

HB-2X2-M

~25° medium beam optimized for CREE XP-L and XM-L



SPECIFICATION:

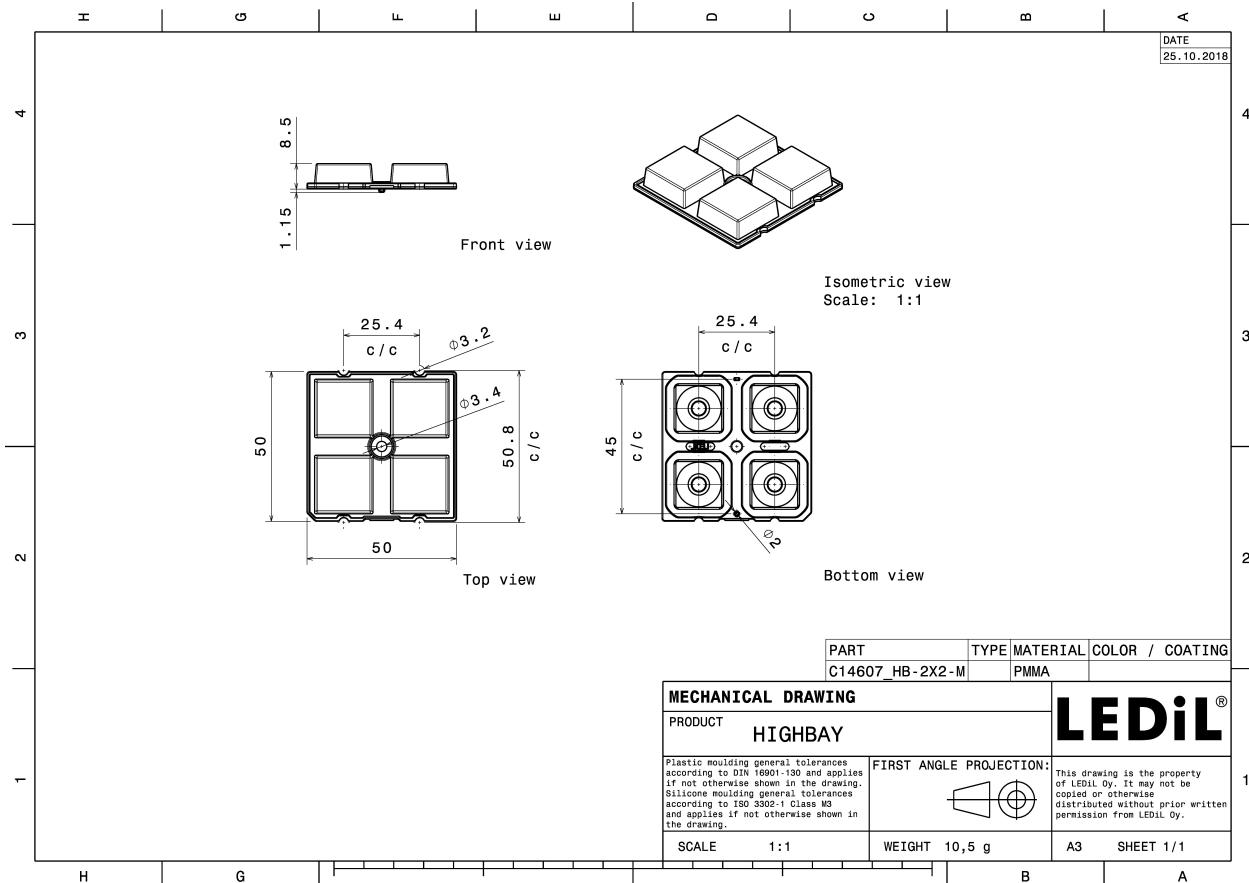
Dimensions	50.0 x 50.0
Height	8.5 mm
Fastening	pin, screw
ROHS compliant	yes 

MATERIALS:

Component	Type	Material	Colour	Finish	Length (mm)
HB-2X2-M	Multi-lens	PMMA	clear		

ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C14607_HB-2X2-M	800	160	160	9.2
» Box size: 480 x 280 x 300 mm				

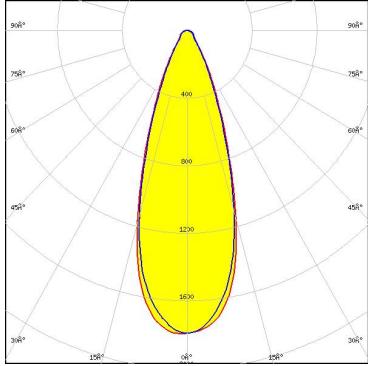
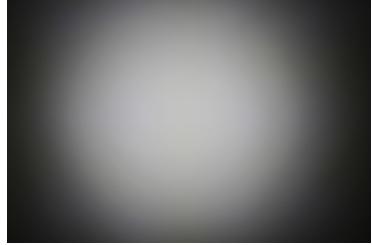


See also our general installation guide: www.ledil.com/installation_guide

OPTICAL RESULTS (MEASURED):



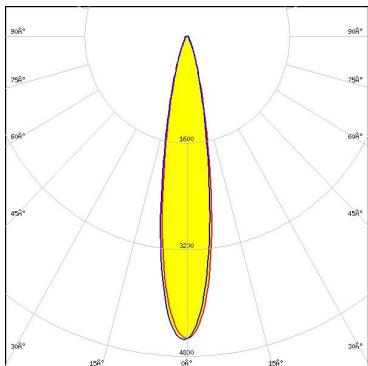
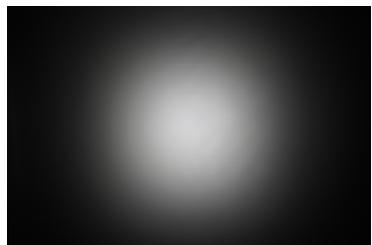
LED Bridgelux SMD 5050
FWHM / FWTM 36.0° / 66.0°
Efficiency 94 %
Peak intensity 1.8 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files



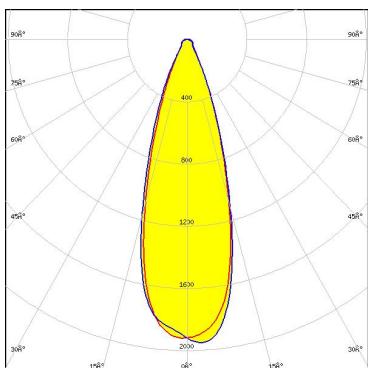
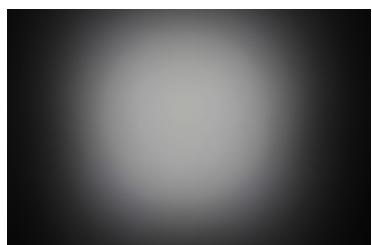
LED XD16
FWHM / FWTM 19.0° / 39.0°
Efficiency 90 %
Peak intensity 4.6 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files



LED XD16
FWHM / FWTM 33.0° / 59.0°
Efficiency 94 %
Peak intensity 2 cd/lm
LEDs/each optic 4
Light colour/type White
Required components:

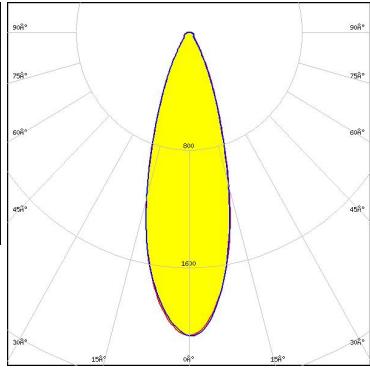
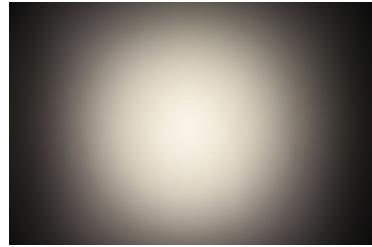


Light distribution files

OPTICAL RESULTS (MEASURED):



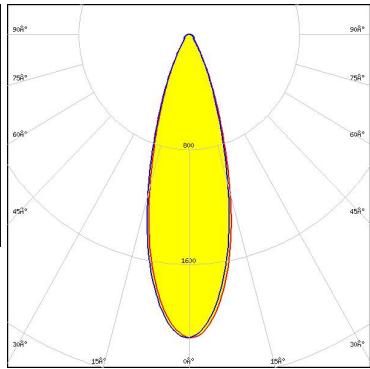
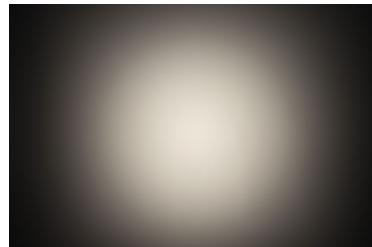
LED XM-L
 FWHM / FWTM 32.0° / 61.0°
 Efficiency 93 %
 Peak intensity 2 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



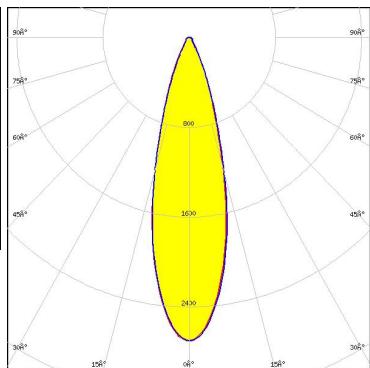
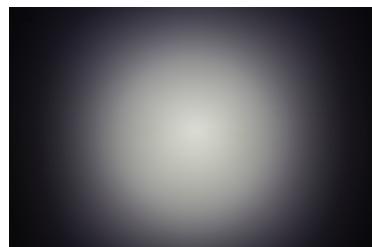
LED XM-L2
 FWHM / FWTM 32.0° / 61.0°
 Efficiency 92 %
 Peak intensity 2.1 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED XM-L3
 FWHM / FWTM 28.0° / 54.0°
 Efficiency 95 %
 Peak intensity 2.7 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

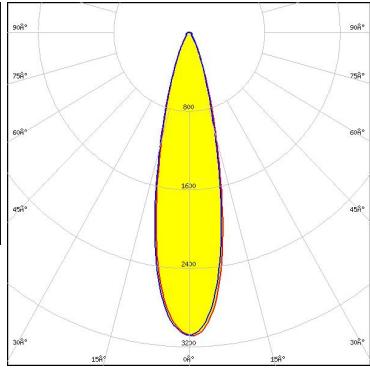
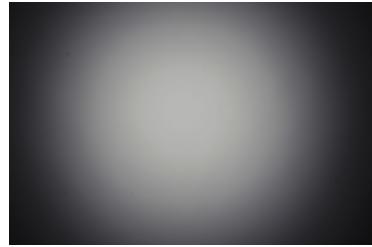


Light distribution files

OPTICAL RESULTS (MEASURED):



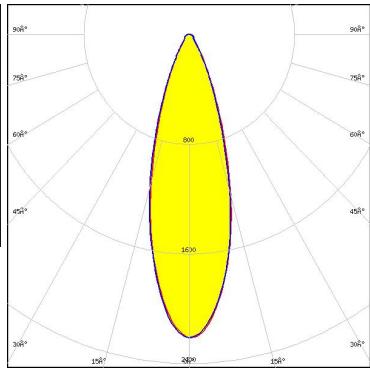
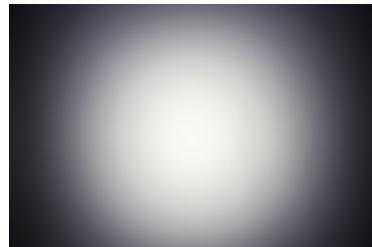
LED XP-G2
 FWHM / FWTM 25.0° / 49.0°
 Efficiency 0 %
 Peak intensity 3.1 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



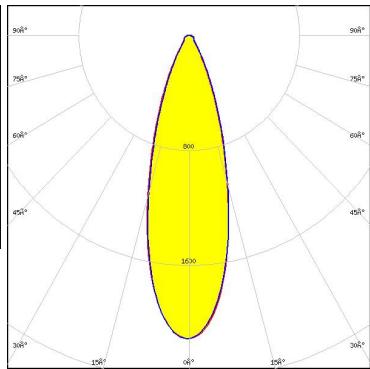
LED XP-L HD
 FWHM / FWTM 31.0° / 60.0°
 Efficiency 94 %
 Peak intensity 2.2 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED XP-L2
 FWHM / FWTM 31.0° / 61.0°
 Efficiency 93 %
 Peak intensity 2.1 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

