



# HEPER

heper<sup>®</sup> + MOONLIGHT<sup>®</sup>

# Innova



## **Company**

Presenting innovative designs, Heper+Moonlight brand is recognized throughout the world for its functionality, design and performance.

## **Philosophy**

Lighting for Life' to create and offer comfortable and healthy lighting systems that contribute to a more pleasant way of life for people wherever and whenever they come together.

## **Leading Designs**

Our engineering group uses the latest design and modeling software to ensure the outstanding optical performance as well as the best overall durability of our luminaires.

## **Test of Quality**

Our success relies on the quality of our product development process. All products are individually tested which are necessary for successful usage.

## **Special Solutions**

Heper+Moonlight offers complete design and production services beginning with your idea to the completed product.

## **Product Sales**

With a product range sold throughout over 40 countries worldwide, Heper+Moonlight is the supplier for all professional outdoor lighting needs.

## **Product**

Our products contribute to a more pleasant way of life for people wherever and whenever they come together.

## **Technology**

Heper+Moonlight technology, and the products which incorporate this technology, are improving lives and places around the world.

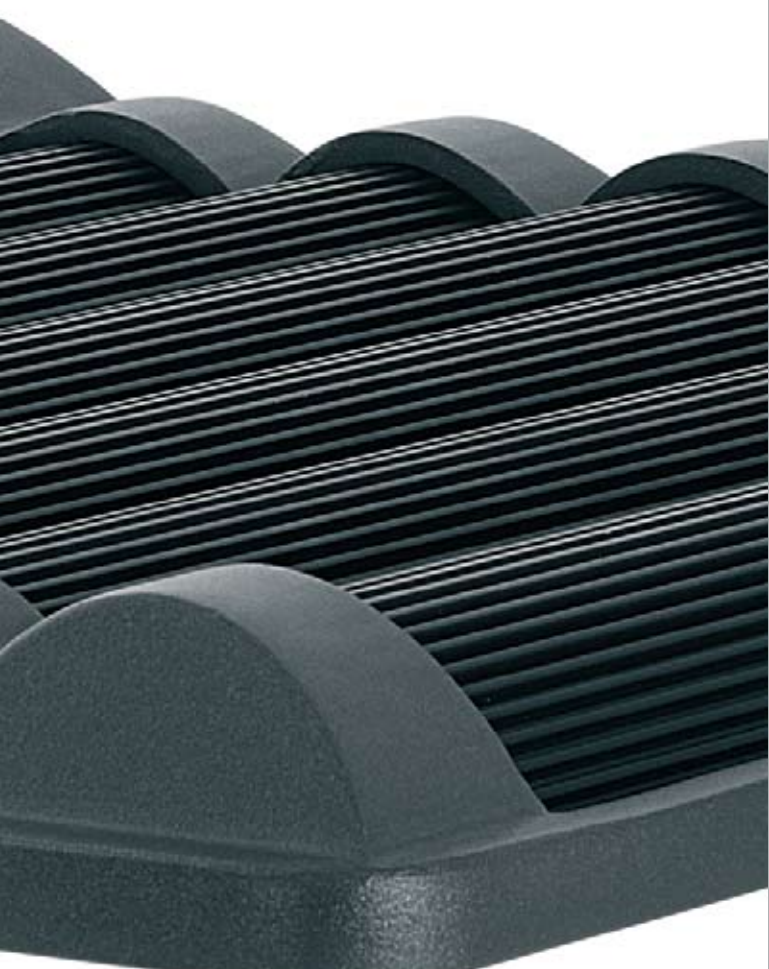
## **Light Pollution**

Heper+Moonlight lighting systems have been extensively developed to meet the exacting demands of Light Pollution requirements.

## **Street lighting**

Heper+Moonlight Street Lighting Systems offer minimized installation and maintenance costs and maximized energy savings.

# ation



## BARTENBACH DEVELOPMENTS WITH HEPER+MOONLIGHT

### Research and Development

An interdisciplinary approach is taken by Bartenbach team of engineers and scientist for a wide range of tasks for Heper+Moonlight:

- ✓ Development of luminaires
- ✓ Development of secondary reflector systems
- ✓ Development optical systems for road lighting
- ✓ Photometric measurements and computations
- ✓ Studies and appraisals
- ✓ Research projects

### Luminaire development

The development of the luminaire starts with the initial idea and follows through concept and detailed development (optical systems, reflectors, etc.) to the support of Heper+Moonlight up the prototyping and pre-production samples.

A number of patented lighting technologies have been used such as the "spots and mirrors" technique.

LEDs represent another focal point of the future design efforts since they offer many opportunities but also challenges as a light source for general lighting.

Research projects provide the know how that is then implemented in many development projects commissioned by Heper+Moonlight.

### Measurements

Photometric tests such as measuring the polar curve of luminaires, the optical characteristics of certain materials, luminance measurements using cameras etc. are done in Bartenbach laboratories.

### Design Concept

The experts at Bartenbach LichtLabor focus on the design of lighting concepts and systems utilizing both natural and artificial lighting from the initial concept right through to site supervision.

