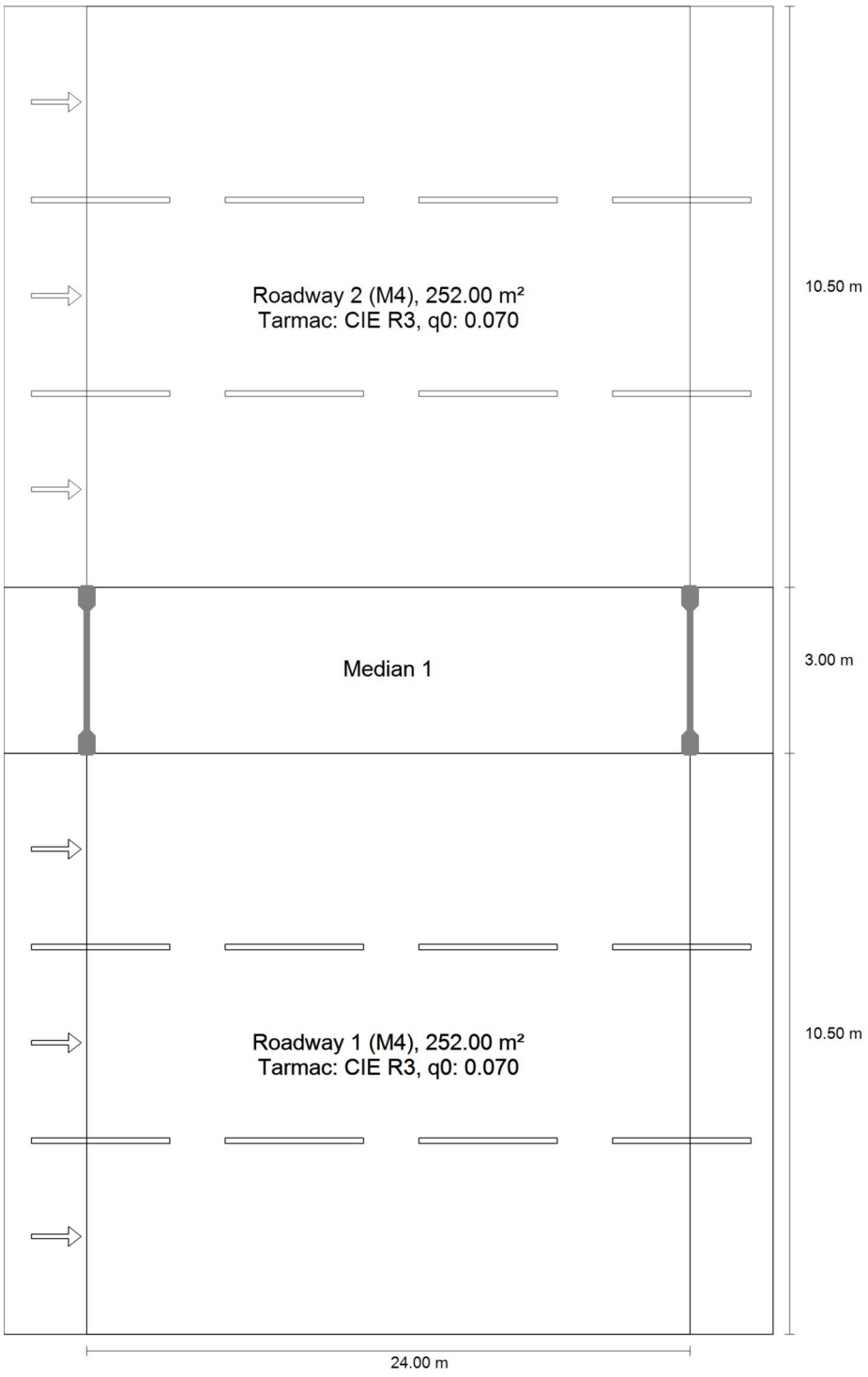
**Date** 07.04.2021

# Klaipėda

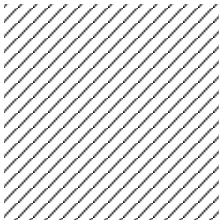
1. H. Manto g. atkarpa prie geležinkelio tilto · Alternative 1

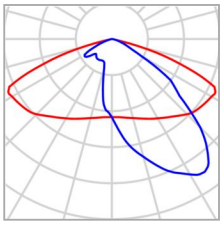
## Summary (according to EN 13201:2015)



1. H. Manto g. atkarpa prie geležinkelio tilto · Alternative 1

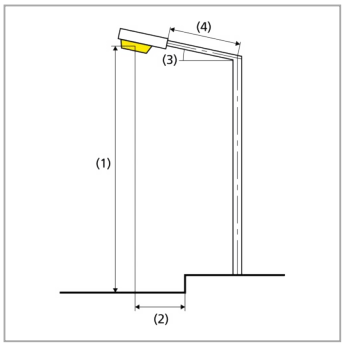
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (Median, 2 per pole)




| | |
|---|---|
| Pole distance | 24.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | -0.215 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.285 m |
| Annual operating hours | 4000 h: 100.0 %, 98.0 W |
| Consumption | 4116.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

1. H. Manto g. atkarpa prie geležinkelio tilto · Alternative 1

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.92 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.41 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.90 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.49 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.92 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.41 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.90 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.49 | ≥ 0.30 | ✓ |

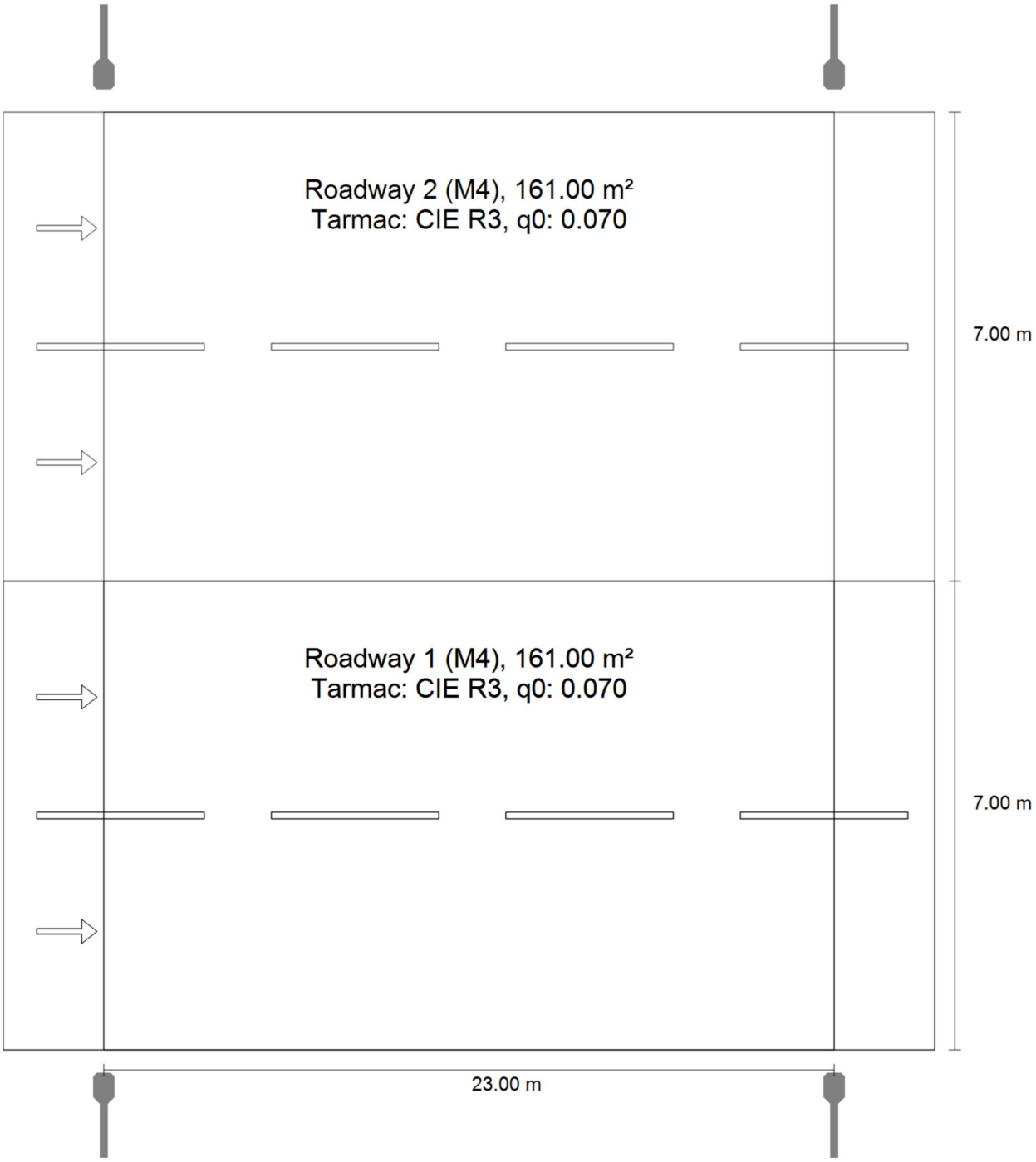
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 1. H. Manto g. atkarpa prie geležinkelio tilto | $D_p$ | 0.011 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (Median) | $D_e$ | 0.8 kWh/m² yr, | 392.0 kWh/yr |

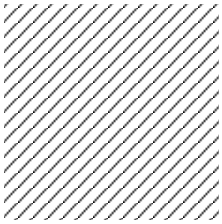
2. H. Manto g. atkarpa prie Įgulos gatvės · Alternative 2

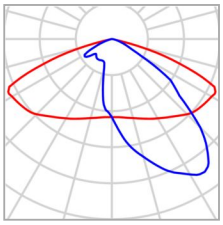
## Summary (according to EN 13201:2015)



2. H. Manto g. atkarpa prie Įgulos gatvės · Alternative 2

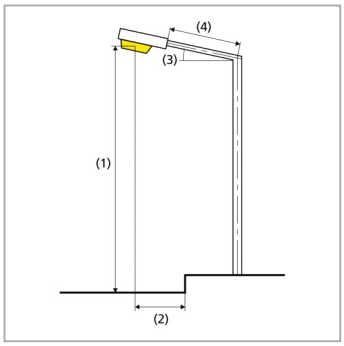
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides opposite)




| | |
|---|---|
| Pole distance | 23.000 m |
| (1) Light spot height | 20.000 m |
| (2) Light point overhang | -0.600 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 4214.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

2. H. Manto g. atkarpa prie Įgulos gatvės · Alternative 2

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 1.01 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.88 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.95 | ≥ 0.60 | ✓ |
| | TI | 2 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.78 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 1.01 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.88 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.95 | ≥ 0.60 | ✓ |
| | TI | 2 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.78 | ≥ 0.30 | ✓ |

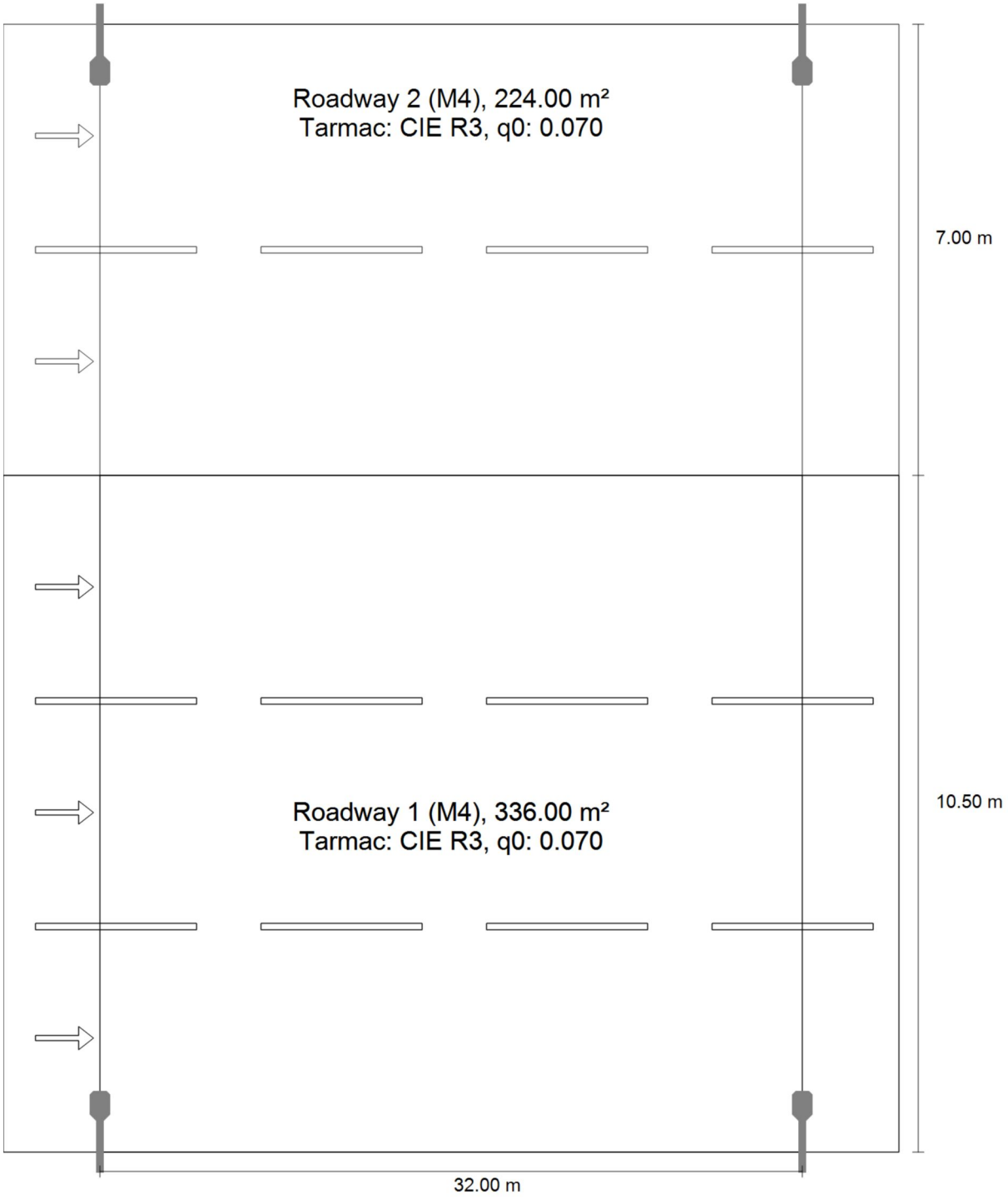
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 2. H. Manto g. atkarpa prie Įgulos gatvės | $D_p$ | 0.017 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides opposite) | $D_e$ | 1.2 kWh/m² yr, | 392.0 kWh/yr |

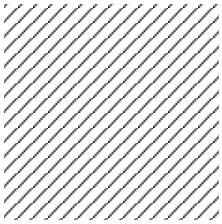
3. H. Manto g. prie Klaipėdos universiteto · Alternative 3

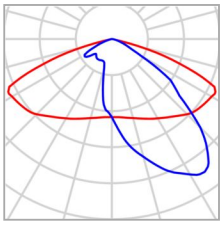
## Summary (according to EN 13201:2015)



3. H. Manto g. prie Klaipėdos universiteto · Alternative 3

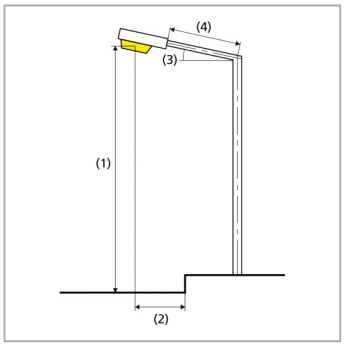
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides opposite)




| | |
|---|---|
| Pole distance | 32.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.686 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 3038.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

3. H. Manto g. prie Klaipėdos universiteto · Alternative 3

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.90 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.66 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.78 | ≥ 0.60 | ✓ |
| | TI | 5 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.46 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.92 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.59 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.78 | ≥ 0.60 | ✓ |
| | TI | 5 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.46 | ≥ 0.30 | ✓ |

