

## ANGELINA-M-B

~30° medium beam compatible with BJB connectors

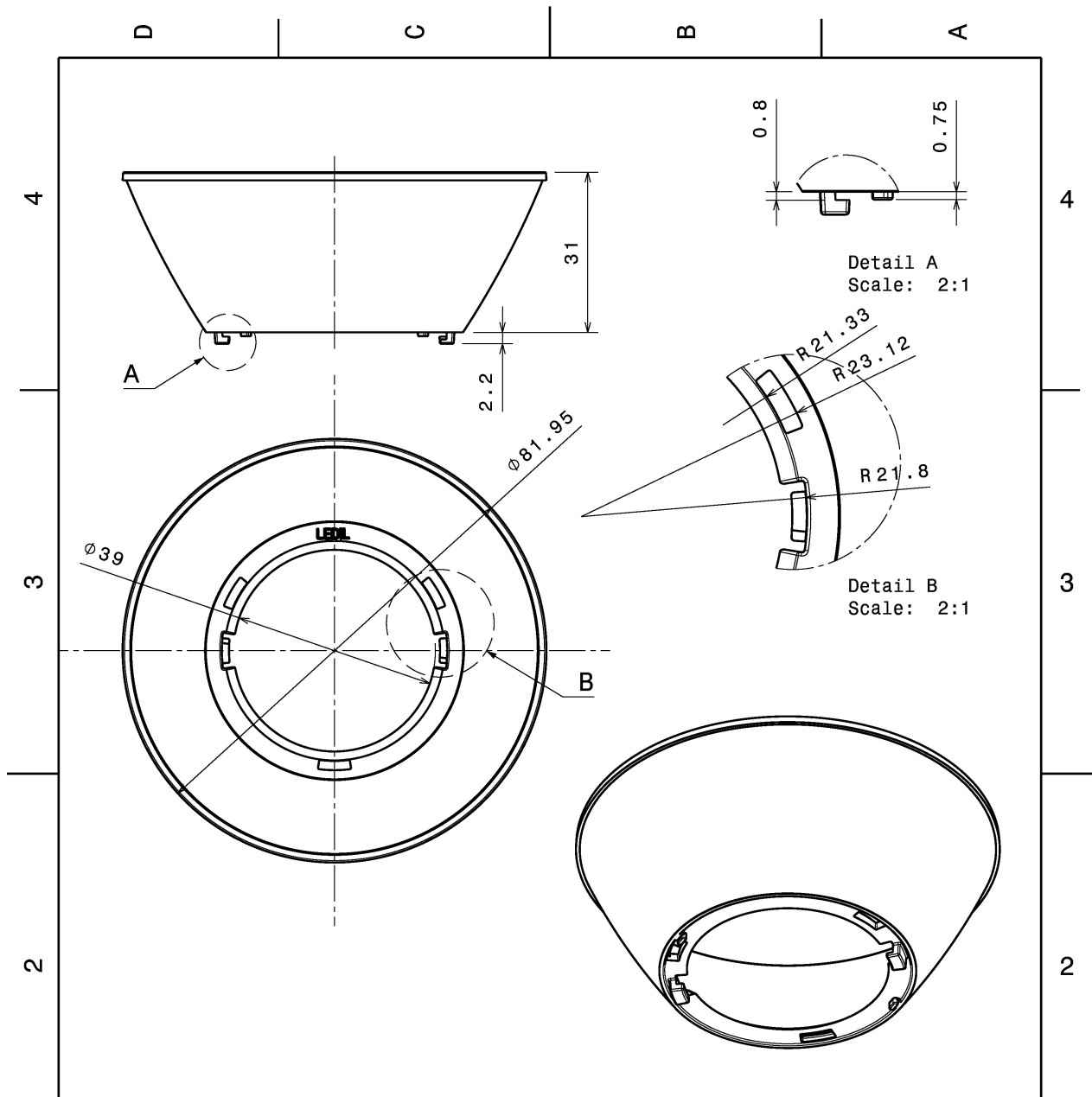
### TECHNICAL SPECIFICATIONS:

|                 |                    |
|-----------------|--------------------|
| Dimensions      | Ø 82 mm            |
| Height          | 31 mm              |
| Fastening       | socket             |
| Colour          | metal              |
| Box size        | 480 x 280 x 300 mm |
| Box weight      | 10 kg              |
| Quantity in Box | 2035 pcs           |
| ROHS compliant  | yes ⓘ              |



### MATERIAL SPECIFICATIONS:

| Component    | Type      | Material | Colour | Coating |
|--------------|-----------|----------|--------|---------|
| ANGELINA-M-B | Reflector | PC       | metal  | HMDS    |



| INDEX | PART NO | DESCRIPTION | MATERIAL | COLOUR |
|-------|---------|-------------|----------|--------|
| 1     |         | ANGELINA-B  | PC       | metal  |

Tolerances if not otherwise shown  
According to DIN ISO 2768-1  
Linear measures:  
Up to 30mm class M, otherwise class C.  
According to DIN ISO 2768-2  
Form and position: class L

**LEDiL** Ledil Oy  
Salorankatu 10  
FIN 24240 SALO  
Finland

THIRD ANGLE PROJECTION:

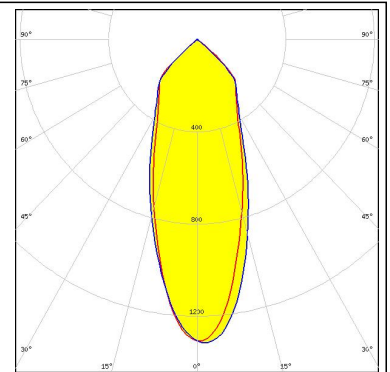
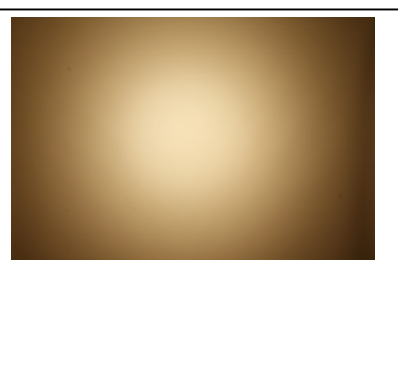
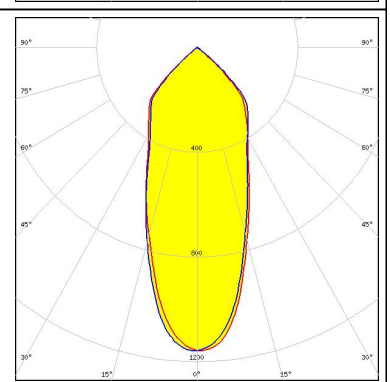
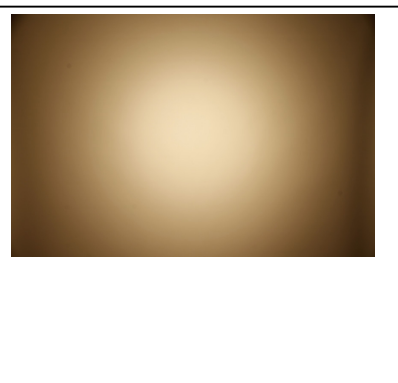
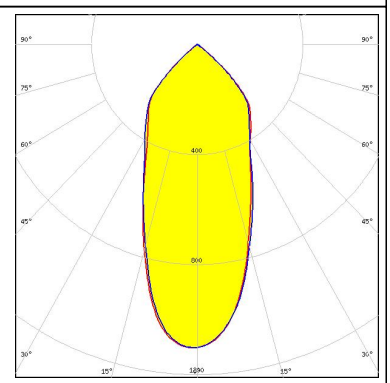

