

## VERONICA-SQ-SE

~190° side emitter beam

### SPECIFICATION:

Dimensions	22.5 x 22.5
Height	11.4 mm
Fastening	tape
ROHS compliant	yes ⓘ

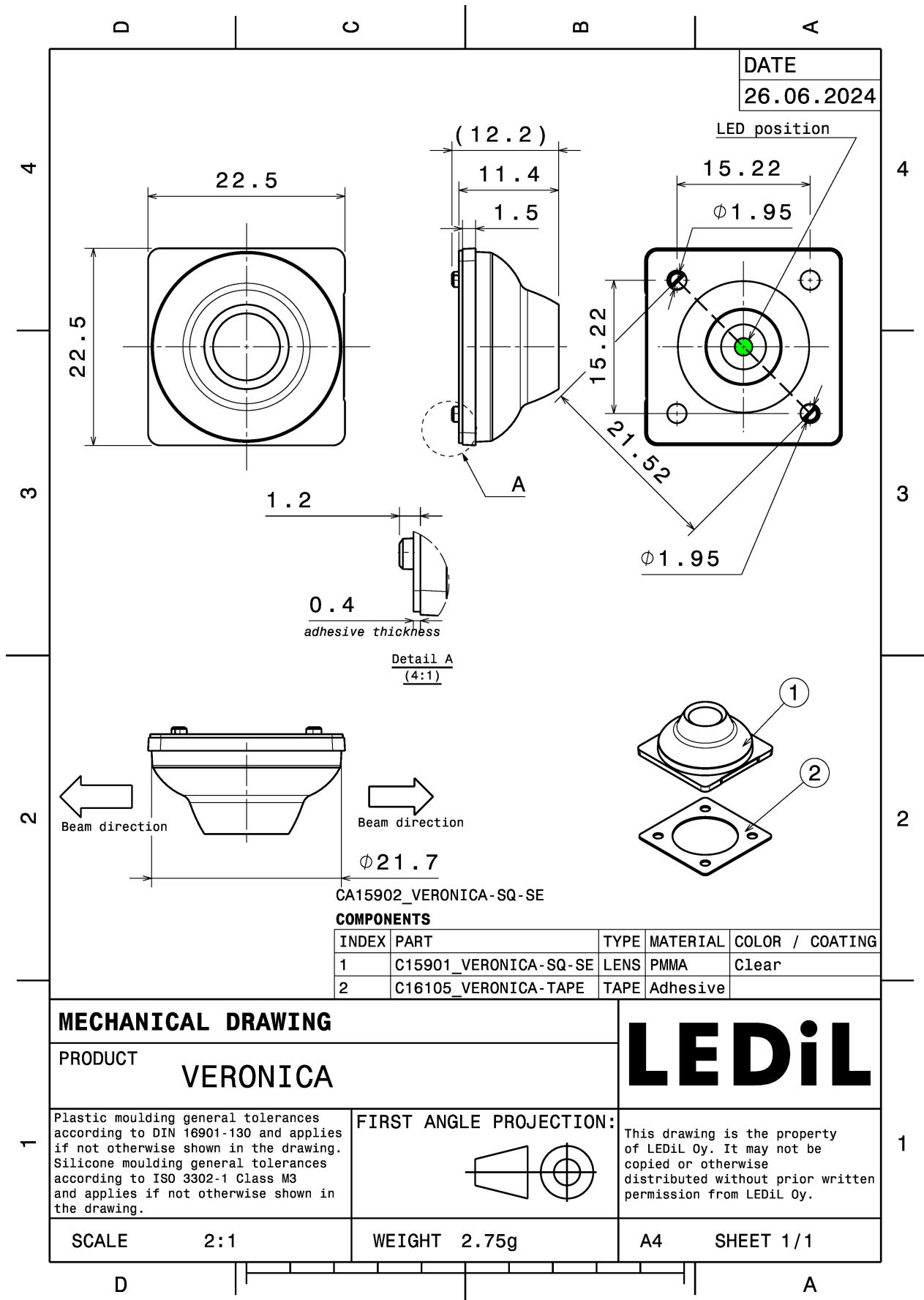
### MATERIALS:

Component	Type	Material	Colour	Finish	Length (mm)
VERONICA-SQ-SE	Single lens	PMMA	clear		
VERONICA-TAPE	Tape	Acryl tape	clear		



### ORDERING INFORMATION:

Component	Type	Qty in box	MOQ	MPQ	Box weight (kg)
CA15902_VERONICA-SQ-SE » Box size: 480 x 280 x 300 mm	Single lens	3060	360	180	9.6



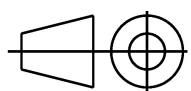
**MECHANICAL DRAWING**

PRODUCT  
**VERONICA**



Plastic moulding general tolerances according to DIN 16901-130 and applies if not otherwise shown in the drawing. Silicone moulding general tolerances according to ISO 3302-1 Class M3 and applies if not otherwise shown in the drawing.

FIRST ANGLE PROJECTION:



This drawing is the property of LEDiL Oy. It may not be copied or otherwise distributed without prior written permission from LEDiL Oy.

SCALE 2:1

WEIGHT 2.75g

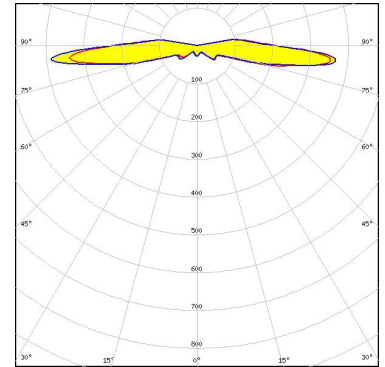
A4 SHEET 1/1

See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### OPTICAL RESULTS (MEASURED):



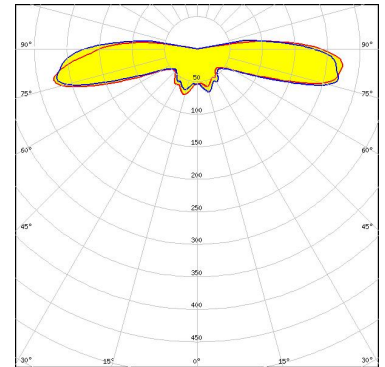
**LED** XHP35 HI  
**FWHM / FWTM** 183.0° / 201.0°  
**Efficiency** 88 %  
**Peak intensity** 0.4 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**



Light distribution files



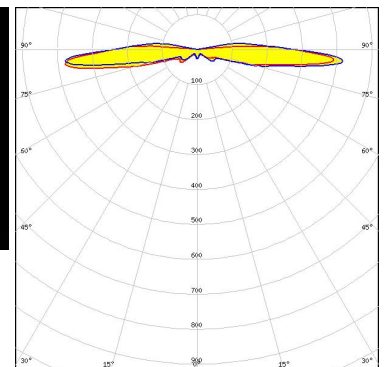
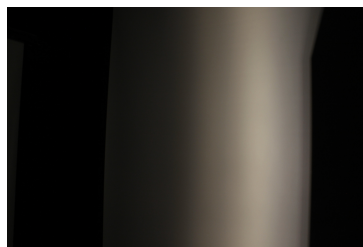
**LED** XHP70.2  
**FWHM / FWTM** 194.0° / 220.0°  
**Efficiency** 84 %  
**Peak intensity** 0.2 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**



Light distribution files



**LED** XP-G2  
**FWHM / FWTM** 184.0° / 196.0°  
**Efficiency** 87 %  
**Peak intensity** 0.4 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**

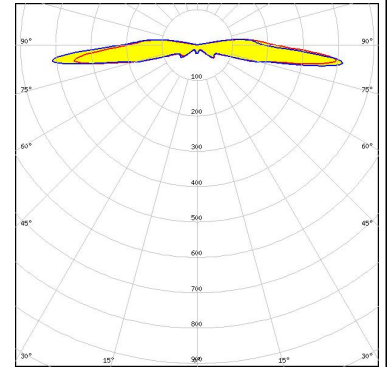


Light distribution files

#### OPTICAL RESULTS (MEASURED):



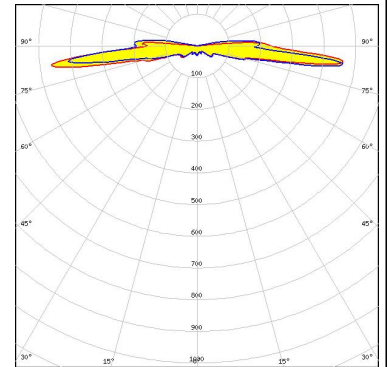
LED XP-L HI  
 FWHM / FWTM 184.0° / 210.0°  
 Efficiency 87 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



