

## HB-IP-2X6-O

~30° + 115° oval beam

### SPECIFICATION:

Dimensions	173.0 x 71.4 mm
Height	13.1 mm
Fastening	screw
Ingress protection classes	IP67
ROHS compliant	yes ⓘ

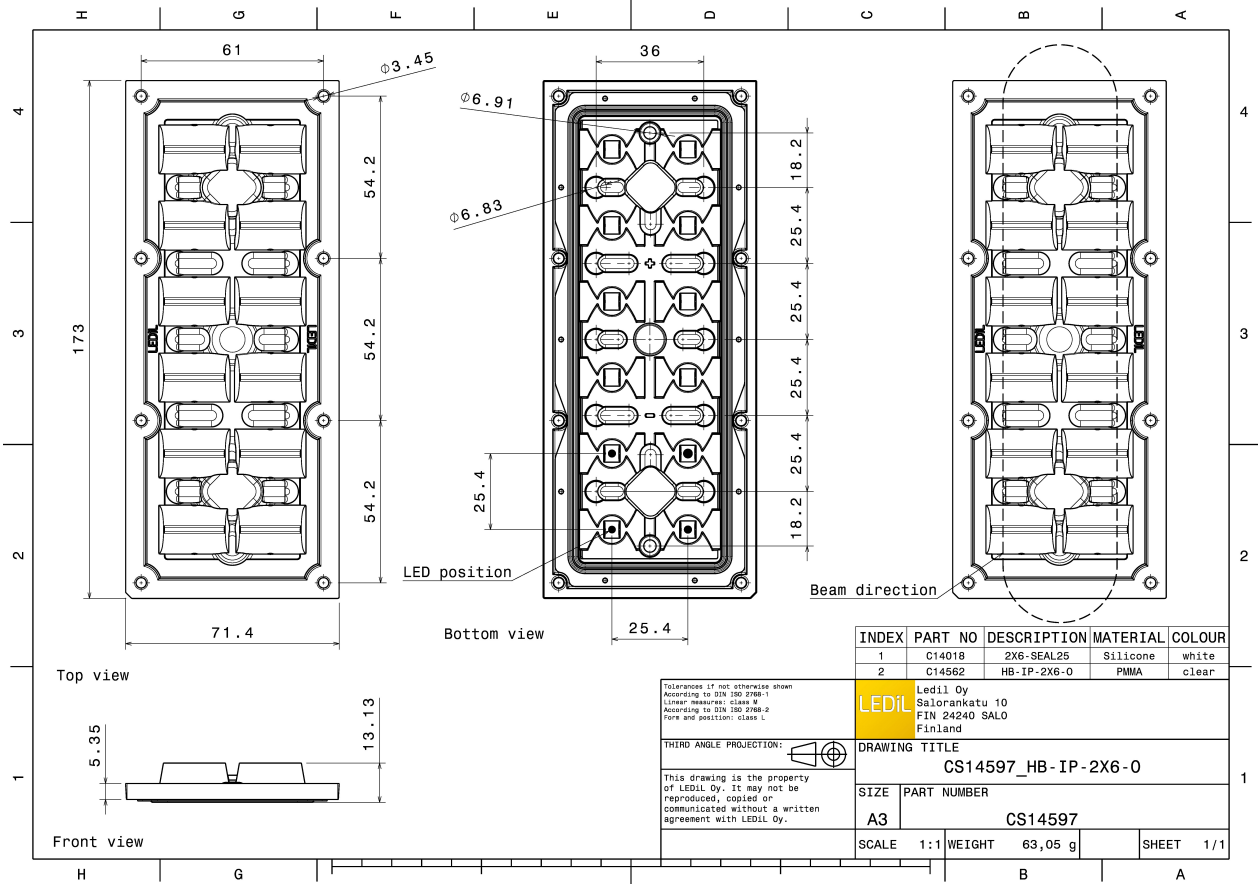
### MATERIALS:

Component	Type	Material	Colour	Finish
HB-IP-2X6-O	Multi-lens	PMMA	clear	
2X6-SEAL25	Seal	Silicone	white	



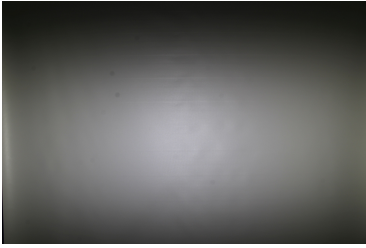
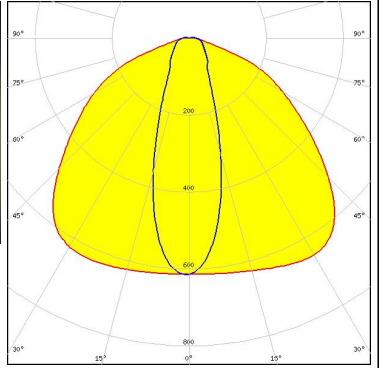

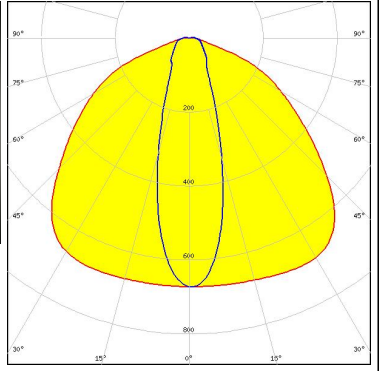
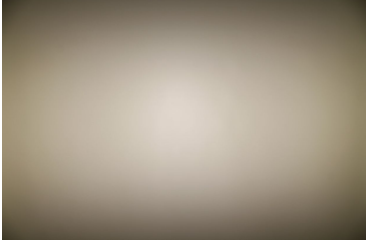
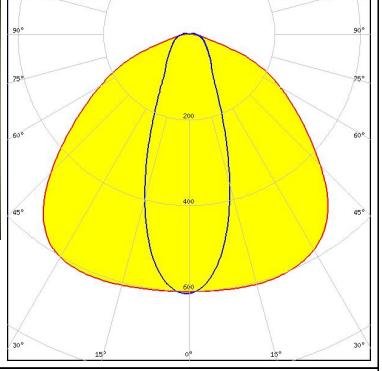

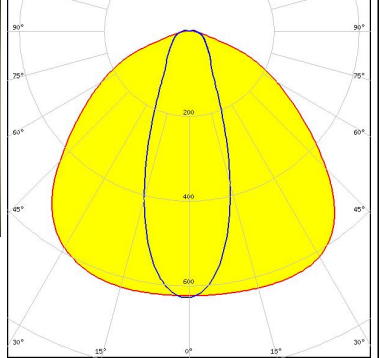
### ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CS14597_HB-IP-2X6-O	Multi-lens	108	36	36	8.0
» Box size: 476 x 273 x 247 mm					