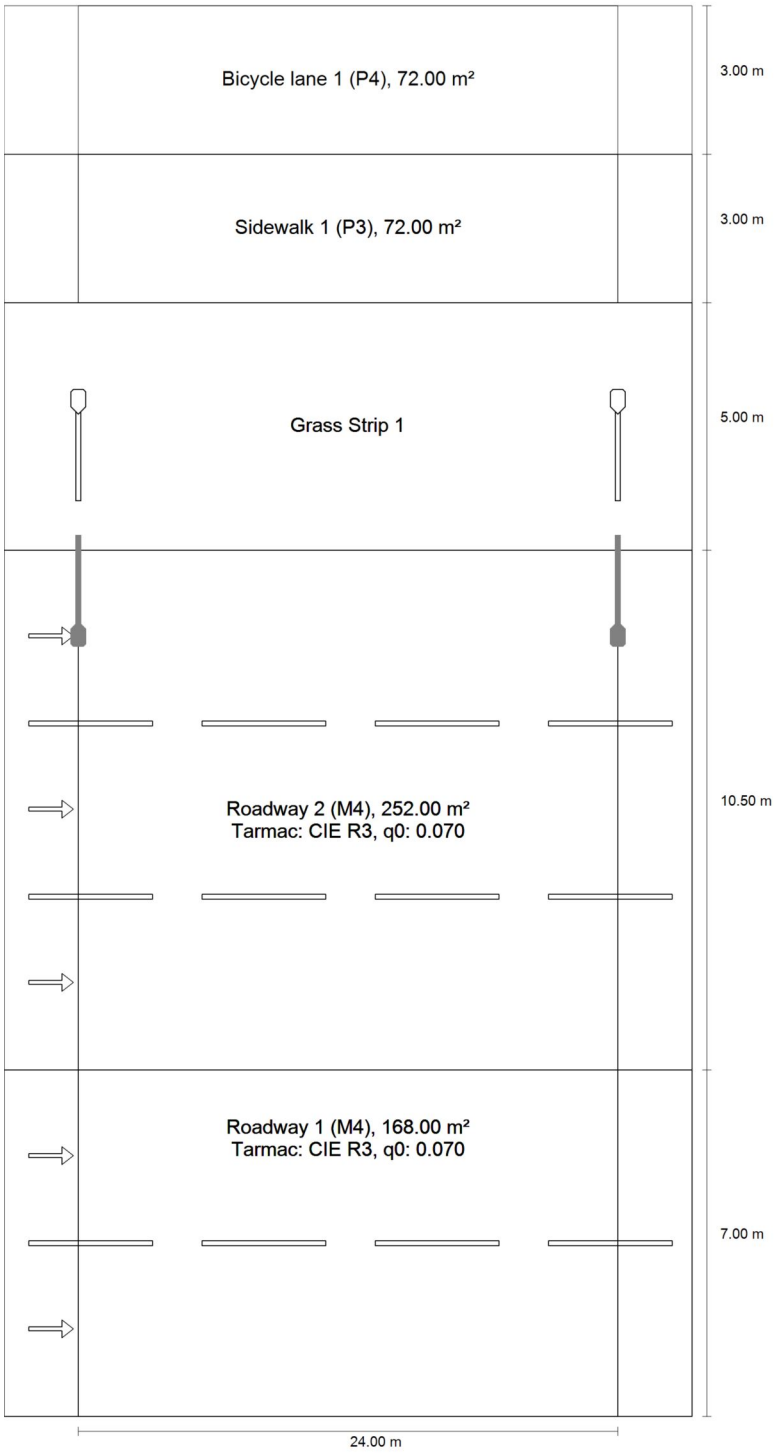
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 3. H. Manto g. prie Klaipėdos universiteto | $D_p$ | 0.010 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides opposite) | $D_e$ | 0.7 kWh/m² yr, | 392.0 kWh/yr |

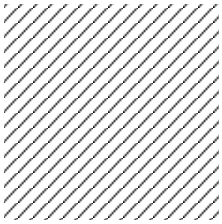
4. H. Manto g. prie PC "Studlendas" · Alternative 4

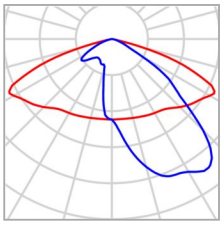
# Summary (according to EN 13201:2015)



4. H. Manto g. prie PC "Studlendas" · Alternative 4

# Summary (according to EN 13201:2015)

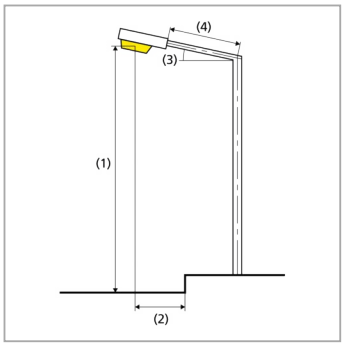




| | | | |
|---|---|---|---|
| Manufacturer | LUG LIGHT FACTORY | P | 95.0 W |
| Article name | URBINO LED 95W 14300lm 740 O73 | $\Phi_{Lamp}$ | 14300 lm |
| Fitting | 1x LED 4000K | $\Phi_{Luminaire}$ | 14300 lm |
| | | η | 100.00 % |

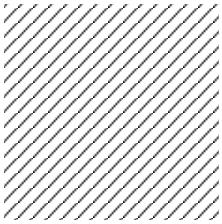
## URBINO LED 95W 14300lm 740 O73 (single side top)

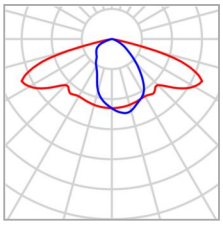
| | |
|---|---|
| Pole distance | 24.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 1.686 m |
| (3) Boom inclination | 10.0° |
| (4) Boom length | 2.000 m |
| Annual operating hours | 4000 h: 100.0 %, 95.0 W |
| Consumption | 3990.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 465 cd/klm<br>≥ 80°: 179 cd/klm<br>≥ 90°: 12.0 cd/klm |
| Luminous intensity class<br>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*1 |
| Glare index class | D.5 |



4. H. Manto g. prie PC "Studlendas" · Alternative 4

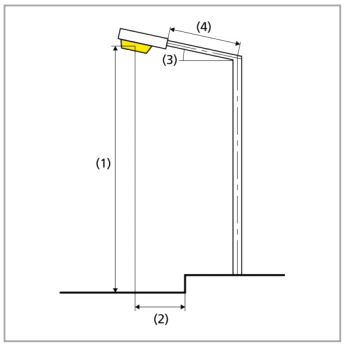
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 18.0 W |
| Article name | URBINO LED 18W 2600lm 740 O39 | $\Phi_{Luminaire}$ | 2599 lm |
| Fitting | 1x LED | | |

## URBINO LED 18W 2600lm 740 O39 (single side bottom)




| | |
|---|---|
| Pole distance | 24.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 20.500 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 2.000 m |
| Annual operating hours | 4000 h: 100.0 %, 18.0 W |
| Consumption | 756.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 460 cd/klm<br>≥ 80°: 30.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*4 |
| Glare index class | D.6 |

4. H. Manto g. prie PC "Studlendas" · Alternative 4

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Bicycle lane 1 (P4) | $E_{av}$ | 5.97 lx | [5.00 - 7.50] lx | ✓ |
| | $E_{min}$ | 3.51 lx | ≥ 1.00 lx | ✓ |
| Sidewalk 1 (P3) | $E_{av}$ | 8.75 lx | [7.50 - 11.25] lx | ✓ |
| | $E_{min}$ | 5.51 lx | ≥ 1.50 lx | ✓ |
| Roadway 2 (M4) | $L_{av}$ | 1.34 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.63 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.88 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.61 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.75 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.60 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.91 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.56 | ≥ 0.30 | ✓ |

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

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LUG Light Factory Sp. z o.o. Centrala: 65-127 Zielona Góra, ul. Gorzowska 11 | tel. +48 68 453 32 00, e-mail: lug@lug.com.pl

4. H. Manto g. prie PC "Studlendas" · Alternative 4

# Summary (according to EN 13201:2015)

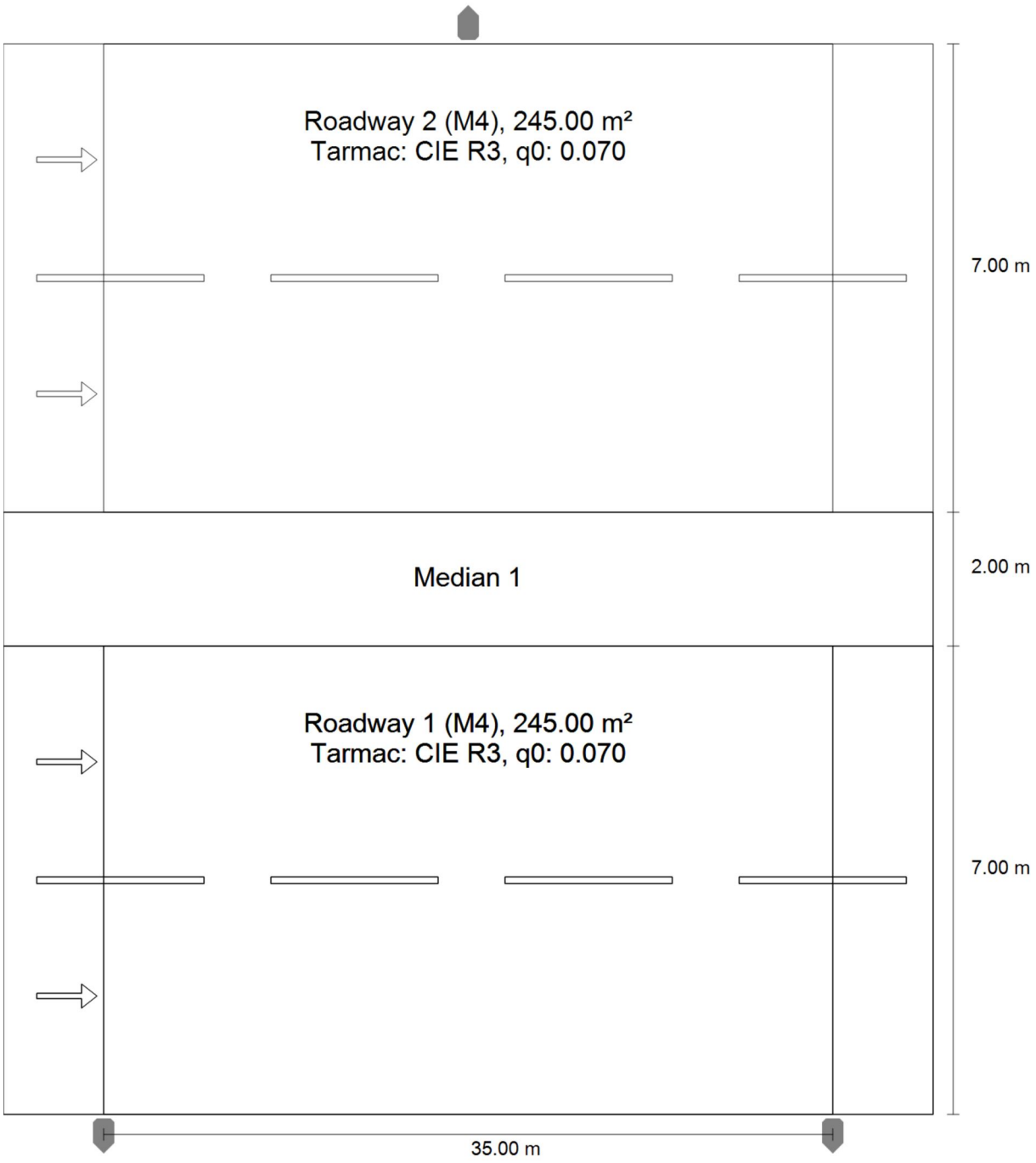
## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 4. H. Manto g. prie PC "Studlendas" | $D_p$ | 0.002 W/lx*m² | - |
| URBINO LED 95W 14300lm 740 O73 (single side top) | $D_e$ | 0.7 kWh/m² yr, | 380.0 kWh/yr |
| URBINO LED 18W 2600lm 740 O39 (single side bottom) | $D_e$ | 0.1 kWh/m² yr, | 72.0 kWh/yr |

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

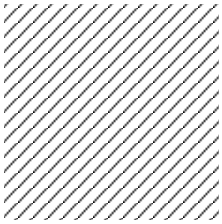
5. Liepų g. prie Danės upės (prie tilto) · Alternative 5

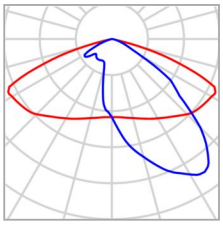
## Summary (according to EN 13201:2015)



5. Liepų g. prie Danės upės (prie tilto) · Alternative 5

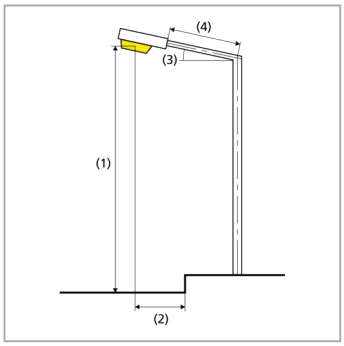
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides offset)




| | |
|---|---|
| Pole distance | 35.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | -0.315 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 0.001 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 2842.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

5. Liepų g. prie Danės upės (prie tilto) · Alternative 5

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.83 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.81 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.77 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.54 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.83 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.80 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.77 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.54 | ≥ 0.30 | ✓ |

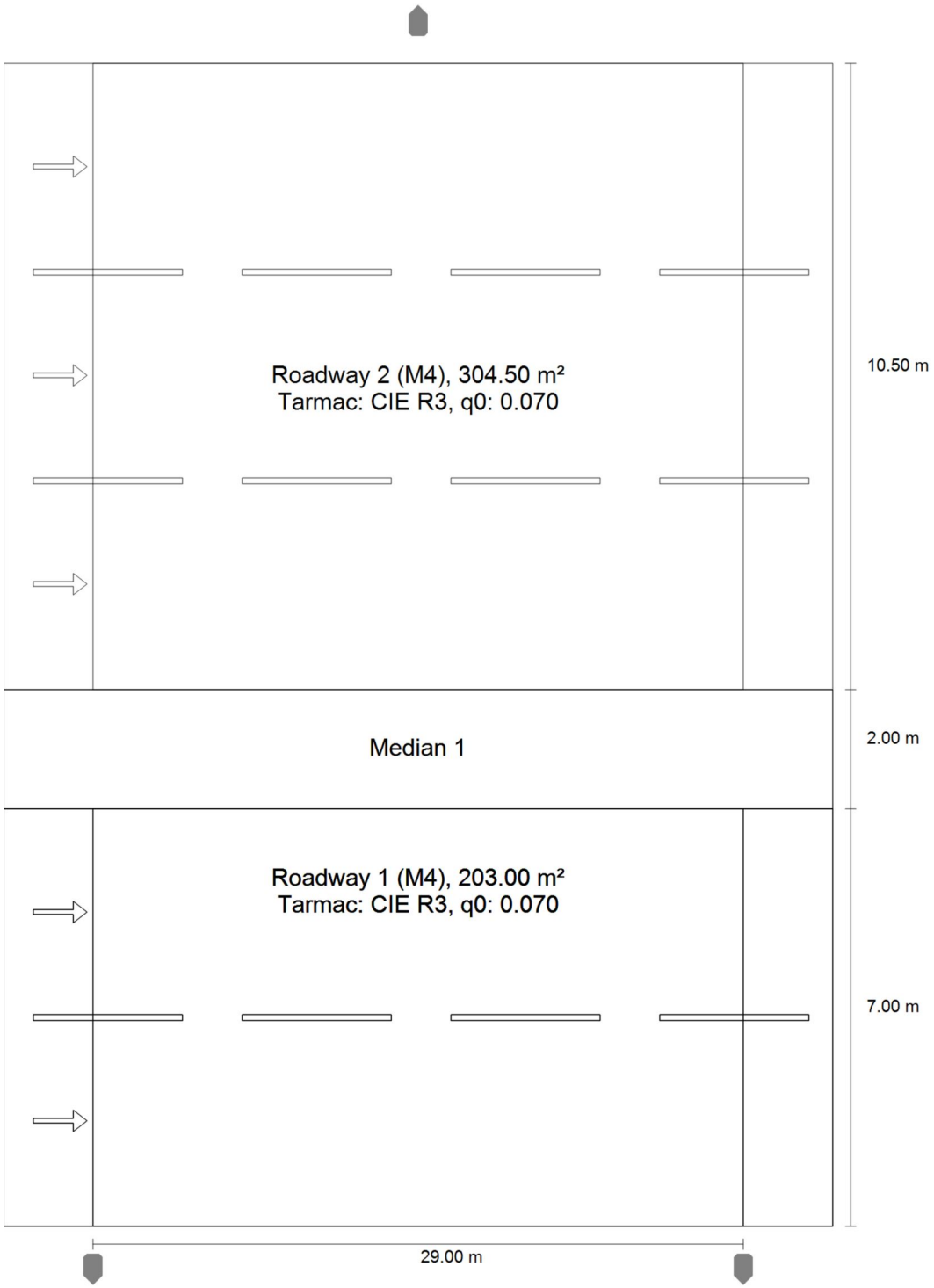
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 5. Liepų g. prie Danės upės (prie tilto) | $D_p$ | 0.013 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides offset) | $D_e$ | 0.8 kWh/m² yr, | 392.0 kWh/yr |

