

### WINNIE-M-C

~35° spot beam with holder C compatible with LEDiL HEKLA

#### SPECIFICATION:

Dimensions	Ø 50.0 mm
Height	19.5 mm
Fastening	tape
ROHS compliant	yes ⓘ



#### MATERIALS:

Component	Type	Material	Colour	Finish	Length (mm)
C14233_WINNIE-M	Single lens	PMMA	clear		
C15821_WINNIE-HLD-C	Holder	PC	black		

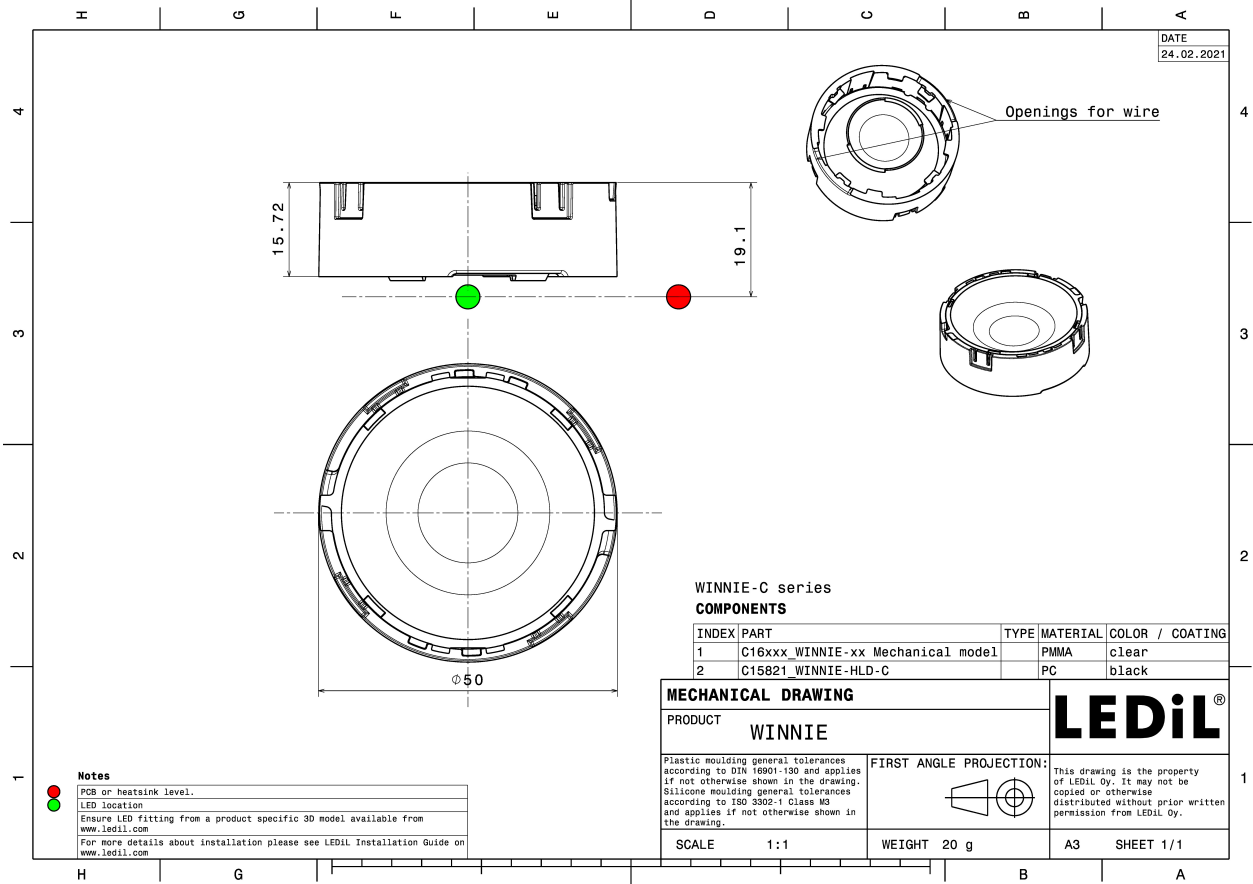
#### ORDERING INFORMATION:

##### Quantities for one set:

Single lens	1
Holder	1

Component		Qty in box	MOQ	MPQ	Box weight (kg)
C14233_WINNIE-M	Single lens	364	84	28	6.5
» Box size: 480 x 280 x 300 mm					
C15821_WINNIE-HLD-C	Holder	420		28	4.1
» Box size: 400 x 300 x 300 mm					



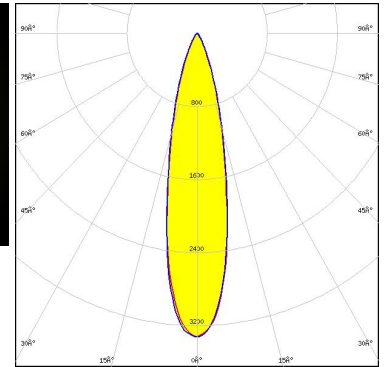
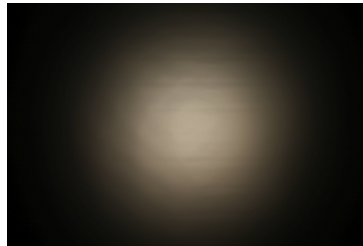


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

### OPTICAL RESULTS (MEASURED):

bridgelux

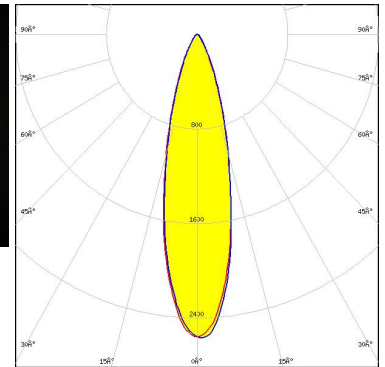
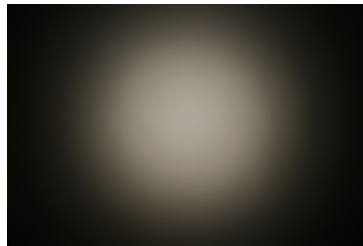
LED V4 HD Gen 7  
 FWHM / FWTM 23.0° / 48.0°  
 Efficiency 83 %  
 Peak intensity 3.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15253\_HEKLA-SOCKET-A



Light distribution files

bridgelux

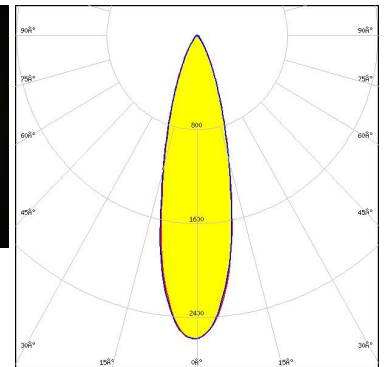
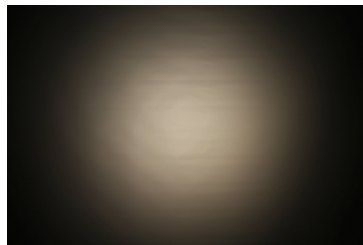
LED V6 Gen6  
 FWHM / FWTM 26.0° / 55.0°  
 Efficiency 80 %  
 Peak intensity 2.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15253\_HEKLA-SOCKET-A



