

**Riigitee nr 8 km 34,8 - 35,0 ja riigitee nr 11196 km 0,0 - 0,1 ning
bussipeatuste valgustus**

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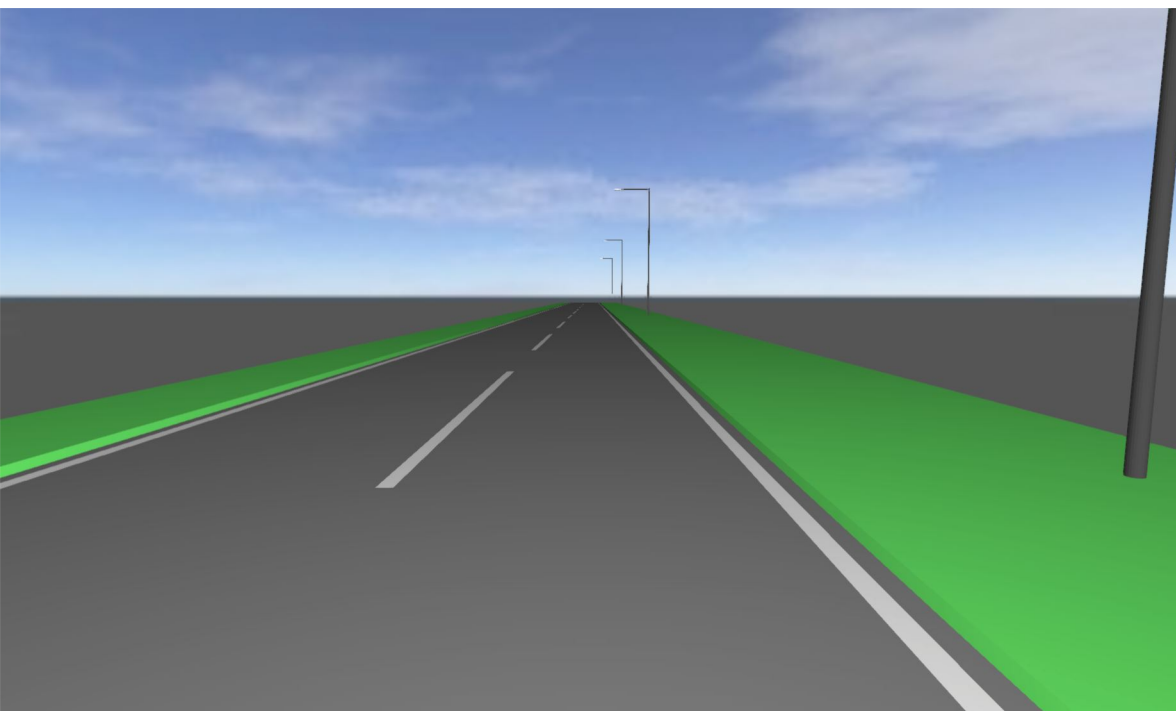
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Product data sheets

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Riigi tee nr 8 · Alternative 1

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Description

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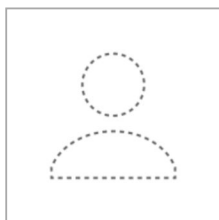
Luminaire list

| | | |
|-----------------------------------|-------------------------------|---------------------------------|
| Φ_{total} 30764 lm | P_{total} 240.0 W | Luminous efficacy 128.2 lm/W |
|-----------------------------------|-------------------------------|---------------------------------|

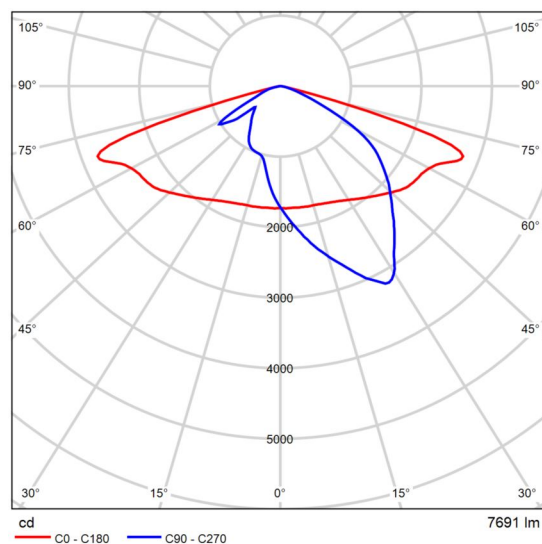
| pcs. | Manufacturer | Article No. | Article name | P | Φ | Luminous efficacy |
|------|-------------------------------|--------------------------------|--------------------------------|--------|---------|-------------------|
| 4 | Not yet a DIALux member | Mini Martin 60 W 32 LEDs | MRS 060 730 V05 F032_Bin-N4_TH | 60.0 W | 7691 lm | 128.2 lm/W |

