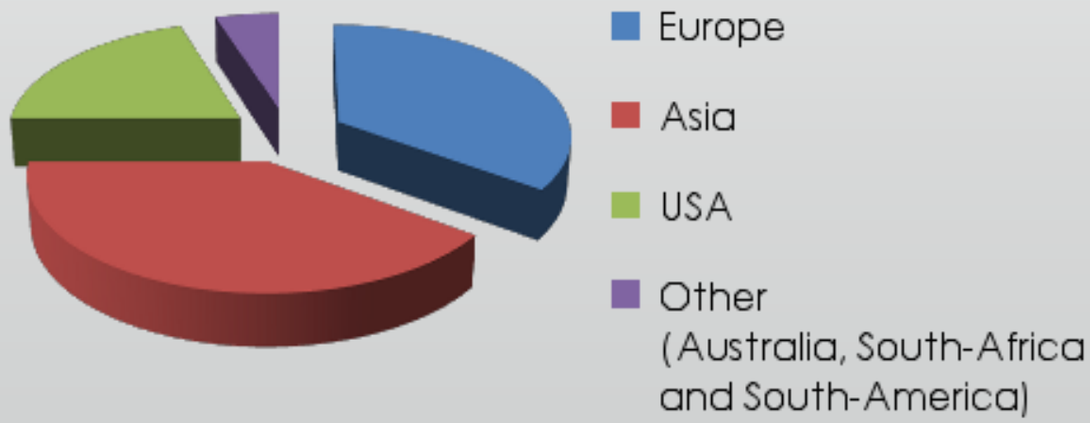
Who is LEDIL?

LEDIL Oy, based in Salo, Finland, is the world-leading Optoelectronics-only supplier, manufacturer, and expert in Researching and developing optical components for high power LEDs.

Company background in optical engineering for high power LEDs since 1997. Ledil Oy was established year 2002.

Turnover for FY2011 is around 12 000 000€

Ledil has sales in all continents:



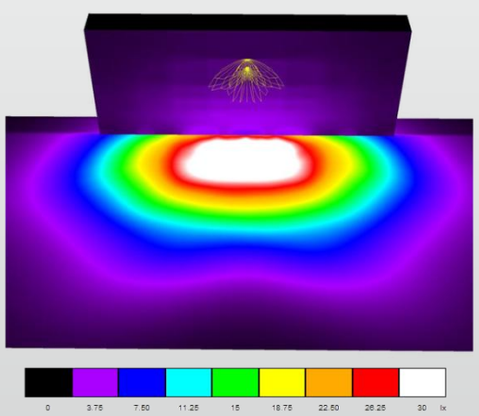
What does LEDIL do?

Product range

-Over 1000 standard optical products for 14 different LED manufacturers

-Customized solutions

-Lens specific PCB design for all our standard products (Gerber files)



Design

-Optically and Mechanically optimized solutions

-High quality materials and quality control

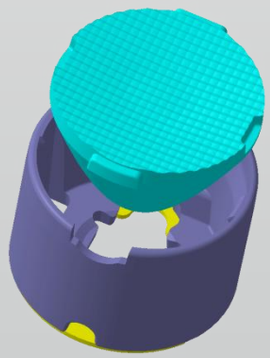
Customer support

-Technical support and simulations

-Photometric data (IES/EULUMDAT)

-Mechanical 3D files

-Near-field ray data (Zemax .DAT format)



