

## HB-2X2-M

~25° medium beam optimized for CREE XP-L  
and XM-L

### TECHNICAL SPECIFICATIONS:

Dimensions	50.0 x 50.0 mm
Height	8.5 mm
Fastening	pin, screw
ROHS compliant	yes ⓘ

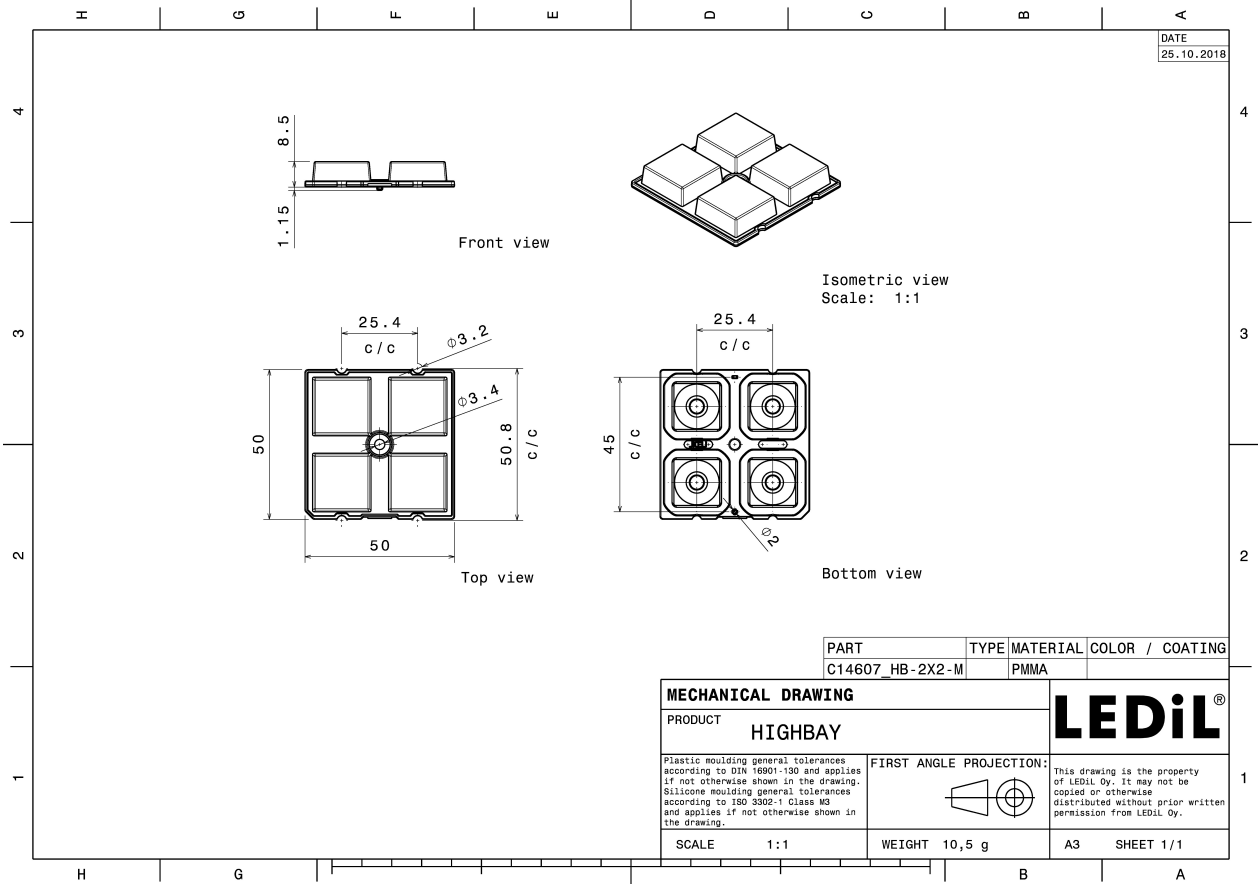
### MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour	Finish
HB-2X2-M	Multi-lens	PMMA	clear	

### ORDERING INFORMATION:



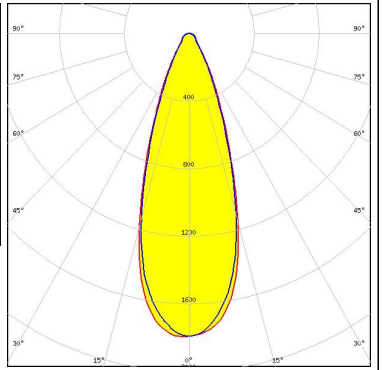

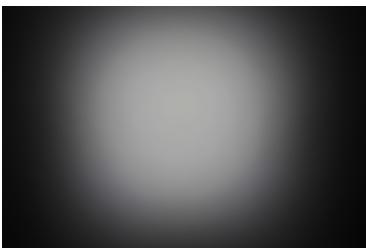
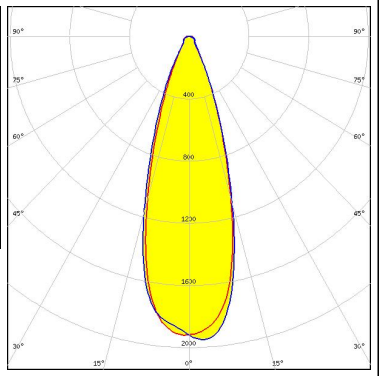


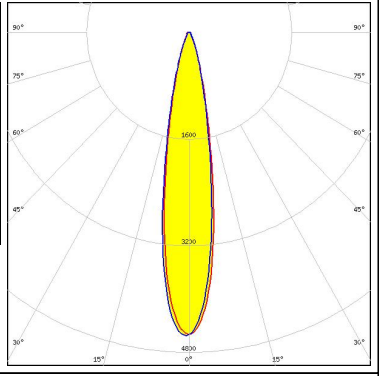

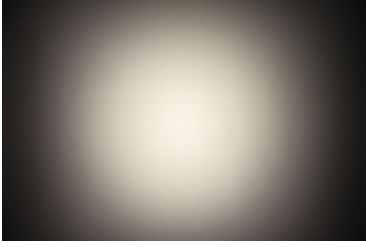
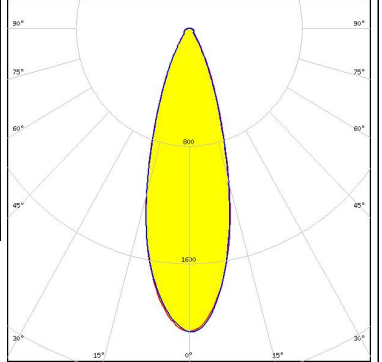
Component	Qty in box	MOQ	MPQ	Box weight (kg)
C14607_HB-2X2-M » Box size: 480 x 280 x 300 mm	800	160	160	9.2




