

LENA-X-WAS

White version with asymmetric beam for wall-washing

SPECIFICATION:

Dimensions	Ø 111.0 mm
Height	32.6 mm
Fastening	glue
ROHS compliant	yes ⓘ




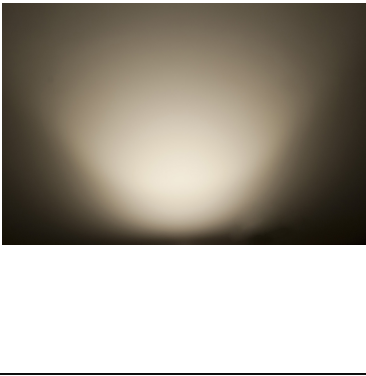
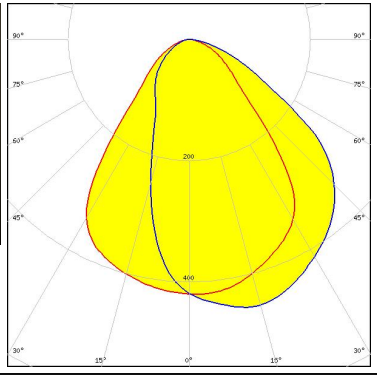


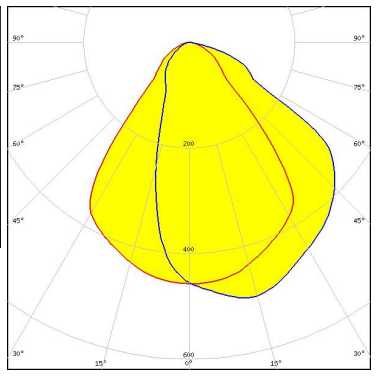


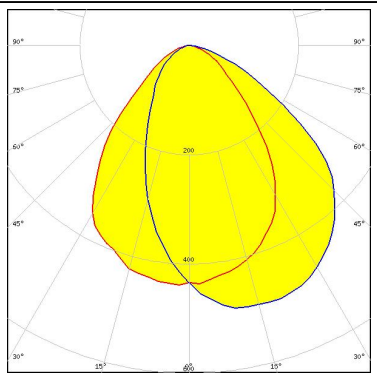


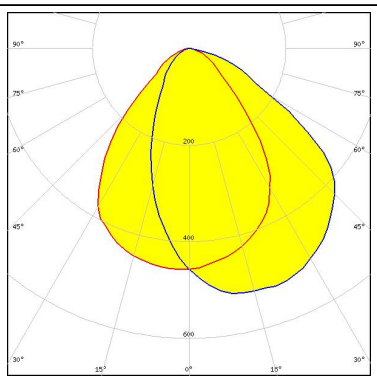
MATERIALS:

Component	Type	Material	Colour	Finish	Coating
LENA-X-WAS	Reflector	HRPC	white		


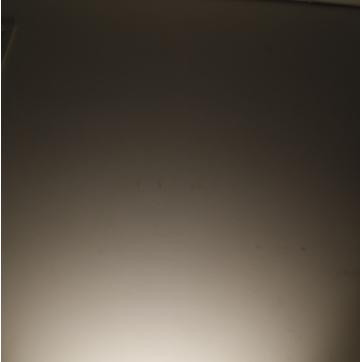
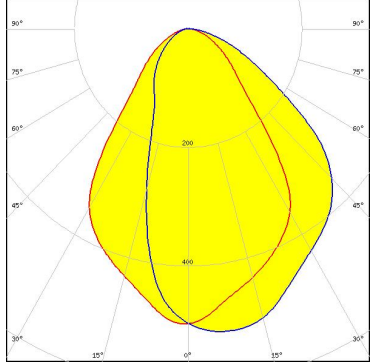

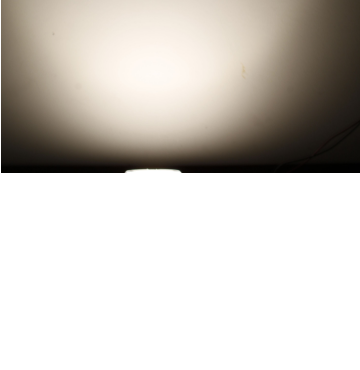
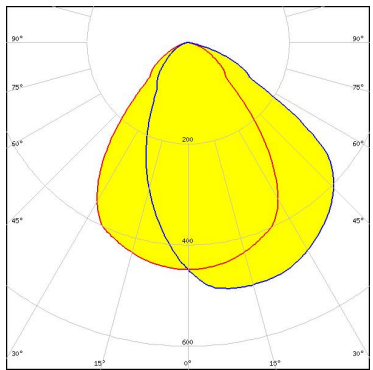

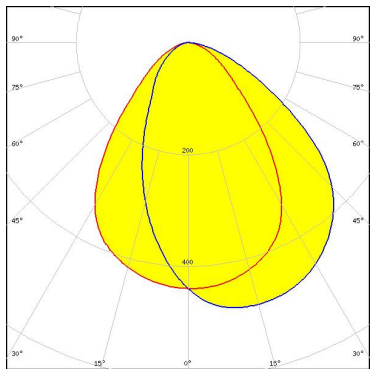

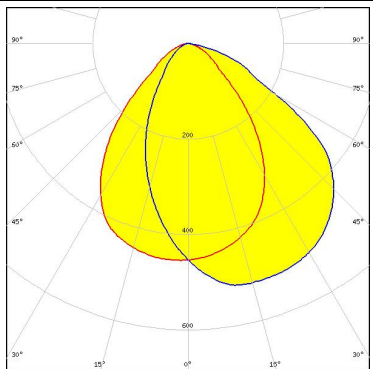
ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C13101_LENA-X-WAS » Box size: 480 x 280 x 300 mm	56	56	56	3.2


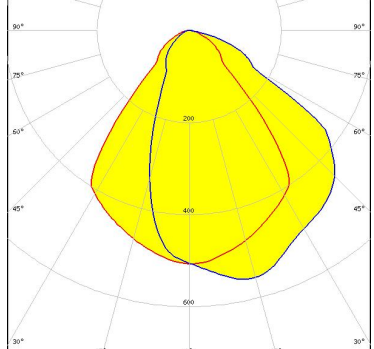

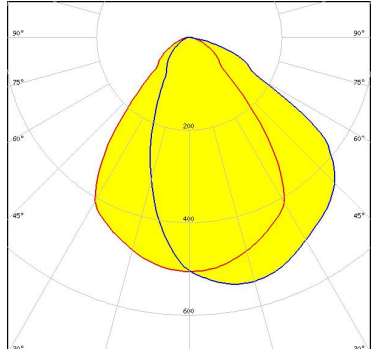

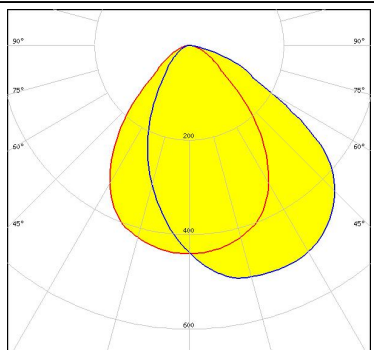

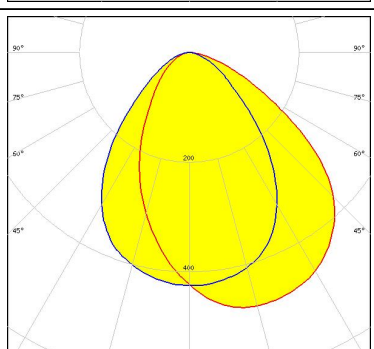
OPTICAL RESULTS (MEASURED):

<p></p> <p>LED BXRA ES Rectangle FWHM / FWTM Asymmetric Efficiency 77 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C12153_LENA-STD-BASE-BXRA C11996_LENA-LENS</p>		
<p></p> <p>LED BXRA ES Rectangle FWHM / FWTM Asymmetric Efficiency 81 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C12153_LENA-STD-BASE-BXRA</p>		
<p></p> <p>LED BXRA RS FWHM / FWTM Asymmetric Efficiency 83 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C12229_LENA-STD-BASE-RS C11996_LENA-LENS</p>		
<p></p> <p>LED BXRA RS FWHM / FWTM Asymmetric Efficiency 87 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C12229_LENA-STD-BASE-RS</p>		

OPTICAL RESULTS (MEASURED):

<p></p> <p>LED V10 Gen6 FWHM / FWTM Asymmetric Efficiency 82 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13186_LENA-STD-BASE-CXA15 C11996_LENA-LENS</p>		
<p></p> <p>LED V22 Gen7 FWHM / FWTM Asymmetric Efficiency 86 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13867_LENA-STD-BASE-VERO29 C14169_LENA-CLEAR-LENS Bender Wirth: 431 Typ L3</p>		
<p></p> <p>LED V22 Gen7 FWHM / FWTM Asymmetric Efficiency 83 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13867_LENA-STD-BASE-VERO29 C11996_LENA-LENS Bender Wirth: 431 Typ L3</p>		
<p></p> <p>LED Vero SE 29 FWHM / FWTM Asymmetric Efficiency 90 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C15083_LENA-STD-BASE-VERO29</p>		

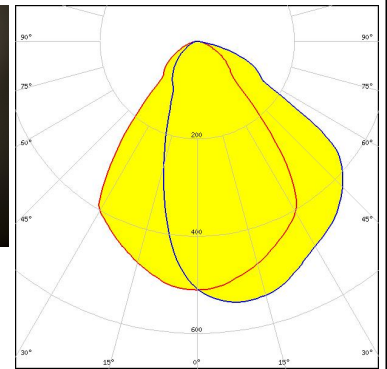
OPTICAL RESULTS (MEASURED):

<p></p> <p>LED VERO13 FWHM / FWTM Asymmetric Efficiency 92 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White Required components: C13868_LENA-STD-BASE-VERO13-18</p>	
<p></p> <p>LED VERO18 FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White Required components: C13868_LENA-STD-BASE-VERO13-18</p>	
<p></p> <p>LED VERO29 FWHM / FWTM Asymmetric Efficiency 89 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13867_LENA-STD-BASE-VERO29</p>	
<p></p> <p>LED VERO29 FWHM / FWTM Asymmetric Efficiency 84 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White Required components: C13867_LENA-STD-BASE-VERO29 C11996_LENA-LENS</p>	

OPTICAL RESULTS (MEASURED):

