

HB-2X2-RW

~50° wide beam optimized for CREE XP-L and XM-L

SPECIFICATION:

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

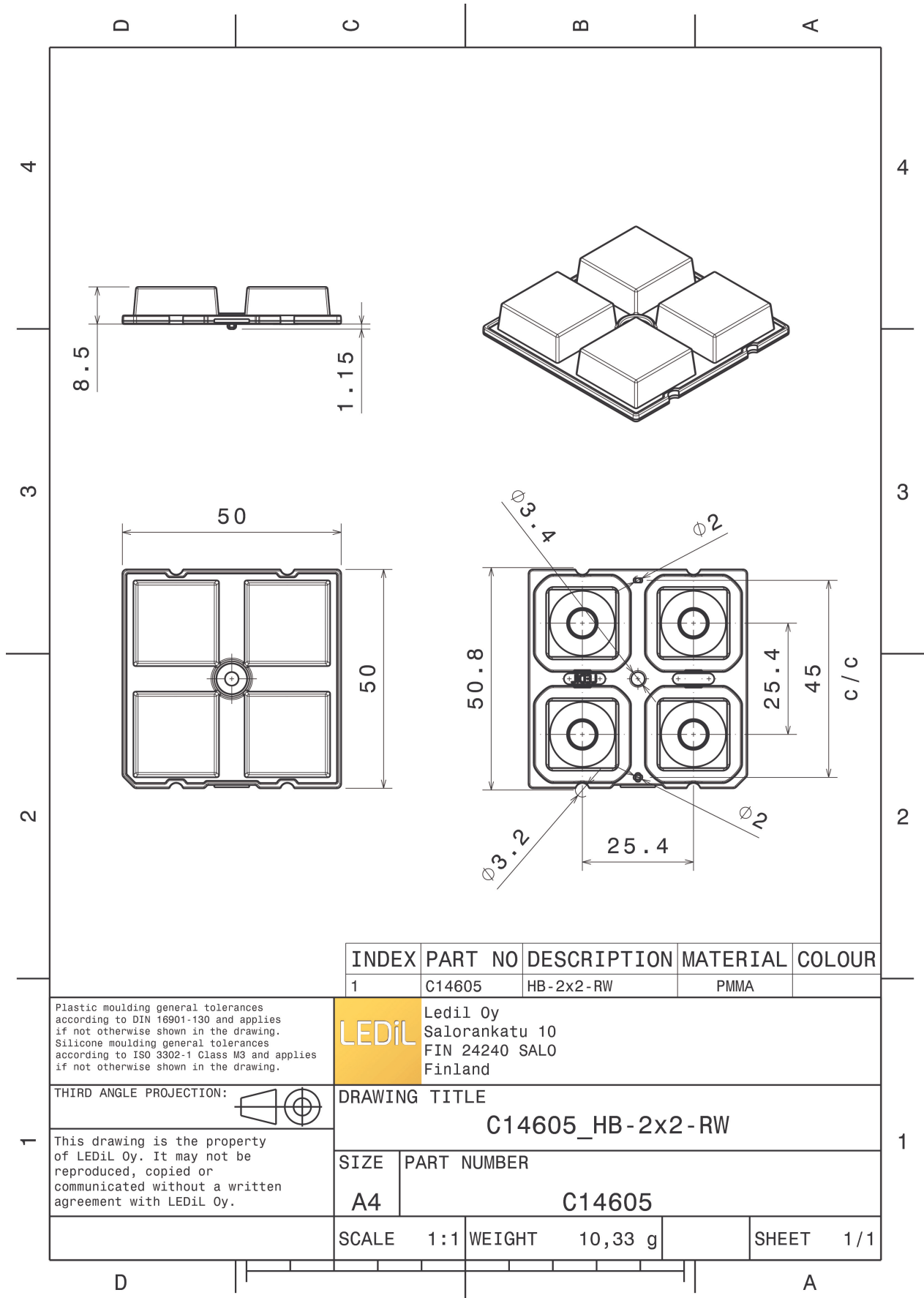
MATERIALS:

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

ORDERING INFORMATION:


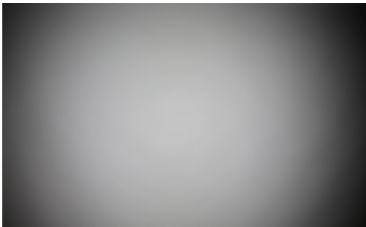
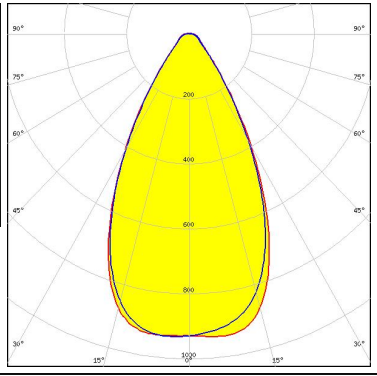

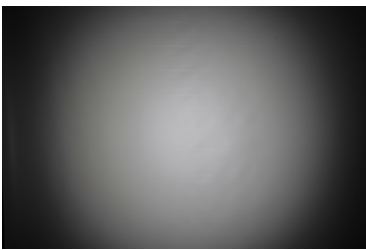
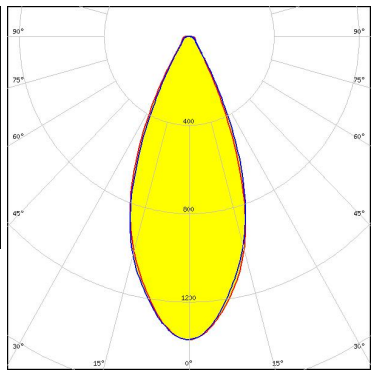

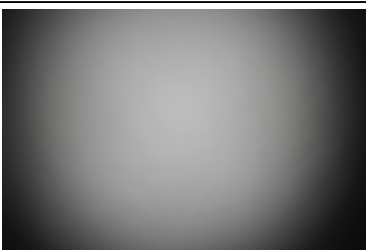
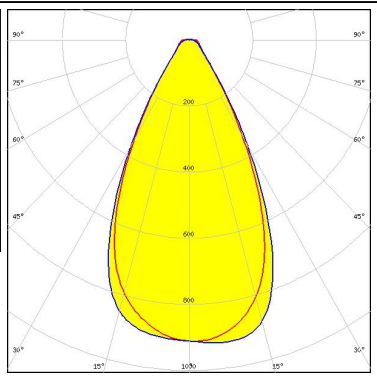

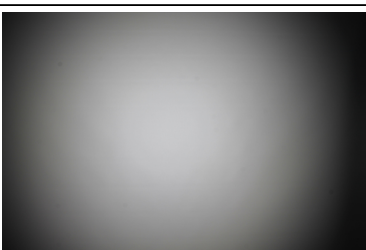
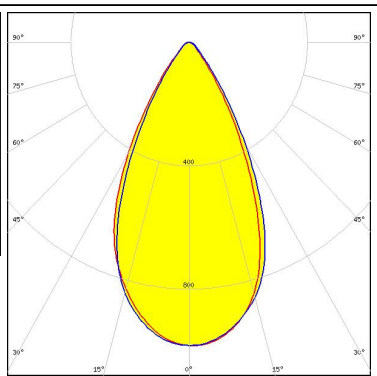
Component	Qty in box	MOQ	MPQ	Box weight (kg)
C14605_HB-2X2-RW » Box size: 476 x 273 x 292 mm	800	160	160	9.1




