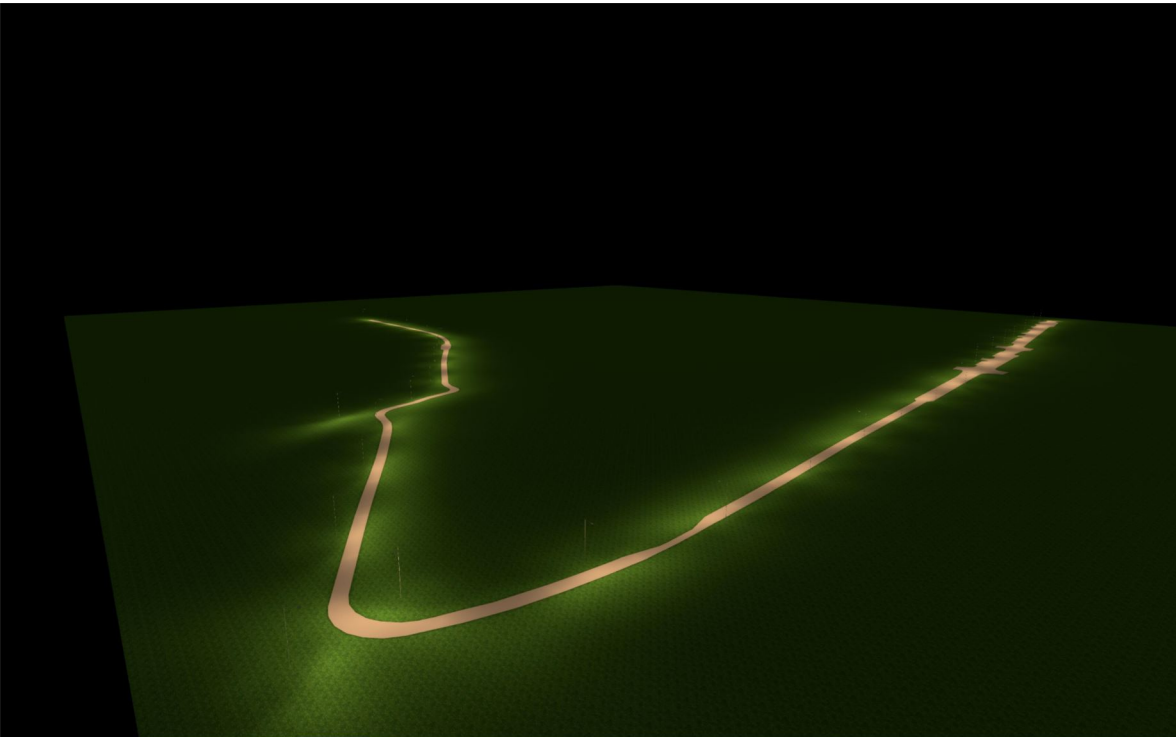




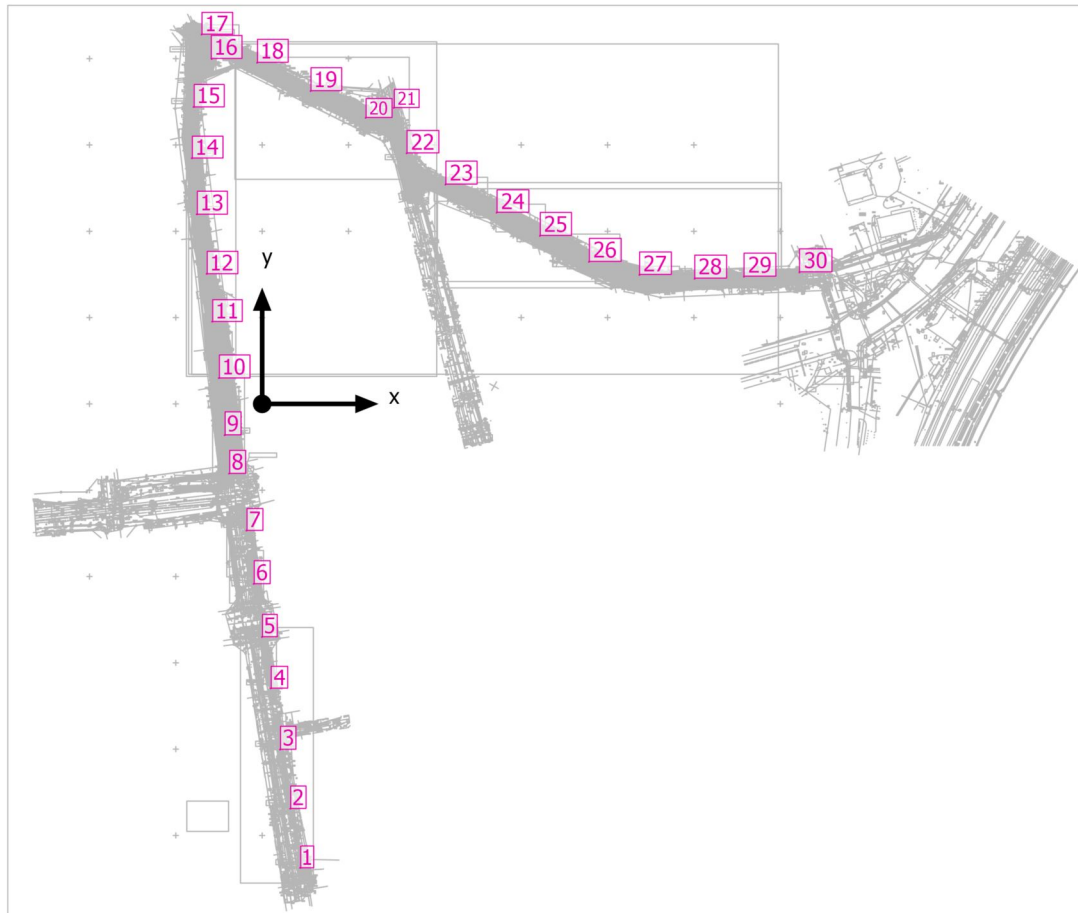
**Rūdolfa Blaumaņa ielas (no Baznīcas ielas līdz Ceriņu ielai)
un Ceriņu ielas (no Rūdolfa Blaumaņa ielas līdz Ievu ielai)
apgaismojuma plāns**

