

## ANGELA-S-B

~10° spot beam compatible with BJB connectors

### TECHNICAL SPECIFICATIONS:

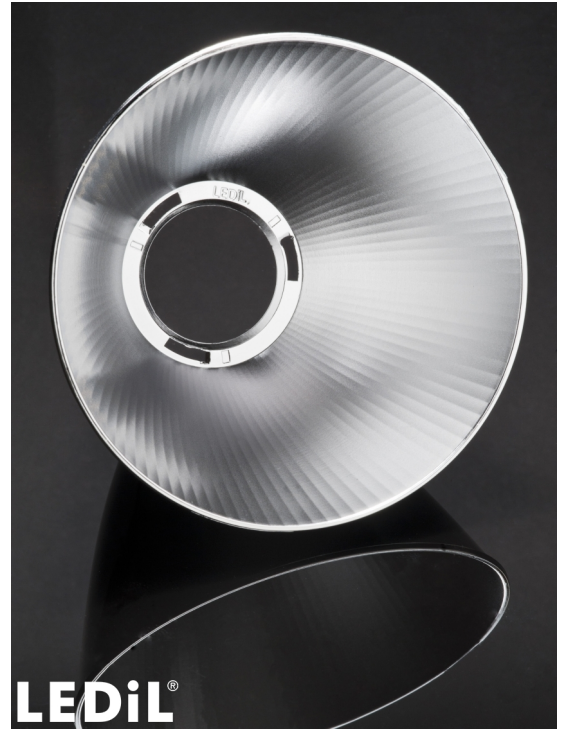
Dimensions	Ø 119.5 mm
Height	74.5 mm
Fastening	socket
ROHS compliant	yes ⓘ

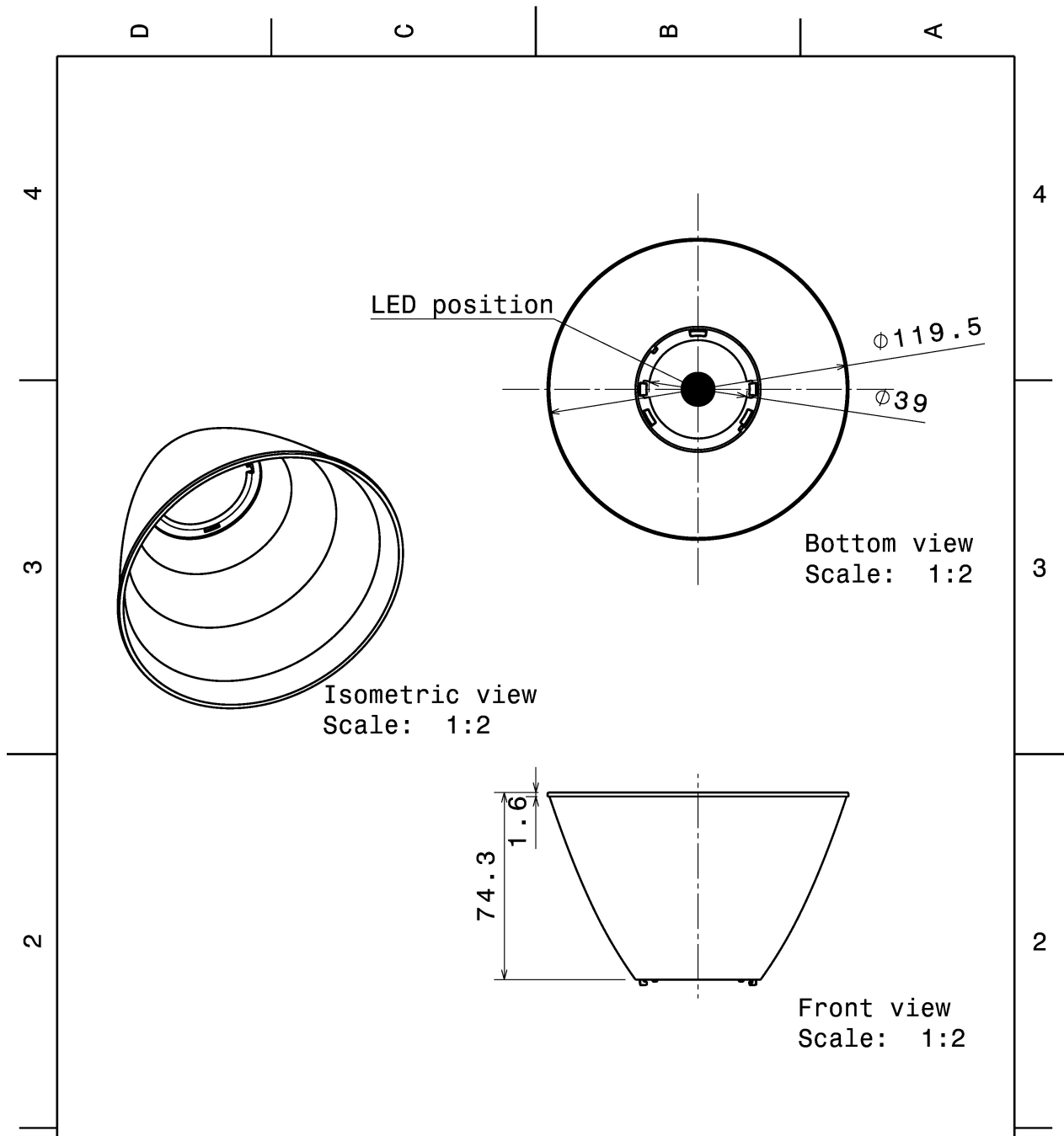
### MATERIAL SPECIFICATIONS:

