

## LINNEA-90

~90° + 90° wide beam optimized for 1.0 mm metal sheet or profile. Variant made from PC.

### TECHNICAL SPECIFICATIONS:

|                |                 |
|----------------|-----------------|
| Dimensions     | 285.0 x 40.0 mm |
| Height         | 9.5 mm          |
| Fastening      | clips           |
| ROHS compliant | yes ⓘ           |

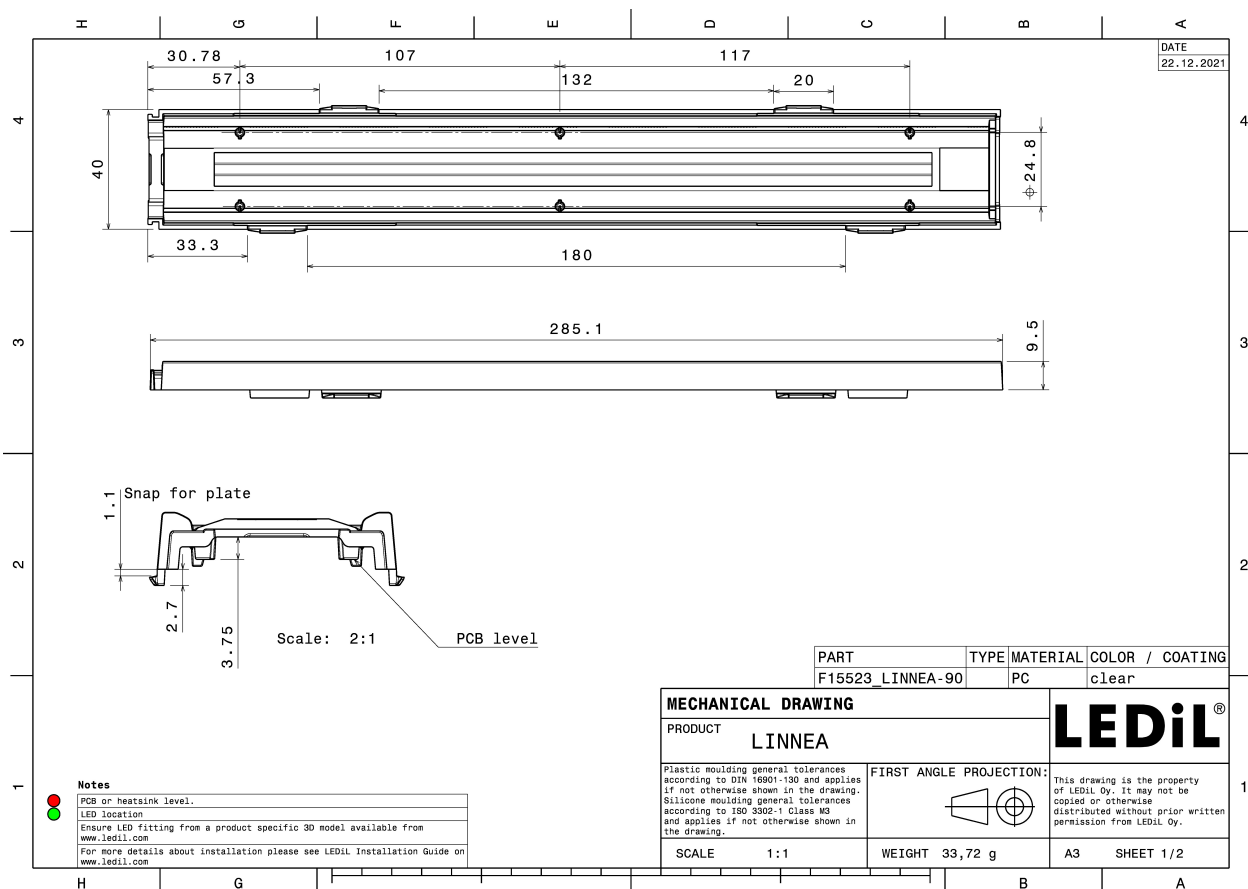
### MATERIAL SPECIFICATIONS:

| Component | Type        | Material | Colour | Finish |
|-----------|-------------|----------|--------|--------|
| LINNEA-90 | Linear lens | PC       | clear  |        |

### ORDERING INFORMATION:

| Component                                          | Qty in box | MOQ | MPQ | Box weight (kg) |
|----------------------------------------------------|------------|-----|-----|-----------------|
| F15523_LINNEA-90<br>» Box size: 398 x 298 x 265 mm | 162        | 36  | 36  | 6.6             |



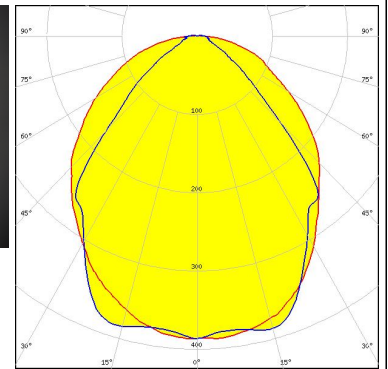
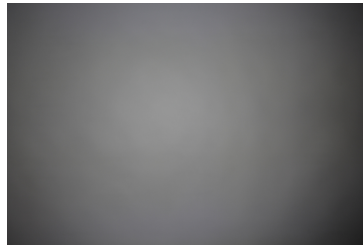


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

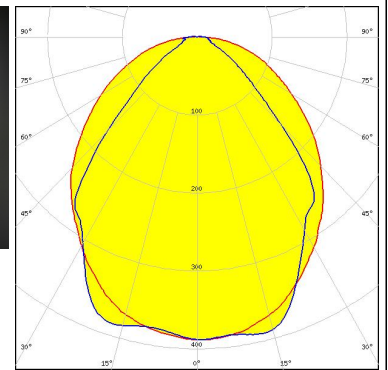
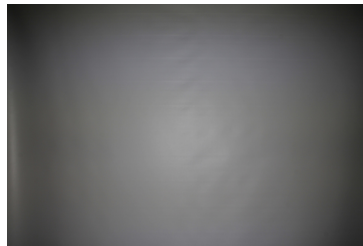
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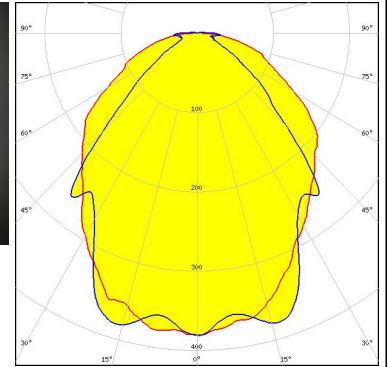
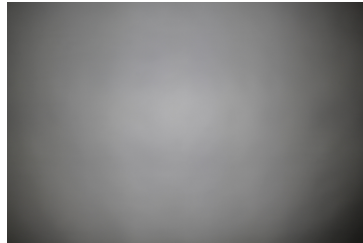
LED CALOSNU405-M7W1  
 FWHM / FWTM 104.0 + 87.0° / 164.0 + 124.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



