

## ANGELINA-S

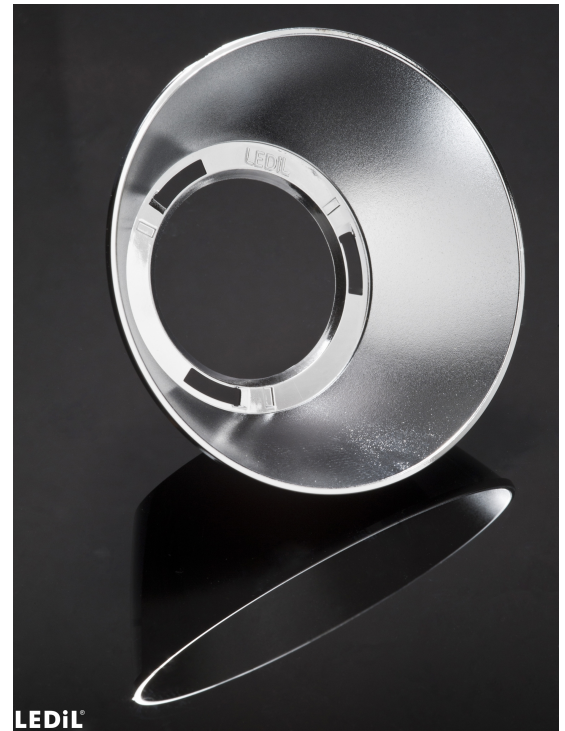
~20° spot beam

### SPECIFICATION:

Dimensions	Ø 82.0 mm
Height	31 mm
Fastening	socket
ROHS compliant	yes ⓘ

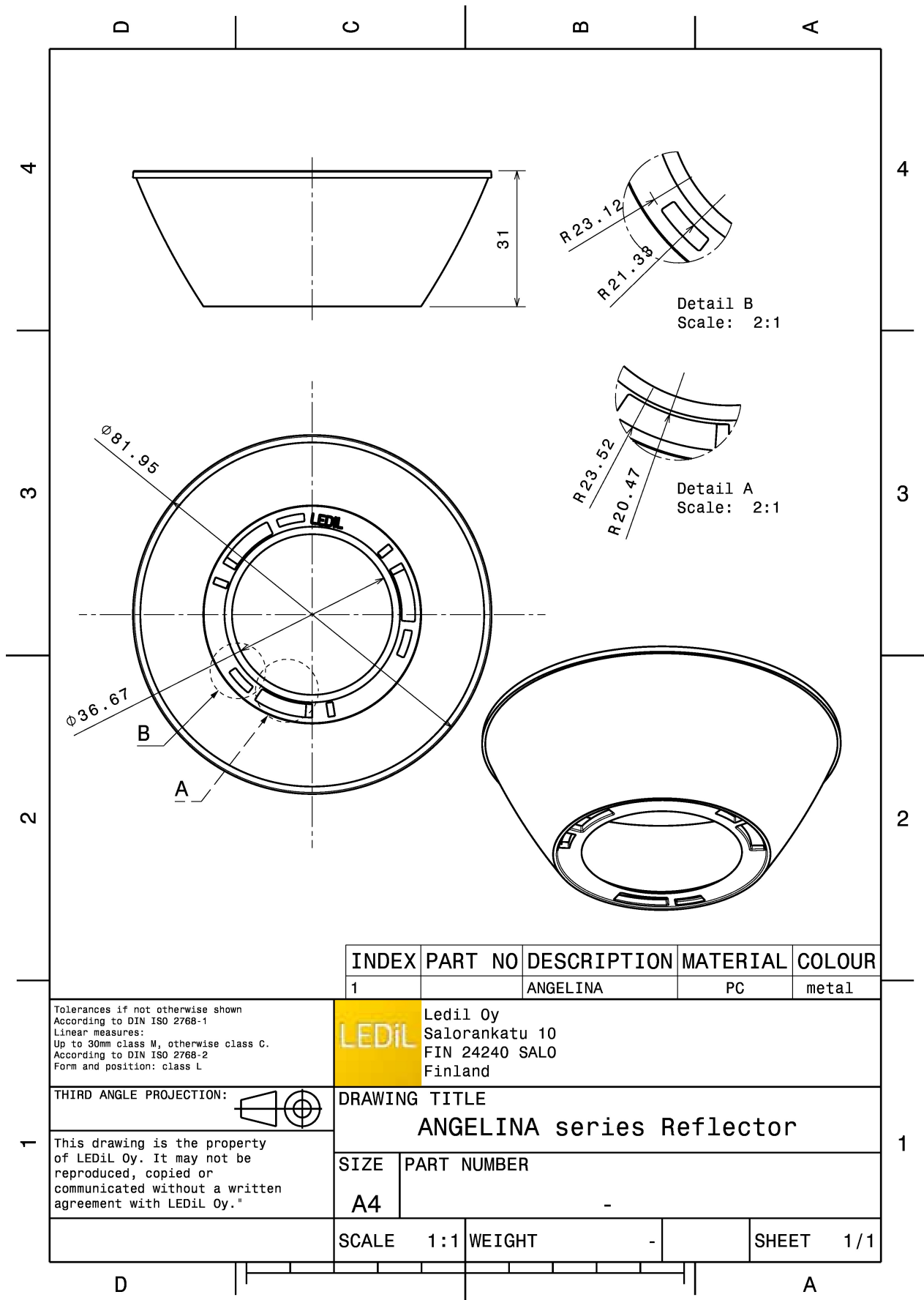
### MATERIALS:

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



### ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
F13325_ANGELINA-S » Box size: 480 x 280 x 300 mm	900	120	60	12.7



INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1		ANGELINA	PC	metal

Tolerances if not otherwise shown  
According to DIN ISO 2768-1  
Linear measures:  
Up to 30mm class M, otherwise class C.  
According to DIN ISO 2768-2  
Form and position: class L

**LEDiL** Ledil Oy  
Salorankatu 10  
FIN 24240 SALO  
Finland

THIRD ANGLE PROJECTION:

DRAWING TITLE  
**ANGELINA series Reflector**

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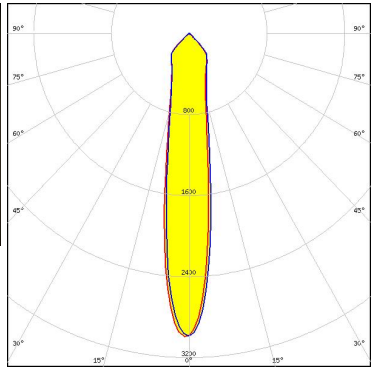


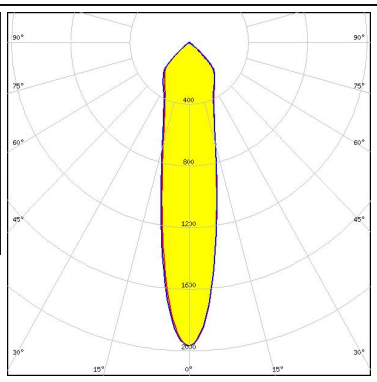


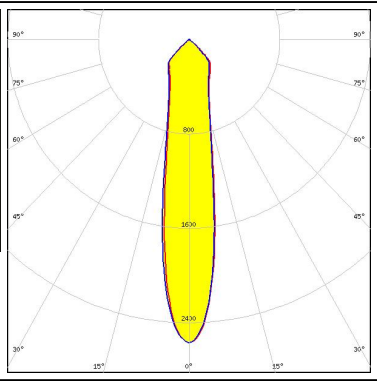



SIZE	PART NUMBER
A4	-

SCALE	1:1	WEIGHT	-	SHEET	1/1
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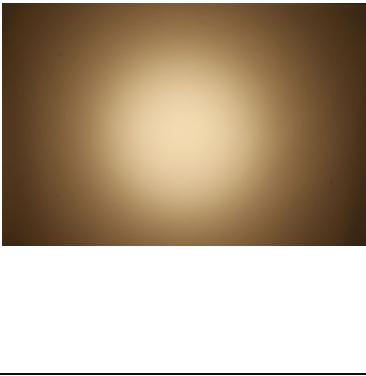
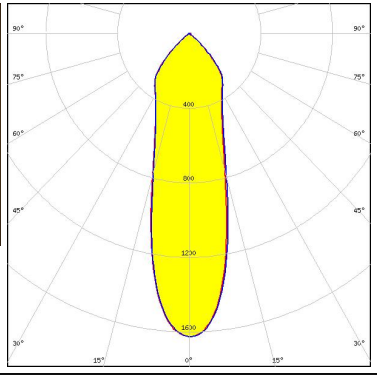

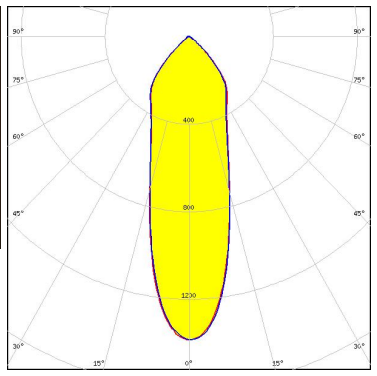

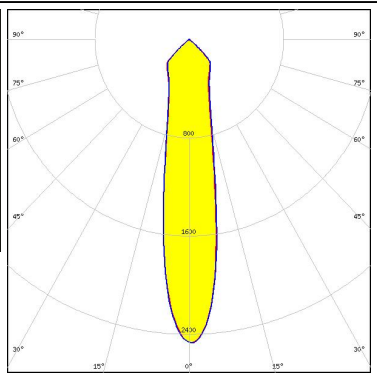

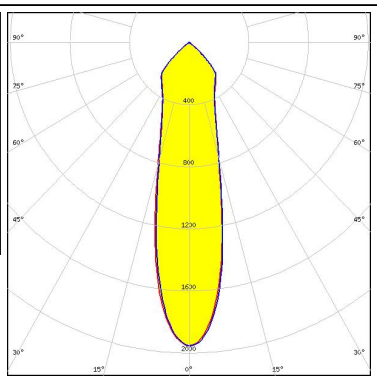
See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)




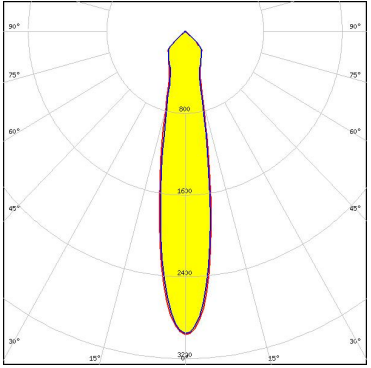
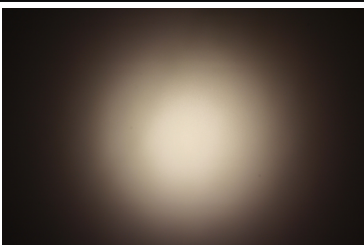
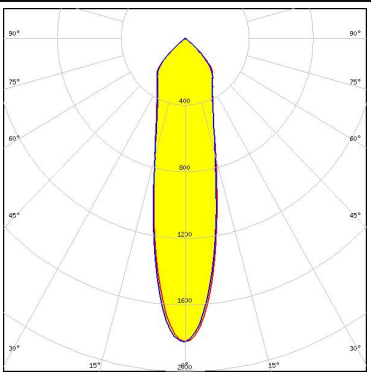

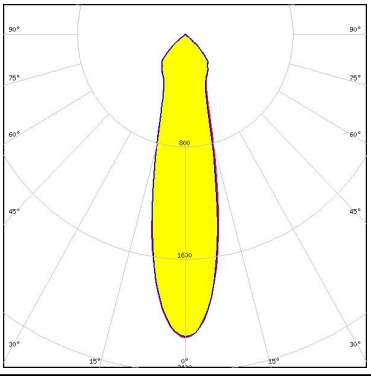

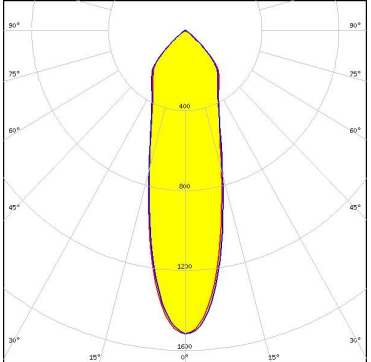
### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED BXRA ES Rectangle            FWHM / FWTM 17.0° / 75.0°            Efficiency 94 %            Peak intensity 3 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2100BL + 50-2100AN</p>		
<p></p> <p>LED V10 Gen7            FWHM / FWTM 22.0° / 92.0°            Efficiency 88 %            Peak intensity 2 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 434 Typ L1</p>		
<p></p> <p>LED V13 Gen7            FWHM / FWTM 20.0° / 87.0°            Efficiency 94 %            Peak intensity 2.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p></p> <p>LED V15 Gen6            FWHM / FWTM 23.0° / 94.0°            Efficiency 88 %            Peak intensity 2.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 456 Typ L2</p>		


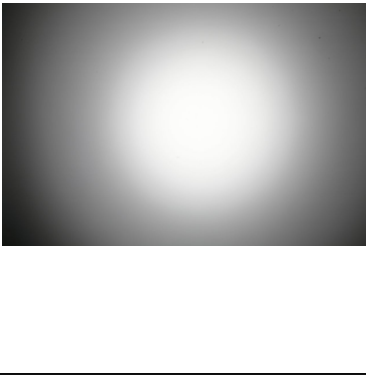
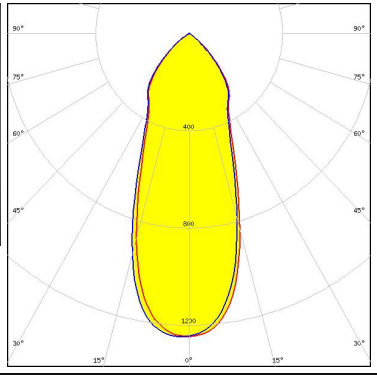

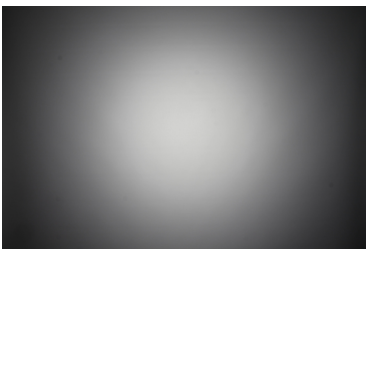
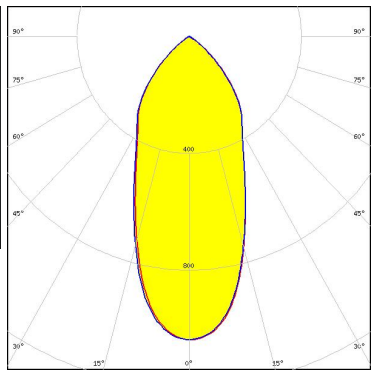


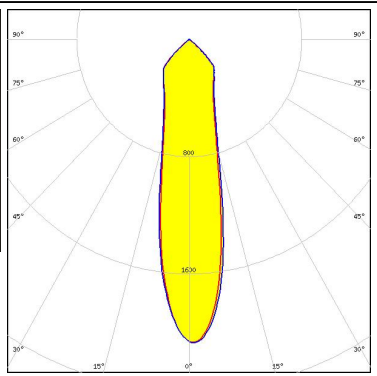


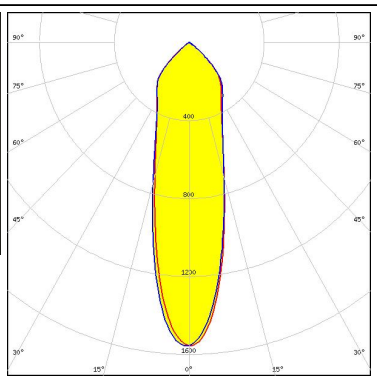
### OPTICAL RESULTS (MEASURED):

<p>bridgelux.</p> <p>LED V22 Gen6</p> <p>FWHM / FWTM 29.0° / 91.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 1.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2204-CT + 50-2100AN</p>		
<p>bridgelux.</p> <p>LED V22 Gen6</p> <p>FWHM / FWTM 32.0° / 93.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS IDEAL: 50-2204-CT + 50-2100AN</p>		
<p>bridgelux.</p> <p>LED Vero SE 13</p> <p>FWHM / FWTM 20.0° / 89.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C16402_CLAMP-VEROSE-13-18</p>		
<p>bridgelux.</p> <p>LED Vero SE 18</p> <p>FWHM / FWTM 26.0° / 91.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C16402_CLAMP-VEROSE-13-18</p>		