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

### ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
F13662_ANGELA-S-B » Box size: 398 x 298 x 265 mm	180	90	45	8.6





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  
**Angela-B**



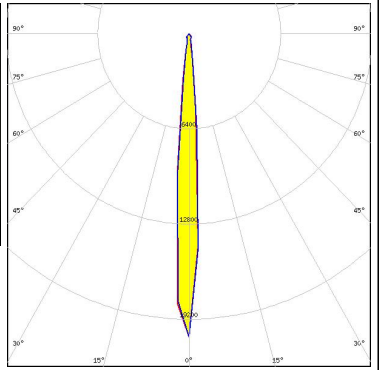


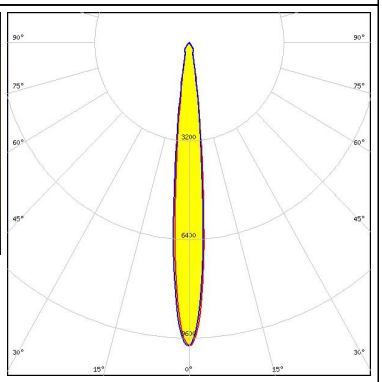


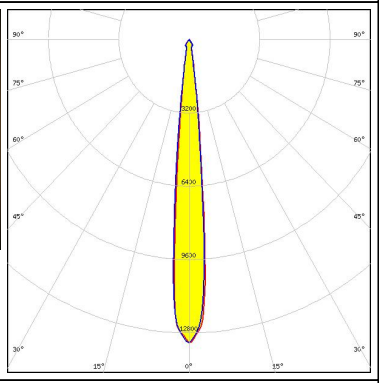


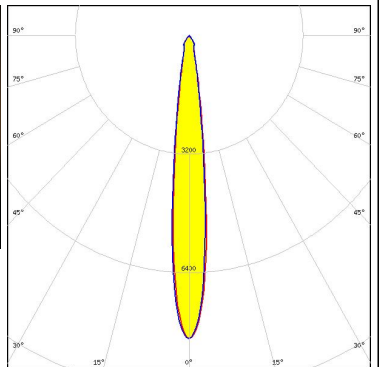
This drawing is the property of LEDiL Oy. It may not be reproduced, copied or communicated without a written agreement with LEDiL Oy."

SIZE	PART NUMBER
A4	-


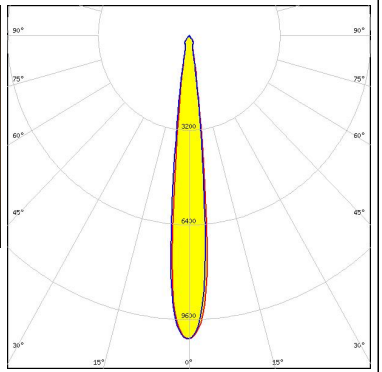

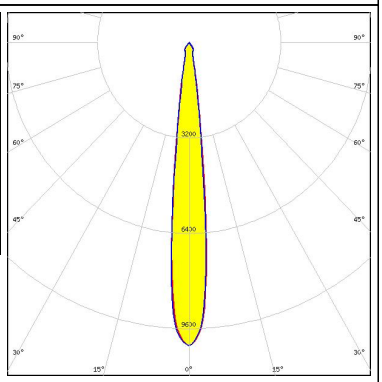

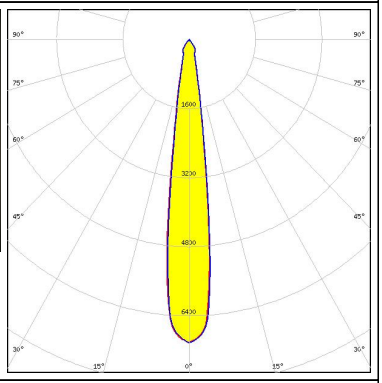

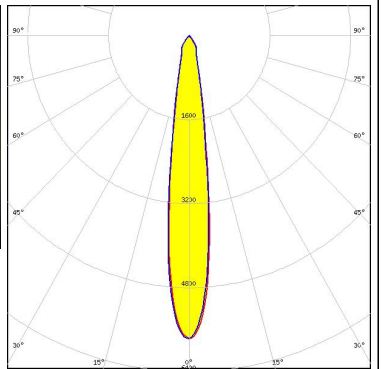
SCALE	1:2	WEIGHT	-	SHEET	1/1
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See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### PHOTOMETRIC DATA (MEASURED):

<p></p> <p>LED BXRA ES Rectangle</p> <p>FWHM / FWTM 8.0° / 16.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 20.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2040</p>		
<p></p> <p>LED V15 Gen6</p> <p>FWHM / FWTM 11.0° / 25.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 9.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS BJB: 47.319.2274</p>		
<p></p> <p>LED V15 Gen6</p> <p>FWHM / FWTM 11.0° / 20.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 13 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2224</p>		
<p></p> <p>LED V18 Gen6</p> <p>FWHM / FWTM 13.0° / 28.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 8.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS BJB: 47.319.2274</p>		

#### PHOTOMETRIC DATA (MEASURED):

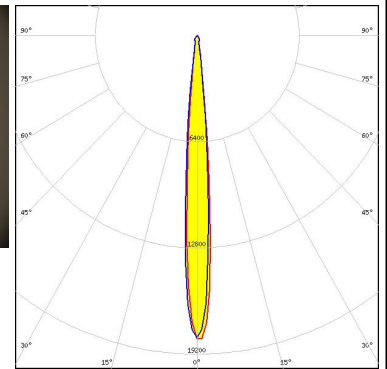
<p>bridgelux.</p> <p>LED V18 Gen6</p> <p>FWHM / FWTM 12.0° / 23.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 10 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2274</p>		
<p>bridgelux.</p> <p>LED V18 Gen7</p> <p>FWHM / FWTM 12.0° / 24.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 10.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2350</p>		
<p>bridgelux.</p> <p>LED V22 Gen6</p> <p>FWHM / FWTM 15.0° / 30.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: A.A.G. STUCCHI: 8102-G2</p>		
<p>bridgelux.</p> <p>LED V22 Gen6</p> <p>FWHM / FWTM 15.0° / 35.0°</p> <p>Efficiency 84 %</p> <p>Peak intensity 5.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS A.A.G. STUCCHI: 8102-G2</p>		



