

## HB-2X2-O

~20° + 115° oval beam for aisle lighting

### TECHNICAL SPECIFICATIONS:

Dimensions	50.0 x 50.0 mm
Height	10.6 mm
Fastening	glue, pin, screw
ROHS compliant	yes ⓘ

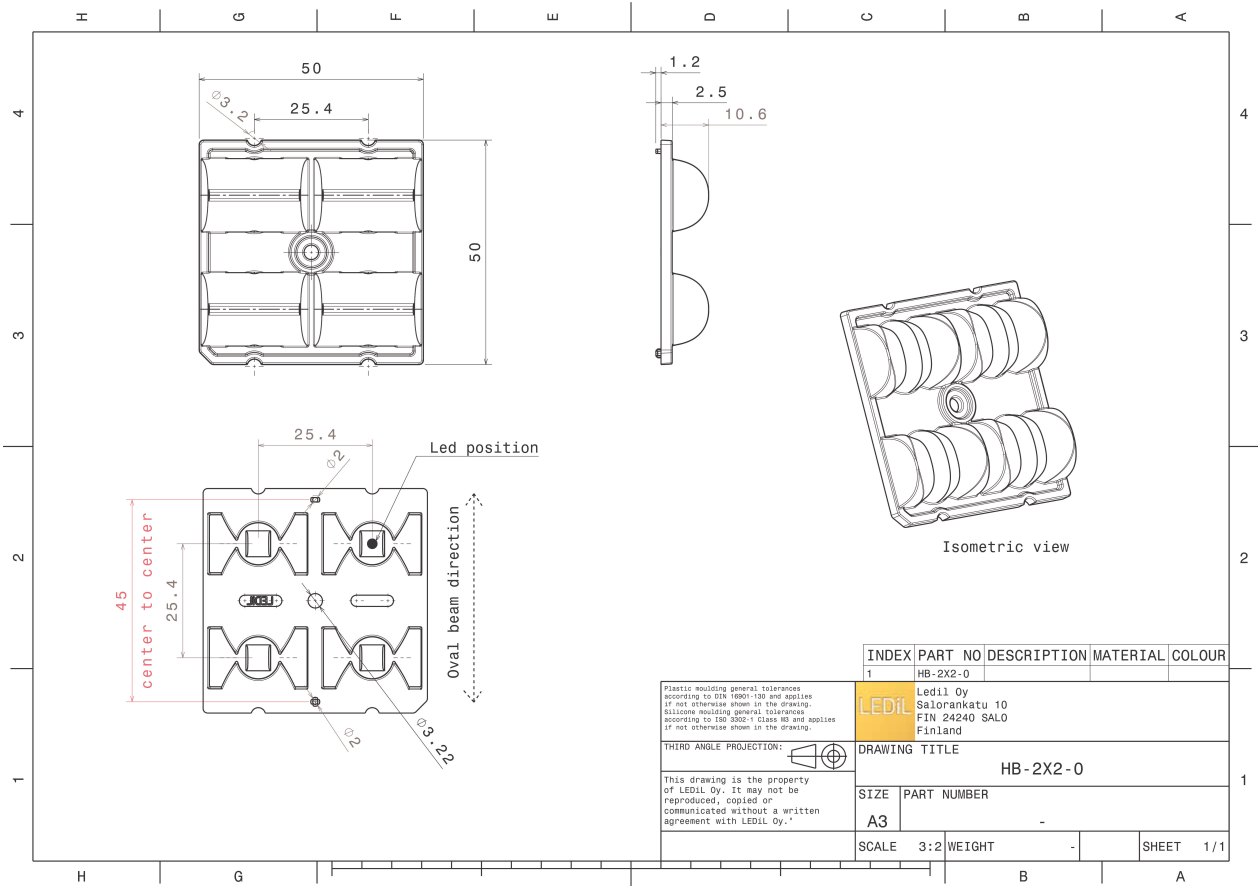
### MATERIAL SPECIFICATIONS:

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

### ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C13749_HB-2X2-O » Box size: 480 x 280 x 300 mm	800	160	160	10.4



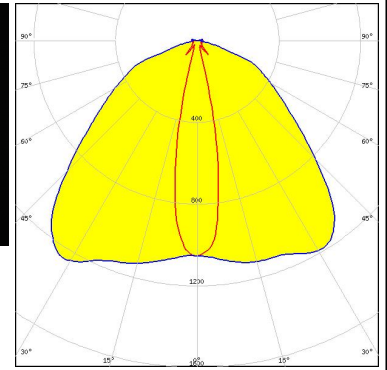


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

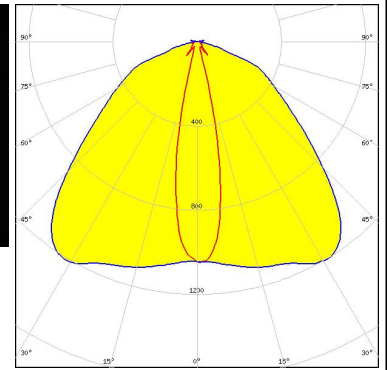
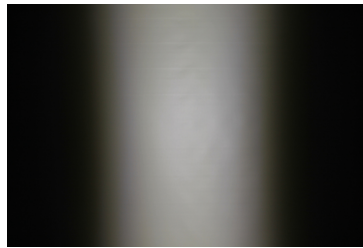
#### PHOTOMETRIC DATA (MEASURED):



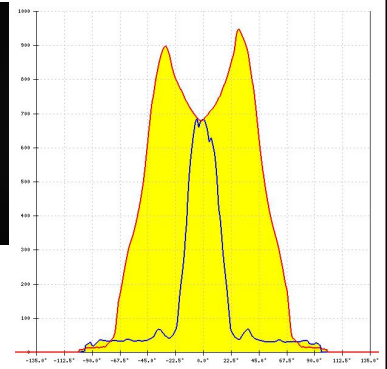
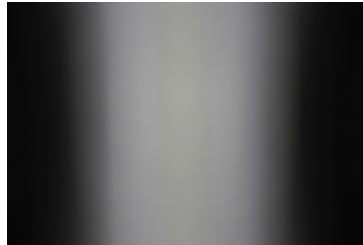
**LED** QUICK FLUX XTP 2x4 xxx LS G5  
**FWHM / FWTM** 21.0 + 111.0° / 32.0 + 148.0°  
**Efficiency** 94 %  
**Peak intensity** 1.3 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



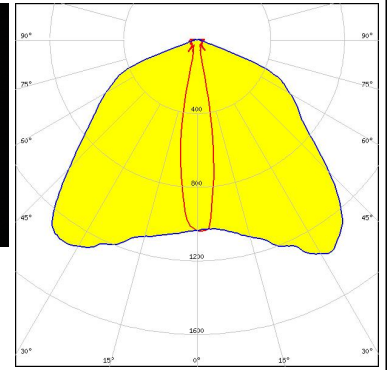
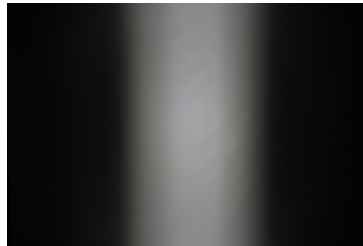
**LED** QUICK FLUX XTP 2x6 xxx LS G5  
**FWHM / FWTM** 22.0 + 111.0° / 33.0 + 149.0°  
**Efficiency** 94 %  
**Peak intensity** 1.2 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



**LED** XD16  
**FWHM / FWTM** 29.0 + 116.0° / 44.0 + 141.0°  
**Efficiency** 94 %  
**Peak intensity** 1 cd/lm  
**LEDs/each optic** 4  
**Light colour** White  
**Required components:**



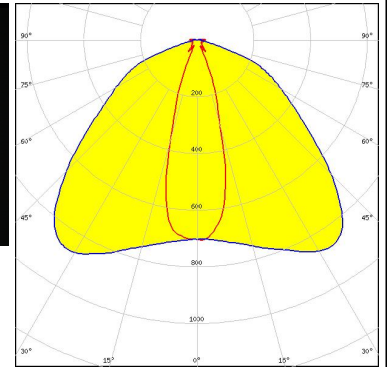
**LED** XD16  
**FWHM / FWTM** 19.0 + 127.0° / 28.0 + 141.0°  
**Efficiency** 93 %  
**Peak intensity** 1.4 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



#### PHOTOMETRIC DATA (MEASURED):

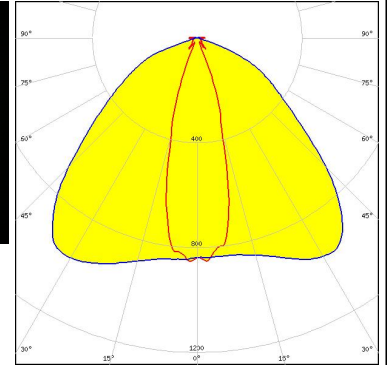
##### CREE ⇄ LED

LED XHP35 HD  
 FWHM / FWTM 29.0 + 117.0° / 48.0 + 148.0°  
 Efficiency 94 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



