

## ANGELINA-S-B

~20° spot beam compatible with BJB and B+W connectors

### SPECIFICATION:

|                |           |
|----------------|-----------|
| Dimensions     | Ø 82.0 mm |
| Height         | 31 mm     |
| Fastening      | socket    |
| ROHS compliant | yes ⓘ     |

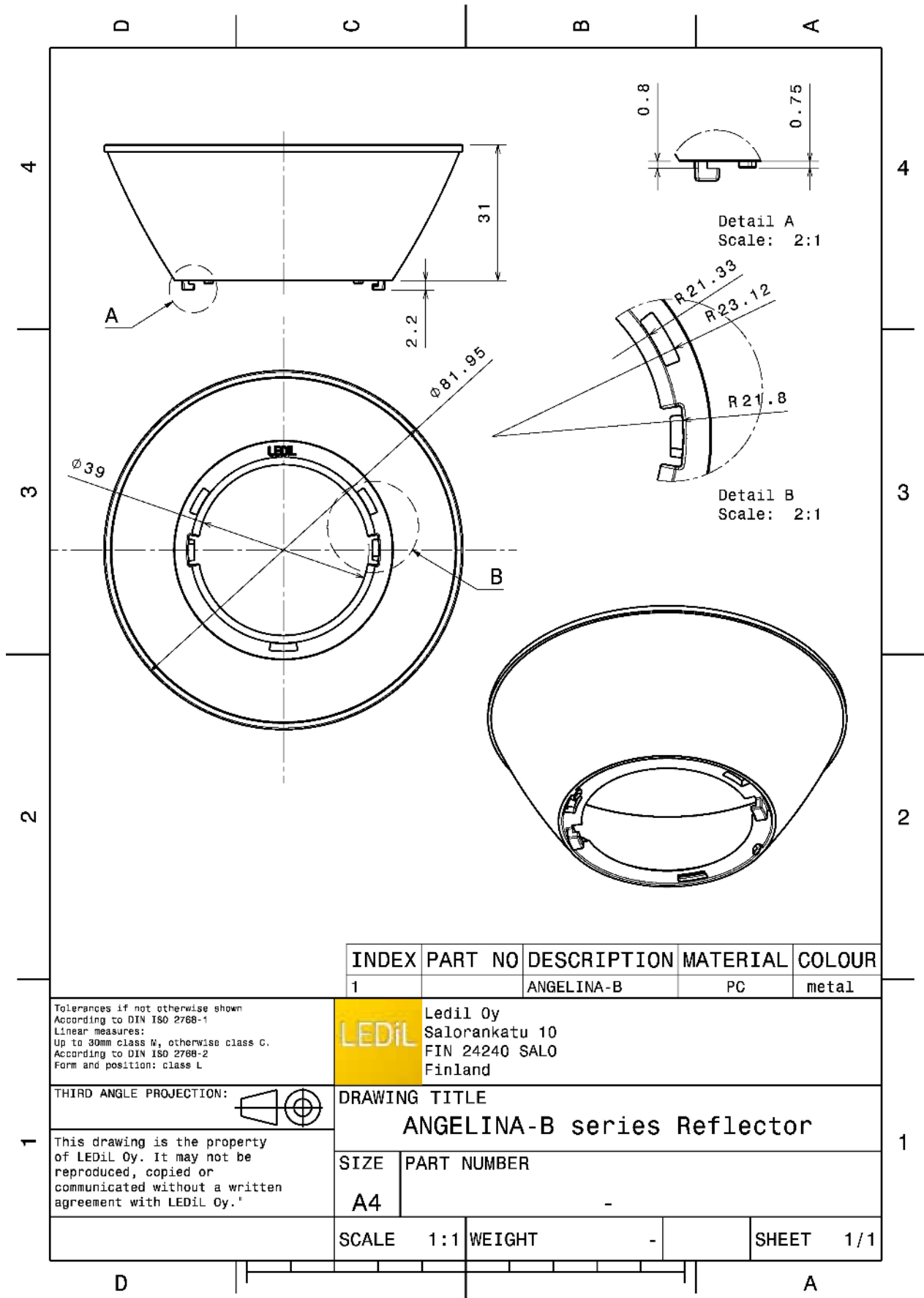
### MATERIALS:

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

### ORDERING INFORMATION:

| Component   | Qty in box | MOQ | MPQ | Box weight (kg) |
|---|------------|-----|-----|-----------------|
| F13659_ANGELINA-S-B<br>» Box size: 480 x 280 x 300 mm | 825        | 110 | 55  | 11.3            |





| 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**


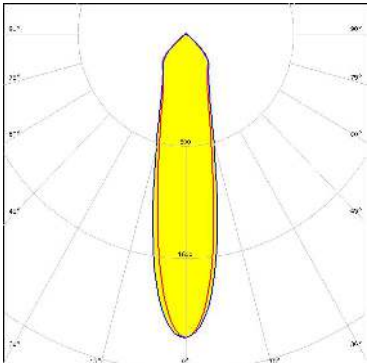

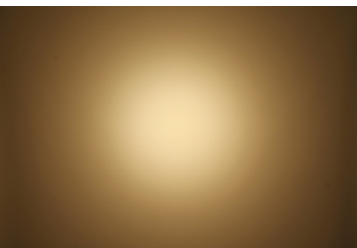
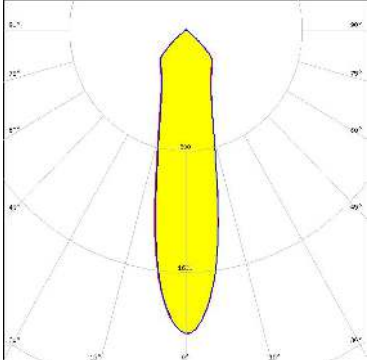

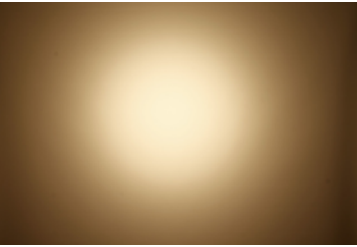
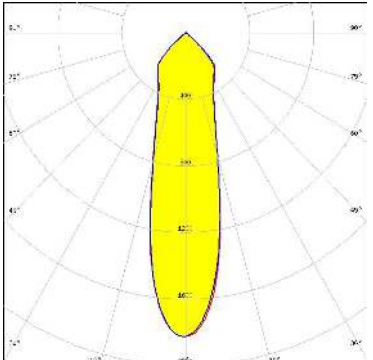