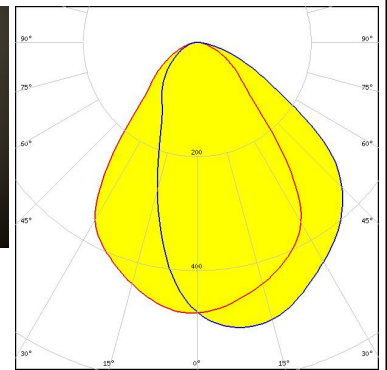
CITIZEN

LED CL-L340
 FWHM / FWTM Asymmetric
 Efficiency 84 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C11995_LENA-STD-BASE-CL340



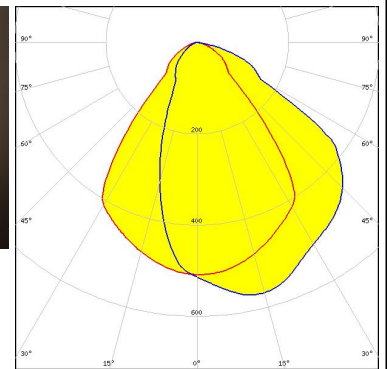
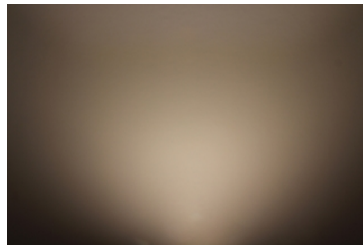
CITIZEN

LED CL-L340
 FWHM / FWTM Asymmetric
 Efficiency 82 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C11995_LENA-STD-BASE-CL340
 C11996_LENA-LENS



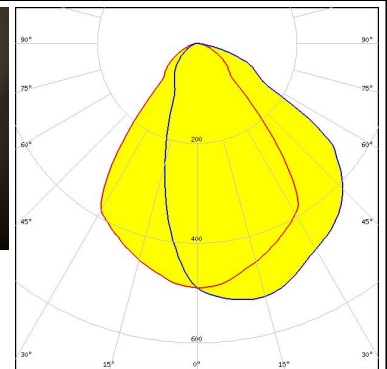
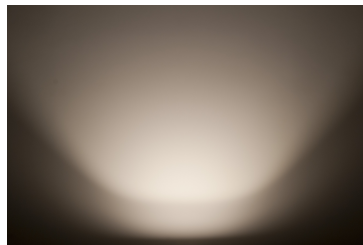
CITIZEN

LED CLL03x/CLU03x
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13868_LENA-STD-BASE-VERO13-18
 Bender Wirth: 433 Typ L1



CITIZEN

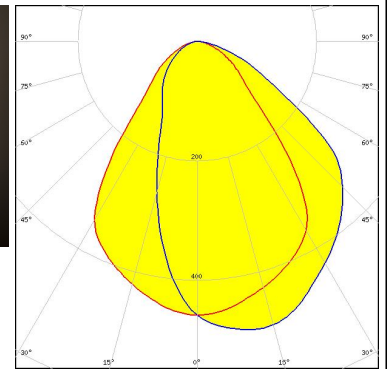
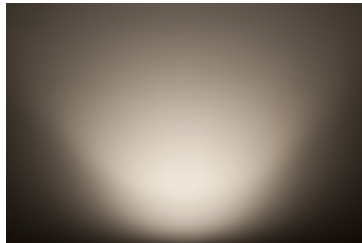
LED CLL03x/CLU03x
 FWHM / FWTM Asymmetric
 Efficiency 81 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12691_LENA-STD-BASE-CLL030



OPTICAL RESULTS (MEASURED):

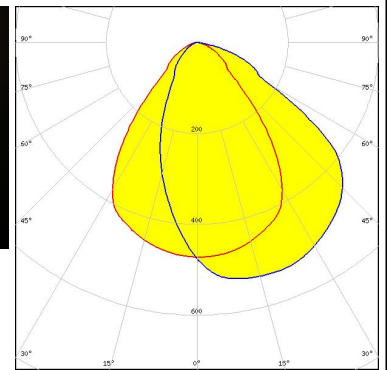
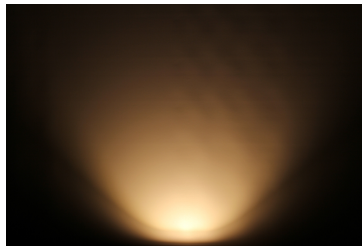
CITIZEN

LED CLL03x/CLU03x
 FWHM / FWTM Asymmetric
 Efficiency 80 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12691_LENA-STD-BASE-CLL030
 C11996_LENA-LENS



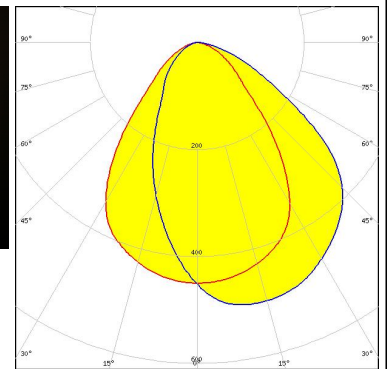
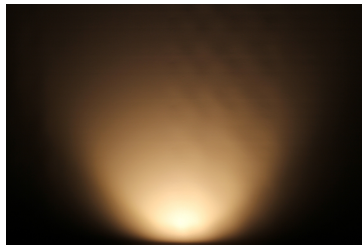
CITIZEN

LED CLL04x/CLU04x
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13867_LENA-STD-BASE-VERO29
 Bender Wirth: 431 Typ L3



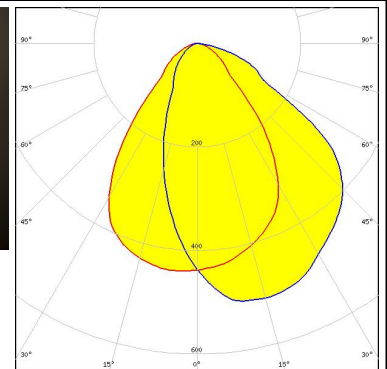
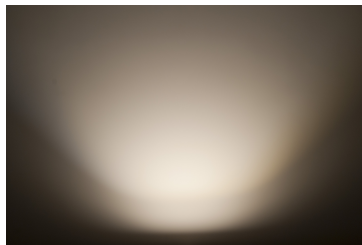
CITIZEN

LED CLL04x/CLU04x
 FWHM / FWTM Asymmetric
 Efficiency 85 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13867_LENA-STD-BASE-VERO29
 C11996_LENA-LENS
 Bender Wirth: 431 Typ L3



CITIZEN

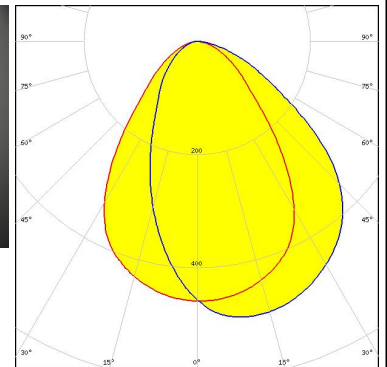
LED CLL04x/CLU04x
 FWHM / FWTM Asymmetric
 Efficiency 82 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040



OPTICAL RESULTS (MEASURED):

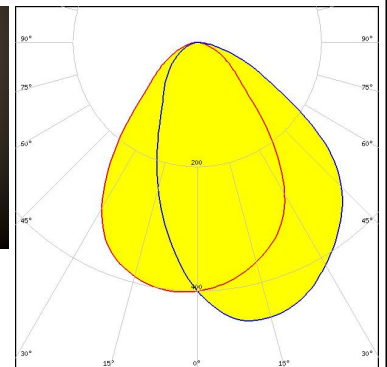
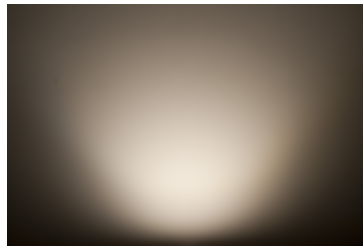
CITIZEN

LED CLL04x/CLU04x
 FWHM / FWTM Asymmetric
 Efficiency 84 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C11996_LENA-LENS
 IDEAL: 50-2204CT + 50-2100LN



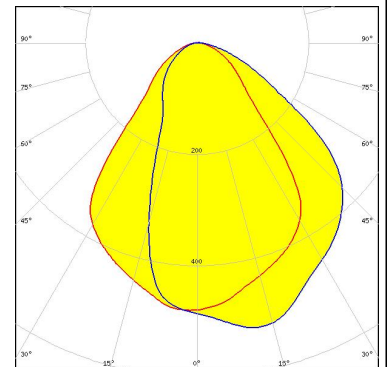
CITIZEN

LED CLL04x/CLU04x
 FWHM / FWTM Asymmetric
 Efficiency 74 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040
 C11996_LENA-LENS



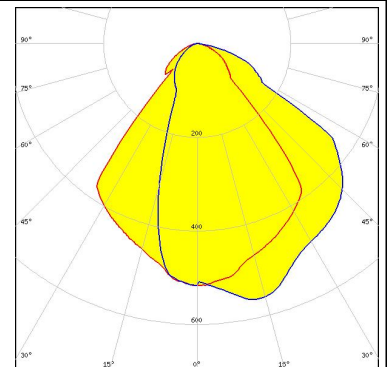
CITIZEN

LED CLU710/711
 FWHM / FWTM Asymmetric
 Efficiency 86 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12691_LENA-STD-BASE-CLL030
 C11996_LENA-LENS



CITIZEN

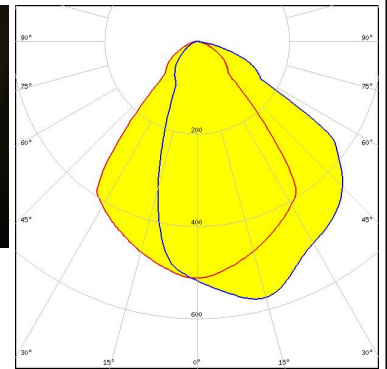
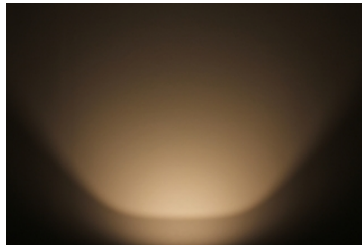
LED CLU710/711
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12691_LENA-STD-BASE-CLL030



OPTICAL RESULTS (MEASURED):

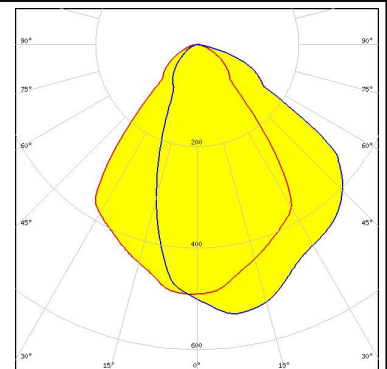
CITIZEN

LED CLU720/721/723
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13868_LENA-STD-BASE-VERO13-18
 Bender Wirth: 433 Typ L1