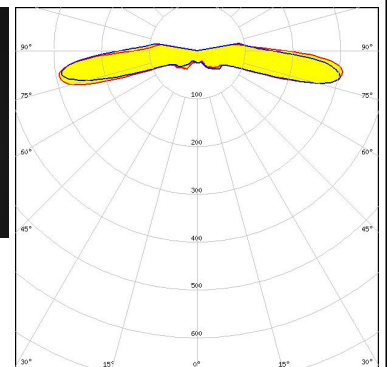
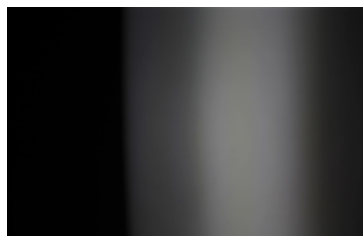
LED XQ-E HI  
 FWHM / FWTM 176.0° / 195.0°  
 Efficiency 87 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



LED LUXEON 5050 Round LES  
 FWHM / FWTM 180.0° / 200.0°  
 Efficiency 87 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

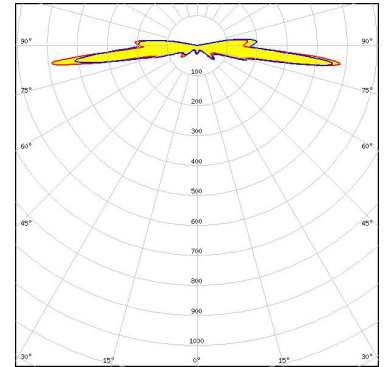


Light distribution files

#### OPTICAL RESULTS (MEASURED):



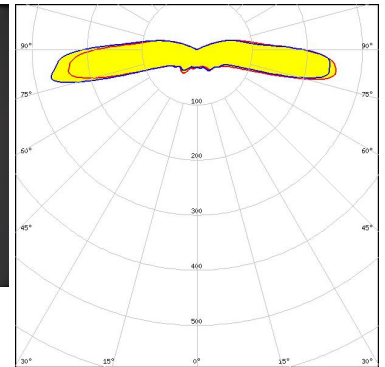
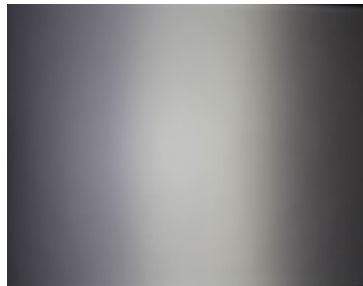
**LED** LUXEON CZ  
**FWHM / FWTM** 173.0° / 200.0°  
**Efficiency** 90 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**



Light distribution files



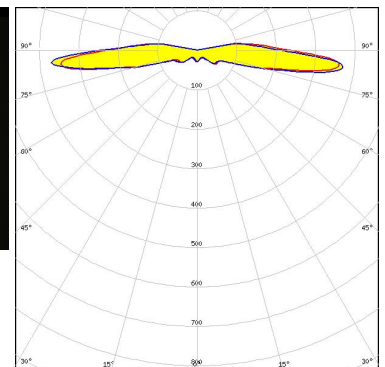
**LED** LUXEON M/MX  
**FWHM / FWTM** 189.0° / 225.0°  
**Efficiency** 91 %  
**Peak intensity** 2.7 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**



Light distribution files



**LED** LUXEON TX  
**FWHM / FWTM** 185.0° / 201.0°  
**Efficiency** 88 %  
**Peak intensity** 0.4 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**

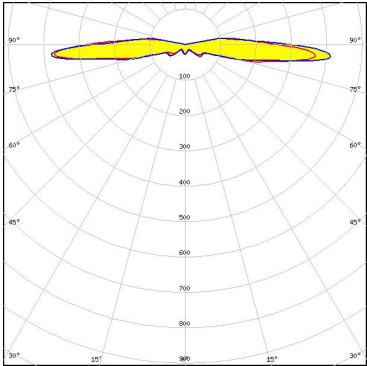


Light distribution files

#### OPTICAL RESULTS (MEASURED):

**NICHIA**

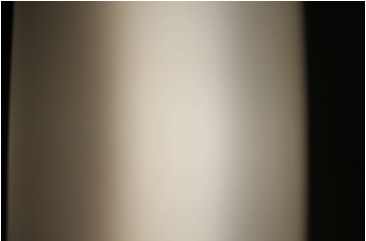
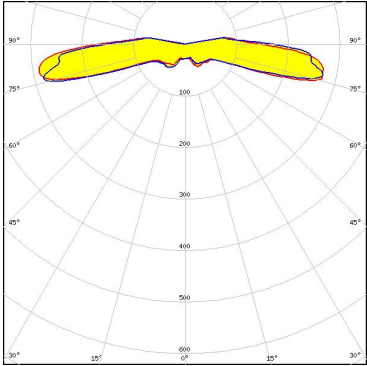
LED NVSW219F-V2  
 FWHM / FWTM 185.0° / 201.0°  
 Efficiency 89 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files

**OSRAM**  
 Opto Semiconductors

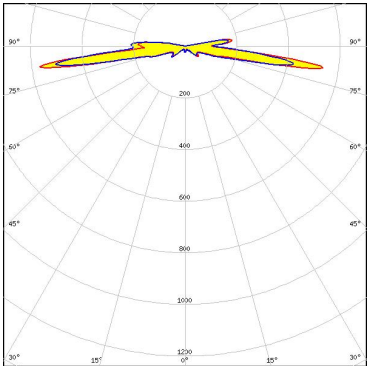
LED Duris S8  
 FWHM / FWTM 182.0° / 201.0°  
 Efficiency 87 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

Light distribution files

**OSRAM**  
 Opto Semiconductors

LED OSLO Black Flat (LUW HWQP)  
 FWHM / FWTM 170.0° / 210.0°  
 Efficiency 89 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

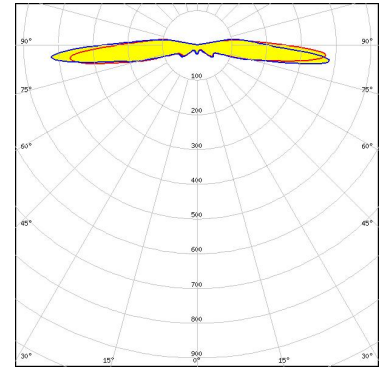


Light distribution files

#### OPTICAL RESULTS (MEASURED):

**OSRAM**  
Opto Semiconductors

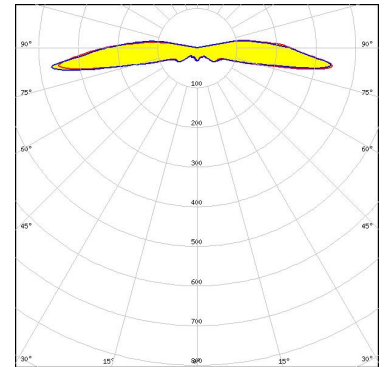
LED OSLON Square CSSRM2/CSSRM3  
 FWHM / FWTM 186.0° / 220.0°  
 Efficiency 88 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

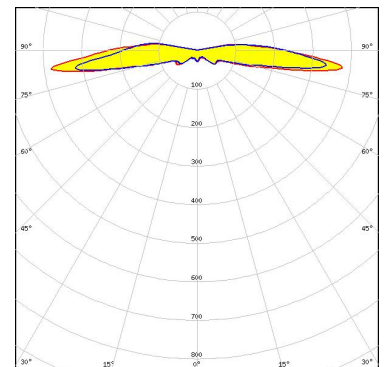
LED OSLON Square EC  
 FWHM / FWTM 189.0° / 201.0°  
 Efficiency 88 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

LED OSLON Square PC  
 FWHM / FWTM 187.0° / 200.0°  
 Efficiency 88 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

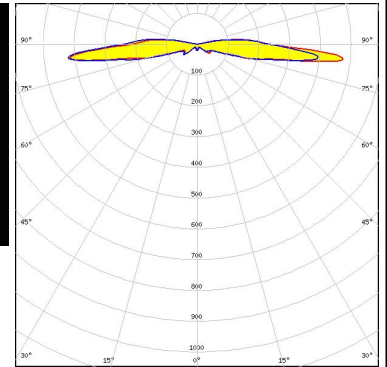
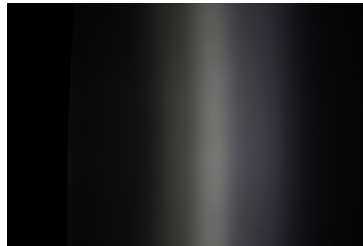


Light distribution files

#### OPTICAL RESULTS (MEASURED):

**OSRAM**  
Opto Semiconductors

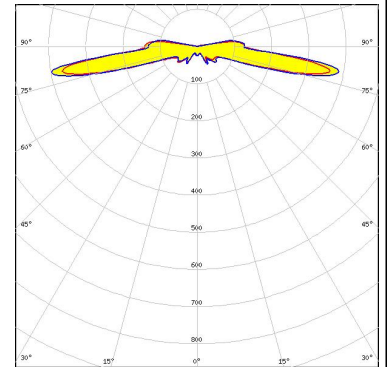
LED OSLON SSL 150  
FWHM / FWTM 182.0° / 200.0°  
Efficiency 89 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files

