

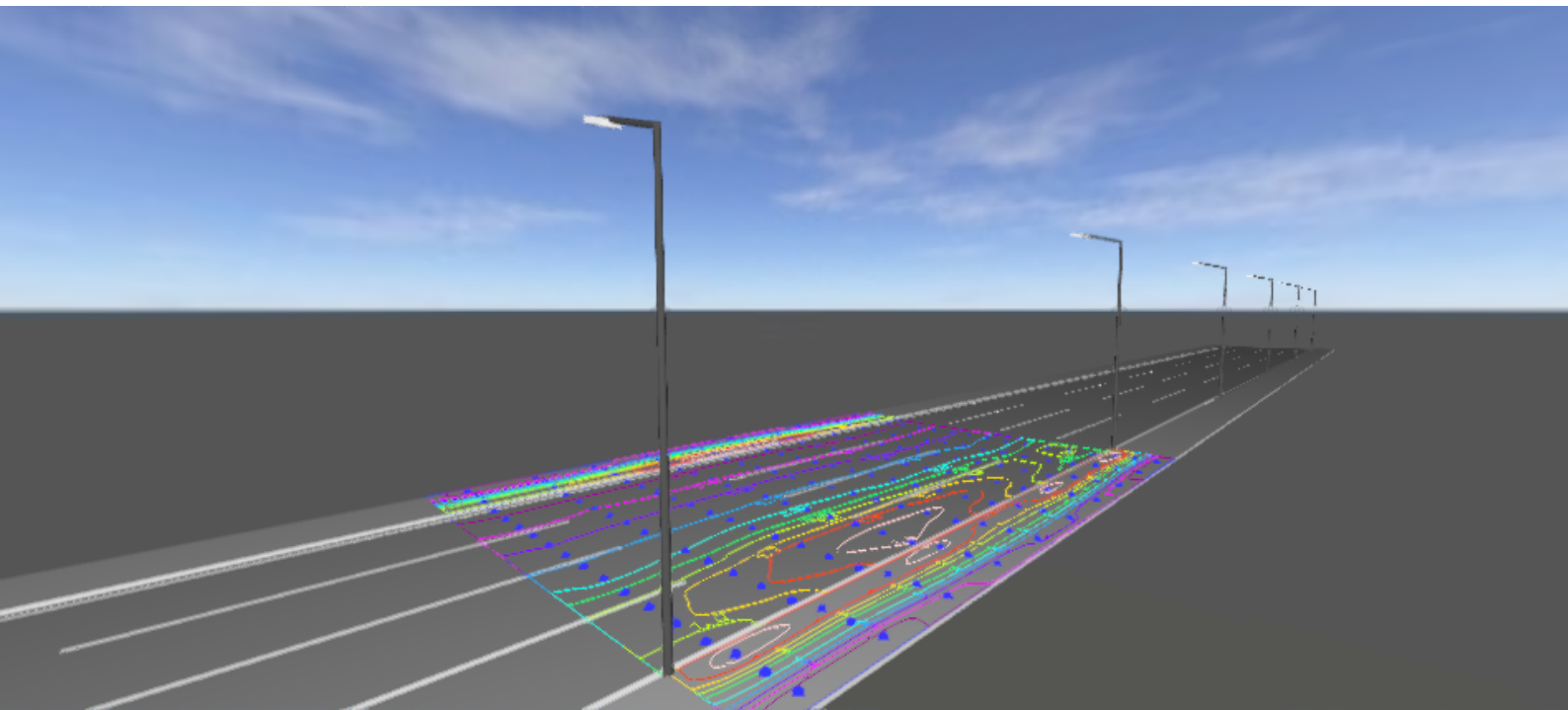
Operator:
Dave

HongKong bosunlighting
co.,LTD
+86 18676024888
sale@bosunlighting.com

Date:
2019-09-08



MOONRIVER-40W 10M road and 2line 2M sidewalk with 8M pole



Content

MOONRIVER-40W 10M road and 2line 2M sidewalk with 8M pole

MOONRIVER-40W 10M road and 2line 2M sidewalk with 8M pole

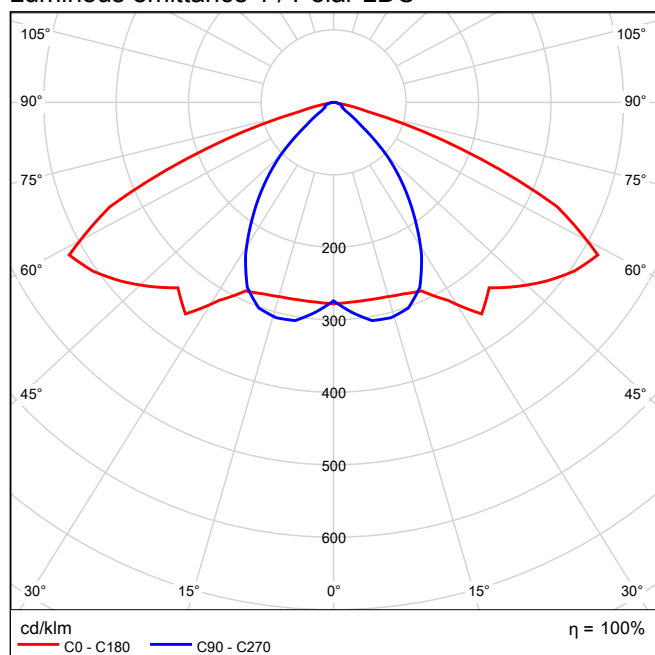
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九高 1x49

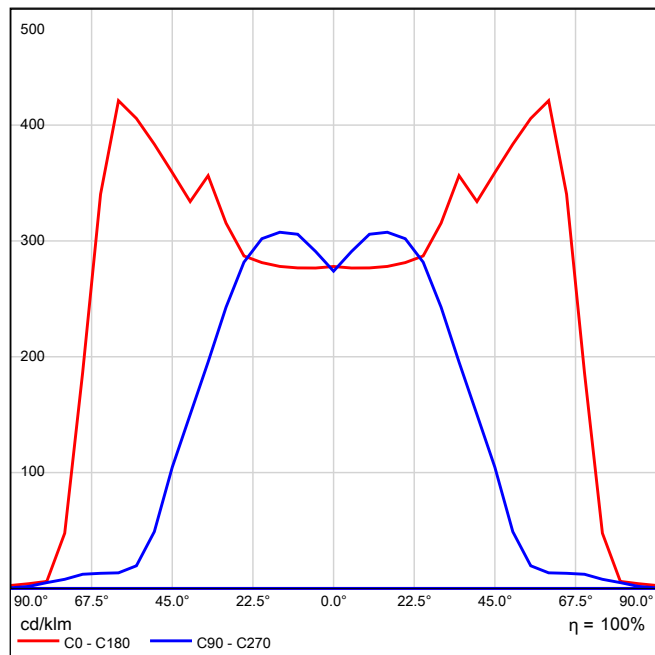
See our luminaire catalog for an image of the luminaire.

Light output ratio: 100.12%
Lamp luminous flux: 5783 lm
Luminaire luminous flux: 5790 lm
Power: 39.9 W
Luminous efficacy: 145.1 lm/W

Luminous emittance 1 / Polar LDC

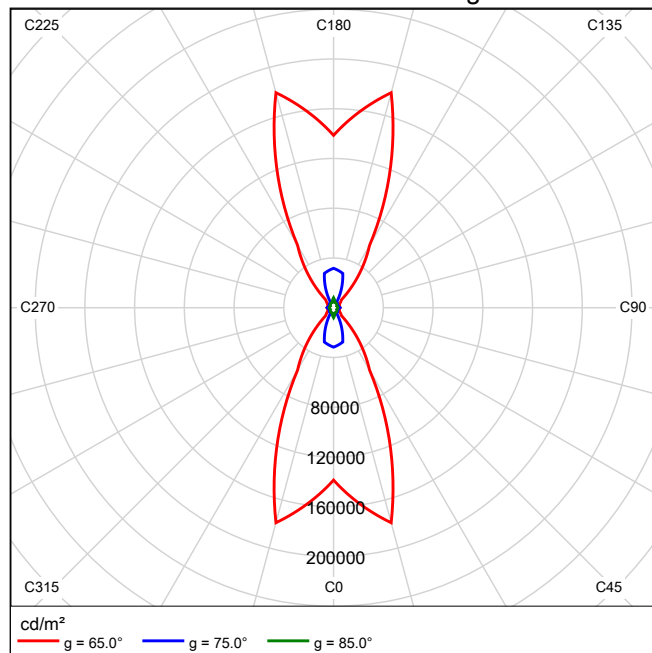


Luminous emittance 1 / Linear LDC



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

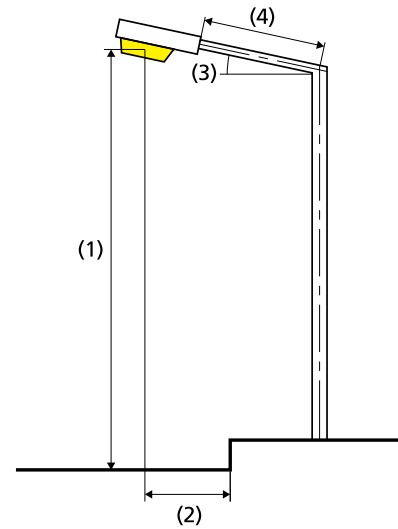
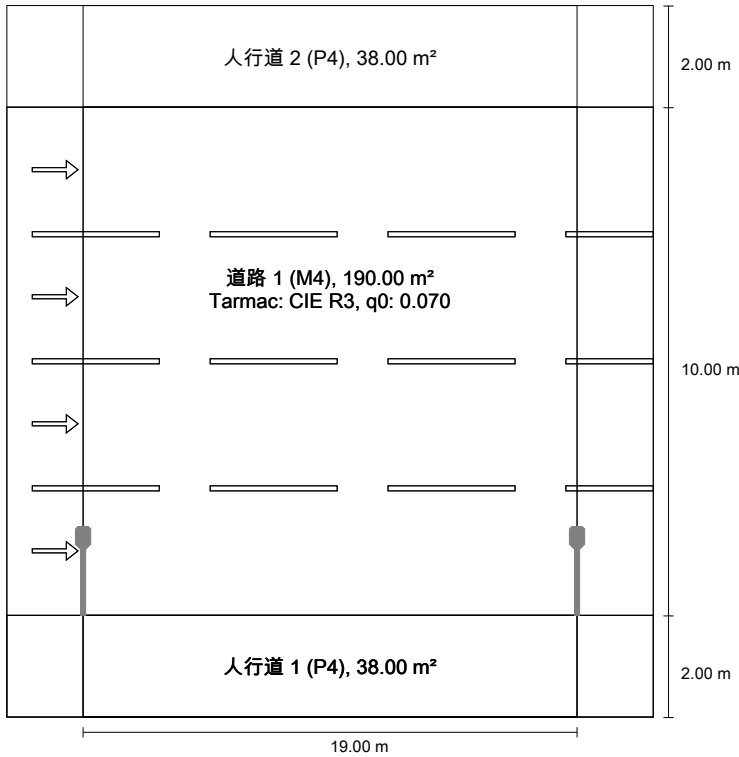
Luminous emittance 1 / Luminance diagram



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):	5790.10 lm
Luminous flux (lamp):	5783.40 lm
Operating Hours	
4000 h:	100.0 %, 39.9 W
W/km:	2114.9
Arrangement:	single side bottom
Pole distance:	19.000 m
Boom inclination (3):	15.0°
Boom length (4):	1.526 m
Light centre height (1):	8.000 m
Light overhang (2):	1.500 m

Results for valuation fields
Light loss factor: 0.67

人行道 2 (P4)

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 5.42	✓ 4.27

道路 1 (M4)

Lm [cd/m²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 0.75	✓ 0.40	✓ 0.71	✓ 5	* 0.58

人行道 1 (P4)

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.95	* 13.01

* Informative, not part of the valuation

Results for energy efficiency indicators

Power density indicator (Dp)	0.012 W/lxm²
Energy consumption density	
Arrangement: 40W Moon river 1_IESNA2002.IES (159.6 kWh/yr)	0.6 kWh/m² yr

ULR:	0.00
ULOR:	0.00
Maximum luminous intensities	
at 70° and above	424 cd/klm *
at 80° and above	50.6 cd/klm *
at 90° and above	7.85 cd/klm *
Luminous intensity class:	G*3

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.4

人行道 2 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 5.42	✓ 4.27

人行道 2 (P4)

Horizontal illuminance [lx]

13.667	4.27	4.34	4.49	4.86	4.90	4.90	4.86	4.49	4.34	4.27
13.000	5.08	5.13	5.30	5.68	5.75	5.75	5.68	5.30	5.13	5.08
12.333	6.05	6.06	6.21	6.50	6.68	6.68	6.50	6.21	6.06	6.05
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 3 Points

