

ANGELINA-XW

White version with ~91° wide beam

SPECIFICATION:

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

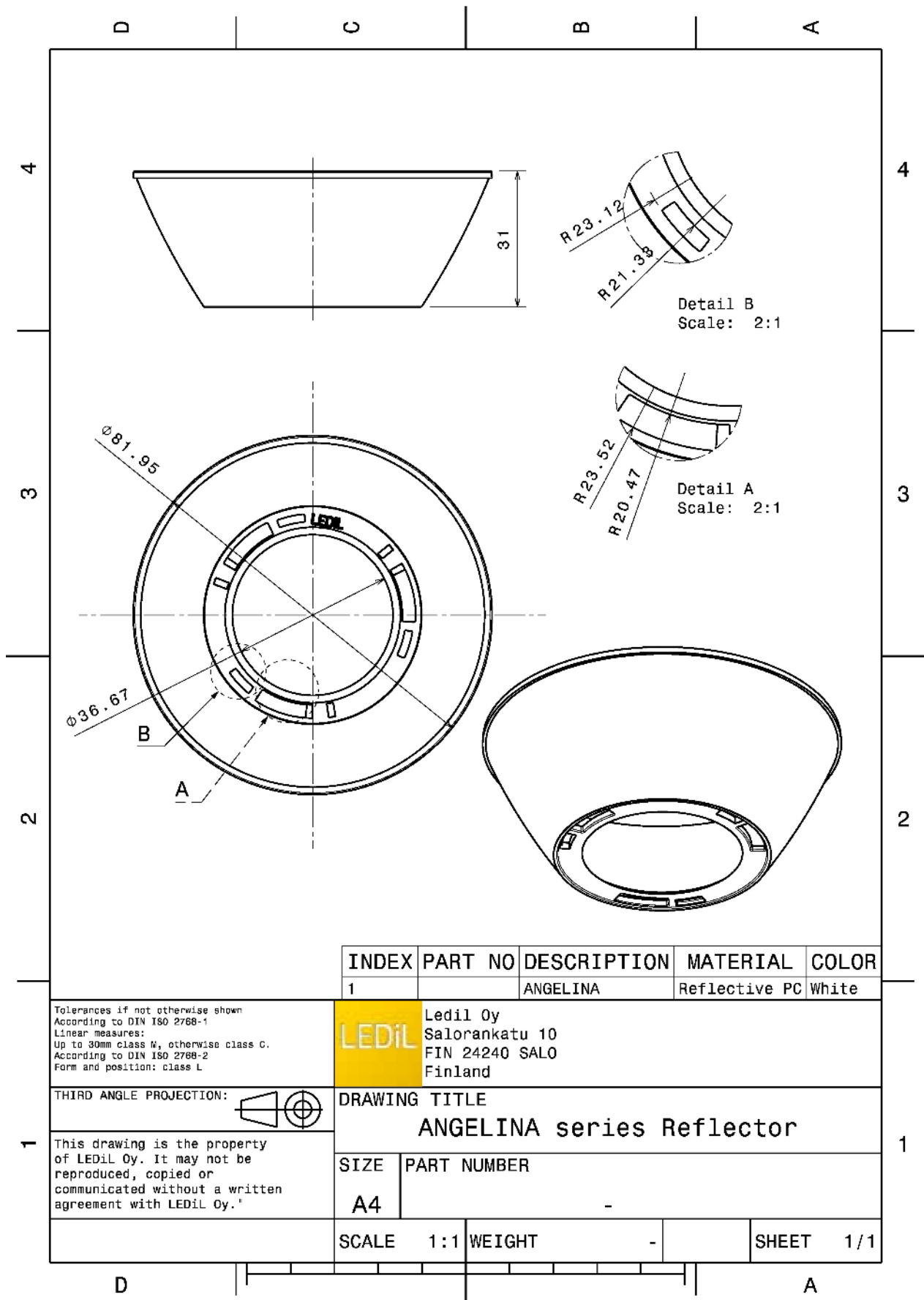
MATERIALS:

Component	Type	Material	Colour	Finish	Coating
ANGELINA-XW	Reflector	HRPC	white		



ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
F13838_ANGELINA-XW » Box size: 480 x 280 x 300 mm	900	120	60	12.3



INDEX	PART NO	DESCRIPTION	MATERIAL	COLOR
1		ANGELINA	Reflective PC	White

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


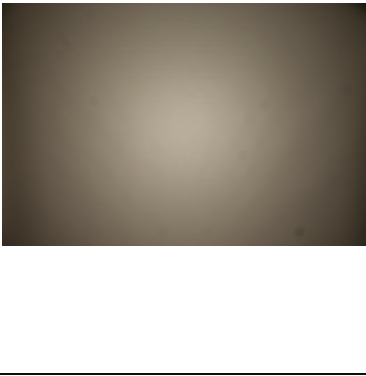
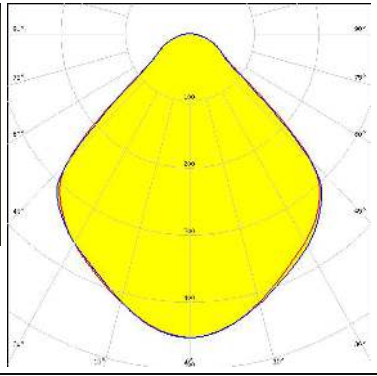

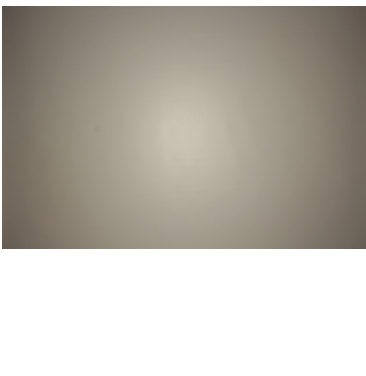
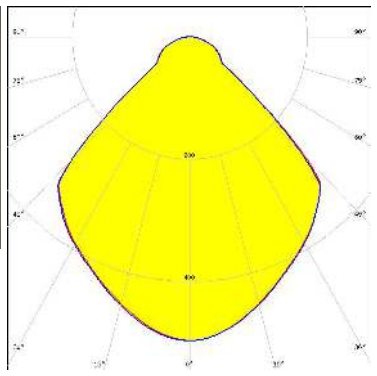


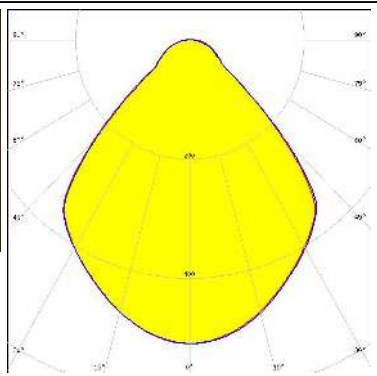

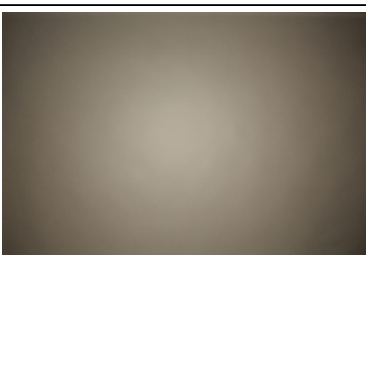
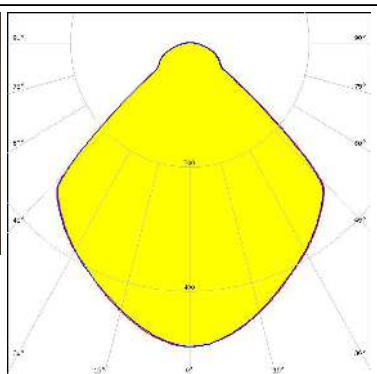
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SIZE	PART NUMBER
A4	-


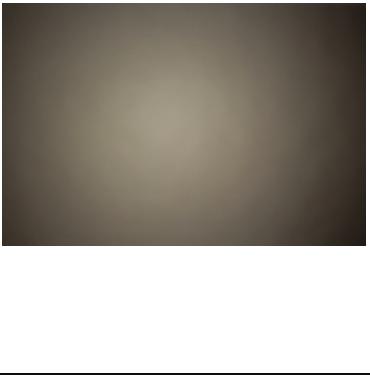
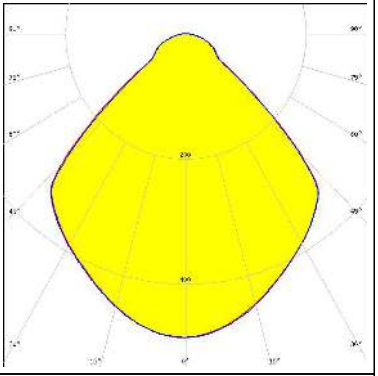

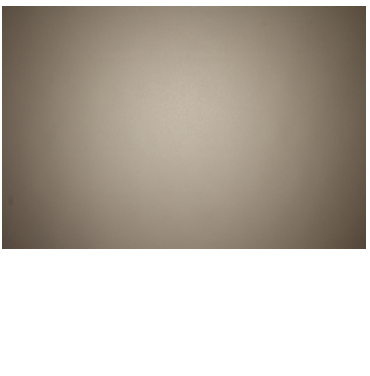
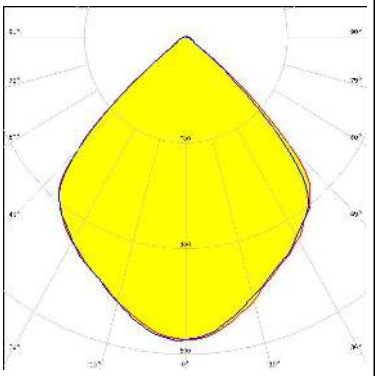

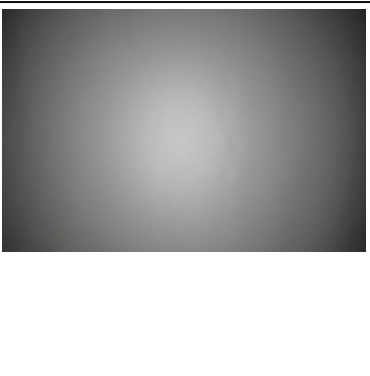
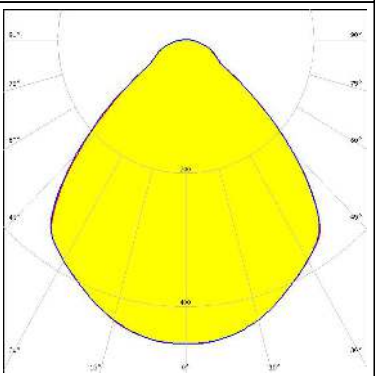

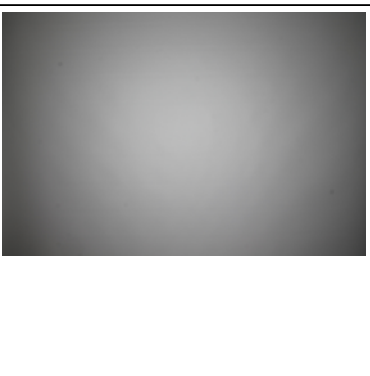
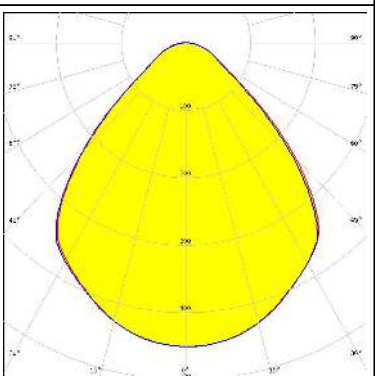
SCALE	1:1	WEIGHT	-	SHEET	1/1
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See also our general installation guide: www.ledil.com/installation_guide


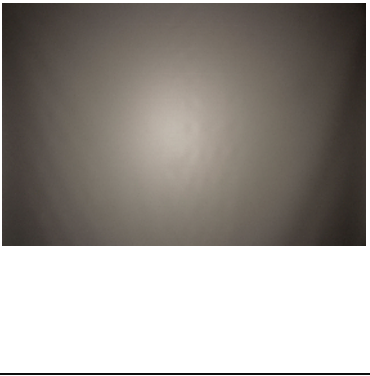
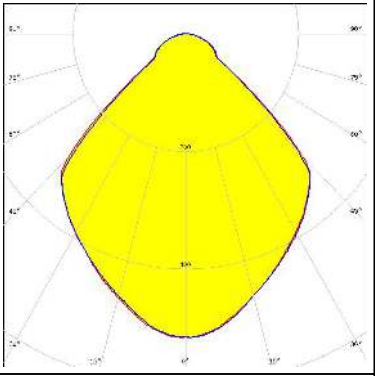


