

## FLORENCE-Z90

~90° wide beam. Ideal for retail and industrial lighting. Can be used for general office lighting with shade.

### SPECIFICATION:

Dimensions	61.0 x 286.0 mm
Height	8.5 mm
Fastening	screw
ROHS compliant	yes ⓘ

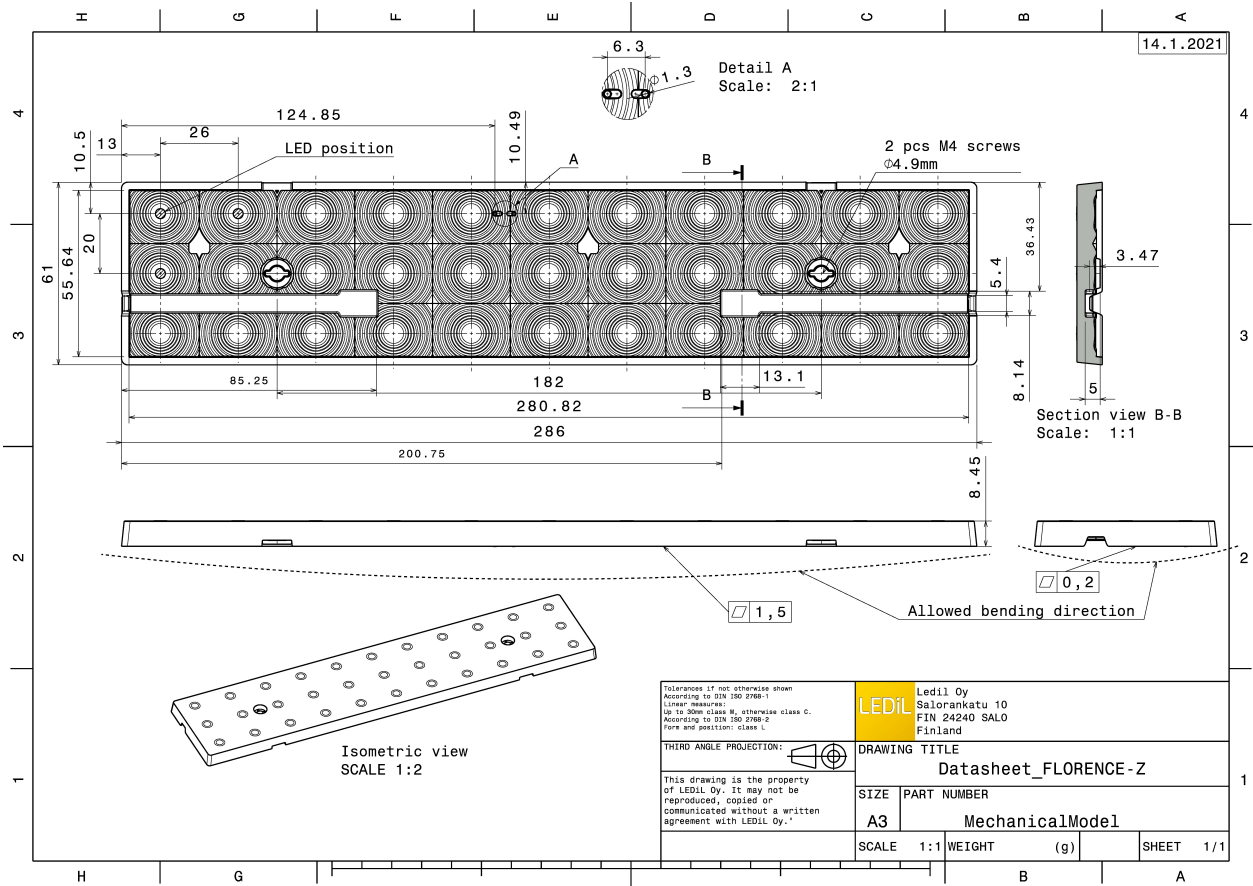
### MATERIALS:

Component	Type	Material	Colour	Finish
FLORENCE-Z90	Linear lens	PMMA	clear	




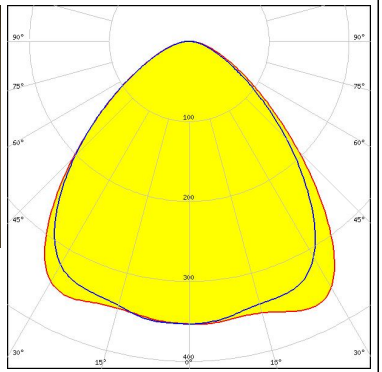

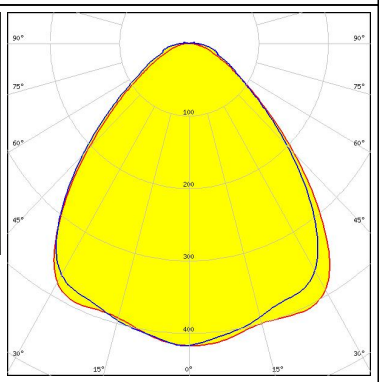

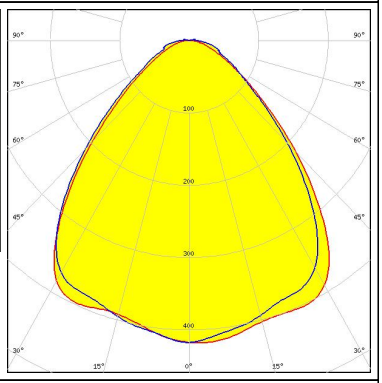

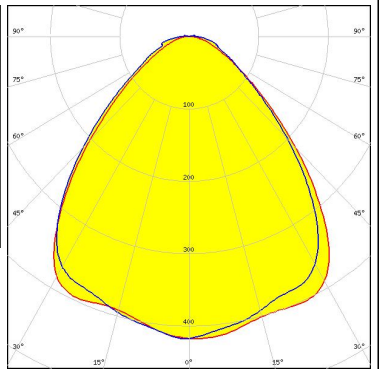
### ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
F13853_FLORENCE-Z90 » Box size: 398 x 298 x 140 mm	72	18	6	7.8