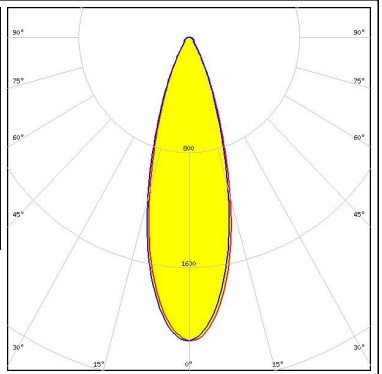

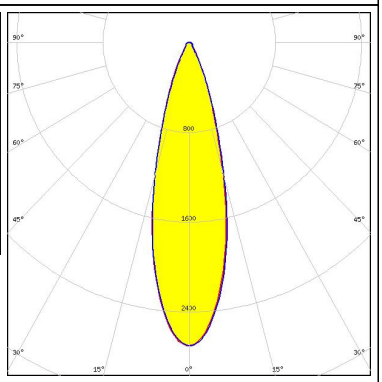

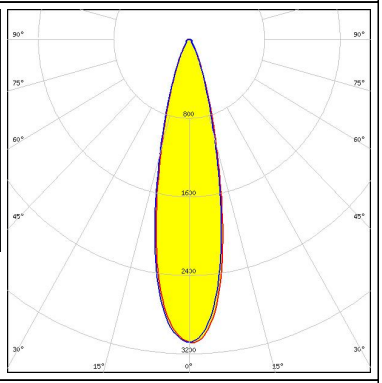

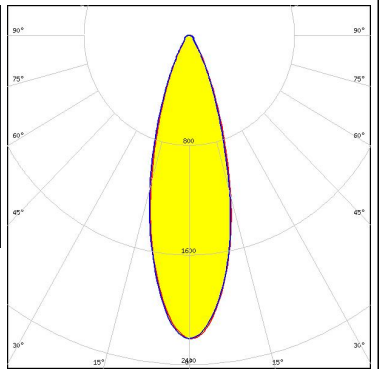


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### PHOTOMETRIC DATA (MEASURED):


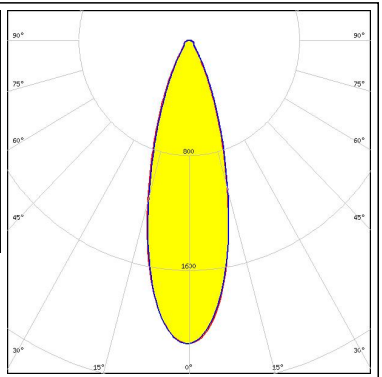

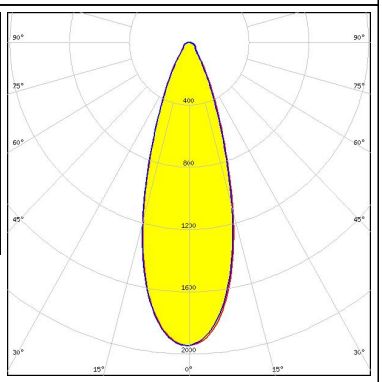

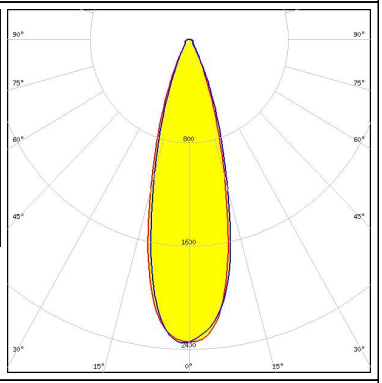

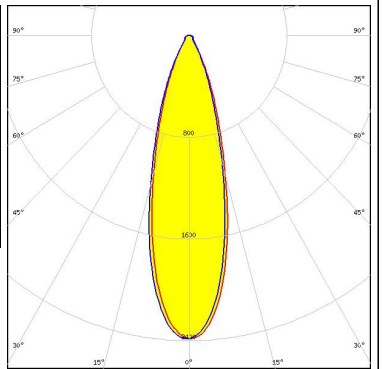
<p> <b>LED</b> Bridgelux SMD 5050</p> <p><b>FWHM / FWTM</b> 36.0° / 66.0°</p> <p><b>Efficiency</b> 94 %</p> <p><b>Peak intensity</b> 1.8 cd/lm</p> <p><b>LEDs/each optic</b> 1</p> <p><b>Light colour</b> White</p> <p><b>Required components:</b></p>		
<p> <b>LED</b> XD16</p> <p><b>FWHM / FWTM</b> 33.0° / 59.0°</p> <p><b>Efficiency</b> 94 %</p> <p><b>Peak intensity</b> 2 cd/lm</p> <p><b>LEDs/each optic</b> 4</p> <p><b>Light colour</b> White</p> <p><b>Required components:</b></p>		
<p> <b>LED</b> XD16</p> <p><b>FWHM / FWTM</b> 19.0° / 39.0°</p> <p><b>Efficiency</b> 90 %</p> <p><b>Peak intensity</b> 4.6 cd/lm</p> <p><b>LEDs/each optic</b> 1</p> <p><b>Light colour</b> White</p> <p><b>Required components:</b></p>		
<p> <b>LED</b> XM-L</p> <p><b>FWHM / FWTM</b> 32.0° / 61.0°</p> <p><b>Efficiency</b> 93 %</p> <p><b>Peak intensity</b> 2 cd/lm</p> <p><b>LEDs/each optic</b> 1</p> <p><b>Light colour</b> White</p> <p><b>Required components:</b></p>		

#### PHOTOMETRIC DATA (MEASURED):

<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XM-L2            FWHM / FWTM 32.0° / 61.0°            Efficiency 92 %            Peak intensity 2.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XM-L3            FWHM / FWTM 28.0° / 54.0°            Efficiency 95 %            Peak intensity 2.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XP-G2            FWHM / FWTM 25.0° / 49.0°            Efficiency 0 %            Peak intensity 3.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XP-L HD            FWHM / FWTM 31.0° / 60.0°            Efficiency 94 %            Peak intensity 2.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		



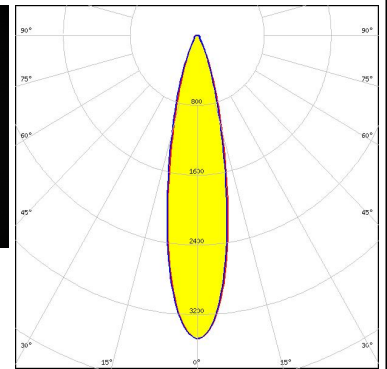
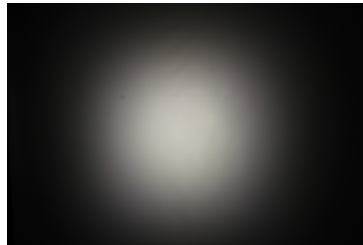
#### PHOTOMETRIC DATA (MEASURED):

<p><b>CREE</b> LED</p> <p>LED: XP-L2            FWHM / FWTM: 31.0° / 61.0°            Efficiency: 93 %            Peak intensity: 2.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED: LUXEON 5050 Round LES            FWHM / FWTM: 34.0° / 65.0°            Efficiency: 94 %            Peak intensity: 2 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED: LUXEON MZ            FWHM / FWTM: 30.0° / 55.0°            Efficiency: 91 %            Peak intensity: 2.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED: LUXEON V            FWHM / FWTM: 29.0° / 58.0°            Efficiency: 94 %            Peak intensity: 2.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		

