

## BARBARA-WW-PF

~60° wide beam

### SPECIFICATION:

Dimensions	Ø 70.0 mm
Height	41.7 mm
Fastening	socket
ROHS compliant	yes ⓘ

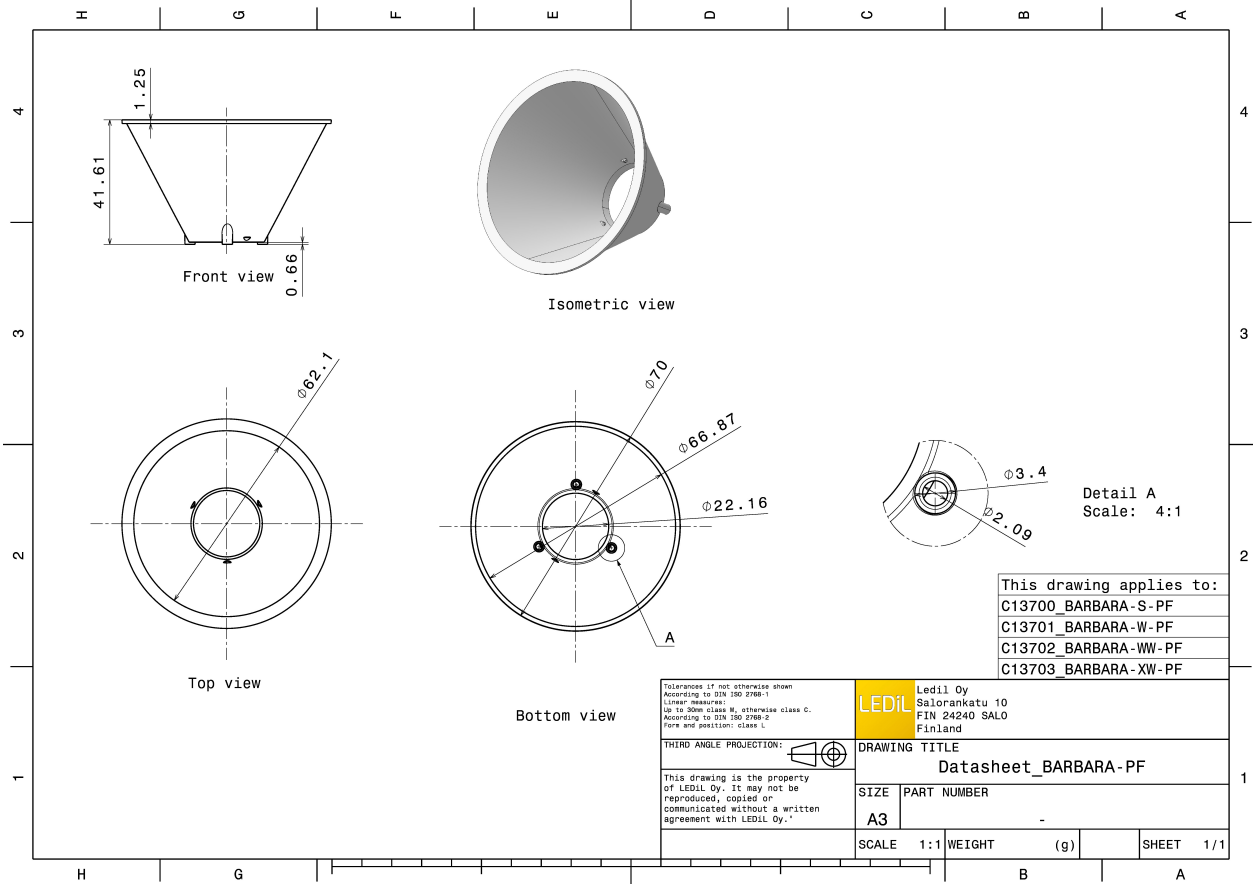
### MATERIALS:

Component	Type	Material	Colour	Finish	Coating
BARBARA-WW-PF	Reflector	PC	metal		HMDS

### ORDERING INFORMATION:


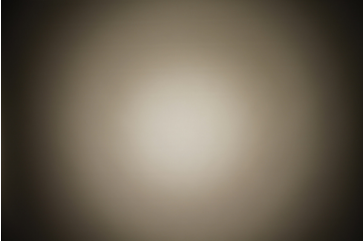
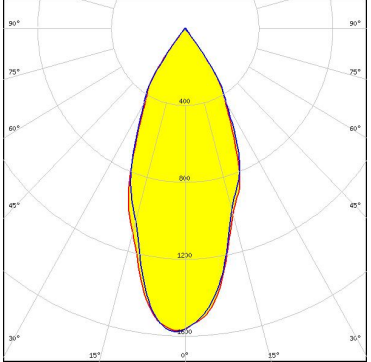

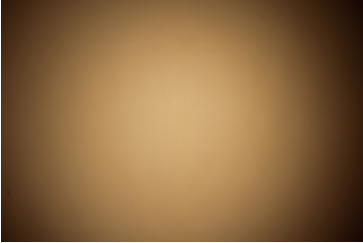



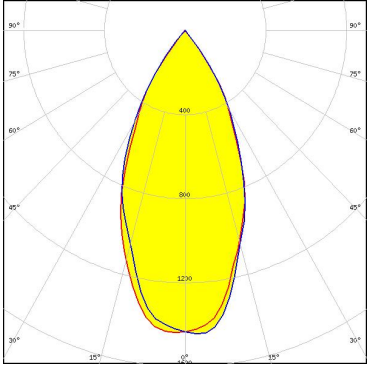


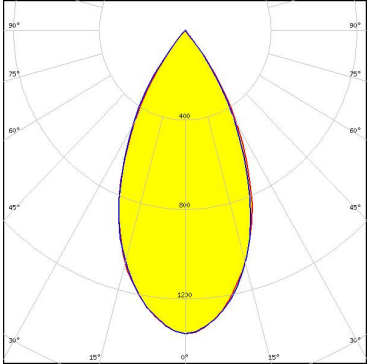
Component	Qty in box	MOQ	MPQ	Box weight (kg)
F13702_BARBARA-WW-PF » Box size: 480 x 280 x 300 mm	288	90	18	6.3




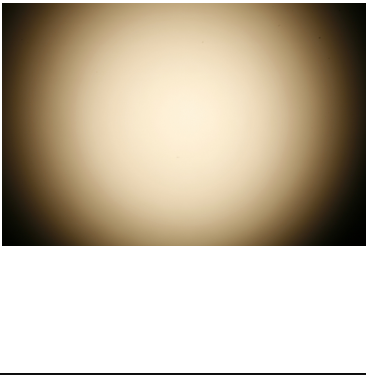
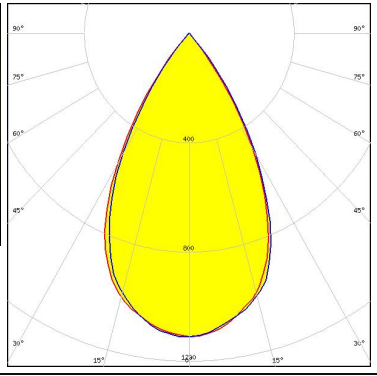


