

## SANDRA-12-O

~40° + 20° oval beam

### SPECIFICATION:

Dimensions	Ø 67.0 mm
Height	11.1 mm
Fastening	pin
ROHS compliant	yes ⓘ

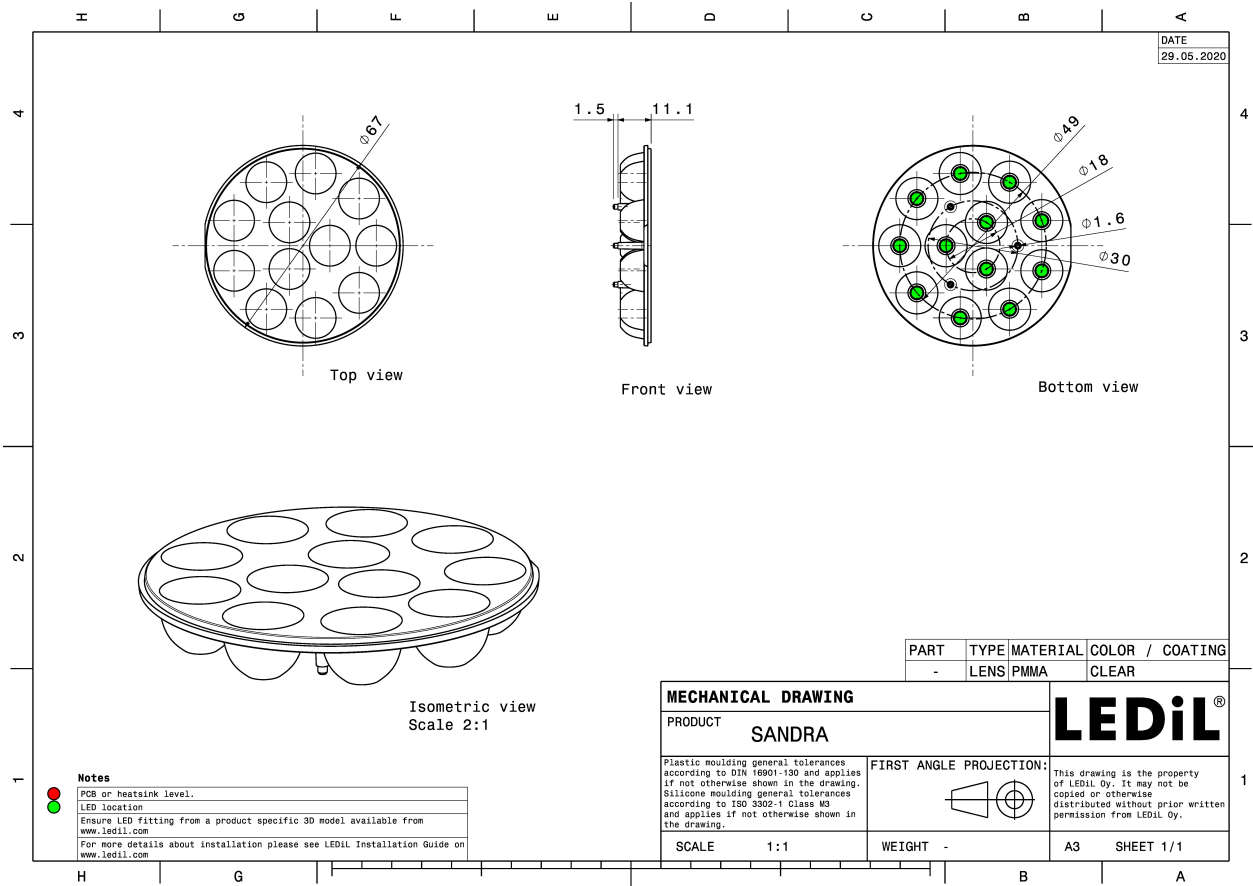
### MATERIALS:

Component	Type	Material	Colour	Finish	Length (mm)
SANDRA-12-O	Multi-lens	PMMA	clear		



### ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C14250_SANDRA-12-O » Box size: 480 x 280 x 300 mm	306		18	7.4

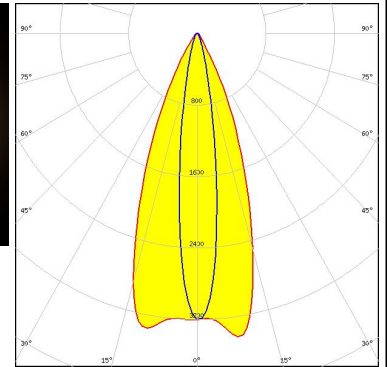
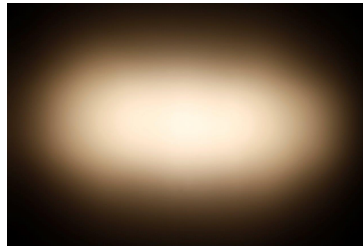


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

### OPTICAL RESULTS (MEASURED):



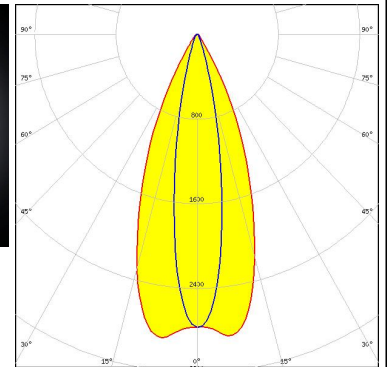
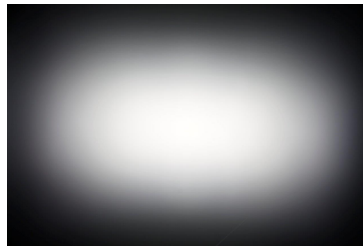
**LED** XP-E2  
**FWHM / FWTM** 40.0 + 15.0°  
**Efficiency** 91 %  
**Peak intensity** 3.4 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**



Light distribution files



**LED** XP-G2  
**FWHM / FWTM** 42.0 + 19.0° / 41.0 + 70.0°  
**Efficiency** 90 %  
**Peak intensity** 2.8 cd/lm  
**LEDs/each optic** 1  
**Light colour/type** White  
**Required components:**

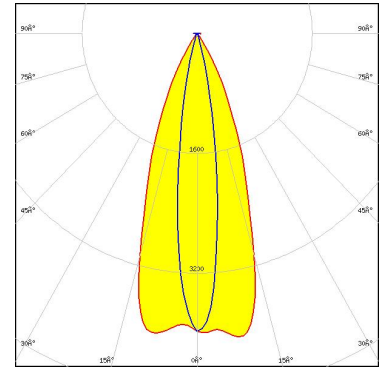


Light distribution files

### OPTICAL RESULTS (SIMULATED):



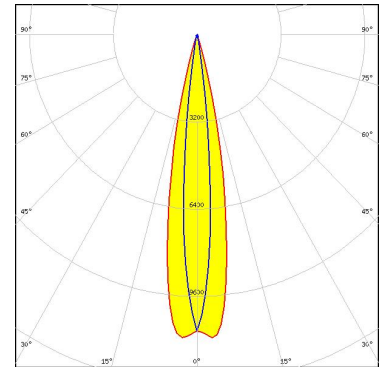
LED XB-D  
 FWHM / FWTM 16.0 + 38.0° / 30.0 + 62.0°  
 Efficiency 97 %  
 Peak intensity 4.1 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



