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Naziv građevine:	SPORTSKA DVORANA BOROVO NASELJE	
Lokacija građevine:	TRG DRAŽENA PETROVIĆA 2 K.Č. BR. 107/5 K.O. VUKOVAR	
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Strukovna odrednica:	ELEKTROTEHNIČKI PROJEKT	
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Projektni ured:	IBEL projekt d.o.o. Višnjevac	
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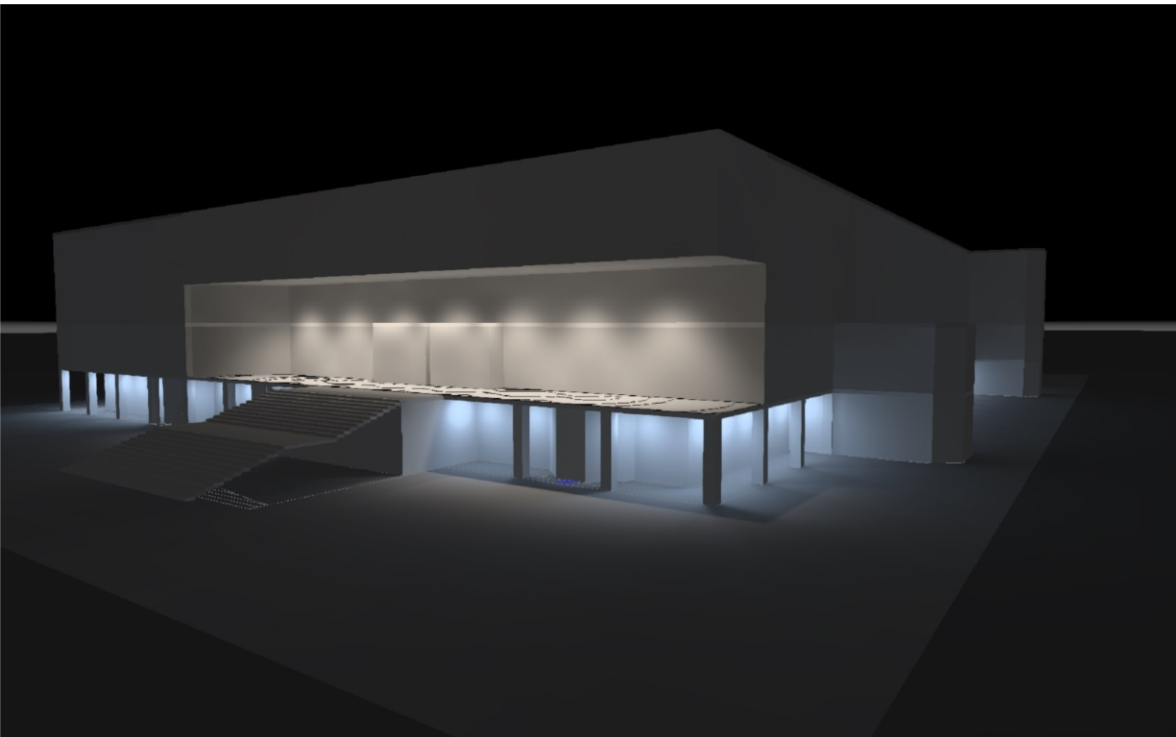
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SPORTSKA DVORANA BOROVO NASELJE
TRG DRAŽENA PETROVIĆA 2, K.Č. BR. 107/5 K.O. VUKOVAR
GLAVNI PROJEKT - ELEKTROTEHNIČKI PROJEKT
MODERNIZACIJA SUSTAVA RASVJETE

Višnjevac,
svibanj 2020.

str.2

PRILOG: SVJETLOTEHNIČKI PRORAČUNI – 2. DIO



PRILOG: SVJETLOTEHNIČKI PRORAČUN - 2. DIO

SPORTSKA DVORANA BOROVO NASELJE
MODERNIZACIJA SUSTAVA RASVJETE

Object

TRG DRAŽENA PETROVIĆA 2
K.Č. BR. 107/5 K.O. VUKOVAR

Preliminary remarks

Notes on planning:

The energy consumption quantities do not take into account light scenes and their dimming levels.

Content

Cover page	1
Preliminary remarks	2
Content	3
Luminaire list	22

Product data sheets

THORNeco - AMY VARIO 150 LED DL 1500 830/35/40 (1x LED-TE404 15W)	24
THORNeco - AMY VARIO 200 LED DL 2000 830/35/40 (1x LED-TE408 20W)	25
THORNeco - EMMA LED 1200 4000 840 (1x LED-TE037 35W)	26
THORNeco - EMMA LED 1500 6000 840 (1x LED-TE038 50W)	27
THORNeco - LENA VARIO LED 380 1900 830/35/40 MWS (1x LED-TE283 21W)	28
THORNeco - LENA VARIO LED 380 2500 830/35/40 (1x LED-TE284 30W)	29
THORNeco - LEONIE LED FL IP65 20W 840 (1x LED-TE227 20W)	30
Thorn Lighting - BETA 3 4100-840 HF LRO Q600 (1x BET3_MO-840 33C6W)	31
Thorn Lighting - COLLEGE LED4200-840 HF L1200 (1x LED_CLLG_4200 33W)	32
Thorn Lighting - COLLEGE LED6500-840 HF L1500 (1x LED_CLLG_6500 64W)	33
ZUMTOBEL - AQFPRO L LED6400-840 PC WB HF (1x Z_AQ6400-840 6550 52C7W)	34
ZUMTOBEL - AQFPRO S LED2900-840 PC MB HF (1x Z_AQ2900-840 3130 21C7W)	35
ZUMTOBEL - AQFPRO S LED4300-840 PC MB HF (1x Z_AQ4300-840 4530 35C2W)	36
ZUMTOBEL - AQFPRO S LED5200-840 PC MB HF (1x Z_AQ5200-840 5370 41C7W)	37

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje

Prizemlje

Room List (Energy evaluation)	38
-------------------------------	----

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Blagajna

Summary	65
Luminaire layout plan	67
Calculation objects	69

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Blagajna

Summary	72
Luminaire layout plan	74

Content

Calculation objects	76
---------------------------	----

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Garderoba

Summary	79
Luminaire layout plan	81
Calculation objects	83

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Garderoba

Summary	85
Luminaire layout plan	87
Calculation objects	89

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Garderoba

Summary	91
Luminaire layout plan	93
Calculation objects	95

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Hodnik

Summary	97
Luminaire layout plan	99
Calculation objects	101

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Hodnik

Summary	103
Luminaire layout plan	105
Calculation objects	107

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Hodnik

Summary	109
---------------	-----

Content

Luminaire layout plan	111
Calculation objects	113

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Hodnik

Summary	115
Luminaire layout plan	117
Calculation objects	119

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Hodnik

Summary	121
Luminaire layout plan	123
Calculation objects	125

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Hodnik

Summary	127
Luminaire layout plan	129
Calculation objects	131

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Hodnik

Summary	133
Luminaire layout plan	135
Calculation objects	137

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Kotlovnica

Summary	139
Luminaire layout plan	141
Calculation objects	143

Content

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Kotlovnica

Summary	145
Luminaire layout plan	147
Calculation objects	149

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Kotlovnica

Summary	151
Luminaire layout plan	153
Calculation objects	155

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Kuhinja

Summary	157
Luminaire layout plan	159
Calculation objects	161

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Praonica rublja

Summary	163
Luminaire layout plan	165
Calculation objects	167

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	169
Luminaire layout plan	171
Calculation objects	173

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	175
Luminaire layout plan	177

Content

Calculation objects	179
---------------------------	-----

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	181
Luminaire layout plan	183
Calculation objects	185

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	187
Luminaire layout plan	189
Calculation objects	191

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	193
Luminaire layout plan	195
Calculation objects	197

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	199
Luminaire layout plan	201
Calculation objects	203

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	205
Luminaire layout plan	207
Calculation objects	209

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	211
---------------	-----

Content

Luminaire layout plan	213
Calculation objects	215

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	217
Luminaire layout plan	219
Calculation objects	221

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	223
Luminaire layout plan	225
Calculation objects	227

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	229
Luminaire layout plan	231
Calculation objects	233

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	235
Luminaire layout plan	237
Calculation objects	239

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	241
Luminaire layout plan	243
Calculation objects	245

Content

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	247
Luminaire layout plan	249
Calculation objects	251

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	253
Luminaire layout plan	255
Calculation objects	257

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	259
Luminaire layout plan	261
Calculation objects	263

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	265
Luminaire layout plan	267
Calculation objects	269

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	271
Luminaire layout plan	273
Calculation objects	275

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	277
Luminaire layout plan	279

Content

Calculation objects	281
---------------------------	-----

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	283
Luminaire layout plan	285
Calculation objects	287

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	289
Luminaire layout plan	291
Calculation objects	293

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	295
Luminaire layout plan	297
Calculation objects	299

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	301
Luminaire layout plan	303
Calculation objects	305

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	307
Luminaire layout plan	309
Calculation objects	311

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	313
---------------	-----

Content

Luminaire layout plan	315
Calculation objects	317

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	319
Luminaire layout plan	321
Calculation objects	323

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	325
Luminaire layout plan	327
Calculation objects	329

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	331
Luminaire layout plan	333
Calculation objects	335

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	337
Luminaire layout plan	339
Calculation objects	341

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	343
Luminaire layout plan	345
Calculation objects	347

Content

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	349
Luminaire layout plan	351
Calculation objects	353

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	355
Luminaire layout plan	357
Calculation objects	359

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Sanitarije

Summary	361
Luminaire layout plan	363
Calculation objects	365

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Spremište

Summary	367
Luminaire layout plan	369
Calculation objects	371

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Spremište

Summary	373
Luminaire layout plan	375
Calculation objects	377

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Spremište

Summary	379
Luminaire layout plan	381

Content

Calculation objects 383

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Spremište

Summary 385
Luminaire layout plan 387
Calculation objects 389

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Spremište

Summary 391
Luminaire layout plan 393
Calculation objects 395

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary 397
Luminaire layout plan 399
Calculation objects 401

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary 403
Luminaire layout plan 405
Calculation objects 407

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary 409
Luminaire layout plan 411
Calculation objects 413

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary 415

Content

Luminaire layout plan	417
Calculation objects	419

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary	421
Luminaire layout plan	423
Calculation objects	425

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary	427
Luminaire layout plan	429
Calculation objects	431

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary	433
Luminaire layout plan	435
Calculation objects	437

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Svlačionica

Summary	439
Luminaire layout plan	441
Calculation objects	443

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Tuševi

Summary	445
Luminaire layout plan	447
Calculation objects	449

Content

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Tuševi

Summary	451
Luminaire layout plan	453
Calculation objects	455

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Tuševi

Summary	457
Luminaire layout plan	459
Calculation objects	461

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Tuševi

Summary	463
Luminaire layout plan	465
Calculation objects	467

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Ulaz

Summary	469
Luminaire layout plan	471
Calculation objects	474

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Ulaz

Summary	476
Luminaire layout plan	478
Calculation objects	480

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje

Ulaz

Summary	482
Luminaire layout plan	484

Content

Calculation objects	486
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje	
Ured	
Summary	488
Luminaire layout plan	490
Calculation objects	492
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje	
Ured	
Summary	497
Luminaire layout plan	499
Calculation objects	501
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje	
Ured	
Luminaire layout plan	506
Calculation objects	508
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - Prizemlje	
Ured	
Summary	513
Luminaire layout plan	515
Calculation objects	517
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje	
1. kat	
Room List (Energy evaluation)	522
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat	
Hodnik	
Summary	530
Luminaire layout plan	532

Content

Calculation objects	534
---------------------------	-----

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Hodnik

Summary	536
Luminaire layout plan	538
Calculation objects	540

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Kotlovnica

Summary	542
Luminaire layout plan	544
Calculation objects	546

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	548
Luminaire layout plan	550
Calculation objects	552

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	554
Luminaire layout plan	556
Calculation objects	558

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	560
Luminaire layout plan	562
Calculation objects	564

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	566
---------------	-----

Content

Luminaire layout plan	568
Calculation objects	570

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	572
Luminaire layout plan	574
Calculation objects	576

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	578
Luminaire layout plan	580
Calculation objects	582

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	584
Luminaire layout plan	586
Calculation objects	588

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	590
Luminaire layout plan	592
Calculation objects	594

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	596
Luminaire layout plan	598
Calculation objects	600

Content

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	602
Luminaire layout plan	604
Calculation objects	606

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Sanitarije

Summary	608
Luminaire layout plan	610
Calculation objects	612

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Svlačionica

Summary	614
Luminaire layout plan	616
Calculation objects	618

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Svlačionica

Summary	620
Luminaire layout plan	622
Calculation objects	624

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Svlačionica

Summary	626
Luminaire layout plan	628
Calculation objects	630

Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat

Svlačionica

Summary	632
Luminaire layout plan	634

Content

Calculation objects	636
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat	
Ulaz	
Summary	638
Luminaire layout plan	640
Calculation objects	642
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 1. kat	
Ulaz	
Summary	644
Luminaire layout plan	646
Calculation objects	648
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje	
2. kat	
Room List (Energy evaluation)	650
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 2. kat	
Kotlovnica	
Summary	653
Luminaire layout plan	655
Calculation objects	657
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 2. kat	
Kotlovnica	
Summary	659
Luminaire layout plan	661
Calculation objects	663
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 2. kat	
Kotlovnica	
Summary	665
Luminaire layout plan	667

Content

Calculation objects	669
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 2. kat	
Kotlovnica	
Summary	671
Luminaire layout plan	673
Calculation objects	675
Sportska dvorana Borovo naselje - Sportska dvorana Borovo naselje - 2. kat	
Stubište	
Summary	677
Luminaire layout plan	679
Calculation objects	681
Glossary	683

Luminaire list

Φ_{total} 1348643 lm	P_{total} 11834.0 W	Luminous efficacy 114.0 lm/W
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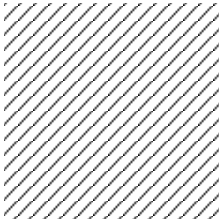
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	THORNeco	96630336 (STD - standard)	LEONIE LED FL IP65 20W 840	20.0 W	1800 lm	90.0 lm/W
96	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W
34	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W
32	THORNeco	96632755 (STD - standard)	AMY VARIO 150 LED DL 1500 830/35/40	15.0 W	1500 lm	100.0 lm/W
9	THORNeco	96632756 (STD - standard)	AMY VARIO 200 LED DL 2000 830/35/40	20.0 W	2002 lm	100.1 lm/W
33	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W
31	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm	120.0 lm/W
1	Thorn	96628877 (STD - standard)	COLLEGE LED6500-840 HF L1500	64.0 W	6500 lm	101.6 lm/W
10	Thorn	96628932 (STD - standard)	COLLEGE LED4200-840 HF L1200	33.0 W	4200 lm	127.3 lm/W
50	Thorn	96634488 (STD - standard)	BETA 3 4100-840 HF LRO Q600	33.6 W	4099 lm	122.0 lm/W
1	ZUMTOBEL	92901898 (STD - standard)	AQFPRO L LED6400-840 PC WB HF	52.7 W	6550 lm	124.3 lm/W

Luminaire list

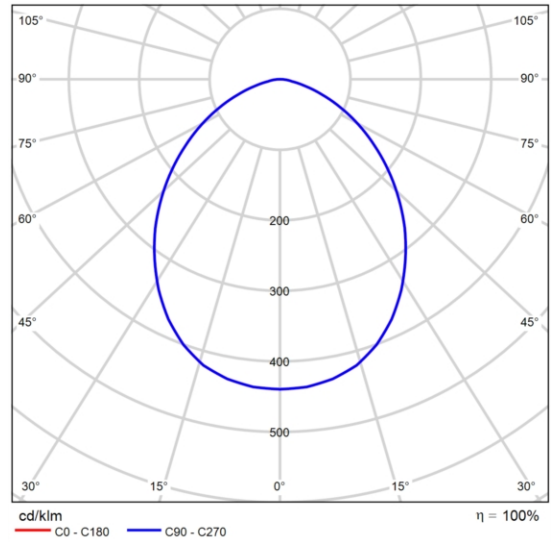
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
22	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W
68	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W
9	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

Product data sheet

THORNeco AMY VARIO 150 LED DL 1500 830/35/40



Article No.	96632755 (STD - standard)
P	15.0 W
Φ_{Lamp}	1500 lm
$\Phi_{Luminaire}$	1500 lm
η	100.00 %
Luminous efficacy	100.0 lm/W
CCT	4000 K
CRI	80



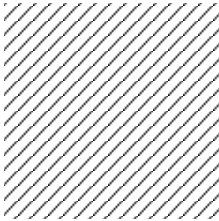
Polar LDC

Glare evaluation according to UGR													
p Ceiling	70	70	50	50	30	70	70	50	50	30			
p Walls	50	30	50	30	30	50	30	50	30	30			
p Floor	20	20	20	20	20	20	20	20	20	20			
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis							
2H	2H	24.1	25.4	24.4	25.6	25.8	24.1	25.4	24.4	25.6	25.8		
	3H	25.1	26.2	25.4	26.5	26.8	25.1	26.2	25.4	26.5	26.8		
	4H	25.4	26.5	25.7	26.7	27.0	25.4	26.5	25.7	26.7	27.0		
	6H	25.5	26.5	25.9	26.8	27.1	25.5	26.5	25.9	26.8	27.1		
	8H	25.5	26.5	25.9	26.8	27.1	25.5	26.5	25.9	26.8	27.1		
4H	2H	24.6	25.7	25.0	26.0	26.3	24.6	25.7	25.0	26.0	26.3		
	3H	25.8	26.7	26.1	27.0	27.3	25.8	26.7	26.1	27.0	27.3		
	4H	26.1	26.9	26.5	27.3	27.6	26.1	26.9	26.5	27.3	27.6		
	6H	26.3	27.0	26.7	27.4	27.8	26.3	27.0	26.7	27.4	27.8		
	8H	26.4	27.0	26.8	27.4	27.8	26.4	27.0	26.8	27.4	27.8		
8H	2H	26.4	27.0	26.9	27.4	27.9	26.4	27.0	26.9	27.4	27.9		
	4H	26.2	26.9	26.7	27.3	27.7	26.2	26.9	26.7	27.3	27.7		
	6H	26.5	27.0	27.0	27.5	27.9	26.5	27.0	27.0	27.5	27.9		
	8H	26.6	27.1	27.1	27.5	28.0	26.6	27.1	27.1	27.5	28.0		
	12H	26.7	27.1	27.2	27.6	28.1	26.7	27.1	27.2	27.6	28.1		
12H	4H	26.2	26.8	26.7	27.2	27.7	26.2	26.8	26.7	27.2	27.7		
	6H	26.5	27.0	27.0	27.4	27.9	26.5	27.0	27.0	27.4	27.9		
	8H	26.6	27.0	27.1	27.5	28.0	26.6	27.0	27.1	27.5	28.0		
Variation of the observer position for the luminaire distances S													
S = 1.0H		+0.2 / -0.3				+0.2 / -0.3							
S = 1.5H		+0.4 / -0.7				+0.4 / -0.7							
S = 2.0H		+0.8 / -1.3				+0.8 / -1.3							
Standard table		BK03				BK03							
Correction summand		8.7				8.7							
Corrected glare indices referring to 1500lm Total luminous flux													

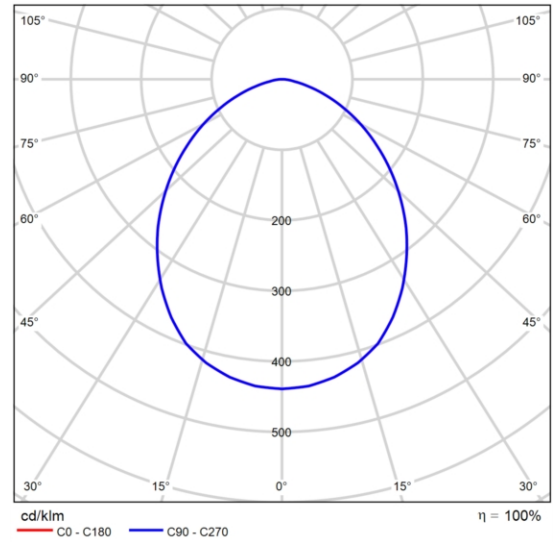
UGR diagram (SHR: 0.25)

Product data sheet

THORNeco AMY VARIO 200 LED DL 2000 830/35/40



Article No.	96632756 (STD - standard)
P	20.0 W
Φ_{Lamp}	2000 lm
$\Phi_{Luminaire}$	2002 lm
η	100.10 %
Luminous efficacy	100.1 lm/W
CCT	4000 K
CRI	80



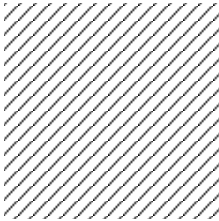
Polar LDC

Glare evaluation according to UGR												
		70	70	50	50	30	70	70	50	50	30	
p Ceiling		50	30	50	30	30	50	30	50	30	30	
p Walls		20	20	20	20	20	20	20	20	20	20	
p Floor		20	20	20	20	20	20	20	20	20	20	
Room size	Viewing direction at right angles to lamp axis	Viewing direction parallel to lamp axis										
X Y												
2H	2H	22.6	23.9	22.9	24.1	24.3	22.6	23.9	22.9	24.1	24.3	
	3H	23.6	24.8	24.0	25.0	25.3	23.6	24.8	24.0	25.0	25.3	
	4H	24.0	25.0	24.3	25.3	25.6	24.0	25.0	24.3	25.3	25.6	
	6H	24.1	25.1	24.4	25.4	25.7	24.1	25.1	24.4	25.4	25.7	
	8H	24.1	25.1	24.5	25.4	25.7	24.1	25.1	24.5	25.4	25.7	
	12H	24.1	25.0	24.5	25.4	25.7	24.1	25.0	24.5	25.4	25.7	
4H	2H	23.1	24.2	23.5	24.5	24.8	23.1	24.2	23.5	24.5	24.8	
	3H	24.3	25.2	24.7	25.5	25.9	24.3	25.2	24.7	25.5	25.9	
	4H	24.7	25.5	25.1	25.9	26.2	24.7	25.5	25.1	25.9	26.2	
	6H	24.9	25.6	25.3	26.0	26.4	24.9	25.6	25.3	26.0	26.4	
	8H	25.0	25.6	25.4	26.0	26.4	25.0	25.6	25.4	26.0	26.4	
	12H	25.0	25.6	25.4	26.0	26.4	25.0	25.6	25.4	26.0	26.4	
8H	4H	24.8	25.5	25.3	25.9	26.3	24.8	25.5	25.3	25.9	26.3	
	6H	25.1	25.6	25.6	26.1	26.5	25.1	25.6	25.6	26.1	26.5	
	8H	25.2	25.7	25.7	26.1	26.6	25.2	25.7	25.7	26.1	26.6	
	12H	25.3	25.7	25.8	26.2	26.7	25.3	25.7	25.8	26.2	26.7	
12H	4H	24.8	25.4	25.3	25.8	26.3	24.8	25.4	25.3	25.8	26.3	
	6H	25.1	25.6	25.6	26.0	26.5	25.1	25.6	25.6	26.0	26.5	
	8H	25.2	25.6	25.7	26.1	26.6	25.2	25.6	25.7	26.1	26.6	
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.2 / -0.3					+0.2 / -0.3					
S = 1.5H		+0.4 / -0.7					+0.4 / -0.7					
S = 2.0H		+0.8 / -1.3					+0.8 / -1.3					
Standard table		BK04					BK04					
Correction summand		7.8					7.8					
Corrected glare indices referring to 2000lm Total luminous flux												

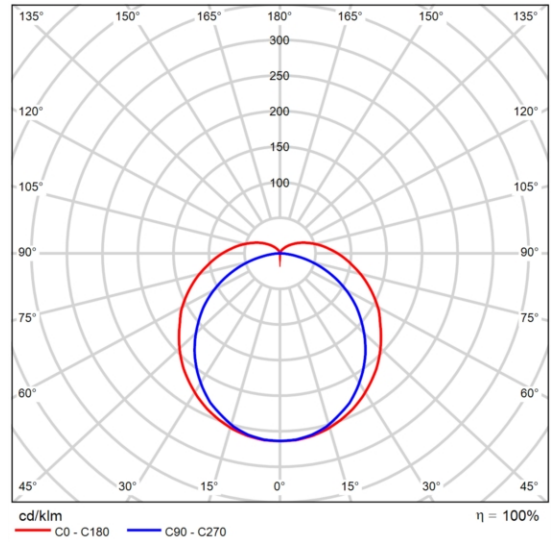
UGR diagram (SHR: 0.25)

Product data sheet

THORNeco EMMA LED 1200 4000 840



Article No.	96666098 (STD - standard)
P	35.0 W
Φ_{Lamp}	4000 lm
$\Phi_{Luminaire}$	4001 lm
η	100.03 %
Luminous efficacy	114.3 lm/W
CCT	4000 K
CRI	80



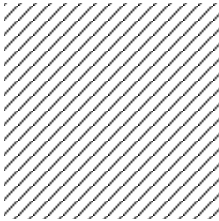
Polar LDC

Glare evaluation according to UGR												
		70	70	50	50	30	70	70	50	50	30	30
p Ceiling		50	30	50	30	30	50	30	50	30	30	30
p Walls		20	20	20	20	20	20	20	20	20	20	20
p Floor		20	20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	21.5	22.8	21.9	23.2	23.7	21.1	22.4	21.5	22.8	23.3	
	3H	23.5	24.7	24.0	25.1	25.6	22.6	23.8	23.1	24.2	24.7	
	4H	24.5	25.6	25.0	26.1	26.6	23.2	24.3	23.7	24.8	25.3	
	6H	25.4	26.5	25.9	27.0	27.5	23.6	24.6	24.1	25.1	25.7	
	8H	25.9	26.9	26.4	27.4	27.9	23.7	24.7	24.2	25.2	25.8	
12H	26.3	27.3	26.8	27.8	28.4	23.7	24.7	24.3	25.2	25.8		
4H	2H	22.1	23.2	22.6	23.7	24.2	21.8	22.9	22.3	23.4	23.9	
	3H	24.3	25.3	24.9	25.8	26.4	23.5	24.5	24.0	25.0	25.5	
	4H	25.5	26.4	26.0	26.9	27.5	24.2	25.1	24.8	25.6	26.2	
	6H	26.6	27.4	27.2	28.0	28.6	24.8	25.5	25.3	26.1	26.7	
	8H	27.2	27.9	27.8	28.5	29.1	24.9	25.7	25.5	26.2	26.9	
12H	27.7	28.4	28.3	29.0	29.6	25.0	25.7	25.6	26.3	27.0		
8H	4H	25.8	26.5	26.4	27.1	27.8	24.7	25.4	25.3	26.0	26.7	
	6H	27.2	27.8	27.8	28.4	29.1	25.5	26.1	26.1	26.7	27.4	
	8H	27.9	28.4	28.5	29.0	29.8	25.8	26.3	26.4	27.0	27.7	
	12H	28.6	29.1	29.2	29.7	30.4	26.0	26.5	26.7	27.1	27.9	
	12H	4H	25.8	26.5	26.4	27.1	27.8	24.8	25.5	25.4	26.1	26.8
6H	27.3	27.8	27.9	28.4	29.1	25.7	26.2	26.3	26.9	27.6		
8H	28.0	28.5	28.7	29.2	29.9	26.1	26.6	26.7	27.2	27.9		
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.1 / -0.1					+0.1 / -0.1					
S = 1.5H		+0.2 / -0.2					+0.2 / -0.2					
S = 2.0H		+0.3 / -0.4					+0.3 / -0.5					
Standard table		BK09					BK06					
Correction summand		11.9					8.9					
Corrected glare indices referring to 4000lm Total luminous flux												

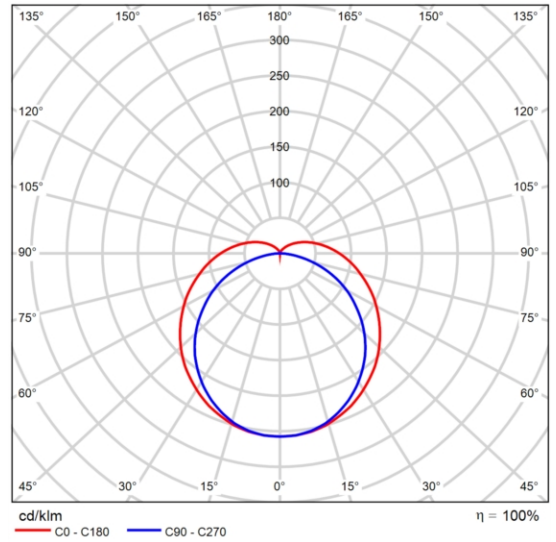
UGR diagram (SHR: 0.25)

Product data sheet

THORNeco EMMA LED 1500 6000 840



Article No.	96666099 (STD - standard)
P	50.0 W
Φ_{Lamp}	6000 lm
$\Phi_{Luminaire}$	6002 lm
η	100.04 %
Luminous efficacy	120.0 lm/W
CCT	4000 K
CRI	80



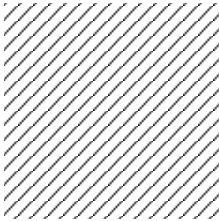
Polar LDC

Glare evaluation according to UGR												
p Ceiling		70	70	50	50	30	70	70	50	50	30	30
p Walls		50	30	50	30	30	50	30	50	30	50	30
p Floor		20	20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	22.0	23.3	22.4	23.7	24.2	21.7	23.0	22.1	23.4	23.9	
	3H	24.0	25.2	24.5	25.7	26.2	23.2	24.4	23.7	24.9	25.4	
	4H	25.0	26.2	25.5	26.6	27.2	23.8	25.0	24.4	25.5	26.0	
	6H	26.0	27.1	26.5	27.6	28.1	24.3	25.3	24.8	25.8	26.4	
	8H	26.5	27.5	27.0	28.0	28.6	24.4	25.4	25.0	26.0	26.5	
4H	2H	22.6	23.8	23.1	24.2	24.8	22.4	23.5	22.9	24.0	24.5	
	3H	24.9	25.9	25.4	26.4	27.0	24.1	25.1	24.7	25.6	26.2	
	4H	26.1	26.9	26.6	27.5	28.1	24.9	25.8	25.5	26.3	26.9	
	6H	27.2	28.0	27.8	28.6	29.2	25.5	26.3	26.1	26.8	27.5	
	8H	27.6	28.5	28.4	29.1	29.8	25.7	26.4	26.3	27.0	27.7	
8H	2H	28.3	29.0	29.0	29.6	30.3	25.8	26.5	26.4	27.1	27.8	
	4H	26.4	27.1	27.0	27.7	28.4	25.4	26.1	26.0	26.7	27.4	
	6H	27.8	28.4	28.4	29.0	29.7	26.2	26.8	26.8	27.4	28.1	
	8H	28.5	29.1	29.2	29.7	30.4	26.5	27.1	27.2	27.7	28.4	
	12H	29.3	29.7	29.9	30.4	31.1	26.8	27.3	27.4	27.9	28.7	
12H	4H	26.4	27.1	27.0	27.7	28.4	25.5	26.2	26.1	26.8	27.5	
	6H	27.9	28.5	28.5	29.1	29.8	26.4	27.0	27.1	27.6	28.3	
	8H	28.7	29.2	29.4	29.8	30.6	26.6	27.3	27.5	28.0	28.7	
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.1 / -0.1					+0.1 / -0.1					
S = 1.5H		+0.2 / -0.2					+0.2 / -0.2					
S = 2.0H		+0.3 / -0.4					+0.3 / -0.5					
Standard table		BK09					BK06					
Correction summand		12.5					9.6					
Corrected glare indices referring to 8000lm Total luminous flux												

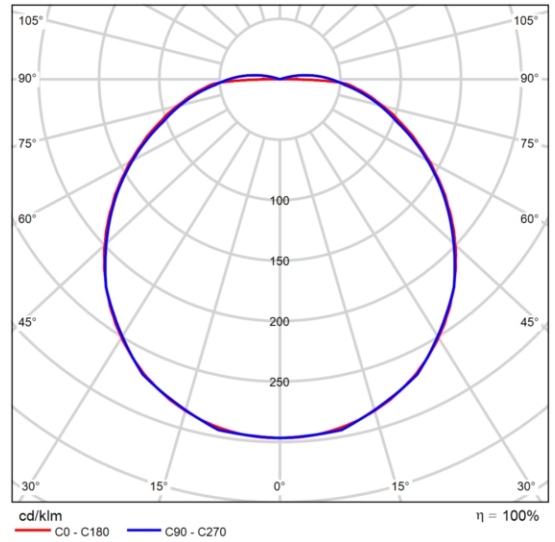
UGR diagram (SHR: 0.25)

Product data sheet

THORNeco LENA VARIO LED 380 1900 830/35/40 MWS



Article No.	96631865 (4000 K)
P	21.0 W
Φ_{Lamp}	1950 lm
$\Phi_{Luminaire}$	1950 lm
η	100.00 %
Luminous efficacy	92.9 lm/W
CCT	4000 K
CRI	80



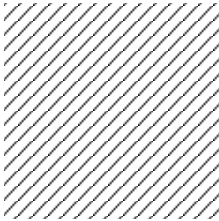
Polar LDC

Glare evaluation according to UGR												
		70	70	50	50	30	70	70	50	50	30	
p Ceiling		50	30	50	30	30	50	30	50	30	30	
p Walls		20	20	20	20	20	20	20	20	20	20	
p Floor		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
Room size	X Y											
2H	2H	16.6	18.0	16.9	18.3	18.6	16.5	17.9	16.8	18.2	18.5	
	3H	18.6	19.9	19.0	20.2	20.5	18.4	19.7	18.8	20.1	20.4	
	4H	19.6	20.8	20.0	21.2	21.5	19.5	20.7	19.8	21.0	21.4	
	6H	20.7	21.8	21.1	22.2	22.6	20.5	21.6	20.9	22.0	22.4	
	8H	21.2	22.4	21.7	22.7	23.1	21.0	22.1	21.4	22.5	22.9	
	12H	21.9	22.9	22.3	23.3	23.7	21.6	22.7	22.0	23.1	23.5	
4H	2H	17.4	18.6	17.7	18.9	19.3	17.3	18.5	17.7	18.8	19.2	
	3H	19.6	20.6	20.0	21.0	21.4	19.5	20.5	19.9	20.9	21.3	
	4H	20.8	21.7	21.2	22.1	22.6	20.6	21.6	21.1	22.0	22.4	
	6H	22.0	22.9	22.5	23.3	23.8	21.9	22.7	22.3	23.2	23.6	
	8H	22.7	23.5	23.2	23.9	24.4	22.5	23.3	23.0	23.8	24.3	
	12H	23.4	24.2	23.9	24.6	25.1	23.2	24.0	23.7	24.4	24.9	
8H	4H	21.3	22.1	21.7	22.5	23.0	21.2	22.0	21.6	22.4	22.9	
	6H	22.8	23.4	23.3	23.9	24.4	22.7	23.3	23.2	23.8	24.3	
	8H	23.6	24.2	24.1	24.7	25.3	23.5	24.1	24.0	24.6	25.1	
	12H	24.6	25.1	25.1	25.6	26.2	24.4	24.9	24.9	25.4	26.0	
12H	4H	21.4	22.1	21.8	22.6	23.1	21.3	22.0	21.8	22.5	23.0	
	6H	23.0	23.6	23.5	24.1	24.6	22.9	23.5	23.4	24.0	24.5	
	8H	23.9	24.4	24.5	25.0	25.5	23.8	24.3	24.3	24.8	25.4	
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.1 / -0.1					+0.1 / -0.1					
S = 1.5H		+0.3 / -0.3					+0.2 / -0.2					
S = 2.0H		+0.4 / -0.5					+0.3 / -0.5					
Standard table		BK10					BK10					
Correction summand		7.6					7.5					
Corrected glare indices referring to 1950lm Total luminous flux												

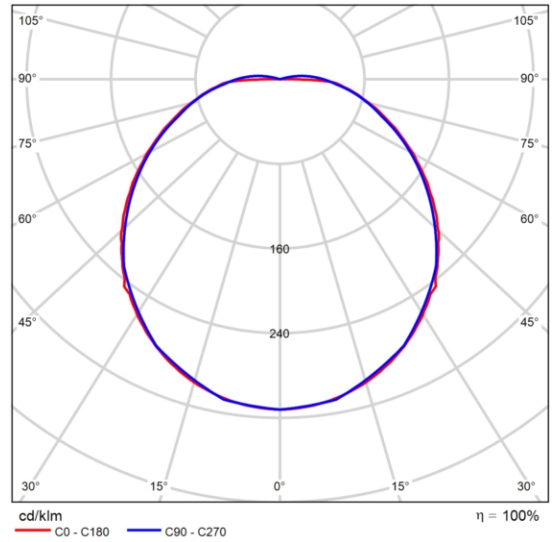
UGR diagram (SHR: 0.25)

Product data sheet

THORNeco LENA VARIO LED 380 2500 830/35/40



Article No.	96631866 (4000 K)
P	30.0 W
Φ_{Lamp}	2550 lm
$\Phi_{Luminaire}$	2550 lm
η	100.00 %
Luminous efficacy	85.0 lm/W
CCT	4000 K
CRI	80



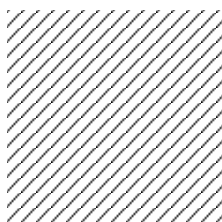
Polar LDC

Glare evaluation according to UGR													
p Ceiling	70	70	50	50	30	70	70	50	50	30			
p Walls	50	30	50	30	30	50	30	50	30	30			
p Floor	20	20	20	20	20	20	20	20	20	20			
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis							
2H	2H	17.6	19.0	17.9	19.2	19.5	17.4	18.8	17.8	19.1	19.4		
	3H	19.5	20.8	19.9	21.1	21.4	19.3	20.6	19.7	20.9	21.3		
	4H	20.5	21.7	20.8	22.0	22.4	20.3	21.5	20.7	21.9	22.2		
	6H	21.5	22.6	21.9	23.0	23.3	21.3	22.5	21.7	22.8	23.2		
	8H	22.0	23.1	22.4	23.5	23.9	21.9	23.0	22.3	23.3	23.7		
12H	22.6	23.7	23.0	24.1	24.4	22.5	23.5	22.9	23.9	24.3			
4H	2H	18.3	19.5	18.7	19.8	20.2	18.2	19.4	18.6	19.7	20.1		
	3H	20.4	21.5	20.8	21.8	22.2	20.3	21.4	20.7	21.7	22.1		
	4H	21.6	22.5	22.0	22.9	23.3	21.5	22.4	21.9	22.8	23.2		
	6H	22.8	23.6	23.2	24.0	24.5	22.7	23.5	23.1	24.0	24.4		
	8H	23.4	24.2	23.9	24.6	25.1	23.3	24.1	23.8	24.6	25.0		
12H	24.1	24.9	24.6	25.3	25.8	24.0	24.7	24.5	25.2	25.7			
8H	4H	22.0	22.8	22.5	23.3	23.7	21.9	22.7	22.4	23.2	23.6		
	6H	23.5	24.1	24.0	24.6	25.1	23.4	24.1	23.9	24.6	25.1		
	8H	24.3	24.9	24.8	25.4	25.9	24.2	24.8	24.7	25.3	25.8		
	12H	25.2	25.7	25.7	26.2	26.8	25.1	25.6	25.7	26.1	26.7		
	12H	22.1	22.8	22.6	23.3	23.8	22.0	22.8	22.5	23.2	23.7		
6H	23.7	24.2	24.2	24.7	25.3	23.6	24.2	24.1	24.7	25.2			
8H	24.6	25.1	25.1	25.6	26.1	24.5	25.0	25.0	25.5	26.1			
Variation of the observer position for the luminaire distances S													
S = 1.0H	+0.1 / -0.1					+0.1 / -0.1							
S = 1.5H	+0.3 / -0.3					+0.2 / -0.2							
S = 2.0H	+0.3 / -0.5					+0.3 / -0.5							
Standard table	BK09					BK09							
Correction summand	7.9					7.8							
Corrected glare indices referring to 2550lm Total luminous flux													

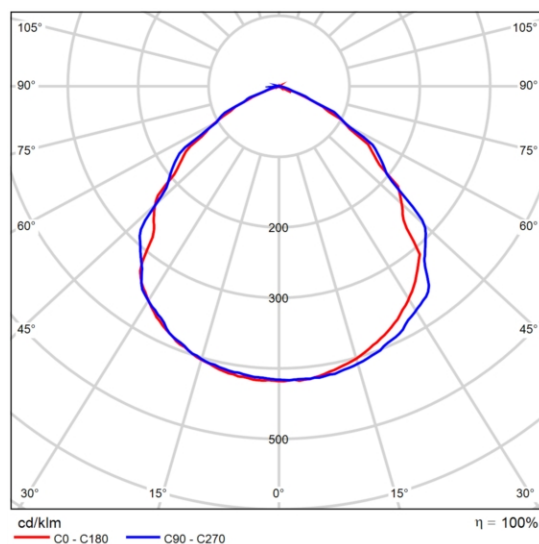
UGR diagram (SHR: 0.25)

Product data sheet

THORNeco LEONIE LED FL IP65 20W 840



Article No.	96630336 (STD - standard)
P	20.0 W
Φ_{Lamp}	1800 lm
$\Phi_{Luminaire}$	1800 lm
η	100.00 %
Luminous efficacy	90.0 lm/W
CCT	4000 K
CRI	80



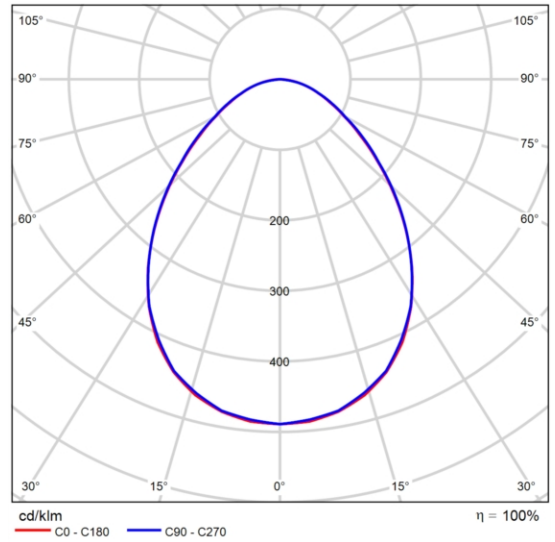
Polar LDC

Product data sheet

Thorn BETA 3 4100-840 HF LRO Q600



Article No.	96634488 (STD - standard)
P	33.6 W
Φ_{Lamp}	4100 lm
$\Phi_{Luminaire}$	4099 lm
η	99.97 %
Luminous efficacy	122.0 lm/W
CCT	3000 K
CRI	80



Polar LDC

Glare evaluation according to UGR												
		70	70	50	50	30	70	70	50	50	30	
p Ceiling		50	30	50	30	30	50	30	50	30	30	
p Walls		20	20	20	20	20	20	20	20	20	20	
p Floor		20	20	20	20	20	20	20	20	20	20	
Room size	Viewing direction at right angles to lamp axis	Viewing direction parallel to lamp axis										
X Y												
2H	2H	16.0	17.2	16.3	17.5	17.7	16.1	17.4	16.4	17.6	17.8	
	3H	17.0	18.1	17.3	18.3	18.6	17.1	18.2	17.4	18.5	18.7	
	4H	17.4	18.4	17.7	18.7	19.0	17.5	18.6	17.9	18.9	19.1	
	6H	17.7	18.6	18.0	18.9	19.3	17.9	18.8	18.2	19.1	19.4	
	8H	17.8	18.7	18.1	19.0	19.3	17.9	18.8	18.3	19.1	19.5	
4H	2H	16.5	17.5	16.8	17.8	18.1	16.6	17.6	16.9	17.9	18.1	
	3H	17.6	18.5	18.0	18.8	19.2	17.7	18.6	18.1	18.9	19.3	
	4H	18.2	18.9	18.6	19.3	19.7	18.3	19.1	18.7	19.4	19.8	
	6H	18.6	19.2	19.0	19.6	20.0	18.7	19.4	19.1	19.8	20.2	
	8H	18.7	19.3	19.1	19.7	20.1	18.8	19.5	19.3	19.8	20.3	
8H	2H	18.7	19.3	19.2	19.7	20.2	18.8	19.4	19.3	19.8	20.2	
	4H	18.4	19.0	18.8	19.4	19.8	18.5	19.1	18.9	19.5	19.9	
	6H	18.9	19.4	19.3	19.8	20.3	19.0	19.6	19.5	20.0	20.4	
	8H	19.1	19.5	19.6	20.0	20.5	19.2	19.6	19.7	20.1	20.6	
	12H	19.2	19.6	19.7	20.1	20.6	19.2	19.6	19.7	20.1	20.6	
12H	4H	18.4	19.0	18.8	19.4	19.8	18.5	19.1	18.9	19.5	19.9	
	6H	18.9	19.4	19.4	19.8	20.3	19.1	19.5	19.6	20.0	20.5	
	8H	19.1	19.5	19.6	20.0	20.5	19.3	19.6	19.7	20.1	20.6	
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.2 / -0.3					+0.2 / -0.3					
S = 1.5H		+0.4 / -0.7					+0.4 / -0.7					
S = 2.0H		+0.9 / -1.1					+0.8 / -1.1					
Standard table		BK04					BK04					
Correction summand		1.4					1.5					
Corrected glare indices referring to 4100lm Total luminous flux												

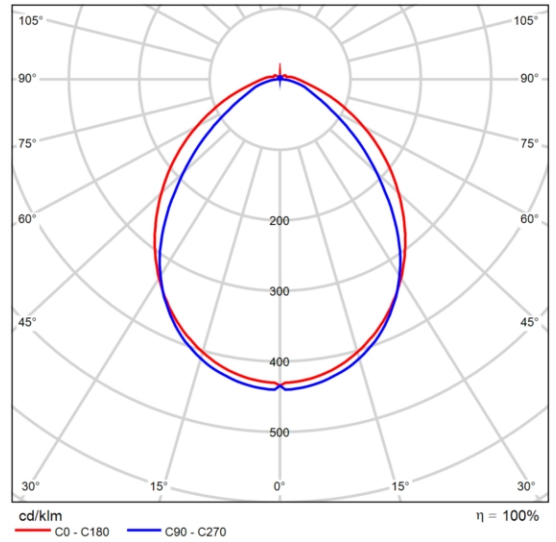
UGR diagram (SHR: 0.25)

Product data sheet

Thorn COLLEGE LED4200-840 HF L1200



Article No.	96628932 (STD - standard)
P	33.0 W
Φ_{Lamp}	4200 lm
$\Phi_{Luminaire}$	4200 lm
η	100.00 %
Luminous efficacy	127.3 lm/W
CCT	3000 K
CRI	80



Polar LDC

Glare evaluation according to UGR												
p Ceiling		70	70	50	50	30	70	70	50	50	30	30
p Walls		50	30	50	30	30	50	30	50	30	30	30
p Floor		20	20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	16.7	17.9	17.1	18.2	18.5	15.0	16.2	15.3	16.5	16.8	16.8
	3H	17.5	18.9	18.2	19.3	19.6	15.6	16.6	15.9	17.0	17.3	17.3
	4H	18.3	19.3	18.7	19.6	20.0	15.8	16.9	16.3	17.2	17.6	17.6
	6H	18.6	19.6	19.0	19.9	20.3	16.1	17.0	16.5	17.4	17.8	17.8
	8H	18.8	19.7	19.2	20.1	20.5	16.2	17.1	16.6	17.5	17.9	17.9
12H	18.9	19.8	19.3	20.2	20.6	16.2	17.1	16.7	17.5	17.9	17.9	17.9
4H	2H	16.9	17.9	17.3	18.3	18.7	15.4	16.5	15.8	16.8	17.2	17.2
	3H	18.3	19.1	18.7	19.5	20.0	16.2	17.0	16.6	17.4	17.9	17.9
	4H	18.8	19.6	19.3	20.1	20.5	16.5	17.3	17.0	17.7	18.2	18.2
	6H	19.4	20.0	19.8	20.5	21.0	16.9	17.5	17.4	18.0	18.5	18.5
	8H	19.6	20.2	20.1	20.7	21.2	17.0	17.6	17.5	18.1	18.6	18.6
12H	19.8	20.4	20.3	20.9	21.4	17.1	17.7	17.6	18.2	18.7	18.7	
8H	4H	18.9	19.6	19.4	20.0	20.6	16.8	17.5	17.3	17.9	18.4	18.4
	6H	19.6	20.2	20.2	20.7	21.2	17.3	17.8	17.8	18.3	18.9	18.9
	8H	20.0	20.5	20.5	21.0	21.6	17.5	18.0	18.0	18.5	19.1	19.1
	12H	20.4	20.8	20.9	21.3	21.9	17.7	18.1	18.2	18.6	19.2	19.2
	12H	4H	18.9	19.5	19.4	20.0	20.5	16.9	17.5	17.4	17.9	18.5
6H	19.7	20.1	20.2	20.6	21.2	17.4	17.9	17.9	18.4	19.0	19.0	
8H	20.1	20.5	20.6	21.0	21.6	17.7	18.1	18.2	18.6	19.2	19.2	
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.2 / -0.2					+0.3 / -0.4					
S = 1.5H		+0.3 / -0.5					+0.7 / -1.1					
S = 2.0H		+0.7 / -0.9					+1.5 / -1.7					
Standard table		BK05					BK04					
Correction summand		2.8					0.1					
Corrected glare indices referring to 4200lm Total luminous flux												

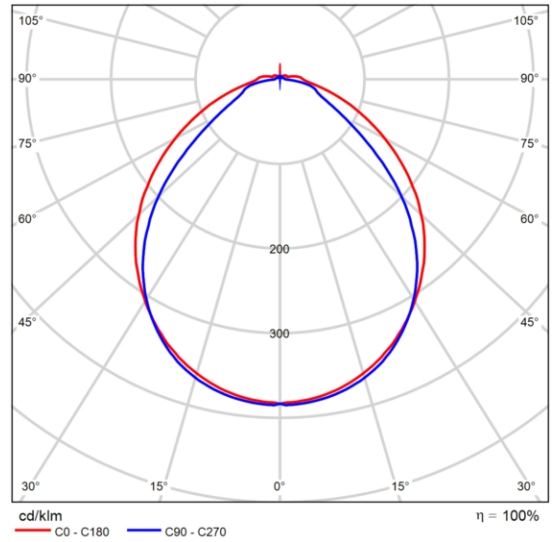
UGR diagram (SHR: 0.25)

Product data sheet

Thorn COLLEGE LED6500-840 HF L1500



Article No.	96628877 (STD - standard)
P	64.0 W
Φ_{Lamp}	6500 lm
$\Phi_{Luminaire}$	6500 lm
η	100.00 %
Luminous efficacy	101.6 lm/W
CCT	3000 K
CRI	80



Polar LDC

Glare evaluation according to UGR												
		70	70	50	50	30	70	70	50	50	30	
p Ceiling		50	30	50	30	30	50	30	50	30	30	
p Walls		20	20	20	20	20	20	20	20	20	20	
p Floor		20	20	20	20	20	20	20	20	20	20	
Room size	Viewing direction at right angles to lamp axis	Viewing direction parallel to lamp axis										
X Y												
2H	2H	17.7	19.0	18.1	19.3	19.6	16.3	17.5	16.6	17.8	18.1	
	3H	19.0	20.1	19.4	20.4	20.8	16.8	18.0	17.2	18.3	18.7	
	4H	19.5	20.5	19.9	20.9	21.3	17.2	18.2	17.6	18.6	19.0	
	6H	19.8	20.8	20.2	21.2	21.6	17.6	18.6	18.0	19.0	19.4	
	8H	20.0	20.9	20.4	21.3	21.7	17.8	18.7	18.2	19.1	19.6	
12H	20.1	21.0	20.5	21.4	21.8	17.9	18.8	18.4	19.2	19.7		
4H	2H	18.1	19.1	18.5	19.5	19.9	16.8	17.9	17.2	18.2	18.6	
	3H	19.6	20.5	20.0	20.9	21.3	17.5	18.4	18.0	18.9	19.3	
	4H	20.2	21.0	20.7	21.5	21.9	18.0	18.8	18.4	19.2	19.7	
	6H	20.7	21.5	21.2	21.9	22.4	18.4	19.1	18.9	19.6	20.1	
	8H	21.0	21.6	21.5	22.1	22.6	18.6	19.3	19.1	19.8	20.3	
12H	21.2	21.8	21.7	22.3	22.8	18.8	19.4	19.3	19.9	20.4		
8H	4H	20.4	21.0	20.9	21.5	22.0	18.4	19.0	18.9	19.5	20.0	
	6H	21.1	21.6	21.6	22.2	22.7	19.0	19.5	19.5	20.0	20.6	
	8H	21.4	21.9	22.0	22.5	23.0	19.2	19.7	19.8	20.3	20.8	
	12H	21.8	22.2	22.3	22.7	23.3	19.5	19.9	20.1	20.5	21.1	
	12H	4H	20.4	21.0	20.9	21.5	22.0	18.4	19.0	18.9	19.5	20.1
6H	21.1	21.6	21.7	22.2	22.7	19.1	19.6	19.6	20.1	20.7		
8H	21.5	22.0	22.1	22.5	23.1	19.4	19.9	20.0	20.4	21.0		
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.1 / -0.2					+0.2 / -0.3					
S = 1.5H		+0.3 / -0.5					+0.6 / -1.0					
S = 2.0H		+0.5 / -0.8					+1.3 / -1.7					
Standard table		BK05					BK04					
Correction summand		4.1					1.7					
Corrected glare indices referring to 8500lm Total luminous flux												

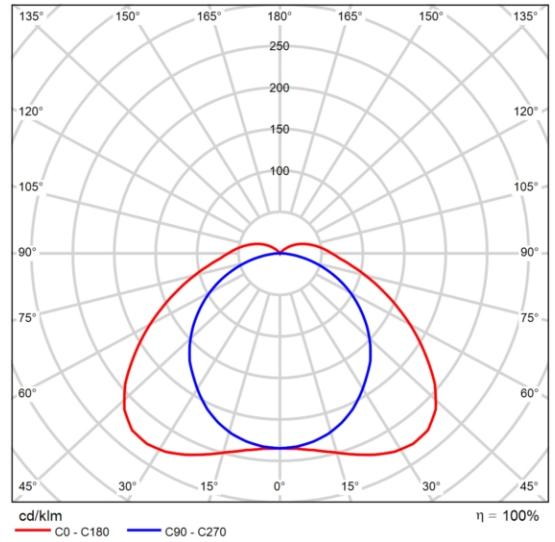
UGR diagram (SHR: 0.25)

Product data sheet

ZUMTOBEL AQFPRO L LED6400-840 PC WB HF



Article No.	92901898 (STD - standard)
P	52.7 W
Φ_{Lamp}	6550 lm
$\Phi_{Luminaire}$	6550 lm
η	100.00 %
Luminous efficacy	124.3 lm/W
CCT	3000 K
CRI	100



Polar LDC

Glare evaluation according to UGR												
		70	70	50	50	30	70	70	50	50	30	
p Ceiling		50	30	50	30	30	50	30	50	30	30	
p Walls		20	20	20	20	20	20	20	20	20	20	
p Floor		20	20	20	20	20	20	20	20	20	20	
Room size	Viewing direction at right angles to lamp axis	Viewing direction parallel to lamp axis										
X Y												
2H	2H	20.9	22.3	21.3	22.7	23.1	19.0	20.4	19.4	20.8	21.2	
	3H	22.5	23.7	22.9	24.1	24.6	20.4	21.6	20.8	22.0	22.5	
	4H	23.2	24.4	23.7	24.8	25.2	20.9	22.1	21.4	22.5	23.0	
	6H	23.8	24.9	24.3	25.4	25.9	21.3	22.4	21.8	22.8	23.3	
	8H	24.1	25.2	24.6	25.6	26.1	21.4	22.4	21.9	22.9	23.4	
12H	24.4	25.4	24.9	25.9	26.4	21.4	22.5	21.9	22.9	23.4		
4H	2H	21.4	22.6	21.9	23.0	23.5	20.0	21.2	20.5	21.6	22.0	
	3H	23.2	24.2	23.7	24.7	25.2	21.5	22.5	22.0	23.0	23.5	
	4H	24.1	25.0	24.6	25.5	26.0	22.2	23.1	22.7	23.6	24.1	
	6H	24.9	25.7	25.4	26.2	26.8	22.6	23.4	23.2	23.9	24.5	
	8H	25.3	26.0	25.8	26.5	27.1	22.8	23.5	23.3	24.1	24.6	
12H	25.6	26.3	26.2	26.9	27.5	22.9	23.6	23.4	24.1	24.7		
8H	4H	24.3	25.0	24.9	25.6	26.2	22.6	23.4	23.2	23.9	24.5	
	6H	25.3	25.9	25.9	26.5	27.1	23.3	23.9	23.9	24.5	25.1	
	8H	25.8	26.4	26.4	26.9	27.6	23.5	24.1	24.1	24.7	25.3	
	12H	26.3	26.8	26.9	27.4	28.1	23.7	24.2	24.3	24.8	25.4	
	12H	4H	24.3	25.0	24.9	25.5	26.1	22.7	23.4	23.3	23.9	24.5
6H	25.4	25.9	25.9	26.5	27.1	23.4	24.0	24.0	24.6	25.2		
8H	25.9	26.4	26.5	27.0	27.7	23.7	24.2	24.4	24.8	25.5		
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.1 / -0.1					+0.1 / -0.1					
S = 1.5H		+0.3 / -0.3					+0.3 / -0.4					
S = 2.0H		+0.4 / -0.6					+0.5 / -0.7					
Standard table		BK07					BK06					
Correction summand		9.2					6.7					
Corrected glare indices referring to 8550lm Total luminous flux												

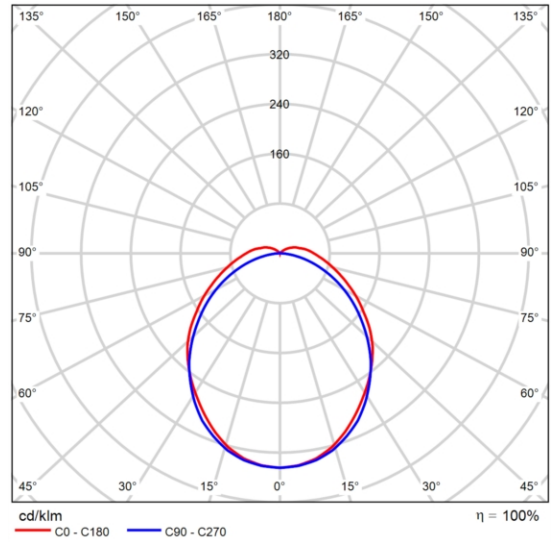
UGR diagram (SHR: 0.25)

Product data sheet

ZUMTOBEL AQFPRO S LED2900-840 PC MB HF



Article No.	96630753 (STD - standard)
P	21.7 W
Φ_{Lamp}	3130 lm
$\Phi_{Luminaire}$	3130 lm
η	100.00 %
Luminous efficacy	144.3 lm/W
CCT	3000 K
CRI	100



Polar LDC

Glare evaluation according to UGR												
		70	70	50	50	30	70	70	50	50	30	
ρ Ceiling		50	30	50	30	30	50	30	50	30	30	
ρ Walls		20	20	20	20	20	20	20	20	20	20	
ρ Floor		20	20	20	20	20	20	20	20	20	20	
Room size		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
X	Y											
2H	2H	18.1	19.4	18.5	19.8	20.1	18.4	19.7	18.8	20.0	20.4	
	3H	19.6	20.8	20.1	21.2	21.6	19.7	20.9	20.1	21.2	21.7	
	4H	20.4	21.5	20.8	21.9	22.3	20.2	21.3	20.6	21.7	22.1	
	6H	21.1	22.1	21.5	22.5	23.0	20.5	21.6	21.0	22.0	22.4	
	8H	21.4	22.4	21.9	22.9	23.3	20.6	21.6	21.1	22.1	22.5	
12H	21.7	22.7	22.2	23.2	23.6	20.7	21.6	21.2	22.1	22.6		
4H	2H	18.7	19.8	19.1	20.2	20.6	18.9	20.0	19.3	20.4	20.8	
	3H	20.4	21.4	20.9	21.8	22.3	20.4	21.4	20.9	21.8	22.3	
	4H	21.3	22.2	21.8	22.6	23.1	21.0	21.9	21.5	22.4	22.9	
	6H	22.2	22.9	22.7	23.4	24.0	21.5	22.2	22.0	22.7	23.3	
	8H	22.6	23.3	23.1	23.8	24.4	21.6	22.3	22.2	22.8	23.4	
12H	23.0	23.7	23.6	24.2	24.8	21.7	22.4	22.3	22.9	23.5		
8H	4H	21.6	22.3	22.1	22.8	23.3	21.3	22.0	21.8	22.5	23.1	
	6H	22.6	23.2	23.2	23.8	24.4	21.9	22.5	22.5	23.0	23.6	
	8H	23.2	23.7	23.8	24.3	24.9	22.2	22.7	22.7	23.2	23.9	
	12H	23.8	24.2	24.4	24.8	25.4	22.3	22.8	22.9	23.3	24.0	
	12H	23.8	24.2	24.4	24.8	25.4	22.3	22.8	22.9	23.3	24.0	
12H	4H	21.6	22.2	22.1	22.7	23.3	21.3	22.0	21.9	22.5	23.1	
	6H	22.7	23.2	23.3	23.8	24.4	22.0	22.5	22.6	23.1	23.7	
	8H	23.3	23.8	23.9	24.3	25.0	22.3	22.8	22.9	23.3	24.0	
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.1 / -0.1					+0.1 / -0.1					
S = 1.5H		+0.2 / -0.3					+0.2 / -0.3					
S = 2.0H		+0.3 / -0.6					+0.5 / -0.7					
Standard table		BK07					BK05					
Correction summand		6.5					5.0					
Corrected glare indices referring to 3130lm Total luminous flux												

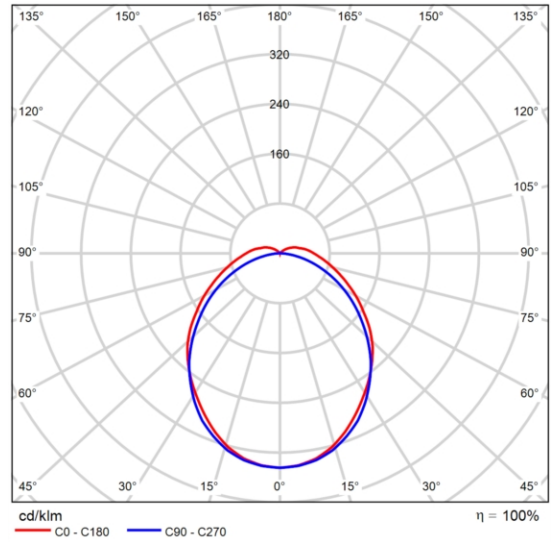
UGR diagram (SHR: 0.25)

Product data sheet

ZUMTOBEL AQFPRO S LED4300-840 PC MB HF



Article No.	96630754 (STD - standard)
P	35.2 W
Φ_{Lamp}	4530 lm
$\Phi_{Luminaire}$	4530 lm
η	100.00 %
Luminous efficacy	128.7 lm/W
CCT	3000 K
CRI	100



Polar LDC

Glare evaluation according to UGR												
p Ceiling	70	70	50	50	30	70	70	50	50	30	30	
p Walls	50	30	50	30	30	50	30	50	30	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis						
2H	2H	19.4	20.7	19.8	21.1	21.4	19.7	21.0	20.1	21.3	21.7	
	3H	20.9	22.1	21.4	22.5	22.9	21.0	22.2	21.4	22.5	22.9	
	4H	21.7	22.8	22.1	23.2	23.6	21.5	22.6	21.9	23.0	23.4	
	6H	22.4	23.4	22.8	23.8	24.3	21.8	22.9	22.3	23.3	23.7	
	8H	22.7	23.7	23.2	24.1	24.6	21.9	22.9	22.4	23.4	23.8	
4H	2H	20.0	21.1	20.4	21.5	21.9	20.2	21.3	20.6	21.7	22.1	
	3H	21.7	22.7	22.2	23.1	23.6	21.7	22.6	22.2	23.1	23.6	
	4H	22.6	23.5	23.1	23.9	24.4	22.3	23.2	22.8	23.6	24.1	
	6H	23.5	24.2	24.0	24.7	25.3	22.8	23.5	23.3	24.0	24.6	
	8H	23.9	24.6	24.4	25.1	25.7	22.9	23.6	23.5	24.1	24.7	
8H	2H	24.3	25.0	24.9	25.5	26.1	23.0	23.7	23.5	24.2	24.8	
	4H	22.8	23.6	23.4	24.1	24.6	22.6	23.3	23.1	23.8	24.4	
	6H	23.9	24.5	24.5	25.0	25.6	23.2	23.8	23.8	24.3	24.9	
	8H	24.5	25.0	25.1	25.6	26.2	23.4	24.0	24.0	24.5	25.1	
	12H	25.1	25.5	25.7	26.1	26.7	23.6	24.1	24.2	24.6	25.3	
12H	4H	22.9	23.5	23.4	24.0	24.6	22.6	23.3	23.2	23.8	24.4	
	6H	24.0	24.5	24.6	25.1	25.7	23.3	23.8	23.9	24.4	25.0	
	8H	24.6	25.1	25.2	25.6	26.3	23.6	24.0	24.2	24.6	25.3	
Variation of the observer position for the luminaire distances S												
S = 1.0H	+0.1 / -0.1					+0.1 / -0.1						
S = 1.5H	+0.2 / -0.3					+0.2 / -0.3						
S = 2.0H	+0.3 / -0.6					+0.5 / -0.7						
Standard table	BK07					BK05						
Correction summand	7.8					6.3						
Corrected glare indices referring to 4530lm Total luminous flux												

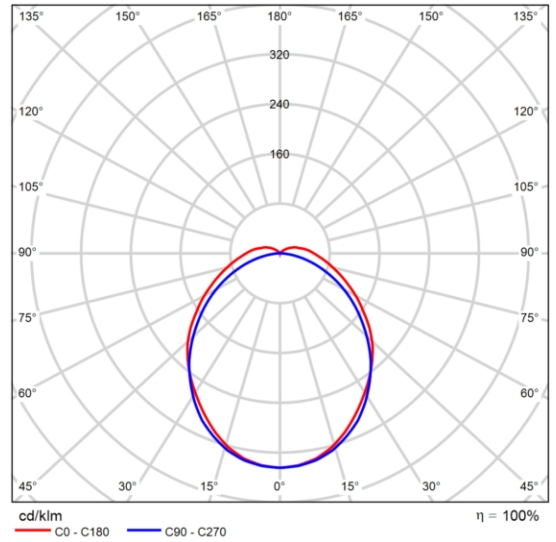
UGR diagram (SHR: 0.25)

Product data sheet

ZUMTOBEL AQFPRO S LED5200-840 PC MB HF



Article No.	96630755 (STD - standard)
P	41.7 W
Φ_{Lamp}	5370 lm
$\Phi_{Luminaire}$	5370 lm
η	100.00 %
Luminous efficacy	128.8 lm/W
CCT	3000 K
CRI	100

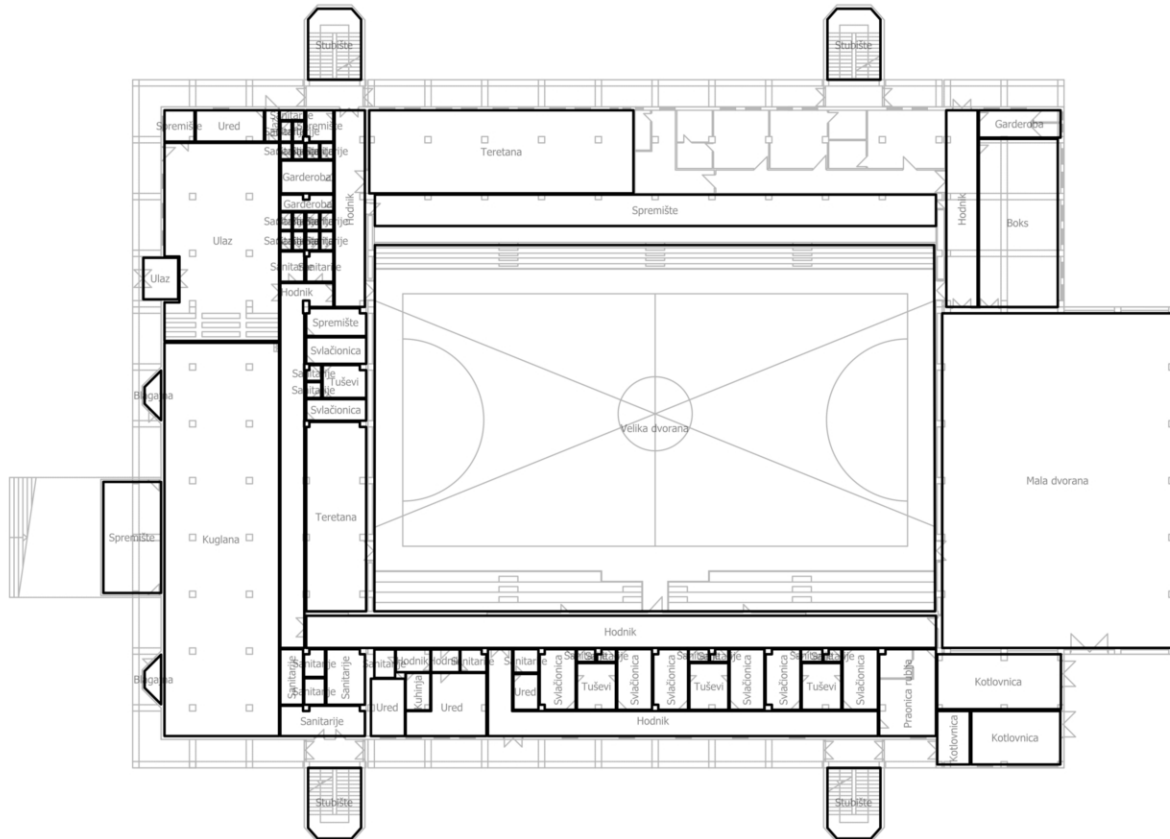


Polar LDC

Glare evaluation according to UGR												
p Ceiling		70	70	50	50	30	70	70	50	50	30	
p Walls		50	30	50	30	30	50	30	50	30	30	
p Floor		20	20	20	20	20	20	20	20	20	20	
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	20.0	21.3	20.4	21.6	22.0	20.3	21.5	20.6	21.9	22.3	
	3H	21.5	22.7	21.9	23.1	23.5	21.6	22.7	22.0	23.1	23.5	
	4H	22.3	23.4	22.7	23.8	24.2	22.1	23.2	22.5	23.6	24.0	
	6H	23.0	24.0	23.4	24.4	24.9	22.4	23.5	22.9	23.9	24.3	
	8H	23.3	24.3	23.8	24.7	25.2	22.5	23.5	23.0	23.9	24.4	
12H	23.6	24.6	24.1	25.0	25.5	22.6	23.5	23.0	24.0	24.4		
4H	2H	20.6	21.7	21.0	22.1	22.5	20.8	21.9	21.2	22.3	22.7	
	3H	22.3	23.3	22.8	23.7	24.2	22.3	23.2	22.8	23.7	24.1	
	4H	23.2	24.0	23.7	24.5	25.0	22.9	23.8	23.4	24.2	24.7	
	6H	24.1	24.8	24.6	25.3	25.9	23.4	24.1	23.9	24.6	25.2	
	8H	24.5	25.2	25.0	25.7	26.3	23.5	24.2	24.0	24.7	25.3	
12H	24.9	25.6	25.4	26.1	26.7	23.6	24.2	24.1	24.8	25.3		
8H	4H	23.4	24.1	24.0	24.7	25.2	23.2	23.9	23.7	24.4	25.0	
	6H	24.5	25.1	25.1	25.6	26.2	23.8	24.4	24.4	24.9	25.5	
	8H	25.1	25.6	25.6	26.1	26.8	24.0	24.5	24.6	25.1	25.7	
	12H	25.7	26.1	26.2	26.7	27.3	24.2	24.6	24.8	25.2	25.9	
	12H	23.4	24.1	24.0	24.6	25.2	23.2	23.9	23.8	24.4	25.0	
6H	24.6	25.1	25.1	25.6	26.3	23.9	24.4	24.5	25.0	25.6		
8H	25.2	25.6	25.8	26.2	26.9	24.2	24.6	24.8	25.2	25.9		
Variation of the observer position for the luminaire distances S												
S = 1.0H		+0.1 / -0.1					+0.1 / -0.1					
S = 1.5H		+0.2 / -0.3					+0.2 / -0.3					
S = 2.0H		+0.3 / -0.6					+0.5 / -0.7					
Standard table		BK07					BK05					
Correction summand		8.4					6.8					
Corrected glare indices referring to 5370lm Total luminous flux												

UGR diagram (SHR: 0.25)

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)



Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Blagajna

P_{total}
50.0 W

A_{Room}
3.42 m²

Lighting power density
14.60 W/m² (Room)

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{\text{Luminaire}}$
1	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm

Blagajna

P_{total}
50.0 W

A_{Room}
3.42 m²

Lighting power density
14.60 W/m² (Room)

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{\text{Luminaire}}$
1	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm

Boks

P_{total}
400.0 W

A_{Room}
83.23 m²

Lighting power density
4.81 W/m² (Room)

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{\text{Luminaire}}$
8	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Garderoba

P_{total} 41.7 W	A_{Room} 10.79 m ²	Lighting power density 3.86 W/m ² = 1.81 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 213 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm

Garderoba

P_{total} 70.4 W	A_{Room} 14.00 m ²	Lighting power density 5.03 W/m ² = 1.82 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 277 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Garderoba

P_{total} 41.7 W	A_{Room} 5.26 m ²	Lighting power density 7.93 W/m ² = 3.15 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 252 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Hodnik

P_{total} 140.0 W	A_{Room} 37.38 m ²	Lighting power density 3.75 W/m ² = 2.54 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 147 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
4	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Hodnik

P_{total} 180.0 W	A_{Room} 58.97 m ²	Lighting power density 3.05 W/m ² = 2.66 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 115 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
9	THORNeco	96632756 (STD - standard)	AMY VARIO 200 LED DL 2000 830/35/40	20.0 W	2002 lm

Hodnik

P_{total} 550.0 W	A_{Room} 127.25 m ²	Lighting power density 4.32 W/m ² = 2.48 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 175 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
11	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Hodnik

P_{total} 315.0 W	A_{Room} 70.59 m ²	Lighting power density 4.46 W/m ² = 2.60 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 172 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
9	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Hodnik

P_{total} 150.0 W	A_{Room} 38.63 m ²	Lighting power density 3.88 W/m ² = 2.15 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 180 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
3	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm

Hodnik

P_{total} 35.0 W	A_{Room} 4.93 m ²	Lighting power density 7.10 W/m ² = 4.76 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 149 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Hodnik

P_{total} 35.0 W	A_{Room} 4.07 m ²	Lighting power density 8.60 W/m ² = 5.36 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 160 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Kotlovnica

P_{total} 105.6 W	A_{Room} 29.82 m ²	Lighting power density 3.54 W/m ² = 1.28 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 277 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
3	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Kotlovnica

P_{total} 41.7 W	A_{Room} 10.91 m ²	Lighting power density 3.82 W/m ² = 1.74 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 220 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Kotlovnica

P_{total} 105.6 W	A_{Room} 42.63 m ²	Lighting power density 2.48 W/m ² = 1.18 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 210 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
3	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Kuglana

P_{total} 1209.6 W	A_{Room} 282.82 m ²	Lighting power density 4.28 W/m ² (Room)
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
36	Thorn	96634488 (STD - standard)	BETA 3 4100-840 HF LRO Q600	33.6 W	4099 lm

Kuhinja

P_{total} 41.7 W	A_{Room} 5.79 m ²	Lighting power density 7.21 W/m ² = 2.40 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 300 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Praonica rublja

P_{total} 125.1 W	A_{Room} 30.76 m ²	Lighting power density 4.07 W/m ² = 1.25 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 324 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
3	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 4.56 m ²	Lighting power density 4.61 W/m ² = 4.06 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 113 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.35 m ²	Lighting power density 15.56 W/m ² = 10.85 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 143 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 1.52 m ²	Lighting power density 13.81 W/m ² = 10.19 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 136 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.44 m ²	Lighting power density 14.58 W/m ² = 9.94 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 147 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 30.0 W	A_{Room} 7.92 m ²	Lighting power density 3.79 W/m ² = 3.26 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 116 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 3.71 m ²	Lighting power density 5.67 W/m ² = 4.49 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 126 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 3.56 m ²	Lighting power density 5.89 W/m ² = 4.61 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 128 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 3.68 m ²	Lighting power density 5.70 W/m ² = 4.44 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 128 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 1.45 m ²	Lighting power density 14.48 W/m ² = 9.49 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 153 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.35 m ²	Lighting power density 15.56 W/m ² = 10.71 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 145 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.59 m ²	Lighting power density 13.21 W/m ² = 8.87 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 149 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 1.29 m ²	Lighting power density 16.28 W/m ² = 11.04 W/m ² /100 lx (Room)	E_{perpendicular} (Workplane) 147 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.69 m ²	Lighting power density 12.43 W/m ² = 8.62 W/m ² /100 lx (Room)	E_{perpendicular} (Workplane) 144 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.24 m ²	Lighting power density 16.94 W/m ² = 11.89 W/m ² /100 lx (Room)	E_{perpendicular} (Workplane) 142 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 3.49 m ²	Lighting power density 6.02 W/m ² = 4.77 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 126 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.40 m ²	Lighting power density 15.00 W/m ² = 10.11 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 148 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.50 m ²	Lighting power density 14.00 W/m ² = 9.37 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 149 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 5.06 m ²	Lighting power density 4.15 W/m ² = 3.67 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 113 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.35 m ²	Lighting power density 15.56 W/m ² = 10.39 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 150 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.54 m ²	Lighting power density 13.66 W/m ² = 9.29 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 147 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 1.54 m ²	Lighting power density 13.66 W/m ² = 9.30 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 147 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.26 m ²	Lighting power density 16.67 W/m ² = 11.26 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 148 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.26 m ²	Lighting power density 16.67 W/m ² = 11.11 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 150 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 1.43 m ²	Lighting power density 14.63 W/m ² = 9.92 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 147 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.43 m ²	Lighting power density 14.63 W/m ² = 9.56 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 153 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.40 m ²	Lighting power density 15.00 W/m ² = 10.50 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 143 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 1.17 m ²	Lighting power density 17.95 W/m ² = 11.91 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 151 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.17 m ²	Lighting power density 17.95 W/m ² = 11.91 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 151 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 1.33 m ²	Lighting power density 15.76 W/m ² = 10.32 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 153 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 21.0 W	A_{Room} 1.33 m ²	Lighting power density 15.76 W/m ² = 10.18 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 155 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 21.0 W	A_{Room} 3.45 m ²	Lighting power density 6.08 W/m ² = 4.75 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 128 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sanitarije

P_{total} 42.0 W	A_{Room} 13.28 m ²	Lighting power density 3.16 W/m ² = 2.40 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 132 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Sanitarije

P_{total} 60.0 W	A_{Room} 15.70 m ²	Lighting power density 3.82 W/m ² = 2.68 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 143 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Spremište

P_{total} 21.7 W	A_{Room} 5.90 m ²	Lighting power density 3.68 W/m ² = 2.13 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 172 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Spremište

P_{total} 21.7 W	A_{Room} 5.23 m ²	Lighting power density 4.15 W/m ² = 2.31 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 180 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Spremište

P_{total} 35.2 W	A_{Room} 10.15 m ²	Lighting power density 3.47 W/m ² = 1.91 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 182 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Spremište

P_{total} 387.2 W	A_{Room} 110.45 m ²	Lighting power density 3.51 W/m ² = 1.58 W/m ² /100 lx (Room) 3.51 W/m ² = 1.58 W/m ² /100 lx (Workplane)	E_{perpendicular (Workplane)} 221 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
11	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Spremište

P_{total} 70.4 W	A_{Room} 40.22 m ²	Lighting power density 1.75 W/m ² = 1.15 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 152 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Svlačionica

P_{total} 43.4 W	A_{Room} 13.36 m ²	Lighting power density 3.25 W/m ² = 1.53 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 213 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Svlačionica

P_{total} 43.4 W	A_{Room} 13.25 m ²	Lighting power density 3.28 W/m ² = 1.53 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 214 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Svlačionica

P_{total} 43.4 W	A_{Room} 12.93 m ²	Lighting power density 3.36 W/m ² = 1.55 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 217 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Svlačionica

P_{total} 43.4 W	A_{Room} 13.20 m ²	Lighting power density 3.29 W/m ² = 1.53 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular (Workplane)}$ 214 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Svlačionica

P_{total} 43.4 W	A_{Room} 12.85 m ²	Lighting power density 3.38 W/m ² = 1.55 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular (Workplane)}$ 218 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Svlačionica

P_{total} 43.4 W	A_{Room} 13.44 m ²	Lighting power density 3.23 W/m ² = 1.51 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular (Workplane)}$ 214 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Svlačionica

P_{total} 52.7 W	A_{Room} 9.97 m ²	Lighting power density 5.28 W/m ² = 2.26 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 234 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	92901898 (STD - standard)	AQFPRO L LED6400-840 PC WB HF	52.7 W	6550 lm

Svlačionica

P_{total} 35.2 W	A_{Room} 8.08 m ²	Lighting power density 4.36 W/m ² = 2.16 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 202 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Teretana

P_{total} 470.4 W	A_{Room} 137.71 m ²	Lighting power density 3.42 W/m ² (Room)
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
14	Thorn	96634488 (STD - standard)	BETA 3 4100-840 HF LRO Q600	33.6 W	4099 lm

Sportska dvorana Borovo naselje · Prizemlje
Room List (Energy evaluation)

Teretana

P_{total} 300.0 W	A_{Room} 70.95 m ²	Lighting power density 4.23 W/m ² (Room)
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
6	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm

Tuševi

P_{total} 43.4 W	A_{Room} 11.43 m ²	Lighting power density 3.80 W/m ² = 1.58 W/m ² /100 lx (Room)	E_{perpendicular} (Workplane) 240 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Tuševi

P_{total} 41.7 W	A_{Room} 11.43 m ²	Lighting power density 3.65 W/m ² = 1.65 W/m ² /100 lx (Room)	E_{perpendicular} (Workplane) 221 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm

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Room List (Energy evaluation)

Tuševi

P_{total} 41.7 W	A_{Room} 11.62 m ²	Lighting power density 3.59 W/m ² = 1.63 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 220 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm

Tuševi

P_{total} 35.2 W	A_{Room} 8.77 m ²	Lighting power density 4.01 W/m ² = 1.89 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 212 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Ulaz

P_{total} 480.0 W	A_{Room} 138.13 m ²	Lighting power density 3.48 W/m ² = 1.47 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 236 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
32	THORNeco	96632755 (STD - standard)	AMY VARIO 150 LED DL 1500 830/35/40	15.0 W	1500 lm

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Room List (Energy evaluation)

Ulaz

P_{total} 50.0 W	A_{Room} 2.73 m ²	Lighting power density 18.33 W/m ² = 8.34 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 220 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
1	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm

Ulaz

P_{total} 70.0 W	A_{Room} 9.07 m ²	Lighting power density 7.71 W/m ² = 3.29 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 235 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Ured

P_{total} 99.0 W	A_{Room} 13.39 m ²	Lighting power density 7.39 W/m ² (Room)
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
3	Thorn	96628932 (STD - standard)	COLLEGE LED4200-840 HF L1200	33.0 W	4200 lm

Sportska dvorana Borovo naselje · Prizemlje

Room List (Energy evaluation)

Ured

P_{total}
165.0 W

A_{Room}
25.90 m²

Lighting power density
6.37 W/m² (Room)

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
5	Thorn	96628932 (STD - standard)	COLLEGE LED4200-840 HF L1200	33.0 W	4200 lm

Ured

P_{total}
66.0 W

A_{Room}
12.21 m²

Lighting power density
5.40 W/m² (Room)

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	Thorn	96628932 (STD - standard)	COLLEGE LED4200-840 HF L1200	33.0 W	4200 lm

Ured

P_{total}
64.0 W

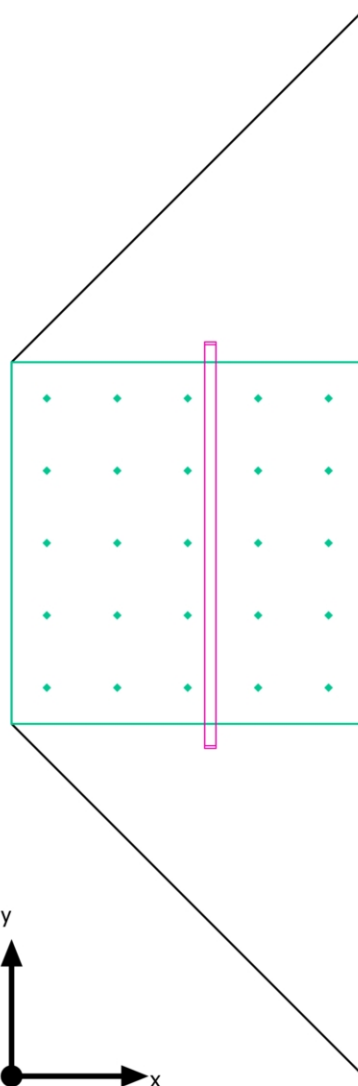
A_{Room}
5.62 m²

Lighting power density
11.38 W/m² (Room)

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	Thorn	96628877 (STD - standard)	COLLEGE LED6500-840 HF L1500	64.0 W	6500 lm

Sportska dvorana Borovo naselje · Prizemlje · Blagajna

Summary



Sportska dvorana Borovo naselje · Prizemlje · Blagajna

Summary

Results

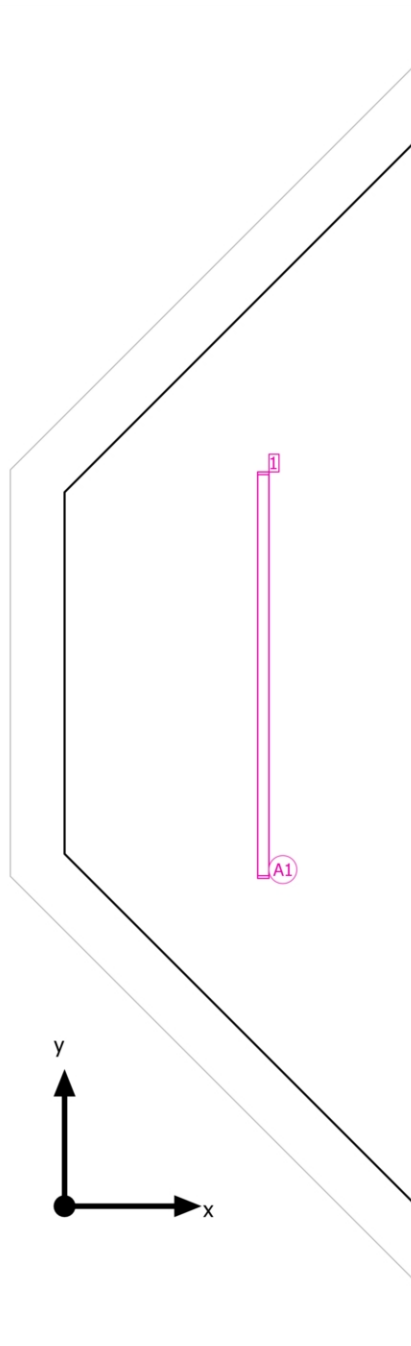
	Symbol	Calculated	Target	Check	Index
Consumption values	Consumption	140 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	14.60 W/m ²	-	-	

Utilisation profile: Places of public assembly - General areas, Ticket offices

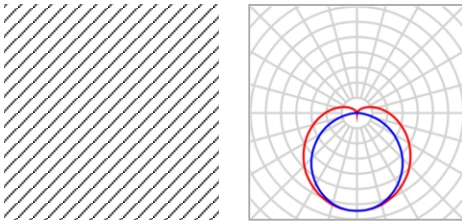
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm	120.0 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Blagajna
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Blagajna
Luminaire layout plan



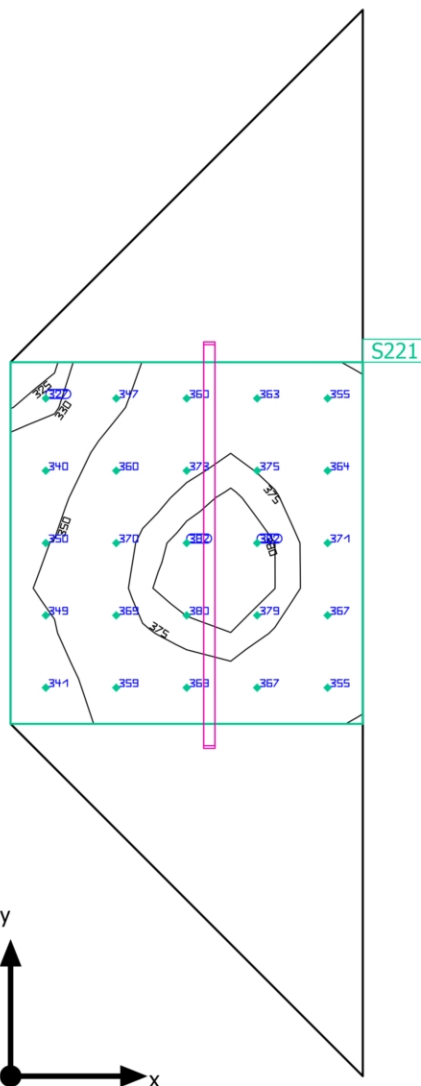
Manufacturer	THORNeco
Article No.	96666099 (STD - standard)
Article name	EMMA LED 1500 6000 840

1 x THORNeco EMMA LED 1500 6000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.733 m / 1.959 m / 3.120 m	0.733 m	1.959 m	3.120 m	1
X-direction	1 pcs., Centre - centre, Distances not equal				
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Blagajna

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Blagajna

Calculation objects

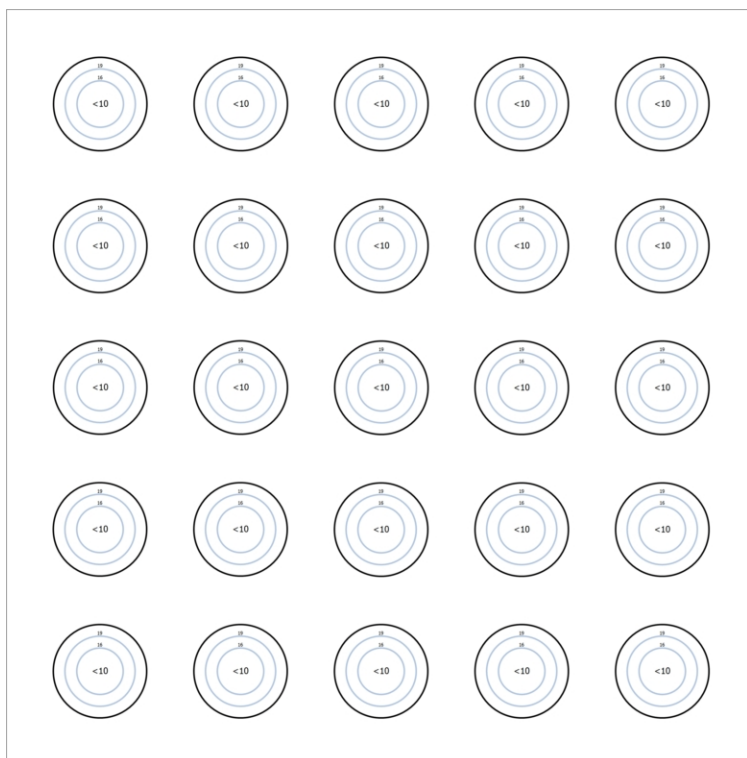
Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Blagajna) Perpendicular illuminance (adaptive) Height: 0.800 m	362 lx	324 lx	383 lx	0.90	0.85	S221

Sportska dvorana Borovo naselje · Prizemlje · Blagajna
Calculation objects

Radna površina (Blagajna) (UGR)

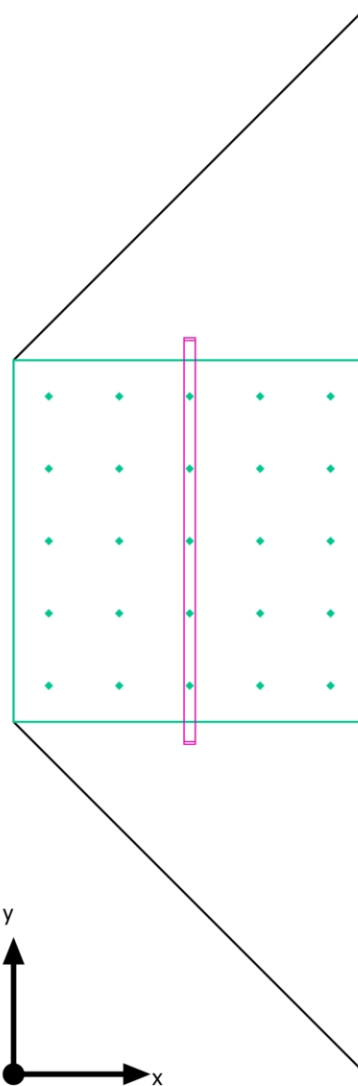
Strongest glare at	-33°
max	<10
Target	≤22.0
Viewing sector	0° - 360°
Step width	15°
Height	1.200 m
Index	S221



Utilisation profile: Places of public assembly - General areas, Ticket offices

Sportska dvorana Borovo naselje · Prizemlje · Blagajna

Summary



Sportska dvorana Borovo naselje · Prizemlje · Blagajna

Summary

Results

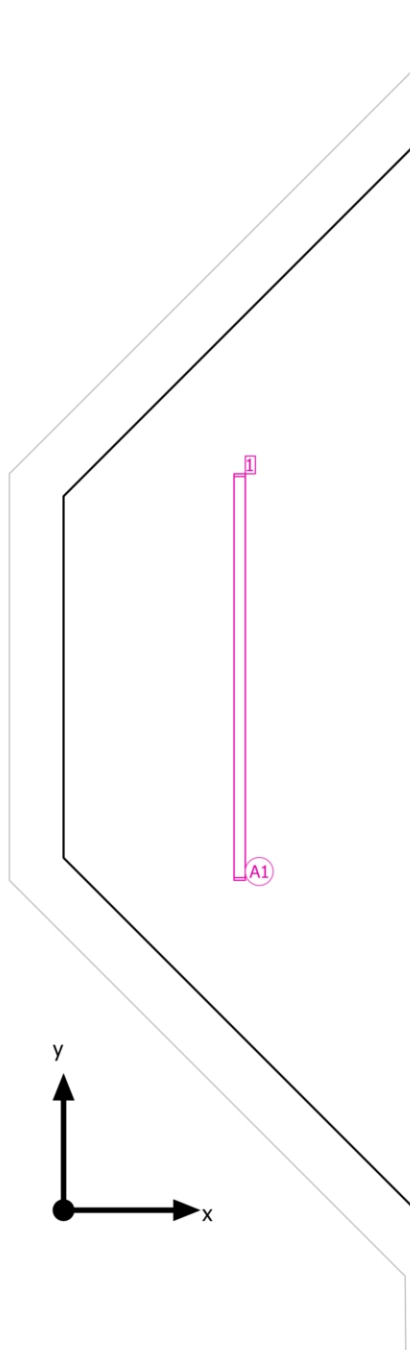
	Symbol	Calculated	Target	Check	Index
Consumption values	Consumption	140 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	14.60 W/m ²	-	-	

Utilisation profile: Places of public assembly - General areas, Ticket offices

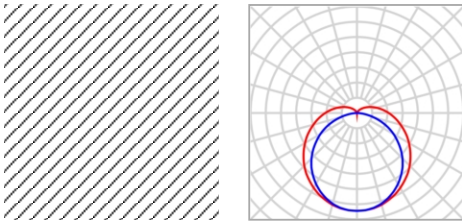
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm	120.0 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Blagajna
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Blagajna
Luminaire layout plan

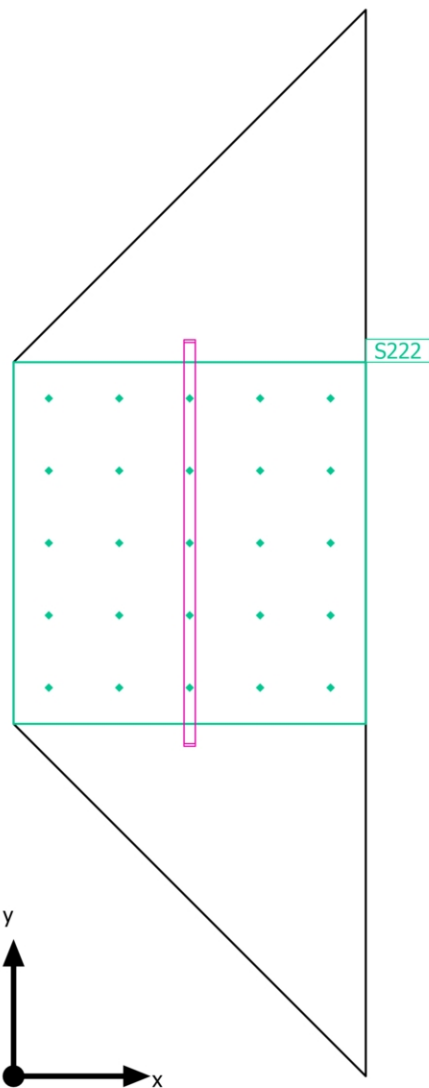


Manufacturer	THORNeco
Article No.	96666099 (STD - standard)
Article name	EMMA LED 1500 6000 840

1 x THORNeco EMMA LED 1500 6000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.650 m / 1.967 m / 3.120 m	0.650 m	1.967 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 3.934 m				
Y-direction	1 pcs., Centre - centre, 1.300 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Blagajna
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Blagajna

Calculation objects

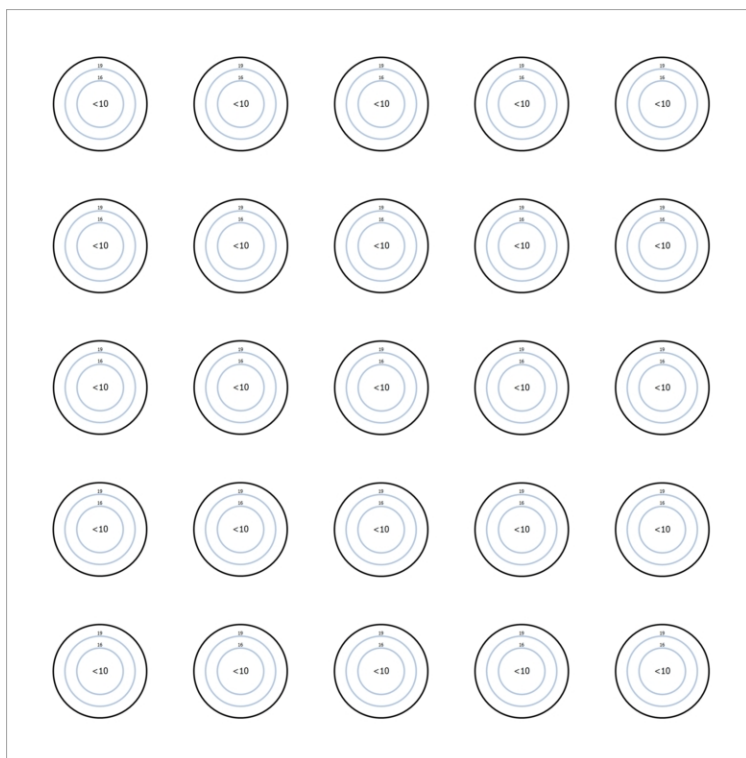
Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Blagajna) Perpendicular illuminance (adaptive) Height: 0.800 m	377 lx	350 lx	395 lx	0.93	0.89	S222

Sportska dvorana Borovo naselje · Prizemlje · Blagajna
Calculation objects

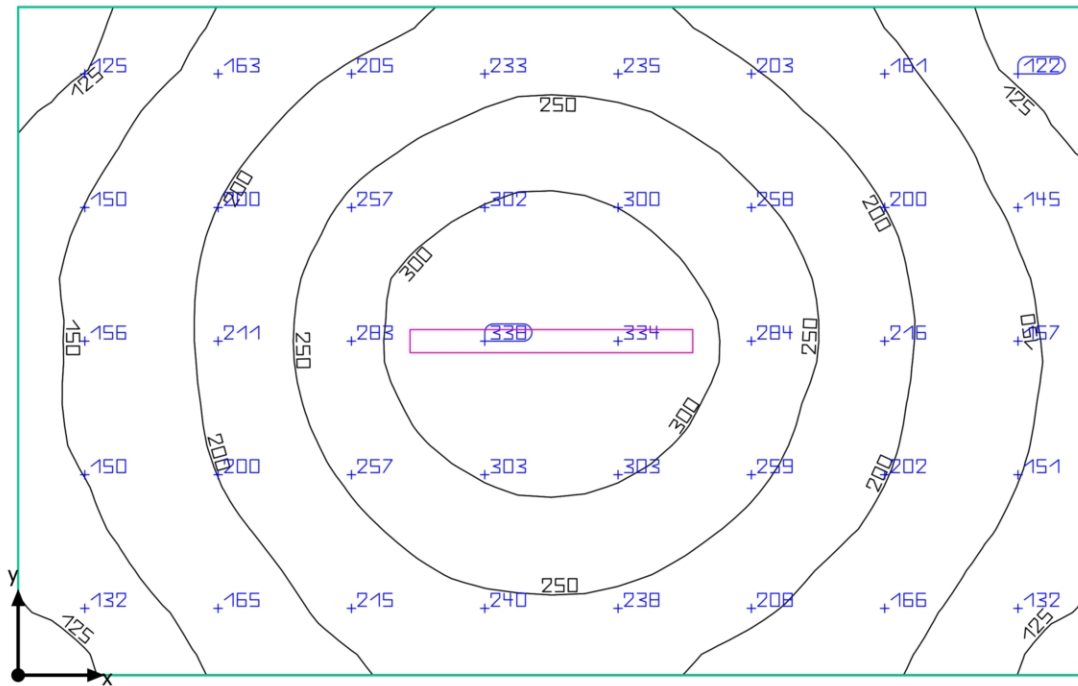
Radna površina (Blagajna) (UGR)

Strongest glare at	-33°
max	<10
Target	≤22.0
Viewing sector	0° - 360°
Step width	15°
Height	1.200 m
Index	S222



Utilisation profile: Places of public assembly - General areas, Ticket offices

Sportska dvorana Borovo naselje · Prizemlje · Garderoba
Summary



Sportska dvorana Borovo naselje · Prizemlje · Garderoba

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	213 lx	≥ 200 lx	✓	S13
	g_1	0.51	-	-	S13
Consumption values	Consumption	34 kWh/a	max. 400 kWh/a	✓	
Lighting power density	Room	3.86 W/m ²	-	-	
		1.81 W/m ² /100 lx	-	-	

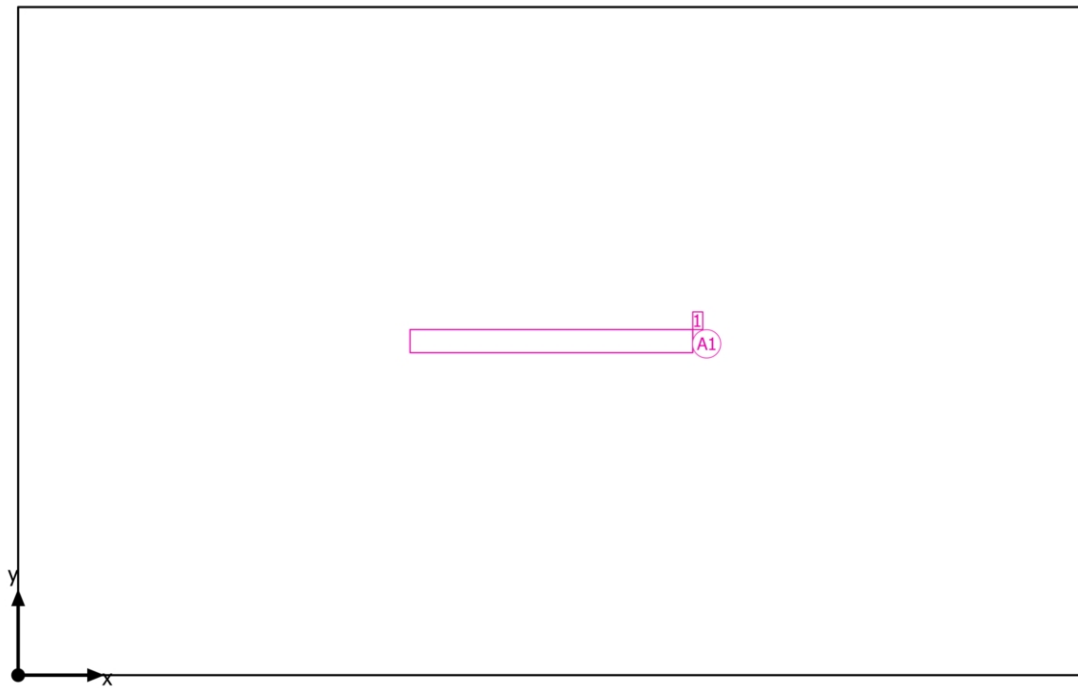
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

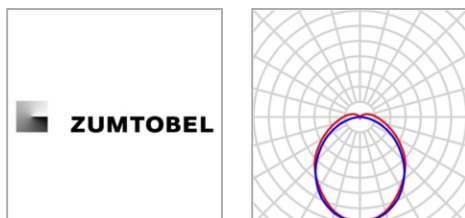
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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Garderoba

Luminaire layout plan



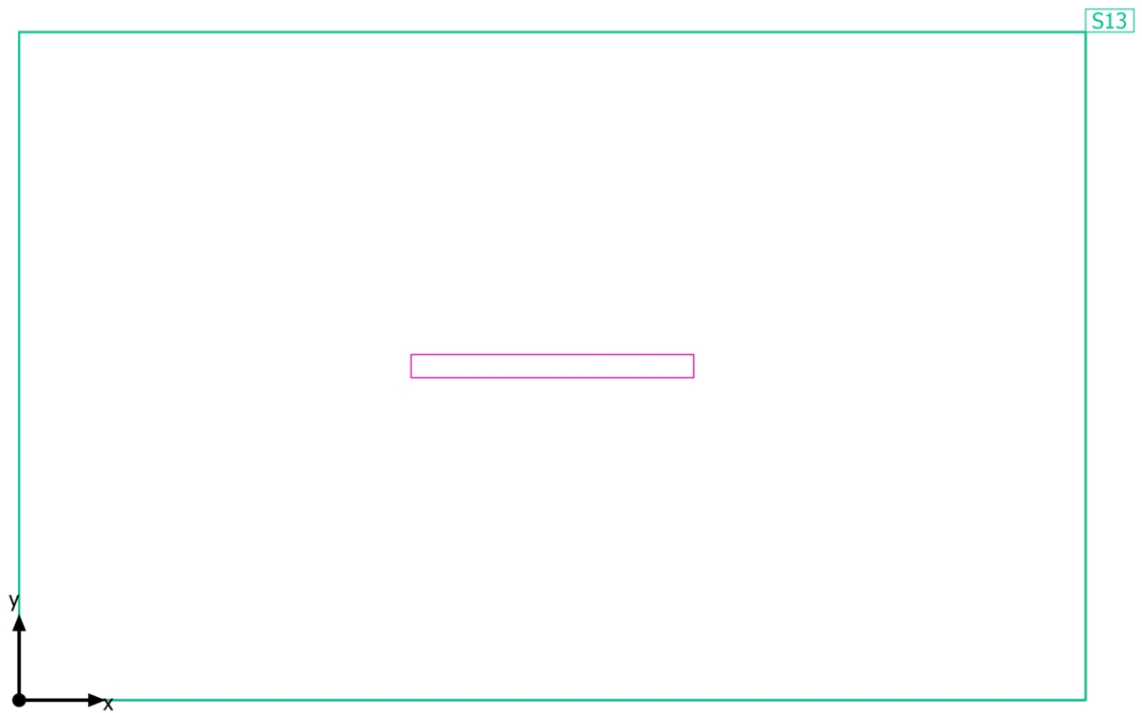
Manufacturer	ZUMTOBEL
Article No.	96630755 (STD - standard)
Article name	AQFPRO S LED5200-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED5200-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.075 m / 1.300 m / 3.120 m	2.075 m	1.300 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 4.150 m				
Y-direction	1 pcs., Centre - centre, 2.600 m				
Arrangement	A1				

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Calculation objects



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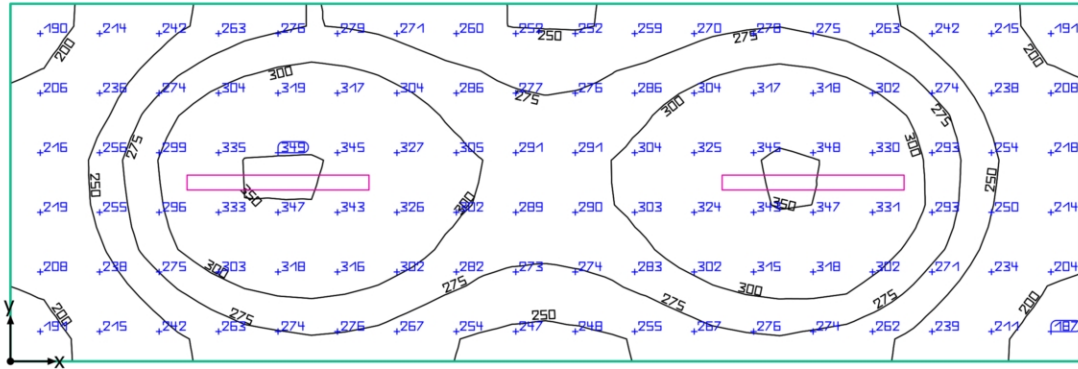
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Garderoba) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	213 lx (≥ 200 lx) ✓	109 lx	342 lx	0.51	0.32	S13

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Garderoba
Summary



Sportska dvorana Borovo naselje · Prizemlje · Garderoba

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	277 lx	≥ 200 lx	✓	S51
	g_1	0.67	-	-	S51
Consumption values	Consumption	58 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	5.03 W/m ²	-	-	
		1.82 W/m ² /100 lx	-	-	

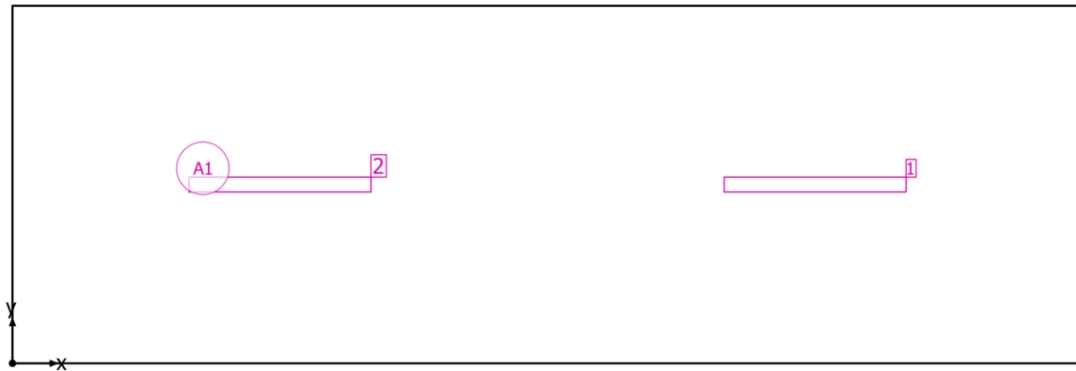
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

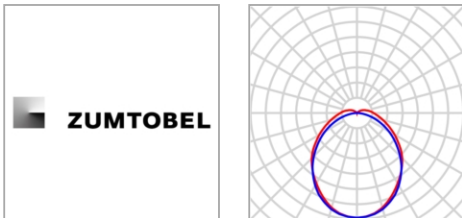
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Garderoba
Luminaire layout plan



Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	4.853 m / 1.082 m / 3.120 m	4.853 m	1.082 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 3.235 m	1.617 m	1.082 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.163 m				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Garderoba

