

HB-2X2-RS

~10° spot beam

SPECIFICATION:

Dimensions	50.0 x 50.0 mm
Height	10 mm
Fastening	screw
ROHS compliant	yes ⓘ

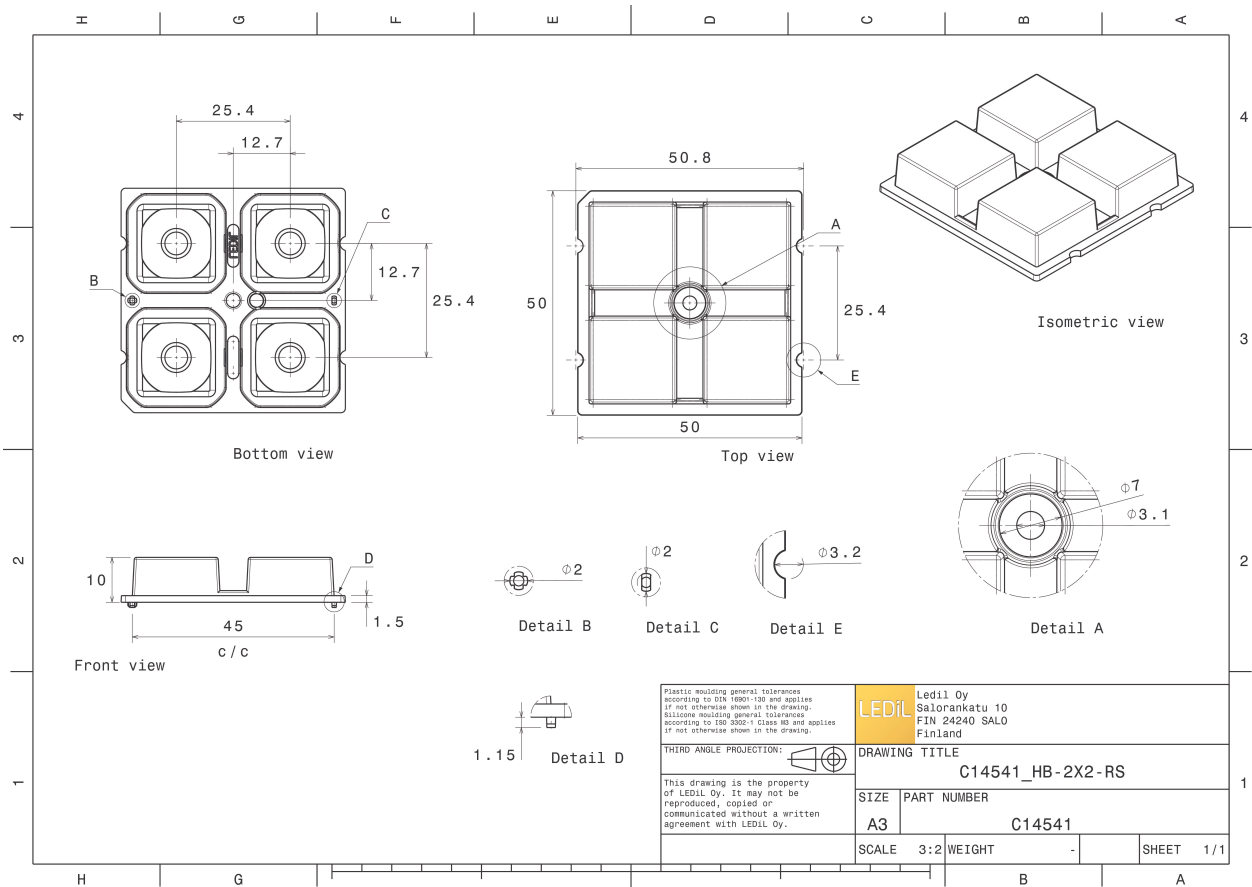
MATERIALS:

Component	Type	Material	Colour	Finish
HB-2X2-RS	Multi-lens	PMMA	clear	



ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C14541_HB-2X2-RS » Box size: 480 x 280 x 300 mm	800	160	160	10.2

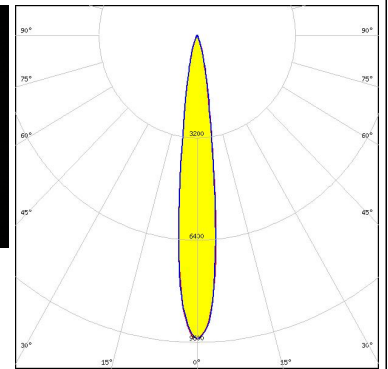


See also our general installation guide: www.ledil.com/installation_guide

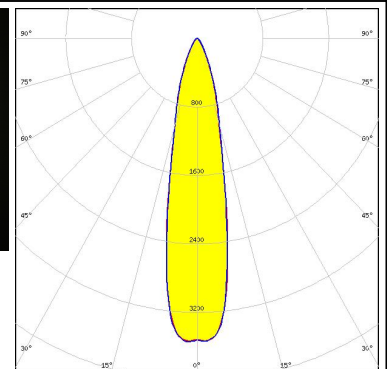
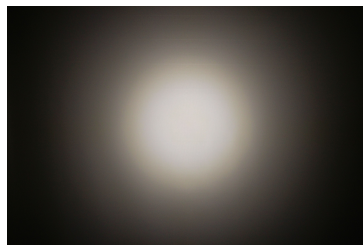
OPTICAL RESULTS (MEASURED):



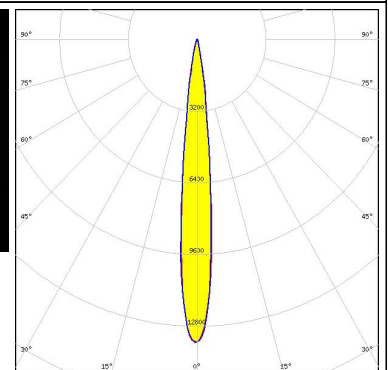
LED QUICK FLUX XTP 2x6 xxx LS G5
 FWHM / FWTM 14.0° / 29.0°
 Efficiency 94 %
 Peak intensity 9.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



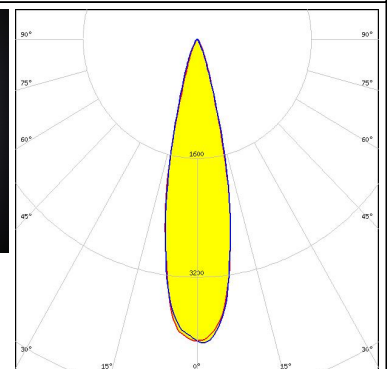
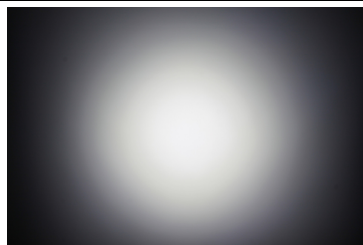
LED J Series 5050C 6V E Class
 FWHM / FWTM 22.0° / 50.0°
 Efficiency 95 %
 Peak intensity 3.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LED XD16
 FWHM / FWTM 11.0° / 23.0°
 Efficiency 93 %
 Peak intensity 13.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