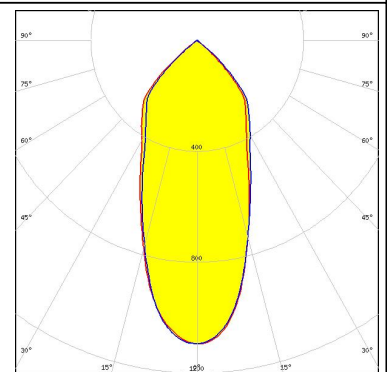
DRAWING TITLE  
**ANGELINA-B series Reflector**

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| SIZE | PART NUMBER |
|------|-------------|
| A4   | -           |

| SCALE | 1:1 | WEIGHT | - | SHEET | 1/1 |
|-------|-----|--------|---|-------|-----|
|-------|-----|--------|---|-------|-----|

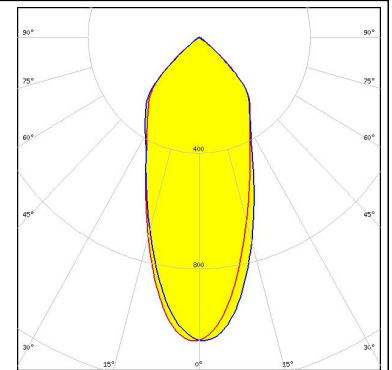
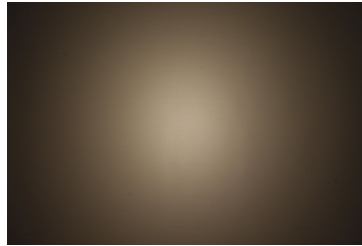
#### PHOTOMETRIC DATA (MEASURED):

|  |  |   |
|--|--|---|
| <p>bridgelux.</p> <p>LED BXRA ES Rectangle</p> <p>FWHM 38.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 1.320 cd/lm</p> <p>Required components:<br/>BJB: 47.319.2040</p> |  |    |
| <p>bridgelux.</p> <p>LED V15 Gen6</p> <p>FWHM 41.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.200 cd/lm</p> <p>Required components:<br/>BJB: 47.319.2224</p>          |   |   |
| <p>bridgelux.</p> <p>LED V18 Gen6</p> <p>FWHM 44.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.100 cd/lm</p> <p>Required components:<br/>BJB: 47.319.2274</p>          |  |  |
| <p>bridgelux.</p> <p>LED V18 Gen7</p> <p>FWHM 44.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.100 cd/lm</p> <p>Required components:<br/>BJB: 47.319.2350</p>          |  |  |

#### PHOTOMETRIC DATA (MEASURED):

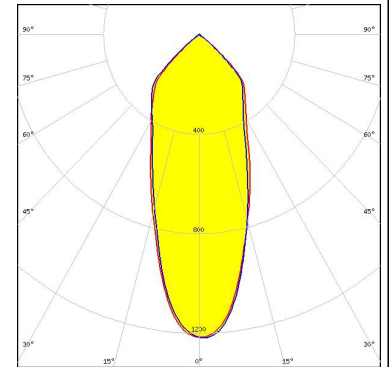
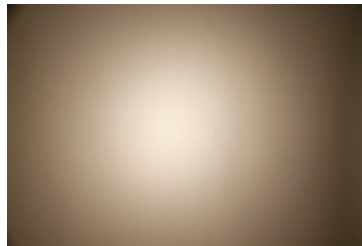
#### CITIZEN

LED CLL03x/CLU03x  
FWHM 43.0°  
Efficiency 89 %  
Peak intensity 1.050 cd/lm  
Required components:  
F13671\_ANGE-RZ-LENS  
A.A.G. STUCCHI: 8101/G2



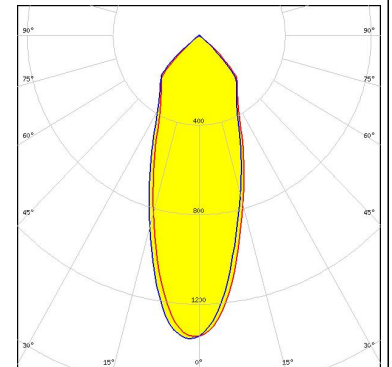
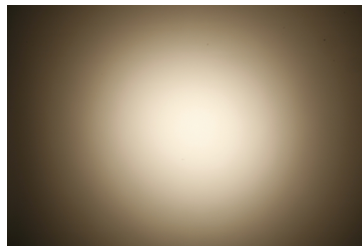
#### CITIZEN

LED CLL03x/CLU03x  
FWHM 39.0°  
Efficiency 94 %  
Peak intensity 1.220 cd/lm  
Required components:  
A.A.G. STUCCHI: 8101/G2



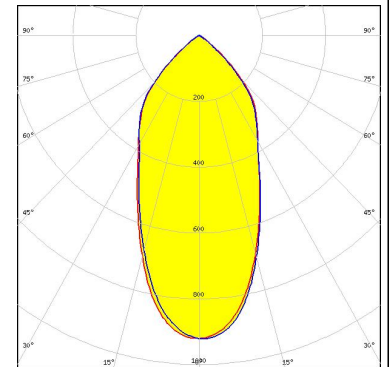
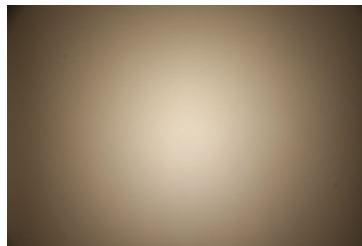
#### CITIZEN

LED CLL03x/CLU03x  
FWHM 37.0°  
Efficiency 92 %  
Peak intensity 1.400 cd/lm  
Required components:  
BJB: 47.319.2021



#### CITIZEN

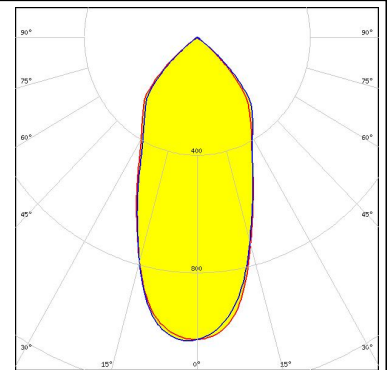
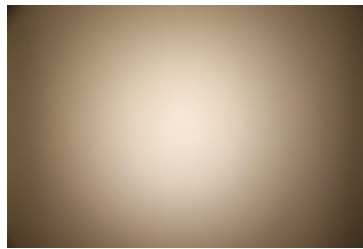
LED CLL04x/CLU04x  
FWHM 50.0°  
Efficiency 87 %  
Peak intensity 0.920 cd/lm  
Required components:  
F13671\_ANGE-RZ-LENS  
A.A.G. STUCCHI: 8102/G2