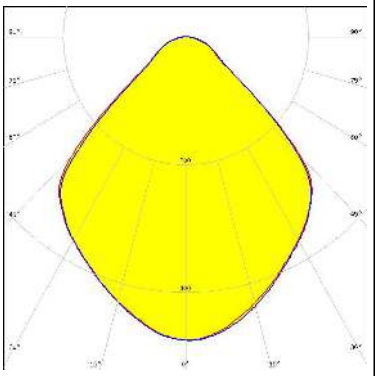


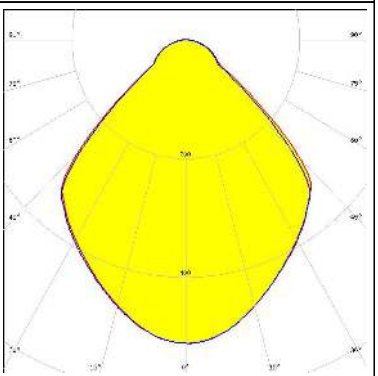


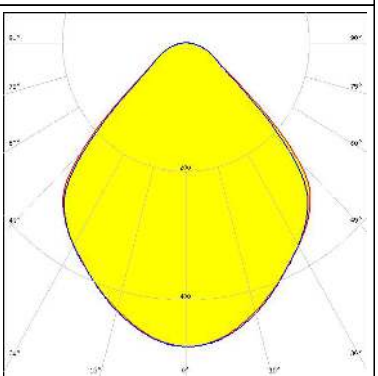
OPTICAL RESULTS (MEASURED):

<p></p> <p>LED V10 Gen7 FWHM / FWTM 93.0° / 132.0° Efficiency 89 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 F13671_ANGE-RZ-LENS Bender Wirth: 434 Typ L1</p>		
<p></p> <p>LED V13 Gen7 FWHM / FWTM 92.0° / 130.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p></p> <p>LED V22 Gen6 FWHM / FWTM 88.0° / 126.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: IDEAL: 50-2204-CT + 50-2100AN</p>		
<p></p> <p>LED Vero SE 13 FWHM / FWTM 94.0° / 131.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C16402_CLAMP-VEROSE-13-18</p>		


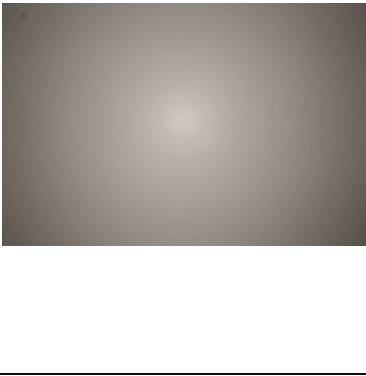
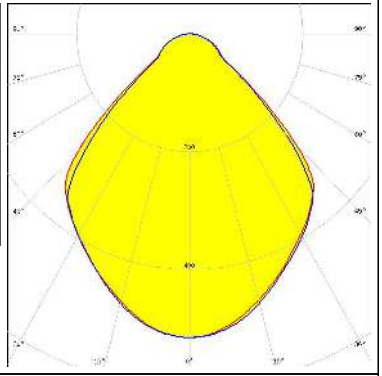


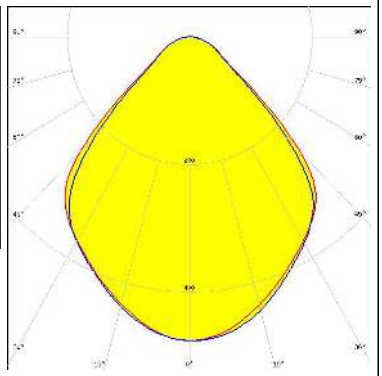
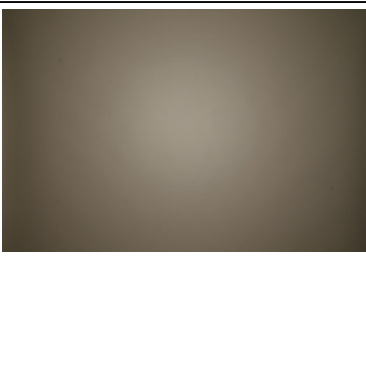
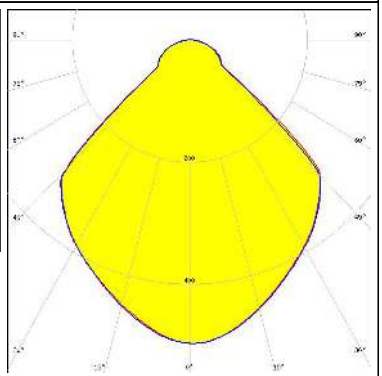
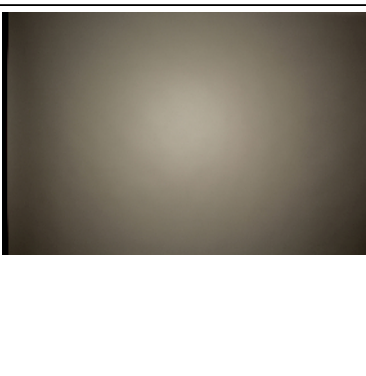
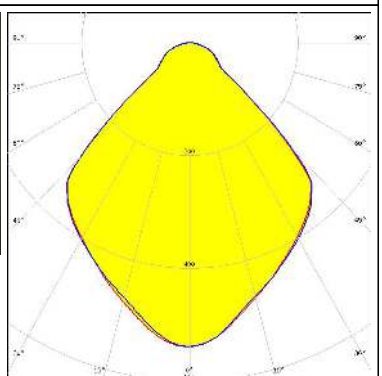
OPTICAL RESULTS (MEASURED):

<p></p> <p>LED Vero SE 18 FWHM / FWTM 93.0° / 131.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C16402_CLAMP-VEROSE-13-18</p>		
<p></p> <p>LED VERO18 FWHM / FWTM 90.0° / 106.0° Efficiency 94 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18</p>		
<p></p> <p>LED VERO29 FWHM / FWTM 91.0° / 134.0° Efficiency 93 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13584_CLAMP-VERO29</p>		
<p></p> <p>LED VERO29 FWHM / FWTM 90.0° / 133.0° Efficiency 91 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13584_CLAMP-VERO29 F13671_ANGE-RZ-LENS</p>		

OPTICAL RESULTS (MEASURED):

<p></p> <p>LED Vesta TW 15mm DP FWHM / FWTM 92.0° / 129.0° Efficiency 96 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour Tunable White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 482 Typ L2</p>		
<p></p> <p>LED Vesta TW 15mm DP FWHM / FWTM 92.0° / 130.0° Efficiency 91 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour Tunable White</p> <p>Required components: C13658_CLAMP-VERO13-18 F13671_ANGE-RZ-LENS Bender Wirth: 482 Typ L2</p>		
<p></p> <p>LED Vesta TW 18mm (31W) DP FWHM / FWTM 91.0° / 128.0° Efficiency 96 % Peak intensity 0.5 cd/lm LEDs/each optic 1 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 FWHM / FWTM 90.0° / 130.0° Efficiency 90 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour Tunable White</p> <p>Required components: C13584_CLAMP-VERO29 F13671_ANGE-RZ-LENS Bender Wirth: 483 Typ L3</p>		

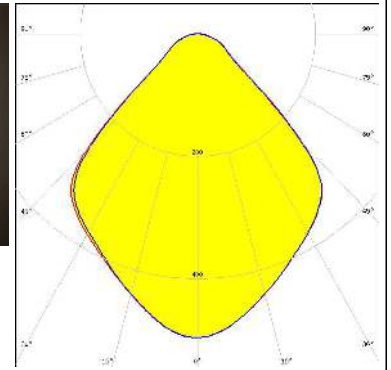
OPTICAL RESULTS (MEASURED):

<p></p> <p>LED Vesta TW 22mm DP FWHM / FWTM 90.0° / 127.0° Efficiency 96 % Peak intensity 0.5 cd/lm LEDs/each optic 1 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 FWHM / FWTM 90.0° / 129.0° Efficiency 91 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour Tunable White</p> <p>Required components: C13584_CLAMP-VERO29 F13671_ANGE-RZ-LENS Bender Wirth: 494 Typ L3</p>		
<p>CITIZEN</p> <p>LED CLL02x/CLU02x (LES10) FWHM / FWTM 94.0° / 130.0° Efficiency 95 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 434 Typ L1</p>		
<p>CITIZEN</p> <p>LED CLL03x/CLU03x FWHM / FWTM 90.0° / 124.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C16791_CLAMP-Z45-A TE Connectivity: 2325807-3</p>		

OPTICAL RESULTS (MEASURED):

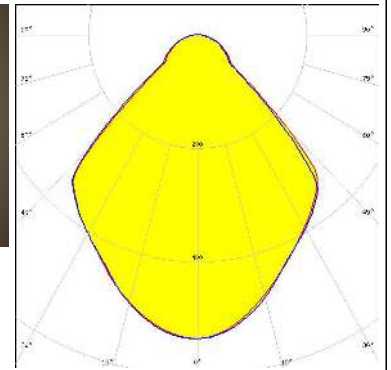
CITIZEN

LED CLL03x/CLU03x
 FWHM / FWTM 91.0° / 128.0°
 Efficiency 92 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C16791_CLAMP-Z45-A
 F13671_ANGE-RZ-LENS
 TE Connectivity: 2325807-3



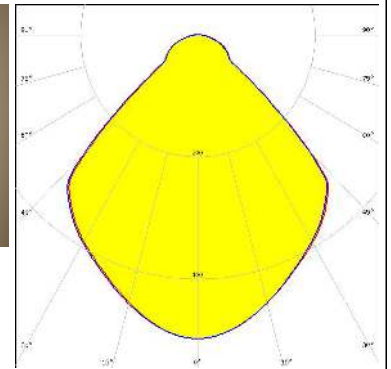
CITIZEN

LED CLL03x/CLU03x
 FWHM / FWTM 89.0° / 125.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 IDEAL: 50-2103CT + 50-2100AN



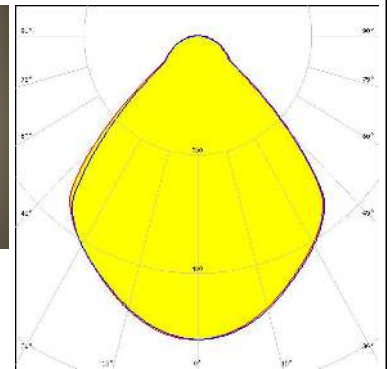
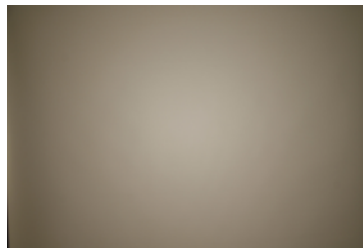
CITIZEN

LED CLL03x/CLU03x
 FWHM / FWTM 91.0° / 130.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



CITIZEN

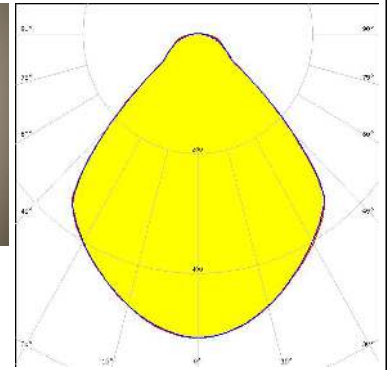
LED CLL04x/CLU04x
 FWHM / FWTM 88.0° / 125.0°
 Efficiency 95 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C13584_CLAMP-VERO29
 Bender Wirth: 431 Typ L3



OPTICAL RESULTS (MEASURED):

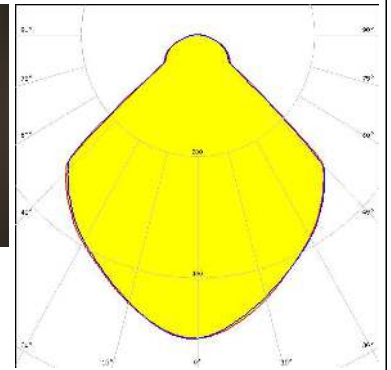
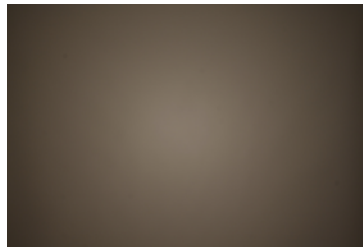
CITIZEN

LED CLL04x/CLU04x
 FWHM / FWTM 88.0° / 126.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 IDEAL: 50-2204-CT + 50-2100AN



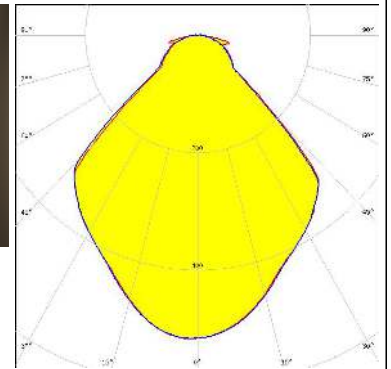
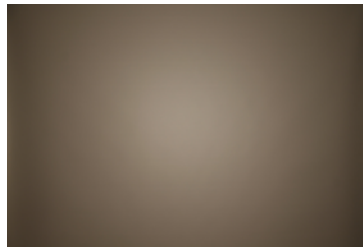
CITIZEN