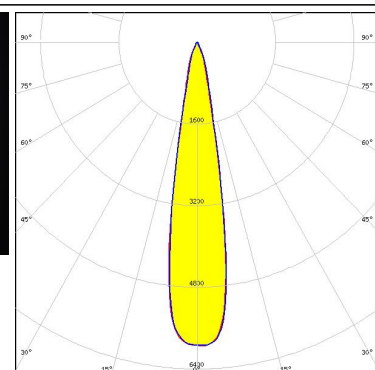
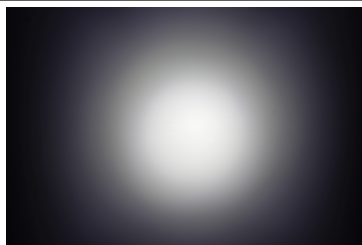
LED XHP35 HD
 FWHM / FWTM 24.0° / 42.0°
 Efficiency 89 %
 Peak intensity 4.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



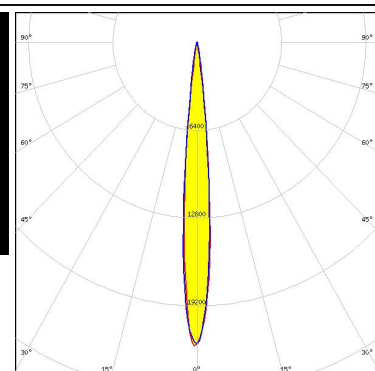
OPTICAL RESULTS (MEASURED):



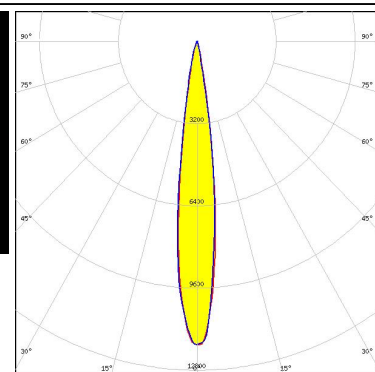
LED XM-L3
FWHM / FWTM 20.0° / 36.0°
Efficiency 96 %
Peak intensity 6 cd/lm
LEDs/each optic 1
Light colour White
Required components:



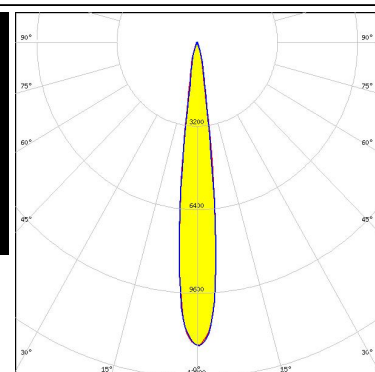
LED XP-E2
FWHM / FWTM 10.0° / 18.0°
Efficiency 94 %
Peak intensity 22.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED XP-G2
FWHM / FWTM 14.0° / 25.0°
Efficiency 94 %
Peak intensity 11.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



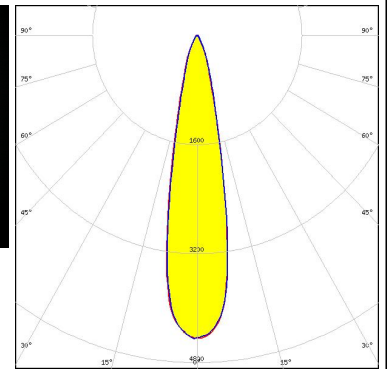
LED XP-L HI
FWHM / FWTM 13.0° / 25.0°
Efficiency 94 %
Peak intensity 11.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:



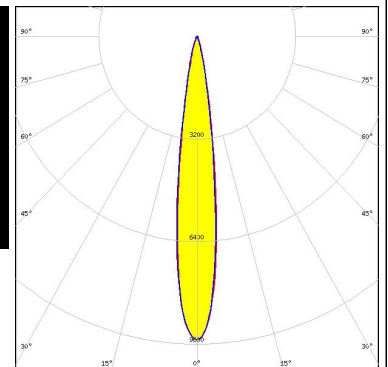
OPTICAL RESULTS (MEASURED):



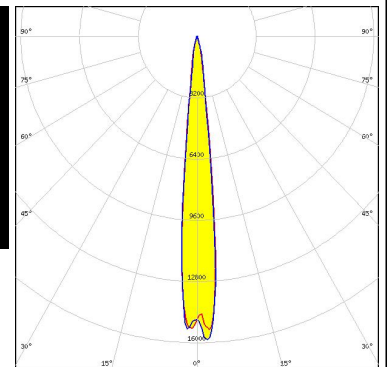
LED XP-L2
FWHM / FWTM 21.0° / 43.0°
Efficiency 94 %
Peak intensity 4.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



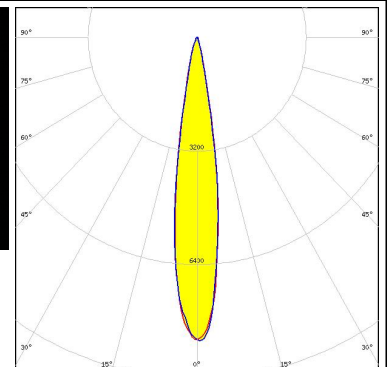
LED LUXEON V2
FWHM / FWTM 15.0° / 28.0°
Efficiency 94 %
Peak intensity 9.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED SST-10-B130
FWHM / FWTM 12.0° / 21.0°
Efficiency 96 %
Peak intensity 15.9 cd/lm
LEDs/each optic 1
Light colour Deep Red
Required components:



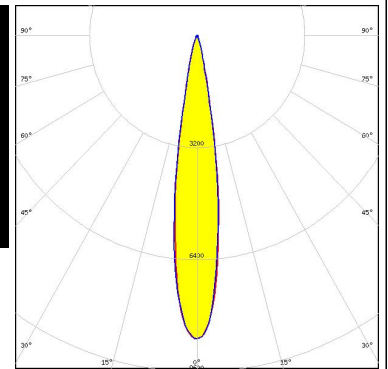
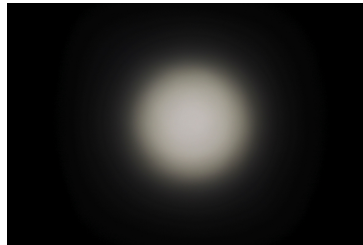
LED NVSW219D
FWHM / FWTM 17.0° / 29.0°
Efficiency 94 %
Peak intensity 8.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:



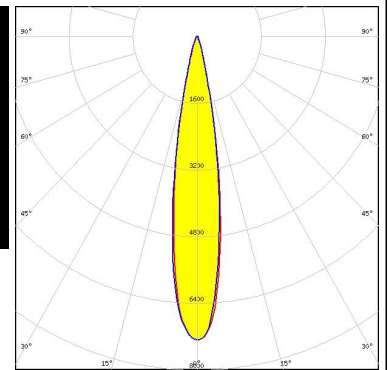
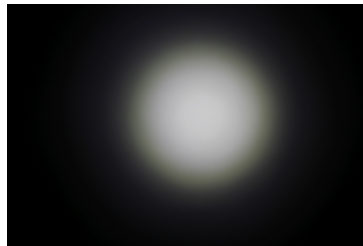
OPTICAL RESULTS (MEASURED):



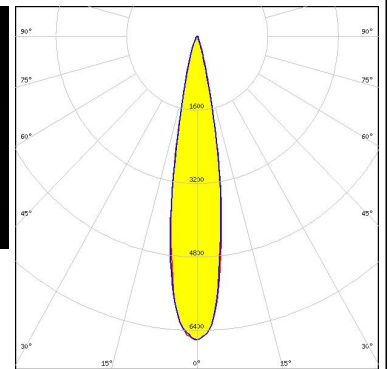
LED NVSW219F
FWHM / FWTM 17.0° / 29.0°
Efficiency 94 %
Peak intensity 8.7 cd/lm
LEDs/each optic 1
Light colour White
Required components:



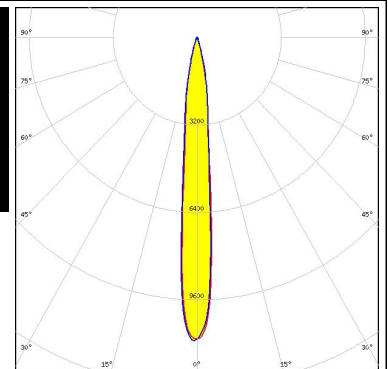
LED NVSW319B
FWHM / FWTM 18.0° / 32.0°
Efficiency 94 %
Peak intensity 7.3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED NVSW3x9A
FWHM / FWTM 19.0° / 33.0°
Efficiency 94 %
Peak intensity 6.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:



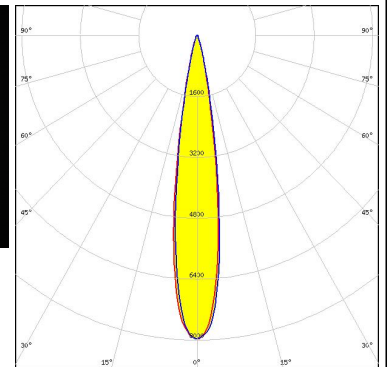
LED NVSxE21A
FWHM / FWTM 11.0° / 28.0°
Efficiency 89 %
Peak intensity 11.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:



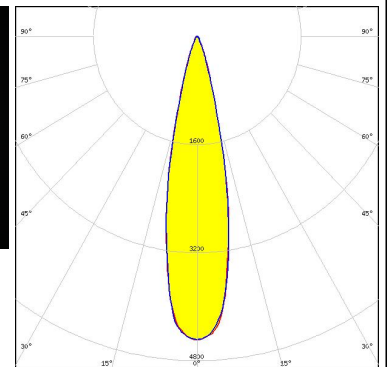
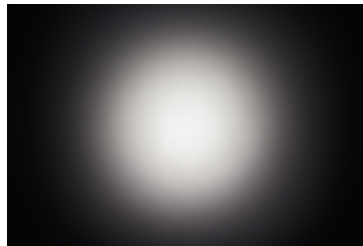
OPTICAL RESULTS (MEASURED):



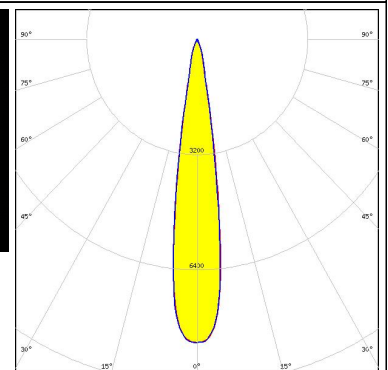
LED NVSxx19B/NVSxx19C
FWHM / FWTM 17.0° / 30.0°
Efficiency 93 %
Peak intensity 8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



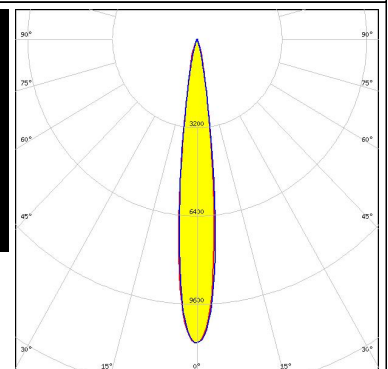
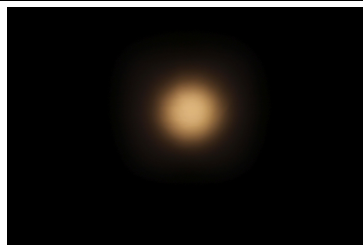
LED NWSx229A
FWHM / FWTM 23.0° / 41.0°
Efficiency 94 %
Peak intensity 4.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED PL-BRICK HP 3800 2x8 SSG
FWHM / FWTM 16.0° / 28.0°
Efficiency 95 %
Peak intensity 8.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED PrevaLED Core Z3 LES9
FWHM / FWTM 13.5° / 26.0°
Efficiency 95 %
Peak intensity 11 cd/lm
LEDs/each optic 1
Light colour White
Required components:

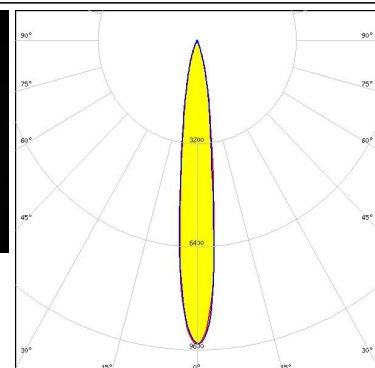
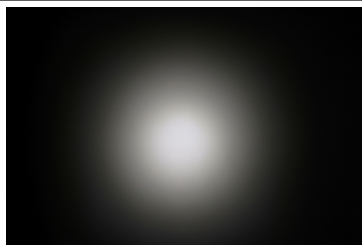


OPTICAL RESULTS (MEASURED):

OSRAM

Opto Semiconductors

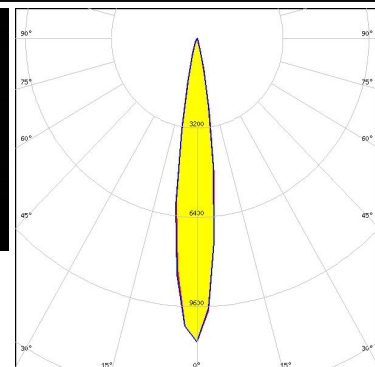
LED OSCONIQ C 3030
FWHM / FWTM 13.0° / 31.0°
Efficiency 95 %
Peak intensity 9.4 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OSRAM

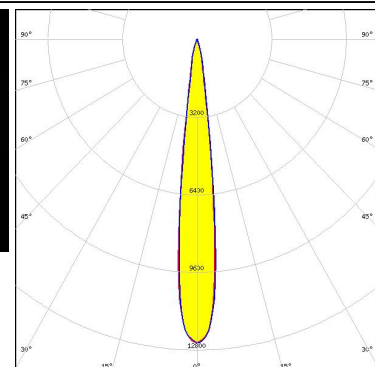
Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3
FWHM / FWTM 15.0° / 27.0°
Efficiency 90 %
Peak intensity 11 cd/lm
LEDs/each optic 1
Light colour White
Required components:



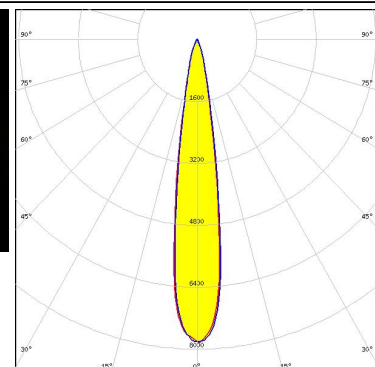
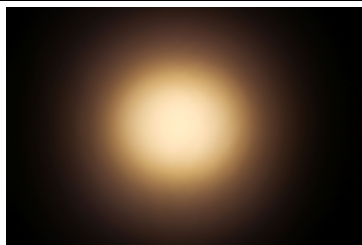
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4
FWHM / FWTM 13.0° / 23.0°
Efficiency 93 %
Peak intensity 12.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



