

## 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:

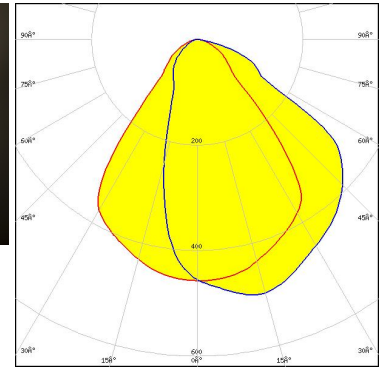
Component	Qty in box	MOQ	MPQ	Box weight (kg)
C13101_LENA-X-WAS » Box size: 480 x 280 x 300 mm	56	56	56	3.2



### OPTICAL RESULTS (MEASURED):



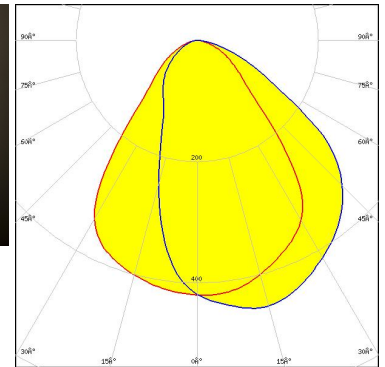
**LED** BXRA ES Rectangle  
**FWHM / FWTM** Asymmetric  
**Efficiency** 81 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12153\_LENA-STD-BASE-BXRA



Light distribution files



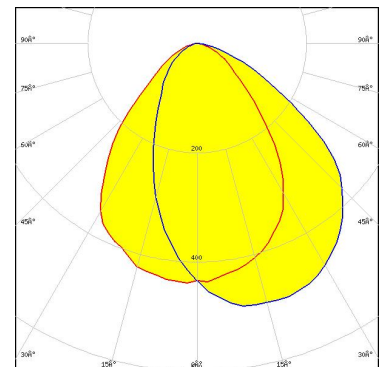
**LED** BXRA ES Rectangle  
**FWHM / FWTM** Asymmetric  
**Efficiency** 77 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12153\_LENA-STD-BASE-BXRA  
 C11996\_LENA-LENS



Light distribution files



**LED** BXRA RS  
**FWHM / FWTM** Asymmetric  
**Efficiency** 83 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12229\_LENA-STD-BASE-RS  
 C11996\_LENA-LENS

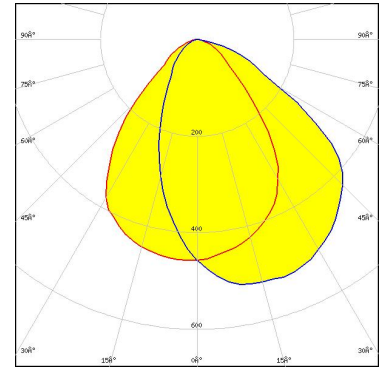


Light distribution files

### OPTICAL RESULTS (MEASURED):



**LED** BXRA RS  
**FWHM / FWTM** Asymmetric  
**Efficiency** 87 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12229\_LENA-STD-BASE-RS



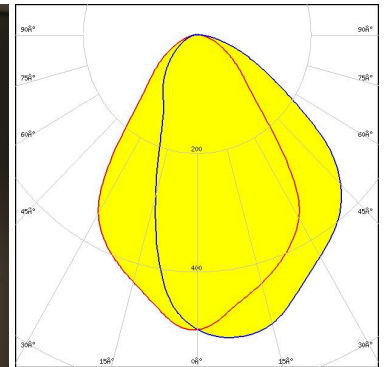
Light distribution files



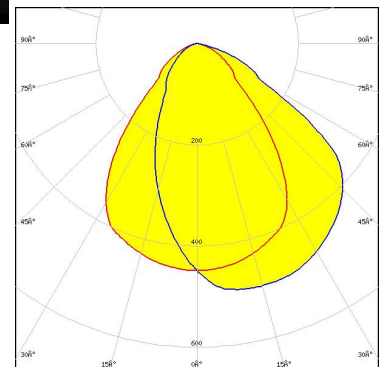
**LED** V10 Gen6  
**FWHM / FWTM** Asymmetric  
**Efficiency** 82 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13186\_LENA-STD-BASE-CXA15  
 C11996\_LENA-LENS



Light distribution files



**LED** V22 Gen7  
**FWHM / FWTM** Asymmetric  
**Efficiency** 86 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13867\_LENA-STD-BASE-VERO29  
 C14169\_LENA-CLEAR-LENS  
 Bender Wirth: 431 Typ L3



Light distribution files

#### OPTICAL RESULTS (MEASURED):



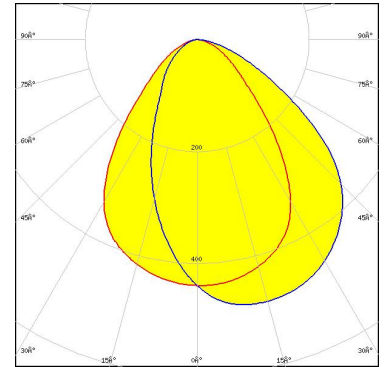
LED V22 Gen7  
 FWHM / FWTM Asymmetric  
 Efficiency 83 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C13867\_LENA-STD-BASE-VERO29

C11996\_LENA-LENS

Bender Wirth: 431 Typ L3



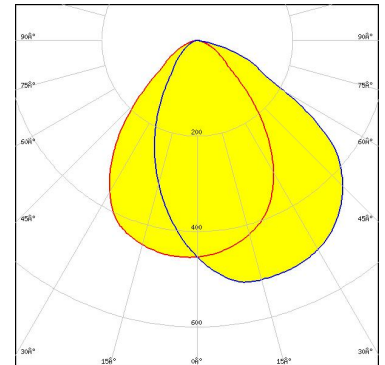
Light distribution files



LED Vero SE 29  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C15083\_LENA-STD-BASE-VERO29



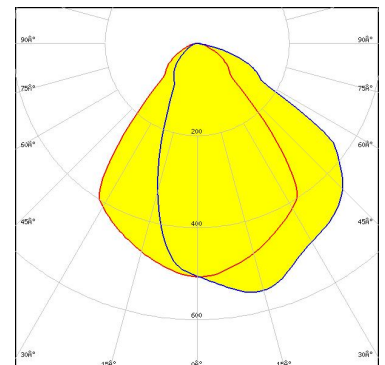
Light distribution files



LED VERO13  
 FWHM / FWTM Asymmetric  
 Efficiency 92 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C13868\_LENA-STD-BASE-VERO13-18

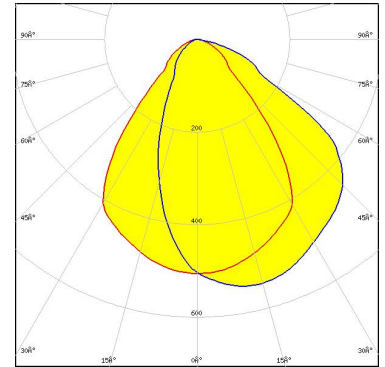


Light distribution files

#### OPTICAL RESULTS (MEASURED):



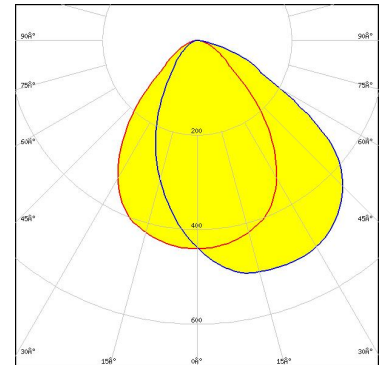
**LED** VERO18  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18



Light distribution files



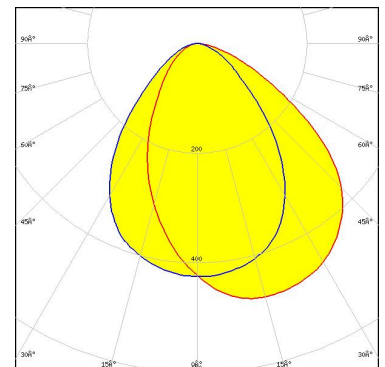
**LED** VERO29  
**FWHM / FWTM** Asymmetric  
**Efficiency** 89 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13867\_LENA-STD-BASE-VERO29



Light distribution files



**LED** VERO29  
**FWHM / FWTM** Asymmetric  
**Efficiency** 84 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13867\_LENA-STD-BASE-VERO29  
 C11996\_LENA-LENS

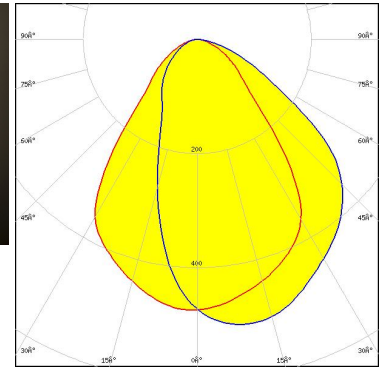


Light distribution files

#### OPTICAL RESULTS (MEASURED):

### CITIZEN

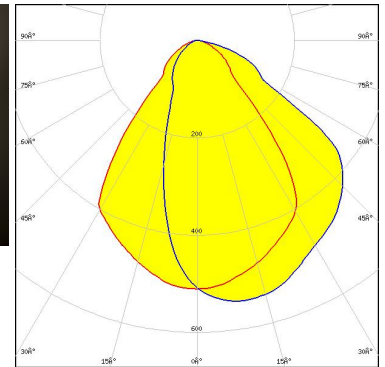
LED CL-L340  
 FWHM / FWTM Asymmetric  
 Efficiency 82 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C11995\_LENA-STD-BASE-CL340  
 C11996\_LENA-LENS



Light distribution files

### CITIZEN

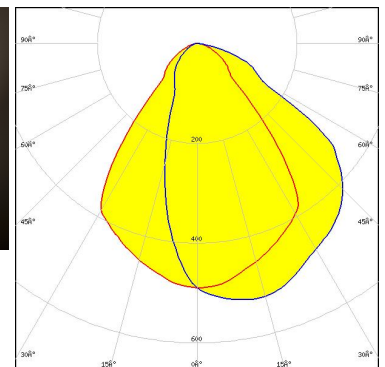
LED CL-L340  
 FWHM / FWTM Asymmetric  
 Efficiency 84 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C11995\_LENA-STD-BASE-CL340



Light distribution files

### CITIZEN

LED CLL03x/CLU03x  
 FWHM / FWTM Asymmetric  
 Efficiency 81 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030

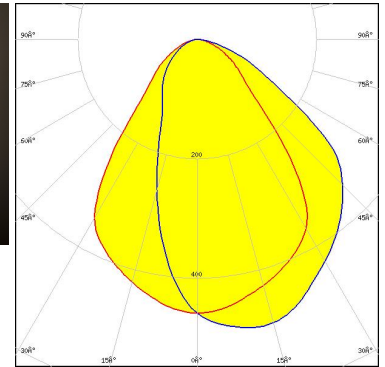


Light distribution files

#### OPTICAL RESULTS (MEASURED):

### CITIZEN

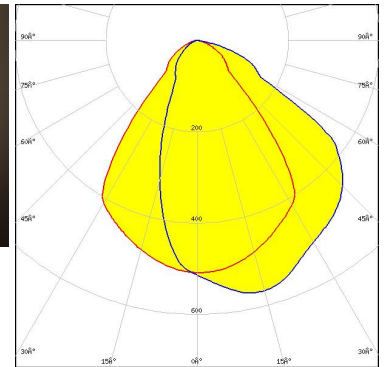
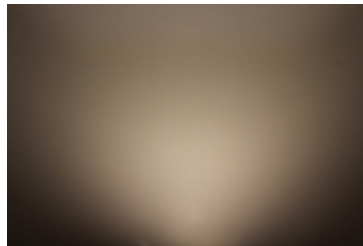
LED CLL03x/CLU03x  
 FWHM / FWTM Asymmetric  
 Efficiency 80 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030  
 C11996\_LENA-LENS



