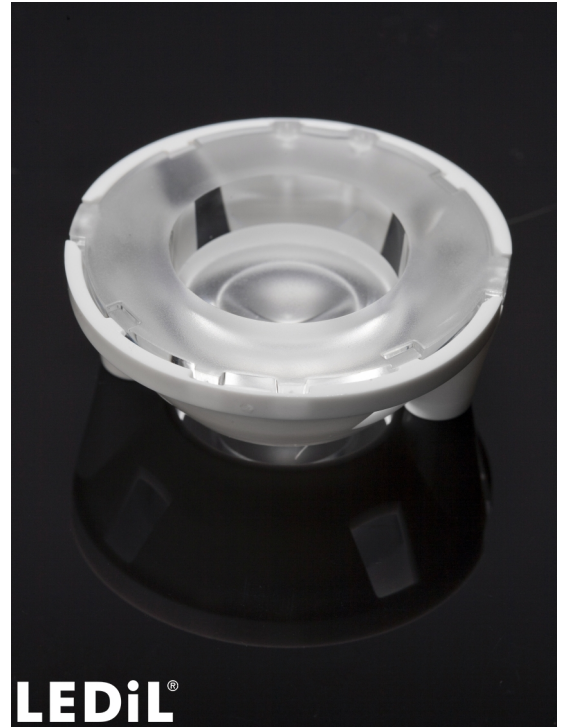


### WINNIE-S

~20° spot beam. Holder with 35 mm screw hole distance according to Zhaga standard. Compatible with Bender+Wirth 4xx Typ L5 connector.

#### SPECIFICATION:

Dimensions	Ø 49.8 mm
Height	19.3 mm
Fastening	screw
ROHS compliant	yes ⓘ



#### MATERIALS:

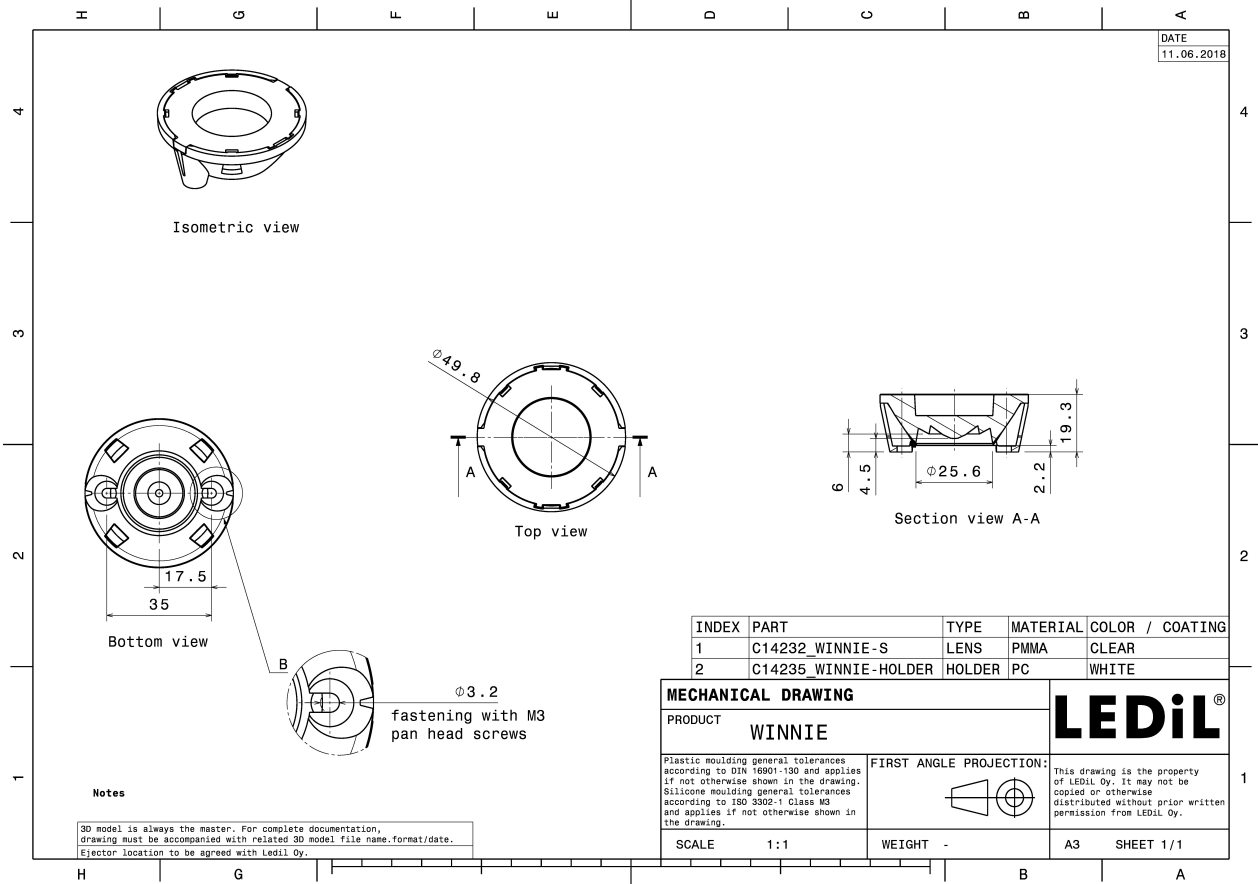
Component	Type	Material	Colour	Finish
C14232_WINNIE-S	Single lens	PMMA	clear	
C14235_WINNIE-HOLDER	Holder	PC	white	

