

*brilliance in lighting*

# photinus

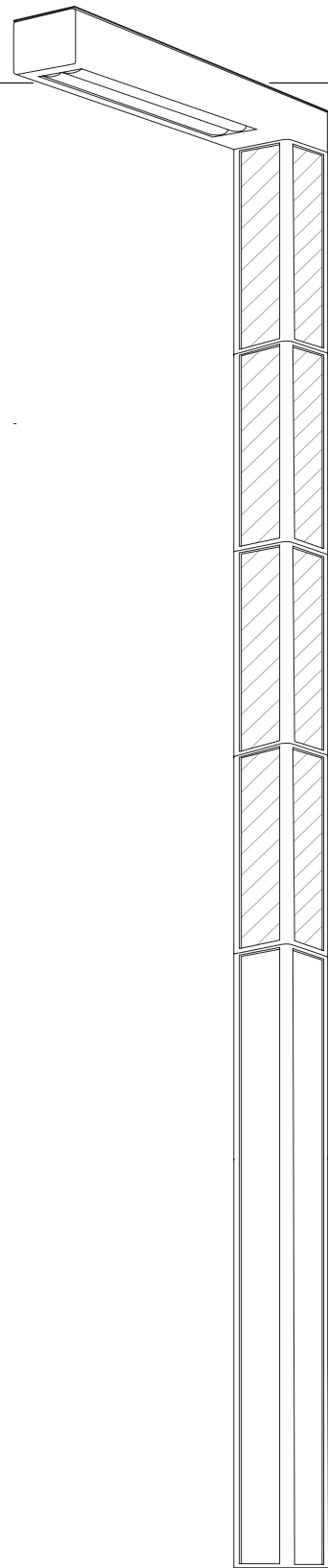
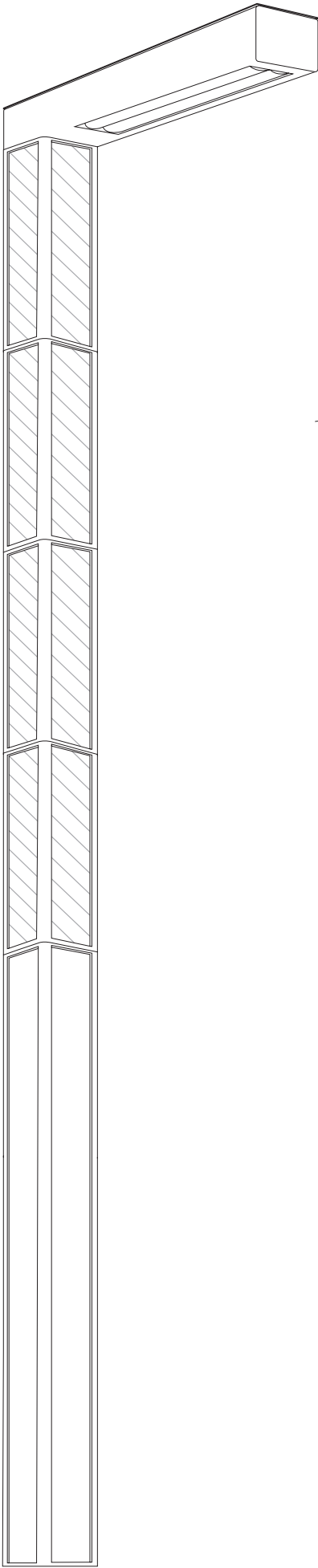
---

## DATASHEET V2|2016

---

**merkur300**

---



# 1

## **merkur300**

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

#### **APPLICATION**

The merkur300 stands out for its exceptional, cubic design and guarantees a secure supply in all different climate zones. The merkur300 solar light is a solar powered LED street lamp, which is used in regions without electrical infrastructure or in which it would not be economically feasible to implement one. The luminaire is especially used in areas that demand a secure supply and excellent light quality even in dim conditions.

The merkur300 is able to generate sufficient energy via the diffuse light component in regions with poor weather (snow, fog, etc.) due to the cubic aluminium construction with 16 photinus High Performance photovoltaic modules. 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. The merkur300 is best suited for residential streets, side streets, cycle routes and footpaths as well as car parks etc. in accordance with DIN EN13201 due to its light output.