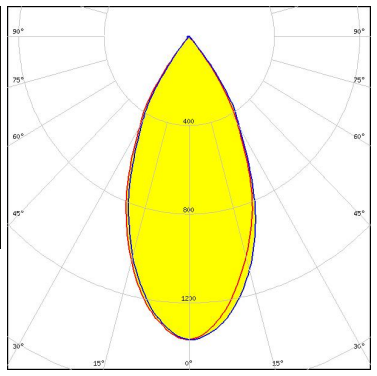


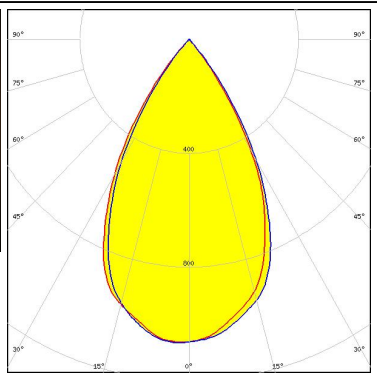
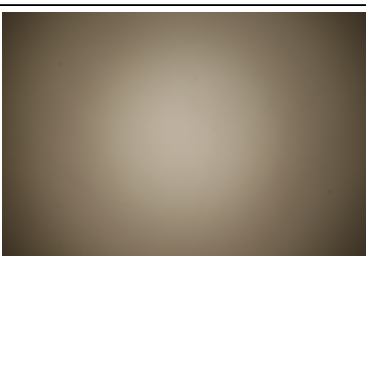
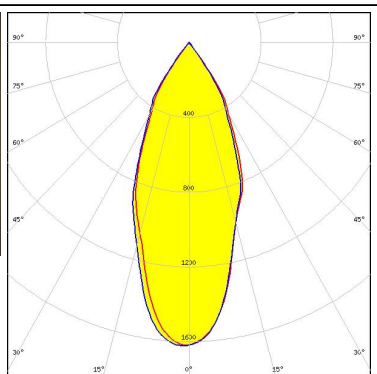


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED V10 Gen7            FWHM / FWTM 44.0° / 74.0°            Efficiency 88 %            Peak intensity 1.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13709_PF-SOCKET-VERO13-18            Bender Wirth: 434 Typ L1</p>		
<p></p> <p>LED V15 Gen6            FWHM / FWTM 51.0° / 78.0°            Efficiency 86 %            Peak intensity 1.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13709_PF-SOCKET-VERO13-18            Bender Wirth: 456 Typ L2</p>		
<p></p> <p>LED VERO10            FWHM / FWTM 49.0° / 77.0°            Efficiency 89 %            Peak intensity 1.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13708_PF-SOCKET-VERO10</p>		
<p></p> <p>LED VERO13            FWHM / FWTM 51.0° / 77.0°            Efficiency 90 %            Peak intensity 1.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13709_PF-SOCKET-VERO13-18</p>		

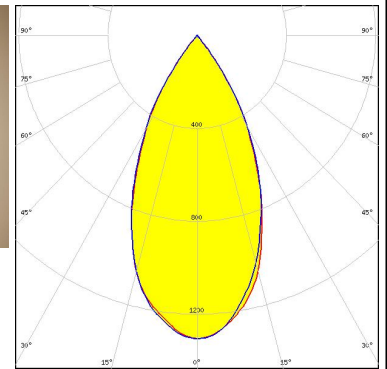
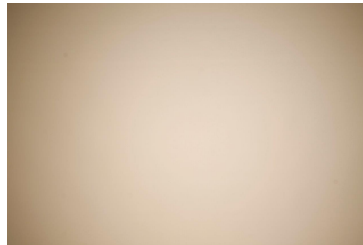
#### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED VERO18            FWHM / FWTM 58.0° / 83.0°            Efficiency 91 %            Peak intensity 1.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13709_PF-SOCKET-VERO13-18</p>		
<p></p> <p>LED Xenio Point 13mm            FWHM / FWTM 49.0° / 76.0°            Efficiency 89 %            Peak intensity 1.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13709_PF-SOCKET-VERO13-18</p>		
<p></p> <p>LED Xenio Point 18mm            FWHM / FWTM 59.0° / 80.0°            Efficiency 88 %            Peak intensity 1.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13709_PF-SOCKET-VERO13-18</p>		
<p><b>CITIZEN</b></p> <p>LED CLL02x/CLU02x (LES10)            FWHM / FWTM 43.0° / 74.0°            Efficiency 88 %            Peak intensity 1.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13709_PF-SOCKET-VERO13-18            Bender Wirth: 434 Typ L1</p>		