#### ORDERING INFORMATION:

##### Quantities for one set:

Single lens	1
Holder	1

Component		Qty in box	MOQ	MPQ	Box weight (kg)
C14232_WINNIE-S	Single lens	364	84	28	7.0
» Box size: 480 x 280 x 300 mm					
C14235_WINNIE-HOLDER	Holder	1820	84	28	7.2
» Box size: 480 x 280 x 300 mm					



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

### OPTICAL RESULTS (MEASURED):

**bridgelux.**

LED	V18 Gen6
FWHM / FWTM	36.0° / 84.0°
Efficiency	88 %
Peak intensity	1.4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



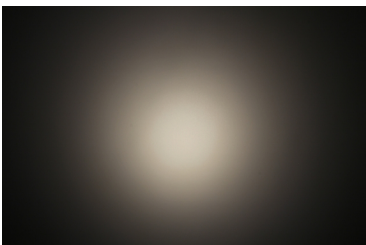
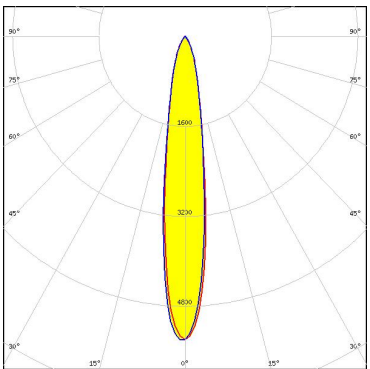

**bridgelux.**

LED	VERO10
FWHM / FWTM	21.0° / 55.0°
Efficiency	89 %
Peak intensity	3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



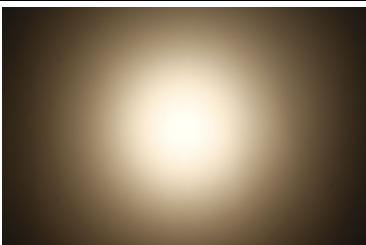

**CITIZEN**

LED	CLL01x
FWHM / FWTM	16.0° / 42.0°
Efficiency	87 %
Peak intensity	5.4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

**CITIZEN**

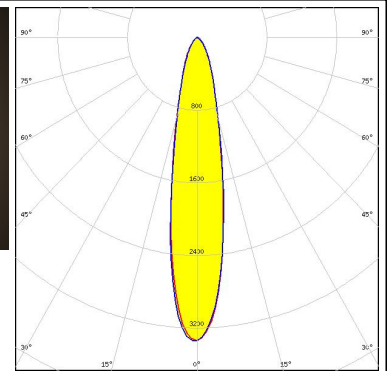
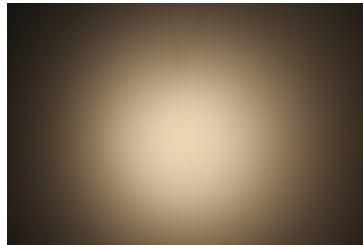
LED	CLL02x/CLU02x (LES10)
FWHM / FWTM	20.0° / 50.0°
Efficiency	88 %
Peak intensity	3.4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 434 Typ L5	




### OPTICAL RESULTS (MEASURED):

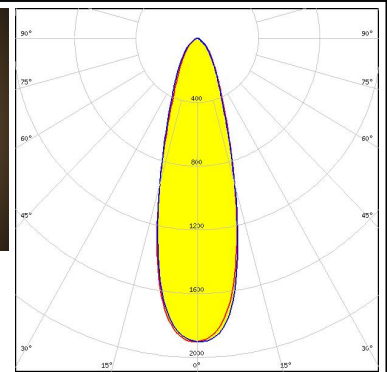
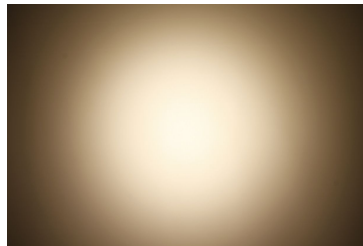
#### CITIZEN

LED CLL02x/CLU02x (LES10)  
 FWHM / FWTM 21.0° / 52.0°  
 Efficiency 87 %  
 Peak intensity 3.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