### OPTICAL RESULTS (MEASURED):



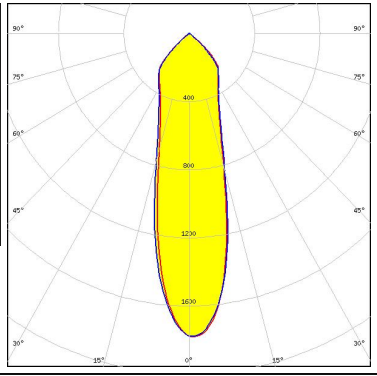


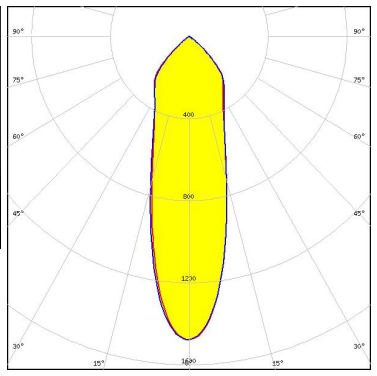


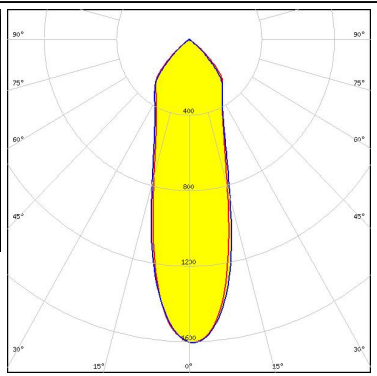


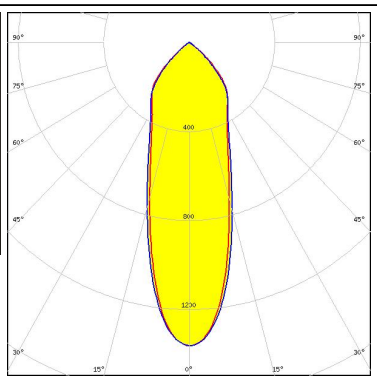
<p>bridgelux.</p> <p>LED VERO13 FWHM / FWTM 20.0° / 68.0° Efficiency 93 % Peak intensity 3 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18</p>		
<p>bridgelux.</p> <p>LED VERO13 FWHM / FWTM 25.0° / 92.0° Efficiency 88 % Peak intensity 1.8 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 F13671_ANGE-RZ-LENS</p>		
<p>bridgelux.</p> <p>LED VERO18 FWHM / FWTM 25.0° / 88.0° Efficiency 92 % Peak intensity 2.2 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18</p>		
<p>bridgelux.</p> <p>LED VERO18 FWHM / FWTM 29.0° / 94.0° Efficiency 89 % Peak intensity 1.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 F13671_ANGE-RZ-LENS</p>		

### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED VERO29            FWHM / FWTM 39.0° / 96.0°            Efficiency 90 %            Peak intensity 1.2 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13584_CLAMP-VERO29</p>		
<p></p> <p>LED VERO29            FWHM / FWTM 44.0° / 99.0°            Efficiency 89 %            Peak intensity 1 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13584_CLAMP-VERO29            F13671_ANGE-RZ-LENS</p>		
<p></p> <p>LED Vesta TW 15mm DP            FWHM / FWTM 24.0° / 90.0°            Efficiency 92 %            Peak intensity 2.1 cd/m            LEDs/each optic 1            Light colour Tunable White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 482 Typ L2</p>		
<p></p> <p>LED Vesta TW 15mm DP            FWHM / FWTM 28.0° / 94.0°            Efficiency 89 %            Peak intensity 1.6 cd/m            LEDs/each optic 1            Light colour Tunable White            Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 482 Typ L2</p>		



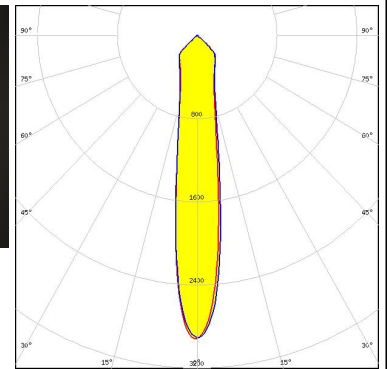
#### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED Vesta TW 18mm (31W) DP</p> <p>FWHM / FWTM 27.0° / 92.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour Tunable White</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 483 Typ L3</p>		
<p></p> <p>LED Vesta TW 18mm (31W) DP</p> <p>FWHM / FWTM 30.0° / 94.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour Tunable White</p> <p>Required components: C13584_CLAMP-VERO29 F13671_ANGE-RZ-LENS Bender Wirth: 483 Typ L3</p>		
<p></p> <p>LED Vesta TW 22mm DP</p> <p>FWHM / FWTM 30.0° / 93.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour Tunable White</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 494 Typ L3</p>		
<p></p> <p>LED Vesta TW 22mm DP</p> <p>FWHM / FWTM 33.0° / 95.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour Tunable White</p> <p>Required components: C13584_CLAMP-VERO29 F13671_ANGE-RZ-LENS Bender Wirth: 494 Typ L3</p>		

#### OPTICAL RESULTS (MEASURED):

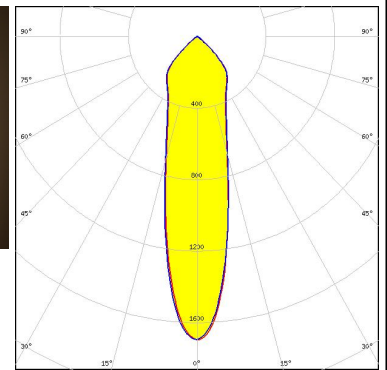
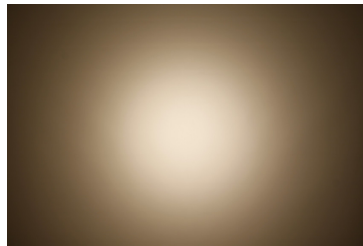
#### CITIZEN

LED CLL02x/CLU02x (LES10)  
 FWHM / FWTM 17.0° / 75.0°  
 Efficiency 93 %  
 Peak intensity 2.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 434 Typ L1



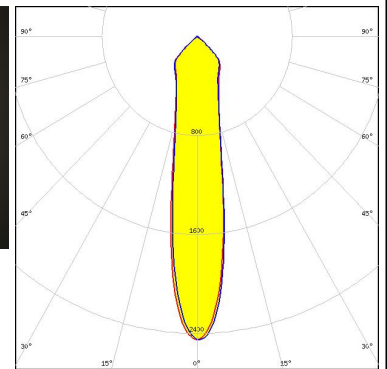
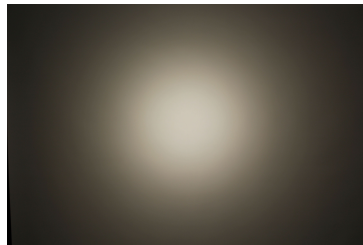
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 25.0° / 92.0°  
 Efficiency 87 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



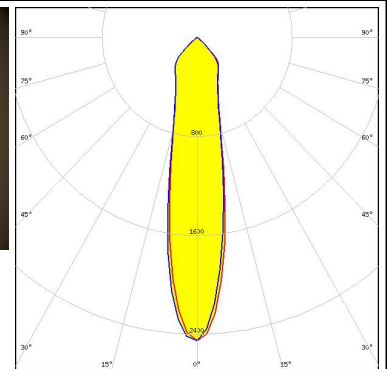
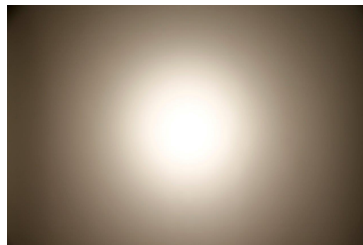
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 20.0° / 88.0°  
 Efficiency 94 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16791\_CLAMP-Z45-A  
 TE Connectivity: 2325807-3



#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 19.0° / 83.0°  
 Efficiency 94 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2103CT + 50-2100AN

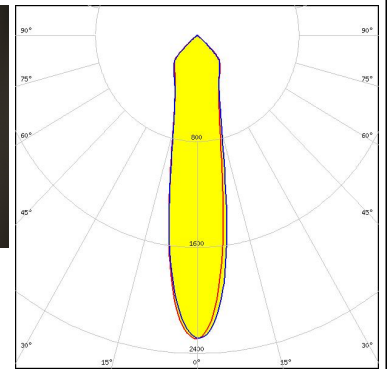




### OPTICAL RESULTS (MEASURED):

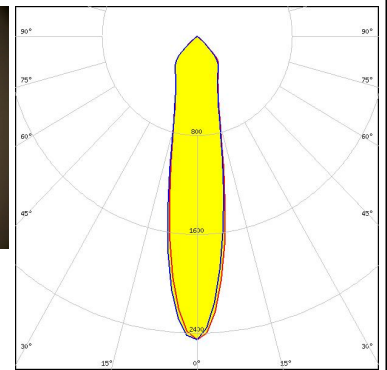
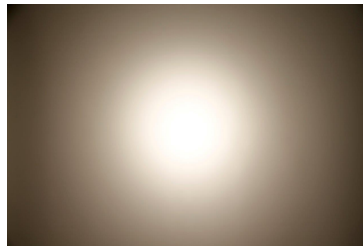
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 21.0° / 89.0°  
 Efficiency 92 %  
 Peak intensity 2.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 433 Typ L1



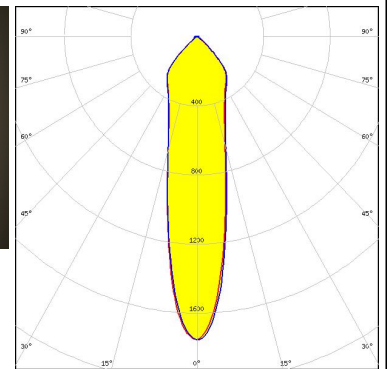
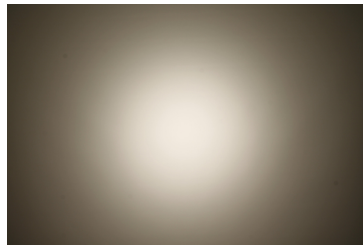
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 22.0° / 87.0°  
 Efficiency 94 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



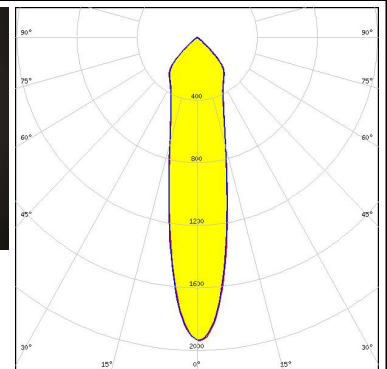
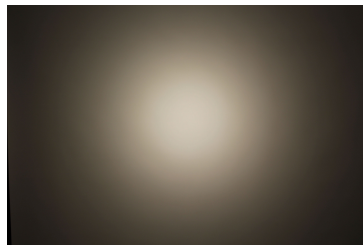
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM 23.0° / 90.0°  
 Efficiency 87 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 IDEAL: 50-2103CT + 50-2100AN



#### CITIZEN

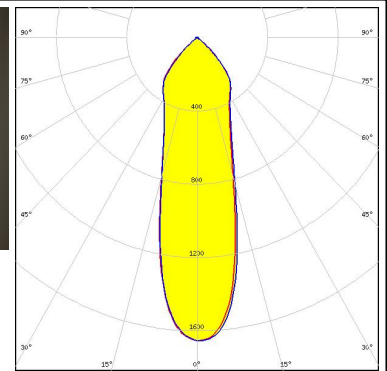
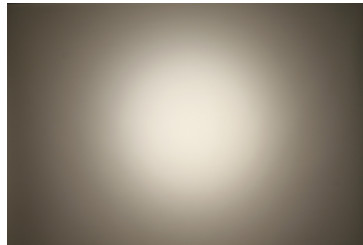
LED CLL03x/CLU03x  
 FWHM / FWTM 23.0° / 91.0°  
 Efficiency 91 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16791\_CLAMP-Z45-A  
 F13671\_ANGE-RZ-LENS  
 TE Connectivity: 2325807-3



#### OPTICAL RESULTS (MEASURED):

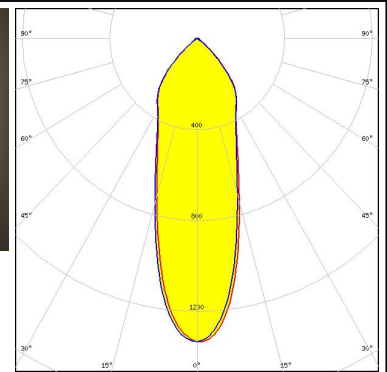
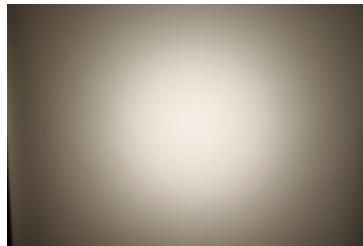
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 29.0° / 91.0°  
 Efficiency 93 %  
 Peak intensity 1.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 431 Typ L3



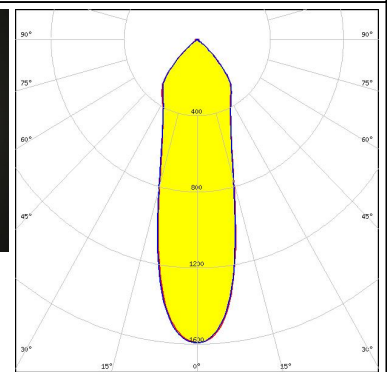
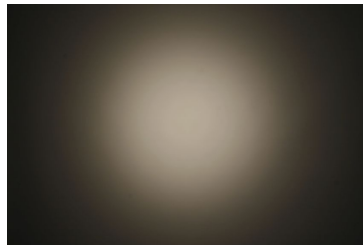
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 33.0° / 93.0°  
 Efficiency 88 %  
 Peak intensity 1.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 IDEAL: 50-2204-CT + 50-2100AN



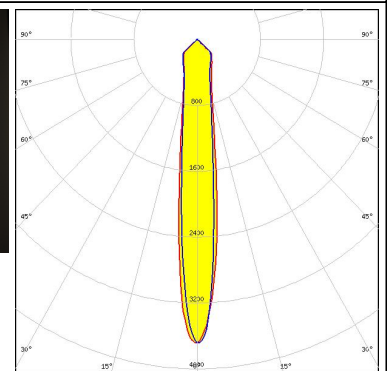
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM 30.0° / 91.0°  
 Efficiency 92 %  
 Peak intensity 1.6 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN



#### CITIZEN

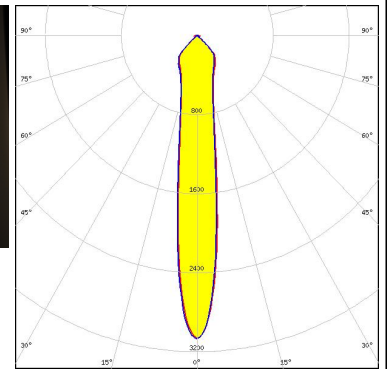
LED CLU700/701/702/703  
 FWHM / FWTM 14.0° / 56.0°  
 Efficiency 93 %  
 Peak intensity 3.7 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 434 Typ L1



#### OPTICAL RESULTS (MEASURED):

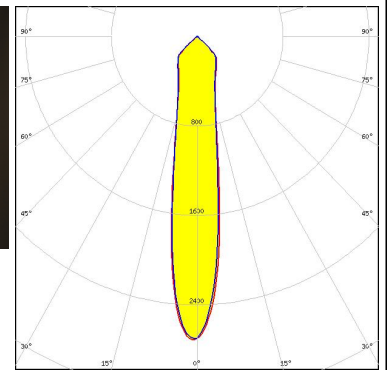
#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 15.0° / 75.0°  
 Efficiency 94 %  
 Peak intensity 3.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2103CT + 50-2100AN



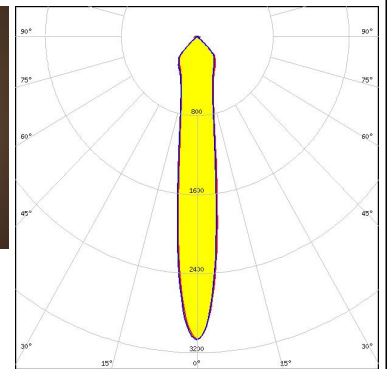
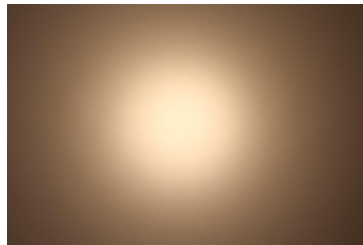
#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 18.0° / 81.0°  
 Efficiency 92 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18



