

## STRADELLA-IP-28-HB-M

~65° wide beam. Variant made from PMMA.

### SPECIFICATION:

Dimensions	100.0 x 100.0 mm
Height	9.5 mm
Fastening	pin, screw
Ingress protection classes	IP66, IP67
ROHS compliant	yes ⓘ

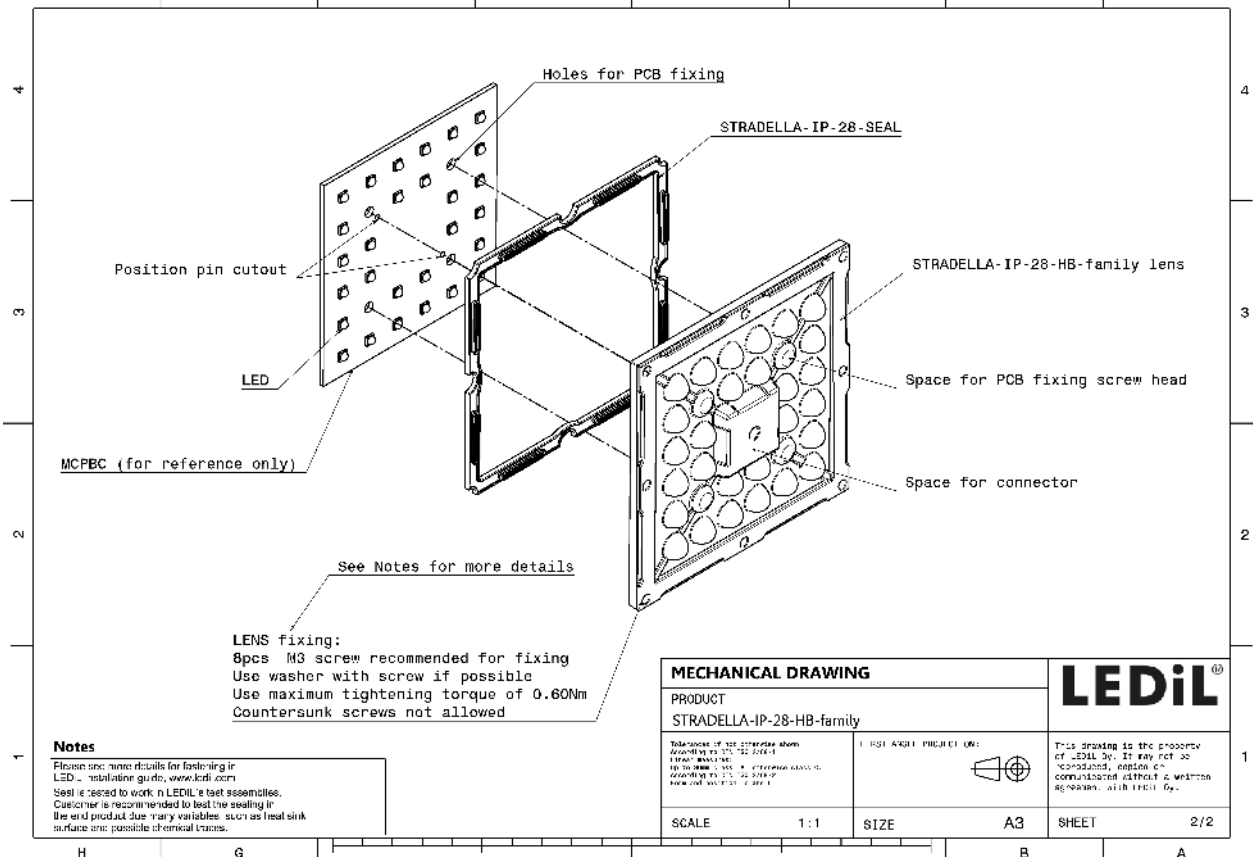
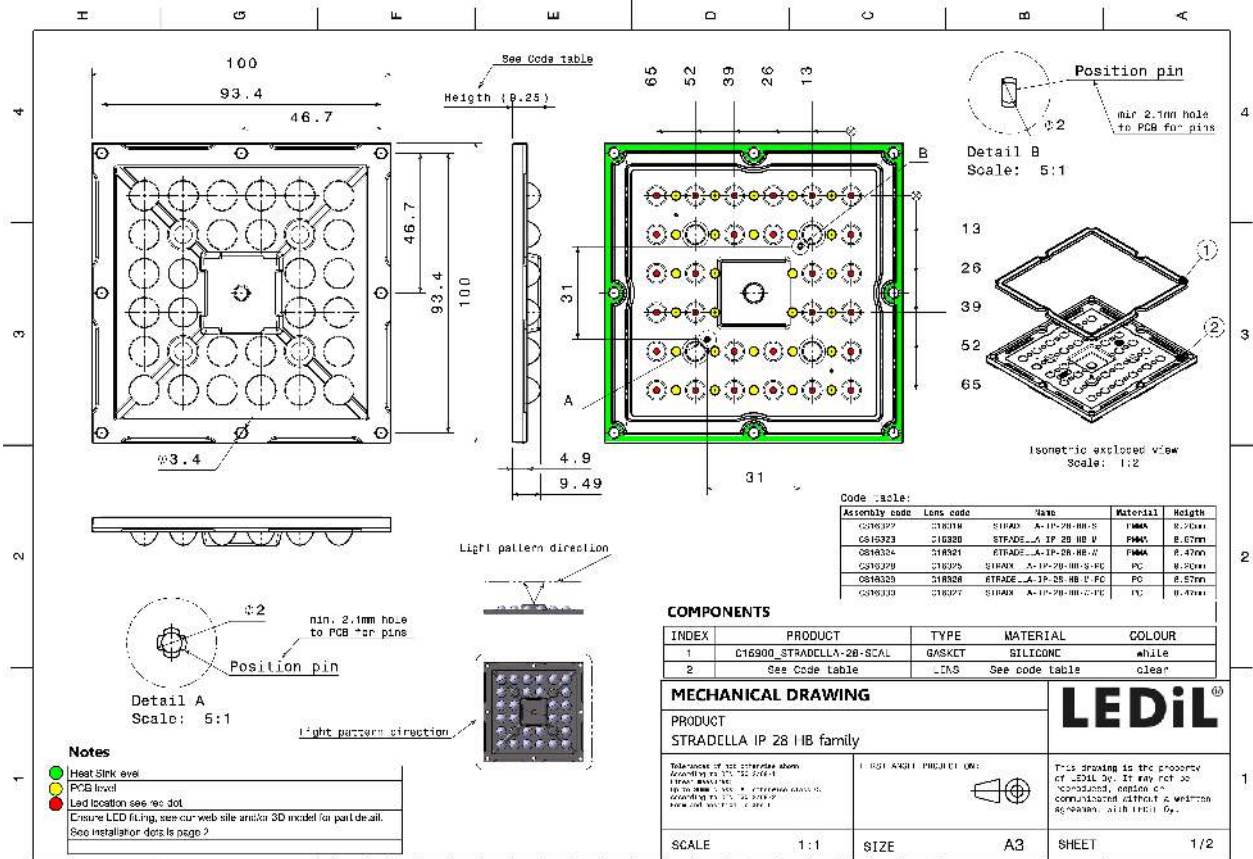
### MATERIALS:

Component	Type	Material	Colour	Finish
STRADELLA-IP-28-HB-M	Multi-lens	PMMA	clear	
STRADELLA-28-SEAL	Seal	Silicone	white	





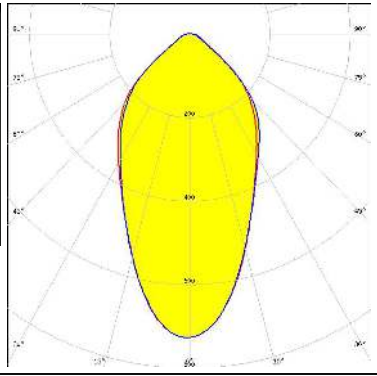


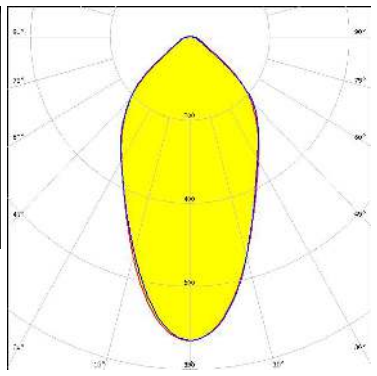

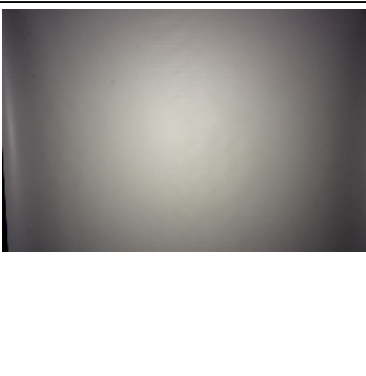
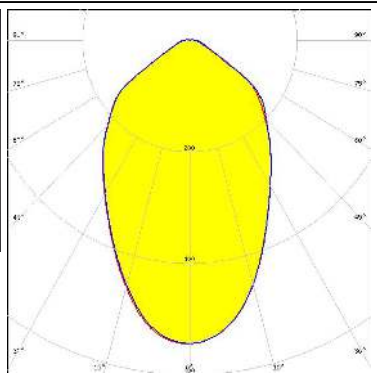