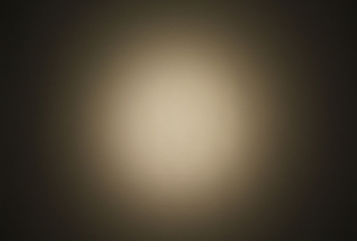
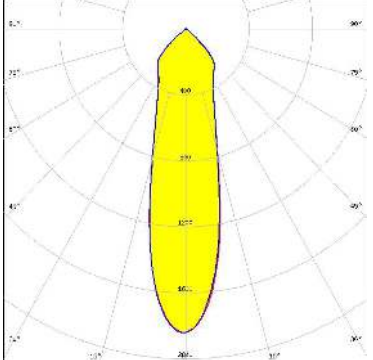
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| SIZE | PART NUMBER |
|------|-------------|
| A4   | -           |


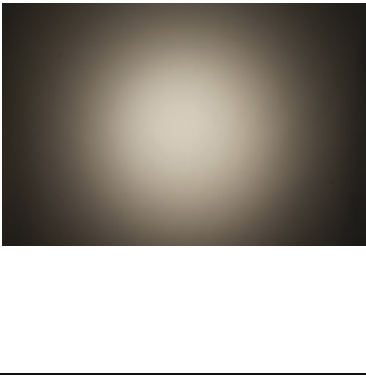
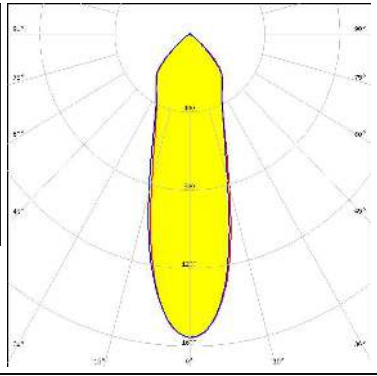


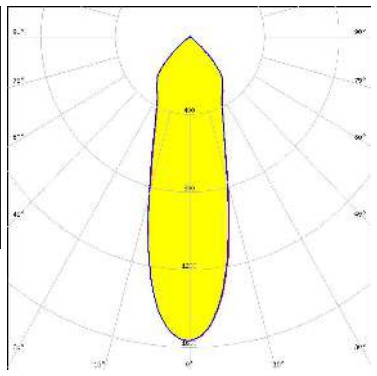

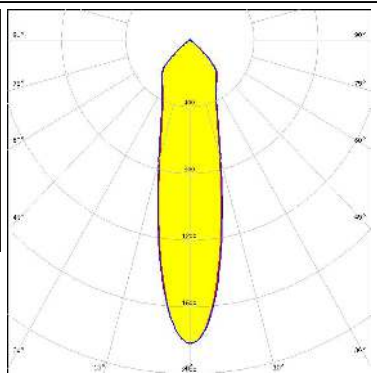
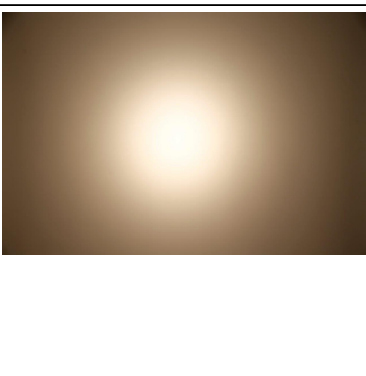
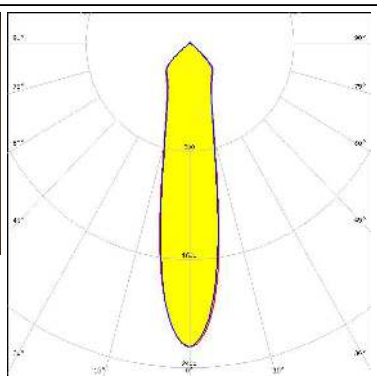
| SCALE | 1:1 | WEIGHT | - | SHEET | 1/1 |
|-------|-----|--------|---|-------|-----|
|-------|-----|--------|---|-------|-----|

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

#### OPTICAL RESULTS (MEASURED):

|   |  |   |
|---|--|---|
| <p></p> <p>LED BXRA ES Rectangle</p> <p>FWHM / FWTM 23.0° / 90.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 2.2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2040</p> |  |    |
| <p></p> <p>LED V15 Gen6</p> <p>FWHM / FWTM 24.0° / 92.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2224</p>            |   |   |
| <p></p> <p>LED V18 Gen6</p> <p>FWHM / FWTM 27.0° / 92.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 1.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2274</p>        |  |  |
| <p></p> <p>LED V18 Gen7</p> <p>FWHM / FWTM 27.0° / 92.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2350</p>        |  |  |

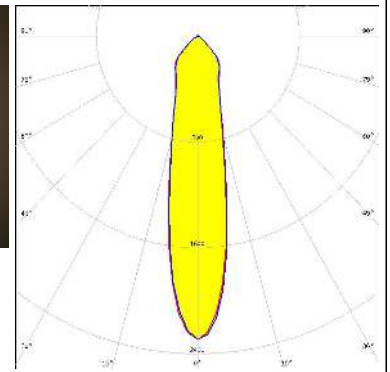
#### OPTICAL RESULTS (MEASURED):

|   |  |   |
|---|--|---|
| <p></p> <p>LED V22 Gen6<br/>           FWHM / FWTM 31.0° / 93.0°<br/>           Efficiency 91 %<br/>           Peak intensity 1.6 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8102-G2</p> |    |    |
| <p></p> <p>LED V22 Gen7<br/>           FWHM / FWTM 31.0° / 92.0°<br/>           Efficiency 91 %<br/>           Peak intensity 1.6 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           BJB: 47.319.2030</p>        |   |   |
| <p><b>CITIZEN</b></p> <p>LED CLL03x/CLU03x<br/>           FWHM / FWTM 25.0° / 92.0°<br/>           Efficiency 89 %<br/>           Peak intensity 1.8 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           F13671_ANGE-RZ-LENS<br/>           A.A.G. STUCCHI: 8101-G2</p>                           |  |  |
| <p><b>CITIZEN</b></p> <p>LED CLL03x/CLU03x<br/>           FWHM / FWTM 22.0° / 91.0°<br/>           Efficiency 94 %<br/>           Peak intensity 2.3 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8101-G2</p>  |  |  |