**SAMSUNG**

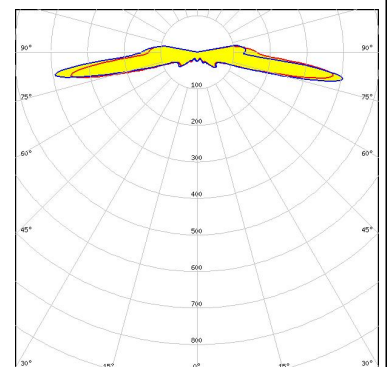
LED LH181A  
FWHM / FWTM 170.0° / 210.0°  
Efficiency 91 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files

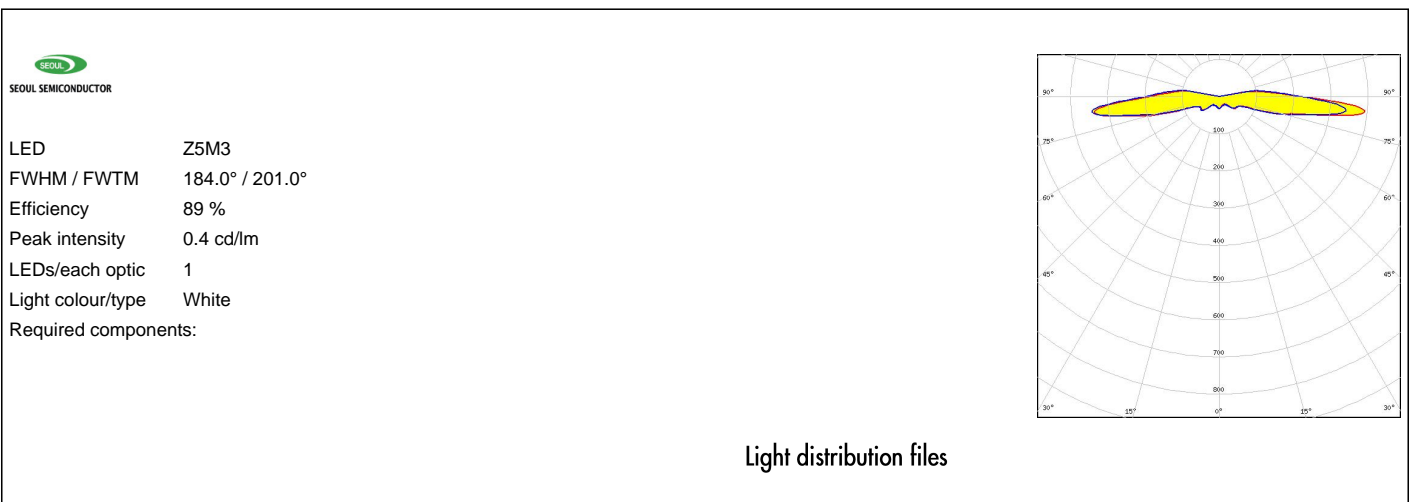
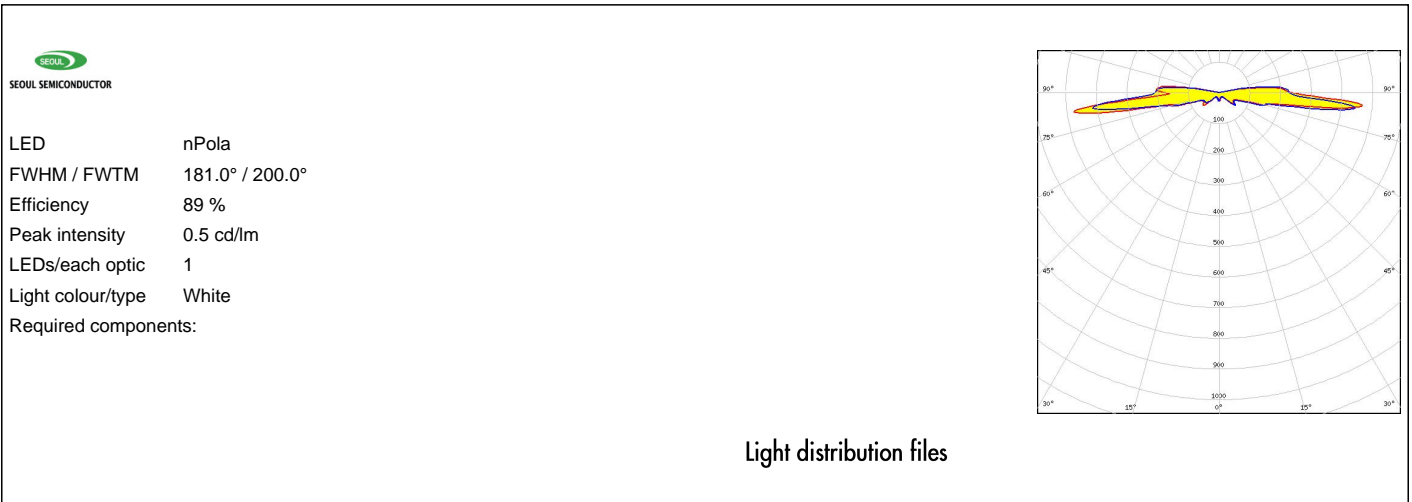
**SAMSUNG**

LED LH181B  
FWHM / FWTM 171.0° / 201.0°  
Efficiency 88 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files

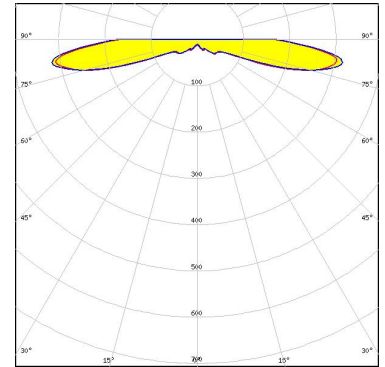
#### OPTICAL RESULTS (MEASURED):



#### OPTICAL RESULTS (SIMULATED):



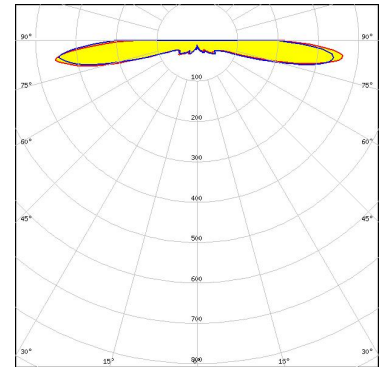
LED J Series 5050 6V P Class  
 FWHM / FWTM 180.0° / 182.0°  
 Efficiency 75 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



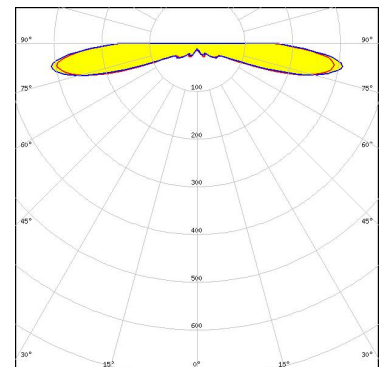
LED J Series 5050B 30V K Class  
 FWHM / FWTM 180.0° / 182.0°  
 Efficiency 75 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



LED J Series 5050B 6V K Class  
 FWHM / FWTM 180.0° / 182.0°  
 Efficiency 75 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

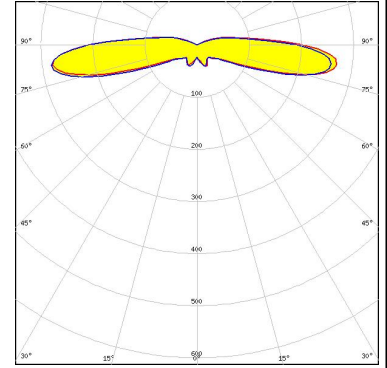


Light distribution files

#### OPTICAL RESULTS (SIMULATED):



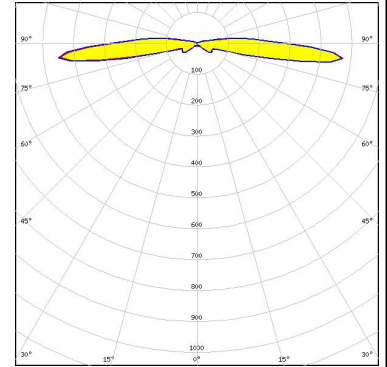
LED XD16  
 FWHM / FWTM 188.0° / 223.0°  
 Efficiency 94 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 7  
 Light colour/type White  
 Required components:



Light distribution files



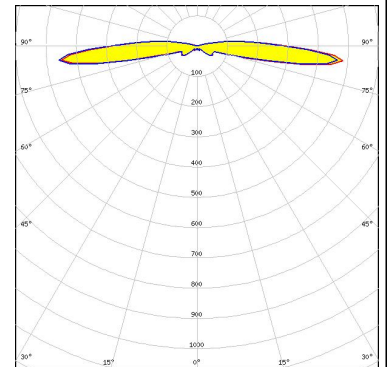
LED XE-G  
 FWHM / FWTM 184.0° / 204.0°  
 Efficiency 96 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type Blue  
 Required components:



Light distribution files



LED XE-G  
 FWHM / FWTM 184.0° / 200.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type Green  
 Required components:

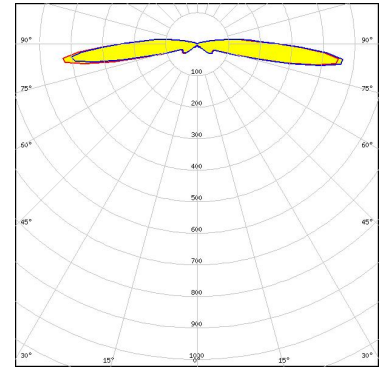


Light distribution files

#### OPTICAL RESULTS (SIMULATED):



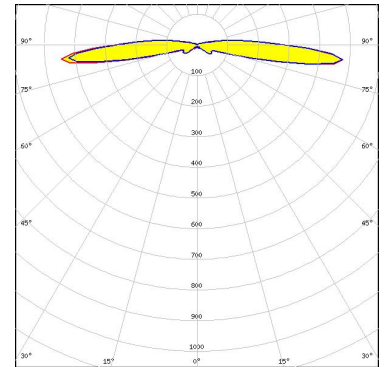
LED XE-G  
 FWHM / FWTM 180.0° / 204.0°  
 Efficiency 96 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type Red  
 Required components:



Light distribution files



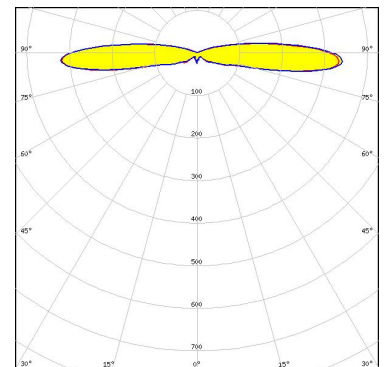
LED XE-G  
 FWHM / FWTM 182.0° / 204.0°  
 Efficiency 96 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



LED XHP35 HD  
 FWHM / FWTM 194.0° / 216.0°  
 Efficiency 94 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

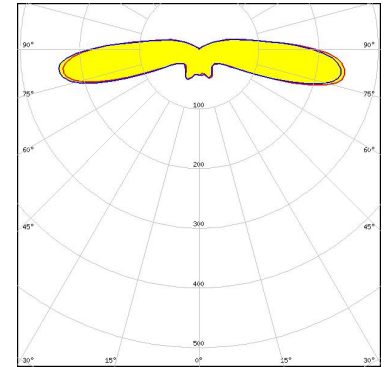


Light distribution files

#### OPTICAL RESULTS (SIMULATED):



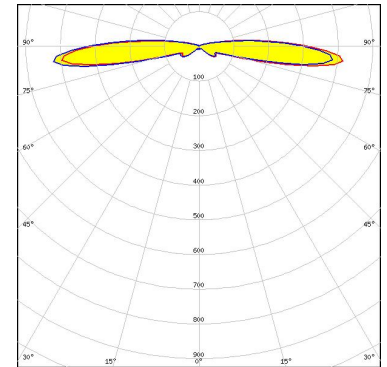
LED XHP70  
FWHM / FWTM 190.0° / 232.0°  
Efficiency 94 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files



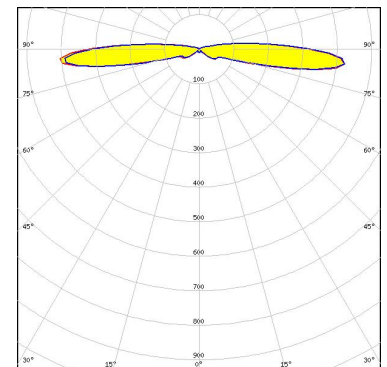
LED XP-E  
FWHM / FWTM 188.0° / 208.0°  
Efficiency 95 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files



LED XP-E2  
FWHM / FWTM 188.0° / 206.0°  
Efficiency 95 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type Red  
Required components:

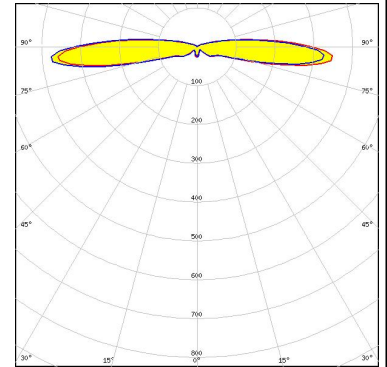


Light distribution files

#### OPTICAL RESULTS (SIMULATED):



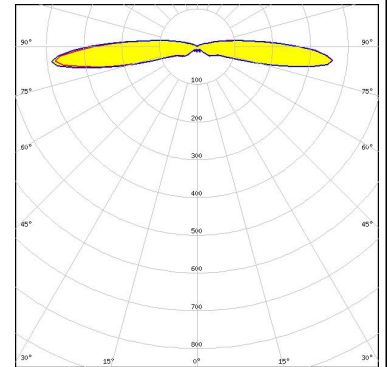
LED XP-G2 HE  
FWHM / FWTM 191.0° / 212.0°  
Efficiency 95 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files



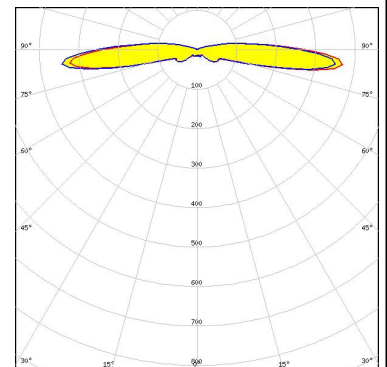
LED XP-G3  
FWHM / FWTM 186.0° / 211.0°  
Efficiency 94 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files



LED XP-G4  
FWHM / FWTM 187.0° / 212.0°  
Efficiency 91 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:

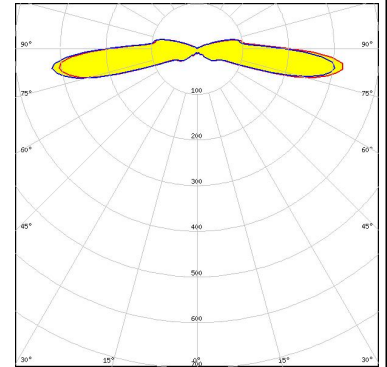


Light distribution files

#### OPTICAL RESULTS (SIMULATED):



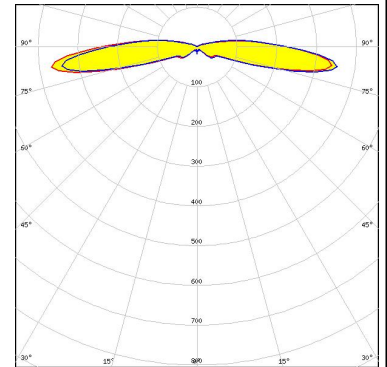
LED XQ-E HI  
 FWHM / FWTM 183.0° / 221.0°  
 Efficiency 94 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 4  
 Light colour/type White  
 Required components:



Light distribution files



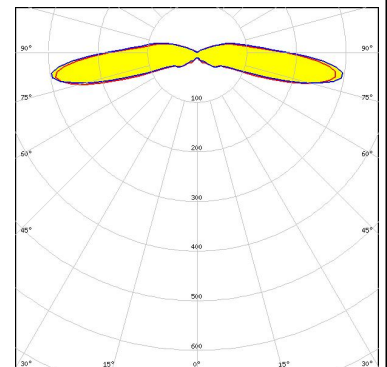
LED XT-E  
 FWHM / FWTM 184.0° / 212.0°  
 Efficiency 95 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



LED LUXEON 5050 Round LES  
 FWHM / FWTM 184.0° / 226.0°  
 Efficiency 95 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

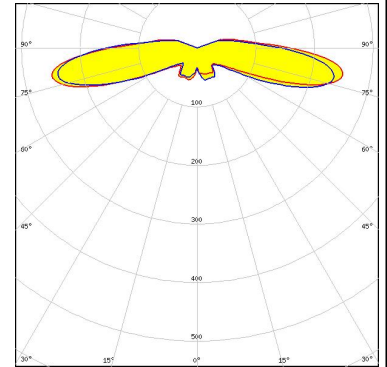


Light distribution files

#### OPTICAL RESULTS (SIMULATED):



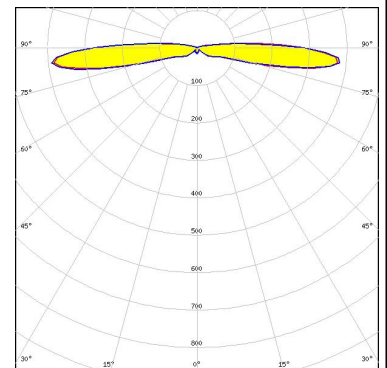
LED LUXEON 7070  
 FWHM / FWTM 185.0° / 220.0°  
 Efficiency 96 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



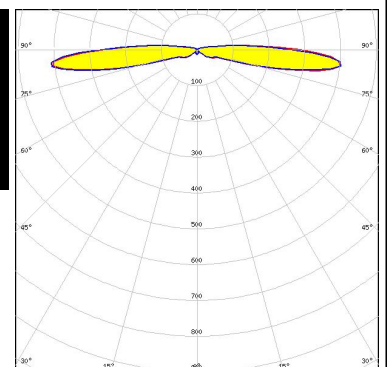
LED LUXEON C  
 FWHM / FWTM 184.0° / 204.0°  
 Efficiency 91 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type Red  
 Required components:



Light distribution files

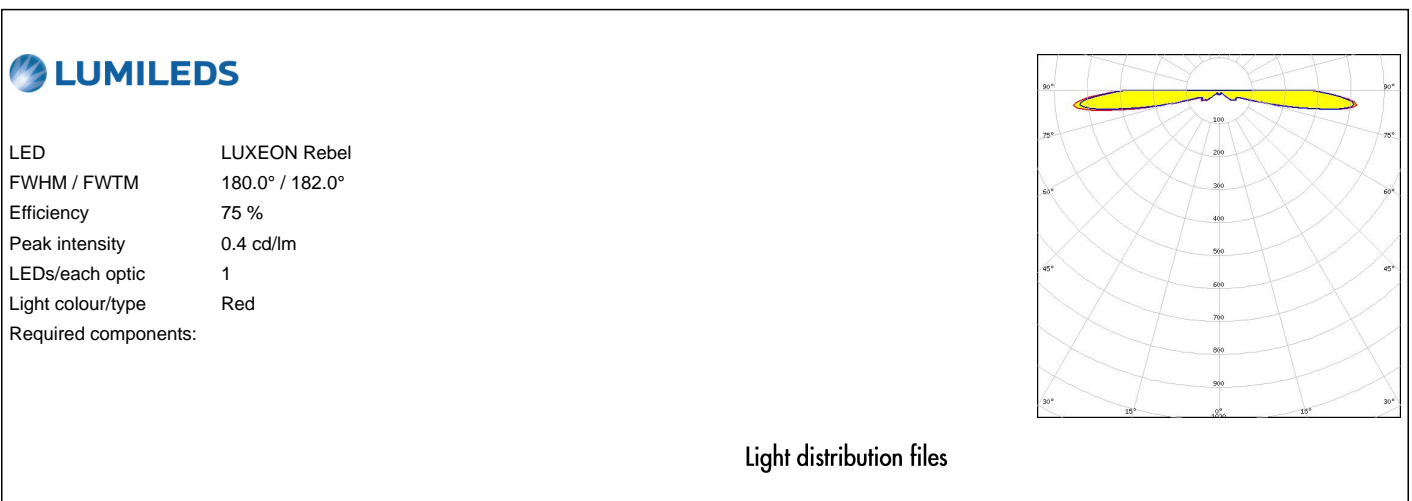
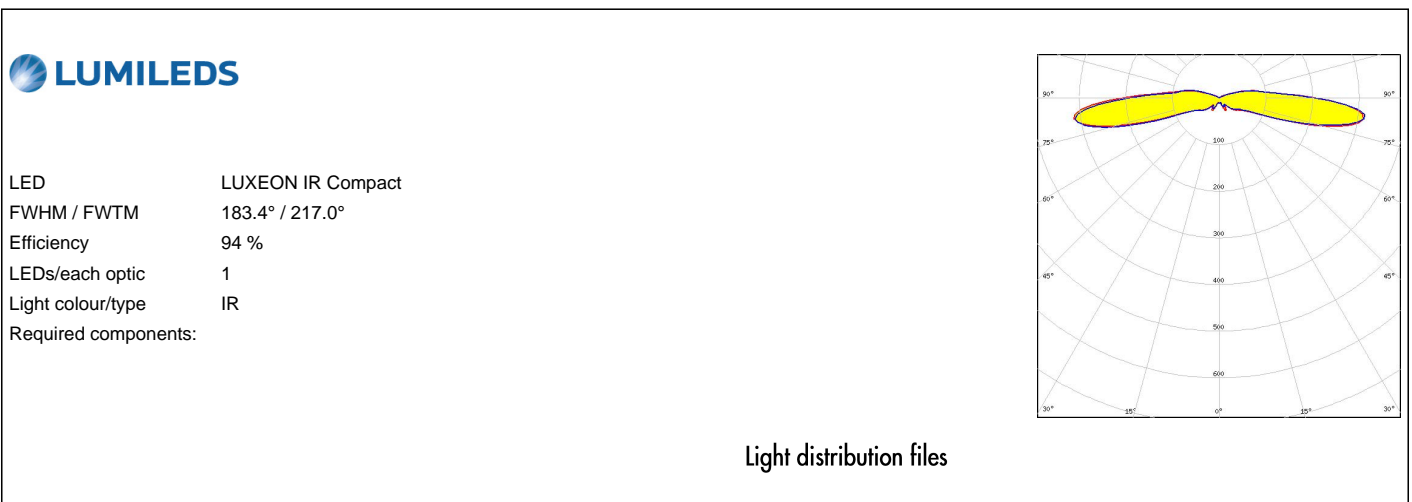
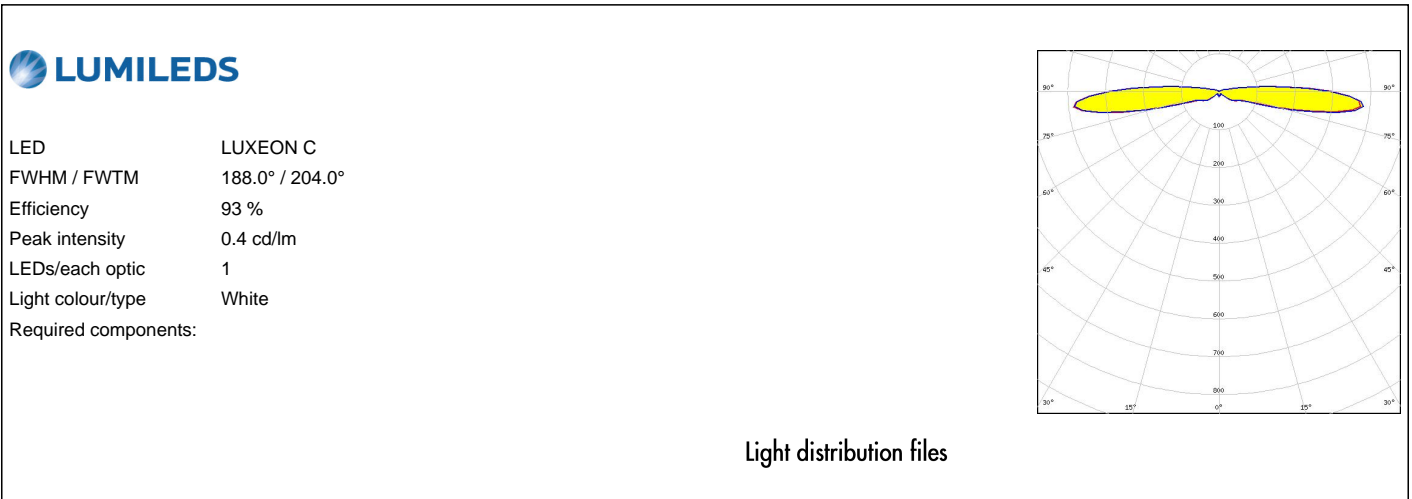


LED LUXEON C  
 FWHM / FWTM 183.0° / 201.0°  
 Efficiency 92 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type Green  
 Required components:



Light distribution files

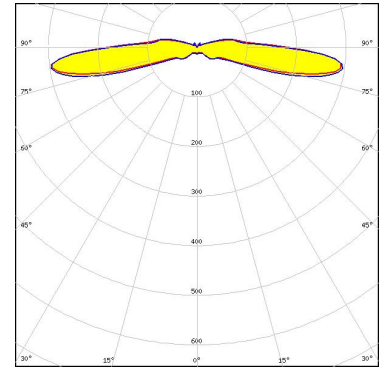
#### OPTICAL RESULTS (SIMULATED):



#### OPTICAL RESULTS (SIMULATED):



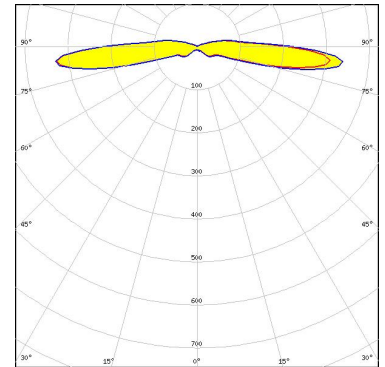
LED LUXEON Z  
FWHM / FWTM 183.4° / 218.0°  
Efficiency 89 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type Red  
Required components:



Light distribution files



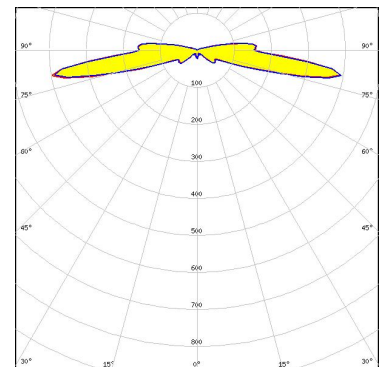
LED LUXEON Z  
FWHM / FWTM 184.0° / 216.0°  
Efficiency 87 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 4  
Light colour/type Red  
Required components:



Light distribution files

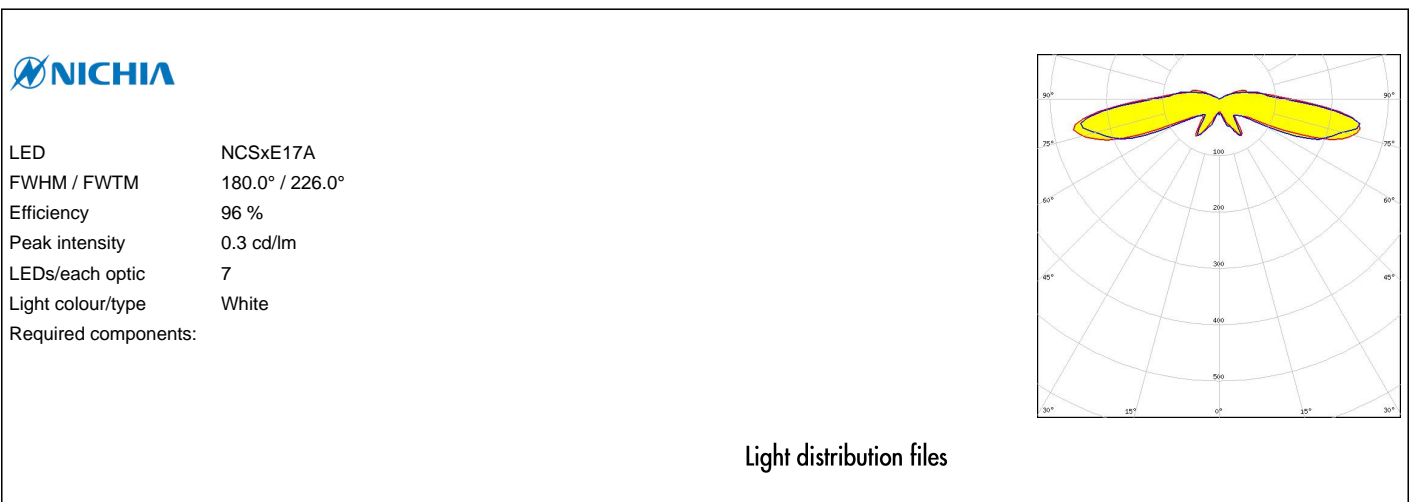
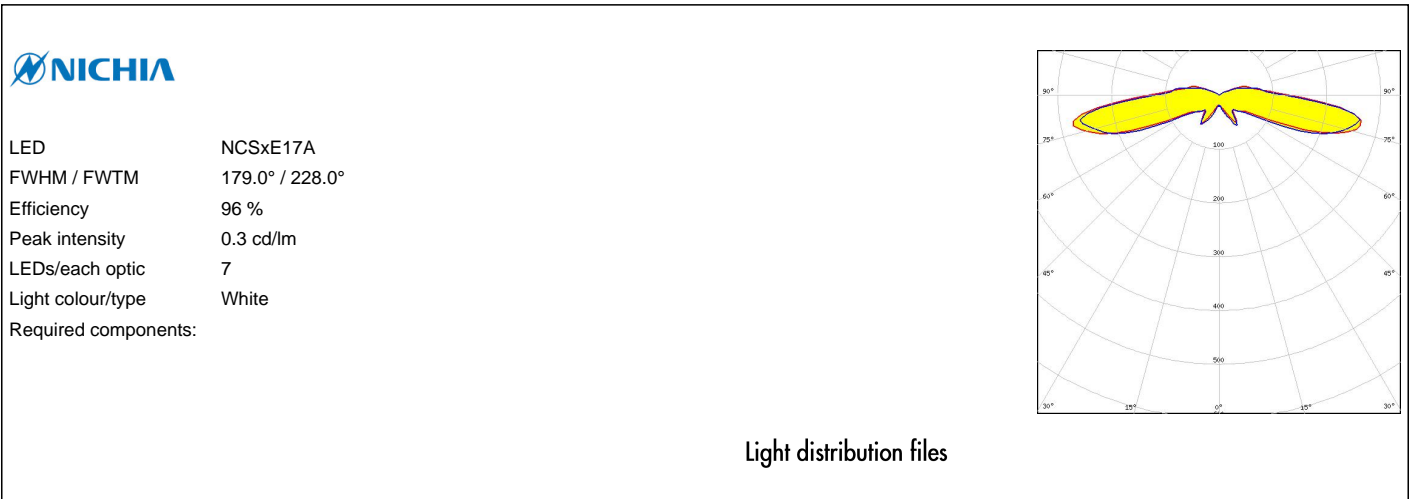


LED NCSxE17A  
FWHM / FWTM 173.0° / 208.0°  
Efficiency 96 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files

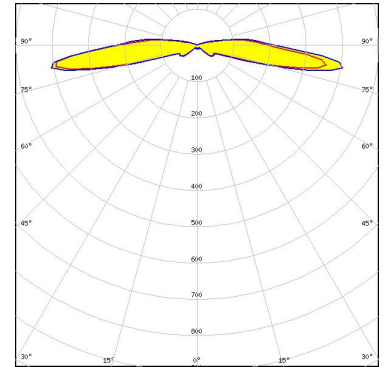
#### OPTICAL RESULTS (SIMULATED):



#### OPTICAL RESULTS (SIMULATED):

**OSRAM**  
Opto Semiconductors

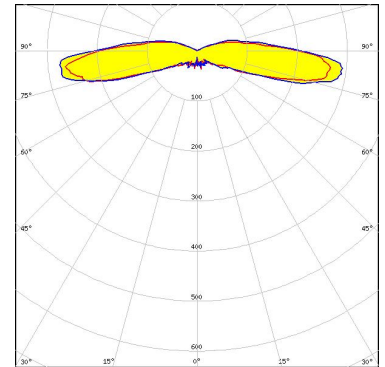
LED OSCONIQ P 3030  
 FWHM / FWTM 181.0° / 208.0°  
 Efficiency 95 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

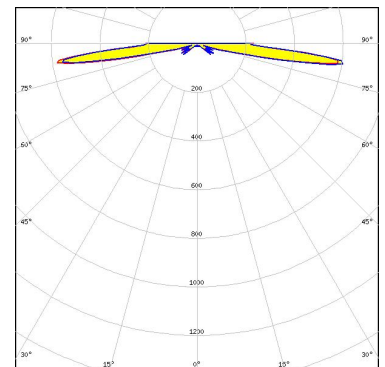
LED OSCONIQ P 7070  
 FWHM / FWTM 192.0° / 226.0°  
 Efficiency 95 %  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

LED OSLO Pure 1414  
 FWHM / FWTM 174.0 + 173.0° / 182.0°  
 Efficiency 76 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

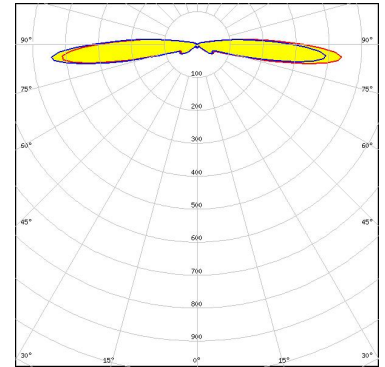


Light distribution files

#### OPTICAL RESULTS (SIMULATED):

**OSRAM**  
Opto Semiconductors

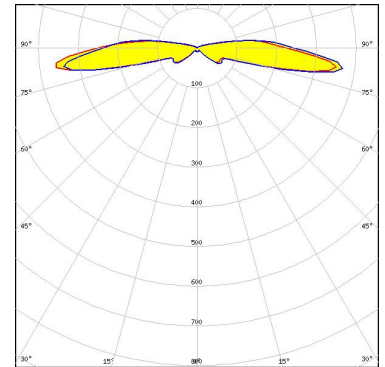
LED OSLON Signal  
FWHM / FWTM 186.0° / 203.0°  
Efficiency 95 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type Red  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

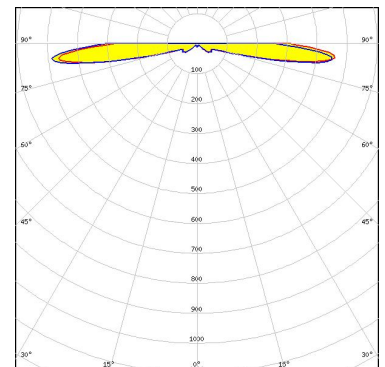
LED OSLON SSL 120  
FWHM / FWTM 188.0° / 212.0°  
Efficiency 95 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

LED OSLON SSL 150  
FWHM / FWTM 180.0° / 182.0°  
Efficiency 78 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type Red  
Required components:

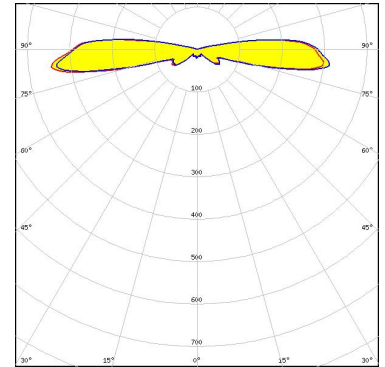


Light distribution files

#### OPTICAL RESULTS (SIMULATED):

**OSRAM**  
Opto Semiconductors

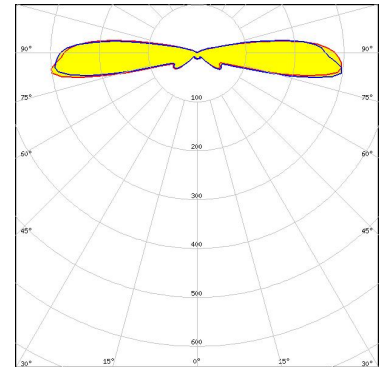
LED OSLON SSL 80  
FWHM / FWTM 195.0° / 206.0°  
Efficiency 93 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

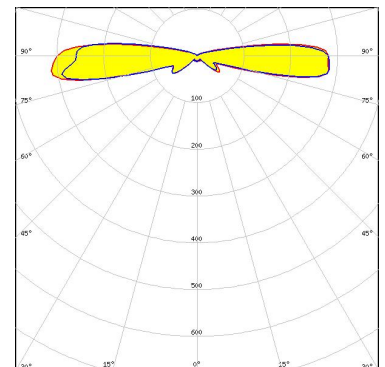
LED OSLON SSL 80  
FWHM / FWTM 198.0° / 216.0°  
Efficiency 94 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type Blue  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

LED OSLON SSL 80  
FWHM / FWTM 197.0° / 215.0°  
Efficiency 96 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type Red  
Required components:

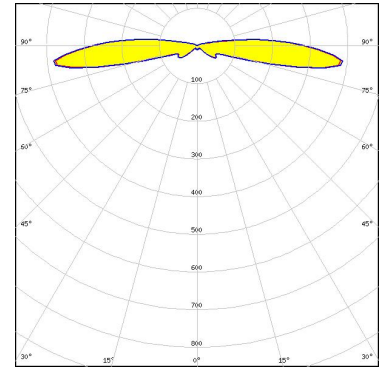


Light distribution files

#### OPTICAL RESULTS (SIMULATED):

**OSRAM**  
Opto Semiconductors

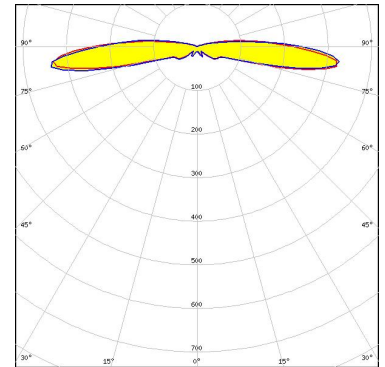
LED OSTAR Projection Compact (KW.CSLNM1.TG)  
FWHM / FWTM 188.0° / 208.0°  
Efficiency 96 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type Red  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

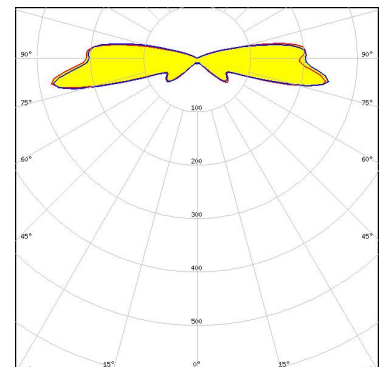
LED SFH 4170S  
FWHM / FWTM 188.0° / 208.0°  
Efficiency 87 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type IR  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

LED SFH 4715AS  
FWHM / FWTM 202.0° / 221.0°  
Efficiency 95 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type IR  
Required components:

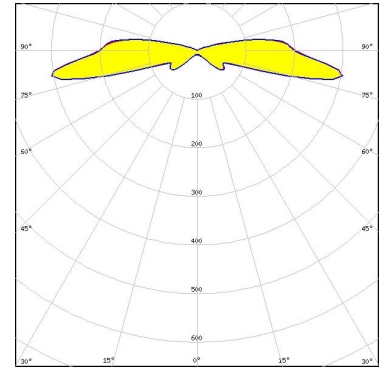


Light distribution files

#### OPTICAL RESULTS (SIMULATED):

**OSRAM**  
Opto Semiconductors

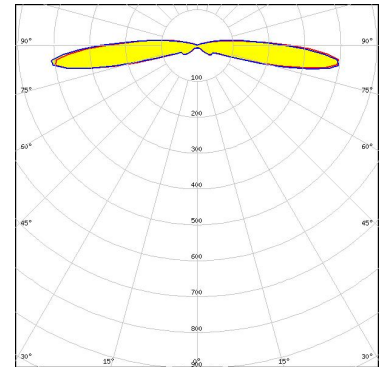
LED SFH 4715S  
FWHM / FWTM 196.0° / 216.0°  
Efficiency 95 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type IR  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

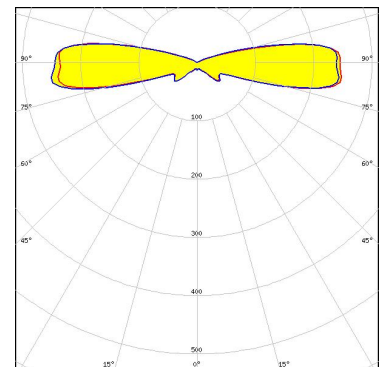
LED SFH 4716AS  
FWHM / FWTM 184.0° / 207.0°  
Efficiency 95 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type IR  
Required components:



Light distribution files

**OSRAM**  
Opto Semiconductors

LED SFH 4717AS  
FWHM / FWTM 207.0° / 224.0°  
Efficiency 95 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type IR  
Required components:

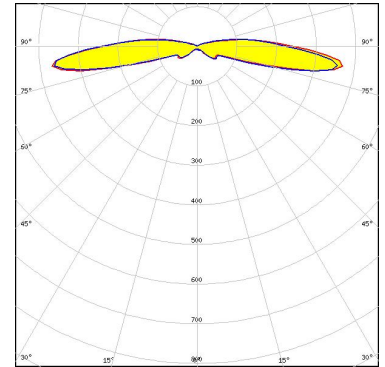


Light distribution files

#### OPTICAL RESULTS (SIMULATED):

**OSRAM**  
Opto Semiconductors

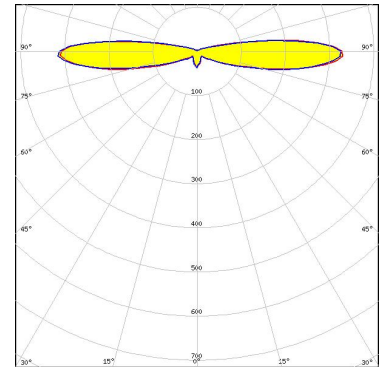
LED SFH 4770S  
FWHM / FWTM 185.0° / 212.0°  
Efficiency 95 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour/type IR  
Required components:



Light distribution files

**SAMSUNG**

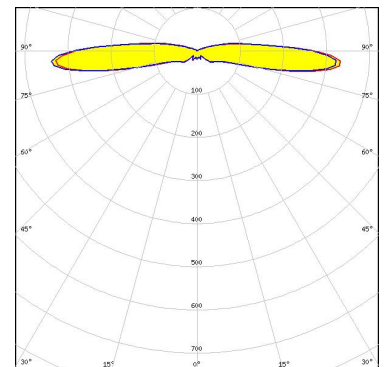
LED LH351C  
FWHM / FWTM 196.0° / 215.0°  
Efficiency 96 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files