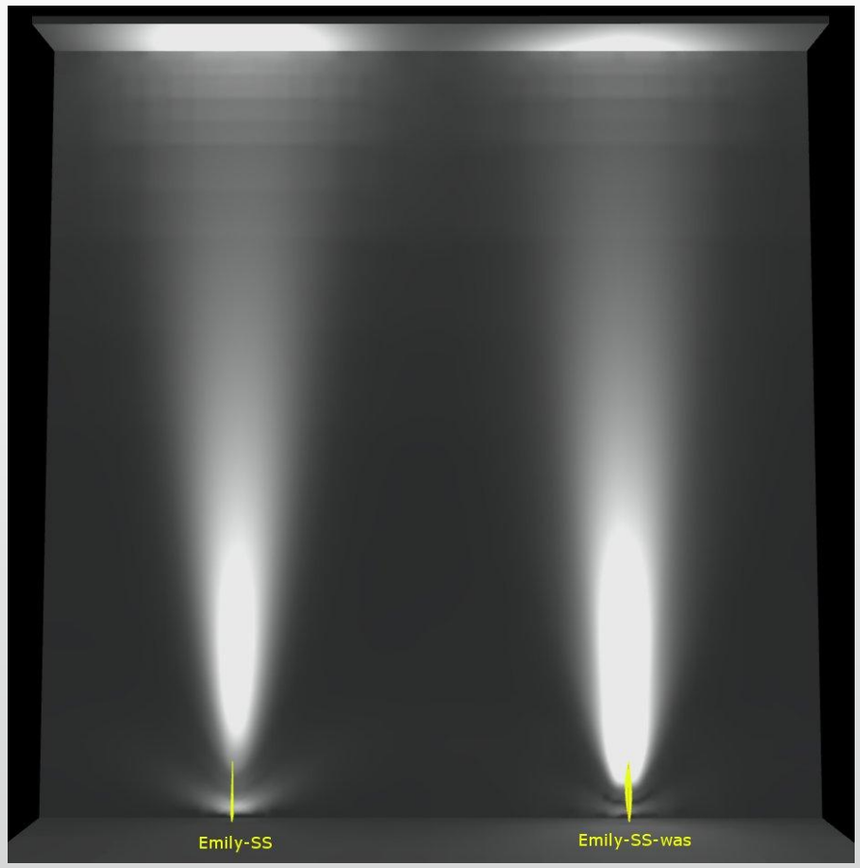
Wall washing applications

Most products used today are symmetrical spotlights.

Symmetrical distribution looks good but isn’t efficient in any way.

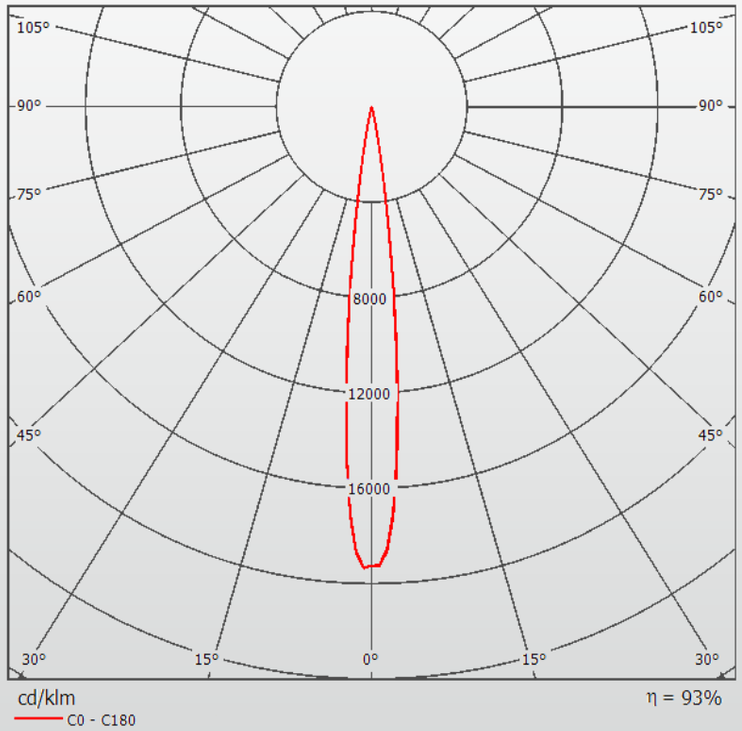
Light loss might be over 50% depending on the situation.

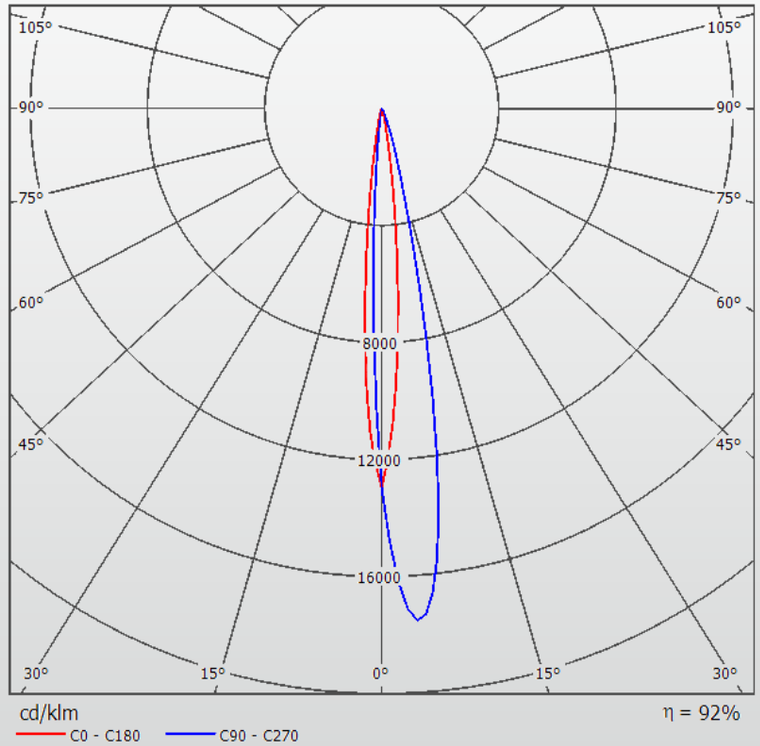
Asymmetric distribution doesn’t waste as much light and still looks good.