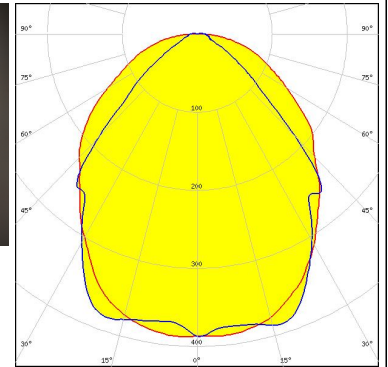
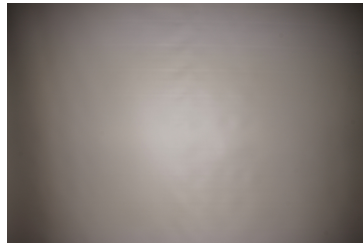
LED CALOSNU410-M7W1  
 FWHM / FWTM 104.0 + 86.0° / 164.0 + 124.0°  
 Efficiency 83 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XP-E  
 FWHM / FWTM 104.0 + 88.0° / 164.0 + 126.0°  
 Efficiency 81 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



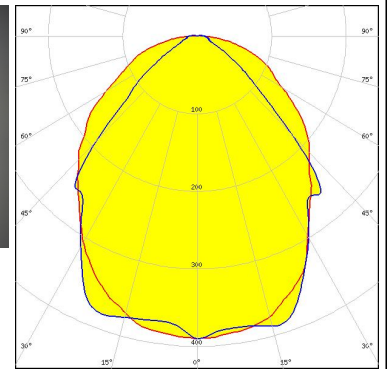
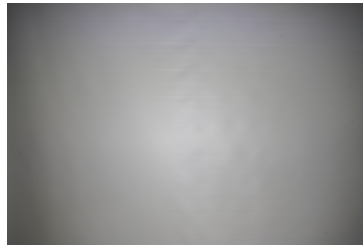
LED L-iC-282-827-865-011A  
 FWHM / FWTM 102.0 + 89.0° / 164.0 + 124.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

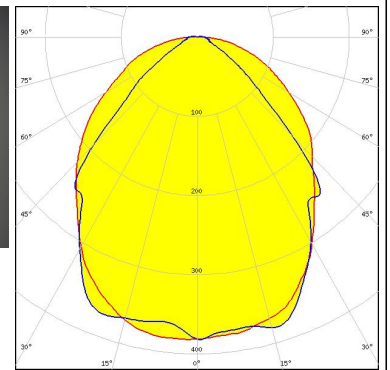
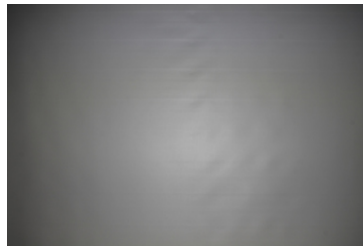
##### Helvar

LED LP-282-840-009A 60/300  
 FWHM / FWTM 100.0 + 89.0° / 163.0 + 125.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



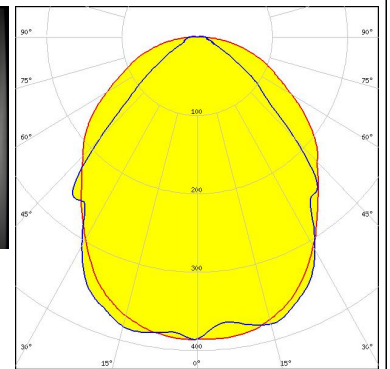
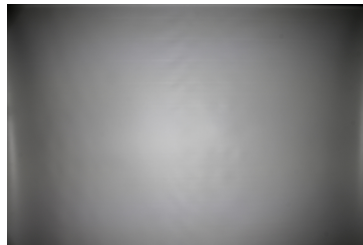
##### Helvar

LED LS-282-840-011A  
 FWHM / FWTM 102.0 + 90.0° / 164.0 + 125.0°  
 Efficiency 81 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

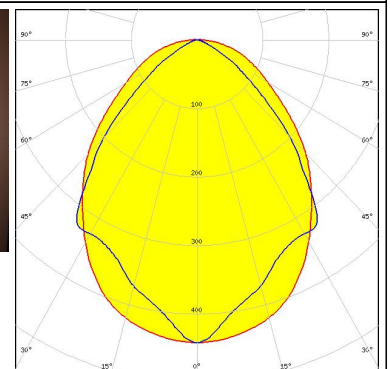
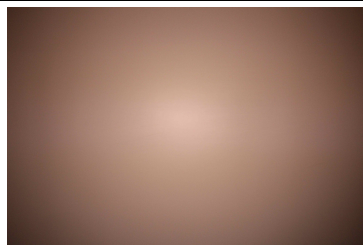


##### Helvar

LED LX-282-840-023A  
 FWHM / FWTM 102.0 + 89.0° / 164.0 + 125.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LinearZ 280-112 Circadian TW  
 FWHM / FWTM 93.0 + 87.0° / 159.0 + 122.0°  
 Efficiency 84 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour Tunable White  
 Required components:

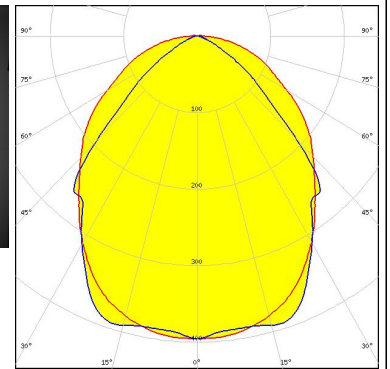
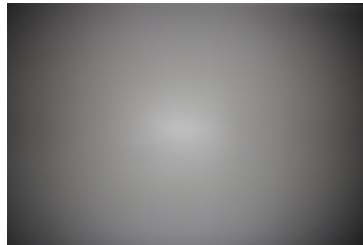