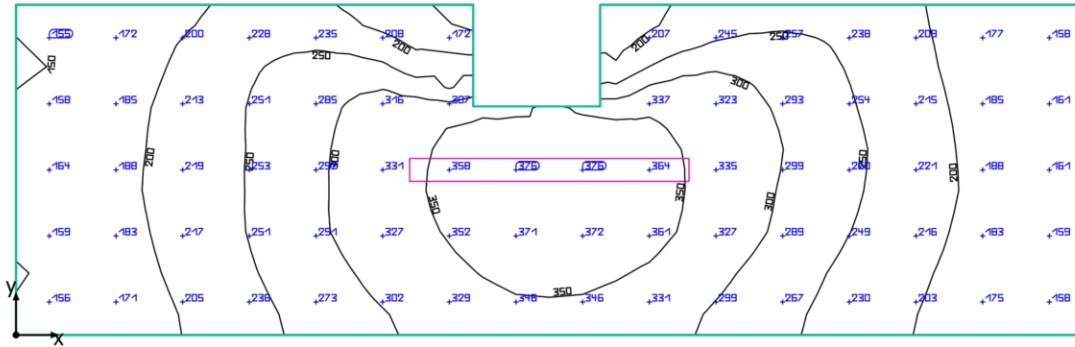
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Garderoba) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	277 lx (≥ 200 lx) ✓	185 lx	351 lx	0.67	0.53	S51

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Garderoba
Summary



Sportska dvorana Borovo naselje · Prizemlje · Garderoba

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	252 lx	≥ 200 lx	✓	S134
	g_1	0.60	-	-	S134
Consumption values	Consumption	34 kWh/a	max. 200 kWh/a	✓	
Lighting power density	Room	7.93 W/m ²	-	-	
		3.15 W/m ² /100 lx	-	-	

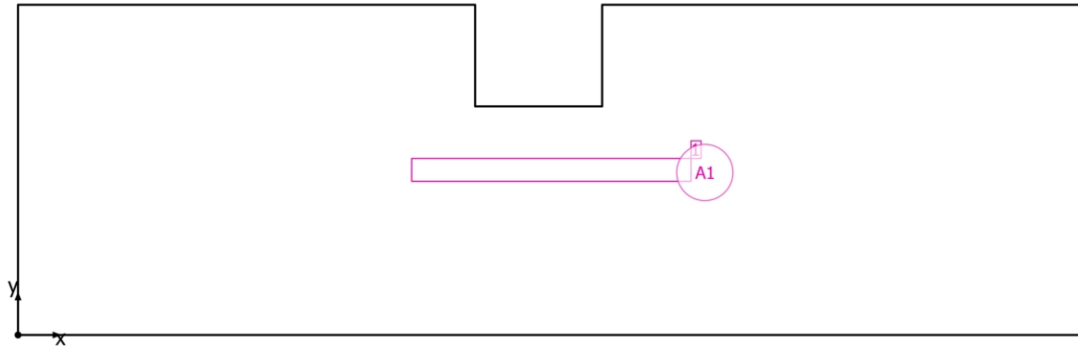
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

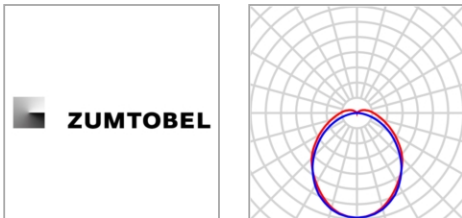
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Garderoba
Luminaire layout plan



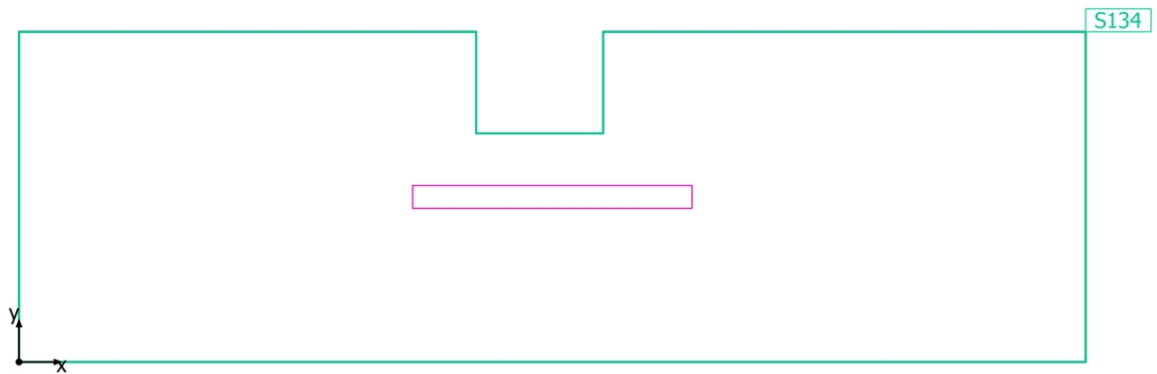
Manufacturer	ZUMTOBEL
Article No.	96630755 (STD - standard)
Article name	AQFPRO S LED5200-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED5200-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.100 m / 0.650 m / 3.120 m	2.100 m	0.650 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 4.200 m				
Y-direction	1 pcs., Centre - centre, 1.300 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Garderoba) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	252 lx (≥ 200 lx) ✓	150 lx	377 lx	0.60	0.40	S134

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

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Summary



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Summary

Results

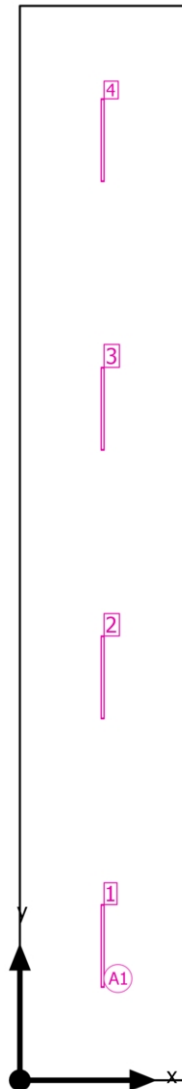
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	147 lx	≥ 100 lx	✓	S11
	g_1	0.67	-	-	S11
Consumption values	Consumption	150 kWh/a	max. 1350 kWh/a	✓	
Lighting power density	Room	3.75 W/m ²	-	-	
		2.54 W/m ² /100 lx	-	-	

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

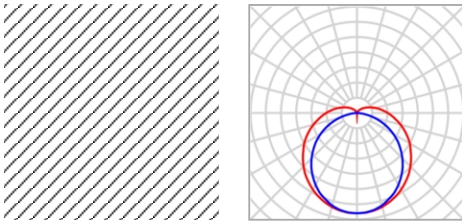
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

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Luminaire layout plan



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Luminaire layout plan



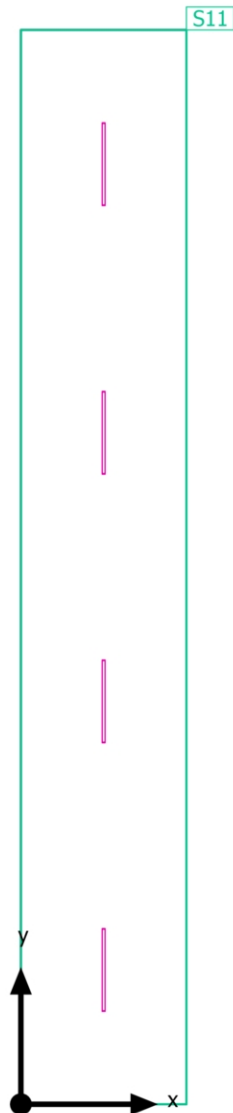
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

4 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.200 m / 1.947 m / 3.120 m	1.200 m	1.947 m	3.120 m	1
X-direction	4 pcs., Centre - centre, 3.893 m	1.200 m	5.840 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.400 m	1.200 m	9.733 m	3.120 m	3
		1.200 m	13.627 m	3.120 m	4
Arrangement	A1				

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Calculation objects



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Calculation objects

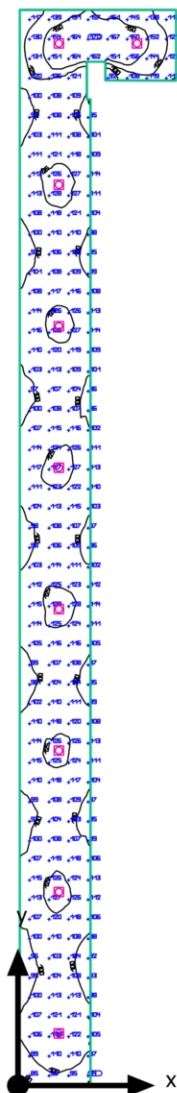
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	147 lx (≥ 100 lx) ✓	98.8 lx	179 lx	0.67	0.55	S11

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

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Summary



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	115 lx	≥ 100 lx	✓	S31
	g_1	0.62	-	-	S31
Consumption values	Consumption	200 kWh/a	max. 2100 kWh/a	✓	
Lighting power density	Room	3.05 W/m ²	-	-	
		2.66 W/m ² /100 lx	-	-	

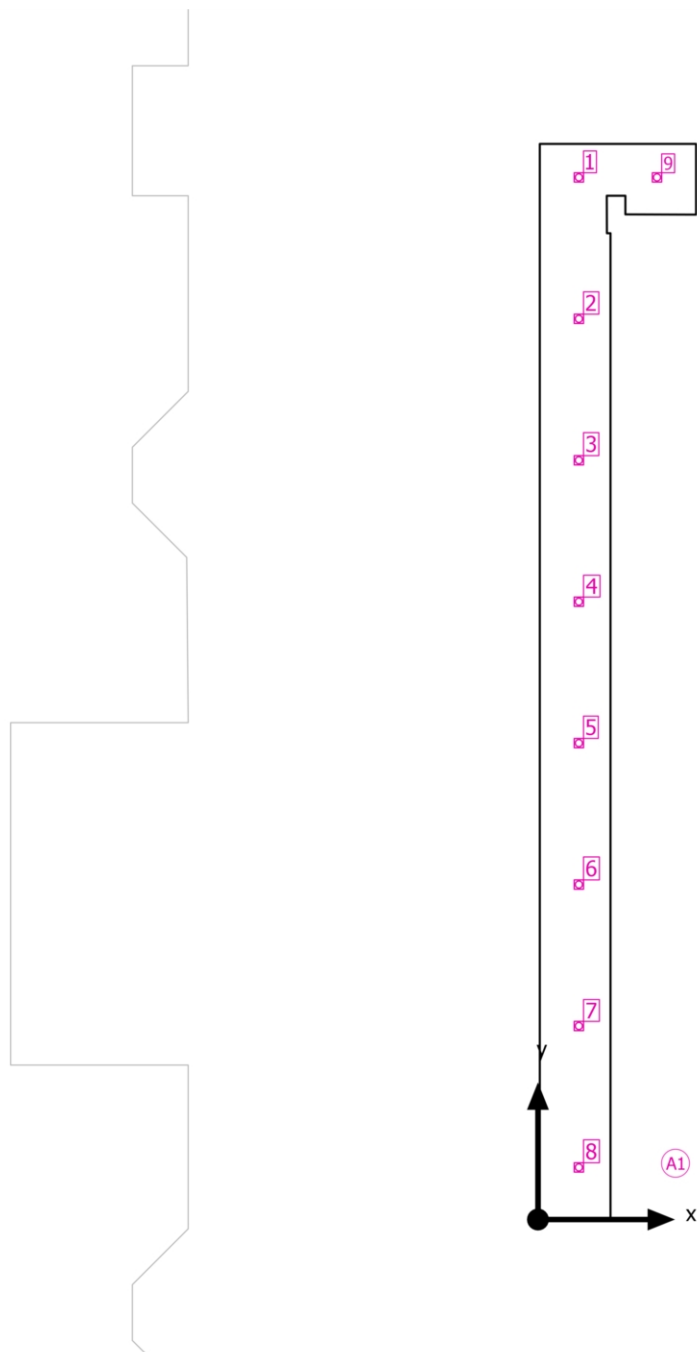
Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
9	THORNeco	96632756 (STD - standard)	AMY VARIO 200 LED DL 2000 830/35/40	20.0 W	2002 lm	100.1 lm/W

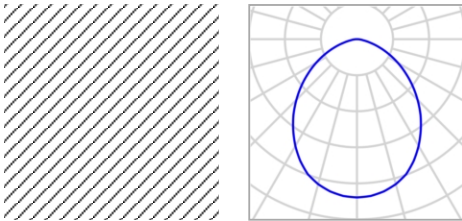
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Luminaire layout plan



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Luminaire layout plan



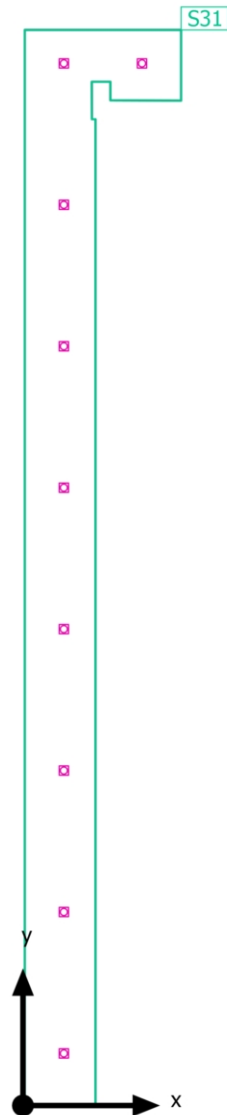
Manufacturer	THORNeco
Article No.	96632756 (STD - standard)
Article name	AMY VARIO 200 LED DL 2000 830/35/40

9 x THORNeco AMY VARIO 200 LED DL 2000 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.100 m / 28.000 m / 3.120 m	1.100 m	28.000 m	3.120 m	1
X-direction	8 pcs., Centre - centre, Distances not equal	1.100 m	24.200 m	3.120 m	2
		1.100 m	20.400 m	3.120 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	1.100 m	16.600 m	3.120 m	4
		1.100 m	12.800 m	3.120 m	5
Arrangement	A1	1.100 m	9.000 m	3.120 m	6
		1.100 m	5.200 m	3.120 m	7
		1.100 m	1.400 m	3.120 m	8
		3.200 m	28.000 m	3.120 m	9

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Calculation objects



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Calculation objects

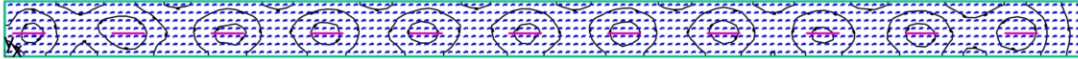
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	115 lx (≥ 100 lx) ✓	70.9 lx	173 lx	0.62	0.41	S31

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

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Summary



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Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	175 lx	≥ 100 lx	✓	S36
	g_1	0.45	-	-	S36
Consumption values	Consumption	600 kWh/a	max. 4500 kWh/a	✓	
Lighting power density	Room	4.32 W/m ²	-	-	
		2.48 W/m ² /100 lx	-	-	

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
11	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm	120.0 lm/W

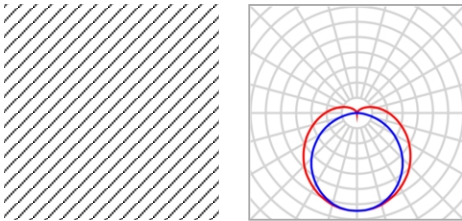
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Luminaire layout plan



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Luminaire layout plan



Manufacturer	THORNeco
Article No.	96666099 (STD - standard)
Article name	EMMA LED 1500 6000 840

11 x THORNeco EMMA LED 1500 6000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.127 m / 1.068 m / 3.120 m	1.127 m	1.068 m	3.120 m	1
X-direction	11 pcs., Centre - centre, Distances not equal	5.729 m	1.068 m	3.120 m	2
		10.331 m	1.068 m	3.120 m	3
Y-direction	1 pcs., Centre - centre, Distances not equal	14.932 m	1.068 m	3.120 m	4
		19.534 m	1.068 m	3.120 m	5
Arrangement	A1	24.136 m	1.068 m	3.120 m	6
		28.737 m	1.068 m	3.120 m	7
		33.339 m	1.068 m	3.120 m	8
		37.941 m	1.068 m	3.120 m	9
		42.542 m	1.068 m	3.120 m	10
		47.144 m	1.068 m	3.120 m	11

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Calculation objects



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Calculation objects

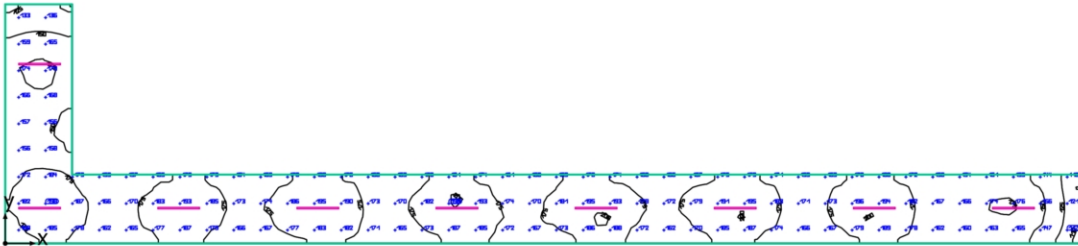
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	175 lx (≥ 100 lx) ✓	79.3 lx	232 lx	0.45	0.34	S36

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	172 lx	≥ 100 lx	✓	S38
	g_1	0.63	-	-	S38
Consumption values	Consumption	350 kWh/a	max. 2500 kWh/a	✓	
Lighting power density	Room	4.46 W/m ²	-	-	
		2.60 W/m ² /100 lx	-	-	

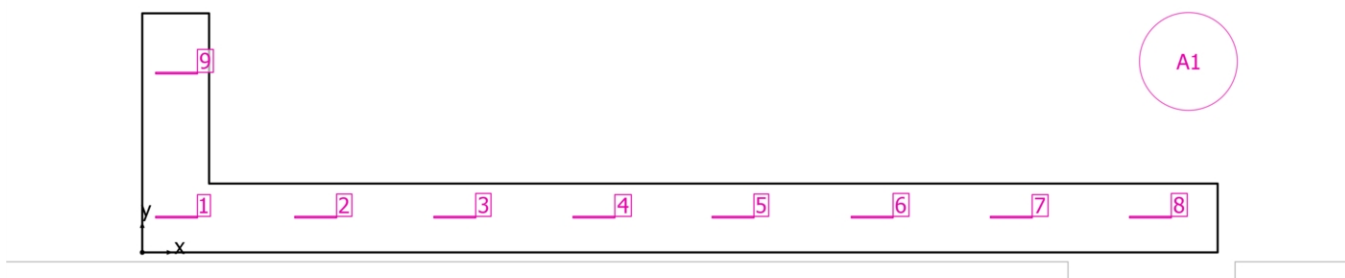
Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
9	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

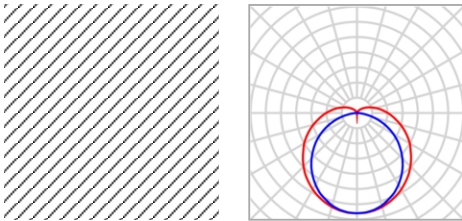
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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Luminaire layout plan



Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

9 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.986 m / 1.015 m / 3.120 m	0.986 m	1.015 m	3.120 m	1
X-direction	8 pcs., Centre - centre, Distances not equal	4.984 m	1.015 m	3.120 m	2
		8.981 m	1.015 m	3.120 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	12.979 m	1.015 m	3.120 m	4
		16.976 m	1.015 m	3.120 m	5
Arrangement	A1	20.974 m	1.015 m	3.120 m	6
		24.971 m	1.015 m	3.120 m	7
		28.969 m	1.015 m	3.120 m	8
		0.986 m	5.160 m	3.120 m	9

Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Calculation objects

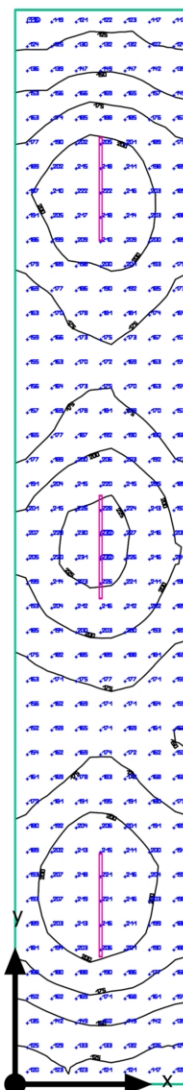
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	172 lx (≥ 100 lx) ✓	108 lx	201 lx	0.63	0.54	S38

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	180 lx	≥ 100 lx	✓	S53
	g_1	0.64	-	-	S53
Consumption values	Consumption	160 kWh/a	max. 1400 kWh/a	✓	
Lighting power density	Room	3.88 W/m ²	-	-	
		2.15 W/m ² /100 lx	-	-	

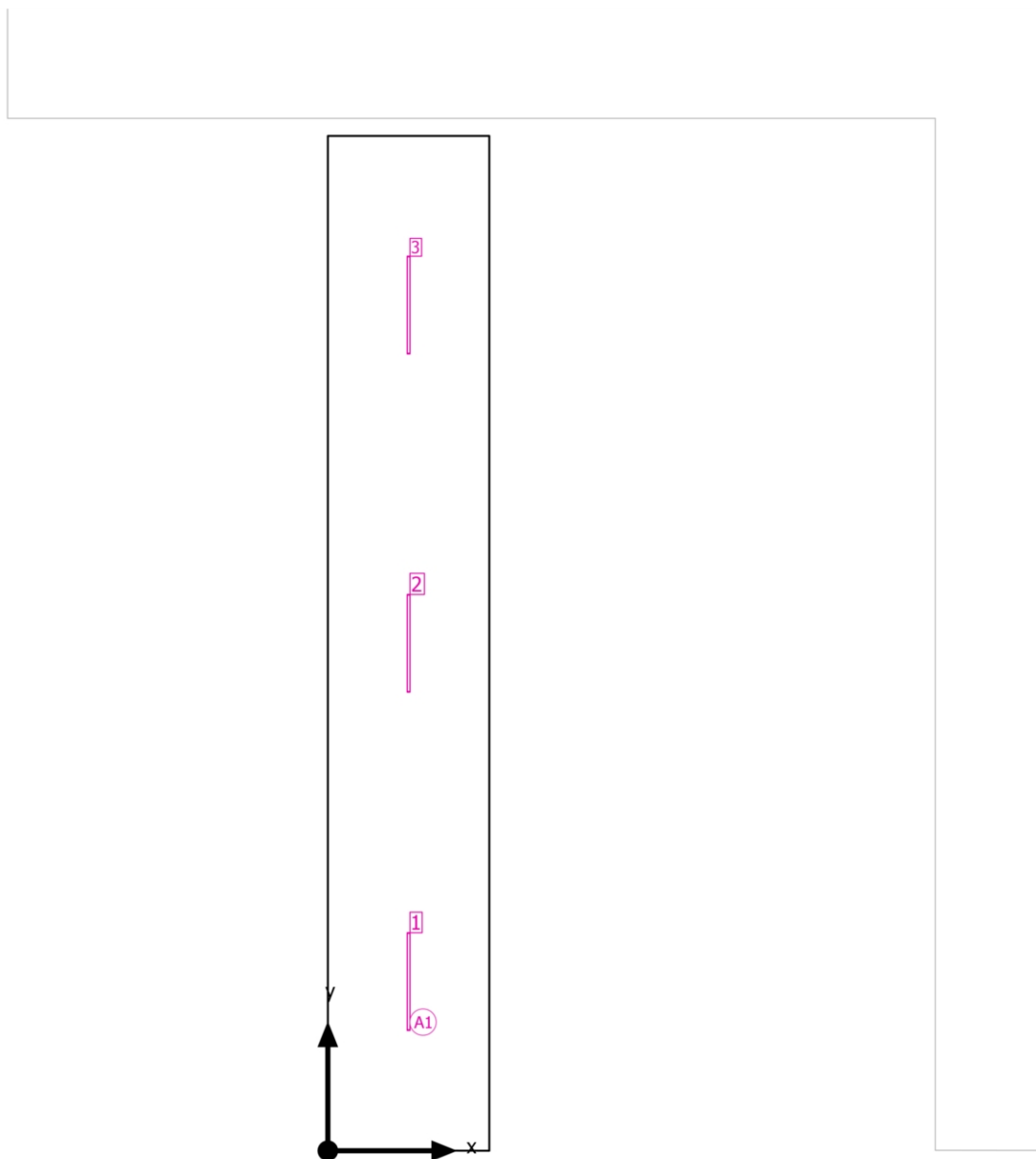
Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm	120.0 lm/W

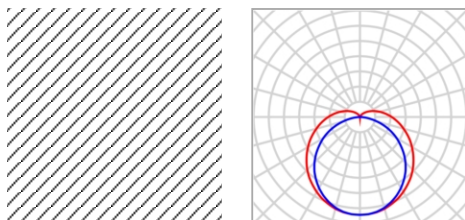
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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Luminaire layout plan



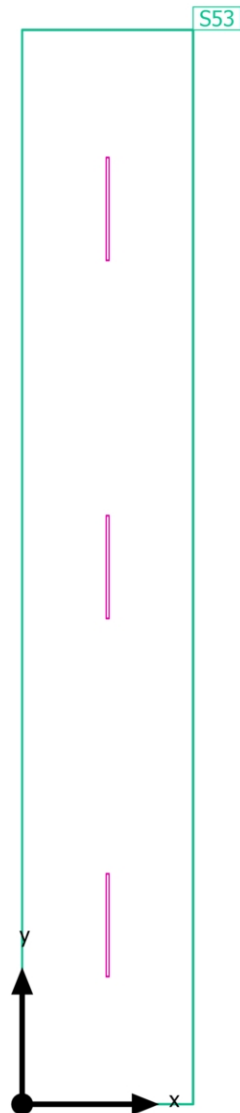
Manufacturer	THORNeco
Article No.	96666099 (STD - standard)
Article name	EMMA LED 1500 6000 840

3 x THORNeco EMMA LED 1500 6000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.240 m / 2.597 m / 3.120 m	1.240 m	2.597 m	3.120 m	1
X-direction	3 pcs., Centre - centre, 5.193 m	1.240 m	7.790 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.480 m	1.240 m	12.983 m	3.120 m	3
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

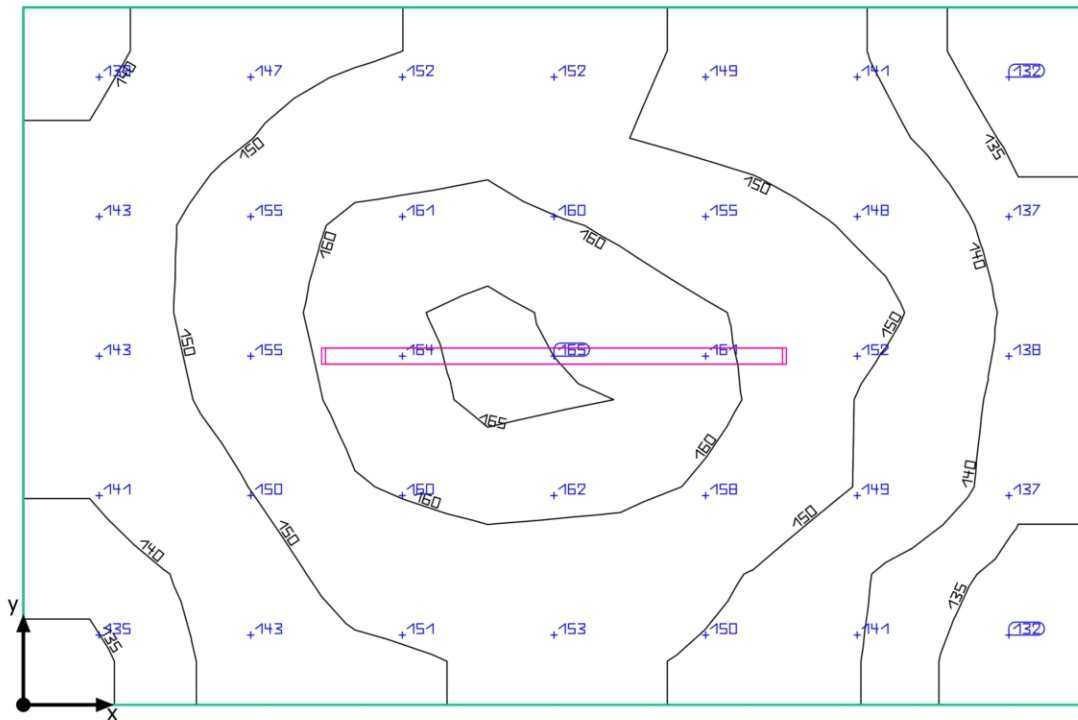
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	180 lx (≥ 100 lx) ✓	115 lx	232 lx	0.64	0.50	S53

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · Prizemlje · Hodnik
Summary



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	149 lx	≥ 100 lx	✓	S69
	g_1	0.87	-	-	S69
Consumption values	Consumption	38 kWh/a	max. 200 kWh/a	✓	
Lighting power density	Room	7.10 W/m ²	-	-	
		4.76 W/m ² /100 lx	-	-	

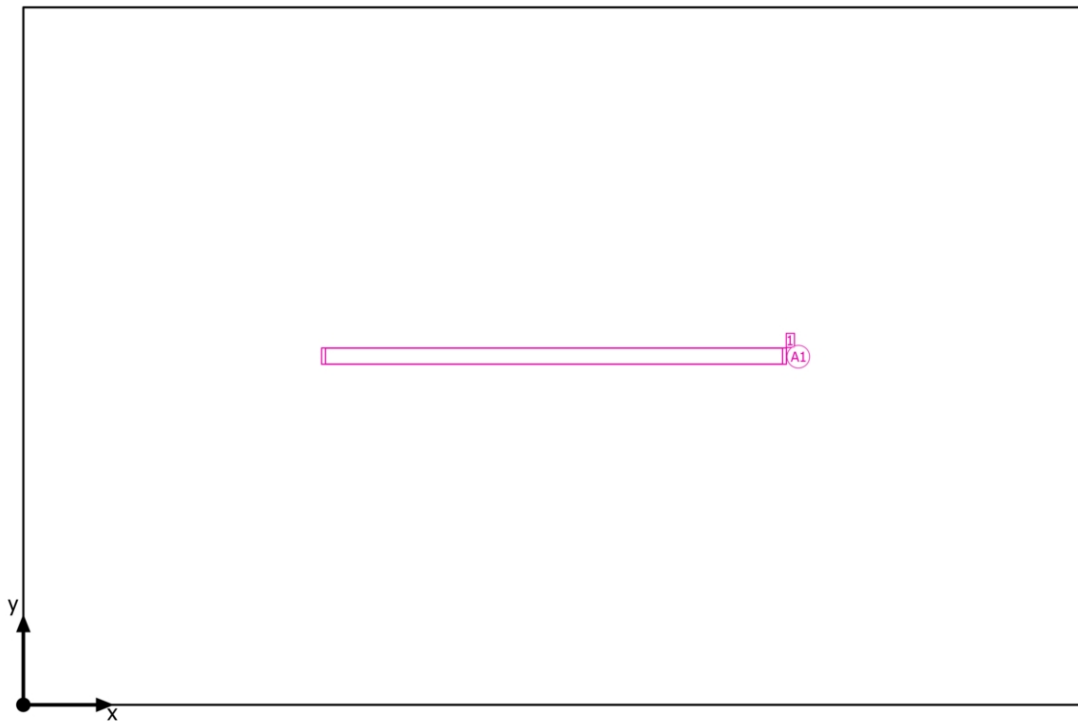
Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

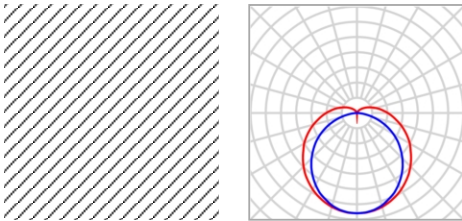
Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Luminaire layout plan



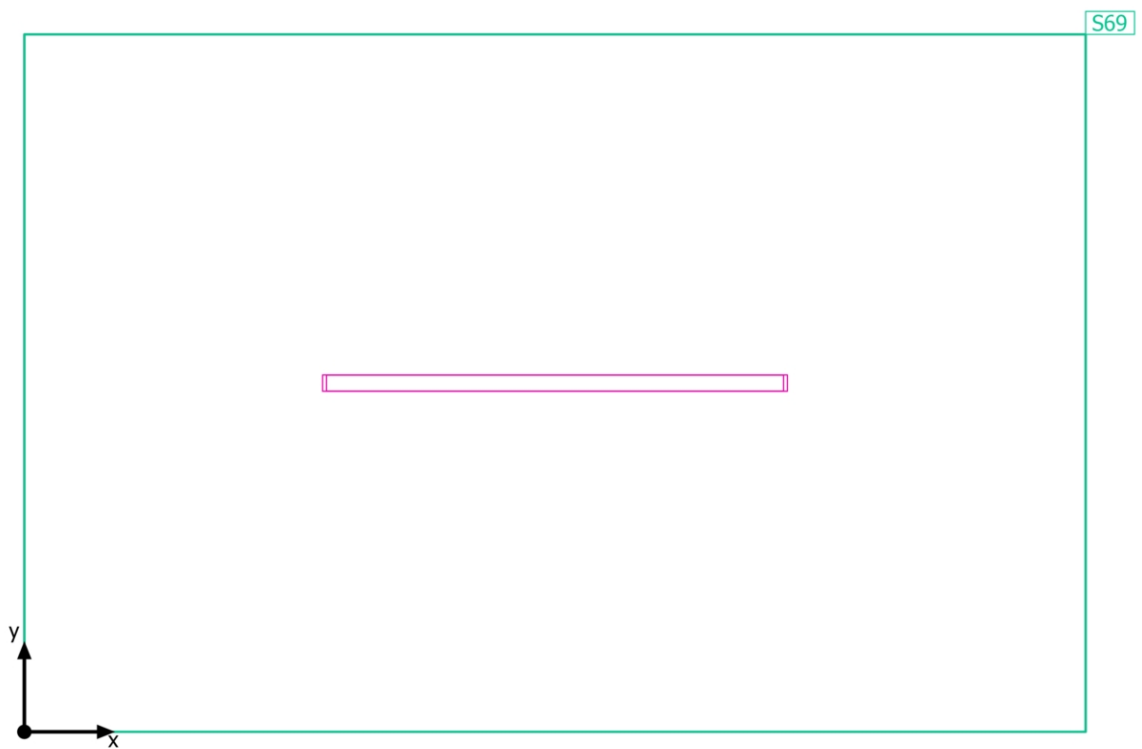
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

1 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.370 m / 0.900 m / 3.120 m	1.370 m	0.900 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.740 m				
Y-direction	1 pcs., Centre - centre, 1.800 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Calculation objects

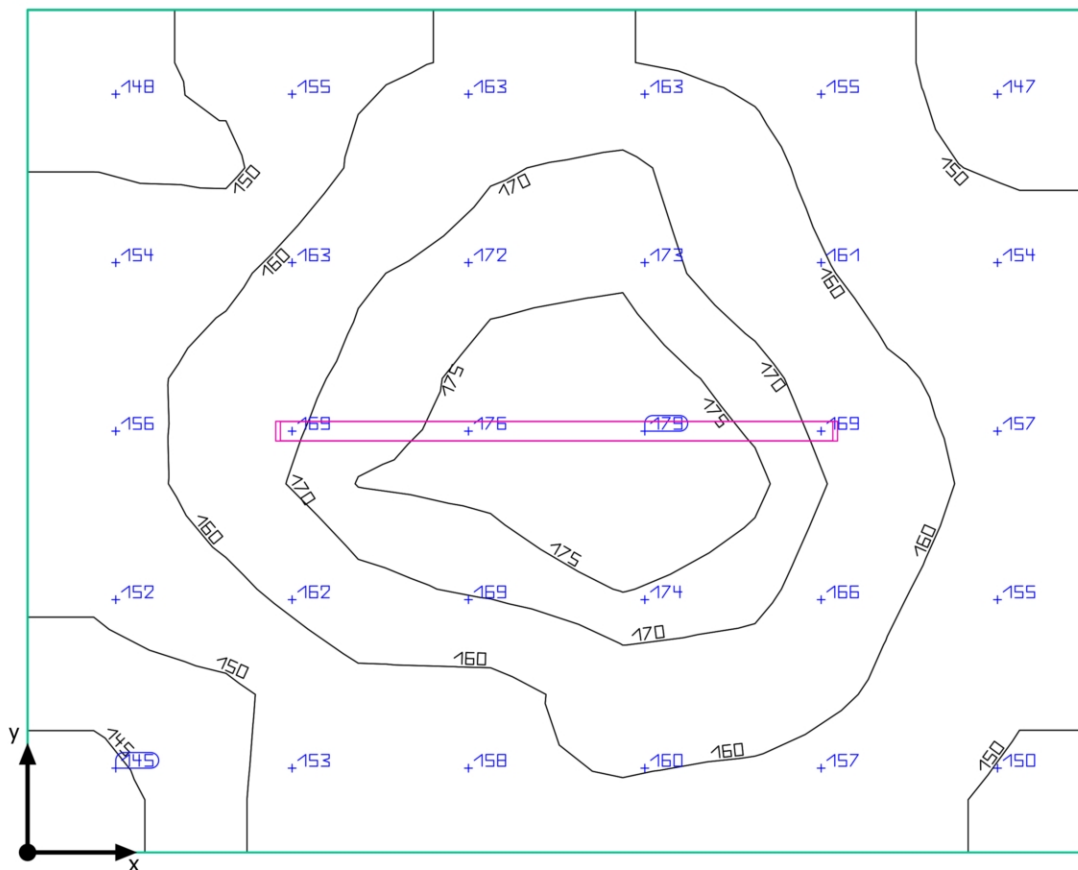
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	149 lx (≥ 100 lx) ✓	130 lx	165 lx	0.87	0.79	S69

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	160 lx	≥ 100 lx	✓	S71
	g_1	0.89	-	-	S71
Consumption values	Consumption	38 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	8.60 W/m ²	-	-	
		5.36 W/m ² /100 lx	-	-	

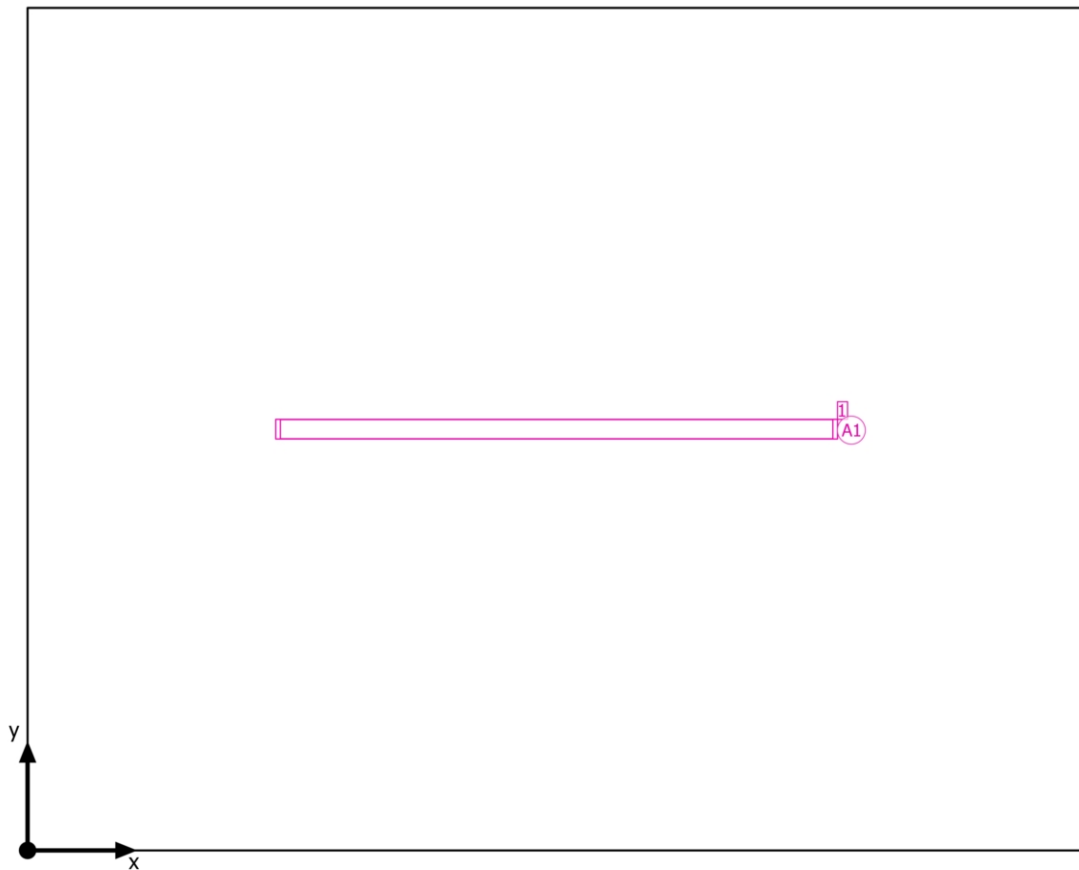
Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

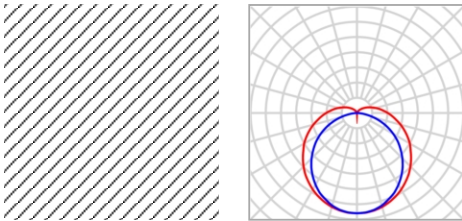
Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Luminaire layout plan



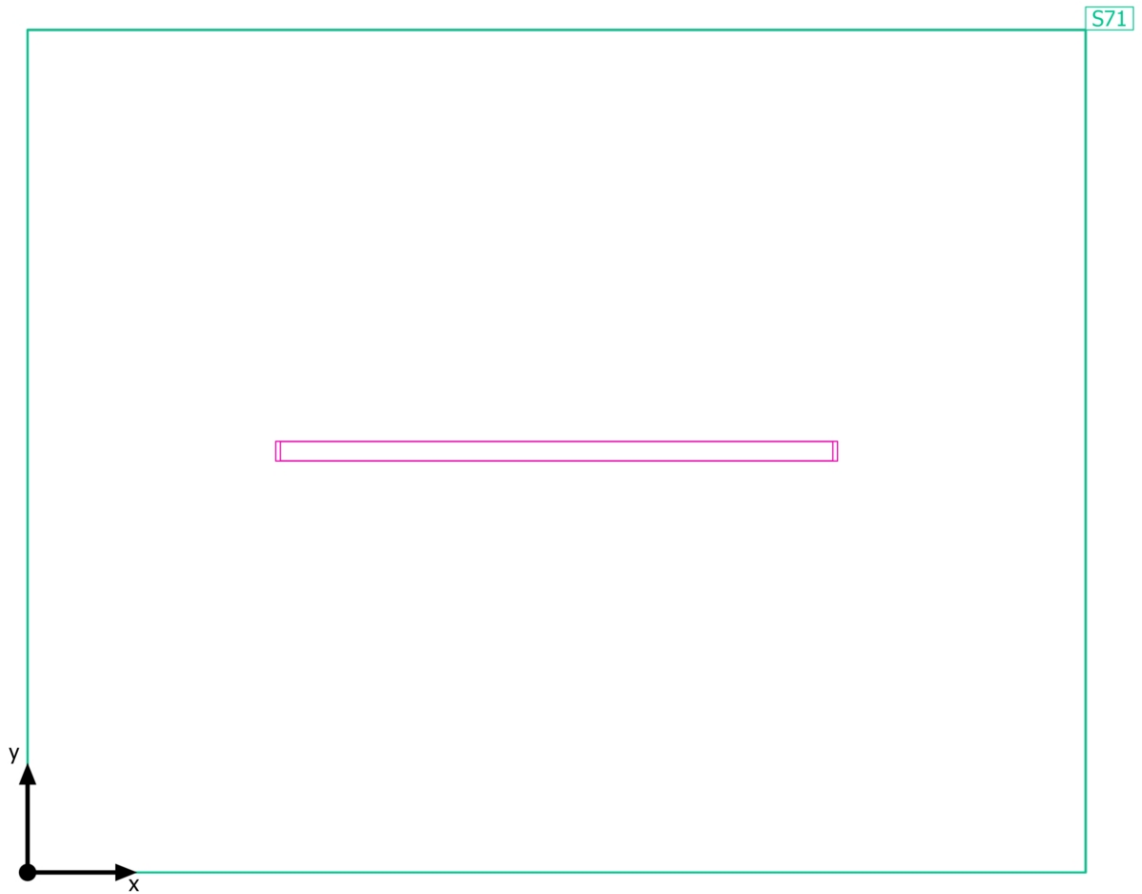
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

1 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.130 m / 0.900 m / 3.120 m	1.130 m	0.900 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.260 m				
Y-direction	1 pcs., Centre - centre, 1.800 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Hodnik

Calculation objects



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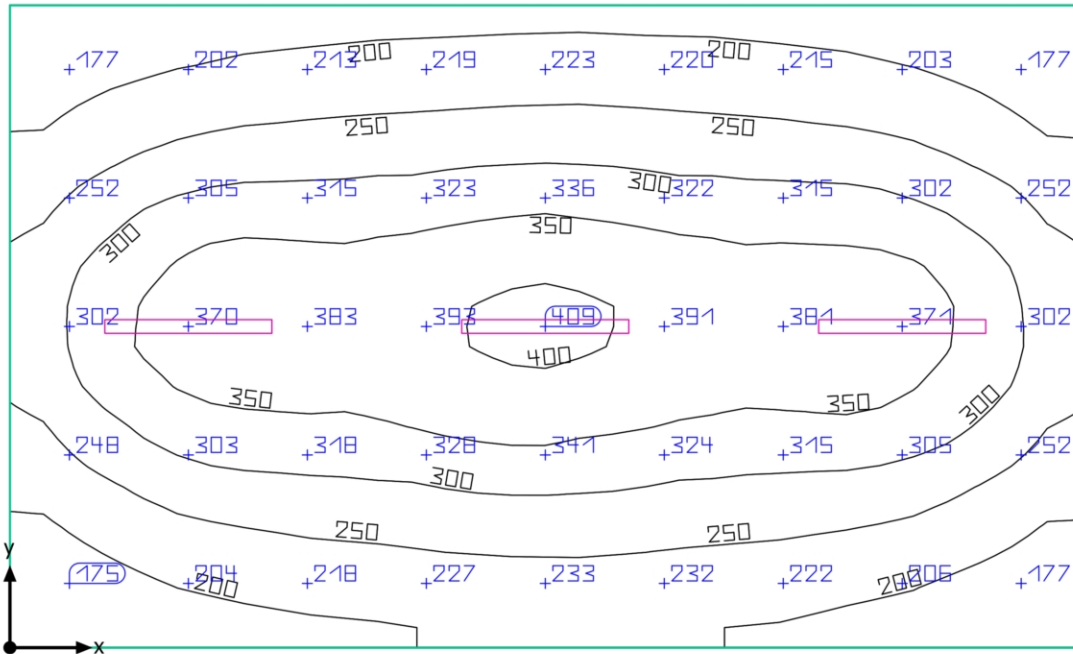
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	160 lx (≥ 100 lx) ✓	143 lx	178 lx	0.89	0.80	S71

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	277 lx	≥ 200 lx	✓	S40
	g_1	0.55	-	-	S40
Consumption values	Consumption	17 kWh/a	max. 1050 kWh/a	✓	
Lighting power density	Room	3.54 W/m ²	-	-	
		1.28 W/m ² /100 lx	-	-	

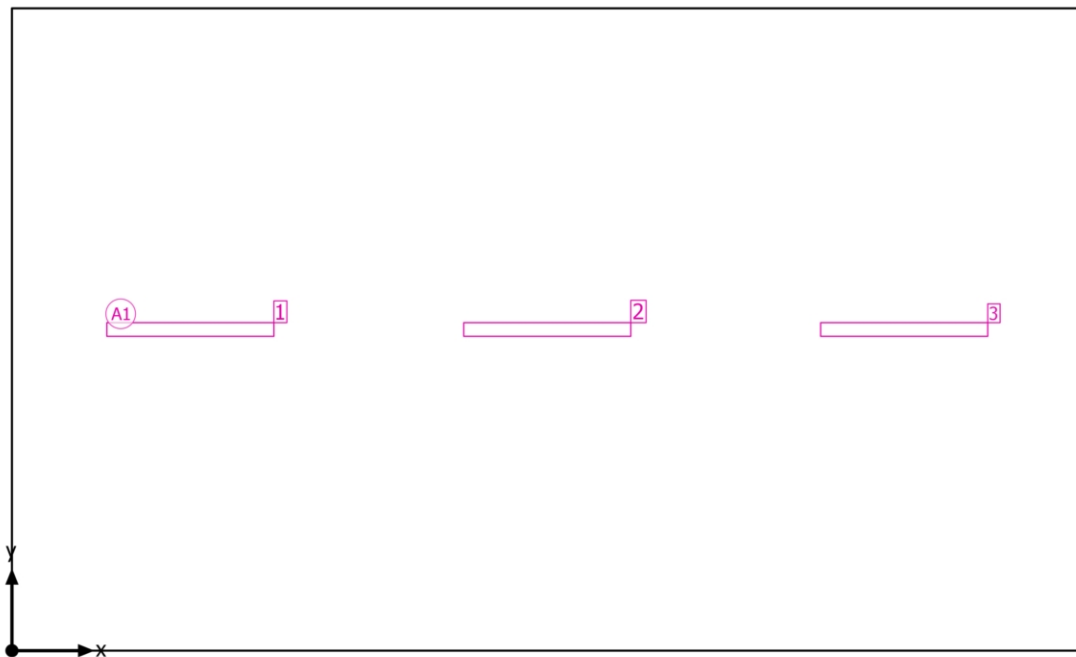
Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Luminaire list

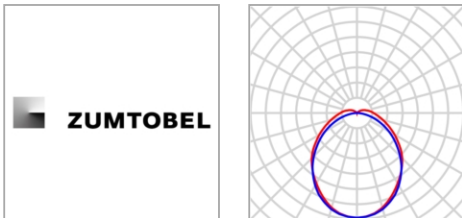
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica
Luminaire layout plan



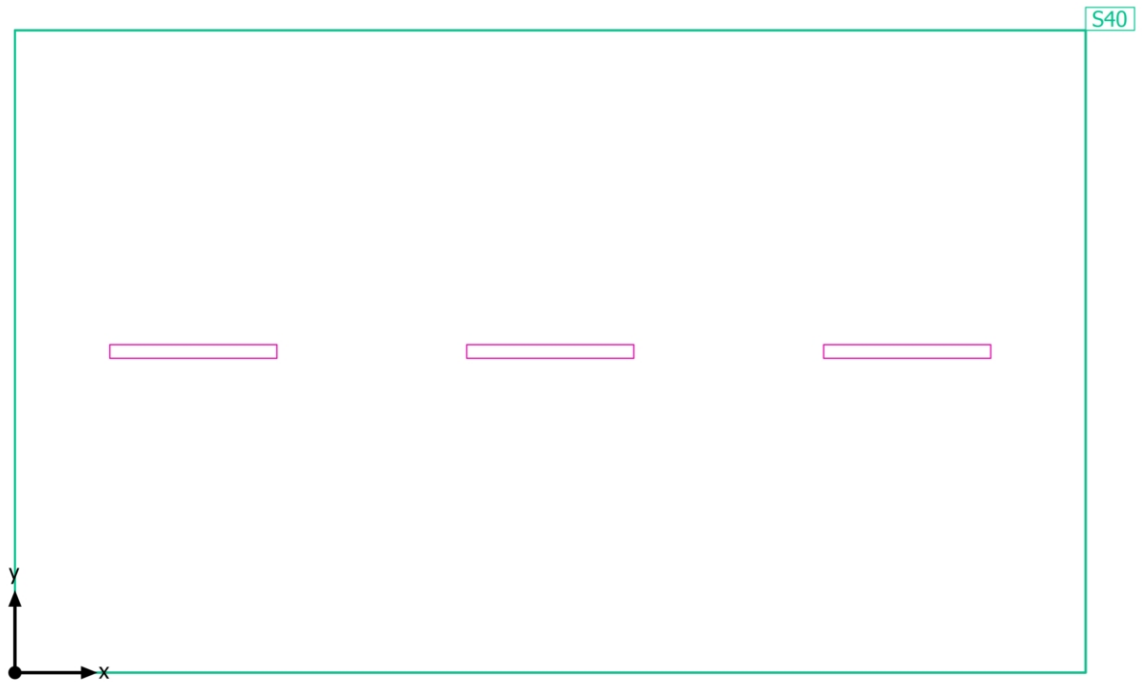
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

3 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.175 m / 2.115 m / 3.120 m	1.175 m	2.115 m	3.120 m	1
X-direction	3 pcs., Centre - centre, 2.350 m	3.525 m	2.115 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 4.230 m	5.875 m	2.115 m	3.120 m	3
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica

Calculation objects



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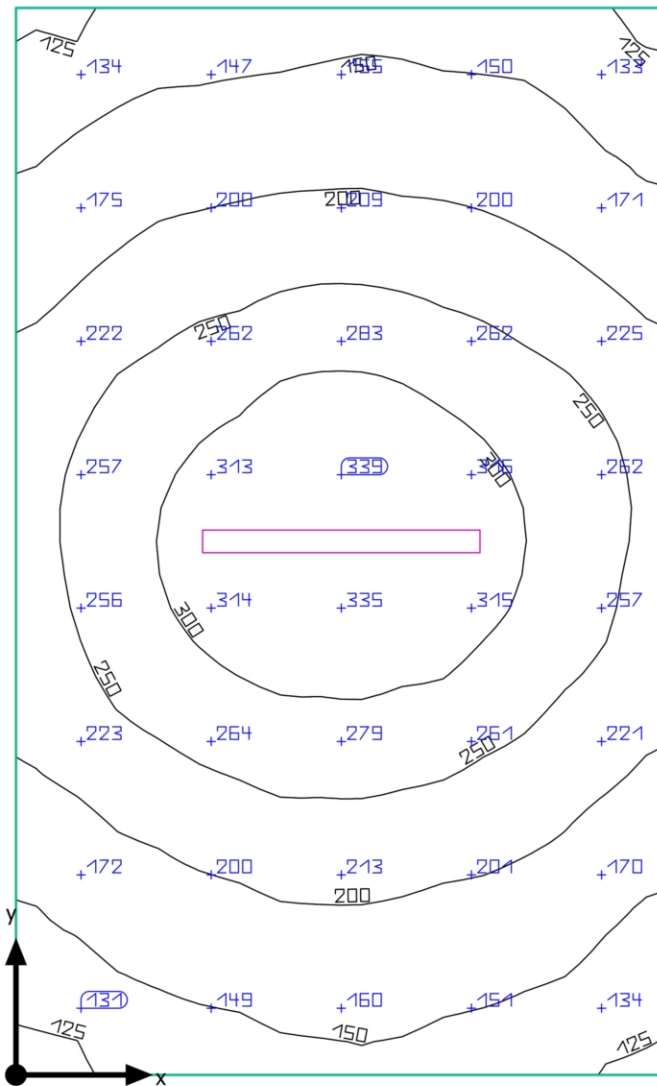
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	277 lx (≥ 200 lx) ✓	153 lx	408 lx	0.55	0.38	S40

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica

Summary

Results

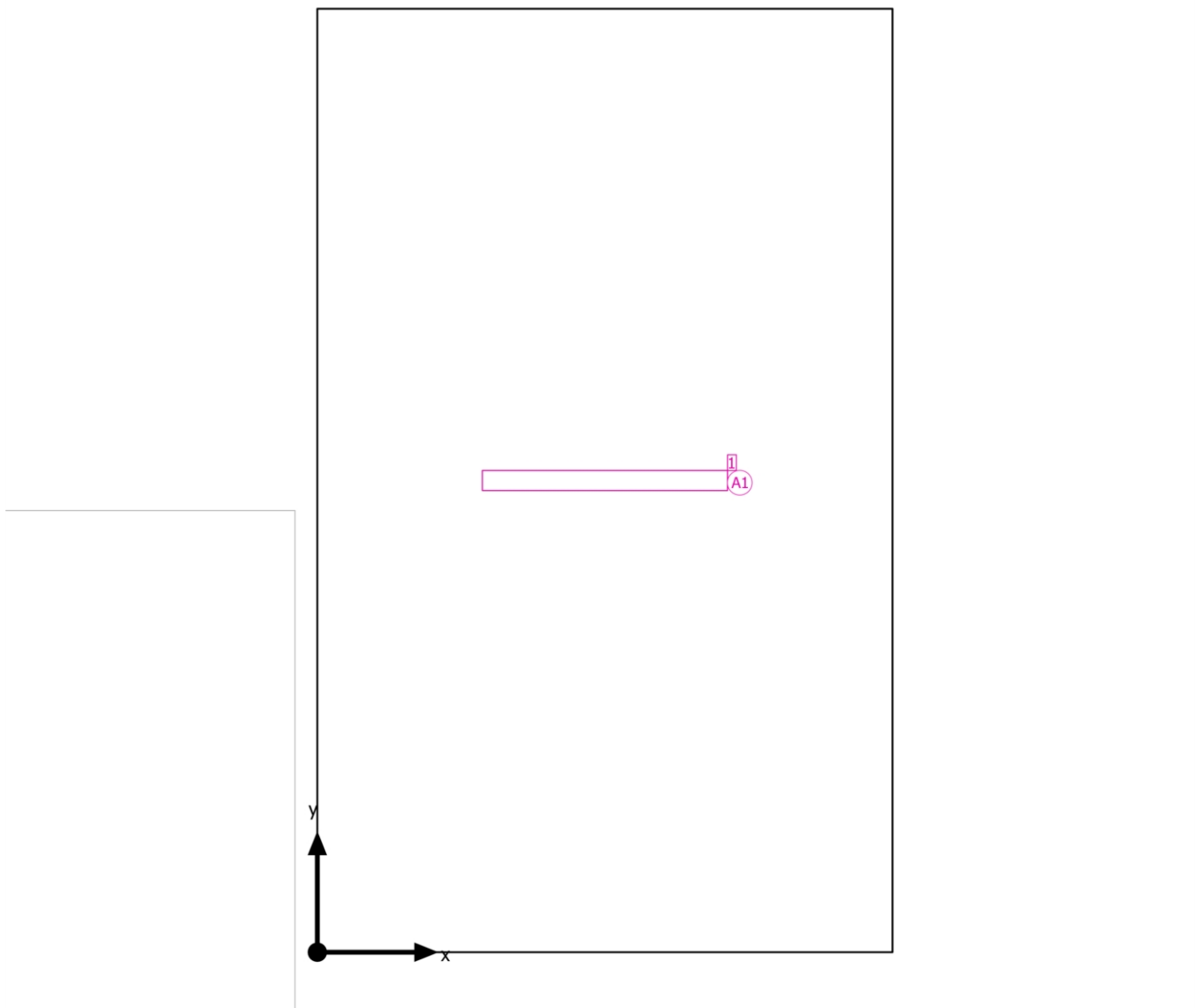
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	220 lx	≥ 200 lx	✓	S42
	g_1	0.55	-	-	S42
Consumption values	Consumption	7 kWh/a	max. 400 kWh/a	✓	
Lighting power density	Room	3.82 W/m ²	-	-	
		1.74 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Luminaire list

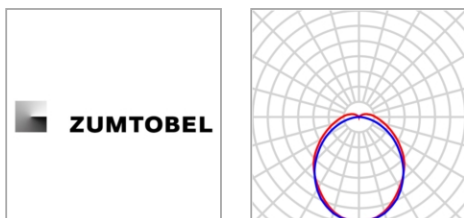
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica

Luminaire layout plan

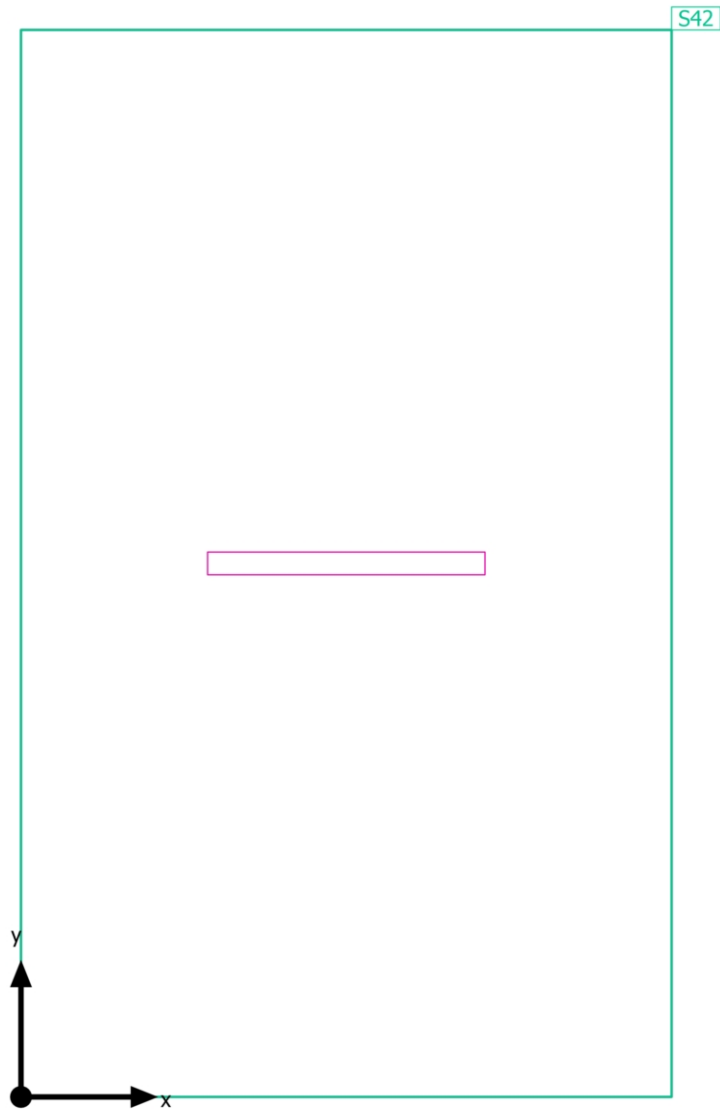


Manufacturer	ZUMTOBEL
Article No.	96630755 (STD - standard)
Article name	AQFPRO S LED5200-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED5200-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.290 m / 2.115 m / 3.120 m	1.290 m	2.115 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 4.230 m				
Y-direction	1 pcs., Centre - centre, 2.580 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica

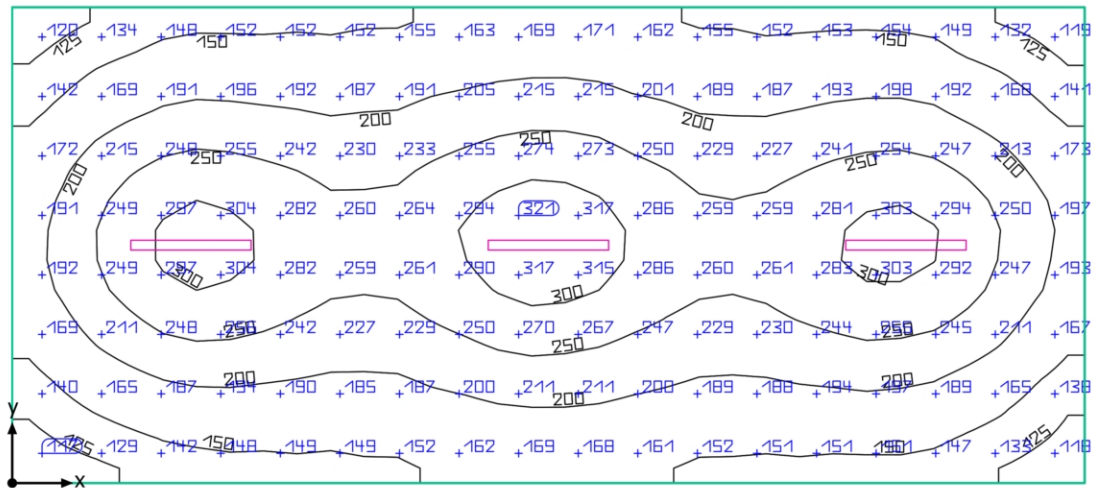
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	220 lx (≥ 200 lx) ✓	121 lx	344 lx	0.55	0.35	S42

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica

Summary

Results

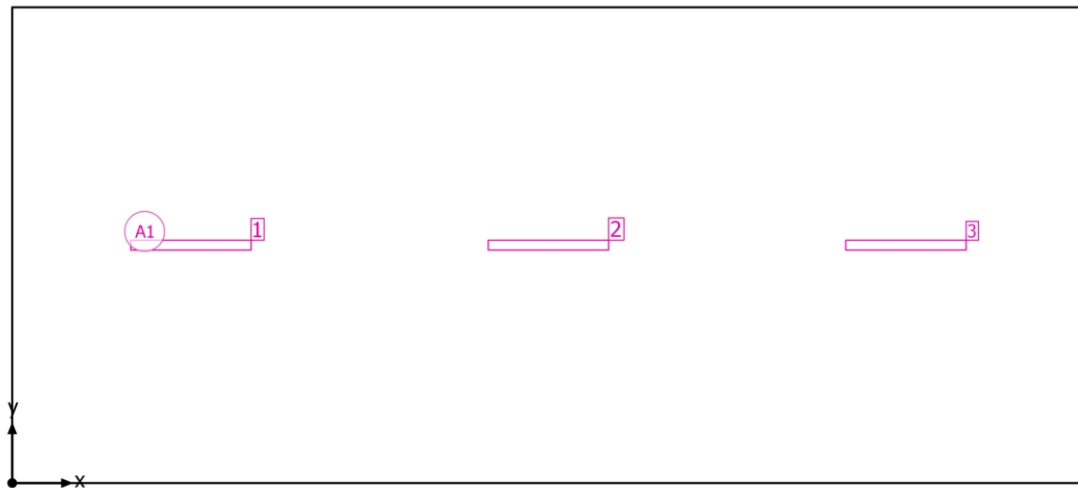
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	210 lx	≥ 200 lx	✓	S44
	g_1	0.52	-	-	S44
Consumption values	Consumption	17 kWh/a	max. 1500 kWh/a	✓	
Lighting power density	Room	2.48 W/m ²	-	-	
		1.18 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

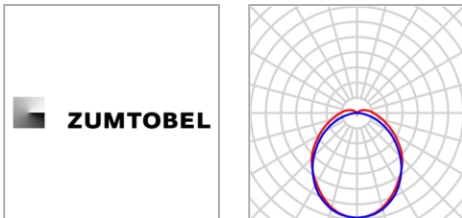
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica
Luminaire layout plan



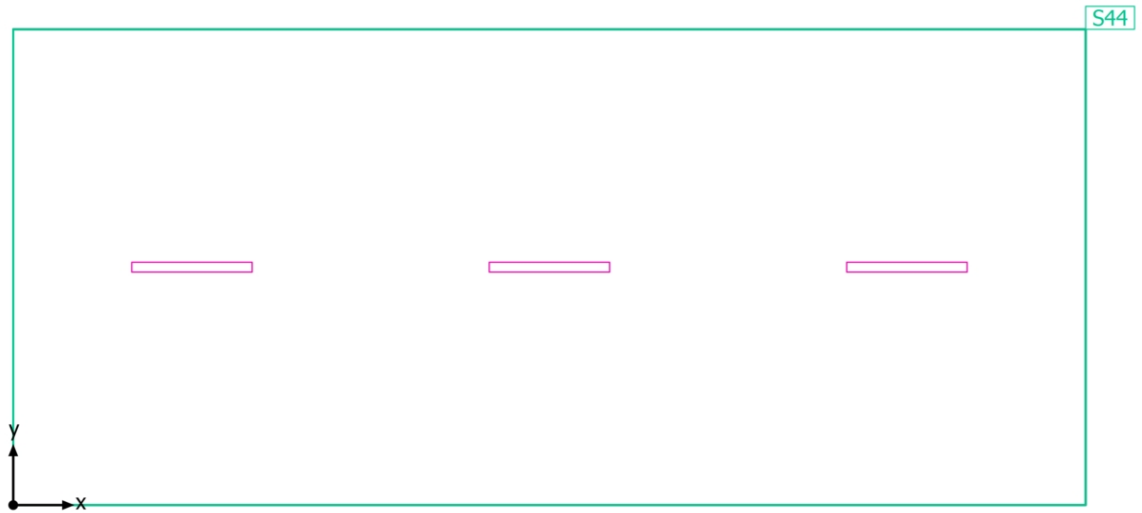
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

3 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.633 m / 2.175 m / 3.120 m	1.633 m	2.175 m	3.120 m	1
X-direction	3 pcs., Centre - centre, 3.267 m	4.900 m	2.175 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 4.350 m	8.167 m	2.175 m	3.120 m	3
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Kotlovnica

Calculation objects

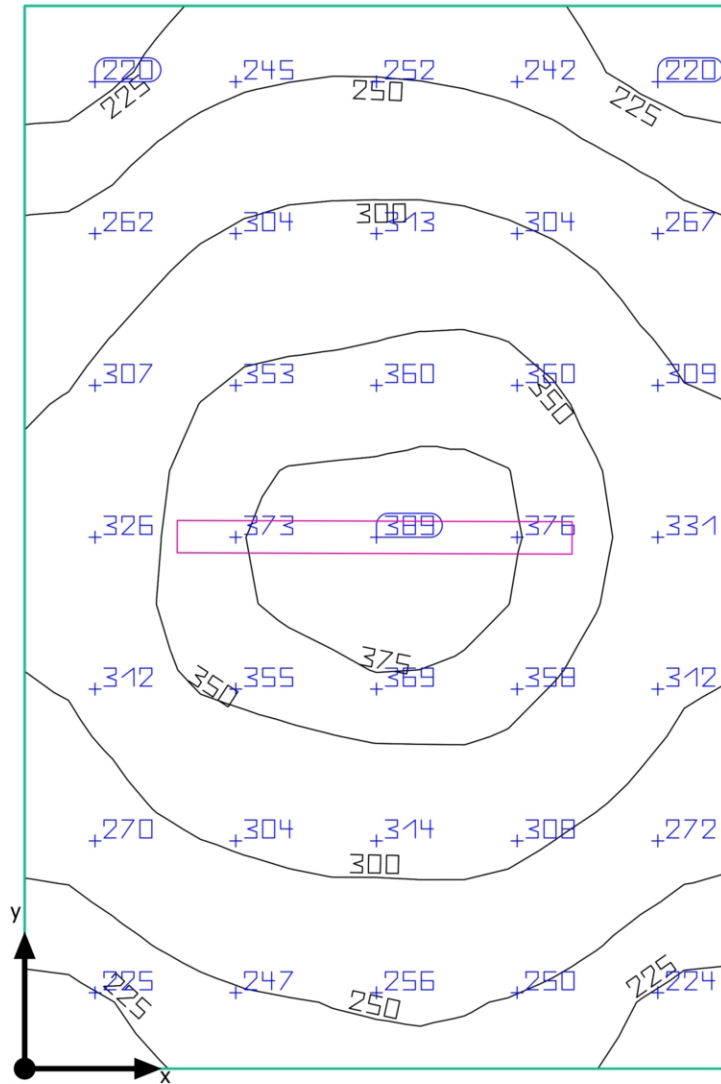
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	210 lx (≥ 200 lx) ✓	110 lx	330 lx	0.52	0.33	S44

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · Prizemlje · Kuhinja

Summary



Sportska dvorana Borovo naselje · Prizemlje · Kuhinja

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	300 lx	≥ 300 lx	✓	S49
	g_1	0.69	-	-	S49
Consumption values	Consumption	160 kWh/a	max. 250 kWh/a	✓	
Lighting power density	Room	7.21 W/m ²	-	-	
		2.40 W/m ² /100 lx	-	-	

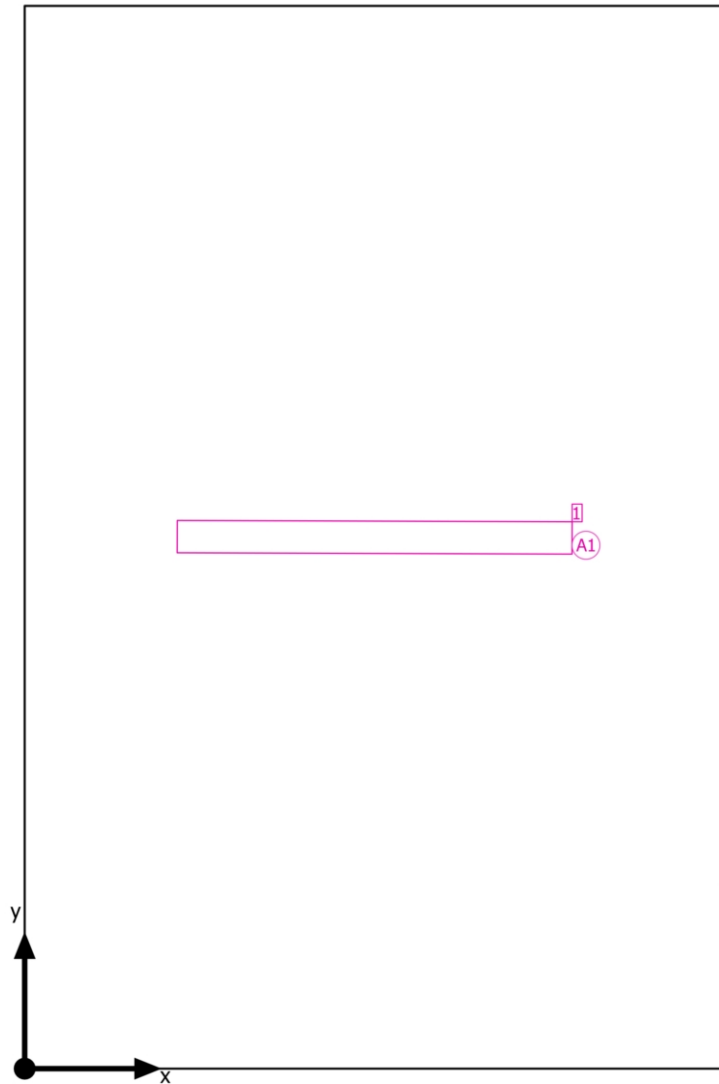
Utilisation profile: Places of public assembly - Restaurants and hotels, Buffet

Luminaire list

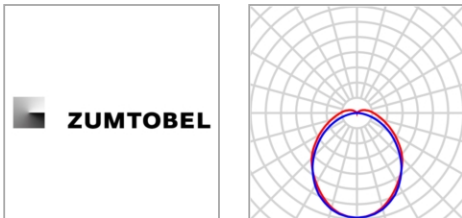
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Kuhinja
Luminaire layout plan



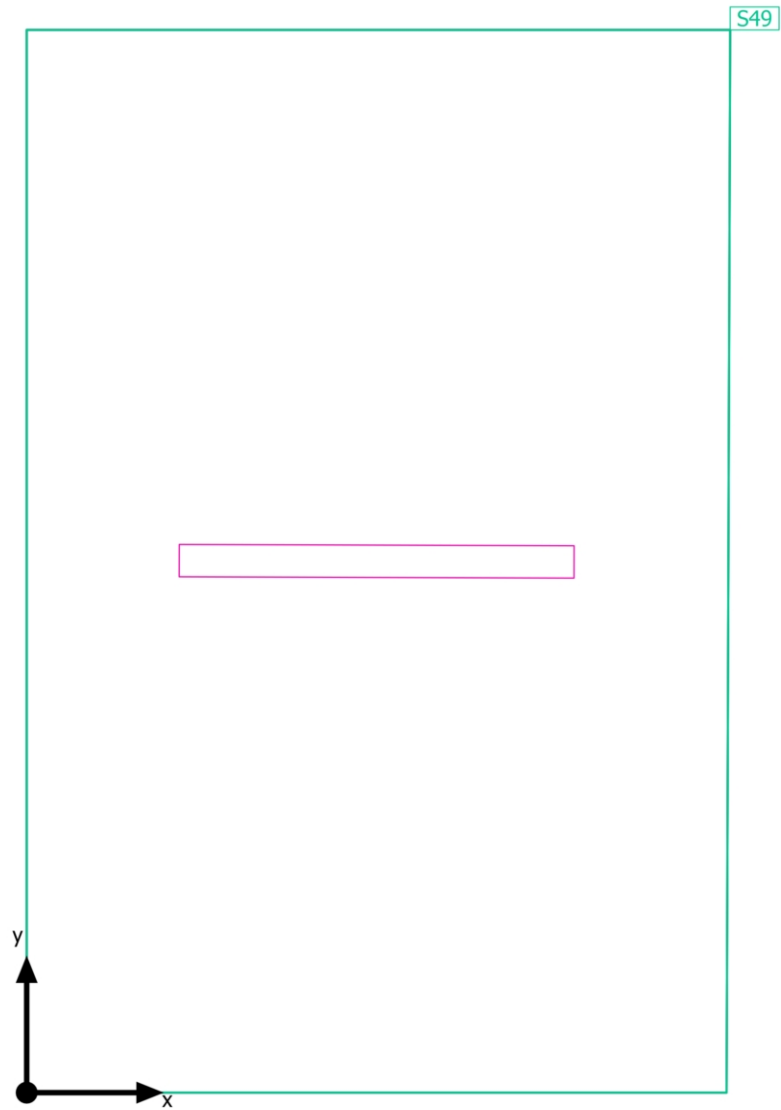
Manufacturer	ZUMTOBEL
Article No.	96630755 (STD - standard)
Article name	AQFPRO S LED5200-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED5200-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.975 m / 1.480 m / 3.120 m	0.975 m	1.480 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.967 m				
Y-direction	1 pcs., Centre - centre, 1.960 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Kuhinja

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Kuhinja

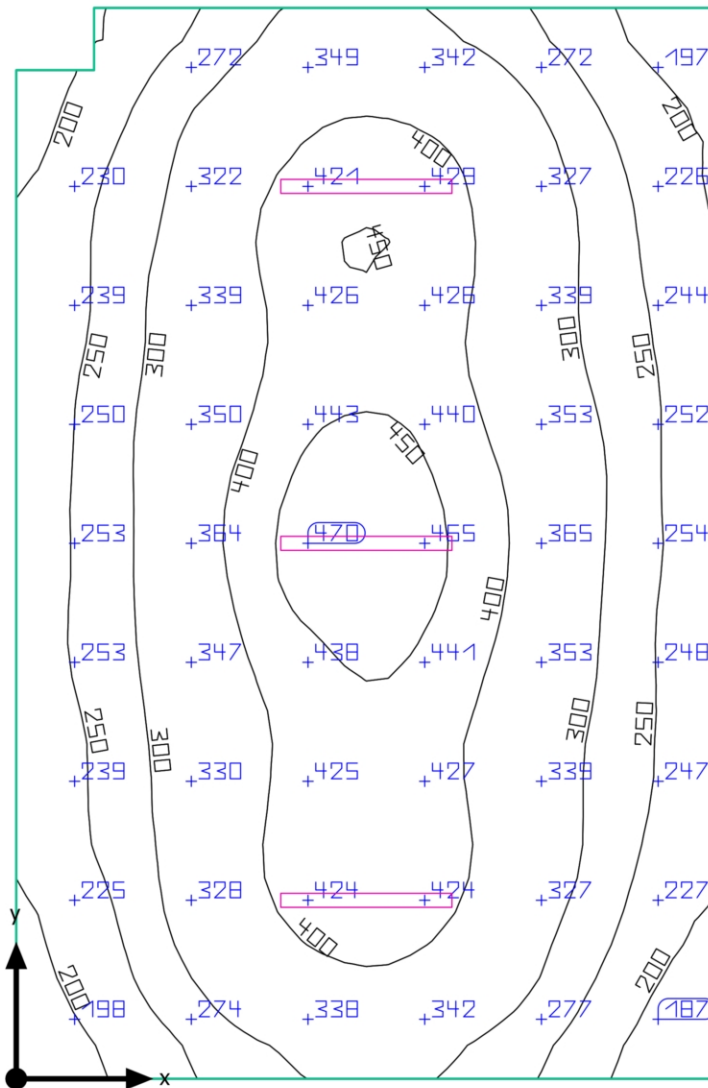
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kuhinja) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	300 lx (≥ 300 lx) ✓	207 lx	388 lx	0.69	0.53	S49

Utilisation profile: Places of public assembly - Restaurants and hotels, Buffet

Sportska dvorana Borovo naselje · Prizemlje · Praonica rublja
Summary



Sportska dvorana Borovo naselje · Prizemlje · Praonica rublja

Summary

Results

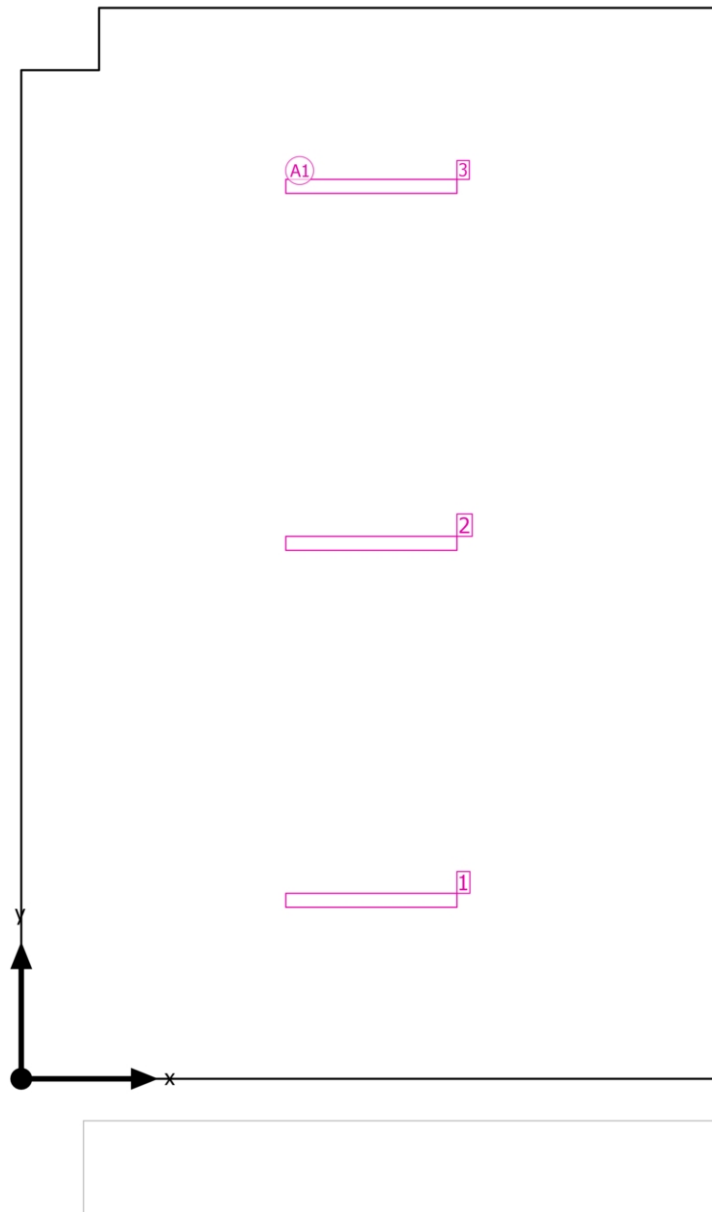
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	324 lx	≥ 300 lx	✓	S46
	g_1	0.49	-	-	S46
Consumption values	Consumption	280 kWh/a	max. 1100 kWh/a	✓	
Lighting power density	Room	4.07 W/m ²	-	-	
		1.25 W/m ² /100 lx	-	-	

Utilisation profile: Industrial activities and crafts - Laundries and dry cleaning, Washing and dry cleaning

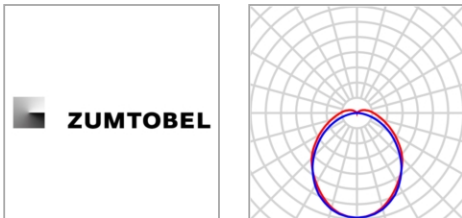
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Praonica rublja
Luminaire layout plan

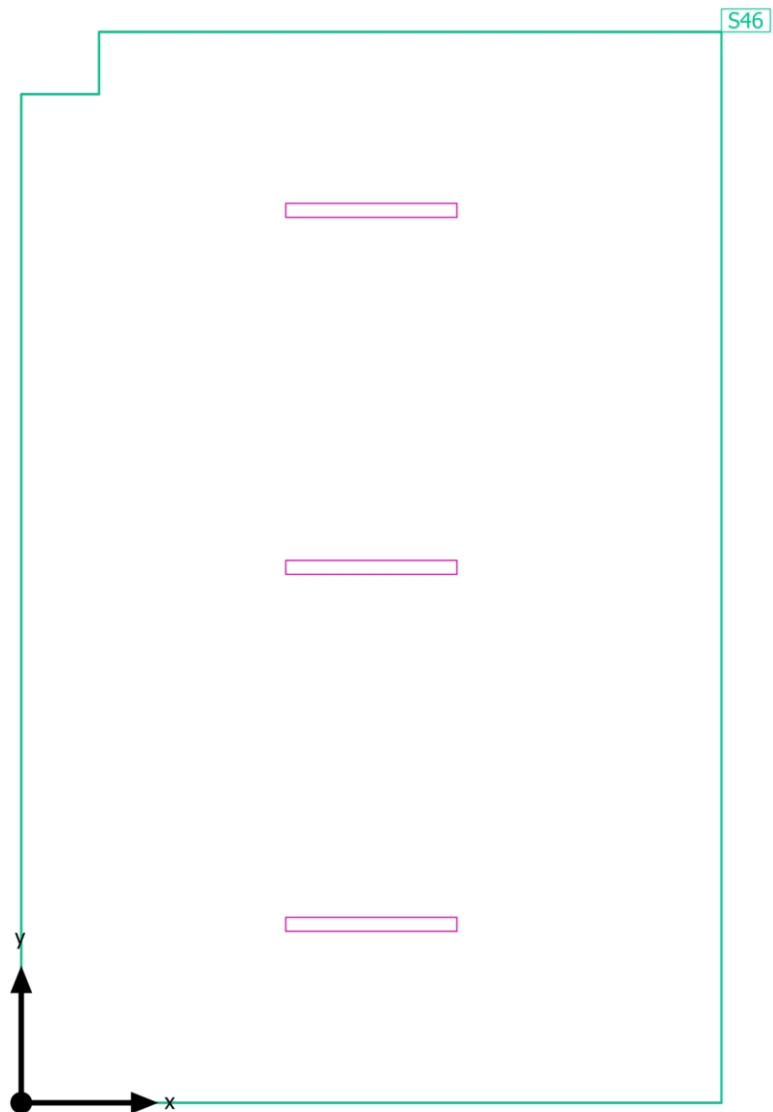


Manufacturer	ZUMTOBEL
Article No.	96630755 (STD - standard)
Article name	AQFPRO S LED5200-840 PC MB HF

3 x ZUMTOBEL AQFPRO S LED5200-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.250 m / 1.147 m / 3.120 m	2.250 m	1.147 m	3.120 m	1
X-direction	3 pcs., Centre - centre, 2.293 m	2.250 m	3.440 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 4.500 m	2.250 m	5.733 m	3.120 m	3
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Praonica rublja
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Praonica rublja

Calculation objects

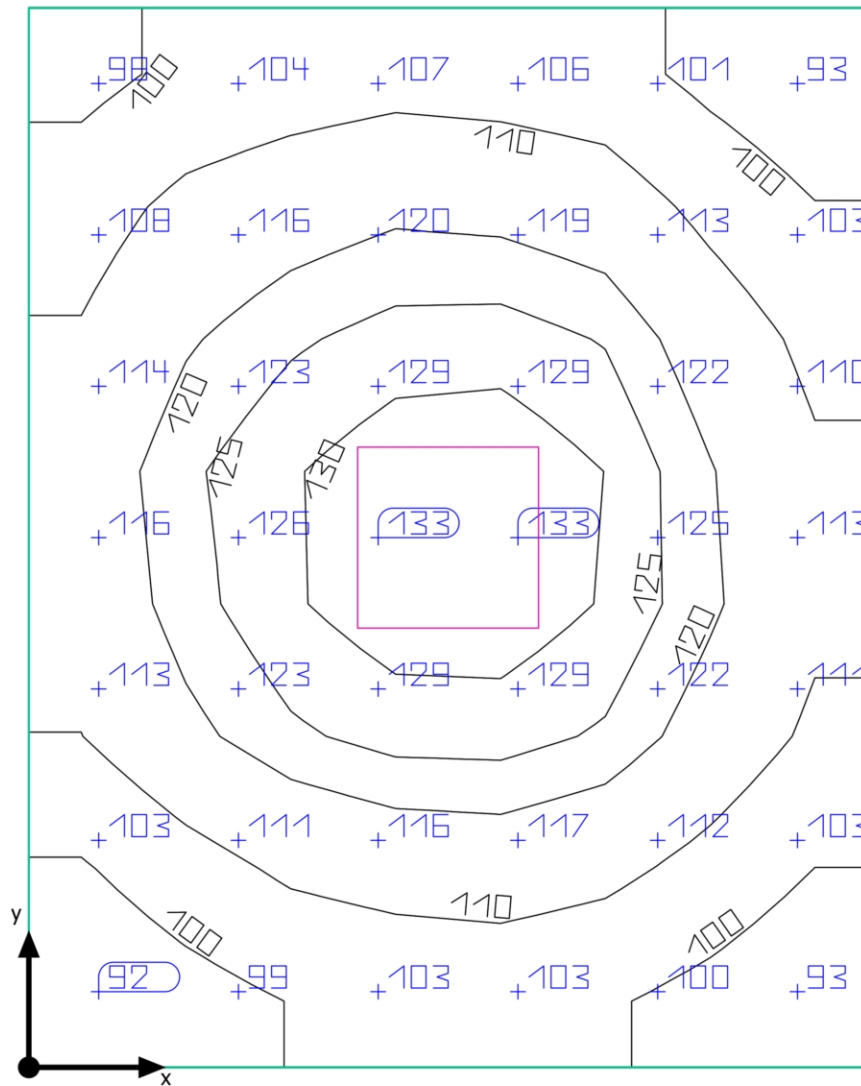
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Praonica rublja) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	324 lx (≥ 300 lx) ✓	158 lx	481 lx	0.49	0.33	S46

Utilisation profile: Industrial activities and crafts - Laundries and dry cleaning, Washing and dry cleaning

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

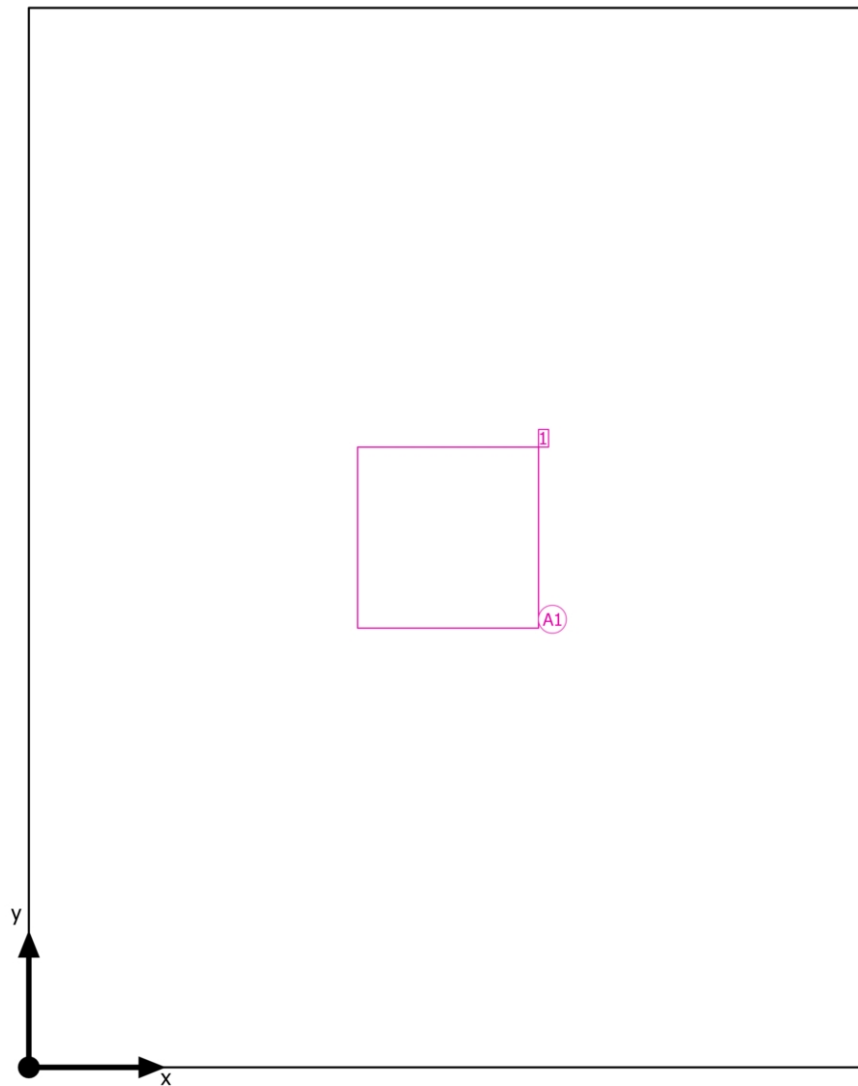
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	113 lx	≥ 100 lx	✓	S17
	g_1	0.80	-	-	S17
Consumption values	Consumption	40 kWh/a	max. 200 kWh/a	✓	
Lighting power density	Room	4.61 W/m ²	-	-	
		4.06 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

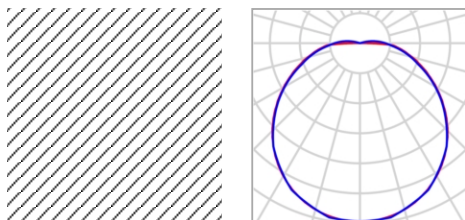
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



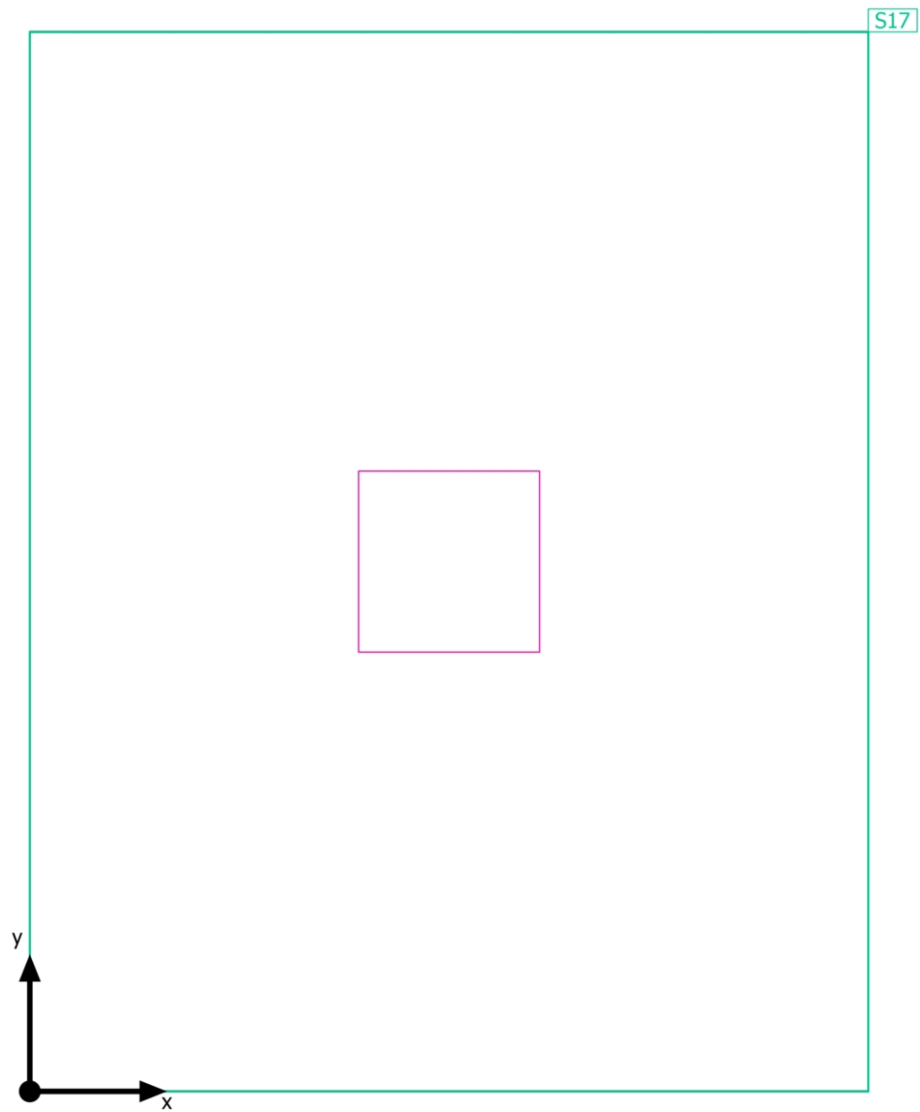
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.950 m / 1.200 m / 3.120 m	0.950 m	1.200 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.400 m				
Y-direction	1 pcs., Centre - centre, 1.900 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



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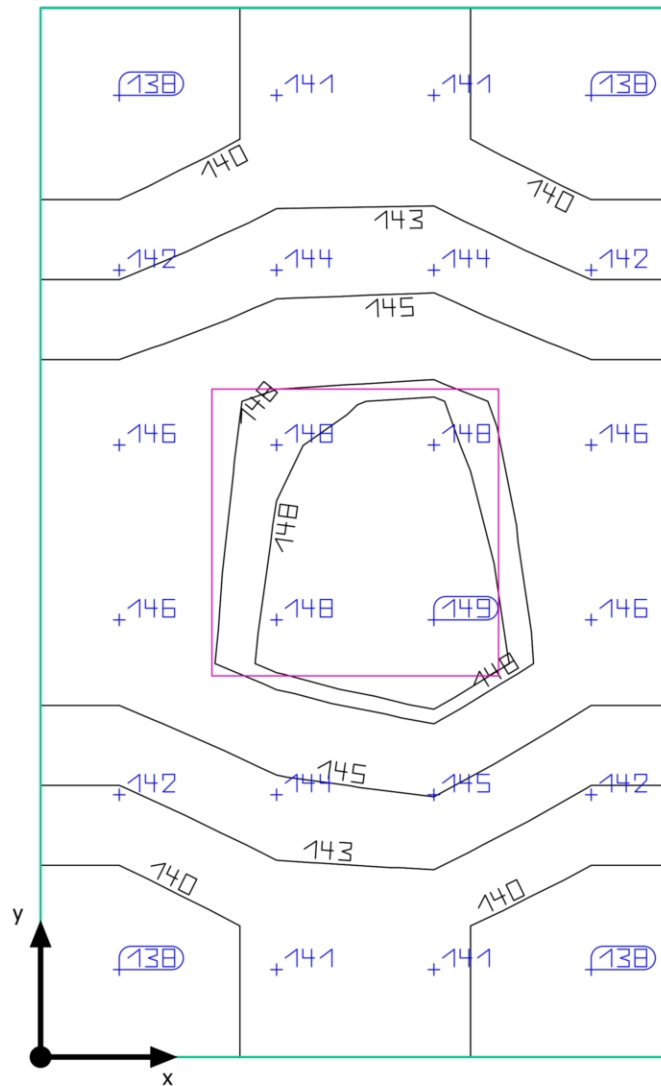
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	113 lx (≥ 100 lx) ✓	90.4 lx	134 lx	0.80	0.67	S17

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

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Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

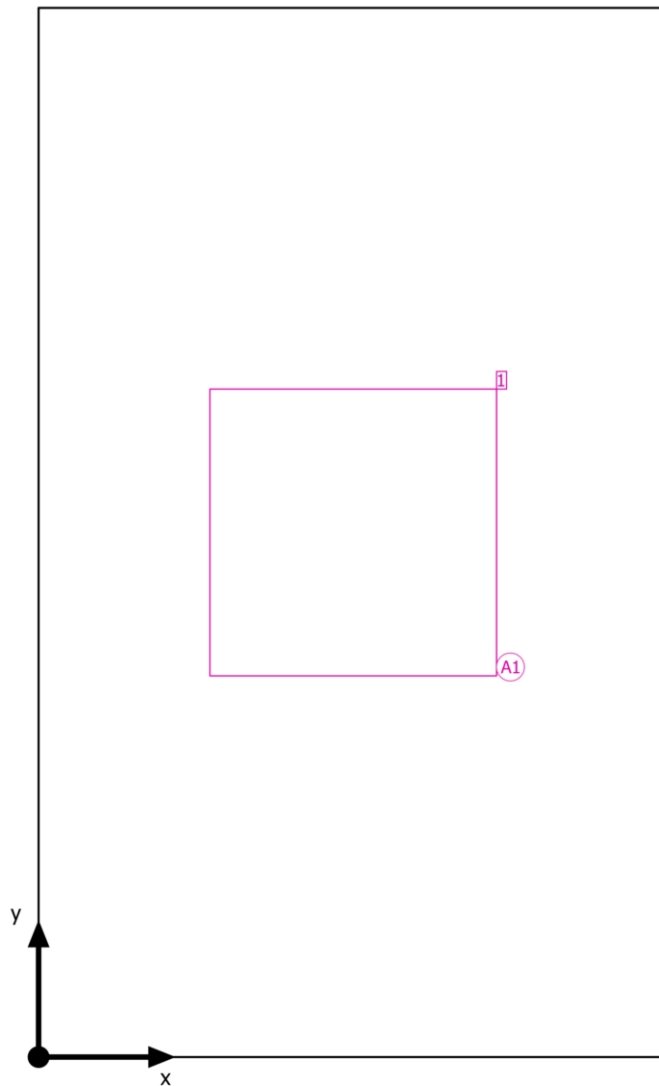
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	143 lx	≥ 100 lx	✓	S19
	g_1	0.97	-	-	S19
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	15.56 W/m ²	-	-	
		10.85 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

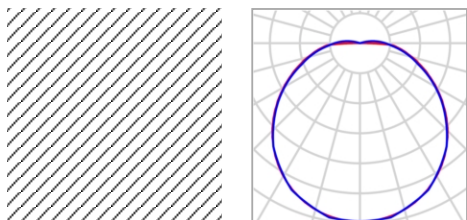
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



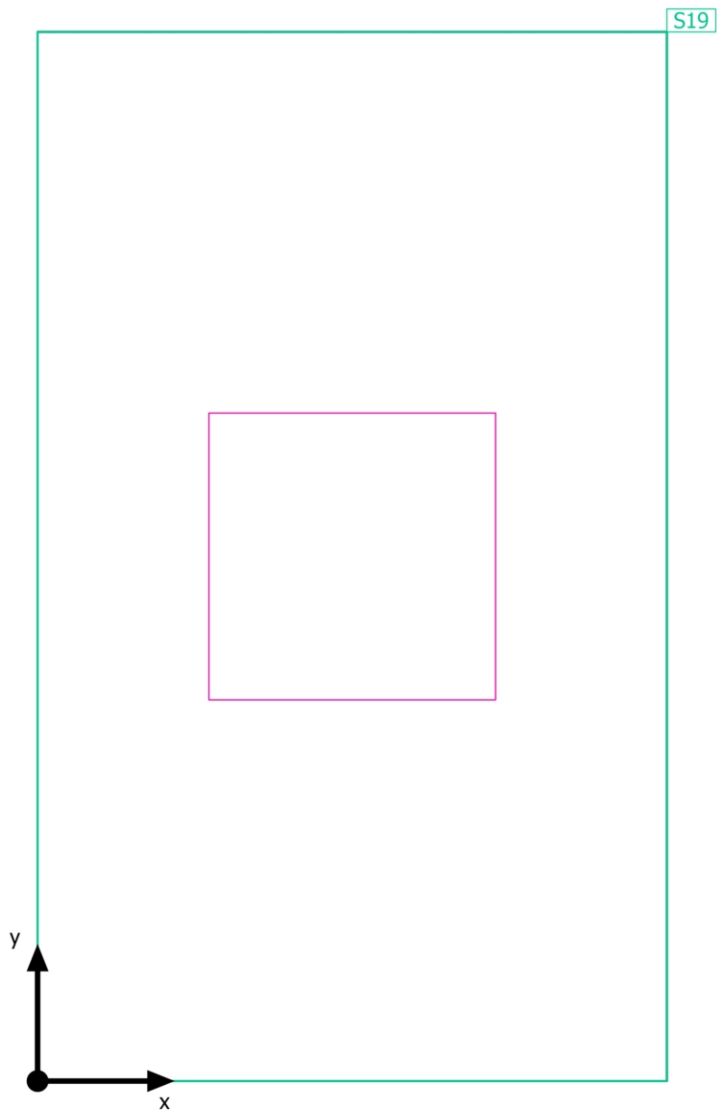
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.750 m / 3.120 m	0.450 m	0.750 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.500 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

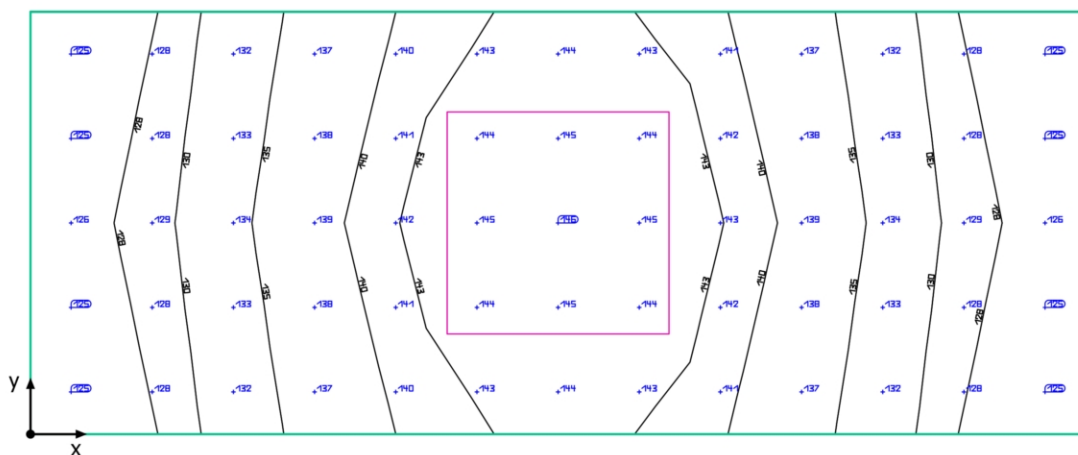
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	143 lx (≥ 100 lx) ✓	138 lx	149 lx	0.97	0.93	S19

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	136 lx	≥ 100 lx	✓	S27
	g_1	0.92	-	-	S27
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	13.81 W/m ²	-	-	
		10.19 W/m ² /100 lx	-	-	

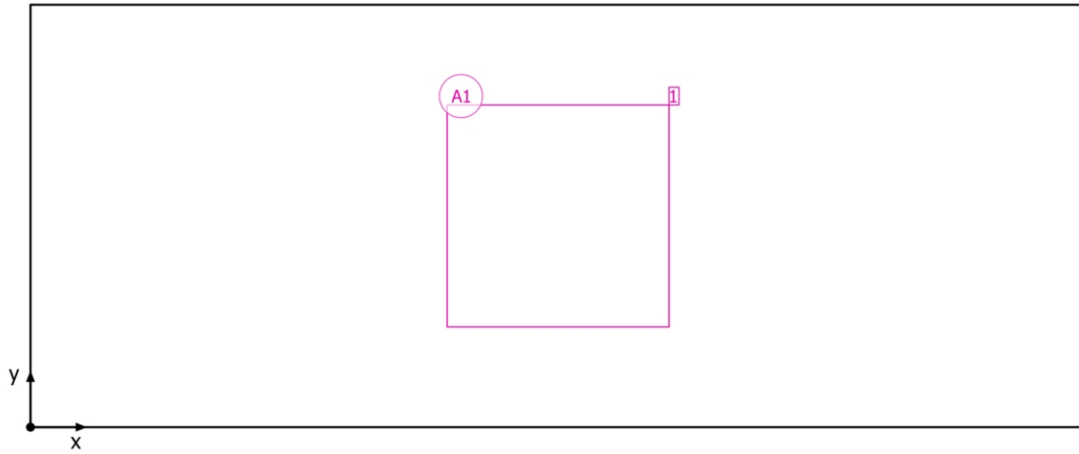
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

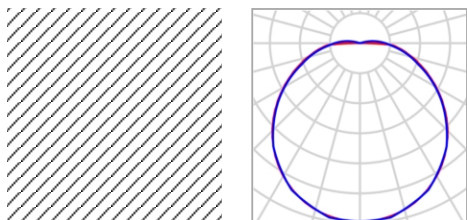
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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



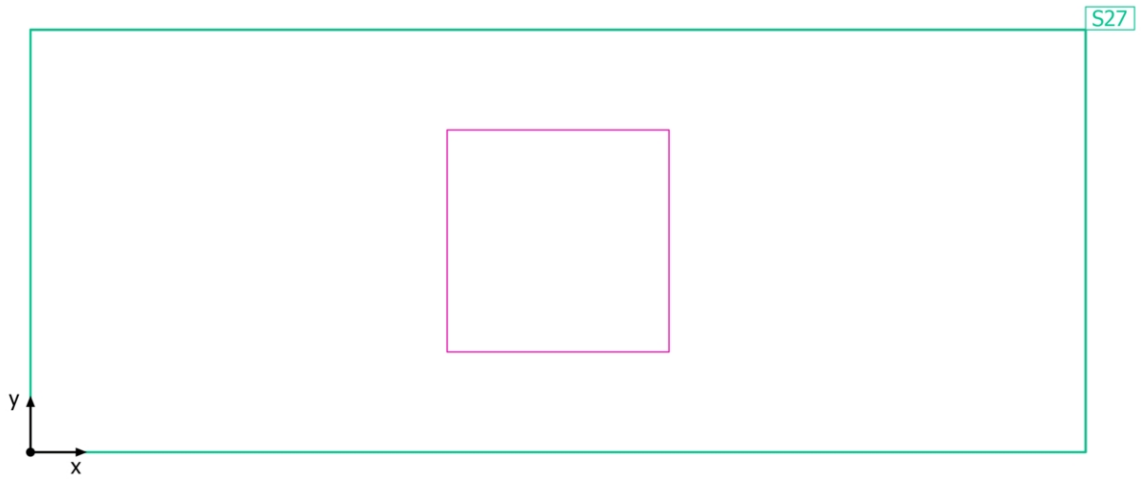
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.975 m / 0.390 m / 3.120 m	0.975 m	0.390 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.950 m				
Y-direction	1 pcs., Centre - centre, 0.780 m				
Arrangement	A1				

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Calculation objects



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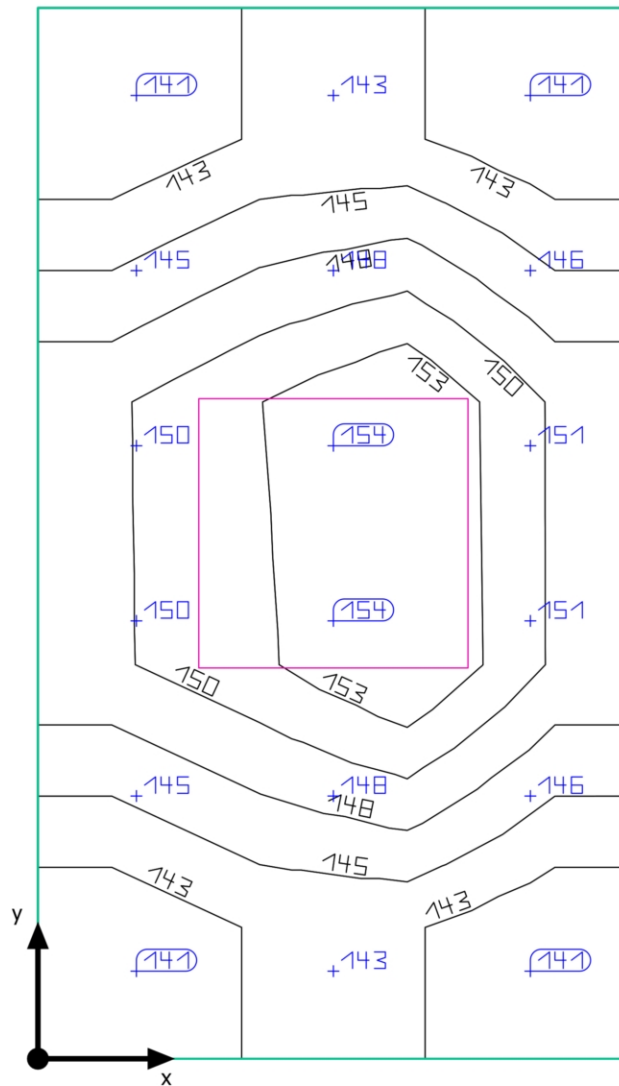
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	136 lx (≥ 100 lx) ✓	125 lx	144 lx	0.92	0.87	S27