Light distribution files

### CITIZEN

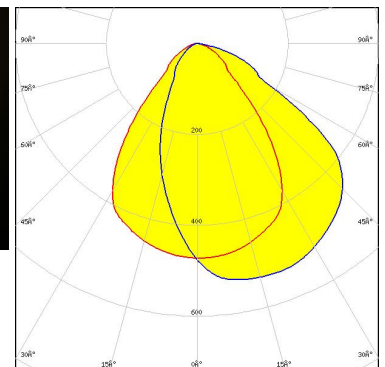
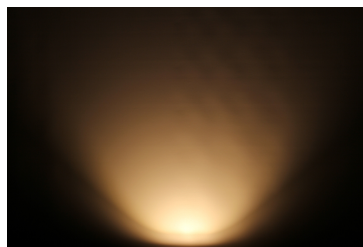
LED CLL03x/CLU03x  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 433 Typ L1



Light distribution files

### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13867\_LENA-STD-BASE-VERO29  
 Bender Wirth: 431 Typ L3



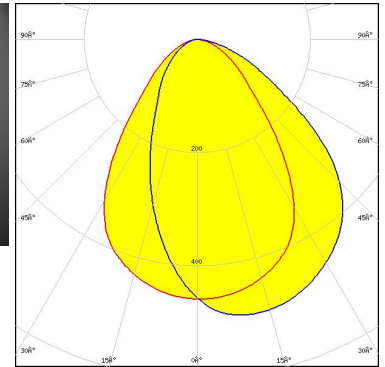
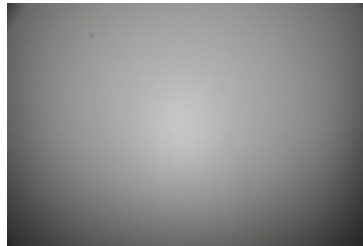
Light distribution files



#### OPTICAL RESULTS (MEASURED):

### CITIZEN

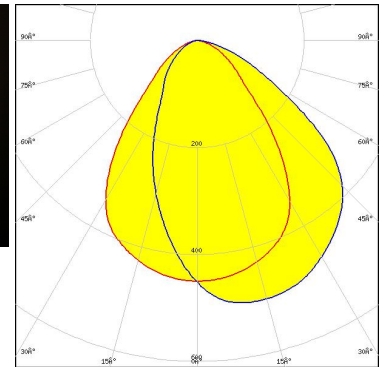
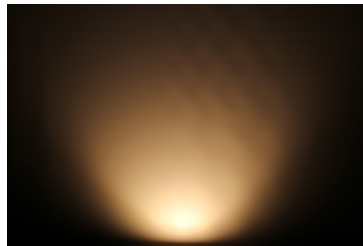
LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 84 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C11996\_LENA-LENS  
 IDEAL: 50-2204CT + 50-2100LN



Light distribution files

### CITIZEN

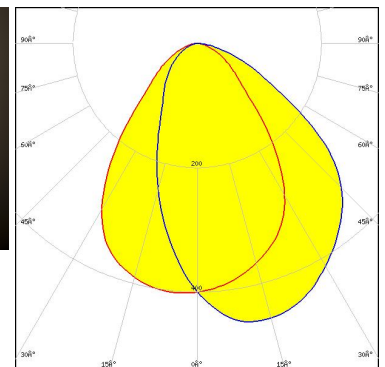
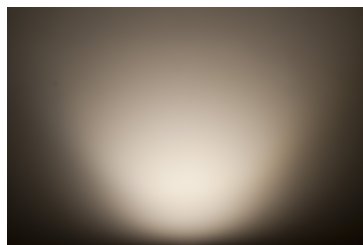
LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13867\_LENA-STD-BASE-VERO29  
 C11996\_LENA-LENS  
 Bender Wirth: 431 Typ L3



Light distribution files

### CITIZEN

LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 74 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040  
 C11996\_LENA-LENS

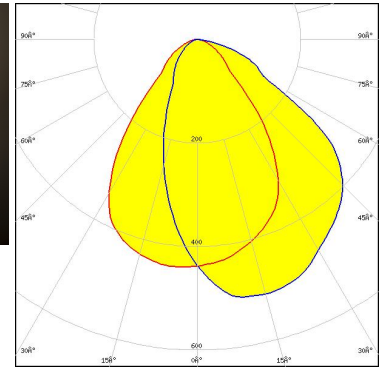


Light distribution files

### OPTICAL RESULTS (MEASURED):

#### CITIZEN

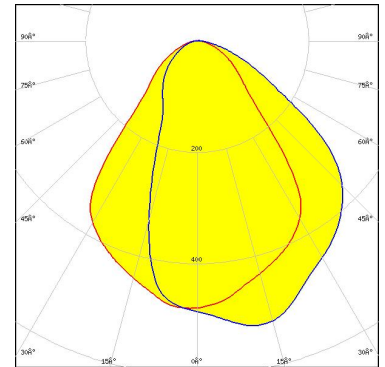
LED CLL04x/CLU04x  
 FWHM / FWTM Asymmetric  
 Efficiency 82 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040



Light distribution files

#### CITIZEN

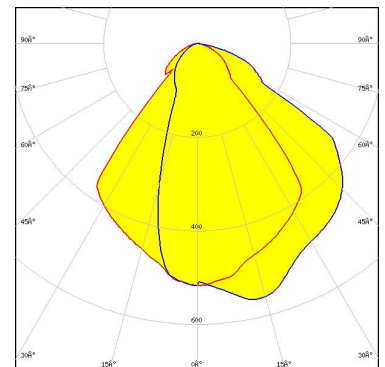
LED CLU710/711  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030  
 C11996\_LENA-LENS



Light distribution files

#### CITIZEN

LED CLU710/711  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12691\_LENA-STD-BASE-CLL030

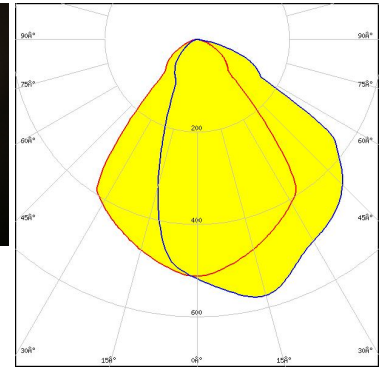
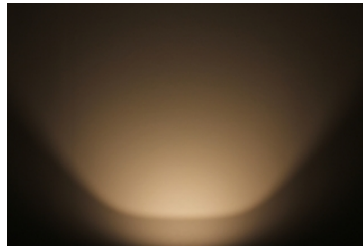


Light distribution files

#### OPTICAL RESULTS (MEASURED):

### CITIZEN

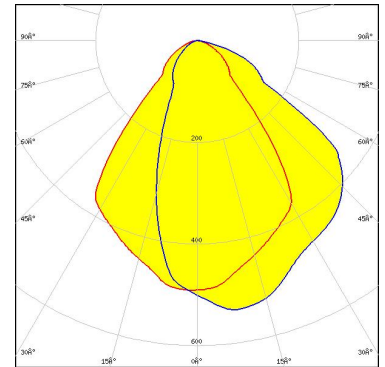
LED CLU720/721/723  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 433 Typ L1



Light distribution files

### CITIZEN

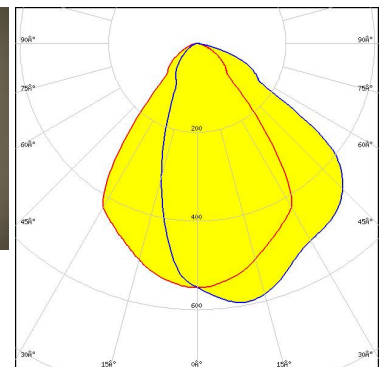
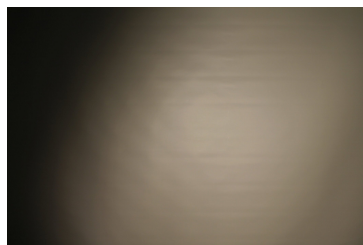
LED CLU730/731/733  
 FWHM / FWTM Asymmetric  
 Efficiency 84 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040



Light distribution files



LED CMA1840  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C14146\_LENA-STD-BASE-CXA18

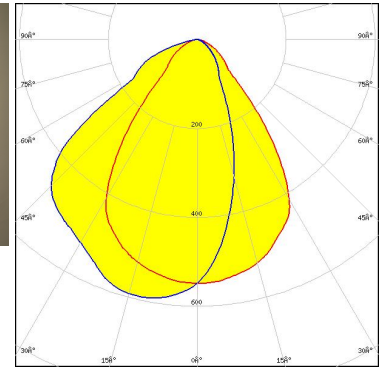
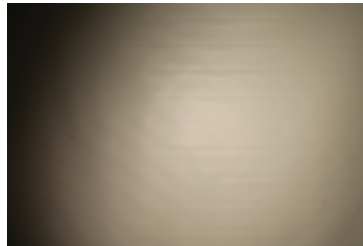


Light distribution files

### OPTICAL RESULTS (MEASURED):



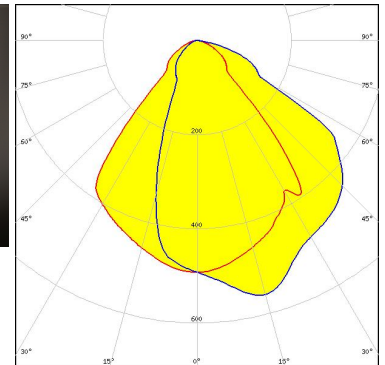
LED CMA2550  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13324\_LENA-STD-BASE-CXA25



Light distribution files



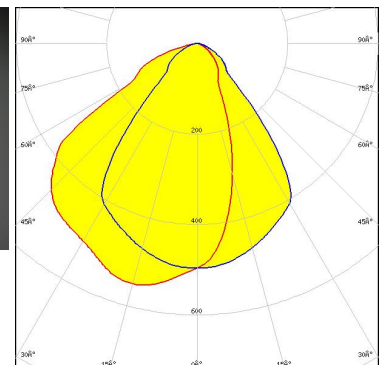
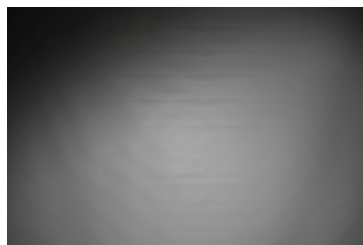
LED CMT14xx  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 434 Typ L1



Light distribution files



LED CMT19xx  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 477 Typ L1

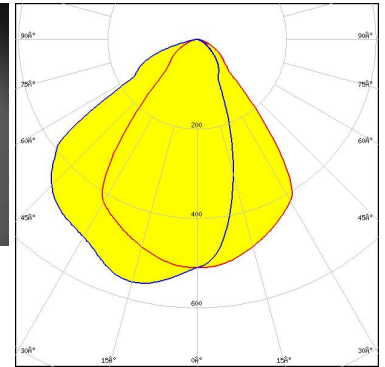


Light distribution files

### OPTICAL RESULTS (MEASURED):



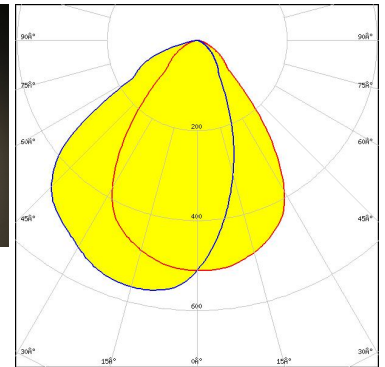
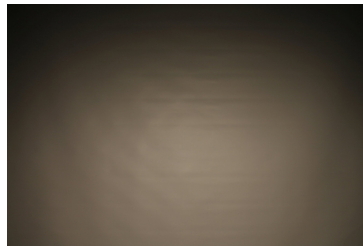
**LED** CMT19xx  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12691\_LENA-STD-BASE-CLL030