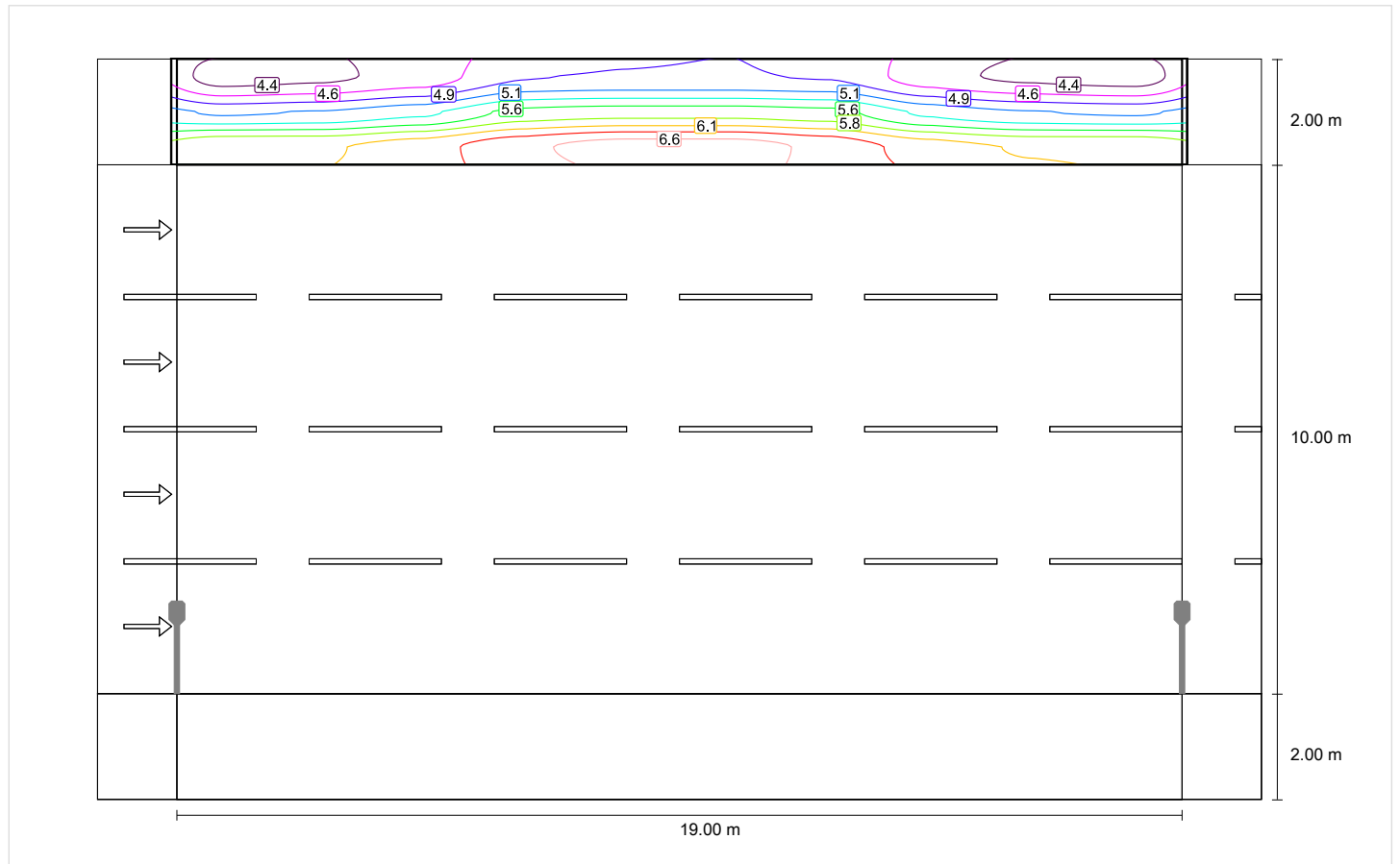
Em [lx]	Emin [lx]	Emax [lx]	g1	g2
5.42	4.27	6.68	0.789	0.640

人行道 2 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 5.00	≥ 1.00
≤ 7.50	
✓ 5.42	✓ 4.27

Horizontal illuminance

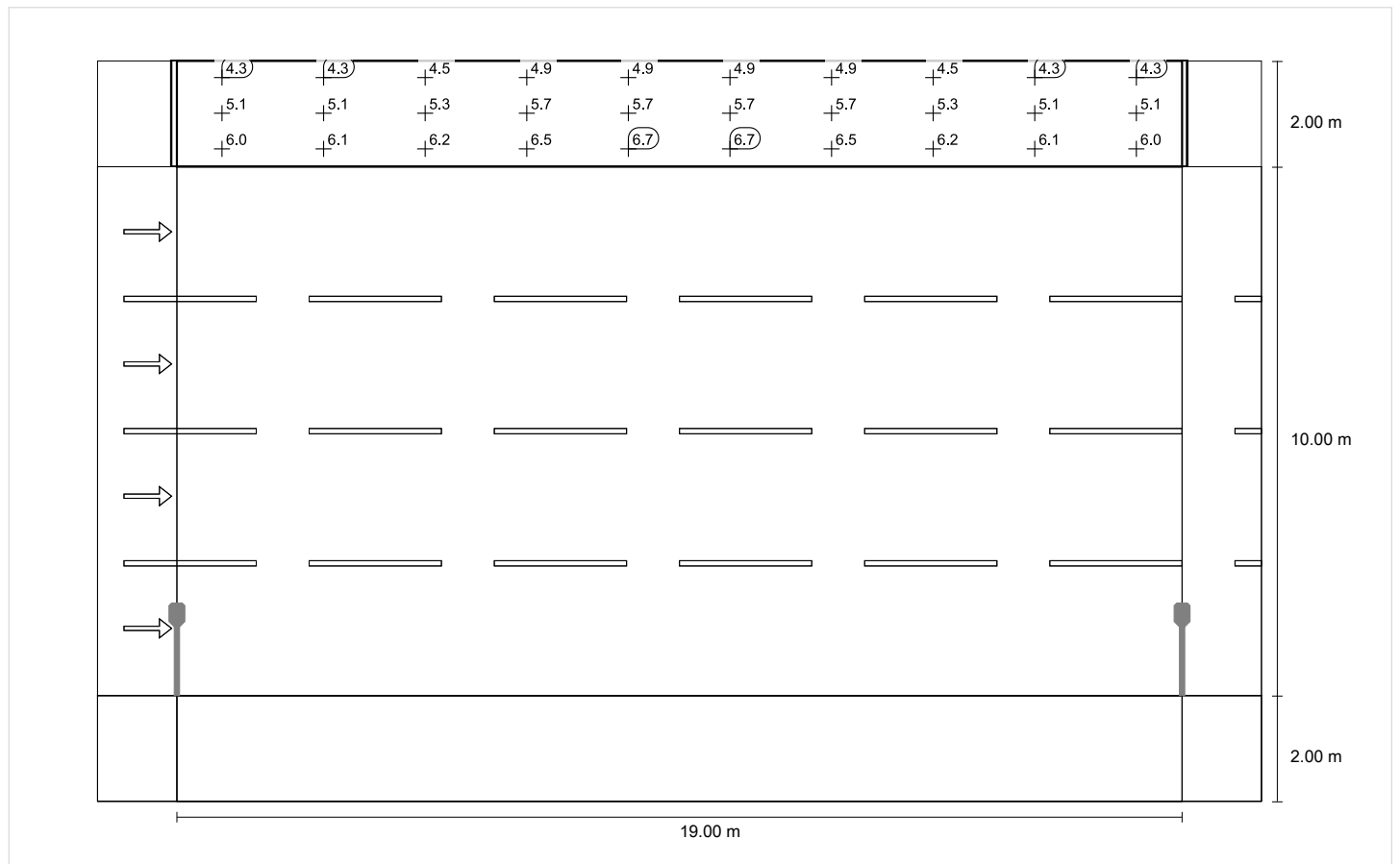


人行道 2 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 5.00	≥ 1.00
≤ 7.50	
✓ 5.42	✓ 4.27

Horizontal illuminance



道路 1 (M4)

Light loss factor: 0.67
Grid: 10 x 12 Points

Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 0.75	✓ 0.40	✓ 0.71	✓ 5	* 0.58

* Informative, not part of the valuation

Assigned observer (4):

Observer	Position [m]	Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15
Observer 1	(-60.000, 3.250, 1.500)	0.75	0.40	0.71	5
Observer 2	(-60.000, 5.750, 1.500)	0.77	0.40	0.84	5
Observer 3	(-60.000, 8.250, 1.500)	0.79	0.40	0.87	5
Observer 4	(-60.000, 10.750, 1.500)	0.80	0.40	0.87	4

道路 1 (M4)

Horizontal illuminance [lx]

11.583	7.46	7.36	7.40	7.58	7.85	7.85	7.58	7.40	7.36	7.46
10.750	9.10	8.82	8.80	8.85	9.08	9.08	8.85	8.80	8.82	9.10
9.917	10.7	10.4	10.3	10.3	10.1	10.1	10.3	10.3	10.4	10.7
9.083	12.5	12.0	11.7	11.5	11.2	11.2	11.5	11.7	12.0	12.5
8.250	14.1	13.4	12.9	12.3	12.2	12.2	12.3	12.9	13.4	14.1
7.417	15.7	14.6	14.0	13.1	12.4	12.4	13.1	14.0	14.6	15.7
6.583	16.7	15.3	14.5	13.2	12.3	12.3	13.2	14.5	15.3	16.7
5.750	16.9	15.5	14.5	12.9	12.0	12.0	12.9	14.5	15.5	16.9
4.917	18.8	17.1	16.1	14.0	13.2	13.2	14.0	16.1	17.1	18.8
4.083	20.1	18.3	17.3	15.4	14.6	14.6	15.4	17.3	18.3	20.1
3.250	20.0	18.4	17.3	16.2	16.0	16.0	16.2	17.3	18.4	20.0
2.417	18.3	17.3	16.7	16.4	15.8	15.8	16.4	16.7	17.3	18.3
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
13.5	7.36	20.1	0.546	0.366

Observer 1

Luminance with dry roadway [cd/m²]

11.583	0.32	0.33	0.33	0.34	0.35	0.34	0.32	0.30	0.31	0.31
10.750	0.39	0.39	0.39	0.40	0.40	0.39	0.37	0.36	0.36	0.39
9.917	0.46	0.47	0.46	0.47	0.46	0.45	0.43	0.42	0.43	0.45
9.083	0.52	0.54	0.54	0.55	0.53	0.52	0.50	0.49	0.50	0.51
8.250	0.59	0.60	0.61	0.61	0.62	0.61	0.57	0.56	0.56	0.58
7.417	0.66	0.67	0.68	0.69	0.69	0.68	0.67	0.65	0.63	0.65
6.583	0.73	0.75	0.77	0.77	0.76	0.74	0.75	0.73	0.69	0.71
5.750	0.80	0.82	0.88	0.86	0.83	0.80	0.81	0.80	0.76	0.78
4.917	0.97	1.02	1.10	1.06	1.04	1.00	0.95	0.95	0.89	0.92
4.083	1.12	1.20	1.31	1.31	1.27	1.22	1.14	1.09	1.02	1.06
3.250	1.13	1.25	1.36	1.44	1.41	1.34	1.20	1.09	1.03	1.06
2.417	0.98	1.10	1.24	1.38	1.32	1.21	1.12	0.98	0.90	0.91
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
0.75	0.30	1.44	0.405	0.211

Luminance with new lamp [cd/m²]

11.583	0.47	0.49	0.50	0.51	0.52	0.51	0.47	0.45	0.46	0.47
10.750	0.59	0.59	0.59	0.60	0.60	0.59	0.55	0.53	0.54	0.58
9.917	0.69	0.71	0.69	0.70	0.69	0.67	0.64	0.62	0.64	0.67
9.083	0.78	0.80	0.80	0.82	0.80	0.78	0.74	0.73	0.74	0.76
8.250	0.87	0.89	0.90	0.91	0.93	0.91	0.85	0.84	0.84	0.86
7.417	0.98	1.01	1.01	1.03	1.03	1.01	1.01	0.97	0.95	0.97
6.583	1.09	1.12	1.15	1.16	1.13	1.10	1.11	1.09	1.04	1.06
5.750	1.19	1.22	1.31	1.28	1.24	1.19	1.21	1.20	1.13	1.16
4.917	1.45	1.52	1.64	1.59	1.55	1.50	1.42	1.41	1.33	1.38
4.083	1.67	1.79	1.95	1.95	1.90	1.82	1.71	1.63	1.53	1.58
3.250	1.68	1.86	2.04	2.14	2.10	2.00	1.79	1.63	1.53	1.58
2.417	1.46	1.64	1.85	2.06	1.97	1.80	1.67	1.46	1.34	1.36
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.12	0.45	2.14	0.405	0.211

Observer 2

Luminance with dry roadway [cd/m²]

11.583	0.33	0.34	0.34	0.35	0.36	0.34	0.32	0.31	0.31	0.32
10.750	0.41	0.41	0.41	0.41	0.42	0.40	0.37	0.36	0.37	0.40
9.917	0.48	0.49	0.48	0.48	0.48	0.46	0.44	0.43	0.44	0.46
9.083	0.54	0.56	0.56	0.57	0.56	0.55	0.52	0.51	0.51	0.53
8.250	0.62	0.64	0.64	0.65	0.66	0.64	0.61	0.59	0.58	0.60
7.417	0.70	0.72	0.74	0.74	0.74	0.71	0.71	0.68	0.66	0.68
6.583	0.79	0.81	0.85	0.83	0.81	0.78	0.79	0.78	0.74	0.75
5.750	0.89	0.92	0.96	0.93	0.90	0.85	0.85	0.85	0.81	0.84
4.917	1.06	1.12	1.20	1.15	1.11	1.07	1.02	1.00	0.95	0.99
4.083	1.15	1.24	1.35	1.35	1.30	1.25	1.17	1.12	1.05	1.08
3.250	1.08	1.19	1.31	1.39	1.38	1.31	1.17	1.07	1.00	1.03
2.417	0.90	1.00	1.14	1.28	1.24	1.16	1.06	0.93	0.85	0.86
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
0.77	0.31	1.39	0.403	0.223

Luminance with new lamp [cd/m²]

