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Rūpniecības iela, Ventspils

Date:
09/06/2019

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Rūpniecības ielas seguma atjaunošana posmā no dzelzceļa pārbrauktuves (ieskaitot) pie Durbes ielas līdz dzelzceļa pārbrauktuvei pie apvedtilta, Ventspilī

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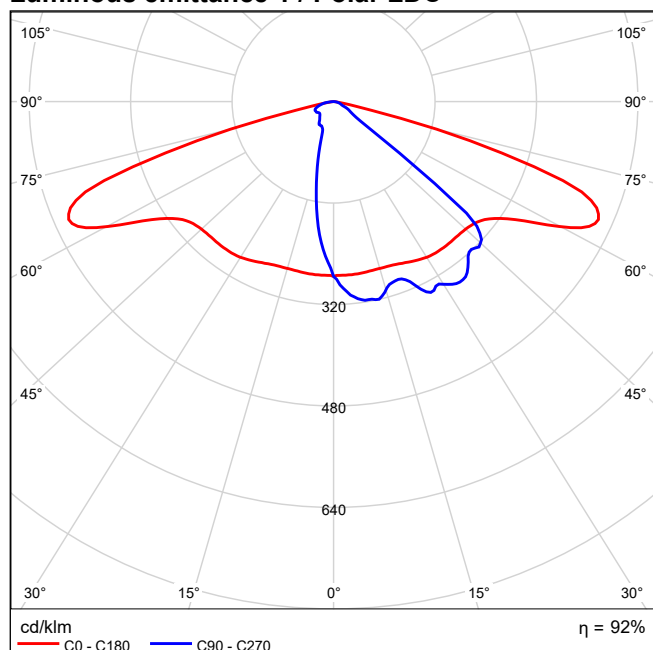
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Cree Europe XSP-E-210-E-Q XSP1 HO Field Adjustable 210 1x5 MDA-SA_30K 65W



Light output ratio: 92.06%
Lamp luminous flux: 8751 lm
Luminaire luminous flux: 8056 lm
Power: 65.0 W
Luminous efficacy: 123.9 lm/W

Luminous emittance 1 / Polar LDC



XSP1 High Output

Designed from the ground up as a totally optimized LED street and area lighting system, the XSP High Output Series delivers incredible efficiency without sacrificing application performance. Beyond substantial energy savings and reduced maintenance, Cree achieves greater optical control with our NanoOptic® Precision Delivery Grid™ optic when compared to traditional cobra head luminaires.

The XSP High Output Series is the better alternative for traditional street and area lighting with quick payback and improved performance.

FEATURES

- Full cut-off optics (NanoOptic® Precision Delivery Grid™)
- Input Power: E=94W / H=63W
- Lumen output: 4000 – 11500lm
- Efficacy: Up to 155lm/W
- CCT: 3000K, 4000K, 5700K (CRI Standard min.70, CRI 80 @3000K on request for MOQ)
- Initial Colour Consistency: 4 MacAdam steps
- Input Voltage: 220-240V
- Driver equipped with temperature sensor to preserve optimal working conditions
- Power factor: Up to > 0.99 at full load
- Lifetime: L80F10 Up to >180Khrs Ta=25°C (>180Khrs L80 IESNA TM-21)
- Surge protection: 10kV CM/DM surge immunity according to EN 61000-4-5 and EN 61547 (Class I SPD equipped with LED signal)
- Fuse option available
- Operative temperature: -40°C up to +50°C
- Insulation class: Class I – Class II
- Enclosure rated IP66 per IEC 60529
- Impact resistance IK08
- Cable type H07RN-F (Cable length Up to 12mt)
- Tool-less entry
- Removable tray
- Control options: Fixed, Field Adjustable Output, Virtual Midnight reprog., DALI, Flux Regulator, Lineswitch, Lumistep, Dynadimmer, Constant Lumen Output
- Nema socket option available
- LED Board equipped with integral ESD and Surge protection
- Fixture assembled without the use of glues, totally dismountable and recyclable.

CONSTRUCTION AND MATERIALS

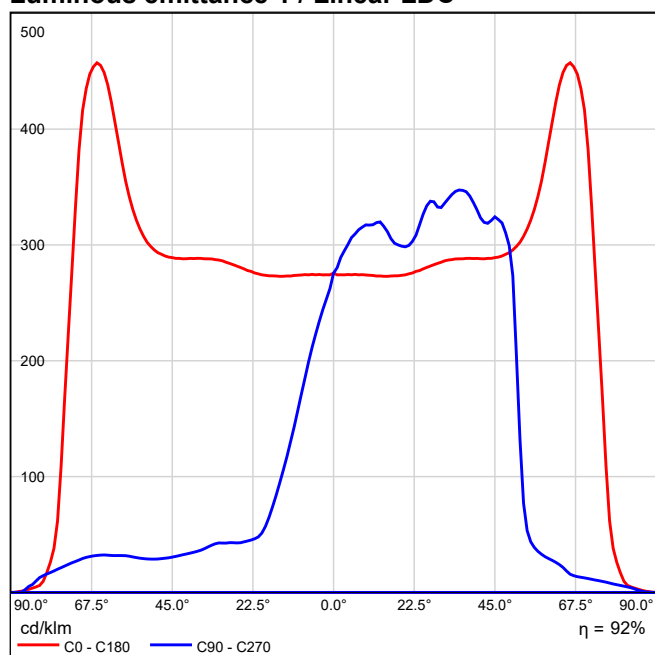
- Die cast, low copper <0,1%, aluminum alloy housing for long weathering and reliability
- Luminaire is designed to mount directly to 76mm or 60mm outer dimension tenons or poles and can be tilted +/- 20°, in steps of 5°
- Luminaire fitter 02 can mount to 60mm OD tenons and fitter 03 to 76mm
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion.

WARRANTY AND CERTIFICATIONS

- Limited Warranty†: Class 1 — 10 years on Colorfast DeltaGuard® finish / 10 years on luminaire
- Class 2 — 10 years on Colorfast DeltaGuard® finish / 5 years on luminaire
- CE mark / CB mark / ENEC mark / RoHs compliant
- UMSUG Charge code (UK Power performance test)
- Risk group exempt in accordance with Standard CEI EN 62471 for photobiological safety (Tested IEC/TR62778)
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Compliant to: EN 60598-1; EN 60598-2-3

† See www.cree-europe.com/en/resources/warranty for warranty

Luminous emittance 1 / Linear LDC



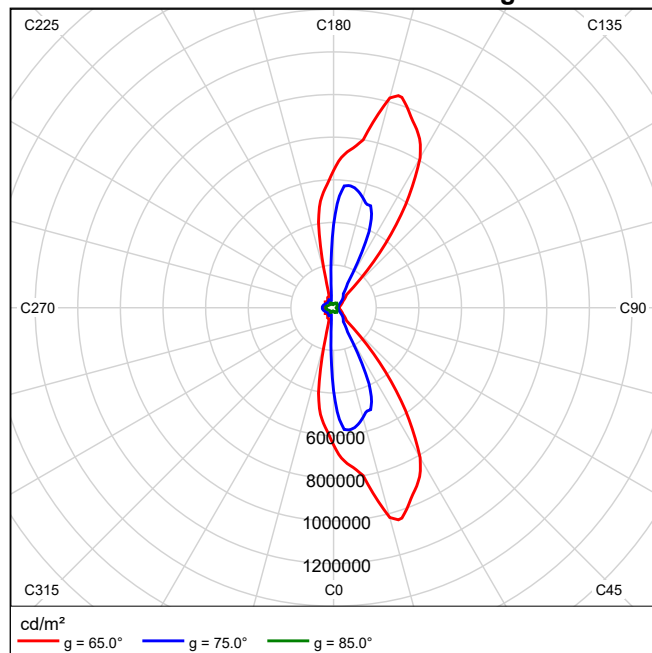
terms

AVAILABLE DISTRIBUTIONS

2LG (Type II Long) Asymmetric optic for street lighting, cycle paths and footpaths
 275 (Type II Short 0.75) Asymmetric optic for street lighting
 210 (Type II Short 1.0) Asymmetric optic for street lighting
 2SH (Type II Short) Asymmetric optic for street lighting
 3SH (Type III Short) Asymmetric optic for street lighting
 3ME (Type III Medium) Asymmetric optic for street lighting and car parks
 4ME (Type IV Medium) Asymmetric optic for street lighting and car parks

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

Luminous emittance 1 / Luminance diagram

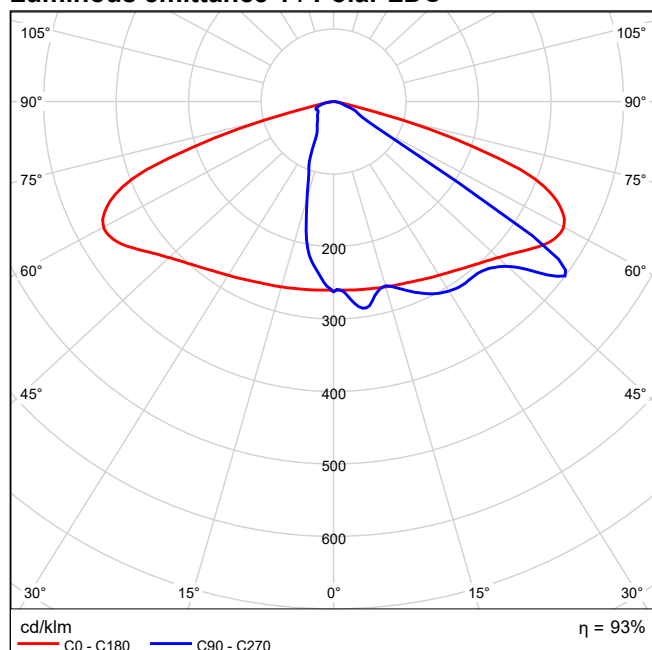


Cree Europe XSP-E-2SH-E-Q XSP1 HO Field Adjustable 2SH 1x5 MDA-SA 30K 74W



Light output ratio: 92.68%
 Lamp luminous flux: 9766 lm
 Luminaire luminous flux: 9052 lm
 Power: 74.0 W
 Luminous efficacy: 122.3 lm/W

Luminous emittance 1 / Polar LDC



XSP1 High Output

Designed from the ground up as a totally optimized LED street and area lighting system, the XSP High Output Series delivers incredible efficiency without sacrificing application performance. Beyond substantial energy savings and reduced maintenance, Cree achieves greater optical control with our NanoOptic® Precision Delivery Grid™ optic when compared to traditional cobra head luminaires.

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- Full cut-off optics (NanoOptic® Precision Delivery Grid™)
- Input Power: E=94W / H=63W
- Lumen output: 4000 – 11500lm
- Efficacy: Up to 155lm/W
- CCT: 3000K, 4000K, 5700K (CRI Standard min.70, CRI 80 @3000K on request for MOQ)
- Initial Colour Consistency: 4 MacAdam steps
- Input Voltage: 220-240V
- Driver equipped with temperature sensor to preserve optimal working conditions
- Power factor: Up to > 0.99 at full load
- Lifetime: L80F10 Up to >180Khrs Ta=25°C (>180Khrs L80 IESNA TM-21)
- Surge protection: 10kV CM/DM surge immunity according to EN 61000-4-5 and EN 61547 (Class I SPD equipped with LED signal)
- Fuse option available
- Operative temperature: -40°C up to +50°C
- Insulation class: Class I – Class II
- Enclosure rated IP66 per IEC 60529
- Impact resistance IK08
- Cable type H07RN-F (Cable length Up to 12mt)
- Tool-less entry
- Removable tray
- Control options: Fixed, Field Adjustable Output, Virtual Midnight reprog., DALI, Flux Regulator, Lineswitch, Lumistep, Dynadimmer, Constant Lumen Output
- Nema socket option available
- LED Board equipped with integral ESD and Surge protection
- Fixture assembled without the use of glues, totally dismountable and recyclable.

CONSTRUCTION AND MATERIALS

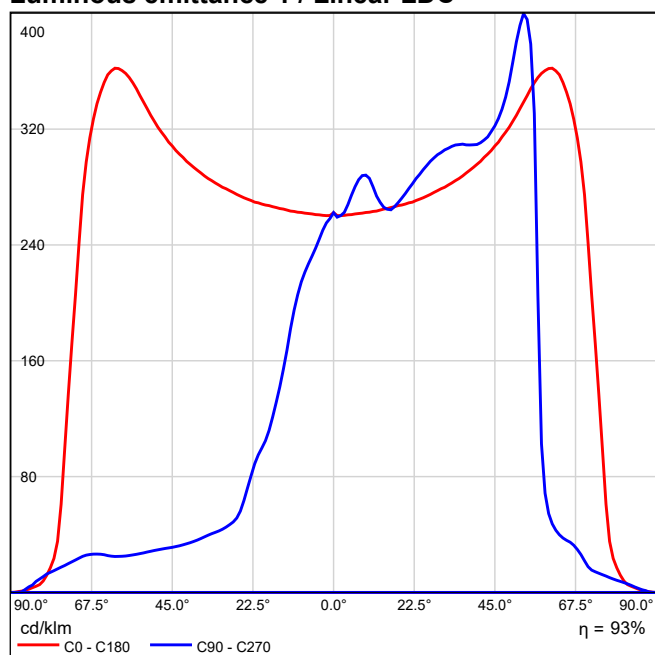
- Die cast, low copper <0,1%, aluminum alloy housing for long weathering and reliability
- Luminaire is designed to mount directly to 76mm or 60mm outer dimension tenons or poles and can be tilted +/- 20°, in steps of 5°
- Luminaire fitter 02 can mount to 60mm OD tenons and fitter 03 to 76mm
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion.

