

HB-2X2-O

~20° + 115° oval beam for aisle lighting

SPECIFICATION:

Dimensions	50.0 x 50.0 mm
Height	10.6 mm
Fastening	glue, pin, screw
ROHS compliant	yes ⓘ

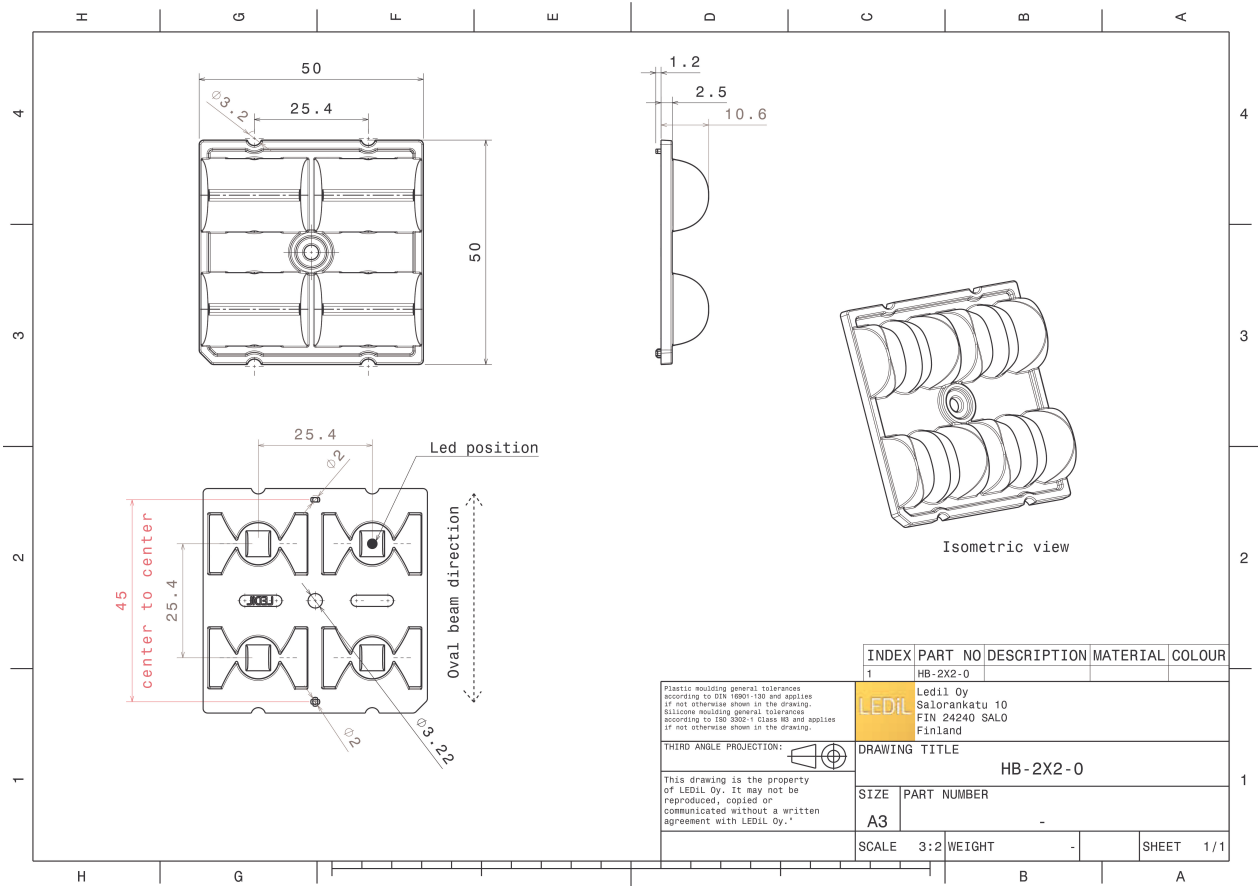
MATERIALS:

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




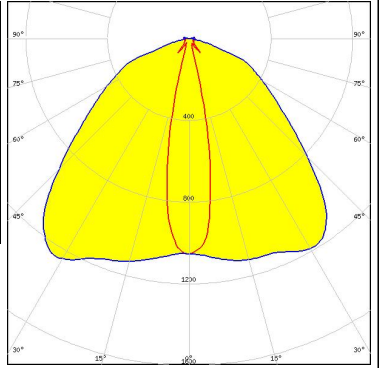
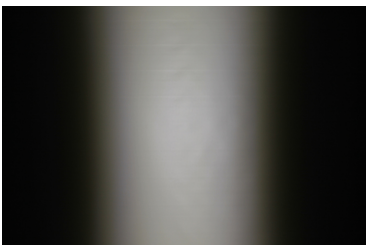
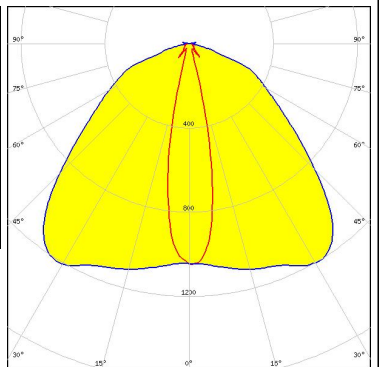
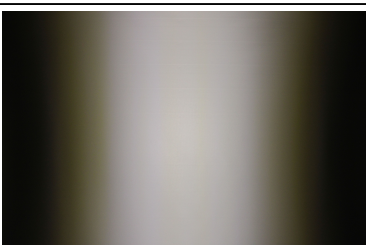
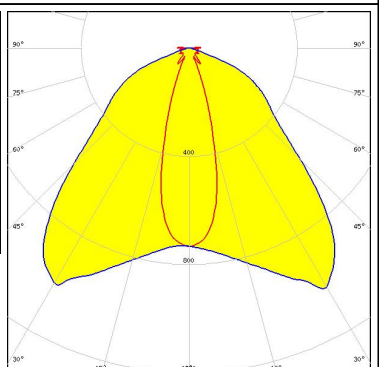
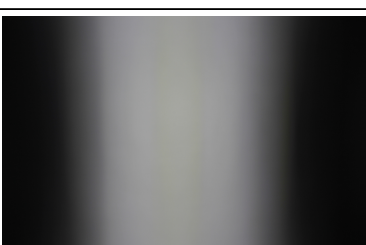
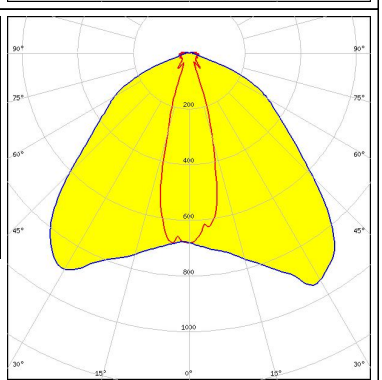
ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C13749_HB-2X2-O » Box size: 480 x 280 x 300 mm	800	160	160	10.4

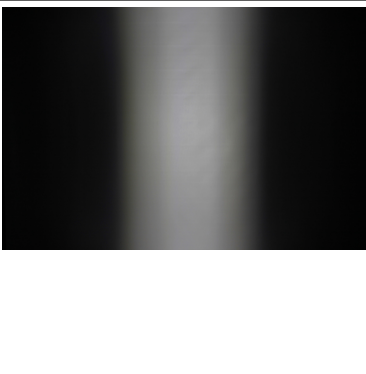
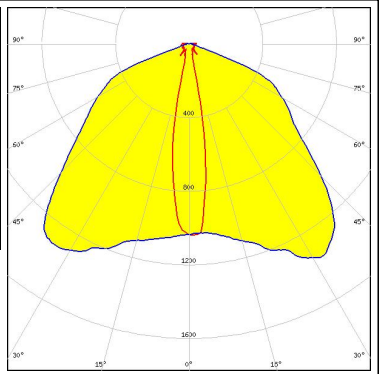

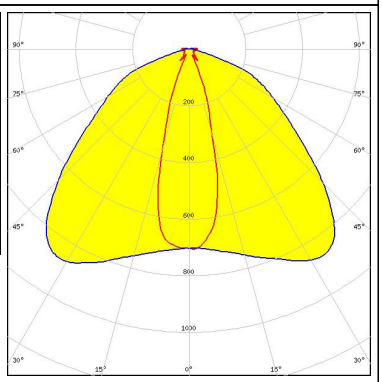
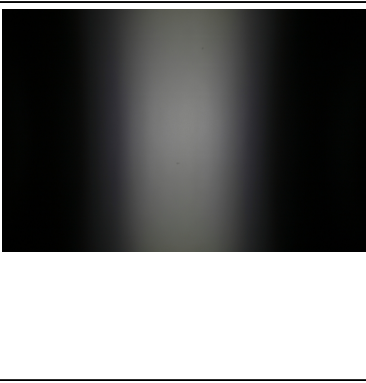
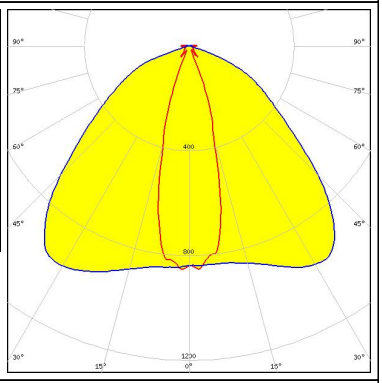
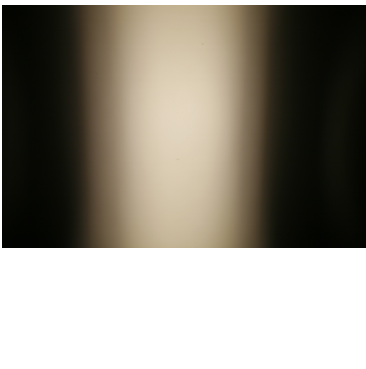
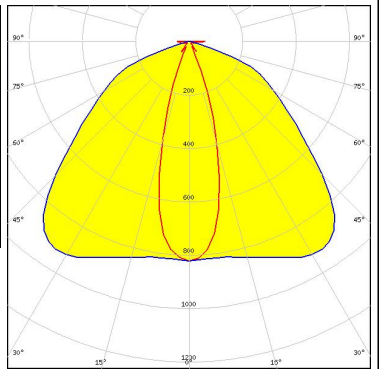