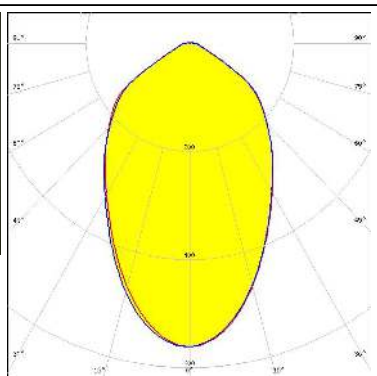
### ORDERING INFORMATION:

Component	Type	Qty in box	MOQ	MPQ	Box weight (kg)
CS16323_STRADELLA-IP-28-HB-M » Box size: 476 x 273 x 247 mm	Multi-lens	156	78	78	5.8


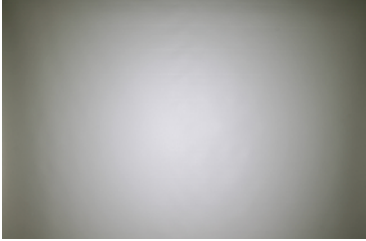
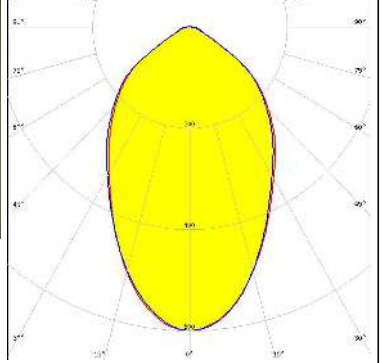


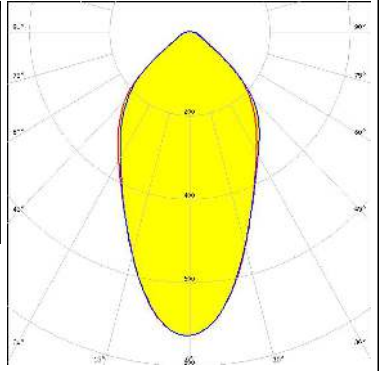


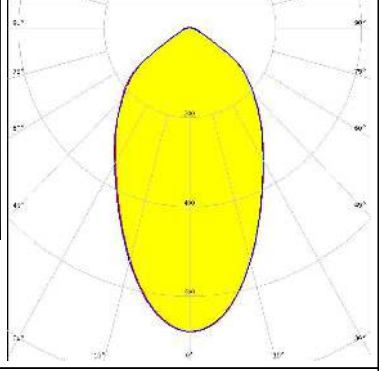


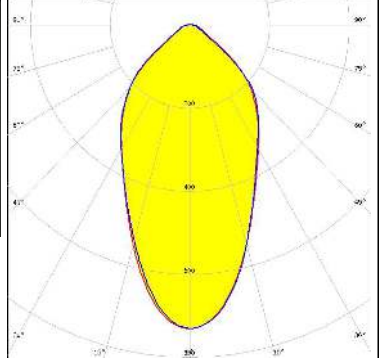


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### OPTICAL RESULTS (MEASURED):

 <p>LED HiQLED STR28 CR JE2835 4x7 xxx            FWHM / FWTM 56.0° / 113.0°            Efficiency 92 %            Peak intensity 0.7 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
 <p>LED HiQLED STR28 CR JK3030 4x7 xxx            FWHM / FWTM 55.0° / 112.0°            Efficiency 92 %            Peak intensity 0.7 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
 <p>LED QUICK FLUX STR28 XD2x14 xxx G8            FWHM / FWTM 71.0° / 126.0°            Efficiency 92 %            Peak intensity 0.5 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
 <p>LED QUICK FLUX STR28 XP2x14 xxx G7            FWHM / FWTM 71.0° / 127.0°            Efficiency 94 %            Peak intensity 0.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		

#### OPTICAL RESULTS (MEASURED):

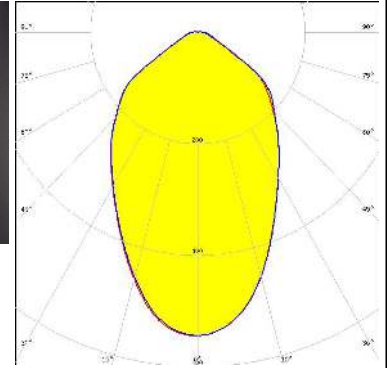
 <p> <b>LED</b> QUICK FLUX STR28 XT2x14 xxx G5  <b>FWHM / FWTM</b> 70.0° / 126.0°  <b>Efficiency</b> 94 %  <b>Peak intensity</b> 0.6 cd/lm  <b>LEDs/each optic</b> 1  <b>Light colour</b> White  <b>Required components:</b> </p>		
 <p> <b>LED</b> J Series 2835  <b>FWHM / FWTM</b> 56.0° / 113.0°  <b>Efficiency</b> 92 %  <b>Peak intensity</b> 0.7 cd/lm  <b>LEDs/each optic</b> 1  <b>Light colour</b> White  <b>Required components:</b> </p>		
 <p> <b>LED</b> J Series 3030  <b>FWHM / FWTM</b> 61.0° / 119.0°  <b>Efficiency</b> 95 %  <b>Peak intensity</b> 0.7 cd/lm  <b>LEDs/each optic</b> 1  <b>Light colour</b> White  <b>Required components:</b> </p>		
 <p> <b>LED</b> J Series 3030  <b>FWHM / FWTM</b> 55.0° / 112.0°  <b>Efficiency</b> 92 %  <b>Peak intensity</b> 0.7 cd/lm  <b>LEDs/each optic</b> 1  <b>Light colour</b> White  <b>Required components:</b> </p>		



