

## ANGELINA-XW

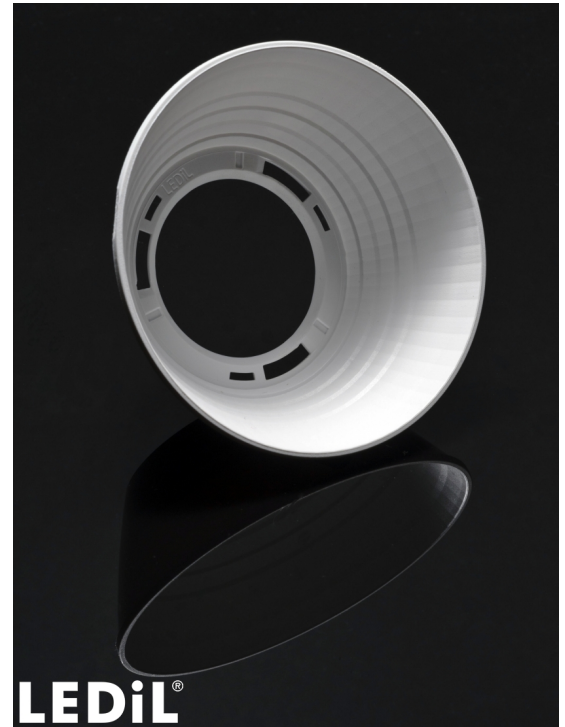
White version with ~91° wide beam

### TECHNICAL SPECIFICATIONS:

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

### MATERIAL SPECIFICATIONS:

Component	Type	Material
ANGELINA-XW	Reflector	HRPC



Colour	Finish	Coating
white		

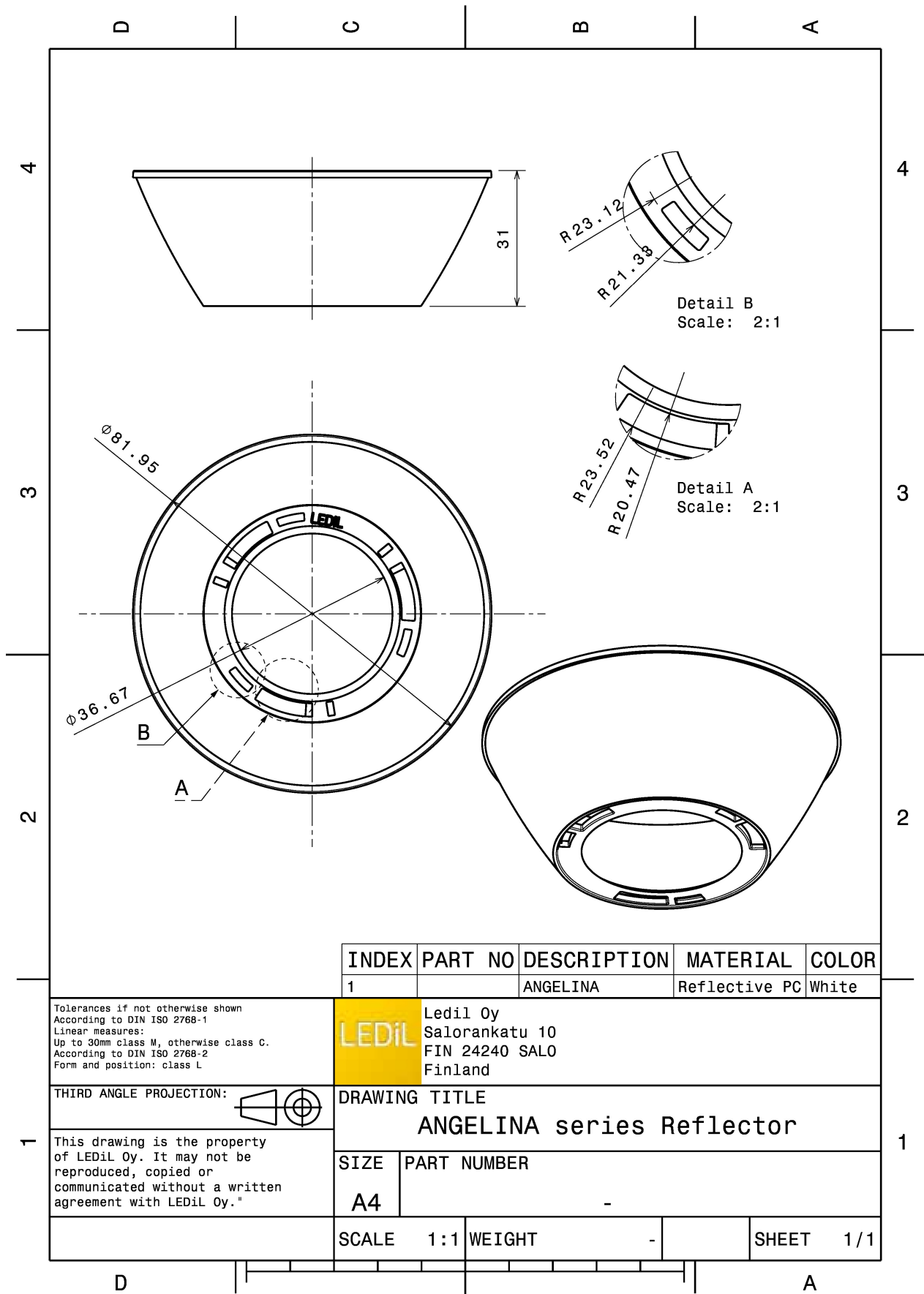
### ORDERING INFORMATION:

#### Component

F13838\_ANGELINA-XW

» Box size: 480 x 280 x 300 mm

Qty in box	MOQ	MPQ	Box weight (kg)
900	120	60	12.3



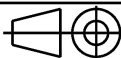
INDEX	PART NO	DESCRIPTION	MATERIAL	COLOR
1		ANGELINA	Reflective PC	White

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 Oy  
Salorankatu 10  
FIN 24240 SALO  
Finland

THIRD ANGLE PROJECTION:



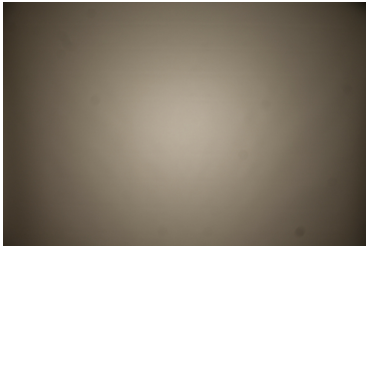
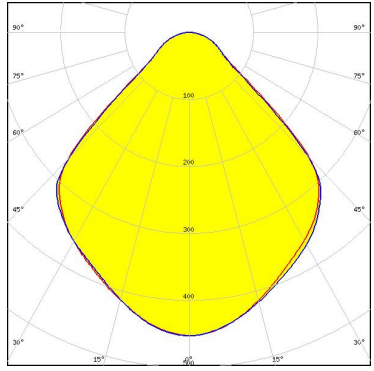
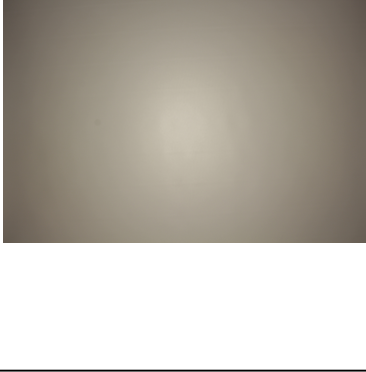
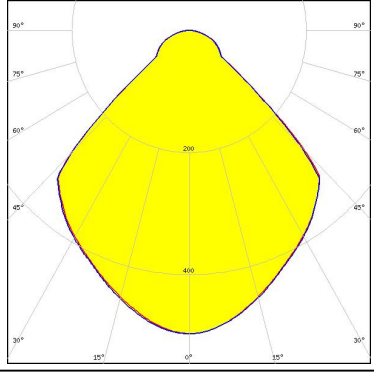
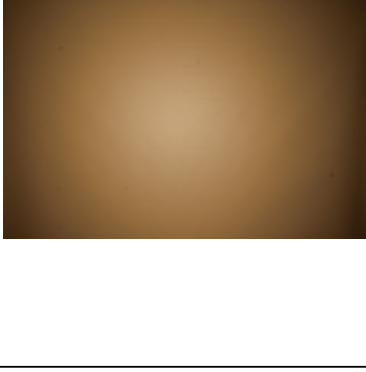
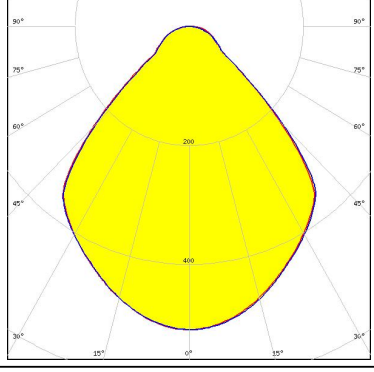

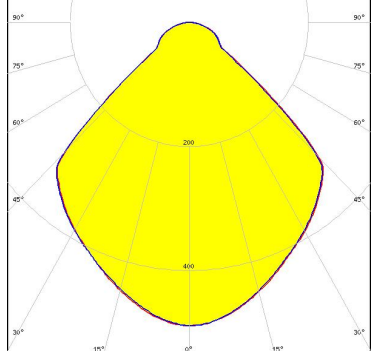
DRAWING TITLE  
**ANGELINA series Reflector**

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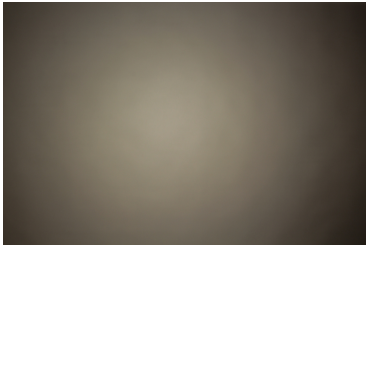
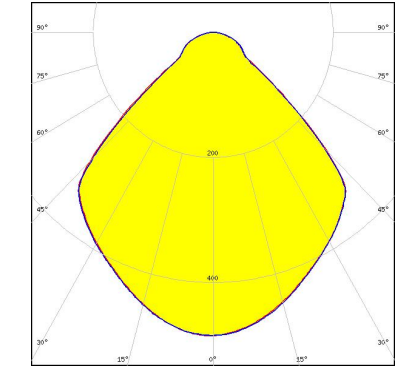
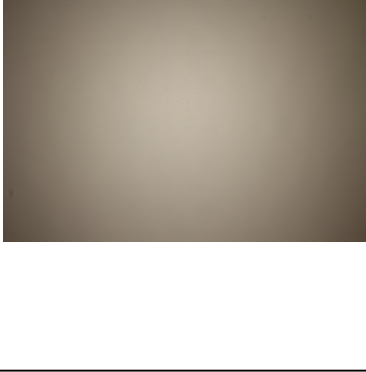
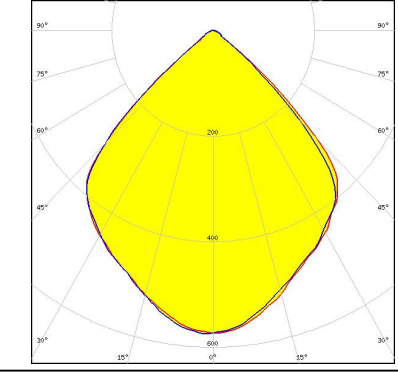
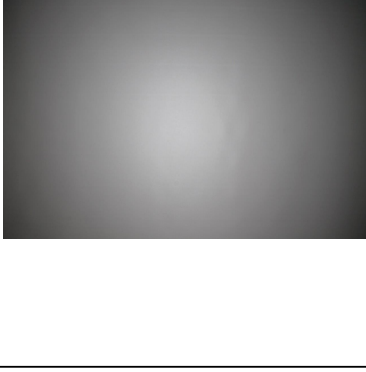
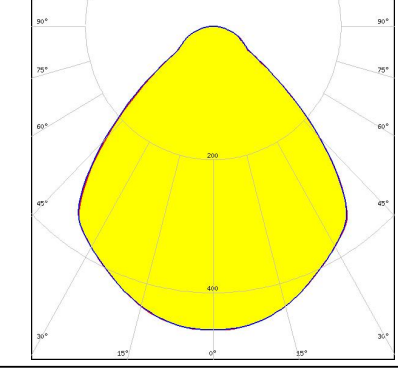