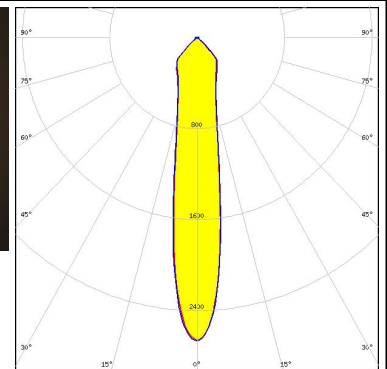
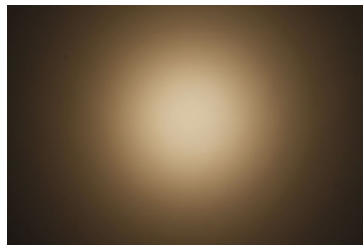
#### CITIZEN

LED CLU720/721/723  
 FWHM / FWTM 17.0° / 84.0°  
 Efficiency 94 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### CITIZEN

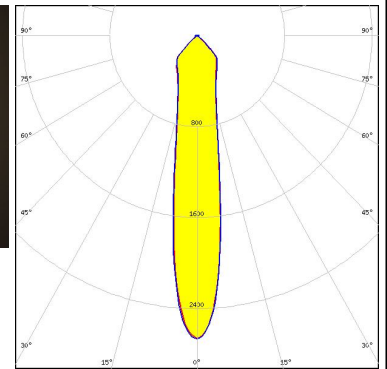
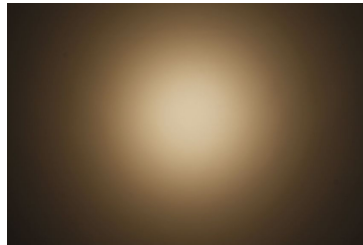
LED CLU730/731/733  
 FWHM / FWTM 18.0° / 84.0°  
 Efficiency 92 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN



### OPTICAL RESULTS (MEASURED):

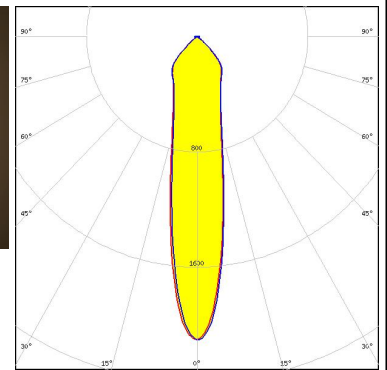
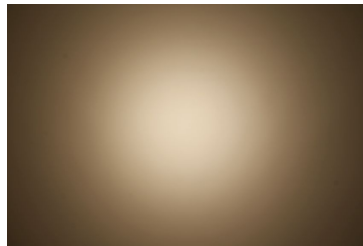
#### CITIZEN

LED CLU730/731/733  
 FWHM / FWTM 18.0° / 84.0°  
 Efficiency 92 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN



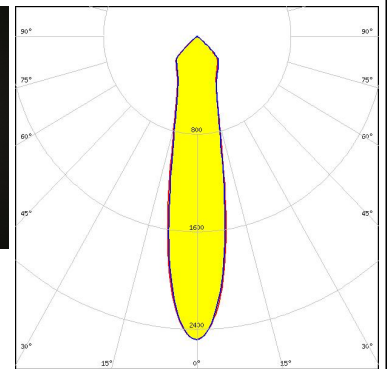
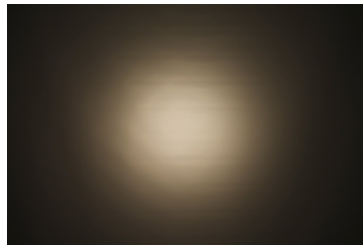
#### CITIZEN

LED CLU730/731/733  
 FWHM / FWTM 21.0° / 88.0°  
 Efficiency 87 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 IDEAL: 50-2204-CT + 50-2100AN



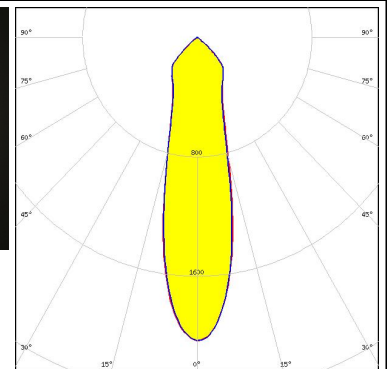
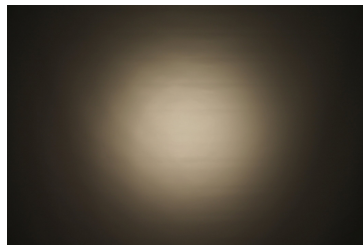
#### CREE LEDs

LED CMA1840  
 FWHM / FWTM 22.0° / 88.0°  
 Efficiency 95 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18

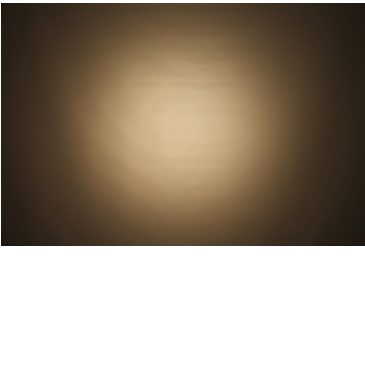
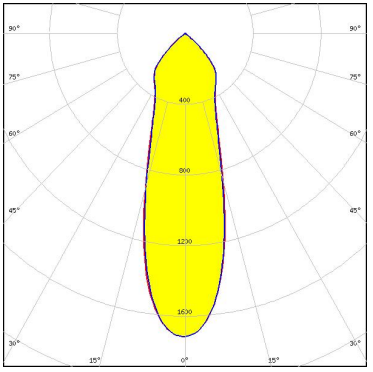

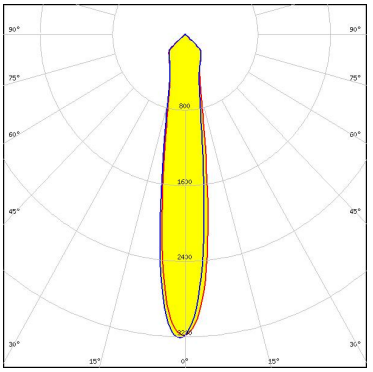

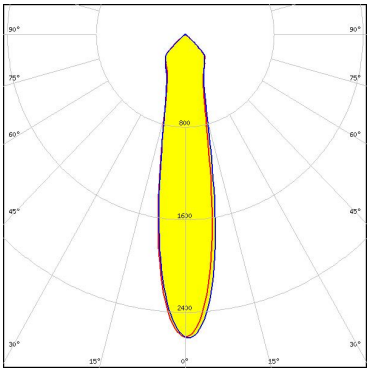

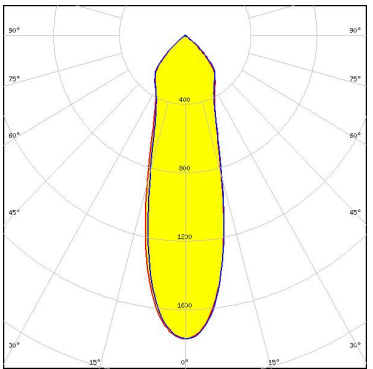


#### CREE LEDs

LED CMA2550  
 FWHM / FWTM 26.0° / 90.0°  
 Efficiency 94 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



### OPTICAL RESULTS (MEASURED):

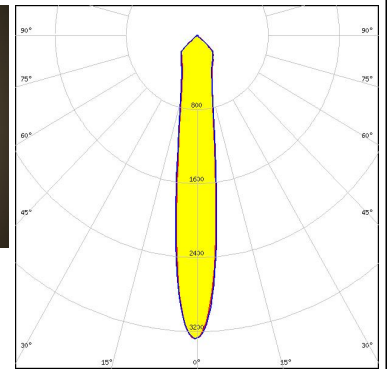
<p><b>CREE</b> LEDs</p> <p>LED CMA3090 FWHM / FWTM 30.0° / 92.0° Efficiency 94 % Peak intensity 1.7 cd/m LEDs/each optic 1 Light colour White Required components: C14036_CLAMP_CXA25-30</p>		
<p><b>CREE</b> LEDs</p> <p>LED CMT14xx FWHM / FWTM 17.0° / 65.0° Efficiency 94 % Peak intensity 3.2 cd/m LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 434 Typ L1</p>		
<p><b>CREE</b> LEDs</p> <p>LED CMT19xx FWHM / FWTM 21.0° / 85.0° Efficiency 94 % Peak intensity 2.6 cd/m LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 477 Typ L1</p>		
<p><b>CREE</b> LEDs</p> <p>LED CMT28xx FWHM / FWTM 29.0° / 91.0° Efficiency 94 % Peak intensity 1.8 cd/m LEDs/each optic 1 Light colour White Required components: C13584_CLAMP-VERO29 Bender Wirth: 471 Typ L3</p>		



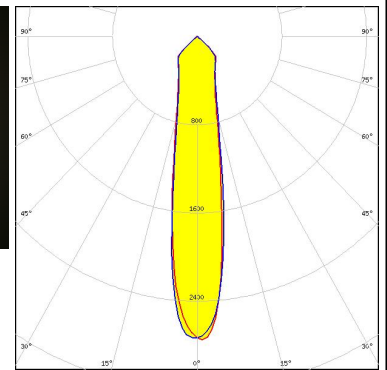
### OPTICAL RESULTS (MEASURED):



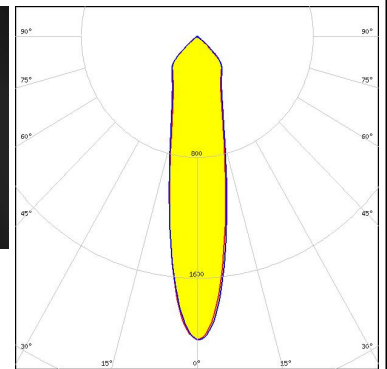
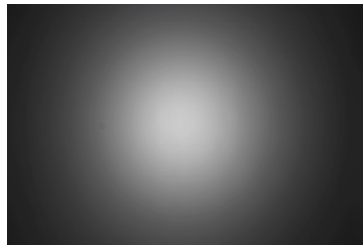
LED CXA/B 15xx  
 FWHM / FWTM 15.0° / 65.0°  
 Efficiency 93 %  
 Peak intensity 3.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 441 Typ L1



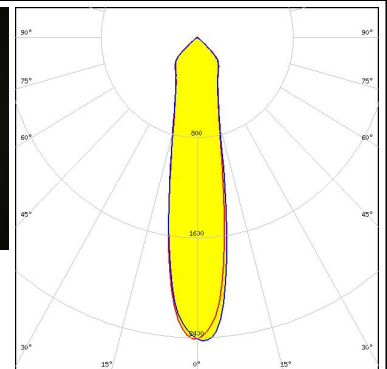
LED CXA/B 15xx  
 FWHM / FWTM 20.0° / 81.0°  
 Efficiency 94 %  
 Peak intensity 2.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18



LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM / FWTM 22.0° / 90.0°  
 Efficiency 89 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE Connectivity: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1


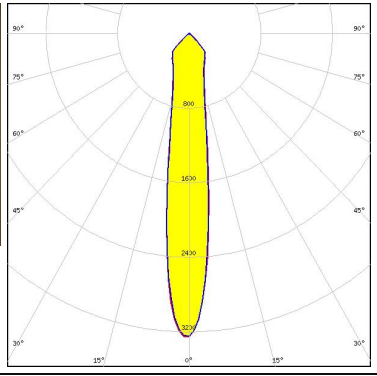

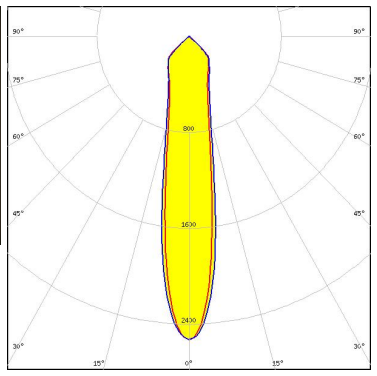

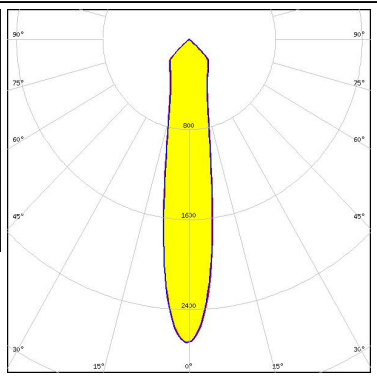

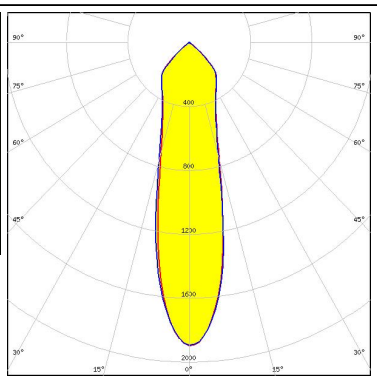


LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM / FWTM 22.0° / 89.0°  
 Efficiency 94 %  
 Peak intensity 2.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18





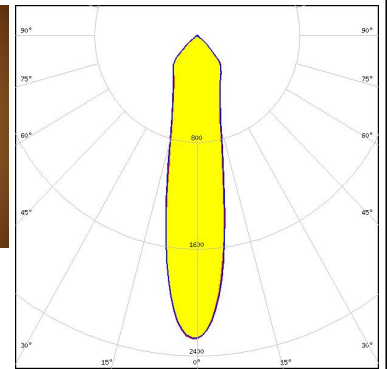
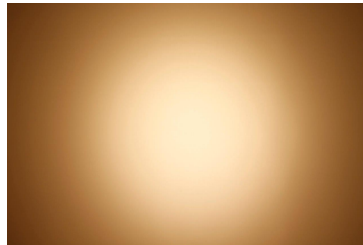
### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> LEDs</p> <p>LED CXA/B 1816 &amp; CXA/B 1820 &amp; CXA 1850            FWHM / FWTM 16.0° / 68.0°            Efficiency 94 %            Peak intensity 3.3 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2101CR + 50-2100AN</p>		
<p><b>CREE</b> LEDs</p> <p>LED CXA/B 1816 &amp; CXA/B 1820 &amp; CXA 1850            FWHM / FWTM 19.0° / 87.0°            Efficiency 93 %            Peak intensity 2.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 437 Typ L1</p>		
<p><b>CREE</b> LEDs</p> <p>LED CXA/B 1816 &amp; CXA/B 1820 &amp; CXA 1850            FWHM / FWTM 19.0° / 83.0°            Efficiency 93 %            Peak intensity 2.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE Connectivity: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>CREE</b> LEDs</p> <p>LED CXA/B 25xx            FWHM / FWTM 25.0° / 92.0°            Efficiency 93 %            Peak intensity 1.9 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C14036_CLAMP_CXA25-30</p>		

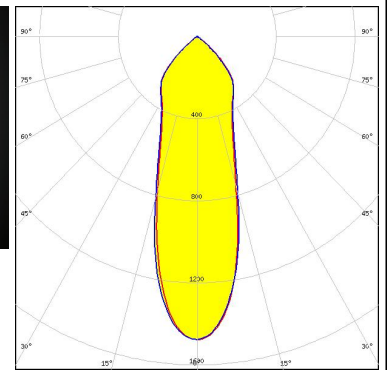
### OPTICAL RESULTS (MEASURED):



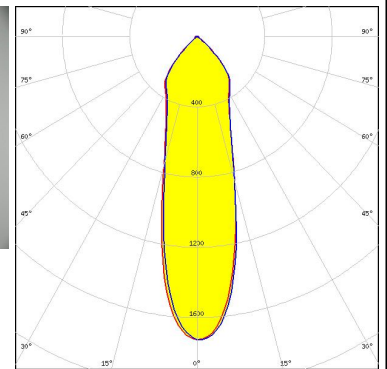
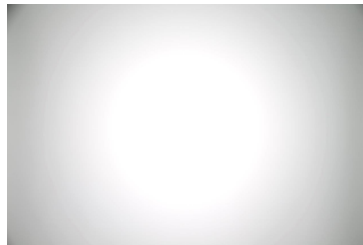
LED CXA/B 25xx  
 FWHM / FWTM 22.0° / 87.0°  
 Efficiency 94 %  
 Peak intensity 2.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2102CR + 50-2100AN