11.583	0.49	0.51	0.51	0.53	0.53	0.51	0.48	0.46	0.47	0.48
10.750	0.61	0.61	0.61	0.62	0.62	0.60	0.56	0.54	0.55	0.59
9.917	0.71	0.73	0.72	0.72	0.71	0.69	0.66	0.64	0.66	0.69
9.083	0.81	0.84	0.84	0.86	0.83	0.82	0.78	0.76	0.77	0.79
8.250	0.92	0.95	0.95	0.97	0.99	0.95	0.90	0.88	0.87	0.89
7.417	1.05	1.08	1.10	1.10	1.10	1.06	1.06	1.02	0.99	1.02
6.583	1.17	1.22	1.27	1.24	1.21	1.17	1.18	1.17	1.11	1.13
5.750	1.33	1.37	1.44	1.38	1.34	1.27	1.27	1.27	1.21	1.26
4.917	1.59	1.67	1.79	1.72	1.66	1.60	1.52	1.50	1.41	1.47
4.083	1.72	1.85	2.02	2.01	1.94	1.86	1.74	1.67	1.56	1.61
3.250	1.61	1.78	1.96	2.07	2.05	1.95	1.75	1.59	1.49	1.53
2.417	1.34	1.49	1.69	1.91	1.85	1.72	1.59	1.39	1.27	1.28
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.15	0.46	2.07	0.403	0.223

Observer 3

Luminance with dry roadway [cd/m²]

11.583	0.34	0.35	0.35	0.36	0.37	0.35	0.33	0.32	0.32	0.33
10.750	0.42	0.42	0.42	0.43	0.43	0.42	0.39	0.38	0.38	0.41
9.917	0.49	0.51	0.50	0.51	0.50	0.49	0.46	0.44	0.46	0.48
9.083	0.57	0.59	0.59	0.60	0.59	0.57	0.55	0.53	0.53	0.55
8.250	0.66	0.68	0.69	0.69	0.70	0.67	0.64	0.61	0.62	0.63
7.417	0.76	0.79	0.80	0.80	0.79	0.76	0.76	0.73	0.70	0.72
6.583	0.88	0.90	0.93	0.91	0.87	0.83	0.84	0.84	0.80	0.83
5.750	0.99	1.03	1.06	1.01	0.97	0.93	0.91	0.91	0.87	0.91
4.917	1.12	1.19	1.27	1.21	1.18	1.12	1.06	1.04	0.99	1.04
4.083	1.13	1.23	1.34	1.34	1.29	1.24	1.16	1.10	1.03	1.07
3.250	0.99	1.10	1.23	1.32	1.32	1.26	1.13	1.02	0.95	0.97
2.417	0.81	0.90	1.04	1.19	1.16	1.09	1.02	0.90	0.81	0.80
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
0.79	0.32	1.34	0.402	0.236

Luminance with new lamp [cd/m²]

11.583	0.51	0.52	0.53	0.54	0.55	0.52	0.49	0.47	0.48	0.50
10.750	0.63	0.63	0.63	0.64	0.64	0.62	0.58	0.56	0.57	0.61
9.917	0.74	0.77	0.75	0.76	0.75	0.72	0.68	0.66	0.69	0.71
9.083	0.85	0.88	0.88	0.90	0.89	0.86	0.82	0.79	0.79	0.82
8.250	0.98	1.02	1.03	1.03	1.05	1.00	0.95	0.92	0.92	0.95
7.417	1.13	1.18	1.20	1.20	1.17	1.13	1.13	1.09	1.05	1.07
6.583	1.32	1.34	1.39	1.35	1.29	1.24	1.25	1.25	1.19	1.23
5.750	1.48	1.53	1.59	1.51	1.45	1.38	1.36	1.35	1.30	1.35
4.917	1.68	1.78	1.89	1.80	1.75	1.66	1.58	1.55	1.47	1.55
4.083	1.69	1.83	2.00	2.00	1.92	1.85	1.72	1.65	1.54	1.59
3.250	1.48	1.65	1.83	1.97	1.98	1.89	1.69	1.53	1.42	1.45
2.417	1.21	1.34	1.55	1.77	1.73	1.63	1.52	1.34	1.21	1.20
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.18	0.47	2.00	0.402	0.236

Observer 4

Luminance with dry roadway [cd/m²]

11.583	0.35	0.37	0.37	0.38	0.38	0.36	0.34	0.33	0.33	0.34
10.750	0.44	0.44	0.44	0.44	0.45	0.43	0.40	0.39	0.40	0.42
9.917	0.52	0.54	0.53	0.53	0.53	0.51	0.48	0.46	0.48	0.50
9.083	0.61	0.64	0.63	0.65	0.64	0.60	0.58	0.56	0.56	0.58
8.250	0.72	0.74	0.75	0.75	0.76	0.72	0.69	0.66	0.65	0.67
7.417	0.84	0.87	0.89	0.87	0.85	0.81	0.81	0.79	0.76	0.78
6.583	0.99	1.01	1.03	0.99	0.95	0.90	0.90	0.90	0.86	0.90
5.750	1.07	1.10	1.15	1.08	1.03	0.99	0.95	0.95	0.93	0.97
4.917	1.12	1.20	1.29	1.24	1.19	1.13	1.07	1.05	0.99	1.04
4.083	1.05	1.15	1.28	1.30	1.27	1.21	1.13	1.07	0.99	1.02
3.250	0.91	1.00	1.13	1.23	1.25	1.21	1.09	0.99	0.91	0.91
2.417	0.75	0.82	0.96	1.11	1.09	1.03	0.98	0.87	0.77	0.75
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
0.80	0.33	1.30	0.404	0.251

Luminance with new lamp [cd/m²]

11.583	0.53	0.55	0.54	0.56	0.57	0.54	0.51	0.49	0.49	0.51
10.750	0.66	0.66	0.65	0.66	0.67	0.64	0.60	0.58	0.59	0.63
9.917	0.78	0.80	0.79	0.79	0.79	0.77	0.72	0.69	0.71	0.74
9.083	0.91	0.95	0.94	0.96	0.95	0.90	0.87	0.83	0.84	0.86
8.250	1.07	1.11	1.12	1.11	1.13	1.07	1.03	0.98	0.97	1.00
7.417	1.25	1.29	1.33	1.30	1.26	1.21	1.21	1.18	1.14	1.17
6.583	1.47	1.51	1.54	1.47	1.41	1.34	1.34	1.34	1.28	1.34
5.750	1.59	1.65	1.71	1.61	1.54	1.48	1.42	1.43	1.39	1.44
4.917	1.67	1.79	1.92	1.85	1.77	1.69	1.59	1.56	1.48	1.56
4.083	1.57	1.72	1.90	1.93	1.89	1.81	1.68	1.59	1.48	1.53
3.250	1.36	1.50	1.69	1.83	1.87	1.81	1.63	1.47	1.36	1.36
2.417	1.12	1.23	1.43	1.66	1.62	1.53	1.46	1.29	1.15	1.12
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 12 Points

Lm [cd/m ²]	Lmin [cd/m ²]	Lmax [cd/m ²]	g1	g2
1.20	0.49	1.93	0.404	0.251

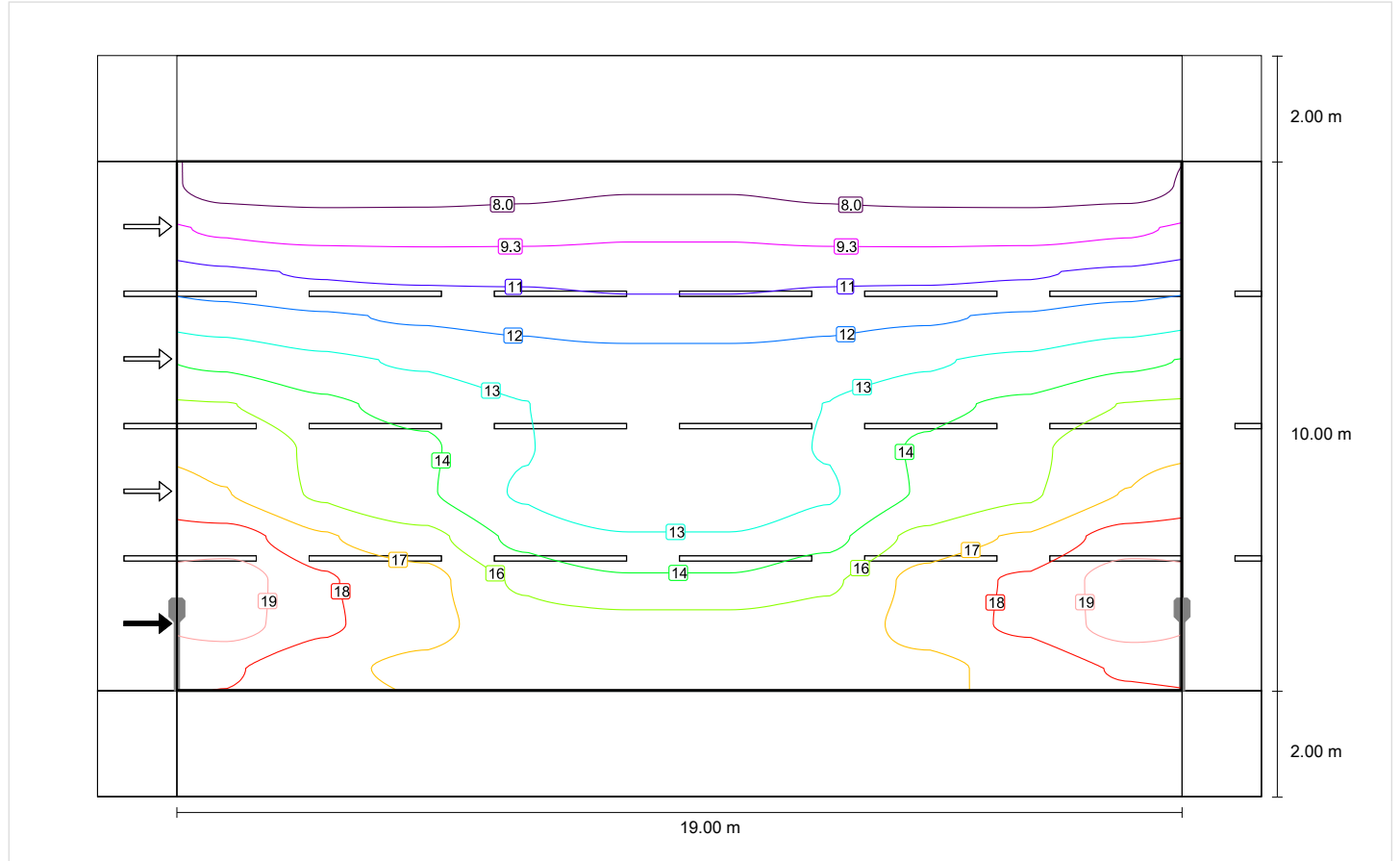
道路 1 (M4)

Light loss factor: 0.67
Grid: 10 x 12 Points

Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 0.75	✓ 0.40	✓ 0.71	✓ 5	* 0.58

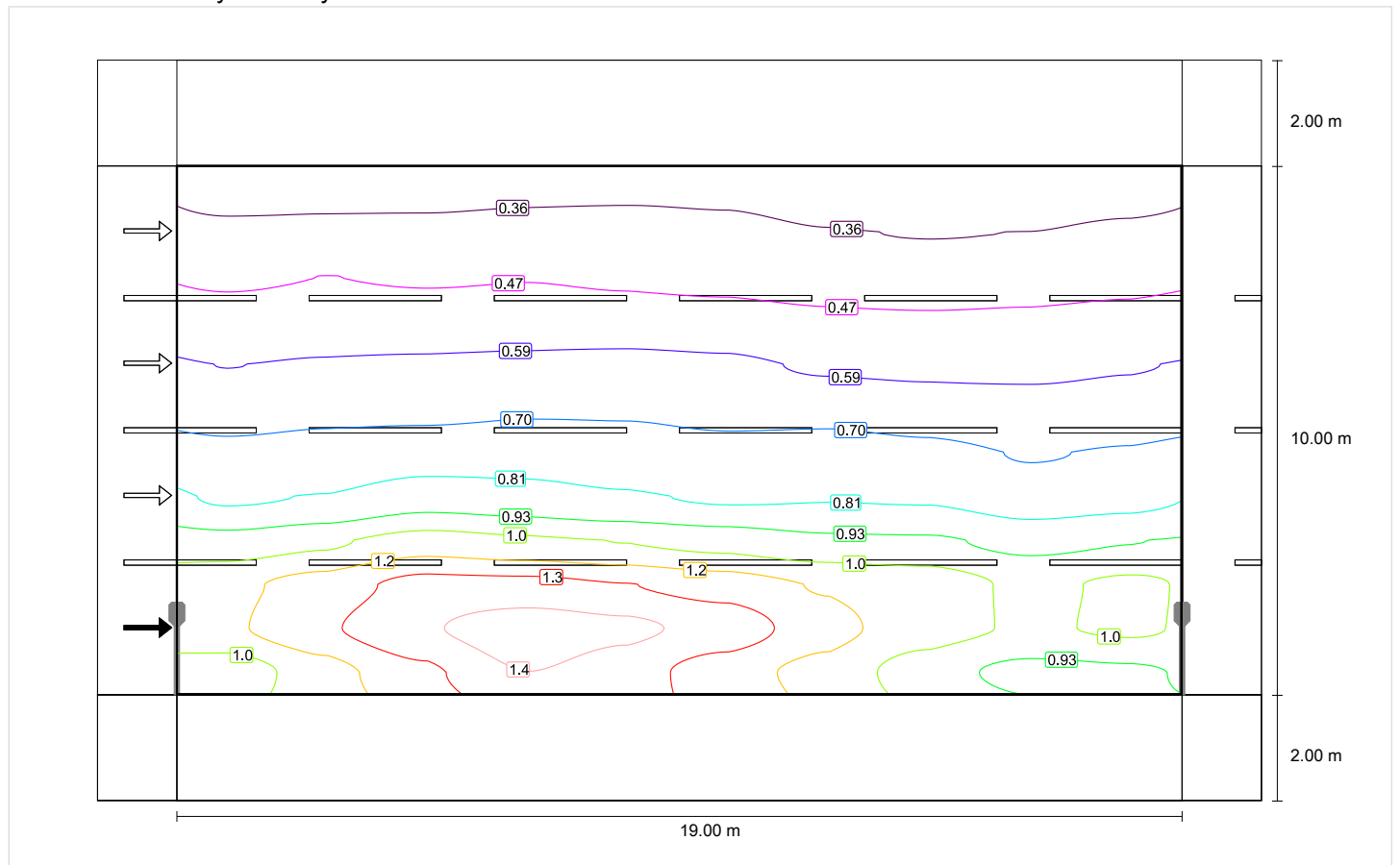
* Informative, not part of the valuation

