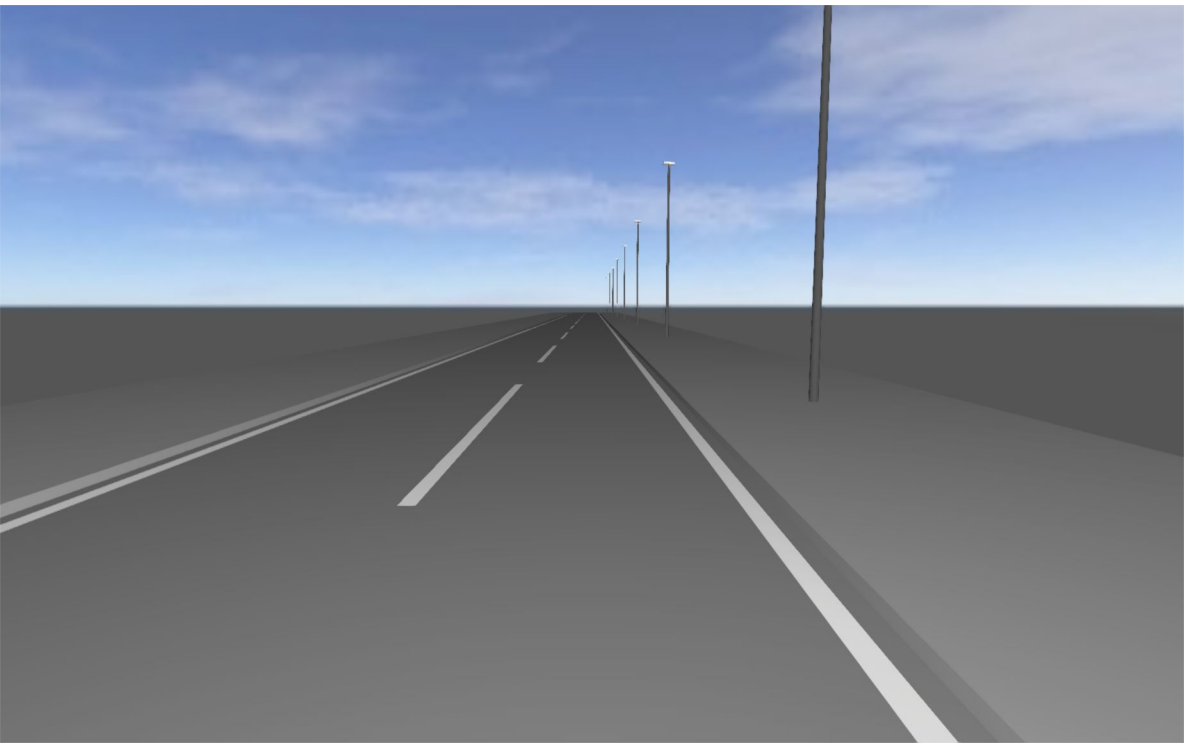


Project 0

Table of Contents

Product data sheets

Street 1 · Alternative 5

DIALux

Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
41680 lm	270.4 W	154.1 lm/W

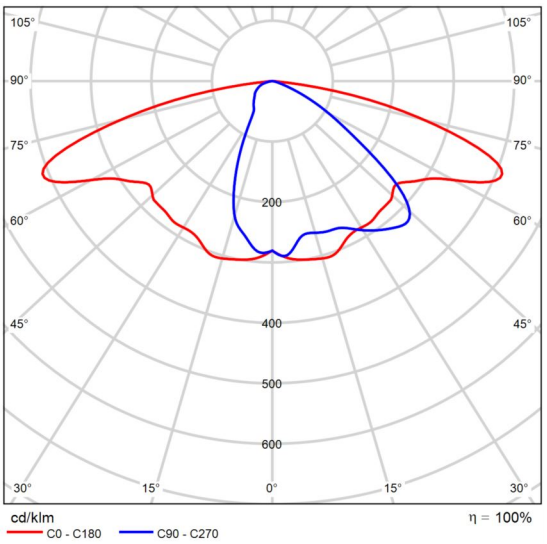
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
8	AEC ILLUMINAZIONE	22-120-03_03	I-TRON ZERO 5P5 STA 7040.060-3M	33.8 W	5210 lm	154.1 lm/W

DIALux

Product data sheet

AEC ILLUMINAZIONE - I-TRON ZERO 5P5 STA 7040.060-3M

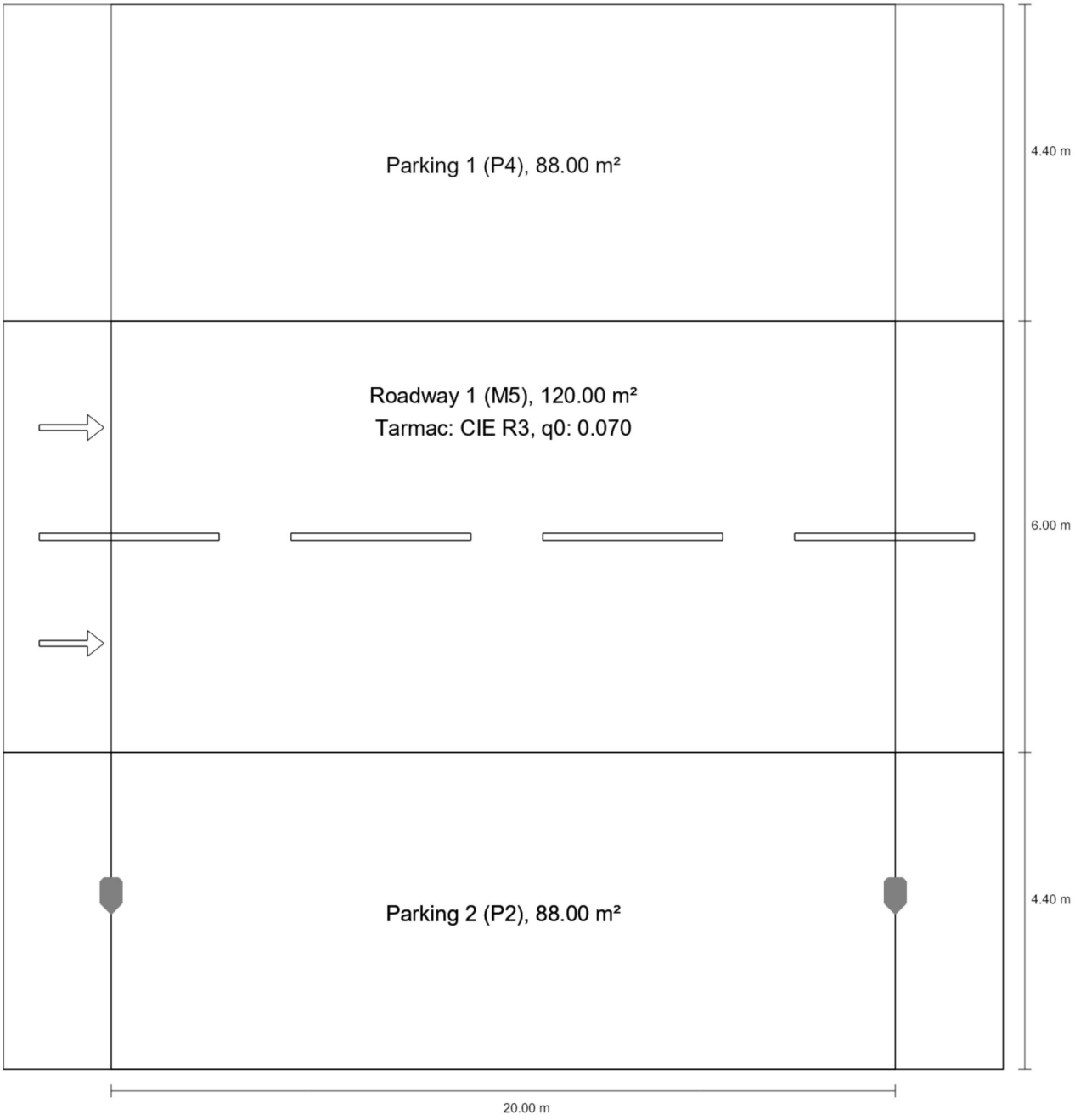
Article No.	22-120-03_03
P	33.8 W
Φ_{Lamp}	5210 lm
$\Phi_{Luminaire}$	5210 lm
η	100.00 %
Luminous efficacy	154.1 lm/W
CCT	4000 K
CRI	70



Polar LDC

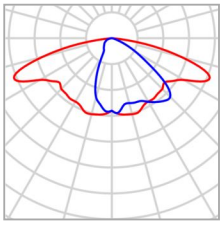
DIALux

Summary (according to EN 13201:2015)



DIALux

Summary (according to EN 13201:2015)