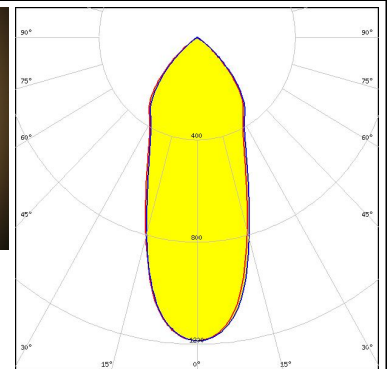
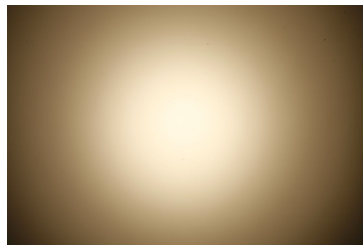
LED CXA/B 30xx  
 FWHM / FWTM 32.0° / 95.0°  
 Efficiency 92 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



LED CXA/B 30xx  
 FWHM / FWTM 28.0° / 89.0°  
 Efficiency 94 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2234C + 50-2100AN



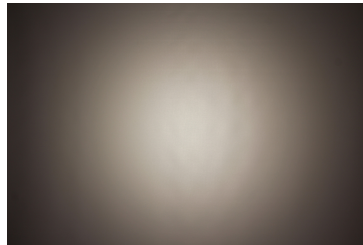
LED CXA/B 3590  
 FWHM / FWTM 40.0° / 97.0°  
 Efficiency 93 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2303CR + 50-2300AN



#### OPTICAL RESULTS (MEASURED):

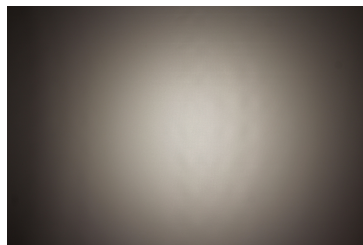
#### EVERLIGHT

LED CHI3030 19W  
 FWHM / FWTM 29.0° / 90.0°  
 Efficiency 88 %  
 Peak intensity 1.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 468 Typ L3



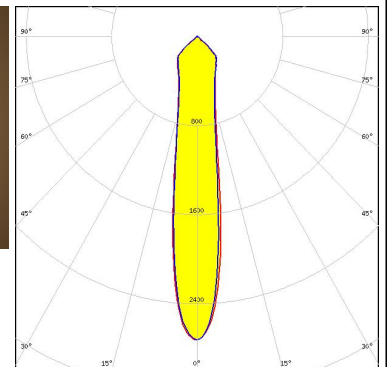
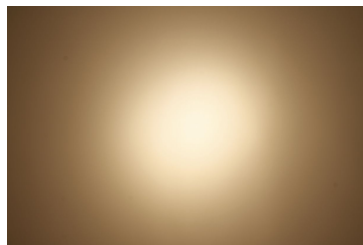
#### EVERLIGHT

LED CHI3030 29W  
 FWHM / FWTM 39.0° / 90.0°  
 Efficiency 88 %  
 Peak intensity 1.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 468 Typ L3



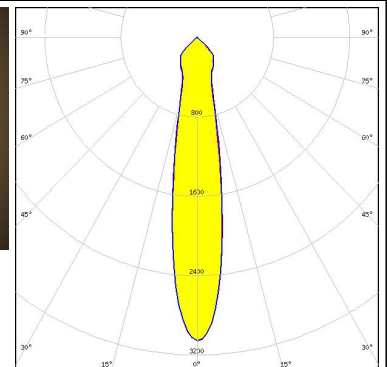
#### LUMILEDS

LED LUXEON CoB 1202/1203  
 FWHM / FWTM 18.0° / 83.0°  
 Efficiency 93 %  
 Peak intensity 2.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 438 Typ L1

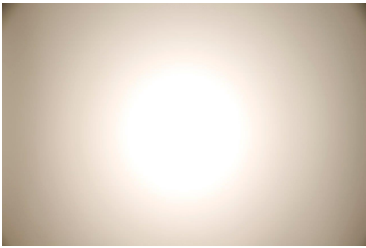
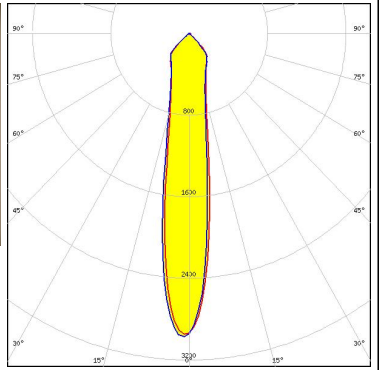
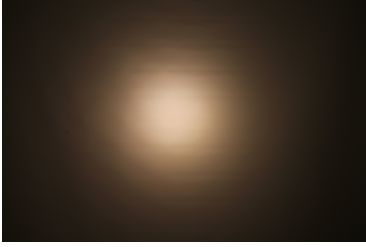
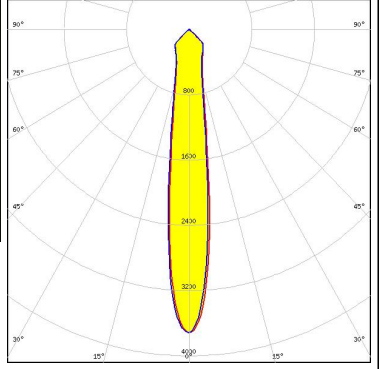
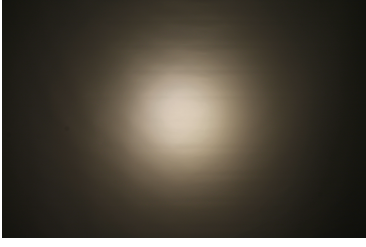
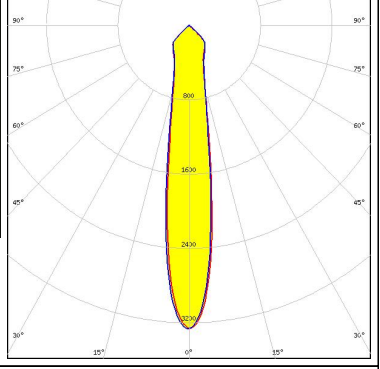
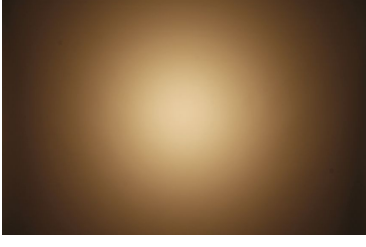
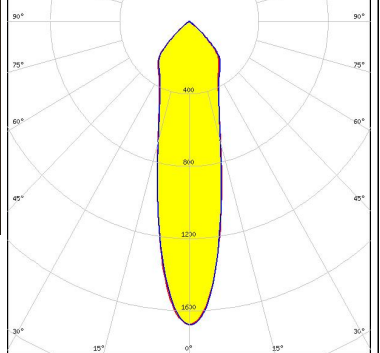


#### LUMILEDS


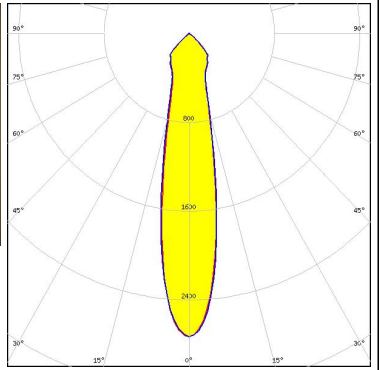
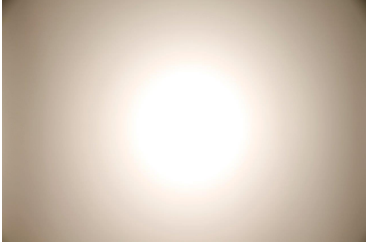
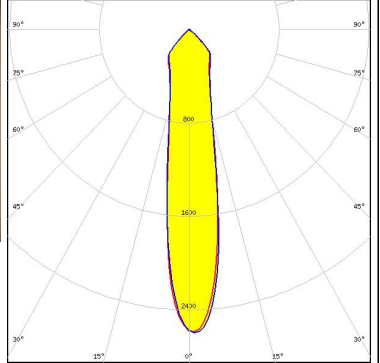

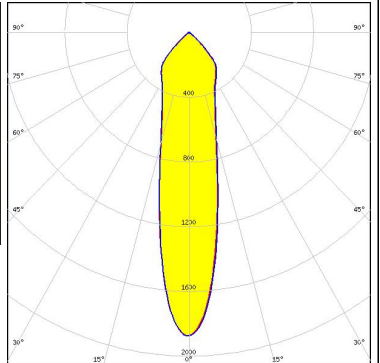
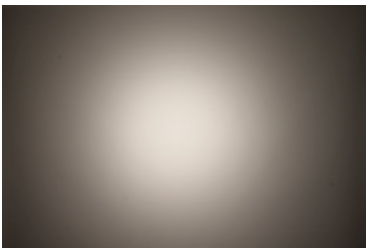
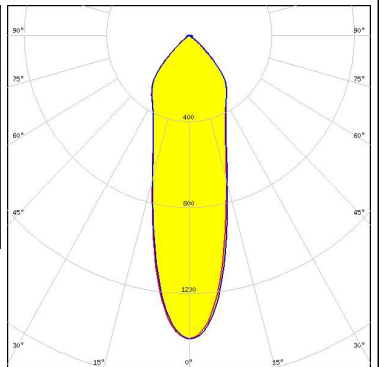
LED LUXEON CoB 1204/1205  
 FWHM / FWTM 19.0° / 68.0°  
 Efficiency 94 %  
 Peak intensity 3.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



### OPTICAL RESULTS (MEASURED):

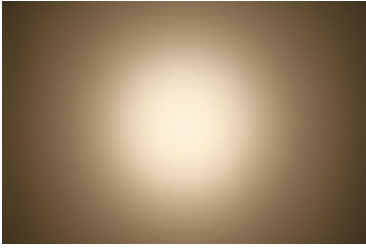
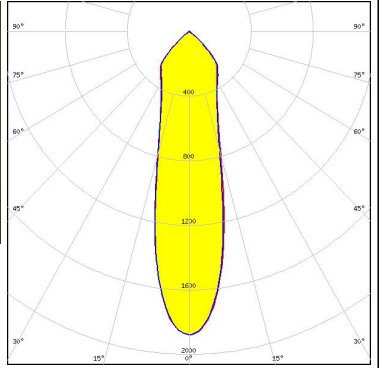

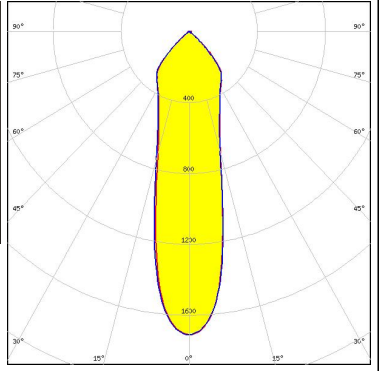
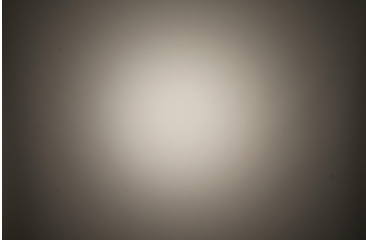
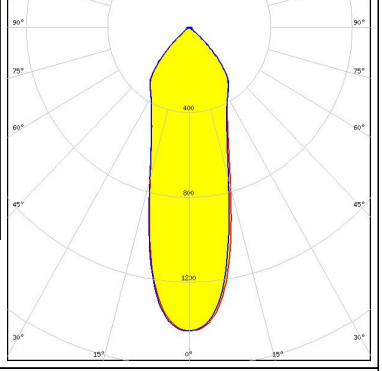
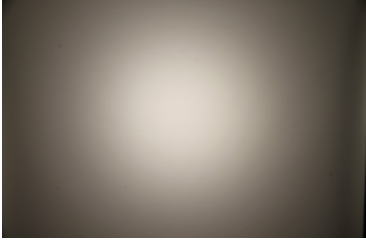
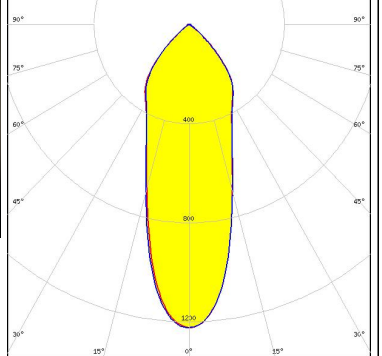
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1204/1205</p> <p>FWHM / FWTM 17.0° / 76.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2100SH + 50-2100AN</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1204HD</p> <p>FWHM / FWTM 15.0° / 53.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 3.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1205HD</p> <p>FWHM / FWTM 17.0° / 65.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 3.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208</p> <p>FWHM / FWTM 25.0° / 92.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208</p> <p>FWHM / FWTM 21.0° / 79.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 2.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208</p> <p>FWHM / FWTM 20.0° / 84.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2100SH + 50-2100AN</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208</p> <p>FWHM / FWTM 23.0° / 89.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.9 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS IDEAL: 50-2100SH + 50-2100AN</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 30.0° / 93.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS IDEAL: 50-2204-CT + 50-2100AN</p>		


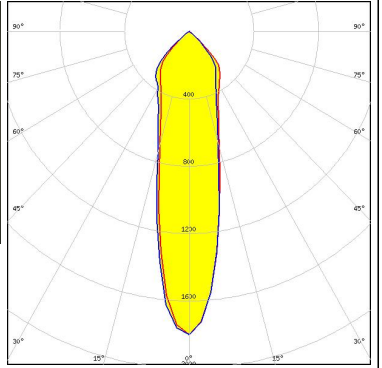
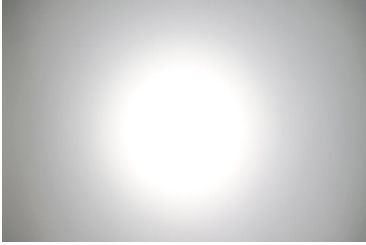
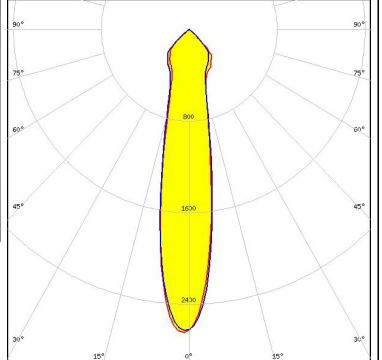
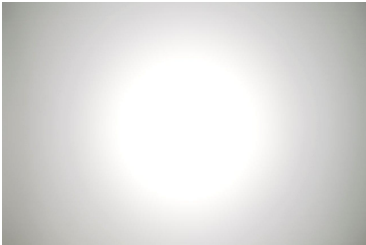
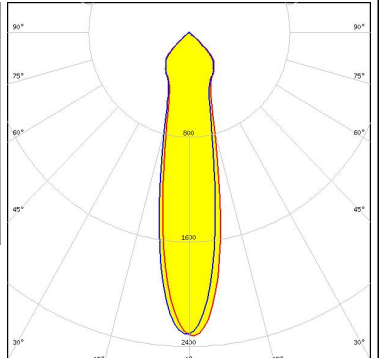
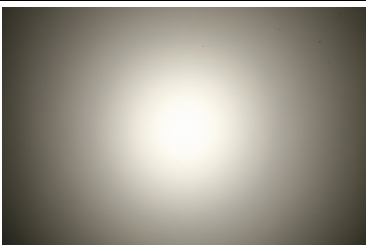
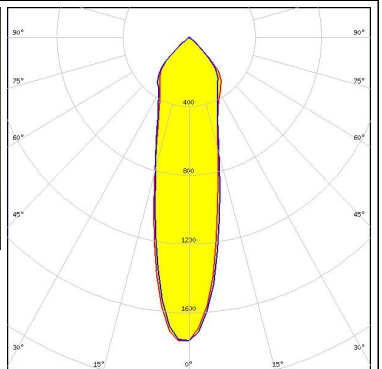