#### PHOTOMETRIC DATA (MEASURED):

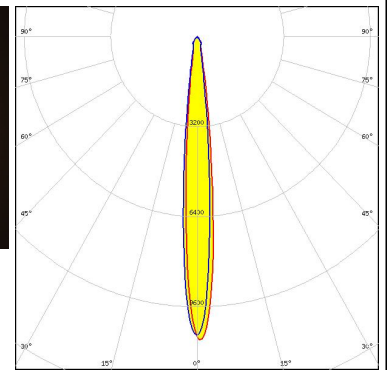
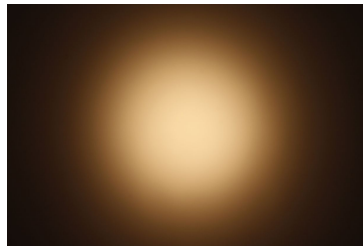
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 9.0° / 17.0°  
 Efficiency 94 %  
 Peak intensity 18.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



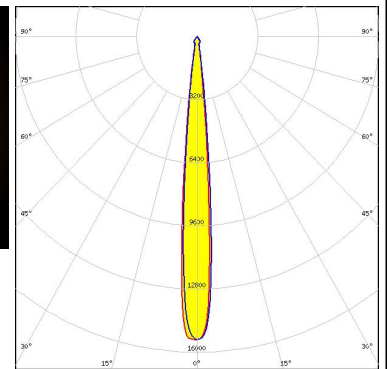
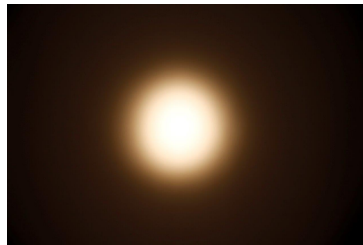
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 10.0° / 23.0°  
 Efficiency 86 %  
 Peak intensity 10.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 A.A.G. STUCCHI: 8101-G2



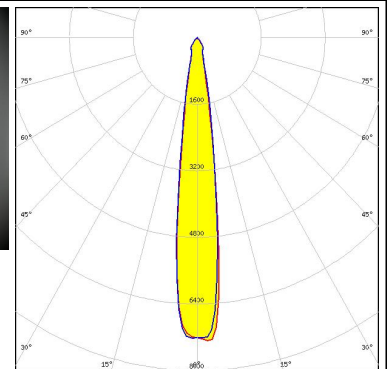
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 10.0° / 18.0°  
 Efficiency 93 %  
 Peak intensity 15.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8101-G2



#### CITIZEN

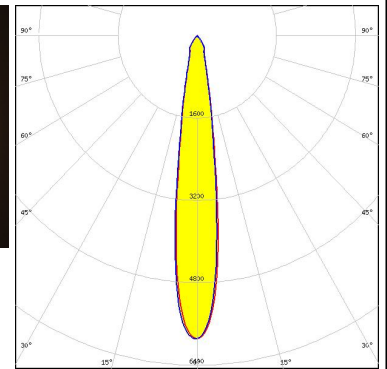
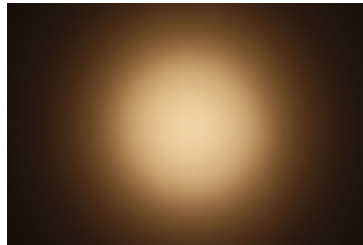
LED CLL04x/CLU04x  
 FWHM / FWTM 15.0° / 29.0°  
 Efficiency 92 %  
 Peak intensity 7.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2030



#### PHOTOMETRIC DATA (MEASURED):

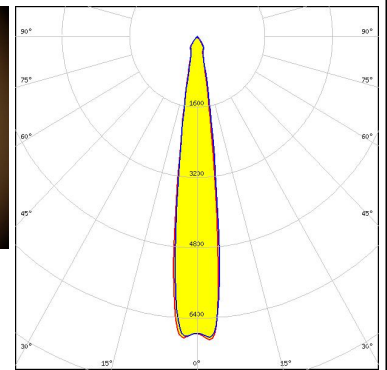
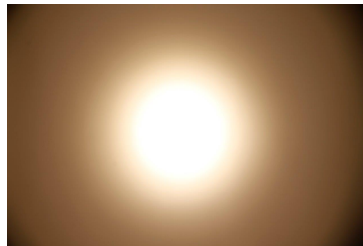
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 15.0° / 35.0°  
 Efficiency 86 %  
 Peak intensity 5.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 A.A.G. STUCCHI: 8102-G2



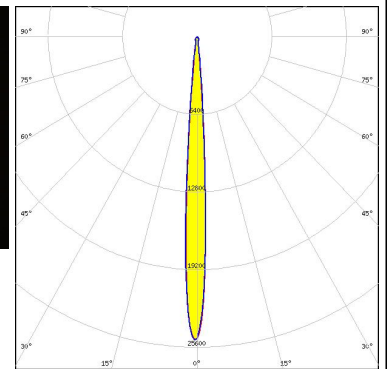
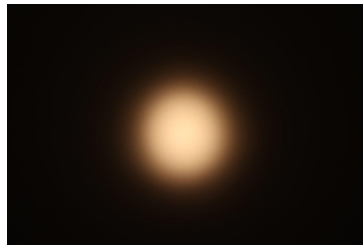
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 15.0° / 30.0°  
 Efficiency 92 %  
 Peak intensity 6.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8102-G2



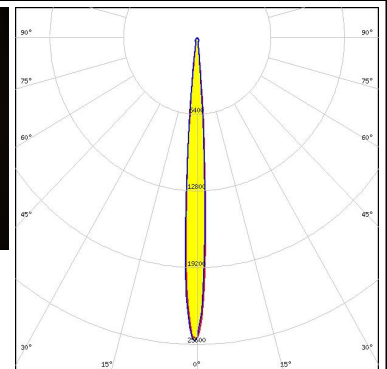
#### CITIZEN

LED CLU720/721  
 FWHM / FWTM 7.0° / 14.0°  
 Efficiency 94 %  
 Peak intensity 25 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8101-G2