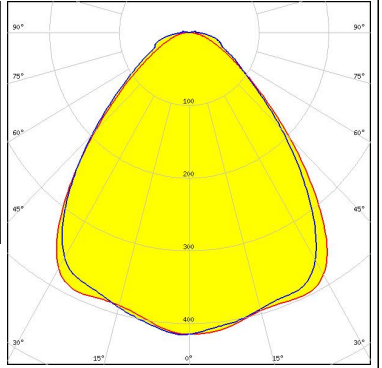
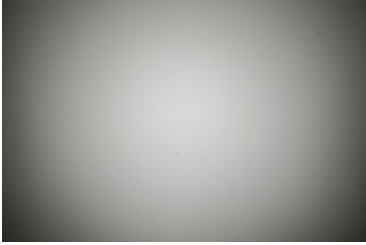
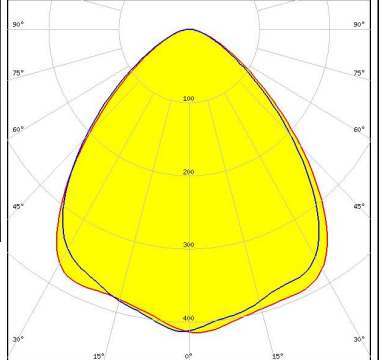
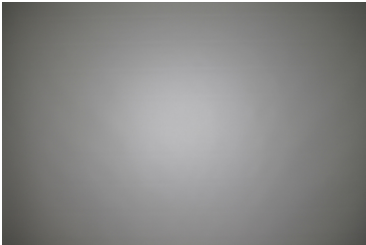
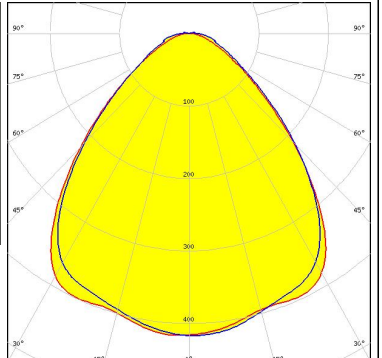
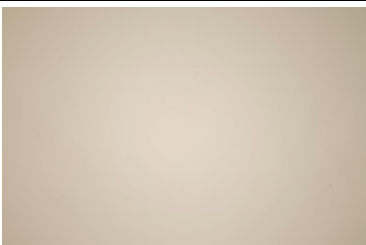
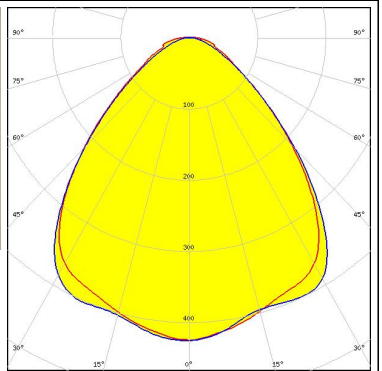


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

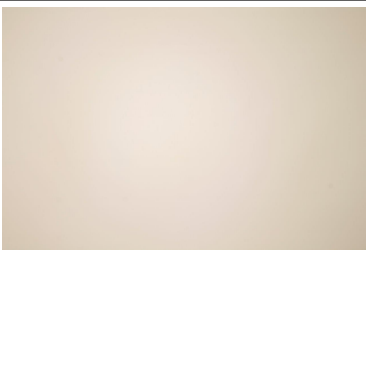
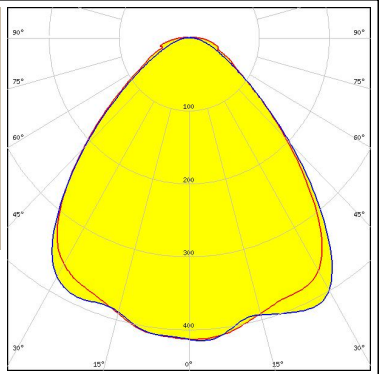

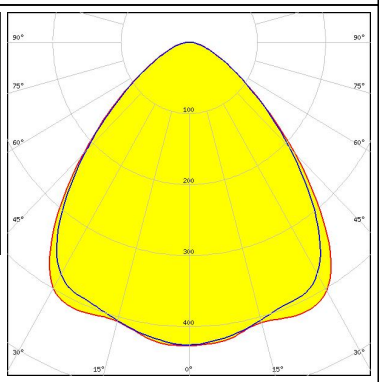

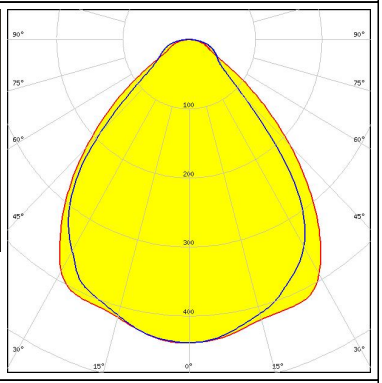

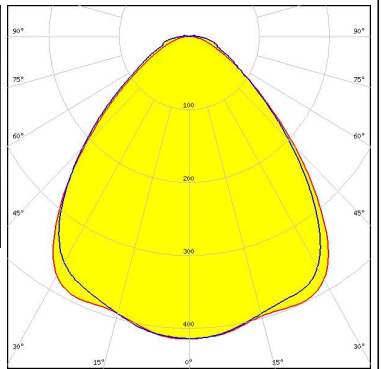
#### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> LED</p> <p>LED XH-B/G            FWHM / FWTM 95.0° / 140.0°            Efficiency 82 %            Peak intensity 0.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>FRANK</b></p> <p>LED LED-Modul 280 x 55 mm 1B            FWHM / FWTM 90.0° / 134.0 + 144.0°            Efficiency 92 %            Peak intensity 0.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>FRANK</b></p> <p>LED LED-Modul 280 x 55 mm 1F            FWHM / FWTM 90.0° / 133.0 + 144.0°            Efficiency 92 %            Peak intensity 0.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>FRANK</b></p> <p>LED LED-Modul 280 x 55 mm 2F            FWHM / FWTM 90.0° / 133.0 + 144.0°            Efficiency 92 %            Peak intensity 0.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		

#### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON 3030 2D (Square LES)</p> <p>FWHM / FWTM 88.0 + 87.0° / 133.0 + 153.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON 3535 2D</p> <p>FWHM / FWTM 92.0° / 135.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 0.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON 3535L HE</p> <p>FWHM / FWTM 92.0° / 139.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 0.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON XR-3535L (L202 - xxxx033C30001)</p> <p>FWHM / FWTM 91.0° / 134.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 0.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

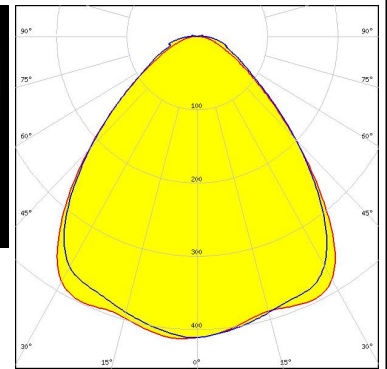
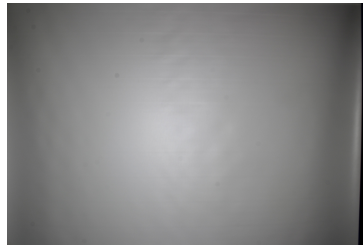
#### OPTICAL RESULTS (MEASURED):

<p><b>LUMINUS</b></p> <p>LED MP-2016            FWHM / FWTM 90.0° / 140.0°            Efficiency 91 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NF2x757D            FWHM / FWTM 92.0° / 134.0°            Efficiency 90 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NFSW757H            FWHM / FWTM 90.0 + 83.0° / 122.0 + 131.0°            Efficiency 87 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C14646_FLORENCE-3R-SHD-WHT</p>		
<p><b>NICHIA</b></p> <p>LED NFSW757H            FWHM / FWTM 91.0 + 90.0° / 134.0 + 145.0°            Efficiency 92 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		

#### OPTICAL RESULTS (MEASURED):

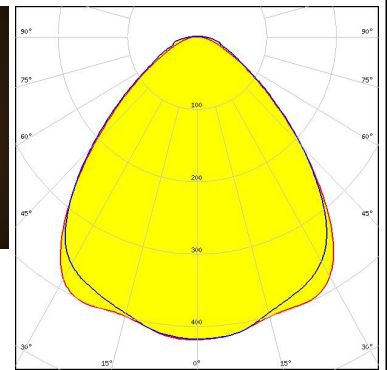
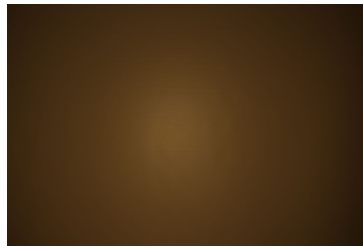
#### OSRAM

LED PL-BAR-G3 1100 280x55  
 FWHM / FWTM 90.0° / 140.0°  
 Efficiency 92 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

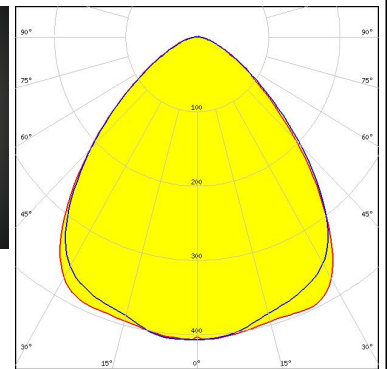
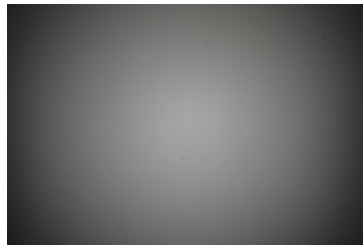
LED PLG2-BAR-1100-xxx-280x55-DC  
 FWHM / FWTM 92.0° / 138.0°  
 Efficiency 92 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

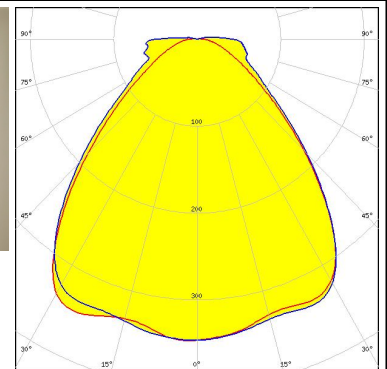
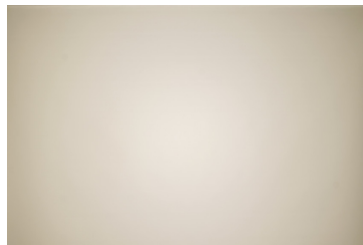
LED Duris E5  
 FWHM / FWTM 92.0° / 135.0°  
 Efficiency 88 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

LED Duris S2  
 FWHM / FWTM 95.0° / 165.0°  
 Efficiency 90 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

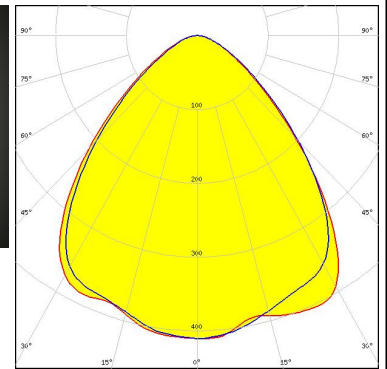
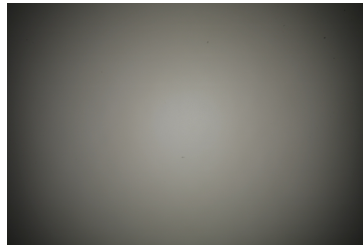