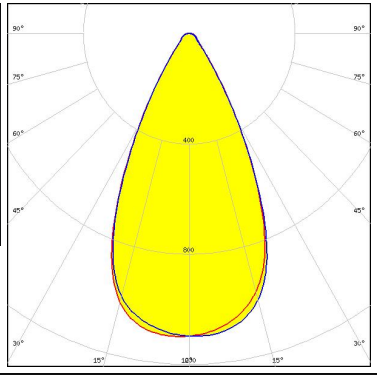

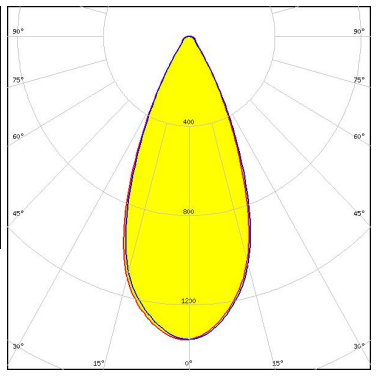

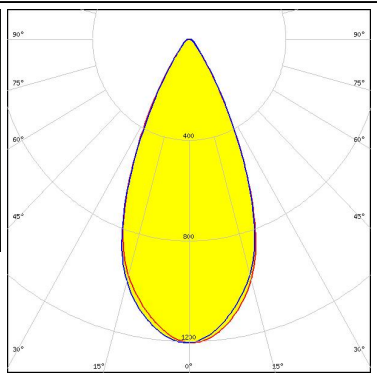

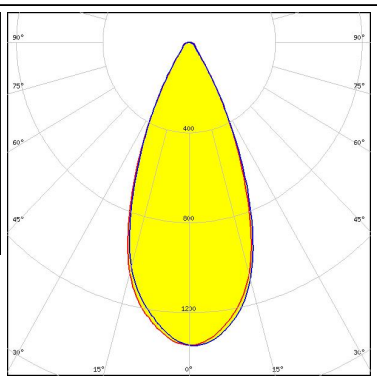


See also our general installation guide: www.ledil.com/installation_guide


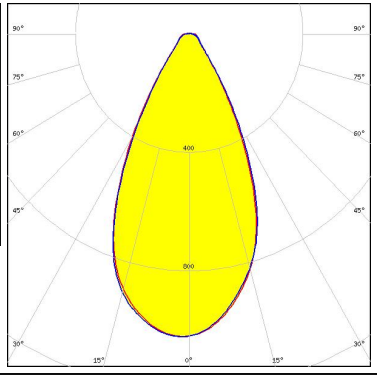

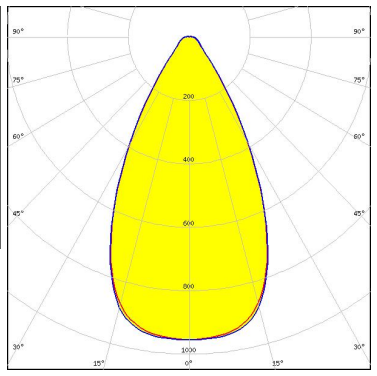

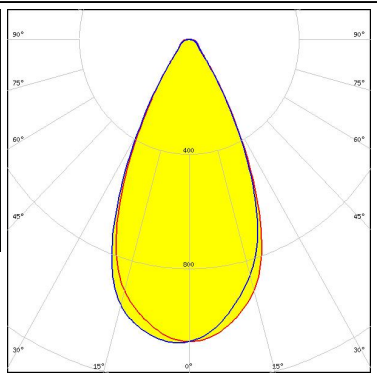

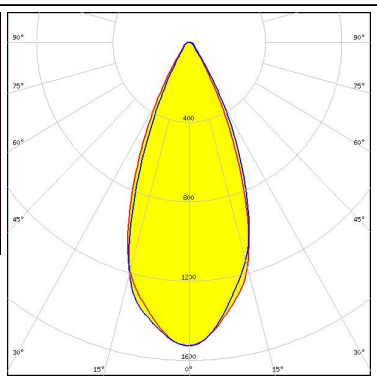
OPTICAL RESULTS (MEASURED):

<p></p> <p>LED Bridgelux SMD 5050</p> <p>FWHM / FWTM 56.0° / 89.0°</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></p> <p>LED XD16</p> <p>FWHM / FWTM 44.0° / 71.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 1.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p></p> <p>LED XD16</p> <p>FWHM / FWTM 54.0° / 85.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.9 cd/lm</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		
<p></p> <p>LED XHP35 HD</p> <p>FWHM / FWTM 53.0° / 82.0°</p> <p>Efficiency 84 %</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):

<p>CREE → LED</p> <p>LED XM-L3 FWHM / FWTM 52.0° / 79.0° Efficiency 95 % Peak intensity 1.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE → LED</p> <p>LED XP-G2 FWHM / FWTM 45.0° / 73.0° Efficiency 94 % Peak intensity 1.4 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE → LED</p> <p>LED XP-G3 FWHM / FWTM 48.0° / 75.0° Efficiency 86 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE → LED</p> <p>LED XP-L HI FWHM / FWTM 45.0° / 72.0° Efficiency 92 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

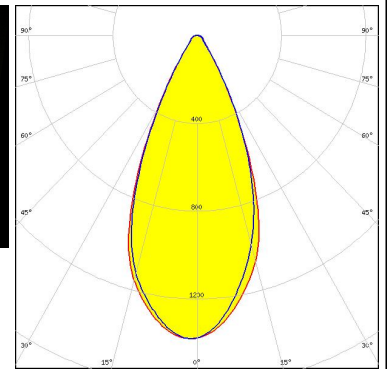
OPTICAL RESULTS (MEASURED):

<p>CREE LED</p> <p>LED: XP-L2 FWHM / FWTM: 52.0° / 83.0° Efficiency: 92 % Peak intensity: 1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>		
<p>LUMILEDS</p> <p>LED: LUXEON 5050 Round LES FWHM / FWTM: 55.0° / 87.0° Efficiency: 94 % Peak intensity: 1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>		
<p>LUMILEDS</p> <p>LED: LUXEON V FWHM / FWTM: 52.0° / 81.0° Efficiency: 93 % Peak intensity: 1.1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>		
<p>LUMINUS</p> <p>LED: SST-10-B130 FWHM / FWTM: 44.0° / 70.0° Efficiency: 96 % Peak intensity: 1.5 cd/lm LEDs/each optic: 1 Light colour: Deep Red Required components:</p>		

OPTICAL RESULTS (MEASURED):