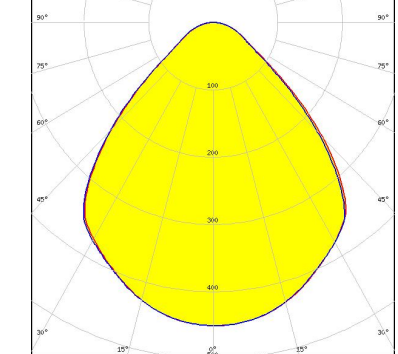
SIZE	PART NUMBER
A4	-

SCALE	1:1	WEIGHT	-	SHEET	1/1
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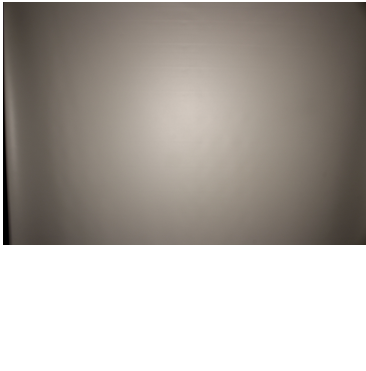
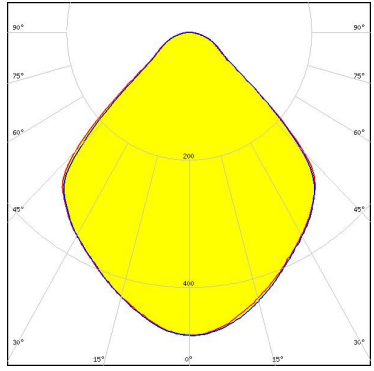
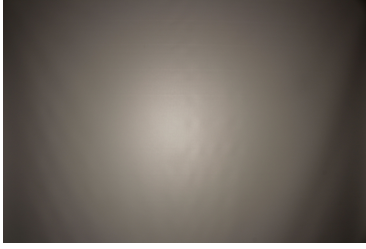
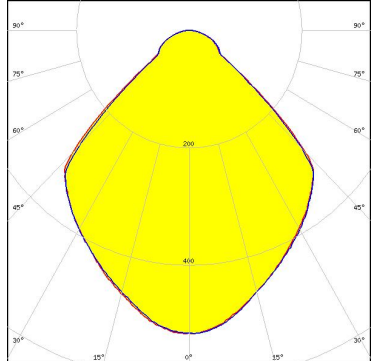
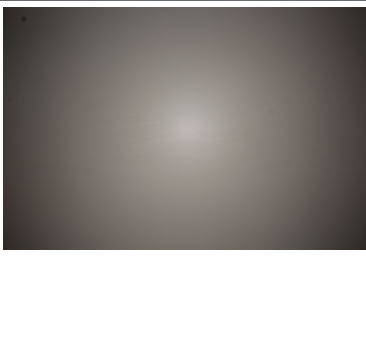
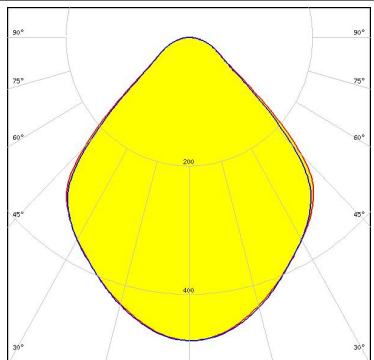

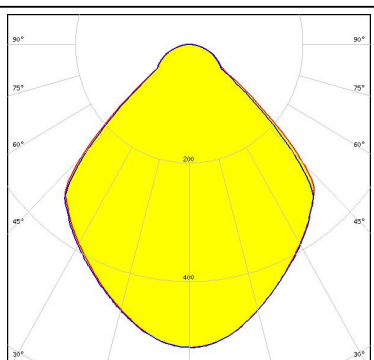
#### PHOTOMETRIC DATA (MEASURED):

<p>bridgelux.</p> <p>LED V10 Gen7            FWHM 93.0°            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>bridgelux.</p> <p>LED V13 Gen7            FWHM 92.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p>bridgelux.</p> <p>LED V22 Gen6            FWHM 88.0°            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>bridgelux.</p> <p>LED Vero SE 13            FWHM 94.0°            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>		


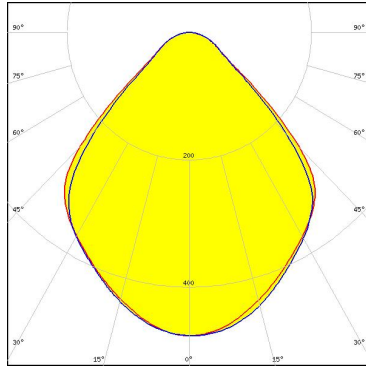
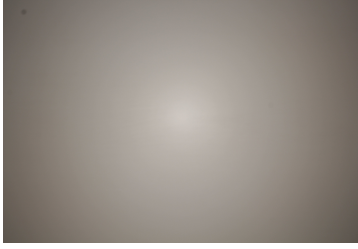
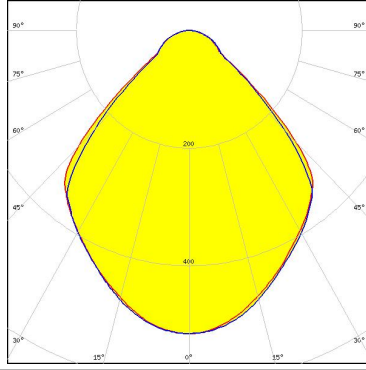
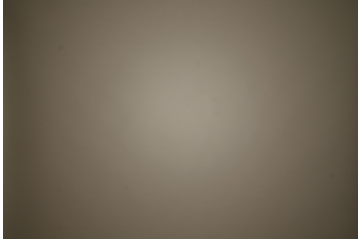
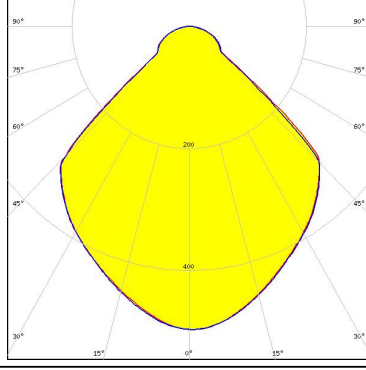

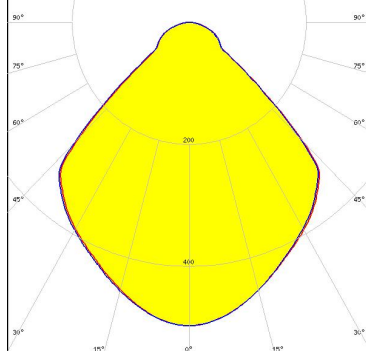
#### PHOTOMETRIC DATA (MEASURED):

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

#### PHOTOMETRIC DATA (MEASURED):

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

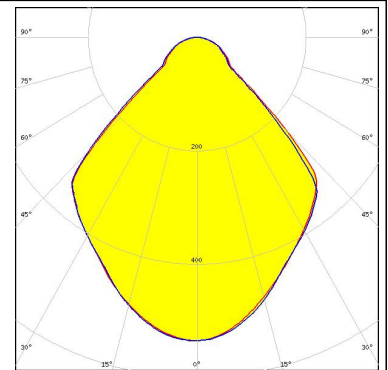
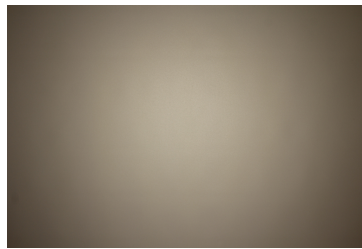
#### PHOTOMETRIC DATA (MEASURED):

<p>bridgelux.</p> <p>LED Vesta TW 22mm DP</p> <p>FWHM 90.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Tunable 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>bridgelux.</p> <p>LED Vesta TW 22mm DP</p> <p>FWHM 90.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Tunable White</p> <p>Required components:</p> <p>C13584_CLAMP-VERO29</p> <p>Bender Wirth: 494 Typ L3</p>		
<p><b>CITIZEN</b></p> <p>LED CLL02x/CLU02x (LES10)</p> <p>FWHM 94.0°</p> <p>Efficiency 95 %</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>C13658_CLAMP-VERO13-18</p> <p>Bender Wirth: 434 Typ L1</p>		
<p><b>CITIZEN</b></p> <p>LED CLL03x/CLU03x</p> <p>FWHM 91.0°</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: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

#### PHOTOMETRIC DATA (MEASURED):

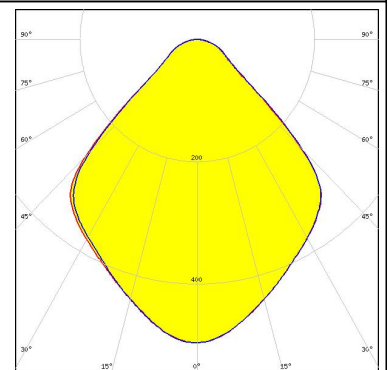
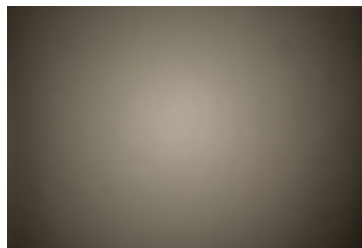
#### CITIZEN

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



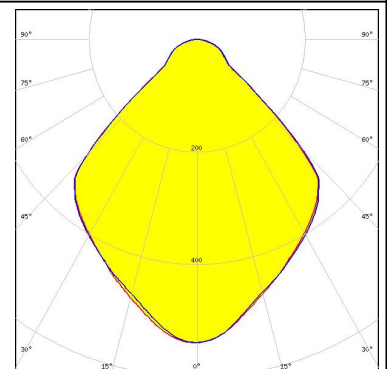
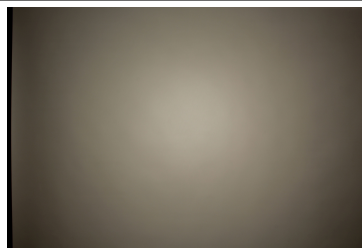
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 91.0°  
 Efficiency 92 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16791\_CLAMP-Z45-A  
 F13671\_ANGE-RZ-LENS  
 TE: 2325807-3



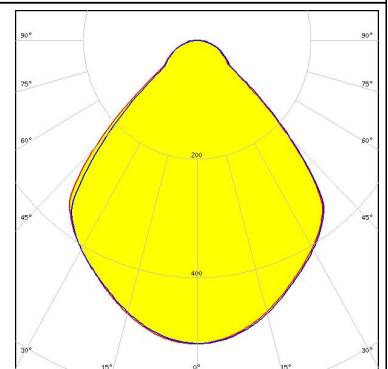
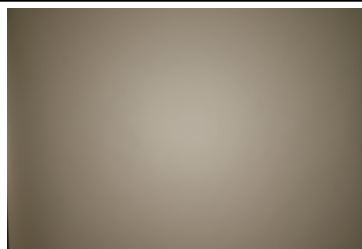
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 90.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16791\_CLAMP-Z45-A  
 TE: 2325807-3