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Luminous emittance 1 / Linear LDC



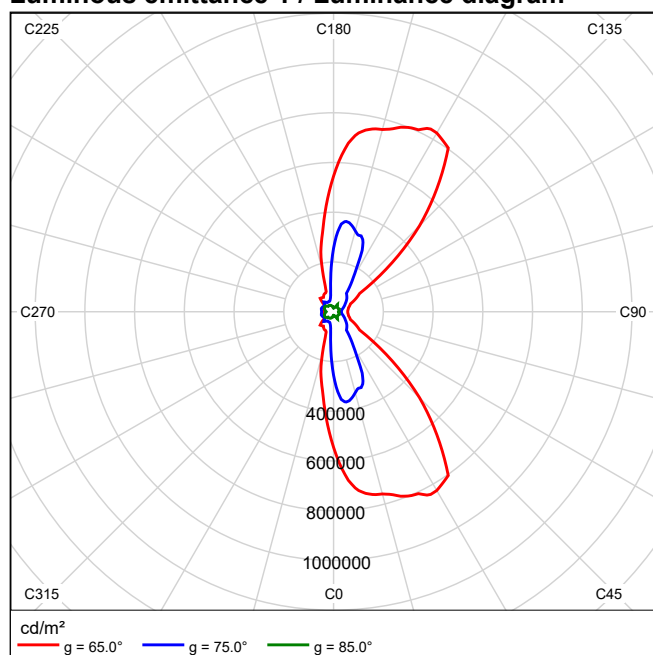
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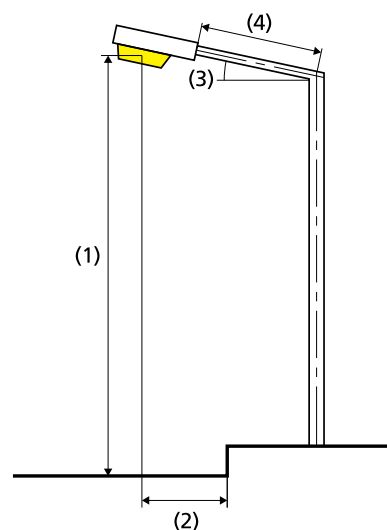
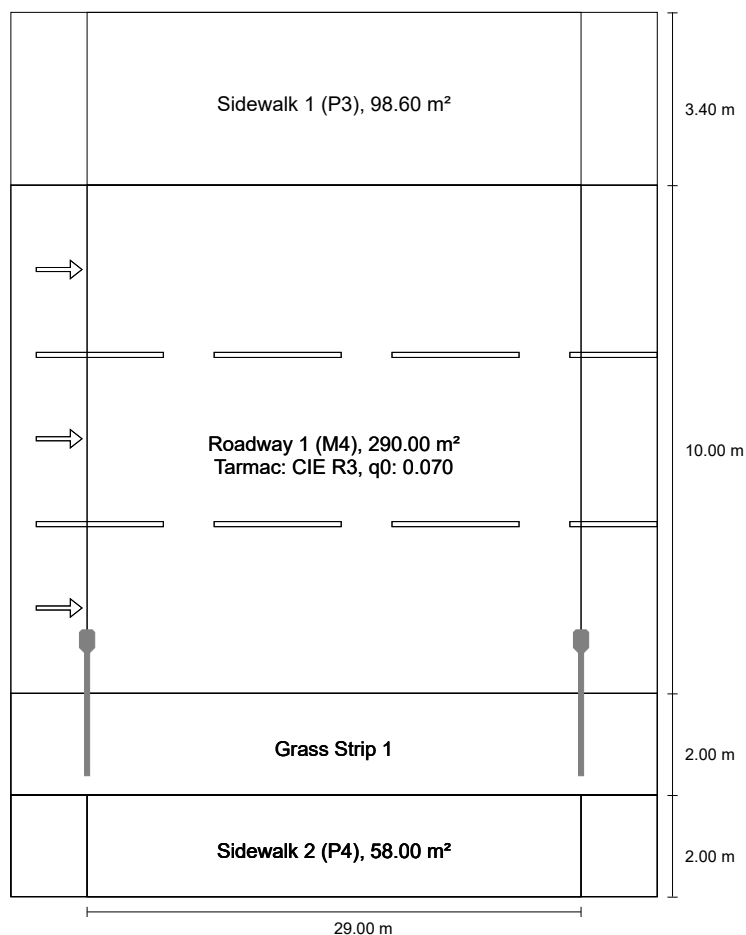
It is not possible to generate a cone diagram, as the light distribution is asymmetrical.

Luminous emittance 1 / Luminance diagram



Rūpniecības iela 1. posms according to EN 13201:2015

Cree Europe XSP-E-2SH-E-Q XSP1 HO Field Adjustable 2SH



Lamp:	1x5 MDA-SA 30K 74W
Luminous flux (luminaire):	9051.58 lm
Luminous flux (lamp):	9766.00 lm
Operating Hours	
4000 h:	100.0 %, 74.0 W
W/km:	2516.0
Arrangement:	single side bottom
Pole distance:	29.000 m
Boom inclination (3):	0.0°
Boom length (4):	2.000 m
Light centre height (1):	10.000 m
Light overhang (2):	1.000 m

Results for valuation fields

Light loss factor: 0.80

Sidewalk 1 (P3)

Em [lx] ≥ 7.50 ≤ 11.25	Emin [lx] ≥ 1.50
✓ 9.66	✓ 8.67

Roadway 1 (M4)

Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR ≥ 0.30
✓ 0.82	✓ 0.51	✓ 0.85	✓ 7	✓ 0.59

Sidewalk 2 (P4)

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 5.54	✓ 3.52

ULR:	-1.00
ULOR:	0.00

Maximum luminous intensities

at 70° and above	442 cd/klm *
at 80° and above	21.0 cd/klm *
at 90° and above	0.00 cd/klm *

Luminous intensity class: G*4

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

Results for energy efficiency indicators

Power density indicator (Dp)	0.014 W/lxm ²
Energy consumption density	
Arrangement: XSP1 HO Field Adjustable 2SH (296.0 kWh/yr)	0.7 kWh/m ² yr

Sidewalk 1 (P3)

Light loss factor: 0.80
Grid: 10 x 3 Points

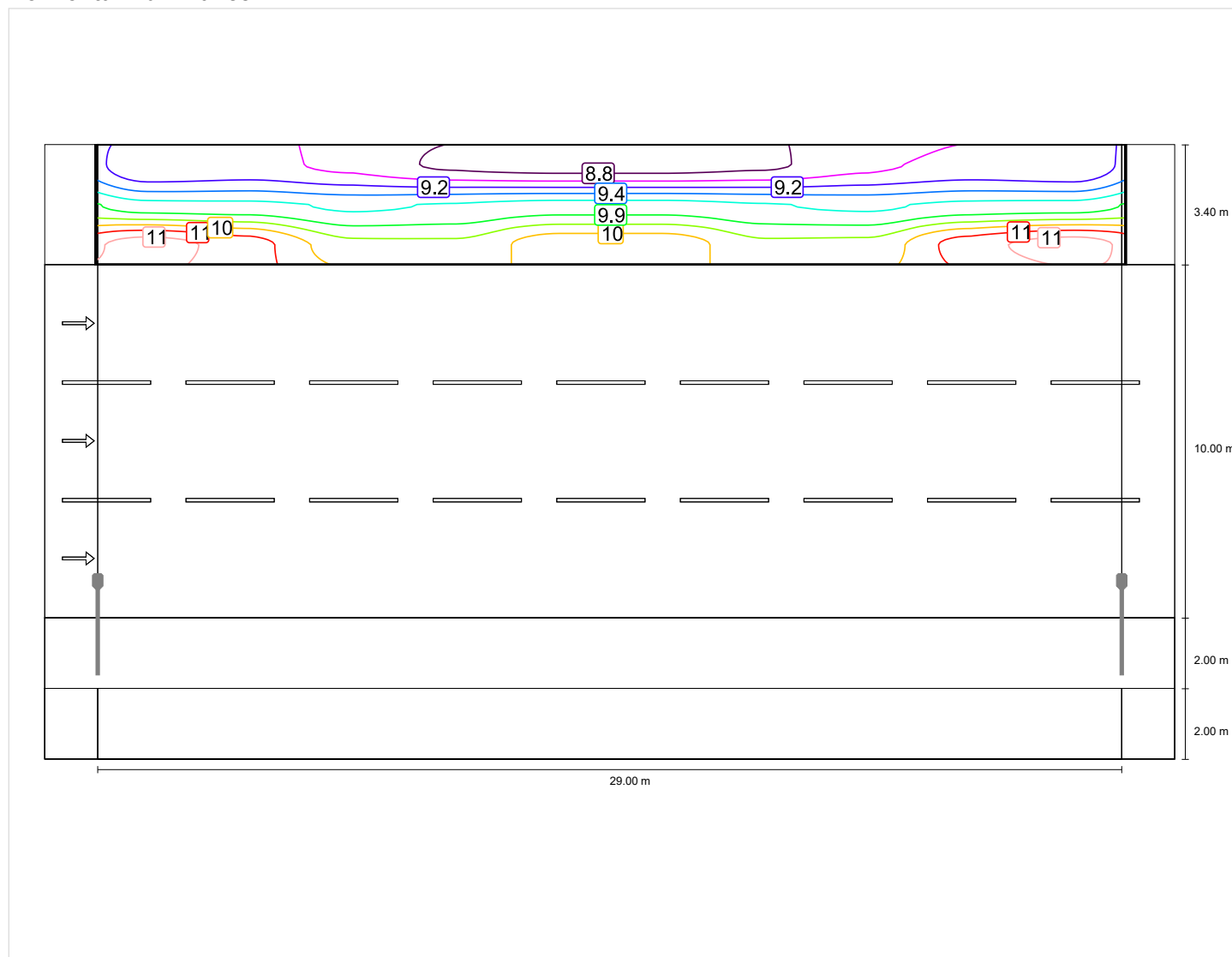
Em [lx] ≥ 7.50 ≤ 11.25	Emin [lx] ≥ 1.50
✓ 9.66	✓ 8.67

Sidewalk 1 (P3)

Light loss factor: 0.80
 Grid: 10 x 3 Points

Em [lx]	Emin [lx]
≥ 7.50	≥ 1.50
≤ 11.25	
✓ 9.66	✓ 8.67

Horizontal illuminance



Roadway 1 (M4)

Light loss factor: 0.80
 Grid: 10 x 9 Points

Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR ≥ 0.30
✓ 0.82	✓ 0.51	✓ 0.85	✓ 7	✓ 0.59

Assigned observer (3):

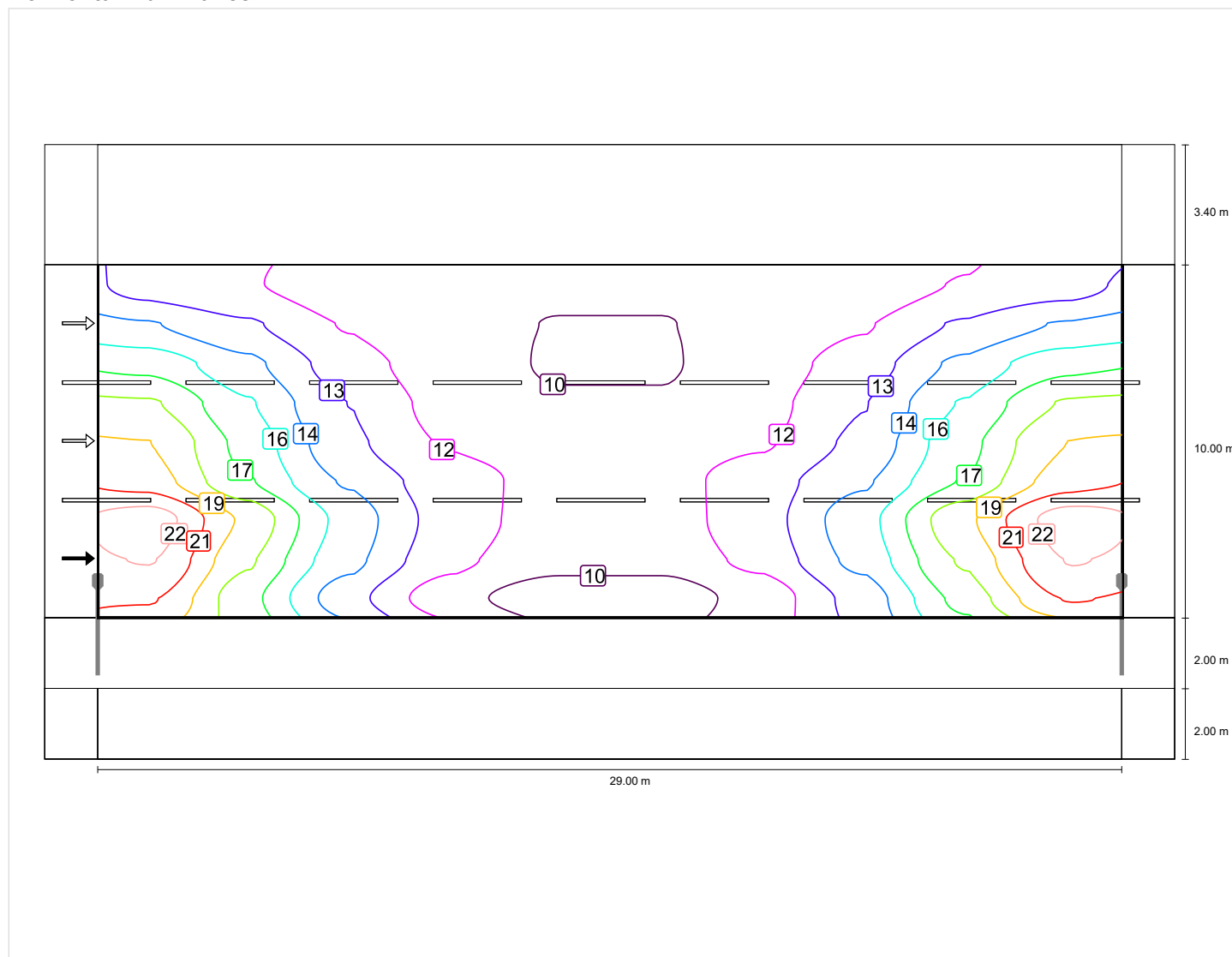
Observer	Position [m]	Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15
Observer 1	(-60.000, 5.667, 1.500)	0.82	0.53	0.85	7
Observer 2	(-60.000, 9.000, 1.500)	0.86	0.52	0.85	7
Observer 3	(-60.000, 12.333, 1.500)	0.90	0.51	0.85	4