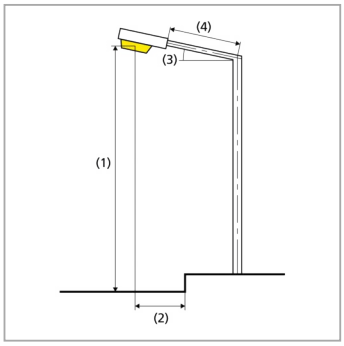
Manufacturer	AEC ILLUMINAZIONE
Article No.	22-120-03_03
Article name	I-TRON ZERO 5P5 STA 7040.060-3M
Fitting	1x L-ITR0-5P5-4000-060-3M-70-25

P	33.8 W
Φ_{Lamp}	5210 lm
$\Phi_{Luminaire}$	5210 lm
η	100.00 %

DIALux

Summary (according to EN 13201:2015)

I-TRON ZERO 5P5 STA 7040.060-3M (single side bottom)



Pole distance	20.000 m
(1) Light spot height	8.000 m
(2) Light point overhang	-1.992 m
(3) Boom inclination	5.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 33.8 W
Wattage / route	1690.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	≥ 70°: 539 cd/klm ≥ 80°: 171 cd/klm ≥ 90°: 1.80 cd/klm
Luminous intensity class 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.	G*1
Glare index class	D.5
MF	0.80

DIALux

Summary (according to EN 13201:2015)

Results for valuation fields

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

	Symbol	Calculated	Target	Check
Parking 1 (P4)	E_{av}	7.07 lx	[5.00 - 7.50] lx	✓
	E_{min}	5.25 lx	≥ 1.00 lx	✓
Roadway 1 (M5)	L_{av}	0.68 cd/m²	≥ 0.50 cd/m²	✓
	U_o	0.57	≥ 0.35	✓
	U_l	0.74	≥ 0.40	✓
	TI	12 %	≤ 15 %	✓
	R_{EI}(1)	0.77	–	
Parking 2 (P2)	E_{av}	14.02 lx	[10.00 - 15.00] lx	✓
	E_{min}	7.26 lx	≥ 2.00 lx	✓

(1) Informative, not part of the valuation

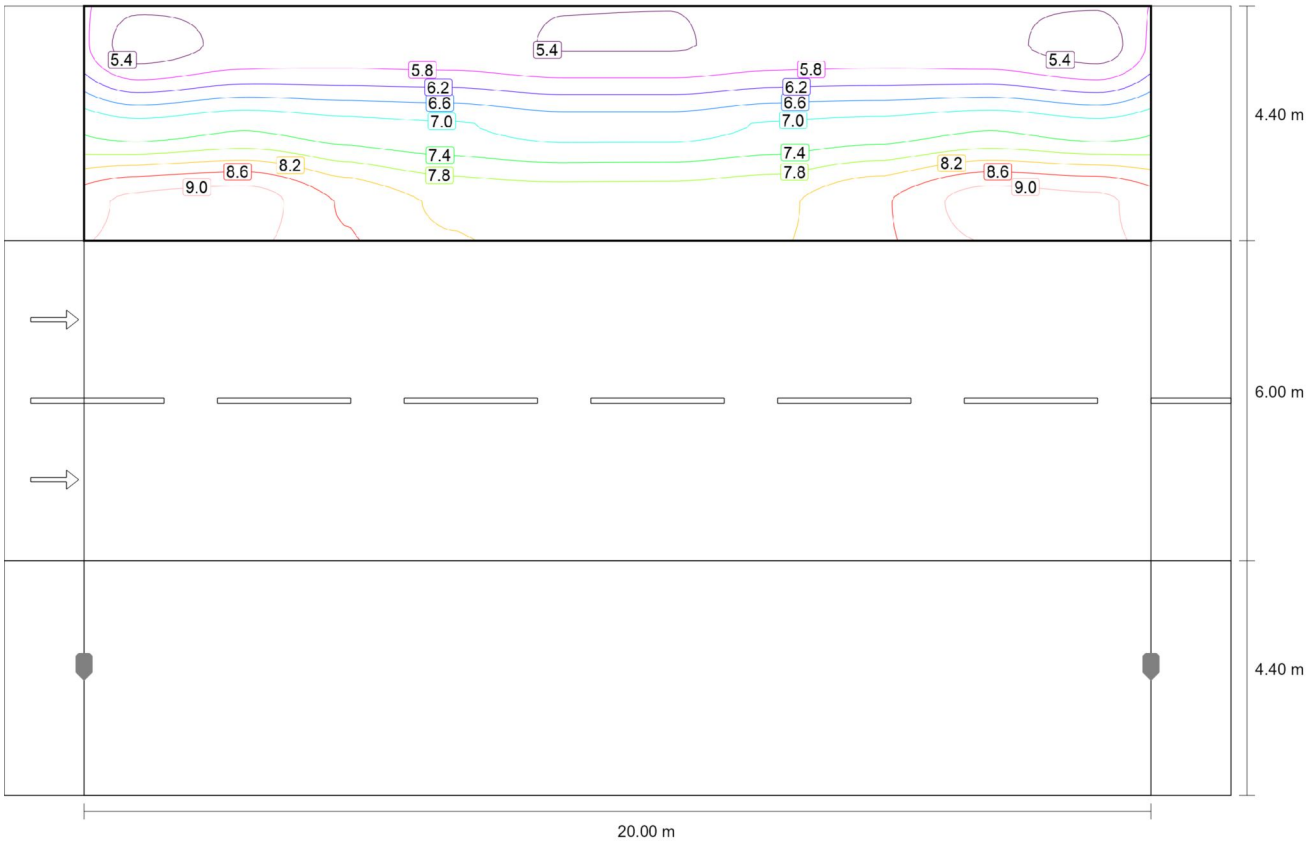
Results for energy efficiency indicators

	Symbol	Calculated	Energy Consumption
Street 1	D_p	0.011 W/lx*m²	–
I-TRON ZERO 5P5 STA 7040.060-3M (single side bottom)	D_e	0.5 kWh/m² yr	135.2 kWh/yr

Parking 1 (P4)

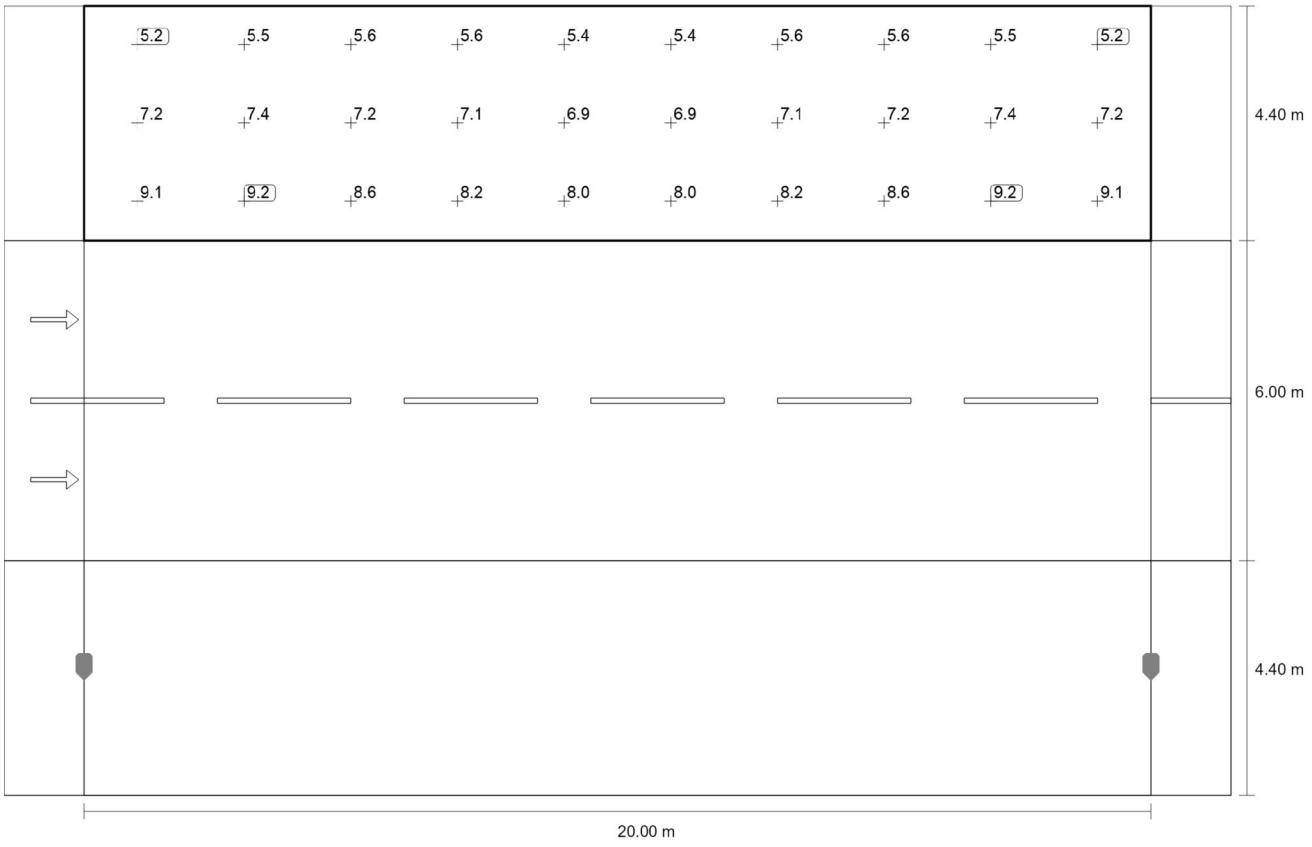
Results for valuation field

	Symbol	Calculated	Target	Check
Parking 1 (P4)	E_{av}	7.07 lx	[5.00 - 7.50] lx	✓
	E_{min}	5.25 lx	≥ 1.00 lx	✓



