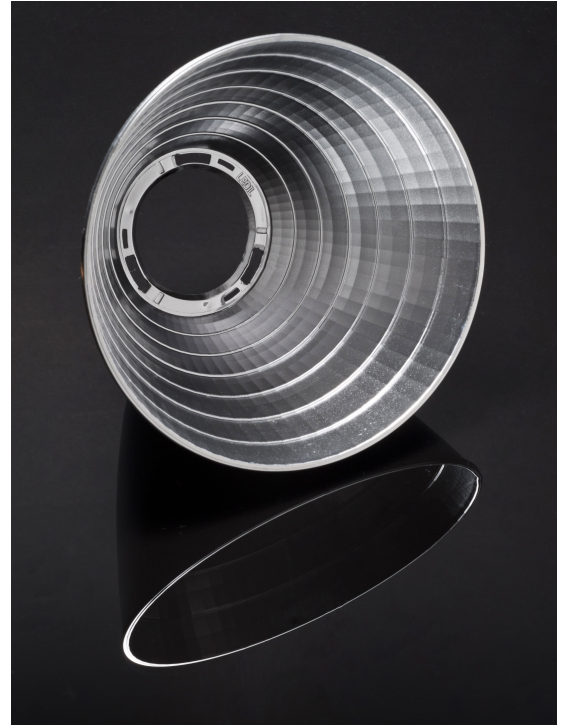


## ANGELA-M

~30° medium beam

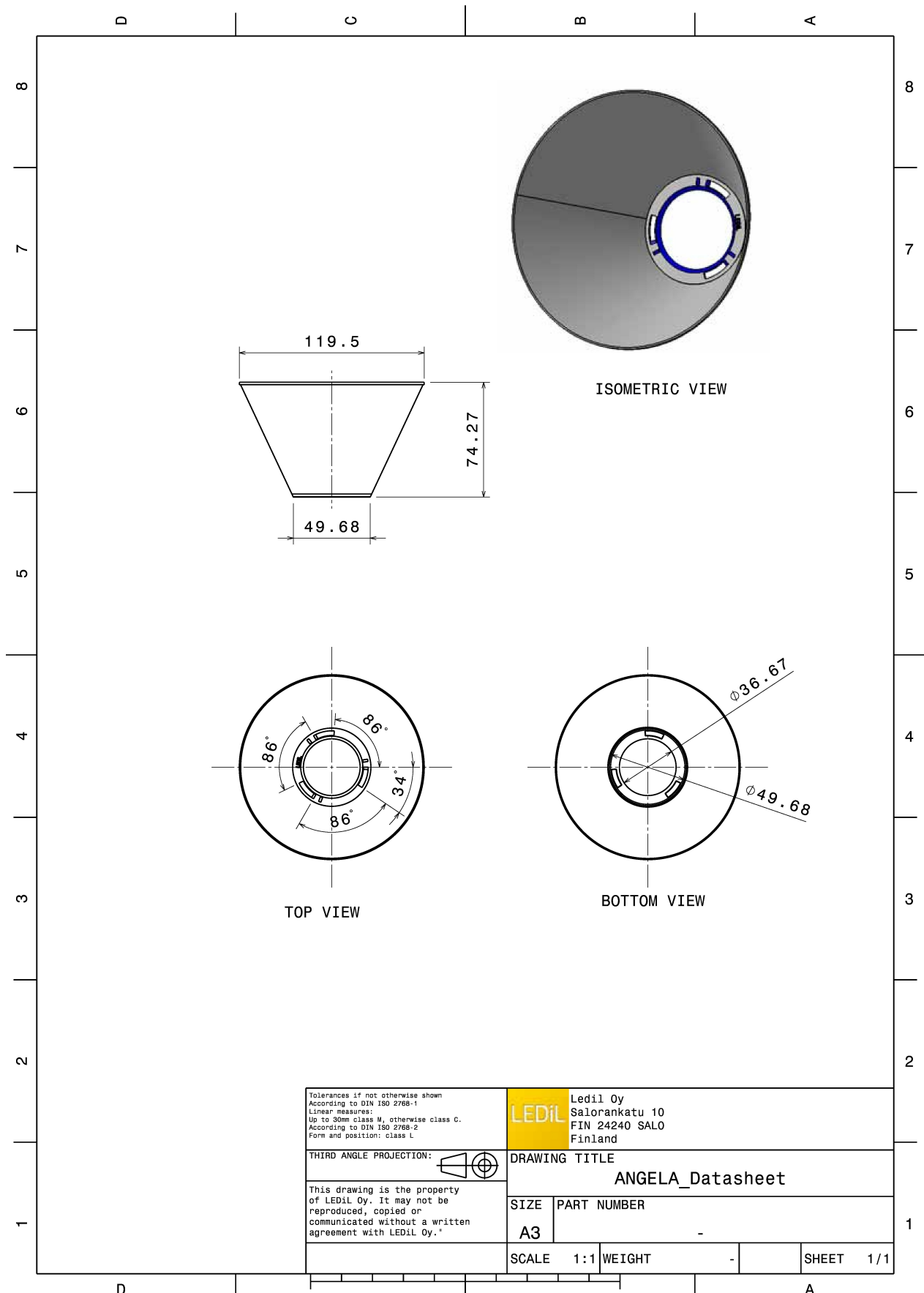
### TECHNICAL SPECIFICATIONS:

Dimensions	Ø 119.5 mm
Height	74.3 mm
Fastening	socket
Colour	metal
Box size	398 x 298 x 265 mm
Box weight	9.3 kg
Quantity in Box	180 pcs
ROHS compliant	yes ⓘ


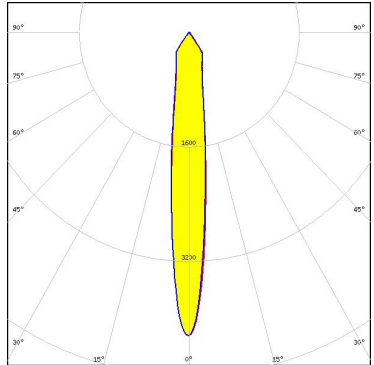

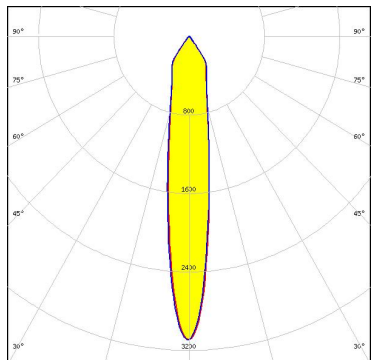

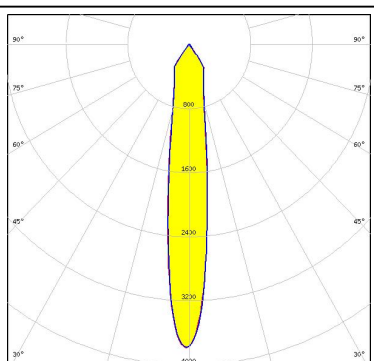

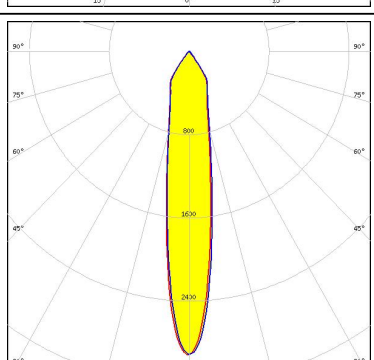


### MATERIAL SPECIFICATIONS:



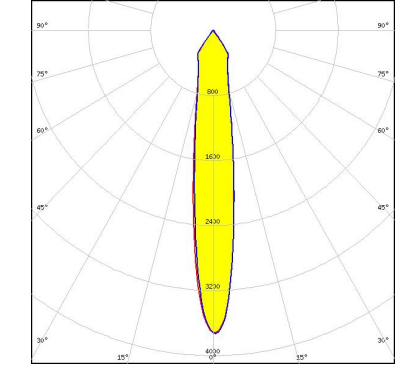

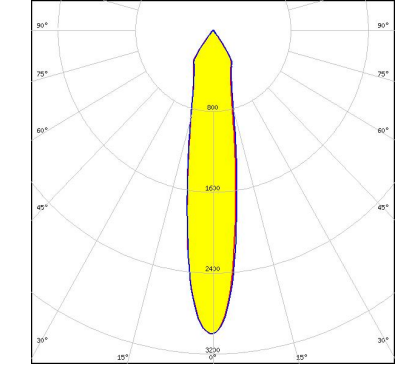

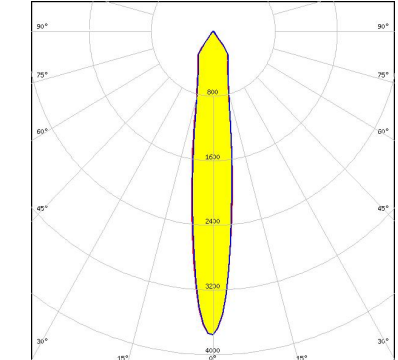
Component	Type	Material	Colour	Coating
ANGELA-M	Reflector	PC	metal	HMDS



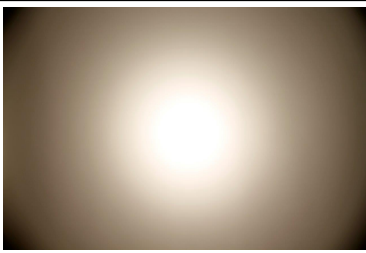
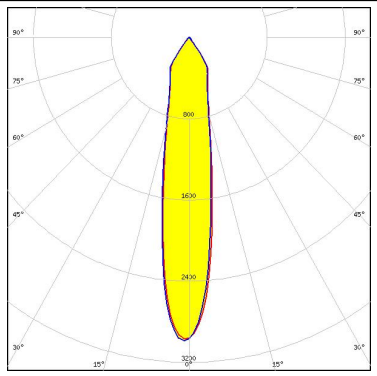
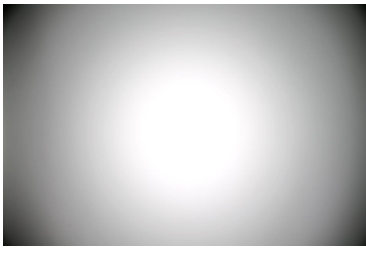
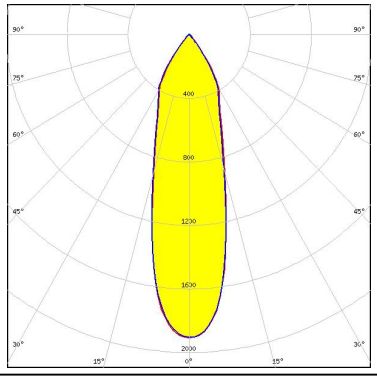

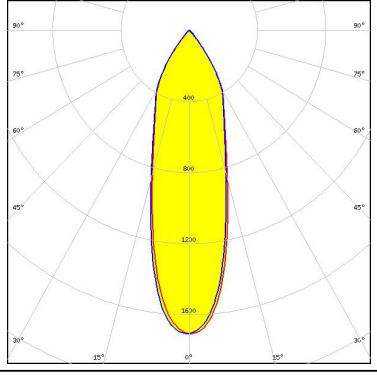

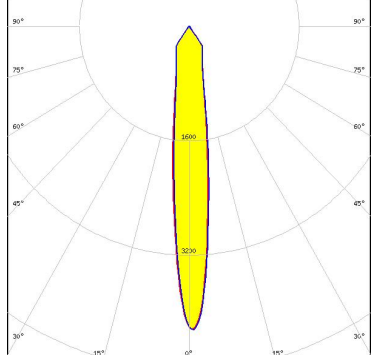
#### PHOTOMETRIC DATA (MEASURED):

<p>bridgelux.</p> <p>LED V10 Gen7            FWHM 14.0°            Efficiency 83 %            Peak intensity 4.200 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 434 Typ L1</p>		
<p>bridgelux.</p> <p>LED V10 Gen7            FWHM 16.0°            Efficiency 78 %            Peak intensity 3.100 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>bridgelux.</p> <p>LED V13 Gen7            FWHM 16.0°            Efficiency 84 %            Peak intensity 3.800 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p>bridgelux.</p> <p>LED V13 Gen7            FWHM 18.0°            Efficiency 80 %            Peak intensity 2.900 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGE-RZ-LENS            TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

#### PHOTOMETRIC DATA (MEASURED):

<p>bridgelux.</p> <p>LED V15 Gen6</p> <p>FWHM 17.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 3.900 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 456 Typ L2</p>		
<p>bridgelux.</p> <p>LED Vero SE 13</p> <p>FWHM 16.0°</p> <p>Efficiency 84 %</p> <p>Peak intensity 3.700 cd/lm</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 19.0°</p> <p>Efficiency 84 %</p> <p>Peak intensity 3.000 cd/lm</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 VERO13</p> <p>FWHM 16.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 3.600 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18</p>		