#### OPTICAL RESULTS (MEASURED):

#### OSRAM

Opto Semiconductors

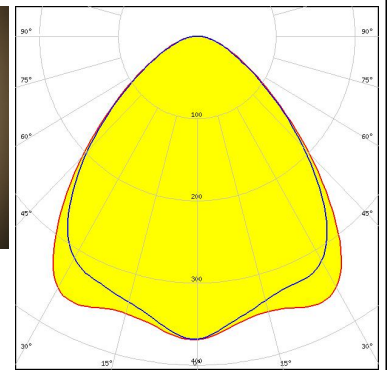
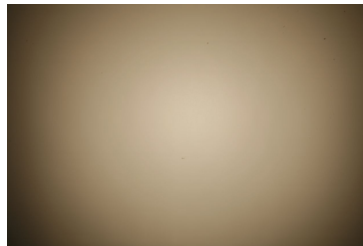
LED Duris S5 (Single chip)  
 FWHM / FWTM 91.0° / 133.0°  
 Efficiency 88 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

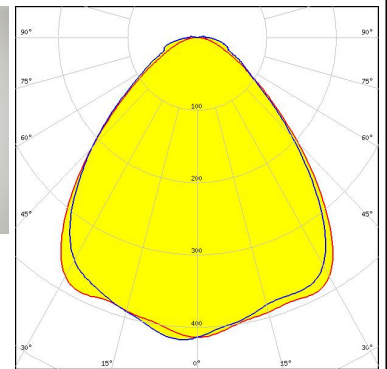
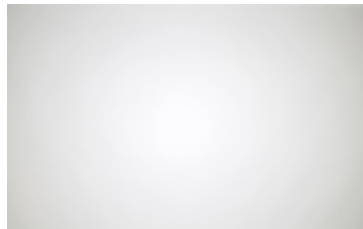
LED OSCONIQ P 2226  
 FWHM / FWTM 94.0° / 140.0°  
 Efficiency 83 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

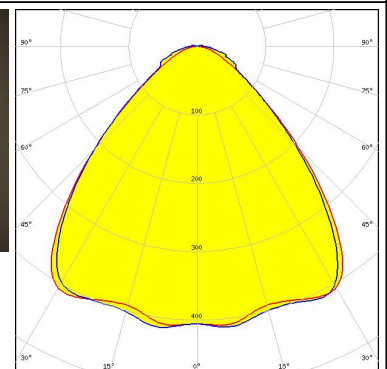
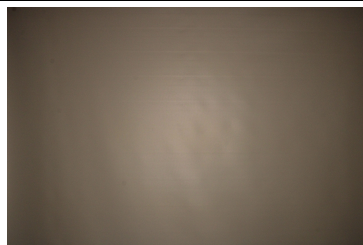
Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3  
 FWHM / FWTM 91.0° / 145.0°  
 Efficiency 93 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHILIPS

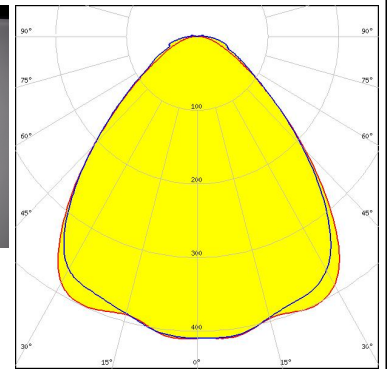
LED Fortimo LED Line VO 1ft MF 3R HV5  
 FWHM / FWTM 90.0° / 130.0 + 146.0°  
 Efficiency 94 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

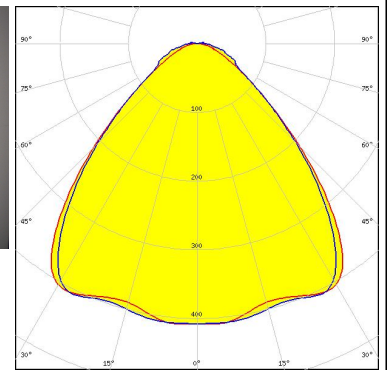
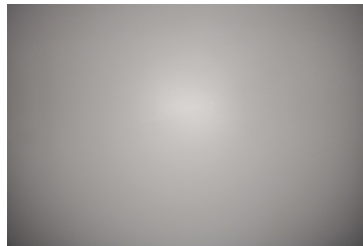
#### PHILIPS

LED Fortimo LED Line 1ft 650lm 3R HV4 & LV4  
 FWHM / FWTM 90.0° / 142.0°  
 Efficiency 93 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



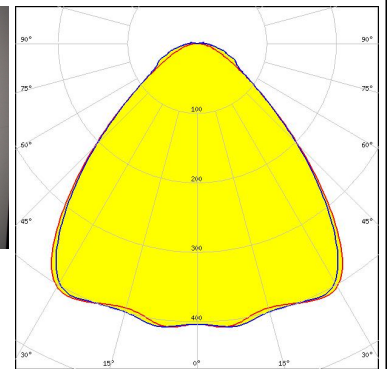
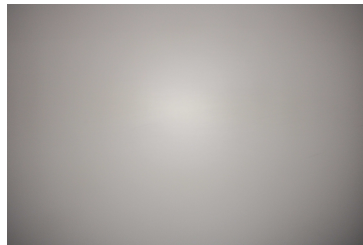
#### PHILIPS

LED Fortimo LED Line 1ft HF 3R HV5  
 FWHM / FWTM 90.0° / 139.0°  
 Efficiency 94 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



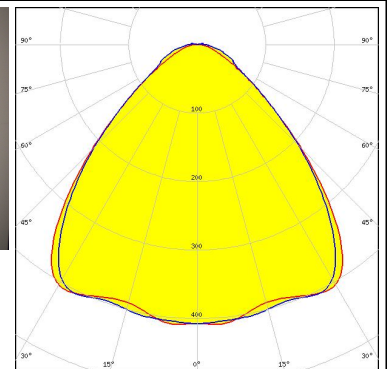
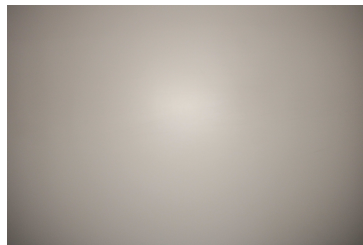
#### PHILIPS