#### CITIZEN

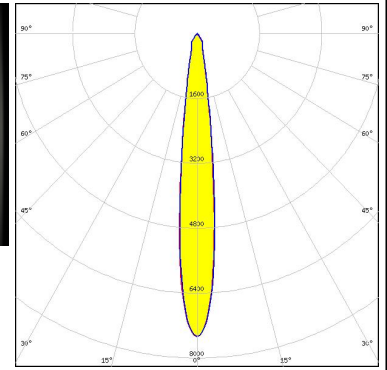
LED CLU720/721  
 FWHM / FWTM 7.0° / 14.0°  
 Efficiency 94 %  
 Peak intensity 25.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



#### PHOTOMETRIC DATA (MEASURED):

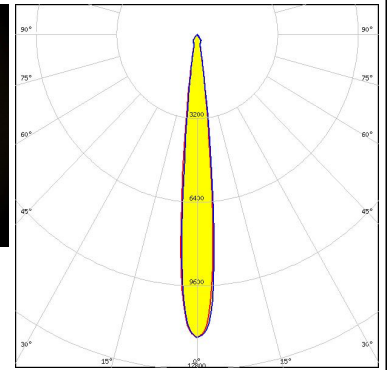
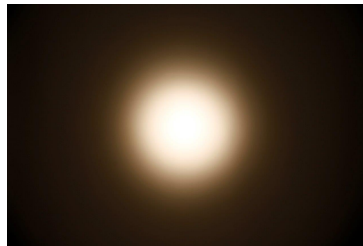
##### CREE LED

LED CXA/B 25xx  
 FWHM / FWTM 13.0° / 30.0°  
 Efficiency 86 %  
 Peak intensity 7.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2141



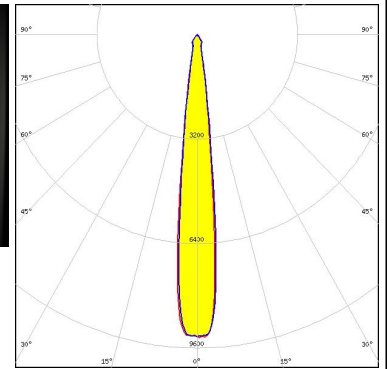
##### CREE LED

LED CXA/B 25xx  
 FWHM / FWTM 11.0° / 22.0°  
 Efficiency 92 %  
 Peak intensity 11.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8401-G2



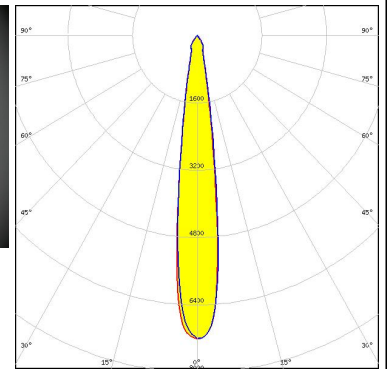
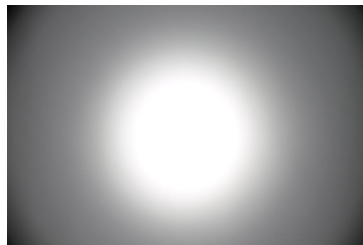
##### CREE LED

LED CXA/B 25xx  
 FWHM / FWTM 13.0° / 25.0°  
 Efficiency 89 %  
 Peak intensity 9.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2141

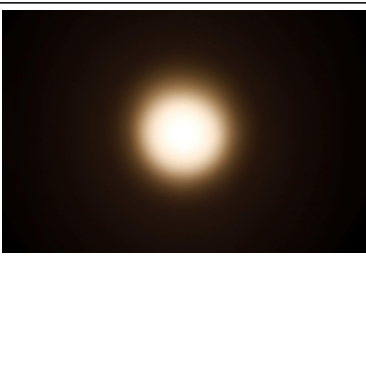
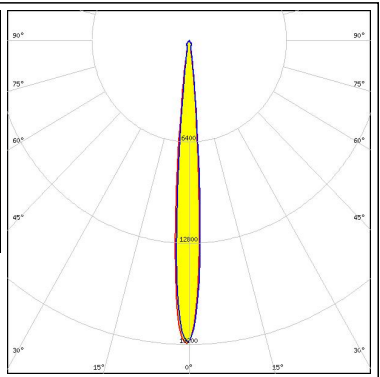
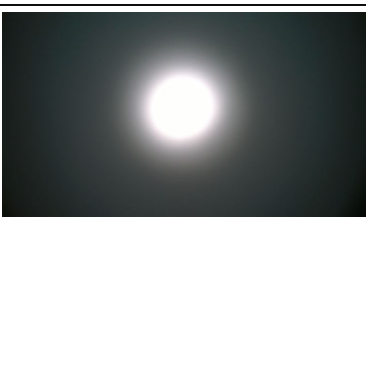
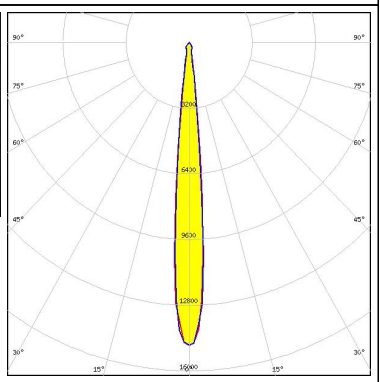