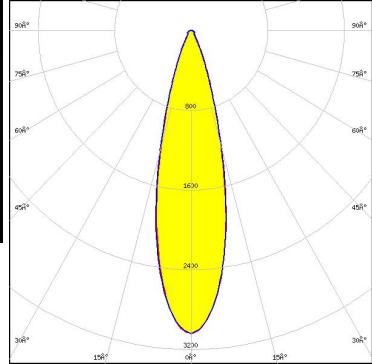


Light distribution files

OPTICAL RESULTS (MEASURED):

inventronics

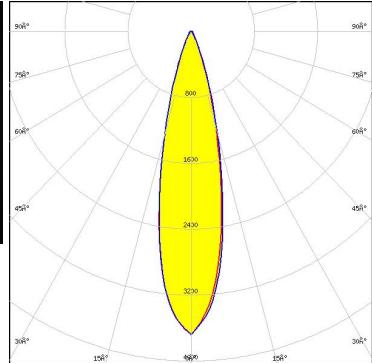
LED PL-BRICK HP 3800 2x8 SSG
 FWHM / FWTM 26.0° / 50.0°
 Efficiency 94 %
 Peak intensity 3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

inventronics

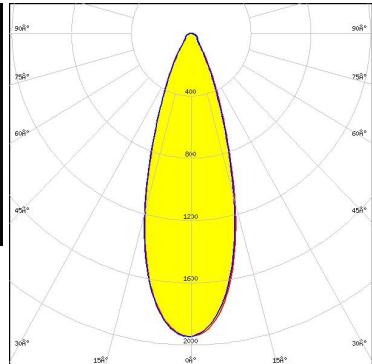
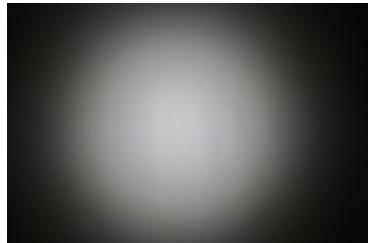
LED PrevalLED Brick HP 2x8
 FWHM / FWTM 23.0° / 44.0°
 Efficiency 91 %
 Peak intensity 3.8 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

LUMILEDS

LED LUXEON 5050 Round LES
 FWHM / FWTM 34.0° / 65.0°
 Efficiency 94 %
 Peak intensity 2 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

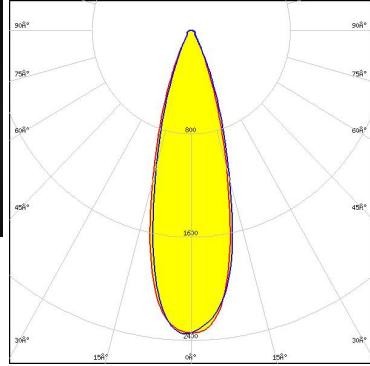


Light distribution files

OPTICAL RESULTS (MEASURED):



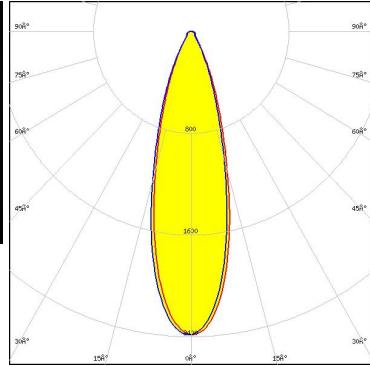
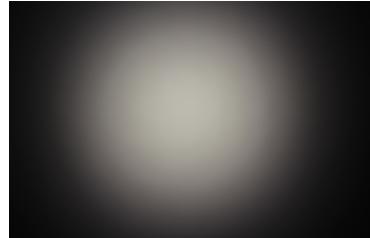
LED LUXEON MZ
 FWHM / FWTM 30.0° / 55.0°
 Efficiency 91 %
 Peak intensity 2.4 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



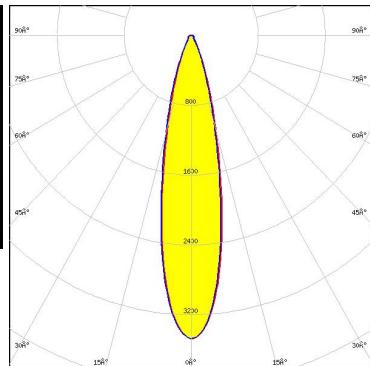
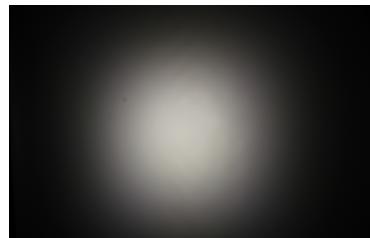
LED LUXEON V
 FWHM / FWTM 29.0° / 58.0°
 Efficiency 94 %
 Peak intensity 2.4 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED LUXEON V2
 FWHM / FWTM 23.0° / 47.0°
 Efficiency 94 %
 Peak intensity 3.5 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

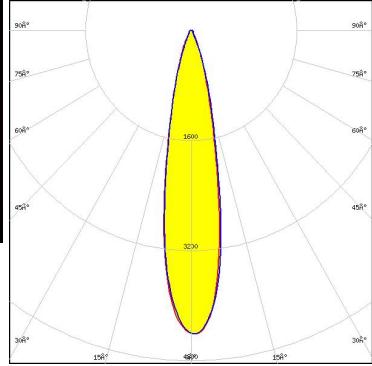


Light distribution files

OPTICAL RESULTS (MEASURED):



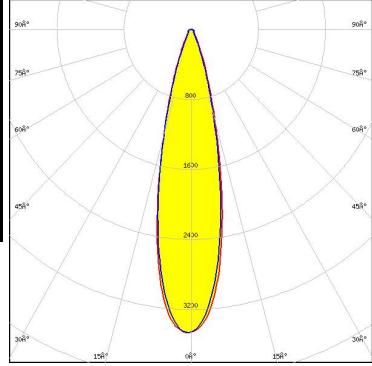
LED SST-10-B130
 FWHM / FWTM 21.0° / 42.0°
 Efficiency 95 %
 Peak intensity 4.4 cd/lm
 LEDs/each optic 1
 Light colour/type Deep Red
 Required components:



Light distribution files



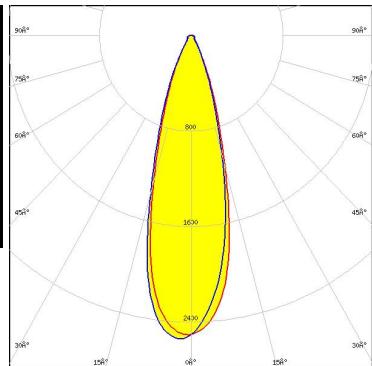
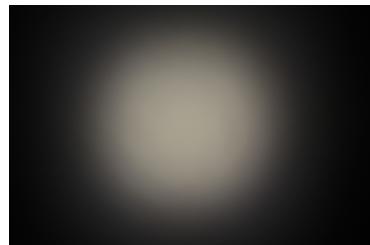
LED RecLED 122x50mm 1900lm 730 2x4 Opt G1
 FWHM / FWTM 24.0° / 46.0°
 Efficiency 95 %
 Peak intensity 3.5 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED NVSW219D
 FWHM / FWTM 29.0° / 55.0°
 Efficiency 94 %
 Peak intensity 2.5 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

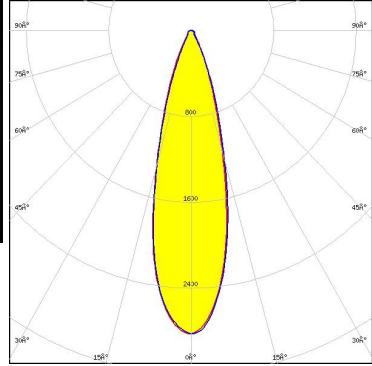


Light distribution files

OPTICAL RESULTS (MEASURED):



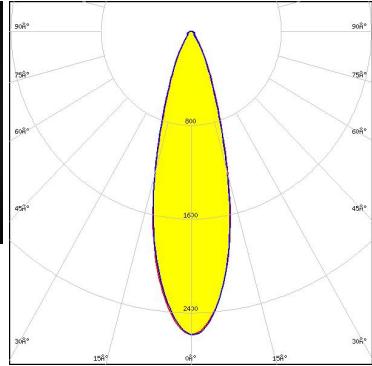
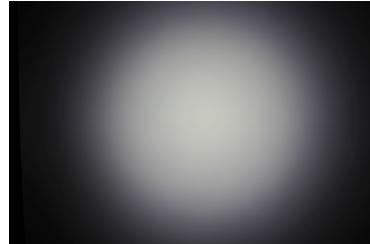
LED NVSW219F-V2
 FWHM / FWTM 28.0° / 53.0°
 Efficiency 95 %
 Peak intensity 2.8 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



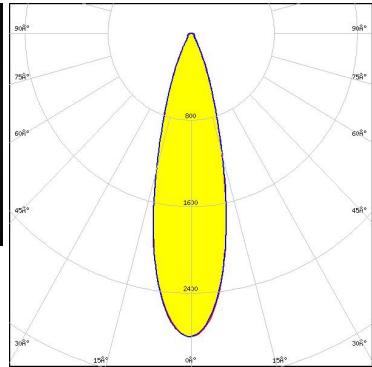
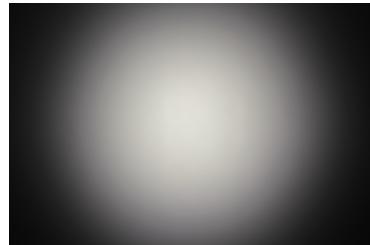
LED NVSW319B
 FWHM / FWTM 29.0° / 57.0°
 Efficiency 94 %
 Peak intensity 2.6 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED NVSW3x9A
 FWHM / FWTM 28.0° / 53.0°
 Efficiency 94 %
 Peak intensity 2.8 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

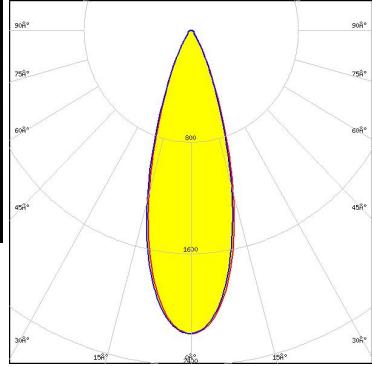
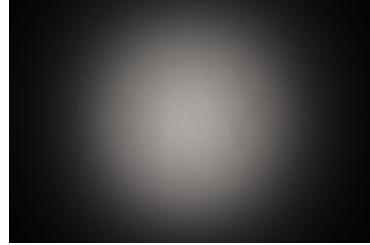


Light distribution files

OPTICAL RESULTS (MEASURED):



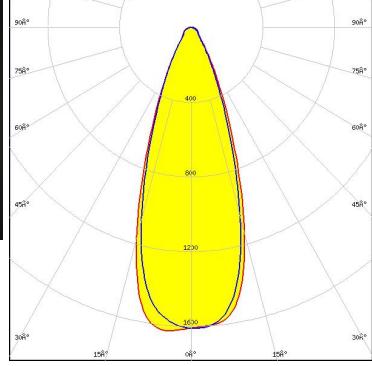
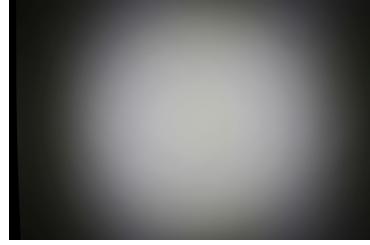
LED NWSx229A
 FWHM / FWTM 33.0° / 58.0°
 Efficiency 87 %
 Peak intensity 2.2 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



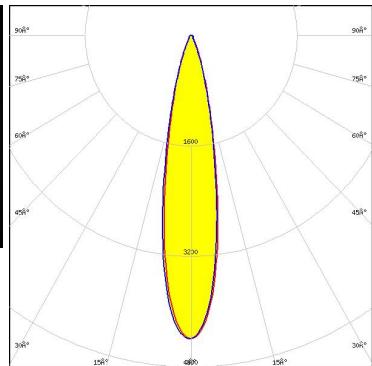
LED Duris S8
 FWHM / FWTM 38.0° / 68.0°
 Efficiency 94 %
 Peak intensity 1.6 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED OSCONIQ C 3030
 FWHM / FWTM 21.0° / 42.0°
 Efficiency 93 %
 Peak intensity 4.4 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



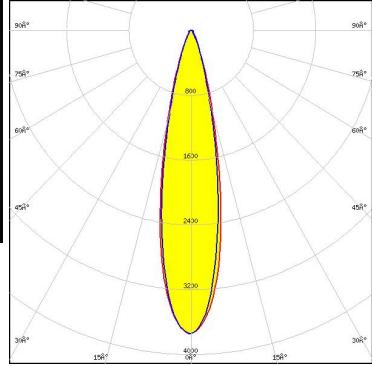
Light distribution files

OPTICAL RESULTS (MEASURED):

OSRAM

Opto Semiconductors

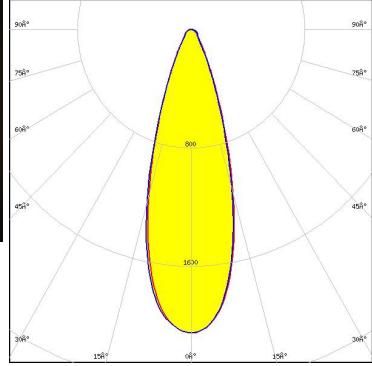
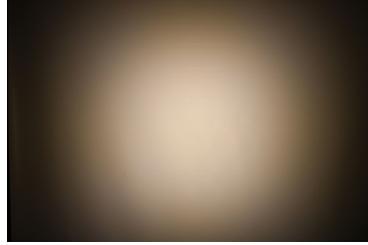
LED OSLON Square CSSRM2/CSSRM3
FWHM / FWTM 23.0° / 44.0°
Efficiency 91 %
Peak intensity 3.8 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