#### PHOTOMETRIC DATA (MEASURED):

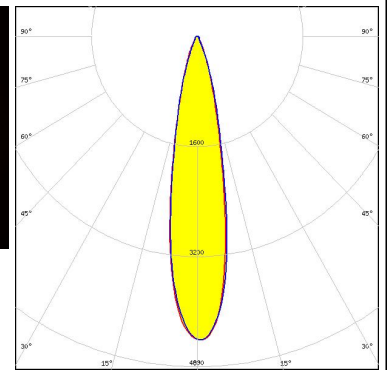
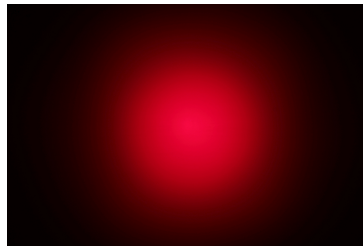
#### LUMILEDS

LED LUXEON V2  
 FWHM / FWTM 23.0° / 47.0°  
 Efficiency 94 %  
 Peak intensity 3.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



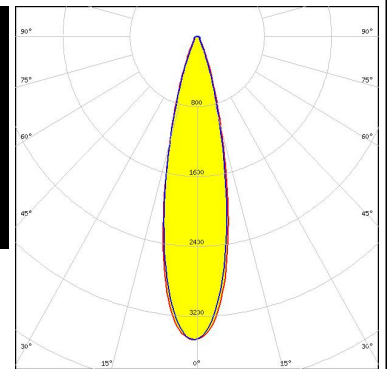
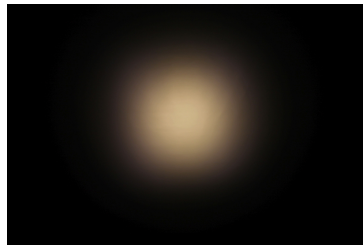
#### LUMINUS

LED SST-10-B130  
 FWHM / FWTM 21.0° / 42.0°  
 Efficiency 95 %  
 Peak intensity 4.4 cd/lm  
 LEDs/each optic 1  
 Light colour Deep Red  
 Required components:



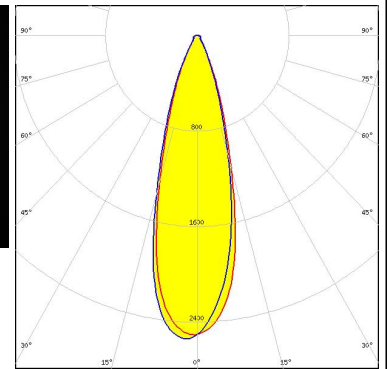
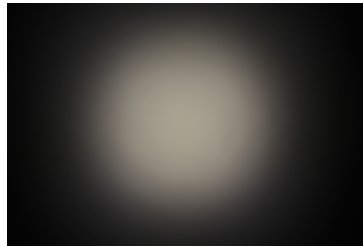
#### MST *Your solutions*

LED RecLED 122x50mm 1900lm 730 2x4 Opt G1  
 FWHM / FWTM 24.0° / 46.0°  
 Efficiency 95 %  
 Peak intensity 3.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:


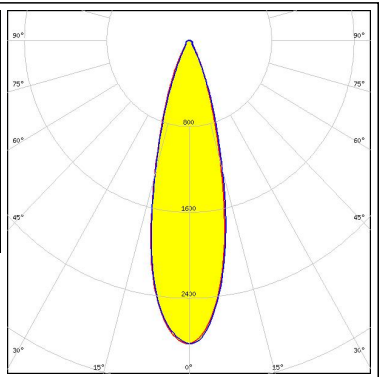

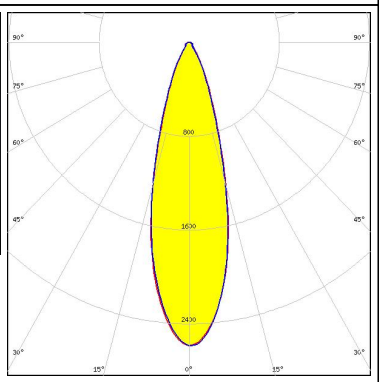

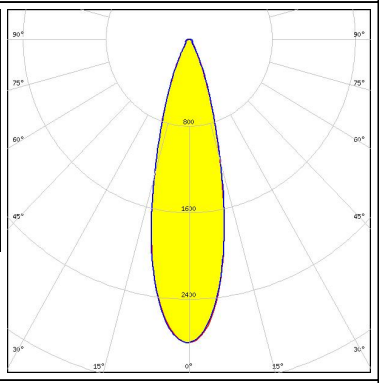

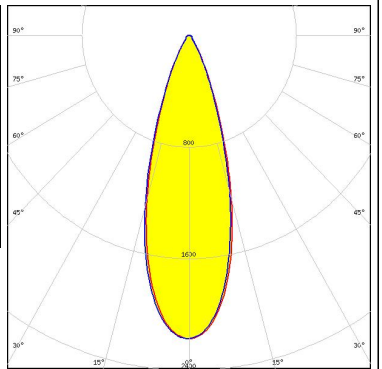


#### NICHIA

LED NVSW219D  
 FWHM / FWTM 29.0° / 55.0°  
 Efficiency 94 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



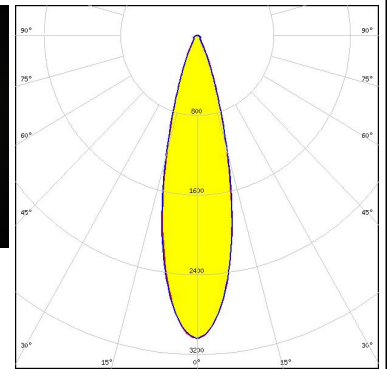
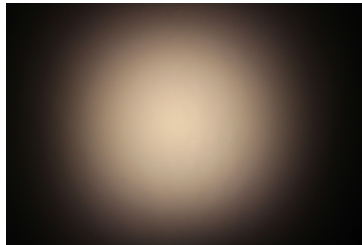
#### PHOTOMETRIC DATA (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVSW219F            FWHM / FWTM 28.0° / 53.0°            Efficiency 95 %            Peak intensity 2.8 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW319B            FWHM / FWTM 29.0° / 57.0°            Efficiency 94 %            Peak intensity 2.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW3x9A            FWHM / FWTM 28.0° / 53.0°            Efficiency 94 %            Peak intensity 2.8 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NWSx229A            FWHM / FWTM 33.0° / 58.0°            Efficiency 87 %            Peak intensity 2.2 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		

#### PHOTOMETRIC DATA (MEASURED):

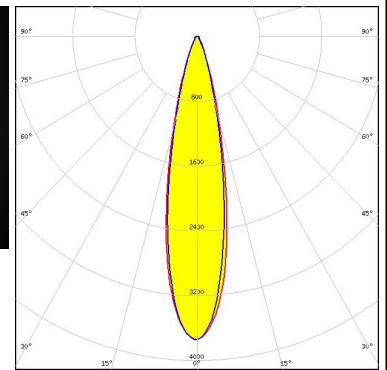
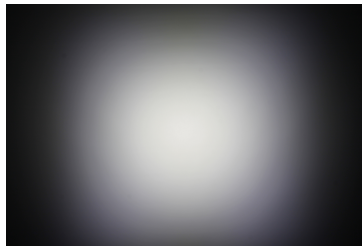
#### OSRAM

