

## LENINA-S

~19° spot beam

### SPECIFICATION:

Dimensions	Ø 74.0 mm
Height	40 mm
ROHS compliant	yes ⓘ

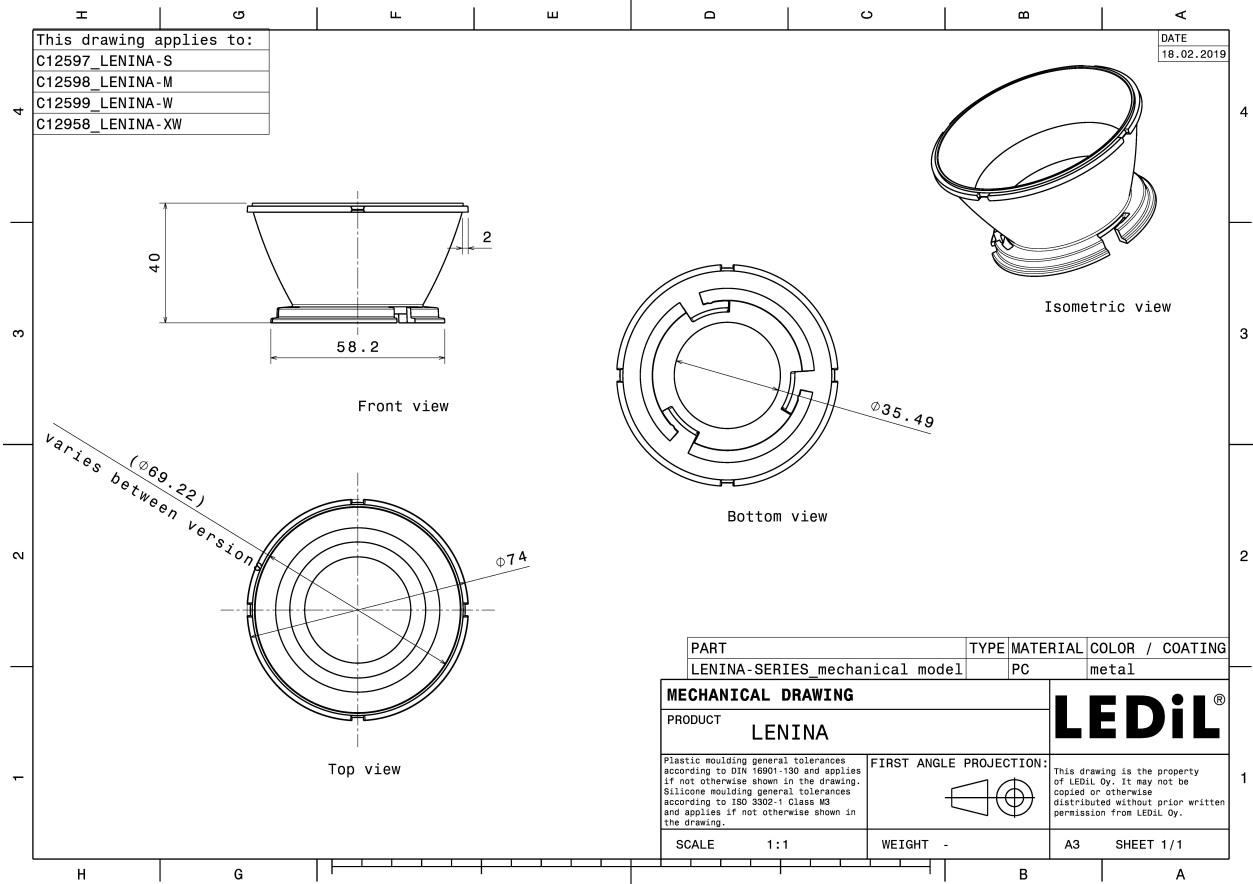
### MATERIALS:

Component	Type	Material	Colour	Finish	Coating
LENINA-S	Reflector	PC	metal		lacquer




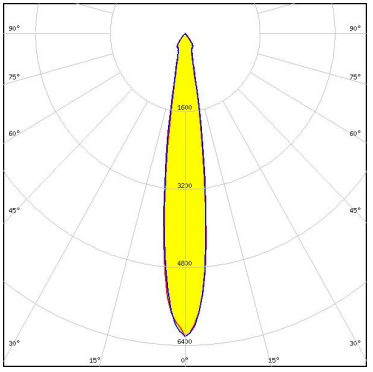

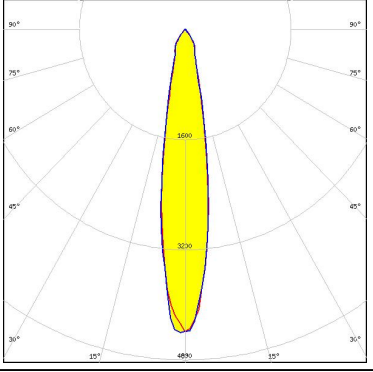

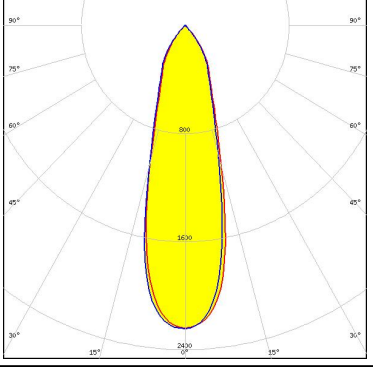

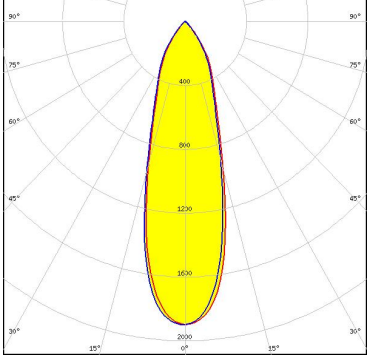
### ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C12597_LENINA-S » Box size: 476 x 273 x 197 mm	60	120	60	2.0


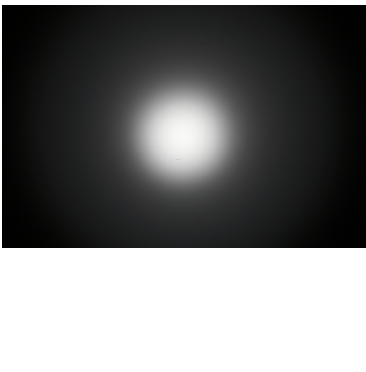


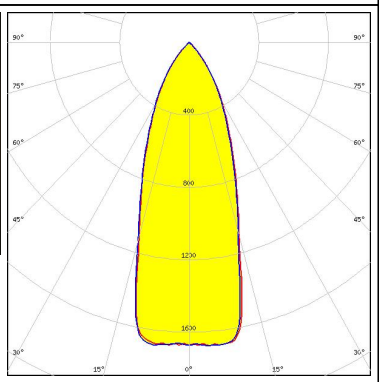


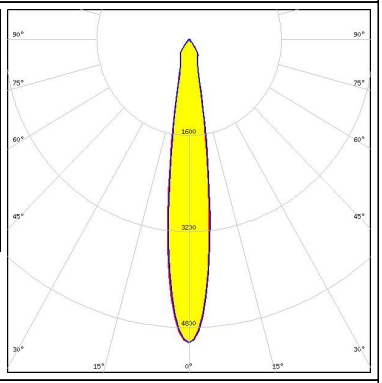


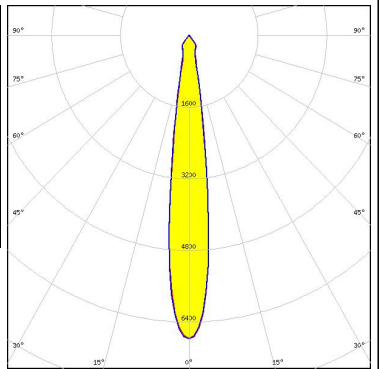


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)



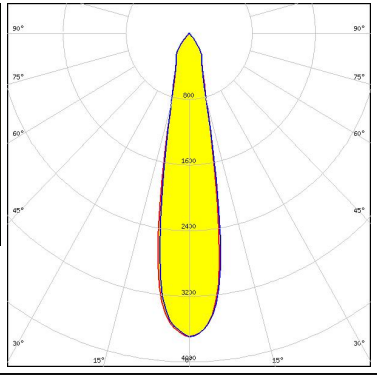


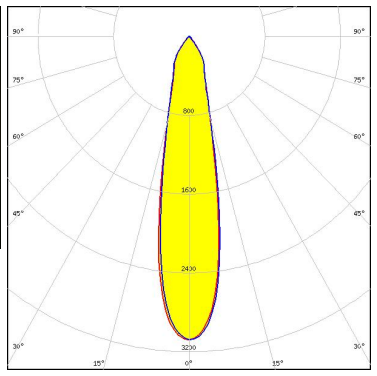


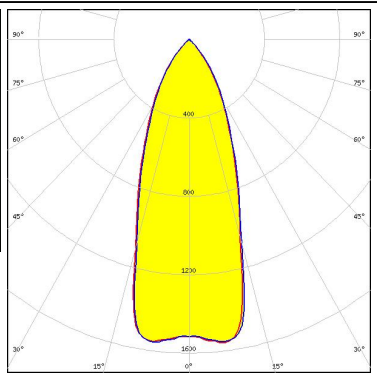


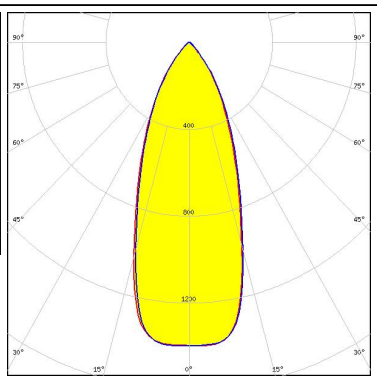
### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED BXRA ES Rectangle            FWHM / FWTM 15.0° / 36.0°            Efficiency 88 %            LEDs/each optic 1            Light colour White            Required components:            C12153_LENINA-STD-BASE-BXRA</p>	
<p></p> <p>LED BXRA ES Rectangle            FWHM / FWTM 20.0° / 60.0°            Efficiency 80 %            LEDs/each optic 1            Light colour White            Required components:            C12153_LENINA-STD-BASE-BXRA            C12606_LENINA-DL</p>	
<p></p> <p>LED BXRA RS            FWHM / FWTM 28.0° / 70.0°            Efficiency 89 %            Peak intensity 2.3 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12229_LENINA-STD-BASE-RS</p>	
<p></p> <p>LED BXRA RS            FWHM / FWTM 32.0° / 72.0°            Efficiency 81 %            Peak intensity 2 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12229_LENINA-STD-BASE-RS            C12606_LENINA-DL</p>	

### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED V10 Gen6            FWHM / FWTM 13.0° / 30.0°            Efficiency 83 %            Peak intensity 7.2 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13186_LENINA-STD-BASE-CXA15            C12606_LENINA-DL</p>		
<p></p> <p>LED Vero SE 29            FWHM / FWTM 38.0° / 76.0°            Efficiency 92 %            Peak intensity 1.7 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C15083_LENINA-STD-BASE-VERO29</p>		
<p></p> <p>LED VERO13            FWHM / FWTM 16.0° / 35.0°            Efficiency 86 %            Peak intensity 5.1 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL</p>		
<p></p> <p>LED VERO13            FWHM / FWTM 15.0° / 29.0°            Efficiency 91 %            Peak intensity 6.8 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18</p>		

### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED VERO18            FWHM / FWTM 21.0° / 52.0°            Efficiency 90 %            Peak intensity 3.7 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13868_LENINA-STD-BASE-VERO13-18</p>		
<p></p> <p>LED VERO18            FWHM / FWTM 22.0° / 60.0°            Efficiency 86 %            Peak intensity 3.1 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL</p>		
<p></p> <p>LED VERO29            FWHM / FWTM 40.0° / 78.0°            Efficiency 89 %            Peak intensity 1.6 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13867_LENINA-STD-BASE-VERO29</p>		
<p></p> <p>LED VERO29            FWHM / FWTM 40.0° / 78.0°            Efficiency 85 %            Peak intensity 1.5 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13867_LENINA-STD-BASE-VERO29            C12606_LENINA-DL</p>		

### OPTICAL RESULTS (MEASURED):

#### CITIZEN

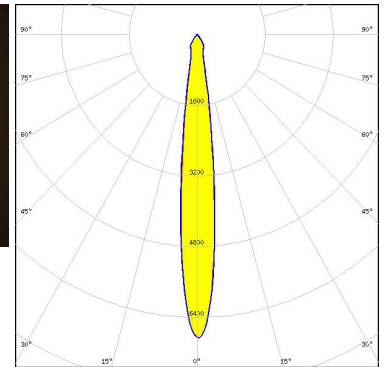
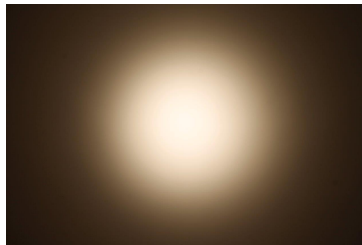
LED CL-L340  
FWHM / FWTM 17.0° / 44.0°  
Efficiency 88 %  
LEDs/each optic 1  
Light colour White  
Required components:  
C11995\_LENINA-STD-BASE-CL340

#### CITIZEN

LED CL-L340  
FWHM / FWTM 22.0° / 62.0°  
Efficiency 80 %  
LEDs/each optic 1  
Light colour White  
Required components:  
C11995\_LENINA-STD-BASE-CL340  
C12606\_LENINA-DL

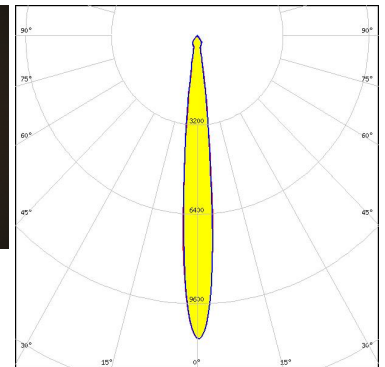
#### CITIZEN

LED CLL02x/CLU02x (LES10)  
FWHM / FWTM 13.0° / 28.0°  
Efficiency 86 %  
Peak intensity 6.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13868\_LENINA-STD-BASE-VERO13-18  
C12606\_LENINA-DL  
Bender Wirth: 434 Typ L1



#### CITIZEN

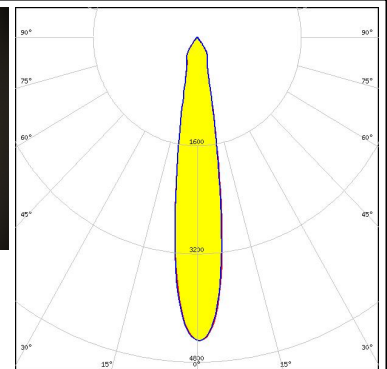
LED CLL02x/CLU02x (LES10)  
FWHM / FWTM 11.0° / 22.0°  
Efficiency 91 %  
Peak intensity 10.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13868\_LENINA-STD-BASE-VERO13-18  
Bender Wirth: 434 Typ L1



### OPTICAL RESULTS (MEASURED):

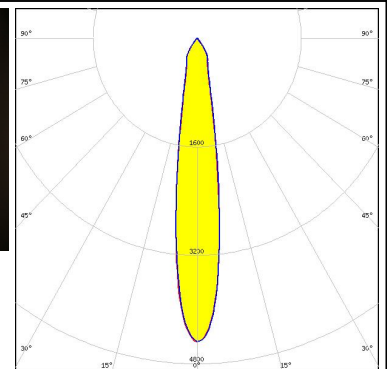
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 17.0° / 41.0°  
 Efficiency 87 %  
 Peak intensity 4.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 433 Typ L1