Luminaire list

Φ_{total} 235042 lm	P_{total} 2040.0 W	Luminous efficacy 115.2 lm/W				
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
34		Micro Martin 60 W 16 LEDs	MRUE 060 730 L22 A016_Bin-L_TH	60.0 W	6913 lm	115.2 lm/W

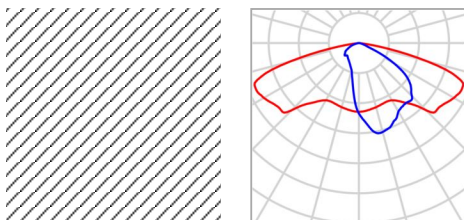
Site 1

Luminaire layout plan



Site 1

Luminaire layout plan



Article No.	Micro Martin 60 W 16 LEDs	P	60.0 W
Article name	MRUE 060 730 L22 A016_Bin-L_TH	$\Phi_{\text{Luminaire}}$	6913 lm
Fitting	1x 16 LEDs bin L		

Individual luminaires

X	Y	Mounting height	Luminaire
22.189 m	-270.100 m	8.000 m	1
16.377 m	-235.582 m	8.000 m	2
10.469 m	-201.163 m	8.000 m	3
5.030 m	-165.593 m	8.000 m	4
-0.008 m	-135.674 m	8.000 m	5
-4.835 m	-104.762 m	8.000 m	6
-9.047 m	-73.723 m	8.000 m	7
-19.140 m	-40.541 m	8.000 m	8
-21.764 m	-18.179 m	8.000 m	9
-25.148 m	15.006 m	8.000 m	10
-29.010 m	47.873 m	8.000 m	11
-32.212 m	75.677 m	8.000 m	12
-37.968 m	110.344 m	8.000 m	13

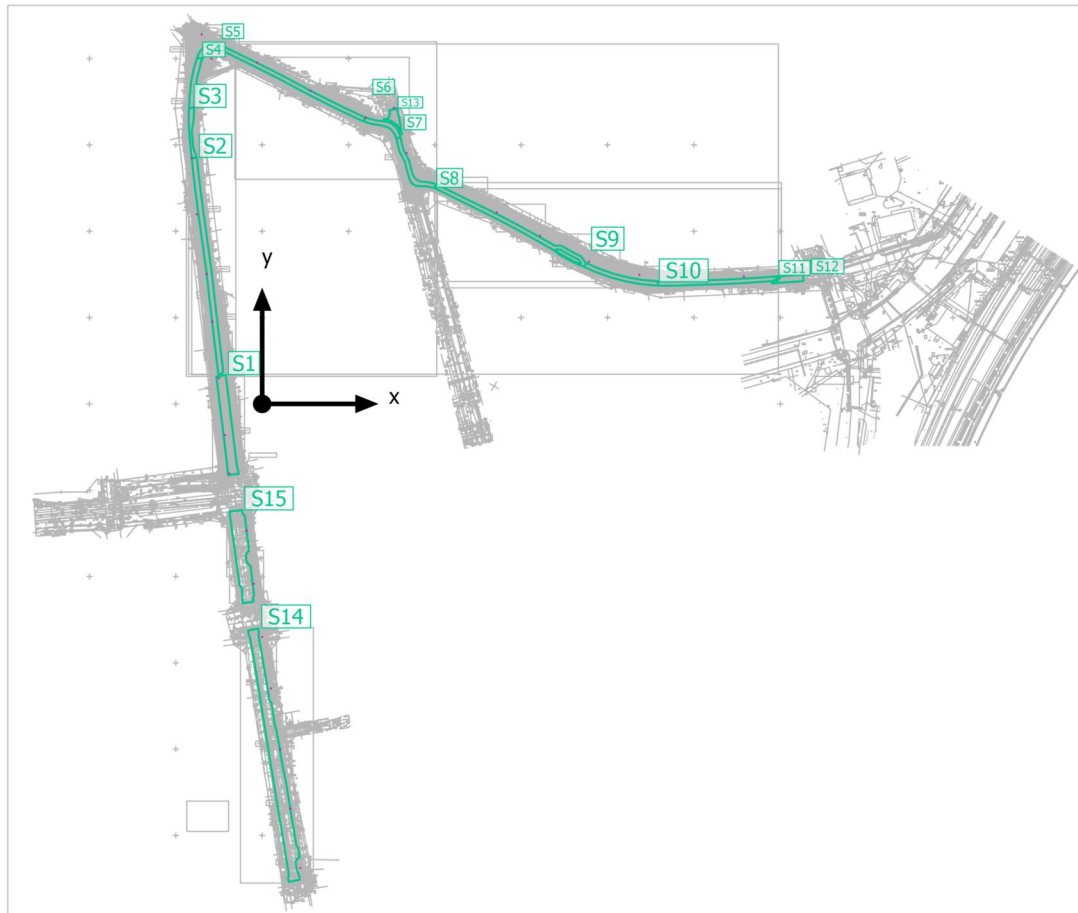
Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
-40.894 m	143.046 m	8.000 m	14
-39.807 m	172.819 m	8.000 m	15
-29.454 m	200.857 m	8.000 m	16
-35.203 m	215.070 m	8.000 m	17
-2.869 m	198.686 m	8.000 m	18
28.228 m	182.181 m	8.000 m	19
60.276 m	166.607 m	8.000 m	20
76.671 m	172.345 m	8.000 m	21
84.114 m	145.928 m	8.000 m	22
106.702 m	127.762 m	8.000 m	23
136.471 m	111.406 m	8.000 m	24
161.653 m	97.881 m	8.000 m	25
190.196 m	82.780 m	8.000 m	26
219.481 m	75.135 m	8.000 m	27
251.627 m	72.965 m	8.000 m	28
280.314 m	74.116 m	8.000 m	29
312.594 m	76.640 m	8.000 m	30