PHILIPS

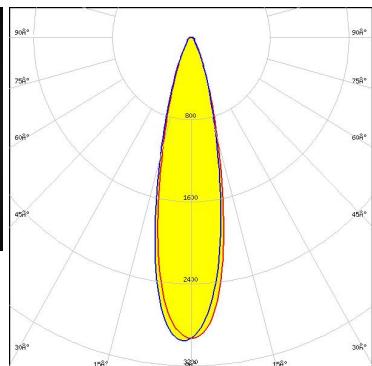
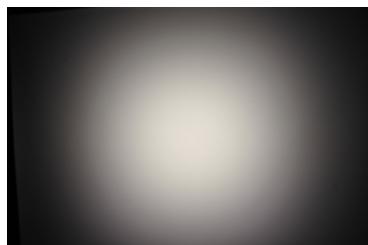
LED Fortimo FastFlex LED 2x8 DA (U)HE
FWHM / FWTM 32.0° / 61.0°
Efficiency 96 %
Peak intensity 2.1 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4
FWHM / FWTM 25.0° / 51.0°
Efficiency 92 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

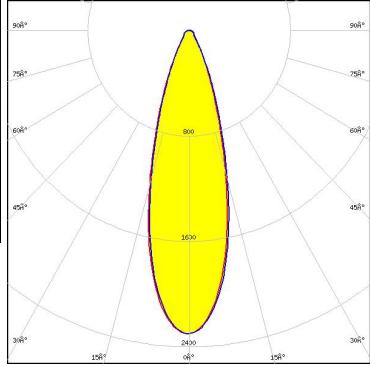


Light distribution files

OPTICAL RESULTS (MEASURED):

PHILIPS

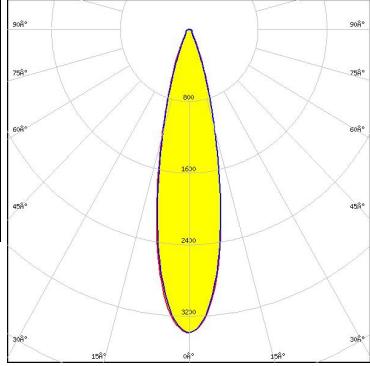
LED Fortimo FastFlex LED 2x8 DA G4+
 FWHM / FWTM 30.0° / 59.0°
 Efficiency 96 %
 Peak intensity 2.3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

PHILIPS

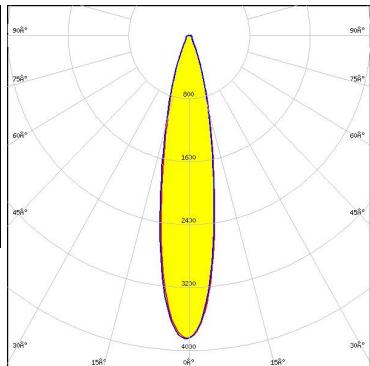
LED Fortimo FastFlex LED 2x8 DA G5
 FWHM / FWTM 24.0° / 47.0°
 Efficiency 94 %
 Peak intensity 3.4 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

SAMSUNG

LED HiLOM RC12 Z (LH181B)
 FWHM / FWTM 21.0° / 45.0°
 Efficiency 96 %
 Peak intensity 3.9 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

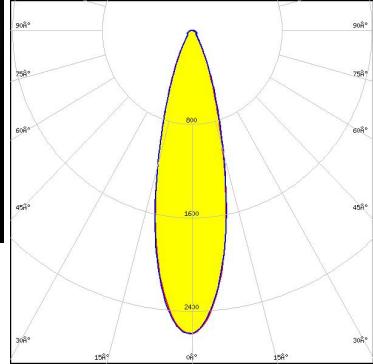


Light distribution files

OPTICAL RESULTS (MEASURED):

SAMSUNG

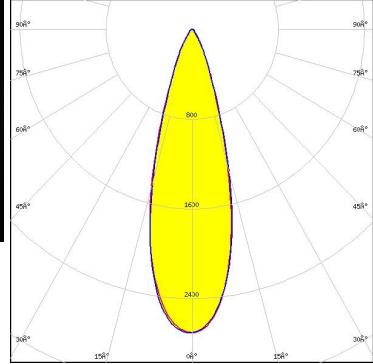
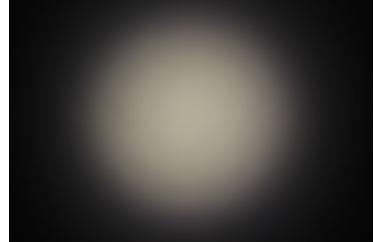
LED HiLOM RH12 Z (LH351C)
 FWHM / FWTM 27.0° / 55.0°
 Efficiency 95 %
 Peak intensity 2.6 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

SAMSUNG

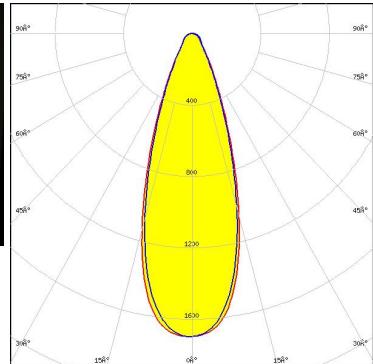
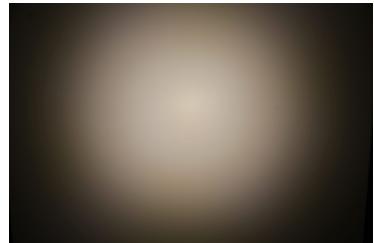
LED HiLOM RH16 (LH351C)
 FWHM / FWTM 30.0° / 55.0°
 Efficiency 94 %
 Peak intensity 2.7 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

SAMSUNG

LED HiLOM RM12 Z (LH502C)
 FWHM / FWTM 35.0° / 67.0°
 Efficiency 95 %
 Peak intensity 1.7 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

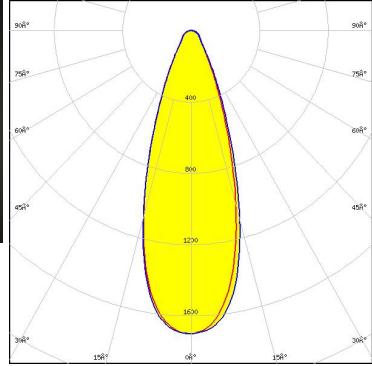
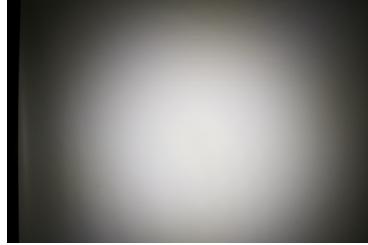


Light distribution files

OPTICAL RESULTS (MEASURED):

SAMSUNG

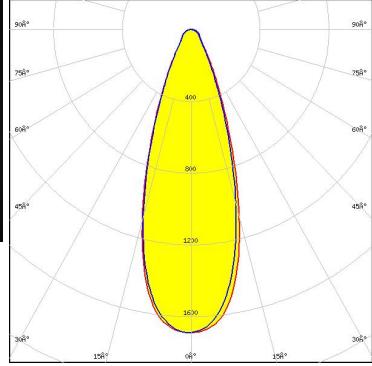
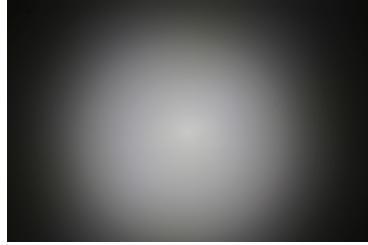
LED HiLOM RM16 Z (LH502C)
 FWHM / FWTM 36.0° / 68.0°
 Efficiency 96 %
 Peak intensity 1.7 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

SAMSUNG

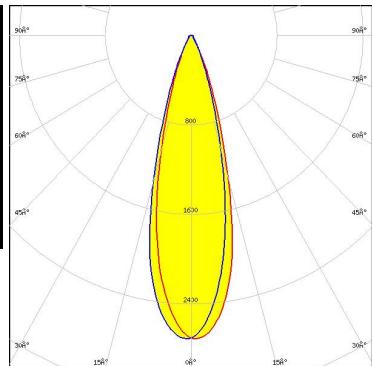
LED HiLOM RM8 Z (LH502C)
 FWHM / FWTM 36.0° / 68.0°
 Efficiency 96 %
 Peak intensity 1.7 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

SAMSUNG

LED LH351B
 FWHM / FWTM 28.0° / 52.0°
 Efficiency 85 %
 Peak intensity 2.7 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

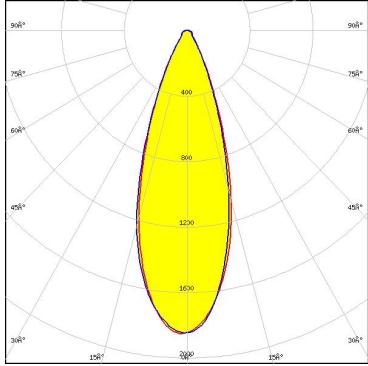
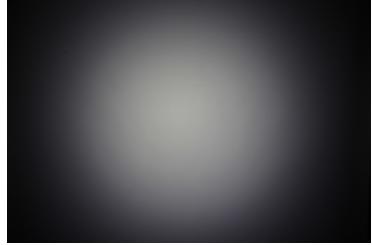


Light distribution files

OPTICAL RESULTS (MEASURED):

SAMSUNG

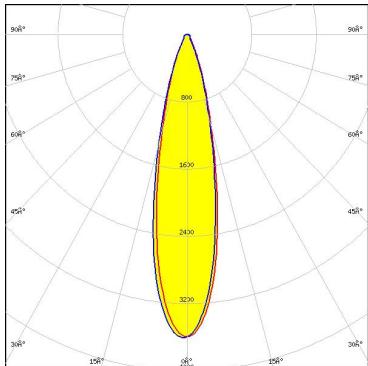
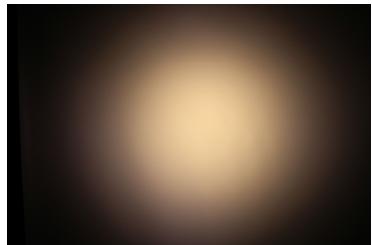
LED LH351D
FWHM / FWTM 35.0° / 64.0°
Efficiency 91 %
Peak intensity 1.9 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

SEITEC Elektronik GmbH

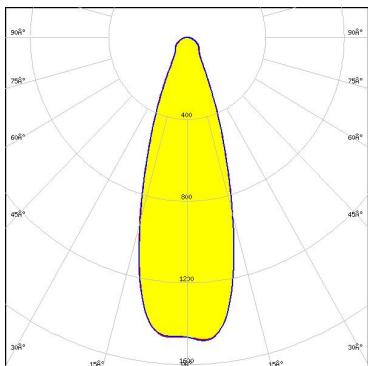
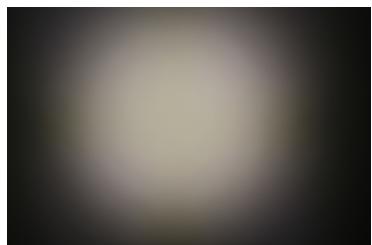
LED LED-Pa-L15c2W11c2-xxx-C050-01
FWHM / FWTM 24.0° / 48.0 + 47.0°
Efficiency 95 %
Peak intensity 3.6 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