#### **OPERATION**

The integrated battery is loaded via 16 photinus High Performance photovoltaic modules and powers efficiently the LED array during the night.

#### **OPTIONS**

Anthracite is our standard colour for the merkur300. Nevertheless, the luminaire can be ordered in all RAL colours for large projects and at an additional charge.

# 2

## TECHNICAL DATA

### PHOTOVOLTAIC ENERGY COLUMN

<b>Modules</b>	16 monocrystalline silicon cells with exceptional efficiency specially processed by photinus.
<b>Efficiency</b>	22,5 %
<b>Max. performance of the energy column Pmpp</b>	336 W
<b>Dimensions of the energy column</b>	see page 4
<b>Protection class</b>	IP65

### ENERGY STORAGE

<b>Battery</b>	LiFePO <sub>4</sub>   634 Wh   13.2V   48Ah
<b>Max. back-up time</b>	6 days / Zurich site
<b>Operating temperature</b>	0°C bis +55°C
<b>Battery life</b>	approx. 12 - 15 years (depending on ambient temperature)

## DIMENSIONS

<b>Total height from ground level</b>	5462 mm
<b>Height of light from ground level</b>	5342 mm
<b>Height of vandalism protection</b>	2500 mm
<b>Height of energy column</b>	2842 mm
<b>Length of pole under ground</b>	1200 mm
<b>Total length of pole (galvanised steel)</b>	6650 mm

## LIGHTS

<b>Max. luminous flux</b>	3000lm (Zurich site, 47. latitude, 1800lm)
<b>Luminance at ground level</b>	see page 10
<b>Max. back-up time</b>	6 days (Zurich site, 47. latitude, 1800lm)
<b>Colour temperature</b>	4000 K
<b>Optics/Light distribution</b>	situational
<b>Lifespan of LED</b>	> 50 000h
<b>Other</b>	insect neutral light

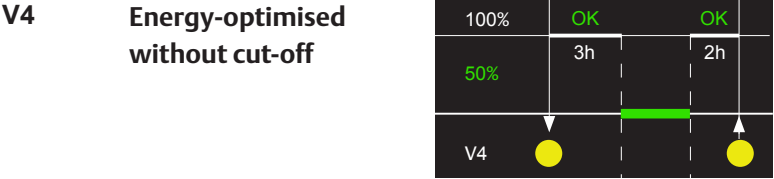
**LIGHTING**

The luminous flux depends on the geographical position and on the chosen time management (calculations are based on the standard factory setting V5)

<b>Zurich site; 47 degrees latitude</b>	1800 lm
<b>Number of LED modules</b>	1
<b>Dakar site; 15 degrees latitude</b>	5000 lm
<b>Number of LED modules</b>	2
<b>Luminance at ground level</b>	see page 10