Site 1 (Light scene 1)

Calculation objects



Site 1 (Light scene 1)

Calculation objects

Calculation surfaces

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	g_1	g_2	Index
Calculation surface 3 Perpendicular illuminance Height: 0.050 m	14.5 lx	5.94 lx	26.5 lx	0.41	0.22	S1
Calculation surface 4 Perpendicular illuminance Height: 0.050 m	12.5 lx	5.05 lx	25.1 lx	0.40	0.20	S2
Calculation surface 5 Perpendicular illuminance Height: 0.050 m	13.3 lx	6.78 lx	24.7 lx	0.51	0.27	S3
Calculation surface 6 Perpendicular illuminance Height: 0.050 m	10.9 lx	4.52 lx	24.5 lx	0.41	0.18	S4
Calculation surface 7 Perpendicular illuminance Height: 0.050 m	19.1 lx	7.84 lx	27.6 lx	0.41	0.28	S5
Calculation surface 8 Perpendicular illuminance Height: 0.050 m	11.3 lx	4.53 lx	26.0 lx	0.40	0.17	S6
Calculation surface 9 Perpendicular illuminance Height: 0.050 m	10.8 lx	6.55 lx	19.7 lx	0.61	0.33	S7
Calculation surface 10 Perpendicular illuminance Height: 0.050 m	13.9 lx	6.60 lx	26.8 lx	0.47	0.25	S8
Calculation surface 11 Perpendicular illuminance Height: 0.050 m	12.2 lx	5.12 lx	22.9 lx	0.42	0.22	S9
Calculation surface 12 Perpendicular illuminance Height: 0.050 m	13.8 lx	6.00 lx	23.1 lx	0.43	0.26	S10
Calculation surface 13 Perpendicular illuminance Height: 0.050 m	14.6 lx	6.82 lx	26.3 lx	0.47	0.26	S11

Site 1 (Light scene 1)

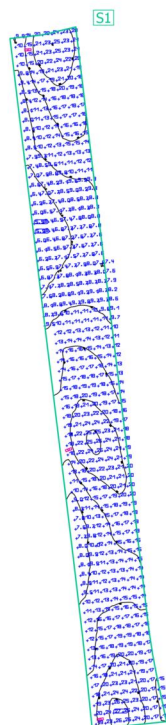
Calculation objects

Calculation surface 14 Perpendicular illuminance Height: 0.050 m	15.7 lx	8.09 lx	25.7 lx	0.52	0.31	S12
Calculation surface 15 Perpendicular illuminance Height: 0.050 m	15.0 lx	6.87 lx	23.4 lx	0.46	0.29	S13
Calculation surface 1 Perpendicular illuminance Height: 0.050 m	11.8 lx	4.98 lx	26.0 lx	0.42	0.19	S14
Calculation surface 2 Perpendicular illuminance Height: 0.050 m	12.0 lx	6.11 lx	23.0 lx	0.51	0.27	S15

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 3

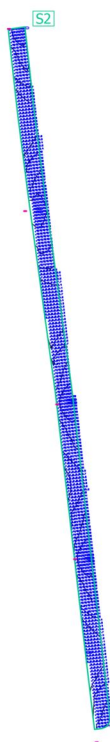


Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	g_1	g_2	Index
Calculation surface 3 Perpendicular illuminance Height: 0.050 m	14.5 lx	5.94 lx	26.5 lx	0.41	0.22	S1

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 4

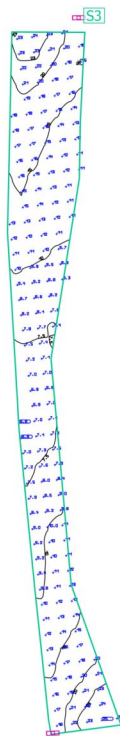


Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	g_1	g_2	Index
Calculation surface 4 Perpendicular illuminance Height: 0.050 m	12.5 lx	5.05 lx	25.1 lx	0.40	0.20	S2

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 5

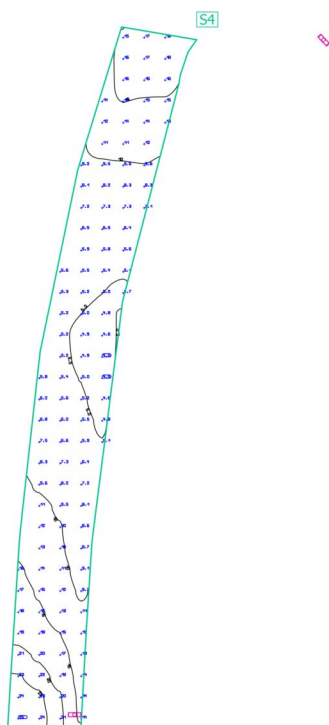


Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	g_1	g_2	Index
Calculation surface 5 Perpendicular illuminance Height: 0.050 m	13.3 lx	6.78 lx	24.7 lx	0.51	0.27	S3