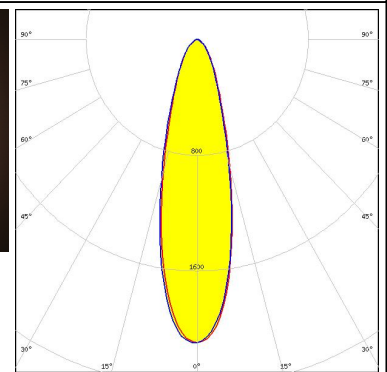
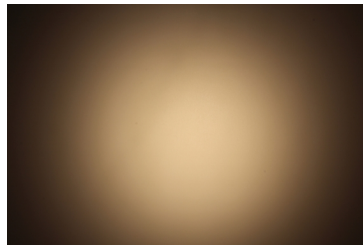
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 30.0° / 68.0°  
 Efficiency 88 %  
 Peak intensity 1.9 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 433 Typ L5



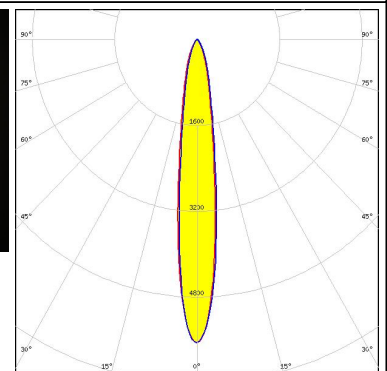
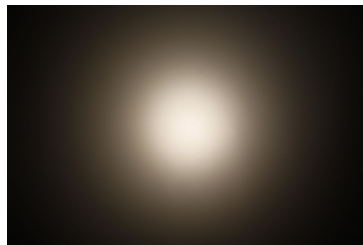
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 28.0° / 66.0°  
 Efficiency 87 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### CITIZEN

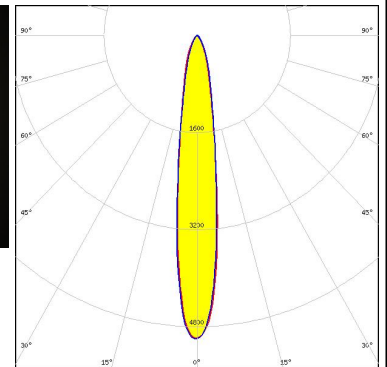
LED CLU700/701/702/703  
 FWHM / FWTM 15.0° / 39.0°  
 Efficiency 90 %  
 Peak intensity 5.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 434 Typ L5



### OPTICAL RESULTS (MEASURED):

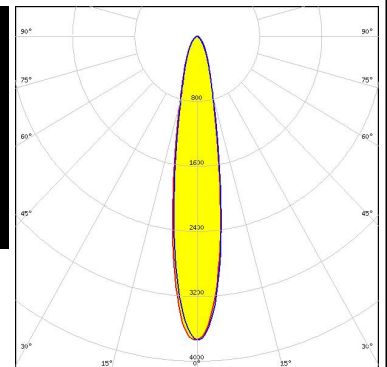
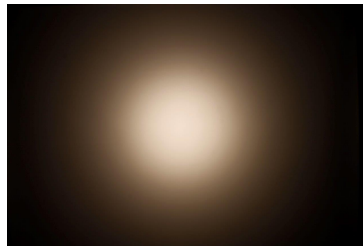
#### CITIZEN

LED CLU700/701/702/703  
 FWHM / FWTM 15.0° / 41.0°  
 Efficiency 89 %  
 Peak intensity 5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



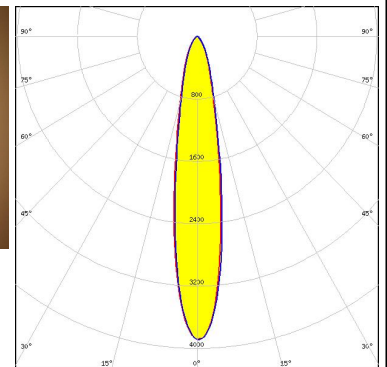
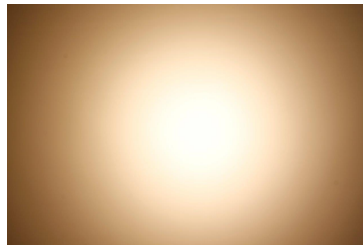
#### CITIZEN

LED CLU710/711  
 FWHM / FWTM 18.0° / 47.0°  
 Efficiency 90 %  
 Peak intensity 3.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