LED CLU700/701/702/703
 FWHM / FWTM 95.0° / 130.0°
 Efficiency 95 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13658_CLAMP-VERO13-18
 Bender Wirth: 434 Typ L1



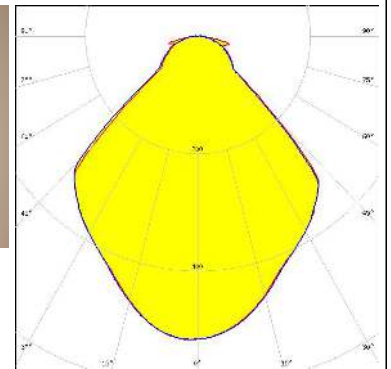
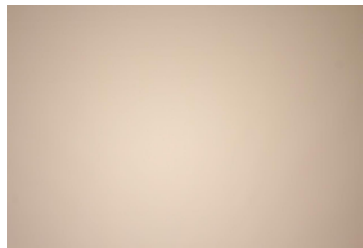
CITIZEN

LED CLU720/721/723
 FWHM / FWTM 89.0° / 125.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 IDEAL: 50-2103CT + 50-2100AN



CITIZEN

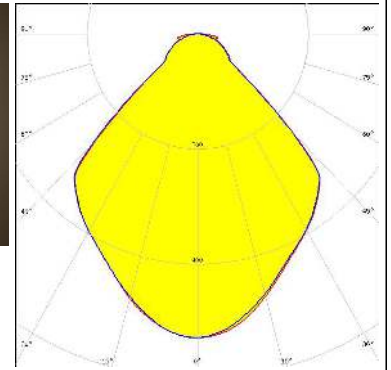
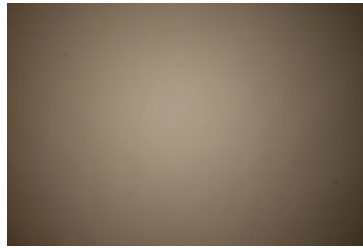
LED CLU720/721/723
 FWHM / FWTM 93.0° / 137.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



OPTICAL RESULTS (MEASURED):

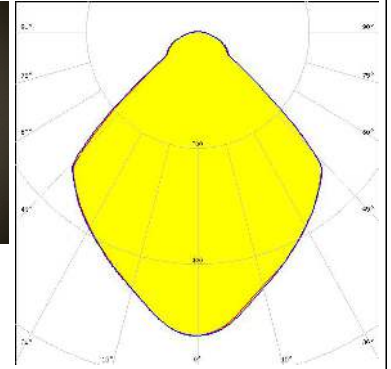
CITIZEN

LED CLU730/731/733
 FWHM / FWTM 90.0° / 126.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 IDEAL: 50-2204-CT + 50-2100AN



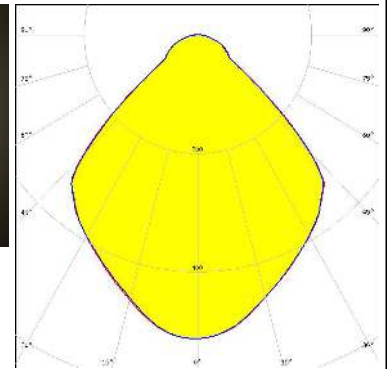
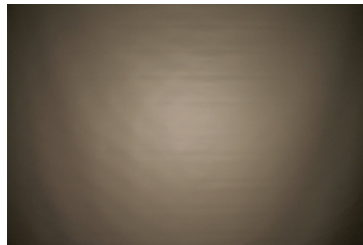
CREE LED

LED CMA1840
 FWHM / FWTM 93.0° / 129.0°
 Efficiency 97 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C14123_CLAMP-CXA15-18



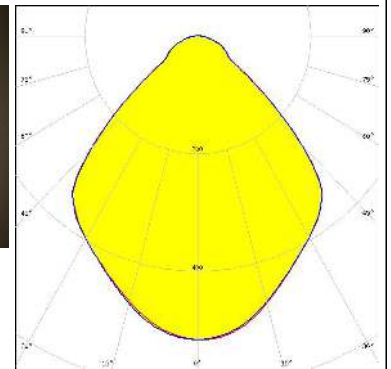
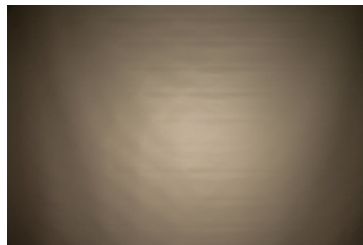
CREE LED

LED CMA2550
 FWHM / FWTM 92.0° / 130.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C14036_CLAMP_CXA25-30

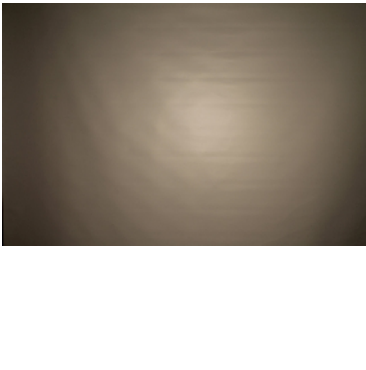
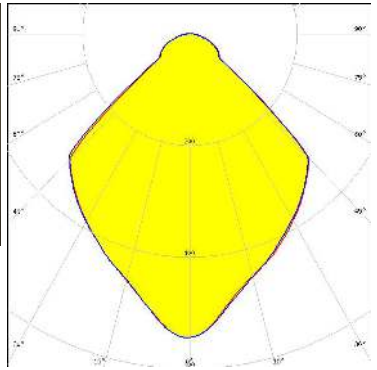

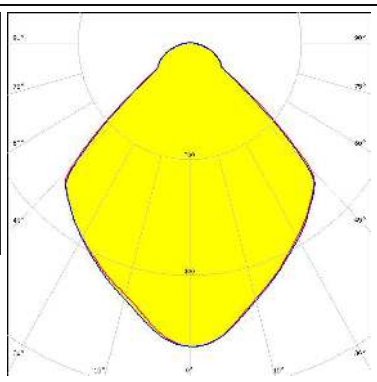
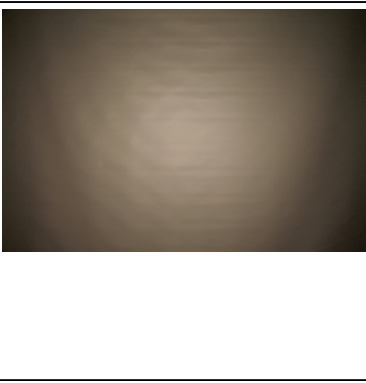
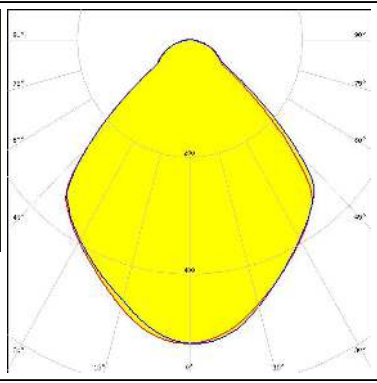
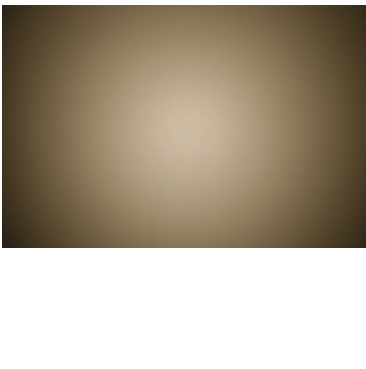
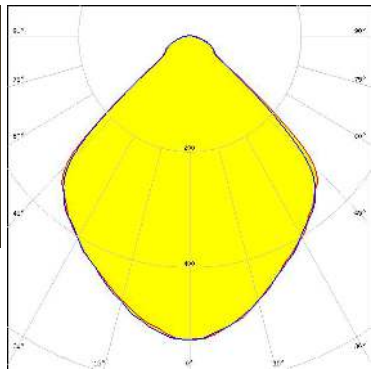


CREE LED


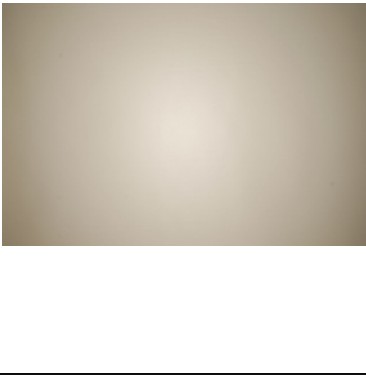
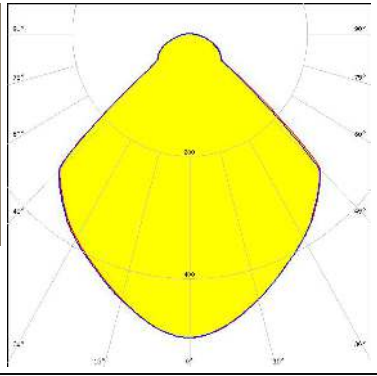

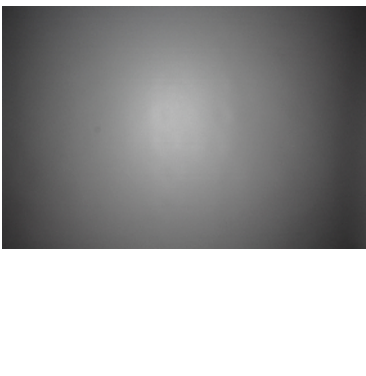
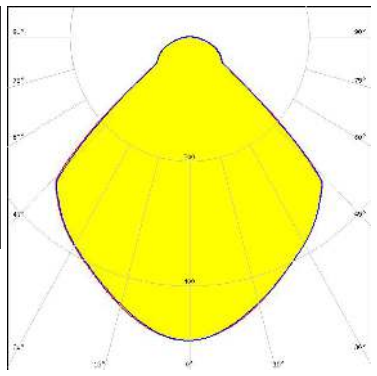

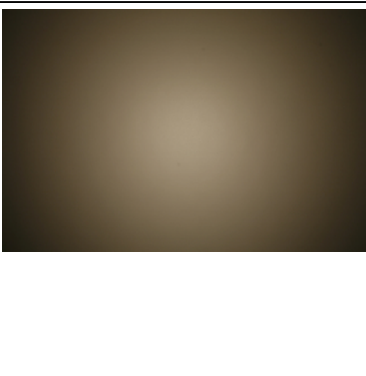
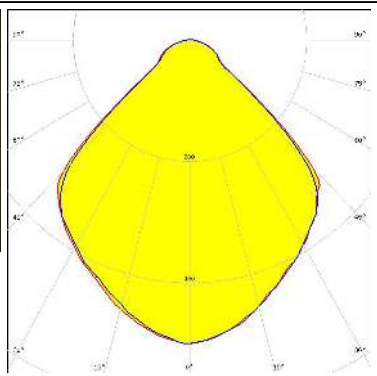

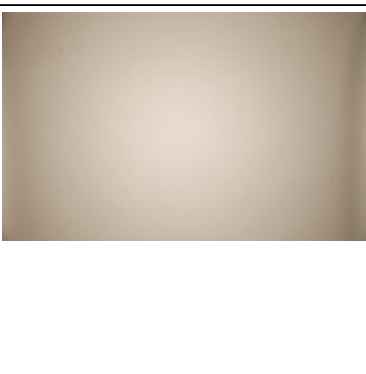
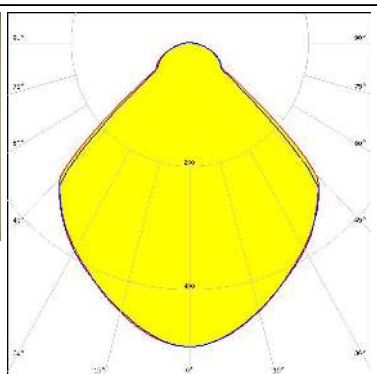
LED CMA3090
 FWHM / FWTM 90.0° / 129.0°
 Efficiency 97 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C14036_CLAMP_CXA25-30



OPTICAL RESULTS (MEASURED):

<p>CREE ⇄ LED</p> <p>LED CMT14xx FWHM / FWTM 93.0° / 127.0° Efficiency 94 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 434 Typ L1</p>		
<p>CREE ⇄ LED</p> <p>LED CMT19xx FWHM / FWTM 92.0° / 130.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 477 Typ L1</p>		
<p>CREE ⇄ LED</p> <p>LED CMT28xx FWHM / FWTM 89.0° / 127.0° Efficiency 96 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 471 Typ L3</p>		
<p>CREE ⇄ LED</p> <p>LED CXA/B 15xx FWHM / FWTM 94.0° / 115.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C14123_CLAMP-CXA15-18</p>		

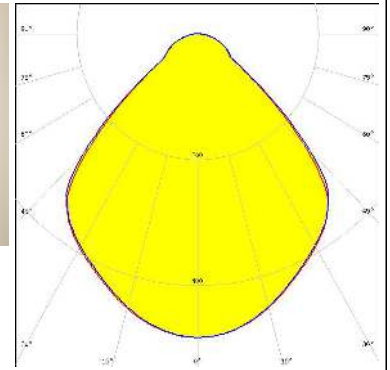
OPTICAL RESULTS (MEASURED):