#### OPTICAL RESULTS (MEASURED):

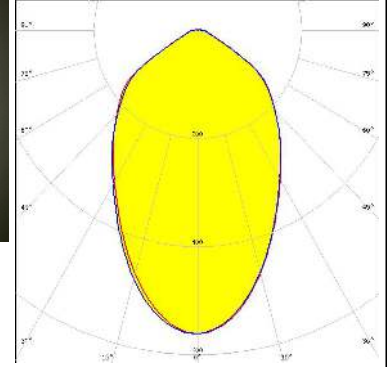
##### CREE → LED

LED XD16  
 FWHM / FWTM 71.0° / 126.0°  
 Efficiency 92 %  
 Peak intensity 0.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



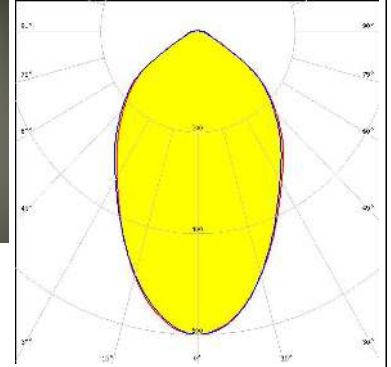
##### CREE → LED

LED XP-G3  
 FWHM / FWTM 71.0° / 127.0°  
 Efficiency 94 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



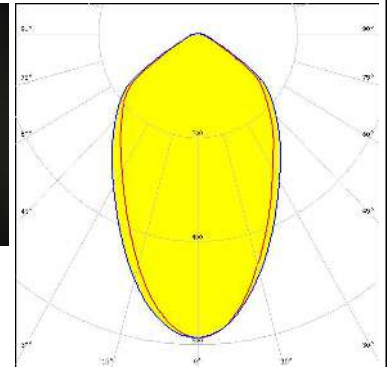
##### CREE → LED

LED XT-E  
 FWHM / FWTM 70.0° / 126.0°  
 Efficiency 94 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:


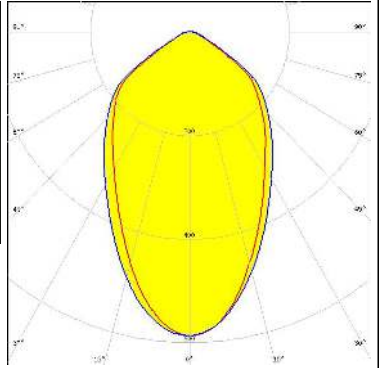

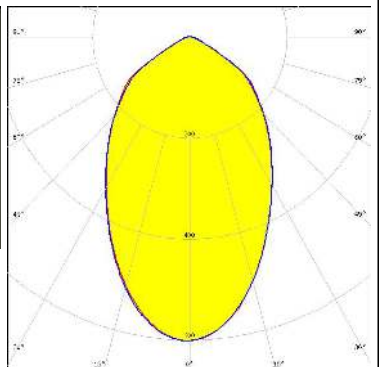

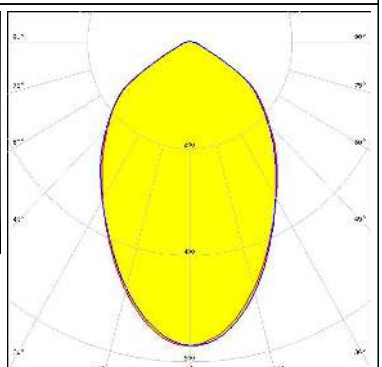
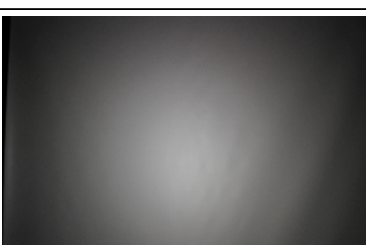
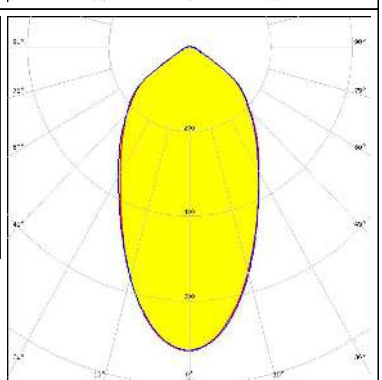