Horizontal illuminance

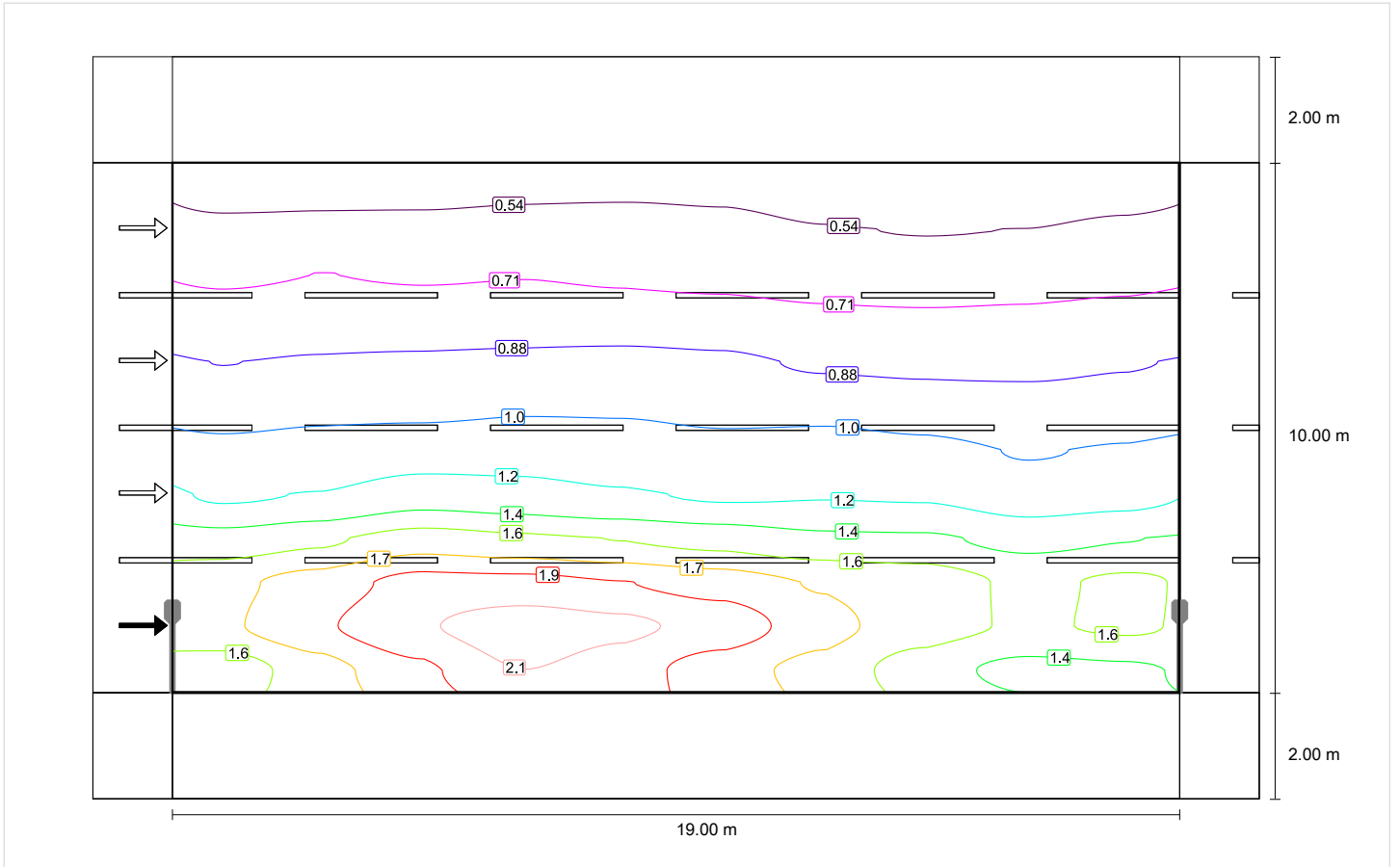


Observer 1

Luminance with dry roadway

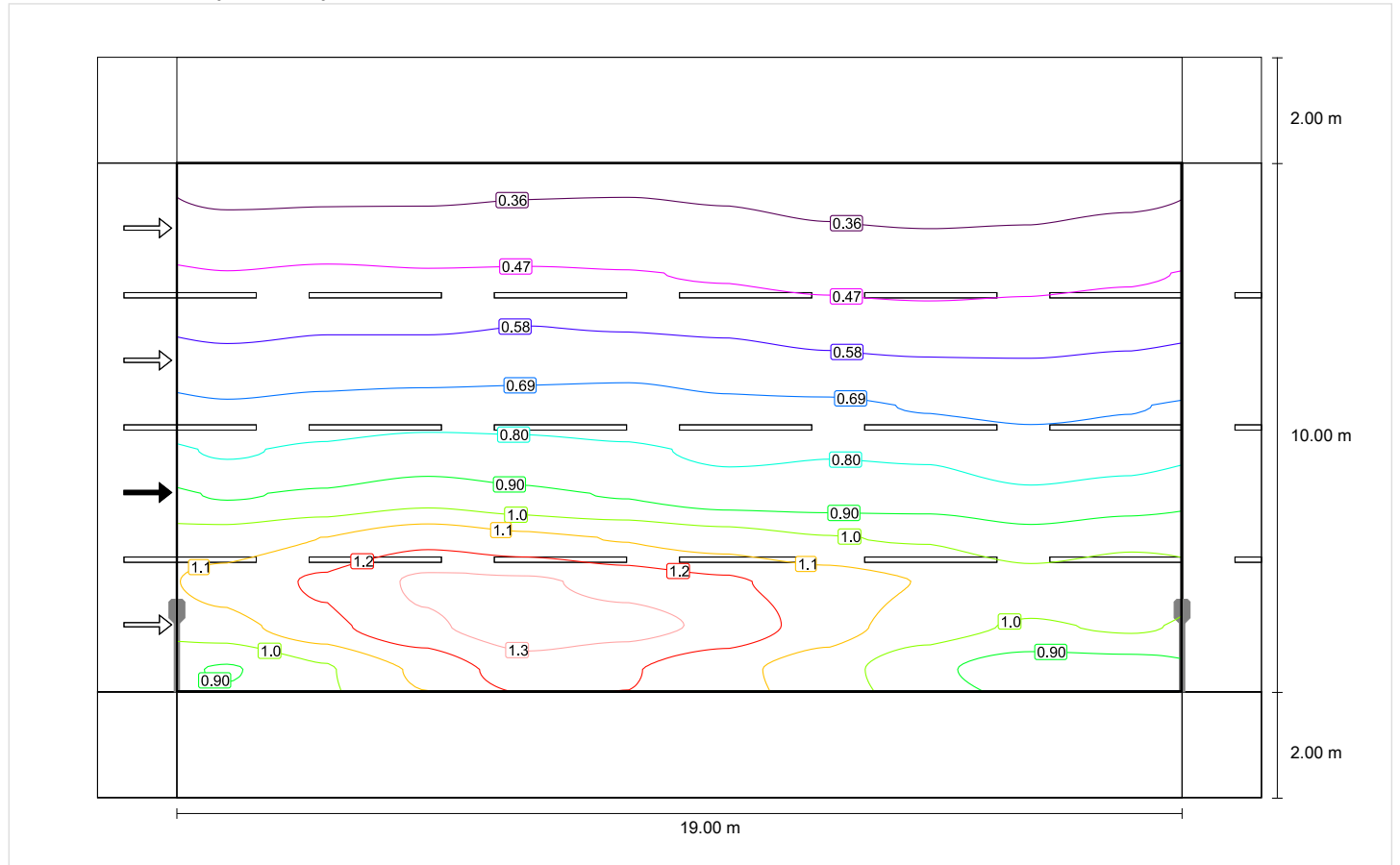


Luminance with new lamp

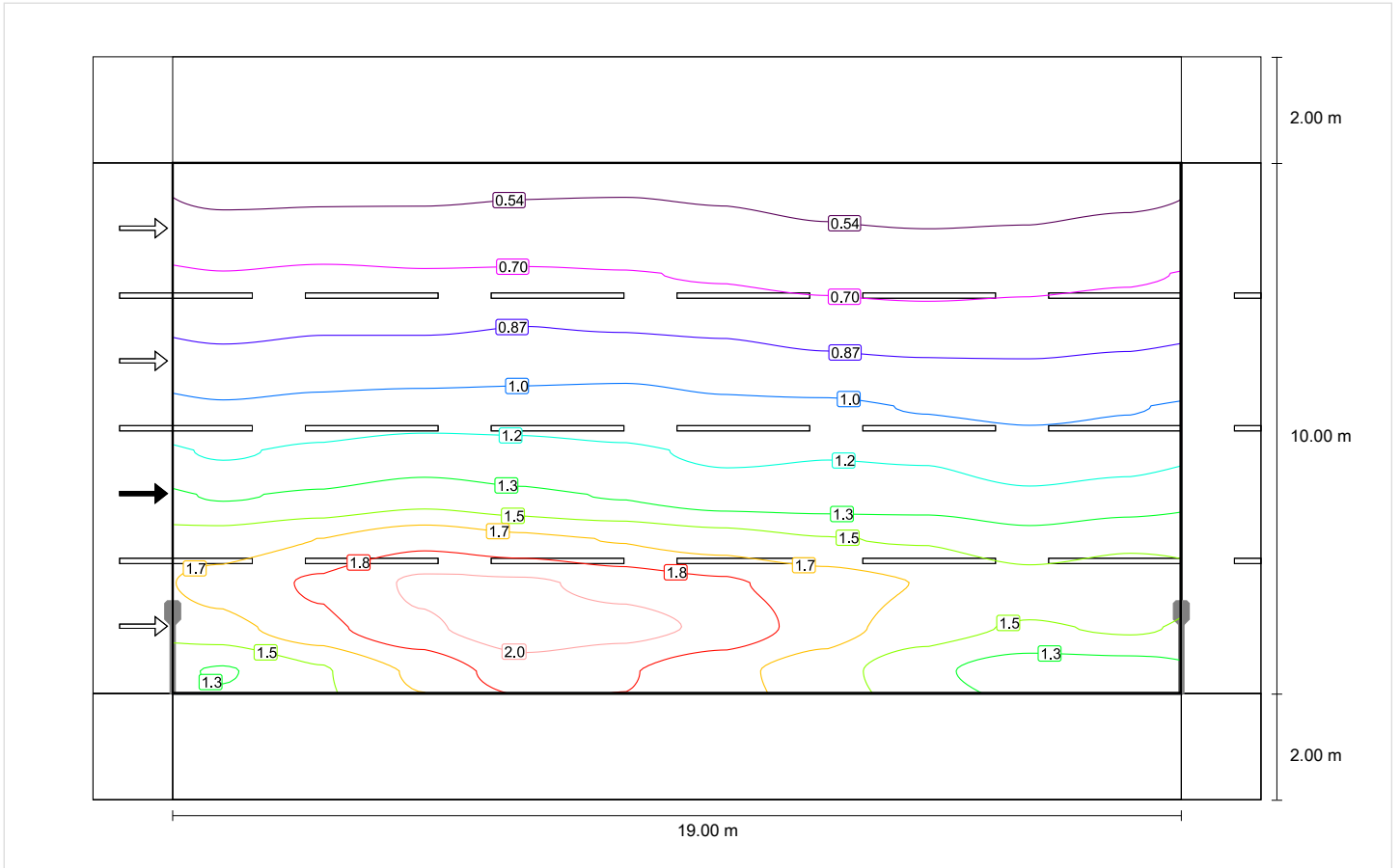


Observer 2

Luminance with dry roadway

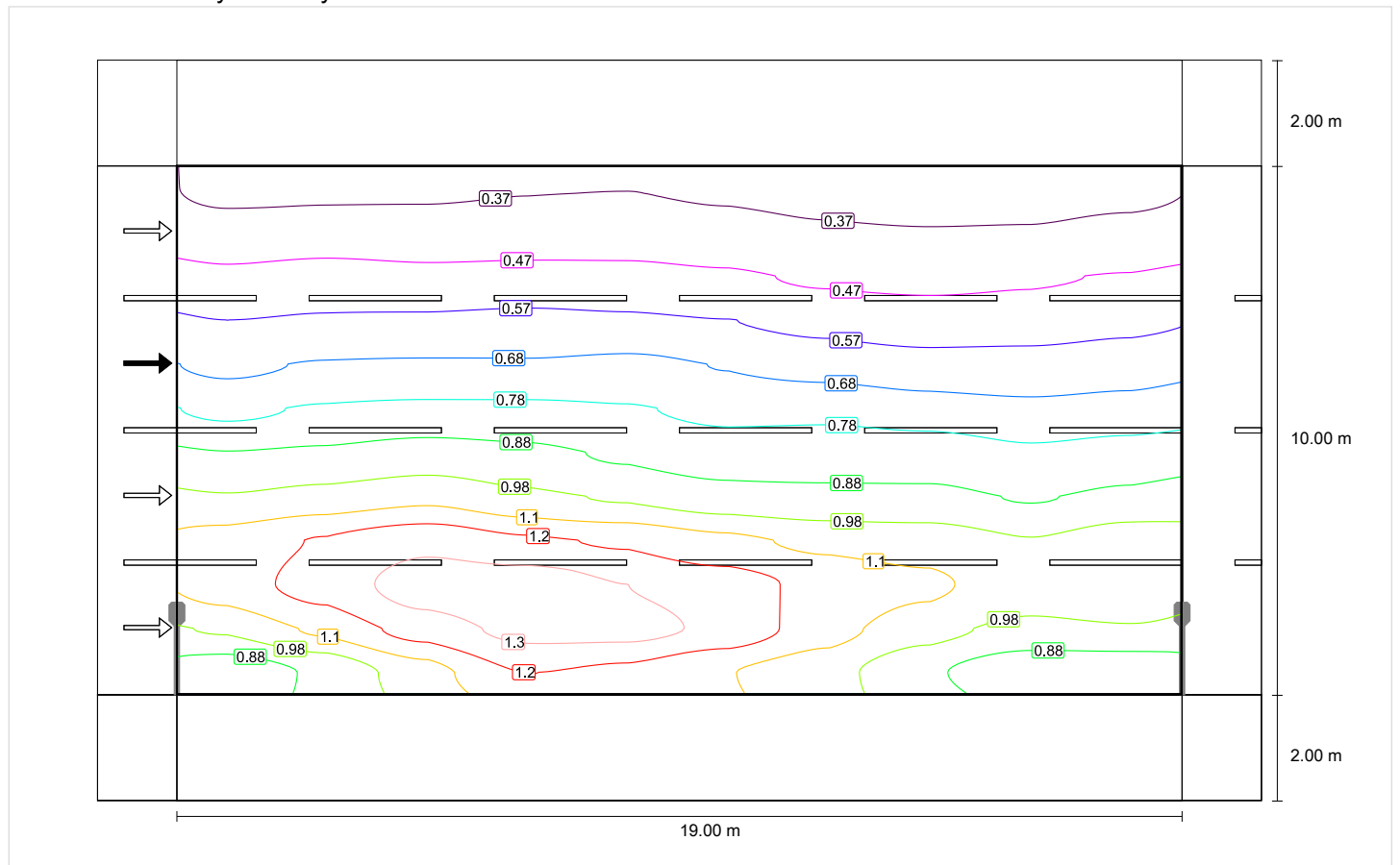