Maintenance value, horizontal illuminance [lx] (Iso-illuminance curves)

Parking 1 (P4)



Maintenance value, horizontal illuminance [lx] (Value grid)

m	1.000	3.000	5.000	7.000	9.000	11.000	13.000	15.000	17.000	19.000
14.067	5.25	5.54	5.59	5.56	5.42	5.42	5.56	5.59	5.54	5.25
12.600	7.16	7.38	7.18	7.06	6.86	6.86	7.06	7.18	7.38	7.16
11.133	9.10	9.22	8.58	8.15	8.04	8.04	8.15	8.58	9.22	9.10

Maintenance value, horizontal illuminance [lx] (Value chart)

	E_{av}	E_{min}	E_{max}	U_o (g_1)	g_2
Maintenance value, horizontal illuminance	7.07 lx	5.25 lx	9.22 lx	0.74	0.57

Roadway 1 (M5)

Results for valuation field

	Symbol	Calculated	Target	Check
Roadway 1 (M5)	L_{av}	0.68 cd/m²	≥ 0.50 cd/m²	✓
	U_o	0.57	≥ 0.35	✓
	U_l	0.74	≥ 0.40	✓
	TI	12 %	≤ 15 %	✓
	R_{EI}(1)	0.77	–	

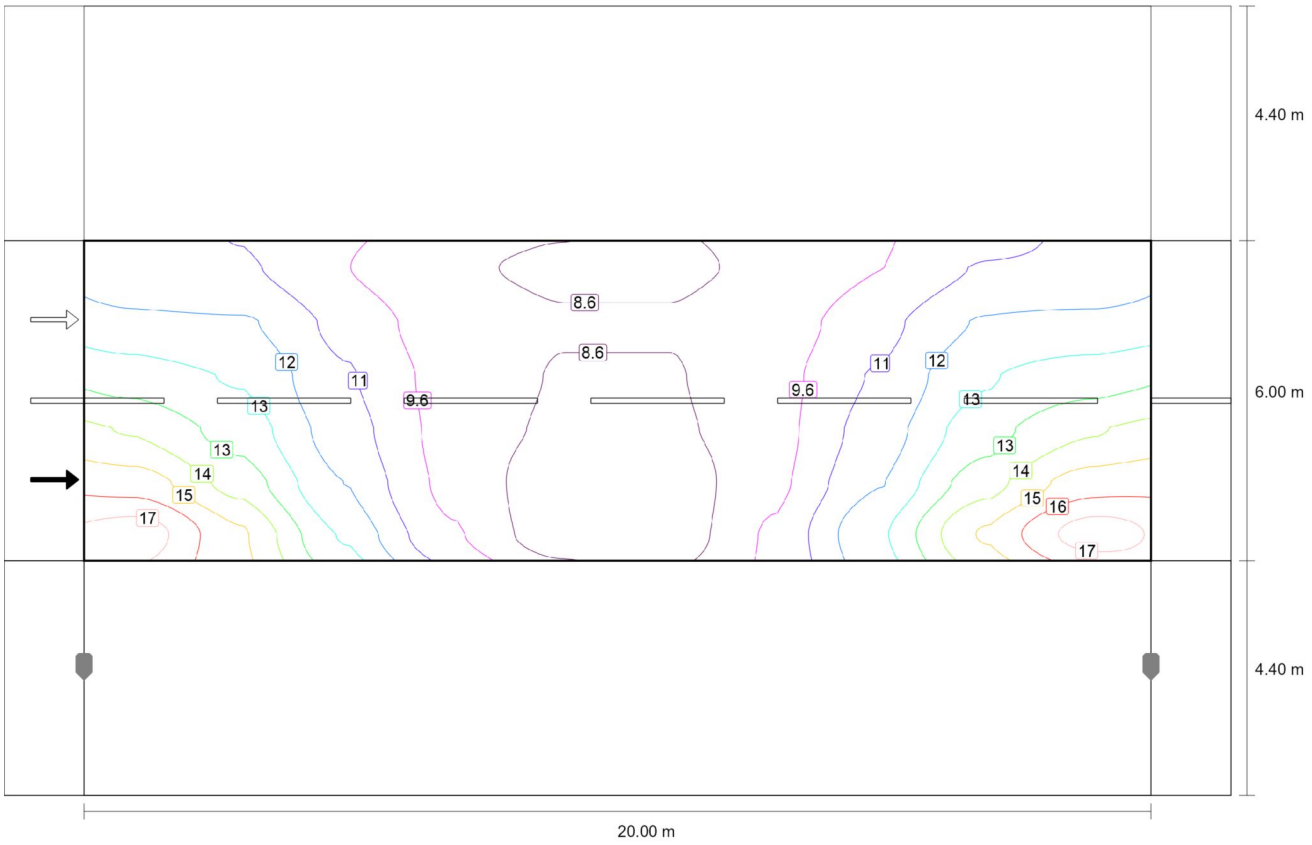
Results for observer

	Symbol	Calculated	Target	Check
Observer 1 Position: -60.000 m, 5.900 m, 1.500 m	L_{av}	0.68 cd/m²	≥ 0.50 cd/m²	✓
	U_o	0.61	≥ 0.35	✓
	U_l	0.74	≥ 0.40	✓
	TI	12 %	≤ 15 %	✓
Observer 2 Position: -60.000 m, 8.900 m, 1.500 m	L_{av}	0.78 cd/m²	≥ 0.50 cd/m²	✓
	U_o	0.57	≥ 0.35	✓
	U_l	0.82	≥ 0.40	✓
	TI	7 %	≤ 15 %	✓

(1) Informative, not part of the valuation

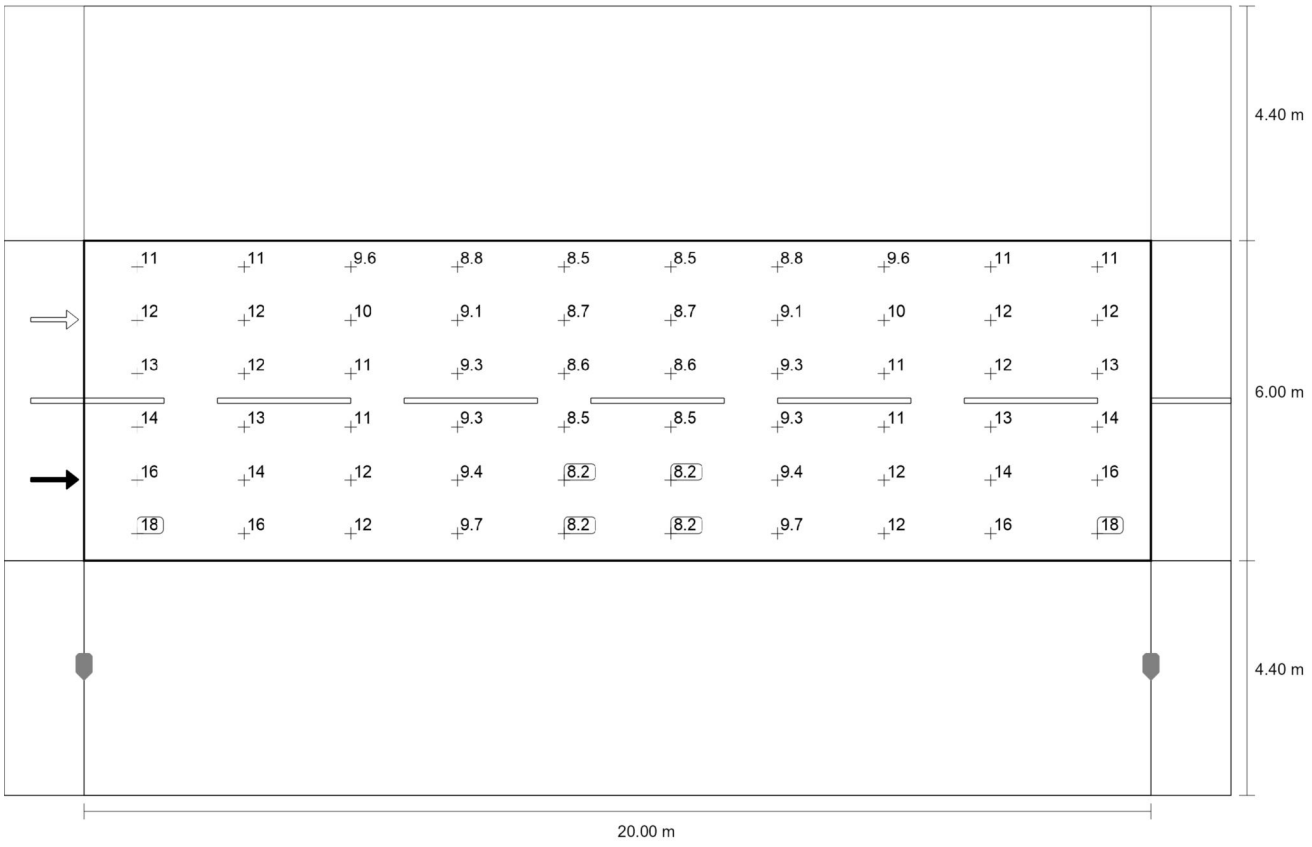
DIALux

Roadway 1 (M5)