##### NICHIA

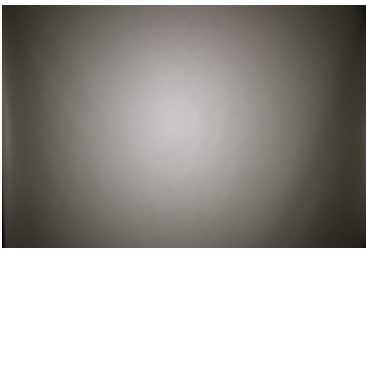
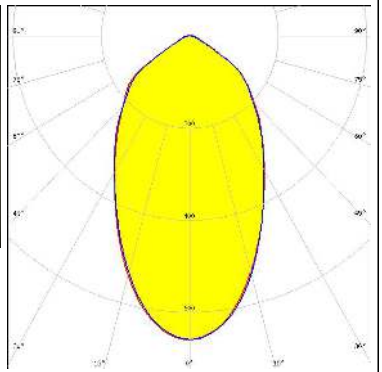

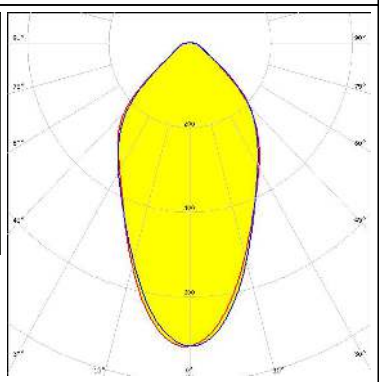

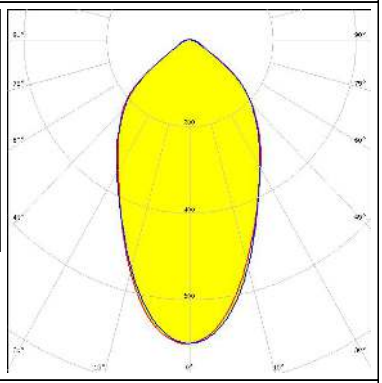

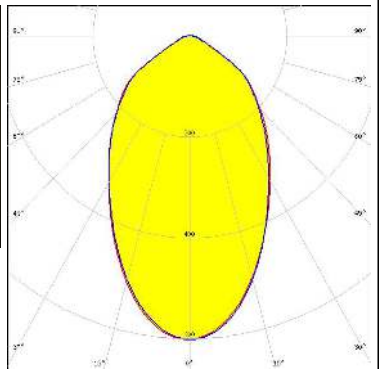
LED NF2W585AR  
 FWHM / FWTM 68.0° / 126.0°  
 Efficiency 93 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED NF2W585AR            FWHM / FWTM 67.0° / 125.0°            Efficiency 93 %            Peak intensity 0.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW219F            FWHM / FWTM 69.0° / 125.0°            Efficiency 94 %            Peak intensity 0.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW319B            FWHM / FWTM 74.0° / 126.0°            Efficiency 94 %            Peak intensity 0.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>OSRAM</b>  <small>Opto Semiconductors</small></p> <p>LED OSCONIQ S 3030 (QSLR31)            FWHM / FWTM 57.0° / 118.0°            Efficiency 94 %            Peak intensity 0.7 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		

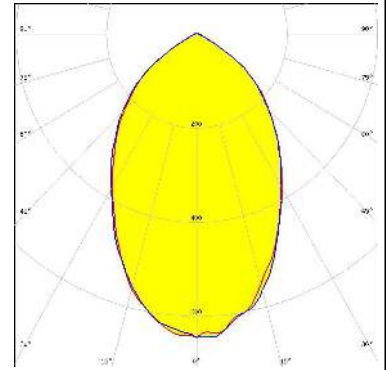
#### OPTICAL RESULTS (MEASURED):

<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM 62.0° / 122.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SAMSUNG</b></p> <p>LED HiLOM SC28 (LH181B)</p> <p>FWHM / FWTM 57.0° / 111.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SAMSUNG</b></p> <p>LED HiLOM SM28 (LM301B)</p> <p>FWHM / FWTM 58.0° / 115.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 0.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SECO</b> SEOUL SEMICONDUCTOR</p> <p>LED Z5M3</p> <p>FWHM / FWTM 67.0° / 125.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

#### OPTICAL RESULTS (SIMULATED):

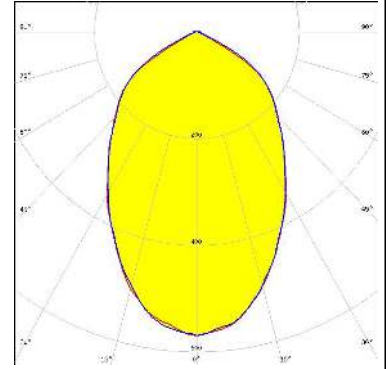
##### CREE LED

LED J Series 5050 Round LES  
 FWHM / FWTM 70.0° / 120.0°  
 Efficiency 95 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