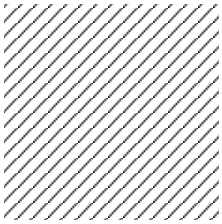
6. Liepu g prie ESO ir Prekybos Centro · Alternative 6

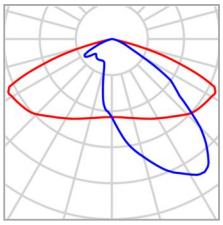
## Summary (according to EN 13201:2015)



6. Liepu g prie ESO ir Prekybos Centro · Alternative 6

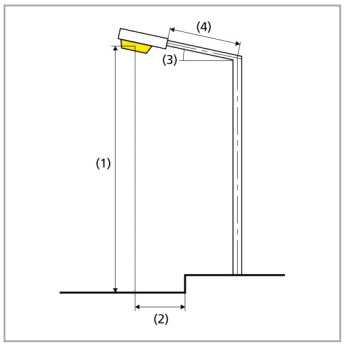
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides offset)




| | |
|---|---|
| Pole distance | 29.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | -0.715 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 0.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 3332.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

6. Liepu g prie ESO ir Prekybos Centro · Alternative 6

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Jezdnia 2 (M4) | $L_{av}$ | 0.80 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.71 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.83 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.60 | ≥ 0.30 | ✓ |
| Jezdnia 1 (M4) | $L_{av}$ | 0.86 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.72 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.83 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.60 | ≥ 0.30 | ✓ |

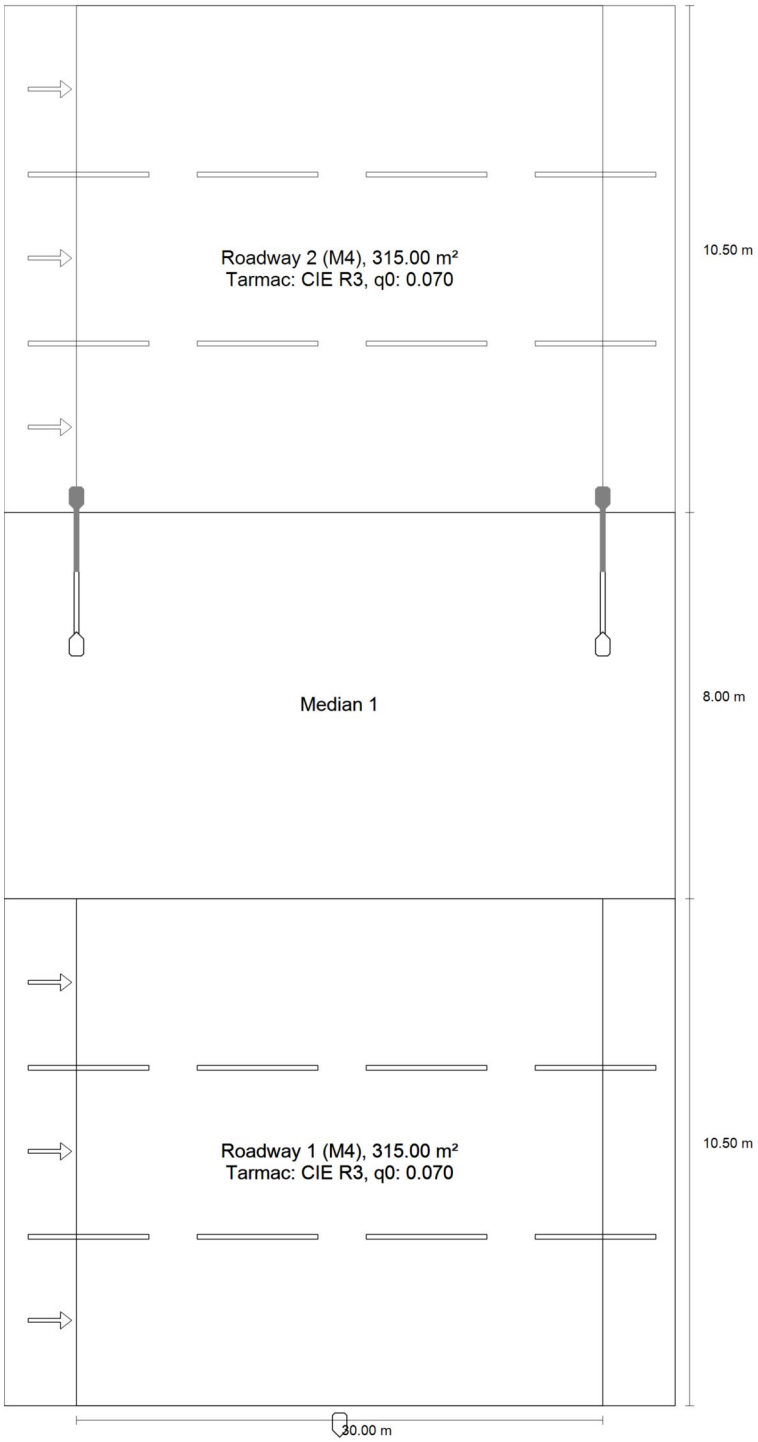
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 6. Liepu g prie ESO ir Prekybos Centro | $D_p$ | 0.012 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides offset) | $D_e$ | 0.8 kWh/m² yr, | 392.0 kWh/yr |

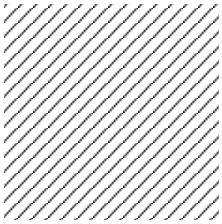
7. Liepu g prie Viaduko st. · Alternative 7

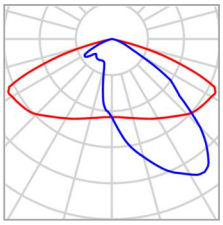
## Summary (according to EN 13201:2015)



7. Liepu g prie Viaduko st. · Alternative 7

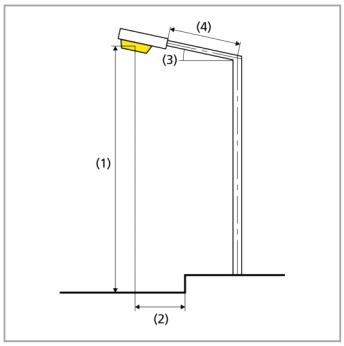
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

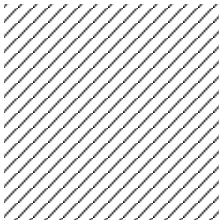
## URBINO LED 49W 7850lm 740 O33 (single side bottom)

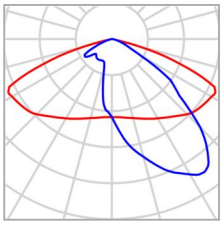



| | |
|---|---|
| Pole distance | 30.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 18.785 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.500 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 1617.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

7. Liepu g prie Viaduko st. · Alternative 7

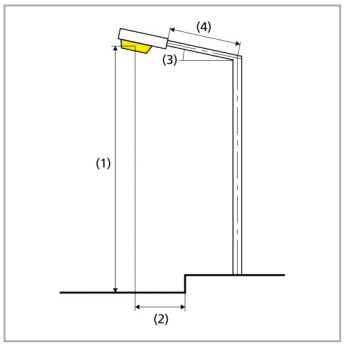
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

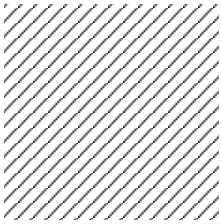
## URBINO LED 49W 7850lm 740 O33 (single side bottom)

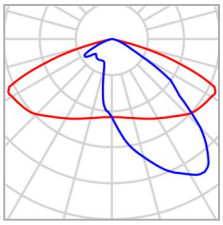



| | |
|---|---|
| Pole distance | 30.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 18.785 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.500 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 1617.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

7. Liepu g prie Viaduko st. · Alternative 7

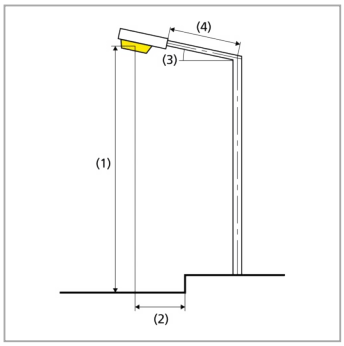
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (single side bottom)




| | |
|---|---|
| Pole distance | 30.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | -0.400 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 0.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 1617.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

7. Liepu g prie Viaduko st. · Alternative 7

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Jezdnia 2 (M4) | $L_{av}$ | 0.78 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.44 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.81 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.50 | ≥ 0.30 | ✓ |
| Jezdnia 1 (M4) | $L_{av}$ | 1.05 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.80 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.83 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.50 | ≥ 0.30 | ✓ |

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

7. Liepu g prie Viaduko st. · Alternative 7

# Summary (according to EN 13201:2015)

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 7. Liepu g prie Viaduko st. | $D_p$ | 0.004 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (single side bottom) | $D_e$ | 0.3 kWh/m² yr, | 196.0 kWh/yr |
| URBINO LED 49W 7850lm 740 O33 (single side bottom) | $D_e$ | 0.3 kWh/m² yr, | 196.0 kWh/yr |
| URBINO LED 49W 7850lm 740 O33 (single side bottom) | $D_e$ | 0.3 kWh/m² yr, | 196.0 kWh/yr |

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

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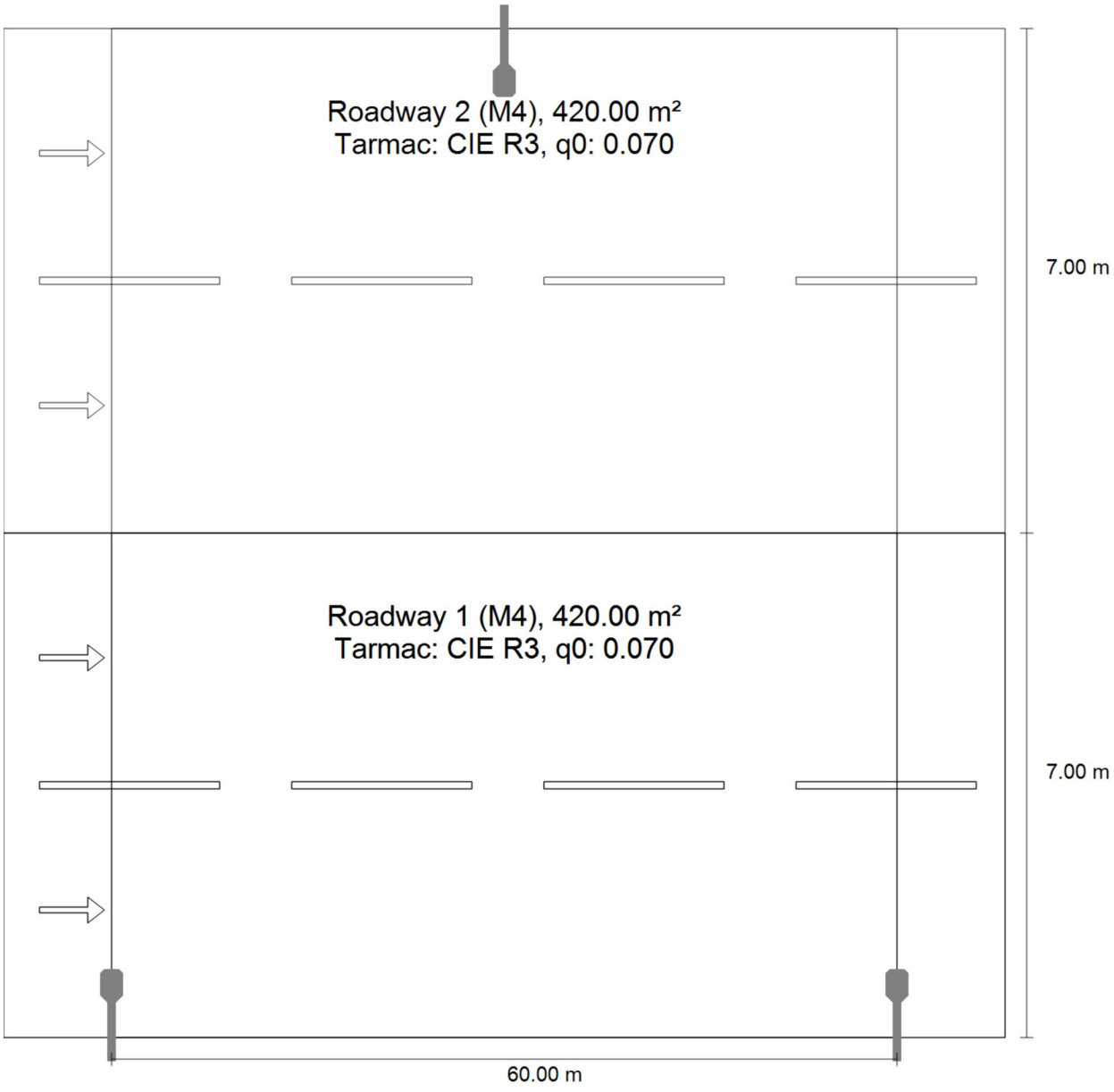
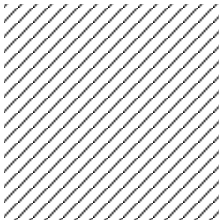
8. Liepojos g. · Alternative 8

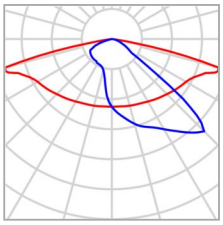
## Summary (according to EN 13201:2015)



8. Liepojos g. · Alternative 8

# Summary (according to EN 13201:2015)

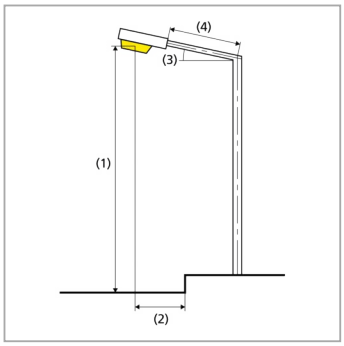




| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 64.0 W |
| Article name | URBINO LED 64W 9100lm 740 O60R | $\Phi_{Luminaire}$ | 9099 lm |
| Fitting | 1x LED | | |

## URBINO LED 64W 9100lm 740 O60R (both sides offset)

| | |
|---|---|
| Pole distance | 60.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.686 m |
| (3) Boom inclination | 10.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 64.0 W |
| Consumption | 2176.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 563 cd/klm<br>≥ 80°: 301 cd/klm<br>≥ 90°: 8.85 cd/klm |
| Luminous intensity class<br>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. | - |
| Glare index class | D.4 |