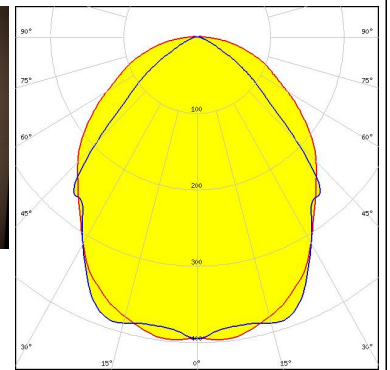
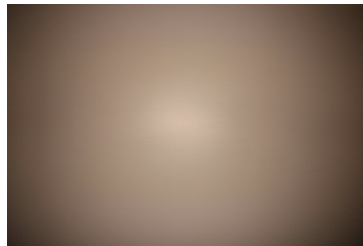
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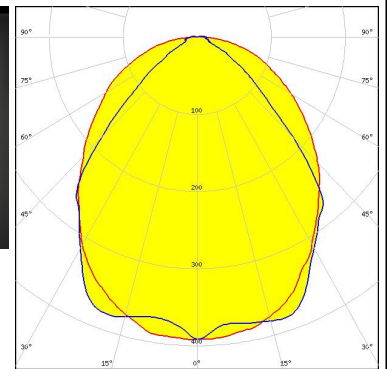
LED LinearZ 280-26  
FWHM / FWTM 101.0 + 89.0° / 164.0 + 124.0°  
Efficiency 83 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



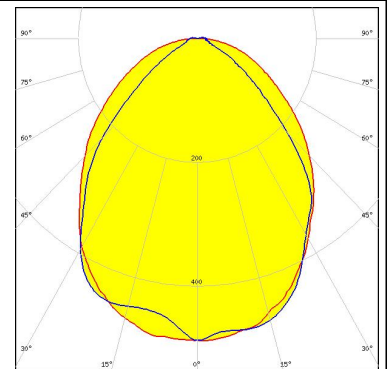
LED LinearZ 280-40 TW  
FWHM / FWTM 101.0 + 89.0° / 163.0 + 123.0°  
Efficiency 83 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour Tunable White  
Required components:



LED LinLED 280x24mm 1100lm 830 2C 30V LINNEA-GC G1  
FWHM / FWTM 88.0 + 100.0° / 125.0 + 164.0°  
Efficiency 83 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



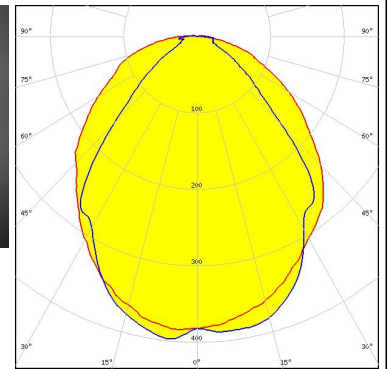
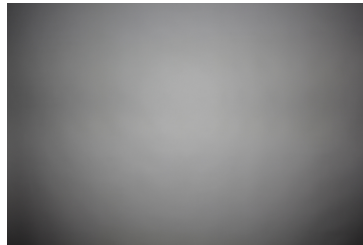
LED NF2x757D  
FWHM / FWTM 86.0 + 99.0° / 125.0 + 159.0°  
Efficiency 0 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



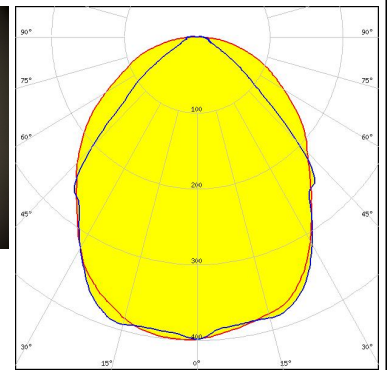
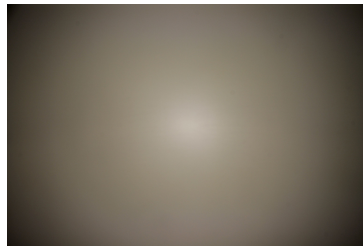
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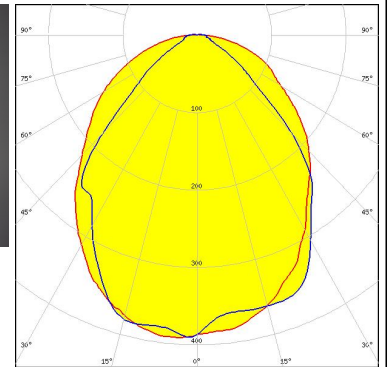
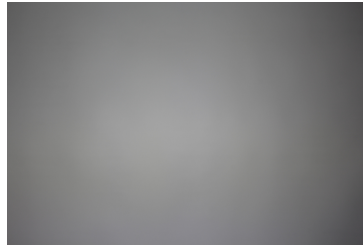
LED NF2x757G  
FWHM / FWTM 105.0 + 85.0° / 165.0 + 125.0°  
Efficiency 83 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



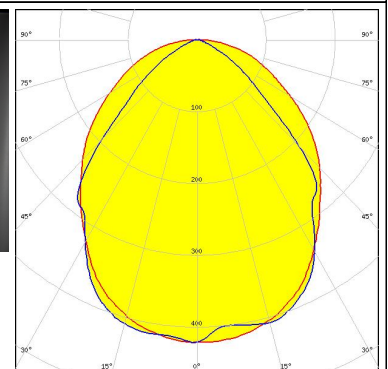
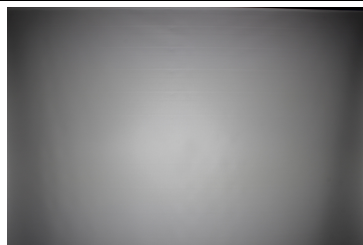
LED NFSW757H  
FWHM / FWTM 100.0 + 90.0° / 163.0 + 125.0°  
Efficiency 85 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



LED NFSx757G  
FWHM / FWTM 98.0 + 88.0° / 162.0 + 125.0°  
Efficiency 81 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