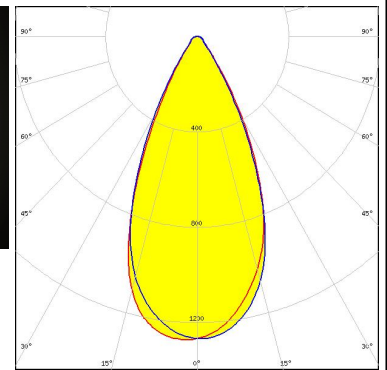
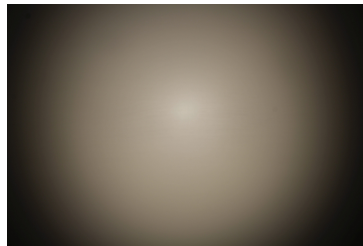
MST *Your solutions*

LED RecLED 122x50mm 1900lm 730 2x4 Opt G1
 FWHM / FWTM 46.0° / 72.5°
 Efficiency 97 %
 Peak intensity 1.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



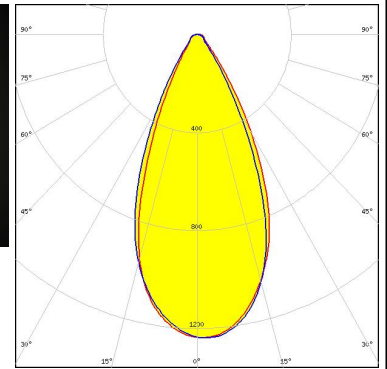
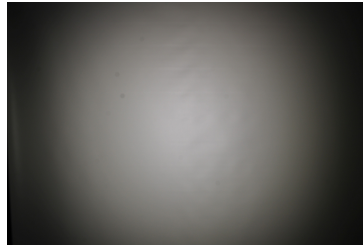
NICHIA

LED NVSW219F
 FWHM / FWTM 49.0° / 76.0°
 Efficiency 96 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



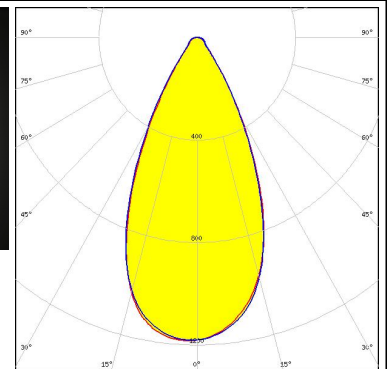
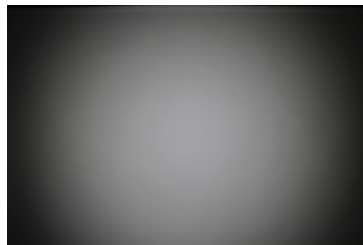
NICHIA

LED NVSW219F
 FWHM / FWTM 48.0° / 76.0°
 Efficiency 94 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:


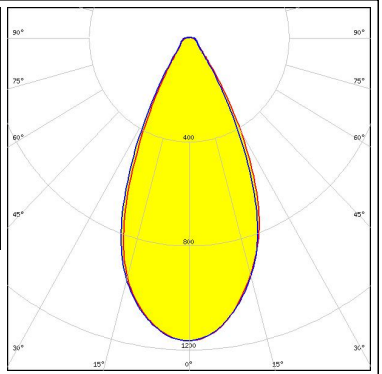

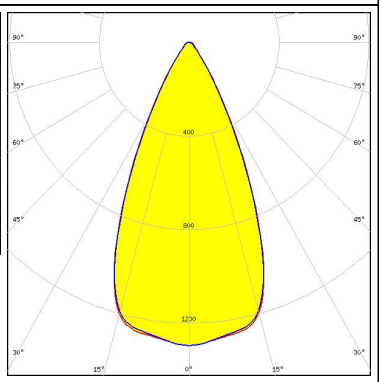

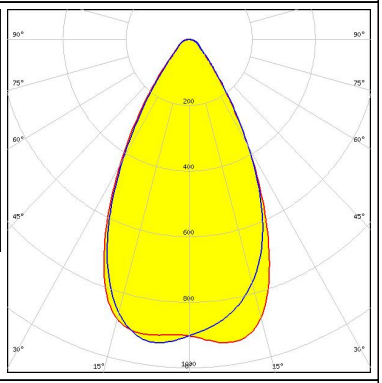

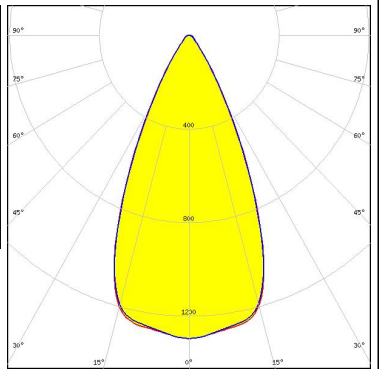


NICHIA

LED NVSW319B
 FWHM / FWTM 50.0° / 79.0°
 Efficiency 94 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



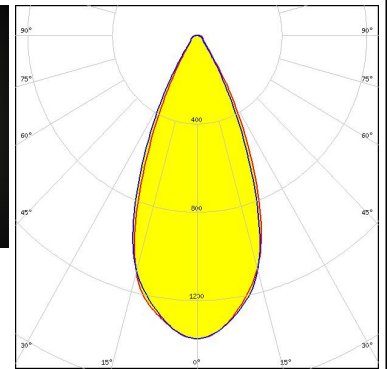
OPTICAL RESULTS (MEASURED):

<p>NICHIA</p> <p>LED NVSW3x9A FWHM / FWTM 50.0° / 78.0° Efficiency 93 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>OSRAM</p> <p>LED PrevaLED Brick HP 2x8 FWHM / FWTM 49.0° / 72.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>OSRAM <small>Opto Semiconductors</small></p> <p>LED Duris S8 FWHM / FWTM 56.0° / 89.0° Efficiency 95 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>OSRAM <small>Opto Semiconductors</small></p> <p>LED OSLON Square CSSRM2/CSSRM3 FWHM / FWTM 49.0° / 72.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

OPTICAL RESULTS (MEASURED):

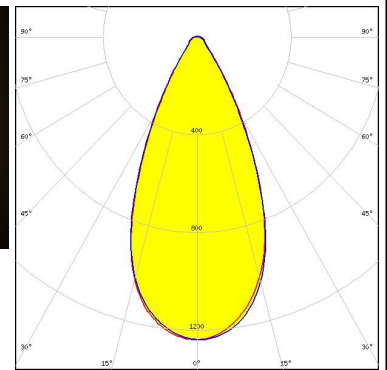
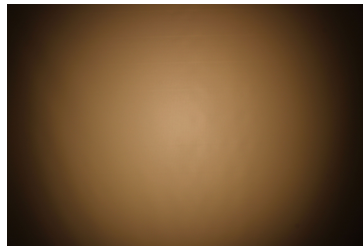
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4
 FWHM / FWTM 45.0° / 71.0°
 Efficiency 93 %
 Peak intensity 1.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