8. Liepojos g. · Alternative 8

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.75 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.52 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.61 | ≥ 0.60 | ✓ |
| | TI | 10 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.54 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.75 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.50 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.61 | ≥ 0.60 | ✓ |
| | TI | 10 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.54 | ≥ 0.30 | ✓ |

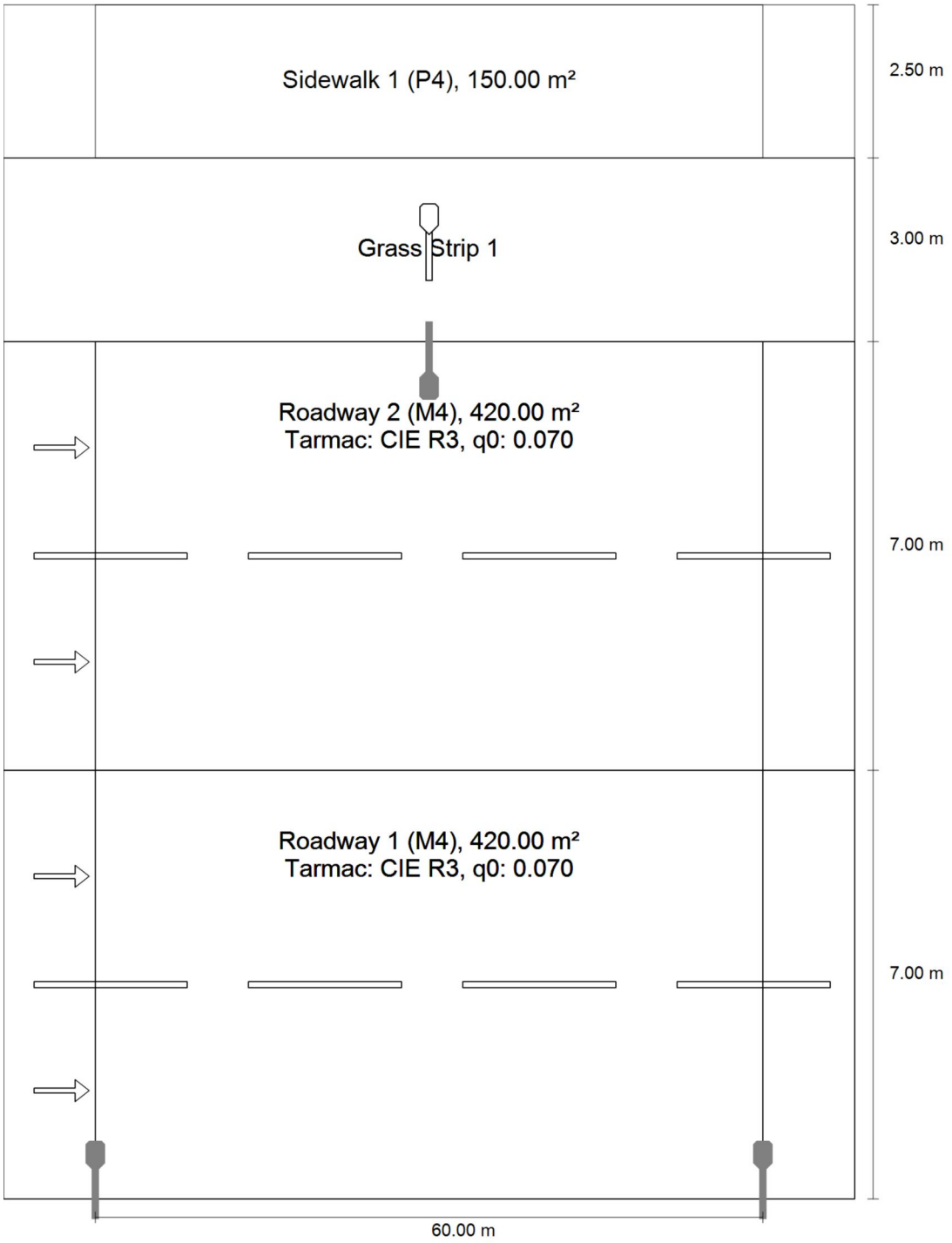
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 8. Liepojos g. | $D_p$ | 0.013 W/lx*m² | - |
| URBINO LED 64W 9100lm 740 O60R (both sides offset) | $D_e$ | 0.6 kWh/m² yr, | 512.0 kWh/yr |

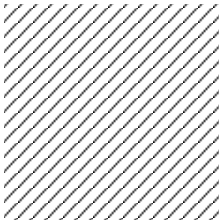
9. Liepojos g. prie Girininkijos st. · Alternative 9

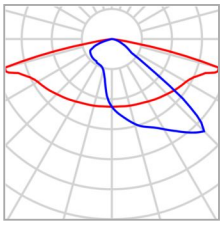
## Summary (according to EN 13201:2015)



9. Liepojos g. prie Girininkijos st. · Alternative 9

# Summary (according to EN 13201:2015)

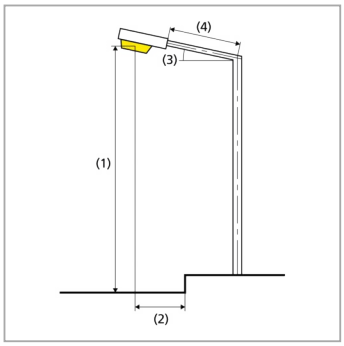




| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 64.0 W |
| Article name | URBINO LED 64W 9100lm 740 O60R | $\Phi_{Luminaire}$ | 9099 lm |
| Fitting | 1x LED | | |

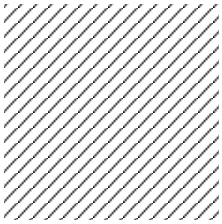
## URBINO LED 64W 9100lm 740 O60R (both sides offset)

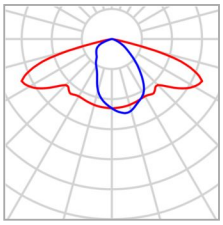
| | |
|---|---|
| Pole distance | 60.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.686 m |
| (3) Boom inclination | 10.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 64.0 W |
| Consumption | 2176.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 563 cd/klm<br>≥ 80°: 301 cd/klm<br>≥ 90°: 8.85 cd/klm |
| Luminous intensity class<br>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. | - |
| Glare index class | D.4 |



9. Liepojos g. prie Girininkijos st. · Alternative 9

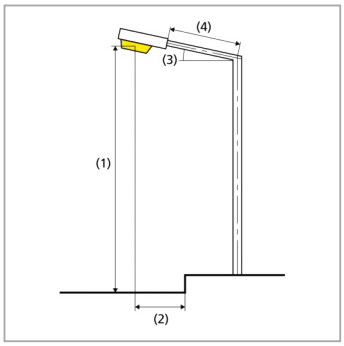
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 18.0 W |
| Article name | URBINO LED 18W 2600lm 740 O39 | $\Phi_{Luminaire}$ | 2599 lm |
| Fitting | 1x LED | | |

## URBINO LED 18W 2600lm 740 O39 (single side bottom)




| | |
|---|---|
| Pole distance | 60.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 16.000 m |
| (3) Boom inclination | 10.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 18.0 W |
| Consumption | 306.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 545 cd/klm<br>≥ 80°: 151 cd/klm<br>≥ 90°: 5.19 cd/klm |
| Luminous intensity class<br>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*1 |
| Glare index class | D.6 |

9. Liepojos g. prie Girininkijos st. · Alternative 9

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Sidewalk 1 (P4) | $E_{av}$ | 5.75 lx | [5.00 - 7.50] lx | ✓ |
| | $E_{min}$ | 2.39 lx | ≥ 1.00 lx | ✓ |
| Roadway 2 (M4) | $L_{av}$ | 0.79 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.56 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.61 | ≥ 0.60 | ✓ |
| | TI | 10 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.68 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.76 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.50 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.61 | ≥ 0.60 | ✓ |
| | TI | 10 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.54 | ≥ 0.30 | ✓ |

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

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9. Liepojos g. prie Girininkijos st. · Alternative 9

# Summary (according to EN 13201:2015)

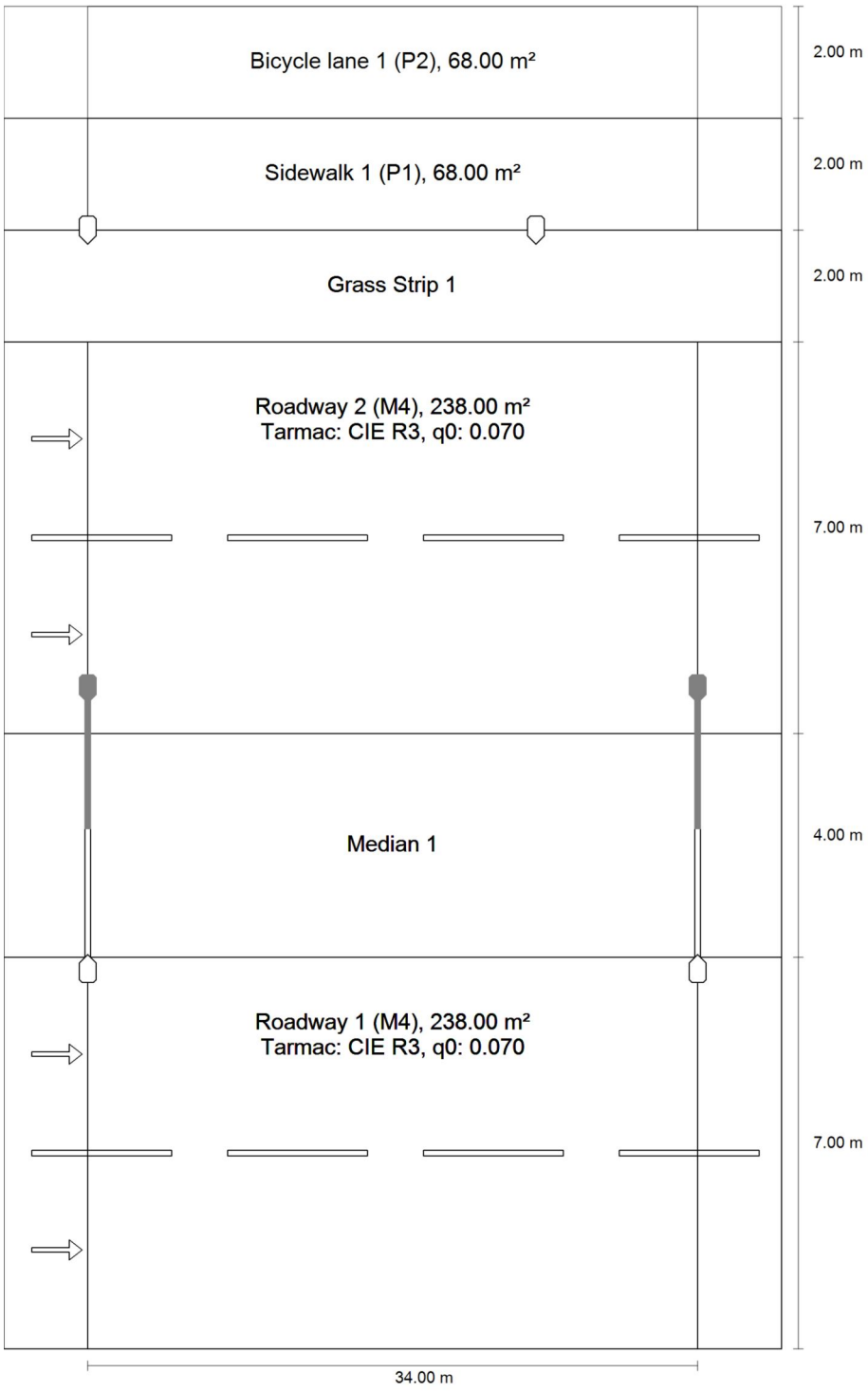
## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 9. Liepojos g. prie Girininkijos st. | $D_p$ | 0.002 W/lx*m² | - |
| URBINO LED 64W 9100lm 740 O60R (both sides offset) | $D_e$ | 0.5 kWh/m² yr, | 512.0 kWh/yr |
| URBINO LED 18W 2600lm 740 O39 (single side bottom) | $D_e$ | 0.1 kWh/m² yr, | 72.0 kWh/yr |

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

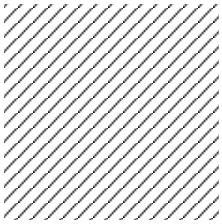
10. Liepojos g. prie onkologijos departamento · Alternative 10

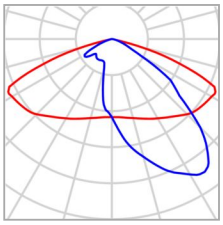
## Summary (according to EN 13201:2015)



10. Liepojos g. prie onkologijos departamento · Alternative 10

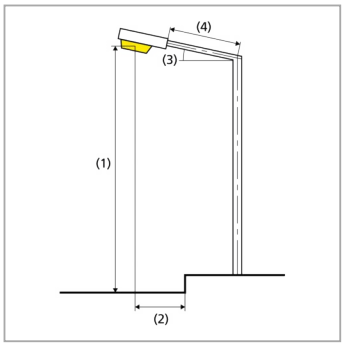
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

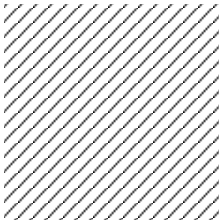
## URBINO LED 49W 7850lm 740 O33 (single side bottom)

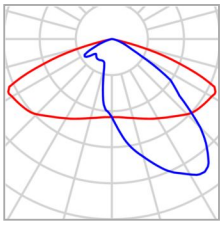



| | |
|---|---|
| Pole distance | 34.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 11.800 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 2.500 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 1421.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

10. Liepojos g. prie onkologijos departamento · Alternative 10

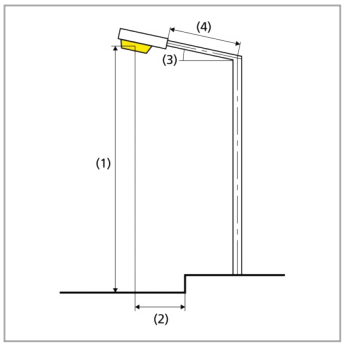
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

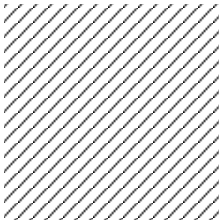
## URBINO LED 49W 7850lm 740 O33 (single side bottom)

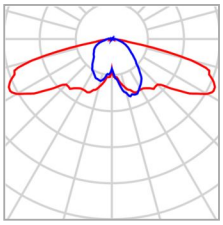



| | |
|---|---|
| Pole distance | 34.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 11.800 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 2.500 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 1421.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

10. Liepojos g. prie onkologijos departamento · Alternative 10

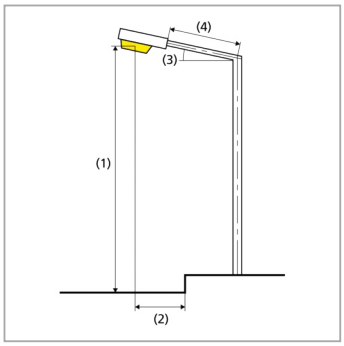
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG LIGHT FACTORY | P | 19.0 W |
| Article name | AVENIDA LENS LED 19W 2600lm 740 O31 | $\Phi_{Lamp}$ | 2600 lm |
| | | $\Phi_{Luminaire}$ | 2600 lm |
| Fitting | 1x LED 4000K | η | 100.00 % |

## AVENIDA LENS LED 19W 2600lm 740 O31 (single side bottom)




| | |
|---|---|
| Pole distance | 25.000 m |
| (1) Light spot height | 5.000 m |
| (2) Light point overhang | 20.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 0.000 m |
| Annual operating hours | 4000 h: 100.0 %, 19.0 W |
| Consumption | 760.0 W/km |
| ULR / ULOR | 0.02 / 0.02 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 460 cd/klm<br>≥ 80°: 84.7 cd/klm<br>≥ 90°: 18.1 cd/klm |
| Luminous intensity class<br>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.3 |