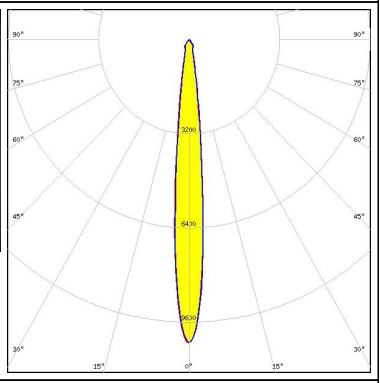

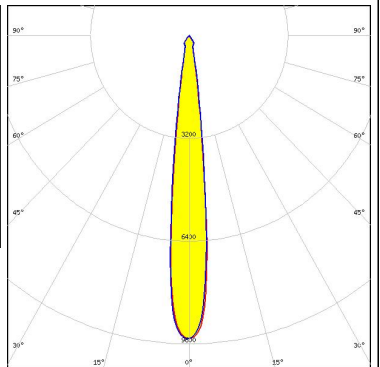


##### CREE LED


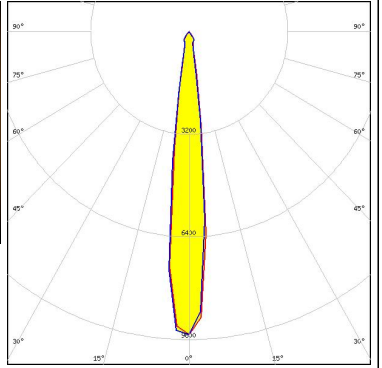

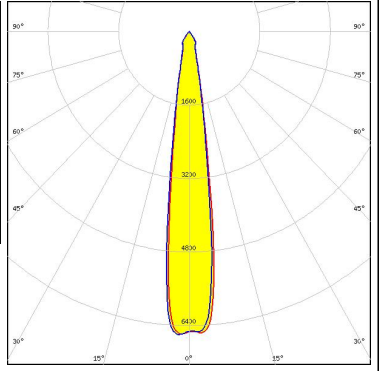
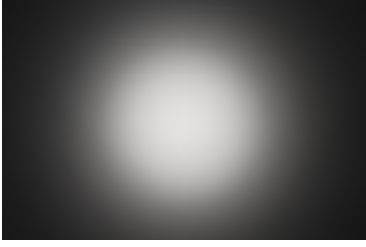
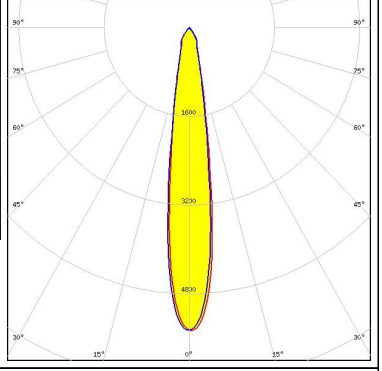

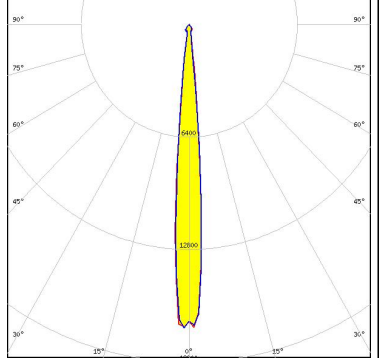
LED CXA/B 30xx  
 FWHM / FWTM 15.0° / 30.0°  
 Efficiency 91 %  
 Peak intensity 7.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8404-G2



### PHOTOMETRIC DATA (MEASURED):


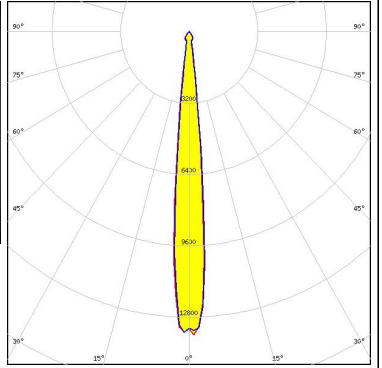

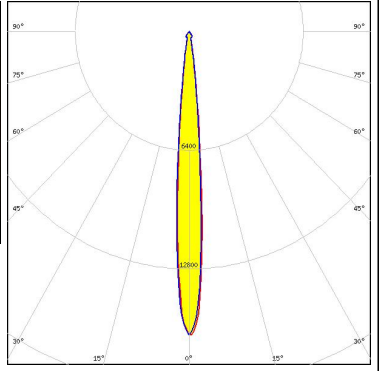
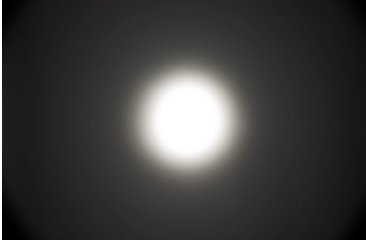
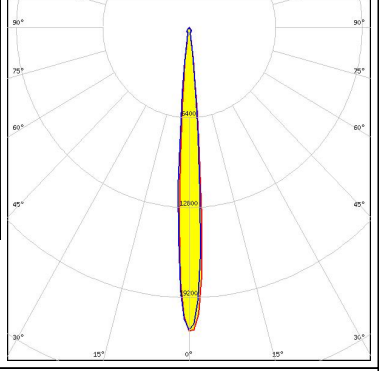

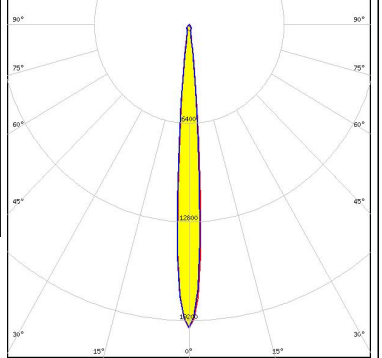
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1204/1205</p> <p>FWHM / FWTM 9.0° / 16.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 19.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: A.A.G. STUCCHI: 8301-G2</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208</p> <p>FWHM / FWTM 10.0° / 19.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 14.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: A.A.G. STUCCHI: 8301-G2</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208</p> <p>FWHM / FWTM 11.0° / 24.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 10 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS A.A.G. STUCCHI: 8301-G2</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 13.0° / 25.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 9.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2030</p>		

#### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 13.0° / 24.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 9.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: A.A.G. STUCCHI: 8102-G2</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM 15.0° / 31.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 6.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2030</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM 16.0° / 37.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 5.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS BJB: 47.319.2030</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON K12</p> <p>FWHM / FWTM 9.0° / 16.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 17.3 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2070</p>		



#### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON K16</p> <p>FWHM / FWTM 11.0° / 18.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 13.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2070</p>		
<p><b>LUMINUS</b></p> <p>LED CxM-14 (19x19)</p> <p>FWHM / FWTM 9.0° / 18.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 16.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2021</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13</p> <p>FWHM / FWTM 8.0° / 15.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 21.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: A.A.G. STUCCHI: 8502-G2</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13 19x19</p> <p>FWHM / FWTM 8.5° / 160.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 19.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2021</p>		

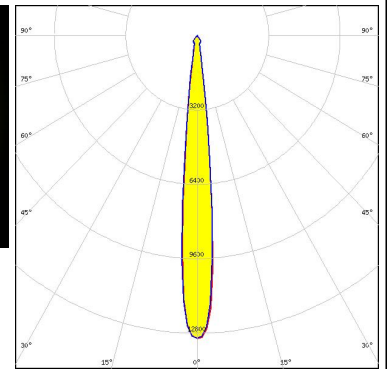
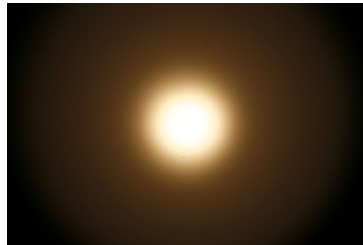


#### PHOTOMETRIC DATA (MEASURED):

#### OSRAM

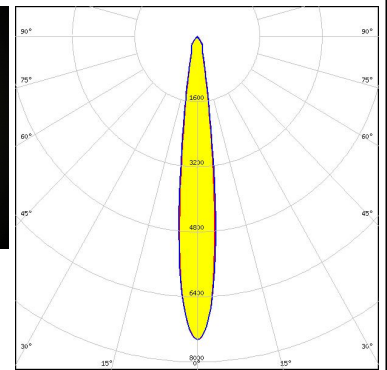
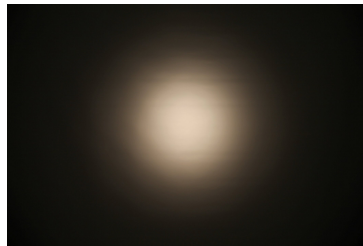
Opto Semiconductors

LED Soleriq S19  
 FWHM / FWTM 11.0° / 20.0°  
 Efficiency 93 %  
 Peak intensity 13.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2170



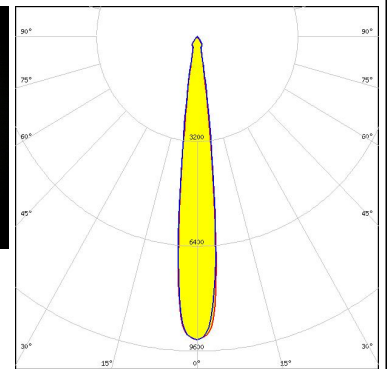
#### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM 13.0° / 29.0°  
 Efficiency 86 %  
 Peak intensity 7.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2030



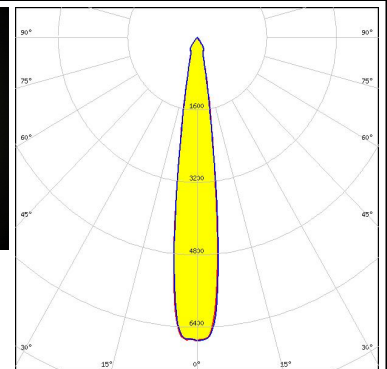
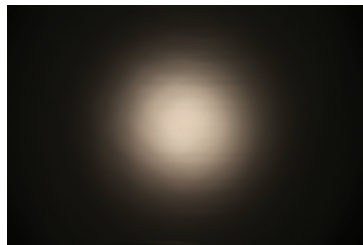
#### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM 13.0° / 25.0°  
 Efficiency 91 %  
 Peak intensity 9.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2030



#### PHILIPS

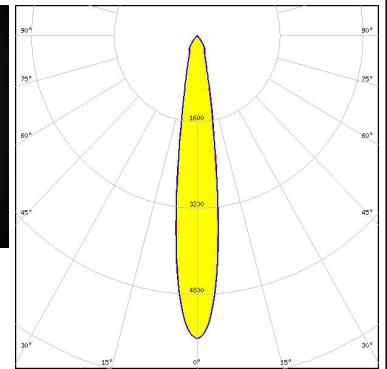
LED Fortimo SLM L23 CoB  
 FWHM / FWTM 15.0° / 32.0°  
 Efficiency 91 %  
 Peak intensity 6.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2030



#### PHOTOMETRIC DATA (MEASURED):

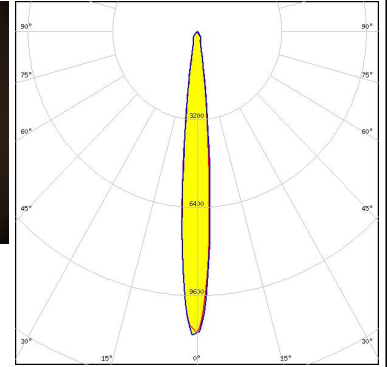
### PHILIPS

LED Fortimo SLM L23 CoB  
 FWHM / FWTM 16.0° / 37.0°  
 Efficiency 86 %  
 Peak intensity 5.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2030



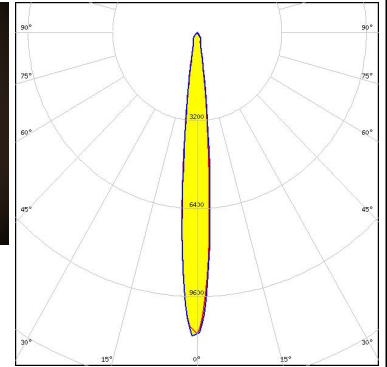
### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 11.0° / 23.0°  
 Efficiency 87 %  
 Peak intensity 11 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 BJB: 47.319.2021



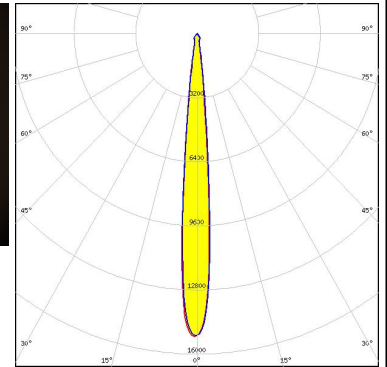
### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 11.0° / 23.0°  
 Efficiency 87 %  
 Peak intensity 11 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 A.A.G. STUCCHI: 8101-G2



