

## LENA-X-WAS

White version with asymmetric beam for wall-washing

### TECHNICAL SPECIFICATIONS:

Dimensions	Ø 111.0 mm
Height	32.6 mm
Fastening	glue
ROHS compliant	yes ⓘ



### MATERIAL SPECIFICATIONS:



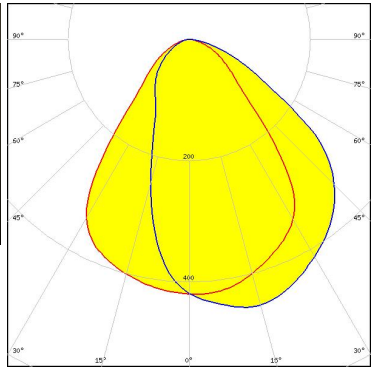


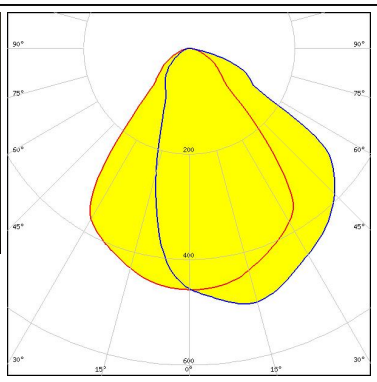


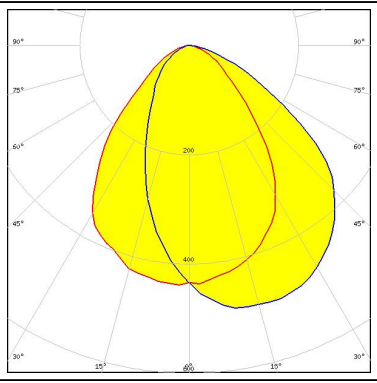


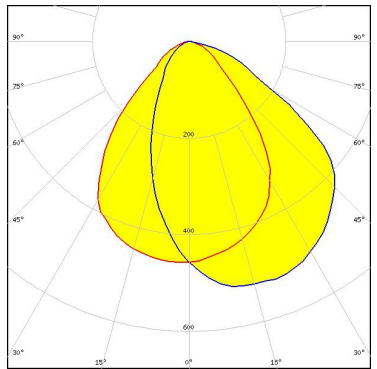
Component	Type	Material	Colour	Finish	Coating
LENA-X-WAS	Reflector	HRPC	white		

### ORDERING INFORMATION:



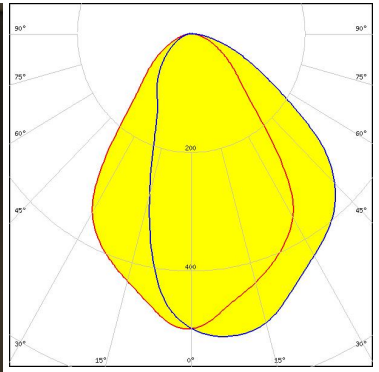

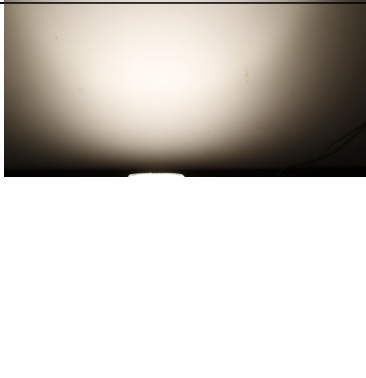
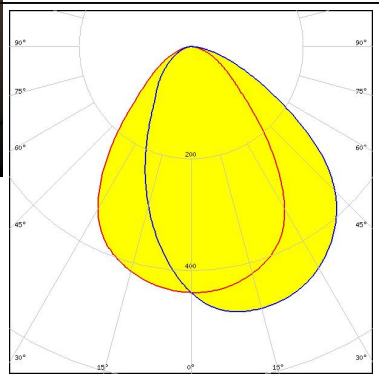


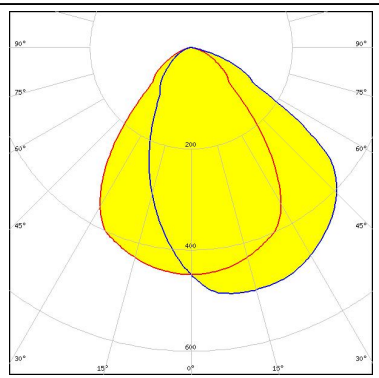


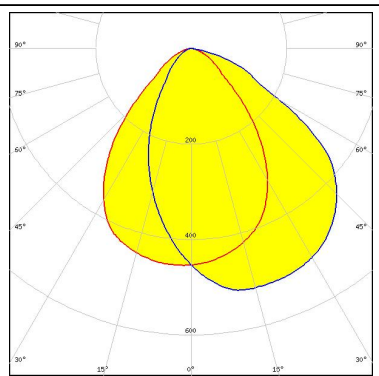
Component	Qty in box	MOQ	MPQ	Box weight (kg)
C13101_LENA-X-WAS » Box size: 480 x 280 x 300 mm	56	56	56	3.2




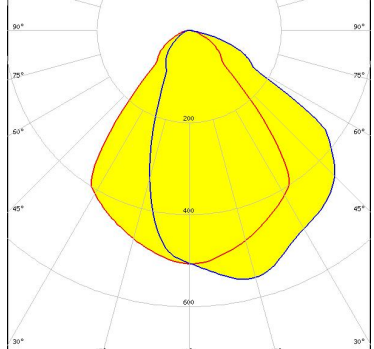

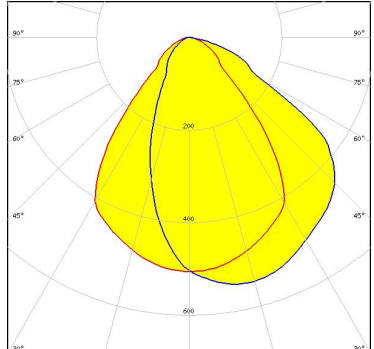

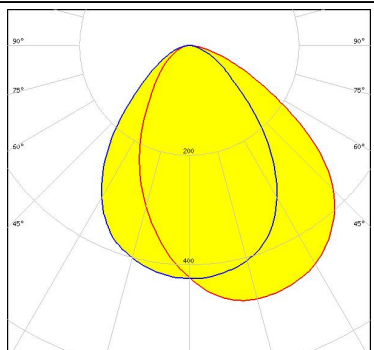

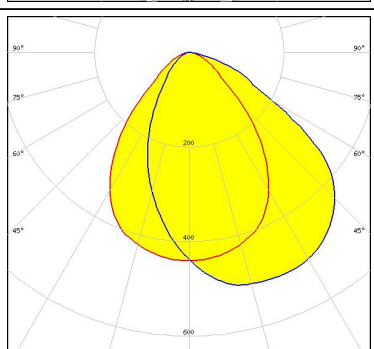
### PHOTOMETRIC DATA (MEASURED):

<p></p> <p>LED BXRA ES Rectangle            FWHM / FWTM Asymmetric            Efficiency 77 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C12153_LENA-STD-BASE-BXRA            C11996_LENA-LENS</p>		
<p></p> <p>LED BXRA ES Rectangle            FWHM / FWTM Asymmetric            Efficiency 81 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C12153_LENA-STD-BASE-BXRA</p>		
<p></p> <p>LED BXRA RS            FWHM / FWTM Asymmetric            Efficiency 83 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C12229_LENA-STD-BASE-RS            C11996_LENA-LENS</p>		
<p></p> <p>LED BXRA RS            FWHM / FWTM Asymmetric            Efficiency 87 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C12229_LENA-STD-BASE-RS</p>		

### PHOTOMETRIC DATA (MEASURED):

<p></p> <p>LED V10 Gen6 FWHM / FWTM Asymmetric Efficiency 82 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13186_LENA-STD-BASE-CXA15 C11996_LENA-LENS</p>		
<p></p> <p>LED V22 Gen7 FWHM / FWTM Asymmetric Efficiency 83 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 C11996_LENA-LENS Bender Wirth: 431 Typ L3</p>		
<p></p> <p>LED V22 Gen7 FWHM / FWTM Asymmetric Efficiency 86 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 C14169_LENA-CLEAR-LENS Bender Wirth: 431 Typ L3</p>		
<p></p> <p>LED Vero SE 29 FWHM / FWTM Asymmetric Efficiency 90 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C15083_LENA-STD-BASE-VERO29</p>		

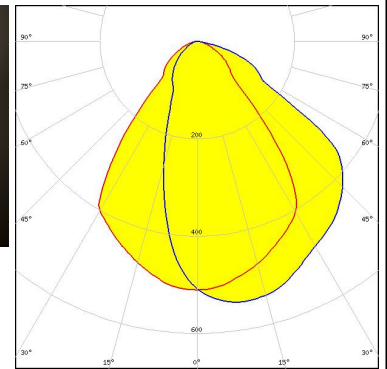
#### PHOTOMETRIC DATA (MEASURED):

<p></p> <p>LED VERO13            FWHM / FWTM Asymmetric            Efficiency 92 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENA-STD-BASE-VERO13-18</p>	
<p></p> <p>LED VERO18            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENA-STD-BASE-VERO13-18</p>	
<p></p> <p>LED VERO29            FWHM / FWTM Asymmetric            Efficiency 84 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13867_LENA-STD-BASE-VERO29            C11996_LENA-LENS</p>	
<p></p> <p>LED VERO29            FWHM / FWTM Asymmetric            Efficiency 89 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13867_LENA-STD-BASE-VERO29</p>	

### PHOTOMETRIC DATA (MEASURED):

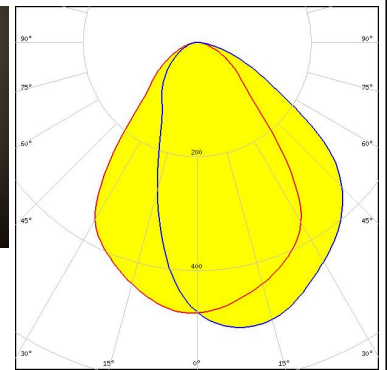
#### CITIZEN

LED CL-L340  
 FWHM / FWTM Asymmetric  
 Efficiency 84 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C11995\_LENA-STD-BASE-CL340