Product data sheet

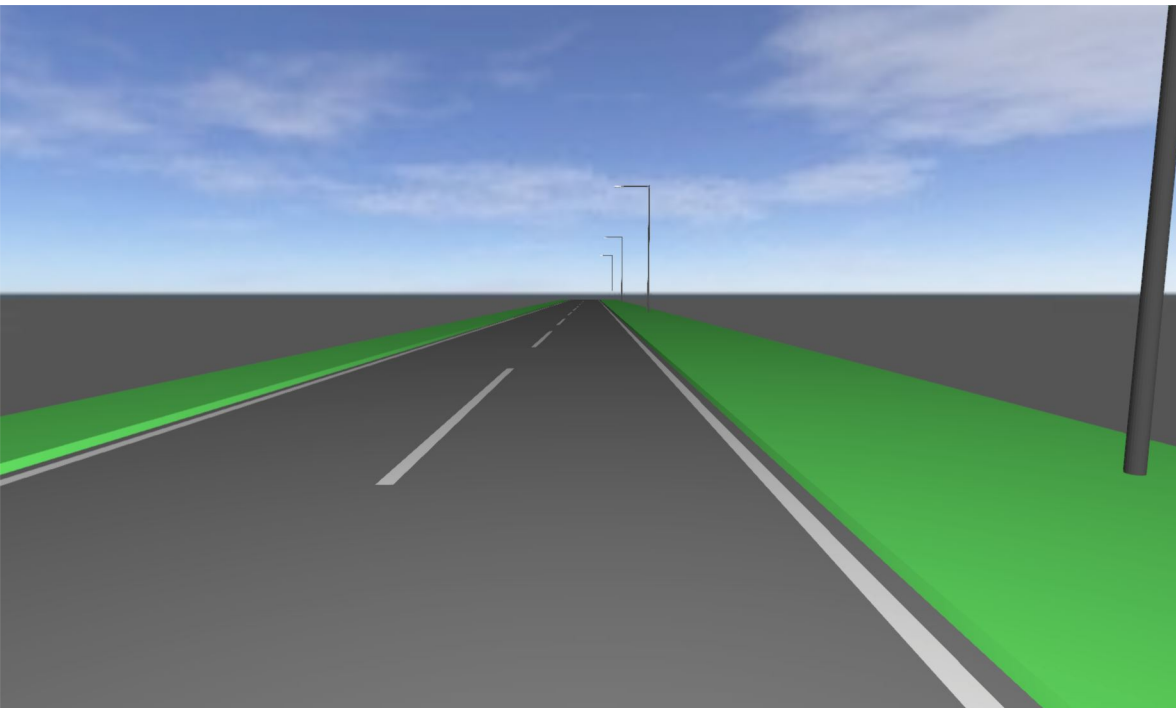
Not yet a DIALux member - MRS 060 730 V05 F032_Bin-N4_TH



| | |
|---------------------------|--------------------------|
| Article No. | Mini Martin 60 W 32 LEDs |
| P | 60.0 W |
| $\Phi_{\text{Luminaire}}$ | 7691 lm |
| Luminous efficacy | 128.2 lm/W |
| CCT | 3000 K |
| CRI | 70 |