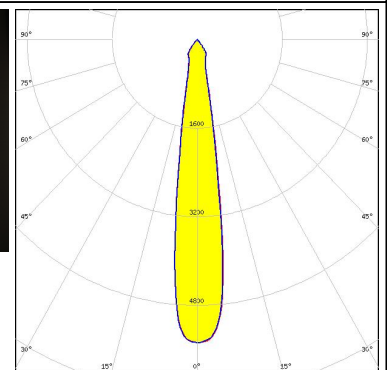
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 17.0° / 43.0°  
 Efficiency 87 %  
 Peak intensity 4.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030  
 C12606\_LENINA-DL



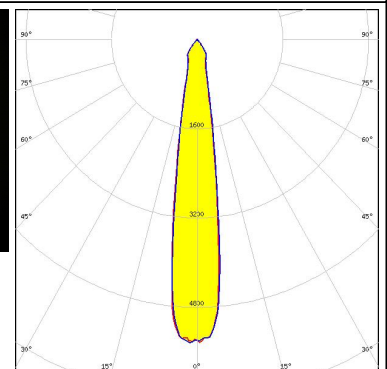
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 17.0° / 34.0°  
 Efficiency 91 %  
 Peak intensity 5.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 Bender Wirth: 433 Typ L1



#### CITIZEN

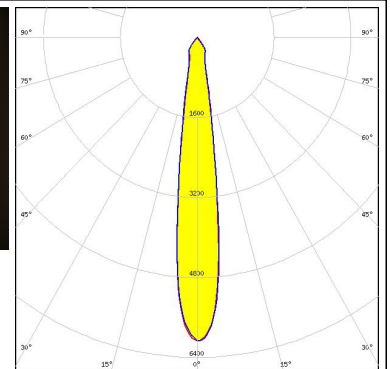
LED CLL03x/CLU03x  
 FWHM / FWTM 16.0° / 36.0°  
 Efficiency 93 %  
 Peak intensity 5.4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030



### OPTICAL RESULTS (MEASURED):

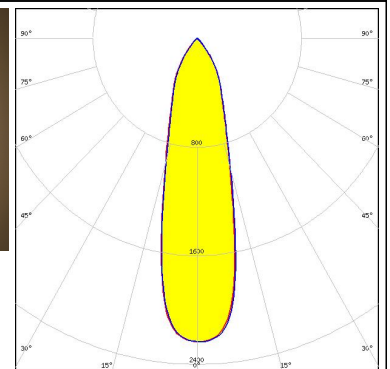
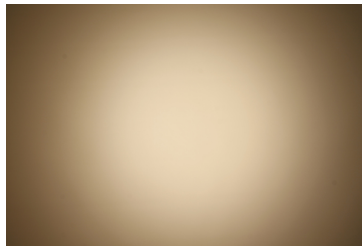
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 15.0° / 33.0°  
 Efficiency 91 %  
 Peak intensity 6.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030



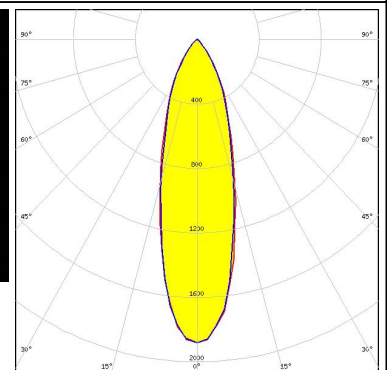
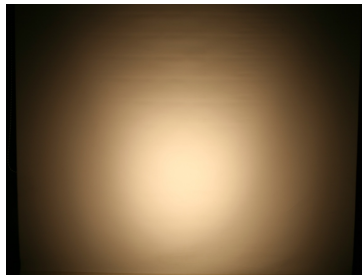
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 27.0° / 69.0°  
 Efficiency 86 %  
 Peak intensity 2.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 C12606\_LENINA-DL  
 Bender Wirth: 431 Typ L3



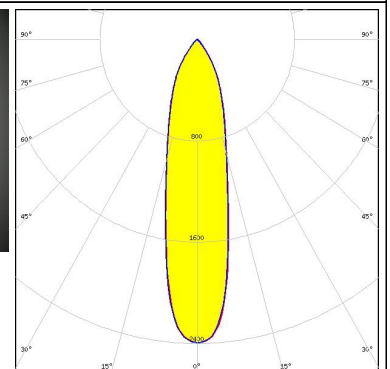
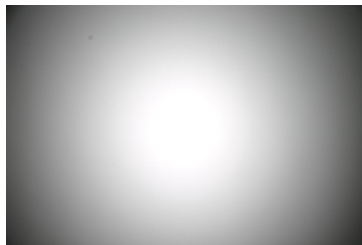
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 30.0° / 70.0°  
 Efficiency 78 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040  
 C12606\_LENINA-DL



#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 25.0° / 67.0°  
 Efficiency 87 %  
 Peak intensity 2.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12606\_LENINA-DL  
 IDEAL: 50-2204CT + 50-2100LN

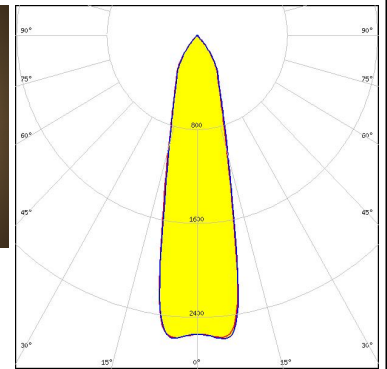
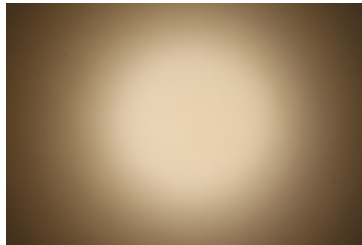




### OPTICAL RESULTS (MEASURED):

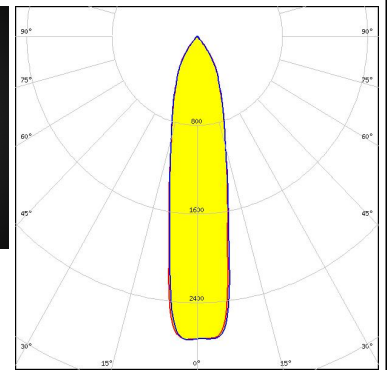
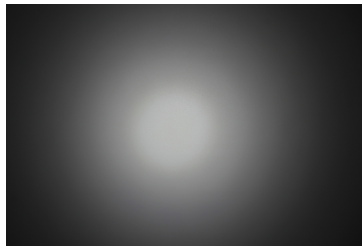
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 26.0° / 68.0°  
 Efficiency 91 %  
 Peak intensity 2.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 Bender Wirth: 431 Typ L3



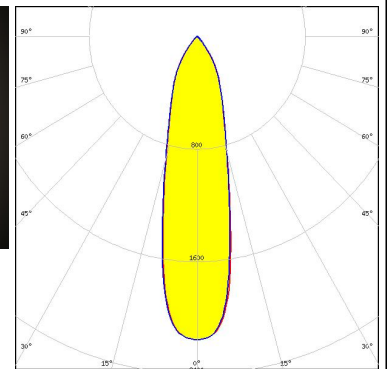
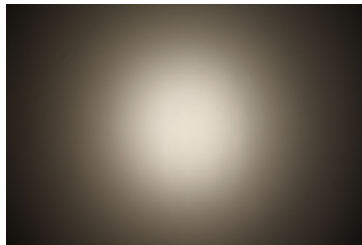
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 23.0° / 66.0°  
 Efficiency 90 %  
 Peak intensity 2.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204CT + 50-2100LN



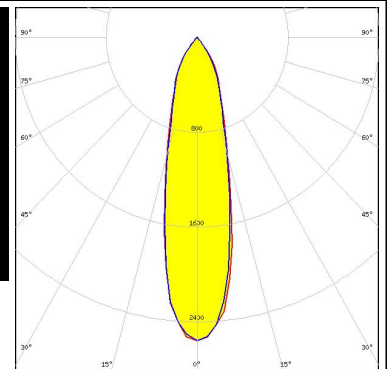
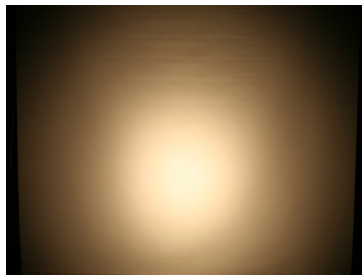
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 26.0° / 68.0°  
 Efficiency 79 %  
 Peak intensity 2.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12606\_LENINA-DL  
 A.A.G. STUCCHI: 8102-G2 + S-8000-12



#### CITIZEN

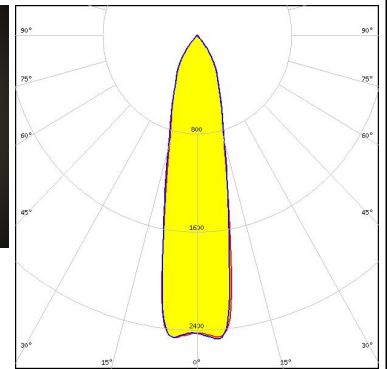
LED CLL04x/CLU04x  
 FWHM / FWTM 26.0° / 68.0°  
 Efficiency 86 %  
 Peak intensity 2.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040



### OPTICAL RESULTS (MEASURED):

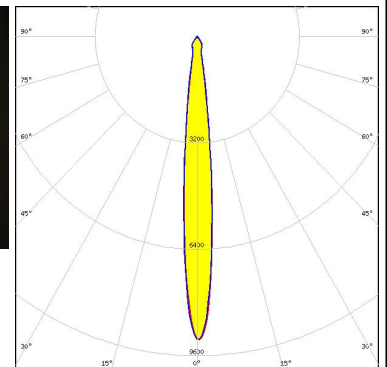
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 24.0° / 67.0°  
 Efficiency 83 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8102-G2 + S-8000-12



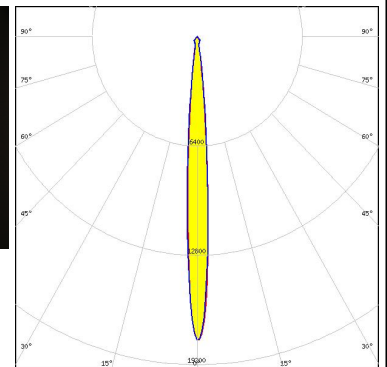
#### CITIZEN

LED CLU700/701/702/703  
 FWHM / FWTM 11.0° / 23.0°  
 Efficiency 86 %  
 Peak intensity 9.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 434 Typ L1



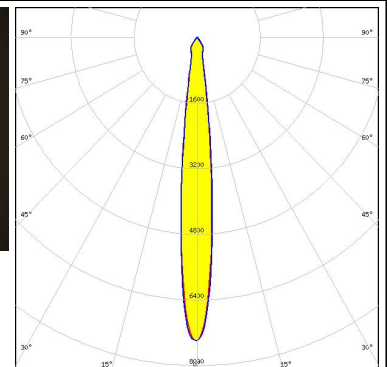
#### CITIZEN

LED CLU700/701/702/703  
 FWHM / FWTM 8.0° / 17.0°  
 Efficiency 91 %  
 Peak intensity 17.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 434 Typ L1



#### CITIZEN

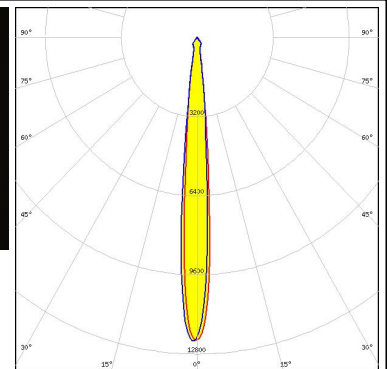
LED CLU710/711  
 FWHM / FWTM 12.0° / 26.0°  
 Efficiency 89 %  
 Peak intensity 7.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030  
 C12606\_LENINA-DL



### OPTICAL RESULTS (MEASURED):

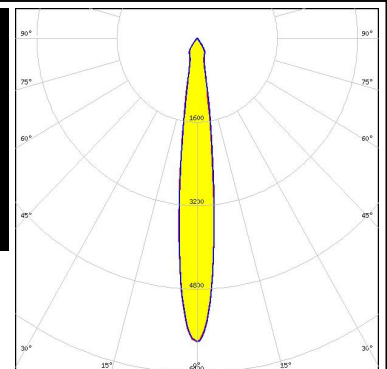
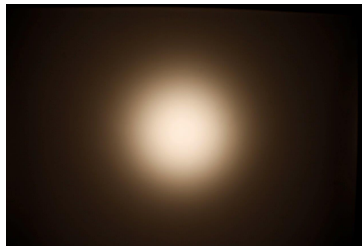
#### CITIZEN

LED CLU710/711  
 FWHM / FWTM 10.0° / 20.0°  
 Efficiency 94 %  
 Peak intensity 12.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030



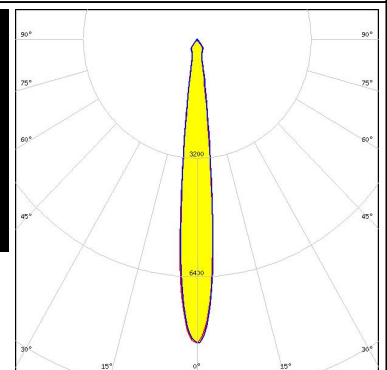
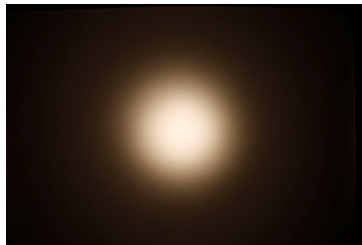
#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 13.0° / 30.0°  
 Efficiency 84 %  
 Peak intensity 5.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030  
 C12606\_LENINA-DL



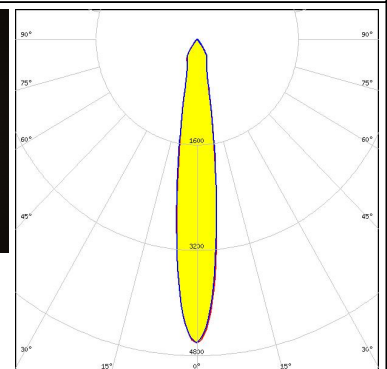
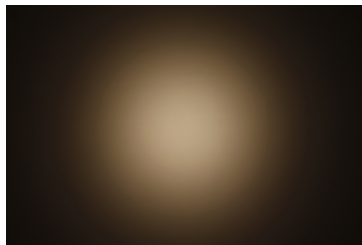
#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 12.0° / 24.0°  
 Efficiency 89 %  
 Peak intensity 8.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030



#### CITIZEN

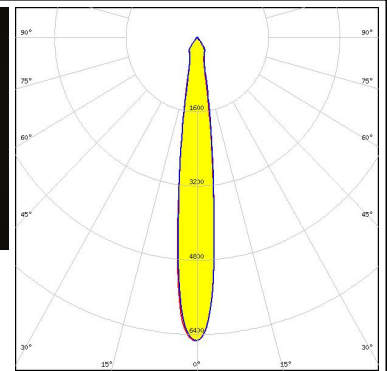
LED CLU730/731/733  
 FWHM / FWTM 15.0° / 39.0°  
 Efficiency 85 %  
 Peak intensity 4.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040  
 C12606\_LENINA-DL