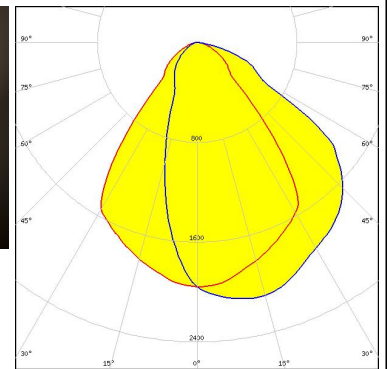
#### CITIZEN

LED CL-L340  
 FWHM / FWTM Asymmetric  
 Efficiency 82 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C11995\_LENA-STD-BASE-CL340  
 C11996\_LENA-LENS



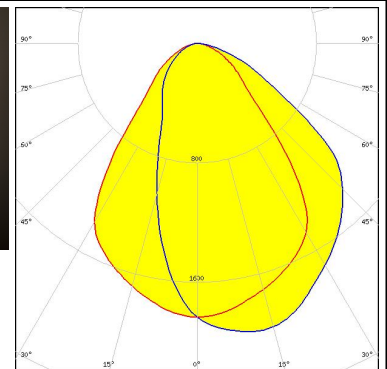
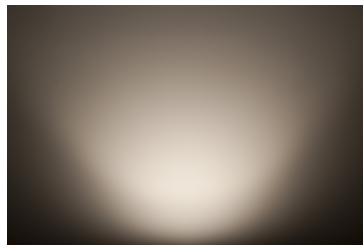
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM Asymmetric  
 Efficiency 81 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030



#### CITIZEN

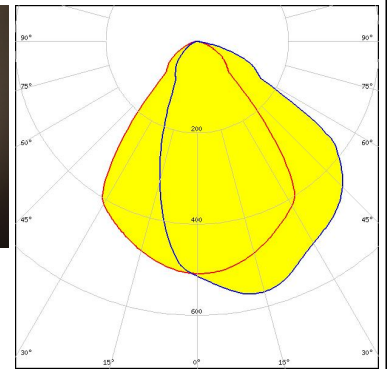
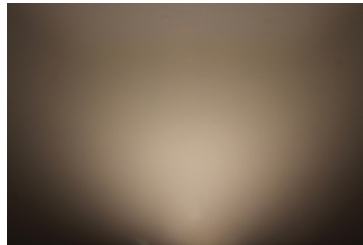
LED CLL03x/CLU03x  
 FWHM / FWTM Asymmetric  
 Efficiency 80 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030  
 C11996\_LENA-LENS



#### PHOTOMETRIC DATA (MEASURED):

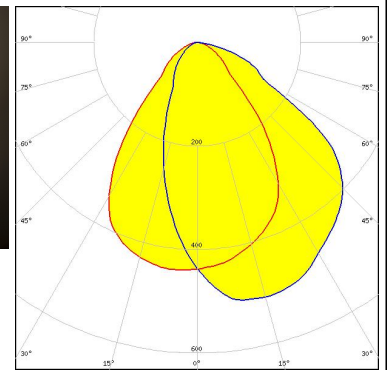
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 433 Typ L1



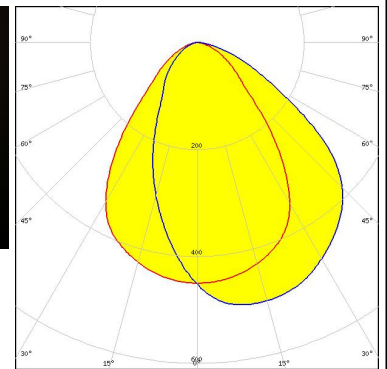
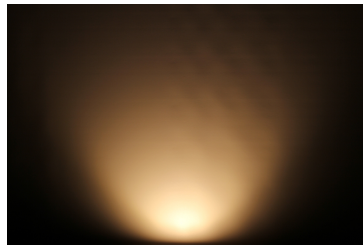
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 82 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040



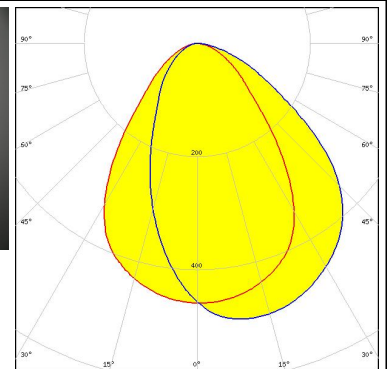
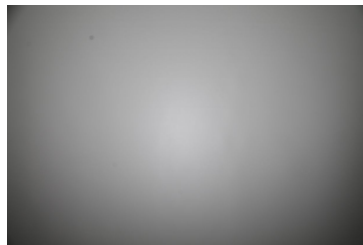
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENA-STD-BASE-VERO29  
 C11996\_LENA-LENS  
 Bender Wirth: 431 Typ L3



#### CITIZEN

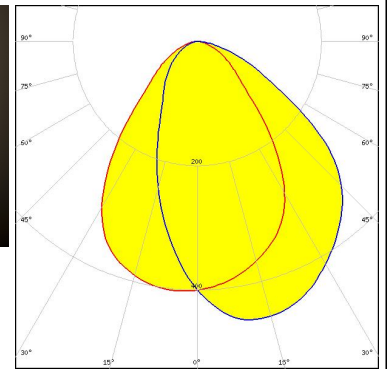
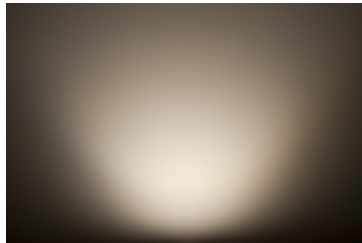
LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 84 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C11996\_LENA-LENS  
 IDEAL: 50-2204CT + 50-2100LN



#### PHOTOMETRIC DATA (MEASURED):

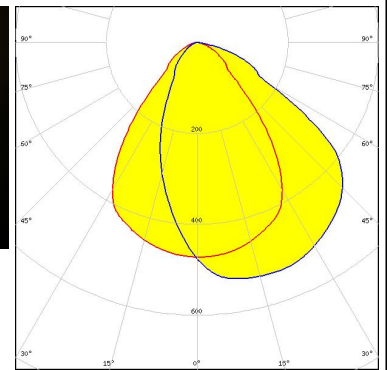
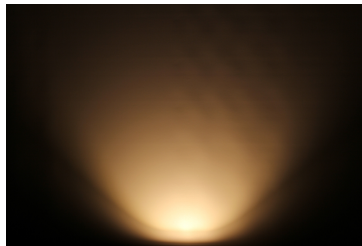
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 74 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040  
 C11996\_LENA-LENS



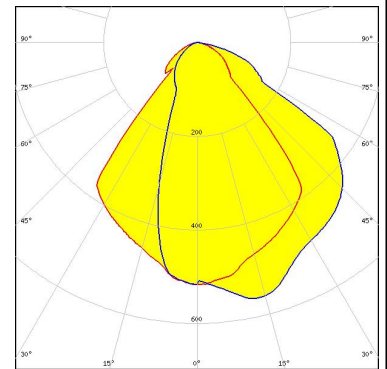
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENA-STD-BASE-VERO29  
 Bender Wirth: 431 Typ L3



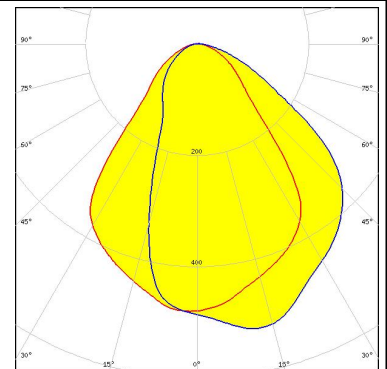
#### CITIZEN

LED CLU710/711  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030



#### CITIZEN

LED CLU710/711  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030  
 C11996\_LENA-LENS

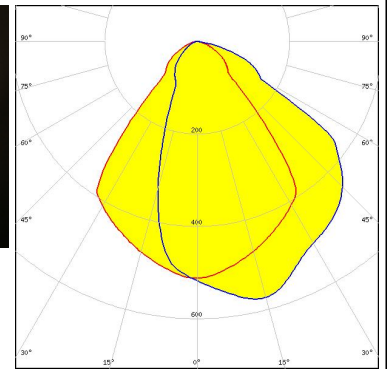
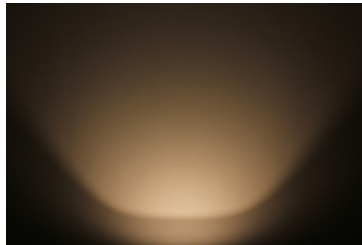




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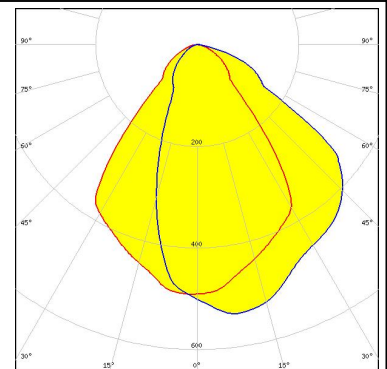
#### CITIZEN

LED CLU720/721  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 433 Typ L1

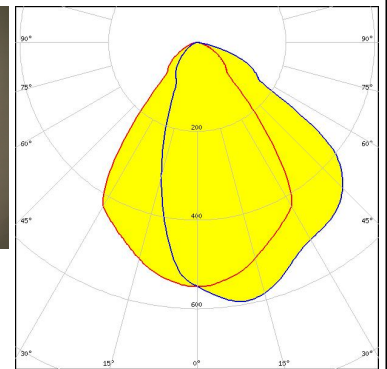
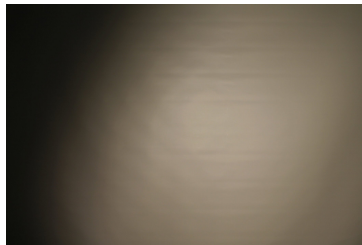


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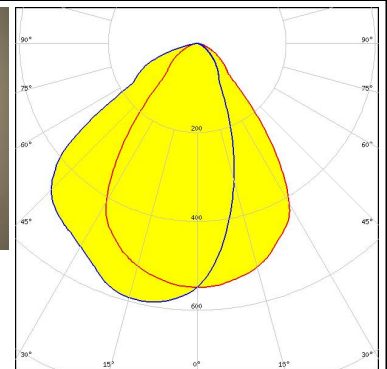
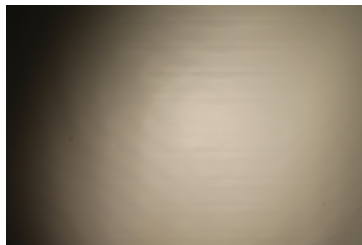
LED CLU730/731  
 FWHM / FWTM Asymmetric  
 Efficiency 84 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040