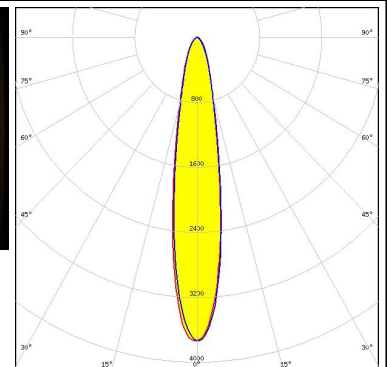
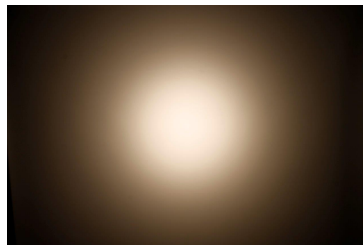
#### CITIZEN

LED CLU710/711  
 FWHM / FWTM 18.0° / 47.0°  
 Efficiency 88 %  
 Peak intensity 3.9 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 470 Typ L5



#### CITIZEN

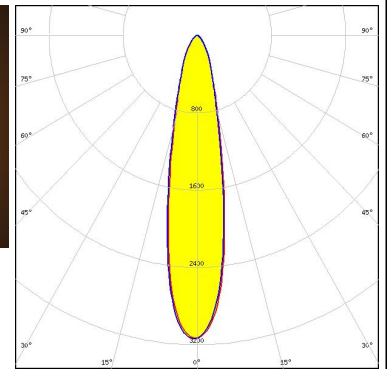
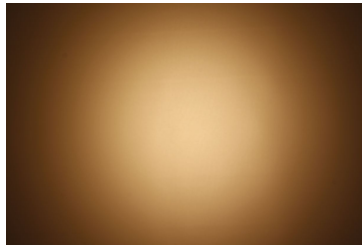
LED CLU710/711  
 FWHM / FWTM 18.0° / 47.0°  
 Efficiency 90 %  
 Peak intensity 3.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (MEASURED):

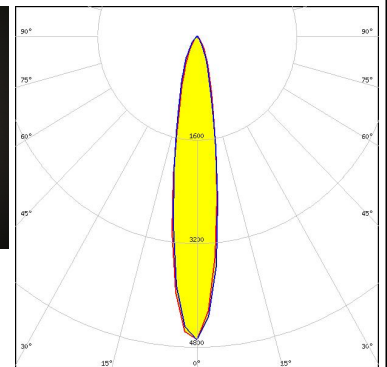
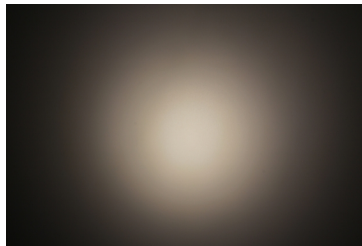
#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 22.0° / 54.0°  
 Efficiency 93 %  
 Peak intensity 3.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 433 Typ L5



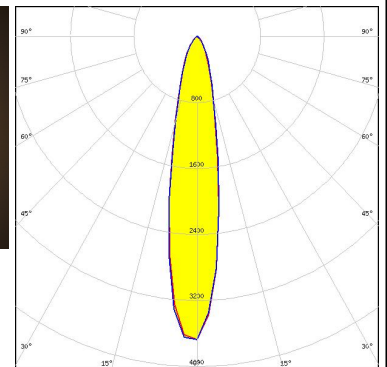
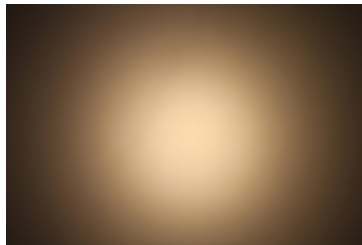
#### CREE LED

LED CXA/B 13xx  
 FWHM / FWTM 18.0° / 46.0°  
 Efficiency 89 %  
 Peak intensity 4.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



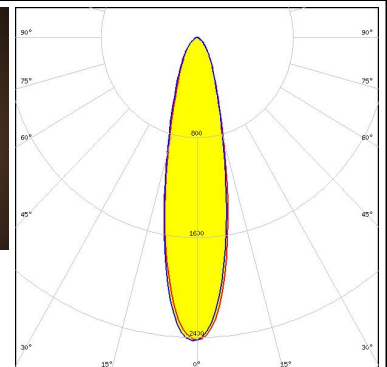
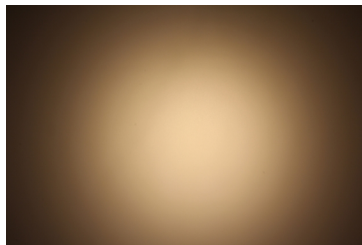
#### CREE LED

LED CXA/B 15xx  
 FWHM / FWTM 20.0° / 49.0°  
 Efficiency 87 %  
 Peak intensity 3.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### CREE LED