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	147 lx	≥ 100 lx	✓	S29
	g_1	0.95	-	-	S29
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	14.58 W/m ²	-	-	
		9.94 W/m ² /100 lx	-	-	

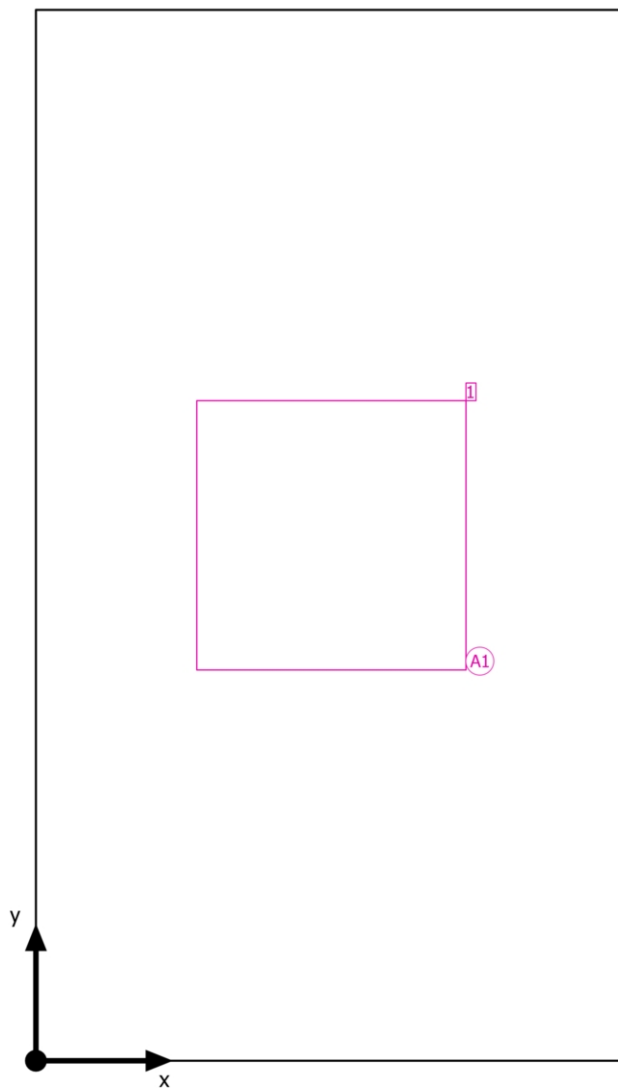
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

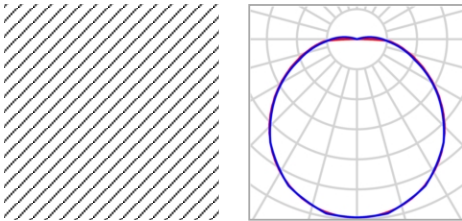
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Luminaire layout plan



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Luminaire layout plan



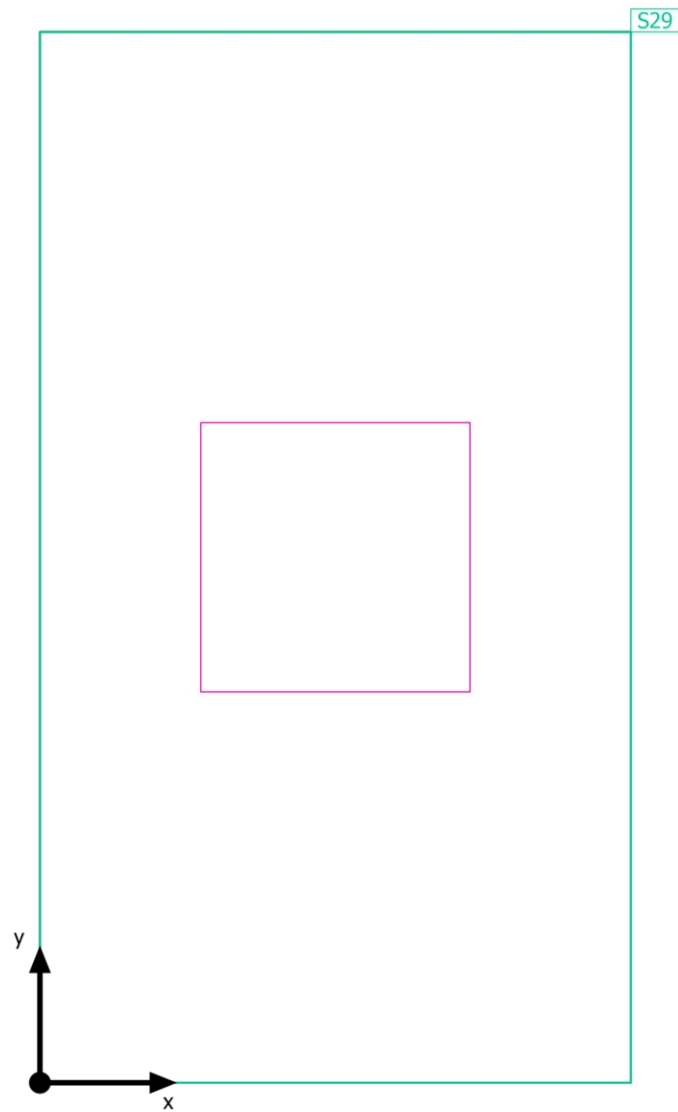
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.800 m / 3.120 m	0.450 m	0.800 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.600 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

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Calculation objects



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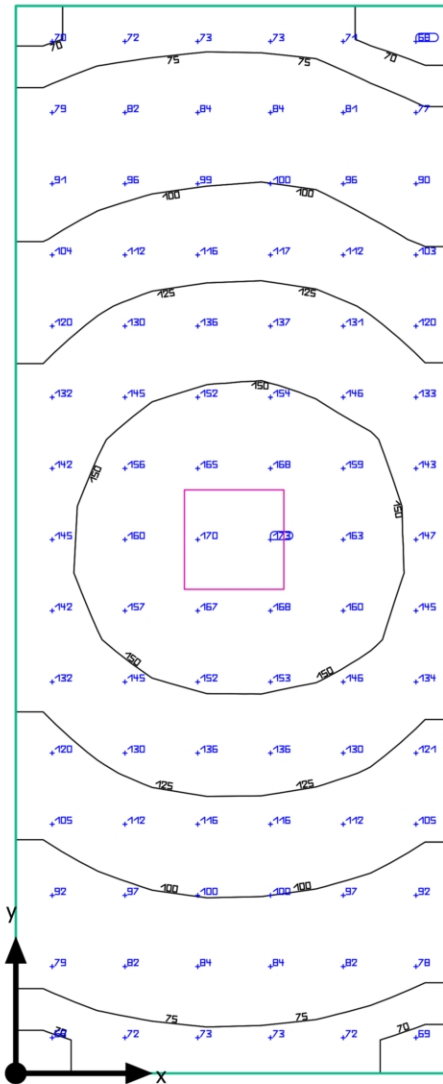
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	147 lx (≥ 100 lx) ✓	140 lx	154 lx	0.95	0.91	S29

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

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Summary



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Summary

Results

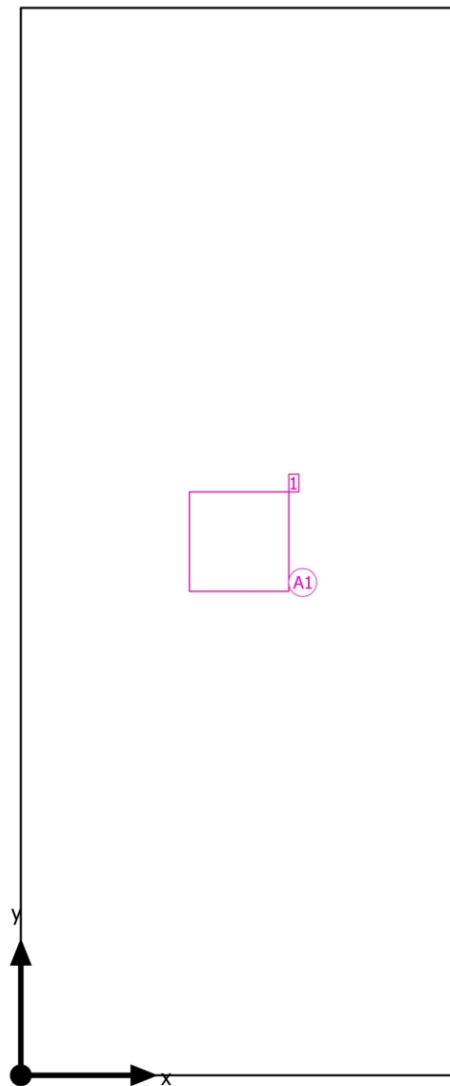
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	116 lx	≥ 100 lx	✓	S204
	g_1	0.58	-	-	S204
Consumption values	Consumption	58 kWh/a	max. 300 kWh/a	✓	
Lighting power density	Room	3.79 W/m ²	-	-	
		3.26 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

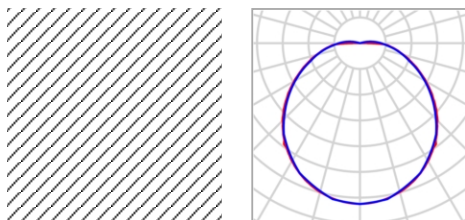
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

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Luminaire layout plan



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Luminaire layout plan



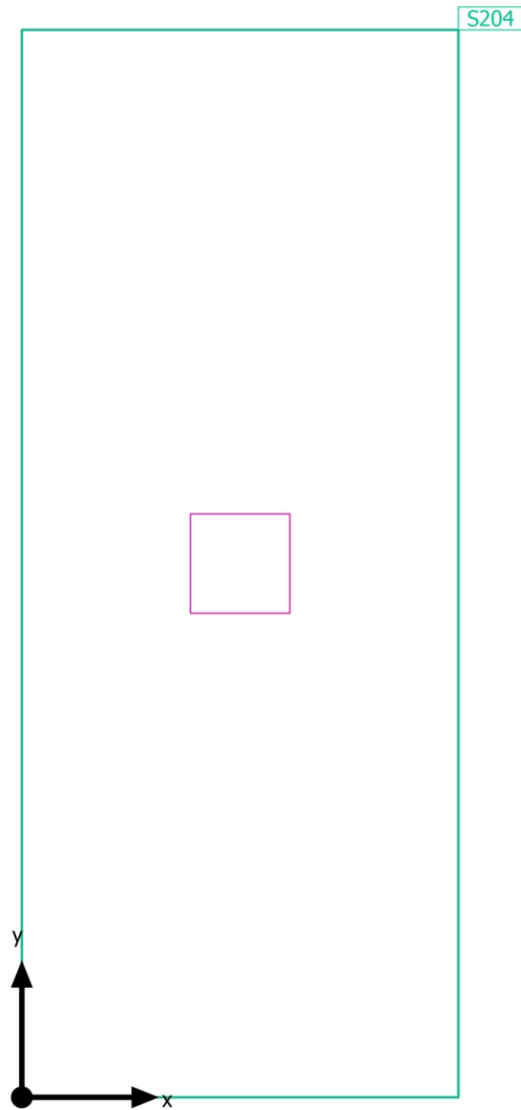
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

1 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.900 m / 2.200 m / 3.120 m	0.900 m	2.200 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 4.400 m				
Y-direction	1 pcs., Centre - centre, 1.800 m				
Arrangement	A1				

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Calculation objects



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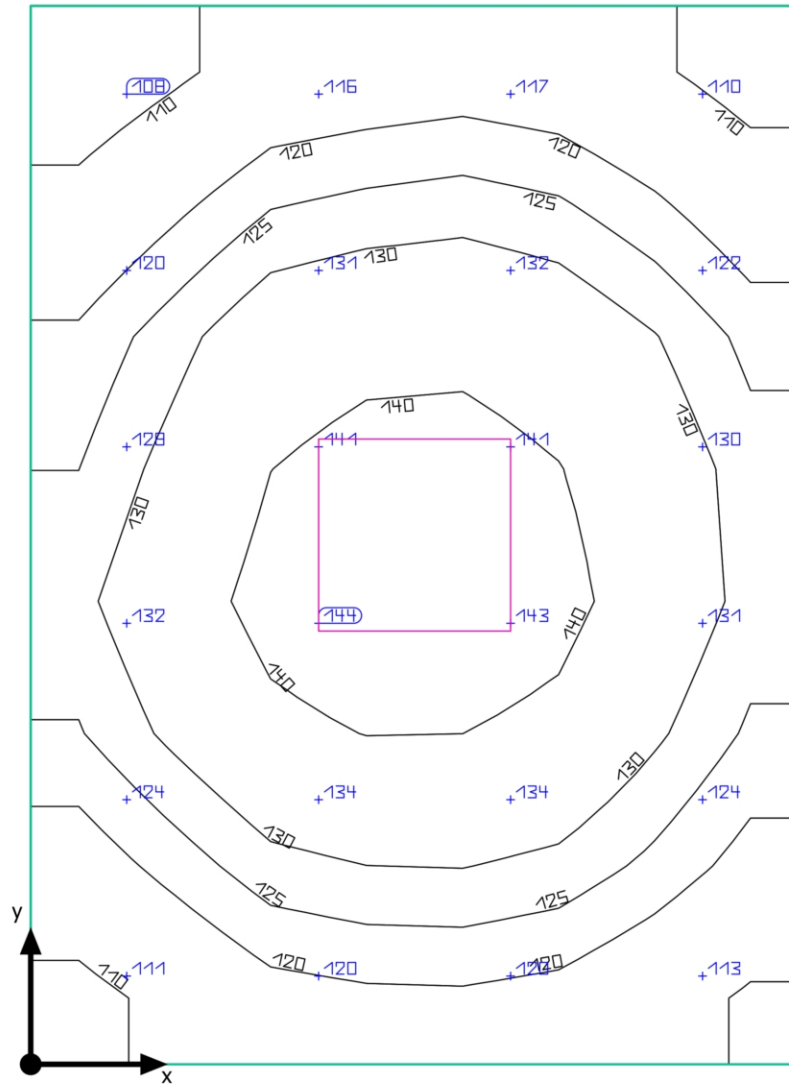
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	116 lx (≥ 100 lx) ✓	67.0 lx	173 lx	0.58	0.39	S204

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	126 lx	≥ 100 lx	✓	S67
	g_1	0.83	-	-	S67
Consumption values	Consumption	40 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	5.67 W/m ²	-	-	
		4.49 W/m ² /100 lx	-	-	

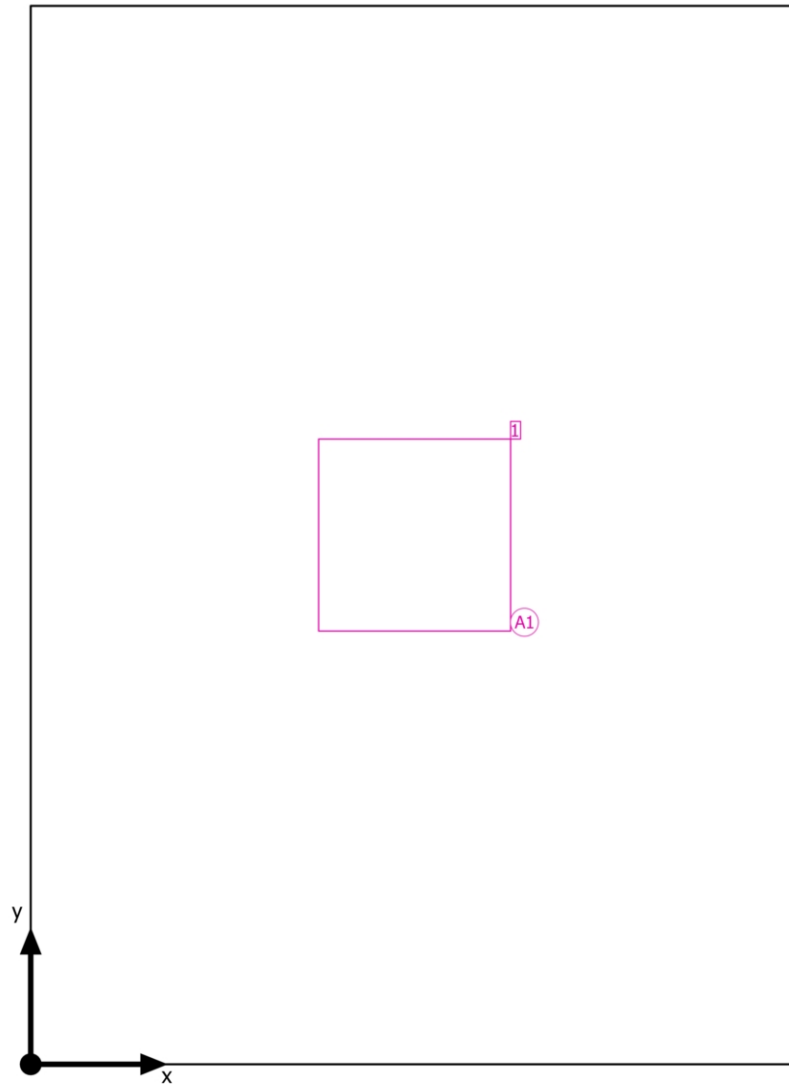
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

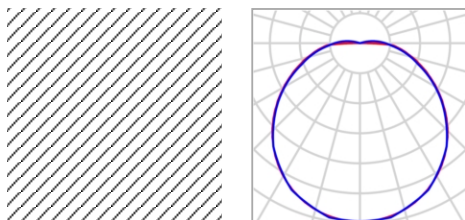
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Luminaire layout plan



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Luminaire layout plan



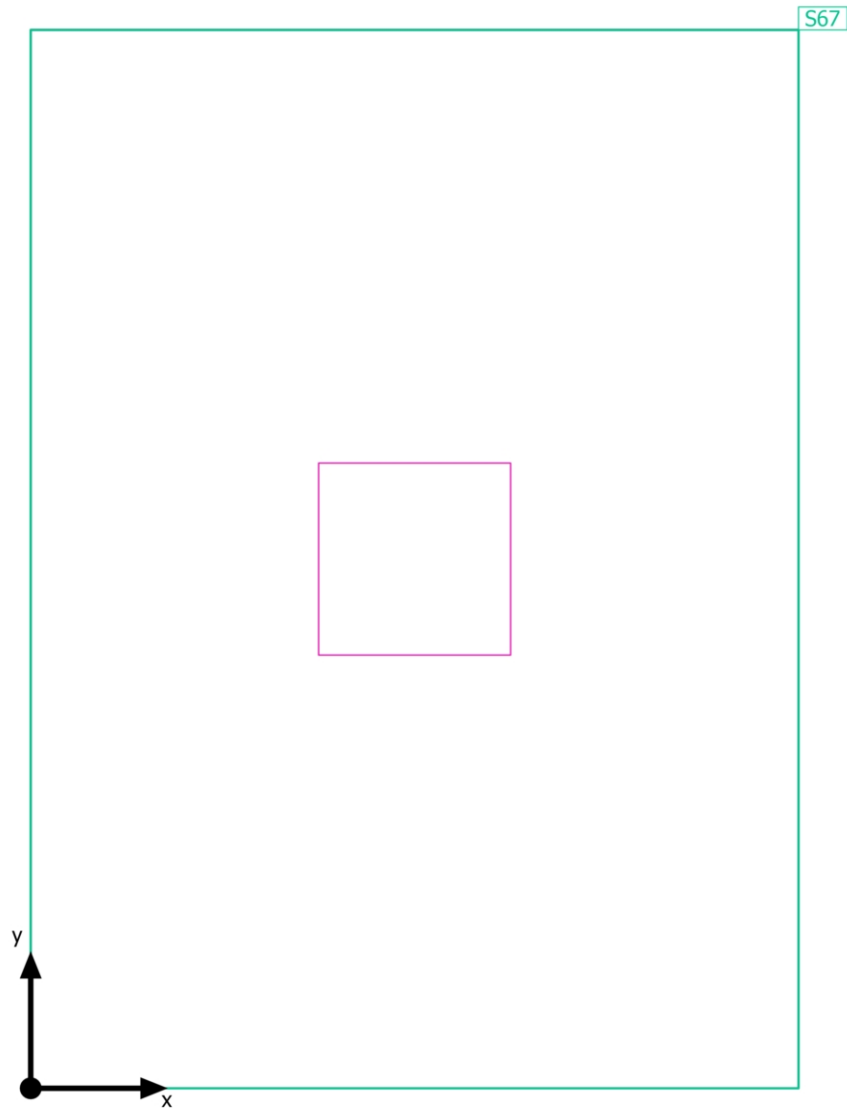
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.820 m / 1.130 m / 3.120 m	0.820 m	1.130 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.260 m				
Y-direction	1 pcs., Centre - centre, 1.640 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

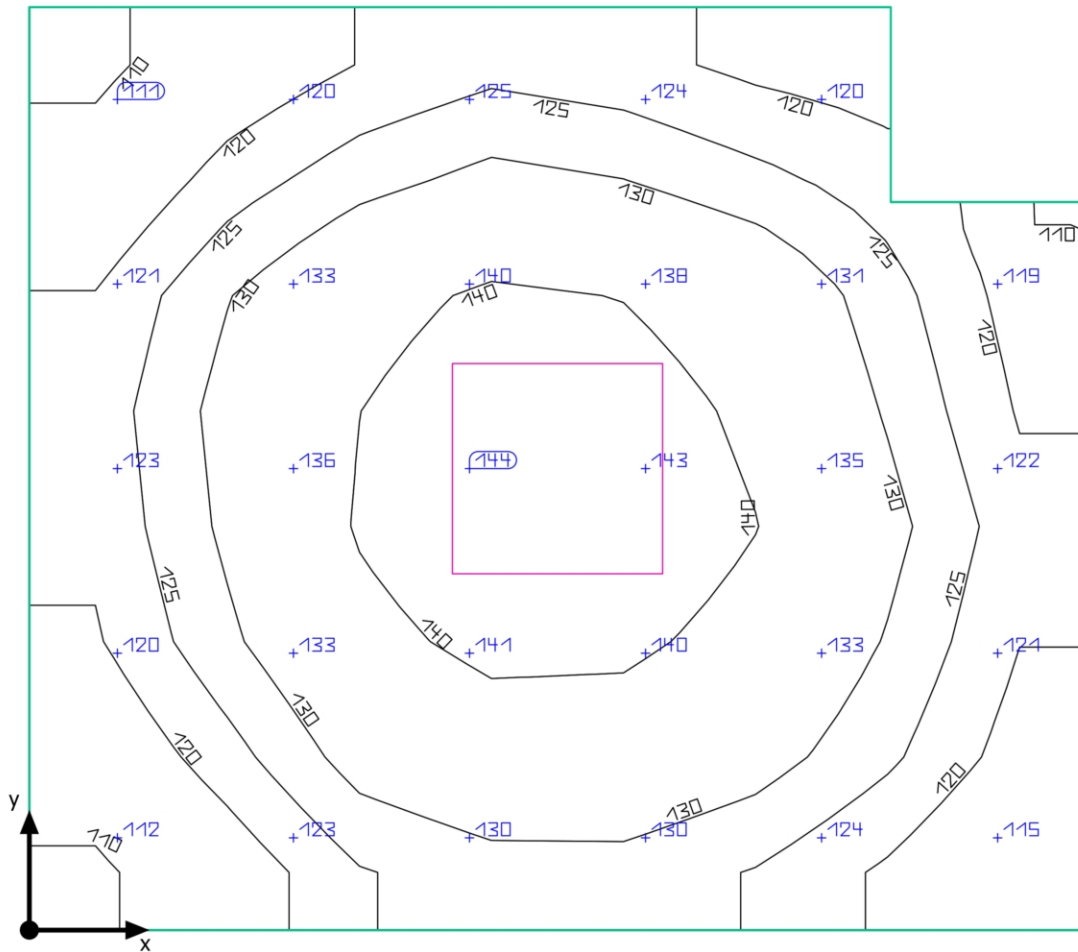
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	126 lx (≥ 100 lx) ✓	104 lx	145 lx	0.83	0.72	S67

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



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Summary

Results

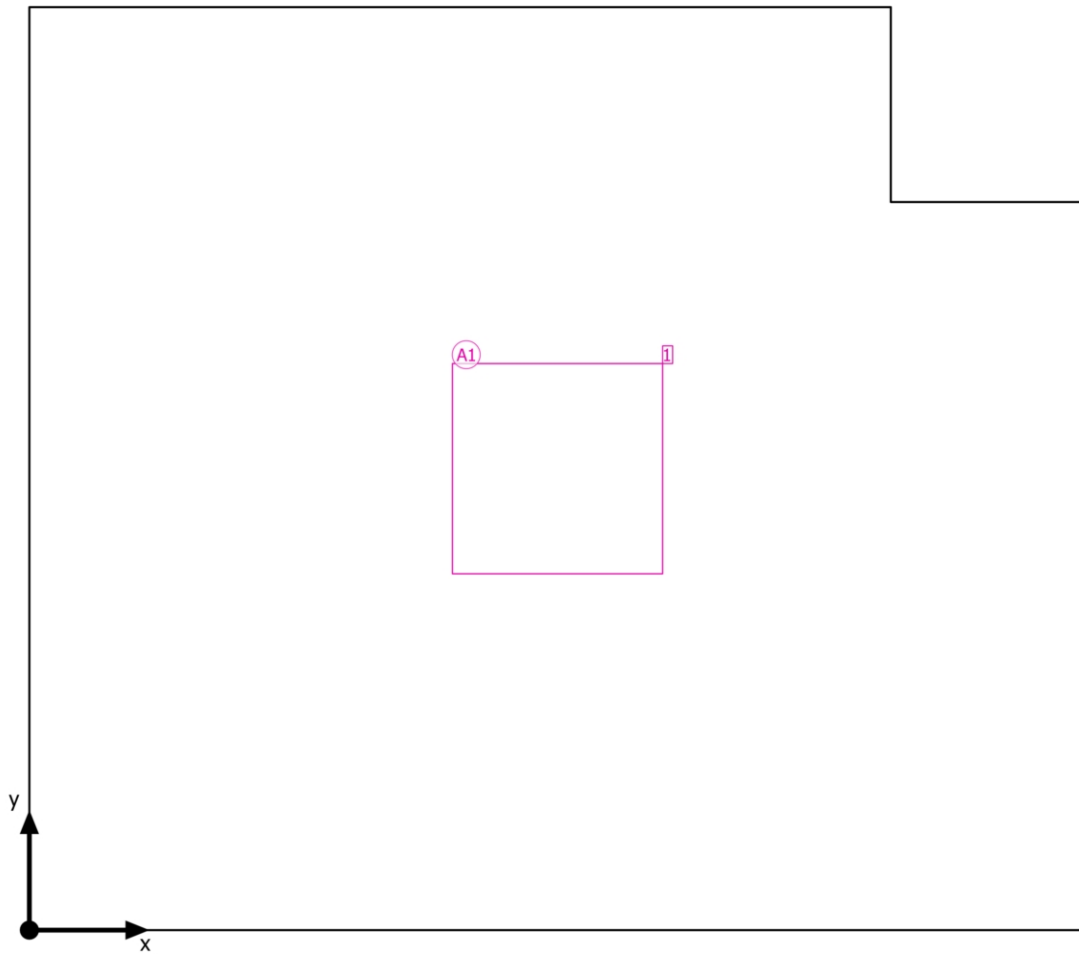
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	128 lx	≥ 100 lx	✓	S73
	g_1	0.84	-	-	S73
Consumption values	Consumption	40 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	5.89 W/m ²	-	-	
		4.61 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

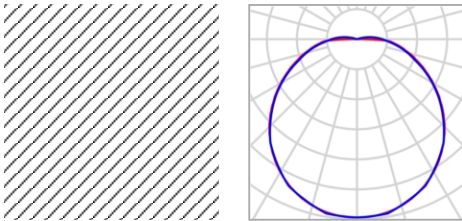
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



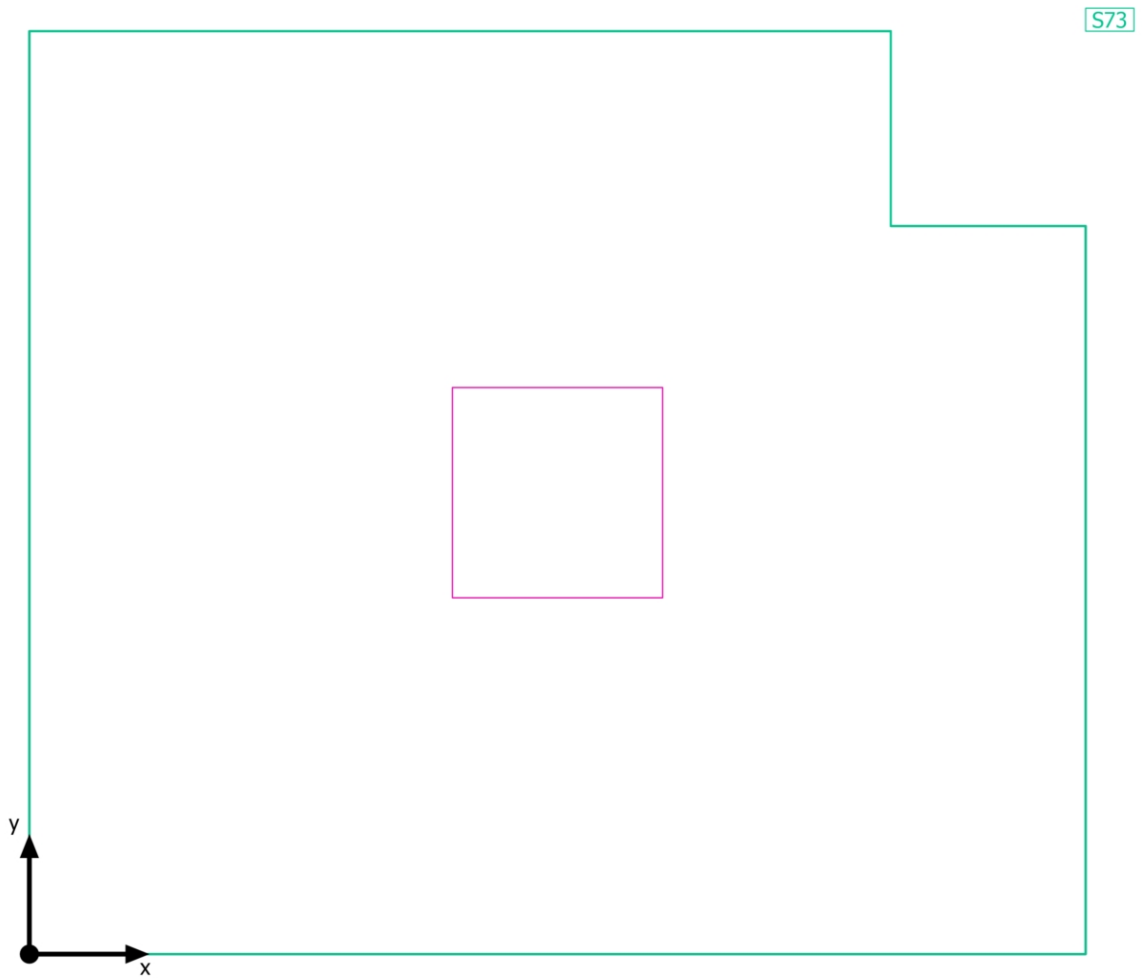
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.030 m / 0.900 m / 3.120 m	1.030 m	0.900 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.060 m				
Y-direction	1 pcs., Centre - centre, 1.800 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

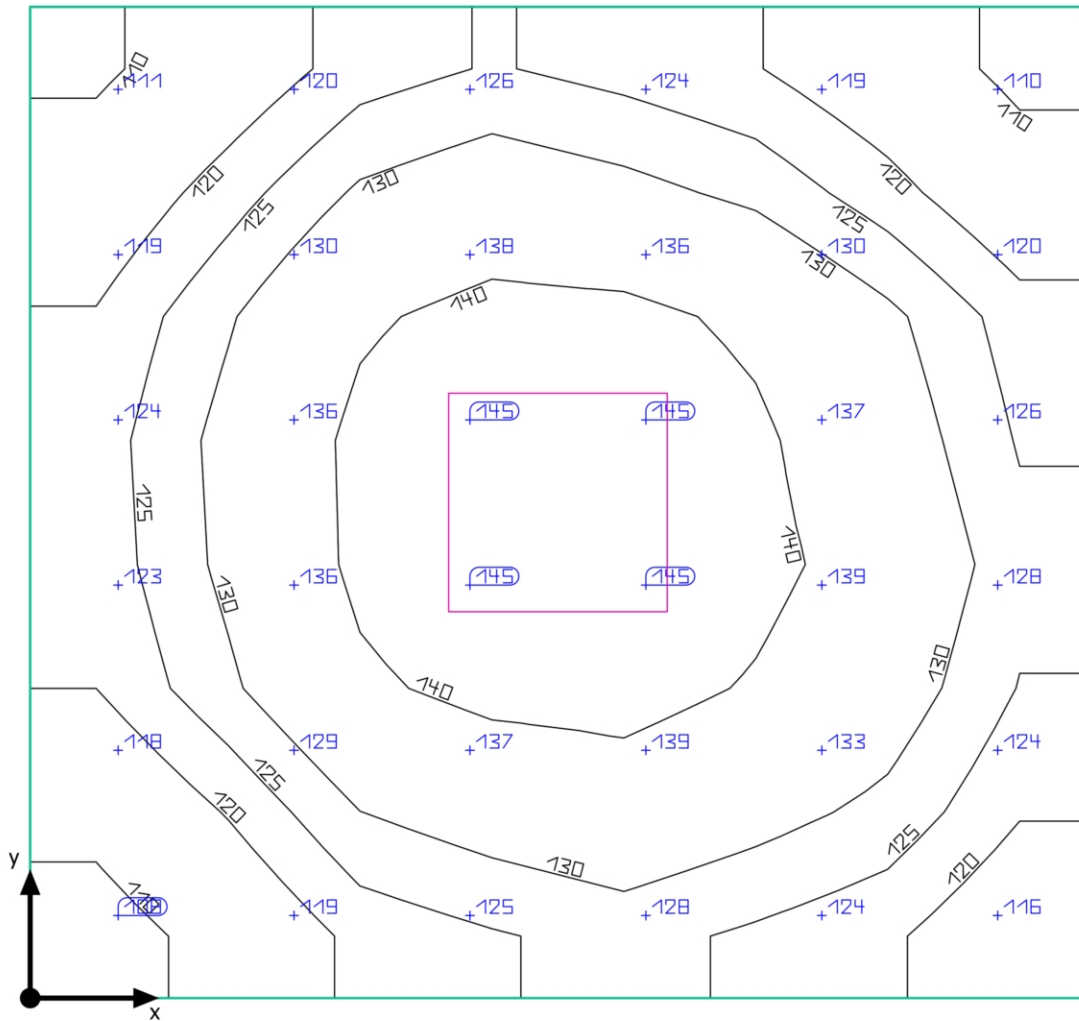
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	128 lx (≥ 100 lx) ✓	108 lx	145 lx	0.84	0.74	S73

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



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Summary

Results

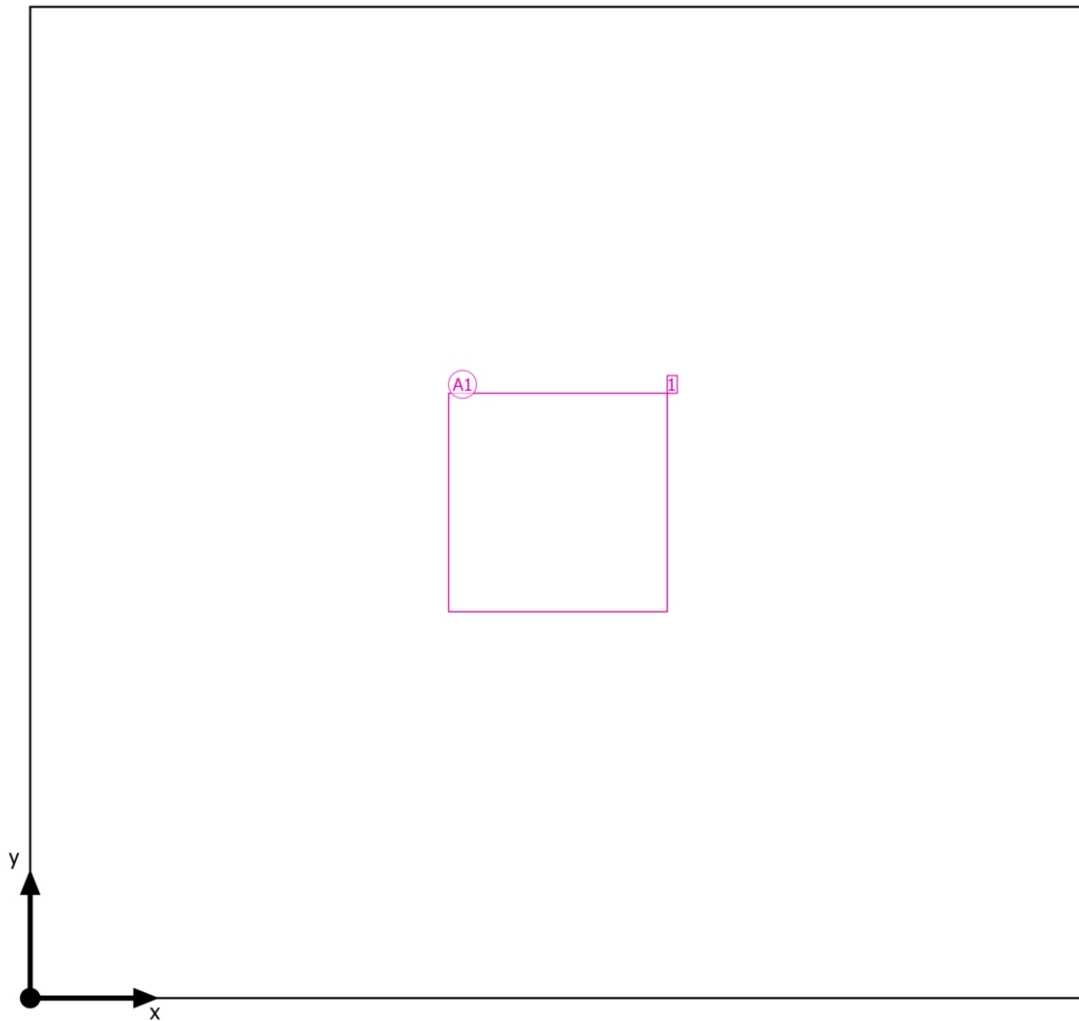
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	128 lx	≥ 100 lx	✓	S75
	g_1	0.83	-	-	S75
Consumption values	Consumption	40 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	5.70 W/m ²	-	-	
		4.44 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

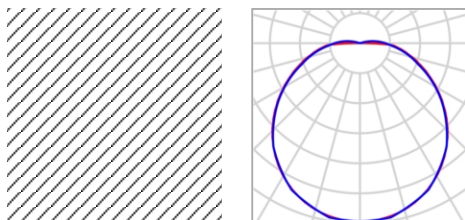
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



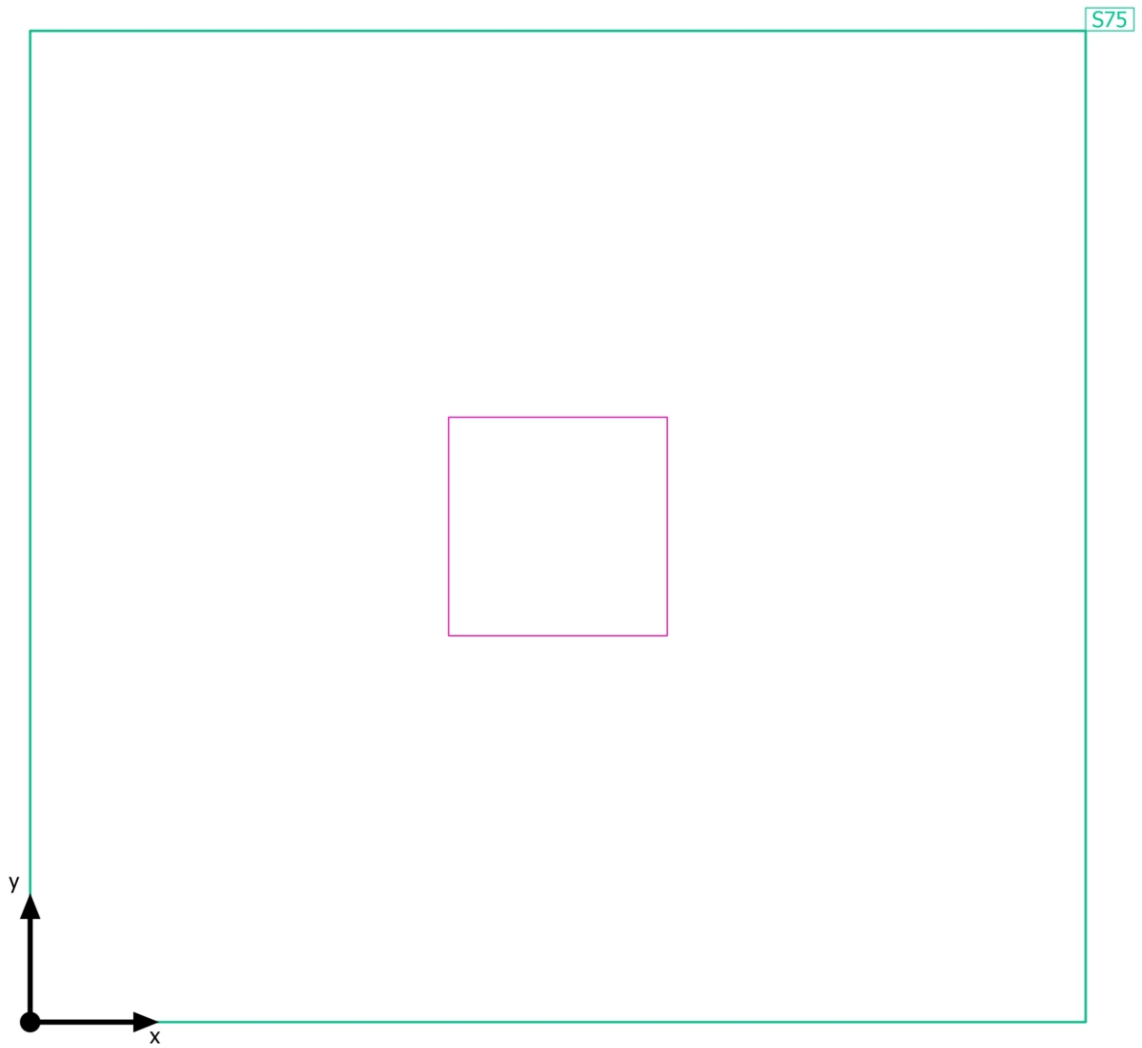
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.990 m / 0.930 m / 3.120 m	0.990 m	0.930 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.980 m				
Y-direction	1 pcs., Centre - centre, 1.860 m				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

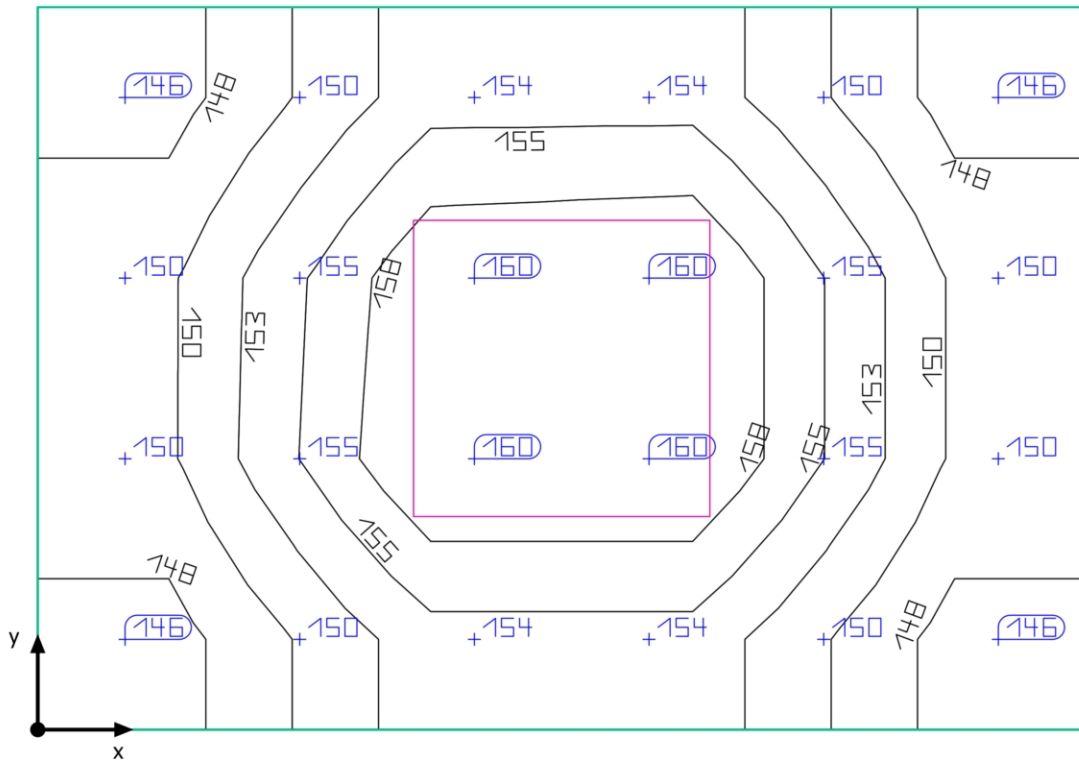
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	128 lx (≥ 100 lx) ✓	106 lx	146 lx	0.83	0.73	S75

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



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Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	153 lx	≥ 100 lx	✓	S80
	g_1	0.95	-	-	S80
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	14.48 W/m ²	-	-	
		9.49 W/m ² /100 lx	-	-	

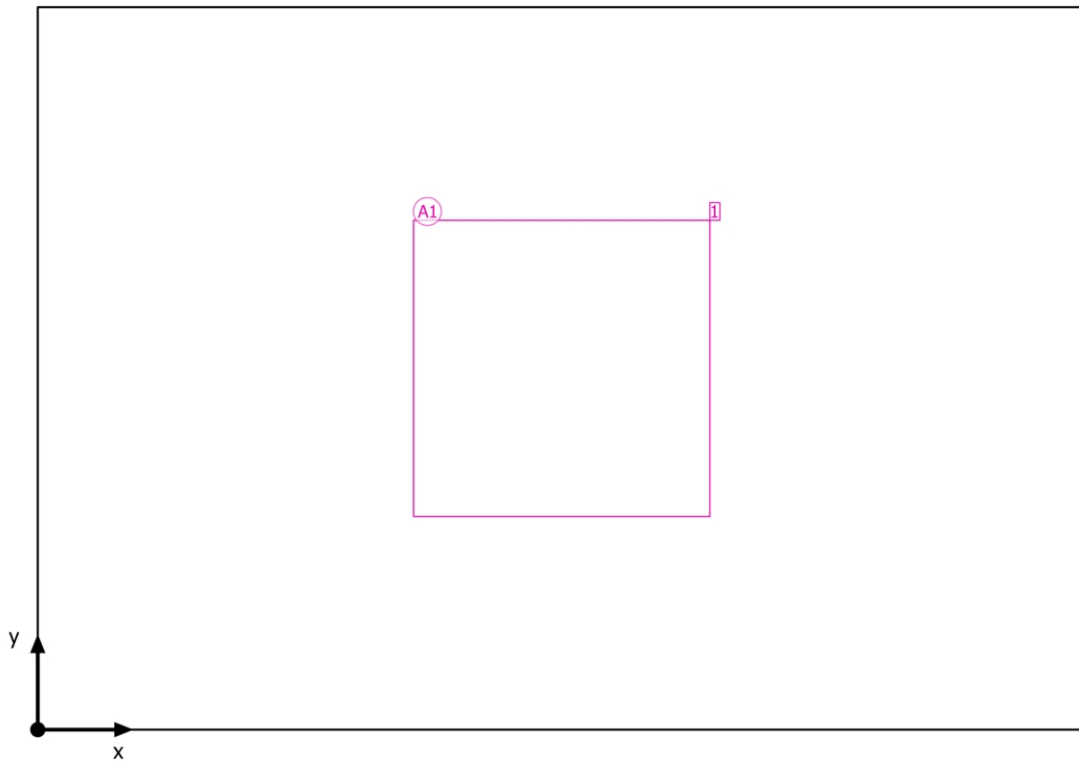
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

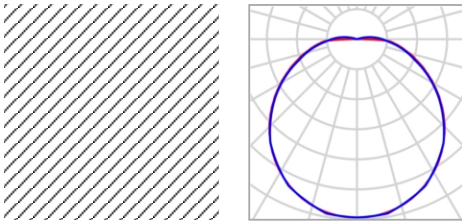
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



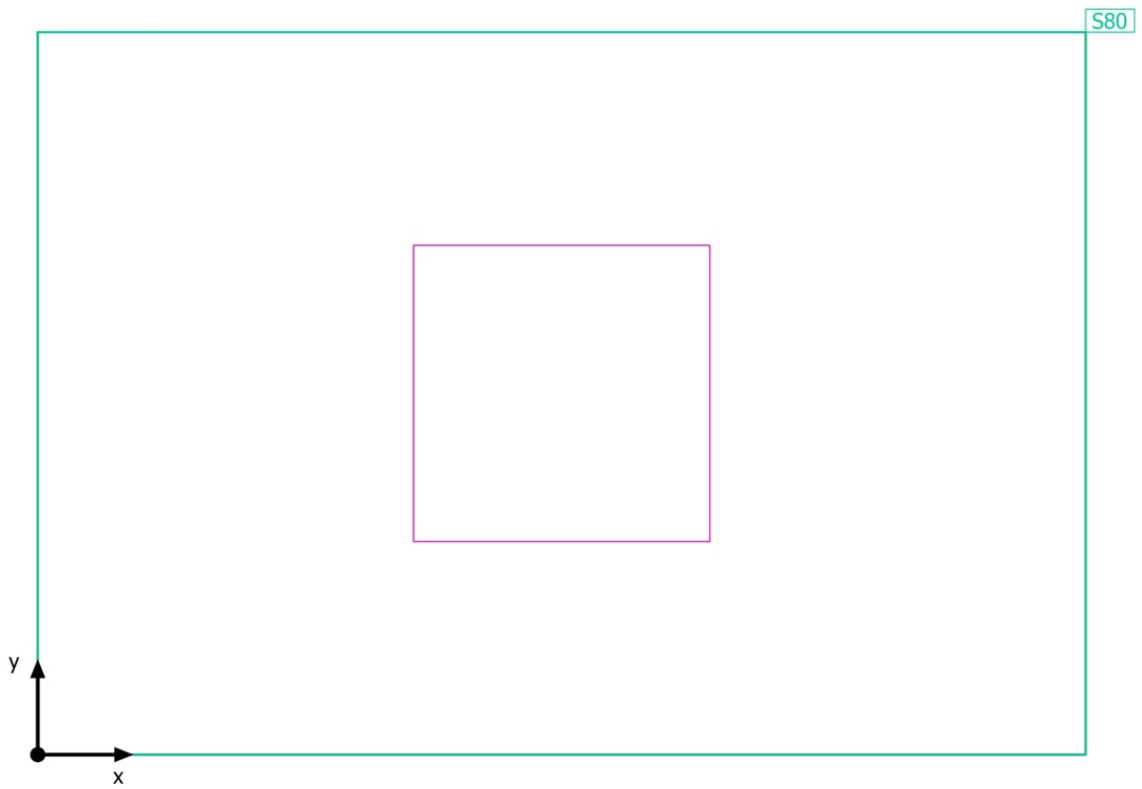
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.725 m / 0.500 m / 3.120 m	0.725 m	0.500 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.450 m				
Y-direction	1 pcs., Centre - centre, 1.000 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



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Calculation objects

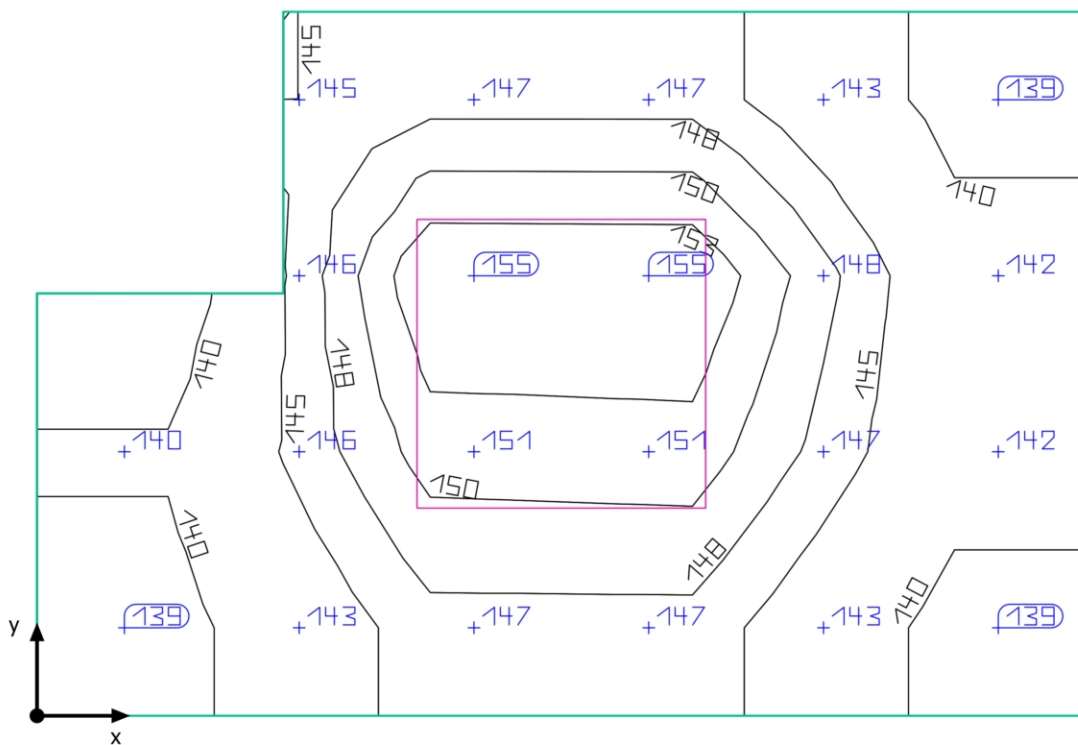
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	153 lx (≥ 100 lx) ✓	146 lx	160 lx	0.95	0.91	S80

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

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Summary



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Summary

Results

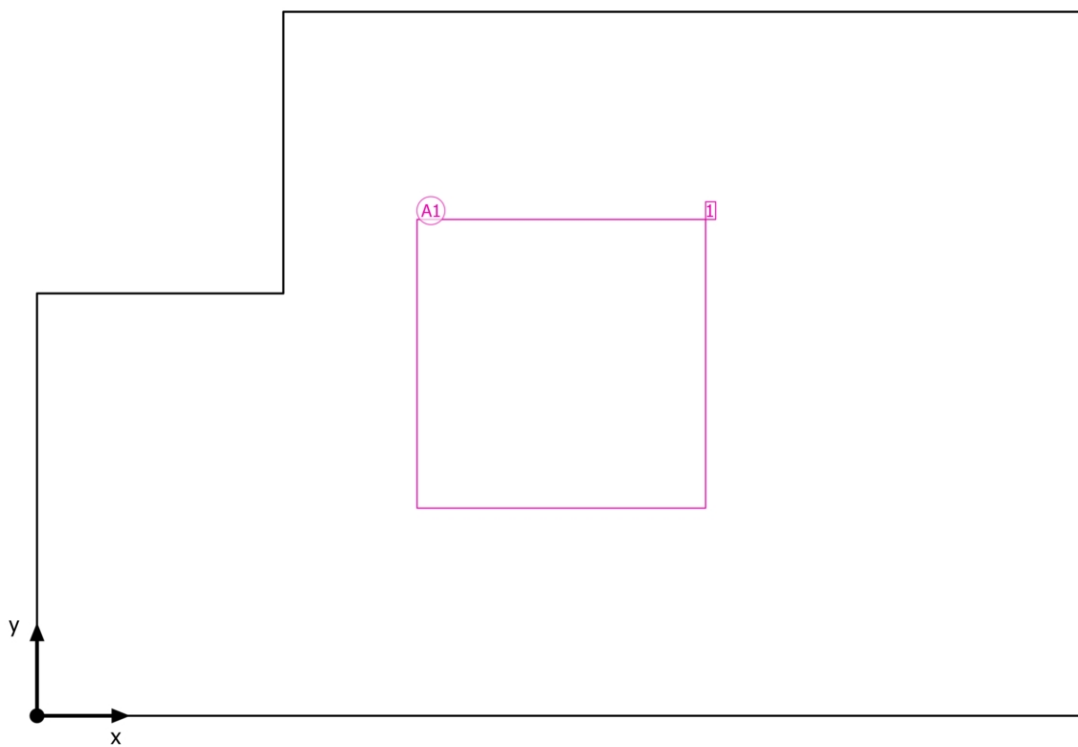
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	145 lx	≥ 100 lx	✓	S82
	g_1	0.95	-	-	S82
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	15.56 W/m ²	-	-	
		10.71 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

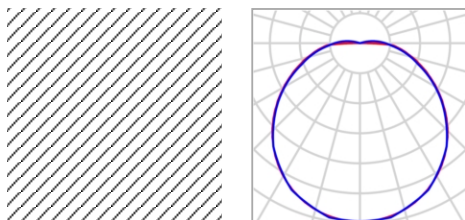
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



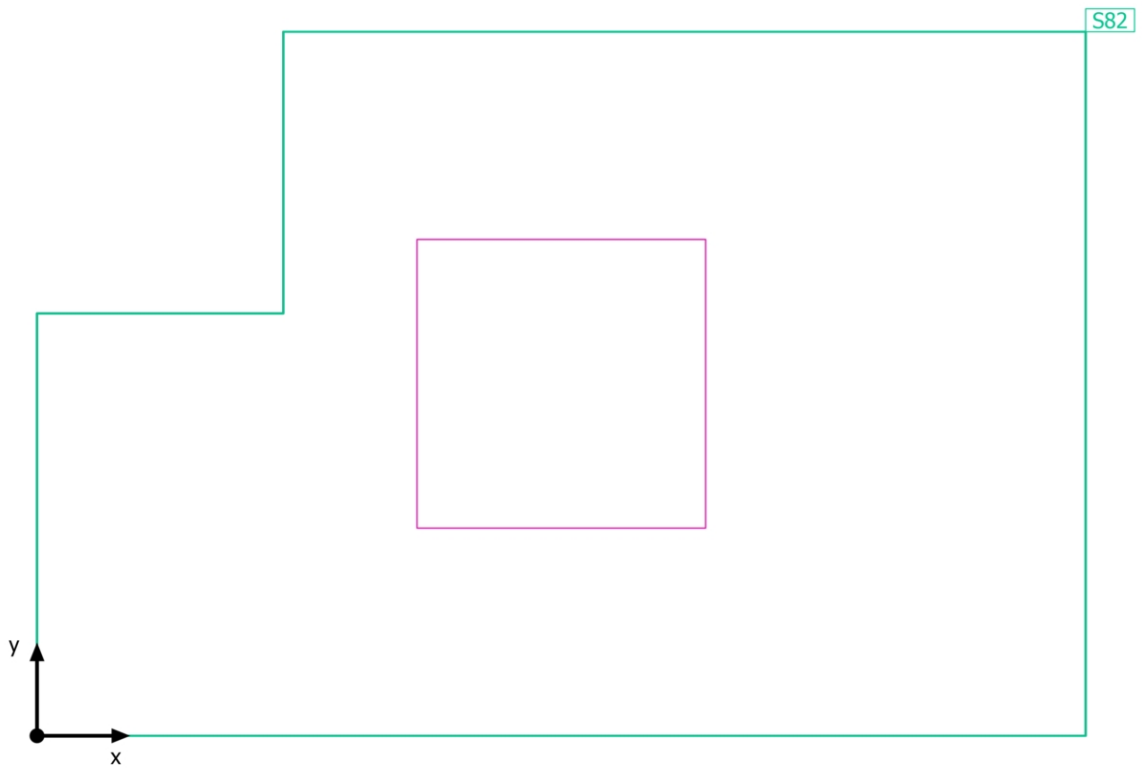
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.745 m / 0.500 m / 3.120 m	0.745 m	0.500 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.490 m				
Y-direction	1 pcs., Centre - centre, 1.000 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

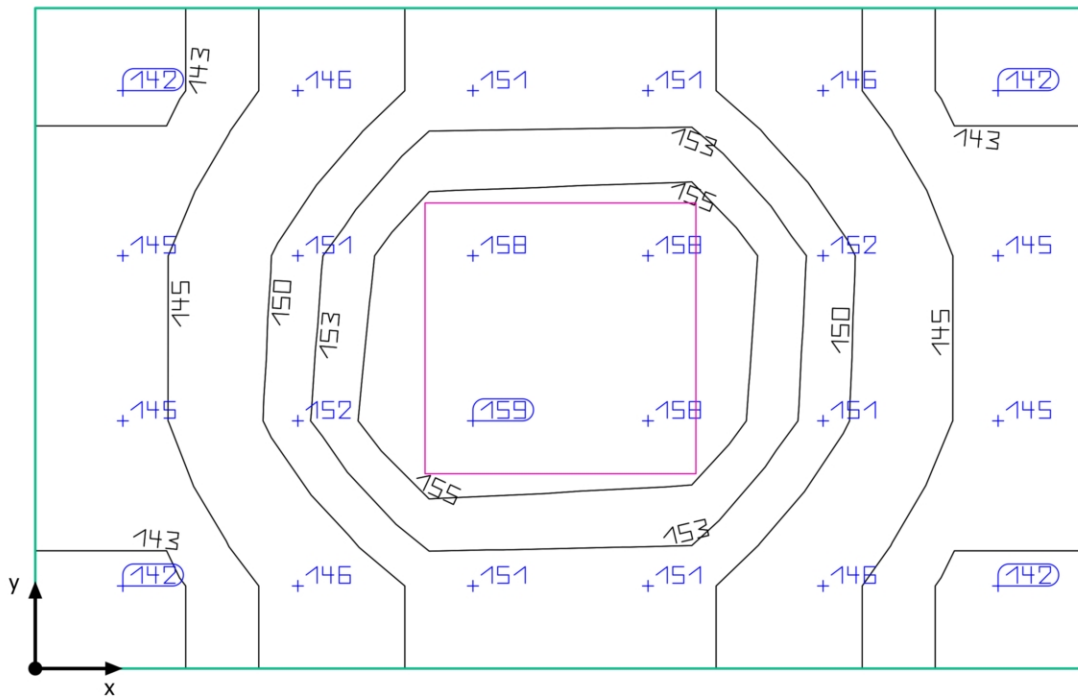
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	145 lx (≥ 100 lx) ✓	138 lx	153 lx	0.95	0.90	S82

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	149 lx	≥ 100 lx	✓	S90
	g_1	0.95	-	-	S90
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	13.21 W/m ²	-	-	
		8.87 W/m ² /100 lx	-	-	

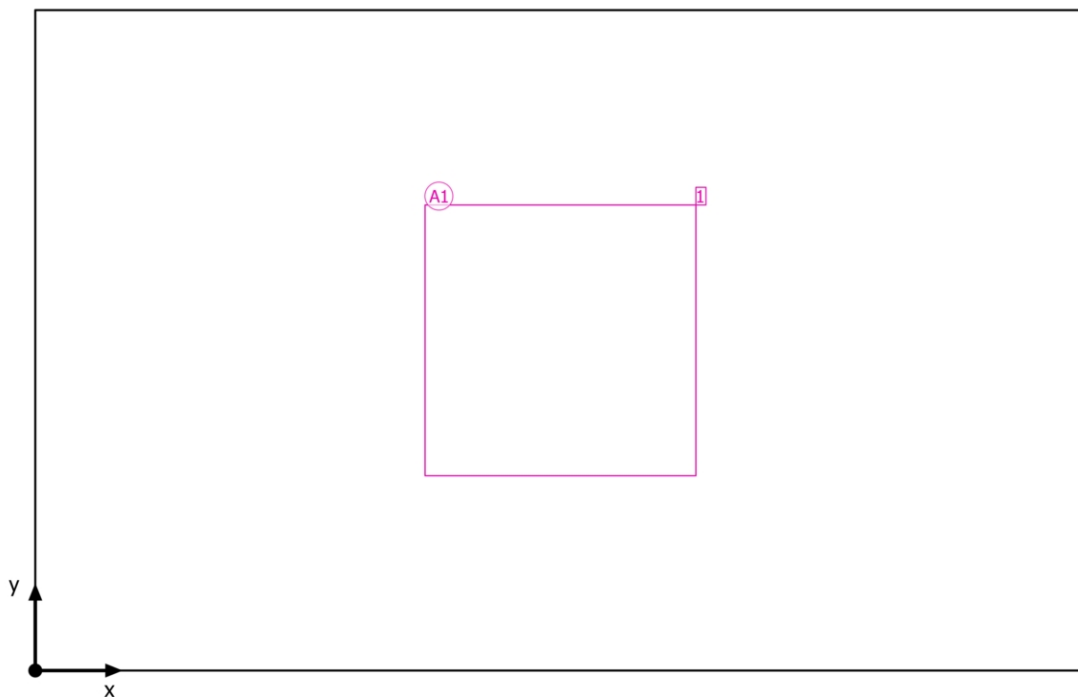
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

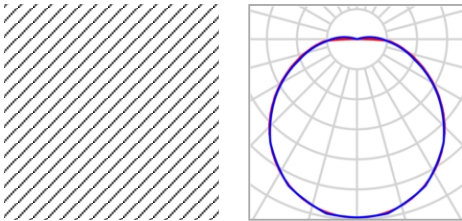
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Luminaire layout plan



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Luminaire layout plan



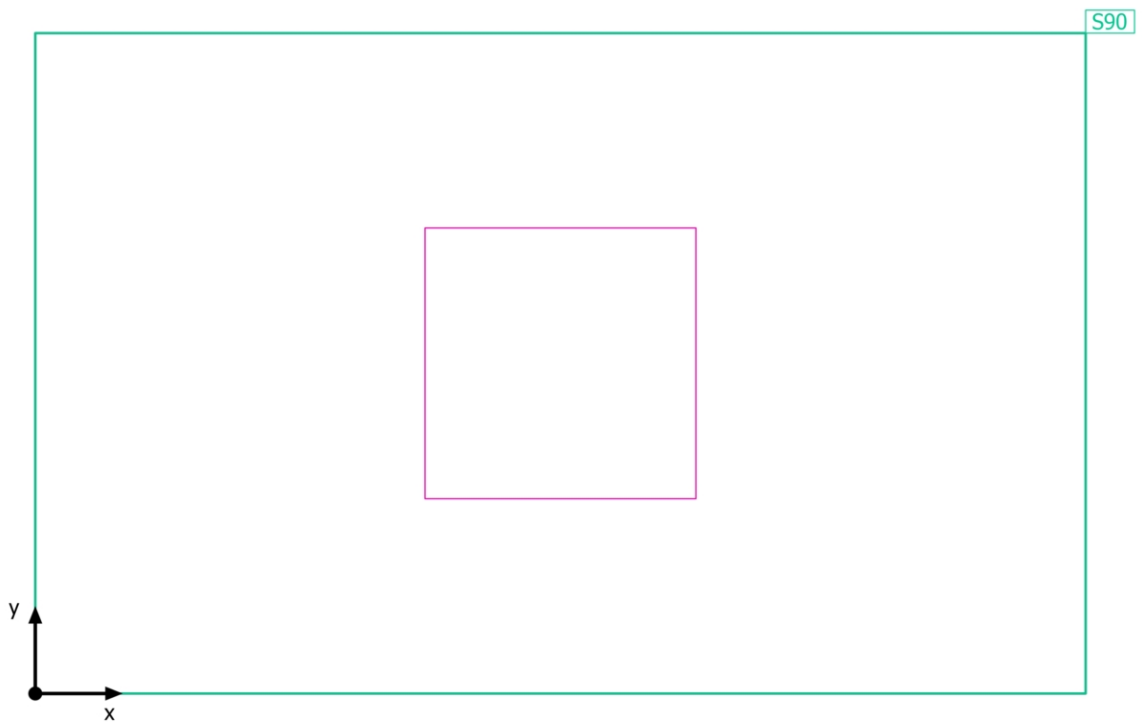
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.795 m / 0.500 m / 3.120 m	0.795 m	0.500 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.590 m				
Y-direction	1 pcs., Centre - centre, 1.000 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

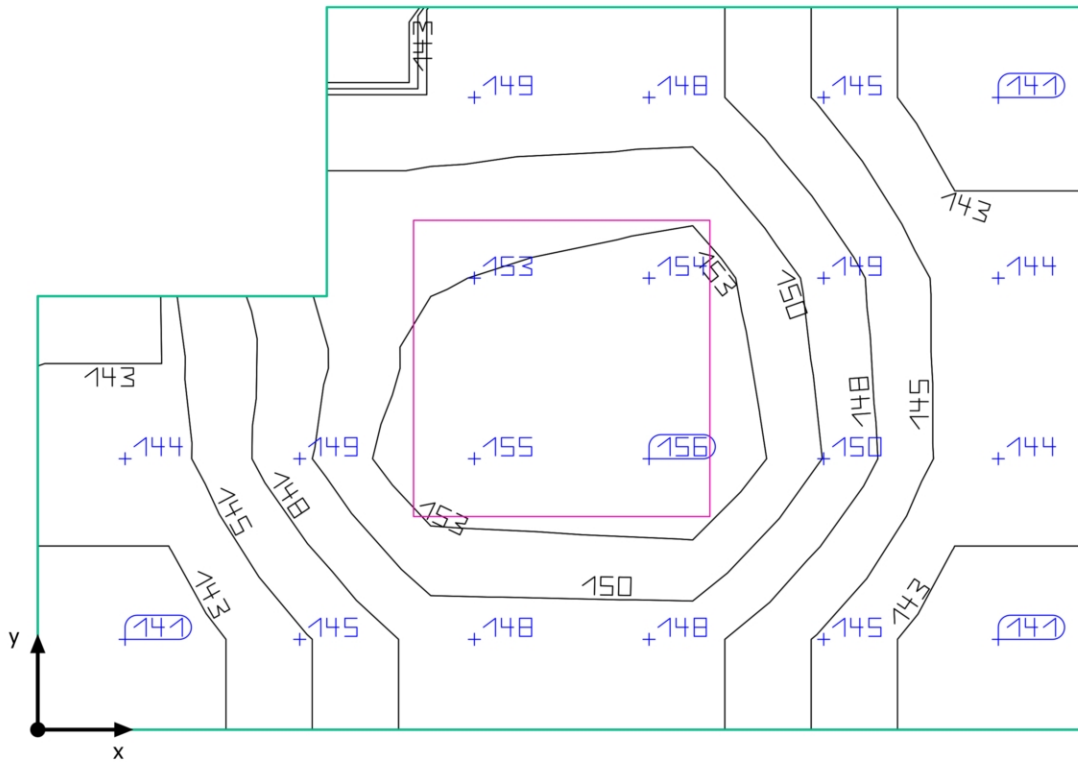
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	149 lx (≥ 100 lx) ✓	142 lx	157 lx	0.95	0.90	S90

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	147 lx	≥ 100 lx	✓	S92
	g_1	0.96	-	-	S92
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	16.28 W/m ²	-	-	
		11.04 W/m ² /100 lx	-	-	

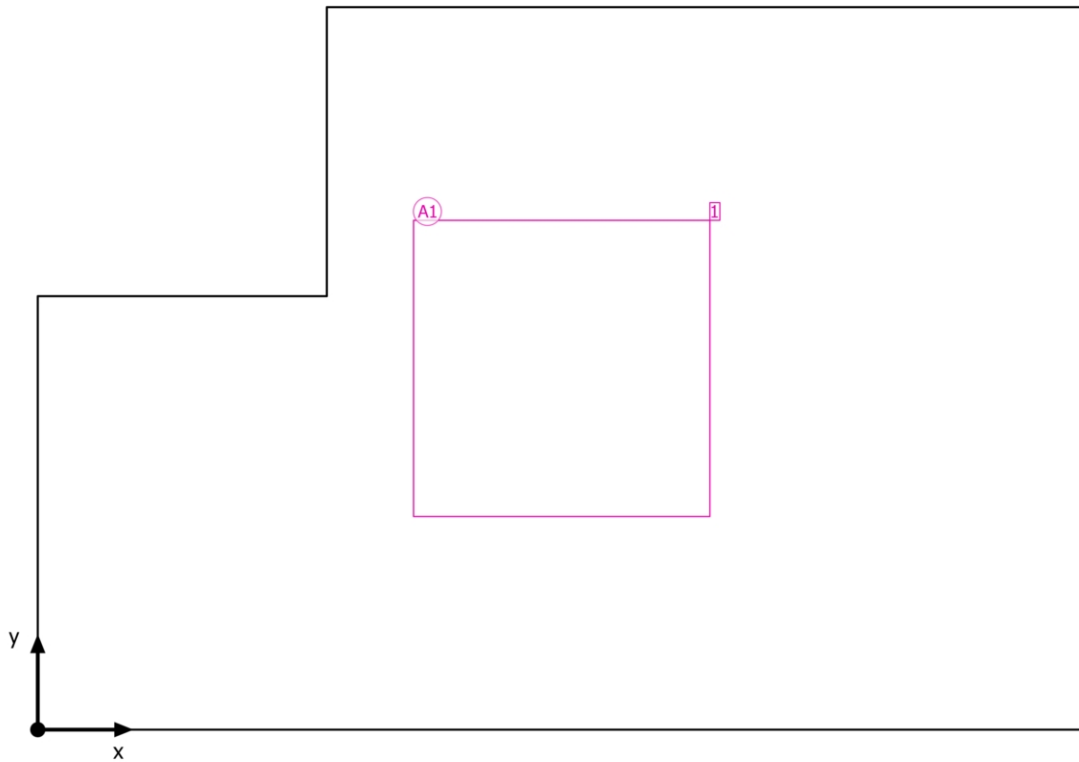
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

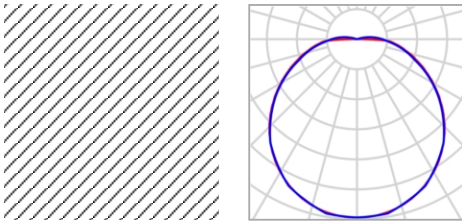
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



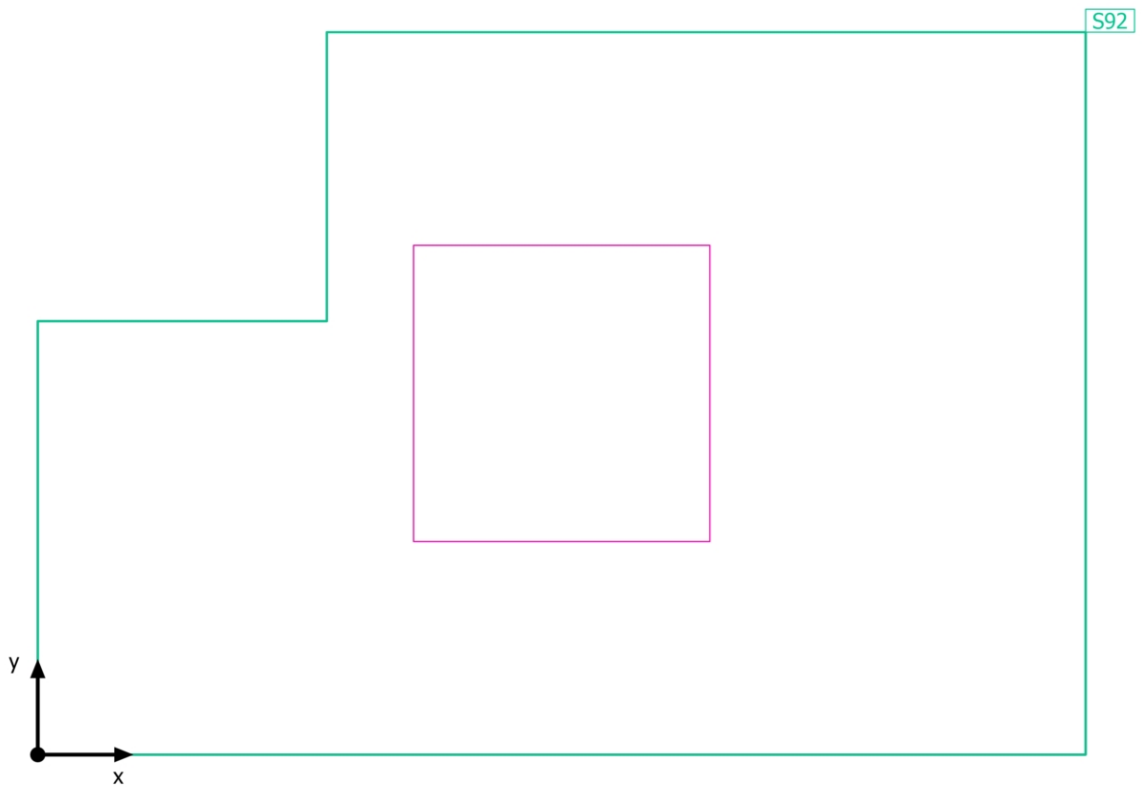
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.725 m / 0.500 m / 3.120 m	0.725 m	0.500 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.450 m				
Y-direction	1 pcs., Centre - centre, 1.000 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

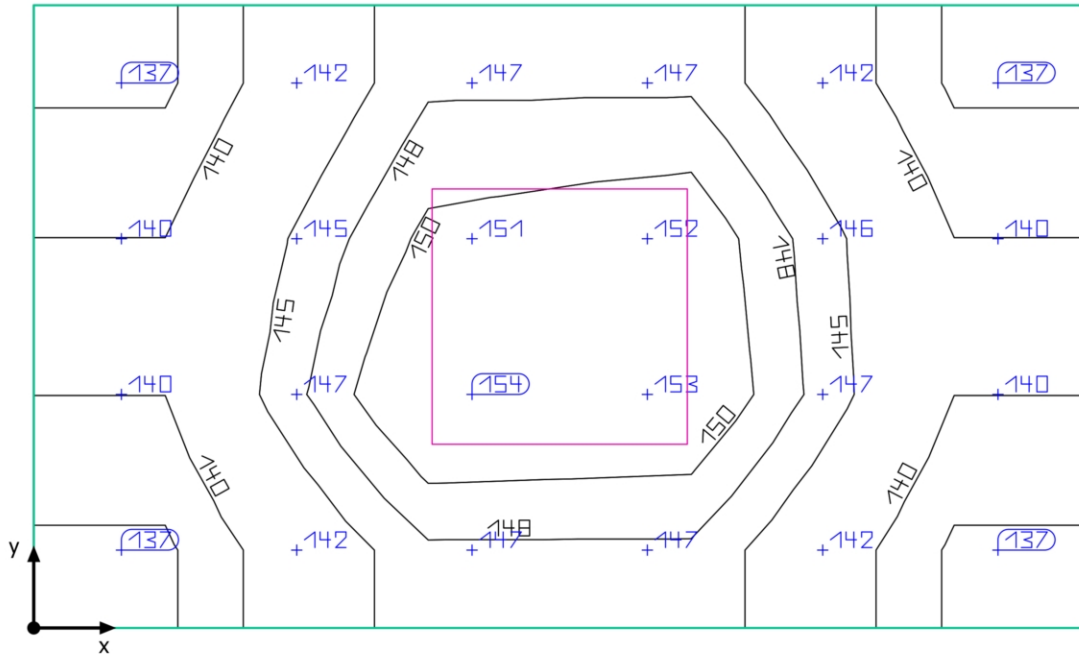
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	147 lx (≥ 100 lx) ✓	141 lx	154 lx	0.96	0.92	S92

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



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Summary

Results

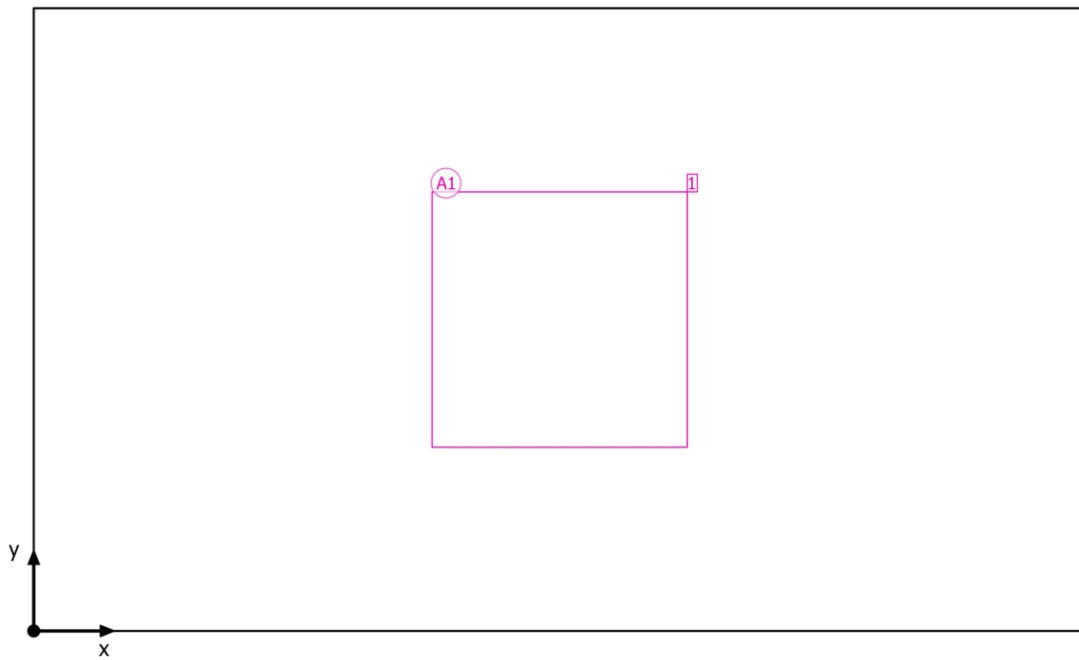
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	144 lx	≥ 100 lx	✓	S100
	g_1	0.95	-	-	S100
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	12.43 W/m ²	-	-	
		8.62 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

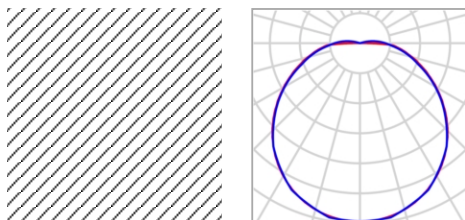
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



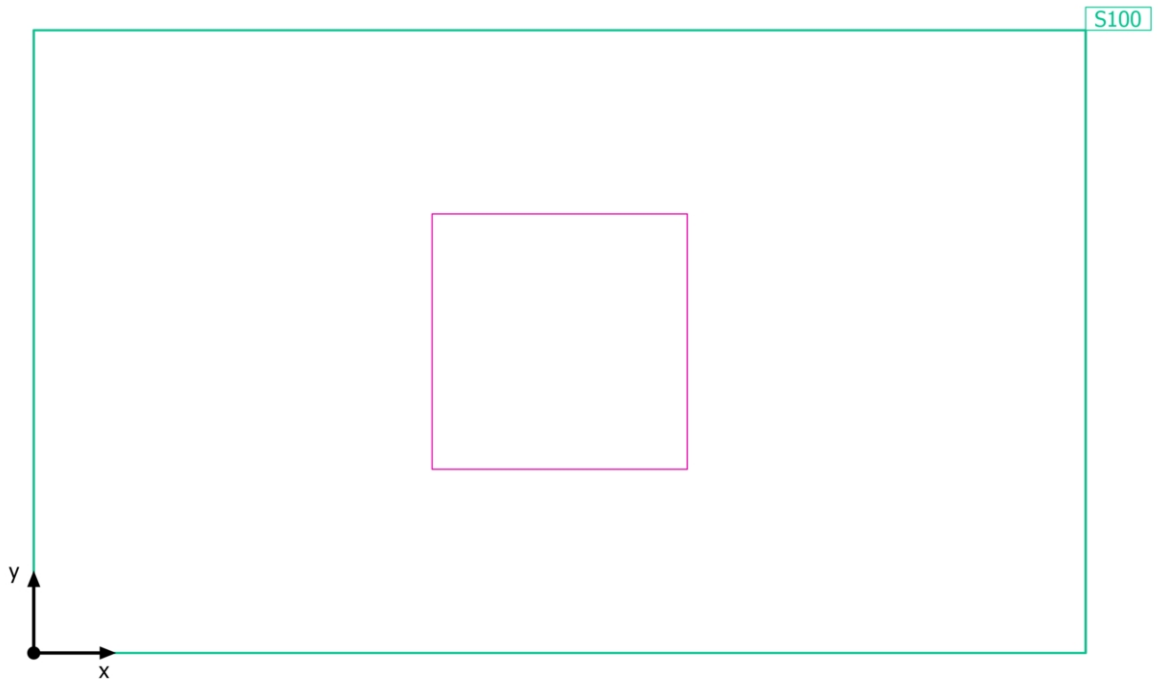
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.845 m / 0.500 m / 3.120 m	0.845 m	0.500 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.690 m				
Y-direction	1 pcs., Centre - centre, 1.000 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

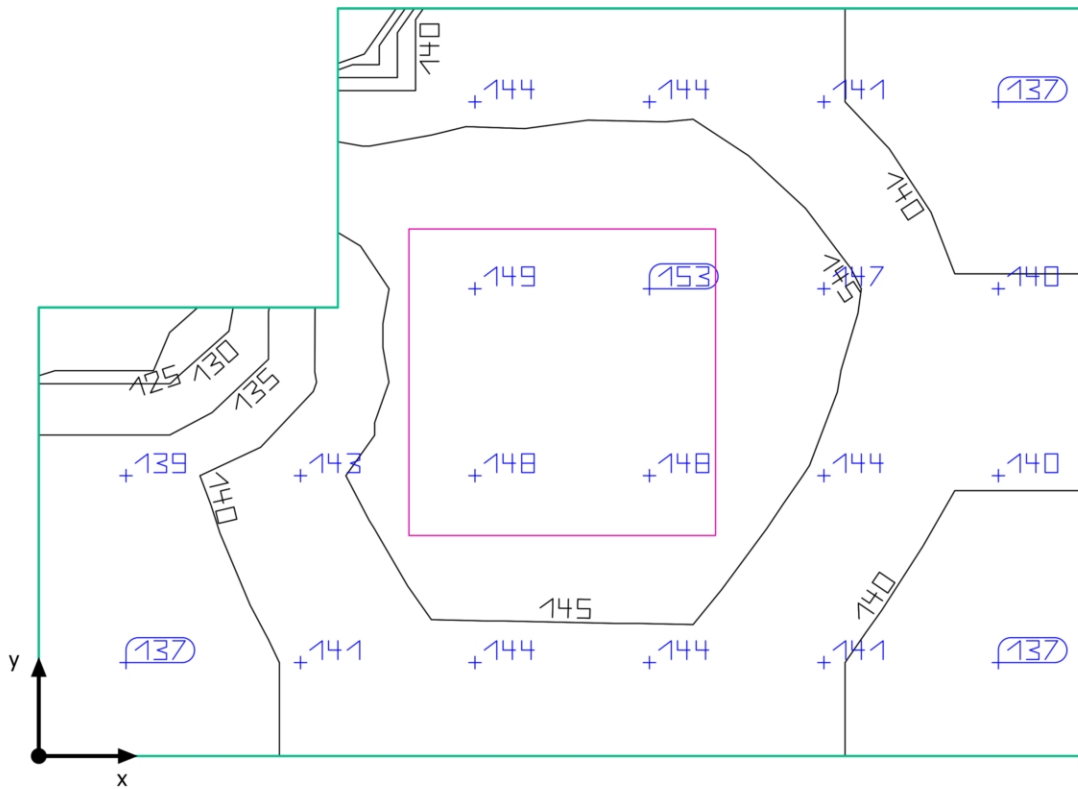
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	144 lx (≥ 100 lx) ✓	137 lx	152 lx	0.95	0.90	S100

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	142 lx	≥ 100 lx	✓	S102
	g_1	0.87	-	-	S102
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	16.94 W/m ²	-	-	
		11.89 W/m ² /100 lx	-	-	

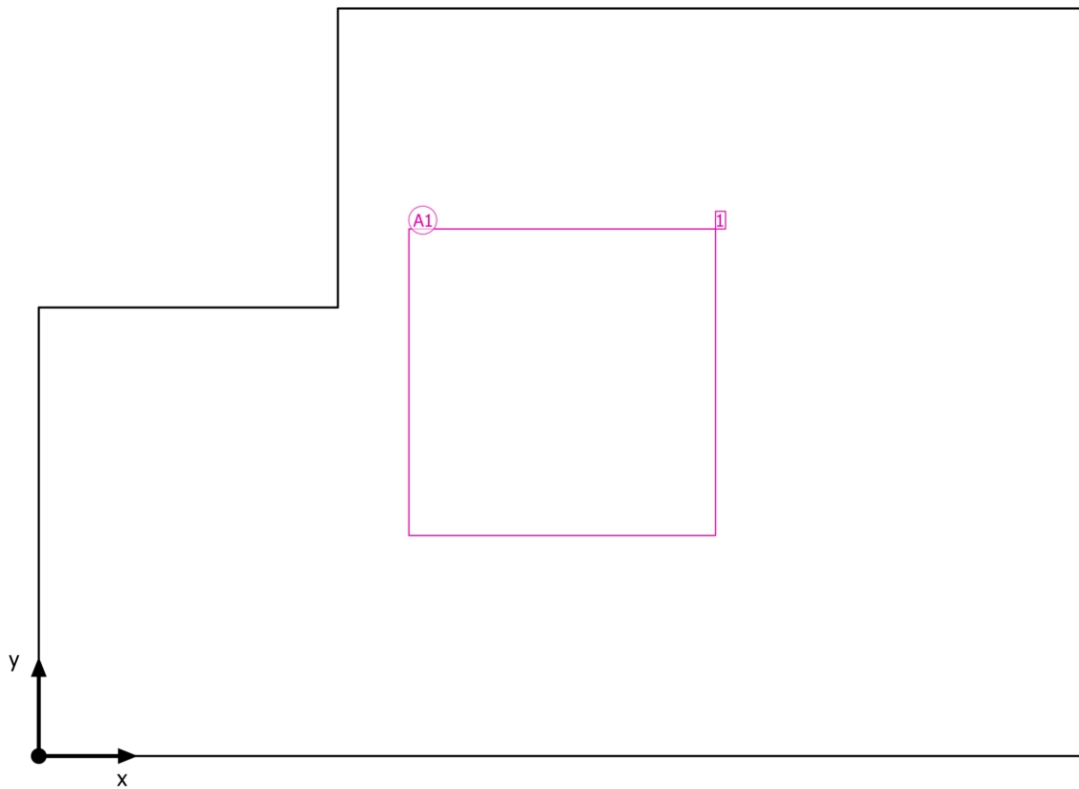
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

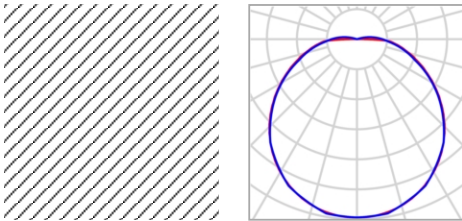
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



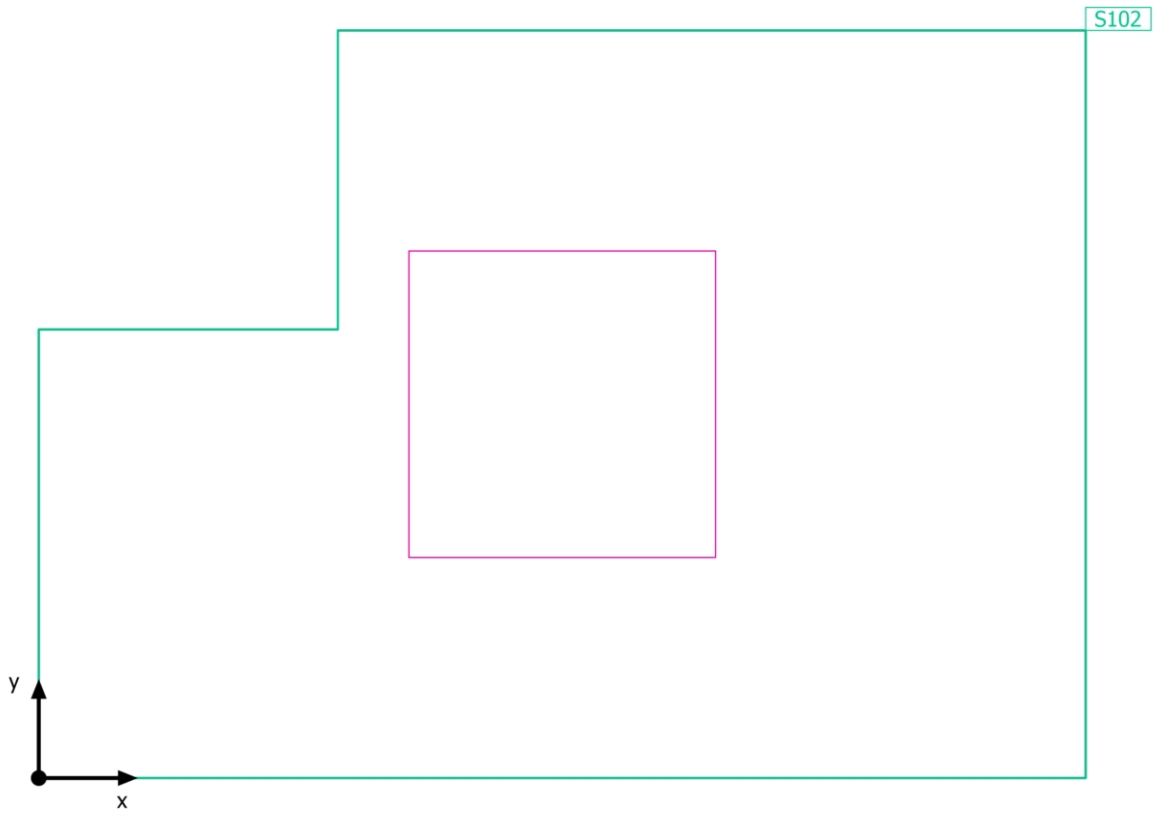
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.700 m / 0.500 m / 3.120 m	0.700 m	0.500 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.400 m				
Y-direction	1 pcs., Centre - centre, 1.000 m				
Arrangement	A1				

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Calculation objects



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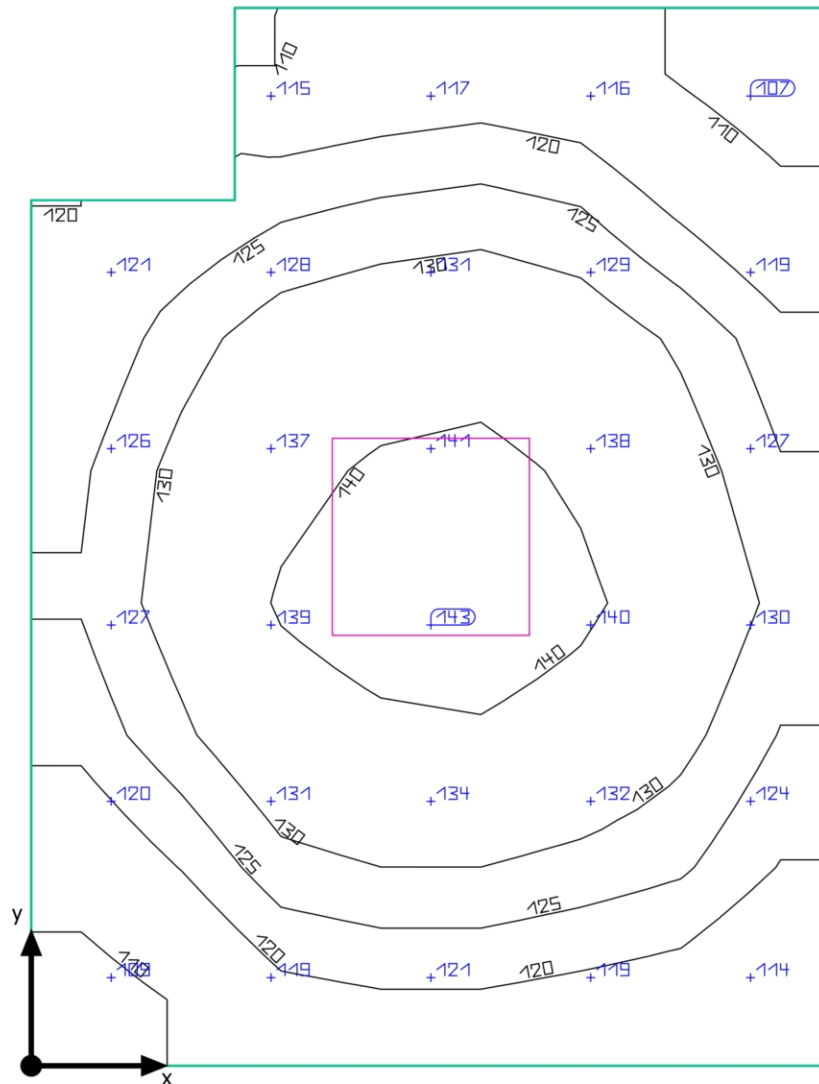
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	142 lx (≥ 100 lx) ✓	124 lx	149 lx	0.87	0.83	S102

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

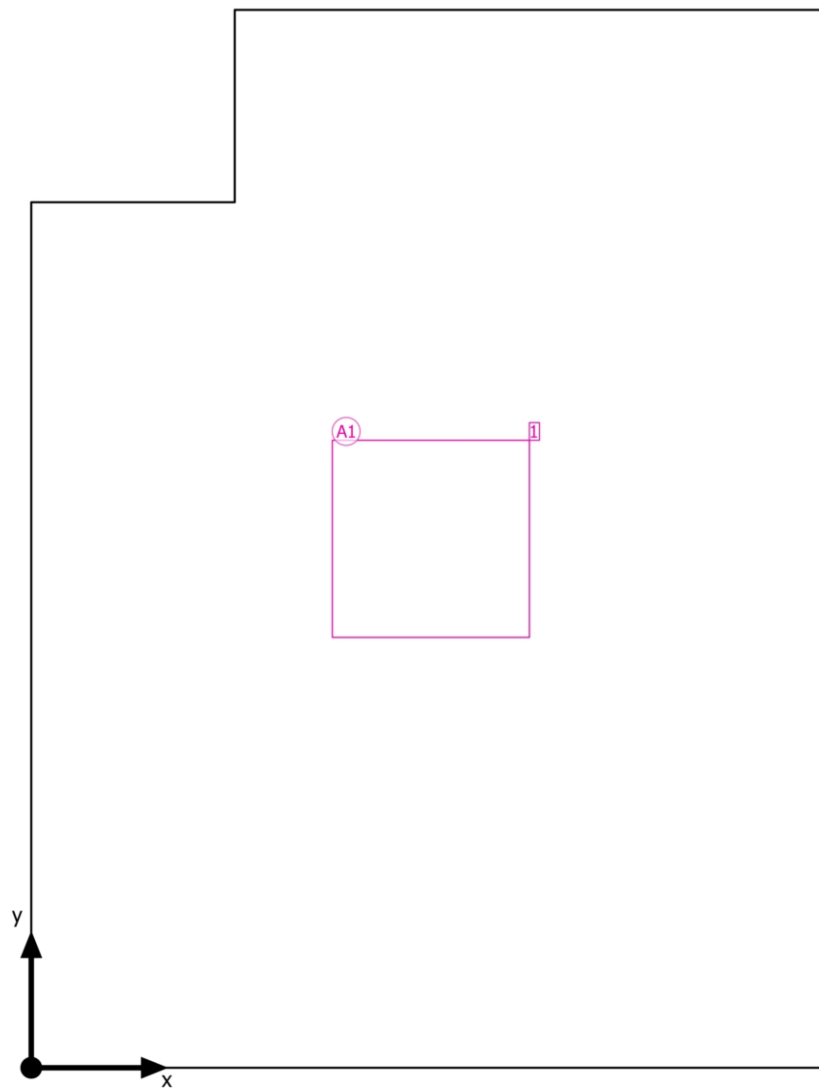
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	126 lx	≥ 100 lx	✓	S206
	g_1	0.83	-	-	S206
Consumption values	Consumption	40 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	6.02 W/m ²	-	-	
		4.77 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

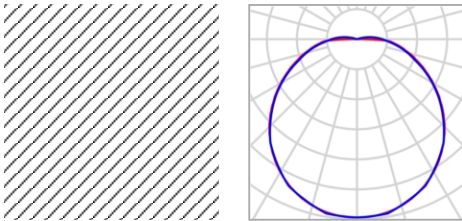
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



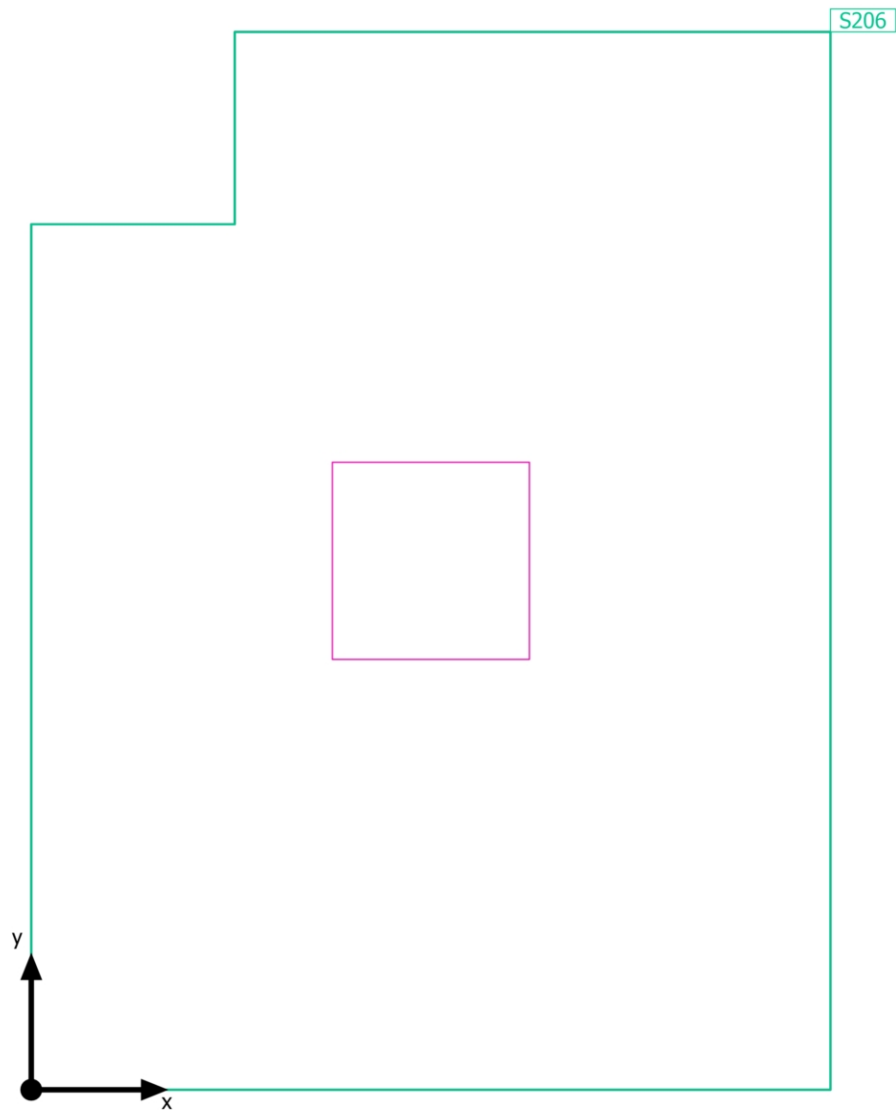
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.831 m / 1.100 m / 3.120 m	0.831 m	1.100 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.200 m				
Y-direction	1 pcs., Centre - centre, 1.663 m				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

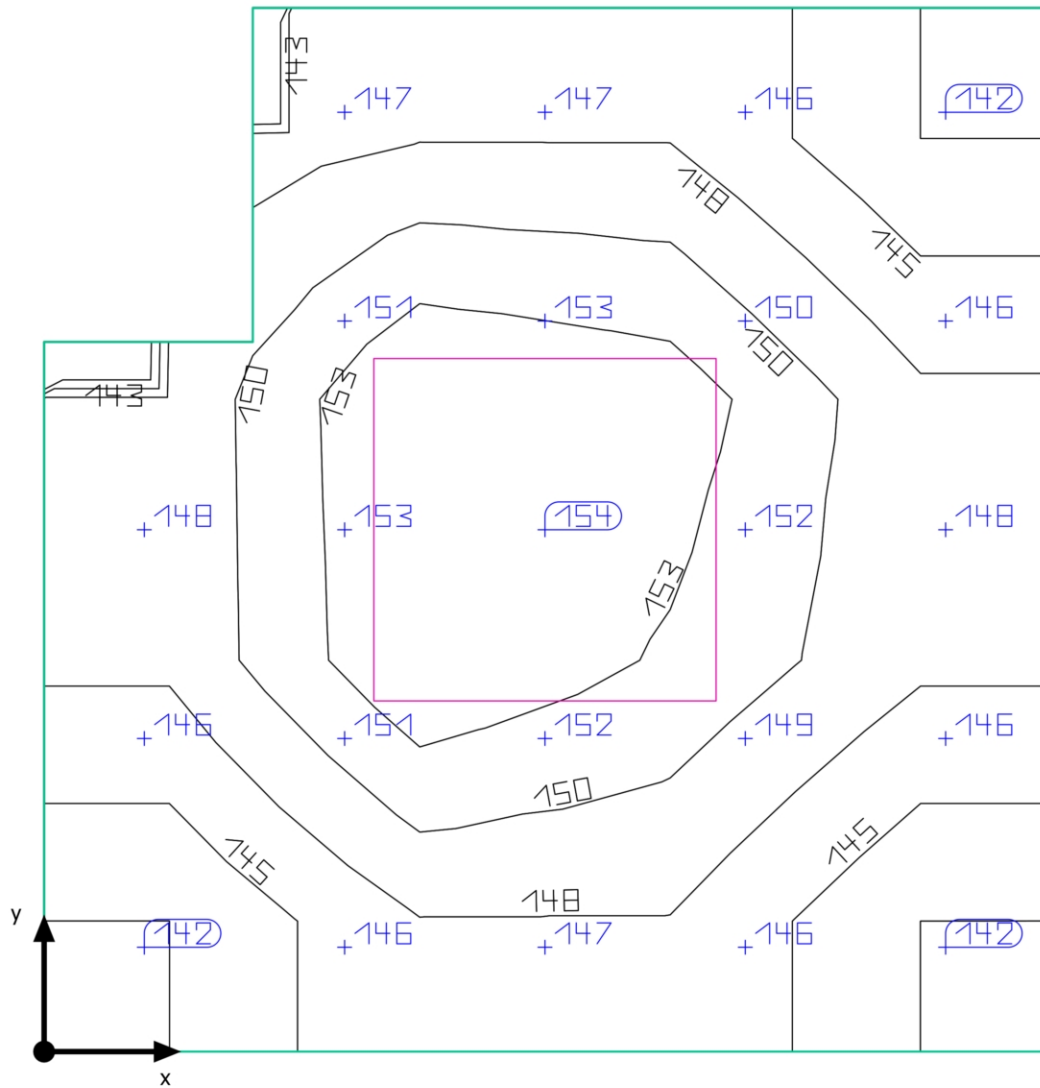
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	126 lx (≥ 100 lx) ✓	104 lx	143 lx	0.83	0.73	S206

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

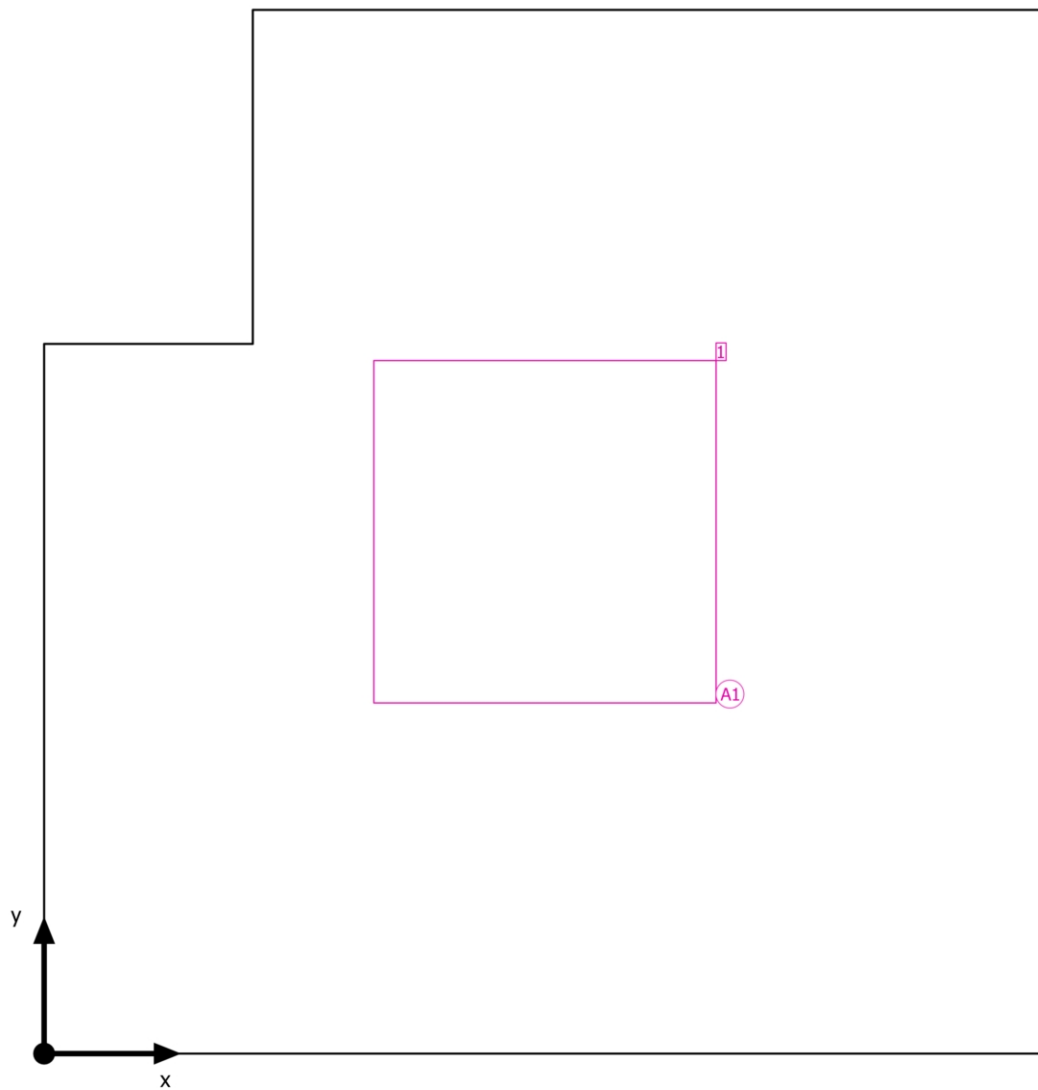
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	148 lx	≥ 100 lx	✓	S110
	g_1	0.96	-	-	S110
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	15.00 W/m ²	-	-	
		10.11 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

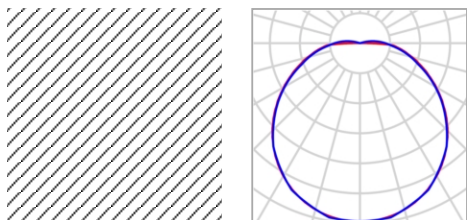
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