#### PHOTOMETRIC DATA (MEASURED):

<p>bridgelux.</p> <p>LED VERO18            FWHM 19.0°            Efficiency 85 %            Peak intensity 3.000 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18</p>		
<p>bridgelux.</p> <p>LED VERO29            FWHM 29.0°            Efficiency 85 %            Peak intensity 1.900 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13584_CLAMP-VERO29</p>		
<p>bridgelux.</p> <p>LED VERO29            FWHM 30.0°            Efficiency 79 %            Peak intensity 1.710 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13584_CLAMP-VERO29            F13671_ANGE-RZ-LENS</p>		
<p><b>CITIZEN</b></p> <p>LED CLL02x/CLU02x (LES10)            FWHM 14.0°            Efficiency 84 %            Peak intensity 4.300 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 434 Typ L1</p>		

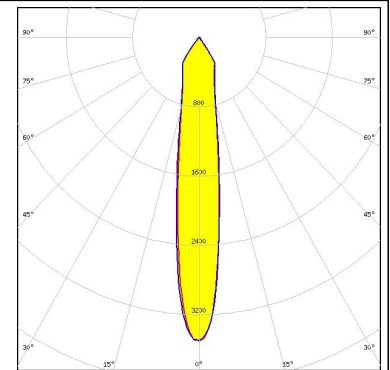
#### PHOTOMETRIC DATA (MEASURED):

#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 17.0°  
 Efficiency 83 %  
 Peak intensity 3.500 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

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

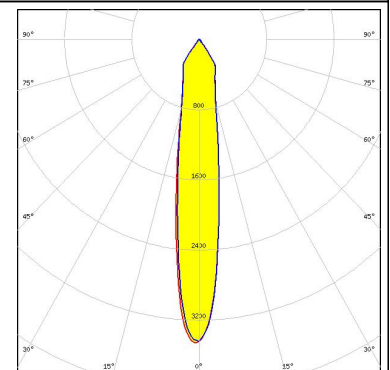
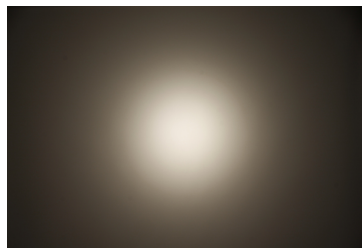


#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 17.0°  
 Efficiency 88 %  
 Peak intensity 3.400 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

C13658\_CLAMP-VERO13-18  
 Bender Wirth: 433 Typ L1

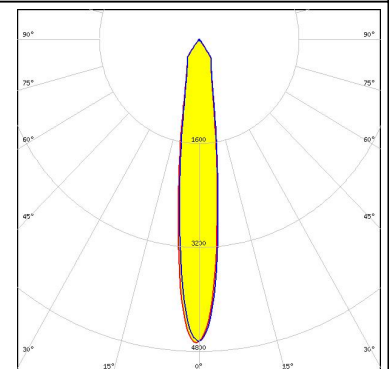
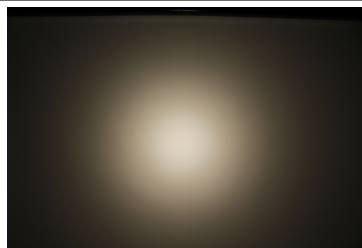


#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 15.0°  
 Efficiency 89 %  
 Peak intensity 4.700 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

C16791\_CLAMP-Z45-A  
 TE: 2325807-3

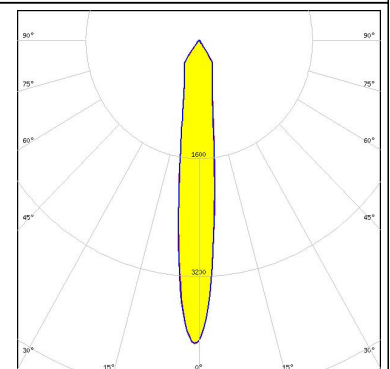
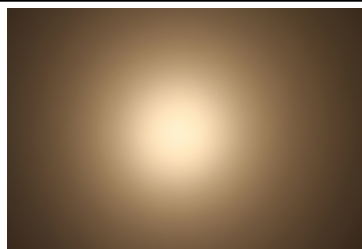


#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 14.0°  
 Efficiency 84 %  
 Peak intensity 4.100 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

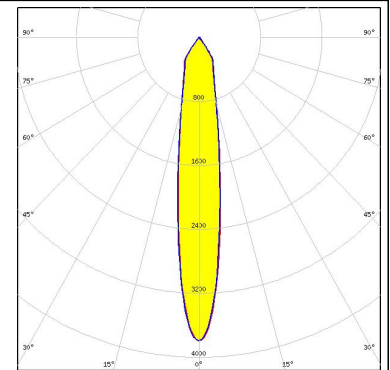
IDEAL: 50-2103CT + 50-2100AN



#### PHOTOMETRIC DATA (MEASURED):

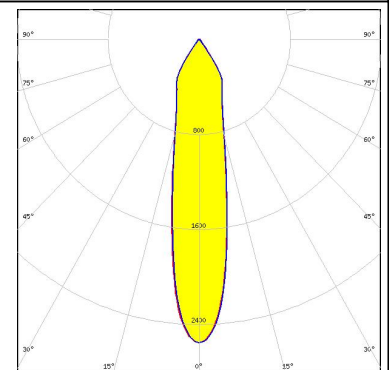
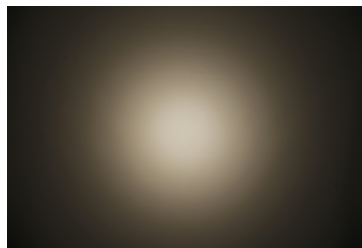
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 17.0°  
 Efficiency 85 %  
 Peak intensity 3.800 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16791\_CLAMP-Z45-A  
 F13671\_ANGE-RZ-LENS  
 TE: 2325807-3



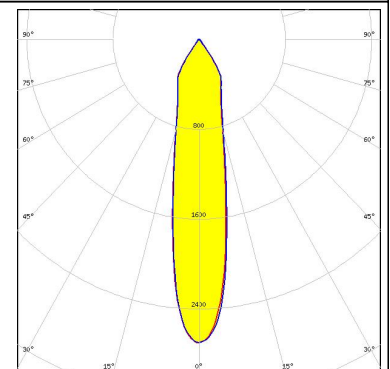
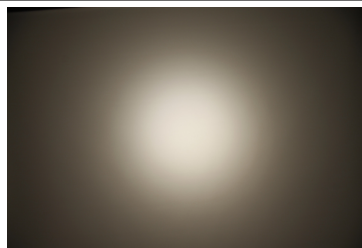
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM 21.0°  
 Efficiency 83 %  
 Peak intensity 2.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN



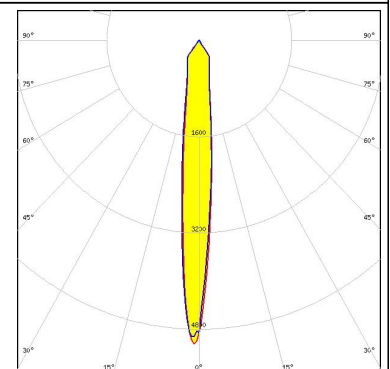
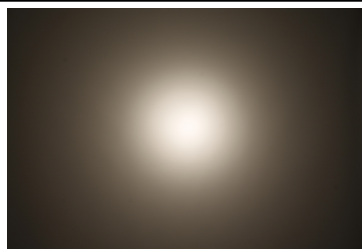
#### CITIZEN

LED CLL04x/CLU04x  
 FWHM 21.0°  
 Efficiency 84 %  
 Peak intensity 2.700 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 431 Typ L3



#### CITIZEN

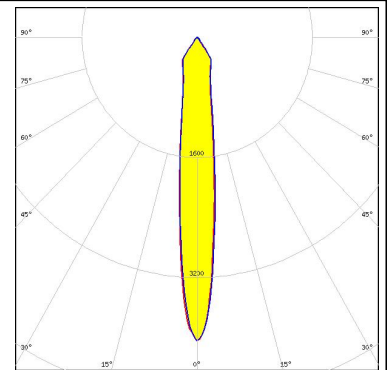
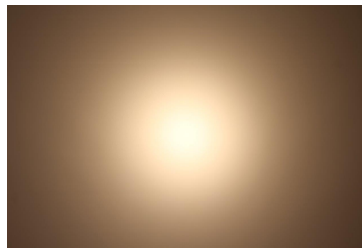
LED CLU700/701  
 FWHM 12.0°  
 Efficiency 83 %  
 Peak intensity 5.200 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 434 Typ L1



#### PHOTOMETRIC DATA (MEASURED):

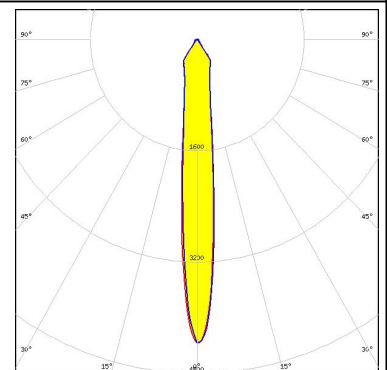
#### CITIZEN

LED CLU720/721  
 FWHM 14.0°  
 Efficiency 87 %  
 Peak intensity 4.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



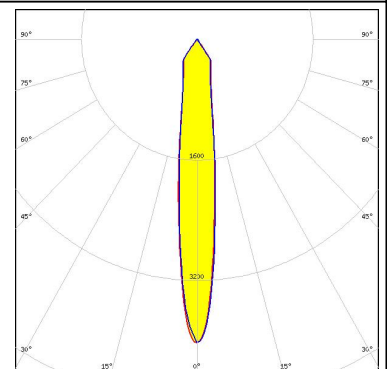
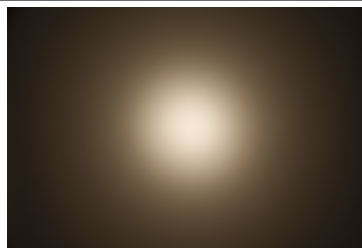
#### CITIZEN

LED CLU720/721  
 FWHM 12.0°  
 Efficiency 87 %  
 Peak intensity 4.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2103CT + 50-2100AN



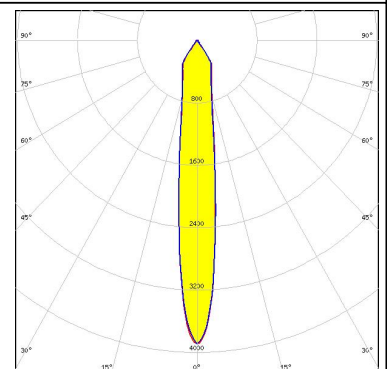
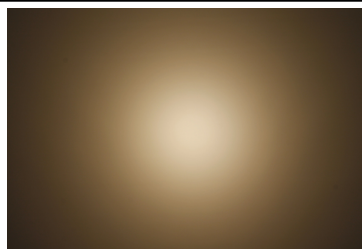
#### CITIZEN

LED CLU720/721  
 FWHM 14.0°  
 Efficiency 83 %  
 Peak intensity 4.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 433 Typ L1



#### CITIZEN

LED CLU730/731  
 FWHM 14.0°  
 Efficiency 83 %  
 Peak intensity 3.900 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2103CT + 50-2100AN

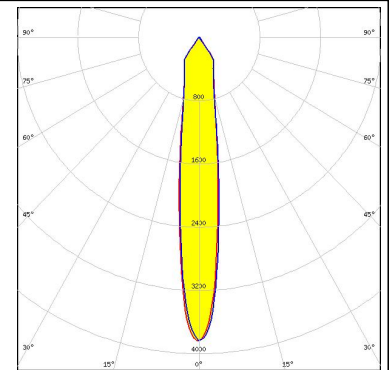




#### PHOTOMETRIC DATA (MEASURED):

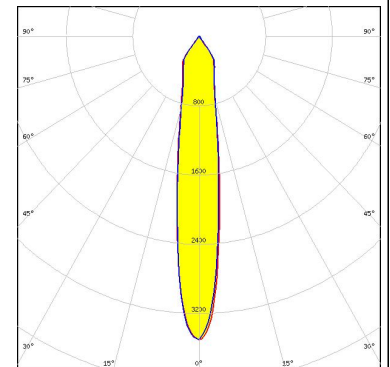
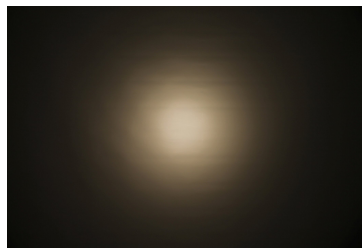
#### CITIZEN

LED CLU730/731  
 FWHM 15.0°  
 Efficiency 84 %  
 Peak intensity 3.800 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 471 Typ L3



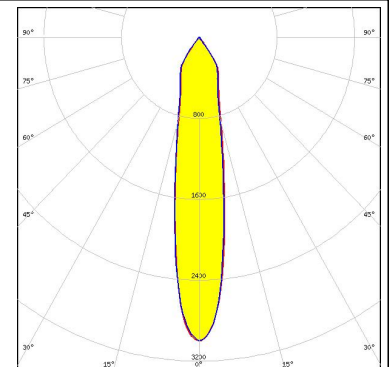
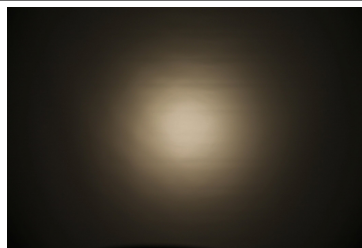
#### CREE