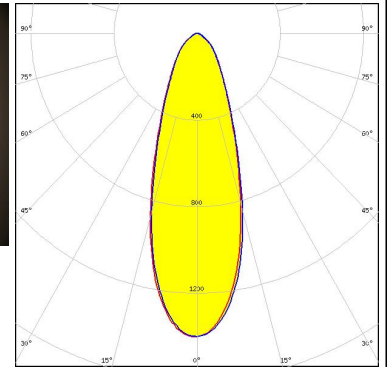
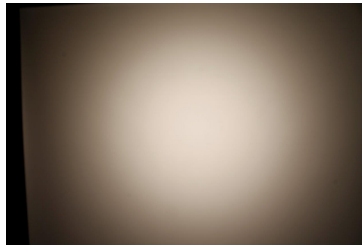
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM / FWTM 25.0° / 61.0°  
 Efficiency 86 %  
 Peak intensity 2.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



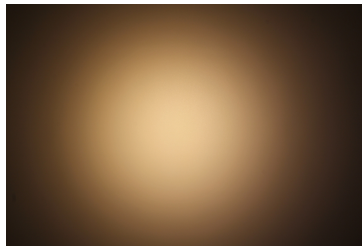
### OPTICAL RESULTS (MEASURED):



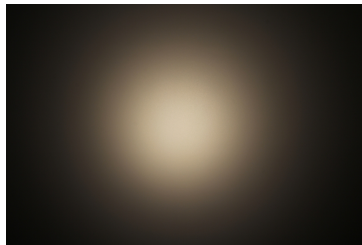
LED CXA/B 25xx  
 FWHM / FWTM 35.0° / 83.0°  
 Efficiency 85 %  
 Peak intensity 1.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



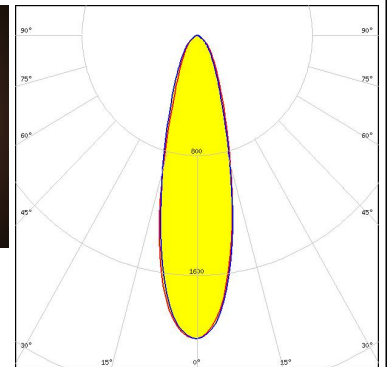
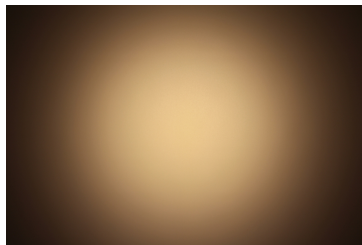
LED LUXEON CoB 1202/1203  
 FWHM / FWTM 20.0° / 54.0°  
 Efficiency 87 %  
 Peak intensity 3.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON CoB 1202s  
 FWHM / FWTM 15.0° / 42.0°  
 Efficiency 89 %  
 Peak intensity 5.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

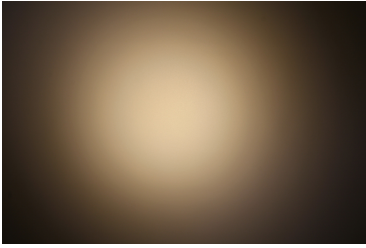
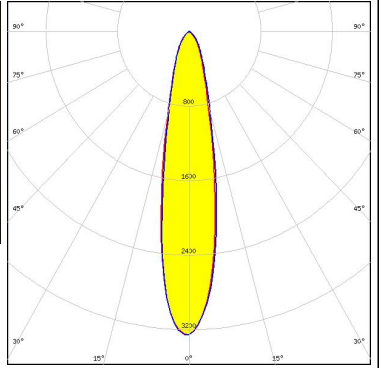


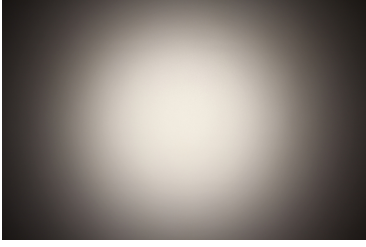
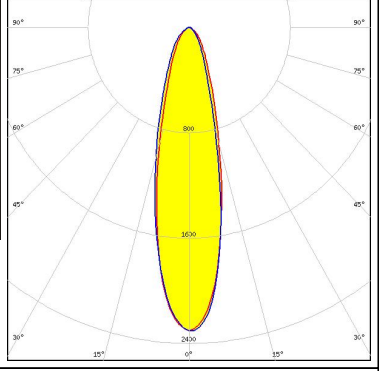
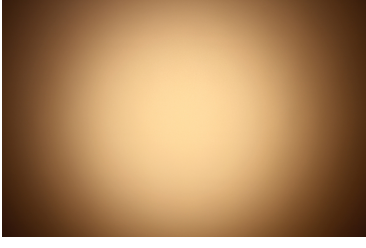
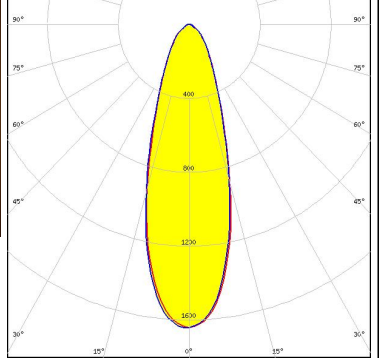