### OPTICAL RESULTS (MEASURED):

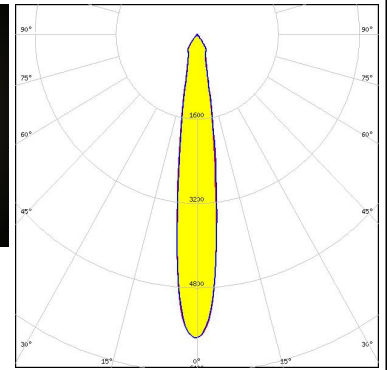
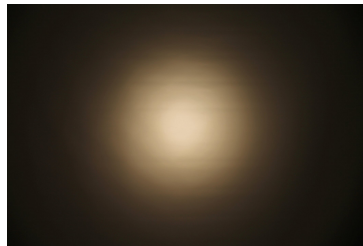
#### CITIZEN

LED CLU730/731/733  
 FWHM / FWTM 14.0° / 30.0°  
 Efficiency 94 %  
 Peak intensity 6.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040



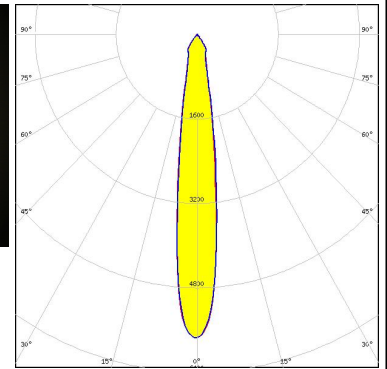
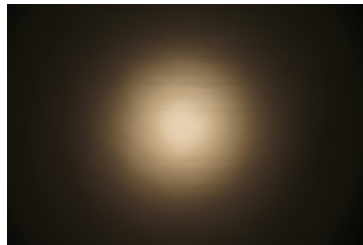
#### CREE LED

LED CMA1840  
 FWHM / FWTM 25.0° / 70.0°  
 Efficiency 92 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14146\_LENINA-STD-BASE-CXA18



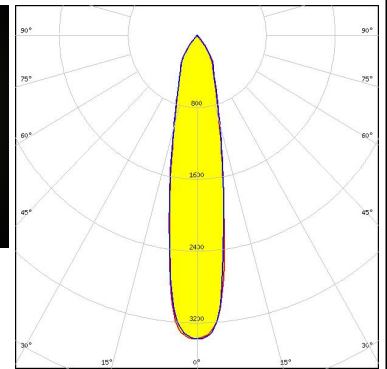
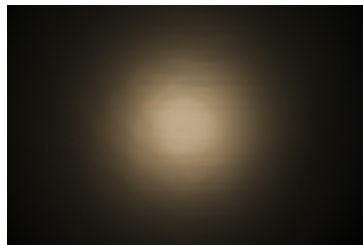
#### CREE LED

LED CMA1840  
 FWHM / FWTM 15.0° / 37.0°  
 Efficiency 92 %  
 Peak intensity 5.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14146\_LENINA-STD-BASE-CXA18



#### CREE LED

LED CMA2550  
 FWHM / FWTM 21.0° / 63.0°  
 Efficiency 92 %  
 Peak intensity 3.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13324\_LENINA-STD-BASE-CXA25



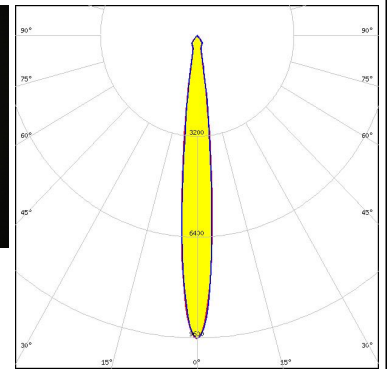
### OPTICAL RESULTS (MEASURED):

#### CREE LED

LED CMT14xx  
FWHM / FWTM 11.0° / 24.0°  
Efficiency 92 %  
Peak intensity 9.7 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

C13868\_LENINA-STD-BASE-VERO13-18  
Bender Wirth: 434 Typ L1

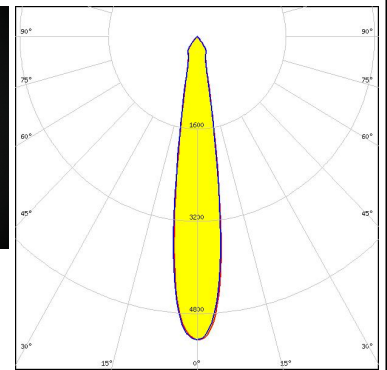


#### CREE LED

LED CMT19xx  
FWHM / FWTM 17.0° / 37.0°  
Efficiency 92 %  
Peak intensity 5.3 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

C13868\_LENINA-STD-BASE-VERO13-18  
Bender Wirth: 477 Typ L1

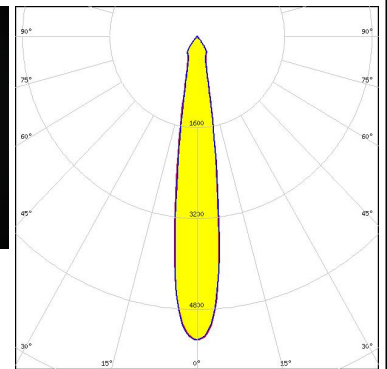


#### CREE LED

LED CMT19xx  
FWHM / FWTM 16.0° / 37.0°  
Efficiency 92 %  
Peak intensity 5.3 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

C12691\_LENINA-STD-BASE-CLL030

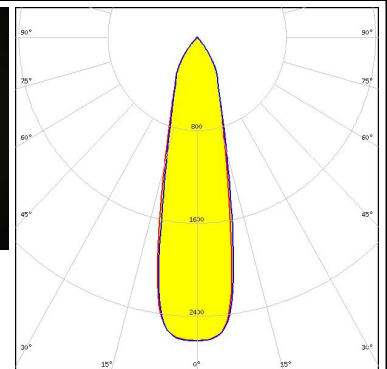
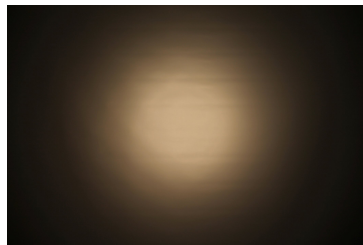


#### CREE LED

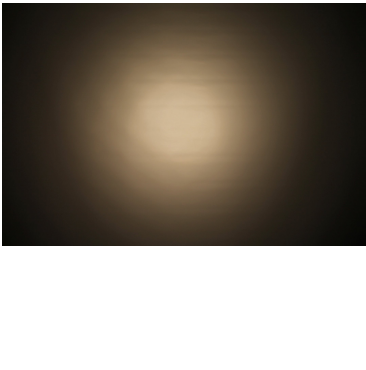
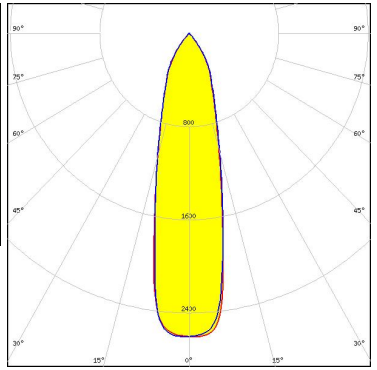

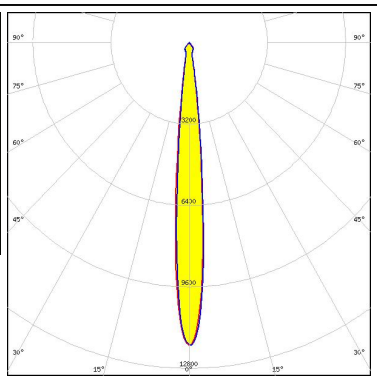

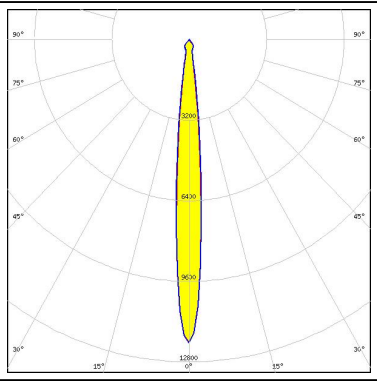

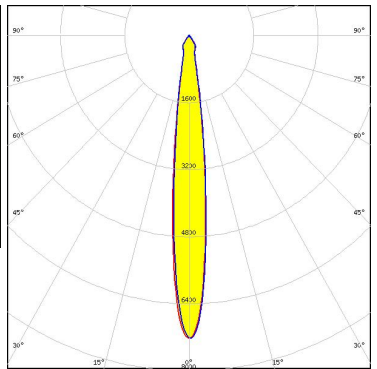
LED CMT28xx  
FWHM / FWTM 26.0° / 68.0°  
Efficiency 92 %  
Peak intensity 2.6 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

C13867\_LENINA-STD-BASE-VERO29  
Bender Wirth: 471 Typ L3



### OPTICAL RESULTS (MEASURED):

<p><b>CREE LED</b></p> <p>LED CMT28xx            FWHM / FWTM 26.0° / 68.0°            Efficiency 92 %            Peak intensity 2.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C12692_LENINA-STD-BASE-CLL040</p>		
<p><b>CREE LED</b></p> <p>LED CXA/B 15xx            FWHM / FWTM 10.0° / 21.0°            Efficiency 91 %            Peak intensity 11.9 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENINA-STD-BASE-VERO13-18            Bender Wirth: 441 Typ L1</p>		
<p><b>CREE LED</b></p> <p>LED CXA/B 15xx            FWHM / FWTM 10.0° / 20.0°            Efficiency 91 %            Peak intensity 12.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13186_LENINA-STD-BASE-CXA15</p>		
<p><b>CREE LED</b></p> <p>LED CXA/B 15xx            FWHM / FWTM 13.0° / 27.0°            Efficiency 87 %            Peak intensity 7.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL            Bender Wirth: 441 Typ L1</p>		

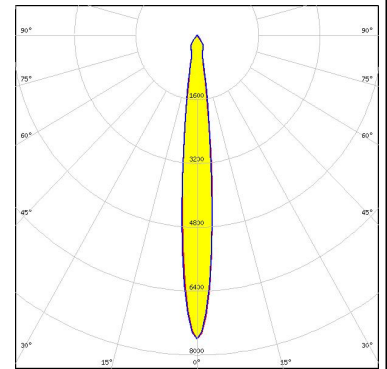
### OPTICAL RESULTS (MEASURED):

#### CREE LED

LED CXA/B 15xx  
FWHM / FWTM 12.0° / 26.0°  
Efficiency 86 %  
Peak intensity 7.6 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C13186\_LENINA-STD-BASE-CXA15  
C12606\_LENINA-DL

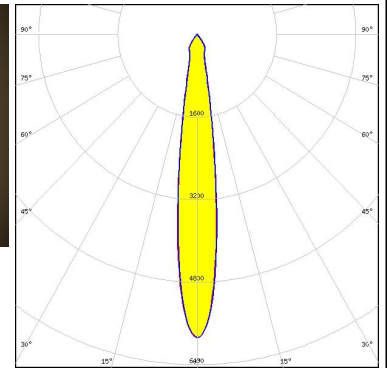


#### CREE LED

LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
FWHM / FWTM 15.0° / 32.0°  
Efficiency 88 %  
Peak intensity 5.9 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C13868\_LENINA-STD-BASE-VERO13-18  
C12606\_LENINA-DL  
Bender Wirth: 437 Typ L1



#### CREE LED

LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
FWHM / FWTM 12.0° / 28.0°  
Efficiency 92 %  
Peak intensity 9.6 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C14146\_LENINA-STD-BASE-CXA18

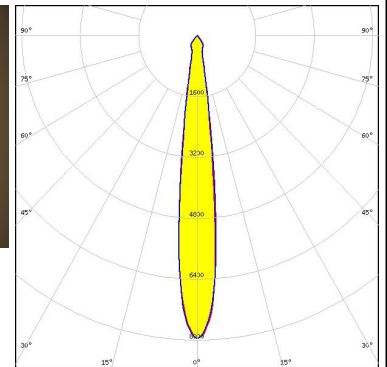


#### CREE LED


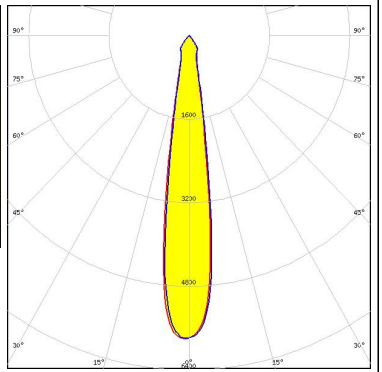

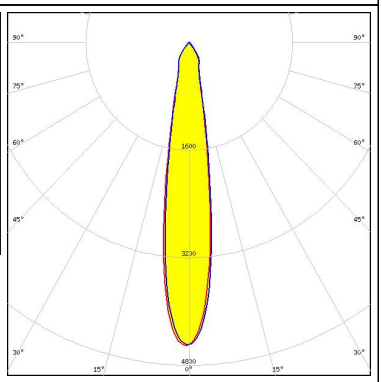

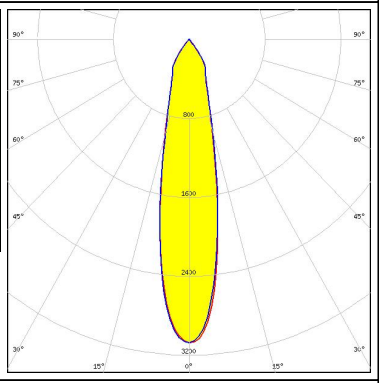

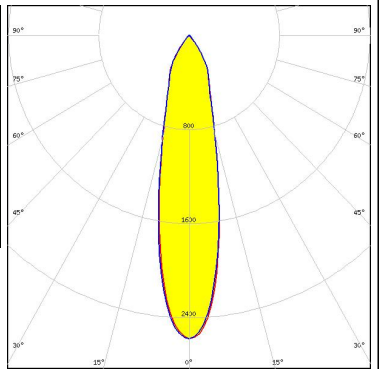
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
FWHM / FWTM 13.0° / 26.0°  
Efficiency 92 %  
Peak intensity 8 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C13868\_LENINA-STD-BASE-VERO13-18  
Bender Wirth: 437 Typ L1



### OPTICAL RESULTS (MEASURED):

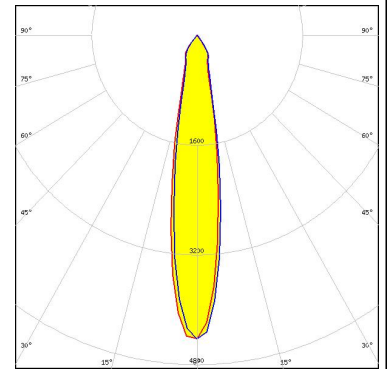
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED CXA/B 1830            FWHM / FWTM 16.0° / 33.0°            Efficiency 93 %            Peak intensity 5.8 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            Bender Wirth: 437 Typ L1</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED CXA/B 1830            FWHM / FWTM 18.0° / 41.0°            Efficiency 88 %            Peak intensity 4.5 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL            Bender Wirth: 437 Typ L1</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED CXA/B 25xx            FWHM / FWTM 22.0° / 63.0°            Efficiency 86 %            Peak intensity 3.2 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13324_LENINA-STD-BASE-CXA25</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED CXA/B 25xx            FWHM / FWTM 23.0° / 65.0°            Efficiency 78 %            Peak intensity 2.7 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13324_LENINA-STD-BASE-CXA25            C12606_LENINA-DL</p>		



