

## HB-2X2-O

~20° + 115° oval beam for aisle lighting

## SPECIFICATION:

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

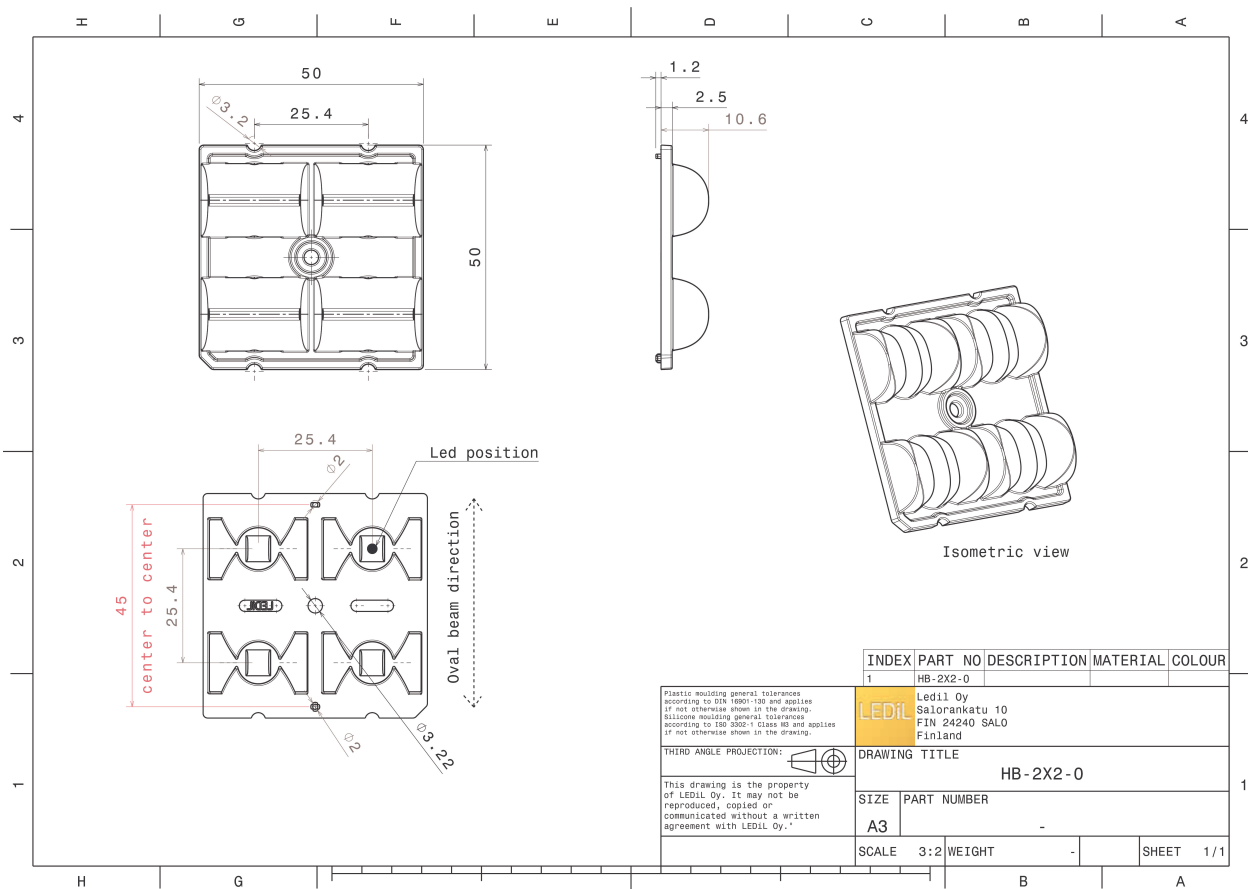
## MATERIALS:

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



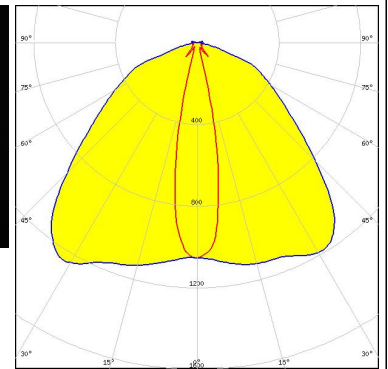
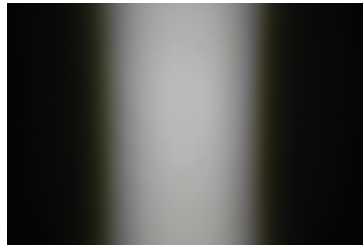
See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)



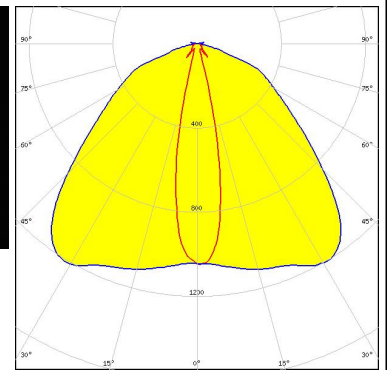
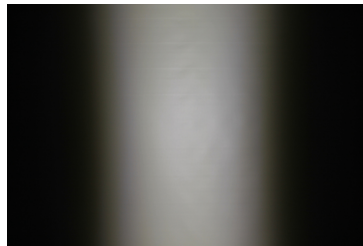
#### OPTICAL RESULTS (MEASURED):



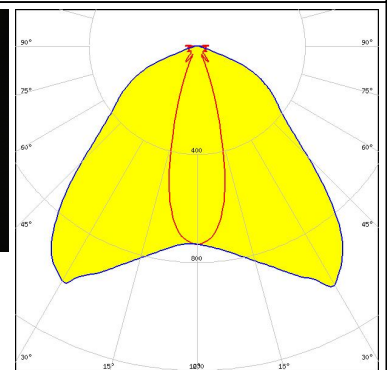
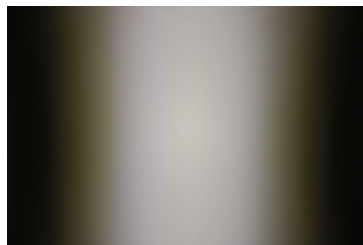
LED QUICK FLUX XTP 2x4 xxx LS G5  
 FWHM / FWTM 21.0 + 111.0° / 32.0 + 148.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



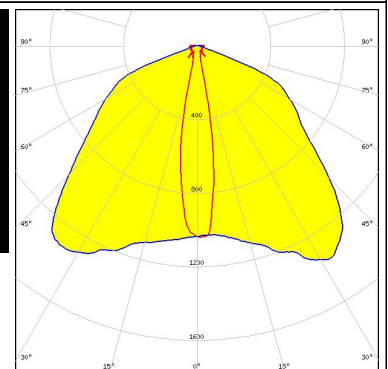
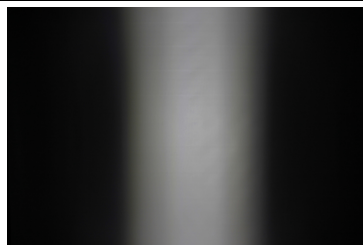
LED QUICK FLUX XTP 2x4 xxx LS G5  
 FWHM / FWTM 22.0 + 111.0° / 33.0 + 149.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED J Series 5050C 6V E Class  
 FWHM / FWTM 30.0 + 95.0° / 60.0 + 140.0°  
 Efficiency 96 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



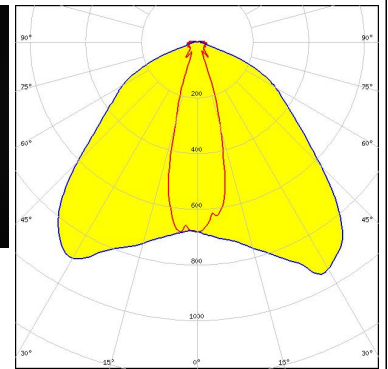
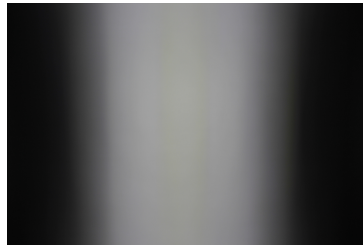
LED XD16  
 FWHM / FWTM 19.0 + 127.0° / 28.0 + 141.0°  
 Efficiency 93 %  
 Peak intensity 1.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



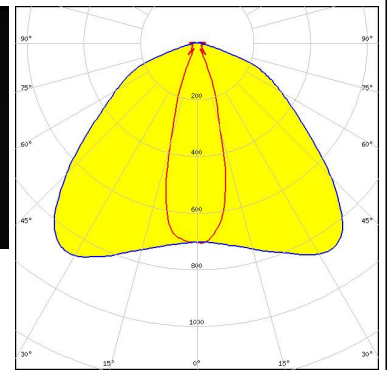
#### OPTICAL RESULTS (MEASURED):



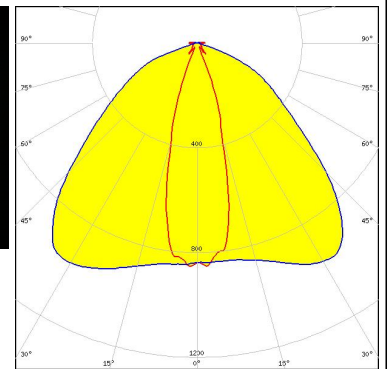
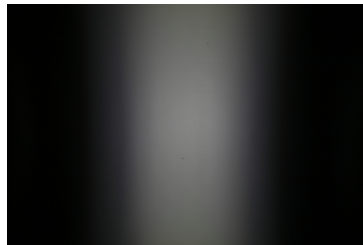
LED XD16  
 FWHM / FWTM 29.0 + 116.0° / 44.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 4  
 Light colour White  
 Required components:



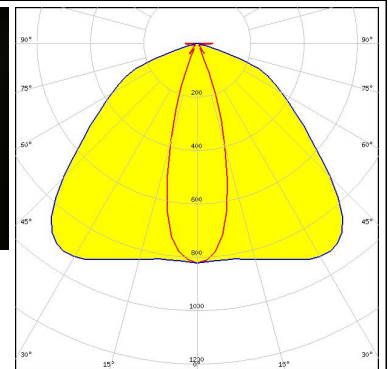
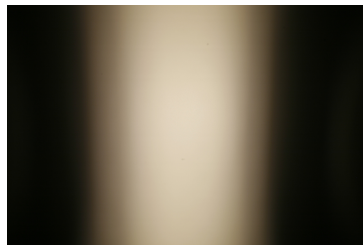
LED XHP35 HD  
 FWHM / FWTM 29.0 + 117.0° / 48.0 + 148.0°  
 Efficiency 94 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



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:



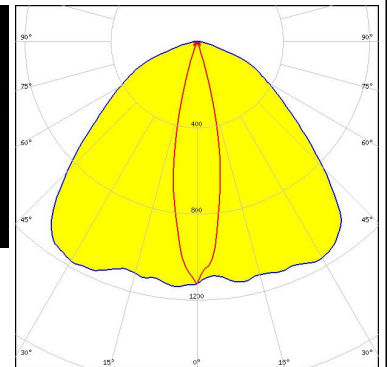
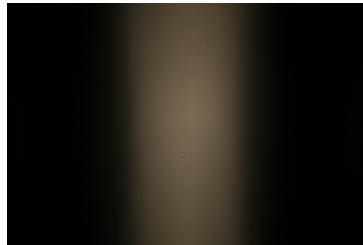
LED XM-L2  
 FWHM / FWTM 30.0 + 106.0° / 48.0 + 143.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



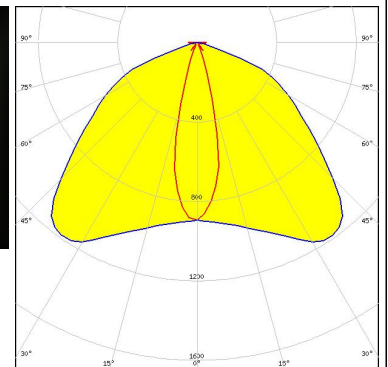
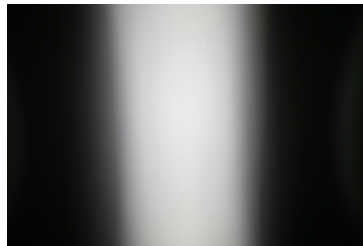
#### OPTICAL RESULTS (MEASURED):



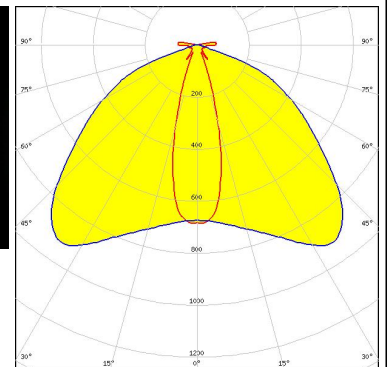
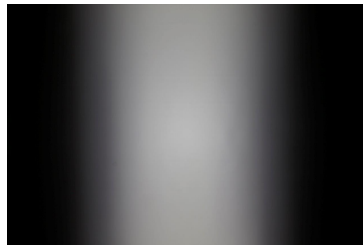
LED XP-G  
FWHM / FWTM 26.0 + 115.0° / 44.0 + 158.0°  
Efficiency 94 %  
Peak intensity 1.1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



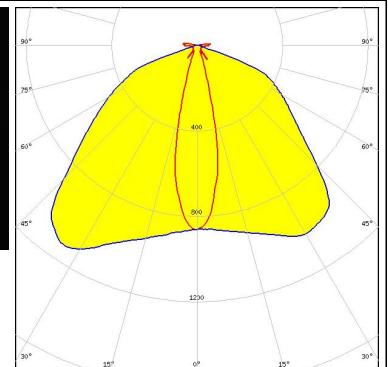
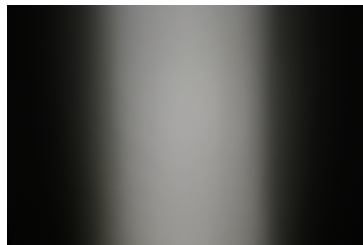
LED XP-G2  
FWHM / FWTM 27.0 + 112.0° / 42.0 + 146.0°  
Efficiency 94 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



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:



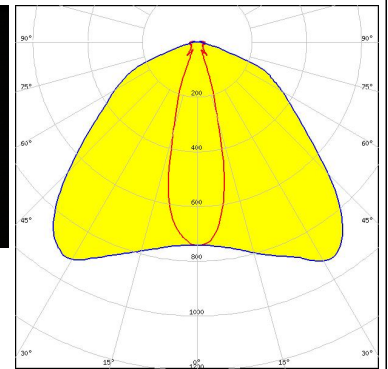
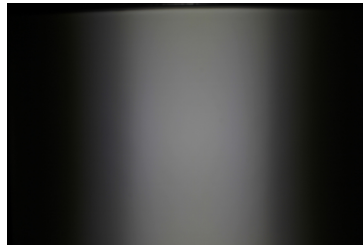
LED XP-L HI  
FWHM / FWTM 25.0 + 123.0° / 41.0 + 143.0°  
Efficiency 94 %  
Peak intensity 1.1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



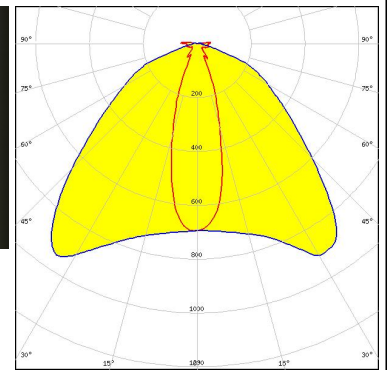
### OPTICAL RESULTS (MEASURED):



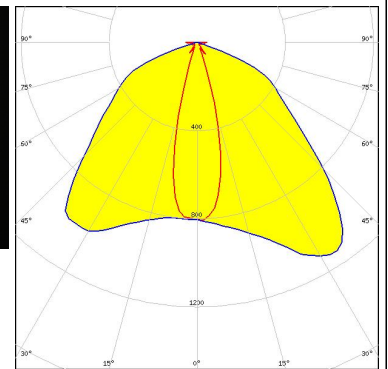
LED XP-L2  
FWHM / FWTM 28.0 + 117.0° / 47.0 + 150.0°  
Efficiency 94 %  
Peak intensity 0.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



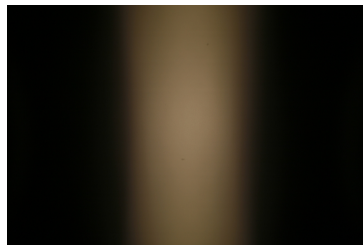
LED LUXEON 5050 Round LES  
FWHM / FWTM 29.0 + 114.0° / 51.0 + 147.0°  
Efficiency 94 %  
Peak intensity 0.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



LED LUXEON MZ  
FWHM / FWTM 28.0 + 103.0° / 43.0 + 14.0°  
Efficiency 94 %  
Peak intensity 1.1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



LED LUXEON R  
FWHM / FWTM 25.0 + 105.0° / 44.0 + 148.0°  
Efficiency 94 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:

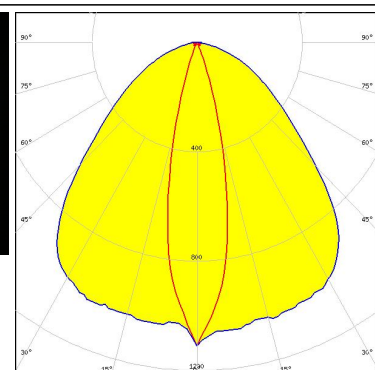
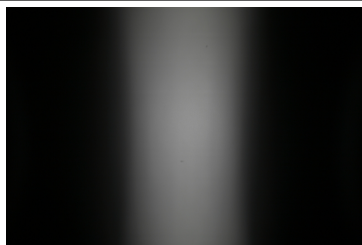




### OPTICAL RESULTS (MEASURED):

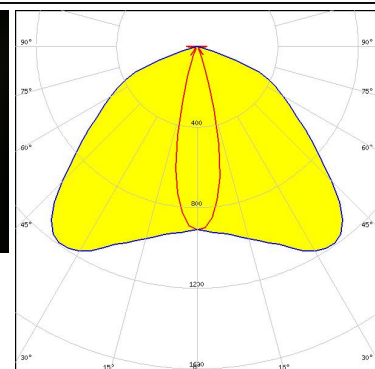
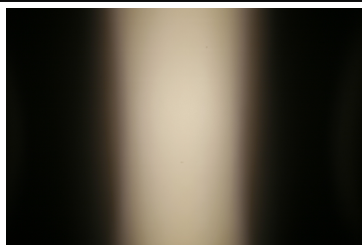
#### LUMILEDS

LED LUXEON Rebel ES  
FWHM / FWTM 25.0 + 106.0° / 42.0 + 150.0°  
Efficiency 94 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



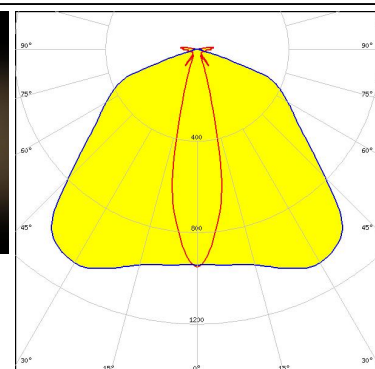
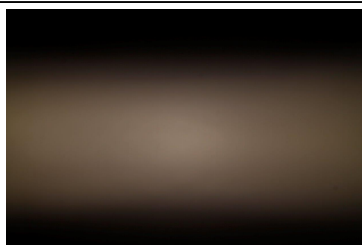
#### LUMILEDS

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:



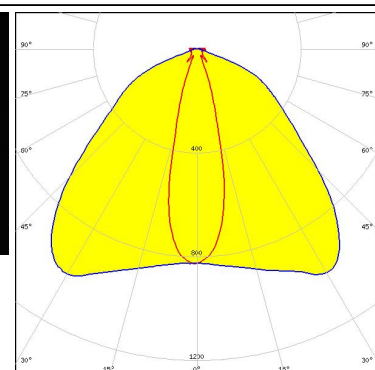
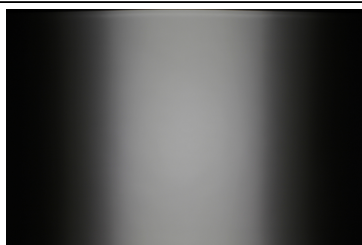
#### LUMILEDS