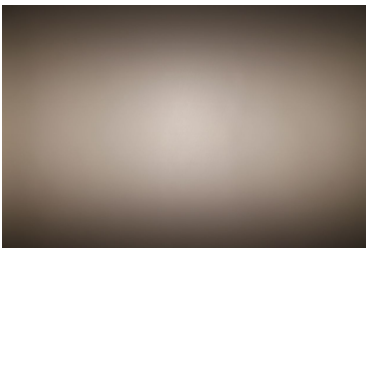
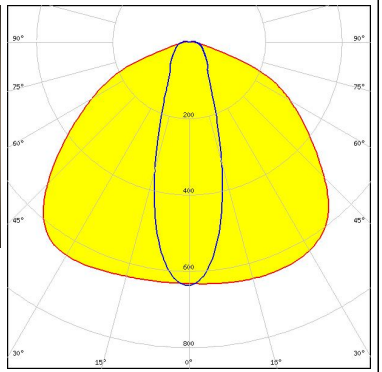

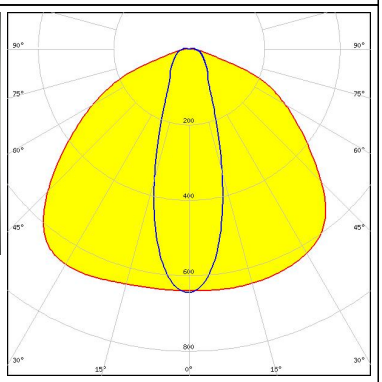

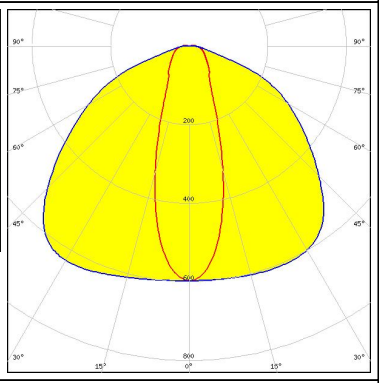
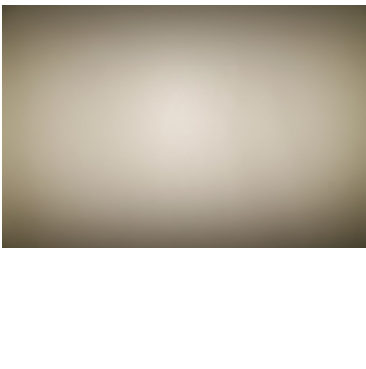
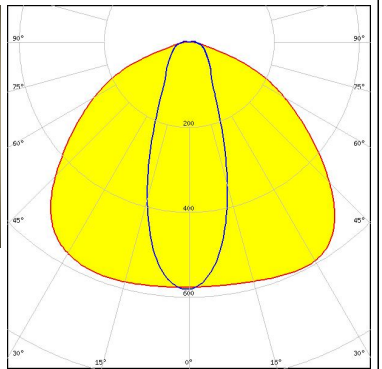


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### OPTICAL RESULTS (MEASURED):

<p><b>COMET ELECTRONICS</b></p> <p>LED QUICK FLUX 2x6 LED XG xxx G7+</p> <p>FWHM / FWTM 116.0 + 32.0° / 149.0 + 92.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>COMET ELECTRONICS</b></p> <p>LED QUICK FLUX 2x6 LED XT xxx G5</p> <p>FWHM / FWTM 113.0 + 30.0° / 148.0 + 87.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>CREE LED</b></p> <p>LED XM-L</p> <p>FWHM / FWTM 36.0 + 110.0° / 96.0 + 147.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>CREE LED</b></p> <p>LED XM-L2</p> <p>FWHM / FWTM 36.0 + 108.0° / 92.0 + 147.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

#### OPTICAL RESULTS (MEASURED):

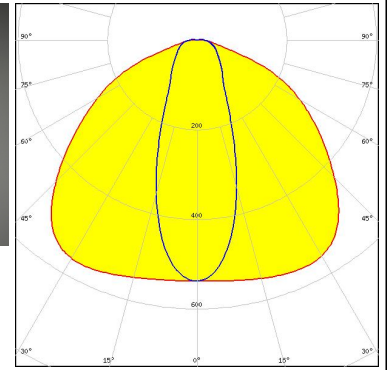
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED                    XP-G            FWHM / FWTM      31.0 + 117.0° / 91.0 + 149.0°            Efficiency            91 %            Peak intensity       0.7 cd/lm            LEDs/each optic    1            Light colour         White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED                    XP-G2            FWHM / FWTM      32.0 + 116.0° / 91.0 + 149.0°            Efficiency            92 %            Peak intensity       0.7 cd/lm            LEDs/each optic    1            Light colour         White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED                    XP-G3            FWHM / FWTM      33.0 + 119.0° / 100.0 + 150.0°            Efficiency            92 %            Peak intensity       0.6 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      36.0 + 115.0° / 100.0 + 149.0°            Efficiency            91 %            Peak intensity       0.6 cd/lm            LEDs/each optic    1            Light colour         White            Required components:</p>		



#### OPTICAL RESULTS (MEASURED):

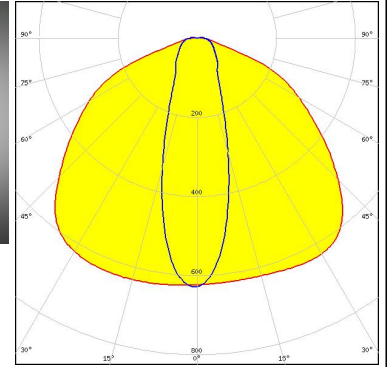
##### CREE LED

LED XP-L2  
 FWHM / FWTM 118.0 + 38.0° / 151.0 + 114.0°  
 Efficiency 92 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



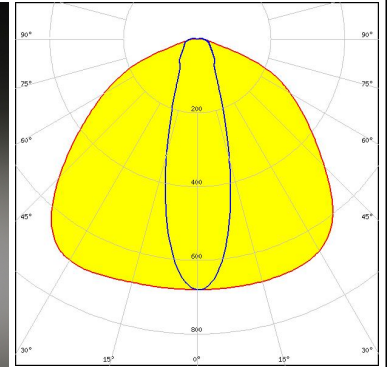
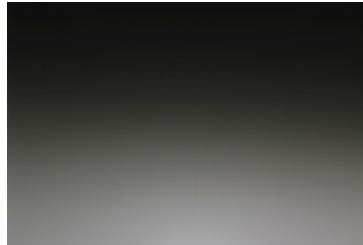
##### CREE LED

LED XT-E  
 FWHM / FWTM 31.0 + 119.0° / 99.0 + 151.0°  
 Efficiency 92 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