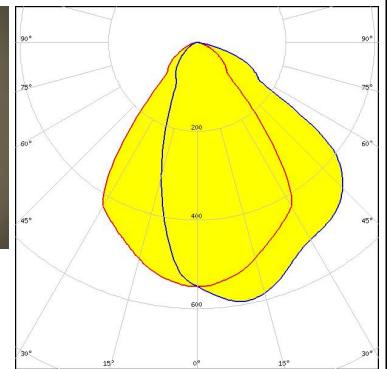
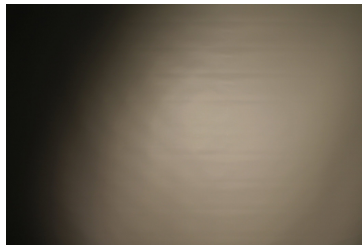


CITIZEN

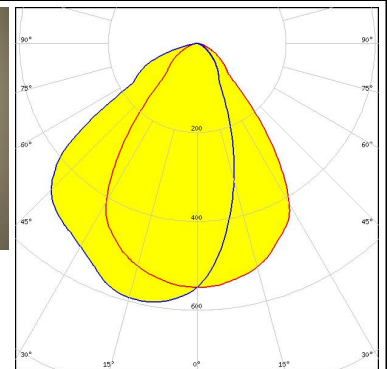
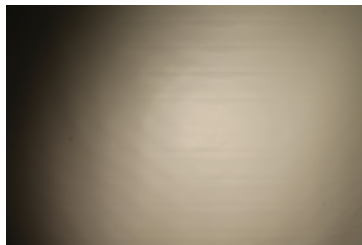
LED CLU730/731/733
 FWHM / FWTM Asymmetric
 Efficiency 84 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040




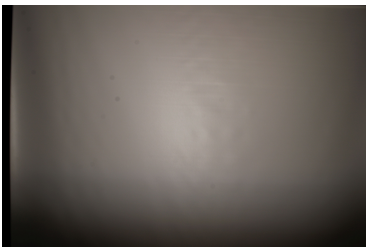
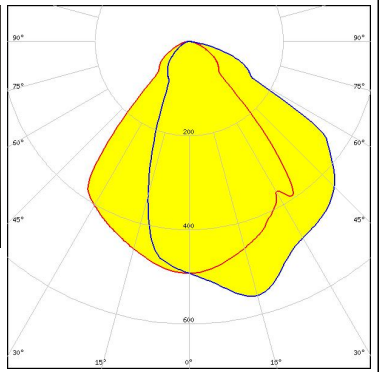

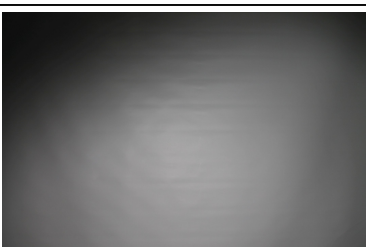
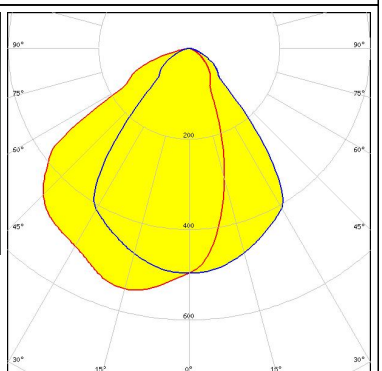

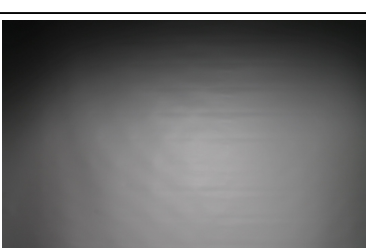
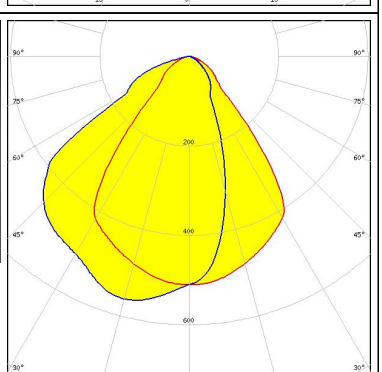

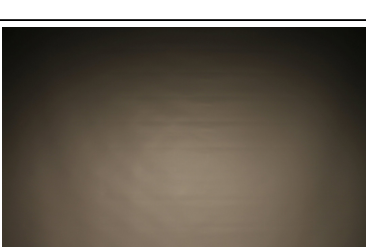
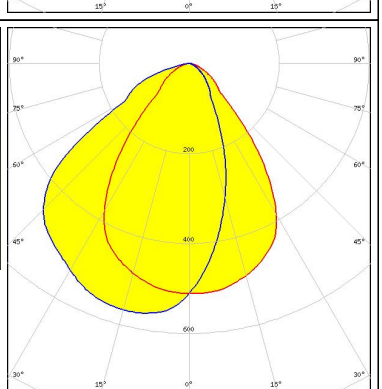
LED CMA1840
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C14146_LENA-STD-BASE-CXA18



LED CMA2550
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13324_LENA-STD-BASE-CXA25



OPTICAL RESULTS (MEASURED):

<p>CREE  LED</p> <p>LED CMT14xx FWHM / FWTM Asymmetric Efficiency 90 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 434 Typ L1</p>		
<p>CREE  LED</p> <p>LED CMT19xx FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 477 Typ L1</p>		
<p>CREE  LED</p> <p>LED CMT19xx FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C12691_LENA-STD-BASE-CLL030</p>		
<p>CREE  LED</p> <p>LED CMT28xx FWHM / FWTM Asymmetric Efficiency 90 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C12692_LENA-STD-BASE-CLL040</p>		

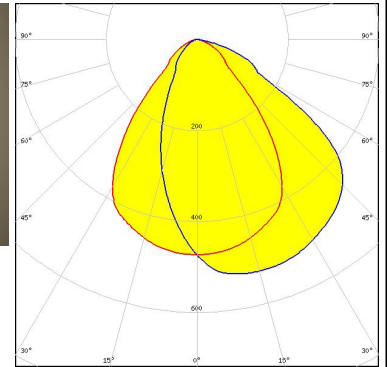
OPTICAL RESULTS (MEASURED):

CREE LED

LED CMT28xx
 FWHM / FWTM Asymmetric
 Efficiency 89 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

C13867_LENA-STD-BASE-VERO29
 Bender Wirth: 471 Typ L3

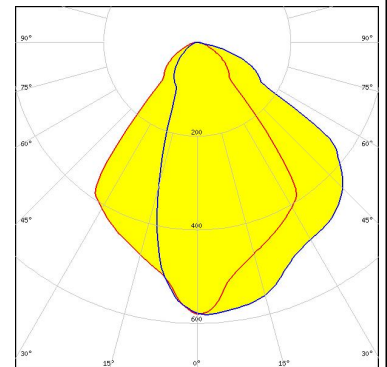


CREE LED

LED CXA/B 15xx
 FWHM / FWTM Asymmetric
 Efficiency 88 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

C13186_LENA-STD-BASE-CXA15

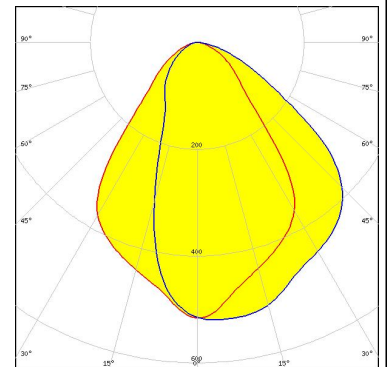


CREE LED

LED CXA/B 15xx
 FWHM / FWTM Asymmetric
 Efficiency 84 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

C13186_LENA-STD-BASE-CXA15
 C11996_LENA-LENS

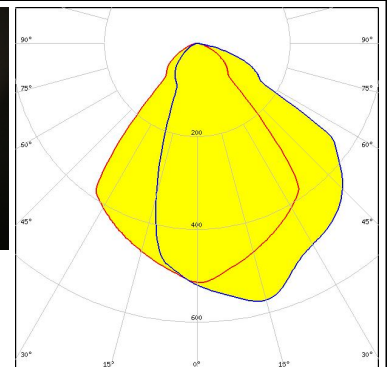
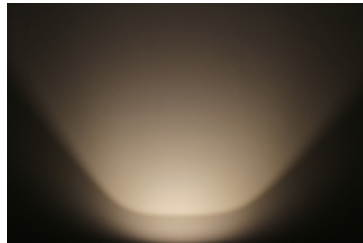


CREE LED

LED CXA/B 15xx
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

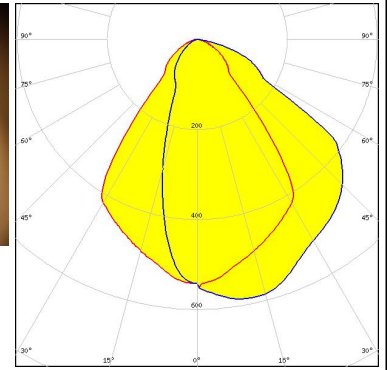
C13868_LENA-STD-BASE-VERO13-18
 Bender Wirth: 441 Typ L1



OPTICAL RESULTS (MEASURED):

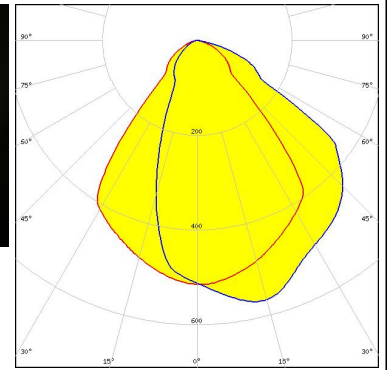
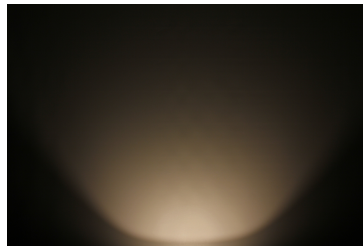
CREE LED

LED CXA/B 1816 & CXA/B 1820 & CXA 1850
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C14146_LENA-STD-BASE-CXA18



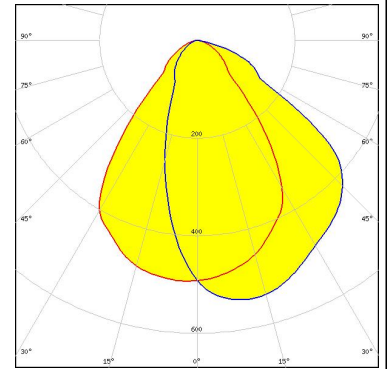
CREE LED

LED CXA/B 1816 & CXA/B 1820 & CXA 1850
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13868_LENA-STD-BASE-VERO13-18
 Bender Wirth: 437 Typ L1



