

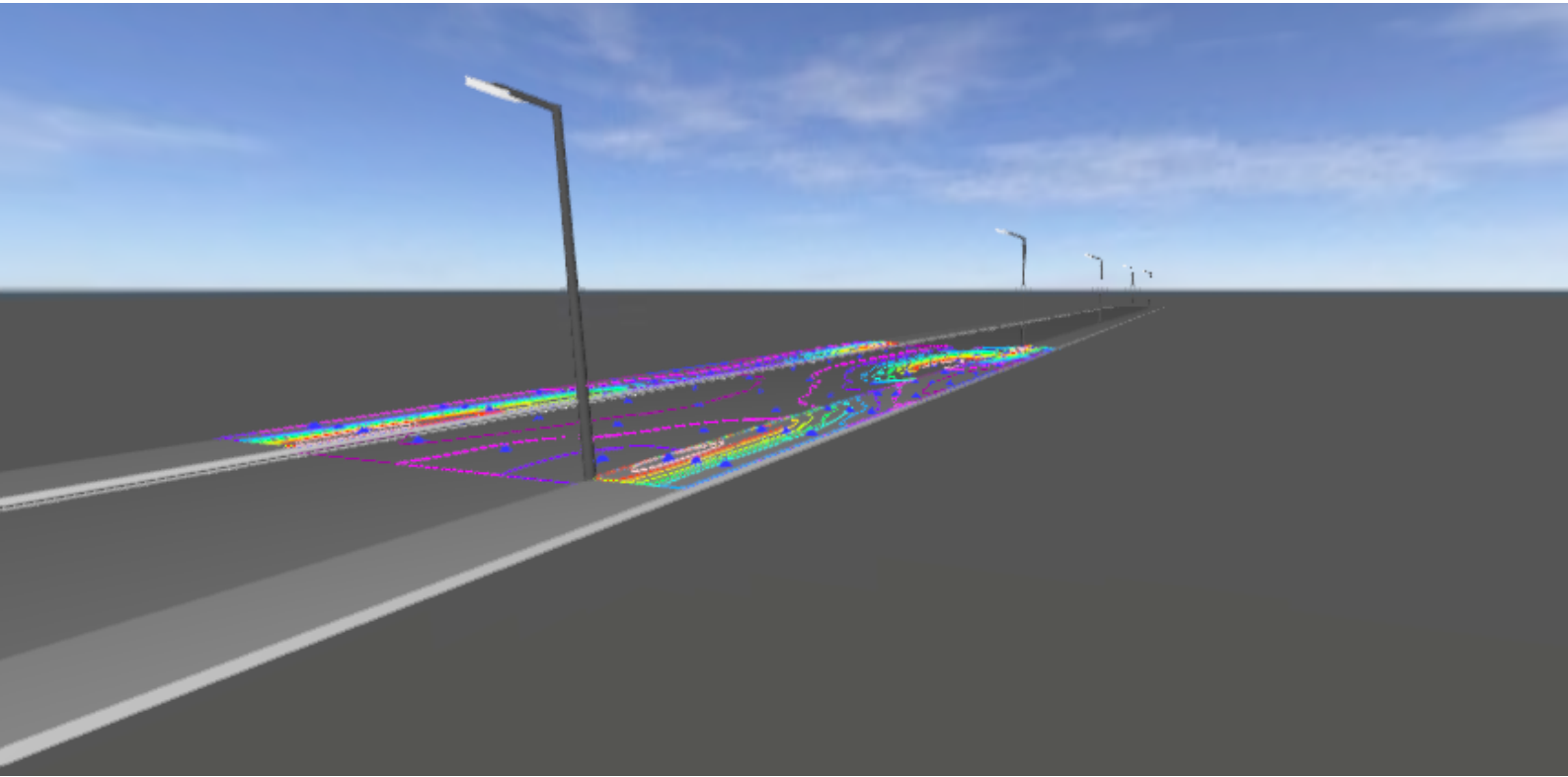
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Date:
2019-09-08



MOONRIVER-10W 5M road & 2line 1.5M sidewalk with 5M poledesign



Content

MOONRIVER-10W 5M road & 2line 1.5M sidewalk with 5M poledesign

MOONRIVER-10W 5M road & 2line 1.5M sidewalk with 5M poledesign

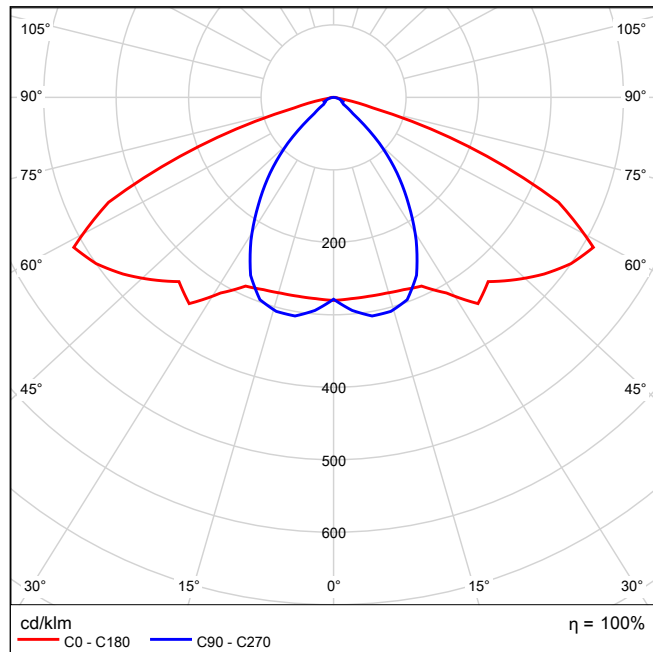
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九高 1x49

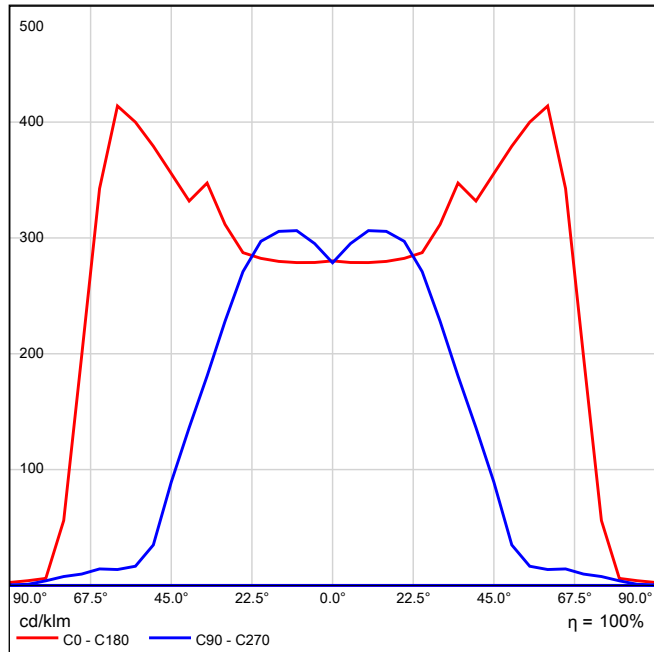
See our luminaire catalog for an image of the luminaire.