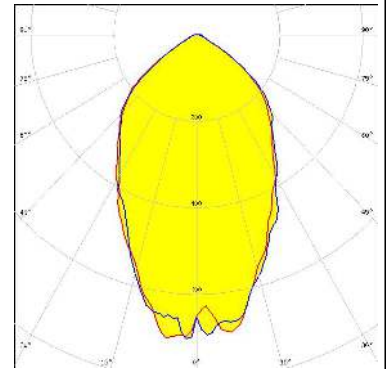
##### CREE LED

LED XP-G2 HE  
 FWHM / FWTM 74.0° / 126.0°  
 Efficiency 95 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



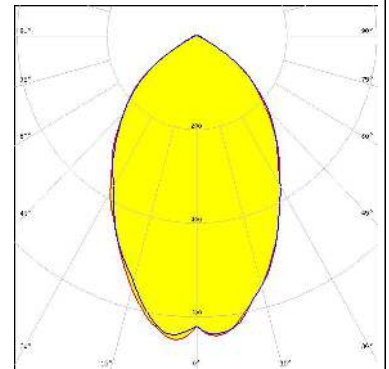
##### LUMILEDS

LED LUXEON 3030 2D (Round LES)  
 FWHM / FWTM 58.0° / 118.0°  
 Efficiency 92 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



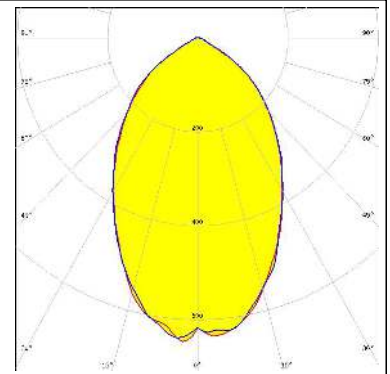
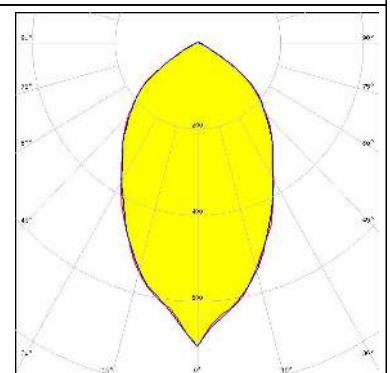
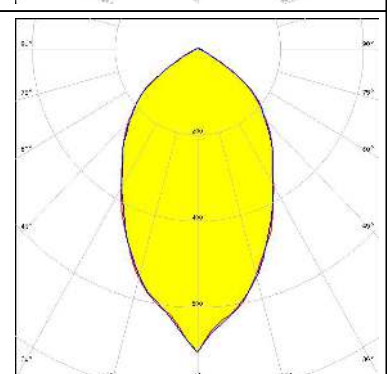
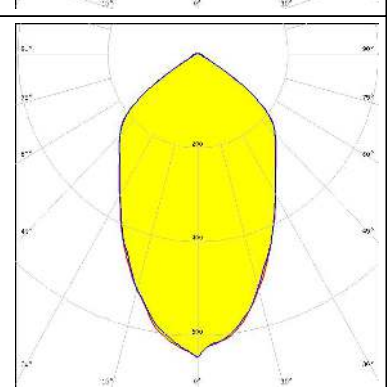
##### LUMILEDS

LED LUXEON 5050 Round LES  
 FWHM / FWTM 69.0° / 120.0°  
 Efficiency 94 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

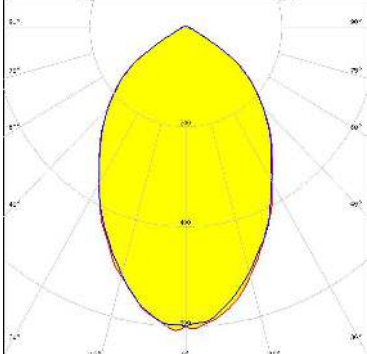
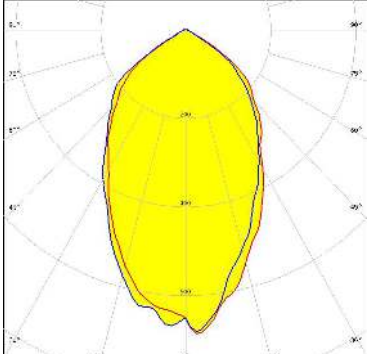
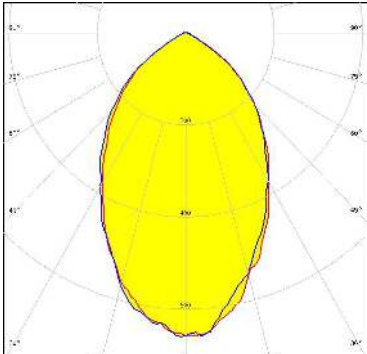
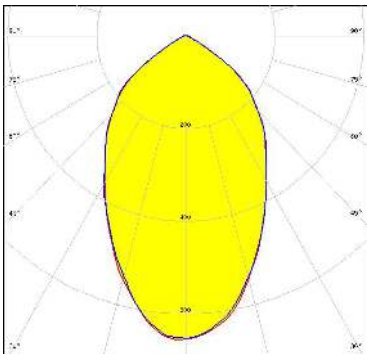