### OPTICAL RESULTS (MEASURED):

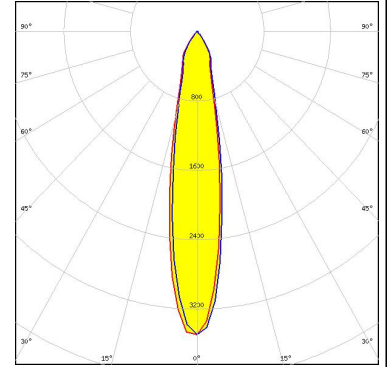
#### CREE LED

LED CXA2011  
 FWHM / FWTM 16.0° / 38.0°  
 Efficiency 88 %  
 Peak intensity 4.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12105\_LENINA-STD-BASE-CXA20



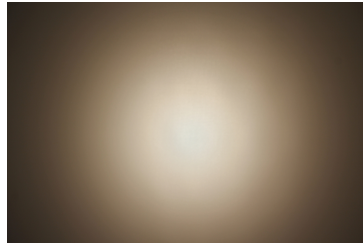
#### CREE LED

LED CXA2011  
 FWHM / FWTM 20.0° / 60.0°  
 Efficiency 80 %  
 Peak intensity 3.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12105\_LENINA-STD-BASE-CXA20  
 C12606\_LENINA-DL



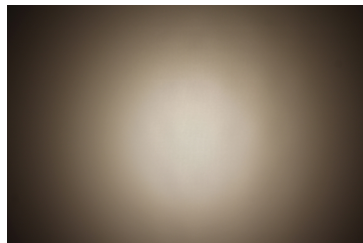
#### EVERLIGHT

LED CHI3030 19W  
 FWHM / FWTM 25.0° / 68.0°  
 Efficiency 91 %  
 Peak intensity 2.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 C12606\_LENINA-DL  
 Bender Wirth: 468 Typ L3



#### EVERLIGHT

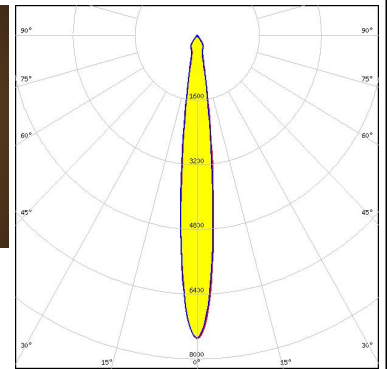
LED CHI3030 29W  
 FWHM / FWTM 33.0° / 76.0°  
 Efficiency 87 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 C12606\_LENINA-DL  
 Bender Wirth: 468 Typ L3



### OPTICAL RESULTS (MEASURED):

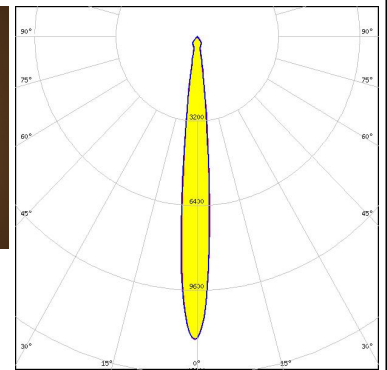
#### LUMILEDS

LED LUXEON CoB 1202/1203  
 FWHM / FWTM 13.0° / 27.0°  
 Efficiency 88 %  
 Peak intensity 7.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 438 Typ L1



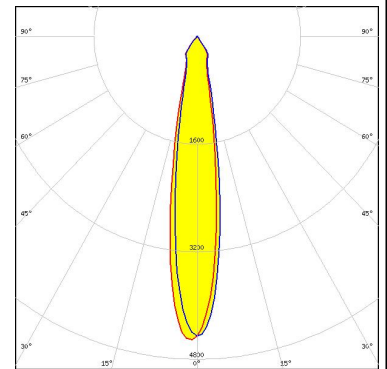
#### LUMILEDS

LED LUXEON CoB 1202/1203  
 FWHM / FWTM 11.0° / 21.0°  
 Efficiency 92 %  
 Peak intensity 11.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 Bender Wirth: 438 Typ L1



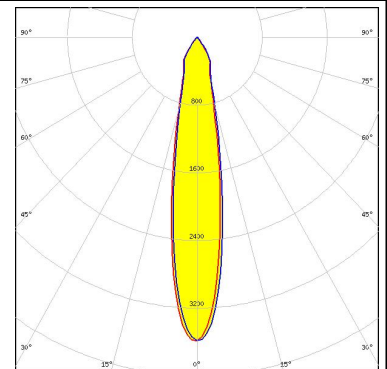
#### LUMILEDS

LED LUXEON CoB 1204/1205  
 FWHM / FWTM 18.0° / 42.0°  
 Efficiency 88 %  
 Peak intensity 4.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ



#### LUMILEDS

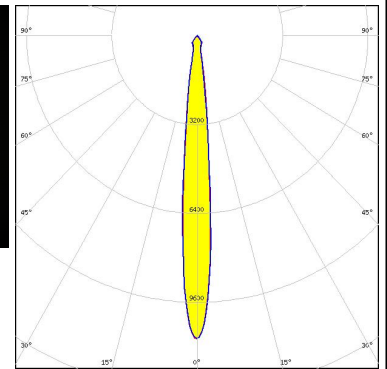
LED LUXEON CoB 1204/1205  
 FWHM / FWTM 19.0° / 53.0°  
 Efficiency 84 %  
 Peak intensity 3.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ  
 C12606\_LENINA-DL



### OPTICAL RESULTS (MEASURED):

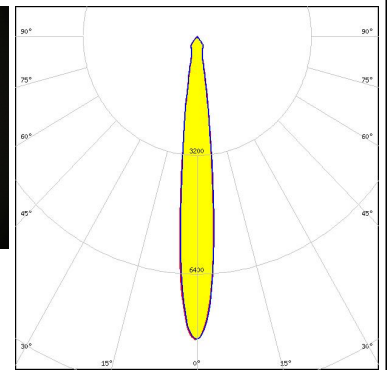
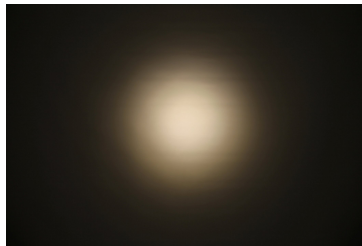
#### LUMILEDS

LED LUXEON CoB 1204HD  
 FWHM / FWTM 10.0° / 22.0°  
 Efficiency 92 %  
 Peak intensity 10.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C11981\_LENINA-STD-BASE-COB-L110



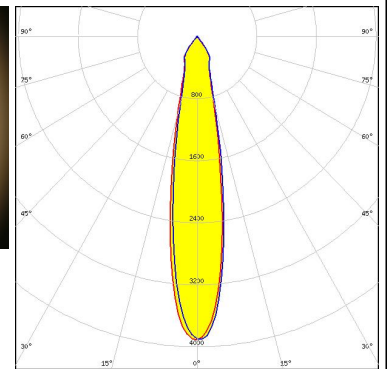
#### LUMILEDS

LED LUXEON CoB 1205HD  
 FWHM / FWTM 12.0° / 27.0°  
 Efficiency 92 %  
 Peak intensity 8.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C11981\_LENINA-STD-BASE-COB-L110



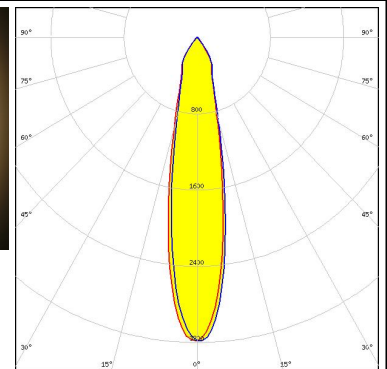
#### LUMILEDS

LED LUXEON CoB 1208  
 FWHM / FWTM 20.0° / 50.0°  
 Efficiency 89 %  
 Peak intensity 3.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ



#### LUMILEDS

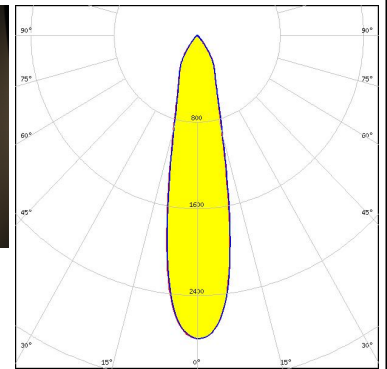
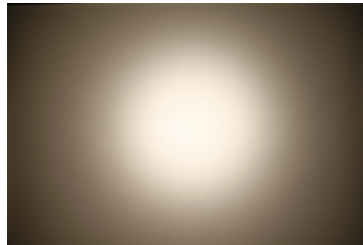
LED LUXEON CoB 1208  
 FWHM / FWTM 21.0° / 61.0°  
 Efficiency 85 %  
 Peak intensity 3.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ  
 C12606\_LENINA-DL



### OPTICAL RESULTS (MEASURED):

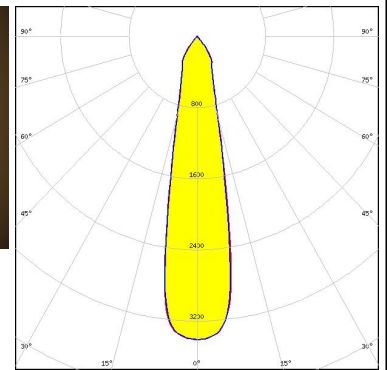
#### LUMILEDS

LED LUXEON CoB 1211  
 FWHM / FWTM 23.0° / 64.0°  
 Efficiency 86 %  
 Peak intensity 2.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 C12606\_LENINA-DL  
 Bender Wirth: 431 Typ L3



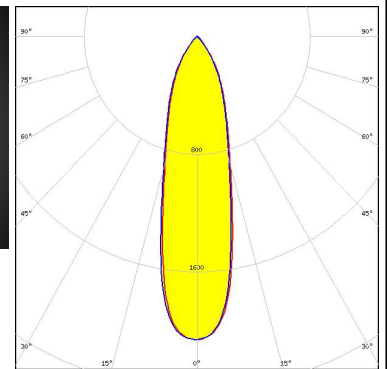
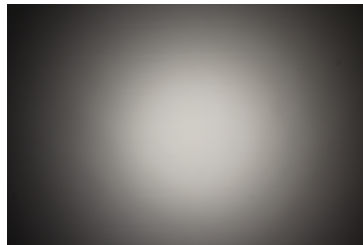
#### LUMILEDS

LED LUXEON CoB 1211  
 FWHM / FWTM 22.0° / 61.0°  
 Efficiency 92 %  
 Peak intensity 3.4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 Bender Wirth: 431 Typ L3



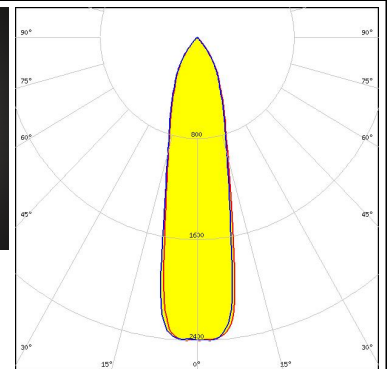
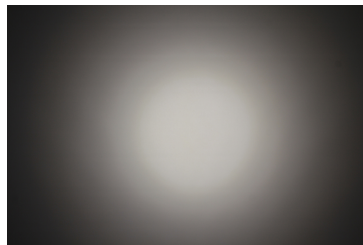
#### LUMILEDS

LED LUXEON CoB 1216/1812  
 FWHM / FWTM 27.0° / 69.0°  
 Efficiency 81 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12606\_LENINA-DL  
 A.A.G. STUCCHI: 8102-G2 + S-8000-12



#### LUMILEDS

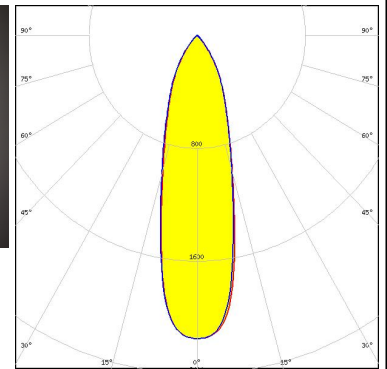
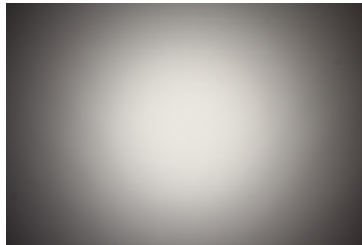
LED LUXEON CoB 1216/1812  
 FWHM / FWTM 25.0° / 68.0°  
 Efficiency 85 %  
 Peak intensity 2.4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 A.A.G. STUCCHI: 8102-G2 + S-8000-12



### OPTICAL RESULTS (MEASURED):

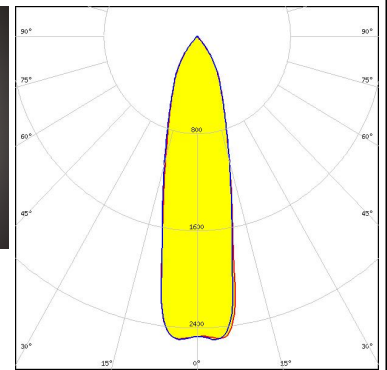
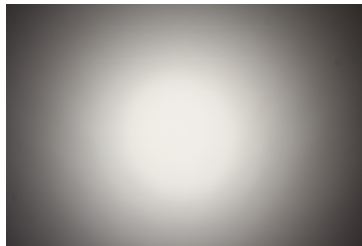
#### LUMILEDS

LED LUXEON CoB 1216/1812  
 FWHM / FWTM 28.0° / 69.0°  
 Efficiency 87 %  
 Peak intensity 2.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040  
 C12606\_LENINA-DL



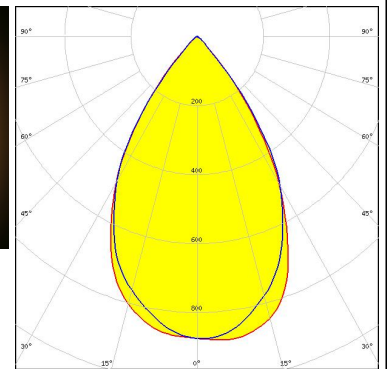
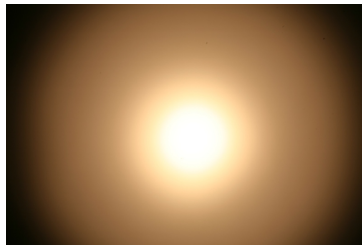
#### LUMILEDS

LED LUXEON CoB 1216/1812  
 FWHM / FWTM 27.0° / 68.0°  
 Efficiency 91 %  
 Peak intensity 2.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040



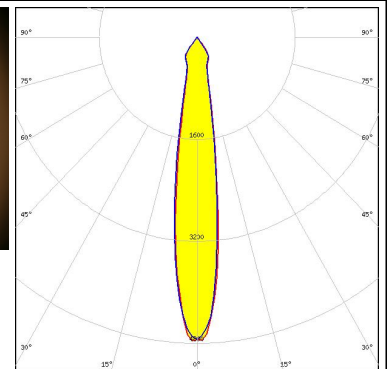
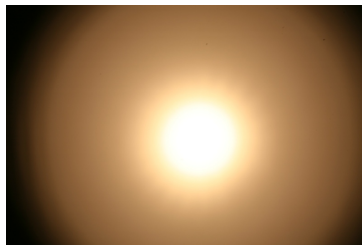
#### LUMILEDS