### OPTICAL RESULTS (MEASURED):


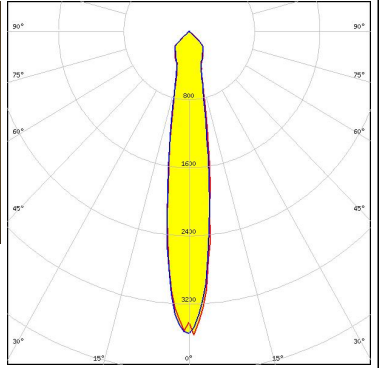

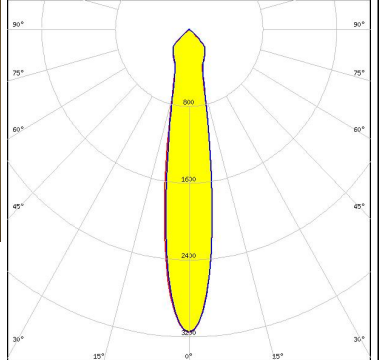

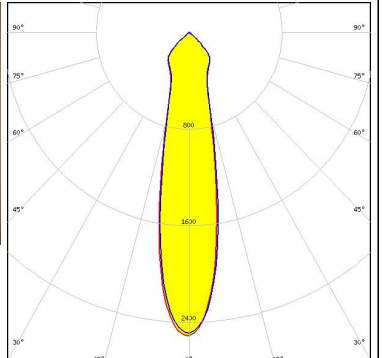
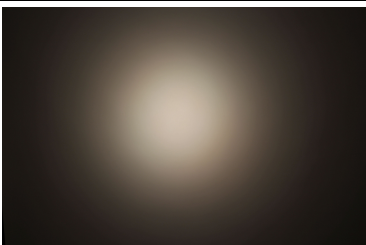
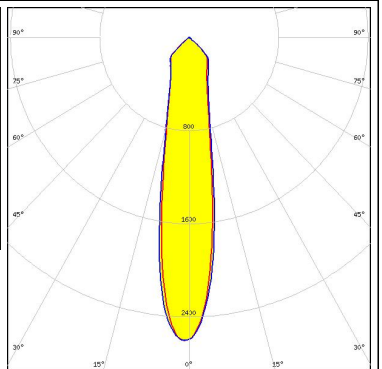
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 26.0° / 91.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 431 Typ L3</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 26.0° / 91.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 1.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2204-CT + 50-2100AN</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1213/1216/1812</p> <p>FWHM / FWTM 31.0° / 93.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 1.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2204-CT + 50-2100AN</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1213/1216/1812</p> <p>FWHM / FWTM 34.0° / 95.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS IDEAL: 50-2204CT + 50-2100LN</p>		




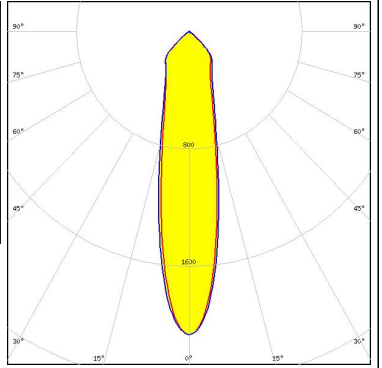
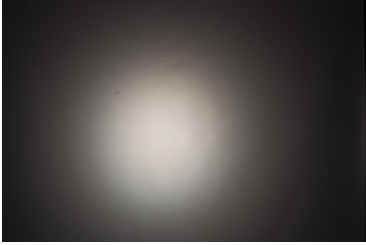
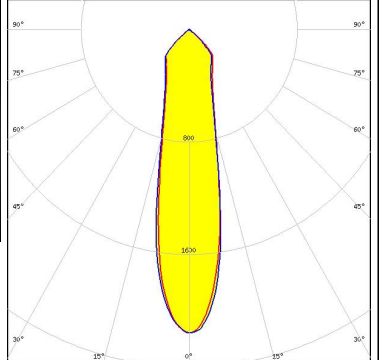
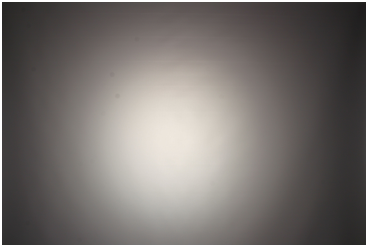
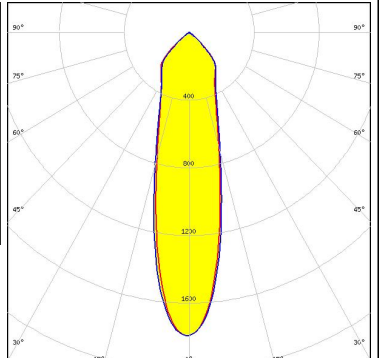
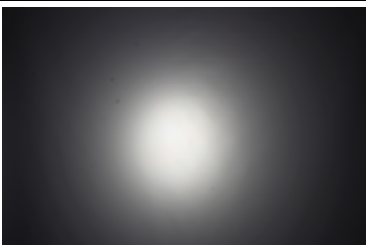
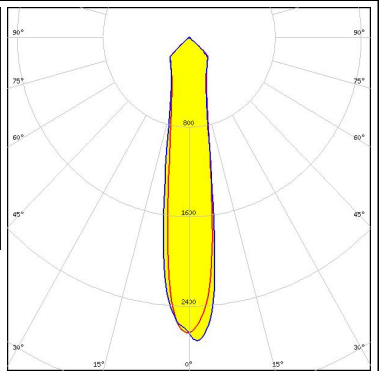
### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON K12</p> <p>FWHM / FWTM 25.0° / 93.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS TE Connectivity: 2213134-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON K12</p> <p>FWHM / FWTM 20.0° / 86.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: 2213134-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON K16</p> <p>FWHM / FWTM 22.0° / 90.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.3 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: 2213134-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON K16</p> <p>FWHM / FWTM 26.0° / 92.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS TE Connectivity: 2213134-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		


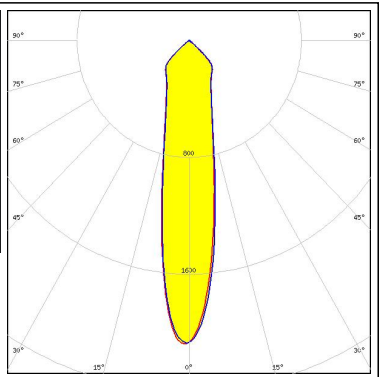

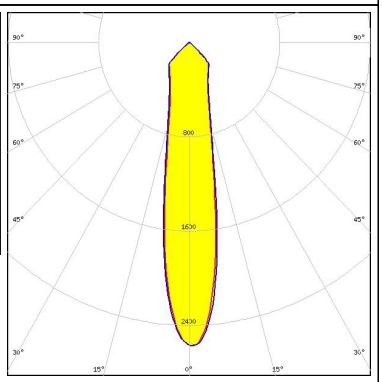

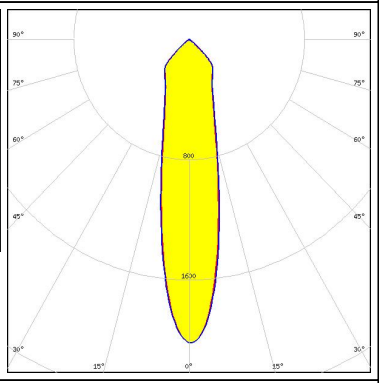

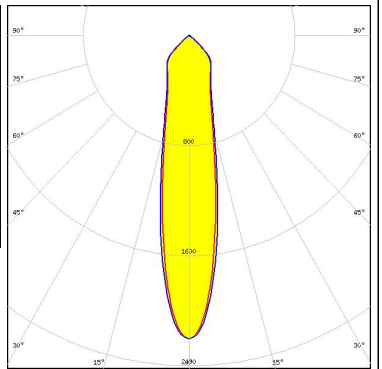
### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON S2000            FWHM / FWTM 17.0° / 55.0°            Efficiency 93 %            Peak intensity 3.6 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13395_CLAMP-S2000</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON S3000            FWHM / FWTM 18.0° / 65.0°            Efficiency 92 %            Peak intensity 3.2 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13397_CLAMP-S3000</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON S5000            FWHM / FWTM 22.0° / 86.0°            Efficiency 93 %            Peak intensity 2.5 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13399_CLAMP-S5000</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-14 (Dim-To-Warm)            FWHM / FWTM 20.0° / 80.0°            Efficiency 93 %            Peak intensity 2.6 cd/m            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 491 Typ L2</p>		

### OPTICAL RESULTS (MEASURED):


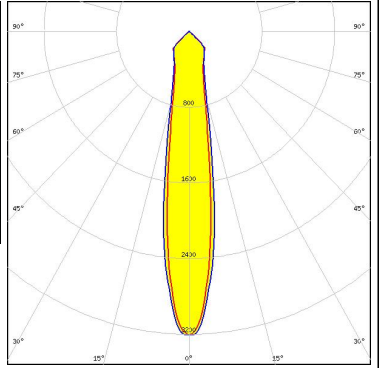

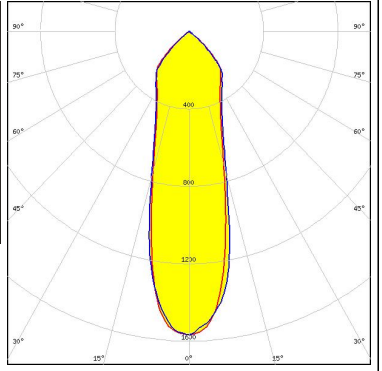
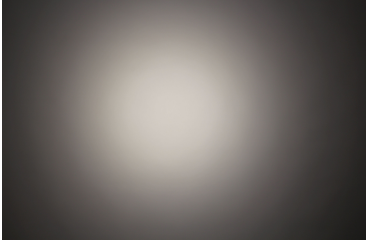
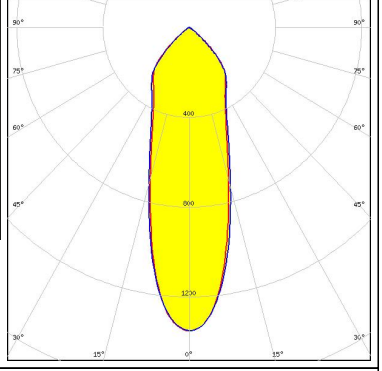
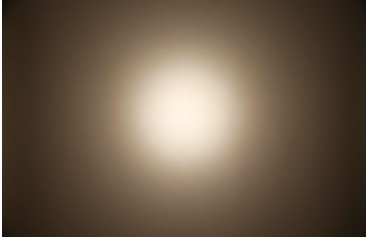
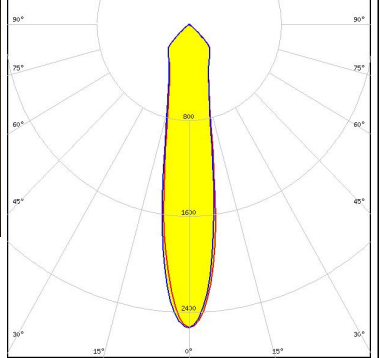
<p><b>LUMINUS</b></p> <p>LED CDM-14 (Dim-To-Warm)            FWHM / FWTM 23.0° / 89.0°            Efficiency 89 %            Peak intensity 2.1 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-18 (Dim-To-Warm)            FWHM / FWTM 24.0° / 89.0°            Efficiency 93 %            Peak intensity 2.2 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-18 (Dim-To-Warm)            FWHM / FWTM 26.0° / 91.0°            Efficiency 89 %            Peak intensity 1.8 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-9 (Dim-To-Warm)            FWHM / FWTM 18.0° / 81.0°            Efficiency 92 %            Peak intensity 2.7 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 490 Typ L1</p>		

### OPTICAL RESULTS (MEASURED):


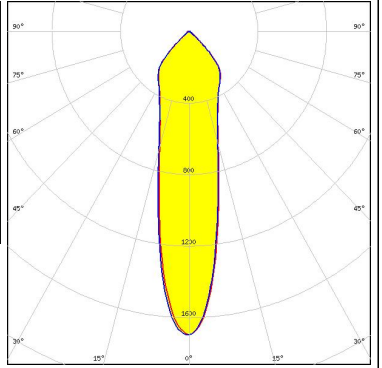
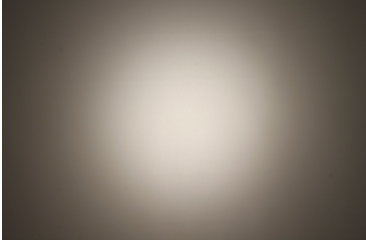
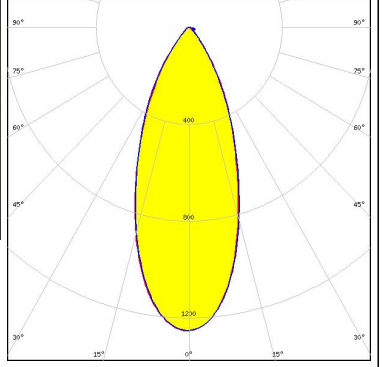
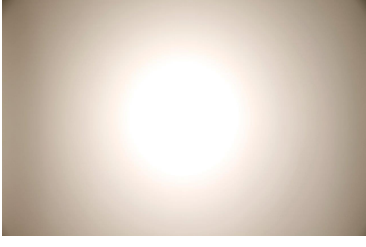
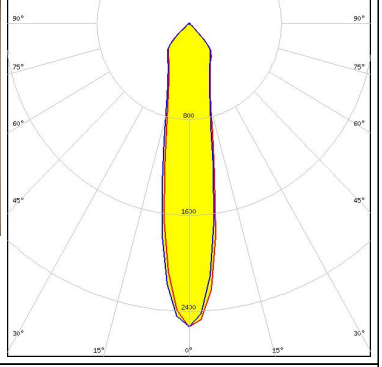
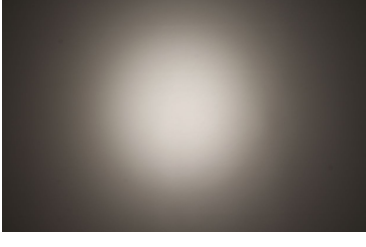
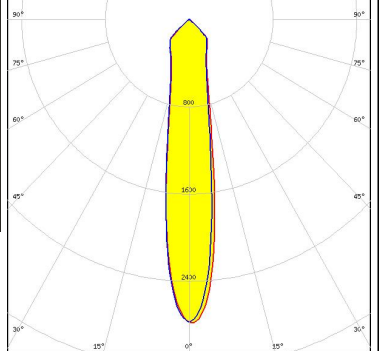
<p><b>LUMINUS</b></p> <p>LED CDM-9 (Dim-To-Warm)</p> <p>FWHM / FWTM 21.0° / 91.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 2.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 F13671_ANGE-RZ-LENS Bender Wirth: 490 Typ L1</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-14 (Tunable White)</p> <p>FWHM / FWTM 20.0° / 86.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 2.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-14 (Tunable White)</p> <p>FWHM / FWTM 23.0° / 90.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13584_CLAMP-VERO29 F13671_ANGE-RZ-LENS Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-14 RGBW</p> <p>FWHM / FWTM 22.0° / 87.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 2.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour RGBW</p> <p>Required components: C13584_CLAMP-VERO29 F13671_ANGE-RZ-LENS Bender Wirth: 500 Typ L3-1</p>		



### OPTICAL RESULTS (MEASURED):

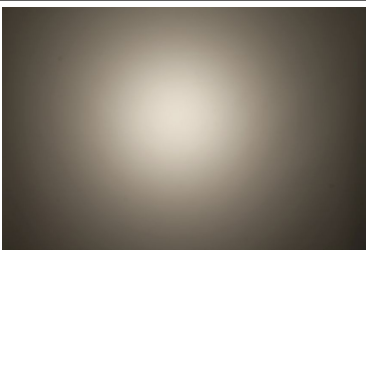
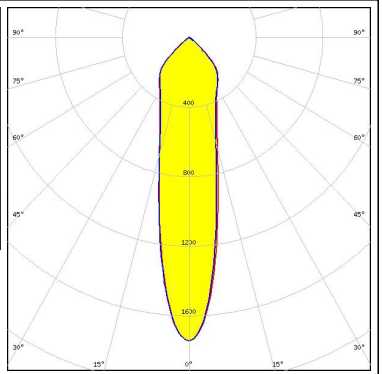