Light output ratio: 100.11%
Lamp luminous flux: 1597 lm
Luminaire luminous flux: 1599 lm
Power: 10.1 W
Luminous efficacy: 158.3 lm/W

Luminous emittance 1 / Polar LDC

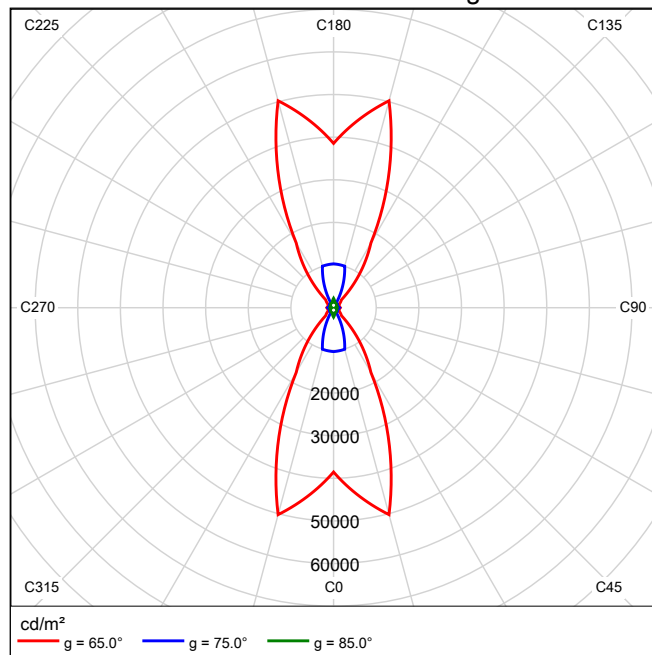


Luminous emittance 1 / Linear LDC



It is not possible to generate a cone diagram, as the light distribution is asymmetrical.

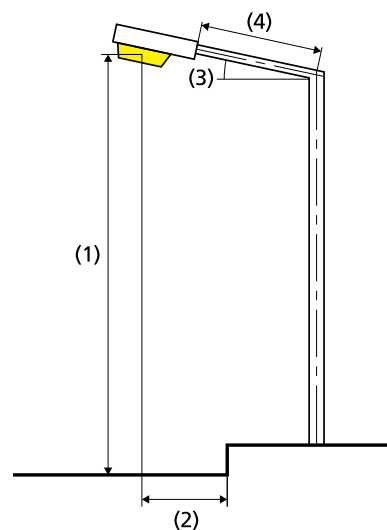
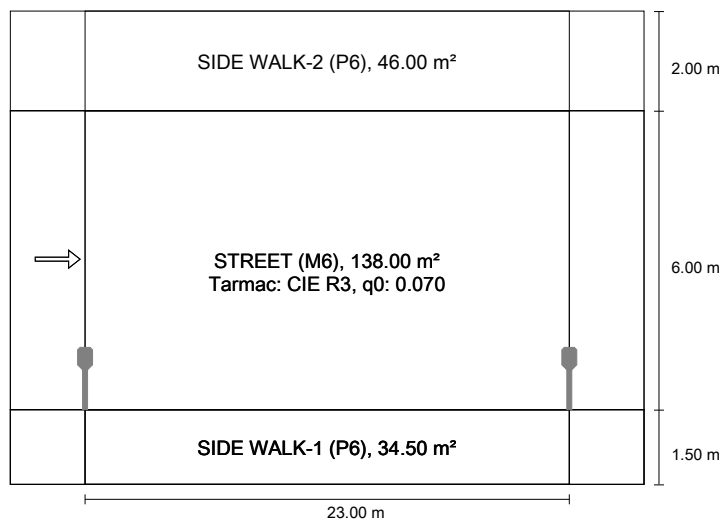
Luminous emittance 1 / Luminance diagram



It is not possible to generate a UGR diagram, as the light distribution is asymmetrical.

街道 1 according to EN 13201:2015

九高



Results for valuation fields

Light loss factor: 0.67

SIDE WALK-2 (P6)

E _{min} [lx] ≥ 0.40	E _{min} (sc) ≥ 0.20	E _m [lx]
✓ 1.57	✓ 0.52	* 2.26

STREET (M6)

L _m [cd/m²] ≥ 0.30	U _o ≥ 0.35	U _l ≥ 0.40	TI [%] ≤ 20	EIR
✓ 0.30	✓ 0.49	✓ 0.49	✓ 10	* 0.21

SIDE WALK-1 (P6)

E _{min} [lx] ≥ 0.40	E _m [lx]
✓ 0.72	* 3.49

* Informative, not part of the valuation

Results for energy efficiency indicators

Power density indicator (D _p)	0.011 W/lx·m²
Energy consumption density	
Arrangement: 10WMoon river 1_IESNA2002.IES (40.4 kWh/yr)	0.2 kWh/m² yr

Lamp:	1x49
Luminous flux (luminaire):	1598.84 lm
Luminous flux (lamp):	1597.10 lm
Operating Hours	
4000 h:	100.0 %, 10.1 W
W/km:	434.4
Arrangement:	single side bottom
Pole distance:	23.000 m
Boom inclination (3):	20.0°
Boom length (4):	1.028 m
Light centre height (1):	5.000 m
Light overhang (2):	1.000 m

ULR:	0.00
ULOR:	0.00

Maximum luminous intensities	
at 70° and above	476 cd/klm *
at 80° and above	117 cd/klm *
at 90° and above	9.77 cd/klm *
Luminous intensity class:	G*2

Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.