### PHOTOMETRIC DATA (MEASURED):

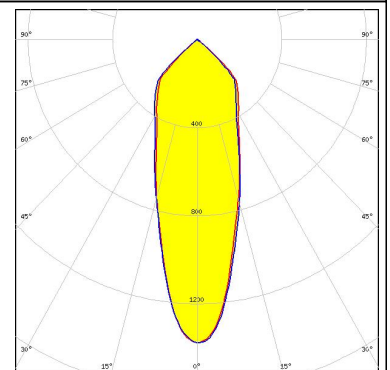
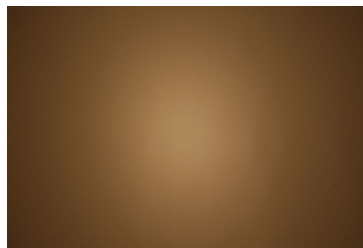
#### CITIZEN

LED CLL04x/CLU04x  
FWHM 39.0°  
Efficiency 94 %  
Peak intensity 1.200 cd/lm  
Required components:  
A.A.G. STUCCHI: 8102/G2



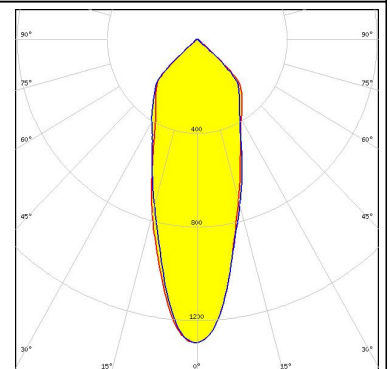
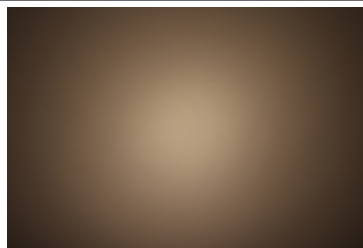
#### CITIZEN

LED CLU720/721  
FWHM 34.0°  
Efficiency 94 %  
Peak intensity 1.400 cd/lm  
Required components:  
BJB: 47.319.2021



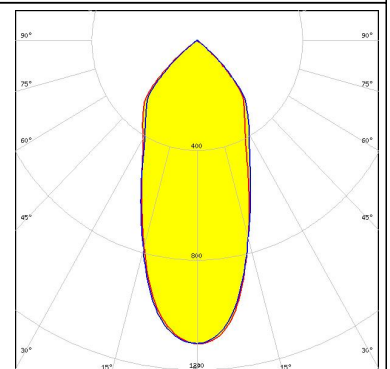
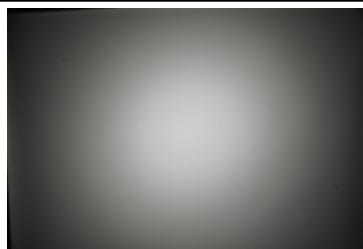
#### CITIZEN

LED CLU720/721  
FWHM 35.0°  
Efficiency 94 %  
Peak intensity 1.300 cd/lm  
Required components:  
A.A.G. STUCCHI: 8101/G2



#### CREE

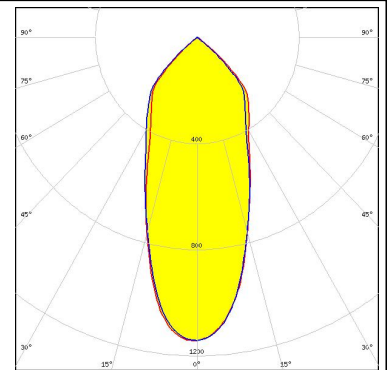
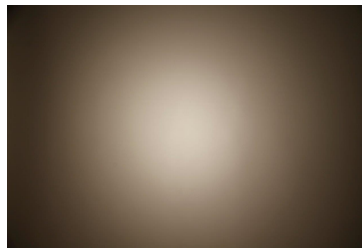
LED CXA/B 25xx  
FWHM 44.0°  
Efficiency 92 %  
Peak intensity 1.100 cd/lm  
Required components:  
BJB: 47.319.2141



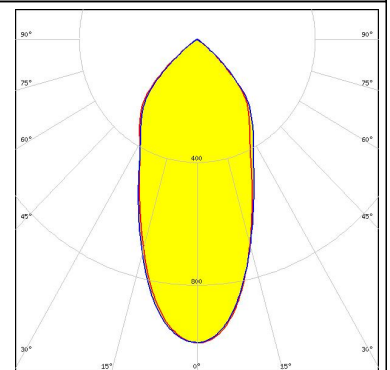
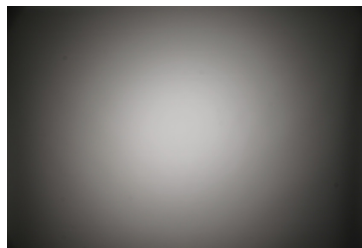
#### PHOTOMETRIC DATA (MEASURED):



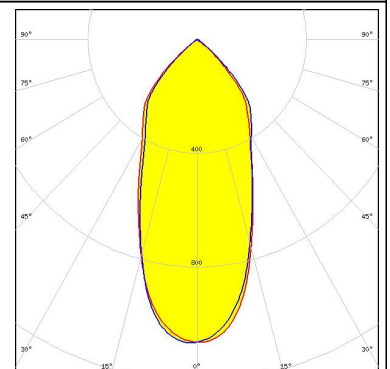
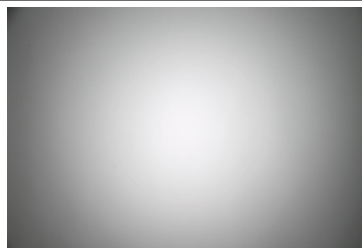
LED CXA/B 25xx  
 FWHM 42.0°  
 Efficiency 93 %  
 Peak intensity 1.140 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8401/G2



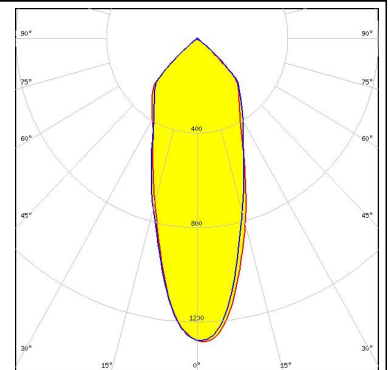
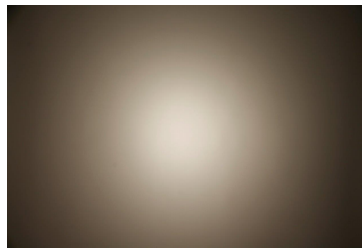
LED CXA/B 25xx  
 FWHM 46.0°  
 Efficiency 89 %  
 Peak intensity 0.990 cd/lm  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2141



