

HB-2X2-W

~50° wide beam

SPECIFICATION:

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

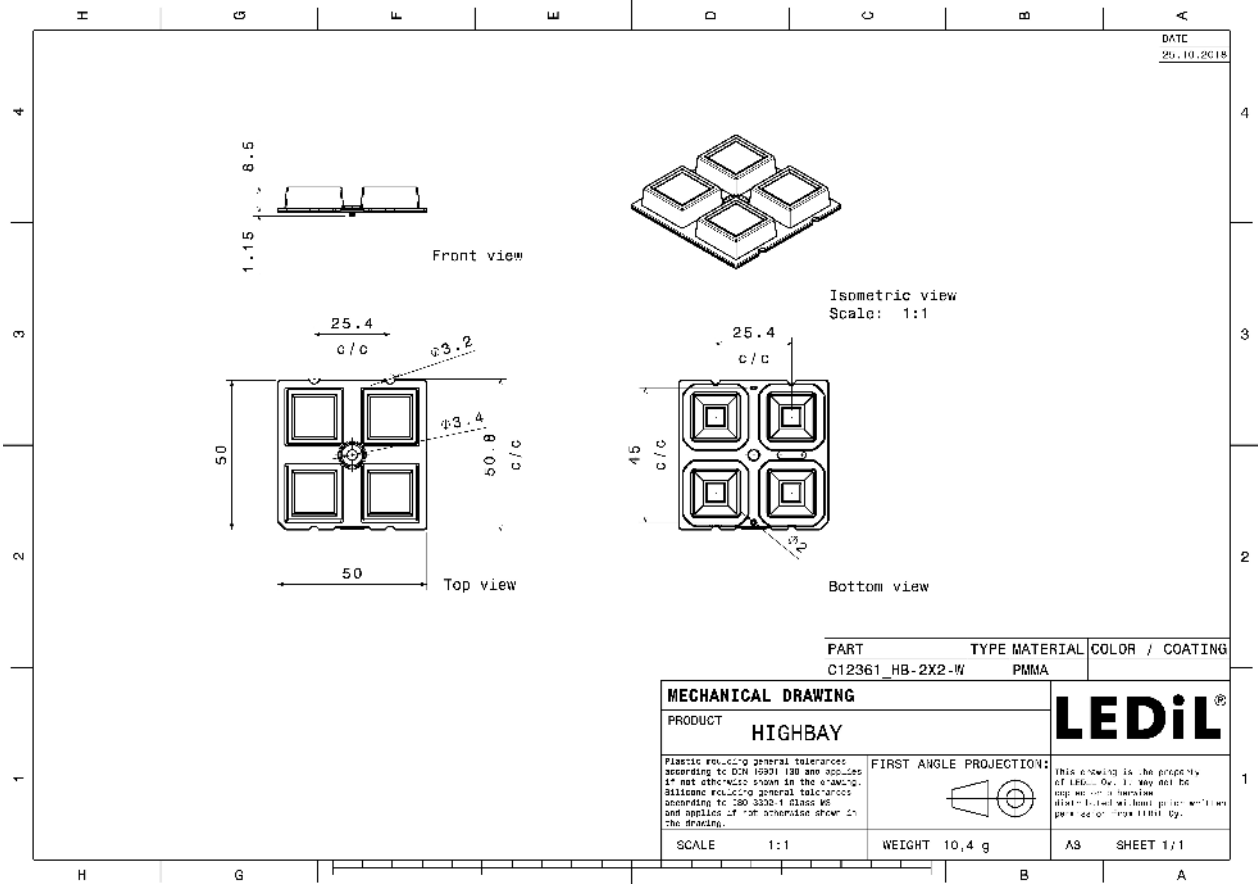


MATERIALS:

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


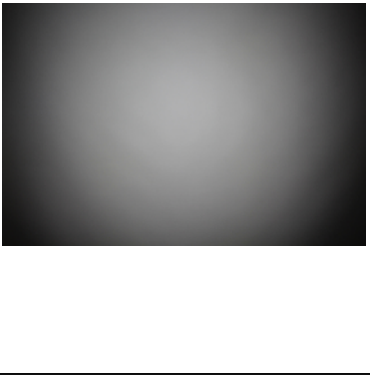
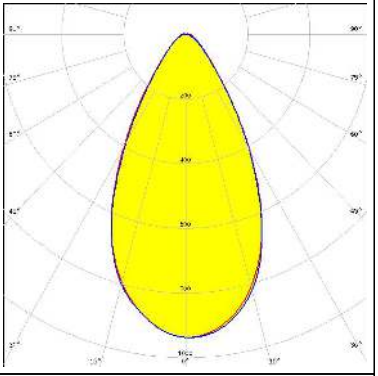