### SAMSUNG

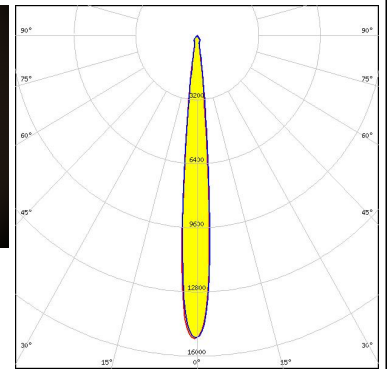
LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 10.0° / 19.0°  
 Efficiency 91 %  
 Peak intensity 15.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



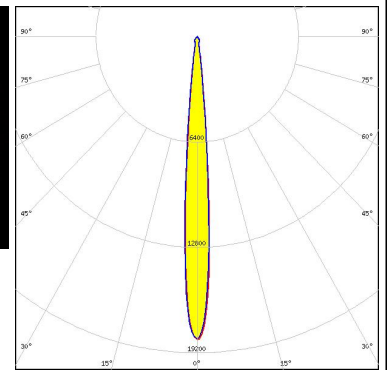
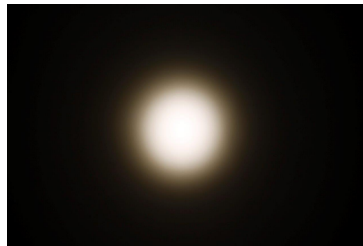
#### PHOTOMETRIC DATA (MEASURED):

### SAMSUNG

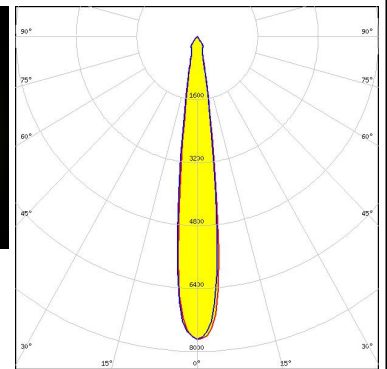
LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 10.0° / 19.0°  
 Efficiency 91 %  
 Peak intensity 15.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8101-G2



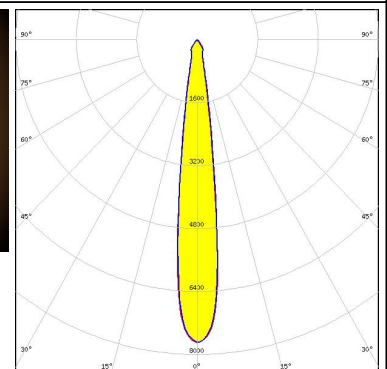
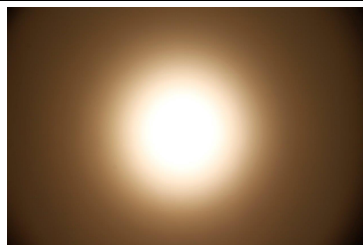
**SEOUL SEMICONDUCTOR**  
 LED ZC12/18  
 FWHM / FWTM 9.0° / 17.0°  
 Efficiency 93 %  
 Peak intensity 18.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8101-G2




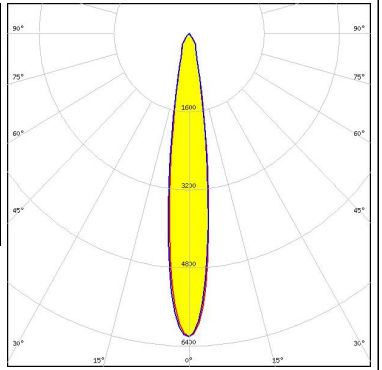

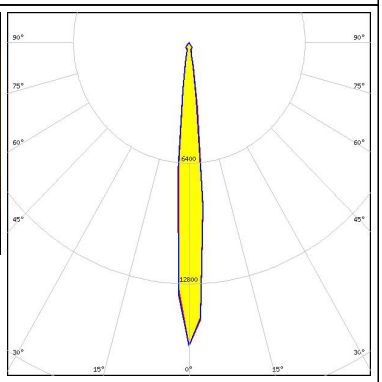
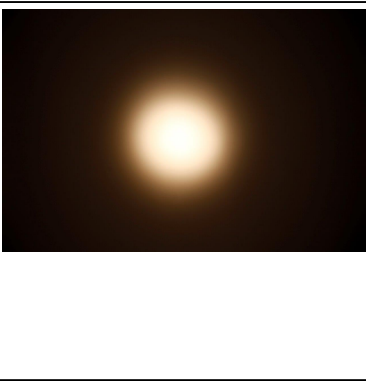
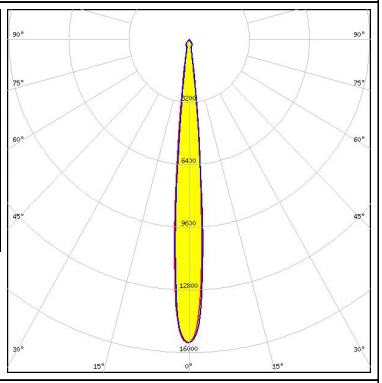

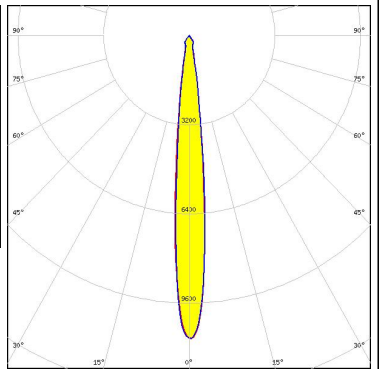
**SEOUL SEMICONDUCTOR**  
 LED ZC25/40/60  
 FWHM / FWTM 14.0° / 29.0°  
 Efficiency 93 %  
 Peak intensity 7.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2030