#### OPTICAL RESULTS (MEASURED):

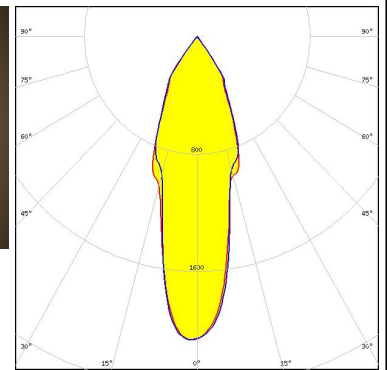
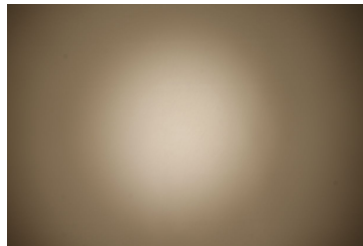
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 50.0° / 76.0°  
 Efficiency 86 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13709\_PF-SOCKET-VERO13-18  
 Bender Wirth: 433 Typ L1



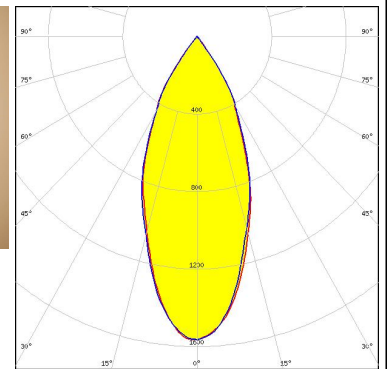
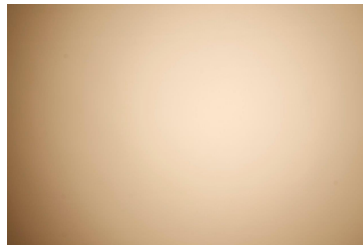
#### CITIZEN

LED CLU700/701/702/703  
 FWHM / FWTM 28.0° / 72.0°  
 Efficiency 88 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13709\_PF-SOCKET-VERO13-18  
 Bender Wirth: 434 Typ L1

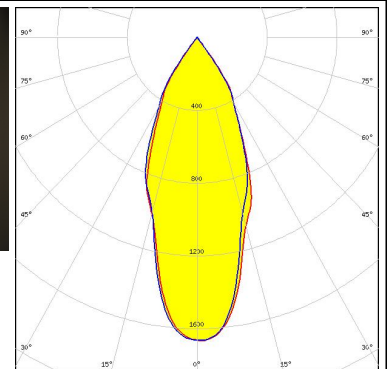
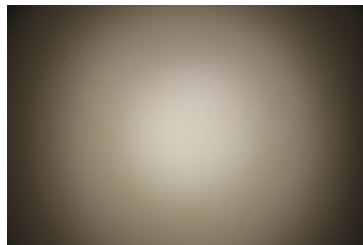


#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 43.0° / 73.0°  
 Efficiency 86 %  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13709\_PF-SOCKET-VERO13-18  
 Bender Wirth: 433 Typ L1