LED CxM-14 (19x19)  
 FWHM / FWTM 29.0° / 67.0°  
 Efficiency 86 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:





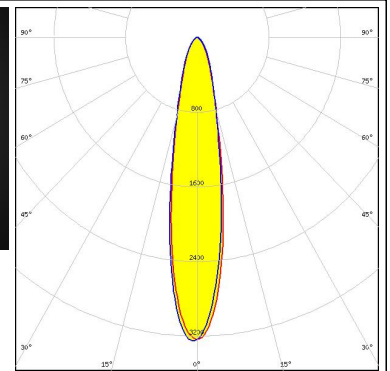
### OPTICAL RESULTS (MEASURED):

<p><b>LUMINUS</b></p> <p>LED CxM-9 (13.5x13.5)</p> <p>FWHM / FWTM 22.0° / 53.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 3.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Duris S10</p> <p>FWHM / FWTM 18.0° / 51.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13</p> <p>FWHM / FWTM 26.0° / 64.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 2.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S19</p> <p>FWHM / FWTM 33.0° / 77.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

### OPTICAL RESULTS (MEASURED):

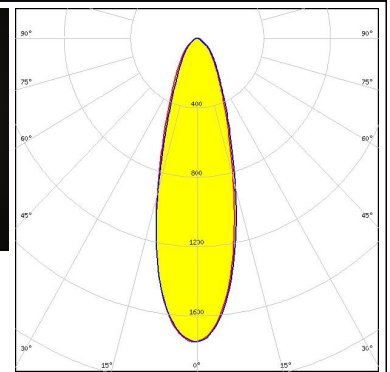
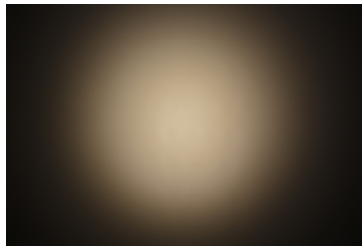
#### SAMSUNG

LED LC003D / LC006D / LC009D / LC013D  
 FWHM / FWTM 20.0° / 51.0°  
 Efficiency 87 %  
 Peak intensity 3.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:

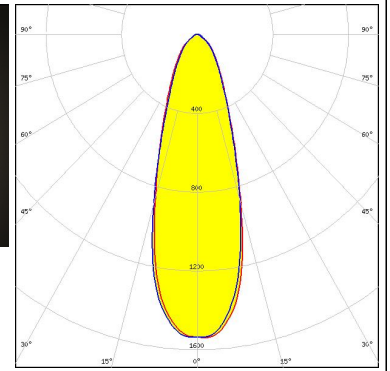


#### SAMSUNG

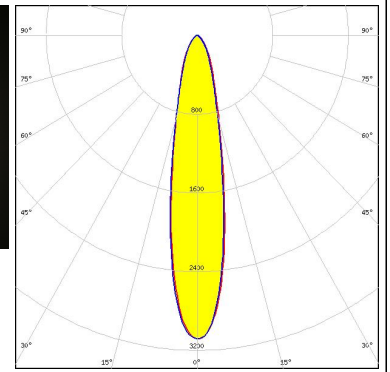
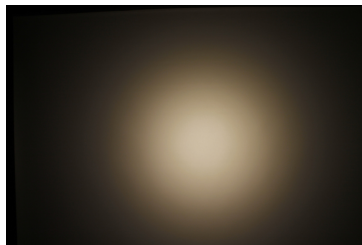
LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 30.0° / 72.0°  
 Efficiency 86 %  
 Peak intensity 1.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



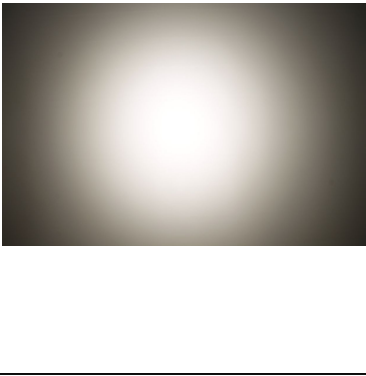
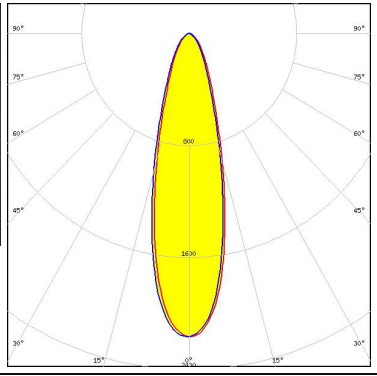