#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Square LES</p> <p>FWHM / FWTM 70.0° / 120.0°</p> <p>Efficiency 95 %</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>NICHIA</b></p> <p>LED NF2x757G</p> <p>FWHM / FWTM 63.0° / 119.0°</p> <p>Efficiency 94 %</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>NICHIA</b></p> <p>LED NF2x757G</p> <p>FWHM / FWTM 63.0° / 119.0°</p> <p>Efficiency 94 %</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>NICHIA</b></p> <p>LED NVSxE21A</p> <p>FWHM / FWTM 65.0° / 118.0°</p> <p>Efficiency 93 %</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 (SIMULATED):

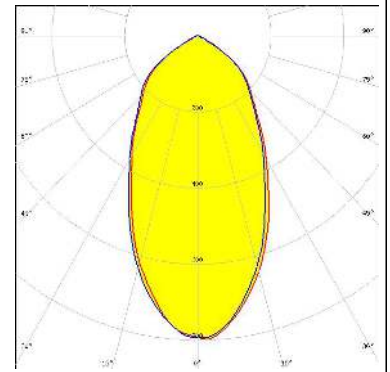
<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C            FWHM / FWTM 73.0° / 122.0°            Efficiency 95 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Duris S5 (2 chip)            FWHM / FWTM 64.0° / 119.0°            Efficiency 94 %            Peak intensity 1 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Duris S8            FWHM / FWTM 67.0° / 118.0°            Efficiency 94 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSCONIQ C 2424            FWHM / FWTM 68.0° / 118.0°            Efficiency 95 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

#### OSRAM

Opto Semiconductors

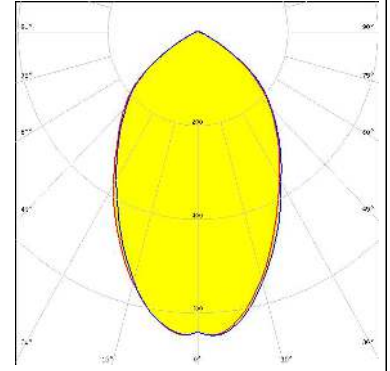
LED OSCONIQ P 3030  
 FWHM / FWTM 56.0° / 119.0°  
 Efficiency 96 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

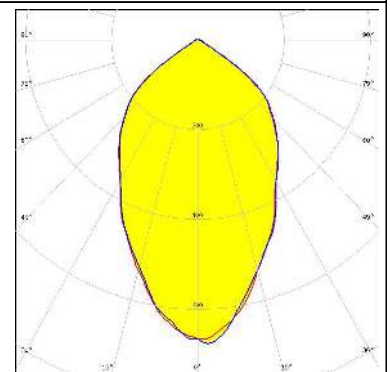
Opto Semiconductors

LED OSCONIQ P 3737 (2W version)  
 FWHM / FWTM 68.0° / 121.0°  
 Efficiency 94 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



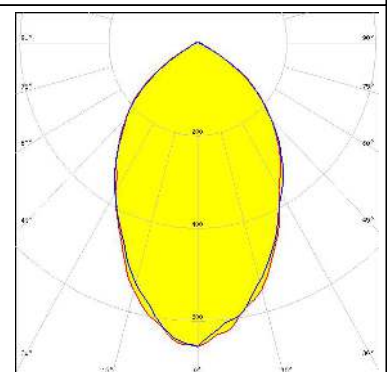
#### SAMSUNG

LED LH181B  
 FWHM / FWTM 65.0° / 117.0°  
 Efficiency 94 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### SAMSUNG

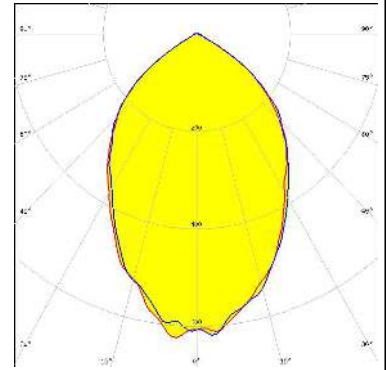
LED LH351B  
 FWHM / FWTM 71.0° / 119.0°  
 Efficiency 94 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