LED CXA/B 30xx  
 FWHM 45.0°  
 Efficiency 92 %  
 Peak intensity 1.070 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8404/G2



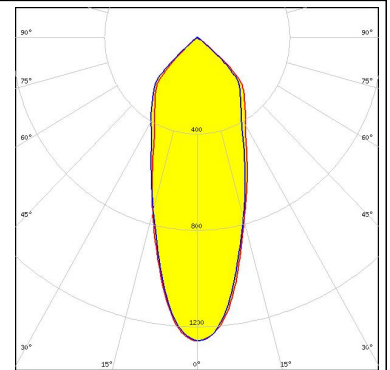
LED COB 10W/13W/17W/24W  
 FWHM 37.0°  
 Efficiency 94 %  
 Peak intensity 1.280 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8600/G2



#### PHOTOMETRIC DATA (MEASURED):

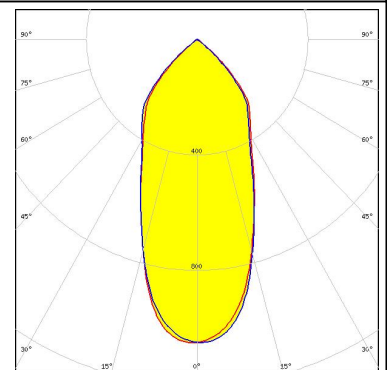
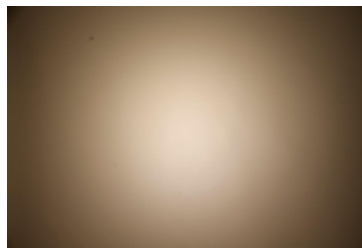
##### LG Innotek

LED COB 10W/13W/17W/24W  
 FWHM 38.0°  
 Efficiency 93 %  
 Peak intensity 1.300 cd/lm  
 Required components:  
 BJB: 47.319.2080



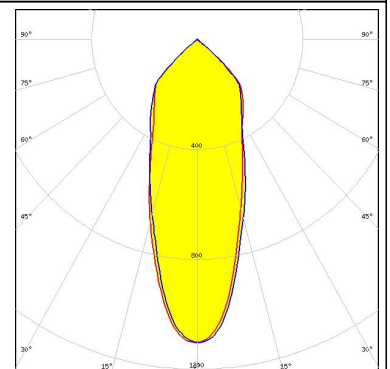
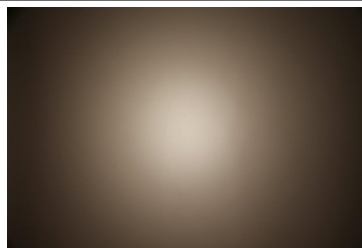
##### LG Innotek

LED COB 40W/60W  
 FWHM 46.0°  
 Efficiency 91 %  
 Peak intensity 1.050 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8102/G2



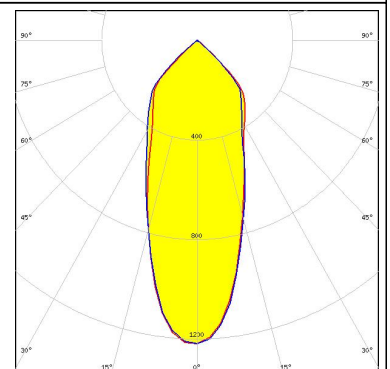
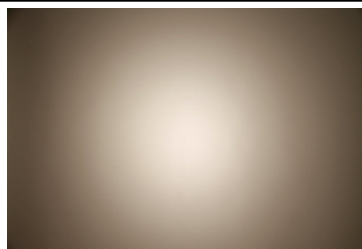
##### LUMILEDS

LED LUXEON CoB 1204/1205  
 FWHM 38.0°  
 Efficiency 94 %  
 Peak intensity 1.260 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8301/G2



##### LUMILEDS

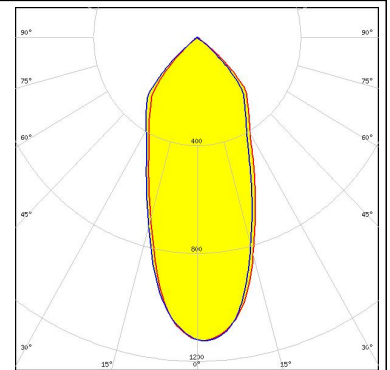
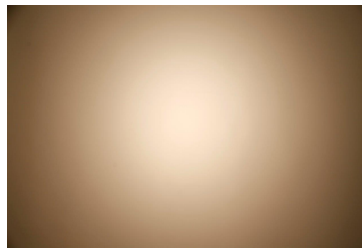
LED LUXEON CoB 1208  
 FWHM 39.0°  
 Efficiency 94 %  
 Peak intensity 1.230 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8301/G2



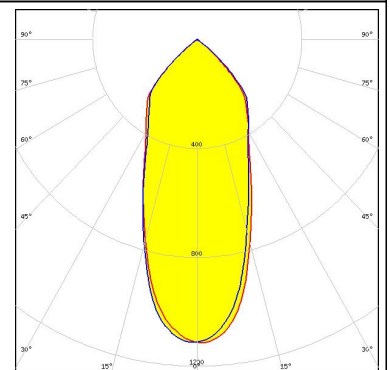
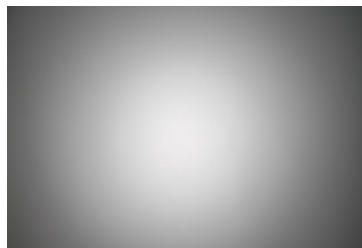
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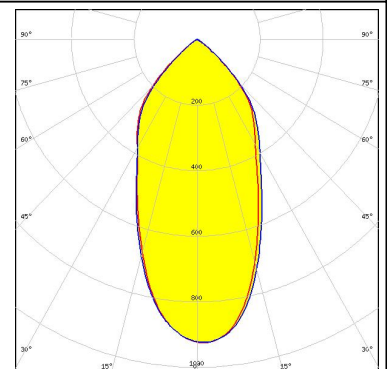
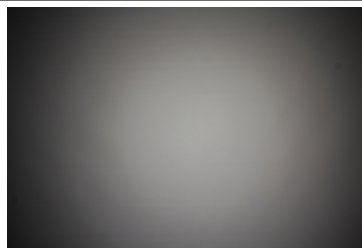
LED LUXEON CoB 1211  
 FWHM 43.0°  
 Efficiency 92 %  
 Peak intensity 1.130 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8102/G2



