


## HB-2X2-W

~50° wide beam

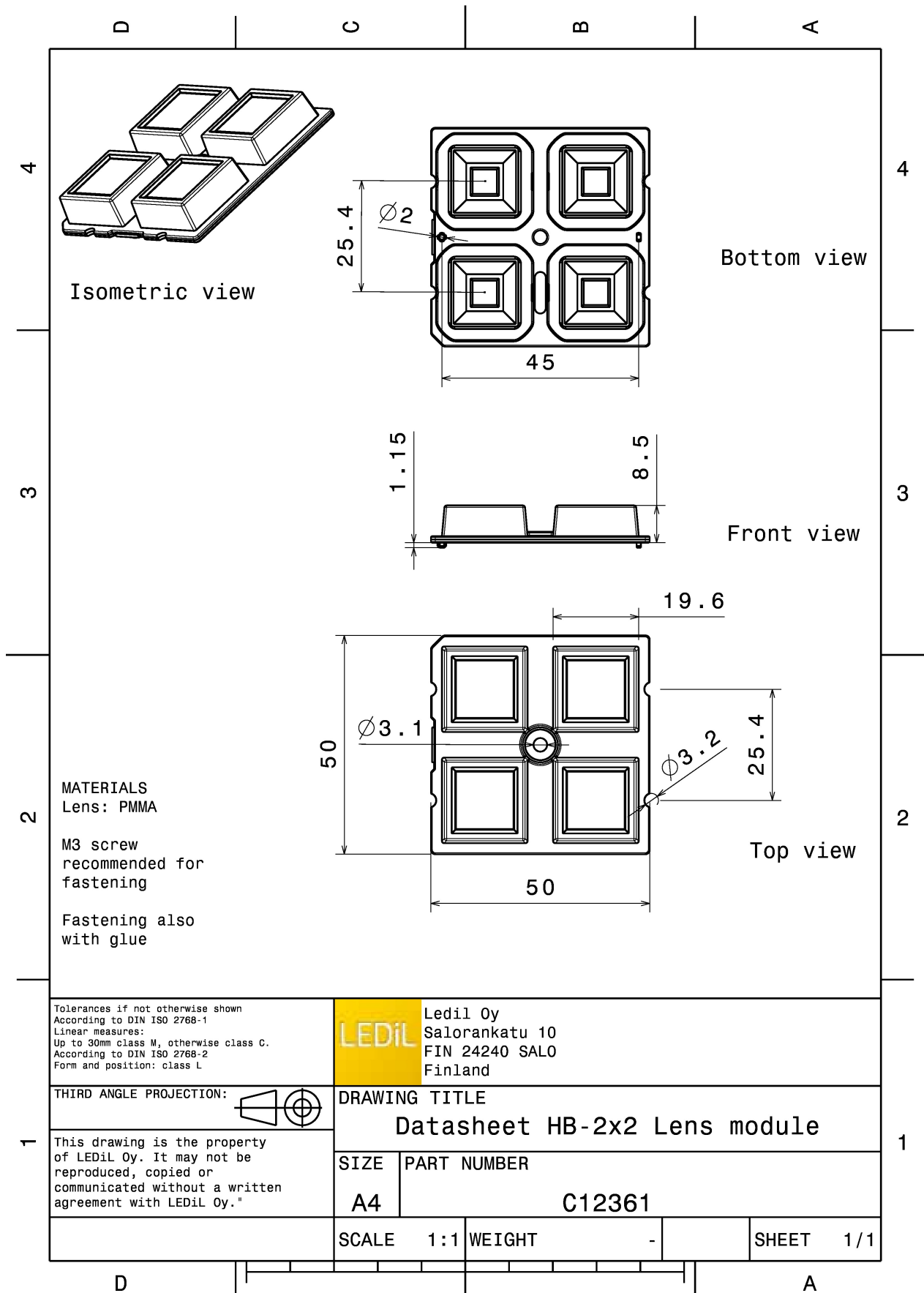
### TECHNICAL SPECIFICATIONS:

Dimensions	50x50 mm
Height	8.5 mm
Fastening	glue, pin, screw
Colour	clear
Box size	480 x 280 x 300 mm
Box weight	9.1 kg
Quantity in Box	800 pcs
ROHS compliant	yes 



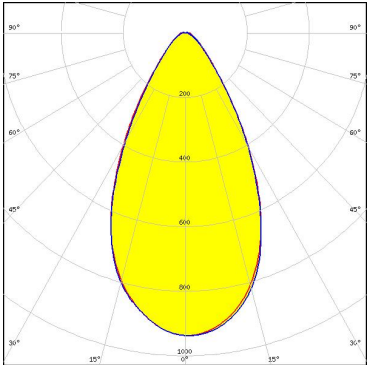

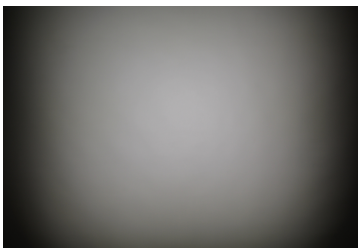
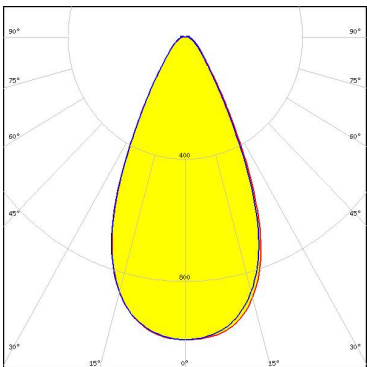


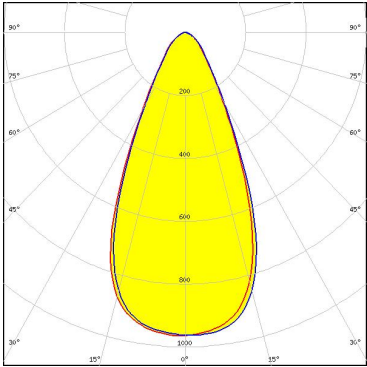

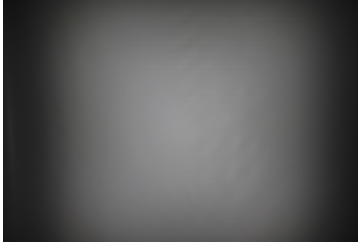
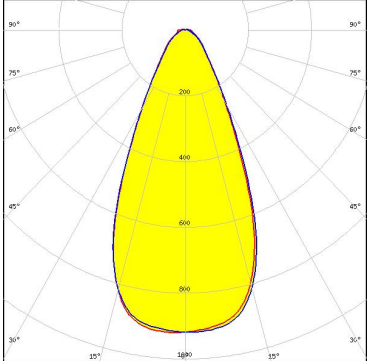


### MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour
HB-2X2-W	Lens array	PMMA	clear



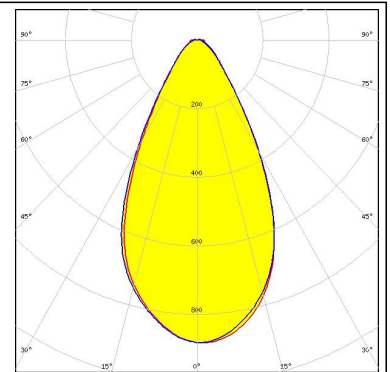
**PHOTOMETRIC DATA (MEASURED):**

<p> <b>bridgelux</b></p> <p>LED SMD 5050 FWHM 55.0° Efficiency 94 % Peak intensity 0.940 cd/lm Required components:</p>		
<p> <b>COMET ELECTRONICS</b></p> <p>LED QUICK FLUX XTP 2x4 xxx LS G5 FWHM 52.0° Efficiency 94 % Peak intensity 0.990 cd/lm Required components:</p>		
<p> <b>CREE</b></p> <p>LED XB-D FWHM 48.0° Efficiency 86 % Peak intensity 0.960 cd/lm Required components:</p>		
<p> <b>CREE</b></p> <p>LED XD16 FWHM 48.0° Efficiency 91 % Peak intensity 0.900 cd/lm Required components:</p>		

