

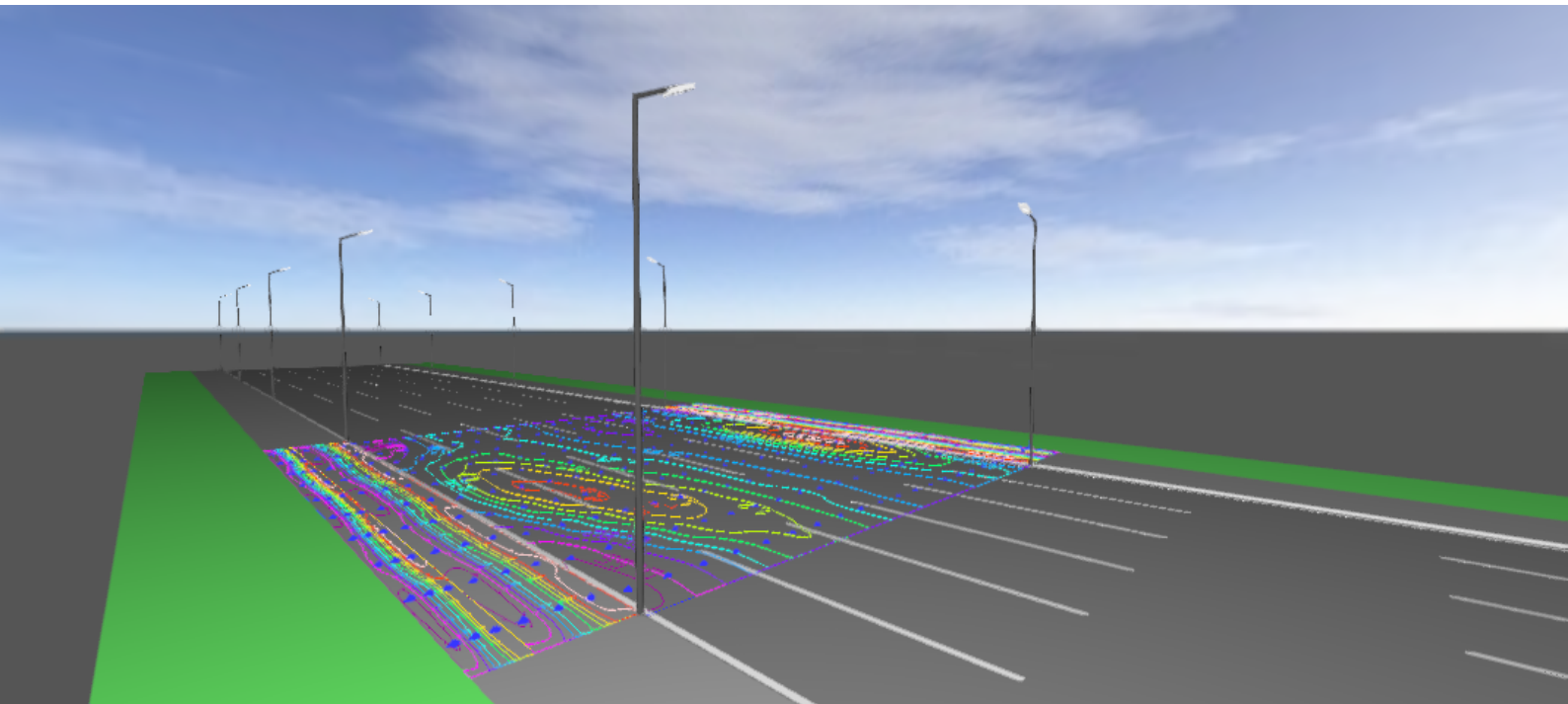
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2019-09-08



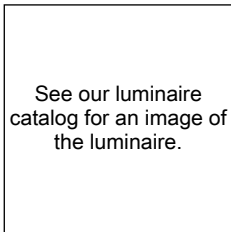
MOONRIVER-80W 18M STREET and 2line sidewalk 2line bikeway 2line greenbelt with 11M pole



Content

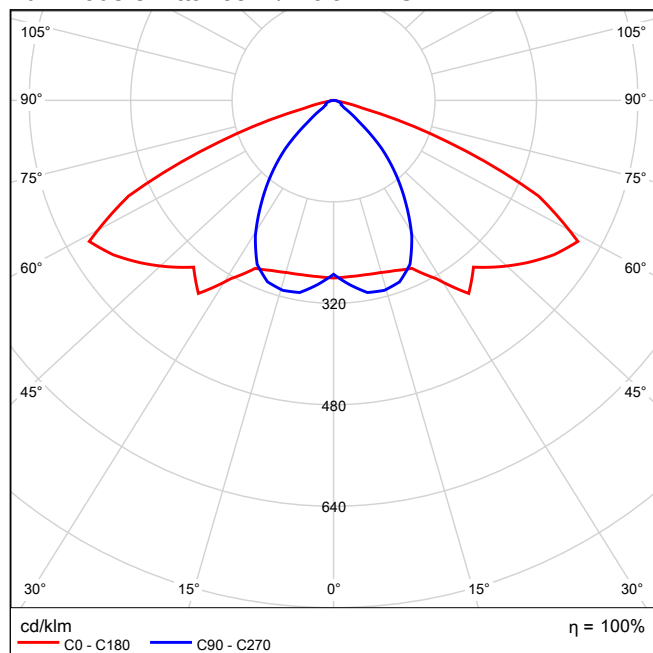
MOONRIVER-80W 18M STREET and 2line sidewalk 2line bikeway 2line greenbelt with 11M pole	
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九高 1x49

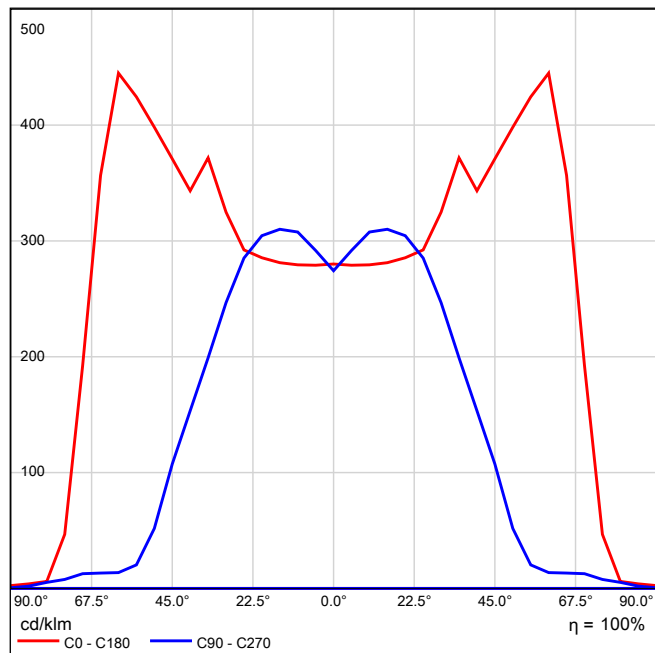


Light output ratio: 100.11%
Lamp luminous flux: 7843 lm
Luminaire luminous flux: 7852 lm
Power: 58.8 W
Luminous efficacy: 133.6 lm/W

Luminous emittance 1 / Polar LDC

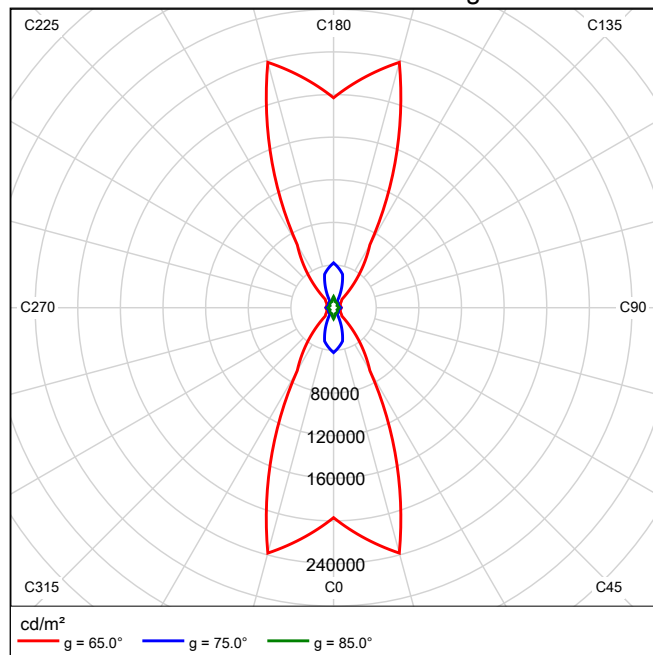


Luminous emittance 1 / Linear LDC



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

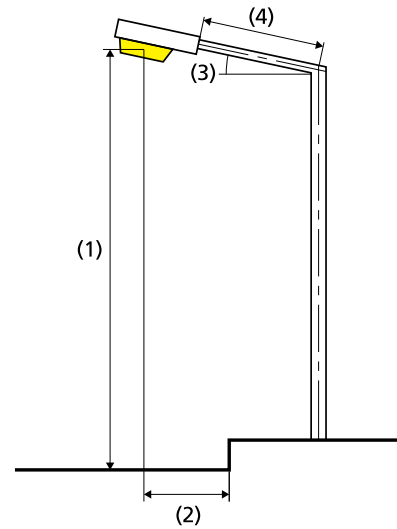
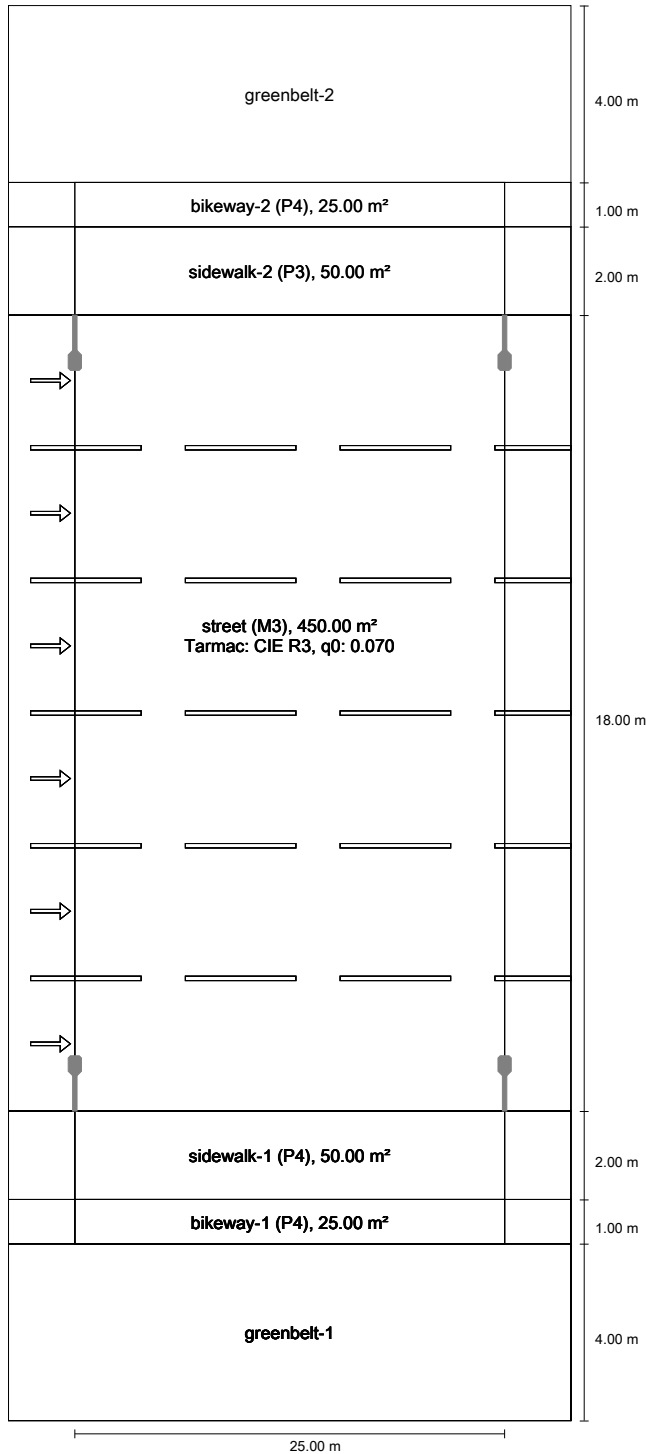
Luminous emittance 1 / Luminance diagram



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



Lamp:	1x49
Luminous flux (luminaire):	7851.98 lm
Luminous flux (lamp):	7843.10 lm
Operating Hours	
4000 h:	100.0 %, 58.8 W
W/km:	4702.3
Arrangement:	both sides opposite
Pole distance:	25.000 m
Boom inclination (3):	25.0°
Boom length (4):	1.057 m
Light centre height (1):	10.000 m
Light overhang (2):	1.000 m

ULR:	0.00
ULOR:	0.00
Maximum luminous intensities	
at 70° and above	531 cd/klm *
at 80° and above	160 cd/klm *
at 90° and above	13.2 cd/klm *
Luminous intensity class:	G*1

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.0

Results for valuation fields

Light loss factor: 0.67

bikeway-2 (P4)

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 7.13	✓ 5.86

sidewalk-2 (P3)

Emin [lx] ≥ 1.50	Emin (sc) ≥ 1.50	Em [lx]
✓ 9.54	✓ 2.27	* 11.98

street (M3)

Lm [cd/m ²] ≥ 1.00	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 1.00	✓ 0.61	✓ 0.65	✓ 6	* 0.60

sidewalk-1 (P4)

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.54	* 11.98

bikeway-1 (P4)

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 7.13	✓ 5.86

* Informative, not part of the valuation

Results for energy efficiency indicators

Power density indicator (Dp)	0.012 W/lxm ²
Energy consumption density	
Arrangement: 60W Moon river 1_IESNA2002.IES (470.2 kWh/yr)	0.8 kWh/m ² yr

bikeway-2 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 7.13	✓ 5.86

bikeway-2 (P4)

Horizontal illuminance [lx]

27.833	5.96	5.92	6.32	6.20	5.86	5.86	6.20	6.32	5.92	5.96
27.500	7.06	6.92	7.37	7.31	6.92	6.92	7.31	7.37	6.92	7.06
27.167	8.08	7.97	8.48	8.48	8.05	8.05	8.48	8.48	7.97	8.08
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 3 Points

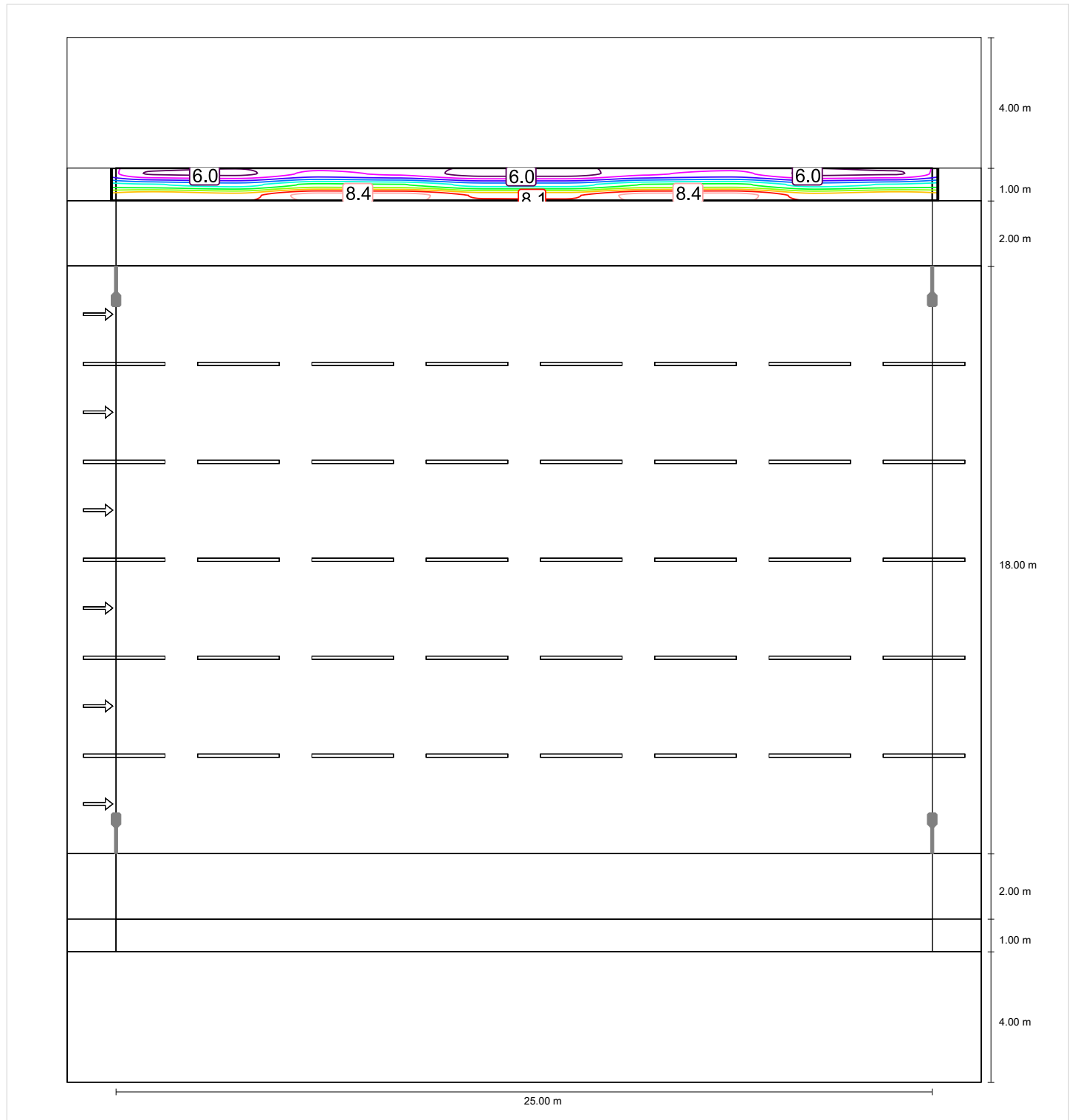
Em [lx]	Emin [lx]	Emax [lx]	g1	g2
7.13	5.86	8.48	0.822	0.690

bikeway-2 (P4)

Light loss factor: 0.67
 Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 5.00	≥ 1.00
≤ 7.50	
✓ 7.13	✓ 5.86

Horizontal illuminance

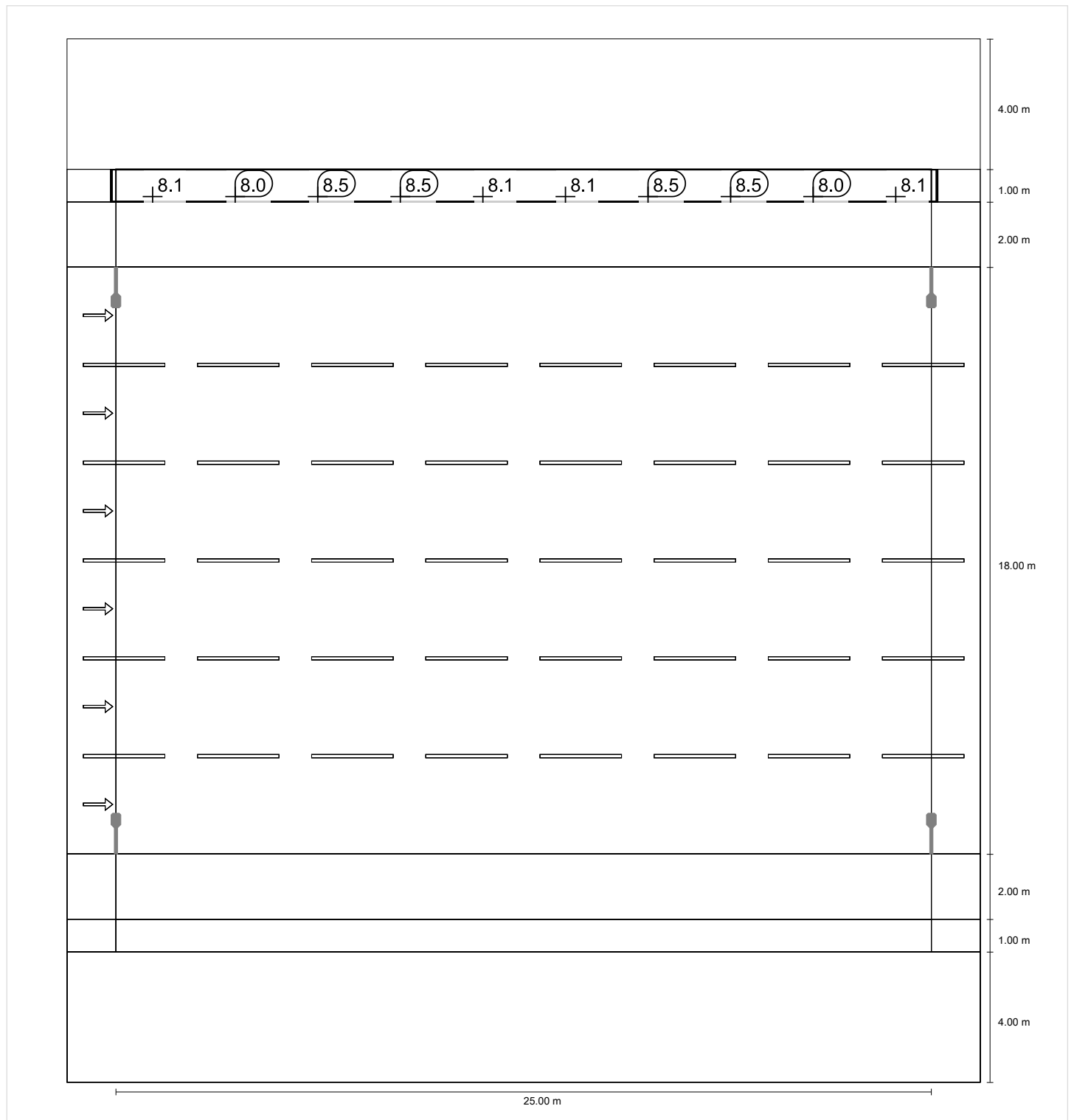


bikeway-2 (P4)