<p>CREE  LED</p> <p>LED CXA/B 15xx FWHM / FWTM 94.0° / 130.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 441 Typ L1</p>		
<p>CREE  LED</p> <p>LED CXA/B 1816 & CXA/B 1820 & CXA 1850 FWHM / FWTM 93.0° / 132.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: TE Connectivity: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p>CREE  LED</p> <p>LED CXA/B 1816 & CXA/B 1820 & CXA 1850 FWHM / FWTM 94.0° / 128.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C14123_CLAMP-CXA15-18</p>		
<p>CREE  LED</p> <p>LED CXA/B 1816 & CXA/B 1820 & CXA 1850 FWHM / FWTM 94.0° / 130.0° Efficiency 94 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 437 Typ L1</p>		

OPTICAL RESULTS (MEASURED):

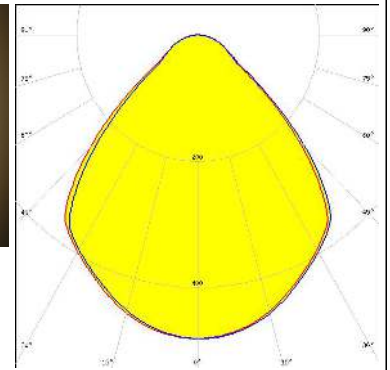
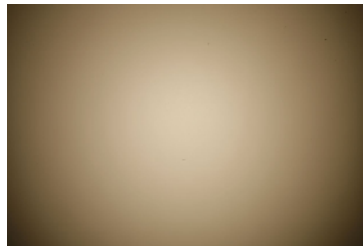
CREE LED

LED CXA/B 30xx
 FWHM / FWTM 91.0° / 131.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C14036_CLAMP_CXA25-30



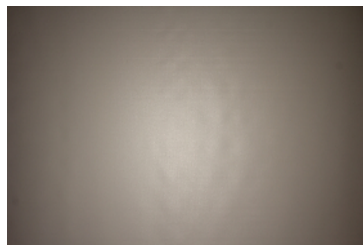
CREE LED

LED CXA/B 3590
 FWHM / FWTM 90.0° / 131.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 IDEAL: 50-2303CR + 50-2300AN



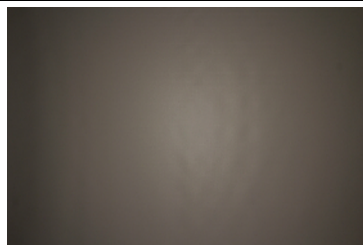
EVERLIGHT

LED CHI3030 19W
 FWHM / FWTM 88.0° / 132.0°
 Efficiency 91 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13584_CLAMP-VERO29
 F13671_ANGE-RZ-LENS
 Bender Wirth: 468 Typ L3


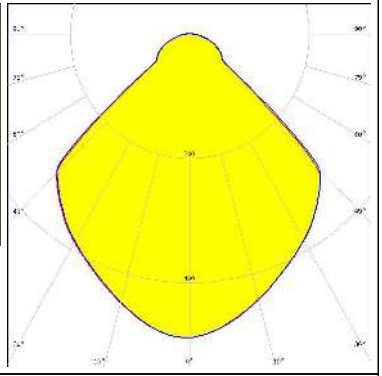

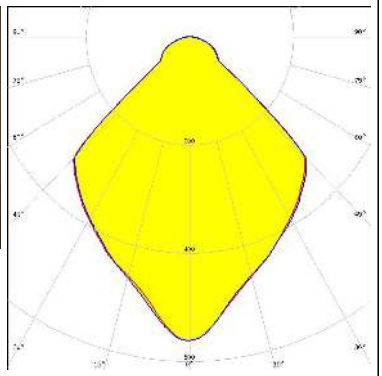

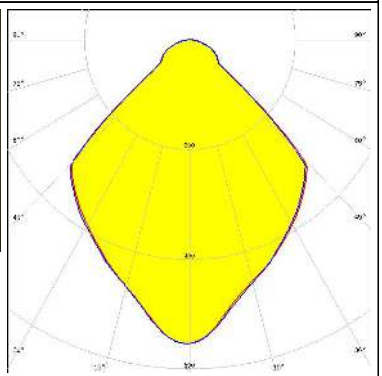
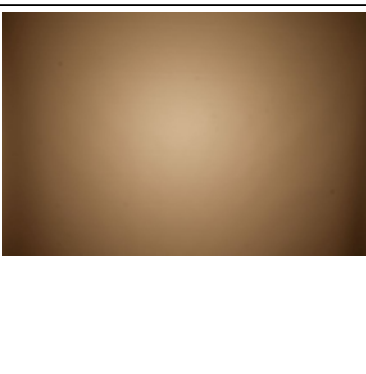
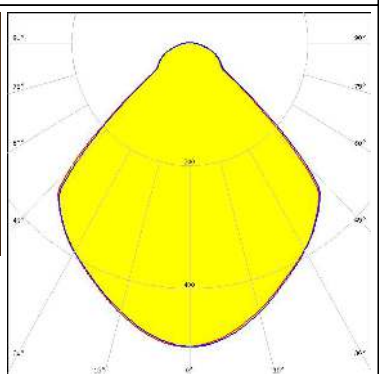


EVERLIGHT

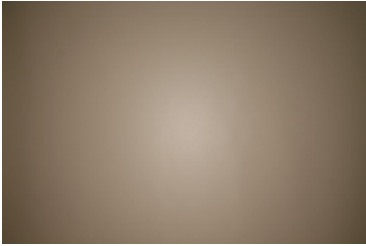
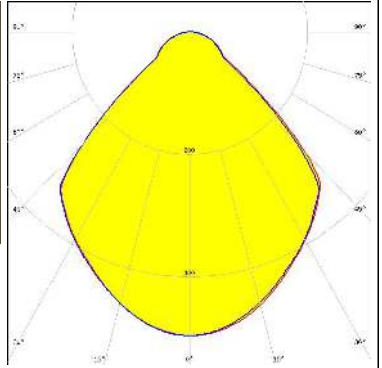
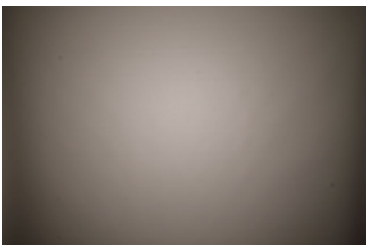
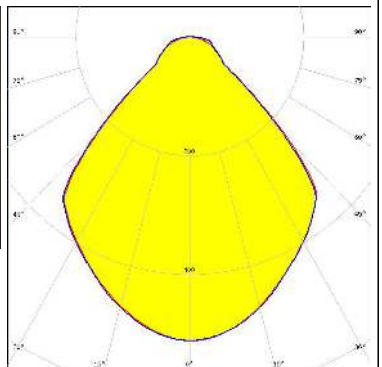

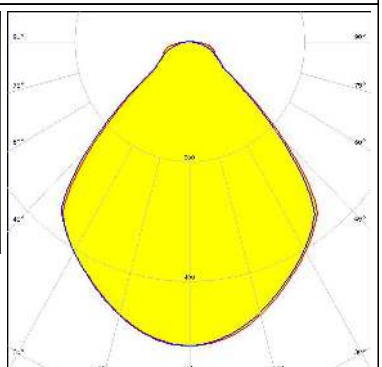

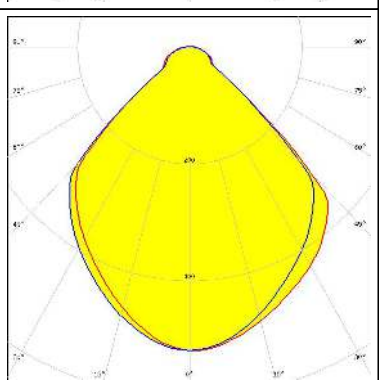
LED CHI3030 29W
 FWHM / FWTM 89.0° / 132.0°
 Efficiency 91 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13584_CLAMP-VERO29
 F13671_ANGE-RZ-LENS
 Bender Wirth: 468 Typ L3



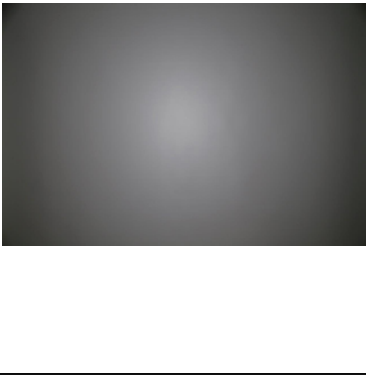
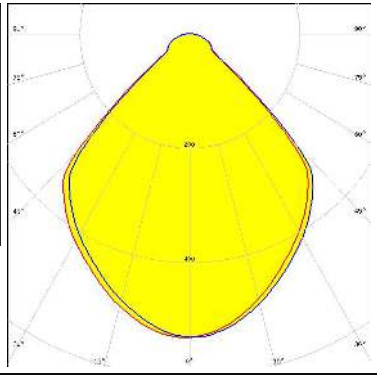
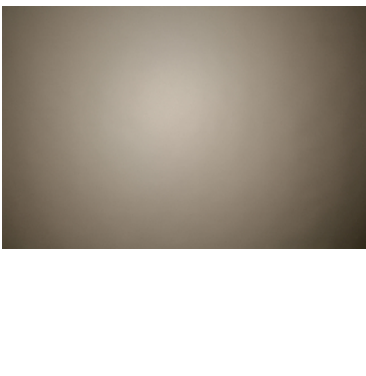
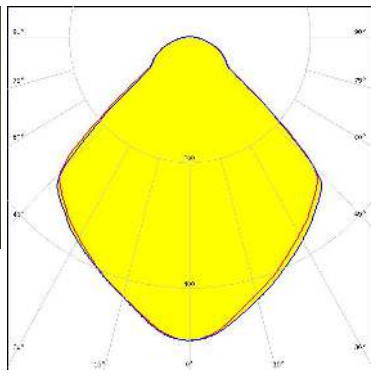
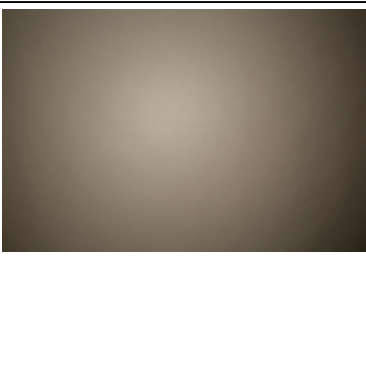
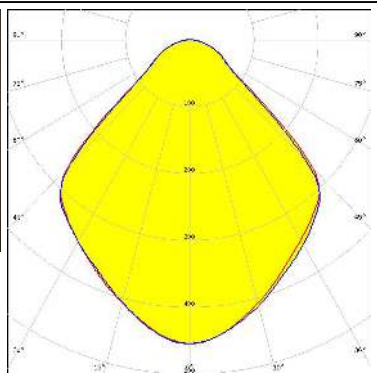
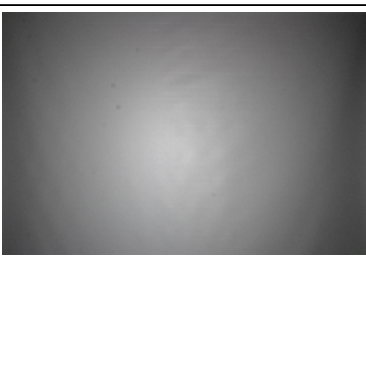
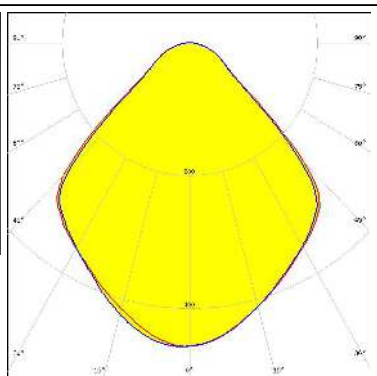
OPTICAL RESULTS (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON CoB 1202/1203</p> <p>FWHM / FWTM 95.0° / 131.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 438 Typ L1</p>		
<p>LUMILEDS</p> <p>LED LUXEON CoB 1204HD</p> <p>FWHM / FWTM 92.0° / 124.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 0.6 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>LUMILEDS</p> <p>LED LUXEON CoB 1205HD</p> <p>FWHM / FWTM 92.0° / 125.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 0.6 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>LUMILEDS</p> <p>LED LUXEON CoB 1208</p> <p>FWHM / FWTM 92.0° / 131.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/lm</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>		