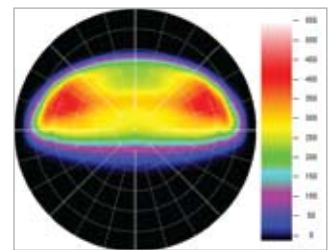
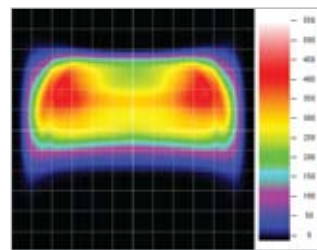
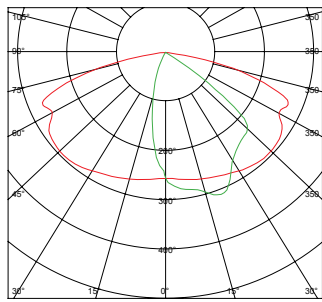
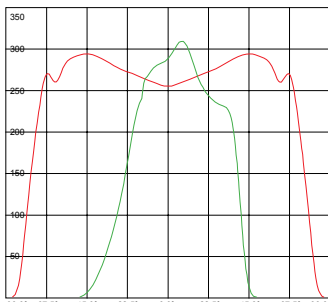
"Not from the luminaire to the overall ambience but from the desired effect to the lighting concept using the findings in perception psychology. And then applying physics and photometry to arrive at the optimal luminaire type respectively lighting system."

Prof. Christian Bartenbach

# Eco

The original aesthetic design of the Eco luminaire is for the high performance of an intelligent lighting system. Eco is a new generation LED fitting with high-level design and different style.

The innovative optics and intelligent electronics meet with the street lighting requirements ME3a (EN13201). These luminaires achieve a dramatic reduction of running costs in public lighting installations, with high lighting performance.



CO - C180  
C90 - C270

Road Lighting Array							Road Class ME3a		
Height (H) (m)	Spacing (S) (m)	Area (A) (m <sup>2</sup> )	Power (W)	Number of Led's	Number of Modules	S/H	W/m <sup>2</sup>	Led/m <sup>2</sup>	
9.0	35	245	86.4	72	6	3.89	0.35	0.29	
10.0	38	266	100.8	84	7	3.80	0.38	0.32	
11.0	41	287	115.2	96	8	3.73	0.40	0.33	
11.5	45	315	129.6	108	9	3.91	0.41	0.34	

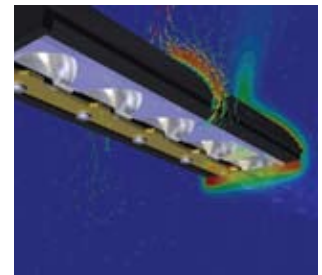
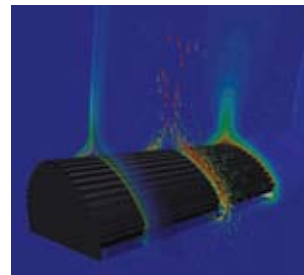
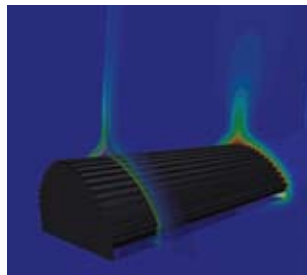
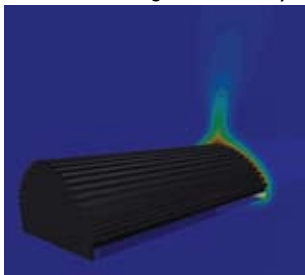


# Oliva

OLIVA is futuristic and ultramodern street lighting coming up with its aesthetically pleasing form that fuses all of the components of the pole on one unique body. The new approach of singularity and autonomy gives way to a strong sense of durability of form and confidence to the product.



## Thermal Management Analysis



Size of modules		
Number of Modules	Width	Length
6	360mm	360mm
7	360mm	420mm
8	360mm	480mm
9	360mm	540mm
10	360mm	600mm

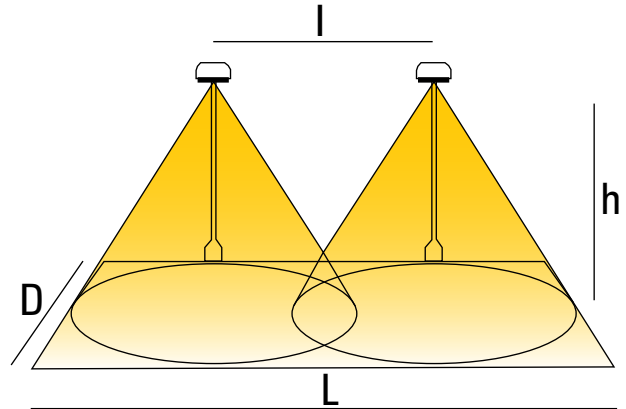
Cool White / Neutral White 700mA	
Luminous Flux of Single Led	145lm
Led Output after 5years	122lm
Depreciation Factor after 5years	0.84
Maintenance Factor	0.90