#### OPTICAL RESULTS (MEASURED):

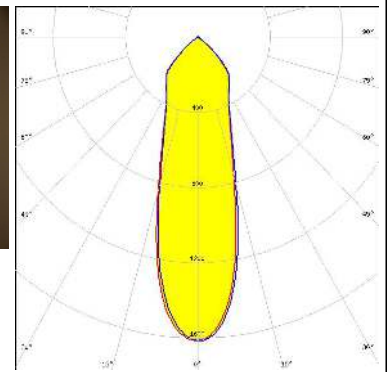
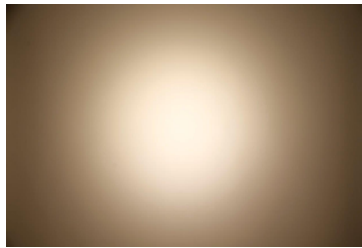
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 23.0° / 86.0°  
 Efficiency 92 %  
 Peak intensity 2.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



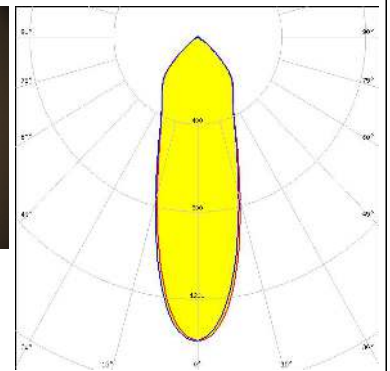
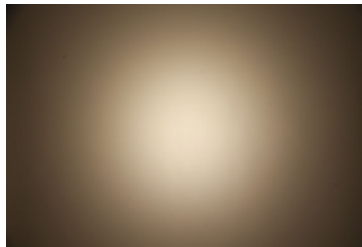
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 30.0° / 93.0°  
 Efficiency 92 %  
 Peak intensity 1.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8102-G2



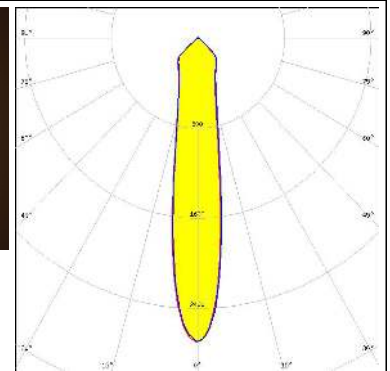
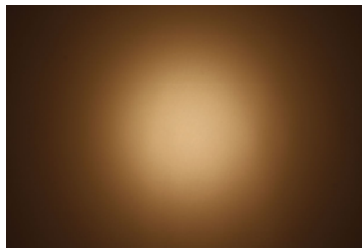
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 33.0° / 94.0°  
 Efficiency 88 %  
 Peak intensity 1.4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 A.A.G. STUCCHI: 8102-G2



#### CITIZEN

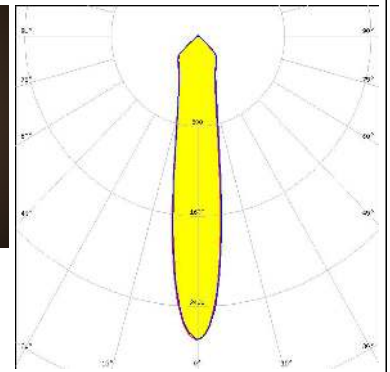
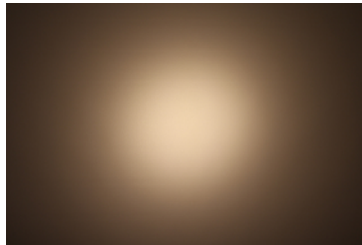
LED CLU720/721/723  
 FWHM / FWTM 19.0° / 81.0°  
 Efficiency 94 %  
 Peak intensity 2.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



#### OPTICAL RESULTS (MEASURED):

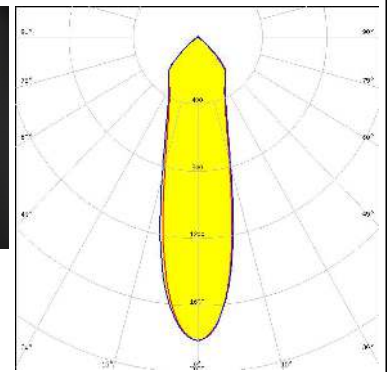
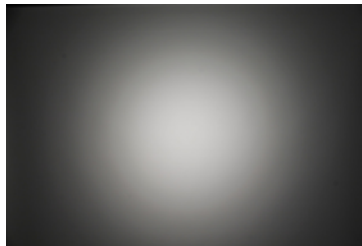
#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 19.0° / 88.0°  
 Efficiency 94 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8101-G2



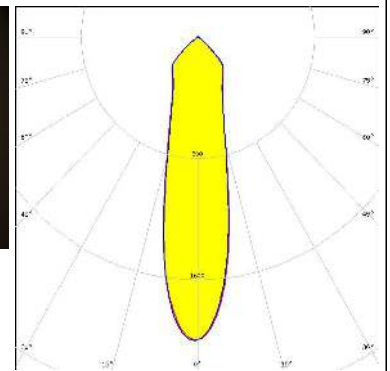
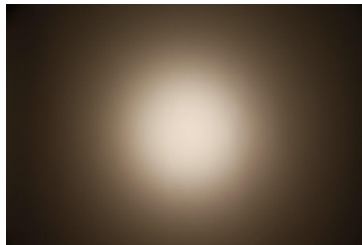
#### CREE LED

LED CXA/B 25xx  
 FWHM / FWTM 27.0° / 91.0°  
 Efficiency 92 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2141



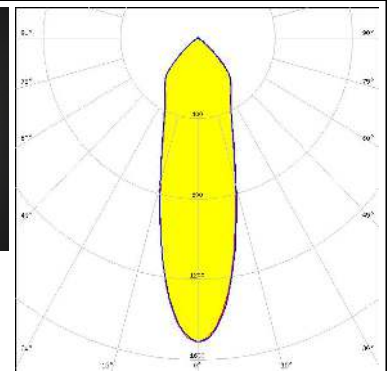
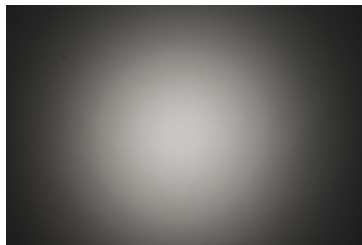
#### CREE LED