LED LUXEON K12  
 FWHM / FWTM 17.5° / 57.0°  
 Efficiency 83 %  
 Peak intensity 3.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12924\_LENINA-STD-BASE-LUXEON-K  
 C12606\_LENINA-DL



#### LUMILEDS

LED LUXEON K12  
 FWHM / FWTM 16.0° / 41.0°  
 Efficiency 89 %  
 Peak intensity 4.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12924\_LENINA-STD-BASE-LUXEON-K



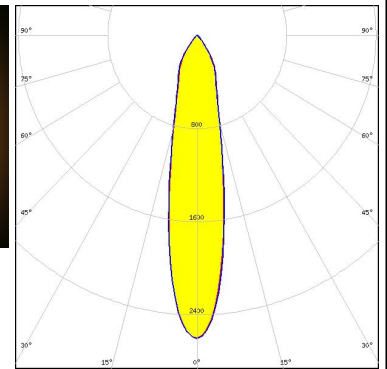
### OPTICAL RESULTS (MEASURED):

#### LUMILEDS

LED LUXEON K16  
FWHM / FWTM 22.0° / 64.0°  
Efficiency 80 %  
Peak intensity 2.6 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C12924\_LENINA-STD-BASE-LUXEON-K  
C12606\_LENINA-DL

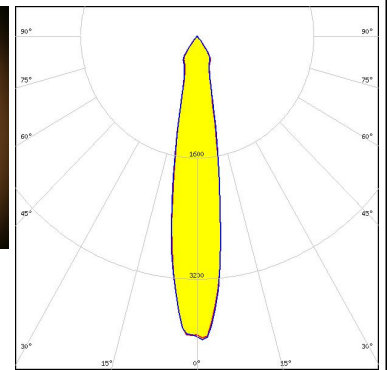


#### LUMILEDS

LED LUXEON K16  
FWHM / FWTM 18.0° / 50.0°  
Efficiency 87 %  
Peak intensity 4 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C12924\_LENINA-STD-BASE-LUXEON-K

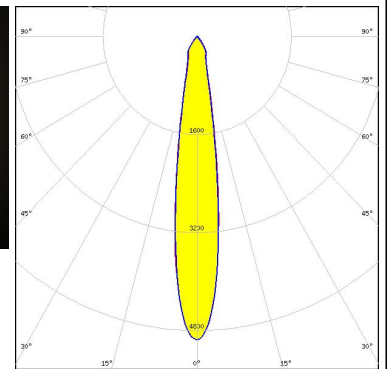


#### LUMINUS

LED CDM-14 (Dim-To-Warm)  
FWHM / FWTM 16.0° / 38.0°  
Efficiency 88 %  
Peak intensity 4.9 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C13868\_LENINA-STD-BASE-VERO13-18  
C12606\_LENINA-DL  
Bender Wirth: 491 Typ L2

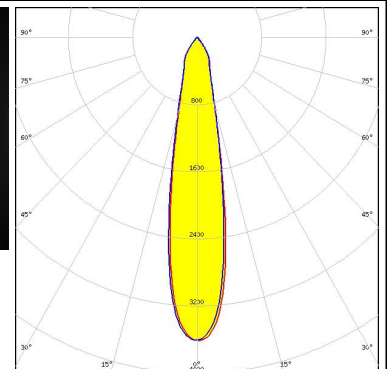
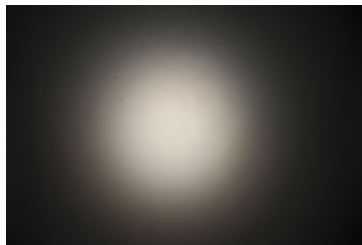


#### LUMINUS

LED CDM-18 (Dim-To-Warm)  
FWHM / FWTM 21.0° / 51.0°  
Efficiency 88 %  
Peak intensity 3.6 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

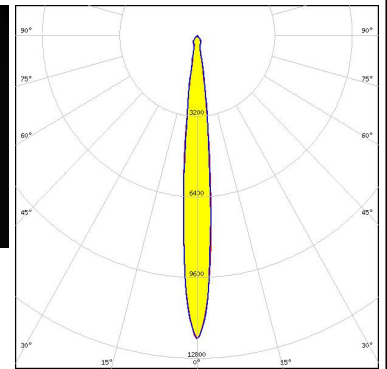
C13868\_LENINA-STD-BASE-VERO13-18  
C12606\_LENINA-DL  
Bender Wirth: 491 Typ L2



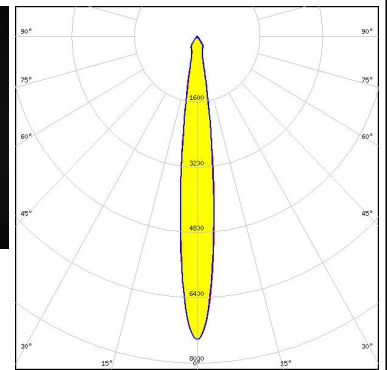
### OPTICAL RESULTS (MEASURED):



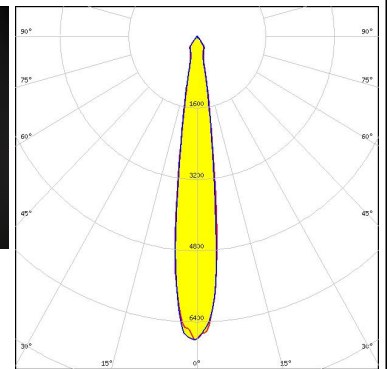
LED CDM-9 (Dim-To-Warm)  
 FWHM / FWTM 11.0° / 21.0°  
 Efficiency 92 %  
 Peak intensity 12 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 Bender Wirth: 490 Typ L1



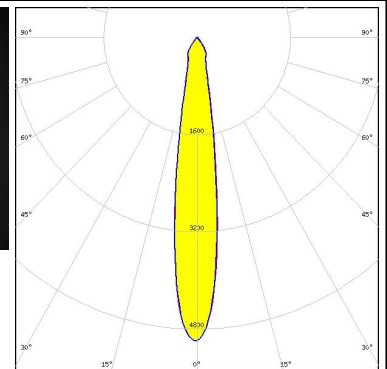
LED CDM-9 (Dim-To-Warm)  
 FWHM / FWTM 13.0° / 27.0°  
 Efficiency 87 %  
 Peak intensity 7.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 490 Typ L1




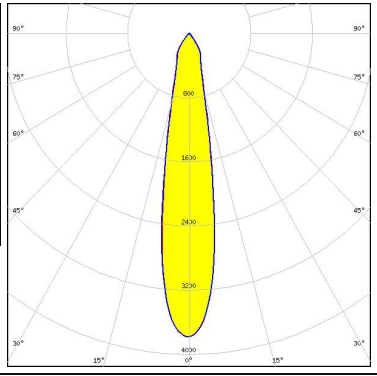

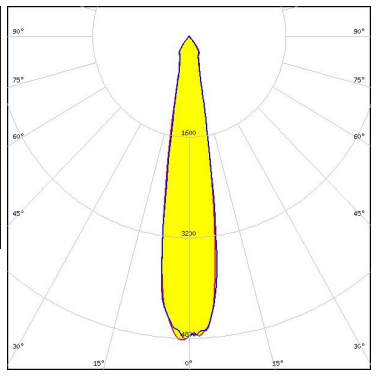

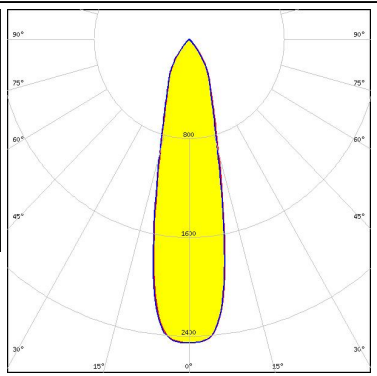

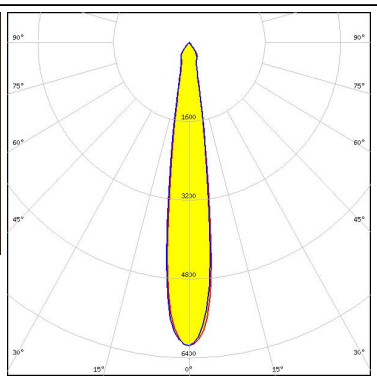
LED CTM-14 (Tunable White)  
 FWHM / FWTM 15.0° / 29.0°  
 Efficiency 92 %  
 Peak intensity 6.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 Bender Wirth: 442 Typ L3



LED CTM-14 (Tunable White)  
 FWHM / FWTM 16.0° / 37.0°  
 Efficiency 87 %  
 Peak intensity 5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13867\_LENINA-STD-BASE-VERO29  
 C12606\_LENINA-DL  
 Bender Wirth: 442 Typ L3



### OPTICAL RESULTS (MEASURED):

<p><b>LUMINUS</b></p> <p>LED CTM-18 (Tunable White)            FWHM / FWTM 19.0° / 48.0°            Efficiency 87 %            Peak intensity 3.8 cd/m<sup>2</sup>            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENINA-STD-BASE-VERO29            C12606_LENINA-DL            Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-18 (Tunable White)            FWHM / FWTM 18.0° / 39.0°            Efficiency 92 %            Peak intensity 4.8 cd/m<sup>2</sup>            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENINA-STD-BASE-VERO29            Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-22 (Tunable White)            FWHM / FWTM 26.0° / 67.0°            Efficiency 87 %            Peak intensity 2.4 cd/m<sup>2</sup>            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13867_LENINA-STD-BASE-VERO29            C12606_LENINA-DL            Bender Wirth: 494 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CxM-14 (19x19)            FWHM / FWTM 16.0° / 32.0°            Efficiency 93 %            Peak intensity 6.2 cd/m<sup>2</sup>            LEDs/each optic 1            Light colour White</p> <p>Required components:            C12691_LENINA-STD-BASE-CLL030</p>		



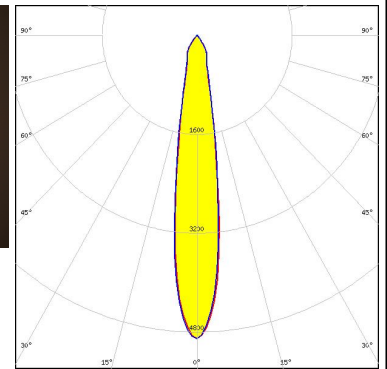
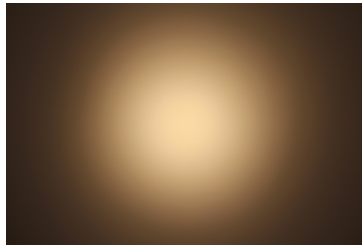
### OPTICAL RESULTS (MEASURED):



LED CxM-14 (19x19)  
FWHM / FWTM 17.0° / 40.0°  
Efficiency 88 %  
Peak intensity 4.9 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

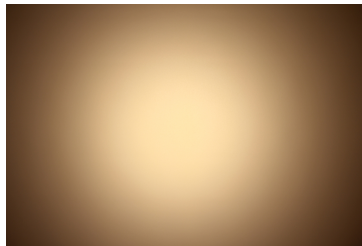
C12691\_LENINA-STD-BASE-CLL030  
C12606\_LENINA-DL



LED CxM-22 (28x28)  
FWHM / FWTM 28.0° / 72.0°  
Efficiency 88 %  
Peak intensity 2.3 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

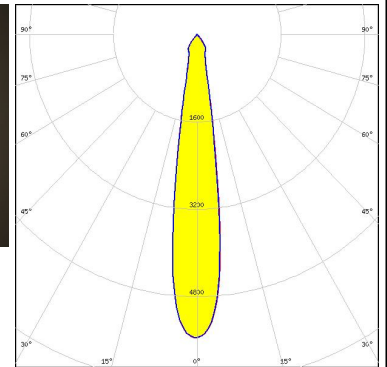
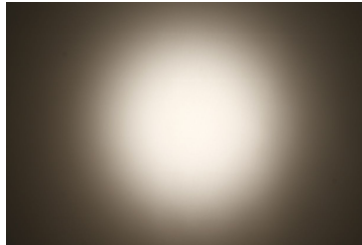
C12692\_LENINA-STD-BASE-CLL040  
C12606\_LENINA-DL



LED COB J-Type  
FWHM / FWTM 17.0° / 35.0°  
Efficiency 92 %  
Peak intensity 5.6 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

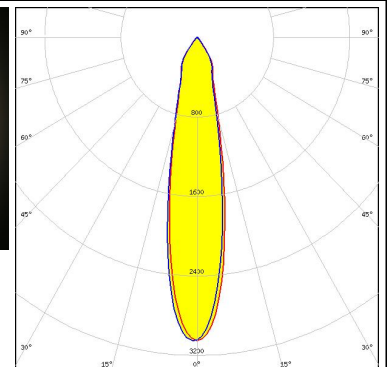
C13868\_LENINA-STD-BASE-VERO13-18  
Bender Wirth: 463 Typ L2



LED COB J-Type  
FWHM / FWTM 21.0° / 61.0°  
Efficiency 83 %  
Peak intensity 3.1 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

C12292\_LENINA-STD-BASE-MEZ  
C12606\_LENINA-DL



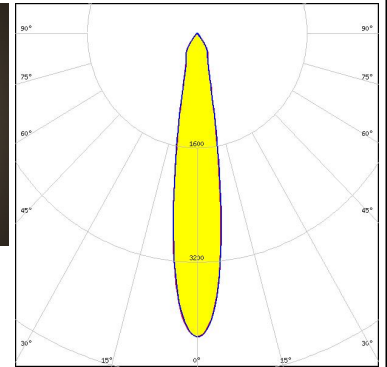
### OPTICAL RESULTS (MEASURED):



LED COB J-Type  
FWHM / FWTM 18.0° / 44.0°  
Efficiency 88 %  
Peak intensity 4.2 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

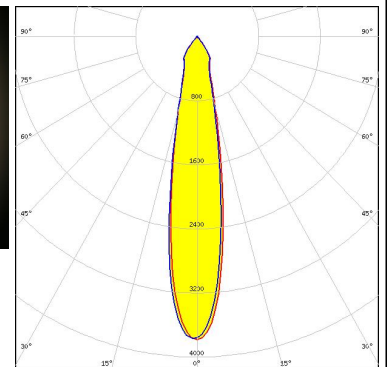
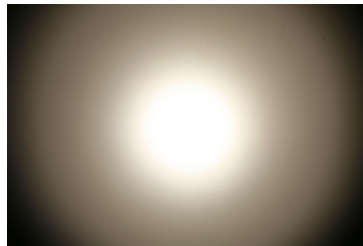
C13868\_LENINA-STD-BASE-VERO13-18  
C12606\_LENINA-DL  
Bender Wirth: 463 Typ L2



LED COB J-Type  
FWHM / FWTM 20.0° / 51.0°  
Efficiency 88 %  
Peak intensity 3.8 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