Light loss factor: 0.67
 Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 5.00	≥ 1.00
≤ 7.50	
✓ 7.13	✓ 5.86

Horizontal illuminance



sidewalk-2 (P3)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 1.50	Emin (sc) ≥ 1.50	Em [lx]
✓ 9.54	✓ 2.27	* 11.98

* Informative, not part of the valuation

sidewalk-2 (P3)

Horizontal illuminance [lx]

26.667	9.71	9.54	10.1	10.2	9.66	9.66	10.2	10.1	9.54	9.71
26.000	11.9	11.8	12.2	12.3	11.8	11.8	12.3	12.2	11.8	11.9
25.333	14.2	14.0	14.2	14.3	13.8	13.8	14.3	14.2	14.0	14.2
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
12.0	9.54	14.3	0.797	0.668

Semi-cylindrical illuminance (west) [lx]

26.667	2.86	3.89	5.01	5.55	4.69	3.95	3.32	2.82	2.39	2.27
26.000	3.20	4.81	6.47	7.05	6.13	4.98	4.03	3.29	2.68	2.47
25.333	3.47	5.61	7.54	8.34	7.48	6.03	4.81	3.72	2.89	2.57
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
4.48	2.27	8.34	0.508	0.273

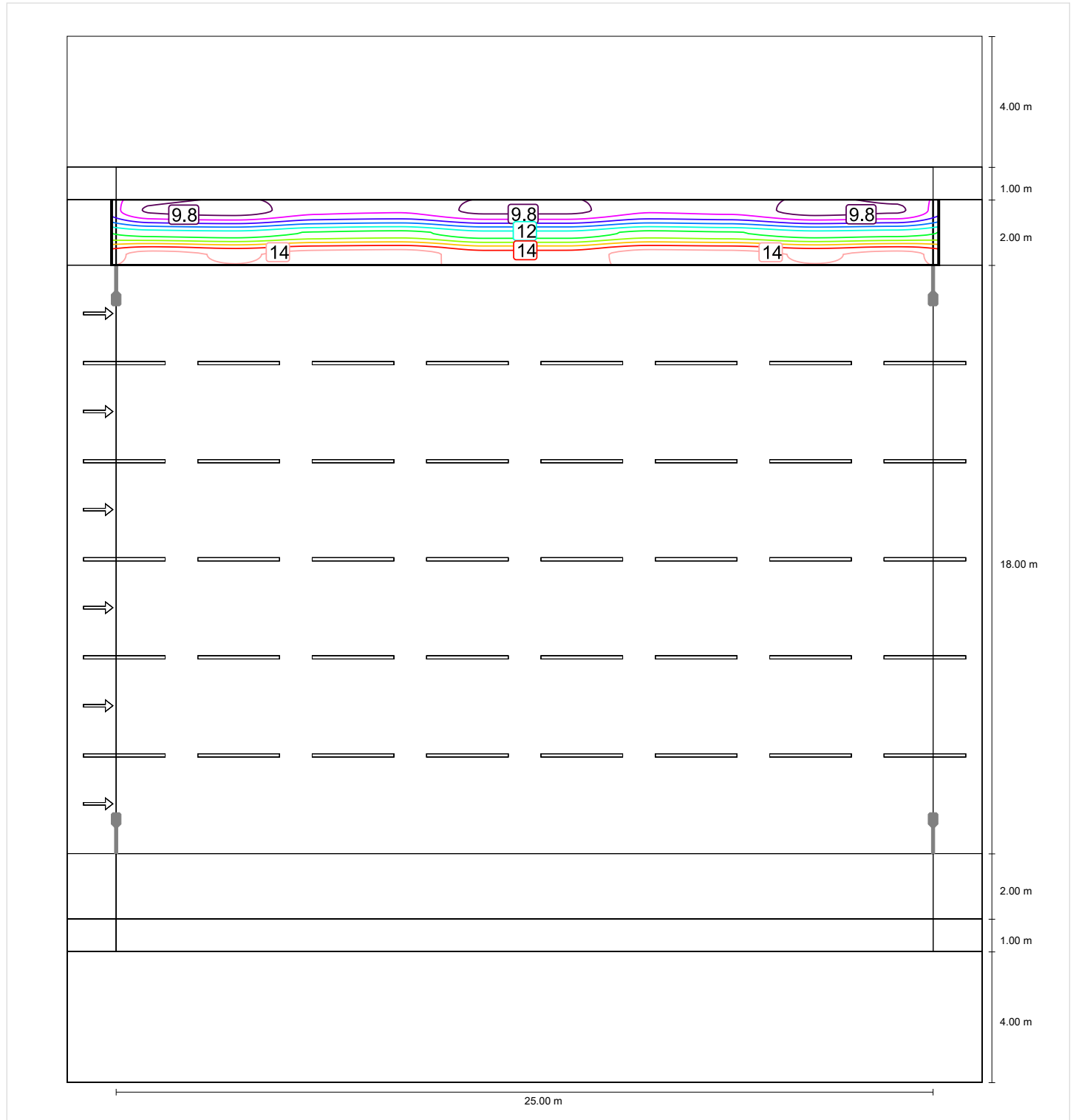
sidewalk-2 (P3)

Light loss factor: 0.67
 Grid: 10 x 3 Points

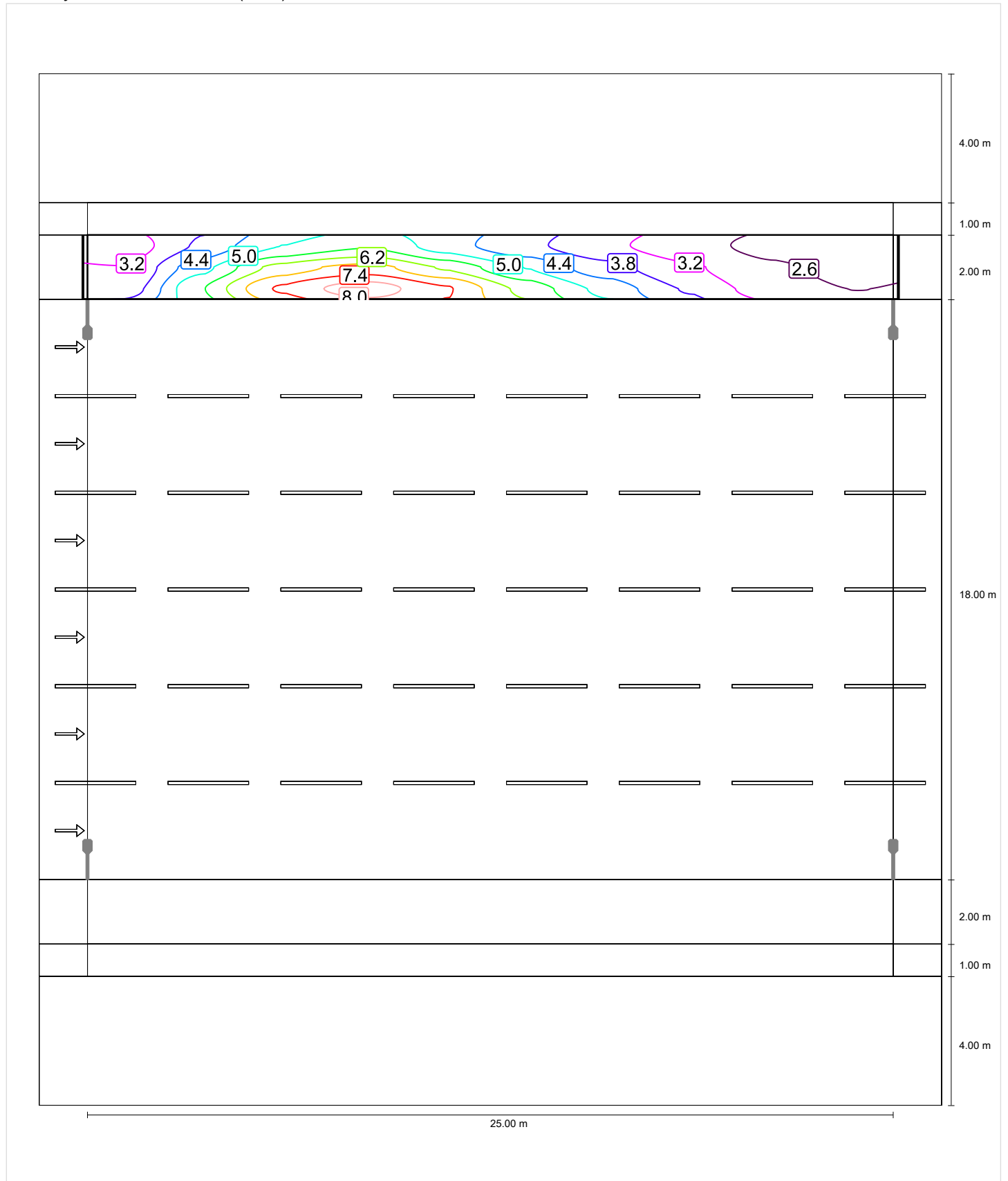
Emin [lx] ≥ 1.50	Emin (sc) ≥ 1.50	Em [lx]
✓ 9.54	✓ 2.27	* 11.98

* Informative, not part of the valuation

Horizontal illuminance



Semi-cylindrical illuminance (west)



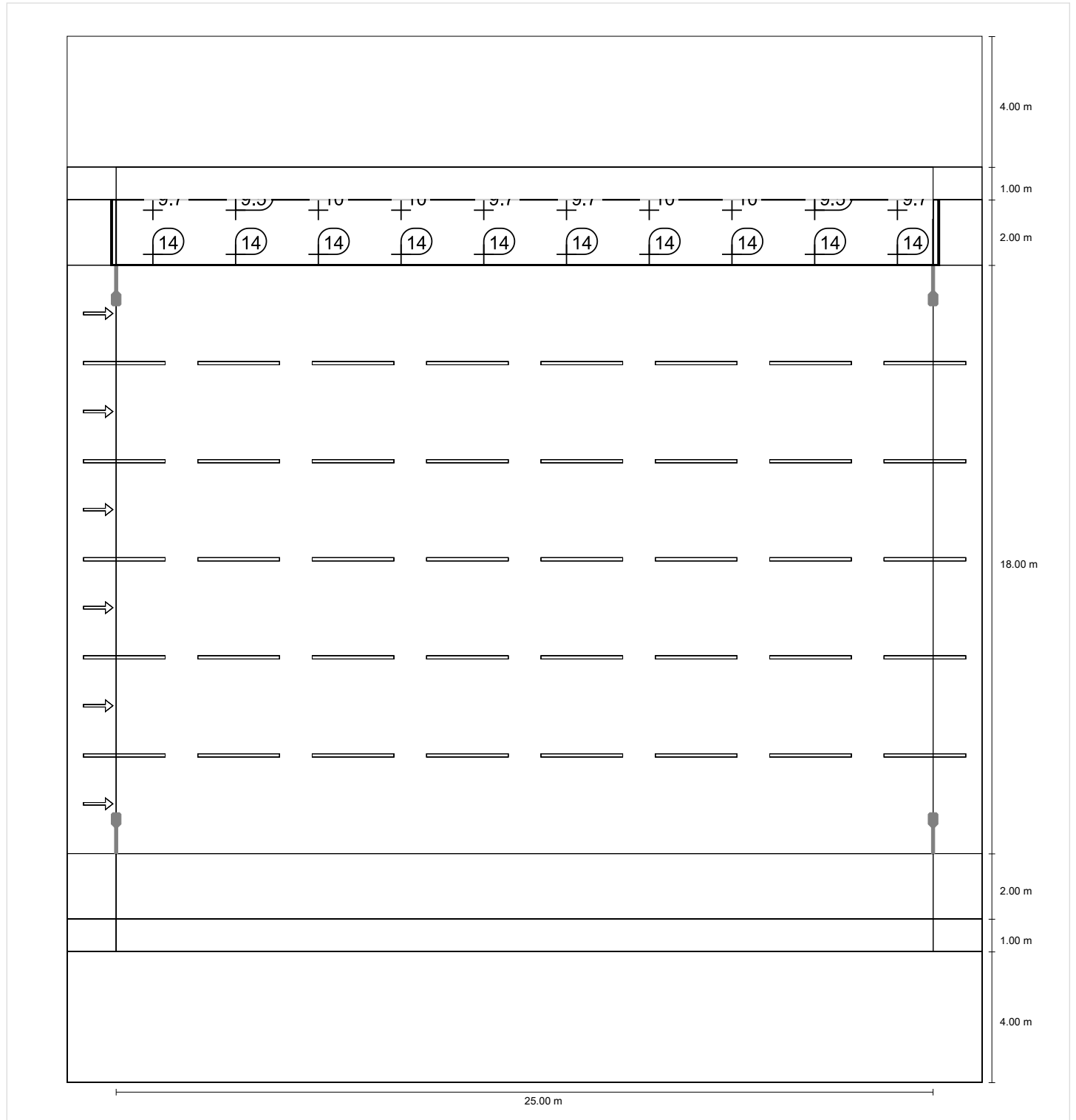
sidewalk-2 (P3)

Light loss factor: 0.67
 Grid: 10 x 3 Points

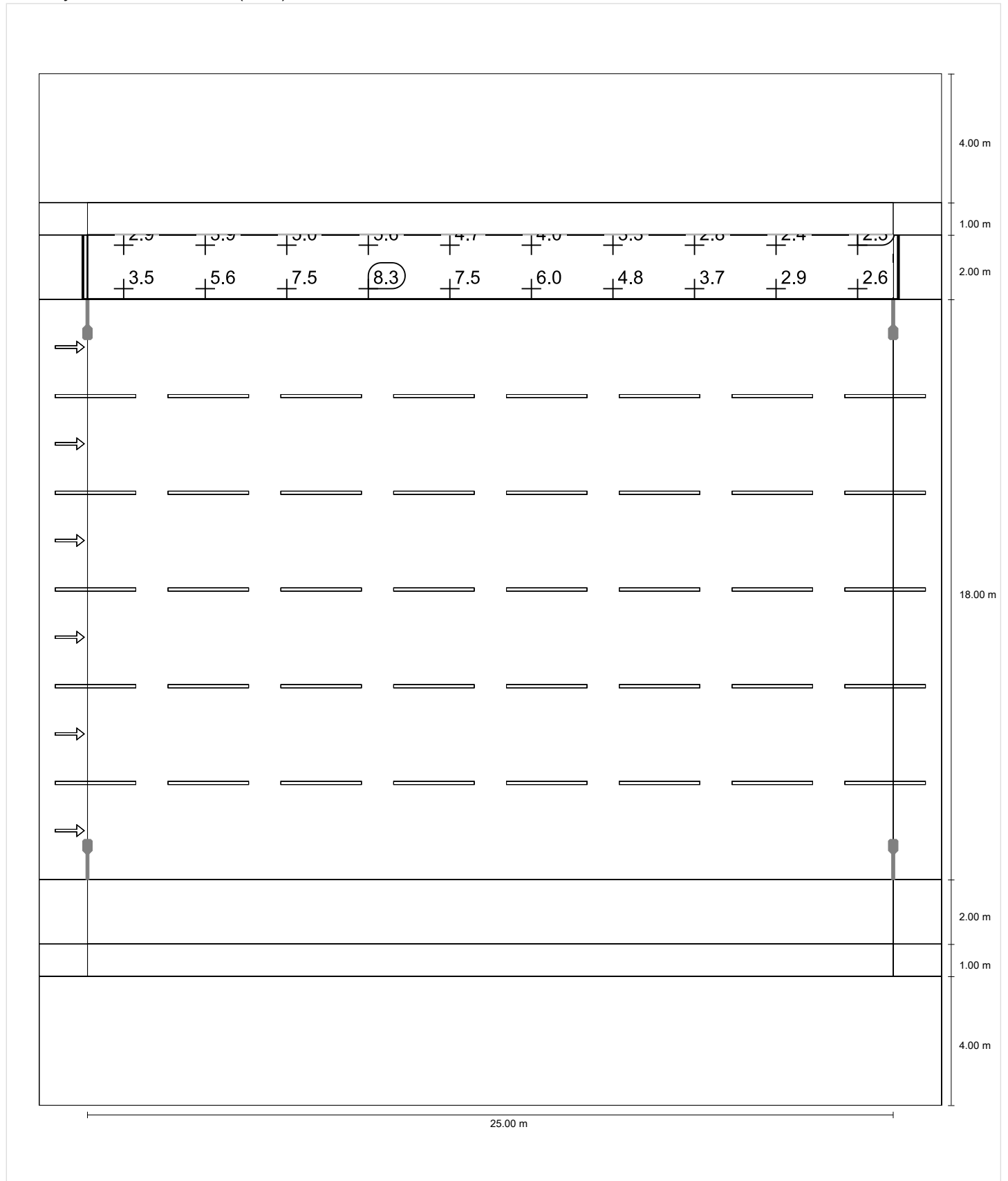
Emin [lx] ≥ 1.50	Emin (sc) ≥ 1.50	Em [lx]
✓ 9.54	✓ 2.27	* 11.98

* Informative, not part of the valuation

Horizontal illuminance



Semi-cylindrical illuminance (west)



street (M3)

Light loss factor: 0.67
 Grid: 10 x 18 Points

Lm [cd/m ²] ≥ 1.00	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 1.00	✓ 0.61	✓ 0.65	✓ 6	* 0.60

* Informative, not part of the valuation

Assigned observer (6):

Observer	Position [m]	Lm [cd/m ²] ≥ 1.00	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15
Observer 1	(-60.000, 8.500, 1.500)	1.00	0.61	0.65	4
Observer 2	(-60.000, 11.500, 1.500)	1.01	0.63	0.86	5
Observer 3	(-60.000, 14.500, 1.500)	1.01	0.66	0.90	6
Observer 4	(-60.000, 17.500, 1.500)	1.01	0.66	0.90	6
Observer 5	(-60.000, 20.500, 1.500)	1.01	0.63	0.86	5
Observer 6	(-60.000, 23.500, 1.500)	1.00	0.61	0.65	4

street (M3)

Horizontal illuminance [lx]

24.500	16.8	16.2	16.1	16.0	15.5	15.5	16.0	16.1	16.2	16.8
23.500	19.4	18.1	17.5	17.0	16.9	16.9	17.0	17.5	18.1	19.4
22.500	20.6	19.1	18.1	17.3	17.0	17.0	17.3	18.1	19.1	20.6
21.500	20.7	19.2	18.4	16.9	16.3	16.3	16.9	18.4	19.2	20.7
20.500	20.1	18.5	17.9	16.2	15.7	15.7	16.2	17.9	18.5	20.1
19.500	19.1	17.7	17.1	15.9	15.2	15.2	15.9	17.1	17.7	19.1
18.500	19.1	18.0	17.3	16.5	15.6	15.6	16.5	17.3	18.0	19.1
17.500	19.4	18.3	17.8	17.0	16.2	16.2	17.0	17.8	18.3	19.4
16.500	19.3	18.4	17.8	17.2	16.7	16.7	17.2	17.8	18.4	19.3
15.500	19.3	18.4	17.8	17.2	16.7	16.7	17.2	17.8	18.4	19.3
14.500	19.4	18.3	17.8	17.0	16.2	16.2	17.0	17.8	18.3	19.4
13.500	19.1	18.0	17.3	16.5	15.6	15.6	16.5	17.3	18.0	19.1
12.500	19.1	17.7	17.1	15.9	15.2	15.2	15.9	17.1	17.7	19.1
11.500	20.1	18.5	17.9	16.2	15.7	15.7	16.2	17.9	18.5	20.1
10.500	20.7	19.2	18.4	16.9	16.3	16.3	16.9	18.4	19.2	20.7
9.500	20.6	19.1	18.1	17.3	17.0	17.0	17.3	18.1	19.1	20.6
8.500	19.4	18.1	17.5	17.0	16.9	16.9	17.0	17.5	18.1	19.4
7.500	16.8	16.2	16.1	16.0	15.5	15.5	16.0	16.1	16.2	16.8
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
17.6	15.2	20.7	0.866	0.736

Observer 1

Luminance with dry roadway [cd/m²]