**ENERGY AND TIME MANAGEMENT**

**Standard factory setting V5/ custom programmes on request**



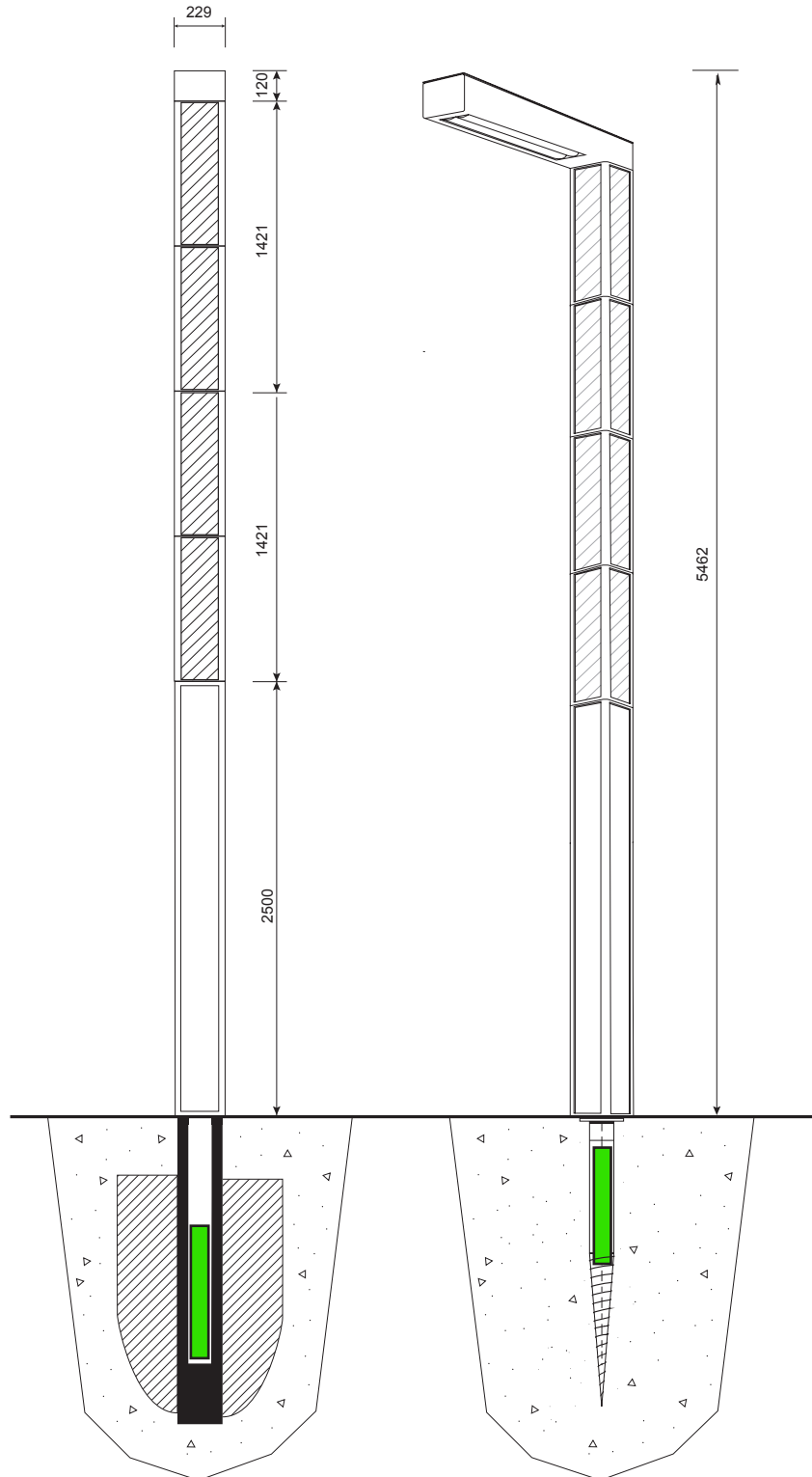
MAINTENANCE CYCLES / WARRANTY

<b>Battery change recommended</b>	after 12 - 15 years
<b>LED change recommended</b>	after 12 years
<b>Material warranty</b>	5 years (incl. battery)
<b>PV module warranty</b> <b>(The warranty period starts</b> <b>on the date of production)</b>	2 years with 100% product guarantee 5 year warranty at 90% minimum output 10 year warranty at 80% minimum output

(subject to technical modifications)