Light distribution files



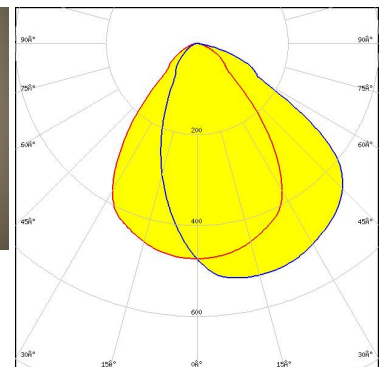
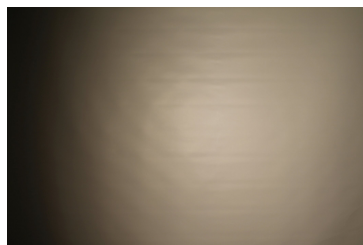
**LED** CMT28xx  
**FWHM / FWTM** Asymmetric  
**Efficiency** 90 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12692\_LENA-STD-BASE-CLL040



Light distribution files



**LED** CMT28xx  
**FWHM / FWTM** Asymmetric  
**Efficiency** 89 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13867\_LENA-STD-BASE-VERO29  
 Bender Wirth: 471 Typ L3

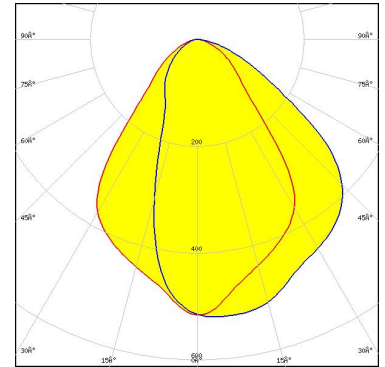


Light distribution files

### OPTICAL RESULTS (MEASURED):



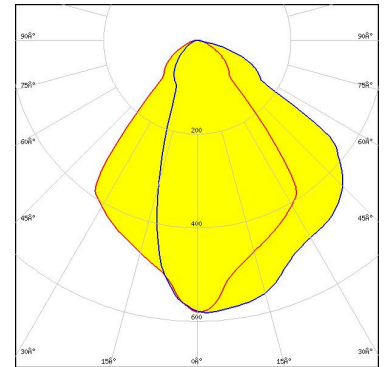
**LED** CXA/B 15xx  
**FWHM / FWTM** Asymmetric  
**Efficiency** 84 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13186\_LENA-STD-BASE-CXA15  
 C11996\_LENA-LENS



Light distribution files



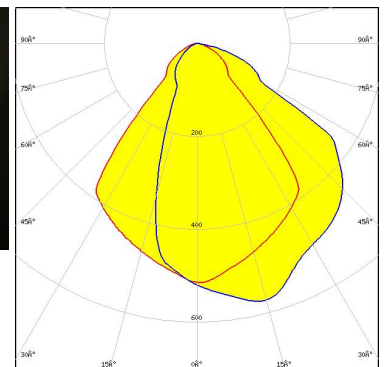
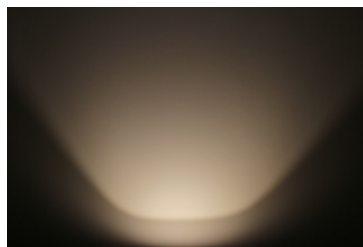
**LED** CXA/B 15xx  
**FWHM / FWTM** Asymmetric  
**Efficiency** 88 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13186\_LENA-STD-BASE-CXA15



Light distribution files



**LED** CXA/B 15xx  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 441 Typ L1

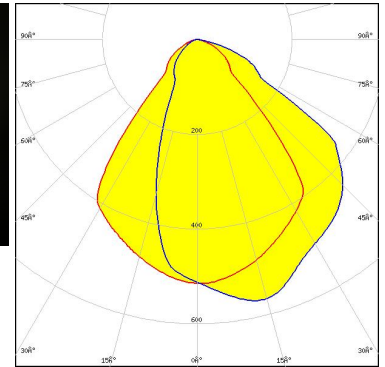
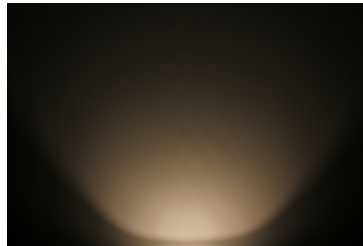


Light distribution files

### OPTICAL RESULTS (MEASURED):



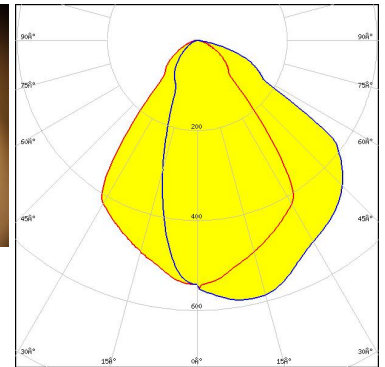
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 437 Typ L1



Light distribution files



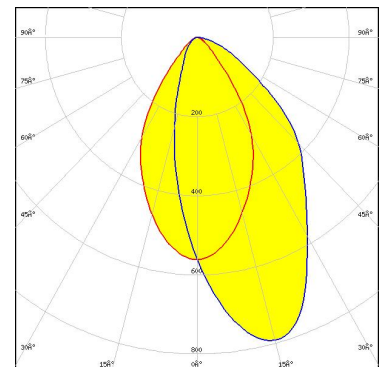
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C14146\_LENA-STD-BASE-CXA18



Light distribution files



LED CXA/B 25xx  
 FWHM / FWTM Asymmetric  
 Efficiency 73 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13324\_LENA-STD-BASE-CXA25  
 C11996\_LENA-LENS

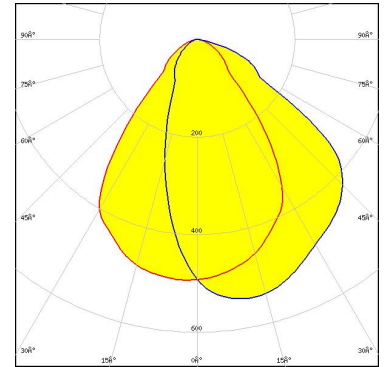


Light distribution files

### OPTICAL RESULTS (MEASURED):



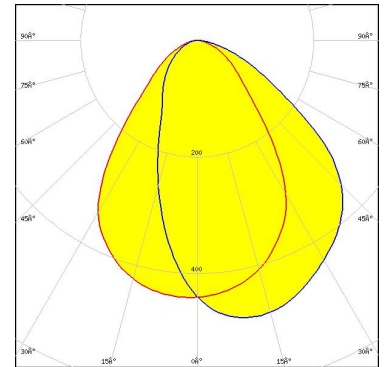
LED CXA/B 25xx  
FWHM / FWTM Asymmetric  
Efficiency 82 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13324\_LENA-STD-BASE-CXA25



Light distribution files



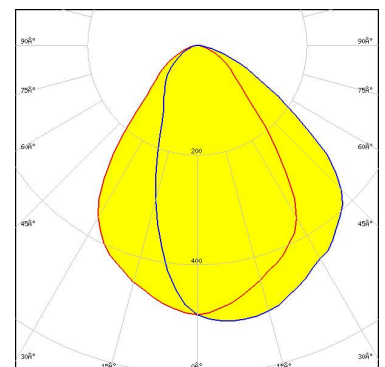
LED CXA/B 25xx  
FWHM / FWTM Asymmetric  
Efficiency 78 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13324\_LENA-STD-BASE-CXA25  
C11996\_LENA-LENS



Light distribution files



LED CXA2011  
FWHM / FWTM Asymmetric  
Efficiency 80 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12105\_LENA-STD-BASE-CXA20  
C11996\_LENA-LENS



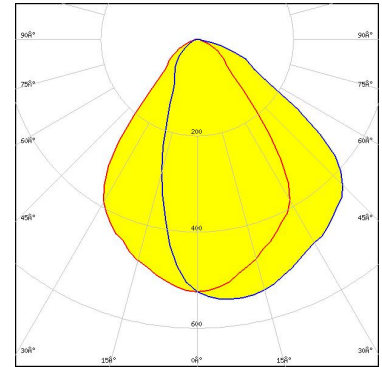
Light distribution files



### OPTICAL RESULTS (MEASURED):



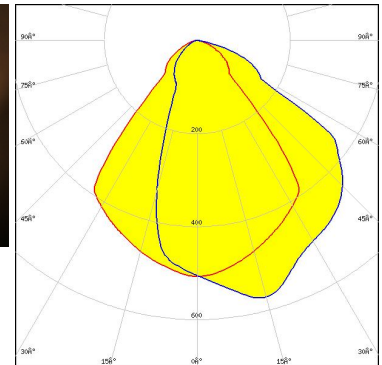
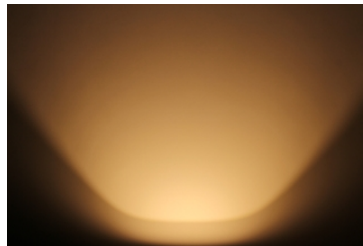
**LED** CXA2011  
**FWHM / FWTM** Asymmetric  
**Efficiency** 83 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12105\_LENA-STD-BASE-CXA20



Light distribution files



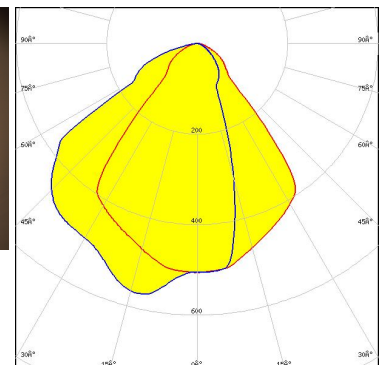
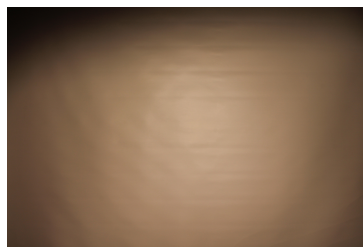
**LED** LUXEON CoB 1202/1203  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 438 Typ L1



Light distribution files



**LED** LUXEON CoB 1204HD  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C11981\_LENA-STD-BASE-COB-L110

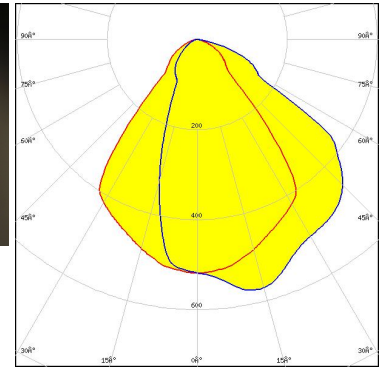
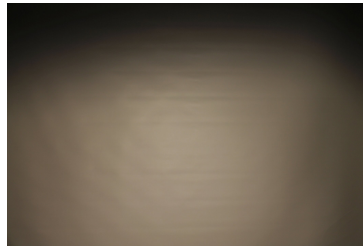