* Luminous intensity values in [cd/klm] for calculating luminous intensity class refer to the output flux of the luminaire, according EN 13201:2015.

Arrangement complies with glare index class D.2

SIDE WALK-2 (P6)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 0.40	Emin (sc) ≥ 0.20	Em [lx]
✓ 1.57	✓ 0.52	* 2.26

* Informative, not part of the valuation

SIDE WALK-2 (P6)

Horizontal illuminance [lx]

9.167	1.88	1.90	1.87	1.77	1.57	1.57	1.77	1.87	1.90	1.88
8.500	2.55	2.46	2.30	2.03	1.83	1.83	2.03	2.30	2.46	2.55
7.833	3.45	3.15	2.82	2.27	2.11	2.11	2.27	2.82	3.15	3.45
m	1.150	3.450	5.750	8.050	10.350	12.650	14.950	17.250	19.550	21.850

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
2.26	1.57	3.45	0.693	0.454

Semi-cylindrical illuminance (west) [lx]

9.167	0.79	1.14	1.41	1.40	0.99	0.74	0.61	0.54	0.52	0.60
8.500	1.08	1.60	1.94	1.77	1.21	0.85	0.66	0.59	0.61	0.77
7.833	1.49	2.20	2.59	2.18	1.46	0.96	0.67	0.59	0.73	1.00
m	1.150	3.450	5.750	8.050	10.350	12.650	14.950	17.250	19.550	21.850

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
1.12	0.52	2.59	0.466	0.202

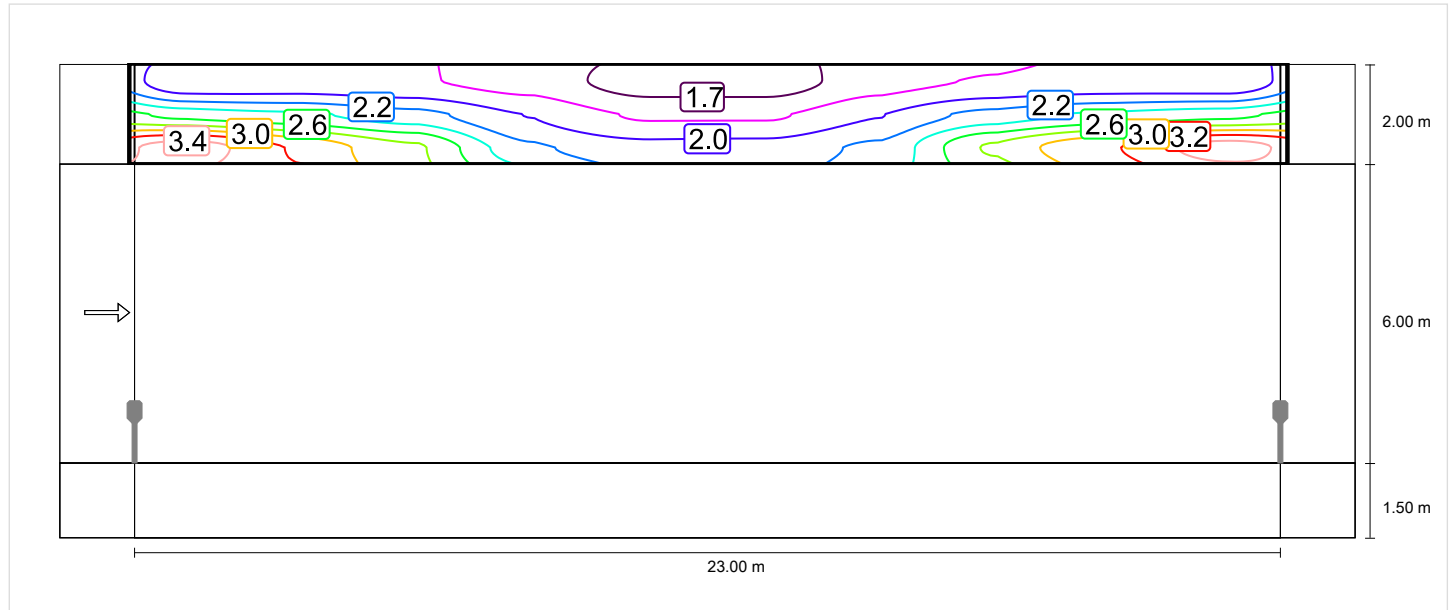
SIDE WALK-2 (P6)

Light loss factor: 0.67
Grid: 10 x 3 Points

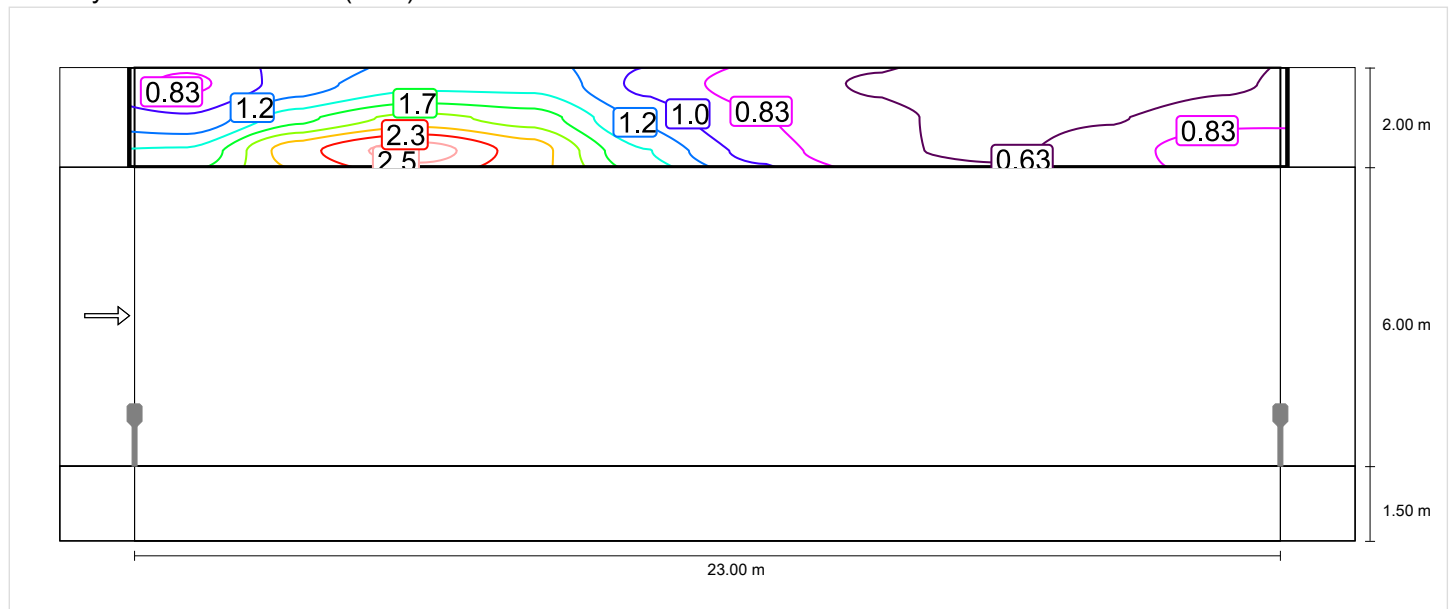
Emin [lx] ≥ 0.40	Emin (sc) ≥ 0.20	Em [lx]
✓ 1.57	✓ 0.52	* 2.26