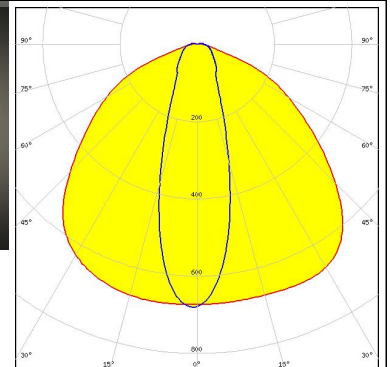
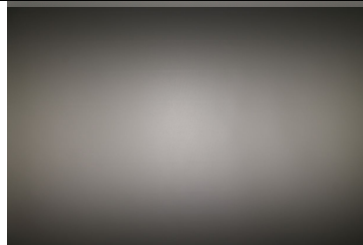
##### CREE LED

LED XT-E HE  
 FWHM / FWTM 112.0 + 29.0° / 147.0 + 85.0°  
 Efficiency 90 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

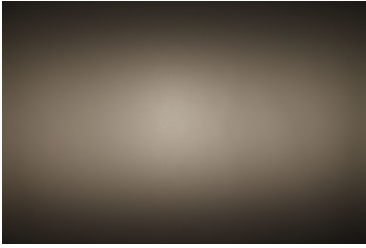
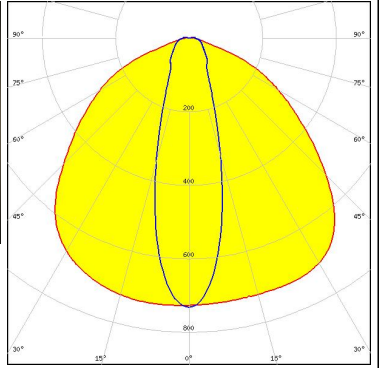
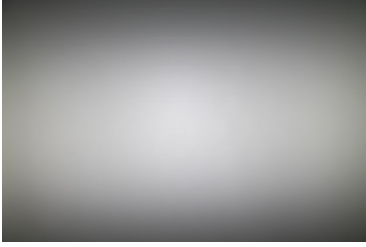
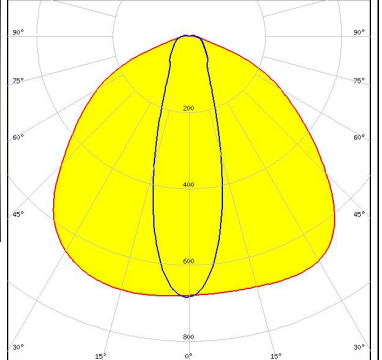
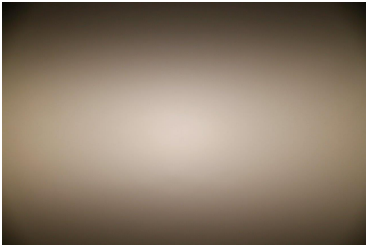
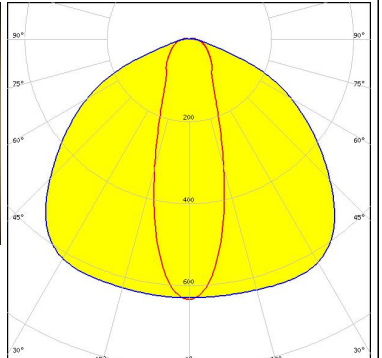
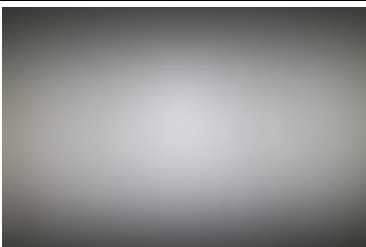
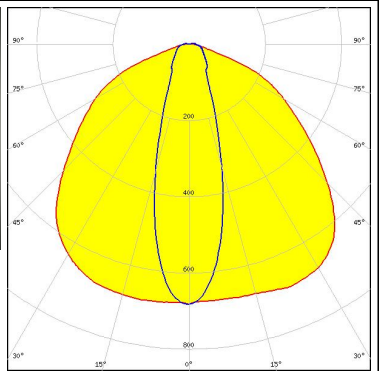


##### LUMILEDS

LED LUXEON R  
 FWHM / FWTM 30.0 + 109.0° / 89.0 + 147.0°  
 Efficiency 91 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



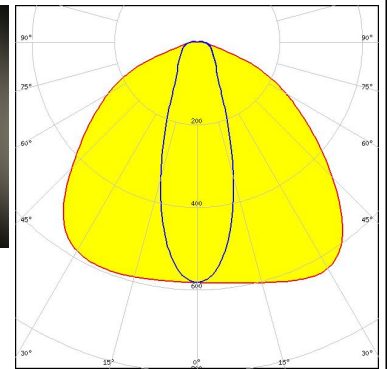
#### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON Rebel</p> <p>FWHM / FWTM 28.0 + 107.0° / 84.0 + 145.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON Rebel ES</p> <p>FWHM / FWTM 30.0 + 110.0° / 88.0 + 146.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON T</p> <p>FWHM / FWTM 32.0 + 115.0° / 103.0 + 148.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 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 TX</p> <p>FWHM / FWTM 30.0 + 111.0° / 84.0 + 147.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

### OPTICAL RESULTS (MEASURED):

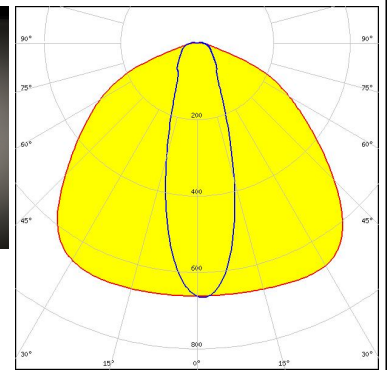
#### LUMILEDS

LED LUXEON V  
 FWHM / FWTM 112.0 + 34.0° / 147.0 + 92.0°  
 Efficiency 87 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



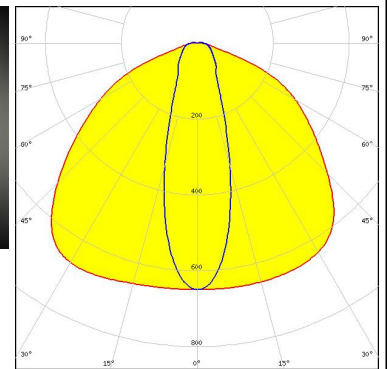
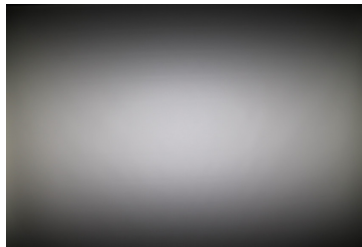
#### LUMILEDS

LED LUXEON V2  
 FWHM / FWTM 113.0 + 31.0° / 147.0 + 91.0°  
 Efficiency 92 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