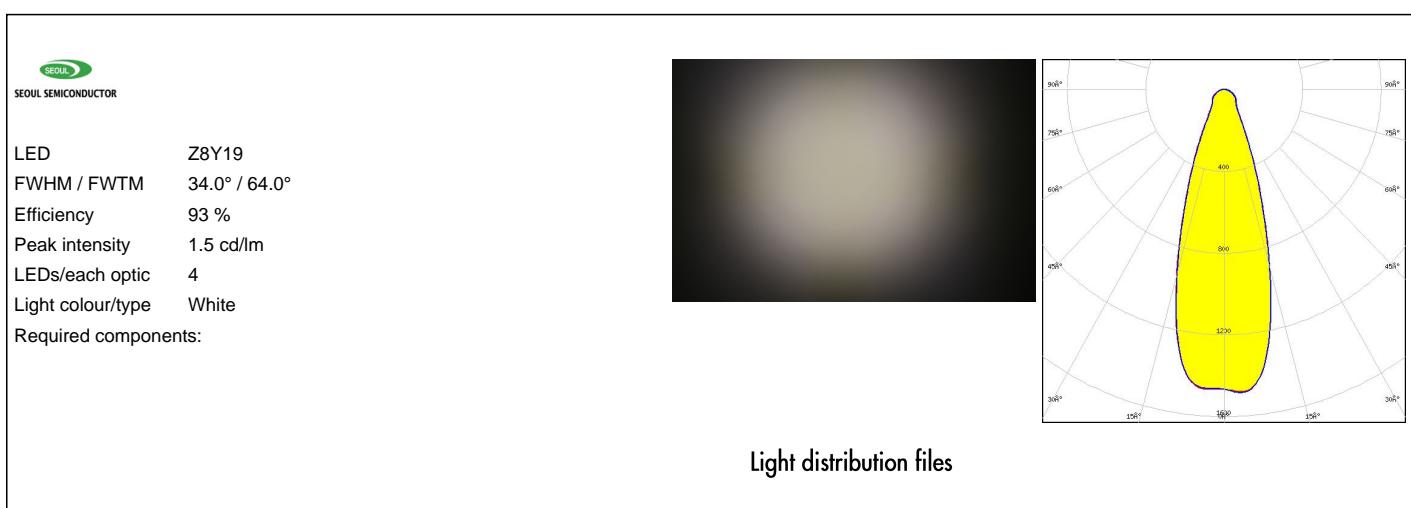
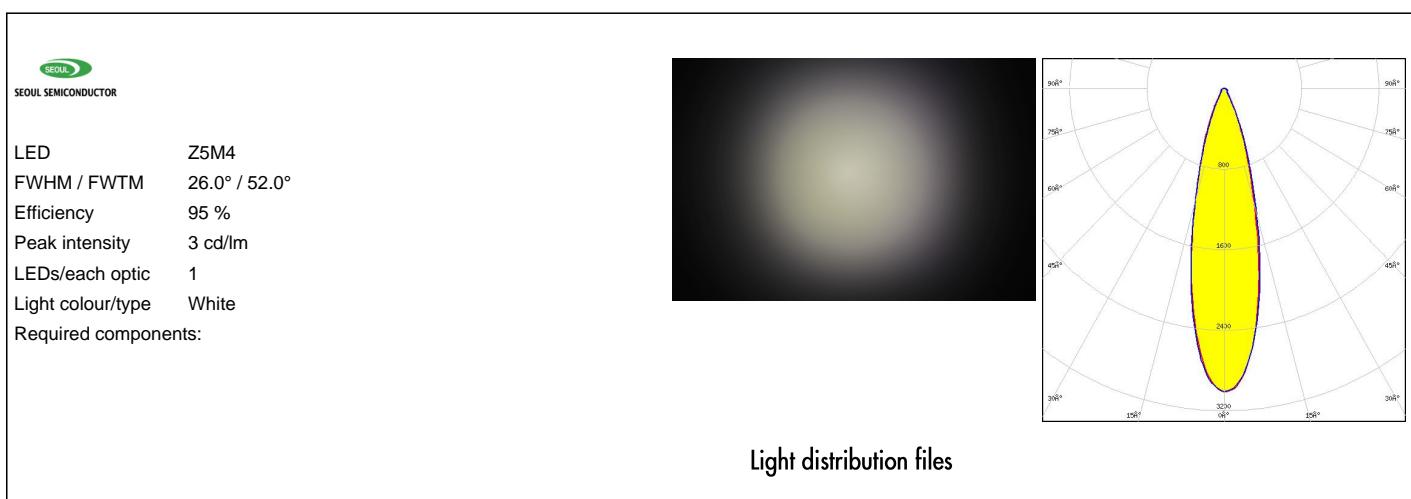
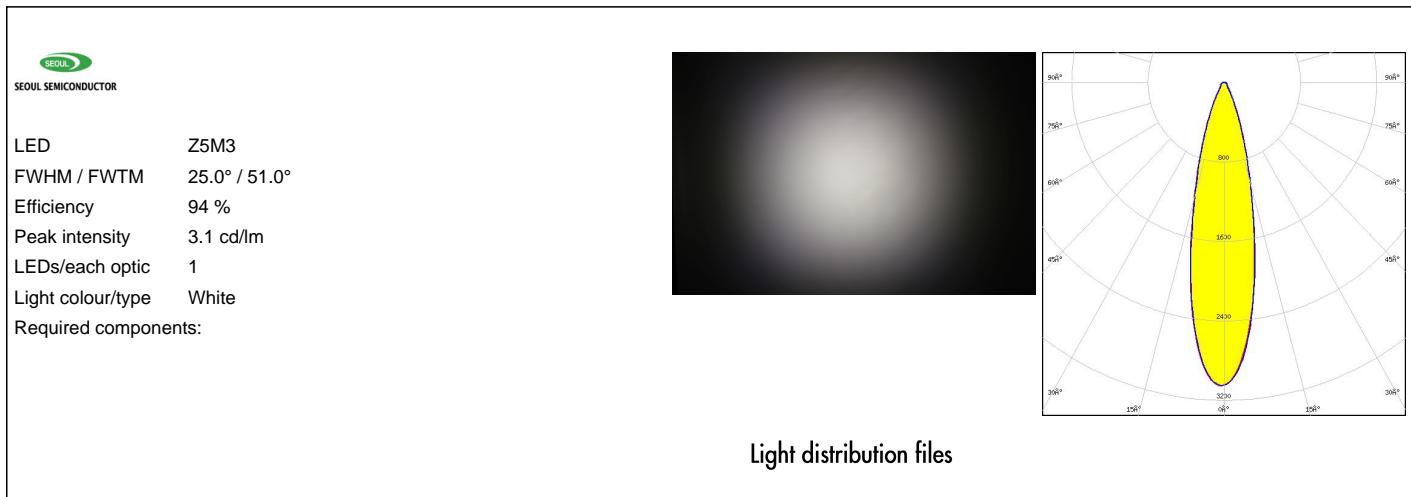
SEOLU SEMICONDUCTOR

LED 2x2 Y22 module - SMJQ-D48W16AA-XX
FWHM / FWTM 34.0° / 64.0°
Efficiency 93 %
Peak intensity 1.5 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

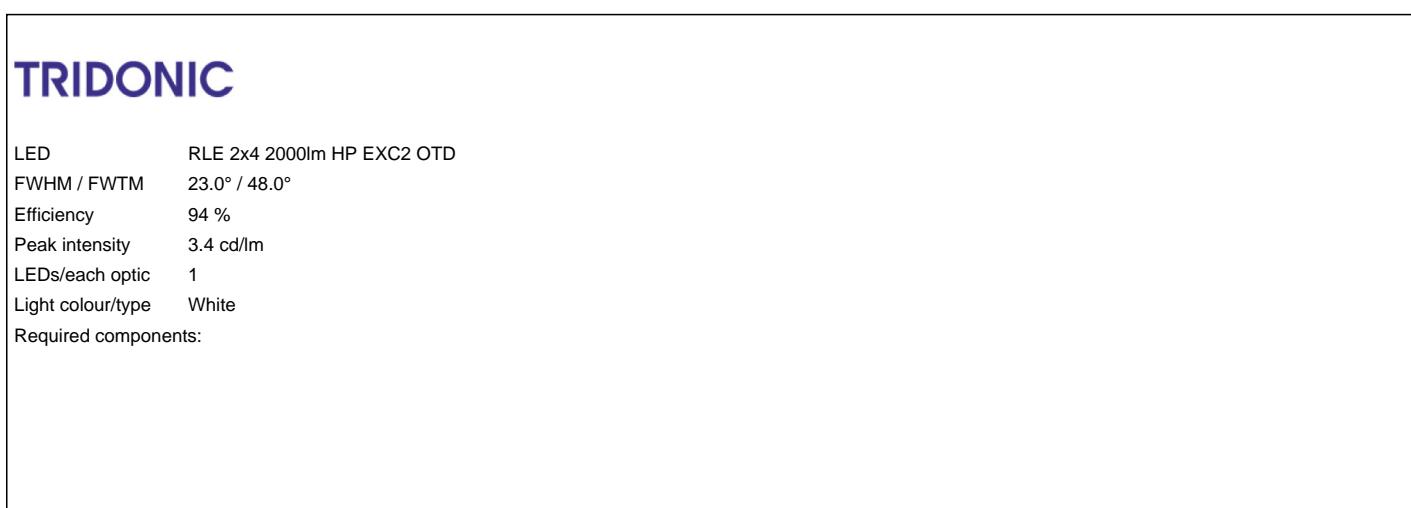
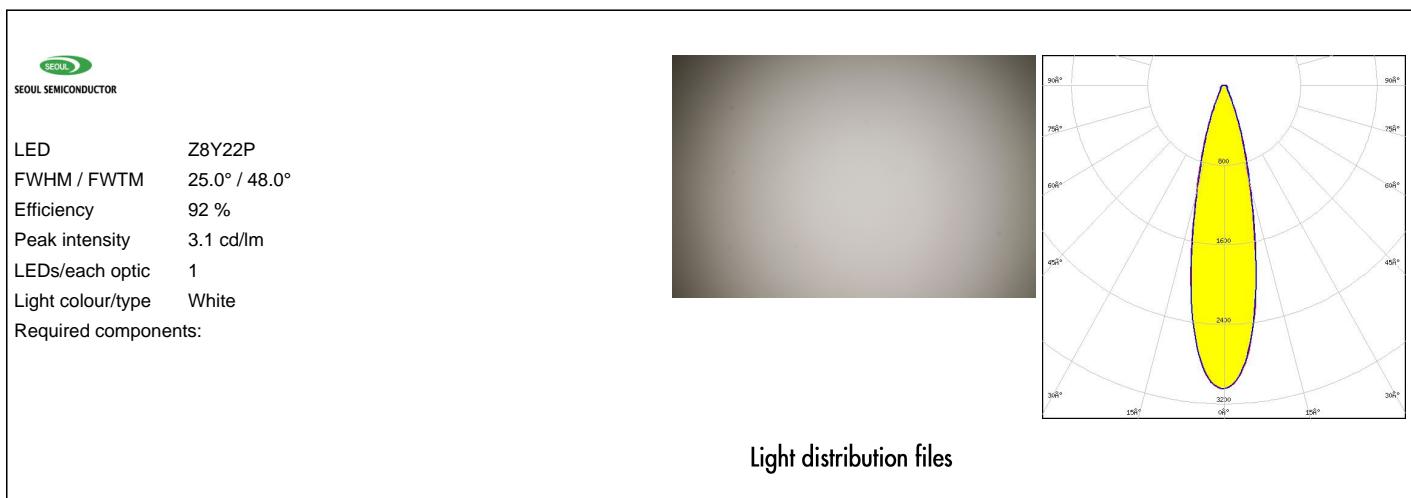
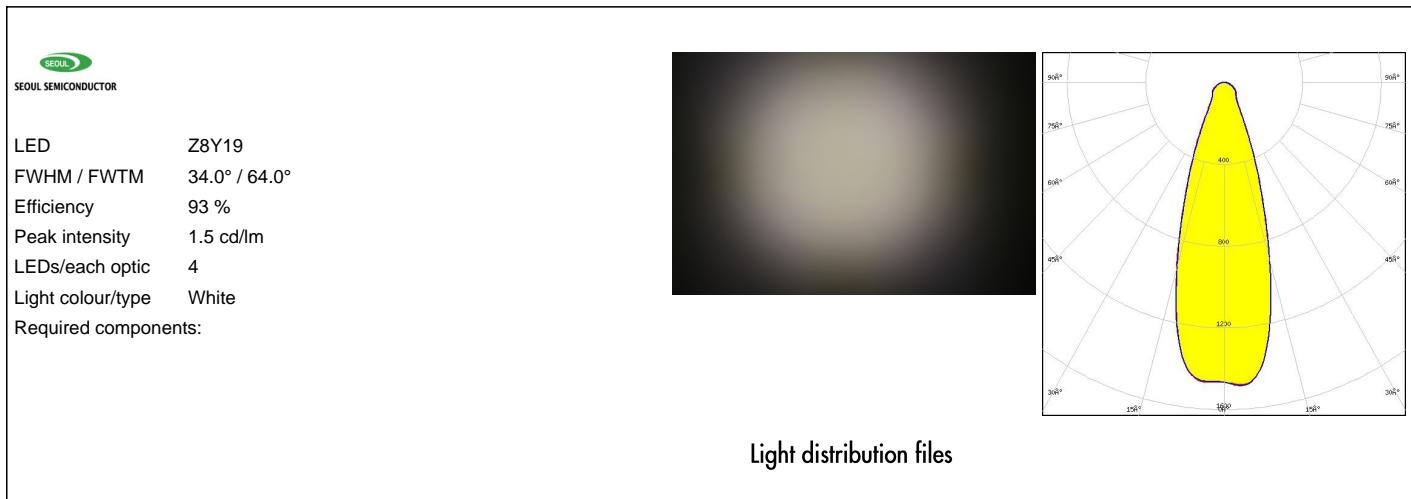


Light distribution files

OPTICAL RESULTS (MEASURED):



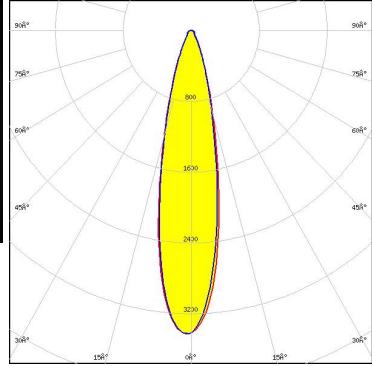
OPTICAL RESULTS (MEASURED):



OPTICAL RESULTS (MEASURED):

TRIDONIC

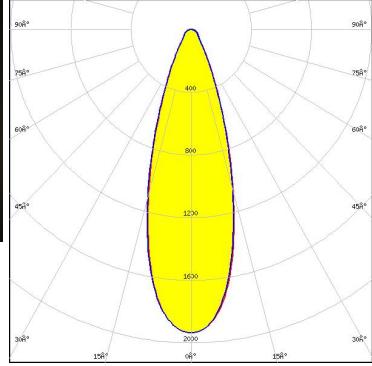
LED RLE 2x8 4000lm HP EXC2 OTD
 FWHM / FWTM 23.0° / 48.0°
 Efficiency 94 %
 Peak intensity 3.4 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