Asymmetric Emily-was series

Optimized asymmetric light distribution:



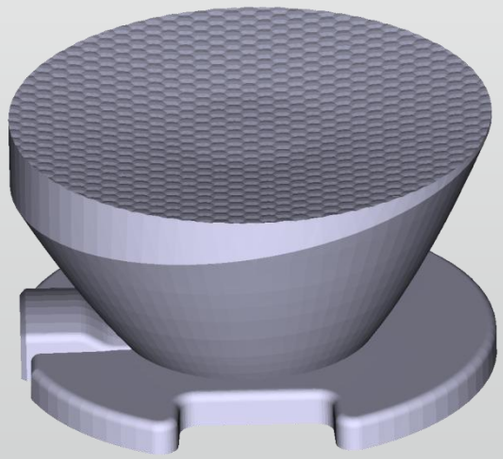


Standard symmetrical optics
-High losses on efficiency

Asymmetrical Emily-was series
-Highest intensity peak around 4°
-Stronger cut-off for better efficiency
-Visually close to symmetrical solutions

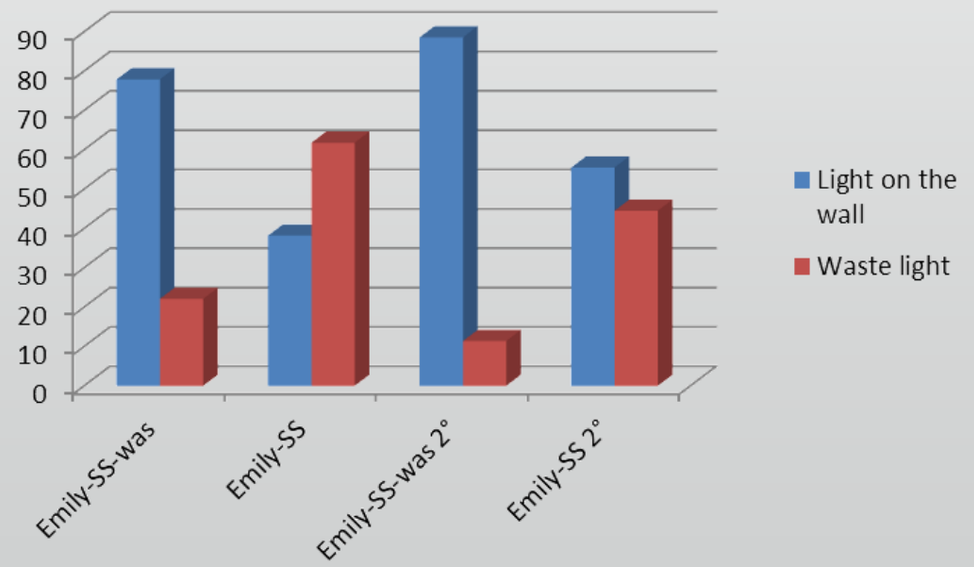
Emily-SS-was

-Asymmetric light distribution with great efficiency for wall washing applications
-Same mechanical dimensions with Emily series
-Tilting of the lamp is not usually needed