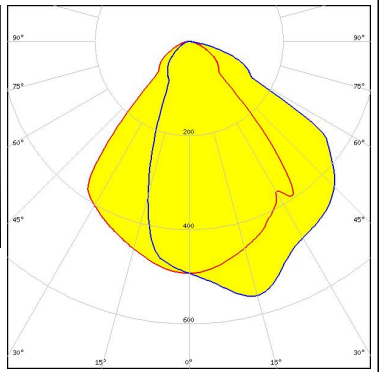
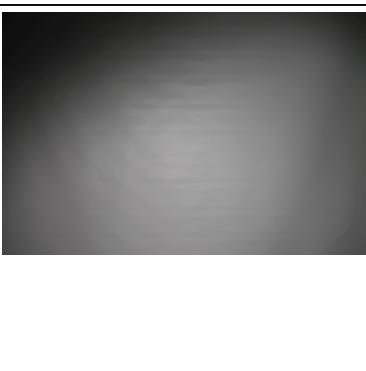
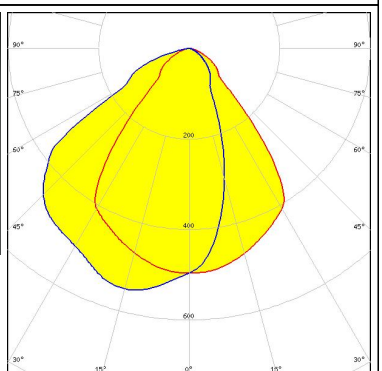
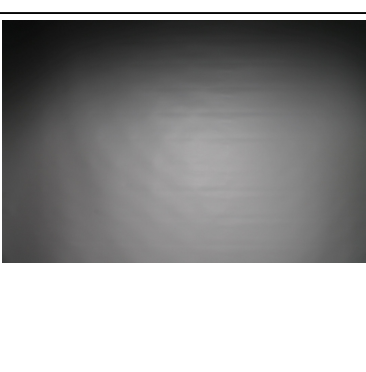
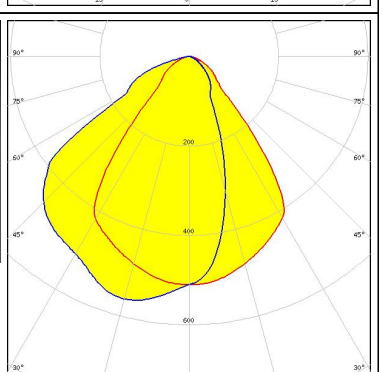
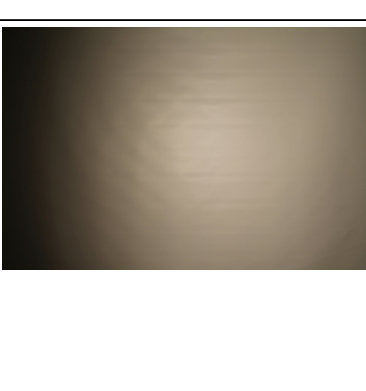
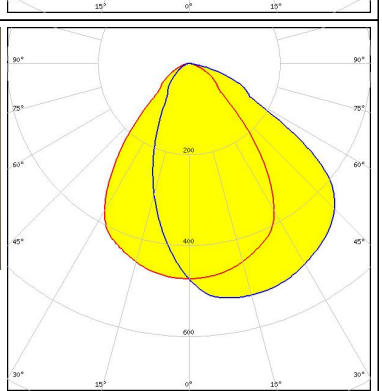
LED CMA1840  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14146\_LENA-STD-BASE-CXA18



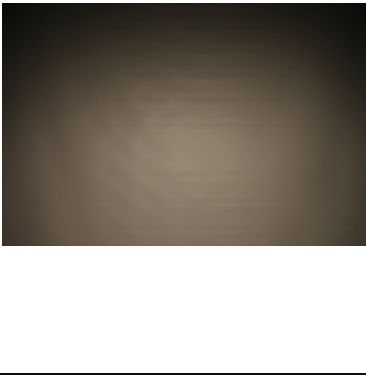
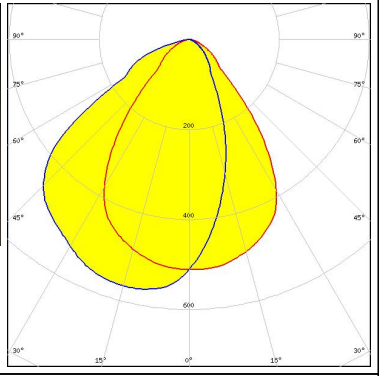

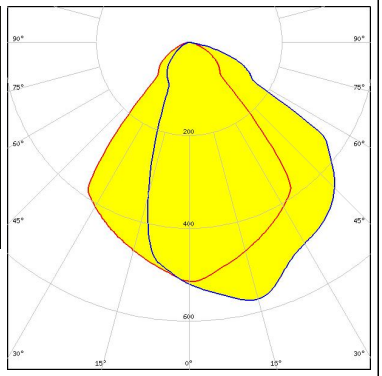

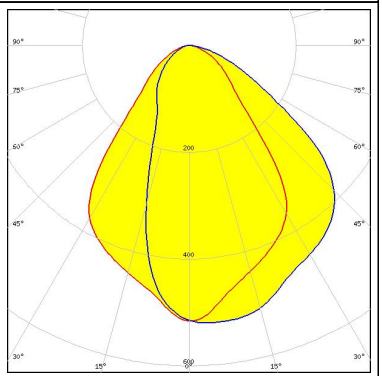

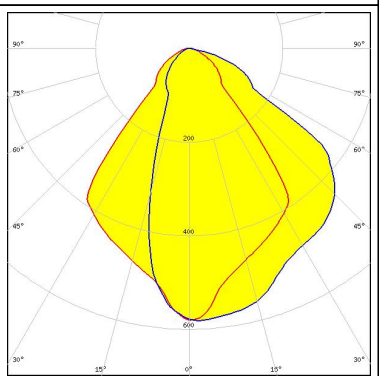
LED CMA2550  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13324\_LENA-STD-BASE-CXA25



#### PHOTOMETRIC DATA (MEASURED):

<p><b>CREE</b> LED</p> <p>LED CMT14xx            FWHM / FWTM Asymmetric            Efficiency 90 %            Peak intensity 0.6 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 434 Typ L1</p>		
<p><b>CREE</b> LED</p> <p>LED CMT19xx            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 0.6 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 477 Typ L1</p>		
<p><b>CREE</b> LED</p> <p>LED CMT19xx            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 0.6 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C12691_LENA-STD-BASE-CLL030</p>		
<p><b>CREE</b> LED</p> <p>LED CMT28xx            FWHM / FWTM Asymmetric            Efficiency 89 %            Peak intensity 0.5 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENA-STD-BASE-VERO29            Bender Wirth: 471 Typ L3</p>		

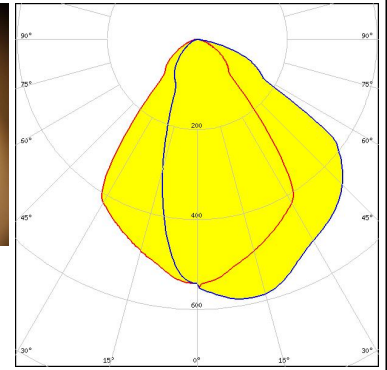
#### PHOTOMETRIC DATA (MEASURED):

<p><b>CREE</b> LED</p> <p>LED CMT28xx            FWHM / FWTM Asymmetric            Efficiency 90 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12692_LENA-STD-BASE-CLL040</p>		
<p><b>CREE</b> LED</p> <p>LED CXA/B 15xx            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 441 Typ L1</p>		
<p><b>CREE</b> LED</p> <p>LED CXA/B 15xx            FWHM / FWTM Asymmetric            Efficiency 84 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13186_LENA-STD-BASE-CXA15            C11996_LENA-LENS</p>		
<p><b>CREE</b> LED</p> <p>LED CXA/B 15xx            FWHM / FWTM Asymmetric            Efficiency 88 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13186_LENA-STD-BASE-CXA15</p>		

#### PHOTOMETRIC DATA (MEASURED):

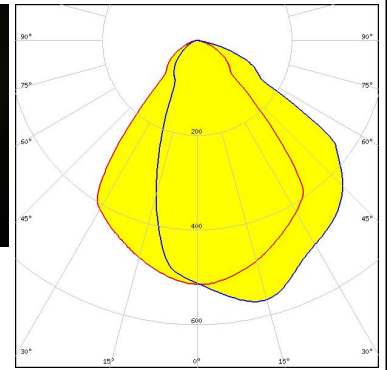
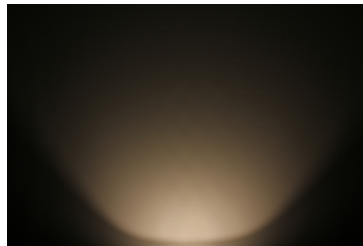
##### CREE LED

LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14146\_LENA-STD-BASE-CXA18



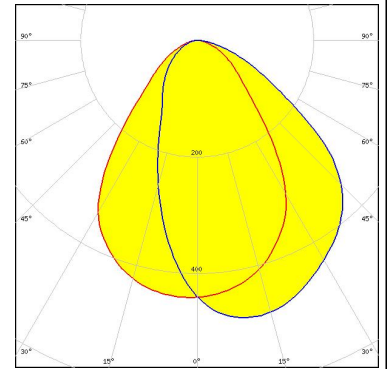
##### CREE LED

LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 437 Typ L1



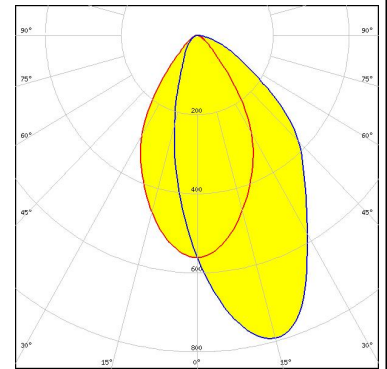
##### CREE LED

LED CXA/B 25xx  
 FWHM / FWTM Asymmetric  
 Efficiency 78 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13324\_LENA-STD-BASE-CXA25  
 C11996\_LENA-LENS