24.500	0.61	0.65	0.77	0.90	0.97	0.97	0.94	0.82	0.70	0.65
23.500	0.74	0.79	0.93	1.10	1.21	1.19	1.09	0.95	0.83	0.79
22.500	0.86	0.95	1.10	1.27	1.34	1.30	1.16	1.02	0.92	0.91
21.500	1.00	1.12	1.27	1.35	1.33	1.25	1.14	1.06	0.98	1.01
20.500	1.12	1.22	1.33	1.29	1.23	1.15	1.06	1.07	1.02	1.07
19.500	1.16	1.22	1.25	1.16	1.10	1.04	1.01	1.03	0.99	1.05
18.500	1.14	1.16	1.15	1.10	1.06	1.01	1.00	0.99	0.97	1.01
17.500	1.07	1.07	1.06	1.05	1.02	0.97	0.95	0.93	0.92	0.96
16.500	0.97	1.00	0.98	0.98	0.97	0.93	0.90	0.86	0.87	0.90
15.500	0.92	0.94	0.92	0.92	0.93	0.89	0.85	0.82	0.84	0.87
14.500	0.88	0.90	0.90	0.89	0.87	0.85	0.83	0.82	0.81	0.84
13.500	0.86	0.88	0.88	0.87	0.87	0.83	0.83	0.81	0.80	0.83
12.500	0.86	0.87	0.89	0.88	0.88	0.84	0.84	0.84	0.80	0.83
11.500	0.91	0.93	0.98	0.98	0.98	0.94	0.92	0.93	0.86	0.88
10.500	0.97	1.02	1.10	1.13	1.12	1.07	1.03	1.02	0.94	0.94
9.500	1.02	1.11	1.22	1.32	1.32	1.26	1.15	1.05	0.97	0.97
8.500	1.01	1.11	1.28	1.42	1.45	1.34	1.18	1.05	0.95	0.95
7.500	0.86	0.98	1.17	1.29	1.31	1.24	1.12	0.94	0.83	0.81
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.00	0.61	1.45	0.612	0.422

Luminance with new lamp [cd/m²]

24.500	0.91	0.97	1.14	1.34	1.45	1.45	1.40	1.23	1.04	0.97
23.500	1.11	1.18	1.39	1.64	1.81	1.77	1.62	1.42	1.24	1.18
22.500	1.28	1.42	1.64	1.90	1.99	1.94	1.74	1.53	1.37	1.35
21.500	1.49	1.66	1.89	2.01	1.98	1.87	1.70	1.59	1.46	1.51
20.500	1.67	1.82	1.98	1.92	1.84	1.72	1.58	1.59	1.52	1.59
19.500	1.74	1.81	1.86	1.73	1.64	1.55	1.51	1.54	1.48	1.57
18.500	1.70	1.73	1.72	1.64	1.58	1.50	1.49	1.48	1.44	1.51
17.500	1.59	1.60	1.59	1.56	1.52	1.44	1.42	1.38	1.37	1.44
16.500	1.44	1.50	1.46	1.46	1.45	1.38	1.35	1.29	1.30	1.34
15.500	1.38	1.41	1.38	1.38	1.38	1.33	1.27	1.23	1.25	1.30
14.500	1.32	1.35	1.34	1.33	1.31	1.27	1.23	1.23	1.21	1.26
13.500	1.29	1.31	1.31	1.30	1.29	1.24	1.24	1.20	1.20	1.23
12.500	1.28	1.30	1.33	1.31	1.32	1.26	1.26	1.25	1.19	1.24
11.500	1.35	1.40	1.47	1.46	1.46	1.40	1.37	1.40	1.28	1.31
10.500	1.45	1.53	1.64	1.69	1.68	1.60	1.53	1.52	1.40	1.40
9.500	1.52	1.66	1.82	1.98	1.97	1.89	1.72	1.57	1.44	1.45
8.500	1.50	1.66	1.91	2.12	2.17	2.00	1.77	1.57	1.42	1.41
7.500	1.29	1.47	1.74	1.92	1.96	1.85	1.67	1.40	1.24	1.21
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.49	0.91	2.17	0.612	0.422

Observer 2

Luminance with dry roadway [cd/m²]

24.500	0.64	0.69	0.83	0.97	1.04	1.03	0.98	0.84	0.71	0.67
23.500	0.78	0.85	1.01	1.19	1.29	1.24	1.12	0.97	0.86	0.83
22.500	0.94	1.05	1.20	1.35	1.38	1.32	1.18	1.04	0.95	0.95
21.500	1.08	1.21	1.32	1.36	1.33	1.25	1.15	1.09	1.02	1.05
20.500	1.16	1.24	1.31	1.25	1.20	1.14	1.05	1.08	1.03	1.07
19.500	1.12	1.15	1.17	1.10	1.07	1.01	0.99	1.00	0.95	1.00
18.500	1.05	1.07	1.06	1.04	1.01	0.95	0.95	0.93	0.91	0.95
17.500	0.97	0.99	1.00	0.98	0.96	0.91	0.91	0.88	0.87	0.90
16.500	0.92	0.94	0.93	0.93	0.93	0.89	0.86	0.82	0.83	0.87
15.500	0.89	0.92	0.89	0.90	0.90	0.87	0.83	0.81	0.82	0.85
14.500	0.87	0.89	0.89	0.88	0.88	0.85	0.83	0.81	0.80	0.84
13.500	0.86	0.89	0.90	0.88	0.88	0.84	0.84	0.82	0.81	0.83
12.500	0.89	0.91	0.93	0.92	0.91	0.87	0.87	0.86	0.82	0.85
11.500	0.97	0.99	1.05	1.04	1.02	0.98	0.95	0.97	0.90	0.92
10.500	1.05	1.12	1.20	1.22	1.19	1.14	1.07	1.06	0.97	0.99
9.500	1.09	1.19	1.30	1.39	1.39	1.32	1.19	1.09	1.00	1.01
8.500	1.00	1.10	1.27	1.42	1.45	1.33	1.18	1.05	0.94	0.94
7.500	0.80	0.91	1.08	1.22	1.26	1.20	1.09	0.91	0.80	0.77
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.01	0.64	1.45	0.634	0.440

Luminance with new lamp [cd/m²]

24.500	0.95	1.03	1.23	1.45	1.55	1.54	1.46	1.25	1.06	1.00
23.500	1.16	1.27	1.51	1.78	1.92	1.85	1.67	1.45	1.28	1.24
22.500	1.40	1.56	1.79	2.02	2.06	1.97	1.76	1.55	1.41	1.42
21.500	1.62	1.81	1.97	2.03	1.98	1.87	1.72	1.63	1.52	1.57
20.500	1.73	1.84	1.95	1.87	1.79	1.69	1.57	1.62	1.53	1.59
19.500	1.67	1.71	1.75	1.64	1.59	1.50	1.48	1.50	1.42	1.49
18.500	1.57	1.60	1.59	1.55	1.50	1.42	1.42	1.38	1.36	1.42
17.500	1.44	1.48	1.49	1.47	1.43	1.35	1.35	1.31	1.30	1.34
16.500	1.38	1.41	1.39	1.38	1.39	1.33	1.29	1.22	1.24	1.30
15.500	1.32	1.37	1.33	1.34	1.34	1.30	1.23	1.21	1.22	1.26
14.500	1.30	1.32	1.33	1.32	1.31	1.26	1.23	1.21	1.20	1.25
13.500	1.29	1.33	1.34	1.31	1.32	1.25	1.25	1.22	1.21	1.25
12.500	1.33	1.36	1.39	1.37	1.36	1.30	1.29	1.28	1.22	1.26
11.500	1.44	1.48	1.56	1.55	1.53	1.46	1.41	1.45	1.34	1.38
10.500	1.57	1.68	1.79	1.82	1.78	1.70	1.60	1.58	1.46	1.47
9.500	1.63	1.77	1.94	2.08	2.07	1.96	1.78	1.62	1.50	1.51
8.500	1.49	1.65	1.89	2.11	2.16	1.99	1.77	1.56	1.41	1.41
7.500	1.19	1.35	1.61	1.82	1.88	1.79	1.62	1.36	1.19	1.15
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.50	0.95	2.16	0.634	0.440

Observer 3

Luminance with dry roadway [cd/m²]

24.500	0.67	0.74	0.89	1.04	1.11	1.09	1.02	0.86	0.74	0.70
23.500	0.85	0.94	1.11	1.29	1.37	1.29	1.14	0.99	0.88	0.87
22.500	1.02	1.14	1.28	1.41	1.40	1.33	1.19	1.07	0.98	1.00
21.500	1.14	1.24	1.34	1.35	1.31	1.23	1.15	1.11	1.04	1.06
20.500	1.13	1.18	1.24	1.19	1.15	1.09	1.04	1.06	1.00	1.02
19.500	1.04	1.06	1.08	1.04	1.01	0.96	0.95	0.95	0.90	0.95
18.500	0.96	0.98	1.00	0.97	0.95	0.90	0.90	0.88	0.87	0.89
17.500	0.91	0.94	0.94	0.93	0.92	0.87	0.87	0.84	0.83	0.87
16.500	0.88	0.92	0.89	0.90	0.91	0.87	0.83	0.81	0.82	0.85
15.500	0.87	0.90	0.88	0.89	0.89	0.87	0.82	0.80	0.81	0.85
14.500	0.88	0.91	0.90	0.90	0.89	0.85	0.84	0.82	0.81	0.84
13.500	0.90	0.93	0.93	0.92	0.91	0.86	0.87	0.84	0.82	0.86
12.500	0.95	0.96	1.00	0.97	0.95	0.91	0.90	0.90	0.86	0.89
11.500	1.05	1.09	1.15	1.11	1.09	1.03	0.99	1.01	0.94	0.97
10.500	1.13	1.21	1.29	1.30	1.26	1.20	1.12	1.10	1.02	1.04
9.500	1.08	1.20	1.31	1.43	1.41	1.34	1.20	1.09	1.01	1.02
8.500	0.93	1.03	1.20	1.36	1.42	1.32	1.16	1.03	0.92	0.91
7.500	0.73	0.82	0.98	1.13	1.18	1.15	1.05	0.89	0.77	0.74
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.01	0.67	1.43	0.662	0.468

Luminance with new lamp [cd/m²]

24.500	1.00	1.10	1.33	1.55	1.65	1.63	1.52	1.29	1.10	1.05
23.500	1.27	1.40	1.65	1.92	2.05	1.92	1.70	1.48	1.32	1.30
22.500	1.52	1.70	1.91	2.10	2.10	1.99	1.78	1.60	1.47	1.49
21.500	1.70	1.85	2.00	2.01	1.96	1.84	1.72	1.65	1.55	1.58
20.500	1.69	1.76	1.86	1.78	1.71	1.63	1.55	1.59	1.49	1.53
19.500	1.55	1.58	1.61	1.55	1.51	1.43	1.41	1.41	1.34	1.41
18.500	1.43	1.46	1.49	1.45	1.42	1.34	1.35	1.32	1.30	1.33
17.500	1.36	1.40	1.40	1.38	1.38	1.31	1.30	1.25	1.23	1.30
16.500	1.32	1.37	1.33	1.35	1.35	1.29	1.24	1.20	1.22	1.27
15.500	1.31	1.34	1.31	1.33	1.33	1.29	1.23	1.19	1.21	1.26
14.500	1.31	1.35	1.35	1.34	1.33	1.26	1.25	1.22	1.21	1.26
13.500	1.34	1.39	1.39	1.37	1.36	1.28	1.29	1.25	1.23	1.28
12.500	1.41	1.43	1.49	1.45	1.42	1.35	1.34	1.34	1.28	1.33
11.500	1.57	1.63	1.71	1.66	1.62	1.54	1.48	1.51	1.41	1.45
10.500	1.69	1.80	1.92	1.94	1.88	1.79	1.68	1.64	1.53	1.55
9.500	1.62	1.78	1.96	2.13	2.11	1.99	1.80	1.63	1.50	1.52
8.500	1.38	1.54	1.79	2.03	2.12	1.97	1.74	1.53	1.37	1.36
7.500	1.09	1.22	1.47	1.68	1.76	1.71	1.57	1.32	1.14	1.10
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.51	1.00	2.13	0.662	0.468

Observer 4

Luminance with dry roadway [cd/m²]

24.500	0.73	0.82	0.98	1.13	1.18	1.15	1.05	0.89	0.77	0.74
23.500	0.93	1.03	1.20	1.36	1.42	1.32	1.16	1.03	0.92	0.91
22.500	1.08	1.20	1.31	1.43	1.41	1.34	1.20	1.09	1.01	1.02
21.500	1.13	1.21	1.29	1.30	1.26	1.20	1.12	1.10	1.02	1.04
20.500	1.05	1.09	1.15	1.11	1.09	1.03	0.99	1.01	0.94	0.97
19.500	0.95	0.96	1.00	0.97	0.95	0.91	0.90	0.90	0.86	0.89
18.500	0.90	0.93	0.93	0.92	0.91	0.86	0.87	0.84	0.82	0.86
17.500	0.88	0.91	0.90	0.90	0.89	0.85	0.84	0.82	0.81	0.84
16.500	0.87	0.90	0.88	0.89	0.89	0.87	0.82	0.80	0.81	0.85
15.500	0.88	0.92	0.89	0.90	0.91	0.87	0.83	0.81	0.82	0.85
14.500	0.91	0.94	0.94	0.93	0.92	0.87	0.87	0.84	0.83	0.87
13.500	0.96	0.98	1.00	0.97	0.95	0.90	0.90	0.88	0.87	0.89
12.500	1.04	1.06	1.08	1.04	1.01	0.96	0.95	0.95	0.90	0.95
11.500	1.13	1.18	1.24	1.19	1.15	1.09	1.04	1.06	1.00	1.02
10.500	1.14	1.24	1.34	1.35	1.31	1.23	1.15	1.11	1.04	1.06
9.500	1.02	1.14	1.28	1.41	1.40	1.33	1.19	1.07	0.98	1.00
8.500	0.85	0.94	1.11	1.29	1.37	1.29	1.14	0.99	0.88	0.87
7.500	0.67	0.74	0.89	1.04	1.11	1.09	1.02	0.86	0.74	0.70
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.01	0.67	1.43	0.662	0.468

Luminance with new lamp [cd/m²]

24.500	1.09	1.22	1.47	1.68	1.76	1.71	1.57	1.32	1.14	1.10
23.500	1.38	1.54	1.79	2.03	2.12	1.97	1.74	1.53	1.37	1.36
22.500	1.62	1.78	1.96	2.13	2.11	1.99	1.80	1.63	1.50	1.52
21.500	1.69	1.80	1.92	1.94	1.88	1.79	1.68	1.64	1.53	1.55
20.500	1.57	1.63	1.71	1.66	1.62	1.54	1.48	1.51	1.41	1.45
19.500	1.41	1.43	1.49	1.45	1.42	1.35	1.34	1.34	1.28	1.33
18.500	1.34	1.39	1.39	1.37	1.36	1.28	1.29	1.25	1.23	1.28
17.500	1.31	1.35	1.35	1.34	1.33	1.26	1.25	1.22	1.21	1.26
16.500	1.31	1.34	1.31	1.33	1.33	1.29	1.23	1.19	1.21	1.26
15.500	1.32	1.37	1.33	1.35	1.35	1.29	1.24	1.20	1.22	1.27
14.500	1.36	1.40	1.40	1.38	1.38	1.31	1.30	1.25	1.23	1.30
13.500	1.43	1.46	1.49	1.45	1.42	1.34	1.35	1.32	1.30	1.33
12.500	1.55	1.58	1.61	1.55	1.51	1.43	1.41	1.41	1.34	1.41
11.500	1.69	1.76	1.86	1.78	1.71	1.63	1.55	1.59	1.49	1.53
10.500	1.70	1.85	2.00	2.01	1.96	1.84	1.72	1.65	1.55	1.58
9.500	1.52	1.70	1.91	2.10	2.10	1.99	1.78	1.60	1.47	1.49
8.500	1.27	1.40	1.65	1.92	2.05	1.92	1.70	1.48	1.32	1.30
7.500	1.00	1.10	1.33	1.55	1.65	1.63	1.52	1.29	1.10	1.05
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.51	1.00	2.13	0.662	0.468

Observer 5

Luminance with dry roadway [cd/m²]

24.500	0.80	0.91	1.08	1.22	1.26	1.20	1.09	0.91	0.80	0.77
23.500	1.00	1.10	1.27	1.42	1.45	1.33	1.18	1.05	0.94	0.94
22.500	1.09	1.19	1.30	1.39	1.39	1.32	1.19	1.09	1.00	1.01
21.500	1.05	1.12	1.20	1.22	1.19	1.14	1.07	1.06	0.97	0.99
20.500	0.97	0.99	1.05	1.04	1.02	0.98	0.95	0.97	0.90	0.92
19.500	0.89	0.91	0.93	0.92	0.91	0.87	0.87	0.86	0.82	0.85
18.500	0.86	0.89	0.90	0.88	0.88	0.84	0.84	0.82	0.81	0.83
17.500	0.87	0.89	0.89	0.88	0.88	0.85	0.83	0.81	0.80	0.84
16.500	0.89	0.92	0.89	0.90	0.90	0.87	0.83	0.81	0.82	0.85
15.500	0.92	0.94	0.93	0.93	0.93	0.89	0.86	0.82	0.83	0.87
14.500	0.97	0.99	1.00	0.98	0.96	0.91	0.91	0.88	0.87	0.90
13.500	1.05	1.07	1.06	1.04	1.01	0.95	0.95	0.93	0.91	0.95
12.500	1.12	1.15	1.17	1.10	1.07	1.01	0.99	1.00	0.95	1.00
11.500	1.16	1.24	1.31	1.25	1.20	1.14	1.05	1.08	1.03	1.07
10.500	1.08	1.21	1.32	1.36	1.33	1.25	1.15	1.09	1.02	1.05
9.500	0.94	1.05	1.20	1.35	1.38	1.32	1.18	1.04	0.95	0.95
8.500	0.78	0.85	1.01	1.19	1.29	1.24	1.12	0.97	0.86	0.83
7.500	0.64	0.69	0.83	0.97	1.04	1.03	0.98	0.84	0.71	0.67
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.01	0.64	1.45	0.634	0.440

Luminance with new lamp [cd/m²]

24.500	1.19	1.35	1.61	1.82	1.88	1.79	1.62	1.36	1.19	1.15
23.500	1.49	1.65	1.89	2.11	2.16	1.99	1.77	1.56	1.41	1.41
22.500	1.63	1.77	1.94	2.08	2.07	1.96	1.78	1.62	1.50	1.51
21.500	1.57	1.68	1.79	1.82	1.78	1.70	1.60	1.58	1.46	1.47
20.500	1.44	1.48	1.56	1.55	1.53	1.46	1.41	1.45	1.34	1.38
19.500	1.33	1.36	1.39	1.37	1.36	1.30	1.29	1.28	1.22	1.26
18.500	1.29	1.33	1.34	1.31	1.32	1.25	1.25	1.22	1.21	1.25
17.500	1.30	1.32	1.33	1.32	1.31	1.26	1.23	1.21	1.20	1.25
16.500	1.32	1.37	1.33	1.34	1.34	1.30	1.23	1.21	1.22	1.26
15.500	1.38	1.41	1.39	1.38	1.39	1.33	1.29	1.22	1.24	1.30
14.500	1.44	1.48	1.49	1.47	1.43	1.35	1.35	1.31	1.30	1.34
13.500	1.57	1.60	1.59	1.55	1.50	1.42	1.42	1.38	1.36	1.42
12.500	1.67	1.71	1.75	1.64	1.59	1.50	1.48	1.50	1.42	1.49
11.500	1.73	1.84	1.95	1.87	1.79	1.69	1.57	1.62	1.53	1.59
10.500	1.62	1.81	1.97	2.03	1.98	1.87	1.72	1.63	1.52	1.57
9.500	1.40	1.56	1.79	2.02	2.06	1.97	1.76	1.55	1.41	1.42
8.500	1.16	1.27	1.51	1.78	1.92	1.85	1.67	1.45	1.28	1.24
7.500	0.95	1.03	1.23	1.45	1.55	1.54	1.46	1.25	1.06	1.00
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.50	0.95	2.16	0.634	0.440

Observer 6

Luminance with dry roadway [cd/m²]

24.500	0.86	0.98	1.17	1.29	1.31	1.24	1.12	0.94	0.83	0.81
23.500	1.01	1.11	1.28	1.42	1.45	1.34	1.18	1.05	0.95	0.95
22.500	1.02	1.11	1.22	1.32	1.32	1.26	1.15	1.05	0.97	0.97
21.500	0.97	1.02	1.10	1.13	1.12	1.07	1.03	1.02	0.94	0.94
20.500	0.91	0.93	0.98	0.98	0.98	0.94	0.92	0.93	0.86	0.88
19.500	0.86	0.87	0.89	0.88	0.88	0.84	0.84	0.84	0.80	0.83
18.500	0.86	0.88	0.88	0.87	0.87	0.83	0.83	0.81	0.80	0.83
17.500	0.88	0.90	0.90	0.89	0.87	0.85	0.83	0.82	0.81	0.84
16.500	0.92	0.94	0.92	0.92	0.93	0.89	0.85	0.82	0.84	0.87
15.500	0.97	1.00	0.98	0.98	0.97	0.93	0.90	0.86	0.87	0.90
14.500	1.07	1.07	1.06	1.05	1.02	0.97	0.95	0.93	0.92	0.96
13.500	1.14	1.16	1.15	1.10	1.06	1.01	1.00	0.99	0.97	1.01
12.500	1.16	1.22	1.25	1.16	1.10	1.04	1.01	1.03	0.99	1.05
11.500	1.12	1.22	1.33	1.29	1.23	1.15	1.06	1.07	1.02	1.07
10.500	1.00	1.12	1.27	1.35	1.33	1.25	1.14	1.06	0.98	1.01
9.500	0.86	0.95	1.10	1.27	1.34	1.30	1.16	1.02	0.92	0.91
8.500	0.74	0.79	0.93	1.10	1.21	1.19	1.09	0.95	0.83	0.79
7.500	0.61	0.65	0.77	0.90	0.97	0.97	0.94	0.82	0.70	0.65
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.00	0.61	1.45	0.612	0.422