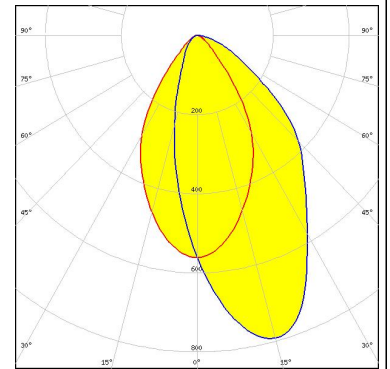
CREE LED

LED CXA/B 25xx
 FWHM / FWTM Asymmetric
 Efficiency 82 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13324_LENA-STD-BASE-CXA25



CREE LED

LED CXA/B 25xx
 FWHM / FWTM Asymmetric
 Efficiency 73 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C13324_LENA-STD-BASE-CXA25
 C11996_LENA-LENS



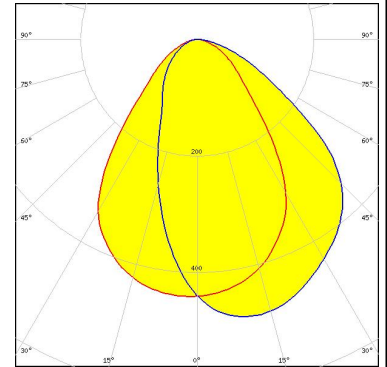
OPTICAL RESULTS (MEASURED):



LED CXA/B 25xx
 FWHM / FWTM Asymmetric
 Efficiency 78 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

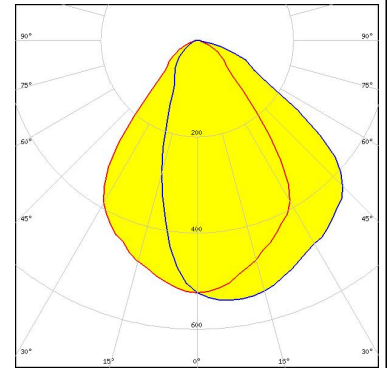
C13324_LENA-STD-BASE-CXA25
 C11996_LENA-LENS



LED CXA2011
 FWHM / FWTM Asymmetric
 Efficiency 83 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

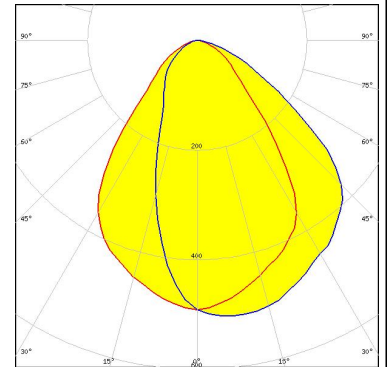
C12105_LENA-STD-BASE-CXA20



LED CXA2011
 FWHM / FWTM Asymmetric
 Efficiency 80 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

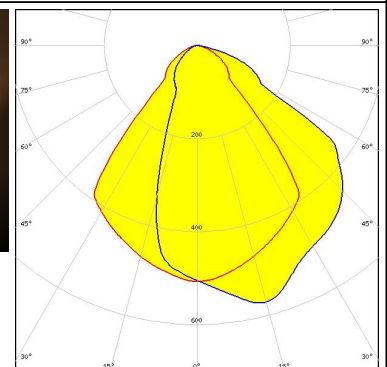
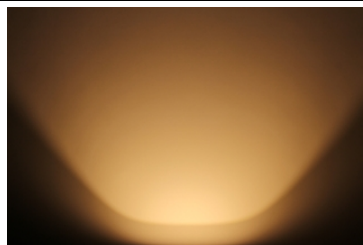
C12105_LENA-STD-BASE-CXA20
 C11996_LENA-LENS




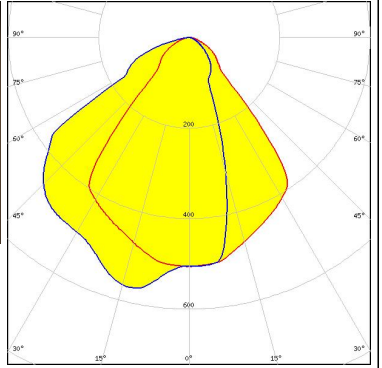

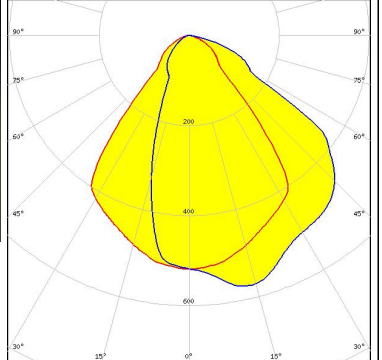
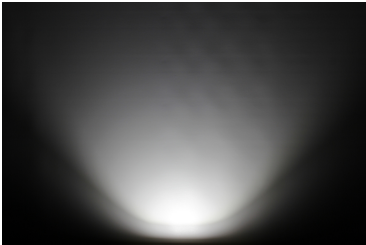
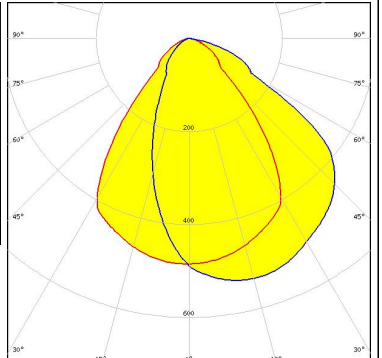
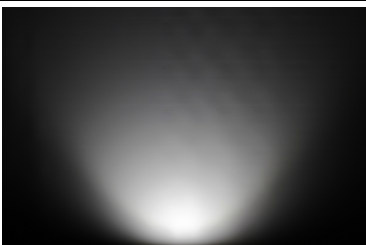
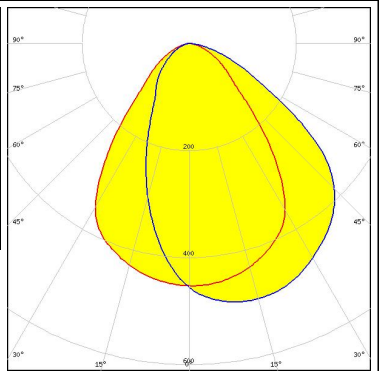
LED LUXEON CoB 1202/1203
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White

Required components:

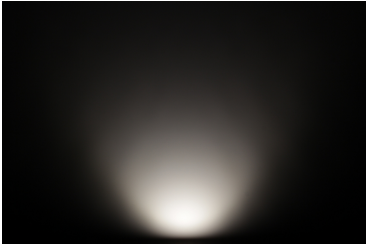
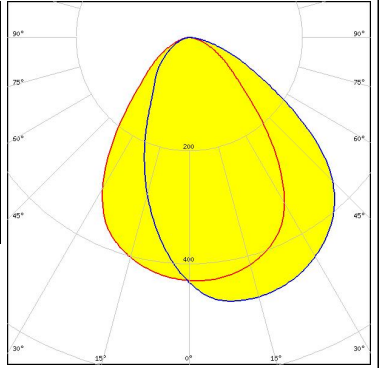
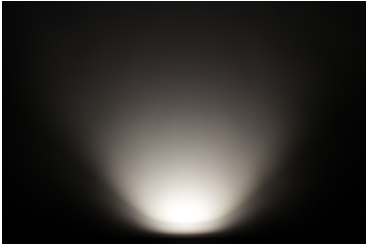
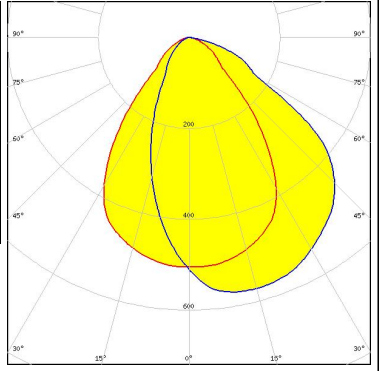
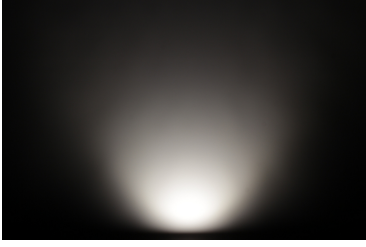
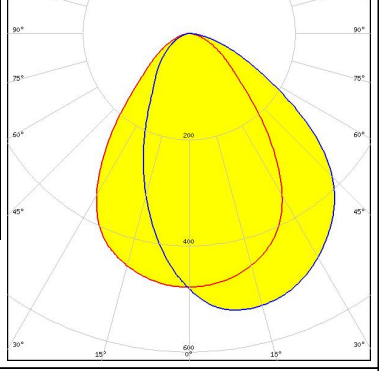

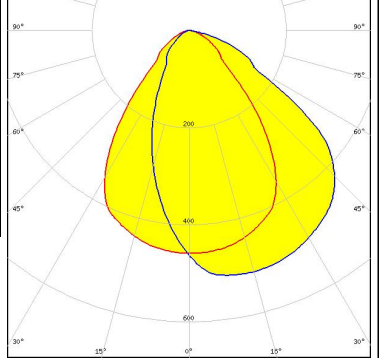
C13868_LENA-STD-BASE-VERO13-18
 Bender Wirth: 438 Typ L1



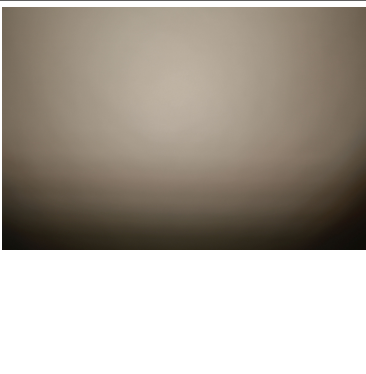
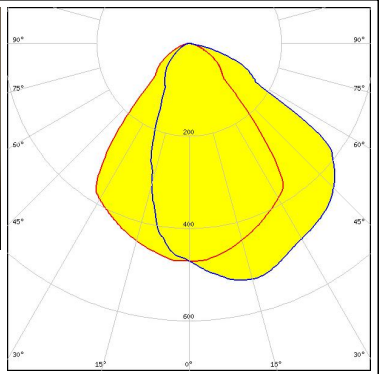