See also our general installation guide: www.ledil.com/installation_guide

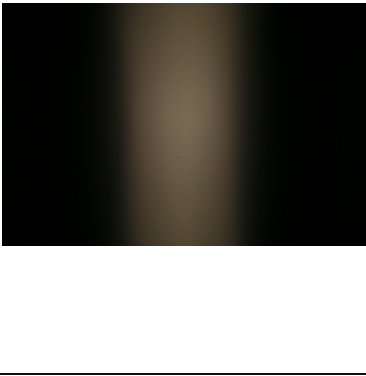
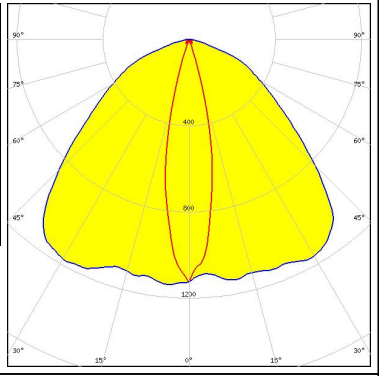
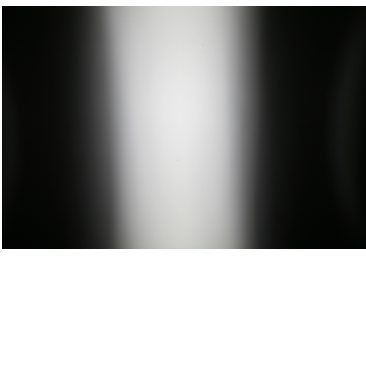
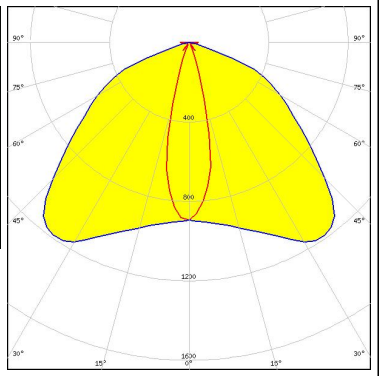
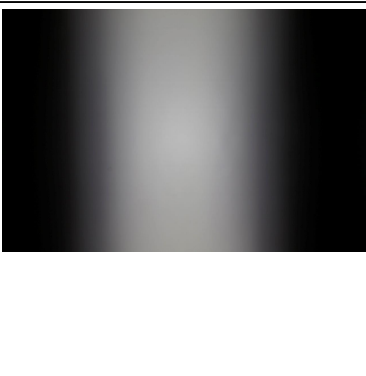
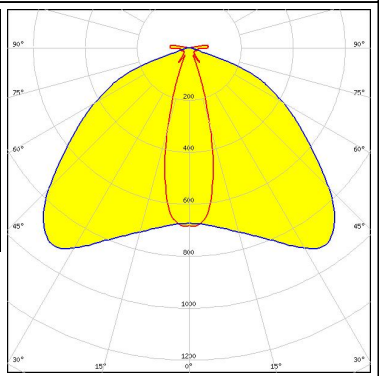

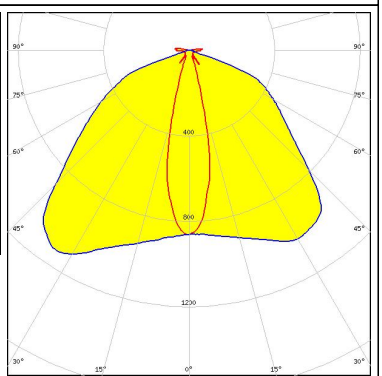
OPTICAL RESULTS (MEASURED):

<p>COMET ELECTRONICS</p> <p>LED QUICK FLUX XTP 2x4 xxx LS G5 FWHM / FWTM 21.0 + 111.0° / 32.0 + 148.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>COMET ELECTRONICS</p> <p>LED QUICK FLUX XTP 2x6 xxx LS G5 FWHM / FWTM 22.0 + 111.0° / 33.0 + 149.0° Efficiency 94 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED J Series 5050C 6V E Class FWHM / FWTM 30.0 + 95.0° / 60.0 + 140.0° Efficiency 96 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED XD16 FWHM / FWTM 29.0 + 116.0° / 44.0 + 141.0° Efficiency 94 % Peak intensity 1 cd/lm LEDs/each optic 4 Light colour White Required components:</p>		

OPTICAL RESULTS (MEASURED):

<p>CREE LEDs</p> <p>LED XD16 FWHM / FWTM 19.0 + 127.0° / 28.0 + 141.0° Efficiency 93 % Peak intensity 1.4 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED XHP35 HD FWHM / FWTM 29.0 + 117.0° / 48.0 + 148.0° Efficiency 94 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED XM-L FWHM / FWTM 28.0 + 108.0° / 45.0 + 142.0° Efficiency 94 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED XM-L2 FWHM / FWTM 30.0 + 106.0° / 48.0 + 143.0° Efficiency 94 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

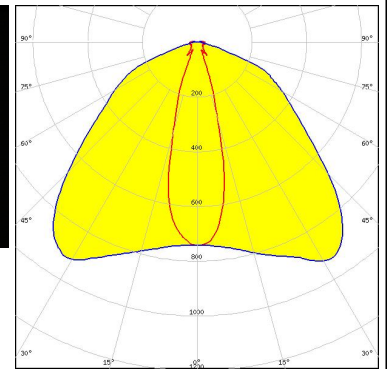
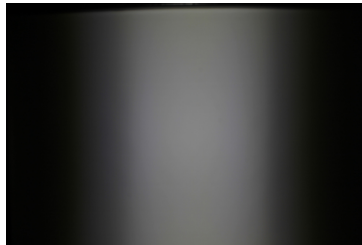
OPTICAL RESULTS (MEASURED):

<p>CREE LEDs</p> <p>LED XP-G FWHM / FWTM 26.0 + 115.0° / 44.0 + 158.0° Efficiency 94 % Peak intensity 1.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED XP-G2 FWHM / FWTM 27.0 + 112.0° / 42.0 + 146.0° Efficiency 94 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED XP-L HD FWHM / FWTM 29.0 + 117.0° / 48.0 + 144.0° Efficiency 94 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE LEDs</p> <p>LED XP-L HI FWHM / FWTM 25.0 + 123.0° / 41.0 + 143.0° Efficiency 94 % Peak intensity 1.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

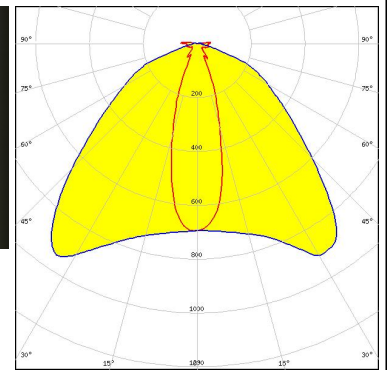
OPTICAL RESULTS (MEASURED):



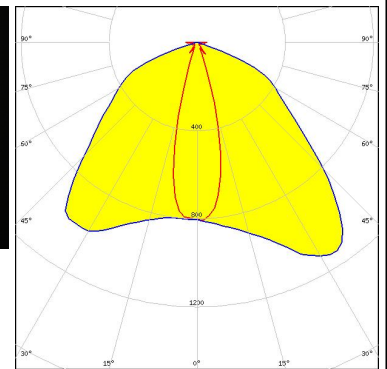
LED XP-L2
 FWHM / FWTM 28.0 + 117.0° / 47.0 + 150.0°
 Efficiency 94 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



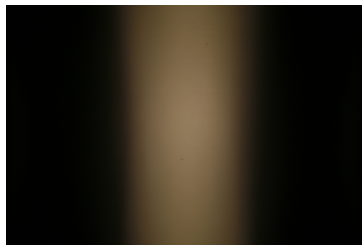
LED LUXEON 5050 Round LES
 FWHM / FWTM 29.0 + 114.0° / 51.0 + 147.0°
 Efficiency 94 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



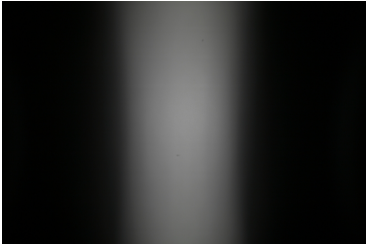
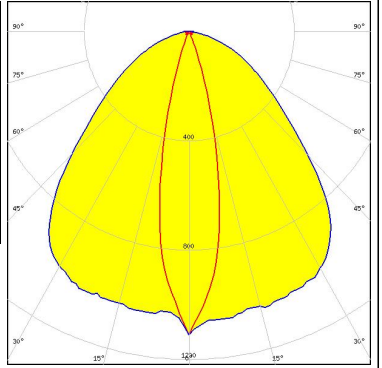
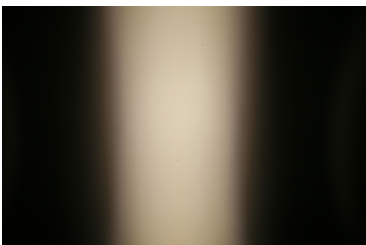
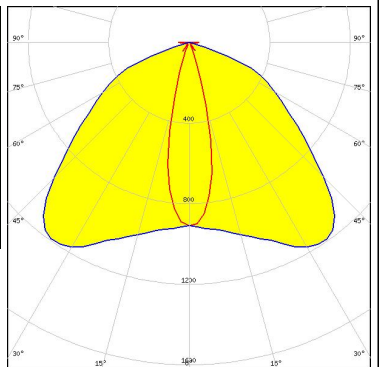
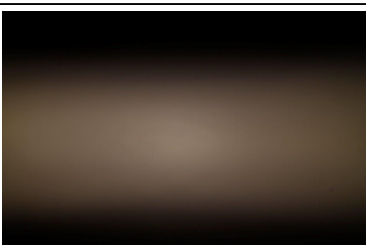
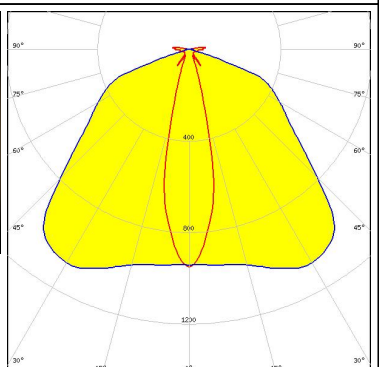
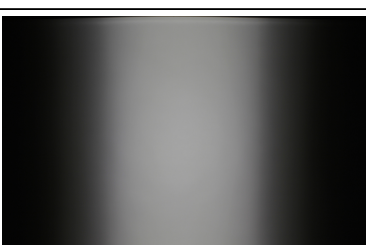
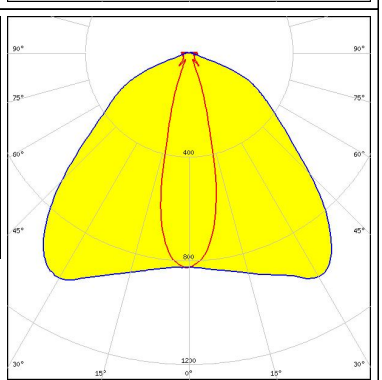
LED LUXEON MZ
 FWHM / FWTM 28.0 + 103.0° / 43.0 + 14.0°
 Efficiency 94 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LED LUXEON R
 FWHM / FWTM 25.0 + 105.0° / 44.0 + 148.0°
 Efficiency 94 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