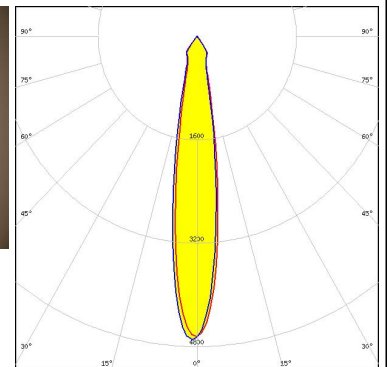
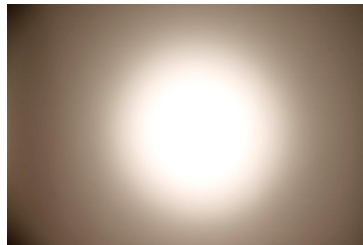
C12292\_LENINA-STD-BASE-MEZ



LED COB L-Type (LES 11)  
FWHM / FWTM 17.0° / 38.0°  
Efficiency 85 %  
Peak intensity 4.7 cd/m  
LEDs/each optic 1  
Light colour White

Required components:

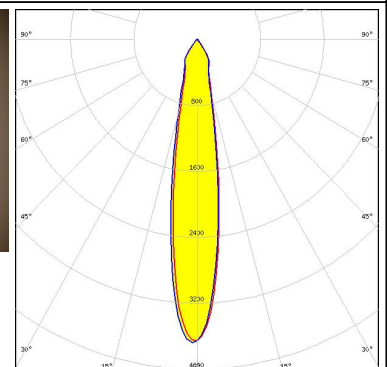
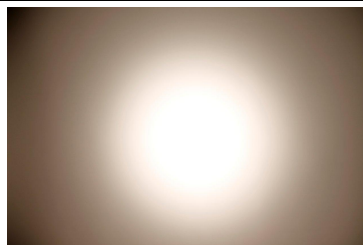
C11981\_LENINA-STD-BASE-COB-L110




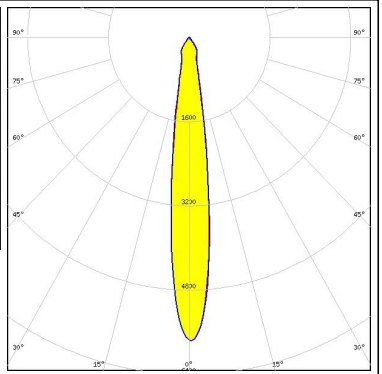

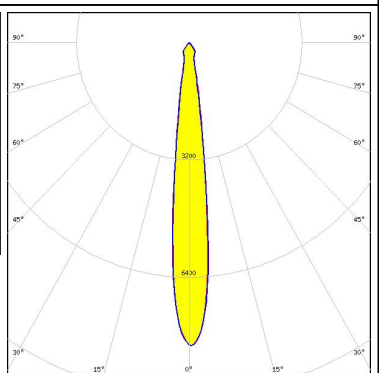

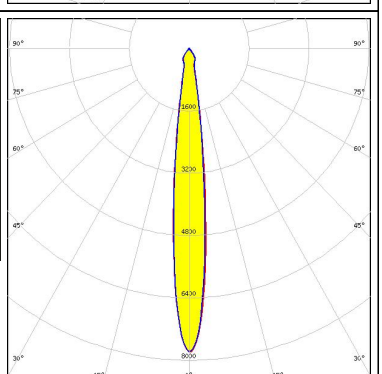

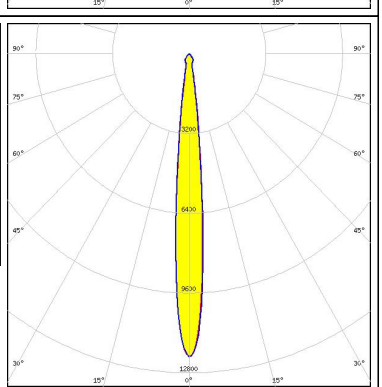
LED COB L-Type (LES 11)  
FWHM / FWTM 18.0° / 49.0°  
Efficiency 81 %  
Peak intensity 3.7 cd/m  
LEDs/each optic 1  
Light colour White

Required components:


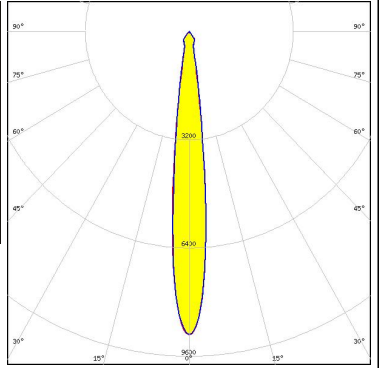

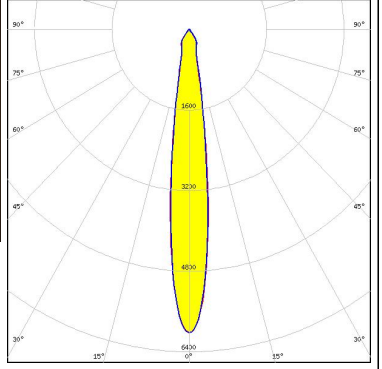

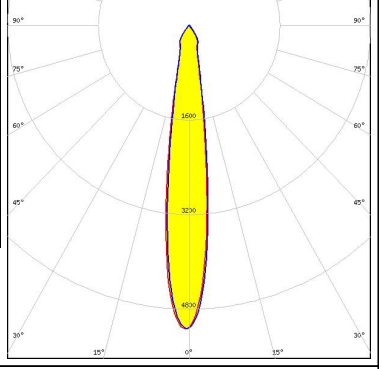

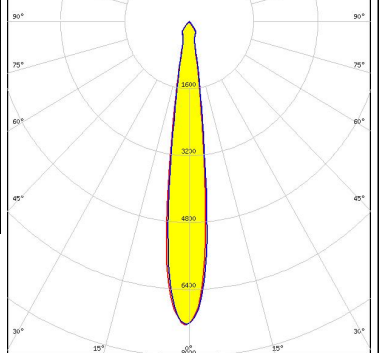
C11981\_LENINA-STD-BASE-COB-L110  
C12606\_LENINA-DL



### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM 15.0° / 32.0°            Efficiency 87 %            Peak intensity 5.8 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL            Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM 13.0° / 26.0°            Efficiency 91 %            Peak intensity 8.3 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 9)            FWHM / FWTM 12.0° / 26.0°            Efficiency 90 %            Peak intensity 7.8 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL            Bender Wirth: 438 Typ L1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 9)            FWHM / FWTM 10.0° / 21.0°            Efficiency 94 %            Peak intensity 12.1 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            Bender Wirth: 438 Typ L1</p>		

### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM / FWTM 12.0° / 25.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13868_LENINA-STD-BASE-VERO13-18 Bender Wirth: 498 Typ L2</p>		
<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM / FWTM 14.0° / 32.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13868_LENINA-STD-BASE-VERO13-18 C12606_LENINA-DL Bender Wirth: 498 Typ L2</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13</p> <p>FWHM / FWTM 16.0° / 36.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 5.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13868_LENINA-STD-BASE-VERO13-18 C12606_LENINA-DL Bender Wirth: 437 Typ L1</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13</p> <p>FWHM / FWTM 14.0° / 28.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 7.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13868_LENINA-STD-BASE-VERO13-18 Bender Wirth: 437 Typ L1</p>		

#### OPTICAL RESULTS (MEASURED):

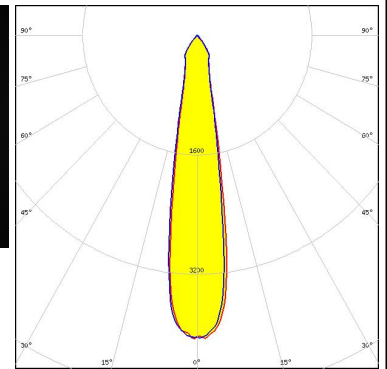
#### OSRAM

Opto Semiconductors

LED Soleriq S19  
 FWHM / FWTM 19.0° / 47.0°  
 Efficiency 92 %  
 Peak intensity 4.1 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

C13867\_LENINA-STD-BASE-VERO29  
 Bender Wirth: 462 Typ L3



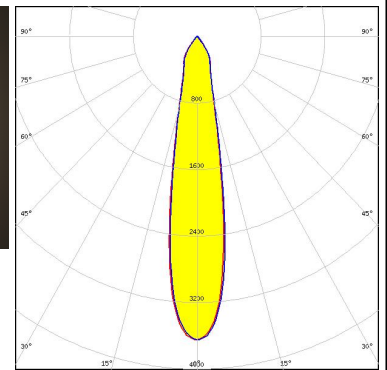
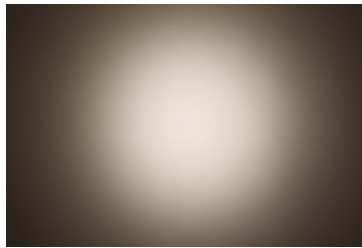
#### OSRAM

Opto Semiconductors

LED Soleriq S19  
 FWHM / FWTM 20.0° / 53.0°  
 Efficiency 88 %  
 Peak intensity 3.7 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

C13867\_LENINA-STD-BASE-VERO29  
 C12606\_LENINA-DL  
 Bender Wirth: 462 Typ L3

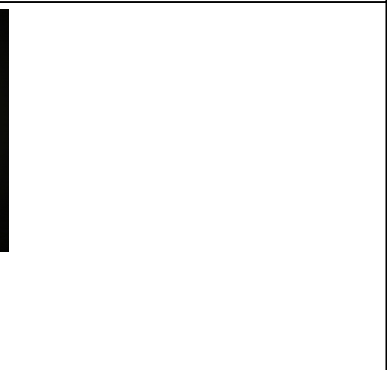
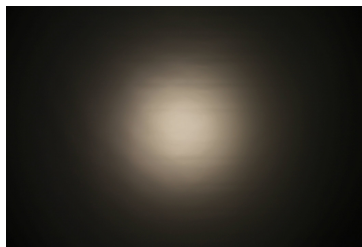


#### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM / FWTM 18.0° / 49.0°  
 Efficiency 87 %  
 Peak intensity 4 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

C12292\_LENINA-STD-BASE-MEZ  
 C12606\_LENINA-DL

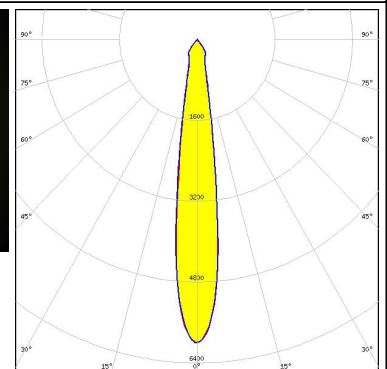
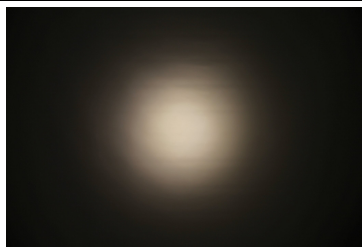


#### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM / FWTM 15.0° / 34.0°  
 Efficiency 93 %  
 Peak intensity 6 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

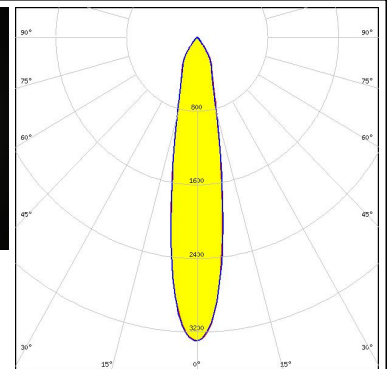
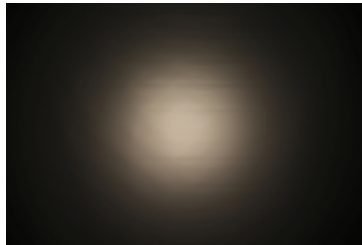
C12292\_LENINA-STD-BASE-MEZ



### OPTICAL RESULTS (MEASURED):

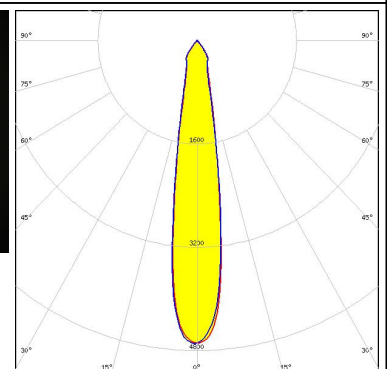
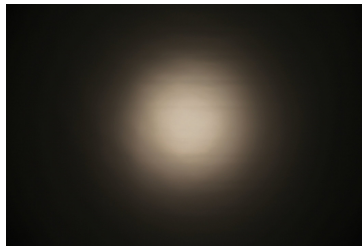
#### PHILIPS

LED Fortimo SLM L15 CoB  
 FWHM / FWTM 20.0° / 58.0°  
 Efficiency 86 %  
 Peak intensity 3.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ  
 C12606\_LENINA-DL



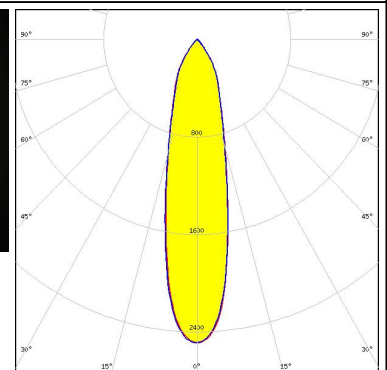
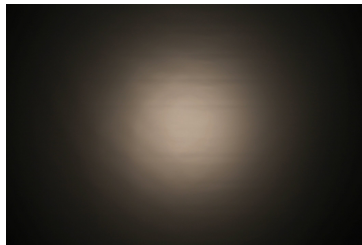
#### PHILIPS

LED Fortimo SLM L15 CoB  
 FWHM / FWTM 18.0° / 42.0°  
 Efficiency 91 %  
 Peak intensity 4.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ



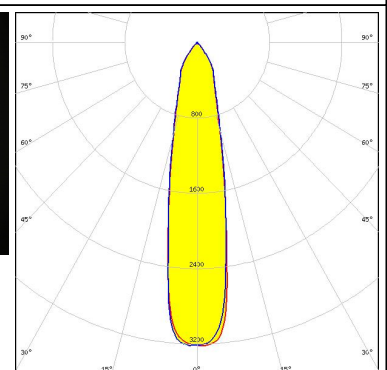
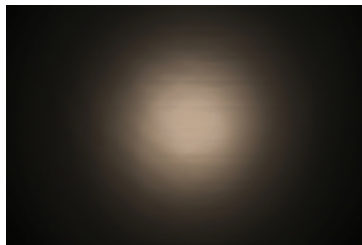
#### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM 24.0° / 66.0°  
 Efficiency 86 %  
 Peak intensity 2.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040  
 C12606\_LENINA-DL



#### PHILIPS

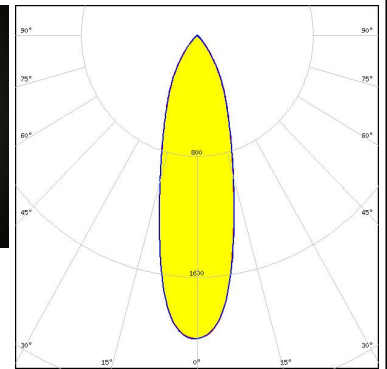
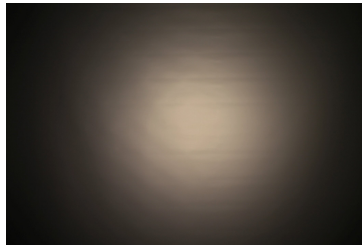
LED Fortimo SLM L19 CoB  
 FWHM / FWTM 22.0° / 64.0°  
 Efficiency 91 %  
 Peak intensity 3.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040