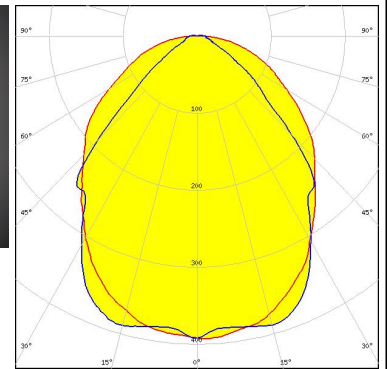
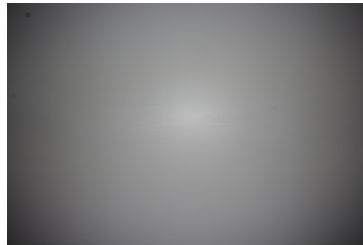
LED PL-LIN-IND-Z1 2800 560x24  
FWHM / FWTM 101.0 + 89.0° / 163.0 + 125.0°  
Efficiency 87 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### PHOTOMETRIC DATA (MEASURED):

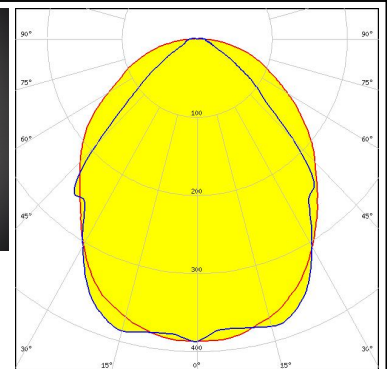
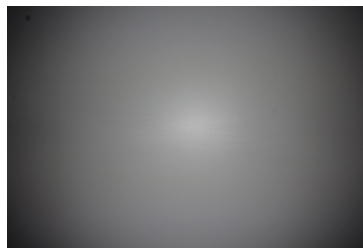
#### OSRAM

LED PL-LIN-Z5 1100 280x20  
 FWHM / FWTM 101.0 + 89.0° / 164.0 + 125.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

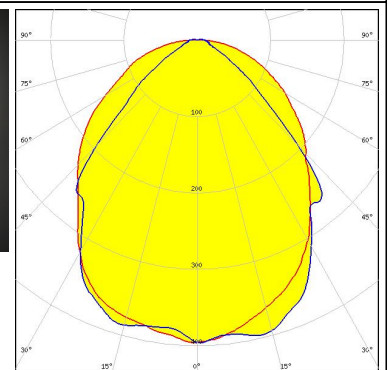
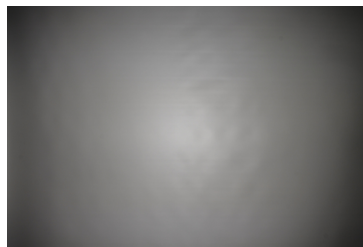
LED PL-LIN-Z5 2000 280x20  
 FWHM / FWTM 101.0 + 89.0° / 164.0 + 125.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

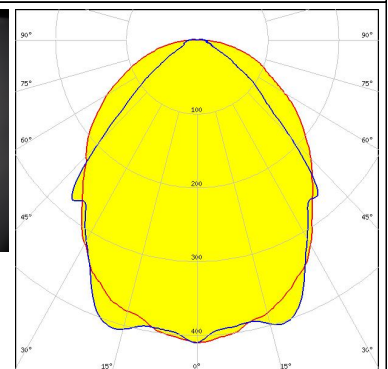
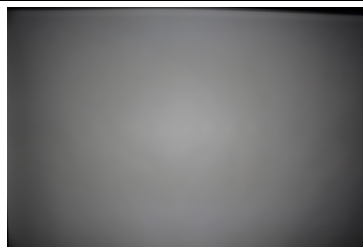
LED Duris S5 (2 chip)  
 FWHM / FWTM 99.0 + 89.0° / 163.0 + 125.0°  
 Efficiency 83 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

Opto Semiconductors

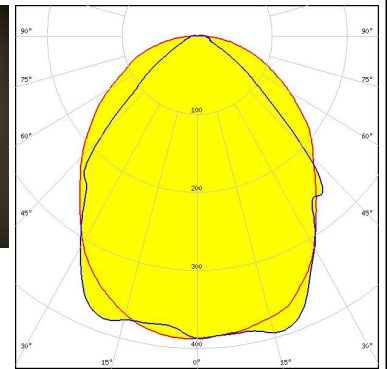
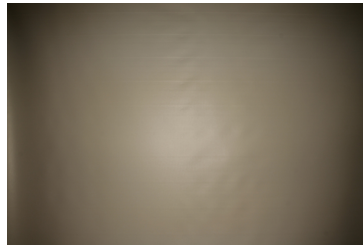
LED Duris S5 (Single chip)  
 FWHM / FWTM 98.0 + 89.0° / 163.0 + 125.0°  
 Efficiency 85 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHOTOMETRIC DATA (MEASURED):

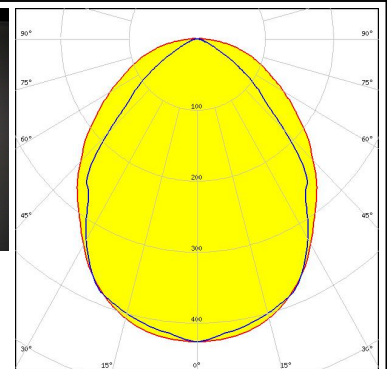
#### PHILIPS

LED Fortimo LED Strip 1ft 1100lm FC HV4 & LV4  
 FWHM / FWTM 100.0 + 89.0° / 163.0 + 124.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



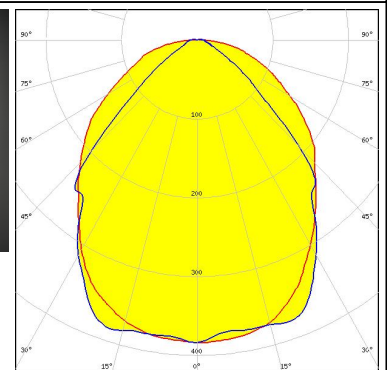
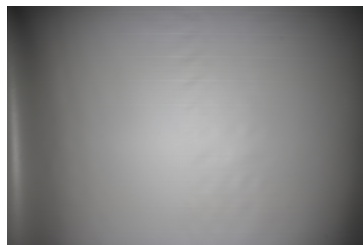
#### PHILIPS