LED CXA/B 25xx  
 FWHM / FWTM 25.0° / 91.0°  
 Efficiency 93 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8401-G2

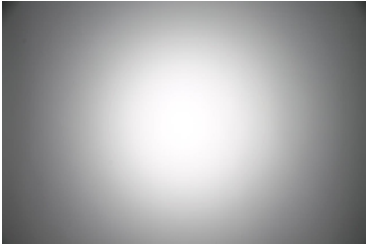
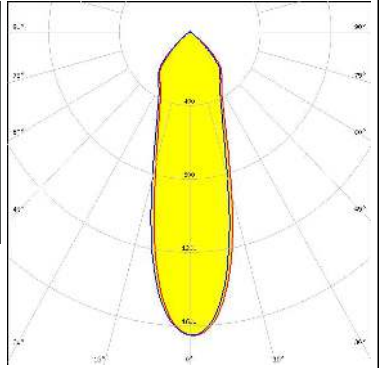
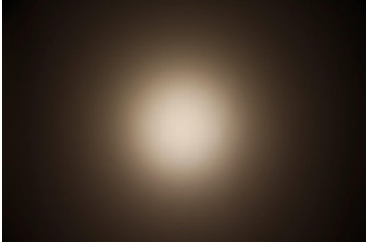
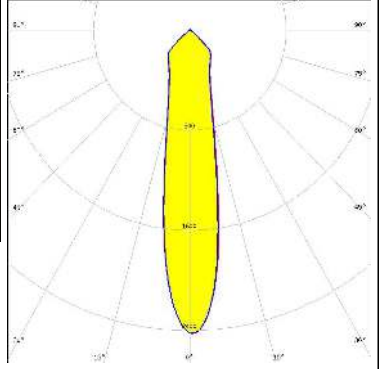
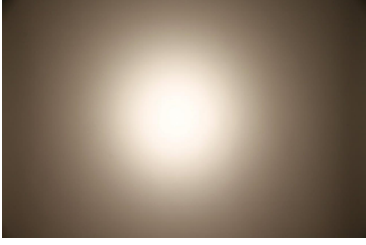
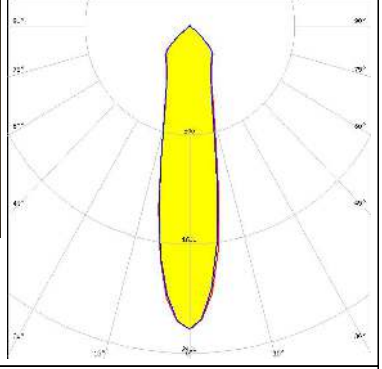
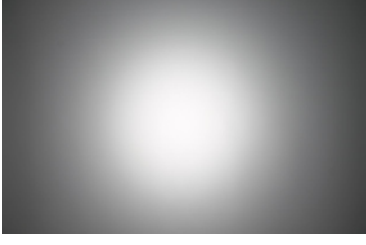
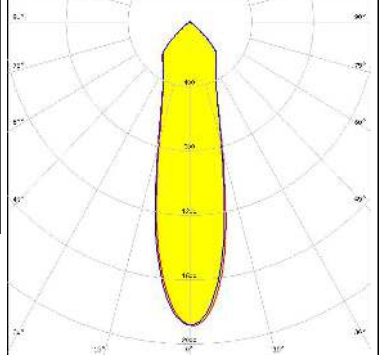


#### CREE LED

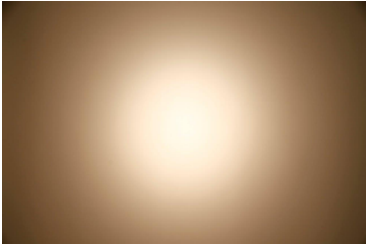
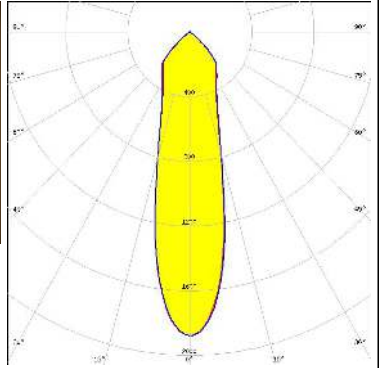
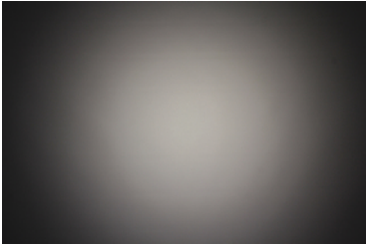
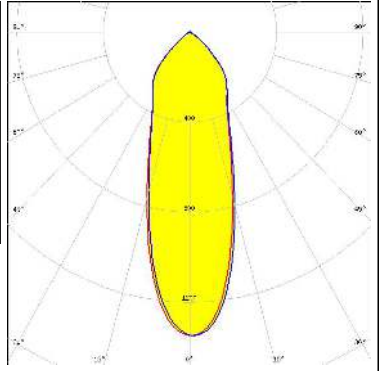
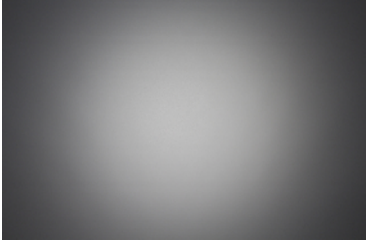
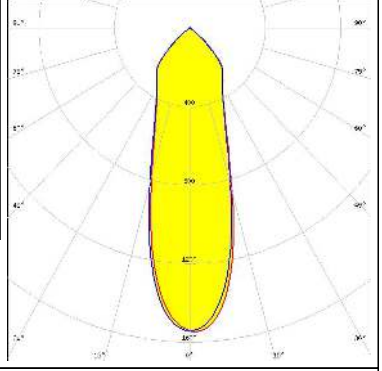
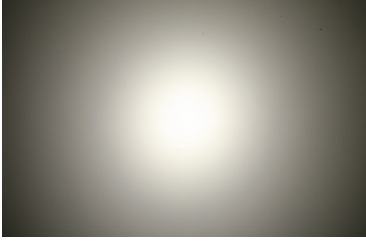
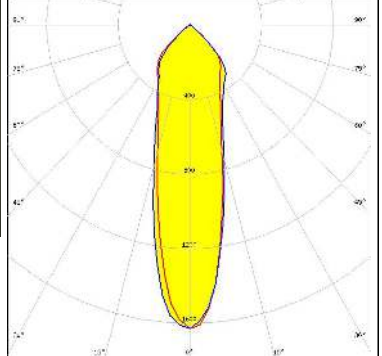
LED CXA/B 25xx  
 FWHM / FWTM 30.0° / 93.0°  
 Efficiency 88 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2141