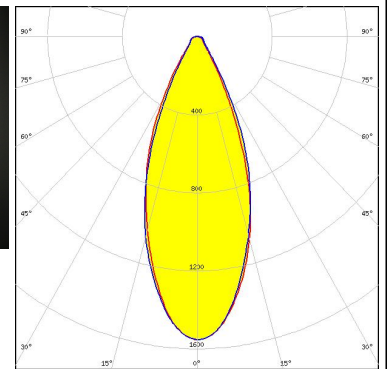
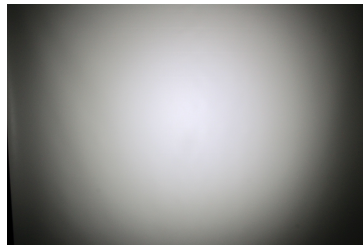
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4+
 FWHM / FWTM 48.0° / 77.0°
 Efficiency 96 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



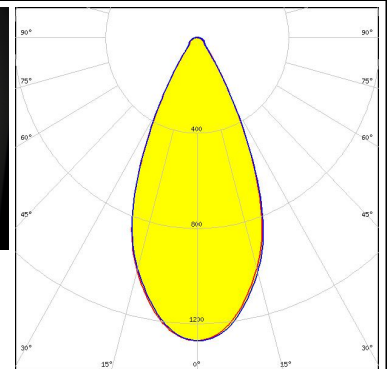
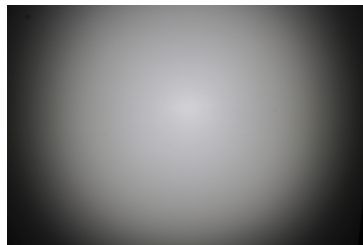
SAMSUNG

LED HiLOM RC12 Z (LH181B)
 FWHM / FWTM 41.0° / 71.0°
 Efficiency 97 %
 Peak intensity 1.6 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

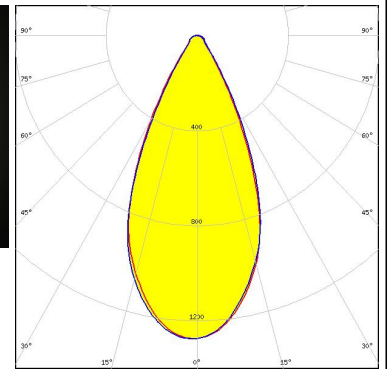
LED HiLOM RH12 Z (LH351C)
 FWHM / FWTM 48.0° / 75.0°
 Efficiency 96 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

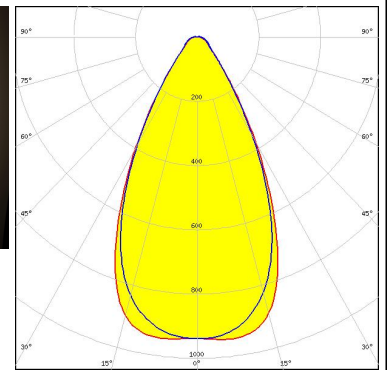
SAMSUNG

LED HiLOM RH16 (LH351C)
 FWHM / FWTM 48.0° / 75.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



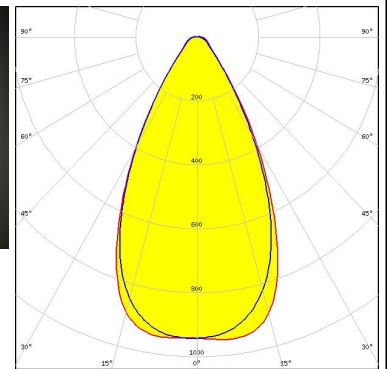
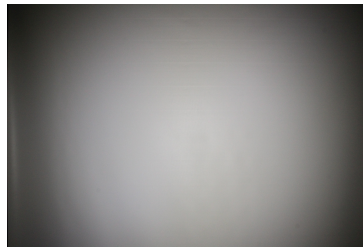
SAMSUNG

LED HiLOM RM12 Z (LH502C)
 FWHM / FWTM 55.0° / 88.0°
 Efficiency 95 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



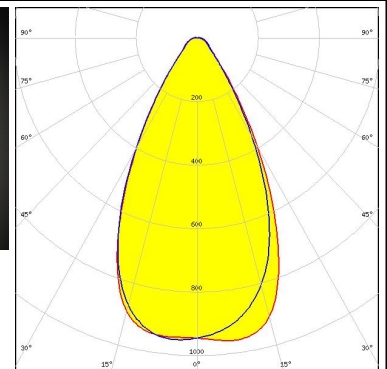
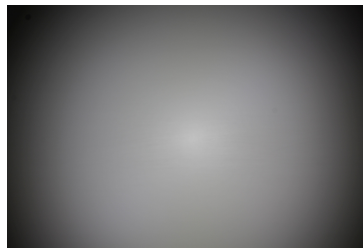
SAMSUNG

LED HiLOM RM16 Z (LH502C)
 FWHM / FWTM 55.0° / 89.0°
 Efficiency 96 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

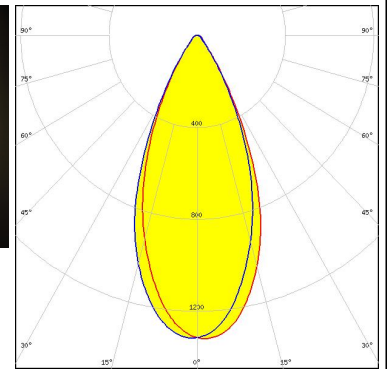
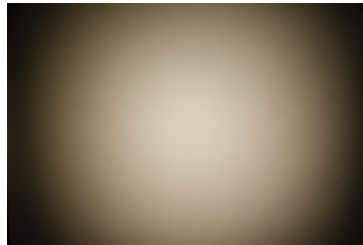
LED HiLOM RM8 Z (LH502C)
 FWHM / FWTM 56.0° / 88.0°
 Efficiency 97 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

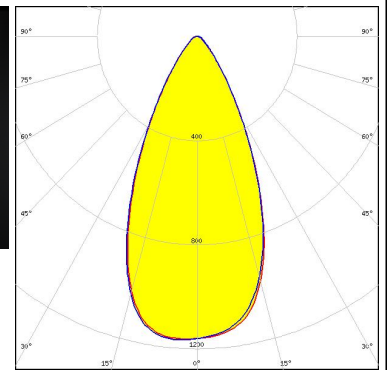
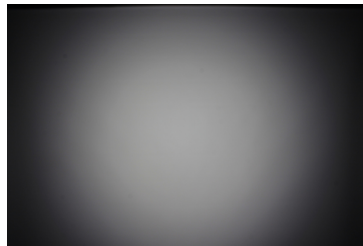
SAMSUNG

LED LH351B
 FWHM / FWTM 45.0° / 74.0°
 Efficiency 86 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