Luminance with new lamp

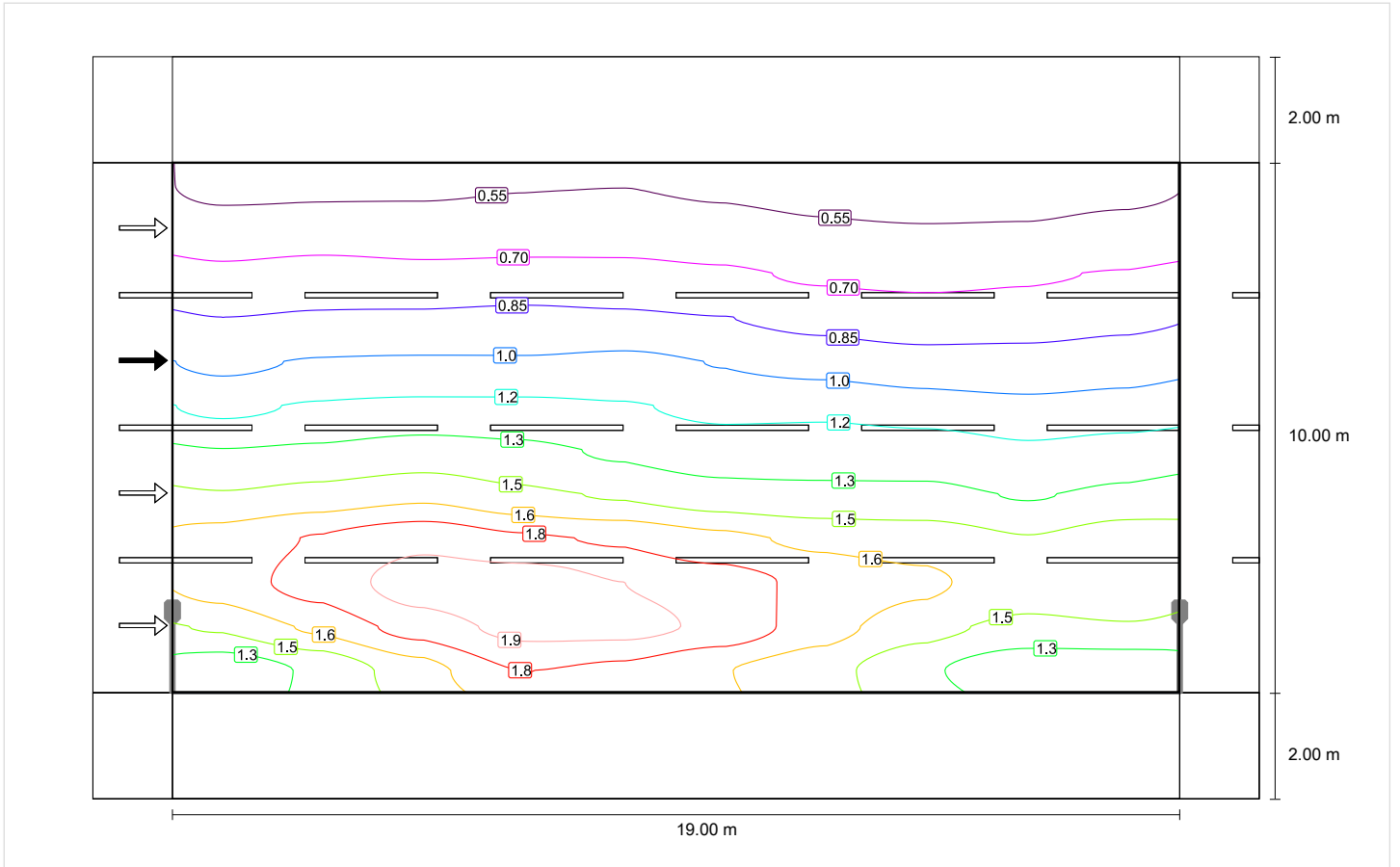


Observer 3

Luminance with dry roadway

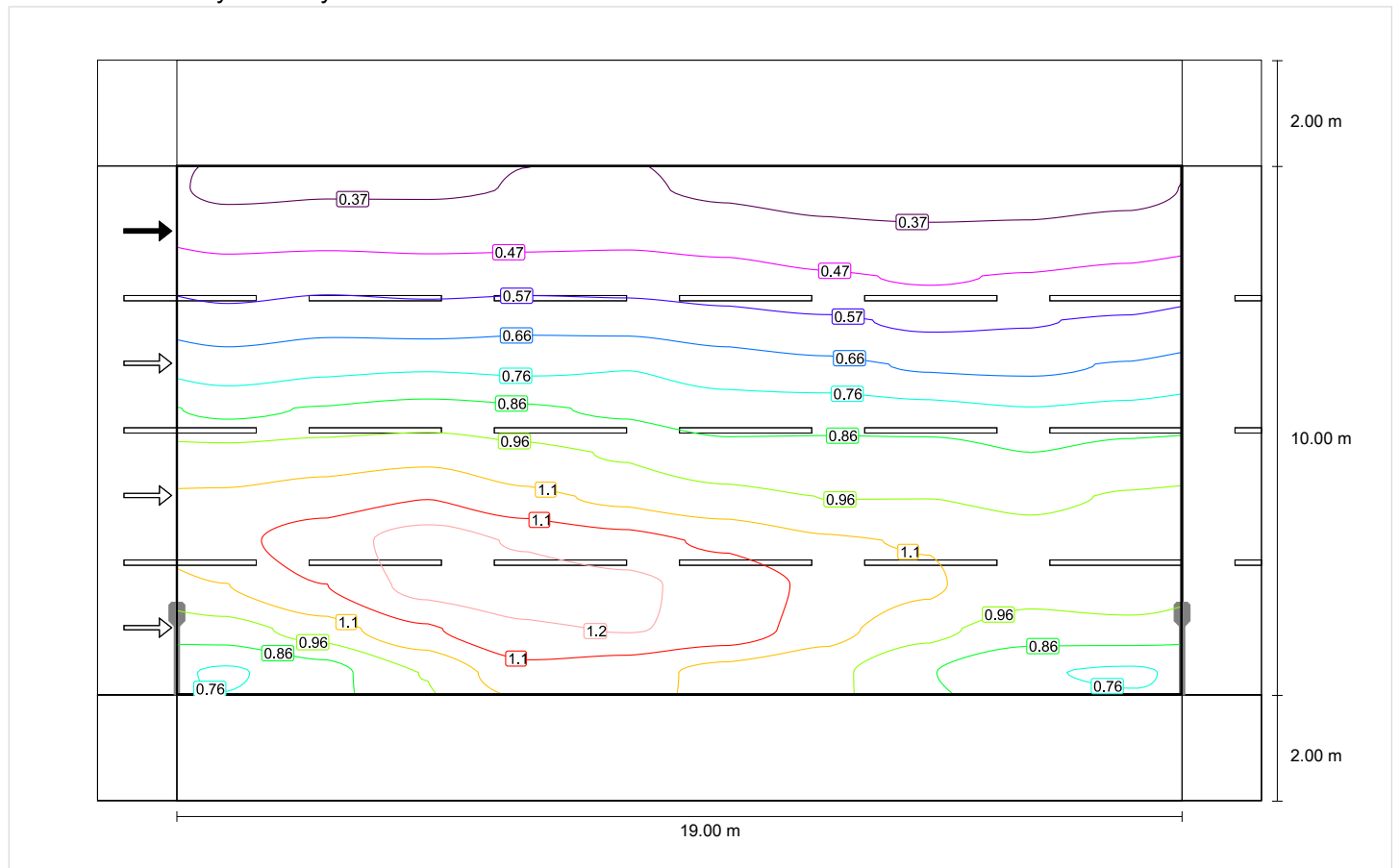


Luminance with new lamp

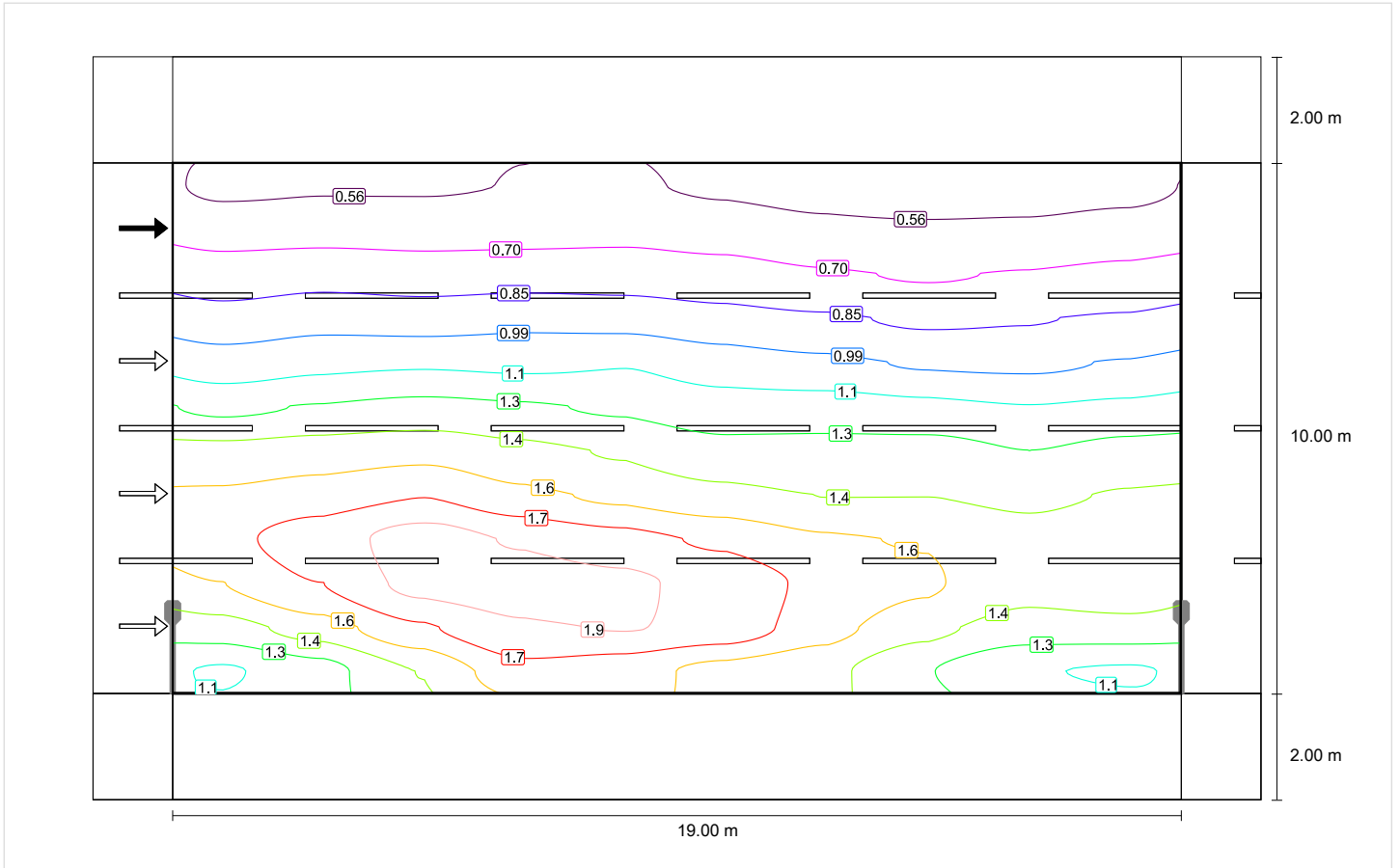


Observer 4

Luminance with dry roadway