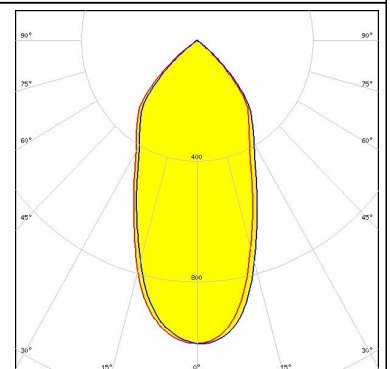
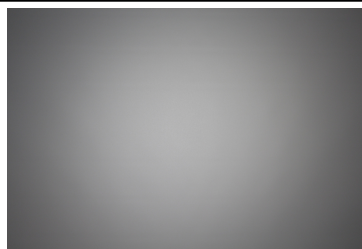
LED LUXEON CoB 1211  
 FWHM 44.0°  
 Efficiency 92 %  
 Peak intensity 1.100 cd/lm  
 Required components:  
 BJB: 47.319.2030



LED LUXEON CoB 1216/1812  
 FWHM 50.0°  
 Efficiency 88 %  
 Peak intensity 0.930 cd/lm  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2030



LED LUXEON CoB 1216/1812  
 FWHM 49.0°  
 Efficiency 91 %  
 Peak intensity 1.000 cd/lm  
 Required components:  
 BJB: 47.319.2030

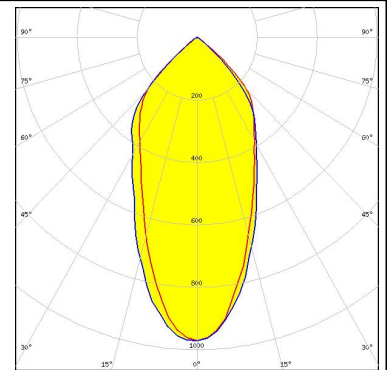




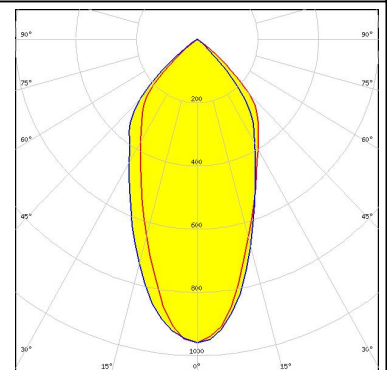
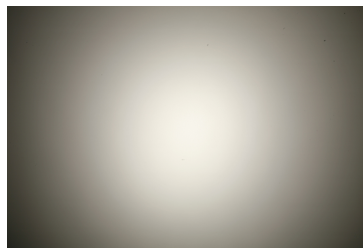
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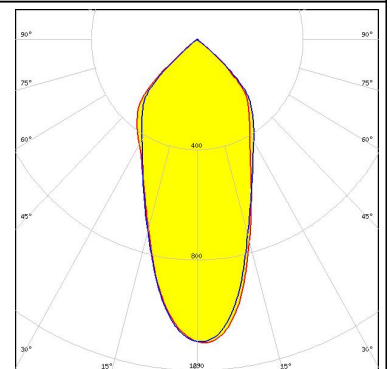
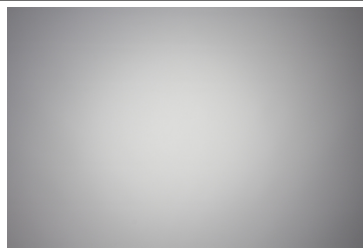
LED LUXEON K12  
 FWHM 48.0°  
 Efficiency 89 %  
 Peak intensity 1.000 cd/lm  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2070



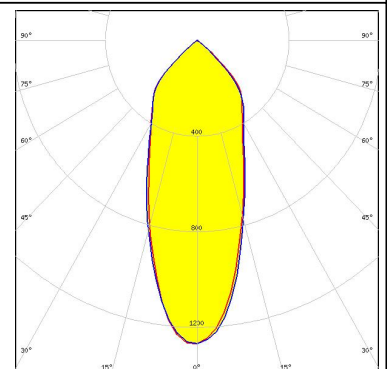
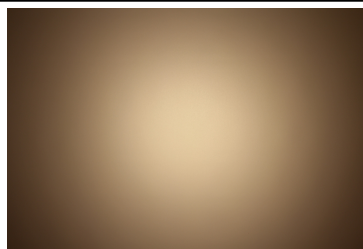
LED LUXEON K16  
 FWHM 50.0°  
 Efficiency 89 %  
 Peak intensity 1.000 cd/lm  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2070



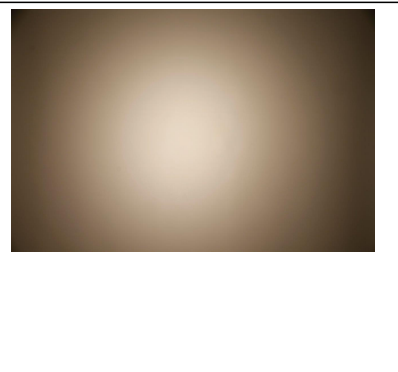
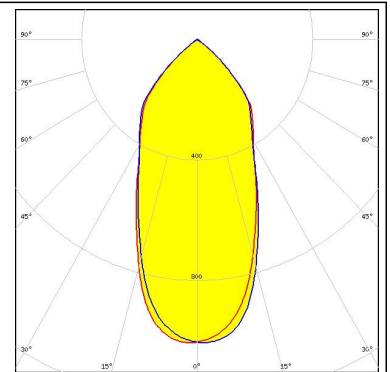
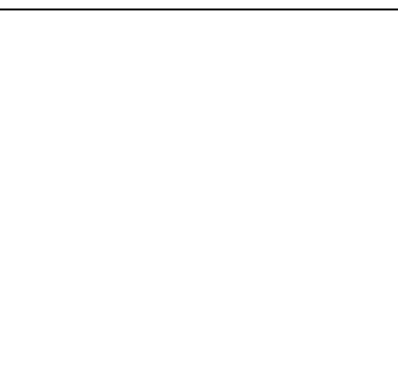
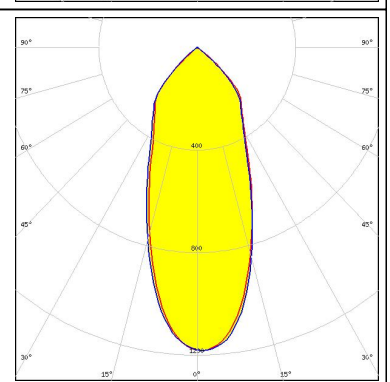
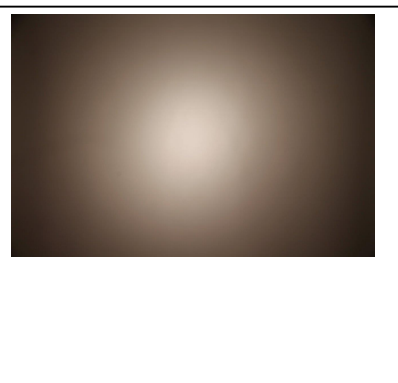
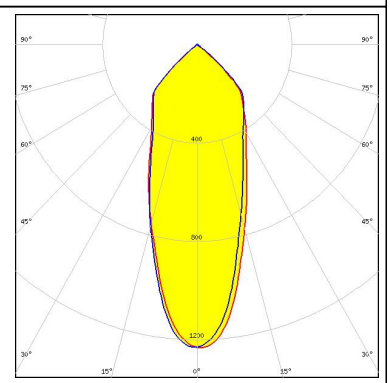
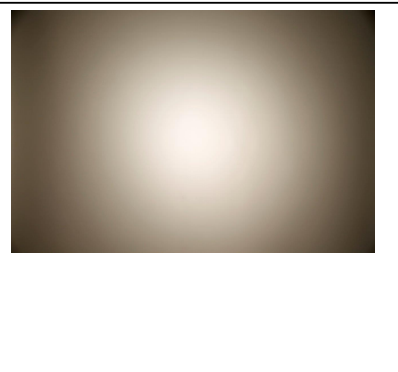
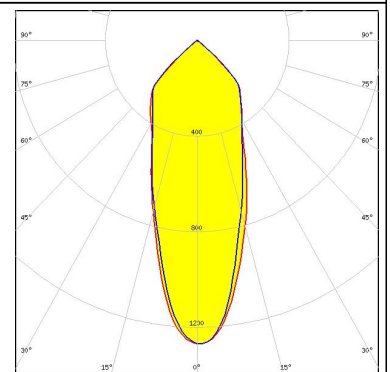
LED LUXEON K16  
 FWHM 44.0°  
 Efficiency 94 %  
 Peak intensity 1.100 cd/lm  
 Required components:  
 BJB: 47.319.2070