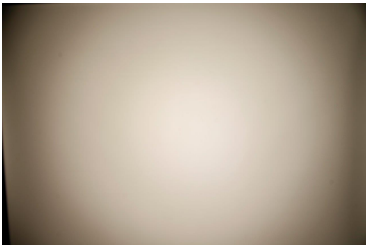
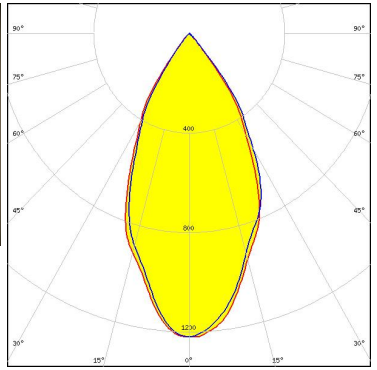
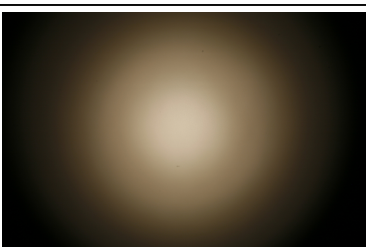
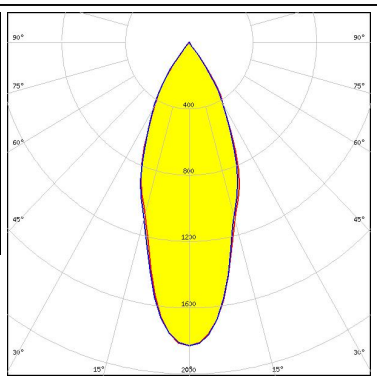
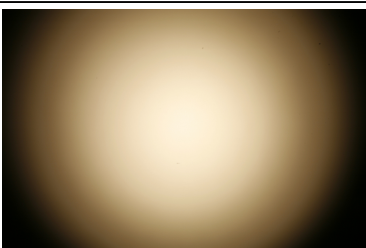
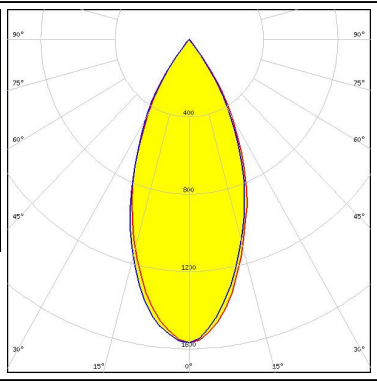
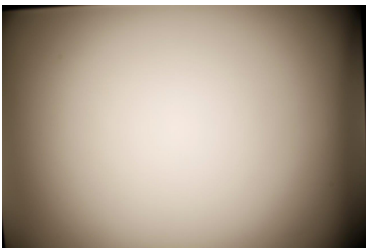
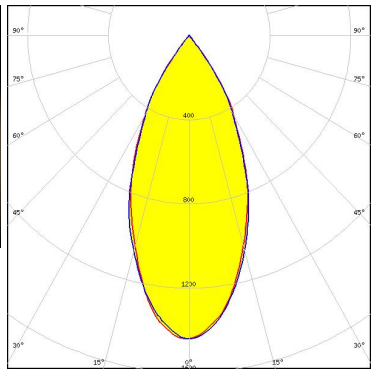


LED CXA/B 15xx  
 FWHM / FWTM 41.0° / 73.0°  
 Efficiency 87 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13709\_PF-SOCKET-VERO13-18  
 Bender Wirth: 441 Typ L1

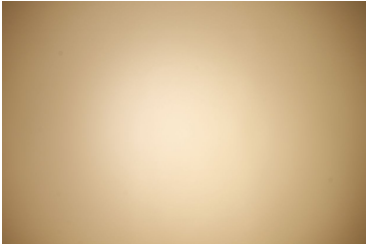
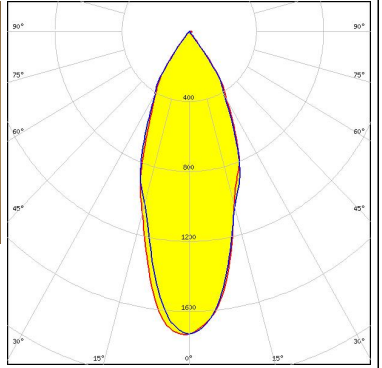