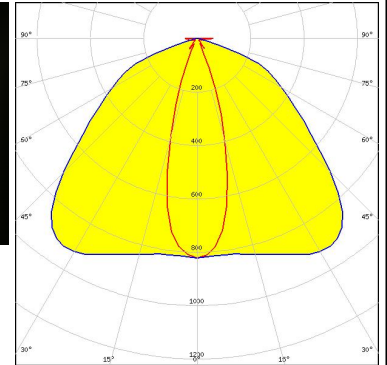
##### CREE ⇄ LED

LED XM-L  
 FWHM / FWTM 28.0 + 108.0° / 45.0 + 142.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



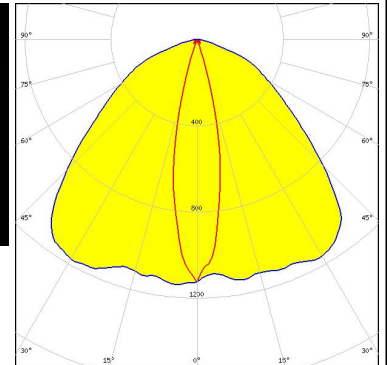
##### CREE ⇄ LED

LED XM-L2  
 FWHM / FWTM 30.0 + 106.0° / 48.0 + 143.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



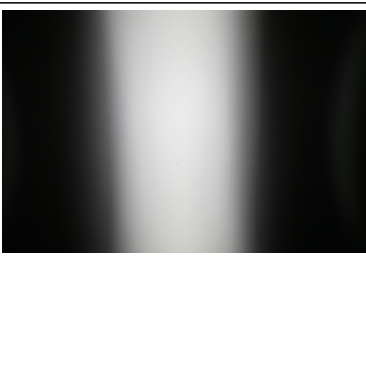
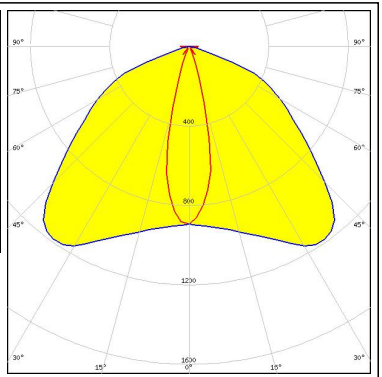

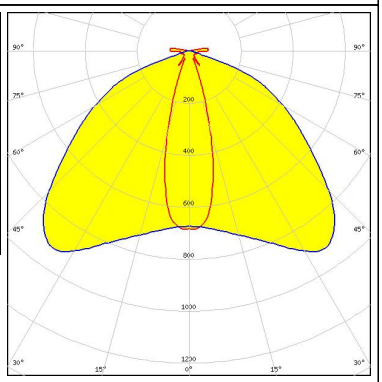

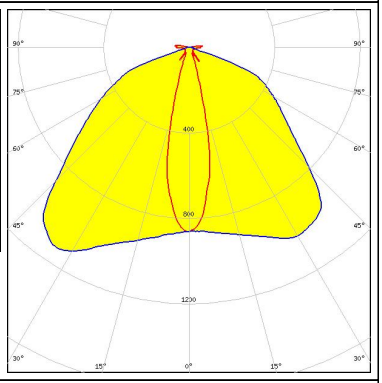

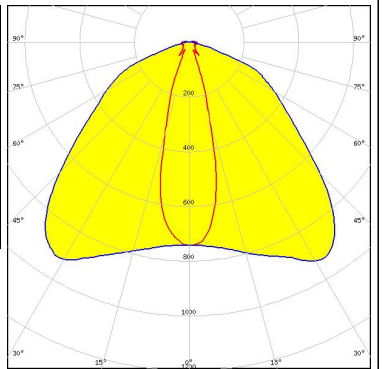
##### CREE ⇄ LED

LED XP-G  
 FWHM / FWTM 26.0 + 115.0° / 44.0 + 158.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:


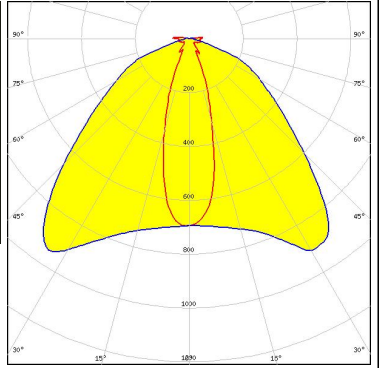
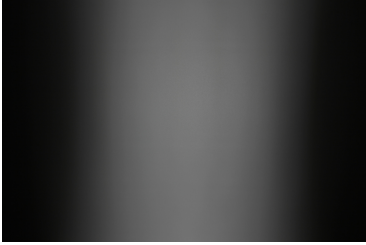
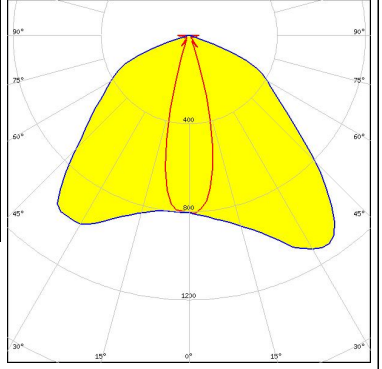
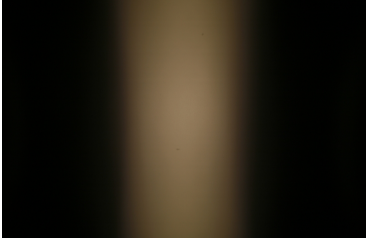
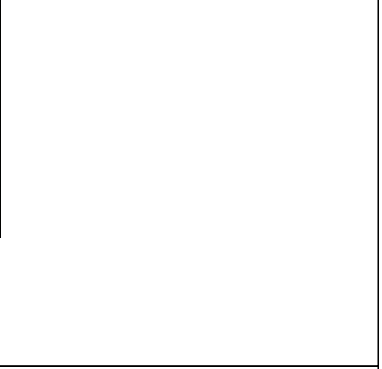
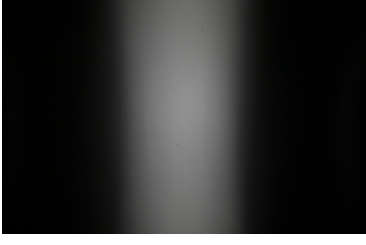
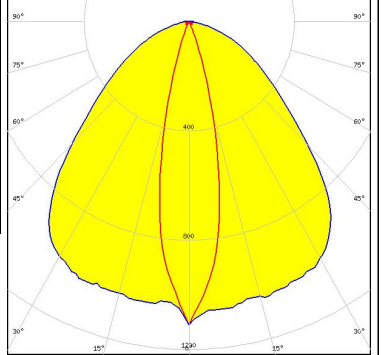




#### PHOTOMETRIC DATA (MEASURED):

<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED                    XP-G2            FWHM / FWTM    27.0 + 112.0° / 42.0 + 146.0°            Efficiency            94 %            Peak intensity    1.2 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    29.0 + 117.0° / 48.0 + 144.0°            Efficiency            94 %            Peak intensity    0.9 cd/lm            LEDs/each optic   1            Light colour        White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED                    XP-L HI            FWHM / FWTM    25.0 + 123.0° / 41.0 + 143.0°            Efficiency            94 %            Peak intensity    1.1 cd/lm            LEDs/each optic   1            Light colour        White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED                    XP-L2            FWHM / FWTM    28.0 + 117.0° / 47.0 + 150.0°            Efficiency            94 %            Peak intensity    0.9 cd/lm            LEDs/each optic   1            Light colour        White            Required components:</p>		

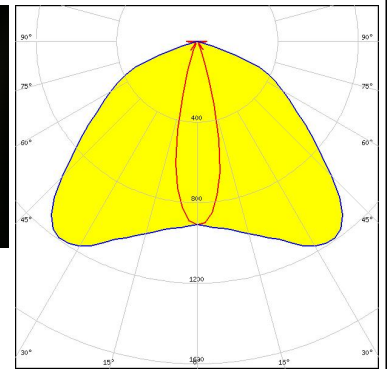
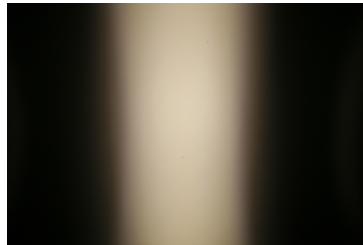
#### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Round LES</p> <p>FWHM / FWTM 29.0 + 114.0° / 51.0 + 147.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.9 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 MZ</p> <p>FWHM / FWTM 28.0 + 103.0° / 43.0 + 14.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 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 R</p> <p>FWHM / FWTM 25.0 + 105.0° / 44.0 + 148.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 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 Rebel ES</p> <p>FWHM / FWTM 25.0 + 106.0° / 42.0 + 150.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