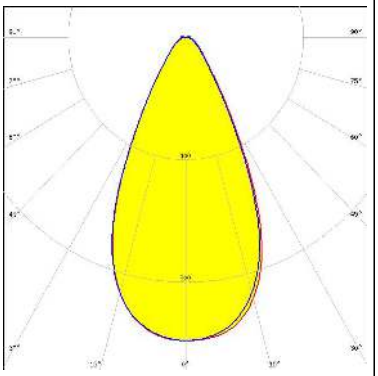

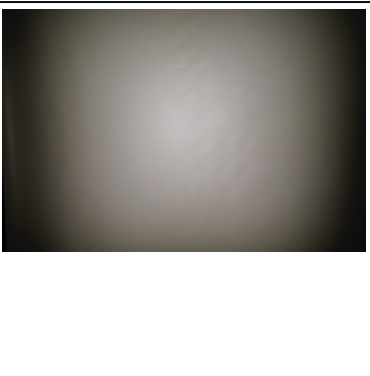
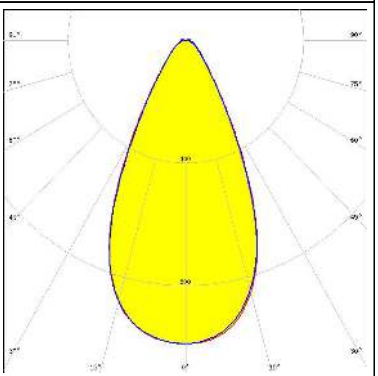

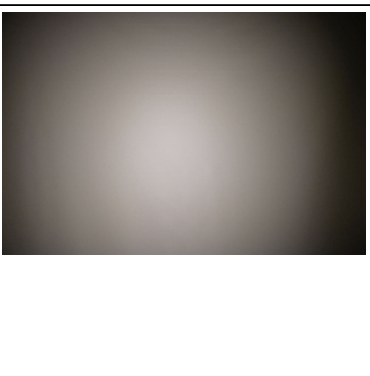
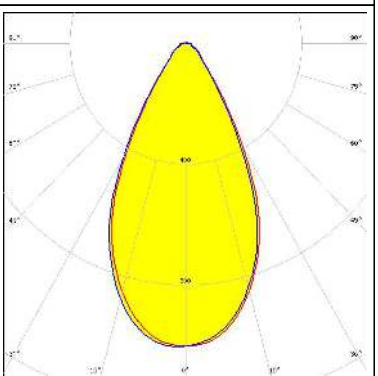
ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C12361_HB-2X2-W » Box size: 480 x 280 x 300 mm	800	160	160	9.1