LED Fortimo LED Strip 1ft 1100lm FC HV5 & LV5  
 FWHM / FWTM 99.0 + 85.0° / 163.0 + 123.0°  
 Efficiency 86 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



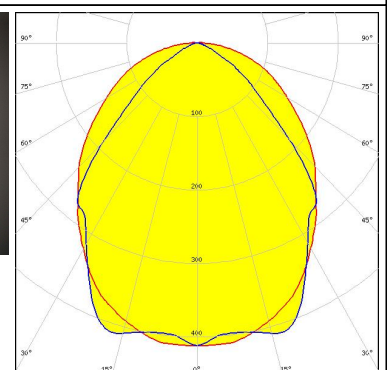
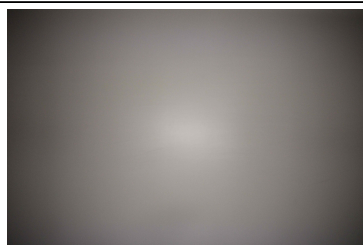
#### PHILIPS

LED Fortimo LED Strip 1ft 650lm FC HV4 & LV4  
 FWHM / FWTM 102.0 + 90.0° / 164.0 + 124.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHILIPS

LED Fortimo LED Strip 1ft 650lm FC HV5 & LV5  
 FWHM / FWTM 101.0 + 87.0° / 163.0 + 123.0°  
 Efficiency 86 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

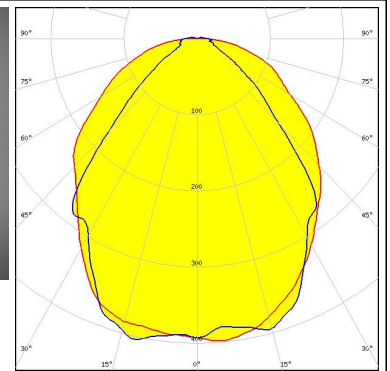
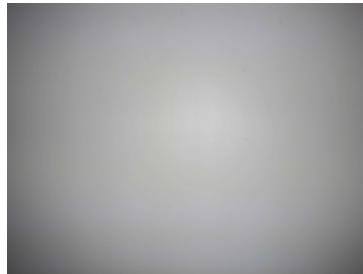




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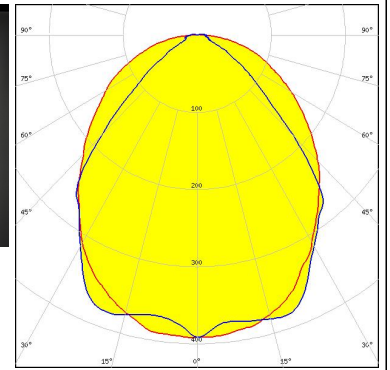
#### SAMSUNG

LED LM28xB Series  
 FWHM / FWTM 105.0 + 86.0° / 165.0 + 124.0°  
 Efficiency 84 %  
 Peak intensity 0.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



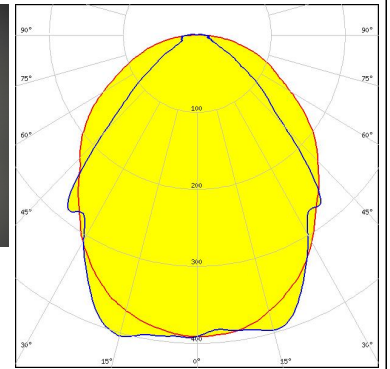
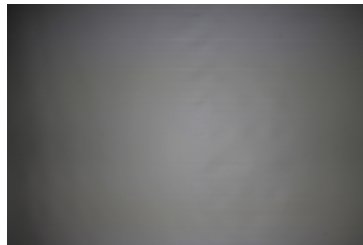
#### SAMSUNG

LED LM561B Plus  
 FWHM / FWTM 88.0 + 100.0° / 125.0 + 164.0°  
 Efficiency 83 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



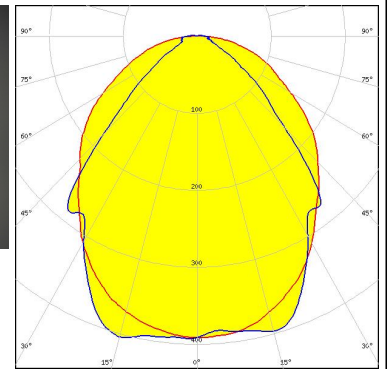
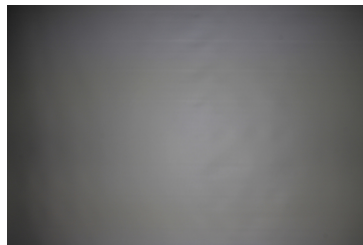
#### SAMSUNG

LED LT-H282C  
 FWHM / FWTM 103.0 + 87.0° / 164.0 + 125.0°  
 Efficiency 84 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### SAMSUNG

LED LT-H562C  
 FWHM / FWTM 103.0 + 87.0° / 164.0 + 125.0°  
 Efficiency 84 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

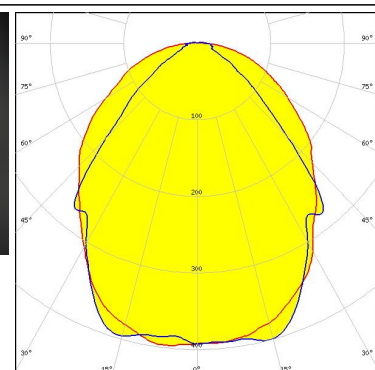
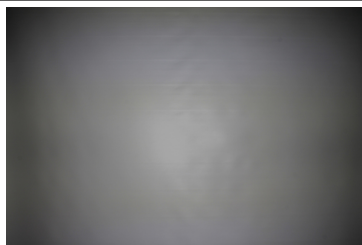




### PHOTOMETRIC DATA (MEASURED):

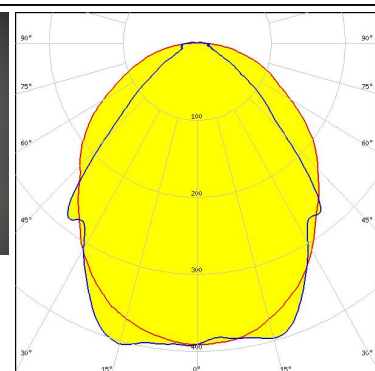
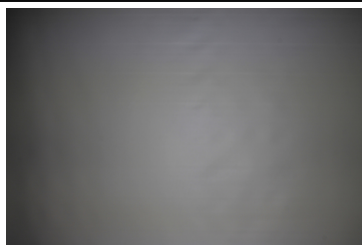
#### SAMSUNG