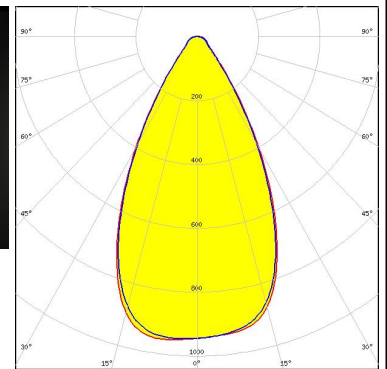
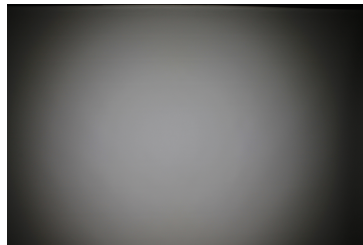
SAMSUNG

LED LH351D
 FWHM / FWTM 49.0° / 82.0°
 Efficiency 94 %
 LEDs/each optic 1
 Light colour White
 Required components:

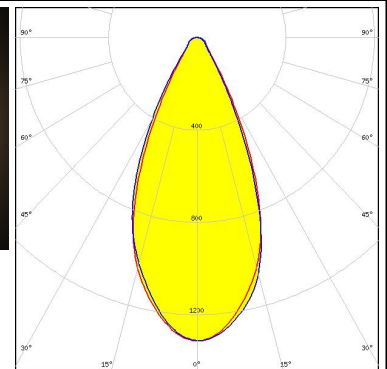
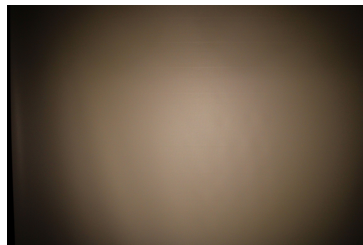


SAMSUNG

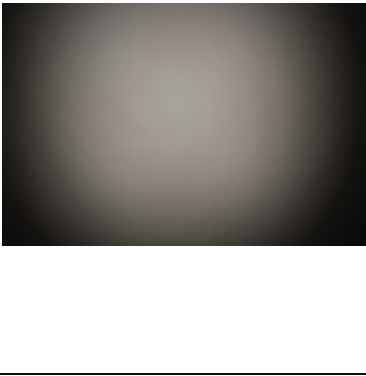
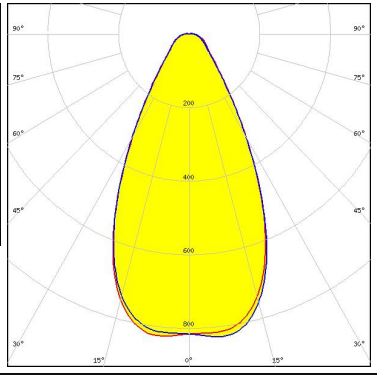

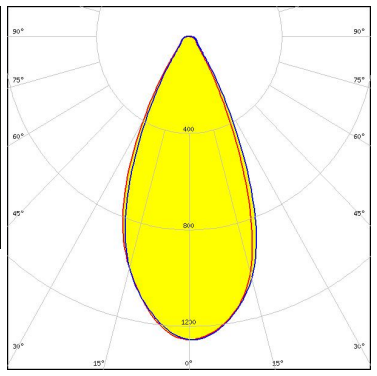

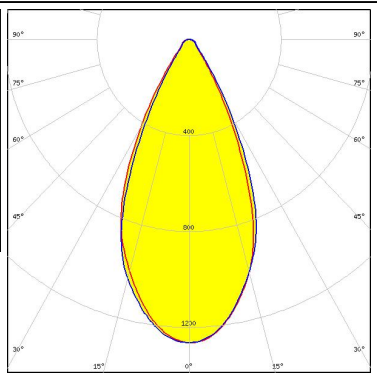
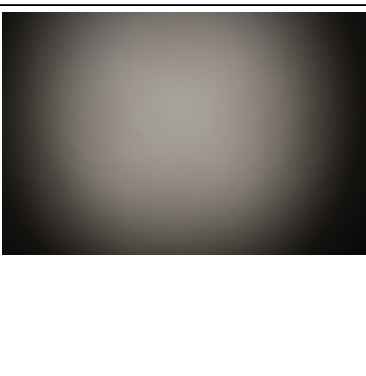
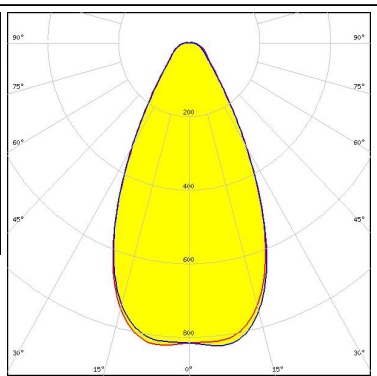
LED LH508A
 FWHM / FWTM 56.0° / 87.0°
 Efficiency 93 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



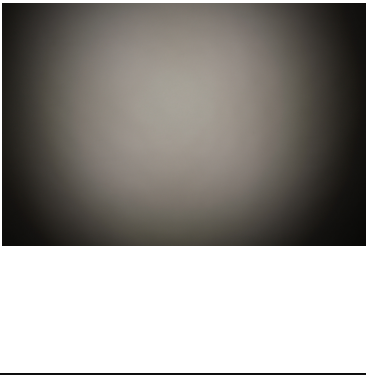
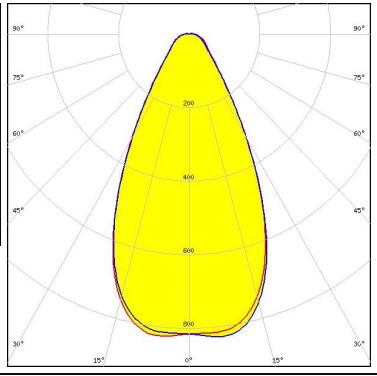

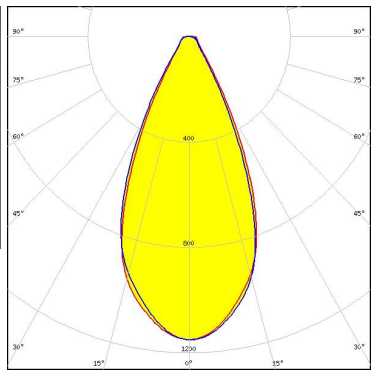



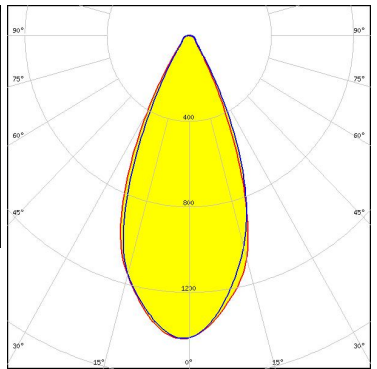
LED LED-Pa-L15c2W11c2-xxx-C050-01
 FWHM / FWTM 47.0° / 76.0°
 Efficiency 96 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

<p>SEOUL SEMICONDUCTOR</p> <p>LED 2x2 Y22 module - SMJQ-D48W16AA-XX</p> <p>FWHM / FWTM 54.0° / 94.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.8 cd/m</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z5M3</p> <p>FWHM / FWTM 47.0° / 75.0°</p> <p>Efficiency 94 %</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 Z5M4</p> <p>FWHM / FWTM 49.0° / 76.0°</p> <p>Efficiency 96 %</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 Z8Y19</p> <p>FWHM / FWTM 54.0° / 94.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.8 cd/m</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		