Roadway 1 (M4)

Light loss factor: 0.80
 Grid: 10 x 9 Points

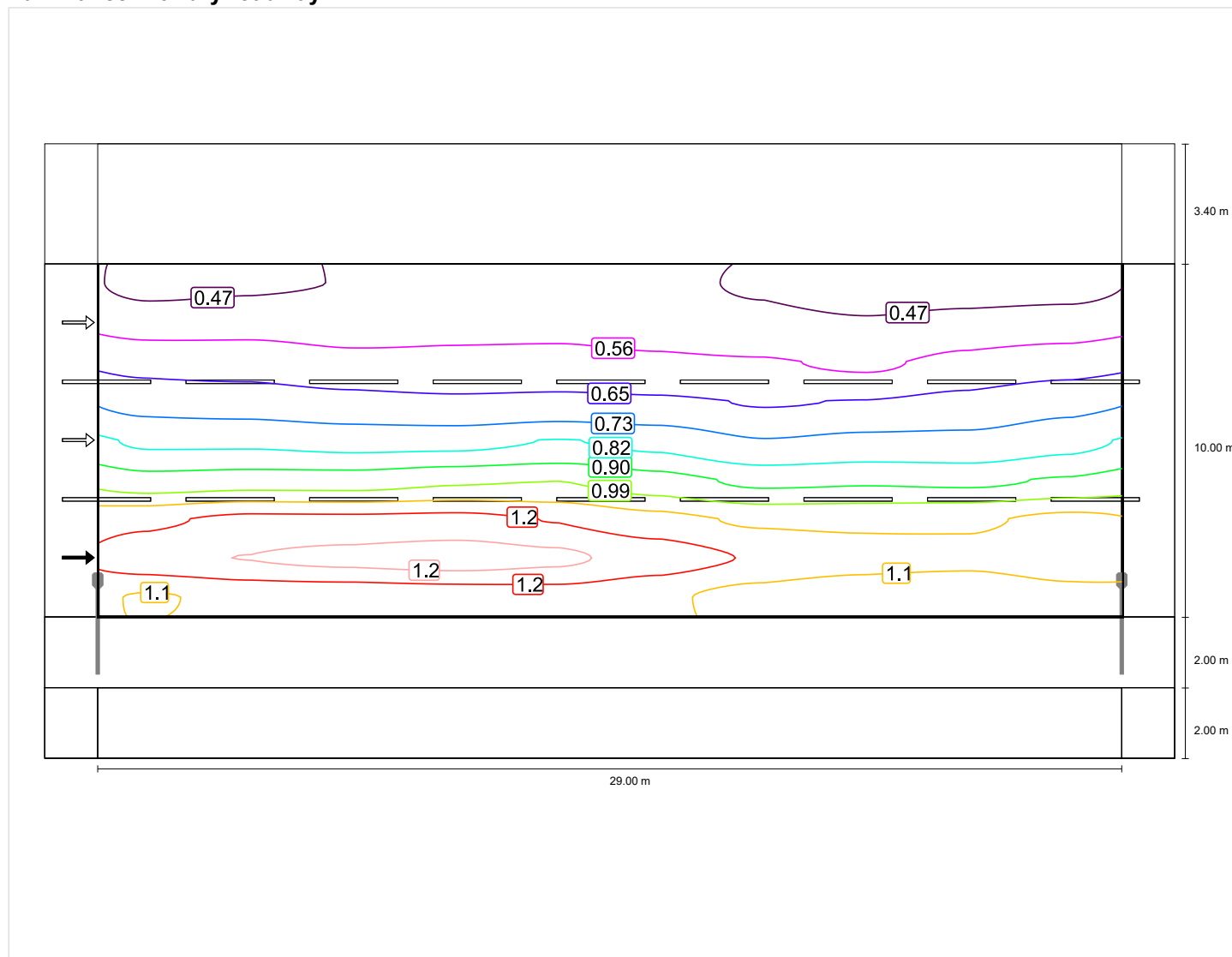
Lm [cd/m²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR ≥ 0.30
✓ 0.82	✓ 0.51	✓ 0.85	✓ 7	✓ 0.59