##### CREE LED

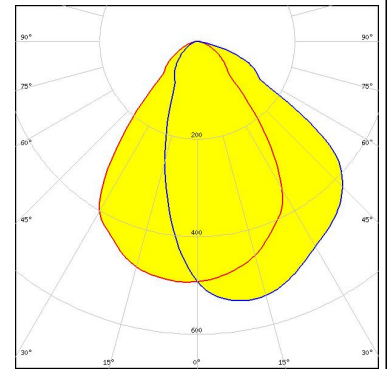
LED CXA/B 25xx  
 FWHM / FWTM Asymmetric  
 Efficiency 73 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13324\_LENA-STD-BASE-CXA25  
 C11996\_LENA-LENS



### PHOTOMETRIC DATA (MEASURED):

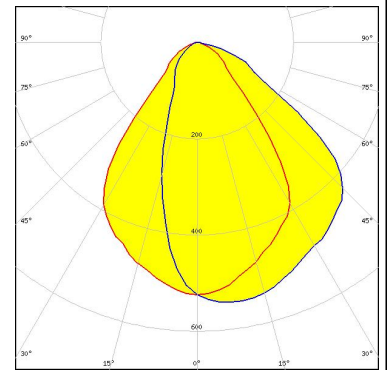
#### CREE LED

LED CXA/B 25xx  
 FWHM / FWTM Asymmetric  
 Efficiency 82 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13324\_LENA-STD-BASE-CXA25



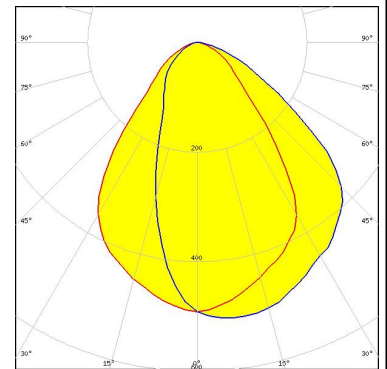
#### CREE LED

LED CXA2011  
 FWHM / FWTM Asymmetric  
 Efficiency 83 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12105\_LENA-STD-BASE-CXA20



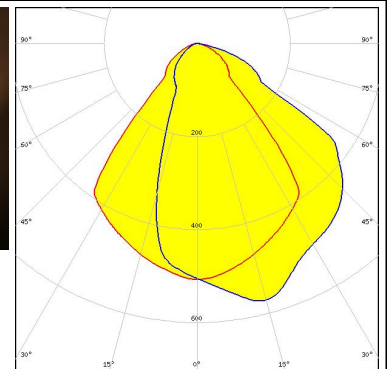
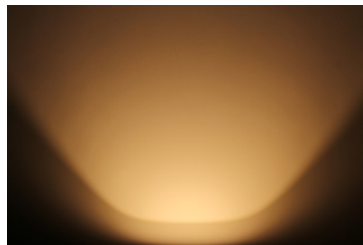
#### CREE LED

LED CXA2011  
 FWHM / FWTM Asymmetric  
 Efficiency 80 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12105\_LENA-STD-BASE-CXA20  
 C11996\_LENA-LENS


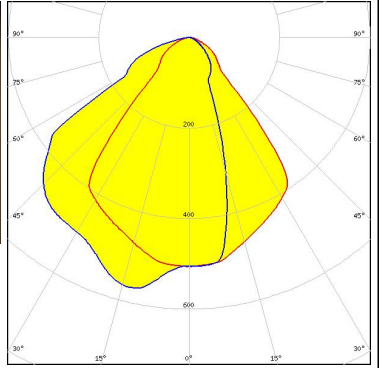

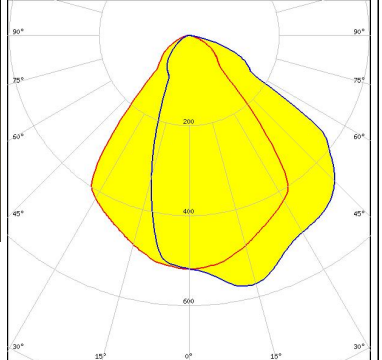
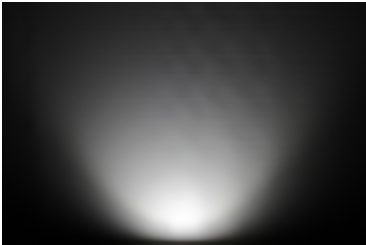
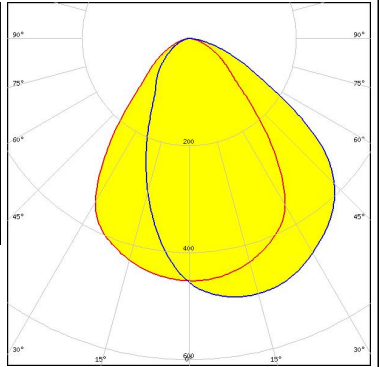
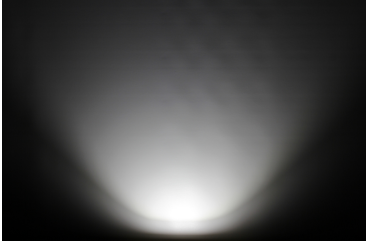
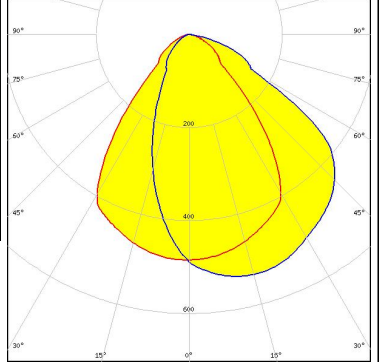


#### LUMILEDS

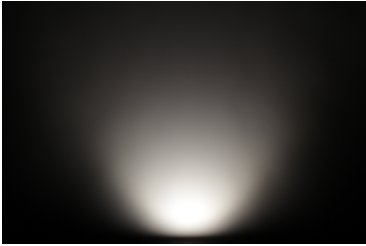
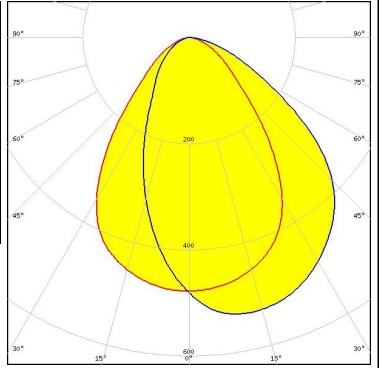

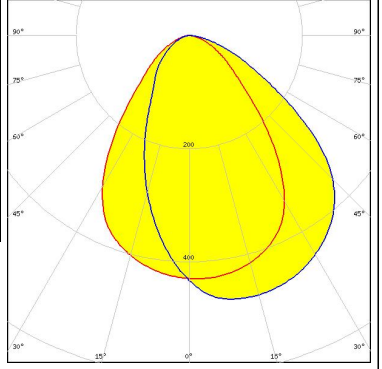
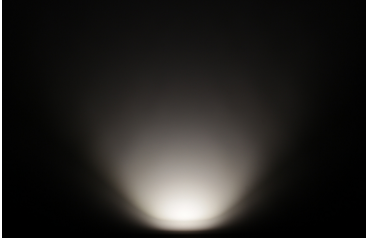
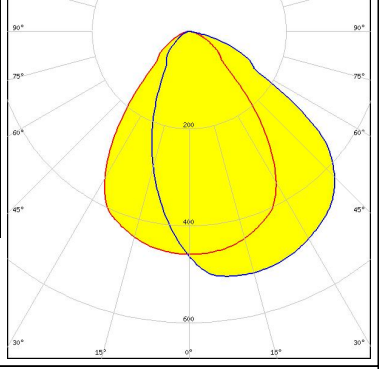

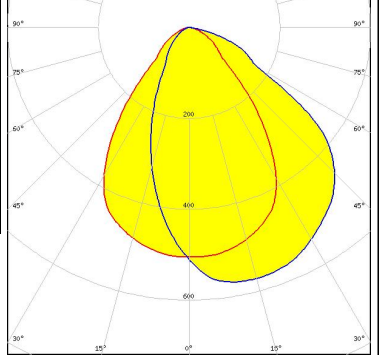
LED LUXEON CoB 1202/1203  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 438 Typ L1




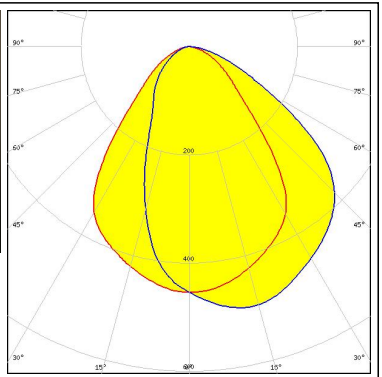
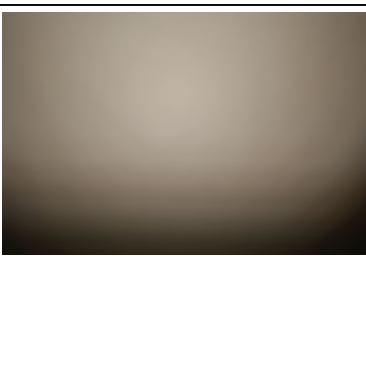
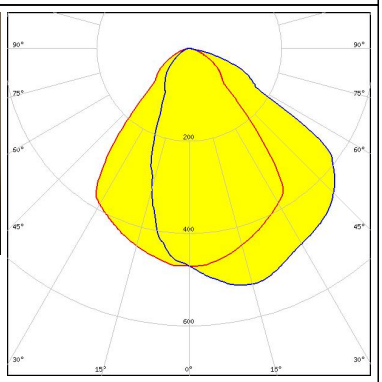