Polar LDC

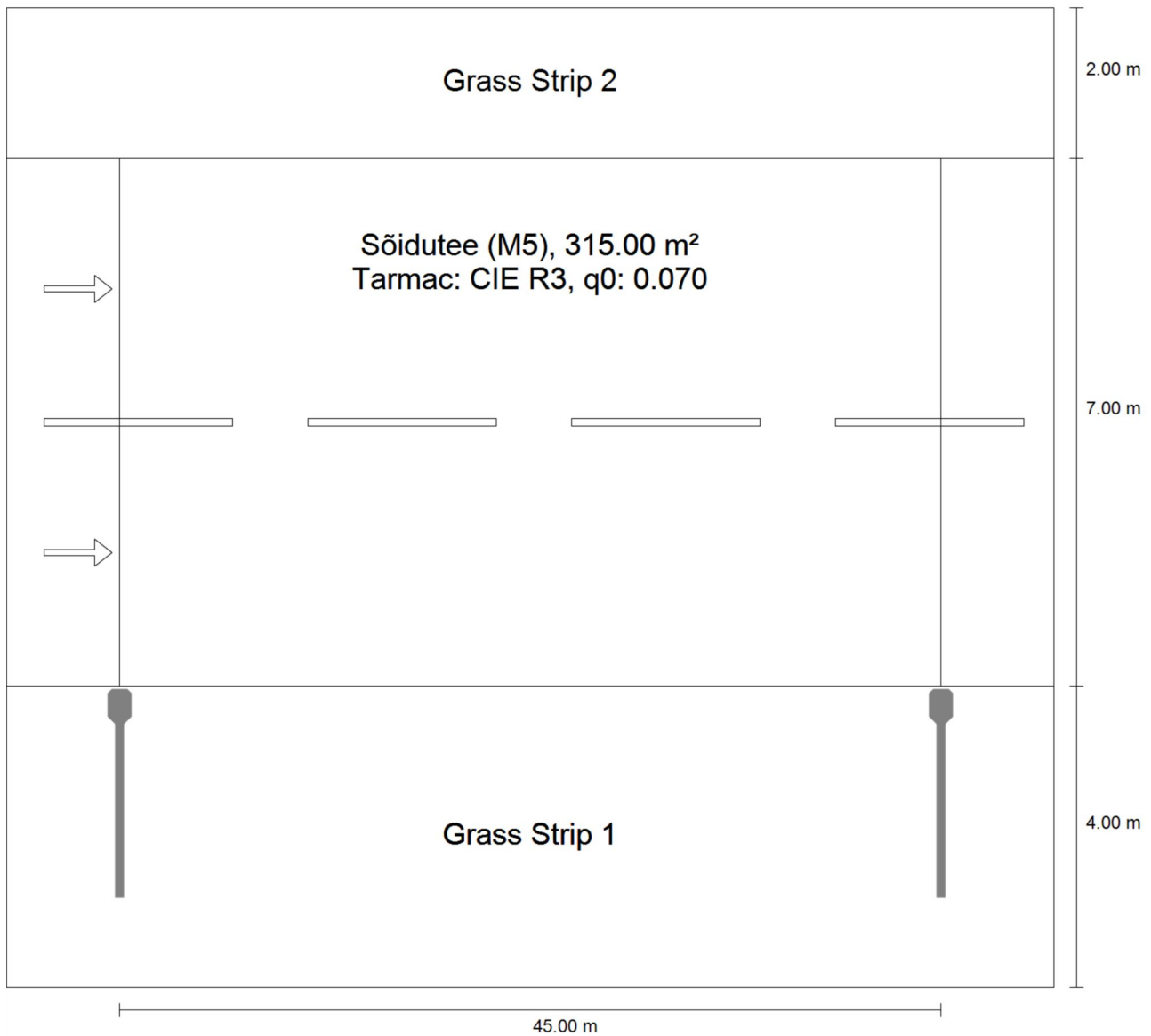


Riigi tee nr 8

Description

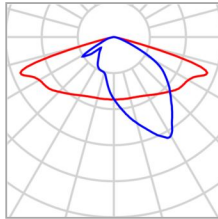
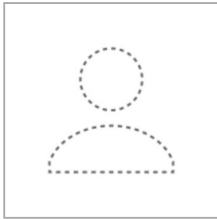
Riigi tee nr 8

Summary (according to EN 13201:2015)



Riigi tee nr 8

Summary (according to EN 13201:2015)



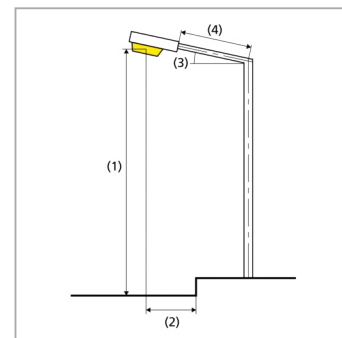
| | | | |
|--------------|-----------------------------------|---------------------------|---------|
| Manufacturer | Not yet a DIALux member | P | 60.0 W |
| Article No. | Mini Martin 60 W 32 LEDs | $\Phi_{\text{Luminaire}}$ | 7691 lm |
| Article name | MRS 060 730 V05 F032_Bin-N4_TH | | |
| Fitting | 1x 32 LEDs bin N4 | | |

Riigi tee nr 8

Summary (according to EN 13201:2015)

MRS 060 730 V05 F032_Bin-N4_TH (single side bottom)

| | |
|--|--|
| Pole distance | 45.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | -0.300 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 2.500 m |
| Annual operating hours | 4000 h: 100.0 %, 60.0 W |
| Consumption | 1320.0 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. | $\geq 70^\circ$: 593 cd/klm $\geq 80^\circ$: 43.2 cd/klm $\geq 90^\circ$: 1.37 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*3 |
| Glare index class | D.5 |
| MF | 0.80 |



Results for valuation fields

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

| | Symbol | Calculated | Target | Check |
|---------------|----------|------------------------|-------------------------------|-------|
| Sõidutee (M5) | L_{av} | 0.51 cd/m ² | ≥ 0.50 cd/m ² | ✓ |
| | U_o | 0.54 | ≥ 0.35 | ✓ |
| | U_l | 0.52 | ≥ 0.40 | ✓ |
| | TI | 11 % | ≤ 15 % | ✓ |
| | R_{EI} | 0.60 | ≥ 0.30 | ✓ |

Riigi tee nr 8

Summary (according to EN 13201:2015)

Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|--------|---------------------------|--------------|
| Riigi tee nr 8 | D_p | 0.022 W/lx*m ² | – |
| MRS 060 730 V05 F032_Bin-N4_TH (single side bottom) | D_e | 0.8 kWh/m ² yr | 240.0 kWh/yr |

Riigi tee nr 8

Sõidutee (M5)

Results for valuation field

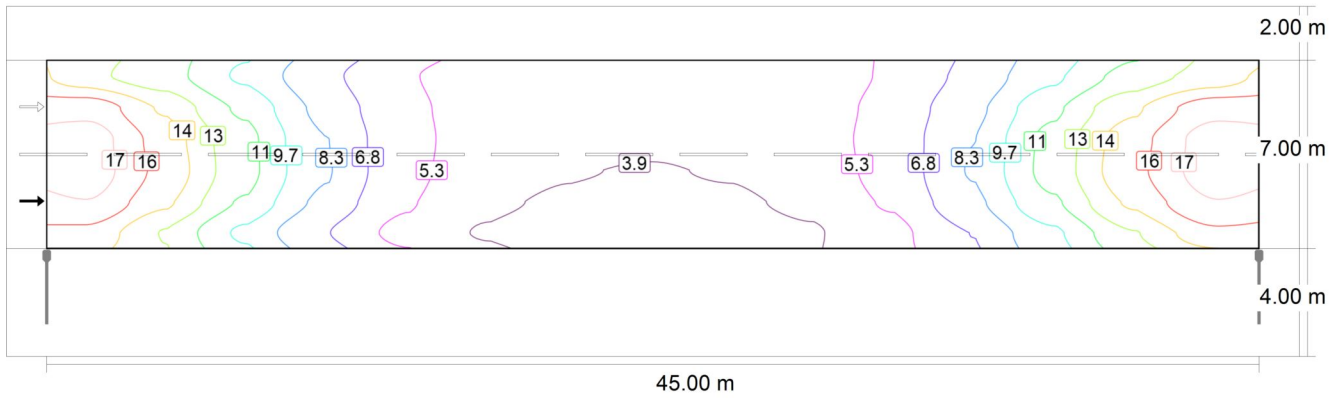
| | Symbol | Calculated | Target | Check |
|---------------|----------|------------------------|-------------------------------|-------|
| Sõidutee (M5) | L_{av} | 0.51 cd/m ² | ≥ 0.50 cd/m ² | ✓ |
| | U_o | 0.54 | ≥ 0.35 | ✓ |
| | U_l | 0.52 | ≥ 0.40 | ✓ |
| | TI | 11 % | ≤ 15 % | ✓ |
| | R_{EI} | 0.60 | ≥ 0.30 | ✓ |