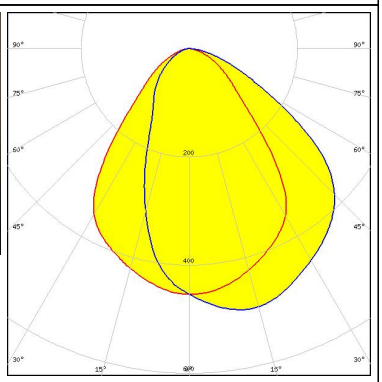

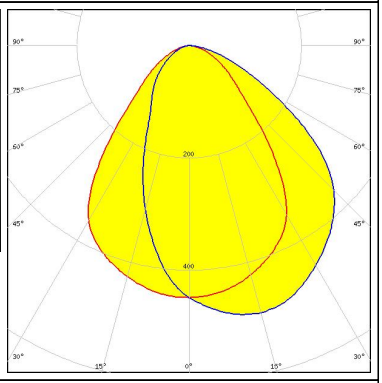
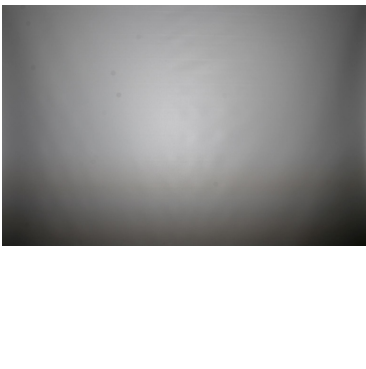
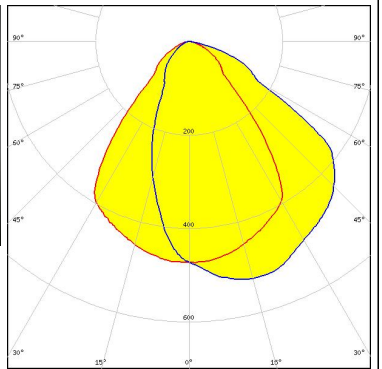
OPTICAL RESULTS (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON CoB 1204HD</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C11981_LENA-STD-BASE-COB-L110</p>		
<p>LUMILEDS</p> <p>LED LUXEON CoB 1205HD</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C11981_LENA-STD-BASE-COB-L110</p>		
<p>LUMILEDS</p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 89 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 Bender Wirth: 431 Typ L3</p>		
<p>LUMILEDS</p> <p>LED LUXEON CoB 1211</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 85 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 C11996_LENA-LENS Bender Wirth: 431 Typ L3</p>		


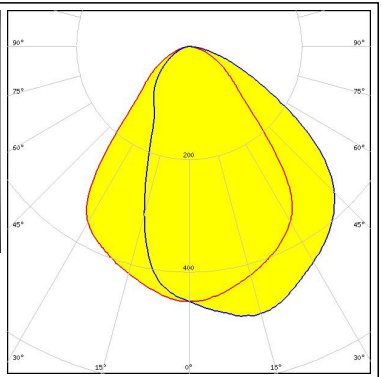

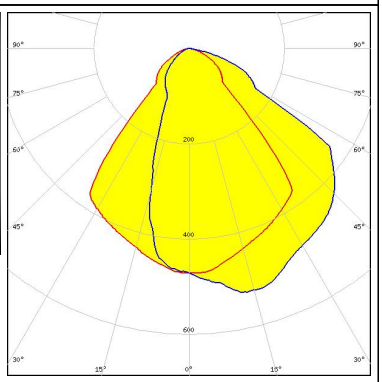
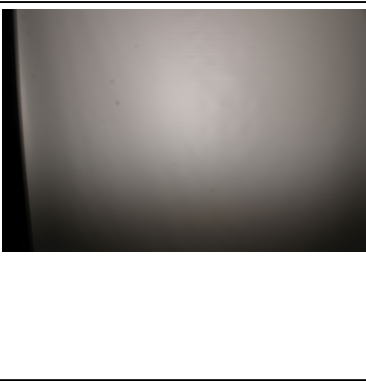
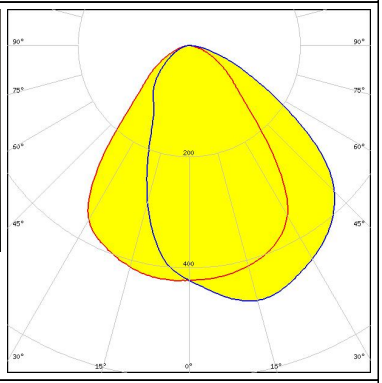

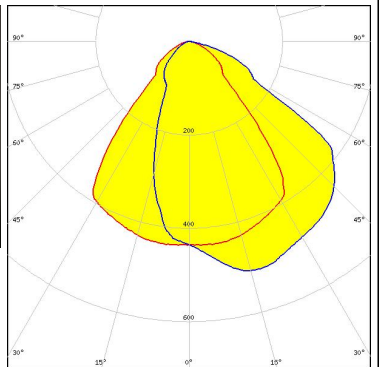
OPTICAL RESULTS (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 81 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C11996_LENA-LENS A.A.G. STUCCHI: 8102-G2 + S-8000-12</p>		
<p>LUMILEDS</p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENA-STD-BASE-CLL040</p>		
<p>LUMILEDS</p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 87 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENA-STD-BASE-CLL040 C11996_LENA-LENS</p>		
<p>LUMILEDS</p> <p>LED LUXEON CoB 1216/1812</p> <p>FWHM / FWTM 75.0° / 123.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: A.A.G. STUCCHI: 8102-G2 + S-8000-12</p>		

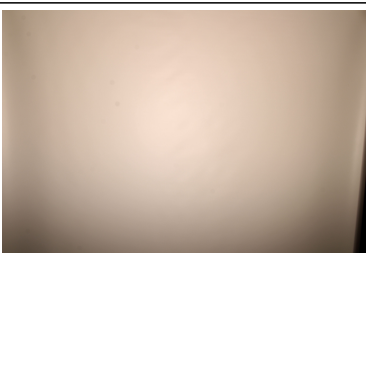
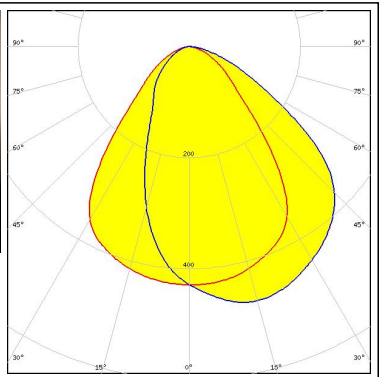
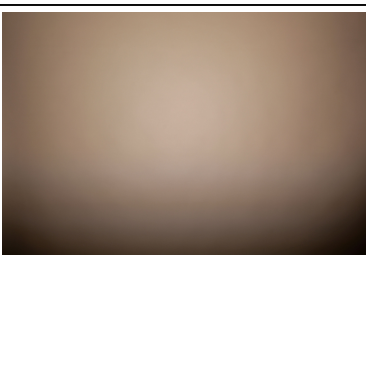
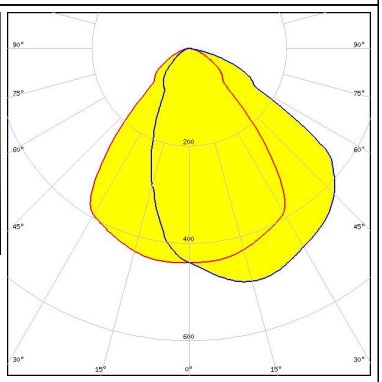
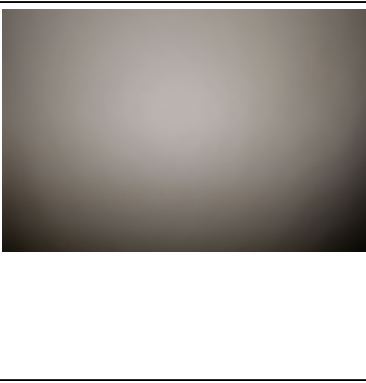
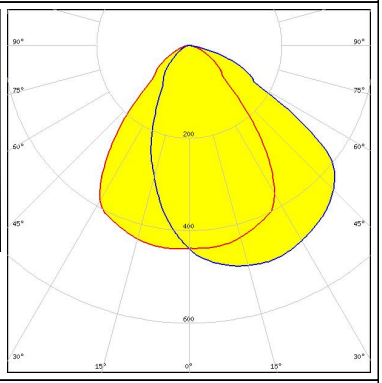

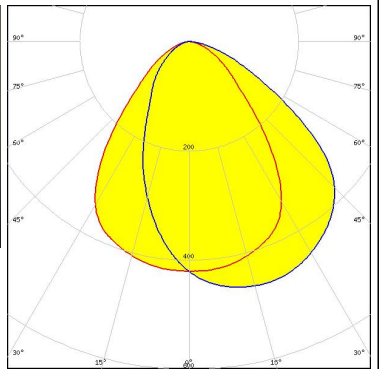
OPTICAL RESULTS (MEASURED):

<p>LUMINUS</p> <p>LED CDM-14 (Dim-To-Warm) FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 491 Typ L2</p>		
<p>LUMINUS</p> <p>LED CDM-14 (Dim-To-Warm) FWHM / FWTM Asymmetric Efficiency 86 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 C11996_LENA-LENS Bender Wirth: 491 Typ L2</p>		
<p>LUMINUS</p> <p>LED CDM-18 (Dim-To-Warm) FWHM / FWTM Asymmetric Efficiency 86 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 C11996_LENA-LENS Bender Wirth: 491 Typ L2</p>		
<p>LUMINUS</p> <p>LED CDM-18 (Dim-To-Warm) FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 491 Typ L2</p>		