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

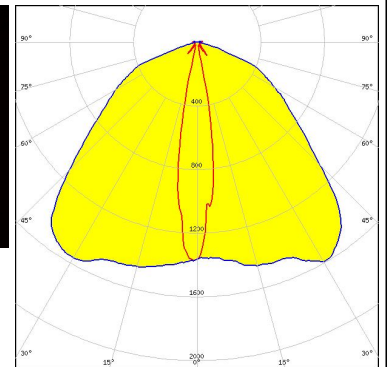
LED LUXEON V  
FWHM / FWTM 26.0 + 108.0° / 44.0 + 141.0°  
Efficiency 94 %  
Peak intensity 1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



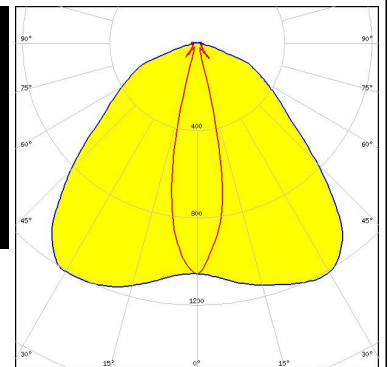
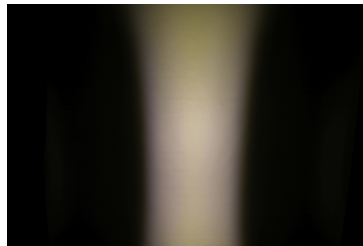
#### OPTICAL RESULTS (MEASURED):



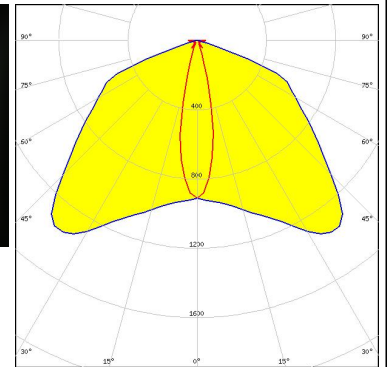
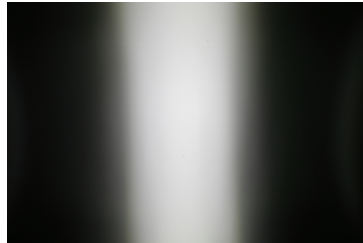
LED SST-10-B130  
 FWHM / FWTM 18.0 + 104.0° / 25.0 + 144.0°  
 Efficiency 97 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour Deep Red  
 Required components:



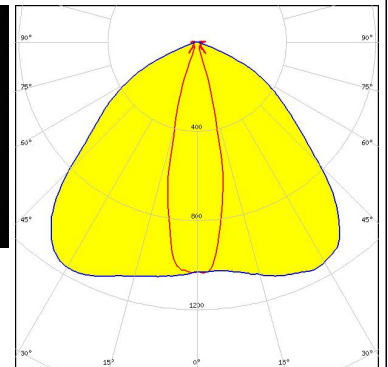
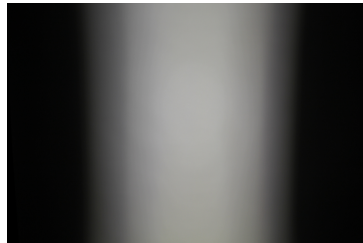
LED RecLED 122x50mm 1900lm 730 2x4 Opt G1  
 FWHM / FWTM 23.0 + 99.5° / 32.5 + 145.0°  
 Efficiency 97 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



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:



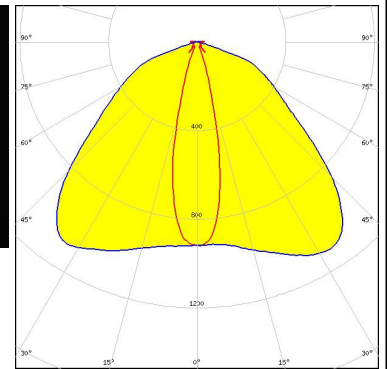
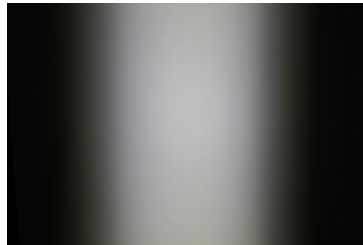
LED NVSW219D  
 FWHM / FWTM 25.0 + 107.0° / 37.0 + 137.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



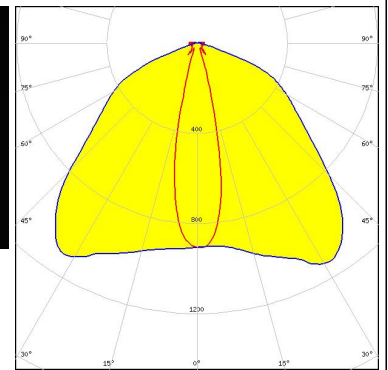
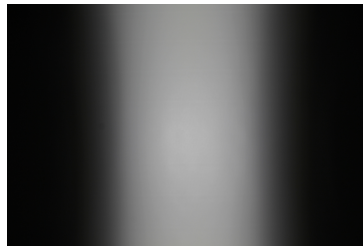
#### OPTICAL RESULTS (MEASURED):



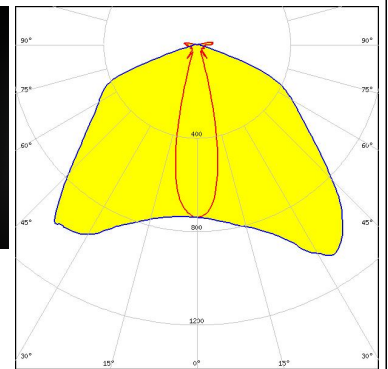
LED NVSW319B  
 FWHM / FWTM 25.0 + 113.0° / 41.0 + 144.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



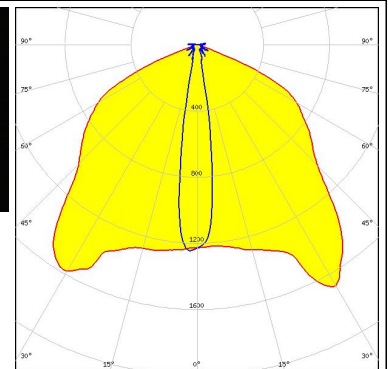
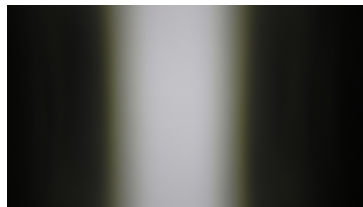
LED NVSW3x9A  
 FWHM / FWTM 24.0 + 119.0° / 38.0 + 144.0°  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



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:



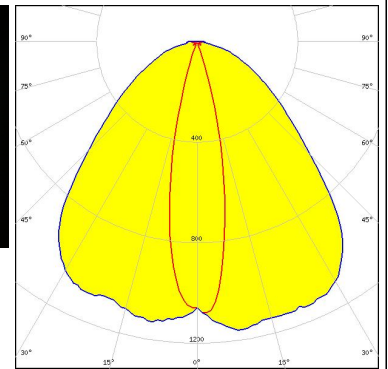
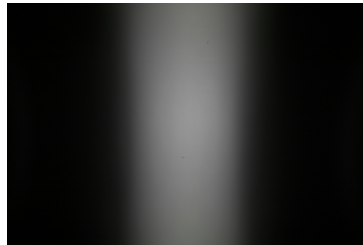
LED NVSxE21A  
 FWHM / FWTM 17.0 + 125.0° / 27.0 + 139.0°  
 Efficiency 94 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



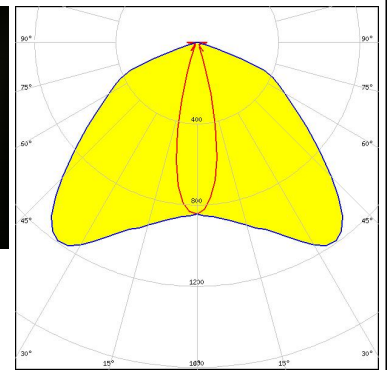
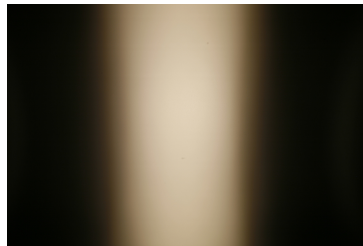
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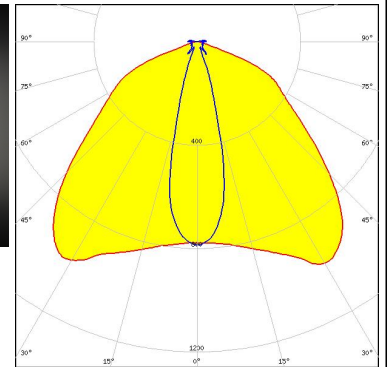
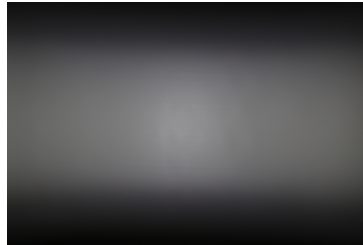
LED NVSxx19A  
 FWHM / FWTM 24.0 + 105.0° / 44.0 + 148.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



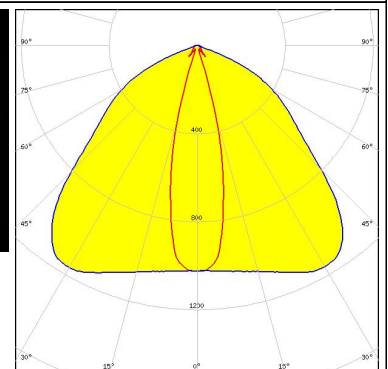
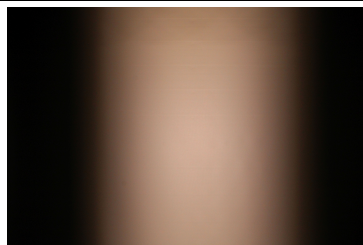
LED NVSxx19B/NVSxx19C  
 FWHM / FWTM 26.0 + 108.0° / 41.0 + 145.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