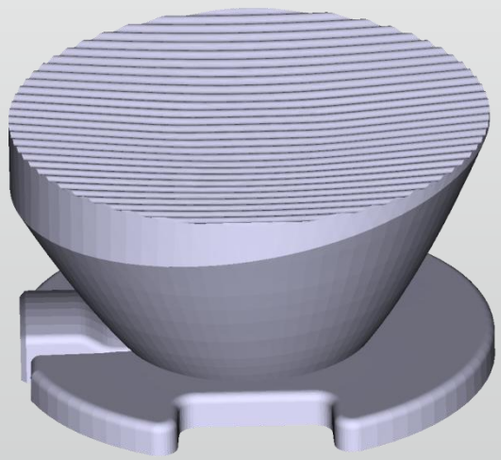
Emily-SS-was
Asymmetric spot lens

Efficiency comparison of Emily-SS and Emily-SS-was

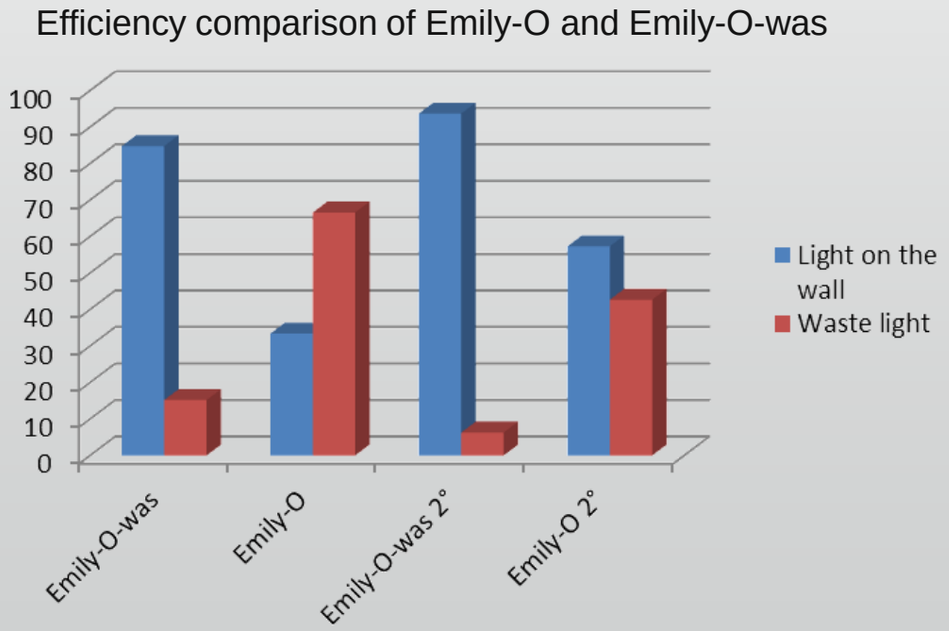


Emily-O-was

-Asymmetric light distribution with great efficiency for wall washing applications
-Same mechanical dimensions with Emily series
-Tilting of the lamp is not usually needed



Emily-O-was
Asymmetric oval lens



Asymmetric street lighting series

Four different asymmetric Strada concepts including single lenses and lens modules

High quality materials and optimized design

Advantages of asymmetric optical design in street lighting

-Tilting of the lamp or adding arm is often not needed
-Better light distribution
-Less light is wasted