* Informative, not part of the valuation

Horizontal illuminance



Semi-cylindrical illuminance (west)



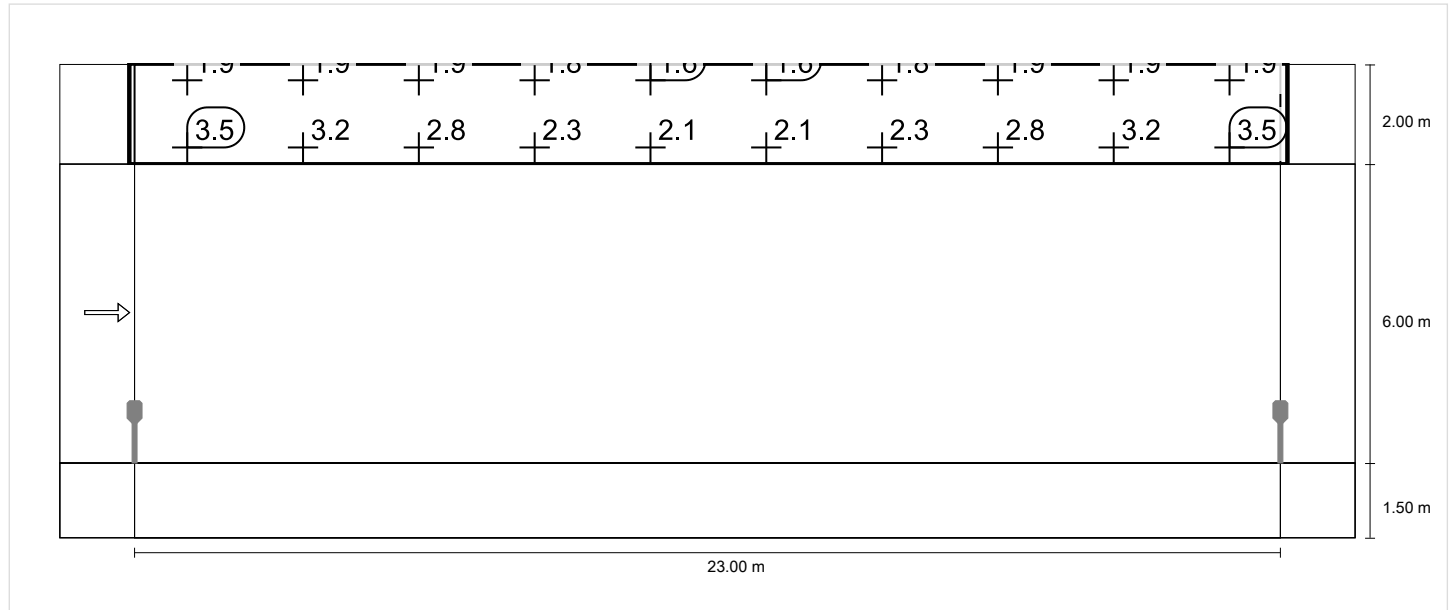
SIDE WALK-2 (P6)

Light loss factor: 0.67
Grid: 10 x 3 Points

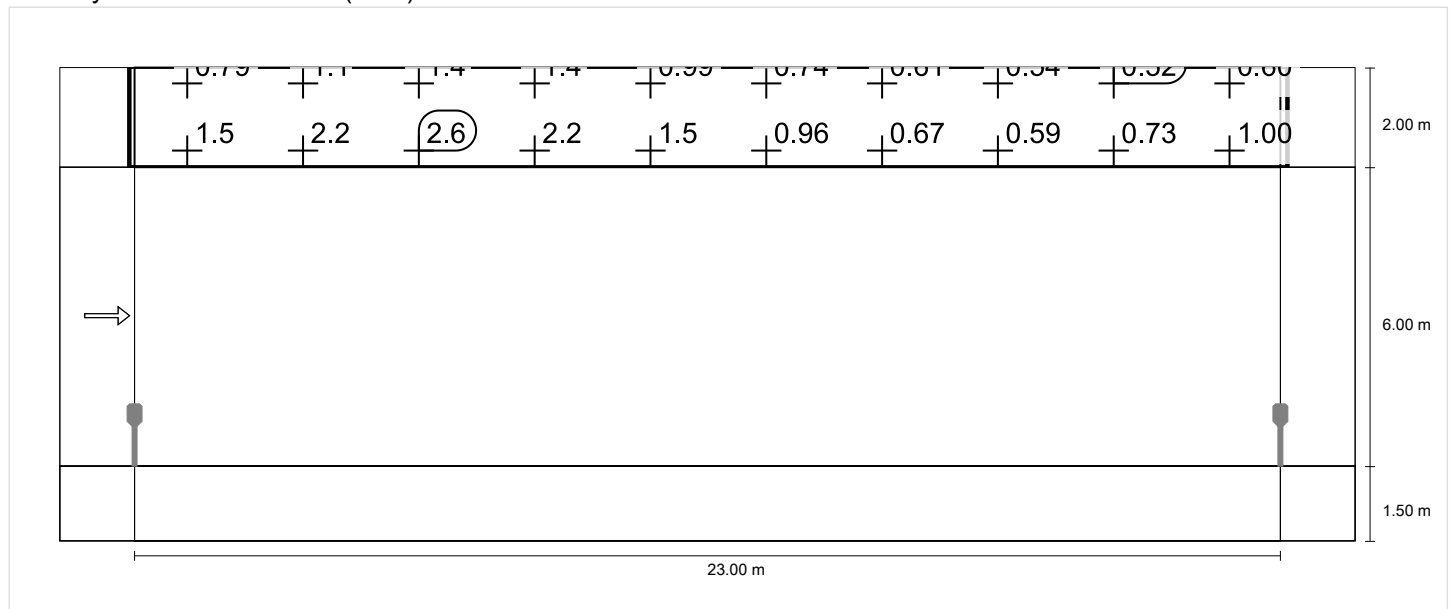
Emin [lx] ≥ 0.40	Emin (sc) ≥ 0.20	Em [lx]
✓ 1.57	✓ 0.52	* 2.26