LED LT-Q282B  
FWHM / FWTM 101.0 + 87.0° / 164.0 + 125.0°  
Efficiency 84 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



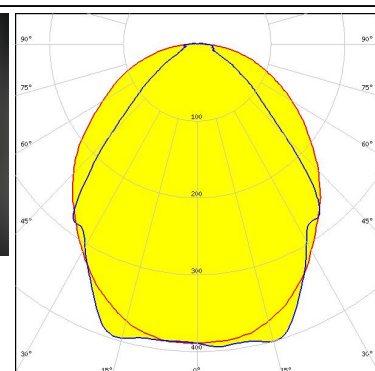
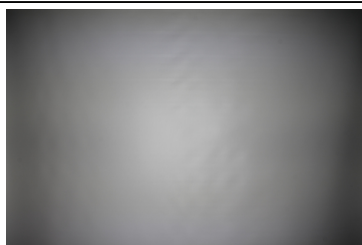
#### SAMSUNG

LED LT-S282H  
FWHM / FWTM 104.0 + 86.0° / 165.0 + 125.0°  
Efficiency 85 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



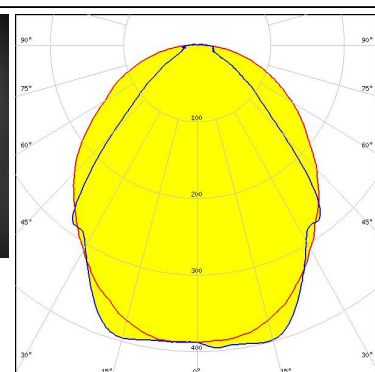
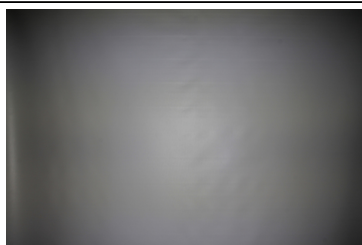
#### SAMSUNG

LED LT-S562H  
FWHM / FWTM 104.0 + 86.0° / 165.0 + 125.0°  
Efficiency 85 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### SAMSUNG

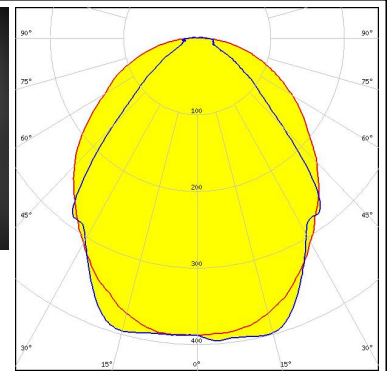
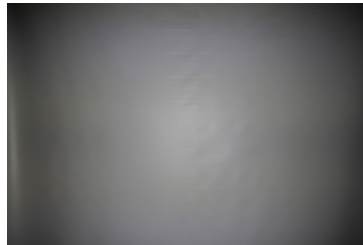
LED LT-V282E  
FWHM / FWTM 103.0 + 86.0° / 164.0 + 125.0°  
Efficiency 85 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



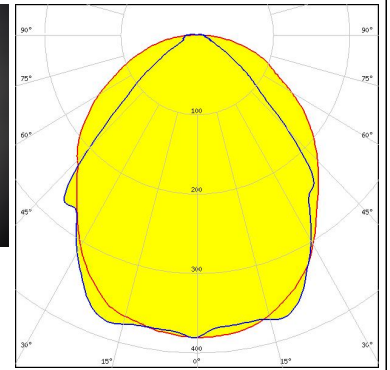
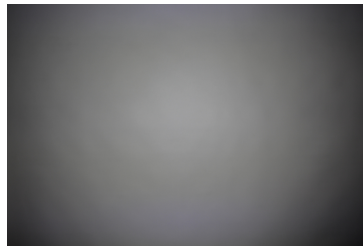
#### PHOTOMETRIC DATA (MEASURED):

#### SAMSUNG

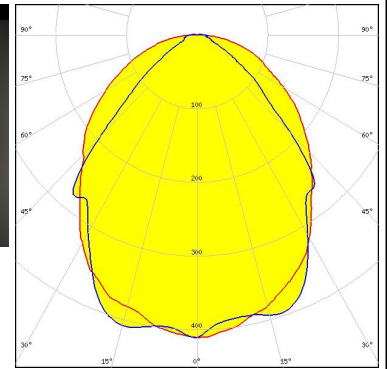
LED LT-V562E  
 FWHM / FWTM 103.0 + 86.0° / 164.0 + 125.0°  
 Efficiency 85 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



SEOUL SEMICONDUCTOR  
 LED SEOUL 5630D  
 FWHM / FWTM 93.0° / 141.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

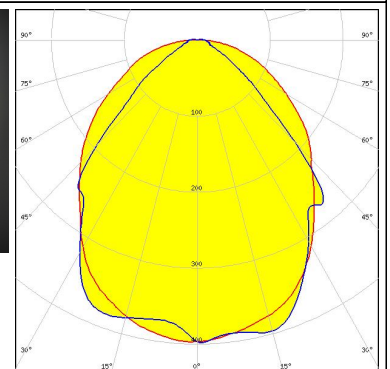
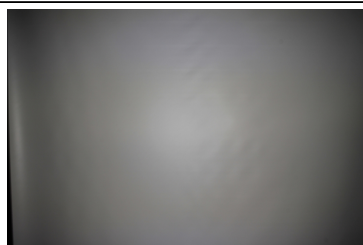


SEOUL SEMICONDUCTOR  
 LED SEOUL DC 3030  
 FWHM / FWTM 99.0 + 88.0° / 163.0 + 125.0°  
 Efficiency 85 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### TRIDONIC