LED PL-BRICK HP 3800 2x8 SSG  
 FWHM / FWTM 26.0° / 50.0°  
 Efficiency 94 %  
 Peak intensity 3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

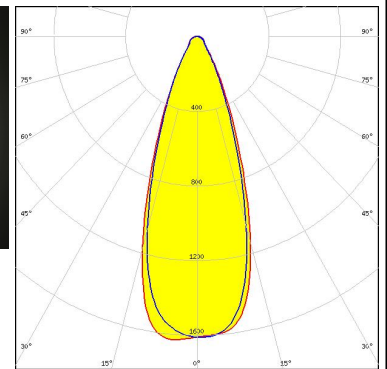
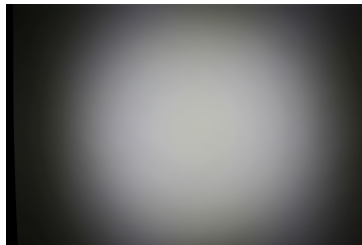
LED PrevaLED Brick HP 2x8  
 FWHM / FWTM 23.0° / 44.0°  
 Efficiency 91 %  
 Peak intensity 3.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

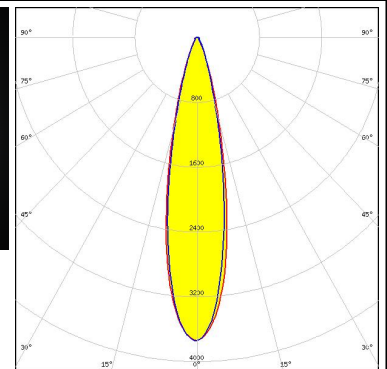
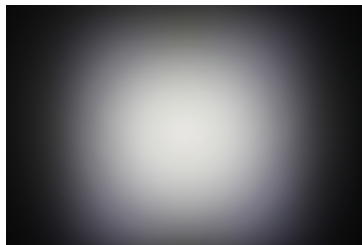
LED Duris S8  
 FWHM / FWTM 38.0° / 68.0°  
 Efficiency 94 %  
 Peak intensity 1.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

LED OSLOM Square CSSRM2/CSSRM3  
 FWHM / FWTM 23.0° / 44.0°  
 Efficiency 91 %  
 Peak intensity 3.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:

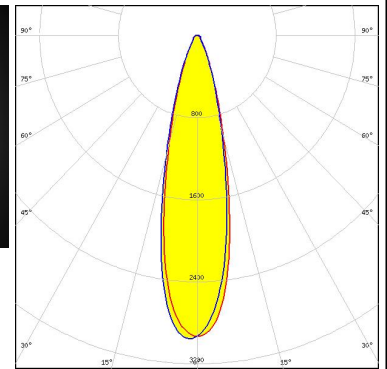
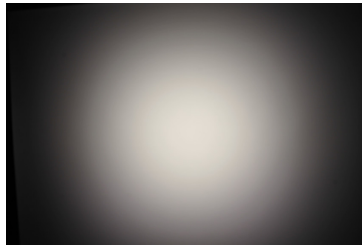




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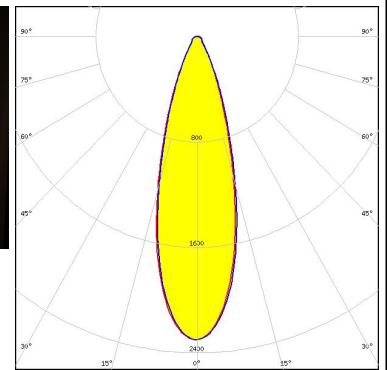
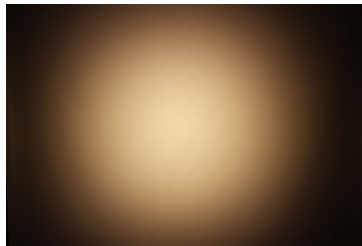
### PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4  
 FWHM / FWTM 25.0° / 51.0°  
 Efficiency 92 %  
 Peak intensity 3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



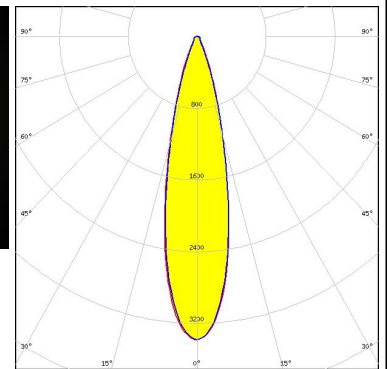
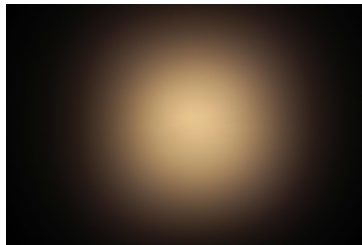
### PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4+  
 FWHM / FWTM 30.0° / 59.0°  
 Efficiency 96 %  
 Peak intensity 2.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



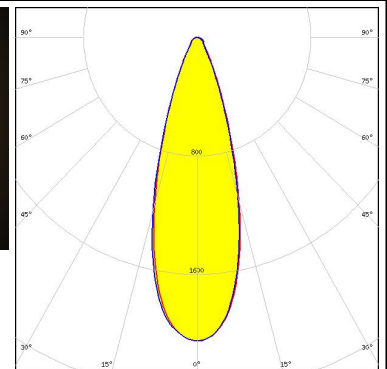
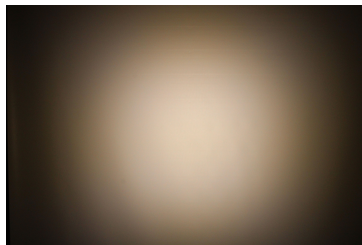
### PHILIPS

LED Fortimo FastFlex LED 2x8 DA G5  
 FWHM / FWTM 24.0° / 47.0°  
 Efficiency 94 %  
 Peak intensity 3.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### PHILIPS

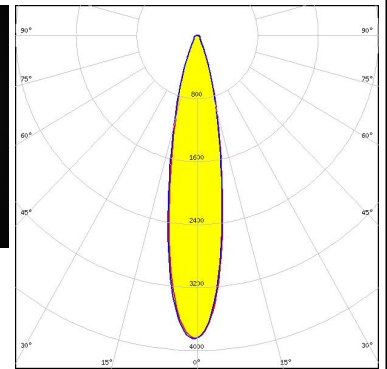
LED Fortimo FastFlex LED 2x8 DA HE  
 FWHM / FWTM 32.0° / 61.0°  
 Efficiency 96 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

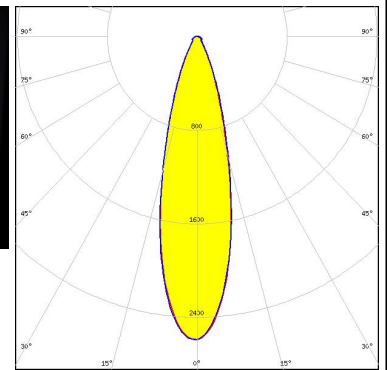
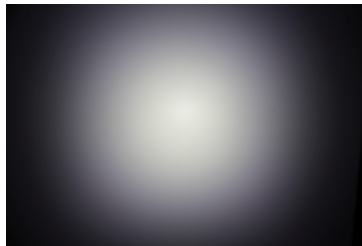
### SAMSUNG