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:

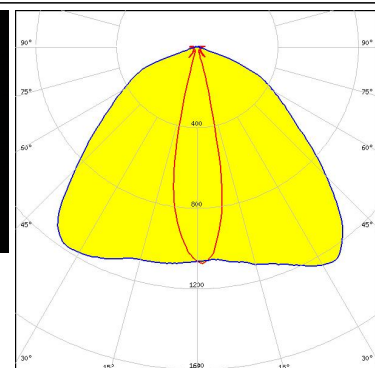
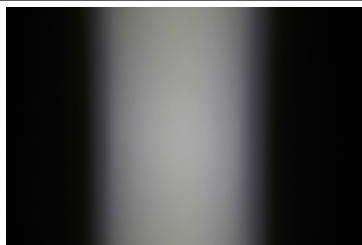




#### OPTICAL RESULTS (MEASURED):

#### OSRAM

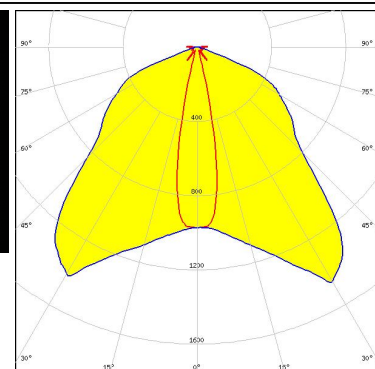
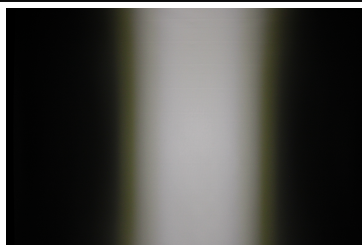
LED PrevaLED Brick HP 2x8  
 FWHM / FWTM 23.0 + 111.0° / 32.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

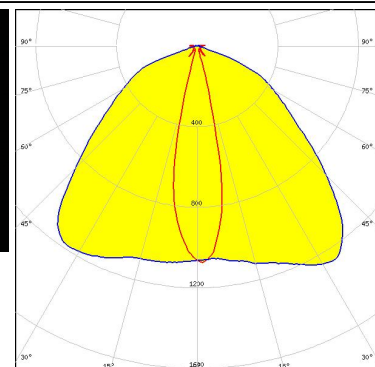
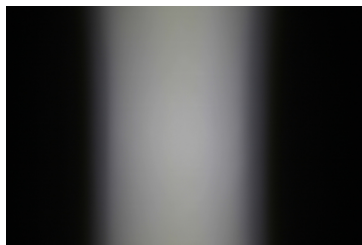
LED OSCONIQ C 3030  
 FWHM / FWTM 22.0 + 95.0° / 32.0 + 140.0°  
 Efficiency 96 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

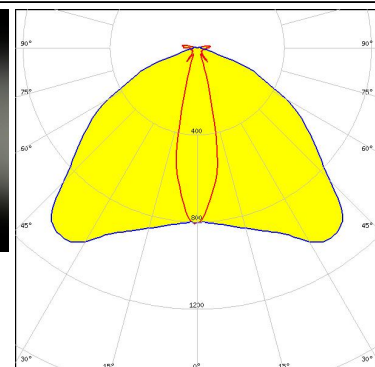
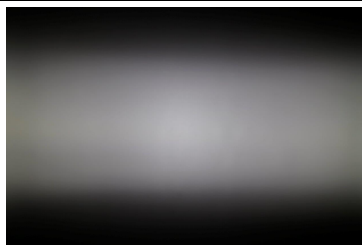
LED OSLOM Square CSSRM2/CSSRM3  
 FWHM / FWTM 23.0 + 111.0° / 32.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

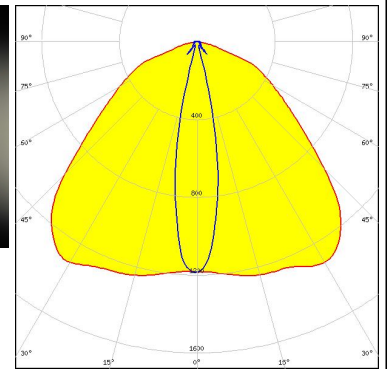
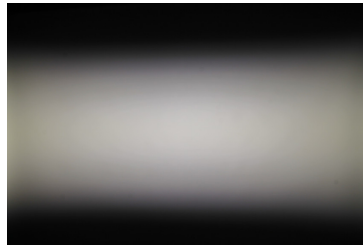
LED OSLOM Square PC  
 FWHM / FWTM 25.0 + 124.0° / 42.0 + 145.0°  
 Efficiency 91 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (MEASURED):

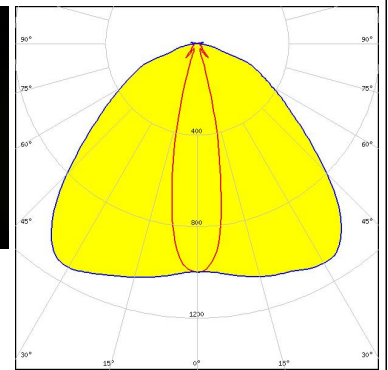
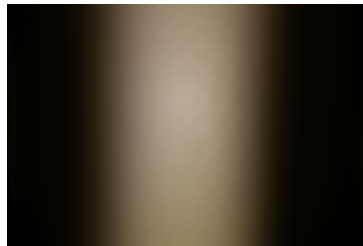
#### PHILIPS

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:



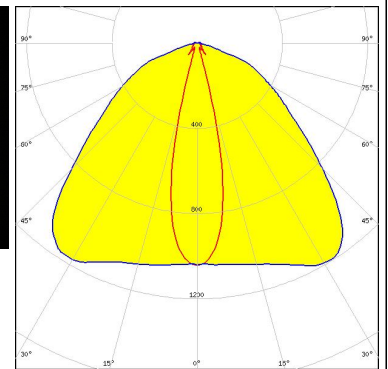
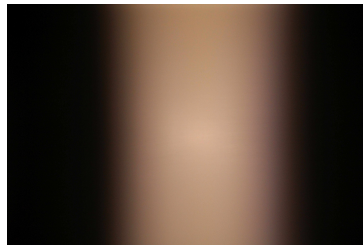
#### PHILIPS

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:



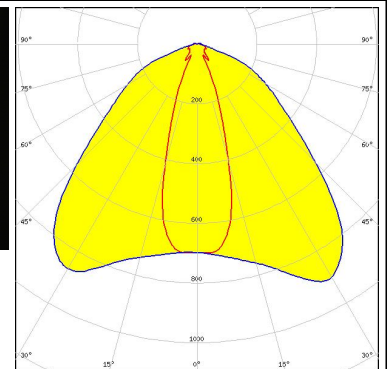
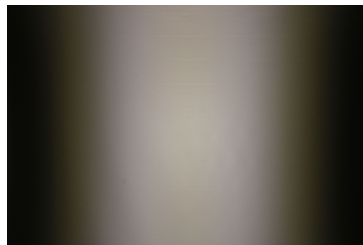
#### PHILIPS

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

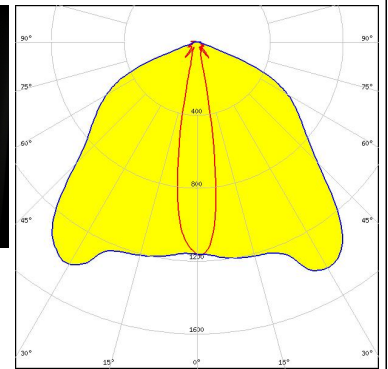
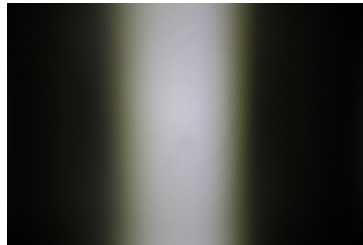
LED Fortimo FastFlex LED 2x8 DA HE  
FWHM / FWTM 32.0 + 98.0° / 51.0 + 142.0°  
Efficiency 98 %  
Peak intensity 0.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### OPTICAL RESULTS (MEASURED):

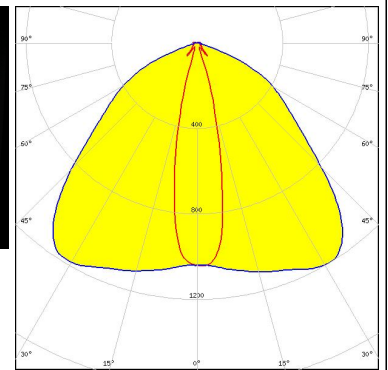
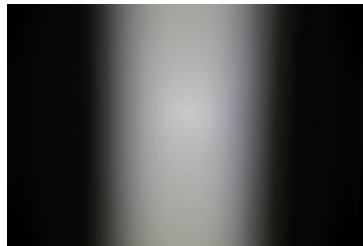
#### SAMSUNG

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:



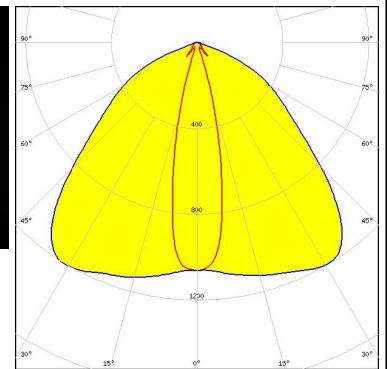
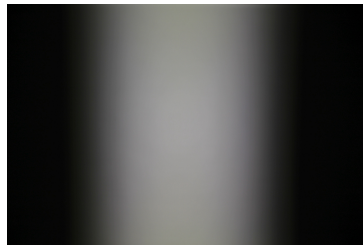
#### SAMSUNG

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:



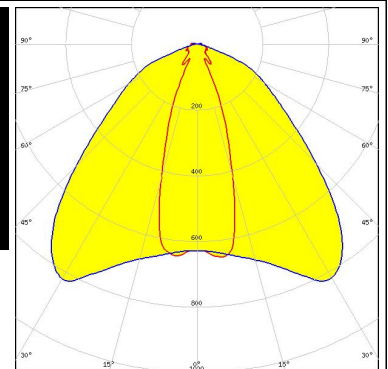
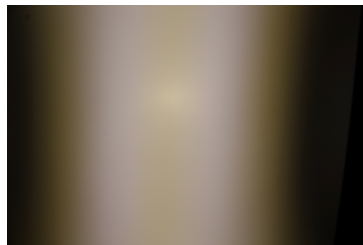
#### SAMSUNG

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



#### SAMSUNG

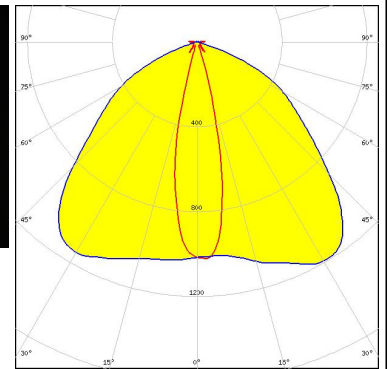
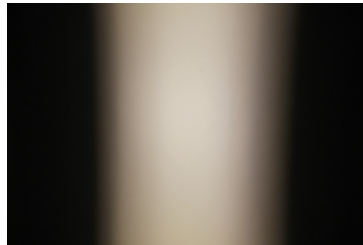
LED HiLOM RM12 Z (LH502C)  
 FWHM / FWTM 35.0 + 98.0° / 76.0 + 141.0°  
 Efficiency 96 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

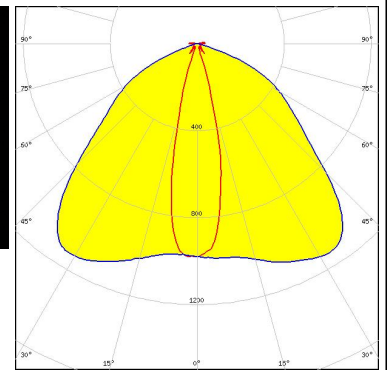
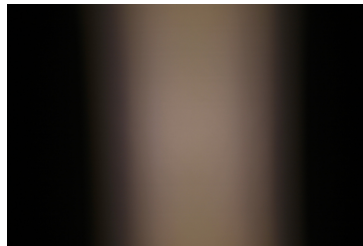
#### SAMSUNG

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



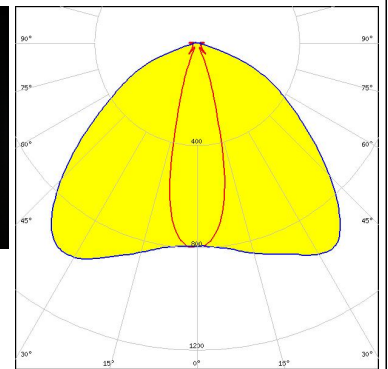
#### SAMSUNG

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



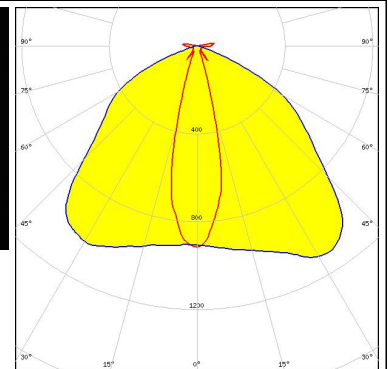
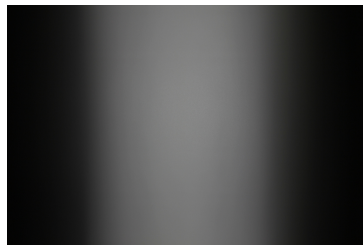
#### SAMSUNG

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:



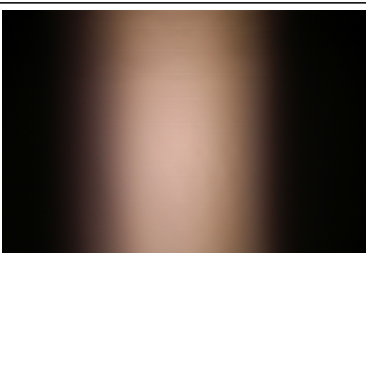
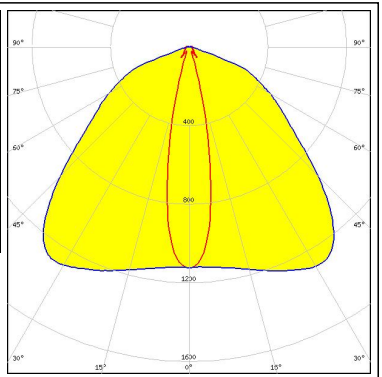
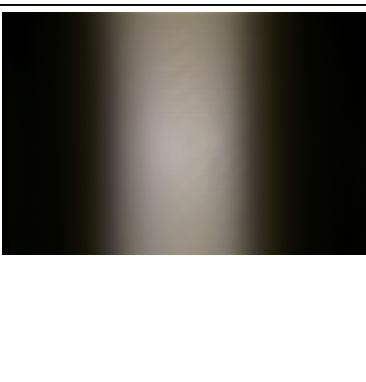
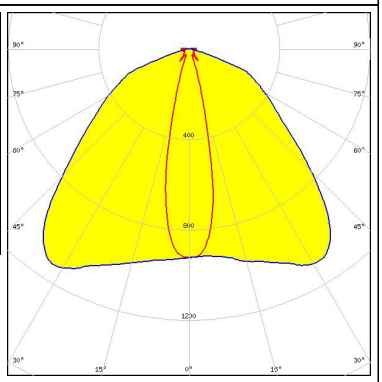
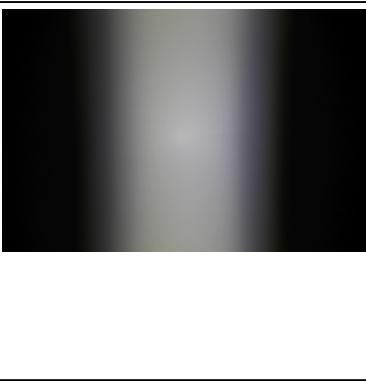
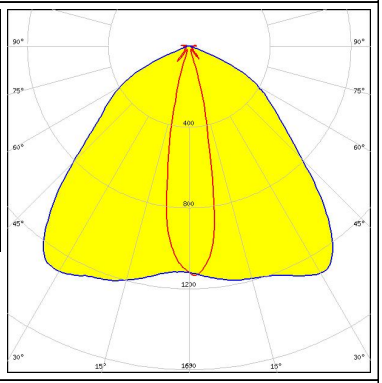
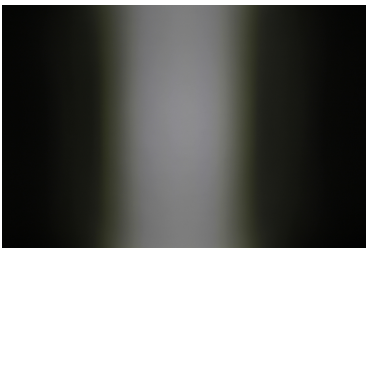
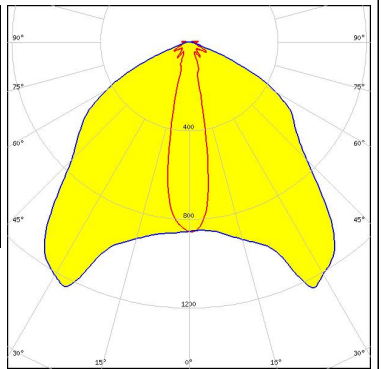
#### SAMSUNG

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:


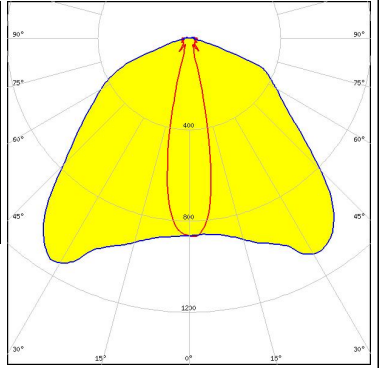
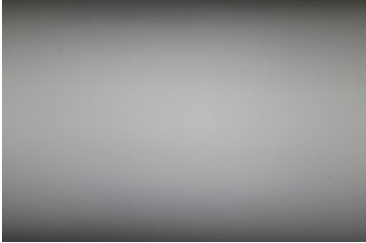

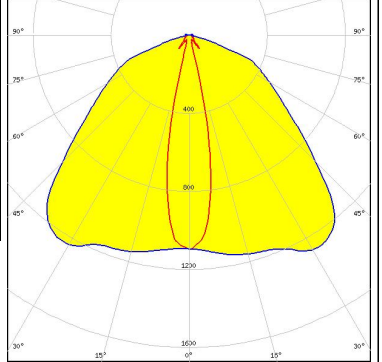




#### OPTICAL RESULTS (MEASURED):

<p><b>SEITEC</b> Elektronik GmbH</p> <p>LED LED-Pa-L15c2W11c2-xxx-C050-01</p> <p>FWHM / FWTM 22.0 + 105.0° / 36.0 + 142.0°</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 Z5M3</p> <p>FWHM / FWTM 23.0 + 113.0° / 39.0 + 146.0°</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>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>		

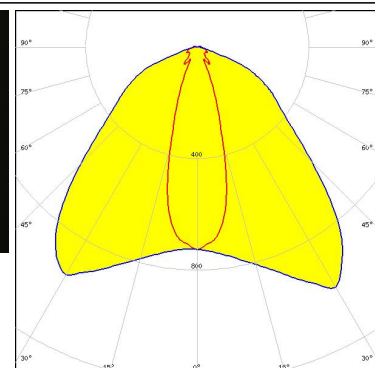
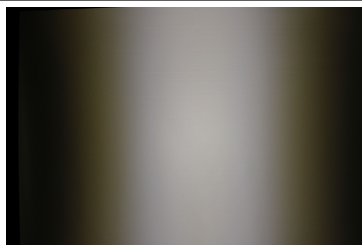
#### OPTICAL RESULTS (MEASURED):