#### OPTICAL RESULTS (MEASURED):


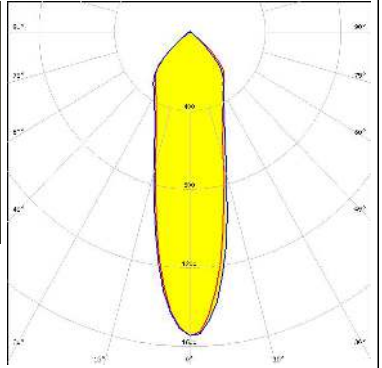

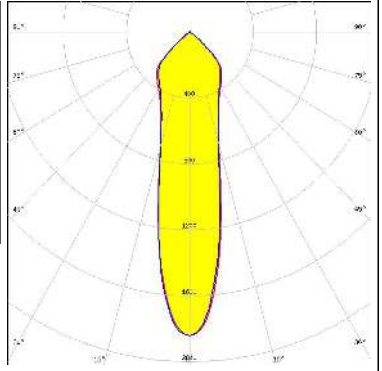
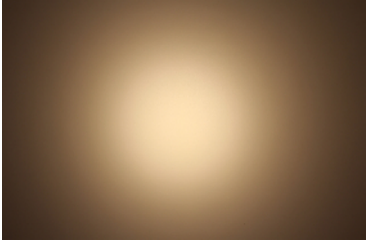
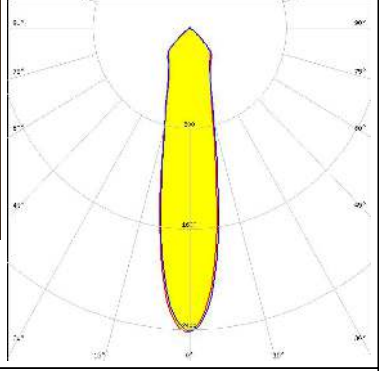
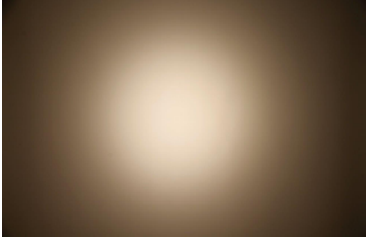
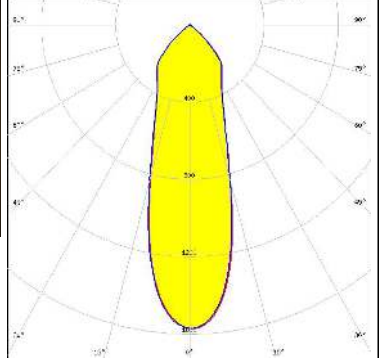
|  |  |   |
|--|--|---|
| <p><b>CREE</b> LED</p> <p>LED CXA/B 30xx<br/>           FWHM / FWTM 30.0° / 92.0°<br/>           Efficiency 92 %<br/>           Peak intensity 1.7 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8404-G2</p>           |    |    |
| <p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1204/1205<br/>           FWHM / FWTM 21.0° / 89.0°<br/>           Efficiency 94 %<br/>           Peak intensity 2.4 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8301-G2</p> |   |   |
| <p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208<br/>           FWHM / FWTM 23.0° / 90.0°<br/>           Efficiency 94 %<br/>           Peak intensity 2.2 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8301-G2</p>      |  |  |
| <p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211<br/>           FWHM / FWTM 26.0° / 91.0°<br/>           Efficiency 92 %<br/>           Peak intensity 1.9 cd/lm<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           BJB: 47.319.2030</p>             |  |  |

#### OPTICAL RESULTS (MEASURED):

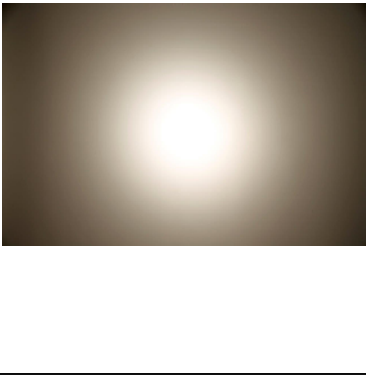
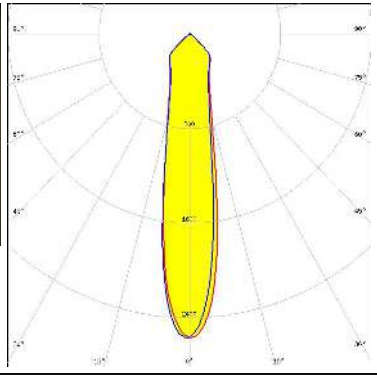