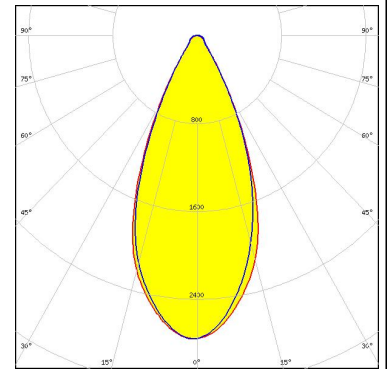
OPTICAL RESULTS (MEASURED):

<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED Z8Y19 FWHM / FWTM 54.0° / 94.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components:</p>		
<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22P FWHM / FWTM 48.0° / 77.0° Efficiency 92 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<h3>TRIDONIC</h3>		
<p>LED RLE 2x4 2000lm HP EXC2 OTD FWHM / FWTM 46.0° / 71.0° Efficiency 94 % Peak intensity 1.4 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 46.0° / 71.0° Efficiency 94 % Peak intensity 1.4 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

OPTICAL RESULTS (MEASURED):

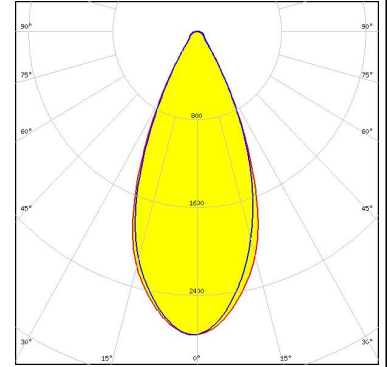
TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD
 FWHM / FWTM 46.0° / 73.0°
 Efficiency 94 %
 Peak intensity 1.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



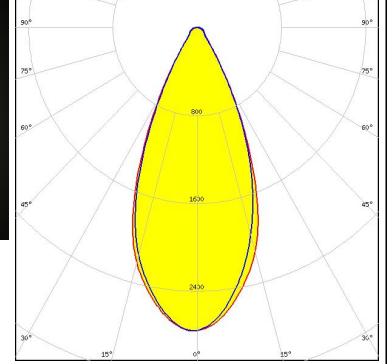
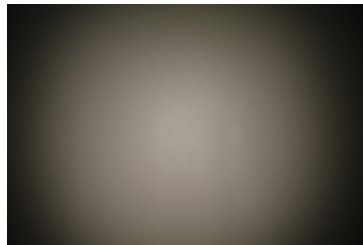
TRIDONIC

LED RLE G1 49x133mm 2000lm xxx EXC OTD
 FWHM / FWTM 46.0° / 73.0°
 Efficiency 94 %
 Peak intensity 1.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



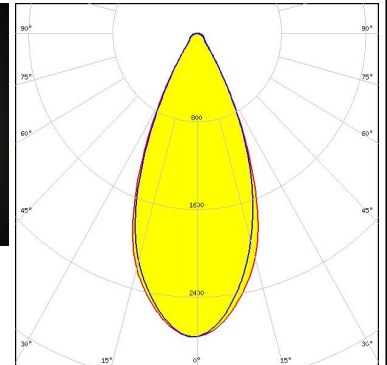
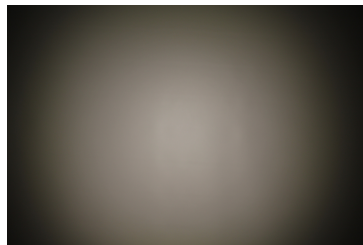
TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD
 FWHM / FWTM 46.0° / 73.0°
 Efficiency 94 %
 Peak intensity 1.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:


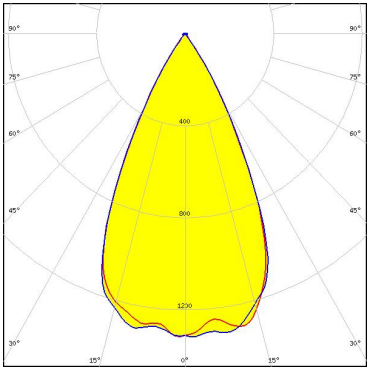

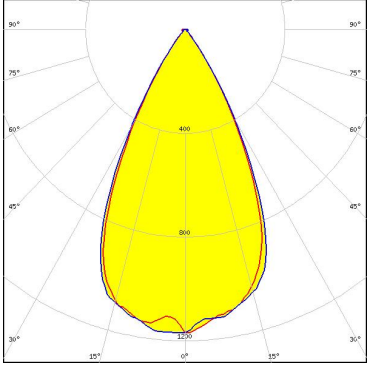

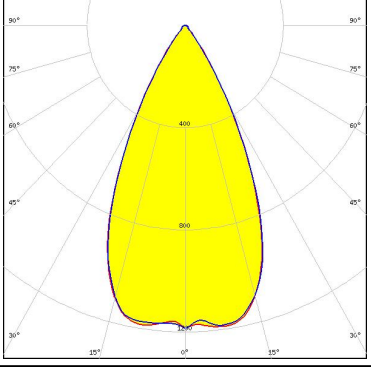

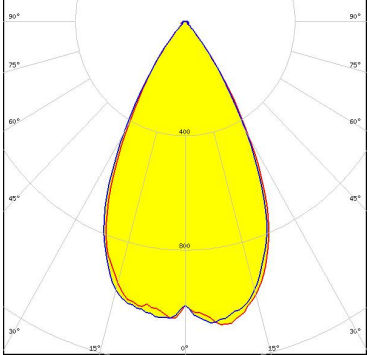


TRIDONIC

LED RLE G1 49x245mm 4000lm xxx EXC OTD
 FWHM / FWTM 46.0° / 73.0°
 Efficiency 94 %
 Peak intensity 1.4 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (SIMULATED):