LED CMA1840  
 FWHM 17.0°  
 Efficiency 82 %  
 Peak intensity 3.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18



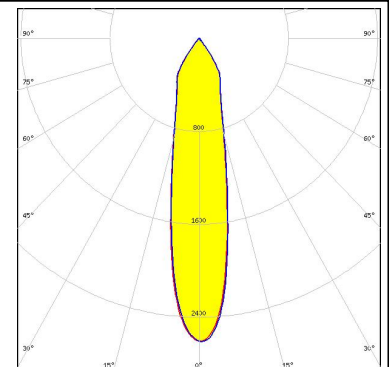
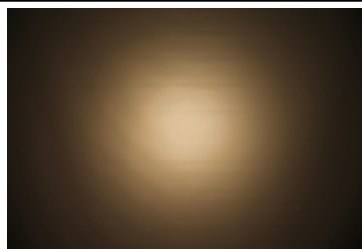
#### CREE

LED CMA2550  
 FWHM 19.0°  
 Efficiency 82 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



#### CREE

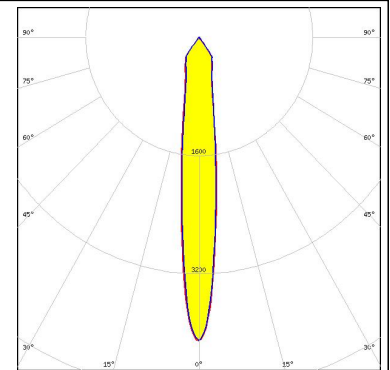
LED CMA3090  
 FWHM 22.0°  
 Efficiency 82 %  
 Peak intensity 2.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



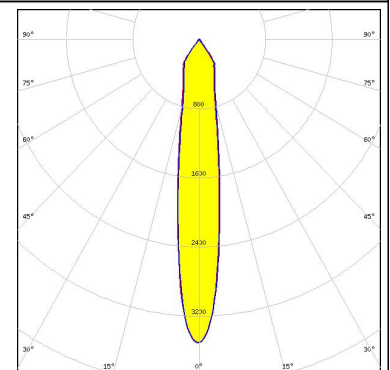
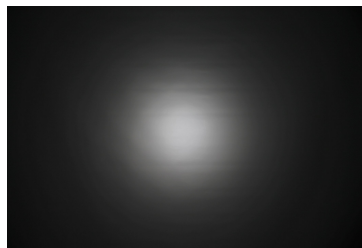
#### PHOTOMETRIC DATA (MEASURED):



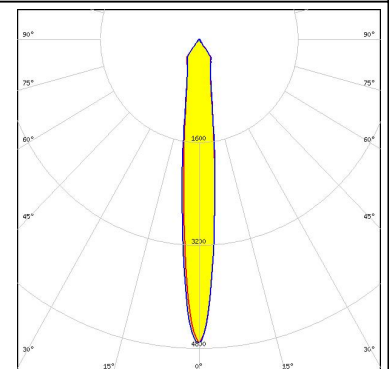
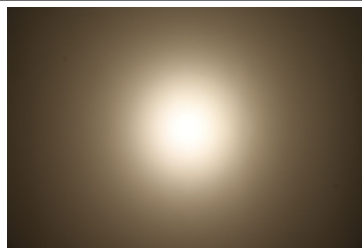
LED CMT14xx  
 FWHM 14.0°  
 Efficiency 81 %  
 Peak intensity 4.150 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 434 Typ L1



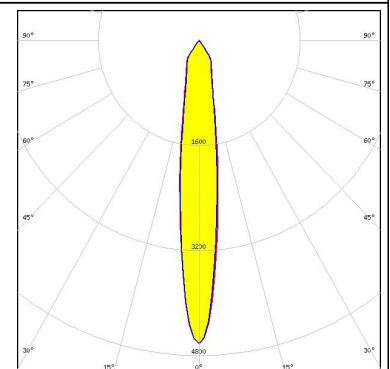
LED CMT19xx  
 FWHM 16.0°  
 Efficiency 81 %  
 Peak intensity 3.509 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 477 Typ L1



LED CXA/B 15xx  
 FWHM 13.0°  
 Efficiency 84 %  
 Peak intensity 4.700 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 441 Typ L1



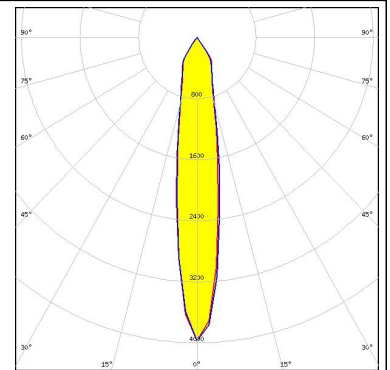
LED CXA/B 15xx  
 FWHM 15.0°  
 Efficiency 85 %  
 Peak intensity 4.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18



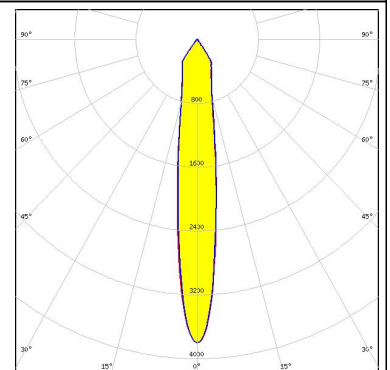
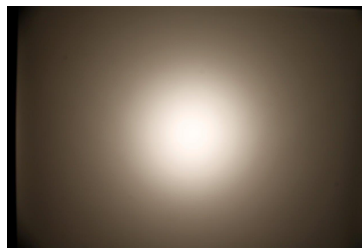
#### PHOTOMETRIC DATA (MEASURED):



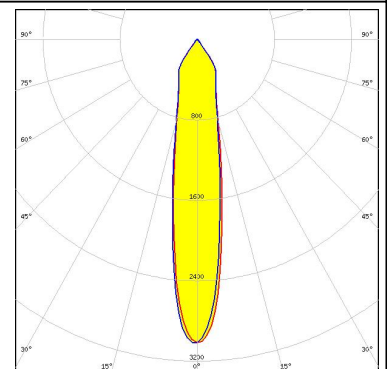
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM 17.0°  
 Efficiency 85 %  
 Peak intensity 4.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18



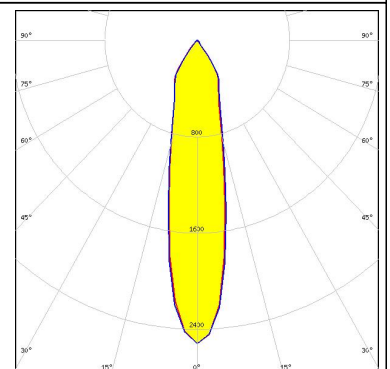
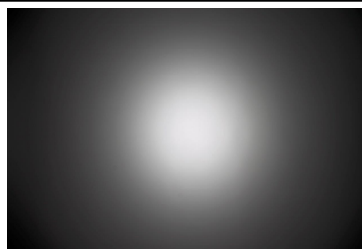
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM 15.0°  
 Efficiency 83 %  
 Peak intensity 3.800 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 437 Typ L1



LED CXA/B 25xx  
 FWHM 19.0°  
 Efficiency 85 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



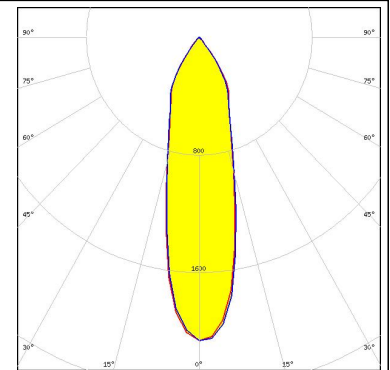
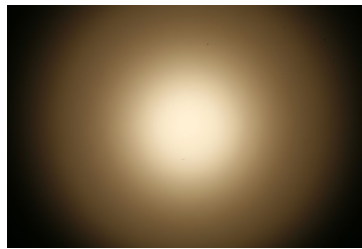
LED CXA/B 30xx  
 FWHM 22.0°  
 Efficiency 84 %  
 Peak intensity 2.520 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



#### PHOTOMETRIC DATA (MEASURED):

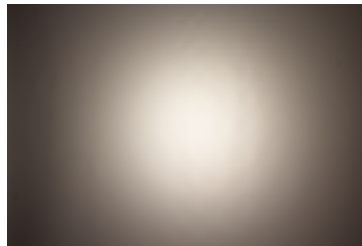
#### CREE

LED CXA/B 3590  
 FWHM 27.0°  
 Efficiency 85 %  
 Peak intensity 2.070 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2303CR + 50-2300AN



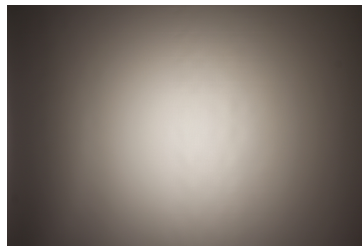
#### EVERLIGHT

LED CHI3030 19W  
 FWHM 21.0°  
 Efficiency 83 %  
 Peak intensity 2.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 468 Typ L3



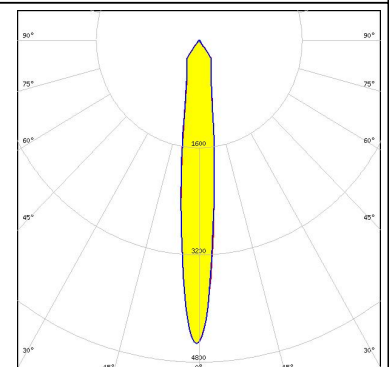
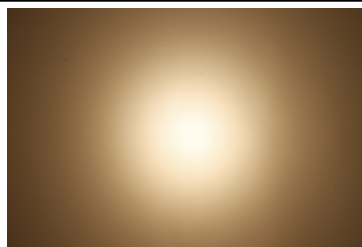
#### EVERLIGHT

LED CHI3030 29W  
 FWHM 26.0°  
 Efficiency 83 %  
 Peak intensity 2.300 cd/lm  
 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 13.0°  
 Efficiency 84 %  
 Peak intensity 4.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 438 Typ L1



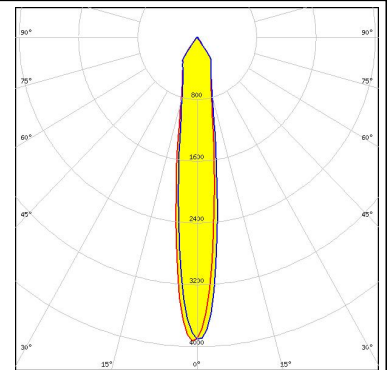
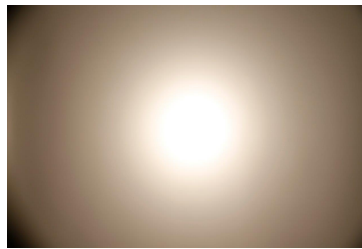
#### PHOTOMETRIC DATA (MEASURED):

##### LUMILEDS

LED LUXEON CoB 1204/1205  
 FWHM 15.0°  
 Efficiency 85 %  
 Peak intensity 3.930 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

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

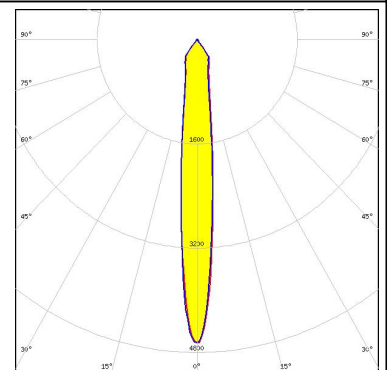
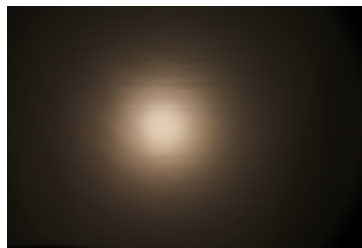


##### LUMILEDS

LED LUXEON CoB 1204HD  
 FWHM 12.0°  
 Efficiency 81 %  
 Peak intensity 4.700 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

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

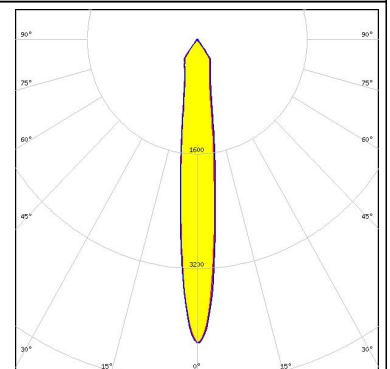
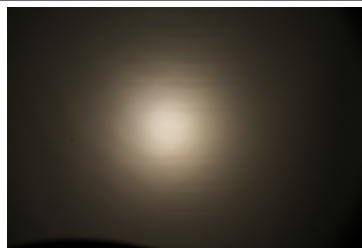


##### LUMILEDS

LED LUXEON CoB 1205HD  
 FWHM 14.0°  
 Efficiency 81 %  
 Peak intensity 4.300 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