* Informative, not part of the valuation

Horizontal illuminance



Semi-cylindrical illuminance (west)



STREET (M6)

Light loss factor: 0.67
Grid: 10 x 3 Points

Lm [cd/m ²] ≥ 0.30	Uo ≥ 0.35	UI ≥ 0.40	TI [%] ≤ 20	EIR
✓ 0.30	✓ 0.49	✓ 0.49	✓ 10	* 0.21

* Informative, not part of the valuation

Assigned observer (1):

Observer	Position [m]	Lm [cd/m ²] ≥ 0.30	Uo ≥ 0.35	UI ≥ 0.40	TI [%] ≤ 20
Observer 1	(-60.000, 4.500, 1.500)	0.30	0.49	0.49	10

STREET (M6)

Horizontal illuminance [lx]

6.500	5.83	4.85	3.67	2.82	2.30	2.30	2.82	3.67	4.85	5.83
4.500	9.16	6.93	4.20	2.69	1.90	1.90	2.69	4.20	6.93	9.16
2.500	11.7	8.91	5.85	3.43	1.84	1.84	3.43	5.85	8.91	11.7
m	1.150	3.450	5.750	8.050	10.350	12.650	14.950	17.250	19.550	21.850

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
5.07	1.84	11.7	0.362	0.157

Observer 1

Luminance with dry roadway [cd/m²]

6.500	0.18	0.16	0.15	0.15	0.17	0.21	0.22	0.21	0.19	0.19
4.500	0.27	0.21	0.18	0.19	0.23	0.31	0.37	0.36	0.38	0.31
2.500	0.33	0.27	0.23	0.26	0.34	0.54	0.77	0.74	0.57	0.42
m	1.150	3.450	5.750	8.050	10.350	12.650	14.950	17.250	19.550	21.850

Grid: 10 x 3 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
0.30	0.15	0.77	0.493	0.194

Luminance with new lamp [cd/m²]

6.500	0.27	0.23	0.22	0.22	0.26	0.31	0.32	0.31	0.28	0.28
4.500	0.40	0.32	0.27	0.29	0.35	0.46	0.55	0.54	0.56	0.46
2.500	0.49	0.41	0.35	0.39	0.51	0.80	1.15	1.11	0.84	0.62
m	1.150	3.450	5.750	8.050	10.350	12.650	14.950	17.250	19.550	21.850

Grid: 10 x 3 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
0.45	0.22	1.15	0.493	0.194

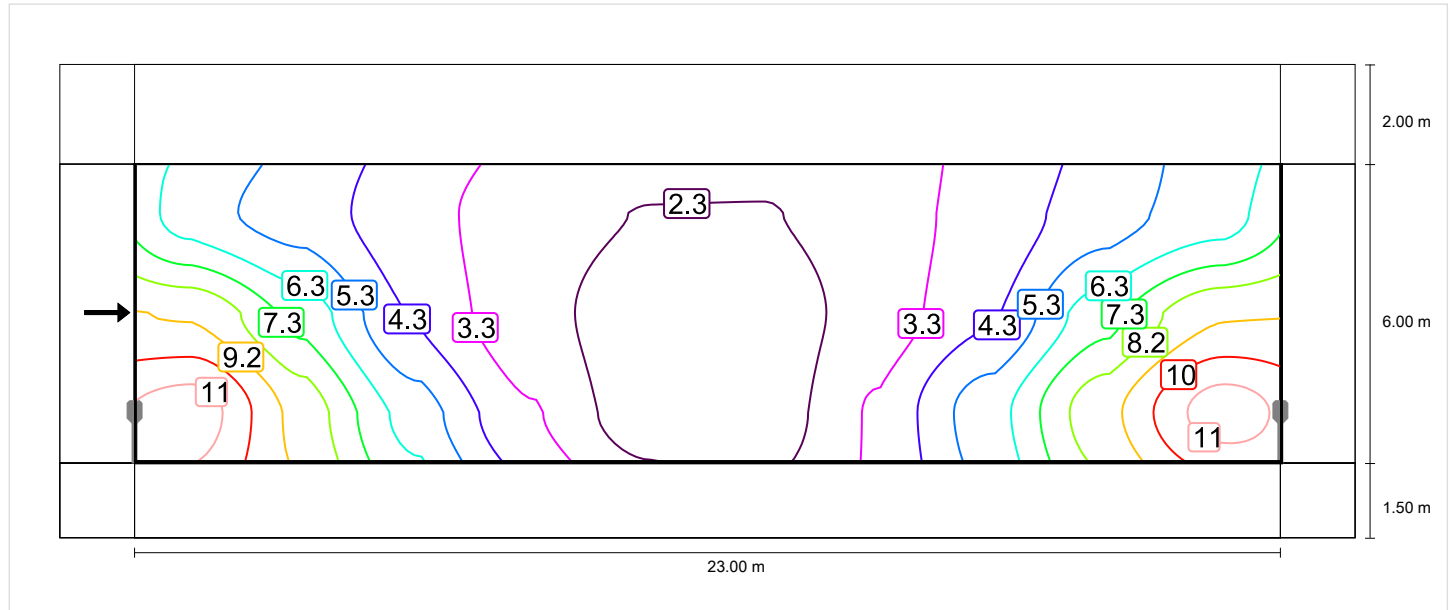
STREET (M6)