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 6

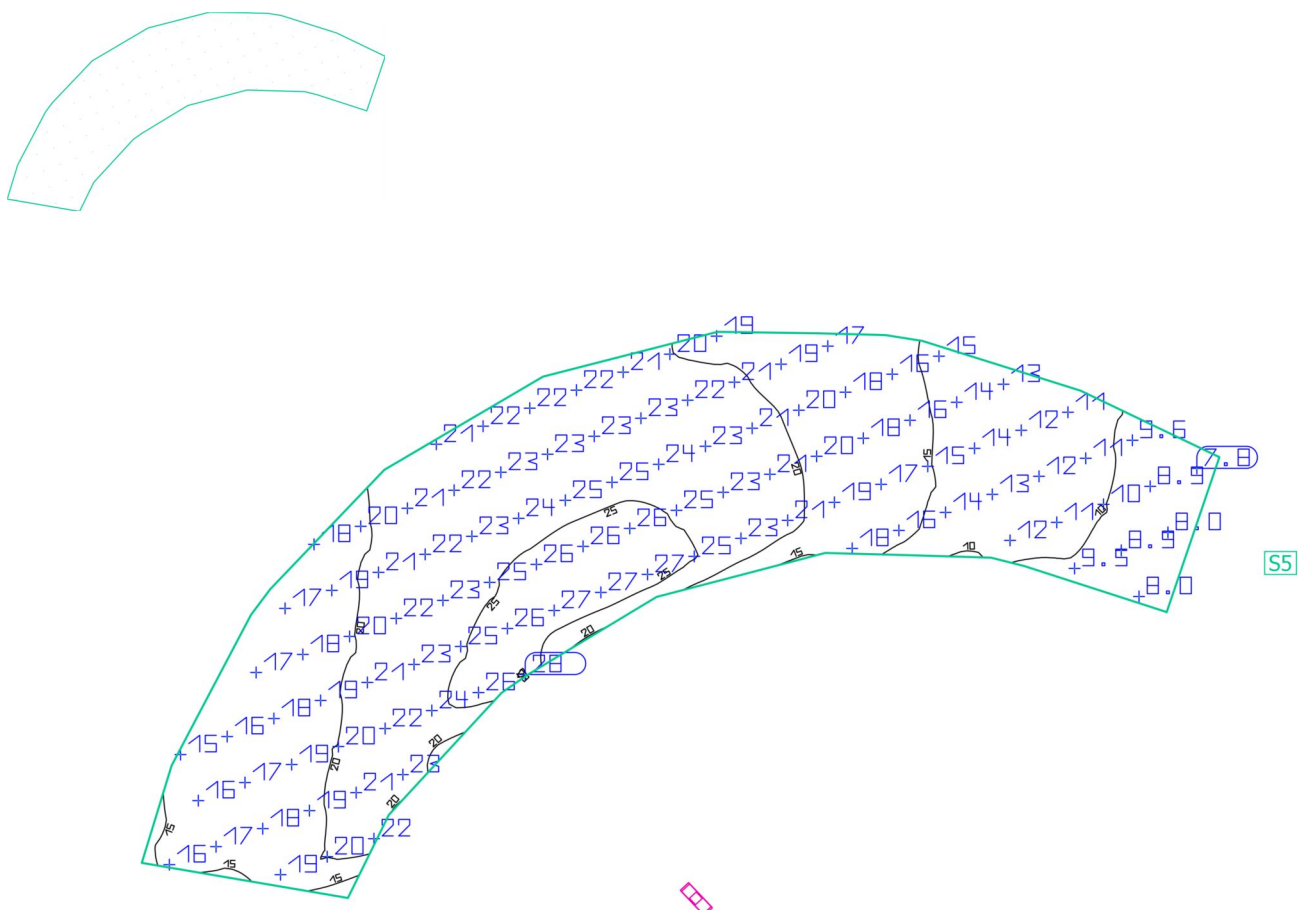


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 6	10.9 lx	4.52 lx	24.5 lx	0.41	0.18	S4
Perpendicular illuminance						
Height: 0.050 m						