10. Liepojos g. prie onkologijos departamento · Alternative 10

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Bicycle lane 1 (P2) | $E_{av}$ | 12.83 lx | [10.00 - 15.00] lx | ✓ |
| | $E_{min}$ | 7.12 lx | ≥ 2.00 lx | ✓ |
| Sidewalk 1 (P1) | $E_{av}$ | 19.20 lx | [15.00 - 22.50] lx | ✓ |
| | $E_{min}$ | 9.62 lx | ≥ 3.00 lx | ✓ |
| Roadway 2 (M4) | $L_{av}$ | 0.91 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.77 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.76 | ≥ 0.60 | ✓ |
| | TI | 7 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.72 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.75 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.62 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.76 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.72 | ≥ 0.30 | ✓ |

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

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10. Liepojos g. prie onkologijos departamento · Alternative 10

# Summary (according to EN 13201:2015)

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 10. Liepojos g. prie onkologijos departamento | $D_p$ | 0.002 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (single side bottom) | $D_e$ | 0.3 kWh/m² yr, | 196.0 kWh/yr |
| URBINO LED 49W 7850lm 740 O33 (single side bottom) | $D_e$ | 0.3 kWh/m² yr, | 196.0 kWh/yr |
| AVENIDA LENS LED 19W 2600lm 740 O31 (single side bottom) | $D_e$ | 0.1 kWh/m² yr, | 76.0 kWh/yr |

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

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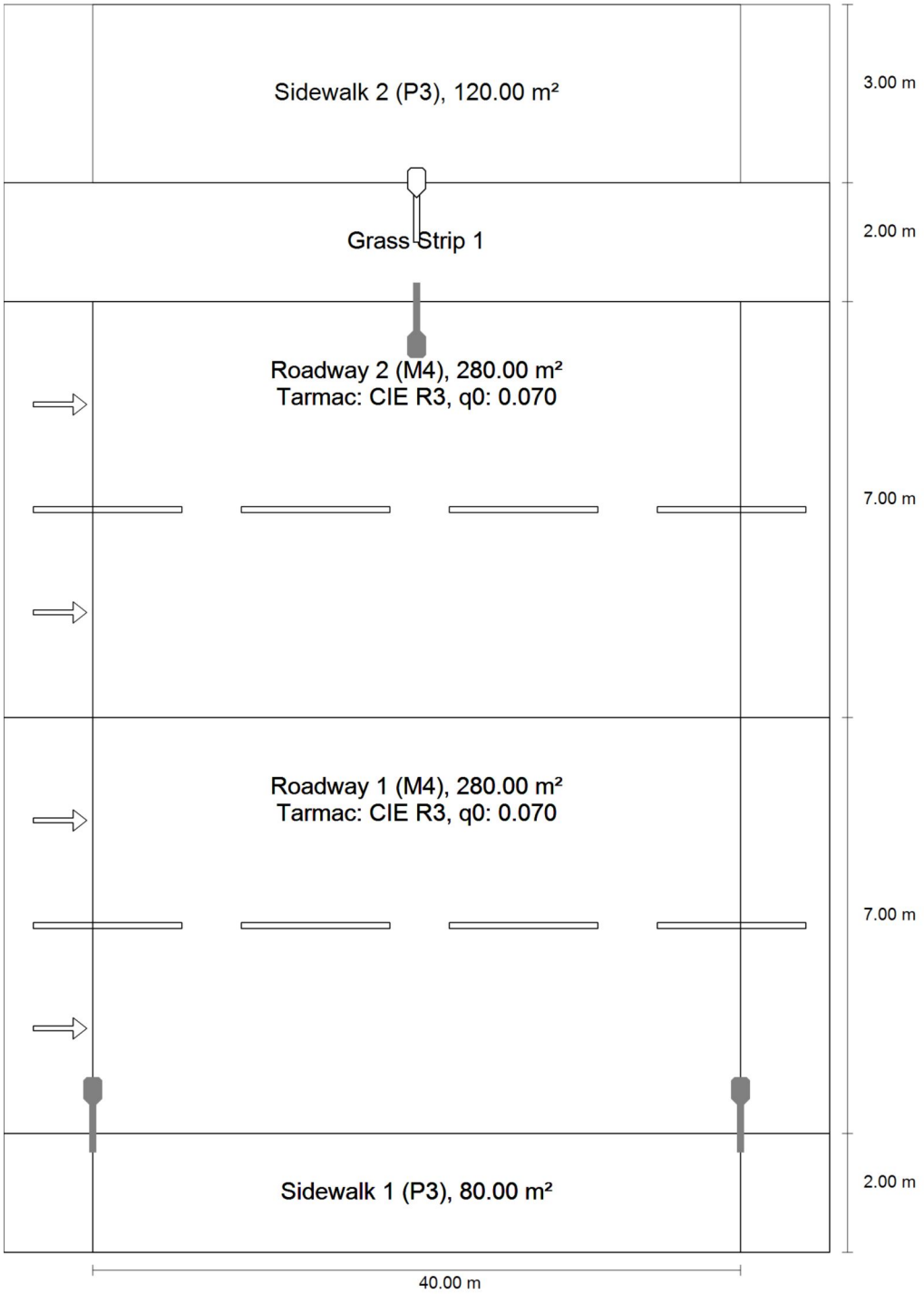
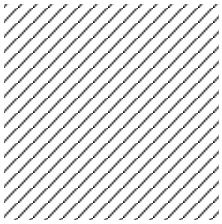
11. Liepojos g. prie PC Maxima · Alternative 11

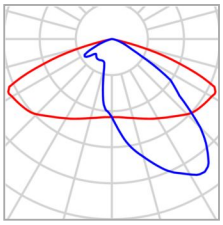
## Summary (according to EN 13201:2015)



11. Liepojos g. prie PC Maxima · Alternative 11

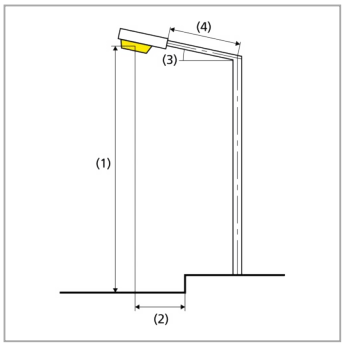
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

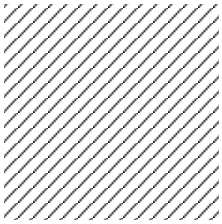
## URBINO LED 49W 7850lm 740 O33 (both sides offset)

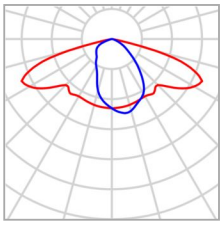



| | |
|---|---|
| Pole distance | 40.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.686 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 2450.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

11. Liepojos g. prie PC Maxima · Alternative 11

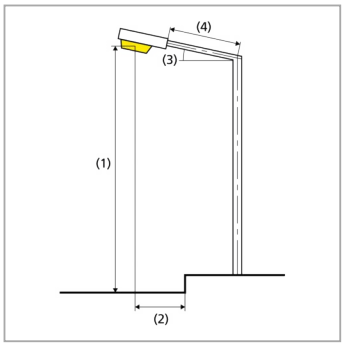
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 18.0 W |
| Article name | URBINO LED 18W 2600lm 740 O39 | $\Phi_{Luminaire}$ | 2599 lm |
| Fitting | 1x LED | | |

## URBINO LED 18W 2600lm 740 O39 (single side bottom)




| | |
|---|---|
| Pole distance | 40.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 16.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 18.0 W |
| Consumption | 450.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 460 cd/klm<br>≥ 80°: 30.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*4 |
| Glare index class | D.6 |

11. Liepojos g. prie PC Maxima · Alternative 11

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Sidewalk 2 (P3) | $E_{av}$ | 7.52 lx | [7.50 - 11.25] lx | ✓ |
| | $E_{min}$ | 4.03 lx | ≥ 1.50 lx | ✓ |
| Roadway 2 (M4) | $L_{av}$ | 0.95 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.76 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.71 | ≥ 0.60 | ✓ |
| | TI | 5 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.64 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.88 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.59 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.68 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.47 | ≥ 0.30 | ✓ |
| Sidewalk 1 (P3) | $E_{av}$ | 8.07 lx | [7.50 - 11.25] lx | ✓ |
| | $E_{min}$ | 4.91 lx | ≥ 1.50 lx | ✓ |

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

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11. Liepojos g. prie PC Maxima · Alternative 11

# Summary (according to EN 13201:2015)

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 11. Liepojos g. prie PC Maxima | $D_p$ | 0.002 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides offset) | $D_e$ | 0.5 kWh/m² yr, | 392.0 kWh/yr |
| URBINO LED 18W 2600lm 740 O39 (single side bottom) | $D_e$ | 0.1 kWh/m² yr, | 72.0 kWh/yr |

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

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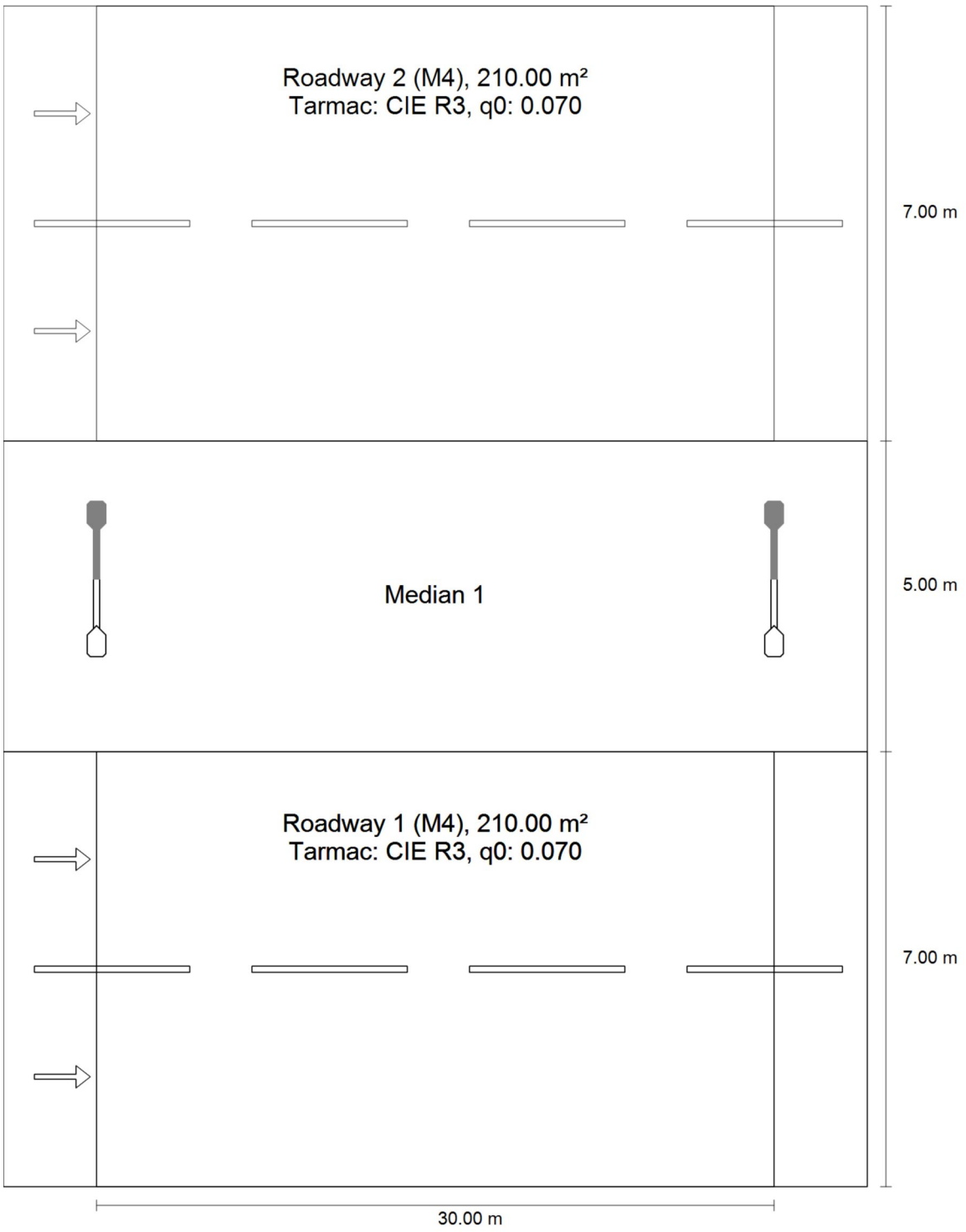
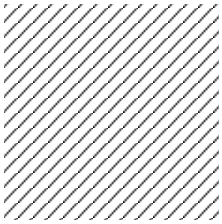
12. Liepojos g. ties PC 'RIMI'- · Alternative 12

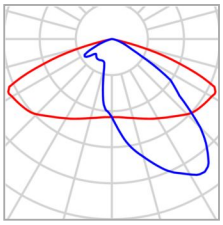
## Summary (according to EN 13201:2015)



12. Liepojos g. ties PC 'RIMI'- · Alternative 12

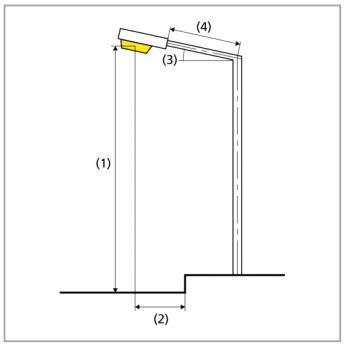
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

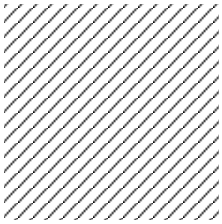
## URBINO LED 49W 7850lm 740 O33 (single side bottom)

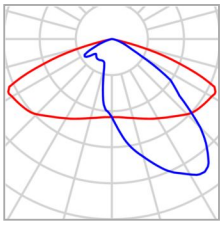



| | |
|---|---|
| Pole distance | 30.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 10.785 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 1617.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

12. Liepojos g. ties PC 'RIMI'- · Alternative 12

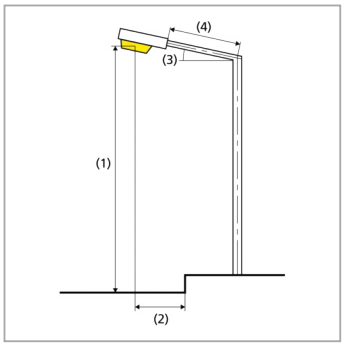
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (single side bottom)




| | |
|---|---|
| Pole distance | 30.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 10.785 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 1617.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

12. Liepojos g. ties PC 'RIMI'- · Alternative 12

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.84 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.56 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.81 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.56 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.78 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.56 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.82 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.56 | ≥ 0.30 | ✓ |