PHILIPS

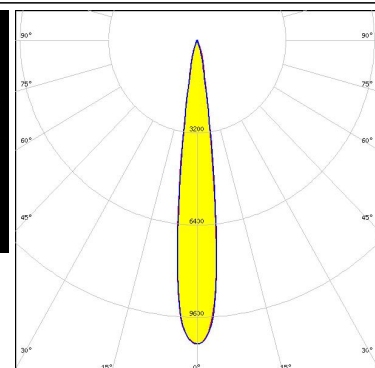
LED Fortimo FastFlex LED 2x8 DA G4+
FWHM / FWTM 17.0° / 32.0°
Efficiency 96 %
Peak intensity 7.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OPTICAL RESULTS (MEASURED):

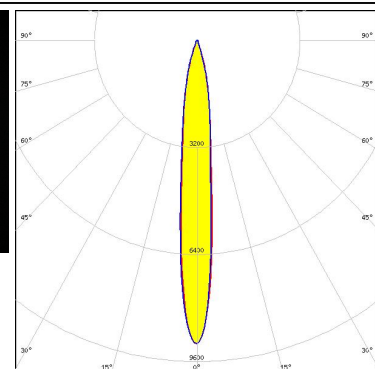
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G5
 FWHM / FWTM 14.0° / 27.0°
 Efficiency 96 %
 Peak intensity 10.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



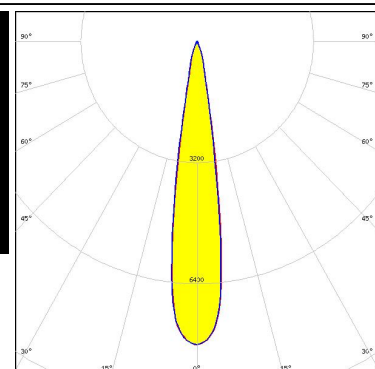
SAMSUNG

LED HiLOM RC12 Z (LH181B)
 FWHM / FWTM 12.0° / 33.0°
 Efficiency 97 %
 Peak intensity 9.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



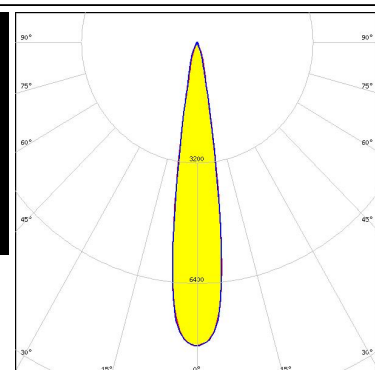
SAMSUNG

LED HiLOM RH12 Z (LH351C)
 FWHM / FWTM 17.0° / 29.0°
 Efficiency 96 %
 Peak intensity 8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

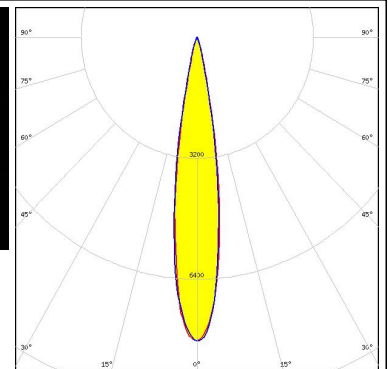
LED HiLOM RH16 (LH351C)
 FWHM / FWTM 17.0° / 30.0°
 Efficiency 94 %
 Peak intensity 8.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

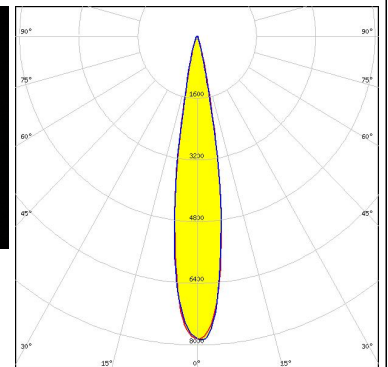
SAMSUNG

LED LH351B
FWHM / FWTM 17.0° / 29.0°
Efficiency 89 %
Peak intensity 8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



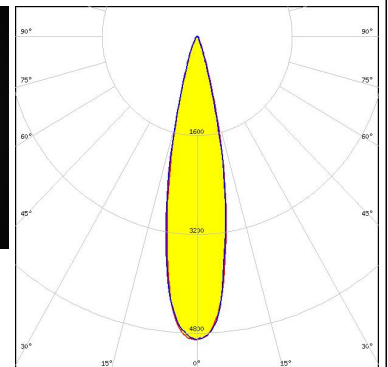
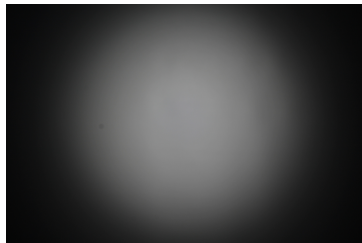
SAMSUNG

LED LH351C
FWHM / FWTM 18.0° / 30.0°
Efficiency 94 %
Peak intensity 7.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:

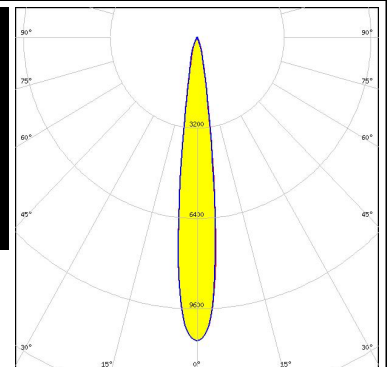
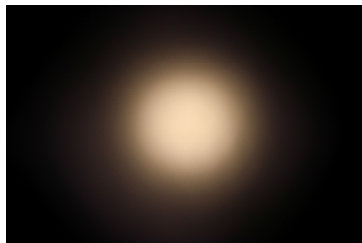


SAMSUNG

LED LH351D
FWHM / FWTM 22.0° / 38.0°
Efficiency 94 %
Peak intensity 4.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED LED-Pa-L15c2W11c2-xxx-C050-01
FWHM / FWTM 14.0° / 27.0°
Efficiency 96 %
Peak intensity 10.7 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OPTICAL RESULTS (MEASURED):

<p>SEOUL SEMICONDUCTOR</p> <p>LED Z5M3</p> <p>FWHM / FWTM 16.0° / 31.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 7.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z5M4</p> <p>FWHM / FWTM 17.0° / 32.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 7.4 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22</p> <p>FWHM / FWTM 14.0° / 35.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 6.6 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22P</p> <p>FWHM / FWTM 16.0° / 33.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 6.9 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

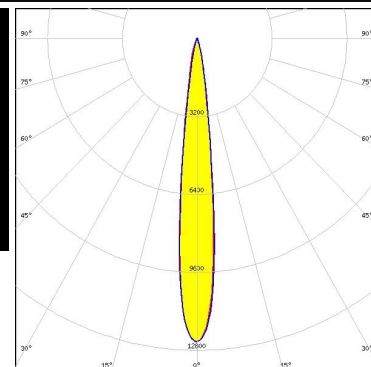
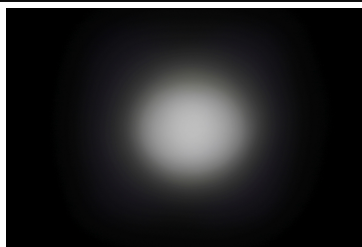
OPTICAL RESULTS (MEASURED):

TRIDONIC

LED RLE 2x4 2000lm HP EXC2 OTD
FWHM / FWTM 13.0° / 25.0°
Efficiency 94 %
Peak intensity 12.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:

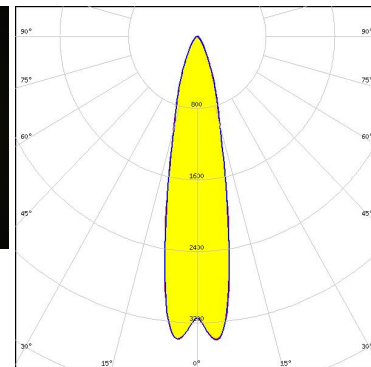
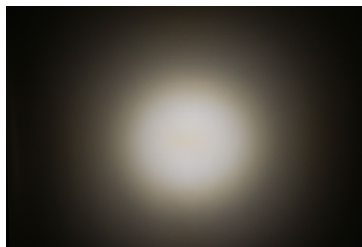
TRIDONIC

LED RLE 2x8 4000lm HP EXC2 OTD
FWHM / FWTM 13.0° / 25.0°
Efficiency 94 %
Peak intensity 12.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



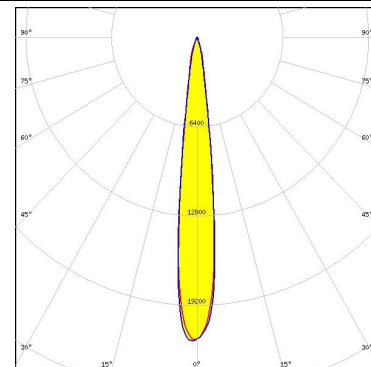
TRIDONIC

LED RLE 2x8 6000lm HP HE EXC3 OTD
FWHM / FWTM 23.0° / 51.0°
Efficiency 97 %
Peak intensity 3.4 cd/lm
LEDs/each optic 1
Light colour White
Required components:



TRIDONIC

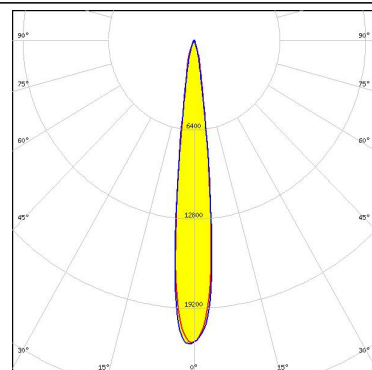
LED RLE G1 49x121mm 2000lm xxx EXC OTD
FWHM / FWTM 13.0° / 27.0°
Efficiency 94 %
Peak intensity 10.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OPTICAL RESULTS (MEASURED):

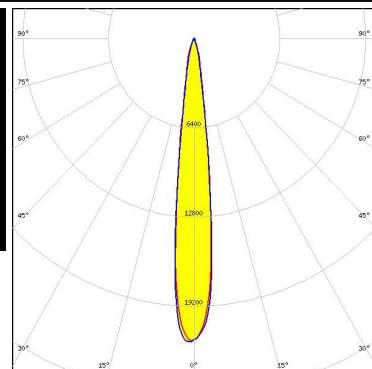
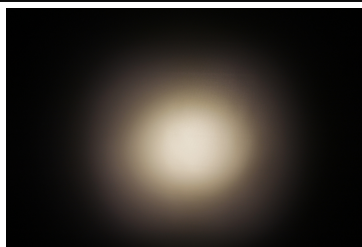
TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD
 FWHM / FWTM 13.0° / 27.0°
 Efficiency 94 %
 Peak intensity 10.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



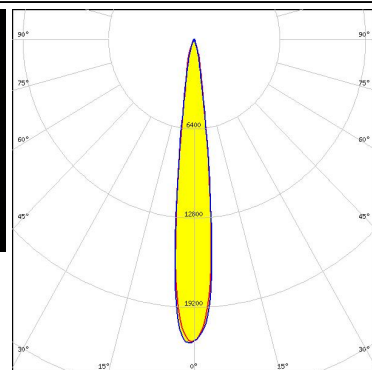
TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD
 FWHM / FWTM 13.0° / 27.0°
 Efficiency 94 %
 Peak intensity 10.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



TRIDONIC

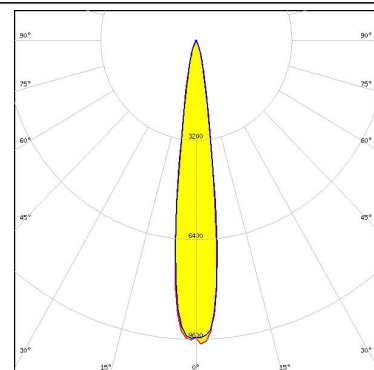
LED RLE G1 49x245mm 4000lm xxx EXC OTD
 FWHM / FWTM 13.0° / 27.0°
 Efficiency 94 %
 Peak intensity 10.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



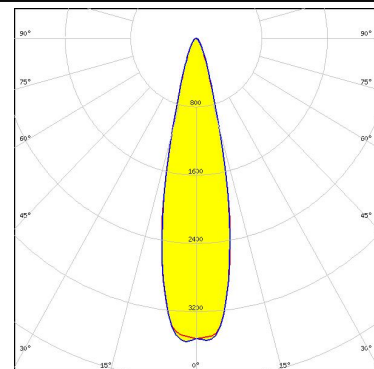
OPTICAL RESULTS (SIMULATED):



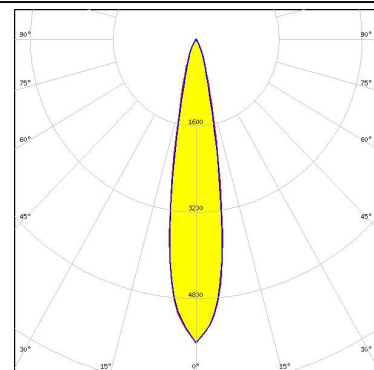
LED XHP35 HI
FWHM / FWTM 14.0° / 29.0°
Efficiency 93 %
Peak intensity 9.9 cd/Im
LEDs/each optic 1
Light colour White
Required components:



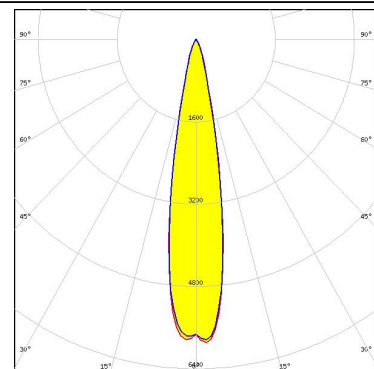
LED XHP35.2 HD
FWHM / FWTM 24.0° / 46.0°
Efficiency 93 %
Peak intensity 3.6 cd/Im
LEDs/each optic 1
Light colour White
Required components:



LED XM-L
FWHM / FWTM 19.0° / 38.0°
Efficiency 92 %
Peak intensity 5.6 cd/Im
LEDs/each optic 1
Light colour White
Required components:



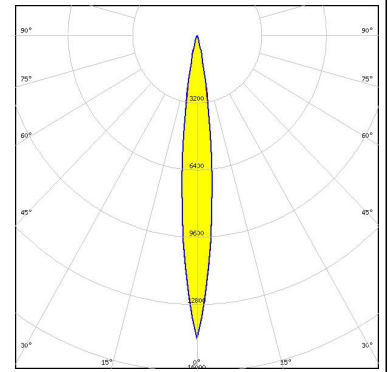
LED XM-L2
FWHM / FWTM 18.0° / 34.0°
Efficiency 94 %
Peak intensity 6.9 cd/Im
LEDs/each optic 1
Light colour White
Required components:



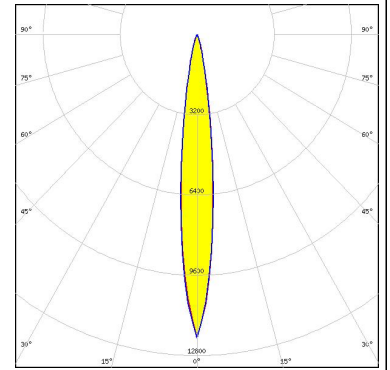
OPTICAL RESULTS (SIMULATED):



LED XP-E2
FWHM / FWTM 12.0° / 26.0°
Efficiency 95 %
Peak intensity 14.4 cd/lm
LEDs/each optic 1
Light colour Red
Required components:

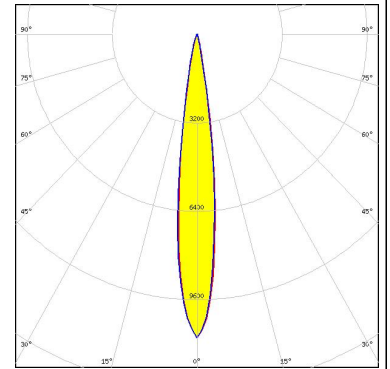


LED XP-G
FWHM / FWTM 13.0° / 27.0°
Efficiency 93 %
Peak intensity 12.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:

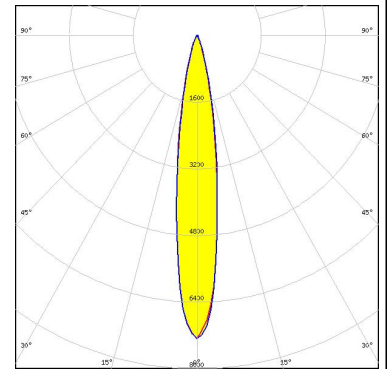


LED XP-G2
FWHM / FWTM 14.0° / 26.0°
Efficiency 89 %
Peak intensity 11 cd/lm
LEDs/each optic 1
Light colour White
Required components:

Protective plate, glass



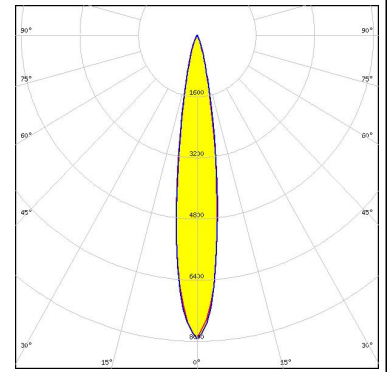
LED XP-G2 HE
FWHM / FWTM 16.0° / 34.0°
Efficiency 94 %
Peak intensity 7.3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OPTICAL RESULTS (SIMULATED):

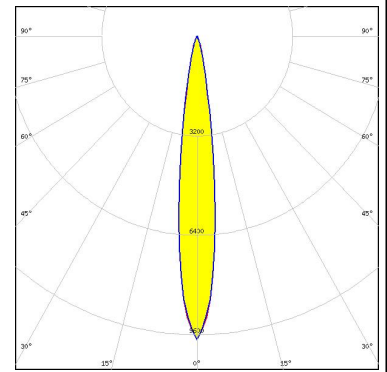


LED XP-G3
FWHM / FWTM 16.0° / 33.0°
Efficiency 94 %
Peak intensity 7.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:

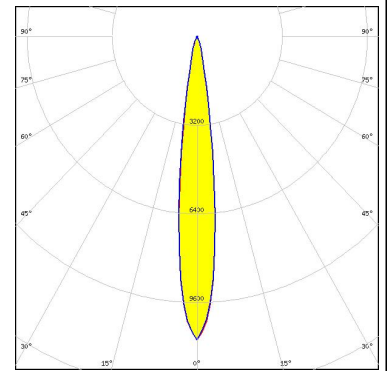


LED XP-G4
FWHM / FWTM 14.0° / 28.0°
Efficiency 88 %
Peak intensity 9.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:

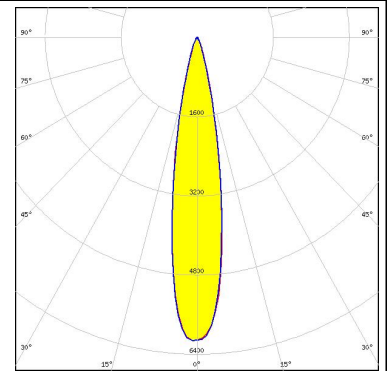
Protective plate, glass



LED XP-G4
FWHM / FWTM 14.0° / 26.0°
Efficiency 95 %
Peak intensity 11 cd/lm
LEDs/each optic 1
Light colour White
Required components:



LED XP-L HD
FWHM / FWTM 19.0° / 35.0°
Efficiency 94 %
Peak intensity 6.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:

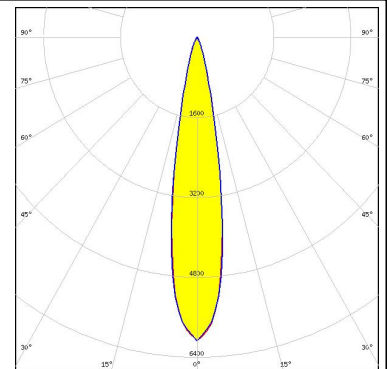


OPTICAL RESULTS (SIMULATED):



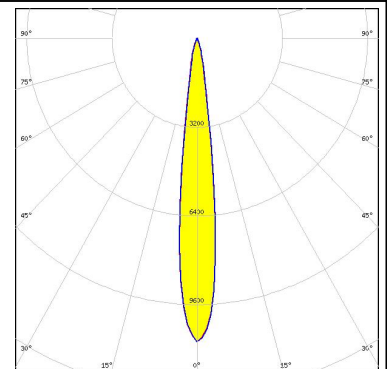
LED XP-L HD
FWHM / FWTM 18.0° / 34.0°
Efficiency 90 %
Peak intensity 6.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:

Protective plate, glass



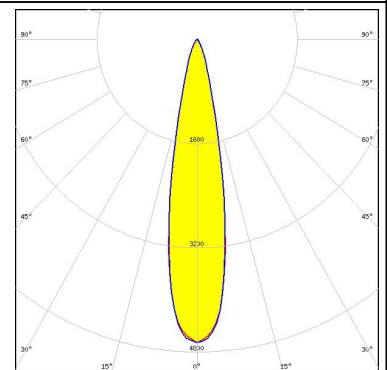
LED XP-L HI
FWHM / FWTM 13.0° / 25.0°
Efficiency 89 %
Peak intensity 10.9 cd/lm
LEDs/each optic 1
Light colour White
Required components:

Protective plate, glass

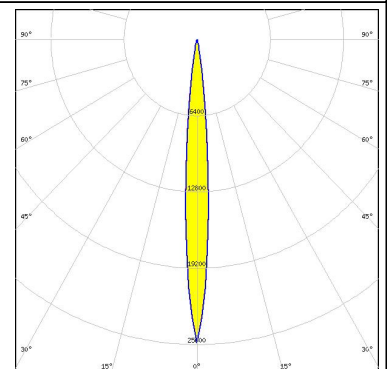


LED XP-L2
FWHM / FWTM 20.0° / 40.0°
Efficiency 89 %
Peak intensity 4.7 cd/lm
LEDs/each optic 1
Light colour White
Required components:

Protective plate, glass



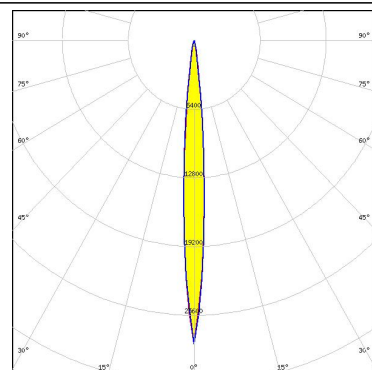
LED XP-P
FWHM / FWTM 8.0° / 18.0°
Efficiency 95 %
Peak intensity 25.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OPTICAL RESULTS (SIMULATED):



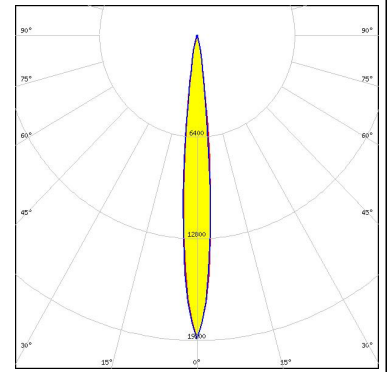
LED XQ-E HI
FWHM / FWTM 8.0° / 18.0°
Efficiency 94 %
Peak intensity 28.3 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OPTICAL RESULTS (SIMULATED):

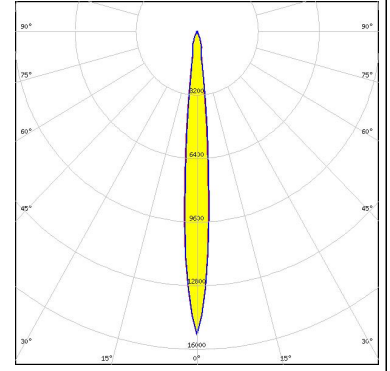
LUMILEDS

LED LUXEON IR Domed 150 (L110-0xxx1500000000)
 FWHM / FWTM 11.0° / 21.0°
 Efficiency 94 %
 Peak intensity 19.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



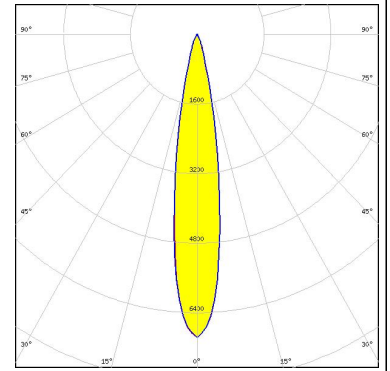
LUMILEDS

LED LUXEON IR Domed 60 (L110-0xxx0600000000)
 FWHM / FWTM 10.0° / 20.0°
 Efficiency 93 %
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

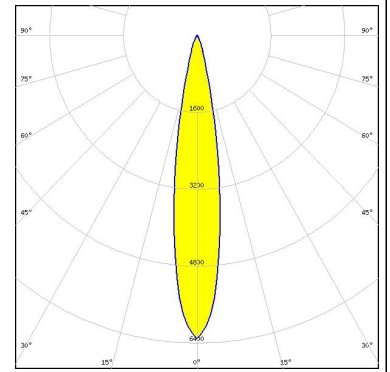
LED LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
 FWHM / FWTM 18.0° / 34.0°
 Efficiency 95 %
 Peak intensity 7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

LED LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
 FWHM / FWTM 18.0° / 34.0°
 Efficiency 88 %
 Peak intensity 6.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass

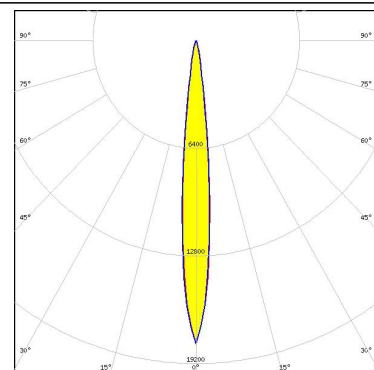


OPTICAL RESULTS (SIMULATED):

OSRAM

Opto Semiconductors

LED OSCONIQ C 2424
FWHM / FWTM 10.0° / 20.0 + 21.0°
Efficiency 96 %
Peak intensity 18 cd/lm
LEDs/each optic 1
Light colour White
Required components:

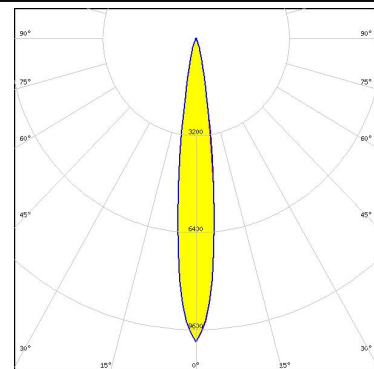


OSRAM

Opto Semiconductors

LED OSCONIQ C 3030
FWHM / FWTM 14.0° / 28.0°
Efficiency 88 %
Peak intensity 10 cd/lm
LEDs/each optic 1
Light colour White
Required components:

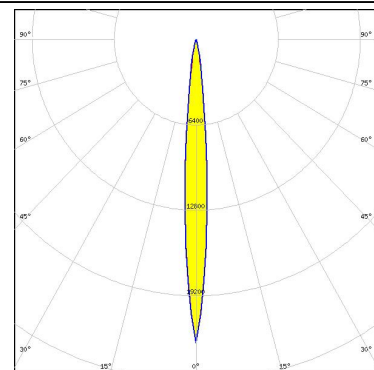
Protective plate, glass



OSRAM

Opto Semiconductors

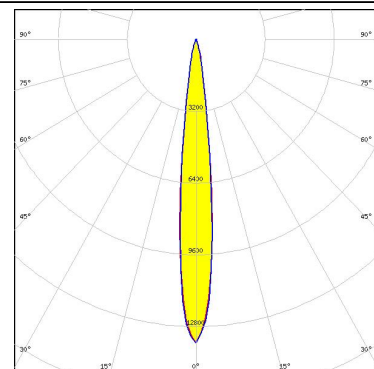
LED OSCONIQ P 3030
FWHM / FWTM 8.0° / 20.0°
Efficiency 95 %
Peak intensity 22.7 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OSRAM

Opto Semiconductors

LED OSCONIQ P 3737 (2W version)
FWHM / FWTM 12.0° / 24.0°
Efficiency 95 %
Peak intensity 13.5 cd/lm
LEDs/each optic 1
Light colour White
Required components:



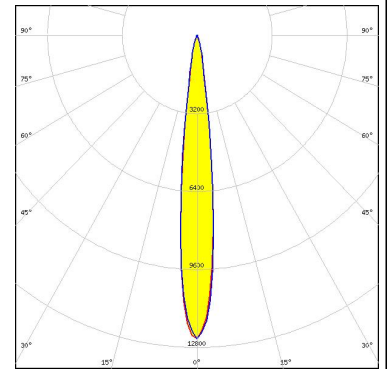
OPTICAL RESULTS (SIMULATED):

OSRAM

Opto Semiconductors

LED OSCONIQ P 3737 (2W version)
 FWHM / FWTM 12.0° / 24.0°
 Efficiency 90 %
 Peak intensity 12.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass