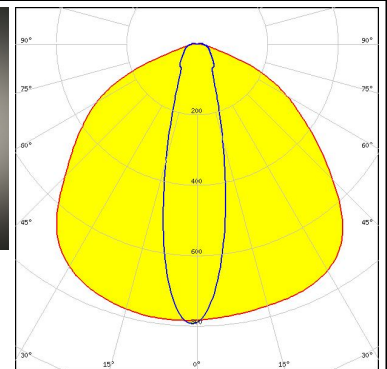
#### LUMILEDS

LED LUXEON XR-TX (L2T0-xxx012M0000)  
 FWHM / FWTM 30.0 + 115.0° / 92.0 + 148.0°  
 Efficiency 91 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### LUMILEDS

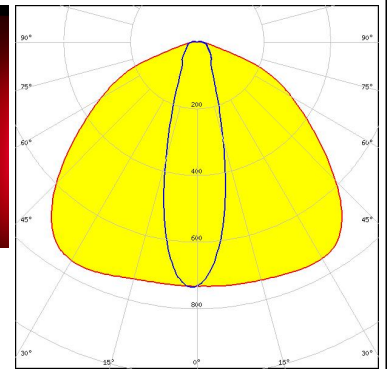
LED LUXEON Z ES  
 FWHM / FWTM 25.0 + 108.0° / 73.0 + 145.0°  
 Efficiency 90 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



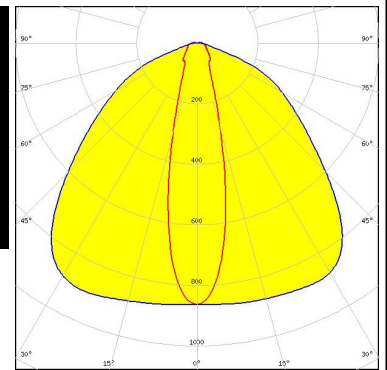
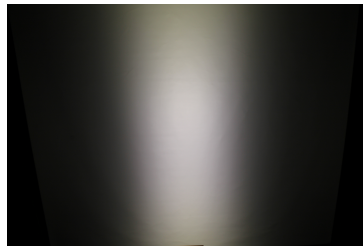
#### OPTICAL RESULTS (MEASURED):



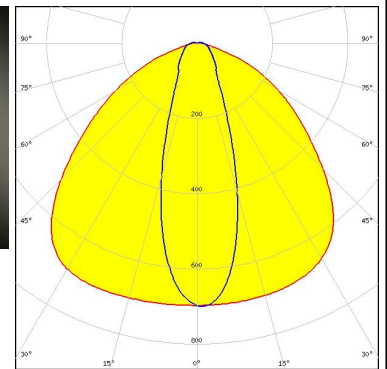
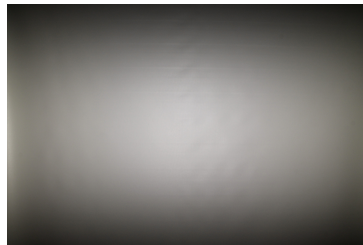
**LED** SST-10-B130  
**FWHM / FWTM** 114.0 + 28.0° / 147.0 + 70.0°  
**Efficiency** 93 %  
**Peak intensity** 0.8 cd/lm  
**LEDs/each optic** 1  
**Light colour** Deep Red  
**Required components:**



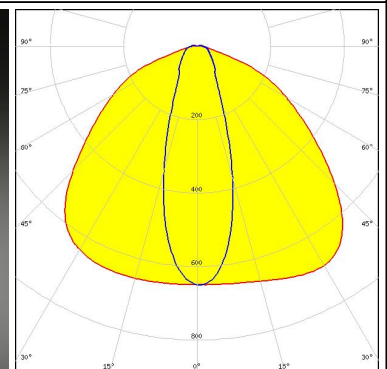
**LED** RecLED 146x45mm 2900lm 730 2x6 IP G1  
**FWHM / FWTM** 24.0 + 103.5° / 56.5 + 143.5°  
**Efficiency** 94 %  
**Peak intensity** 0.9 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



**LED** NVSW219D  
**FWHM / FWTM** 106.0 + 32.0° / 145.0 + 85.0°  
**Efficiency** 92 %  
**Peak intensity** 0.7 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**

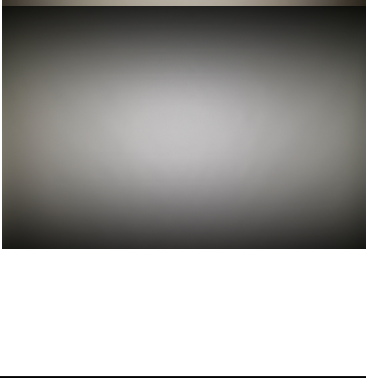
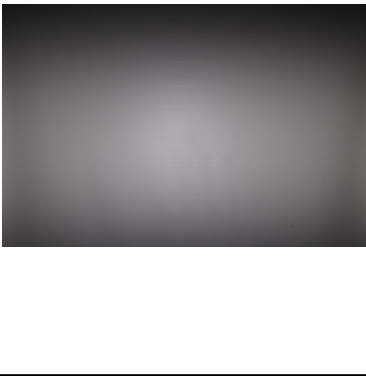
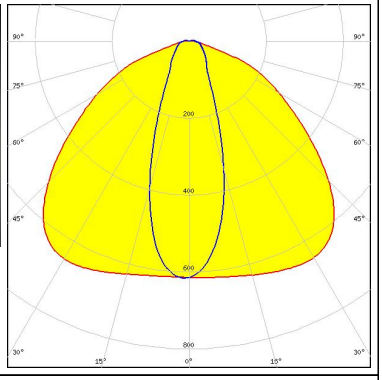


**LED** NVSW219F  
**FWHM / FWTM** 112.0 + 32.0° / 147.0 + 88.0°  
**Efficiency** 92 %  
**Peak intensity** 0.7 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



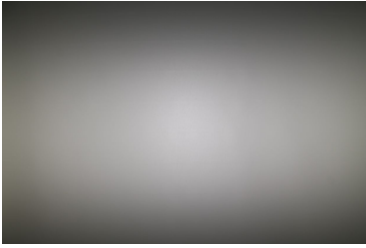
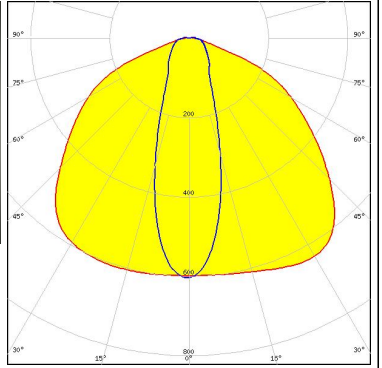
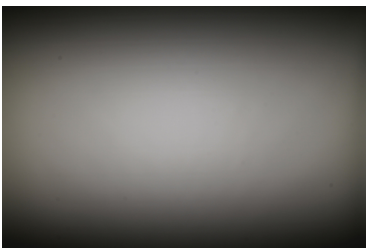
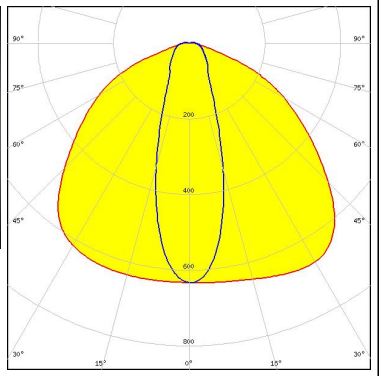