#### CITIZEN

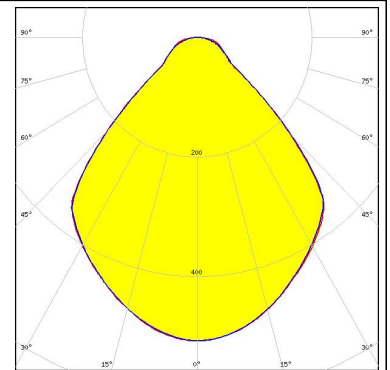
LED CLL04x/CLU04x  
 FWHM 88.0°  
 Efficiency 95 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 431 Typ L3



#### PHOTOMETRIC DATA (MEASURED):

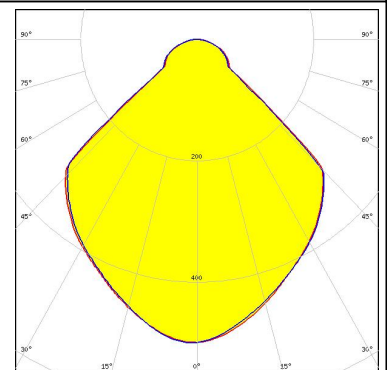
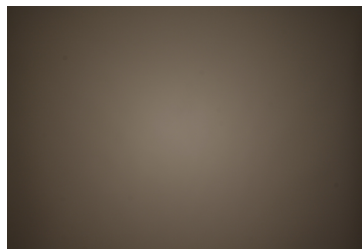
#### CITIZEN

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



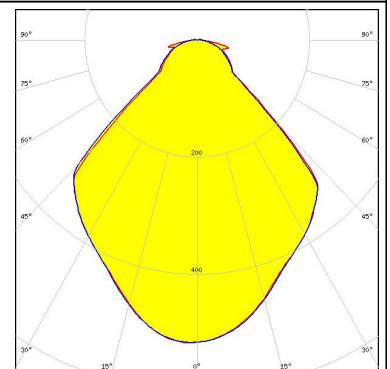
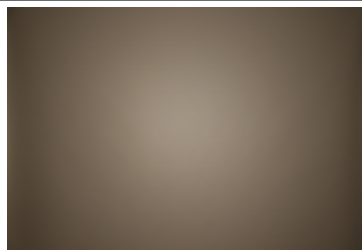
#### CITIZEN

LED CLU700/701/702  
 FWHM 95.0°  
 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



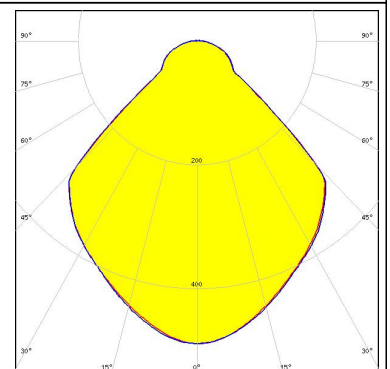
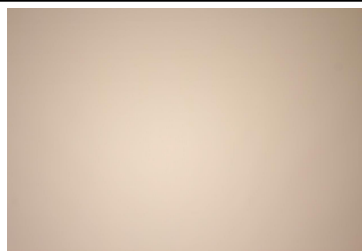
#### CITIZEN

LED CLU720/721  
 FWHM 89.0°  
 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  
 FWHM 93.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1

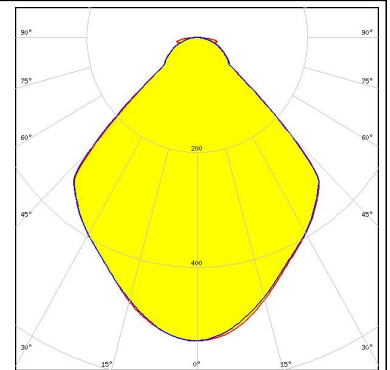
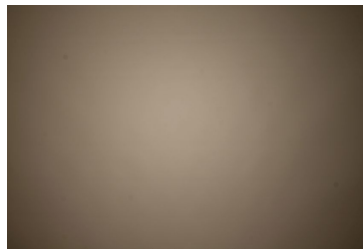




#### PHOTOMETRIC DATA (MEASURED):

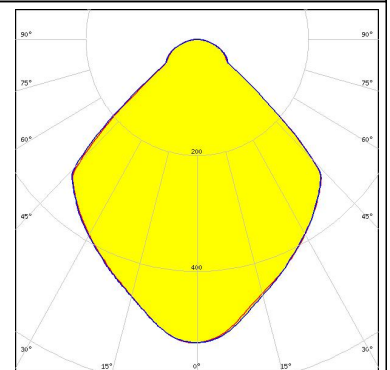
#### CITIZEN

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



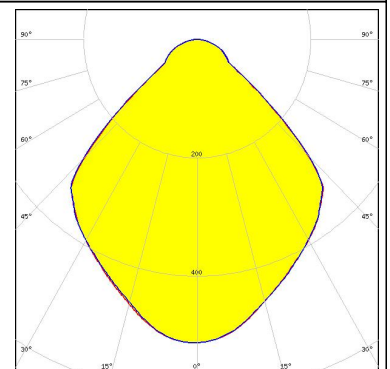
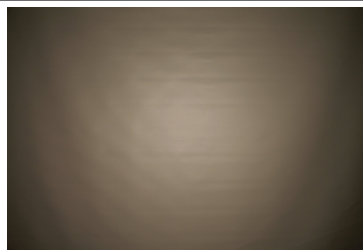
#### CREE

LED CMA1840  
 FWHM 93.0°  
 Efficiency 97 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18



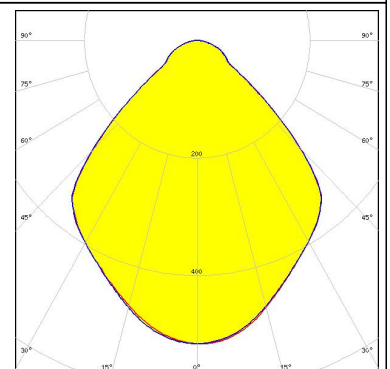
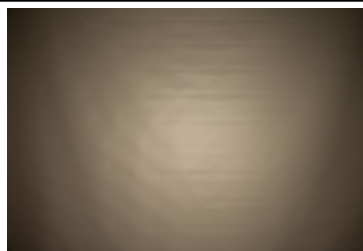
#### CREE

LED CMA2550  
 FWHM 92.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



#### CREE

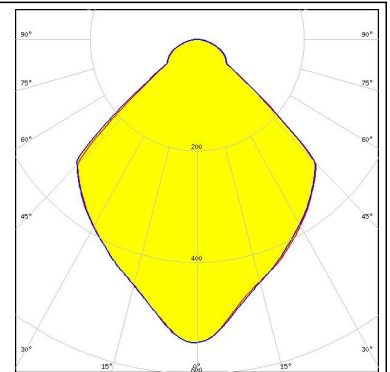
LED CMA3090  
 FWHM 90.0°  
 Efficiency 97 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



#### PHOTOMETRIC DATA (MEASURED):

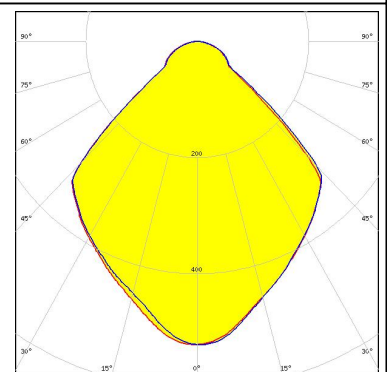
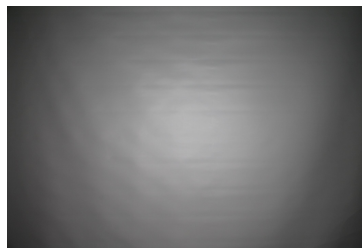
#### CREE

LED CMT14xx  
 FWHM 93.0°  
 Efficiency 94 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 434 Typ L1



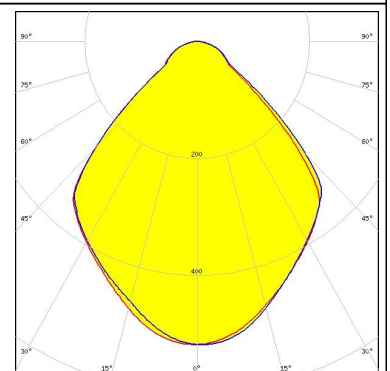
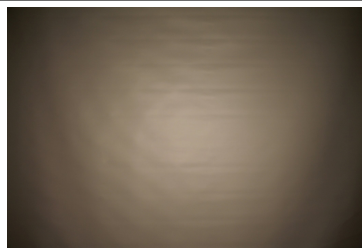
#### CREE

LED CMT19xx  
 FWHM 92.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 477 Typ L1



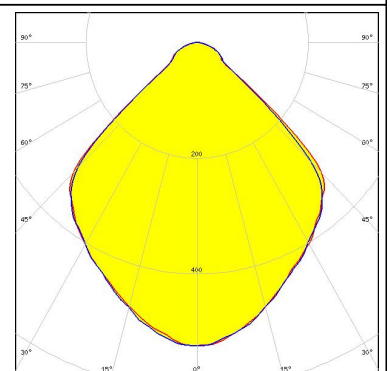
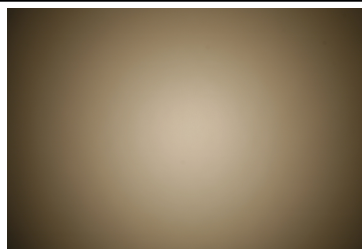
#### CREE

LED CMT28xx  
 FWHM 89.0°  
 Efficiency 96 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 471 Typ L3



#### CREE

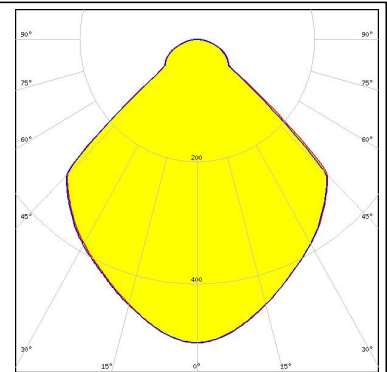
LED CXA/B 15xx  
 FWHM 94.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18



#### PHOTOMETRIC DATA (MEASURED):

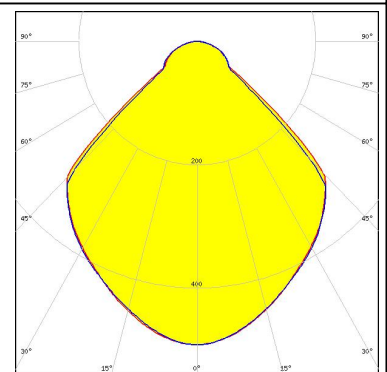
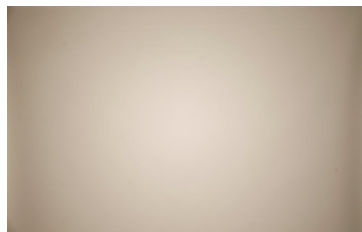
#### CREE

LED CXA/B 15xx  
 FWHM 94.0°  
 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



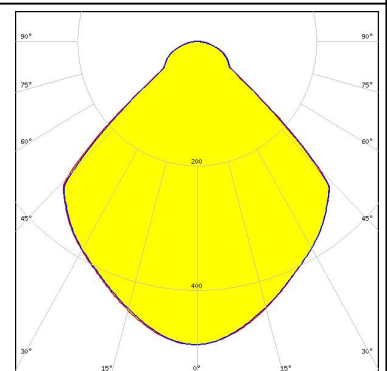
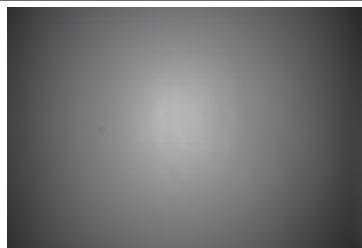
#### CREE

LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM 94.0°  
 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