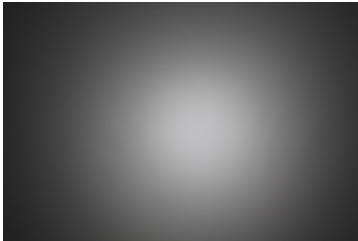
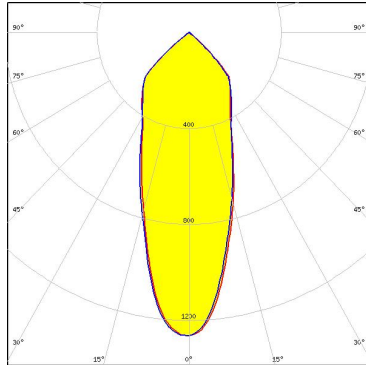
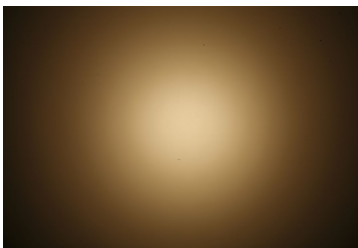
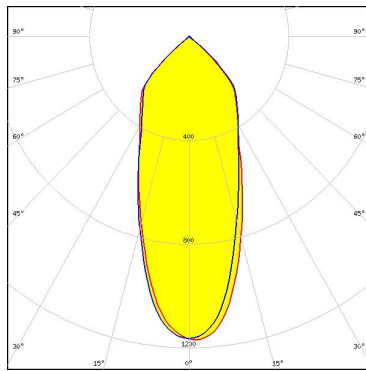

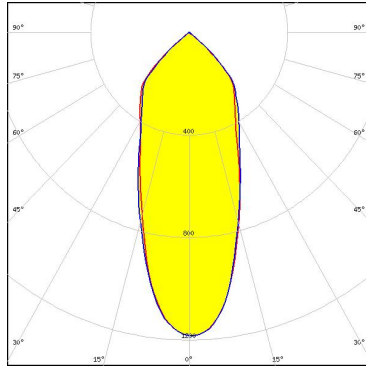
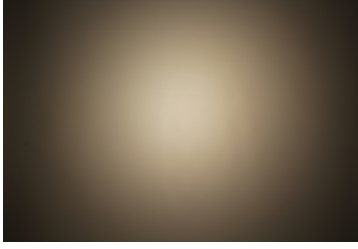
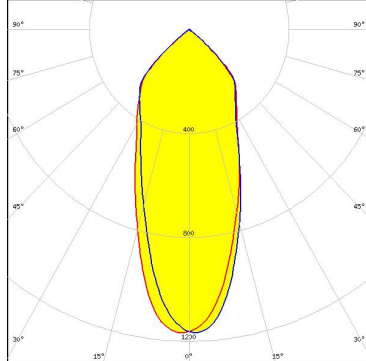
LED CXM-14  
 FWHM 40.0°  
 Efficiency 94 %  
 Peak intensity 1.300 cd/lm  
 Required components:  
 BJB: 47.319.2021



#### PHOTOMETRIC DATA (MEASURED):

|  |  |   |
|--|--|---|
| <p><b>LUMINUS</b></p> <p>LED CXM-22<br/>           FWHM 48.0°<br/>           Efficiency 92 %<br/>           Peak intensity 1.000 cd/lm<br/>           Required components:<br/>           BJB: 47.319.2030</p>   |    |    |
| <p><b>OSRAM</b><br/> <small>Opto Semiconductors</small></p> <p>LED Soleriq E30<br/>           FWHM 42.0°<br/>           Efficiency 90 %<br/>           Peak intensity 1.190 cd/lm<br/>           Required components:<br/>           BJB: 47.319.2090</p>        |   |   |
| <p><b>OSRAM</b><br/> <small>Opto Semiconductors</small></p> <p>LED Soleriq P13<br/>           FWHM 39.0°<br/>           Efficiency 94 %<br/>           Peak intensity 1.230 cd/lm<br/>           Required components:<br/>           A.A.G. STUCCHI: 8502/G2</p> |  |  |
| <p><b>OSRAM</b><br/> <small>Opto Semiconductors</small></p> <p>LED Soleriq S13<br/>           FWHM 37.0°<br/>           Efficiency 94 %<br/>           Peak intensity 1.270 cd/lm<br/>           Required components:<br/>           A.A.G. STUCCHI: 8502/G2</p> |  |  |