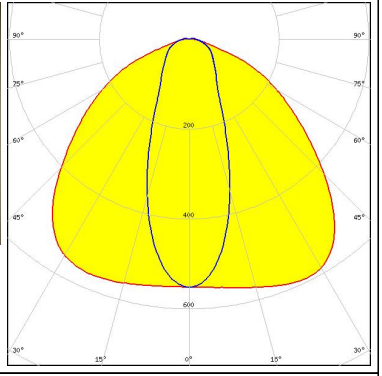
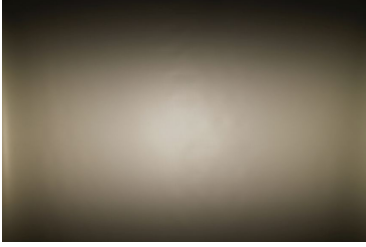
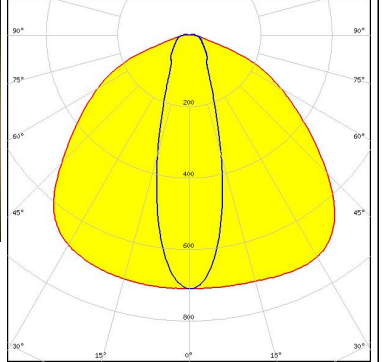


#### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVSW319B            FWHM / FWTM 34.0 + 113.0° / 91.0 + 148.0°            Efficiency 92 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW3x9A            FWHM / FWTM 119.0 + 33.0° / 149.0 + 100.0°            Efficiency 92 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW519A            FWHM / FWTM 113.0 + 35.0° / 147.0 + 90.0°            Efficiency 94 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSxE21A            FWHM / FWTM 26.0 + 116.0° / 107.0 + 145.0°            Efficiency 91 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		



#### OPTICAL RESULTS (MEASURED):

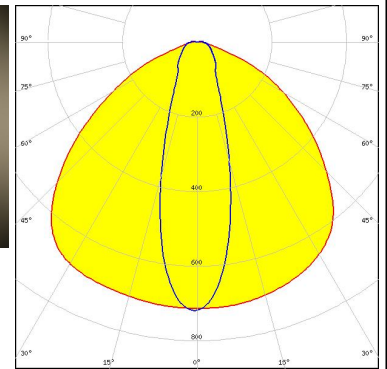
<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C</p> <p>FWHM / FWTM 31.0 + 116.0° / 100.0 + 149.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C</p> <p>FWHM / FWTM 114.0 + 32.0° / 148.0 + 93.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Duris S8</p> <p>FWHM / FWTM 111.0 + 38.0° / 148.0 + 121.0°</p> <p>Efficiency 92 %</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>OSRAM</b> Opto Semiconductors</p> <p>LED OSLOM Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM 110.0 + 29.0° / 146.0 + 86.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

### OPTICAL RESULTS (MEASURED):

#### OSRAM

Opto Semiconductors

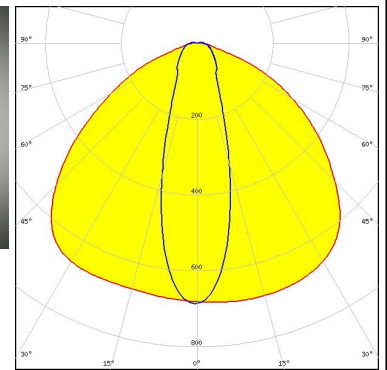
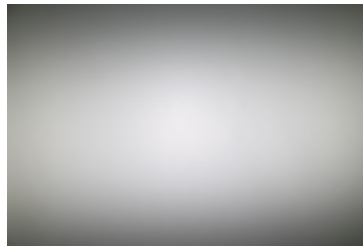
LED OSLON Square EC  
 FWHM / FWTM 30.0 + 108.0° / 87.0 + 145.0°  
 Efficiency 91 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

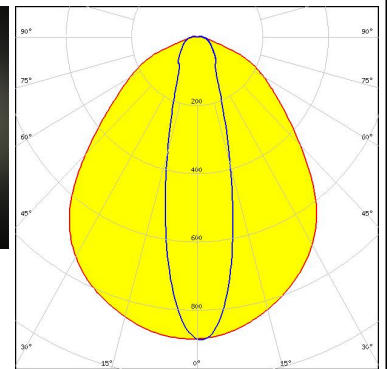
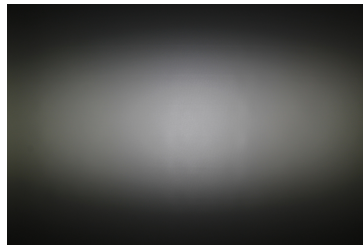
LED OSLON Square PC  
 FWHM / FWTM 30.0 + 111.0° / 91.0 + 146.0°  
 Efficiency 92 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

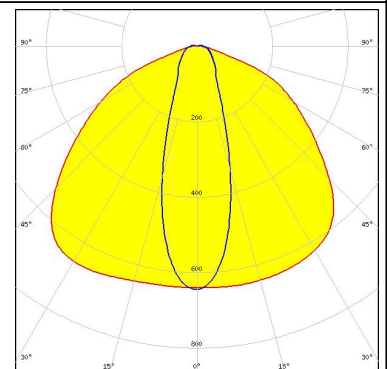
Opto Semiconductors

LED OSLON SSL 80  
 FWHM / FWTM 26.0 + 92.0° / 81.0 + 143.0°  
 Efficiency 93 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHILIPS

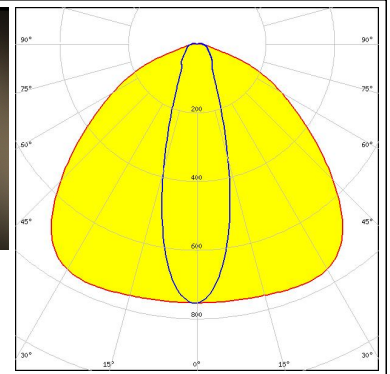
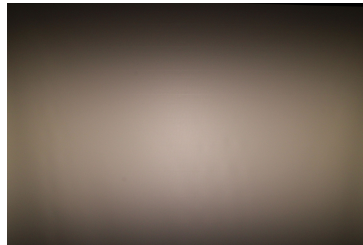
LED Fortimo FastFlex LED 2x6 DP G4  
 FWHM / FWTM 32.0 + 116.0° / 91.0 + 149.0°  
 Efficiency 92 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