TRIDONIC

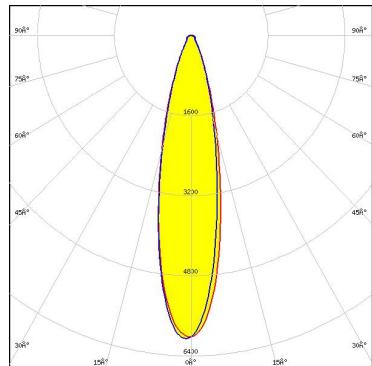
LED RLE 2x8 6000lm HP HE EXC3 OTD
 FWHM / FWTM 33.0° / 64.0°
 Efficiency 95 %
 Peak intensity 1.9 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD
 FWHM / FWTM 24.0° / 51.0°
 Efficiency 94 %
 Peak intensity 3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

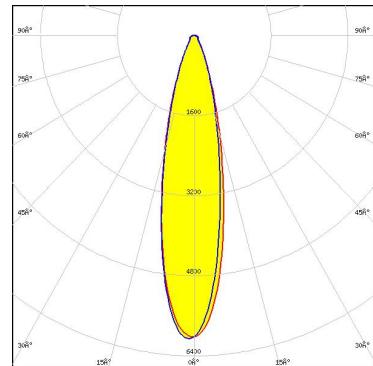


Light distribution files

OPTICAL RESULTS (MEASURED):

TRIDONIC

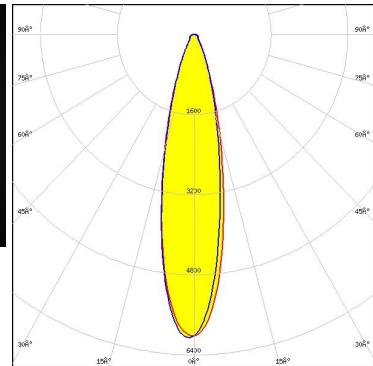
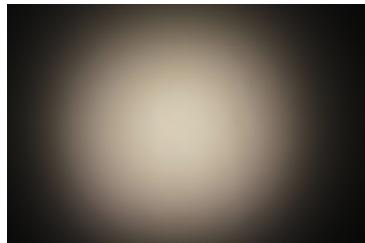
LED RLE G1 49x133mm 2000lm xxx EXC OTD
 FWHM / FWTM 24.0° / 51.0°
 Efficiency 94 %
 Peak intensity 3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

TRIDONIC

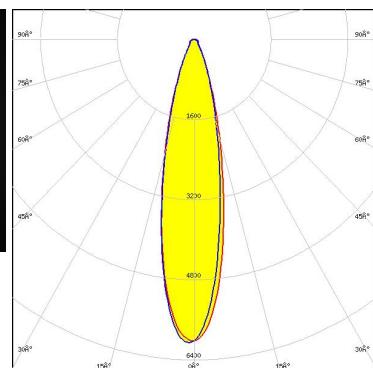
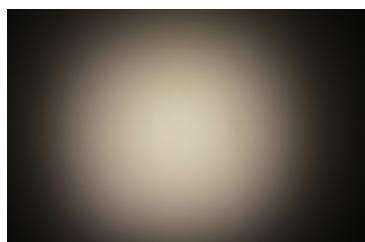
LED RLE G1 49x223mm 4000lm xxx EXC OTD
 FWHM / FWTM 24.0° / 51.0°
 Efficiency 94 %
 Peak intensity 3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

TRIDONIC

LED RLE G1 49x245mm 4000lm xxx EXC OTD
 FWHM / FWTM 24.0° / 51.0°
 Efficiency 94 %
 Peak intensity 3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

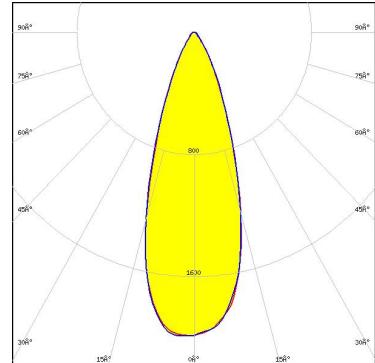


Light distribution files

OPTICAL RESULTS (SIMULATED):



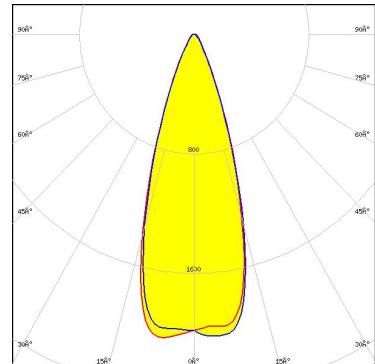
LED J Series 5050 6V P Class
FWHM / FWTM 35.0° / 64.0°
Efficiency 92 %
Peak intensity 2 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files



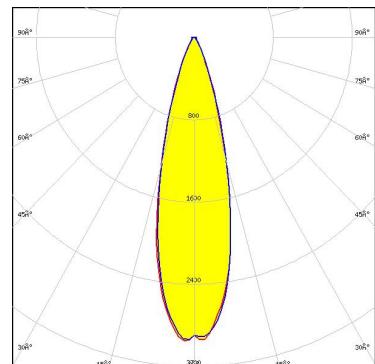
LED XP-G2 HE
FWHM / FWTM 35.0° / 58.0°
Efficiency 92 %
Peak intensity 2.1 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files



LED XP-G3
FWHM / FWTM 28.0° / 50.0°
Efficiency 92 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

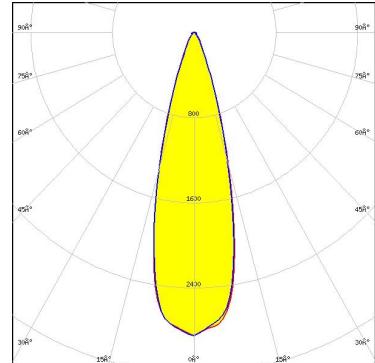


Light distribution files

OPTICAL RESULTS (SIMULATED):



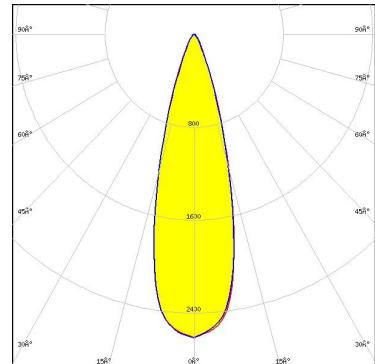
LED	XP-G4
FWHM / FWTM	28.0° / 50.0 + 49.0°
Efficiency	93 %
Peak intensity	2.9 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files



LED	XP-G4
FWHM / FWTM	28.0° / 50.0°
Efficiency	85 %
Peak intensity	2.6 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

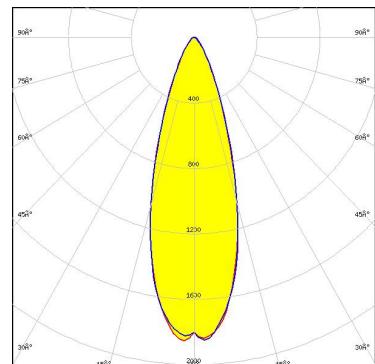


Protective plate, glass

Light distribution files



LED	XP-L2
FWHM / FWTM	32.0° / 62.0°
Efficiency	82 %
Peak intensity	1.9 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



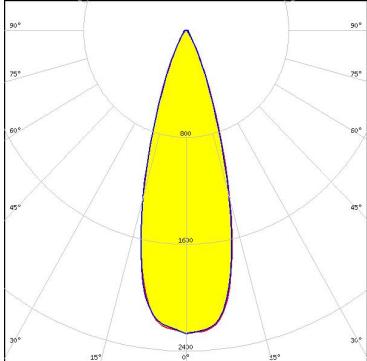
Protective plate, glass

Light distribution files

OPTICAL RESULTS (SIMULATED):



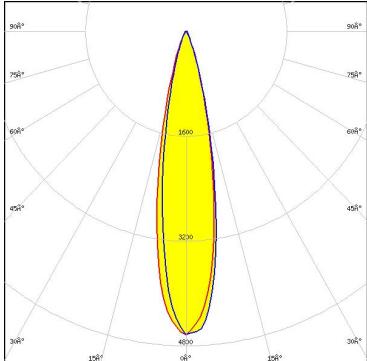
LED	XQ-E HD
FWHM / FWTM	32.0° / 56.0°
Efficiency	92 %
Peak intensity	2.3 cd/lm
LEDs/each optic	4
Light colour/type	RGBW
Required components:	



Light distribution files



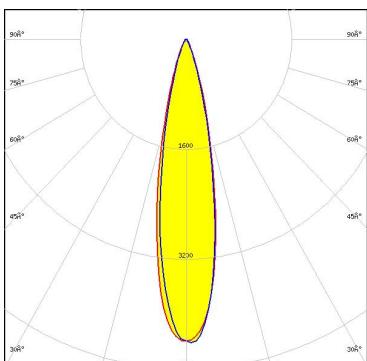
LED	LUXEON 3030 2D (Round LES)
FWHM / FWTM	21.0° / 41.0°
Efficiency	91 %
Peak intensity	4.7 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files



LED	LUXEON 3535 2D
FWHM / FWTM	22.0° / 42.0°
Efficiency	92 %
Peak intensity	4.5 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



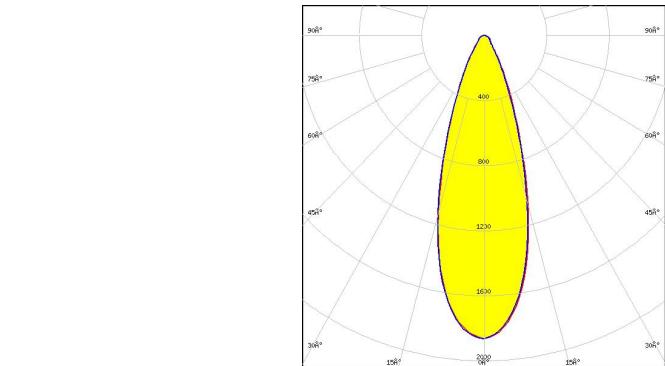
Light distribution files

OPTICAL RESULTS (SIMULATED):



LED LUXEON 5050 Round LES
FWHM / FWTM 34.0° / 64.0°
Efficiency 87 %
Peak intensity 1.9 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

Protective plate, glass

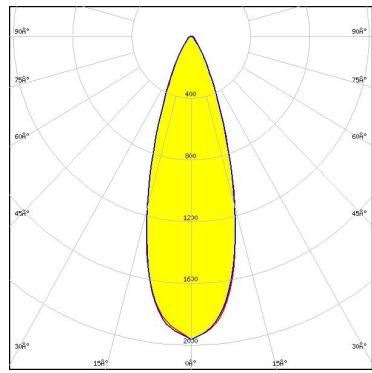


Light distribution files



LED LUXEON 5050 Square LES
FWHM / FWTM 34.0° / 62.0°
Efficiency 88 %
Peak intensity 2 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

Protective plate, glass

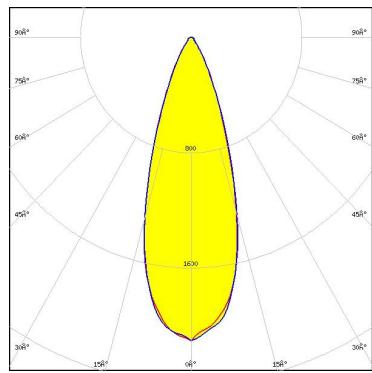


Light distribution files



LED LUXEON 5050 Square LES
FWHM / FWTM 34.0° / 62.0°
Efficiency 93 %
Peak intensity 2.1 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

Light distribution files

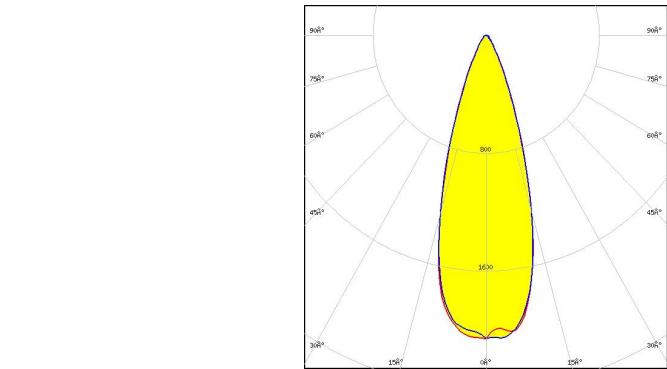


OPTICAL RESULTS (SIMULATED):



LED LUXEON HL2X
 FWHM / FWTM 34.0° / 58.0°
 Efficiency 87 %
 Peak intensity 2.1 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