Horizontal illuminance

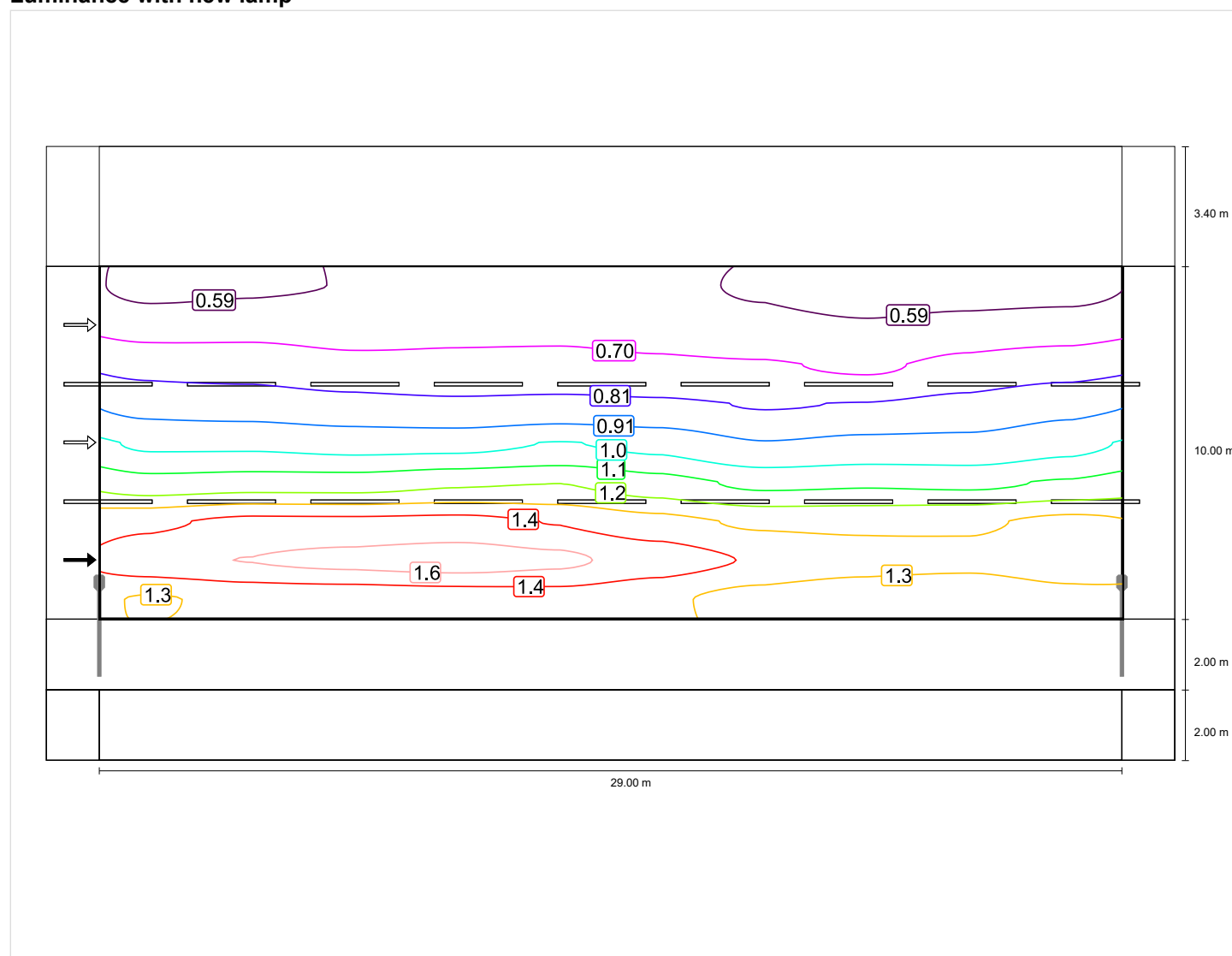


Observer 1

Luminance with dry roadway

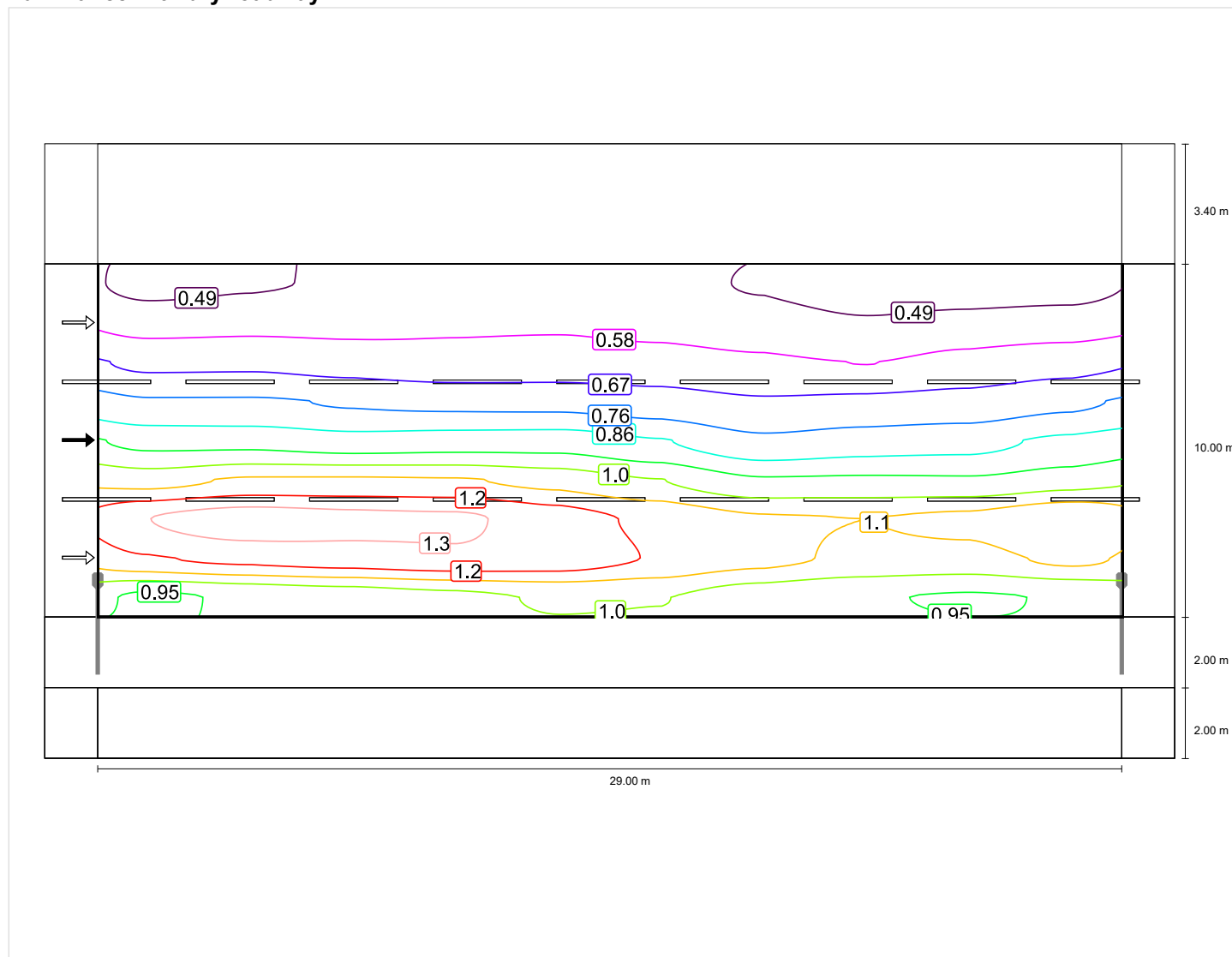


Luminance with new lamp

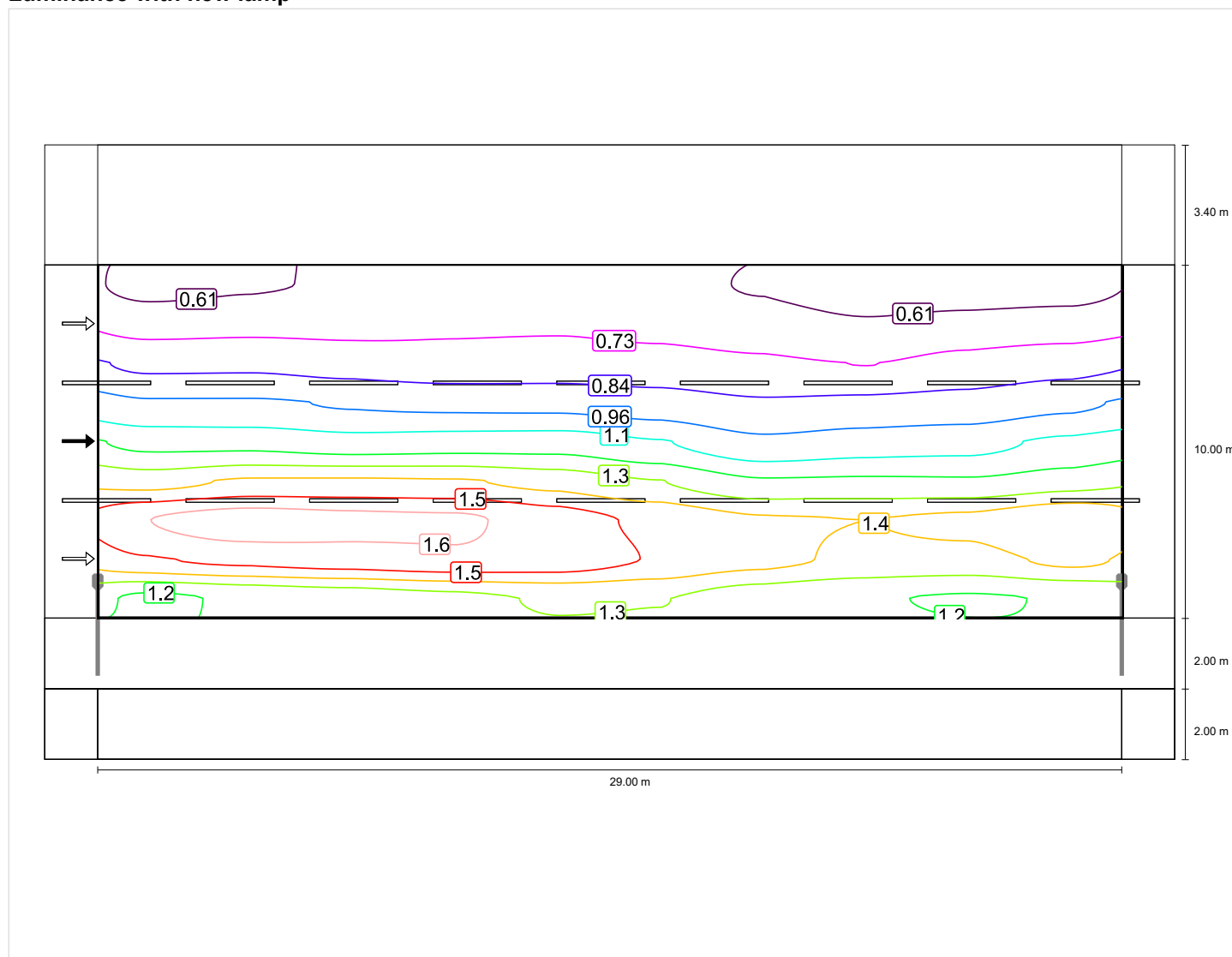


Observer 2

Luminance with dry roadway

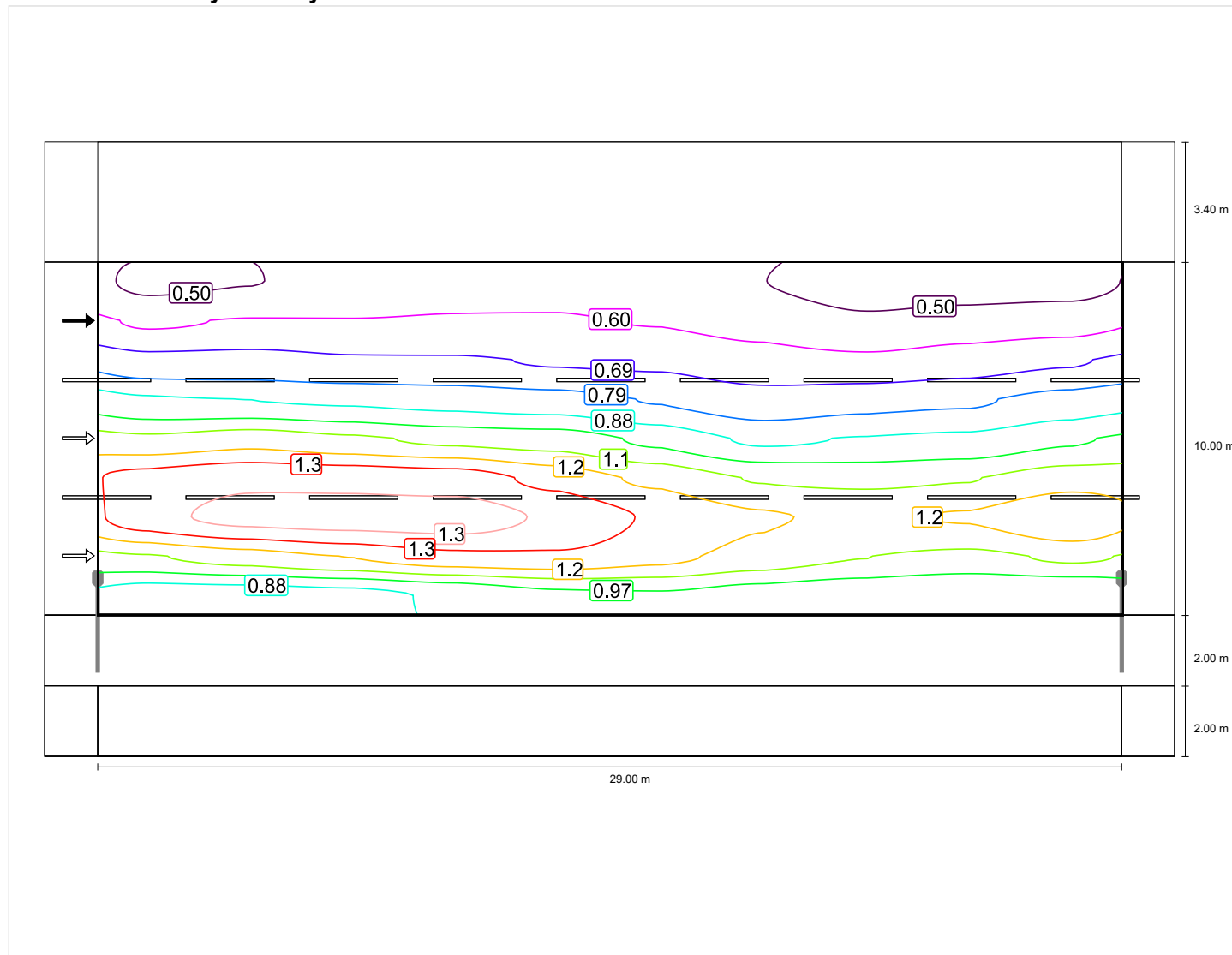


Luminance with new lamp

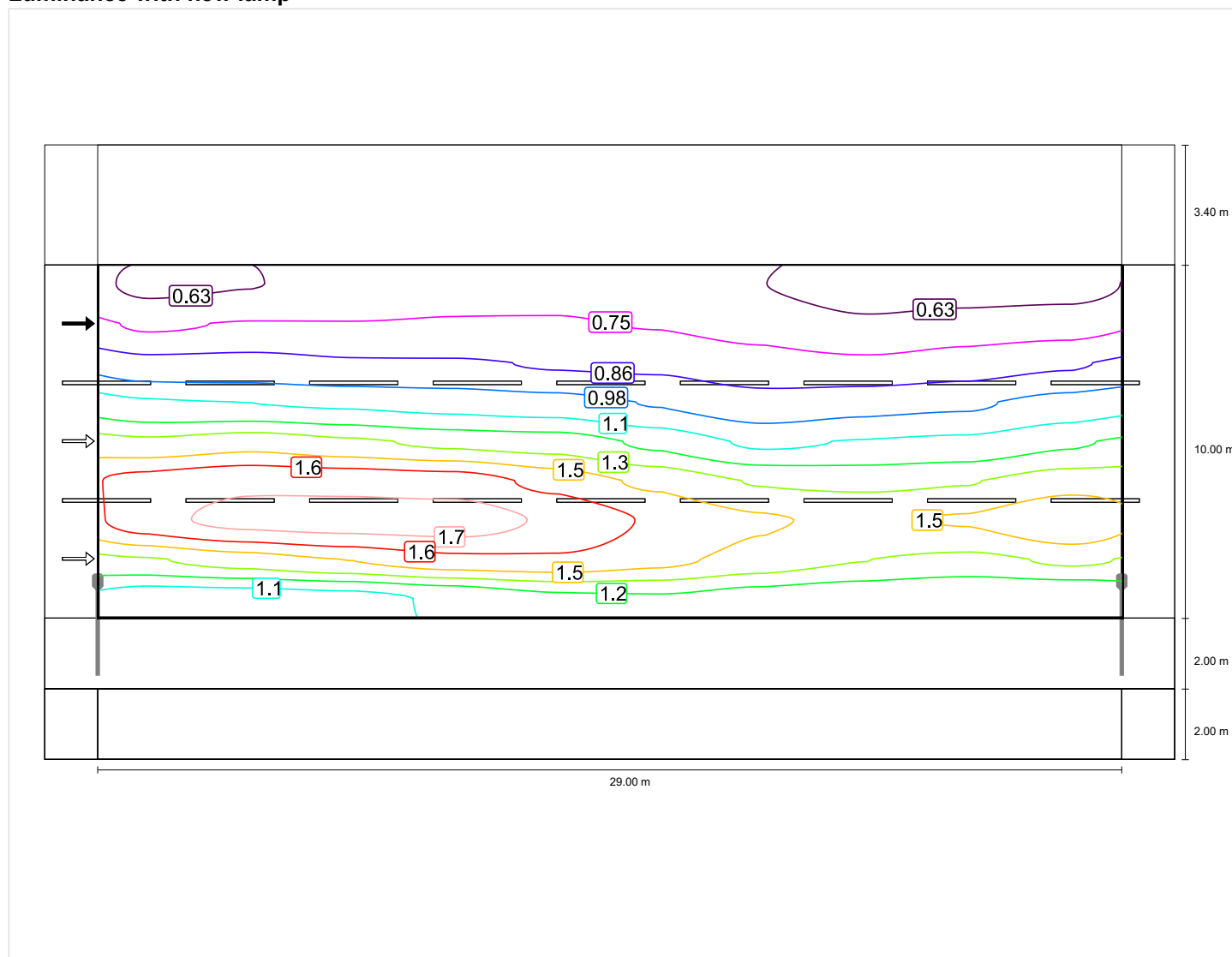


Observer 3

Luminance with dry roadway



Luminance with new lamp



Sidewalk 2 (P4)

Light loss factor: 0.80
Grid: 10 x 3 Points

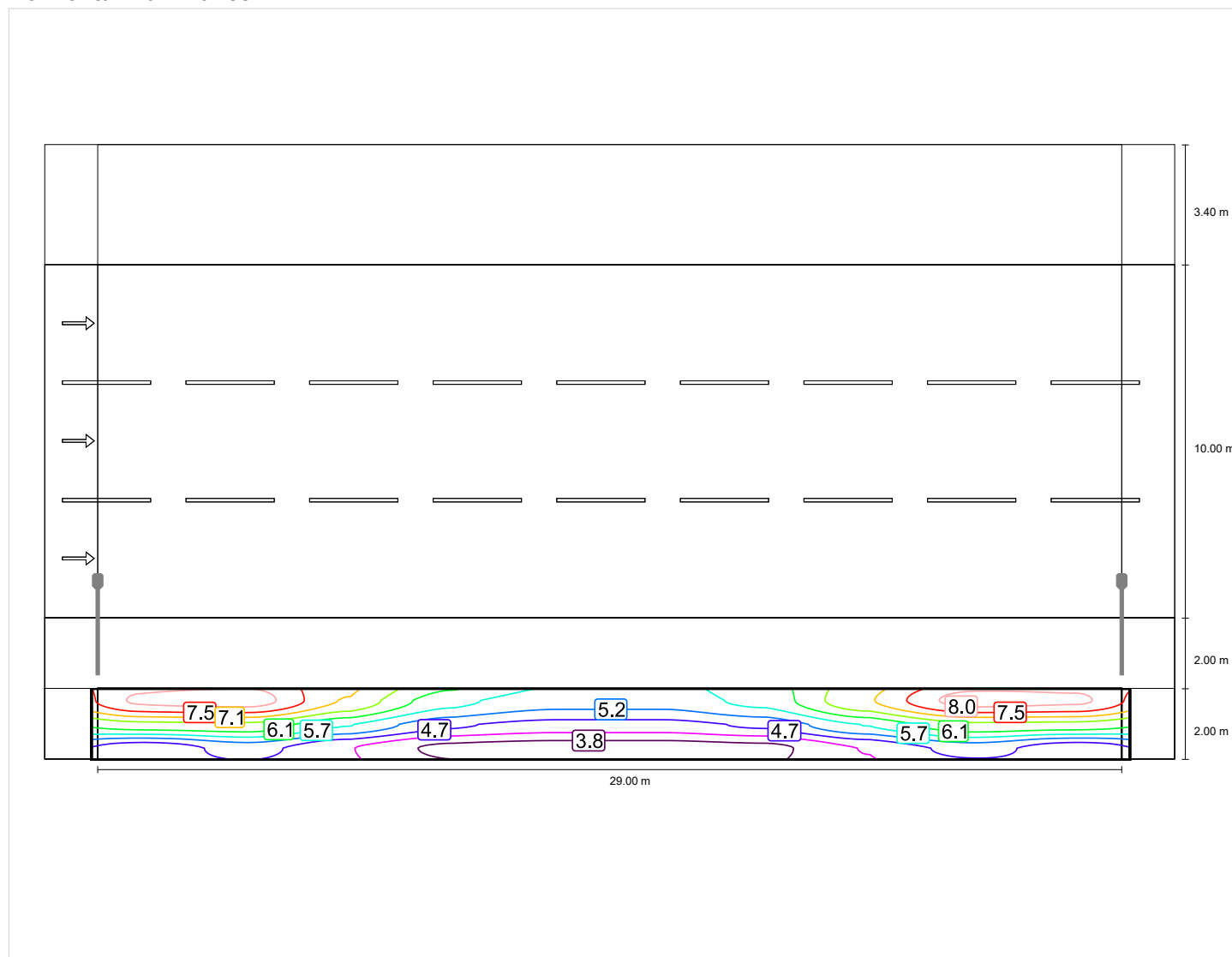
Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 5.54	✓ 3.52

Sidewalk 2 (P4)