Light distribution files

bridgelux

LED V6 HD Gen 7  
 FWHM / FWTM 27.0° / 56.0°  
 Efficiency 83 %  
 Peak intensity 2.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C

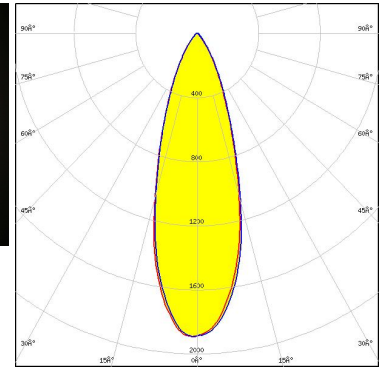
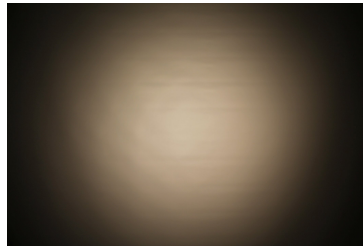


Light distribution files

### OPTICAL RESULTS (MEASURED):



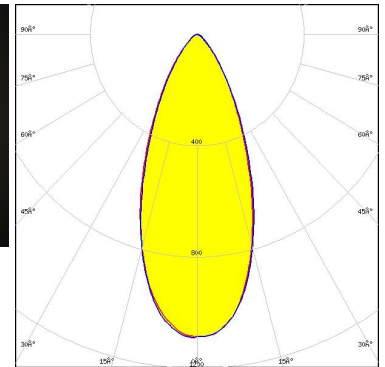
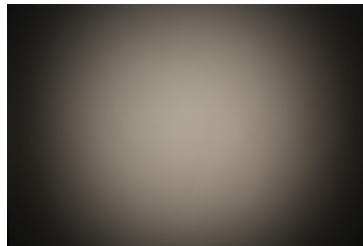
**LED** V9 HD Gen7  
**FWHM / FWTM** 33.0° / 65.0°  
**Efficiency** 82 %  
**Peak intensity** 1.9 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 F15859\_HEKLA-SOCKET-I



Light distribution files



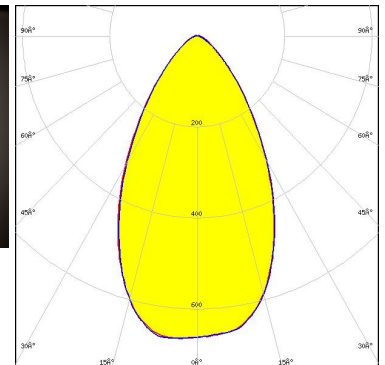
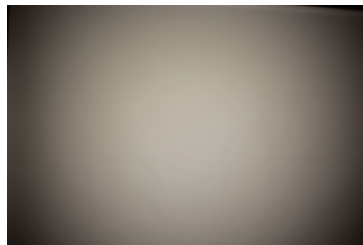
**LED** VERO13  
**FWHM / FWTM** 43.0° / 82.0°  
**Efficiency** 75 %  
**Peak intensity** 1.1 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C16142\_HEKLA-SOCKET-K



Light distribution files



**LED** VERO18  
**FWHM / FWTM** 59.0° / 101.0°  
**Efficiency** 73 %  
**Peak intensity** 0.7 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C16142\_HEKLA-SOCKET-K

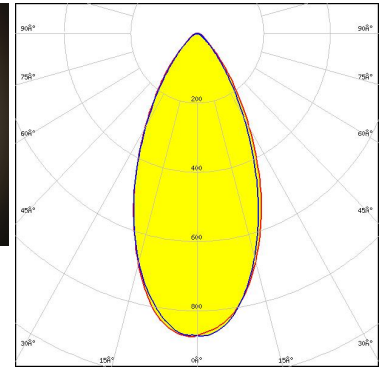
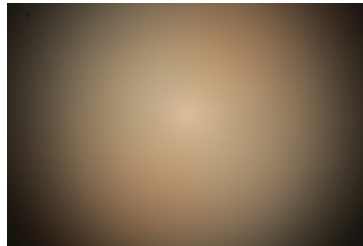


Light distribution files

### OPTICAL RESULTS (MEASURED):



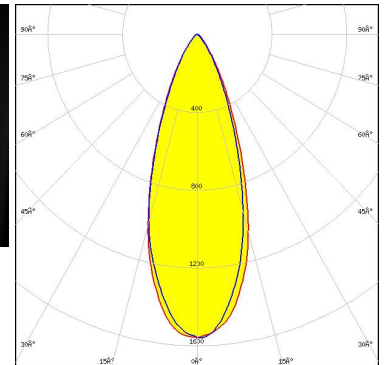
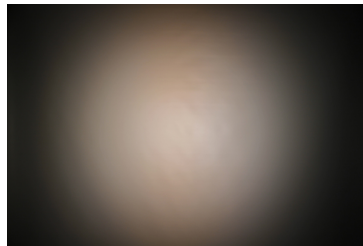
**LED** Vesta DTW 13mm (21W)  
**FWHM / FWTM** 49.0° / 89.0°  
**Efficiency** 72 %  
**Peak intensity** 0.9 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** Tunable White  
**Required components:**  
 C16142\_HEKLA-SOCKET-K  
 Bender Wirth: 491 Typ L8



Light distribution files



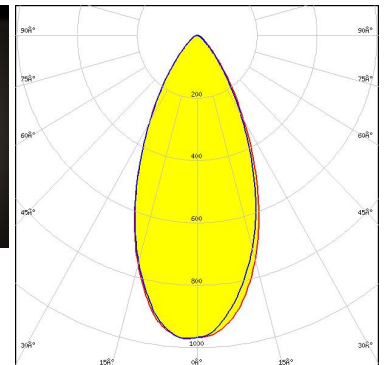
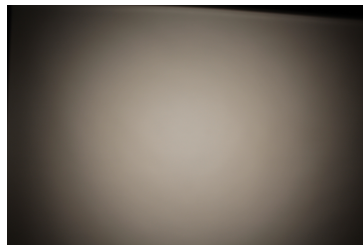
**LED** Vesta DTW 9mm (4W/6W/12W)  
**FWHM / FWTM** 37.0° / 68.0°  
**Efficiency** 79 %  
**Peak intensity** 1.6 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C16142\_HEKLA-SOCKET-K  
 Bender Wirth: 490 Typ L8



Light distribution files



**LED** Vesta TW 13mm (25W) CSP  
**FWHM / FWTM** 47.0° / 85.0°  
**Efficiency** 75 %  
**Peak intensity** 1 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 C16142\_HEKLA-SOCKET-K  
 Bender Wirth: 492 Typ L8

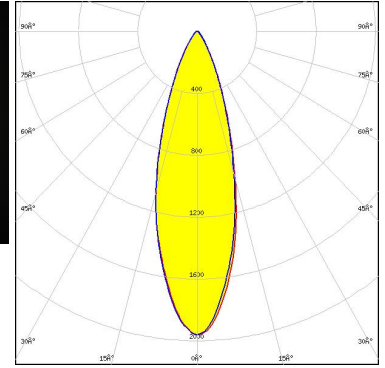


Light distribution files

### OPTICAL RESULTS (MEASURED):



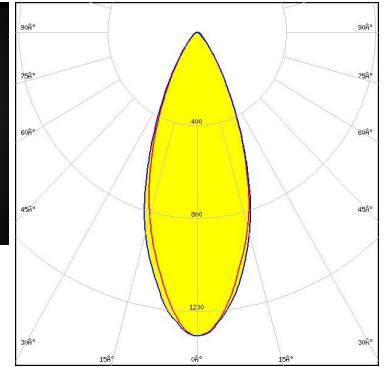
LED Vesta TW 6mm DP  
 FWHM / FWTM 31.0° / 61.0°  
 Efficiency 76 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C16142\_HEKLA-SOCKET-K  
 Bender Wirth: 504 Typ L8