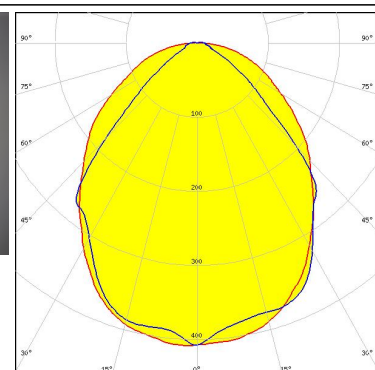
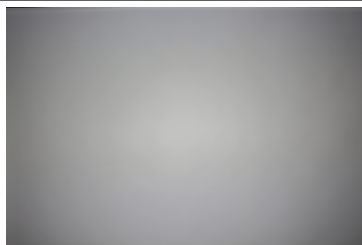
LED LLE G4 24x280mm 1250lm  
 FWHM / FWTM 100.0 + 89.0° / 163.0 + 125.0°  
 Efficiency 83 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



## PHOTOMETRIC DATA (MEASURED):

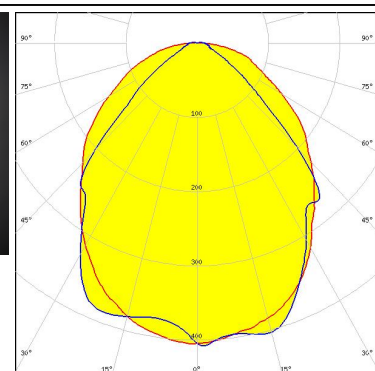
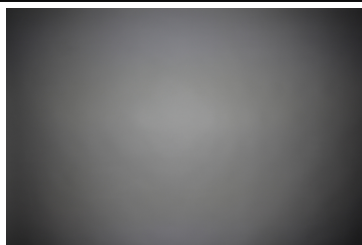
### TRIDONIC

LED LLE G4 24x280mm 2000lm ADV  
FWHM / FWTM 98.0 + 88.0° / 162.0 + 124.0°  
Efficiency 83 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



### TRIDONIC

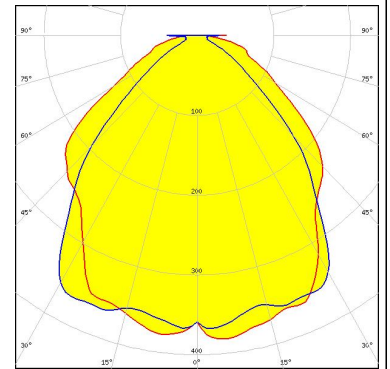
LED LLE G4 24x280mm 650lm  
FWHM / FWTM 99.0 + 89.0° / 163.0 + 125.0°  
Efficiency 84 %  
Peak intensity 0.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



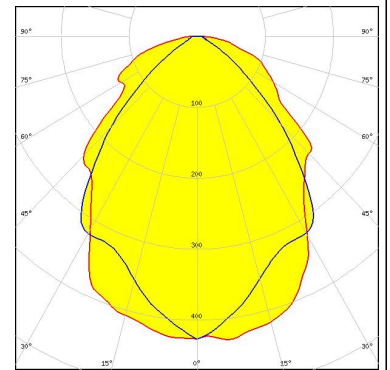
#### PHOTOMETRIC DATA (SIMULATED):



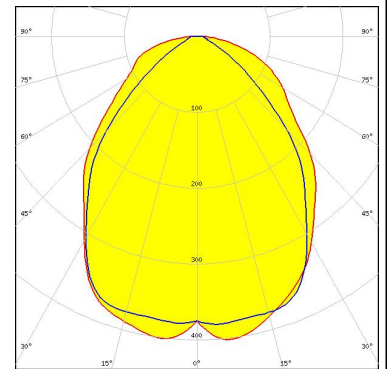
LED XP-G3  
 FWHM / FWTM 105.0 + 89.0° / 161.0 + 124.0°  
 Efficiency 81 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



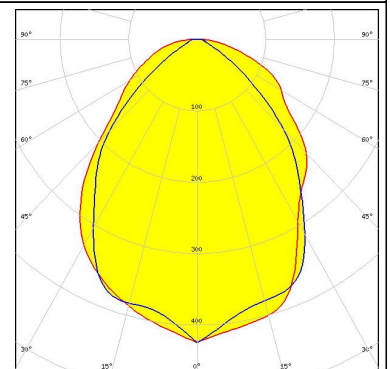
LED LUXEON 2835 Line  
 FWHM / FWTM 96.0 + 84.0° / 161.0 + 120.0°  
 Efficiency 80 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 2  
 Light colour White  
 Required components:



LED LUXEON 3030 2D (Round LES)  
 FWHM / FWTM 93.0 + 84.0° / 162.0 + 124.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED Duris E 2835  
 FWHM / FWTM 83.0 + 91.0° / 122.0 + 159.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

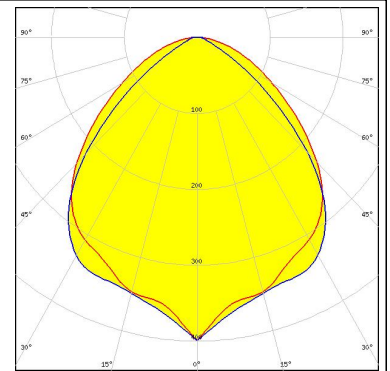




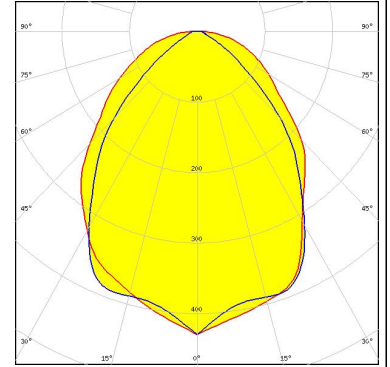
#### PHOTOMETRIC DATA (SIMULATED):

#### SAMSUNG

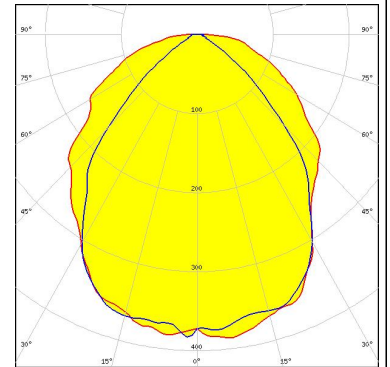
LED LM301B  
 FWHM / FWTM 98.0 + 92.0° / 152.0 + 126.0°  
 Efficiency 86 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