Light loss factor: 0.80
 Grid: 10 x 3 Points

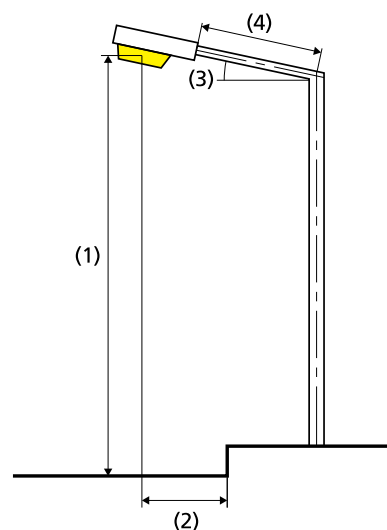
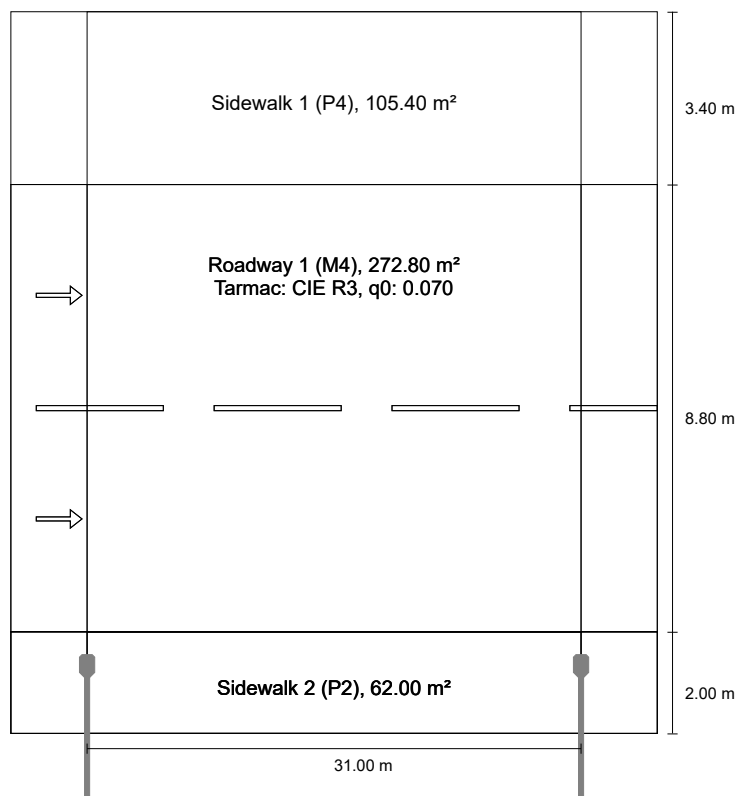
Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 5.54	✓ 3.52

Horizontal illuminance



Rūpniecības iela 2. posms according to EN 13201:2015

Cree Europe XSP-E-210-E-Q XSP1 HO Field Adjustable 210



Lamp:	1x5 MDA-SA_30K 65W
Luminous flux (luminaire):	8056.15 lm
Luminous flux (lamp):	8751.00 lm
Operating Hours	
4000 h:	100.0 %, 65.0 W
W/km:	2080.0
Arrangement:	single side bottom
Pole distance:	31.000 m
Boom inclination (3):	0.0°
Boom length (4):	2.000 m
Light centre height (1):	10.000 m
Light overhang (2):	-0.700 m

Results for valuation fields

Light loss factor: 0.80

Sidewalk 1 (P4)

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 6.49	✓ 4.11

Roadway 1 (M4)

Lm [cd/m²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 0.81	✓ 0.49	✓ 0.77	✓ 10	* 0.47

Sidewalk 2 (P2)

Em [lx] ≥ 10.00 ≤ 15.00	Emin [lx] ≥ 2.00
✓ 12.54	✓ 7.48

ULR:	-1.00
ULOR:	0.00
Maximum luminous intensities	
at 70° and above	735 cd/klm *
at 80° and above	36.0 cd/klm *
at 90° and above	0.00 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

* Informative, not part of the valuation

Results for energy efficiency indicators

Power density indicator (Dp) 0.013 W/lxm²
Energy consumption density
Arrangement: XSP1 HO Field Adjustable 210 (260.0 kWh/yr) 0.6 kWh/m² yr

Sidewalk 1 (P4)

Light loss factor: 0.80
Grid: 11 x 3 Points

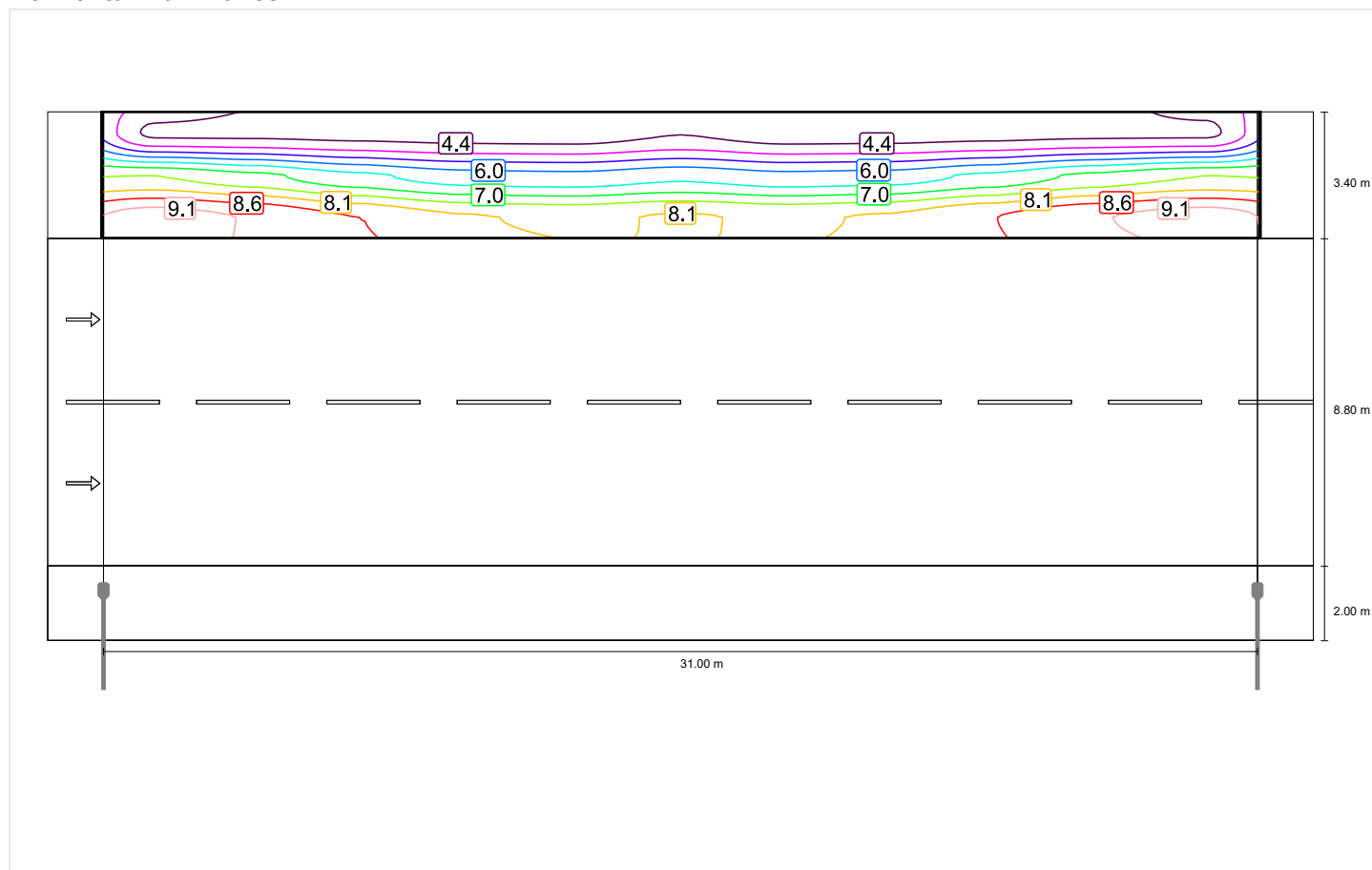
Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 6.49	✓ 4.11

Sidewalk 1 (P4)

Light loss factor: 0.80
 Grid: 11 x 3 Points

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 6.49	✓ 4.11

Horizontal illuminance



Roadway 1 (M4)

Light loss factor: 0.80
 Grid: 11 x 6 Points

Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 0.81	✓ 0.49	✓ 0.77	✓ 10	* 0.47

* Informative, not part of the valuation

Assigned observer (2):

Observer	Position [m]	Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15
Observer 1	(-60.000, 4.200, 1.500)	0.81	0.52	0.77	10
Observer 2	(-60.000, 8.600, 1.500)	0.90	0.49	0.77	6

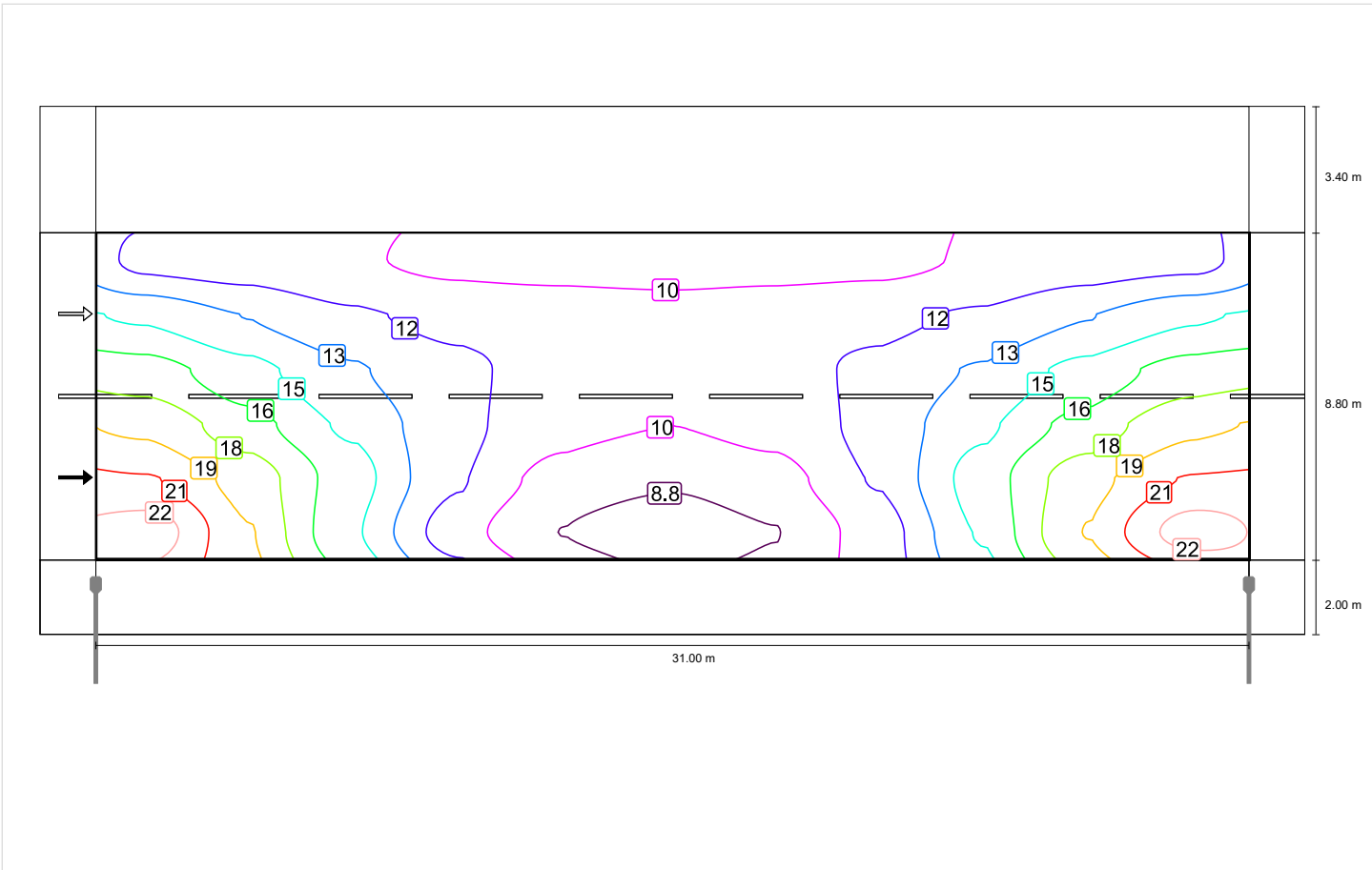
Roadway 1 (M4)

Light loss factor: 0.80
Grid: 11 x 6 Points

Lm [cd/m²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR
✓ 0.81	✓ 0.49	✓ 0.77	✓ 10	* 0.47

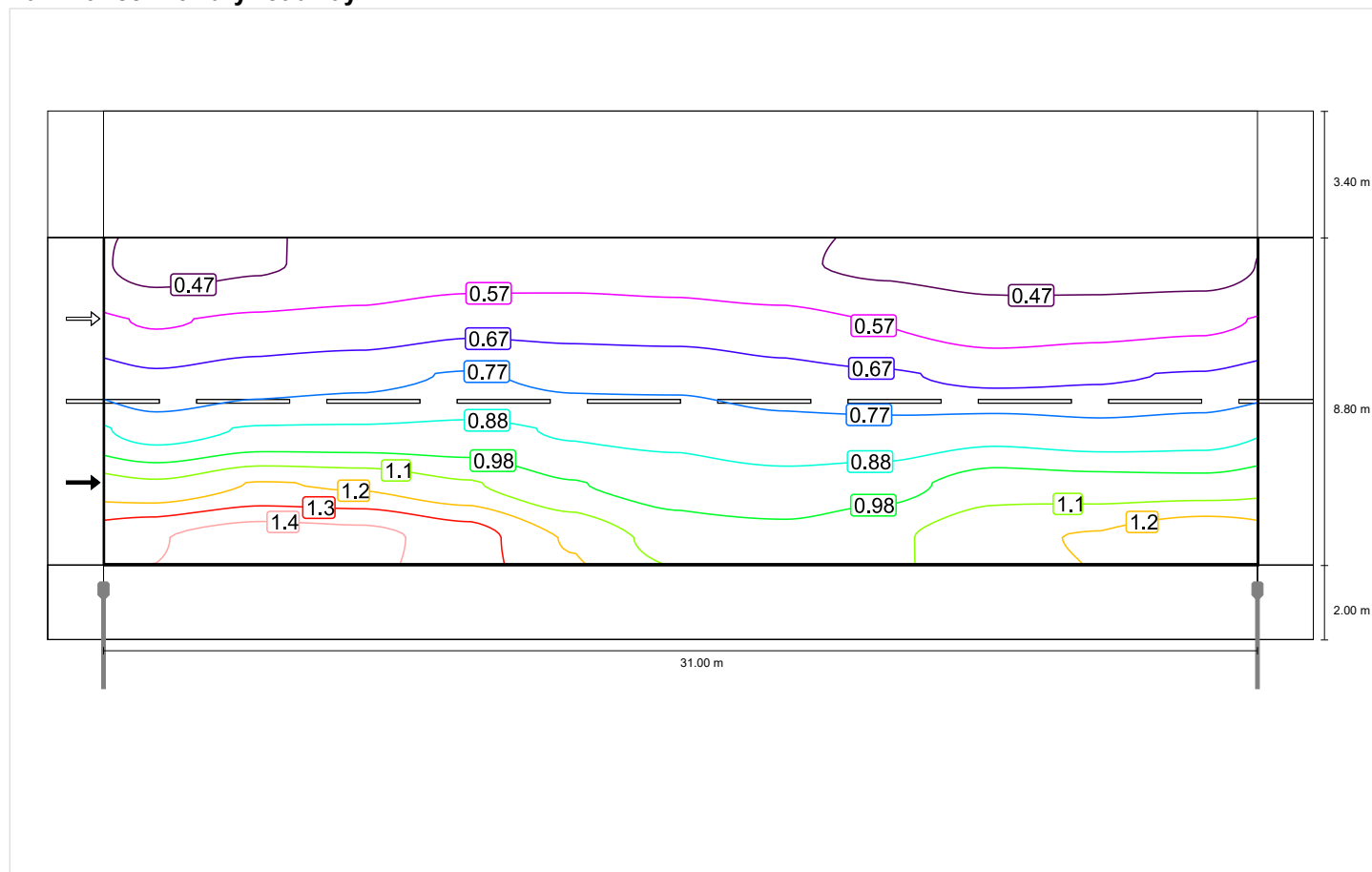
* Informative, not part of the valuation