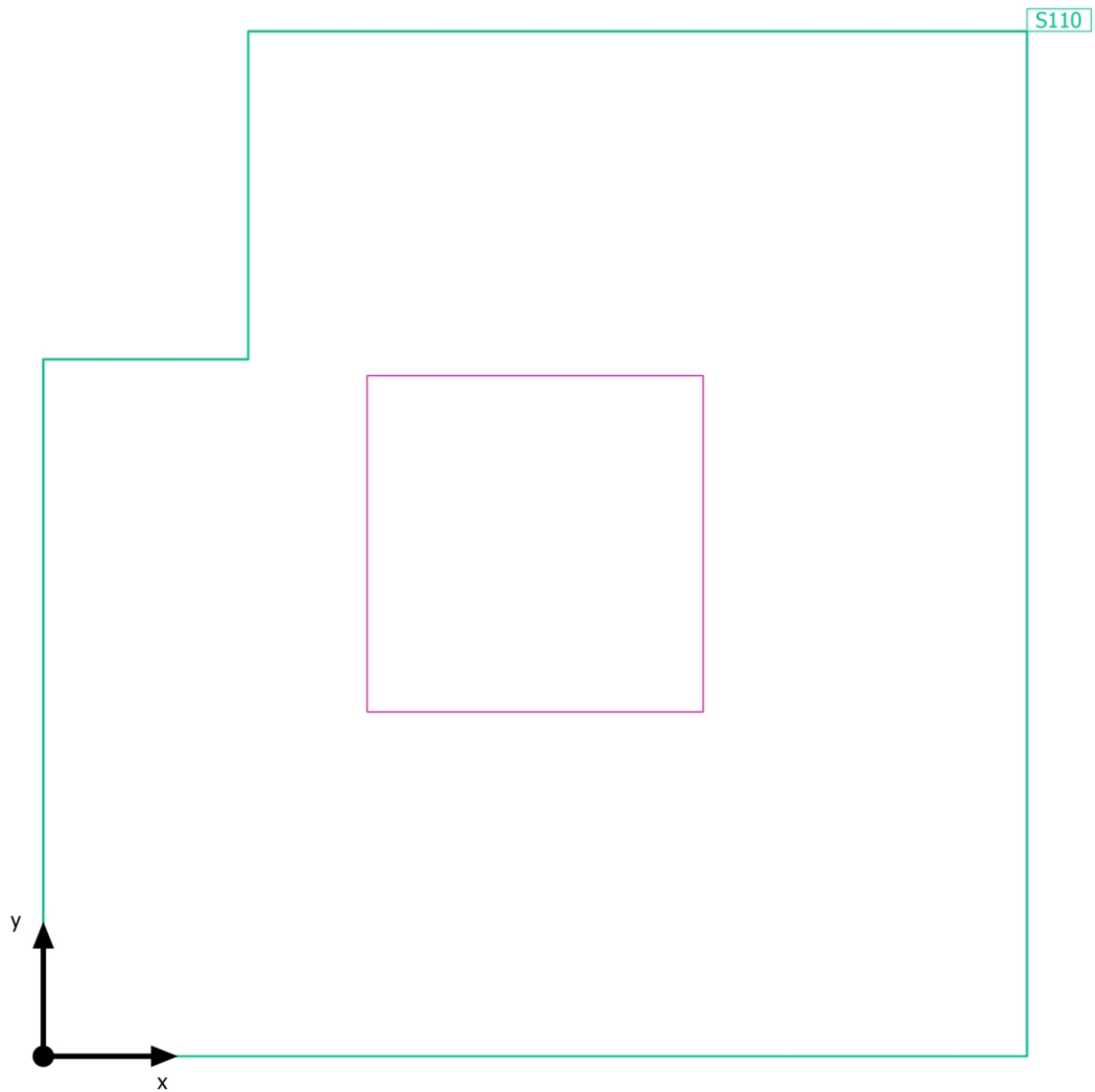
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.600 m / 0.625 m / 3.120 m	0.600 m	0.625 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.250 m				
Y-direction	1 pcs., Centre - centre, 1.200 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

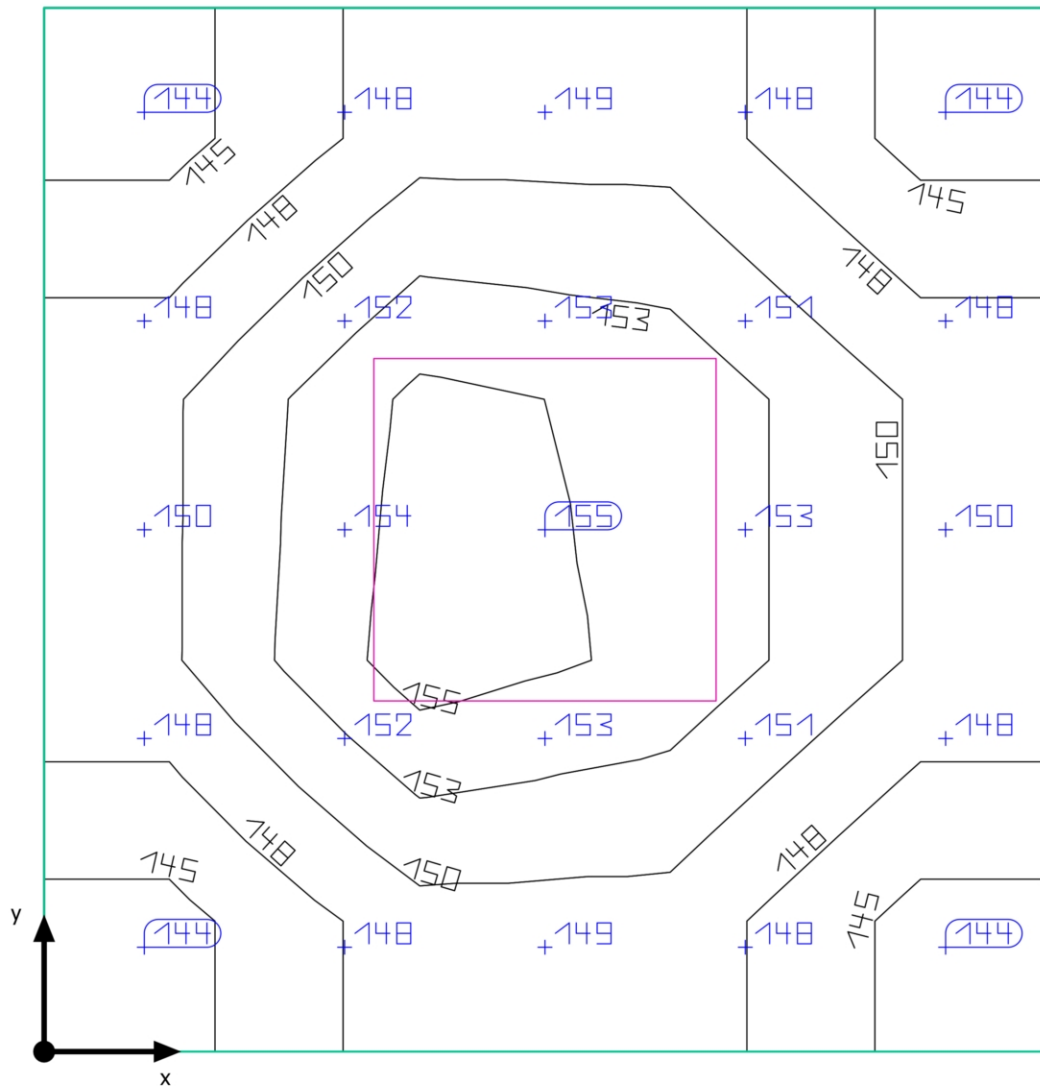
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	148 lx (≥ 100 lx) ✓	142 lx	154 lx	0.96	0.92	S110

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	149 lx	≥ 100 lx	✓	S112
	g_1	0.97	-	-	S112
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	14.00 W/m ²	-	-	
		9.37 W/m ² /100 lx	-	-	

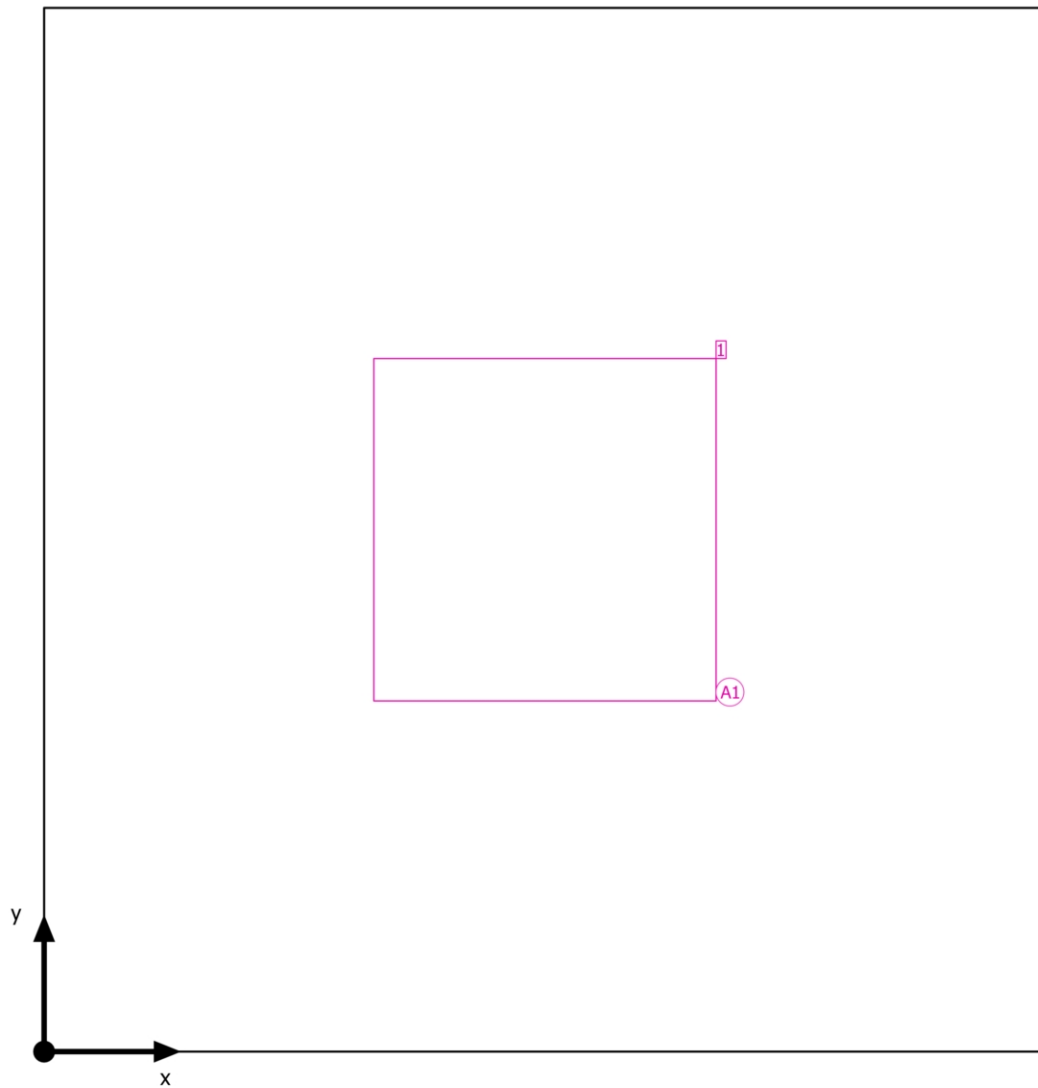
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

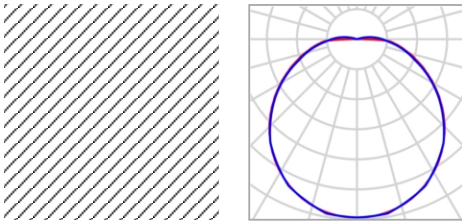
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



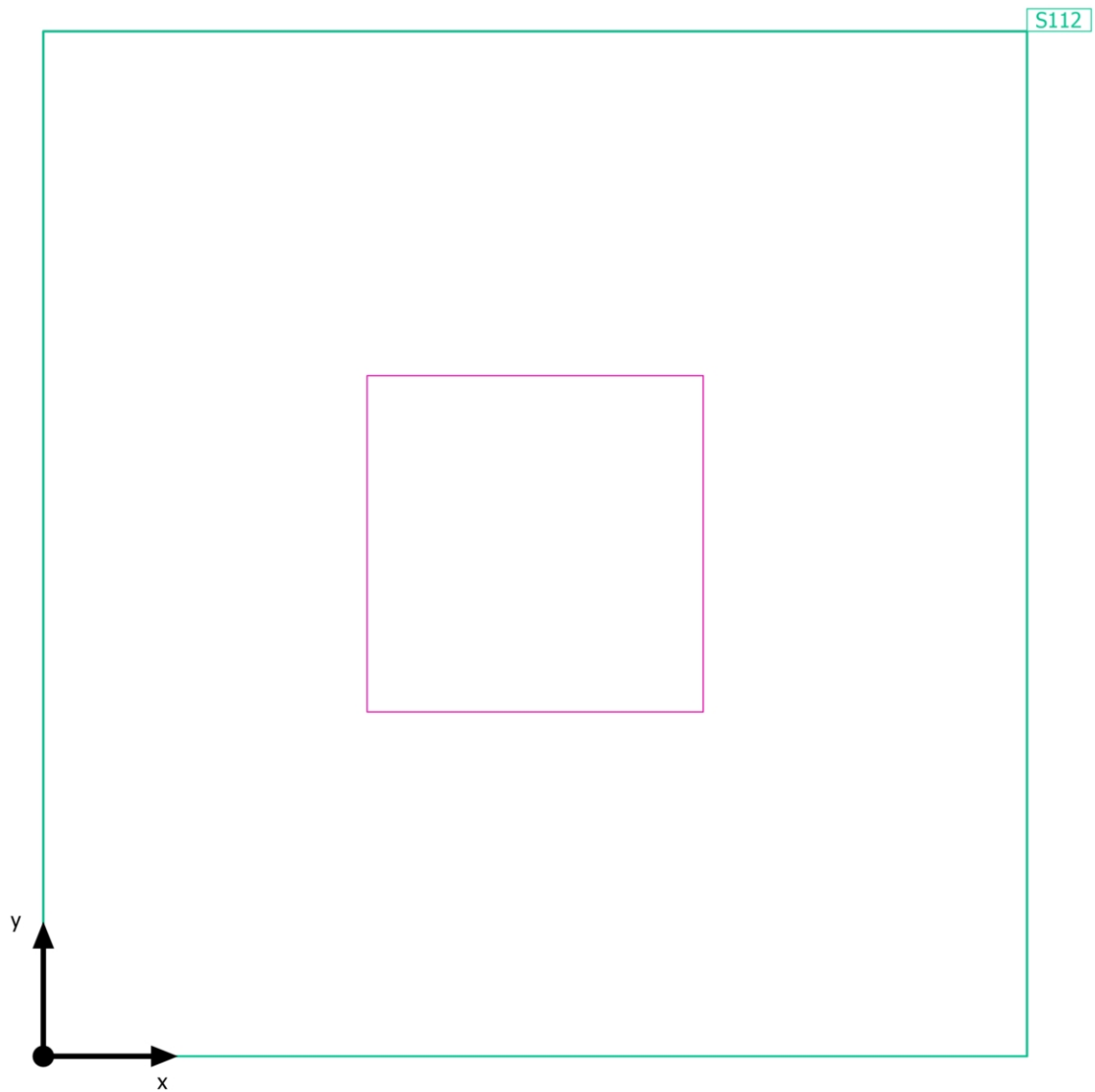
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.600 m / 0.625 m / 3.120 m	0.600 m	0.625 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.250 m				
Y-direction	1 pcs., Centre - centre, 1.200 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

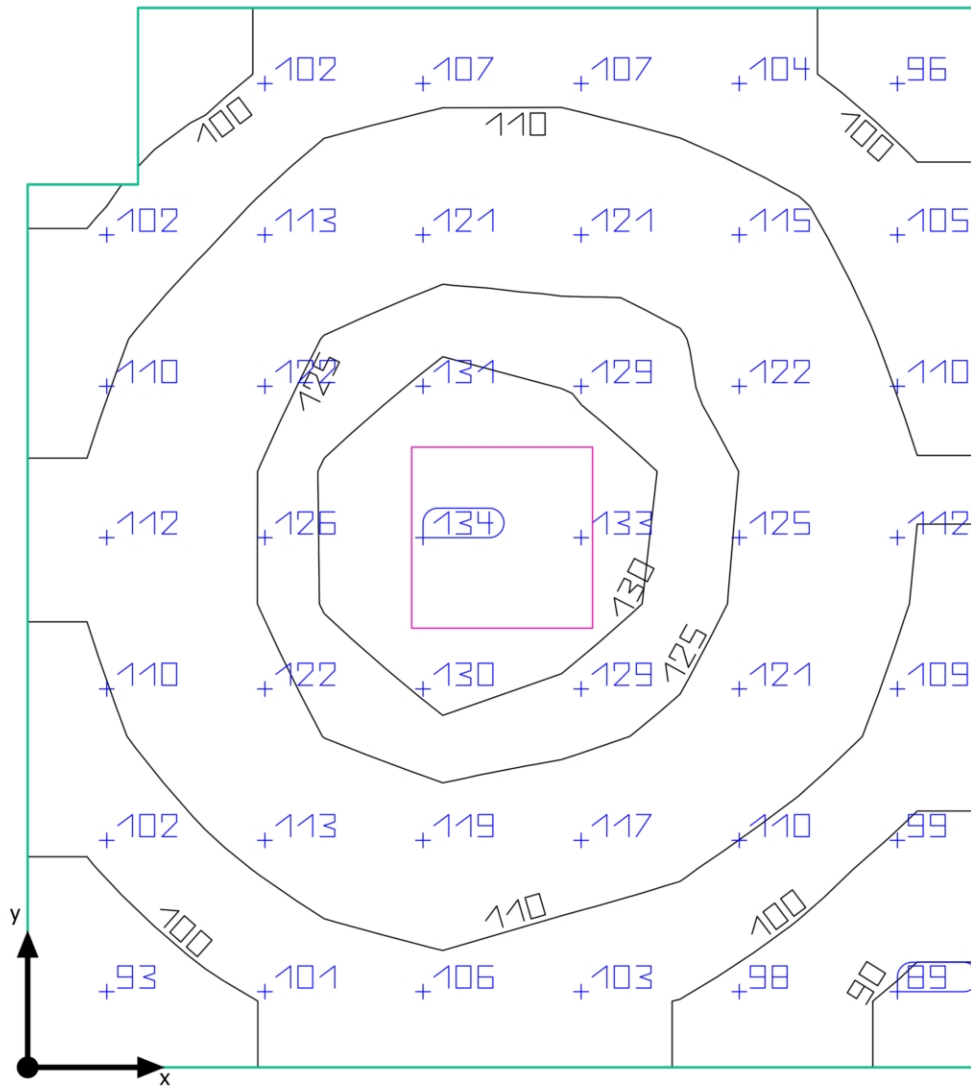
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	149 lx (≥ 100 lx) ✓	144 lx	155 lx	0.97	0.93	S112

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

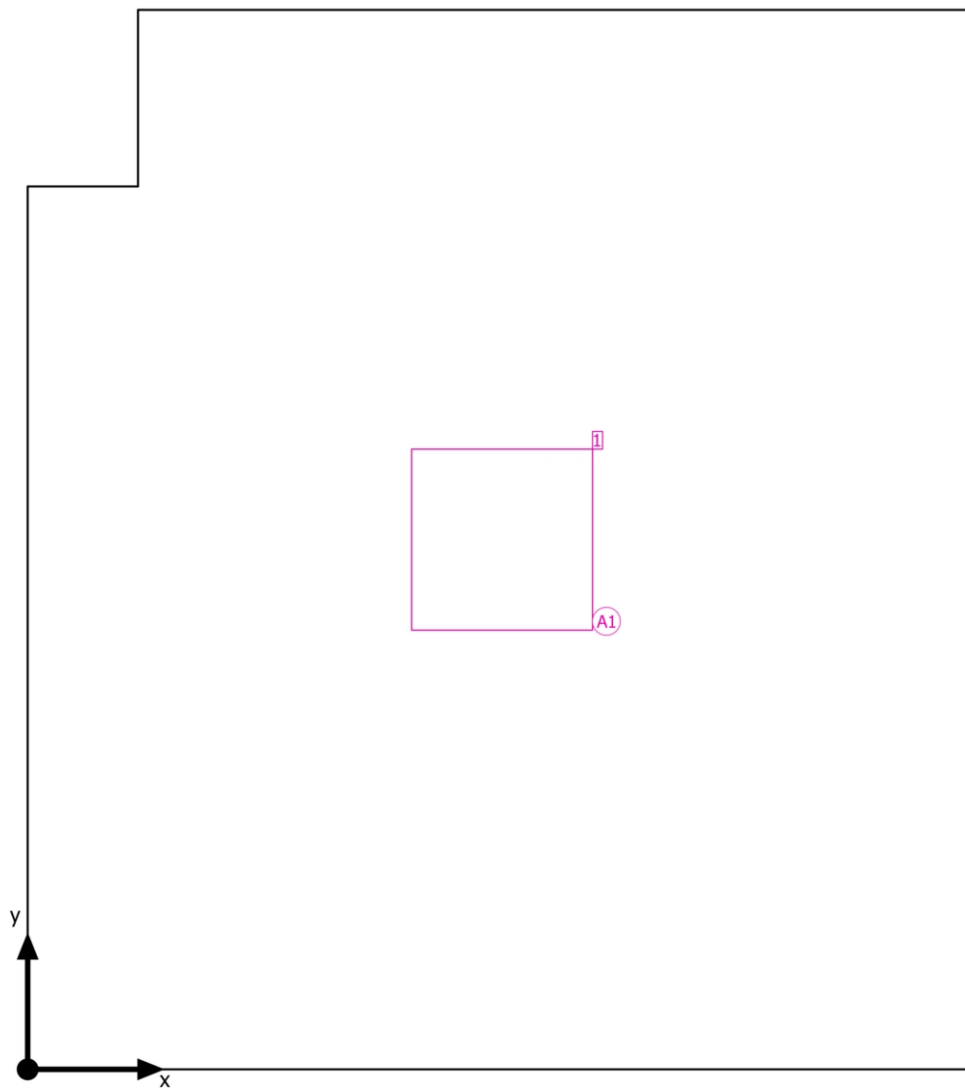
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	113 lx	≥ 100 lx	✓	S118
	g_1	0.78	-	-	S118
Consumption values	Consumption	40 kWh/a	max. 200 kWh/a	✓	
Lighting power density	Room	4.15 W/m ²	-	-	
		3.67 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

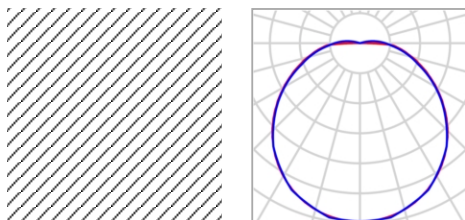
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



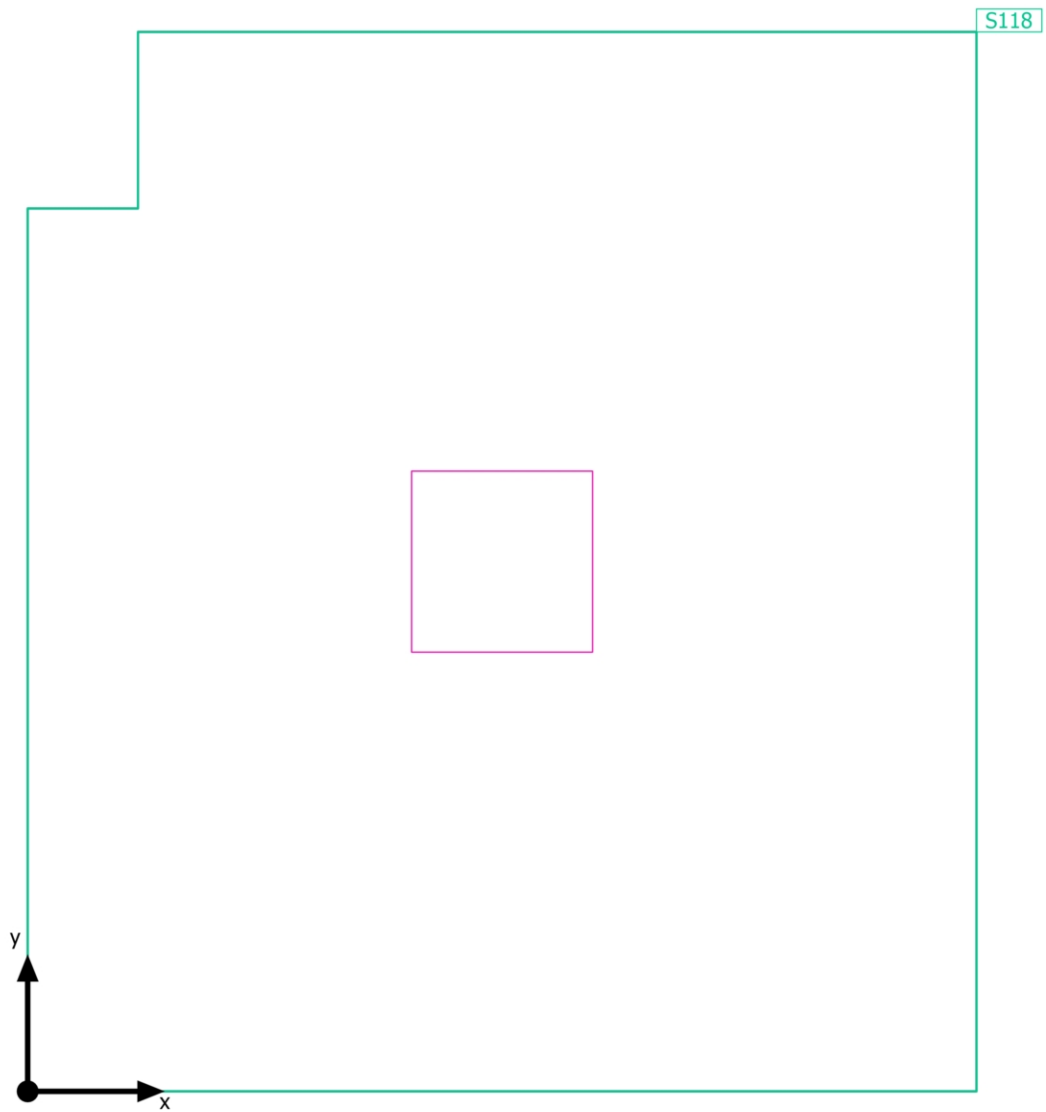
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.075 m / 1.200 m / 3.120 m	1.075 m	1.200 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.400 m				
Y-direction	1 pcs., Centre - centre, 2.150 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

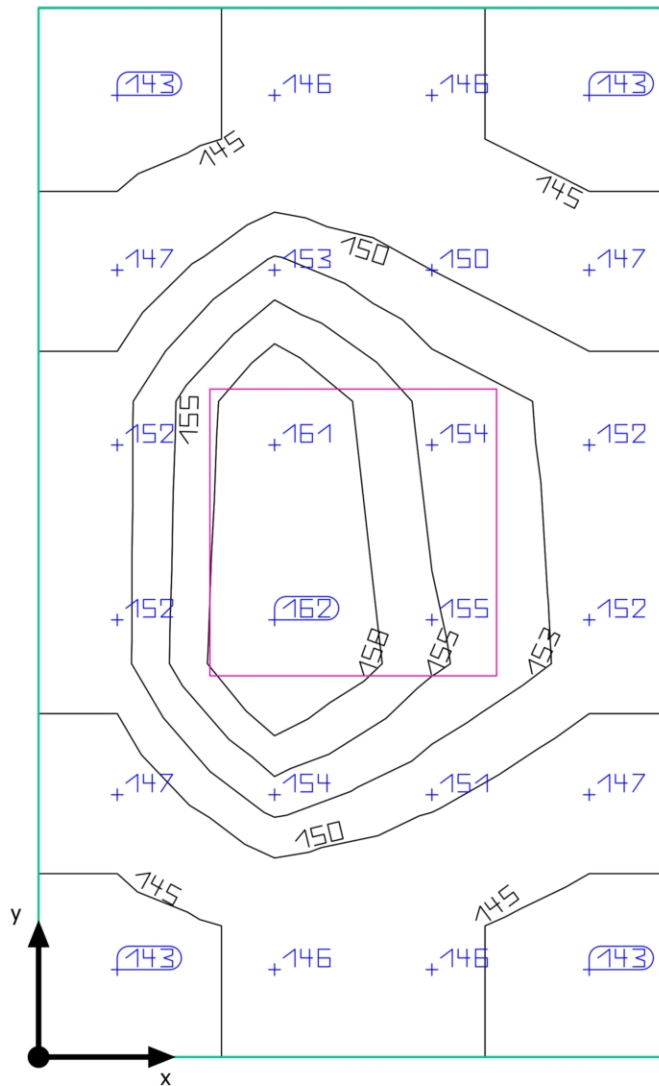
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	113 lx (≥ 100 lx) ✓	87.7 lx	134 lx	0.78	0.65	S118

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

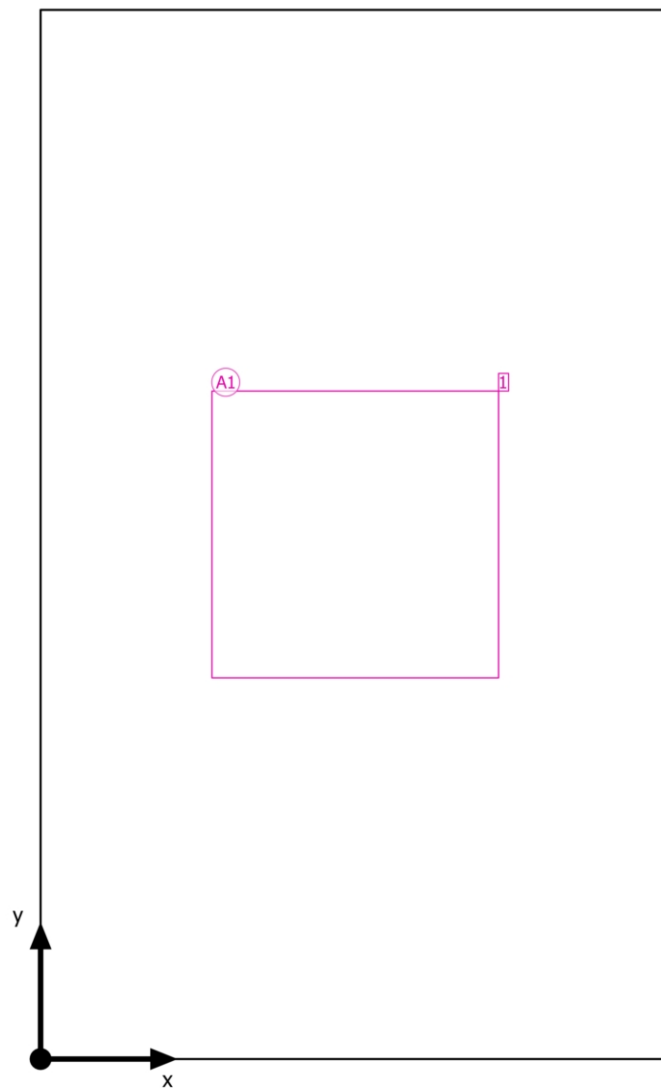
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	150 lx	≥ 100 lx	✓	S120
	g_1	0.95	-	-	S120
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	15.56 W/m ²	-	-	
		10.39 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

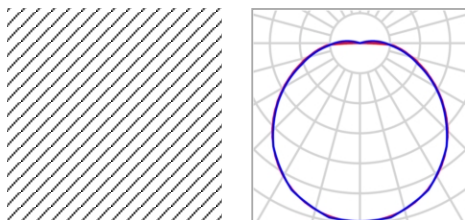
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



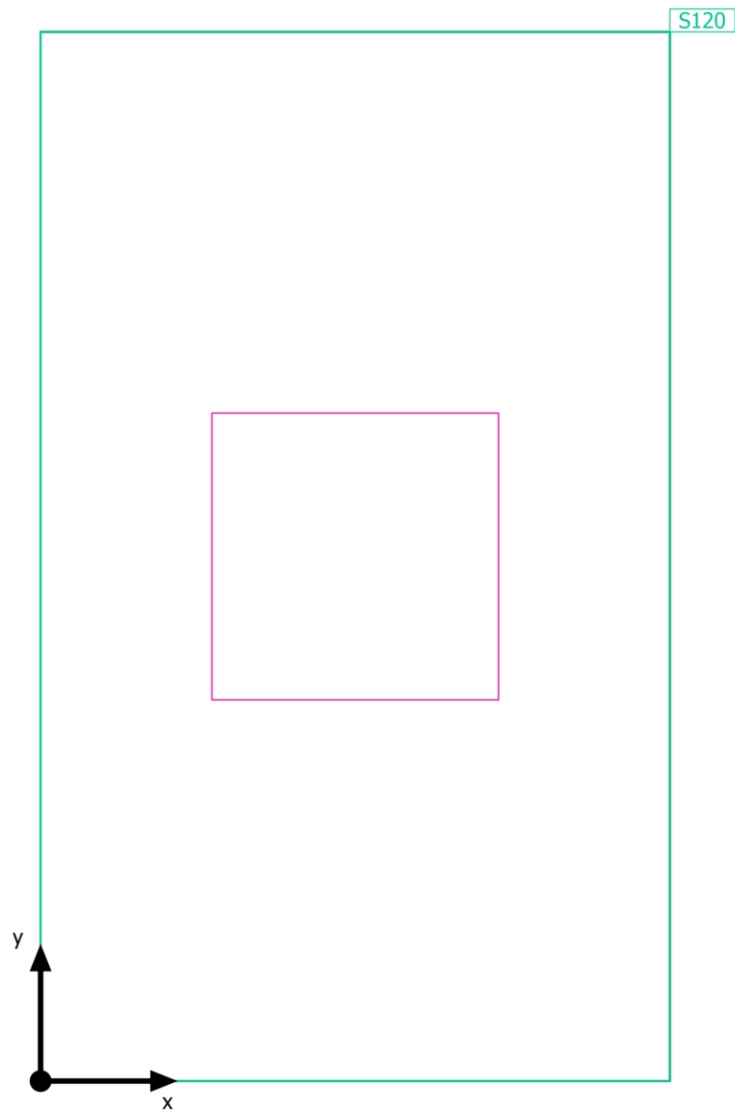
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.750 m / 3.120 m	0.450 m	0.750 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.500 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



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Calculation objects

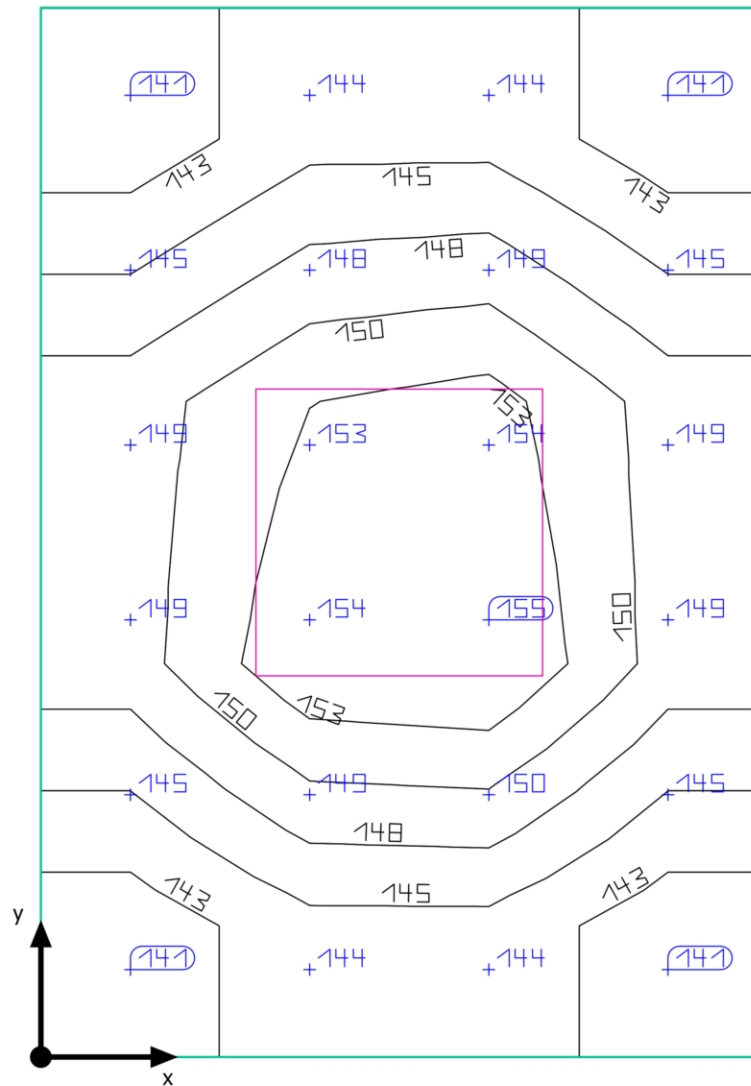
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	150 lx (≥ 100 lx) ✓	143 lx	158 lx	0.95	0.91	S120

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

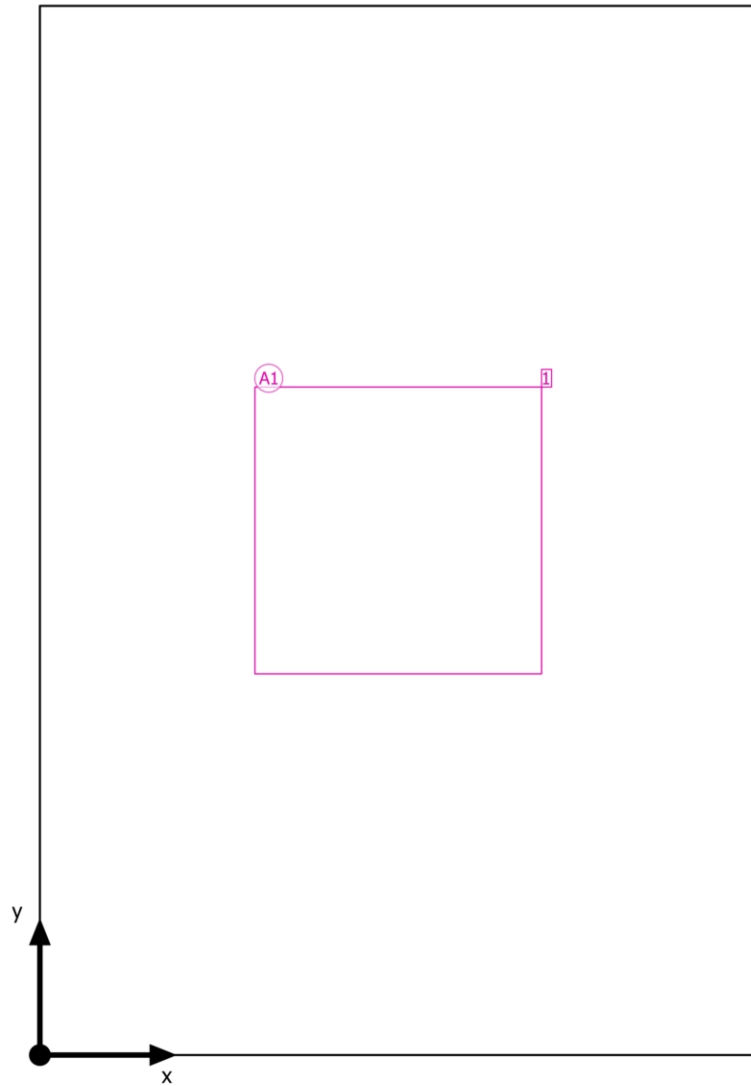
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	147 lx	≥ 100 lx	✓	S122
	g_1	0.96	-	-	S122
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	13.66 W/m ²	-	-	
		9.29 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

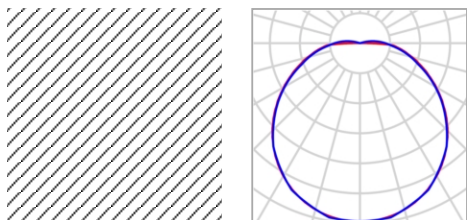
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



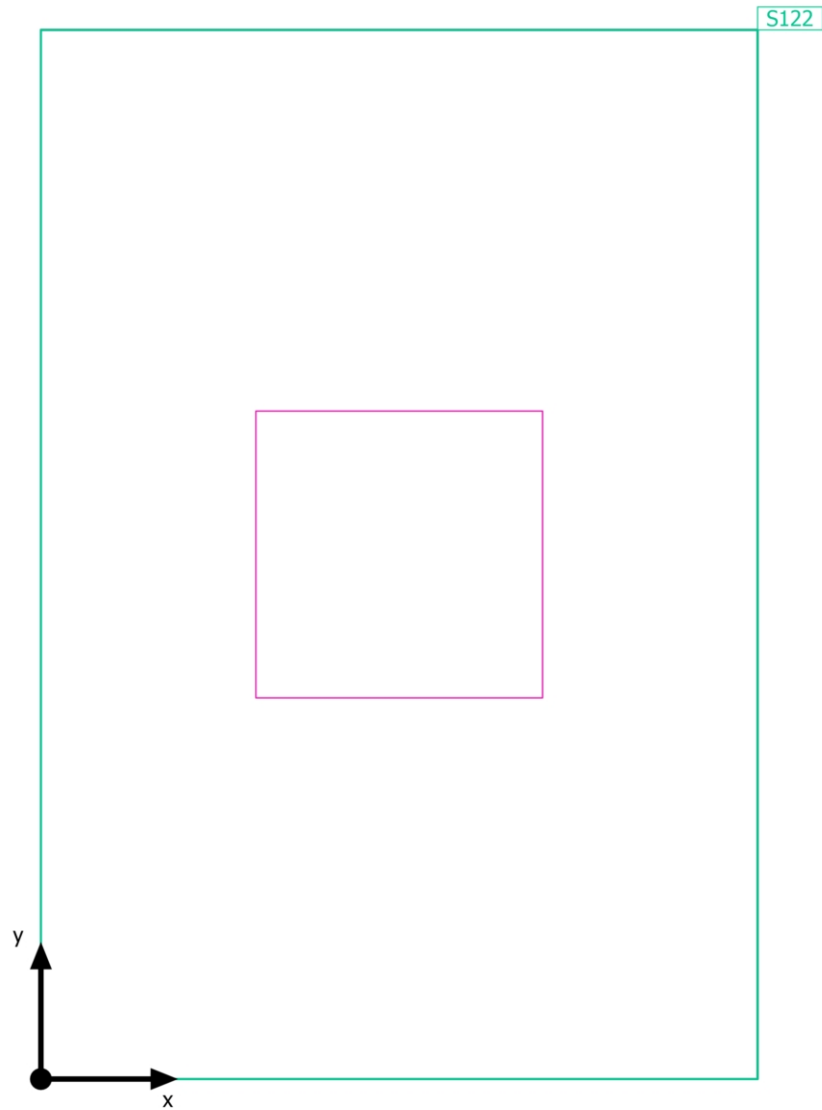
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.512 m / 0.750 m / 3.120 m	0.512 m	0.750 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.500 m				
Y-direction	1 pcs., Centre - centre, 1.025 m				
Arrangement	A1				

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Calculation objects



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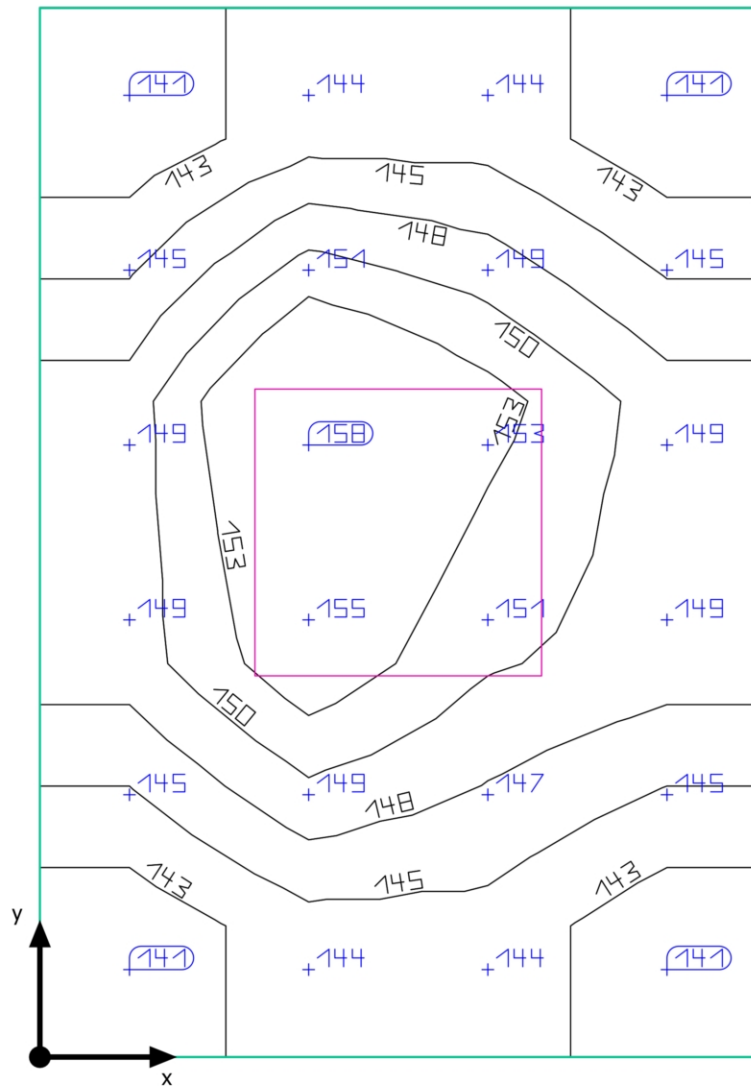
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	147 lx (≥ 100 lx) ✓	141 lx	154 lx	0.96	0.92	S122

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

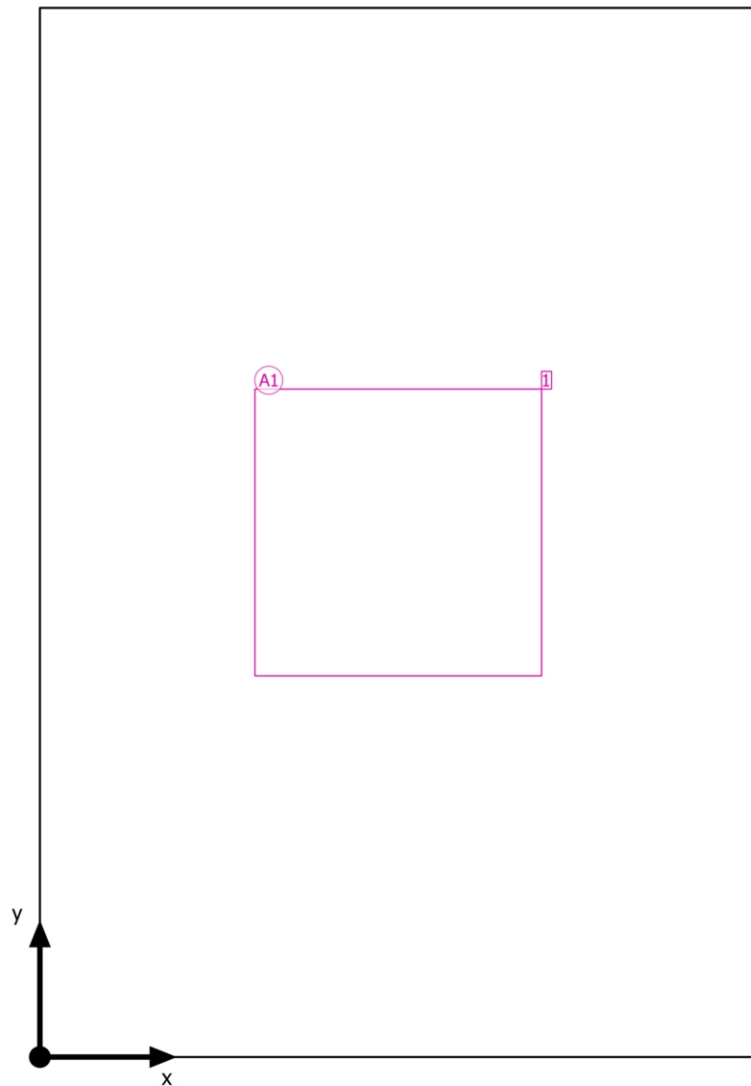
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	147 lx	≥ 100 lx	✓	S124
	g_1	0.96	-	-	S124
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	13.66 W/m ²	-	-	
		9.30 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

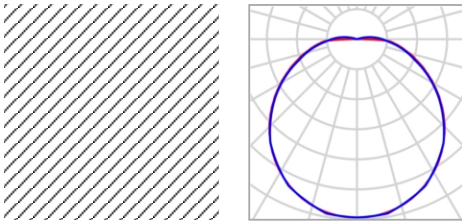
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



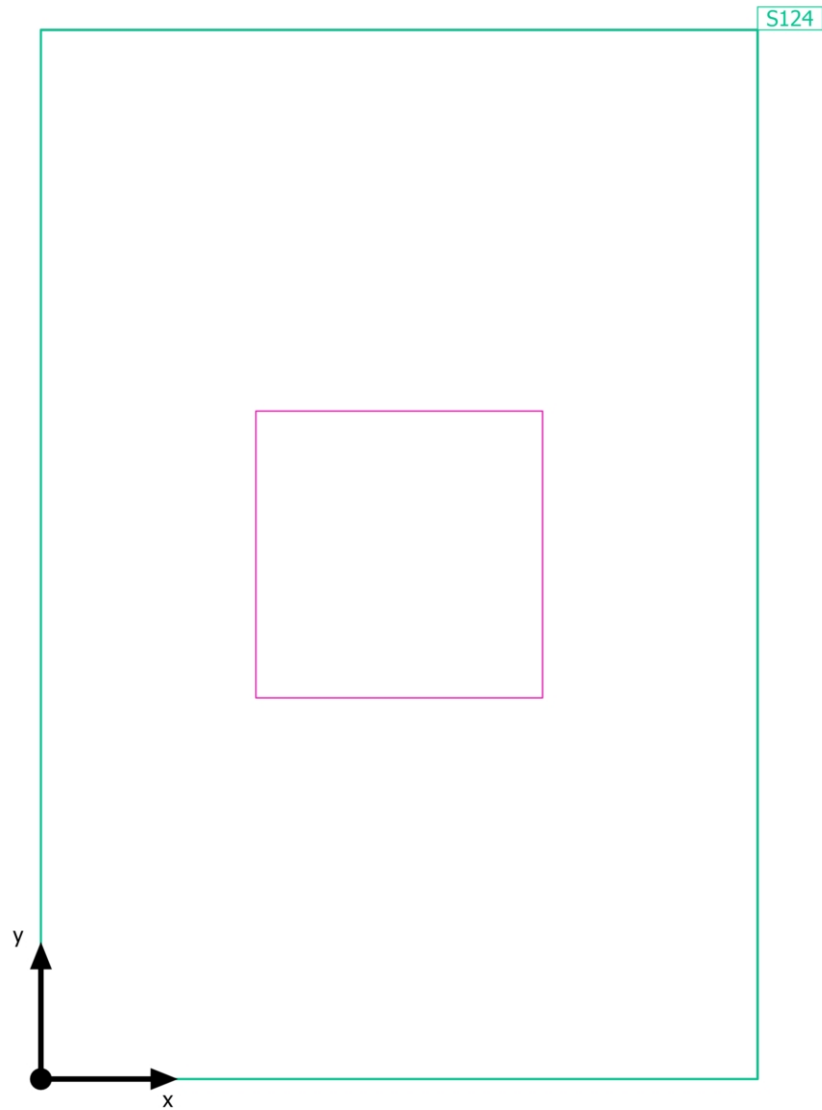
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.512 m / 0.750 m / 3.120 m	0.512 m	0.750 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.500 m				
Y-direction	1 pcs., Centre - centre, 1.025 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

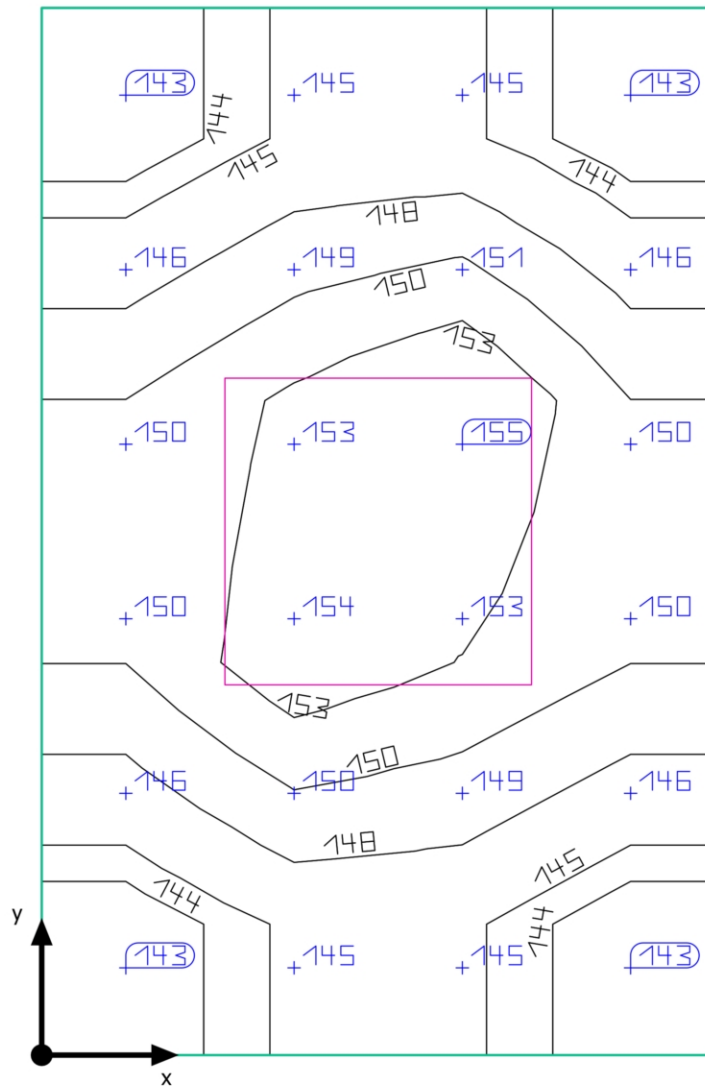
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	147 lx (≥ 100 lx) ✓	141 lx	154 lx	0.96	0.92	S124

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

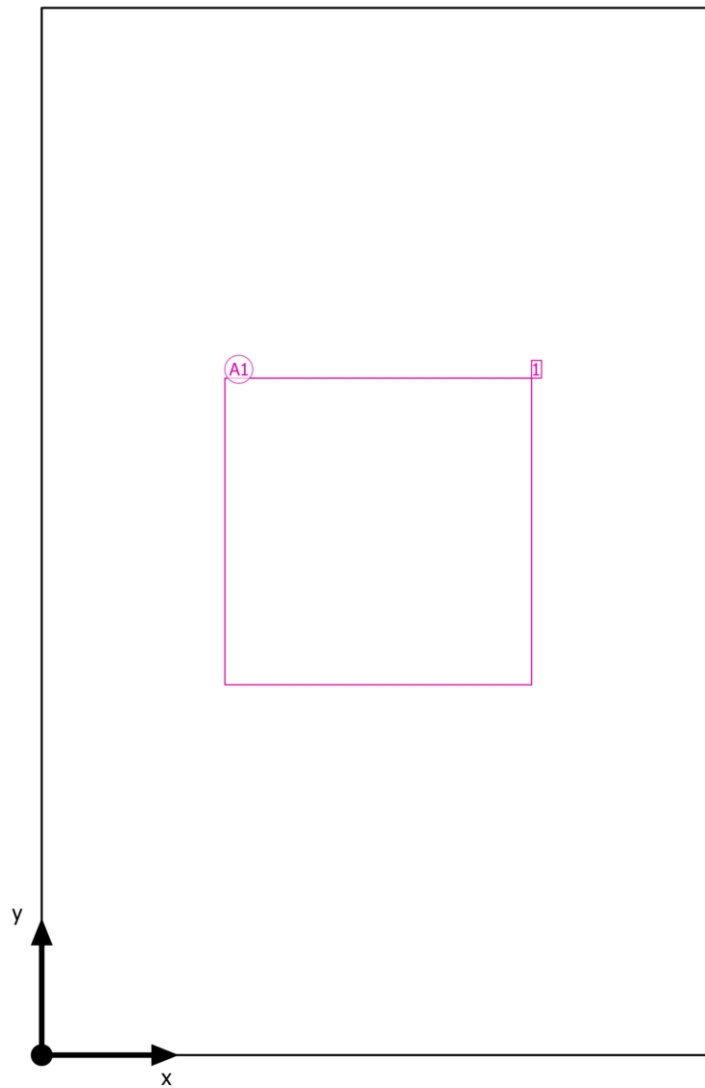
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	148 lx	≥ 100 lx	✓	S126
	g_1	0.97	-	-	S126
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	16.67 W/m ²	-	-	
		11.26 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

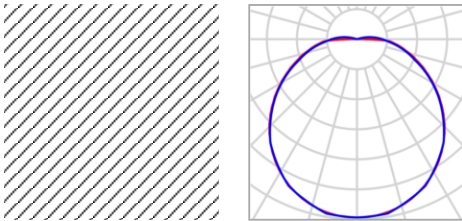
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



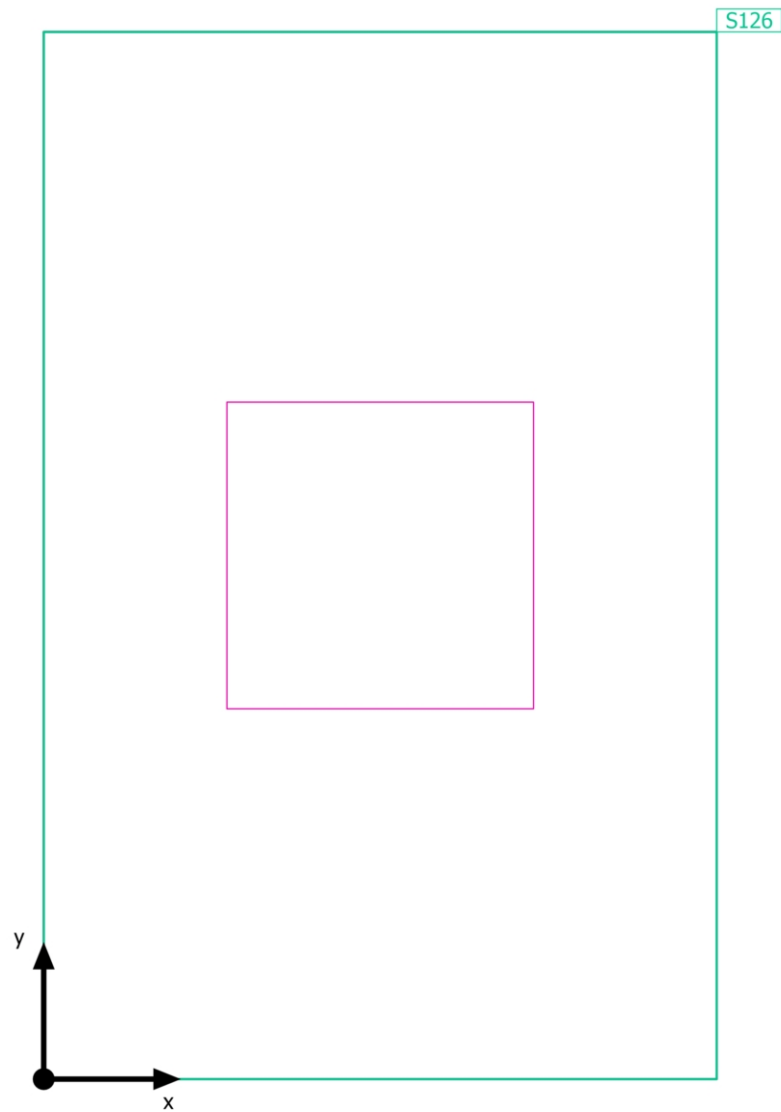
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.700 m / 3.120 m	0.450 m	0.700 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.400 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

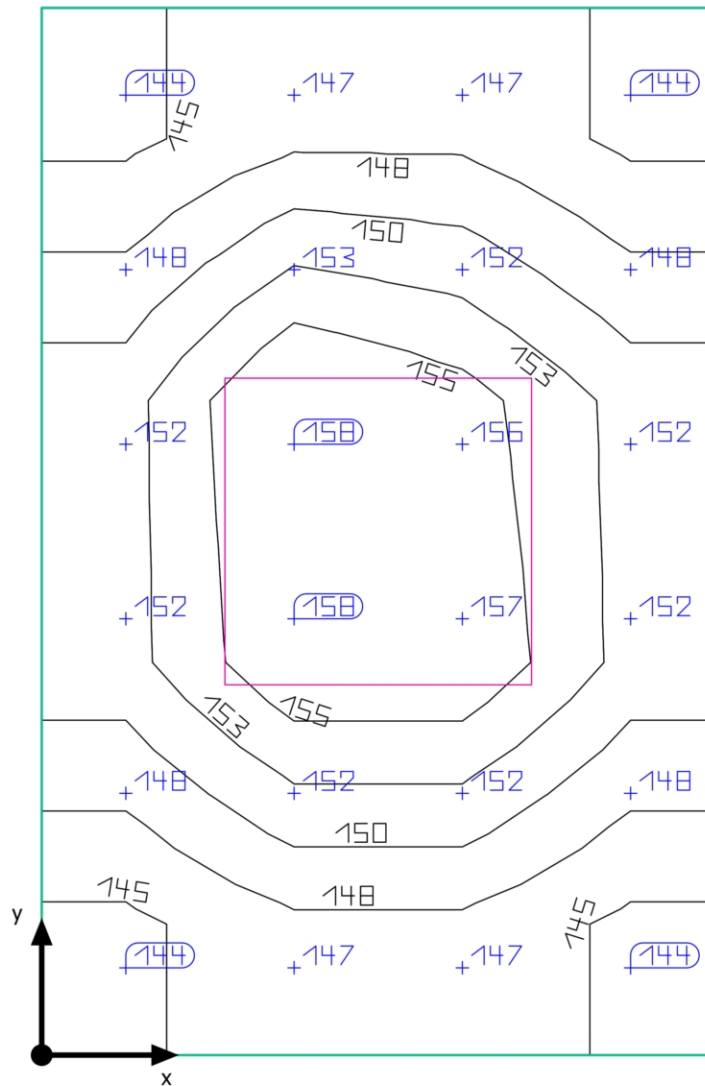
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	148 lx (≥ 100 lx) ✓	143 lx	154 lx	0.97	0.93	S126

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

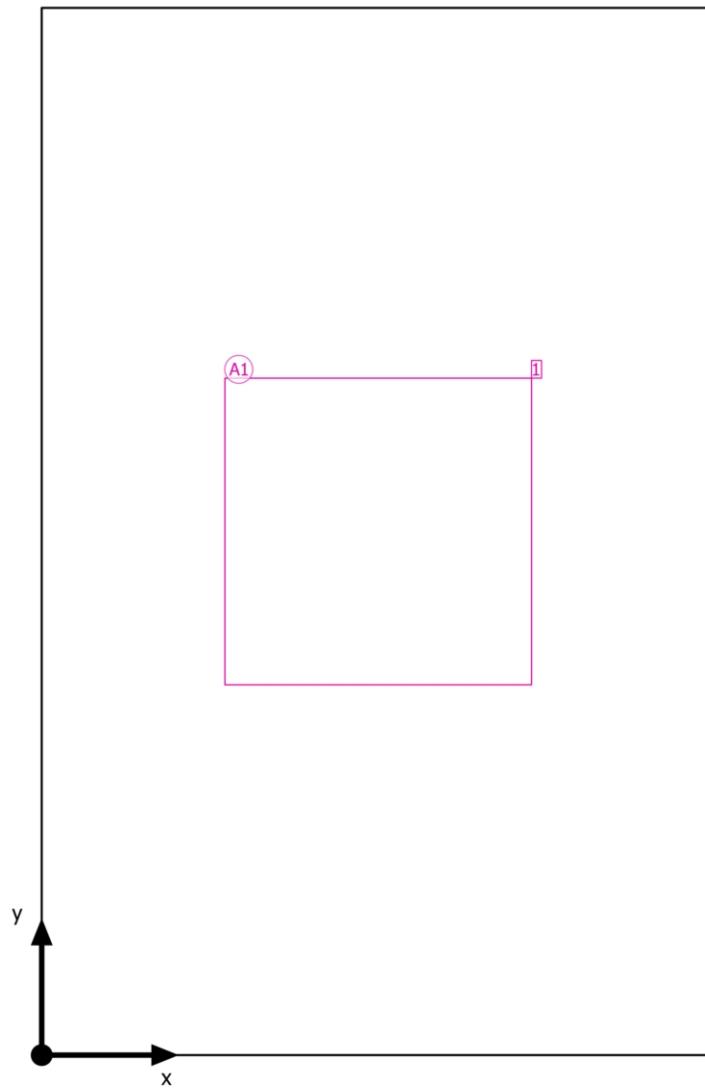
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	150 lx	≥ 100 lx	✓	S128
	g_1	0.96	-	-	S128
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	16.67 W/m ²	-	-	
		11.11 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

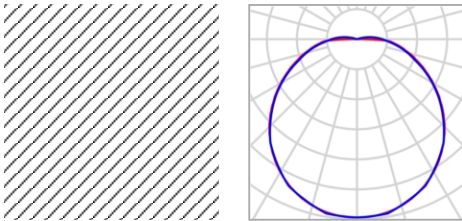
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



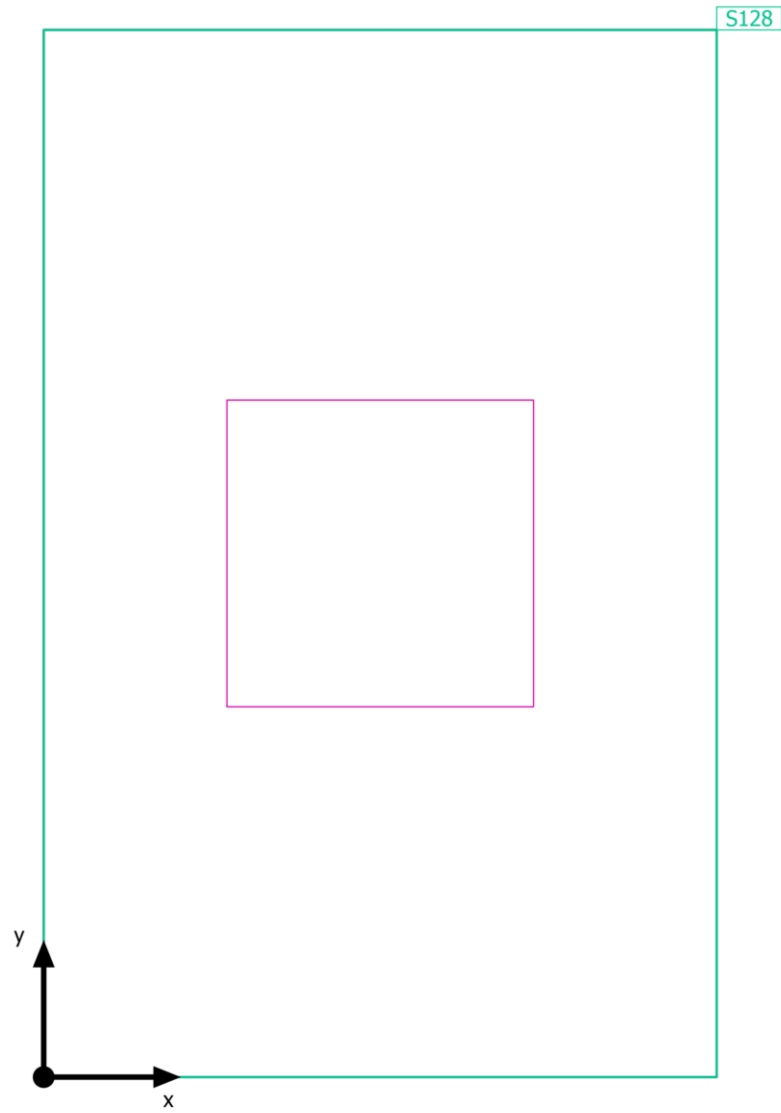
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.700 m / 3.120 m	0.450 m	0.700 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.400 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

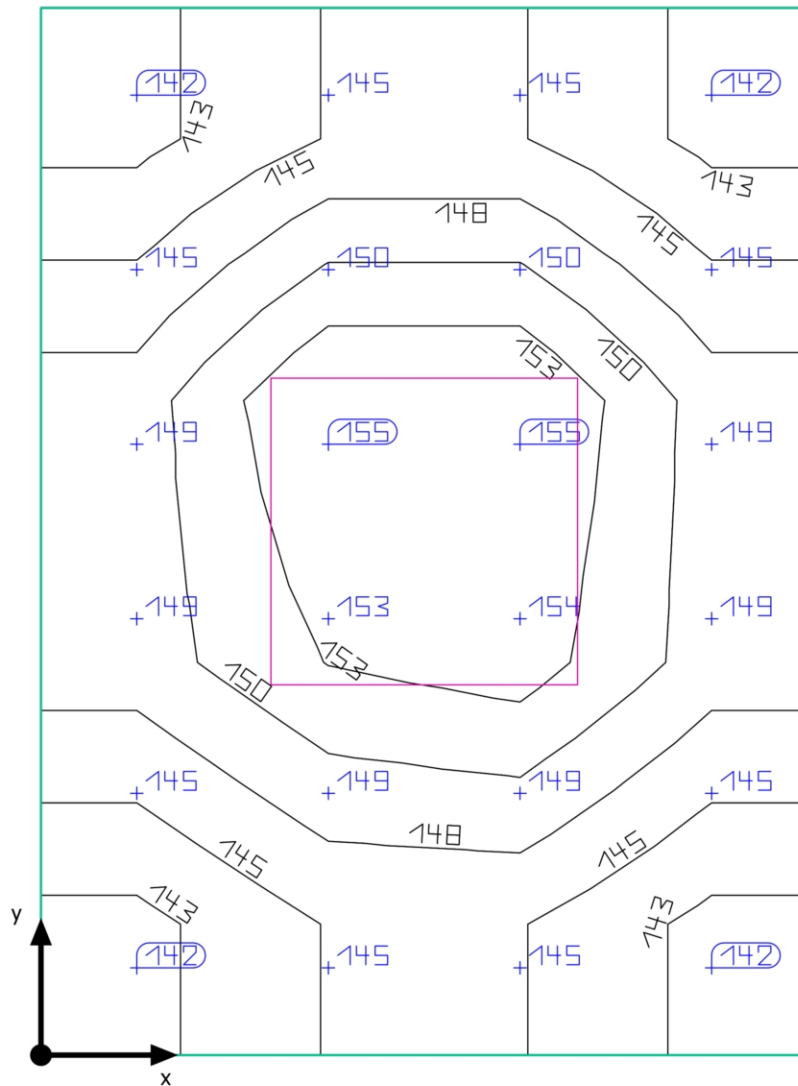
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	150 lx (≥ 100 lx) ✓	144 lx	157 lx	0.96	0.92	S128

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

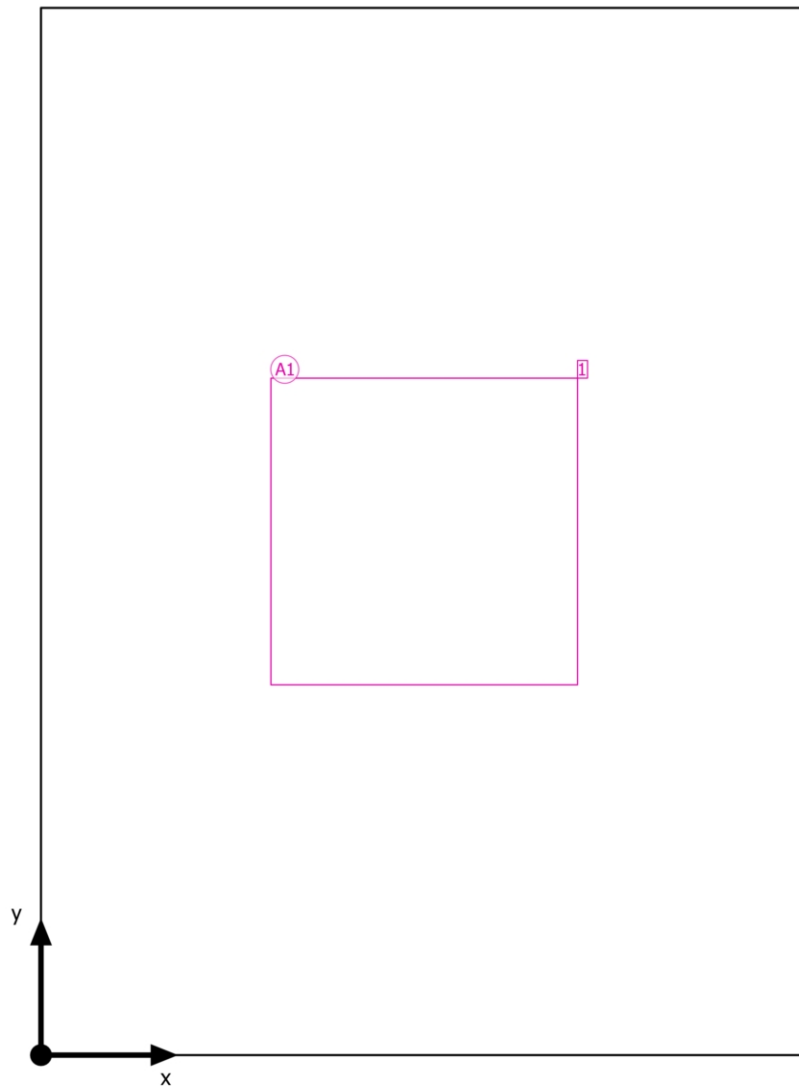
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	147 lx	≥ 100 lx	✓	S130
	g_1	0.97	-	-	S130
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	14.63 W/m ²	-	-	
		9.92 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

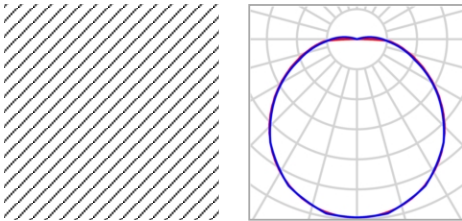
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



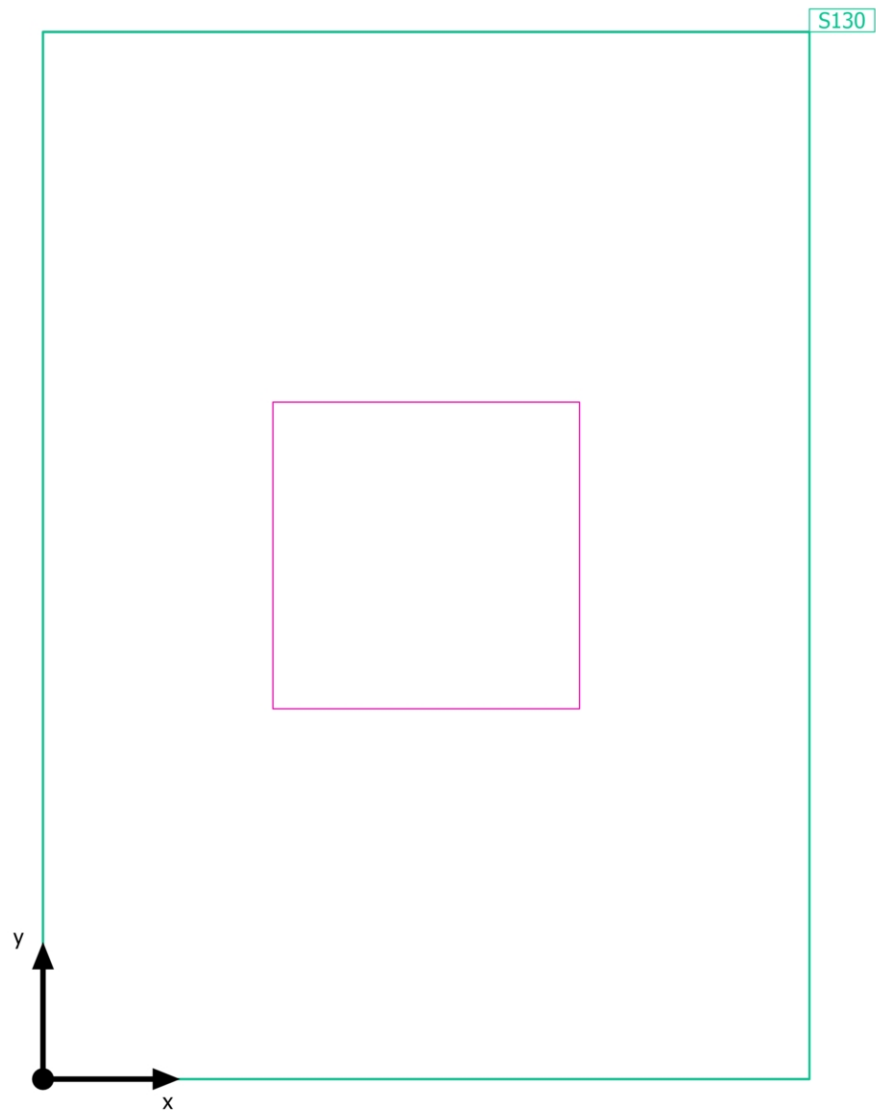
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.512 m / 0.700 m / 3.120 m	0.512 m	0.700 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.400 m				
Y-direction	1 pcs., Centre - centre, 1.025 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

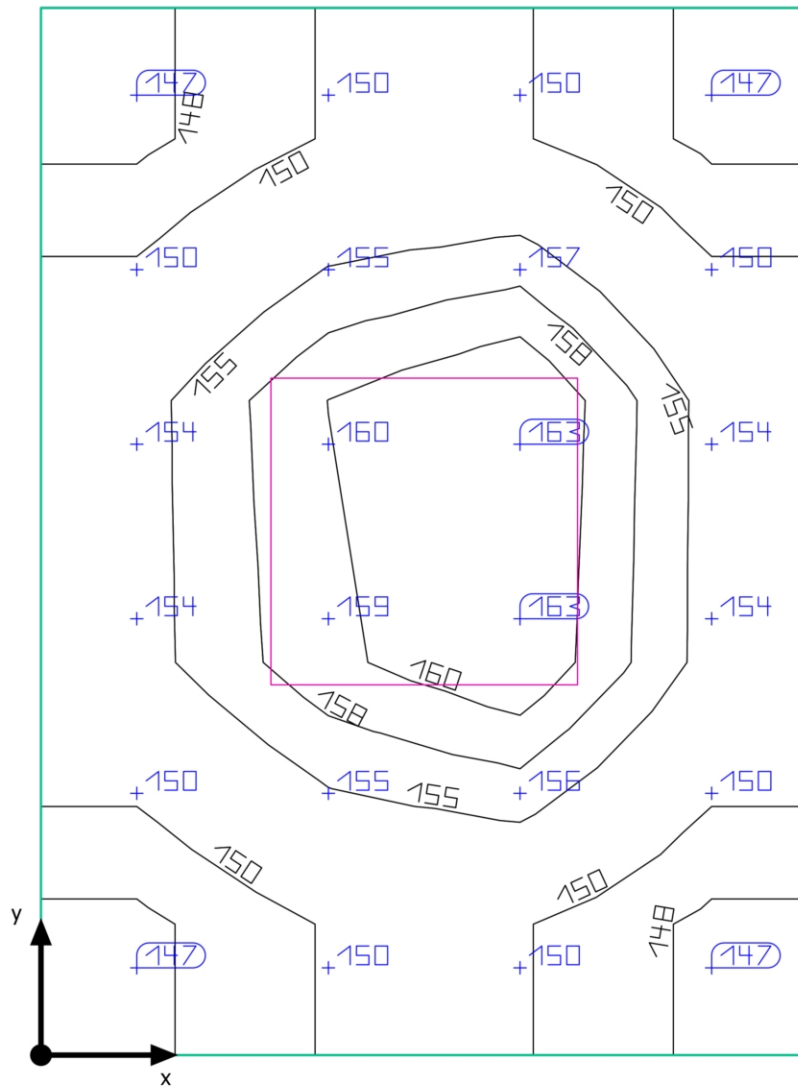
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	147 lx (≥ 100 lx) ✓	142 lx	154 lx	0.97	0.92	S130

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	153 lx	≥ 100 lx	✓	S132
	g_1	0.96	-	-	S132
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	14.63 W/m ²	-	-	
		9.56 W/m ² /100 lx	-	-	

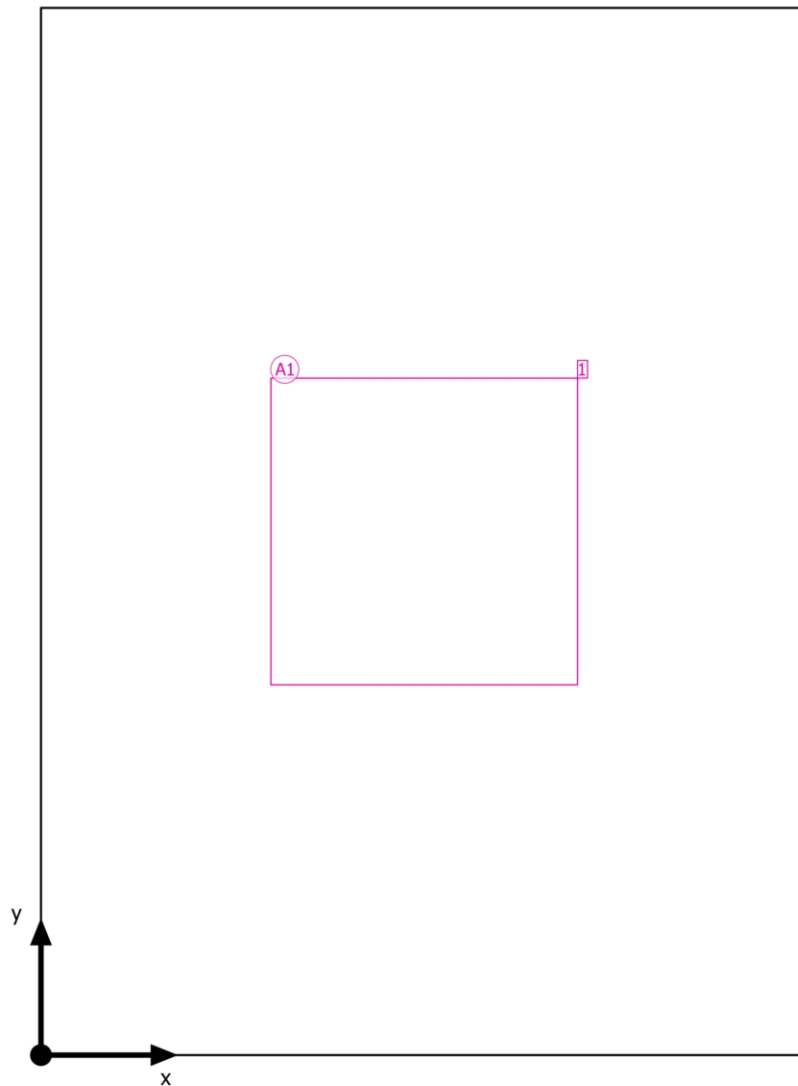
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

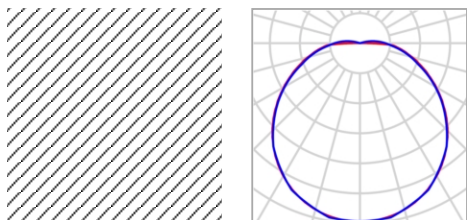
Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



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Luminaire layout plan



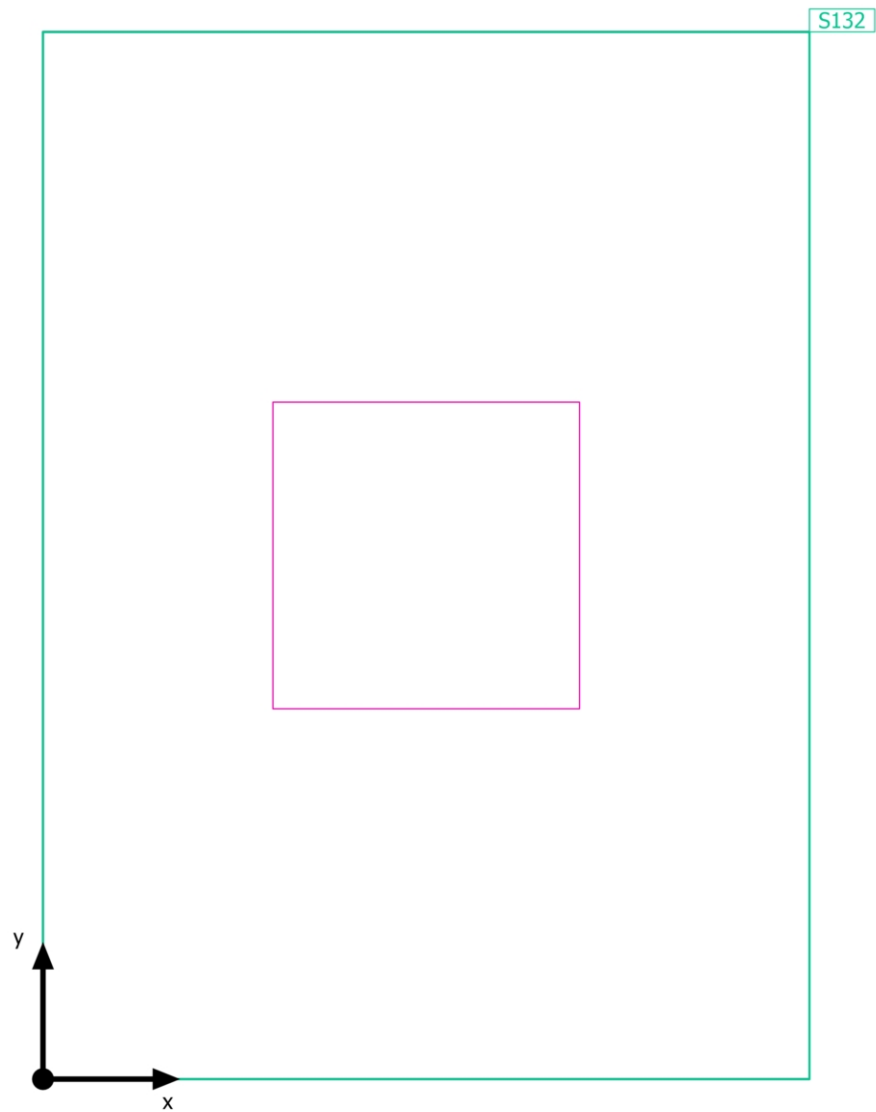
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.512 m / 0.700 m / 3.120 m	0.512 m	0.700 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.400 m				
Y-direction	1 pcs., Centre - centre, 1.025 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects

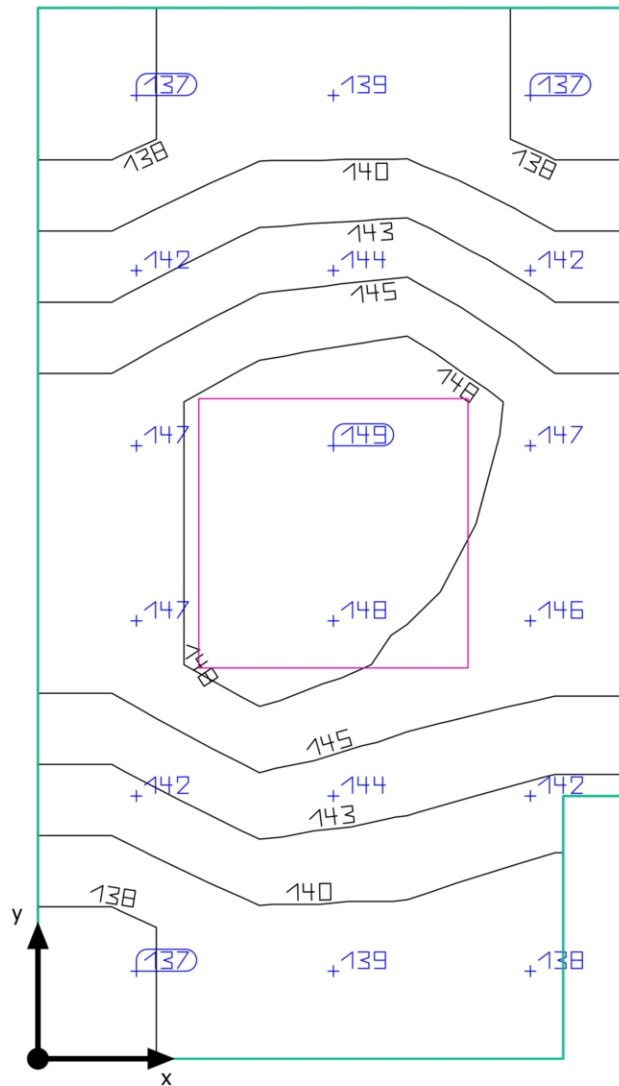
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	153 lx (≥ 100 lx) ✓	147 lx	161 lx	0.96	0.91	S132

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

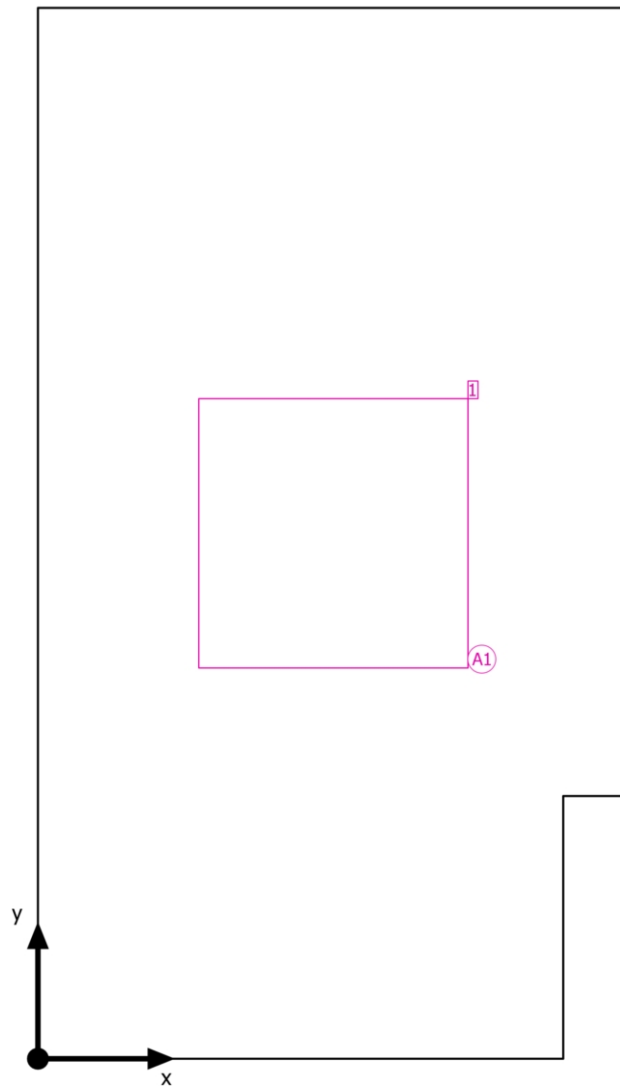
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	143 lx	≥ 100 lx	✓	S136
	g_1	0.96	-	-	S136
Consumption values	Consumption	40 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	15.00 W/m ²	-	-	
		10.50 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

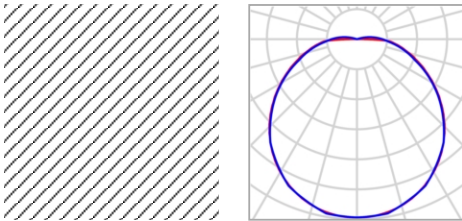
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Luminaire layout plan



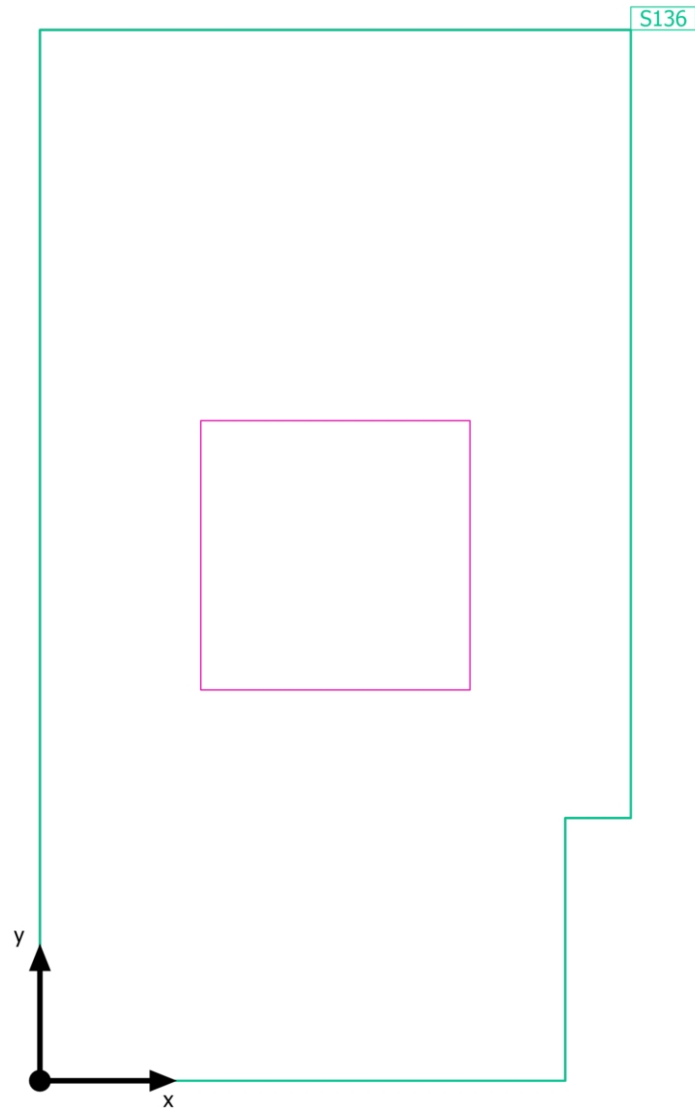
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.800 m / 3.120 m	0.450 m	0.800 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.600 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



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Calculation objects

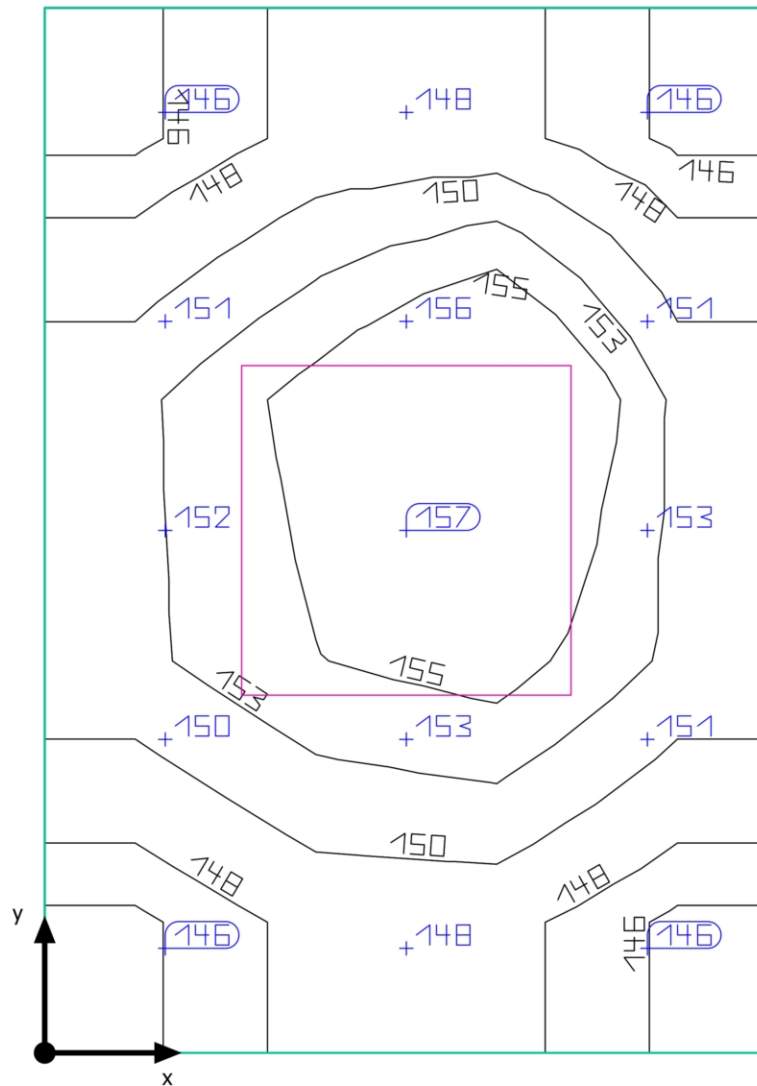
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	143 lx (≥ 100 lx) ✓	137 lx	149 lx	0.96	0.92	S136

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	151 lx	≥ 100 lx	✓	S138
	g_1	0.97	-	-	S138
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	17.95 W/m ²	-	-	
		11.91 W/m ² /100 lx	-	-	

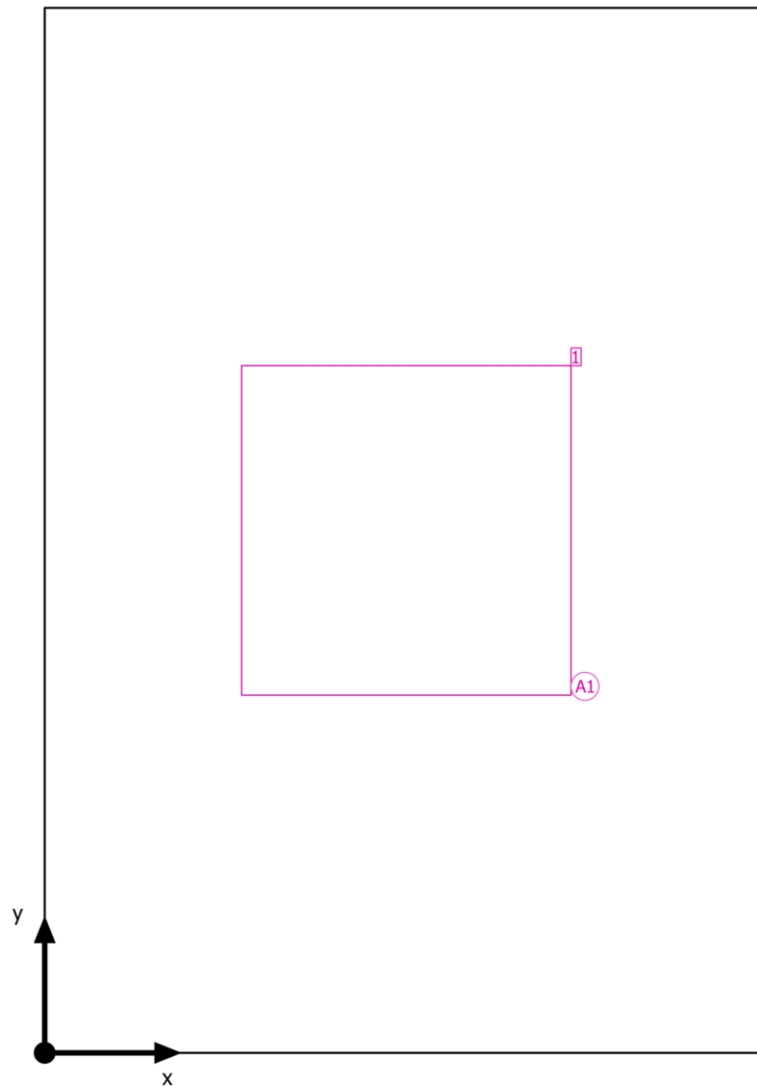
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

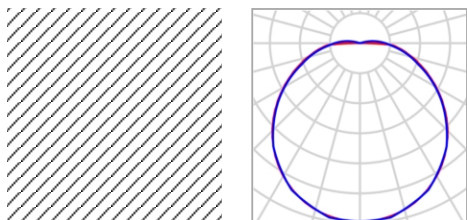
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Luminaire layout plan



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Luminaire layout plan



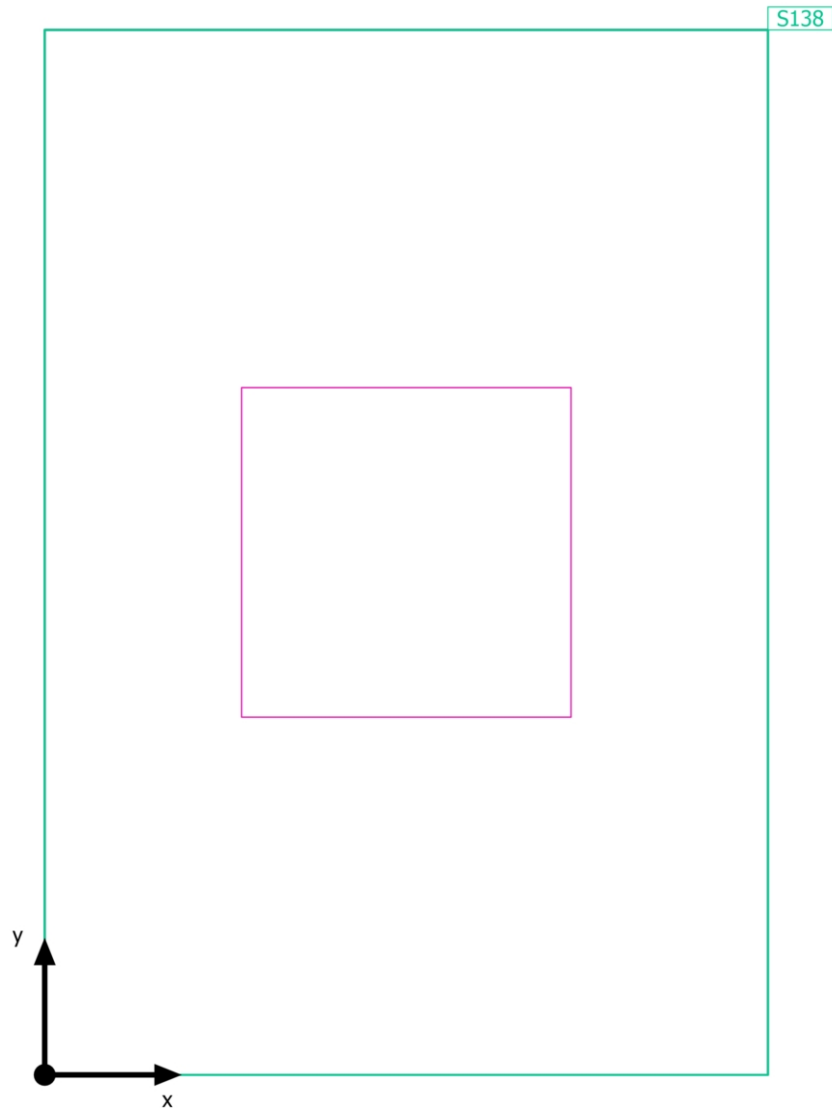
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.650 m / 3.120 m	0.450 m	0.650 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.300 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

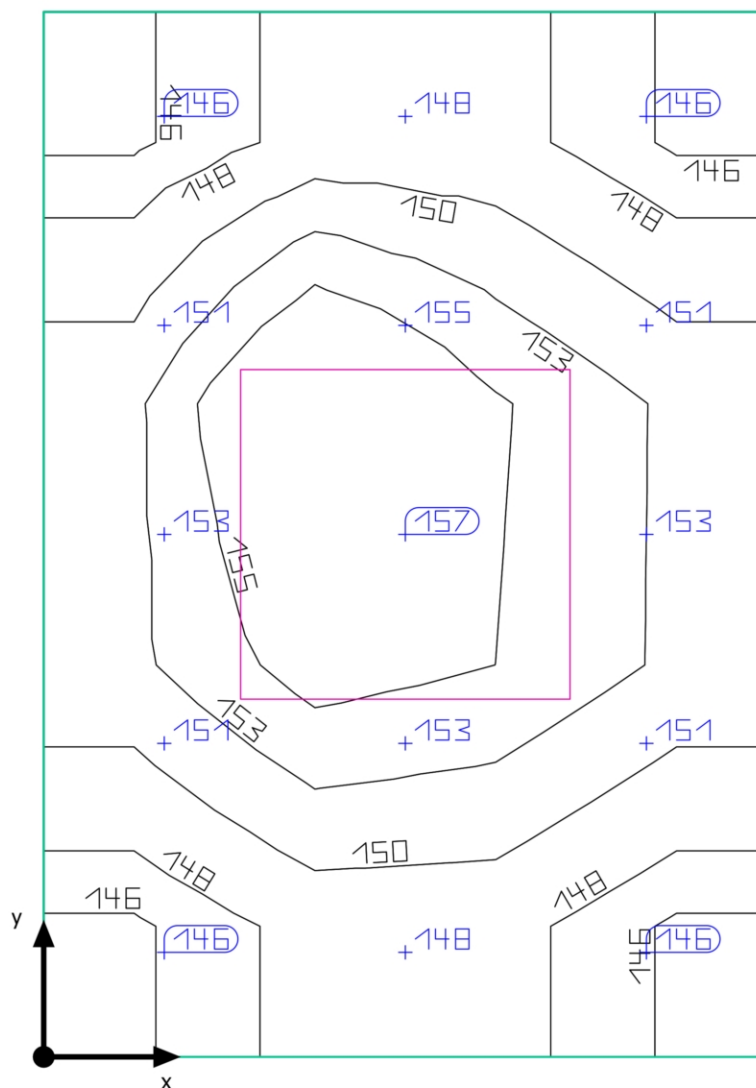
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	151 lx (≥ 100 lx) ✓	146 lx	157 lx	0.97	0.93	S138

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

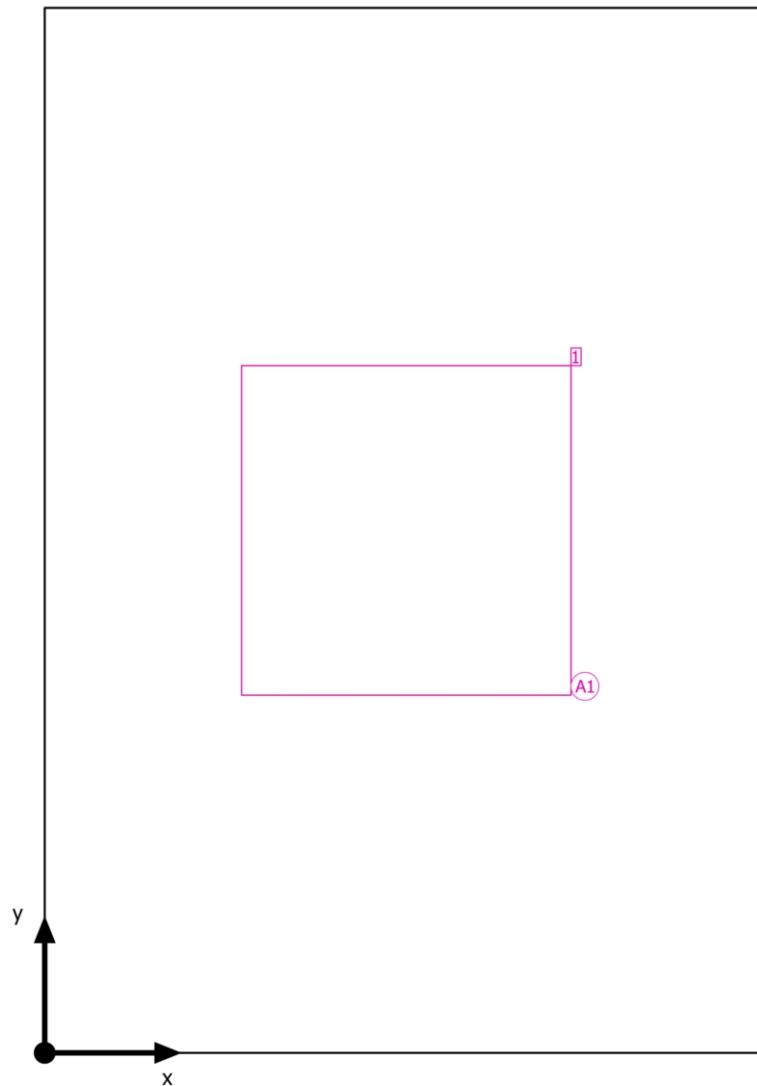
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	151 lx	≥ 100 lx	✓	S140
	g_1	0.97	-	-	S140
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	17.95 W/m ²	-	-	
		11.91 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

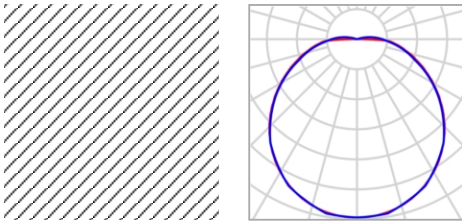
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



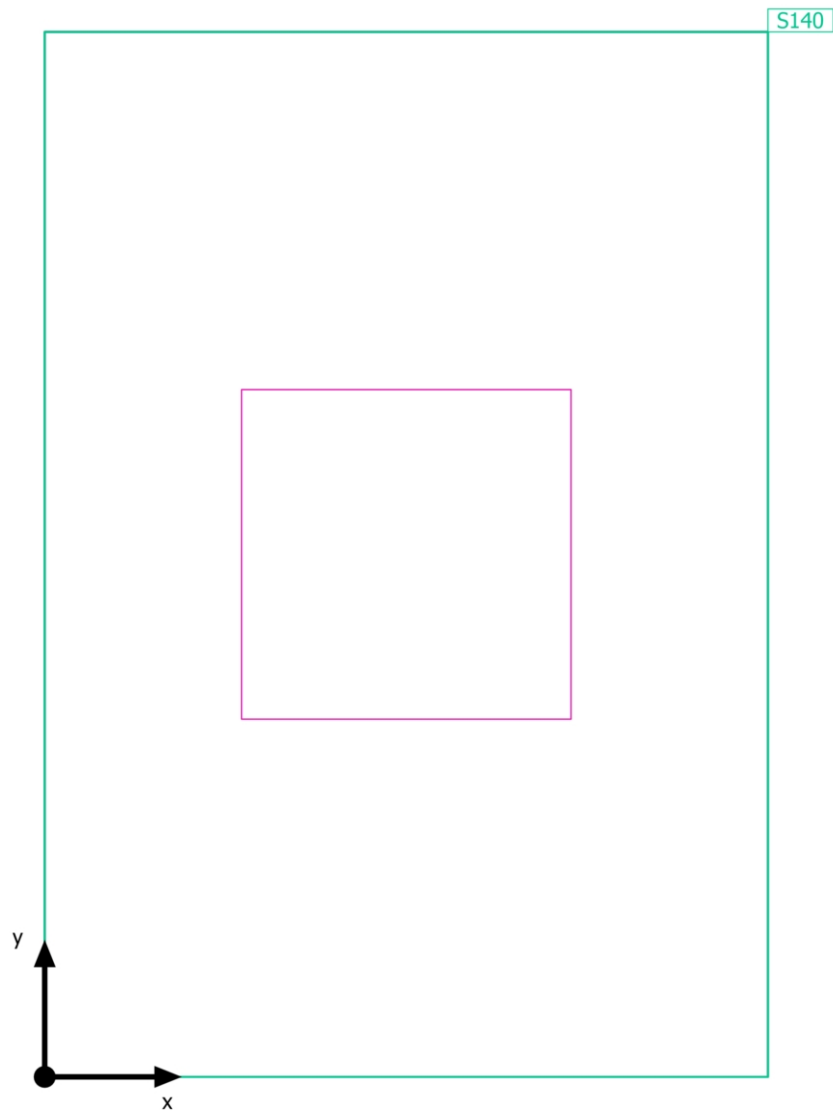
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.450 m / 0.650 m / 3.120 m	0.450 m	0.650 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.300 m				
Y-direction	1 pcs., Centre - centre, 0.900 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