Light loss factor: 0.67
Grid: 10 x 3 Points

Lm [cd/m ²]	U _o	UI	TI [%]	EIR
≥ 0.30	≥ 0.35	≥ 0.40	≤ 20	
✓ 0.30	✓ 0.49	✓ 0.49	✓ 10	* 0.21

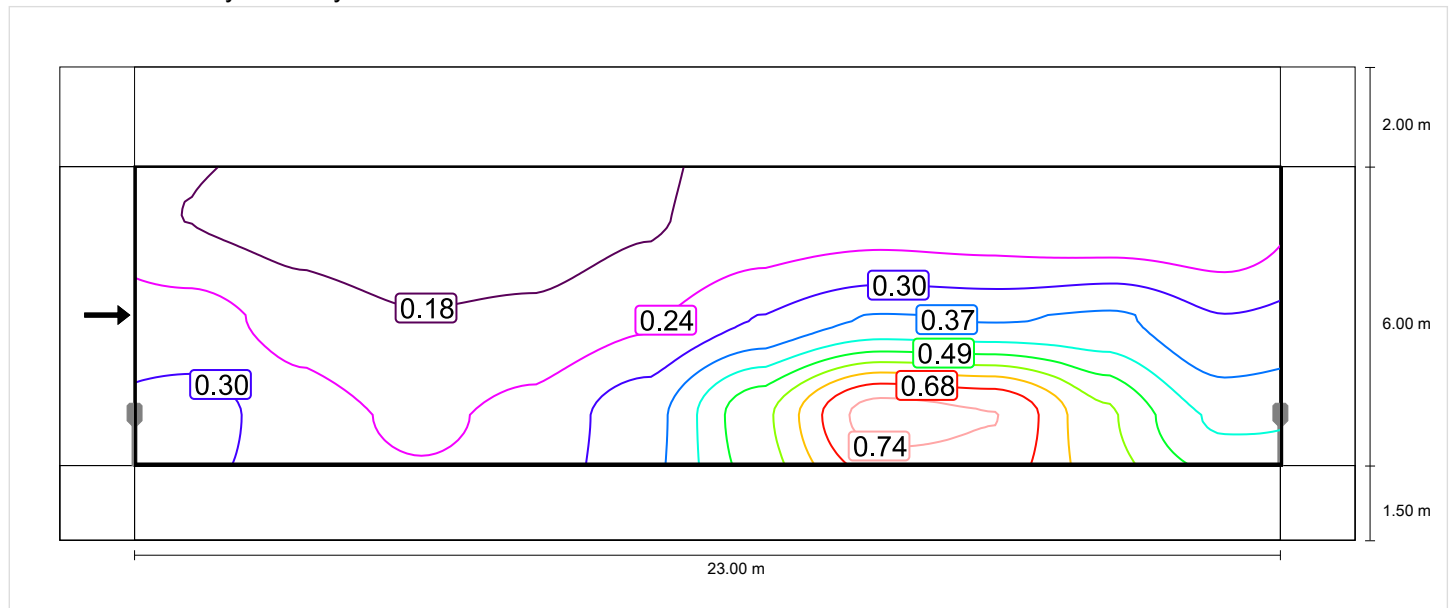
* Informative, not part of the valuation