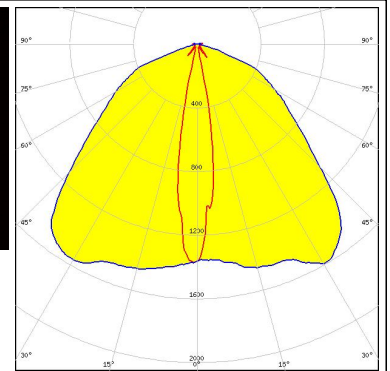
OPTICAL RESULTS (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON Rebel ES</p> <p>FWHM / FWTM 25.0 + 106.0° / 42.0 + 150.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON T</p> <p>FWHM / FWTM 26.0 + 110.0° / 41.0 + 145.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON TX</p> <p>FWHM / FWTM 24.0 + 118.0° / 42.0 + 146.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON V</p> <p>FWHM / FWTM 26.0 + 108.0° / 44.0 + 141.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

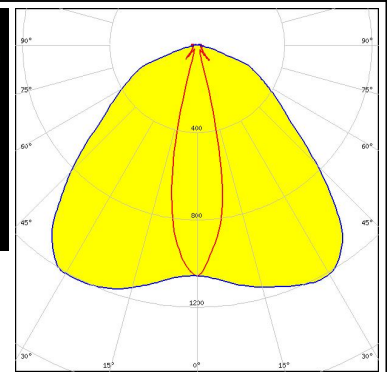
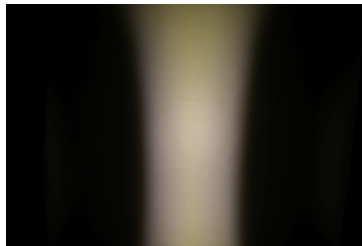
OPTICAL RESULTS (MEASURED):



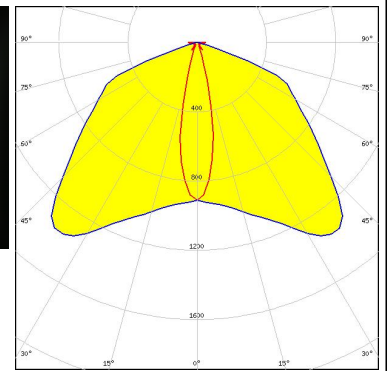
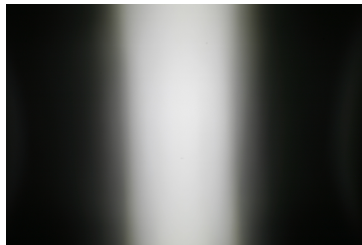
LED SST-10-B130
FWHM / FWTM 18.0 + 104.0° / 25.0 + 144.0°
Efficiency 97 %
Peak intensity 1.6 cd/lm
LEDs/each optic 1
Light colour Deep Red
Required components:



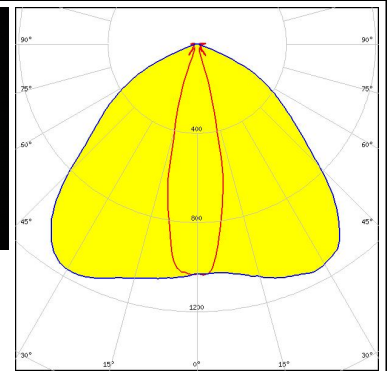
LED RecLED 122x50mm 1900lm 730 2x4 Opt G1
FWHM / FWTM 23.0 + 99.5° / 32.5 + 145.0°
Efficiency 97 %
Peak intensity 1.2 cd/lm
LEDs/each optic 1
Light colour White
Required components:




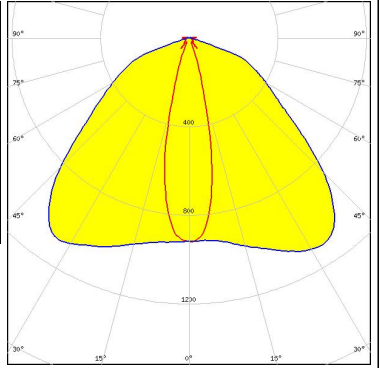
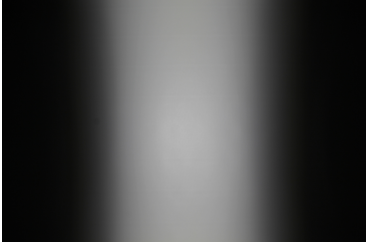
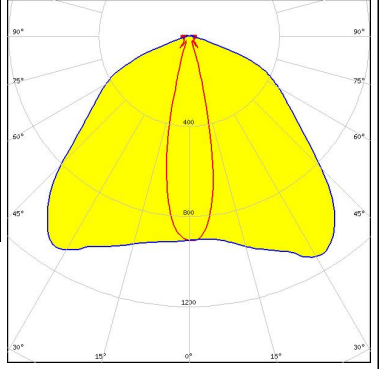
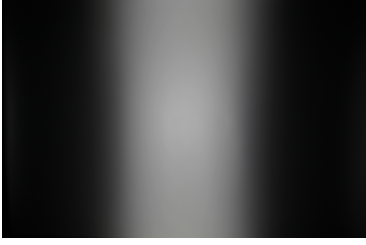
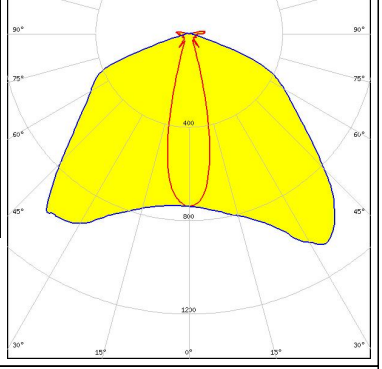
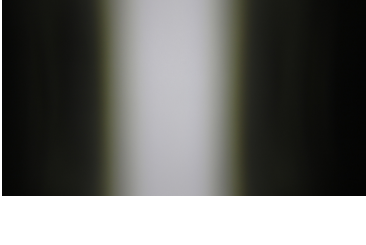
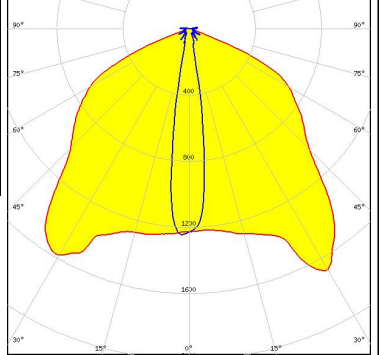
LED NCSxx19B
FWHM / FWTM 23.0 + 113.0° / 39.0 + 146.0°
Efficiency 94 %
Peak intensity 1.4 cd/lm
LEDs/each optic 1
Light colour White
Required components:



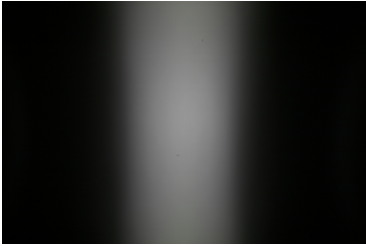
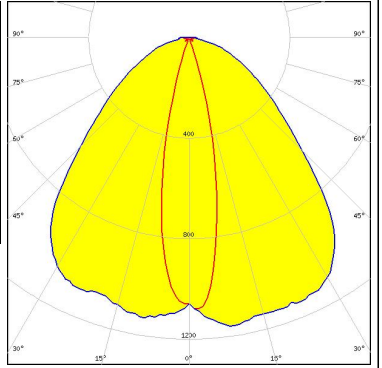
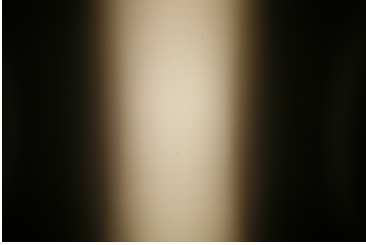
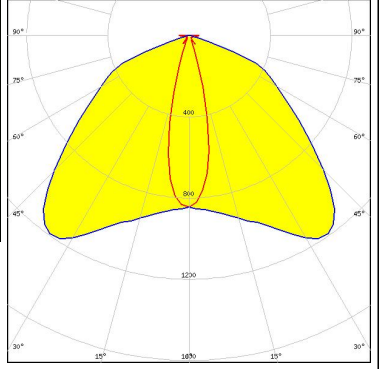
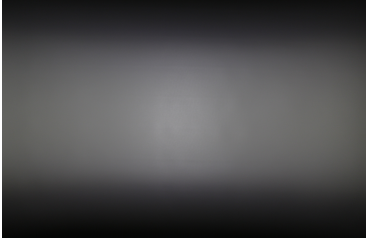
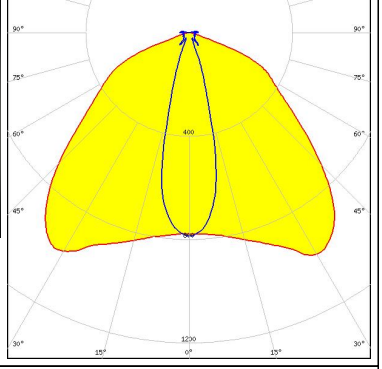
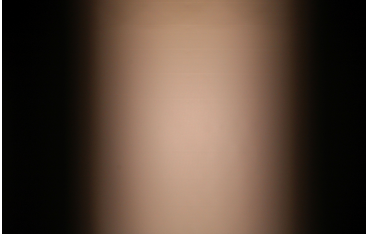
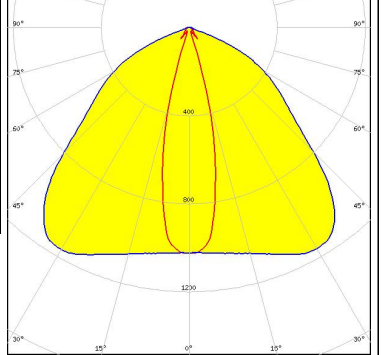
LED NVSW219D
FWHM / FWTM 25.0 + 107.0° / 37.0 + 137.0°
Efficiency 94 %
Peak intensity 1.2 cd/lm
LEDs/each optic 1
Light colour White
Required components:



OPTICAL RESULTS (MEASURED):

<p>NICHIA</p> <p>LED NVSW319B</p> <p>FWHM / FWTM 25.0 + 113.0° / 41.0 + 144.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>NICHIA</p> <p>LED NVSW3x9A</p> <p>FWHM / FWTM 24.0 + 119.0° / 38.0 + 144.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>NICHIA</p> <p>LED NVSW3x9A</p> <p>FWHM / FWTM 25.0 + 134.0° / 43.0 + 147.0°</p> <p>Efficiency 93 %</p> <p>Peak intensity 0.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>NICHIA</p> <p>LED NVSxE21A</p> <p>FWHM / FWTM 17.0 + 125.0° / 27.0 + 139.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

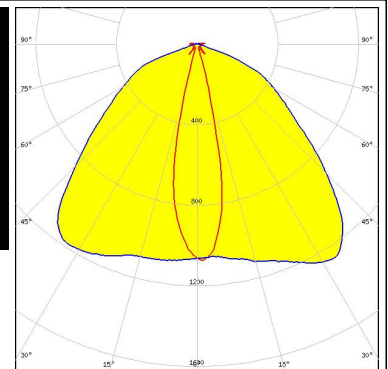
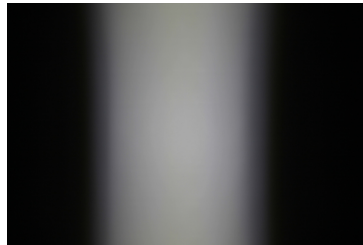
OPTICAL RESULTS (MEASURED):

<p>NICHIA</p> <p>LED NVSxx19A FWHM / FWTM 24.0 + 105.0° / 44.0 + 148.0° Efficiency 94 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NVSxx19B/NVSxx19C FWHM / FWTM 26.0 + 108.0° / 41.0 + 145.0° Efficiency 94 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NWSx229A FWHM / FWTM 27.0 + 118.0° / 43.0 + 143.0° Efficiency 94 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>OSRAM</p> <p>LED PL-BRICK HP 3800 2x8 SSG FWHM / FWTM 26.0 + 102.0° / 37.0 + 139.0° Efficiency 97 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

OPTICAL RESULTS (MEASURED):

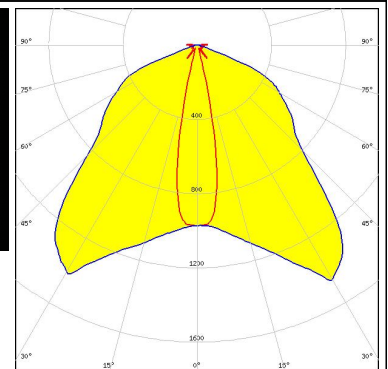
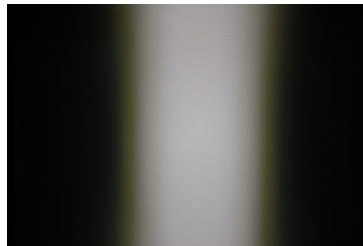
OSRAM

LED PrevaLED Brick HP 2x8
 FWHM / FWTM 23.0 + 111.0° / 32.0 + 141.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



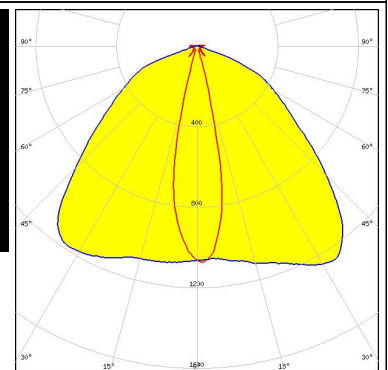
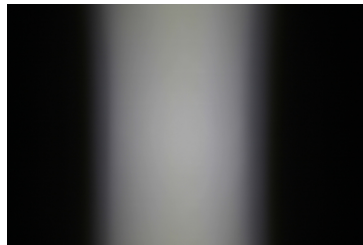
OSRAM

Opto Semiconductors
 LED OSCONIQ C 3030
 FWHM / FWTM 22.0 + 95.0° / 32.0 + 140.0°
 Efficiency 96 %
 Peak intensity 1.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



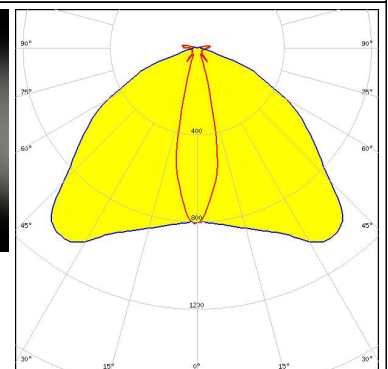
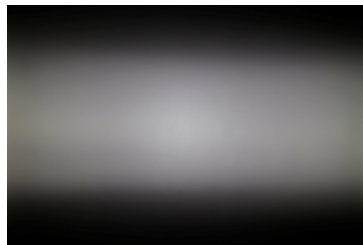
OSRAM

Opto Semiconductors
 LED OSLOM Square CSSRM2/CSSRM3
 FWHM / FWTM 23.0 + 111.0° / 32.0 + 141.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

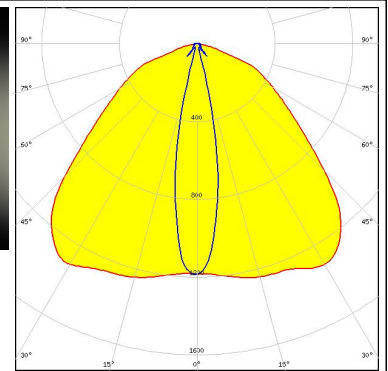
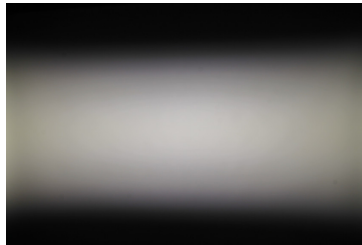
Opto Semiconductors
 LED OSLOM Square PC
 FWHM / FWTM 25.0 + 124.0° / 42.0 + 145.0°
 Efficiency 91 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

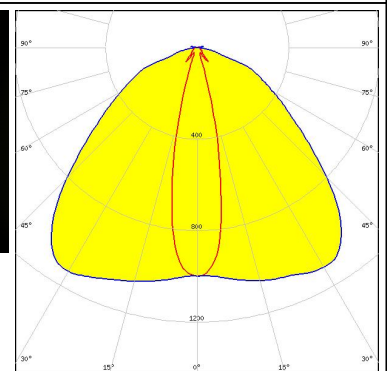
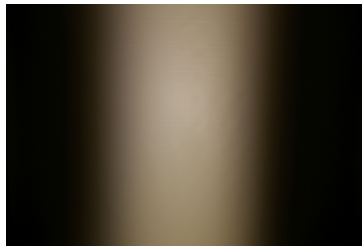
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4
 FWHM / FWTM 21.0 + 108.0° / 31.0 + 147.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



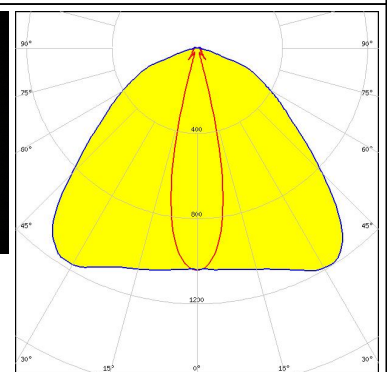
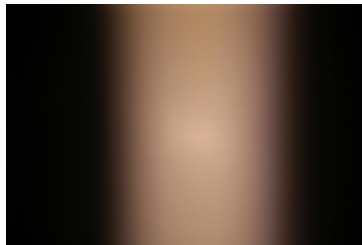
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4+
 FWHM / FWTM 24.0 + 104.0° / 37.0 + 145.0°
 Efficiency 97 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



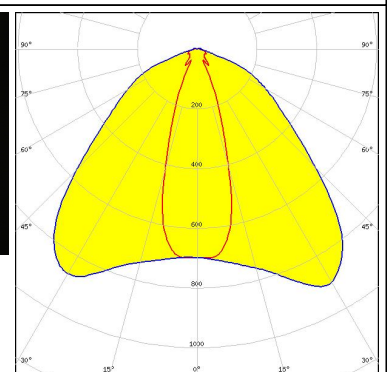
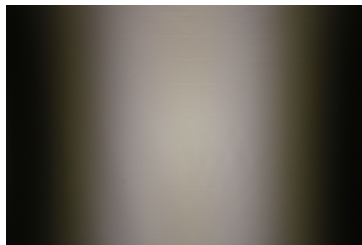
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G5
 FWHM / FWTM 24.0 + 103.0° / 34.0 + 144.0°
 Efficiency 97 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



PHILIPS

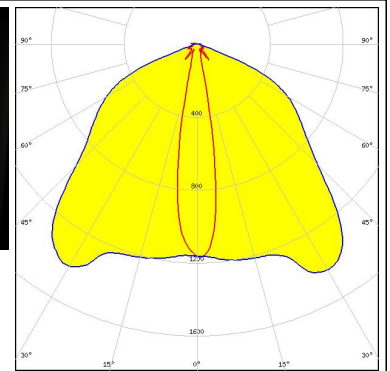
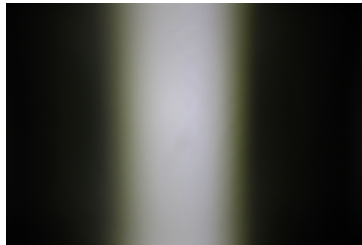
LED Fortimo FastFlex LED 2x8 DA HE
 FWHM / FWTM 32.0 + 98.0° / 51.0 + 142.0°
 Efficiency 98 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