Luminance with new lamp [cd/m²]

24.500	1.29	1.47	1.74	1.92	1.96	1.85	1.67	1.40	1.24	1.21
23.500	1.50	1.66	1.91	2.12	2.17	2.00	1.77	1.57	1.42	1.41
22.500	1.52	1.66	1.82	1.98	1.97	1.89	1.72	1.57	1.44	1.45
21.500	1.45	1.53	1.64	1.69	1.68	1.60	1.53	1.52	1.40	1.40
20.500	1.35	1.40	1.47	1.46	1.46	1.40	1.37	1.40	1.28	1.31
19.500	1.28	1.30	1.33	1.31	1.32	1.26	1.26	1.25	1.19	1.24
18.500	1.29	1.31	1.31	1.30	1.29	1.24	1.24	1.20	1.20	1.23
17.500	1.32	1.35	1.34	1.33	1.31	1.27	1.23	1.23	1.21	1.26
16.500	1.38	1.41	1.38	1.38	1.38	1.33	1.27	1.23	1.25	1.30
15.500	1.44	1.50	1.46	1.46	1.45	1.38	1.35	1.29	1.30	1.34
14.500	1.59	1.60	1.59	1.56	1.52	1.44	1.42	1.38	1.37	1.44
13.500	1.70	1.73	1.72	1.64	1.58	1.50	1.49	1.48	1.44	1.51
12.500	1.74	1.81	1.86	1.73	1.64	1.55	1.51	1.54	1.48	1.57
11.500	1.67	1.82	1.98	1.92	1.84	1.72	1.58	1.59	1.52	1.59
10.500	1.49	1.66	1.89	2.01	1.98	1.87	1.70	1.59	1.46	1.51
9.500	1.28	1.42	1.64	1.90	1.99	1.94	1.74	1.53	1.37	1.35
8.500	1.11	1.18	1.39	1.64	1.81	1.77	1.62	1.42	1.24	1.18
7.500	0.91	0.97	1.14	1.34	1.45	1.45	1.40	1.23	1.04	0.97
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 18 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.49	0.91	2.17	0.612	0.422

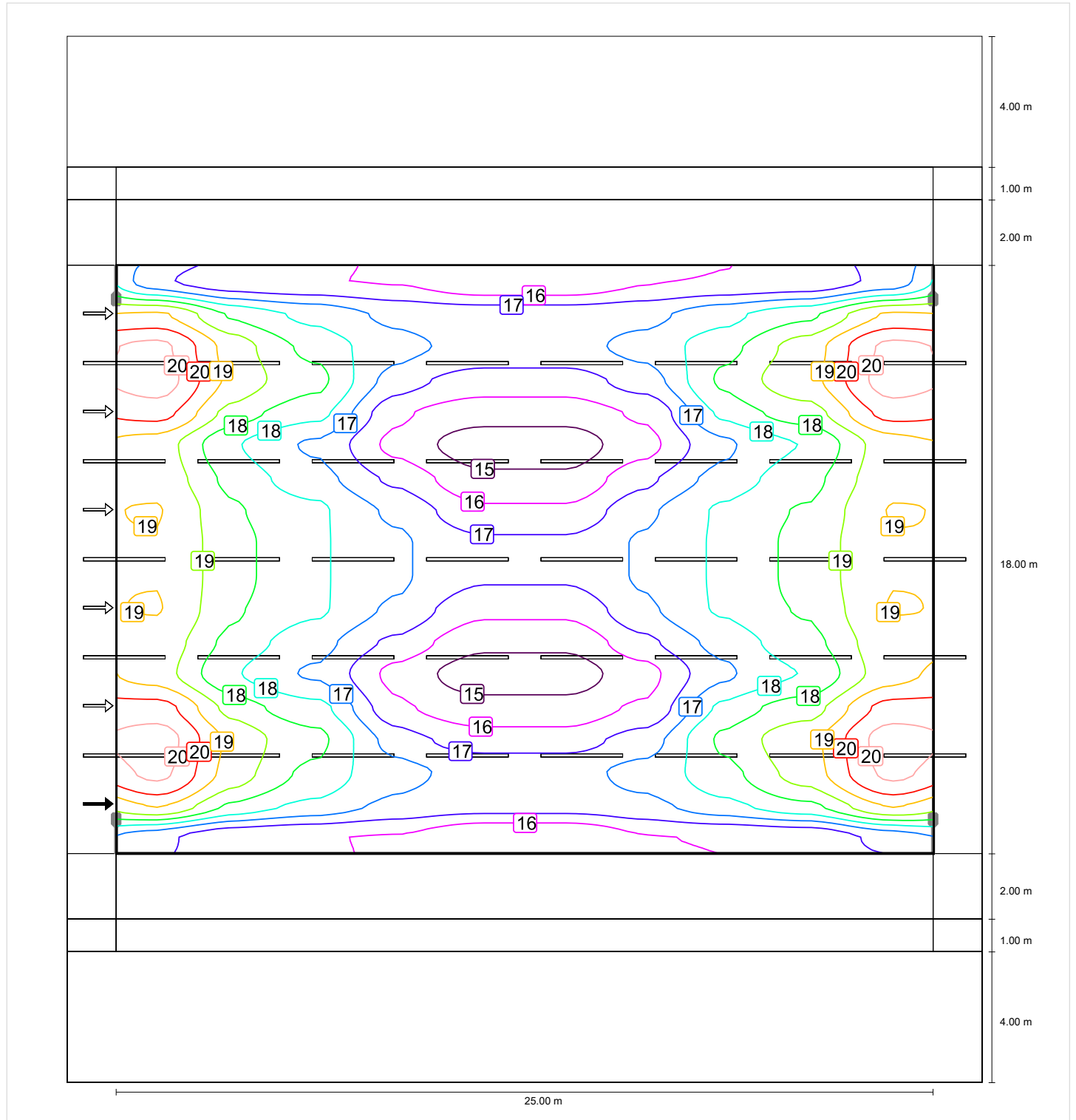
street (M3)

Light loss factor: 0.67
Grid: 10 x 18 Points

Lm [cd/m ²]	Uo	UI	TI [%]	EIR
≥ 1.00	≥ 0.40	≥ 0.60	≤ 15	
✓ 1.00	✓ 0.61	✓ 0.65	✓ 6	* 0.60

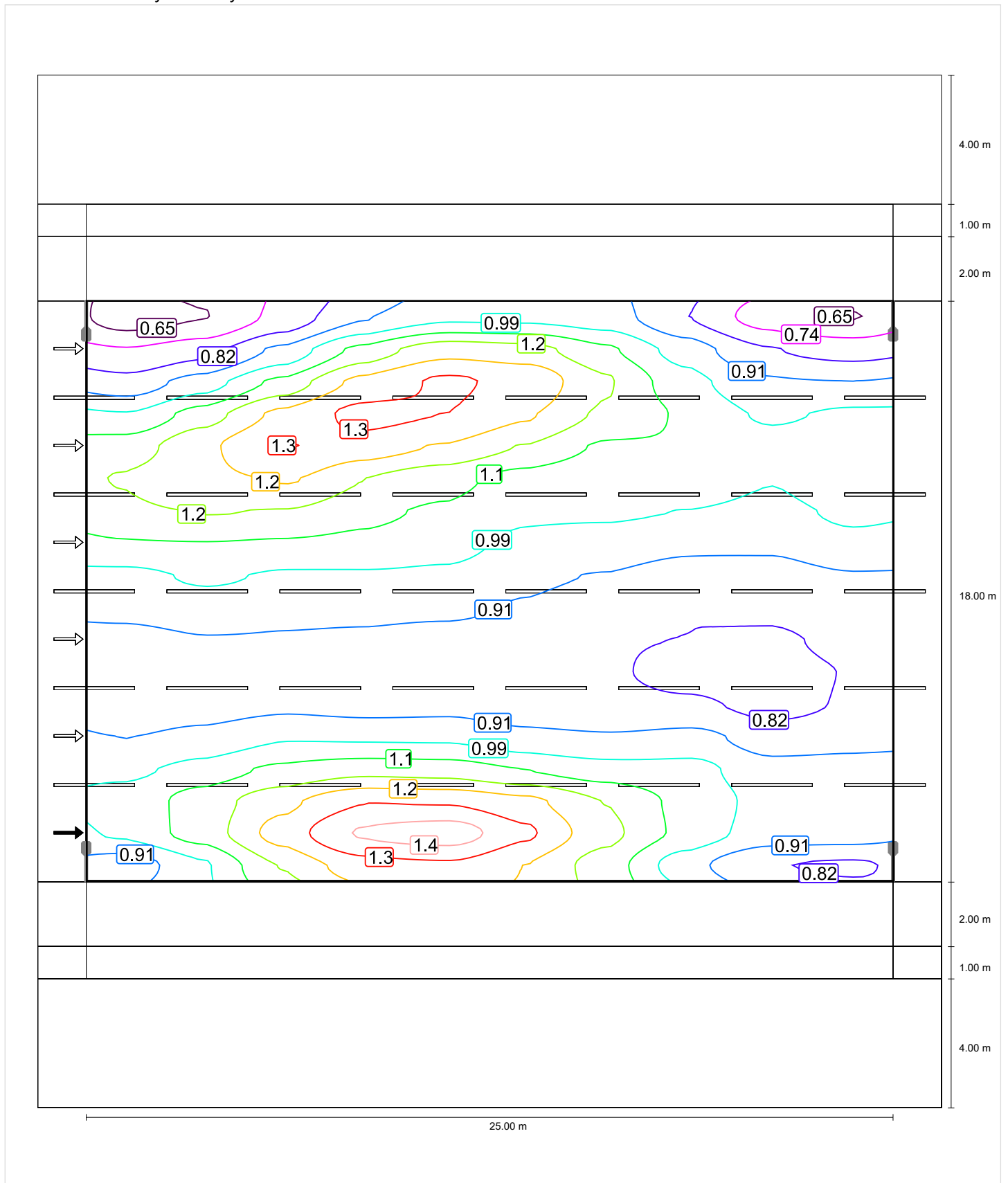
* Informative, not part of the valuation