<p><b>SEOL</b> SEOUL SEMICONDUCTOR</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>		
<p><b>TRIDONIC</b></p> <p>LED RLE 2x4 2000lm HP EXC2 OTD</p> <p>FWHM / FWTM 22.0 + 113.0° / 30.0 + 149.0°</p> <p>Efficiency 94 %</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>TRIDONIC</b></p> <p>LED RLE 2x8 4000lm HP EXC2 OTD</p> <p>FWHM / FWTM 22.0 + 113.0° / 30.0 + 149.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

### OPTICAL RESULTS (MEASURED):

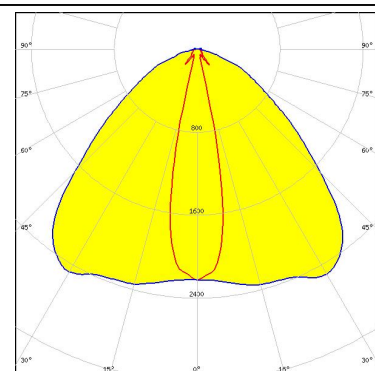
#### TRIDONIC

LED RLE 2x8 6000lm HP HE EXC3 OTD  
FWHM / FWTM 30.0 + 96.0° / 76.0 + 141.0°  
Efficiency 97 %  
Peak intensity 1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



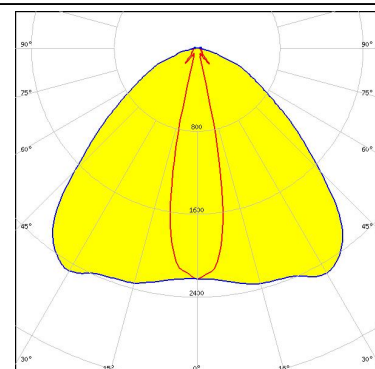
#### TRIDONIC

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:



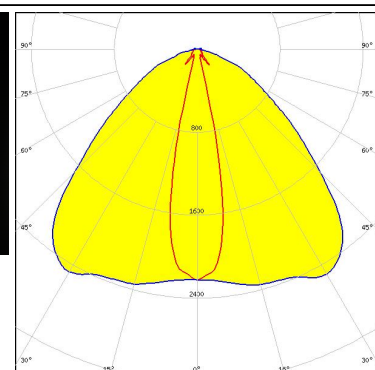
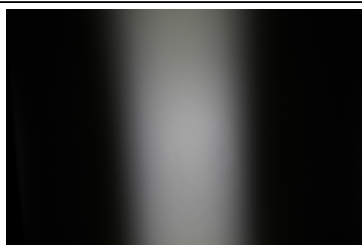
#### TRIDONIC

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:



#### TRIDONIC

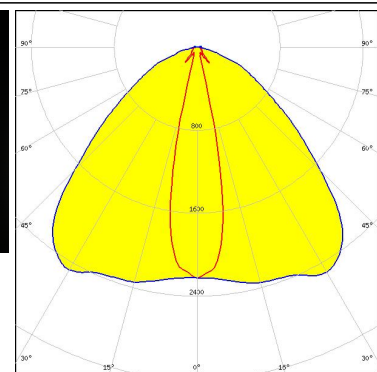
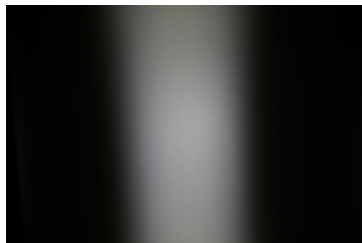
LED RLE G1 49x223mm 4000lm xxx EXC OTD  
FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°  
Efficiency 94 %  
Peak intensity 1.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



### OPTICAL RESULTS (MEASURED):

#### 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:

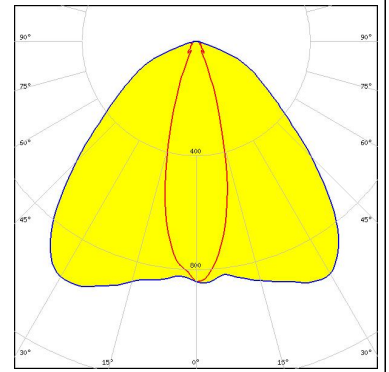




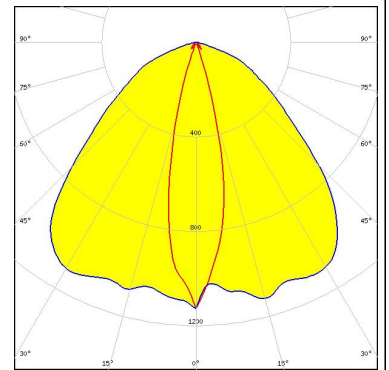
### OPTICAL RESULTS (SIMULATED):



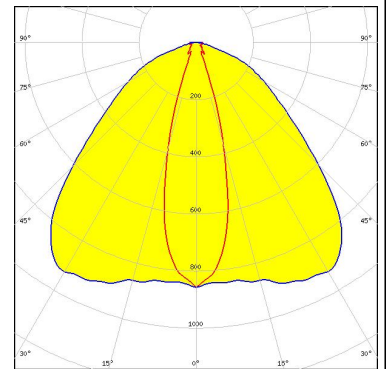
LED J Series 5050 Round LES  
FWHM / FWTM 30.0 + 97.0° / 51.0 + 141.0°  
Efficiency 94 %  
Peak intensity 1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



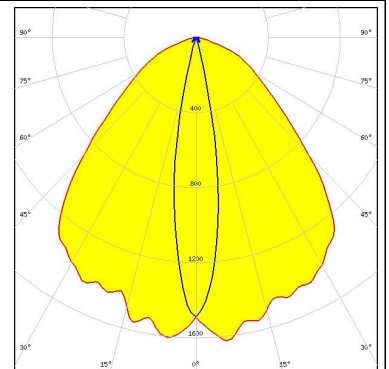
LED XHP35 HI  
FWHM / FWTM 101.0 + 27.0° / 145.0 + 44.0°  
Efficiency 94 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



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:

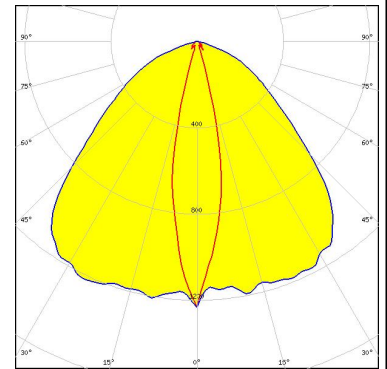


### OPTICAL RESULTS (SIMULATED):

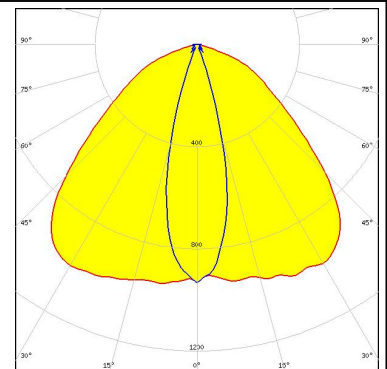


LED XP-G2  
FWHM / FWTM 21.0 + 98.0° / 33.0 + 141.0°  
Efficiency 91 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:

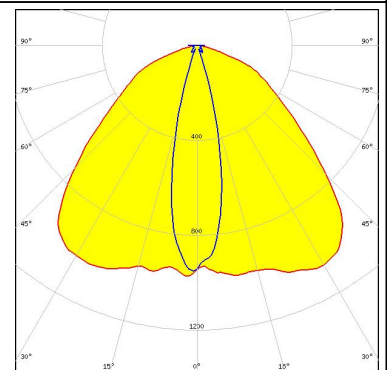
Protective plate, glass



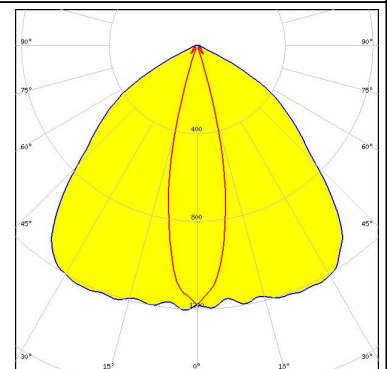
LED XP-G2 HE  
FWHM / FWTM 28.0 + 103.0° / 41.0 + 144.0°  
Efficiency 94 %  
Peak intensity 1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



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-G4  
FWHM / FWTM 24.0 + 100.0° / 36.0 + 128.0°  
Efficiency 97 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:

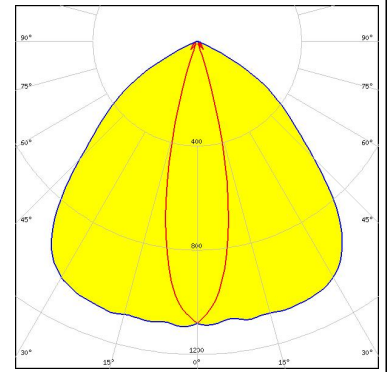


#### OPTICAL RESULTS (SIMULATED):



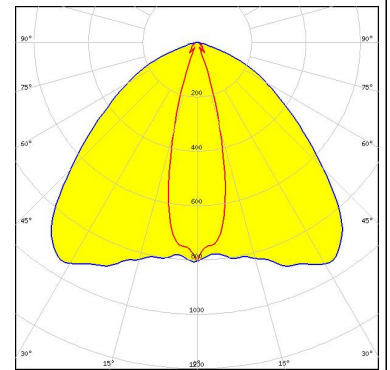
LED XP-G4  
 FWHM / FWTM 24.0 + 95.0° / 36.0 + 127.0°  
 Efficiency 87 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



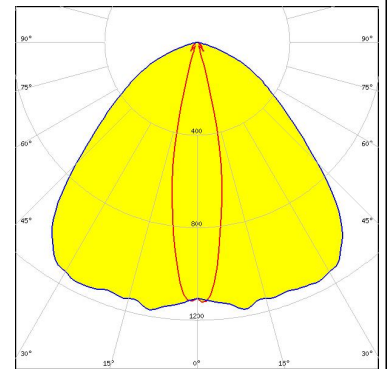
LED XP-L HD  
 FWHM / FWTM 26.0 + 103.0° / 42.0 + 140.0°  
 Efficiency 88 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