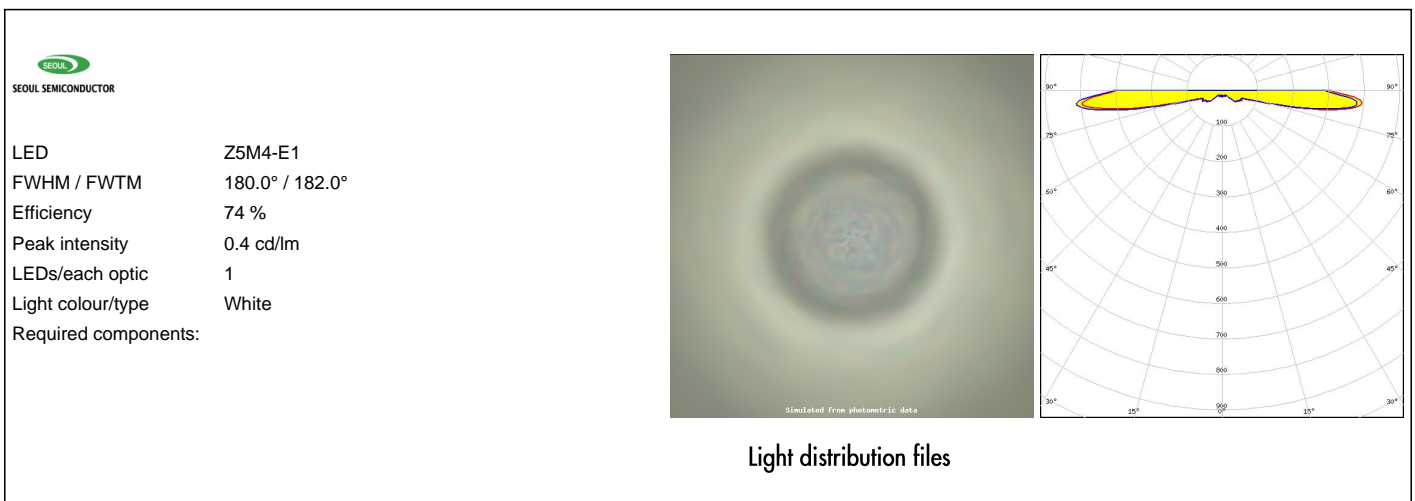
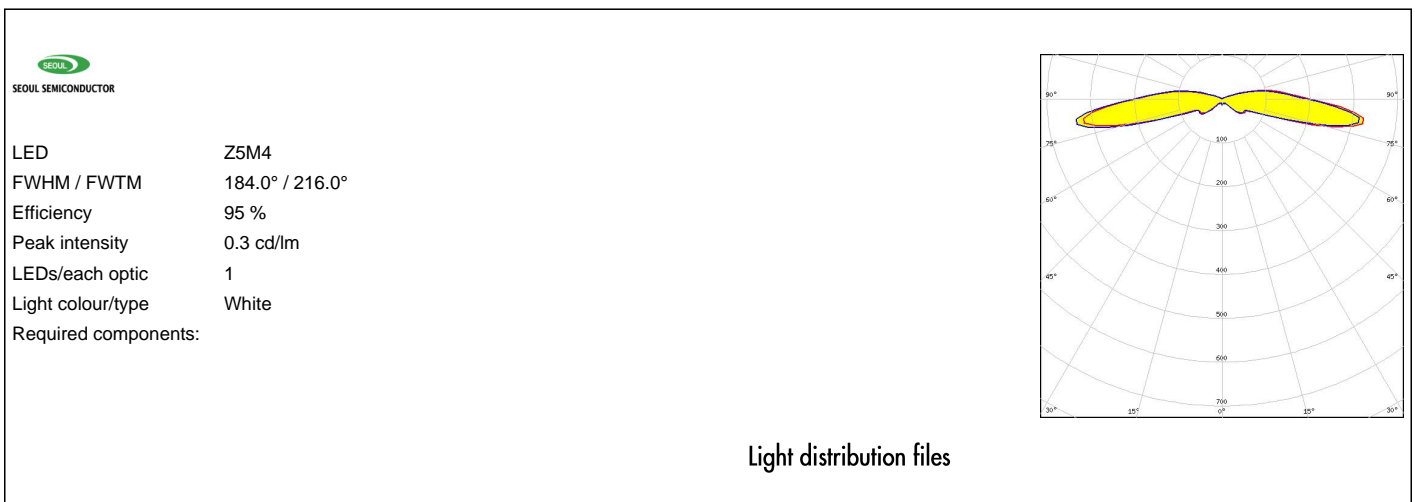
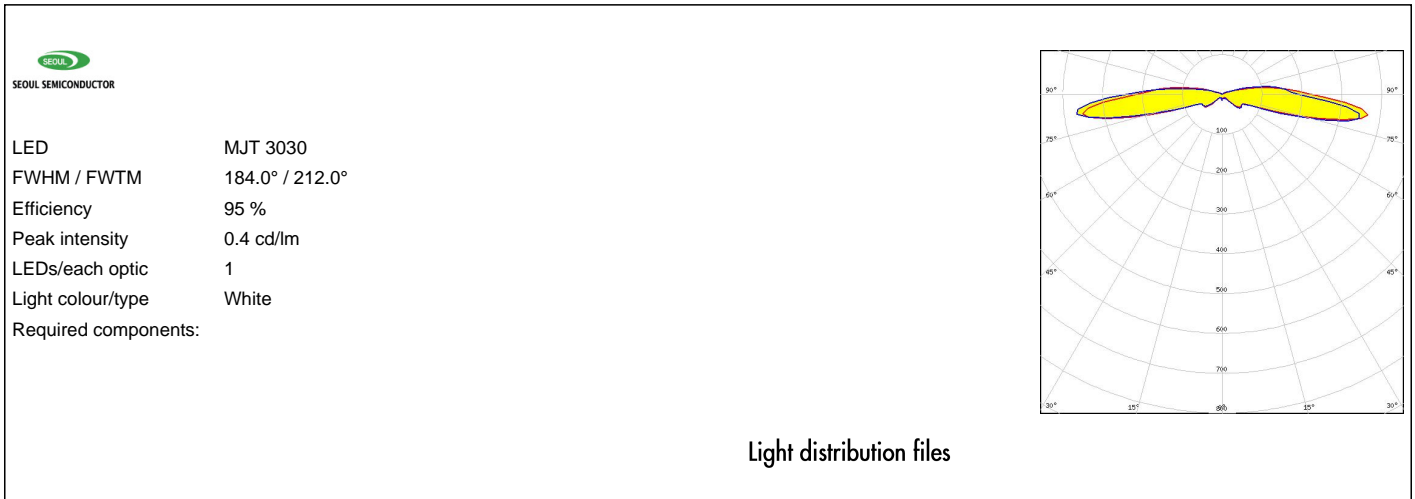
**SAMSUNG**

LED LH351D  
FWHM / FWTM 190.0° / 216.0°  
Efficiency 94 %  
Peak intensity 0.3 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:


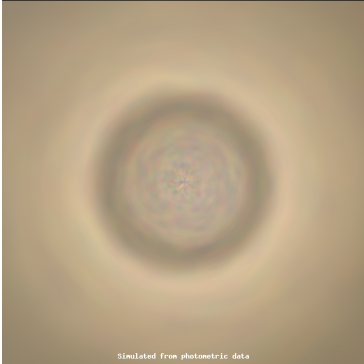
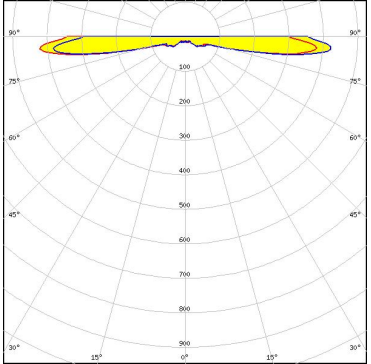


Light distribution files


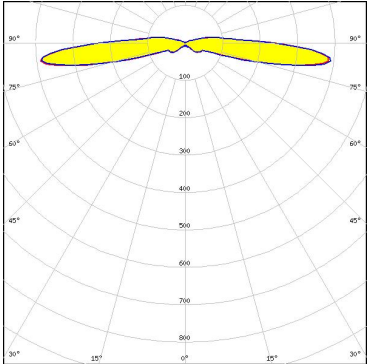
#### OPTICAL RESULTS (SIMULATED):



#### OPTICAL RESULTS (SIMULATED):

 <small>SEOUL SEMICONDUCTOR</small>			
LED	Z5M4-E2		
FWHM / FWTM	180.0° / 182.0°		
Efficiency	74 %		
Peak intensity	0.4 cd/lm		
LEDs/each optic	1		
Light colour/type	White		
Required components:			

Light distribution files

 <small>SEOUL SEMICONDUCTOR</small>			
LED	Z8Y22P		
FWHM / FWTM	181.4° / 210.6°		
Efficiency	94 %		
Peak intensity	0.4 cd/lm		
LEDs/each optic	1		
Light colour/type	White		
Required components:			

Light distribution files

#### GENERAL INFORMATION:

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

#### MATERIALS:

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

#### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

The measured data in the provided downloadable LEDiL Product Datasheets and Mechanical 2D-Drawings is rounded and provided as reference for planning. LEDiL Oy's optical specifications have been verified by conducting performance testing of the products in accordance with the company's quality system. The reported data are averaged results of multiple measurements with typical variation. LEDiL Oy reserves the right to without prior notification make changes and improvements to its products.

LEDiL Oy assumes neither warranty, nor guarantee nor any other liability of any kind for the contents and correctness of the provided data. The provided data has been generated with highest diligence but the provided data may in reality not represent the complete possible variation range of all intrinsic parameters. Therefore, in certain cases a deviation from the provided data could occur.

LEDiL Oy reserves the right to undertake technical changes of its products without further notification which could lead to changes in the provided data. LEDiL Oy assumes no liability of any kind for the possible deviation from any provided data or any other damage resulting from the usage of the provided data.

The user agrees to this disclaimer and user agreement with the download or usage of the provided files.

#### LEDiL Oy

Joensuunkatu 7  
FI-24100 SALO  
Finland

#### LEDiL Inc.

228 West Page Street  
Suite D  
Sycamore IL 60178  
USA

#### Ledil Optics Technology (Shenzhen) Co., Ltd.

# 405 , Block B  
Casic Motor Building  
Shenzhen 518057  
P.R.CHINA

#### Local sales and technical support

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)

#### Shipping locations

Poznan, Poland  
Hong Kong, China

#### Distribution Partners

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)