Light distribution files



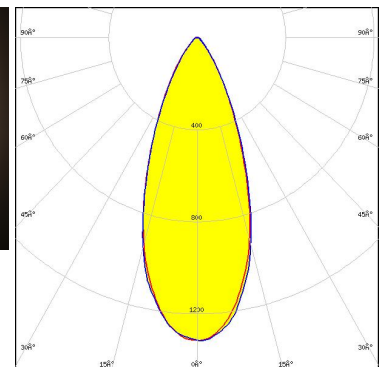
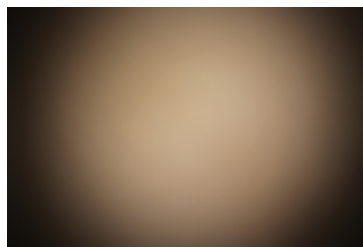
LED Vesta TW 9mm (12W) CSP  
 FWHM / FWTM 40.0° / 73.0°  
 Efficiency 75 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C16142\_HEKLA-SOCKET-K



Light distribution files

### CITIZEN

LED CLC020 Series (Dim-To-Warm)  
 FWHM / FWTM 41.0° / 75.0°  
 Efficiency 76 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C16142\_HEKLA-SOCKET-K

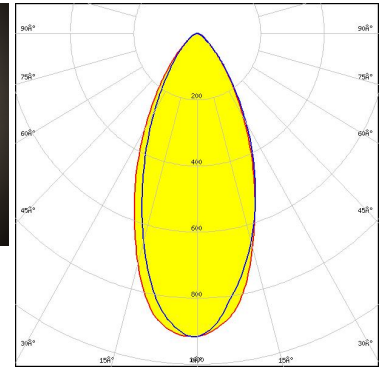
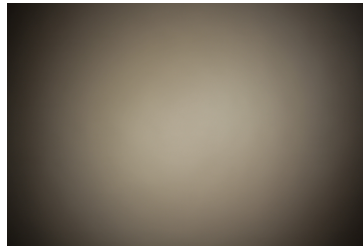


Light distribution files

### OPTICAL RESULTS (MEASURED):

#### CITIZEN

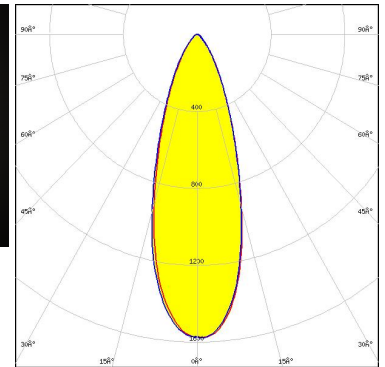
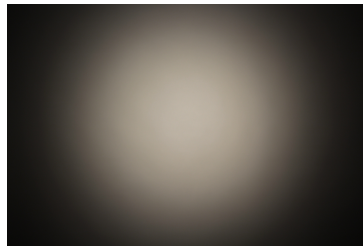
LED CLC030 Series (Dim-To-Warm)  
 FWHM / FWTM 47.0° / 90.0°  
 Efficiency 73 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C16142\_HEKLA-SOCKET-K



Light distribution files

#### CITIZEN

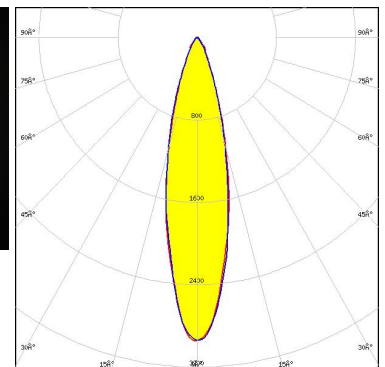
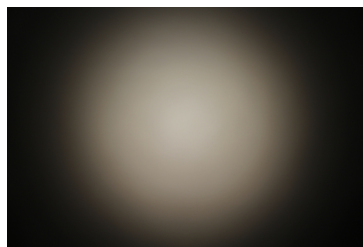
LED CLL02x/CLU02x (LES10)  
 FWHM / FWTM 34.0° / 69.0°  
 Efficiency 77 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



Light distribution files

#### CITIZEN

LED CLU7A2/7A3  
 FWHM / FWTM 25.0° / 51.0°  
 Efficiency 82 %  
 Peak intensity 2.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



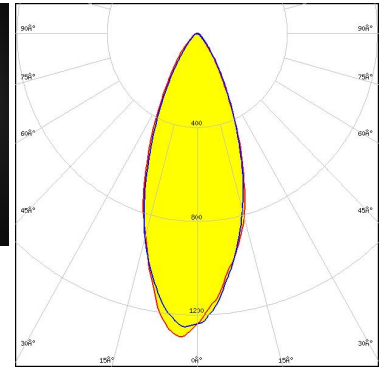
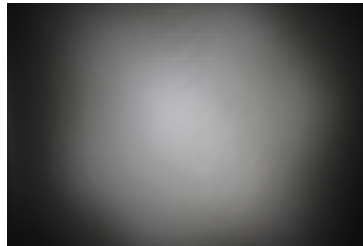
Light distribution files



### OPTICAL RESULTS (MEASURED):

#### CITIZEN

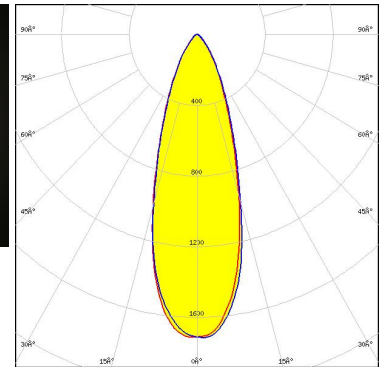
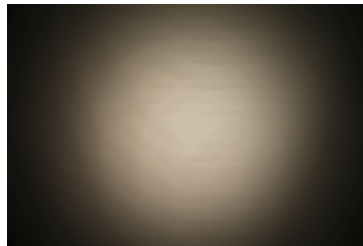
LED LCN-C01B (Tunable White)  
 FWHM / FWTM 40.0° / 74.0°  
 Efficiency 75 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C16142\_HEKLA-SOCKET-K  
 Bender Wirth: 481 Typ L8



Light distribution files



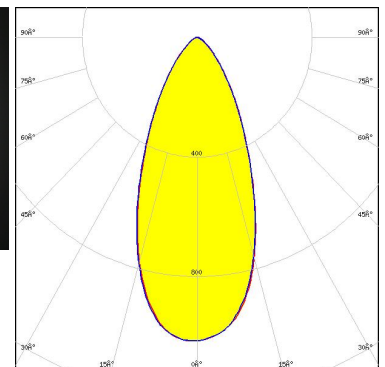
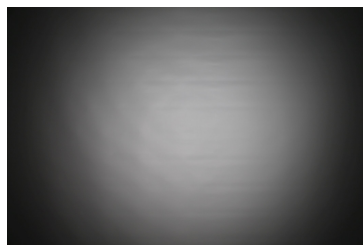
LED CMT14xx  
 FWHM / FWTM 33.0° / 69.0°  
 Efficiency 81 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