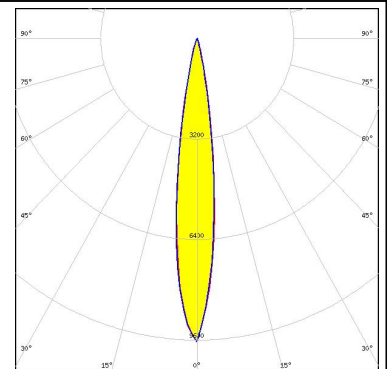


OSRAM

Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3
 FWHM / FWTM 15.0° / 27.0°
 Efficiency 81 %
 Peak intensity 9.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

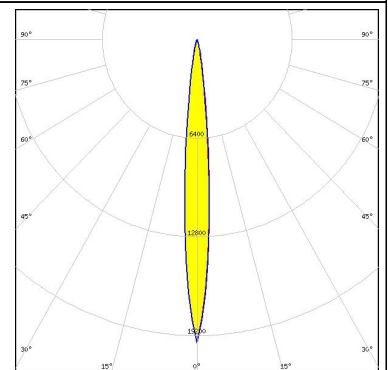
Protective plate, glass



OSRAM

Opto Semiconductors

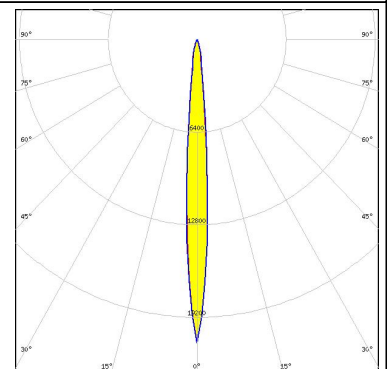
LED OSLON Square Flat
 FWHM / FWTM 10.0° / 20.0°
 Efficiency 96 %
 Peak intensity 19.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

LED OSLON SSL 80
 FWHM / FWTM 8.2° / 18.8°
 Efficiency 94 %
 Peak intensity 21 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

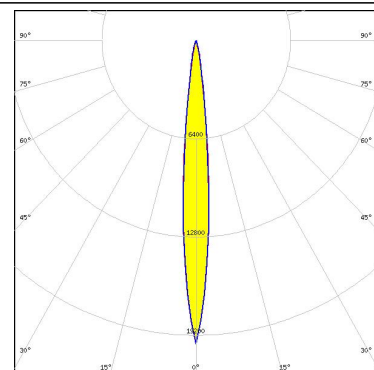


OPTICAL RESULTS (SIMULATED):

OSRAM

Opto Semiconductors

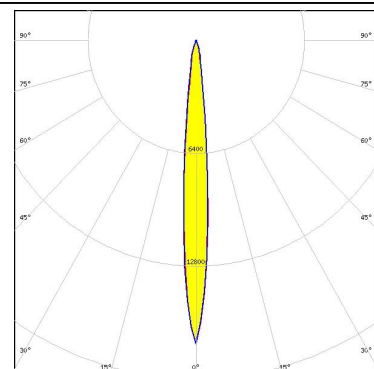
LED OSTAR Projection Compact (KW.CSLNM1.TG)
 FWHM / FWTM 10.0° / 20.0°
 Efficiency 96 %
 Peak intensity 19.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

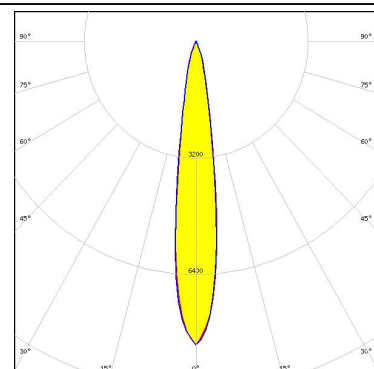
Opto Semiconductors

LED SFH 4715AS
 FWHM / FWTM 9.2° / 21.0°
 Efficiency %
 LEDs/each optic 1
 Light colour IR
 Required components:



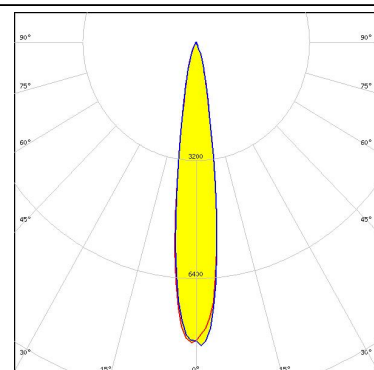
SAMSUNG

LED LH231B
 FWHM / FWTM 16.0° / 32.0°
 Efficiency 95 %
 Peak intensity 8.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

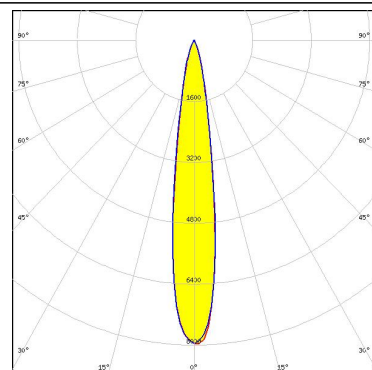
LED LH231B
 FWHM / FWTM 16.0° / 32.0°
 Efficiency 95 %
 Peak intensity 8.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (SIMULATED):

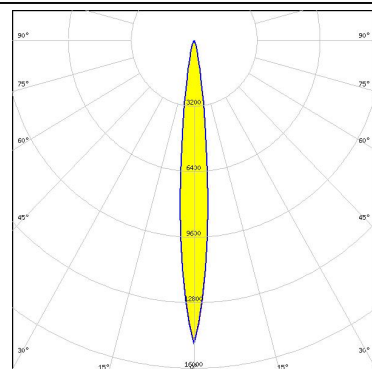
SAMSUNG

LED LH231B
FWHM / FWTM 16.0° / 34.0°
Efficiency 94 %
Peak intensity 8 cd/lm
LEDs/each optic 4
Light colour White
Required components:



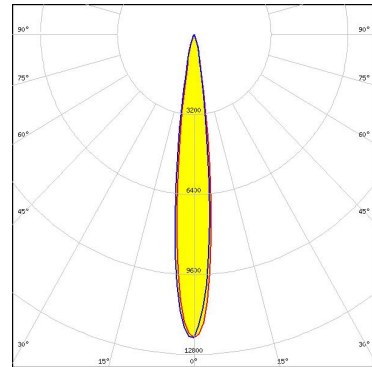
SAMSUNG

LED LM301B
FWHM / FWTM 10.0° / 24.0°
Efficiency 94 %
Peak intensity 14.8 cd/lm
LEDs/each optic 1
Light colour White
Required components:



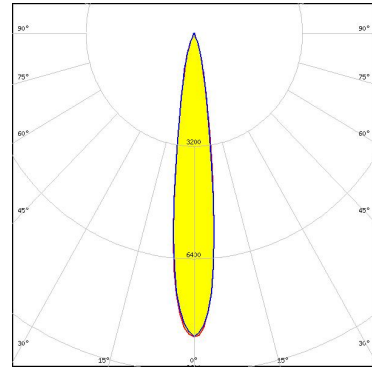
SEOUL SEMICONDUCTOR

LED Z5M1/Z5M2
FWHM / FWTM 13.0° / 26.0°
Efficiency 92 %
Peak intensity 12.1 cd/lm
LEDs/each optic 1
Light colour White
Required components:



SEOUL SEMICONDUCTOR

LED Z8Y22T
FWHM / FWTM 15.0° / 32.0°
Efficiency 94 %
Peak intensity 8.6 cd/lm
LEDs/each optic 1
Light colour White
Required components:



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:

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

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