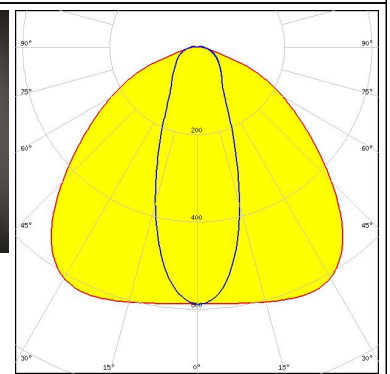
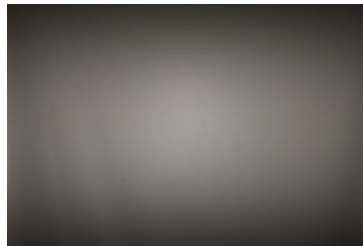
### PHILIPS

LED Fortimo FastFlex LED 2x6 DP G5  
 FWHM / FWTM 108.0 + 29.0° / 145.0 + 72.0°  
 Efficiency 94 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



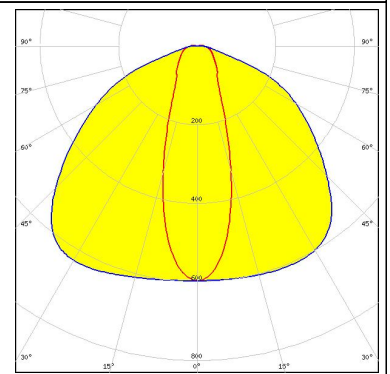
### PHILIPS

LED Fortimo FastFlex LED 2x6 DP HE  
 FWHM / FWTM 106.0 + 37.0° / 146.0 + 110.0°  
 Efficiency 94 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



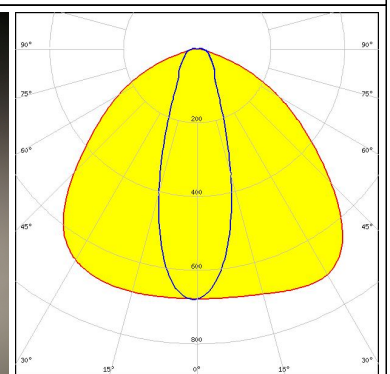
### PHILIPS

LED Fortimo FastFlex LED 2x6 DPX G4  
 FWHM / FWTM 33.0 + 119.0° / 100.0 + 150.0°  
 Efficiency 92 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### SAMSUNG

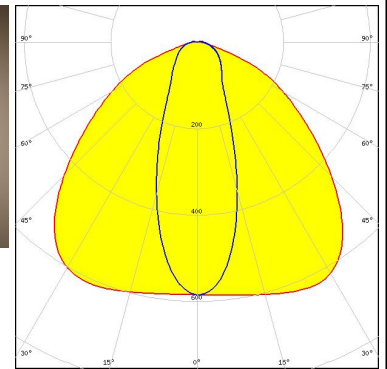
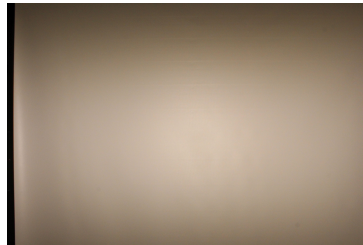
LED HiLOM RH12 (LH351C)  
 FWHM / FWTM 107.0 + 32.0° / 145.0 + 85.0°  
 Efficiency 92 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

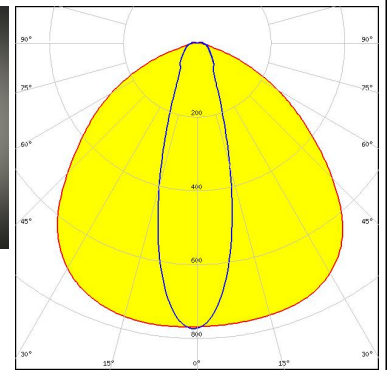
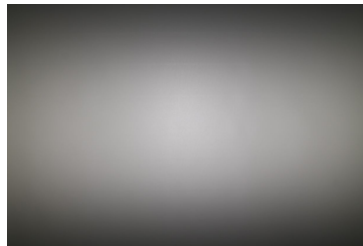
### SAMSUNG

LED HiLOM RM12 ZP (LH502C)  
 FWHM / FWTM 107.0 + 37.0° / 146.0 + 111.0°  
 Efficiency 93 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



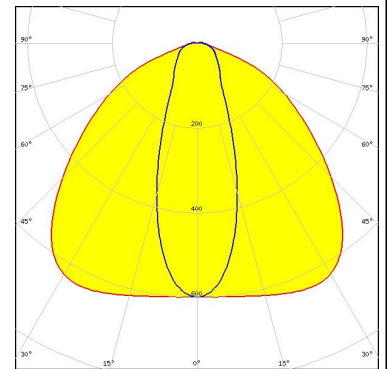
### SAMSUNG

LED LH351Z  
 FWHM / FWTM 29.0 + 104.0° / 70.0 + 144.0°  
 Efficiency 91 %  
 Peak intensity 0.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



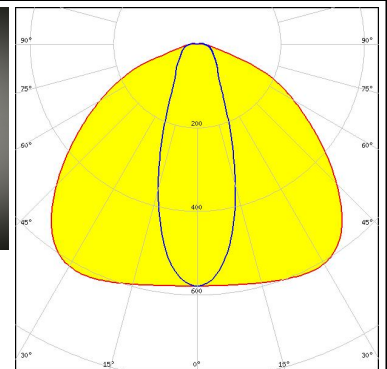
### SCIOLUX

LED BALAM-VP-5250-750-36  
 FWHM / FWTM Asymmetric  
 Efficiency 93 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### SCIOLUX

LED ROY-S26XPL2 (XP-L2)  
 FWHM / FWTM 116.0 + 36.0° / 150.0 + 98.0°  
 Efficiency 93 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



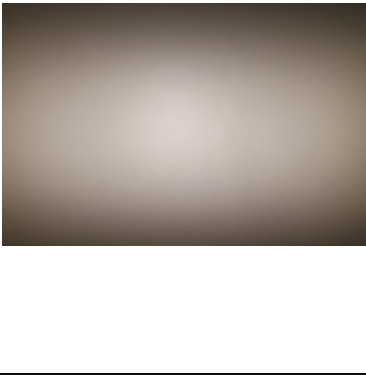
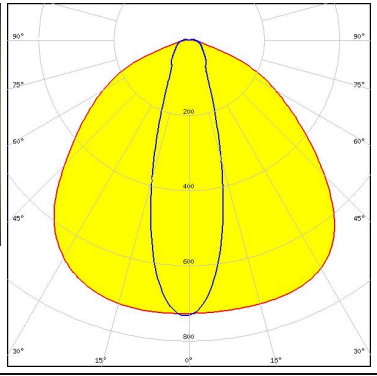

