

# photinus

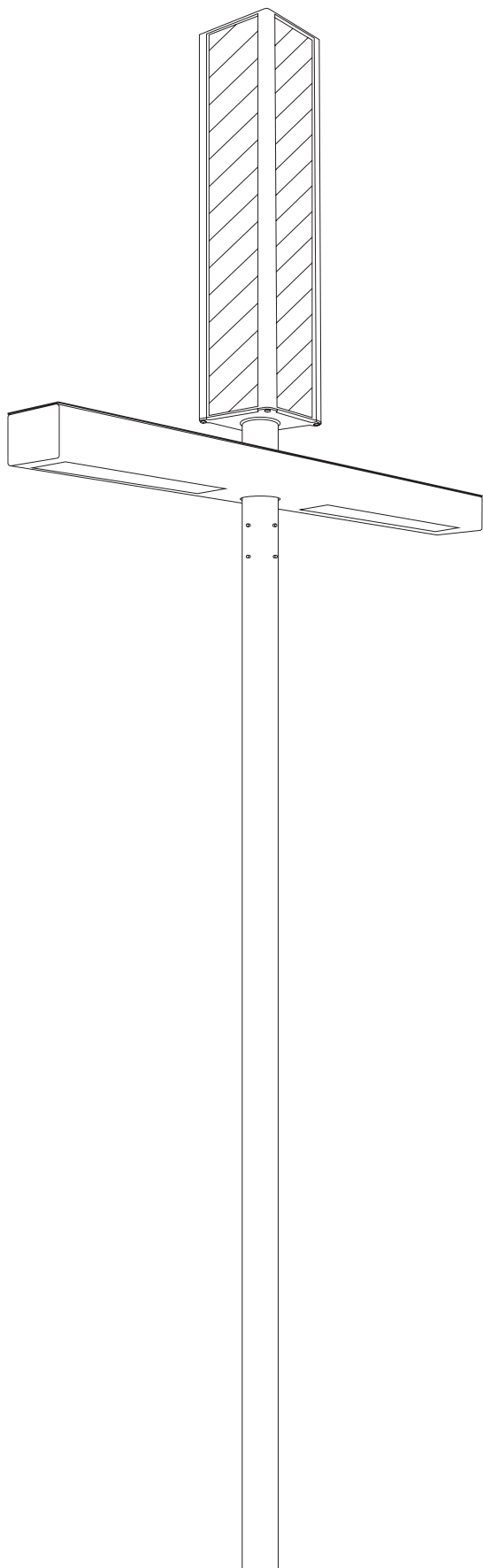
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**DATASHEET V.1 | 2017**

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**aron duo**

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# 1

## aron duo

### SELF-SUFFICIENT SOLAR LED STREET LAMP WITH SECURE SUPPLY

#### USE

The aron duo is available to ensure a secure supply even in critical weather regions. The aron solar light is a solar-powered LED street lamp for car parks with two light sources which are used where there is no electricity supply or where it would not be economically feasible to implement one. The aron duo can be used anywhere where a secure supply and excellent light quality is of paramount importance even in dim conditions. Due to the cubic aluminium construction with 4 photinus high performance photovoltaic modules, sufficient energy can be generated in a targeted manner via the diffuse light component especially in regions with poor weather (snow, fog, etc.). The vertically arranged modules prevent snow from accumulating on it in winter. A sophisticated energy management system guarantees secure functionality over several nights even in poor weather conditions.

#### FUNCTION

The integrated battery is loaded via 4 photinus high performance photovoltaic modules and when dusk comes this energy is used to efficiently operate the LED array.