#### PHOTOMETRIC DATA (MEASURED):

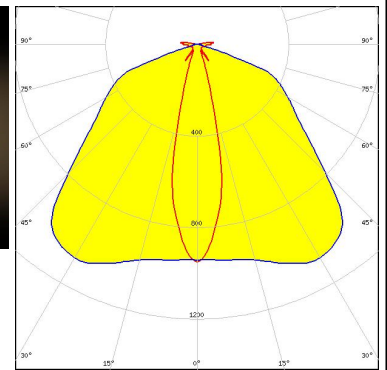
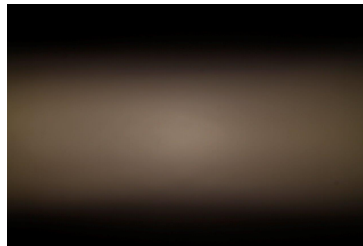
##### LUMILEDS

LED LUXEON T  
 FWHM / FWTM 26.0 + 110.0° / 41.0 + 145.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



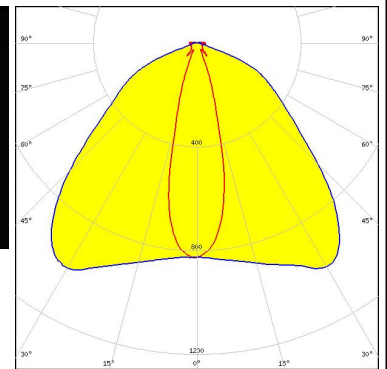
##### LUMILEDS

LED LUXEON TX  
 FWHM / FWTM 24.0 + 118.0° / 42.0 + 146.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



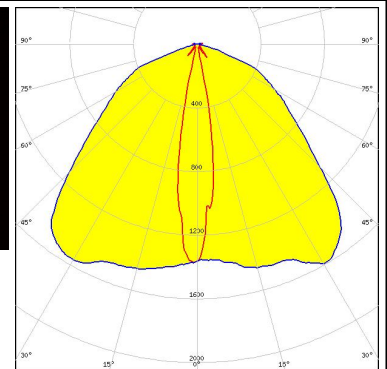
##### LUMILEDS

LED LUXEON V  
 FWHM / FWTM 26.0 + 108.0° / 44.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### LUMINUS

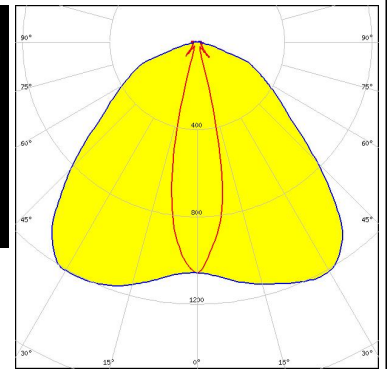
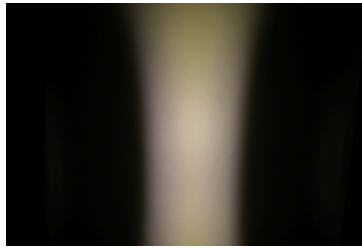
LED SST-10-B130  
 FWHM / FWTM 18.0 + 104.0° / 25.0 + 144.0°  
 Efficiency 97 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour Deep Red  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

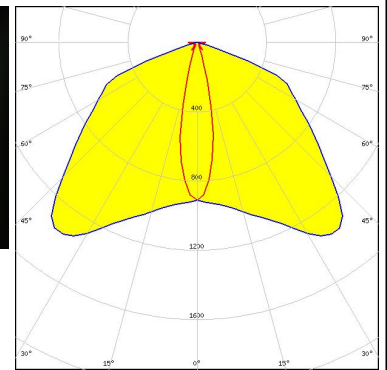
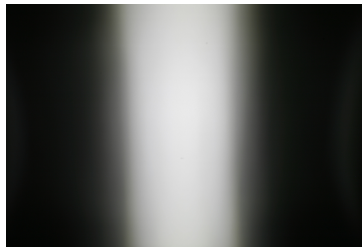
**MST** *Your solutions*

LED RecLED 122x50mm 1900lm 730 2x4 Opt G1  
 FWHM / FWTM 23.0 + 99.5° / 32.5 + 145.0°  
 Efficiency 97 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



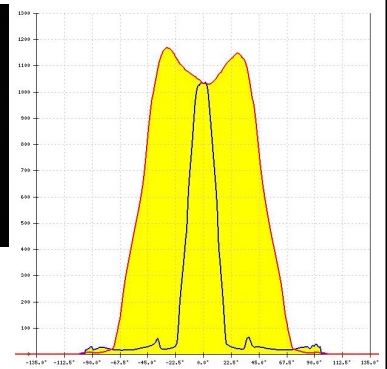
**NICHIA**

LED NCSxx19B  
 FWHM / FWTM 23.0 + 113.0° / 39.0 + 146.0°  
 Efficiency 94 %  
 Peak intensity 1.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



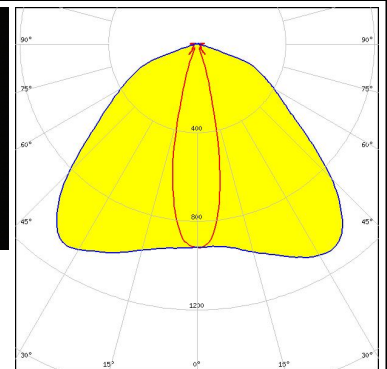
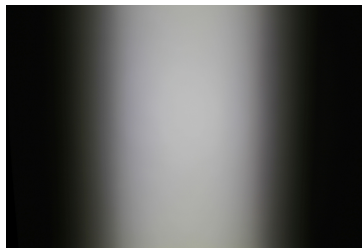
**NICHIA**

LED NVSW219D  
 FWHM / FWTM 25.0 + 107.0° / 37.0 + 137.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:




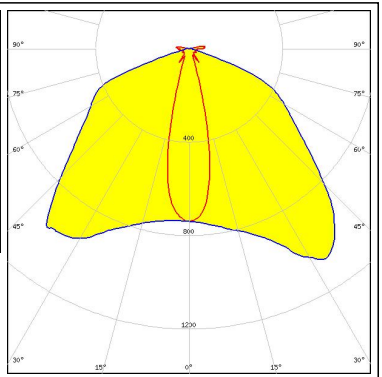

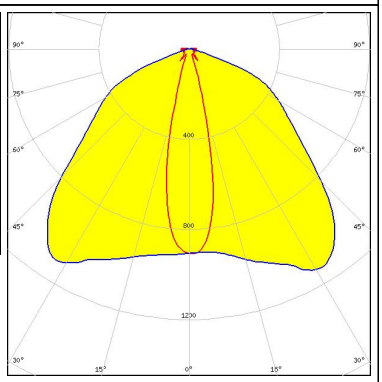
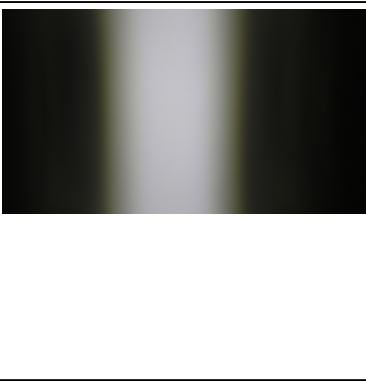
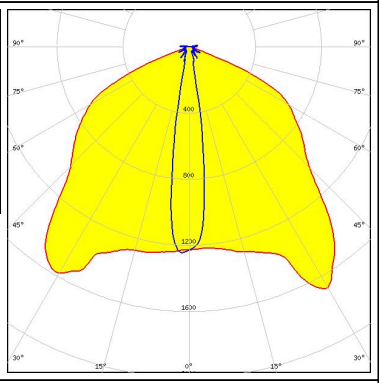

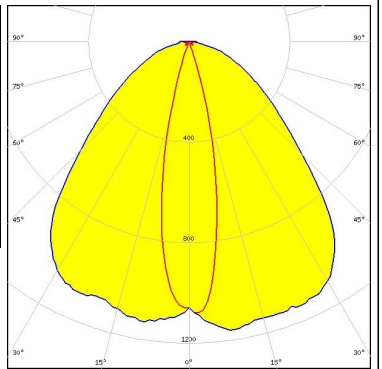
**NICHIA**

LED NVSW319B  
 FWHM / FWTM 25.0 + 113.0° / 41.0 + 144.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:





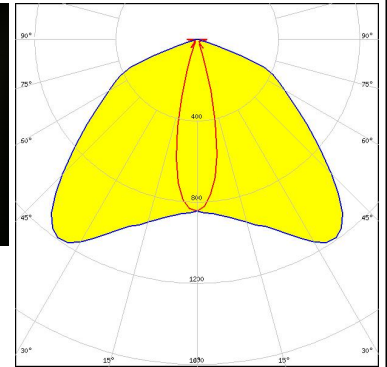
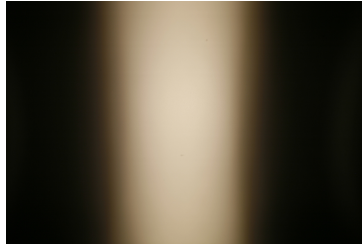
#### PHOTOMETRIC DATA (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVSW3x9A            FWHM / FWTM 25.0 + 134.0° / 43.0 + 147.0°            Efficiency 93 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW3x9A            FWHM / FWTM 24.0 + 119.0° / 38.0 + 144.0°            Efficiency 94 %            Peak intensity 1.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSxE21A            FWHM / FWTM 17.0 + 125.0° / 27.0 + 139.0°            Efficiency 94 %            Peak intensity 1.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSxx19A            FWHM / FWTM 24.0 + 105.0° / 44.0 + 148.0°            Efficiency 94 %            Peak intensity 1.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		