Light distribution files



LED CMT19xx  
 FWHM / FWTM 45.0 + ° / 87.0°  
 Efficiency 77 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15859\_HEKLA-SOCKET-I

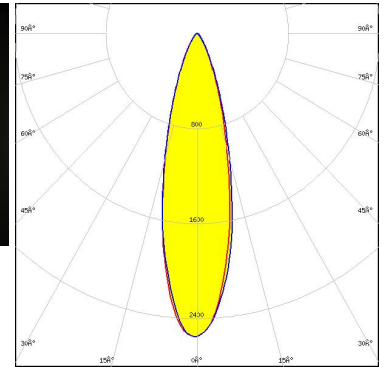
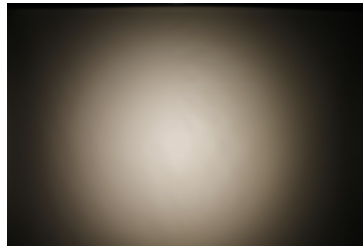


Light distribution files

### OPTICAL RESULTS (MEASURED):



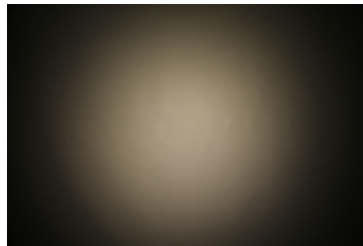
LED CXA/B 13xx  
FWHM / FWTM 27.0° / 55.0°  
Efficiency 81 %  
Peak intensity 2.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15956\_HEKLA-SOCKET-J



Light distribution files



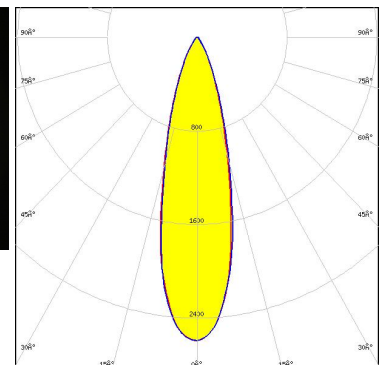
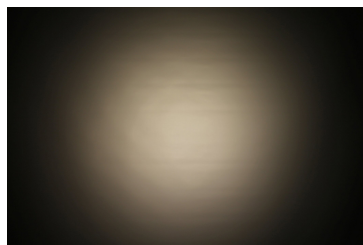
LED LUXEON CX Plus CoB L08 (Gen2)  
FWHM / FWTM 46.0° / 87.0°  
Efficiency 77 %  
Peak intensity 1 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
Bender Wirth: 637a Hekla



Light distribution files



LED LUXEON CoB 1202HD  
FWHM / FWTM 27.0° / 55.0°  
Efficiency 83 %  
Peak intensity 2.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15848\_HEKLA-SOCKET-G



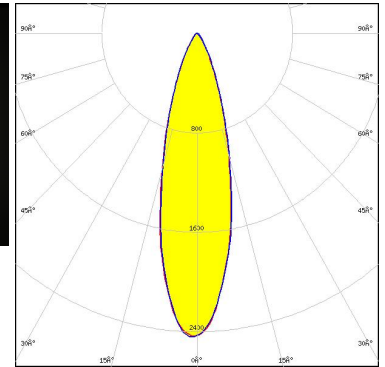
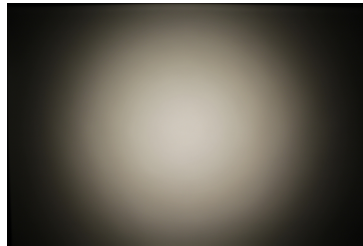
Light distribution files



### OPTICAL RESULTS (MEASURED):



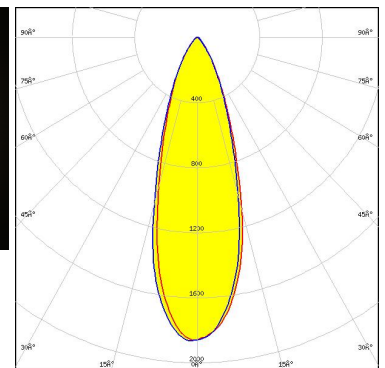
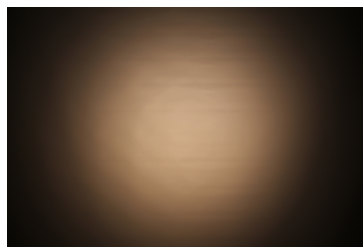
LED LUXEON CoB 1202s  
FWHM / FWTM 27.0° / 57.0°  
Efficiency 81 %  
Peak intensity 2.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15848\_HEKLA-SOCKET-G



Light distribution files



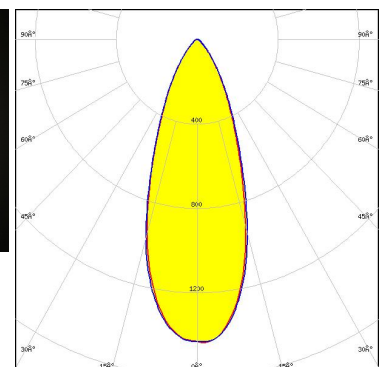
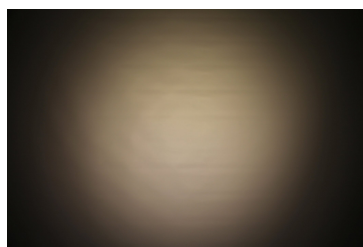
LED LUXEON CoB 1204HD  
FWHM / FWTM 32.0° / 66.0°  
Efficiency 83 %  
Peak intensity 1.9 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15858\_HEKLA-SOCKET-H



Light distribution files



LED LUXEON CoB 1205HD  
FWHM / FWTM 38.0° / 75.0°  
Efficiency 81 %  
Peak intensity 1.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15858\_HEKLA-SOCKET-H

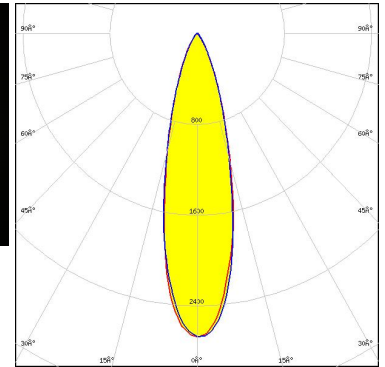
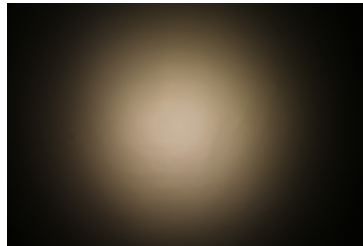