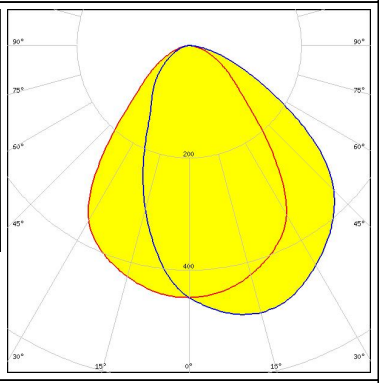
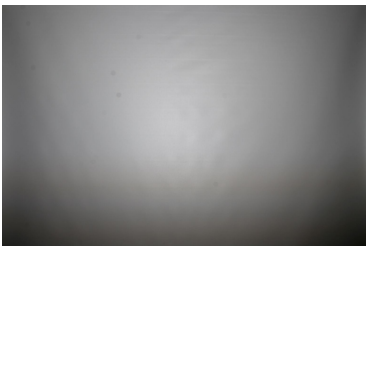
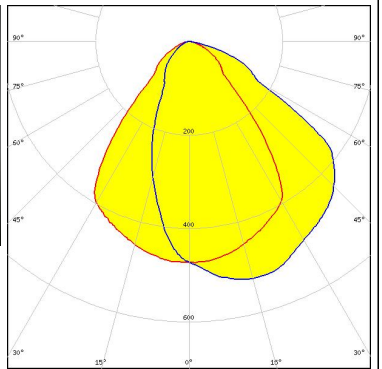
#### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1204HD</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C11981_LENA-STD-BASE-COB-L110</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1205HD</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C11981_LENA-STD-BASE-COB-L110</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 85 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 C11996_LENA-LENS Bender Wirth: 431 Typ L3</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 89 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 Bender Wirth: 431 Typ L3</p>		

#### PHOTOMETRIC DATA (MEASURED):


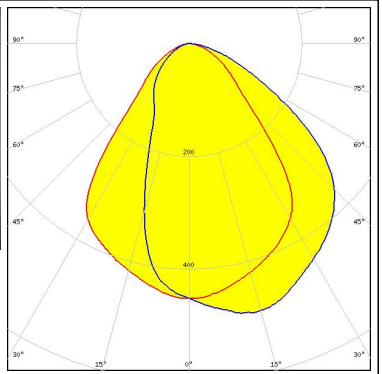

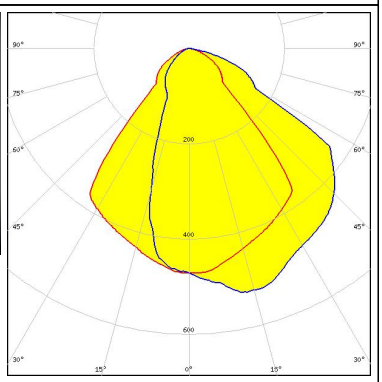
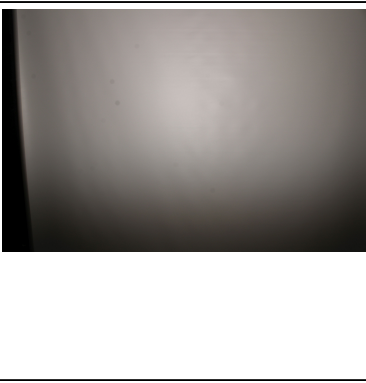
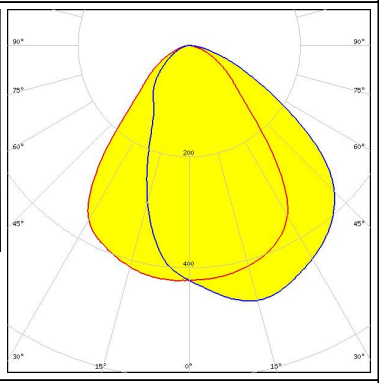

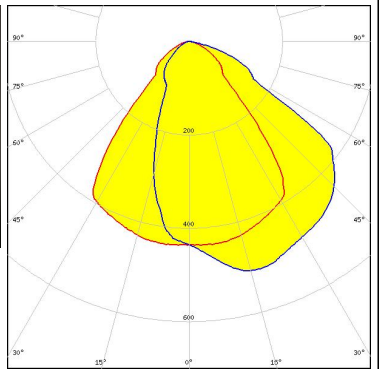
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 87 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENA-STD-BASE-CLL040 C11996_LENA-LENS</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 81 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C11996_LENA-LENS A.A.G. STUCCHI: 8102-G2 + S-8000-12</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM 75.0° / 123.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: A.A.G. STUCCHI: 8102-G2 + S-8000-12</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENA-STD-BASE-CLL040</p>		

#### PHOTOMETRIC DATA (MEASURED):

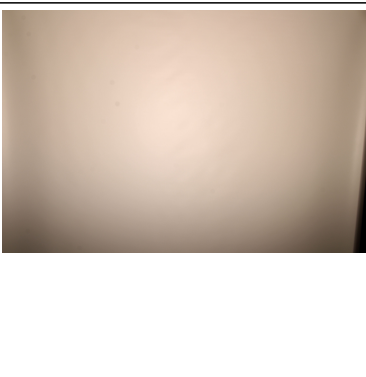
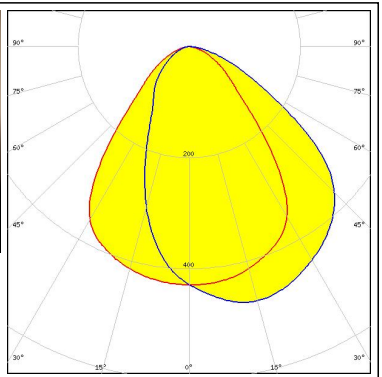
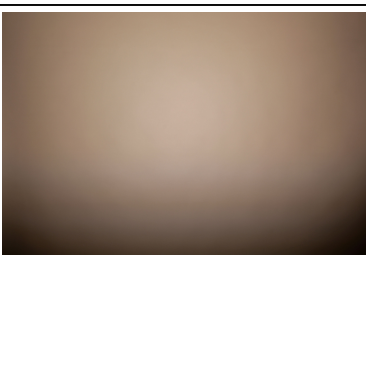
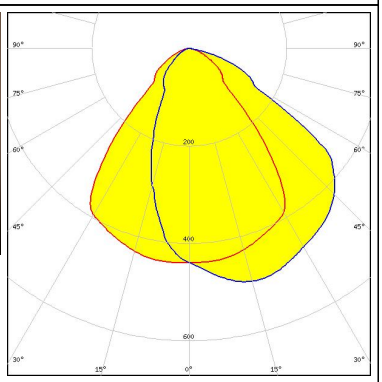

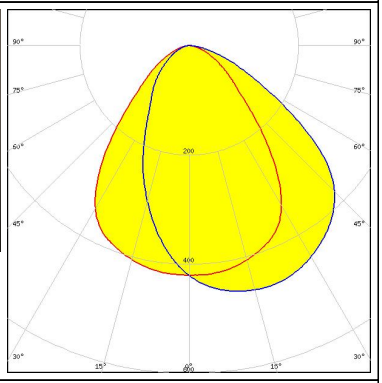
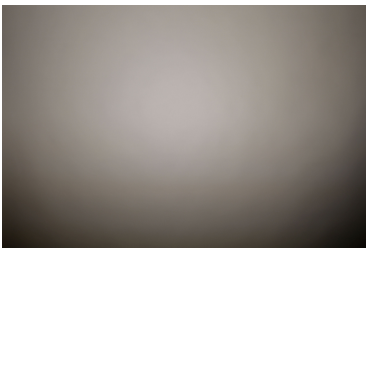
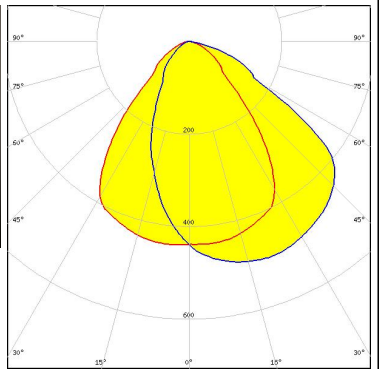
<p><b>LUMINUS</b></p> <p>LED CDM-14 (Dim-To-Warm)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 86 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>C13868_LENA-STD-BASE-VERO13-18</p> <p>C11996_LENA-LENS</p> <p>Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-14 (Dim-To-Warm)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>C13868_LENA-STD-BASE-VERO13-18</p> <p>Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-18 (Dim-To-Warm)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 86 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>C13868_LENA-STD-BASE-VERO13-18</p> <p>C11996_LENA-LENS</p> <p>Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-18 (Dim-To-Warm)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>C13868_LENA-STD-BASE-VERO13-18</p> <p>Bender Wirth: 491 Typ L2</p>		




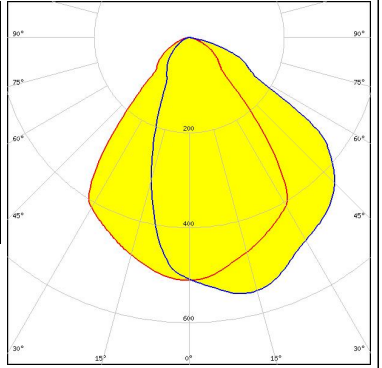
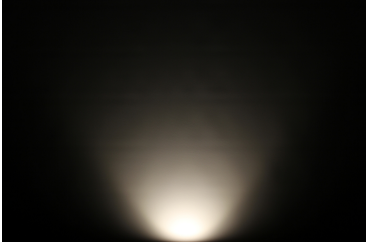
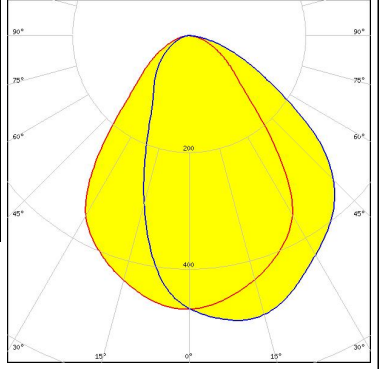
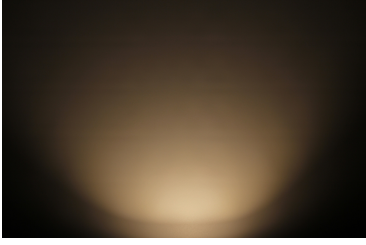
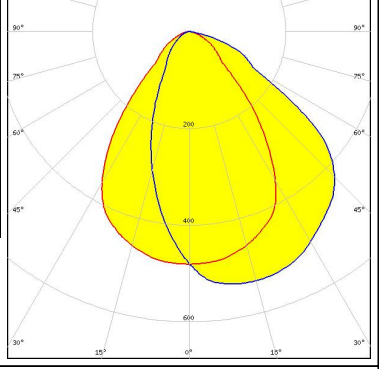
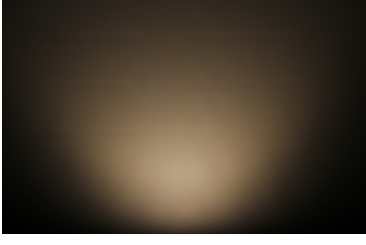
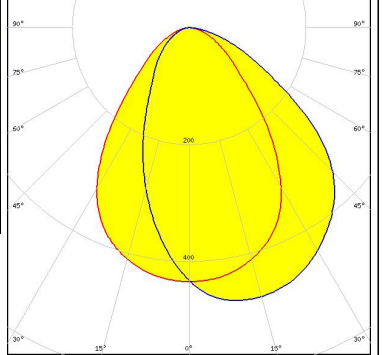
### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMINUS</b></p> <p>LED CDM-9 (Dim-To-Warm)            FWHM / FWTM Asymmetric            Efficiency 85 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            C11996_LENA-LENS            Bender Wirth: 490 Typ L1</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-9 (Dim-To-Warm)            FWHM / FWTM Asymmetric            Efficiency 89 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 490 Typ L1</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-14 (Tunable White)            FWHM / FWTM Asymmetric            Efficiency 84 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENA-STD-BASE-VERO29            C12606_LENINA-DL            Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-14 (Tunable White)            FWHM / FWTM Asymmetric            Efficiency 88 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENA-STD-BASE-VERO29            Bender Wirth: 442 Typ L3</p>		