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

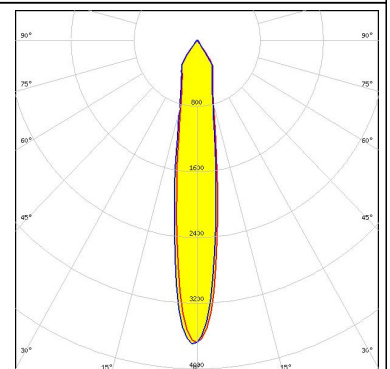
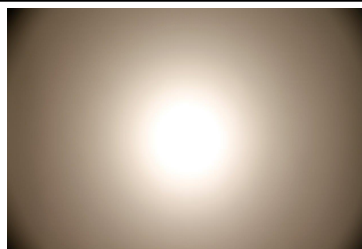


##### LUMILEDS

LED LUXEON CoB 1208  
 FWHM 16.0°  
 Efficiency 85 %  
 Peak intensity 3.700 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

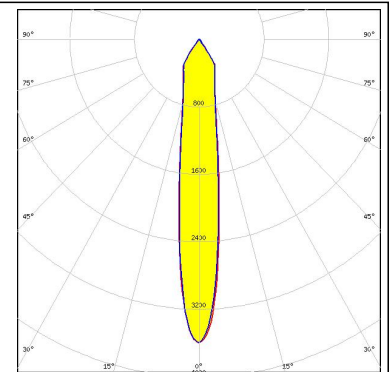
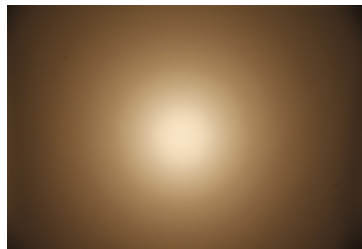
TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### PHOTOMETRIC DATA (MEASURED):

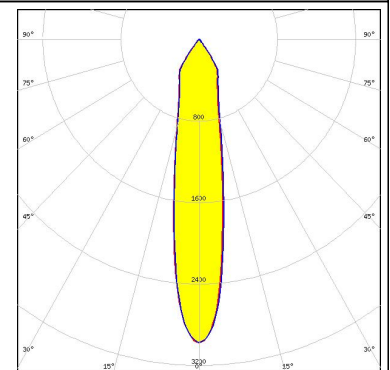
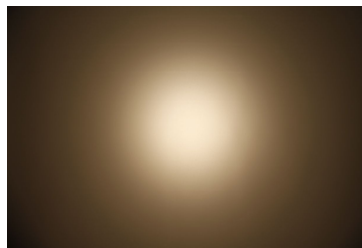
#### LUMILEDS

LED LUXEON CoB 1208  
 FWHM 16.0°  
 Efficiency 83 %  
 Peak intensity 3.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2100SH + 50-2100AN



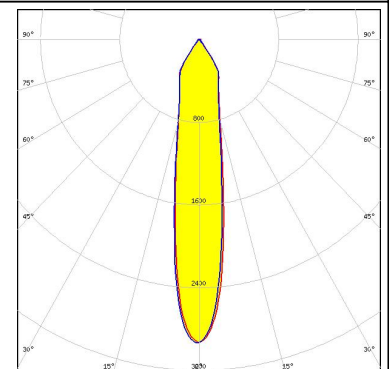
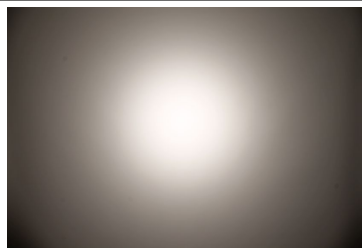
#### LUMILEDS

LED LUXEON CoB 1211  
 FWHM 19.0°  
 Efficiency 85 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 431 Typ L3



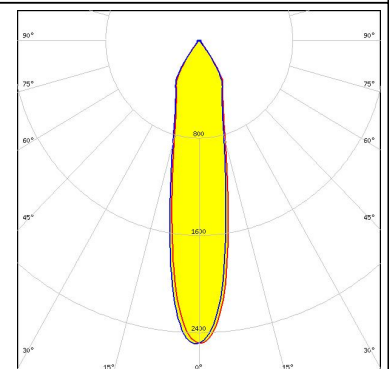
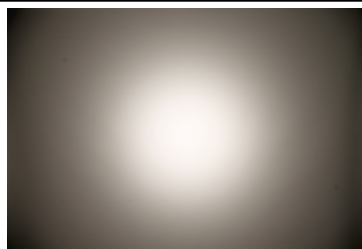
#### LUMILEDS

LED LUXEON CoB 1211  
 FWHM 19.0°  
 Efficiency 83 %  
 Peak intensity 2.900 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN



#### LUMILEDS

LED LUXEON CoB 1216/1812  
 FWHM 22.0°  
 Efficiency 83 %  
 Peak intensity 2.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN



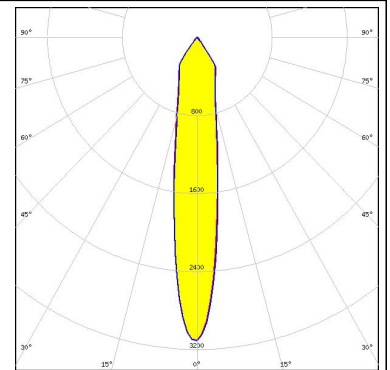
#### PHOTOMETRIC DATA (MEASURED):

##### LUMILEDS

LED LUXEON K12  
 FWHM 17.0°  
 Efficiency 83 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

F13671\_ANGE-RZ-LENS  
 TE: 2213134-2 + OPTIC CLIP Z50 TYPE1 2213194-1

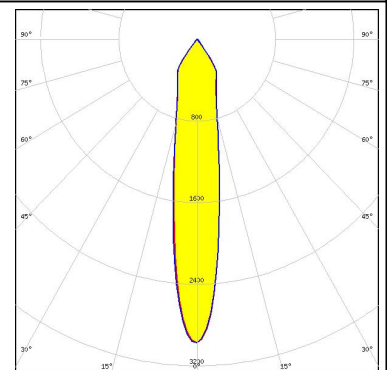
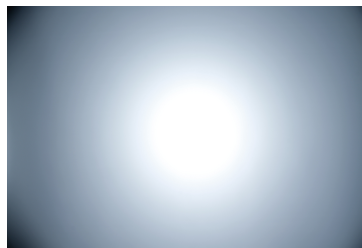


##### LUMILEDS

LED LUXEON K16  
 FWHM 18.0°  
 Efficiency 84 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

F13671\_ANGE-RZ-LENS  
 TE: 2213134-2 + OPTIC CLIP Z50 TYPE1 2213194-1

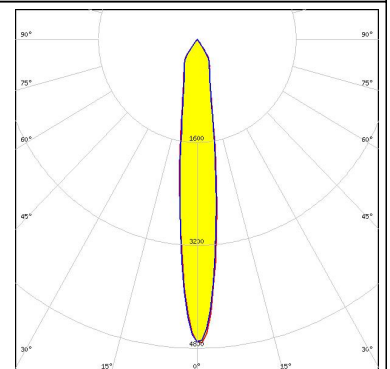
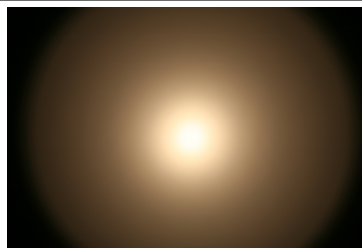


##### LUMILEDS

LED LUXEON S2000  
 FWHM 15.0°  
 Efficiency 85 %  
 Peak intensity 4.700 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

C13395\_CLAMP-S2000

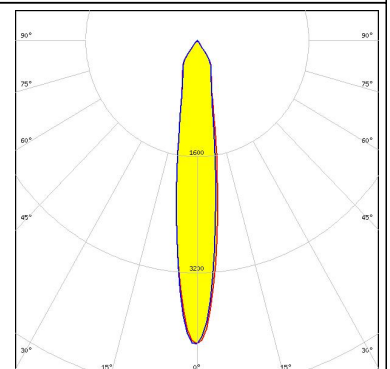
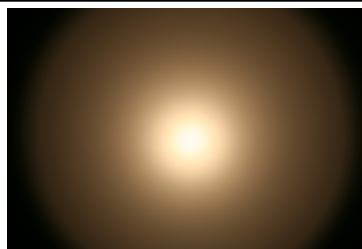


##### LUMILEDS

LED LUXEON S3000  
 FWHM 16.0°  
 Efficiency 85 %  
 Peak intensity 4.200 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

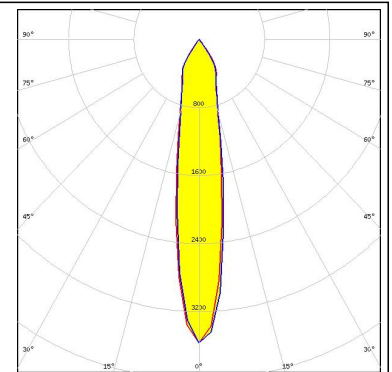
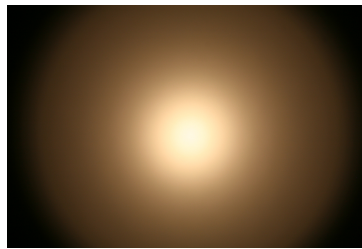
C13397\_CLAMP-S3000



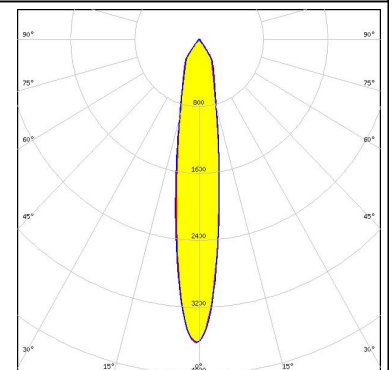
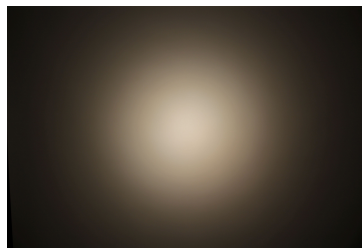
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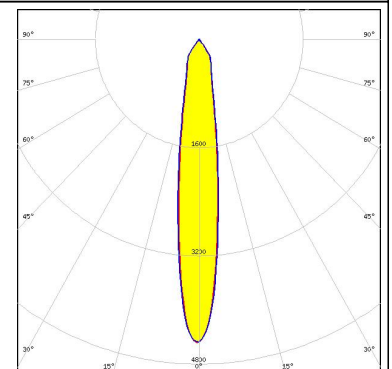
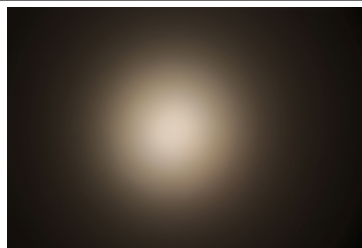
LED LUXEON S5000  
 FWHM 19.0°  
 Efficiency 86 %  
 Peak intensity 3.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13399\_CLAMP-S5000



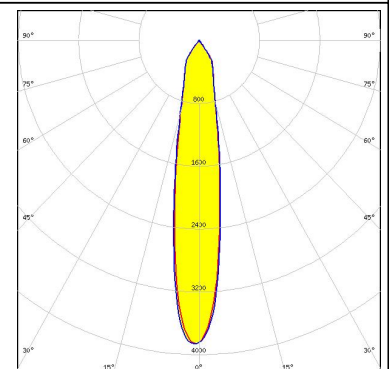
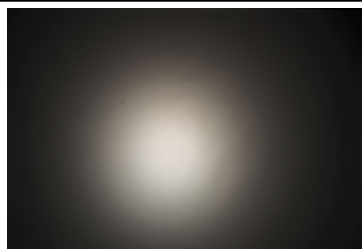
LED CDM-14 (Dim-To-Warm)  
 FWHM 17.0°  
 Efficiency 83 %  
 Peak intensity 3.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 486 Typ L5



LED CDM-14 (Dim-To-Warm)  
 FWHM 16.0°  
 Efficiency 87 %  
 Peak intensity 4.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 491 Typ L2



LED CDM-18 (Dim-To-Warm)  
 FWHM 18.0°  
 Efficiency 87 %  
 Peak intensity 3.900 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 491 Typ L2

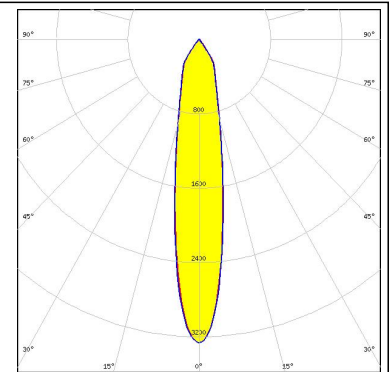




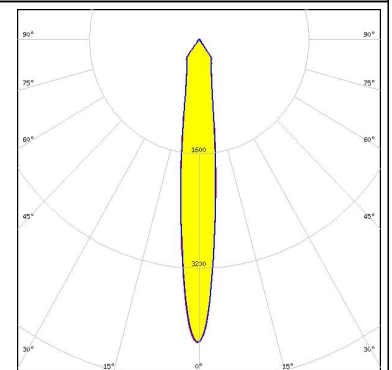
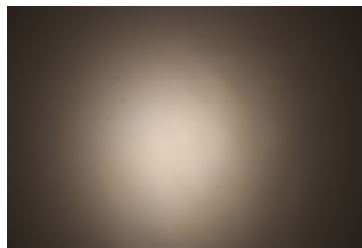
#### PHOTOMETRIC DATA (MEASURED):