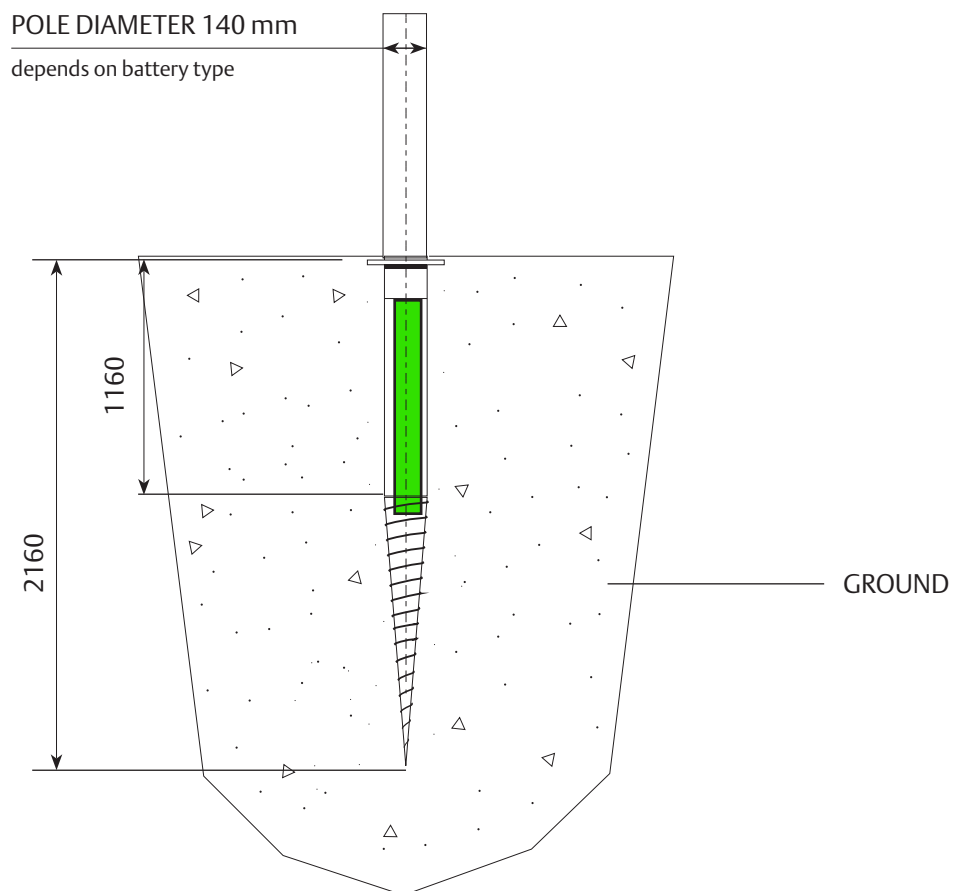
**DIMENSIONS MERKUR300**



# 3

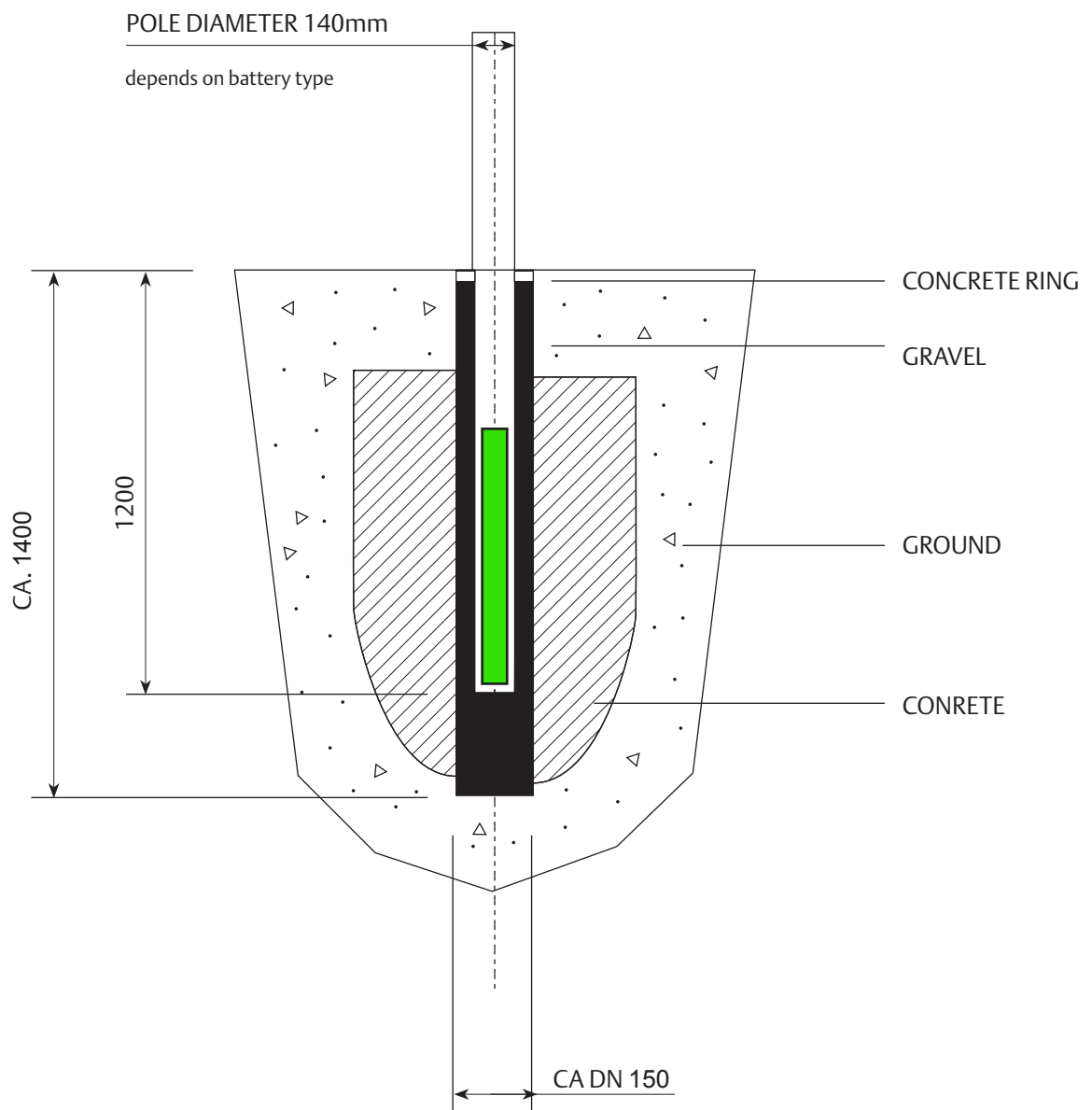
## OPTIONS FOR ASSEMBLY

### OPTION 1 - KRINNER GROUND SCREW



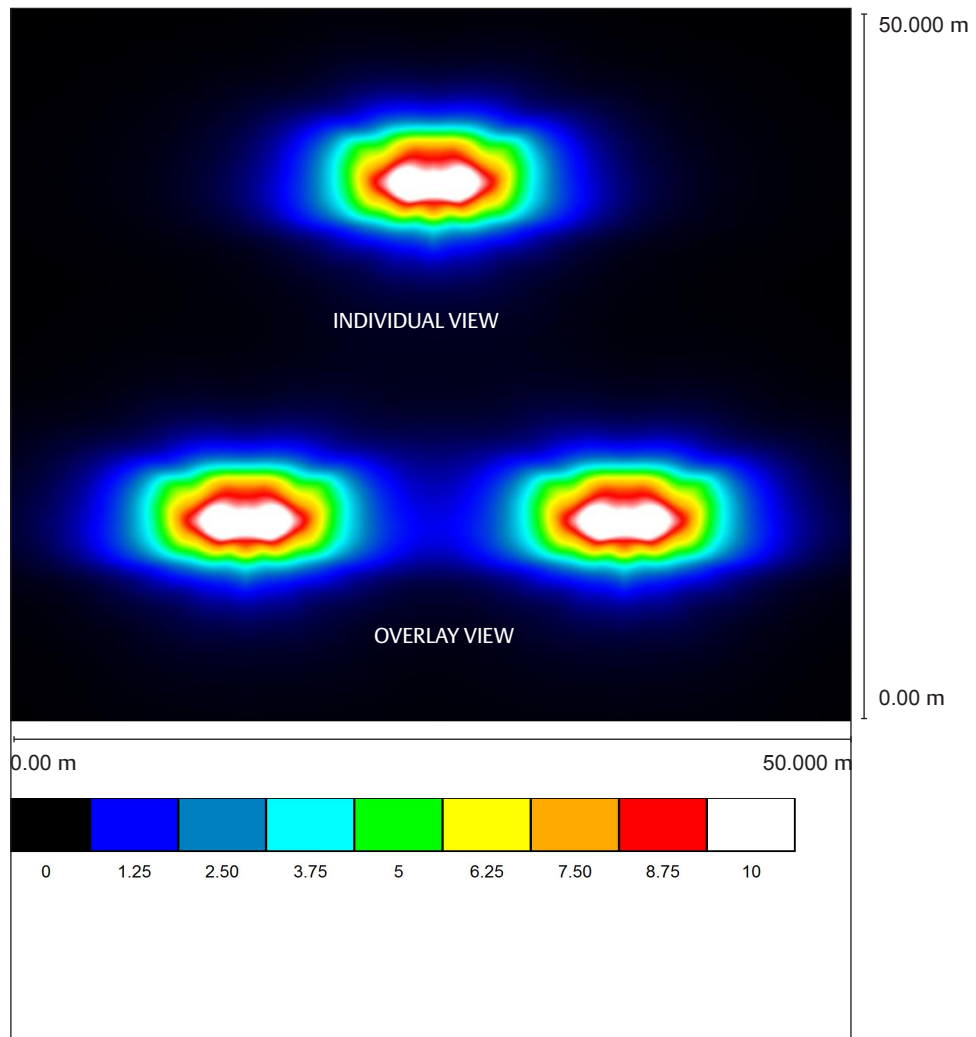