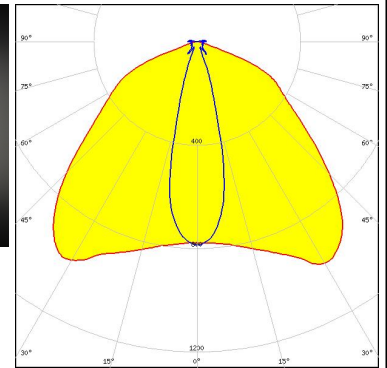
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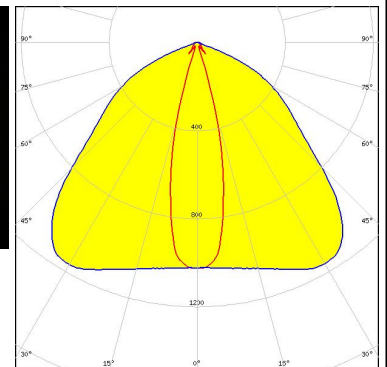
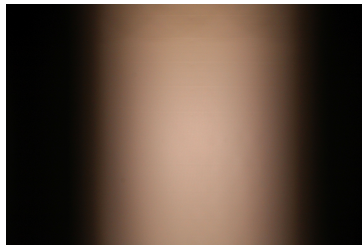
LED NVSxx19B/NVSxx19C  
 FWHM / FWTM 26.0 + 108.0° / 41.0 + 145.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



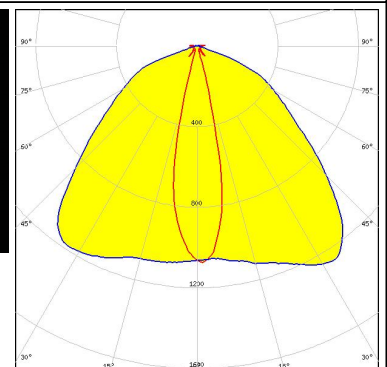
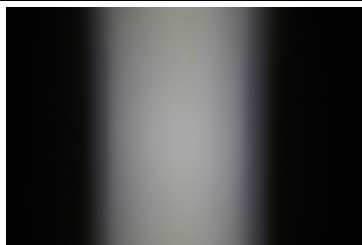
LED NWSx229A  
 FWHM / FWTM 27.0 + 118.0° / 43.0 + 143.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED PL-BRICK HP 3800 2x8 SSG  
 FWHM / FWTM 26.0 + 102.0° / 37.0 + 139.0°  
 Efficiency 97 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED PrevaLED Brick HP 2x8  
 FWHM / FWTM 23.0 + 111.0° / 32.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



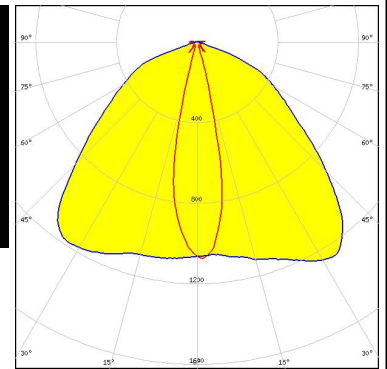
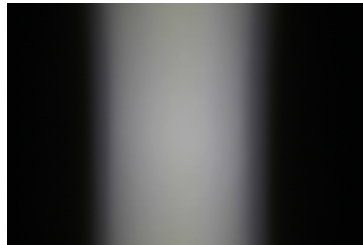


#### PHOTOMETRIC DATA (MEASURED):

#### OSRAM

Opto Semiconductors

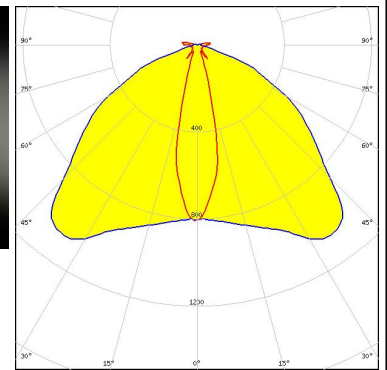
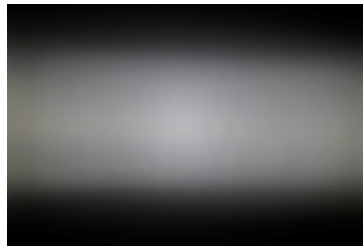
LED OSLON Square CSSRM2/CSSRM3  
 FWHM / FWTM 23.0 + 111.0° / 32.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

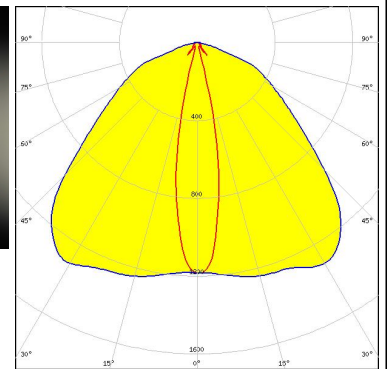
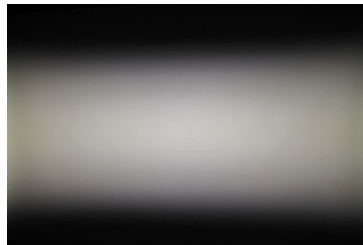
Opto Semiconductors

LED OSLON Square PC  
 FWHM / FWTM 25.0 + 124.0° / 42.0 + 145.0°  
 Efficiency 91 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



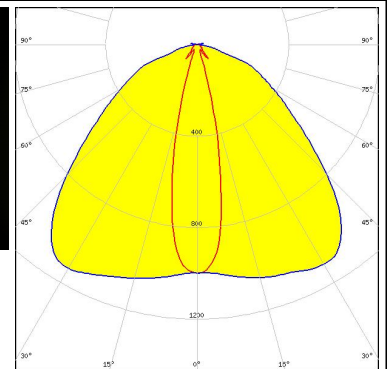
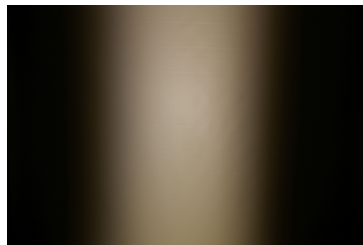
#### PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4  
 FWHM / FWTM 21.0 + 108.0° / 31.0 + 147.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHILIPS

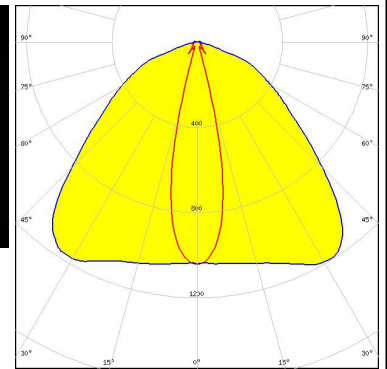
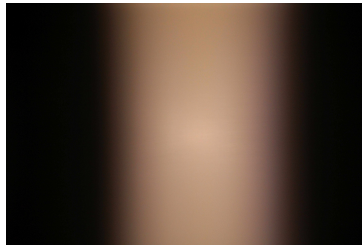
LED Fortimo FastFlex LED 2x8 DA G4+  
 FWHM / FWTM 24.0 + 104.0° / 37.0 + 145.0°  
 Efficiency 97 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

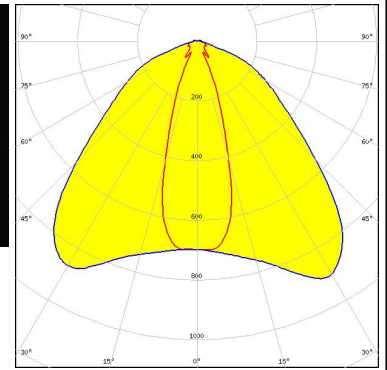
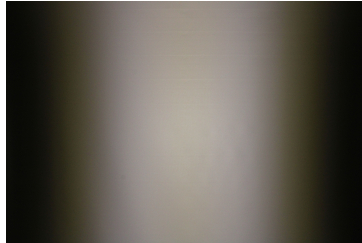
### PHILIPS

LED Fortimo FastFlex LED 2x8 DA G5  
 FWHM / FWTM 24.0 + 103.0° / 34.0 + 144.0°  
 Efficiency 97 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



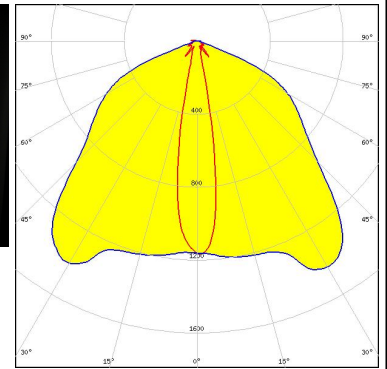
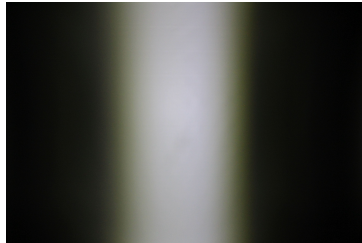
### PHILIPS