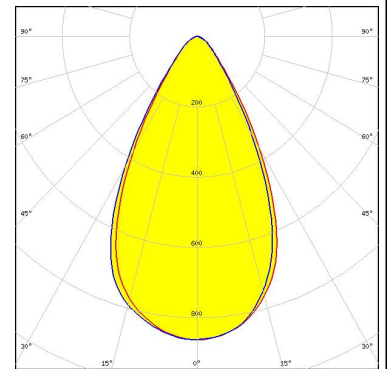
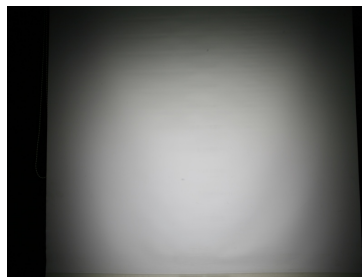
**PHOTOMETRIC DATA (MEASURED):**



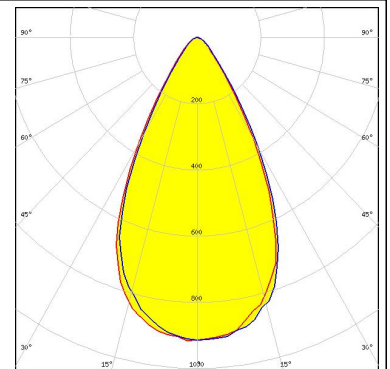
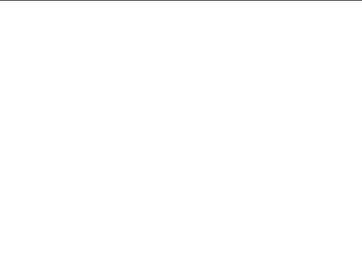
LED XD16 2x2 cluster  
 FWHM 54.0°  
 Efficiency 91 %  
 Peak intensity 0.880 cd/lm  
 Required components:



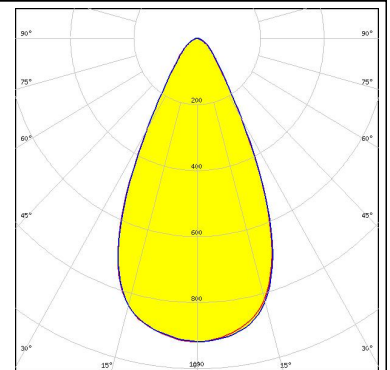
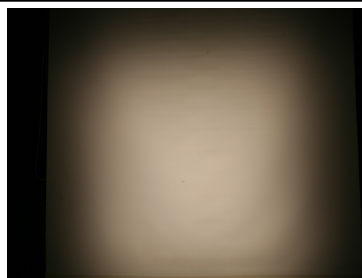
LED XM-L  
 FWHM 57.0°  
 Efficiency 89 %  
 Peak intensity 0.860 cd/lm  
 Required components:



LED XM-L2  
 FWHM 56.0°  
 Efficiency 87 %  
 Peak intensity 0.900 cd/lm  
 Required components:



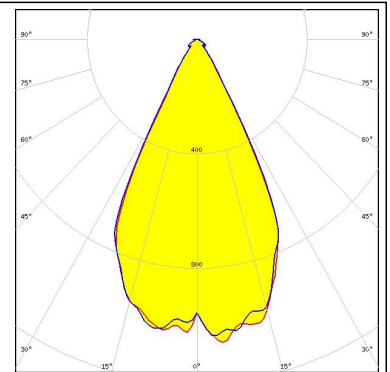
LED XP-G  
 FWHM 52.0°  
 Efficiency 88 %  
 Peak intensity 0.920 cd/lm  
 Required components:



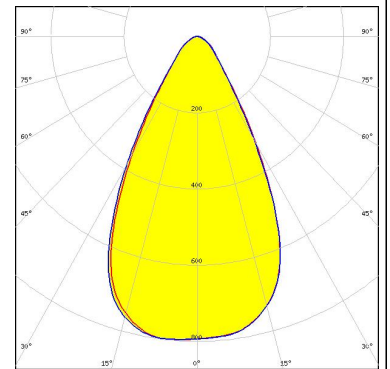
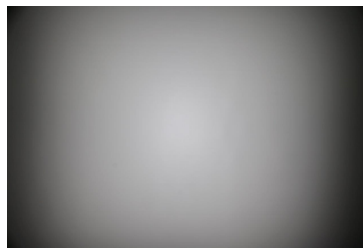
**PHOTOMETRIC DATA (MEASURED):**



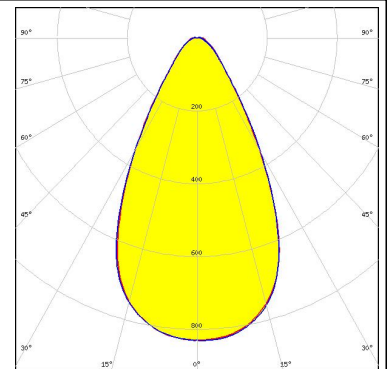
LED XP-G2  
FWHM 51.0°  
Efficiency 88 %  
Peak intensity 0.900 cd/lm  
Required components:



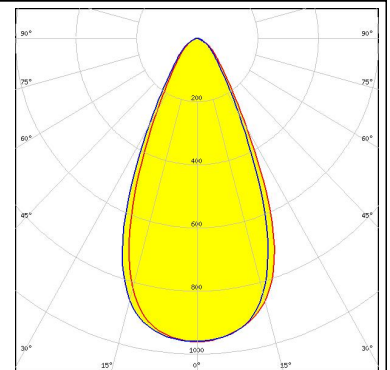
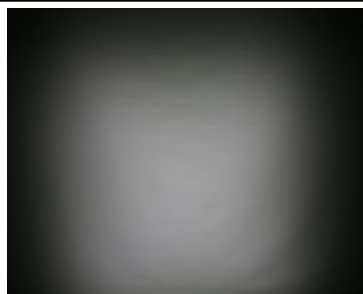
LED XP-L  
FWHM 56.0°  
Efficiency 87 %  
Peak intensity 0.800 cd/lm  
Required components:



LED XP-L2  
FWHM 56.0°  
Efficiency 92 %  
Peak intensity 0.830 cd/lm  
Required components:



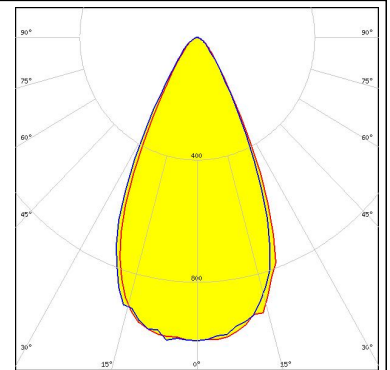
LED XT-E  
FWHM 50.0°  
Efficiency 87 %  
Peak intensity 0.970 cd/lm  
Required components:



**PHOTOMETRIC DATA (MEASURED):**

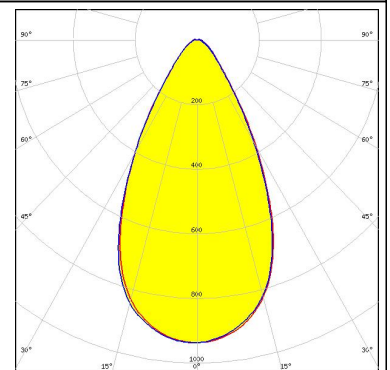
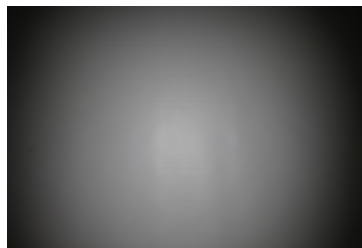
**LG Innotek**