Luminance with new lamp



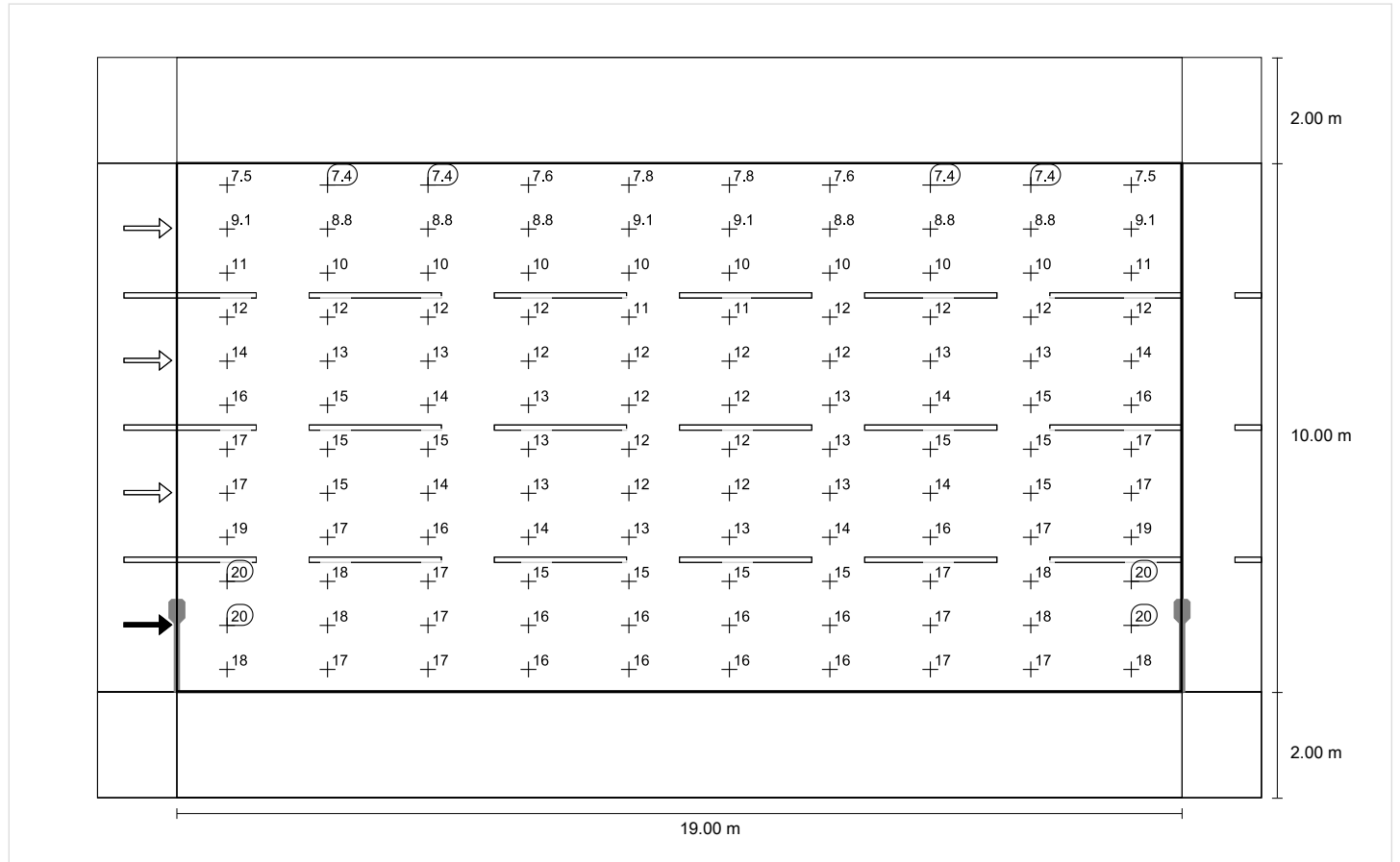
道路 1 (M4)

Light loss factor: 0.67
Grid: 10 x 12 Points

Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 0.75	✓ 0.40	✓ 0.71	✓ 5	* 0.58

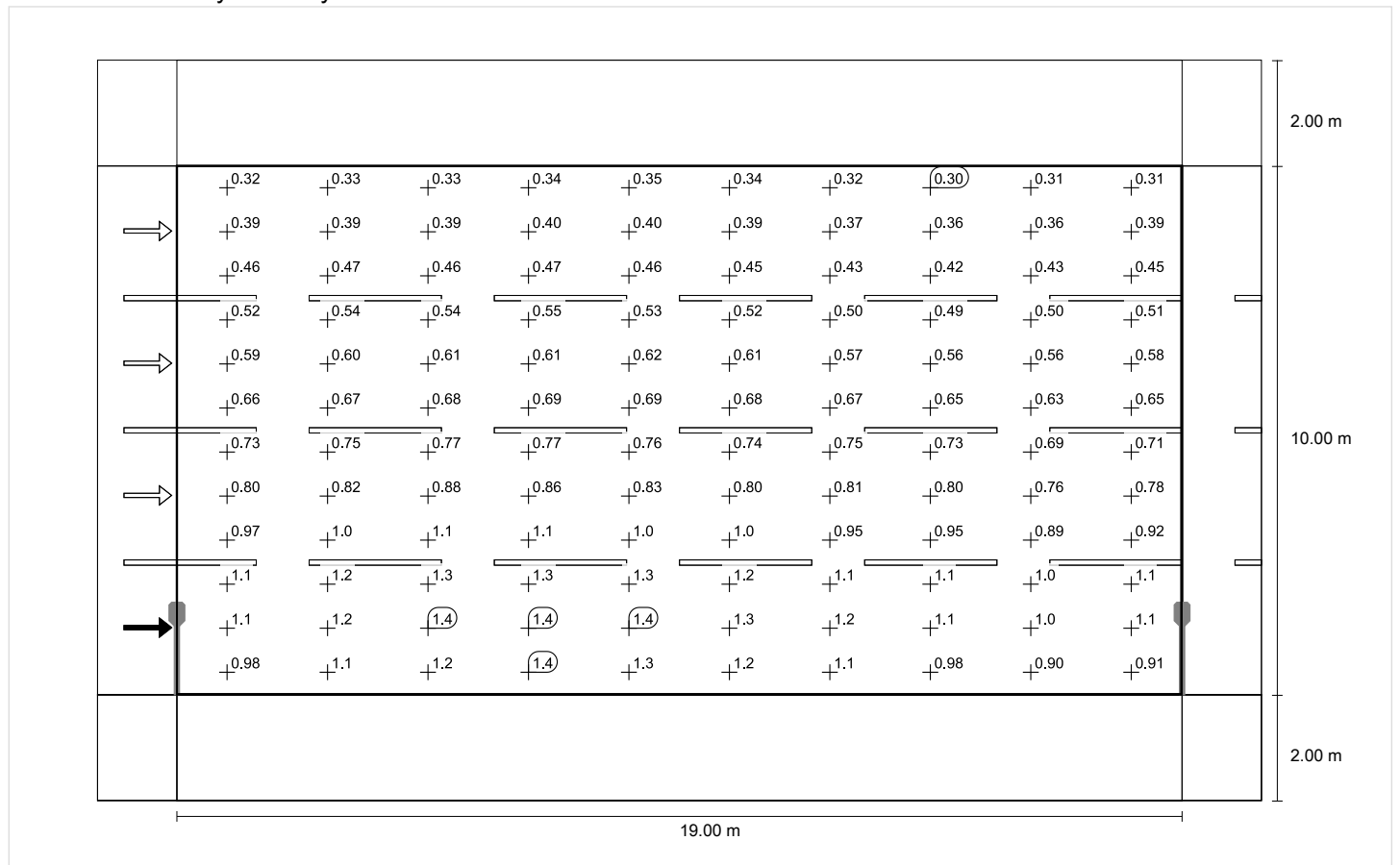
* Informative, not part of the valuation