LED Fortimo FastFlex LED 2x8 DA HE  
 FWHM / FWTM 32.0 + 98.0° / 51.0 + 142.0°  
 Efficiency 98 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



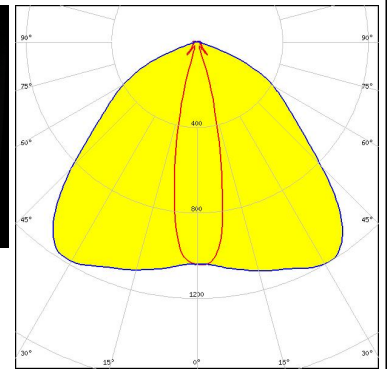
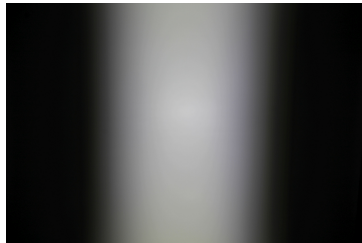
### SAMSUNG

LED HiLOM RC12 Z (LH181B)  
 FWHM / FWTM 19.0 + 106.0° / 31.0 + 140.0°  
 Efficiency 98 %  
 Peak intensity 1.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### SAMSUNG

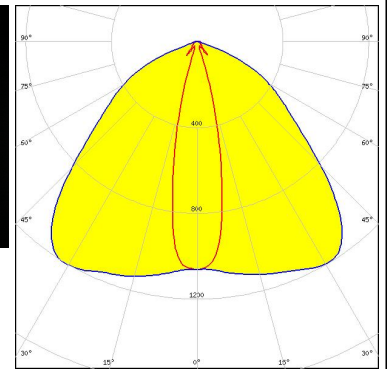
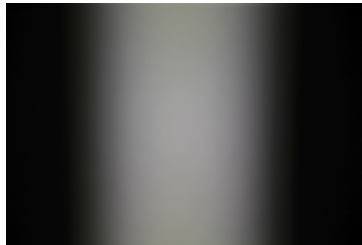
LED HiLOM RH12 Z (LH351C)  
 FWHM / FWTM 23.0 + 102.0° / 36.0 + 139.0°  
 Efficiency 97 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

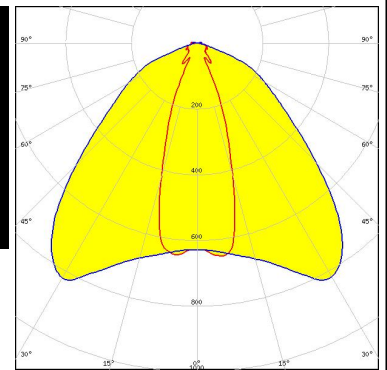
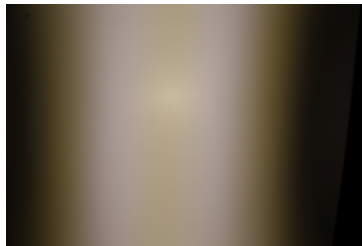
### SAMSUNG

LED HiLOM RH16 (LH351C)  
 FWHM / FWTM 23.0 + 106.0° / 36.0 + 140.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



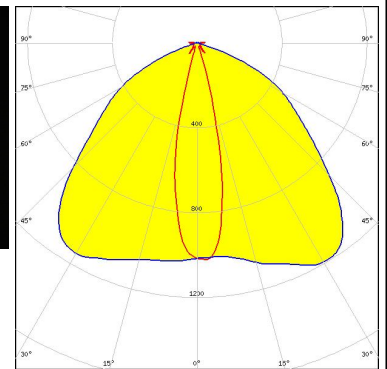
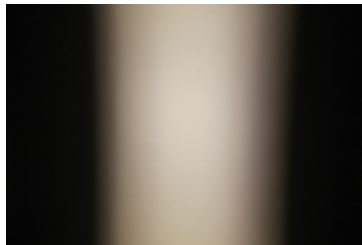
### SAMSUNG

LED HiLOM RM12 Z (LH502C)  
 FWHM / FWTM 35.0 + 98.0° / 76.0 + 141.0°  
 Efficiency 96 %  
 Peak intensity 0.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



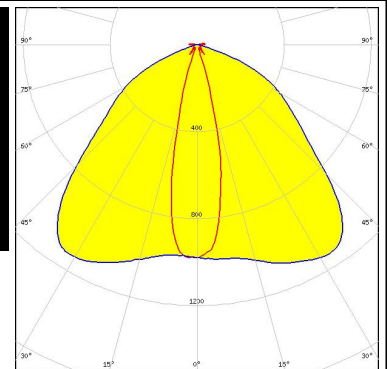
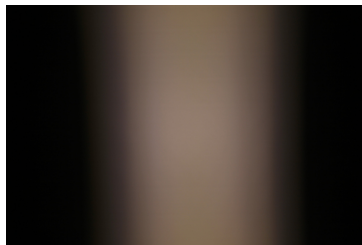
### SAMSUNG

LED LH351B  
 FWHM / FWTM 23.0 + 113.0° / 35.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### SAMSUNG

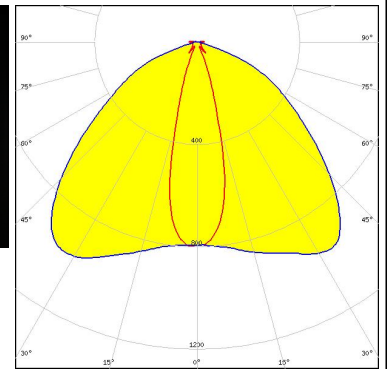
LED LH351C  
 FWHM / FWTM 24.0 + 111.0° / 37.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

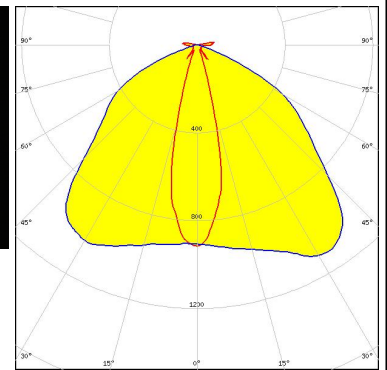
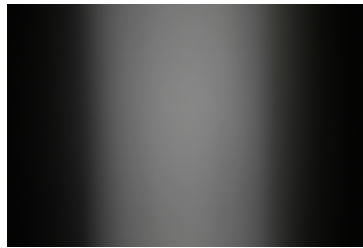
### SAMSUNG

LED LH351D  
 FWHM / FWTM 27.0 + 116.0° / 44.0 + 144.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

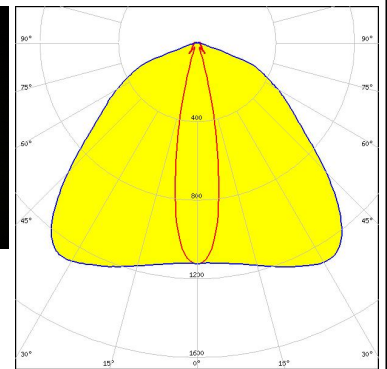
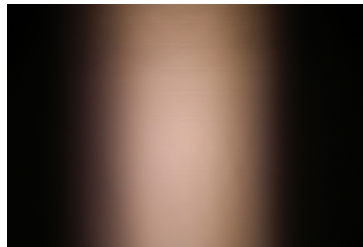


### SAMSUNG

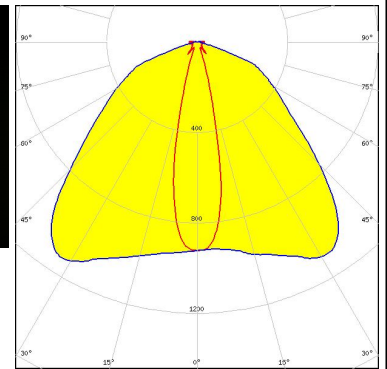
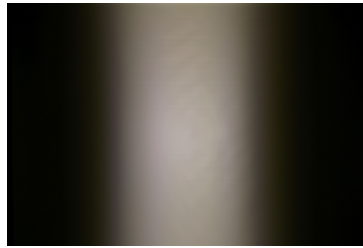
LED LH351Z  
 FWHM / FWTM 26.0 + 117.0° / 42.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LED-Pa-L15c2W11c2-xxx-C050-01  
 FWHM / FWTM 22.0 + 105.0° / 36.0 + 142.0°  
 Efficiency 98 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:


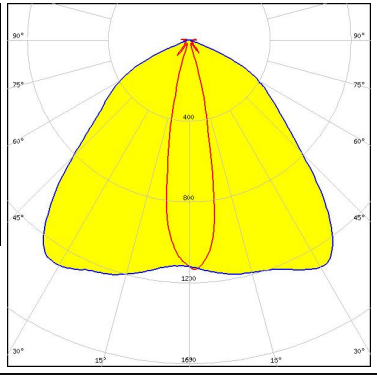
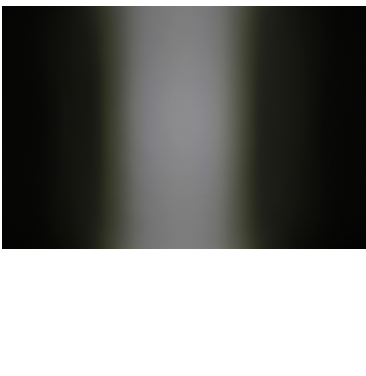
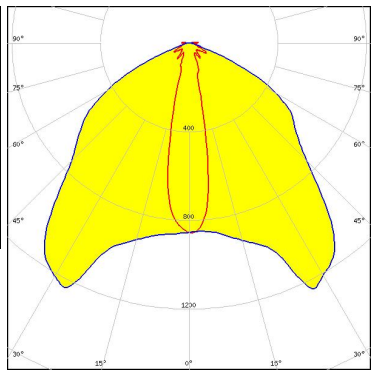
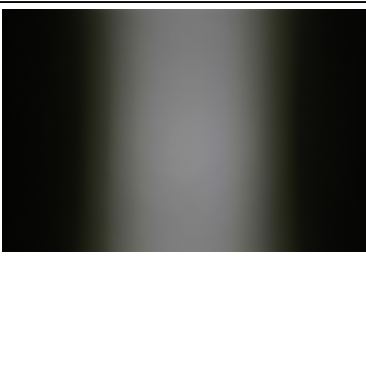
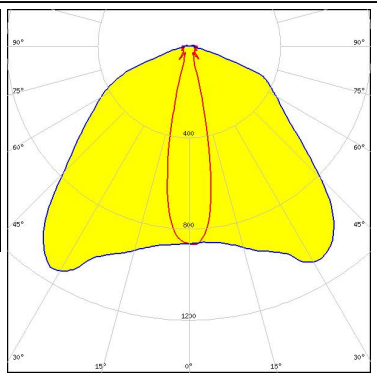
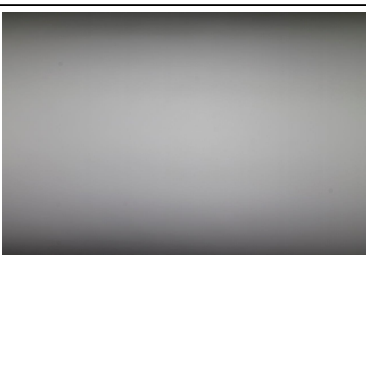



LED Z5M3  
 FWHM / FWTM 23.0 + 113.0° / 39.0 + 146.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:





#### PHOTOMETRIC DATA (MEASURED):

<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z5M4</p> <p>FWHM / FWTM 22.0 + 97.0° / 35.0 + 135.0°</p> <p>Efficiency 98 %</p> <p>Peak intensity 1.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y22</p> <p>FWHM / FWTM 21.0 + 121.0° / 99.0 + 140.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y22P</p> <p>FWHM / FWTM 23.0 + 121.0° / 34.0 + 150.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>TOSHIBA</b> Leading Innovation &gt;&gt;&gt;</p> <p>LED TL1L4</p> <p>FWHM / FWTM 24.0 + 119.0° / 39.0 + 140.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

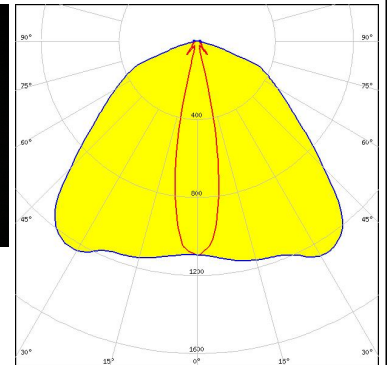
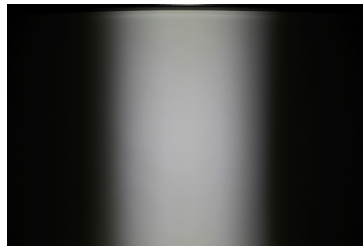
#### PHOTOMETRIC DATA (MEASURED):

#### TRIDONIC

LED RLE 2x4 2000lm HP EXC2 OTD  
 FWHM / FWTM 22.0 + 113.0° / 30.0 + 149.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

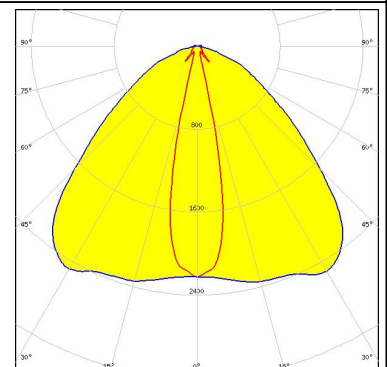
#### TRIDONIC

LED RLE 2x8 4000lm HP EXC2 OTD  
 FWHM / FWTM 22.0 + 113.0° / 30.0 + 149.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



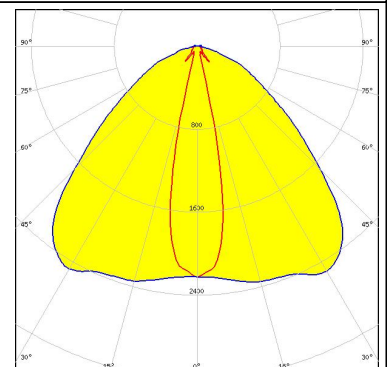
#### TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD  
 FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD  
 FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

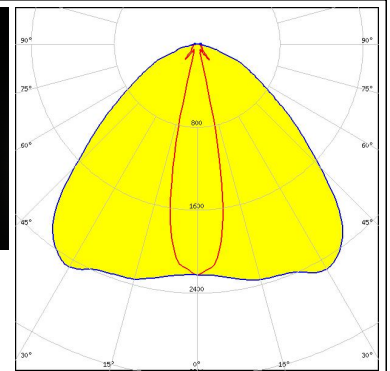
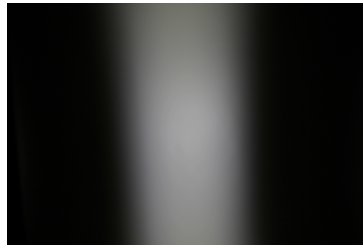




### PHOTOMETRIC DATA (MEASURED):

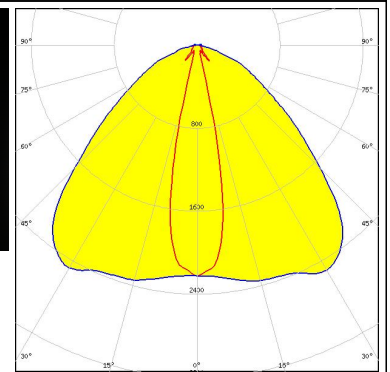
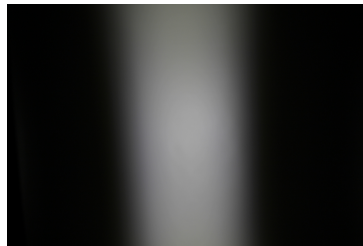
#### TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD  
FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°  
Efficiency 94 %  
Peak intensity 1.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### TRIDONIC

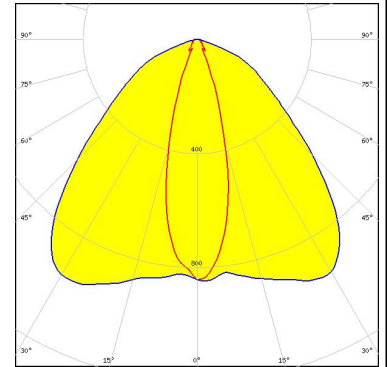
LED RLE G1 49x245mm 4000lm xxx EXC OTD  
FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°  
Efficiency 94 %  
Peak intensity 1.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



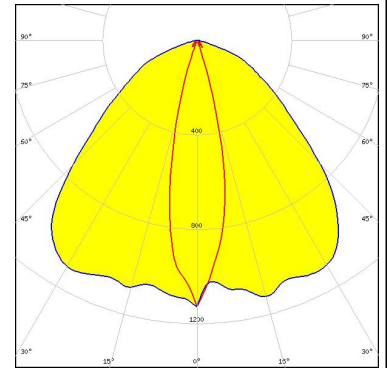
#### PHOTOMETRIC DATA (SIMULATED):



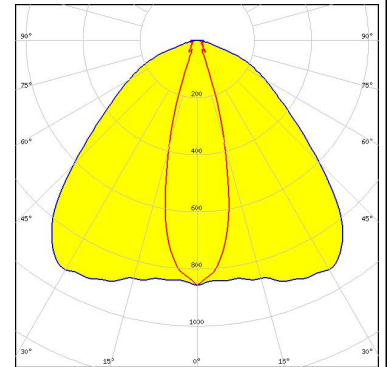
LED J Series 5050 Round LES  
 FWHM / FWTM 30.0 + 97.0° / 51.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