LED H35C1 (LEMWA33)  
FWHM 53.0°  
Efficiency 86 %  
Peak intensity 1.000 cd/lm  
Required components:



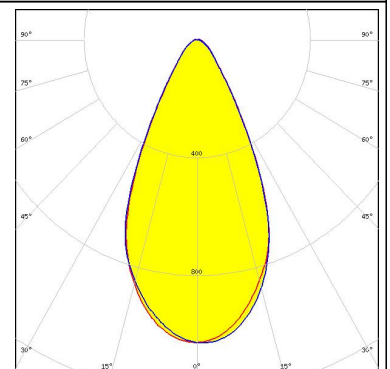
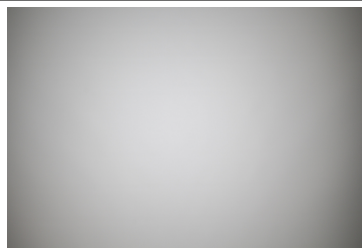
**LUMILEDS**

LED LUXEON 5050  
FWHM 55.0°  
Efficiency 94 %  
Peak intensity 0.940 cd/lm  
Required components:



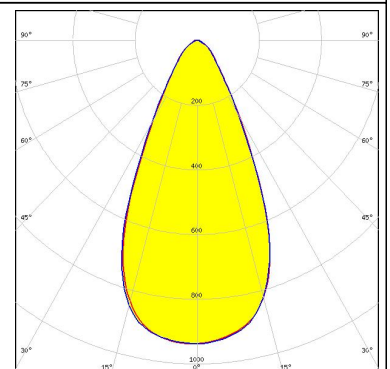
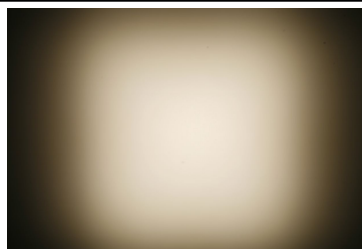
**LUMILEDS**

LED LUXEON MZ  
FWHM 53.0°  
Efficiency 92 %  
Peak intensity 1.000 cd/lm  
Required components:



**LUMILEDS**

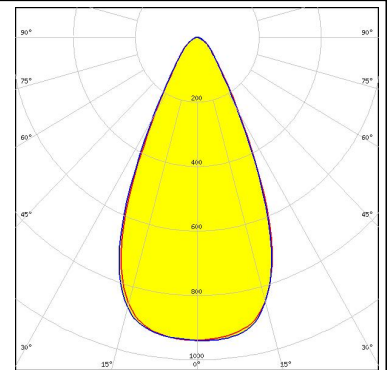
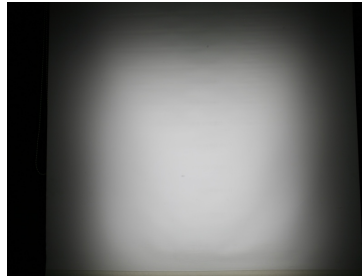
LED LUXEON Q  
FWHM 50.0°  
Efficiency 86 %  
Peak intensity 0.900 cd/lm  
Required components:



**PHOTOMETRIC DATA (MEASURED):**

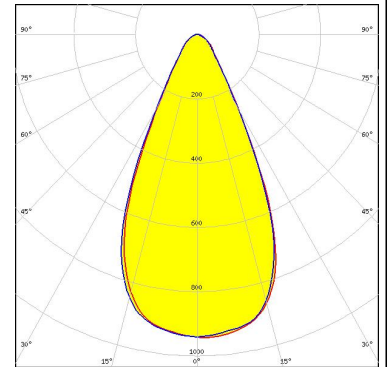
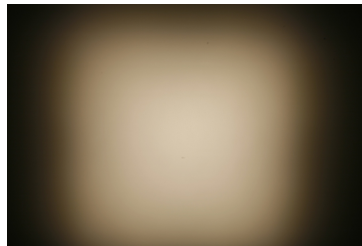
**LUMILEDS**

LED LUXEON Rebel ES  
FWHM 51.0°  
Efficiency 87 %  
Peak intensity 0.940 cd/lm  
Required components:



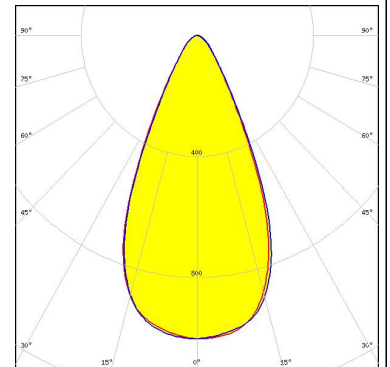
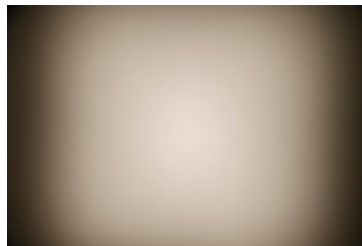
**LUMILEDS**

LED LUXEON T  
FWHM 55.0°  
Efficiency 87 %  
Peak intensity 0.900 cd/lm  
Required components:



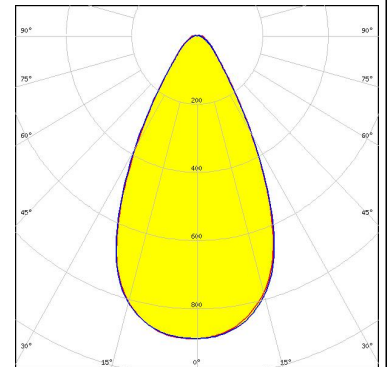
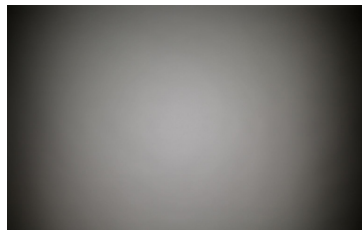
**LUMILEDS**

LED LUXEON TX  
FWHM 50.0°  
Efficiency 88 %  
Peak intensity 1.000 cd/lm  
Required components:



**LUMILEDS**

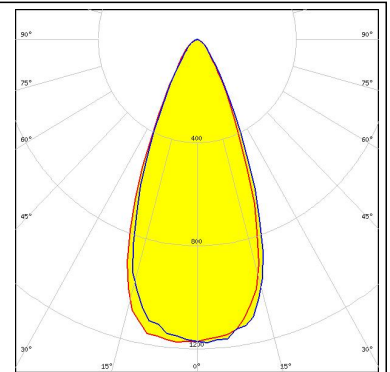
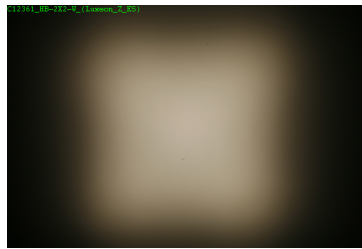
LED LUXEON V  
FWHM 55.0°  
Efficiency 93 %  
Peak intensity 0.890 cd/lm  
Required components:



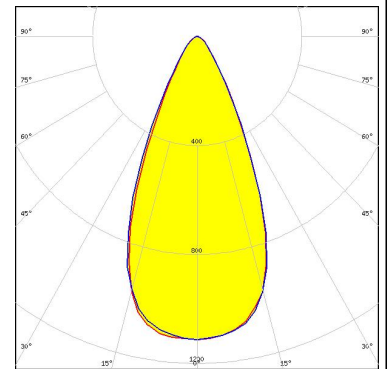
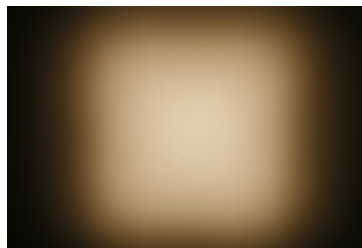
**PHOTOMETRIC DATA (MEASURED):**



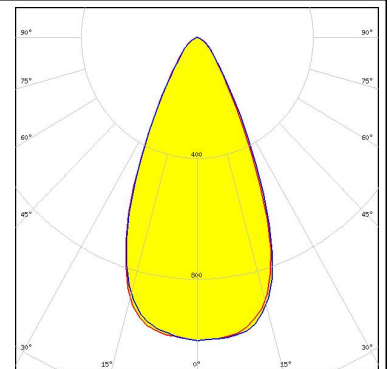
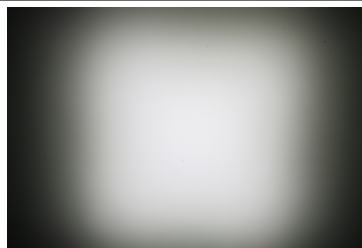
LED LUXEON Z ES  
FWHM 46.0°  
Efficiency 87 %  
Peak intensity 1.180 cd/lm  
Required components:



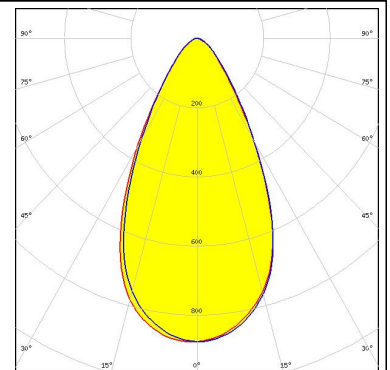
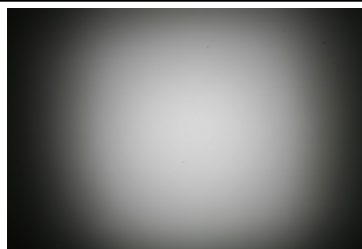
LED NCSxx19A  
FWHM 48.0°  
Efficiency 85 %  
Peak intensity 1.100 cd/lm  
Required components:



LED NCSxx19B  
FWHM 50.0°  
Efficiency 85 %  
Peak intensity 1.000 cd/lm  
Required components:



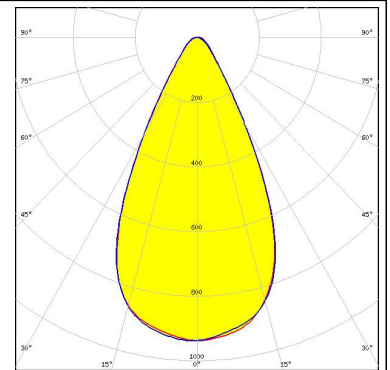
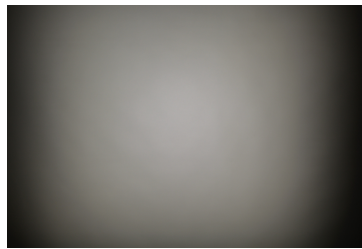
LED NS9x383  
FWHM 54.0°  
Efficiency 86 %  
Peak intensity 0.880 cd/lm  
Required components:



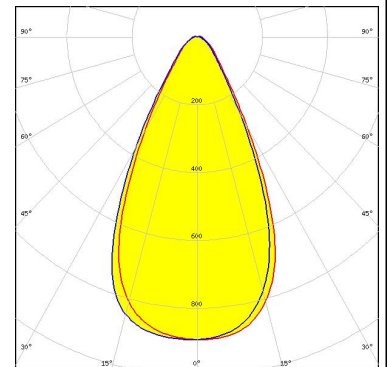
**PHOTOMETRIC DATA (MEASURED):**



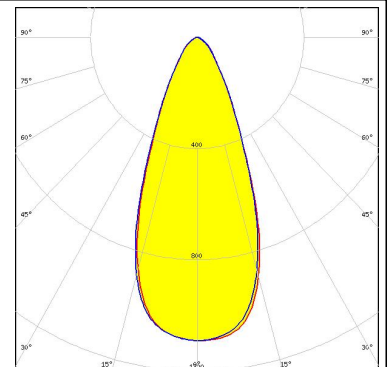
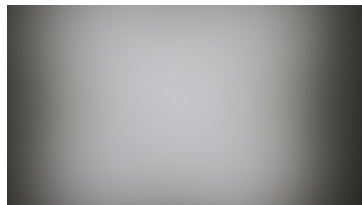
LED NVSW219D  
FWHM 53.0°  
Efficiency 94 %  
Peak intensity 0.940 cd/lm  
Required components:



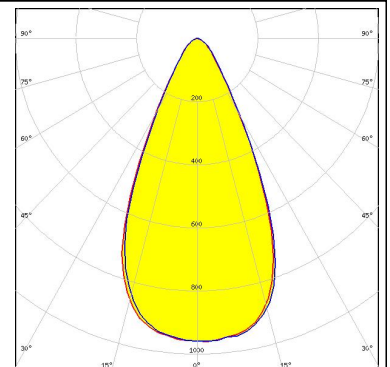
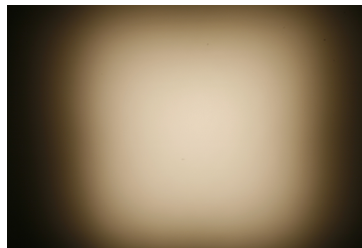
LED NVSW3x9A  
FWHM 53.0°  
Efficiency 92 %  
Peak intensity 0.900 cd/lm  
Required components:



LED NVSxE21A  
FWHM 43.0°  
Efficiency 86 %  
Peak intensity 1.100 cd/lm  
Required components:



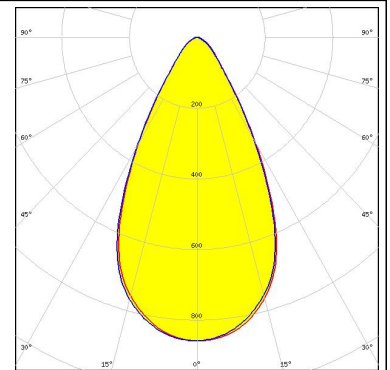
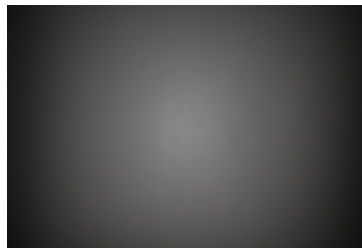
LED NVSxx19B/NVSxx19C  
FWHM 51.0°  
Efficiency 85 %  
Peak intensity 0.960 cd/lm  
Required components:



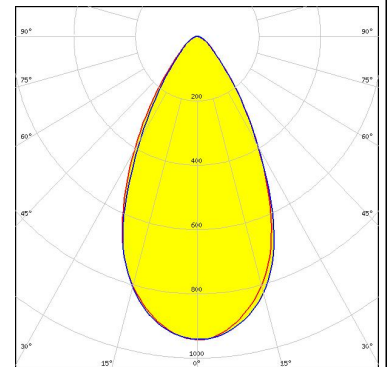
#### PHOTOMETRIC DATA (MEASURED):



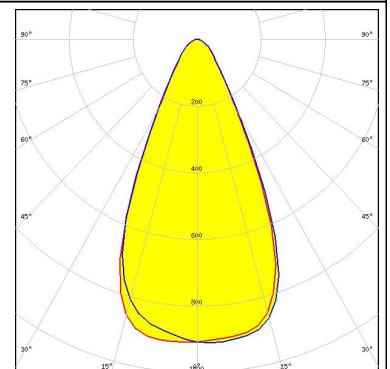
LED NWSx229A  
 FWHM 57.0°  
 Efficiency 86 %  
 Peak intensity 0.860 cd/lm  
 Required components:



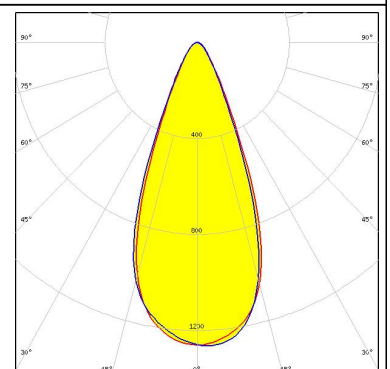
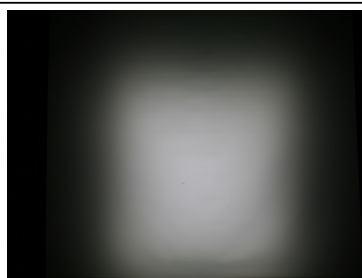
LED OLP-5065F6L-06A  
 FWHM 56.0°  
 Efficiency 88 %  
 Peak intensity 0.940 cd/lm  
 Required components:



LED Oslon Square PC  
 FWHM 54.0°  
 Efficiency 87 %  
 Peak intensity 0.900 cd/lm  
 Required components:



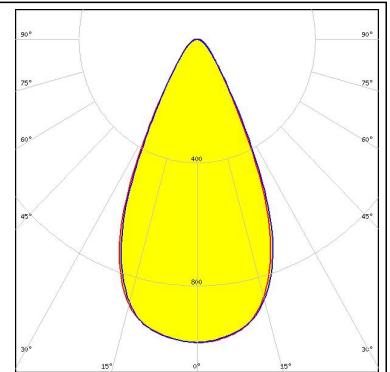
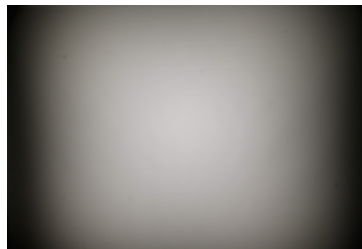
LED Oslon SSL 80  
 FWHM 43.0°  
 Efficiency 89 %  
 Peak intensity 1.260 cd/lm  
 Required components:



**PHOTOMETRIC DATA (MEASURED):**

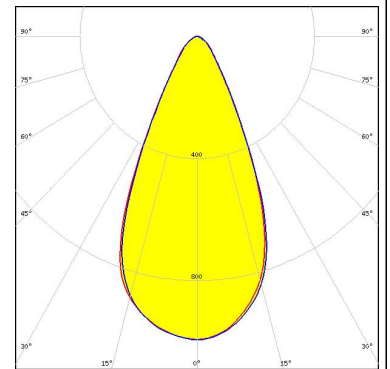
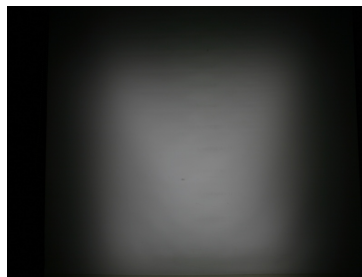
**PHILIPS**

LED Fortimo FastFlex LED board 2x8 DA G4  
 FWHM 52.0°  
 Efficiency 94 %  
 Peak intensity 0.990 cd/lm  
 Required components:



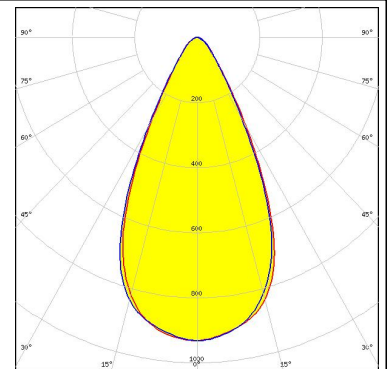
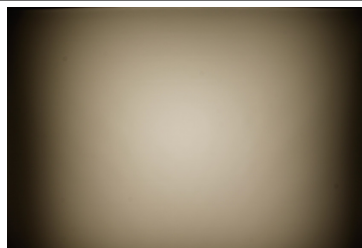
**SAMSUNG**

LED LH351A(3535)  
 FWHM 49.0°  
 Efficiency 89 %  
 Peak intensity 1.000 cd/lm  
 Required components:



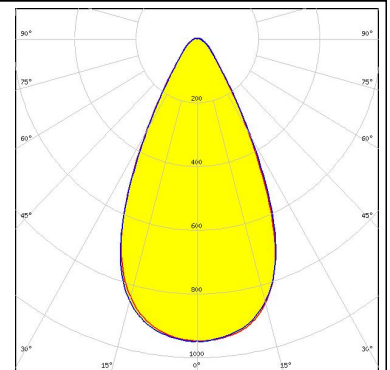
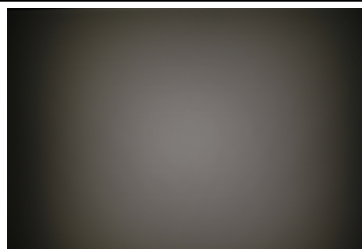
**SAMSUNG**

LED LH351B  
 FWHM 55.0°  
 Efficiency 86 %  
 Peak intensity 0.930 cd/lm  
 Required components:



**SAMSUNG**

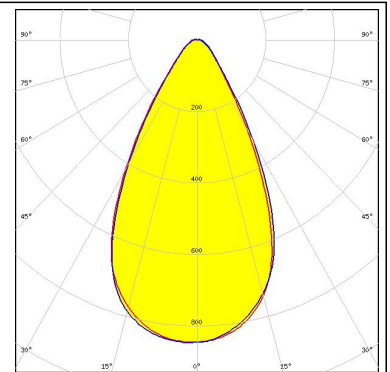
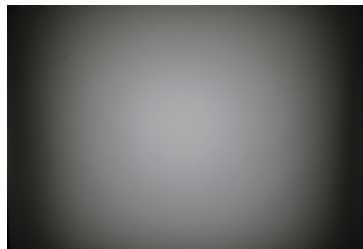
LED LH351C  
 FWHM 53.0°  
 Efficiency 93 %  
 Peak intensity 1.000 cd/lm  
 Required components:



**PHOTOMETRIC DATA (MEASURED):**

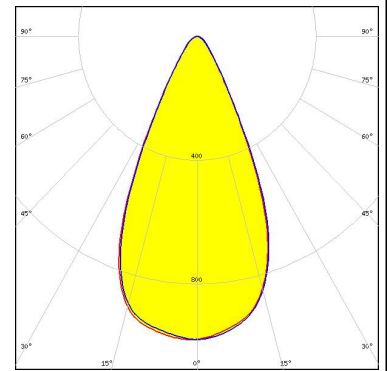
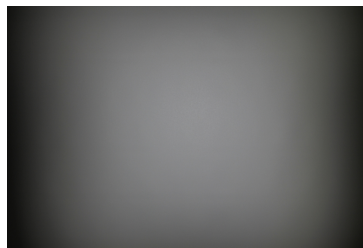
**SAMSUNG**

LED LH351D  
FWHM 56.0°  
Efficiency 91 %  
Peak intensity 0.850 cd/lm  
Required components:



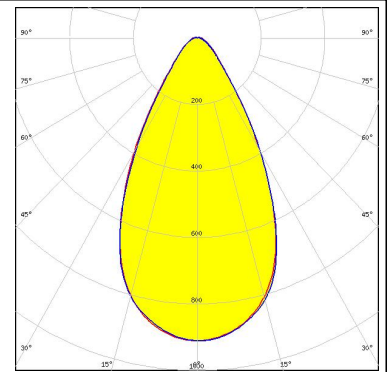
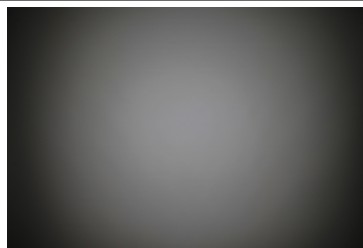
**SAMSUNG**

LED LH351Z  
FWHM 50.0°  
Efficiency 87 %  
Peak intensity 1.000 cd/lm  
Required components:



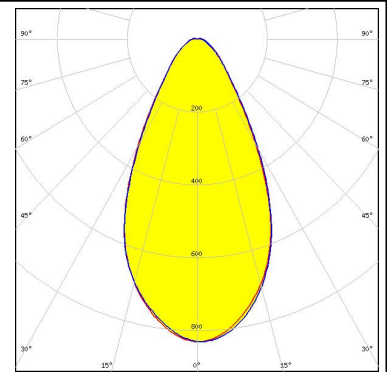
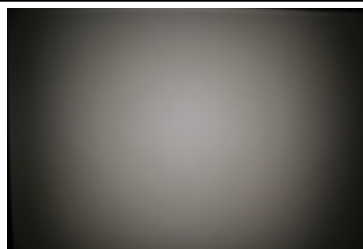
**SAMSUNG**

LED LH508A  
FWHM 56.0°  
Efficiency 93 %  
Peak intensity 0.900 cd/lm  
Required components:


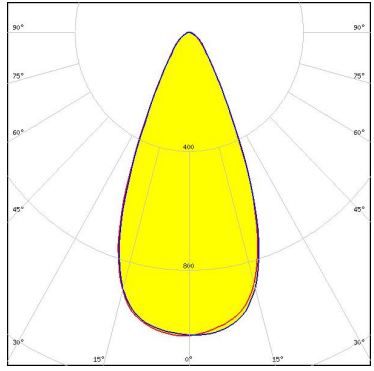
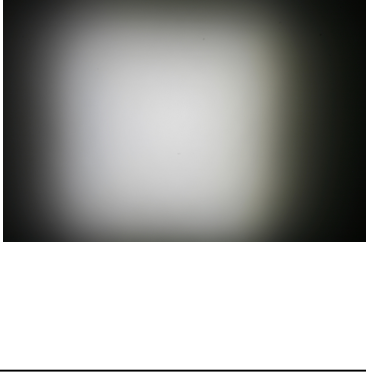
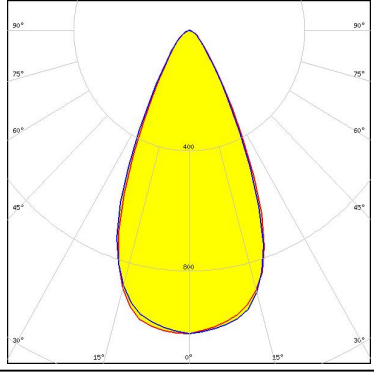
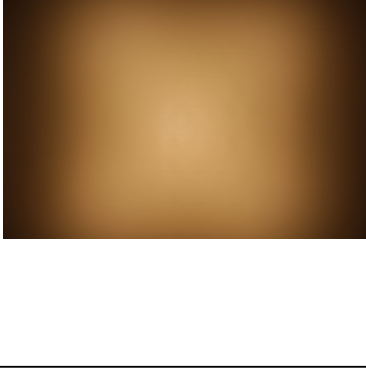
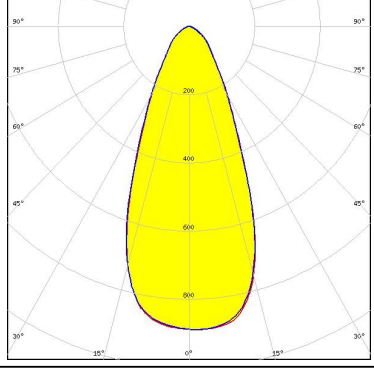
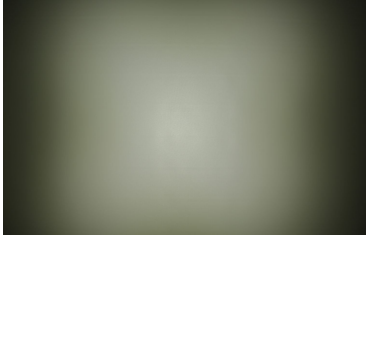
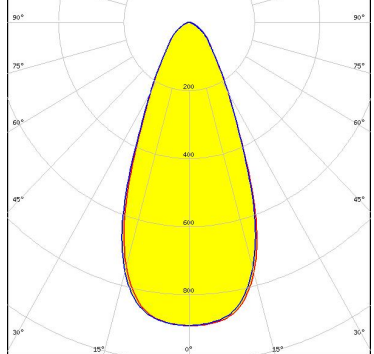


SEOUL SEMICONDUCTOR

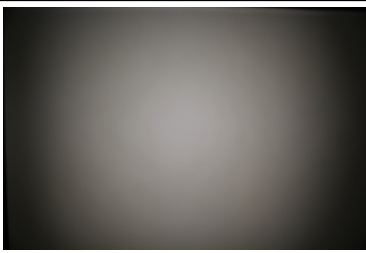
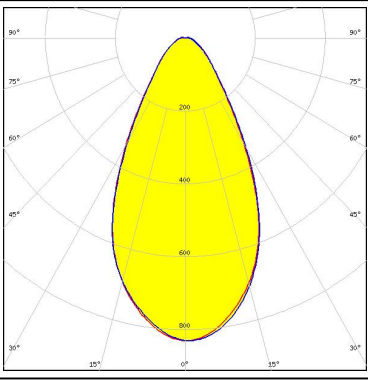

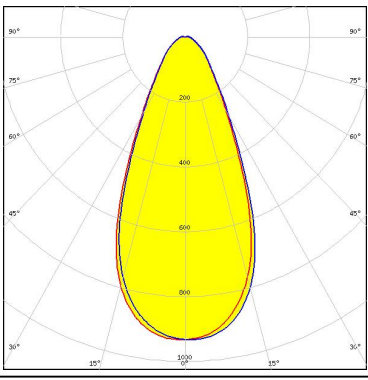

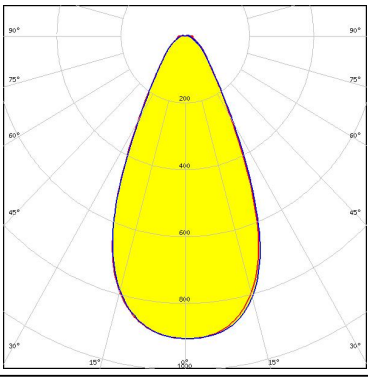

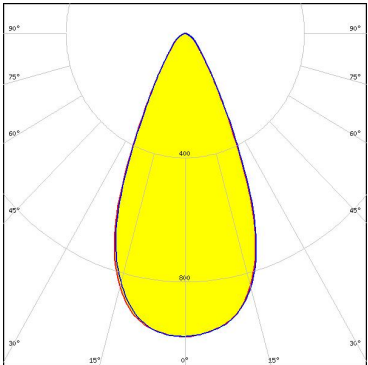
LED SMJQ-D48W16AA-XX  
FWHM 54.0°  
Efficiency 92 %  
Peak intensity 0.830 cd/lm  
Required components:



**PHOTOMETRIC DATA (MEASURED):**

<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED            Z5 FWHM        48.0° Efficiency    88 % Peak intensity 1.000 cd/lm Required components:</p>		
<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED            Z5M1/Z5M2 FWHM        51.0° Efficiency    85 % Peak intensity 1.000 cd/lm Required components:</p>		
<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED            Z8Y15 FWHM        45.0° Efficiency    79 % Peak intensity 0.900 cd/lm Required components:</p>		
<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED            Z8Y19 FWHM        46.0° Efficiency    79 % Peak intensity 0.900 cd/lm Required components:</p>		

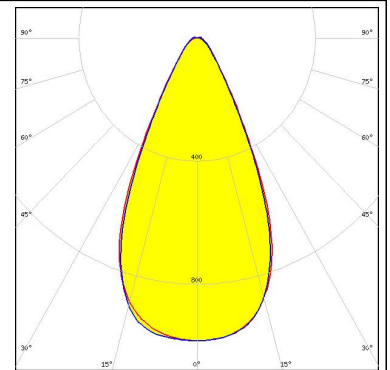
**PHOTOMETRIC DATA (MEASURED):**

<p><b>SEOL</b> SEOUL SEMICONDUCTOR</p> <p>LED            Z8Y19 2x2 cluster FWHM         54.0° Efficiency     92 % Peak intensity 0.830 cd/lm Required components:</p>		
<p><b>SEOL</b> SEOUL SEMICONDUCTOR</p> <p>LED            Z8Y22 FWHM         48.0° Efficiency     92 % Peak intensity 0.930 cd/lm Required components:</p>		
<p><b>SEOL</b> SEOUL SEMICONDUCTOR</p> <p>LED            Z8Y22P FWHM         51.0° Efficiency     92 % Peak intensity 0.910 cd/lm Required components:</p>		
<p><b>TOSHIBA</b> Leading Innovation &gt;&gt;&gt;</p> <p>LED            TL1L4 FWHM         48.0° Efficiency     81 % Peak intensity 0.980 cd/lm Required components:</p>		

#### PHOTOMETRIC DATA (MEASURED):

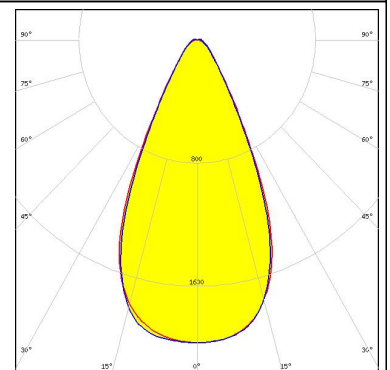
#### TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD  
FWHM 52.0°  
Efficiency 94 %  
Peak intensity 0.980 cd/lm  
Required components:



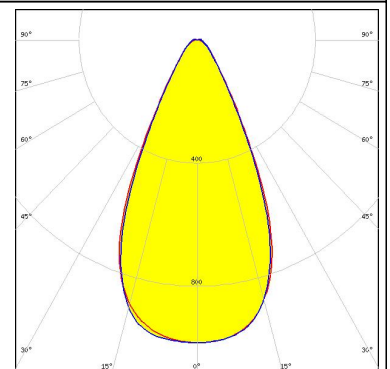
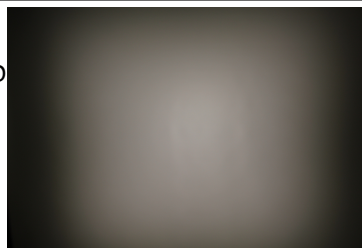
#### TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD  
FWHM 52.0°  
Efficiency 94 %  
Peak intensity 0.980 cd/lm  
Required components:



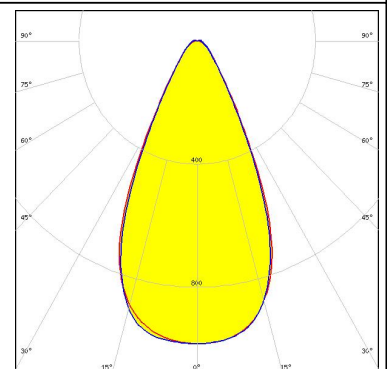
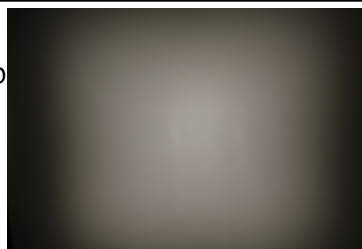
#### TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD  
FWHM 52.0°  
Efficiency 94 %  
Peak intensity 0.980 cd/lm  
Required components:



#### TRIDONIC

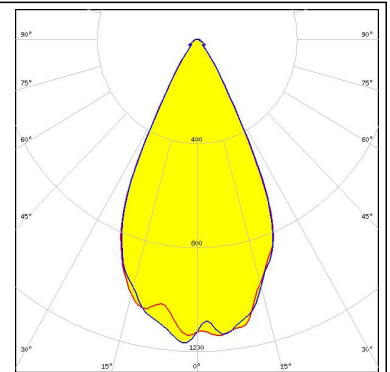
LED RLE G1 49x245mm 4000lm xxx EXC OTD  
FWHM 52.0°  
Efficiency 94 %  
Peak intensity 0.980 cd/lm  
Required components:



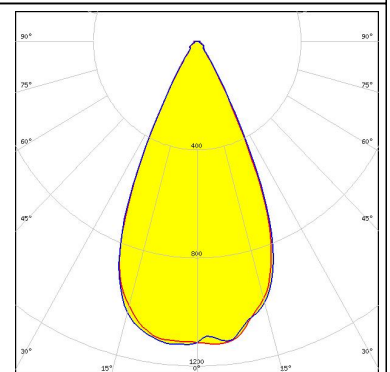
#### PHOTOMETRIC DATA (SIMULATED):



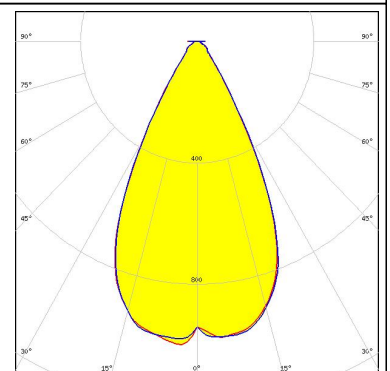
LED XHP35 HI  
FWHM 52.0°  
Efficiency 93 %  
Peak intensity 1.200 cd/lm  
Required components:



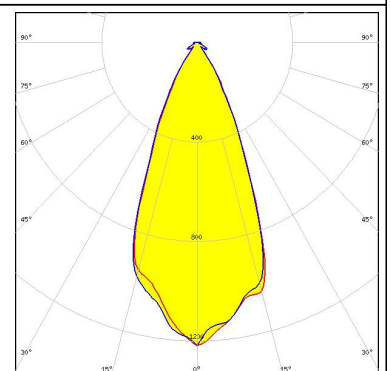
LED XP-E  
FWHM 50.0°  
Efficiency 94 %  
Peak intensity 1.200 cd/lm  
Required components:



LED XP-G3  
FWHM 54.0°  
Efficiency 94 %  
Peak intensity 1.000 cd/lm  
Required components:



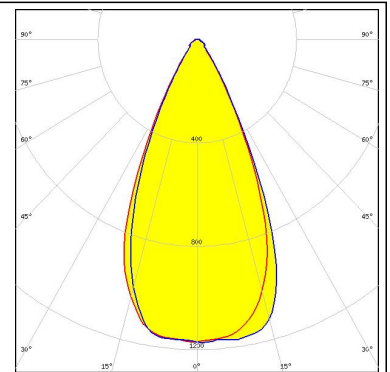
LED XQ-E HI  
FWHM 42.0°  
Efficiency 93 %  
Peak intensity 1.370 cd/lm  
Required components:



#### PHOTOMETRIC DATA (SIMULATED):

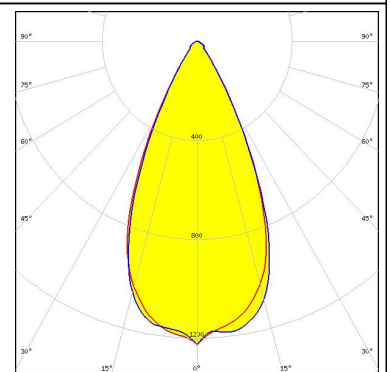
##### LUMILEDS

LED LUXEON 3030 2D  
FWHM 49.0°  
Efficiency 94 %  
Peak intensity 1.200 cd/lm  
Required components:



##### LUMILEDS

LED LUXEON 3535L  
FWHM 49.0°  
Efficiency 94 %  
Peak intensity 1.200 cd/lm  
Required components:

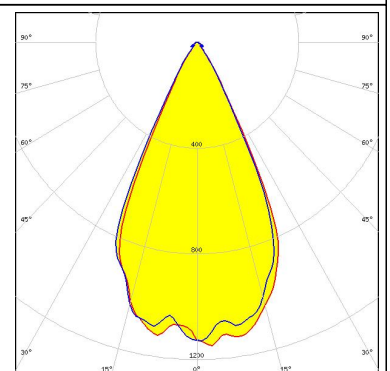


##### LUMILEDS

LED LUXEON A  
FWHM 52.0°  
Efficiency %  
Peak intensity cd/lm  
Required components:

##### LUMILEDS

LED LUXEON H50-2  
FWHM 52.0°  
Efficiency 91 %  
Peak intensity 4.700 cd/lm  
Required components:



#### PHOTOMETRIC DATA (SIMULATED):



LED LUXEON Rebel  
FWHM 52.0°  
Efficiency %  
Peak intensity cd/lm  
Required components:

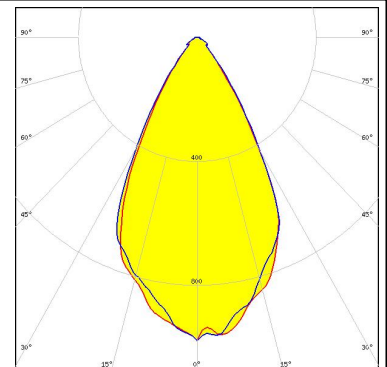


LED NVSxx19A  
FWHM 50.0°  
Efficiency %  
Peak intensity cd/lm  
Required components:



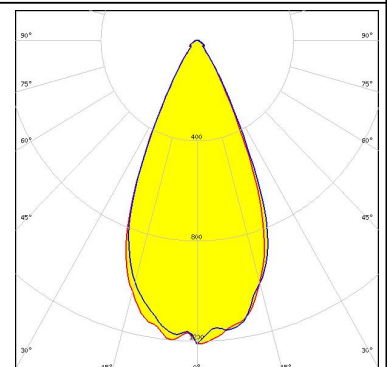
Opto Semiconductors

LED Duris S8  
FWHM 56.0°  
Efficiency 86 %  
Peak intensity 1.000 cd/lm  
Required components:



Opto Semiconductors

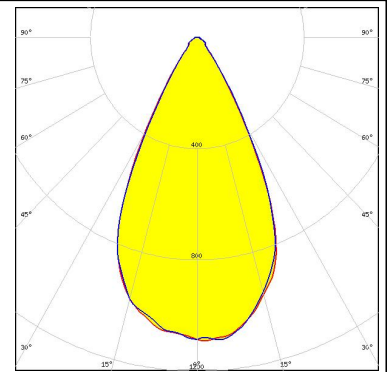
LED OSCONIQ P 3737 (2W version)  
FWHM 48.0°  
Efficiency 93 %  
Peak intensity 1.200 cd/lm  
Required components:



### PHOTOMETRIC DATA (SIMULATED):

**OSRAM**  
Opto Semiconductors

LED                   OSCONIQ P 3737 (3W version)  
FWHM                54.0°  
Efficiency            94 %  
Peak intensity       1.100 cd/lm  
Required components:

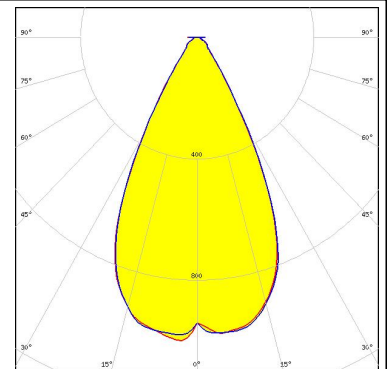


**OSRAM**  
Opto Semiconductors

LED                   Oslon Square Gen3  
FWHM                50.0°  
Efficiency            93 %  
Peak intensity       1.300 cd/lm  
Required components:

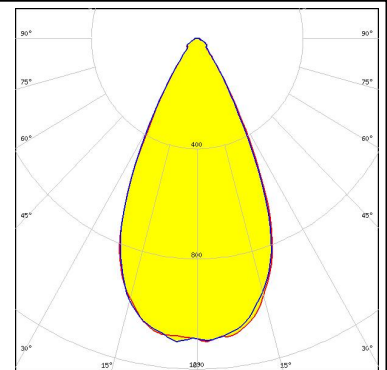
**PHILIPS**

LED                   Fortimo FastFlex LED board 2x8 DAX G4  
FWHM                54.0°  
Efficiency            94 %  
Peak intensity       1.000 cd/lm  
Required components:

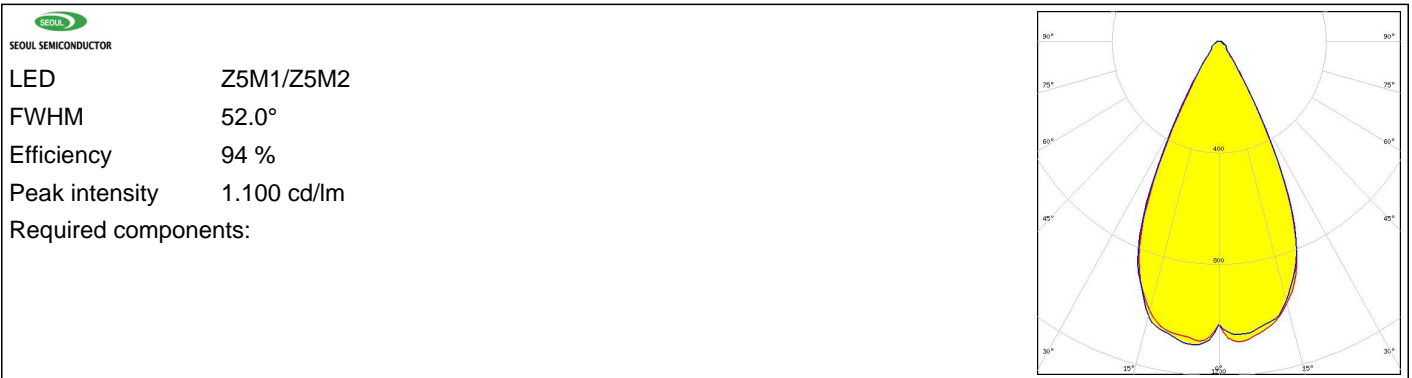


**SEOL**  
SEOUL SEMICONDUCTOR

LED                   Acrich MJT 4040  
FWHM                52.0°  
Efficiency            94 %  
Peak intensity       1.100 cd/lm  
Required components:



## PHOTOMETRIC DATA (SIMULATED):



### 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 13  
FI-24240 SALO  
Finland

#### LEDiL Inc.

228 West Page Street  
Suite D  
Sycamore IL 60178  
USA

#### Local sales and technical support

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

#### Shipping locations

Salo, Finland  
Hong Kong, China

#### Distribution Partners

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