Light distribution files

### OPTICAL RESULTS (MEASURED):



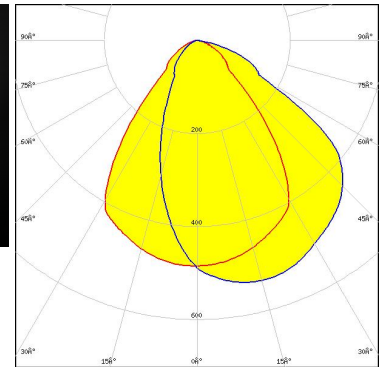
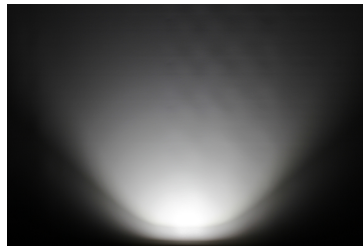
LED LUXEON CoB 1205HD  
FWHM / FWTM Asymmetric  
Efficiency 91 %  
Peak intensity 0.6 cd/m  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C11981\_LENA-STD-BASE-COB-L110



Light distribution files



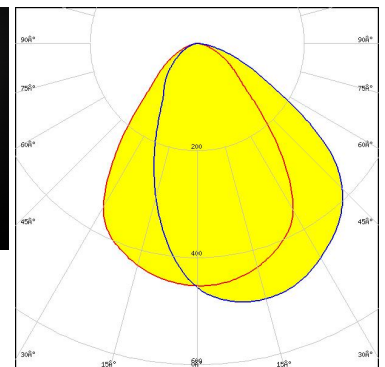
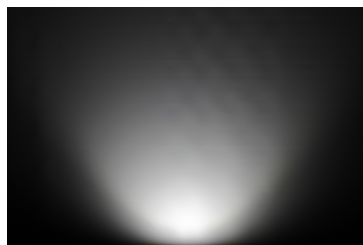
LED LUXEON CoB 1211  
FWHM / FWTM Asymmetric  
Efficiency 89 %  
Peak intensity 0.5 cd/m  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13867\_LENA-STD-BASE-VERO29  
Bender Wirth: 431 Typ L3



Light distribution files



LED LUXEON CoB 1211  
FWHM / FWTM Asymmetric  
Efficiency 85 %  
Peak intensity 0.5 cd/m  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13867\_LENA-STD-BASE-VERO29  
C11996\_LENA-LENS  
Bender Wirth: 431 Typ L3

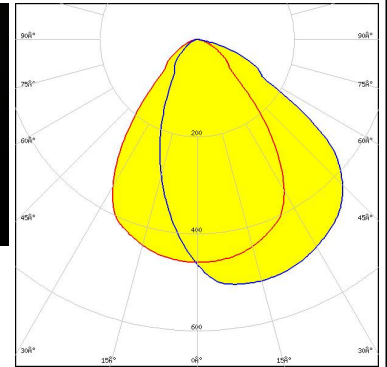
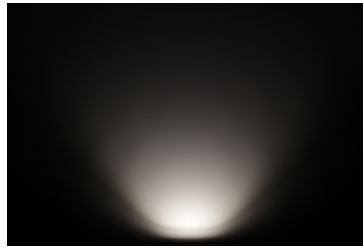


Light distribution files

#### OPTICAL RESULTS (MEASURED):



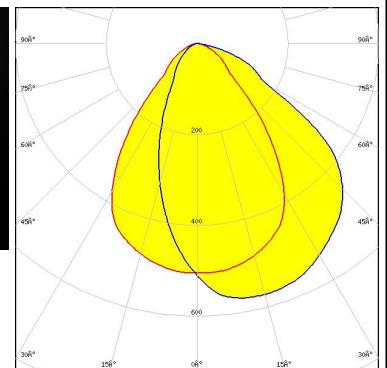
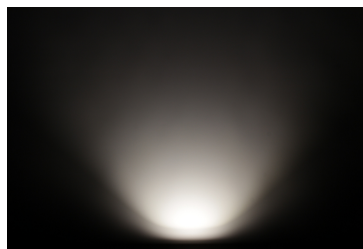
**LED** LUXEON CoB 1213/1216/1812  
**FWHM / FWTM** 75.0° / 123.0°  
**Efficiency** 85 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 A.A.G. STUCCHI: 8102-G2 + S-8000-12



Light distribution files



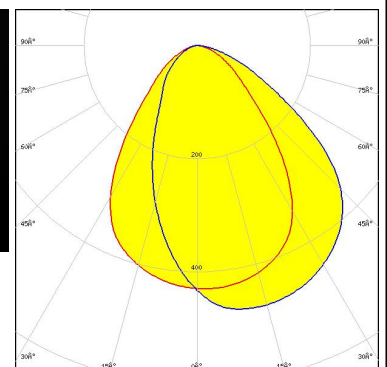
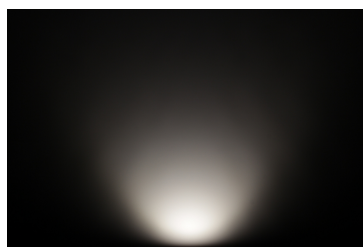
**LED** LUXEON CoB 1213/1216/1812  
**FWHM / FWTM** Asymmetric  
**Efficiency** 92 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12692\_LENA-STD-BASE-CLL040



Light distribution files



**LED** LUXEON CoB 1213/1216/1812  
**FWHM / FWTM** Asymmetric  
**Efficiency** 81 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C11996\_LENA-LENS  
 A.A.G. STUCCHI: 8102-G2 + S-8000-12

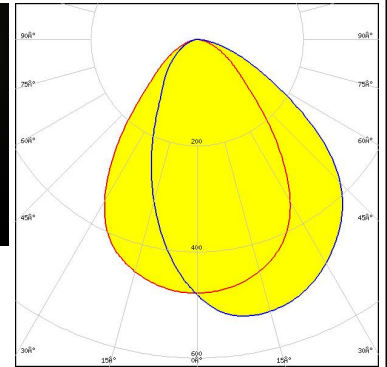


Light distribution files

### OPTICAL RESULTS (MEASURED):



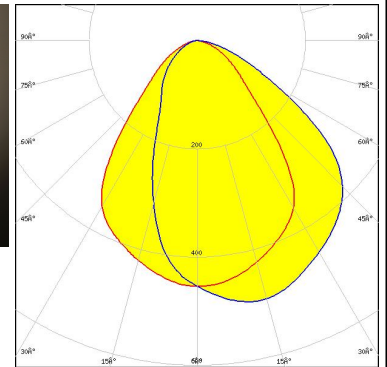
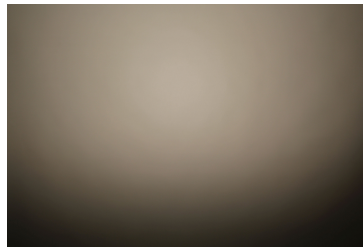
**LED** LUXEON CoB 1213/1216/1812  
**FWHM / FWTM** Asymmetric  
**Efficiency** 87 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12692\_LENA-STD-BASE-CLL040  
 C11996\_LENA-LENS



Light distribution files



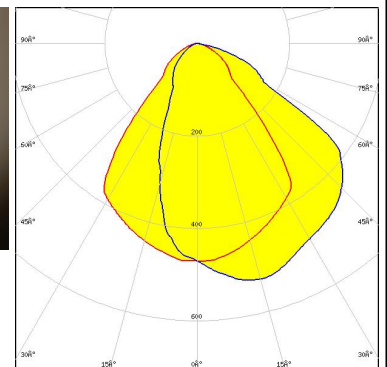
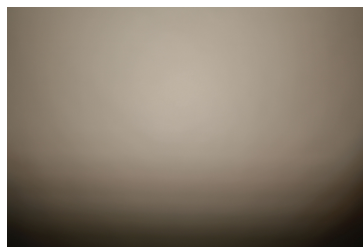
**LED** CDM-14 (Dim-To-Warm)  
**FWHM / FWTM** Asymmetric  
**Efficiency** 86 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18  
 C11996\_LENA-LENS  
 Bender Wirth: 491 Typ L2



Light distribution files



**LED** CDM-14 (Dim-To-Warm)  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 491 Typ L2

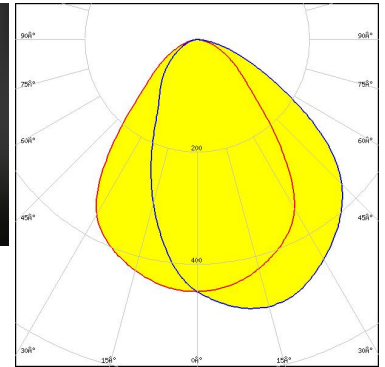


Light distribution files

### OPTICAL RESULTS (MEASURED):



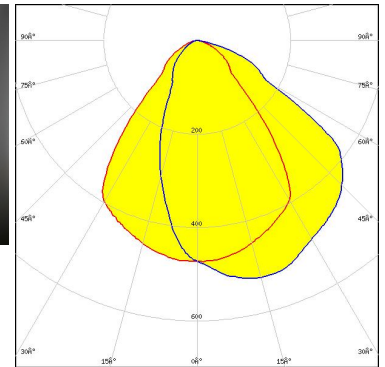
LED CDM-18 (Dim-To-Warm)  
FWHM / FWTM Asymmetric  
Efficiency 86 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13868\_LENA-STD-BASE-VERO13-18  
C11996\_LENA-LENS  
Bender Wirth: 491 Typ L2



Light distribution files



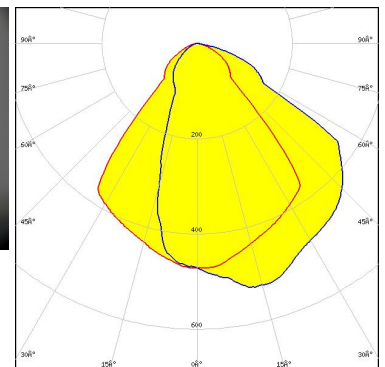
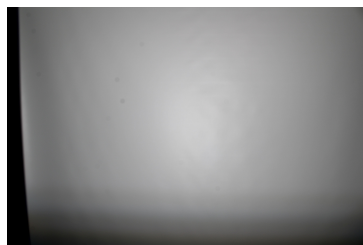
LED CDM-18 (Dim-To-Warm)  
FWHM / FWTM Asymmetric  
Efficiency 91 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13868\_LENA-STD-BASE-VERO13-18  
Bender Wirth: 491 Typ L2



Light distribution files



LED CDM-9 (Dim-To-Warm)  
FWHM / FWTM Asymmetric  
Efficiency 89 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13868\_LENA-STD-BASE-VERO13-18  
Bender Wirth: 490 Typ L1

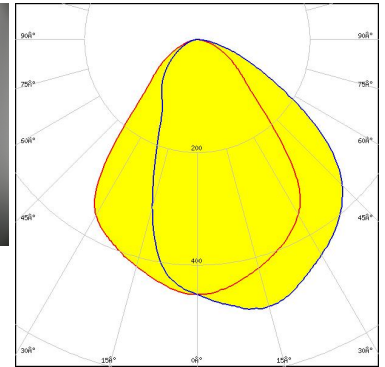


Light distribution files

### OPTICAL RESULTS (MEASURED):



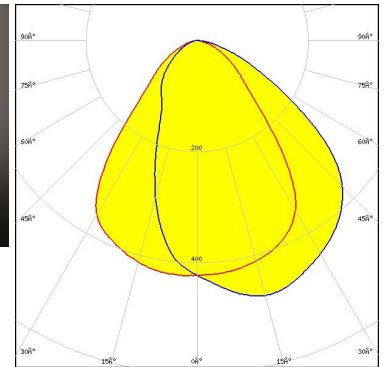
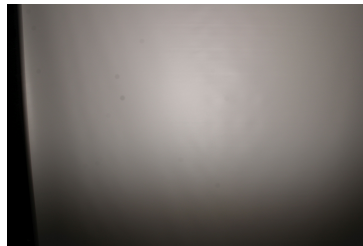
LED CDM-9 (Dim-To-Warm)  
FWHM / FWTM Asymmetric  
Efficiency 85 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13868\_LENA-STD-BASE-VERO13-18  
C11996\_LENA-LENS  
Bender Wirth: 490 Typ L1