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 7

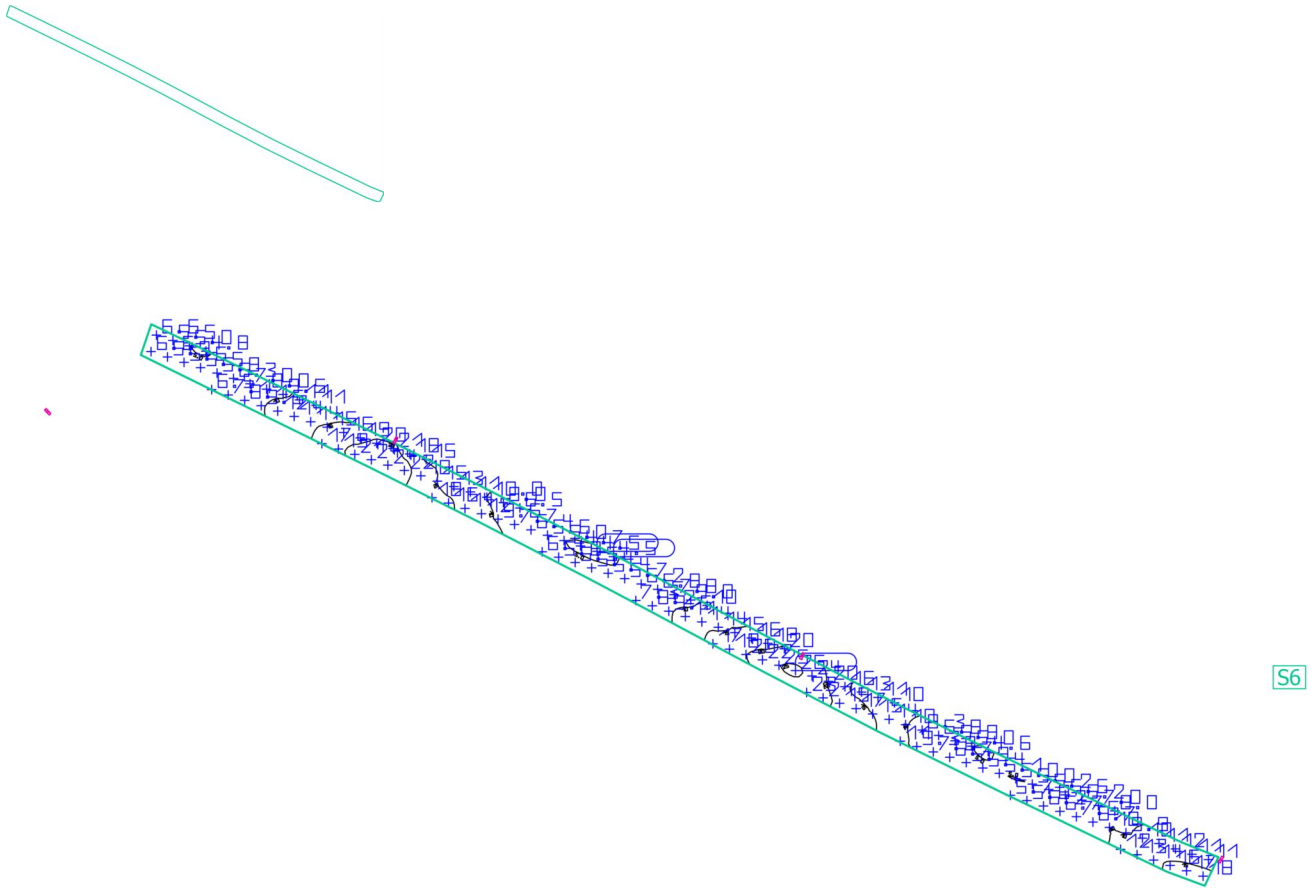


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 7 Perpendicular illuminance Height: 0.050 m	19.1 lx	7.84 lx	27.6 lx	0.41	0.28	S5

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 8

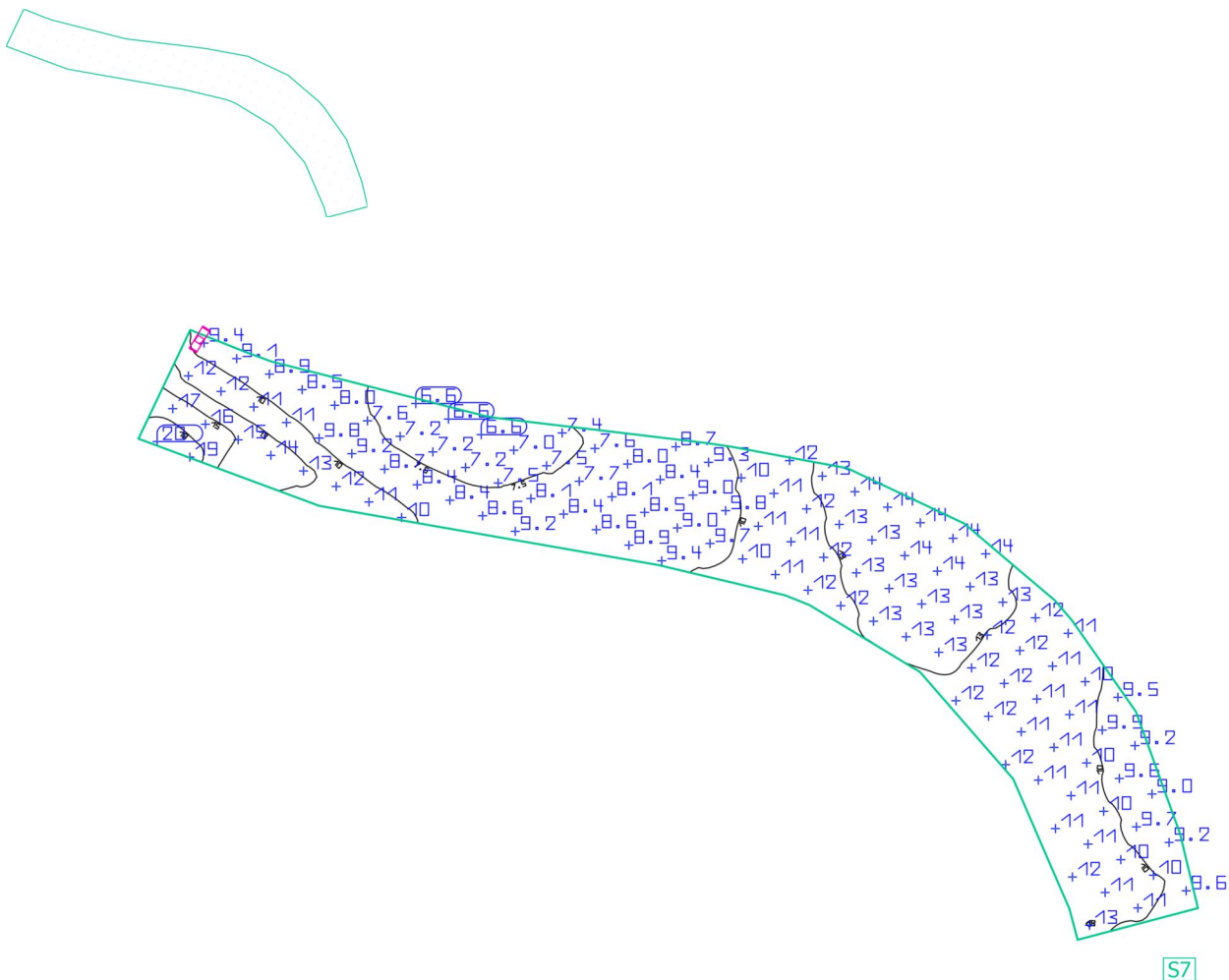


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 8 Perpendicular illuminance Height: 0.050 m	11.3 lx	4.53 lx	26.0 lx	0.40	0.17	S6

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 9



Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 9	10.8 lx	6.55 lx	19.7 lx	0.61	0.33	S7
Perpendicular illuminance						
Height: 0.050 m						