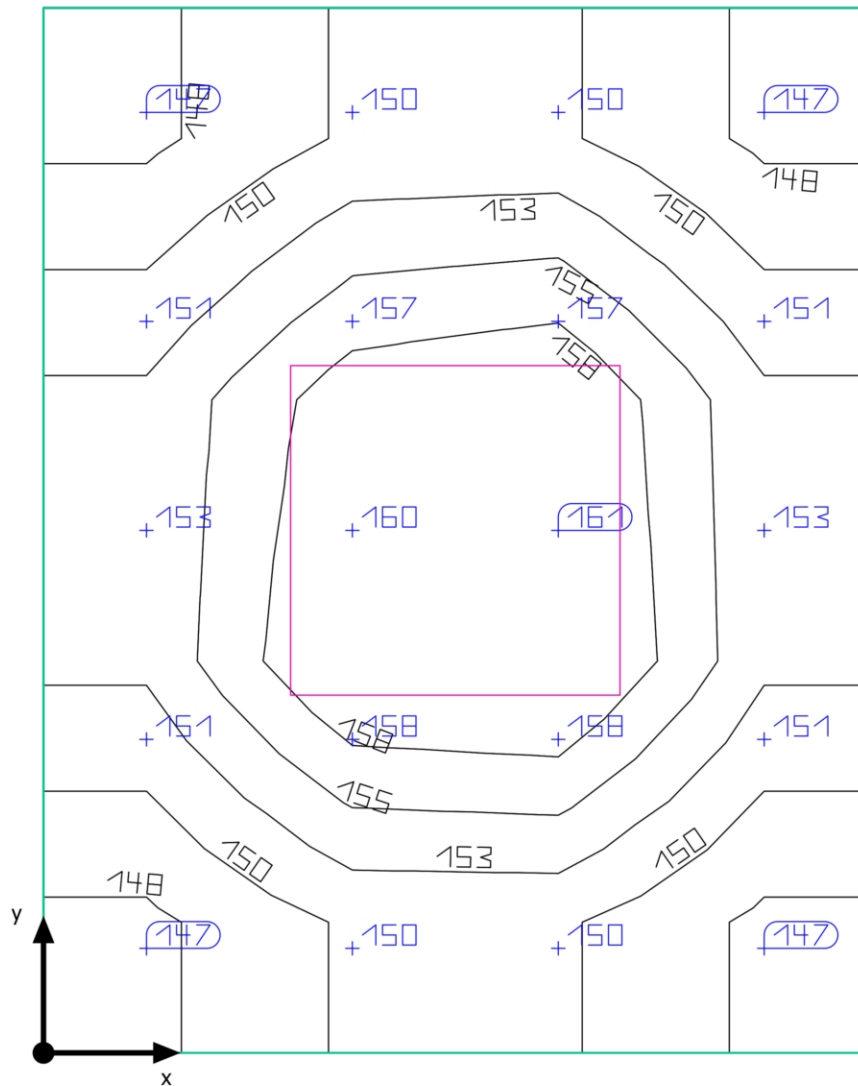
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	151 lx (≥ 100 lx) ✓	146 lx	157 lx	0.97	0.93	S140

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

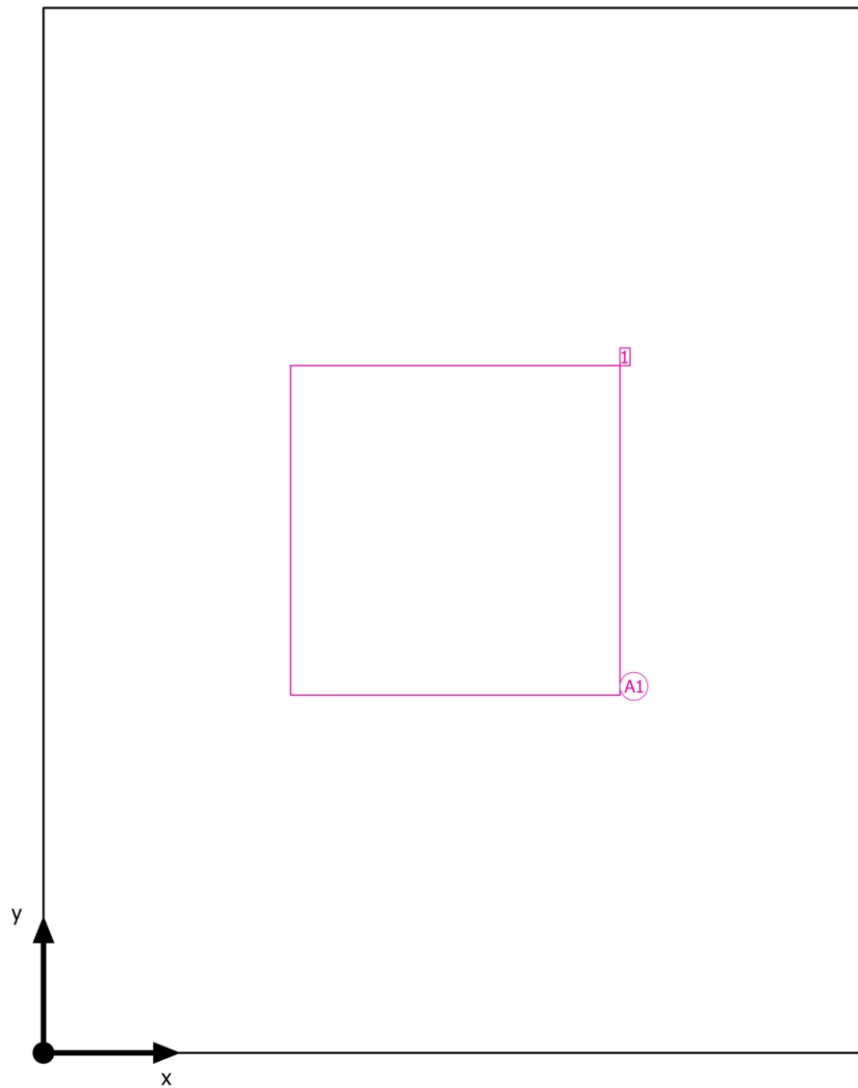
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	153 lx	≥ 100 lx	✓	S142
	g_1	0.96	-	-	S142
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	15.76 W/m ²	-	-	
		10.32 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

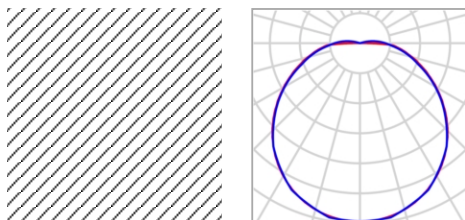
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



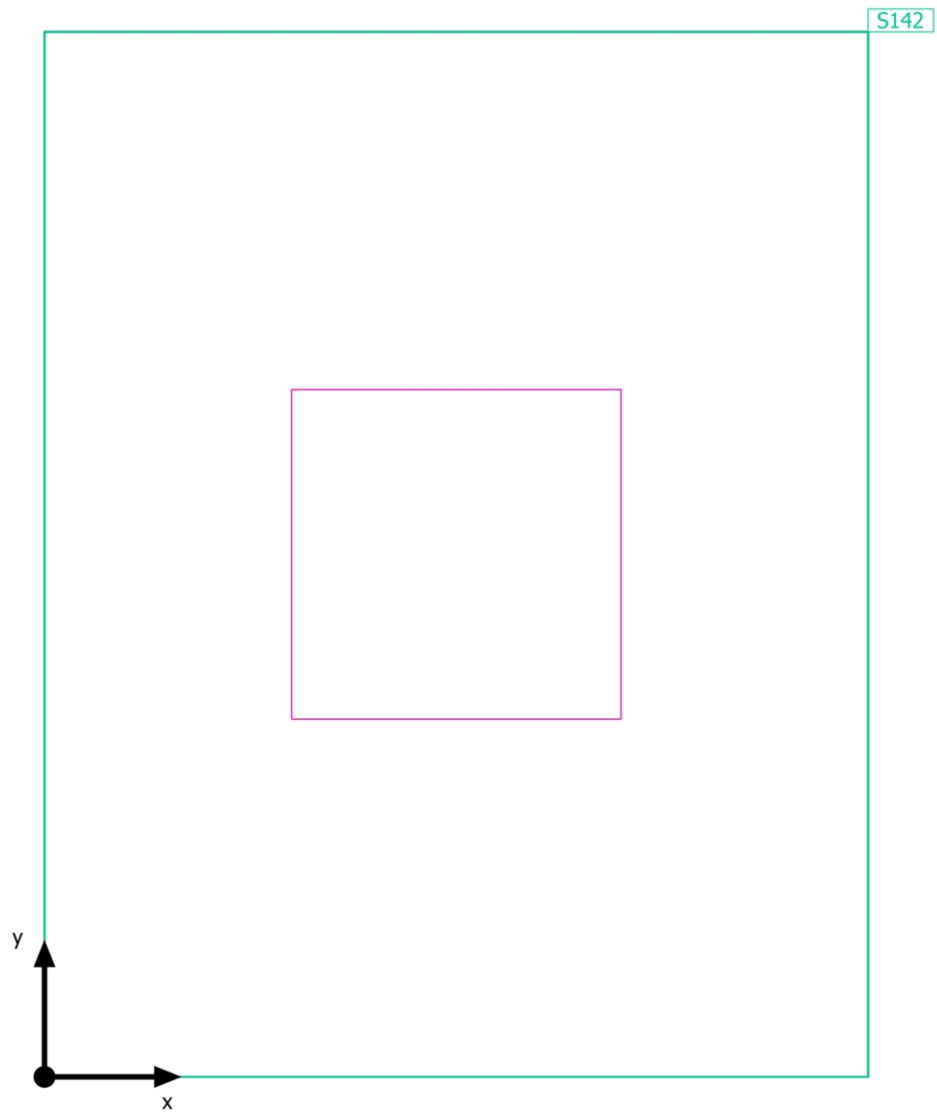
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.512 m / 0.650 m / 3.120 m	0.512 m	0.650 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.300 m				
Y-direction	1 pcs., Centre - centre, 1.025 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

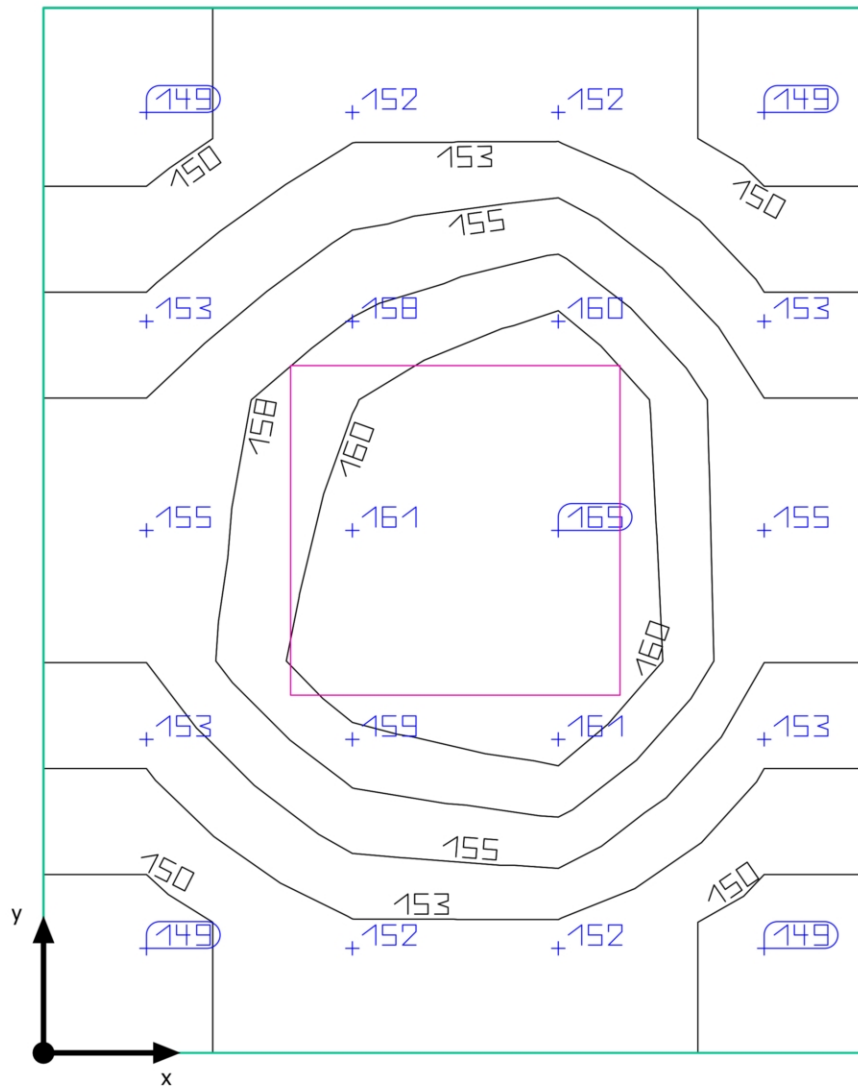
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	153 lx (≥ 100 lx) ✓	147 lx	160 lx	0.96	0.92	S142

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

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Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

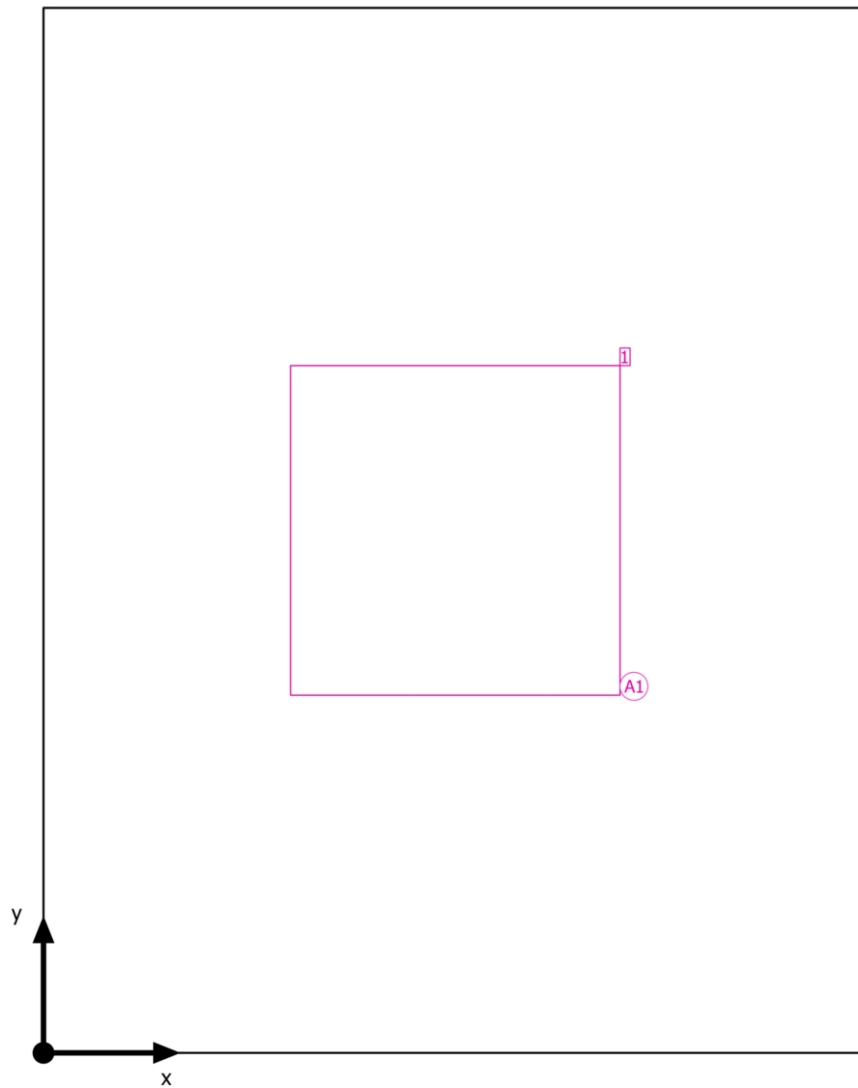
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	155 lx	≥ 100 lx	✓	S144
	g_1	0.96	-	-	S144
Consumption values	Consumption	40 kWh/a	max. 50 kWh/a	✓	
Lighting power density	Room	15.76 W/m ²	-	-	
		10.18 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

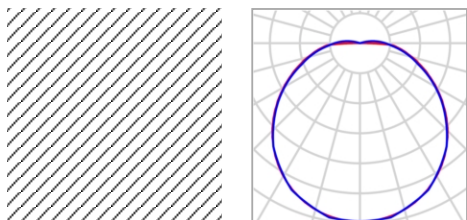
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



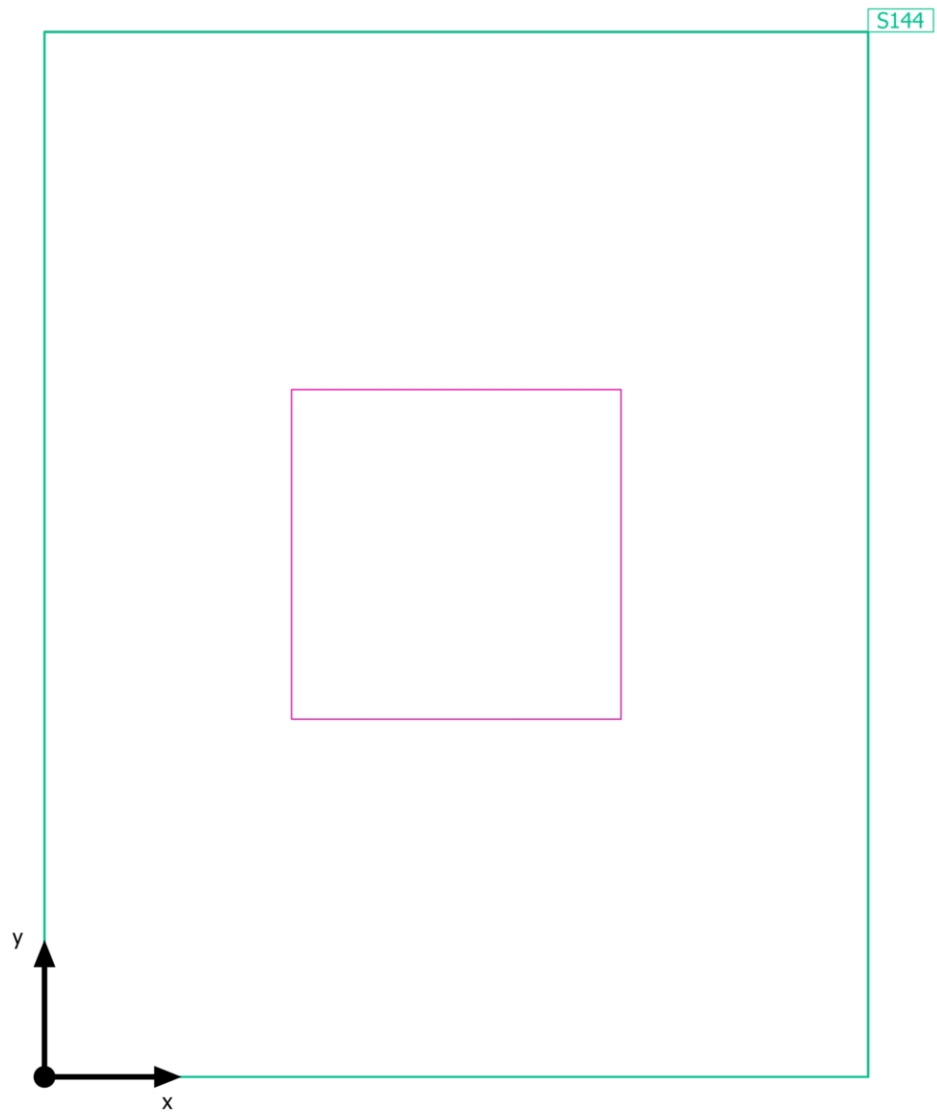
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.512 m / 0.650 m / 3.120 m	0.512 m	0.650 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 1.300 m				
Y-direction	1 pcs., Centre - centre, 1.025 m				
Arrangement	A1				

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Calculation objects



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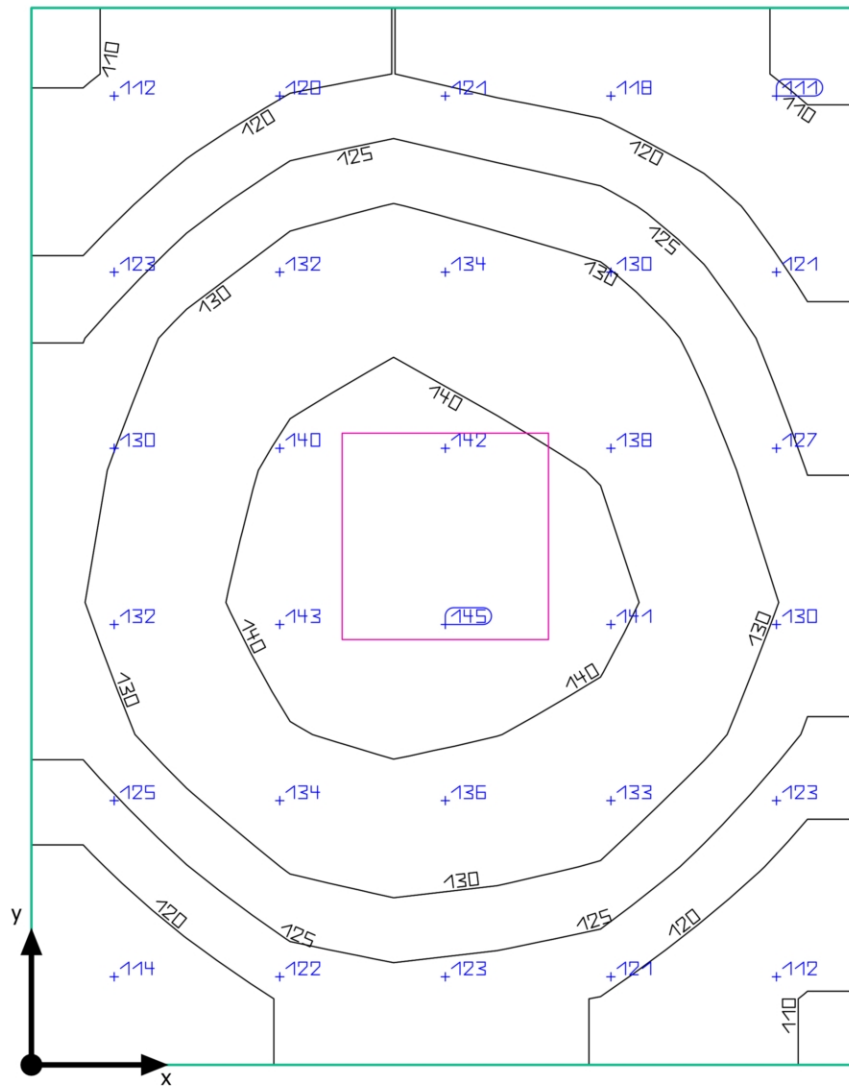
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	155 lx (≥ 100 lx) ✓	149 lx	162 lx	0.96	0.92	S144

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	128 lx	≥ 100 lx	✓	S208
	g_1	0.84	-	-	S208
Consumption values	Consumption	40 kWh/a	max. 150 kWh/a	✓	
Lighting power density	Room	6.08 W/m ²	-	-	
		4.75 W/m ² /100 lx	-	-	

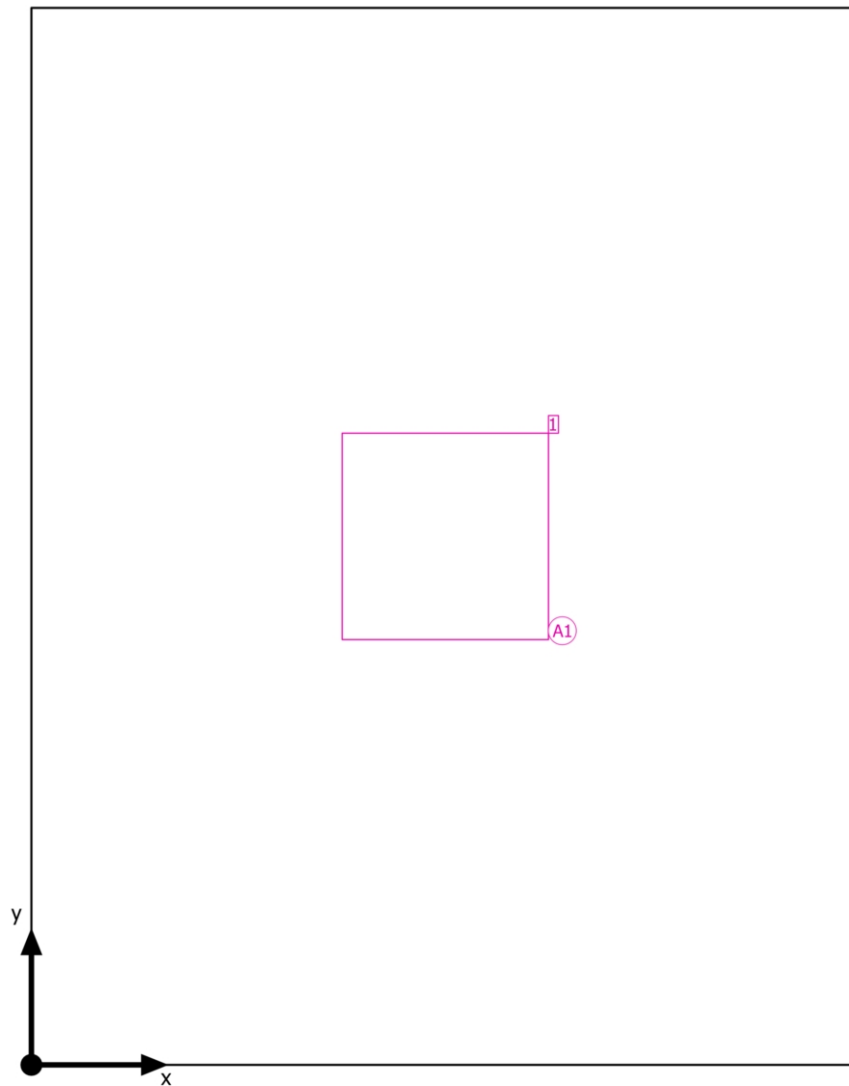
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

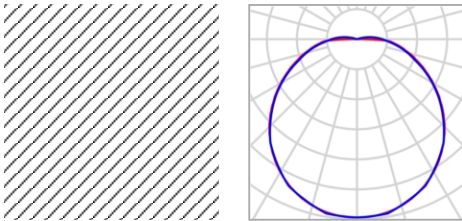
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



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Luminaire layout plan



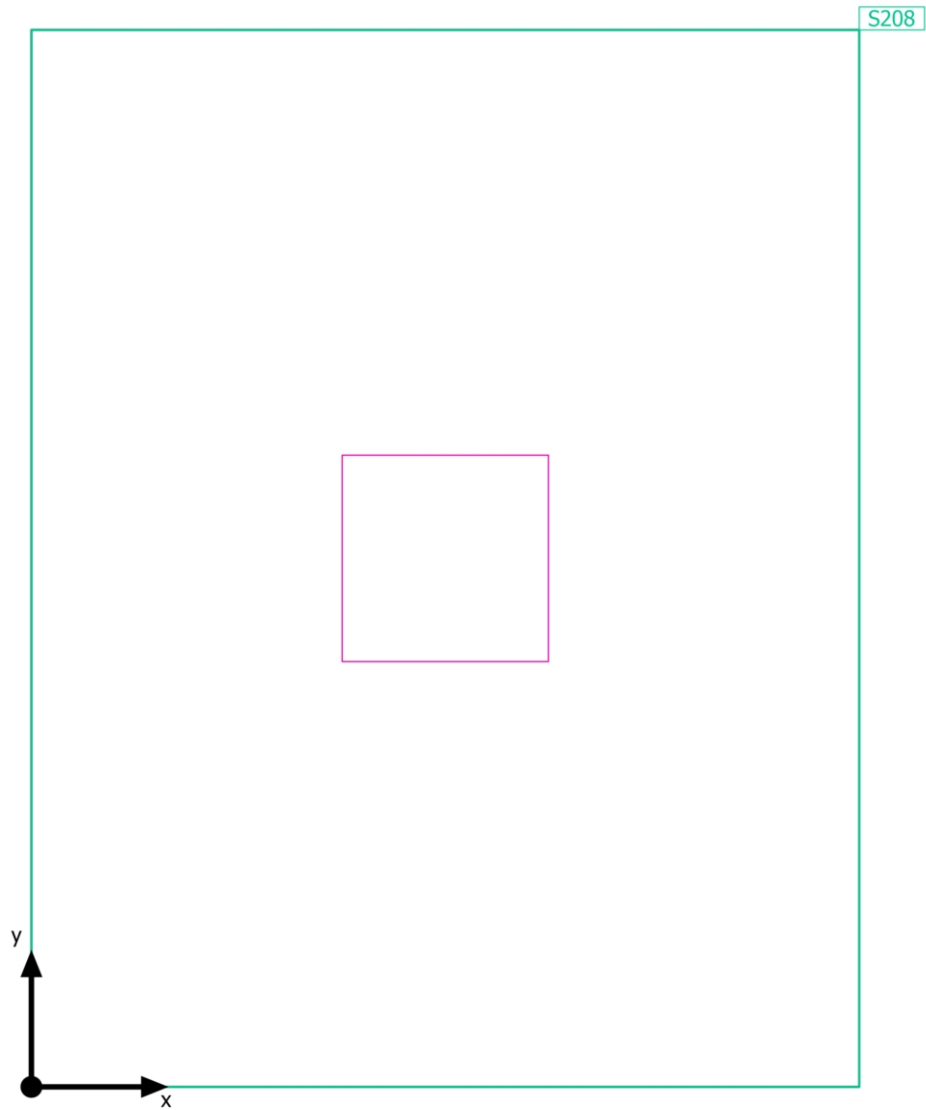
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

1 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.823 m / 1.050 m / 3.120 m	0.823 m	1.050 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.100 m				
Y-direction	1 pcs., Centre - centre, 1.645 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

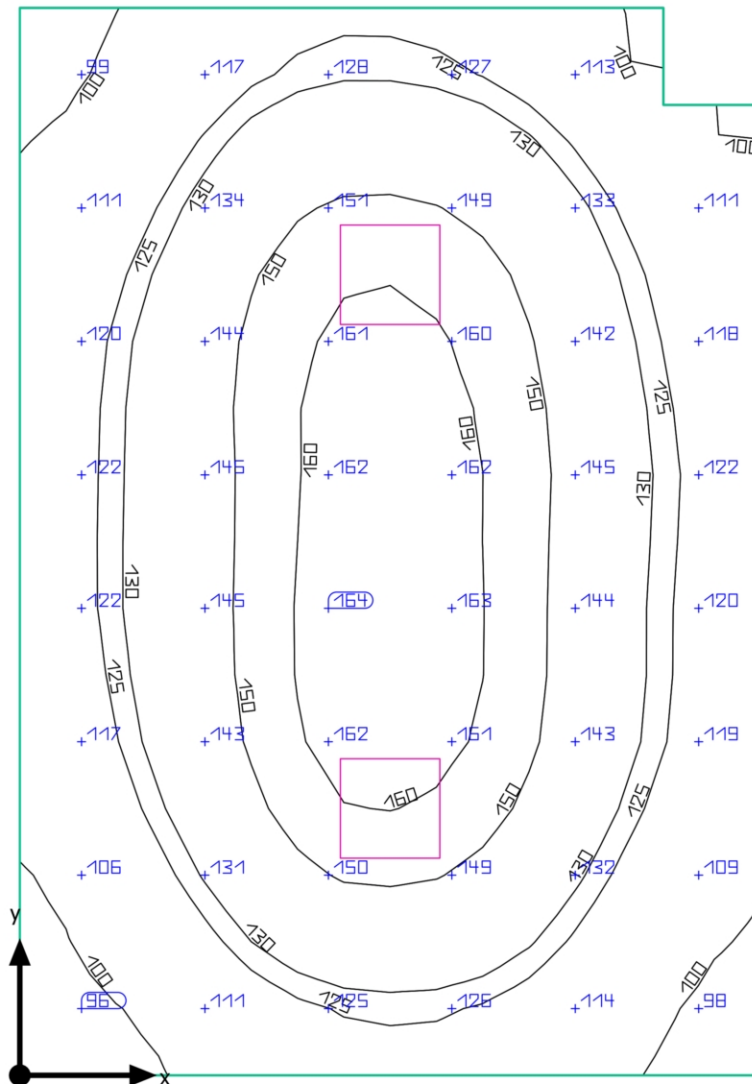
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	128 lx (≥ 100 lx) ✓	108 lx	145 lx	0.84	0.74	S208

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary



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Summary

Results

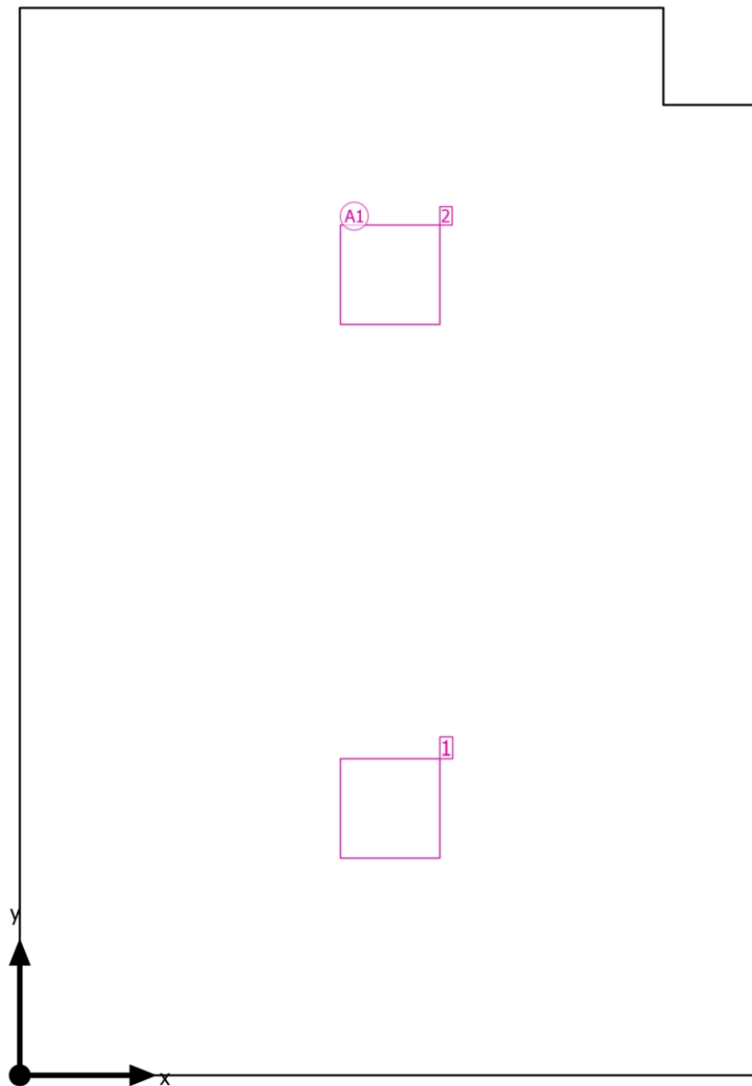
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	132 lx	≥ 100 lx	✓	S210
	g_1	0.68	-	-	S210
Consumption values	Consumption	81 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	3.16 W/m ²	-	-	
		2.40 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

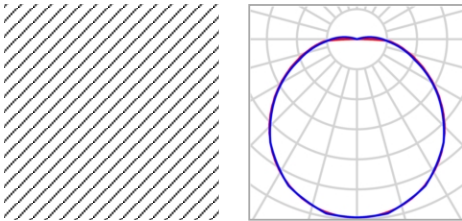
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96631865 (4000 K)	LENA VARIO LED 380 1900 830/35/40 MWS	21.0 W	1950 lm	92.9 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



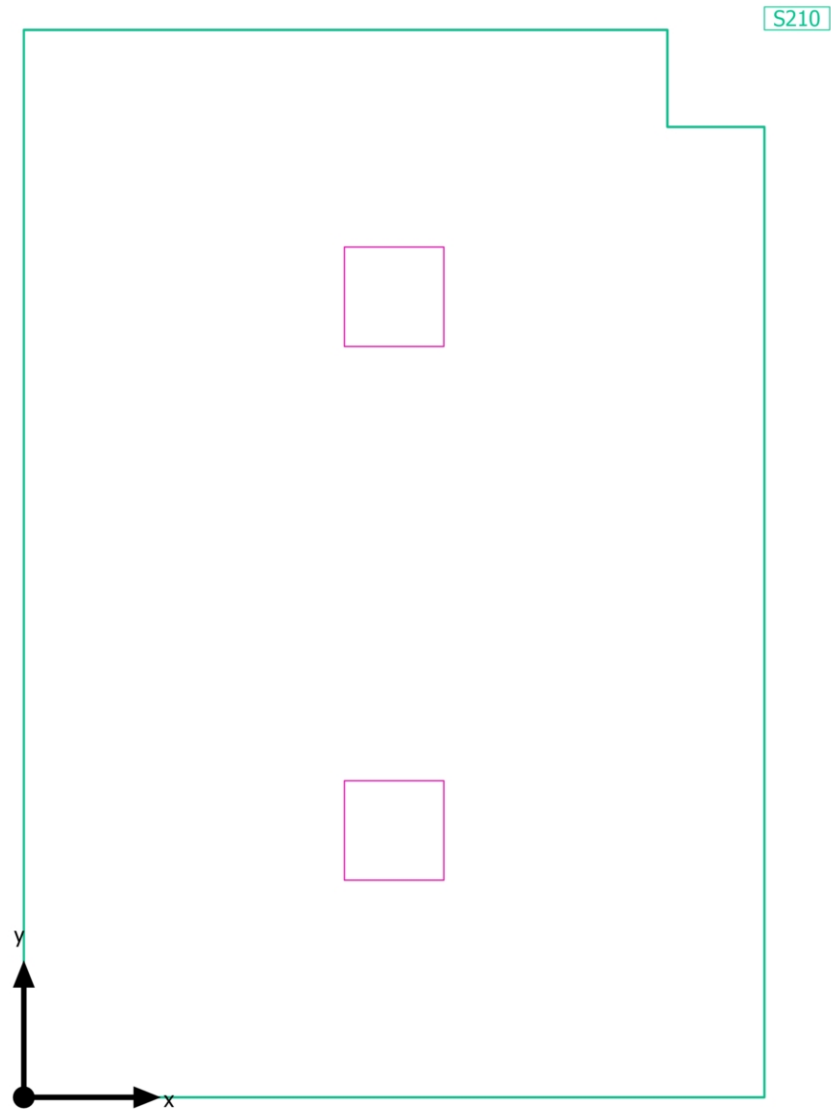
Manufacturer	THORNeco
Article No.	96631865 (4000 K)
Article name	LENA VARIO LED 380 1900 830/35/40 MWS

2 x THORNeco LENA VARIO LED 380 1900 830/35/40 MWS

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.527 m / 1.100 m / 3.120 m	1.527 m	1.100 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.200 m	1.527 m	3.300 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 3.054 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

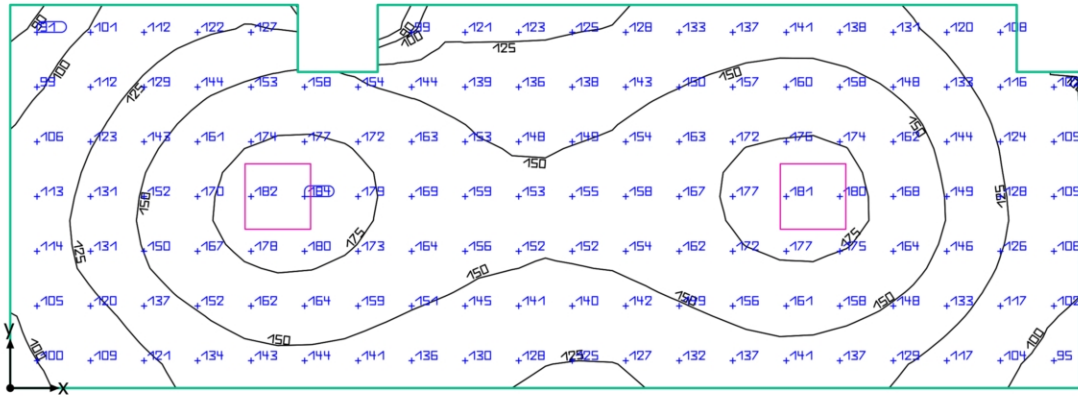
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	132 lx (≥ 100 lx) ✓	90.4 lx	165 lx	0.68	0.55	S210

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije
Summary



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	143 lx	≥ 100 lx	✓	S212
	g_1	0.58	-	-	S212
Consumption values	Consumption	120 kWh/a	max. 600 kWh/a	✓	
Lighting power density	Room	3.82 W/m ²	-	-	
		2.68 W/m ² /100 lx	-	-	

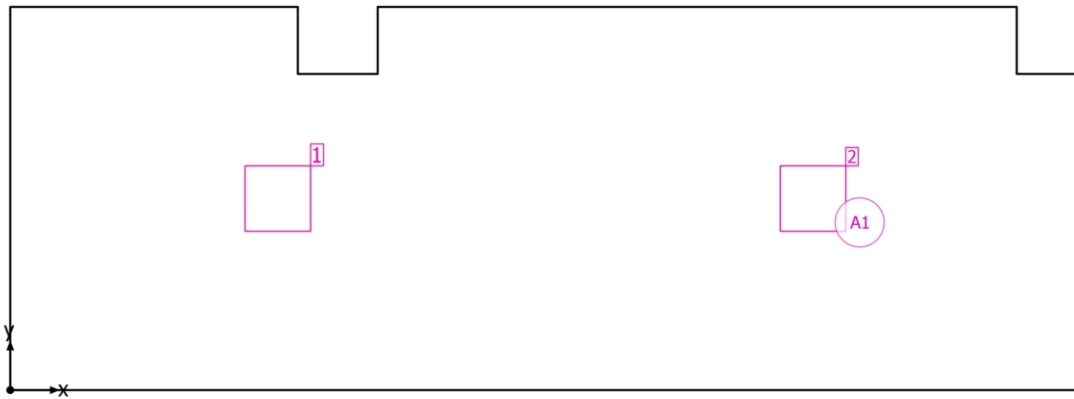
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

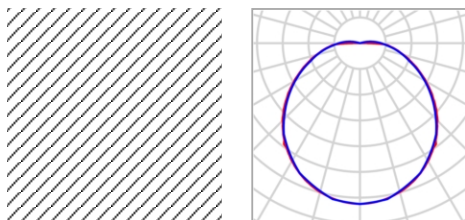
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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Luminaire layout plan



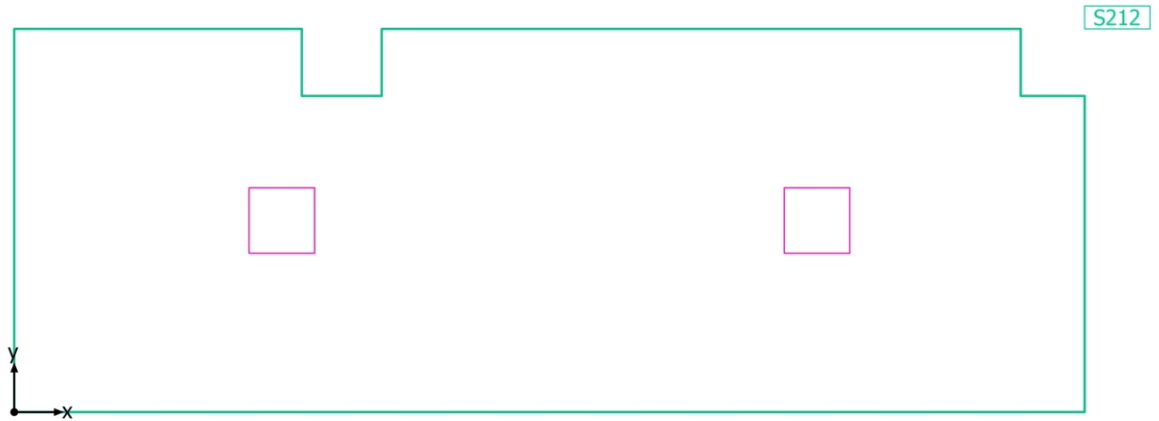
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

2 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.675 m / 1.200 m / 3.120 m	1.675 m	1.200 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 3.350 m	5.025 m	1.200 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.400 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Sanitarije

Calculation objects



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Calculation objects

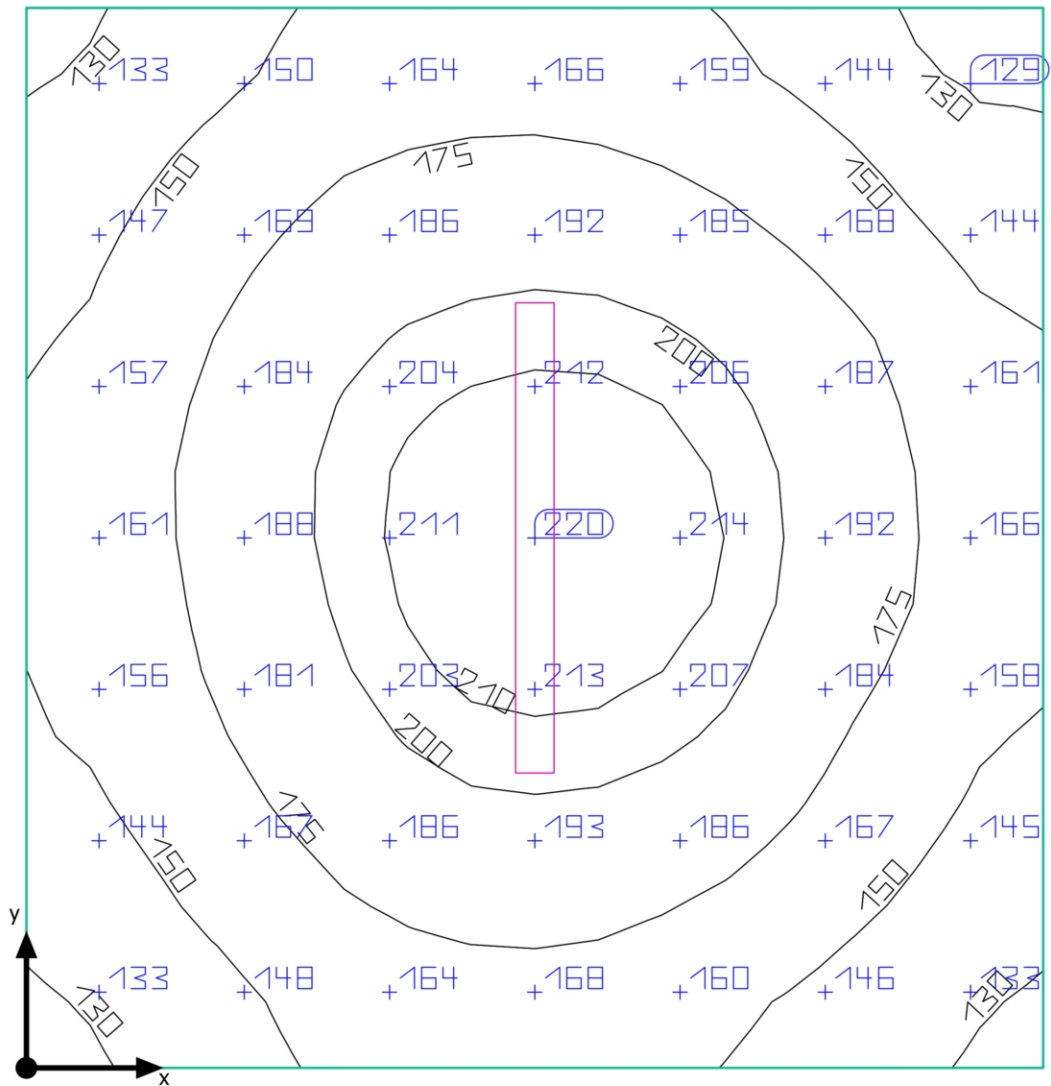
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	143 lx (≥ 100 lx) ✓	83.0 lx	184 lx	0.58	0.45	S212

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary



Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary

Results

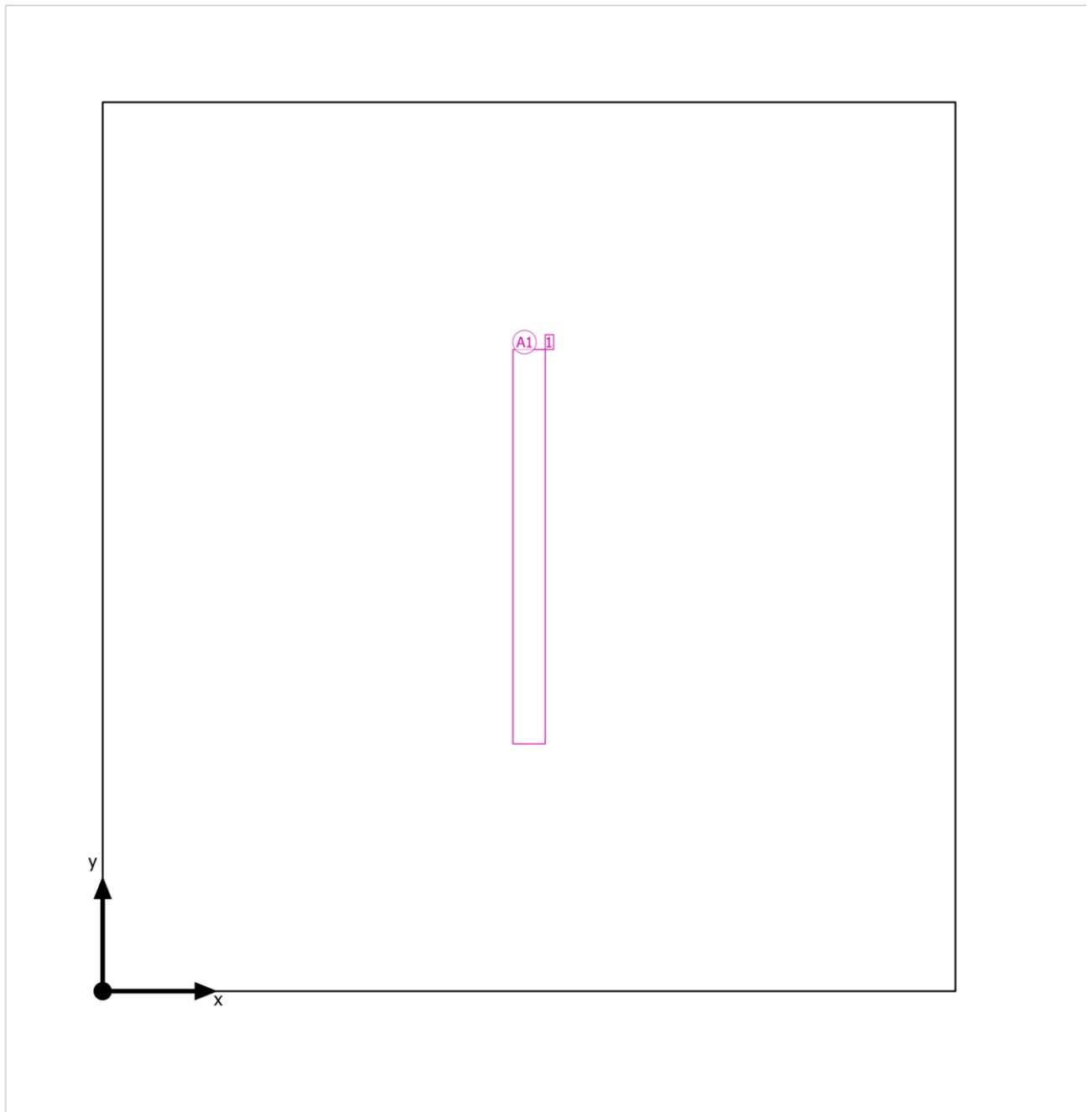
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	172 lx	≥ 100 lx	✓	S7
	g_1	0.73	-	-	S7
Consumption values	Consumption	4 kWh/a	max. 250 kWh/a	✓	
Lighting power density	Room	3.68 W/m ²	-	-	
		2.13 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

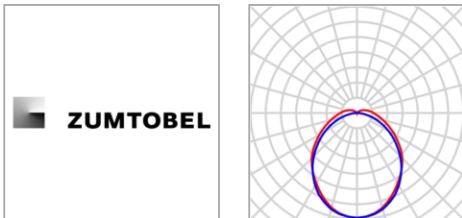
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Spremište
Luminaire layout plan

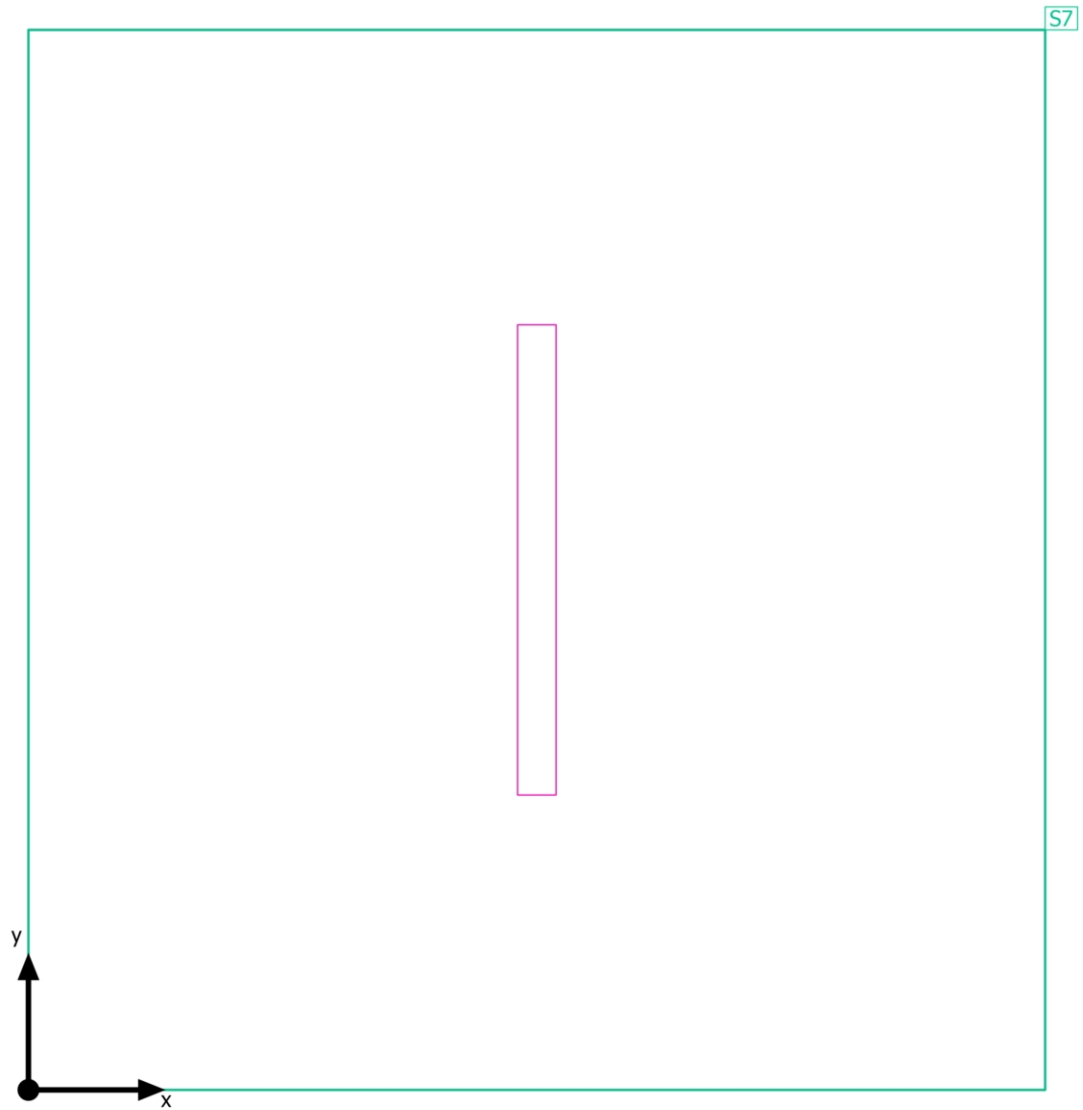


Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.190 m / 1.240 m / 3.120 m	1.190 m	1.240 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.480 m				
Y-direction	1 pcs., Centre - centre, 2.379 m				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Spremište

Calculation objects

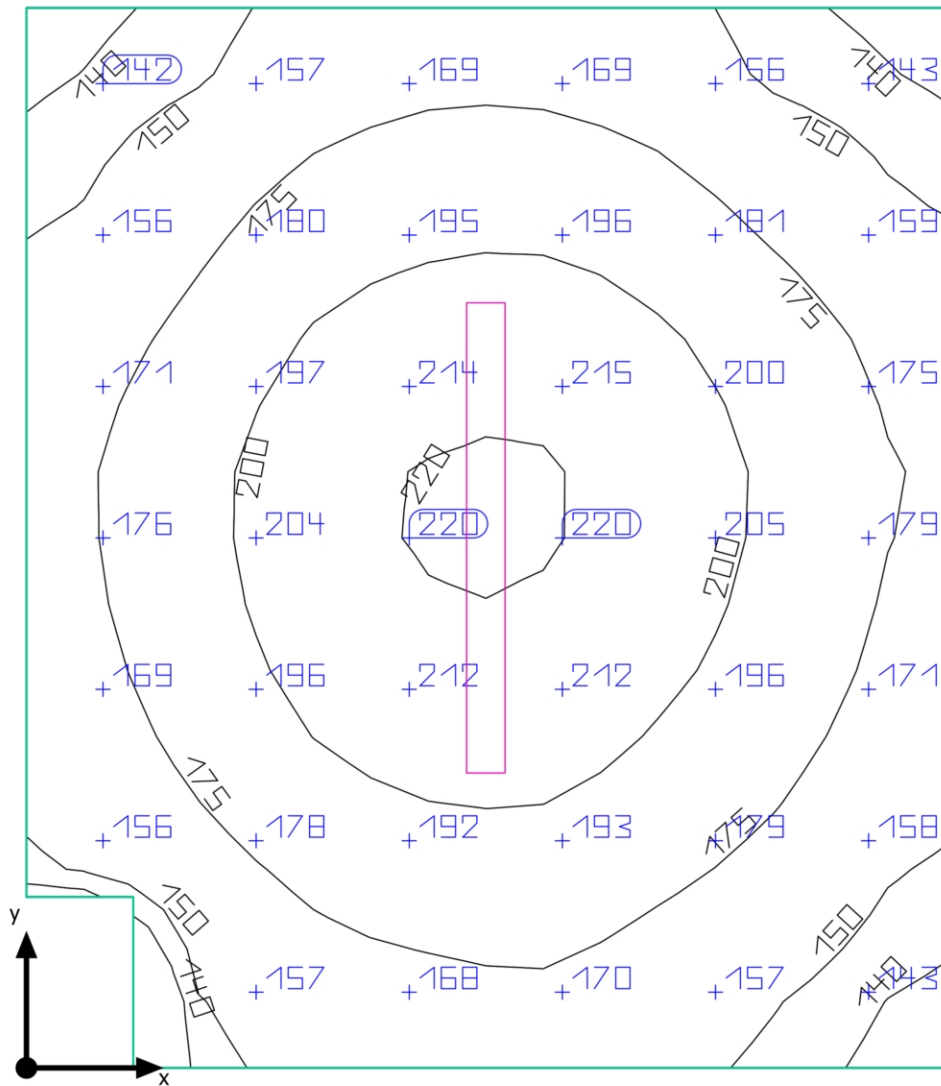
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Spremište) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	172 lx (≥ 100 lx) ✓	126 lx	219 lx	0.73	0.58	S7

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary



Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary

Results

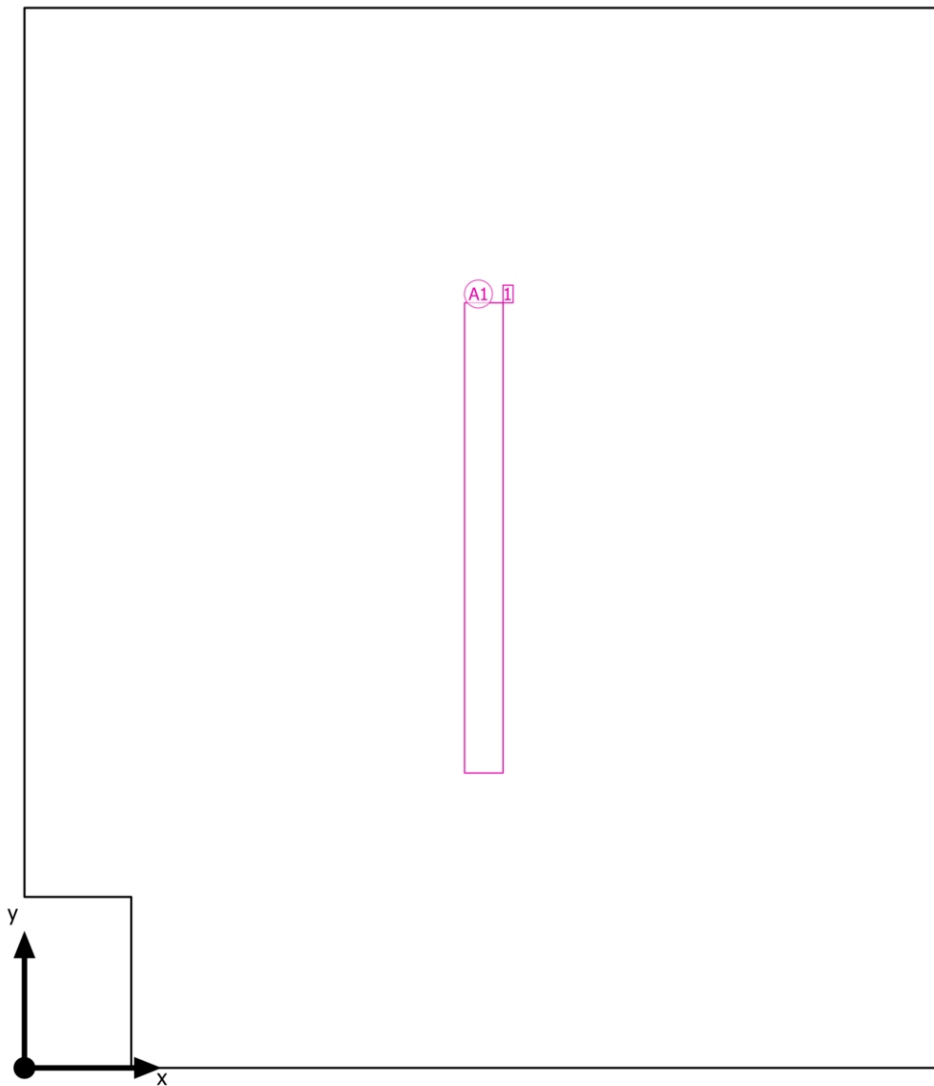
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	180 lx	≥ 100 lx	✓	S15
	g_1	0.74	-	-	S15
Consumption values	Consumption	4 kWh/a	max. 200 kWh/a	✓	
Lighting power density	Room	4.15 W/m ²	-	-	
		2.31 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

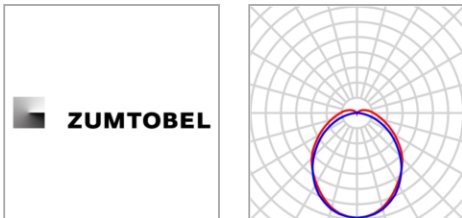
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Spremište
Luminaire layout plan

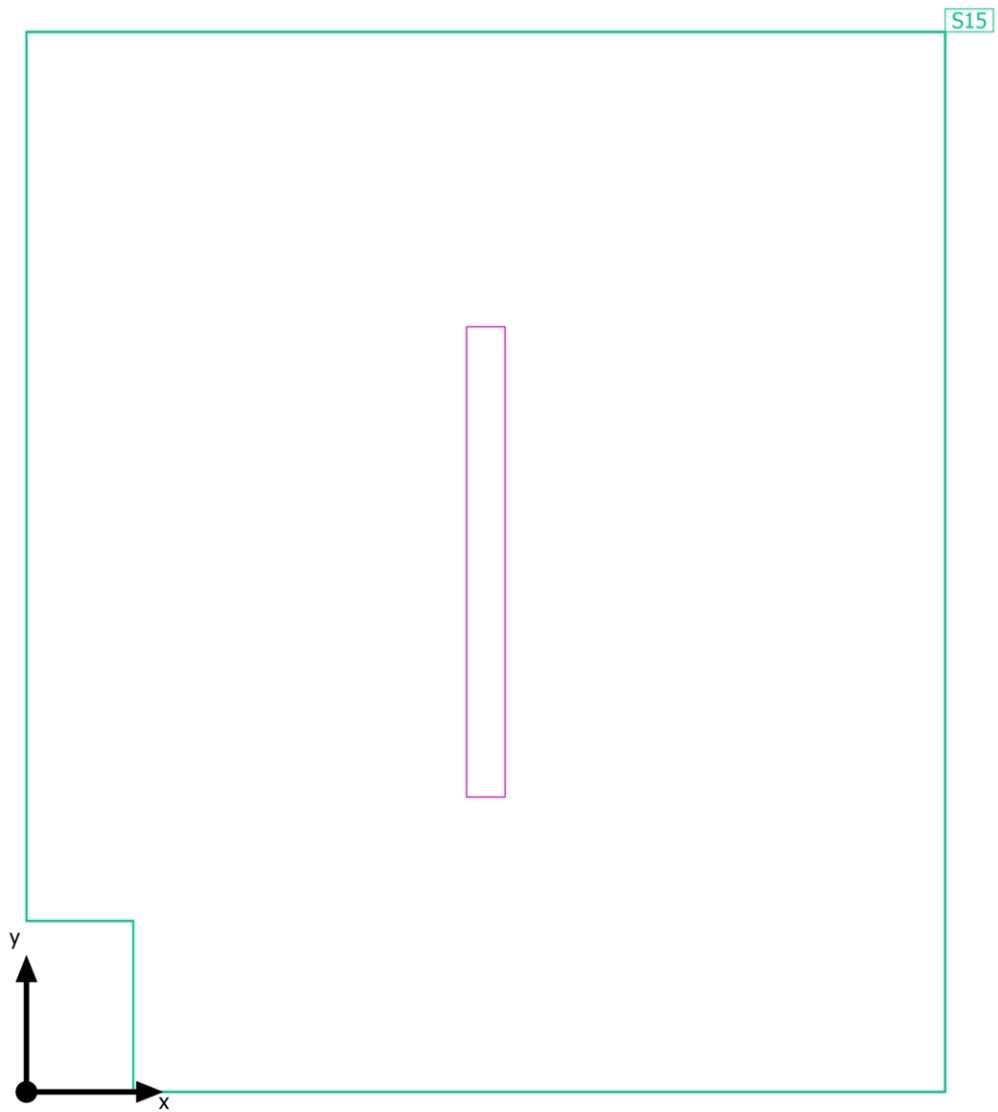


Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.075 m / 1.240 m / 3.120 m	1.075 m	1.240 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.480 m				
Y-direction	1 pcs., Centre - centre, 2.150 m				
Arrangement	A1				

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Calculation objects



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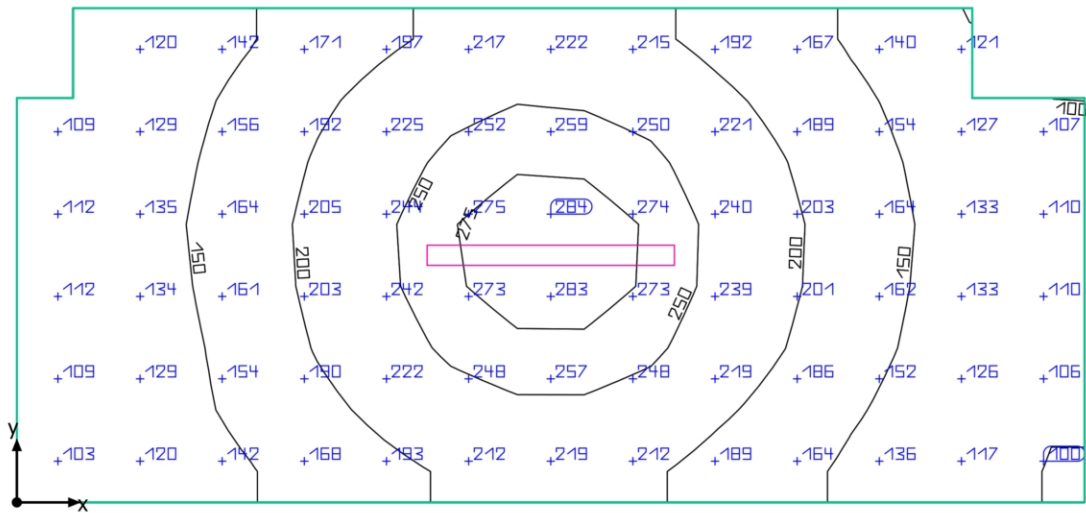
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Spremište) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	180 lx (≥ 100 lx) ✓	133 lx	222 lx	0.74	0.60	S15

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

Sportska dvorana Borovo naselje · Prizemlje · Spremište
Summary



Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary

Results

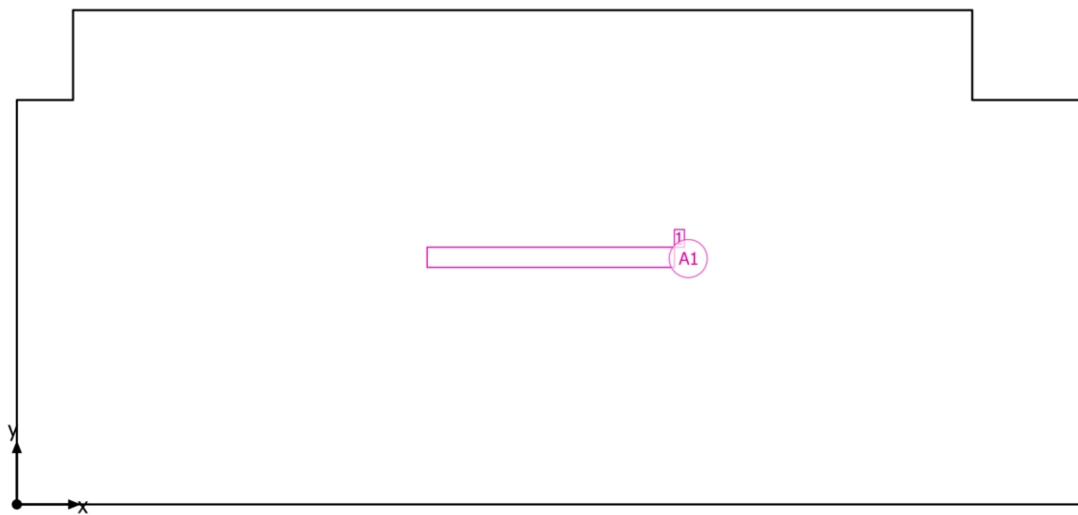
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	182 lx	≥ 100 lx	✓	S33
	g_1	0.54	-	-	S33
Consumption values	Consumption	6 kWh/a	max. 400 kWh/a	✓	
Lighting power density	Room	3.47 W/m ²	-	-	
		1.91 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

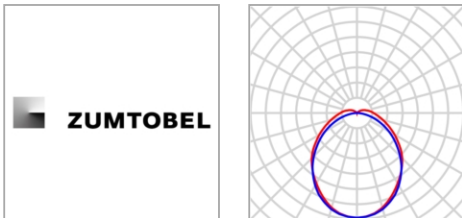
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Spremište
Luminaire layout plan



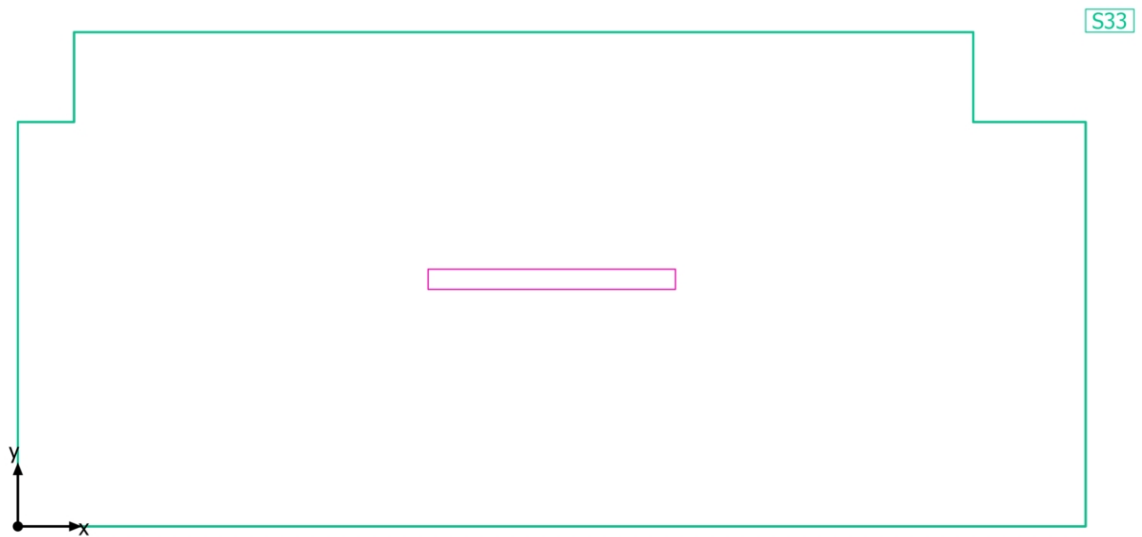
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.375 m / 1.100 m / 3.120 m	2.375 m	1.100 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 4.750 m				
Y-direction	1 pcs., Centre - centre, 2.200 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

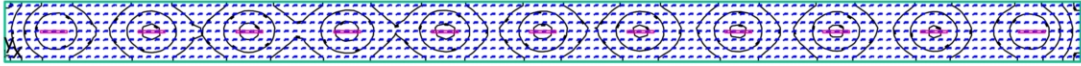
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Spremište) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	182 lx (≥ 100 lx) ✓	98.0 lx	287 lx	0.54	0.34	S33

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary



Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	221 lx	≥ 100 lx	✓	S64
	g_1	0.54	-	-	S64
Consumption values	Consumption	64 kWh/a	max. 3900 kWh/a	✓	
Lighting power density	Room	3.51 W/m ²	-	-	
		1.58 W/m ² /100 lx	-	-	
	Workplane	3.51 W/m ²	-	-	
		1.58 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

Luminaire list

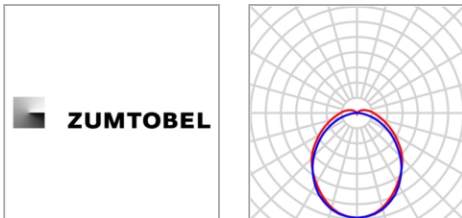
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
11	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Spremište
Luminaire layout plan



Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

11 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.021 m / 1.050 m / 3.120 m	2.021 m	1.050 m	3.120 m	1
X-direction	11 pcs., Centre - centre, 4.042 m	6.062 m	1.050 m	3.120 m	2
		10.104 m	1.050 m	3.120 m	3
Y-direction	1 pcs., Centre - centre, 2.484 m	14.146 m	1.050 m	3.120 m	4
		18.187 m	1.050 m	3.120 m	5
Arrangement	A1	22.229 m	1.050 m	3.120 m	6
		26.271 m	1.050 m	3.120 m	7
		30.312 m	1.050 m	3.120 m	8
		34.354 m	1.050 m	3.120 m	9
		38.396 m	1.050 m	3.120 m	10
		42.438 m	1.050 m	3.120 m	11

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Calculation objects



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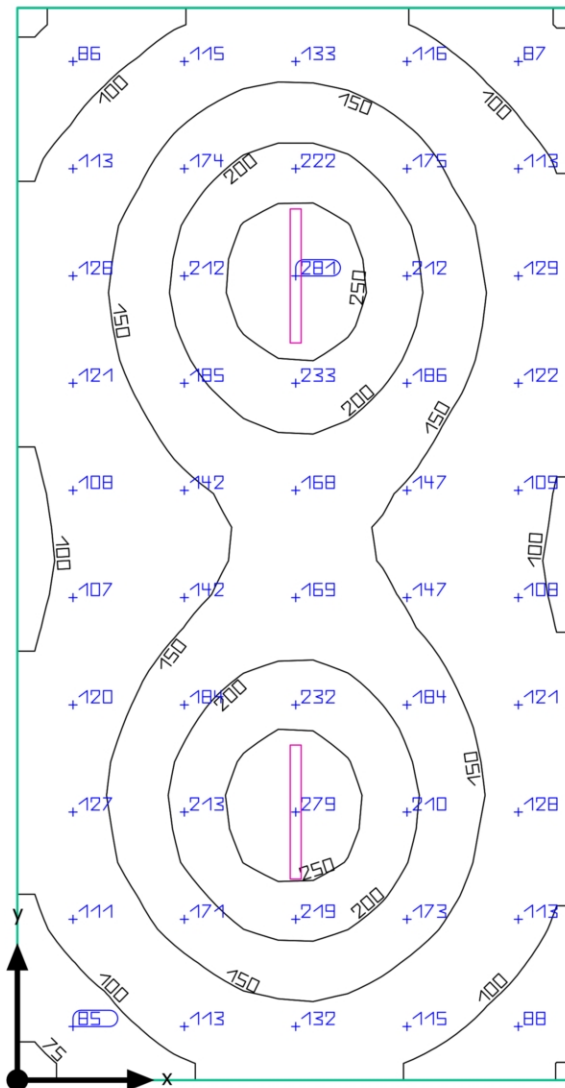
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Spremište) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	221 lx (≥ 100 lx) ✓	119 lx	315 lx	0.54	0.38	S64

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

Sportska dvorana Borovo naselje · Prizemlje · Spremište
Summary



Sportska dvorana Borovo naselje · Prizemlje · Spremište

Summary

Results

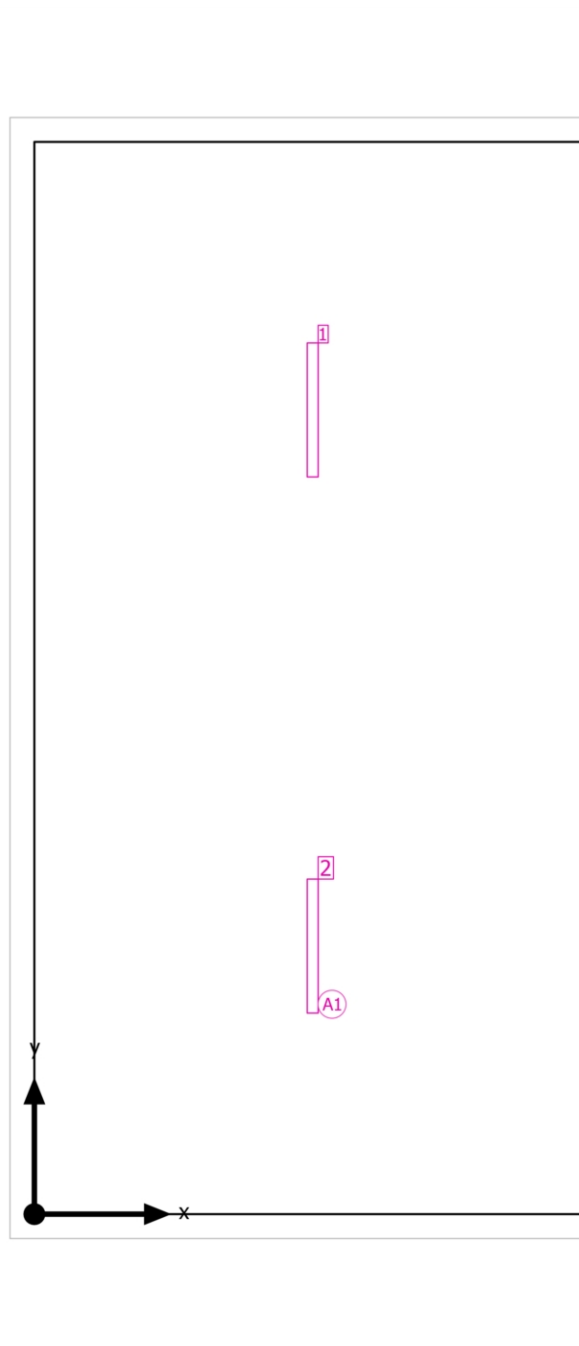
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	152 lx	≥ 100 lx	✓	S198
	g_1	0.47	-	-	S198
Consumption values	Consumption	12 kWh/a	max. 1450 kWh/a	✓	
Lighting power density	Room	1.75 W/m ²	-	-	
		1.15 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

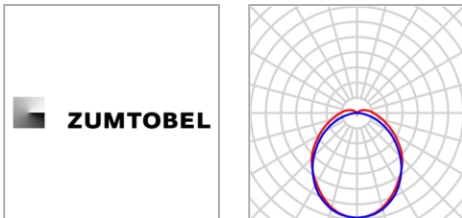
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

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Luminaire layout plan



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Luminaire layout plan

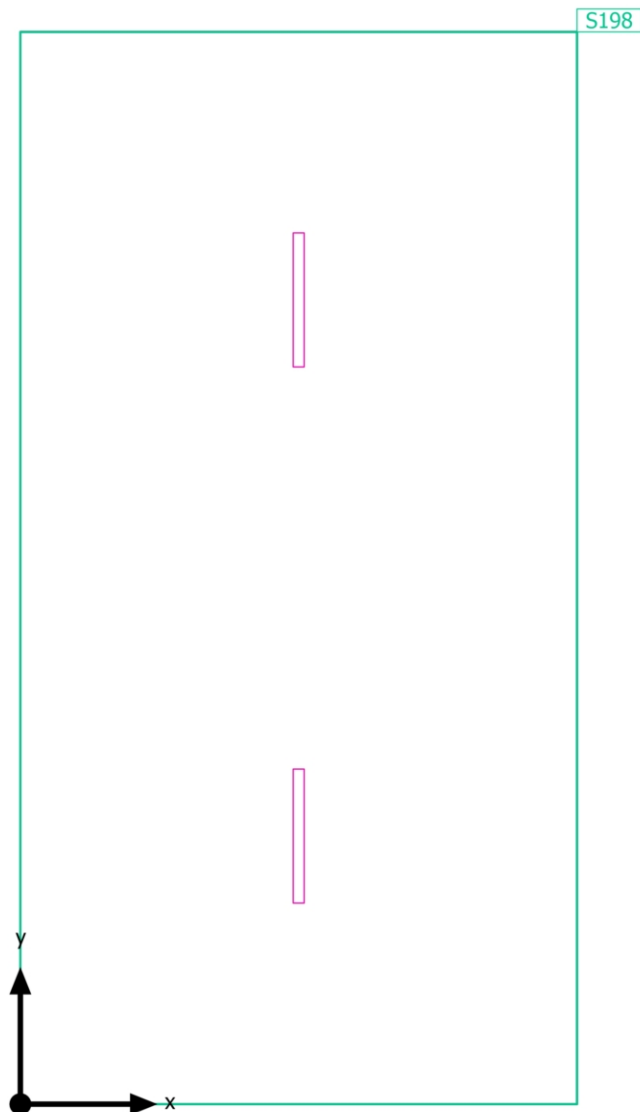


Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.285 m / 6.600 m / 3.120 m	2.285 m	6.600 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 4.400 m	2.285 m	2.200 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 4.570 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Spremište
Calculation objects



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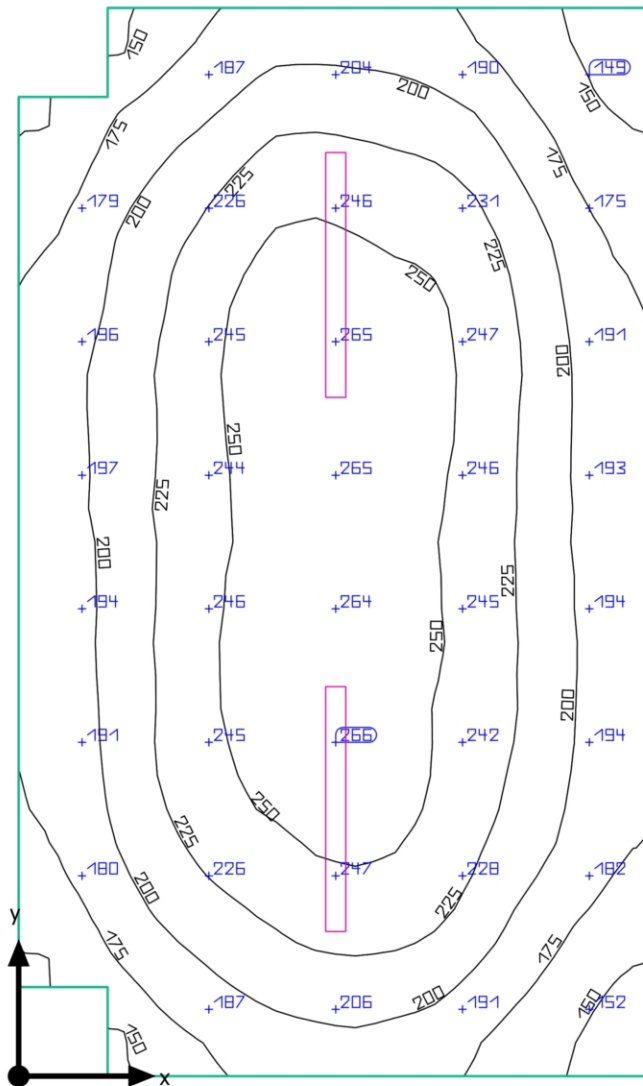
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Spremište) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	152 lx (≥ 100 lx) ✓	71.8 lx	281 lx	0.47	0.26	S198

Utilisation profile: General areas inside buildings - Store rooms and cold stores, Store and stockrooms

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

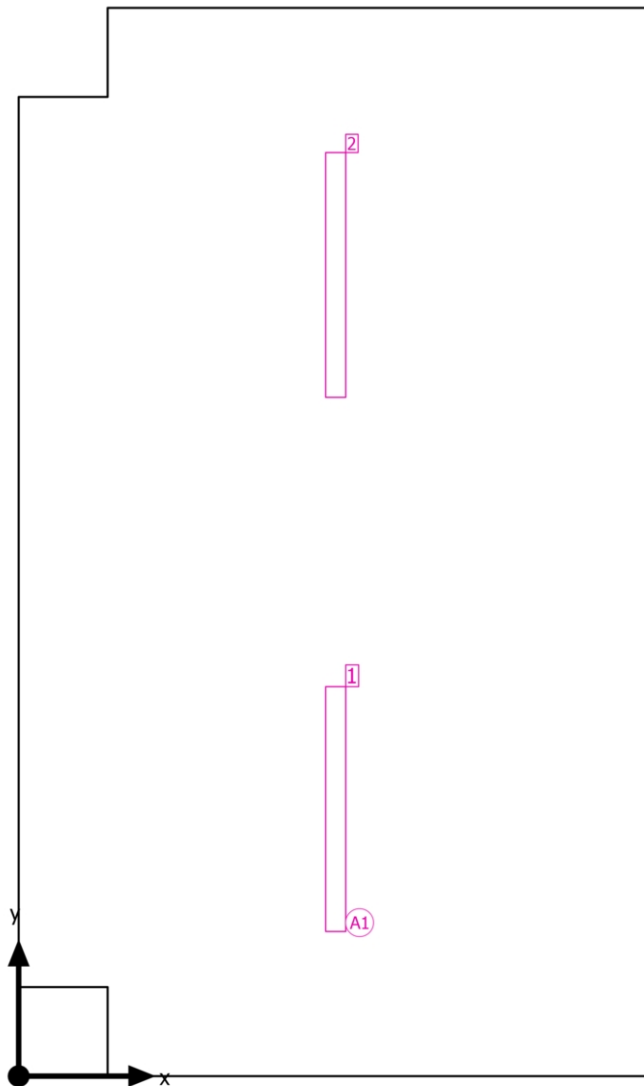
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	213 lx	≥ 200 lx	✓	S78
	g_1	0.63	-	-	S78
Consumption values	Consumption	36 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	3.25 W/m ²	-	-	
		1.53 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

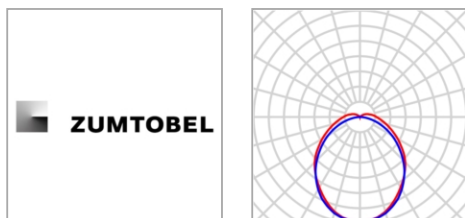
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

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Luminaire layout plan



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Luminaire layout plan

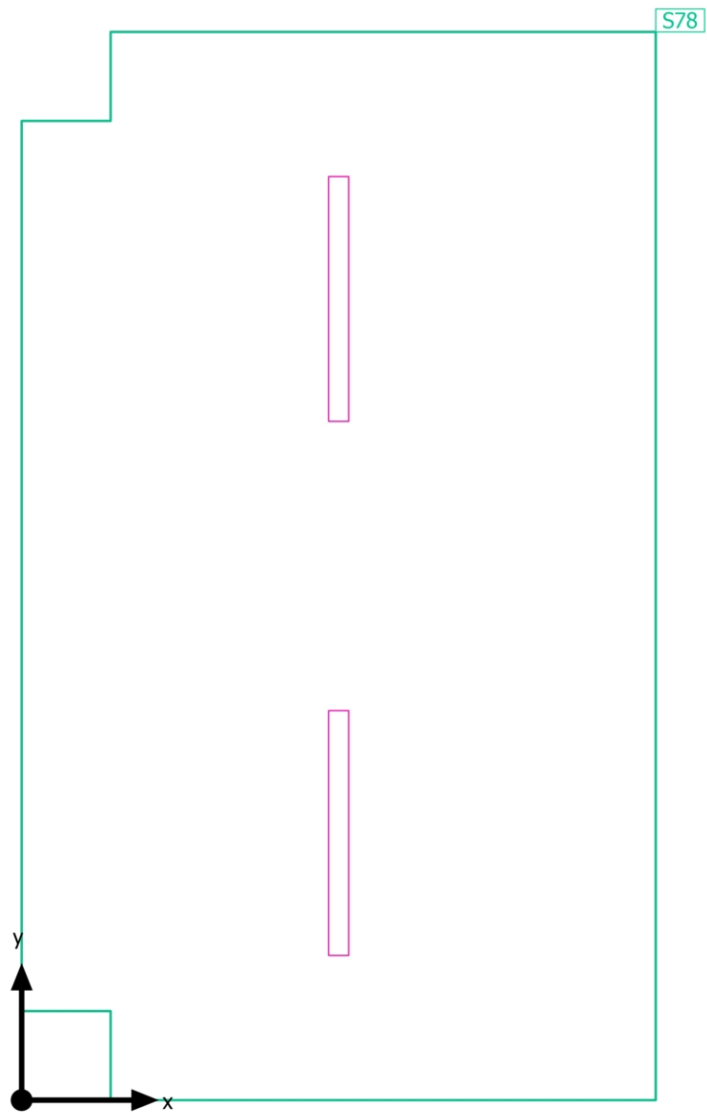


Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.425 m / 1.200 m / 3.120 m	1.425 m	1.200 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.400 m	1.425 m	3.600 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.850 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

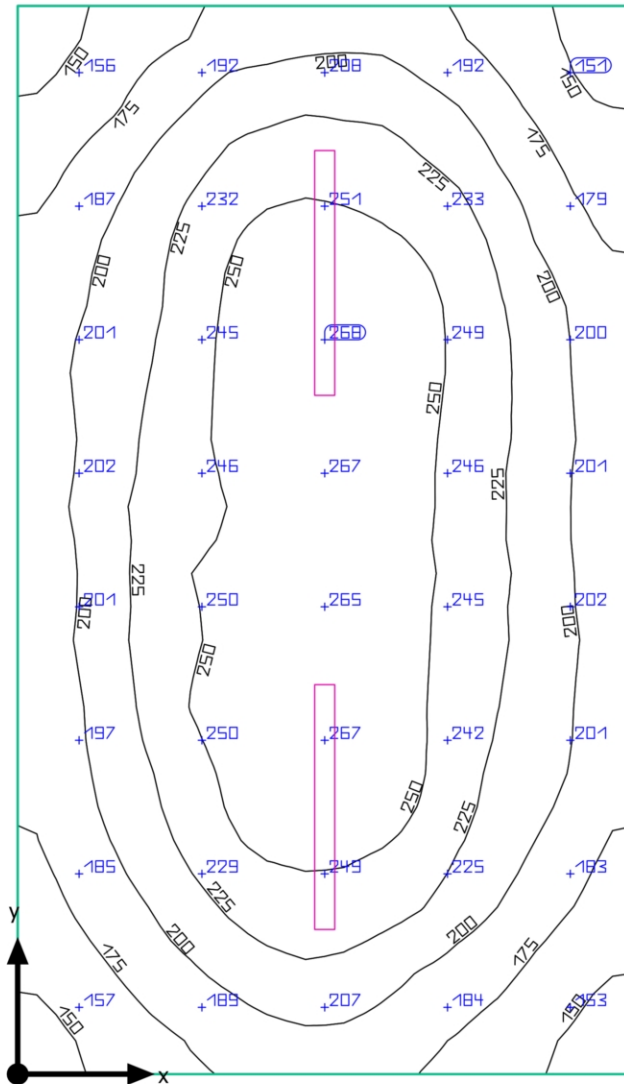
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	213 lx (≥ 200 lx) ✓	134 lx	267 lx	0.63	0.50	S78

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

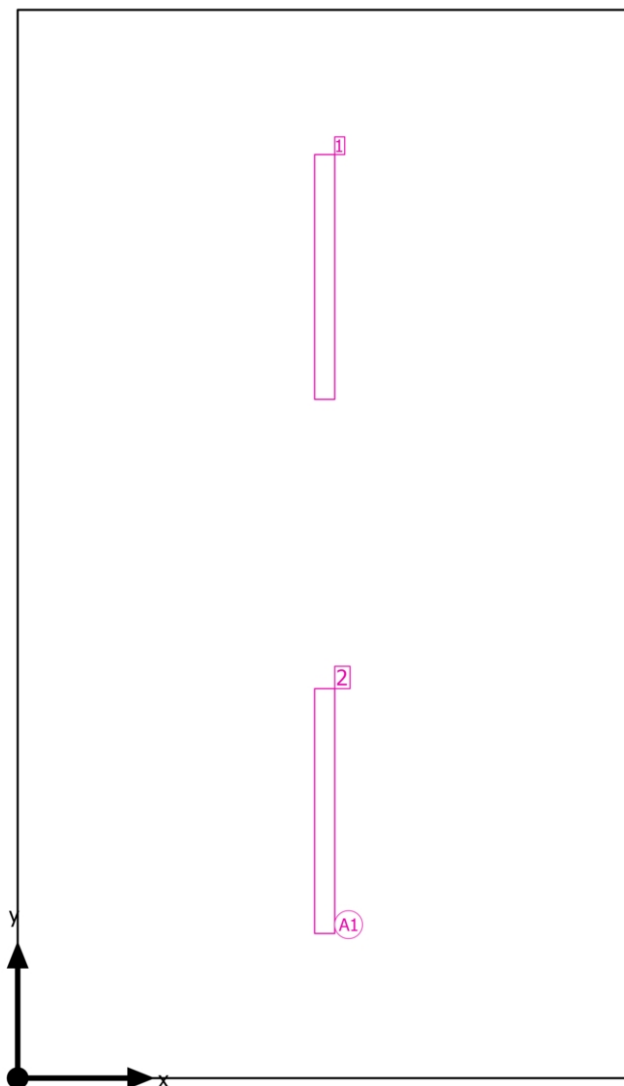
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	214 lx	≥ 200 lx	✓	S86
	g_1	0.64	-	-	S86
Consumption values	Consumption	36 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	3.28 W/m ²	-	-	
		1.53 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

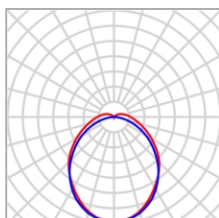
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Luminaire layout plan



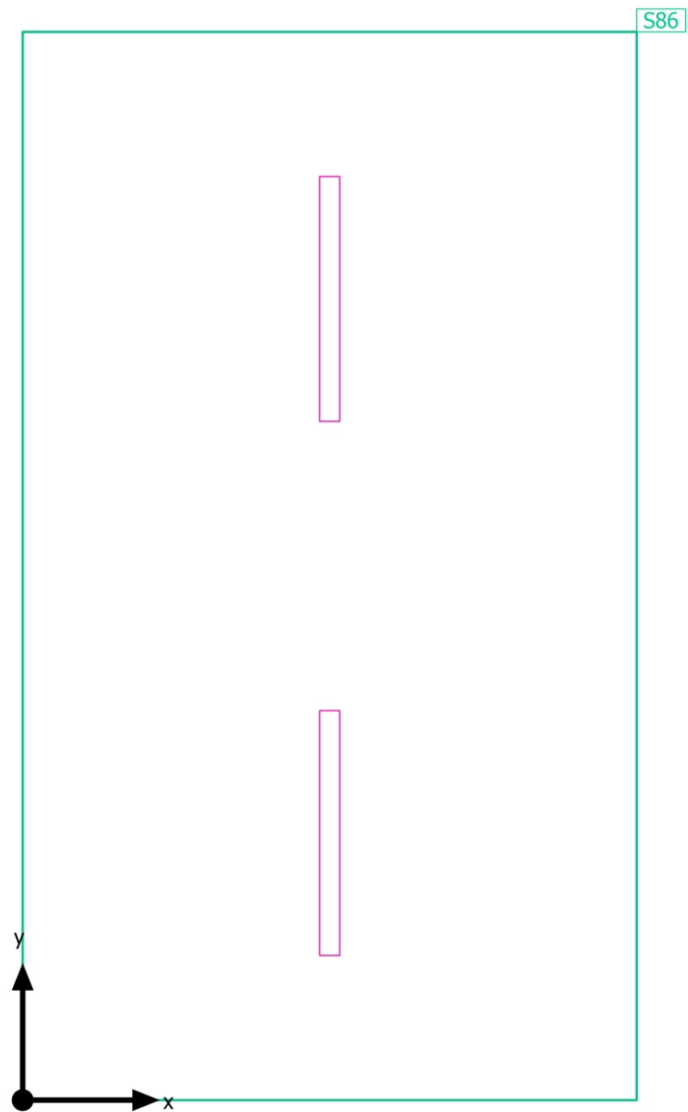
Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.380 m / 3.600 m / 3.120 m	1.380 m	3.600 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.400 m	1.380 m	1.200 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.760 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

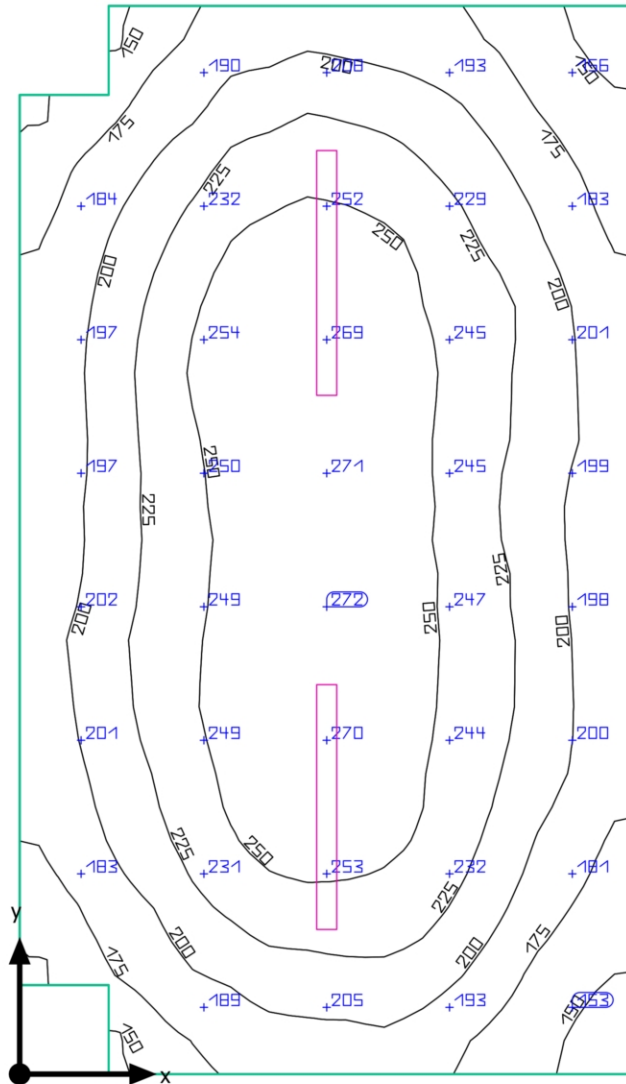
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	214 lx (≥ 200 lx) ✓	137 lx	270 lx	0.64	0.51	S86

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

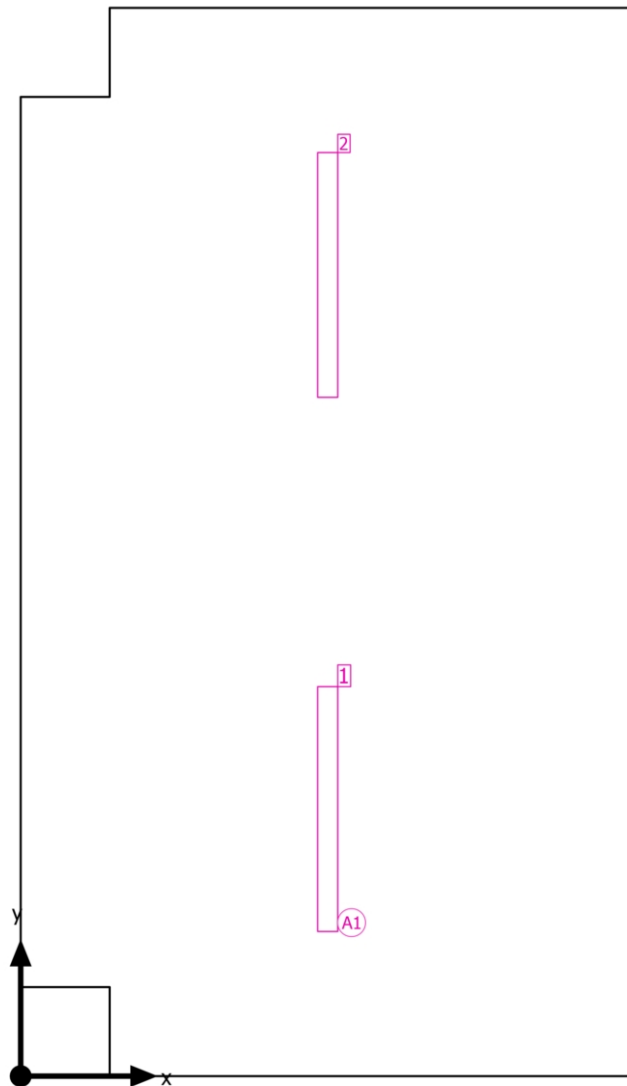
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	217 lx	≥ 200 lx	✓	S88
	g_1	0.63	-	-	S88
Consumption values	Consumption	36 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	3.36 W/m ²	-	-	
		1.55 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

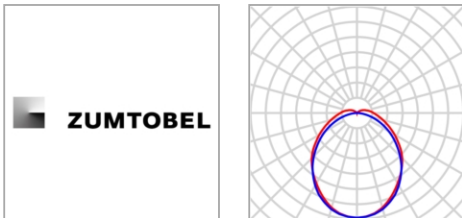
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



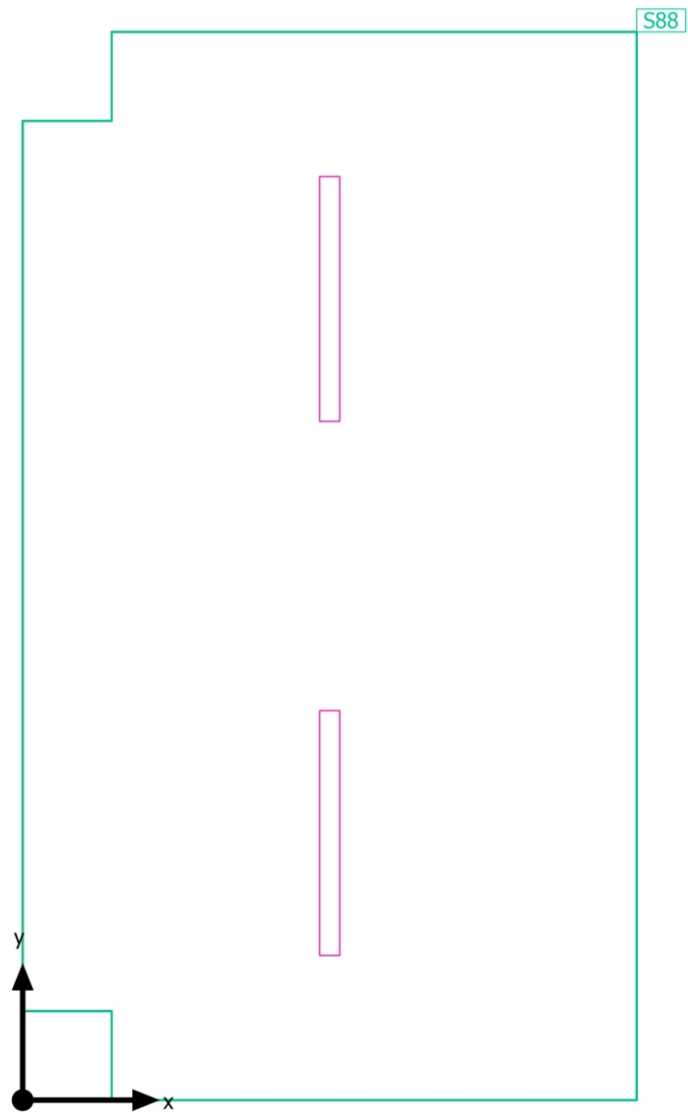
Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.380 m / 1.200 m / 3.120 m	1.380 m	1.200 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.400 m	1.380 m	3.600 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.760 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

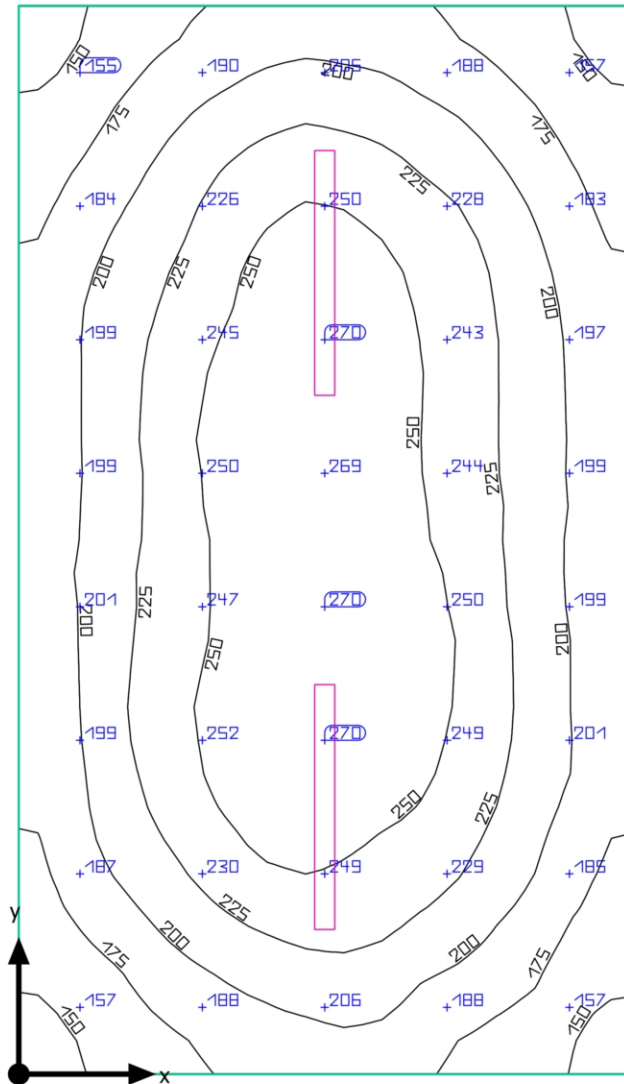
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	217 lx (≥ 200 lx) ✓	137 lx	272 lx	0.63	0.50	S88

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

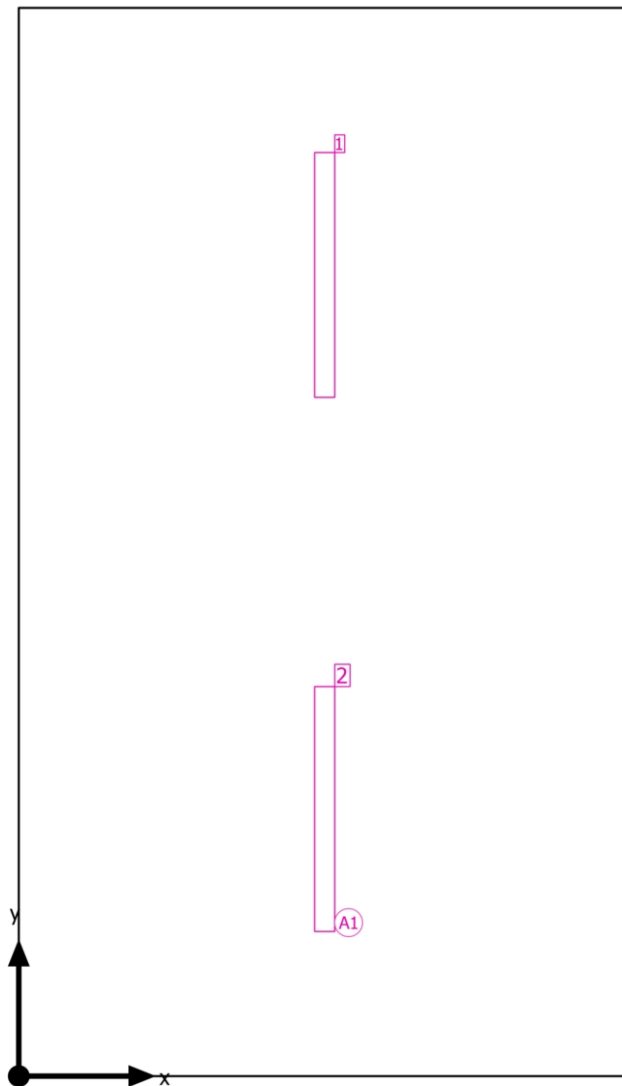
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	214 lx	≥ 200 lx	✓	S96
	g_1	0.65	-	-	S96
Consumption values	Consumption	36 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	3.29 W/m ²	-	-	
		1.53 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

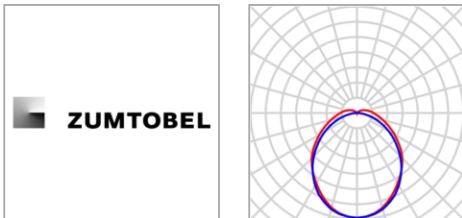
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan

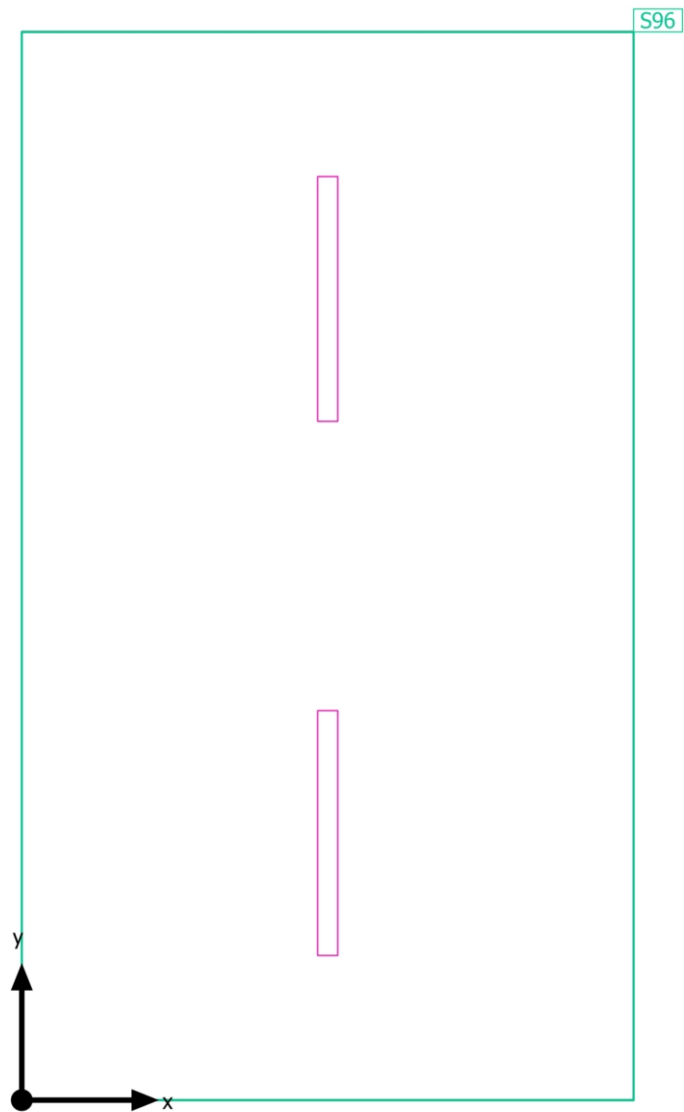


Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.375 m / 3.600 m / 3.120 m	1.375 m	3.600 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.400 m	1.375 m	1.200 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.750 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects

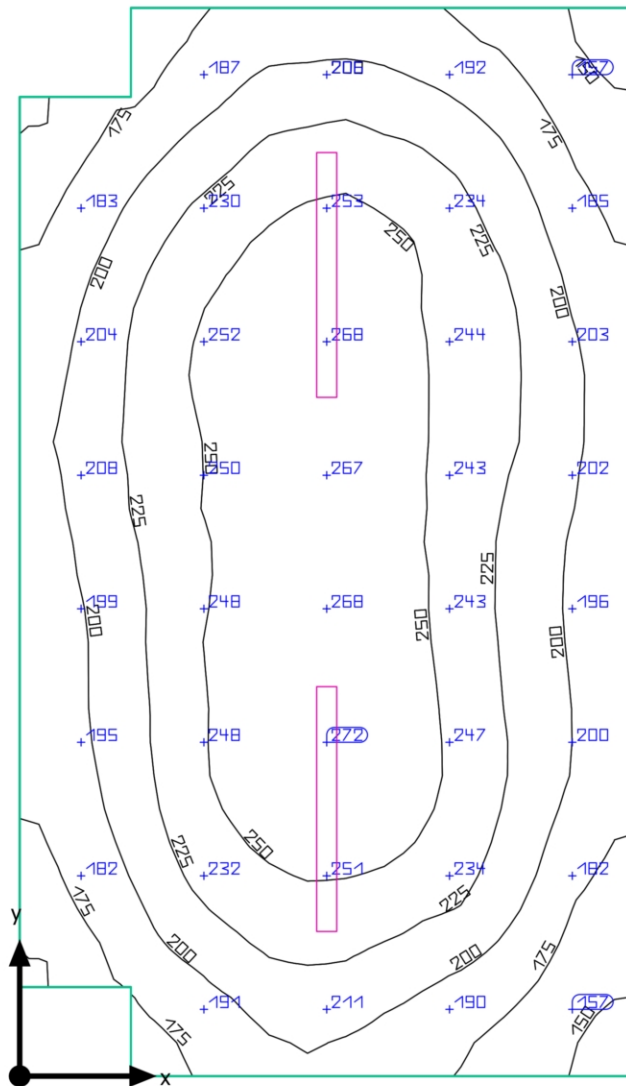
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	214 lx (≥ 200 lx) ✓	140 lx	272 lx	0.65	0.51	S96

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

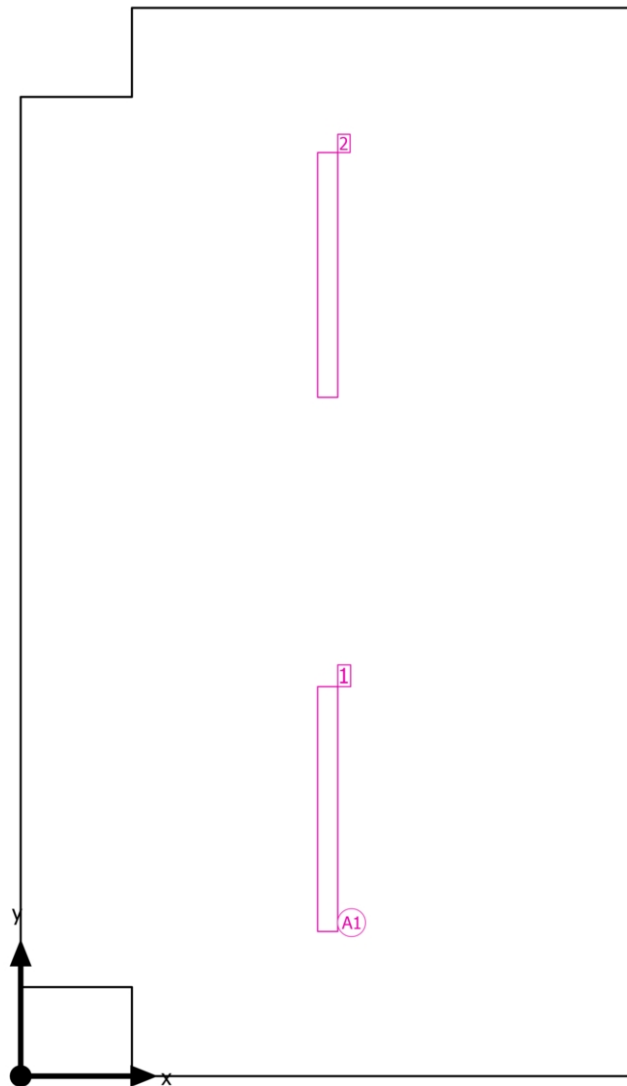
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	218 lx	≥ 200 lx	✓	S98
	g_1	0.65	-	-	S98
Consumption values	Consumption	36 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	3.38 W/m ²	-	-	
		1.55 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

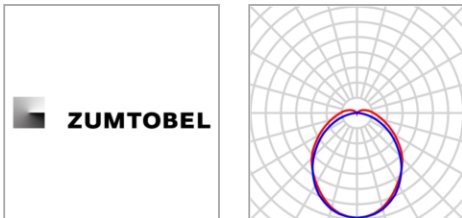
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



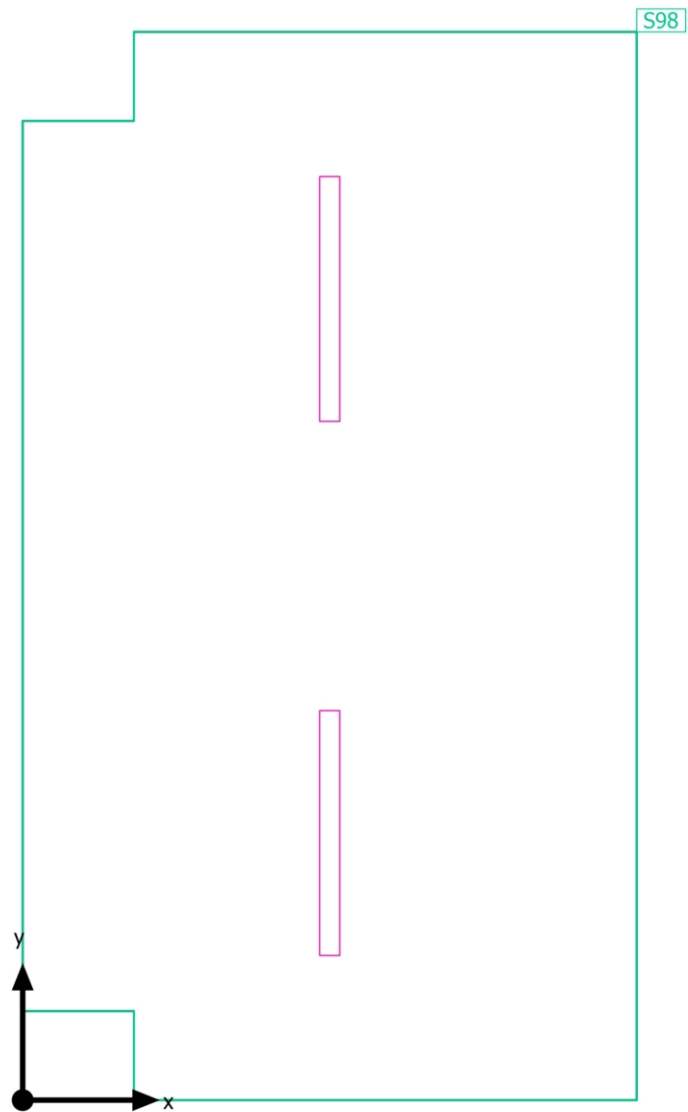
Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.380 m / 1.200 m / 3.120 m	1.380 m	1.200 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.400 m	1.380 m	3.600 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.760 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects

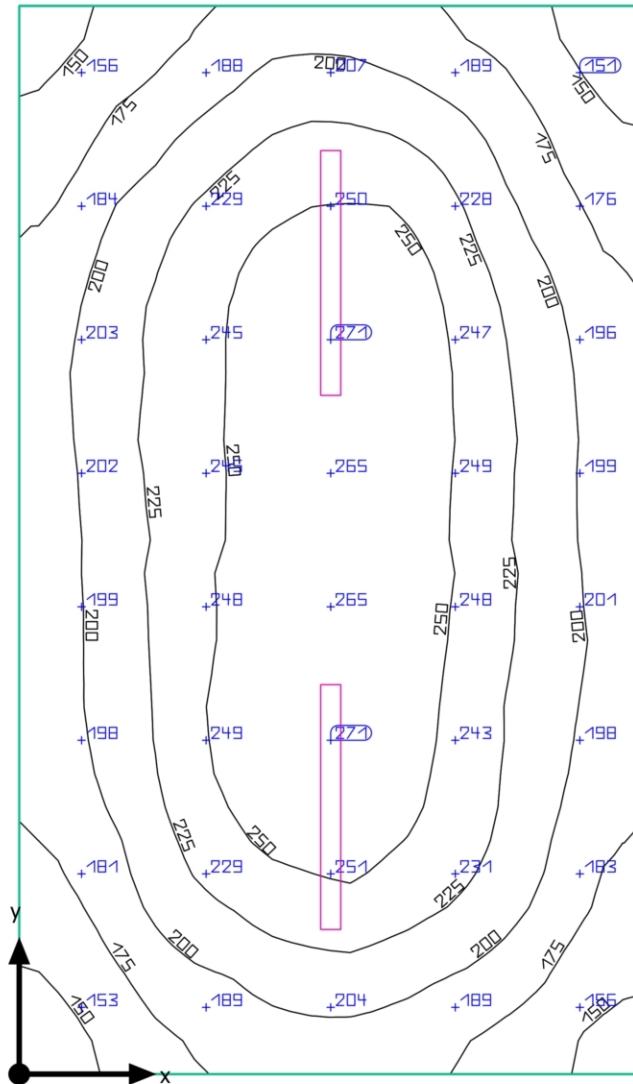
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	218 lx (≥ 200 lx) ✓	141 lx	272 lx	0.65	0.52	S98

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

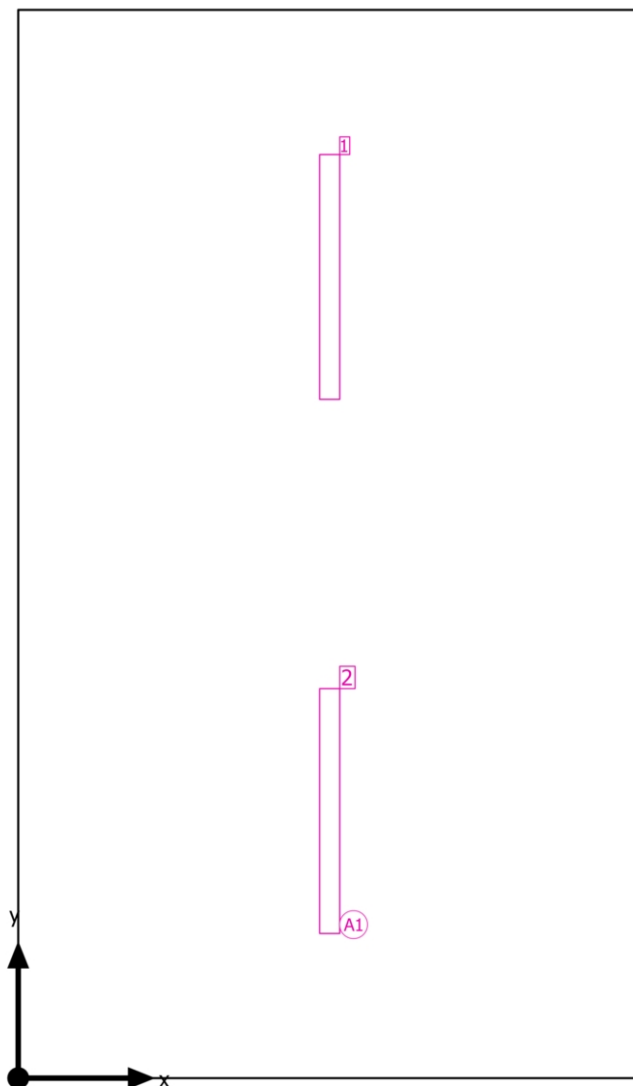
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	214 lx	≥ 200 lx	✓	S106
	g_1	0.63	-	-	S106
Consumption values	Consumption	36 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	3.23 W/m ²	-	-	
		1.51 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

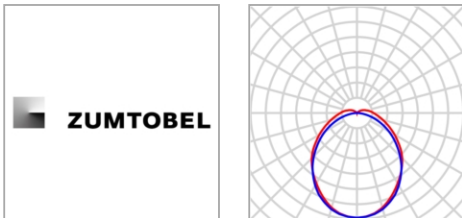
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



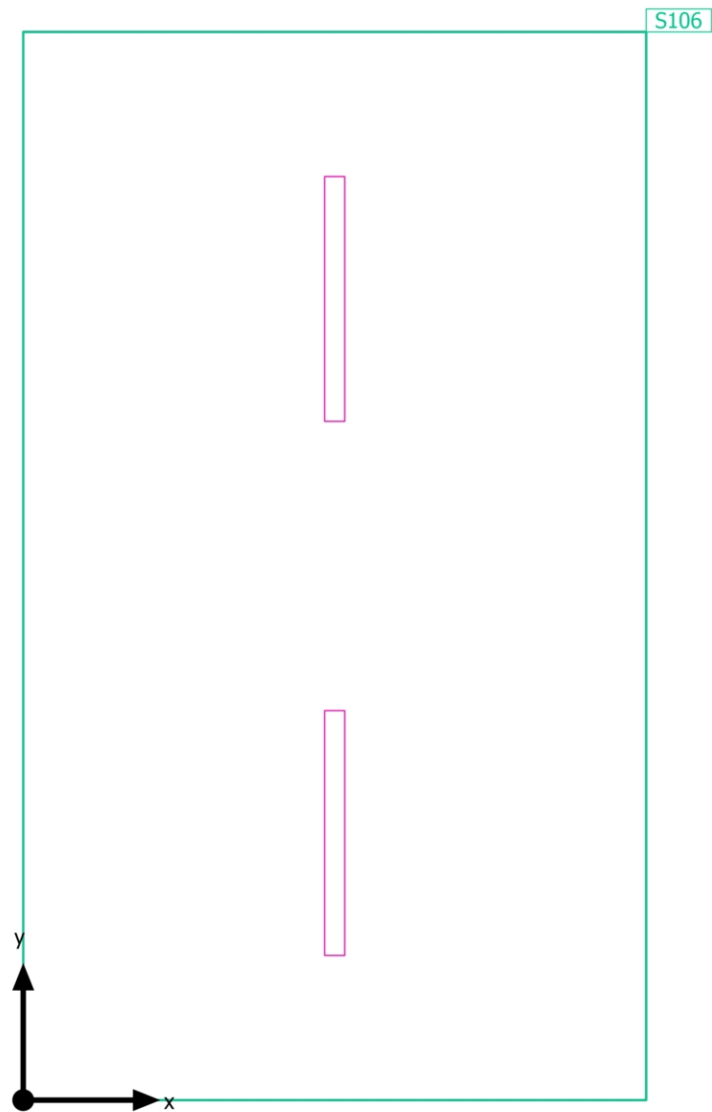
Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.400 m / 3.600 m / 3.120 m	1.400 m	3.600 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.400 m	1.400 m	1.200 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.800 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

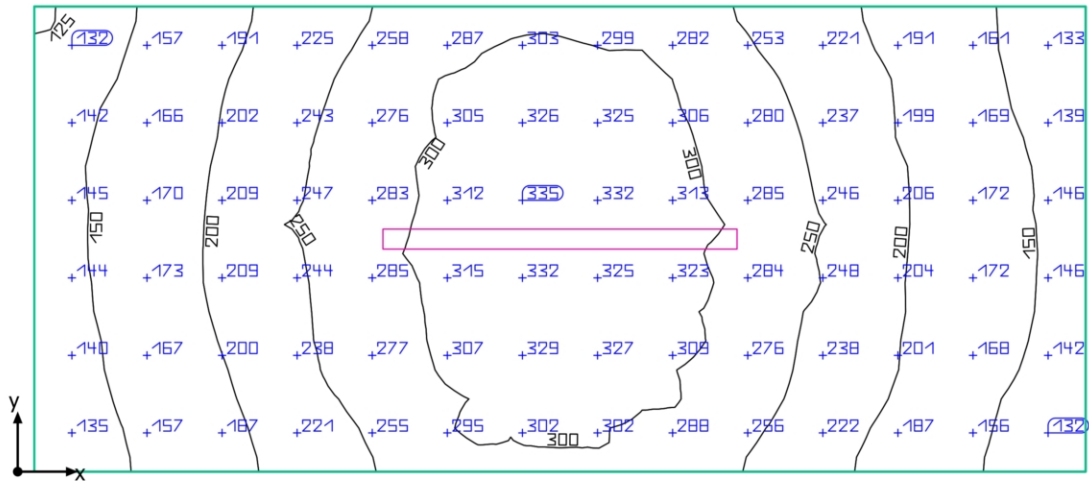
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	214 lx (≥ 200 lx) ✓	134 lx	271 lx	0.63	0.49	S106

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	234 lx	≥ 200 lx	✓	S114
	g_1	0.53	-	-	S114
Consumption values	Consumption	43 kWh/a	max. 400 kWh/a	✓	
Lighting power density	Room	5.28 W/m ²	-	-	
		2.26 W/m ² /100 lx	-	-	

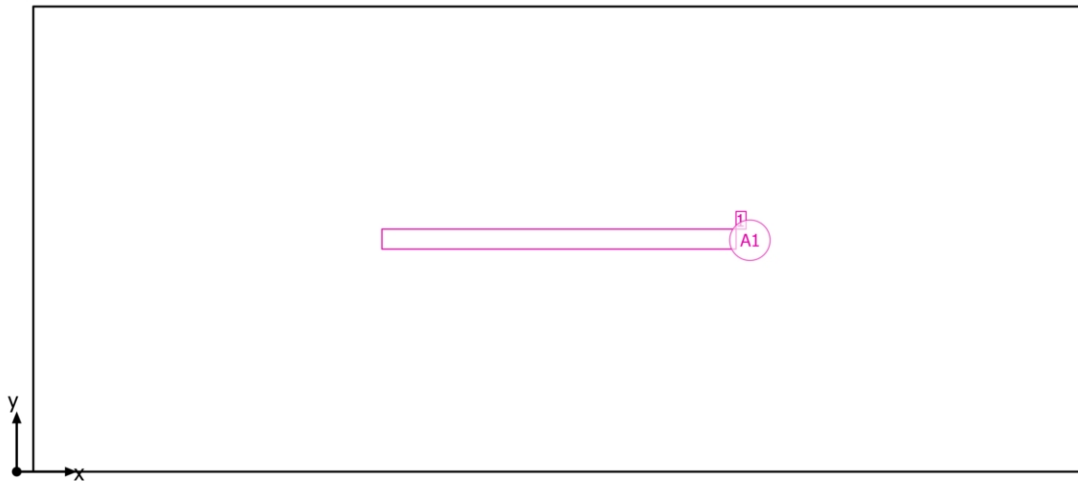
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	92901898 (STD - standard)	AQFPRO L LED6400-840 PC WB HF	52.7 W	6550 lm	124.3 lm/W

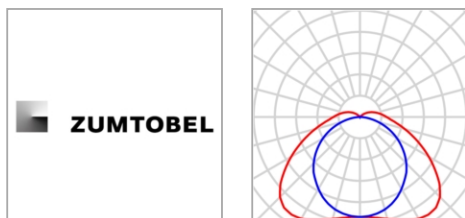
Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Luminaire layout plan



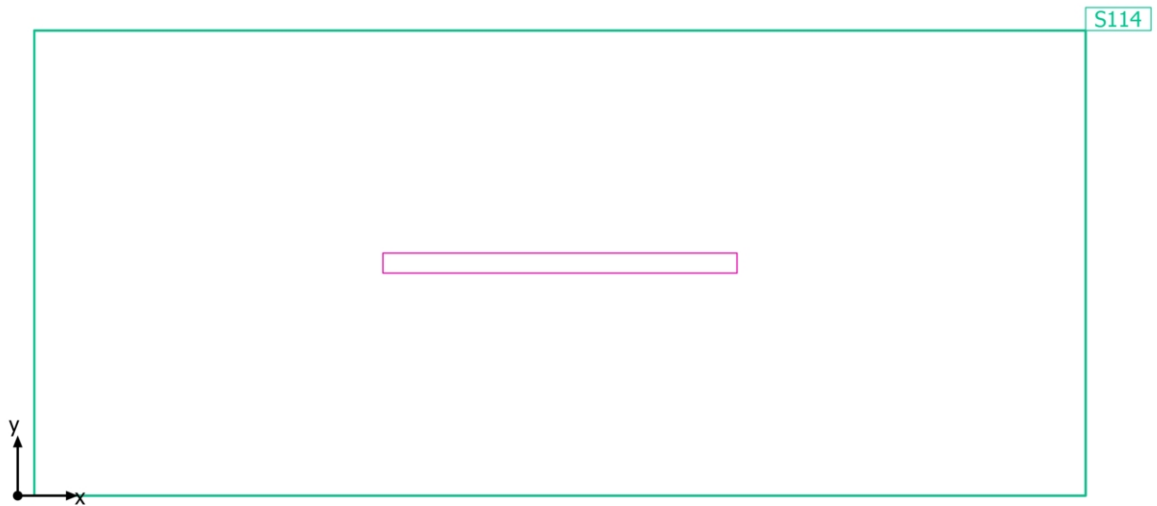
Manufacturer	ZUMTOBEL
Article No.	92901898 (STD - standard)
Article name	AQFPRO L LED6400-840 PC WB HF

1 x ZUMTOBEL AQFPRO L LED6400-840 PC WB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.450 m / 1.050 m / 3.120 m	2.450 m	1.050 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 4.750 m				
Y-direction	1 pcs., Centre - centre, 2.100 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

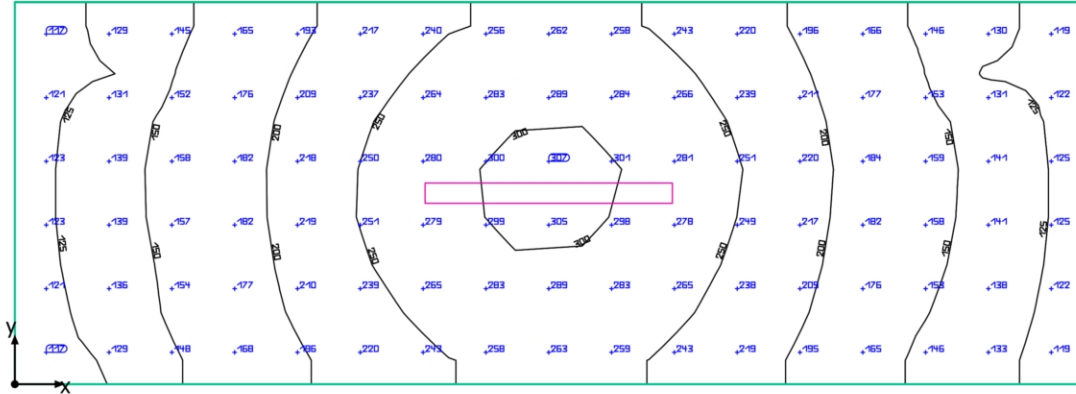
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	234 lx (≥ 200 lx) ✓	124 lx	338 lx	0.53	0.37	S114

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Summary



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Summary

Results

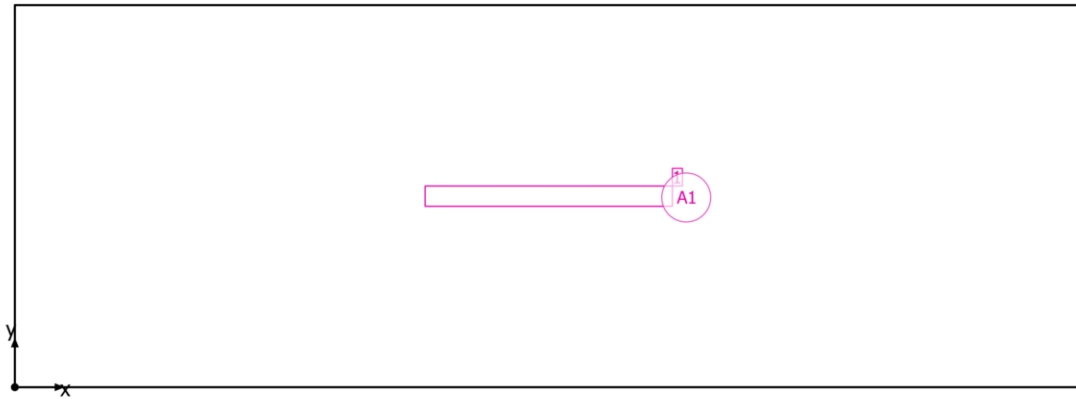
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	202 lx	≥ 200 lx	✓	S116
	g_1	0.57	-	-	S116
Consumption values	Consumption	29 kWh/a	max. 300 kWh/a	✓	
Lighting power density	Room	4.36 W/m ²	-	-	
		2.16 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

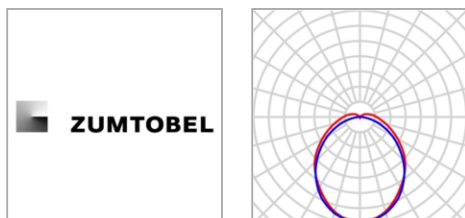
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Luminaire layout plan



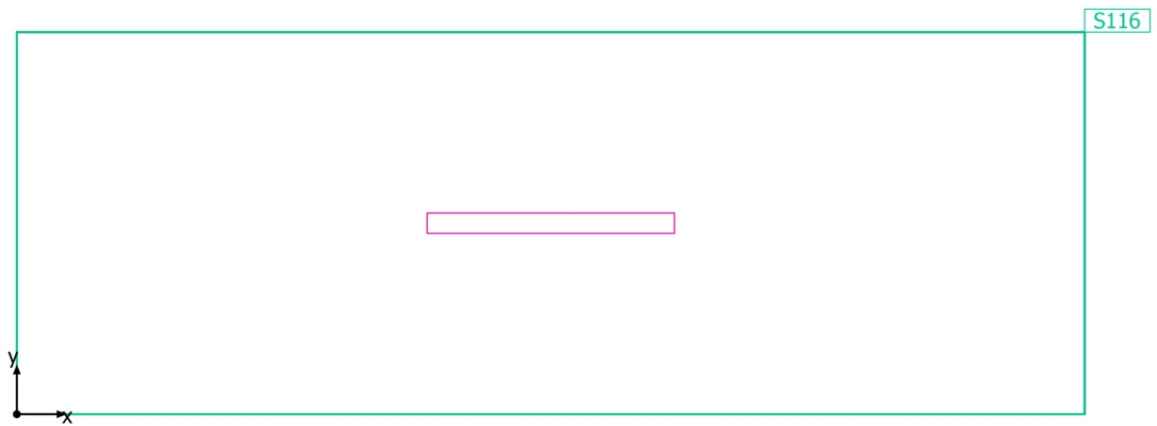
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.375 m / 0.850 m / 3.120 m	2.375 m	0.850 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 4.750 m				
Y-direction	1 pcs., Centre - centre, 1.700 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Svlačionica

Calculation objects

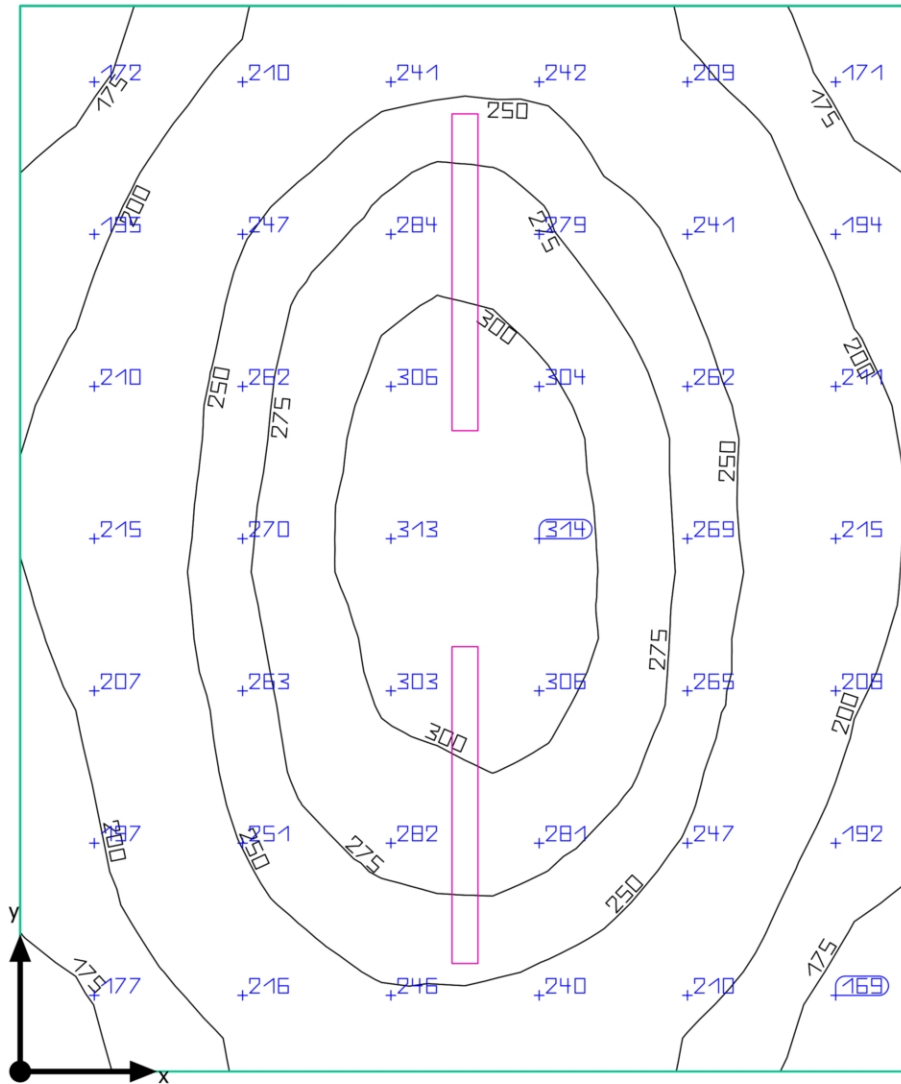
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	202 lx (≥ 200 lx) ✓	116 lx	307 lx	0.57	0.38	S116

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Summary



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Summary

Results

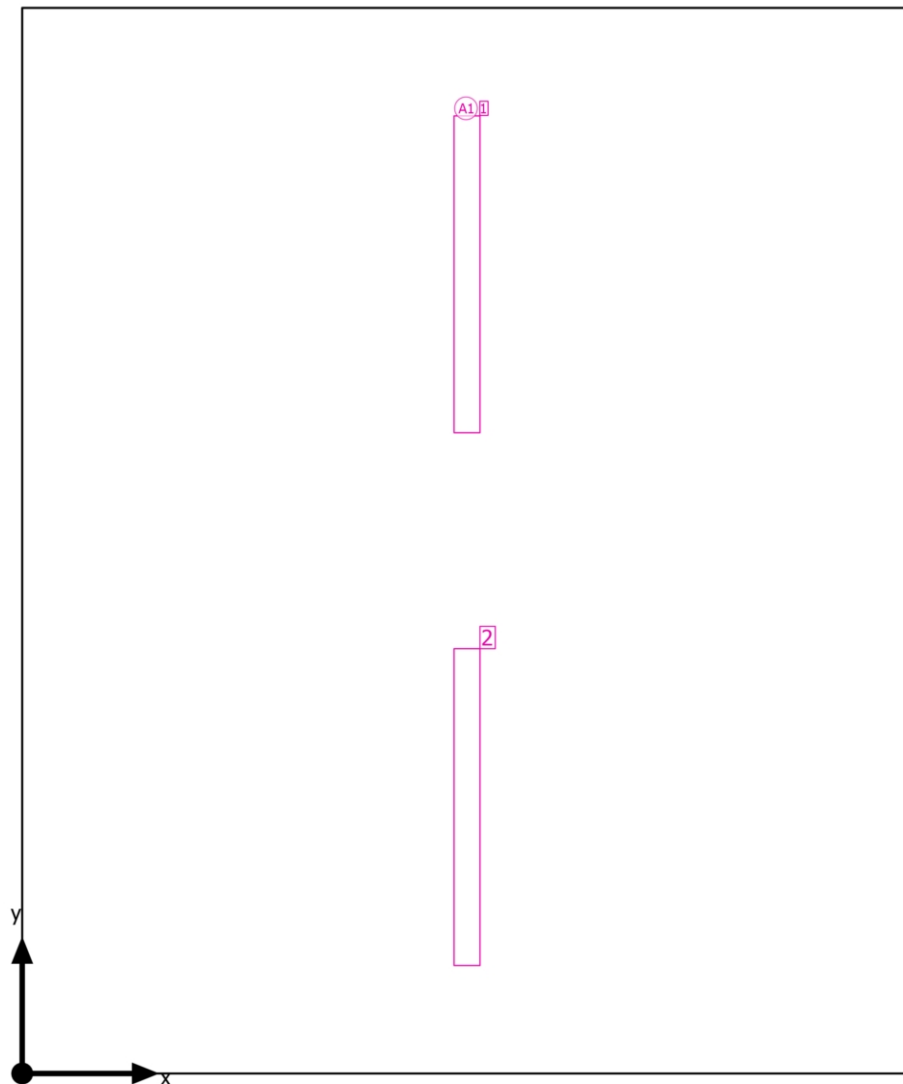
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	240 lx	≥ 200 lx	✓	S84
	g_1	0.64	-	-	S84
Consumption values	Consumption	36 kWh/a	max. 450 kWh/a	✓	
Lighting power density	Room	3.80 W/m ²	-	-	
		1.58 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

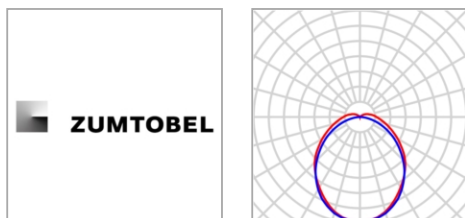
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Tuševi
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Luminaire layout plan

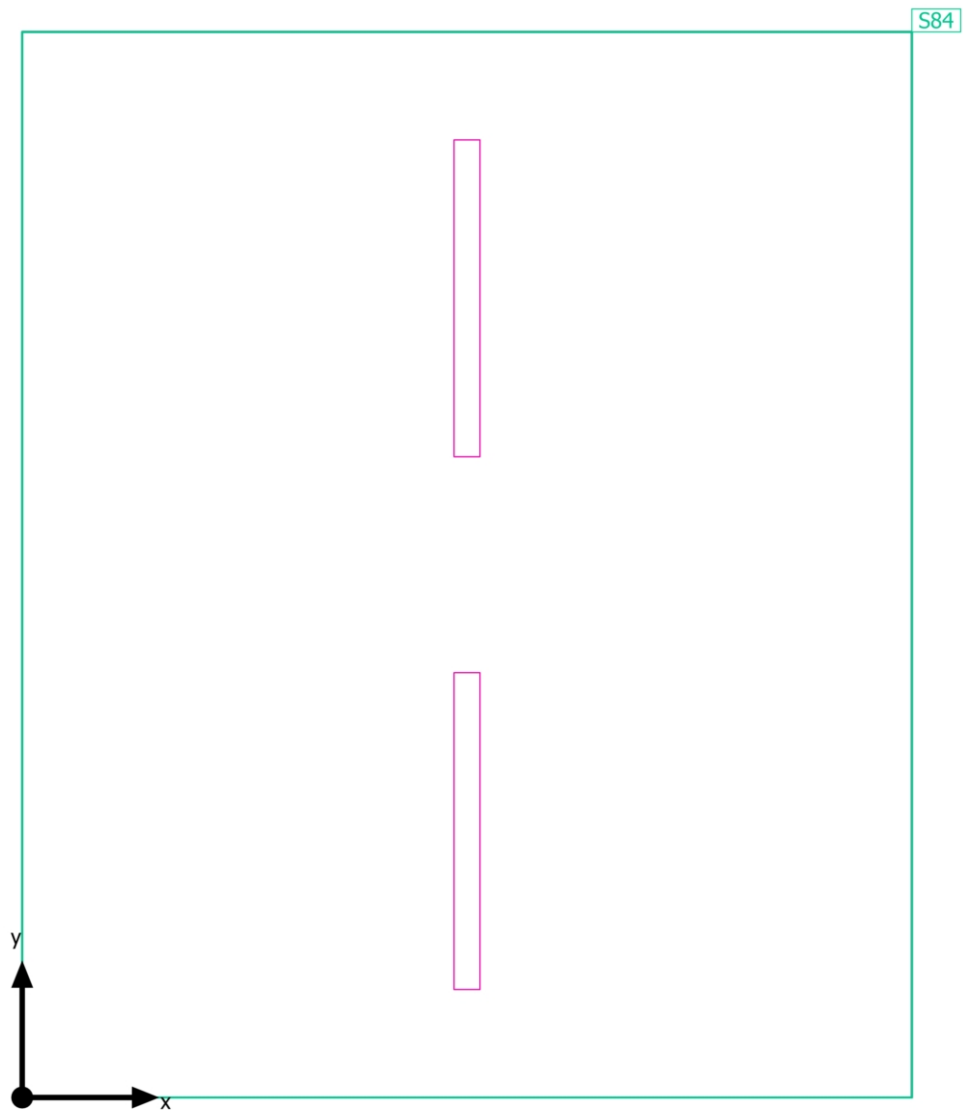


Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

2 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.545 m / 2.775 m / 3.120 m	1.545 m	2.775 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 1.850 m	1.545 m	0.925 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 3.090 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Tuševi
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Tuševi) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	240 lx (≥ 200 lx) ✓	154 lx	319 lx	0.64	0.48	S84

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Summary

Results

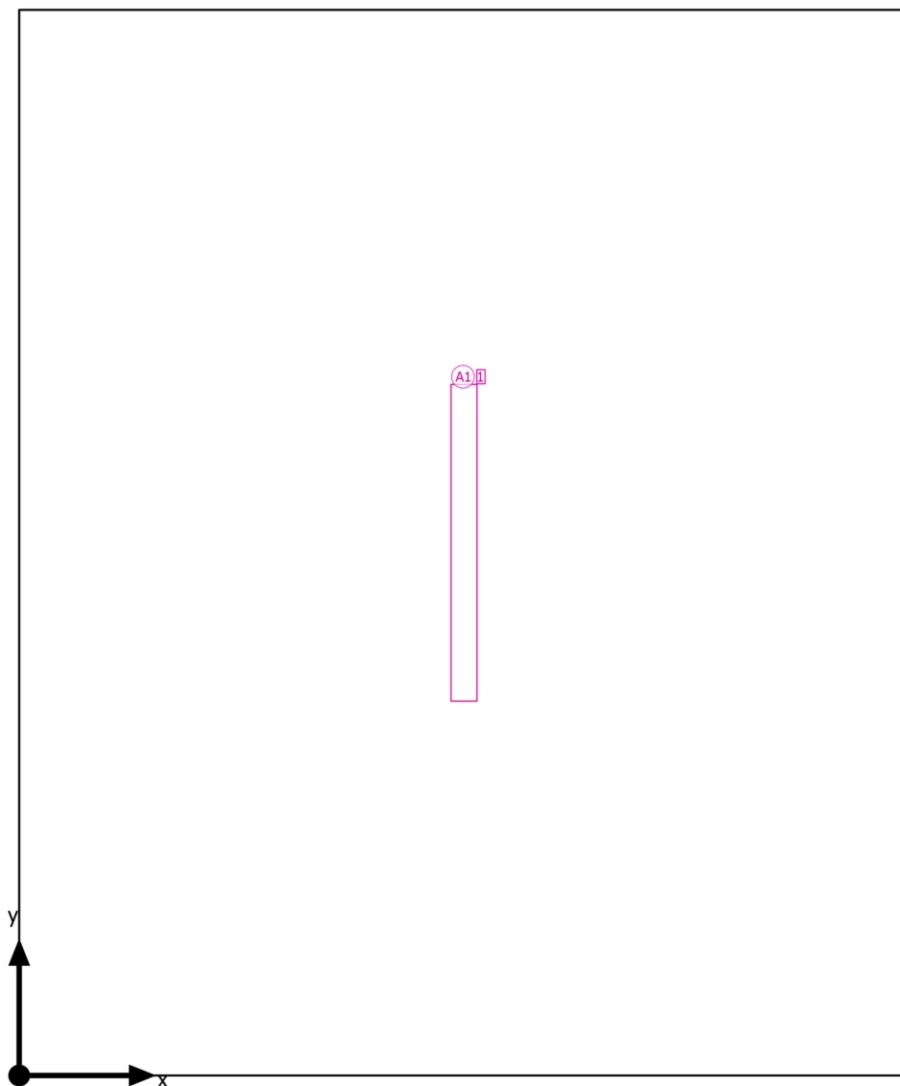
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	221 lx	≥ 200 lx	✓	S94
	g_1	0.55	-	-	S94
Consumption values	Consumption	34 kWh/a	max. 450 kWh/a	✓	
Lighting power density	Room	3.65 W/m ²	-	-	
		1.65 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

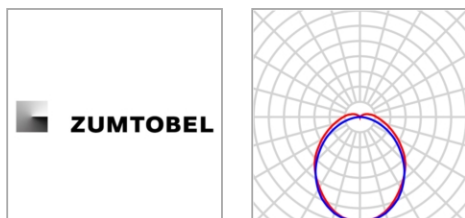
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Luminaire layout plan



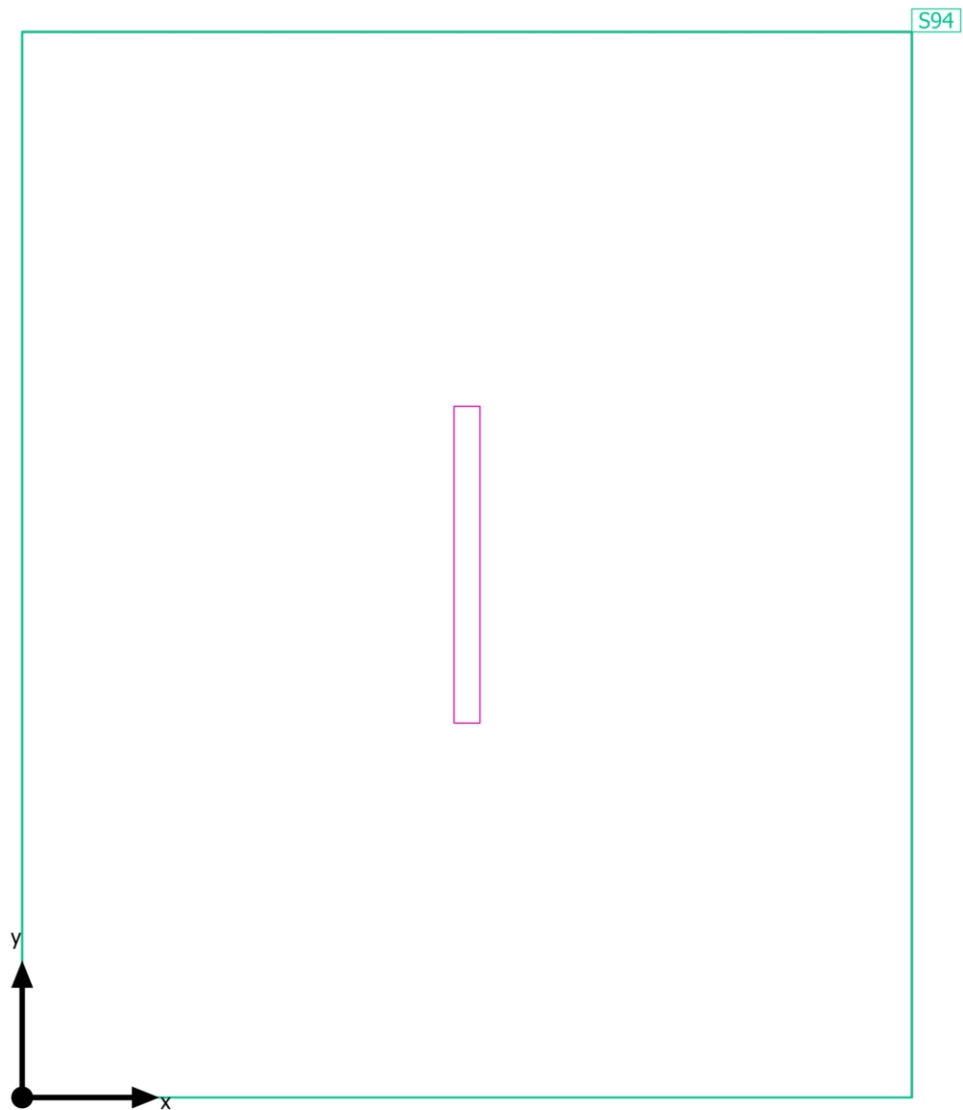
Manufacturer	ZUMTOBEL
Article No.	96630755 (STD - standard)
Article name	AQFPRO S LED5200-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED5200-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.545 m / 1.850 m / 3.120 m	1.545 m	1.850 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 3.700 m				
Y-direction	1 pcs., Centre - centre, 3.090 m				
Arrangement	A1				

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Calculation objects



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Calculation objects

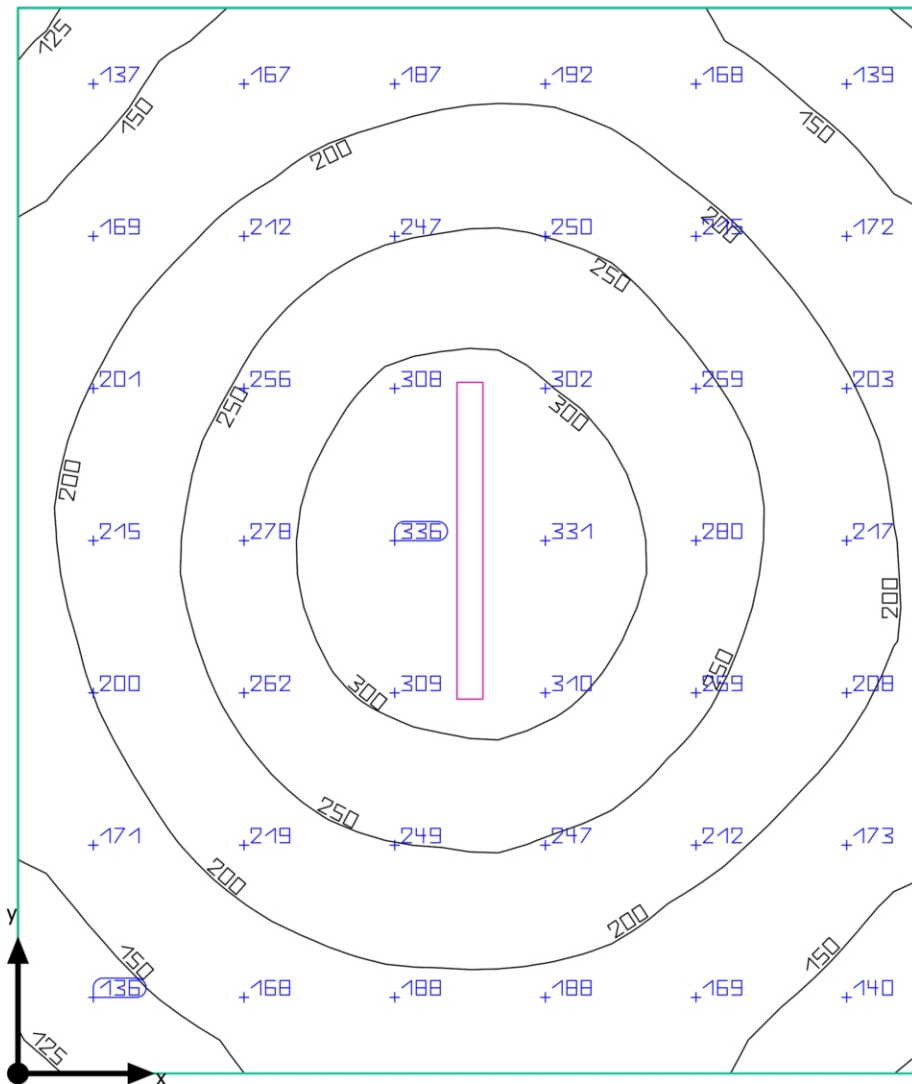
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Tuševi) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	221 lx (≥ 200 lx) ✓	121 lx	345 lx	0.55	0.35	S94

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Summary



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	220 lx	≥ 200 lx	✓	S104
	g_1	0.56	-	-	S104
Consumption values	Consumption	34 kWh/a	max. 450 kWh/a	✓	
Lighting power density	Room	3.59 W/m ²	-	-	
		1.63 W/m ² /100 lx	-	-	

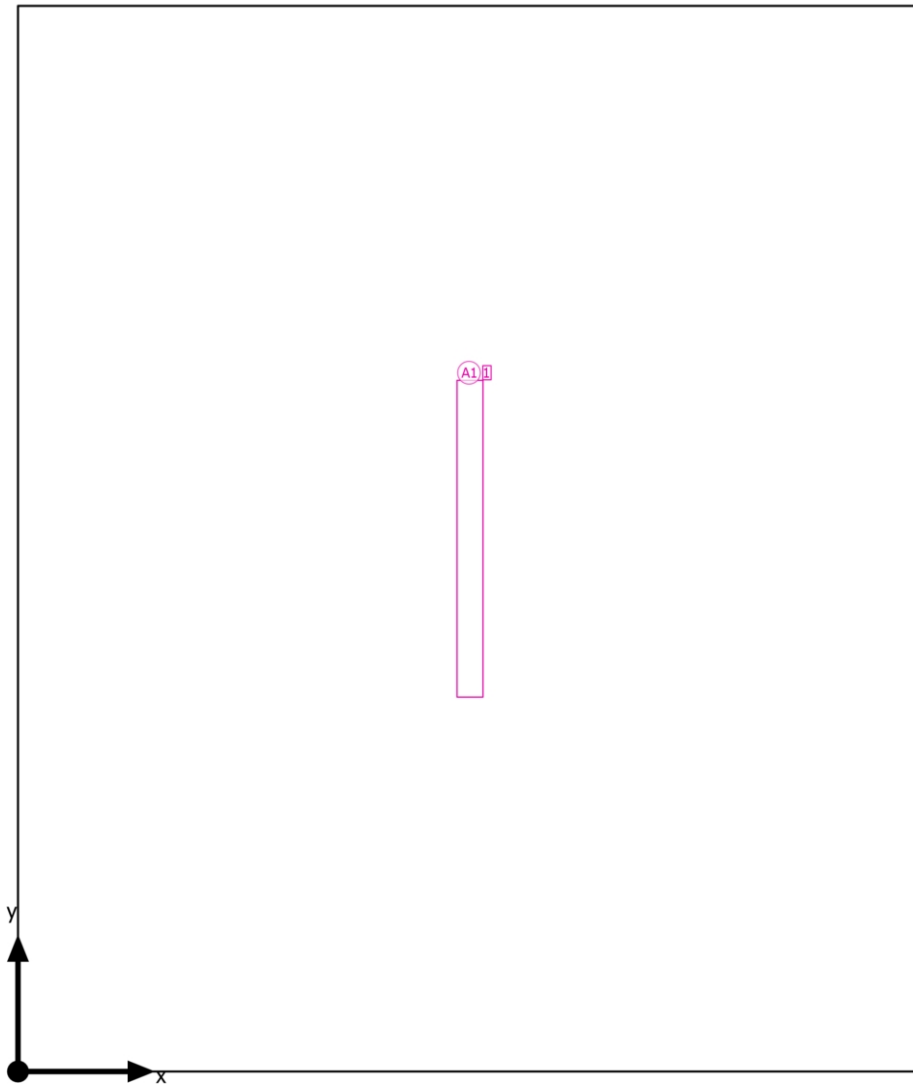
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630755 (STD - standard)	AQFPRO S LED5200-840 PC MB HF	41.7 W	5370 lm	128.8 lm/W

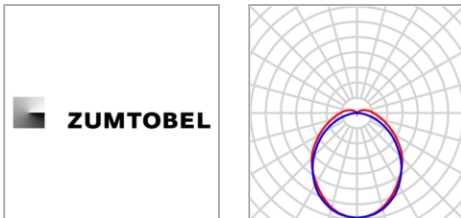
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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Luminaire layout plan



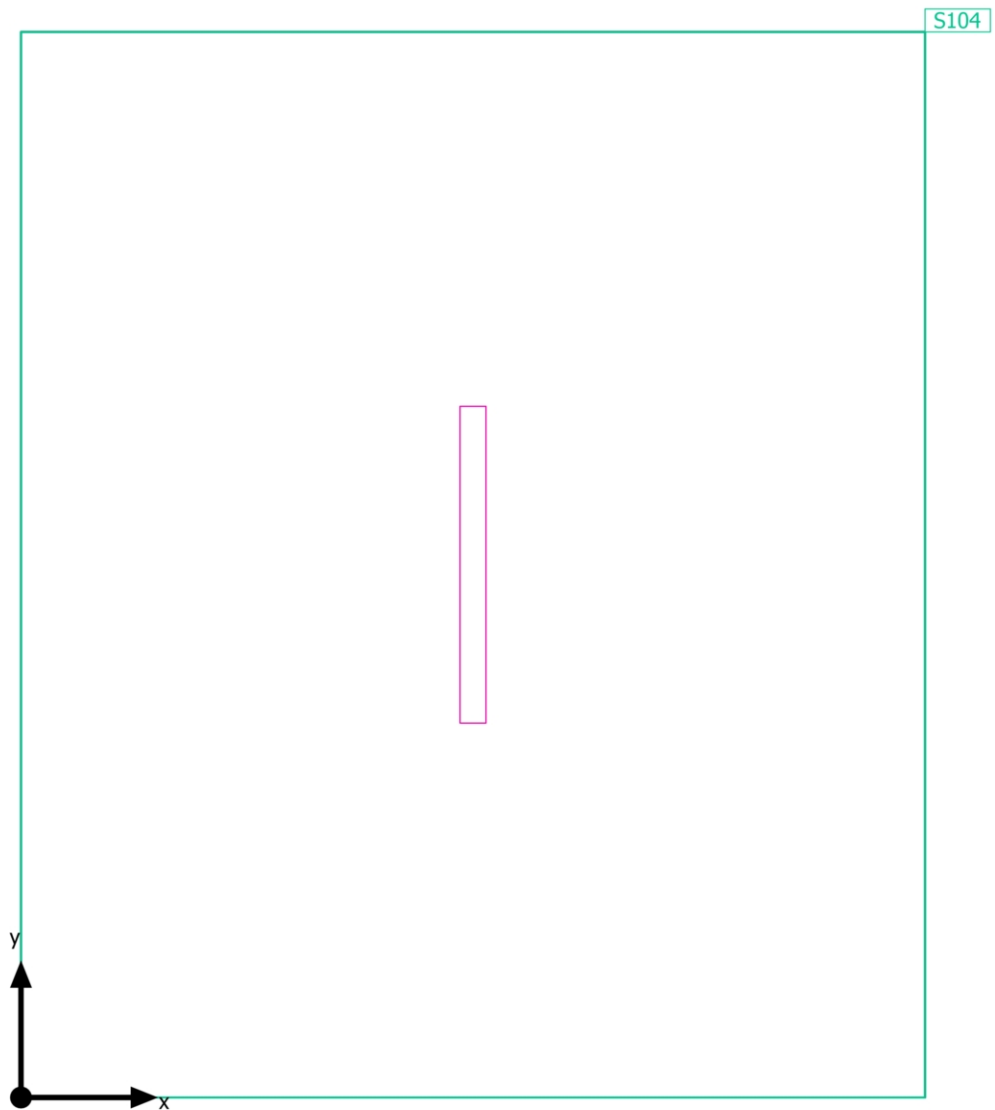
Manufacturer	ZUMTOBEL
Article No.	96630755 (STD - standard)
Article name	AQFPRO S LED5200-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED5200-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.570 m / 1.850 m / 3.120 m	1.570 m	1.850 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 3.700 m				
Y-direction	1 pcs., Centre - centre, 3.140 m				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Calculation objects

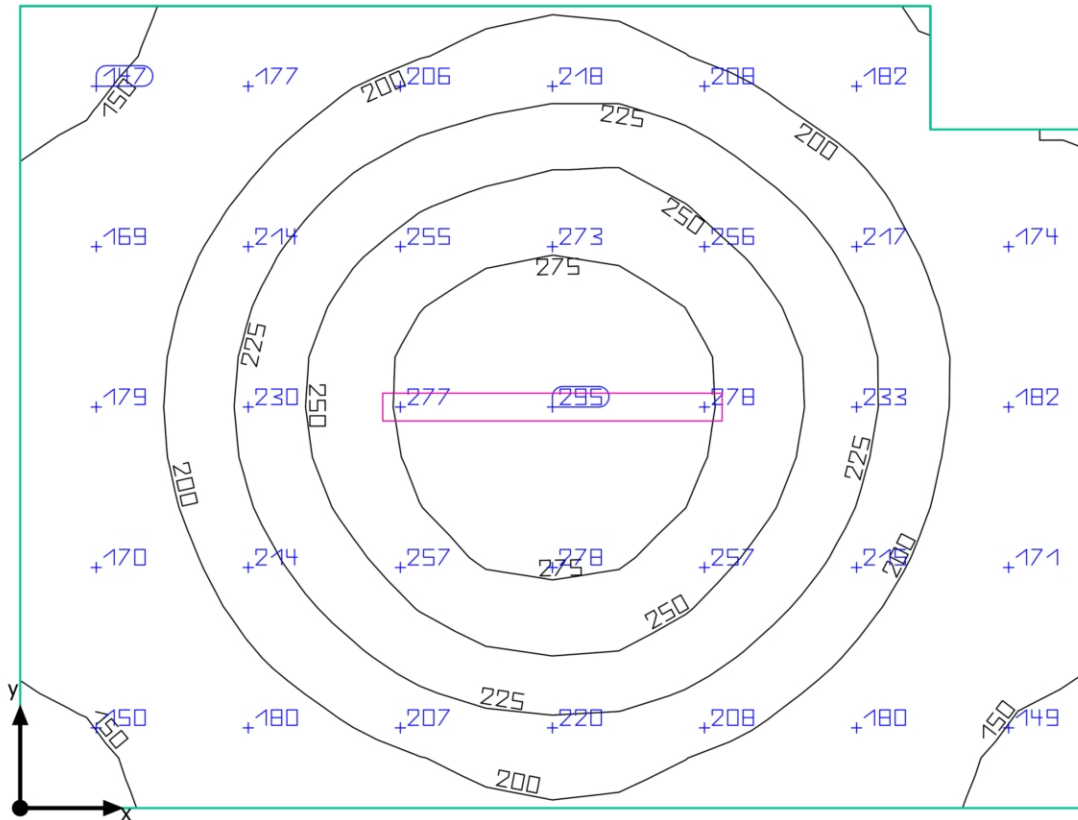
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Tuševi) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	220 lx (≥ 200 lx) ✓	123 lx	342 lx	0.56	0.36	S104

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Summary



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	212 lx	≥ 100 lx	✓	S108
	g_1	0.65	-	-	S108
Consumption values	Consumption	68 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	4.01 W/m ²	-	-	
		1.89 W/m ² /100 lx	-	-	

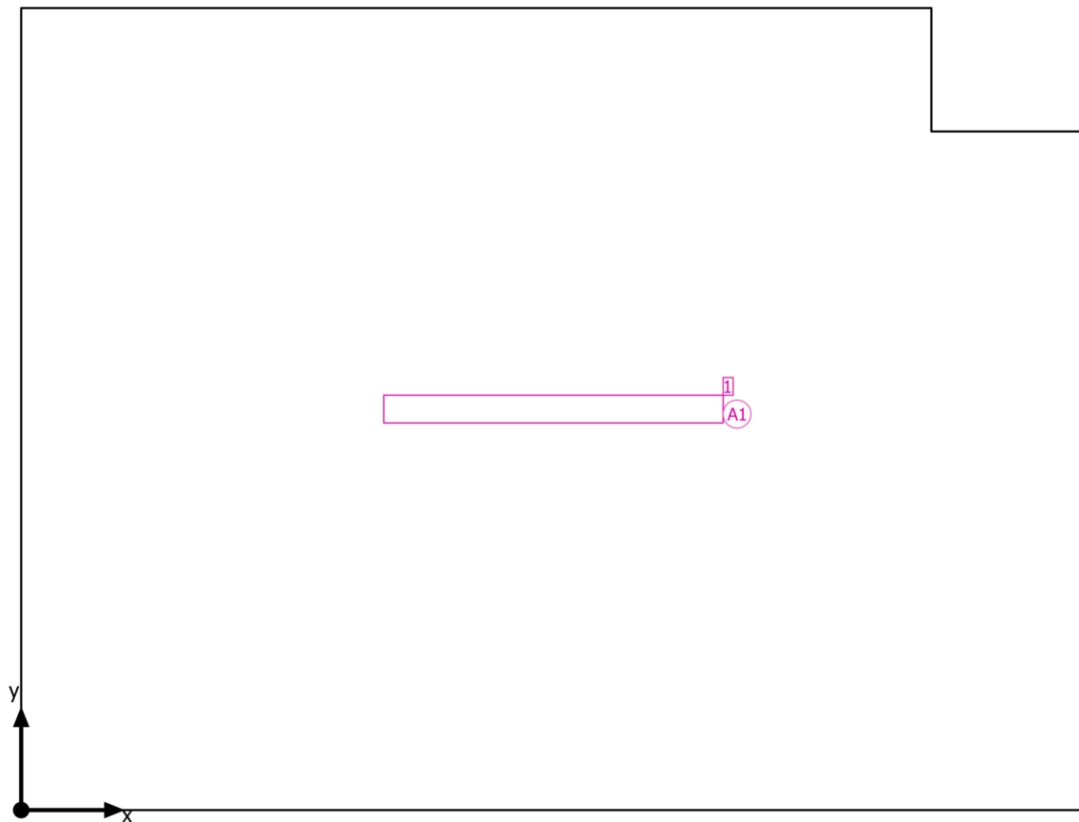
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

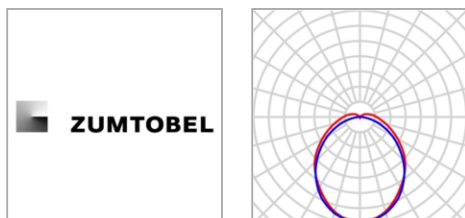
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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Luminaire layout plan



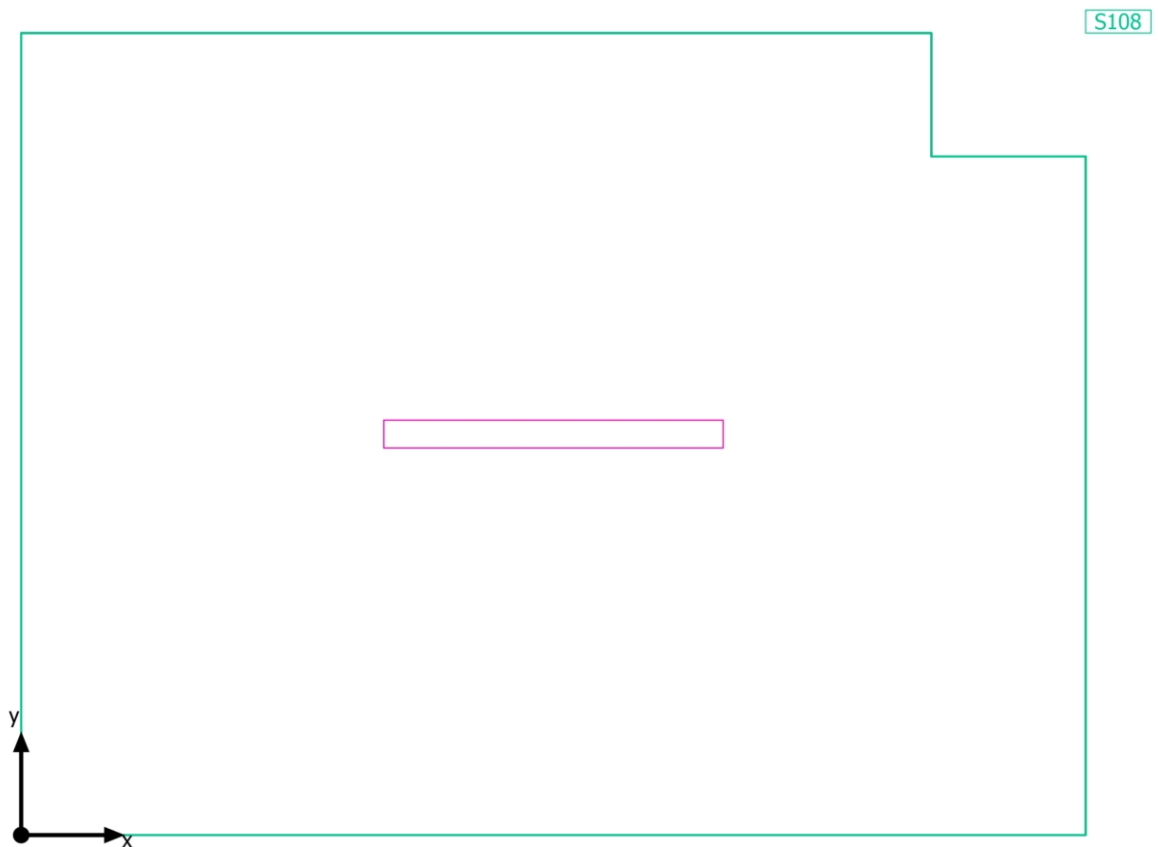
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.725 m / 1.300 m / 3.120 m	1.725 m	1.300 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 3.450 m				
Y-direction	1 pcs., Centre - centre, 2.600 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Tuševi

Calculation objects

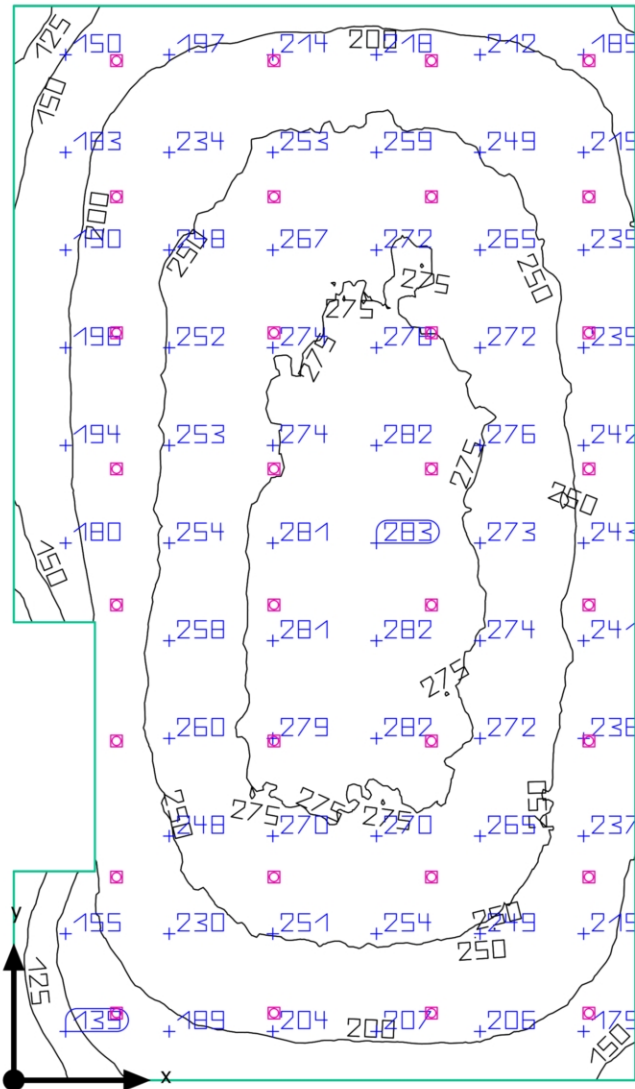
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Tuševi) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	212 lx (≥ 100 lx) ✓	138 lx	295 lx	0.65	0.47	S108

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · Prizemlje · Ulaz

Summary



Sportska dvorana Borovo naselje · Prizemlje · Ulaz

Summary

Results

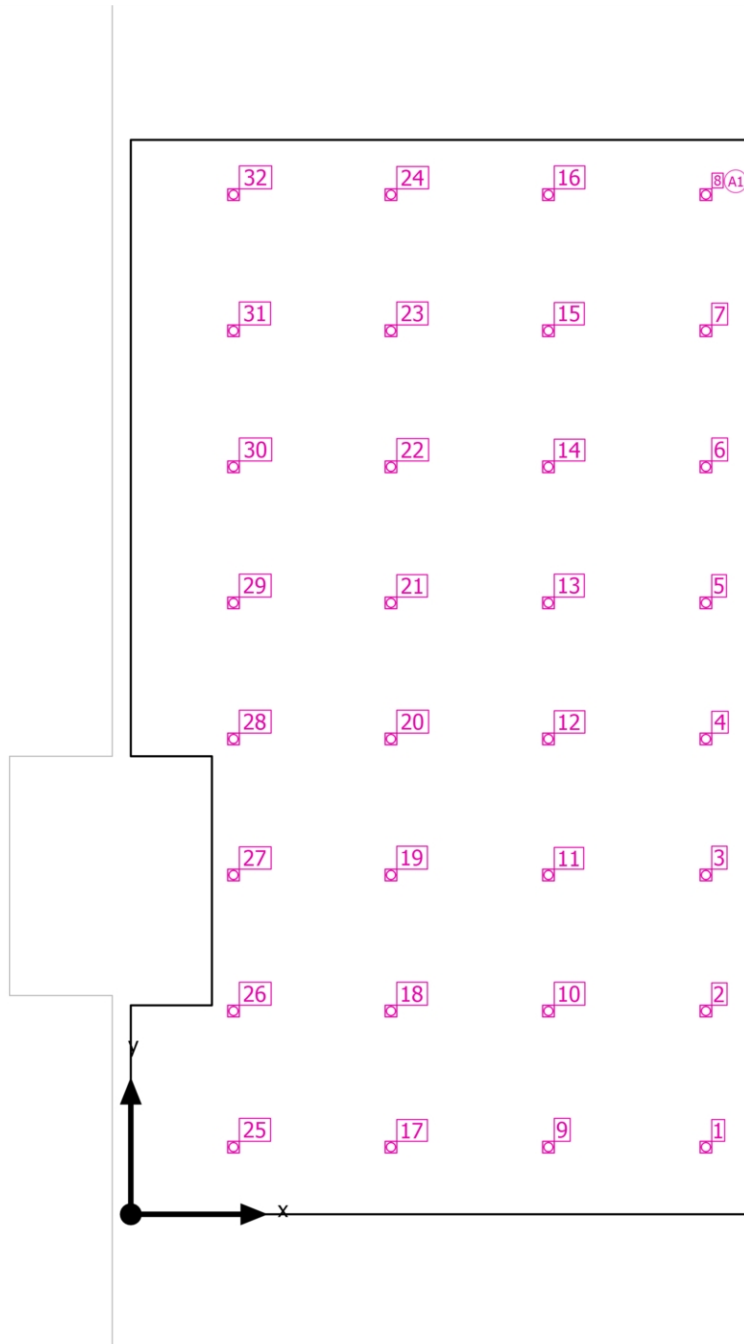
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	236 lx	≥ 200 lx	✓	S2
	g_1	0.43	-	-	S2
Consumption values	Consumption	920 kWh/a	max. 4850 kWh/a	✓	
Lighting power density	Room	3.48 W/m ²	-	-	
		1.47 W/m ² /100 lx	-	-	

Utilisation profile: Educational premises - Educational buildings, Entrance halls

Luminaire list

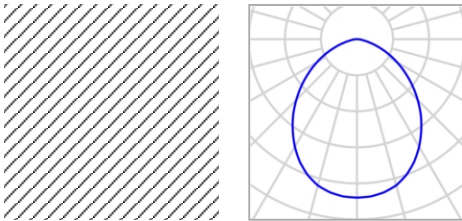
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
32	THORNeco	96632755 (STD - standard)	AMY VARIO 150 LED DL 1500 830/35/40	15.0 W	1500 lm	100.0 lm/W

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Luminaire layout plan



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Luminaire layout plan



Manufacturer	THORNeco
Article No.	96632755 (STD - standard)
Article name	AMY VARIO 150 LED DL 1500 830/35/40

32 x THORNeco AMY VARIO 150 LED DL 1500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	8.400 m / 0.980 m / 3.120 m	8.400 m	0.980 m	3.120 m	1
X-direction	8 pcs., Centre - centre, Distances not equal	8.400 m	2.967 m	3.120 m	2
		8.400 m	4.954 m	3.120 m	3
Y-direction	4 pcs., Centre - centre, Distances not equal	8.400 m	6.941 m	3.120 m	4
		8.400 m	8.927 m	3.120 m	5
Arrangement	A1	8.400 m	10.914 m	3.120 m	6
		8.400 m	12.901 m	3.120 m	7
		8.400 m	14.888 m	3.120 m	8
		6.100 m	0.980 m	3.120 m	9
		6.100 m	2.967 m	3.120 m	10
		6.100 m	4.954 m	3.120 m	11
		6.100 m	6.941 m	3.120 m	12
		6.100 m	8.927 m	3.120 m	13
		6.100 m	10.914 m	3.120 m	14

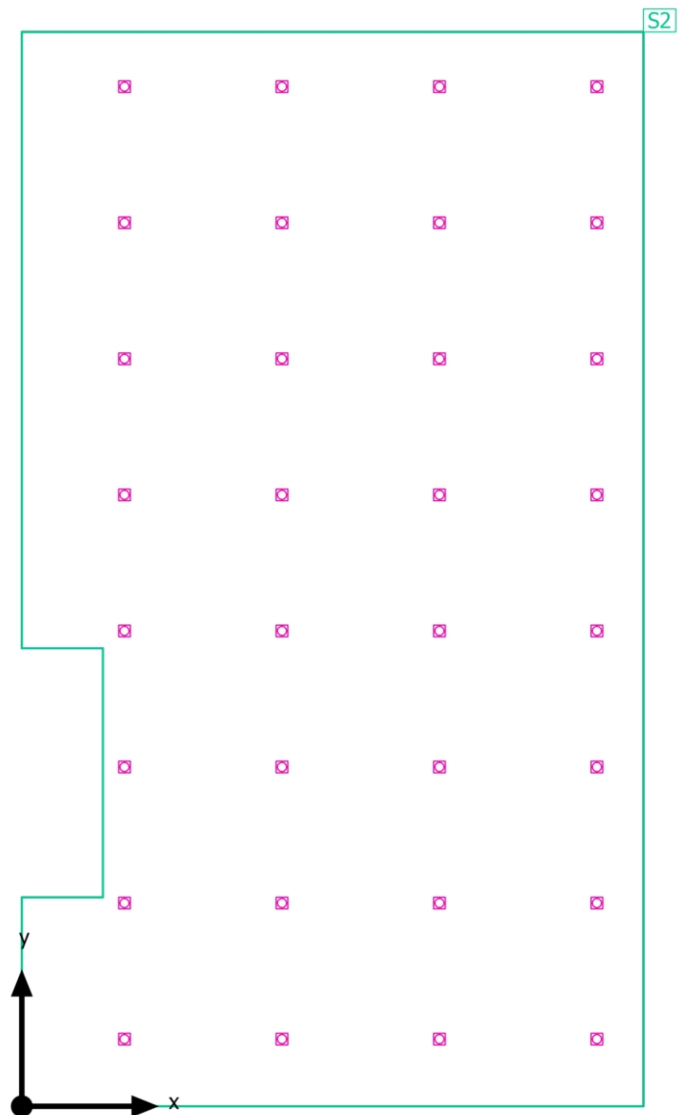
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Luminaire layout plan

X	Y	Mounting height	Luminaire
6.100 m	12.901 m	3.120 m	15
6.100 m	14.888 m	3.120 m	16
3.800 m	0.980 m	3.120 m	17
3.800 m	2.967 m	3.120 m	18
3.800 m	4.954 m	3.120 m	19
3.800 m	6.941 m	3.120 m	20
3.800 m	8.927 m	3.120 m	21
3.800 m	10.914 m	3.120 m	22
3.800 m	12.901 m	3.120 m	23
3.800 m	14.888 m	3.120 m	24
1.500 m	0.980 m	3.120 m	25
1.500 m	2.967 m	3.120 m	26
1.500 m	4.954 m	3.120 m	27
1.500 m	6.941 m	3.120 m	28
1.500 m	8.927 m	3.120 m	29
1.500 m	10.914 m	3.120 m	30
1.500 m	12.901 m	3.120 m	31
1.500 m	14.888 m	3.120 m	32

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Ulaz

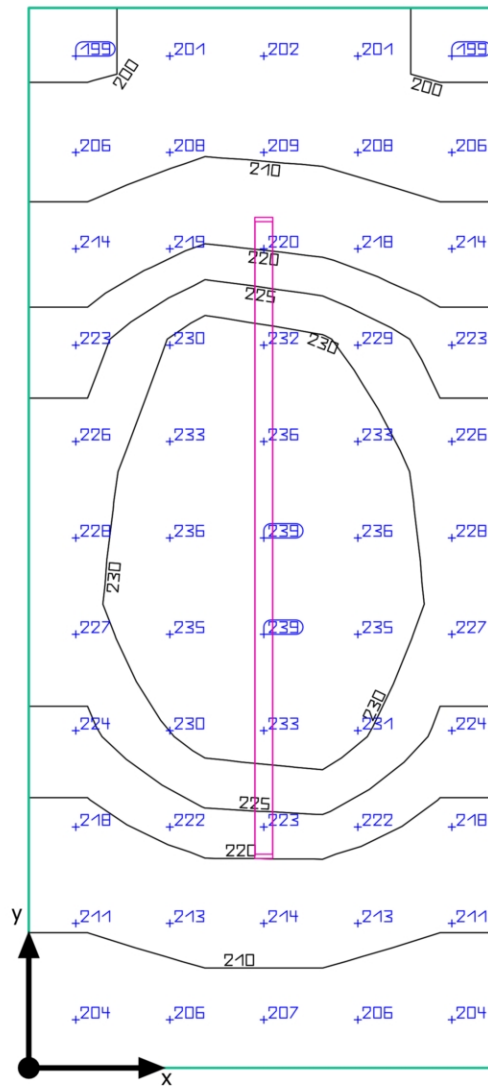
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Ulaz) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	236 lx (≥ 200 lx) ✓	101 lx	286 lx	0.43	0.35	S2

Utilisation profile: Educational premises - Educational buildings, Entrance halls

Sportska dvorana Borovo naselje · Prizemlje · Ulaz
Summary



Sportska dvorana Borovo naselje · Prizemlje · Ulaz

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	220 lx	≥ 100 lx	✓	S25
	g_1	0.90	-	-	S25
Consumption values	Consumption	55 kWh/a	max. 100 kWh/a	✓	
Lighting power density	Room	18.33 W/m ²	-	-	
		8.34 W/m ² /100 lx	-	-	

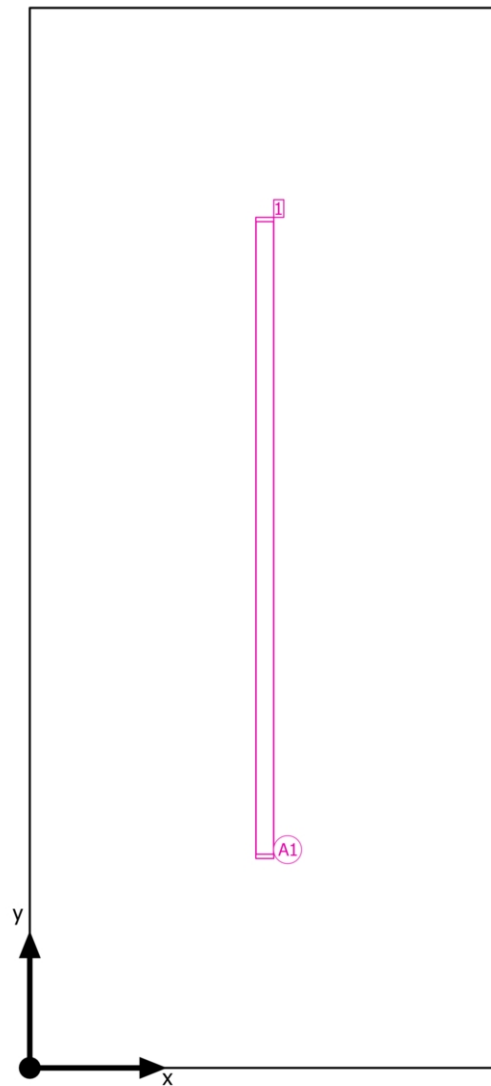
Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

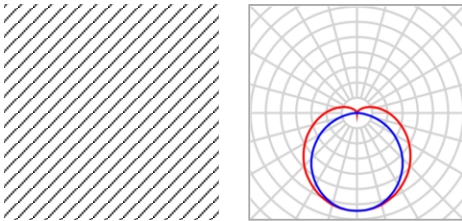
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96666099 (STD - standard)	EMMA LED 1500 6000 840	50.0 W	6002 lm	120.0 lm/W

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Luminaire layout plan



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Luminaire layout plan

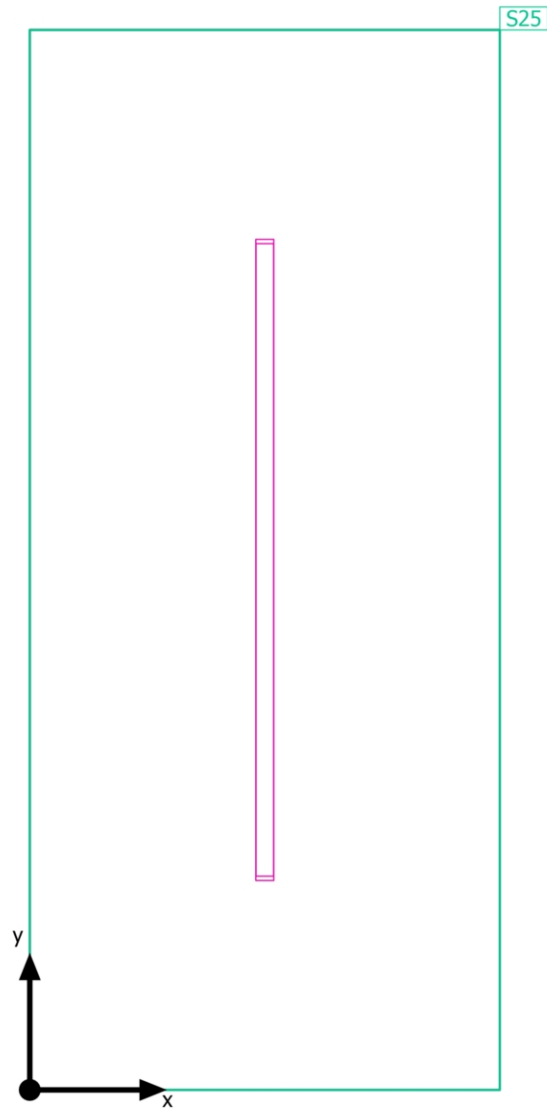


Manufacturer	THORNeco
Article No.	96666099 (STD - standard)
Article name	EMMA LED 1500 6000 840

1 x THORNeco EMMA LED 1500 6000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.550 m / 1.240 m / 3.120 m	0.550 m	1.240 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.480 m				
Y-direction	1 pcs., Centre - centre, 1.100 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Ulaz
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Ulaz

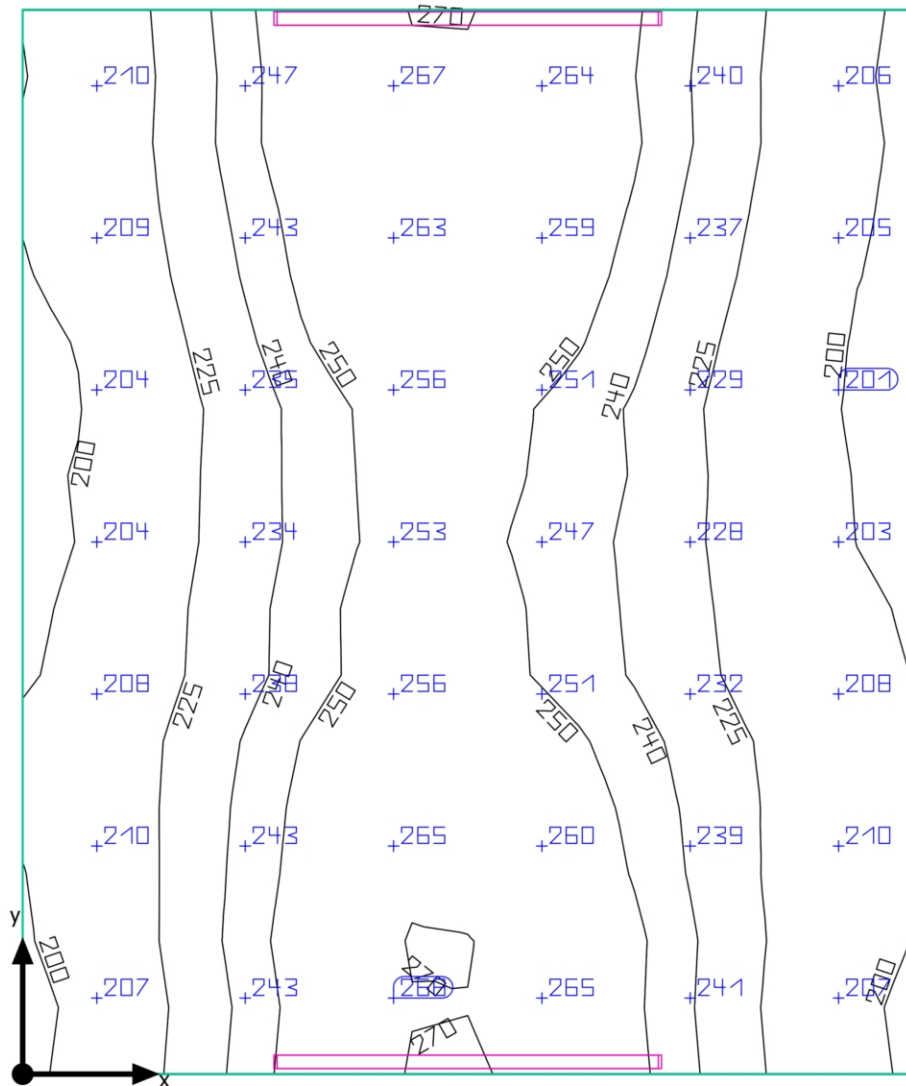
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Ulaz) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	220 lx (≥ 100 lx) ✓	199 lx	238 lx	0.90	0.84	S25

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · Prizemlje · Ulaz
Summary



Sportska dvorana Borovo naselje · Prizemlje · Ulaz

Summary

Results

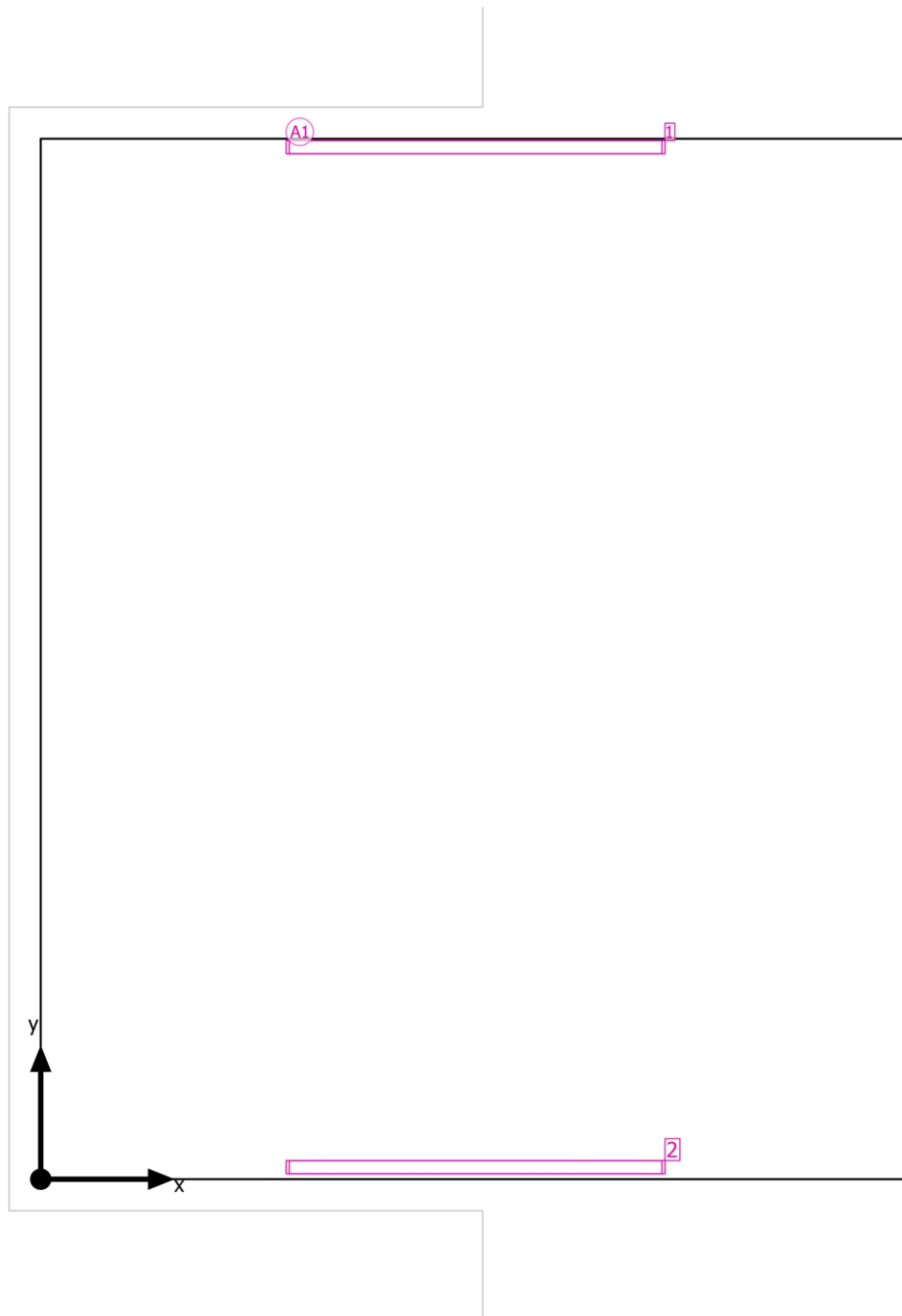
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	235 lx	≥ 200 lx	✓	S147
	g_1	0.83	-	-	S147
Consumption values	Consumption	130 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	7.71 W/m ²	-	-	
		3.29 W/m ² /100 lx	-	-	

Utilisation profile: Educational premises - Educational buildings, Entrance halls

Luminaire list

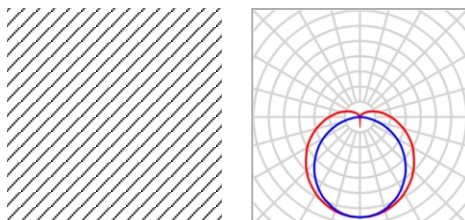
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

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Luminaire layout plan



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Luminaire layout plan



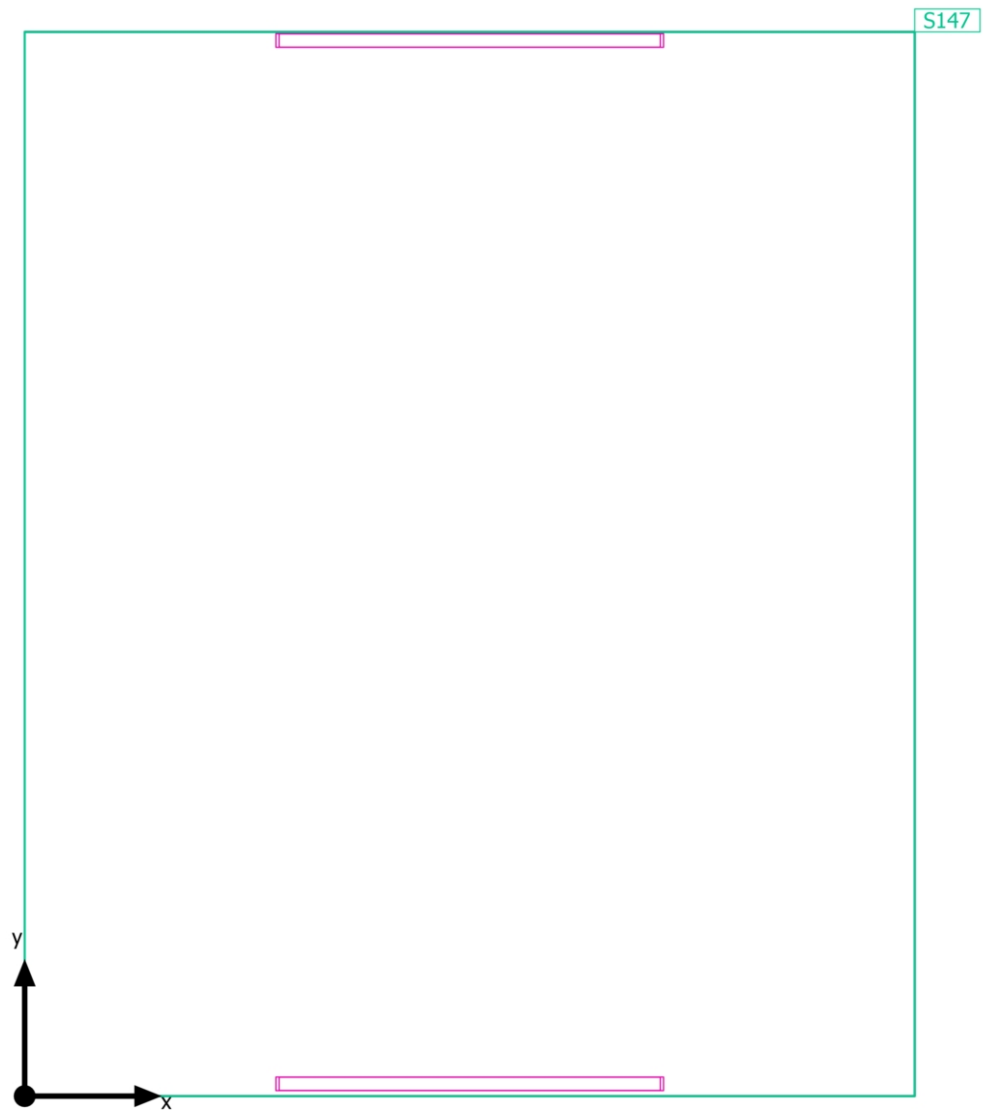
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

2 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.378 m / 3.267 m / 3.120 m	1.378 m	3.267 m	3.120 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.378 m	0.038 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Ulaz

Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Ulaz

Calculation objects

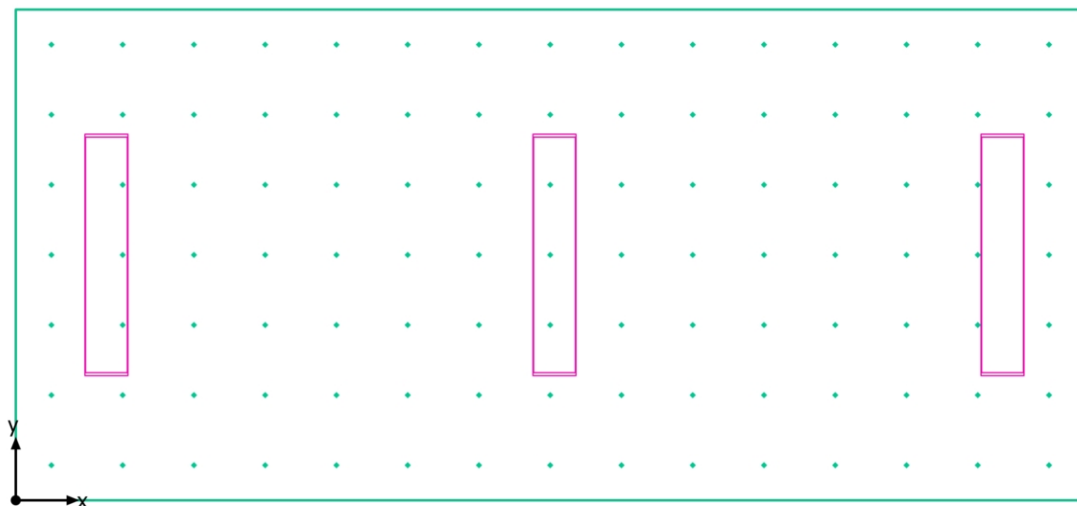
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Ulaz) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	235 lx (≥ 200 lx) ✓	195 lx	271 lx	0.83	0.72	S147

Utilisation profile: Educational premises - Educational buildings, Entrance halls

Sportska dvorana Borovo naselje · Prizemlje · Ured

Summary



Sportska dvorana Borovo naselje · Prizemlje · Ured

Summary

Results

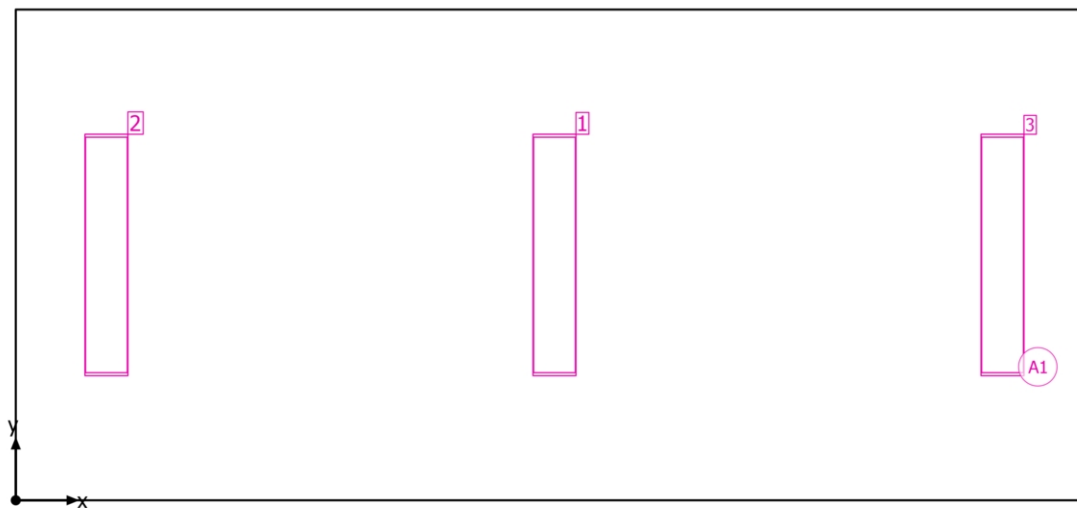
	Symbol	Calculated	Target	Check	Index
Consumption values	Consumption	220 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	7.39 W/m ²	-	-	

Utilisation profile: Offices, Filing, copying, etc.

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	Thorn	96628932 (STD - standard)	COLLEGE LED4200-840 HF L1200	33.0 W	4200 lm	127.3 lm/W

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Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Ured
Luminaire layout plan



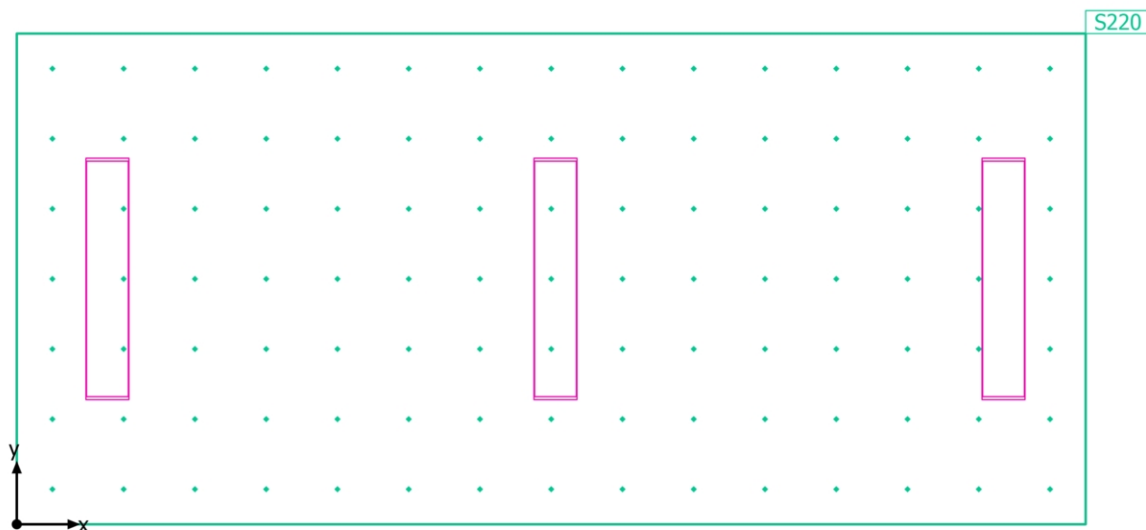
Manufacturer	Thorn
Article No.	96628932 (STD - standard)
Article name	COLLEGE LED4200-840 HF L1200

3 x Thorn Lighting COLLEGE LED4200-840 HF L1200

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.721 m / 1.240 m / 3.120 m	2.721 m	1.240 m	3.120 m	1
X-direction	3 pcs., Centre - centre, Distances not equal	0.458 m	1.240 m	3.120 m	2
		4.985 m	1.240 m	3.120 m	3
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

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Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Ured) Perpendicular illuminance (adaptive) Height: 0.800 m	406 lx	298 lx	489 lx	0.73	0.61	S220

Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

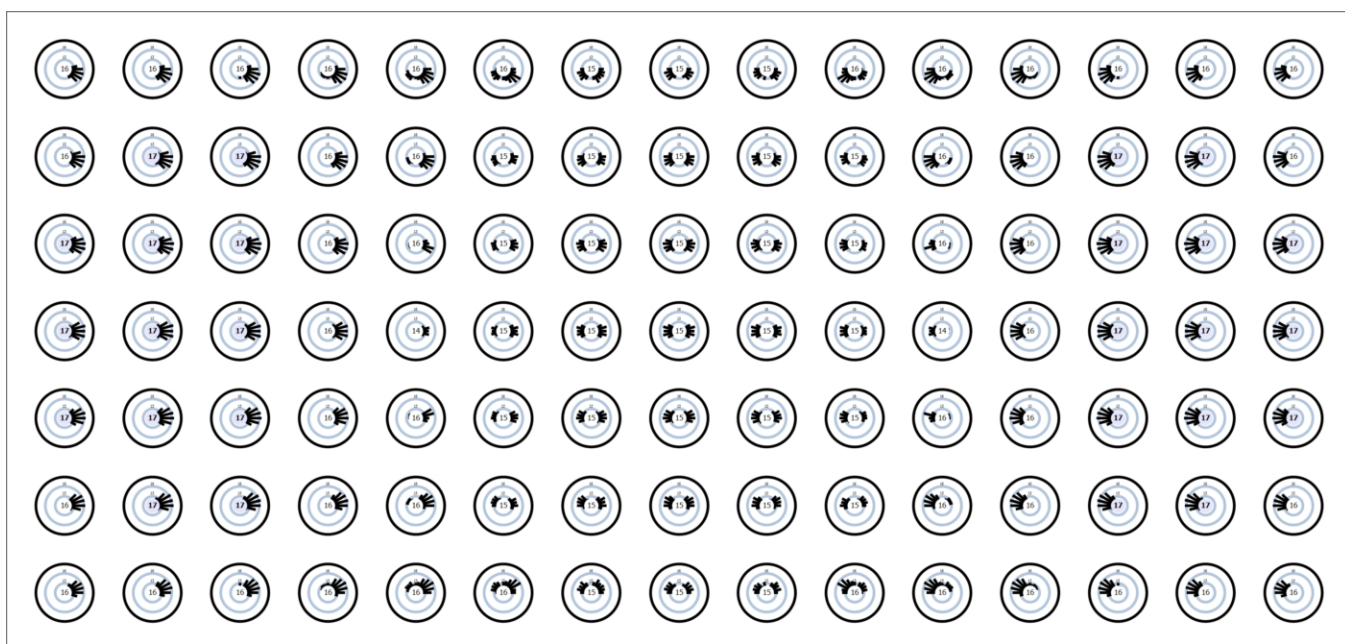
Radna površina (Ured) (UGR)

Strongest glare at	0°
max	16.7
Target	≤19.0
Viewing sector	0° - 360°
Step width	15°
Height	1.200 m
Index	S220

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Calculation objects

Radna površina (Ured) (UGR)

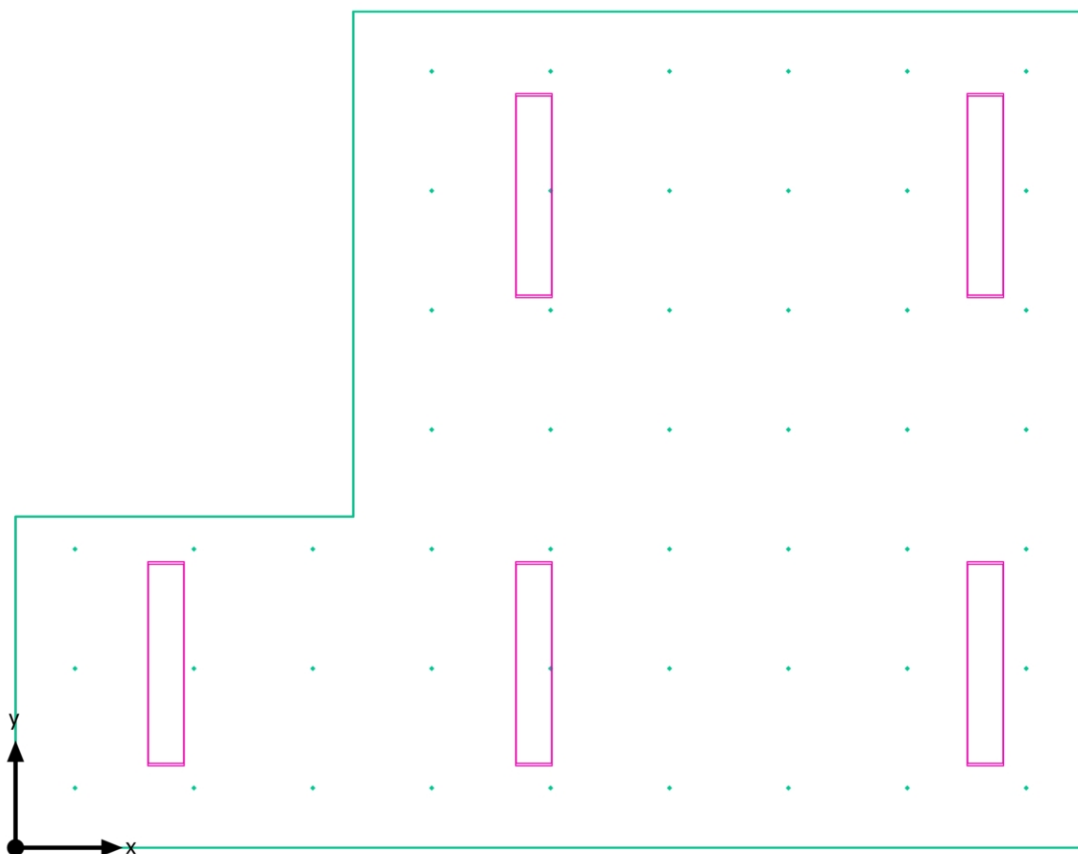


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Calculation objects

Utilisation profile: Offices, Filing, copying, etc.

Sportska dvorana Borovo naselje · Prizemlje · Ured

Summary



Sportska dvorana Borovo naselje · Prizemlje · Ured

Summary

Results

	Symbol	Calculated	Target	Check	Index
Consumption values	Consumption	370 kWh/a	max. 950 kWh/a	✓	
Lighting power density	Room	6.37 W/m ²	-	-	

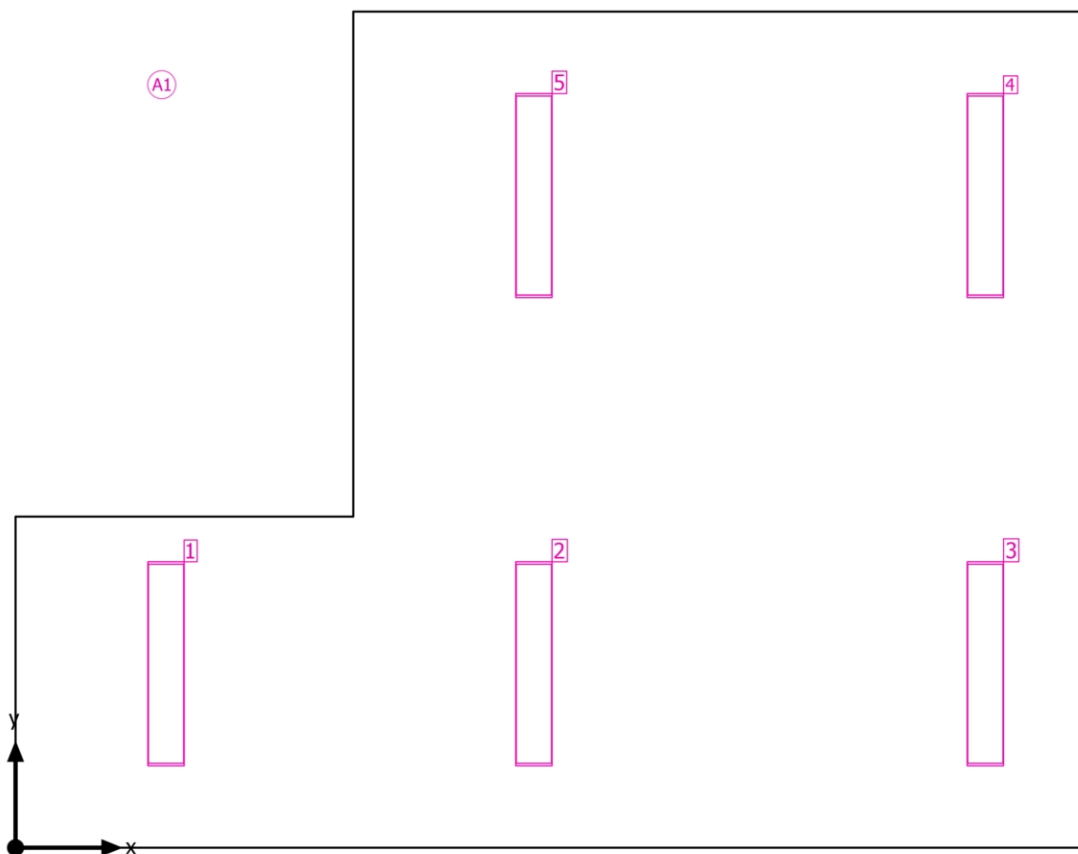
Utilisation profile: Offices, Filing, copying, etc.