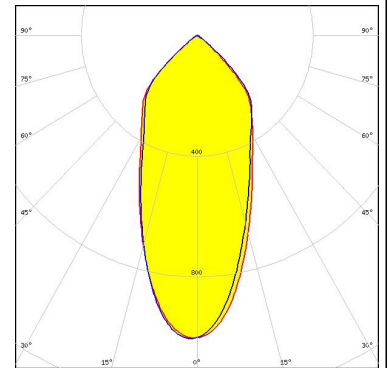
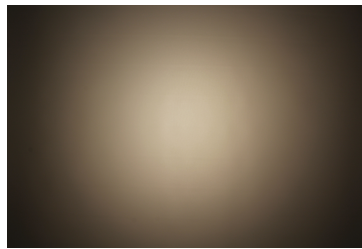
#### PHOTOMETRIC DATA (MEASURED):

|  |  |   |
|--|--|---|
| <p><b>OSRAM</b><br/>Opto Semiconductors</p> <p>LED Soleriq S13 Gen2<br/>           FWHM 37.0°<br/>           Efficiency 93 %<br/>           Peak intensity 0.920 cd/lm<br/>           Required components:<br/>           BJB: 47.319.2021</p>   |    |    |
| <p><b>OSRAM</b><br/>Opto Semiconductors</p> <p>LED Soleriq S19<br/>           FWHM 41.0°<br/>           Efficiency 94 %<br/>           Peak intensity 1.170 cd/lm<br/>           Required components:<br/>           BJB: 47.319.2170</p>        |   |   |
| <p><b>OSRAM</b><br/>Opto Semiconductors</p> <p>LED Soleriq S19<br/>           FWHM 41.0°<br/>           Efficiency 93 %<br/>           Peak intensity 1.200 cd/lm<br/>           Required components:<br/>           A.A.G. STUCCHI: 8503/G2</p> |  |  |
| <p><b>SAMSUNG</b></p> <p>LED COB D Series LES 14.5 mm<br/>           FWHM 41.0°<br/>           Efficiency 93 %<br/>           Peak intensity 1.170 cd/lm<br/>           Required components:<br/>           BJB: 47.319.2021</p>                 |  |  |

**PHOTOMETRIC DATA (MEASURED):**

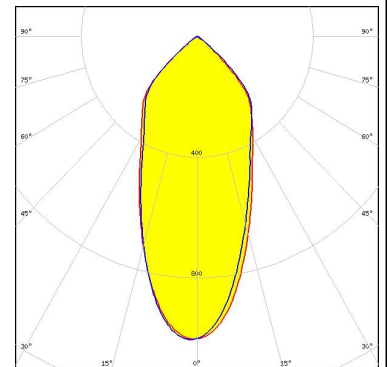
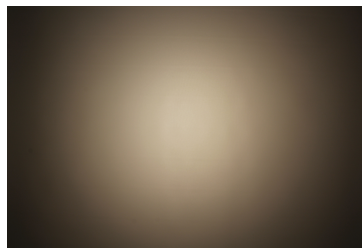
**SAMSUNG**

LED COB D Series LES 14.5 mm  
 FWHM 45.0°  
 Efficiency 89 %  
 Peak intensity 1.000 cd/lm  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 A.A.G. STUCCHI: 8101/G2



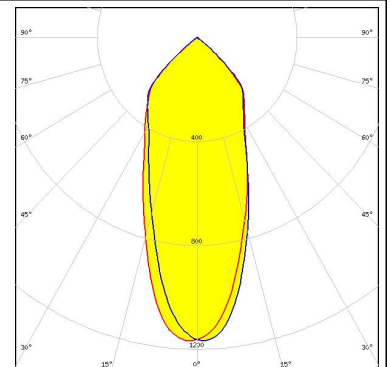
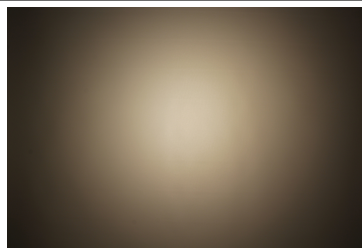
**SAMSUNG**

LED COB D Series LES 14.5 mm  
 FWHM 45.0°  
 Efficiency 89 %  
 Peak intensity 1.000 cd/lm  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2021



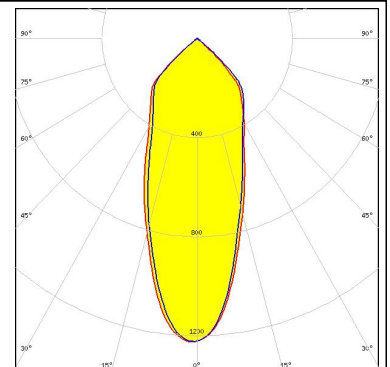
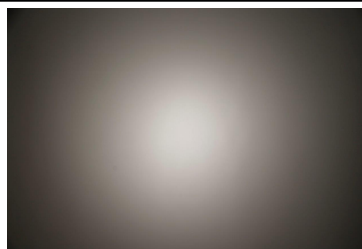
**SAMSUNG**

LED COB D Series LES 14.5 mm  
 FWHM 41.0°  
 Efficiency 93 %  
 Peak intensity 1.170 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8101/G2


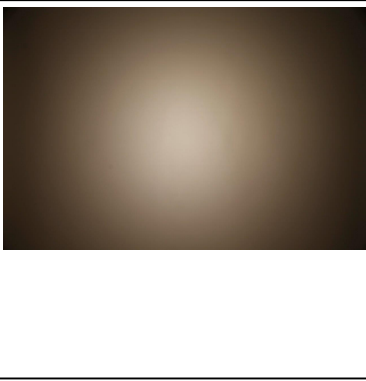
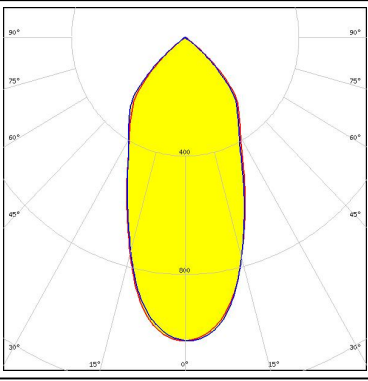
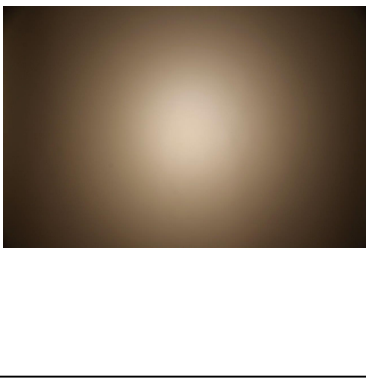
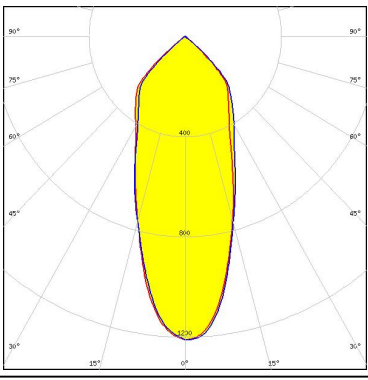
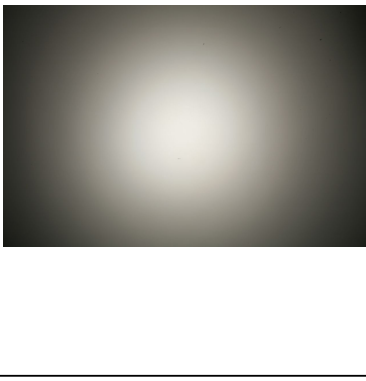
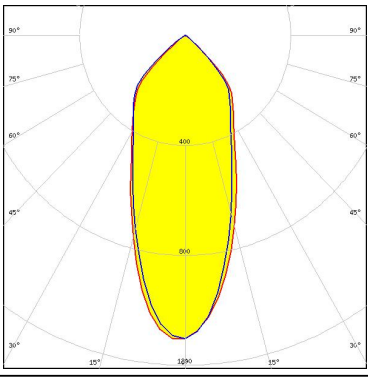