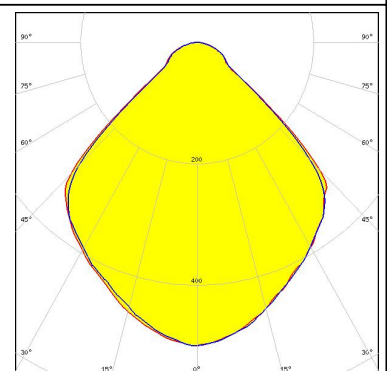
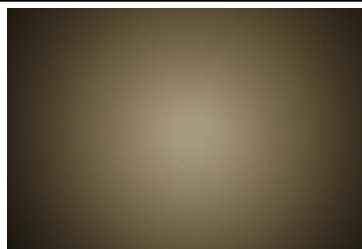
#### CREE

LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM 93.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### CREE

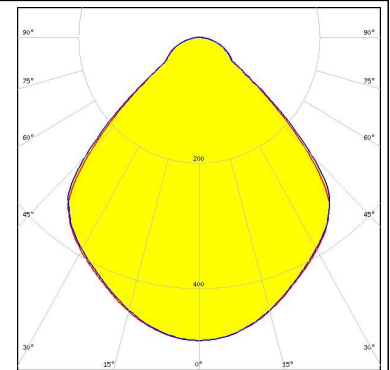
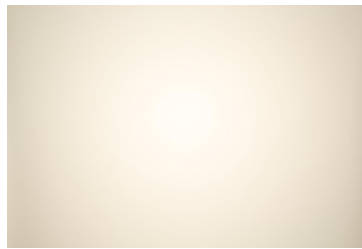
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM 94.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14123\_CLAMP-CXA15-18



#### PHOTOMETRIC DATA (MEASURED):

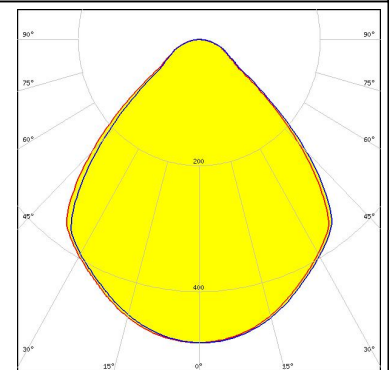
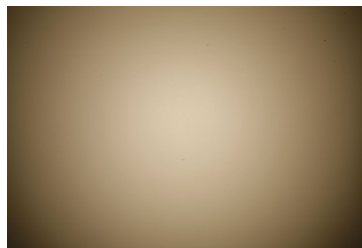
#### CREE

LED CXA/B 30xx  
 FWHM 91.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C14036\_CLAMP\_CXA25-30



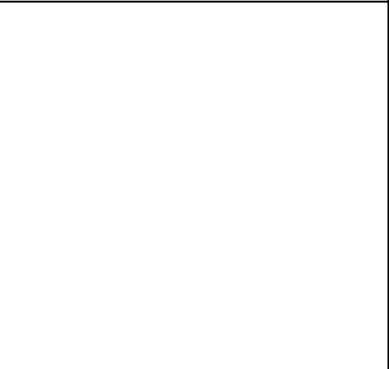
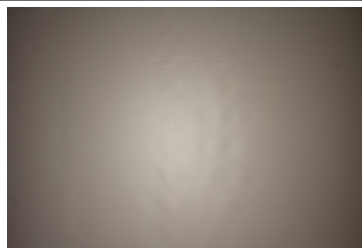
#### CREE

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



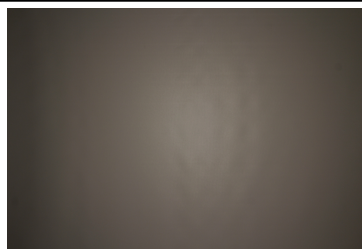
#### EVERLIGHT

LED CHI3030 19W  
 FWHM 88.0°  
 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

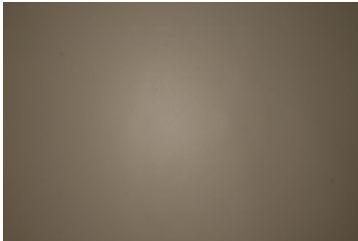
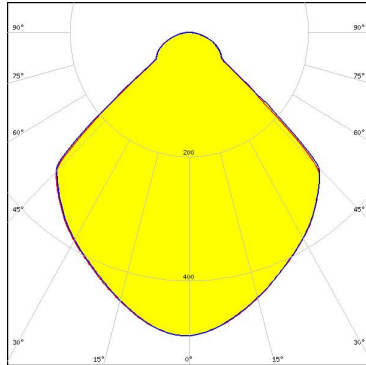

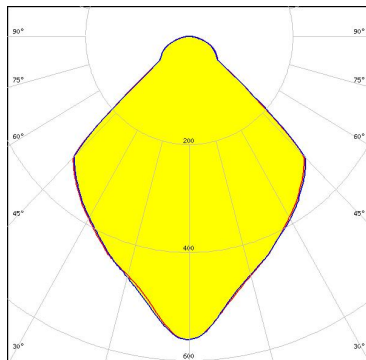

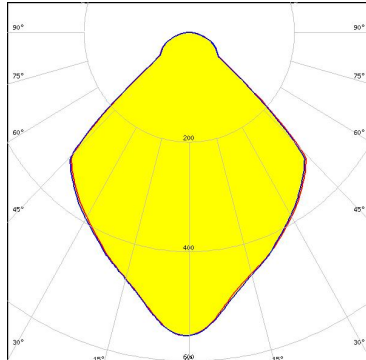
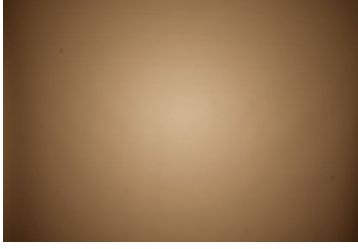
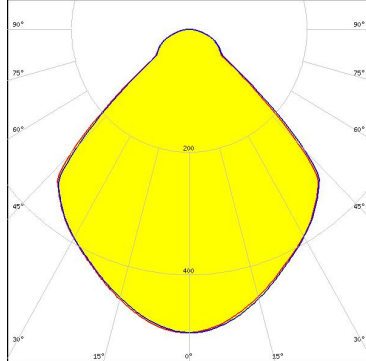


#### EVERLIGHT

LED CHI3030 29W  
 FWHM 89.0°  
 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



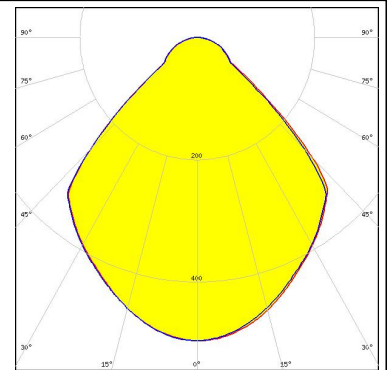
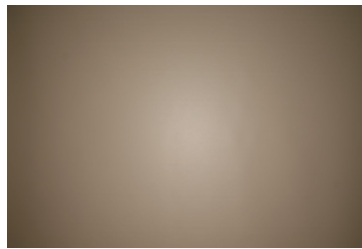
#### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1202/1203            FWHM 95.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 438 Typ L1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1204HD            FWHM 92.0°            Efficiency 96 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1205HD            FWHM 92.0°            Efficiency 96 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CoB 1208            FWHM 92.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		

#### PHOTOMETRIC DATA (MEASURED):

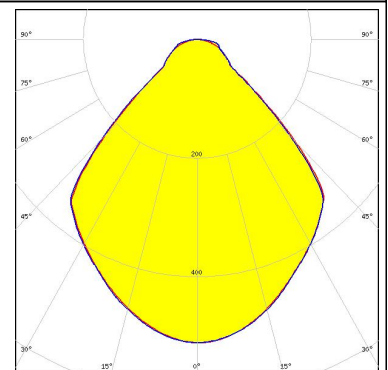
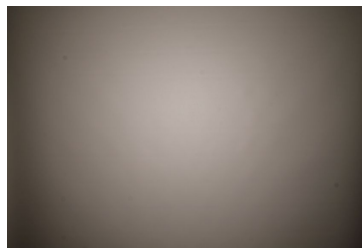
#### LUMILEDS

LED LUXEON CoB 1211  
 FWHM 91.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 431 Typ L3



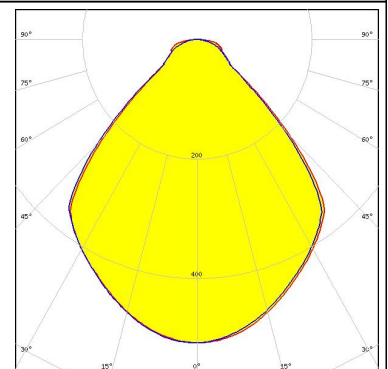
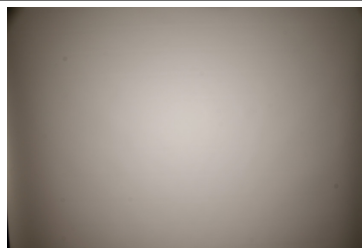
#### LUMILEDS

LED LUXEON CoB 1211  
 FWHM 89.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN



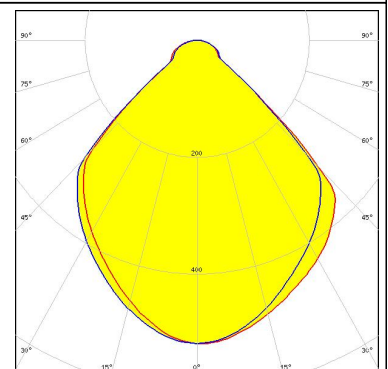
#### LUMILEDS

LED LUXEON CoB 1216/1812  
 FWHM 88.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 IDEAL: 50-2204-CT + 50-2100AN

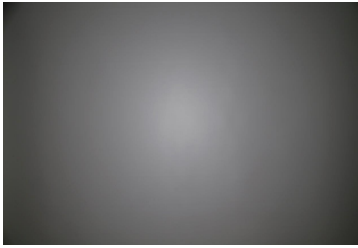
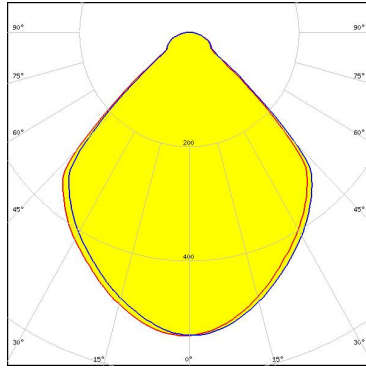
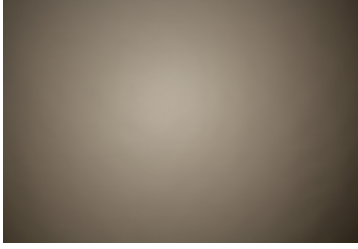
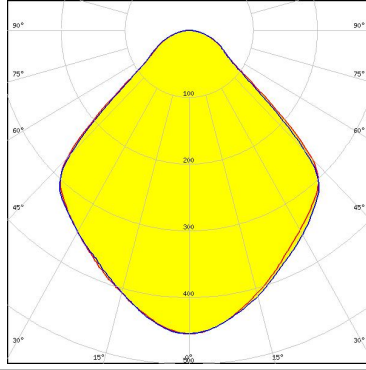
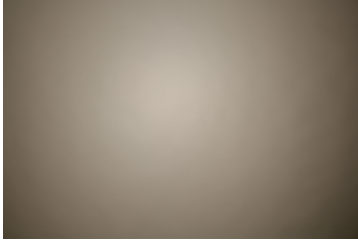
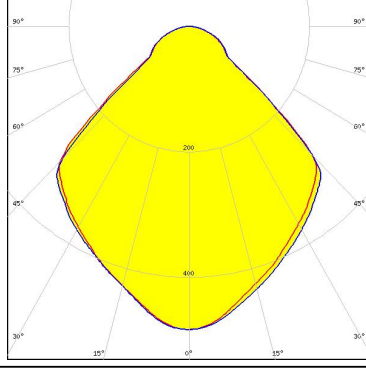
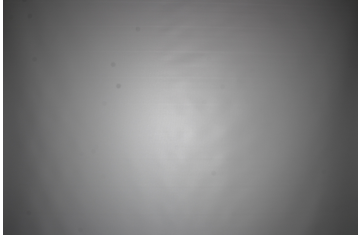
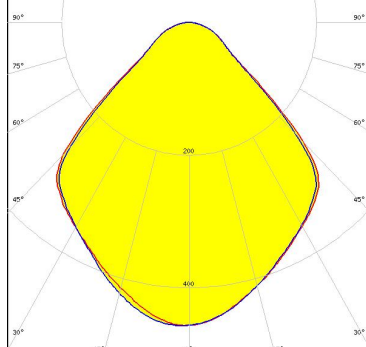