Maintenance value, horizontal illuminance [lx] (Iso-illuminance curves)

Roadway 1 (M5)



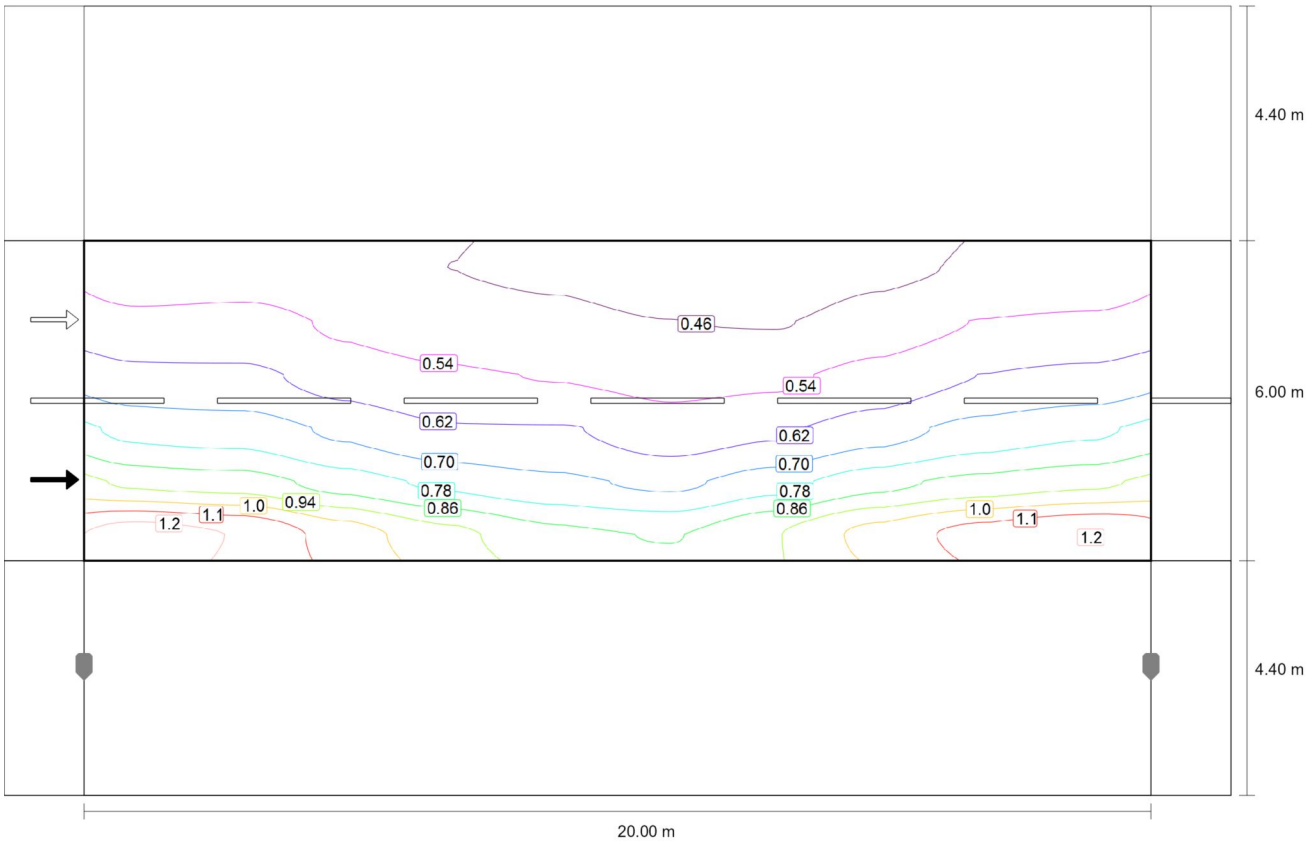
Maintenance value, horizontal illuminance [lx] (Value grid)

m	1.000	3.000	5.000	7.000	9.000	11.000	13.000	15.000	17.000	19.000
9.900	10.72	10.67	9.61	8.78	8.54	8.54	8.78	9.61	10.67	10.72
8.900	11.83	11.64	10.28	9.08	8.68	8.68	9.08	10.28	11.64	11.83
7.900	13.05	12.42	10.67	9.27	8.61	8.61	9.27	10.67	12.42	13.05
6.900	14.34	13.07	11.02	9.29	8.51	8.51	9.29	11.02	13.07	14.34
5.900	15.92	14.04	11.51	9.36	8.18	8.18	9.36	11.51	14.04	15.92
4.900	17.80	15.52	12.38	9.75	8.16	8.16	9.75	12.38	15.52	17.80

Maintenance value, horizontal illuminance [lx] (Value chart)

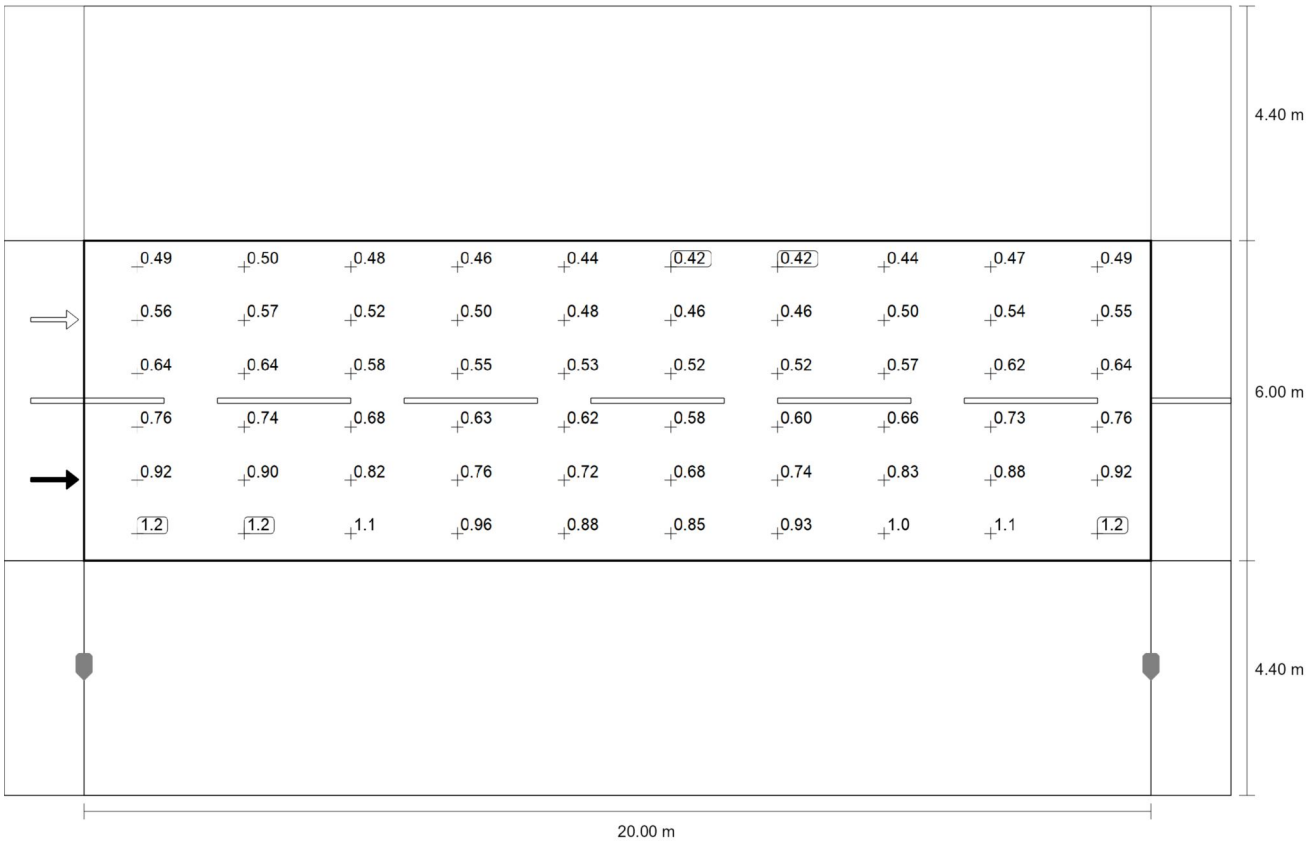
	E_{av}	E_{min}	E_{max}	U_o (g_1)	g_2
Maintenance value, horizontal illuminance	11.1 lx	8.16 lx	17.8 lx	0.74	0.46