# 2

## TECHNICAL DATA

### SOLARTOWER

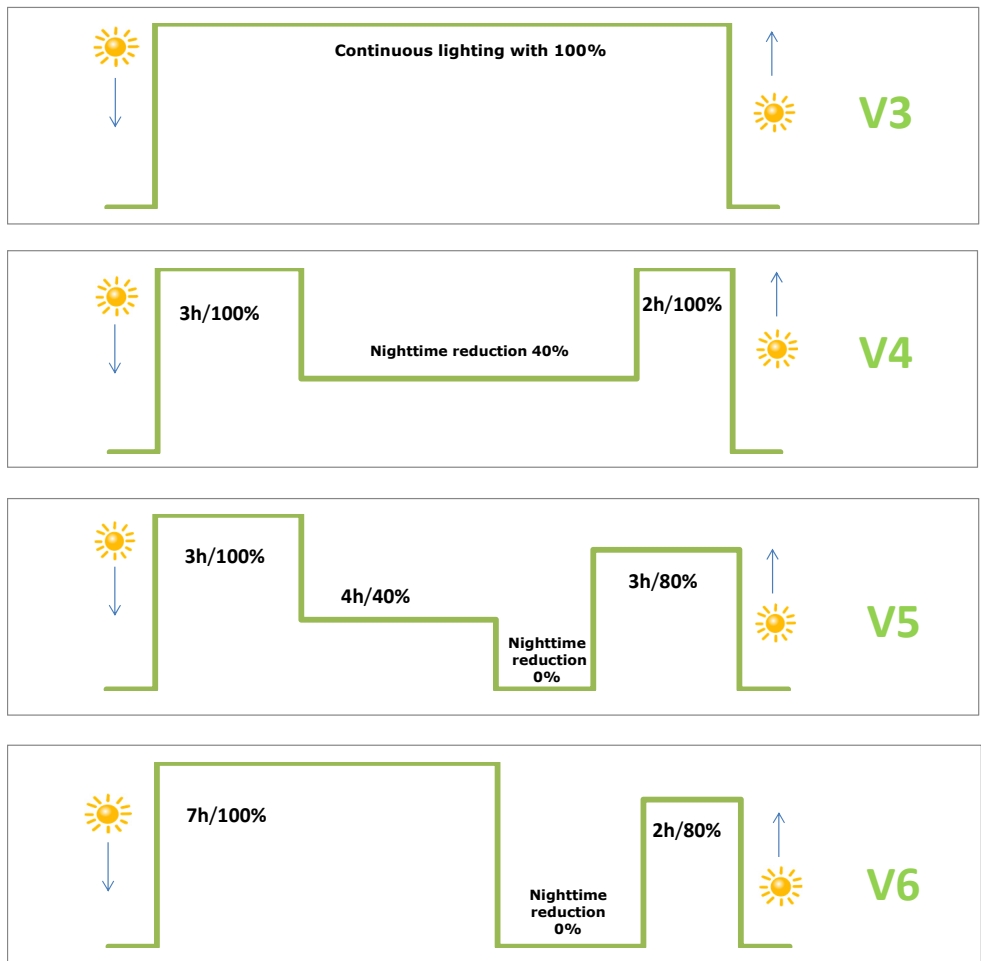
|   |   |
|---|---|
| <b>Solar modules</b>                              | monocrystalline silicon cells with exceptional efficiency specially processed by photinus |
| <b>Efficiency</b>                                 | 22,5%   |
| <b>Max. performance of the energy column Pmpp</b> | 160Wp / 4 solar modules — modules are also charged up in cloudy conditions.               |
| <b>Dimensions of the Solartower</b>               | 237 mm x 237 mm x 1160 mm   |
| <b>Battery</b>                                    | LiFePO <sub>4</sub> / 12V 40Ah  |
| <b>Operating temperature</b>                      | Charge and discharge temperature - 45°C to + 85°C at -45°C capacity over 80%              |
| <b>Battery life</b>                               | Cycle stability 7 to 10 years   |

### LIGHTS

|                                    |   |
|------------------------------------|---|
| <b>Max. luminous flux</b>          | 8000lm (Bregenz site, 47 degrees latitude:1200lm)   |
| <b>Efficiency</b>                  | up to max. 200lm/W  |
| <b>LED module / max. watts</b>     | 88W   |
| <b>Luminance at ground level</b>   | see page 10   |
| <b>Max. back-up time</b>           | 18 days (Bregenz site, 47 degrees latitude: 7 days)<br>„Intelligent plus Modus“ 25 days (Bregenz site: 18 days) |
| <b>Colour temperature</b>          | 4000 K (standard)   |
| <b>Optics   Light distribution</b> | situational   |
| <b>Life of LED</b>                 | > 80000 h   |
| <b>Pivoting light arm</b>          | factory set to 2° inclination<br>(infinitely variable 2° - 9°)  |
| <b>Others</b>                      | insect neutral light  |

ENERGY AND TIME MANAGEMENT

Standard factory setting V5



### DIMENSIONS

|   |   |
|---|---|
| <b>Total height from ground level</b>         | 5570 mm   |
| <b>Height of light from ground level</b>      | 4200 mm to 4400 mm  |
| <b>Total length of pole</b>                   | 5200 mm   |
| <b>Length of pole in the ground assembled</b> | 800 mm to 1000 mm   |
| <b>Pole materials</b>                         | galvanised and powder-coated steel , „Sparkling iron effect dark“ |