Results for observer

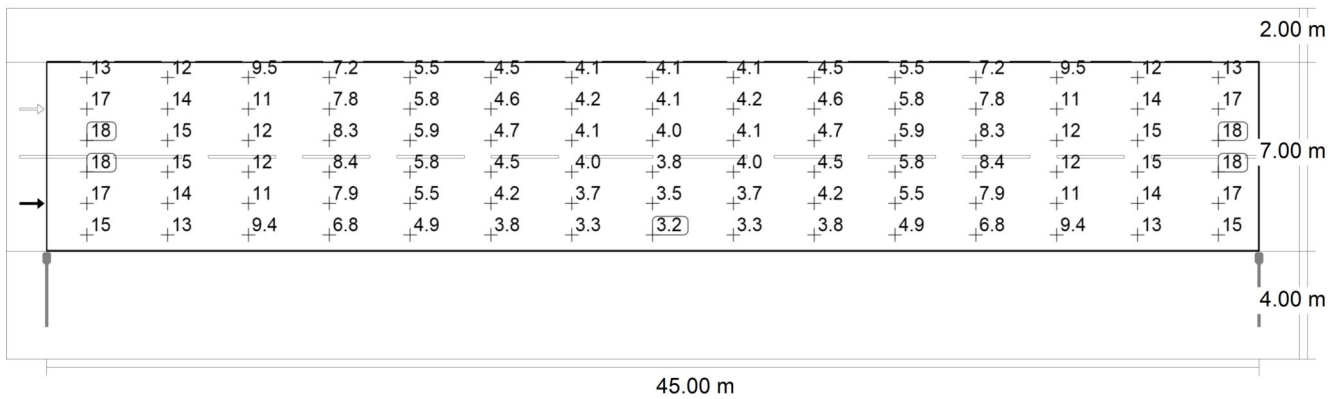
| | Symbol | Calculated | Target | Check |
|--|----------|------------------------|-------------------------------|-------|
| Observer 1 Position: -60.000 m, 5.750 m, 1.500 m | L_{av} | 0.51 cd/m ² | ≥ 0.50 cd/m ² | ✓ |
| | U_o | 0.54 | ≥ 0.35 | ✓ |
| | U_l | 0.52 | ≥ 0.40 | ✓ |
| | TI | 11 % | ≤ 15 % | ✓ |
| | | | | |
| Observer 2 Position: -60.000 m, 9.250 m, 1.500 m | L_{av} | 0.55 cd/m ² | ≥ 0.50 cd/m ² | ✓ |
| | U_o | 0.55 | ≥ 0.35 | ✓ |
| | U_l | 0.64 | ≥ 0.40 | ✓ |
| | TI | 9 % | ≤ 15 % | ✓ |
| | | | | |

Riigi tee nr 8

Sõidutee (M5)



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



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

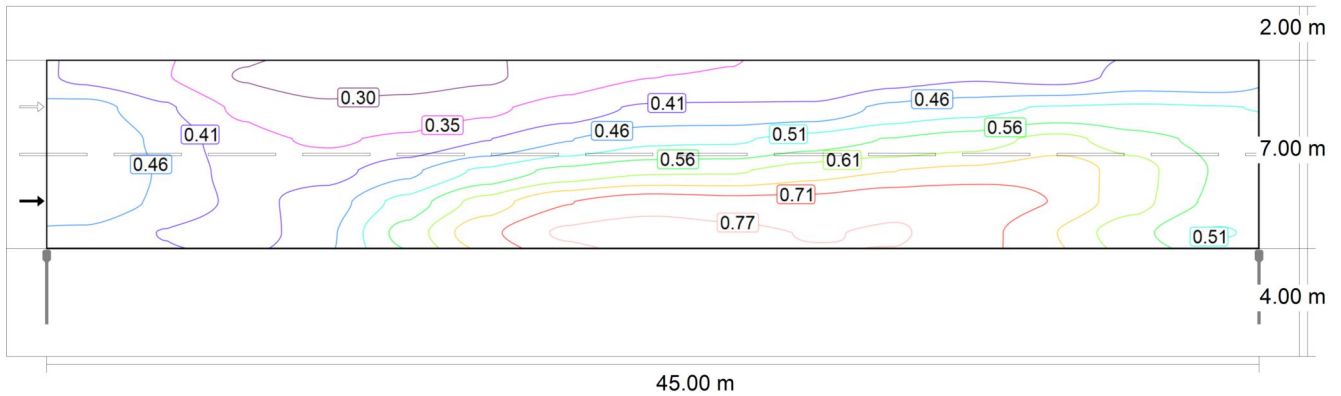
| m | 1.500 | 4.500 | 7.500 | 10.500 | 13.500 | 16.500 | 19.500 | 22.500 | 25.500 | 28.500 | 31.500 | 34.500 | 37.500 | 40.500 | 43.500 |
|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 10.417 | 13.22 | 11.81 | 9.49 | 7.19 | 5.50 | 4.54 | 4.14 | 4.06 | 4.14 | 4.54 | 5.50 | 7.19 | 9.49 | 11.81 | 13.22 |
| 9.250 | 16.57 | 13.91 | 10.90 | 7.85 | 5.76 | 4.64 | 4.18 | 4.07 | 4.18 | 4.64 | 5.76 | 7.85 | 10.90 | 13.91 | 16.57 |
| 8.083 | 17.74 | 14.98 | 11.66 | 8.27 | 5.87 | 4.68 | 4.13 | 4.01 | 4.13 | 4.68 | 5.87 | 8.27 | 11.66 | 14.98 | 17.74 |
| 6.917 | 17.78 | 15.18 | 11.71 | 8.38 | 5.82 | 4.52 | 3.97 | 3.82 | 3.97 | 4.52 | 5.82 | 8.38 | 11.71 | 15.18 | 17.78 |
| 5.750 | 16.98 | 14.40 | 10.98 | 7.89 | 5.52 | 4.20 | 3.66 | 3.54 | 3.66 | 4.20 | 5.52 | 7.89 | 10.98 | 14.40 | 16.98 |
| 4.583 | 15.12 | 12.57 | 9.45 | 6.84 | 4.91 | 3.76 | 3.27 | 3.15 | 3.27 | 3.76 | 4.91 | 6.84 | 9.45 | 12.57 | 15.12 |