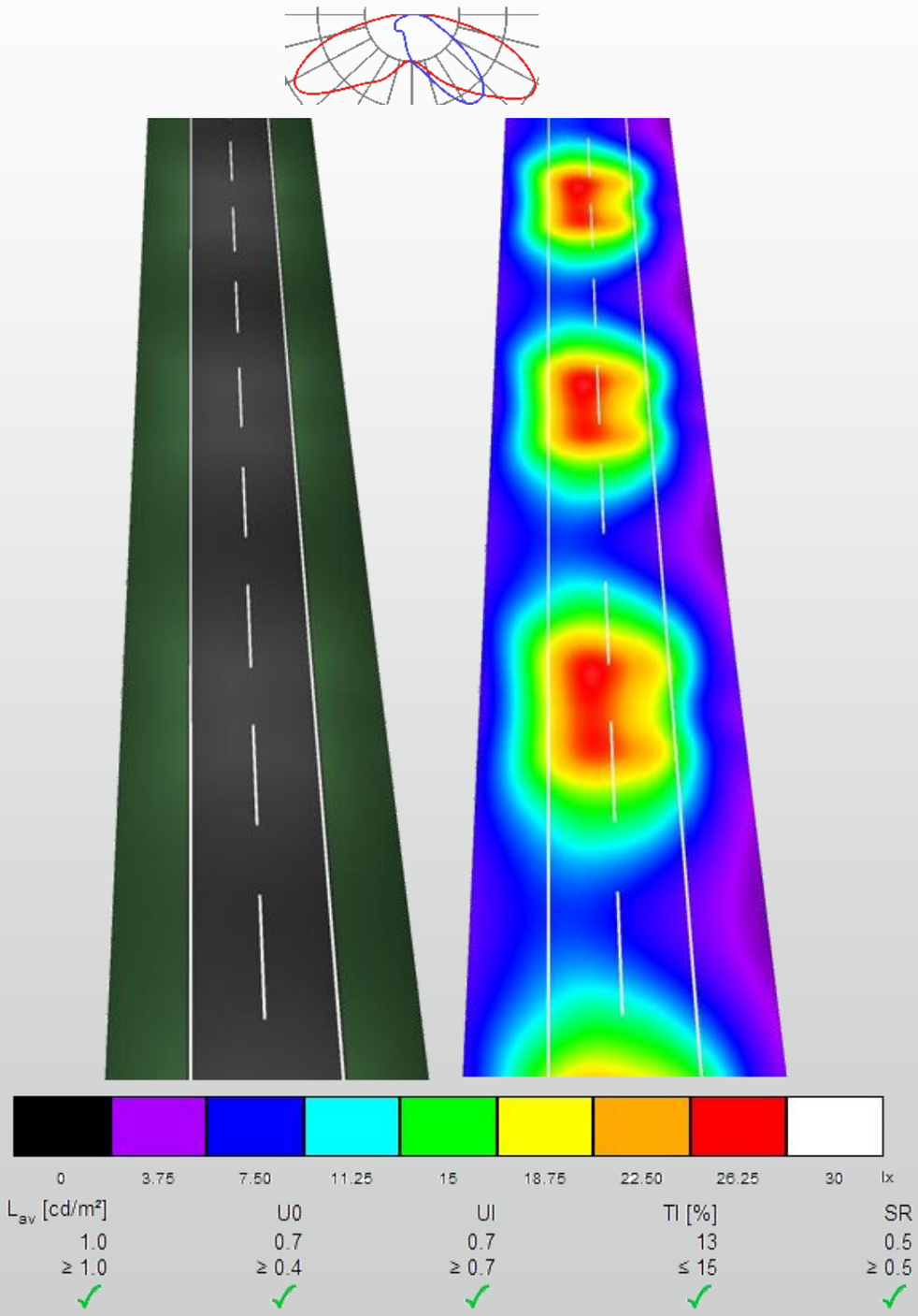
Strada-T series

-Asymmetric distribution for high efficiency
-Two lens types designed to be combined for better results
-Standard Strada footprint

Strada-T-DW
Asymmetric side emitter

Strada-T-DN
Asymmetric forward throw

Strada-T series



Good luminance uniformities required for European motorways such as ME3a classified roads. Good efficiency

Pole height: 8m
Pole distance: 32m (ratio 4:1)
Overhang: -1m
Boom angle: 0°
Boom length: 0m

Street width: 8m
Street coating: R2

Simple mix of lenses:
- 60% Strada-T-DN, 40% Strada-T-DW
- No special lens arrangement on the PCB.
- IESNA type III short light distribution.

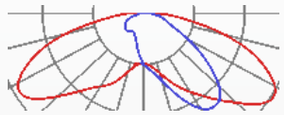
Strada-SQ-T series

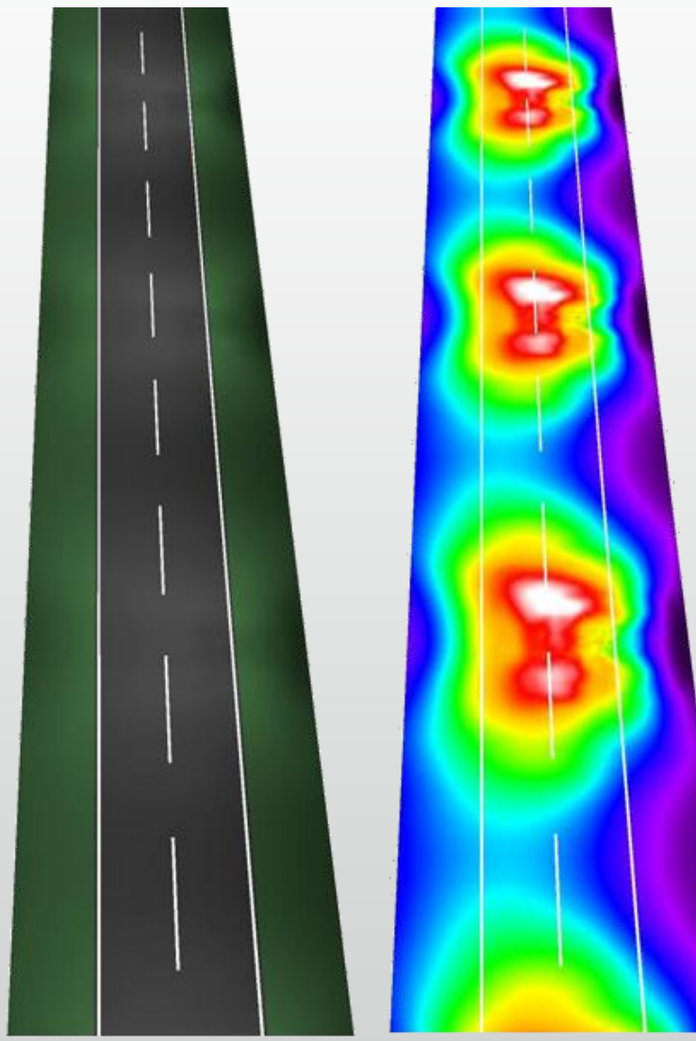
-Asymmetric distribution for high efficiency
-Two lens types designed to be combined for better results
-25mm square footprint with room to add adhesive materials
-Markings for machine assembly