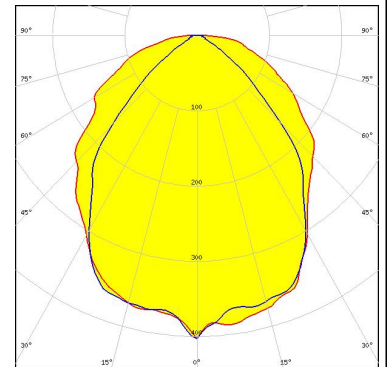
LED SEOUL DC 3030C  
 FWHM / FWTM 91.0 + 82.0° / 160.0 + 120.0°  
 Efficiency 82 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



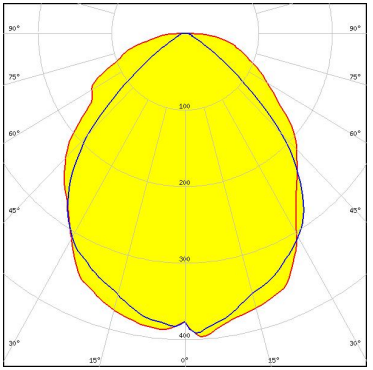
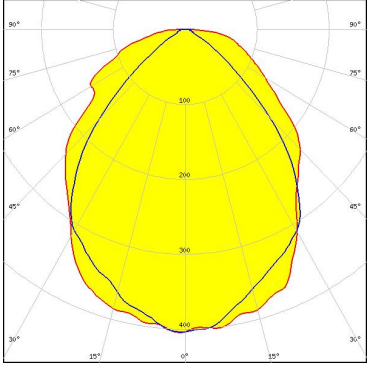
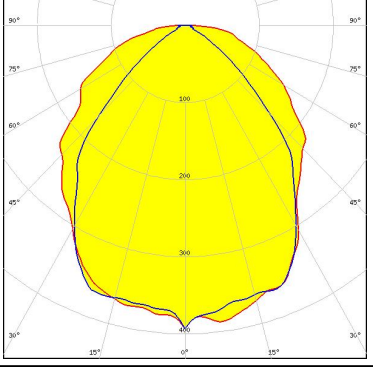
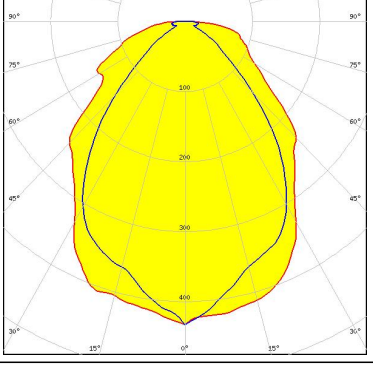
LED SEOUL DC 3528  
 FWHM / FWTM 104.0 + 86.0° / 169.0 + 118.0°  
 Efficiency 77 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



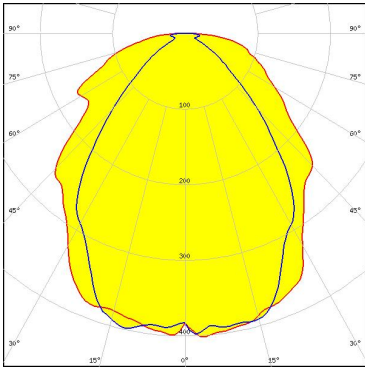
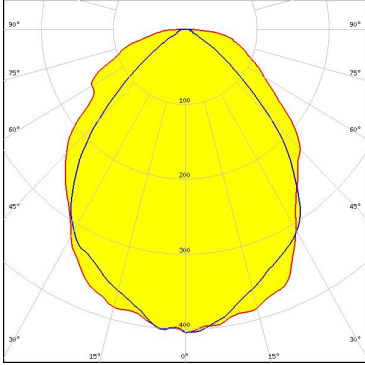
LED SEOUL DC 3528  
 FWHM / FWTM 102.0 + 84.0° / 168.0 + 117.0°  
 Efficiency 77 %  
 Peak intensity 0.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### PHOTOMETRIC DATA (SIMULATED):

|                                                                                                                                                                                                                                                                                                                                           |                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <p><br/>SEOUL SEMICONDUCTOR</p> <p>LED: SEOUL DC 3528</p> <p>FWHM / FWTM: 99.0 + 88.0° / 166.0 + 118.0°</p> <p>Efficiency: 77 %</p> <p>Peak intensity: 0.4 cd/Im</p> <p>LEDs/each optic: 2</p> <p>Light colour: White</p> <p>Required components:</p>    |    |
| <p><br/>SEOUL SEMICONDUCTOR</p> <p>LED: SEOUL DC 3528</p> <p>FWHM / FWTM: 99.0 + 84.0° / 167.0 + 117.0°</p> <p>Efficiency: 78 %</p> <p>Peak intensity: 0.4 cd/Im</p> <p>LEDs/each optic: 2</p> <p>Light colour: White</p> <p>Required components:</p>    |   |
| <p><br/>SEOUL SEMICONDUCTOR</p> <p>LED: SEOUL DC 3528</p> <p>FWHM / FWTM: 102.0 + 86.0° / 169.0 + 118.0°</p> <p>Efficiency: 77 %</p> <p>Peak intensity: 0.4 cd/Im</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p> |  |
| <p><br/>SEOUL SEMICONDUCTOR</p> <p>LED: SEOUL DC 3528</p> <p>FWHM / FWTM: 95.0 + 78.0° / 169.0 + 116.0°</p> <p>Efficiency: 78 %</p> <p>Peak intensity: 0.4 cd/Im</p> <p>LEDs/each optic: 2</p> <p>Light colour: White</p> <p>Required components:</p>  |  |

### PHOTOMETRIC DATA (SIMULATED):

|                                                                                                                         |                                                                                                                                                                                                                                                                               |                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <br><small>SEOUL SEMICONDUCTOR</small> | <p>LED                      SEOUL DC 3528</p> <p>FWHM / FWTM        100.0 + 80.0° / 170.0 + 118.0°</p> <p>Efficiency             78 %</p> <p>Peak intensity        0.4 cd/lm</p> <p>LEDs/each optic      1</p> <p>Light colour          White</p> <p>Required components:</p> |   |
| <br><small>SEOUL SEMICONDUCTOR</small> | <p>LED                      SEOUL DC 3528</p> <p>FWHM / FWTM        99.0 + 84.0° / 167.0 + 116.0°</p> <p>Efficiency             78 %</p> <p>Peak intensity        0.4 cd/lm</p> <p>LEDs/each optic      2</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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