Roadway 1 (M5)



Observer 1: Maintenance value, luminance with dry roadway [cd/m^2] (Iso-illuminance curves)

Roadway 1 (M5)



Observer 1: Maintenance value, luminance with dry roadway [cd/m²] (Value grid)

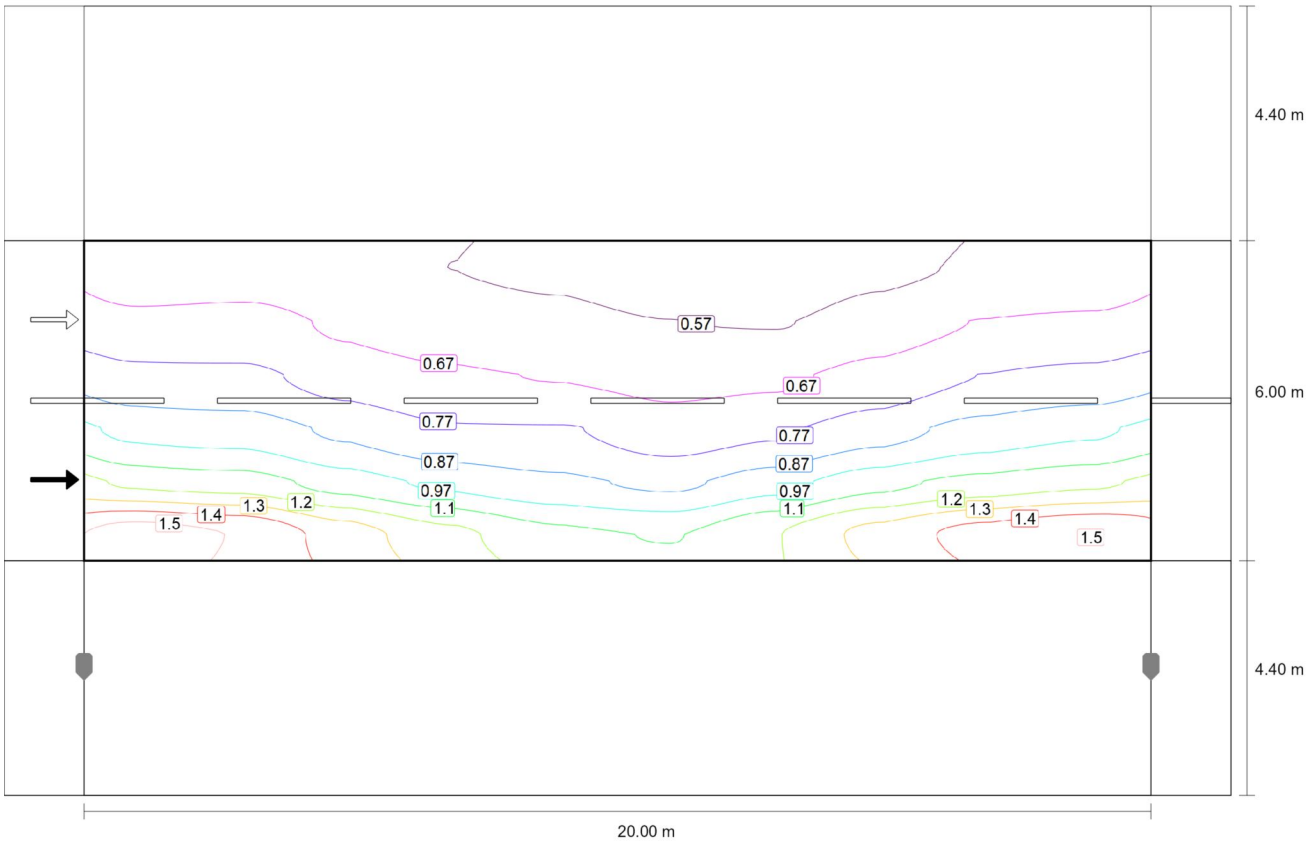
m	1.000	3.000	5.000	7.000	9.000	11.000	13.000	15.000	17.000	19.000
9.900	0.49	0.50	0.48	0.46	0.44	0.42	0.42	0.44	0.47	0.49
8.900	0.56	0.57	0.52	0.50	0.48	0.46	0.46	0.50	0.54	0.55
7.900	0.64	0.64	0.58	0.55	0.53	0.52	0.52	0.57	0.62	0.64
6.900	0.76	0.74	0.68	0.63	0.62	0.58	0.60	0.66	0.73	0.76
5.900	0.92	0.90	0.82	0.76	0.72	0.68	0.74	0.83	0.88	0.92
4.900	1.21	1.17	1.06	0.96	0.88	0.85	0.93	1.04	1.13	1.18

Observer 1: Maintenance value, luminance with dry roadway [cd/m²] (Value chart)

	L_{av}	L_{min}	L_{max}	U_o (g_1)	g_2
Observer 1: Maintenance value, luminance with dry roadway	0.68 cd/m²	0.42 cd/m²	1.21 cd/m²	0.61	0.34

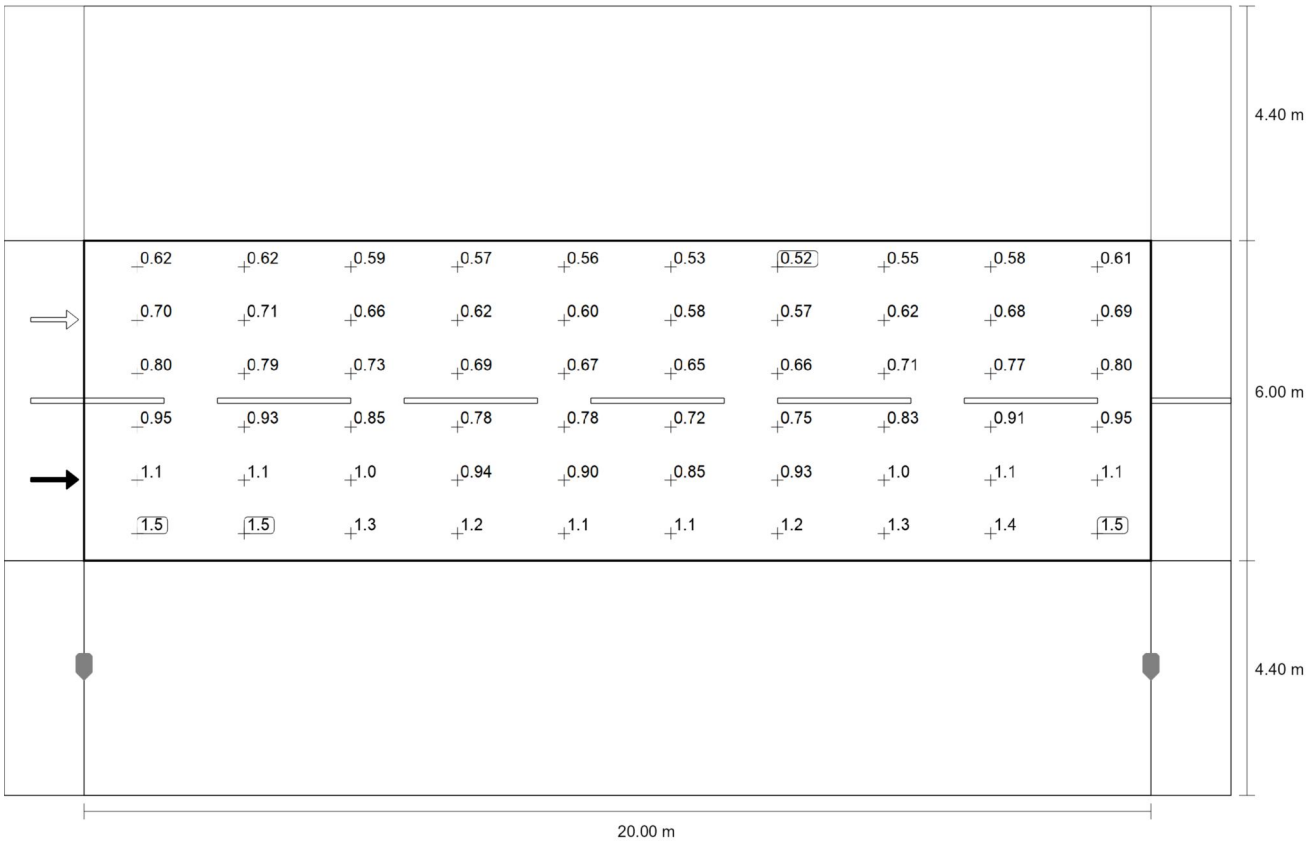
DIALux

Roadway 1 (M5)