#### LUMILEDS


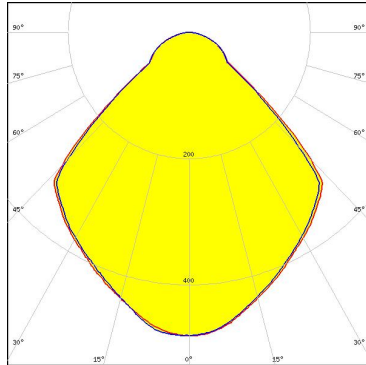
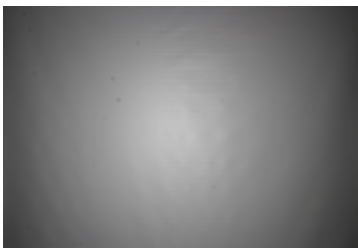
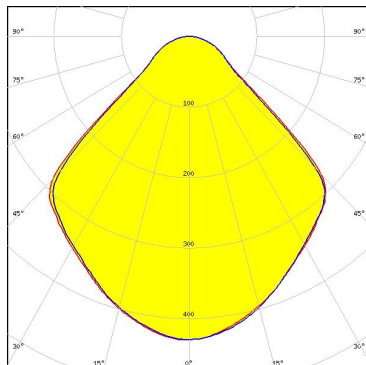

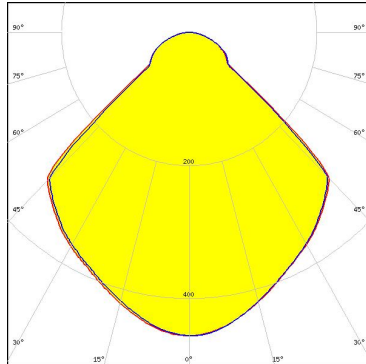
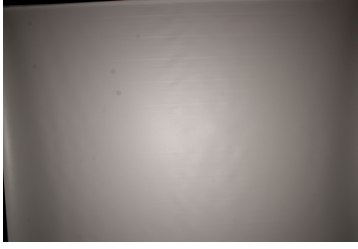
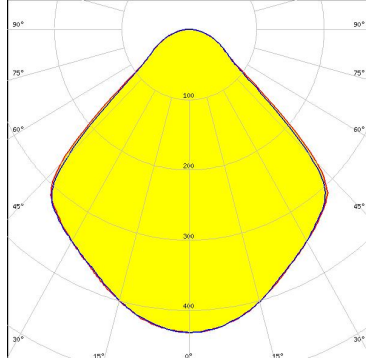
LED LUXEON K12  
 FWHM 92.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213134-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### PHOTOMETRIC DATA (MEASURED):

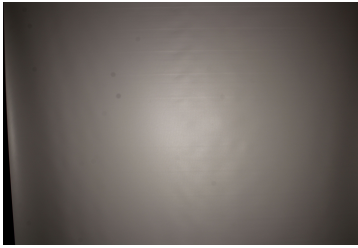
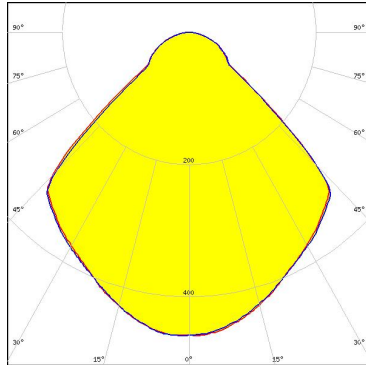
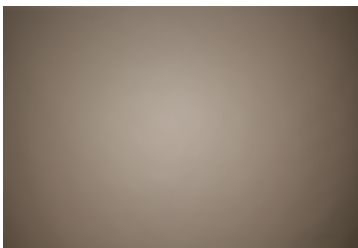
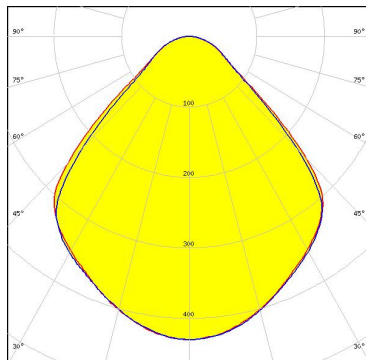

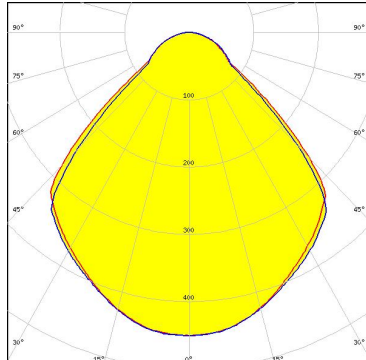
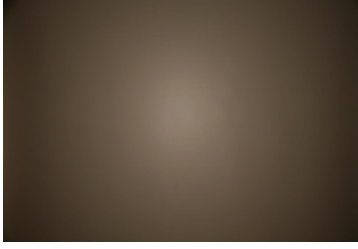
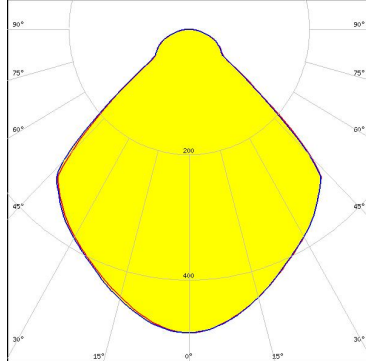
<p><b>LUMILEDS</b></p> <p>LED LUXEON K16            FWHM 90.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            BJB: 47.319.2070</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-14 (Dim-To-Warm)            FWHM 94.0°            Efficiency 90 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-14 (Dim-To-Warm)            FWHM 94.0°            Efficiency 95 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-18 (Dim-To-Warm)            FWHM 93.0°            Efficiency 91 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 491 Typ L2</p>		

#### PHOTOMETRIC DATA (MEASURED):


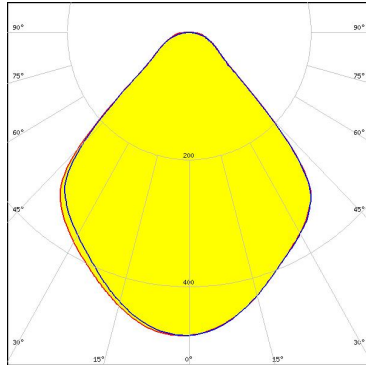
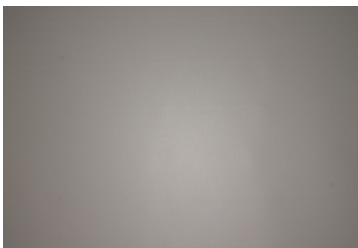
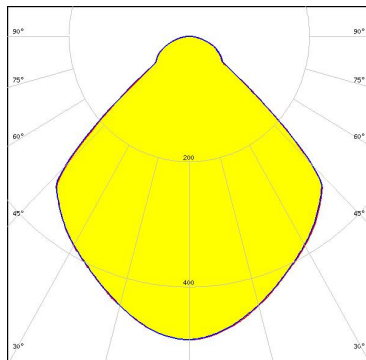

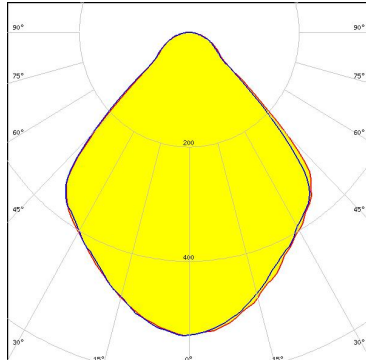
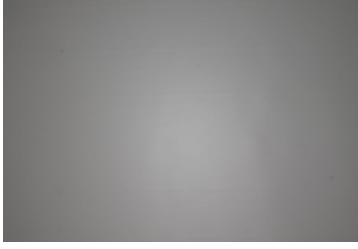
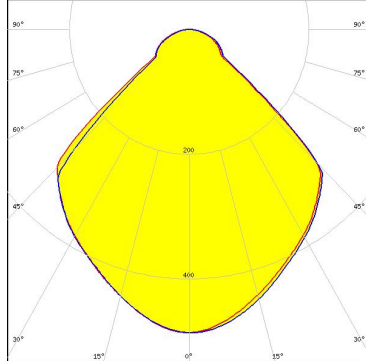
<p><b>LUMINUS</b></p> <p>LED CDM-18 (Dim-To-Warm)            FWHM 93.0°            Efficiency 94 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 491 Typ L2</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-9 (Dim-To-Warm)            FWHM 95.0°            Efficiency 89 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 490 Typ L1</p>		
<p><b>LUMINUS</b></p> <p>LED CDM-9 (Dim-To-Warm)            FWHM 95.0°            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: 490 Typ L1</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-14 (Tunable White)            FWHM 94.0°            Efficiency 88 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13584_CLAMP-VERO29            F13671_ANGE-RZ-LENS            Bender Wirth: 442 Typ L3</p>		




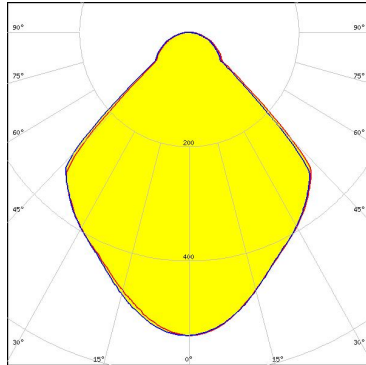
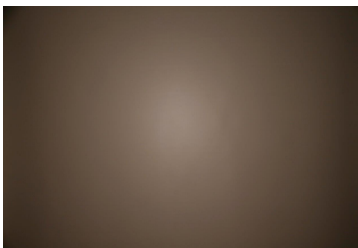
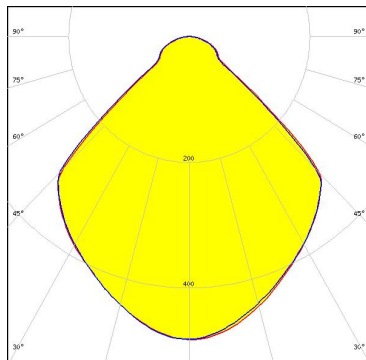

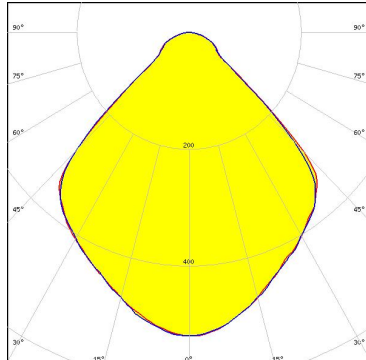
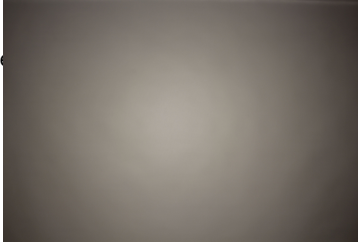
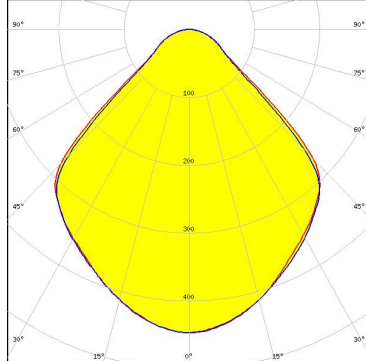
#### PHOTOMETRIC DATA (MEASURED):