LED Fortimo LED Line 1ft LF 3R HV5 & LV5  
 FWHM / FWTM 90.0° / 140.0°  
 Efficiency 94 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHILIPS

LED Fortimo LED Line 1ft MF 3R HV5 & LV5  
 FWHM / FWTM 91.0° / 138.0°  
 Efficiency 94 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

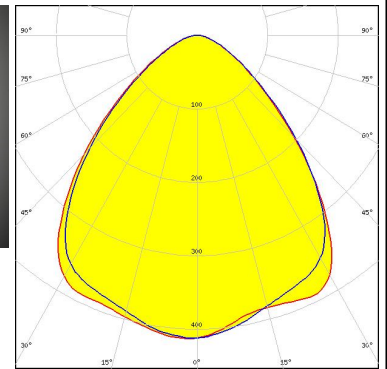




#### OPTICAL RESULTS (MEASURED):

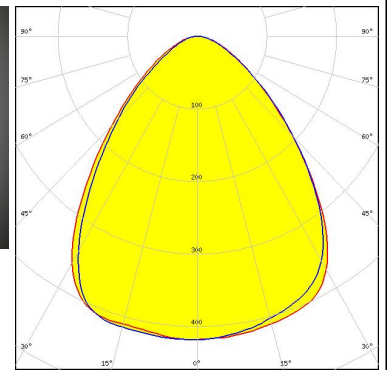
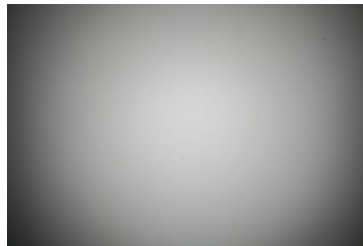
### SAMSUNG

LED LM231 A/B  
FWHM / FWTM 91.0° / 134.0°  
Efficiency 88 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



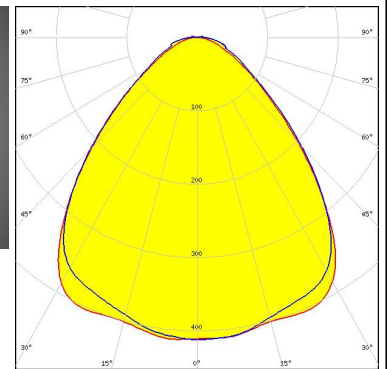
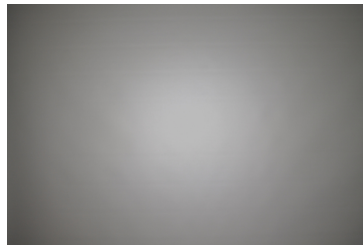
### SAMSUNG

LED LM561B  
FWHM / FWTM 86.0° / 133.0°  
Efficiency 85 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



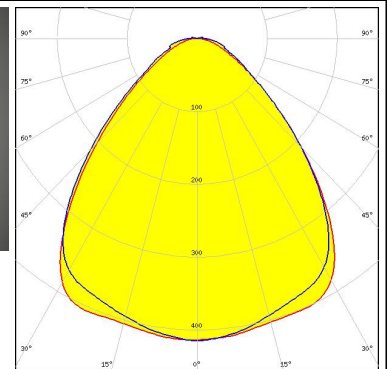
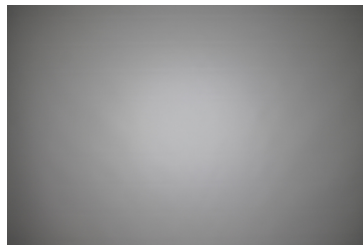
### SAMSUNG

LED LM561B Plus  
FWHM / FWTM 92.0° / 141.0°  
Efficiency 93 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



### SAMSUNG

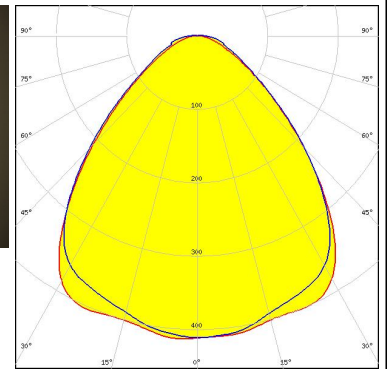
LED LM561C  
FWHM / FWTM 92.0° / 140.0°  
Efficiency 93 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### OPTICAL RESULTS (MEASURED):

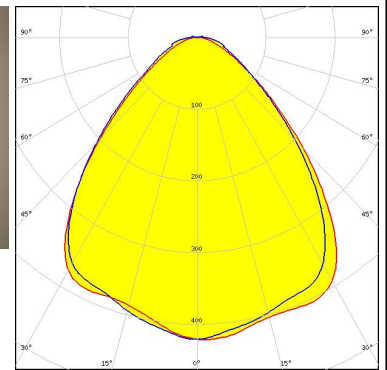
### SAMSUNG

LED LT-R286A  
 FWHM / FWTM 93.0° / 140.0°  
 Efficiency 93 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



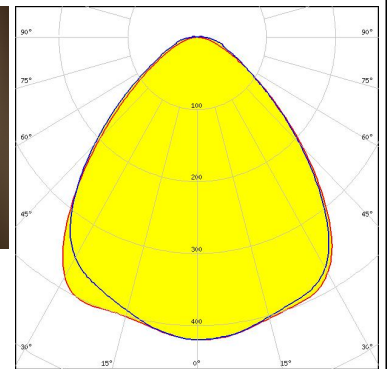
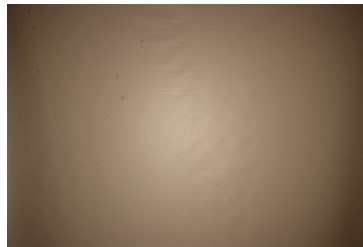
SEOUL SEMICONDUCTOR

LED SEOUL 3030  
 FWHM / FWTM 91.0° / 138.0°  
 Efficiency 91 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