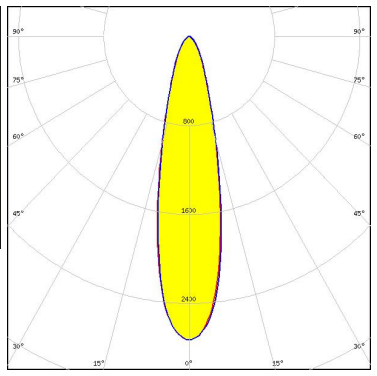
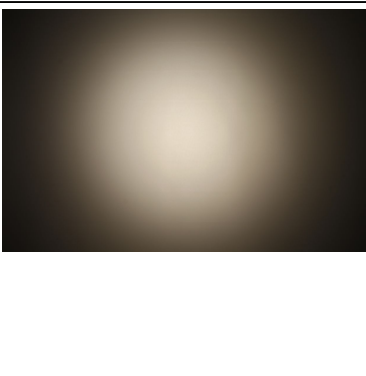
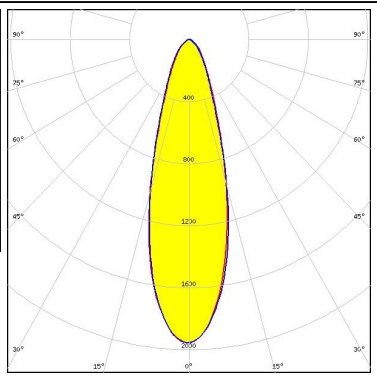
SEOUL SEMICONDUCTOR  
 LED MJT COB LES 14.5  
 FWHM / FWTM 33.0° / 79.0°  
 Efficiency 86 %  
 Peak intensity 1.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 433 Typ L5




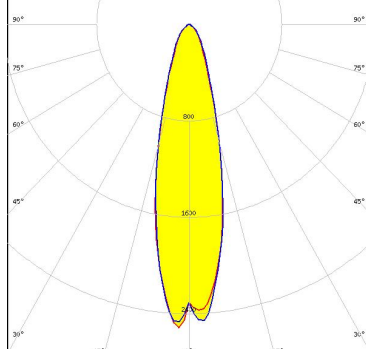

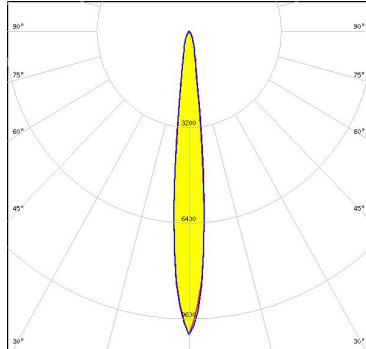

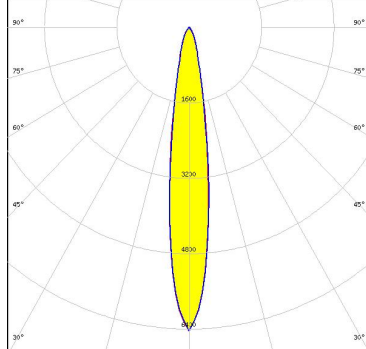

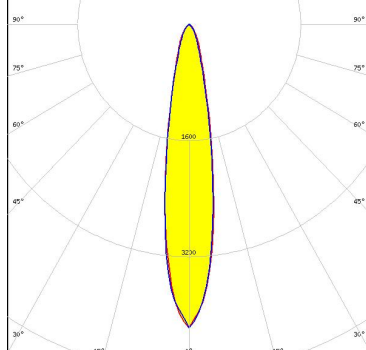
SEOUL SEMICONDUCTOR  
 LED MJT COB LES 9.8  
 FWHM / FWTM 21.0° / 54.0°  
 Efficiency 89 %  
 Peak intensity 3.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 434 Typ L5



### OPTICAL RESULTS (MEASURED):

<p><b>SEOL</b> SEOL SEMICONDUCTOR</p> <p>LED ZC12/18 FWHM / FWTM 27.0° / 64.0° Efficiency 88 % Peak intensity 2.2 cd/lm LEDs/each optic 1 Light colour White Required components: Bender Wirth: 433 Typ L5</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED DMC 124 / 125 FWHM / FWTM 24.0° / 55.0° Efficiency 89 % Peak intensity 2.7 cd/lm LEDs/each optic 1 Light colour White Required components: Bender Wirth: 433 Typ L5</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED DMC 128 FWHM / FWTM 30.0° / 67.0° Efficiency 88 % Peak intensity 2 cd/lm LEDs/each optic 1 Light colour White Required components: Bender Wirth: 433 Typ L5</p>		