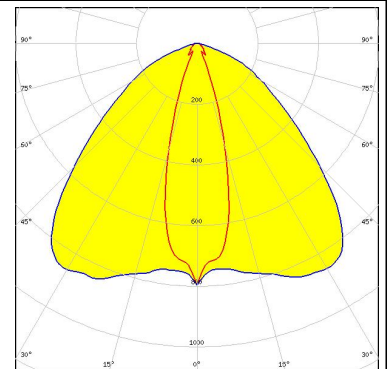
LED XP-L HI  
 FWHM / FWTM 22.0 + 98.0° / 34.0 + 140.0°  
 Efficiency 88 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

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



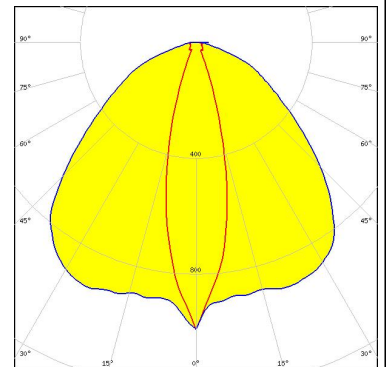
#### OPTICAL RESULTS (SIMULATED):



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

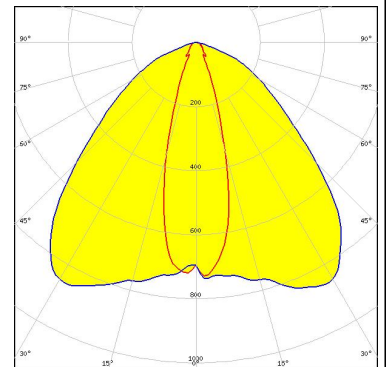


LED XT-E HE  
 FWHM / FWTM 100.0 + 24.0°  
 Efficiency 94 %  
 LEDs/each optic 1  
 Light colour White  
 Required components:



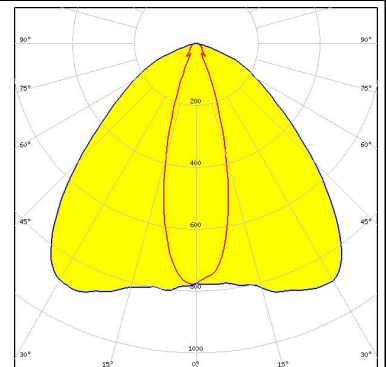
LED LUXEON 5050 HE  
 FWHM / FWTM 30.0 + 98.0° / 52.0 + 140.0°  
 Efficiency 87 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



LED LUXEON 5050 Round LES  
 FWHM / FWTM 30.0 + 96.0° / 48.0 + 140.0°  
 Efficiency 88 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

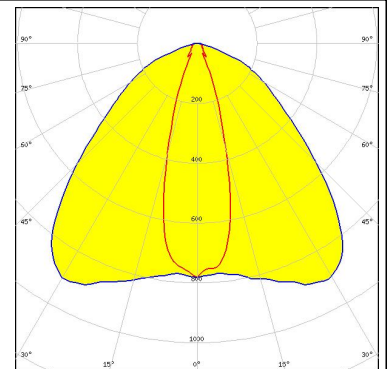
Protective plate, glass



### OPTICAL RESULTS (SIMULATED):

#### LUMILEDS

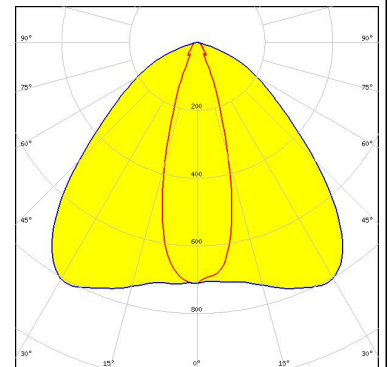
LED LUXEON 5050 Square LES  
FWHM / FWTM 30.0 + 98.0° / 50.0 + 142.0°  
Efficiency 95 %  
Peak intensity 0.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### LUMILEDS

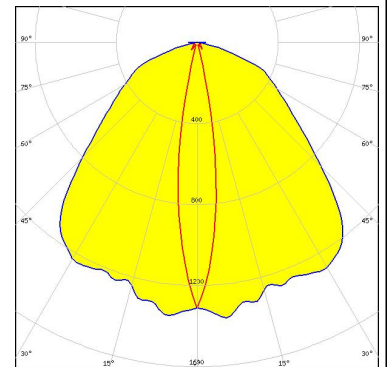
LED LUXEON 5050 Square LES  
FWHM / FWTM 30.0 + 96.0° / 52.0 + 140.0°  
Efficiency 84 %  
Peak intensity 0.8 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:

Protective plate, glass



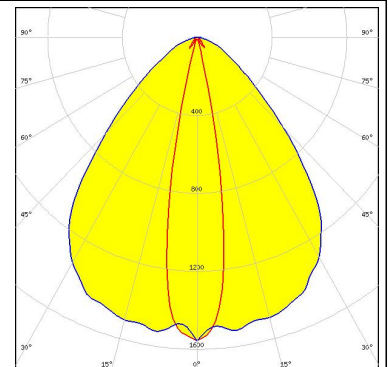
#### LUMILEDS

LED LUXEON IR Domed 150 (L110-0xxx1500000000)  
FWHM / FWTM 16.0 + 98.0° / 28.0 + 149.0°  
Efficiency 94 %  
Peak intensity 1.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### LUMILEDS

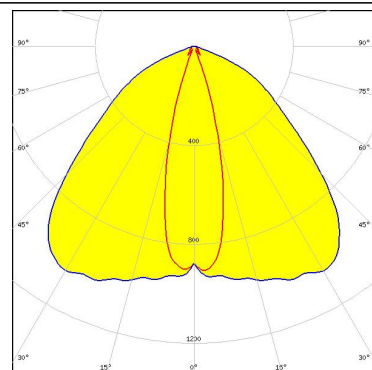
LED LUXEON IR Domed 90 (L110-0xxx0900000000)  
FWHM / FWTM 20.0 + 86.0° / 29.0 + 128.0°  
Efficiency 95 %  
Peak intensity 1.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### OPTICAL RESULTS (SIMULATED):

##### LUMILEDS

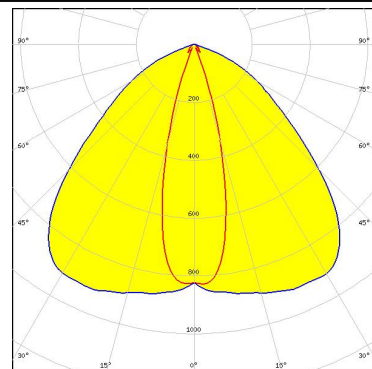
LED	LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
FWHM / FWTM	28.0 + 102.0° / 42.0 + 140.0°
Efficiency	96 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



##### LUMILEDS

LED	LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
FWHM / FWTM	28.0 + 100.0° / 42.0 + 138.0°
Efficiency	86 %
Peak intensity	0.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

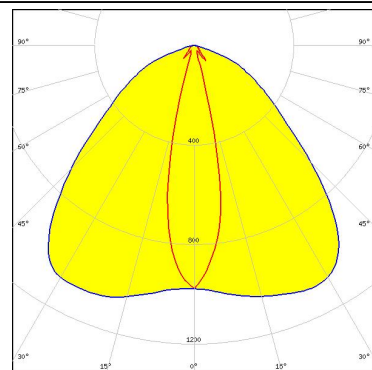
Protective plate, glass



##### Your solutions

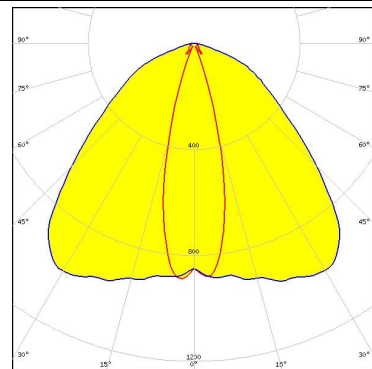
LED	RecLED 122x50mm 1900lm 730 2x4 Opt G1
FWHM / FWTM	24.0 + 97.0° / 34.0 + 141.0°
Efficiency	86 %
Peak intensity	1.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

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:	



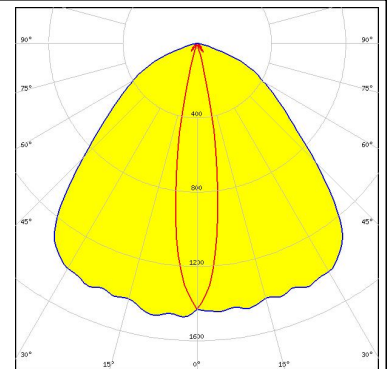


#### OPTICAL RESULTS (SIMULATED):

##### OSRAM

Opto Semiconductors

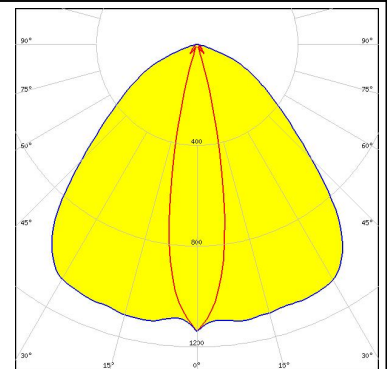
LED OSCONIQ C 2424  
FWHM / FWTM 18.0 + 96.0° / 30.0 + 141.0°  
Efficiency 96 %  
Peak intensity 1.5 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



##### OSRAM

Opto Semiconductors

LED OSCONIQ C 3030  
FWHM / FWTM 21.0 + 94.0° / 34.0 + 138.0°  
Efficiency 86 %  
Peak intensity 1.1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:

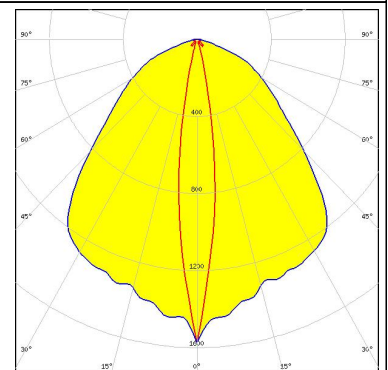


Protective plate, glass

##### OSRAM

Opto Semiconductors

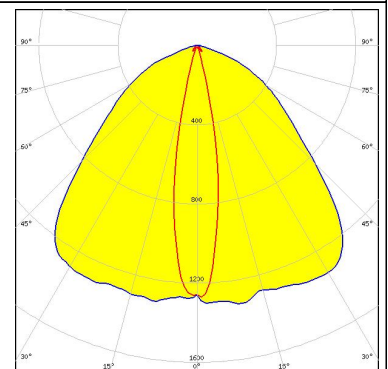
LED OSCONIQ P 3030  
FWHM / FWTM 14.0 + 92.0° / 28.0 + 142.0°  
Efficiency 95 %  
Peak intensity 1.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



##### OSRAM

Opto Semiconductors

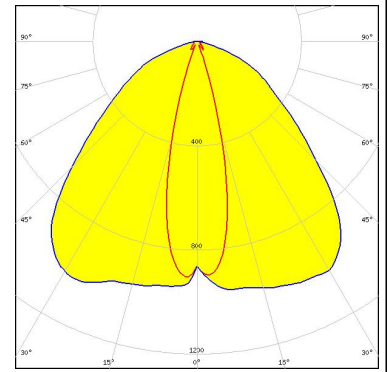
LED OSCONIQ P 3737 (2W version)  
FWHM / FWTM 99.0 + 19.0° / 142.0 + 31.0°  
Efficiency 94 %  
Peak intensity 1.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



### OPTICAL RESULTS (SIMULATED):

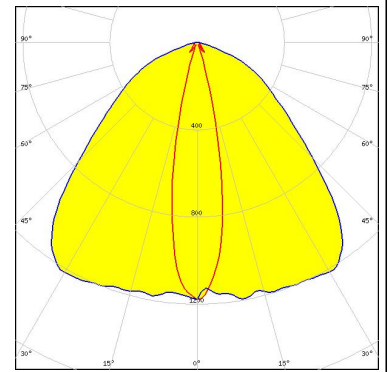
#### OSRAM Opto Semiconductors

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:



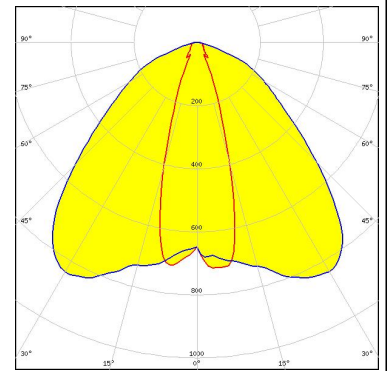
#### OSRAM Opto Semiconductors

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

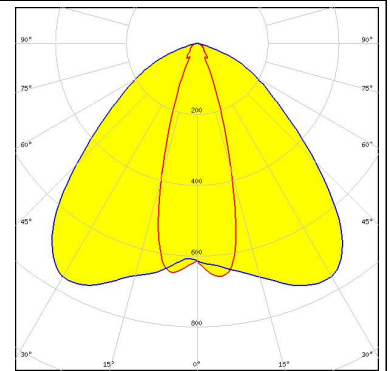
LED OSCONIQ S 5050  
FWHM / FWTM 32.0 + 99.0° / 52.0 + 143.0°  
Efficiency 96 %  
Peak intensity 0.8 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### OSRAM Opto Semiconductors

LED 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





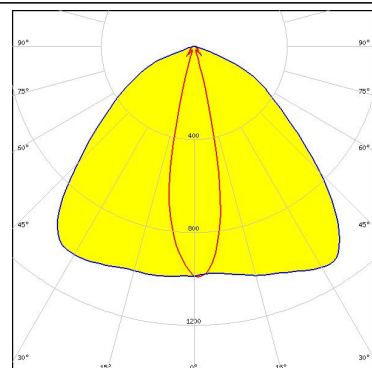
### OPTICAL RESULTS (SIMULATED):

#### 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:

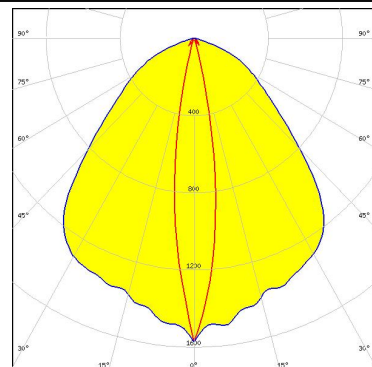
Protective plate, glass



#### OSRAM

Opto Semiconductors

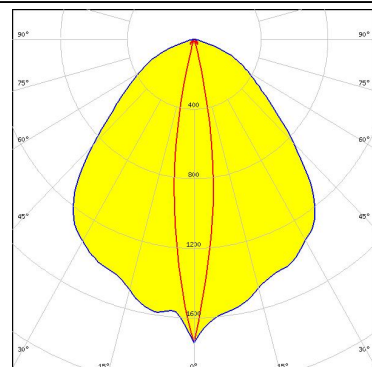
LED OSLON Square Flat  
FWHM / FWTM 16.0 + 90.0° / 30.0 + 140.0°  
Efficiency 96 %  
Peak intensity 1.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### OSRAM

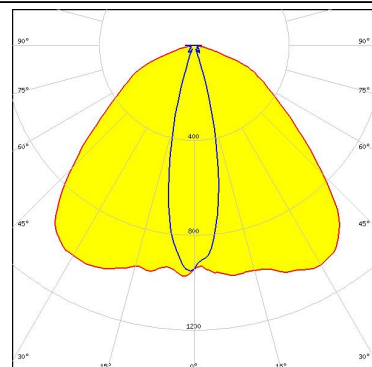
Opto Semiconductors

LED OSTAR Projection Compact (KW.CSLNM1.TG)  
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:



#### 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:

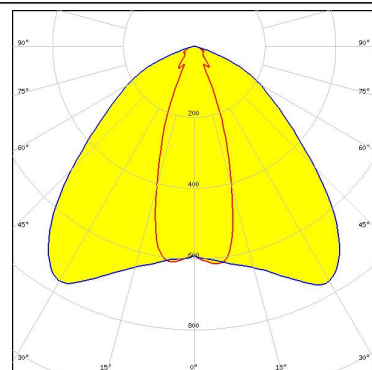


#### OPTICAL RESULTS (SIMULATED):

#### SAMSUNG

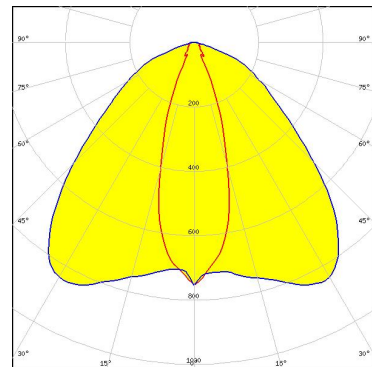
LED HiLOM RM12 Z (LH502C)  
 FWHM / FWTM 36.0 + 98.0° / 78.0 + 140.0°  
 Efficiency 89 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



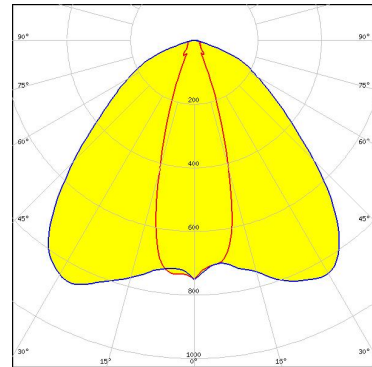
#### SEOUL SEMICONDUCTOR

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:



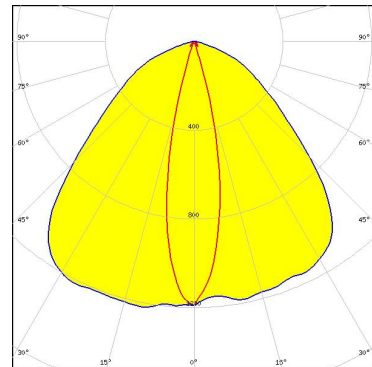
#### SEOUL SEMICONDUCTOR

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:

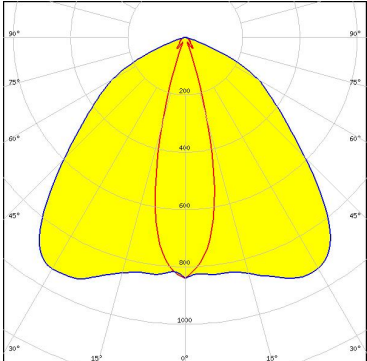
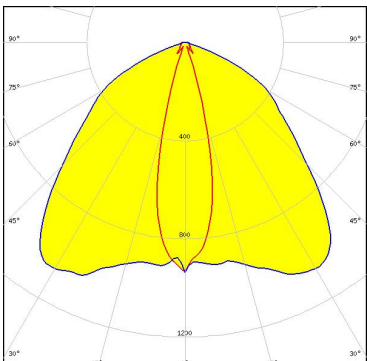
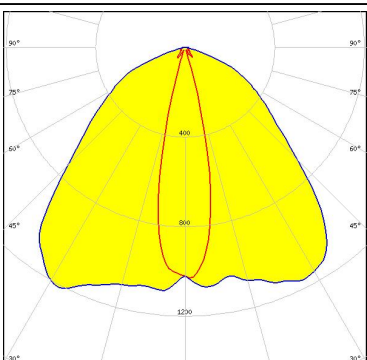


#### SEOUL SEMICONDUCTOR

LED Z5M1/Z5M2  
 FWHM / FWTM 22.0 + 97.0° / 34.0 + 142.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z5M5</p> <p>FWHM / FWTM 26.0 + 100.0° / 40.0 + 138.0°</p> <p>Efficiency 85 %</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>SEOUL SEMICONDUCTOR</b></p> <p>LED Z5M5</p> <p>FWHM / FWTM 26.0 + 103.0° / 38.0 + 140.0°</p> <p>Efficiency 96 %</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>SEOUL SEMICONDUCTOR</b></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>	
<p><b>TRIDONIC</b></p> <p>LED RLE 2x8 4000lm HP EXC2 OTD</p> <p>FWHM / FWTM 22.0 + 100.0° / 32.0 + 142.0°</p> <p>Efficiency 84 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</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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