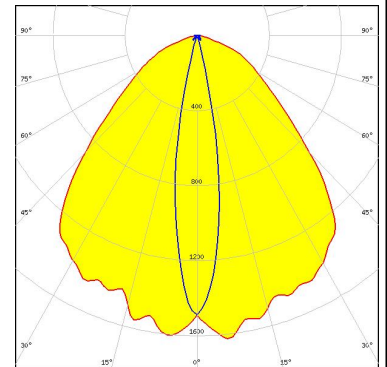
LED XHP35 HI  
 FWHM / FWTM 101.0 + 27.0° / 145.0 + 44.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XHP50.3 HI  
 FWHM / FWTM 28.0 + 100.0° / 44.0 + 144.0°  
 Efficiency 95 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XP-E2  
 FWHM / FWTM 93.0 + 18.0° / 141.0 + 30.0°  
 Efficiency 94 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

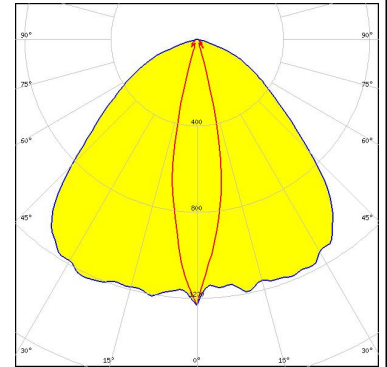


#### PHOTOMETRIC DATA (SIMULATED):

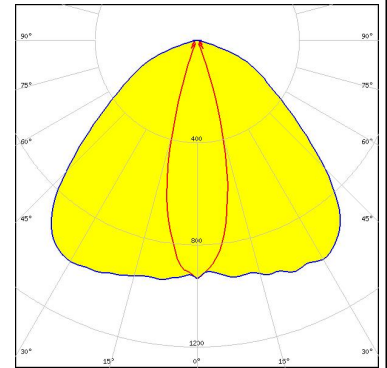


LED XP-G2  
 FWHM / FWTM 21.0 + 98.0° / 33.0 + 141.0°  
 Efficiency 91 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

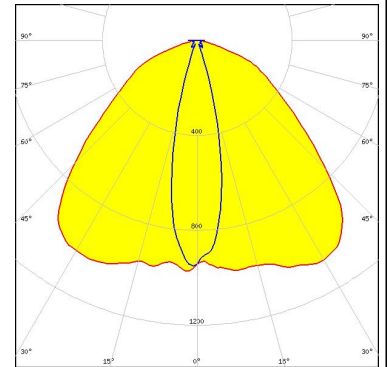
Protective plate, glass



LED XP-G2 HE  
 FWHM / FWTM 28.0 + 103.0° / 41.0 + 144.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

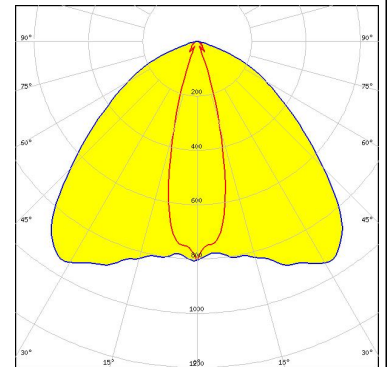


LED XP-G3  
 FWHM / FWTM 103.0 + 29.0° / 146.0 + 49.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XP-L HD  
 FWHM / FWTM 26.0 + 103.0° / 42.0 + 140.0°  
 Efficiency 88 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass

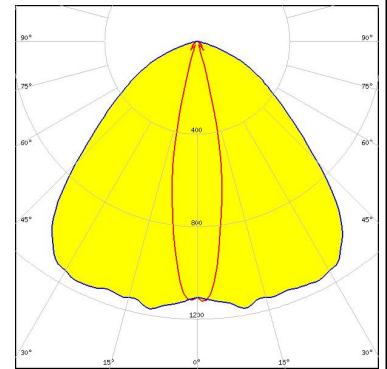


#### PHOTOMETRIC DATA (SIMULATED):



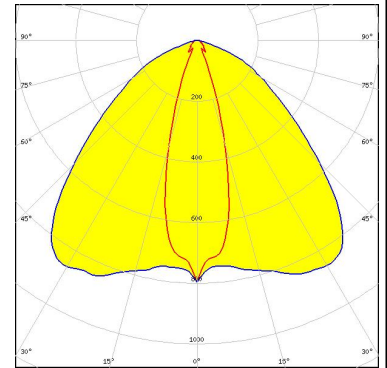
LED XP-L HI  
 FWHM / FWTM 22.0 + 98.0° / 34.0 + 140.0°  
 Efficiency 88 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



LED XP-L2  
 FWHM / FWTM 28.0 + 100.0° / 46.0 + 140.0°  
 Efficiency 87 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

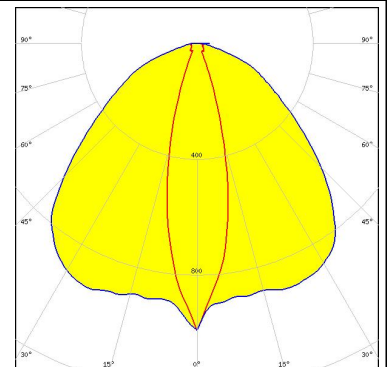
Protective plate, glass



LED XQ-E HI  
 FWHM / FWTM 96.0 + 14.0° / 144.0 + 25.0°  
 Efficiency %  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XT-E HE  
 FWHM / FWTM 100.0 + 24.0°  
 Efficiency 94 %  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (SIMULATED):

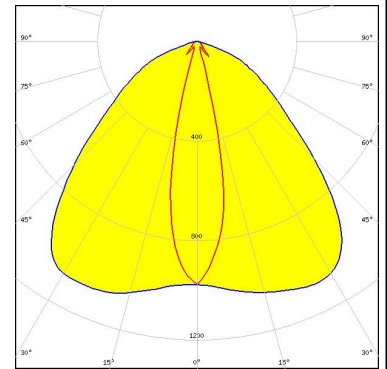
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Round LES</p> <p>FWHM / FWTM 30.0 + 96.0° / 48.0 + 140.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 0.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Square LES</p> <p>FWHM / FWTM 30.0 + 98.0° / 50.0 + 142.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 0.9 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 IR Domed 150</p> <p>FWHM / FWTM 16.0 + 98.0° / 28.0 + 149.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.4 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 IR Domed 90</p> <p>FWHM / FWTM 20.0 + 86.0° / 29.0 + 128.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 1.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

#### PHOTOMETRIC DATA (SIMULATED):

**MST** *Your solutions*

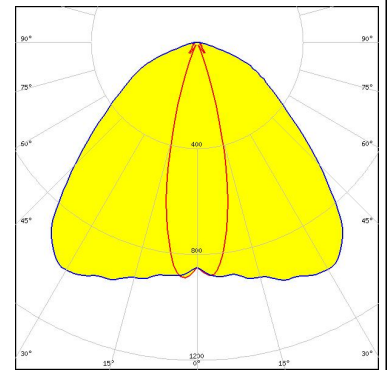
LED RecLED 122x50mm 1900lm 730 2x4 Opt G1  
 FWHM / FWTM 24.0 + 97.0° / 34.0 + 141.0°  
 Efficiency 86 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



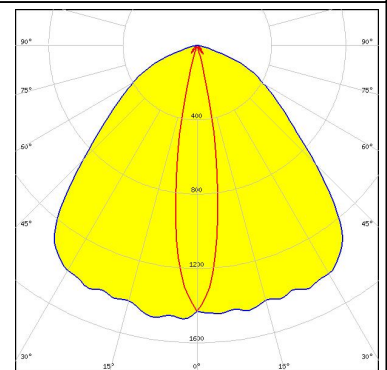
**NICHIA**

LED NV4WB35AM  
 FWHM / FWTM 28.0 + 100.0° / 42.0 + 144.0°  
 Efficiency 95 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



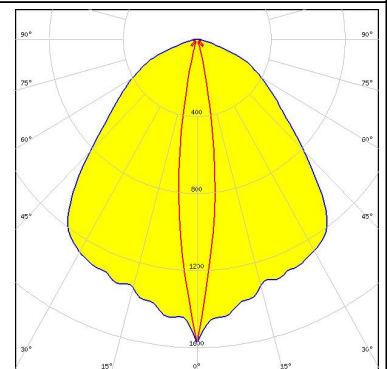
**OSRAM**  
Opto Semiconductors

LED OSCONIQ C 2424  
 FWHM / FWTM 18.0 + 96.0° / 30.0 + 141.0°  
 Efficiency 96 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



**OSRAM**  
Opto Semiconductors

LED OSCONIQ P 3030  
 FWHM / FWTM 14.0 + 92.0° / 28.0 + 142.0°  
 Efficiency 95 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