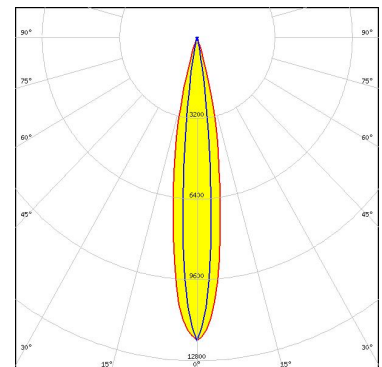
LED XB-D  
 FWHM / FWTM 22.0 + 10.0° / 32.0 + 20.0°  
 Efficiency 83 %  
 Peak intensity 11.1 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:



Light distribution files



LED XD16  
 FWHM / FWTM 18.0 + 11.0° / 33.0 + 20.0°  
 Efficiency 94 %  
 Peak intensity 12 cd/lm  
 LEDs/each optic 1  
 Light colour/type White  
 Required components:

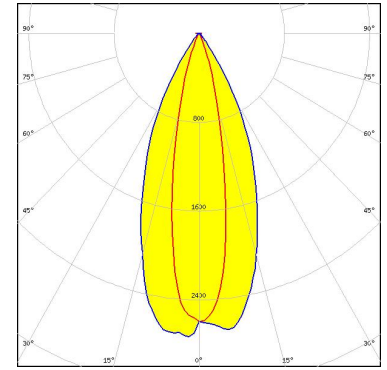


Light distribution files

### OPTICAL RESULTS (SIMULATED):



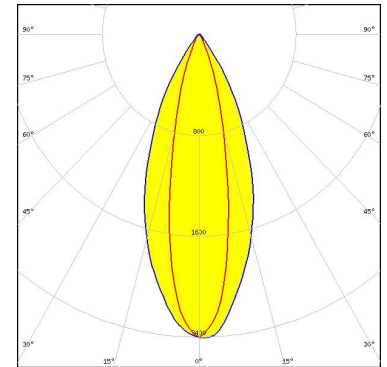
LED XP-G3  
FWHM / FWTM 44.0 + 21.0° / 71.0 + 40.0°  
Efficiency 94 %  
Peak intensity 2.7 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files



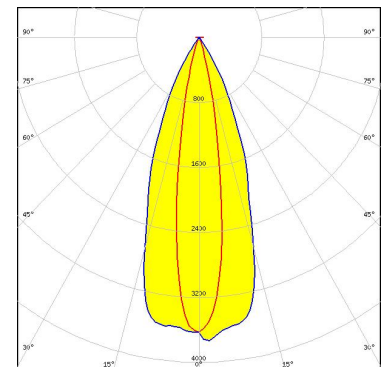
LED XP-L2  
FWHM / FWTM 22.0 + 42.0° / 47.0 + 72.0°  
Efficiency 94 %  
Peak intensity 2.4 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:



Light distribution files



LED XT-E  
FWHM / FWTM 39.0 + 17.0° / 65.0 + 32.0°  
Efficiency 92 %  
Peak intensity 3.7 cd/lm  
LEDs/each optic 1  
Light colour/type White  
Required components:

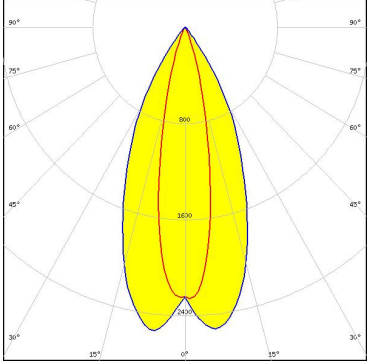


Light distribution files

### OPTICAL RESULTS (SIMULATED):

**LUMILEDS**

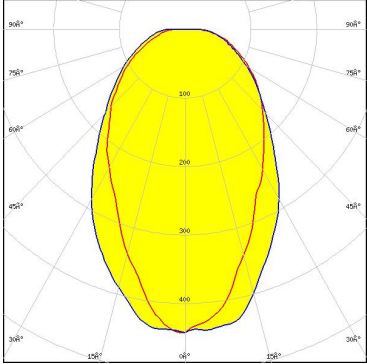
LED	LUXEON HL2X
FWHM / FWTM	22.0 + 46.0° / 40.0 + 74.0°
Efficiency	95 %
Peak intensity	2.5 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files