Horizontal illuminance

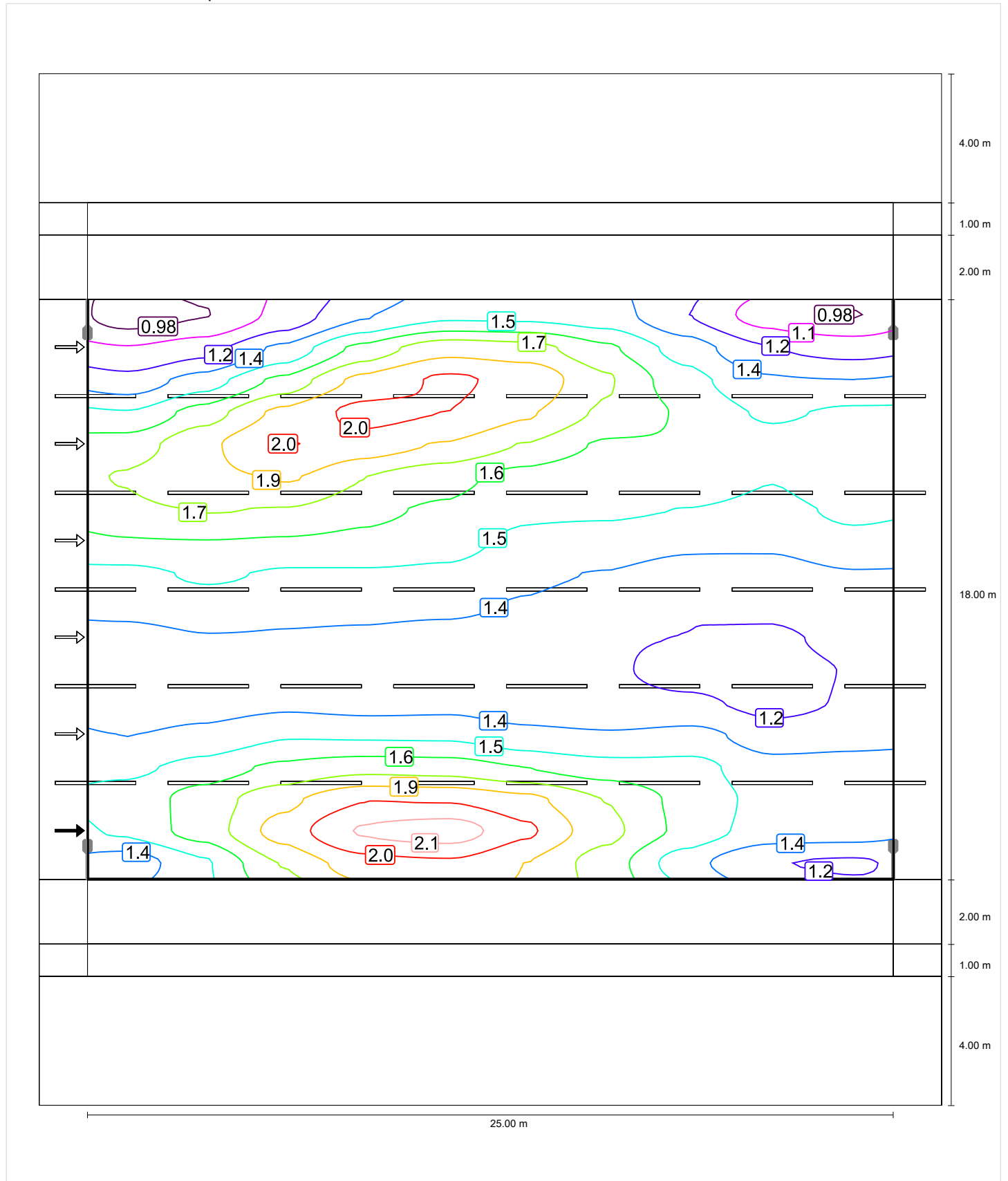


Observer 1

Luminance with dry roadway

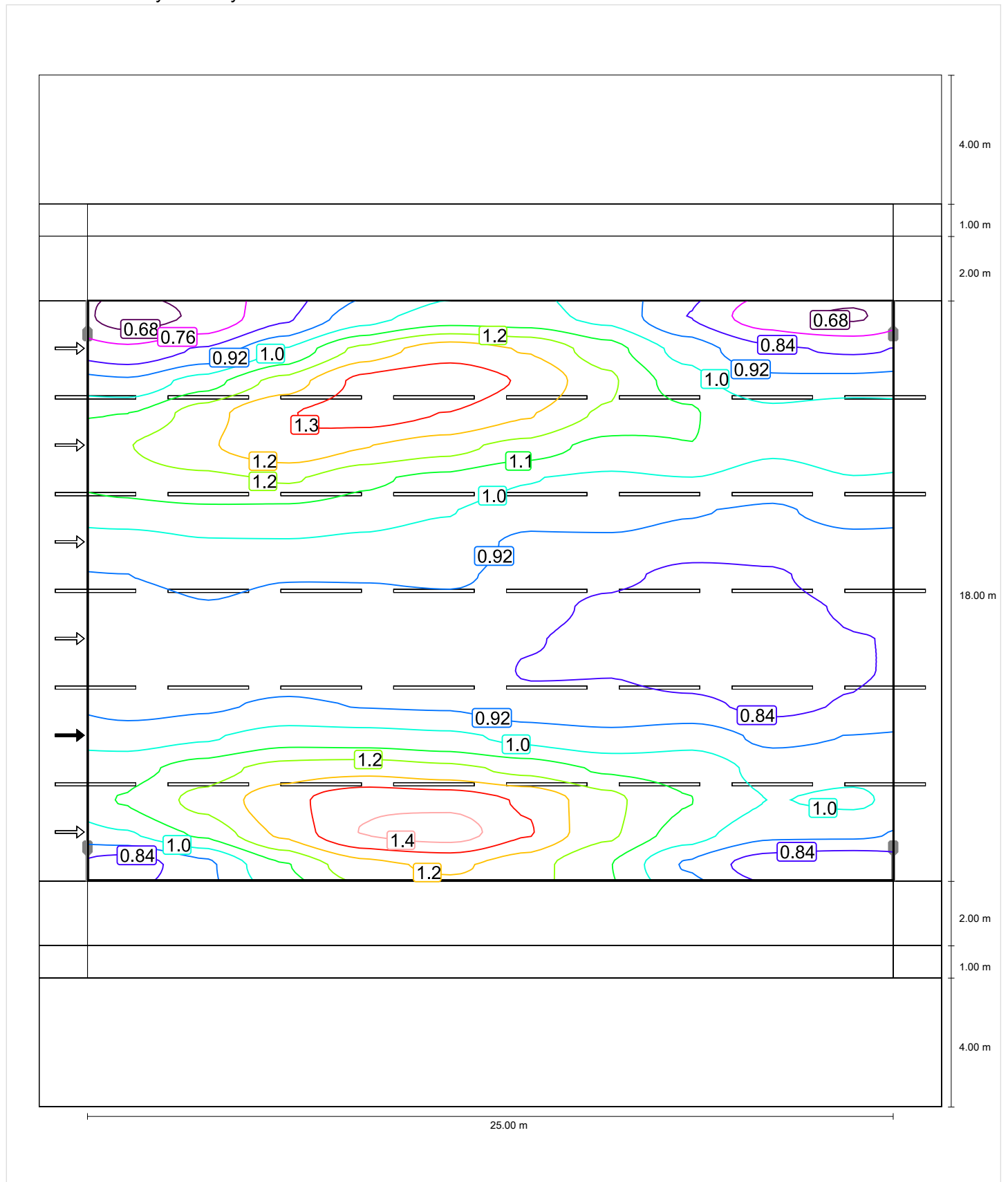


Luminance with new lamp

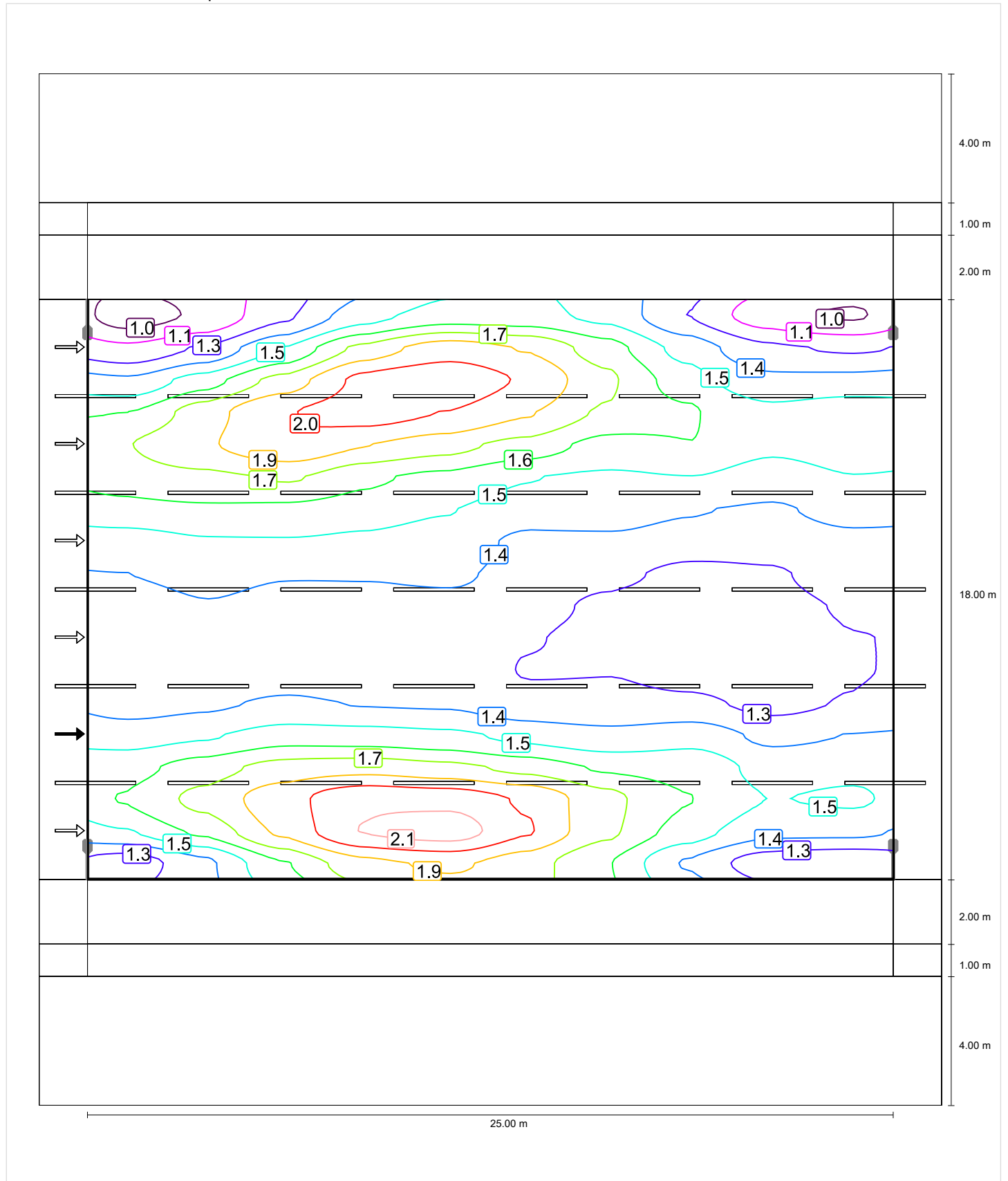


Observer 2

Luminance with dry roadway

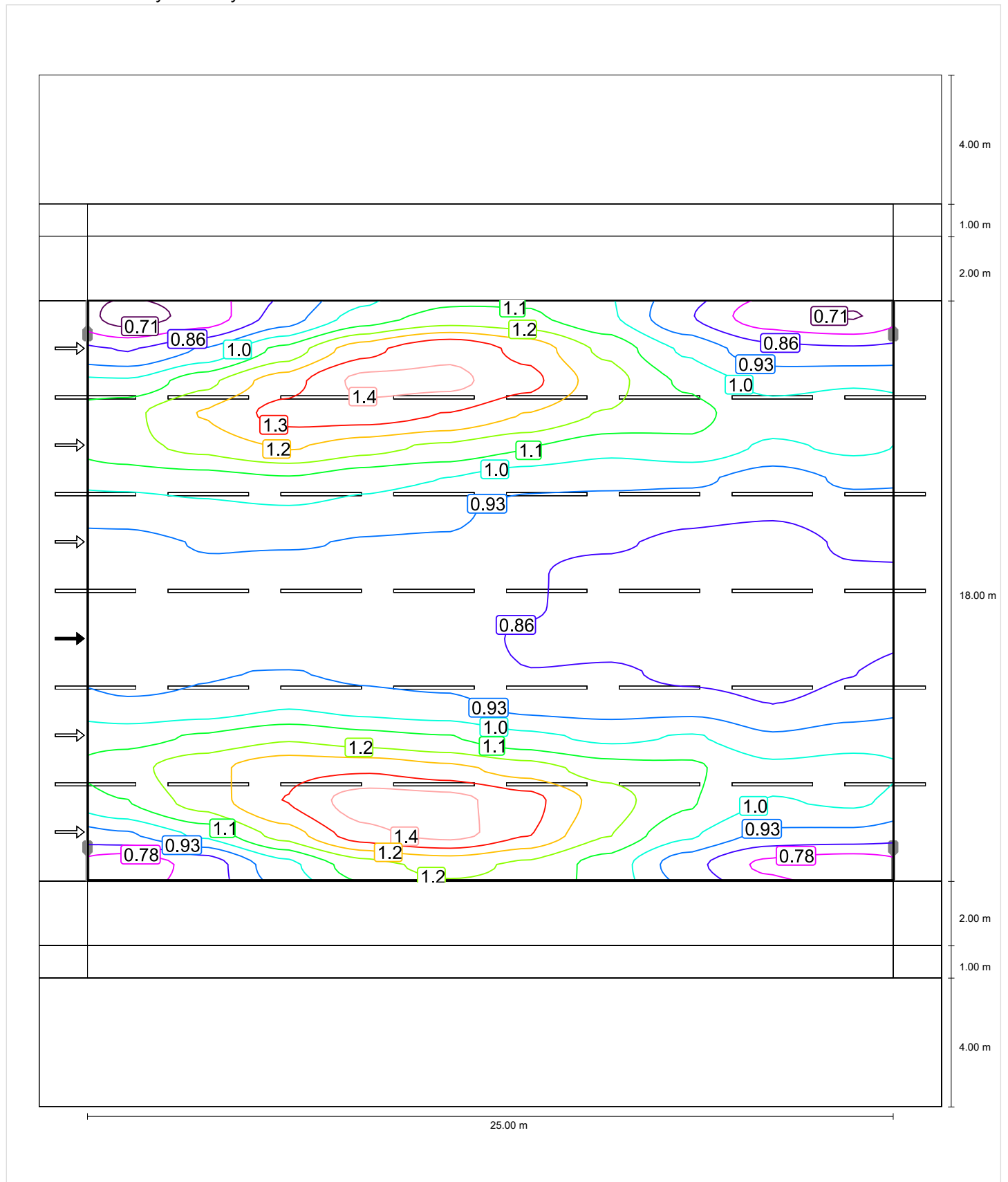


Luminance with new lamp

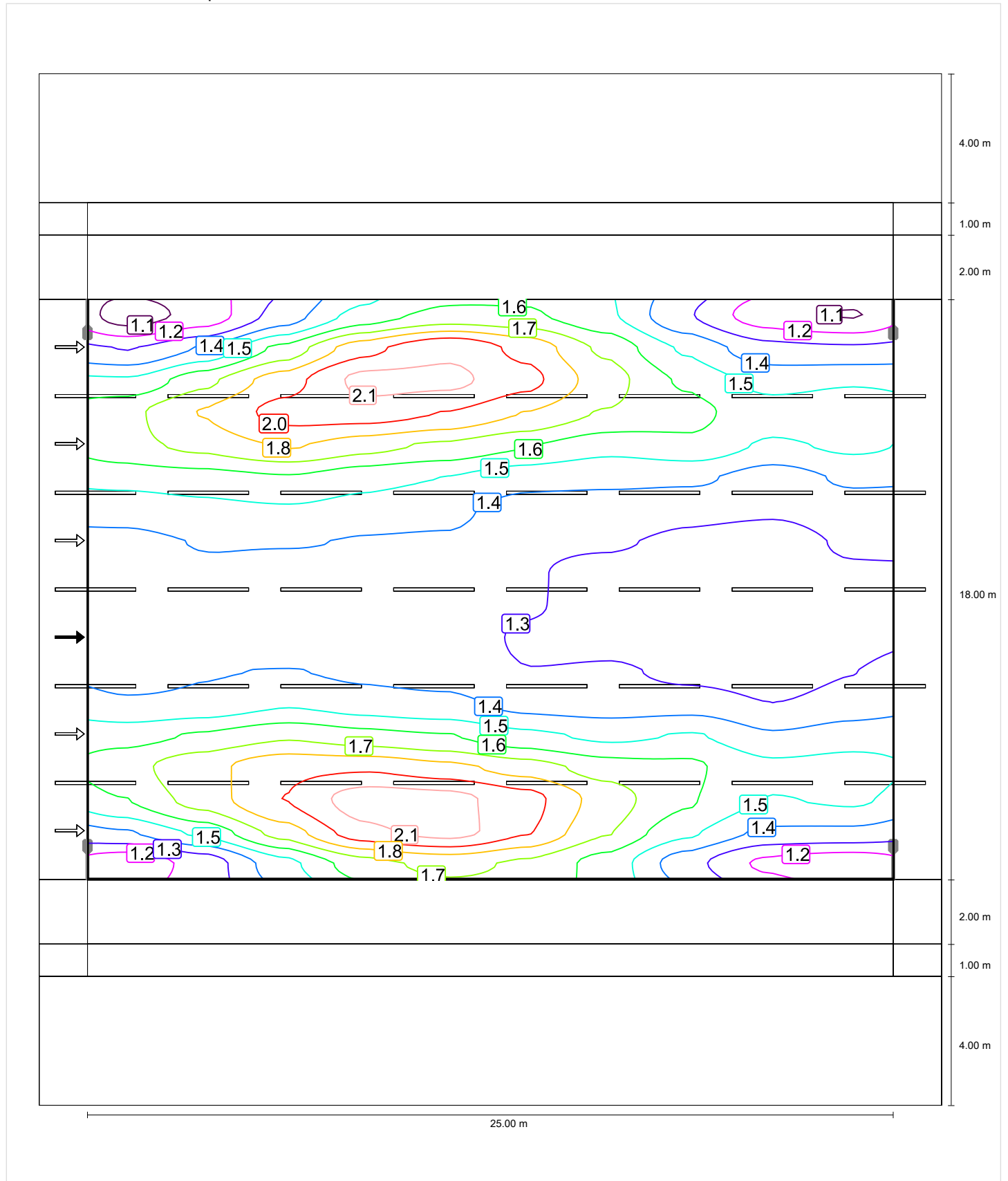


Observer 3

Luminance with dry roadway

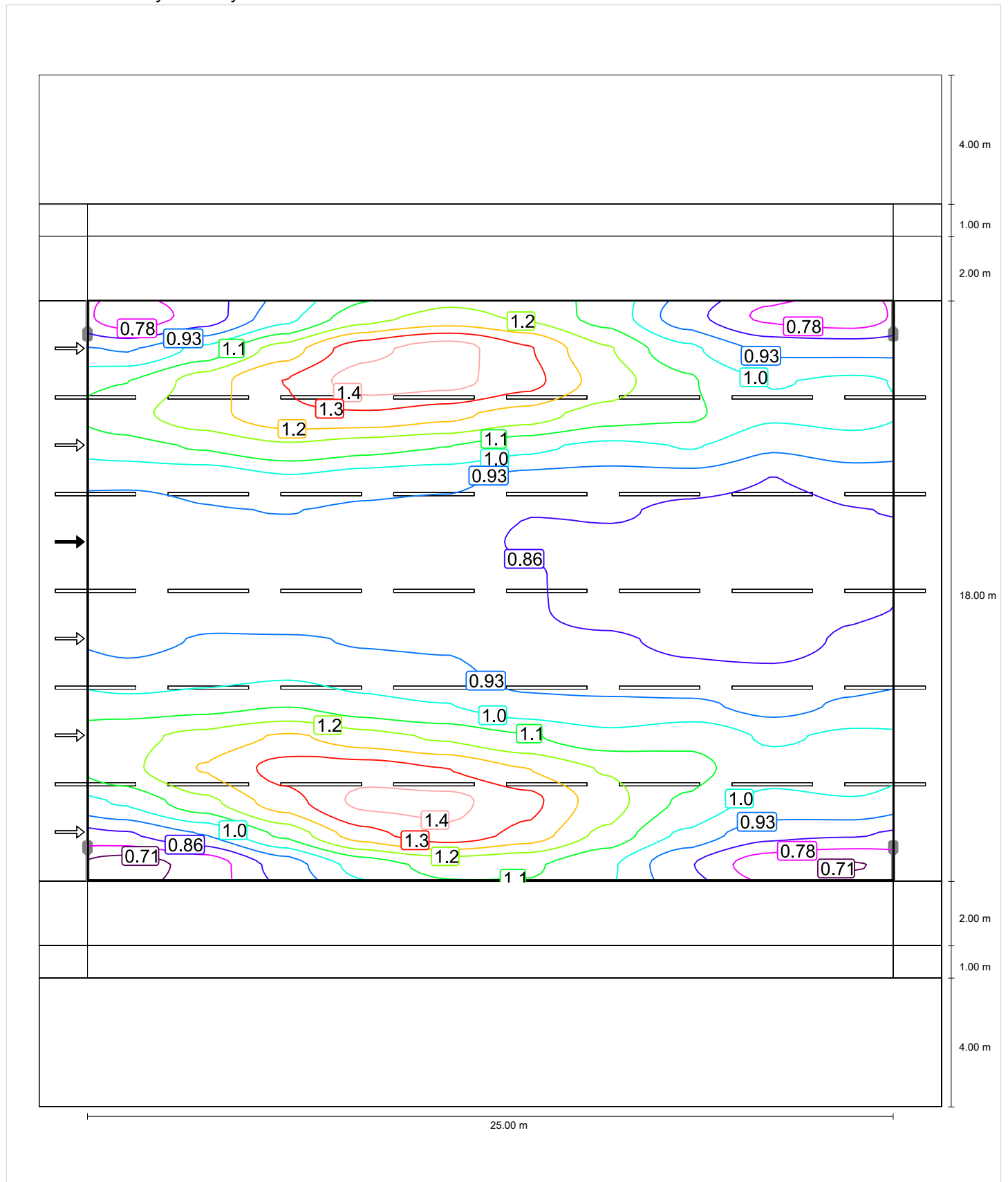


Luminance with new lamp

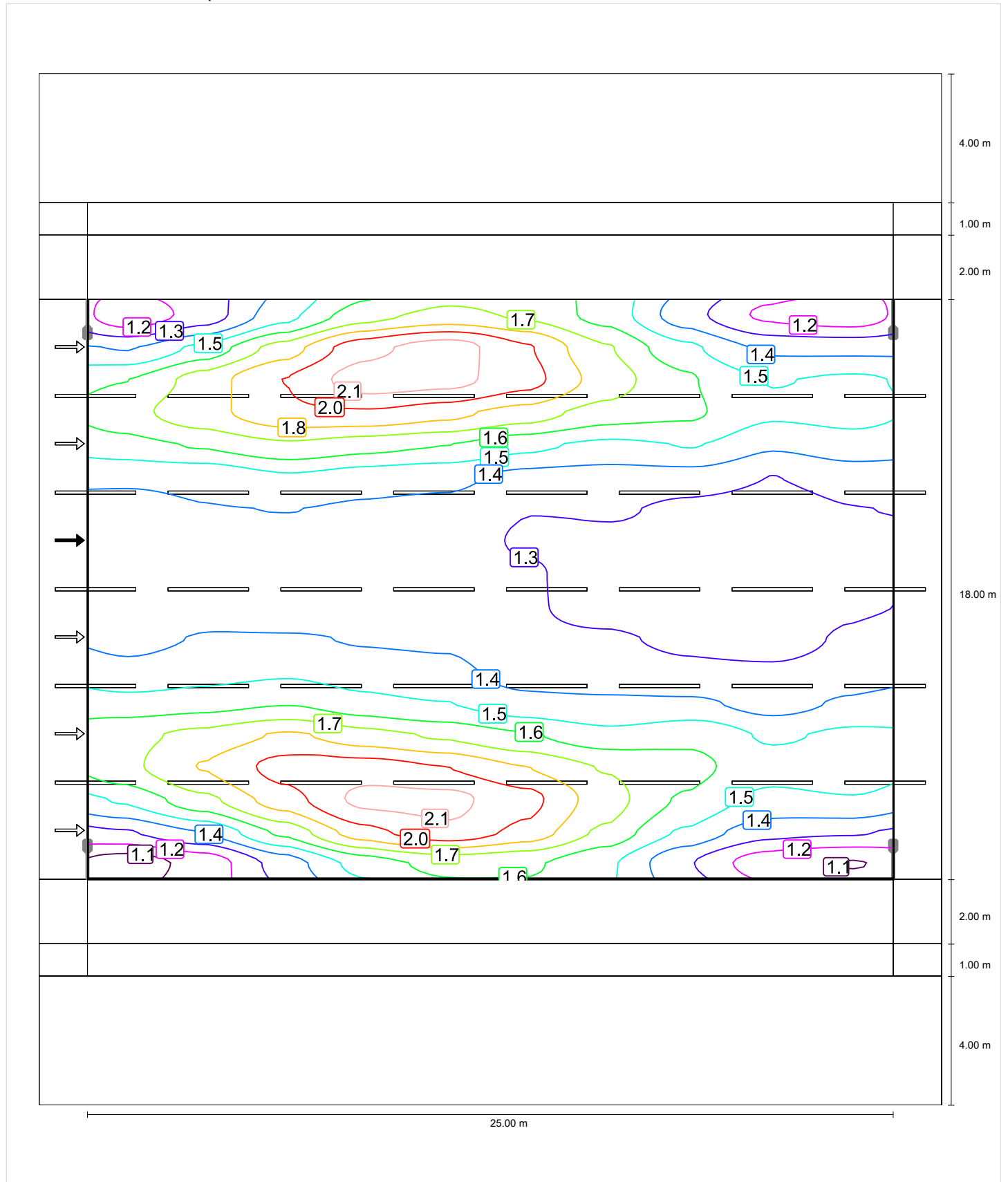


Observer 4

Luminance with dry roadway

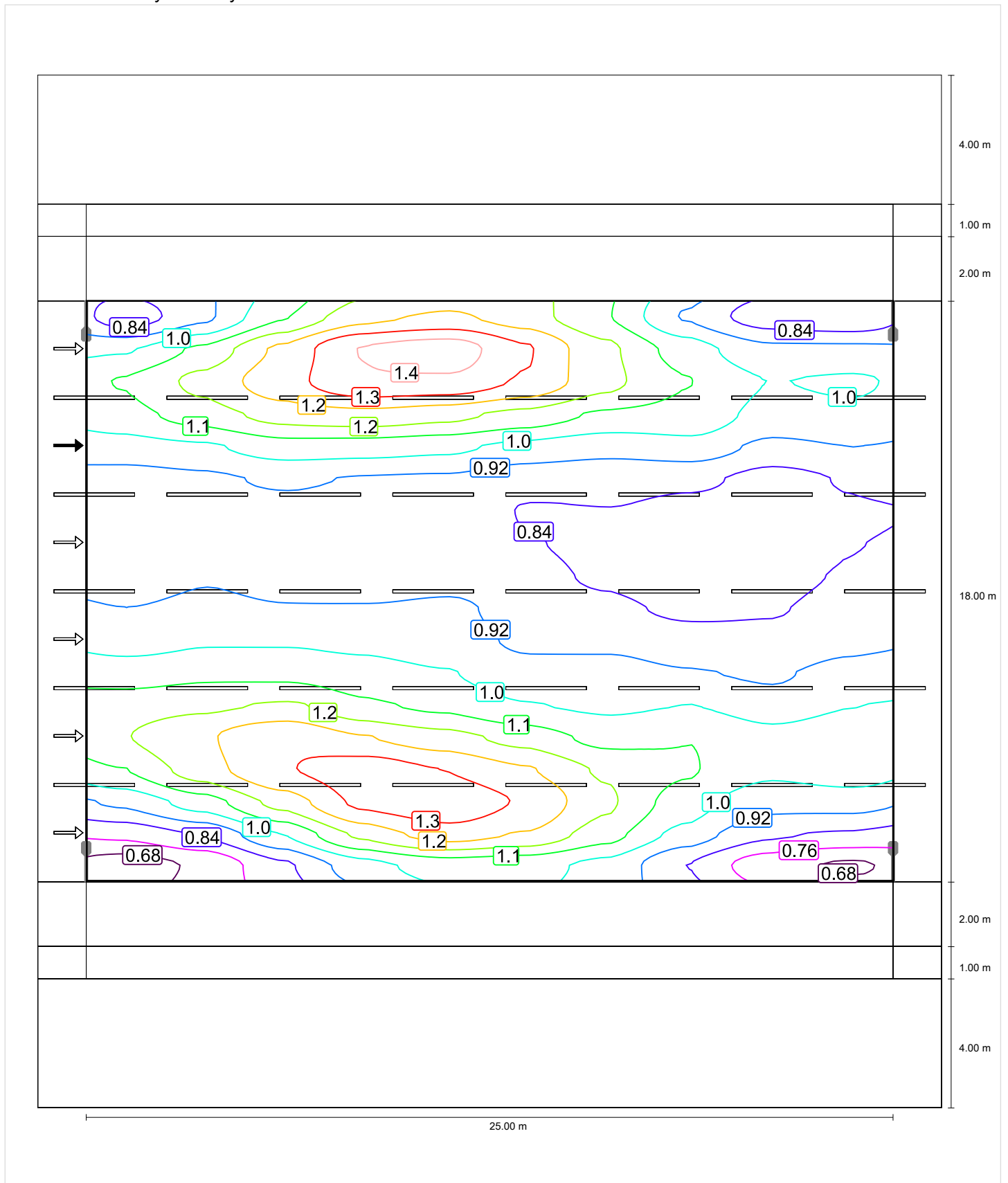