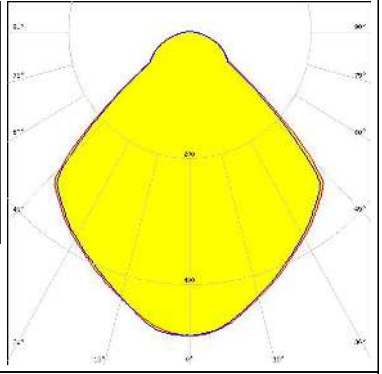
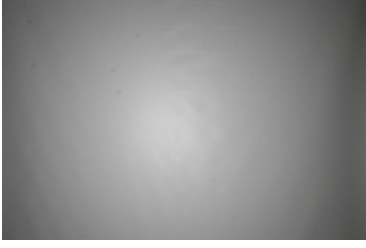
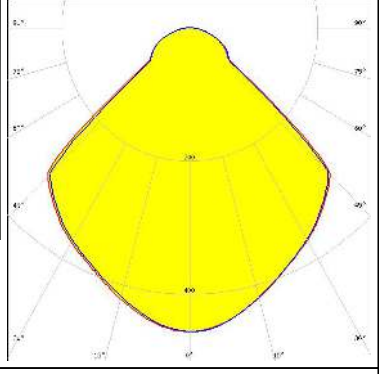

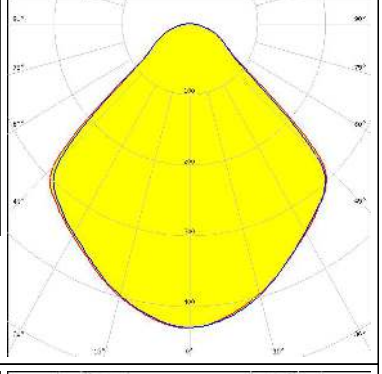

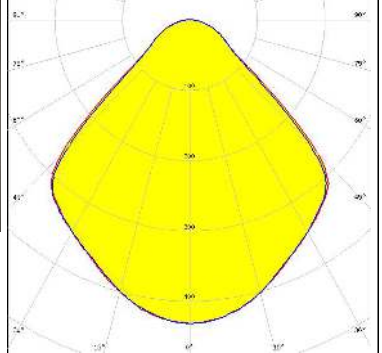
OPTICAL RESULTS (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 91.0° / 129.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</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>LUMILEDS</p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM 89.0° / 127.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 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>LUMILEDS</p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM 88.0° / 127.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 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>LUMILEDS</p> <p>LED LUXEON K12</p> <p>FWHM / FWTM 92.0° / 110.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 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>		


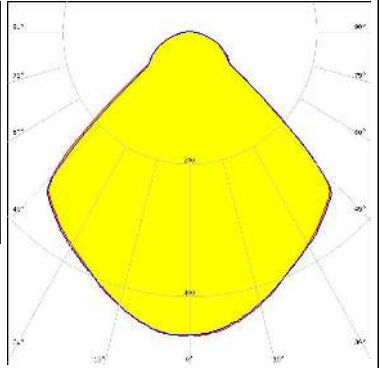

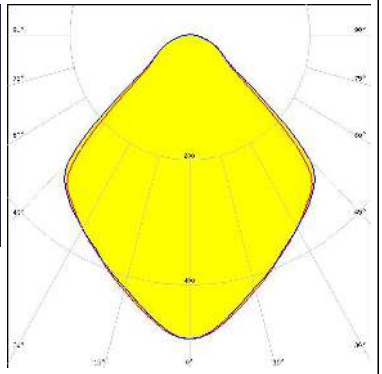
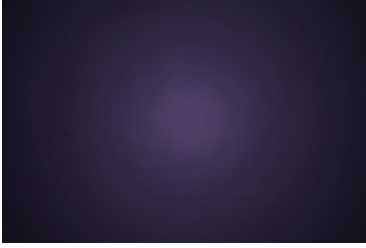
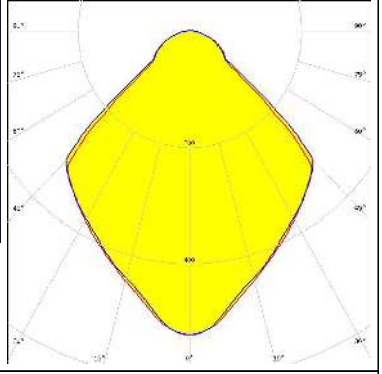
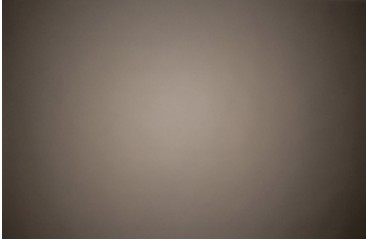
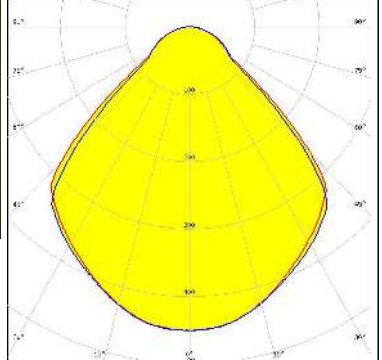
OPTICAL RESULTS (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON K16</p> <p>FWHM / FWTM 90.0° / 107.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: BJB: 47.319.2070</p>		
<p>LUMINUS</p> <p>LED CDM-14 (Dim-To-Warm)</p> <p>FWHM / FWTM 94.0° / 136.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 491 Typ L2</p>		
<p>LUMINUS</p> <p>LED CDM-14 (Dim-To-Warm)</p> <p>FWHM / FWTM 94.0° / 135.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 0.5 cd/m</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: 491 Typ L2</p>		
<p>LUMINUS</p> <p>LED CDM-18 (Dim-To-Warm)</p> <p>FWHM / FWTM 93.0° / 135.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.5 cd/m</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: 491 Typ L2</p>		


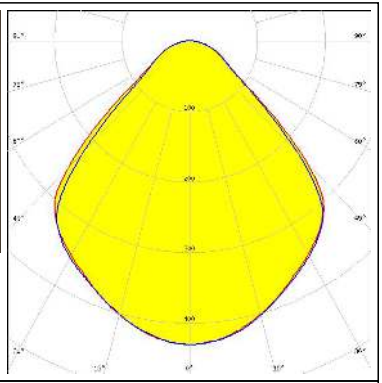
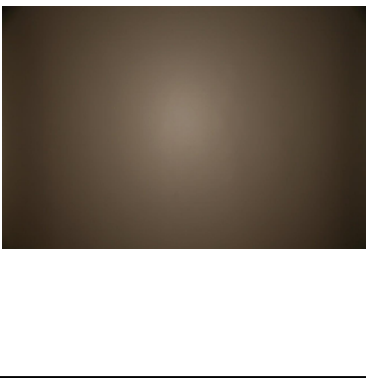
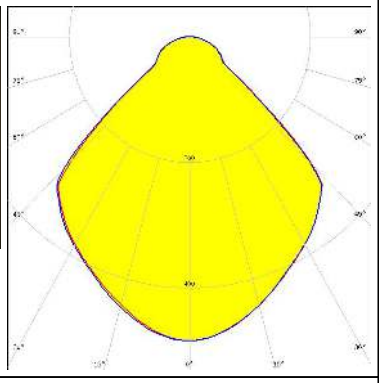
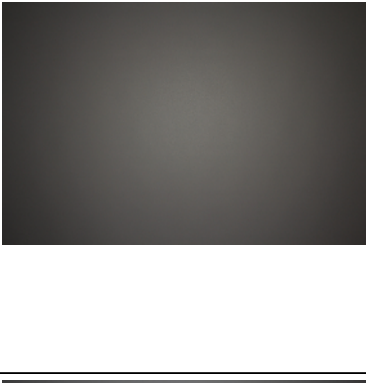
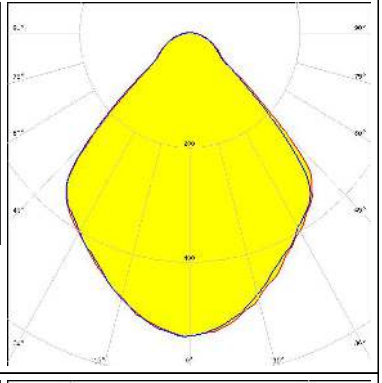
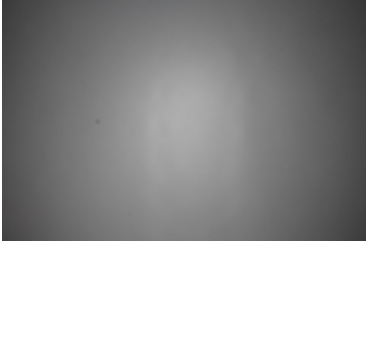
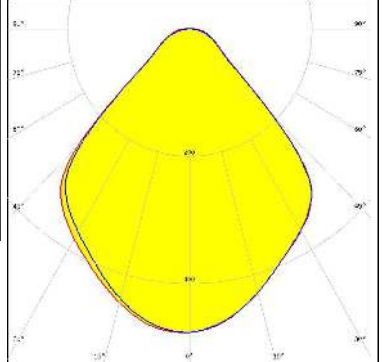
OPTICAL RESULTS (MEASURED):

<p>LUMINUS</p> <p>LED CDM-18 (Dim-To-Warm)</p> <p>FWHM / FWTM 93.0° / 137.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 491 Typ L2</p>		
<p>LUMINUS</p> <p>LED CDM-9 (Dim-To-Warm)</p> <p>FWHM / FWTM 95.0° / 138.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 490 Typ L1</p>		
<p>LUMINUS</p> <p>LED CDM-9 (Dim-To-Warm)</p> <p>FWHM / FWTM 95.0° / 136.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 0.4 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>LUMINUS</p> <p>LED CTM-14 (Tunable White)</p> <p>FWHM / FWTM 94.0° / 136.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 0.4 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>		

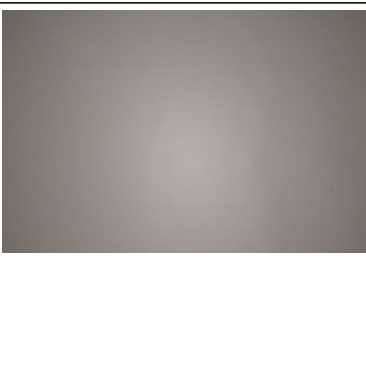
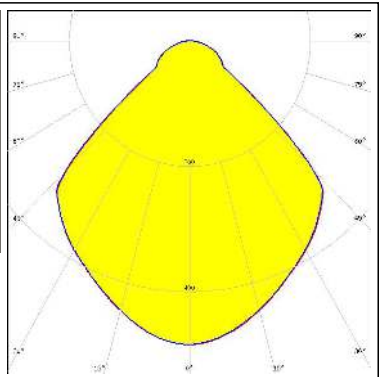
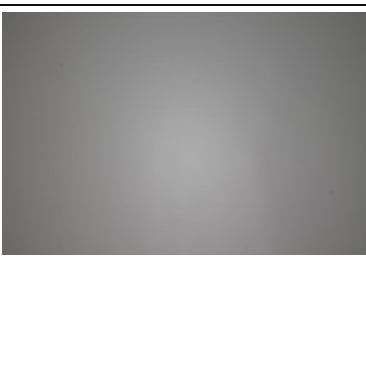
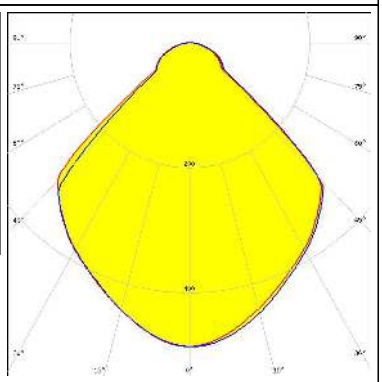
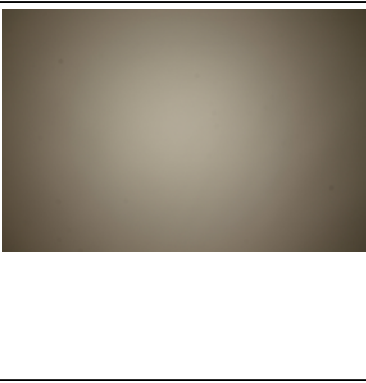
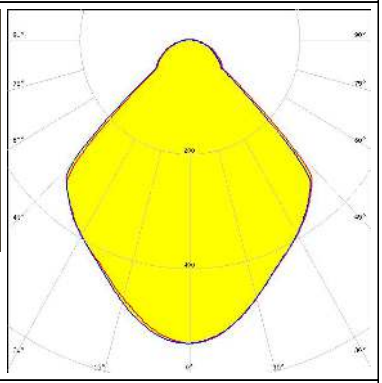
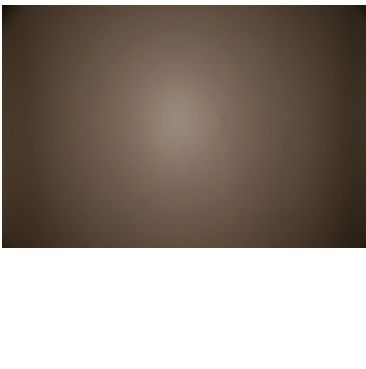
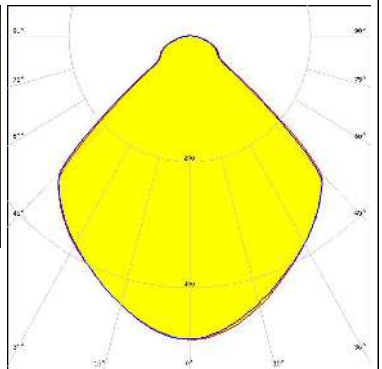
OPTICAL RESULTS (MEASURED):