<p><b>LUMINUS</b></p> <p>LED CTM-14 (Tunable White)            FWHM 94.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13584_CLAMP-VERO29            Bender Wirth: 442 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-22 (Tunable White)            FWHM 92.0°            Efficiency 88 %            Peak intensity 0.4 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13584_CLAMP-VERO29            F13671_ANGE-RZ-LENS            Bender Wirth: 494 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CTM-22 (Tunable White)            FWHM 93.0°            Efficiency 93 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13584_CLAMP-VERO29            Bender Wirth: 494 Typ L3</p>		
<p><b>LUMINUS</b></p> <p>LED CxM-14 (19x19)            FWHM 93.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		


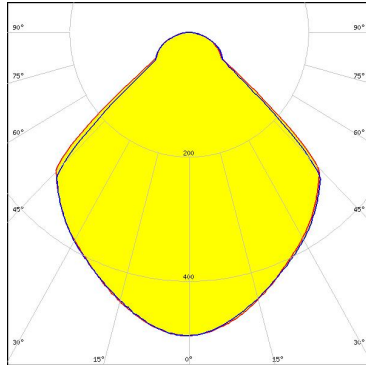

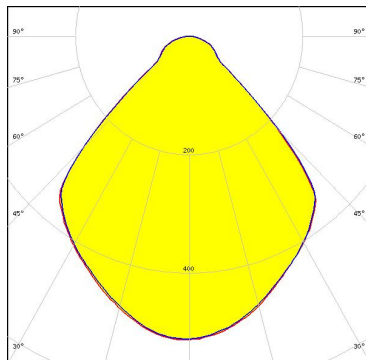

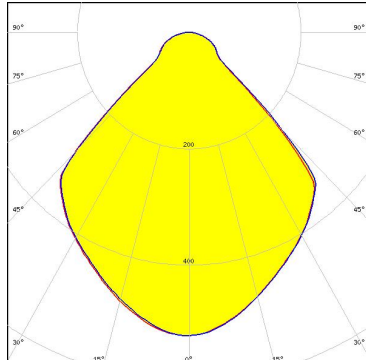
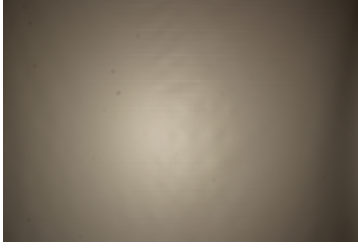
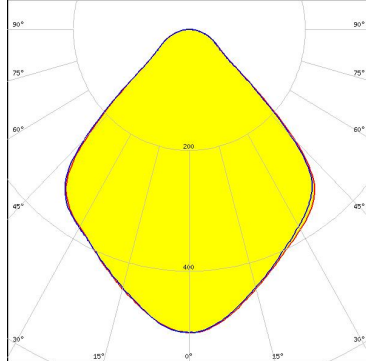
#### PHOTOMETRIC DATA (MEASURED):

<p><b>NICHIA</b></p> <p>LED COB J-Type            FWHM 89.0°            Efficiency 90 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGE-RZ-LENS            IDEAL: 50-2103NC + 50-2100AN</p>		
<p><b>NICHIA</b></p> <p>LED COB J-Type            FWHM 93.0°            Efficiency 95 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 463 Typ L2</p>		
<p><b>NICHIA</b></p> <p>LED COB J-Type            FWHM 88.0°            Efficiency 92 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2103NC + 50-2100AN</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM 94.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 438 Typ L1</p>		

#### PHOTOMETRIC DATA (MEASURED):

<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM 90.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            IDEAL: 50-2100NC + 50-2100AN</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM 94.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            Molex: 180580-0005</p>		
<p><b>NICHIA</b></p> <p>LED COB L-Type (LES 11)            FWHM 92.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: 2213382-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White            FWHM 94.0°            Efficiency 89 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13658_CLAMP-VERO13-18            F13671_ANGE-RZ-LENS            Bender Wirth: 498 Typ L2</p>		

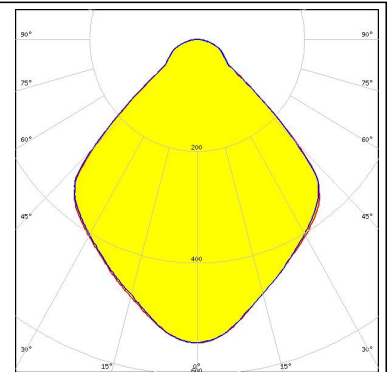
#### PHOTOMETRIC DATA (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White</p> <p>FWHM 94.0°</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: 498 Typ L2</p>		
<p><b>OSRAM</b></p> <p>LED PrevaLED Core AC (LEP-2000)</p> <p>FWHM 89.0°</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: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>OSRAM</b></p> <p>LED PrevaLED Core AC (LEP-800)</p> <p>FWHM 90.0°</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: OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>OSRAM</b></p> <p>LED PrevaLED Core G7 L15 H1</p> <p>FWHM 90.0°</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: C16685_CLAMP-PRV-A F13671_ANGE-RZ-LENS</p>		

#### PHOTOMETRIC DATA (MEASURED):

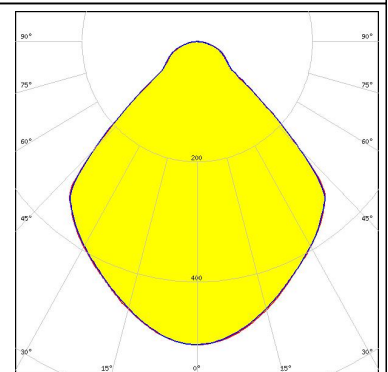
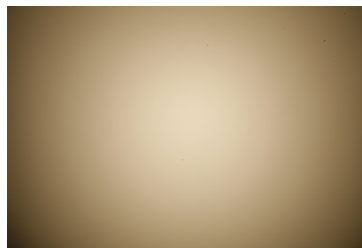
#### OSRAM

LED PrevaLED Core G7 L15 H1  
 FWHM 90.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C16685\_CLAMP-PRV-A



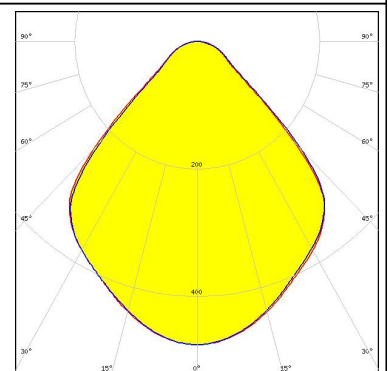
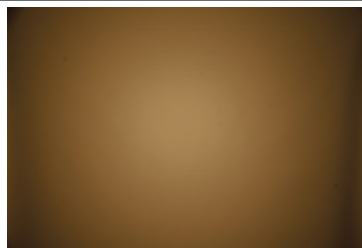
#### OSRAM

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



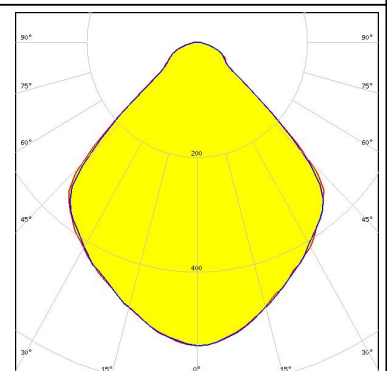
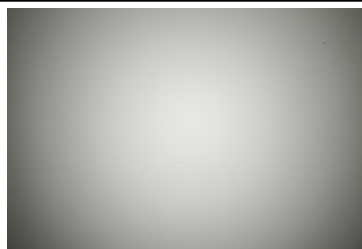
#### OSRAM

LED PrevaLED Core Z4 LES19  
 FWHM 90.0°  
 Efficiency 90 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE: OPTIC CLIP Z50 TYPE1 2213194-1



#### OSRAM

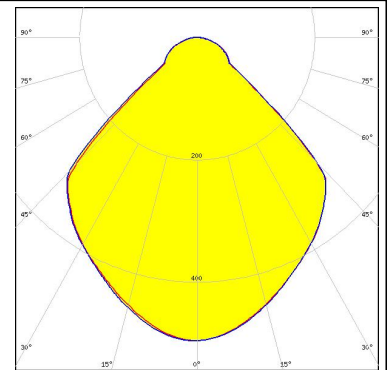
Opto Semiconductors  
 LED Soleriq S13  
 FWHM 92.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213401-2 + OPTIC CLIP Z50 TYPE1 2213194-1



#### PHOTOMETRIC DATA (MEASURED):

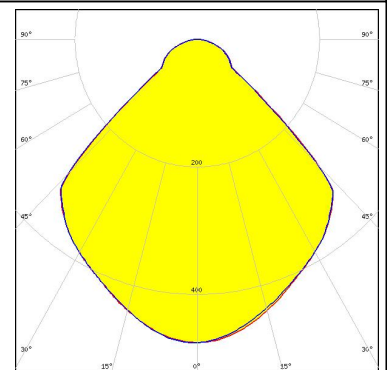
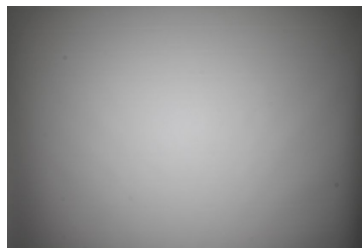
**OSRAM**  
Opto Semiconductors

LED Soleriq S13  
FWHM 93.0°  
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



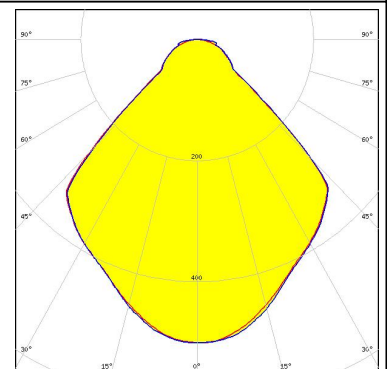
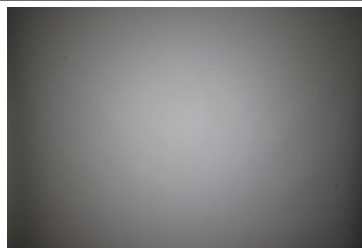
**OSRAM**  
Opto Semiconductors

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



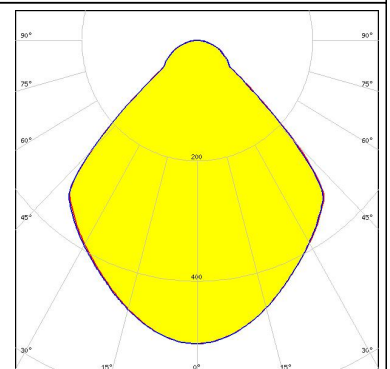
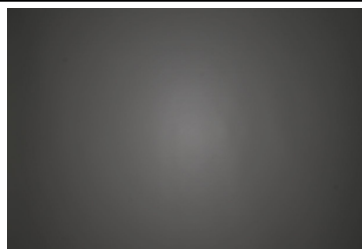
**OSRAM**  
Opto Semiconductors

LED Soleriq S13 19x19  
FWHM 91.0°  
Efficiency 94 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
IDEAL: 50-2103CT + 50-2100AN



**OSRAM**  
Opto Semiconductors

LED Soleriq S19  
FWHM 90.0°  
Efficiency 93 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C13584\_CLAMP-VERO29  
Bender Wirth: 462 Typ L3