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

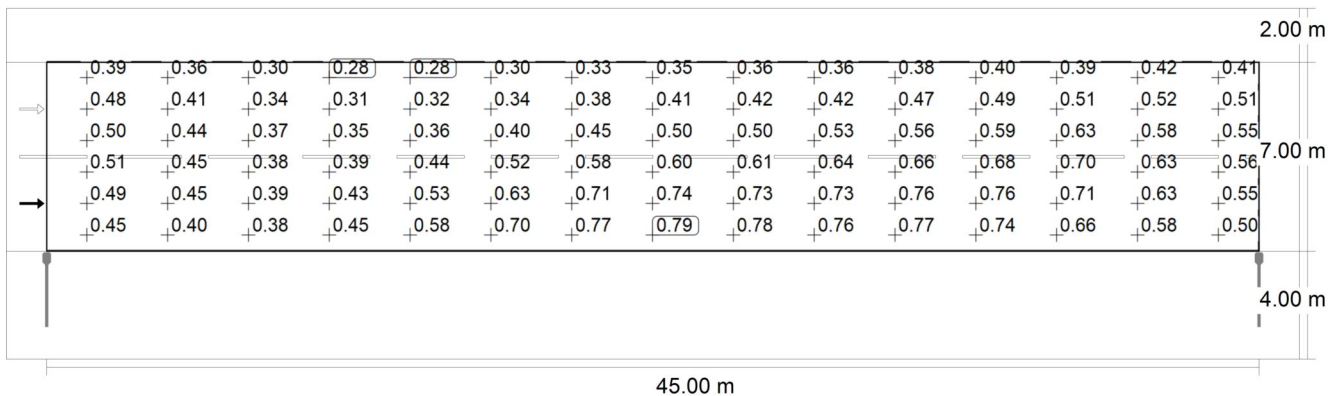
| | E_{av} | E_{min} | E_{max} | g_1 | g_2 |
|---|----------|-----------|-----------|-------|-------|
| Maintenance value, horizontal illuminance | 8.56 lx | 3.15 lx | 17.8 lx | 0.37 | 0.18 |

Riigi tee nr 8

Sõidutee (M5)



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



Observer 1: Maintenance value, luminance with dry roadway [cd/m^2] (Value grid)

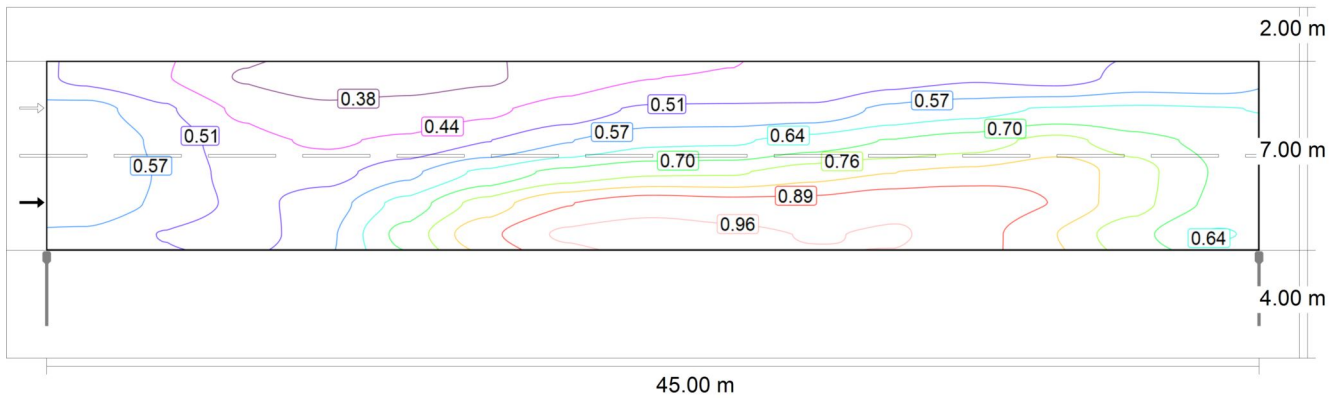
| m | 1.500 | 4.500 | 7.500 | 10.500 | 13.500 | 16.500 | 19.500 | 22.500 | 25.500 | 28.500 | 31.500 | 34.500 | 37.500 | 40.500 | 43.500 |
|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 10.417 | 0.39 | 0.36 | 0.30 | 0.28 | 0.28 | 0.30 | 0.33 | 0.35 | 0.36 | 0.36 | 0.38 | 0.40 | 0.39 | 0.42 | 0.41 |
| 9.250 | 0.48 | 0.41 | 0.34 | 0.31 | 0.32 | 0.34 | 0.38 | 0.41 | 0.42 | 0.42 | 0.47 | 0.49 | 0.51 | 0.52 | 0.51 |
| 8.083 | 0.50 | 0.44 | 0.37 | 0.35 | 0.36 | 0.40 | 0.45 | 0.50 | 0.50 | 0.53 | 0.56 | 0.59 | 0.63 | 0.58 | 0.55 |
| 6.917 | 0.51 | 0.45 | 0.38 | 0.39 | 0.44 | 0.52 | 0.58 | 0.60 | 0.61 | 0.64 | 0.66 | 0.68 | 0.70 | 0.63 | 0.56 |
| 5.750 | 0.49 | 0.45 | 0.39 | 0.43 | 0.53 | 0.63 | 0.71 | 0.74 | 0.73 | 0.73 | 0.76 | 0.76 | 0.71 | 0.63 | 0.55 |
| 4.583 | 0.45 | 0.40 | 0.38 | 0.45 | 0.58 | 0.70 | 0.77 | 0.79 | 0.78 | 0.76 | 0.77 | 0.74 | 0.66 | 0.58 | 0.50 |