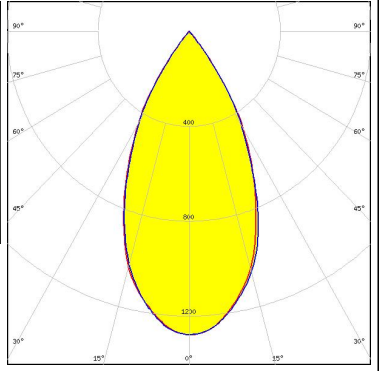
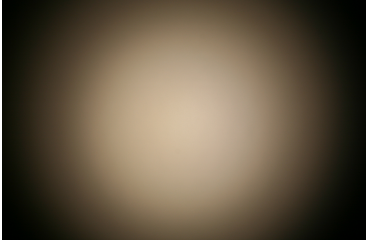
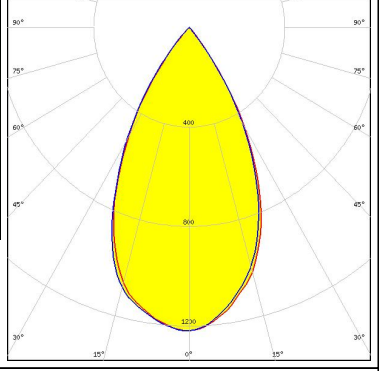
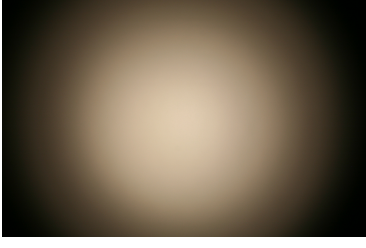
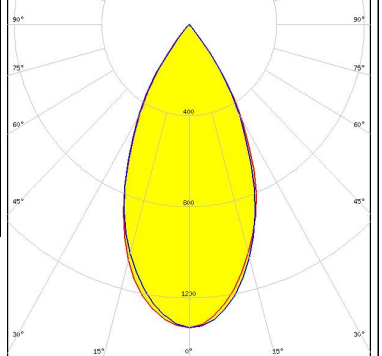





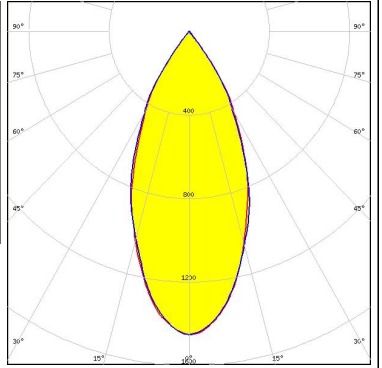
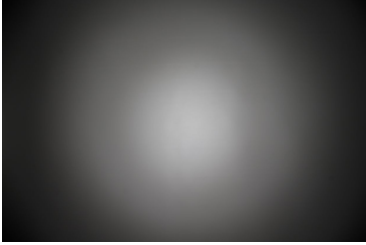
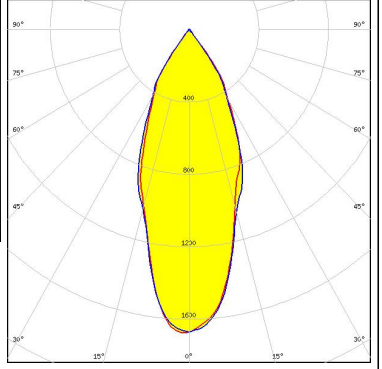
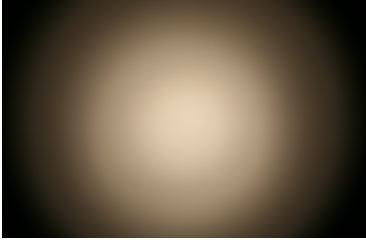
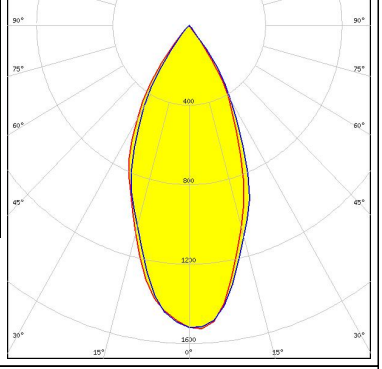