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
5	Thorn	96628932 (STD - standard)	COLLEGE LED4200-840 HF L1200	33.0 W	4200 lm	127.3 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Ured

Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Ured
Luminaire layout plan

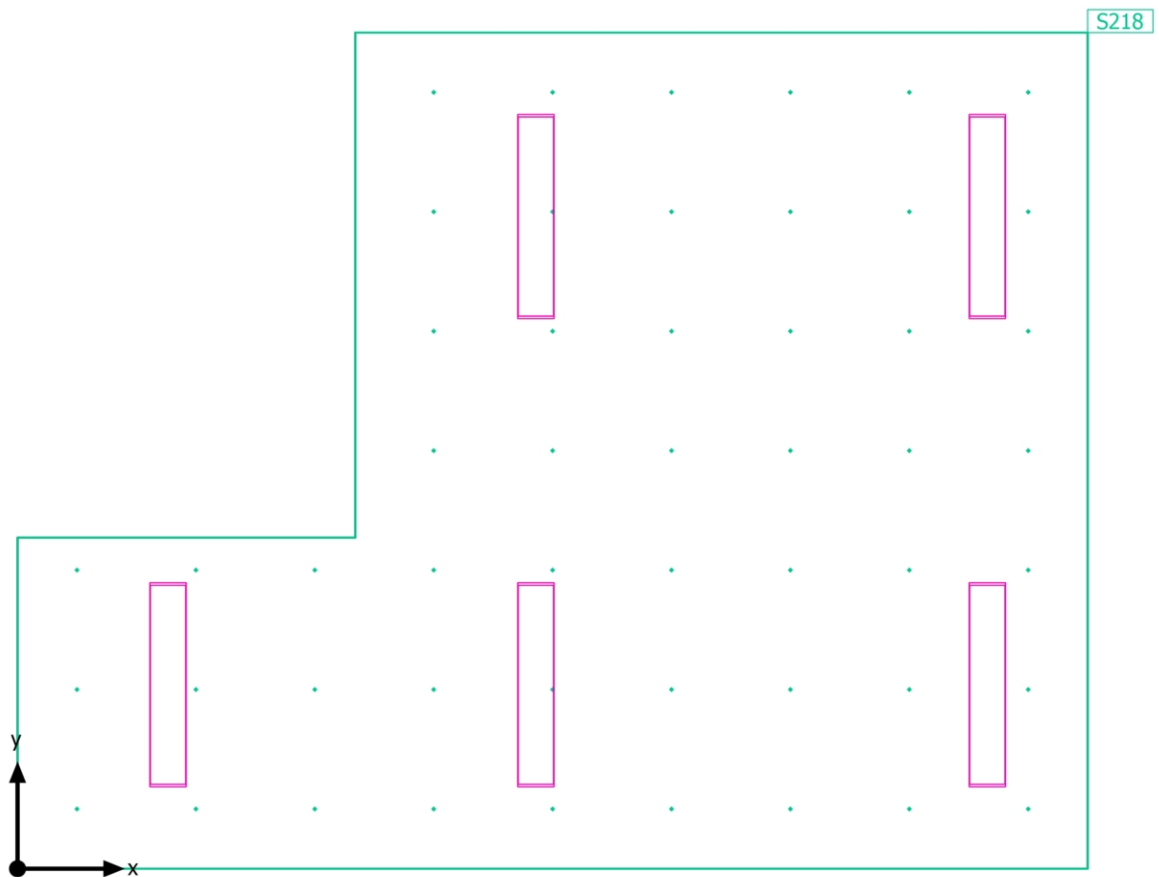


Manufacturer	Thorn
Article No.	96628932 (STD - standard)
Article name	COLLEGE LED4200-840 HF L1200

5 x Thorn Lighting COLLEGE LED4200-840 HF L1200

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.900 m / 1.100 m / 3.120 m	0.900 m	1.100 m	3.120 m	1
X-direction	3 pcs., Centre - centre, Distances not equal	3.100 m	1.100 m	3.120 m	2
		5.800 m	1.100 m	3.120 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	5.800 m	3.900 m	3.120 m	4
		3.100 m	3.900 m	3.120 m	5
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Ured
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Ured) Perpendicular illuminance (adaptive) Height: 0.800 m	438 lx	276 lx	535 lx	0.63	0.52	S218

Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

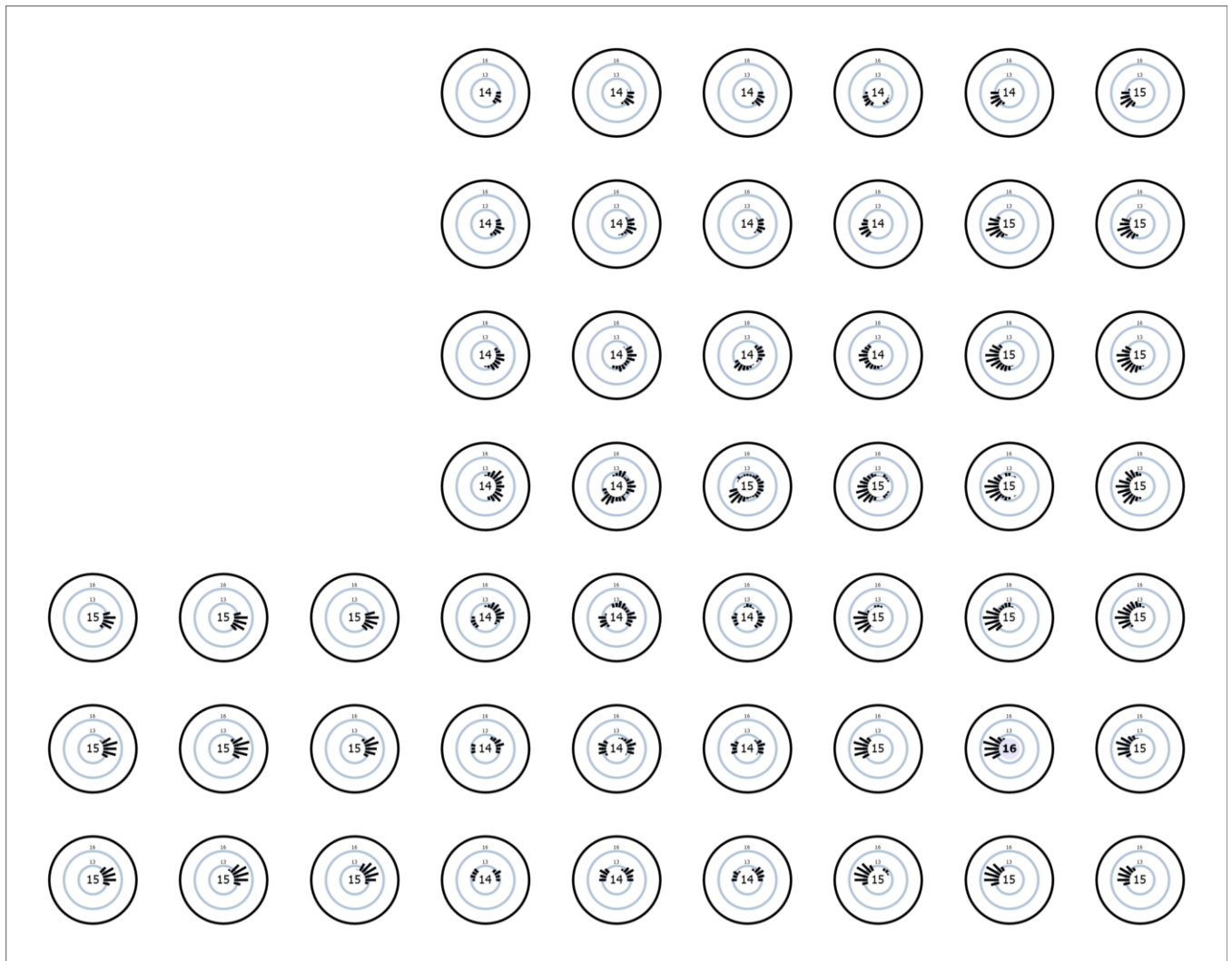
Radna površina (Ured) (UGR)

Strongest glare at	165°
max	15.5
Target	≤19.0
Viewing sector	0° - 360°
Step width	15°
Height	1.200 m
Index	S218

Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

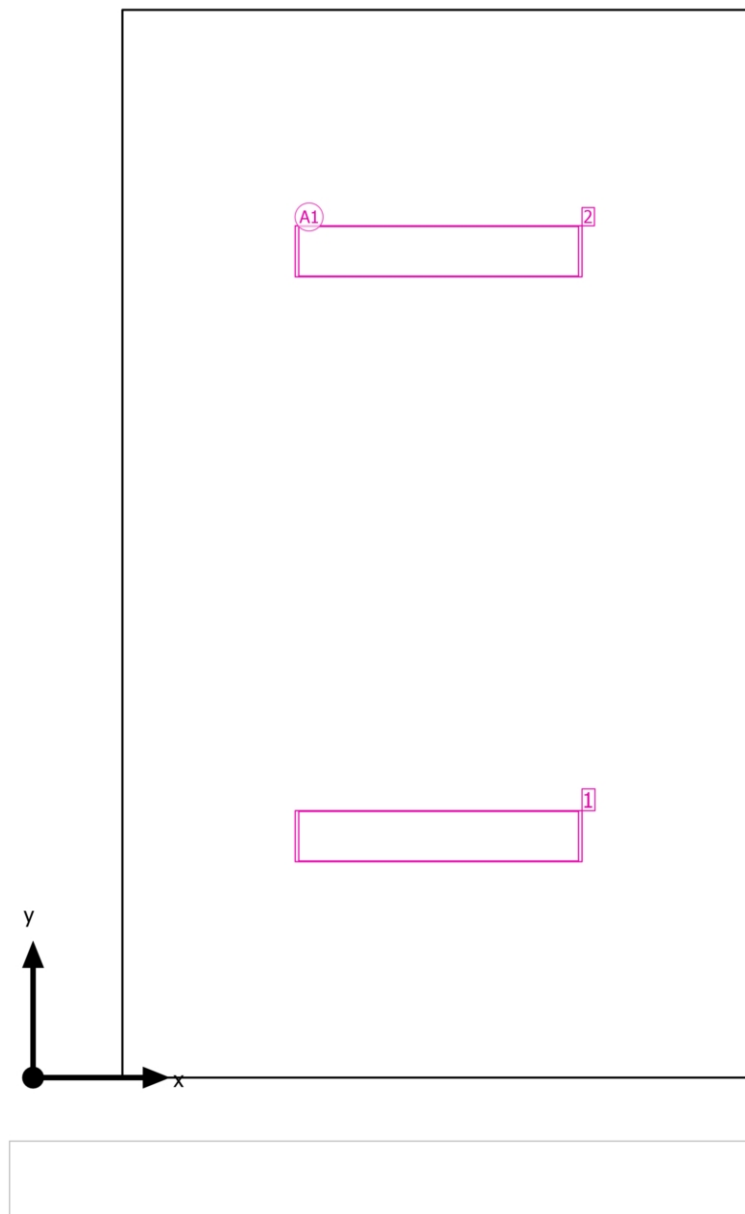
Radna površina (Ured) (UGR)



Sportska dvorana Borovo naselje · Prizemlje · Ured
Calculation objects

Utilisation profile: Offices, Filing, copying, etc.

Sportska dvorana Borovo naselje · Prizemlje · Ured
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Ured
Luminaire layout plan

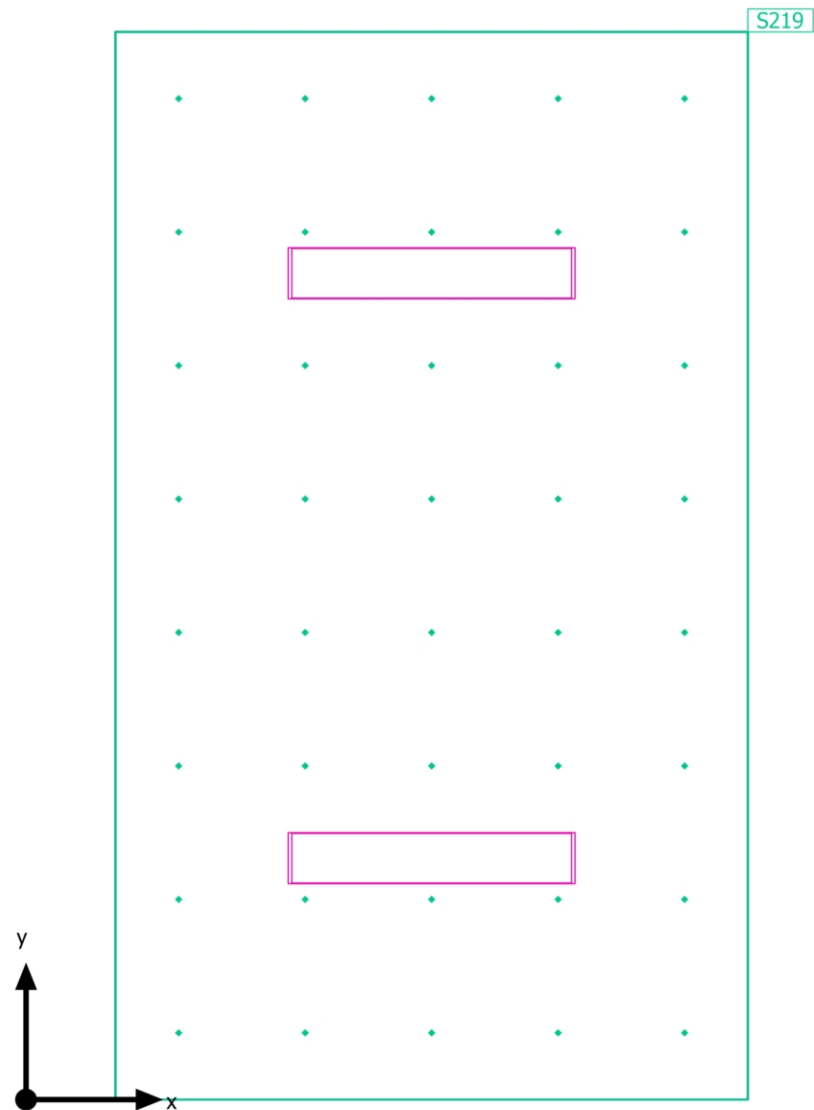


Manufacturer	Thorn
Article No.	96628932 (STD - standard)
Article name	COLLEGE LED4200-840 HF L1200

2 x Thorn Lighting COLLEGE LED4200-840 HF L1200

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.725 m / 1.026 m / 3.120 m	1.725 m	1.026 m	3.120 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.725 m	3.514 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Ured
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Ured) Perpendicular illuminance (adaptive) Height: 0.800 m	336 lx	224 lx	412 lx	0.67	0.54	S219

Sportska dvorana Borovo naselje · Prizemlje · Ured

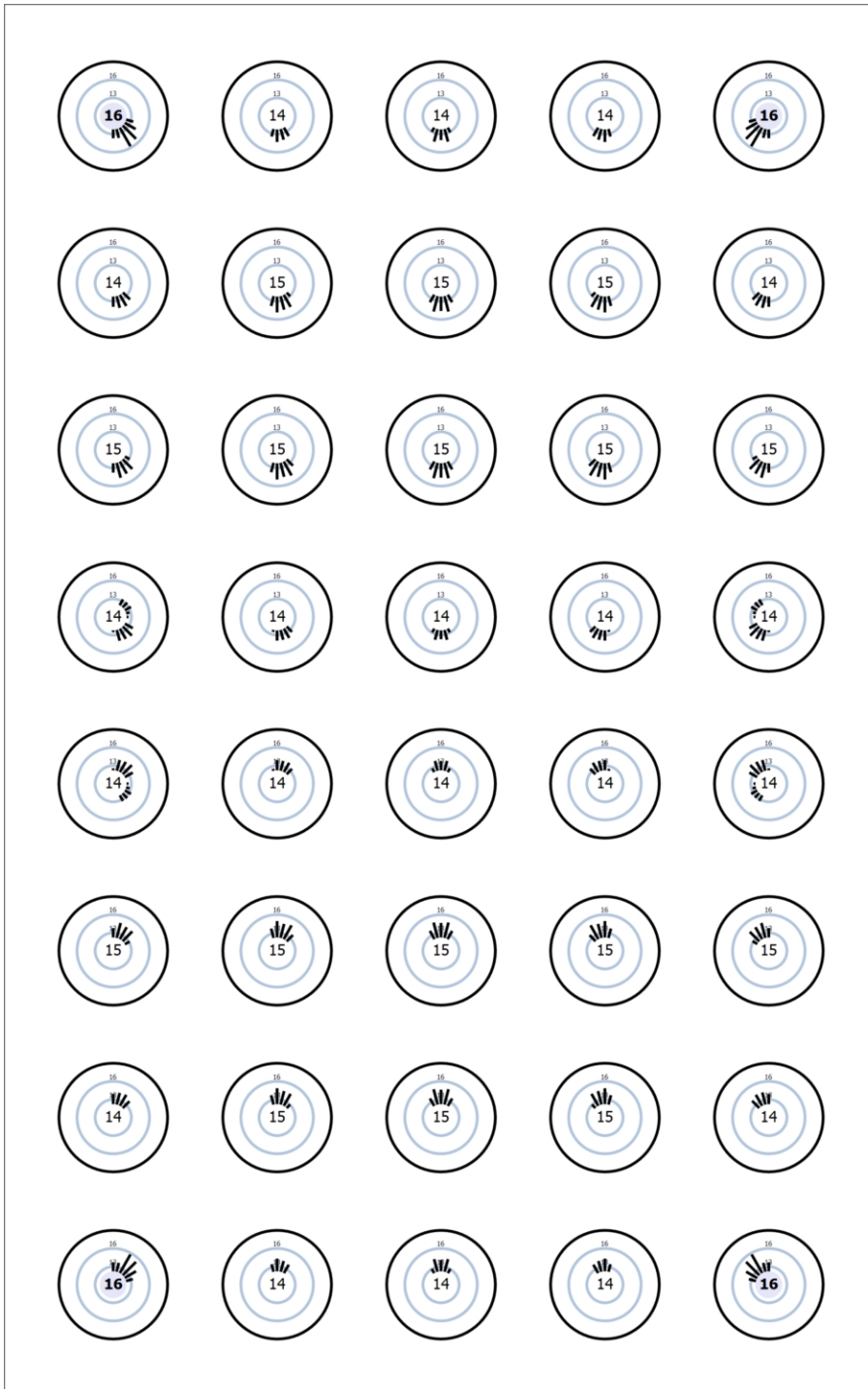
Calculation objects

Radna površina (Ured) (UGR)

Strongest glare at	240°
max	15.8
Target	≤19.0
Viewing sector	0° - 360°
Step width	15°
Height	1.200 m
Index	S219

Sportska dvorana Borovo naselje · Prizemlje · Ured
Calculation objects

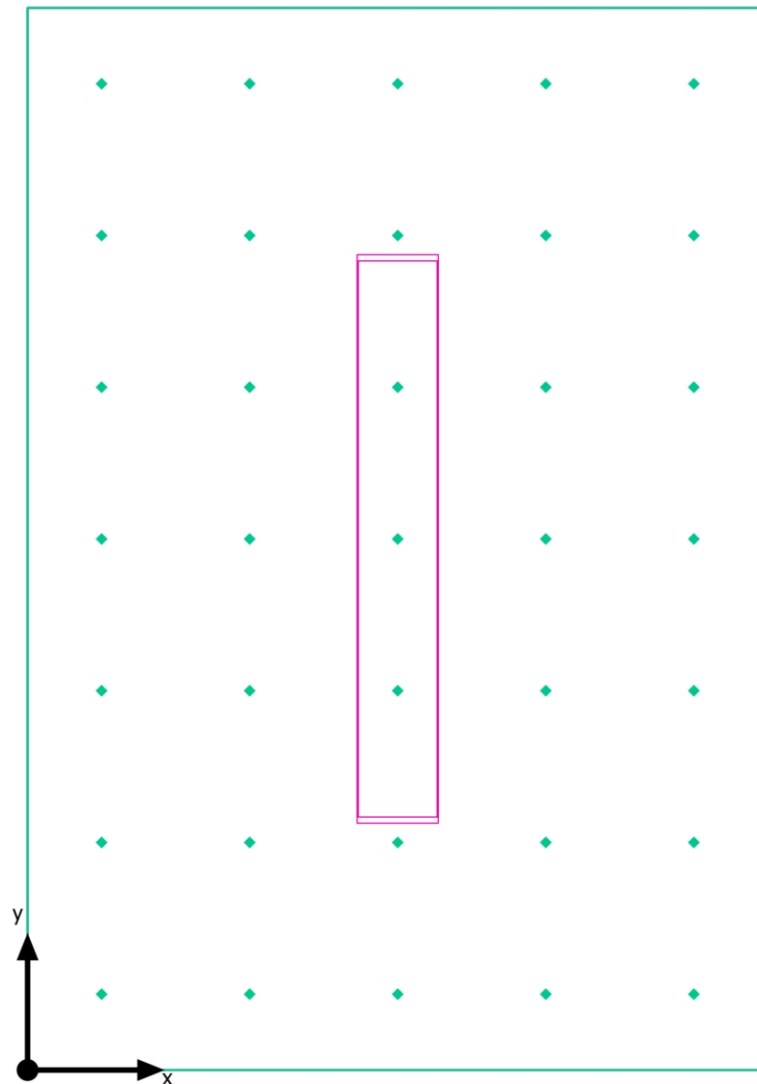
Radna površina (Ured) (UGR)



Sportska dvorana Borovo naselje · Prizemlje · Ured
Calculation objects

Utilisation profile: Offices, Filing, copying, etc.

Sportska dvorana Borovo naselje · Prizemlje · Ured
Summary



Sportska dvorana Borovo naselje · Prizemlje · Ured

Summary

Results

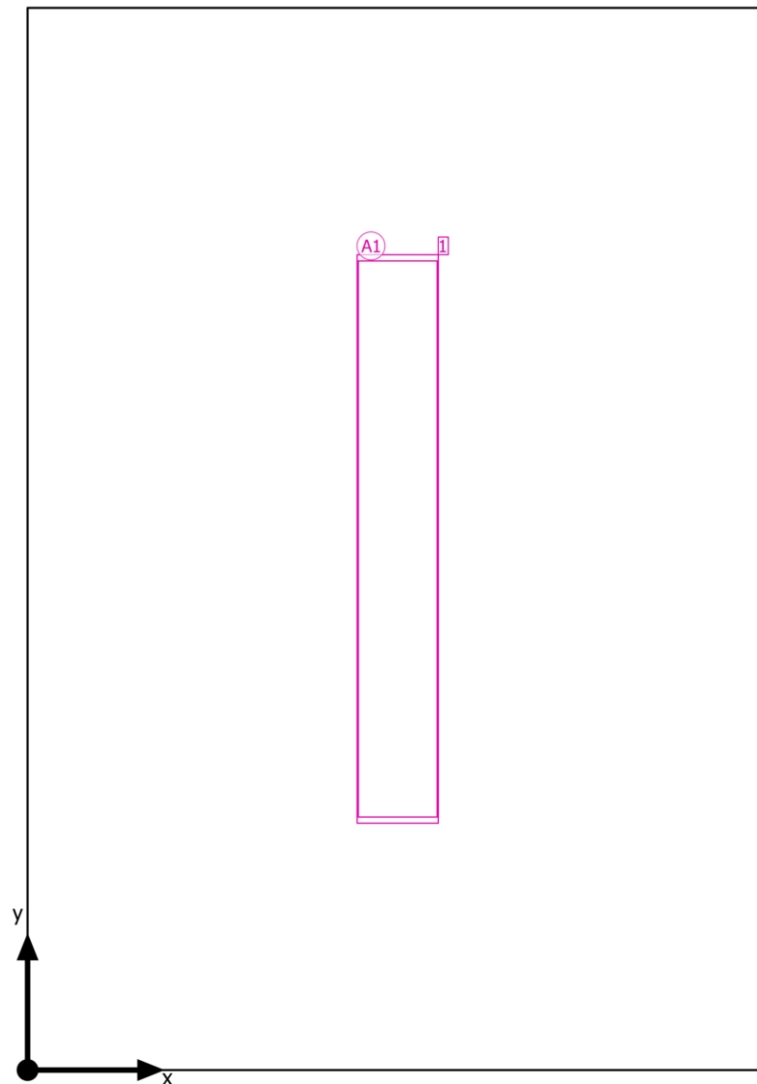
	Symbol	Calculated	Target	Check	Index
Consumption values	Consumption	140 kWh/a	max. 200 kWh/a	✓	
Lighting power density	Room	11.38 W/m ²	-	-	

Utilisation profile: Offices, Filing, copying, etc.

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	Thorn	96628877 (STD - standard)	COLLEGE LED6500-840 HF L1500	64.0 W	6500 lm	101.6 lm/W

Sportska dvorana Borovo naselje · Prizemlje · Ured
Luminaire layout plan



Sportska dvorana Borovo naselje · Prizemlje · Ured

Luminaire layout plan

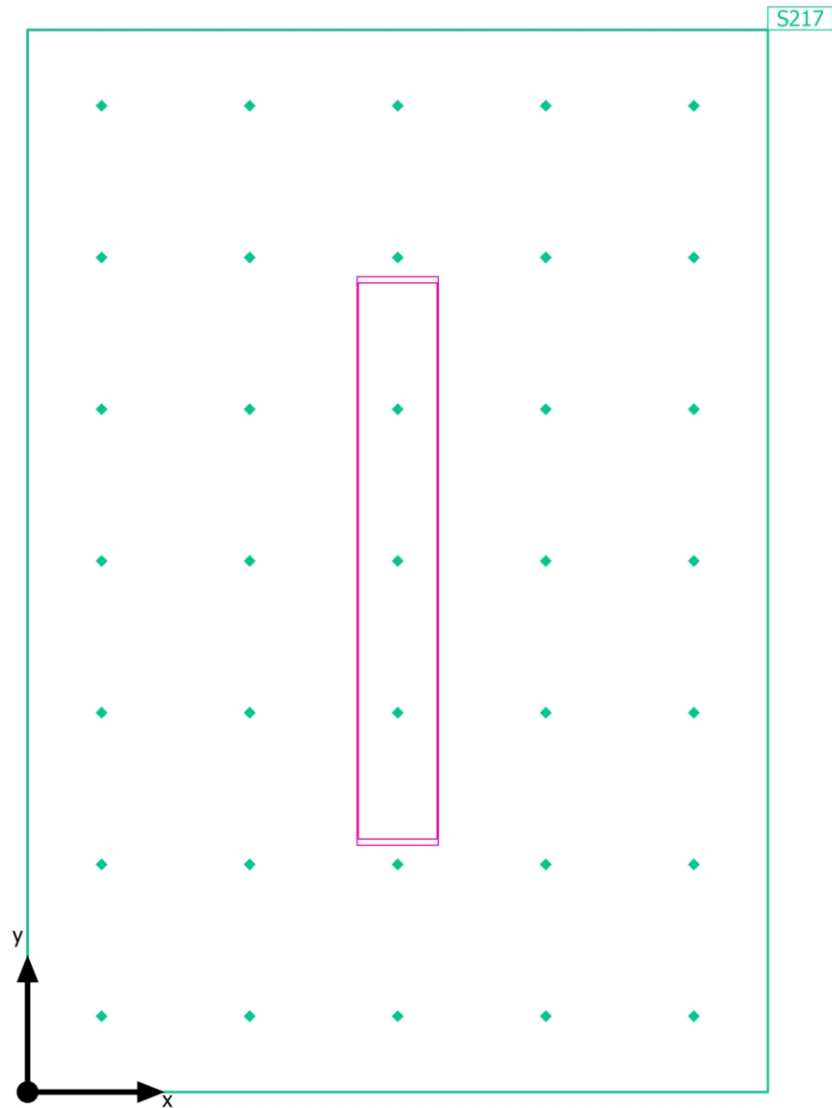


Manufacturer	Thorn
Article No.	96628877 (STD - standard)
Article name	COLLEGE LED6500-840 HF L1500

1 x Thorn Lighting COLLEGE LED6500-840 HF L1500

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.990 m / 1.420 m / 3.120 m	0.990 m	1.420 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.840 m				
Y-direction	1 pcs., Centre - centre, 1.980 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · Prizemlje · Ured
Calculation objects



Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Ured) Perpendicular illuminance (adaptive) Height: 0.800 m	397 lx	269 lx	500 lx	0.68	0.54	S217

Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

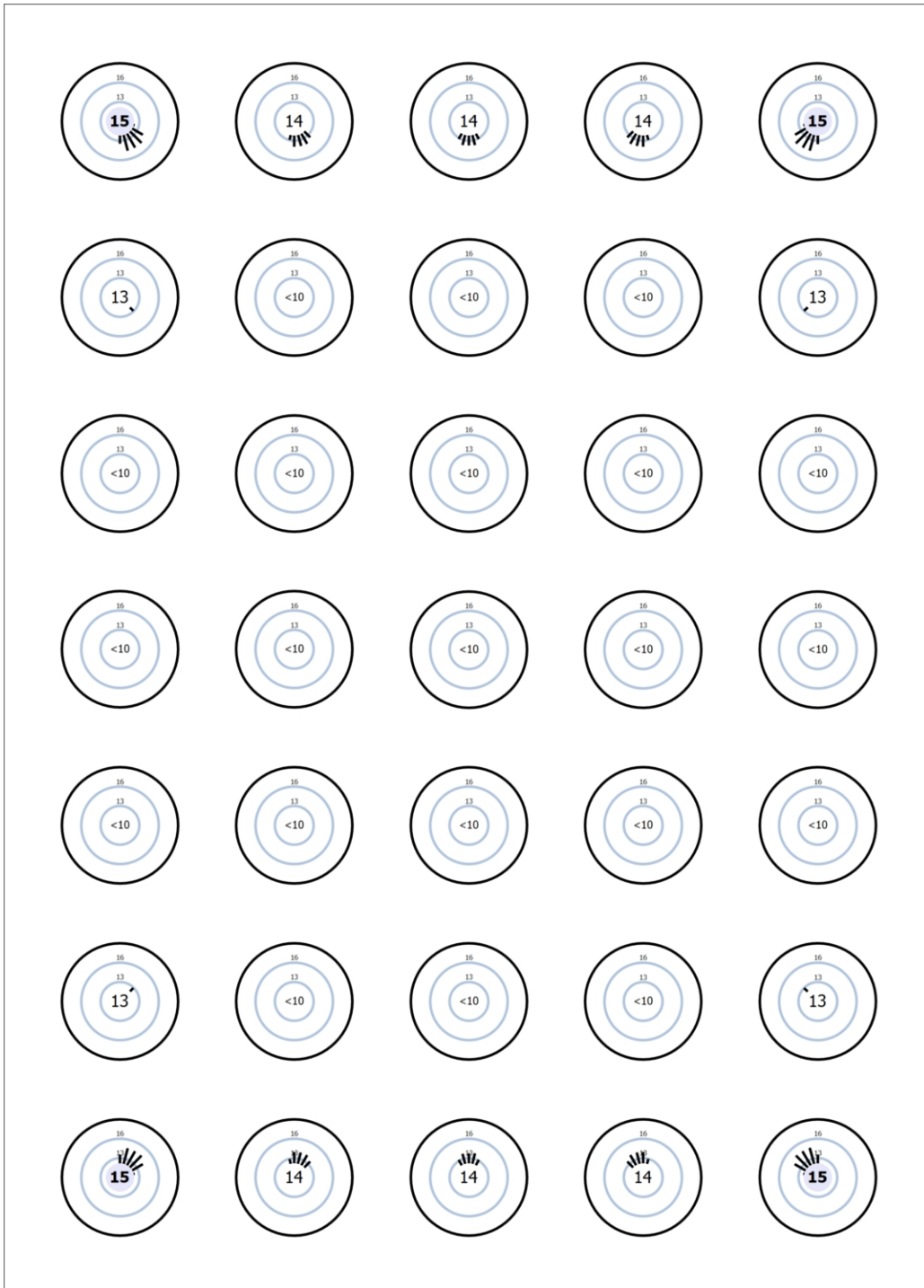
Radna površina (Ured) (UGR)

Strongest glare at	45°
max	14.8
Target	≤19.0
Viewing sector	0° - 360°
Step width	15°
Height	1.200 m
Index	S217

Sportska dvorana Borovo naselje · Prizemlje · Ured

Calculation objects

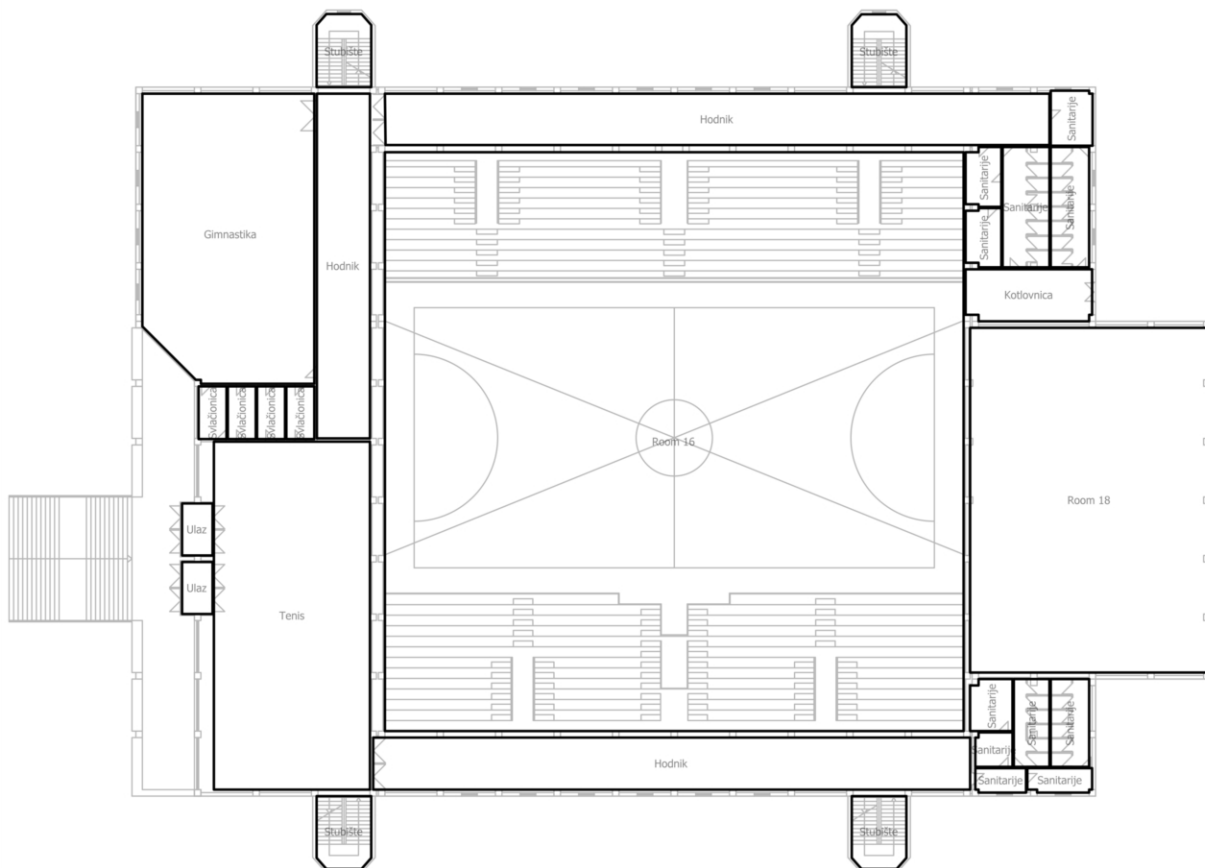
Radna površina (Ured) (UGR)



Sportska dvorana Borovo naselje · Prizemlje · Ured
Calculation objects

Utilisation profile: Offices, Filing, copying, etc.

Sportska dvorana Borovo naselje · 1. kat
Room List (Energy evaluation)



Sportska dvorana Borovo naselje · 1. kat

Room List (Energy evaluation)

Hodnik

P_{total} 387.2 W	A_{Room} 201.75 m ²	Lighting power density 1.92 W/m ² = 1.44 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 133 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
11	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Hodnik

P_{total} 387.2 W	A_{Room} 183.60 m ²	Lighting power density 2.11 W/m ² = 1.42 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 149 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
11	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Kotlovnica

P_{total} 130.2 W	A_{Room} 38.31 m ²	Lighting power density 3.40 W/m ² = 1.31 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 259 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
6	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm

Sportska dvorana Borovo naselje · 1. kat

Room List (Energy evaluation)

Sanitarije

P_{total} 60.0 W	A_{Room} 12.05 m ²	Lighting power density 4.98 W/m ² = 2.88 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 173 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sanitarije

P_{total} 60.0 W	A_{Room} 11.96 m ²	Lighting power density 5.02 W/m ² = 2.89 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 174 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sanitarije

P_{total} 90.0 W	A_{Room} 33.30 m ²	Lighting power density 2.70 W/m ² = 2.13 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 127 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sportska dvorana Borovo naselje · 1. kat

Room List (Energy evaluation)

Sanitarije

P_{total} 90.0 W	A_{Room} 27.29 m ²	Lighting power density 3.30 W/m ² = 2.34 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 141 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sanitarije

P_{total} 60.0 W	A_{Room} 13.54 m ²	Lighting power density 4.43 W/m ² = 2.66 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 166 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sanitarije

P_{total} 60.0 W	A_{Room} 12.72 m ²	Lighting power density 4.72 W/m ² = 2.73 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 173 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sportska dvorana Borovo naselje · 1. kat

Room List (Energy evaluation)

Sanitarije

P_{total} 30.0 W	A_{Room} 7.48 m ²	Lighting power density 4.01 W/m ² = 3.24 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 124 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sanitarije

P_{total} 30.0 W	A_{Room} 7.27 m ²	Lighting power density 4.12 W/m ² = 3.46 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 119 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
1	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sanitarije

P_{total} 60.0 W	A_{Room} 9.14 m ²	Lighting power density 6.57 W/m ² = 3.49 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 188 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sportska dvorana Borovo naselje · 1. kat
Room List (Energy evaluation)

Sanitarije

P_{total} 90.0 W	A_{Room} 18.50 m ²	Lighting power density 4.87 W/m ² = 2.62 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 186 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Sanitarije

P_{total} 90.0 W	A_{Room} 19.91 m ²	Lighting power density 4.52 W/m ² = 2.61 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 173 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm

Svlačionica

P_{total} 70.0 W	A_{Room} 8.71 m ²	Lighting power density 8.04 W/m ² = 3.44 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 233 lx
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Sportska dvorana Borovo naselje · 1. kat

Room List (Energy evaluation)

Svlačionica

P_{total} 70.0 W	A_{Room} 8.71 m ²	Lighting power density 8.04 W/m ² = 3.45 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 233 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Svlačionica

P_{total} 70.0 W	A_{Room} 8.71 m ²	Lighting power density 8.04 W/m ² = 3.44 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 233 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Svlačionica

P_{total} 70.0 W	A_{Room} 8.69 m ²	Lighting power density 8.06 W/m ² = 3.27 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 247 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Sportska dvorana Borovo naselje · 1. kat
Room List (Energy evaluation)

Tenis

P_{total} 140.0 W	A_{Room} 321.02 m ²	Lighting power density 0.44 W/m ² (Room)
------------------------	-------------------------------------	--

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
4	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Ulaz

P_{total} 70.0 W	A_{Room} 9.38 m ²	Lighting power density 7.46 W/m ² = 4.37 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 171 lx
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pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

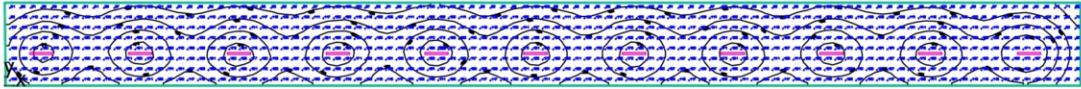
Ulaz

P_{total} 70.0 W	A_{Room} 9.38 m ²	Lighting power density 7.46 W/m ² = 4.63 W/m ² /100 lx (Room)	$\bar{E}_{perpendicular}$ (Workplane) 161 lx
-----------------------	-----------------------------------	--	---

pcs.	Manufacturer	Article No.	Article name	P	$\Phi_{Luminaire}$
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm

Sportska dvorana Borovo naselje · 1. kat · Hodnik

Summary



Sportska dvorana Borovo naselje · 1. kat · Hodnik

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	133 lx	≥ 100 lx	✓	S166
	g_1	0.46	-	-	S166
Consumption values	Consumption	430 kWh/a	max. 7100 kWh/a	✓	
Lighting power density	Room	1.92 W/m ²	-	-	
		1.44 W/m ² /100 lx	-	-	

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
11	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

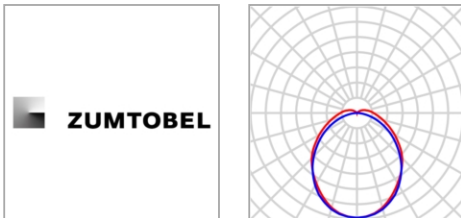
Sportska dvorana Borovo naselje · 1. kat · Hodnik

Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Hodnik

Luminaire layout plan



Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

11 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.750 m / 1.530 m / 3.120 m	1.750 m	1.530 m	3.120 m	1
X-direction	11 pcs., Centre - centre, Distances not equal	6.440 m	1.530 m	3.120 m	2
		11.130 m	1.530 m	3.120 m	3
Y-direction	1 pcs., Centre - centre, Distances not equal	15.820 m	1.530 m	3.120 m	4
		20.510 m	1.530 m	3.120 m	5
Arrangement	A1	25.200 m	1.530 m	3.120 m	6
		29.890 m	1.530 m	3.120 m	7
		34.580 m	1.530 m	3.120 m	8
		39.270 m	1.530 m	3.120 m	9
		43.960 m	1.530 m	3.120 m	10
		48.650 m	1.530 m	3.120 m	11

Sportska dvorana Borovo naselje · 1. kat · Hodnik

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Hodnik

Calculation objects

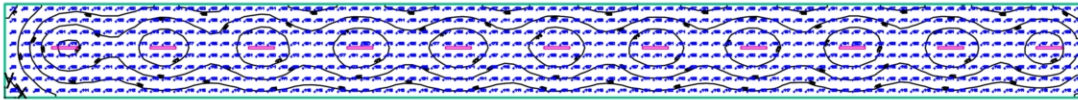
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	133 lx (≥ 100 lx) ✓	60.9 lx	186 lx	0.46	0.33	S166

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · 1. kat · Hodnik

Summary



Sportska dvorana Borovo naselje · 1. kat · Hodnik

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	149 lx	≥ 100 lx	✓	S180
	g_1	0.44	-	-	S180
Consumption values	Consumption	430 kWh/a	max. 6450 kWh/a	✓	
Lighting power density	Room	2.11 W/m ²	-	-	
		1.42 W/m ² /100 lx	-	-	

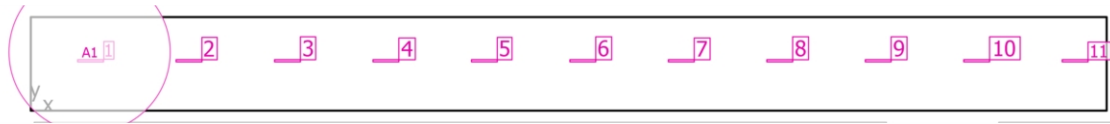
Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
11	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

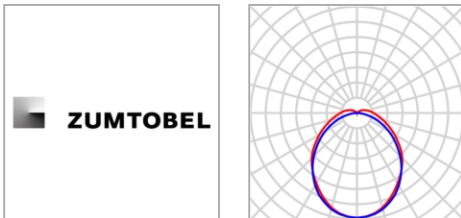
Sportska dvorana Borovo naselje · 1. kat · Hodnik

Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Hodnik

Luminaire layout plan



Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

11 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.550 m / 2.131 m / 3.120 m	2.550 m	2.131 m	3.120 m	1
X-direction	11 pcs., Centre - centre, Distances not equal	6.751 m	2.131 m	3.120 m	2
		10.951 m	2.131 m	3.120 m	3
Y-direction	1 pcs., Centre - centre, Distances not equal	15.152 m	2.131 m	3.120 m	4
		19.352 m	2.131 m	3.120 m	5
Arrangement	A1	23.553 m	2.131 m	3.120 m	6
		27.753 m	2.131 m	3.120 m	7
		31.954 m	2.131 m	3.120 m	8
		36.154 m	2.131 m	3.120 m	9
		40.355 m	2.131 m	3.120 m	10
		44.555 m	2.131 m	3.120 m	11

Sportska dvorana Borovo naselje · 1. kat · Hodnik

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Hodnik

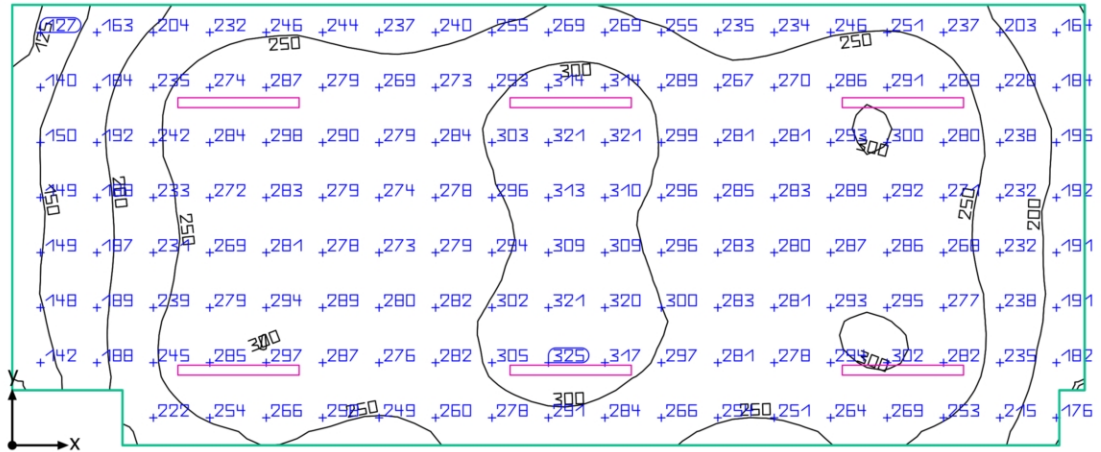
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Hodnik) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	149 lx (≥ 100 lx) ✓	65.8 lx	198 lx	0.44	0.33	S180

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · 1. kat · Kotlovnica
Summary



Sportska dvorana Borovo naselje · 1. kat · Kotlovnica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	259 lx	≥ 200 lx	✓	S178
	g_1	0.46	-	-	S178
Consumption values	Consumption	21 kWh/a	max. 1350 kWh/a	✓	
Lighting power density	Room	3.40 W/m ²	-	-	
		1.31 W/m ² /100 lx	-	-	

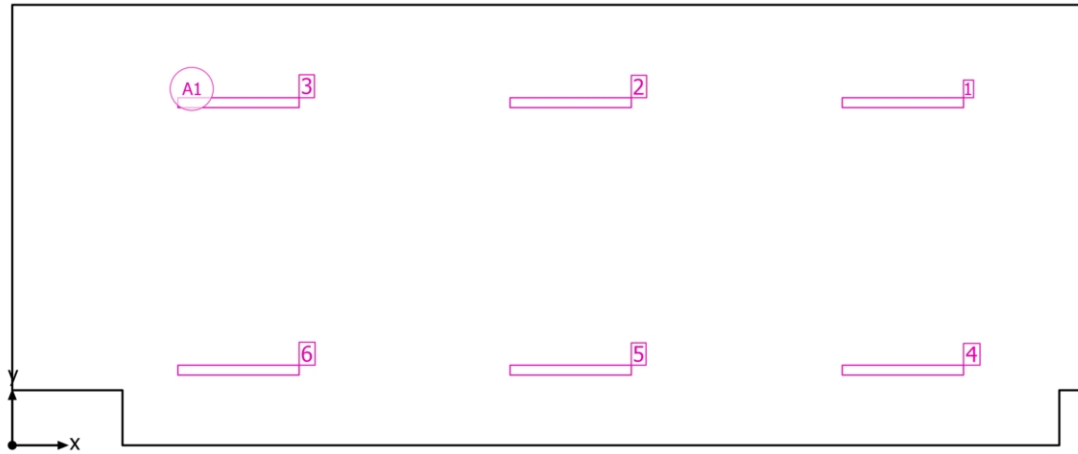
Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Luminaire list

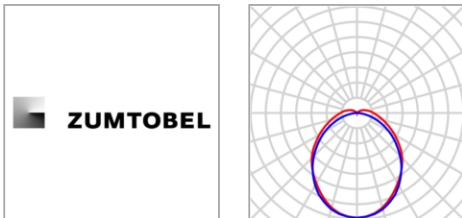
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
6	ZUMTOBEL	96630753 (STD - standard)	AQFPRO S LED2900-840 PC MB HF	21.7 W	3130 lm	144.3 lm/W

Sportska dvorana Borovo naselje · 1. kat · Kotlovnica

Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Kotlovnica
Luminaire layout plan



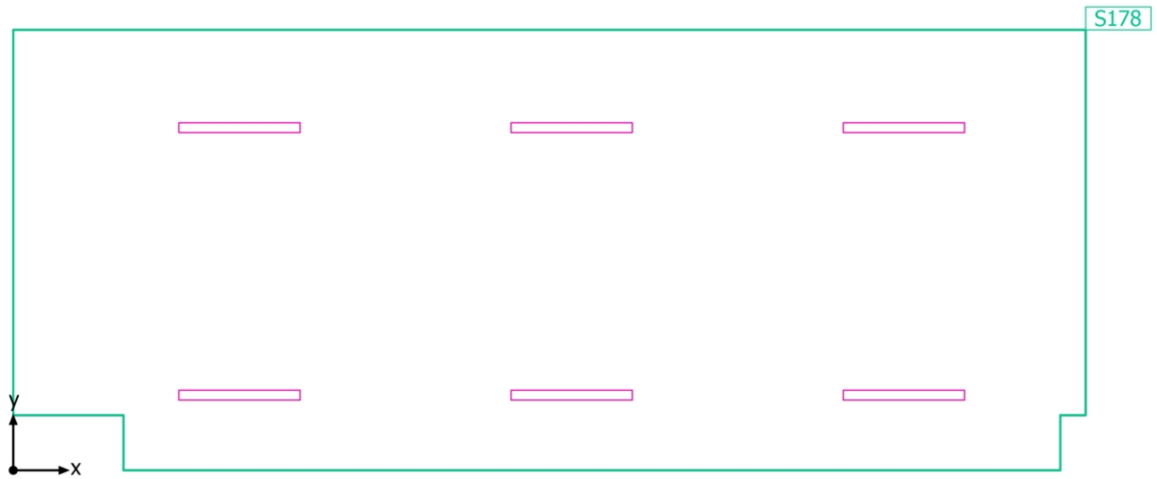
Manufacturer	ZUMTOBEL
Article No.	96630753 (STD - standard)
Article name	AQFPRO S LED2900-840 PC MB HF

6 x ZUMTOBEL AQFPRO S LED2900-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	8.081 m / 3.112 m / 3.120 m	8.081 m	3.112 m	3.120 m	1
X-direction	3 pcs., Centre - centre, Distances not equal	5.067 m	3.112 m	3.120 m	2
		2.053 m	3.112 m	3.120 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	8.081 m	0.682 m	3.120 m	4
		5.067 m	0.682 m	3.120 m	5
Arrangement	A1	2.053 m	0.682 m	3.120 m	6

Sportska dvorana Borovo naselje · 1. kat · Kotlovnica

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Kotlovnica

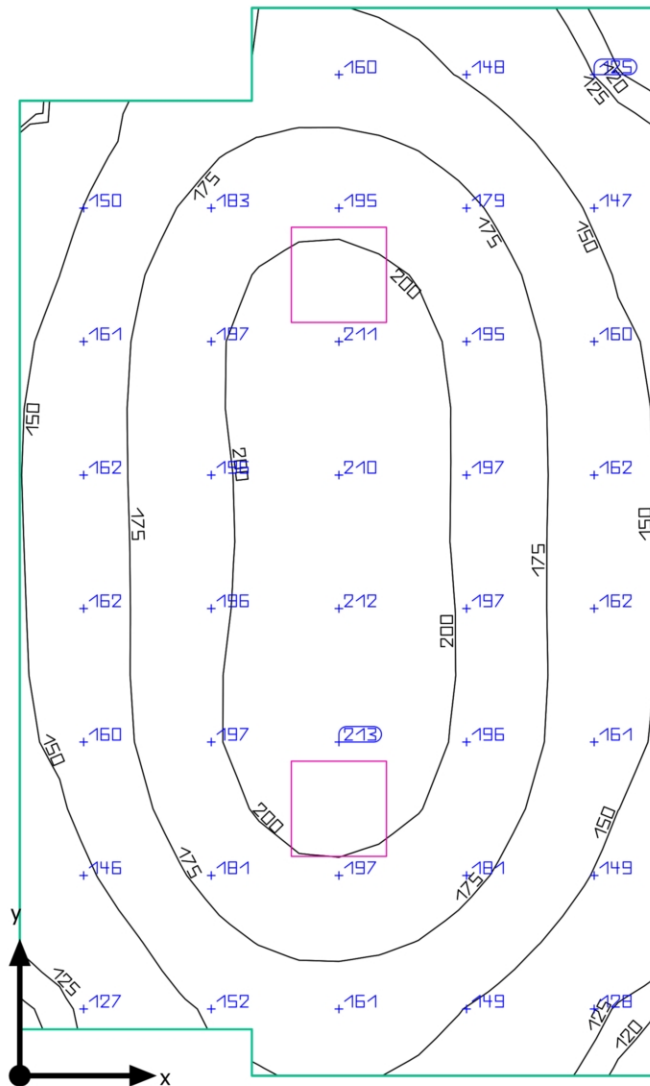
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	259 lx (≥ 200 lx) ✓	119 lx	328 lx	0.46	0.36	S178

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

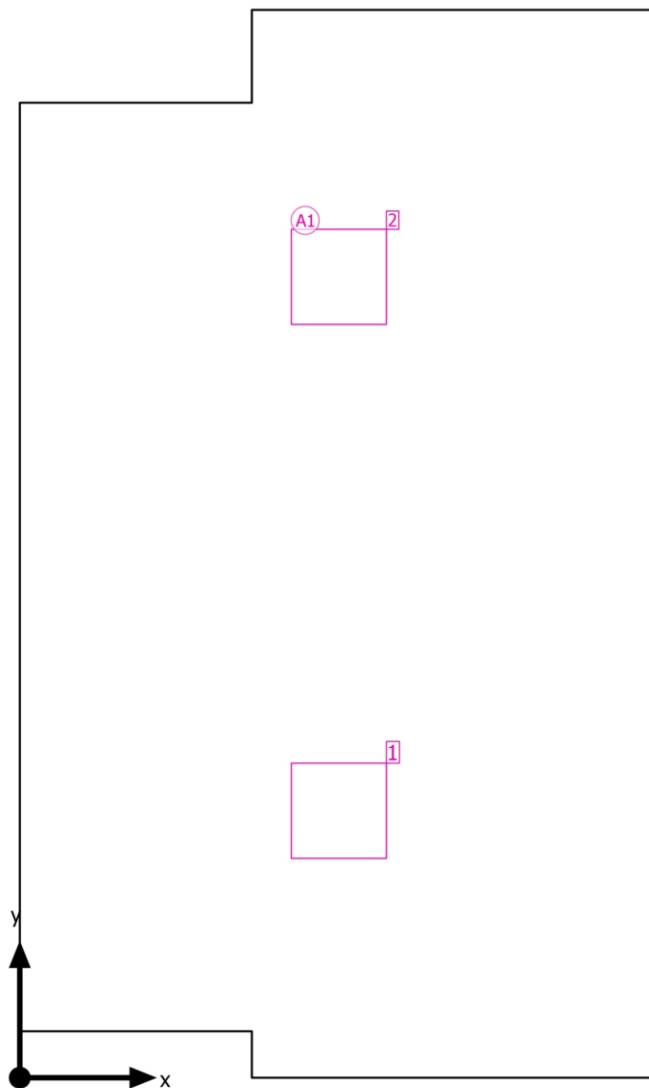
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	173 lx	≥ 100 lx	✓	S168
	g_1	0.66	-	-	S168
Consumption values	Consumption	120 kWh/a	max. 450 kWh/a	✓	
Lighting power density	Room	4.98 W/m ²	-	-	
		2.88 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

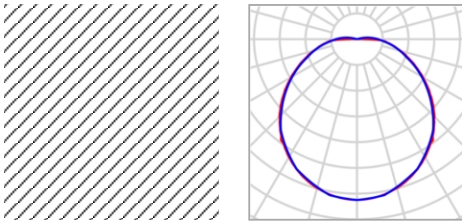
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



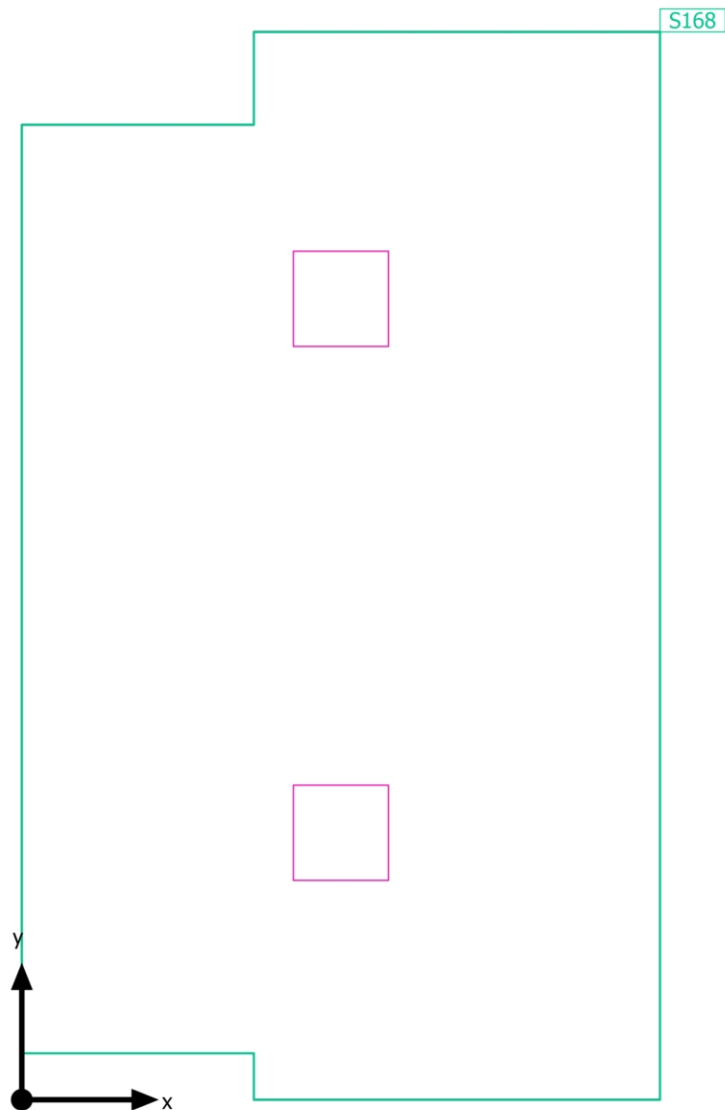
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

2 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.375 m / 1.150 m / 3.120 m	1.375 m	1.150 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.300 m	1.375 m	3.450 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.750 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	173 lx (≥ 100 lx) ✓	115 lx	212 lx	0.66	0.54	S168

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

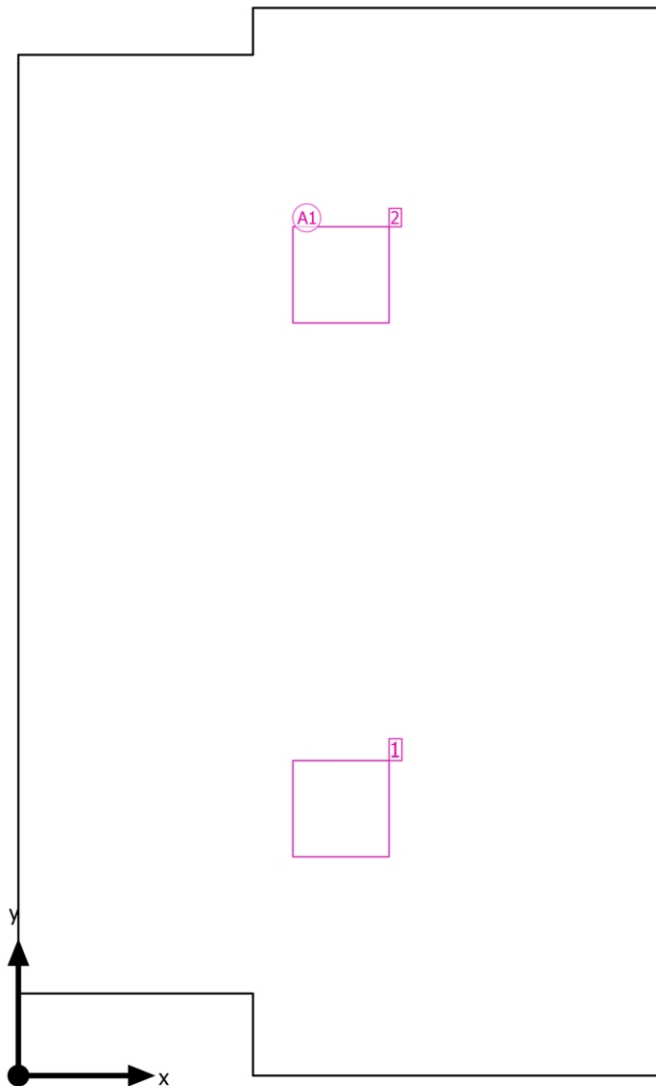
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	174 lx	≥ 100 lx	✓	S170
	g_1	0.66	-	-	S170
Consumption values	Consumption	120 kWh/a	max. 450 kWh/a	✓	
Lighting power density	Room	5.02 W/m ²	-	-	
		2.89 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

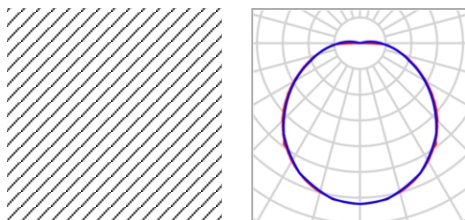
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan



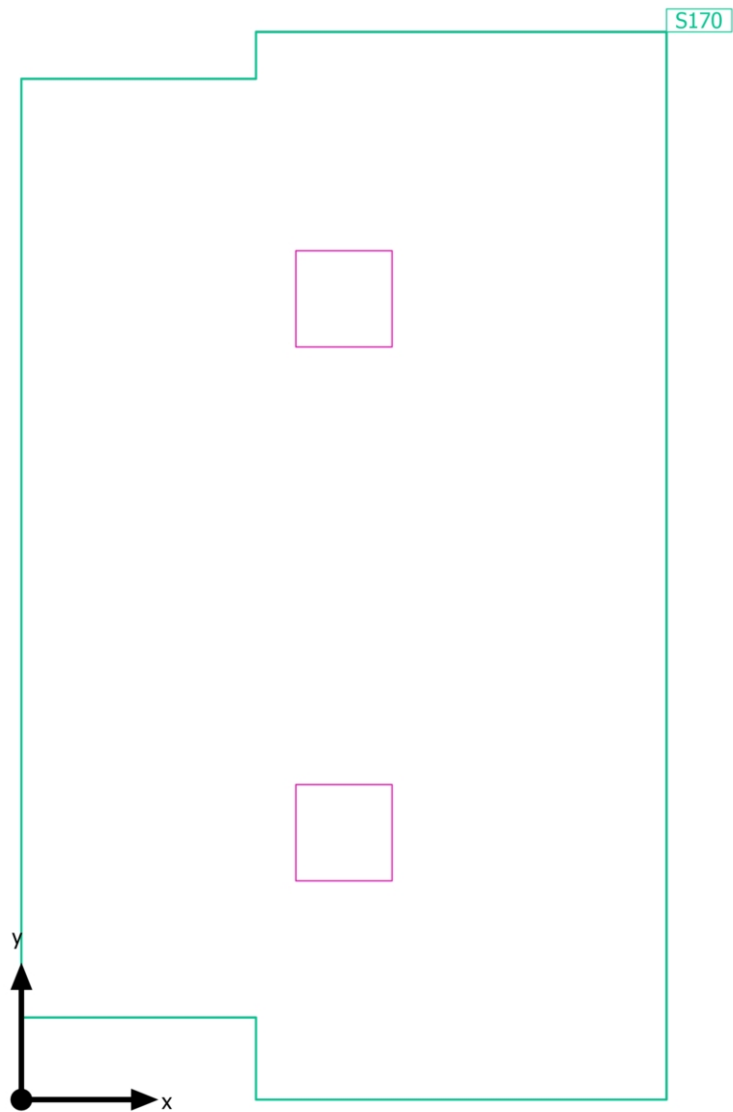
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

2 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.375 m / 1.137 m / 3.120 m	1.375 m	1.137 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.275 m	1.375 m	3.413 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.750 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects

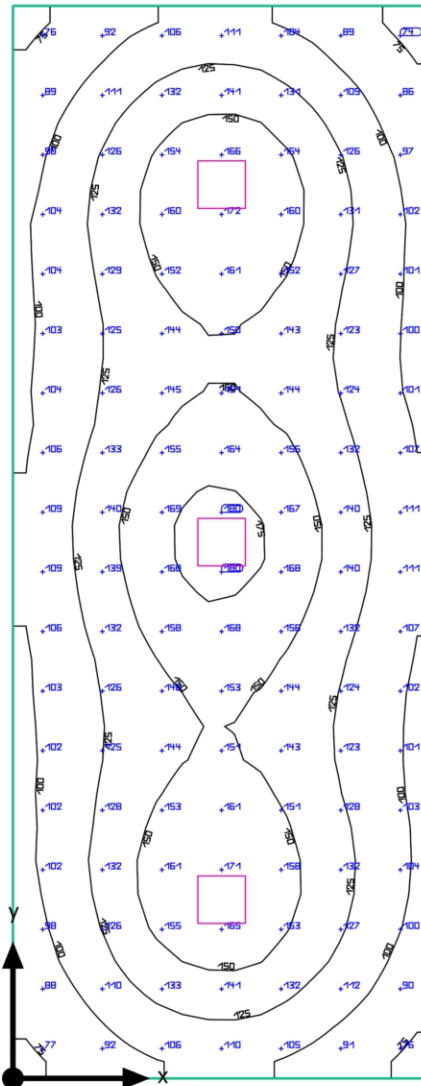
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	174 lx (≥ 100 lx) ✓	115 lx	212 lx	0.66	0.54	S170

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

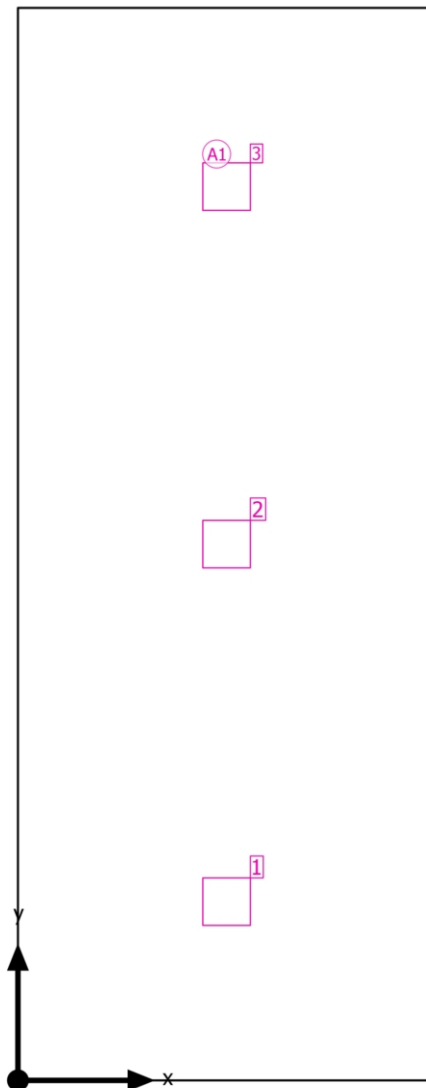
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	127 lx	≥ 100 lx	✓	S172
	g_1	0.53	-	-	S172
Consumption values	Consumption	170 kWh/a	max. 1200 kWh/a	✓	
Lighting power density	Room	2.70 W/m ²	-	-	
		2.13 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

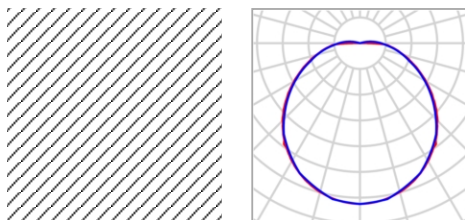
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan



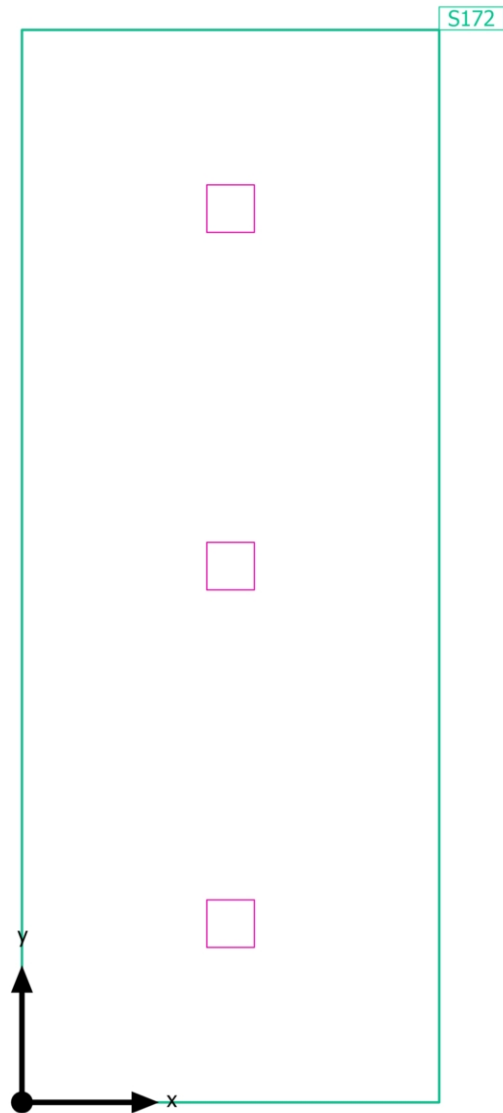
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

3 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.800 m / 1.542 m / 3.120 m	1.800 m	1.542 m	3.120 m	1
X-direction	3 pcs., Centre - centre, 3.083 m	1.800 m	4.625 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 3.600 m	1.800 m	7.708 m	3.120 m	3
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects

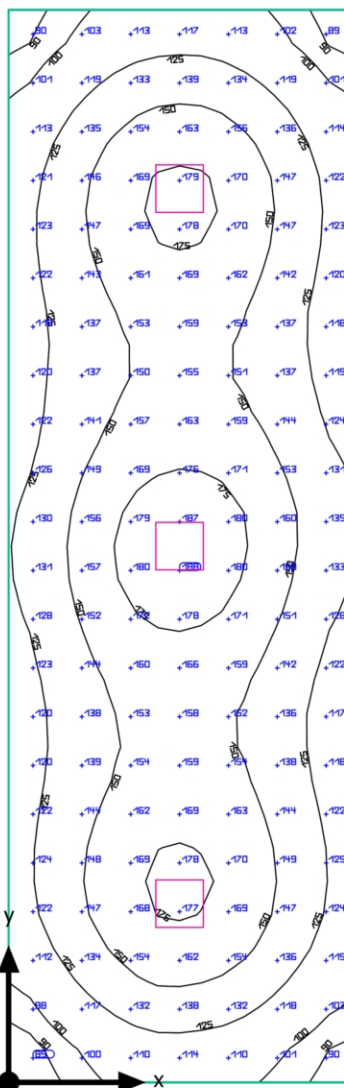
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	127 lx (≥ 100 lx) ✓	67.6 lx	182 lx	0.53	0.37	S172

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

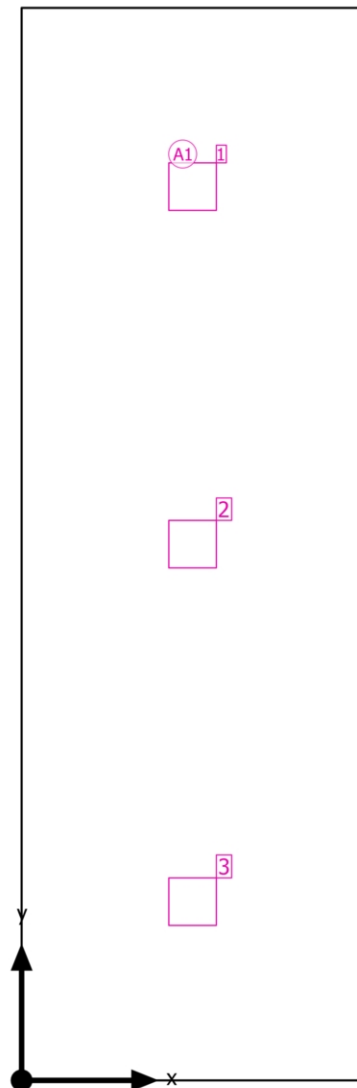
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	141 lx	≥ 100 lx	✓	S174
	g_1	0.58	-	-	S174
Consumption values	Consumption	170 kWh/a	max. 1000 kWh/a	✓	
Lighting power density	Room	3.30 W/m ²	-	-	
		2.34 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

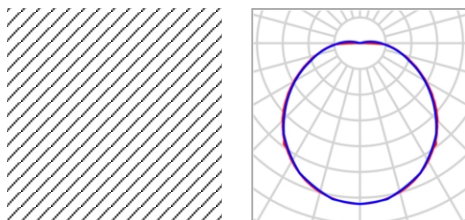
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan

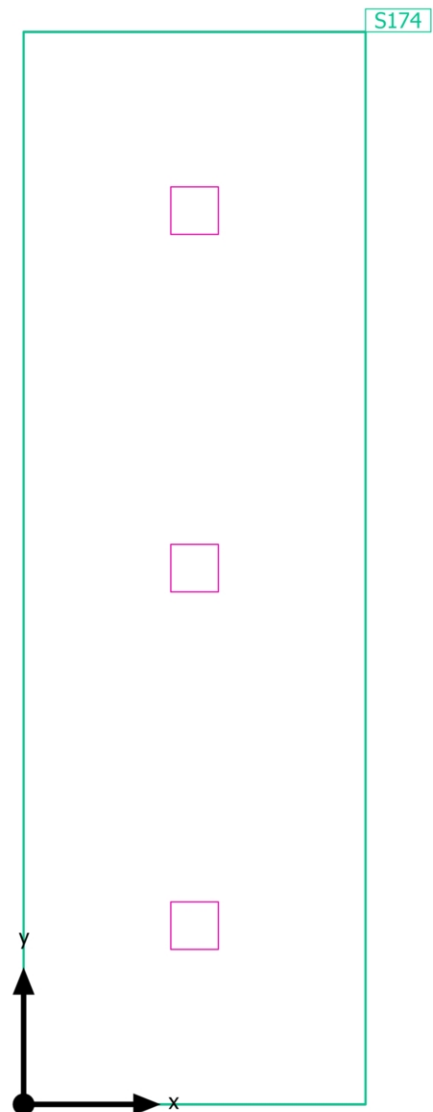


Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

3 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.475 m / 7.708 m / 3.120 m	1.475 m	7.708 m	3.120 m	1
X-direction	3 pcs., Centre - centre, 3.083 m	1.475 m	4.625 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 2.950 m	1.475 m	1.542 m	3.120 m	3
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

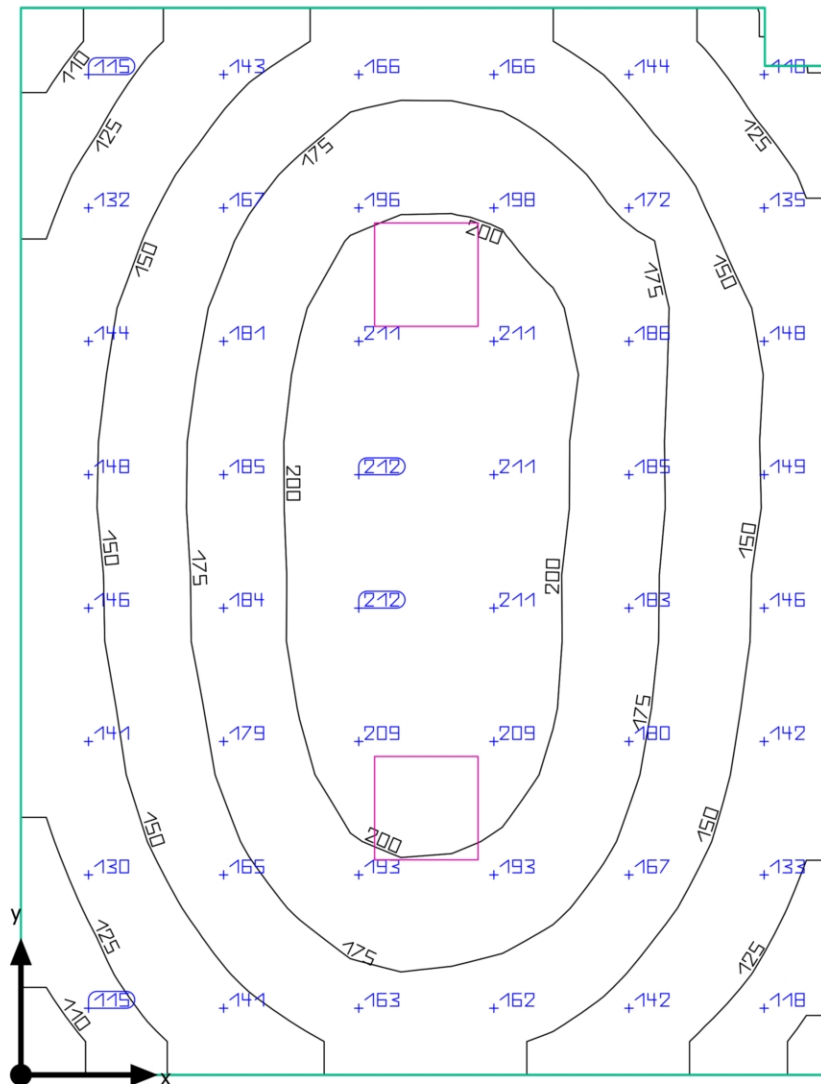
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	141 lx (≥ 100 lx) ✓	81.7 lx	188 lx	0.58	0.43	S174

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

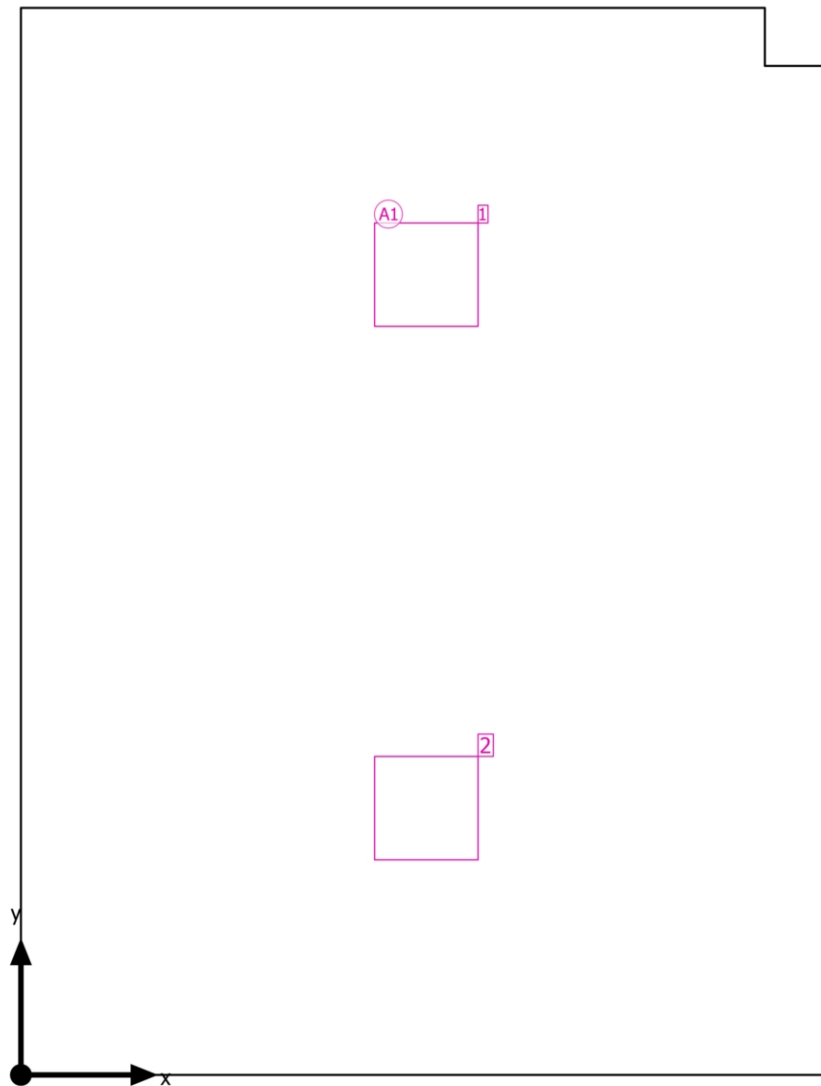
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	166 lx	≥ 100 lx	✓	S176
	g_1	0.63	-	-	S176
Consumption values	Consumption	120 kWh/a	max. 500 kWh/a	✓	
Lighting power density	Room	4.43 W/m ²	-	-	
		2.66 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

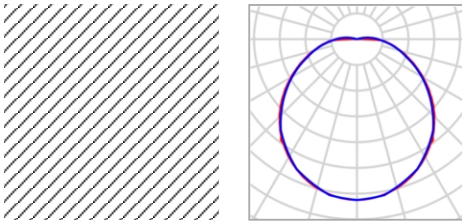
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan



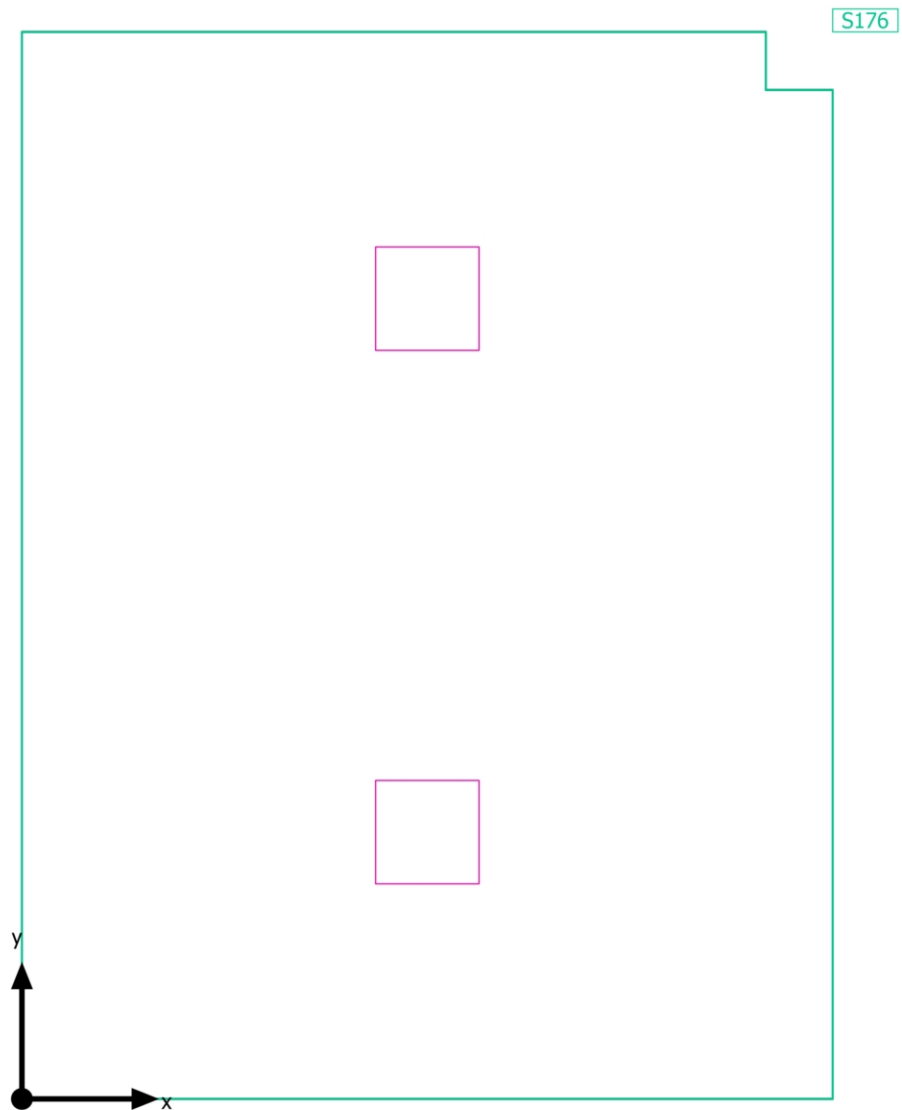
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

2 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.607 m / 3.173 m / 3.120 m	1.607 m	3.173 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.115 m	1.607 m	1.058 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 3.215 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

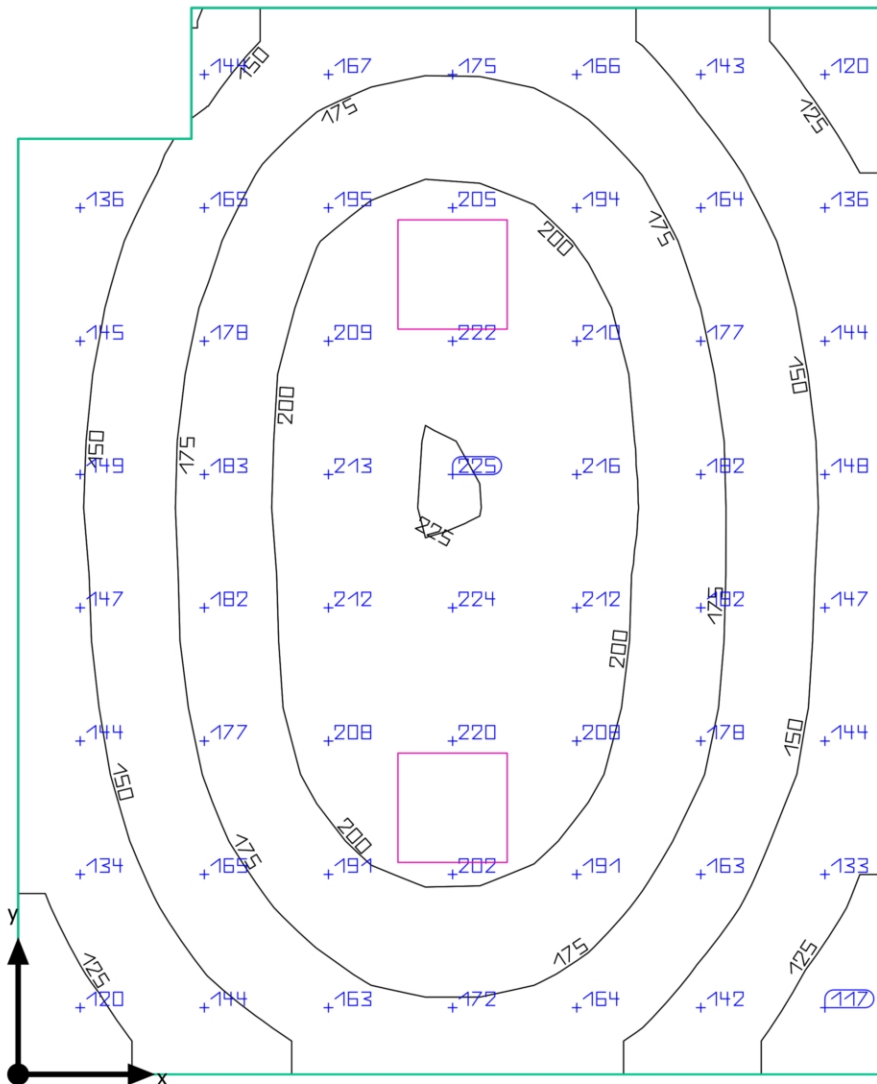
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	166 lx (≥ 100 lx) ✓	104 lx	216 lx	0.63	0.48	S176

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	173 lx	≥ 100 lx	✓	S182
	g_1	0.62	-	-	S182
Consumption values	Consumption	120 kWh/a	max. 450 kWh/a	✓	
Lighting power density	Room	4.72 W/m ²	-	-	
		2.73 W/m ² /100 lx	-	-	

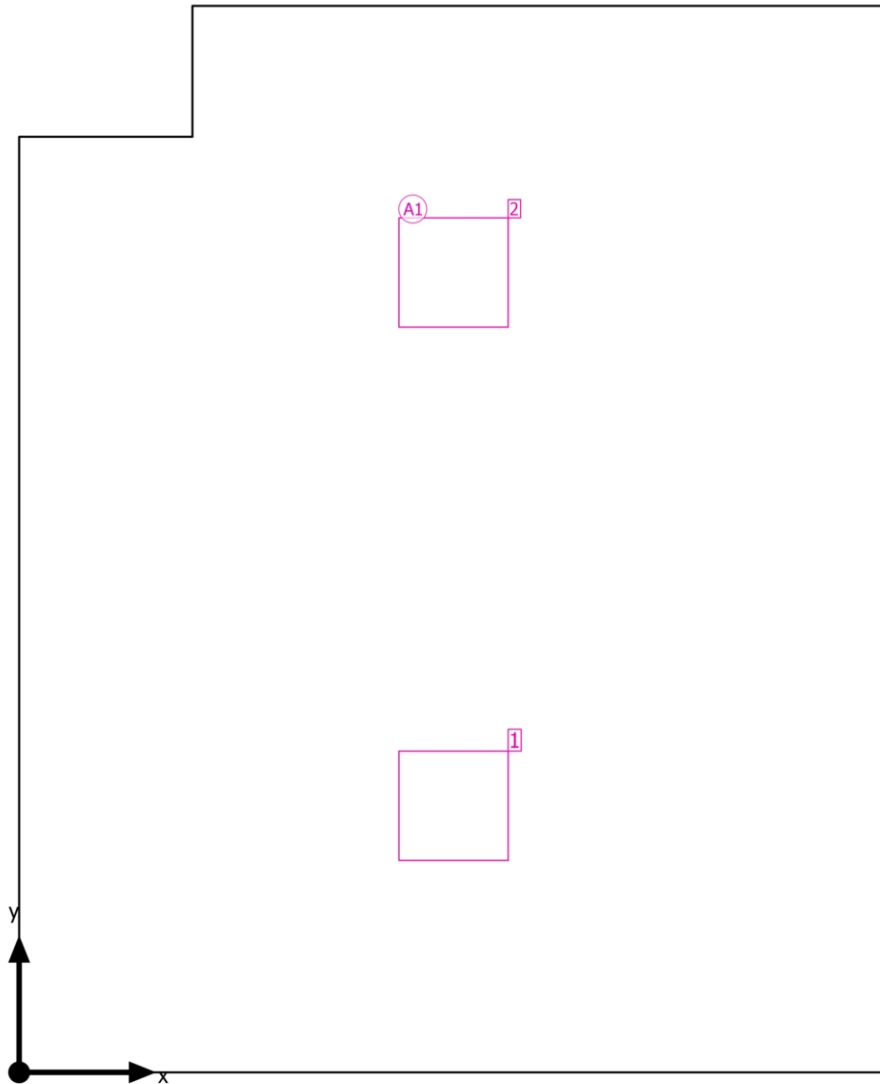
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

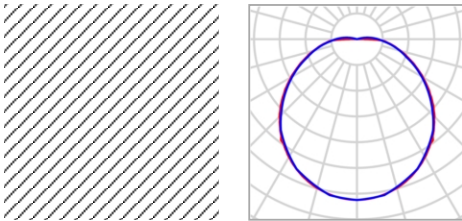
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



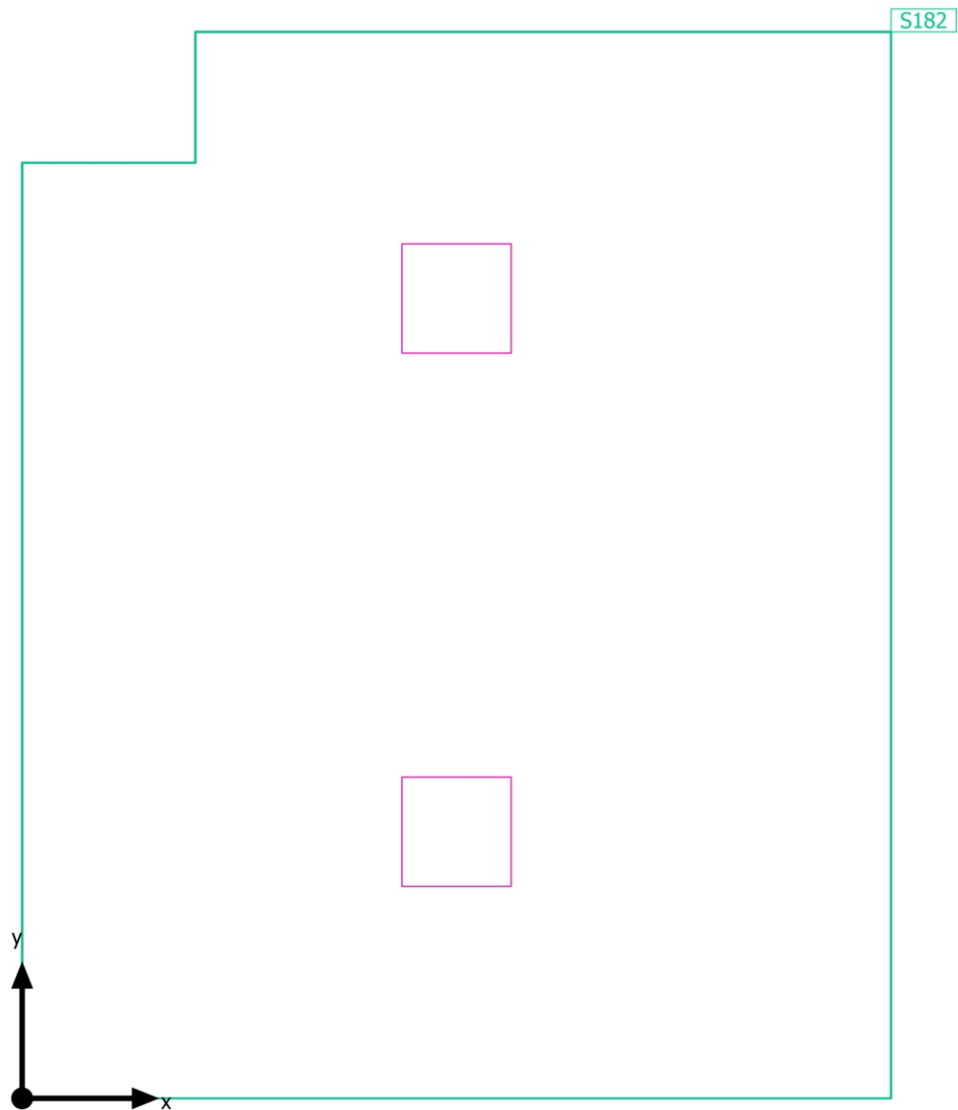
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

2 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.630 m / 1.000 m / 3.120 m	1.630 m	1.000 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.000 m	1.630 m	3.000 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 3.260 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

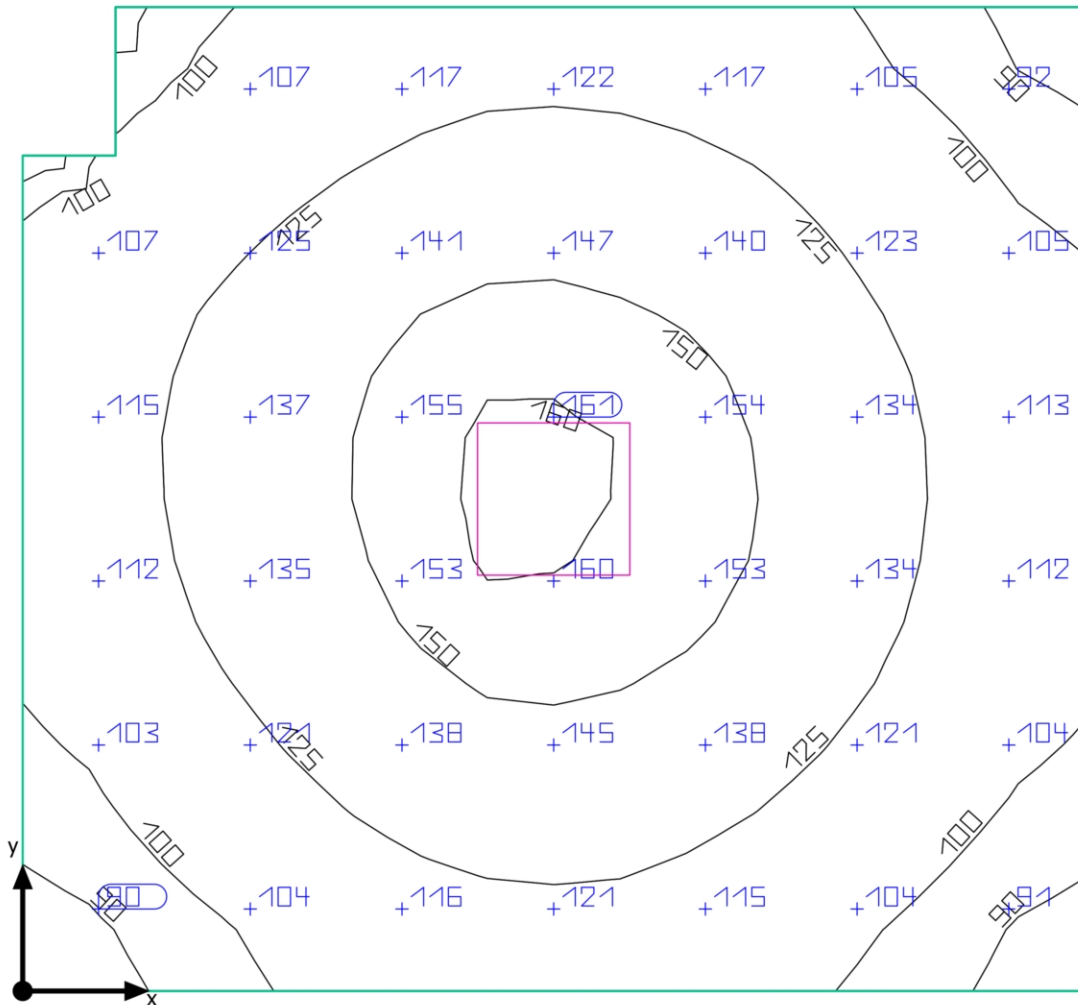
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	173 lx (≥ 100 lx) ✓	107 lx	225 lx	0.62	0.48	S182

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

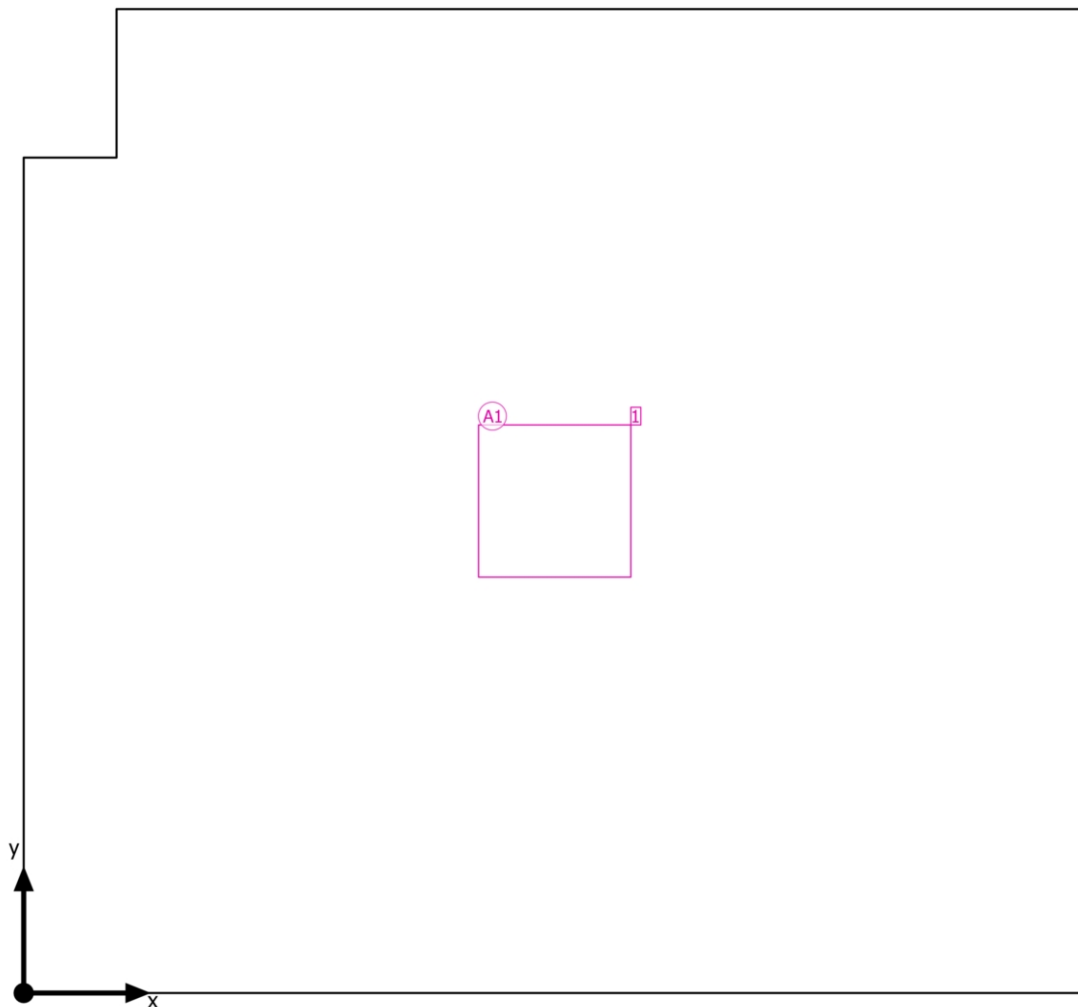
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	124 lx	≥ 100 lx	✓	S184
	g_1	0.68	-	-	S184
Consumption values	Consumption	58 kWh/a	max. 300 kWh/a	✓	
Lighting power density	Room	4.01 W/m ²	-	-	
		3.24 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

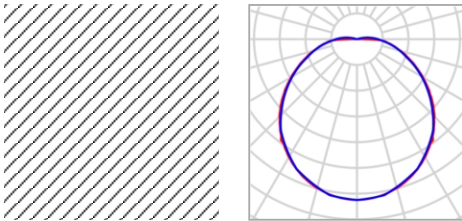
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



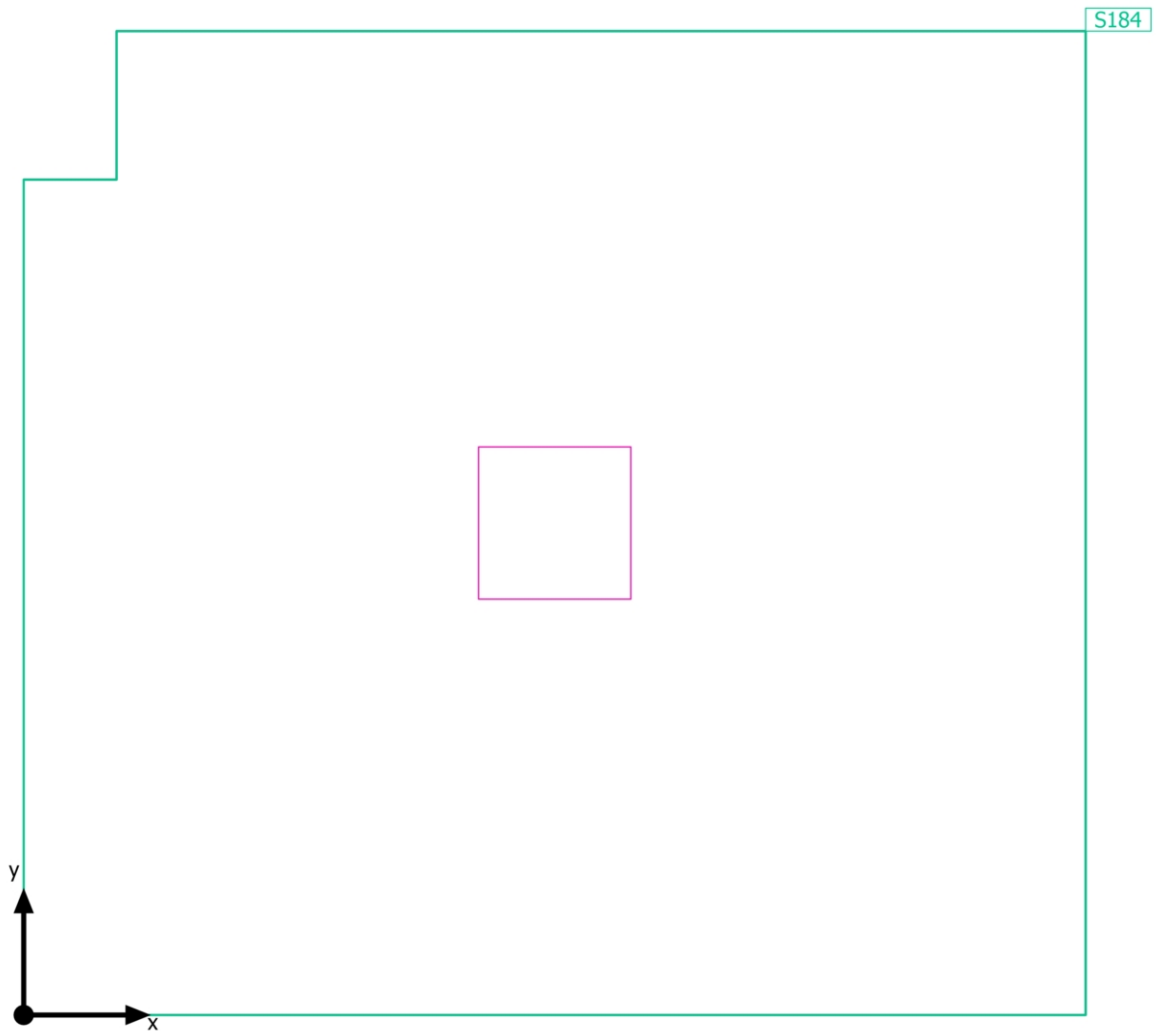
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

1 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.430 m / 1.325 m / 3.120 m	1.430 m	1.325 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 2.860 m				
Y-direction	1 pcs., Centre - centre, 2.650 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects

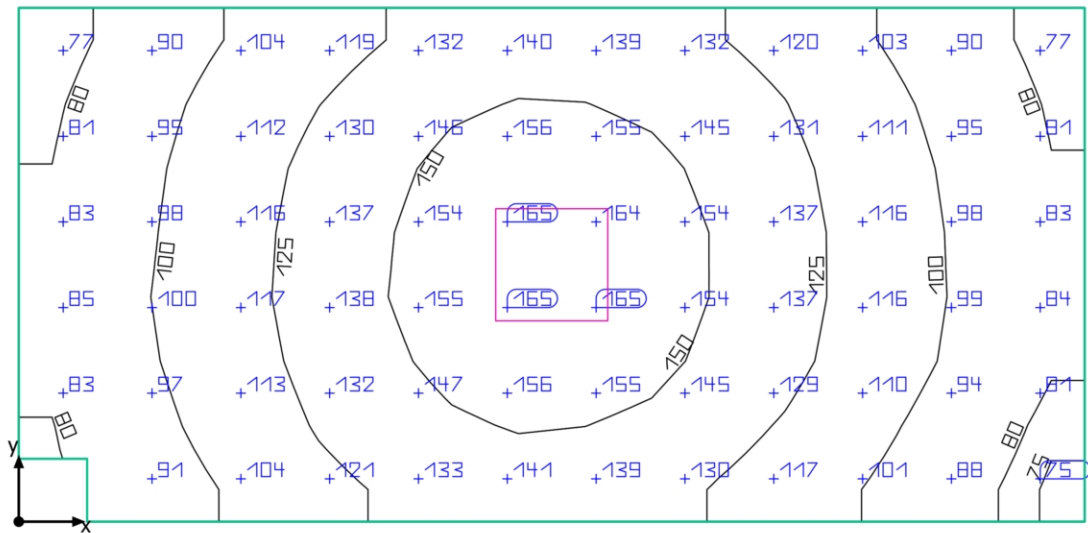
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	124 lx (≥ 100 lx) ✓	84.9 lx	161 lx	0.68	0.53	S184

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

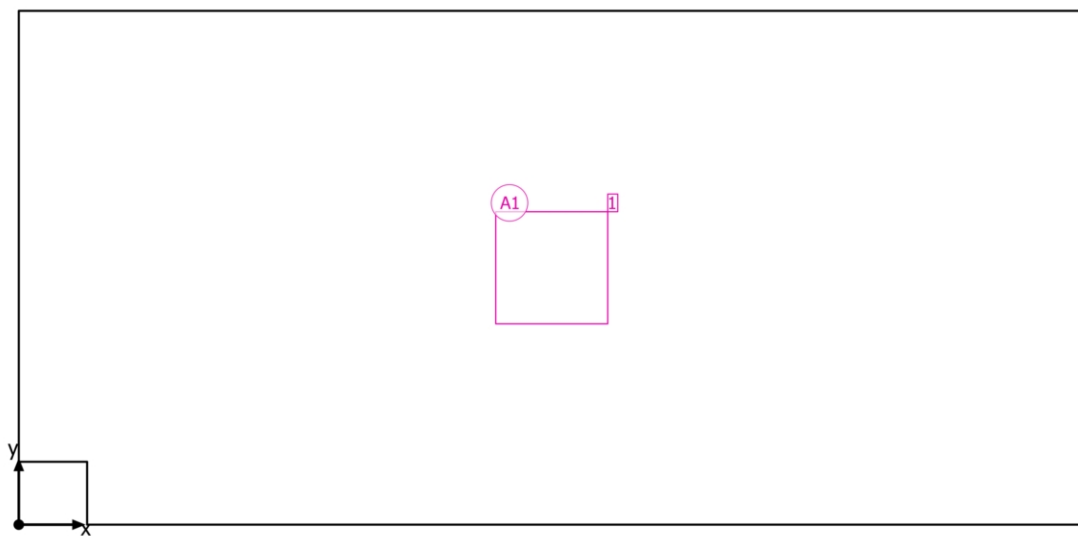
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	119 lx	≥ 100 lx	✓	S186
	g_1	0.62	-	-	S186
Consumption values	Consumption	58 kWh/a	max. 300 kWh/a	✓	
Lighting power density	Room	4.12 W/m ²	-	-	
		3.46 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

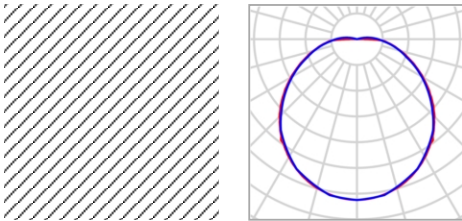
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
1	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



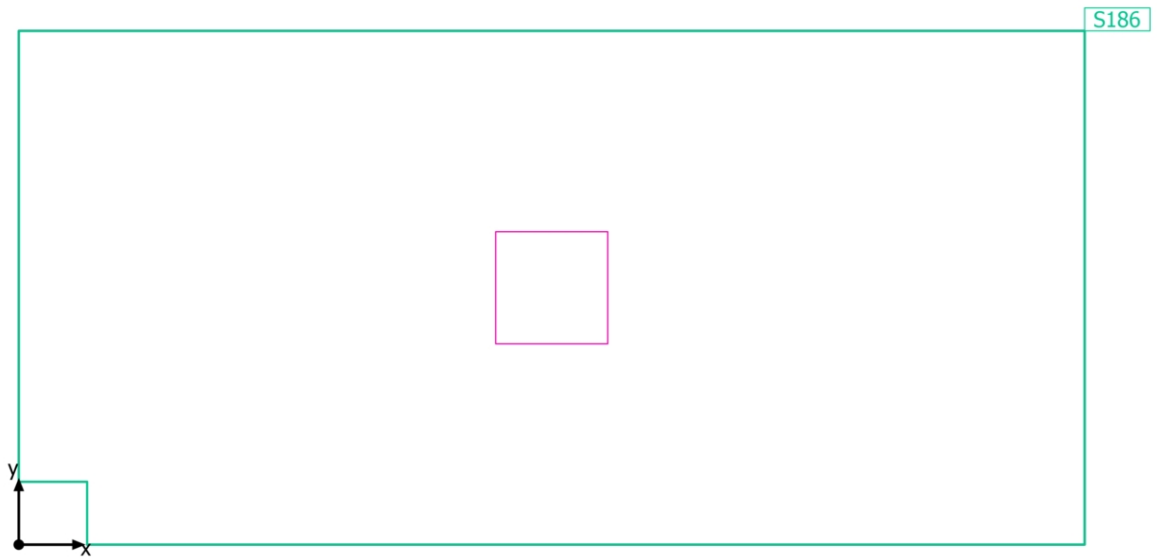
Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