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

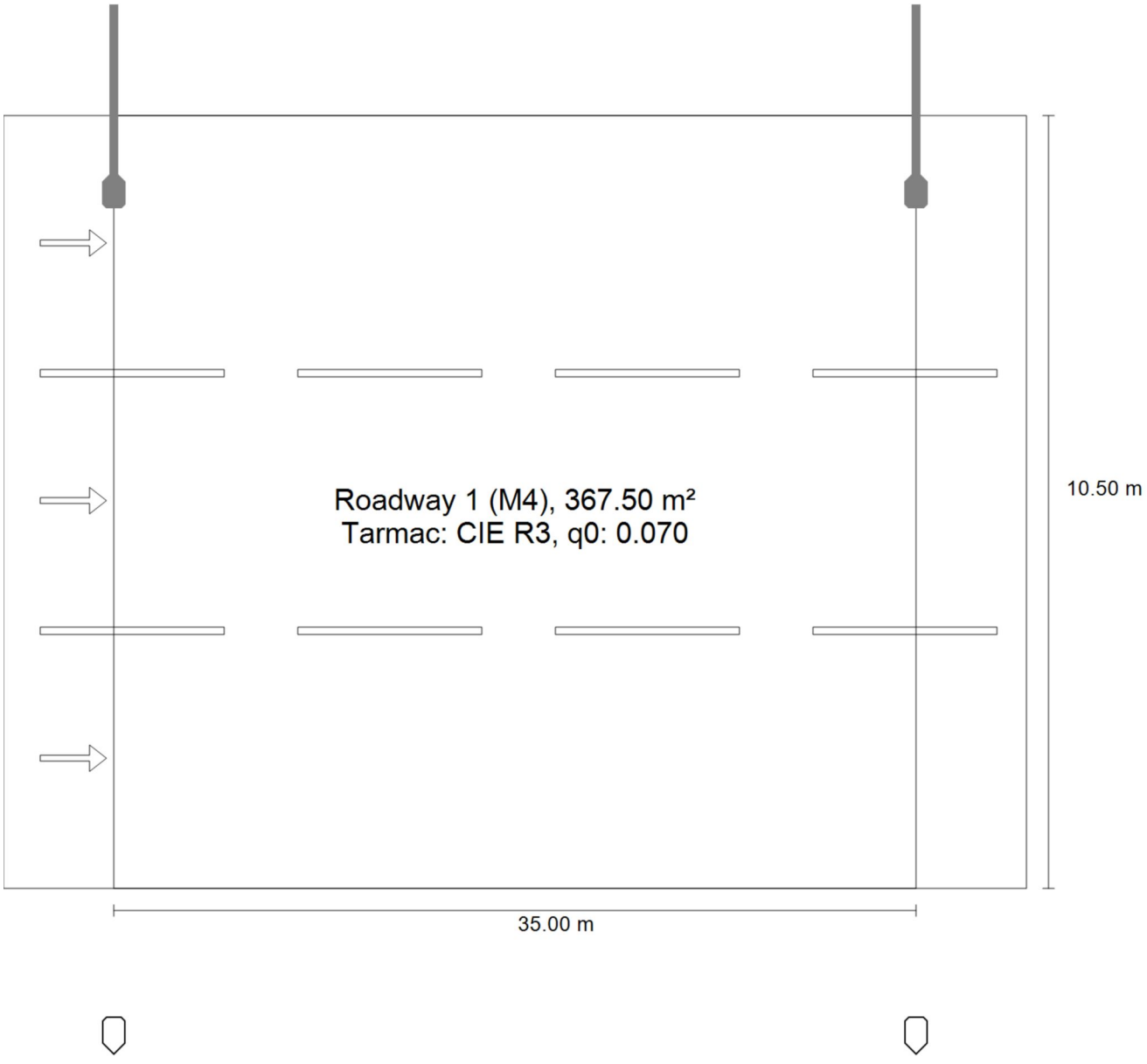
## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 12. Liepojos g. ties PC 'RIMI'- | $D_p$ | 0.007 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (single side bottom) | $D_e$ | 0.5 kWh/m² yr, | 196.0 kWh/yr |
| URBINO LED 49W 7850lm 740 O33 (single side bottom) | $D_e$ | 0.5 kWh/m² yr, | 196.0 kWh/yr |

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

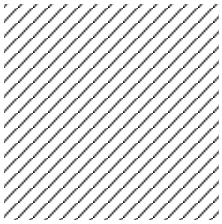
13. Medelyno g. 3 juostos- · Alternative 13

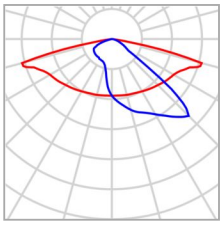
## Summary (according to EN 13201:2015)



13. Medelyno g. 3 juostos- · Alternative 13

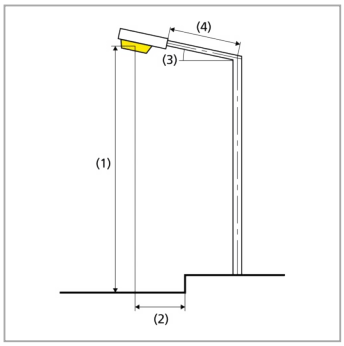
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 53.0 W |
| Article name | URBINO LED 53W 7600lm 740 O60R | $\Phi_{Luminaire}$ | 7599 lm |
| Fitting | 1x LED | | |

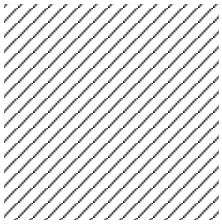
## URBINO LED 53W 7600lm 740 O60R (single side top)

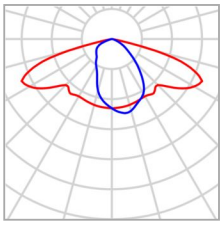



| | |
|---|---|
| Pole distance | 35.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 1.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 2.500 m |
| Annual operating hours | 4000 h: 100.0 %, 53.0 W |
| Consumption | 1537.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 561 cd/klm<br>≥ 80°: 121 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*2 |
| Glare index class | D.4 |

13. Medelyno g. 3 juostos- · Alternative 13

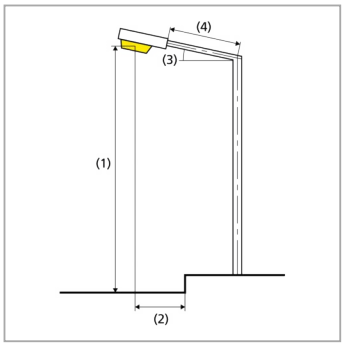
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 18.0 W |
| Article name | URBINO LED 18W 2600lm 740 O39 | $\Phi_{Luminaire}$ | 2599 lm |
| Fitting | 1x LED | | |

## URBINO LED 18W 2600lm 740 O39 (single side bottom)




| | |
|---|---|
| Pole distance | 35.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | -2.000 m |
| (3) Boom inclination | 10.0° |
| (4) Boom length | 0.000 m |
| Annual operating hours | 4000 h: 100.0 %, 18.0 W |
| Consumption | 522.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 545 cd/klm<br>≥ 80°: 151 cd/klm<br>≥ 90°: 5.19 cd/klm |
| Luminous intensity class<br>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*1 |
| Glare index class | D.6 |

13. Medelyno g. 3 juostos- · Alternative 13

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 1 (M4) | $L_{av}$ | 0.85 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.65 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.84 | ≥ 0.60 | ✓ |
| | TI | 9 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.46 | ≥ 0.30 | ✓ |

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

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 13. Medelyno g. 3 juostos- | $D_p$ | 0.004 W/lx*m² | - |
| URBINO LED 53W 7600lm 740 O60R (single side top) | $D_e$ | 0.6 kWh/m² yr, | 212.0 kWh/yr |
| URBINO LED 18W 2600lm 740 O39 (single side bottom) | $D_e$ | 0.2 kWh/m² yr, | 72.0 kWh/yr |

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

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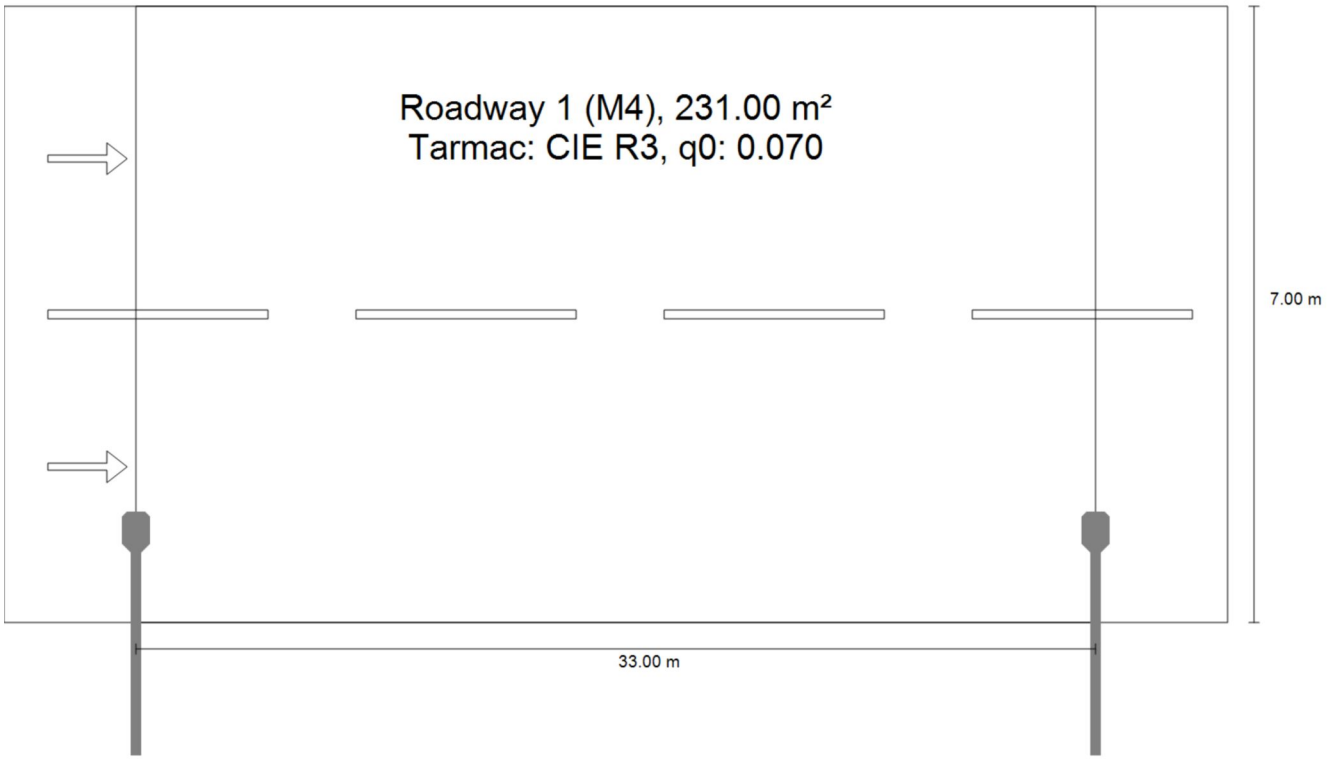
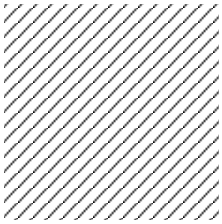
14. Medelyno g. Klaipėdos riba · Alternative 14

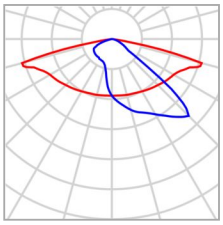
## Summary (according to EN 13201:2015)



14. Medelyno g. Klaipėdos riba · Alternative 14

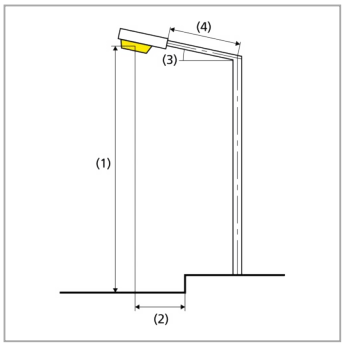
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 53.0 W |
| Article name | URBINO LED 53W 7600lm 740 O60R | $\Phi_{Luminaire}$ | 7599 lm |
| Fitting | 1x LED | | |

## URBINO LED 53W 7600lm 740 O60R (single side bottom)




| | |
|---|---|
| Pole distance | 33.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 1.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 2.500 m |
| Annual operating hours | 4000 h: 100.0 %, 53.0 W |
| Consumption | 1590.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 561 cd/klm<br>≥ 80°: 121 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*2 |
| Glare index class | D.4 |

14. Medelyno g. Klaipėdos riba · Alternative 14

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 1 (M4) | $L_{av}$ | 0.83 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.67 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.85 | ≥ 0.60 | ✓ |
| | TI | 8 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.46 | ≥ 0.30 | ✓ |

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

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 14. Medelyno g. Klaipėdos riba | $D_p$ | 0.020 W/lx*m² | - |
| URBINO LED 53W 7600lm 740 O60R (single side bottom) | $D_e$ | 0.9 kWh/m² yr, | 212.0 kWh/yr |

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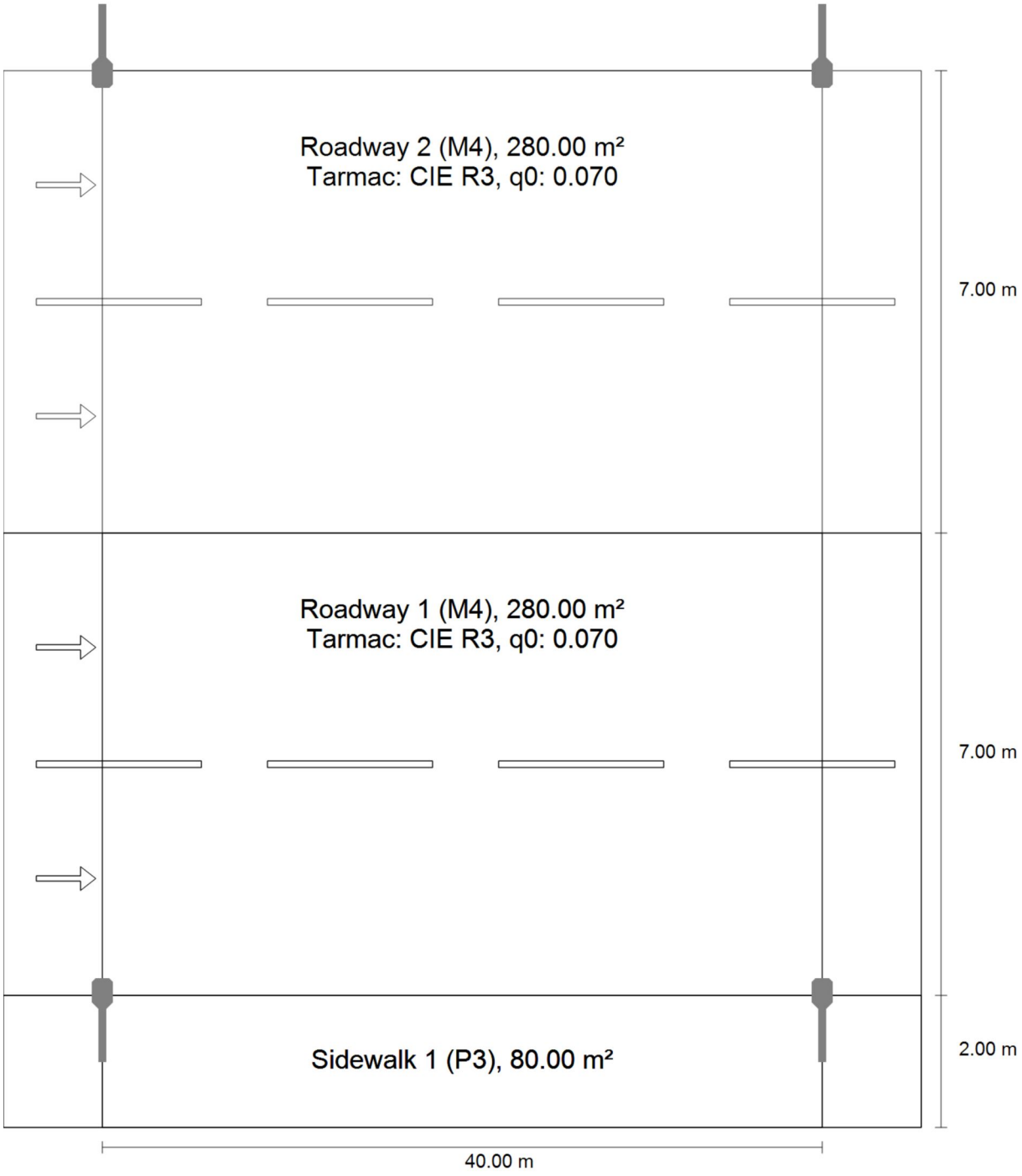
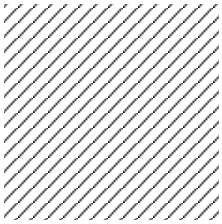
15. P. Lideikio g. 4 juostos · Alternative 15