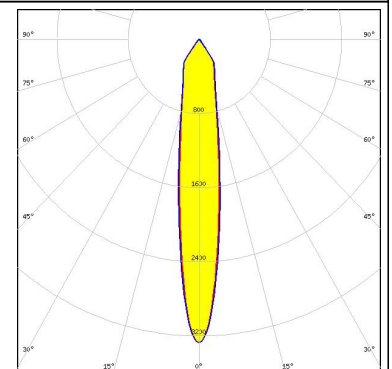
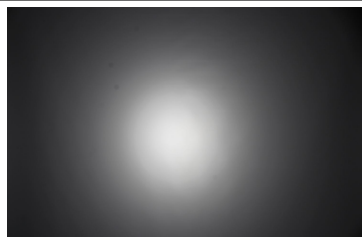
LED CDM-18 (Dim-To-Warm)  
 FWHM 19.0°  
 Efficiency 83 %  
 Peak intensity 3.300 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 491 Typ L2



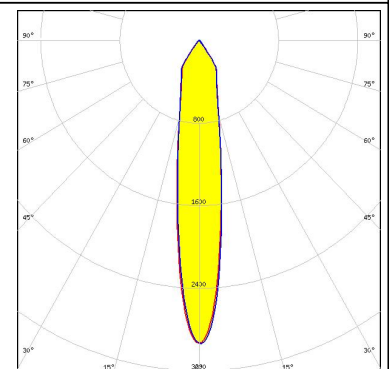
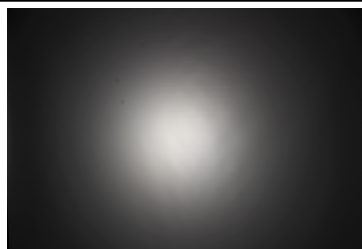
LED CDM-9 (Dim-To-Warm)  
 FWHM 14.0°  
 Efficiency 82 %  
 Peak intensity 4.200 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 490 Typ L1



LED CDM-9 (Dim-To-Warm)  
 FWHM 16.0°  
 Efficiency 78 %  
 Peak intensity 3.300 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 490 Typ L1



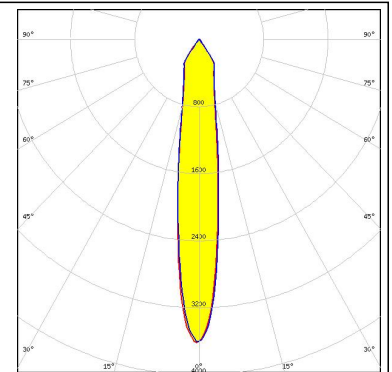
LED CTM-14 (Tunable White)  
 FWHM 18.0°  
 Efficiency 78 %  
 Peak intensity 2.900 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 442 Typ L3



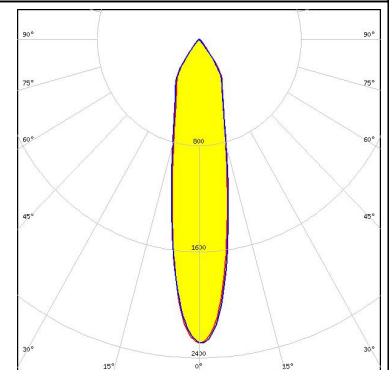
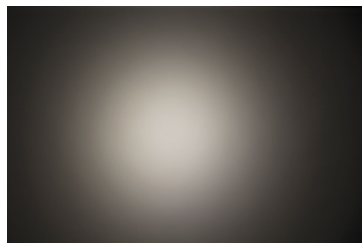
#### PHOTOMETRIC DATA (MEASURED):



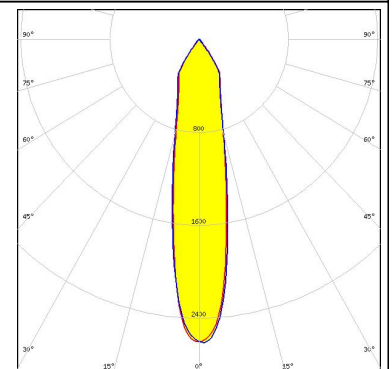
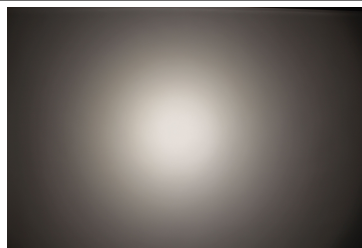
LED CTM-14 (Tunable White)  
 FWHM 16.0°  
 Efficiency 82 %  
 Peak intensity 3.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 442 Typ L3



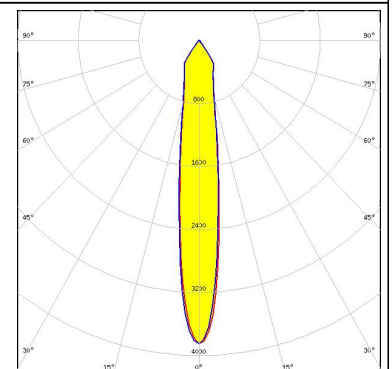
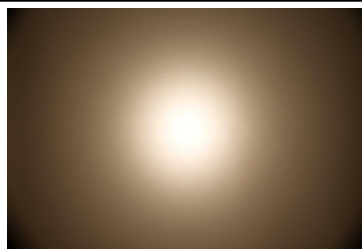
LED CTM-22 (Tunable White)  
 FWHM 22.0°  
 Efficiency 77 %  
 Peak intensity 2.300 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 494 Typ L3



LED CTM-22 (Tunable White)  
 FWHM 21.0°  
 Efficiency 82 %  
 Peak intensity 2.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 494 Typ L3



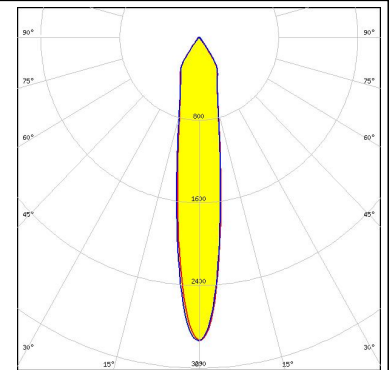
LED CxM-14 (19x19)  
 FWHM 16.0°  
 Efficiency 85 %  
 Peak intensity 3.860 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



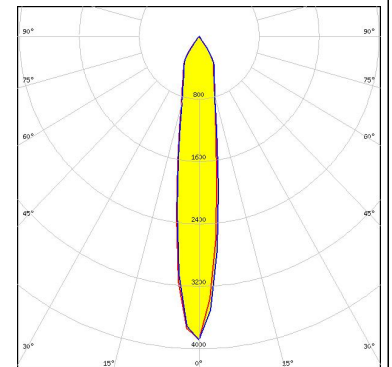
#### PHOTOMETRIC DATA (MEASURED):



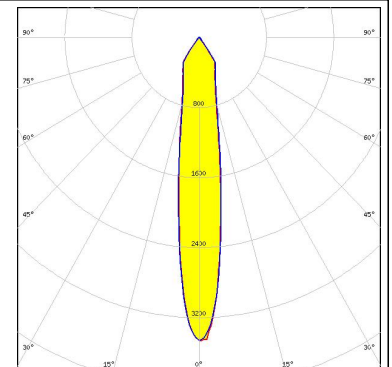
LED COB J-Type  
 FWHM 17.0°  
 Efficiency 80 %  
 Peak intensity 2.900 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 IDEAL: 50-2103NC + 50-2100AN



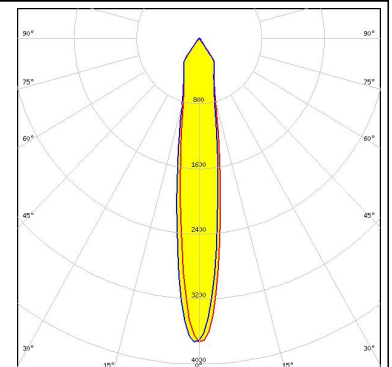
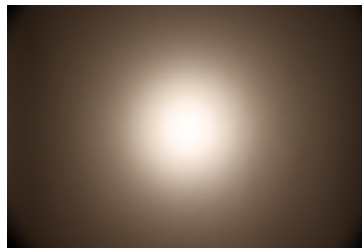
LED COB J-Type  
 FWHM 17.0°  
 Efficiency 83 %  
 Peak intensity 3.890 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2103NC + 50-2100AN



LED COB J-Type  
 FWHM 17.0°  
 Efficiency 83 %  
 Peak intensity 3.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 463 Typ L2



LED COB L-Type (LES 11)  
 FWHM 16.0°  
 Efficiency 86 %  
 Peak intensity 3.740 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 Molex: 180580-0005



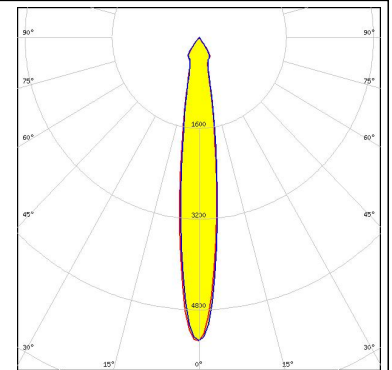
#### PHOTOMETRIC DATA (MEASURED):



LED COB L-Type (LES 11)  
 FWHM 15.0°  
 Efficiency 84 %  
 Peak intensity 5.350 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

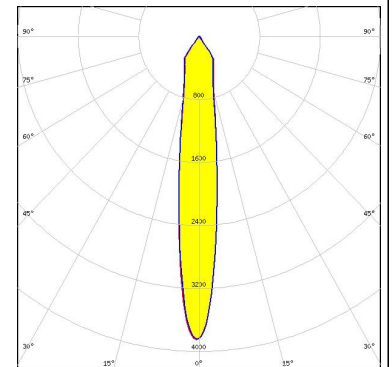
TE: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1



LED COB L-Type (LES 11)  
 FWHM 15.0°  
 Efficiency 83 %  
 Peak intensity 3.900 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

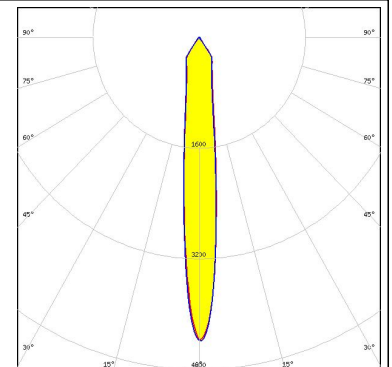
C13658\_CLAMP-VERO13-18  
 Bender Wirth: 438 Typ L1



LED COB L-Type (LES 11)  
 FWHM 13.0°  
 Efficiency 82 %  
 Peak intensity 4.400 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

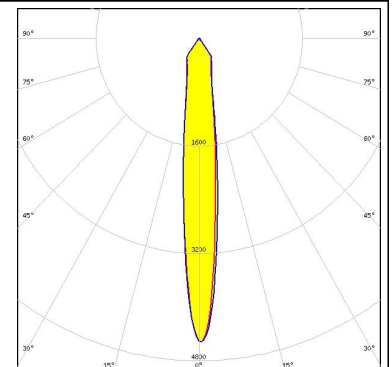
IDEAL: 50-2100NC + 50-2100AN




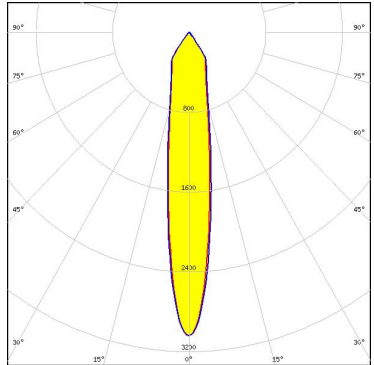
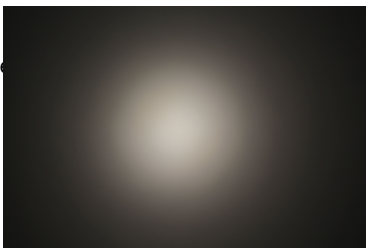
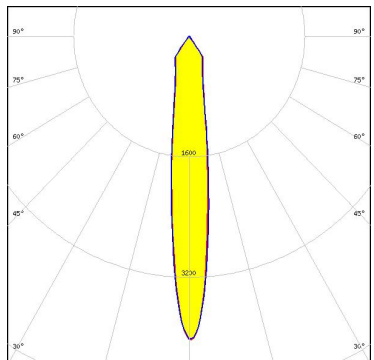
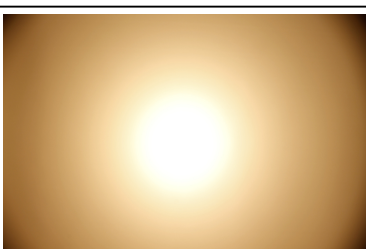
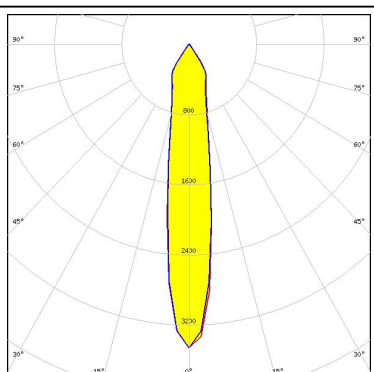
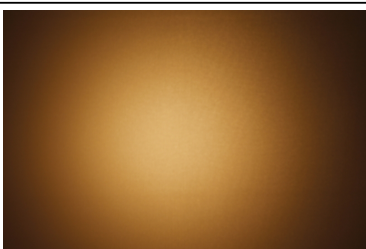
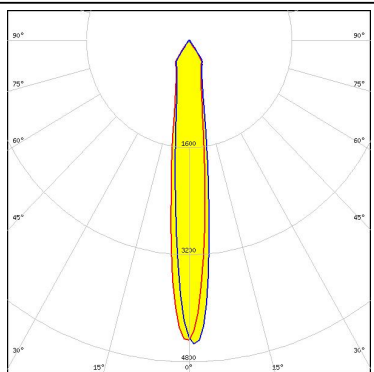
LED COB L-Type (LES 9)  
 FWHM 13.0°  
 Efficiency 85 %  
 Peak intensity 4.500 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