Light distribution files

### OPTICAL RESULTS (MEASURED):



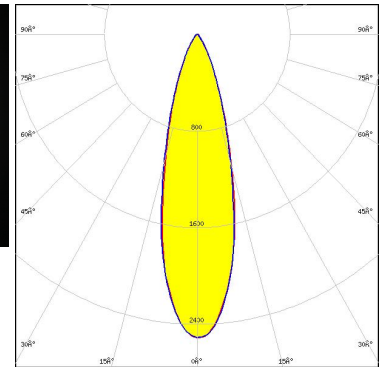
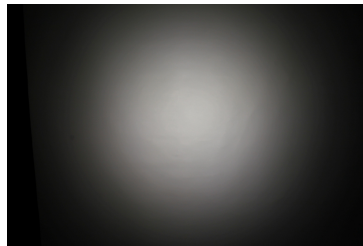
LED LUXEON CX Plus CoB - HD S01H4  
 FWHM / FWTM 27.0° / 54.0°  
 Efficiency 82 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 Bender Wirth: 634c Lena



Light distribution files



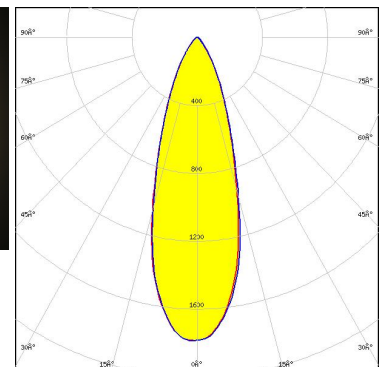
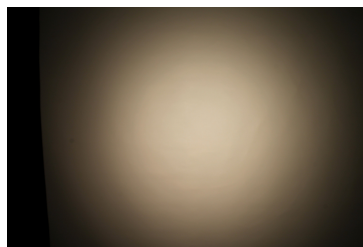
LED LUXEON CX Plus CoB - HD S02H6  
 FWHM / FWTM 28.0° / 56.0°  
 Efficiency 82 %  
 Peak intensity 2.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 Bender Wirth: 634c Hekla



Light distribution files



LED LUXEON CX Plus CoB - HD S04H9  
 FWHM / FWTM 33.0° / 67.0°  
 Efficiency 81 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 Bender Wirth: 634c Hekla

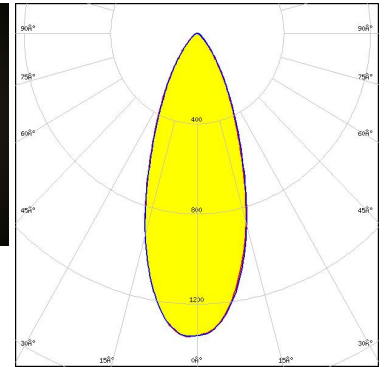
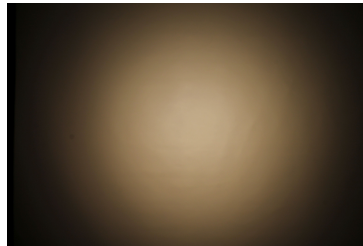


Light distribution files

### OPTICAL RESULTS (MEASURED):



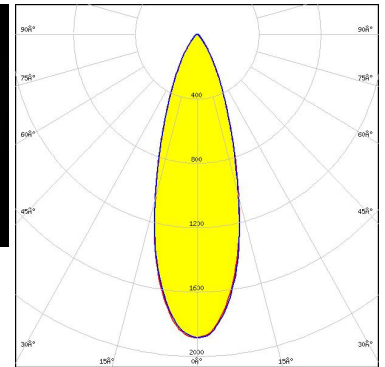
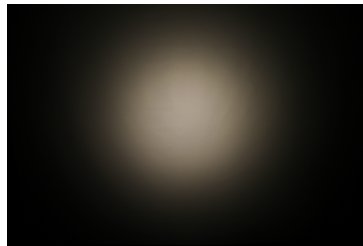
LED LUXEON CX Plus CoB L04 / L05 (Gen2)  
 FWHM / FWTM 39.0° / 76.0°  
 Efficiency 79 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 Bender Wirth: 637a Hekla



Light distribution files



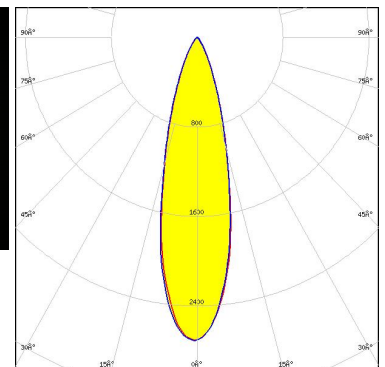
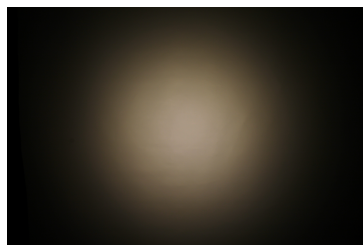
LED LUXEON CX Plus CoB M02 / M03 (Gen2)  
 FWHM / FWTM 32.0° / 65.0°  
 Efficiency 81 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 Bender Wirth: 641a Hekla



Light distribution files



LED LUXEON CX Plus CoB S01 (Gen2)  
 FWHM / FWTM 27.0° / 54.0°  
 Efficiency 83 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 Bender Wirth: 634c Hekla

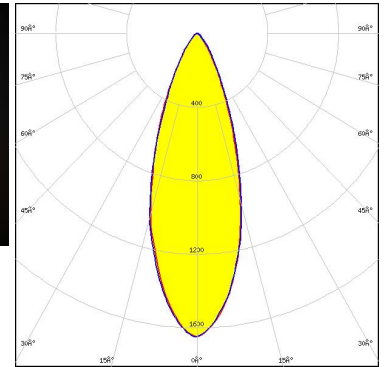
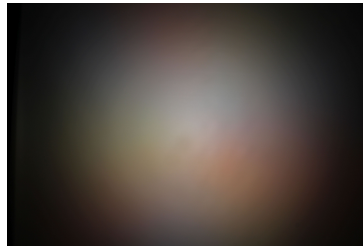


Light distribution files

### OPTICAL RESULTS (MEASURED):



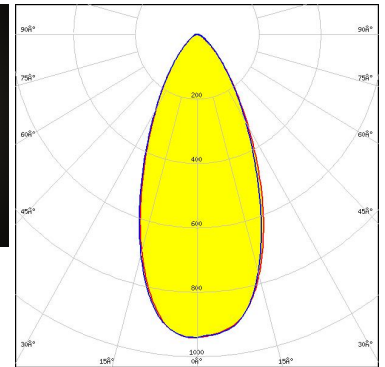
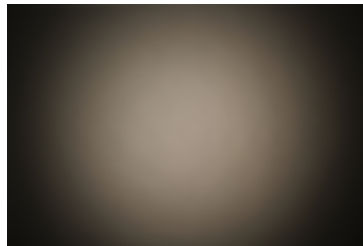
LED LUXEON Fusion 12-up (20x24)  
 FWHM / FWTM 35.0° / 67.0°  
 Efficiency 77 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type Tunable White  
 Required components:  
 C16142\_HEKLA-SOCKET-K  
 Bender Wirth: 442 Typ L8



Light distribution files



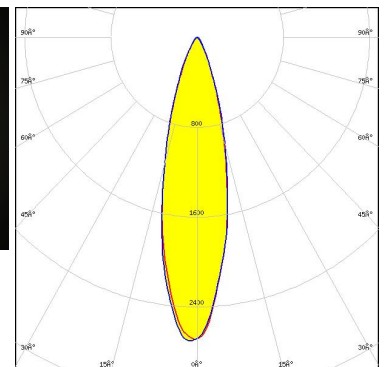
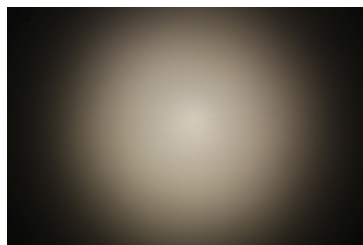
LED CxM-14 (19x19)  
 FWHM / FWTM 47.0° / 89.0°  
 Efficiency 75 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