### OPTICAL RESULTS (SIMULATED):

<p> LED V13 Gen7</p> <p>FWHM / FWTM 26.0° / 60.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 2.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p> LED CXA/B 13xx</p> <p>FWHM / FWTM 12.0° / 25.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 10.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: Bender Wirth: 448 Typ L5</p>	
<p> LED MHD-E/G</p> <p>FWHM / FWTM 16.0° / 36.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 6.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p> LED LUXEON CoB 1202/1203</p> <p>FWHM / FWTM 18.0° / 44.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 4.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: Bender Wirth: 441 Typ L5</p>	

### OPTICAL RESULTS (SIMULATED):

#### LUMILEDS

LED LUXEON CoB Compact  
FWHM / FWTM 15.0° / 42.0°  
Efficiency 89 %  
Peak intensity 5.8 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:

#### LUMINUS

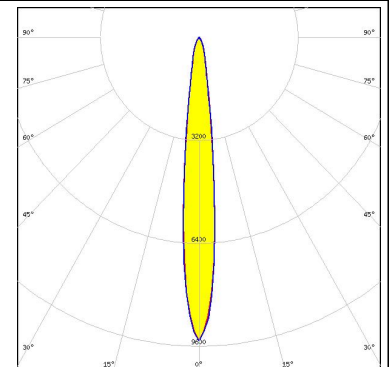
LED CxM-14 (19x19)  
FWHM / FWTM 30.0° / 68.0°  
Efficiency 88 %  
Peak intensity 1.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
Bender Wirth: 433 Typ L5

#### LUMINUS

LED CxM-9 (13.5x13.5)  
FWHM / FWTM 20.0° / 50.0°  
Efficiency 88 %  
Peak intensity 3.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
Bender Wirth: 434 Typ L5

#### NICHIA

LED COB S-Type (LES 6)  
FWHM / FWTM 12.0° / 28.0°  
Efficiency 92 %  
Peak intensity 9.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:

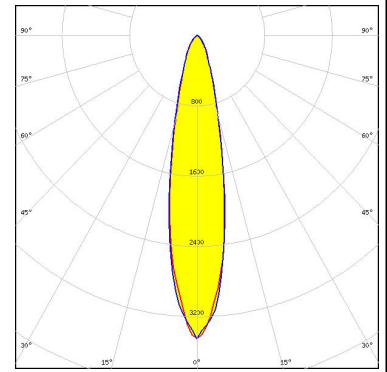


### OPTICAL RESULTS (SIMULATED):

#### OSRAM

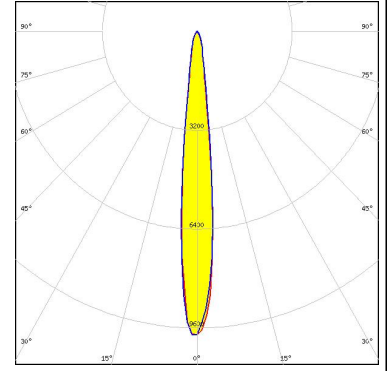
Opto Semiconductors

LED Soleriq S9  
 FWHM / FWTM 22.0° / 49.0°  
 Efficiency 89 %  
 Peak intensity 3.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



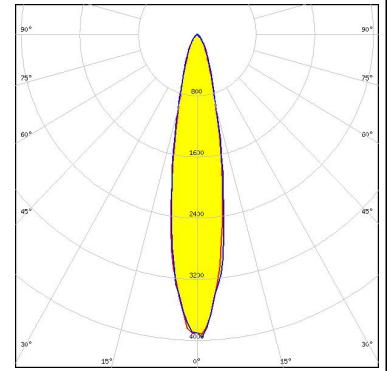
#### SAMSUNG

LED LC010C  
 FWHM / FWTM 12.0° / 25.0°  
 Efficiency 88 %  
 Peak intensity 10.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 479 Typ L5



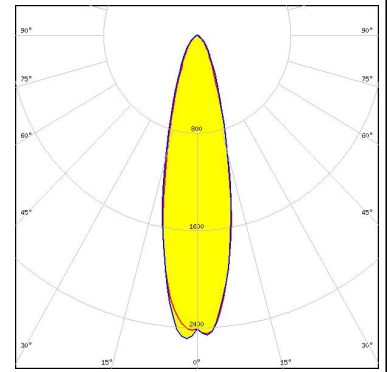
#### SAMSUNG

LED LC020C  
 FWHM / FWTM 20.0° / 46.0°  
 Efficiency 89 %  
 Peak intensity 4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 479 Typ L5




#### SAMSUNG

LED LC040C  
 FWHM / FWTM 26.0° / 59.0°  
 Efficiency 87 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Bender Wirth: 479 Typ L5



## OPTICAL RESULTS (SIMULATED):

 SEOUL SEMICONDUCTOR	
LED	ZC4/6
FWHM / FWTM	20.0° / 50.0°
Efficiency	88 %
Peak intensity	3.4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 434 Typ L5	

### 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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