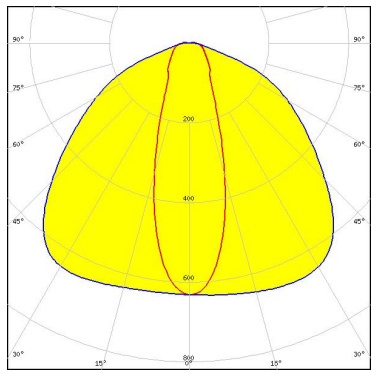

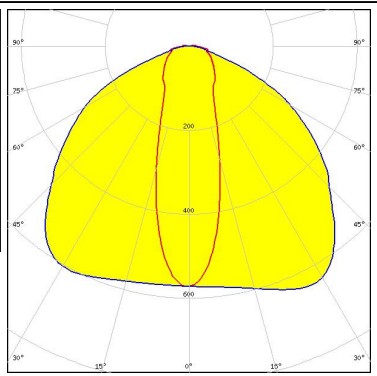
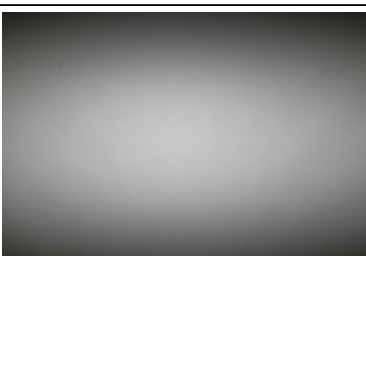
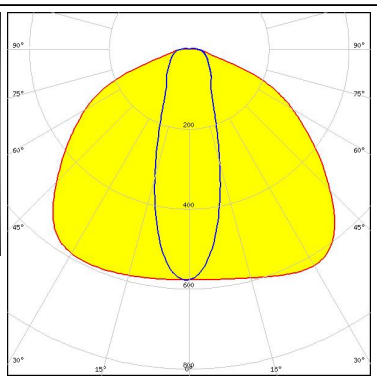


#### OPTICAL RESULTS (MEASURED):

<p><b>SCIOLUX</b></p> <p>LED XLE-S22C4XTEHE (XT-E HE)</p> <p>FWHM / FWTM 112.0 + 29.0° / 147.0 + 85.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SCIOLUX</b></p> <p>LED XLE-S26XHP35 (XHP35 HD)</p> <p>FWHM / FWTM 118.0 + 38.0° / 151.0 + 103.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 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 SMJQ-D36W12Mx</p> <p>FWHM / FWTM 30.0 + 119.0° / 128.0 + 149.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 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 SMJQ-D36W12Px</p> <p>FWHM / FWTM 121.0 + 32.0° / 151.0 + 108.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		



#### OPTICAL RESULTS (MEASURED):

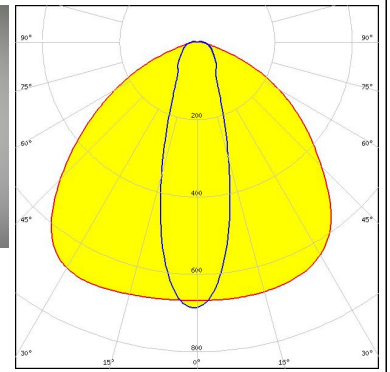
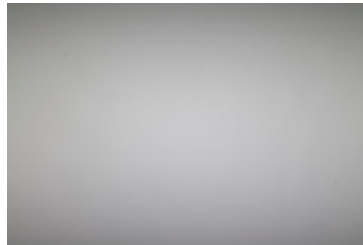
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z5M1/Z5M2</p> <p>FWHM / FWTM 29.0 + 105.0° / 79.0 + 145.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z5M3</p> <p>FWHM / FWTM 32.0 + 111.0° / 96.0 + 148.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.7 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 30.0 + 119.0° / 128.0 + 149.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 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 122.0 + 32.0° / 151.0 + 111.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

### OPTICAL RESULTS (MEASURED):

#### TOSHIBA

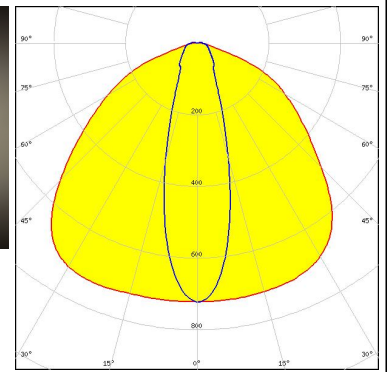
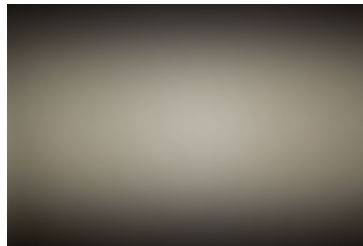
Leading Innovation >>>

LED TL1L4  
 FWHM / FWTM 29.0 + 107.0° / 88.0 + 144.0°  
 Efficiency 87 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### TRIDONIC

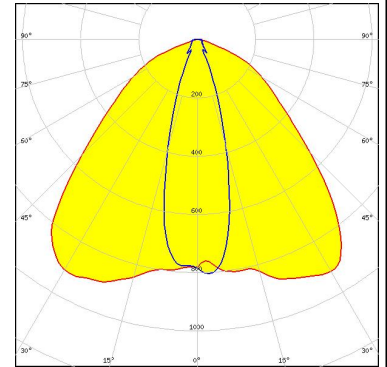
LED RLE 2x6 3000lm HP EXC2 OTD  
 FWHM / FWTM 108.0 + 29.0° / 146.0 + 82.0°  
 Efficiency 92 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



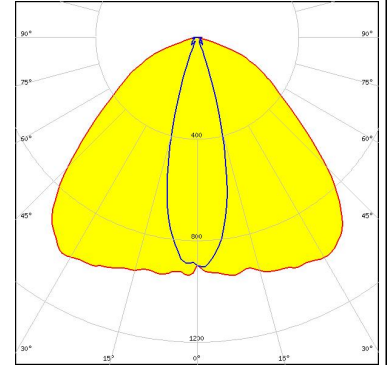
#### OPTICAL RESULTS (SIMULATED):



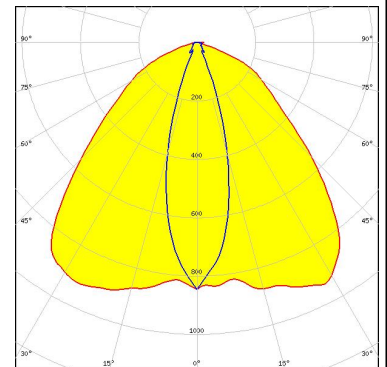
LED J Series 5050 Round LES  
 FWHM / FWTM 29.0 + 96.0° / 50.0 + 141.0°  
 Efficiency 94 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