Light distribution files



LED CXM-4  
 FWHM / FWTM 26.0° / 53.0°  
 Efficiency 79 %  
 Peak intensity 2.7 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C

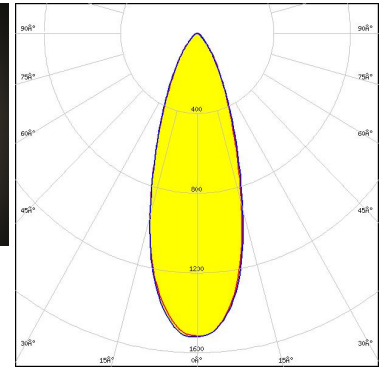
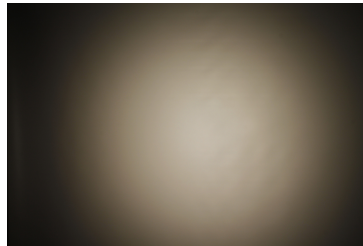


Light distribution files

### OPTICAL RESULTS (MEASURED):



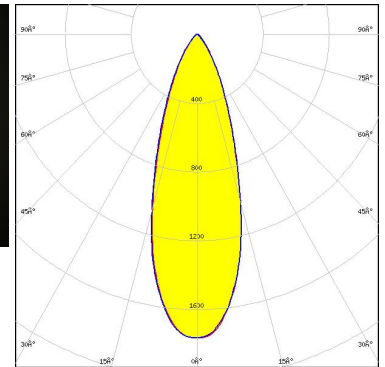
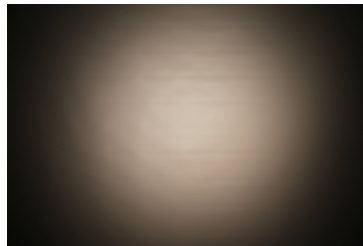
LED CxM-9 (13.5x13.5)  
FWHM / FWTM 35.0° / 72.0°  
Efficiency 78 %  
Peak intensity 1.5 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15255\_HEKLA-SOCKET-C



Light distribution files



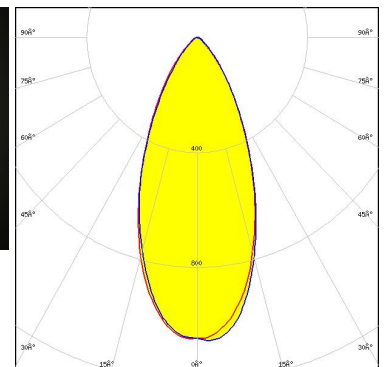
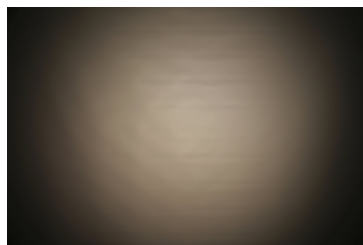
LED Fortimo SLM L09 CoB  
FWHM / FWTM 34.0° / 67.0°  
Efficiency 82 %  
Peak intensity 1.8 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15858\_HEKLA-SOCKET-H



Light distribution files



LED Fortimo SLM L13 CoB  
FWHM / FWTM 45.0° / 84.0°  
Efficiency 77 %  
Peak intensity 1.1 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
C16142\_HEKLA-SOCKET-K  
Bender Wirth: 432 Typ L8



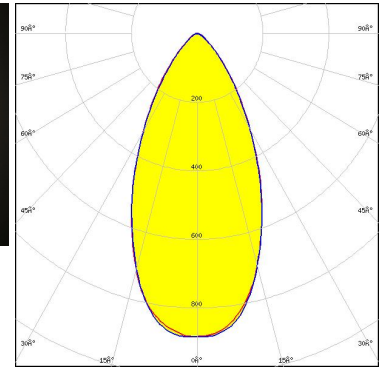
Light distribution files



### OPTICAL RESULTS (MEASURED):

#### PHILIPS

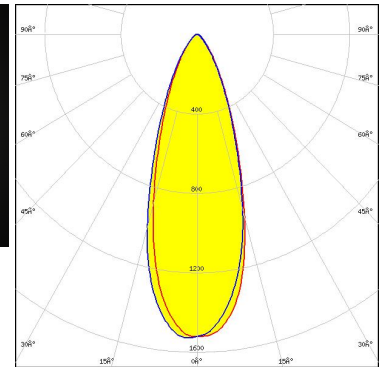
LED Fortimo SLM L15 CoB  
 FWHM / FWTM 50.0° / 91.0°  
 Efficiency 76 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 C16142\_HEKLA-SOCKET-K  
 Bender Wirth: 499 Typ L8



Light distribution files

#### SAMSUNG

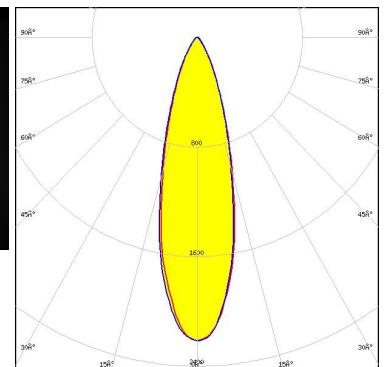
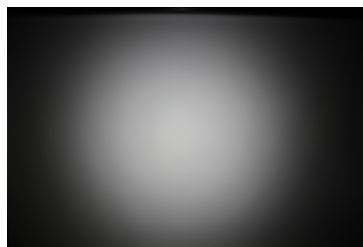
LED LC003D / LC006D / LC009D / LC013D  
 FWHM / FWTM 35.0° / 71.0°  
 Efficiency 79 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



Light distribution files

#### SAMSUNG

LED LC010C  
 FWHM / FWTM 28.0° / 59.0°  
 Efficiency 79 %  
 Peak intensity 2.2 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15848\_HEKLA-SOCKET-G

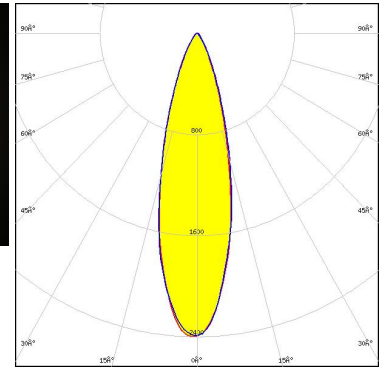


Light distribution files

### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

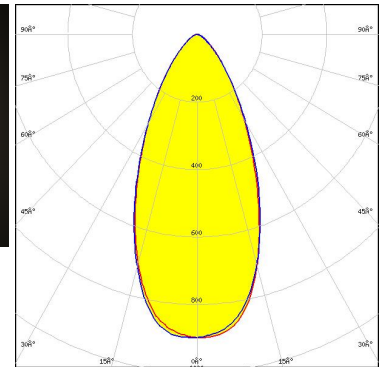
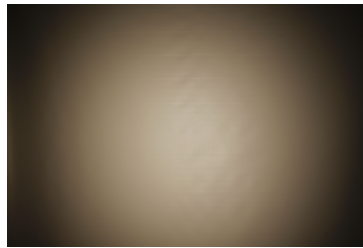
LED LC010C G2  
 FWHM / FWTM 28.0° / 56.0°  
 Efficiency 80 %  
 Peak intensity 2.4 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