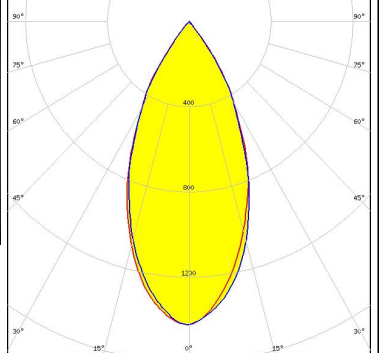
#### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> LEDs</p> <p>LED CXA/B 15xx            FWHM / FWTM 51.0° / 78.0°            Efficiency 85 %            Peak intensity 1.2 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13083_PF-SOCKET            C14658_BARBARA-RZ-LENS</p>		
<p><b>CREE</b> LEDs</p> <p>LED CXA/B 15xx            FWHM / FWTM 40.0° / 73.0°            Efficiency 89 %            Peak intensity 1.8 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C14115_PF-SOCKET-CXA15-18</p>		
<p><b>CREE</b> LEDs</p> <p>LED CXA/B 1816 &amp; CXA/B 1820 &amp; CXA 1850            FWHM / FWTM 46.0° / 75.0°            Efficiency 90 %            Peak intensity 1.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C14115_PF-SOCKET-CXA15-18</p>		
<p><b>CREE</b> LEDs</p> <p>LED CXA/B 1816 &amp; CXA/B 1820 &amp; CXA 1850            FWHM / FWTM 46.0° / 75.0°            Efficiency 86 %            Peak intensity 1.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13709_PF-SOCKET-VERO13-18            Bender Wirth: 437 Typ L1</p>		

#### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1202/1203</p> <p>FWHM / FWTM 39.0° / 73.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13709_PF-SOCKET-VERO13-18 Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED COB J-Type</p> <p>FWHM / FWTM 51.0° / 76.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 1.3 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13709_PF-SOCKET-VERO13-18 Bender Wirth: 463 Typ L2</p>		
<p><b>NICHIA</b></p> <p>LED COB J-Type</p> <p>FWHM / FWTM 55.0° / 78.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 1.2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C14037_PF-NSX-SOCKET</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 51.0° / 77.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 1.3 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C14037_PF-NSX-SOCKET</p>		

#### OPTICAL RESULTS (MEASURED):

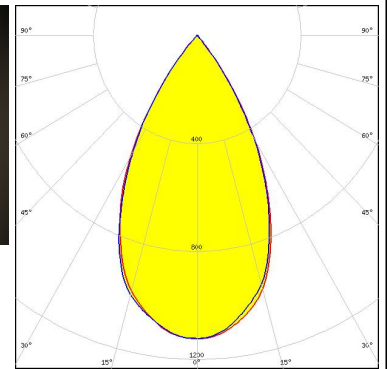
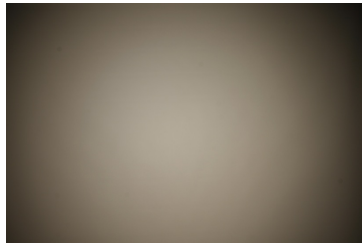
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 46.0° / 75.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13709_PF-SOCKET-VERO13-18 Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 9)</p> <p>FWHM / FWTM 41.0° / 74.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13709_PF-SOCKET-VERO13-18 Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 9)</p> <p>FWHM / FWTM 47.0° / 76.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 1.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C14037_PF-NSX-SOCKET</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13</p> <p>FWHM / FWTM 47.0° / 75.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13709_PF-SOCKET-VERO13-18 Bender Wirth: 437 Typ L1</p>		