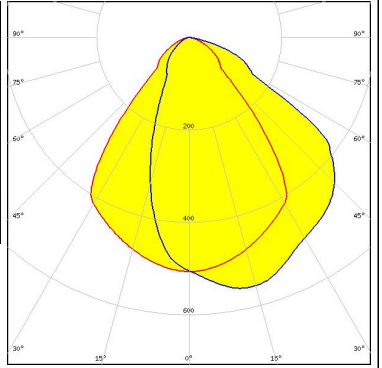
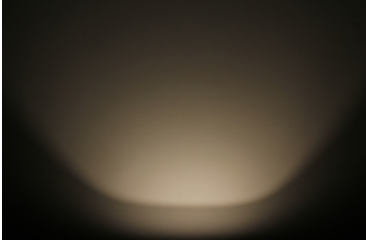
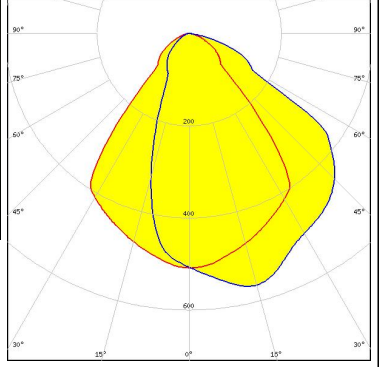
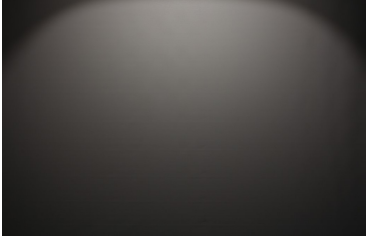
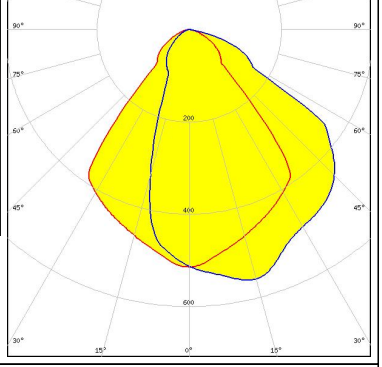
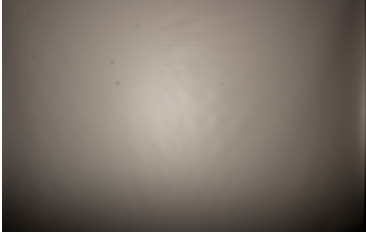
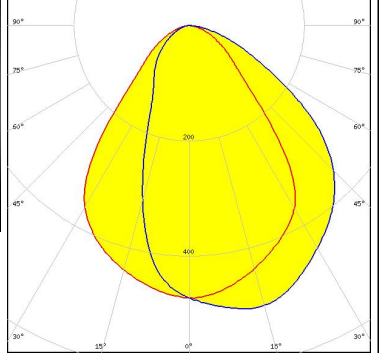
### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMINUS</b></p> <p>LED CTM-18 (Tunable White)            FWHM / FWTM Asymmetric            Efficiency 84 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour Tunable White</p> <p>Required components:            C13867_LENA-STD-BASE-VERO29            C11996_LENA-LENS            Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-18 (Tunable White)            FWHM / FWTM Asymmetric            Efficiency 88 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENA-STD-BASE-VERO29            Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-22 (Tunable White)            FWHM / FWTM Asymmetric            Efficiency 84 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENA-STD-BASE-VERO29            C11996_LENA-LENS            Bender Wirth: 494 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-22 (Tunable White)            FWHM / FWTM Asymmetric            Efficiency 89 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENA-STD-BASE-VERO29            Bender Wirth: 494 Typ L3</p>		

### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMINUS</b></p> <p>LED CxM-14 (19x19)            FWHM / FWTM Asymmetric            Efficiency 88 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12691_LENA-STD-BASE-CLL030</p>		
<p><b>LUMINUS</b></p> <p>LED CxM-14 (19x19)            FWHM / FWTM Asymmetric            Efficiency 83 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12691_LENA-STD-BASE-CLL030            C11996_LENA-LENS</p>		
<p><b>LUMINUS</b></p> <p>LED CxM-22 (28x28)            FWHM / FWTM Asymmetric            Efficiency 86 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12692_LENA-STD-BASE-CLL040</p>		
<p><b>LUMINUS</b></p> <p>LED CxM-22 (28x28)            FWHM / FWTM Asymmetric            Efficiency 79 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12692_LENA-STD-BASE-CLL040            C11996_LENA-LENS</p>		

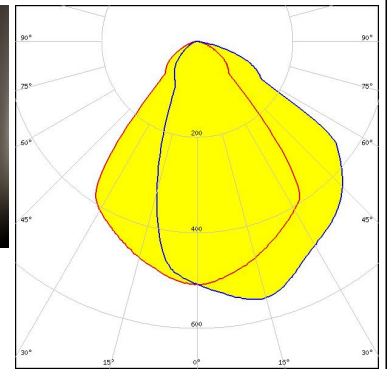
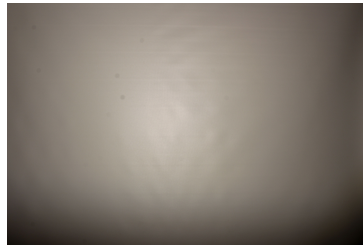
### PHOTOMETRIC DATA (MEASURED):

<p><b>NICHIA</b></p> <p>LED COB J-Type            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 463 Typ L2</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 9)            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White            FWHM / FWTM Asymmetric            Efficiency 85 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENA-STD-BASE-VERO13-18            C11996_LENA-LENS            Bender Wirth: 498 Typ L2</p>		

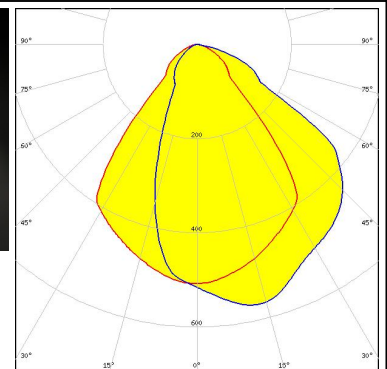
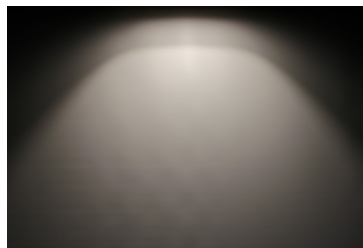
### PHOTOMETRIC DATA (MEASURED):



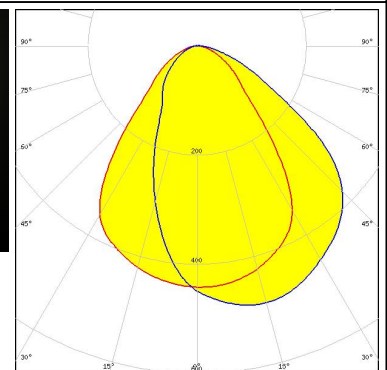
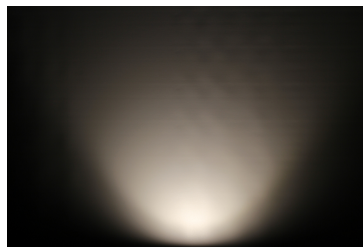
LED NVCWJ024Z-V1MT: COB J-Type Tunable White  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 498 Typ L2



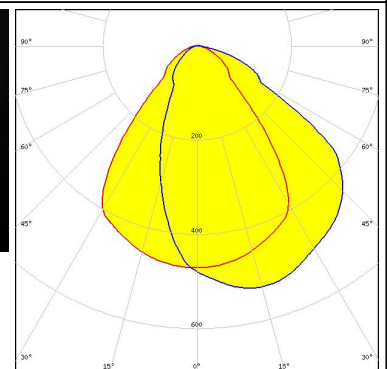
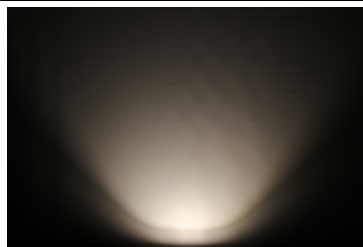
LED Soleriq S13  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 437 Typ L1



LED Soleriq S19  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENA-STD-BASE-VERO29  
 C11996\_LENA-LENS  
 Bender Wirth: 462 Typ L3



LED Soleriq S19  
 FWHM / FWTM Asymmetric  
 Efficiency 89 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENA-STD-BASE-VERO29  
 Bender Wirth: 462 Typ L3



#### PHOTOMETRIC DATA (MEASURED):

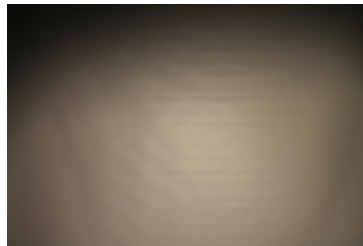
### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ  
 C11996\_LENA-LENS