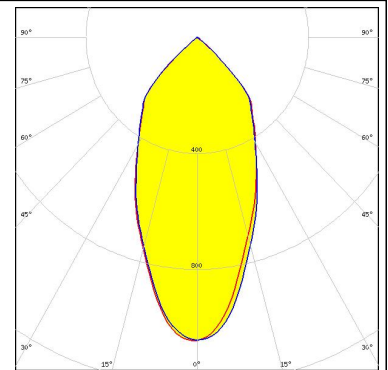
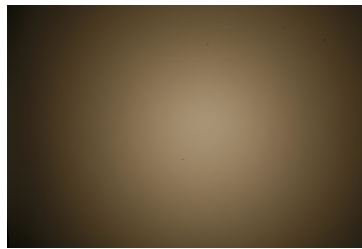
#### PHOTOMETRIC DATA (MEASURED):

**OSRAM**  
Opto Semiconductors

LED Soleriq S19  
FWHM 91.0°  
Efficiency 94 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

TE: 2213407-2 + OPTIC CLIP Z50 TYPE1 2213194-1

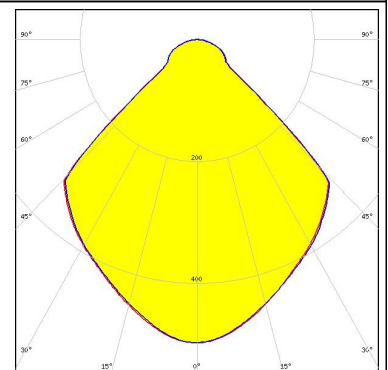
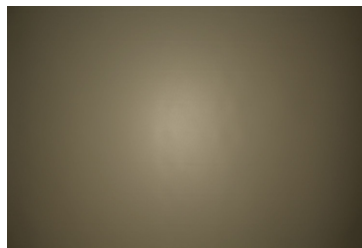


**PHILIPS**

LED Fortimo SLM L09 + SLM holder  
FWHM 93.0°  
Efficiency 94 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

TE: OPTIC CLIP Z50 TYPE1 2213194-1

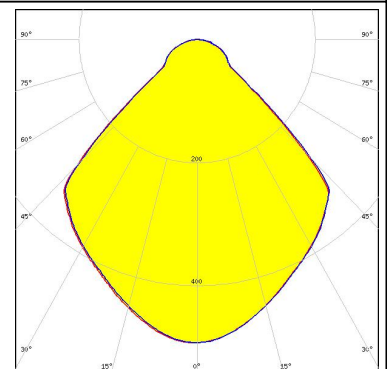
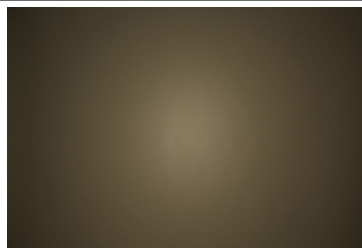


**PHILIPS**

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

Required components:

TE: OPTIC CLIP Z50 TYPE1 2213194-1



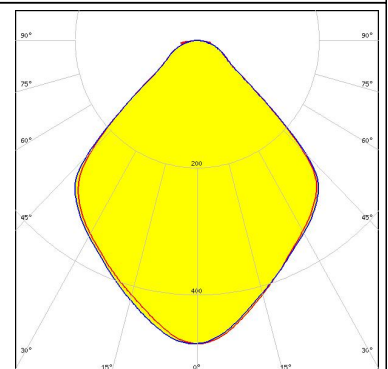
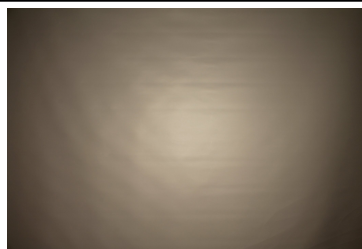
**PHILIPS**

LED Fortimo SLM L13 CoB  
FWHM 91.0°  
Efficiency 88 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour White

Required components:

F13671\_ANGE-RZ-LENS

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



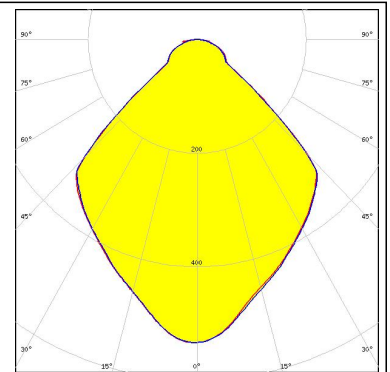
#### PHOTOMETRIC DATA (MEASURED):

#### PHILIPS

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

Required components:

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

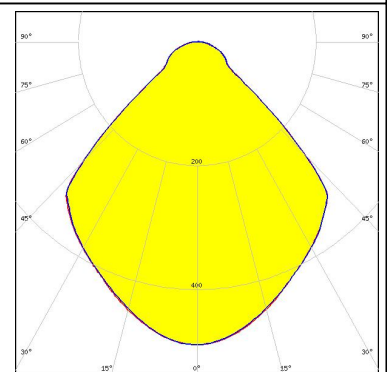
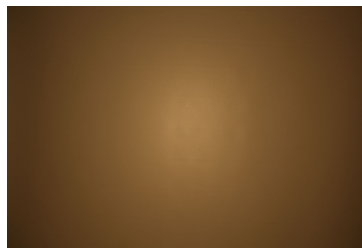


#### PHILIPS

LED Fortimo SLM L15 + SLM holder  
 FWHM 91.0°  
 Efficiency 92 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

TE: OPTIC CLIP Z50 TYPE1 2213194-1



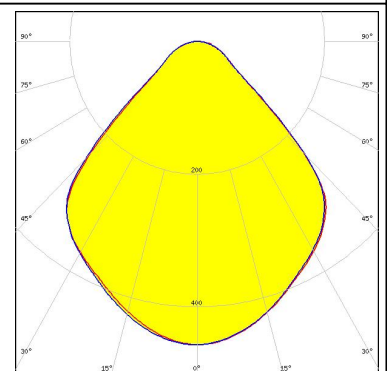
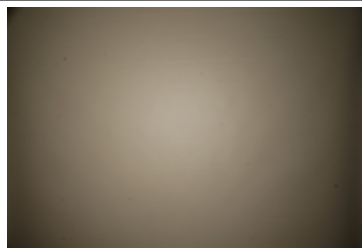
#### PHILIPS

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

Required components:

F13671\_ANGLE-RZ-LENS

TE: OPTIC CLIP Z50 TYPE1 2213194-1

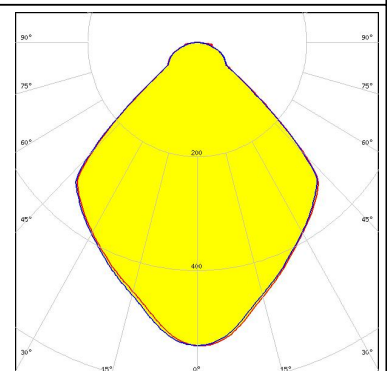
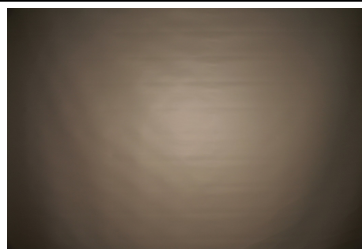


#### PHILIPS

LED Fortimo SLM L15 CoB  
 FWHM 91.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White

Required components:

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

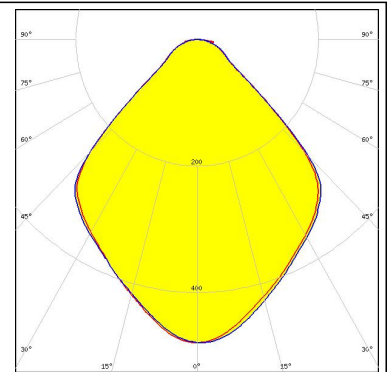
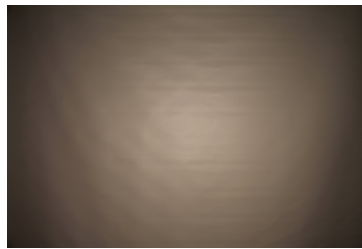




#### PHOTOMETRIC DATA (MEASURED):

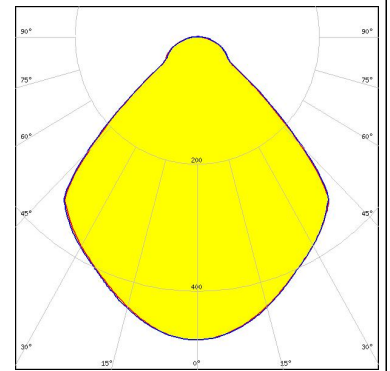
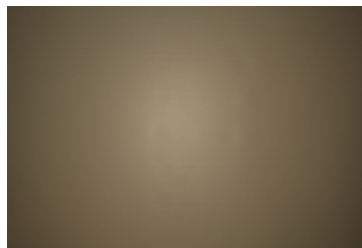
#### PHILIPS

LED Fortimo SLM L15 CoB  
 FWHM 91.0°  
 Efficiency 89 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS  
 TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1



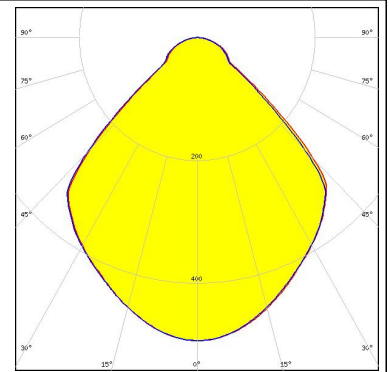
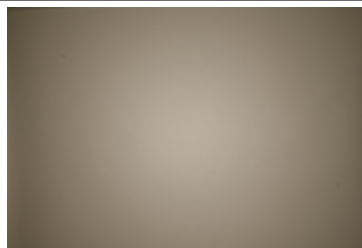
#### PHILIPS

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



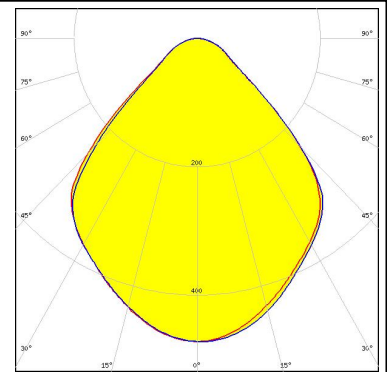
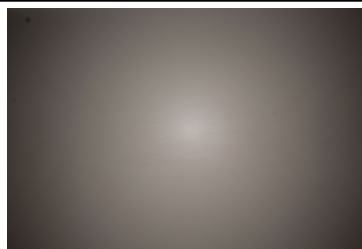
#### SAMSUNG

LED LC026B / 033B / 040B  
 FWHM 91.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 C13658\_CLAMP-VERO13-18  
 Bender Wirth: 450 Typ L2



#### SAMSUNG

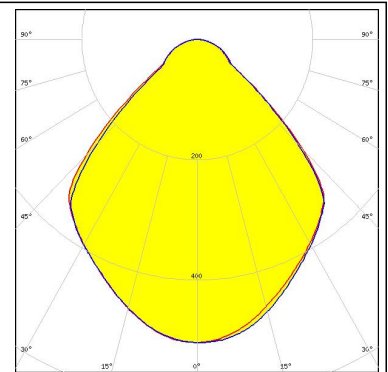
LED LC035T (Tunable white)  
 FWHM 90.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour Tunable White  
 Required components:  
 C13584\_CLAMP-VERO29  
 F13671\_ANGE-RZ-LENS  
 Bender Wirth: 502 Typ L3