Luminance with new lamp

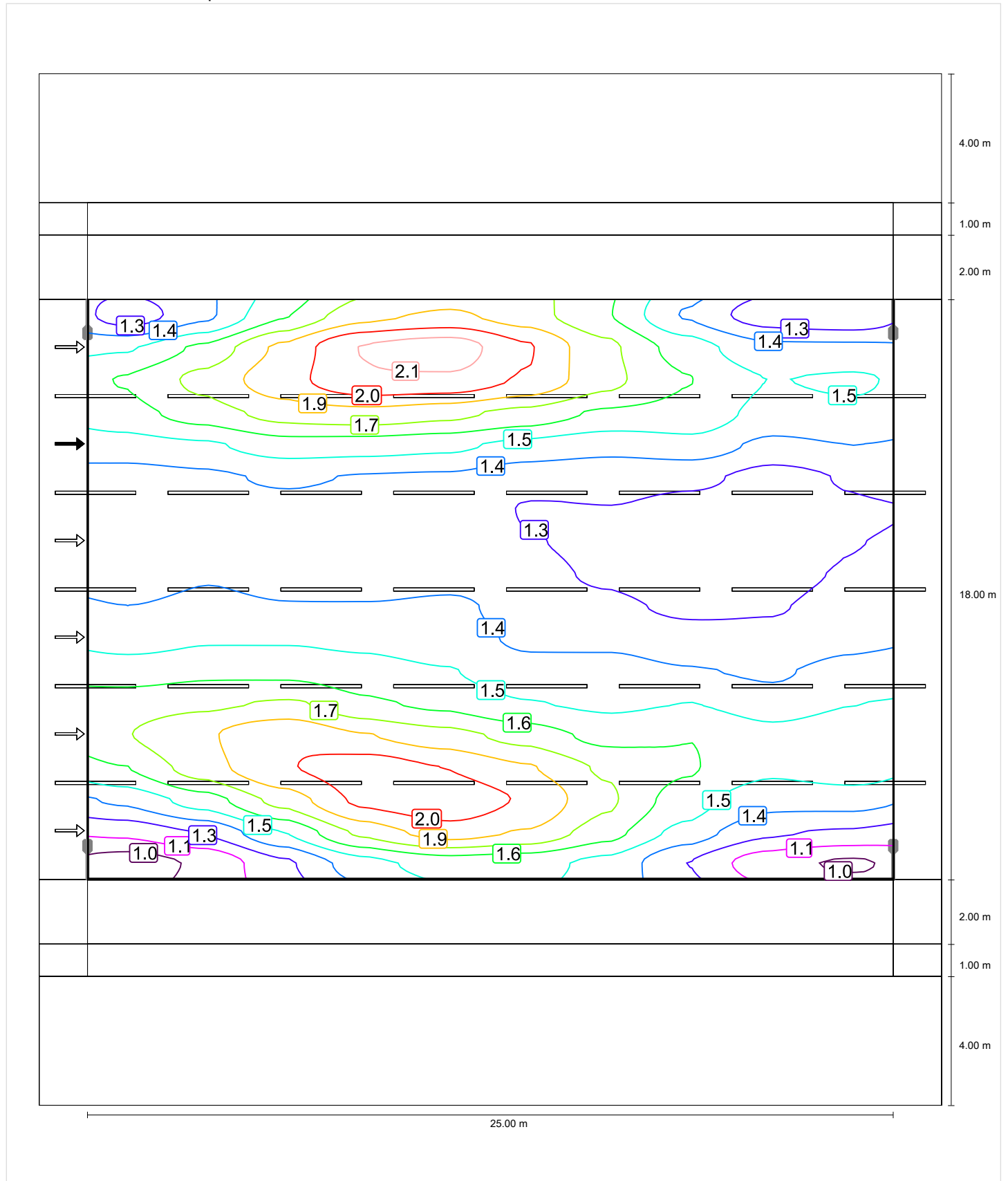


Observer 5

Luminance with dry roadway

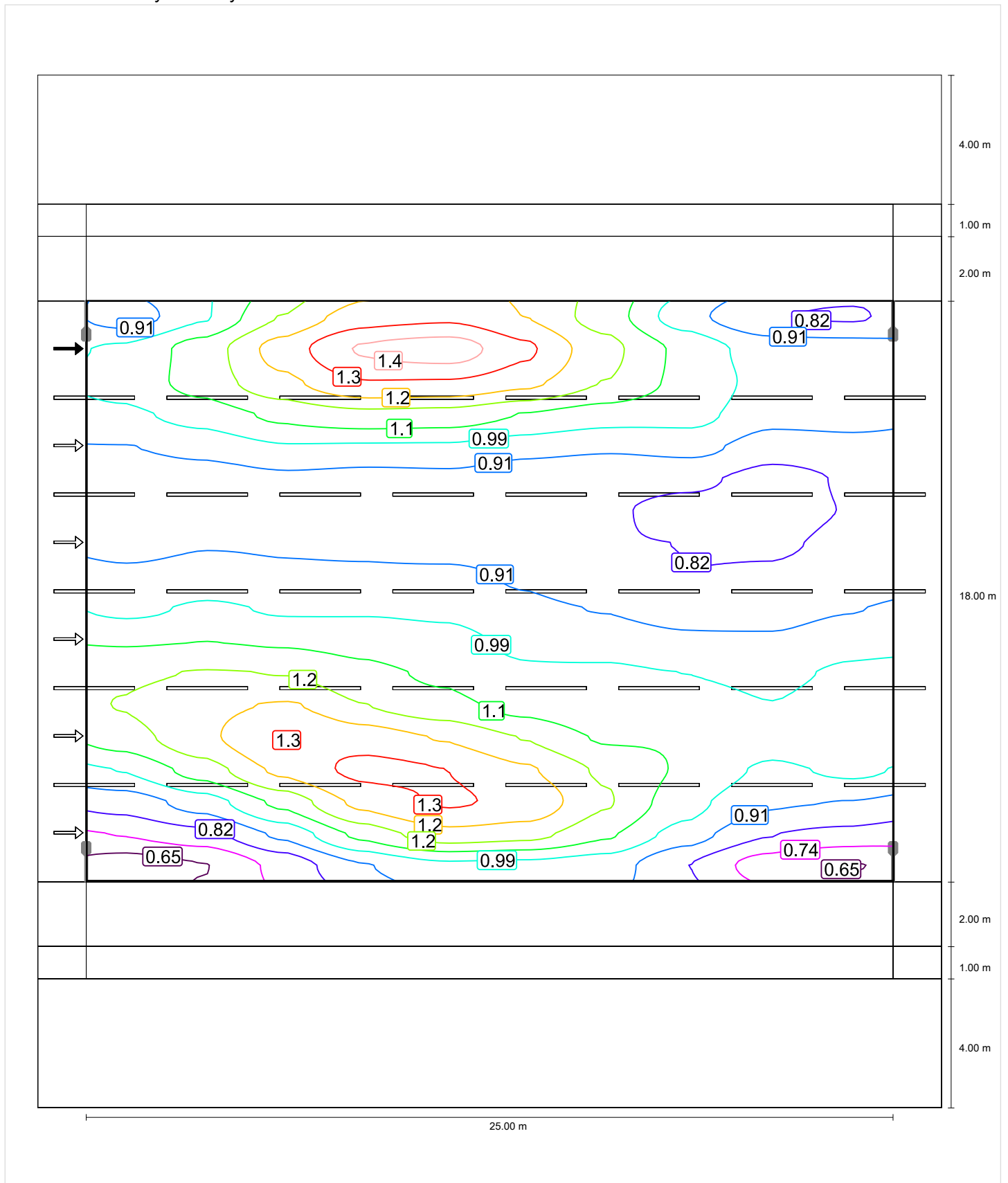


Luminance with new lamp

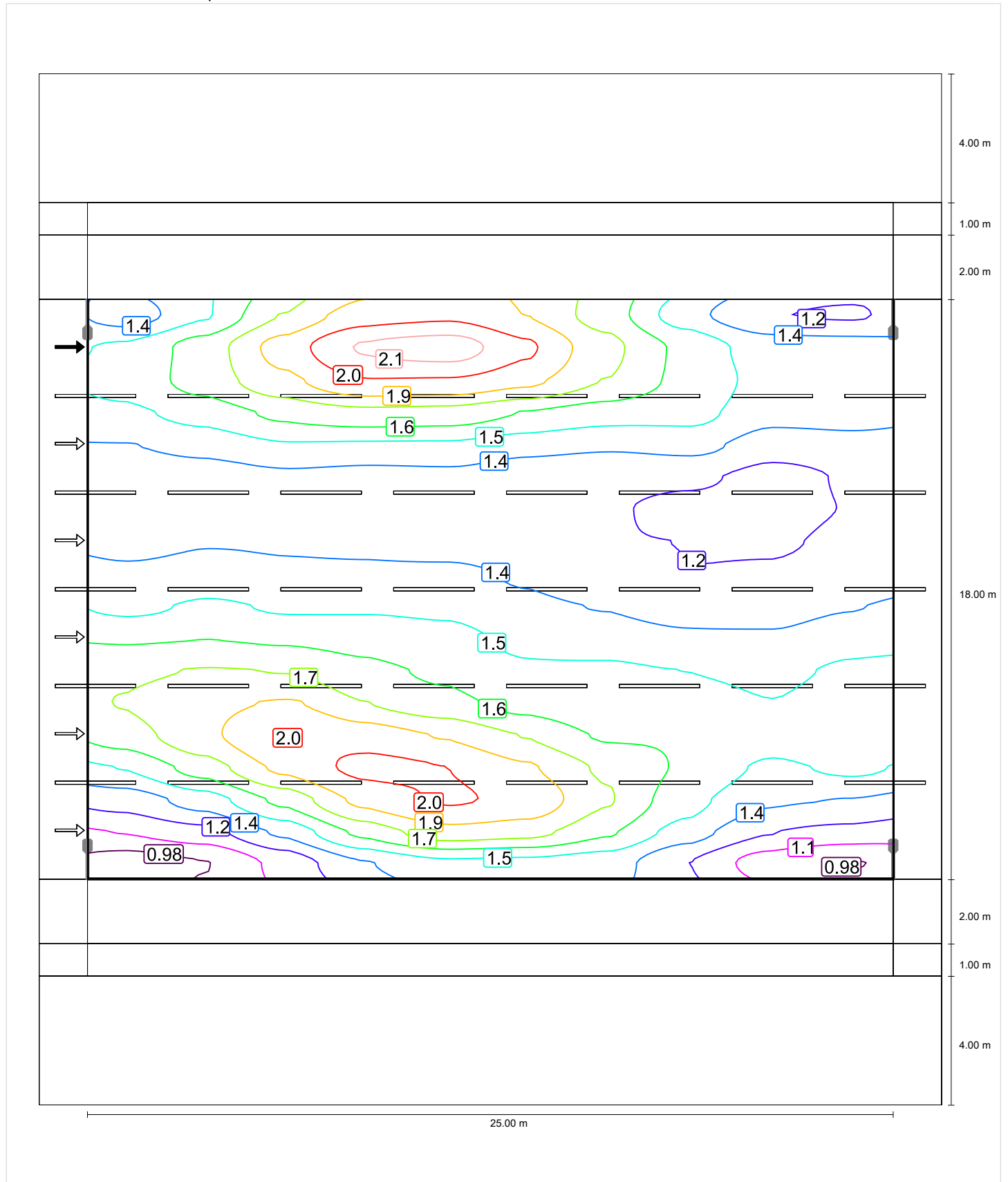


Observer 6

Luminance with dry roadway



Luminance with new lamp



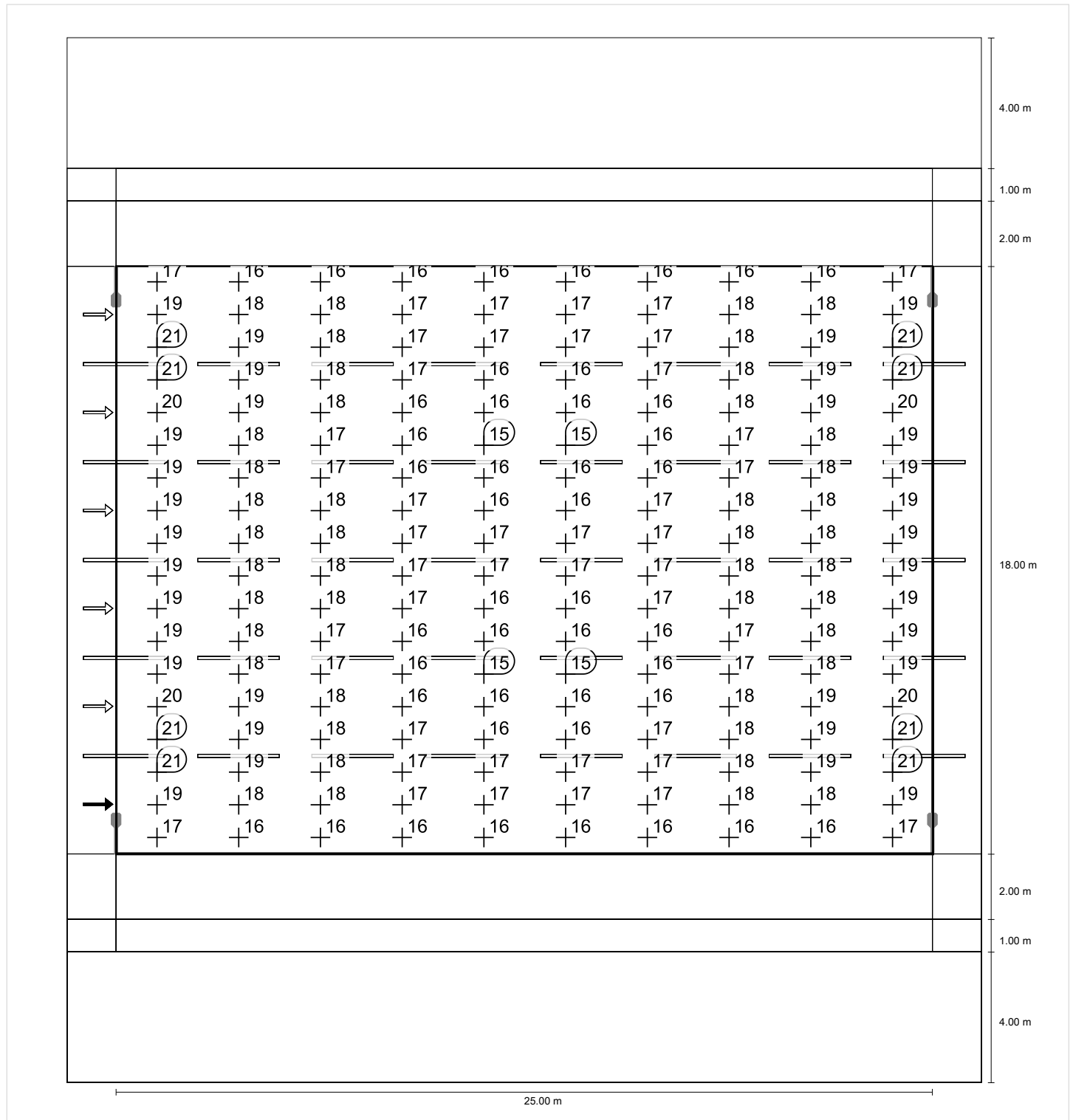
street (M3)

Light loss factor: 0.67
 Grid: 10 x 18 Points

Lm [cd/m ²] ≥ 1.00	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 1.00	✓ 0.61	✓ 0.65	✓ 6	* 0.60

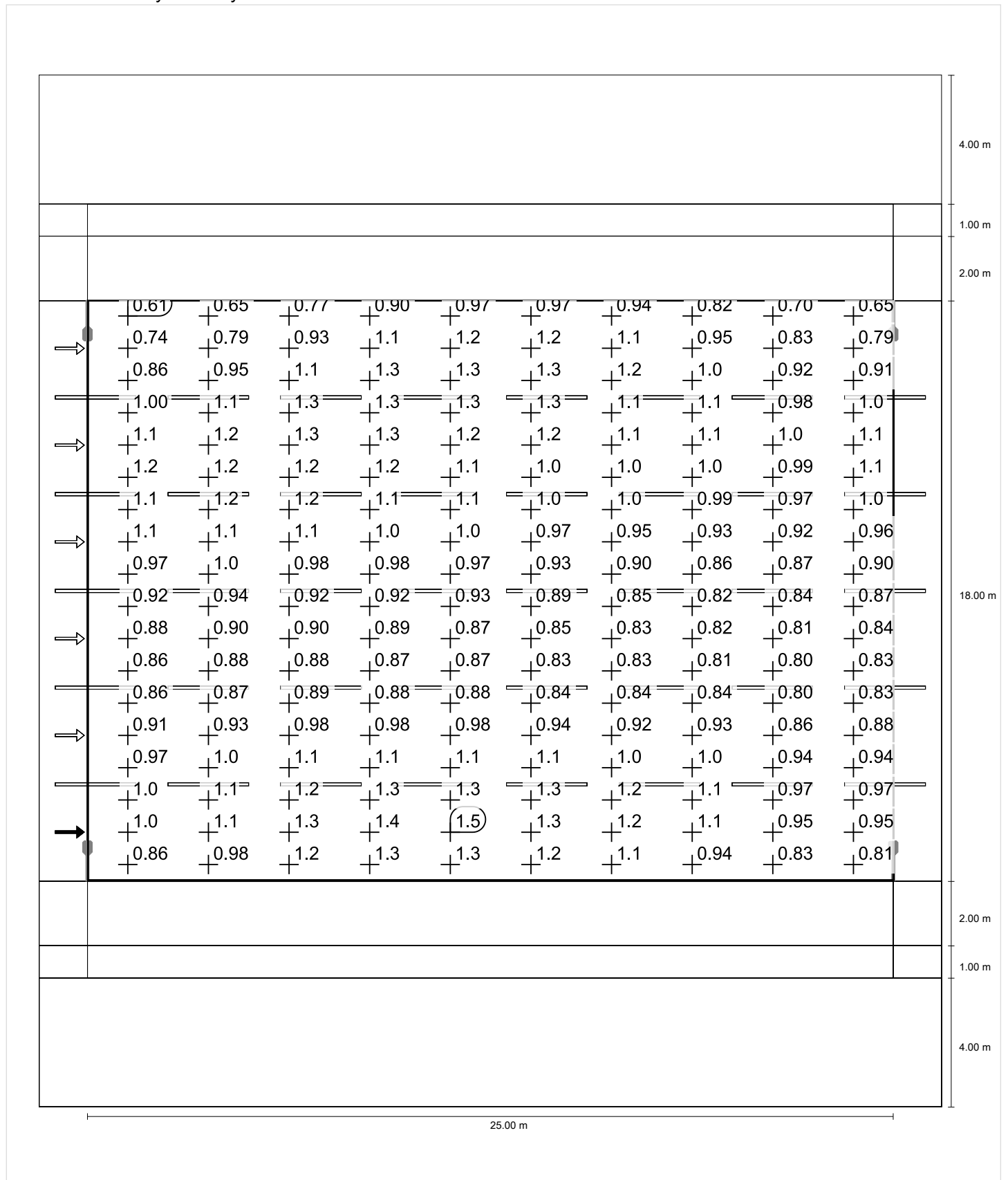
* Informative, not part of the valuation