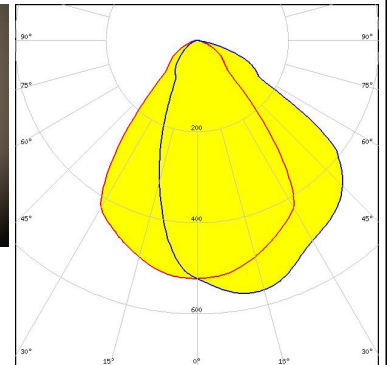
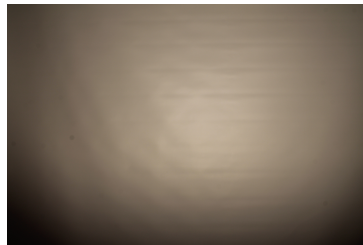
### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ



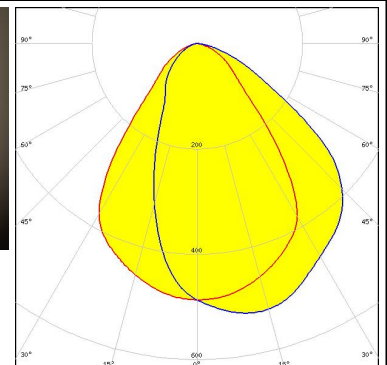
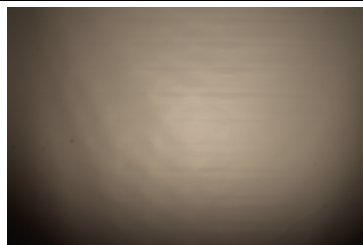
### PHILIPS

LED Fortimo SLM L15 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ



### PHILIPS

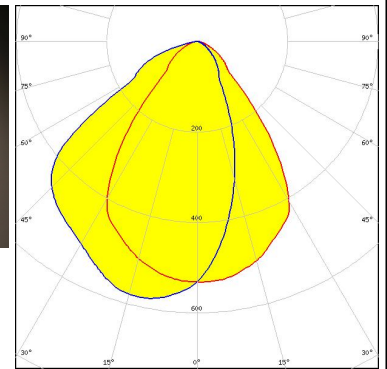
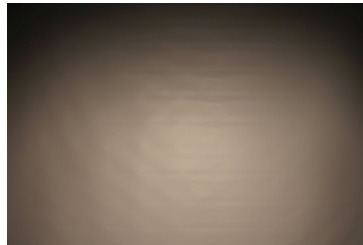
LED Fortimo SLM L15 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ  
 C11996\_LENA-LENS



#### PHOTOMETRIC DATA (MEASURED):

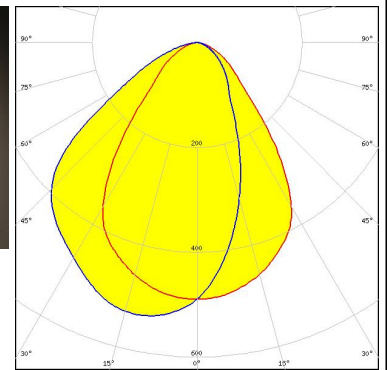
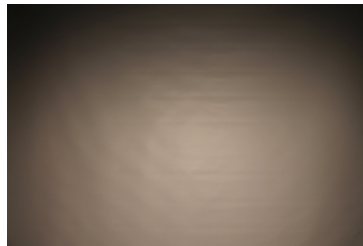
### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040



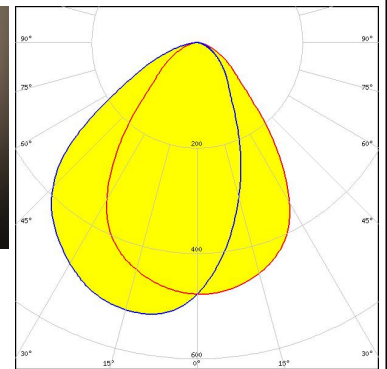
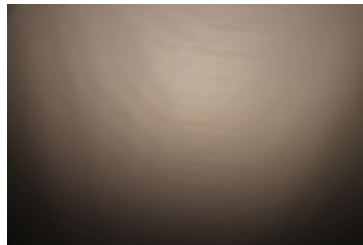
### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040  
 C11996\_LENA-LENS



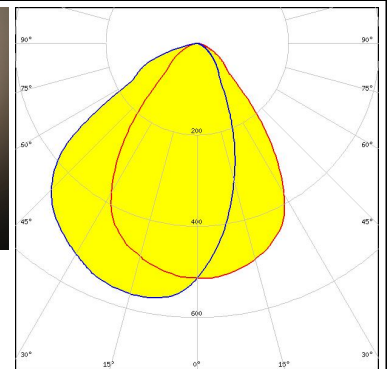
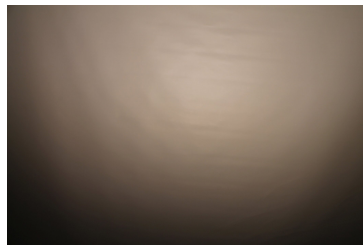
### PHILIPS

LED Fortimo SLM L23 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040  
 C11996\_LENA-LENS



### PHILIPS

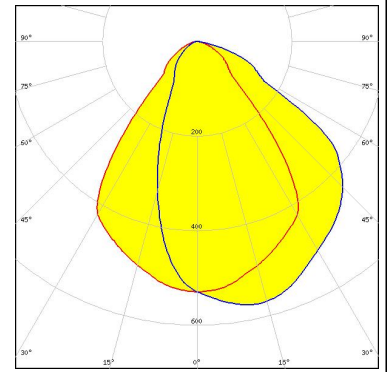
LED Fortimo SLM L23 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040



#### PHOTOMETRIC DATA (MEASURED):

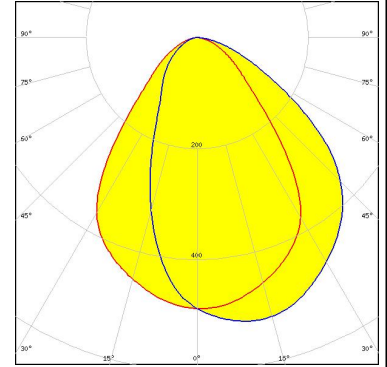
### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030



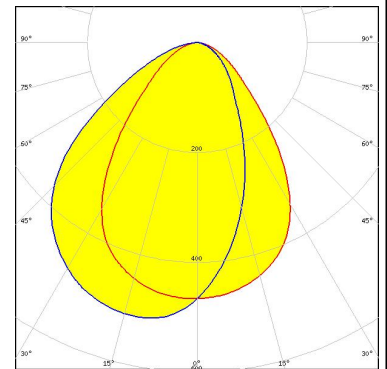
### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM Asymmetric  
 Efficiency 87 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030  
 C11996\_LENA-LENS



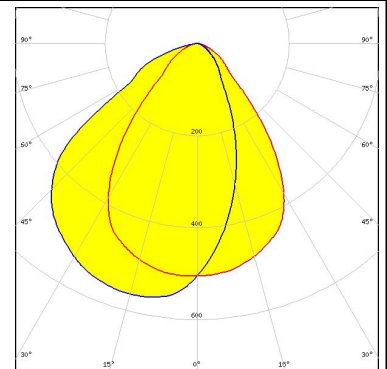
### SAMSUNG

LED LC040D / LC060D / LC080D  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040  
 C11996\_LENA-LENS



### SAMSUNG

LED LC040D / LC060D / LC080D  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040

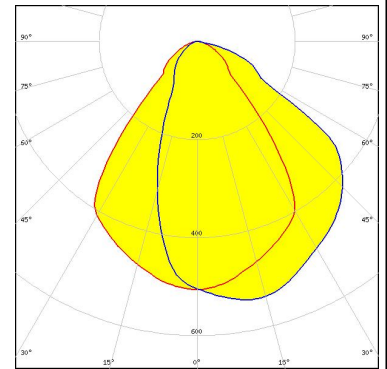




#### PHOTOMETRIC DATA (MEASURED):

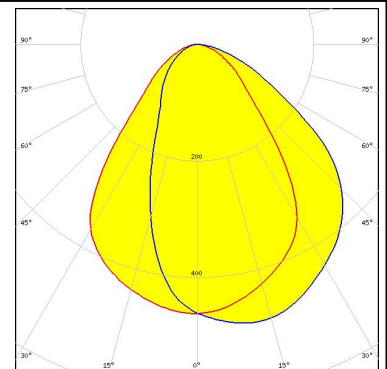
### SHARP

LED Mega Zenigata (GW6DME)  
 FWHM / FWTM Asymmetric  
 Efficiency 87 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ



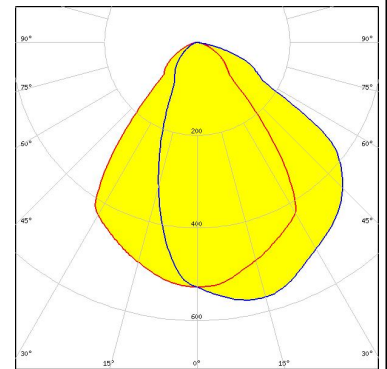
### SHARP

LED Mega Zenigata (GW6DME)  
 FWHM / FWTM Asymmetric  
 Efficiency 83 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ  
 C11996\_LENA-LENS



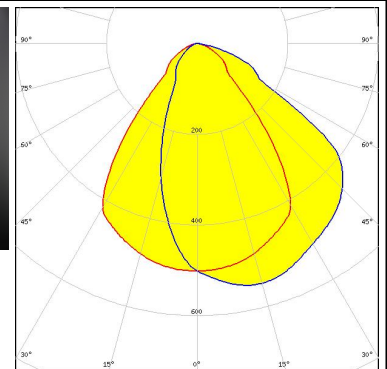
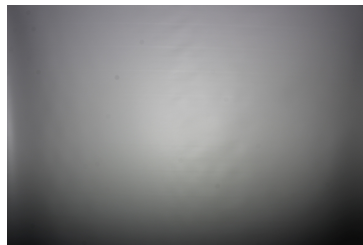
### TRIDONIC

LED SLE G7 LES15  
 FWHM / FWTM Asymmetric  
 Efficiency 92 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030