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

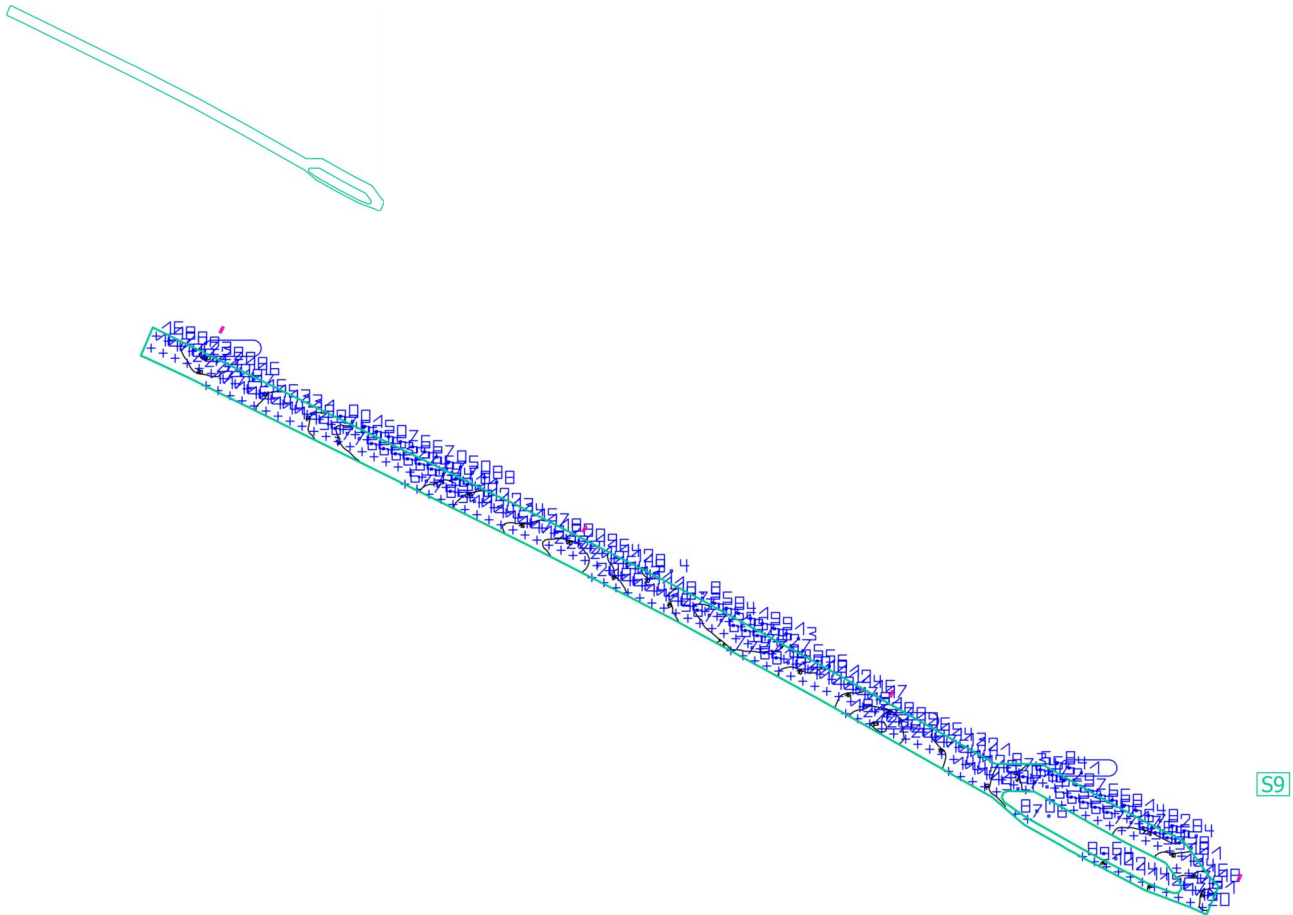
Site 1 (Light scene 1)

Calculation surface 10



Site 1 (Light scene 1)

Calculation surface 11

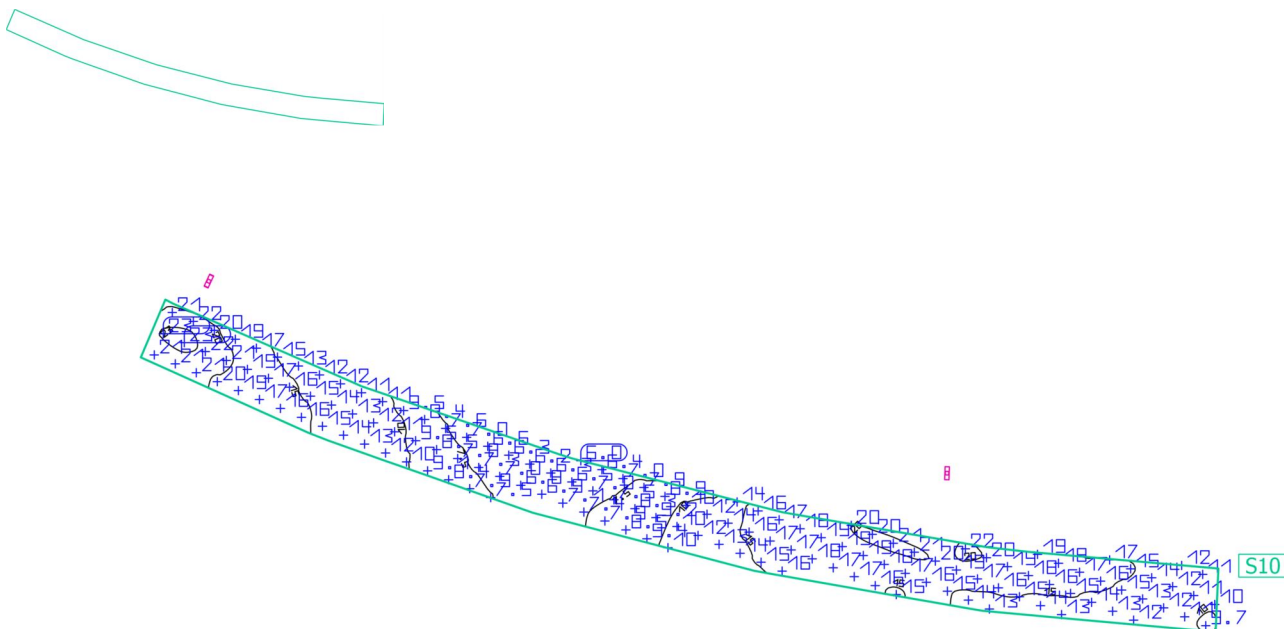


Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	g_1	g_2	Index
Calculation surface 11 Perpendicular illuminance Height: 0.050 m	12.2 lx	5.12 lx	22.9 lx	0.42	0.22	S9