Horizontal illuminance

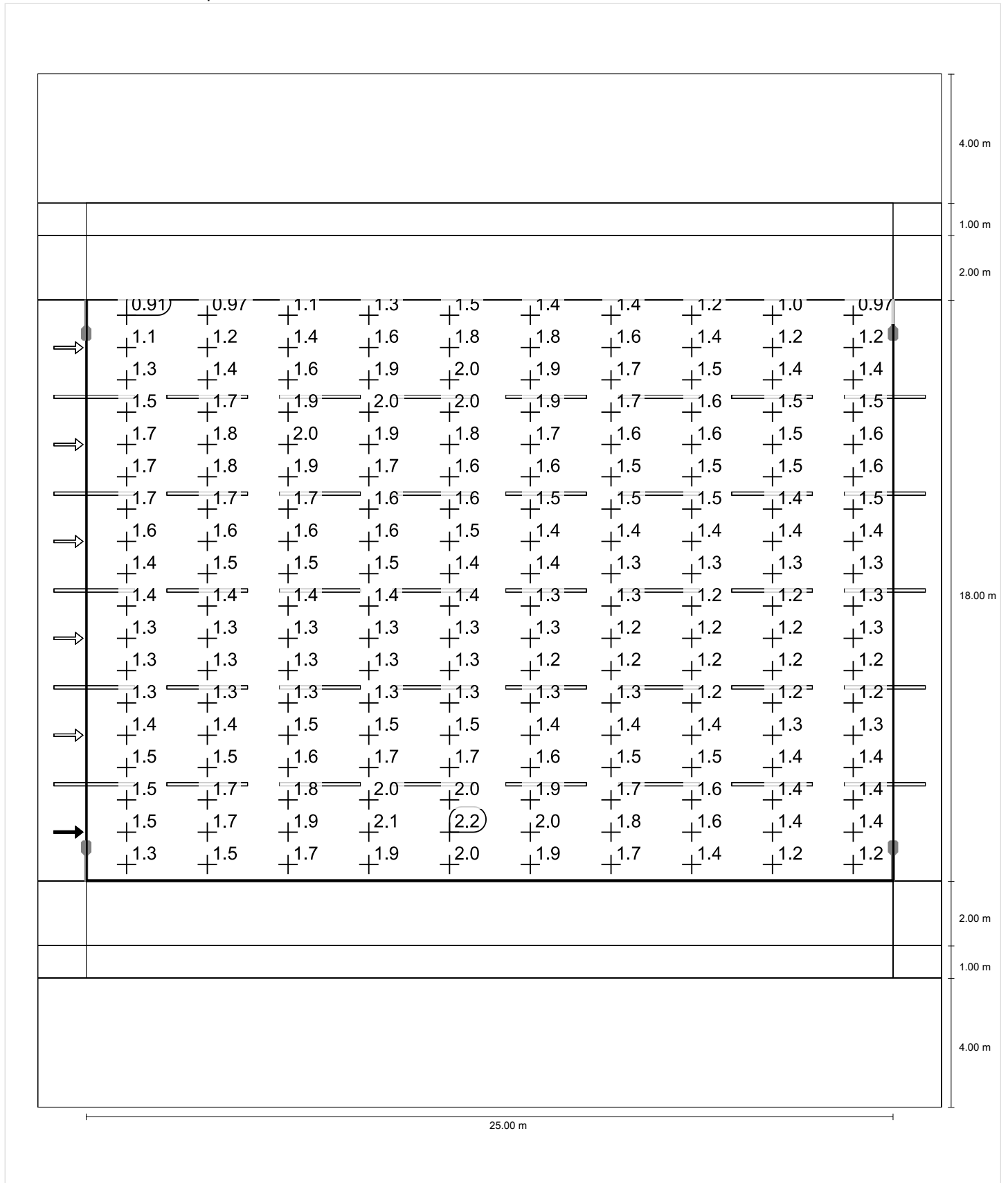


Observer 1

Luminance with dry roadway

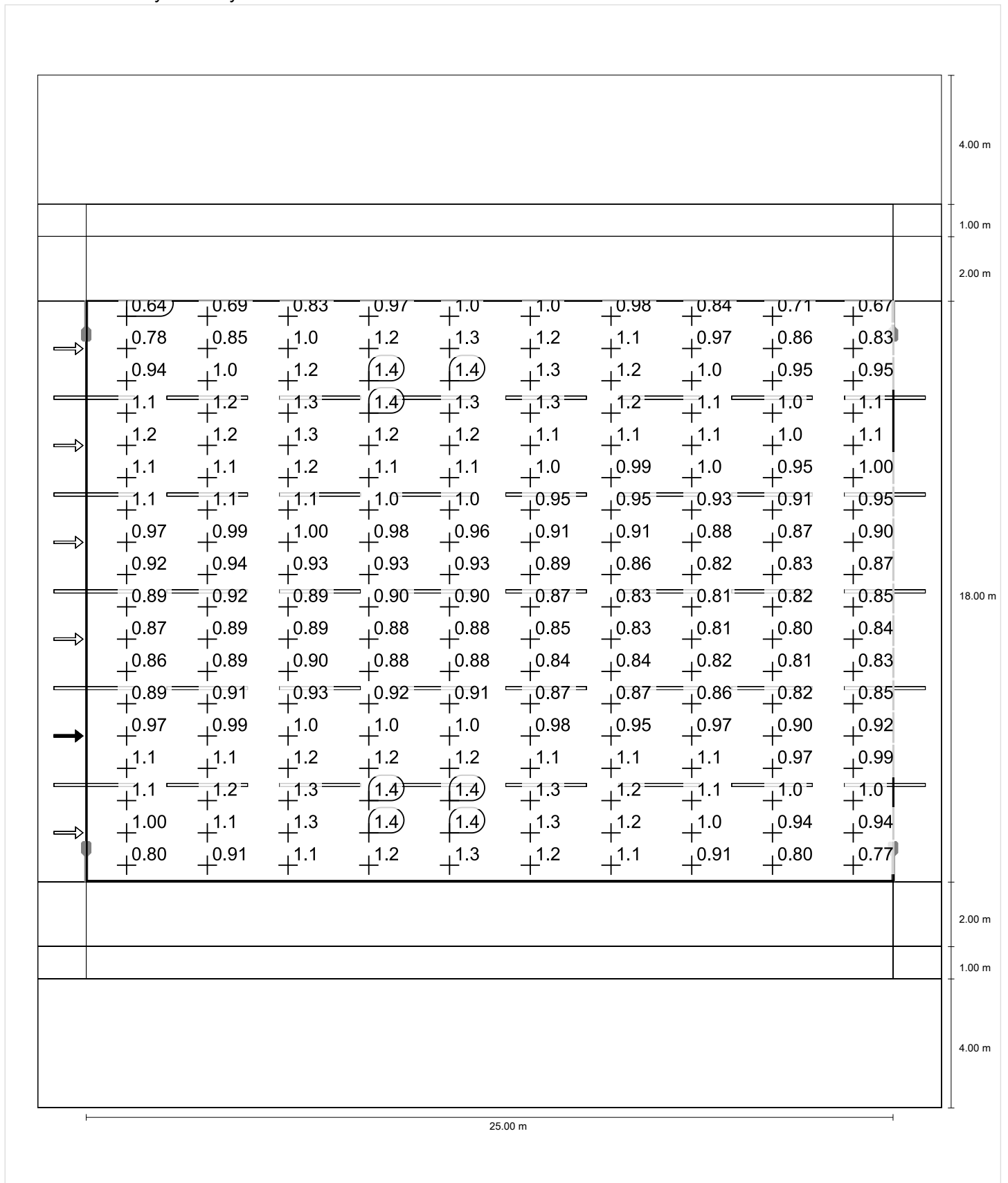


Luminance with new lamp

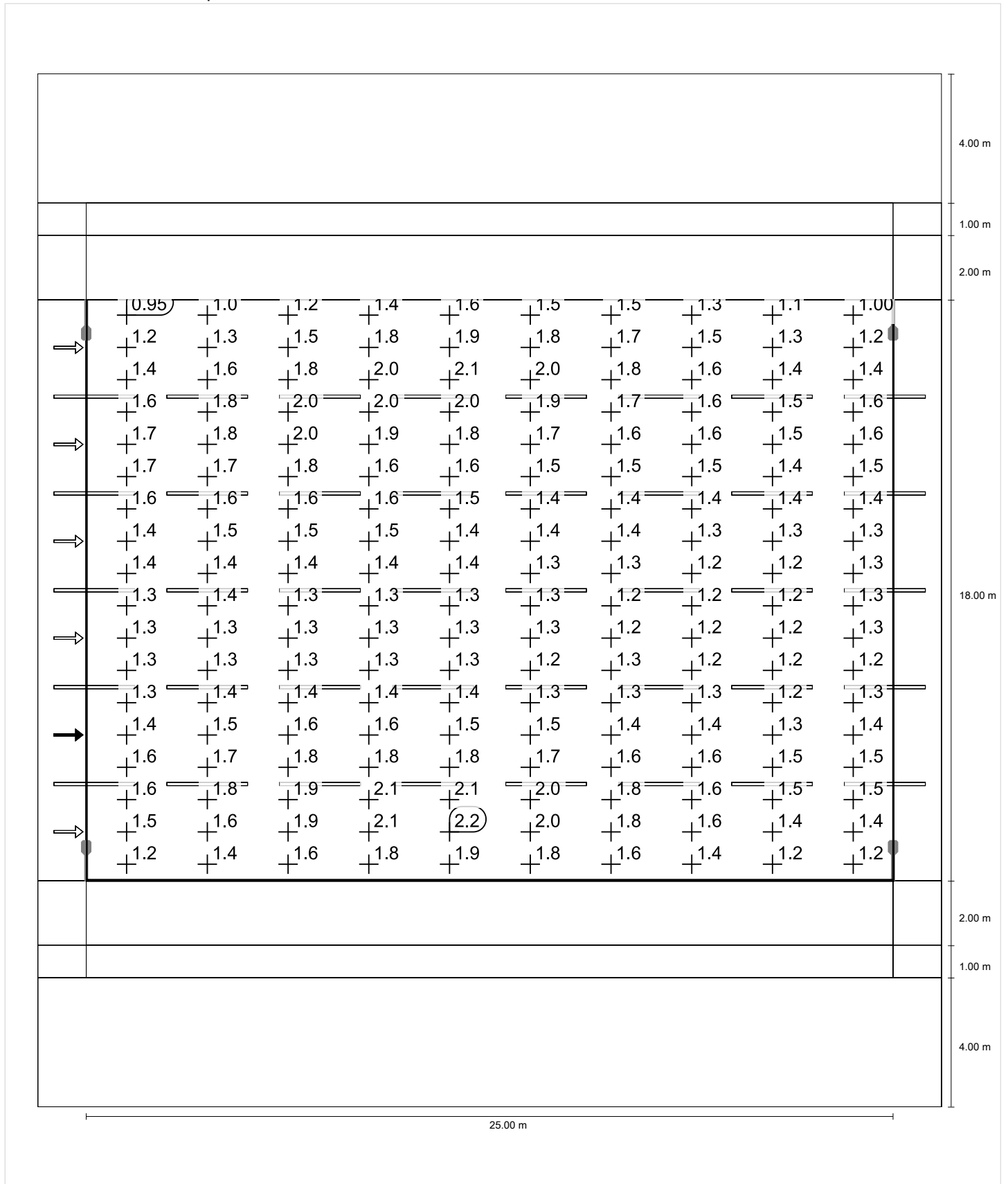


Observer 2

Luminance with dry roadway

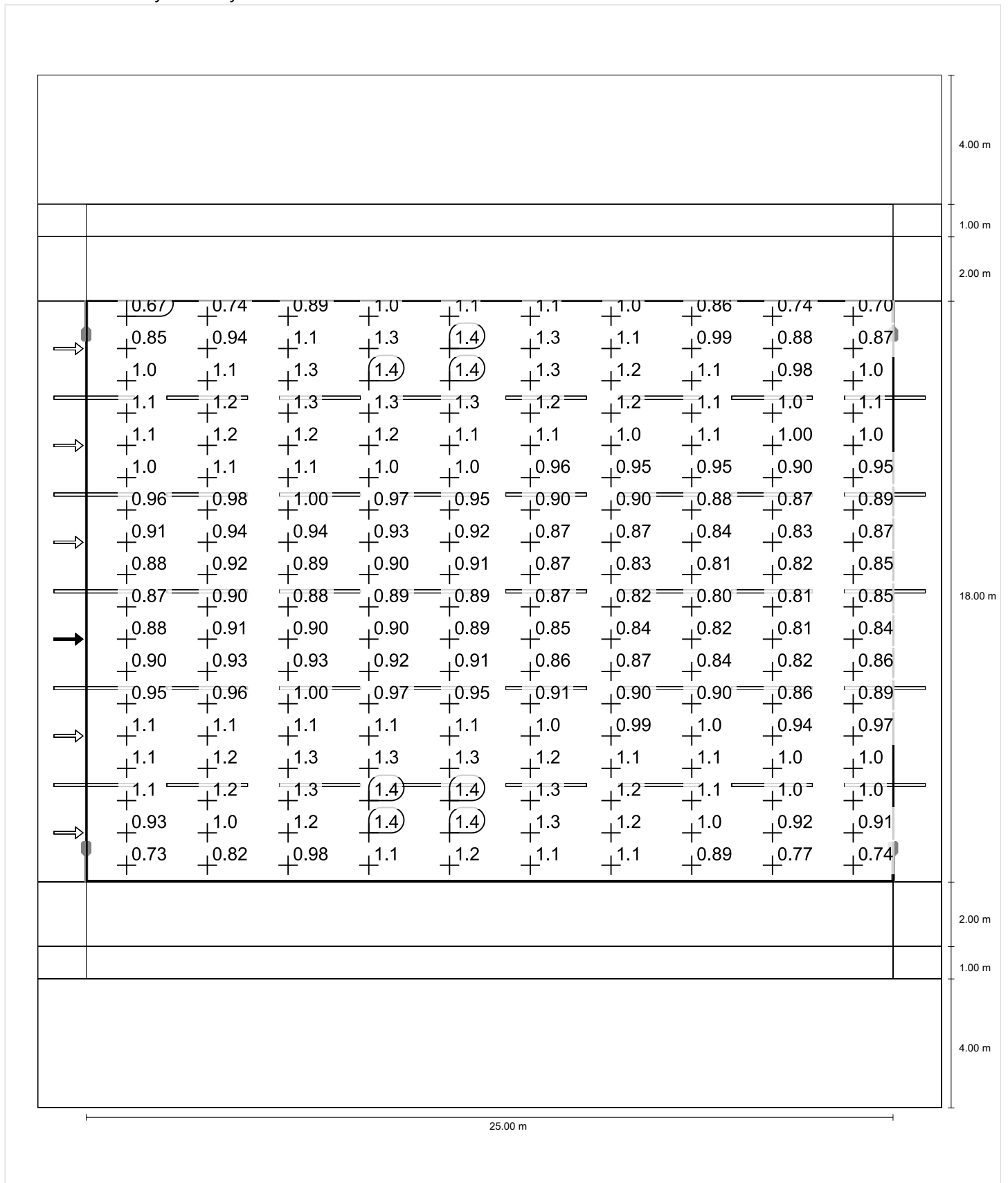


Luminance with new lamp



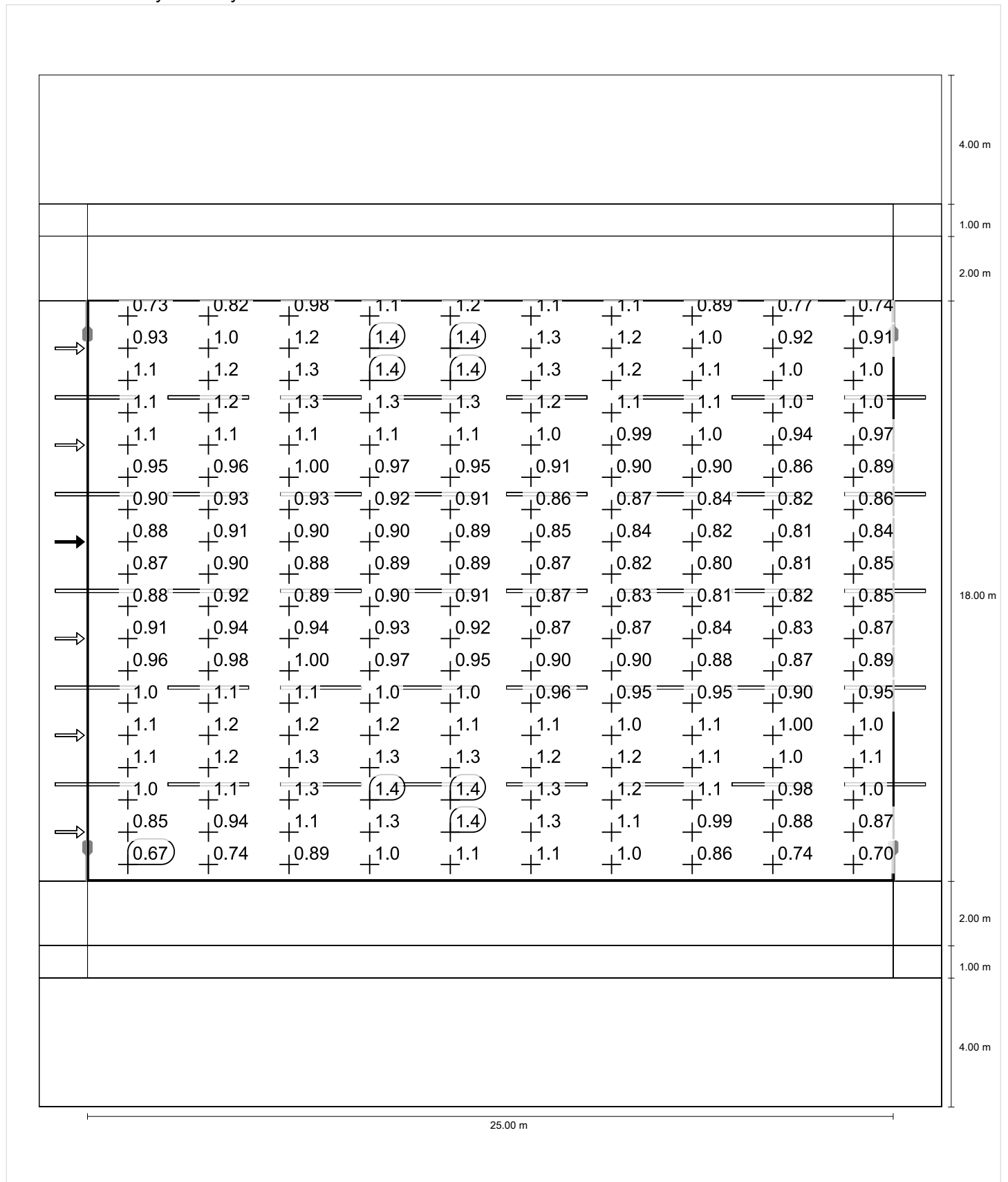
Observer 3

Luminance with dry roadway

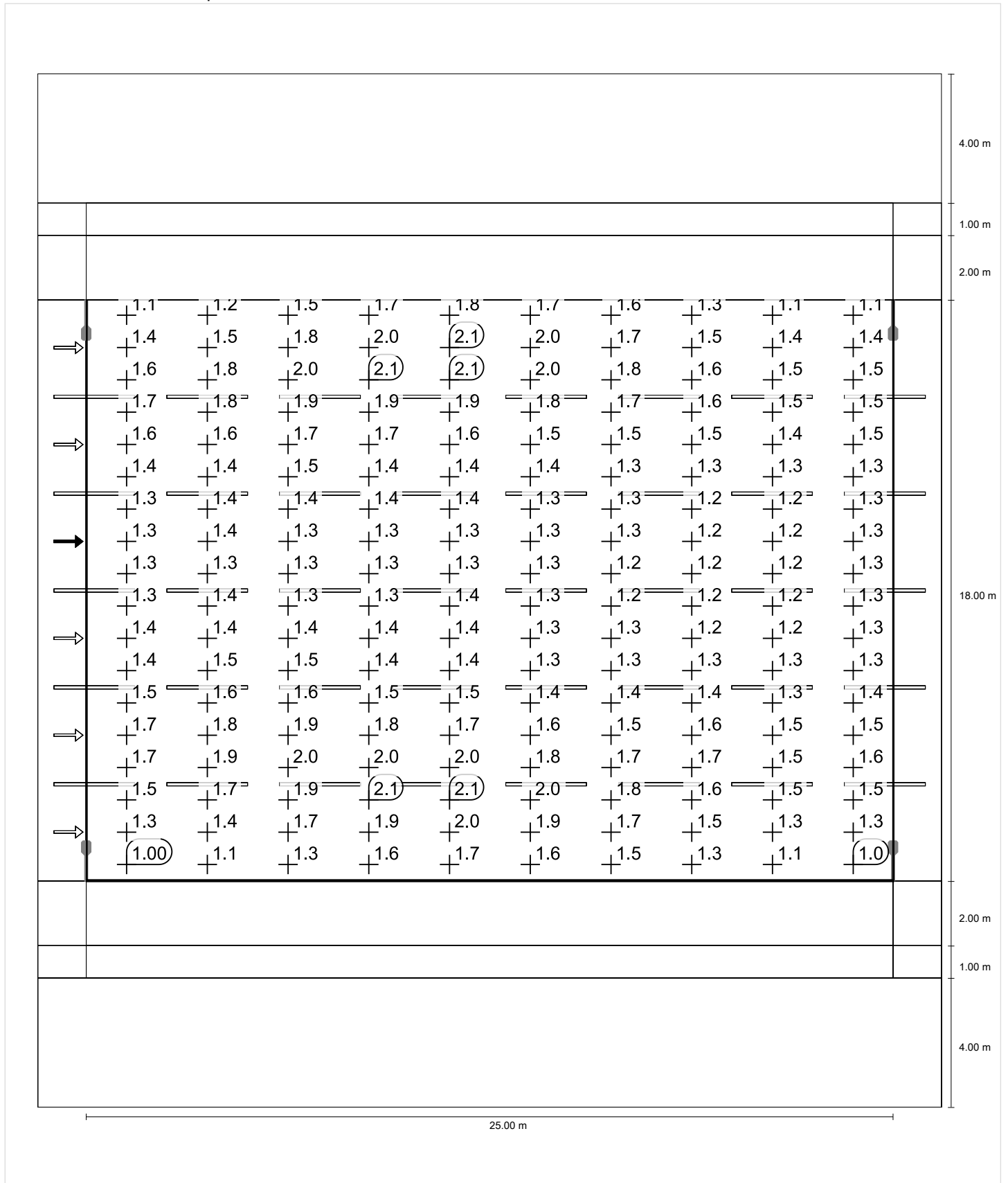


Observer 4

Luminance with dry roadway

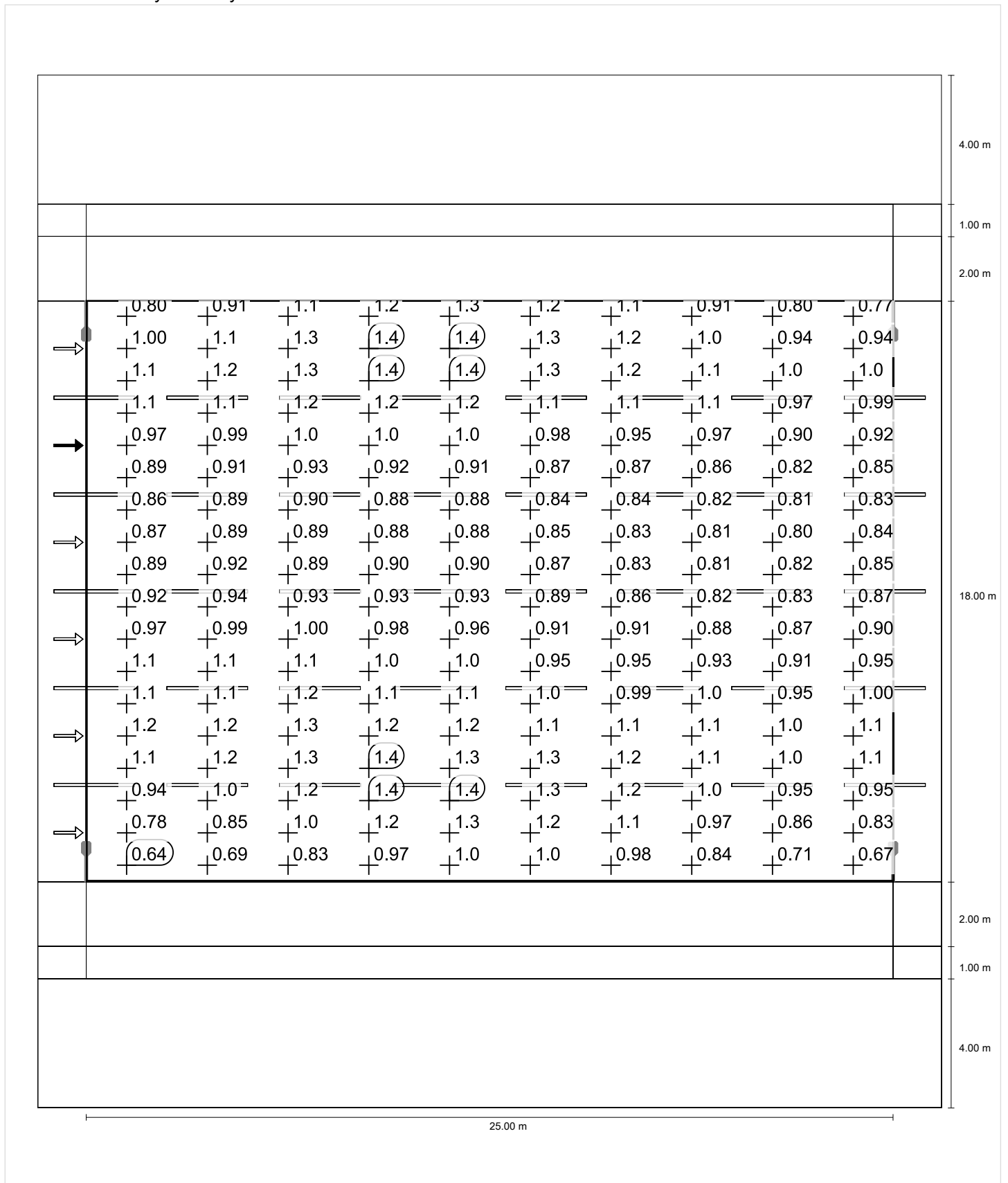


Luminance with new lamp



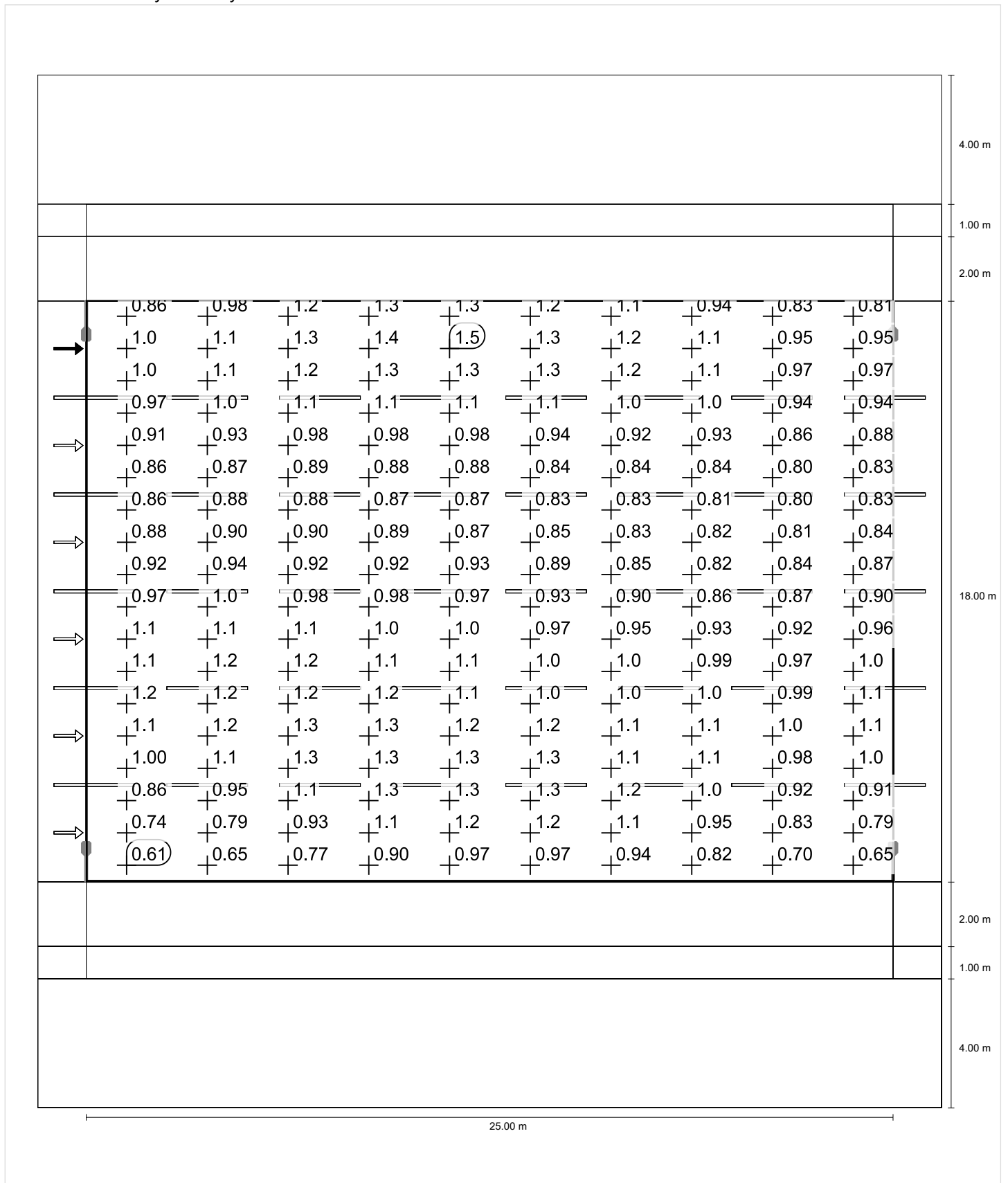
Observer 5

Luminance with dry roadway

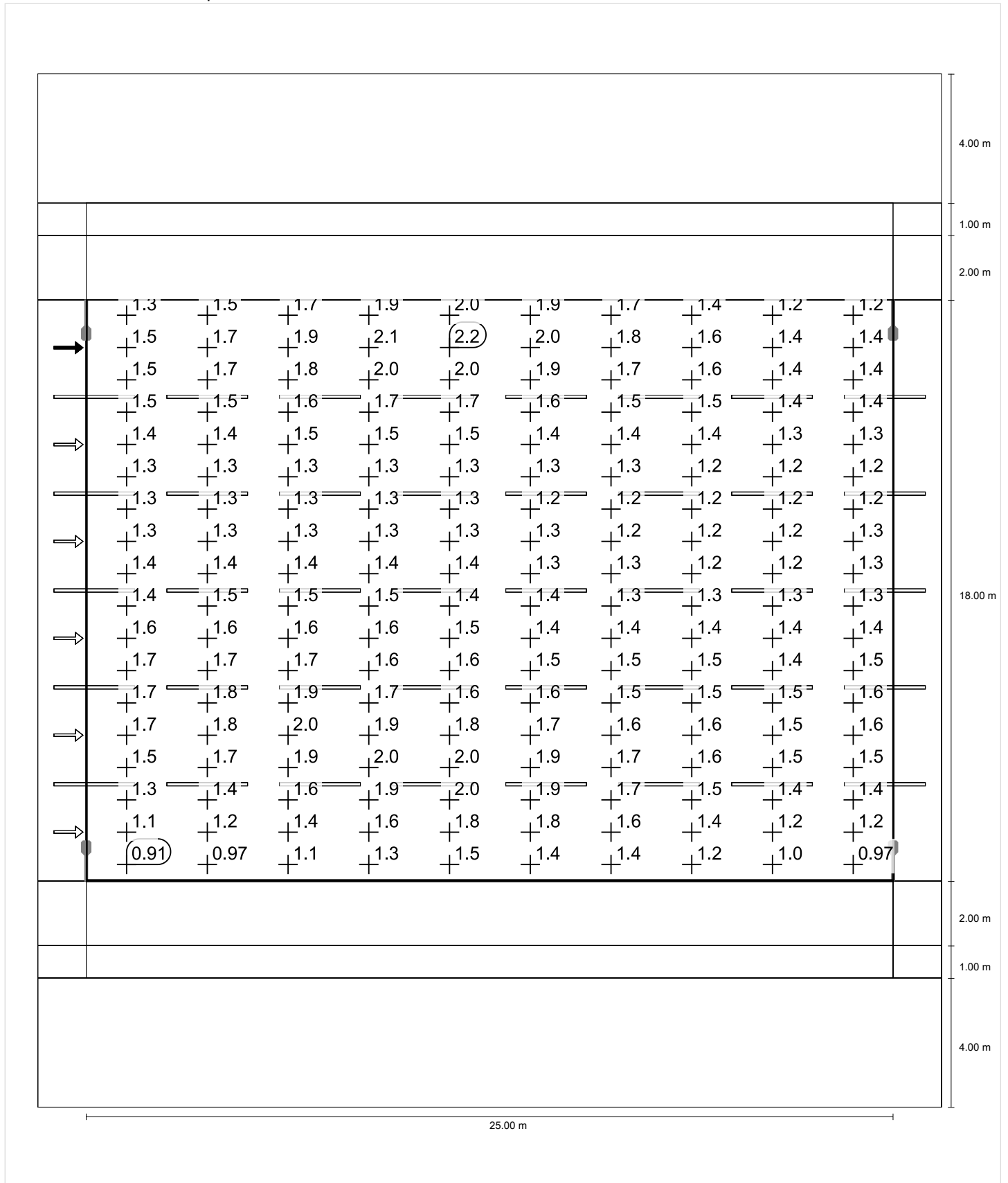


Observer 6

Luminance with dry roadway



Luminance with new lamp



sidewalk-1 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.54	* 11.98

* Informative, not part of the valuation

sidewalk-1 (P4)

Horizontal illuminance [lx]

6.667	14.2	14.0	14.2	14.3	13.8	13.8	14.3	14.2	14.0	14.2
6.000	11.9	11.8	12.2	12.3	11.8	11.8	12.3	12.2	11.8	11.9
5.333	9.71	9.54	10.1	10.2	9.66	9.66	10.2	10.1	9.54	9.71
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
12.0	9.54	14.3	0.797	0.668

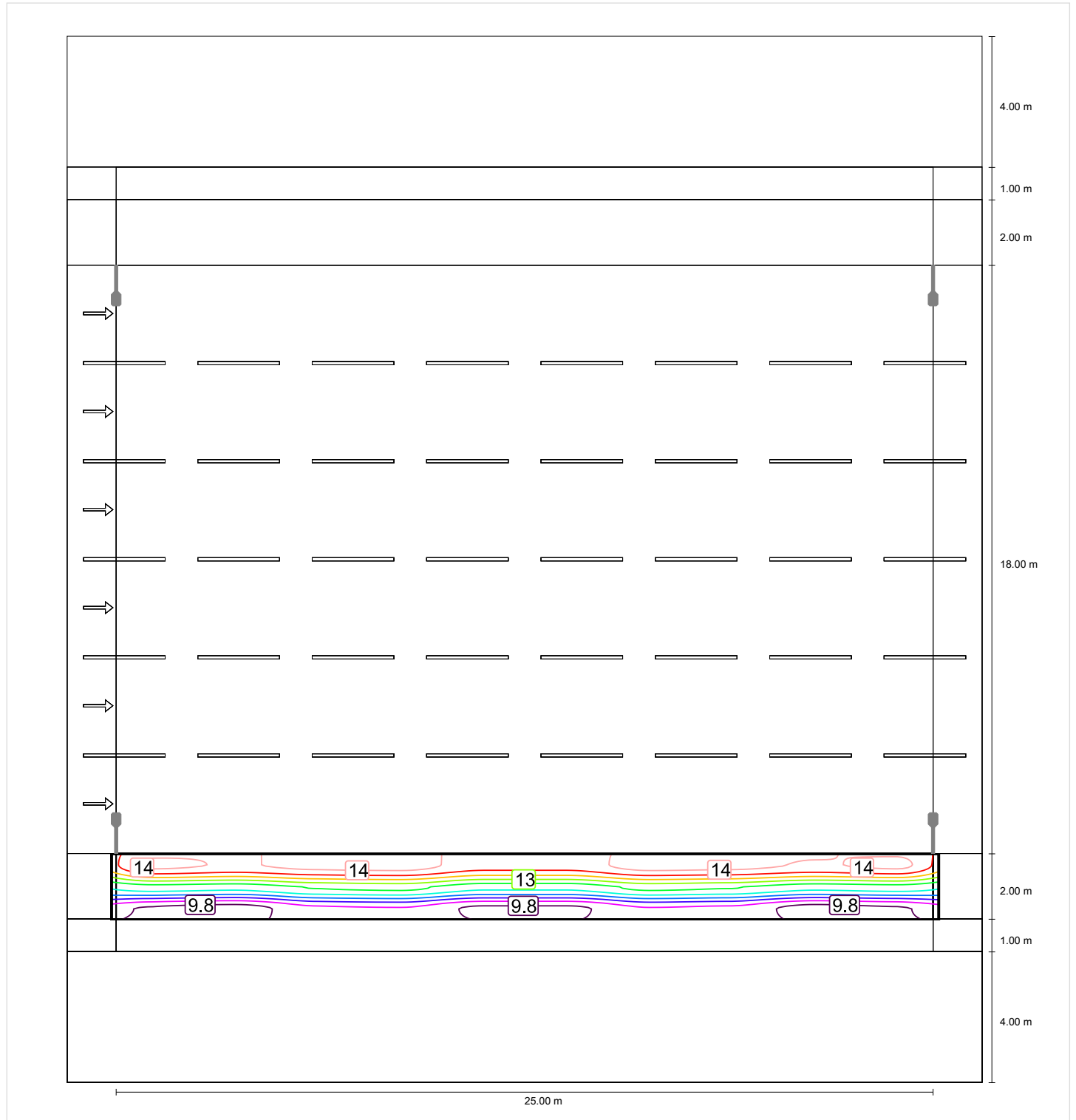