### TRIDONIC

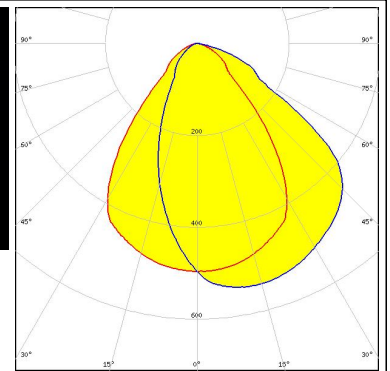
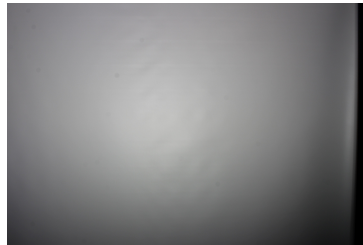
LED SLE G7 LES17 H  
 FWHM / FWTM 76.0° / 123.0°  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14547\_LENA-ADAPTER-B



### PHOTOMETRIC DATA (MEASURED):

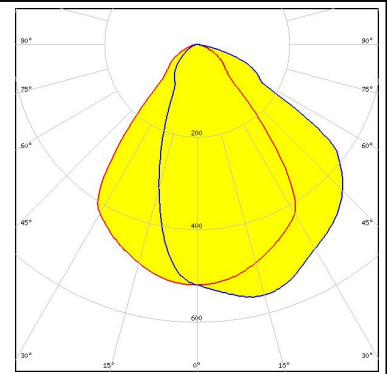
#### TRIDONIC

LED SLE G7 LES21 H  
FWHM / FWTM Asymmetric  
Efficiency 90 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C14547\_LENA-ADAPTER-B


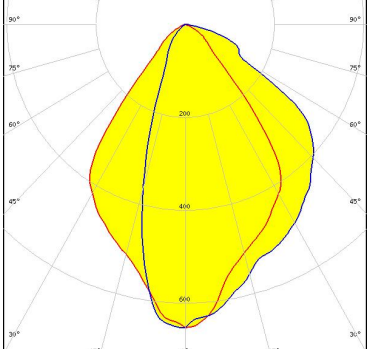

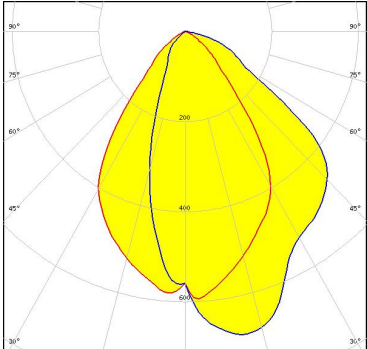

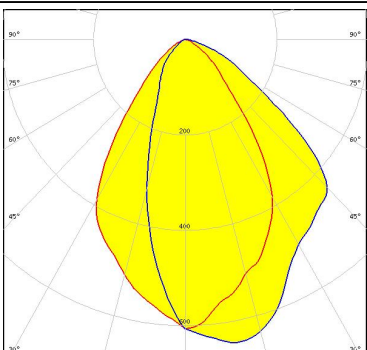

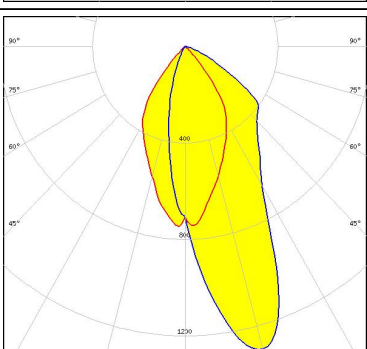


#### XICATO

LED XOB 14.5 mm  
FWHM / FWTM Asymmetric  
Efficiency 91 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C12691\_LENA-STD-BASE-CLL030



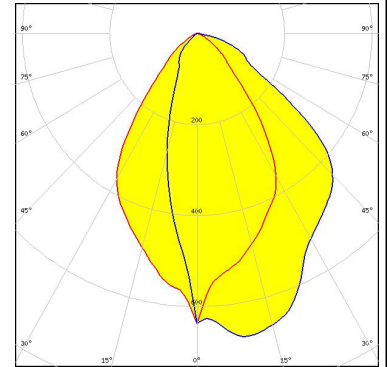
### PHOTOMETRIC DATA (SIMULATED):

<p></p> <p>LED V10 Gen7            FWHM / FWTM Asymmetric            Efficiency 85 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 486 Typ L1</p>	
<p></p> <p>LED V13 Gen7            FWHM / FWTM Asymmetric            Efficiency 87 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2103CT + 50-2100LN</p>	
<p></p> <p>LED V13 Gen7            FWHM / FWTM Asymmetric            Efficiency 84 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C11996_LENA-LENS            IDEAL: 50-2103CT + 50-2100LN</p>	
<p></p> <p>LED V13 Gen7            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 1.3 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENA-STD-BASE-VERO13-18            Bender Wirth: 477 Typ L1</p>	

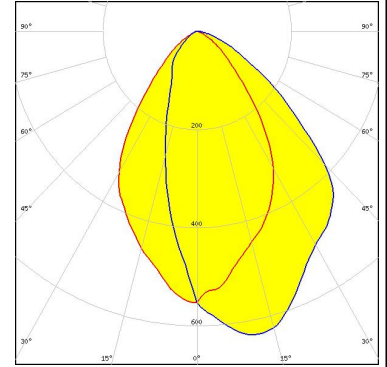
### PHOTOMETRIC DATA (SIMULATED):



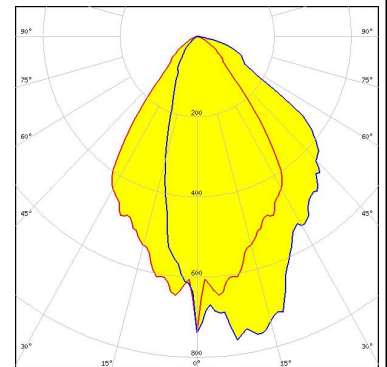
LED CXA/B 30xx  
 FWHM / FWTM Asymmetric  
 Efficiency 82 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2234C + 50-2100LN



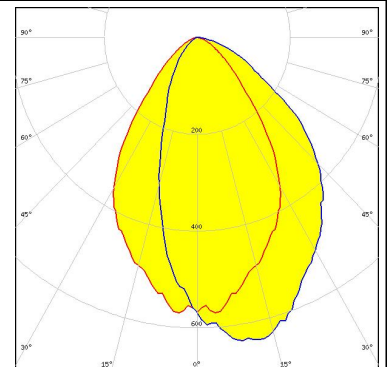
LED CXA/B 30xx  
 FWHM / FWTM Asymmetric  
 Efficiency 78 %  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C11996\_LENA-LENS  
 IDEAL: 50-2234C + 50-2100LN



LED LUXEON CoB 1204/1205  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ



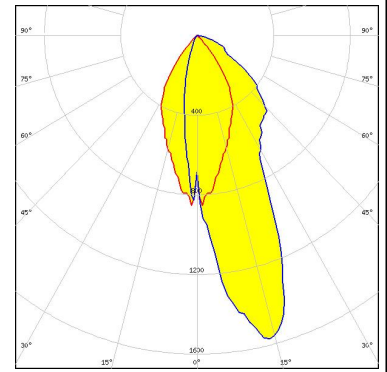
LED LUXEON CoB 1204/1205  
 FWHM / FWTM Asymmetric  
 Efficiency 83 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ  
 C11996\_LENA-LENS



#### PHOTOMETRIC DATA (SIMULATED):

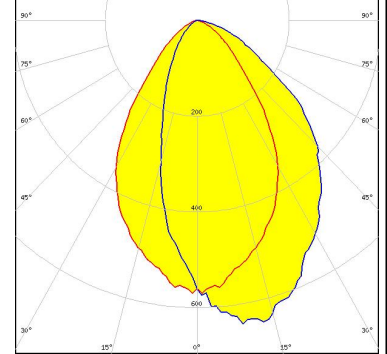
#### LUMILEDS

LED LUXEON CoB 1208  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ



#### LUMILEDS

LED LUXEON CoB 1208  
 FWHM / FWTM Asymmetric  
 Efficiency 82 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ  
 C11996\_LENA-LENS



#### LUMILEDS

LED LUXEON K12  
 FWHM / FWTM Asymmetric  
 Efficiency %  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12924\_LENA-STD-BASE-LUXEON-K

#### LUMILEDS

LED LUXEON K12  
 FWHM / FWTM Asymmetric  
 Efficiency %  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12924\_LENA-STD-BASE-LUXEON-K  
 C11996\_LENA-LENS

### PHOTOMETRIC DATA (SIMULATED):

#### LUMILEDS

LED LUXEON K16  
FWHM / FWTM Asymmetric  
Efficiency %  
LEDs/each optic 1  
Light colour White  
Required components:  
C12924\_LENA-STD-BASE-LUXEON-K  
C11996\_LENA-LENS

#### LUMILEDS

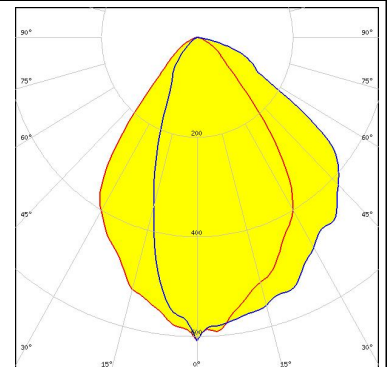
LED LUXEON K16  
FWHM / FWTM Asymmetric  
Efficiency %  
LEDs/each optic 1  
Light colour White  
Required components:  
C12924\_LENA-STD-BASE-LUXEON-K

#### LUMINUS


LED CxM-14 (19x19)  
FWHM / FWTM Asymmetric  
Efficiency 91 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13868\_LENA-STD-BASE-VERO13-18  
Bender Wirth: 433 Typ L1

#### OSRAM

Opto Semiconductors  
LED Soleriq S15  
FWHM / FWTM Asymmetric  
Efficiency 86 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C12691\_LENA-STD-BASE-CLL030



### PHOTOMETRIC DATA (SIMULATED):

 SEOL SEMICONDUCTOR	
LED	ZC12/18
FWHM / FWTM	Asymmetric
Efficiency	91 %
Peak intensity	0.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 433 Typ L1	
<b>SHARP</b>	
LED	Mega Zenigata (GW5DGC)
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour	White
Required components: C12292_LENA-STD-BASE-MEZ	
<b>SHARP</b>	
LED	Mega Zenigata (GW5DGC)
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour	White
Required components: C12292_LENA-STD-BASE-MEZ C11996_LENA-LENS	

### 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:

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