Light distribution files

#### SAMSUNG

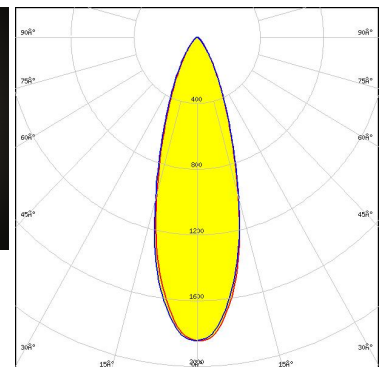
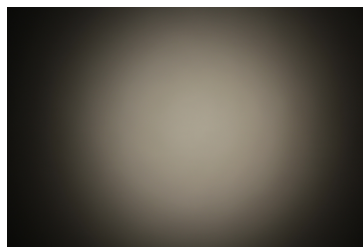
LED LC016D / LC019D / LC026D / LC033D  
 FWHM / FWTM 48.0° / 91.0°  
 Efficiency 75 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



Light distribution files

#### SAMSUNG

LED LC020C  
 FWHM / FWTM 32.0° / 64.0°  
 Efficiency 80 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

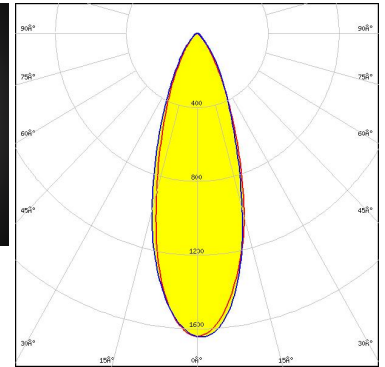
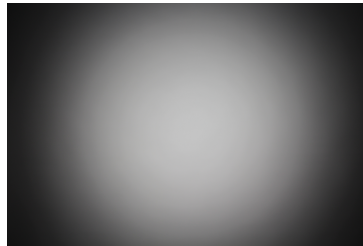


Light distribution files

### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

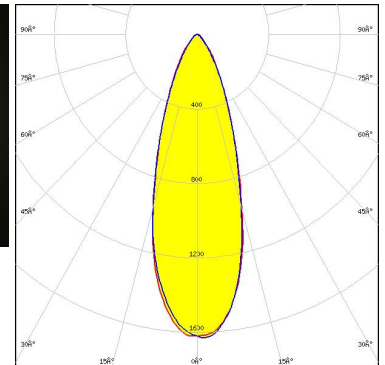
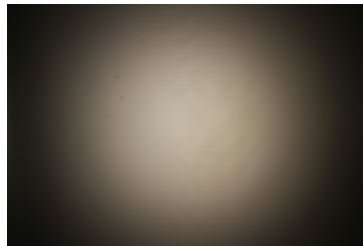
LED LC020C G2  
FWHM / FWTM 34.0° / 68.0°  
Efficiency 79 %  
Peak intensity 1.7 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15859\_HEKLA-SOCKET-I



Light distribution files

#### TRIDONIC

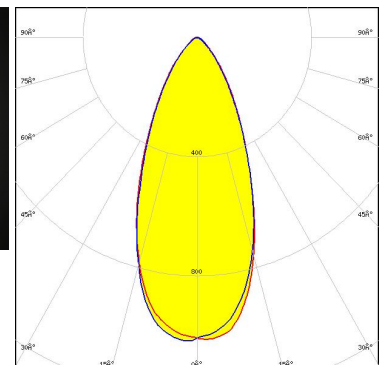
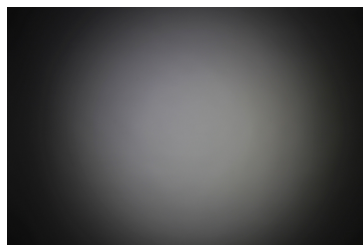
LED SLE G7 LES09  
FWHM / FWTM 34.0° / 69.0°  
Efficiency 78 %  
Peak intensity 1.6 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15255\_HEKLA-SOCKET-C



Light distribution files

#### TRIDONIC

LED SLE G7 LES13  
FWHM / FWTM 45.0° / 86.0°  
Efficiency 75 %  
Peak intensity 1 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:  
F15859\_HEKLA-SOCKET-I



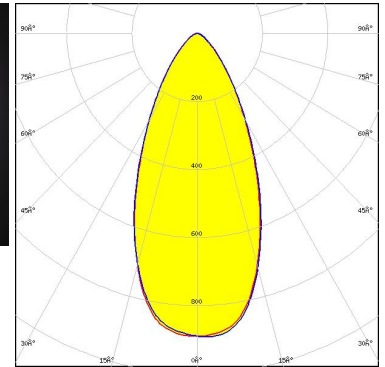
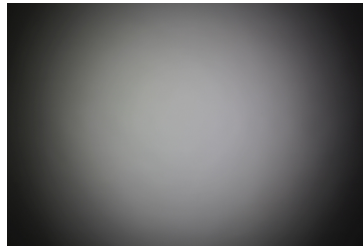
Light distribution files



### OPTICAL RESULTS (MEASURED):

#### TRIDONIC

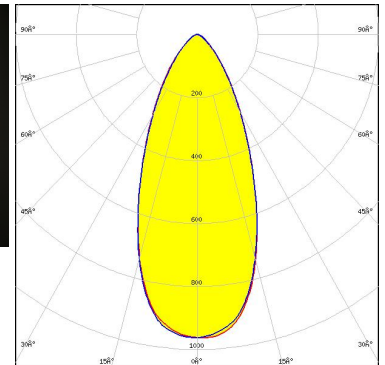
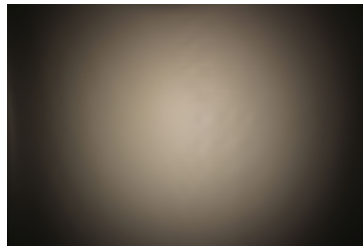
LED SLE G7 LES15  
 FWHM / FWTM 48.0° / 91.0°  
 Efficiency 75 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



Light distribution files

#### XICATO

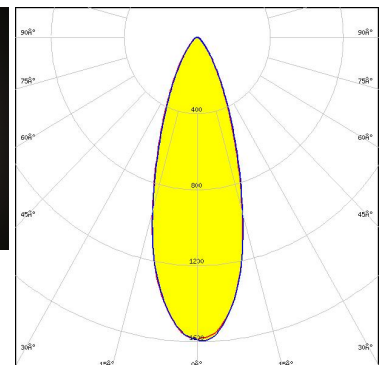
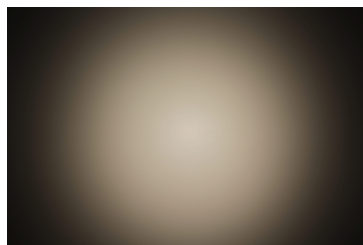
LED XOB 14.5 mm  
 FWHM / FWTM 45.0° / 88.0°  
 Efficiency 75 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