### DIMENSIONS AND WEIGHTS FOR SINGLE DISPATCH

|                              |                           |
|------------------------------|---------------------------|
| <b>Luminaire head in box</b> | 1550 mm x 300 mm x 340 mm |
| <b>Weight</b>                | 8 kg                      |
| <b>Solartower in box</b>     | 1200 mm x 250 mm x 250 mm |
| <b>Weight</b>                | 21 kg                     |
| <b>Pole</b>                  | 5200 mm x 110 mm x 110 mm |
| <b>Weight</b>                | 32 kg                     |

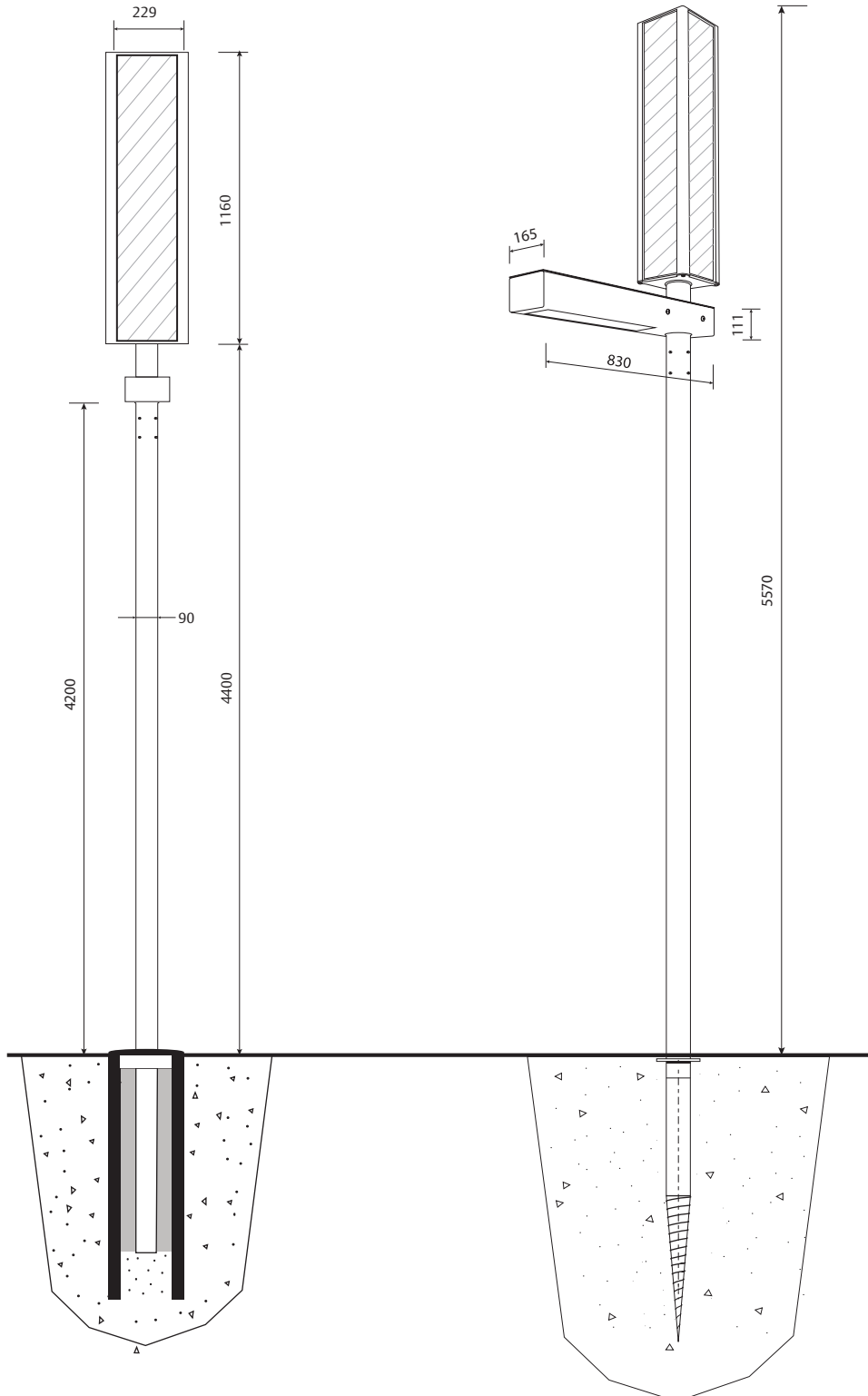
### DIMENSIONS AND WEIGHTS FOR SHIPMENT OF PALLETS

|                                    |                           |
|------------------------------------|---------------------------|
| <b>Pallet</b>                      | 1 Euro palett             |
| <b>Max. number of lights</b>       | 6                         |
| <b>Pallet size (with 6 lights)</b> | 1200mm x 800mm x 1500mm   |
| <b>Weight</b>                      | 174 kg                    |
| <b>Poles</b>                       | 6 pieces (size see above) |
| <b>Total weight of masts</b>       | 192 kg                    |