#### OPTICAL RESULTS (MEASURED):

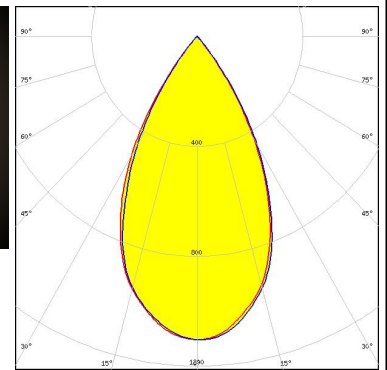
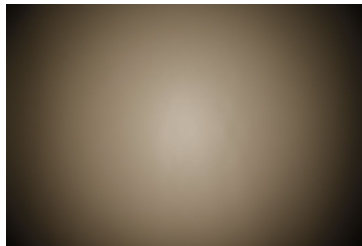
### SAMSUNG

LED LC026B / 033B / 040B  
 FWHM / FWTM 55.0° / 78.0°  
 Efficiency 86 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13709\_PF-SOCKET-VERO13-18  
 Bender Wirth: 450 Typ L2



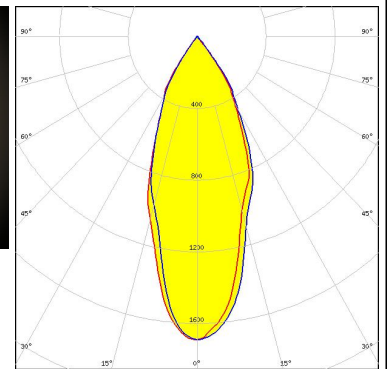
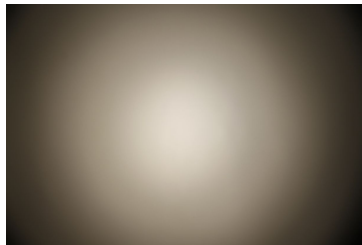
### XICATO

LED XTM - 19mm LES  
 FWHM / FWTM 55.0° / 78.0°  
 Efficiency 84 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14636\_XTM-PF-ADAPTER



### XICATO

LED XTM - 9mm LES  
 FWHM / FWTM 42.0° / 73.0°  
 Efficiency 87 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14636\_XTM-PF-ADAPTER



#### OPTICAL RESULTS (SIMULATED):



LED CxM-14 (19x19)  
FWHM / FWTM 50.0° / 76.0°  
Efficiency 86 %  
Peak intensity 1.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13709\_PF-SOCKET-VERO13-18  
Bender Wirth: 433 Typ L1

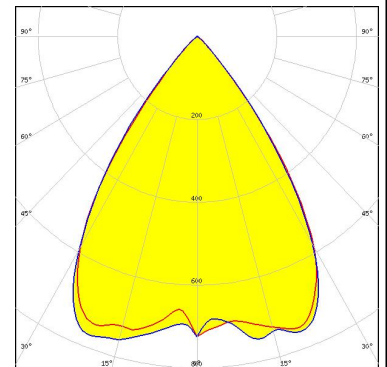


LED CxM-9 (13.5x13.5)  
FWHM / FWTM 43.0° / 74.0°  
Efficiency 88 %  
Peak intensity 1.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13709\_PF-SOCKET-VERO13-18  
Bender Wirth: 434 Typ L1



Opto Semiconductors

LED Soleriq S15  
FWHM / FWTM 73.0° / 88.0°  
Efficiency 90 %  
Peak intensity 0.8 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13709\_PF-SOCKET-VERO13-18  
Bender Wirth: 433 Typ L1



SEOUL SEMICONDUCTOR

LED ZC12/18  
FWHM / FWTM 50.0° / 76.0°  
Efficiency 86 %  
Peak intensity 1.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13709\_PF-SOCKET-VERO13-18  
Bender Wirth: 433 Typ L1

## OPTICAL RESULTS (SIMULATED):

	
SEOUL SEMICONDUCTOR	
LED	ZC4/6
FWHM / FWTM	43.0° / 74.0°
Efficiency	88 %
Peak intensity	1.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
C13709_PF-SOCKET-VERO13-18	
Bender Wirth: 434 Typ L1	

#### 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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