Light distribution files



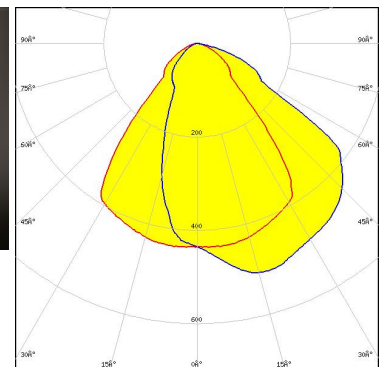
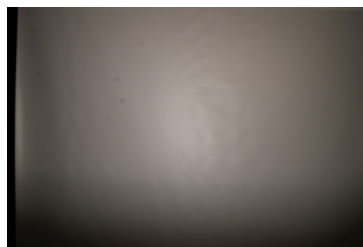
LED CTM-14 (Tunable White)  
FWHM / FWTM Asymmetric  
Efficiency 84 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13867\_LENA-STD-BASE-VERO29  
C12606\_LENINA-DL  
Bender Wirth: 442 Typ L3



Light distribution files



LED CTM-14 (Tunable White)  
FWHM / FWTM Asymmetric  
Efficiency 88 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C13867\_LENA-STD-BASE-VERO29  
Bender Wirth: 442 Typ L3



Light distribution files

### OPTICAL RESULTS (MEASURED):



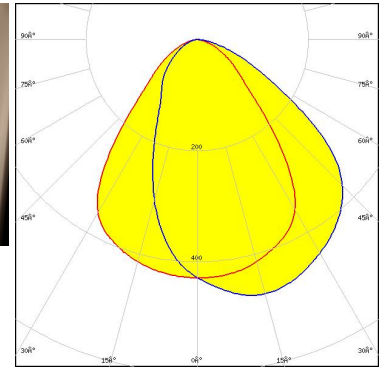
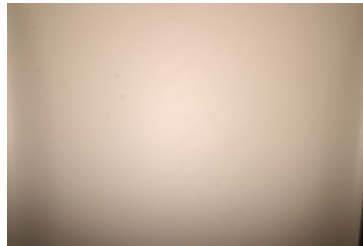
LED CTM-18 (Tunable White)  
FWHM / FWTM Asymmetric  
Efficiency 84 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type Tunable White

Required components:

C13867\_LENA-STD-BASE-VERO29

C11996\_LENA-LENS

Bender Wirth: 442 Typ L3



Light distribution files

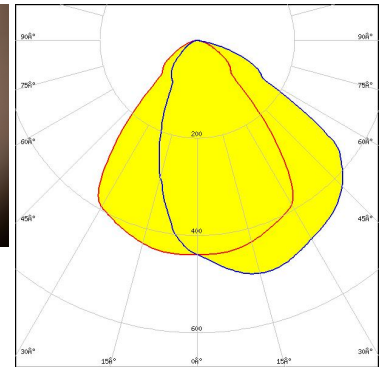
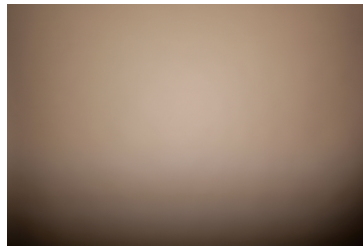


LED CTM-18 (Tunable White)  
FWHM / FWTM Asymmetric  
Efficiency 88 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

C13867\_LENA-STD-BASE-VERO29

Bender Wirth: 442 Typ L3



Light distribution files

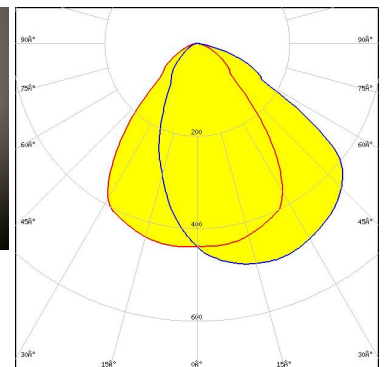
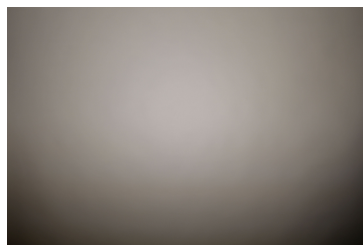


LED CTM-22 (Tunable White)  
FWHM / FWTM Asymmetric  
Efficiency 89 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

C13867\_LENA-STD-BASE-VERO29

Bender Wirth: 494 Typ L3

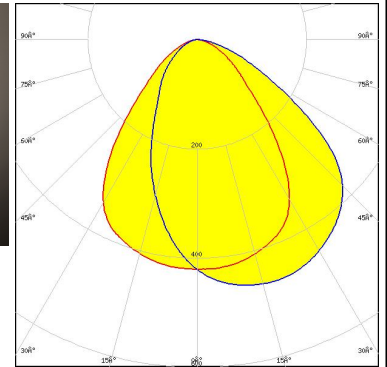
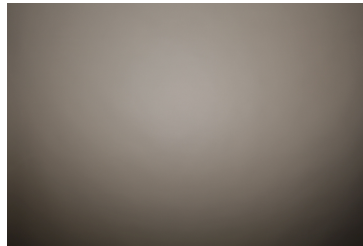


Light distribution files

### OPTICAL RESULTS (MEASURED):



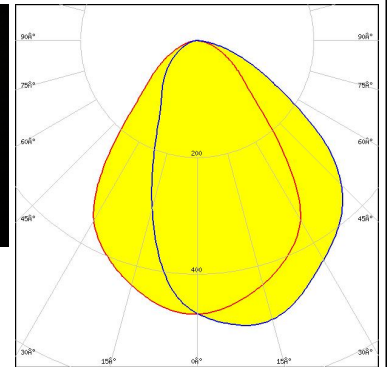
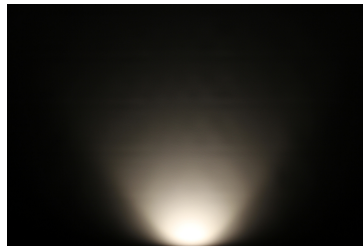
**LED** CTM-22 (Tunable White)  
**FWHM / FWTM** Asymmetric  
**Efficiency** 84 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13867\_LENA-STD-BASE-VERO29  
 C11996\_LENA-LENS  
 Bender Wirth: 494 Typ L3



Light distribution files



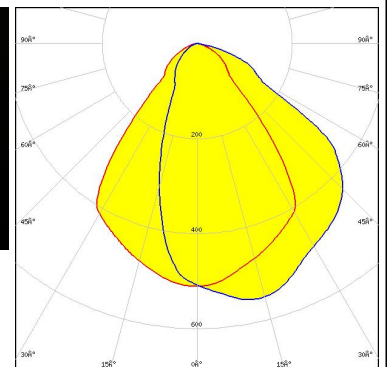
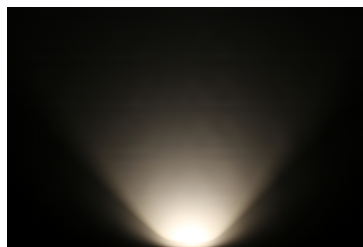
**LED** CxM-14 (19x19)  
**FWHM / FWTM** Asymmetric  
**Efficiency** 83 %  
**Peak intensity** 0.5 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12691\_LENA-STD-BASE-CLL030  
 C11996\_LENA-LENS



Light distribution files



**LED** CxM-14 (19x19)  
**FWHM / FWTM** Asymmetric  
**Efficiency** 88 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C12691\_LENA-STD-BASE-CLL030



Light distribution files



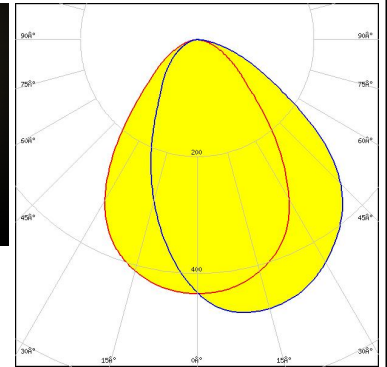
### OPTICAL RESULTS (MEASURED):



LED CxM-22 (28x28)  
 FWHM / FWTM Asymmetric  
 Efficiency 79 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C12692\_LENA-STD-BASE-CLL040  
 C11996\_LENA-LENS



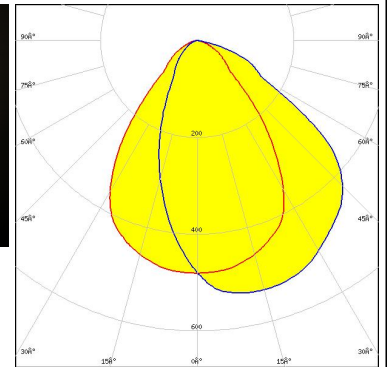
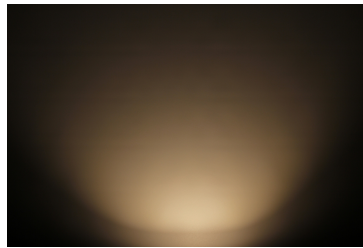
Light distribution files



LED CxM-22 (28x28)  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C12692\_LENA-STD-BASE-CLL040



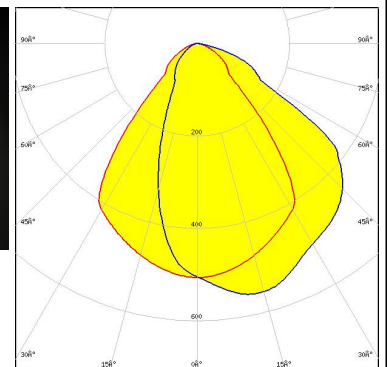
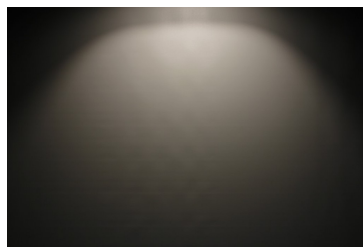
Light distribution files



LED COB J-Type  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 463 Typ L2

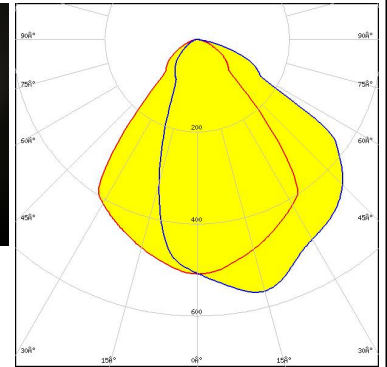
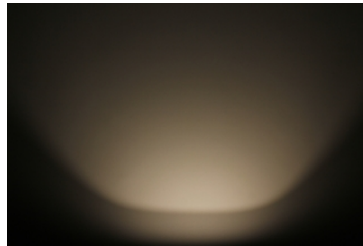