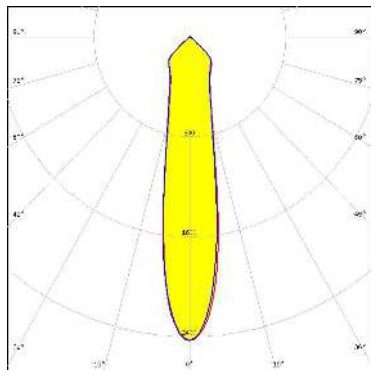

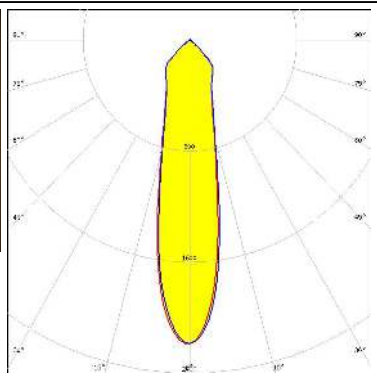
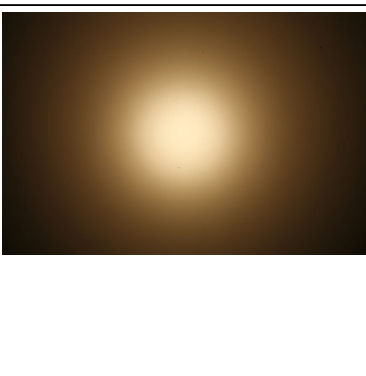
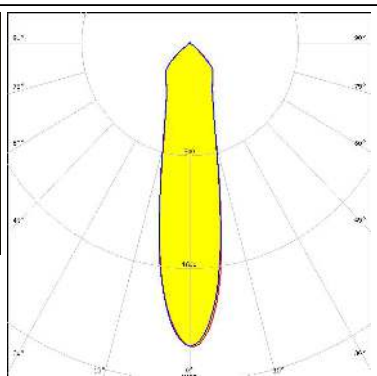
|   |  |   |
|---|--|---|
| <p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 26.0° / 91.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 1.9 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>A.A.G. STUCCHI: 8102-G2</p>                       |    |    |
| <p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM 34.0° / 95.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>F13671_ANGE-RZ-LENS<br/>BJB: 47.319.2030</p> |   |   |
| <p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM 32.0° / 93.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 1.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2030</p>                         |  |  |
| <p><b>LUMILEDS</b></p> <p>LED LUXEON K12</p> <p>FWHM / FWTM 27.0° / 95.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>F13671_ANGE-RZ-LENS<br/>BJB: 47.319.2070</p>           |  |  |



#### OPTICAL RESULTS (MEASURED):

|   |  |   |
|---|--|---|
| <p><b>LUMILEDS</b></p> <p>LED LUXEON K16</p> <p>FWHM / FWTM 29.0° / 95.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>F13671_ANGE-RZ-LENS<br/>BJB: 47.319.2070</p> |    |    |
| <p><b>LUMILEDS</b></p> <p>LED LUXEON K16</p> <p>FWHM / FWTM 24.0° / 94.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2070</p>                         |   |   |
| <p><b>LUMINUS</b></p> <p>LED CxM-14 (19x19)</p> <p>FWHM / FWTM 23.0° / 87.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2021</p>                      |  |  |
| <p><b>LUMINUS</b></p> <p>LED CxM-22 (28x28)</p> <p>FWHM / FWTM 32.0° / 93.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 1.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2030</p>                      |  |  |

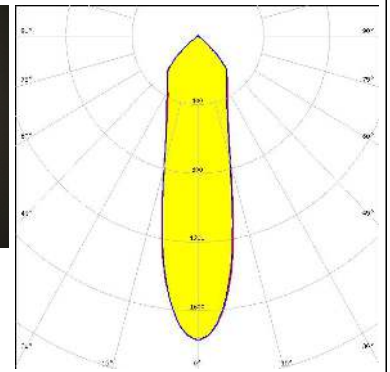
#### OPTICAL RESULTS (MEASURED):

|  |  |   |
|--|--|---|
| <p><b>OSRAM</b><br/>Opto Semiconductors</p> <p>LED Soleriq S13</p> <p>FWHM / FWTM 20.0° / 87.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>A.A.G. STUCCHI: 8502-G2</p> |    |    |
| <p><b>OSRAM</b><br/>Opto Semiconductors</p> <p>LED Soleriq S13 19x19</p> <p>FWHM / FWTM 20.0° / 89.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 2.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2021</p>  |   |   |
| <p><b>OSRAM</b><br/>Opto Semiconductors</p> <p>LED Soleriq S19</p> <p>FWHM / FWTM 23.0° / 89.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>A.A.G. STUCCHI: 8503-G2</p> |  |  |
| <p><b>OSRAM</b><br/>Opto Semiconductors</p> <p>LED Soleriq S19</p> <p>FWHM / FWTM 23.0° / 90.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:<br/>BJB: 47.319.2170</p>        |  |  |

#### OPTICAL RESULTS (MEASURED):

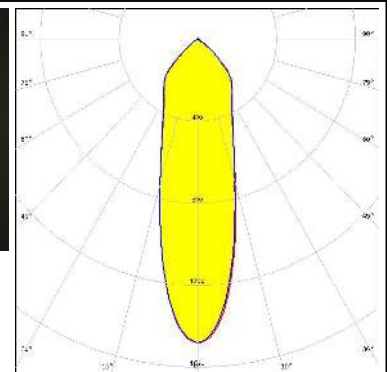
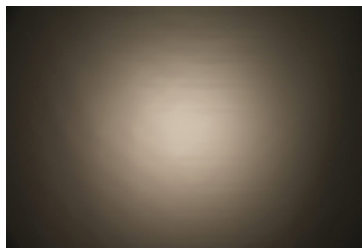
#### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM 27.0° / 92.0°  
 Efficiency 93 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2030



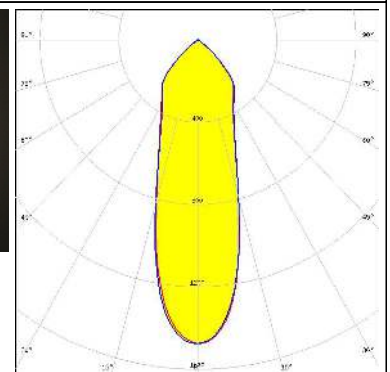
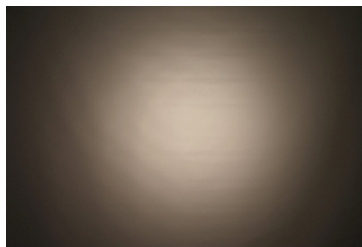
#### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM 30.0° / 94.0°  
 Efficiency 88 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2030



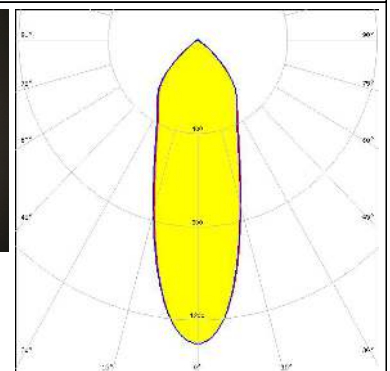
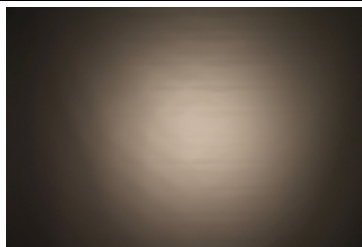
#### PHILIPS