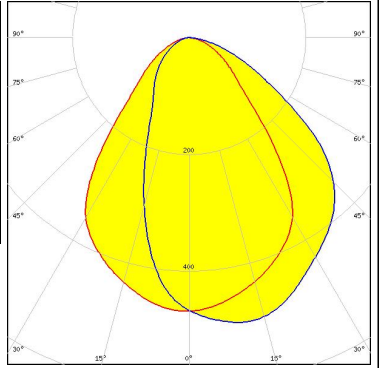

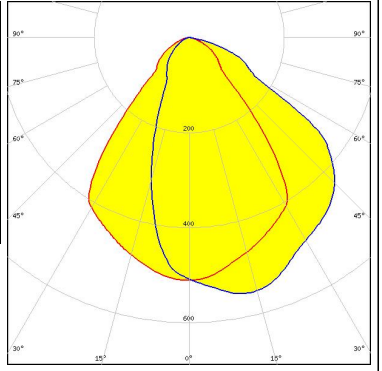
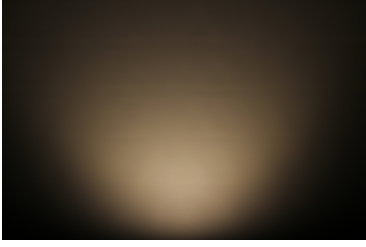
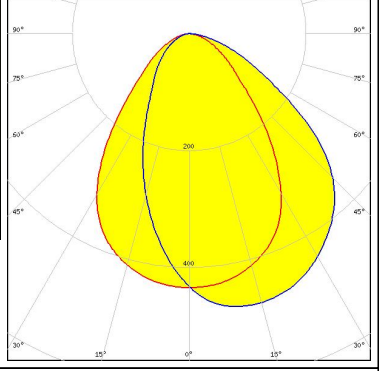
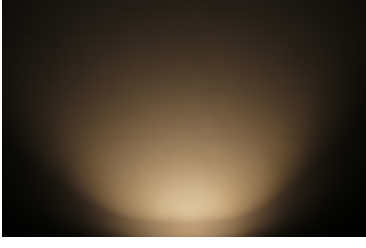
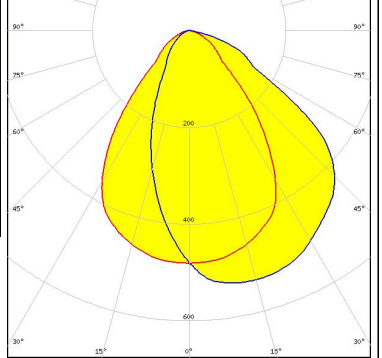
OPTICAL RESULTS (MEASURED):

<p>LUMINUS</p> <p>LED CDM-9 (Dim-To-Warm)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 85 %</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>C13868_LENA-STD-BASE-VERO13-18</p> <p>C11996_LENA-LENS</p> <p>Bender Wirth: 490 Typ L1</p>		
<p>LUMINUS</p> <p>LED CDM-9 (Dim-To-Warm)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 89 %</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>C13868_LENA-STD-BASE-VERO13-18</p> <p>Bender Wirth: 490 Typ L1</p>		
<p>LUMINUS</p> <p>LED CTM-14 (Tunable White)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 84 %</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>C13867_LENA-STD-BASE-VERO29</p> <p>C12606_LENINA-DL</p> <p>Bender Wirth: 442 Typ L3</p>		
<p>LUMINUS</p> <p>LED CTM-14 (Tunable White)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 88 %</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>C13867_LENA-STD-BASE-VERO29</p> <p>Bender Wirth: 442 Typ L3</p>		


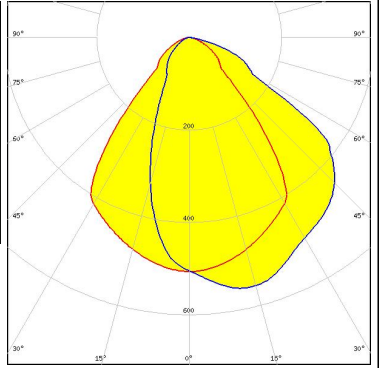
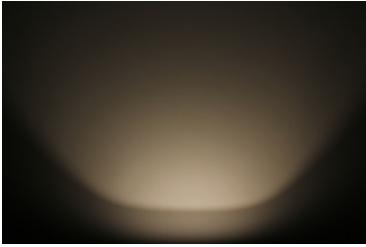
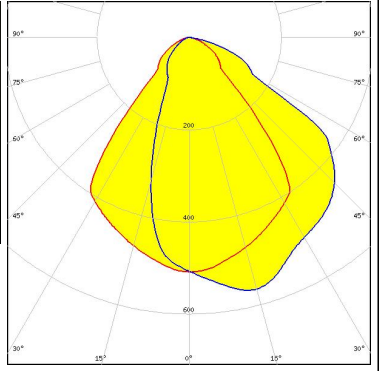
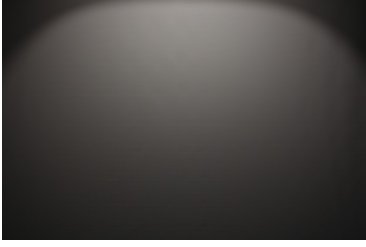
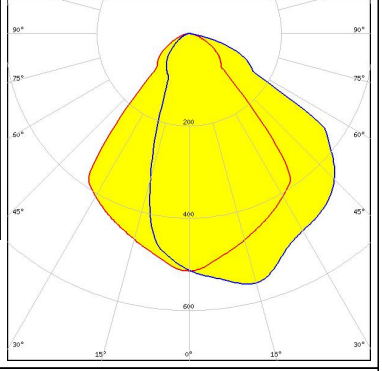
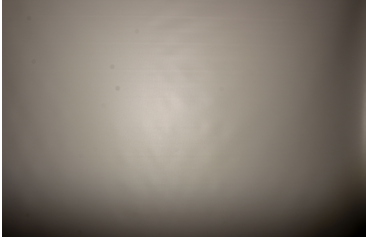
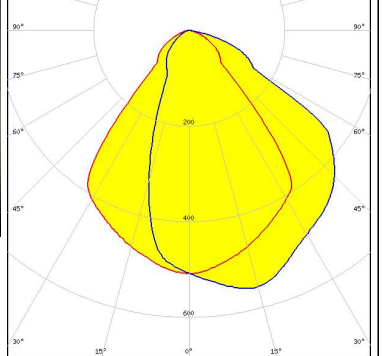
OPTICAL RESULTS (MEASURED):

<p>LUMINUS</p> <p>LED CTM-18 (Tunable White) FWHM / FWTM Asymmetric Efficiency 84 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour Tunable White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 C11996_LENA-LENS Bender Wirth: 442 Typ L3</p>		
<p>LUMINUS</p> <p>LED CTM-18 (Tunable White) FWHM / FWTM Asymmetric Efficiency 88 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 Bender Wirth: 442 Typ L3</p>		
<p>LUMINUS</p> <p>LED CTM-22 (Tunable White) FWHM / FWTM Asymmetric Efficiency 89 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 Bender Wirth: 494 Typ L3</p>		
<p>LUMINUS</p> <p>LED CTM-22 (Tunable White) FWHM / FWTM Asymmetric Efficiency 84 % Peak intensity 0.5 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13867_LENA-STD-BASE-VERO29 C11996_LENA-LENS Bender Wirth: 494 Typ L3</p>		

OPTICAL RESULTS (MEASURED):

<p>LUMINUS</p> <p>LED CxM-14 (19x19)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 83 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12691_LENA-STD-BASE-CLL030 C11996_LENA-LENS</p>		
<p>LUMINUS</p> <p>LED CxM-14 (19x19)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 88 %</p> <p>Peak intensity 0.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12691_LENA-STD-BASE-CLL030</p>		
<p>LUMINUS</p> <p>LED CxM-22 (28x28)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 79 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENA-STD-BASE-CLL040 C11996_LENA-LENS</p>		
<p>LUMINUS</p> <p>LED CxM-22 (28x28)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 86 %</p> <p>Peak intensity 0.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C12692_LENA-STD-BASE-CLL040</p>		

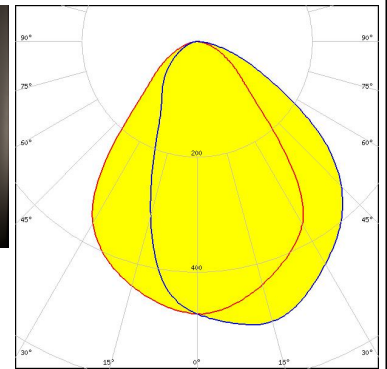
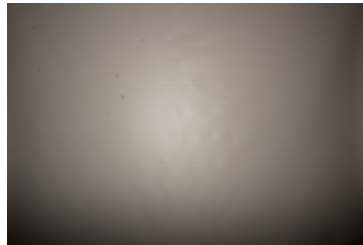
OPTICAL RESULTS (MEASURED):

<p>NICHIA</p> <p>LED COB J-Type FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 463 Typ L2</p>		
<p>NICHIA</p> <p>LED COB L-Type (LES 11) FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 438 Typ L1</p>		
<p>NICHIA</p> <p>LED COB L-Type (LES 9) FWHM / FWTM Asymmetric Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 438 Typ L1</p>		
<p>NICHIA</p> <p>LED NVCWJ024Z-V1MT: COB J-Type Tunable White FWHM / FWTM Asymmetric Efficiency 90 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 498 Typ L2</p>		

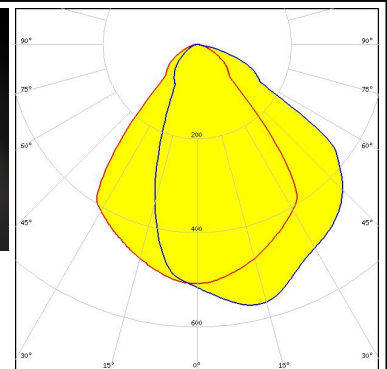
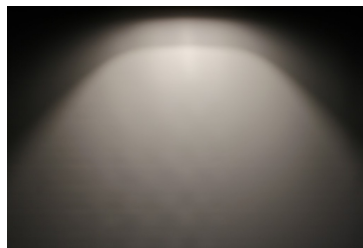
OPTICAL RESULTS (MEASURED):



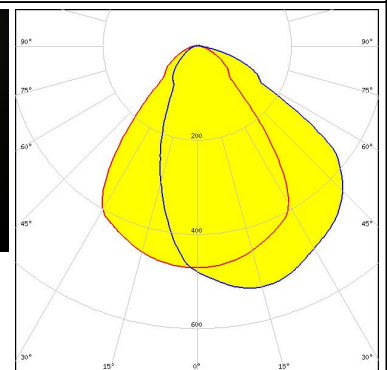
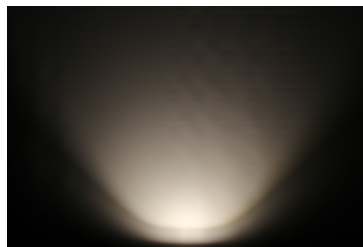
LED NVCWJ024Z-V1MT: COB J-Type Tunable White
FWHM / FWTM Asymmetric
Efficiency 85 %
Peak intensity 0.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:
 C13868_LENA-STD-BASE-VERO13-18
 C11996_LENA-LENS
 Bender Wirth: 498 Typ L2