Light distribution files

### OPTICAL RESULTS (MEASURED):



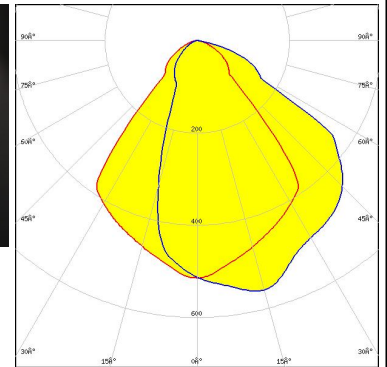
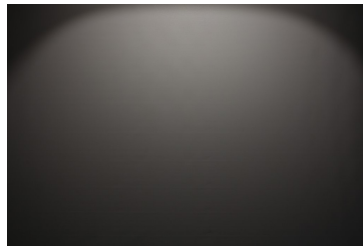
**LED** COB L-Type (LES 11)  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 438 Typ L1



Light distribution files



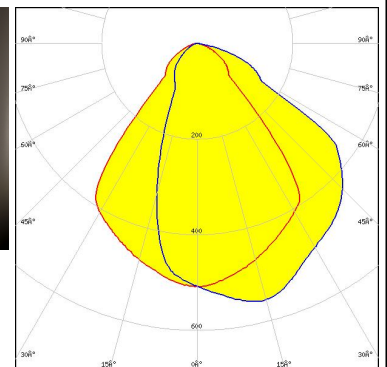
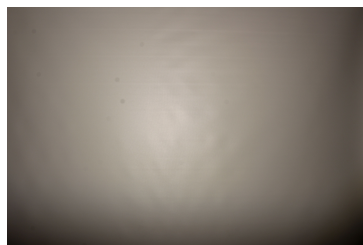
**LED** COB L-Type (LES 9)  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 0.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 438 Typ L1



Light distribution files



**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/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 498 Typ L2

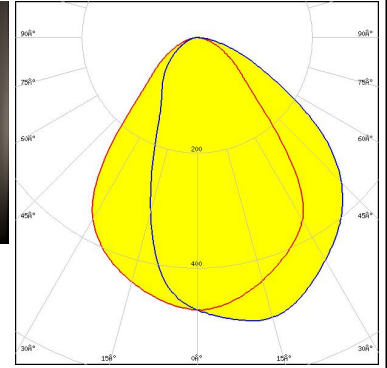


Light distribution files

#### OPTICAL RESULTS (MEASURED):



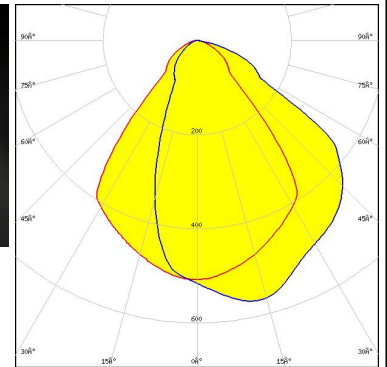
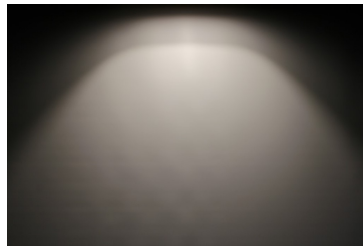
LED NVCWJ024Z-V1MT: COB J-Type Tunable White  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 C11996\_LENA-LENS  
 Bender Wirth: 498 Typ L2



Light distribution files



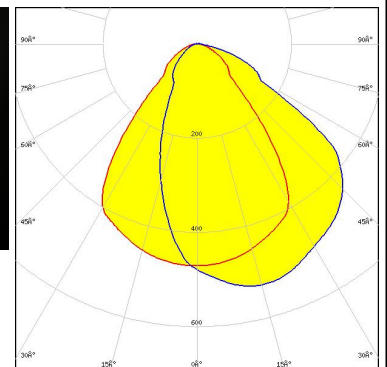
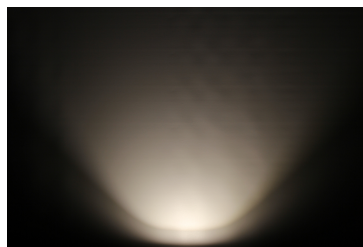
LED Soleriq S13  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13868\_LENA-STD-BASE-VERO13-18  
 Bender Wirth: 437 Typ L1



Light distribution files



LED Soleriq S19  
 FWHM / FWTM Asymmetric  
 Efficiency 89 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C13867\_LENA-STD-BASE-VERO29  
 Bender Wirth: 462 Typ L3



Light distribution files

### OPTICAL RESULTS (MEASURED):

**OSRAM**  
Opto Semiconductors

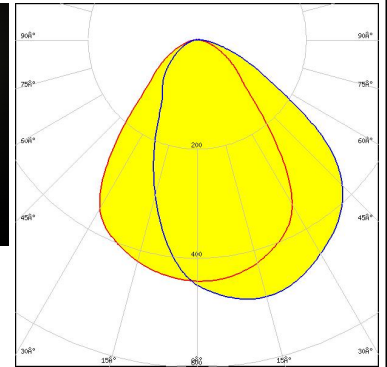
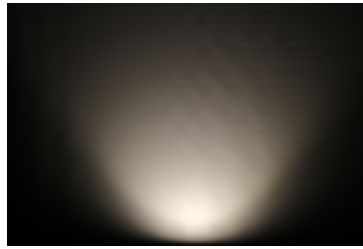
LED Soleriq S19  
FWHM / FWTM Asymmetric  
Efficiency 85 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

C13867\_LENA-STD-BASE-VERO29

C11996\_LENA-LENS

Bender Wirth: 462 Typ L3



Light distribution files

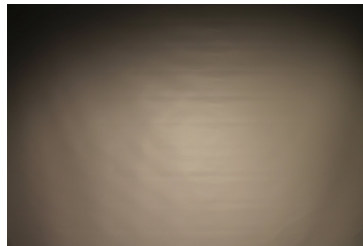
**PHILIPS**

LED Fortimo SLM L13 CoB  
FWHM / FWTM Asymmetric  
Efficiency 85 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

C12292\_LENA-STD-BASE-MEZ

C11996\_LENA-LENS



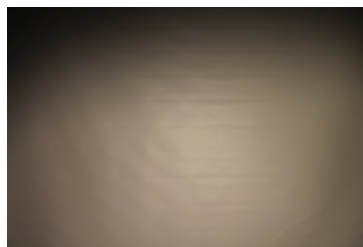
Light distribution files

**PHILIPS**

LED Fortimo SLM L13 CoB  
FWHM / FWTM Asymmetric  
Efficiency 90 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

C12292\_LENA-STD-BASE-MEZ

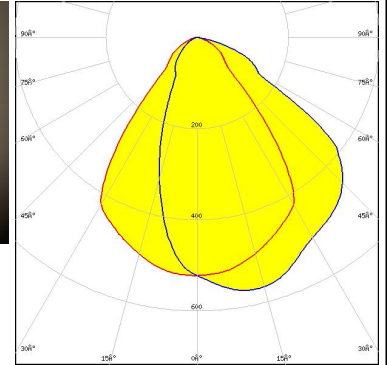


Light distribution files

#### OPTICAL RESULTS (MEASURED):

### PHILIPS

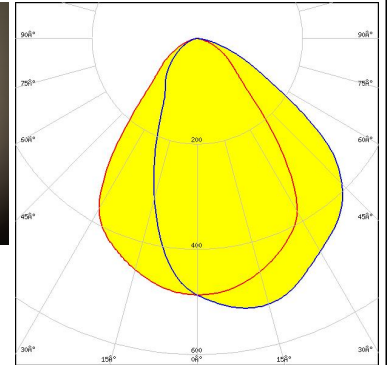
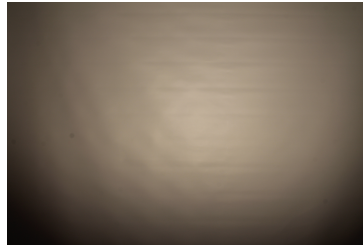
LED Fortimo SLM L15 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ



Light distribution files

### PHILIPS

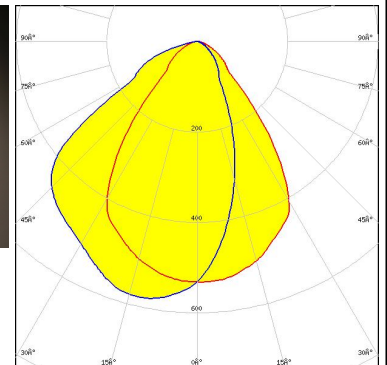
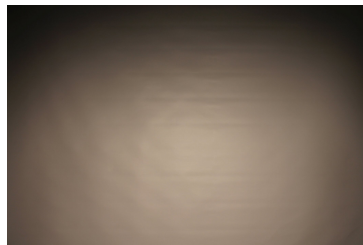
LED Fortimo SLM L15 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 85 %  
 Peak intensity 0.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ  
 C11996\_LENA-LENS



Light distribution files

### PHILIPS

LED Fortimo SLM L19 CoB  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12692\_LENA-STD-BASE-CLL040

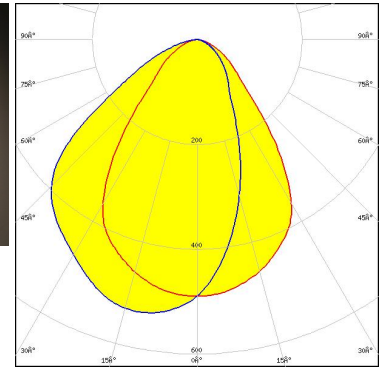
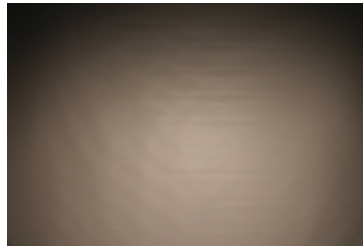


Light distribution files

### OPTICAL RESULTS (MEASURED):

#### PHILIPS

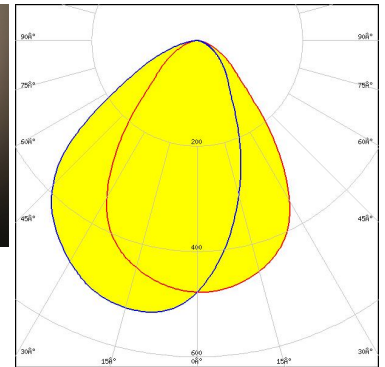
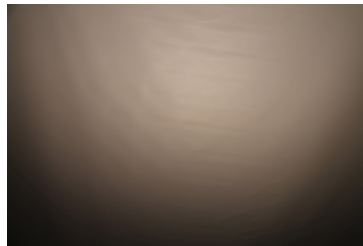
LED Fortimo SLM L19 CoB  
FWHM / FWTM Asymmetric  
Efficiency 85 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12692\_LENA-STD-BASE-CLL040  
C11996\_LENA-LENS



Light distribution files

#### PHILIPS

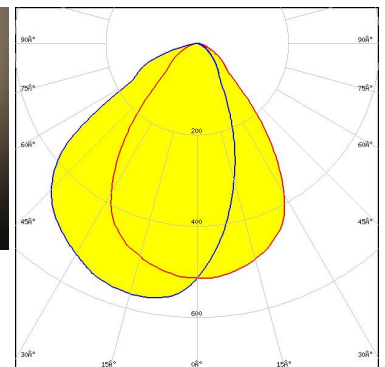
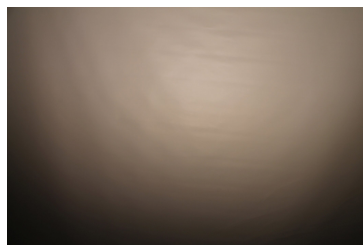
LED Fortimo SLM L23 CoB  
FWHM / FWTM Asymmetric  
Efficiency 85 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12692\_LENA-STD-BASE-CLL040  
C11996\_LENA-LENS