Light distribution files

#### XICATO

LED XOB 9.8 mm  
 FWHM / FWTM 35.0° / 69.0°  
 Efficiency 78 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:  
 F15255\_HEKLA-SOCKET-C

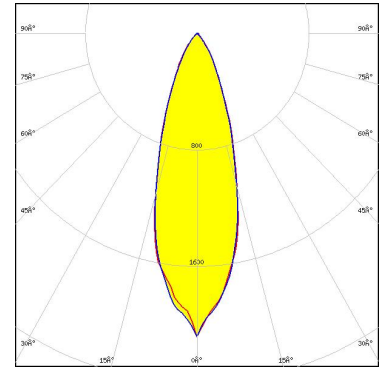


Light distribution files

### OPTICAL RESULTS (SIMULATED):



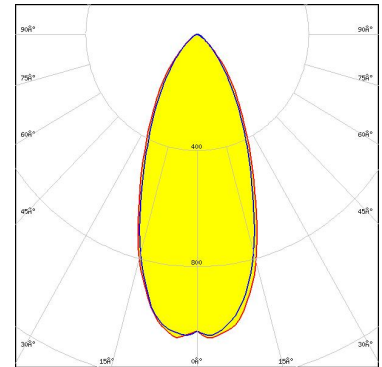
**LED** VERO10  
**FWHM / FWTM** 32.0° / 65.0°  
**Efficiency** 83 %  
**Peak intensity** 2.1 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 F15616\_HEKLA-SOCKET-F



Light distribution files

### CITIZEN

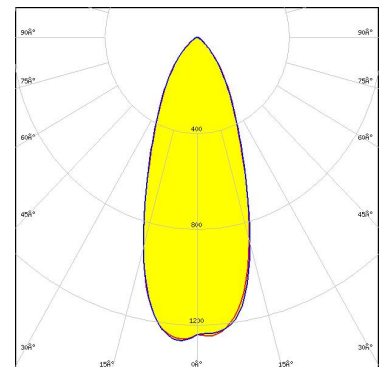
**LED** CLL03x/CLU03x  
**FWHM / FWTM** 45.0° / 89.0°  
**Efficiency** 77 %  
**Peak intensity** 1.1 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 F15859\_HEKLA-SOCKET-I



Light distribution files



**LED** CMA1825  
**FWHM / FWTM** 40.0° / 84.0°  
**Efficiency** 82 %  
**Peak intensity** 1.3 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**  
 F15254\_HEKLA-SOCKET-B



Light distribution files

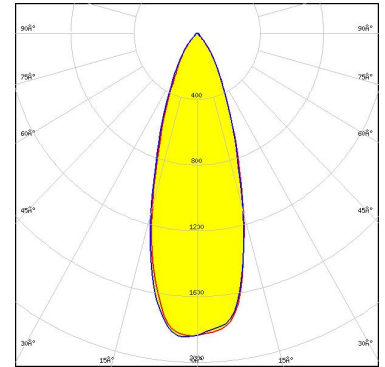
### OPTICAL RESULTS (SIMULATED):



LED CXA/B 15xx  
FWHM / FWTM 24.0° / 68.0°  
Efficiency 84 %  
Peak intensity 1.9 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

F15256\_HEKLA-SOCKET-D



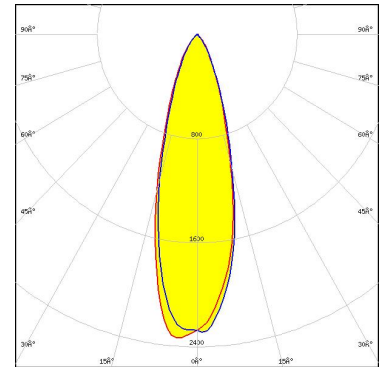
Light distribution files



LED CXA/B 15xx  
FWHM / FWTM 30.0° / 61.0°  
Efficiency 83 %  
Peak intensity 2.4 cd/lm  
LEDs/each optic 1  
Light colour/type White

Required components:

F15256\_HEKLA-SOCKET-D



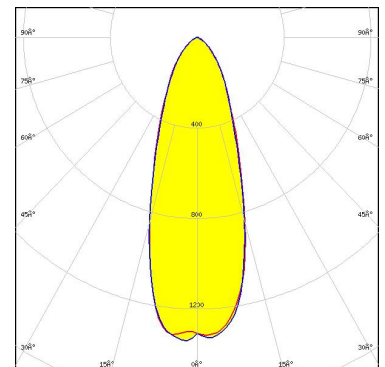
Light distribution files



LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
FWHM / FWTM 36.0° / 84.0°  
Efficiency 81 %  
Peak intensity 1.4 cd/lm  
LEDs/each optic 1  
Light colour/type White


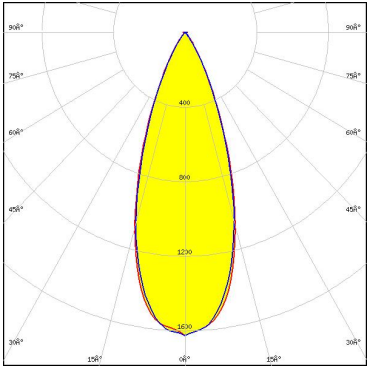
Required components:


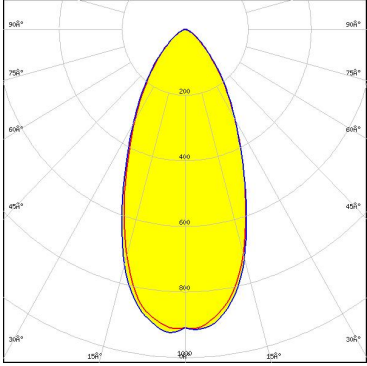
F15254\_HEKLA-SOCKET-B


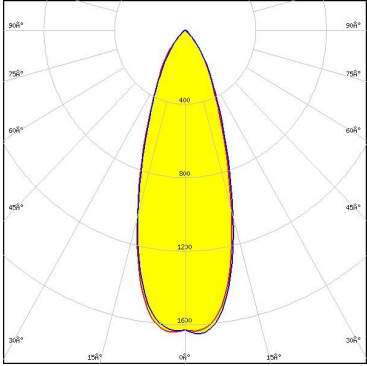


Light distribution files

### OPTICAL RESULTS (SIMULATED):

		
LED	NFSWE11A	
FWHM / FWTM	37.0° / 63.0°	
Efficiency	72 %	
Peak intensity	1.6 cd/lm	
LEDs/each optic	30	
Light colour/type	White	
Required components:		
		<a href="#">Light distribution files</a>

 <small>SEOUL SEMICONDUCTOR</small>		
LED	MJT COB LES 14.5	
FWHM / FWTM	48.0° / 95.0 + 96.0°	
Efficiency	78 %	
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour/type	White	
Required components:		
F15859_HEKLA-SOCKET-I		<a href="#">Light distribution files</a>

 <small>SEOUL SEMICONDUCTOR</small>		
LED	MJT COB LES 9.8	
FWHM / FWTM	36.0° / 73.0°	
Efficiency	82 %	
Peak intensity	1.7 cd/lm	
LEDs/each optic	1	
Light colour/type	White	
Required components:		
F15255_HEKLA-SOCKET-C		<a href="#">Light distribution files</a>

### GENERAL INFORMATION:

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

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

### MATERIALS:

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

### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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

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Hong Kong, China

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