MAINTENANCE CYCLES | WARRANTY

|   |  |
|---|--|
| <b>Battery change recommended</b>   | after 8 years  |
| <b>LED change recommended</b>   | after 12 years   |
| <b>Material warranty</b>  | 2 years (incl. battery)  |
| <b>PV module warranty</b><br><b>(The warranty period is deemed to start on the date of manufacture)</b> | 2 years with 100% product guarantee<br>5 year warranty at 90% minimum output<br>10 year warranty at 80% minimum output |
|   | (technical changes reserved)   |

**DIMENSIONS**



# 3

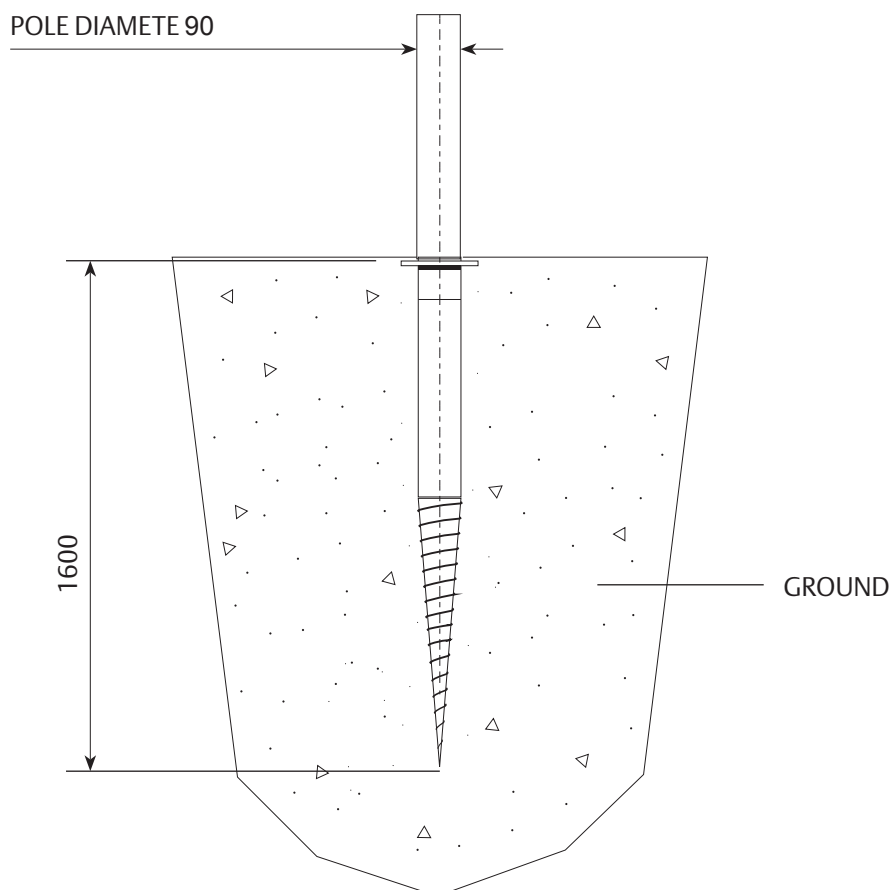
## OPTIONS FOR ASSEMBLY

### OPTION 1 - GROUND SCREW

#### KRINNER GROUND SCREW

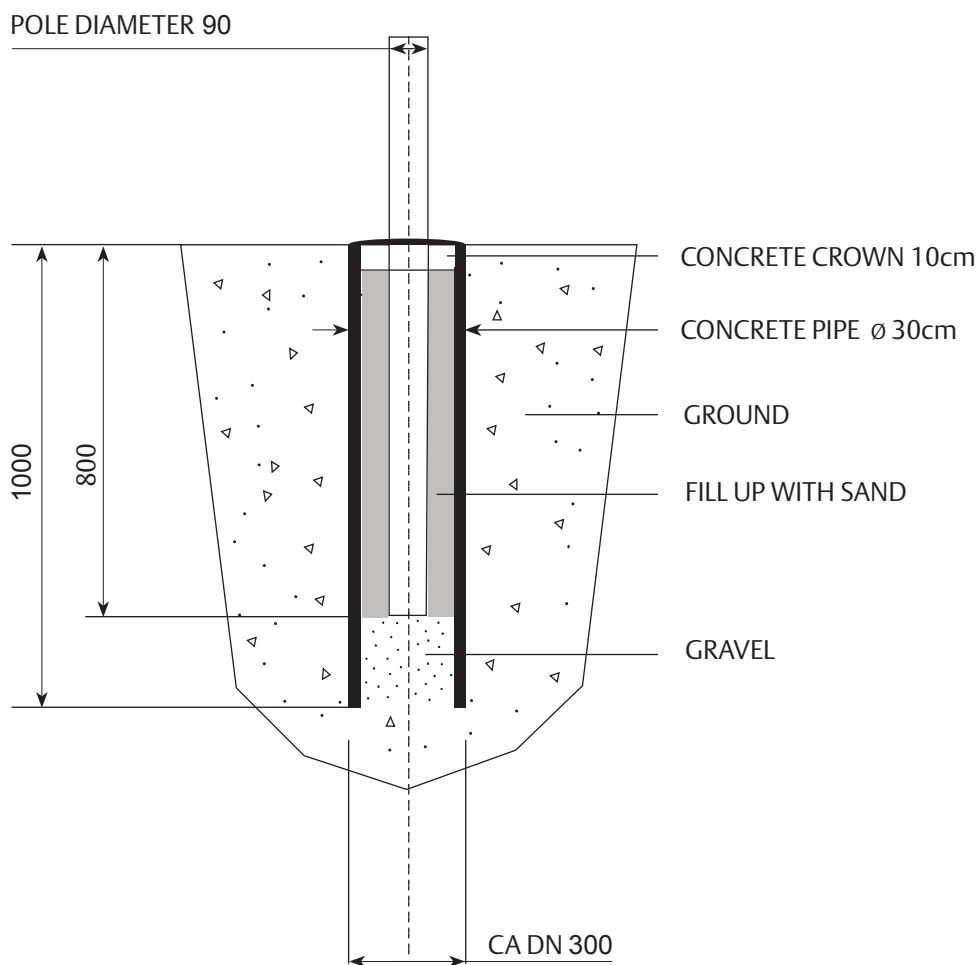
Art. 26160: KSF E140x1600-E76-100

Art. 26813: Eccentric disk set - E90



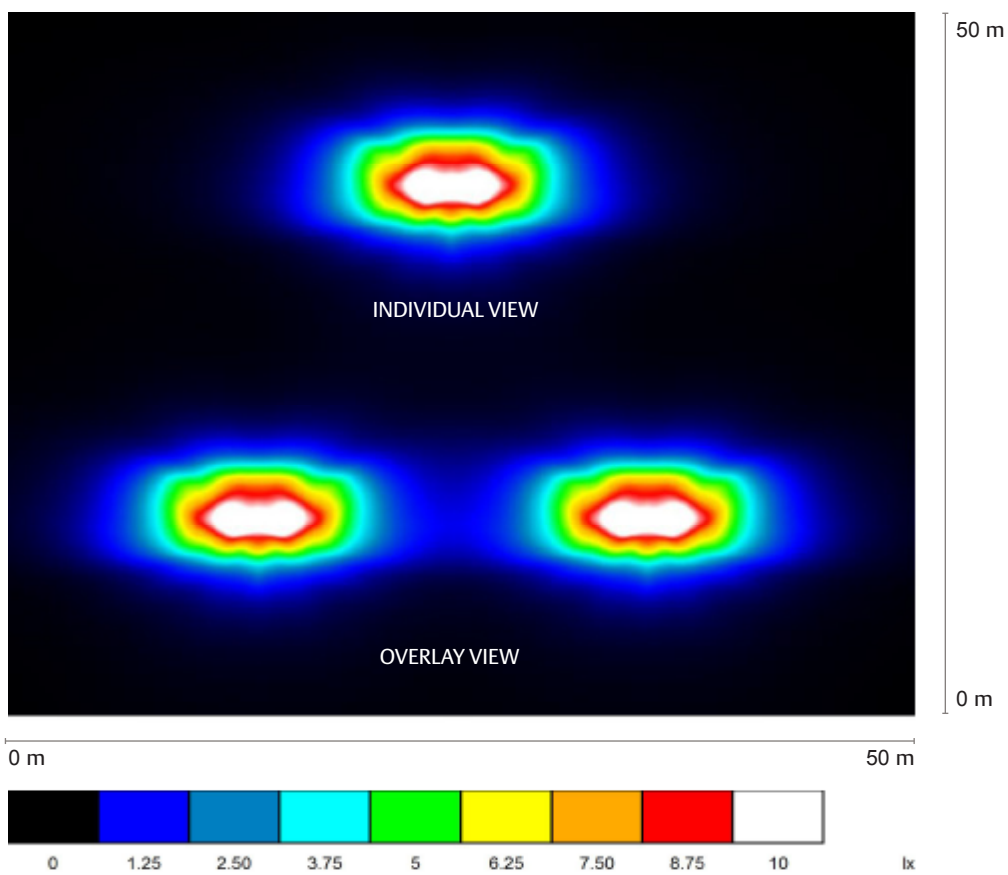


**OPTION 2 - PIPE FOUNDATION**



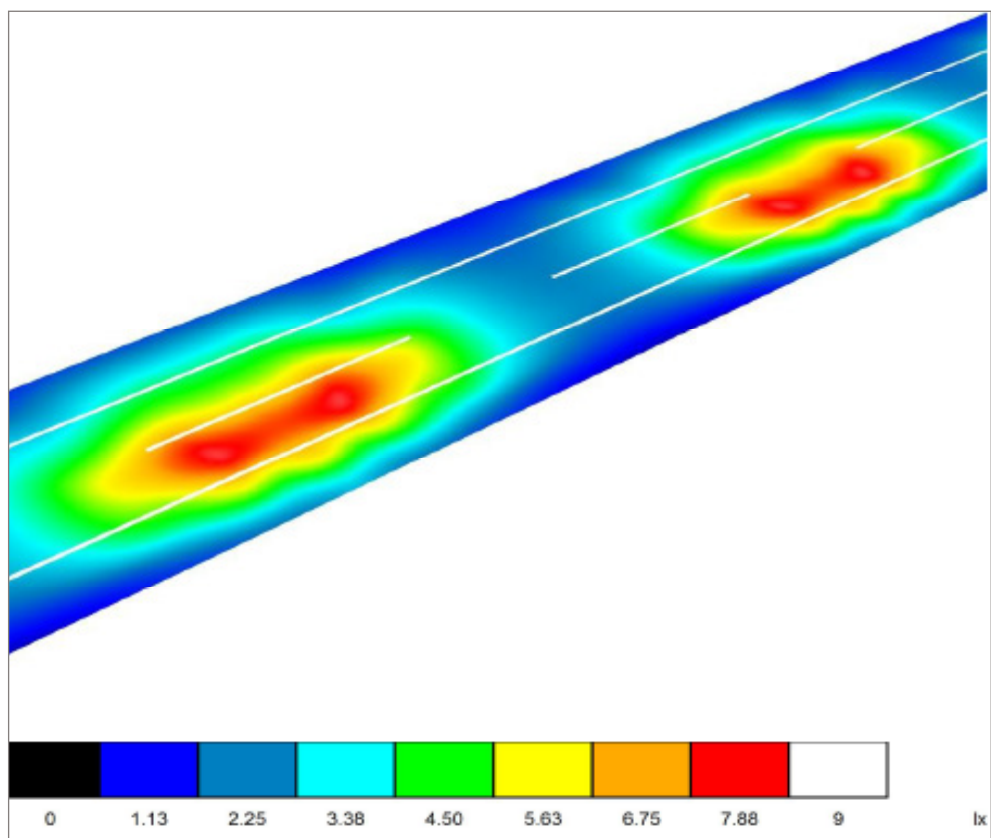
DIALUX LIGHT DISTRIBUTION CURVE (LDC)

USING AN EXAMPLE OF A DISTANCE BETWEEN POLES OF 25M, 1200LM (BREGENZ SITE)



**EXAMPLE OF LIGHTING PLANNING**

EXAMPLE OF LIGHTING PLANNING:  
ROAD 5M IN WIDTH, 30M SPACING BETWEEN LIGHTS



|   | E <sub>av</sub> [lx] | E <sub>min</sub> [lx] |
|---|----------------------|-----------------------|
| <b>Calculated value</b>                           | 4,30                 | 2,16                  |
| <b>Value required to fulfil lighting class S6</b> | >2,00                | >0,60                 |
|   | <b>OK</b>            | <b>OK</b>             |