Light distribution files

#### PHILIPS

LED Fortimo SLM L23 CoB  
FWHM / FWTM Asymmetric  
Efficiency 90 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12692\_LENA-STD-BASE-CLL040

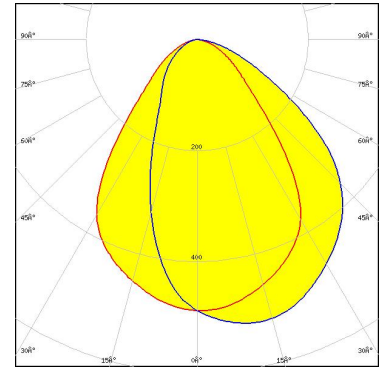


Light distribution files

### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

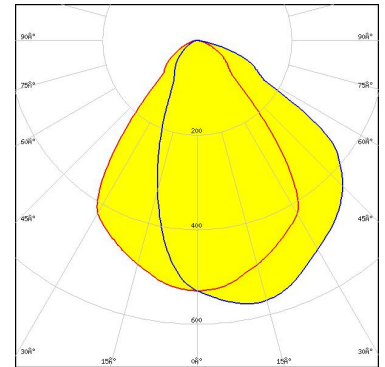
LED LC016D / LC019D / LC026D / LC033D  
FWHM / FWTM Asymmetric  
Efficiency 87 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12691\_LENA-STD-BASE-CLL030  
C11996\_LENA-LENS



Light distribution files

#### SAMSUNG

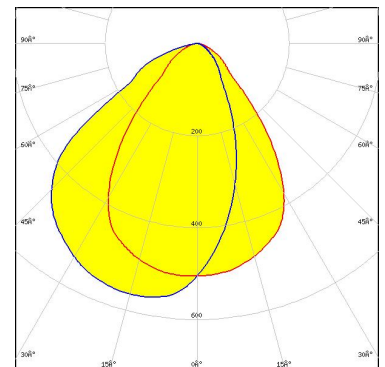
LED LC016D / LC019D / LC026D / LC033D  
FWHM / FWTM Asymmetric  
Efficiency 91 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12691\_LENA-STD-BASE-CLL030



Light distribution files

#### SAMSUNG

LED LC040D / LC060D / LC080D  
FWHM / FWTM Asymmetric  
Efficiency 91 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12692\_LENA-STD-BASE-CLL040

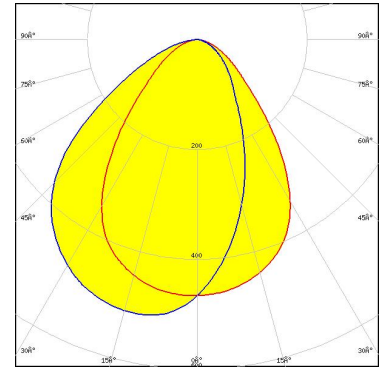


Light distribution files

### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

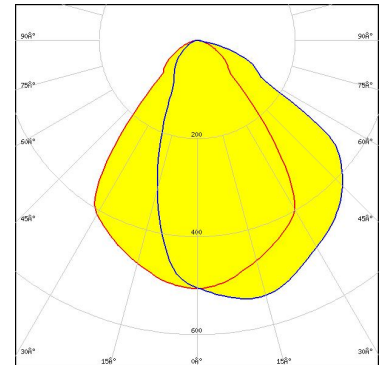
LED LC040D / LC060D / LC080D  
FWHM / FWTM Asymmetric  
Efficiency 86 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12692\_LENA-STD-BASE-CLL040  
C11996\_LENA-LENS



Light distribution files

#### SHARP

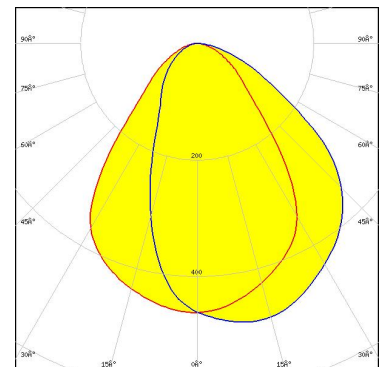
LED Mega Zenigata (GW6DME)  
FWHM / FWTM Asymmetric  
Efficiency 87 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12292\_LENA-STD-BASE-MEZ



Light distribution files

#### SHARP

LED Mega Zenigata (GW6DME)  
FWHM / FWTM Asymmetric  
Efficiency 83 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12292\_LENA-STD-BASE-MEZ  
C11996\_LENA-LENS



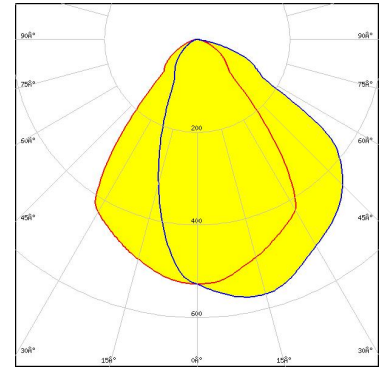
Light distribution files



### OPTICAL RESULTS (MEASURED):

#### TRIDONIC

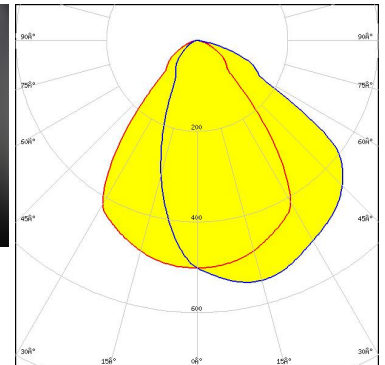
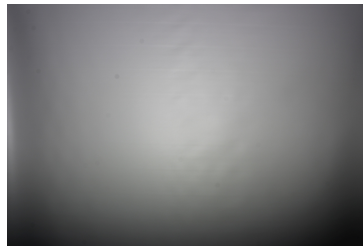
LED SLE G7 LES15  
FWHM / FWTM Asymmetric  
Efficiency 92 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12691\_LENA-STD-BASE-CLL030



Light distribution files

#### TRIDONIC

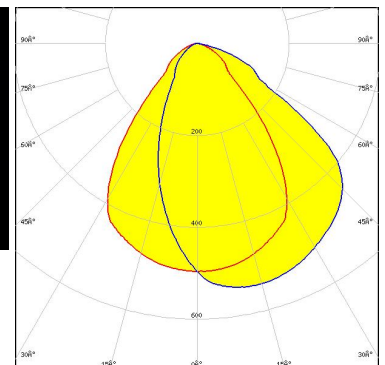
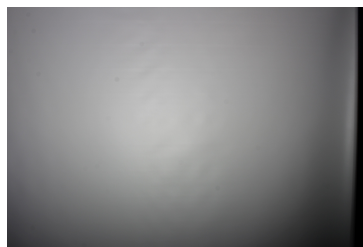
LED SLE G7 LES17 H  
FWHM / FWTM 76.0° / 123.0°  
Efficiency 91 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C14547\_LENA-ADAPTER-B



Light distribution files

#### TRIDONIC

LED SLE G7 LES21 H  
FWHM / FWTM Asymmetric  
Efficiency 90 %  
Peak intensity 0.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C14547\_LENA-ADAPTER-B

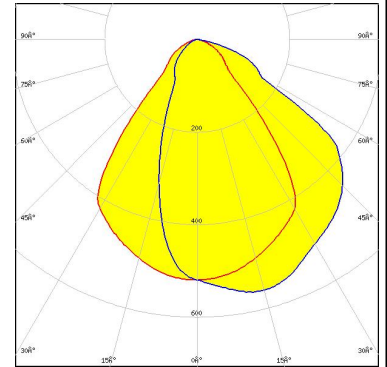


Light distribution files

#### OPTICAL RESULTS (MEASURED):

### XICATO

LED XOB 14.5 mm  
FWHM / FWTM Asymmetric  
Efficiency 91 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C12691\_LENA-STD-BASE-CLL030

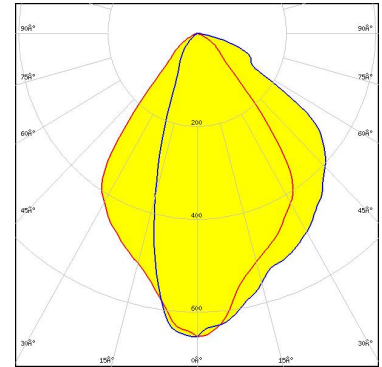


Light distribution files

### OPTICAL RESULTS (SIMULATED):



**LED** V10 Gen7  
**FWHM / FWTM** Asymmetric  
**Efficiency** 85 %  
**Peak intensity** 0.7 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18

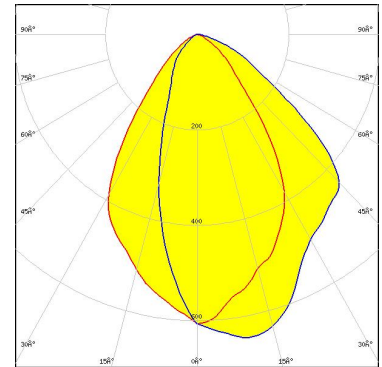


Bender Wirth: 486 Typ L1

Light distribution files



**LED** V13 Gen7  
**FWHM / FWTM** Asymmetric  
**Efficiency** 84 %  
**Peak intensity** 0.7 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C11996\_LENA-LENS