Horizontal illuminance

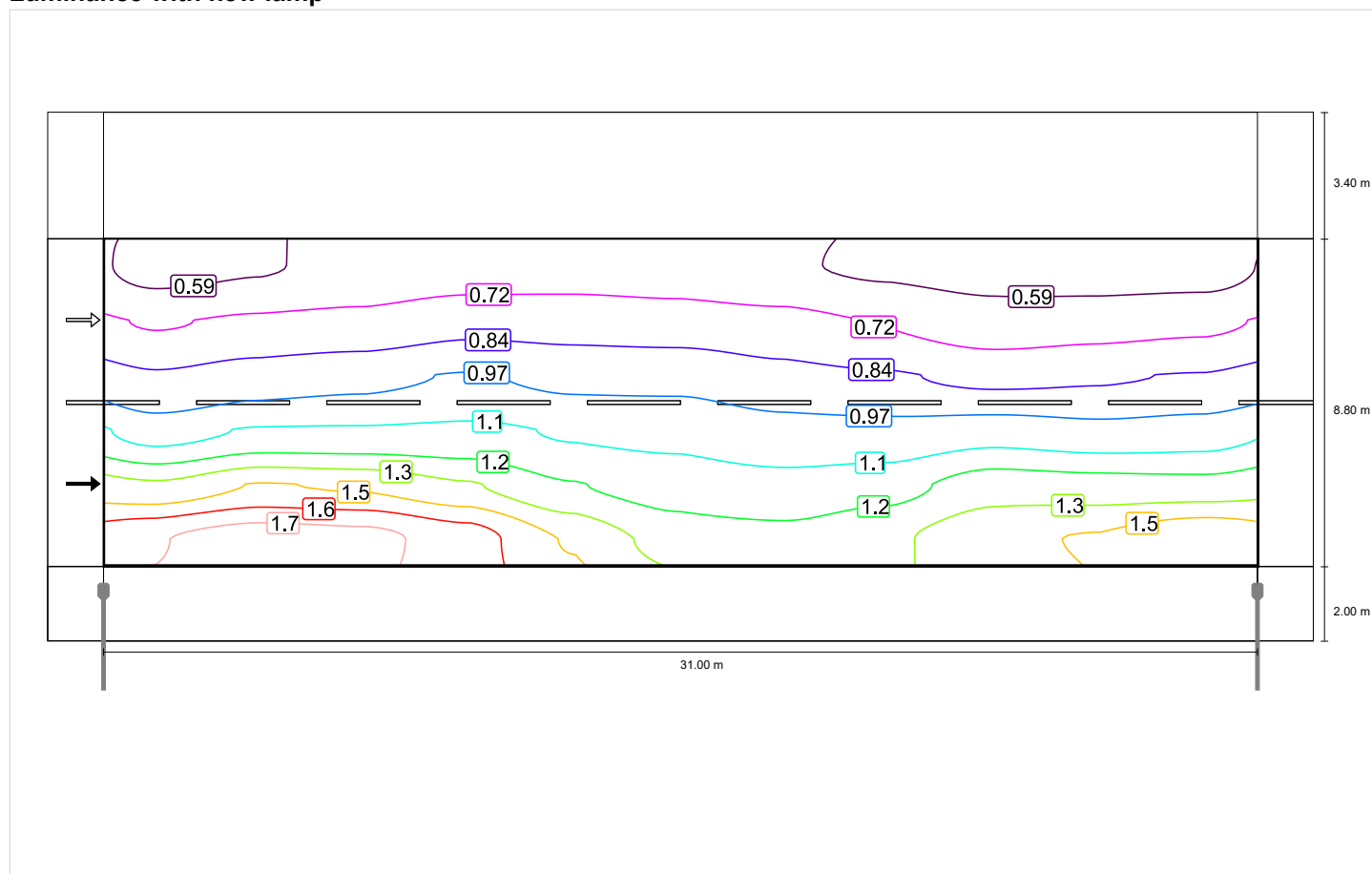


Observer 1

Luminance with dry roadway

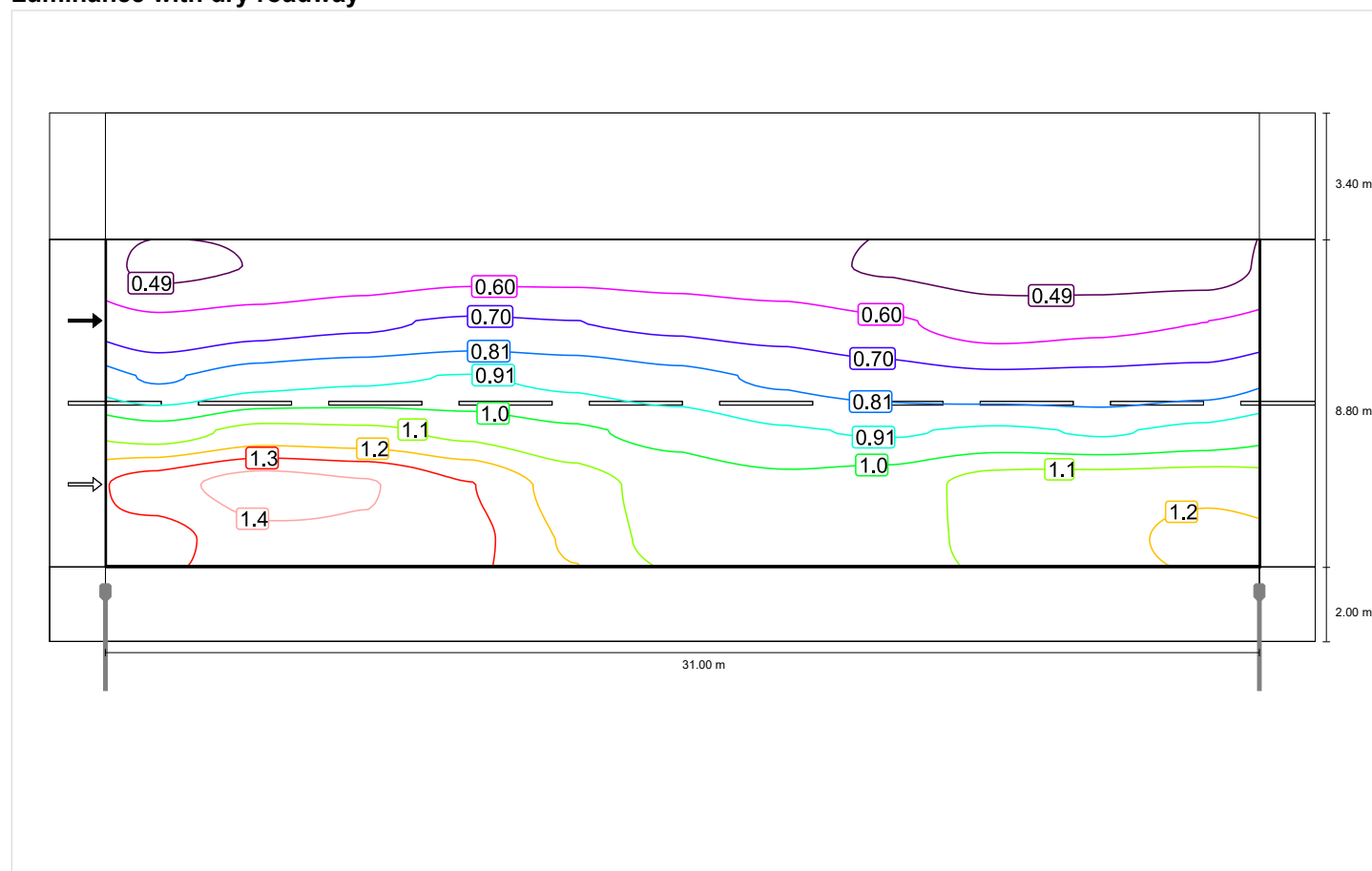


Luminance with new lamp

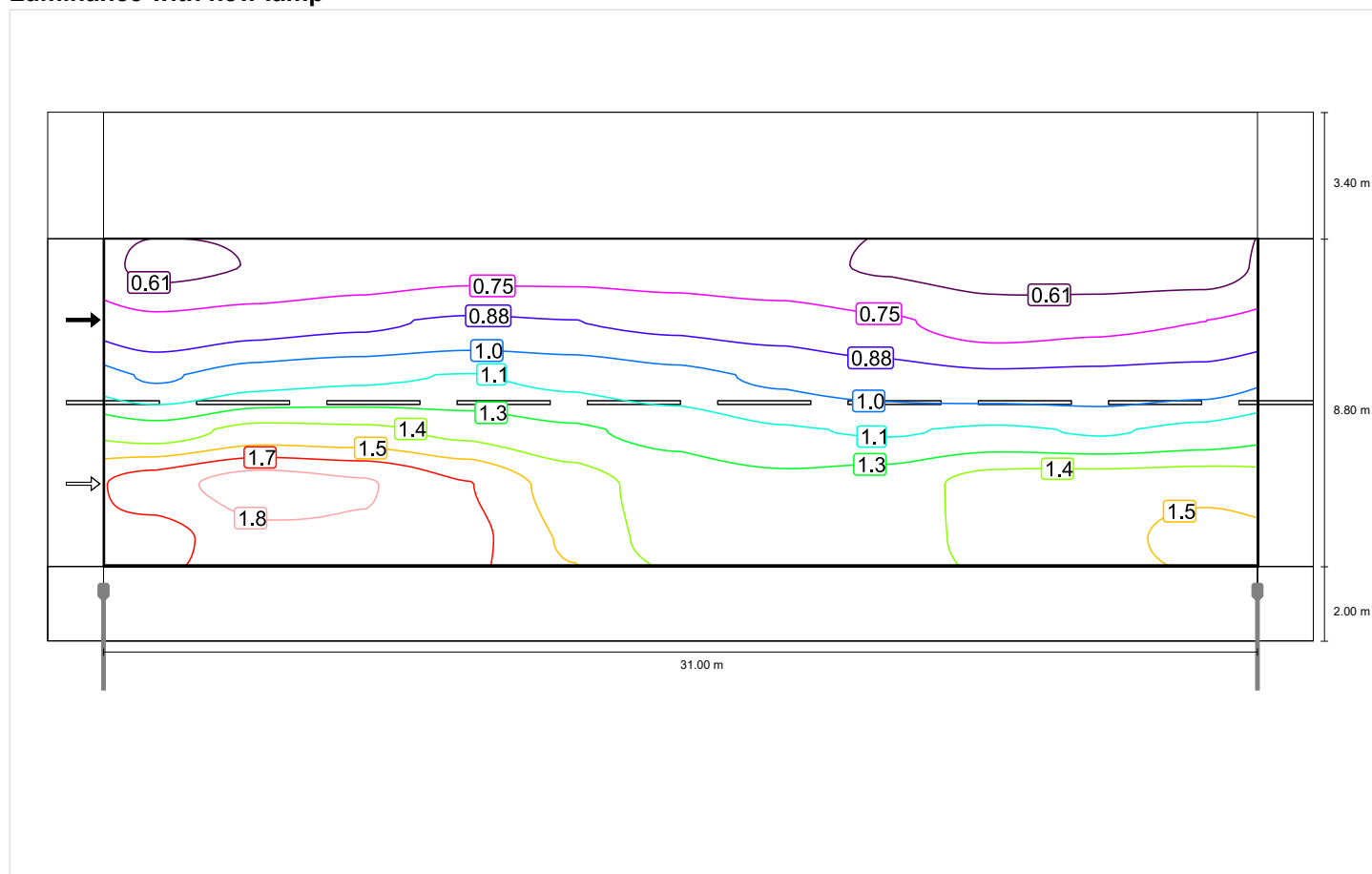


Observer 2

Luminance with dry roadway



Luminance with new lamp



Sidewalk 2 (P2)