#### PHOTOMETRIC DATA (MEASURED):

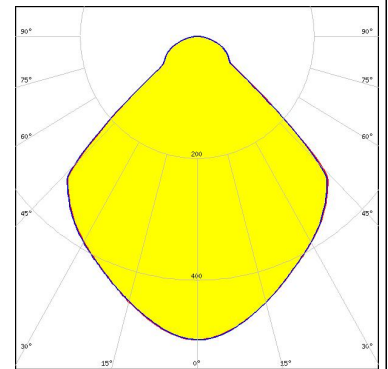
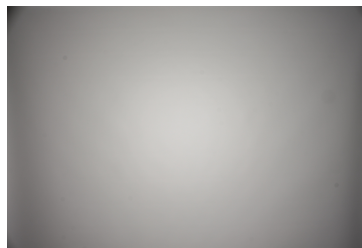
#### SAMSUNG

LED LC035T (Tunable white)  
 FWHM 91.0°  
 Efficiency 96 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour Tunable White  
 Required components:  
 C13584\_CLAMP-VERO29  
 Bender Wirth: 502 Typ L3



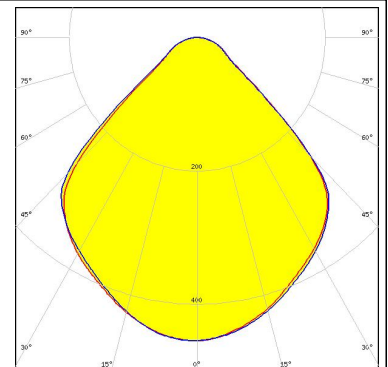
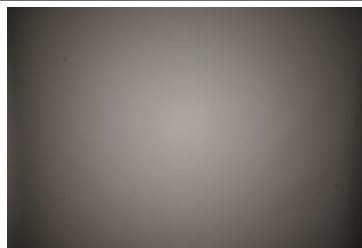
#### SAMSUNG

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



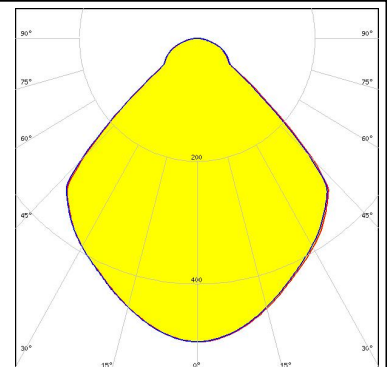
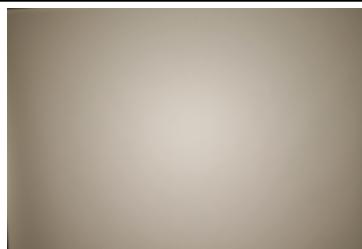
SEOUL SEMICONDUCTOR

LED AC Zhaga COB  
 FWHM 93.0°  
 Efficiency 91 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F13671\_ANGE-RZ-LENS

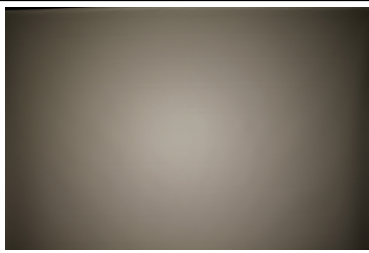
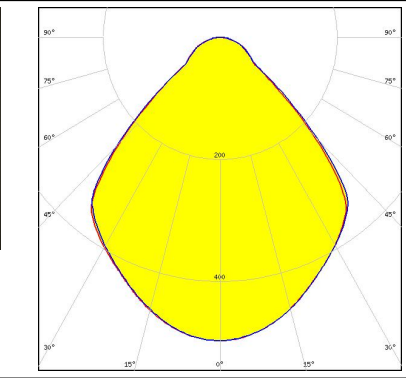
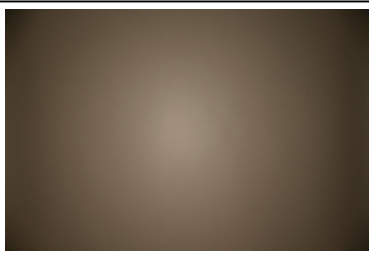
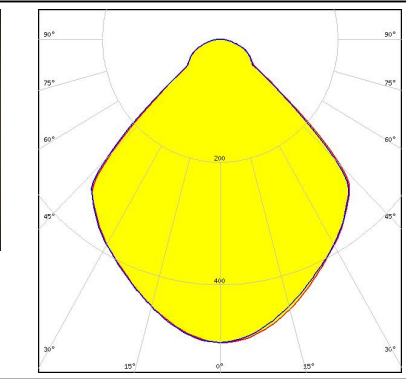

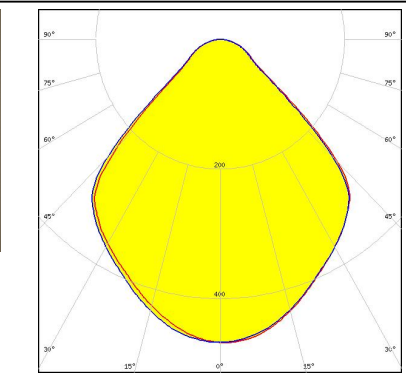
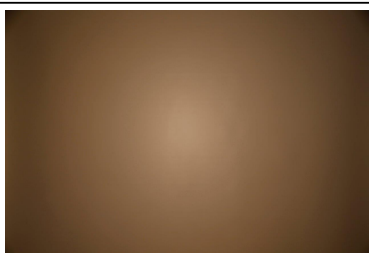
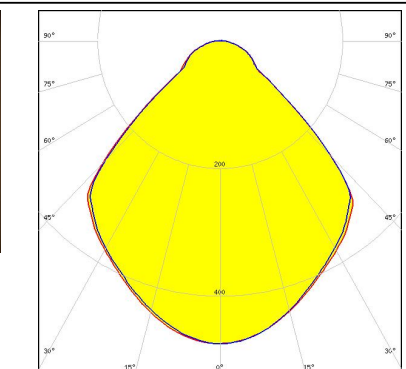


SEOUL SEMICONDUCTOR

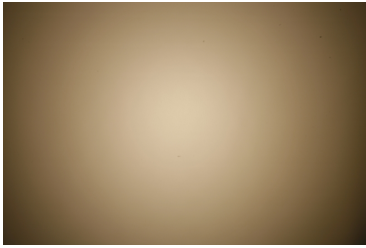
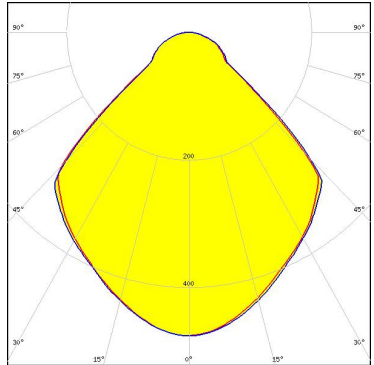
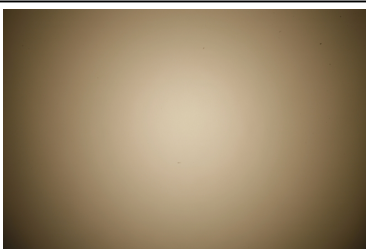
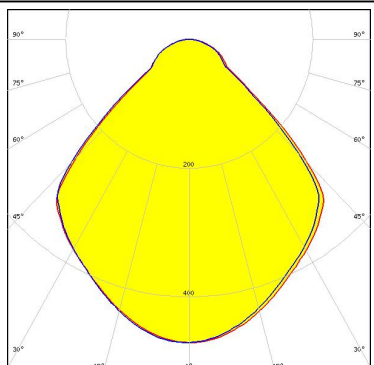
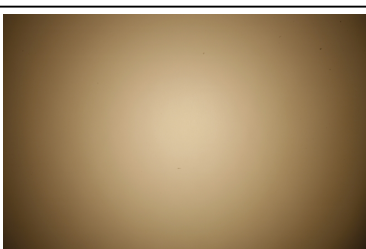
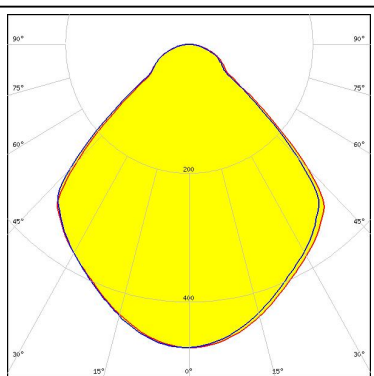
LED MJT COB LES 14.5  
 FWHM 92.0°  
 Efficiency 94 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 TE: 2213254-2 + OPTIC CLIP Z50 TYPE1 2213194-1




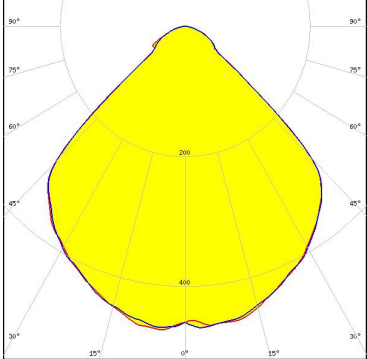

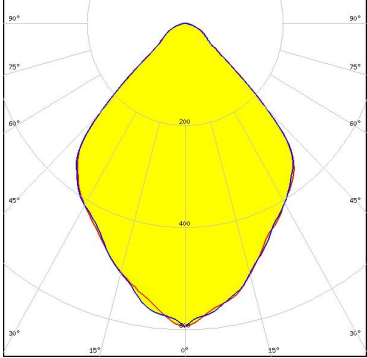

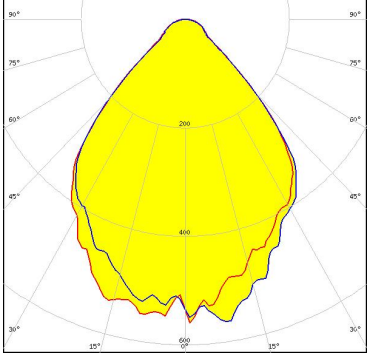

#### PHOTOMETRIC DATA (MEASURED):

<p><b>SEUL</b> SEOUL SEMICONDUCTOR</p> <p>LED MJT COB LES 22            FWHM 89.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C13584_CLAMP-VERO29            Bender Wirth: 431 Typ L3</p>		
<p><b>SHARP</b></p> <p>LED Mega Zenigata (GW6DME)            FWHM 92.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>SHARP</b></p> <p>LED Mega Zenigata (GW6DME)            FWHM 92.0°            Efficiency 92 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F13671_ANGLE-RZ-LENS            TE: 2213130-2 + OPTIC CLIP Z50 TYPE1 2213194-1</p>		
<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-464            FWHM 93.0°            Efficiency 94 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            TE: OPTIC CLIP Z50 TYPE1 2213194-1</p>		

**PHOTOMETRIC DATA (MEASURED):**

<p><b>VS LIGHTING SOLUTIONS</b></p> <p>LED WU-M-484            FWHM 93.0°            Efficiency 94 %            Peak intensity 0.5 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 93.0°            Efficiency 94 %            Peak intensity 0.5 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 92.0°            Efficiency 94 %            Peak intensity 0.5 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 93.0°            Efficiency 92 %            Peak intensity 0.5 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            C13658_CLAMP-VERO13-18            Bender Wirth: 486 Typ L1</p>	
<p> <b>bridgelux.</b></p> <p>LED V13 Gen7            FWHM 86.0°            Efficiency 92 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            IDEAL: 50-2103CT + 50-2100AN</p>	
<p> <b>bridgelux.</b></p> <p>LED V22 Gen7            FWHM 82.0°            Efficiency 94 %            Peak intensity 0.6 cd/lm            LEDs/each optic 1            Light colour White</p> <p>Required components:            IDEAL: 50-2204-CT + 50-2100AN</p>	
<p> <b>LUMINUS</b></p> <p>LED CxM-9 (13.5x13.5)            FWHM 94.0°            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>	

## PHOTOMETRIC DATA (SIMULATED):

	
SEOUL SEMICONDUCTOR	
LED	ZC12/18
FWHM	92.0°
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	94.0°
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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Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».



## JONHON

«**JONHON**» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«**FORSTAR**» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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