Horizontal illuminance

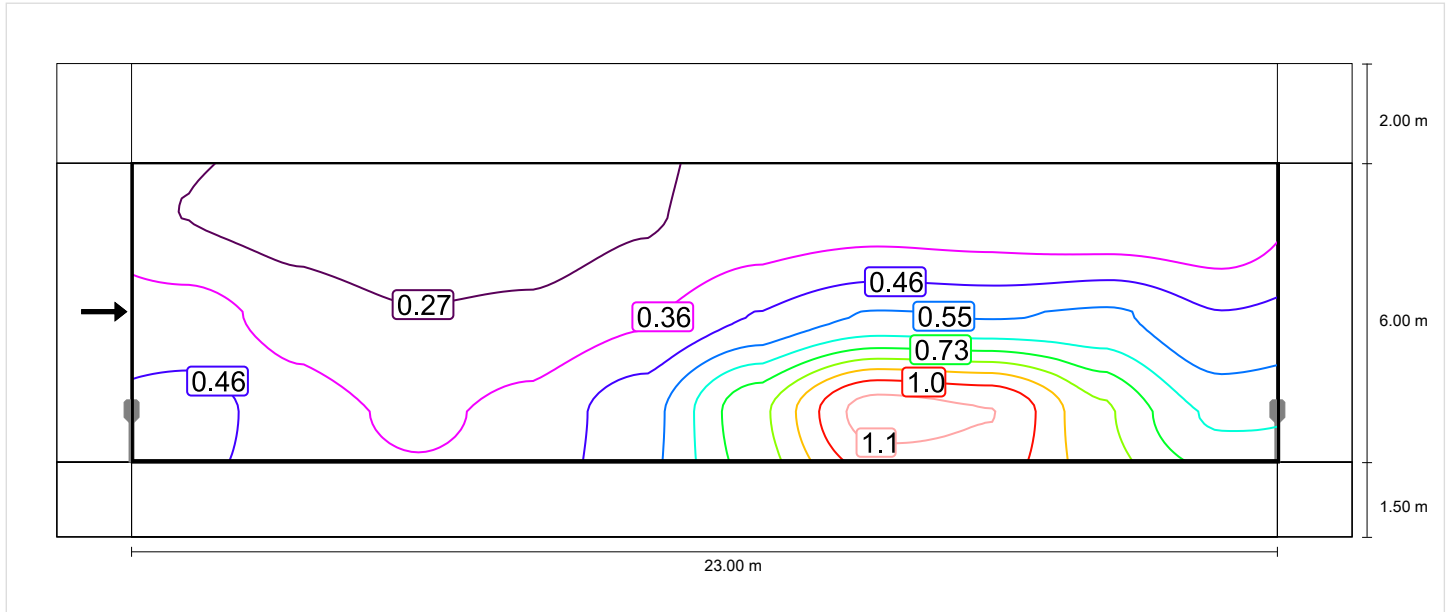


Observer 1

Luminance with dry roadway



Luminance with new lamp



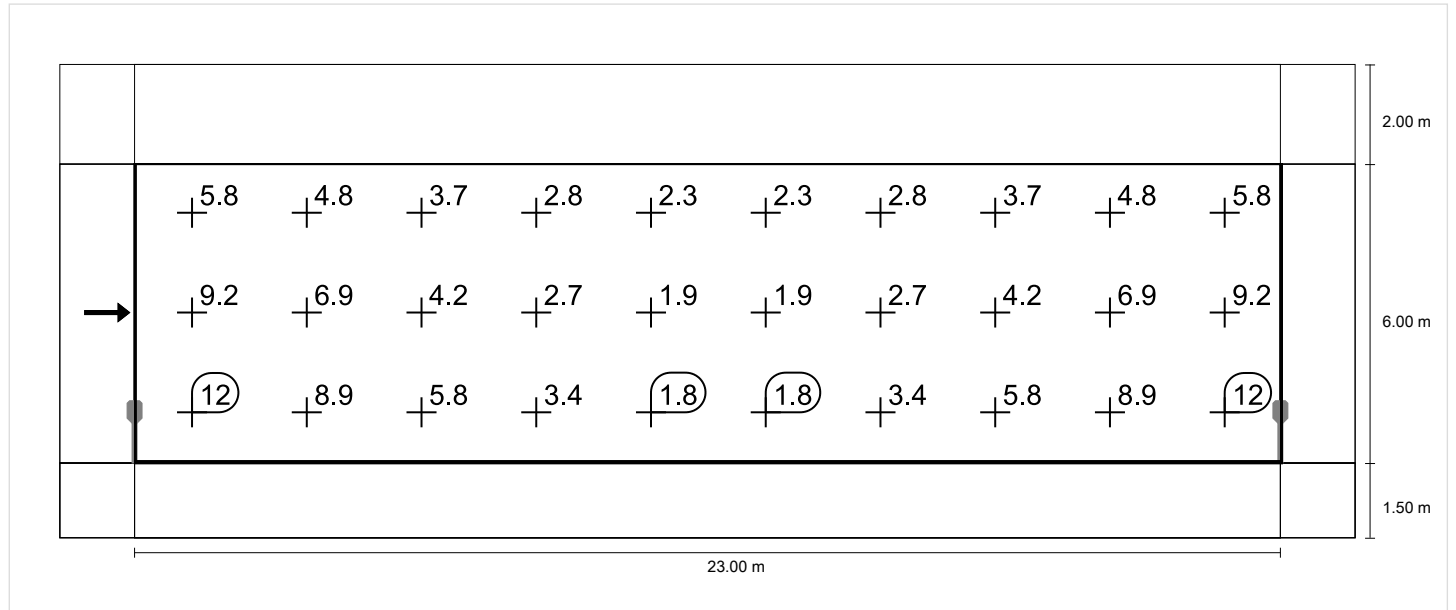
STREET (M6)

Light loss factor: 0.67
Grid: 10 x 3 Points

Lm [cd/m ²] ≥ 0.30	U _o ≥ 0.35	U _I ≥ 0.40	TI [%] ≤ 20	EIR
✓ 0.30	✓ 0.49	✓ 0.49	✓ 10	* 0.21

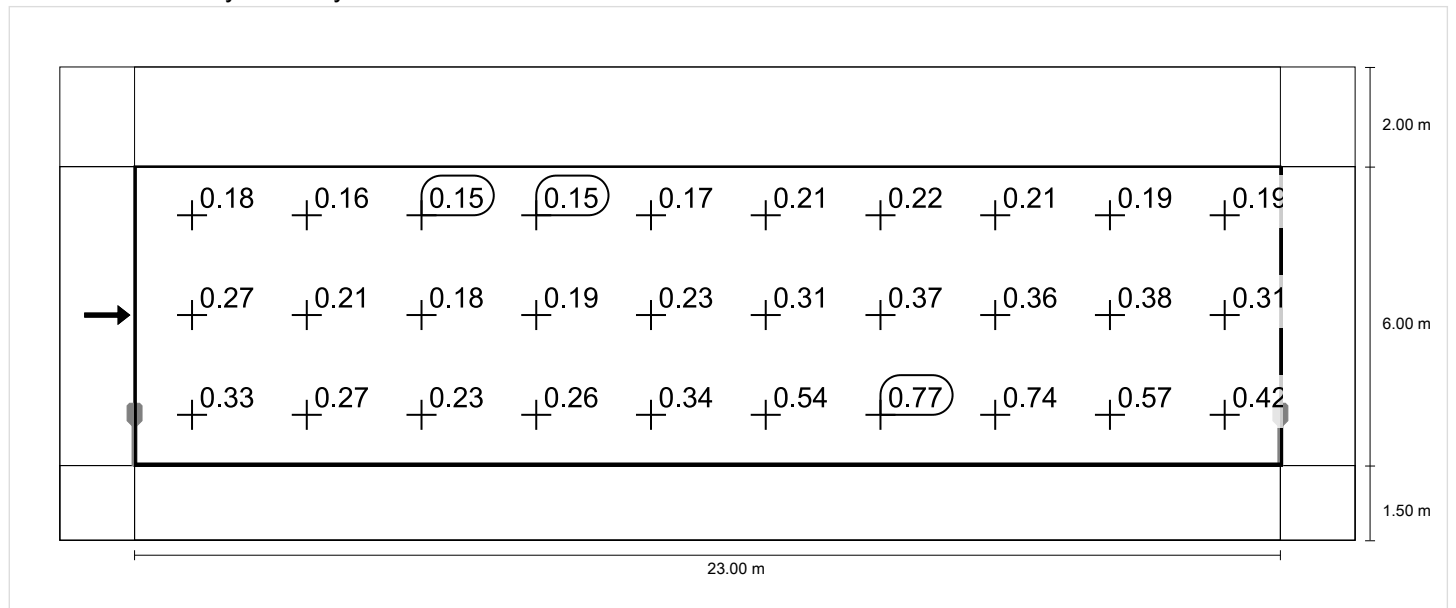
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Horizontal illuminance