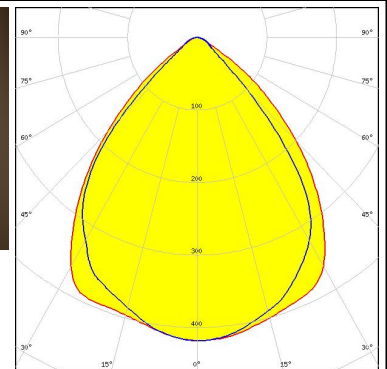
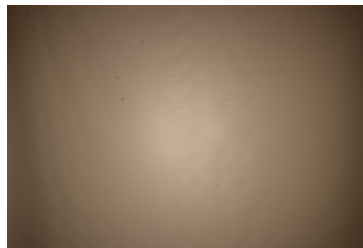
SEOUL SEMICONDUCTOR

LED SEOUL 5630C  
 FWHM / FWTM 90.0° / 136.0°  
 Efficiency 91 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

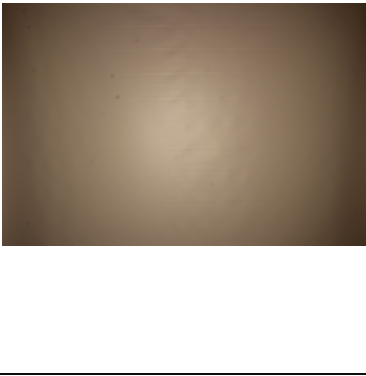
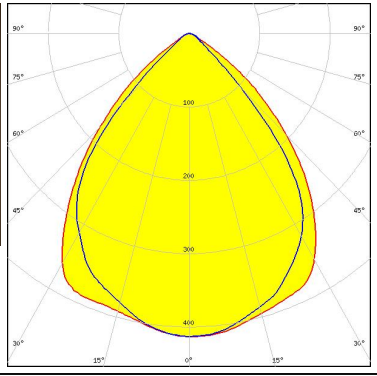
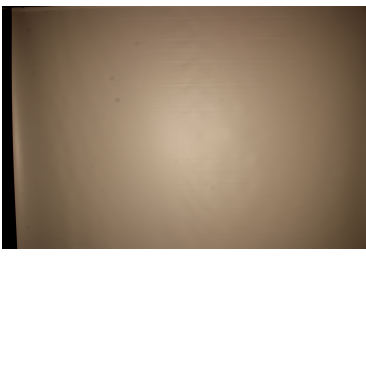
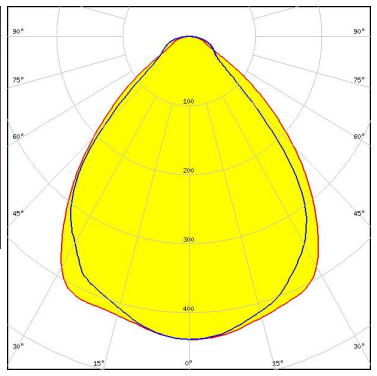

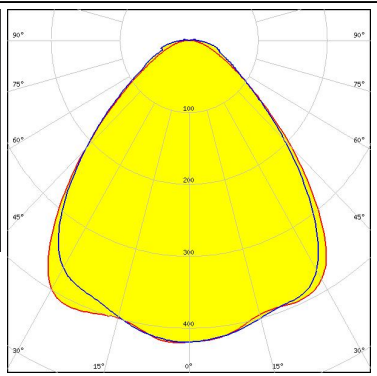
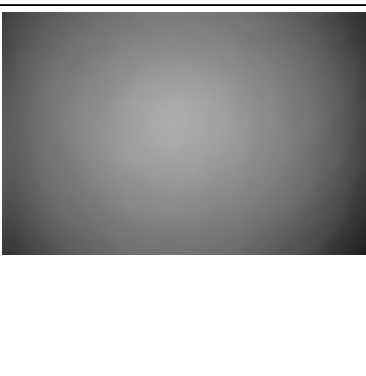
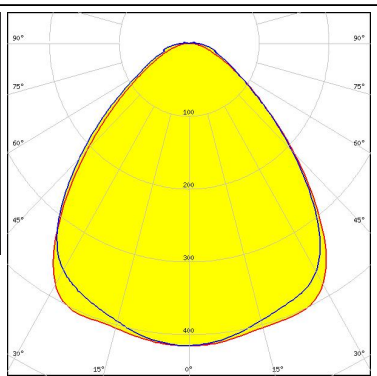


SEOUL SEMICONDUCTOR

LED SEOUL 5630C  
 FWHM / FWTM 87.0 + 81.0° / 116.0 + 103.0°  
 Efficiency 74 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14453\_FLORENCE-3R-SHD-GR



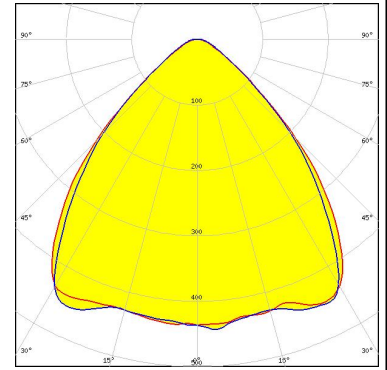
#### OPTICAL RESULTS (MEASURED):

<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED: SEOUL 5630C            FWHM / FWTM: 87.0 + 81.0° / 115.0 + 101.0°            Efficiency: 71 %            Peak intensity: 0.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:            C14592_FLORENCE-3R-SHD-BLK</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED: SEOUL 5630C            FWHM / FWTM: 89.0 + 83.0° / 121.0 + 123.0°            Efficiency: 86 %            Peak intensity: 0.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:            C14646_FLORENCE-3R-SHD-WHT</p>		
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED: SEOUL DC 3030            FWHM / FWTM: 90.0° / 140.0°            Efficiency: 93 %            Peak intensity: 0.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		
<p><b>TRIDONIC</b></p> <p>LED: LLE G2 55x280mm 2000lm            FWHM / FWTM: 91.0° / 135.0°            Efficiency: 93 %            Peak intensity: 0.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>		