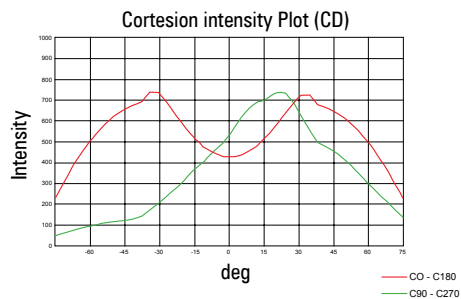
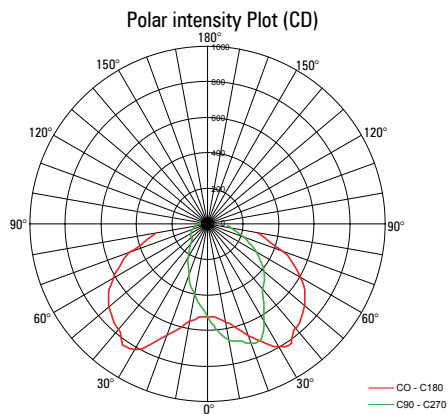
# Tila

TILA is a new opening for creating harmonious and pleasing lines, simple in its understanding, helping to fully experience the dynamics of light and feel its infinite characteristic.



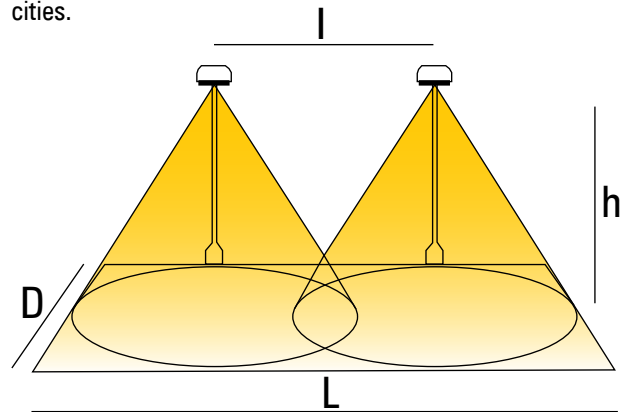
Single Pole						
h	L	D	I	E <sub>max</sub>	E <sub>ave</sub>	N.of LED
8 mt	28 mt	7 mt	--	35 lux	13 lux	60

Double Pole						
h	L	D	I	E <sub>max</sub>	E <sub>ave</sub>	N.of LED
4 mt	24 mt	3.5 mt	12 mt	47 lux	24 lux	48



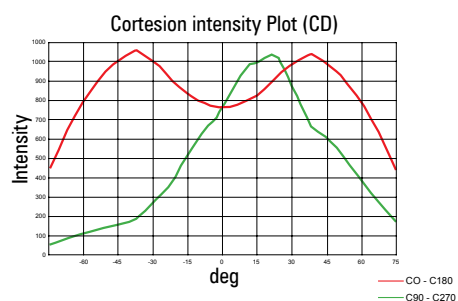
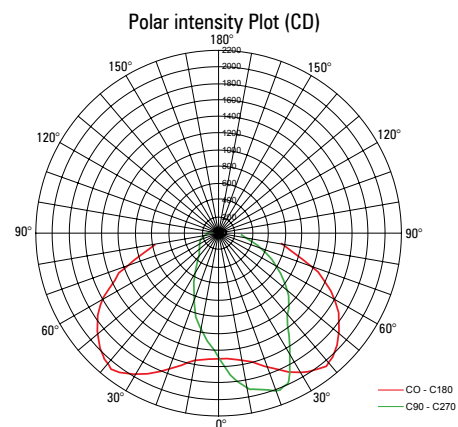
# Wings

WINGS is an expression of independency with its implanted LED lighting units in both expanded sides. By constantly challenging our sense of perception of eternity and linear orientation on exterior spaces. It is a unique sculptural product for future of cities.



Single Pole						
h	L	D	I	E <sub>max</sub>	E <sub>ave</sub>	N.of LED
8 mt	28 mt	7 mt	--	35 lux	13 lux	60

Double Pole						
h	L	D	I	E <sub>max</sub>	E <sub>ave</sub>	N.of LED
8 mt	52 mt	7 mt	28mt	35 lux	15 lux	120



HEPER  
MOONLIGHT



**heper** + **MOONLIGHT**

MOONLIGHT AYDINLATMA SAN. TİC. LTD. ŞTİ.

1. Organize San. Böl. Uygurlar Cad. No. 1 Sincan, (06935) ANKARA, TÜRKİYE

T.: +90 312 267 54 30 (pbx) F.: +90 312 267 54 31

[www.moonlight.com.tr](http://www.moonlight.com.tr) / [www.moonlightlighting.com](http://www.moonlightlighting.com) / e-mail: [info@moonlight.com.tr](mailto:info@moonlight.com.tr)

© Copyright 2010 All rights reserved.

Conception: Heper + Moonlight