Horizontal illuminance

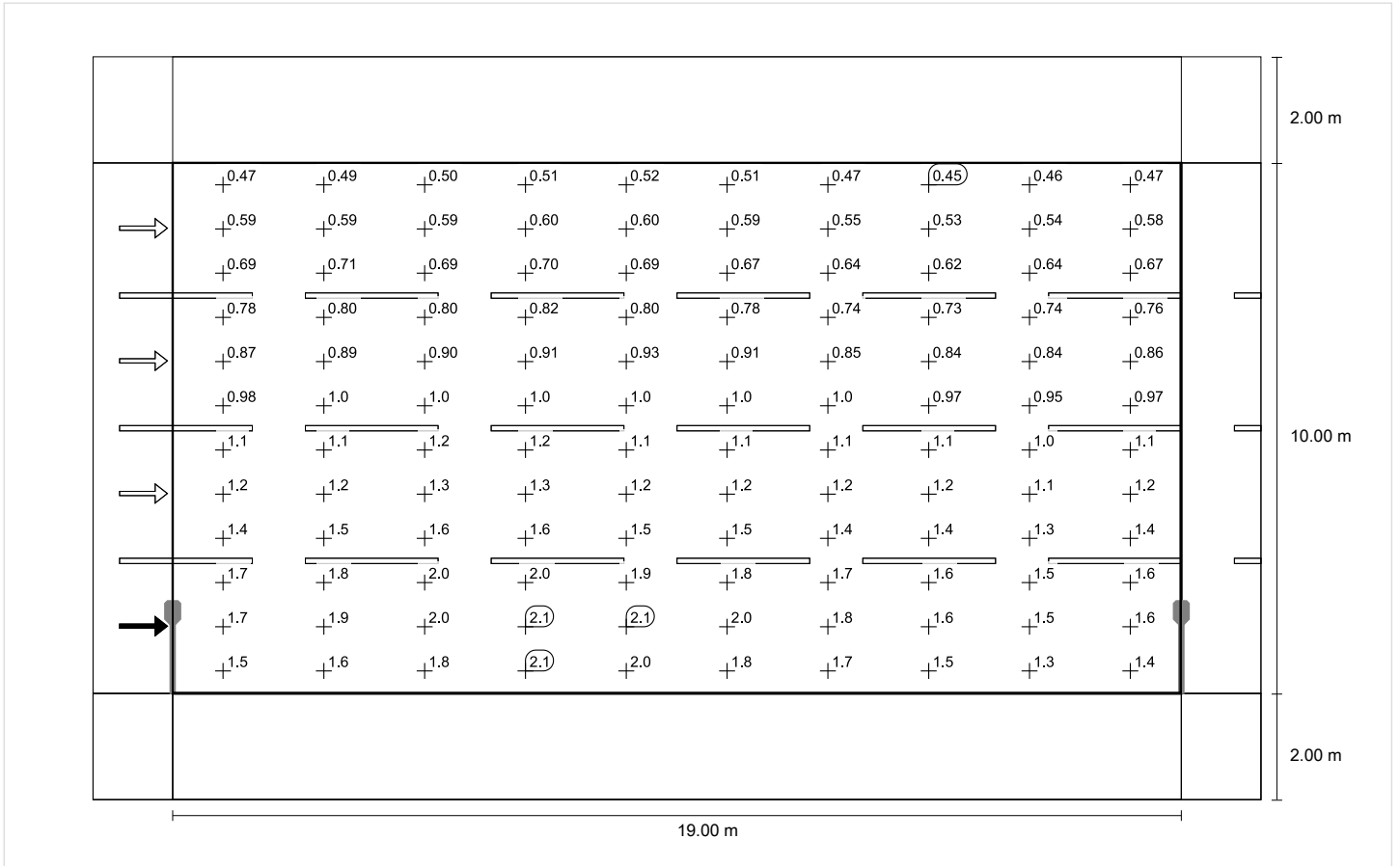


Observer 1

Luminance with dry roadway

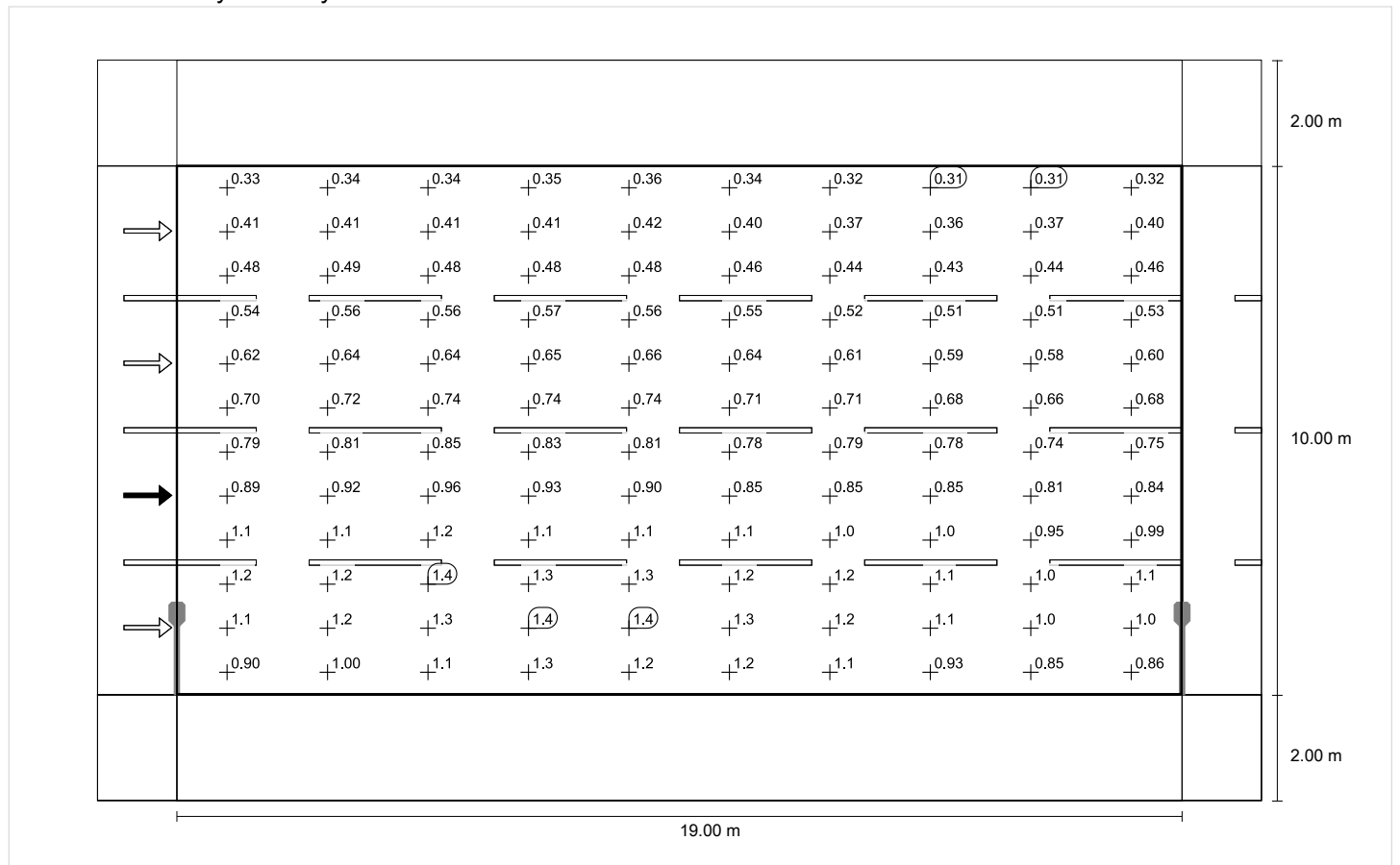


Luminance with new lamp

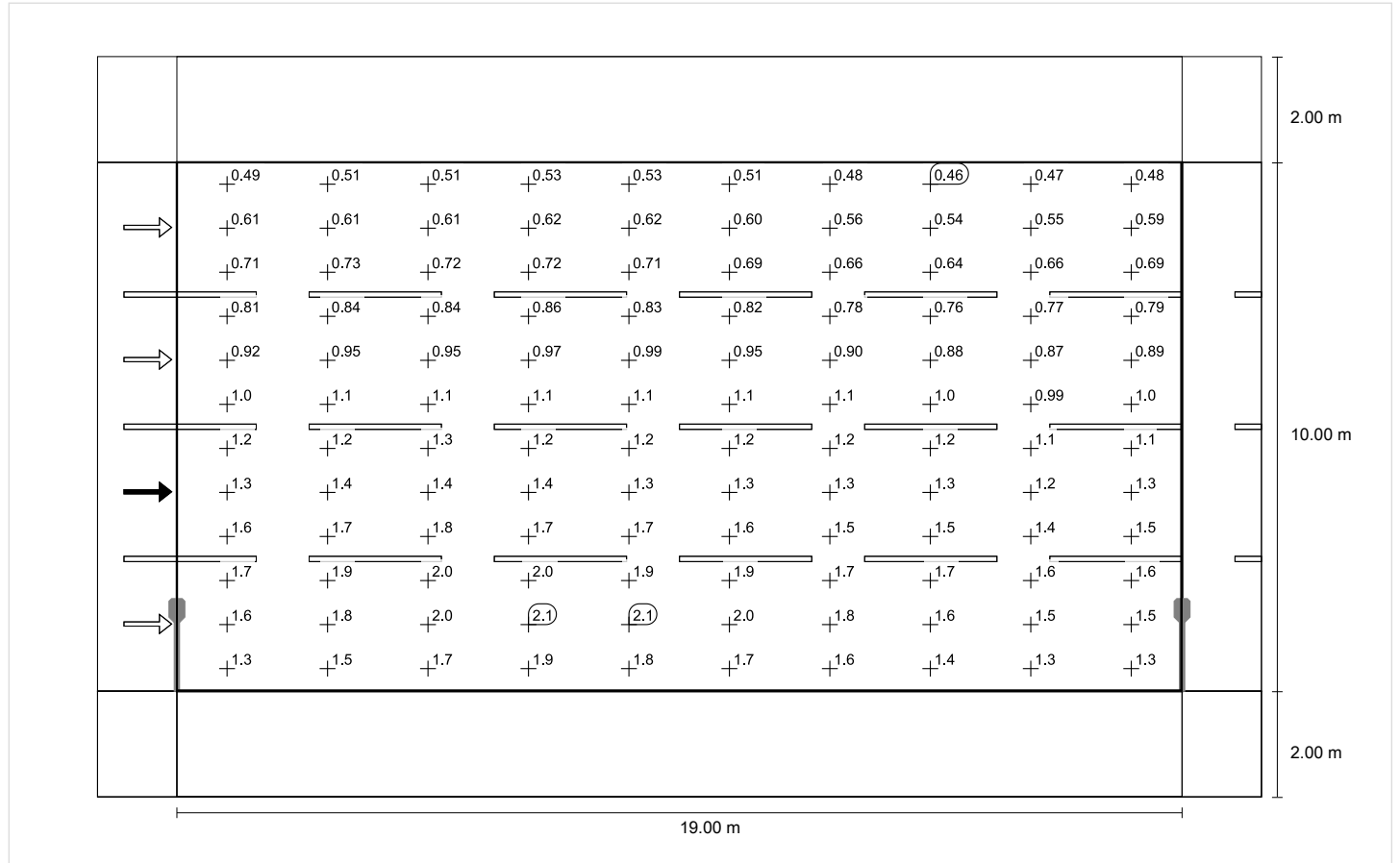


Observer 2

Luminance with dry roadway

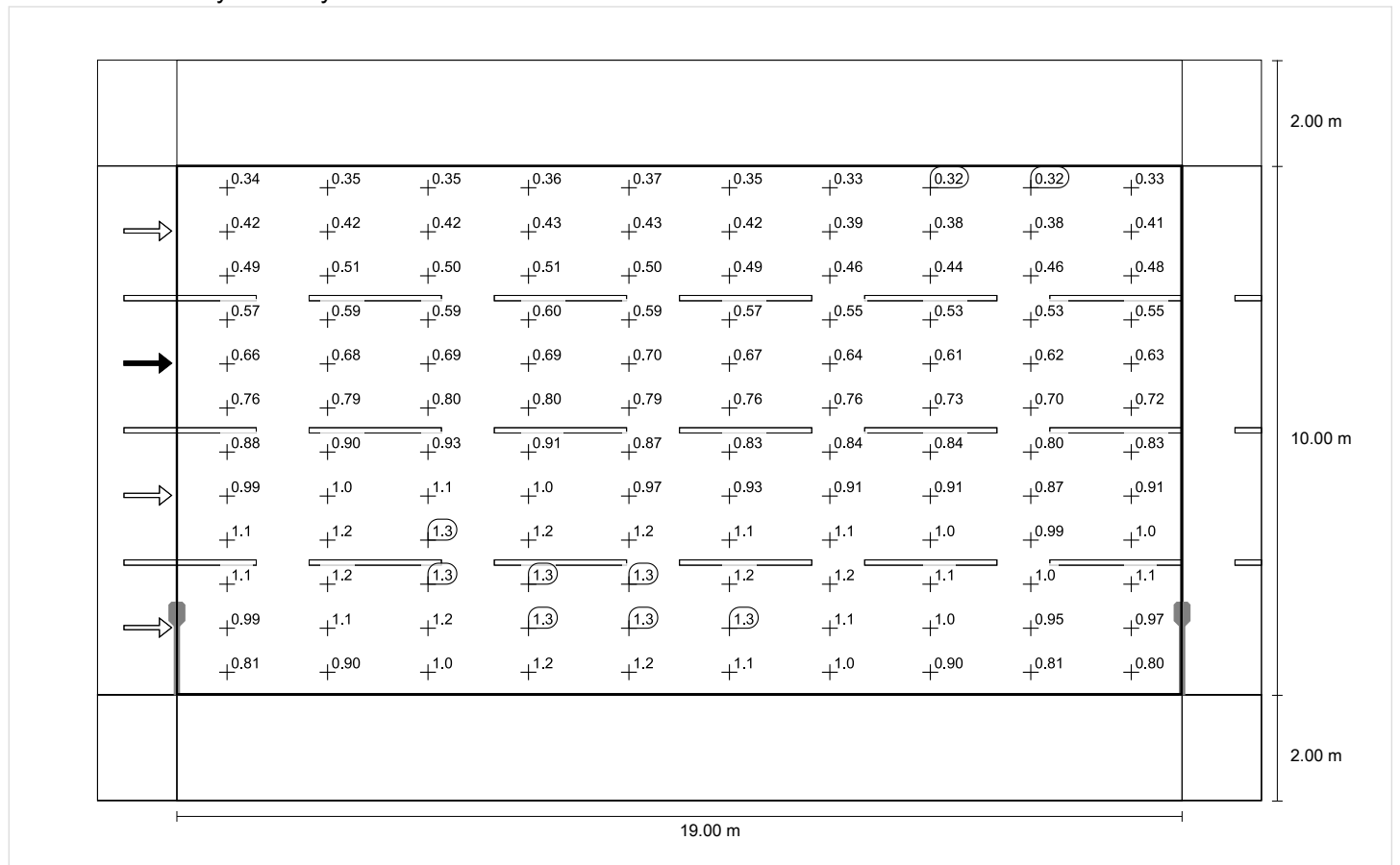


Luminance with new lamp

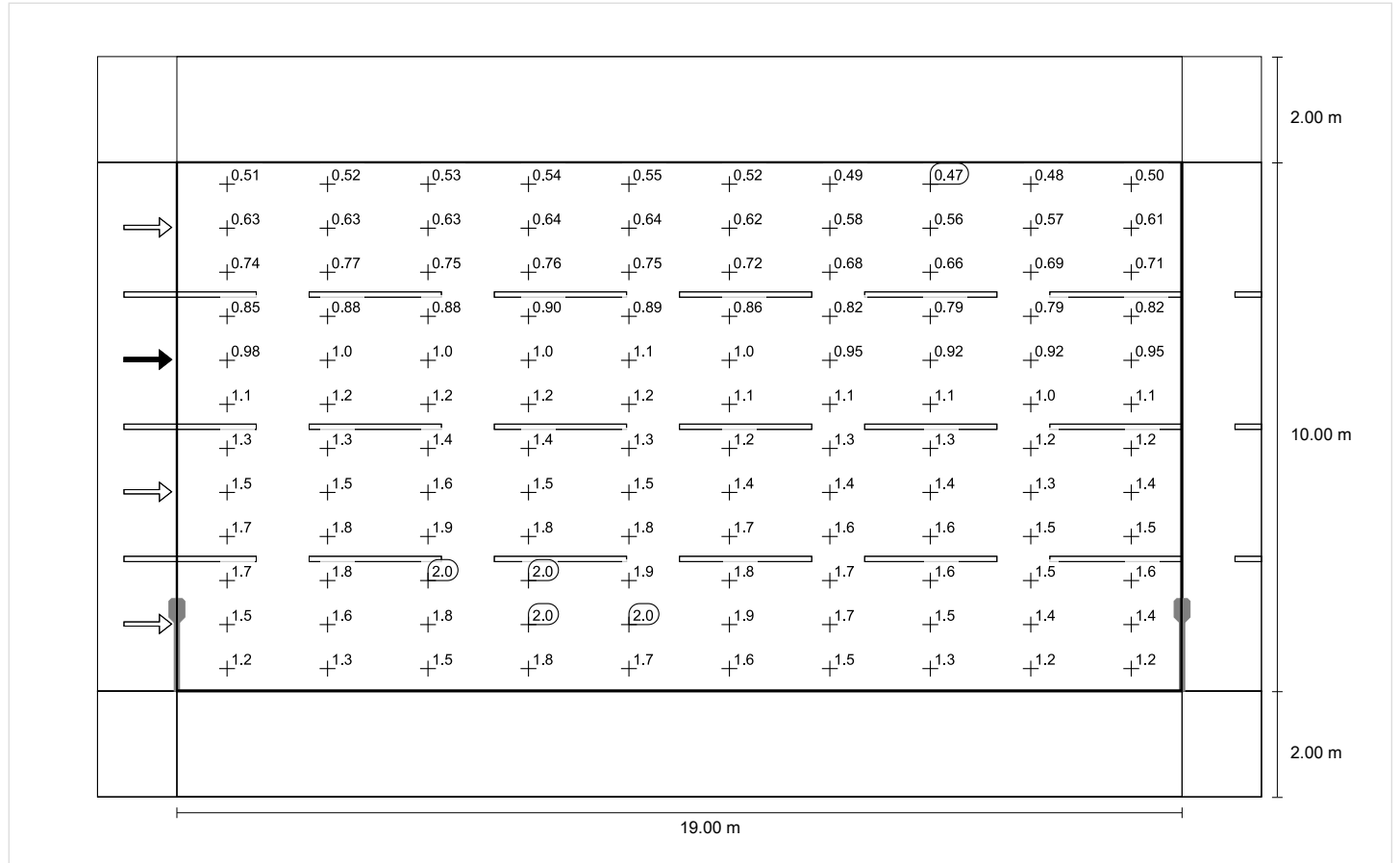


Observer 3

Luminance with dry roadway

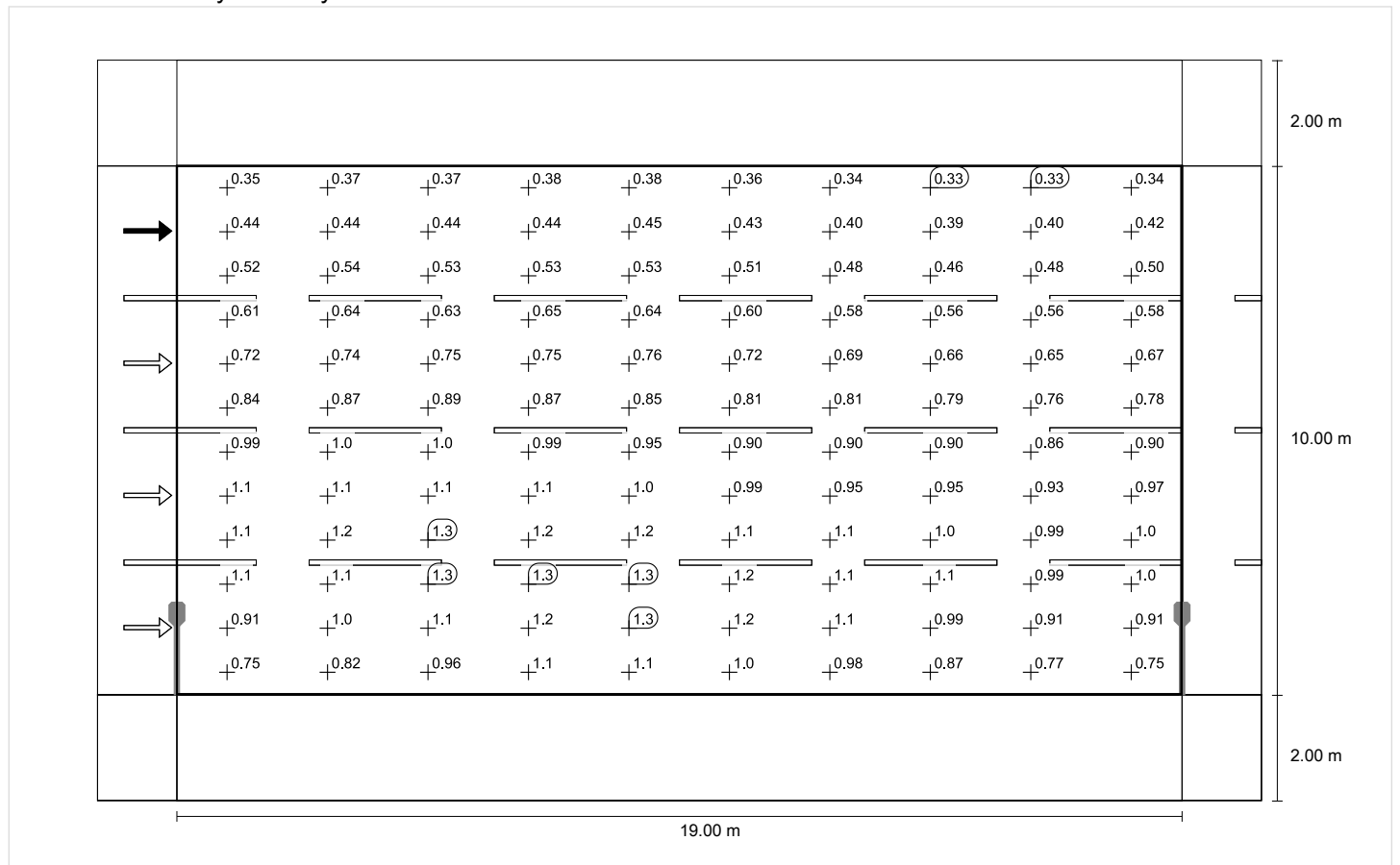


Luminance with new lamp

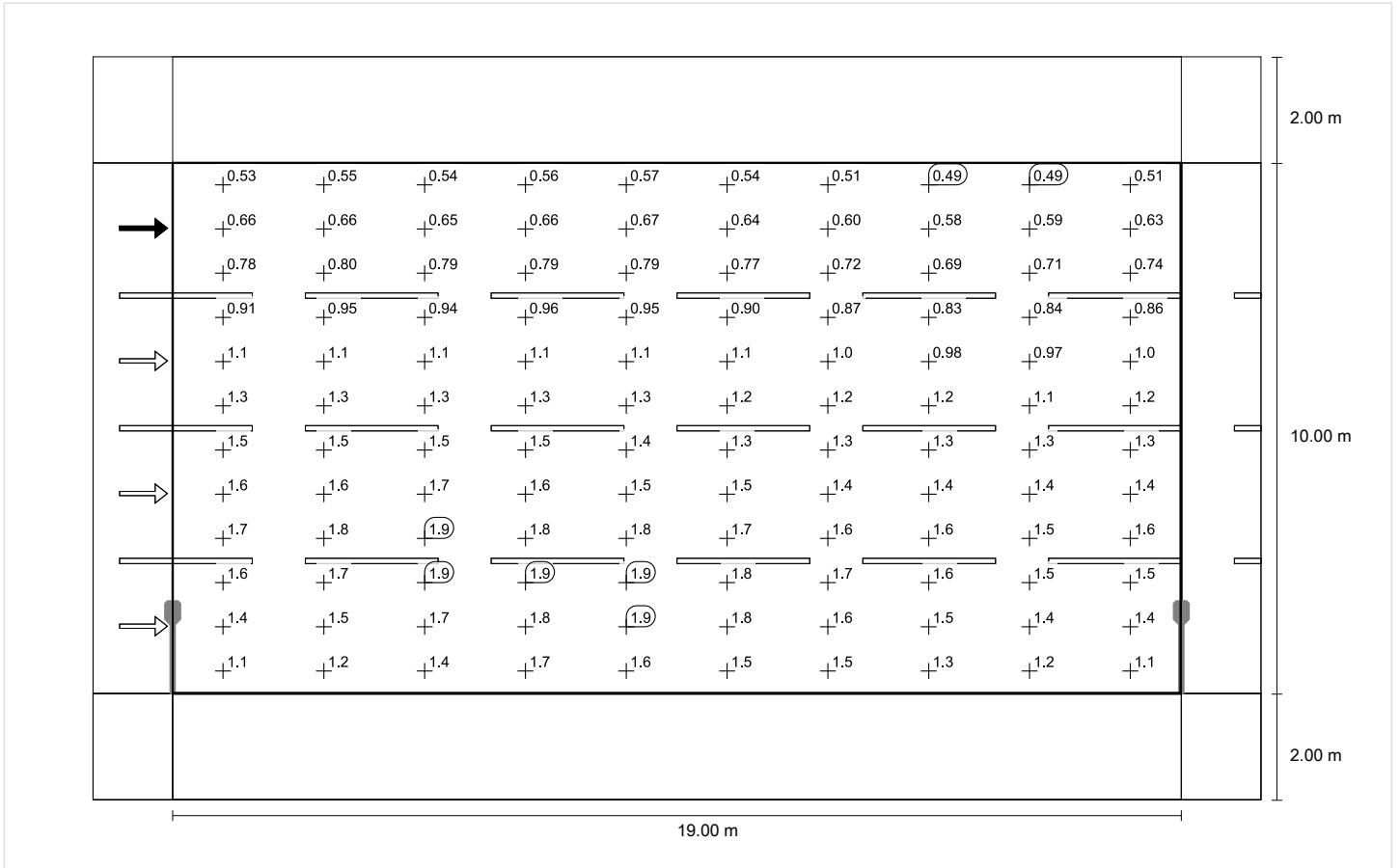


Observer 4

Luminance with dry roadway



Luminance with new lamp



人行道 1 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.95	* 13.01

* Informative, not part of the valuation