### OPTICAL RESULTS (MEASURED):

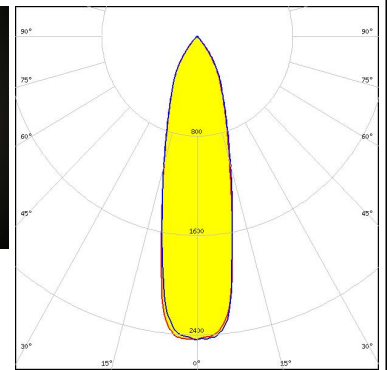
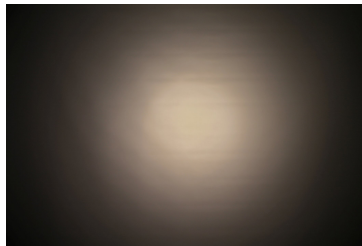
#### PHILIPS

LED Fortimo SLM L23 CoB  
 FWHM / FWTM 29.0° / 70.0°  
 Efficiency 86 %  
 Peak intensity 2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040  
 C12606\_LENINA-DL



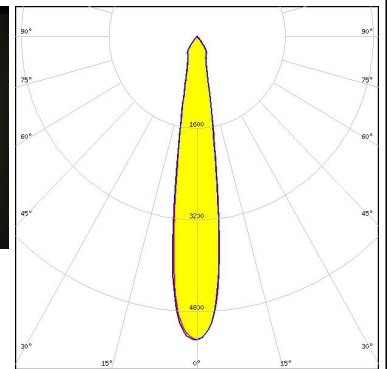
#### PHILIPS

LED Fortimo SLM L23 CoB  
 FWHM / FWTM 27.0° / 69.0°  
 Efficiency 91 %  
 Peak intensity 2.4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040



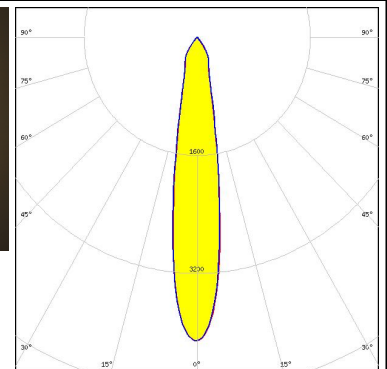
#### SAMSUNG

LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 16.0° / 37.0°  
 Efficiency 91 %  
 Peak intensity 5.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030



#### SAMSUNG

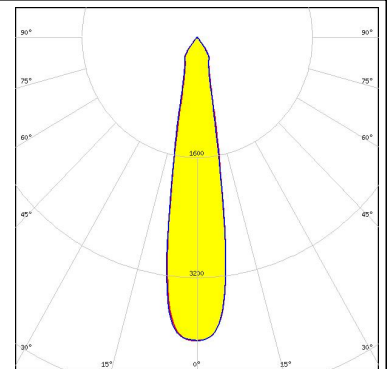
LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 18.0° / 47.0°  
 Efficiency 87 %  
 Peak intensity 4.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030  
 C12606\_LENINA-DL



#### OPTICAL RESULTS (MEASURED):

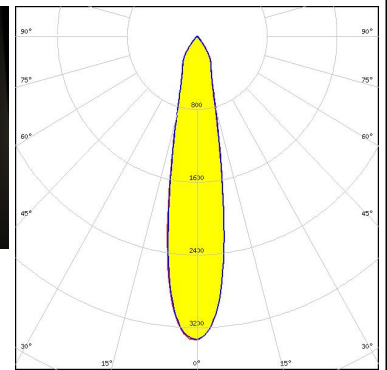
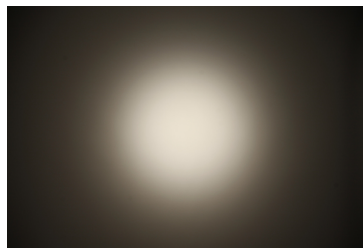
### SAMSUNG

LED LC026B / 033B / 040B  
 FWHM / FWTM 20.0° / 48.0°  
 Efficiency 91 %  
 Peak intensity 4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 Bender Wirth: 450 Typ L2



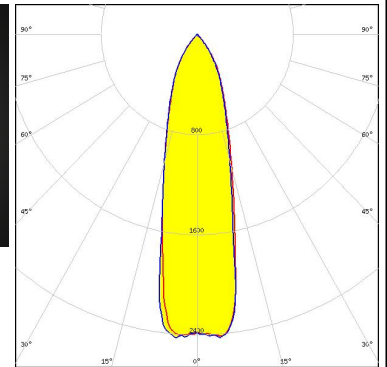
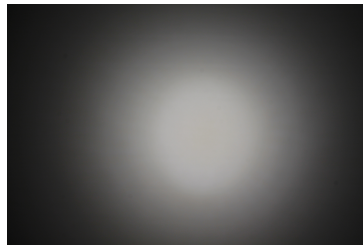
### SAMSUNG

LED LC026B / 033B / 040B  
 FWHM / FWTM 21.0° / 58.0°  
 Efficiency 87 %  
 Peak intensity 3.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 450 Typ L2



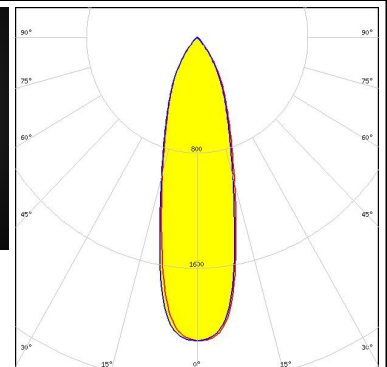
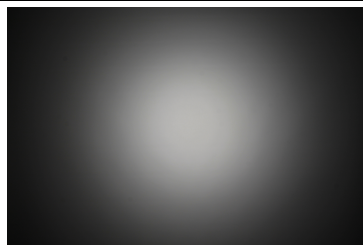
### SAMSUNG

LED LC040D / LC060D / LC080D  
 FWHM / FWTM 28.0° / 69.0°  
 Efficiency 91 %  
 Peak intensity 2.4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040



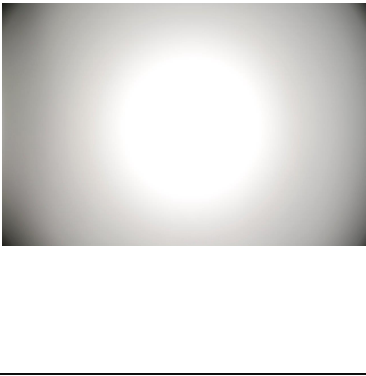
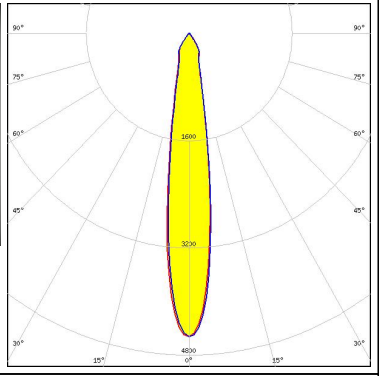
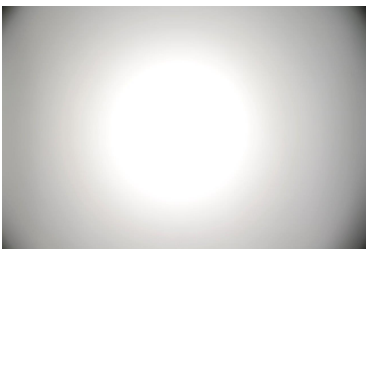
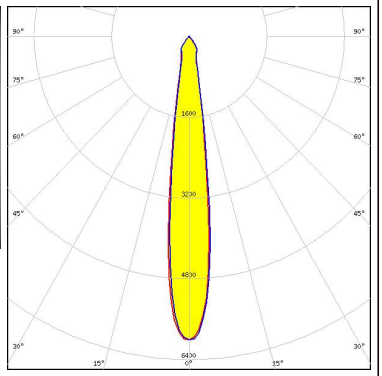

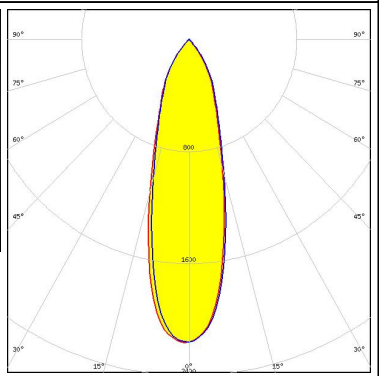

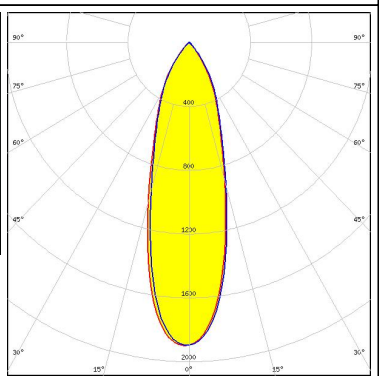
### SAMSUNG

LED LC040D / LC060D / LC080D  
 FWHM / FWTM 29.0° / 70.0°  
 Efficiency 87 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12692\_LENINA-STD-BASE-CLL040  
 C12606\_LENINA-DL





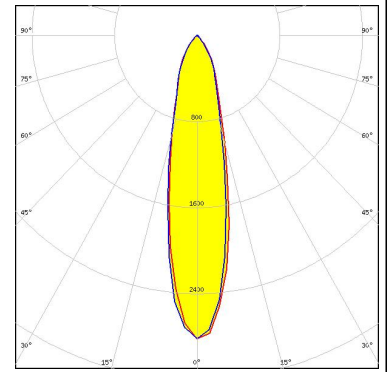
### OPTICAL RESULTS (MEASURED):

<p>SEOL SEMICONDUCTOR</p> <p>LED ZC12/18</p> <p>FWHM / FWTM 16.0° / 41.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 4.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12691_LENINA-STD-BASE-CLL030 C12606_LENINA-DL</p>		
<p>SEOL SEMICONDUCTOR</p> <p>LED ZC12/18</p> <p>FWHM / FWTM 15.0° / 32.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12691_LENINA-STD-BASE-CLL030</p>		
<p>SEOL SEMICONDUCTOR</p> <p>LED ZC25/40/60</p> <p>FWHM / FWTM 29.0° / 70.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 2.2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENINA-STD-BASE-CLL040</p>		
<p>SEOL SEMICONDUCTOR</p> <p>LED ZC25/40/60</p> <p>FWHM / FWTM 30.0° / 71.0°</p> <p>Efficiency 82 %</p> <p>Peak intensity 1.9 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENINA-STD-BASE-CLL040 C12606_LENINA-DL</p>		

### OPTICAL RESULTS (MEASURED):

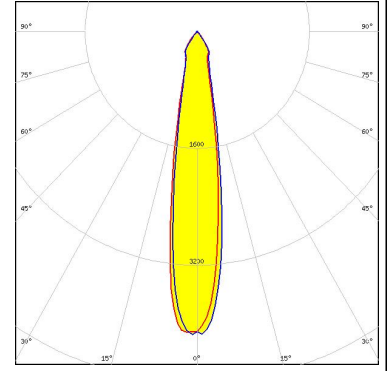
#### SHARP

LED Mega Zenigata (GW5DGC)  
 FWHM / FWTM 24.0° / 62.0°  
 Efficiency 80 %  
 Peak intensity 2.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ  
 C12606\_LENINA-DL



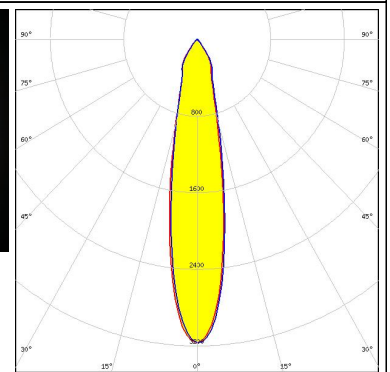
#### SHARP

LED Mega Zenigata (GW5DGC)  
 FWHM / FWTM 17.0° / 46.0°  
 Efficiency 88 %  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ



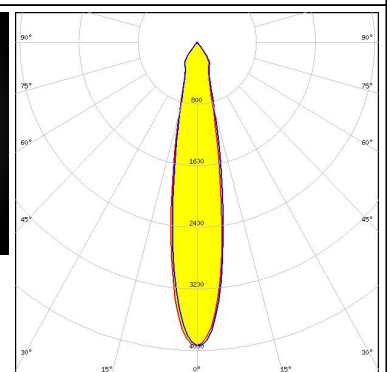
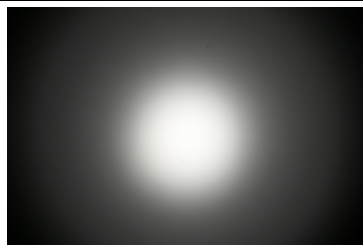
#### SHARP

LED Mega Zenigata (GW6DME)  
 FWHM / FWTM 21.0° / 60.0°  
 Efficiency 83 %  
 Peak intensity 3.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ  
 C12606\_LENINA-DL



#### SHARP

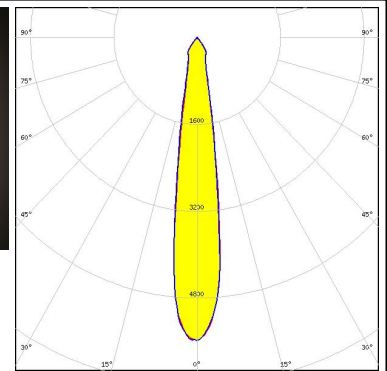
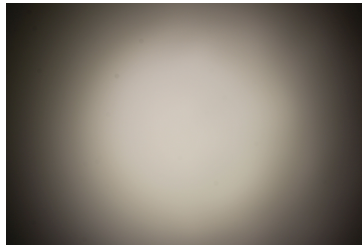
LED Mega Zenigata (GW6DME)  
 FWHM / FWTM 19.0° / 47.0°  
 Efficiency 88 %  
 Peak intensity 3.9 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12292\_LENINA-STD-BASE-MEZ



### OPTICAL RESULTS (MEASURED):

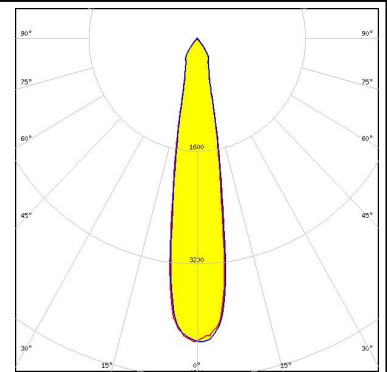
#### TRIDONIC

LED SLE G7 LES15  
 FWHM / FWTM 16.0° / 36.0°  
 Efficiency 93 %  
 Peak intensity 5.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030



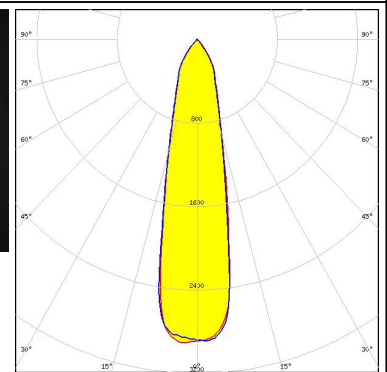
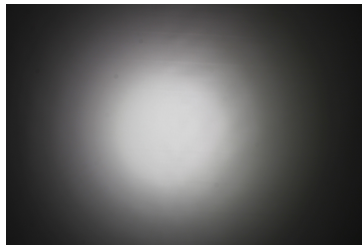
#### TRIDONIC