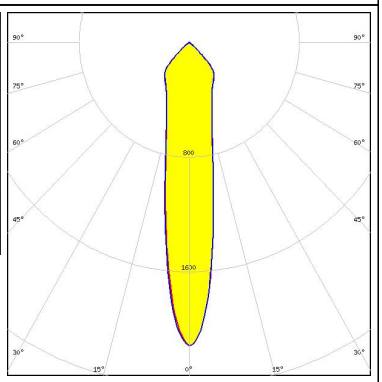
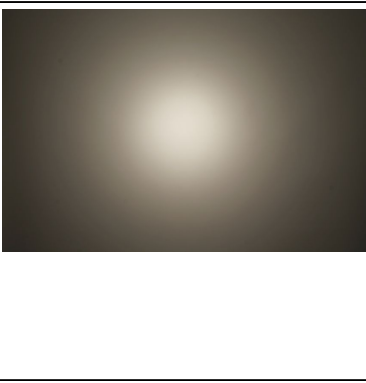
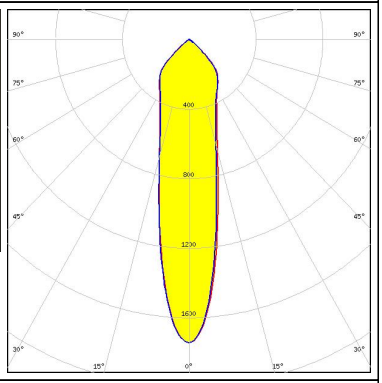
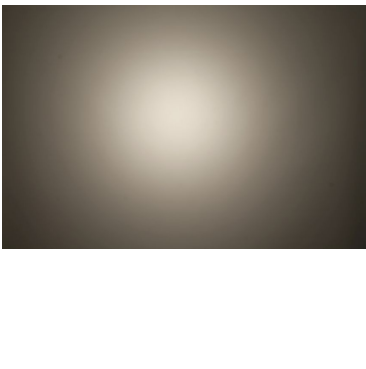
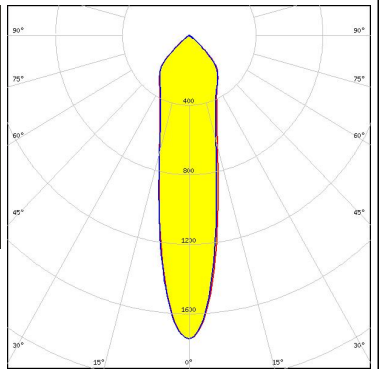
<p><b>LUMINUS</b></p> <p>LED CTM-14 RGBW            FWHM / FWTM 18.0° / 62.0°            Efficiency 94 %            Peak intensity 3.2 cd/lm            LEDs/each optic 1            Light colour RGBW</p> <p>Required components:            C13584_CLAMP-VERO29            Bender Wirth: 500 Typ L3-1</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-22 (Tunable White)            FWHM / FWTM 29.0°            Efficiency 91 %            Peak intensity 1.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13584_CLAMP-VERO29            Bender Wirth: 494 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-22 (Tunable White)            FWHM / FWTM 32.0° / 95.0°            Efficiency 87 %            Peak intensity 1.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13584_CLAMP-VERO29            F13671_ANGE-RZ-LENS            Bender Wirth: 494 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CxM-14 (19x19)            FWHM / FWTM 20.0° / 86.0°            Efficiency 94 %            Peak intensity 2.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

### OPTICAL RESULTS (MEASURED):

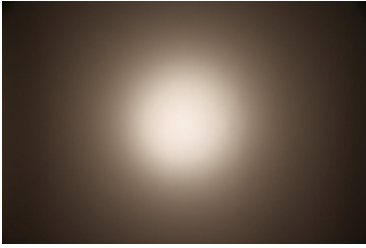
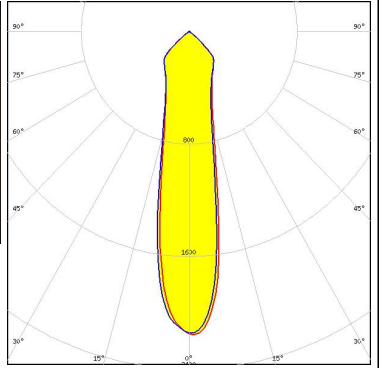
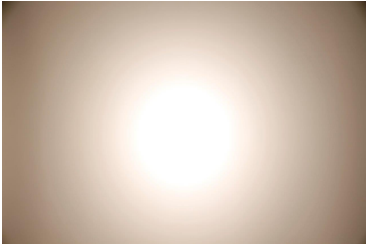
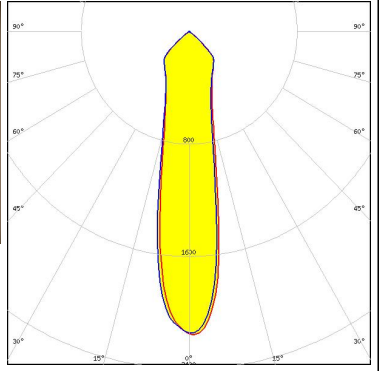
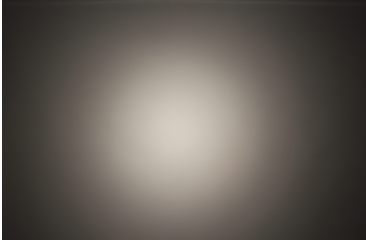
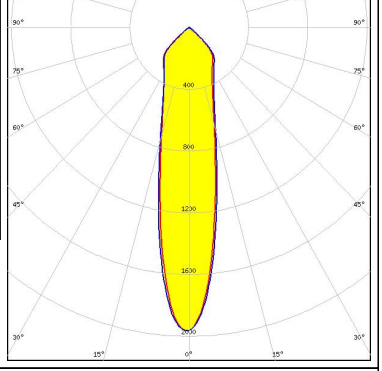

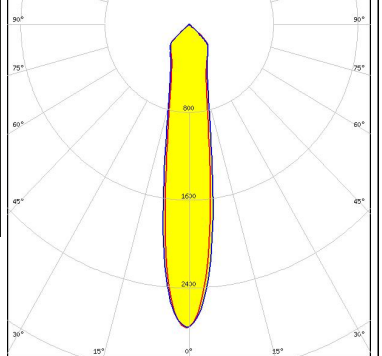
<p><b>NICHIA</b></p> <p>LED COB J-Type            FWHM / FWTM 24.0° / 90.0°            Efficiency 87 %            Peak intensity 1.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGE-RZ-LENS            IDEAL: 50-2103NC + 50-2100AN</p>		
<p><b>NICHIA</b></p> <p>LED COB J-Type            FWHM / FWTM 22.0° / 89.0°            Efficiency 93 %            Peak intensity 2.3 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 463 Typ L2</p>		
<p><b>NICHIA</b></p> <p>LED COB J-Type            FWHM / FWTM 20.0° / 85.0°            Efficiency 94 %            Peak intensity 2.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2103NC + 50-2100AN</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM 18.0° / 78.0°            Efficiency 93 %            Peak intensity 2.8 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 438 Typ L1</p>		



### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM 17.0° / 86.0°            Efficiency 92 %            Peak intensity 2.7 cd/m            LEDs/each optic 1            Light colour White            Required components:            TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM 19.0° / 88.0°            Efficiency 87 %            Peak intensity 2.1 cd/m            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGE-RZ-LENS            IDEAL: 50-2100NC + 50-2100AN</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM 17.0° / 86.0°            Efficiency 92 %            Peak intensity 2.7 cd/m            LEDs/each optic 1            Light colour White            Required components:            TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM / FWTM 23.0° / 92.0°            Efficiency 86 %            Peak intensity 1.7 cd/m            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGE-RZ-LENS            TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

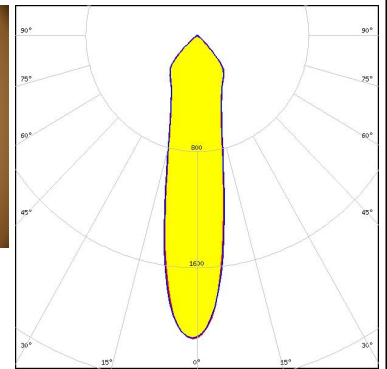
### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 22.0° / 93.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: Molex: 180580-0005</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 16.0° / 71.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 3.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2100NC + 50-2100AN</p>		
<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM / FWTM 22.0° / 91.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 F13671_ANGE-RZ-LENS Bender Wirth: 498 Typ L2</p>		
<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM / FWTM 18.0° / 80.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 2.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 498 Typ L2</p>		

### OPTICAL RESULTS (MEASURED):

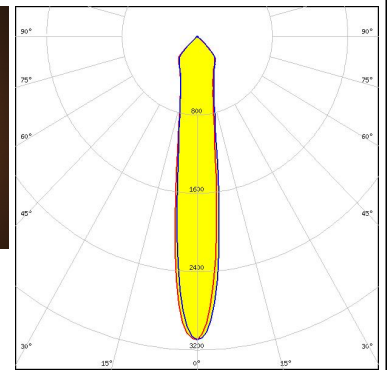
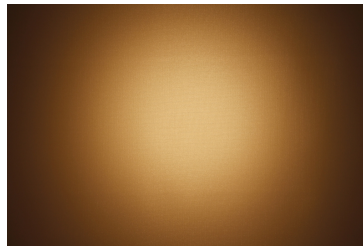
#### OSRAM

LED PrevaLED Core AC (LEP-2000)  
 FWHM / FWTM 23.0° / 88.0°  
 Efficiency 93 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



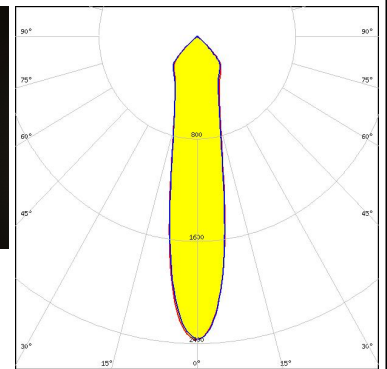
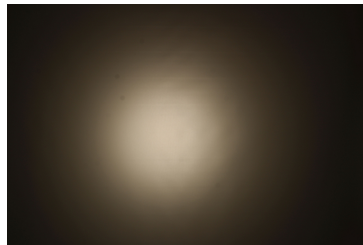
#### OSRAM

LED PrevaLED Core AC (LEP-800)  
 FWHM / FWTM 16.0° / 76.0°  
 Efficiency 94 %  
 Peak intensity 3.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



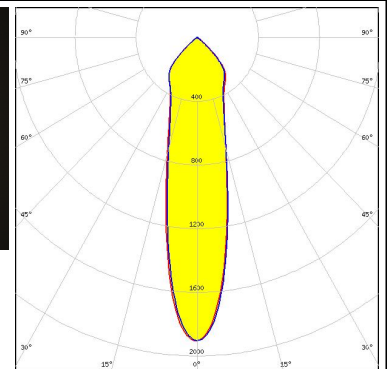
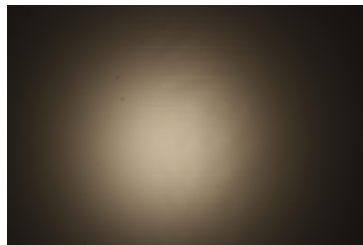
#### OSRAM

LED PrevaLED Core G7 L15 H1  
 FWHM / FWTM 21.0° / 88.0°  
 Efficiency 94 %  
 Peak intensity 2.4 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16685\_CLAMP-PRV-A



#### OSRAM

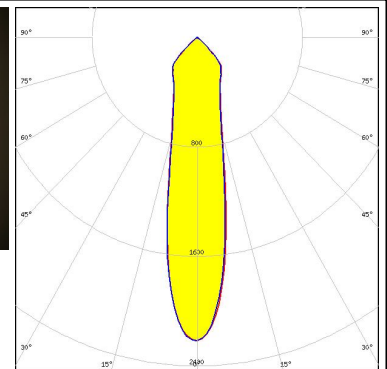
LED PrevaLED Core G7 L15 H1  
 FWHM / FWTM 24.0° / 90.0°  
 Efficiency 91 %  
 Peak intensity 1.9 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16685\_CLAMP-PRV-A  
 F13671\_ANGE-RZ-LENS



### OPTICAL RESULTS (MEASURED):

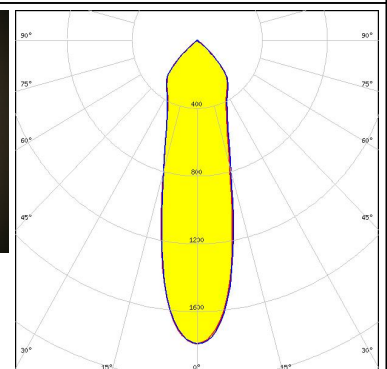
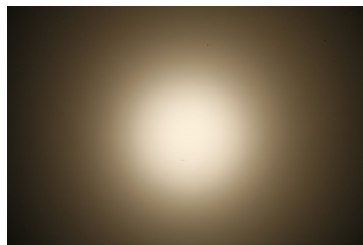
#### OSRAM

LED PrevaLED Core Z3 LES19  
 FWHM / FWTM 23.0° / 89.0°  
 Efficiency 94 %  
 Peak intensity 2.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



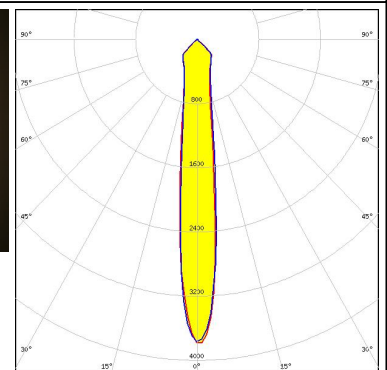
#### OSRAM

LED PrevaLED Core Z3 LES23  
 FWHM / FWTM 27.0° / 91.0°  
 Efficiency 94 %  
 Peak intensity 1.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



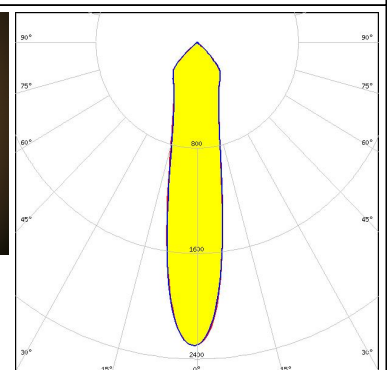
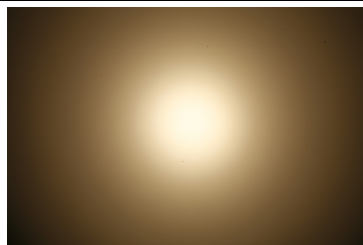
#### OSRAM

LED PrevaLED Core Z3 LES9  
 FWHM / FWTM 14.0° / 54.0°  
 Efficiency 94 %  
 Peak intensity 3.8 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



#### OSRAM

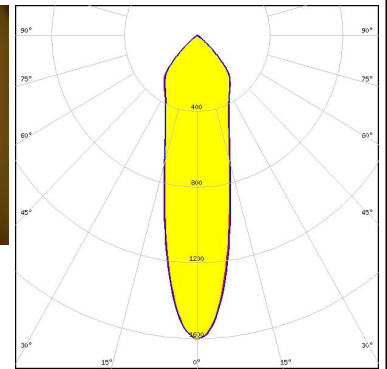
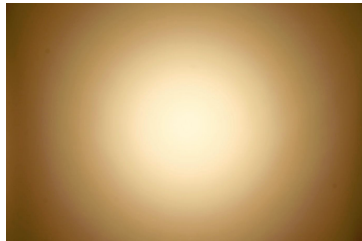
LED PrevaLED Core Z4 LES19  
 FWHM / FWTM 21.0° / 87.0°  
 Efficiency 94 %  
 Peak intensity 2.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



### OPTICAL RESULTS (MEASURED):

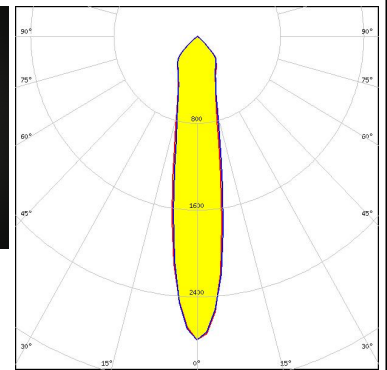
#### OSRAM

LED PrevaLED Core Z4 LES19  
 FWHM / FWTM 26.0° / 92.0°  
 Efficiency 88 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



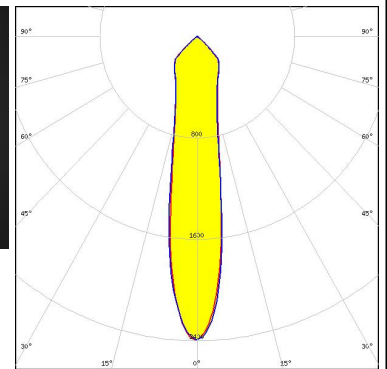
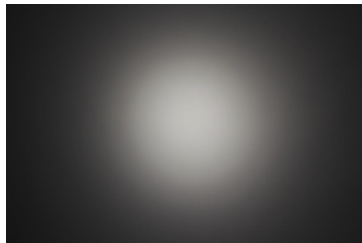
#### OSRAM Opto Semiconductors