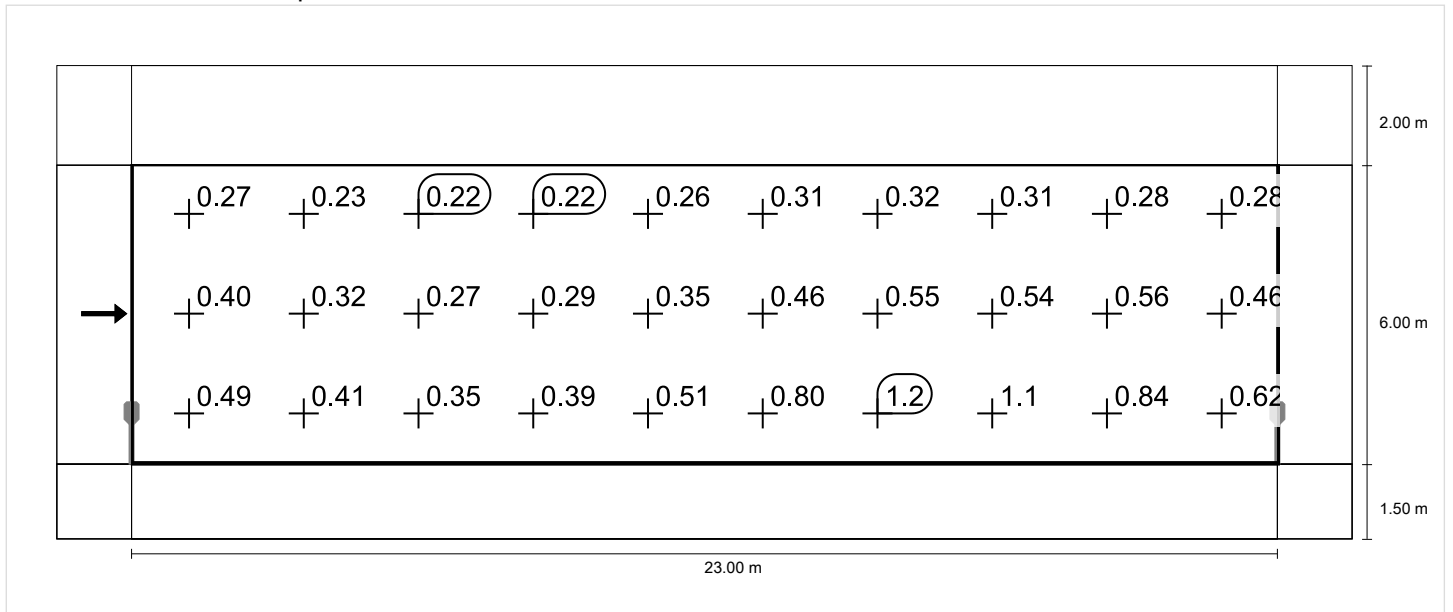


Observer 1

Luminance with dry roadway



Luminance with new lamp



SIDE WALK-1 (P6)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 0.40	Em [lx]
✓ 0.72	* 3.49

* Informative, not part of the valuation

SIDE WALK-1 (P6)

Horizontal illuminance [lx]

1.250	7.71	7.09	4.81	2.44	1.38	1.38	2.44	4.81	7.09	7.71
0.750	5.43	5.40	3.85	1.82	1.05	1.05	1.82	3.85	5.40	5.43
0.250	3.33	3.51	2.62	1.22	0.72	0.72	1.22	2.62	3.51	3.33
m	1.150	3.450	5.750	8.050	10.350	12.650	14.950	17.250	19.550	21.850

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
3.49	0.72	7.71	0.206	0.094

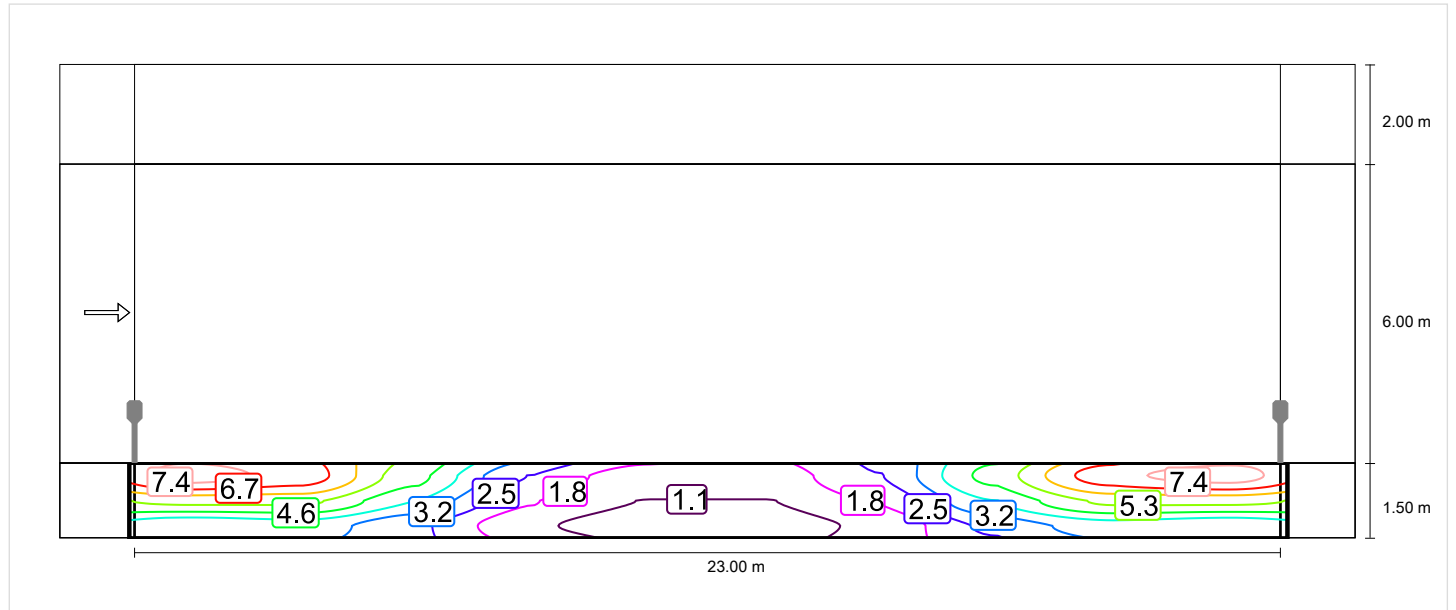
SIDE WALK-1 (P6)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 0.40	Em [lx]
✓ 0.72	* 3.49

* Informative, not part of the valuation

Horizontal illuminance



SIDE WALK-1 (P6)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 0.40	Em [lx]
✓ 0.72	* 3.49

* Informative, not part of the valuation

Horizontal illuminance