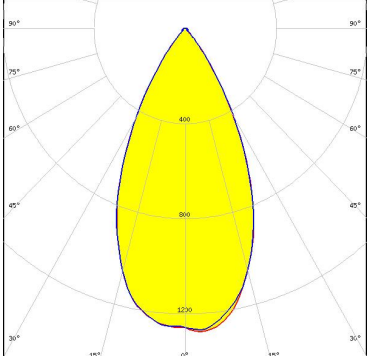
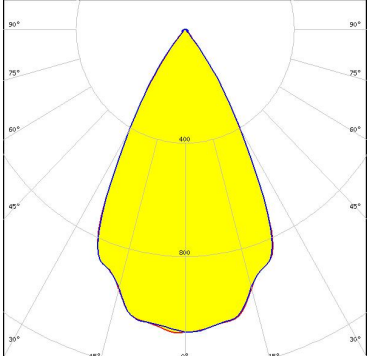
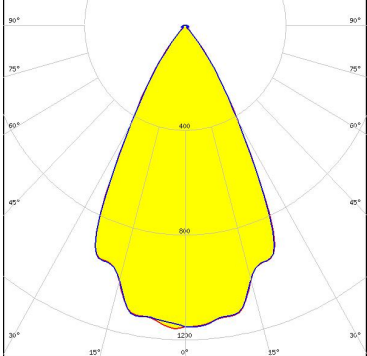
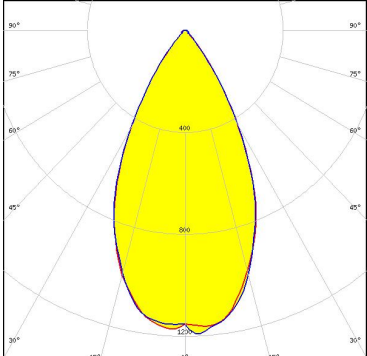
	<p>LED XHP35 HI FWHM / FWTM 52.0° / 68.0° Efficiency 93 % Peak intensity 1.4 cd/lm LEDs/each optic 1 Light colour White Required components:</p>	
	<p>LED XM-L FWHM / FWTM 54.0° / 74.0° Efficiency 92 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>	
	<p>LED XP-G3 FWHM / FWTM 52.0° / 74.0° Efficiency 89 % Peak intensity 1.2 cd/lm LEDs/each optic 1 Light colour White Required components:</p>	
	<p>LED XP-L HD FWHM / FWTM 55.0° / 79.0° Efficiency 93 % Peak intensity 1.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>	

Protective plate, glass

OPTICAL RESULTS (SIMULATED):

<p>CREE → LED</p> <p>LED: XP-L HD FWHM / FWTM: 56.0° / 78.0° Efficiency: 90 % Peak intensity: 1.1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	
<p>CREE → LED</p> <p>LED: XP-L HI FWHM / FWTM: 48.0° / 72.0° Efficiency: 90 % Peak intensity: 1.4 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	
<p>CREE → LED</p> <p>LED: XP-L2 FWHM / FWTM: 58.0° / 82.0° Efficiency: 89 % Peak intensity: 1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	
<p>CREE → LED</p> <p>LED: XP-P FWHM / FWTM: 40.0° / 66.0° Efficiency: 91 % Peak intensity: 1.8 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	

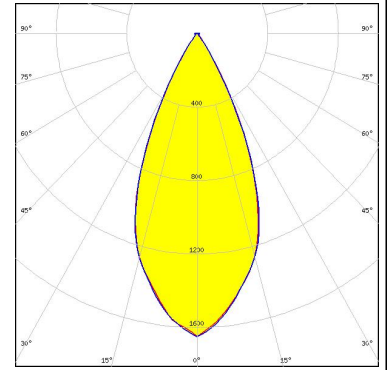
OPTICAL RESULTS (SIMULATED):

<p>LUMILEDS</p> <p>LED LUXEON HL2X</p> <p>FWHM / FWTM 50.0° / 76.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>LUMILEDS</p> <p>LED LUXEON HL2X-D</p> <p>FWHM / FWTM 56.0° / 76.0°</p> <p>Efficiency 88 %</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 style="background-color: #e0f0ff; padding: 2px; display: inline-block;">Protective plate, glass</p>	
<p>LUMILEDS</p> <p>LED LUXEON HL2X-D</p> <p>FWHM / FWTM 56.0° / 76.0°</p> <p>Efficiency 96 %</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 HL2X-P</p> <p>FWHM / FWTM 54.0° / 80.0°</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>	

OPTICAL RESULTS (SIMULATED):

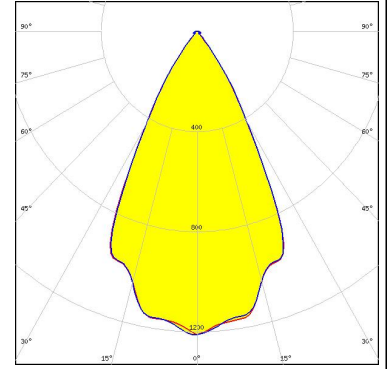
LUMILEDS

LED LUXEON HL2Z
 FWHM / FWTM 46.0° / 66.0°
 Efficiency 94 %
 Peak intensity 1.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

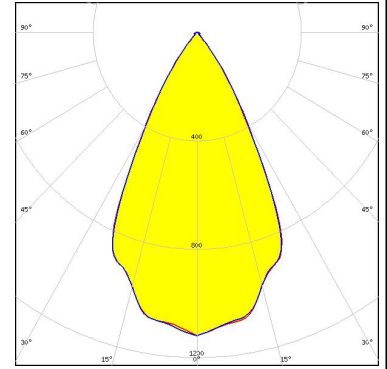
LED LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
 FWHM / FWTM 54.0° / 76.0°
 Efficiency 96 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



LUMILEDS

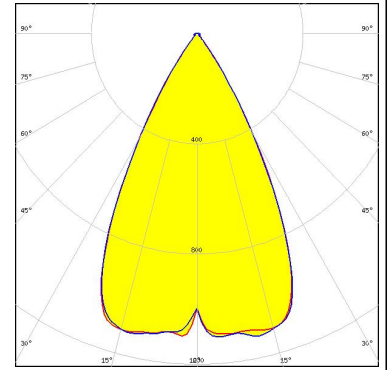
LED LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)
 FWHM / FWTM 54.0° / 76.0°
 Efficiency 88 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass

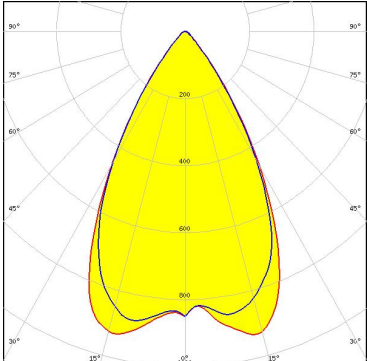
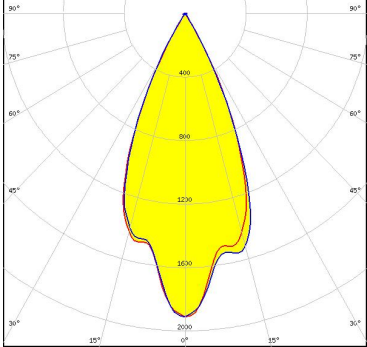
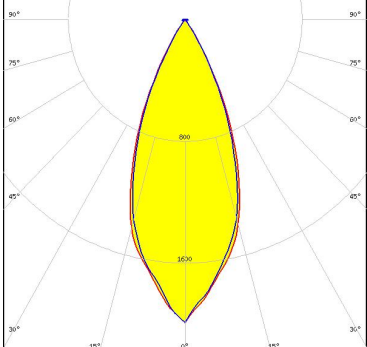
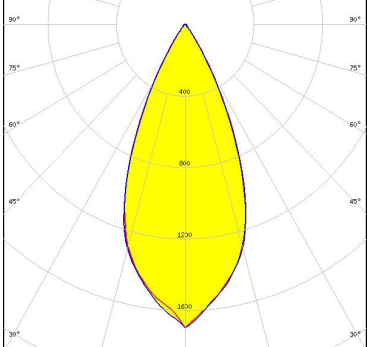