Protective plate, glass

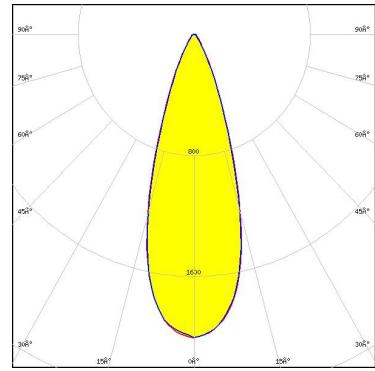


Light distribution files



LED LUXEON HL2X-D
 FWHM / FWTM 34.0° / 58.0°
 Efficiency 85 %
 Peak intensity 2 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

Protective plate, glass

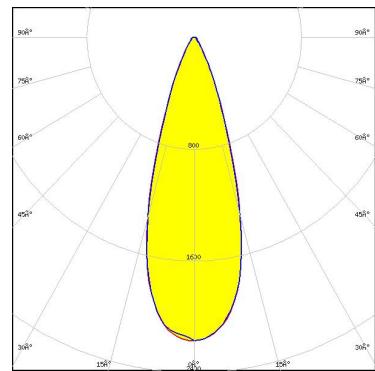


Light distribution files



LED LUXEON HL2X-D
 FWHM / FWTM 34.0° / 58.0°
 Efficiency 94 %
 Peak intensity 2.2 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

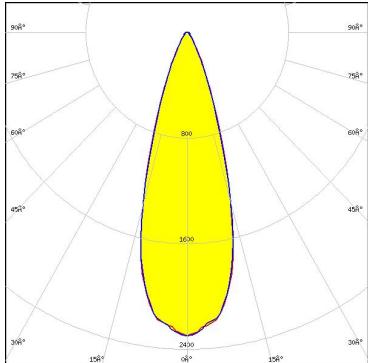
Light distribution files



OPTICAL RESULTS (SIMULATED):



LED	LUXEON HL2X-E
FWHM / FWTM	32.0° / 56.0°
Efficiency	94 %
Peak intensity	2.3 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

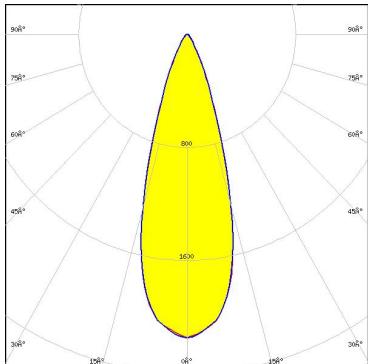


Light distribution files



LED	LUXEON HL2X-E
FWHM / FWTM	32.0° / 56.0°
Efficiency	86 %
Peak intensity	2.2 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

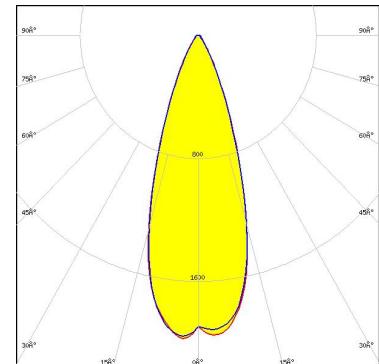
Protective plate, glass



Light distribution files



LED	LUXEON HL2X-P
FWHM / FWTM	36.0° / 62.0°
Efficiency	91 %
Peak intensity	2 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

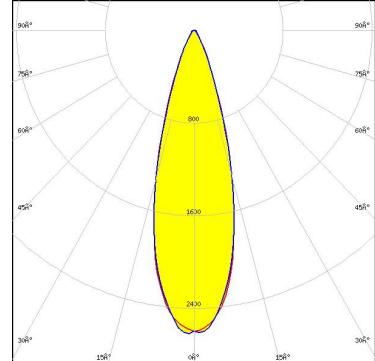


Light distribution files

OPTICAL RESULTS (SIMULATED):



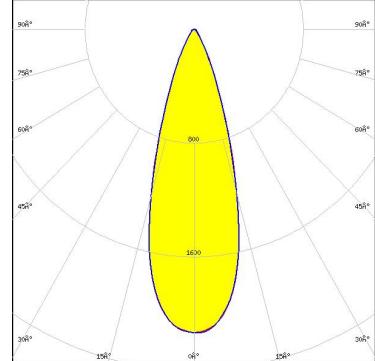
LED LUXEON HL4X
 FWHM / FWTM 30.0° / 54.0°
 Efficiency 94 %
 Peak intensity 2.6 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED LUXEON XR-HL2X (L2H2-xxxxxxMLU010)
 FWHM / FWTM 32.0° / 58.0°
 Efficiency 85 %
 Peak intensity 2.1 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

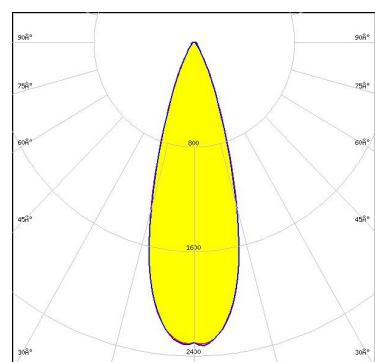


Protective plate, glass

Light distribution files



LED LUXEON XR-HL2X (L2H2-xxxxxxMLU010)
 FWHM / FWTM 32.0° / 56.0°
 Efficiency 94 %
 Peak intensity 2.3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

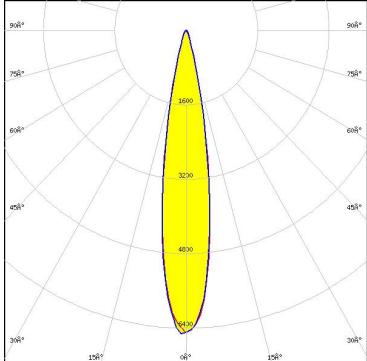


Light distribution files

OPTICAL RESULTS (SIMULATED):



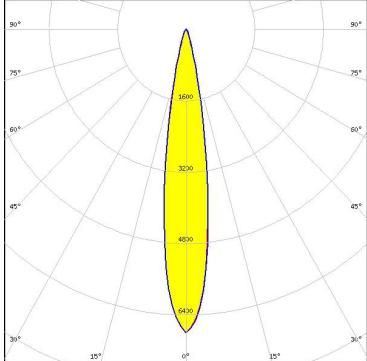
LED SFT-12R-W-A
 FWHM / FWTM 18.0° / 34.0°
 Efficiency 93 %
 Peak intensity 6.5 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED SFT-12R-W-A
 FWHM / FWTM 16.0° / 32.0°
 Efficiency 88 %
 Peak intensity 6.8 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

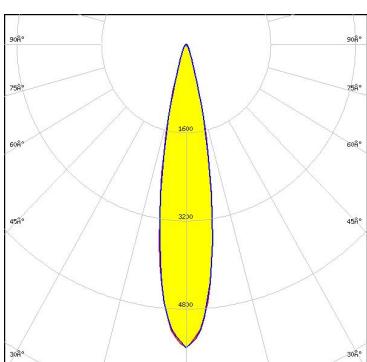


Protective plate, glass

Light distribution files



LED SFT-25R-W-A
 FWHM / FWTM 20.0° / 36.0°
 Efficiency 93 %
 Peak intensity 5.5 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

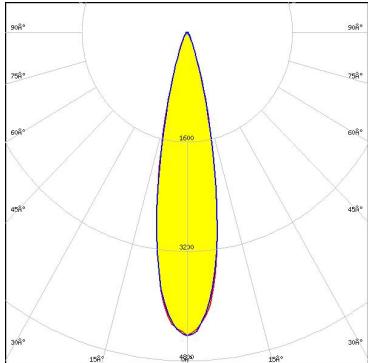


Light distribution files

OPTICAL RESULTS (SIMULATED):



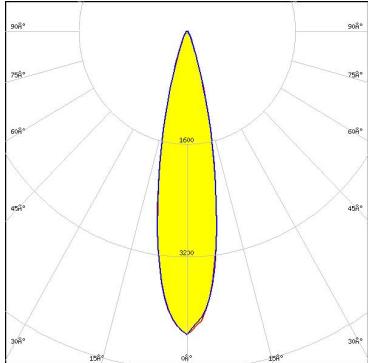
LED SST-12 Gen2
 FWHM / FWTM 22.0° / 42.0°
 Efficiency 93 %
 Peak intensity 4.5 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



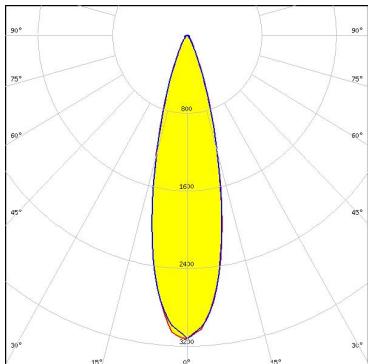
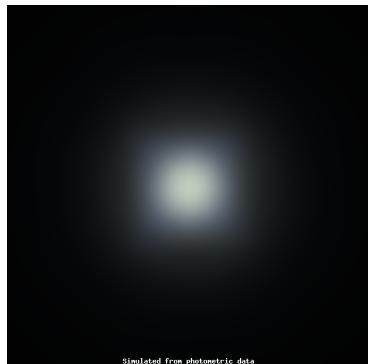
LED SST-20 Gen2
 FWHM / FWTM 22.0° / 42.0°
 Efficiency 93 %
 Peak intensity 4.3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files



LED SST-20F-W
 FWHM / FWTM 26.0° / 50.0°
 Efficiency 93 %
 Peak intensity 3.1 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

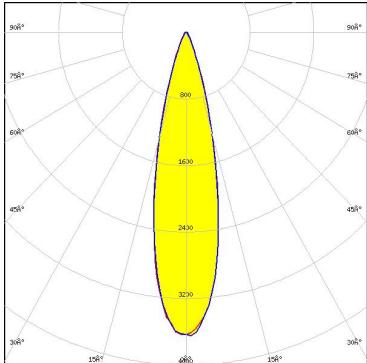


Light distribution files

OPTICAL RESULTS (SIMULATED):



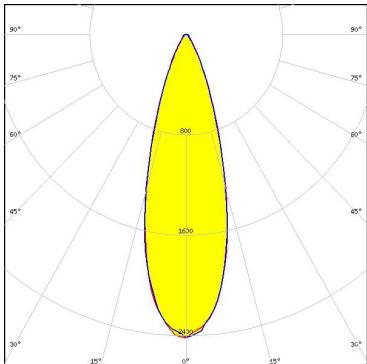
LED	SST-25-W
FWHM / FWTM	24.0° / 46.0 + 45.0°
Efficiency	93 %
Peak intensity	3.7 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files



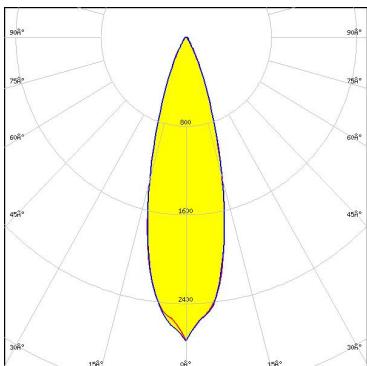
LED	SST-36F-W
FWHM / FWTM	32.0° / 58.0°
Efficiency	93 %
Peak intensity	2.4 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	



Light distribution files



LED	NV4WB35AM
FWHM / FWTM	30.0° / 54.0°
Efficiency	93 %
Peak intensity	2.7 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

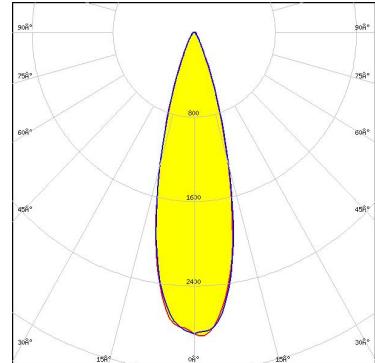


Light distribution files

OPTICAL RESULTS (SIMULATED):



LED	NVSxx19B/NVSxx19C
FWHM / FWTM	28.0° / 50.0°
Efficiency	92 %
Peak intensity	2.9 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

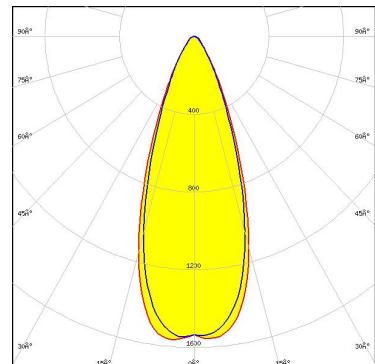


Light distribution files



LED	Duris S8
FWHM / FWTM	38.0° / 69.0°
Efficiency	89 %
Peak intensity	1.6 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

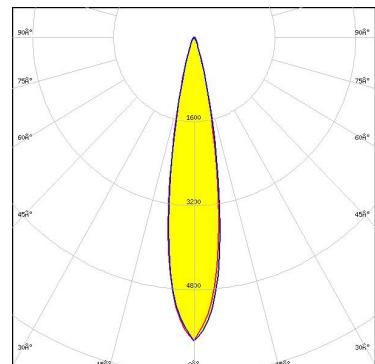
Protective plate, glass



Light distribution files



LED	OSCONIQ C 2424 Gen1
FWHM / FWTM	19.0 + 20.0° / 36.0°
Efficiency	93 %
Peak intensity	5.8 cd/lm
LEDs/each optic	1
Light colour/type	White
Required components:	