**LUMILEDS**

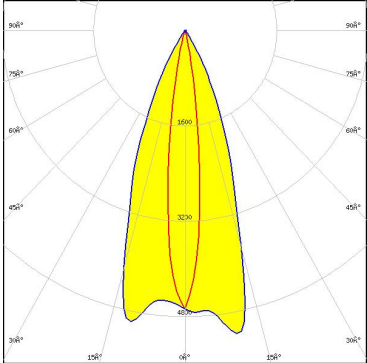
LED	LUXEON HL2X-P
FWHM / FWTM	65.0 + 75.0° / 159.0 + 166.0°
Efficiency	86 %
Peak intensity	0.4 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files

**OSRAM**  
Opto Semiconductors

LED	OSLON SSL 150
FWHM / FWTM	Asymmetric
Efficiency	98 %
Peak intensity	5.2 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

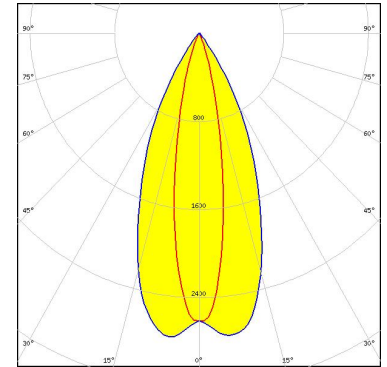


Light distribution files

### OPTICAL RESULTS (SIMULATED):

#### SAMSUNG

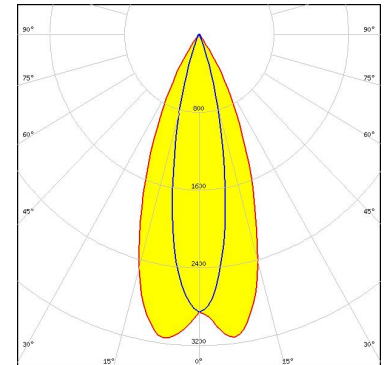
LED	LH351C
FWHM / FWTM	20.0 + 46.0° / 39.0 + 71.0°
Efficiency	96 %
Peak intensity	2.8 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files



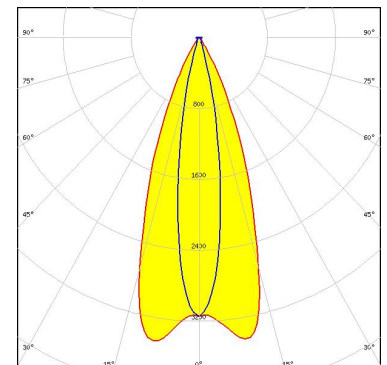
LED	Z5M4
FWHM / FWTM	22.0 + 42.0° / 40.0 + 66.0°
Efficiency	95 %
Peak intensity	3.1 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files




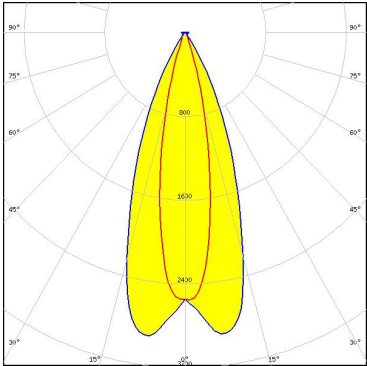
LED	Z8Y19
FWHM / FWTM	18.0 + 40.0° / 34.0 + 60.0°
Efficiency	93 %
Peak intensity	3.5 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files

### OPTICAL RESULTS (SIMULATED):

 SEUL SEMICONDUCTOR	
LED	Z8Y22
FWHM / FWTM	22.0 + 40.0° / 39.0 + 64.0°
Efficiency	93 %
Peak intensity	2.9 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



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.

### MATERIALS:

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