NICHIA

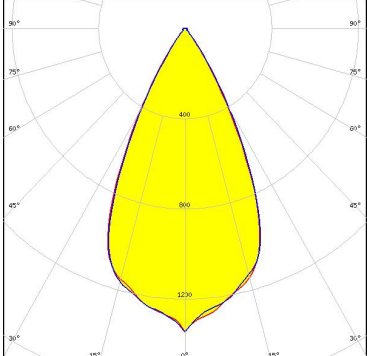
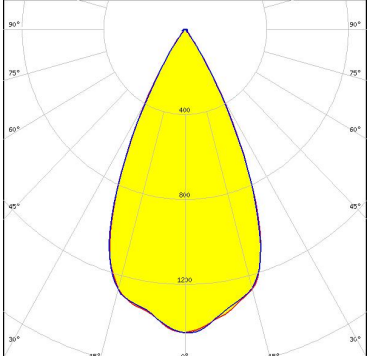
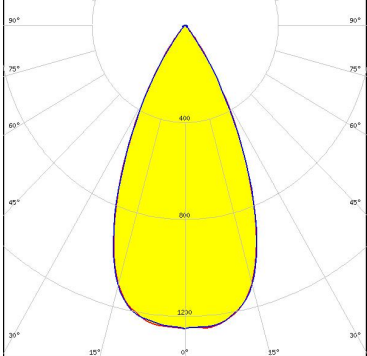
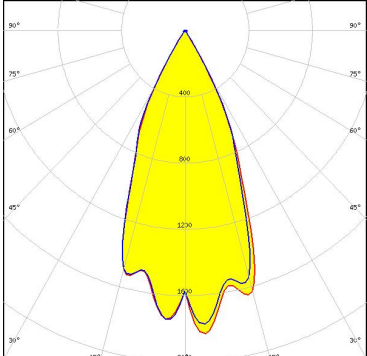
LED NV4WB35AM
 FWHM / FWTM 56.0° / 74.0°
 Efficiency 95 %
 Peak intensity 1.2 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (SIMULATED):

<p>OSRAM Opto Semiconductors</p> <p>LED Duris S8</p> <p>FWHM / FWTM 57.0° / 83.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p style="background-color: #ADD8E6; padding: 2px; display: inline-block;">Protective plate, glass</p>	
<p>OSRAM Opto Semiconductors</p> <p>LED OSCONIQ C 2424</p> <p>FWHM / FWTM 45.0° / 62.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 1.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>OSRAM Opto Semiconductors</p> <p>LED OSCONIQ P 3030</p> <p>FWHM / FWTM 42.0° / 64.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>OSRAM Opto Semiconductors</p> <p>LED OSCONIQ P 3737 (2W version)</p> <p>FWHM / FWTM 45.0° / 68.0°</p> <p>Efficiency 96 %</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 (SIMULATED):

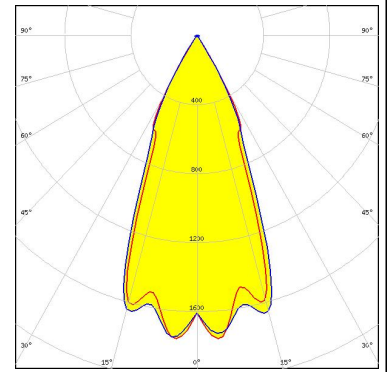
<p>OSRAM Opto Semiconductors</p> <p>LED OSCONIQ P 3737 (3W version)</p> <p>FWHM / FWTM 52.0° / 72.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>OSRAM Opto Semiconductors</p> <p>LED OSCONIQ P 3737 Flat</p> <p>FWHM / FWTM 50.0° / 68.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 1.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p>OSRAM Opto Semiconductors</p> <p>LED OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM 50.0° / 72.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1.3 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p style="background-color: #ADD8E6; padding: 2px;">Protective plate, glass</p>	
<p>OSRAM Opto Semiconductors</p> <p>LED OSLON Square Flat</p> <p>FWHM / FWTM 43.0° / 64.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 1.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

OPTICAL RESULTS (SIMULATED):

OSRAM

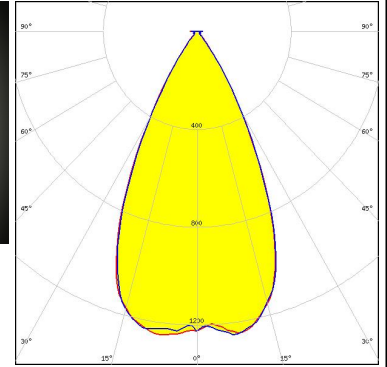
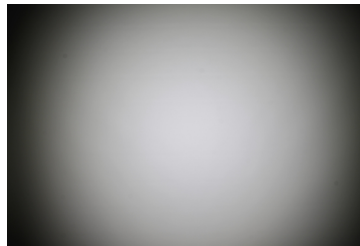
Opto Semiconductors

LED OSTAR Projection Compact (Kx.CSLNM1.xx)
 FWHM / FWTM 42.0° / 64.0°
 Efficiency 96 %
 Peak intensity 1.8 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



PHILIPS

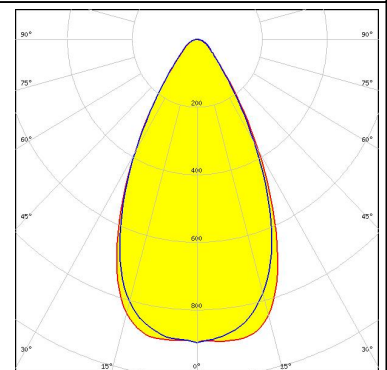
LED Fortimo FastFlex LED 2x8 DAX G4
 FWHM / FWTM 51.0° / 73.0°
 Efficiency 94 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

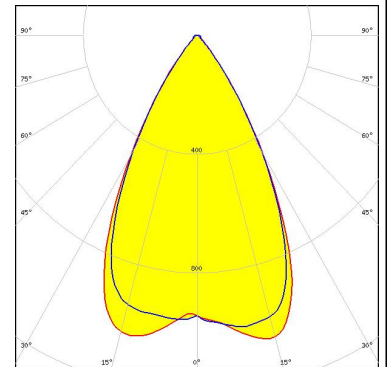
LED HiLOM RM16 Z (LH502C)
 FWHM / FWTM 56.0° / 90.0°
 Efficiency 89 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

Protective plate, glass



SEIOUL SEMICONDUCTOR

LED SEOUL DC 5050 6V
 FWHM / FWTM 54.0° / 79.0°
 Efficiency 94 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (SIMULATED):



GENERAL INFORMATION:

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

MATERIALS:

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LEDiL Oy

Joensuunkatu 13
FI-24240 SALO
Finland

LEDiL Inc.

228 West Page Street
Suite D
Sycamore IL 60178
USA

Ledil Optics Technology (Shenzhen) Co., Ltd.

405 , Block B
Casic Motor Building
Shenzhen 518057
P.R.CHINA

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