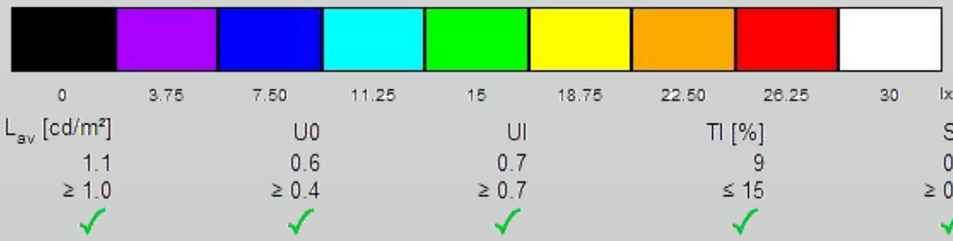
Strada-SQ-T-DW
Asymmetric side emitter

Strada-T-DN
Asymmetric forward throw

Strada-SQ-T series







Good luminance uniformities required for European motorways such as ME3a classified roads. Good efficiency

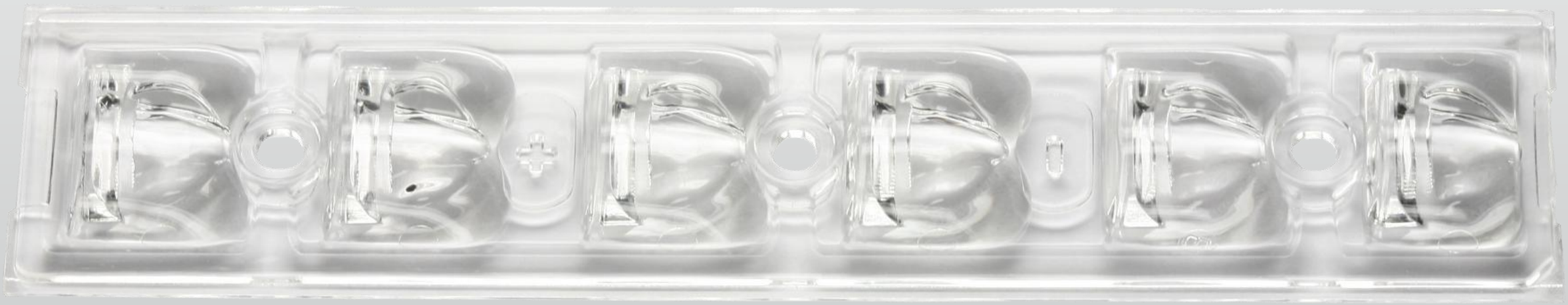
Pole height: 8m
Pole distance: 32m (ratio 4:1)
Overhang: -1m
Boom angle: 0°
Boom length: 0m

Street width: 8m
Street coating: R2

Simple mix of lenses:
- 60% Strada-T-DN, 40% Strada-T-DW
- No special lens arrangement on the PCB.
- IESNA type III short light distribution.