Observer 1: Luminance with new installation [cd/m²] (Iso-illuminance curves)

Roadway 1 (M5)



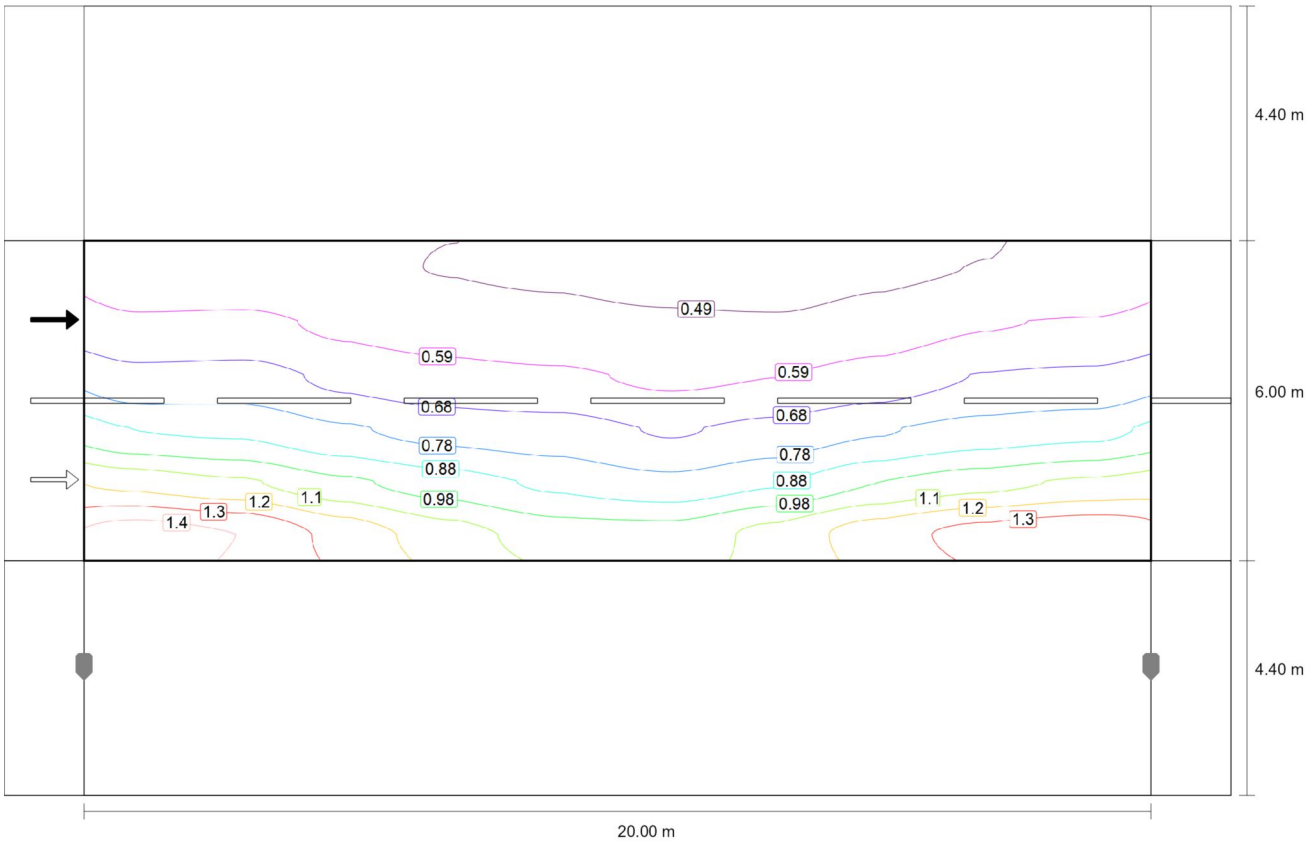
Observer 1: Luminance with new installation [cd/m²] (Value grid)

m	1.000	3.000	5.000	7.000	9.000	11.000	13.000	15.000	17.000	19.000
9.900	0.62	0.62	0.59	0.57	0.56	0.53	0.52	0.55	0.58	0.61
8.900	0.70	0.71	0.66	0.62	0.60	0.58	0.57	0.62	0.68	0.69
7.900	0.80	0.79	0.73	0.69	0.67	0.65	0.66	0.71	0.77	0.80
6.900	0.95	0.93	0.85	0.78	0.78	0.72	0.75	0.83	0.91	0.95
5.900	1.15	1.12	1.02	0.94	0.90	0.85	0.93	1.04	1.10	1.15
4.900	1.52	1.46	1.32	1.20	1.10	1.07	1.16	1.30	1.41	1.47

Observer 1: Luminance with new installation [cd/m²] (Value chart)

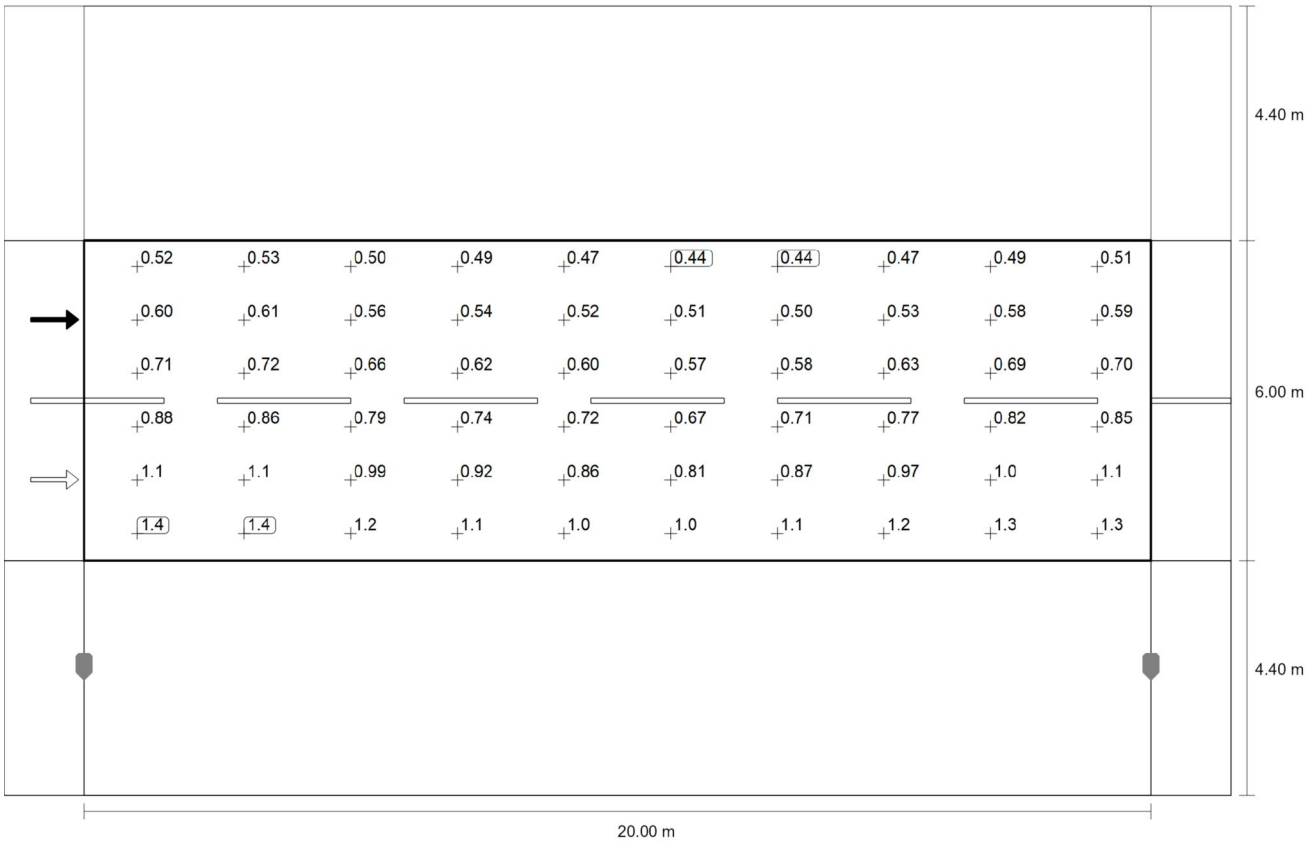
	L_{av}	L_{min}	L_{max}	U_o (g_1)	g_2
Observer 1: Luminance with new installation	0.85 cd/m²	0.52 cd/m²	1.52 cd/m²	0.61	0.34

Roadway 1 (M5)



Observer 2: Maintenance value, luminance with dry roadway [cd/m^2] (Iso-illuminance curves)

Roadway 1 (M5)