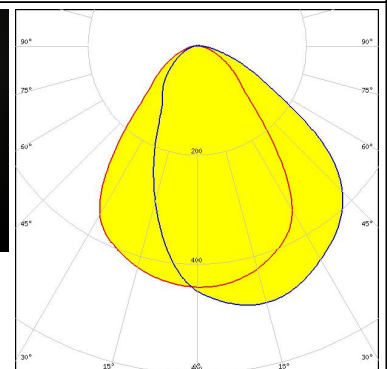
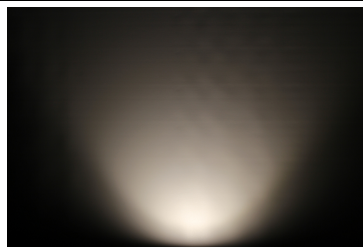
LED Soleriq S13
FWHM / FWTM Asymmetric
Efficiency 90 %
Peak intensity 0.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:
 C13868_LENA-STD-BASE-VERO13-18
 Bender Wirth: 437 Typ L1



LED Soleriq S19
FWHM / FWTM Asymmetric
Efficiency 89 %
Peak intensity 0.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:
 C13867_LENA-STD-BASE-VERO29
 Bender Wirth: 462 Typ L3



LED Soleriq S19
FWHM / FWTM Asymmetric
Efficiency 85 %
Peak intensity 0.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:
 C13867_LENA-STD-BASE-VERO29
 C11996_LENA-LENS
 Bender Wirth: 462 Typ L3



OPTICAL RESULTS (MEASURED):

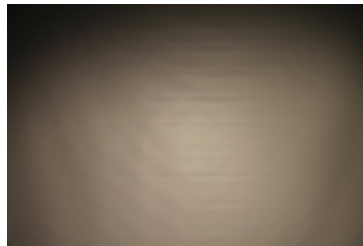
PHILIPS

LED Fortimo SLM L13 CoB
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ



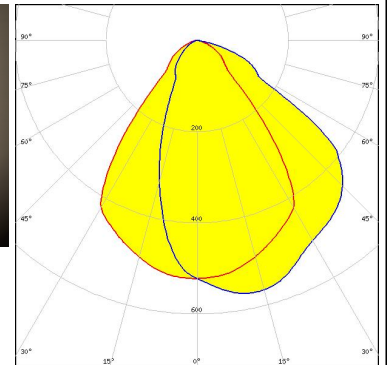
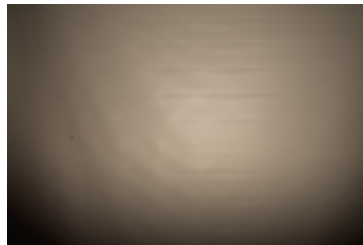
PHILIPS

LED Fortimo SLM L13 CoB
 FWHM / FWTM Asymmetric
 Efficiency 85 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ
 C11996_LENA-LENS



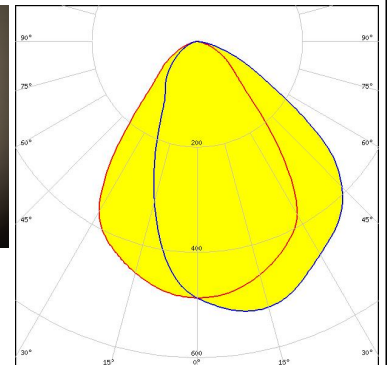
PHILIPS

LED Fortimo SLM L15 CoB
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ



PHILIPS

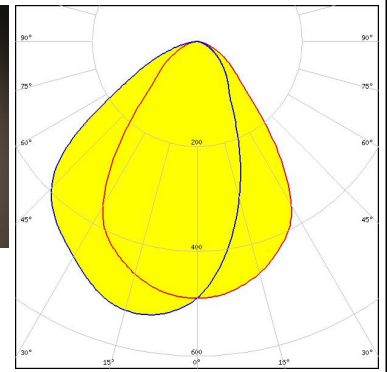
LED Fortimo SLM L15 CoB
 FWHM / FWTM Asymmetric
 Efficiency 85 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ
 C11996_LENA-LENS



OPTICAL RESULTS (MEASURED):

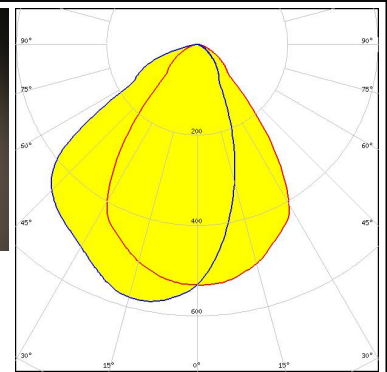
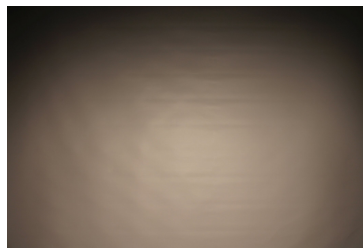
PHILIPS

LED Fortimo SLM L19 CoB
 FWHM / FWTM Asymmetric
 Efficiency 85 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040
 C11996_LENA-LENS



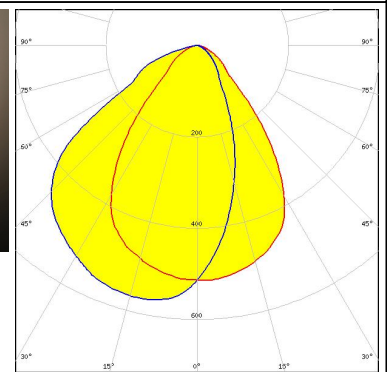
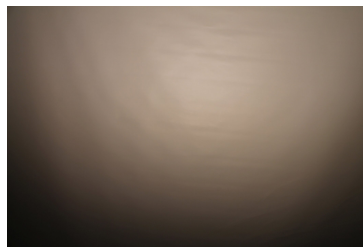
PHILIPS

LED Fortimo SLM L19 CoB
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.6 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040



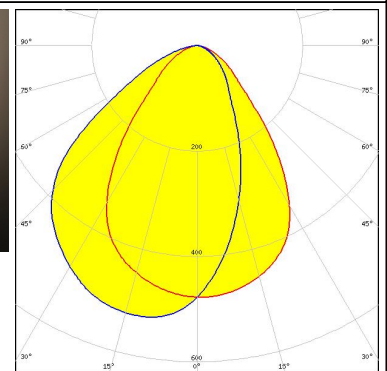
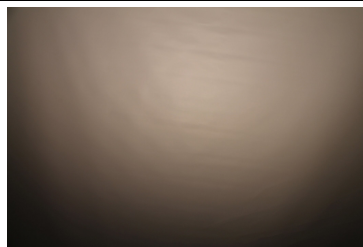
PHILIPS

LED Fortimo SLM L23 CoB
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.6 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040



PHILIPS

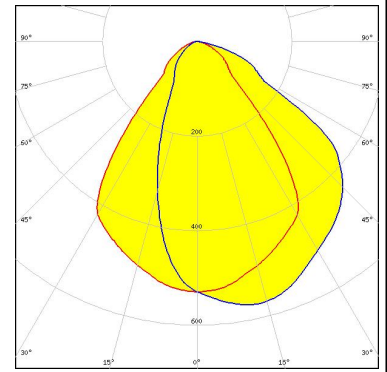
LED Fortimo SLM L23 CoB
 FWHM / FWTM Asymmetric
 Efficiency 85 %
 Peak intensity 0.5 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040
 C11996_LENA-LENS



OPTICAL RESULTS (MEASURED):

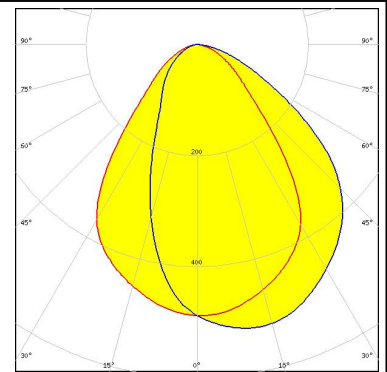
SAMSUNG

LED LC016D / LC019D / LC026D / LC033D
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12691_LENA-STD-BASE-CLL030



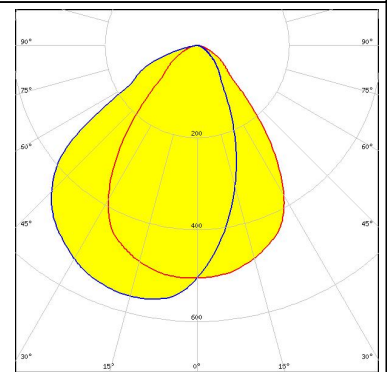
SAMSUNG

LED LC016D / LC019D / LC026D / LC033D
 FWHM / FWTM Asymmetric
 Efficiency 87 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12691_LENA-STD-BASE-CLL030
 C11996_LENA-LENS



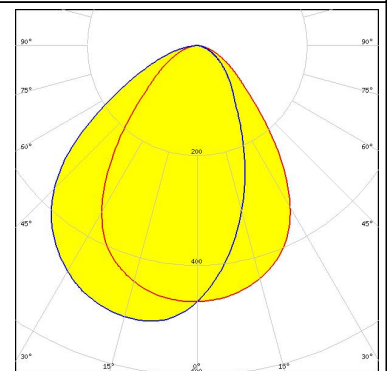
SAMSUNG

LED LC040D / LC060D / LC080D
 FWHM / FWTM Asymmetric
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040



SAMSUNG

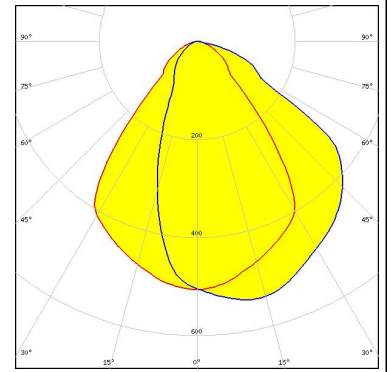
LED LC040D / LC060D / LC080D
 FWHM / FWTM Asymmetric
 Efficiency 86 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12692_LENA-STD-BASE-CLL040
 C11996_LENA-LENS



OPTICAL RESULTS (MEASURED):

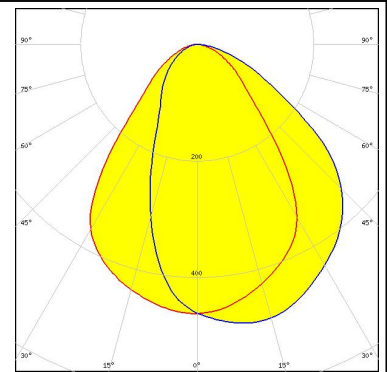
SHARP

LED Mega Zenigata (GW6DME)
 FWHM / FWTM Asymmetric
 Efficiency 87 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ



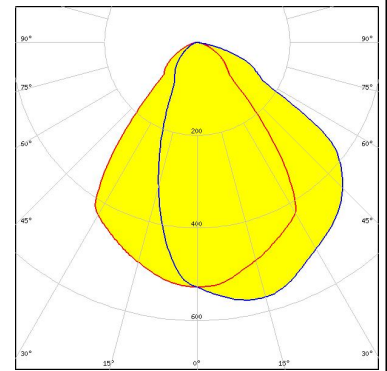
SHARP

LED Mega Zenigata (GW6DME)
 FWHM / FWTM Asymmetric
 Efficiency 83 %
 Peak intensity 0.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ
 C11996_LENA-LENS



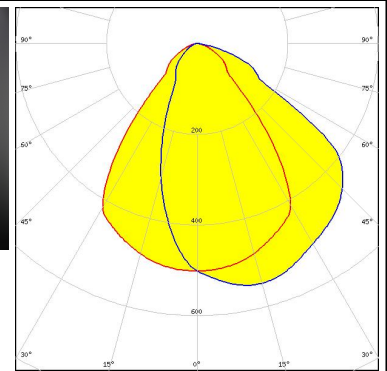
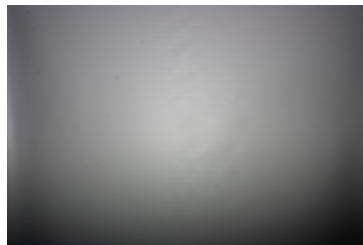
TRIDONIC

LED SLE G7 LES15
 FWHM / FWTM Asymmetric
 Efficiency 92 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12691_LENA-STD-BASE-CLL030



TRIDONIC

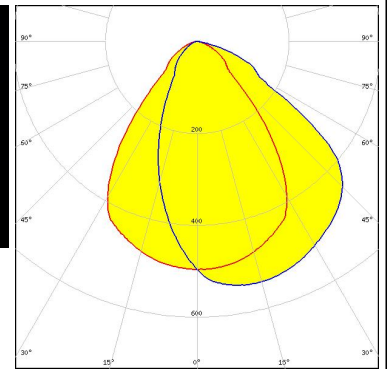
LED SLE G7 LES17 H
 FWHM / FWTM 76.0° / 123.0°
 Efficiency 91 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C14547_LENA-ADAPTER-B



OPTICAL RESULTS (MEASURED):

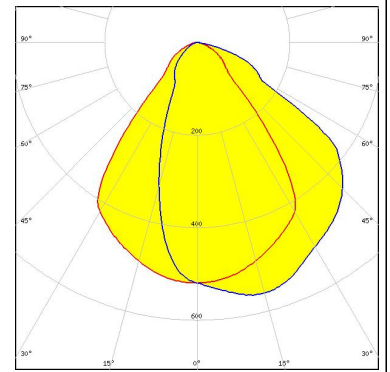
TRIDONIC

LED SLE G7 LES21 H
FWHM / FWTM Asymmetric
Efficiency 90 %
Peak intensity 0.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:
C14547_LENA-ADAPTER-B



XICATO

LED XOB 14.5 mm
FWHM / FWTM Asymmetric
Efficiency 91 %
Peak intensity 0.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:
C12691_LENA-STD-BASE-CLL030



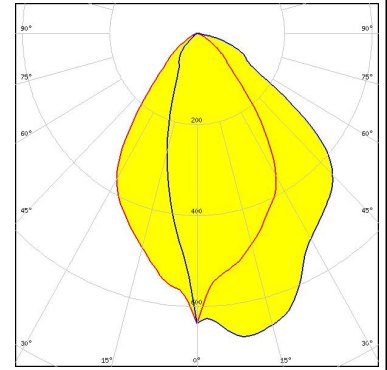
OPTICAL RESULTS (SIMULATED):

<p>bridgelux.</p> <p>LED V10 Gen7</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 85 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 486 Typ L1</p>	
<p>bridgelux.</p> <p>LED V13 Gen7</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 1.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 477 Typ L1</p>	
<p>bridgelux.</p> <p>LED V13 Gen7</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 87 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: IDEAL: 50-2103CT + 50-2100LN</p>	
<p>bridgelux.</p> <p>LED V13 Gen7</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 84 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: C11996_LENA-LENS IDEAL: 50-2103CT + 50-2100LN</p>	

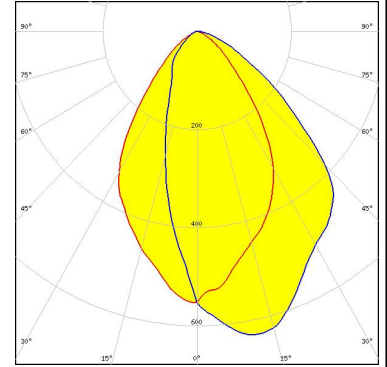
OPTICAL RESULTS (SIMULATED):



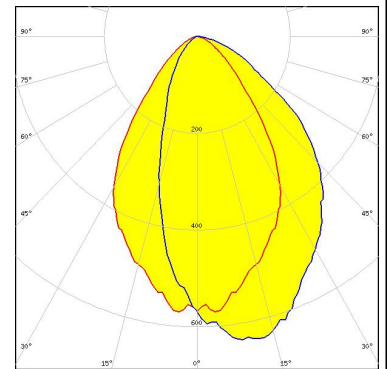
LED CXA/B 30xx
 FWHM / FWTM Asymmetric
 Efficiency 82 %
 Peak intensity 0.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 IDEAL: 50-2234C + 50-2100LN



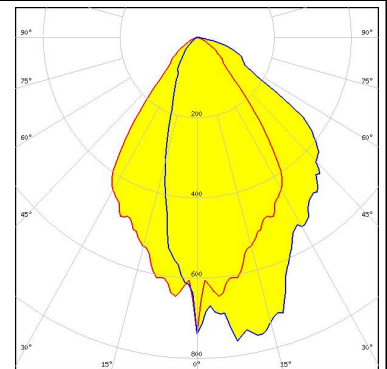
LED CXA/B 30xx
 FWHM / FWTM Asymmetric
 Efficiency 78 %
 LEDs/each optic 1
 Light colour White
 Required components:
 C11996_LENA-LENS
 IDEAL: 50-2234C + 50-2100LN



LED LUXEON CoB 1204/1205
 FWHM / FWTM Asymmetric
 Efficiency 83 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ
 C11996_LENA-LENS



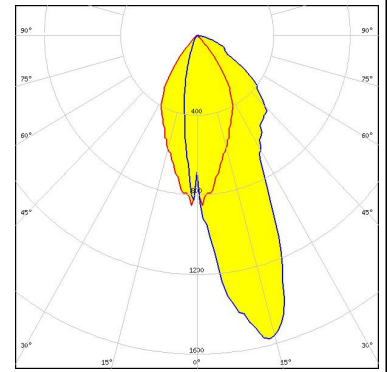
LED LUXEON CoB 1204/1205
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ



OPTICAL RESULTS (SIMULATED):

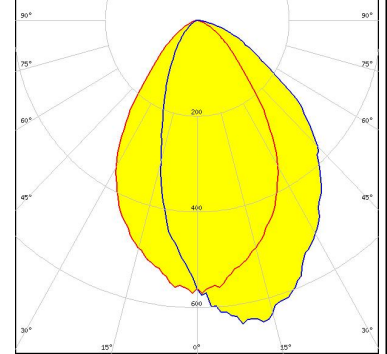
LUMILEDS

LED LUXEON CoB 1208
 FWHM / FWTM Asymmetric
 Efficiency 90 %
 Peak intensity 0.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ



LUMILEDS

LED LUXEON CoB 1208
 FWHM / FWTM Asymmetric
 Efficiency 82 %
 Peak intensity 0.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:
 C12292_LENA-STD-BASE-MEZ
 C11996_LENA-LENS



LUMILEDS

LED LUXEON K12
 FWHM / FWTM Asymmetric
 Efficiency %
 LEDs/each optic 1
 Light colour White
 Required components:
 C12924_LENA-STD-BASE-LUXEON-K
 C11996_LENA-LENS

LUMILEDS

LED LUXEON K12
 FWHM / FWTM Asymmetric
 Efficiency %
 LEDs/each optic 1
 Light colour White
 Required components:
 C12924_LENA-STD-BASE-LUXEON-K

OPTICAL RESULTS (SIMULATED):

LUMILEDS

LED LUXEON K16
FWHM / FWTM Asymmetric
Efficiency %
LEDs/each optic 1
Light colour White
Required components:
C12924_LENA-STD-BASE-LUXEON-K
C11996_LENA-LENS

LUMILEDS

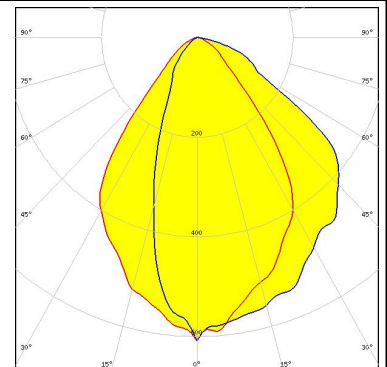
LED LUXEON K16
FWHM / FWTM Asymmetric
Efficiency %
LEDs/each optic 1
Light colour White
Required components:
C12924_LENA-STD-BASE-LUXEON-K

LUMINUS


LED CxM-14 (19x19)
FWHM / FWTM Asymmetric
Efficiency 91 %
Peak intensity 0.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:
C13868_LENA-STD-BASE-VERO13-18
Bender Wirth: 433 Typ L1

OSRAM Opto Semiconductors

LED Soleriq S15
FWHM / FWTM Asymmetric
Efficiency 86 %
Peak intensity 0.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:
C12691_LENA-STD-BASE-CLL030



OPTICAL RESULTS (SIMULATED):

 SEOL SEMICONDUCTOR	
LED	ZC12/18
FWHM / FWTM	Asymmetric
Efficiency	91 %
Peak intensity	0.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components: C13868_LENA-STD-BASE-VERO13-18 Bender Wirth: 433 Typ L1	
SHARP	
LED	Mega Zenigata (GW5DGC)
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour	White
Required components: C12292_LENA-STD-BASE-MEZ	
SHARP	
LED	Mega Zenigata (GW5DGC)
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour	White
Required components: C12292_LENA-STD-BASE-MEZ C11996_LENA-LENS	

GENERAL INFORMATION:

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

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

MATERIALS:

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

PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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

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

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

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

LEDiL Oy

Joensuunkatu 13
FI-24240 SALO
Finland

LEDiL Inc.

228 West Page Street
Suite D
Sycamore IL 60178
USA

Ledil Optics Technology (Shenzhen) Co., Ltd.

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

Local sales and technical support

[www.ledil.com/
where_to_buy](http://www.ledil.com/where_to_buy)

Shipping locations

Salo, Finland
Hong Kong, China

Distribution Partners

[www.ledil.com/
where_to_buy](http://www.ledil.com/where_to_buy)