LED Fortimo SLM L23 CoB  
 FWHM / FWTM 32.0° / 95.0°  
 Efficiency 93 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2030



#### PHILIPS

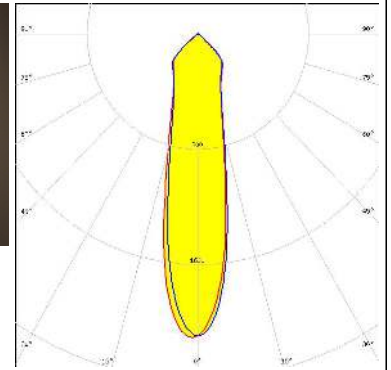
LED Fortimo SLM L23 CoB  
 FWHM / FWTM 34.0° / 95.0°  
 Efficiency 88 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2030



#### OPTICAL RESULTS (MEASURED):

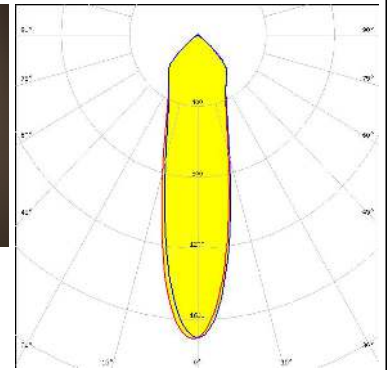
### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 24.0° / 91.0°  
 Efficiency 93 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8101-G2



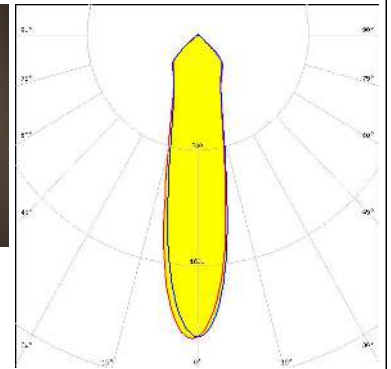
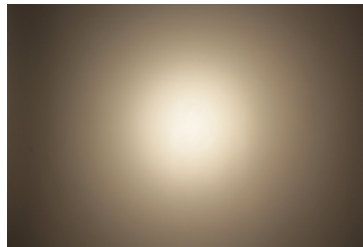
### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 27.0° / 93.0°  
 Efficiency 89 %  
 Peak intensity 1.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2021



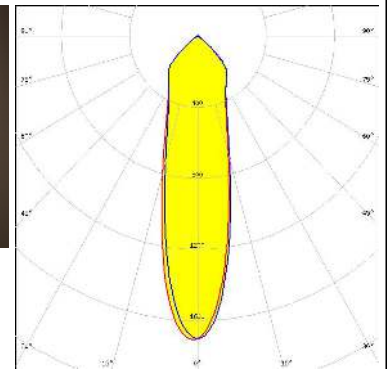
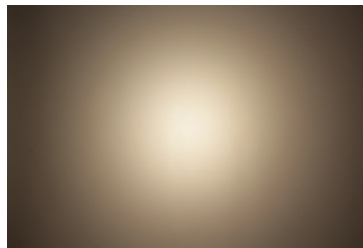
### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 24.0° / 91.0°  
 Efficiency 93 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



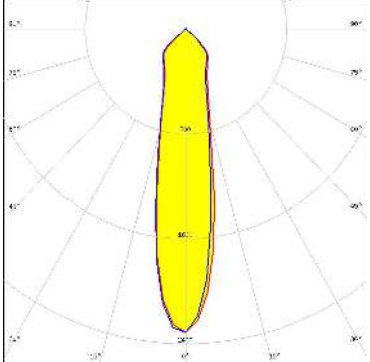


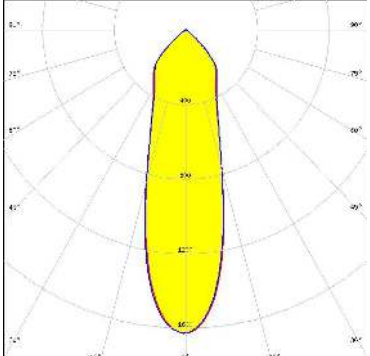
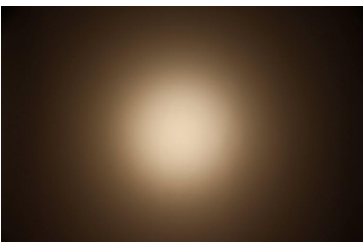
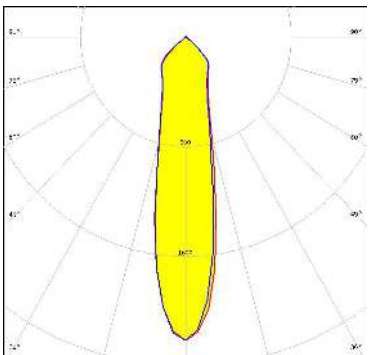
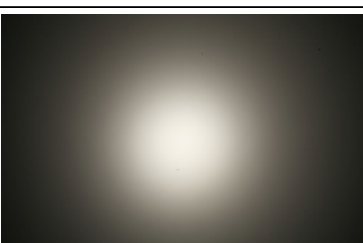
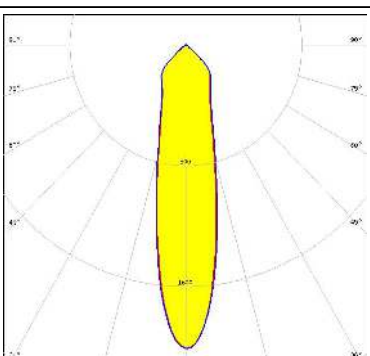


### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 27.0° / 93.0°  
 Efficiency 89 %  
 Peak intensity 1.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 A.A.G. STUCCHI: 8101-G2