sidewalk-1 (P4)

Light loss factor: 0.67
 Grid: 10 x 3 Points

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.54	* 11.98

* Informative, not part of the valuation

Horizontal illuminance



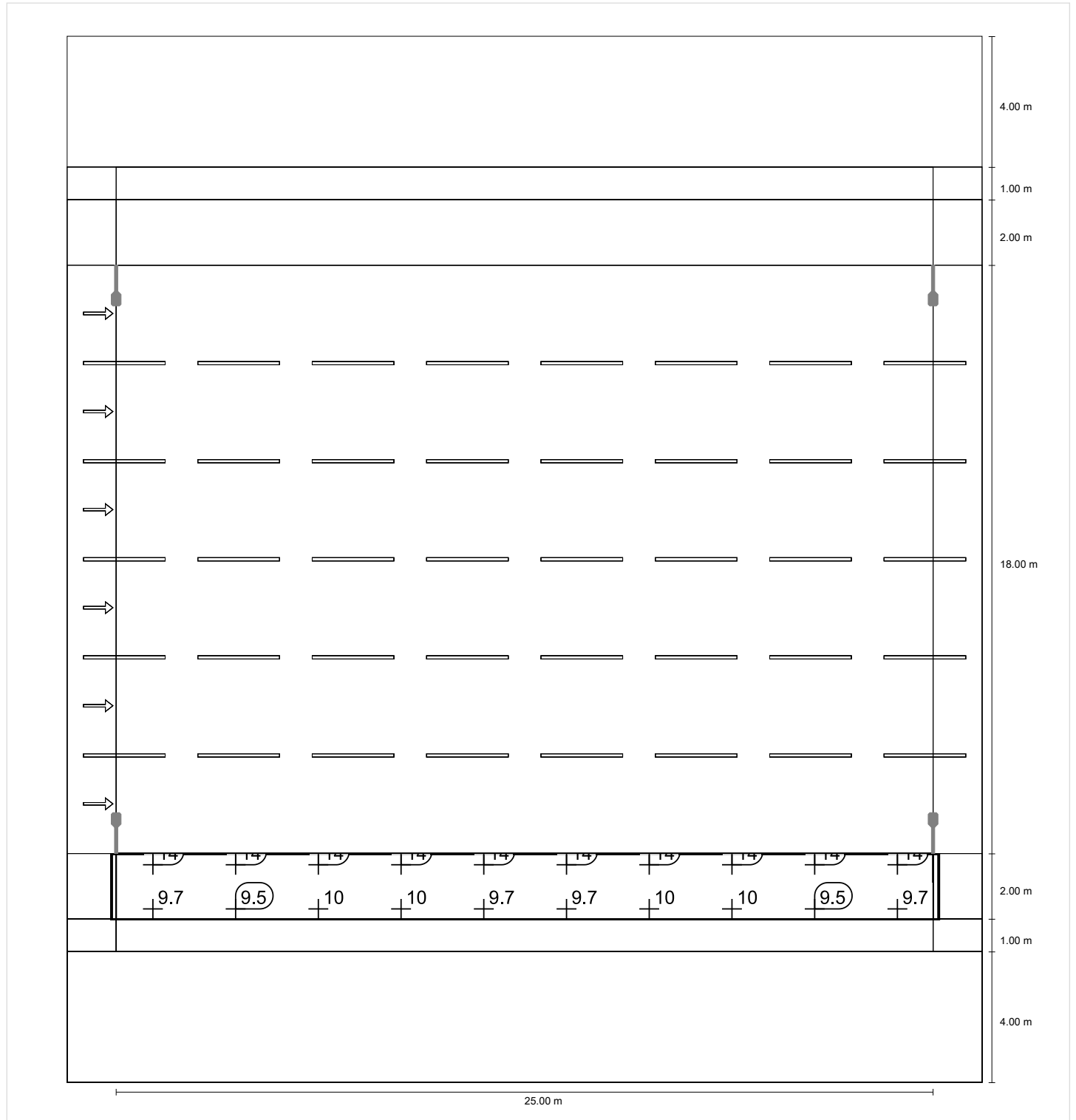
sidewalk-1 (P4)

Light loss factor: 0.67
 Grid: 10 x 3 Points

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.54	* 11.98

* Informative, not part of the valuation

Horizontal illuminance



bikeway-1 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 7.13	✓ 5.86

bikeway-1 (P4)

Horizontal illuminance [lx]

4.833	8.08	7.97	8.48	8.48	8.05	8.05	8.48	8.48	7.97	8.08
4.500	7.06	6.92	7.37	7.31	6.92	6.92	7.31	7.37	6.92	7.06
4.167	5.96	5.92	6.32	6.20	5.86	5.86	6.20	6.32	5.92	5.96
m	1.250	3.750	6.250	8.750	11.250	13.750	16.250	18.750	21.250	23.750

Grid: 10 x 3 Points

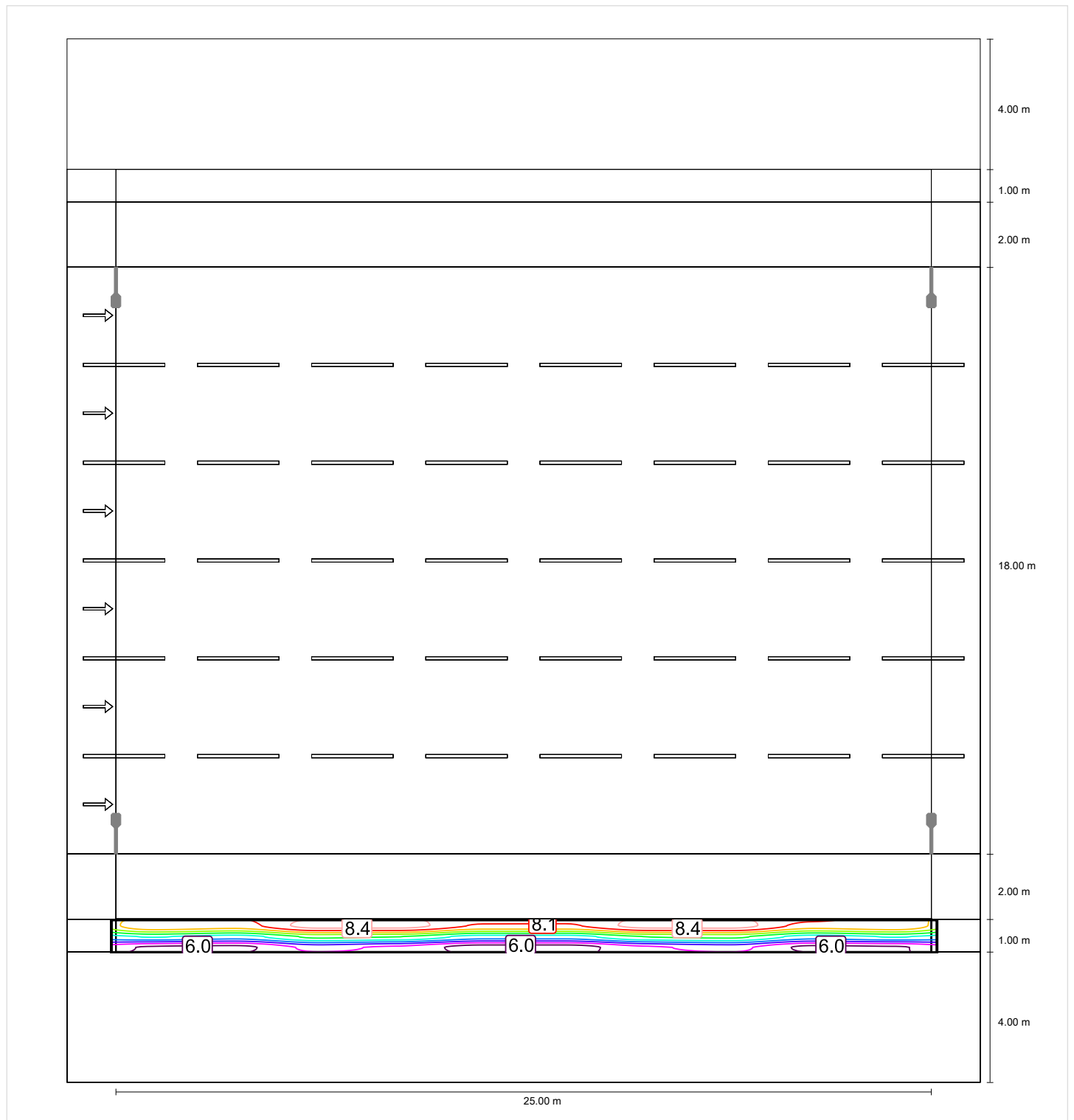
Em [lx]	Emin [lx]	Emax [lx]	g1	g2
7.13	5.86	8.48	0.822	0.690

bikeway-1 (P4)

Light loss factor: 0.67
 Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 5.00	≥ 1.00
≤ 7.50	
✓ 7.13	✓ 5.86

Horizontal illuminance



bikeway-1 (P4)

Light loss factor: 0.67
 Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 5.00	≥ 1.00
≤ 7.50	
✓ 7.13	✓ 5.86

Horizontal illuminance