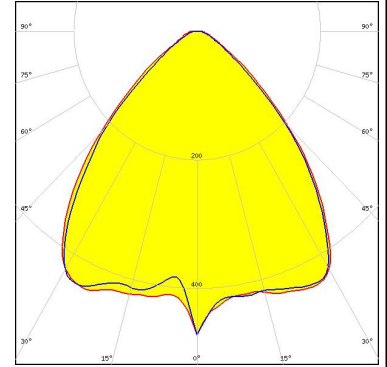
#### OPTICAL RESULTS (SIMULATED):



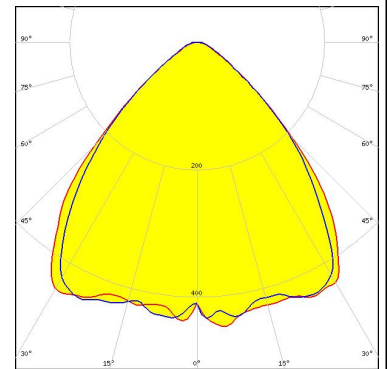
LED J Series 5050 Round LES  
 FWHM / FWTM 88.0° / 120.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



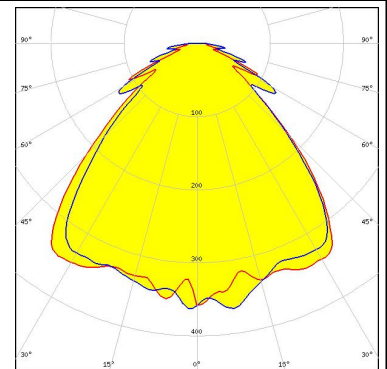
LED J Series 5050C 6V E Class  
 FWHM / FWTM 87.0° / 122.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



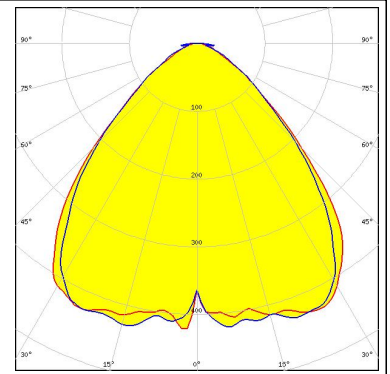
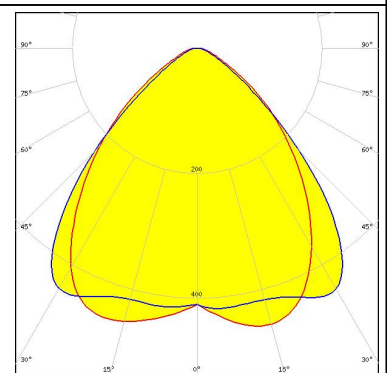
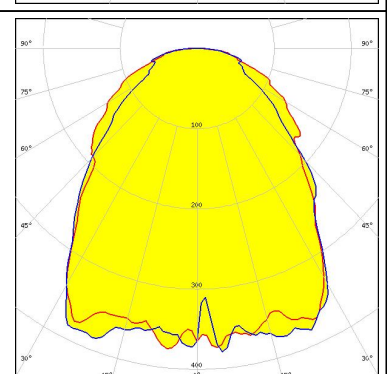
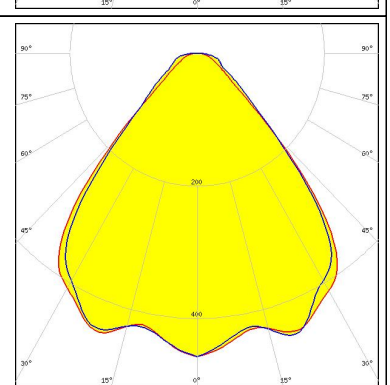
LED LUXEON 5050 Round LES  
 FWHM / FWTM 90.0° / 120.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED NF2x757G  
 FWHM / FWTM 90.0° / 146.0°  
 Efficiency 80 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

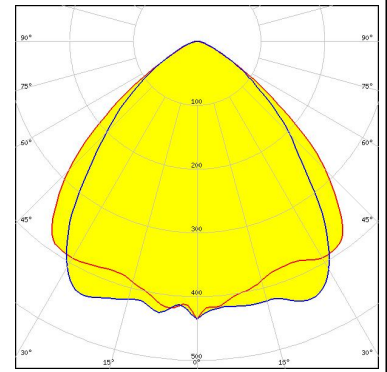
<p><b>NICHIA</b></p> <p>LED: NFMW48xA            FWHM / FWTM: 89.0° / 130.0°            Efficiency: 92 %            Peak intensity: 0.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NFSx757G            FWHM / FWTM: 86.0 + 90.0° / 128.0 + 122.0°            Efficiency: 92 %            Peak intensity: 0.5 cd/lm            LEDs/each optic: 2            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxE21A            FWHM / FWTM: 90.0° / 163.0°            Efficiency: 94 %            Peak intensity: 0.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>OSRAM</b>  <small>Opto Semiconductors</small></p> <p>LED: Duris E 2835            FWHM / FWTM: 85.0° / 122.0°            Efficiency: 87 %            Peak intensity: 0.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

##### OSRAM

Opto Semiconductors

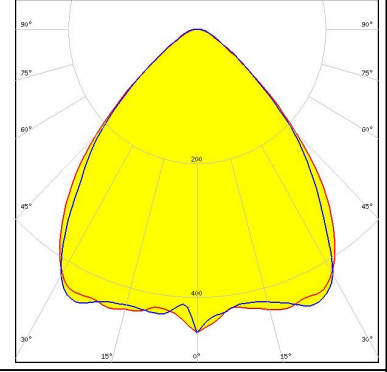
LED Duris E 2835  
 FWHM / FWTM 86.0 + 87.0° / 120.0 + 126.0°  
 Efficiency 92 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 2  
 Light colour White  
 Required components:



##### OSRAM

Opto Semiconductors

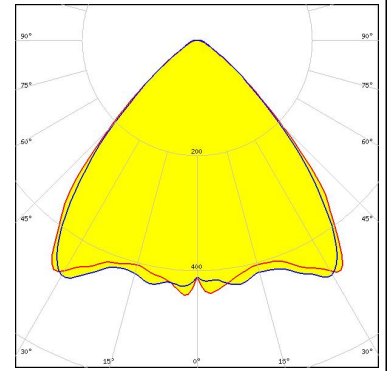
LED Duris S8  
 FWHM / FWTM 89.0° / 121.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### OSRAM

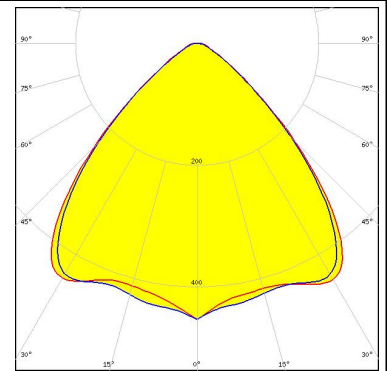
Opto Semiconductors

LED OSCONIQ C 2424  
 FWHM / FWTM 88.0° / 114.0°  
 Efficiency 92 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### SAMSUNG

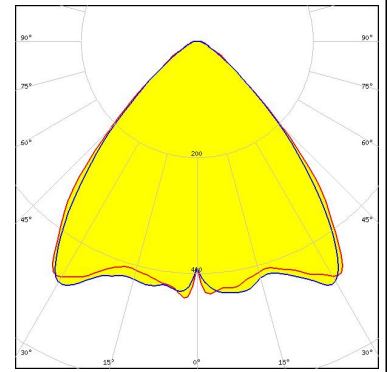
LED LM28xB Series  
 FWHM / FWTM 90.0° / 120.0°  
 Efficiency 93 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

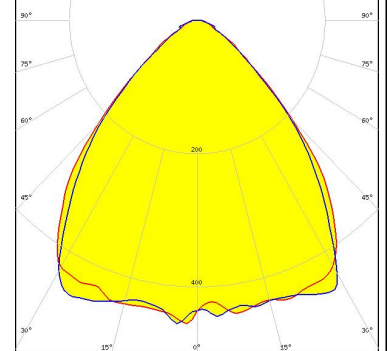
### SAMSUNG

LED LM301B  
 FWHM / FWTM 88.0° / 119.0°  
 Efficiency 92 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



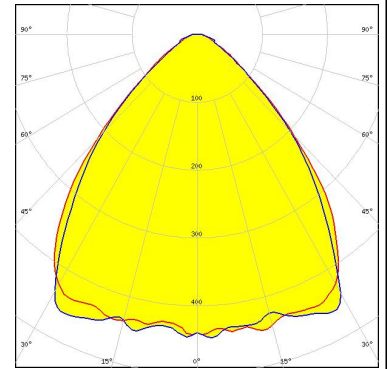
### SAMSUNG

LED LM301B  
 FWHM / FWTM 88.0° / 122.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 2  
 Light colour White  
 Required components:



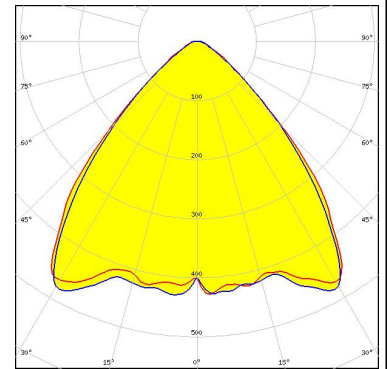
### SAMSUNG

LED LM302Z plus  
 FWHM / FWTM 87.0° / 122.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 2  
 Light colour White  
 Required components:

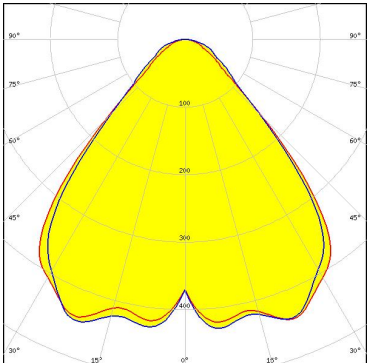
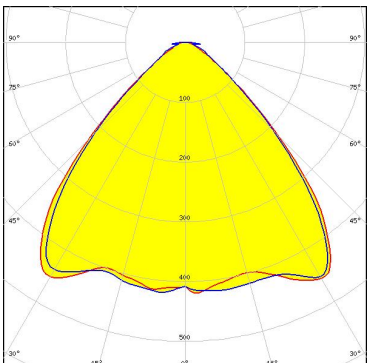
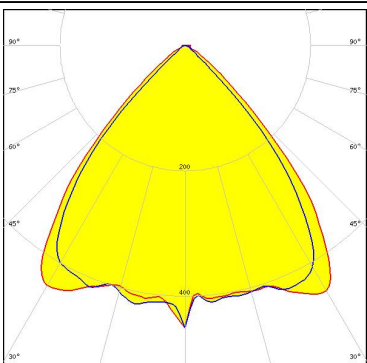


### SAMSUNG

LED LM302Z plus  
 FWHM / FWTM 87.0° / 118.0°  
 Efficiency 92 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

<p><b>SEOL</b> SEOL SEMICONDUCTOR</p> <p>LED: SEOUL 5630D            FWHM / FWTM: 83.0° / 127.0°            Efficiency: 84 %            Peak intensity: 0.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>SEOL</b> SEOL SEMICONDUCTOR</p> <p>LED: SEOUL DC 3030C            FWHM / FWTM: 89.0° / 120.0°            Efficiency: 94 %            Peak intensity: 0.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>TRIDONIC</b></p> <p>LED: LLE G2 55x280mm 2000lm            FWHM / FWTM: 85.0 + 81.0° / 108.0 + 97.0°            Efficiency: 77 %            Peak intensity: 0.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:            C14592_FLORENCE-3R-SHD-BLK</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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