LED Soleriq S13  
 FWHM / FWTM 20.0° / 82.0°  
 Efficiency 94 %  
 Peak intensity 2.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1



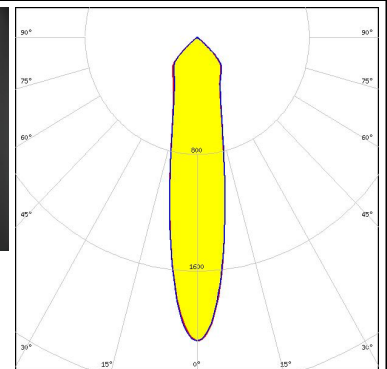
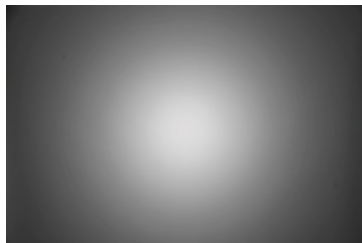
#### OSRAM Opto Semiconductors

LED Soleriq S13  
 FWHM / FWTM 20.0° / 89.0°  
 Efficiency 92 %  
 Peak intensity 2.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 437 Typ L1



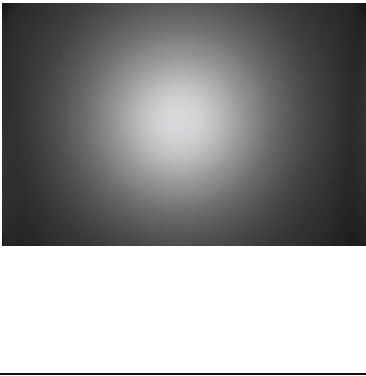
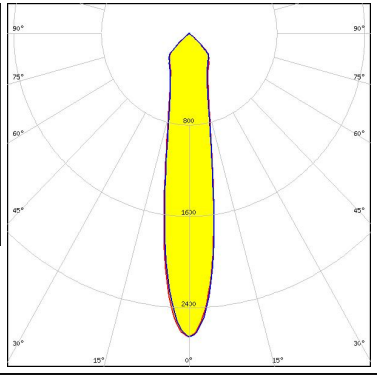

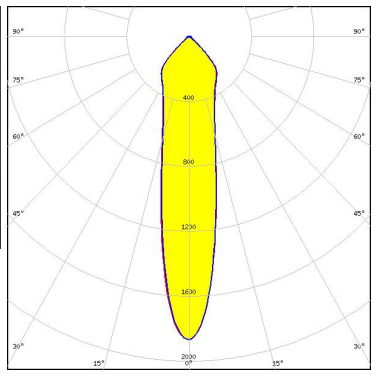

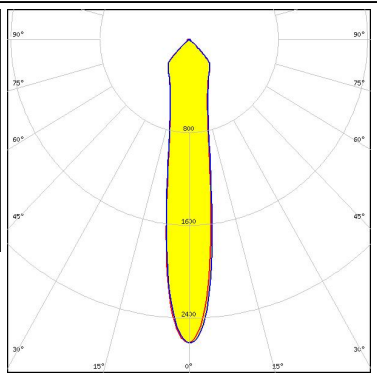

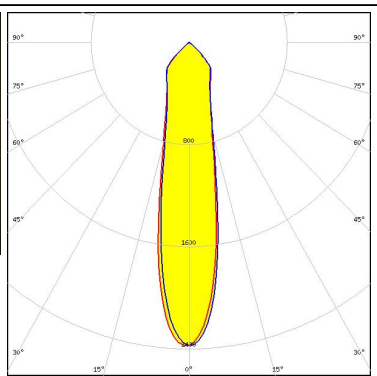
#### OSRAM Opto Semiconductors

LED Soleriq S13 19x19  
 FWHM / FWTM 22.0° / 90.0°  
 Efficiency 88 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1





### OPTICAL RESULTS (MEASURED):

<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13 19x19</p> <p>FWHM / FWTM 19.0° / 84.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 2.7 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13 19x19</p> <p>FWHM / FWTM 22.0° / 90.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.9 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGE-RZ-LENS IDEAL: 50-2103CT + 50-2100AN</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S13 19x19</p> <p>FWHM / FWTM 17.0° / 86.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 2.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2103CT + 50-2100AN</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED Soleriq S19</p> <p>FWHM / FWTM 22.0° / 87.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 2.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: 2213407-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

### OPTICAL RESULTS (MEASURED):

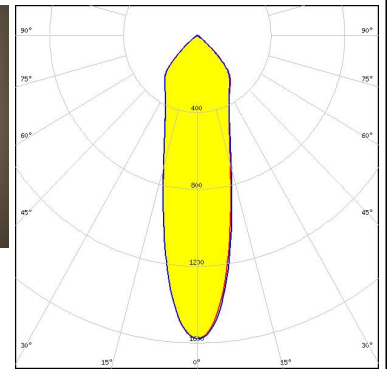
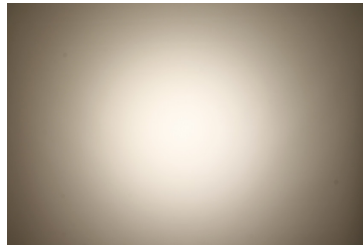
#### OSRAM

Opto Semiconductors

LED Soleriq S19  
FWHM / FWTM 27.0° / 93.0°  
Efficiency 88 %  
Peak intensity 1.6 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

F13671\_ANGE-RZ-LENS  
TE Connectivity: 2213407-2 + OPTIC CLIP Z50 TYPE1 2213194-1



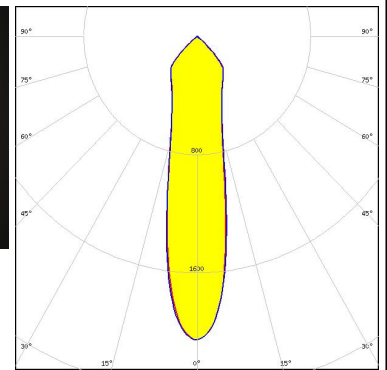
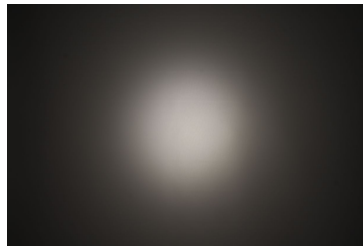
#### OSRAM

Opto Semiconductors

LED Soleriq S19  
FWHM / FWTM 23.0° / 89.0°  
Efficiency 92 %  
Peak intensity 2.1 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C13584\_CLAMP-VERO29  
Bender Wirth: 462 Typ L3

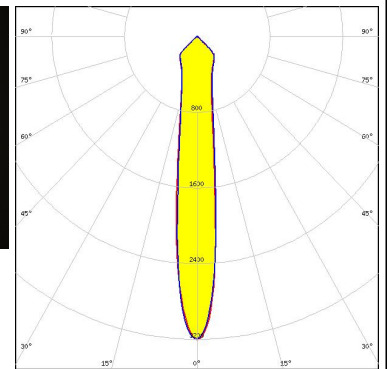


#### PHILIPS

LED Fortimo SLM L09 + SLM holder  
FWHM / FWTM 15.0° / 70.0°  
Efficiency 92 %  
Peak intensity 3.2 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1

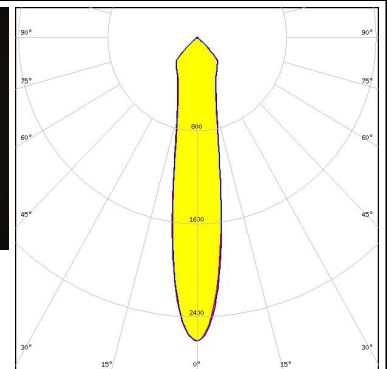
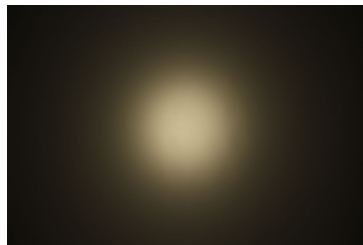


#### PHILIPS

LED Fortimo SLM L13 + SLM holder  
FWHM / FWTM 19.0° / 86.0°  
Efficiency 92 %  
Peak intensity 2.6 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



#### OPTICAL RESULTS (MEASURED):

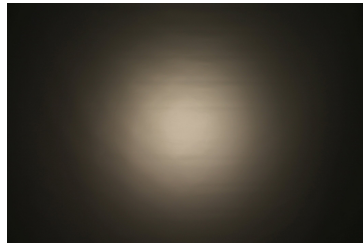
### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM / FWTM 23.0° / 89.0°  
 Efficiency 88 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

F13671\_ANGE-RZ-LENS

TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1

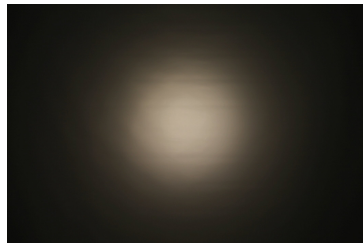


### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM / FWTM 20.0° / 78.0°  
 Efficiency 94 %  
 Peak intensity 2.8 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



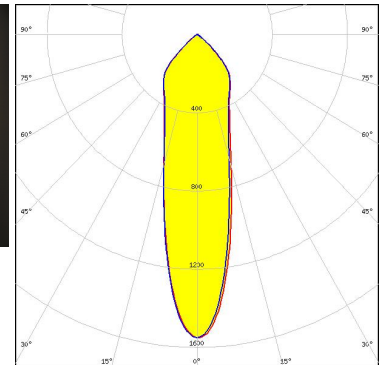
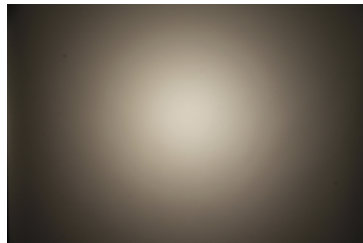
### PHILIPS

LED Fortimo SLM L15 + SLM holder  
 FWHM / FWTM 27.0° / 93.0°  
 Efficiency 87 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

F13671\_ANGE-RZ-LENS

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1

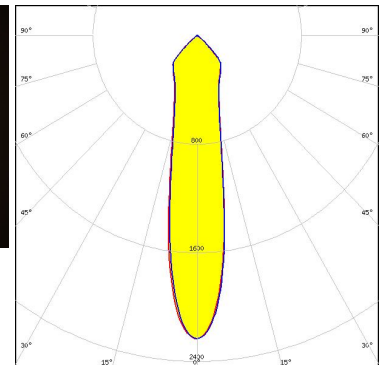
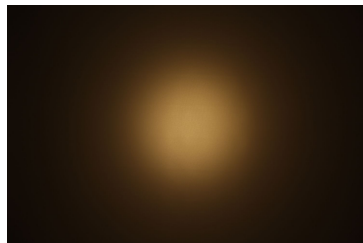


### PHILIPS

LED Fortimo SLM L15 + SLM holder  
 FWHM / FWTM 21.0° / 88.0°  
 Efficiency 91 %  
 Peak intensity 2.2 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



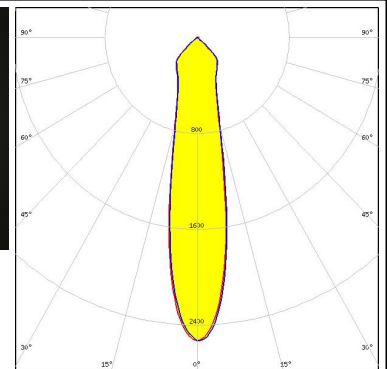
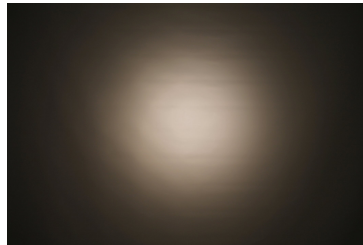
### OPTICAL RESULTS (MEASURED):

#### PHILIPS

LED Fortimo SLM L15 CoB  
 FWHM / FWTM 22.0° / 86.0°  
 Efficiency 94 %  
 Peak intensity 2.5 cd/m  
 LEDs/each optic 1  
 Light colour White

Required components:

TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



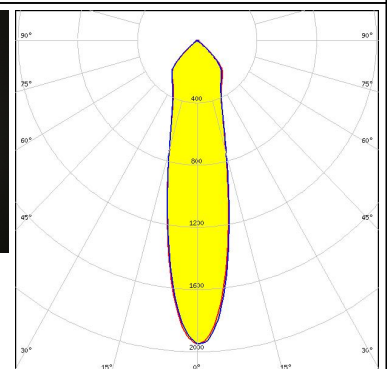
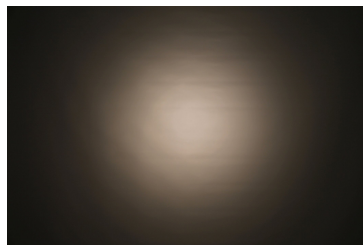
#### PHILIPS

LED Fortimo SLM L15 CoB  
 FWHM / FWTM 24.0° / 90.0°  
 Efficiency 88 %  
 Peak intensity 2 cd/m  
 LEDs/each optic 1  
 Light colour White

Required components:

F13671\_ANGE-RZ-LENS

TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1

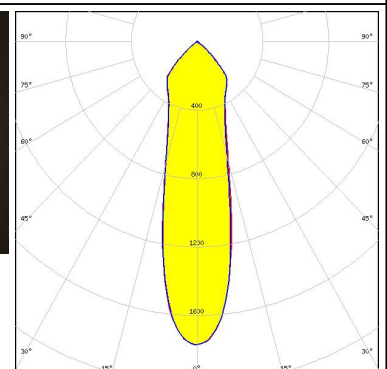
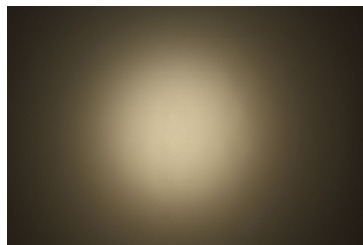


#### PHILIPS

LED Fortimo SLM L19 + SLM holder  
 FWHM / FWTM 26.0° / 91.0°  
 Efficiency 90 %  
 Peak intensity 1.8 cd/m  
 LEDs/each optic 1  
 Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



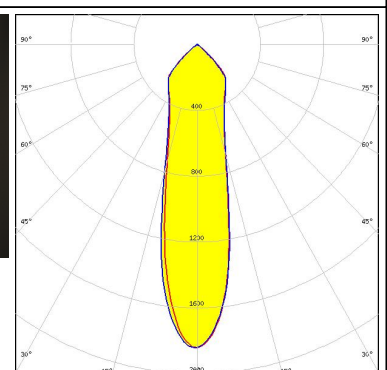
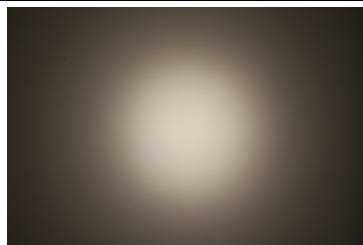
#### SAMSUNG

LED LC026B / 033B / 040B  
 FWHM / FWTM 25.0° / 92.0°  
 Efficiency 92 %  
 Peak intensity 1.8 cd/m  
 LEDs/each optic 1  
 Light colour White

Required components:

C13658\_CLAMP-VERO13-18

Bender Wirth: 450 Typ L2



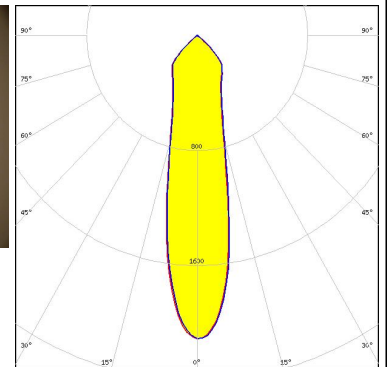
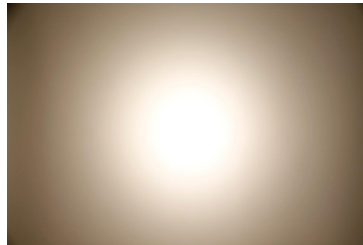
### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

LED LC026B / 033B / 040B  
 FWHM / FWTM 24.0° / 89.0°  
 Efficiency 93 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White

Required components:

TE Connectivity: 2213258-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### SAMSUNG