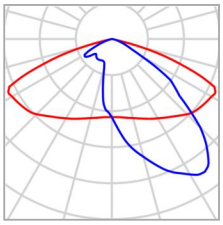
## Summary (according to EN 13201:2015)



15. P. Lideikio g. 4 juostos · Alternative 15

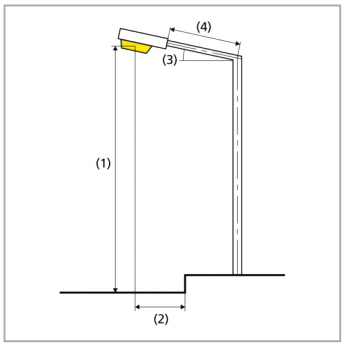
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides opposite)




| | |
|---|---|
| Pole distance | 40.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 2450.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

15. P. Lideikio g. 4 juostos · Alternative 15

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.83 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.67 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.63 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.52 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.83 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.67 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.63 | ≥ 0.60 | ✓ |
| | TI | 6 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.52 | ≥ 0.30 | ✓ |
| Sidewalk 1 (P3) | $E_{av}$ | 8.63 lx | [7.50 - 11.25] lx | ✓ |
| | $E_{min}$ | 4.70 lx | ≥ 1.50 lx | ✓ |

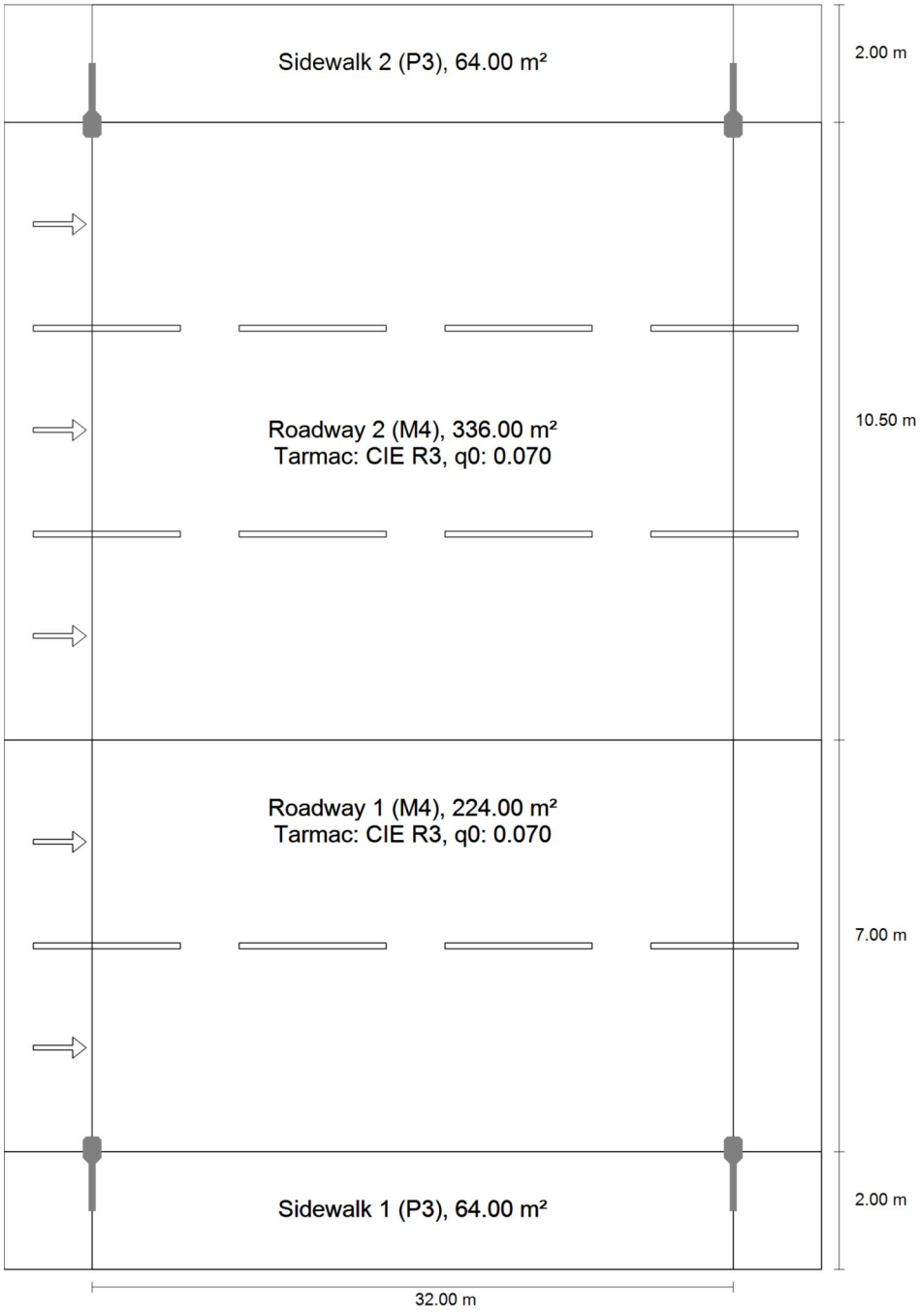
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 15. P. Lideikio g. 4 juostos | $D_p$ | 0.010 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides opposite) | $D_e$ | 0.6 kWh/m² yr, | 392.0 kWh/yr |

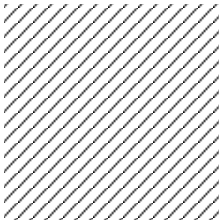
16. P. Lideikio g. 5 juostos · Alternative 16

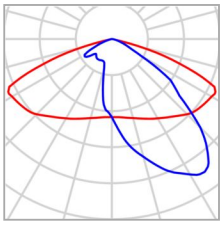
## Summary (according to EN 13201:2015)



16. P. Lideikio g. 5 juostos · Alternative 16

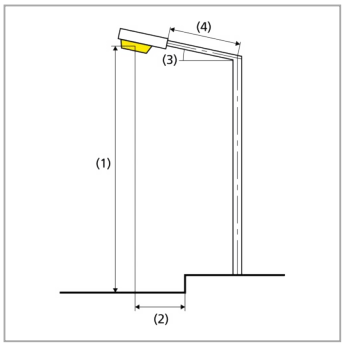
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides opposite)




| | |
|---|---|
| Pole distance | 32.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 3038.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

16. P. Lideikio g. 5 juostos · Alternative 16

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Sidewalk 2 (P3) | $E_{av}$ | 9.32 lx | [7.50 - 11.25] lx | ✓ |
| | $E_{min}$ | 5.75 lx | ≥ 1.50 lx | ✓ |
| Roadway 2 (M4) | $L_{av}$ | 0.87 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.70 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.80 | ≥ 0.60 | ✓ |
| | TI | 5 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.52 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.87 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.77 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.80 | ≥ 0.60 | ✓ |
| | TI | 5 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.52 | ≥ 0.30 | ✓ |
| Sidewalk 1 (P3) | $E_{av}$ | 9.32 lx | [7.50 - 11.25] lx | ✓ |
| | $E_{min}$ | 5.75 lx | ≥ 1.50 lx | ✓ |

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

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 16. P. Lideikio g. 5 juostos | $D_p$ | 0.009 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides opposite) | $D_e$ | 0.6 kWh/m² yr, | 392.0 kWh/yr |

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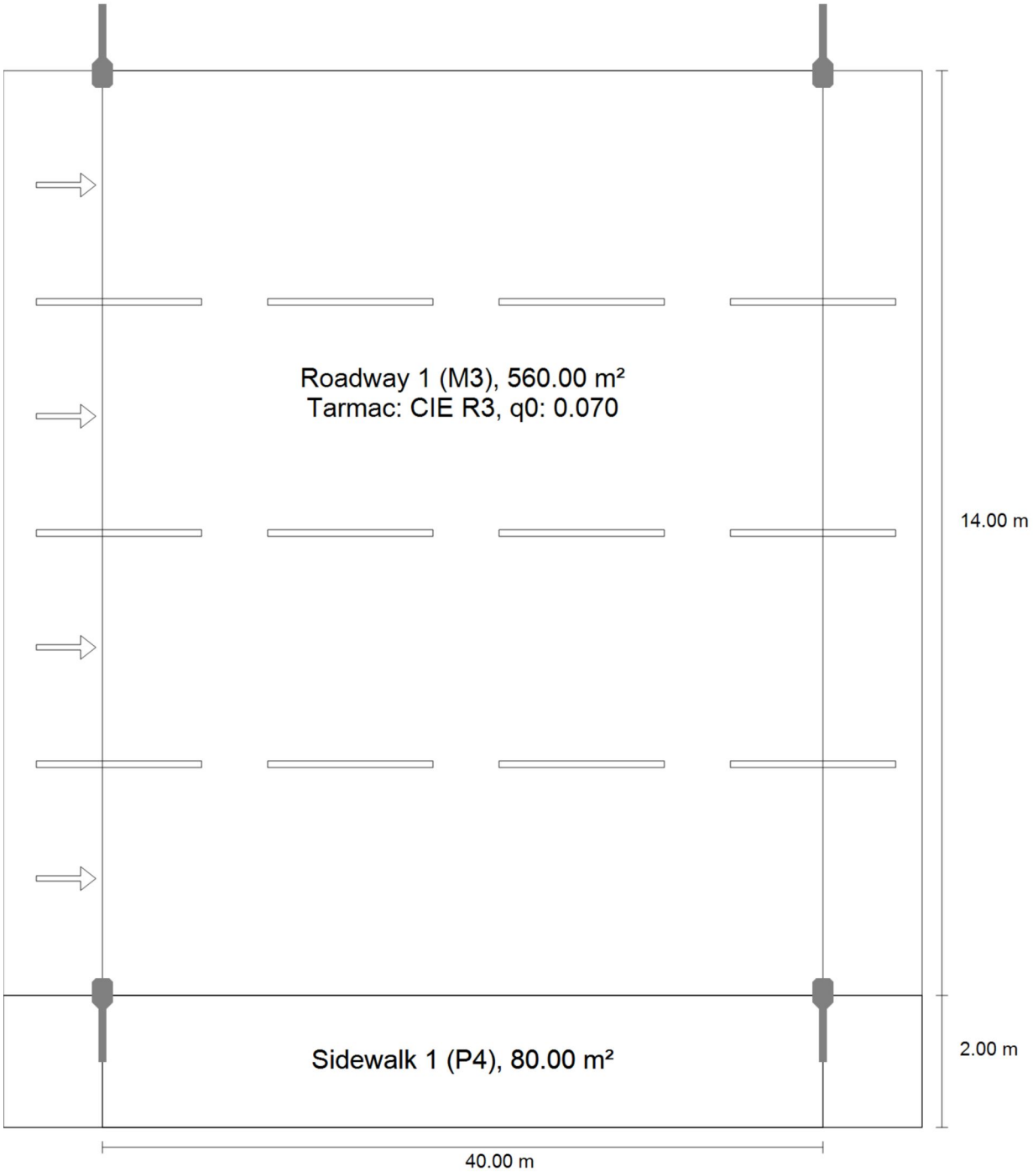
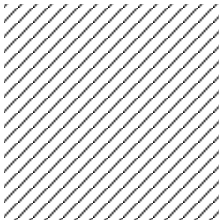
17. P. Lideikio gatvė  4 juostos · Alternative 17

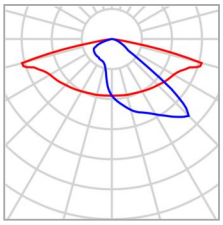
## Summary (according to EN 13201:2015)



17. P. Lideikio gatvė  4 juostos · Alternative 17

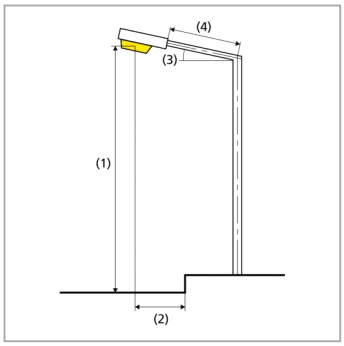
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 53.0 W |
| Article name | URBINO LED 53W 7600lm 740 O60R | $\Phi_{Luminaire}$ | 7599 lm |
| Fitting | 1x LED | | |

## URBINO LED 53W 7600lm 740 O60R (both sides opposite)




| | |
|---|---|
| Pole distance | 40.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 53.0 W |
| Consumption | 2650.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 561 cd/klm<br>≥ 80°: 121 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*2 |
| Glare index class | D.4 |

17. P. Lideikio gatvė  4 juostos · Alternative 17

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 1 (M3) | $L_{av}$ | 1.00 cd/m² | ≥ 1.00 cd/m² | ✓ |
| | $U_o$ | 0.56 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.79 | ≥ 0.60 | ✓ |
| | TI | 9 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.48 | ≥ 0.30 | ✓ |
| Sidewalk 1 (P4) | $E_{av}$ | 7.49 lx | [5.00 - 7.50] lx | ✓ |
| | $E_{min}$ | 3.02 lx | ≥ 1.00 lx | ✓ |

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

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 17. P. Lideikio gatvė  4 juostos | $D_p$ | 0.012 W/lx*m² | - |
| URBINO LED 53W 7600lm 740 O60R (both sides opposite) | $D_e$ | 0.7 kWh/m² yr, | 424.0 kWh/yr |

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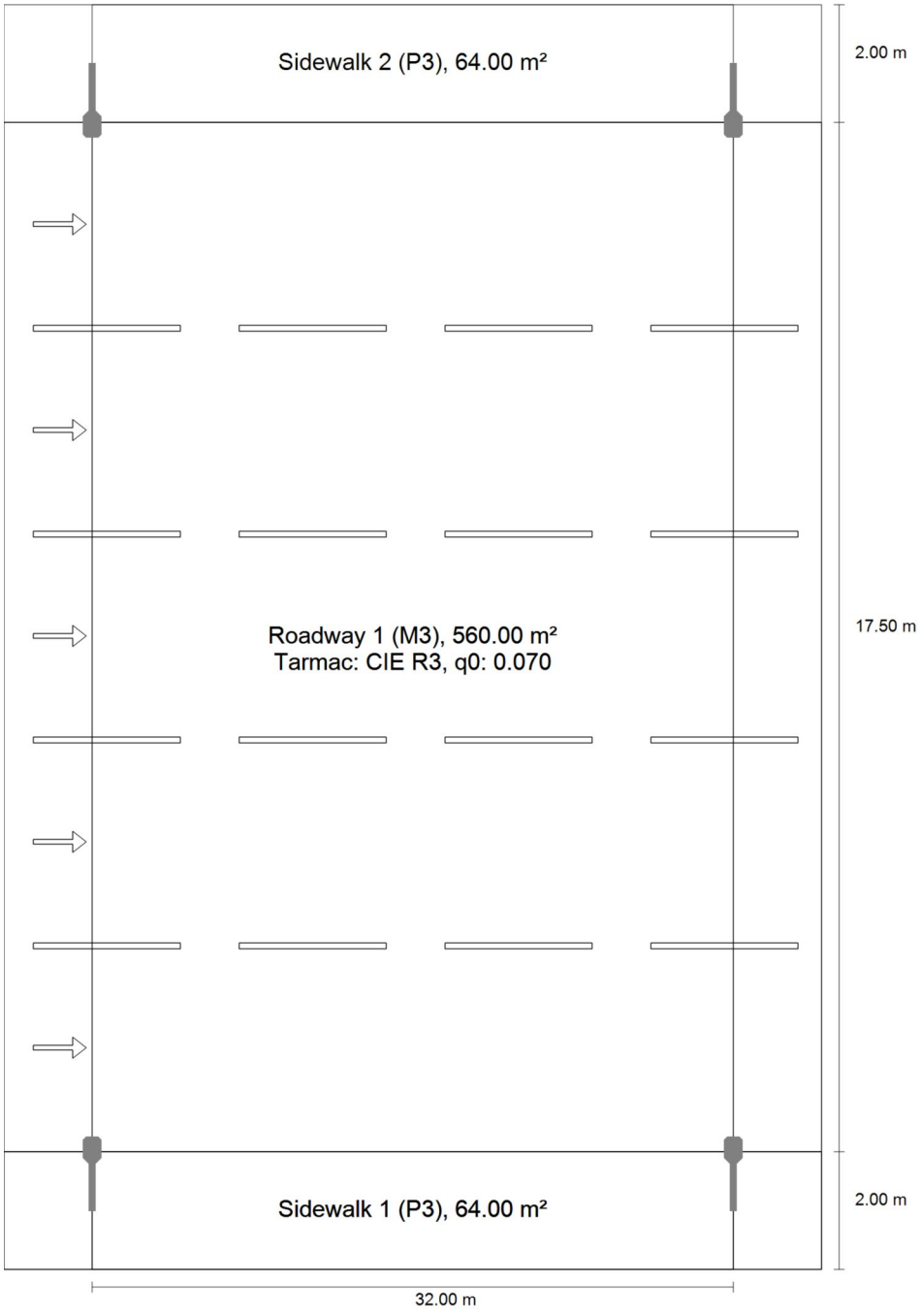
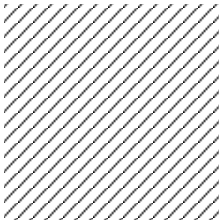
18. P. Lideikio gatv  5 juostos  M3 · Alternative 18