Observer 1: Maintenance value, luminance with dry roadway [cd/m^2] (Value chart)

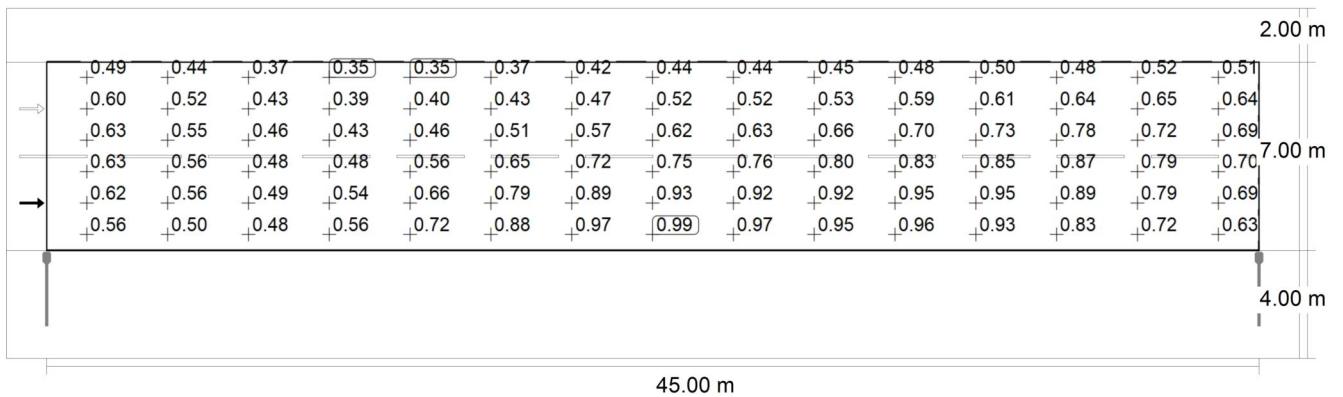
| | L_{av} | L_{min} | L_{max} | g_1 | g_2 |
|---|----------------------|----------------------|----------------------|-------|-------|
| Observer 1: Maintenance value, luminance with dry roadway | 0.51 cd/m^2 | 0.28 cd/m^2 | 0.79 cd/m^2 | 0.54 | 0.35 |

Riigi tee nr 8

Sõidutee (M5)



Observer 1: Luminance with new installation [cd/m^2] (Iso-illuminance curves)



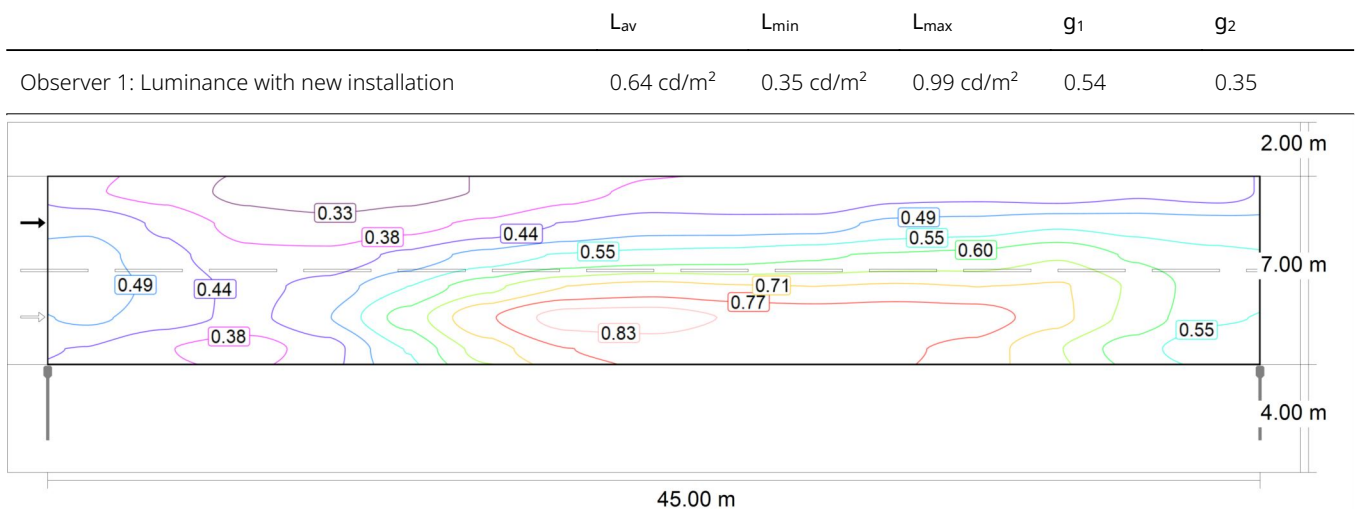
Observer 1: Luminance with new installation [cd/m^2] (Value grid)