人行道 1 (P4)

Horizontal illuminance [lx]

1.667	15.7	15.3	15.4	15.5	14.7	14.7	15.5	15.4	15.3	15.7
1.000	12.8	12.7	13.1	13.4	13.3	13.3	13.4	13.1	12.7	12.8
0.333	9.97	9.95	10.6	11.0	11.4	11.4	11.0	10.6	9.95	9.97
m	0.950	2.850	4.750	6.650	8.550	10.450	12.350	14.250	16.150	18.050

Grid: 10 x 3 Points

Em [lx]	Emin [lx]	Emax [lx]	g1	g2
13.0	9.95	15.7	0.765	0.632

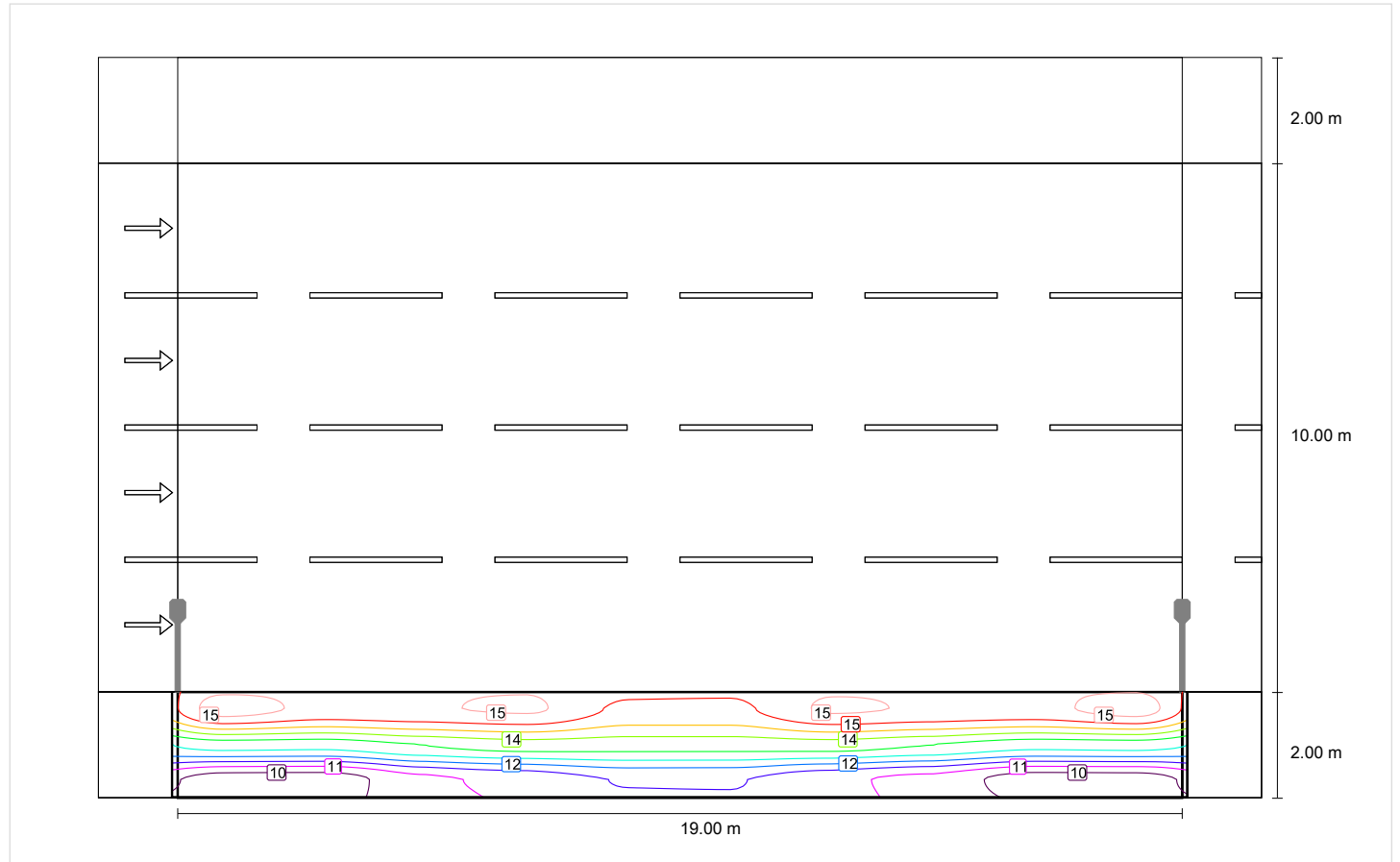
人行道 1 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.95	* 13.01

* Informative, not part of the valuation

Horizontal illuminance



人行道 1 (P4)

Light loss factor: 0.67
Grid: 10 x 3 Points

Emin [lx] ≥ 1.00	Em [lx]
✓ 9.95	* 13.01

* Informative, not part of the valuation

Horizontal illuminance