LED HiLOM RC12 Z (LH181B)  
 FWHM / FWTM 21.0° / 45.0°  
 Efficiency 96 %  
 Peak intensity 3.9 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



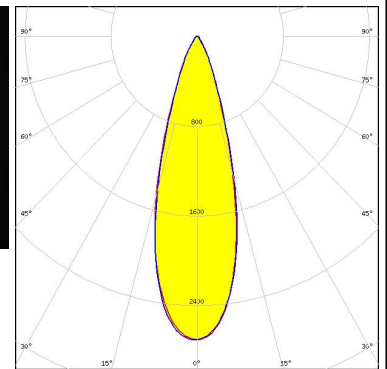
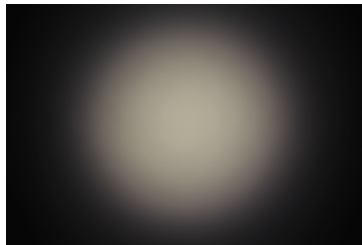
### SAMSUNG

LED HiLOM RH12 Z (LH351C)  
 FWHM / FWTM 27.0° / 55.0°  
 Efficiency 95 %  
 Peak intensity 2.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



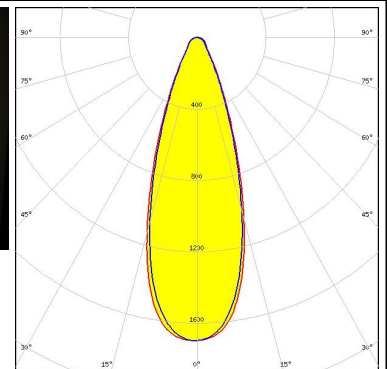
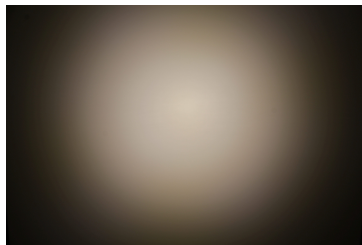
### SAMSUNG

LED HiLOM RH16 (LH351C)  
 FWHM / FWTM 30.0° / 55.0°  
 Efficiency 94 %  
 Peak intensity 2.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### SAMSUNG

LED HiLOM RM12 Z (LH502C)  
 FWHM / FWTM 35.0° / 67.0°  
 Efficiency 95 %  
 Peak intensity 1.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:

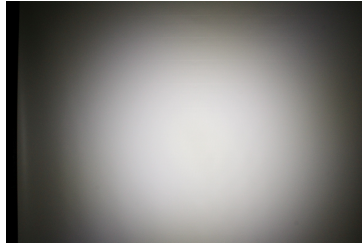




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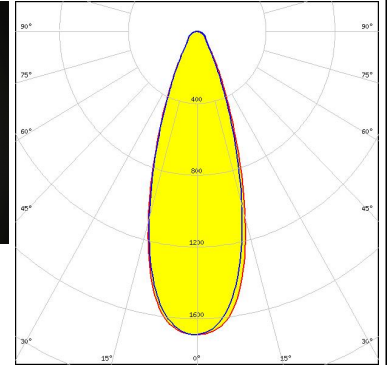
### SAMSUNG

LED HiLOM RM16 Z (LH502C)  
 FWHM / FWTM 36.0° / 68.0°  
 Efficiency 96 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



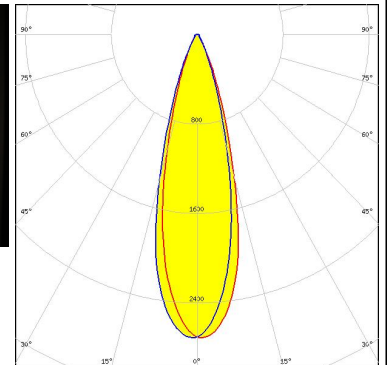
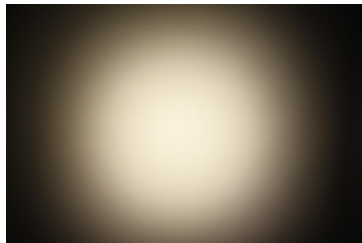
### SAMSUNG

LED HiLOM RM8 Z (LH502C)  
 FWHM / FWTM 36.0° / 68.0°  
 Efficiency 96 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



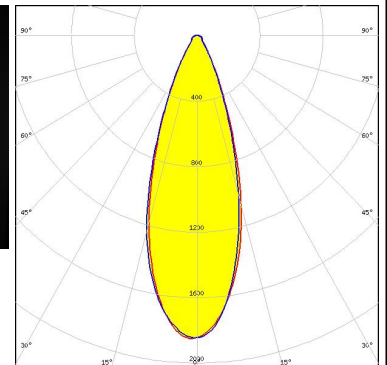
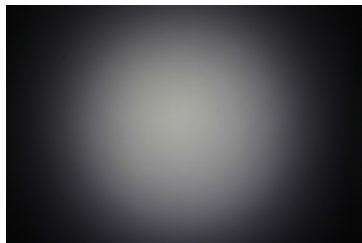
### SAMSUNG

LED LH351B  
 FWHM / FWTM 28.0° / 52.0°  
 Efficiency 85 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:


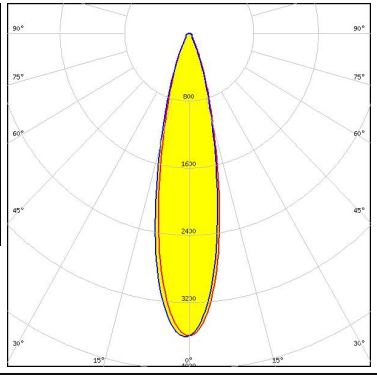

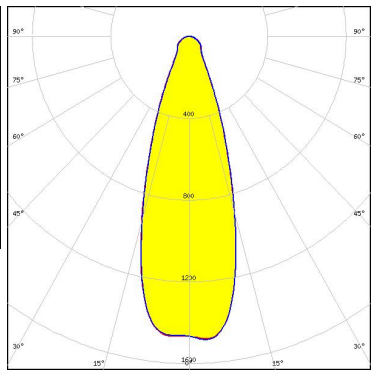

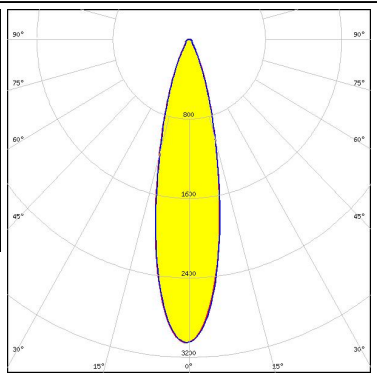

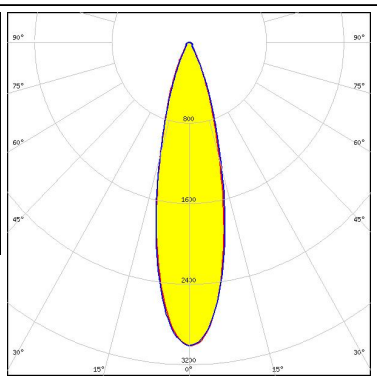


### SAMSUNG

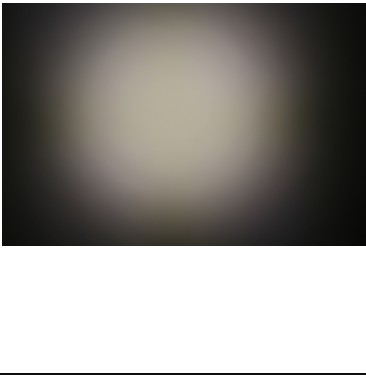
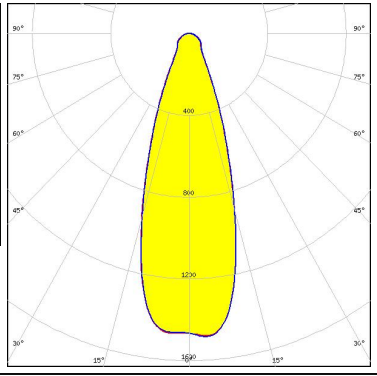

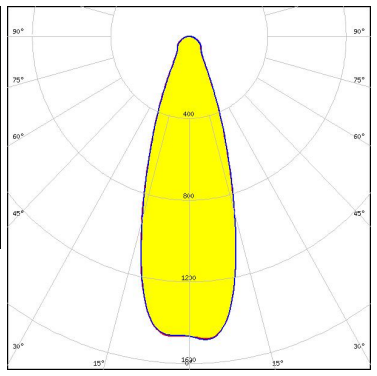

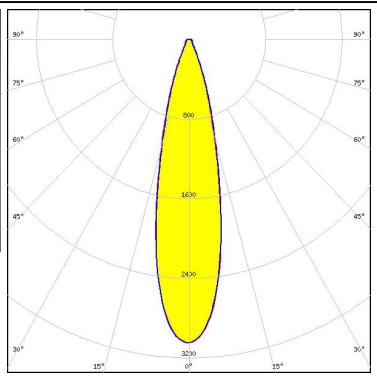
LED LH351D  
 FWHM / FWTM 35.0° / 64.0°  
 Efficiency 91 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### PHOTOMETRIC DATA (MEASURED):

<p><b>SEITEC</b> Elektronik GmbH</p> <p>LED LED-Pa-L15c2W11c2-xxx-C050-01            FWHM / FWTM 24.0° / 48.0 + 47.0°            Efficiency 95 %            Peak intensity 3.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>SEOUL</b> SEMICONDUCTOR</p> <p>LED 2x2 Y22 module - SMJQ-D48W16AA-XX            FWHM / FWTM 34.0° / 64.0°            Efficiency 93 %            Peak intensity 1.5 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>SEOUL</b> SEMICONDUCTOR</p> <p>LED Z5M3            FWHM / FWTM 25.0° / 51.0°            Efficiency 94 %            Peak intensity 3.1 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>SEOUL</b> SEMICONDUCTOR</p> <p>LED Z5M4            FWHM / FWTM 26.0° / 52.0°            Efficiency 95 %            Peak intensity 3 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		

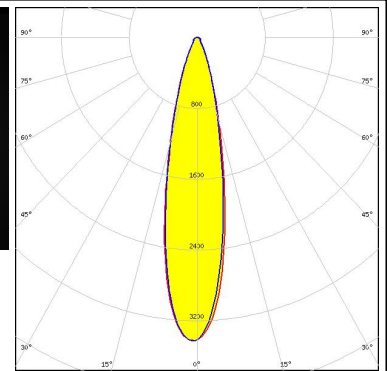
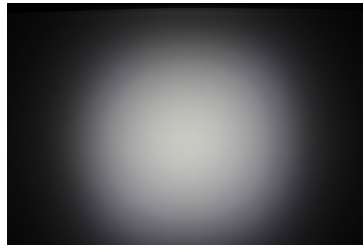
#### PHOTOMETRIC DATA (MEASURED):

<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y19</p> <p>FWHM / FWTM 34.0° / 64.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.5 cd/m</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y19</p> <p>FWHM / FWTM 34.0° / 64.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.5 cd/m</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y22P</p> <p>FWHM / FWTM 25.0° / 48.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 3.1 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>TRIDONIC</b></p> <p>LED RLE 2x4 2000lm HP EXC2 OTD</p> <p>FWHM / FWTM 23.0° / 48.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 3.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

### PHOTOMETRIC DATA (MEASURED):

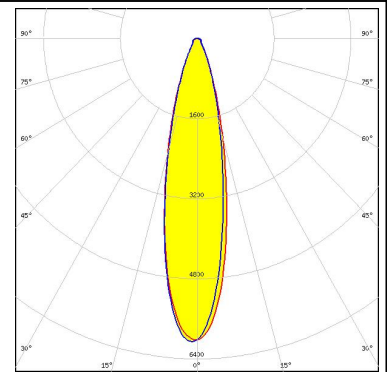
#### TRIDONIC

LED RLE 2x8 4000lm HP EXC2 OTD  
 FWHM / FWTM 23.0° / 48.0°  
 Efficiency 94 %  
 Peak intensity 3.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



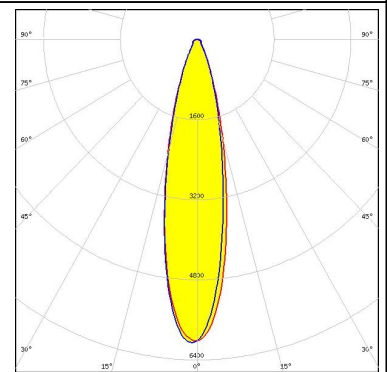
#### TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD  
 FWHM / FWTM 24.0° / 51.0°  
 Efficiency 94 %  
 Peak intensity 3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



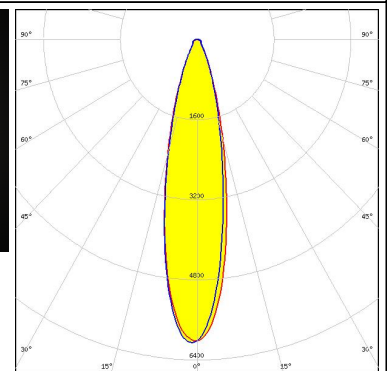
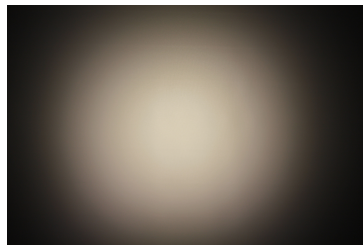
#### TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD  
 FWHM / FWTM 24.0° / 51.0°  
 Efficiency 94 %  
 Peak intensity 3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### TRIDONIC