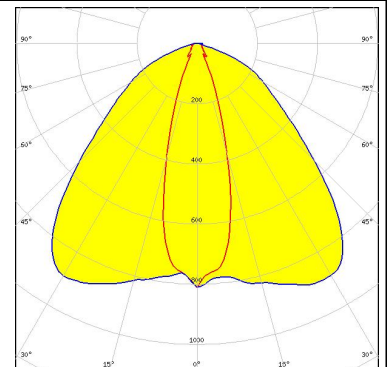
LED XP-G2 HE  
 FWHM / FWTM 103.0 + 28.0° / 144.0 + 42.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON 5050 Round LES  
 FWHM / FWTM 34.0 + 96.0° / 61.0 + 141.0°  
 Efficiency 93 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON 5050 Square LES  
 FWHM / FWTM 30.0 + 98.0° / 52.0 + 141.0°  
 Efficiency 95 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

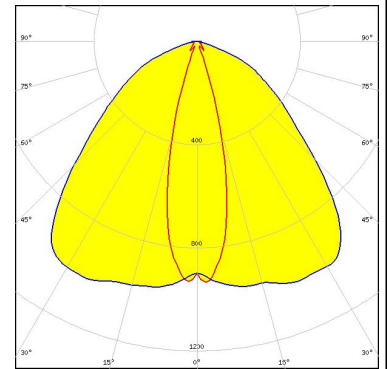
<p><b>NICHIA</b></p> <p>LED: NV4WB35AM</p> <p>FWHM / FWTM: 100.0 + 28.0° / 140.0 + 42.0°</p> <p>Efficiency: 95 %</p> <p>Peak intensity: 1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>OSRAM</b></p> <p>LED: PrevaLED Brick HP IP 2x6</p> <p>FWHM / FWTM: 24.0 + 97.0° / 36.0 + 141.0°</p> <p>Efficiency: 95 %</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>OSRAM</b> Opto Semiconductors</p> <p>LED: OSCONIQ P 3030</p> <p>FWHM / FWTM: 92.0 + 14.0° / 141.0 + 28.0°</p> <p>Efficiency: 95 %</p> <p>Peak intensity: 1.5 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSCONIQ P 3737 (2W version)</p> <p>FWHM / FWTM: 32.0 + 100.0° / 44.0 + 142.0°</p> <p>Efficiency: 95 %</p> <p>Peak intensity: 1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

##### OSRAM

Opto Semiconductors

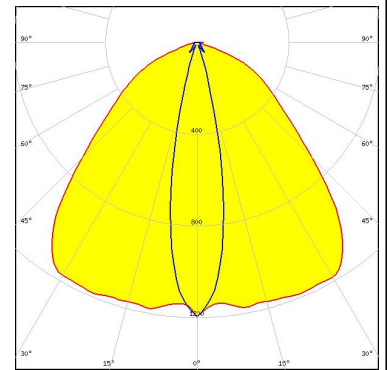
LED OSCONIQ P 3737 (3W version)  
 FWHM / FWTM 27.0 + 100.0° / 44.0 + 143.0°  
 Efficiency 94 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### OSRAM

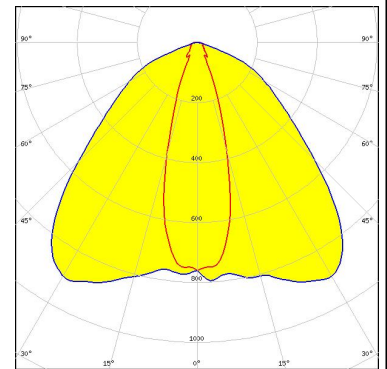
Opto Semiconductors

LED OSCONIQ P 3737 Flat  
 FWHM / FWTM 96.0 + 22.0° / 140.0 + 36.0°  
 Efficiency 96 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



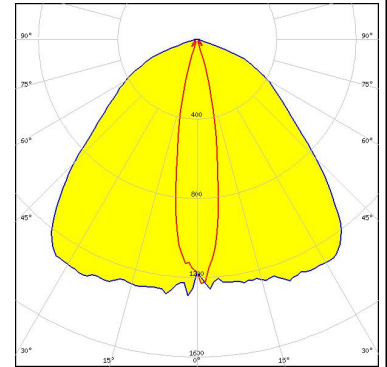
##### SAMSUNG

LED LH502D  
 FWHM / FWTM 30.0 + 98.0° / 52.0 + 140.0°  
 Efficiency 96 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:




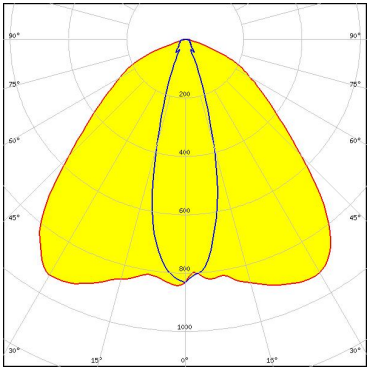

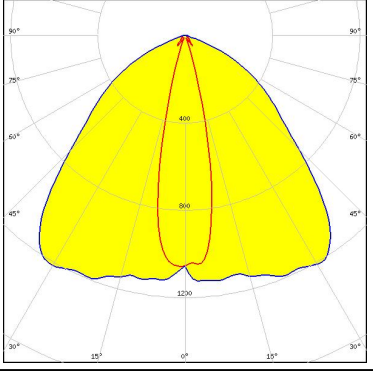

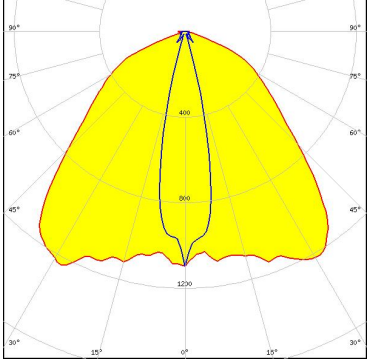
SEOUL SEMICONDUCTOR

LED SEOUL DC 3528  
 FWHM / FWTM 20.0 + 99.0° / 36.0 + 142.0°  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:





#### OPTICAL RESULTS (SIMULATED):

<p> SEOUL SEMICONDUCTOR</p> <p>LED: SEOUL DC 5050 6V</p> <p>FWHM / FWTM: 97.0 + 29.0° / 142.0 + 49.0°</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> SEOUL SEMICONDUCTOR</p> <p>LED: Z5M4</p> <p>FWHM / FWTM: 24.0 + 98.0° / 34.0 + 136.0°</p> <p>Efficiency: 96 %</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> SEOUL SEMICONDUCTOR</p> <p>LED: Z8Y22T</p> <p>FWHM / FWTM: 97.0 + 21.0° / 141.0 + 32.0°</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:

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

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

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