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 12



Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 12	13.8 lx	6.00 lx	23.1 lx	0.43	0.26	S10
Perpendicular illuminance						
Height: 0.050 m						

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 13

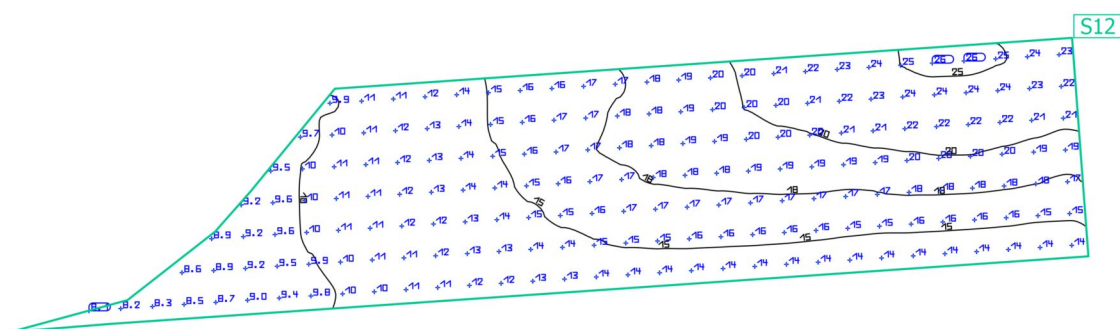


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 13 Perpendicular illuminance Height: 0.050 m	14.6 lx	6.82 lx	26.3 lx	0.47	0.26	S11

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 14

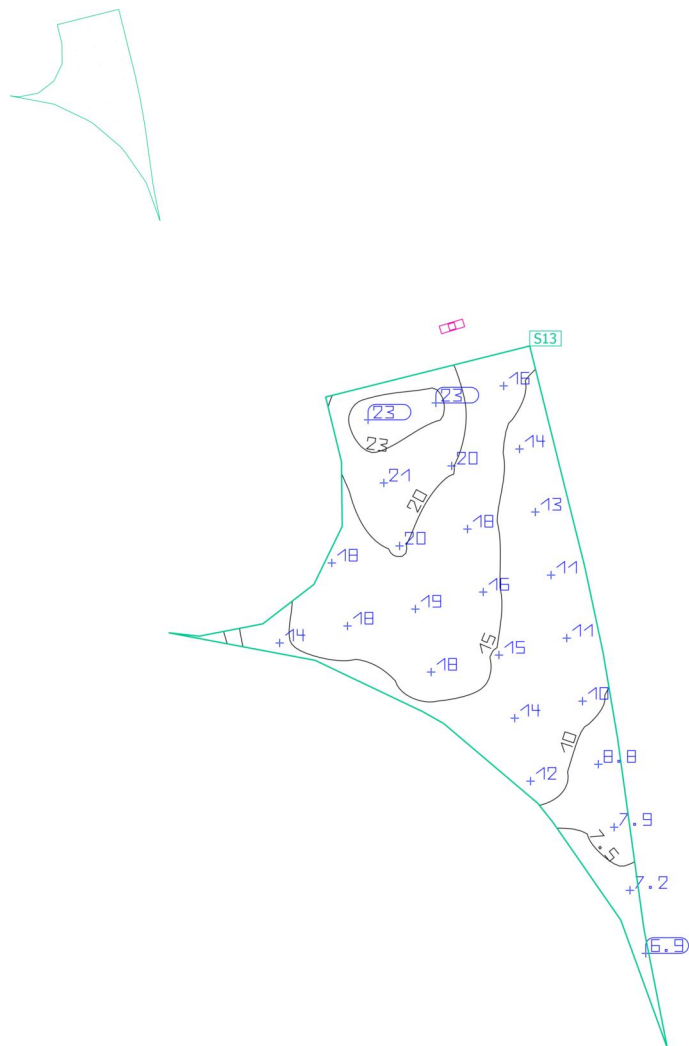


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 14	15.7 lx	8.09 lx	25.7 lx	0.52	0.31	S12
Perpendicular illuminance						
Height: 0.050 m						

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 15

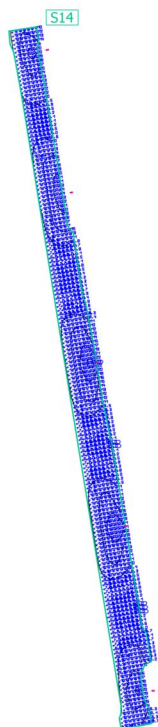


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 15 Perpendicular illuminance Height: 0.050 m	15.0 lx	6.87 lx	23.4 lx	0.46	0.29	S13

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 1

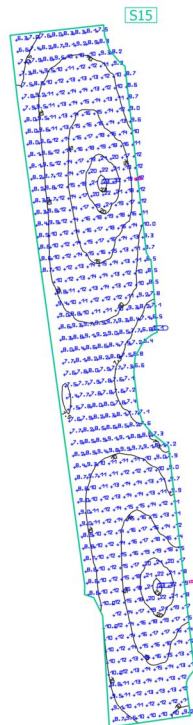


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 1 Perpendicular illuminance Height: 0.050 m	11.8 lx	4.98 lx	26.0 lx	0.42	0.19	S14