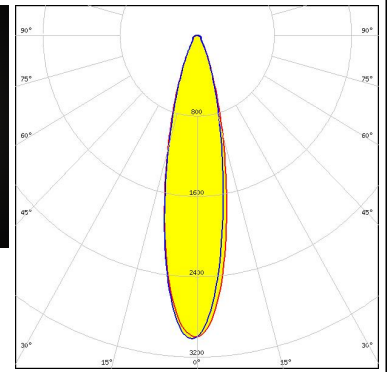
LED RLE G1 49x223mm 4000lm xxx EXC OTD  
 FWHM / FWTM 24.0° / 51.0°  
 Efficiency 94 %  
 Peak intensity 3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



## PHOTOMETRIC DATA (MEASURED):

### TRIDONIC

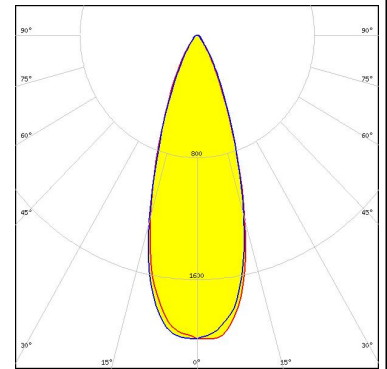
LED RLE G1 49x245mm 4000lm xxx EXC OTD  
FWHM / FWTM 24.0° / 51.0°  
Efficiency 94 %  
Peak intensity 3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



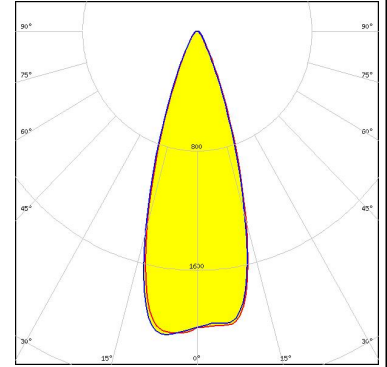
#### PHOTOMETRIC DATA (SIMULATED):



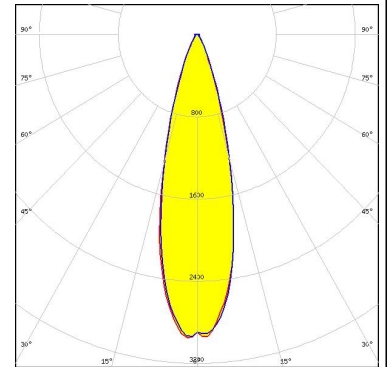
LED J Series 5050 Round LES  
 FWHM / FWTM 35.0° / 64.0°  
 Efficiency 92 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XP-G2 HE  
 FWHM / FWTM 35.0° / 58.0°  
 Efficiency 92 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

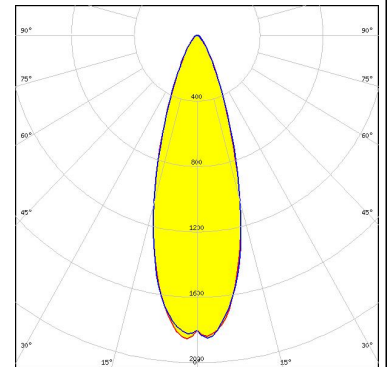


LED XP-G3  
 FWHM / FWTM 28.0° / 50.0°  
 Efficiency 92 %  
 Peak intensity 3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XP-L2  
 FWHM / FWTM 32.0° / 62.0°  
 Efficiency 82 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass





#### PHOTOMETRIC DATA (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON 3030 2D (Round LES)</p> <p>FWHM / FWTM 21.0° / 41.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 4.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 3535 2D</p> <p>FWHM / FWTM 22.0° / 42.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 4.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Round LES</p> <p>FWHM / FWTM 34.0° / 64.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Square LES</p> <p>FWHM / FWTM 34.0° / 62.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	

#### PHOTOMETRIC DATA (SIMULATED):

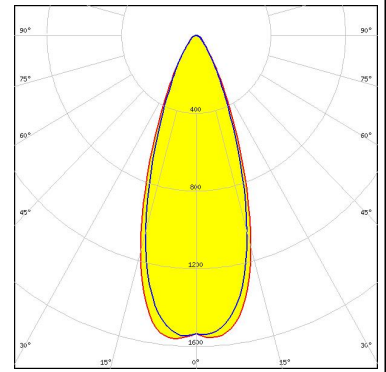
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Square LES</p> <p>FWHM / FWTM 34.0° / 62.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 2.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON HL2X-P</p> <p>FWHM / FWTM 36.0° / 62.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>NICHIA</b></p> <p>LED NV4WB35AM</p> <p>FWHM / FWTM 30.0° / 54.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 2.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C</p> <p>FWHM / FWTM 28.0° / 50.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 2.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

### PHOTOMETRIC DATA (SIMULATED):

#### OSRAM Opto Semiconductors

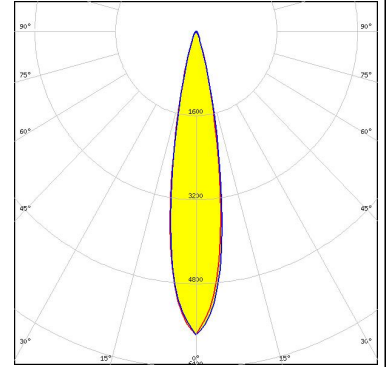
LED Duris S8  
 FWHM / FWTM 38.0° / 69.0°  
 Efficiency 89 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



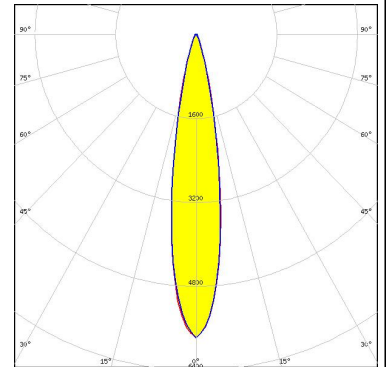
#### OSRAM Opto Semiconductors

LED OSCONIQ C 2424  
 FWHM / FWTM 19.0 + 20.0° / 36.0°  
 Efficiency 93 %  
 Peak intensity 5.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM Opto Semiconductors

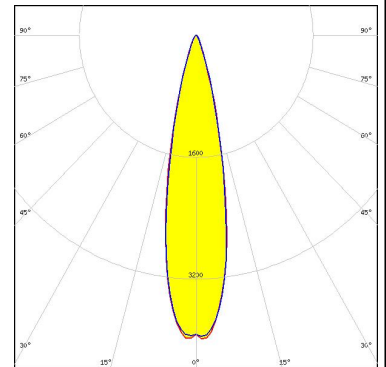
LED OSCONIQ P 3030  
 FWHM / FWTM 18.0° / 36.0°  
 Efficiency 94 %  
 Peak intensity 5.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