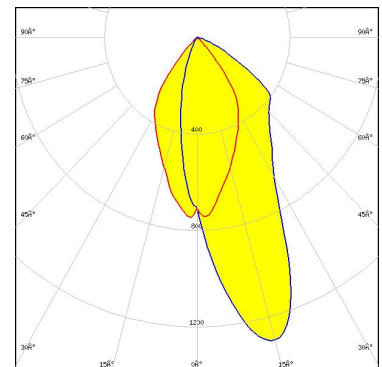


IDEAL: 50-2103CT + 50-2100LN

Light distribution files



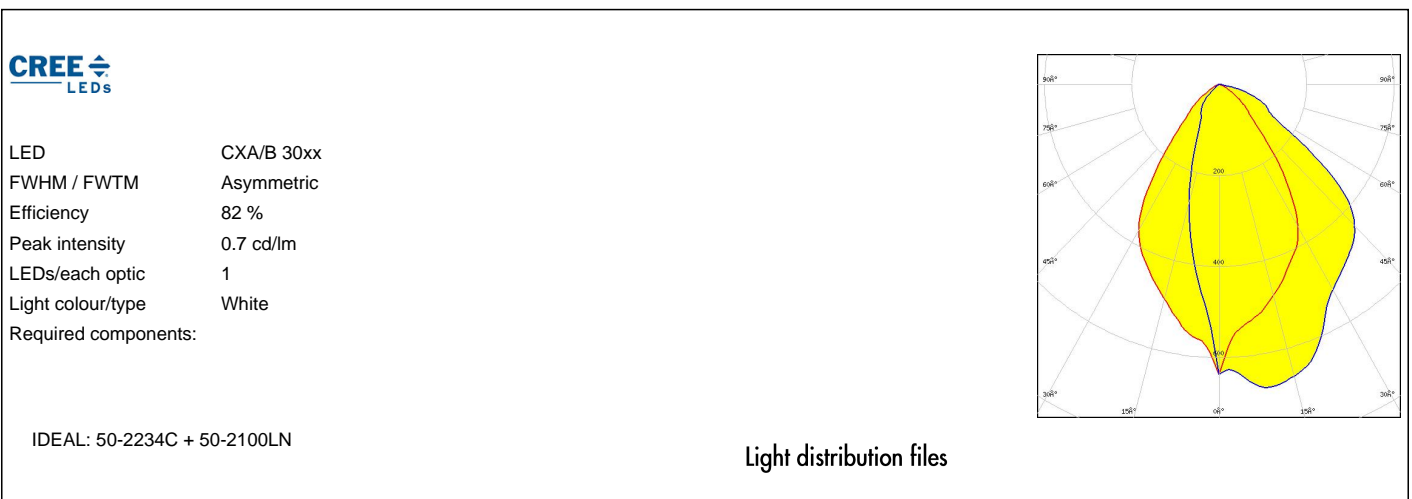
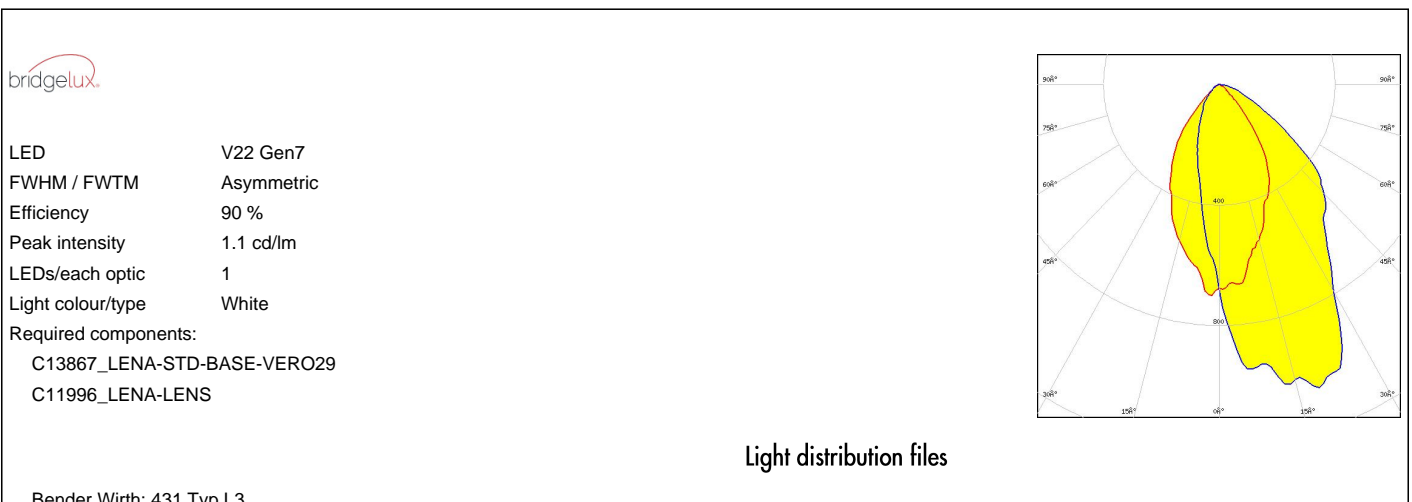
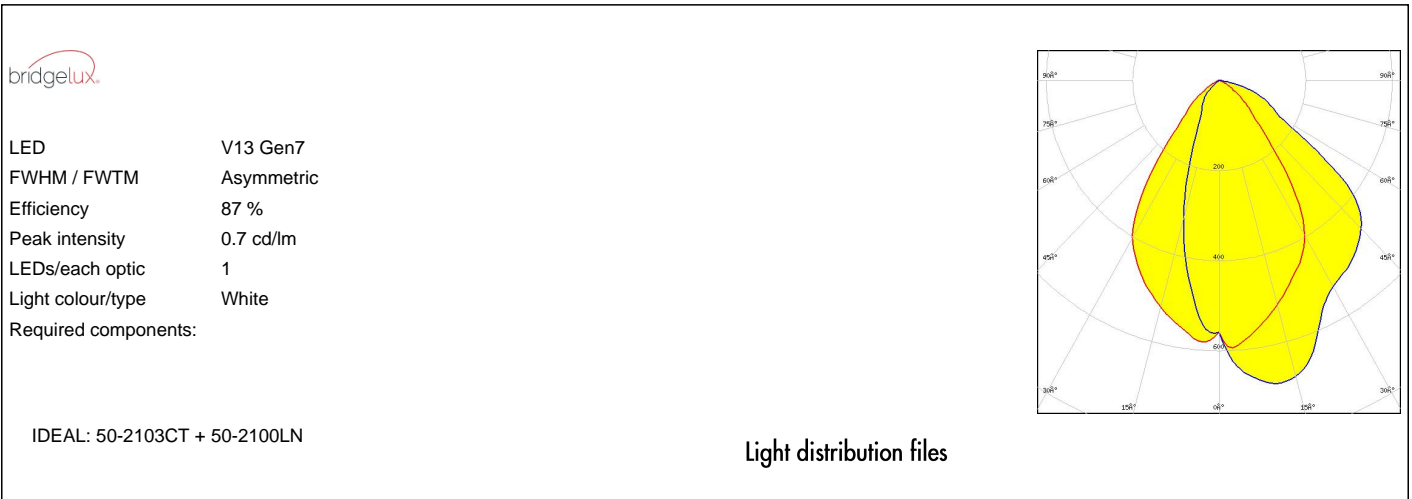
**LED** V13 Gen7  
**FWHM / FWTM** Asymmetric  
**Efficiency** 91 %  
**Peak intensity** 1.3 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C13868\_LENA-STD-BASE-VERO13-18



Bender Wirth: 477 Typ L1

Light distribution files

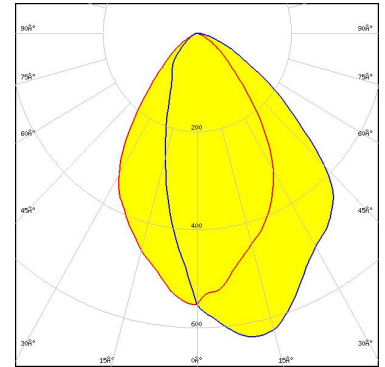
### OPTICAL RESULTS (SIMULATED):



### OPTICAL RESULTS (SIMULATED):



LED CXA/B 30xx  
 FWHM / FWTM Asymmetric  
 Efficiency 78 %  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C11996\_LENA-LENS

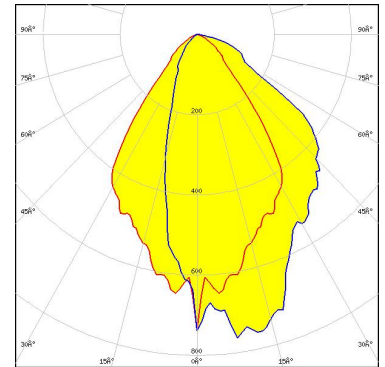


IDEAL: 50-2234C + 50-2100LN

Light distribution files



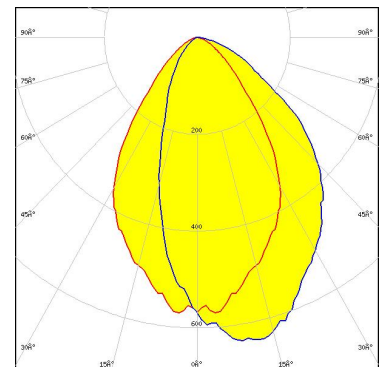
LED LUXEON CoB 1204/1205  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ



Light distribution files



LED LUXEON CoB 1204/1205  
 FWHM / FWTM Asymmetric  
 Efficiency 83 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C12292\_LENA-STD-BASE-MEZ  
 C11996\_LENA-LENS



Light distribution files

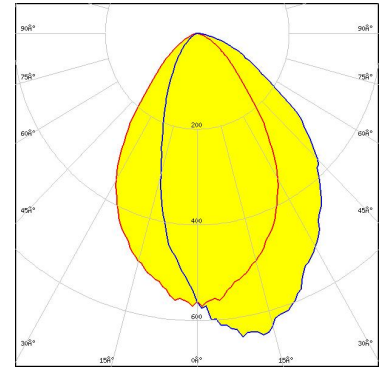
### OPTICAL RESULTS (SIMULATED):



LED LUXEON CoB 1208  
FWHM / FWTM Asymmetric  
Efficiency 82 %  
Peak intensity 0.6 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

C12292\_LENA-STD-BASE-MEZ  
C11996\_LENA-LENS



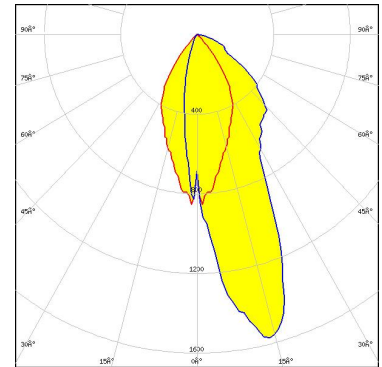
Light distribution files



LED LUXEON CoB 1208  
FWHM / FWTM Asymmetric  
Efficiency 90 %  
Peak intensity 0.8 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

C12292\_LENA-STD-BASE-MEZ



Light distribution files



LED LUXEON K12  
FWHM / FWTM Asymmetric  
Efficiency %  
LEDs/each optic 1  
Light colour/type White

Required components:

C12924\_LENA-STD-BASE-LUXEON-K

Light distribution files

### OPTICAL RESULTS (SIMULATED):



LED	LUXEON K12
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour/type	White

Required components:

C12924\_LENA-STD-BASE-LUXEON-K  
C11996\_LENA-LENS

[Light distribution files](#)



LED	LUXEON K16
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour/type	White

Required components:

C12924\_LENA-STD-BASE-LUXEON-K

[Light distribution files](#)



LED	LUXEON K16
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour/type	White

Required components:

C12924\_LENA-STD-BASE-LUXEON-K  
C11996\_LENA-LENS

[Light distribution files](#)

#### OPTICAL RESULTS (SIMULATED):



LED CxM-14 (19x19)  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C13868\_LENA-STD-BASE-VERO13-18

Bender Wirth: 433 Typ L1

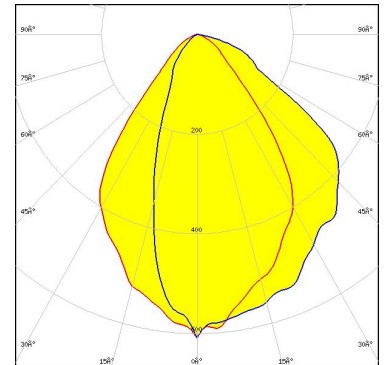
Light distribution files



LED Soleriq S15  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C12691\_LENA-STD-BASE-CLL030



Light distribution files



LED ZC12/18  
 FWHM / FWTM Asymmetric  
 Efficiency 91 %  
 Peak intensity 0.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White

Required components:

C13868\_LENA-STD-BASE-VERO13-18

Bender Wirth: 433 Typ L1



## OPTICAL RESULTS (SIMULATED):

### SHARP

LED	Mega Zenigata (GW5DGC)
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour/type	White

Required components:

C12292\_LENA-STD-BASE-MEZ

Light distribution files

### SHARP

LED	Mega Zenigata (GW5DGC)
FWHM / FWTM	Asymmetric
Efficiency	%
LEDs/each optic	1
Light colour/type	White

Required components:

C12292\_LENA-STD-BASE-MEZ

C11996\_LENA-LENS

Light distribution files

### 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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