C13658\_CLAMP-VERO13-18  
 Bender Wirth: 438 Typ L1



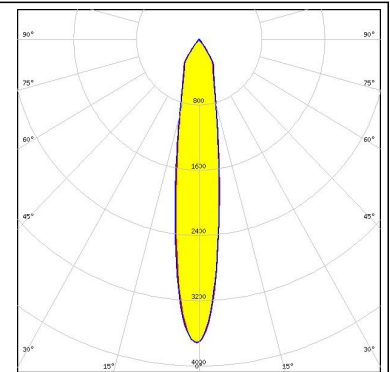
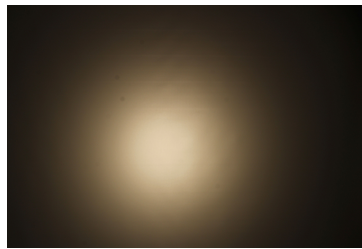
#### PHOTOMETRIC DATA (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM 17.0°</p> <p>Efficiency 78 %</p> <p>Peak intensity 3.000 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 14.0°</p> <p>Efficiency 83 %</p> <p>Peak intensity 4.000 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>		
<p><b>OSRAM</b></p> <p>LED PrevaLED Core AC (LEP-2000)</p> <p>FWHM 17.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 3.470 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:            TE: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>OSRAM</b></p> <p>LED PrevaLED Core AC (LEP-800)</p> <p>FWHM 13.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 4.560 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:            TE: OPTIC CLIP Z50 TYPE1 2213194-1</p>		

#### PHOTOMETRIC DATA (MEASURED):

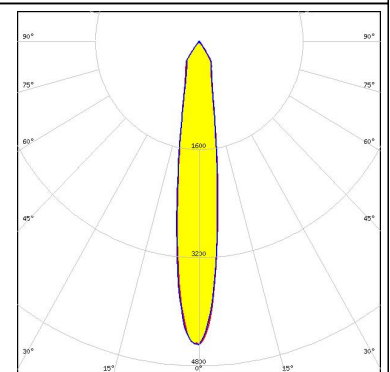
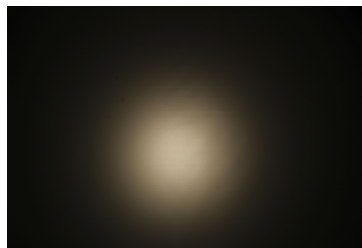
#### OSRAM

LED PrevaLED Core G7 L15 H1  
 FWHM 17.0°  
 Efficiency 85 %  
 Peak intensity 3.700 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16685\_CLAMP-PRV-A  
 F13671\_ANGE-RZ-LENS



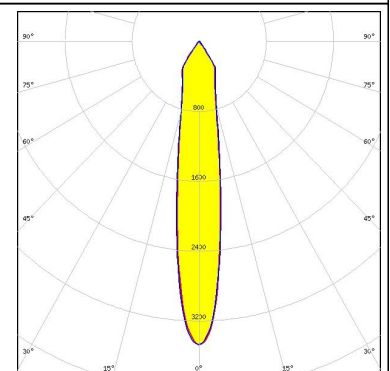
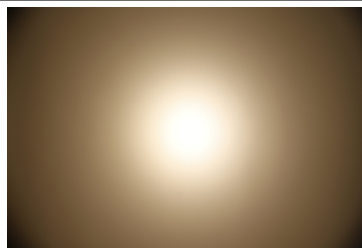
#### OSRAM

LED PrevaLED Core G7 L15 H1  
 FWHM 16.0°  
 Efficiency 89 %  
 Peak intensity 4.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16685\_CLAMP-PRV-A



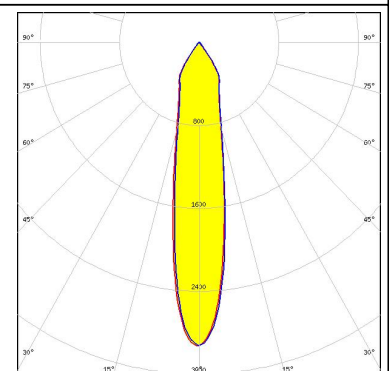
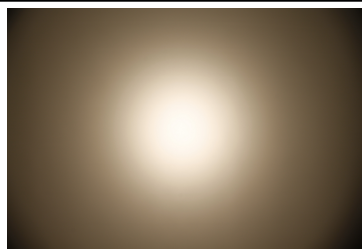
#### OSRAM

LED PrevaLED Core Z3 LES19  
 FWHM 17.0°  
 Efficiency 85 %  
 Peak intensity 3.470 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



#### OSRAM

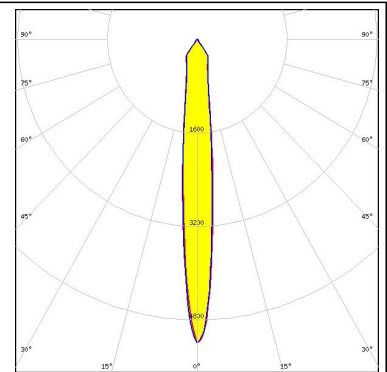
LED PrevaLED Core Z3 LES23  
 FWHM 20.0°  
 Efficiency 85 %  
 Peak intensity 2.930 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



#### PHOTOMETRIC DATA (MEASURED):

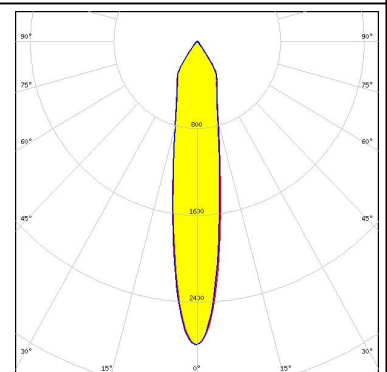
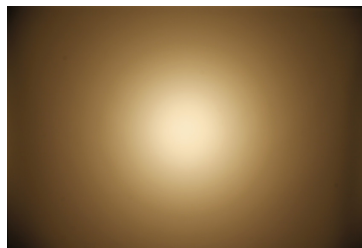
#### OSRAM

LED PrevaLED Core Z3 LES9  
 FWHM 12.0°  
 Efficiency 85 %  
 Peak intensity 5.190 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



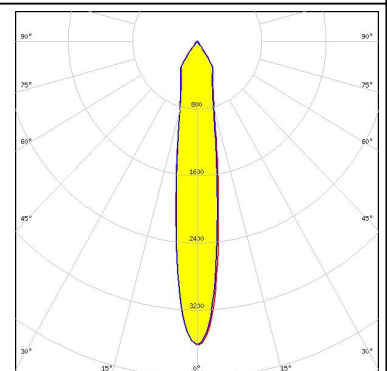
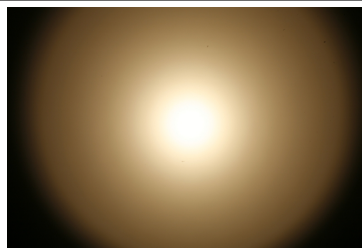
#### OSRAM

LED PrevaLED Core Z4 LES19  
 FWHM 19.0°  
 Efficiency 80 %  
 Peak intensity 2.800 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



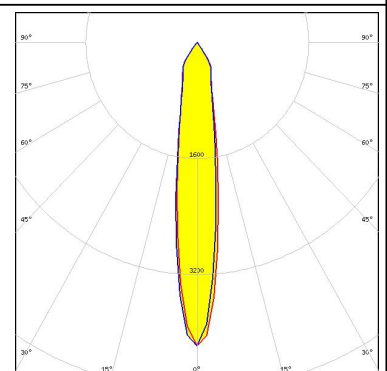
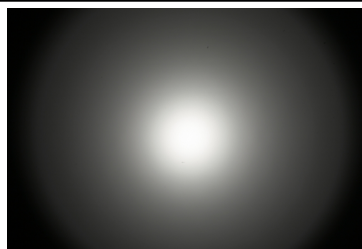
#### OSRAM

LED PrevaLED Core Z4 LES19  
 FWHM 16.0°  
 Efficiency 85 %  
 Peak intensity 3.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



#### OSRAM

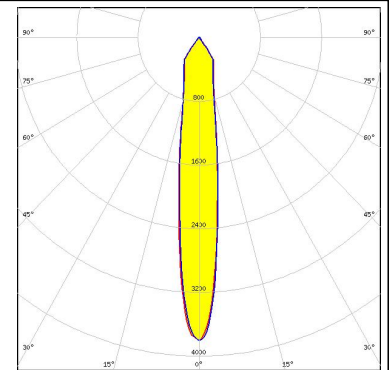
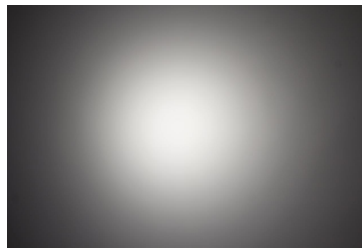
Opto Semiconductors  
 LED Soleriq S13  
 FWHM 15.0°  
 Efficiency 86 %  
 Peak intensity 4.200 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### PHOTOMETRIC DATA (MEASURED):

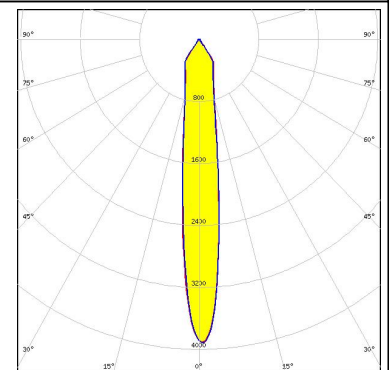
**OSRAM**  
Opto Semiconductors

LED Soleriq S13  
FWHM 15.0°  
Efficiency 83 %  
Peak intensity 3.800 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 437 Typ L1



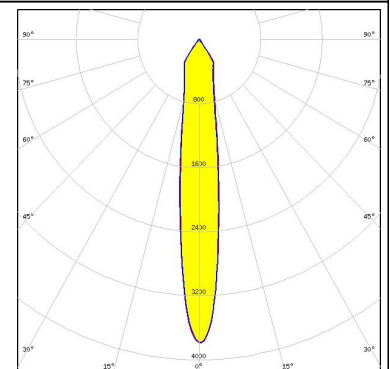
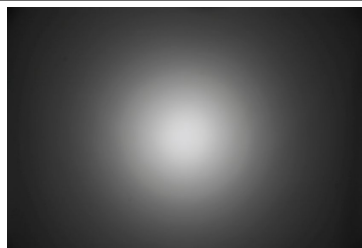
**OSRAM**  
Opto Semiconductors

LED Soleriq S13 19x19  
FWHM 14.0°  
Efficiency 82 %  
Peak intensity 3.900 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
IDEAL: 50-2103CT + 50-2100AN



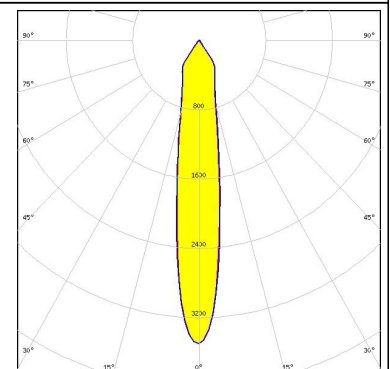
**OSRAM**  
Opto Semiconductors

LED Soleriq S13 19x19  
FWHM 15.0°  
Efficiency 82 %  
Peak intensity 3.800 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



**OSRAM**  
Opto Semiconductors

LED Soleriq S19  
FWHM 17.0°  
Efficiency 86 %  
Peak intensity 3.510 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
TE: 2213407-2 + OPTIC CLIP Z50 TYPE1 2213194-1