<p>LUMINUS</p> <p>LED CTM-14 (Tunable White)</p> <p>FWHM / FWTM 94.0° / 137.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</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>LUMINUS</p> <p>LED CTM-14 RGBW</p> <p>FWHM / FWTM 92.0° / 132.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.5 cd/m</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>		
<p>LUMINUS</p> <p>LED CTM-14 RGBW</p> <p>FWHM / FWTM 93.0° / 132.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour RGBW</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 500 Typ L3-1</p>		
<p>LUMINUS</p> <p>LED CTM-22 (Tunable White)</p> <p>FWHM / FWTM 93.0° / 137.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 494 Typ L3</p>		

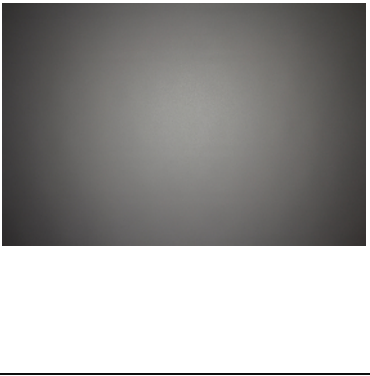
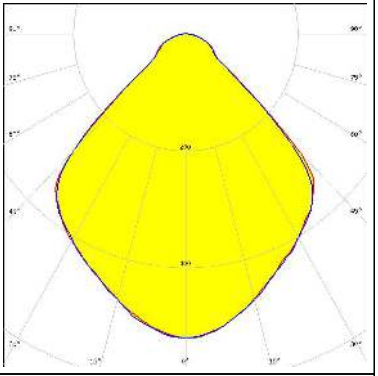
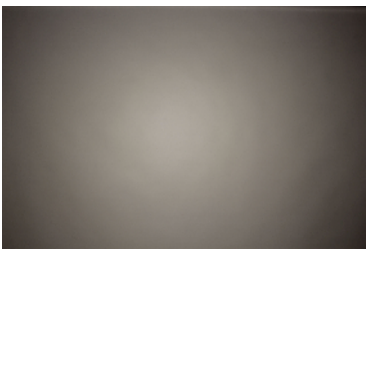
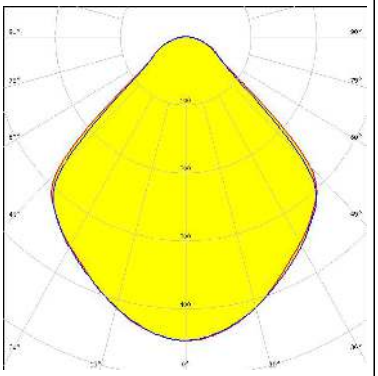

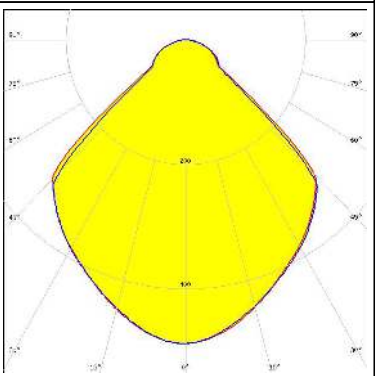

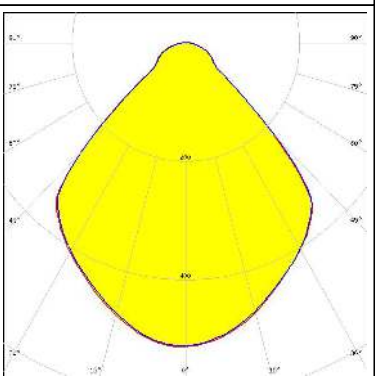
OPTICAL RESULTS (MEASURED):

<p>LUMINUS</p> <p>LED CTM-22 (Tunable White)</p> <p>FWHM / FWTM 92.0° / 136.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 0.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>C13584_CLAMP-VERO29</p> <p>F13671_ANGE-RZ-LENS</p> <p>Bender Wirth: 494 Typ L3</p>		
<p>LUMINUS</p> <p>LED CxM-14 (19x19)</p> <p>FWHM / FWTM 93.0° / 134.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p>NICHIA</p> <p>LED COB J-Type</p> <p>FWHM / FWTM 88.0° / 124.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>IDEAL: 50-2103NC + 50-2100AN</p>		
<p>NICHIA</p> <p>LED COB J-Type</p> <p>FWHM / FWTM 89.0° / 129.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>F13671_ANGE-RZ-LENS</p> <p>IDEAL: 50-2103NC + 50-2100AN</p>		

OPTICAL RESULTS (MEASURED):

<p>NICHIA</p> <p>LED COB J-Type</p> <p>FWHM / FWTM 93.0° / 132.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 463 Typ L2</p>		
<p>NICHIA</p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 94.0° / 132.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 438 Typ L1</p>		
<p>NICHIA</p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 90.0° / 125.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2100NC + 50-2100AN</p>		
<p>NICHIA</p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 94.0° / 130.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: Molex: 180580-0005</p>		

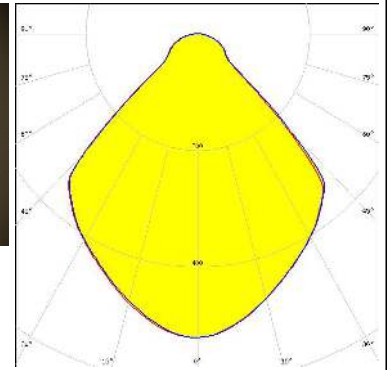
OPTICAL RESULTS (MEASURED):

<p>NICHIA</p> <p>LED COB L-Type (LES 11)</p> <p>FWHM / FWTM 92.0° / 126.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</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>NICHIA</p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM / FWTM 94.0° / 132.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 0.5 cd/m</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>NICHIA</p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM / FWTM 94.0° / 131.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</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>OSRAM</p> <p>LED PrevaLED Core AC (LEP-2000)</p> <p>FWHM / FWTM 89.0° / 125.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		

OPTICAL RESULTS (MEASURED):

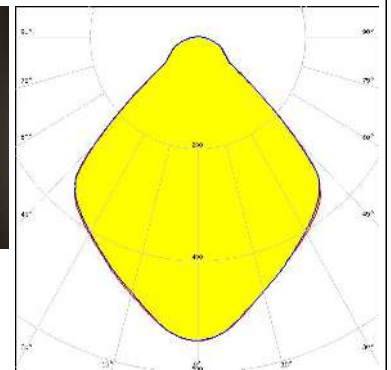
OSRAM

LED PrevaLED Core AC (LEP-800)
 FWHM / FWTM 90.0° / 126.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



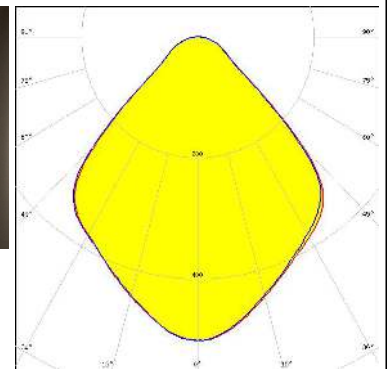
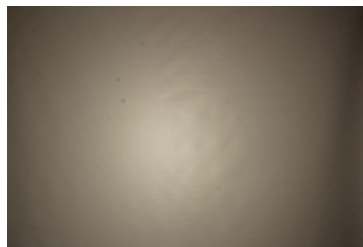
OSRAM

LED PrevaLED Core G7 L15 H1
 FWHM / FWTM 90.0° / 125.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C16685_CLAMP-PRV-A



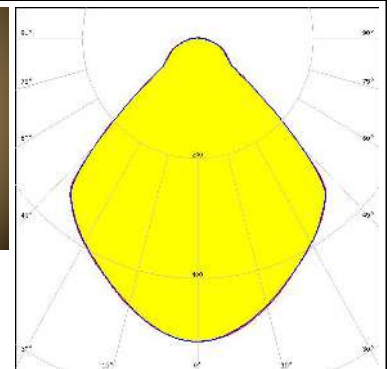
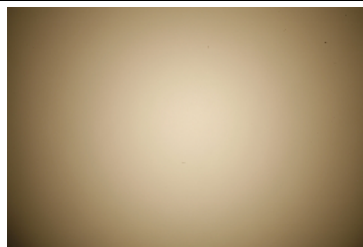
OSRAM

LED PrevaLED Core G7 L15 H1
 FWHM / FWTM 90.0° / 127.0°
 Efficiency 92 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C16685_CLAMP-PRV-A
 F13671_ANGE-RZ-LENS



OSRAM

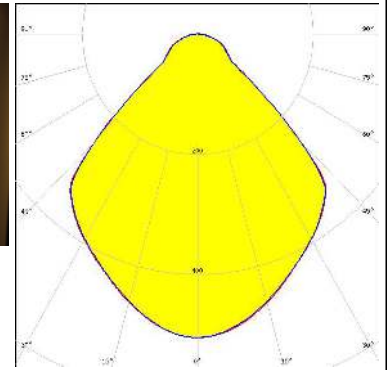
LED PrevaLED Core Z4 LES19
 FWHM / FWTM 90.0° / 129.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



OPTICAL RESULTS (MEASURED):

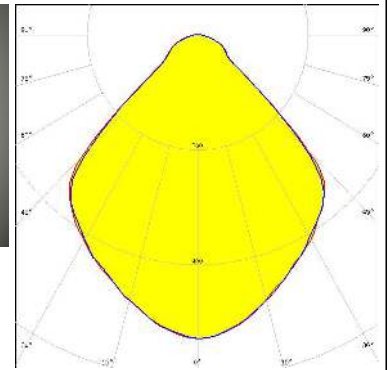
OSRAM

LED PrevaLED Core Z4 LES19
 FWHM / FWTM 90.0° / 129.0°
 Efficiency 90 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 F13671_ANGE-RZ-LENS
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



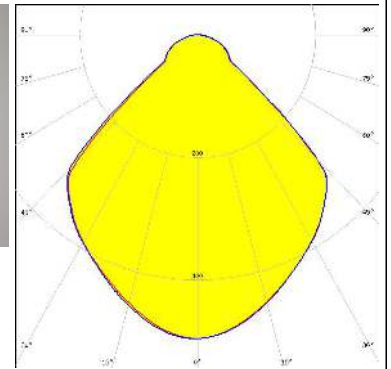
OSRAM

Opto Semiconductors
 LED Soleriq S13
 FWHM / FWTM 92.0° / 128.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1



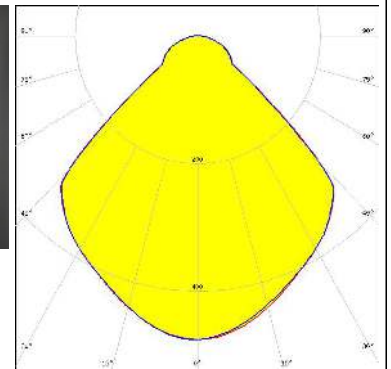
OSRAM

Opto Semiconductors
 LED Soleriq S13
 FWHM / FWTM 93.0° / 130.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C13658_CLAMP-VERO13-18
 Bender Wirth: 437 Typ L1