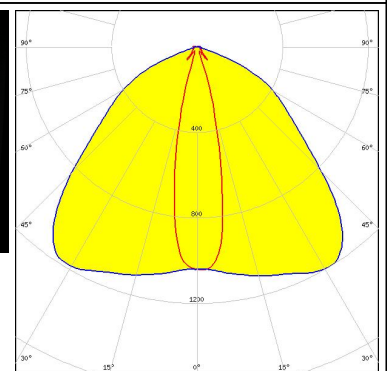
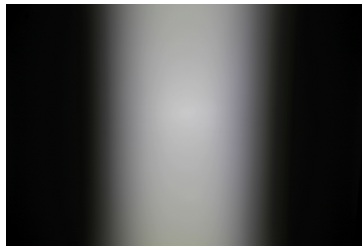
SAMSUNG

LED HiLOM RC12 Z (LH181B)
 FWHM / FWTM 19.0 + 106.0° / 31.0 + 140.0°
 Efficiency 98 %
 Peak intensity 1.4 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:



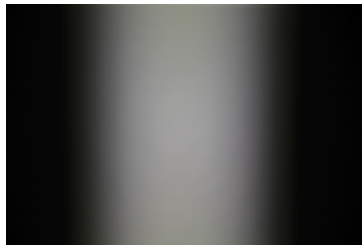
SAMSUNG

LED HiLOM RH12 Z (LH351C)
 FWHM / FWTM 23.0 + 102.0° / 36.0 + 139.0°
 Efficiency 97 %
 Peak intensity 1.2 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:



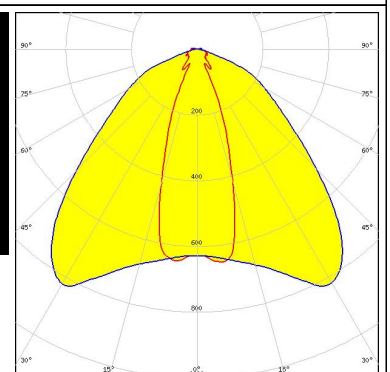
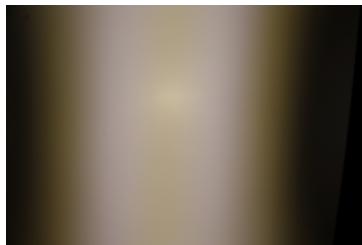
SAMSUNG

LED HiLOM RH16 (LH351C)
 FWHM / FWTM 23.0 + 106.0° / 36.0 + 140.0°
 Efficiency 94 %
 Peak intensity 1.2 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

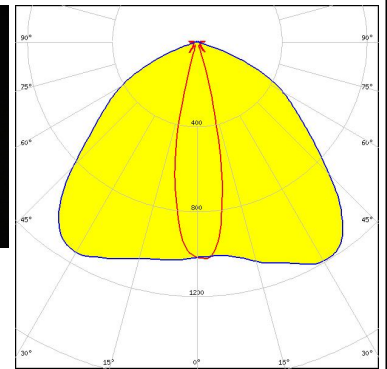
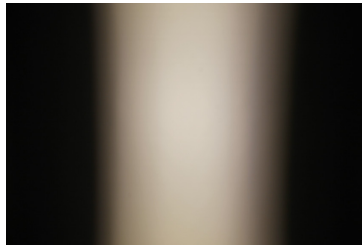
LED HiLOM RM12 Z (LH502C)
 FWHM / FWTM 35.0 + 98.0° / 76.0 + 141.0°
 Efficiency 96 %
 Peak intensity 0.8 cd/m
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

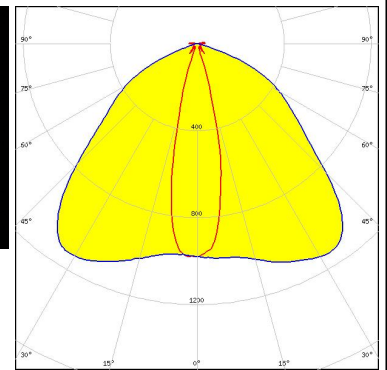
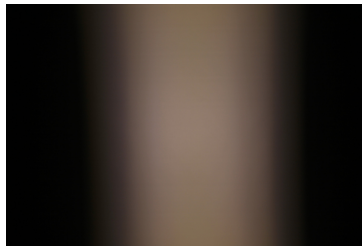
SAMSUNG

LED LH351B
 FWHM / FWTM 23.0 + 113.0° / 35.0 + 141.0°
 Efficiency 94 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



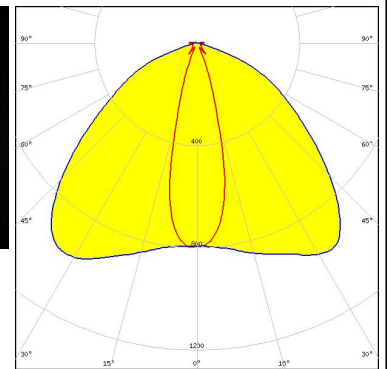
SAMSUNG

LED LH351C
 FWHM / FWTM 24.0 + 111.0° / 37.0 + 141.0°
 Efficiency 94 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



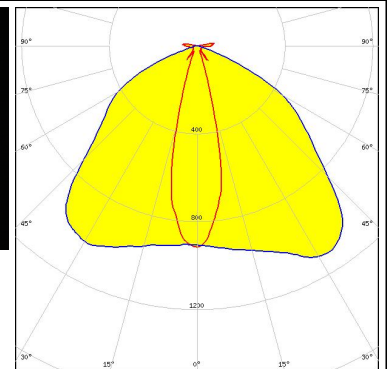
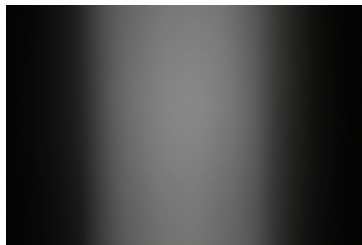
SAMSUNG

LED LH351D
 FWHM / FWTM 27.0 + 116.0° / 44.0 + 144.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

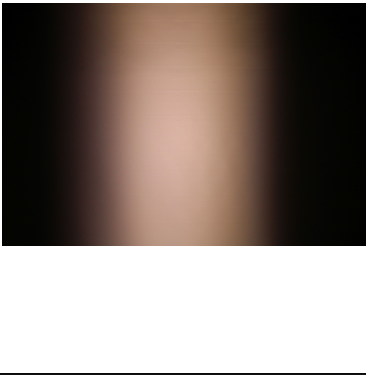
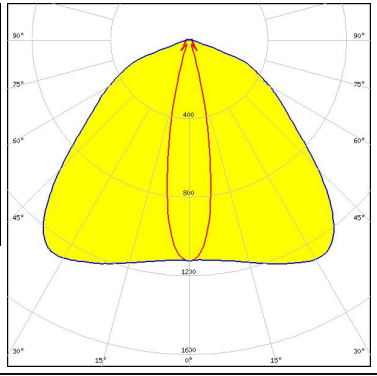
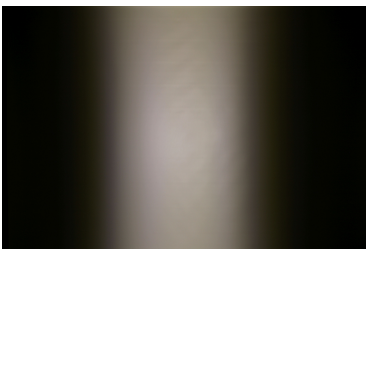
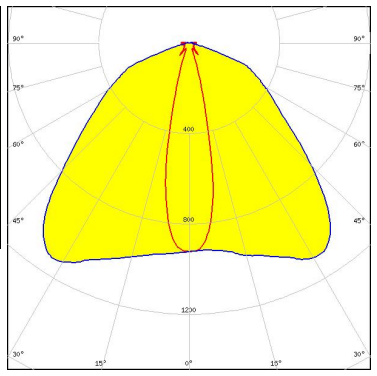
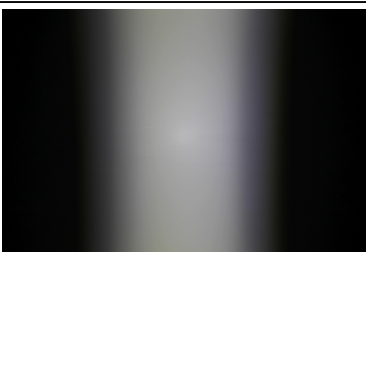
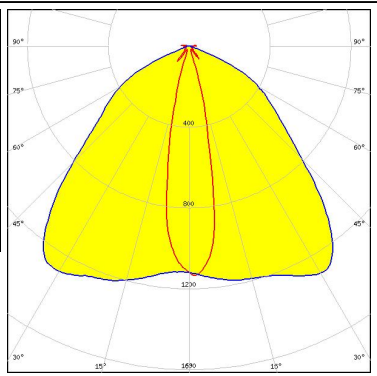
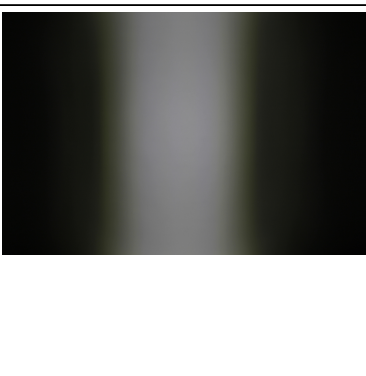
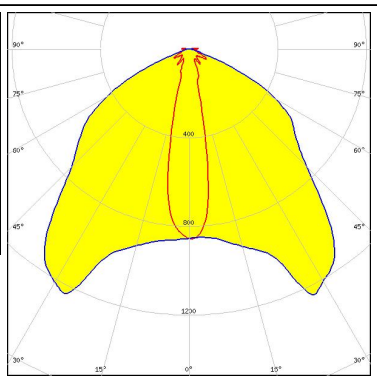