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Site 1 (Light scene 1)

Calculation surface 2

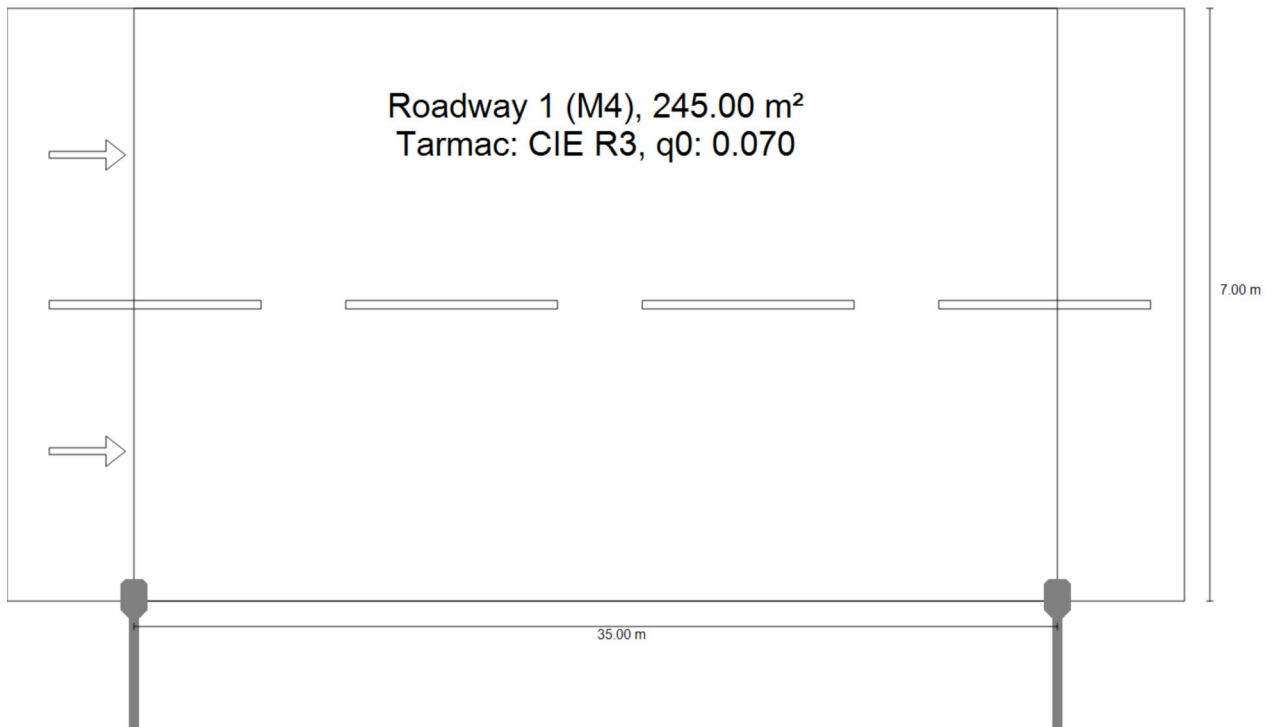


Properties	$\bar{E}$	E_{min}	E_{max}	g_1	g_2	Index
Calculation surface 2 Perpendicular illuminance Height: 0.050 m	12.0 lx	6.11 lx	23.0 lx	0.51	0.27	S15

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

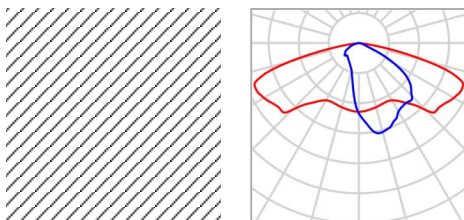
Street 1

Summary (according to EN 13201:2015)



Street 1

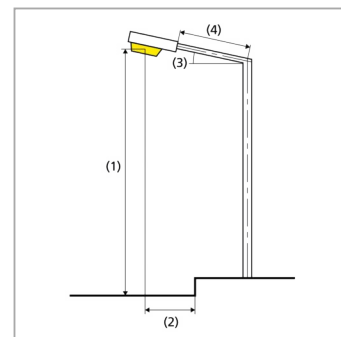
Summary (according to EN 13201:2015)



Article No.	Micro Martin 60 W 16 LEDs	P	60.0 W
Article name	MRUE 060 730 L22 A016_Bin-L_TH	Φ_{Lamp}	6913 lm
Fitting	1x 16 LEDs bin L	$\Phi_{\text{Luminaire}}$	6913 lm
		η	100.00 %

MRUE 060 730 L22 A016_Bin-L_TH (single side bottom)

Pole distance	35.000 m
(1) Light spot height	8.000 m
(2) Light point overhang	0.000 m
(3) Boom inclination	0.0°
(4) Boom length	1.500 m
Annual operating hours	4000 h: 100.0 %, 60.0 W
Consumption	1740.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	≥ 70°: 602 cd/klm
Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	≥ 80°: 159 cd/klm ≥ 90°: 1.91 cd/klm
Luminous intensity class	G*1
The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.	
Glare index class	D.5



Street 1

Summary (according to EN 13201:2015)

Results for valuation fields

	Symbol	Calculated	Target	Check
Roadway 1 (M4)	L_{av}	0.79 cd/m ²	≥ 0.75 cd/m ²	✓
	U_o	0.48	≥ 0.40	✓
	U_l	0.65	≥ 0.60	✓
	TI	13 %	≤ 15 %	✓
	R_{EI}	0.50	≥ 0.30	✓

A maintenance factor of 0.80 was used for calculating for the installation.

Results for energy efficiency indicators

	Symbol	Calculated	Consumption
Street 1	D_p	0.021 W/lx*m ²	-
MRUE 060 730 L22 A016_Bin-L_TH (single side bottom)	D_e	1.0 kWh/m ² yr,	240.0 kWh/yr