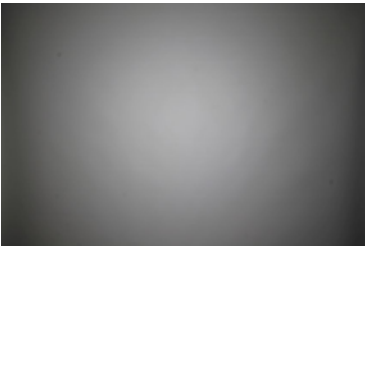
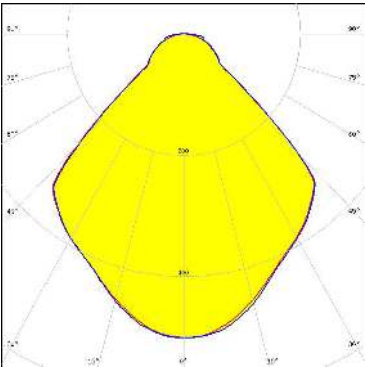
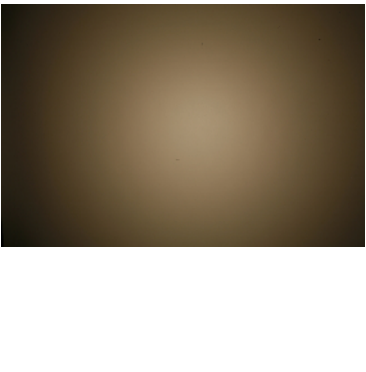
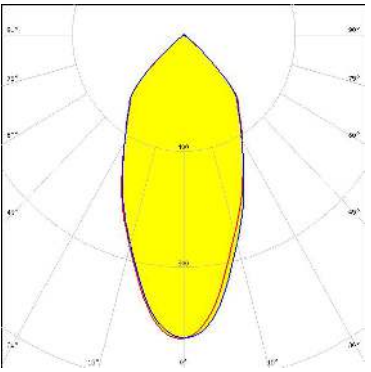
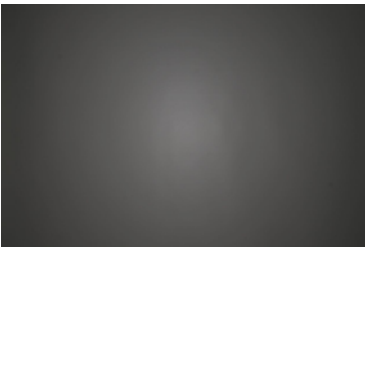
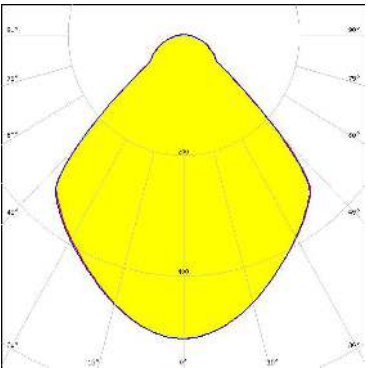
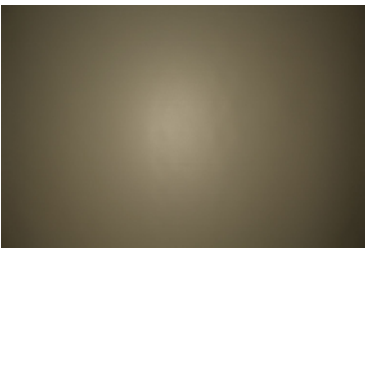
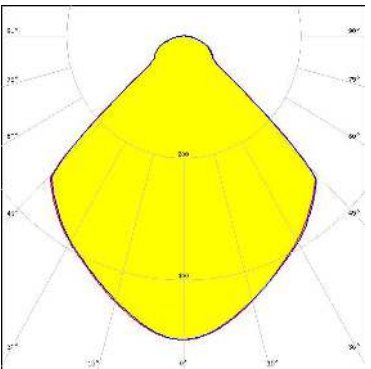


OSRAM

Opto Semiconductors
 LED Soleriq S13 19x19
 FWHM / FWTM 93.0° / 134.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1



OPTICAL RESULTS (MEASURED):

<p>OSRAM Opto Semiconductors</p> <p>LED Soleriq S13 19x19</p> <p>FWHM / FWTM 91.0° / 131.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2103CT + 50-2100AN</p>		
<p>OSRAM Opto Semiconductors</p> <p>LED Soleriq S19</p> <p>FWHM / FWTM 91.0° / 130.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/lm</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>		
<p>OSRAM Opto Semiconductors</p> <p>LED Soleriq S19</p> <p>FWHM / FWTM 90.0° / 127.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13584_CLAMP-VERO29 Bender Wirth: 462 Typ L3</p>		
<p>PHILIPS</p> <p>LED Fortimo SLM L09 + SLM holder</p> <p>FWHM / FWTM 93.0° / 128.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1</p>		

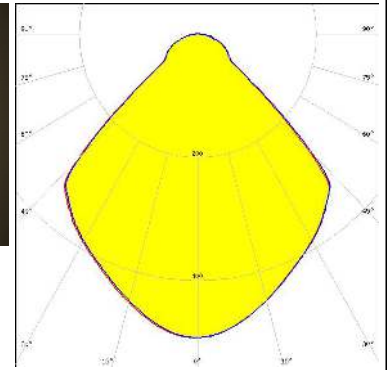
OPTICAL RESULTS (MEASURED):

PHILIPS

LED Fortimo SLM L13 + SLM holder
 FWHM / FWTM 92.0° / 131.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1

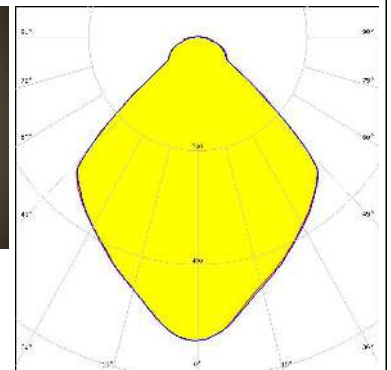
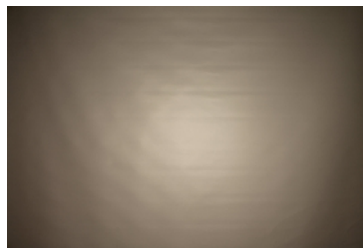


PHILIPS

LED Fortimo SLM L13 CoB
 FWHM / FWTM 92.0° / 127.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White

Required components:

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



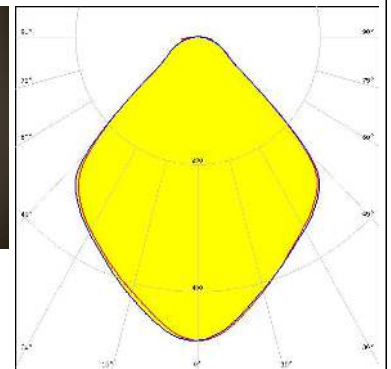
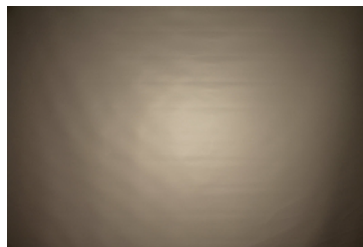
PHILIPS

LED Fortimo SLM L13 CoB
 FWHM / FWTM 91.0° / 128.0°
 Efficiency 88 %
 Peak intensity 0.5 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



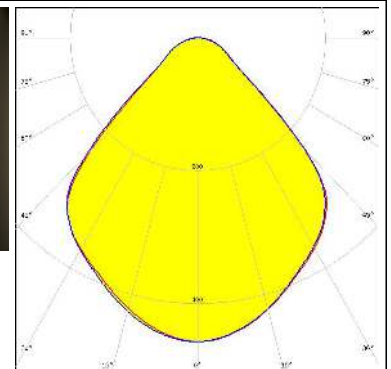
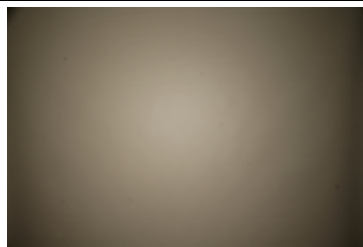
PHILIPS

LED Fortimo SLM L15 + SLM holder
 FWHM / FWTM 91.0° / 131.0°
 Efficiency 89 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White

Required components:

F13671_ANGE-RZ-LENS

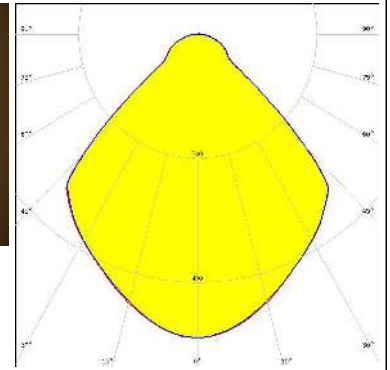
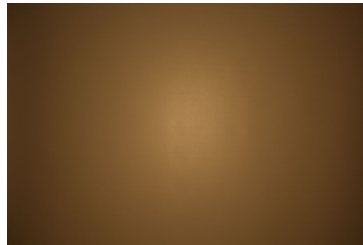
TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



OPTICAL RESULTS (MEASURED):

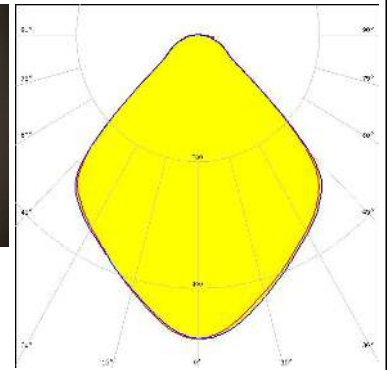
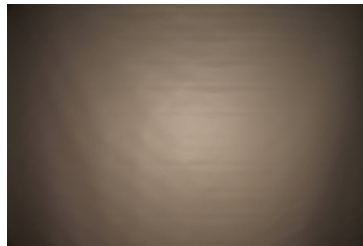
PHILIPS

LED Fortimo SLM L15 + SLM holder
 FWHM / FWTM 91.0° / 129.0°
 Efficiency 92 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



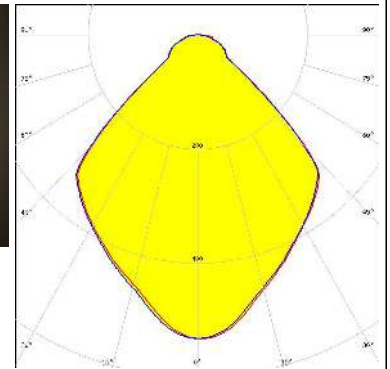
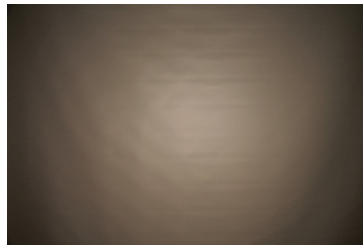
PHILIPS

LED Fortimo SLM L15 CoB
 FWHM / FWTM 91.0° / 128.0°
 Efficiency 89 %
 Peak intensity 0.5 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



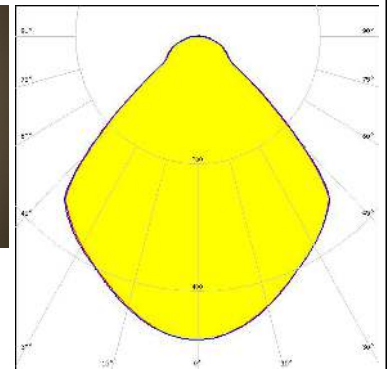
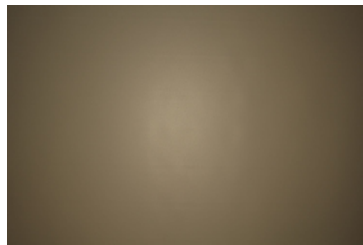
PHILIPS

LED Fortimo SLM L15 CoB
 FWHM / FWTM 91.0° / 127.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



PHILIPS

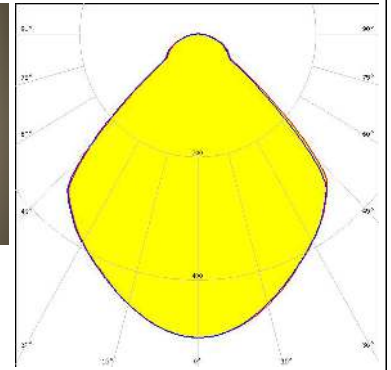
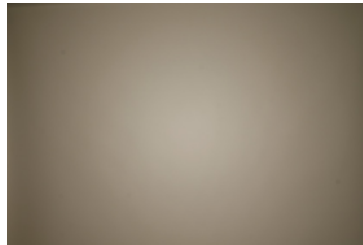
LED Fortimo SLM L19 + SLM holder
 FWHM / FWTM 90.0° / 130.0°
 Efficiency 91 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



OPTICAL RESULTS (MEASURED):

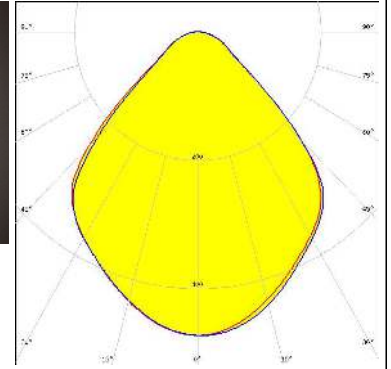
SAMSUNG

LED LC026B / 033B / 040B
 FWHM / FWTM 91.0° / 130.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C13658_CLAMP-VERO13-18
 Bender Wirth: 450 Typ L2



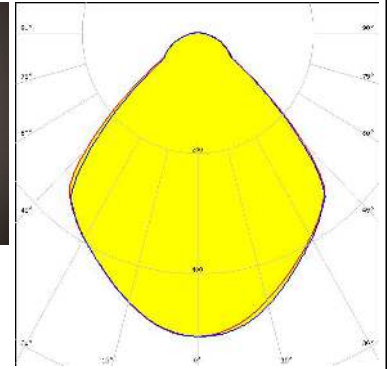
SAMSUNG

LED LC035T (Tunable white)
 FWHM / FWTM 90.0° / 131.0°
 Efficiency 91 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour Tunable White
 Required components:
 C13584_CLAMP-VERO29
 F13671_ANGE-RZ-LENS
 Bender Wirth: 502 Typ L3