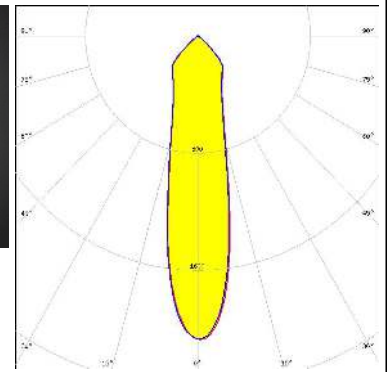
#### OPTICAL RESULTS (MEASURED):

|  |  |   |
|--|--|---|
| <p> <b>SEOUL SEMICONDUCTOR</b></p> <p>LED ZC12/18<br/>           FWHM / FWTM 22.0° / 89.0°<br/>           Efficiency 93 %<br/>           Peak intensity 2.3 cd/m<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8101-G2</p>    |    |    |
| <p> <b>SEOUL SEMICONDUCTOR</b></p> <p>LED ZC25/40/60<br/>           FWHM / FWTM 30.0° / 93.0°<br/>           Efficiency 92 %<br/>           Peak intensity 1.6 cd/m<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8102-G2</p> |   |   |
| <p><b>SHARP</b></p> <p>LED Mega Zenigata (GW6DME)<br/>           FWHM / FWTM 23.0° / 90.0°<br/>           Efficiency 94 %<br/>           Peak intensity 2.2 cd/m<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           A.A.G. STUCCHI: 8301-G2</p>   |  |  |
| <p><b>SHARP</b></p> <p>LED Tiger Zenigata (GWTGCBG4FD)<br/>           FWHM / FWTM 23.0° / 90.0°<br/>           Efficiency 91 %<br/>           Peak intensity 2 cd/m<br/>           LEDs/each optic 1<br/>           Light colour White<br/>           Required components:<br/>           F13671_ANGE-RZ-LENS<br/>           BJB: 47.319.2051</p>  |  |  |

#### OPTICAL RESULTS (MEASURED):

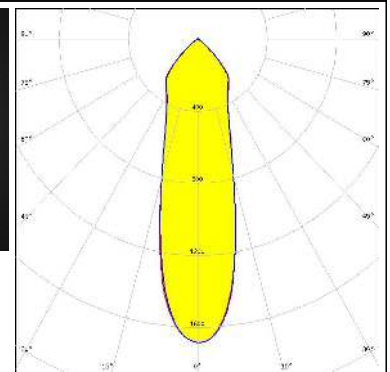
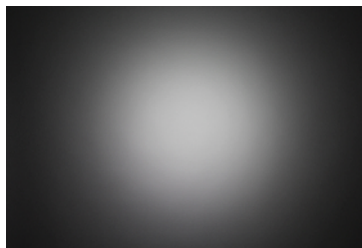
#### TRIDONIC

LED SLE G7 LES17 H  
 FWHM / FWTM 24.0° / 89.0°  
 Efficiency 91 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



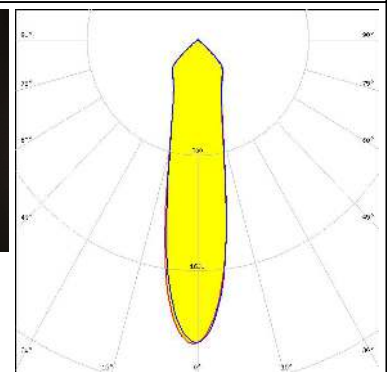
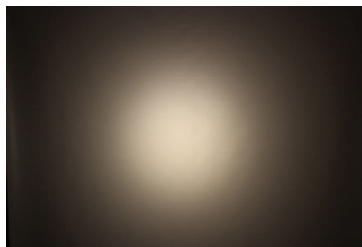
#### TRIDONIC

LED SLE G7 LES21 H  
 FWHM / FWTM 29.0° / 91.0°  
 Efficiency 91 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



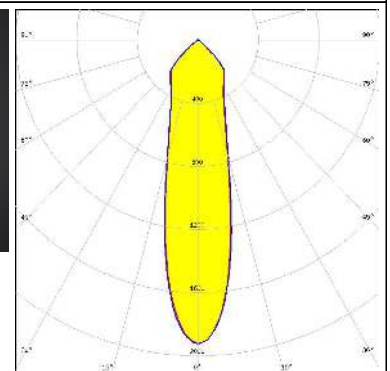
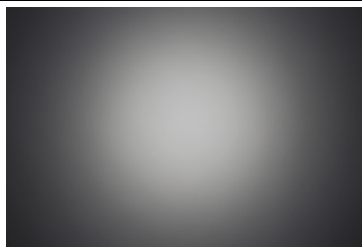
#### XICATO

LED XOB 14.5 mm  
 FWHM / FWTM 23.0° / 92.0°  
 Efficiency 94 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



#### XICATO

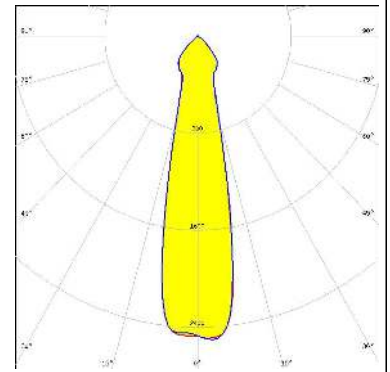
LED XTM - 19mm LES  
 FWHM / FWTM 25.0° / 91.0°  
 Efficiency 93 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C15743\_XTM-ADAPTER-50-B



#### OPTICAL RESULTS (SIMULATED):

### CITIZEN

LED CLL04x/CLU04x  
FWHM / FWTM 24.0° / 79.0°  
Efficiency 89 %  
Peak intensity 2.5 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
BJB: 47.319.2315

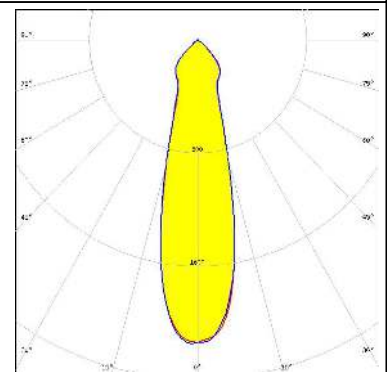


### CITIZEN

LED CLL04x/CLU04x  
FWHM / FWTM 22.0° / 68.0°  
Efficiency 95 %  
Peak intensity 3.1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
BJB: 47.319.2030

### SAMSUNG

LED LC040D / LC060D / LC080D  
FWHM / FWTM 27.0° / 85.0°  
Efficiency 90 %  
Peak intensity 2.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
BJB: 47.319.2030



#### 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.

#### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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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