SAMSUNG

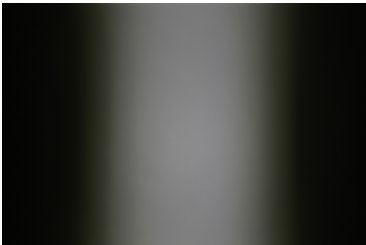
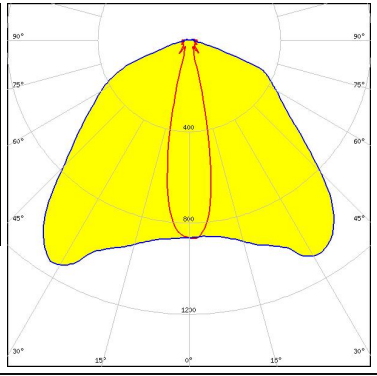
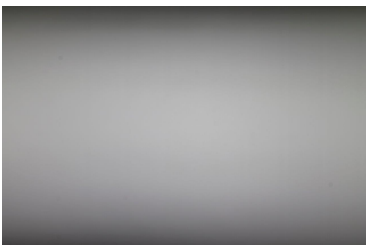
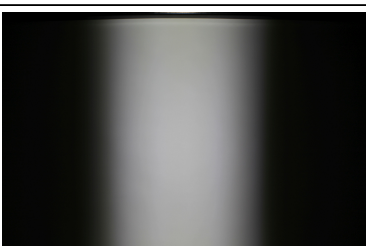
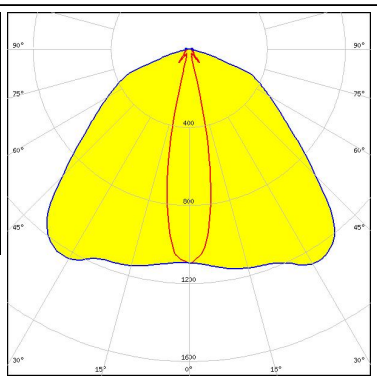
LED LH351Z
 FWHM / FWTM 26.0 + 117.0° / 42.0 + 141.0°
 Efficiency 94 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

<p>SEITEC Elektronik GmbH</p> <p>LED LED-Pa-L15c2W11c2-xxx-C050-01</p> <p>FWHM / FWTM 22.0 + 105.0° / 36.0 + 142.0°</p> <p>Efficiency 98 %</p> <p>Peak intensity 1.3 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z5M3</p> <p>FWHM / FWTM 23.0 + 113.0° / 39.0 + 146.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 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 22.0 + 97.0° / 35.0 + 135.0°</p> <p>Efficiency 98 %</p> <p>Peak intensity 1.3 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 21.0 + 121.0° / 99.0 + 140.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

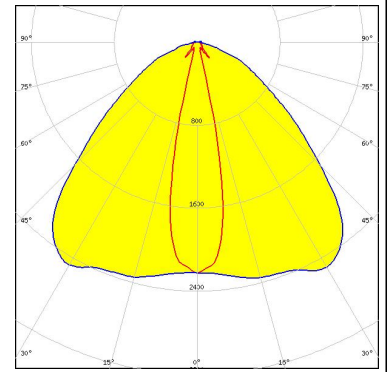
OPTICAL RESULTS (MEASURED):

<p>SEUL SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22P FWHM / FWTM 23.0 + 121.0° / 34.0 + 150.0° Efficiency 94 % Peak intensity 1.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>TOSHIBA Leading Innovation >>></p> <p>LED TL1L4 FWHM / FWTM 24.0 + 119.0° / 39.0 + 140.0° Efficiency 89 % Peak intensity 1.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>TRIDONIC</p> <p>LED RLE 2x4 2000lm HP EXC2 OTD FWHM / FWTM 22.0 + 113.0° / 30.0 + 149.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>TRIDONIC</p> <p>LED RLE 2x8 4000lm HP EXC2 OTD FWHM / FWTM 22.0 + 113.0° / 30.0 + 149.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

OPTICAL RESULTS (MEASURED):

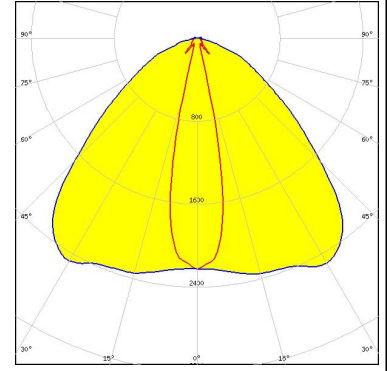
TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD
 FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



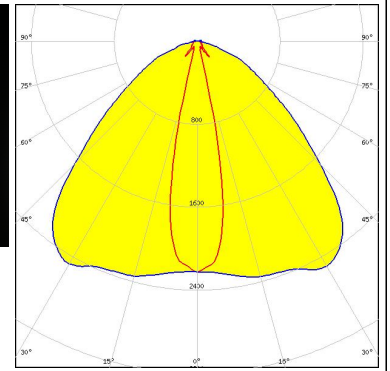
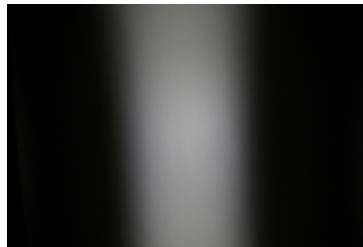
TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD
 FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



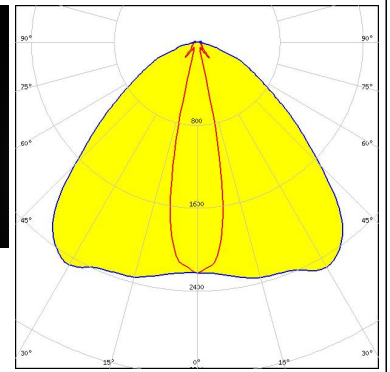
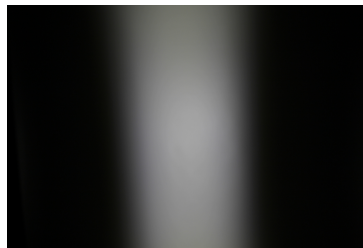
TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD
 FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



TRIDONIC

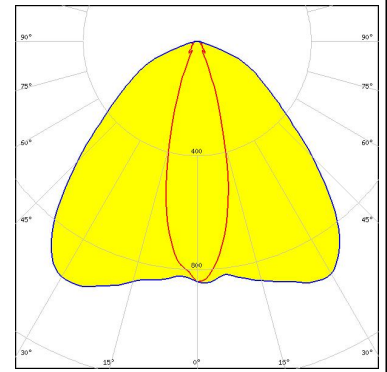
LED RLE G1 49x245mm 4000lm xxx EXC OTD
 FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



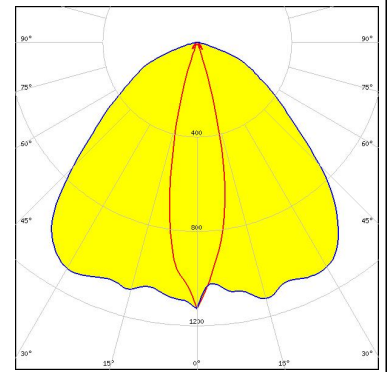
OPTICAL RESULTS (SIMULATED):



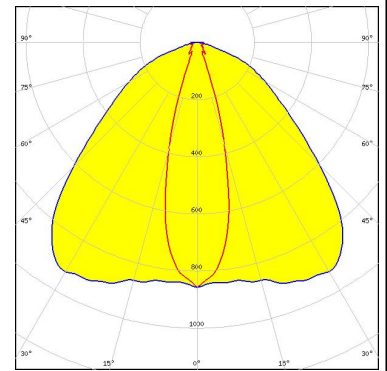
LED J Series 5050 Round LES
 FWHM / FWTM 30.0 + 97.0° / 51.0 + 141.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



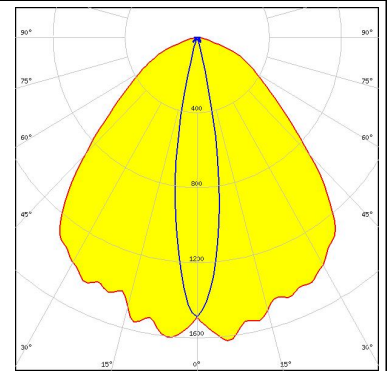
LED XHP35 HI
 FWHM / FWTM 101.0 + 27.0° / 145.0 + 44.0°
 Efficiency 94 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LED XHP50.3 HI
 FWHM / FWTM 28.0 + 100.0° / 44.0 + 144.0°
 Efficiency 95 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LED XP-E2
 FWHM / FWTM 93.0 + 18.0° / 141.0 + 30.0°
 Efficiency 94 %
 Peak intensity 1.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

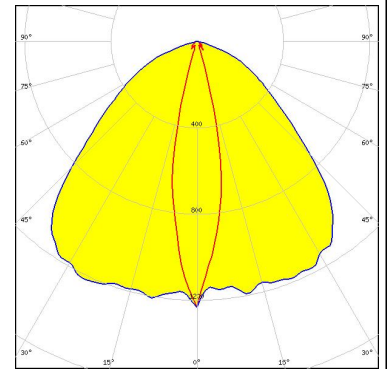


OPTICAL RESULTS (SIMULATED):

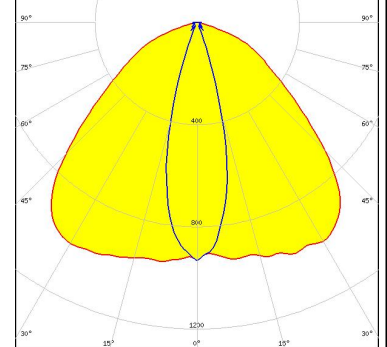


LED XP-G2
 FWHM / FWTM 21.0 + 98.0° / 33.0 + 141.0°
 Efficiency 91 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

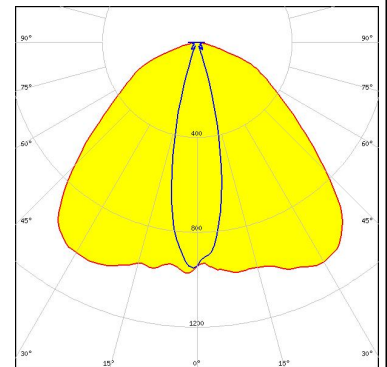
Protective plate, glass



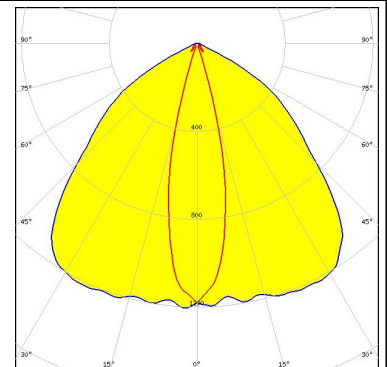
LED XP-G2 HE
 FWHM / FWTM 28.0 + 103.0° / 41.0 + 144.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LED XP-G3
 FWHM / FWTM 103.0 + 29.0° / 146.0 + 49.0°
 Efficiency 94 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LED XP-G4
 FWHM / FWTM 24.0 + 100.0° / 36.0 + 128.0°
 Efficiency 97 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