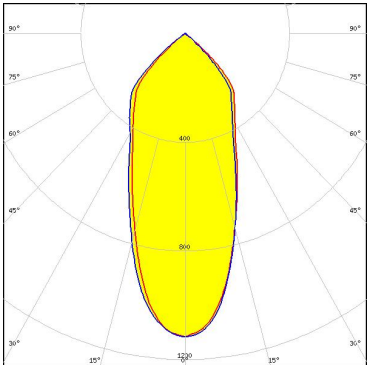


SEOUL SEMICONDUCTOR

LED ZC12/18  
 FWHM 39.0°  
 Efficiency 93 %  
 Peak intensity 1.230 cd/lm  
 Required components:  
 A.A.G. STUCCHI: 8101/G2



#### PHOTOMETRIC DATA (MEASURED):

|   |  |   |
|---|--|---|
| <p> SEUL SEMICONDUCTOR</p> <p>LED ZC25/40/60<br/>           FWHM 47.0°<br/>           Efficiency 92 %<br/>           Peak intensity 1.030 cd/lm<br/>           Required components:<br/>           A.A.G. STUCCHI: 8102/G2</p> |    |    |
| <p><b>SHARP</b></p> <p>LED Mega Zenigata (GW6DME)<br/>           FWHM 40.0°<br/>           Efficiency 94 %<br/>           Peak intensity 1.210 cd/lm<br/>           Required components:<br/>           A.A.G. STUCCHI: 8301/G2</p>   |   |   |
| <p><b>SHARP</b></p> <p>LED Tiger Zenigata (GWTGCBG4FD)<br/>           FWHM 41.0°<br/>           Efficiency 90 %<br/>           Peak intensity 1.100 cd/lm<br/>           Required components:<br/>           F13671_ANGE-RZ-LENS<br/>           BJB: 47.319.2051</p>  |  |  |
| <p><b>XICATO</b></p> <p>LED XTM - 19mm LES<br/>           FWHM 43.0°<br/>           Efficiency 93 %<br/>           Peak intensity 1.100 cd/lm<br/>           Required components:<br/>           C15743_XTM-ADAPTER-50-B</p>  |  |  |

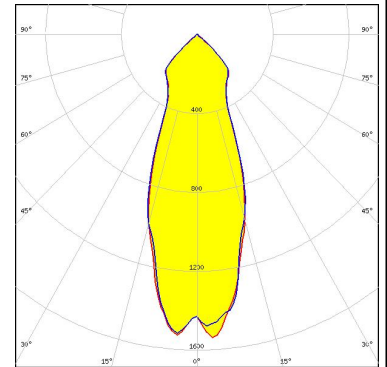
#### PHOTOMETRIC DATA (SIMULATED):

### CITIZEN

LED CLL04x/CLU04x  
FWHM 37.0°  
Efficiency 95 %  
Peak intensity 1.600 cd/lm  
Required components:  
BJB: 47.319.2030

### CITIZEN

LED CLU730/731  
FWHM 37.0°  
Efficiency 91 %  
Peak intensity 1.570 cd/lm  
Required components:  
BJB: 47.319.2030

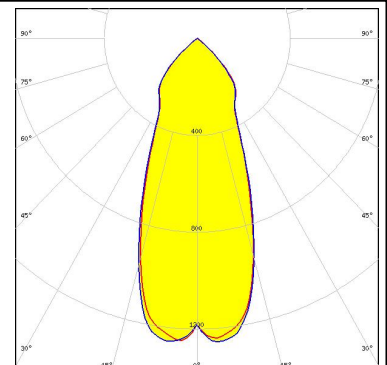


### LUMILEDS

LED LUXEON K12  
FWHM 29.0°  
Efficiency %  
Peak intensity cd/lm  
Required components:  
BJB: 47.319.2070

### SAMSUNG

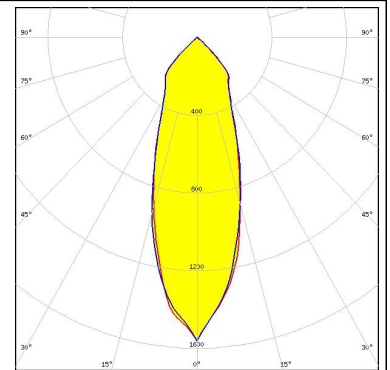
LED COB D Series LES 22 mm  
FWHM 41.0°  
Efficiency 90 %  
Peak intensity 1.270 cd/lm  
Required components:  
BJB: 47.319.2030



#### PHOTOMETRIC DATA (SIMULATED):

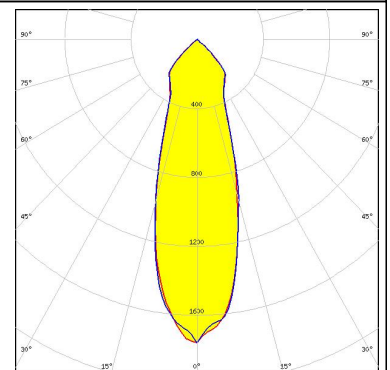
#### TRIDONIC

LED SLE G6 LES15 H D50  
FWHM 35.0°  
Efficiency 91 %  
Peak intensity 1.560 cd/lm  
Required components:



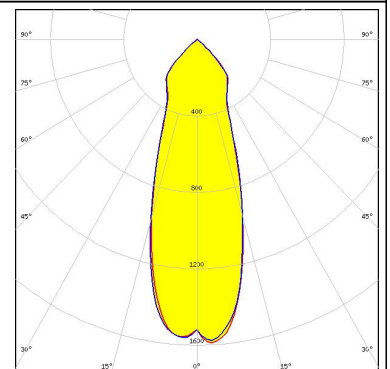
#### TRIDONIC

LED SLE G6 LES17 H  
FWHM 32.0°  
Efficiency 91 %  
Peak intensity 1.800 cd/lm  
Required components:



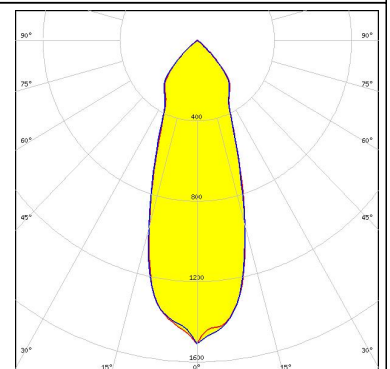
#### TRIDONIC

LED SLE G6 LES19 H  
FWHM 34.0°  
Efficiency 91 %  
Peak intensity 1.620 cd/lm  
Required components:



#### TRIDONIC

LED SLE G6 LES23 H  
FWHM 36.0°  
Efficiency 90 %  
Peak intensity 1.510 cd/lm  
Required components:



### 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.

Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.

### 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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