**SEOUL SEMICONDUCTOR**  
 LED ZC25/40/60  
 FWHM / FWTM 14.0° / 28.0°  
 Efficiency 91 %  
 Peak intensity 7.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8102-G2



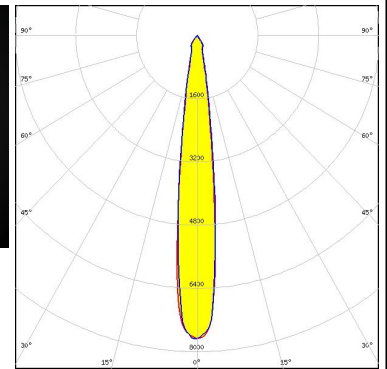
#### PHOTOMETRIC DATA (MEASURED):

<p><b>SEOL</b> SEOUL SEMICONDUCTOR</p> <p>LED ZC25/40/60 FWHM / FWTM 16.0° / 35.0° Efficiency 87 % Peak intensity 6.2 cd/lm LEDs/each optic 1 Light colour White Required components: F13671_ANGE-RZ-LENS BJB: 47.319.2030</p>		
<p><b>SHARP</b></p> <p>LED Mega Zenigata (GW6DME) FWHM / FWTM 10.0° / 18.0° Efficiency 94 % Peak intensity 16.1 cd/lm LEDs/each optic 1 Light colour White Required components: BJB: 47.319.2011</p>		
<p><b>SHARP</b></p> <p>LED Mega Zenigata (GW6DME) FWHM / FWTM 10.0° / 18.0° Efficiency 94 % Peak intensity 15.5 cd/lm LEDs/each optic 1 Light colour White Required components: A.A.G. STUCCHI: 8301-G2</p>		
<p><b>TRIDONIC</b></p> <p>LED SLE G7 LES17 H FWHM / FWTM 11.0° / 23.0° Efficiency 90 % Peak intensity 10.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

#### PHOTOMETRIC DATA (MEASURED):

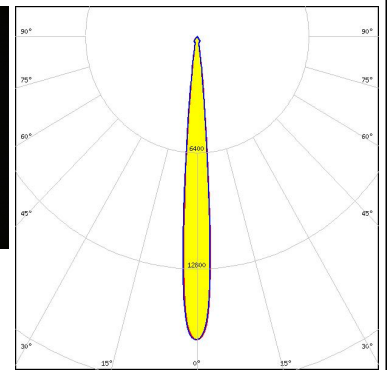
#### TRIDONIC

LED SLE G7 LES21 H  
 FWHM / FWTM 14.0° / 29.0°  
 Efficiency 90 %  
 Peak intensity 7.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



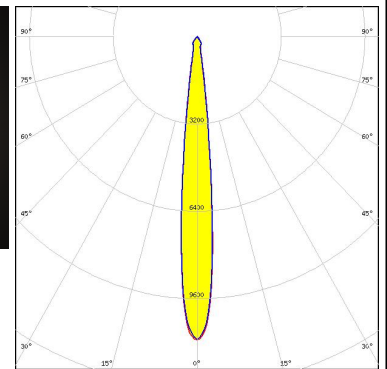
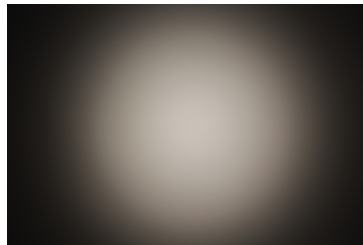
#### XICATO

LED XOB 14.5 mm  
 FWHM / FWTM 9.0° / 18.0°  
 Efficiency 92 %  
 Peak intensity 16.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



#### XICATO

LED XTM - 19mm LES  
 FWHM / FWTM 12.0° / 22.0°  
 Efficiency 91 %  
 Peak intensity 11 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C15743\_XTM-ADAPTER-50-B

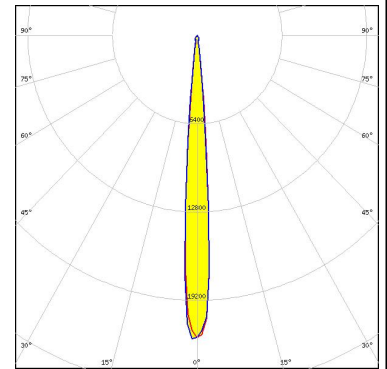




#### PHOTOMETRIC DATA (SIMULATED):

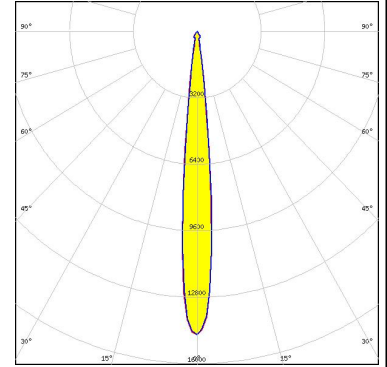
### CITIZEN

LED CLU730/731  
 FWHM / FWTM 8.5° / 15.0°  
 Efficiency 92 %  
 Peak intensity 22.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2030



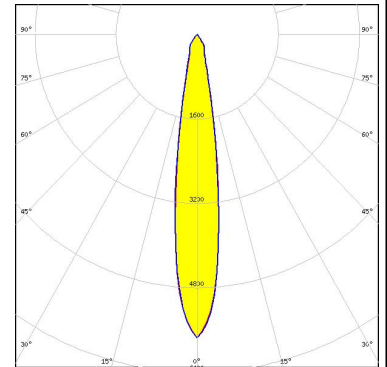
### OSRAM

Opto Semiconductors  
 LED Soleriq S15  
 FWHM / FWTM 10.0° / 18.0°  
 Efficiency 90 %  
 Peak intensity 14.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 BJB: 47.319.2021



### SAMSUNG

LED LC040D / LC060D / LC080D  
 FWHM / FWTM 17.0° / 36.0°  
 Efficiency 87 %  
 Peak intensity 5.8 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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