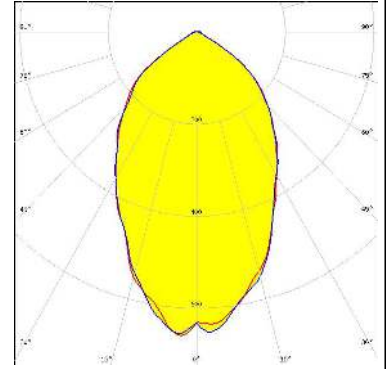
#### SAMSUNG

LED LH351C  
 FWHM / FWTM 75.0° / 119.0°  
 Efficiency 94 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



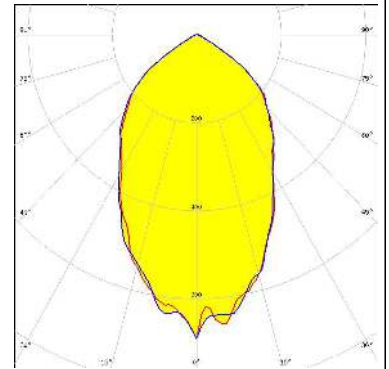
#### SAMSUNG

LED LM28xB Series  
 FWHM / FWTM 66.0° / 119.0°  
 Efficiency 94 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



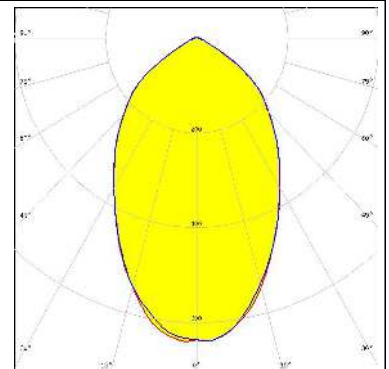
#### SAMSUNG

LED LM301B  
 FWHM / FWTM 63.0° / 118.0°  
 Efficiency 94 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:




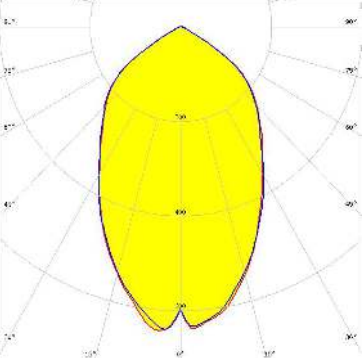

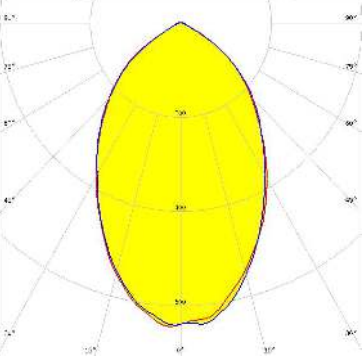

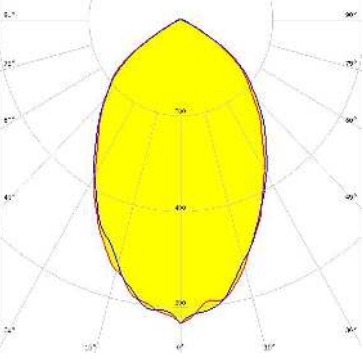

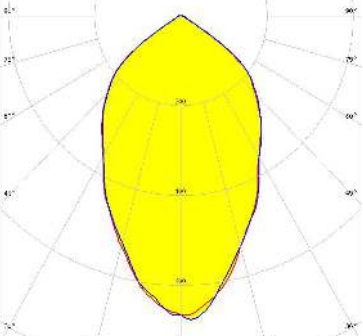
SEOUL SEMICONDUCTOR

LED SEOUL 3030  
 FWHM / FWTM 69.0° / 120.0°  
 Efficiency 95 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:





#### OPTICAL RESULTS (SIMULATED):

<p> SEOU SEMICONDUCTOR</p> <p>LED: SEOUL DC 3030</p> <p>FWHM / FWTM: 68.0° / 120.0°</p> <p>Efficiency: 96 %</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> SEOU SEMICONDUCTOR</p> <p>LED: SEOUL DC 5050 6V</p> <p>FWHM / FWTM: 69.0° / 120.0°</p> <p>Efficiency: 94 %</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> SEOU SEMICONDUCTOR</p> <p>LED: Z5M1/Z5M2</p> <p>FWHM / FWTM: 70.0° / 122.0°</p> <p>Efficiency: 94 %</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> SEOU SEMICONDUCTOR</p> <p>LED: Z8Y19</p> <p>FWHM / FWTM: 65.0° / 117.0°</p> <p>Efficiency: 94 %</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 (SIMULATED):

<p> SEOUL SEMICONDUCTOR</p> <p>LED: Z8Y22</p> <p>FWHM / FWTM: 76.0° / 130.0°</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>	
<p> SEOUL SEMICONDUCTOR</p> <p>LED: Z8Y22T</p> <p>FWHM / FWTM: 69.0° / 118.0°</p> <p>Efficiency: 94 %</p> <p>Peak intensity: 0.6 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	

#### GENERAL INFORMATION:

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

#### MATERIALS:

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