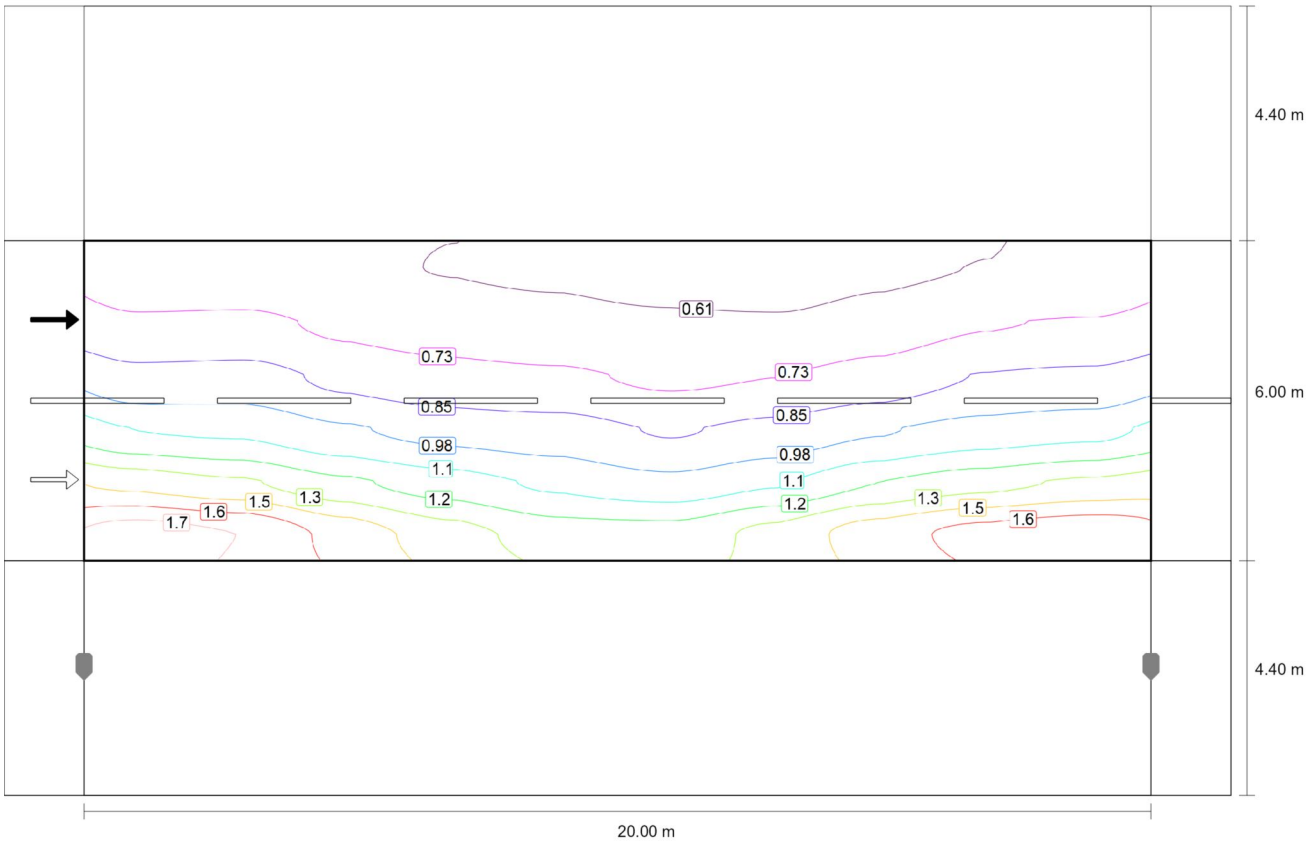
Observer 2: Maintenance value, luminance with dry roadway [cd/m²] (Value grid)

m	1.000	3.000	5.000	7.000	9.000	11.000	13.000	15.000	17.000	19.000
9.900	0.52	0.53	0.50	0.49	0.47	0.44	0.44	0.47	0.49	0.51
8.900	0.60	0.61	0.56	0.54	0.52	0.51	0.50	0.53	0.58	0.59
7.900	0.71	0.72	0.66	0.62	0.60	0.57	0.58	0.63	0.69	0.70
6.900	0.88	0.86	0.79	0.74	0.72	0.67	0.71	0.77	0.82	0.85
5.900	1.14	1.09	0.99	0.92	0.86	0.81	0.87	0.97	1.04	1.09
4.900	1.41	1.36	1.23	1.12	1.03	1.02	1.10	1.22	1.30	1.34

Observer 2: Maintenance value, luminance with dry roadway [cd/m²] (Value chart)

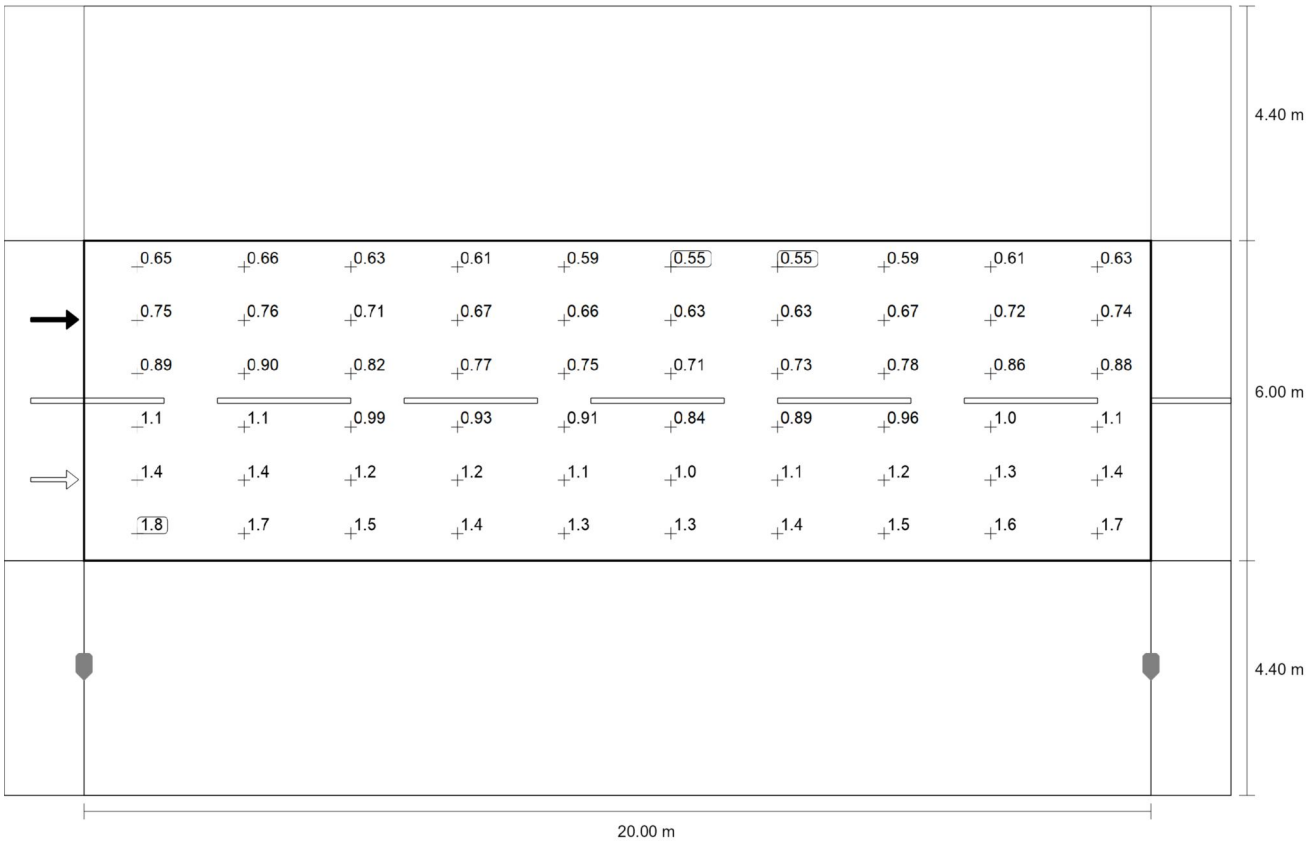
	L_{av}	L_{min}	L_{max}	U_o (g_1)	g_2
Observer 2: Maintenance value, luminance with dry roadway	0.78 cd/m²	0.44 cd/m²	1.41 cd/m²	0.57	0.31

Roadway 1 (M5)



Observer 2: Luminance with new installation [cd/m²] (Iso-illuminance curves)

Roadway 1 (M5)



Observer 2: Luminance with new installation [cd/m²] (Value grid)

m	1.000	3.000	5.000	7.000	9.000	11.000	13.000	15.000	17.000	19.000
9.900	0.65	0.66	0.63	0.61	0.59	0.55	0.55	0.59	0.61	0.63
8.900	0.75	0.76	0.71	0.67	0.66	0.63	0.63	0.67	0.72	0.74
7.900	0.89	0.90	0.82	0.77	0.75	0.71	0.73	0.78	0.86	0.88
6.900	1.10	1.07	0.99	0.93	0.91	0.84	0.89	0.96	1.02	1.06
5.900	1.43	1.36	1.24	1.15	1.07	1.01	1.08	1.22	1.30	1.36
4.900	1.77	1.70	1.54	1.39	1.28	1.27	1.38	1.53	1.63	1.68