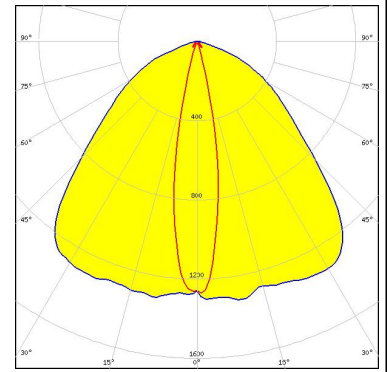




### PHOTOMETRIC DATA (SIMULATED):

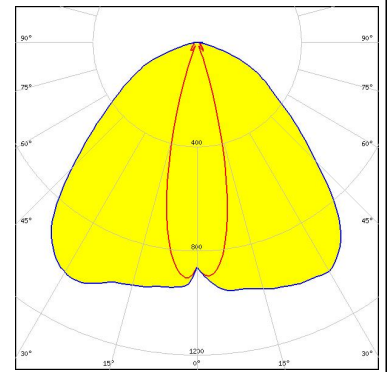
#### OSRAM Opto Semiconductors

LED OSCONIQ P 3737 (2W version)  
 FWHM / FWTM 99.0 + 19.0° / 142.0 + 31.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



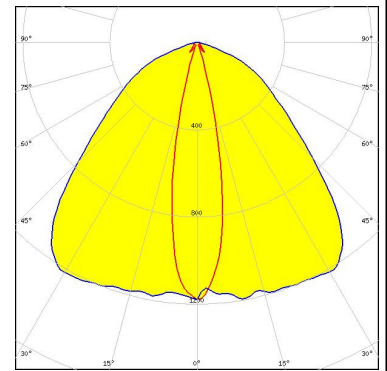
#### OSRAM Opto Semiconductors

LED OSCONIQ P 3737 (3W version)  
 FWHM / FWTM 100.0 + 30.0° / 144.0 + 51.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM Opto Semiconductors

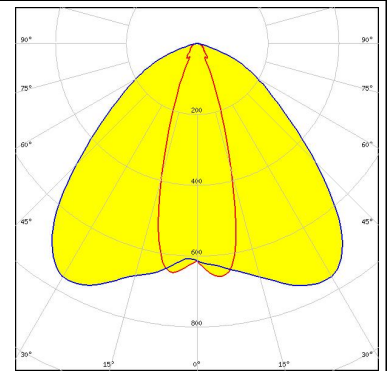
LED OSCONIQ P 3737 Flat  
 FWHM / FWTM 22.0 + 98.0° / 35.0 + 142.0°  
 Efficiency 96 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM Opto Semiconductors

LED OSCONIQ S 5050  
 FWHM / FWTM 32.0 + 98.0° / 53.0 + 140.0°  
 Efficiency 85 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass

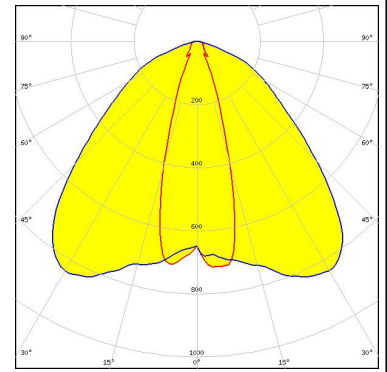


#### PHOTOMETRIC DATA (SIMULATED):

##### OSRAM

Opto Semiconductors

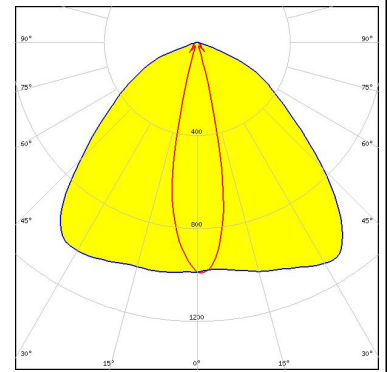
LED OSCONIQ S 5050  
 FWHM / FWTM 32.0 + 99.0° / 52.0 + 143.0°  
 Efficiency 96 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### OSRAM

Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3  
 FWHM / FWTM 23.0 + 101.0° / 33.0 + 140.0°  
 Efficiency 85 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

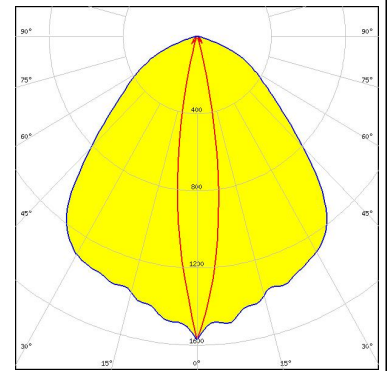


Protective plate, glass

##### OSRAM

Opto Semiconductors

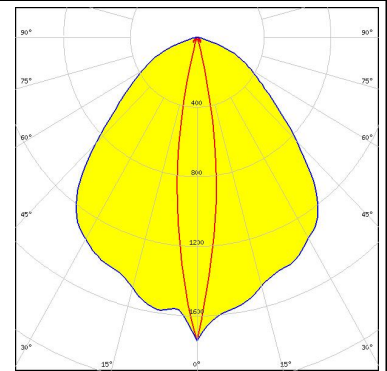
LED OSLON Square Flat  
 FWHM / FWTM 16.0 + 90.0° / 30.0 + 140.0°  
 Efficiency 96 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### OSRAM

Opto Semiconductors

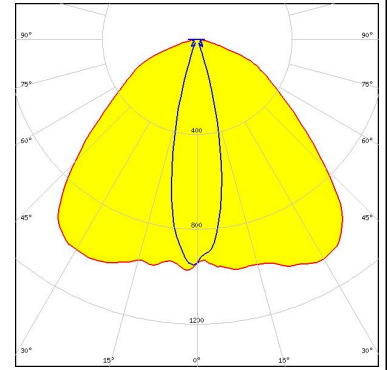
LED OSTAR Projection Compact (Kx.CSLNM1.xx)  
 FWHM / FWTM 16.0 + 89.0° / 28.0 + 140.0°  
 Efficiency 96 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (SIMULATED):

### PHILIPS

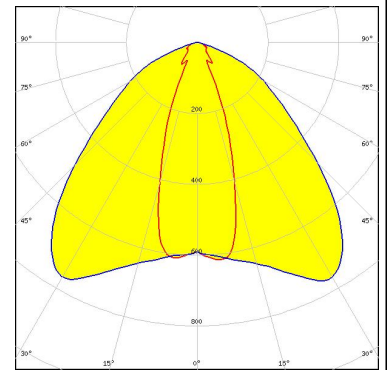
LED Fortimo FastFlex LED 2x8 DAX G4  
 FWHM / FWTM 103.0 + 29.0° / 146.0 + 49.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



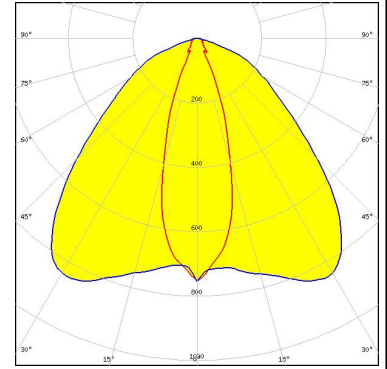
### SAMSUNG

LED HiLOM RM12 Z (LH502C)  
 FWHM / FWTM 36.0 + 98.0° / 78.0 + 140.0°  
 Efficiency 89 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

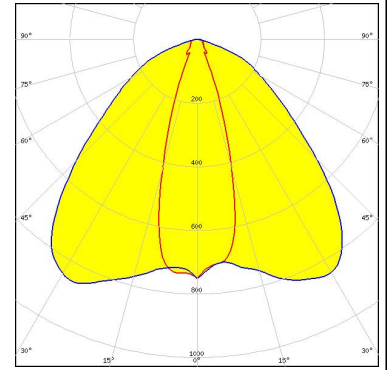
Protective plate, glass




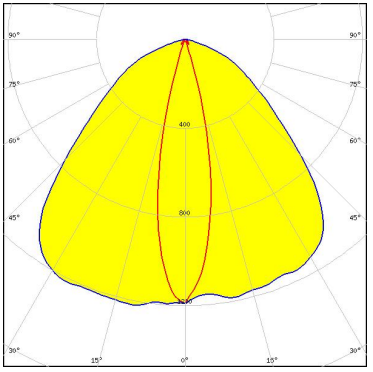

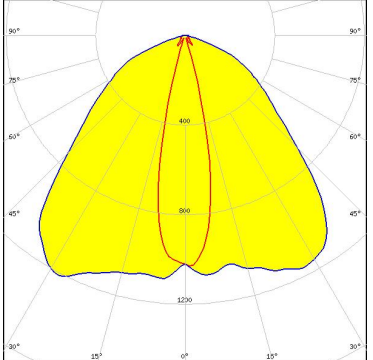
SEOUL SEMICONDUCTOR  
 LED MJT 5050  
 FWHM / FWTM 32.0 + 98.0° / 52.0 + 142.0°  
 Efficiency 94 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



SEOUL SEMICONDUCTOR  
 LED SEOUL DC 5050 6V  
 FWHM / FWTM 33.0 + 98.0° / 58.0 + 143.0°  
 Efficiency 94 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (SIMULATED):

<p> SEUL SEMICONDUCTOR</p> <p>LED Z5M1/Z5M2</p> <p>FWHM / FWTM 22.0 + 97.0° / 34.0 + 142.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p> SEUL SEMICONDUCTOR</p> <p>LED Z8Y22T</p> <p>FWHM / FWTM 21.0 + 96.0° / 33.0 + 141.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

### 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:

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