1 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.950 m / 0.940 m / 3.120 m	1.950 m	0.940 m	3.120 m	1
X-direction	1 pcs., Centre - centre, 3.900 m				
Y-direction	1 pcs., Centre - centre, 1.880 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

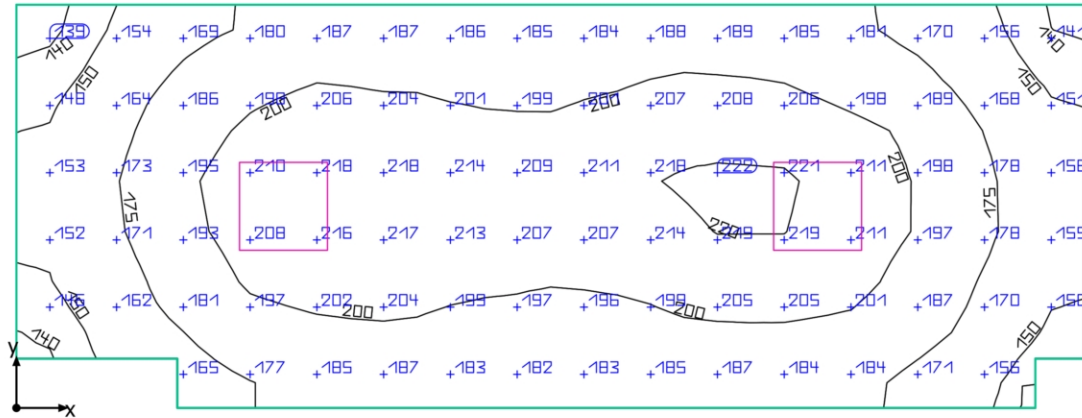
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	119 lx (≥ 100 lx) ✓	73.7 lx	166 lx	0.62	0.44	S186

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	188 lx	≥ 100 lx	✓	S188
	g_1	0.72	-	-	S188
Consumption values	Consumption	120 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	6.57 W/m ²	-	-	
		3.49 W/m ² /100 lx	-	-	

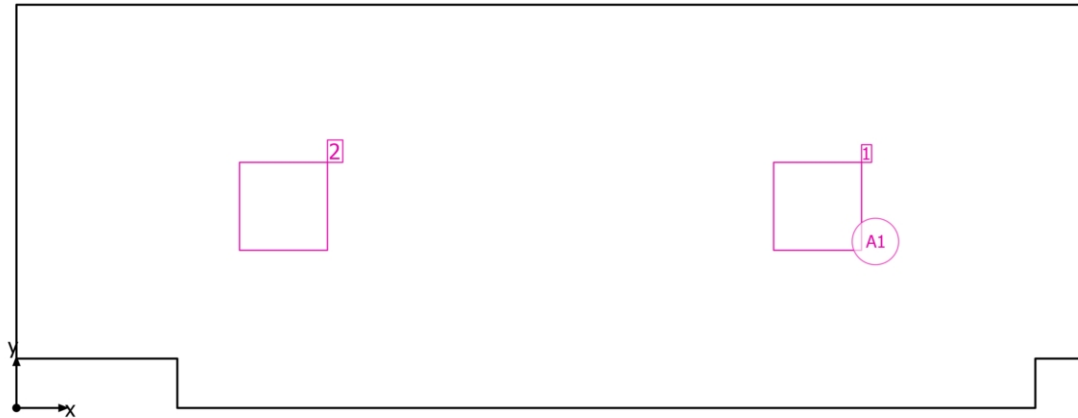
Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

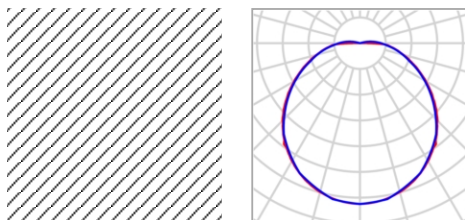
Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan



Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

2 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	3.735 m / 0.940 m / 3.120 m	3.735 m	0.940 m	3.120 m	1
X-direction	2 pcs., Centre - centre, 2.490 m	1.245 m	0.940 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, 1.880 m				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

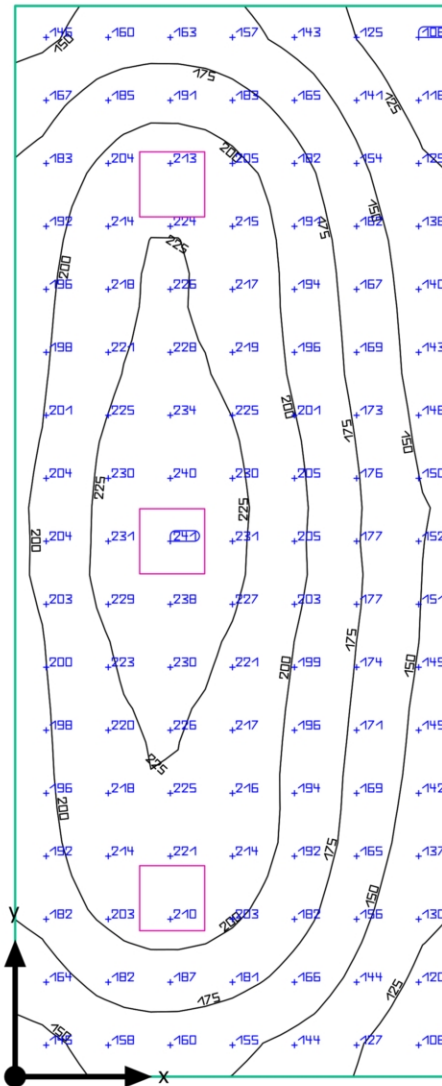
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	188 lx (≥ 100 lx) ✓	136 lx	221 lx	0.72	0.62	S188

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

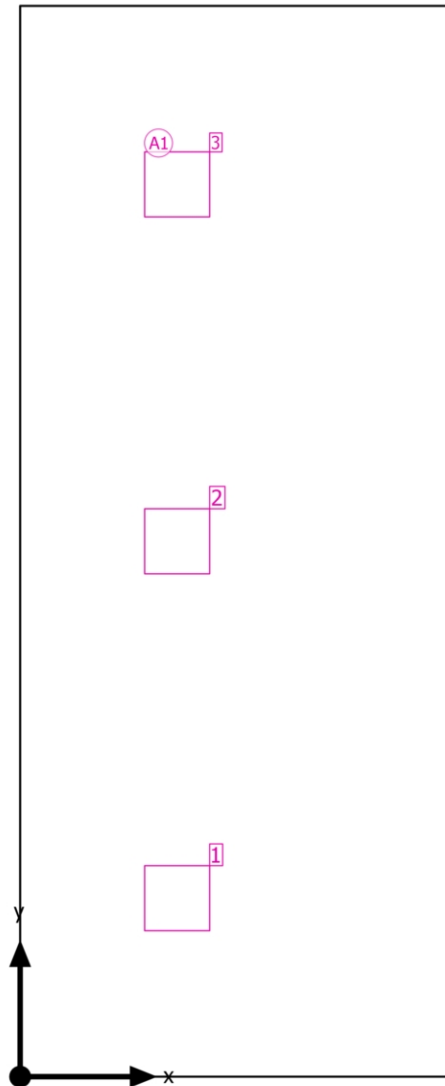
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	186 lx	≥ 100 lx	✓	S190
	g_1	0.55	-	-	S190
Consumption values	Consumption	170 kWh/a	max. 650 kWh/a	✓	
Lighting power density	Room	4.87 W/m ²	-	-	
		2.62 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

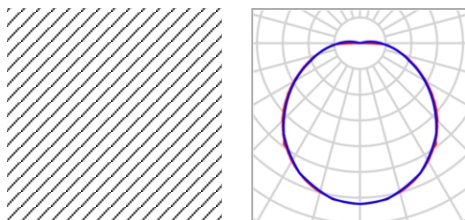
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan

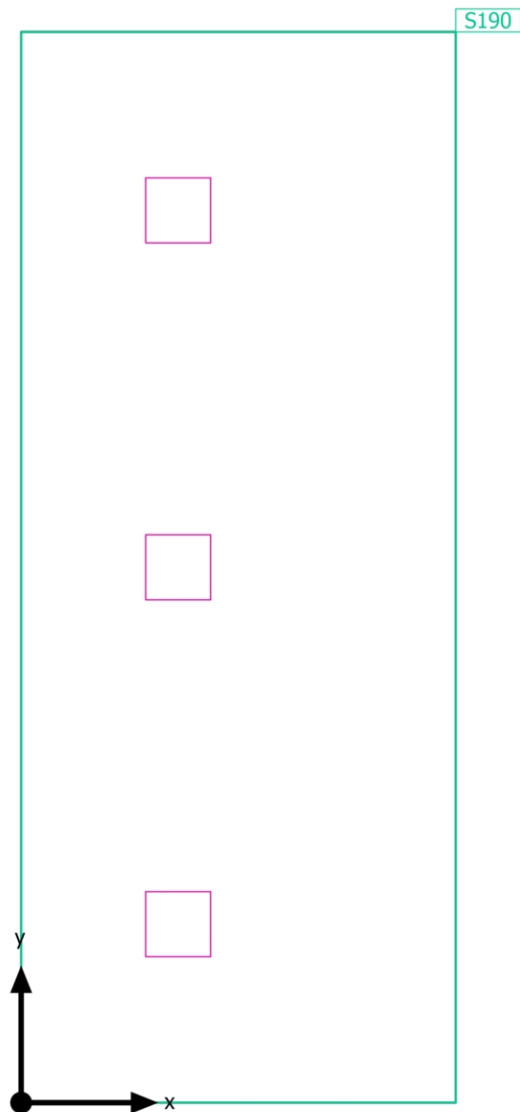


Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

3 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	0.990 m / 1.125 m / 3.120 m	0.990 m	1.125 m	3.120 m	1
X-direction	3 pcs., Centre - centre, Distances not equal	0.990 m	3.375 m	3.120 m	2
		0.990 m	5.625 m	3.120 m	3
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects

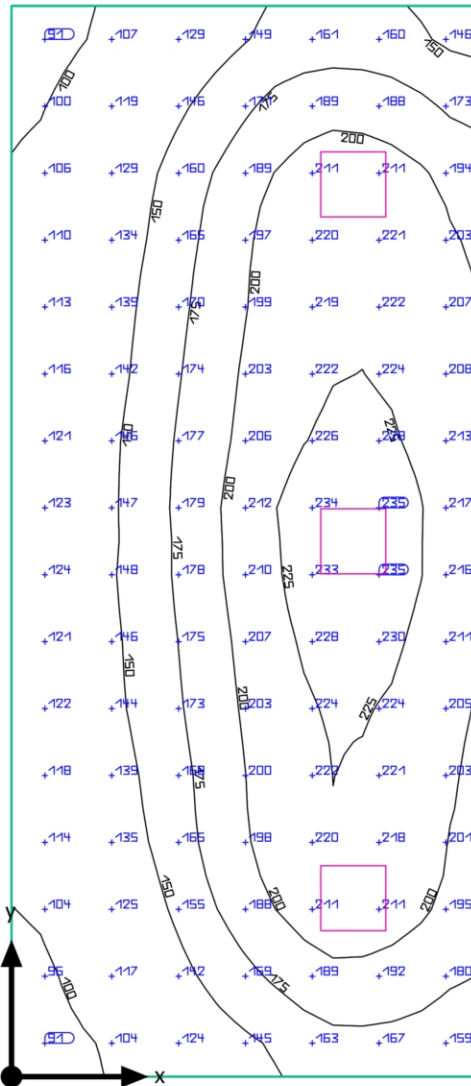
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	186 lx (≥ 100 lx) ✓	102 lx	241 lx	0.55	0.42	S190

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Summary

Results

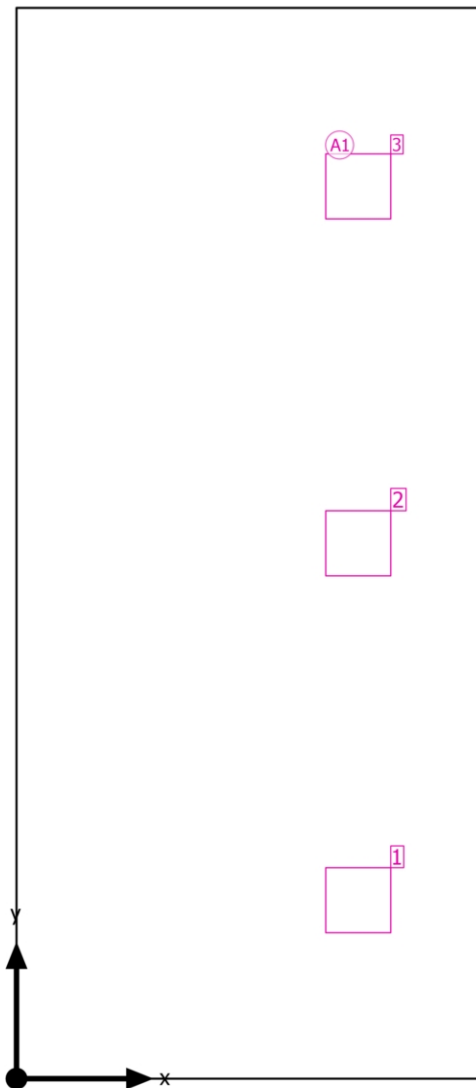
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	173 lx	≥ 100 lx	✓	S192
	g_1	0.50	-	-	S192
Consumption values	Consumption	170 kWh/a	max. 700 kWh/a	✓	
Lighting power density	Room	4.52 W/m ²	-	-	
		2.61 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Luminaire list

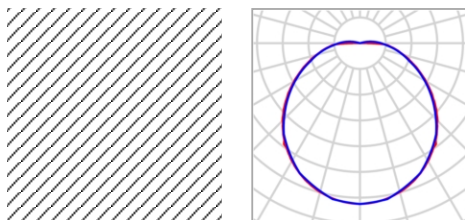
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	THORNeco	96631866 (4000 K)	LENA VARIO LED 380 2500 830/35/40	30.0 W	2550 lm	85.0 lm/W

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Luminaire layout plan

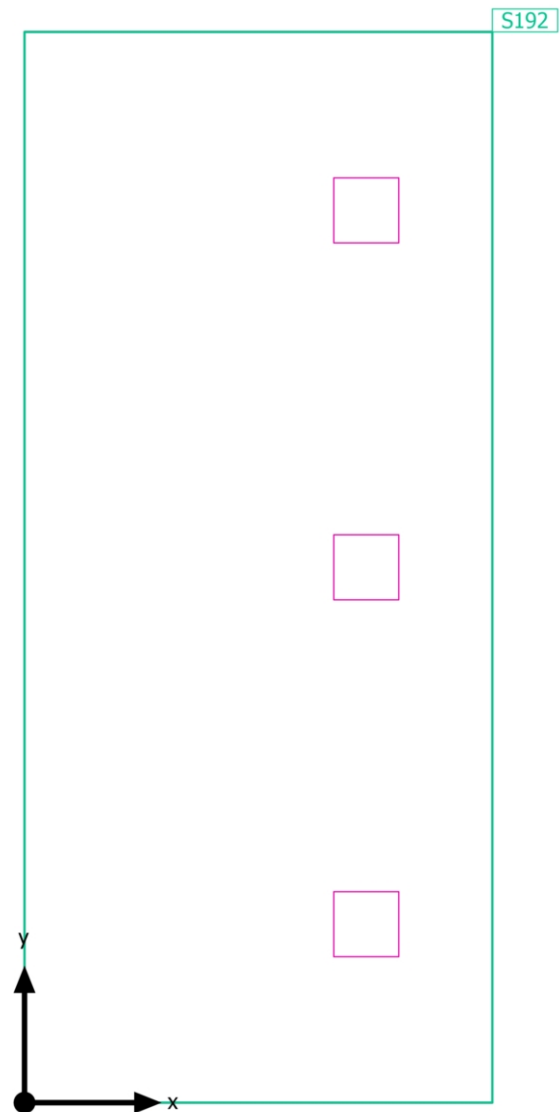


Manufacturer	THORNeco
Article No.	96631866 (4000 K)
Article name	LENA VARIO LED 380 2500 830/35/40

3 x THORNeco LENA VARIO LED 380 2500 830/35/40

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.155 m / 1.125 m / 3.120 m	2.155 m	1.125 m	3.120 m	1
X-direction	3 pcs., Centre - centre, Distances not equal	2.155 m	3.375 m	3.120 m	2
		2.155 m	5.625 m	3.120 m	3
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Sanitarije
Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Sanitarije

Calculation objects

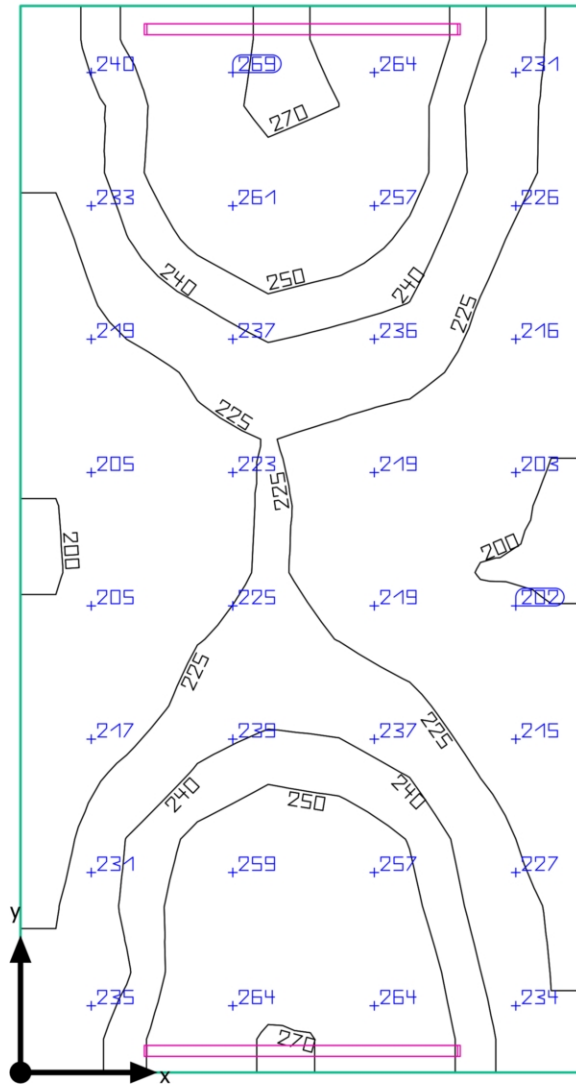
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Sanitarije) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	173 lx (≥ 100 lx) ✓	87.3 lx	237 lx	0.50	0.37	S192

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Rest rooms

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Summary



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	233 lx	≥ 200 lx	✓	S156
	g_1	0.85	-	-	S156
Consumption values	Consumption	58 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	8.04 W/m ²	-	-	
		3.44 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

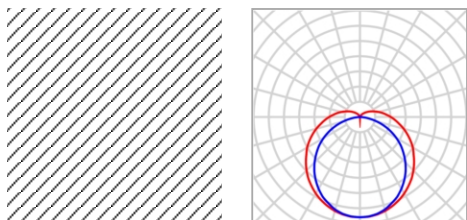
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

Sportska dvorana Borovo naselje · 1. kat · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Luminaire layout plan



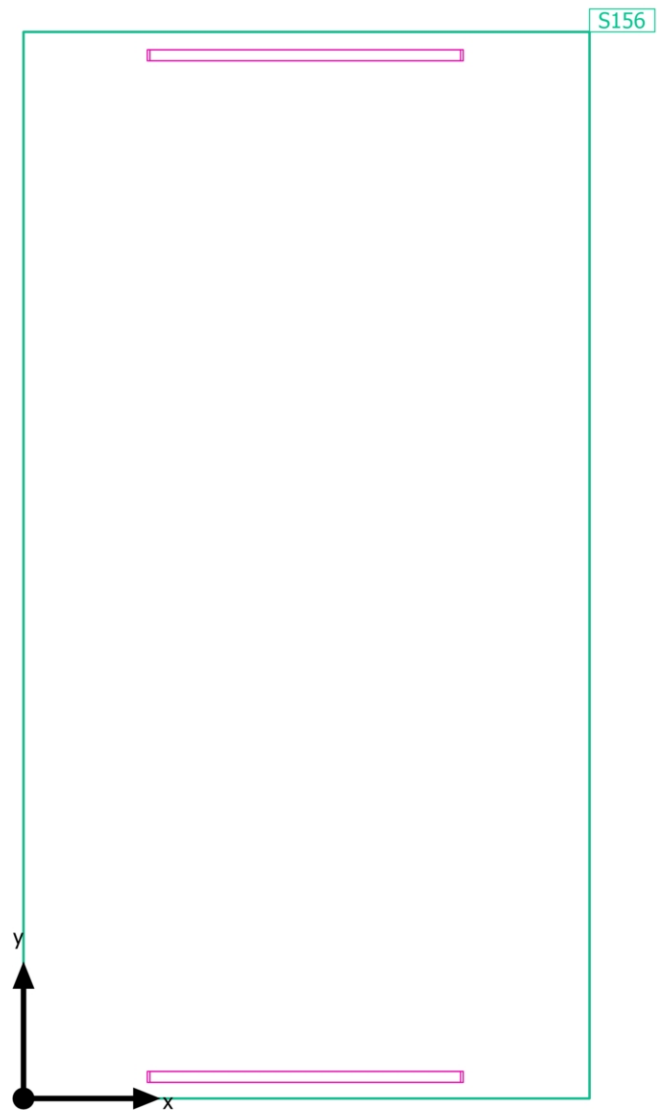
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

2 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.070 m / 3.961 m / 3.120 m	1.070 m	3.961 m	3.120 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.070 m	0.082 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects

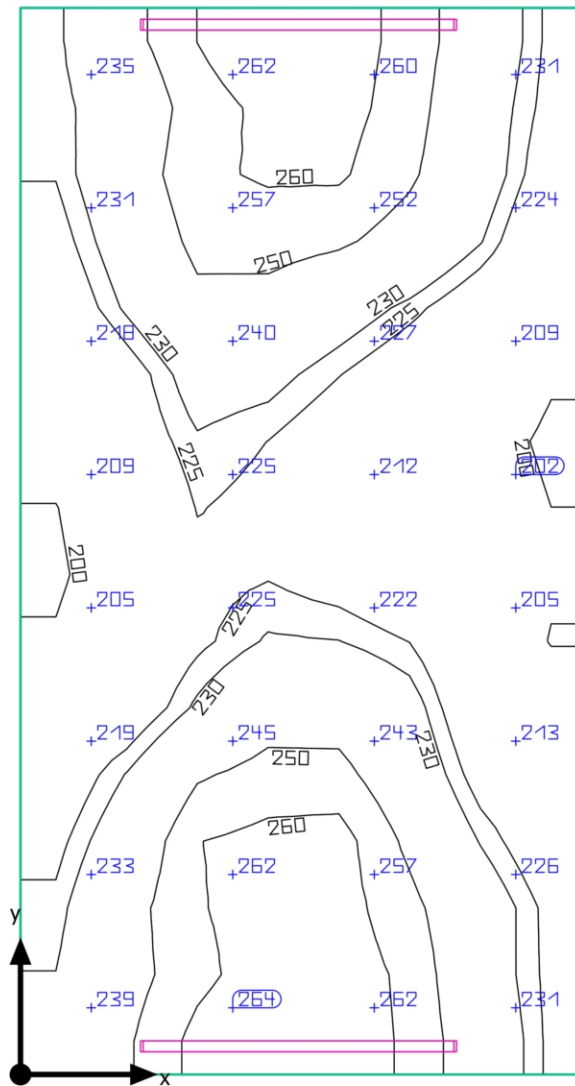
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	233 lx (≥ 200 lx) ✓	198 lx	271 lx	0.85	0.73	S156

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Summary



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	233 lx	≥ 200 lx	✓	S160
	g_1	0.85	-	-	S160
Consumption values	Consumption	58 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	8.04 W/m ²	-	-	
		3.45 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

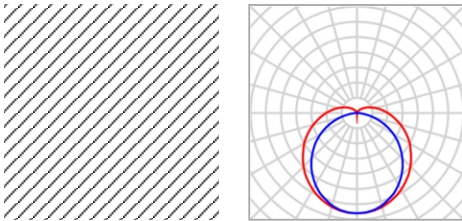
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

Sportska dvorana Borovo naselje · 1. kat · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Svlačionica
Luminaire layout plan



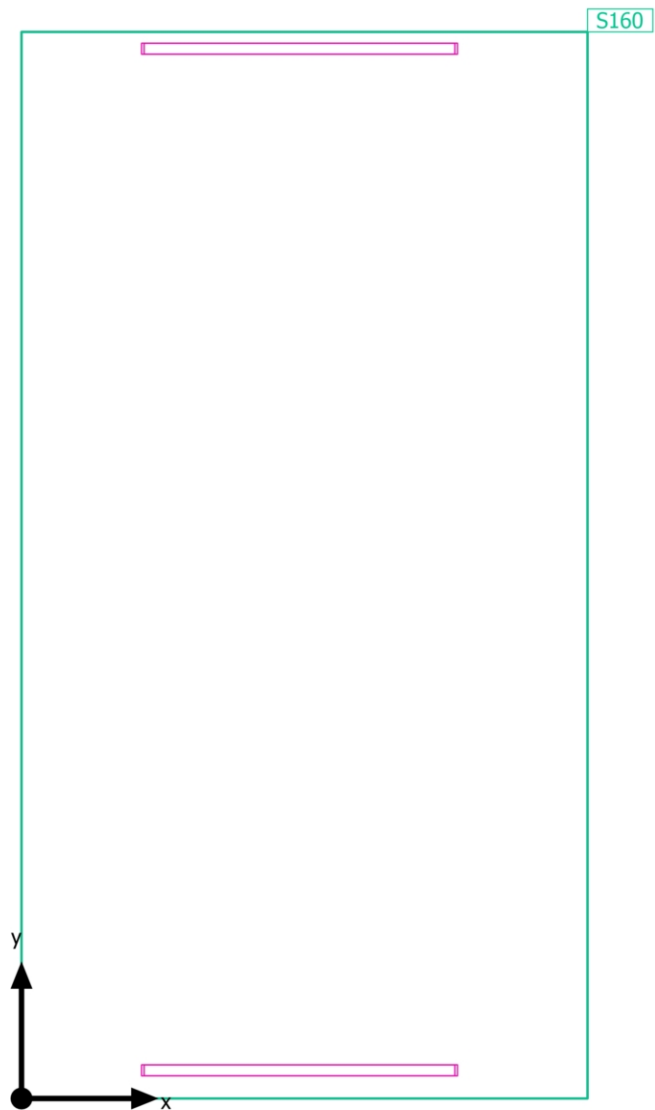
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

2 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.056 m / 3.986 m / 3.120 m	1.056 m	3.986 m	3.120 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.056 m	0.107 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	233 lx (≥ 200 lx) ✓	198 lx	270 lx	0.85	0.73	S160

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Summary

Results

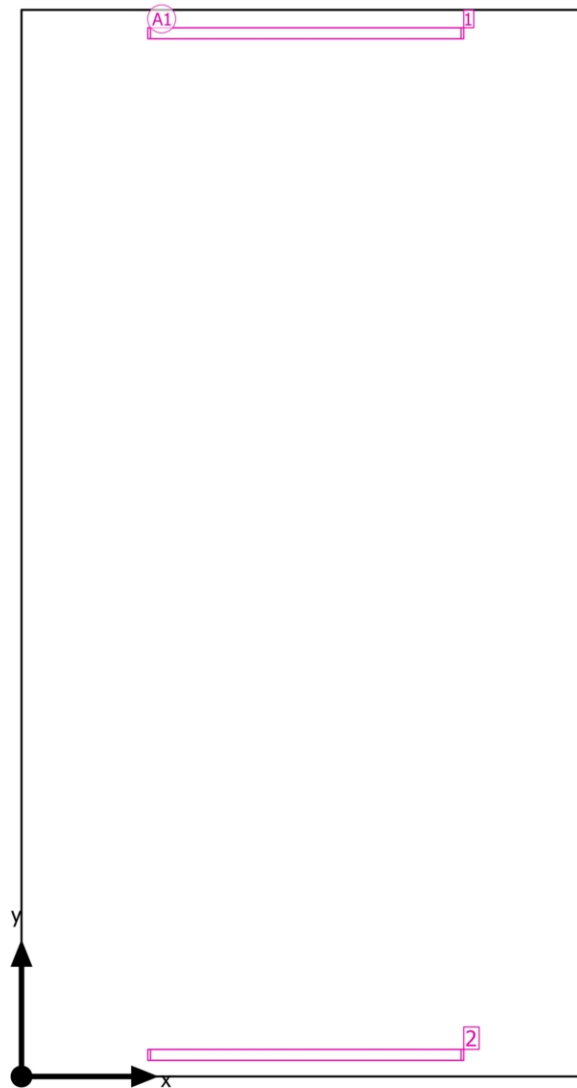
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	233 lx	≥ 200 lx	✓	S158
	g_1	0.84	-	-	S158
Consumption values	Consumption	58 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	8.04 W/m ²	-	-	
		3.44 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Luminaire list

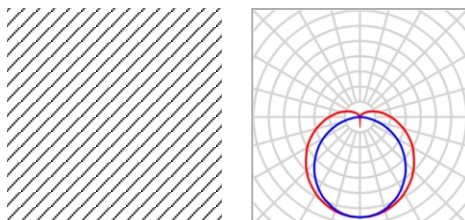
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

Sportska dvorana Borovo naselje · 1. kat · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Luminaire layout plan



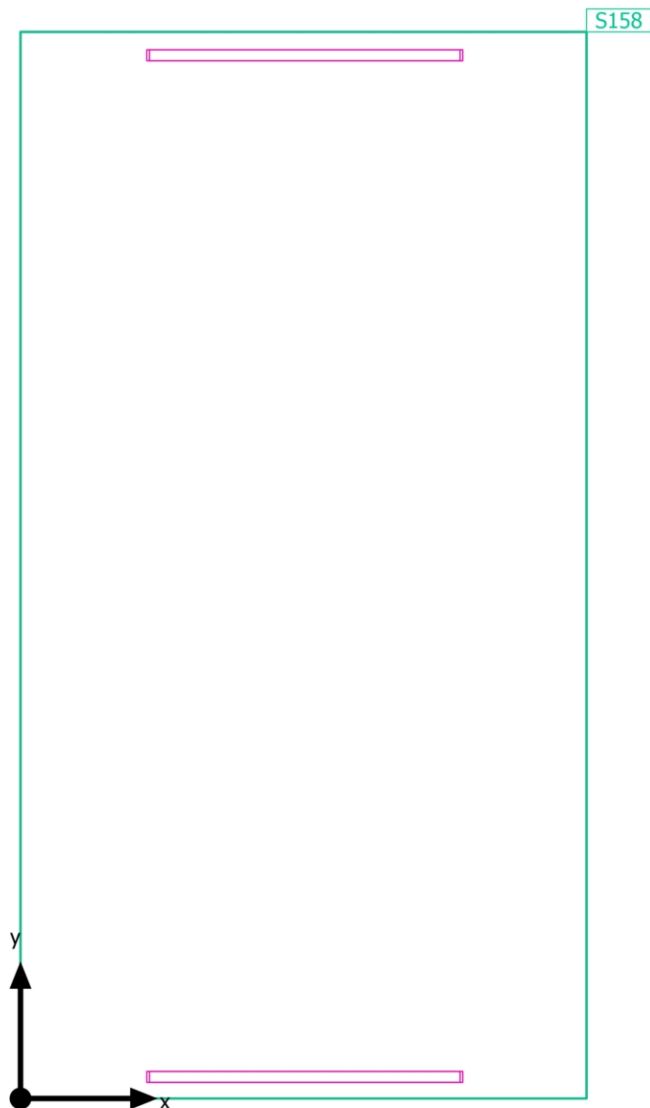
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

2 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.080 m / 3.961 m / 3.120 m	1.080 m	3.961 m	3.120 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.080 m	0.082 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects

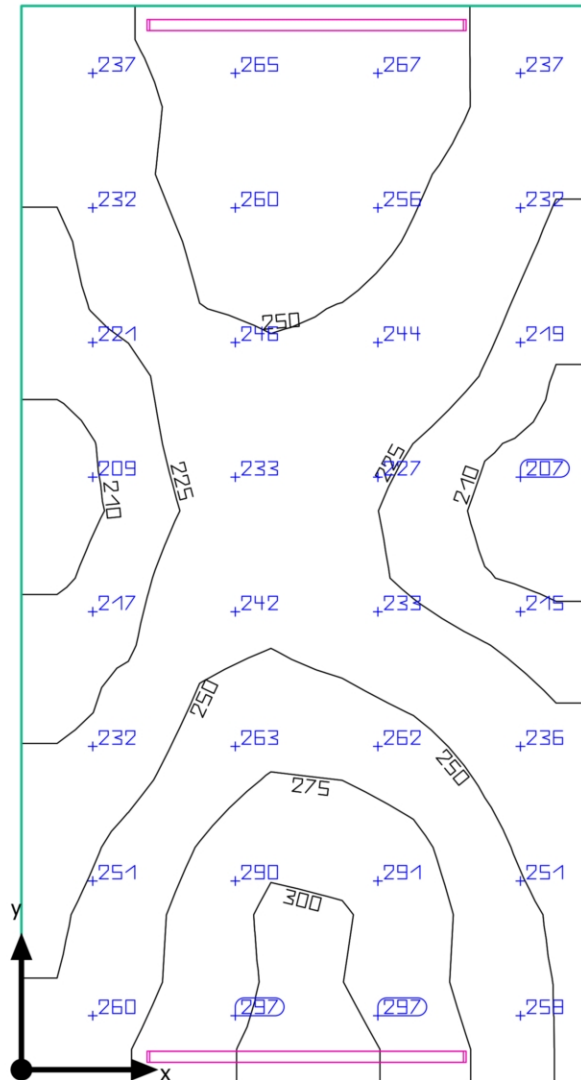
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	233 lx (≥ 200 lx) ✓	196 lx	273 lx	0.84	0.72	S158

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Summary



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	247 lx	≥ 200 lx	✓	S154
	g_1	0.83	-	-	S154
Consumption values	Consumption	58 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	8.06 W/m ²	-	-	
		3.27 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

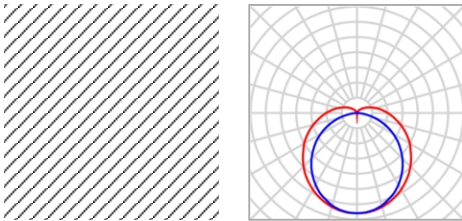
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

Sportska dvorana Borovo naselje · 1. kat · Svlačionica
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Svlačionica
Luminaire layout plan



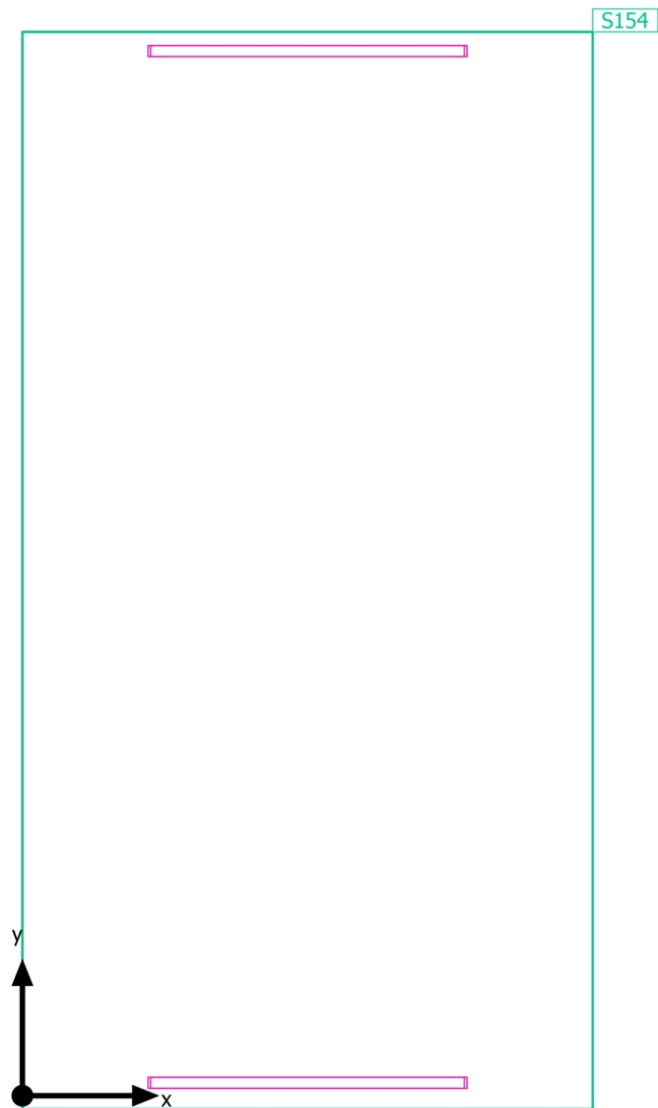
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

2 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.072 m / 3.928 m / 3.120 m	1.072 m	3.928 m	3.120 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.072 m	0.049 m	3.120 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Svlačionica

Calculation objects

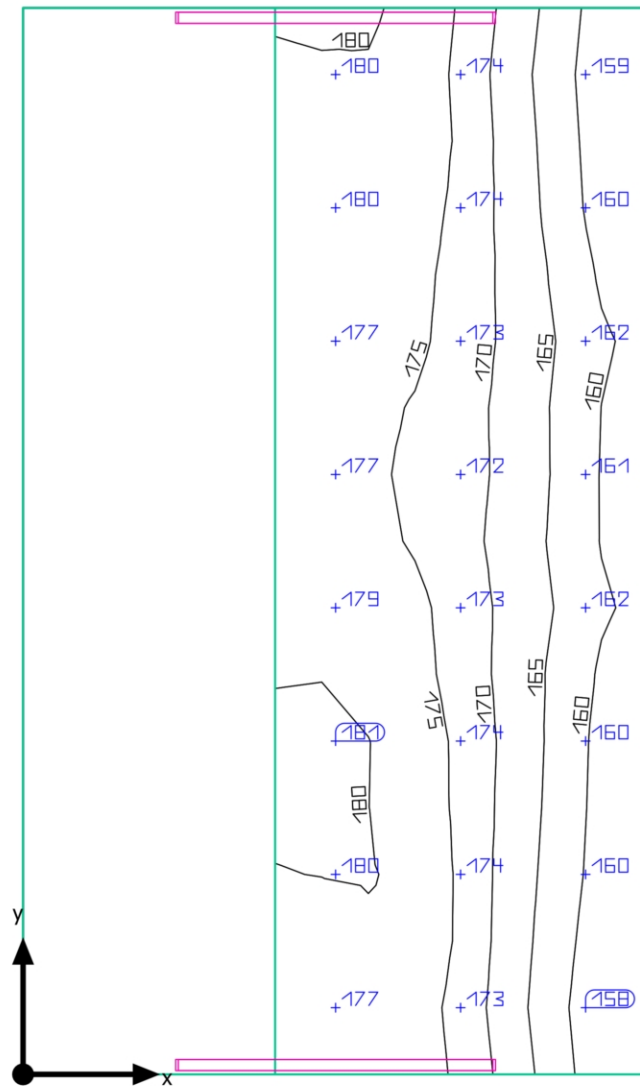
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Svlačionica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	247 lx (≥ 200 lx) ✓	204 lx	306 lx	0.83	0.67	S154

Utilisation profile: General areas inside buildings - Rest, sanitation and first aid rooms, Cloakrooms, washrooms, bathrooms, toilets

Sportska dvorana Borovo naselje · 1. kat · Ulaz

Summary



Sportska dvorana Borovo naselje · 1. kat · Ulaz

Summary

Results

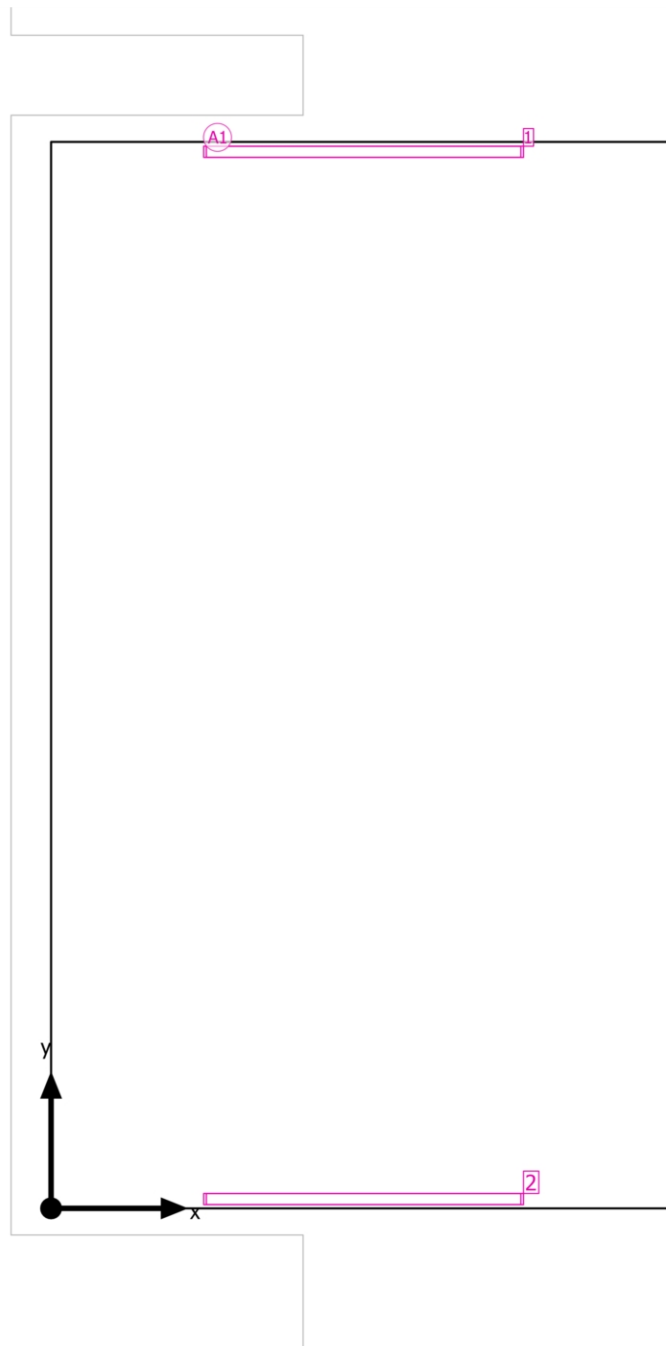
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	171 lx	≥ 100 lx	✓	S214
	g_1	0.91	-	-	S214
Consumption values	Consumption	77 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	7.46 W/m ²	-	-	
		4.37 W/m ² /100 lx	-	-	

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

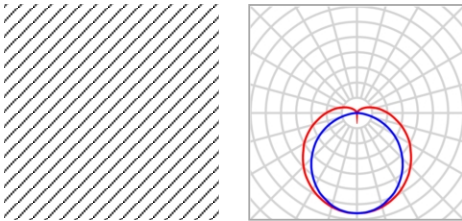
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

Sportska dvorana Borovo naselje · 1. kat · Ulaz
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Ulaz

Luminaire layout plan



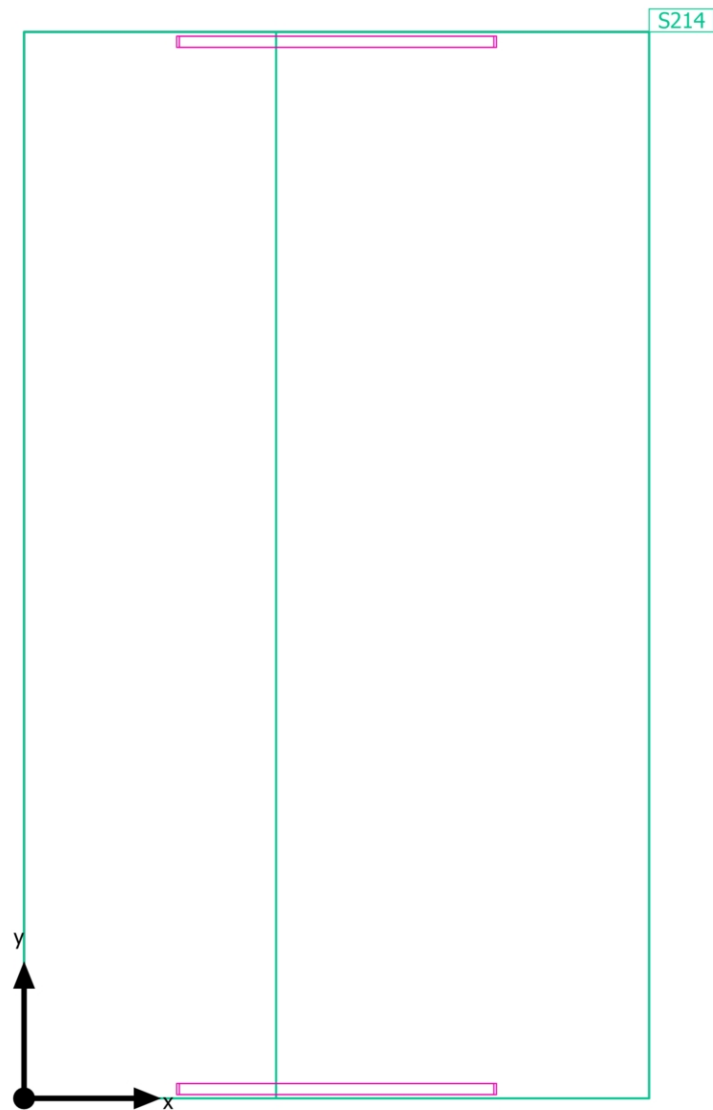
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

2 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.172 m / 3.963 m / 3.060 m	1.172 m	3.963 m	3.060 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.172 m	0.035 m	3.060 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Ulaz

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Ulaz

Calculation objects

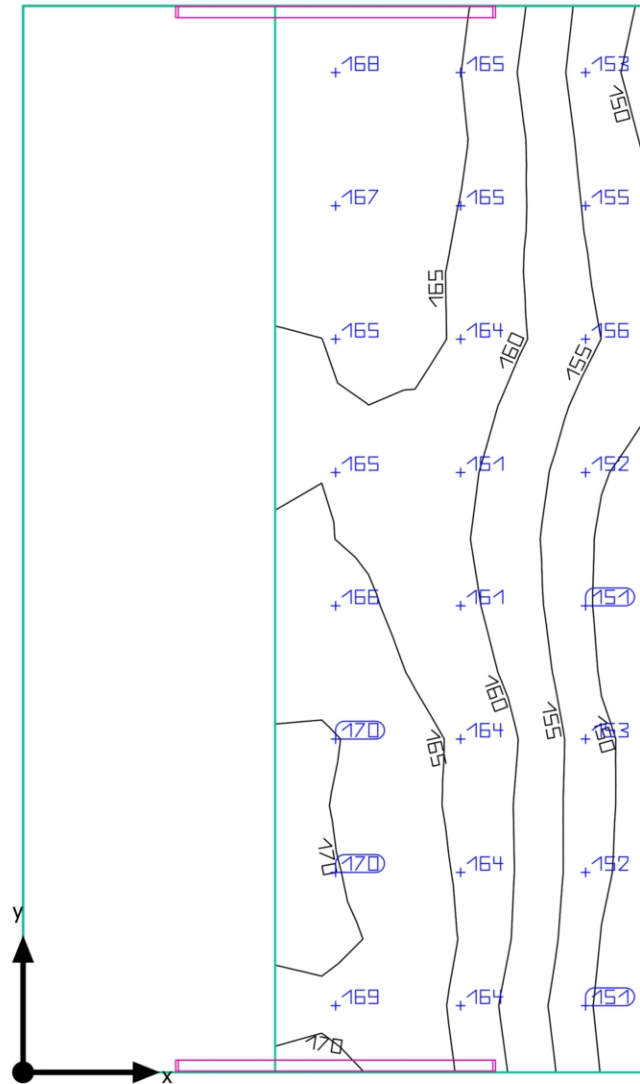
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Ulaz) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	171 lx (≥ 100 lx) ✓	155 lx	181 lx	0.91	0.86	S214

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · 1. kat · Ulaz

Summary



Sportska dvorana Borovo naselje · 1. kat · Ulaz

Summary

Results

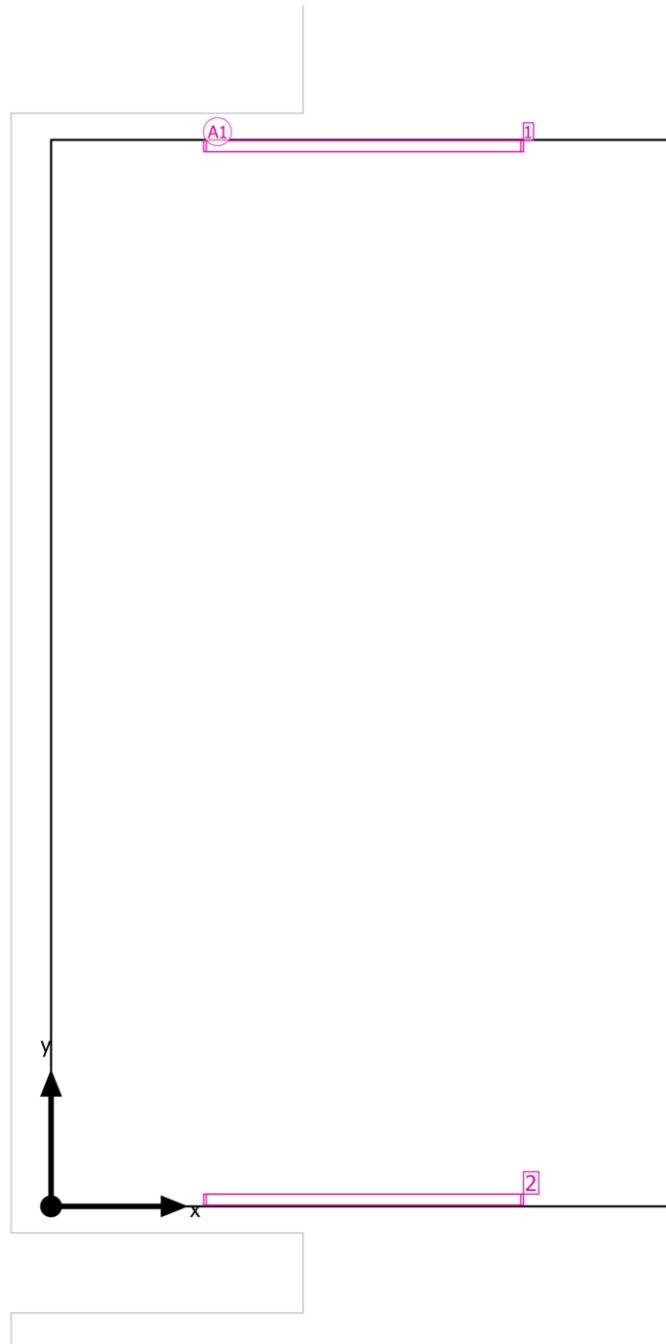
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	161 lx	≥ 100 lx	✓	S213
	g_1	0.92	-	-	S213
Consumption values	Consumption	77 kWh/a	max. 350 kWh/a	✓	
Lighting power density	Room	7.46 W/m ²	-	-	
		4.63 W/m ² /100 lx	-	-	

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Luminaire list

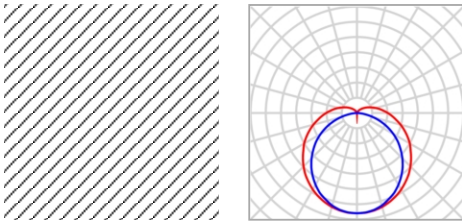
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	THORNeco	96666098 (STD - standard)	EMMA LED 1200 4000 840	35.0 W	4001 lm	114.3 lm/W

Sportska dvorana Borovo naselje · 1. kat · Ulaz
Luminaire layout plan



Sportska dvorana Borovo naselje · 1. kat · Ulaz

Luminaire layout plan



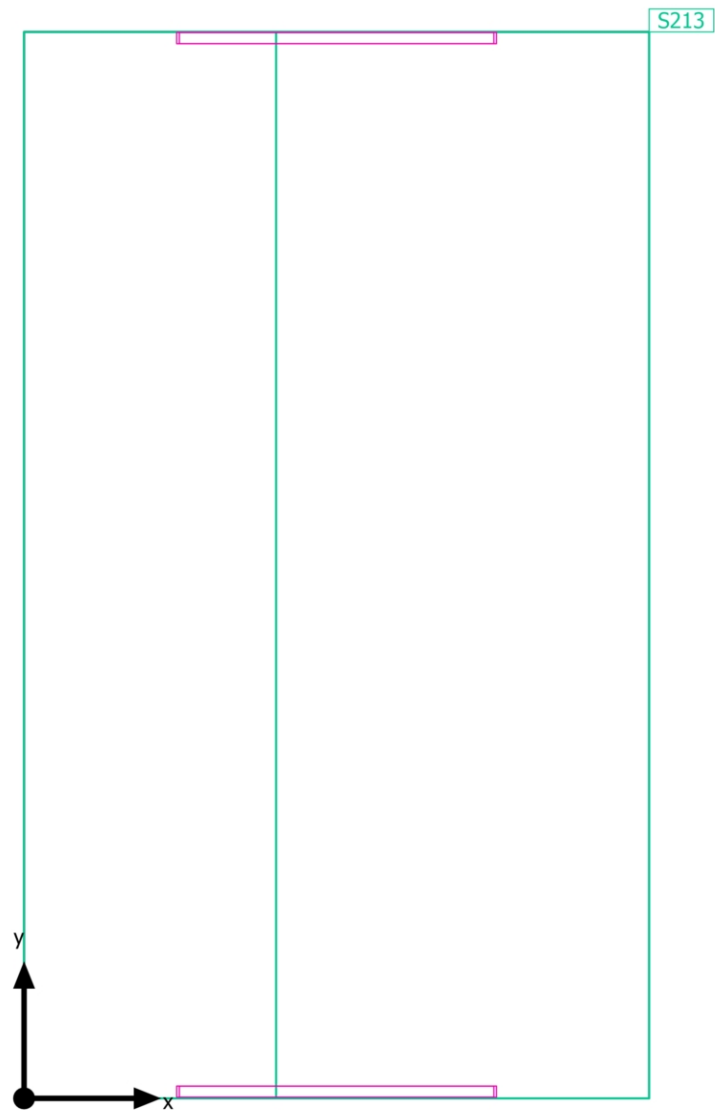
Manufacturer	THORNeco
Article No.	96666098 (STD - standard)
Article name	EMMA LED 1200 4000 840

2 x THORNeco EMMA LED 1200 4000 840

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.172 m / 3.977 m / 3.060 m	1.172 m	3.977 m	3.060 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.172 m	0.025 m	3.060 m	2
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Sportska dvorana Borovo naselje · 1. kat · Ulaz

Calculation objects



Sportska dvorana Borovo naselje · 1. kat · Ulaz

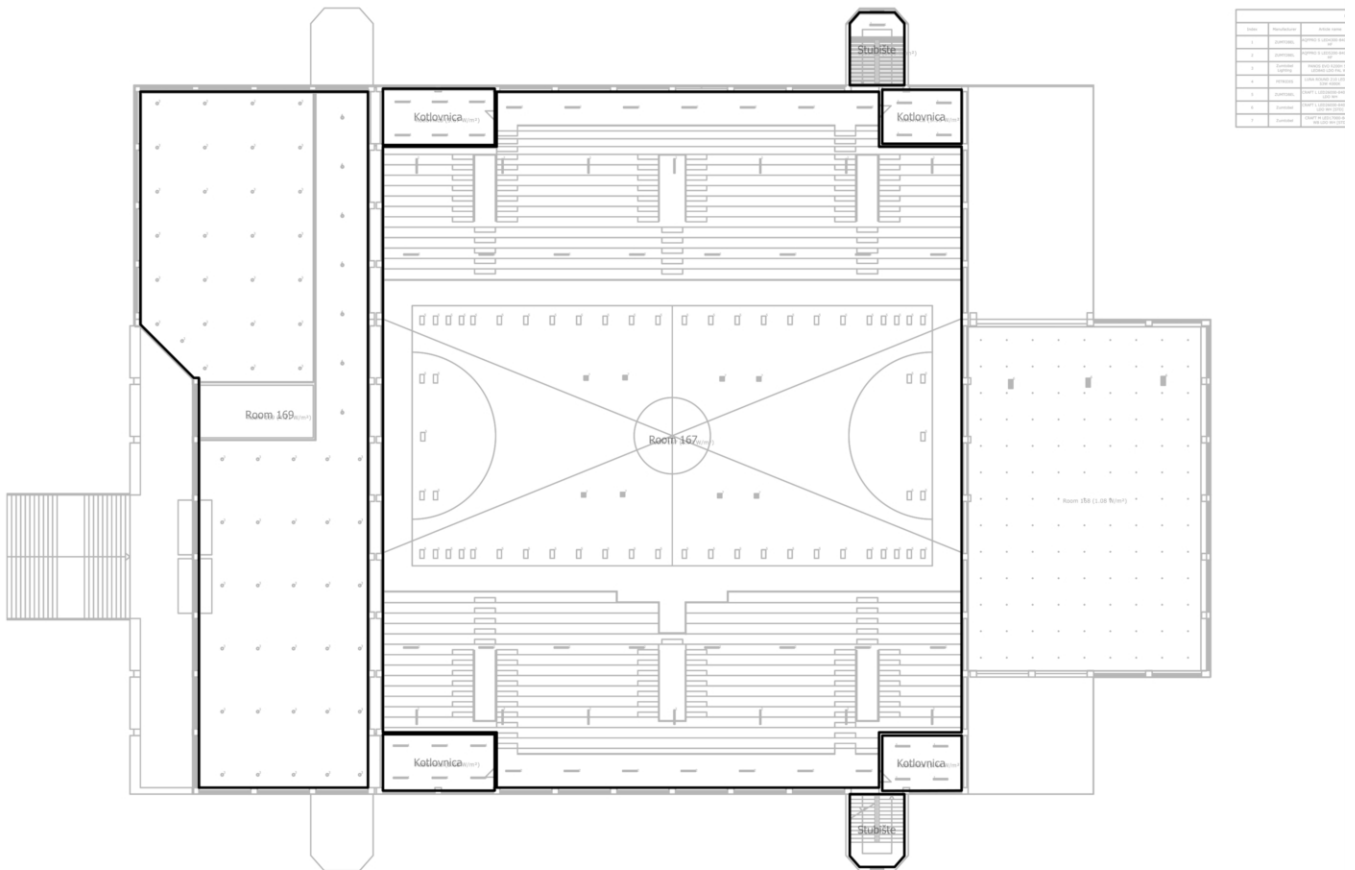
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Pod (Ulaz) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	161 lx (≥ 100 lx) ✓	148 lx	171 lx	0.92	0.87	S213

Utilisation profile: Traffic zones inside buildings, Circulation areas and corridors

Sportska dvorana Borovo naselje · 2. kat
Room List (Energy evaluation)



Sportska dvorana Borovo naselje · 2. kat
Room List (Energy evaluation)

Kotlovnica

P_{total} 211.2 W	A_{Room} 37.21 m ²	Lighting power density 5.68 W/m ² = 2.15 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 264 lx
-------------------------------------	---	---	--

pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
6	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Kotlovnica

P_{total} 140.8 W	A_{Room} 25.38 m ²	Lighting power density 5.55 W/m ² = 2.43 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 229 lx
-------------------------------------	---	---	--

pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
4	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Kotlovnica

P_{total} 140.8 W	A_{Room} 25.86 m ²	Lighting power density 5.44 W/m ² = 2.39 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 228 lx
-------------------------------------	---	---	--

pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
4	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Sportska dvorana Borovo naselje · 2. kat
Room List (Energy evaluation)

Kotlovnica

P_{total} 211.2 W	A_{Room} 37.24 m ²	Lighting power density 5.67 W/m ² = 2.15 W/m ² /100 lx (Room)	E_{perpendicular (Workplane)} 263 lx
-------------------------------------	---	---	--

pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
6	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

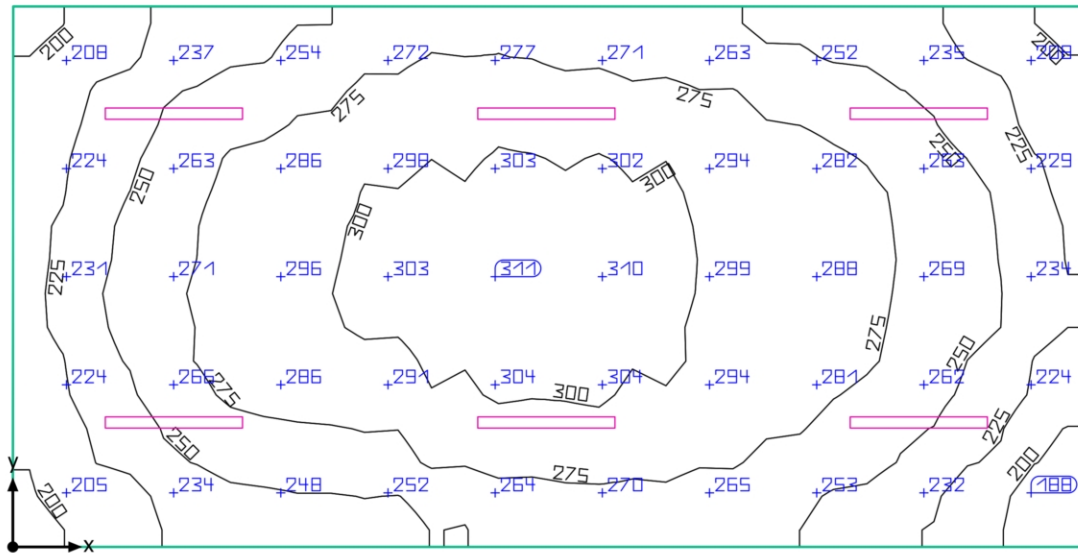
Stubište

P_{total} 70.4 W	A_{Room} 22.88 m ²	Lighting power density 3.08 W/m ² (Room)
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pcs.	Manufacturer	Article No.	Article name	P	Φ _{Luminaire}
2	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	264 lx	≥ 200 lx	✓	S60
	g_1	0.70	-	-	S60
Consumption values	Consumption	35 kWh/a	max. 1350 kWh/a	✓	
Lighting power density	Room	5.68 W/m ²	-	-	
		2.15 W/m ² /100 lx	-	-	

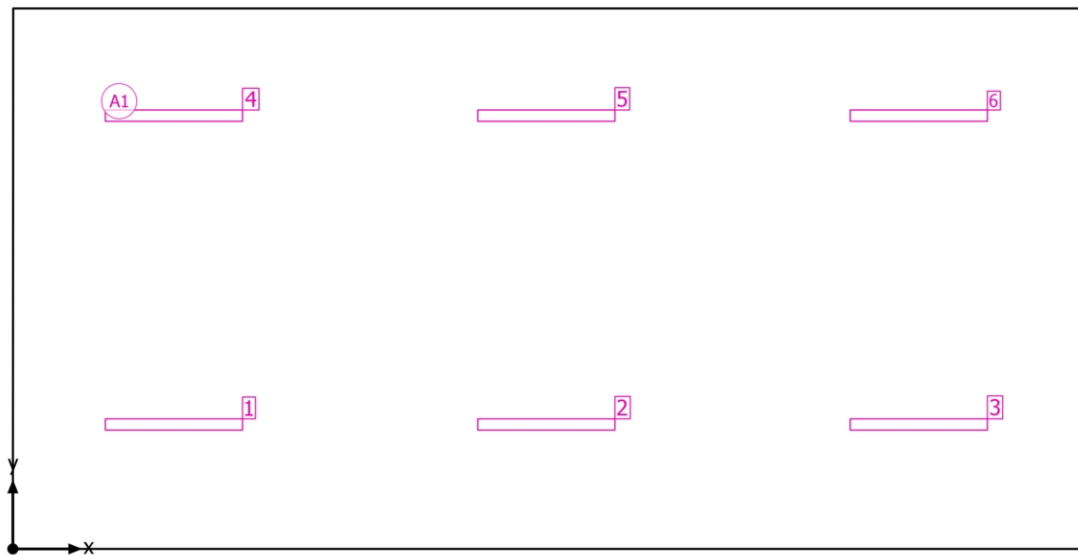
Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
6	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

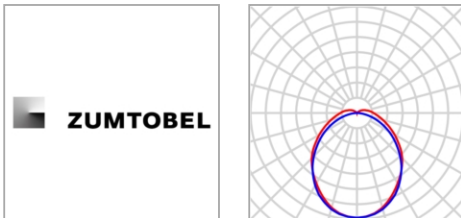
Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Luminaire layout plan



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Luminaire layout plan



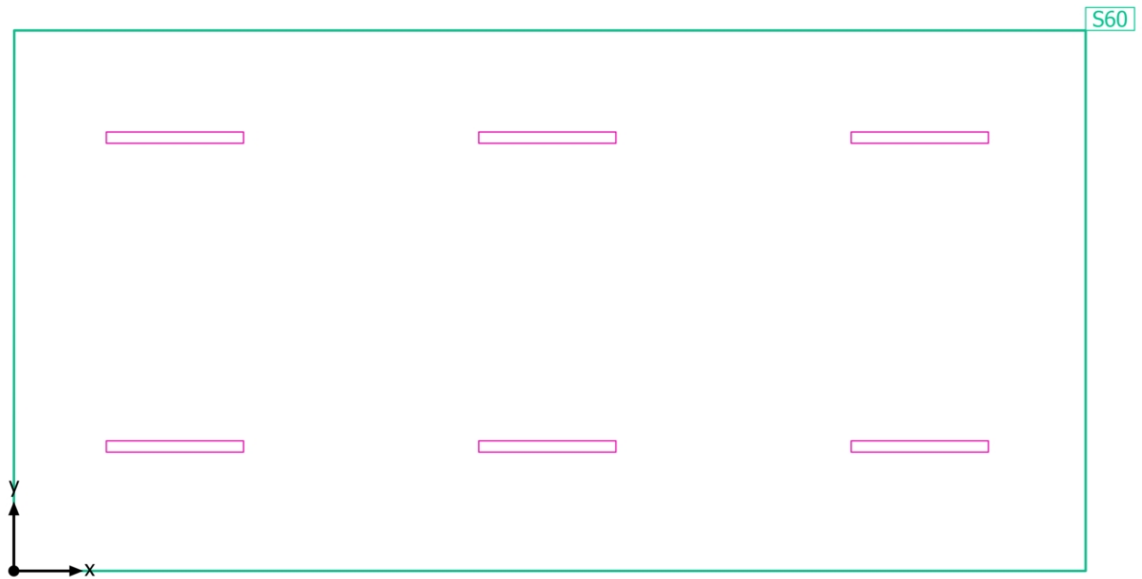
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

6 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.292 m / 0.997 m / 4.760 m	1.292 m	0.997 m	4.760 m	1
X-direction	3 pcs., Centre - centre, Distances not equal	4.278 m	0.997 m	4.760 m	2
		7.265 m	0.997 m	4.760 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	1.292 m	3.471 m	4.760 m	4
		4.278 m	3.471 m	4.760 m	5
Arrangement	A1	7.265 m	3.471 m	4.760 m	6

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects

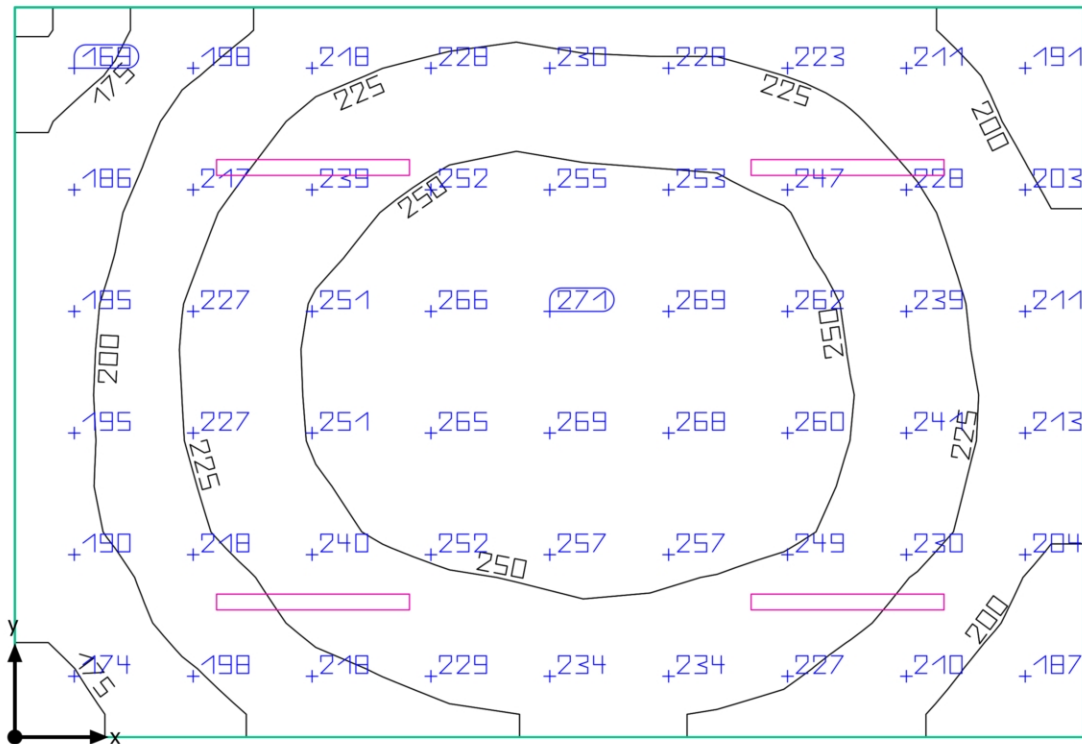
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	264 lx (≥ 200 lx) ✓	184 lx	311 lx	0.70	0.59	S60

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary

Results

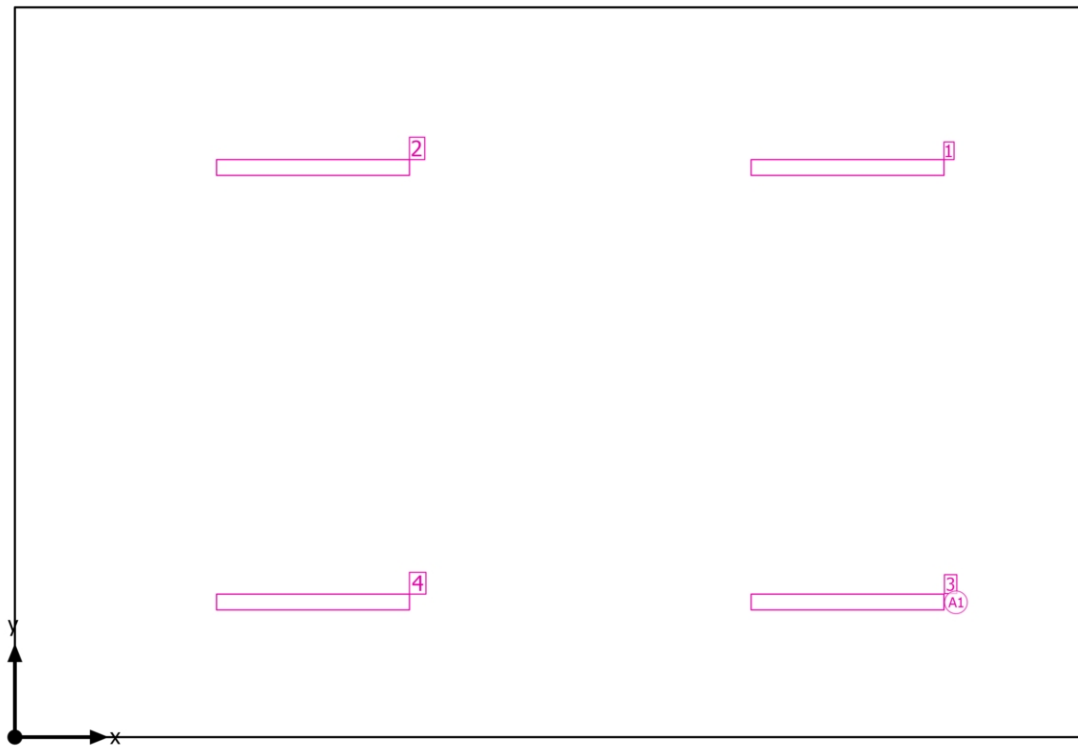
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	229 lx	≥ 200 lx	✓	S58
	g_1	0.70	-	-	S58
Consumption values	Consumption	23 kWh/a	max. 900 kWh/a	✓	
Lighting power density	Room	5.55 W/m ²	-	-	
		2.43 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

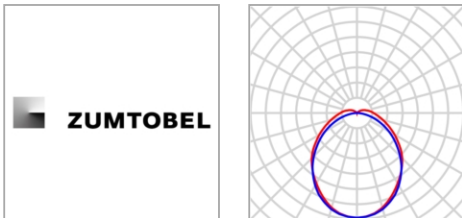
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica
Luminaire layout plan



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica
Luminaire layout plan



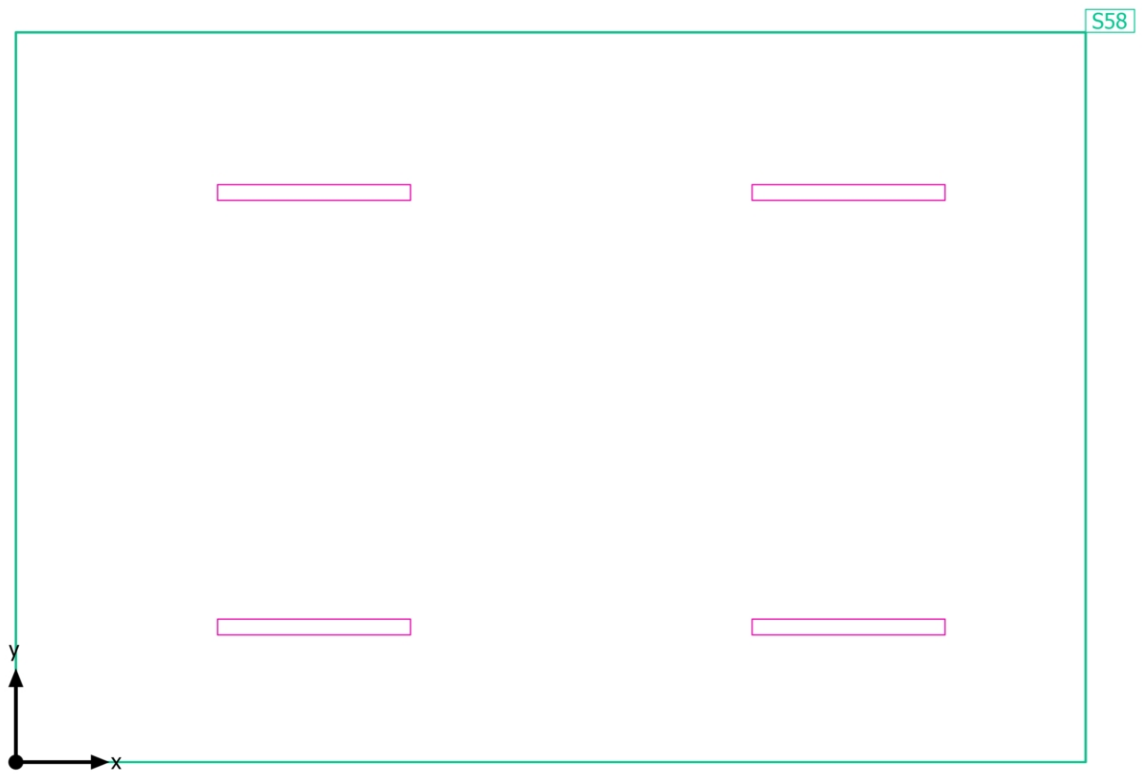
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

4 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	4.748 m / 3.247 m / 4.760 m	4.748 m	3.247 m	4.760 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.700 m	3.247 m	4.760 m	2
		4.748 m	0.770 m	4.760 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	1.700 m	0.770 m	4.760 m	4
Arrangement	A1				

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects

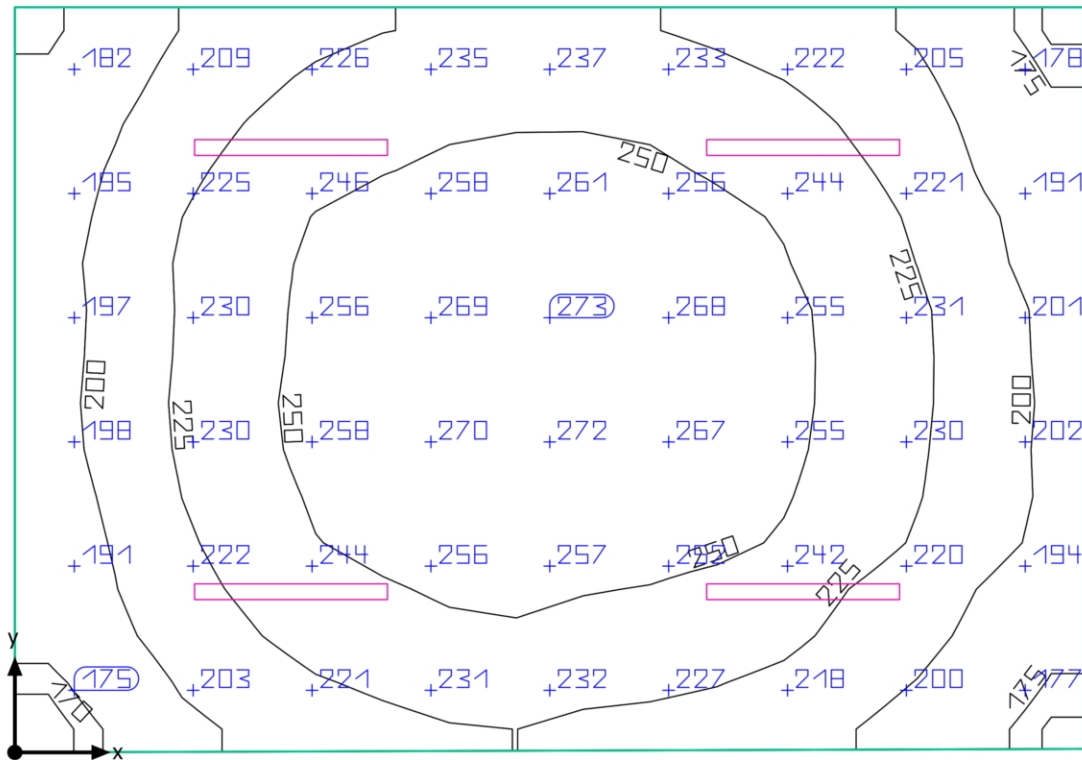
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	229 lx (≥ 200 lx) ✓	160 lx	271 lx	0.70	0.59	S58

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary

Results

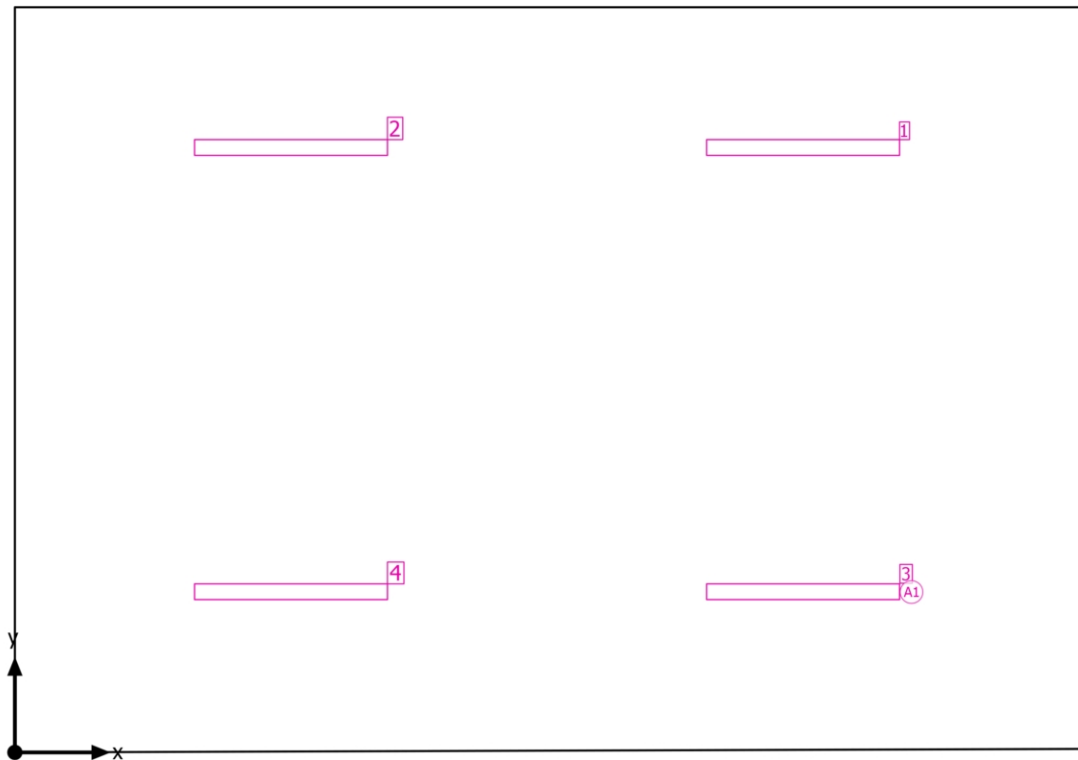
	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	228 lx	≥ 200 lx	✓	S62
	g_1	0.73	-	-	S62
Consumption values	Consumption	23 kWh/a	max. 950 kWh/a	✓	
Lighting power density	Room	5.44 W/m ²	-	-	
		2.39 W/m ² /100 lx	-	-	

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

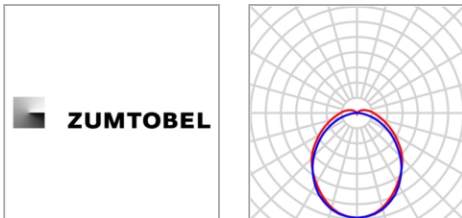
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica
Luminaire layout plan



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica
Luminaire layout plan



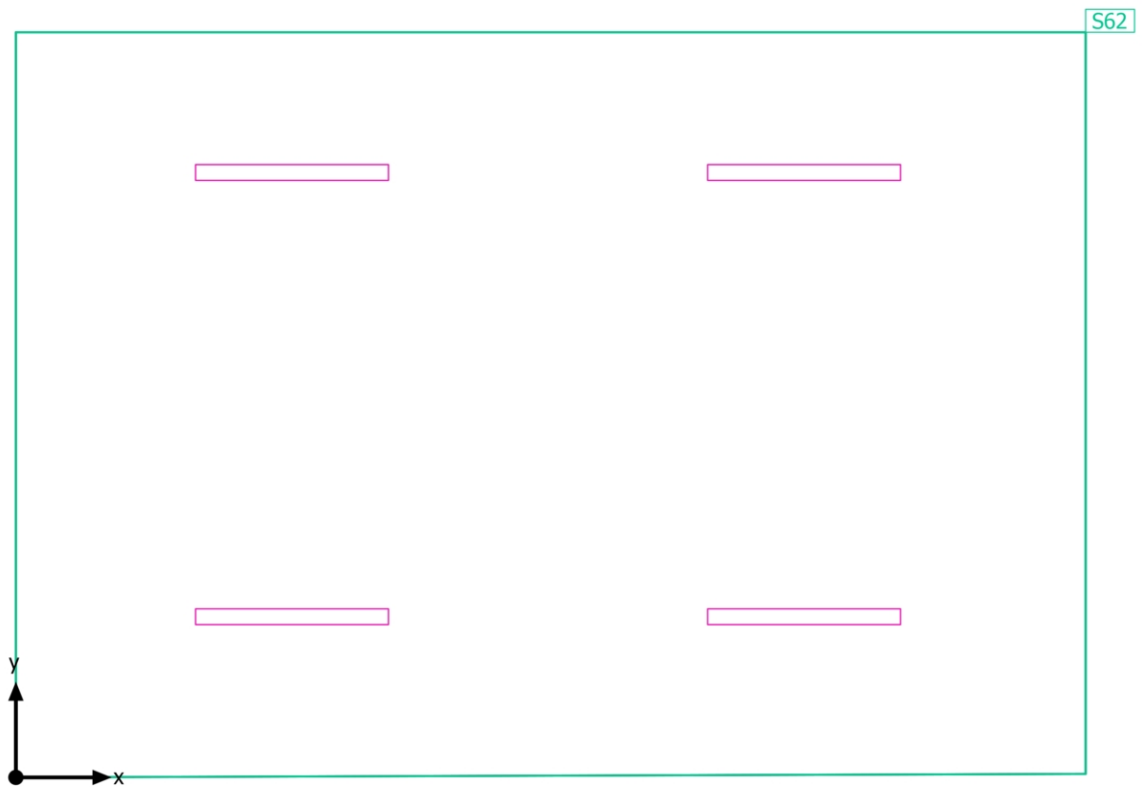
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

4 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	4.494 m / 3.450 m / 4.760 m	4.494 m	3.450 m	4.760 m	1
X-direction	2 pcs., Centre - centre, Distances not equal	1.575 m	3.450 m	4.760 m	2
		4.494 m	0.917 m	4.760 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	1.575 m	0.917 m	4.760 m	4
Arrangement	A1				

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects

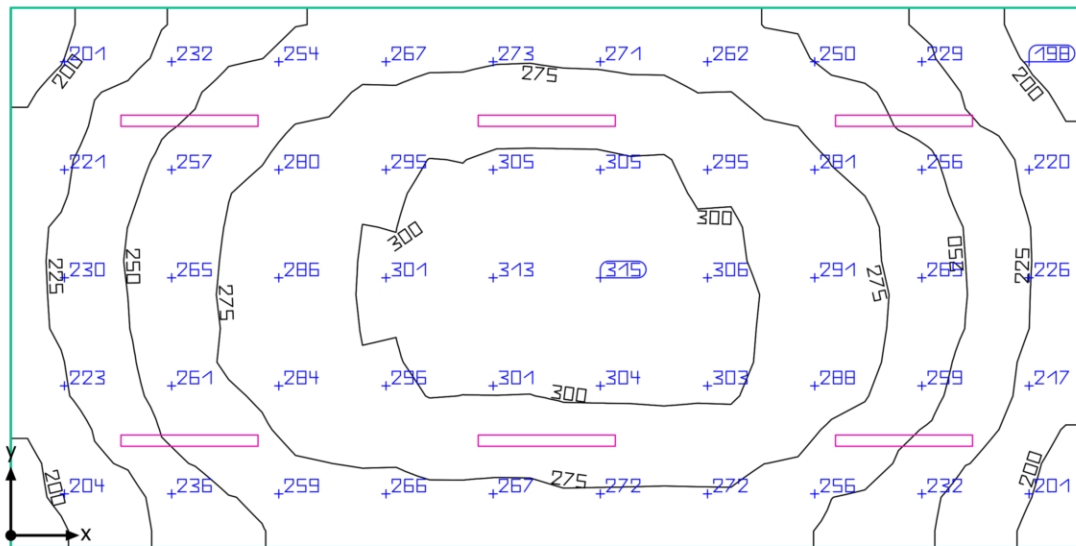
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	228 lx (≥ 200 lx) ✓	166 lx	273 lx	0.73	0.61	S62

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Summary

Results

	Symbol	Calculated	Target	Check	Index
Workplane	$\bar{E}_{\text{perpendicular}}$	263 lx	≥ 200 lx	✓	S56
	g_1	0.71	-	-	S56
Consumption values	Consumption	35 kWh/a	max. 1350 kWh/a	✓	
Lighting power density	Room	5.67 W/m ²	-	-	
		2.15 W/m ² /100 lx	-	-	

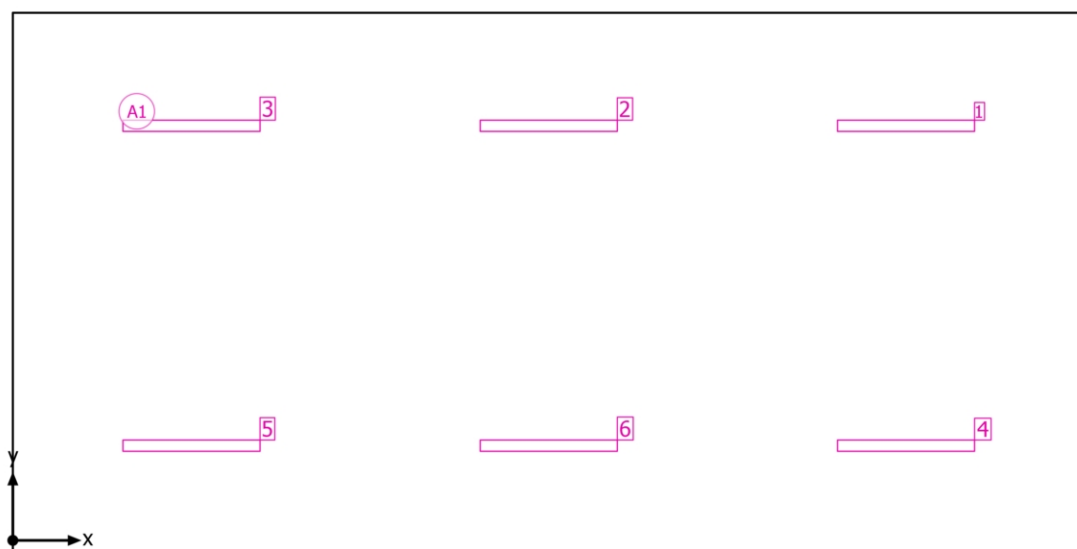
Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
6	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

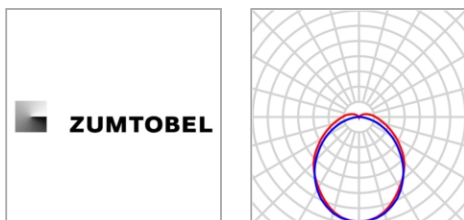
Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Luminaire layout plan



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Luminaire layout plan



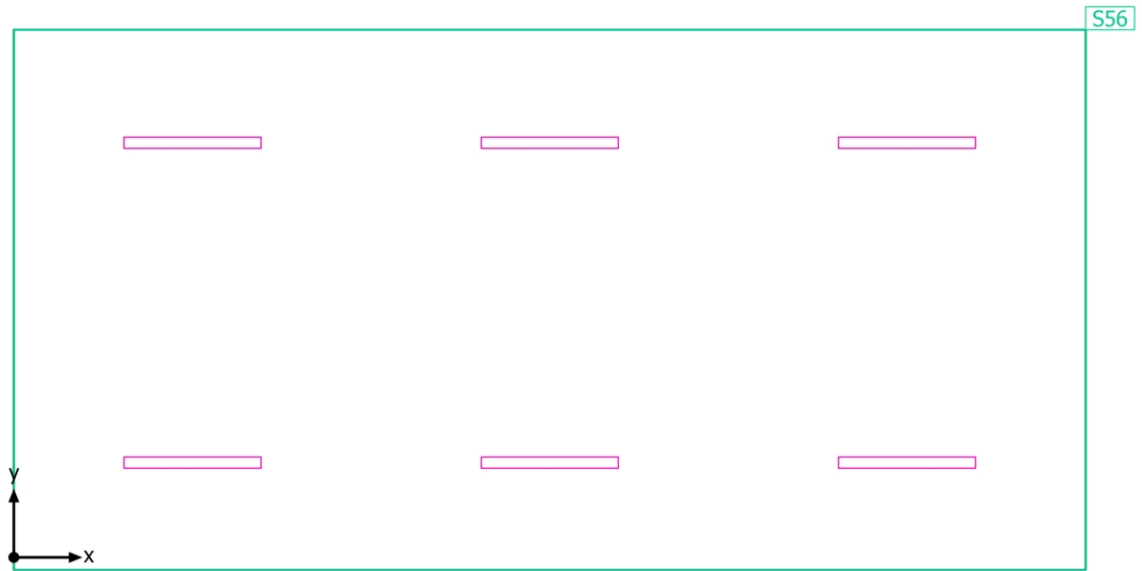
Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

6 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	7.167 m / 3.324 m / 4.760 m	7.167 m	3.324 m	4.760 m	1
X-direction	3 pcs., Centre - centre, Distances not equal	4.300 m	3.324 m	4.760 m	2
		1.433 m	3.324 m	4.760 m	3
Y-direction	2 pcs., Centre - centre, Distances not equal	7.167 m	0.760 m	4.760 m	4
		1.433 m	0.760 m	4.760 m	5
Arrangement	A1	4.300 m	0.760 m	4.760 m	6

Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects



Sportska dvorana Borovo naselje · 2. kat · Kotlovnica

Calculation objects

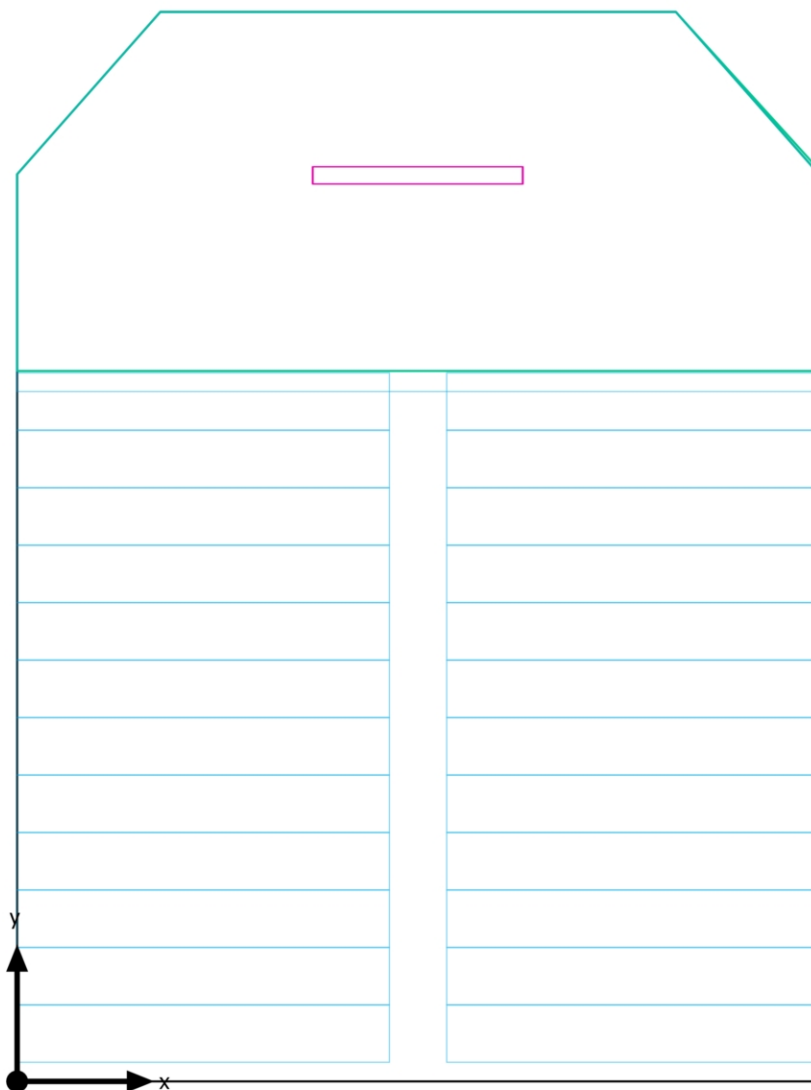
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Radna površina (Kotlovnica) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	263 lx (≥ 200 lx) ✓	187 lx	315 lx	0.71	0.59	S56

Utilisation profile: General areas inside buildings - Control rooms, Plant rooms, switchgear rooms

Sportska dvorana Borovo naselje · 2. kat · Stubište

Summary



Sportska dvorana Borovo naselje · 2. kat · Stubište

Summary

Results

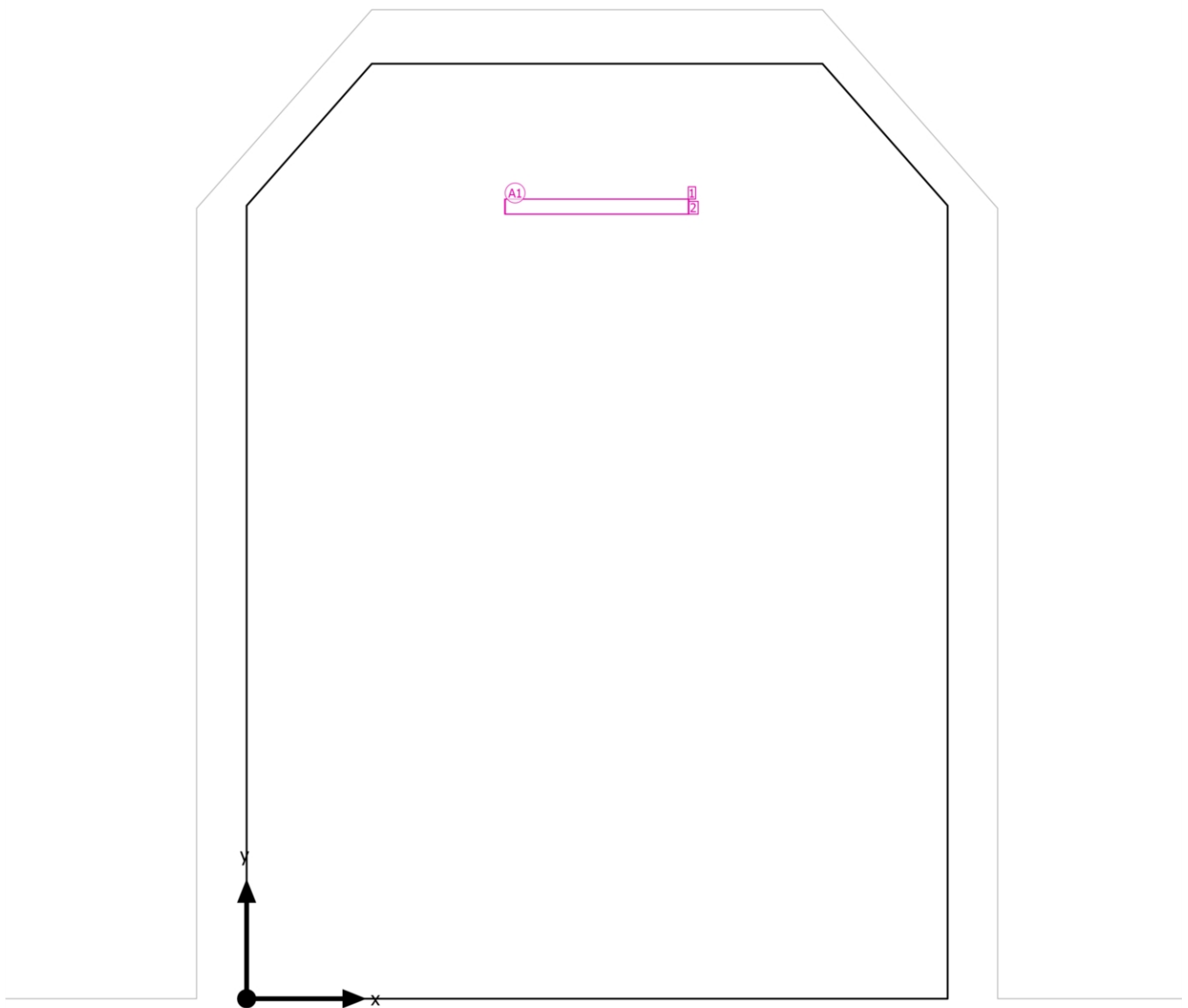
	Symbol	Calculated	Target	Check	Index
Consumption values	Consumption	77 kWh/a	max. 850 kWh/a	✓	
Lighting power density	Room	3.08 W/m ²	-	-	

Utilisation profile: Traffic zones inside buildings, Stairs, escalators, travelators

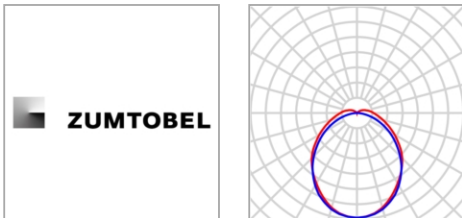
Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	ZUMTOBEL	96630754 (STD - standard)	AQFPRO S LED4300-840 PC MB HF	35.2 W	4530 lm	128.7 lm/W

Sportska dvorana Borovo naselje · 2. kat · Stubište
Luminaire layout plan



Sportska dvorana Borovo naselje · 2. kat · Stubište
Luminaire layout plan



Manufacturer	ZUMTOBEL
Article No.	96630754 (STD - standard)
Article name	AQFPRO S LED4300-840 PC MB HF

1 x ZUMTOBEL AQFPRO S LED4300-840 PC MB HF

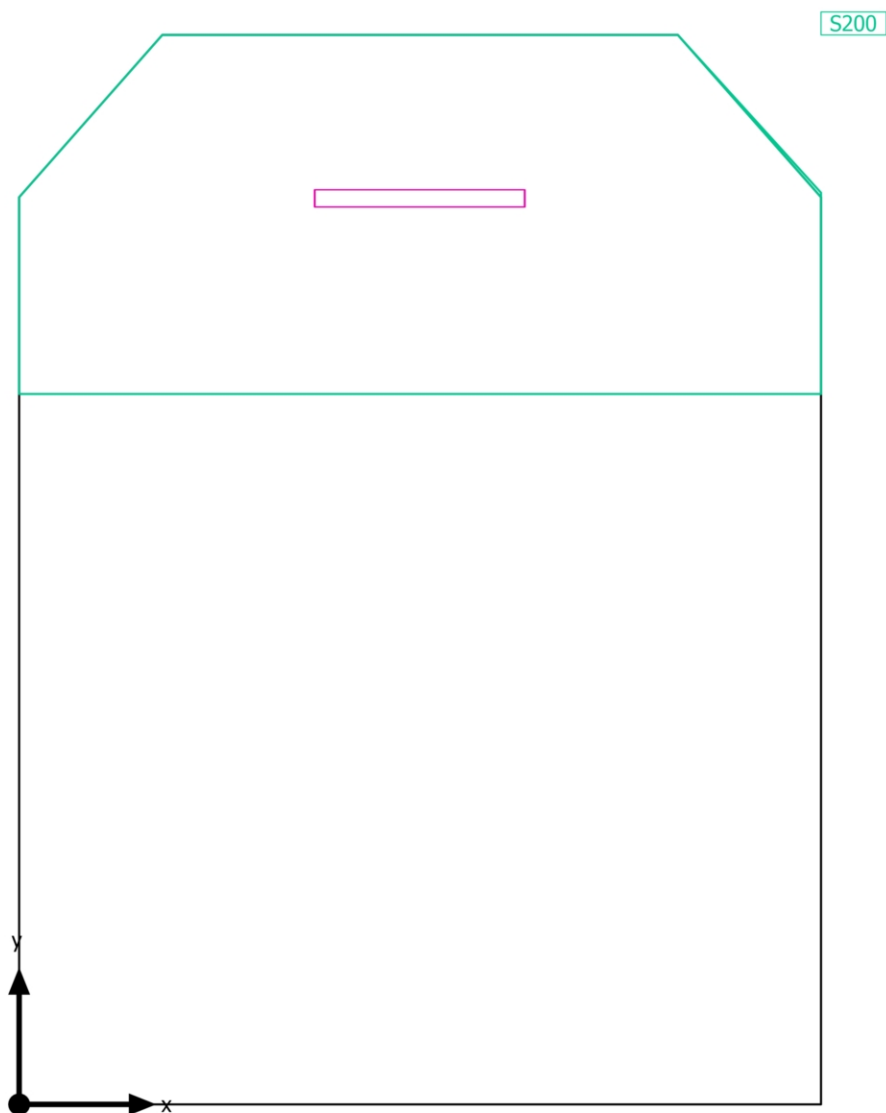
Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.100 m / 4.744 m / 1.579 m	2.100 m	4.744 m	1.579 m	2
X-direction	1 pcs., Centre - centre, Distances not equal				
Y-direction	1 pcs., Centre - centre, Distances not equal				
Arrangement	A1				

Individual luminaires

X	Y	Mounting height	Luminaire
2.096 m	4.744 m	4.760 m	1

Sportska dvorana Borovo naselje · 2. kat · Stubište

Calculation objects



Sportska dvorana Borovo naselje · 2. kat · Stubište

Calculation objects

Calculation surfaces

Properties	\bar{E}	E_{min}	E_{max}	g_1	g_2	Index
Pod (Stubište) Perpendicular illuminance (adaptive) Height: 1.719 m	139 lx	93.2 lx	176 lx	0.67	0.53	S200

Utilisation profile: Traffic zones inside buildings, Stairs, escalators, travelators

Glossary

A

A Formula symbol for a surface in the geometry

B

Background area The background area borders the direct ambient area according to DIN EN 12464-1 and reaches up to the borders of the room. In larger rooms, the background area is at least 3 m wide. It is located horizontally at floor level.

C

CCT (Engl. correlated colour temperature)
 Body temperature of a thermal radiator which serves to describe its light colour. Unit: Kelvin [K]. The lesser the numerical value the redder; the greater the numerical value the bluer the light colour. The colour temperature of gas-discharge lamps and semi-conductors are termed "correlated colour temperature" in contrast to the colour temperature of thermal radiators.

Allocation of the light colours to the colour temperature ranges acc. to EN 12464-1:

Light colour - colour temperature [K]
 warm white (ww) < 3,300 K
 neutral white (nw) ≥ 3,300 – 5,300 K
 daylight white (dw) > 5.300 K

Clearance height The designation for the distance between upper edge of the floor and bottom edge of the ceiling (in the completely furnished status of room).

CRI (Engl. colour rendering index)
 Designation for the colour rendering index of a luminaire or a lamp acc. to DIN 6169: 1976 or CIE 13.3: 1995.

The general colour rendering index Ra (or CRI) is a dimensionless figure that describes the quality of a white light source in regards to its similarity with the remission spectra of defined 8 test colours (see DIN 6169 or CIE 1974) to a reference light source.

D

Daylight factor Ratio of the illuminance achieved solely by daylight incidence at a point in the inside to the horizontal illuminance in the outer area under an unobstructed sky.

Formula symbol: D (Engl. daylight factor)
 Unit: %

Glossary

Daylight quotient effective area	A calculation surface within which the daylight quotient is calculated.
E	
Eta (η)	(light output ratio) The light output ratio describes what percentage of the luminous flux of a free radiating lamp (or LED module) is emitted by the luminaire when installed. Unit: %
G	
g1	Often also U_o (Engl. overall uniformity) Designates the overall uniformity of the illuminance on a surface. It is the quotient from E_{min} to \bar{E} and is required, for instance, in standards for illumination of workstations.
g2	Actually it designates the "non-uniformity" of the illuminance on a surface. It is the quotient of E_{min} to E_{max} and is generally only relevant for certifying the emergency lighting acc. to EN 1838.
I	
Illuminance	Describes the ratio of the luminous flux that strikes a certain surface to the size of this surface ($lm/m^2 = lx$). The illuminance is not tied to an object surface. It can be determined anywhere in space (inside or outside). The illuminance is not a product feature because it is a recipient value. Luxometers are used for measuring. Unit: Lux Abbreviation: lx Formula symbol: E
Illuminance, adaptive	For the determining of the middle adaptive illuminance on a surface, this is rastered "adaptively". In the area of large illuminance differences within the surface, the raster is subdivided finer; within lesser differences, a rougher classification is made.
Illuminance, horizontal	Illuminance that is calculated or measured on a horizontal (level) surface (this can be for example a table top or the floor). The horizontal illuminance is usually identified by the formula letter E_h .
Illuminance, perpendicular	Illuminance that is calculated or measured plumb-vertical to a surface. This needs to be taken into account for tilted surfaces. If the surface is horizontal or vertical, then there is no difference between the perpendicular and the horizontal or vertical illuminance.

Glossary

<p>Illuminance, vertical</p>	<p>Illuminance that is calculated or measured on a vertical surface (this can be for example the front of some shelves). The vertical illuminance is usually identified by the formula letter E_v.</p>
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<p>L</p>	
<p>LENI</p>	<p>(Engl. lighting energy numeric indicator) Lighting energy numeric indicator acc. to EN 15193</p> <p>Unit: kWh/m² year</p>
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<p>LLMF</p>	<p>(Engl. lamp lumen maintenance factor)/acc. to CIE 97: 2005 Lamp flux maintenance factor that takes the luminous flux reduction into account of a luminaire or an LED module in the course of the operating time. The lamp flux maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no luminous flux reduction existing).</p>
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<p>LMF</p>	<p>(Engl. luminaire maintenance factor)/acc. to CIE 97: 2005 Luminaire maintenance factor that takes the soiling into account of the luminaire in the course of the operating time. The luminaire maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).</p>
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<p>LSF</p>	<p>(Engl. lamp survival factor)/acc. to CIE 97: 2005 Lamp survival factor that takes the total failure into account of a luminaire in the course of the operating time. The lamp survival factor is specified as a decimal digit and can have a maximum value of 1 (no failures existing within the time concerned or prompt replacement after the failure).</p>
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<p>Luminance</p>	<p>Dimension for the "brightness impression" that the human eye has of a surface. The surface itself can emit light thereby or light striking it can be reflected (emitter value). It is the only photometric value that the human eye can perceive.</p> <p>Unit: Candela per square metre Abbreviation: cd/m² Formula symbol: L</p>
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<p>Luminous efficacy</p>	<p>Ratio of the emitted luminous flux Φ [lm] to the absorbed electrical power P [W] Unit: lm/W.</p> <p>This ratio can be formed for the lamp or LED module (lamp or module light output), the lamp or module with control gear (system light output) and the complete luminaire (luminaire light output).</p>

Glossary

Luminous flux	<p>Dimension for the total light output that is emitted from one light source in all directions. It is thus an "emitter value" that specifies the entire emitting output. The luminous flux of a light source can only be determined in a laboratory. A difference is made between the lamp or LED module luminous flux and the luminaire luminous flux.</p> <p>Unit: Lumen Abbreviation: lm Formula symbol: Φ</p>
Luminous intensity	<p>Describes the intensity of the light in a certain direction (emitter value). The luminous intensity is a matter of the luminous flux Φ that is emitted in a certain spherical angle Ω. The radiation characteristics of a light source are presented graphically in a light distribution curve (LDC). The luminous intensity is an SI base unit.</p> <p>Unit: Candela Abbreviation: cd Formula symbol: I</p>
M	
Maintenance factor	See MF
MF	<p>(Engl. maintenance factor)/acc. to CIE 97: 2005 Maintenance factor as decimal number between 0 and 1 that describes the ratio of the new value of a photometric planning parameter (e.g. of the illuminance) to a maintenance value after a certain time. The maintenance factor takes into account the soiling of luminaires and rooms as well as the luminous flux reduction and the failure of light sources. The maintenance factor is taken into account either overall or determined in detail acc. to CIE 97: 2005 by the formula $RMF \times LMF \times LLMF \times LSF$.</p>
P	
P	<p>(Engl. power) Electric power consumption</p> <p>Unit: watt Abbreviation: W</p>
R	
Reflection factor	<p>The reflection factor of a surface describes how much of the striking light is reflected back. The reflection factor is defined by the colour of the surface.</p>

Glossary

RMF	(Engl. room maintenance factor)/acc. to CIE 97: 2005 Room maintenance factor that takes the soiling into account of the space encompassing surfaces in the course of the operating time. The room maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).
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S	
Surrounding area	The ambient area directly borders the area of the visual task and should be planned with a width of at least 0.5 m according to DIN EN 12464-1. It is at the same height as the area of the visual task.
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U	
UGR (max)	(unified glare rating) Measure for the psychological glare effect in interiors. In addition to luminaire luminance, the UGR value also depends on the position of the observer, the viewing direction and the ambient luminance. Among other things, EN 12464-1 specifies maximum permissible UGR values for various indoor workplaces.
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UGR observer	Calculation point in the room, for the DIALux the UGR value is determined. The location and height of the calculation point should correspond to the typical observer position (position and eye level of the user).
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V	
Visual task area	The area that is needed for carrying out the visual task in accordance with DIN EN 12464-1. The height corresponds with the height at which the visual task is executed.
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W	
Wall zone	Circumferential area between working plane and walls which is not taken into account for the calculation.
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Workplane	Virtual measuring or calculation surface at the height of the visual task that generally follows the room geometry. The working plane may also feature a wall zone.
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