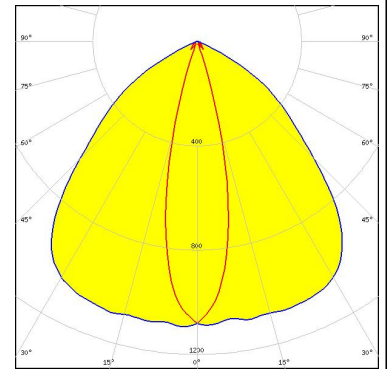


OPTICAL RESULTS (SIMULATED):



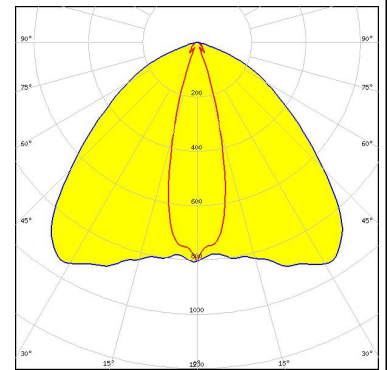
LED XP-G4
 FWHM / FWTM 24.0 + 95.0° / 36.0 + 127.0°
 Efficiency 87 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



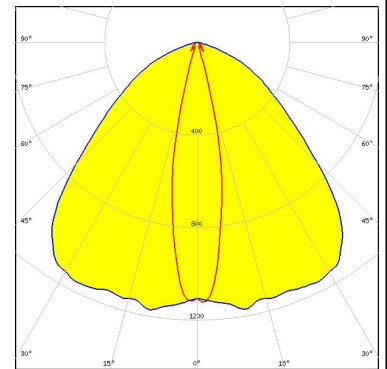
LED XP-L HD
 FWHM / FWTM 26.0 + 103.0° / 42.0 + 140.0°
 Efficiency 88 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



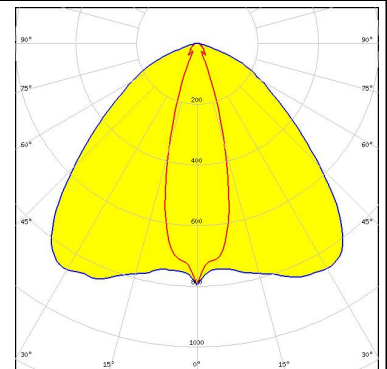
LED XP-L HI
 FWHM / FWTM 22.0 + 98.0° / 34.0 + 140.0°
 Efficiency 88 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



LED XP-L2
 FWHM / FWTM 28.0 + 100.0° / 46.0 + 140.0°
 Efficiency 87 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



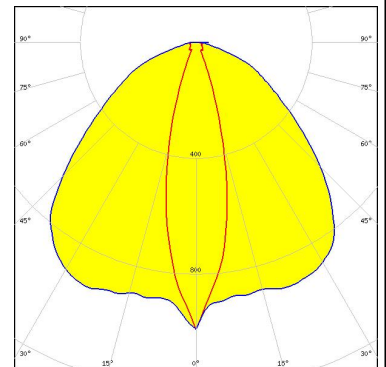
OPTICAL RESULTS (SIMULATED):



LED XQ-E HI
 FWHM / FWTM 96.0 + 14.0° / 144.0 + 25.0°
 Efficiency %
 LEDs/each optic 1
 Light colour White
 Required components:

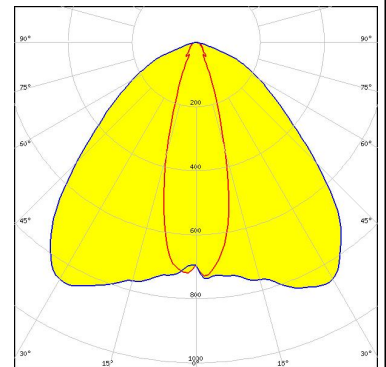


LED XT-E HE
 FWHM / FWTM 100.0 + 24.0°
 Efficiency 94 %
 LEDs/each optic 1
 Light colour White
 Required components:



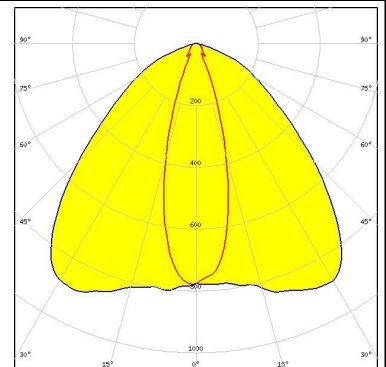
LED LUXEON 5050 HE
 FWHM / FWTM 30.0 + 98.0° / 52.0 + 140.0°
 Efficiency 87 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



LED LUXEON 5050 Round LES
 FWHM / FWTM 30.0 + 96.0° / 48.0 + 140.0°
 Efficiency 88 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

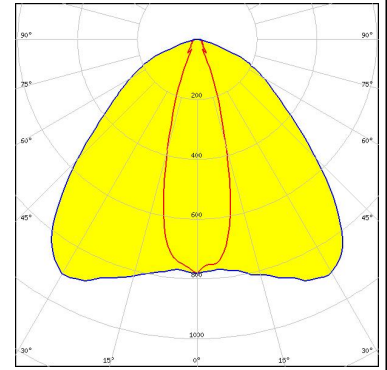
Protective plate, glass



OPTICAL RESULTS (SIMULATED):

LUMILEDS

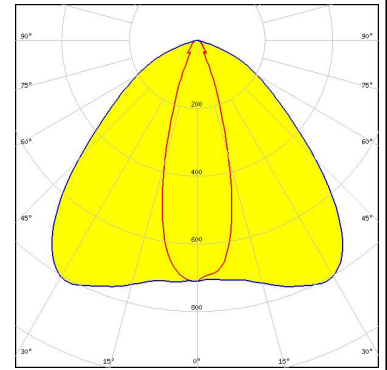
LED LUXEON 5050 Square LES
 FWHM / FWTM 30.0 + 98.0° / 50.0 + 142.0°
 Efficiency 95 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

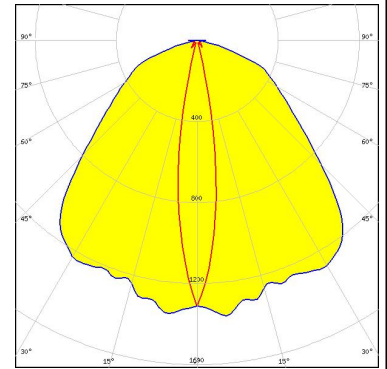
LED LUXEON 5050 Square LES
 FWHM / FWTM 30.0 + 96.0° / 52.0 + 140.0°
 Efficiency 84 %
 Peak intensity 0.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



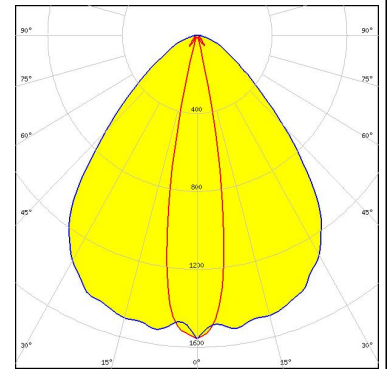
LUMILEDS

LED LUXEON IR Domed 150 (L110-0xxx150000000)
 FWHM / FWTM 16.0 + 98.0° / 28.0 + 149.0°
 Efficiency 94 %
 Peak intensity 1.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

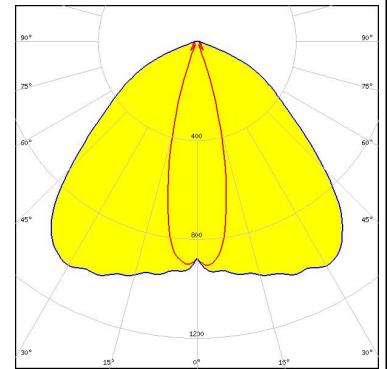
LED LUXEON IR Domed 90 (L110-0xxx090000000)
 FWHM / FWTM 20.0 + 86.0° / 29.0 + 128.0°
 Efficiency 95 %
 Peak intensity 1.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (SIMULATED):

LUMILEDS

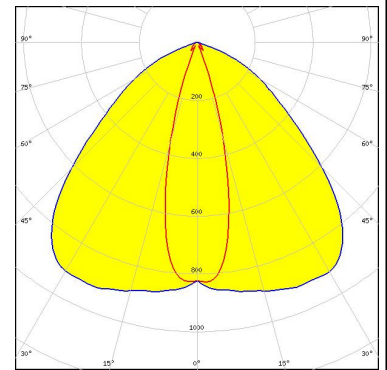
LED LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
 FWHM / FWTM 28.0 + 102.0° / 42.0 + 140.0°
 Efficiency 96 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

LED LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
 FWHM / FWTM 28.0 + 100.0° / 42.0 + 138.0°
 Efficiency 86 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

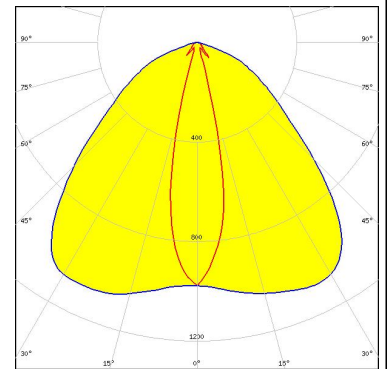
Protective plate, glass



MST *Your solutions*

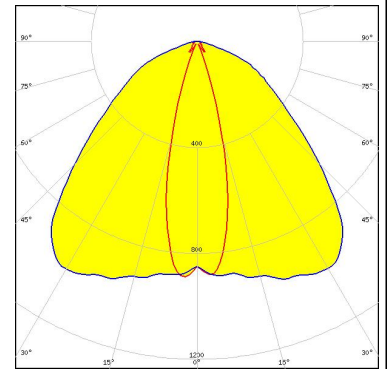
LED RecLED 122x50mm 1900lm 730 2x4 Opt G1
 FWHM / FWTM 24.0 + 97.0° / 34.0 + 141.0°
 Efficiency 86 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