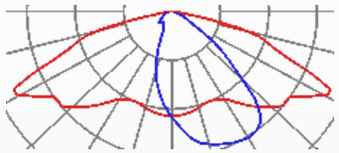
Strada-T-6x1-DNW

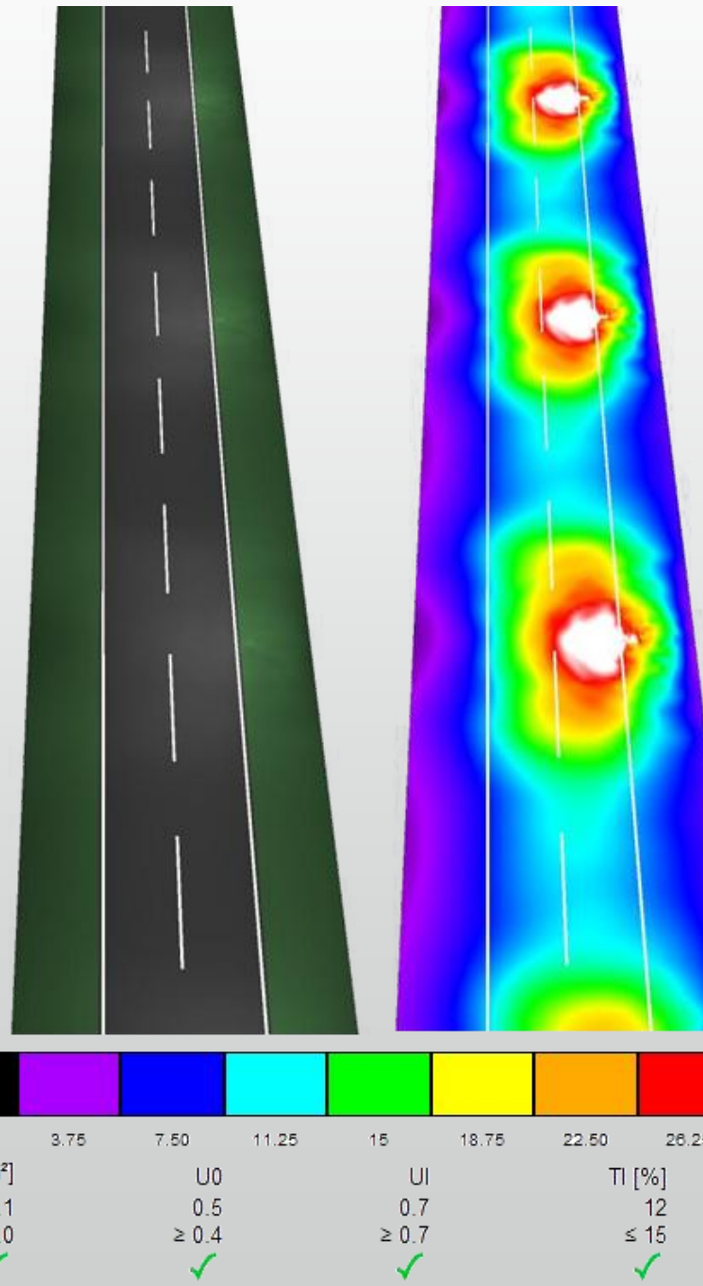
-Asymmetric distribution for high efficiency
-6 lens module with great longitudinal uniformity
-120mm x 25.2mm footprint
-Markings for machine assembly
-Designed to be used also without protective glass
    -Room to add sealing materials
    -Simple outer shapes for easy cleaning
-Optical grade PMMA that can withstand weather and UV-radiation



Strada-T-6x1-DNW
Asymmetric street lighting module

Strada-T-6x1-DNW





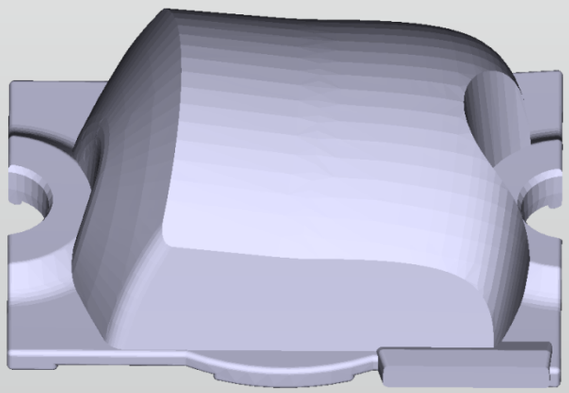
Good luminance uniformities required for European motorways such as ME3a classified roads. Good efficiency

Pole height: 8m
Pole distance: 32m (ratio 4:1)
Overhang: -0.5m
Boom angle: 0°
Boom length: 0m

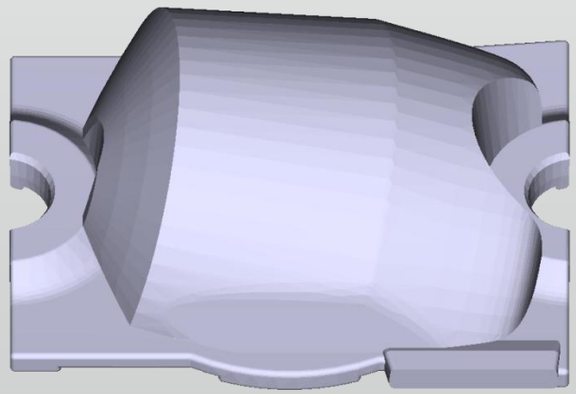
Street width: 8m
Street coating: R2

Strada-F series

-Asymmetric distribution for high efficiency
-Two lens types designed for different applications
-Standard Strada footprint
-Highest intensity peak around 55˚