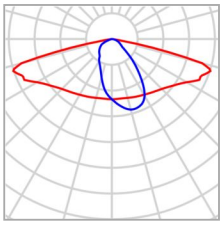
## Summary (according to EN 13201:2015)



18. P. Lideikio gatv  5 juostos  M3 · Alternative 18

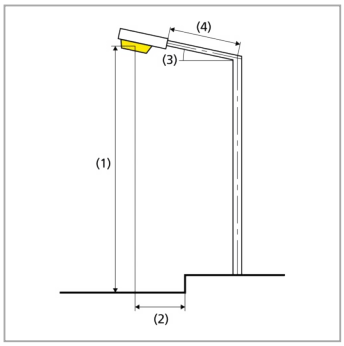
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 52.0 W |
| Article name | URBINO LED 52W 7300lm 740 IP66 O59R | $\Phi_{Luminaire}$ | 7298 lm |
| Fitting | 1x LED | | |

## URBINO LED 52W 7300lm 740 IP66 O59R (both sides opposite)




| | |
|---|---|
| Pole distance | 32.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.000 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 52.0 W |
| Consumption | 3224.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 646 cd/klm<br>≥ 80°: 111 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*2 |
| Glare index class | D.5 |

18. P. Lideikio gatv 5 juostos M3 · Alternative 18

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Sidewalk 2 (P3) | $E_{min}$ | 6.40 lx | ≥ 1.50 lx | ✓ |
| | $E_{av}$(1) | 11.97 lx | - | - |
| Roadway 1 (M3) | $L_{av}$ | 1.00 cd/m² | ≥ 1.00 cd/m² | ✓ |
| | $U_o$ | 0.49 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.81 | ≥ 0.60 | ✓ |
| | TI | 9 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.69 | ≥ 0.30 | ✓ |
| Sidewalk 1 (P3) | $E_{min}$ | 6.40 lx | ≥ 1.50 lx | ✓ |
| | $E_{av}$(1) | 11.97 lx | - | - |

(1) Informative, not part of the valuation

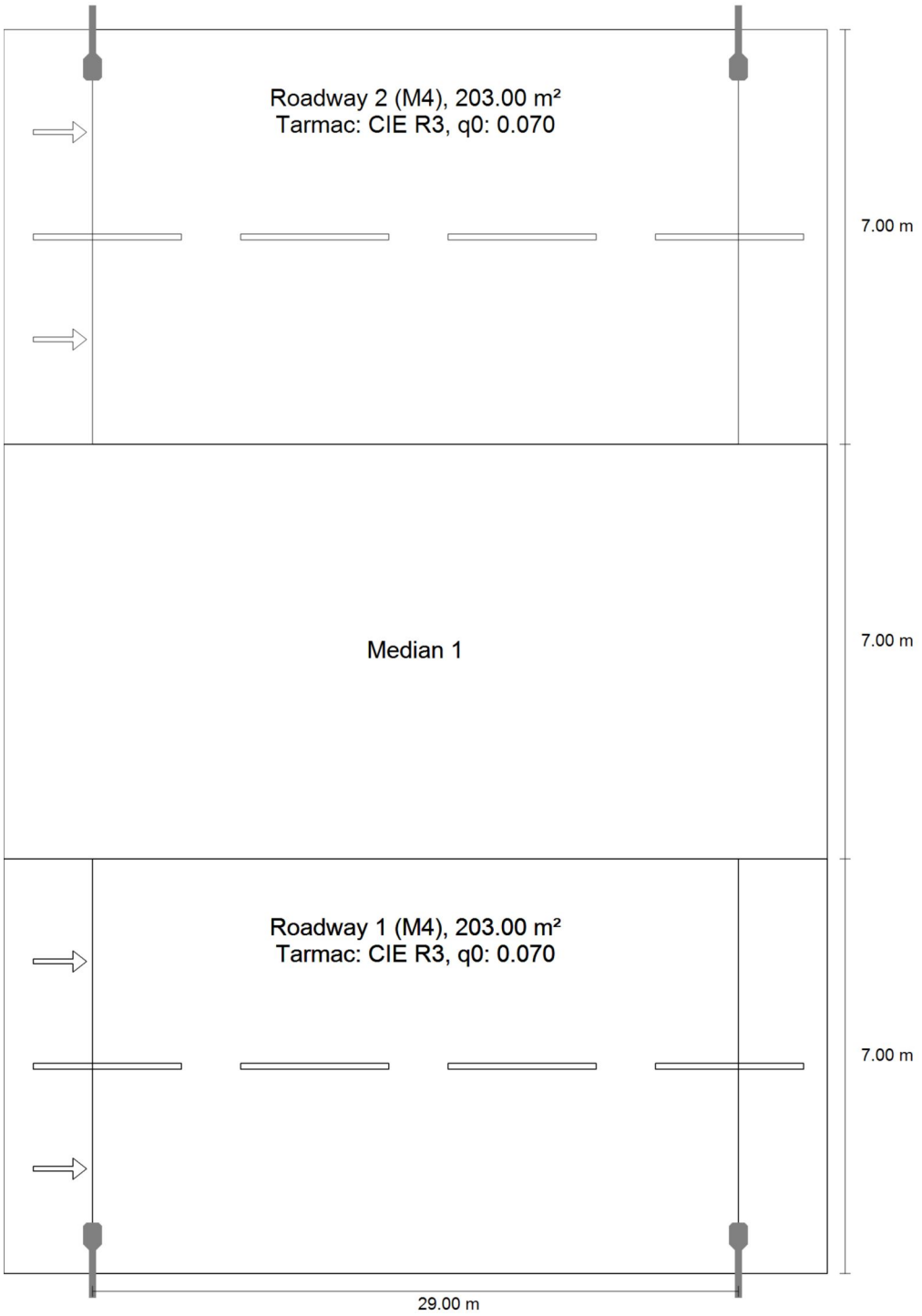
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 18. P. Lideikio gatv 5 juostos M3 | $D_p$ | 0.012 W/lx*m² | - |
| URBINO LED 52W 7300lm 740 IP66 O59R (both sides opposite) | $D_e$ | 0.6 kWh/m² yr, | 416.0 kWh/yr |

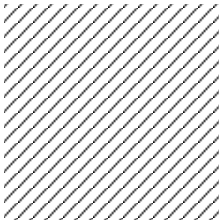
19. Šiaurės pr. · Alternative 19

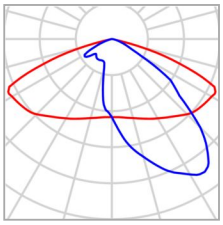
## Summary (according to EN 13201:2015)



19. Šiaurės pr. · Alternative 19

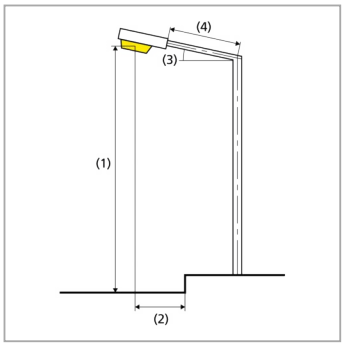
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides opposite)




| | |
|---|---|
| Pole distance | 29.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.600 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 3332.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

19. Šiaurės pr. · Alternative 19

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.89 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.74 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.83 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.48 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.89 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.74 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.83 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.48 | ≥ 0.30 | ✓ |

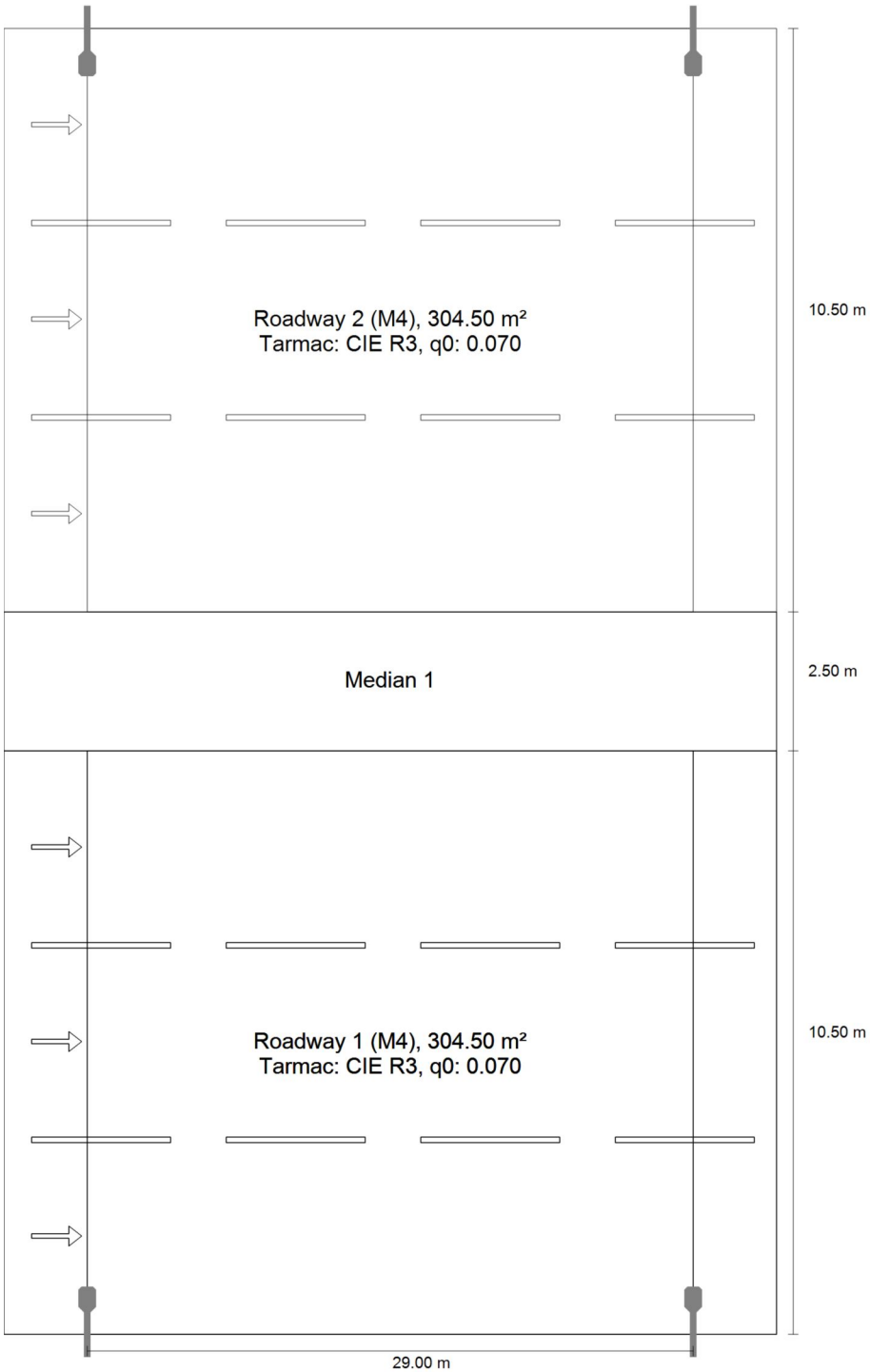
A maintenance factor of 0.80 was used for calculating for the installation.

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 19. Šiaurės pr. | $D_p$ | 0.015 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides opposite) | $D_e$ | 1.0 kWh/m² yr, | 392.0 kWh/yr |

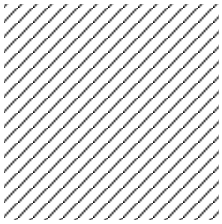
20. Šiaurės pr. ties Kretingos g. · Alternative 20

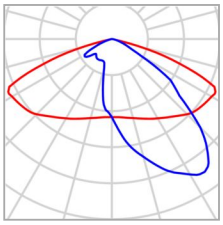
## Summary (according to EN 13201:2015)



20. Šiaurės pr. ties Kretingos g. · Alternative 20

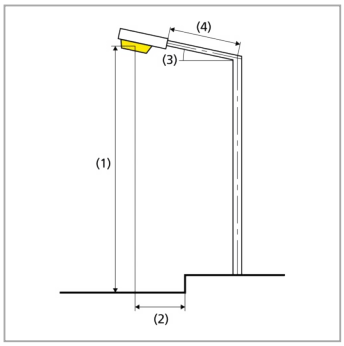
# Summary (according to EN 13201:2015)





| | | | |
|---|---|---|---|
| Manufacturer | LUG Light Factory | P | 49.0 W |
| Article name | URBINO LED 49W 7850lm 740 O33 | $\Phi_{Luminaire}$ | 7849 lm |
| Fitting | 1x LED | | |

## URBINO LED 49W 7850lm 740 O33 (both sides opposite)




| | |
|---|---|
| Pole distance | 29.000 m |
| (1) Light spot height | 10.000 m |
| (2) Light point overhang | 0.600 m |
| (3) Boom inclination | 0.0° |
| (4) Boom length | 1.000 m |
| Annual operating hours | 4000 h: 100.0 %, 49.0 W |
| Consumption | 3332.0 W/km |
| ULR / ULOR | 0.00 / 0.00 |
| Max. luminous intensities<br>Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. | ≥ 70°: 337 cd/klm<br>≥ 80°: 20.7 cd/klm<br>≥ 90°: 0.00 cd/klm |
| Luminous intensity class<br>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*6 |
| Glare index class | D.6 |

20. Šiaurės pr. ties Kretingos g. · Alternative 20

# Summary (according to EN 13201:2015)

## Results for valuation fields

| | Symbol | Calculated | Target | Check |
|---|---|---|---|---|
| Roadway 2 (M4) | $L_{av}$ | 0.78 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.64 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.84 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.48 | ≥ 0.30 | ✓ |
| Roadway 1 (M4) | $L_{av}$ | 0.78 cd/m² | ≥ 0.75 cd/m² | ✓ |
| | $U_o$ | 0.64 | ≥ 0.40 | ✓ |
| | $U_l$ | 0.84 | ≥ 0.60 | ✓ |
| | TI | 4 % | ≤ 15 % | ✓ |
| | $R_{EI}$ | 0.48 | ≥ 0.30 | ✓ |

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

## Results for energy efficiency indicators

| | Symbol | Calculated | Consumption |
|---|---|---|---|
| 20. Šiaurės pr. ties Kretingos g. | $D_p$ | 0.011 W/lx*m² | - |
| URBINO LED 49W 7850lm 740 O33 (both sides opposite) | $D_e$ | 0.6 kWh/m² yr, | 392.0 kWh/yr |