NICHIA

LED NV4WB35AM
 FWHM / FWTM 28.0 + 100.0° / 42.0 + 144.0°
 Efficiency 95 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

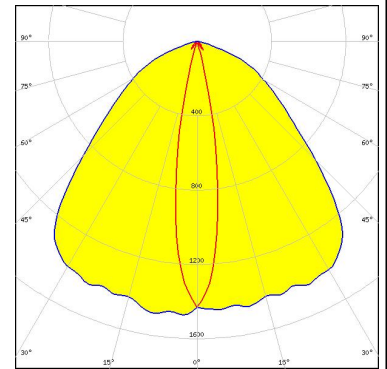


OPTICAL RESULTS (SIMULATED):

OSRAM

Opto Semiconductors

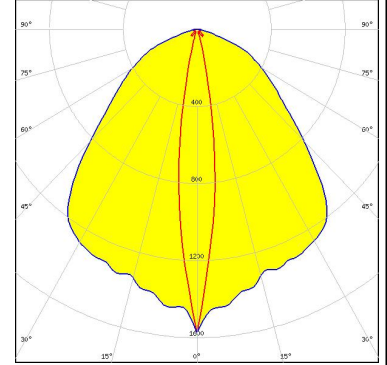
LED OSCONIQ C 2424
 FWHM / FWTM 18.0 + 96.0° / 30.0 + 141.0°
 Efficiency 96 %
 Peak intensity 1.5 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

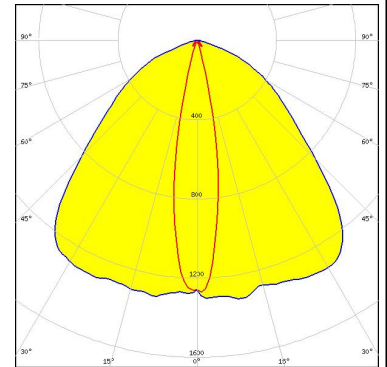
LED OSCONIQ P 3030
 FWHM / FWTM 14.0 + 92.0° / 28.0 + 142.0°
 Efficiency 95 %
 Peak intensity 1.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

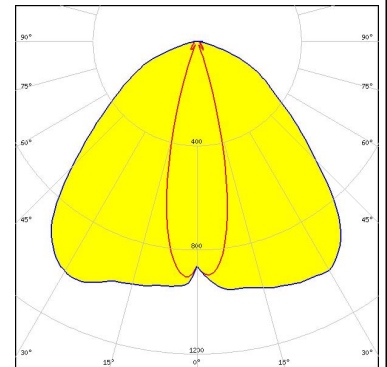
LED OSCONIQ P 3737 (2W version)
 FWHM / FWTM 99.0 + 19.0° / 142.0 + 31.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

LED OSCONIQ P 3737 (3W version)
 FWHM / FWTM 100.0 + 30.0° / 144.0 + 51.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

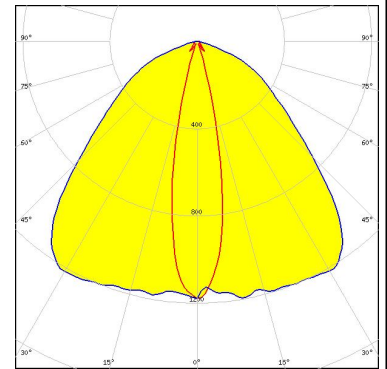


OPTICAL RESULTS (SIMULATED):

OSRAM

Opto Semiconductors

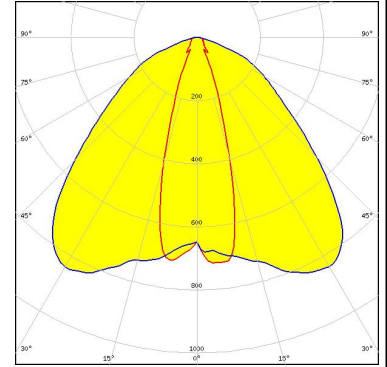
LED OSCONIQ P 3737 Flat
 FWHM / FWTM 22.0 + 98.0° / 35.0 + 142.0°
 Efficiency 96 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

LED OSCONIQ S 5050
 FWHM / FWTM 32.0 + 99.0° / 52.0 + 143.0°
 Efficiency 96 %
 Peak intensity 0.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

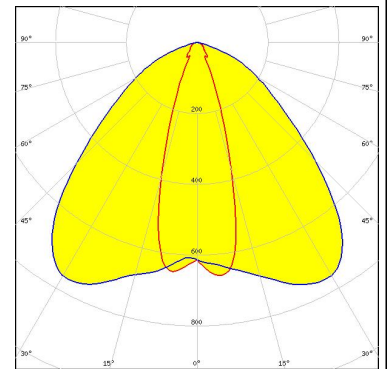


OSRAM

Opto Semiconductors

LED OSCONIQ S 5050
 FWHM / FWTM 32.0 + 98.0° / 53.0 + 140.0°
 Efficiency 85 %
 Peak intensity 0.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass

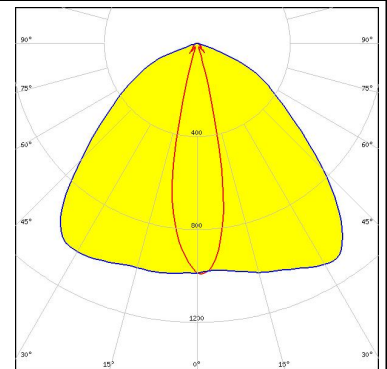


OSRAM

Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3
 FWHM / FWTM 23.0 + 101.0° / 33.0 + 140.0°
 Efficiency 85 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass

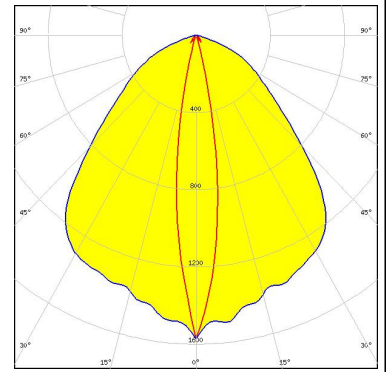


OPTICAL RESULTS (SIMULATED):

OSRAM

Opto Semiconductors

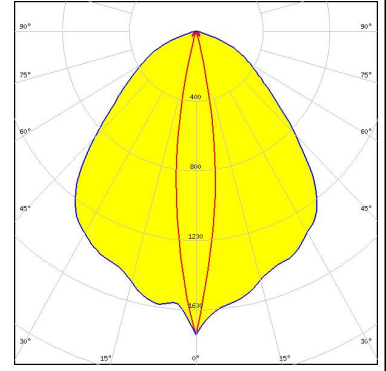
LED OSLOM Square Flat
 FWHM / FWTM 16.0 + 90.0° / 30.0 + 140.0°
 Efficiency 96 %
 Peak intensity 1.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

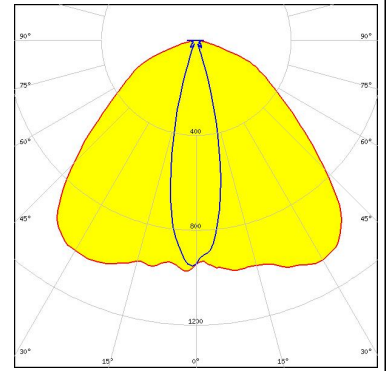
Opto Semiconductors

LED OSTAR Projection Compact (KW.CSLNM1.TG)
 FWHM / FWTM 16.0 + 89.0° / 28.0 + 140.0°
 Efficiency 96 %
 Peak intensity 1.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



PHILIPS

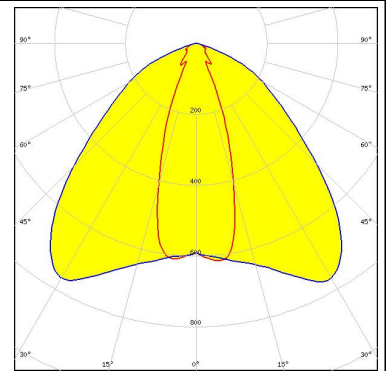
LED Fortimo FastFlex LED 2x8 DAX G4
 FWHM / FWTM 103.0 + 29.0° / 146.0 + 49.0°
 Efficiency 94 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

LED HiLOM RM12 Z (LH502C)
 FWHM / FWTM 36.0 + 98.0° / 78.0 + 140.0°
 Efficiency 89 %
 Peak intensity 0.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

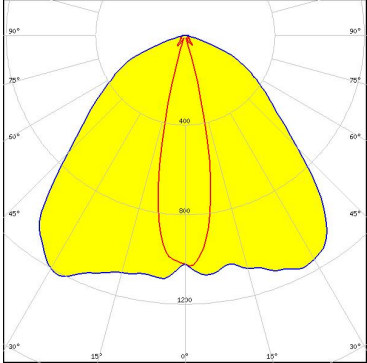
Protective plate, glass



OPTICAL RESULTS (SIMULATED):

<p>SEOUL SEMICONDUCTOR</p> <p>LED MJT 5050</p> <p>FWHM / FWTM 32.0 + 98.0° / 52.0 + 142.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>SEOUL SEMICONDUCTOR</p> <p>LED SEOUL DC 5050 6V</p> <p>FWHM / FWTM 33.0 + 98.0° / 58.0 + 143.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 0.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z5M1/Z5M2</p> <p>FWHM / FWTM 22.0 + 97.0° / 34.0 + 142.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z5M5</p> <p>FWHM / FWTM 26.0 + 103.0° / 38.0 + 140.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

OPTICAL RESULTS (SIMULATED):

<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED: Z5M5 FWHM / FWTM: 26.0 + 100.0° / 40.0 + 138.0° Efficiency: 85 % Peak intensity: 0.9 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	
<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED: Z8Y22T FWHM / FWTM: 21.0 + 96.0° / 33.0 + 141.0° Efficiency: 94 % Peak intensity: 1.2 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
<p>TRIDONIC</p> <p>LED: RLE 2x8 4000lm HP EXC2 OTD FWHM / FWTM: 22.0 + 100.0° / 32.0 + 142.0° Efficiency: 84 % Peak intensity: 1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	

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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