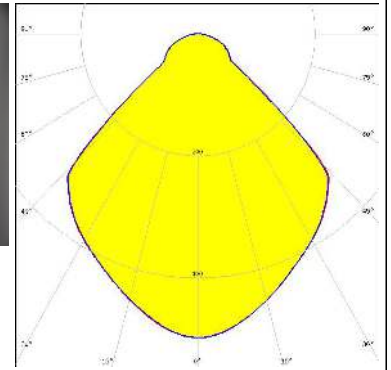
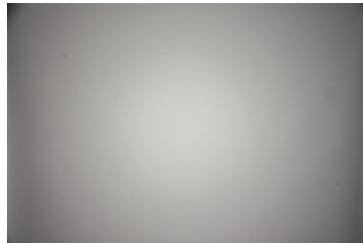
SAMSUNG

LED LC035T (Tunable white)
 FWHM / FWTM 91.0° / 130.0°
 Efficiency 96 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour Tunable White
 Required components:
 C13584_CLAMP-VERO29
 Bender Wirth: 502 Typ L3

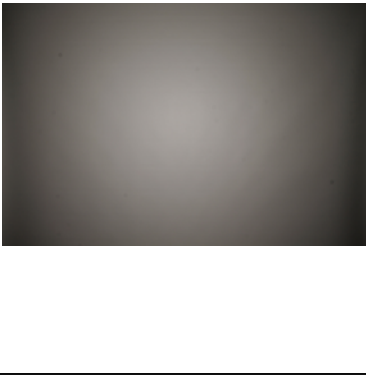
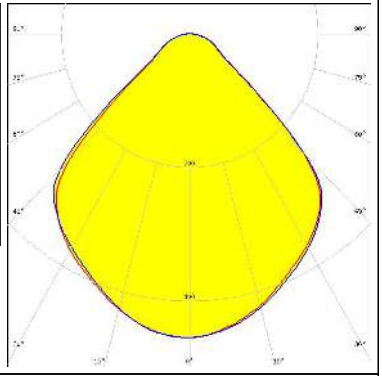
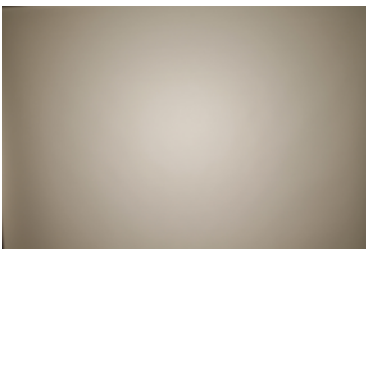
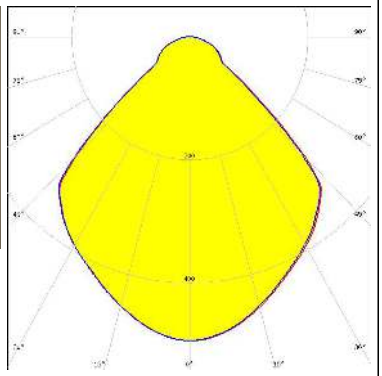
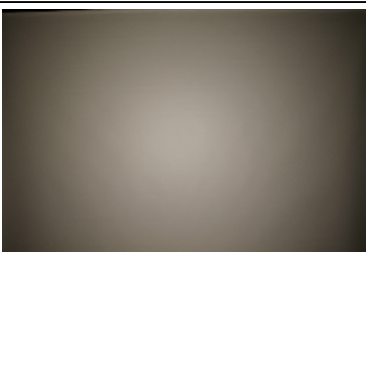
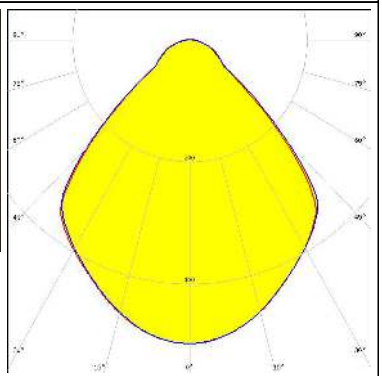
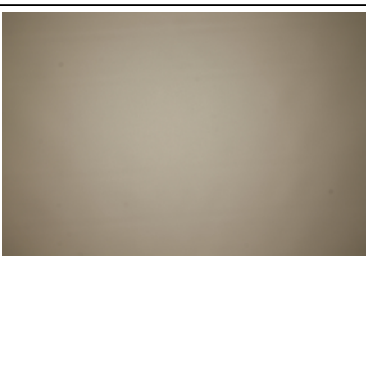
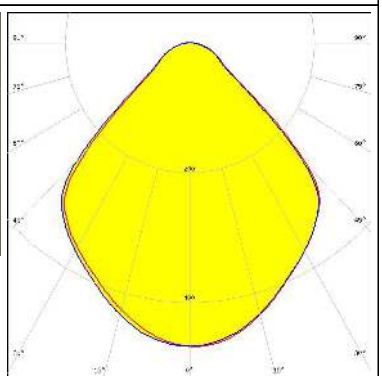


SAMSUNG

LED LC040C
 FWHM / FWTM 93.0° / 132.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 TE Connectivity: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1



OPTICAL RESULTS (MEASURED):

<p>SEOUL SEMICONDUCTOR</p> <p>LED AC Zhaga COB</p> <p>FWHM / FWTM 93.0° / 130.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGLE-RZ-LENS</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED MJT COB LES 14.5</p> <p>FWHM / FWTM 92.0° / 131.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 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>SEOUL SEMICONDUCTOR</p> <p>LED MJT COB LES 22</p> <p>FWHM / FWTM 89.0° / 128.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.5 cd/m</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>SHARP</p> <p>LED Mega Zenigata (GW6DME)</p> <p>FWHM / FWTM 92.0° / 130.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.5 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F13671_ANGLE-RZ-LENS TE Connectivity: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

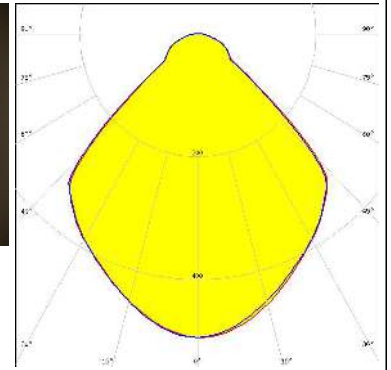
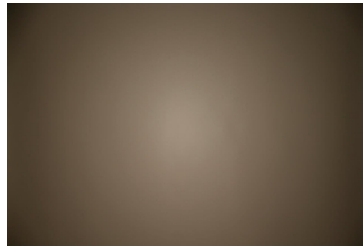
OPTICAL RESULTS (MEASURED):

SHARP

LED Mega Zenigata (GW6DME)
 FWHM / FWTM 92.0° / 131.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

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

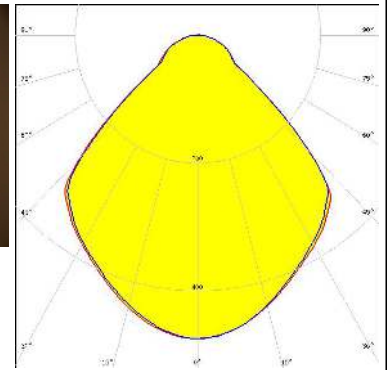
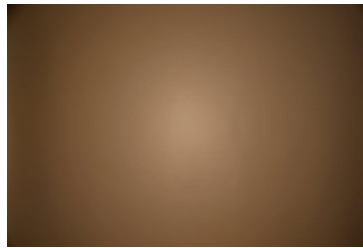


VS LIGHTING SOLUTIONS

LED WU-M-464
 FWHM / FWTM 93.0° / 136.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1

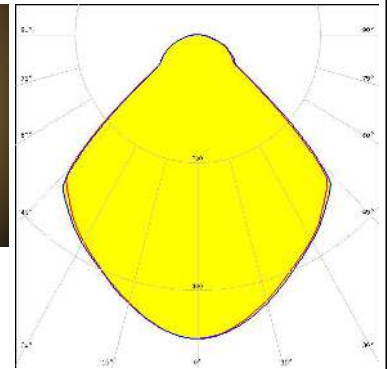
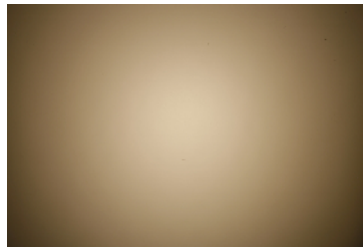


VS LIGHTING SOLUTIONS

LED WU-M-484
 FWHM / FWTM 93.0° / 137.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1

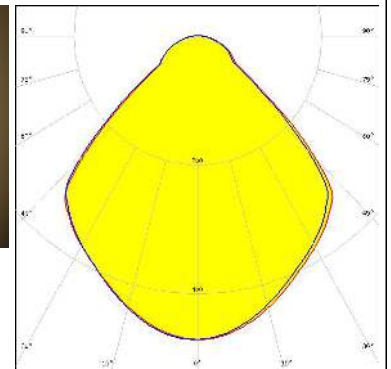
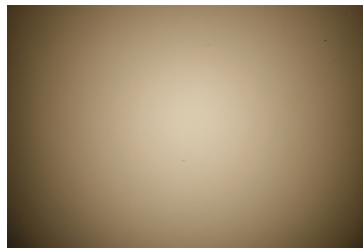


VS LIGHTING SOLUTIONS

LED WU-M-485
 FWHM / FWTM 93.0° / 137.0°
 Efficiency 94 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



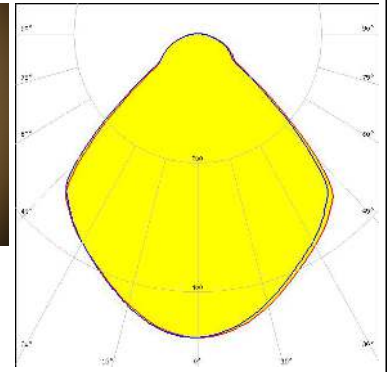
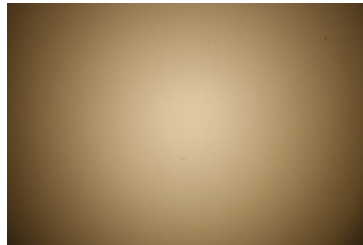
OPTICAL RESULTS (MEASURED):




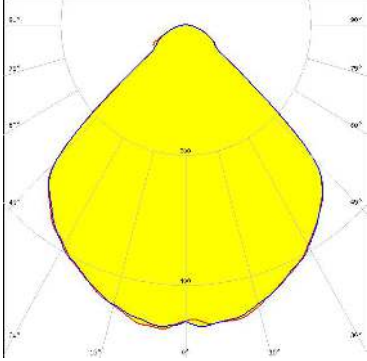

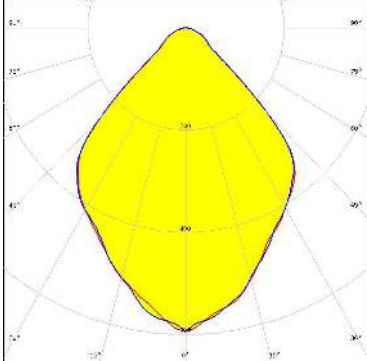

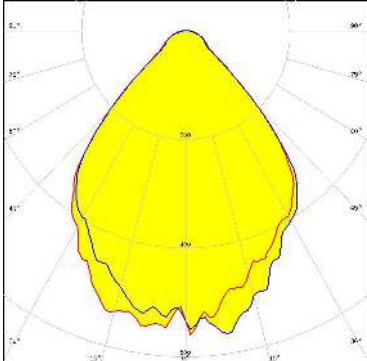

LED WU-M-486
FWHM / FWTM 92.0° / 136.0°
Efficiency 94 %
Peak intensity 0.5 cd/lm
LEDs/each optic 1
Light colour White

Required components:



TE Connectivity: OPTIC CLIP Z50 TYPE1 2213194-1



OPTICAL RESULTS (SIMULATED):

<p></p> <p>LED V10 Gen7 FWHM / FWTM 93.0° / 123.0° Efficiency 92 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 486 Typ L1</p>	
<p></p> <p>LED V13 Gen7 FWHM / FWTM 86.0° / 112.0° Efficiency 92 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White Required components: IDEAL: 50-2103CT + 50-2100AN</p>	
<p></p> <p>LED V22 Gen7 FWHM / FWTM 82.0° / 110.0° Efficiency 94 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White Required components: IDEAL: 50-2204-CT + 50-2100AN</p>	
<p></p> <p>LED CxM-9 (13.5x13.5) FWHM / FWTM 94.0° / 130.0° Efficiency 95 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13658_CLAMP-VERO13-18 Bender Wirth: 434 Typ L1</p>	

OPTICAL RESULTS (SIMULATED):

 SEOUL SEMICONDUCTOR	
LED	ZC12/18
FWHM / FWTM	92.0° / 130.0°
Efficiency	95 %
Peak intensity	0.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
C13658_CLAMP-VERO13-18	
Bender Wirth: 433 Typ L1	
<hr/>	
 SEOUL SEMICONDUCTOR	
LED	ZC4/6
FWHM / FWTM	94.0° / 130.0°
Efficiency	95 %
Peak intensity	0.5 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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