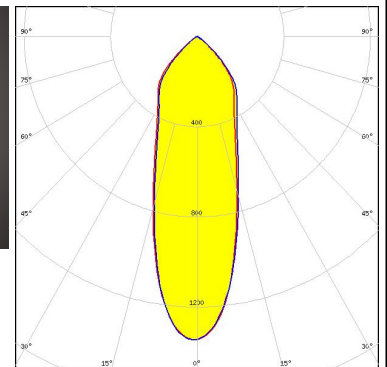
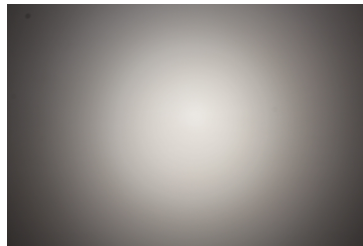
LED LC035T (Tunable white)  
 FWHM / FWTM 34.0° / 95.0°  
 Efficiency 89 %  
 Peak intensity 1.3 cd/m  
 LEDs/each optic 1  
 Light colour Tunable White

Required components:

C13584\_CLAMP-VERO29

F13671\_ANGE-RZ-LENS

Bender Wirth: 502 Typ L3



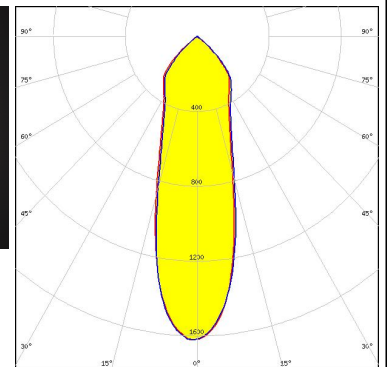
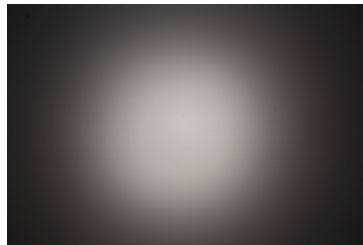
#### SAMSUNG

LED LC035T (Tunable white)  
 FWHM / FWTM 31.0° / 93.0°  
 Efficiency 94 %  
 Peak intensity 1.6 cd/m  
 LEDs/each optic 1  
 Light colour Tunable White

Required components:

C13584\_CLAMP-VERO29

Bender Wirth: 502 Typ L3

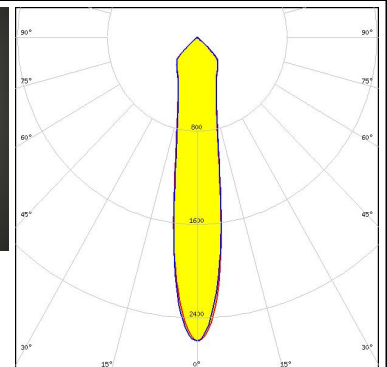


#### SAMSUNG

LED LC040C  
 FWHM / FWTM 18.0° / 87.0°  
 Efficiency 92 %  
 Peak intensity 2.6 cd/m  
 LEDs/each optic 1  
 Light colour White

Required components:

TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1





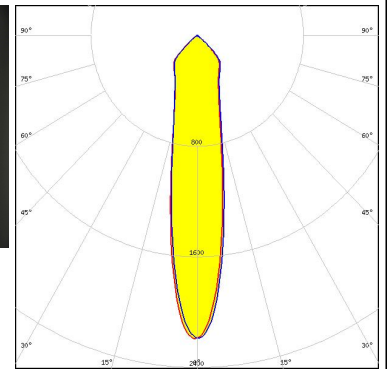
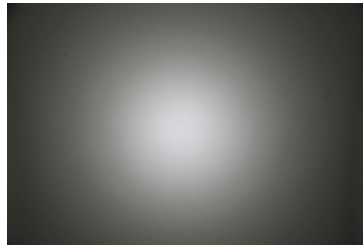
### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

LED LC040C  
FWHM / FWTM 21.0° / 89.0°  
Efficiency 89 %  
Peak intensity 2.2 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

F13671\_ANGE-RZ-LENS  
TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1

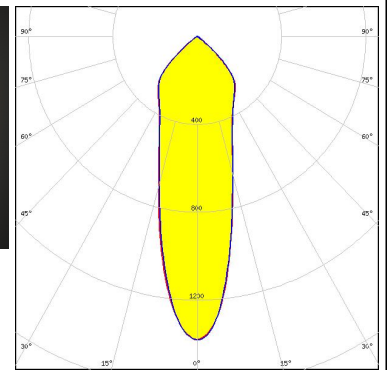
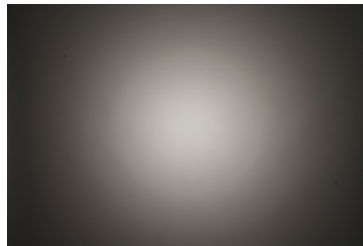


SEOUL SEMICONDUCTOR

LED AC Zhaga COB  
FWHM / FWTM 30.0° / 96.0°  
Efficiency 88 %  
Peak intensity 1.4 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

F13671\_ANGE-RZ-LENS  
Optosource: SEHSMJD-A

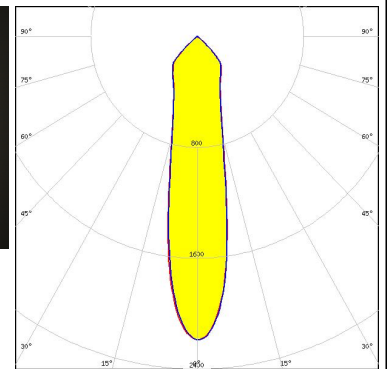
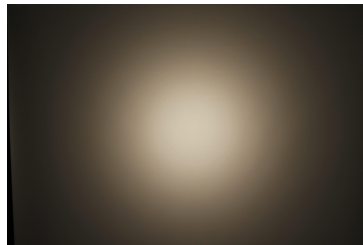


SEOUL SEMICONDUCTOR

LED MJT COB LES 14.5  
FWHM / FWTM 22.0° / 89.0°  
Efficiency 93 %  
Peak intensity 2.2 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1

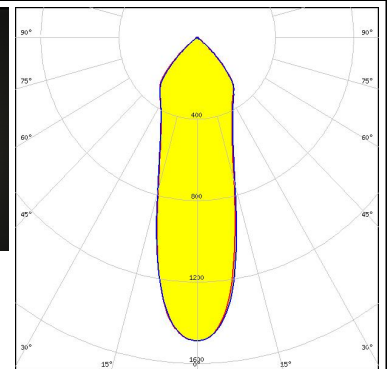


SEOUL SEMICONDUCTOR

LED MJT COB LES 22  
FWHM / FWTM 30.0° / 93.0°  
Efficiency 91 %  
Peak intensity 1.5 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

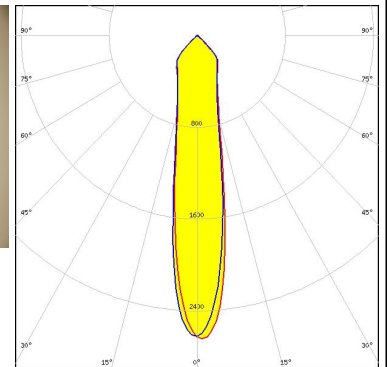
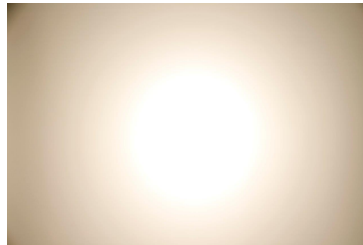
C13584\_CLAMP-VERO29  
Bender Wirth: 431 Typ L3



### OPTICAL RESULTS (MEASURED):

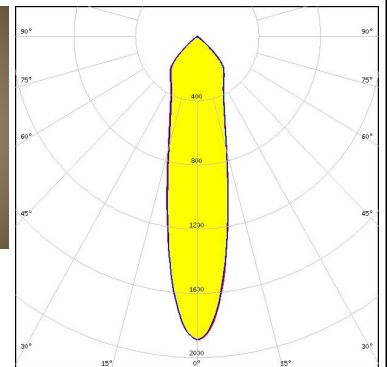
#### SHARP

LED Mega Zenigata (GW6DME)  
 FWHM / FWTM 20.0° / 84.0°  
 Efficiency 94 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2100SH + 50-2100AN



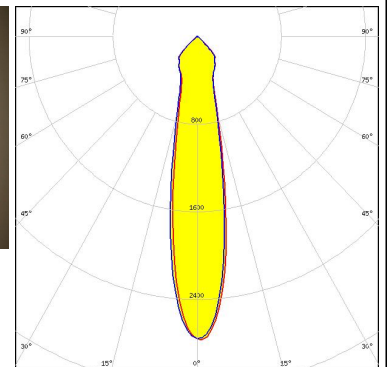
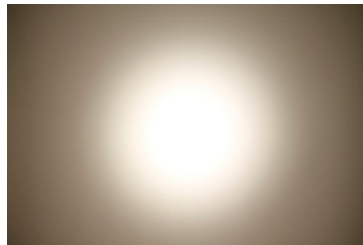
#### SHARP

LED Mega Zenigata (GW6DME)  
 FWHM / FWTM 24.0° / 91.0°  
 Efficiency 89 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



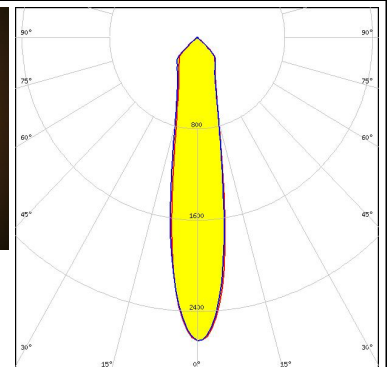
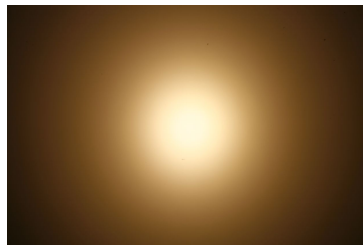
#### SHARP

LED Mega Zenigata (GW6DME)  
 FWHM / FWTM 21.0° / 75.0°  
 Efficiency 92 %  
 Peak intensity 2.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1

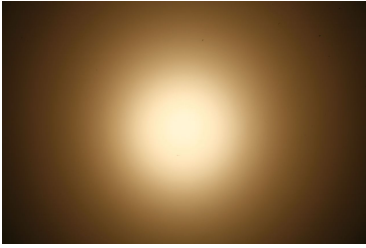
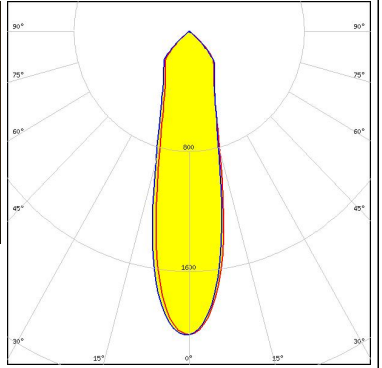

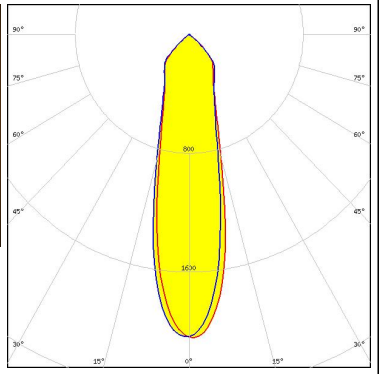
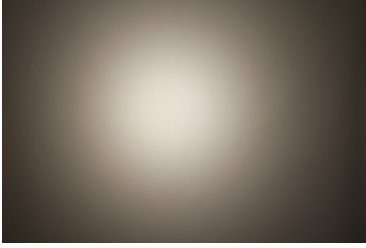
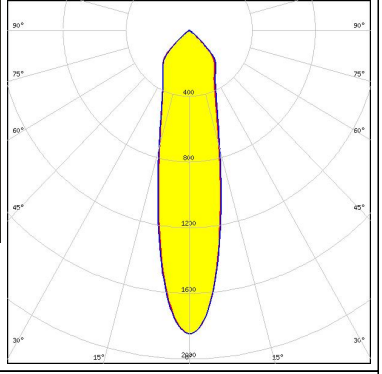

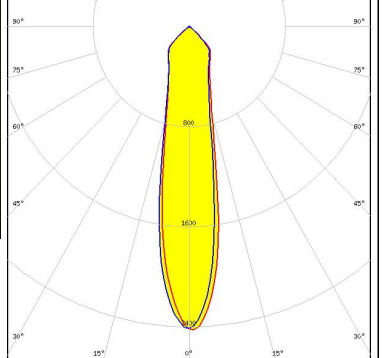


#### VS LIGHTING SOLUTIONS


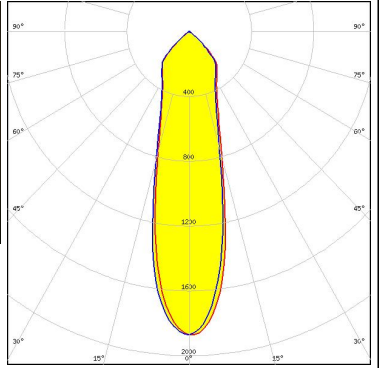

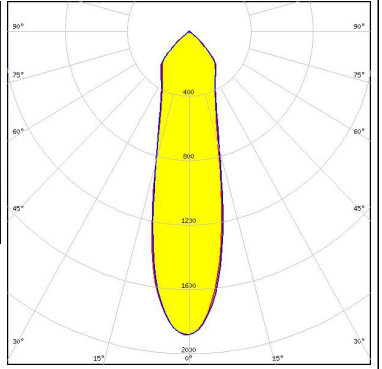
LED WU-M-461  
 FWHM / FWTM 20.0° / 78.0°  
 Efficiency 94 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



#### OPTICAL RESULTS (MEASURED):

<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-462            FWHM / FWTM 26.0° / 89.0°            Efficiency 94 %            Peak intensity 2 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-464            FWHM / FWTM 26.0° / 89.0°            Efficiency 94 %            Peak intensity 2 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-484            FWHM / FWTM 25.0° / 91.0°            Efficiency 88 %            Peak intensity 1.8 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13333_MIRELLA-CL            TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-484            FWHM / FWTM 21.0° / 88.0°            Efficiency 93 %            Peak intensity 2.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		

### OPTICAL RESULTS (MEASURED):

<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-485            FWHM / FWTM 27.0° / 81.0°            Efficiency 93 %            Peak intensity 1.9 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-486            FWHM / FWTM 26.0° / 91.0°            Efficiency 93 %            Peak intensity 1.9 cd/m            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		

### OPTICAL RESULTS (SIMULATED):

<p><b>bridgelux.</b></p> <p>LED V10 Gen7            FWHM / FWTM 17.0° / 33.0°            Efficiency 94 %            Peak intensity 4.2 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13584_CLAMP-VERO29            Bender Wirth: 486 Typ L1</p>	
<p><b>bridgelux.</b></p> <p>LED V10 Gen7            FWHM / FWTM 17.0° / 32.0°            Efficiency 94 %            Peak intensity 4.3 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 486 Typ L1</p>	
<p><b>bridgelux.</b></p> <p>LED V13 Gen7            FWHM / FWTM 16.0° / 34.0°            Efficiency 93 %            Peak intensity 4.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            IDEAL: 50-2103CT + 50-2100AN</p>	
<p><b>bridgelux.</b></p> <p>LED V22 Gen7            FWHM / FWTM 21.0° / 74.0°            Efficiency 94 %            Peak intensity 3 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            IDEAL: 50-2204-CT + 50-2100AN</p>	



#### OPTICAL RESULTS (SIMULATED):

##### LUMINUS

LED CxM-14 (19x19)  
FWHM / FWTM 21.0° / 89.0°  
Efficiency 92 %  
Peak intensity 2.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 433 Typ L1

##### LUMINUS

LED CxM-9 (13.5x13.5)  
FWHM / FWTM 17.0° / 75.0°  
Efficiency 93 %  
Peak intensity 2.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 434 Typ L1

##### SEOL SEMICONDUCTOR

LED ZC12/18  
FWHM / FWTM 21.0° / 89.0°  
Efficiency 92 %  
Peak intensity 2.3 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 433 Typ L1

##### SEOL SEMICONDUCTOR

LED ZC4/6  
FWHM / FWTM 17.0° / 75.0°  
Efficiency 93 %  
Peak intensity 2.9 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 434 Typ L1

### GENERAL INFORMATION:

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.

### MATERIALS:

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

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The measured data in the provided downloadable LEDiL Product Datasheets and Mechanical 2D-Drawings is rounded and provided as reference for planning. LEDiL Oy's optical specifications have been verified by conducting performance testing of the products in accordance with the company's quality system. The reported data are averaged results of multiple measurements with typical variation. LEDiL Oy reserves the right to without prior notification make changes and improvements to its products.

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