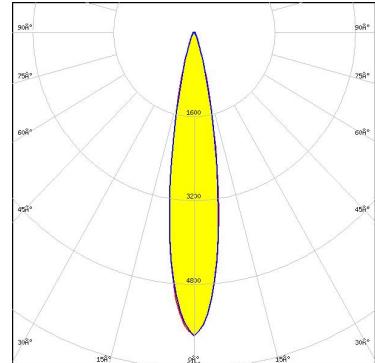


Light distribution files

OPTICAL RESULTS (SIMULATED):

OSRAM
Opto Semiconductors

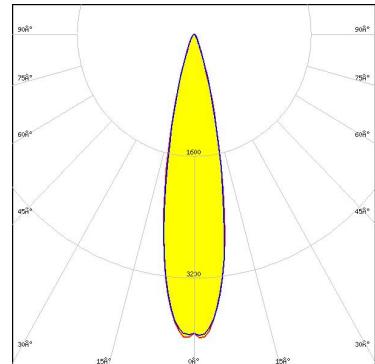
LED OSCONIQ P 3030
FWHM / FWTM 18.0° / 36.0°
Efficiency 94 %
Peak intensity 5.8 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

OSRAM
Opto Semiconductors

LED OSCONIQ P 3737 (2W) PUSRA1
FWHM / FWTM 22.0° / 40.0°
Efficiency 87 %
Peak intensity 4 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

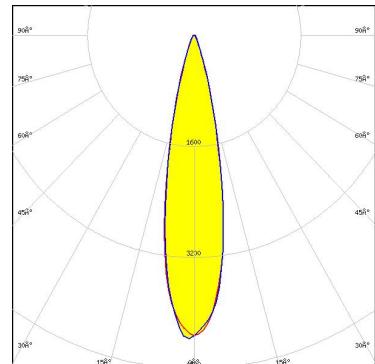


Protective plate, glass

Light distribution files

OSRAM
Opto Semiconductors

LED OSCONIQ P 3737 (2W) PUSRA1
FWHM / FWTM 22.0° / 40.0°
Efficiency 92 %
Peak intensity 4.4 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

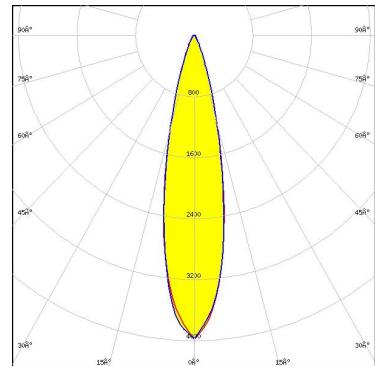


Light distribution files

OPTICAL RESULTS (SIMULATED):

OSRAM
Opto Semiconductors

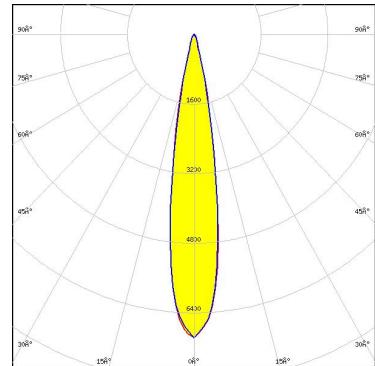
LED OSCONIQ P 3737 Flat
FWHM / FWTM 24.0° / 44.0°
Efficiency 93 %
Peak intensity 4 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

OSRAM
Opto Semiconductors

LED OSLON Pure 1414
FWHM / FWTM 18.0° / 30.0°
Efficiency 93 %
Peak intensity 7 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

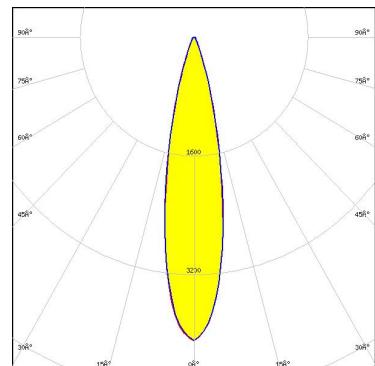


Light distribution files

OSRAM
Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3
FWHM / FWTM 22.0° / 42.0°
Efficiency 89 %
Peak intensity 4.1 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

Protective plate, glass

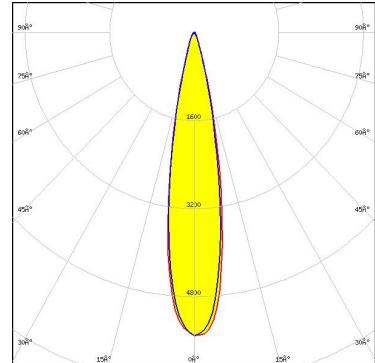


Light distribution files

OPTICAL RESULTS (SIMULATED):

OSRAM
Opto Semiconductors

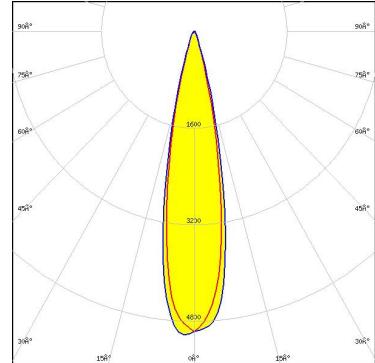
LED OSLON Square Flat
FWHM / FWTM 20.0° / 35.0°
Efficiency 94 %
Peak intensity 5.5 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

OSRAM
Opto Semiconductors

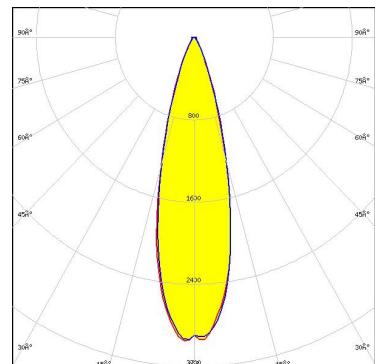
LED OSTAR Projection Compact (KW.CSLNM1.TG)
FWHM / FWTM 21.0° / 38.0°
Efficiency 94 %
Peak intensity 5 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:



Light distribution files

PHILIPS

LED Fortimo FastFlex LED 2x8 DAX G4
FWHM / FWTM 28.0° / 50.0°
Efficiency 92 %
Peak intensity 3 cd/lm
LEDs/each optic 1
Light colour/type White
Required components:

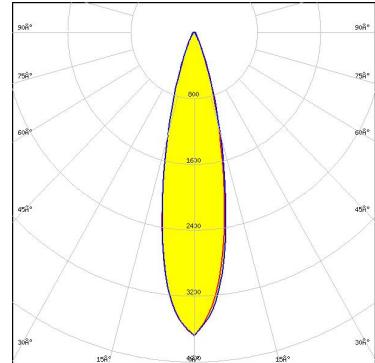


Light distribution files

OPTICAL RESULTS (SIMULATED):

SAMSUNG

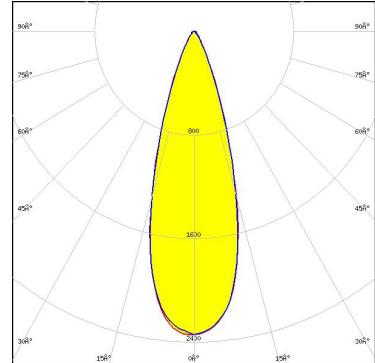
LED LH231B
 FWHM / FWTM 24.0° / 46.0°
 Efficiency 92 %
 Peak intensity 3.7 cd/lm
 LEDs/each optic 4
 Light colour/type White
 Required components:



Light distribution files

SAMSUNG

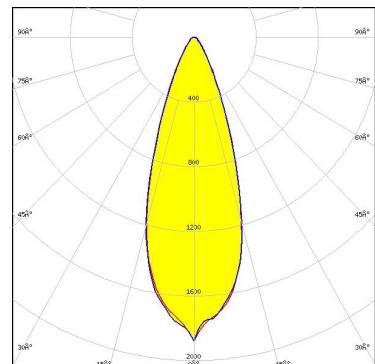
LED LH351C
 FWHM / FWTM 32.0° / 56.0°
 Efficiency 91 %
 Peak intensity 2.3 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



Light distribution files

SAMSUNG

LED LH351D
 FWHM / FWTM 36.0° / 64.0°
 Efficiency 92 %
 Peak intensity 1.9 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:



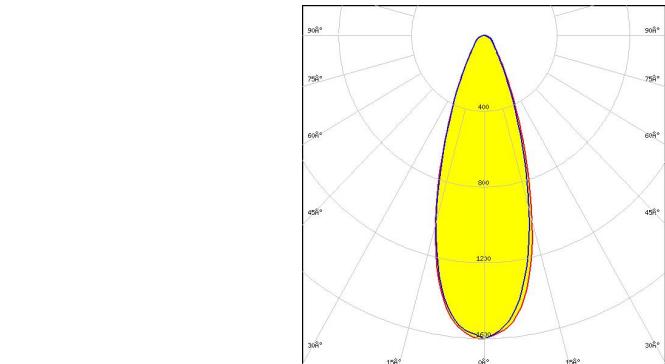
Light distribution files

OPTICAL RESULTS (SIMULATED):

SAMSUNG

LED LH502C
 FWHM / FWTM 36.0° / 70.0°
 Efficiency 89 %
 Peak intensity 1.6 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

Protective plate, glass



Light distribution files

SAMSUNG

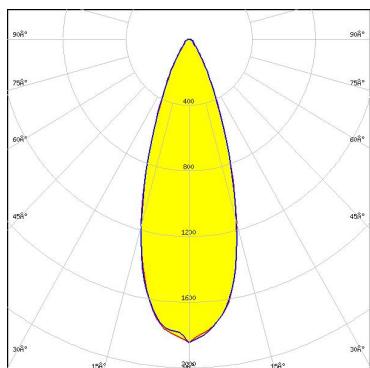
LED LH508A Plus
 FWHM / FWTM 32.0° / 62.0°
 Efficiency 93 %
 Peak intensity 2.1 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