Riigi tee nr 8

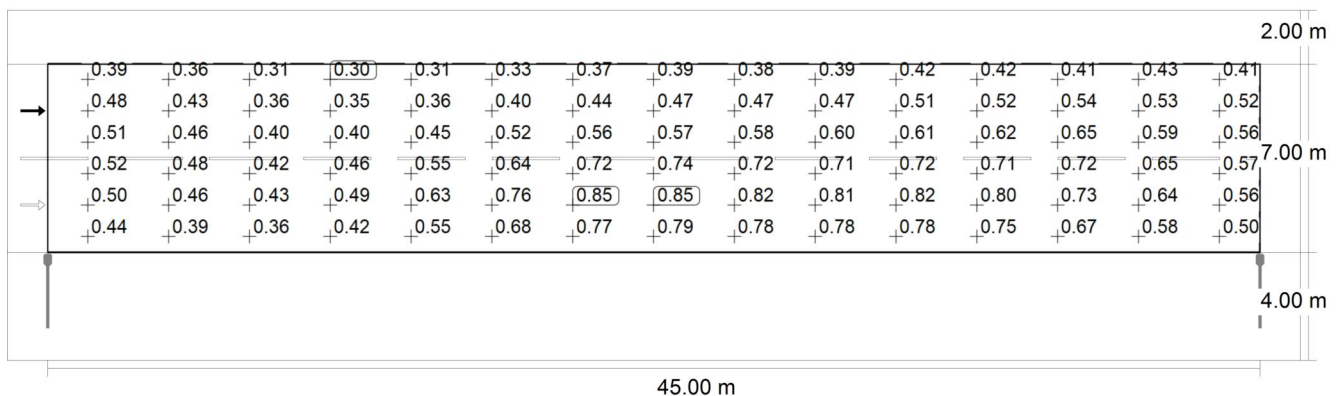
Sõidutee (M5)

| m | 1.500 | 4.500 | 7.500 | 10.500 | 13.500 | 16.500 | 19.500 | 22.500 | 25.500 | 28.500 | 31.500 | 34.500 | 37.500 | 40.500 | 43.500 |
|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 10.417 | 0.49 | 0.44 | 0.37 | 0.35 | 0.35 | 0.37 | 0.42 | 0.44 | 0.44 | 0.45 | 0.48 | 0.50 | 0.48 | 0.52 | 0.51 |
| 9.250 | 0.60 | 0.52 | 0.43 | 0.39 | 0.40 | 0.43 | 0.47 | 0.52 | 0.52 | 0.53 | 0.59 | 0.61 | 0.64 | 0.65 | 0.64 |
| 8.083 | 0.63 | 0.55 | 0.46 | 0.43 | 0.46 | 0.51 | 0.57 | 0.62 | 0.63 | 0.66 | 0.70 | 0.73 | 0.78 | 0.72 | 0.69 |
| 6.917 | 0.63 | 0.56 | 0.48 | 0.48 | 0.56 | 0.65 | 0.72 | 0.75 | 0.76 | 0.80 | 0.83 | 0.85 | 0.87 | 0.79 | 0.70 |
| 5.750 | 0.62 | 0.56 | 0.49 | 0.54 | 0.66 | 0.79 | 0.89 | 0.93 | 0.92 | 0.92 | 0.95 | 0.95 | 0.89 | 0.79 | 0.69 |
| 4.583 | 0.56 | 0.50 | 0.48 | 0.56 | 0.72 | 0.88 | 0.97 | 0.99 | 0.97 | 0.95 | 0.96 | 0.93 | 0.83 | 0.72 | 0.63 |

Observer 1: Luminance with new installation [cd/m^2] (Value chart)



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



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

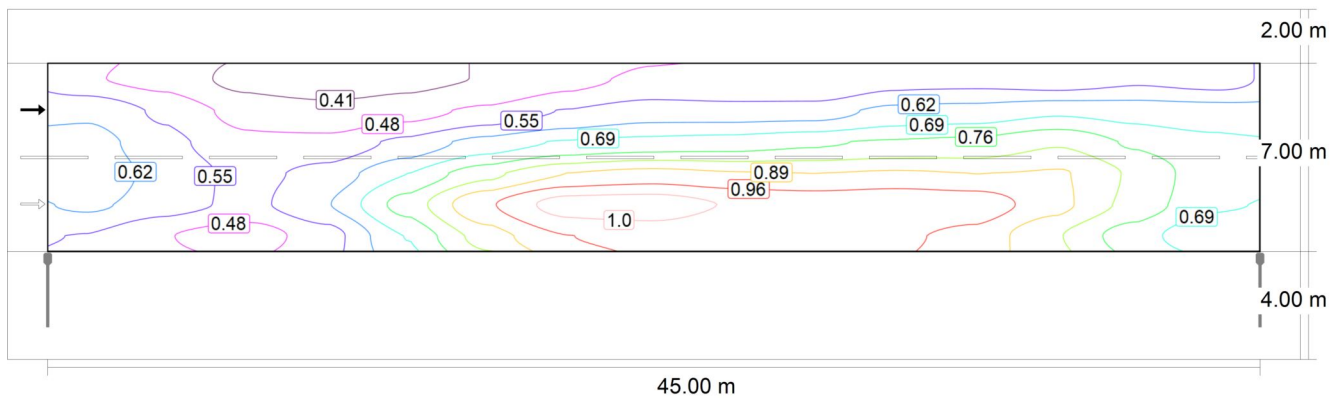
Riigi tee nr 8

Sõidutee (M5)