LED SLE G7 LES17 H  
 FWHM / FWTM 19.0° / 46.0°  
 Efficiency 91 %  
 Peak intensity 4.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14547\_LENINA-ADAPTER-B



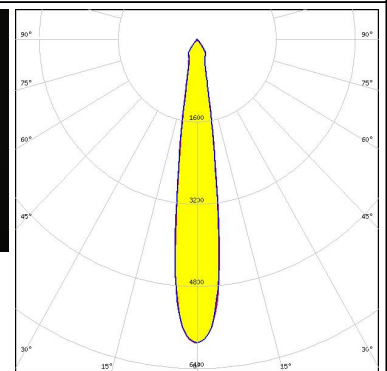
#### TRIDONIC

LED SLE G7 LES21 H  
 FWHM / FWTM 24.0° / 65.0°  
 Efficiency 91 %  
 Peak intensity 2.9 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14547\_LENINA-ADAPTER-B


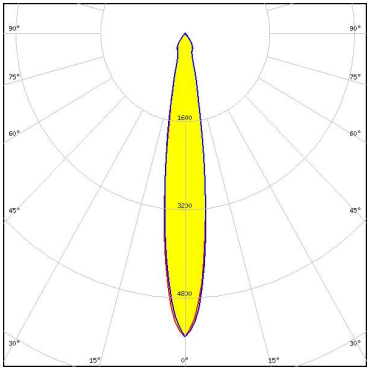

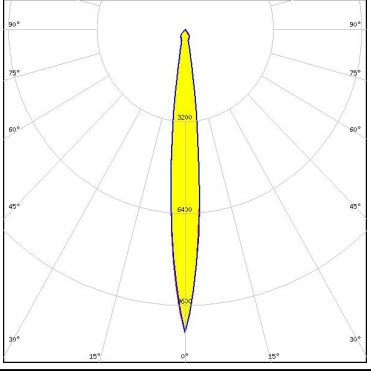

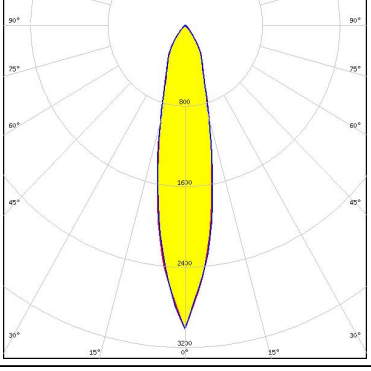

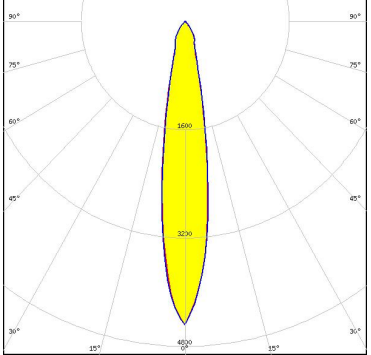


#### XICATO


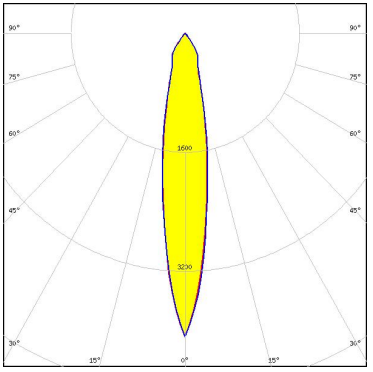

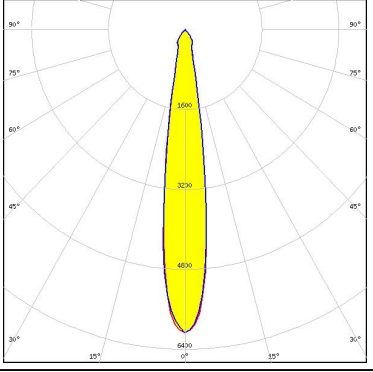

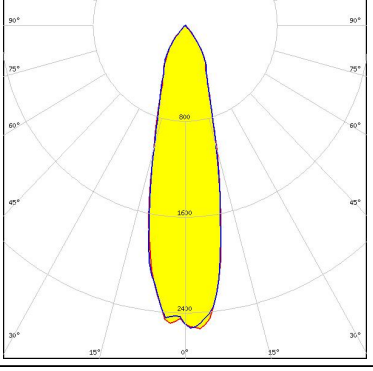

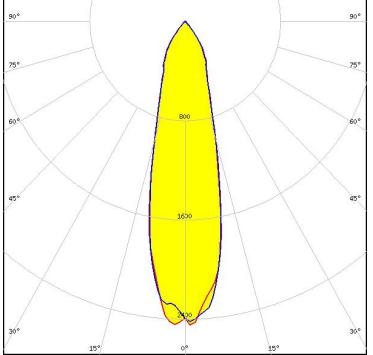
LED XOB 14.5 mm  
 FWHM / FWTM 16.0° / 34.0°  
 Efficiency 93 %  
 Peak intensity 5.9 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12691\_LENINA-STD-BASE-CLL030



### OPTICAL RESULTS (SIMULATED):

<p></p> <p>LED V10 Gen7            FWHM / FWTM 16.0° / 33.0°            Efficiency 85 %            Peak intensity 5.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL            Bender Wirth: 486 Typ L1</p>	
<p></p> <p>LED V10 Gen7            FWHM / FWTM 11.0° / 24.0°            Efficiency 91 %            Peak intensity 10.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            Bender Wirth: 486 Typ L1</p>	
<p></p> <p>LED V13 Gen7            FWHM / FWTM 22.0° / 62.0°            Efficiency 87 %            Peak intensity 3 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C12606_LENINA-DL            IDEAL: 50-2103CT + 50-2100AN</p>	
<p></p> <p>LED V13 Gen7            FWHM / FWTM 18.0° / 41.0°            Efficiency 86 %            Peak intensity 4.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13868_LENINA-STD-BASE-VERO13-18            C12606_LENINA-DL            Bender Wirth: 477 Typ L1</p>	

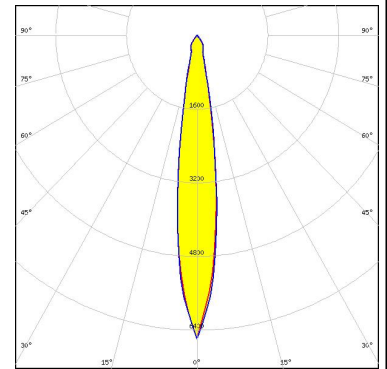
### OPTICAL RESULTS (SIMULATED):

<p></p> <p>LED V13 Gen7            FWHM / FWTM 18.0° / 52.0°            Efficiency 90 %            Peak intensity 4.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2103CT + 50-2100AN</p>	
<p></p> <p>LED V13 Gen7            FWHM / FWTM 16.0° / 32.0°            Efficiency 91 %            Peak intensity 6.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13868_LENINA-STD-BASE-VERO13-18            Bender Wirth: 477 Typ L1</p>	
<p></p> <p>LED V22 Gen7            FWHM / FWTM 27.0° / 70.0°            Efficiency 90 %            Peak intensity 2.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13867_LENINA-STD-BASE-VERO29            Bender Wirth: 431 Typ L3</p>	
<p></p> <p>LED V22 Gen7            FWHM / FWTM 26.0° / 68.0°            Efficiency 87 %            Peak intensity 2.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13867_LENINA-STD-BASE-VERO29            C12606_LENINA-DL            Bender Wirth: 431 Typ L3</p>	

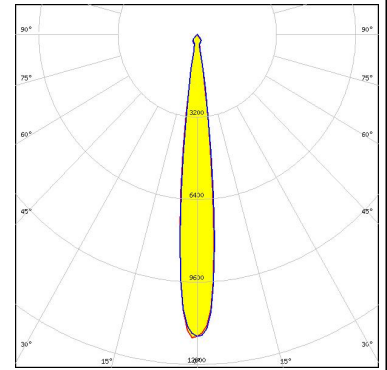
### OPTICAL RESULTS (SIMULATED):



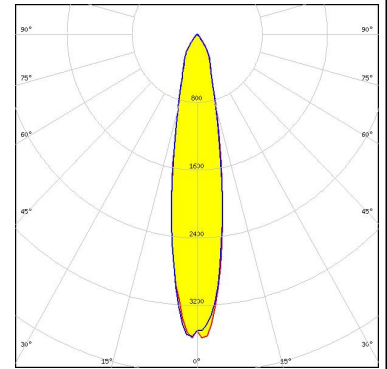
**LED** CXA/B 13xx  
**FWHM / FWTM** 15.0° / 31.0°  
**Efficiency** 91 %  
**Peak intensity** 6.6 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 448 Typ L1



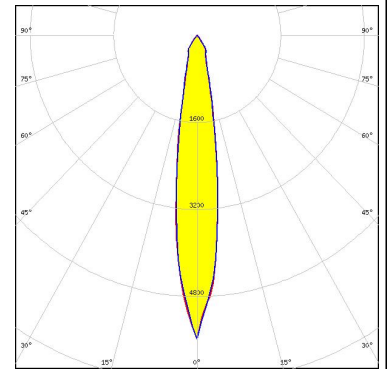
**LED** CXA/B 13xx  
**FWHM / FWTM** 12.0° / 21.0°  
**Efficiency** 94 %  
**Peak intensity** 11.8 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C13868\_LENINA-STD-BASE-VERO13-18  
 Bender Wirth: 448 Typ L1



**LED** CXA/B 1830  
**FWHM / FWTM** 19.0° / 52.0°  
**Efficiency** 84 %  
**Peak intensity** 3.6 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C14146\_LENINA-STD-BASE-CXA18  
 C12606\_LENINA-DL



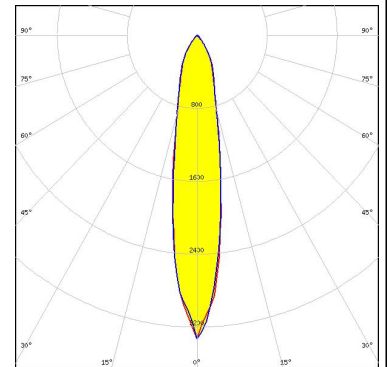
**LED** CXA/B 1830  
**FWHM / FWTM** 16.0°  
**Efficiency** 93 %  
**Peak intensity** 5.6 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C14146\_LENINA-STD-BASE-CXA18



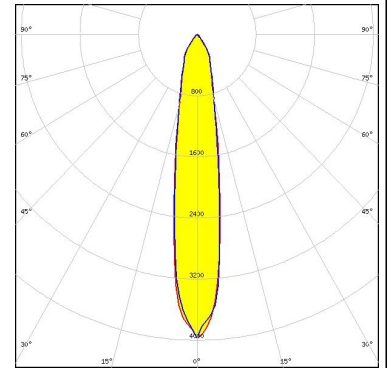
### OPTICAL RESULTS (SIMULATED):



LED CXA/B 30xx  
 FWHM / FWTM 19.0° / 58.0°  
 Efficiency 84 %  
 Peak intensity 3.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C12606\_LENINA-DL  
 IDEAL: 50-2234C + 50-2100LN



LED CXA/B 30xx  
 FWHM / FWTM 18.0° / 53.0°  
 Efficiency 90 %  
 Peak intensity 4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2234C + 50-2100LN



LED CxM-14 (19x19)  
 FWHM / FWTM 17.0° / 41.0°  
 Efficiency 87 %  
 Peak intensity 4.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 433 Typ L1



LED CxM-14 (19x19)  
 FWHM / FWTM 17.0° / 94.0°  
 Efficiency 91 %  
 Peak intensity 5.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13868\_LENINA-STD-BASE-VERO13-18  
 Bender Wirth: 433 Typ L1

### OPTICAL RESULTS (SIMULATED):



**LED** CxM-9 (13.5x13.5)  
**FWHM / FWTM** 11.0° / 22.0°  
**Efficiency** 91 %  
**Peak intensity** 10.9 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C13868\_LENINA-STD-BASE-VERO13-18  
 Bender Wirth: 434 Typ L1

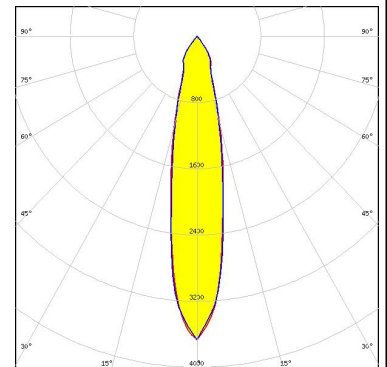


**LED** CxM-9 (13.5x13.5)  
**FWHM / FWTM** 13.0° / 28.0°  
**Efficiency** 86 %  
**Peak intensity** 6.9 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 434 Typ L1



Opto Semiconductors

**LED** Soleriq S15  
**FWHM / FWTM** 20.0° / 56.0°  
**Efficiency** 91 %  
**Peak intensity** 3.7 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C12691\_LENINA-STD-BASE-CLL030






SEOUL SEMICONDUCTOR

**LED** ZC12/18  
**FWHM / FWTM** 17.0° / 41.0°  
**Efficiency** 87 %  
**Peak intensity** 4.5 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**  
 C13868\_LENINA-STD-BASE-VERO13-18  
 C12606\_LENINA-DL  
 Bender Wirth: 433 Typ L1



### OPTICAL RESULTS (SIMULATED):

 SEOL SEMICONDUCTOR	
LED	ZC12/18
FWHM / FWTM	17.0° / 34.0°
Efficiency	91 %
Peak intensity	5.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components: C13868_LENINA-STD-BASE-VERO13-18 Bender Wirth: 433 Typ L1	
 SEOL SEMICONDUCTOR	
LED	ZC4/6
FWHM / FWTM	11.0° / 22.0°
Efficiency	91 %
Peak intensity	10.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components: C13868_LENINA-STD-BASE-VERO13-18 Bender Wirth: 434 Typ L1	
 SEOL SEMICONDUCTOR	
LED	ZC4/6
FWHM / FWTM	13.0° / 28.0°
Efficiency	86 %
Peak intensity	6.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components: C13868_LENINA-STD-BASE-VERO13-18 C12606_LENINA-DL 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.

LEDiL Oy assumes neither warranty, nor guarantee nor any other liability of any kind for the contents and correctness of the provided data. The provided data has been generated with highest diligence but the provided data may in reality not represent the complete possible variation range of all intrinsic parameters. Therefore, in certain cases a deviation from the provided data could occur.

LEDiL Oy reserves the right to undertake technical changes of its products without further notification which could lead to changes in the provided data. LEDiL Oy assumes no liability of any kind for the possible deviation from any provided data or any other damage resulting from the usage of the provided data.

The user agrees to this disclaimer and user agreement with the download or usage of the provided files.

#### LEDiL Oy

Joensuunkatu 13  
FI-24240 SALO  
Finland

#### LEDiL Inc.

228 West Page Street  
Suite D  
Sycamore IL 60178  
USA

#### Ledil Optics Technology (Shenzhen) Co., Ltd.

# 405 , Block B  
Casic Motor Building  
Shenzhen 518057  
P.R.CHINA

#### Local sales and technical support

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)

#### Shipping locations

Salo, Finland  
Hong Kong, China

#### Distribution Partners

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)