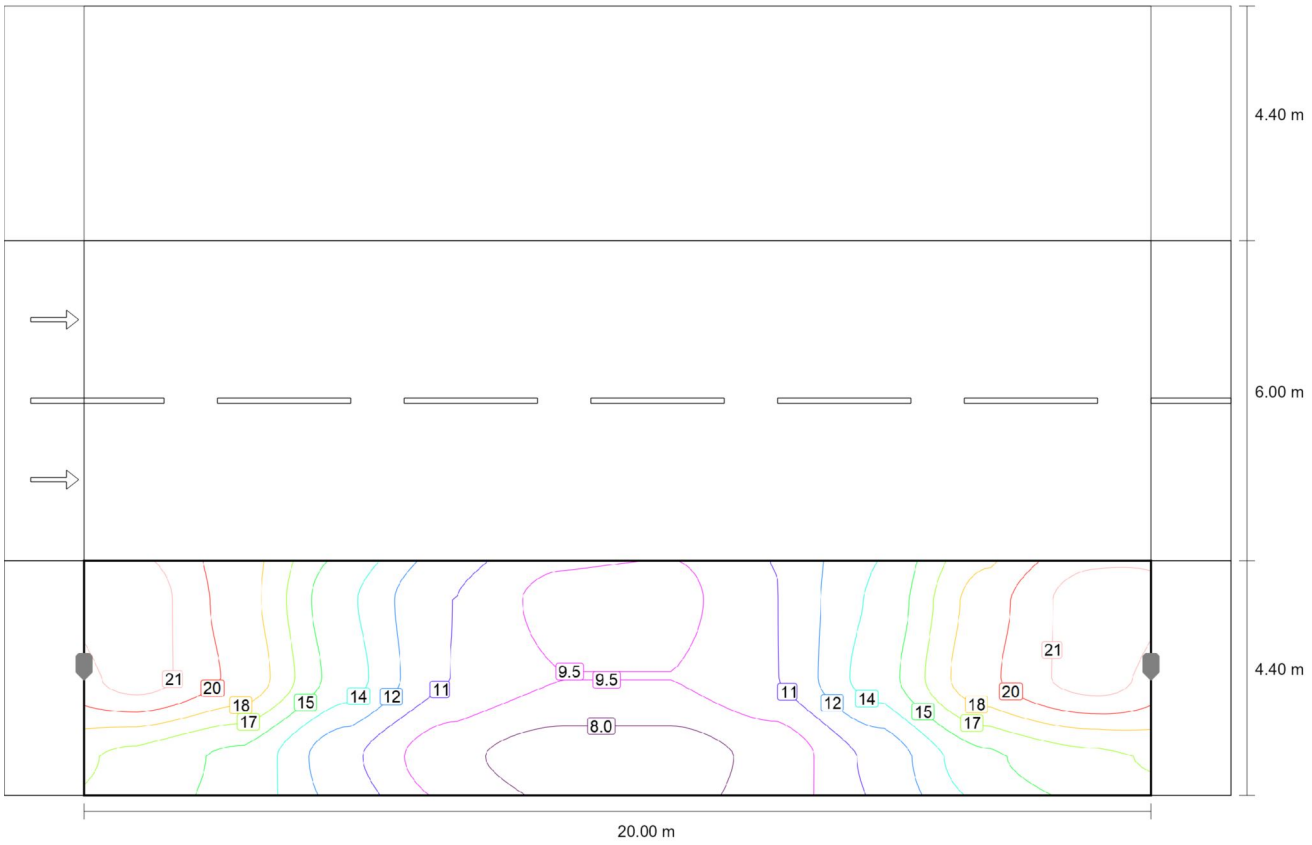
Observer 2: Luminance with new installation [cd/m²] (Value chart)

	L_{av}	L_{min}	L_{max}	U_o (g_1)	g_2
Observer 2: Luminance with new installation	0.97 cd/m²	0.55 cd/m²	1.77 cd/m²	0.57	0.31

Parking 2 (P2)

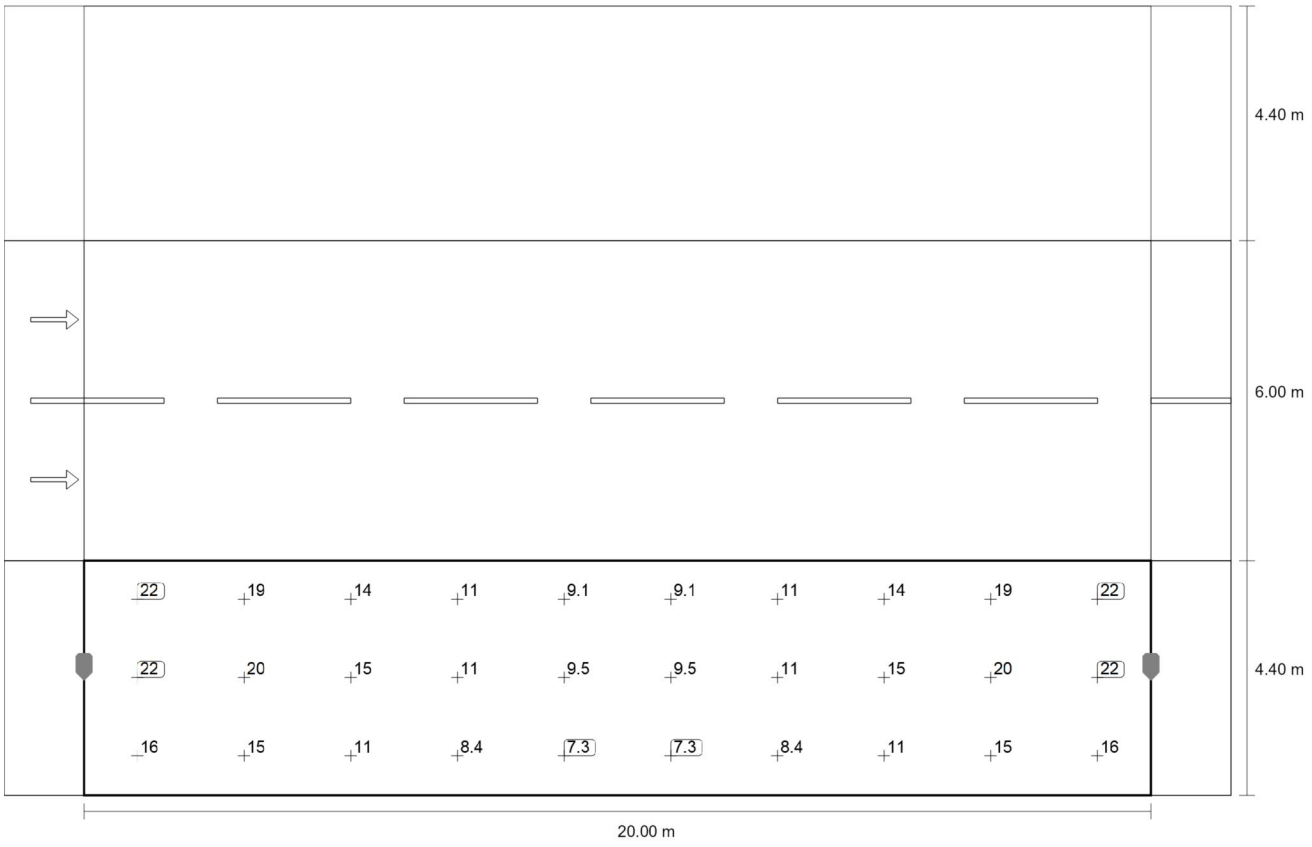
Results for valuation field

	Symbol	Calculated	Target	Check
Parking 2 (P2)	E_{av}	14.02 lx	[10.00 - 15.00] lx	✓
	E_{min}	7.26 lx	≥ 2.00 lx	✓



Maintenance value, horizontal illuminance [lx] (Iso-illuminance curves)

Parking 2 (P2)



Maintenance value, horizontal illuminance [lx] (Value grid)

m	1.000	3.000	5.000	7.000	9.000	11.000	13.000	15.000	17.000	19.000
3.667	22.02	19.10	14.16	10.93	9.06	9.06	10.93	14.16	19.10	22.02
2.200	21.90	19.51	14.67	10.92	9.48	9.48	10.92	14.67	19.51	21.90
0.733	16.49	15.07	11.34	8.43	7.26	7.26	8.43	11.34	15.07	16.49

Maintenance value, horizontal illuminance [lx] (Value chart)

	E_{av}	E_{min}	E_{max}	U_o (g_1)	g_2
Maintenance value, horizontal illuminance	14.0 lx	7.26 lx	22.0 lx	0.52	0.33