| m | 1.500 | 4.500 | 7.500 | 10.500 | 13.500 | 16.500 | 19.500 | 22.500 | 25.500 | 28.500 | 31.500 | 34.500 | 37.500 | 40.500 | 43.500 |
|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 10.417 | 0.39 | 0.36 | 0.31 | 0.30 | 0.31 | 0.33 | 0.37 | 0.39 | 0.38 | 0.39 | 0.42 | 0.42 | 0.41 | 0.43 | 0.41 |
| 9.250 | 0.48 | 0.43 | 0.36 | 0.35 | 0.36 | 0.40 | 0.44 | 0.47 | 0.47 | 0.47 | 0.51 | 0.52 | 0.54 | 0.53 | 0.52 |
| 8.083 | 0.51 | 0.46 | 0.40 | 0.40 | 0.45 | 0.52 | 0.56 | 0.57 | 0.58 | 0.60 | 0.61 | 0.62 | 0.65 | 0.59 | 0.56 |
| 6.917 | 0.52 | 0.48 | 0.42 | 0.46 | 0.55 | 0.64 | 0.72 | 0.74 | 0.72 | 0.71 | 0.72 | 0.71 | 0.72 | 0.65 | 0.57 |
| 5.750 | 0.50 | 0.46 | 0.43 | 0.49 | 0.63 | 0.76 | 0.85 | 0.85 | 0.82 | 0.81 | 0.82 | 0.80 | 0.73 | 0.64 | 0.56 |
| 4.583 | 0.44 | 0.39 | 0.36 | 0.42 | 0.55 | 0.68 | 0.77 | 0.79 | 0.78 | 0.78 | 0.78 | 0.75 | 0.67 | 0.58 | 0.50 |

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

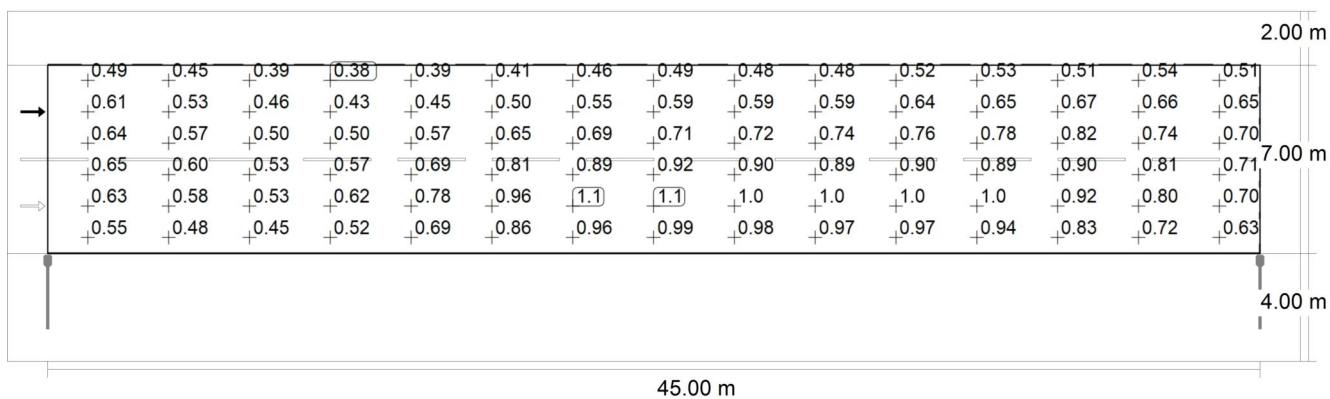
| | L_{av} | L_{min} | L_{max} | g_1 | g_2 |
|---|-----------------------------|-----------------------------|-----------------------------|-------|-------|
| Observer 2: Maintenance value, luminance with dry roadway | 0.55 cd/m^2 | 0.30 cd/m^2 | 0.85 cd/m^2 | 0.55 | 0.35 |



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

Riigi tee nr 8

Sõidutee (M5)



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

| m | 1.500 | 4.500 | 7.500 | 10.500 | 13.500 | 16.500 | 19.500 | 22.500 | 25.500 | 28.500 | 31.500 | 34.500 | 37.500 | 40.500 | 43.500 |
|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 10.417 | 0.49 | 0.45 | 0.39 | 0.38 | 0.39 | 0.41 | 0.46 | 0.49 | 0.48 | 0.48 | 0.52 | 0.53 | 0.51 | 0.54 | 0.51 |
| 9.250 | 0.61 | 0.53 | 0.46 | 0.43 | 0.45 | 0.50 | 0.55 | 0.59 | 0.59 | 0.59 | 0.64 | 0.65 | 0.67 | 0.66 | 0.65 |
| 8.083 | 0.64 | 0.57 | 0.50 | 0.50 | 0.57 | 0.65 | 0.69 | 0.71 | 0.72 | 0.74 | 0.76 | 0.78 | 0.82 | 0.74 | 0.70 |
| 6.917 | 0.65 | 0.60 | 0.53 | 0.57 | 0.69 | 0.81 | 0.89 | 0.92 | 0.90 | 0.89 | 0.90 | 0.89 | 0.90 | 0.81 | 0.71 |
| 5.750 | 0.63 | 0.58 | 0.53 | 0.62 | 0.78 | 0.96 | 1.06 | 1.07 | 1.03 | 1.01 | 1.02 | 1.01 | 0.92 | 0.80 | 0.70 |
| 4.583 | 0.55 | 0.48 | 0.45 | 0.52 | 0.69 | 0.86 | 0.96 | 0.99 | 0.98 | 0.97 | 0.97 | 0.94 | 0.83 | 0.72 | 0.63 |

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

| | L _{av} | L _{min} | L _{max} | g ₁ | g ₂ |
|---|-----------------|------------------|------------------|----------------|----------------|
| Observer 2: Luminance with new installation | 0.68 cd/m² | 0.38 cd/m² | 1.07 cd/m² | 0.55 | 0.35 |