Light distribution files

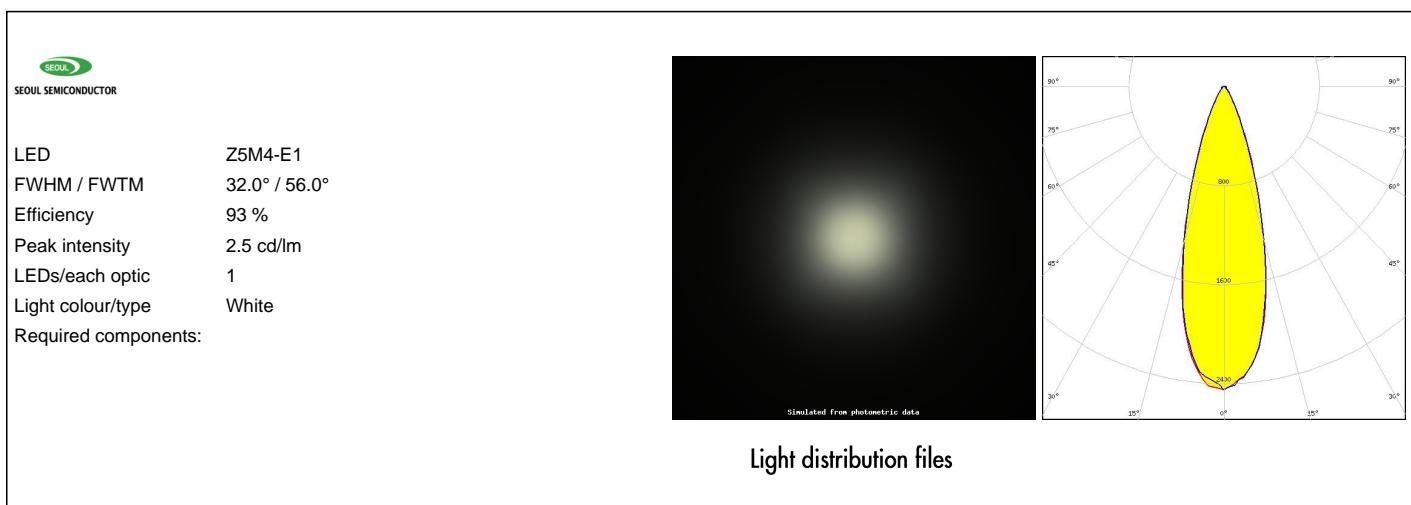
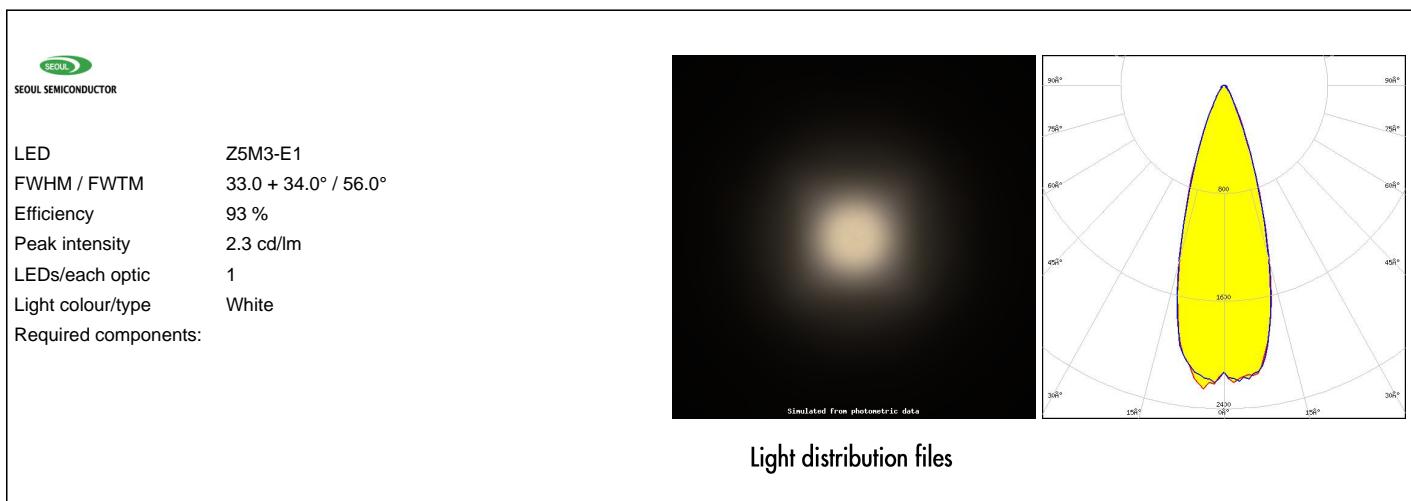
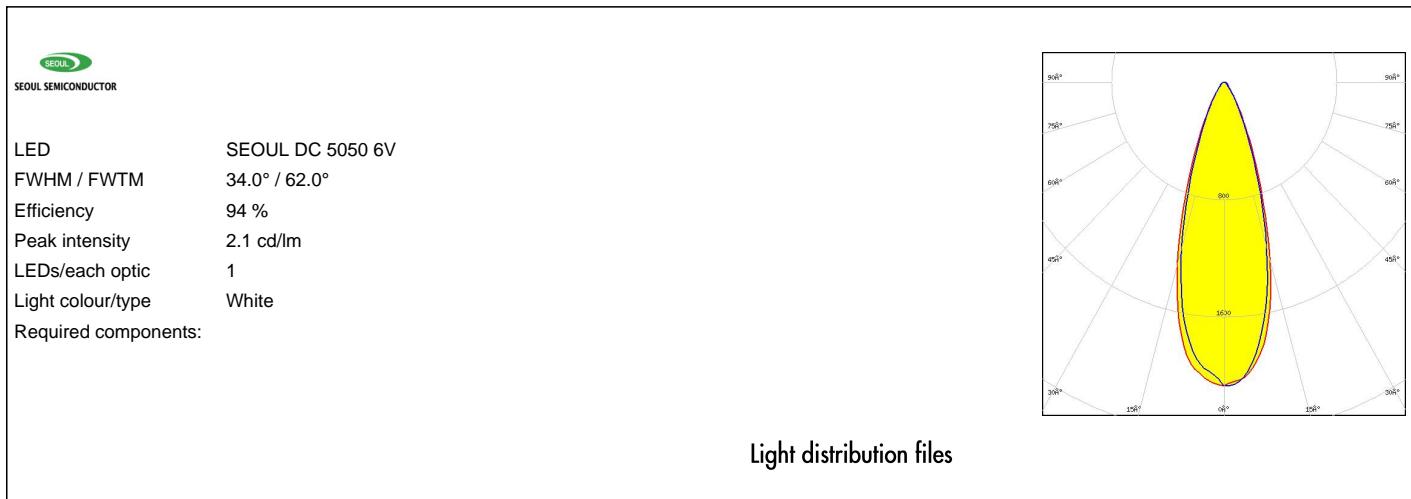
 SEOUL SEMICONDUCTOR

LED MJT 5050
 FWHM / FWTM 36.0° / 66.0°
 Efficiency 92 %
 Peak intensity 1.8 cd/lm
 LEDs/each optic 1
 Light colour/type White
 Required components:

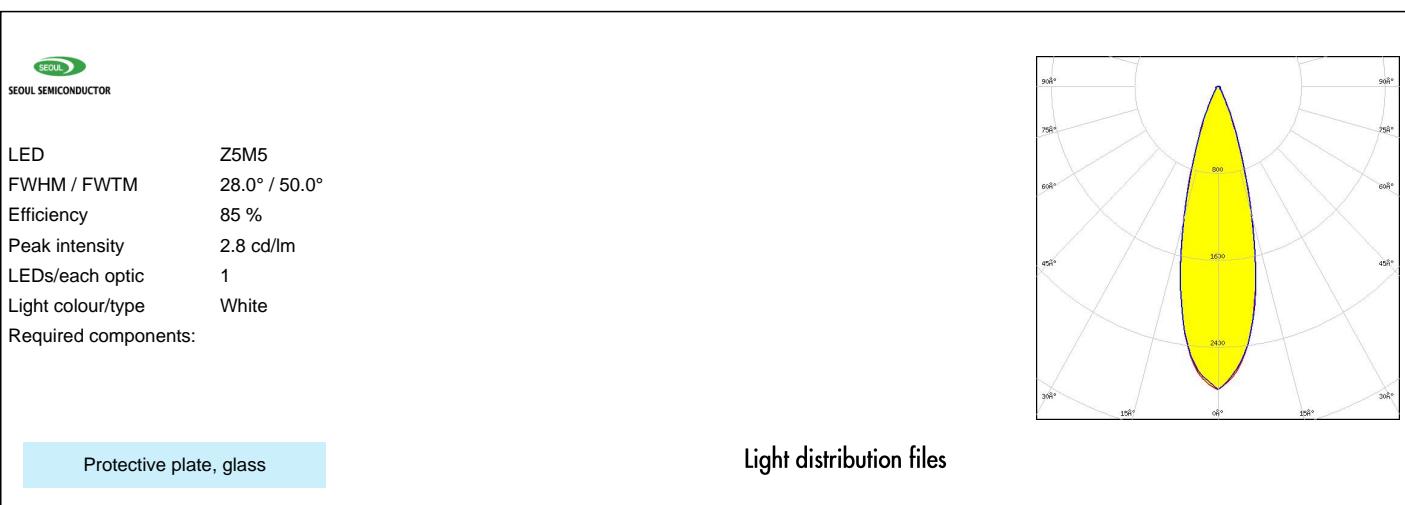
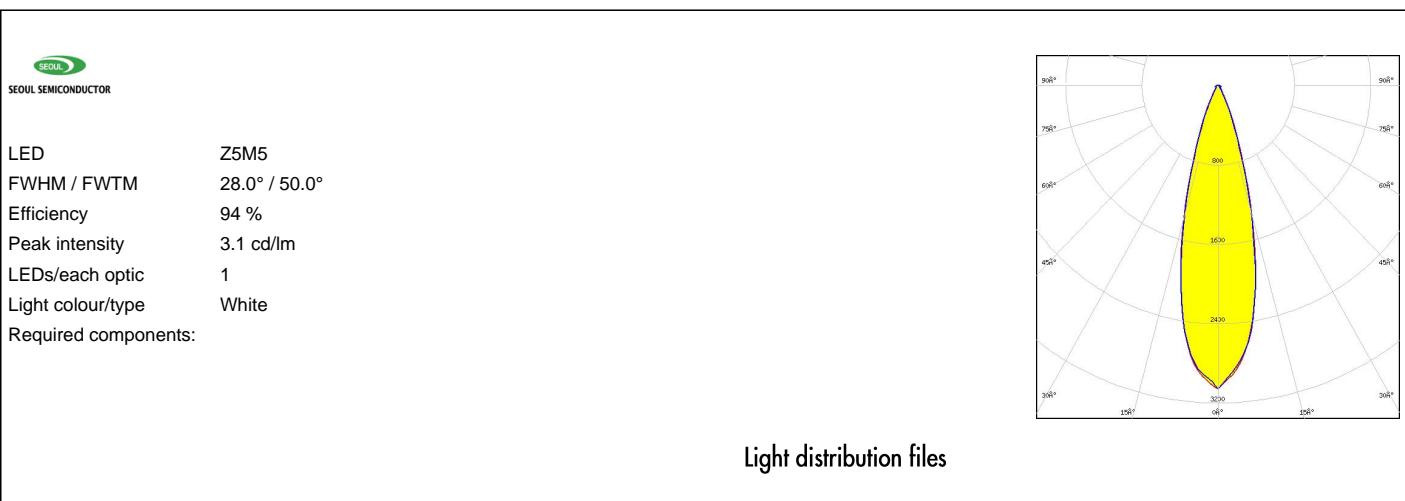
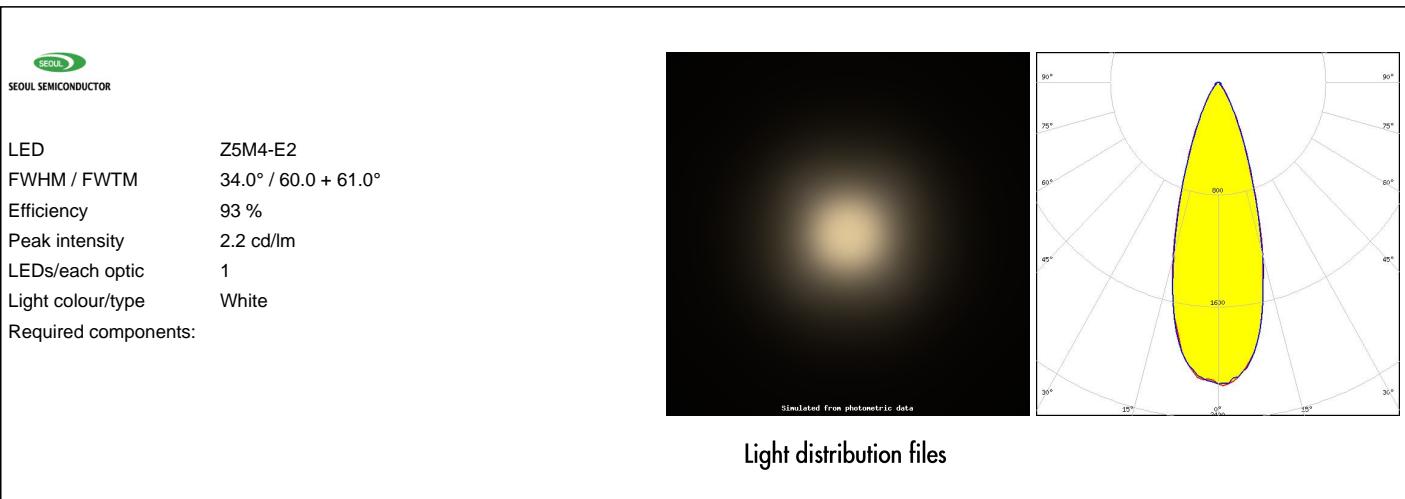
Light distribution files



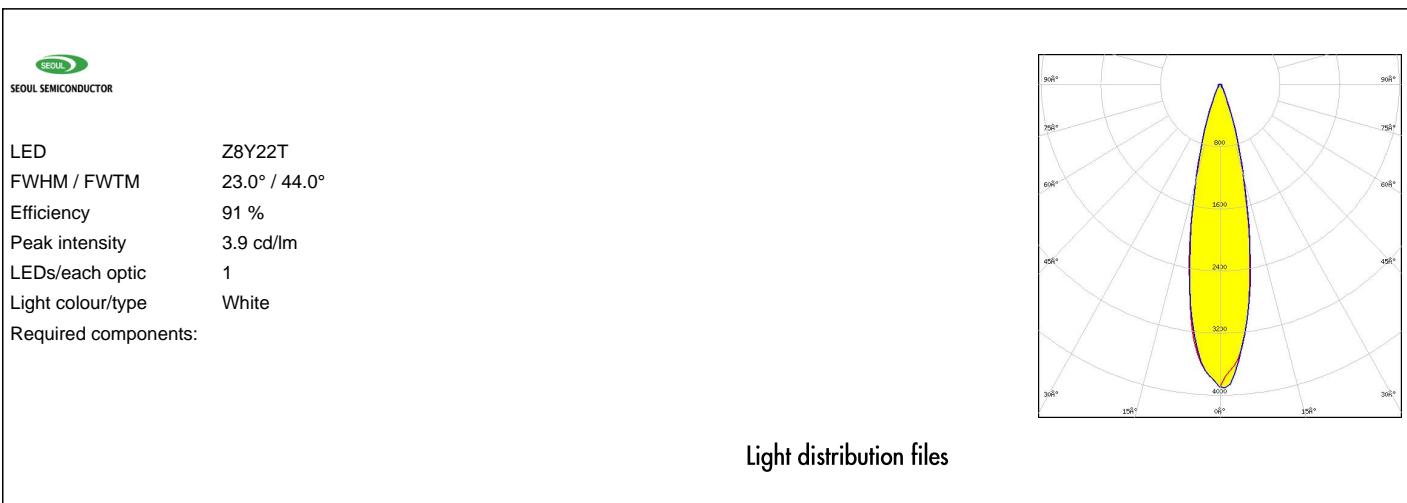
OPTICAL RESULTS (SIMULATED):



OPTICAL RESULTS (SIMULATED):



OPTICAL RESULTS (SIMULATED):



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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