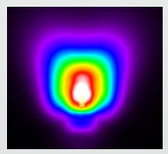
Strada-FT
Forward throw



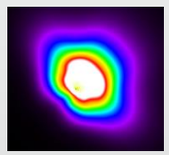
Strada-FW
Wide forward throw

Strada-F series

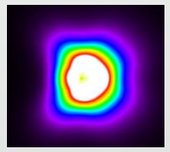
Strada-F series can be used to create modular lighting system for areas like parking lots



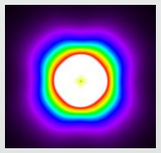
Strada-FT facing one direction (0˚)



Strada-FT facing two direction (0˚ ,90˚)

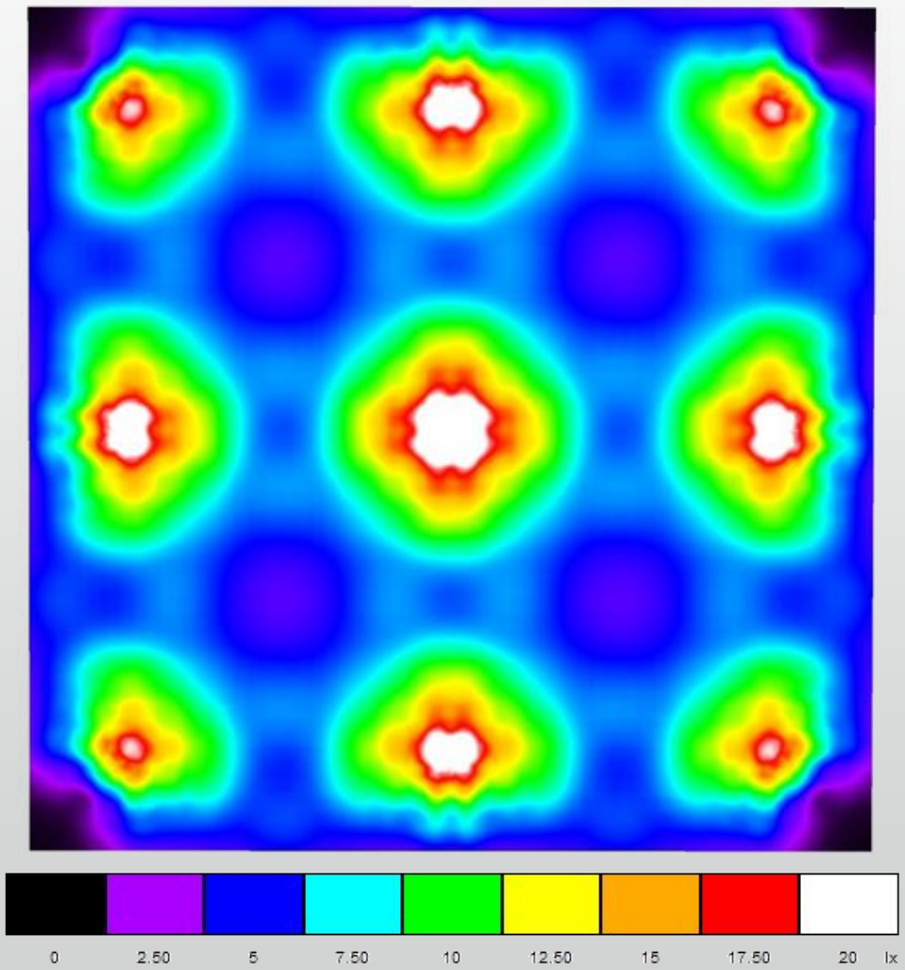


Strada-FT facing three direction (0˚ ,90˚ ,180˚)



Strada-FT facing four direction (0˚ ,90˚ ,180˚ ,270˚)

Uniform distribution can be created when the Strada-F lenses are turned to face multiple directions



Modular design

Brooke-MBH

-Three different reflector angles
-Socket that fastens the led on place
-No soldering needed

Brooke-MBH + Molex socket

Minnie

-Designed to be fitted on a MR16 LED module

Minnie

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