Light loss factor: 0.80
Grid: 11 x 3 Points

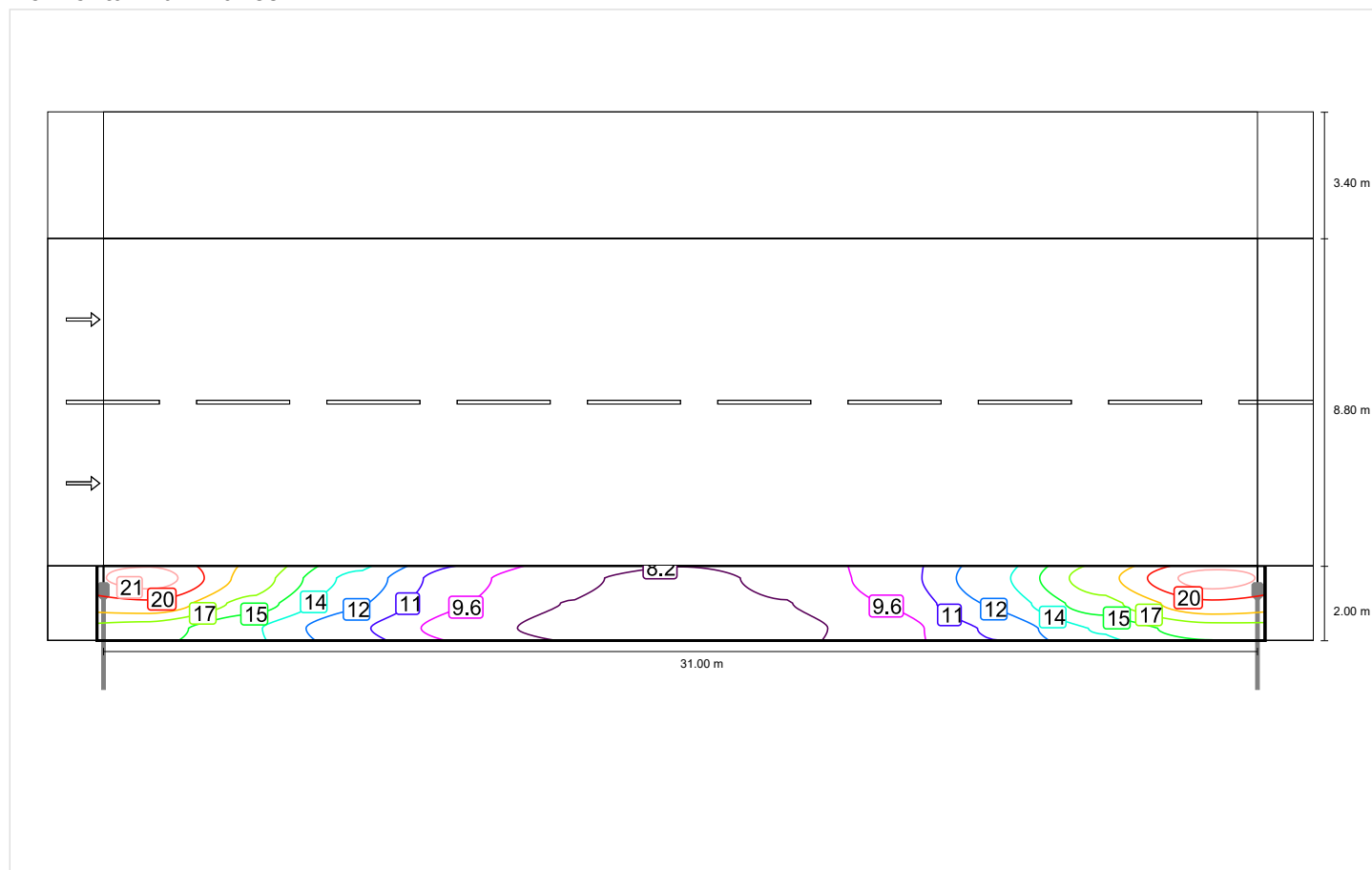
Em [lx] ≥ 10.00 ≤ 15.00	Emin [lx] ≥ 2.00
✓ 12.54	✓ 7.48

Sidewalk 2 (P2)

Light loss factor: 0.80
 Grid: 11 x 3 Points

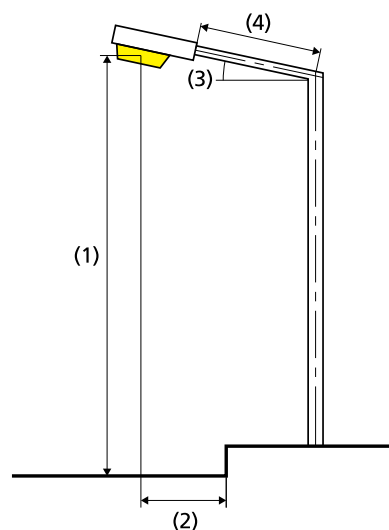
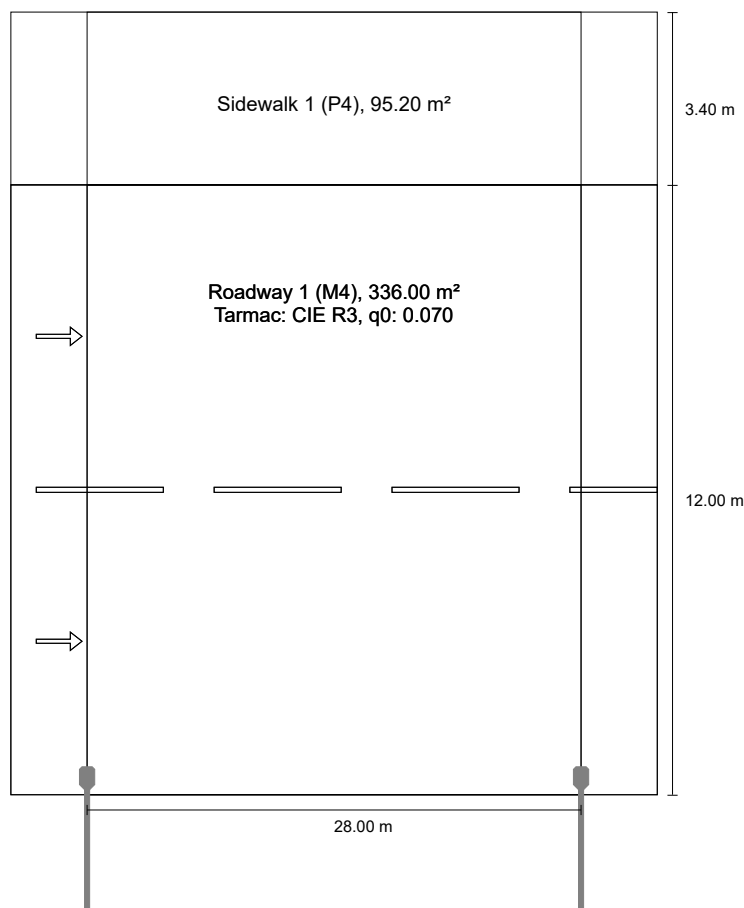
Em [lx]	Emin [lx]
≥ 10.00	≥ 2.00
≤ 15.00	
✓ 12.54	✓ 7.48

Horizontal illuminance



Rūpniecības iela 3. posms according to EN 13201:2015

Cree Europe XSP-E-2SH-E-Q XSP1 HO Field Adjustable 2SH



Lamp:	1x5 MDA-SA 30K 74W
Luminous flux (luminaire):	9051.58 lm
Luminous flux (lamp):	9766.00 lm
Operating Hours	
4000 h:	100.0 %, 74.0 W
W/km:	2664.0
Arrangement:	single side bottom
Pole distance:	28.000 m
Boom inclination (3):	0.0°
Boom length (4):	2.000 m
Light centre height (1):	10.000 m
Light overhang (2):	0.300 m

Results for valuation fields

Light loss factor: 0.80

Sidewalk 1 (P4)

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 7.12	✓ 4.87

Roadway 1 (M4)

Lm [cd/m²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR ≥ 0.30
✓ 0.77	✓ 0.43	✓ 0.79	✓ 8	✓ 0.52

Results for energy efficiency indicators

Power density indicator (Dp)	0.014 W/lxm²
Energy consumption density	
Arrangement: XSP1 HO Field Adjustable 2SH (296.0 kWh/yr)	0.7 kWh/m² yr

ULR:	-1.00
ULOR:	0.00
Maximum luminous intensities	
at 70° and above	442 cd/klm *
at 80° and above	21.0 cd/klm *
at 90° and above	0.00 cd/klm *
Luminous intensity class:	G*4

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

Sidewalk 1 (P4)

Light loss factor: 0.80
Grid: 10 x 3 Points

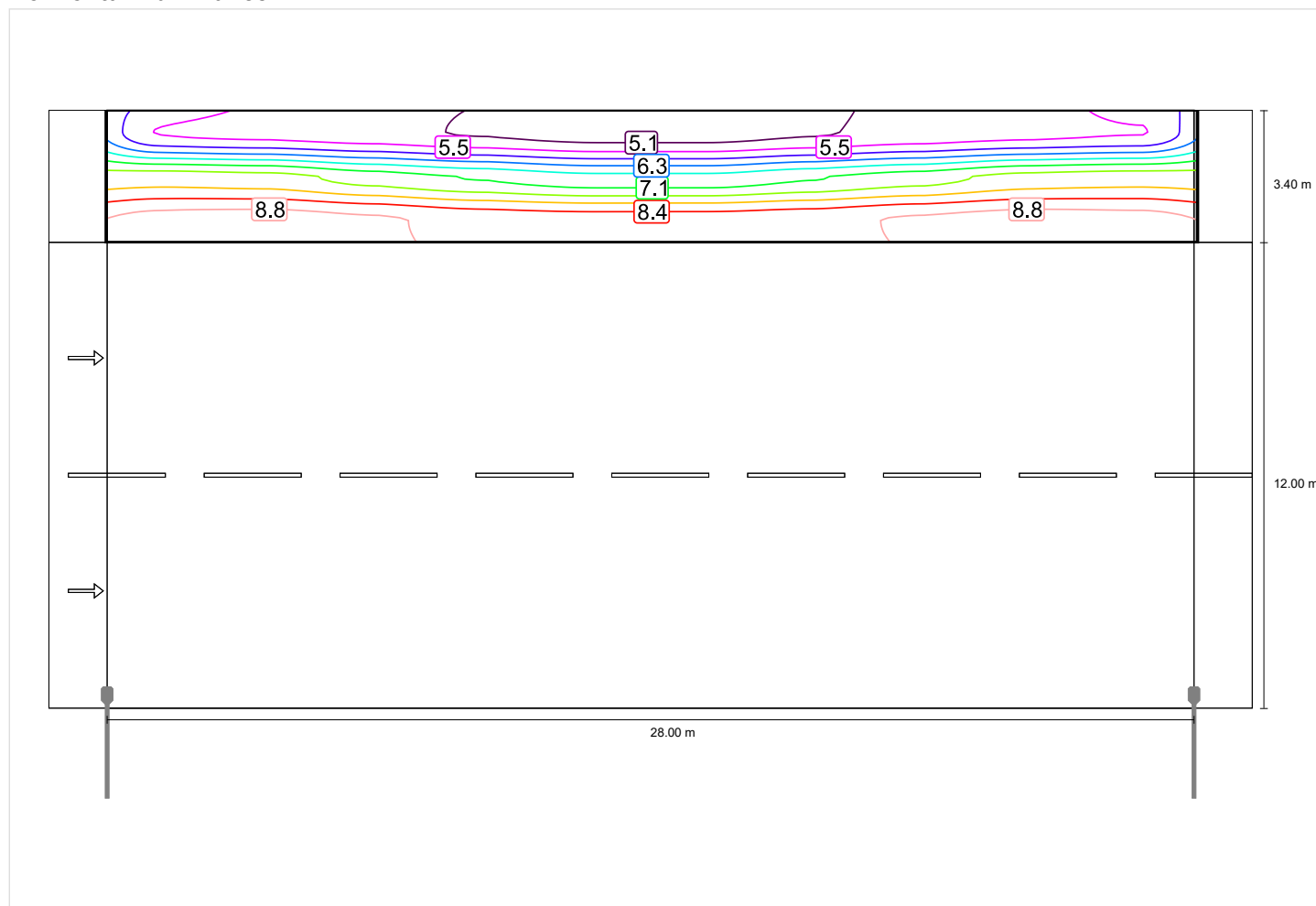
Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 7.12	✓ 4.87

Sidewalk 1 (P4)

Light loss factor: 0.80
 Grid: 10 x 3 Points

Em [lx] ≥ 5.00 ≤ 7.50	Emin [lx] ≥ 1.00
✓ 7.12	✓ 4.87

Horizontal illuminance



Roadway 1 (M4)

Light loss factor: 0.80
 Grid: 10 x 6 Points

Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR ≥ 0.30
✓ 0.77	✓ 0.43	✓ 0.79	✓ 8	✓ 0.52

Assigned observer (2):