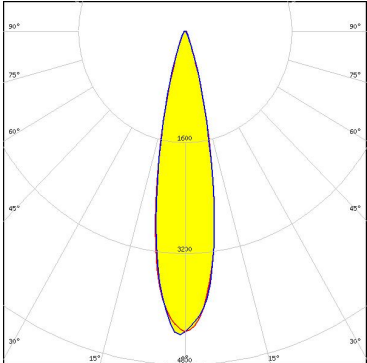
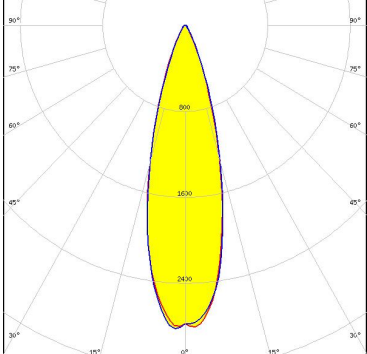
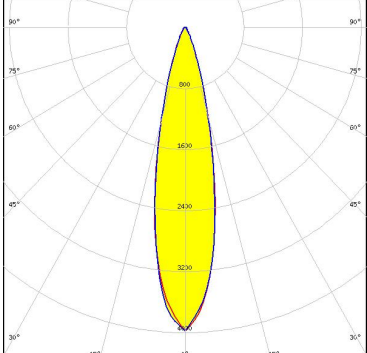
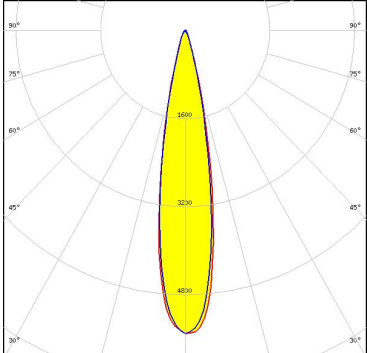
#### OSRAM Opto Semiconductors

LED OSCONIQ P 3737 (2W version)  
 FWHM / FWTM 22.0° / 40.0°  
 Efficiency 87 %  
 Peak intensity 4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



#### PHOTOMETRIC DATA (SIMULATED):

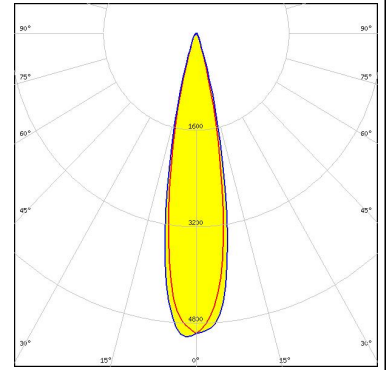
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                      OSCONIQ P 3737 (2W version)</p> <p>FWHM / FWTM        22.0° / 40.0°</p> <p>Efficiency             92 %</p> <p>Peak intensity        4.4 cd/lm</p> <p>LEDs/each optic     1</p> <p>Light colour          White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                      OSCONIQ P 3737 (3W version)</p> <p>FWHM / FWTM        29.0° / 52.0°</p> <p>Efficiency             93 %</p> <p>Peak intensity        2.8 cd/lm</p> <p>LEDs/each optic     1</p> <p>Light colour          White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                      OSCONIQ P 3737 Flat</p> <p>FWHM / FWTM        24.0° / 44.0°</p> <p>Efficiency             93 %</p> <p>Peak intensity        4 cd/lm</p> <p>LEDs/each optic     1</p> <p>Light colour          White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                      OSOLON Square Flat</p> <p>FWHM / FWTM        20.0° / 35.0°</p> <p>Efficiency             94 %</p> <p>Peak intensity        5.5 cd/lm</p> <p>LEDs/each optic     1</p> <p>Light colour          White</p> <p>Required components:</p>	

### PHOTOMETRIC DATA (SIMULATED):

#### OSRAM

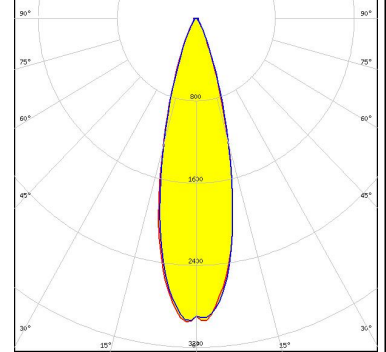
Opto Semiconductors

LED	OSTAR Projection Compact (Kx.CSLNM1.xx)
FWHM / FWTM	21.0° / 38.0°
Efficiency	94 %
Peak intensity	5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



#### PHILIPS

LED	Fortimo FastFlex LED 2x8 DAX G4
FWHM / FWTM	28.0° / 50.0°
Efficiency	92 %
Peak intensity	3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



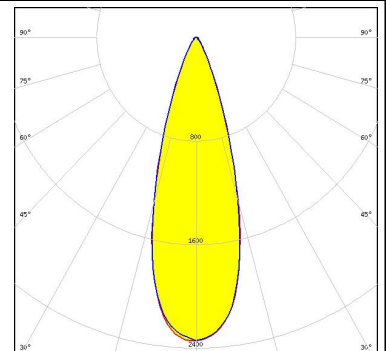
#### SAMSUNG

LED	LH231B
FWHM / FWTM	24.0° / 46.0°
Efficiency	92 %
Peak intensity	3.7 cd/lm
LEDs/each optic	4
Light colour	White
Required components:	



#### SAMSUNG

LED	LH351C
FWHM / FWTM	32.0° / 56.0°
Efficiency	91 %
Peak intensity	2.3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

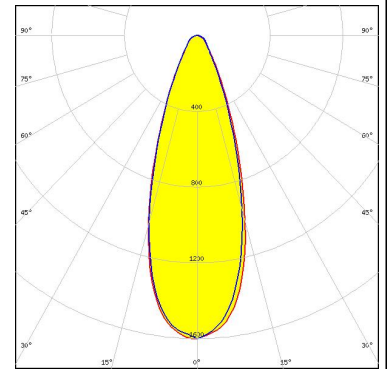


#### PHOTOMETRIC DATA (SIMULATED):

### SAMSUNG

LED LH502C  
 FWHM / FWTM 36.0° / 70.0°  
 Efficiency 89 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass

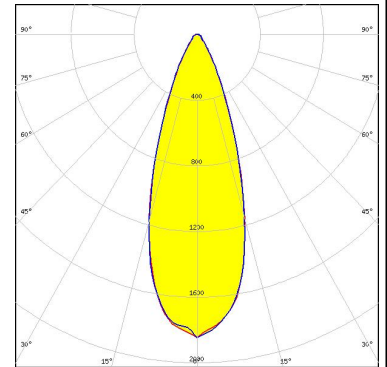


### SAMSUNG

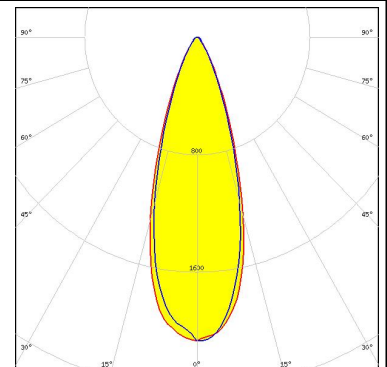
LED LH508A Plus  
 FWHM / FWTM 32.0° / 62.0°  
 Efficiency 93 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



SEOUL SEMICONDUCTOR  
 LED MJT 5050  
 FWHM / FWTM 36.0° / 66.0°  
 Efficiency 92 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



SEOUL SEMICONDUCTOR  
 LED SEOUL DC 5050 6V  
 FWHM / FWTM 34.0° / 62.0°  
 Efficiency 94 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 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.

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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.

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