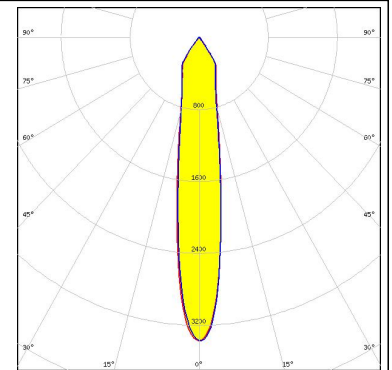


#### PHOTOMETRIC DATA (MEASURED):

#### OSRAM

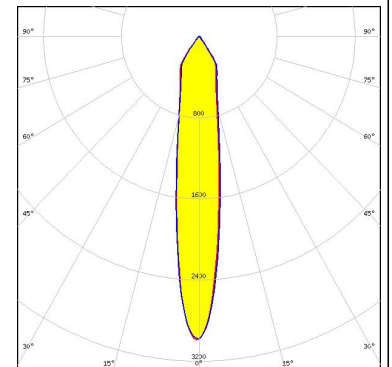
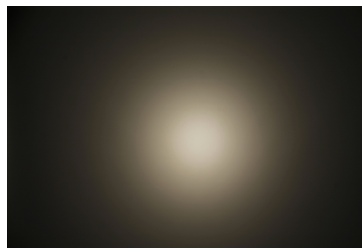
Opto Semiconductors

LED Soleriq S19  
 FWHM 17.0°  
 Efficiency 83 %  
 Peak intensity 3.400 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 462 Typ L3



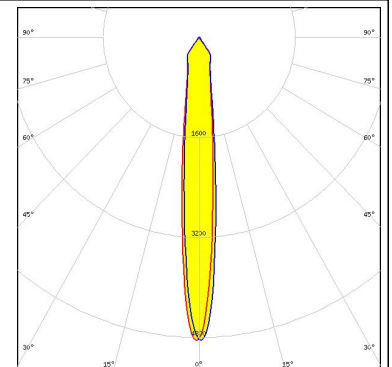
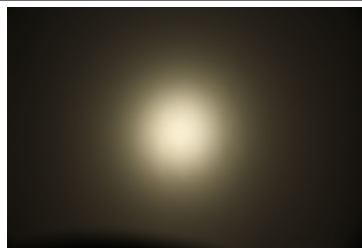
#### PHILIPS

LED Fortimo SLM 1208 L15 G6 Standard  
 FWHM 17.0°  
 Efficiency 78 %  
 Peak intensity 3.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



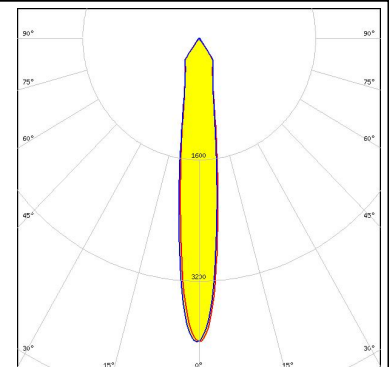
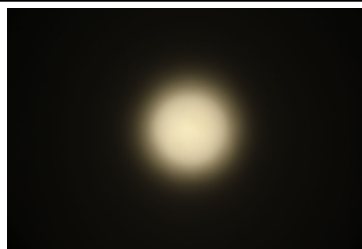
#### PHILIPS

LED Fortimo SLM L09 + SLM holder  
 FWHM 13.0°  
 Efficiency 84 %  
 Peak intensity 4.870 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



#### PHILIPS

LED Fortimo SLM L13 + SLM holder  
 FWHM 15.0°  
 Efficiency 84 %  
 Peak intensity 4.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1

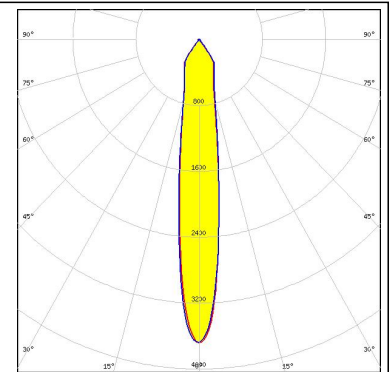


#### PHOTOMETRIC DATA (MEASURED):

#### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM 16.0°  
 Efficiency 81 %  
 Peak intensity 3.700 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

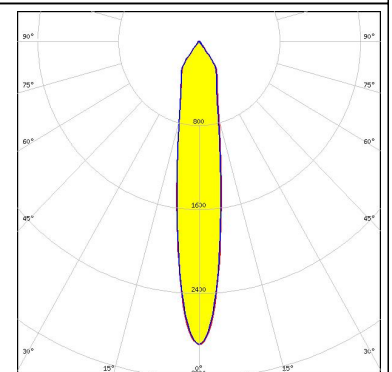
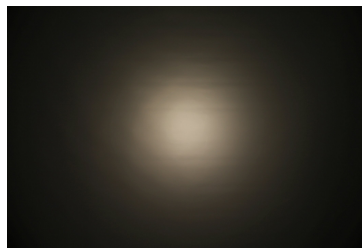
TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### PHILIPS

LED Fortimo SLM L13 CoB  
 FWHM 17.0°  
 Efficiency 76 %  
 Peak intensity 2.900 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

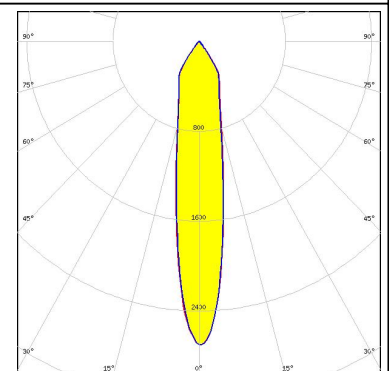
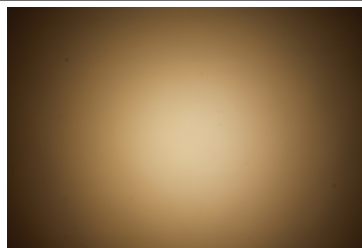
F13671\_ANGE-RZ-LENS  
 TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### PHILIPS

LED Fortimo SLM L15 + SLM holder  
 FWHM 19.0°  
 Efficiency 78 %  
 Peak intensity 2.700 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

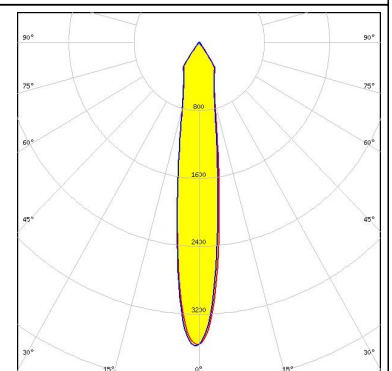
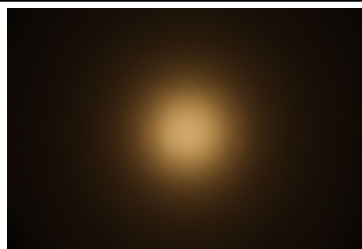
F13671\_ANGE-RZ-LENS  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



#### PHILIPS

LED Fortimo SLM L15 + SLM holder  
 FWHM 16.0°  
 Efficiency 82 %  
 Peak intensity 3.580 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

TE: OPTIC CLIP Z50 TYPE1 2213194-1



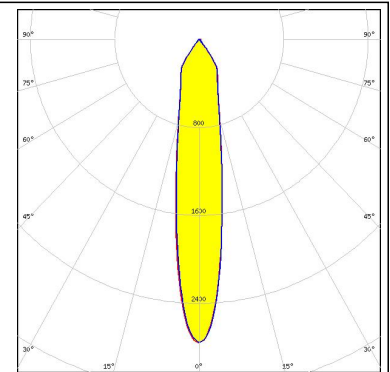
#### PHOTOMETRIC DATA (MEASURED):

### PHILIPS

LED Fortimo SLM L15 CoB  
FWHM 18.0°  
Efficiency 75 %  
Peak intensity 2.800 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

F13671\_ANGE-RZ-LENS  
TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1

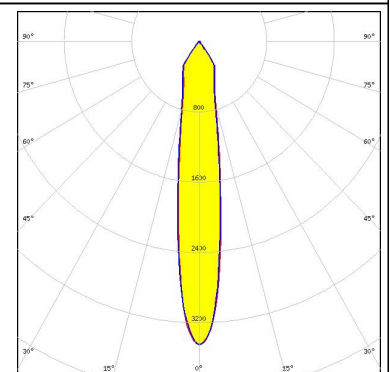
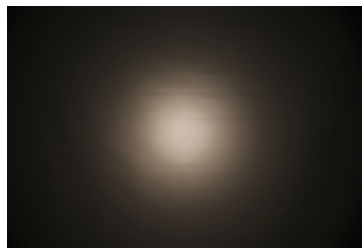


### PHILIPS

LED Fortimo SLM L15 CoB  
FWHM 17.0°  
Efficiency 81 %  
Peak intensity 3.400 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

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

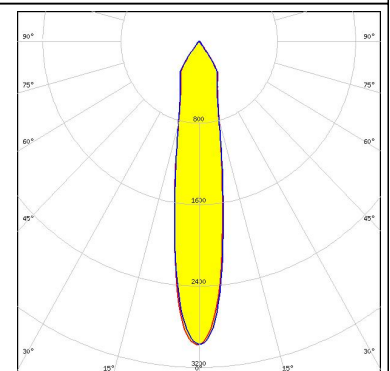
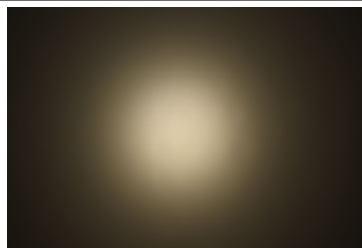


### PHILIPS

LED Fortimo SLM L19 + SLM holder  
FWHM 19.0°  
Efficiency 81 %  
Peak intensity 2.980 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

TE: OPTIC CLIP Z50 TYPE1 2213194-1

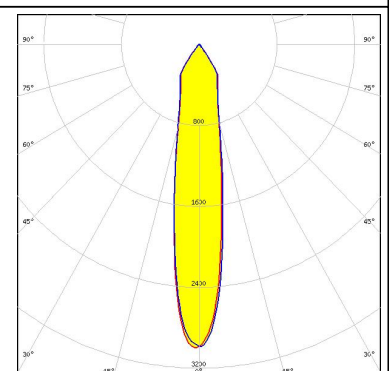
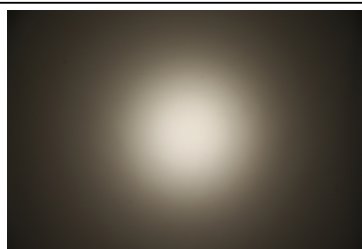


### SAMSUNG

LED LC026B / 033B / 040B  
FWHM 19.0°  
Efficiency 83 %  
Peak intensity 3.000 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

C13658\_CLAMP-VERO13-18  
Bender Wirth: 450 Typ L2

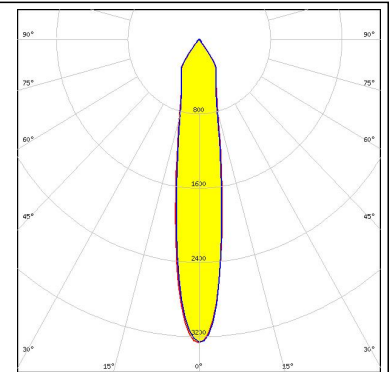


#### PHOTOMETRIC DATA (MEASURED):

### SAMSUNG

LED LC026B / 033B / 040B  
 FWHM 18.0°  
 Efficiency 85 %  
 Peak intensity 3.300 cd/lm  
 LEDs/each optic 1  
 Light colour White

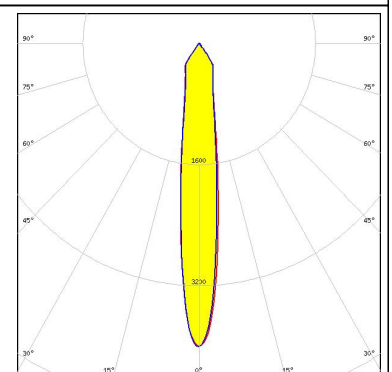
Required components:  
 TE: 2213258-2 + OPTIC CLIP Z50 TYPE1 2213194-1



### SAMSUNG

LED LC040C  
 FWHM 15.0°  
 Efficiency 83 %  
 Peak intensity 4.000 cd/lm  
 LEDs/each optic 1  
 Light colour White

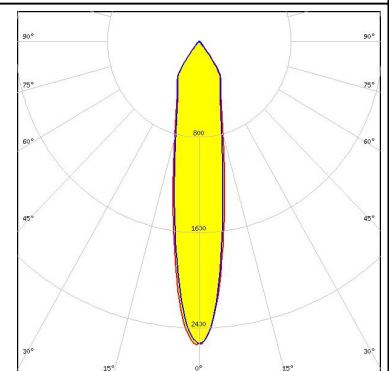
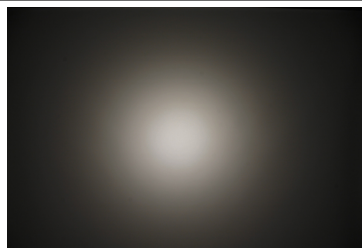
Required components:  
 TE: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1