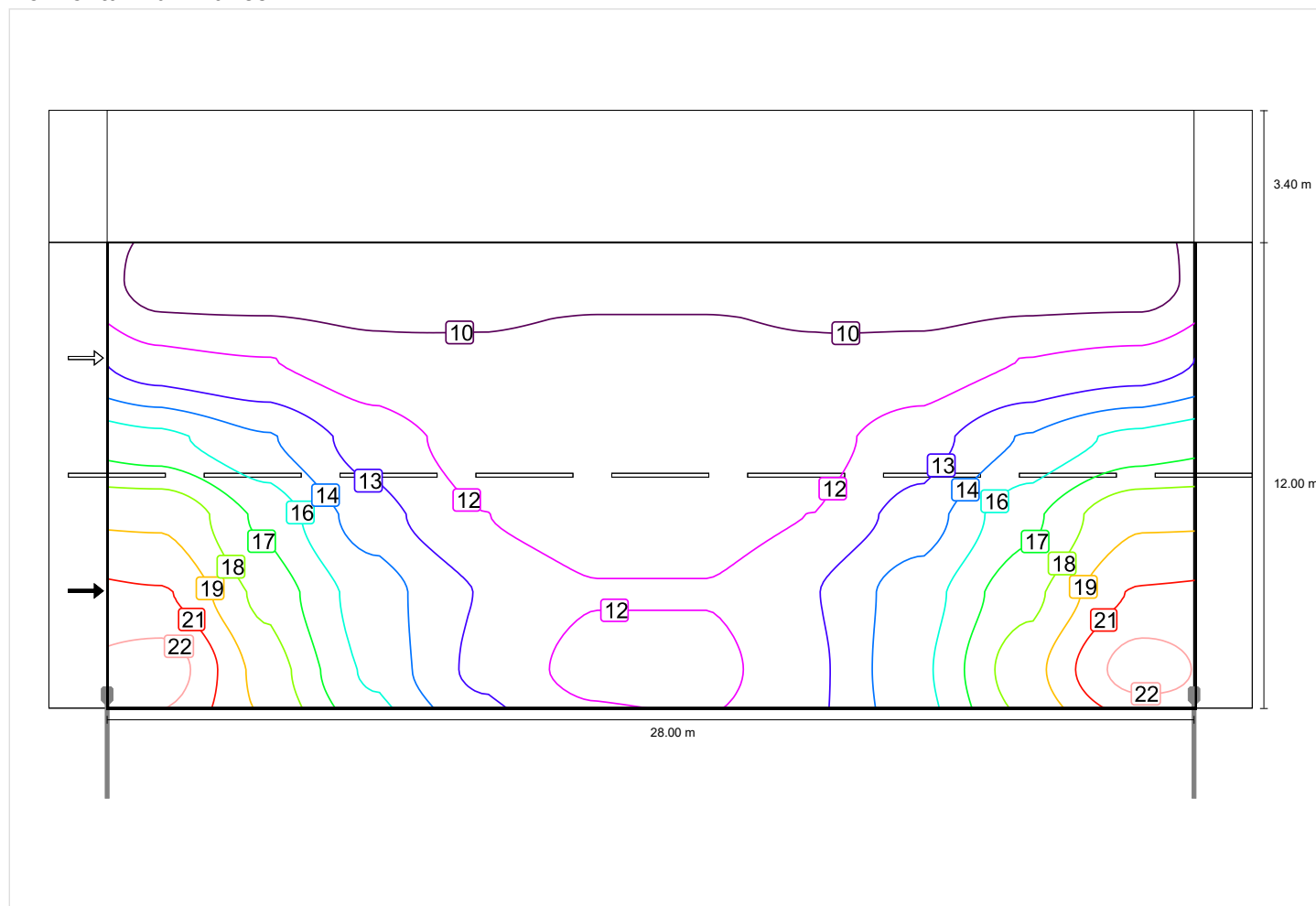
Observer	Position [m]	Lm [cd/m ²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15
Observer 1	(-60.000, 3.000, 1.500)	0.77	0.46	0.85	8
Observer 2	(-60.000, 9.000, 1.500)	0.84	0.43	0.79	3

Roadway 1 (M4)

Light loss factor: 0.80
 Grid: 10 x 6 Points

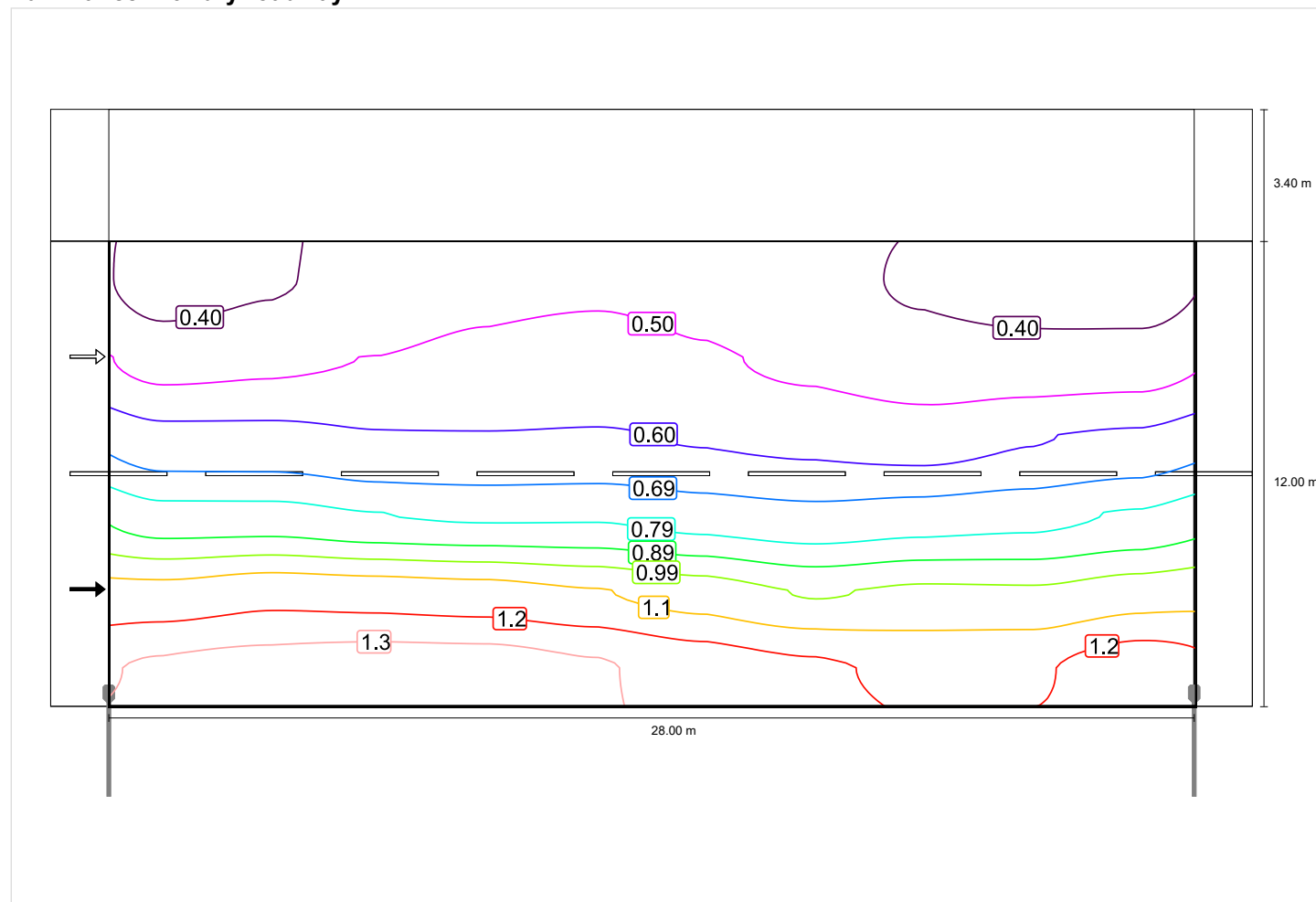
Lm [cd/m²] ≥ 0.75	Uo ≥ 0.40	UI ≥ 0.60	TI [%] ≤ 15	EIR ≥ 0.30
✓ 0.77	✓ 0.43	✓ 0.79	✓ 8	✓ 0.52

Horizontal illuminance

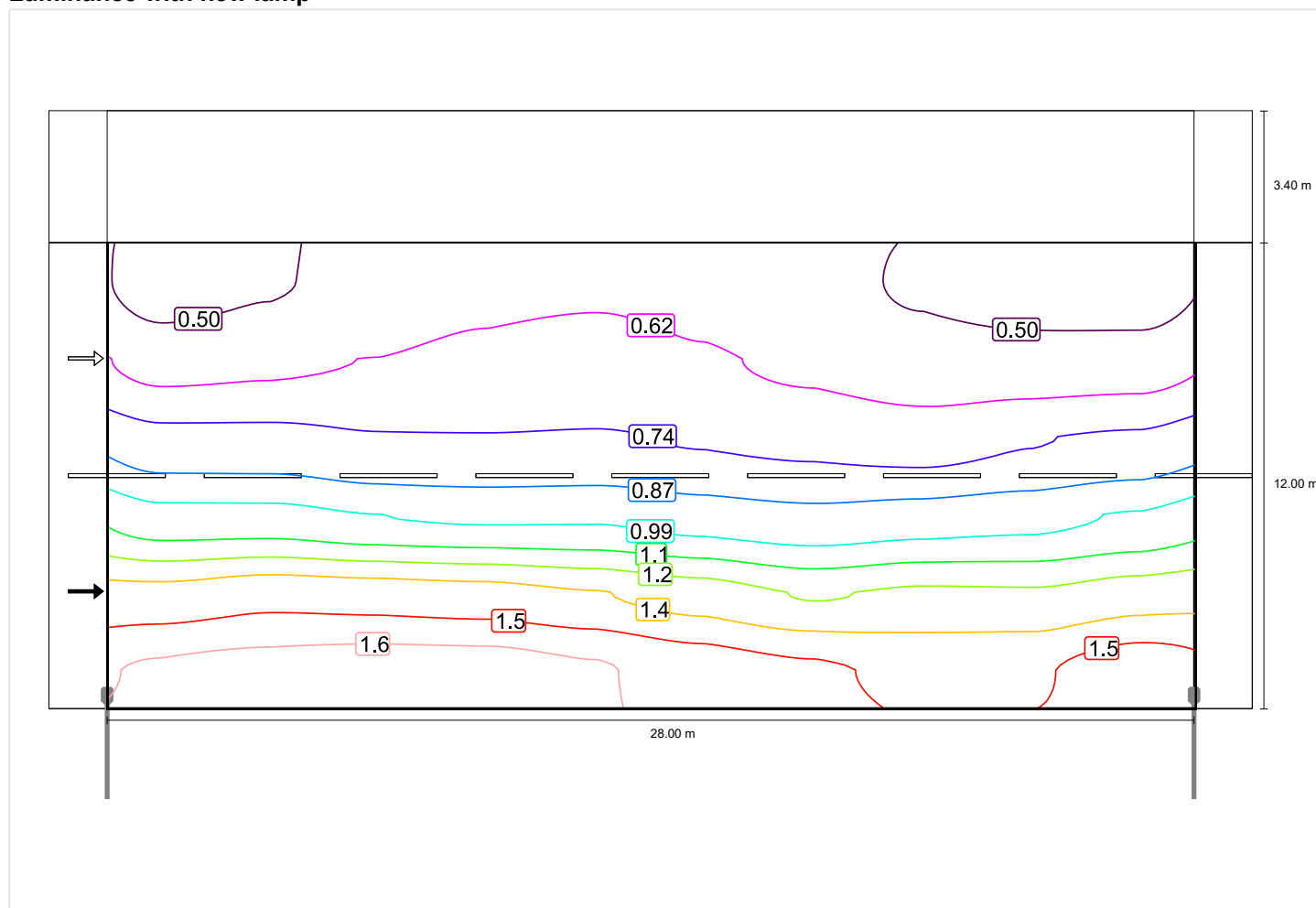


Observer 1

Luminance with dry roadway

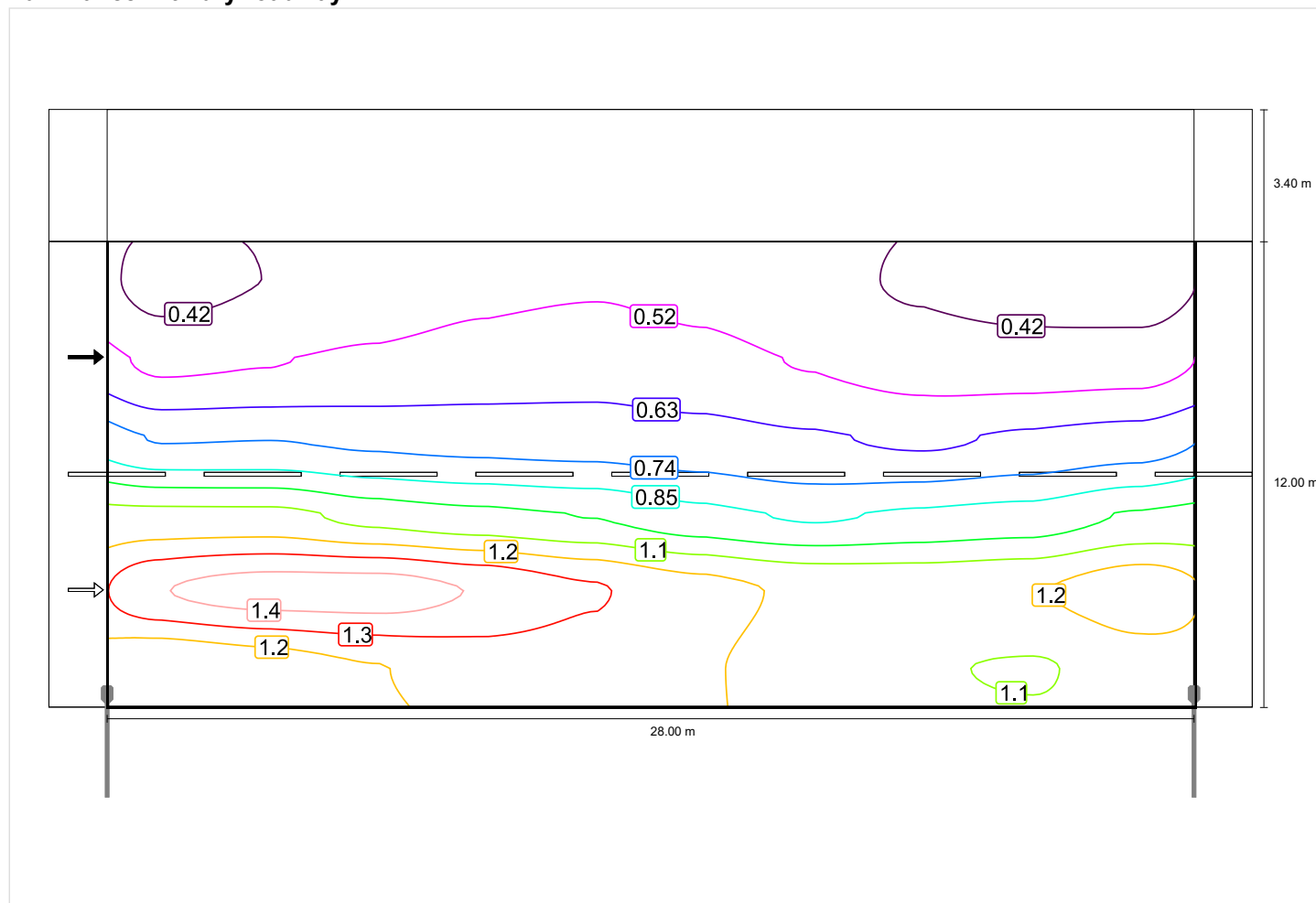


Luminance with new lamp



Observer 2

Luminance with dry roadway



Luminance with new lamp