**OPTION 2 - PIPE FOUNDATION**



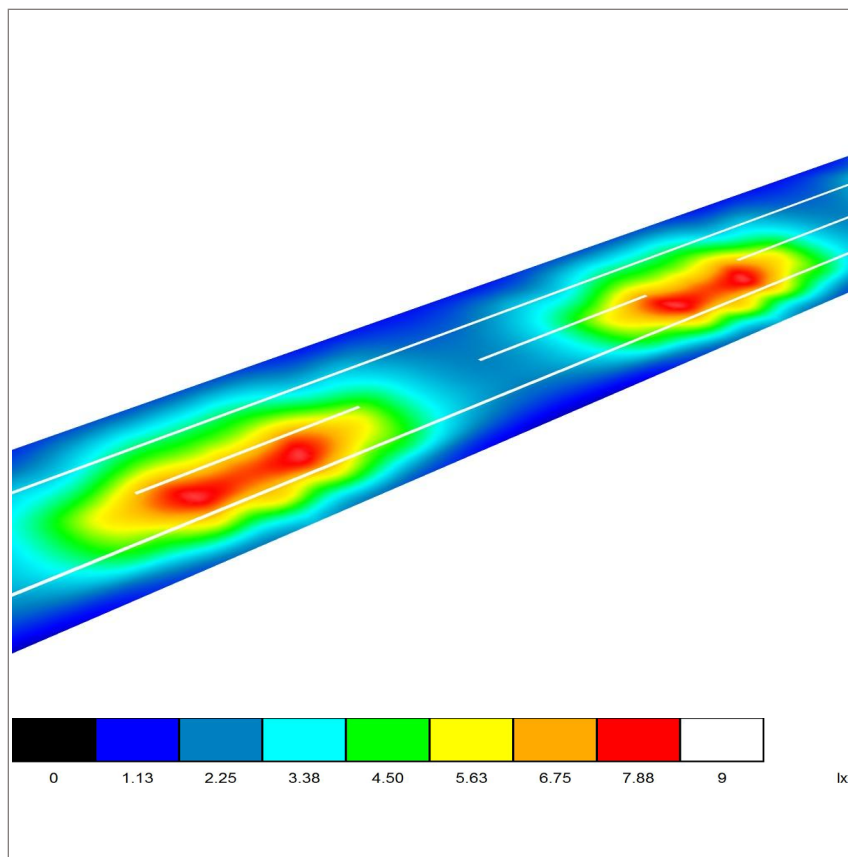
DIALUX LIGHT DISTRIBUTION CURVE (LDC)

USING AN EXAMPLE OF A DISTANCE BETWEEN POLES OF 25M,  
1500 LM (SITE ZURICH)



**EXAMPLE OF LIGHTING PLANNING**

EXAMPLE OF LIGHTING PLANNING: ROAD 5M WIDTH,  
45M SPACING BETWEEN LIGHTS



	$E_{av}$ [lx]	$E_{min}$ [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>