SEOUL SEMICONDUCTOR

LED AC Zhaga COB  
 FWHM 19.0°  
 Efficiency 79 %  
 Peak intensity 2.500 cd/lm  
 LEDs/each optic 1  
 Light colour White

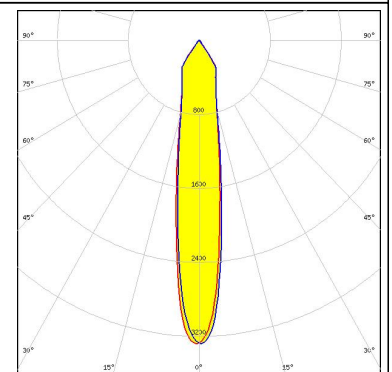
Required components:  
 F13671\_ANGE-RZ-LENS  
 Optosource: SEHSMJD-A





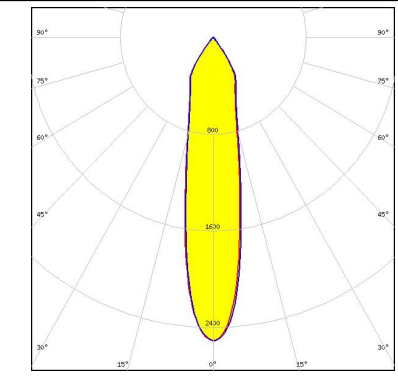

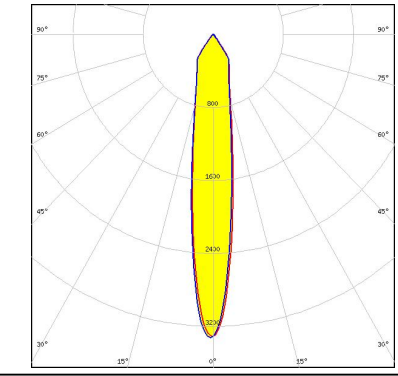

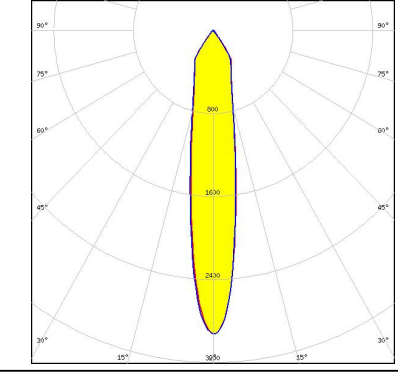

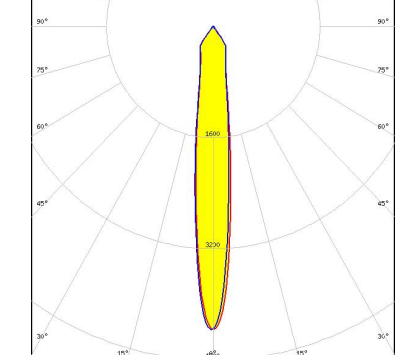
SEOUL SEMICONDUCTOR

LED MJT COB LES 14.5  
 FWHM 17.0°  
 Efficiency 82 %  
 Peak intensity 3.300 cd/lm  
 LEDs/each optic 1  
 Light colour White

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



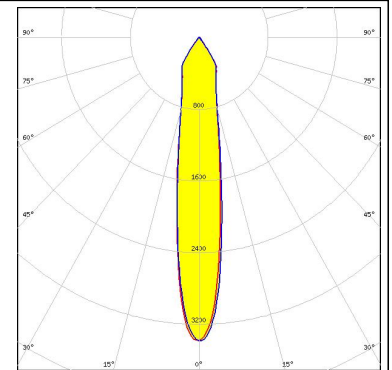
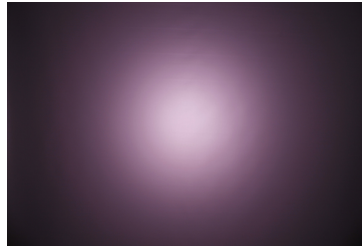
#### PHOTOMETRIC DATA (MEASURED):

<p> SEUL SEMICONDUCTOR</p> <p>LED MJT COB LES 22            FWHM 22.0°            Efficiency 82 %            Peak intensity 2.500 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13584_CLAMP-VERO29            Bender Wirth: 431 Typ L3</p>		
<p><b>TRIDONIC</b></p> <p>LED SLE G1 11mm 1000lm 927 Sunset R EXC            FWHM 16.0°            Efficiency 80 %            Peak intensity 3.300 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGE-RZ-LENS            TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>TRIDONIC</b></p> <p>LED SLE G1 15mm 2000lm 927 Sunset R EXC            FWHM 18.0°            Efficiency 79 %            Peak intensity 2.900 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGE-RZ-LENS            TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>TRIDONIC</b></p> <p>LED SLE G5 LES11            FWHM 14.0°            Efficiency 84 %            Peak intensity 4.400 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 434 Typ L1</p>		

#### PHOTOMETRIC DATA (MEASURED):

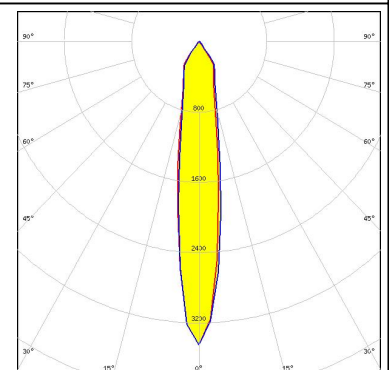
#### TRIDONIC

LED SLE G6 LES19 H  
 FWHM 17.0°  
 Efficiency 84 %  
 Peak intensity 3.400 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



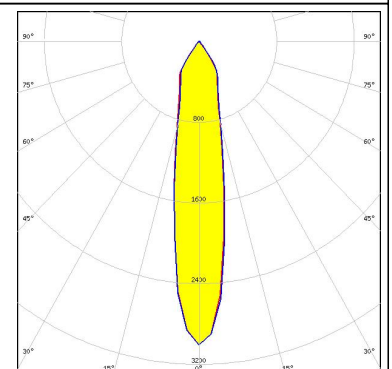
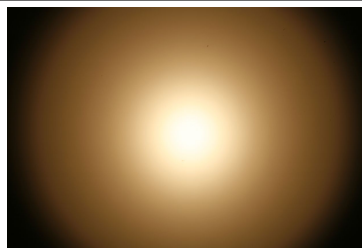
#### VS LIGHTING SOLUTIONS

LED WU-M-461  
 FWHM 17.0°  
 Efficiency 83 %  
 Peak intensity 3.450 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



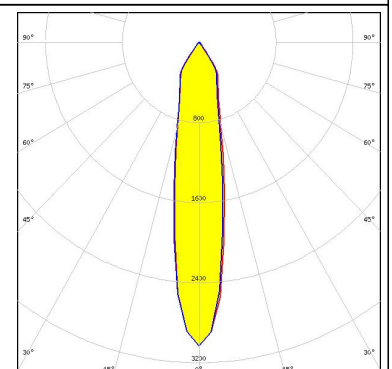
#### VS LIGHTING SOLUTIONS

LED WU-M-462  
 FWHM 20.0°  
 Efficiency 85 %  
 Peak intensity 3.000 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1


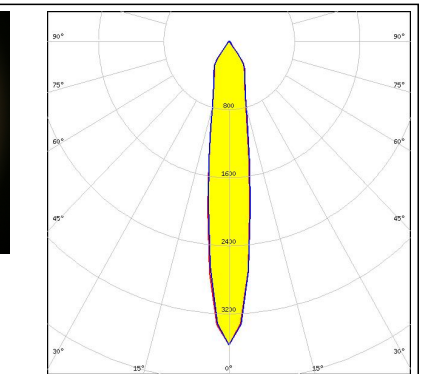

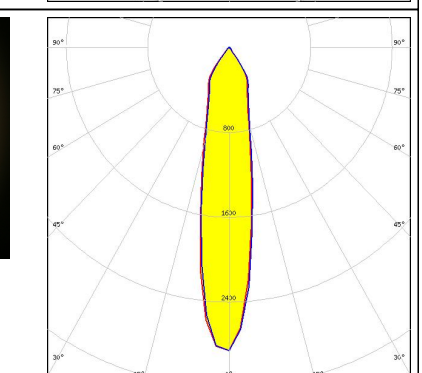

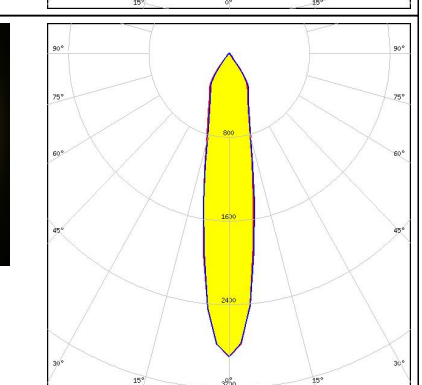


#### VS LIGHTING SOLUTIONS

LED WU-M-464  
 FWHM 20.0°  
 Efficiency 85 %  
 Peak intensity 3.000 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



#### PHOTOMETRIC DATA (MEASURED):

<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-484            FWHM 17.0°            Efficiency 85 %            Peak intensity 3.600 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-485            FWHM 20.0°            Efficiency 85 %            Peak intensity 2.890 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-486            FWHM 20.0°            Efficiency 84 %            Peak intensity 2.900 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: OPTIC CLIP Z50 TYPE1 2213194-1</p>		

#### PHOTOMETRIC DATA (SIMULATED):

<p><b>bridgelux.</b></p> <p>LED V10 Gen7            FWHM 15.0°            Efficiency 90 %            Peak intensity 7.030 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 486 Typ L1</p>	
<p><b>bridgelux.</b></p> <p>LED V13 Gen7            FWHM 14.5°            Efficiency 91 %            Peak intensity 7.530 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2103CT + 50-2100AN</p>	
<p><b>bridgelux.</b></p> <p>LED V22 Gen7            FWHM 17.0°            Efficiency 93 %            Peak intensity 6.339 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2204-CT + 50-2100AN</p>	
<p><b>CREE</b> ⇄</p> <p>LED CXA/B 1830            FWHM 17.0°            Efficiency 88 %            Peak intensity 5.900 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>	



#### PHOTOMETRIC DATA (SIMULATED):



LED CxM-14 (19x19)  
FWHM 17.0°  
Efficiency 83 %  
Peak intensity 3.400 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 433 Typ L1

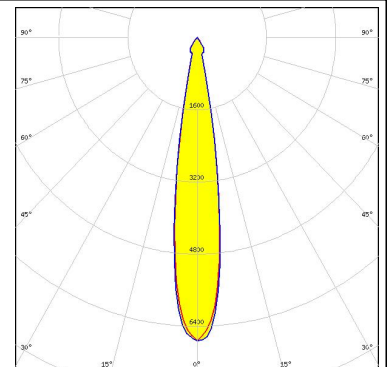


LED CxM-9 (13.5x13.5)  
FWHM 14.0°  
Efficiency 84 %  
Peak intensity 4.300 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 434 Typ L1



Opto Semiconductors


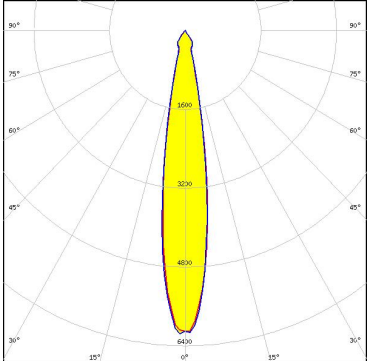
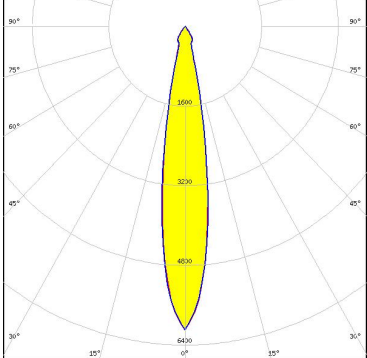
LED Soleriq S15  
FWHM 16.0°  
Efficiency 90 %  
Peak intensity 6.750 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



SEOUL SEMICONDUCTOR

LED ZC12/18  
FWHM 17.0°  
Efficiency 83 %  
Peak intensity 3.400 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13658\_CLAMP-VERO13-18  
Bender Wirth: 433 Typ L1

### PHOTOMETRIC DATA (SIMULATED):

 SEOUL SEMICONDUCTOR	LED ZC4/6 FWHM 14.0° Efficiency 84 % Peak intensity 4.300 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 434 Typ L1	
<b>TRIDONIC</b>	LED SLE G6 LES15 FWHM 17.0° Efficiency 89 % Peak intensity 6.200 cd/lm LEDs/each optic 1 Light colour White Required components: TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1	
<b>TRIDONIC</b>	LED SLE G6 LES17 FWHM 18.0° Efficiency 91 % Peak intensity 6.100 cd/lm LEDs/each optic 1 Light colour White Required components: TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1	

### GENERAL INFORMATION:

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

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

### MATERIALS:

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

### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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

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