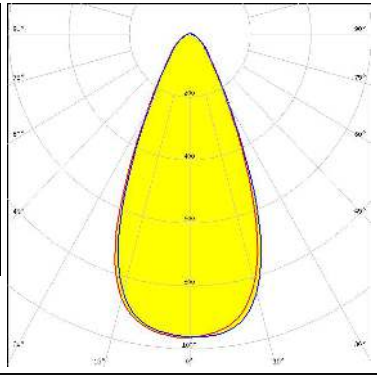

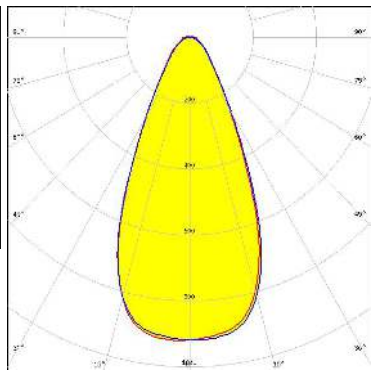
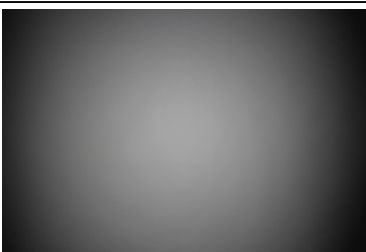
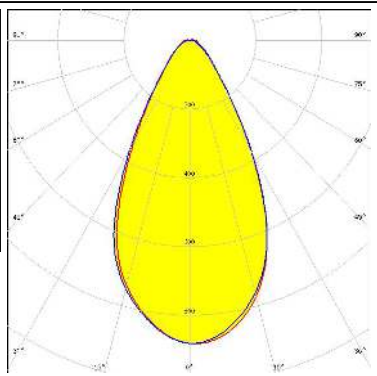
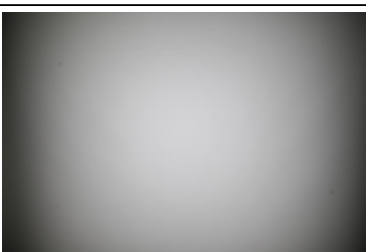
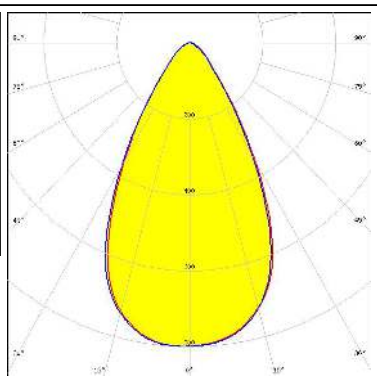


See also our general installation guide: www.ledil.com/installation_guide


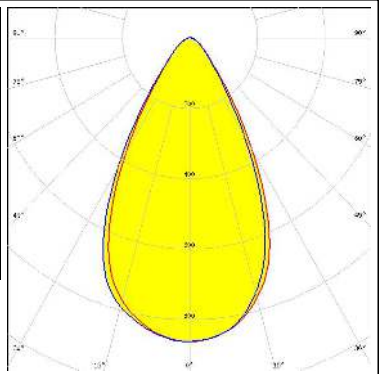

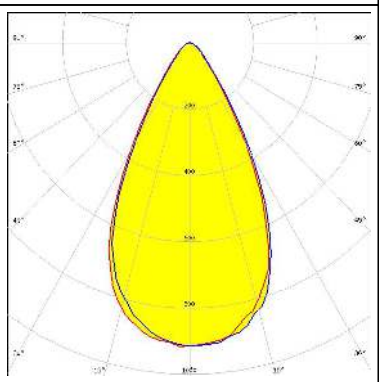

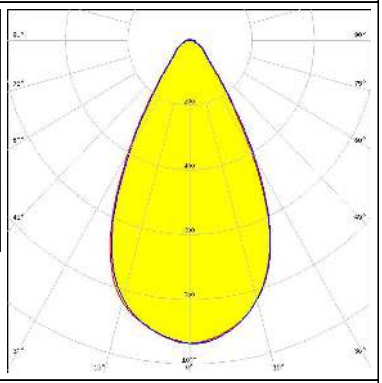

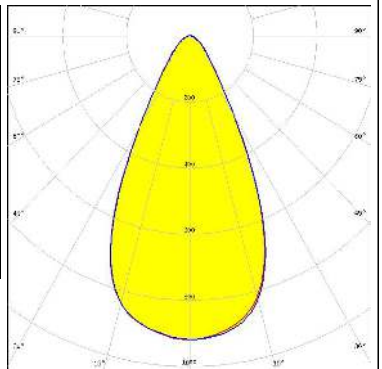
OPTICAL RESULTS (MEASURED):

<p></p> <p>LED Bridgelux SMD 5050</p> <p>FWHM / FWTM 55.0° / 93.0°</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 QUICK FLUX XTP 2x4 xxx LS G5</p> <p>FWHM / FWTM 52.0° / 85.0°</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>		
<p></p> <p>LED QUICK FLUX XTP 2x6 xxx LS G5</p> <p>FWHM / FWTM 52.0° / 86.0°</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>		
<p></p> <p>LED J Series 5050C 6V E Class</p> <p>FWHM / FWTM 54.0° / 86.0°</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>		


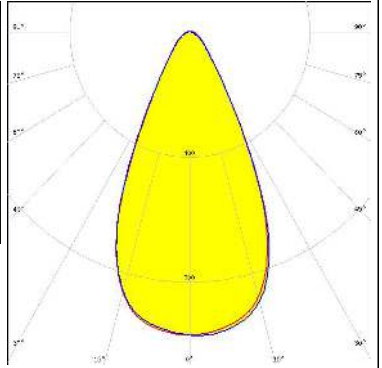
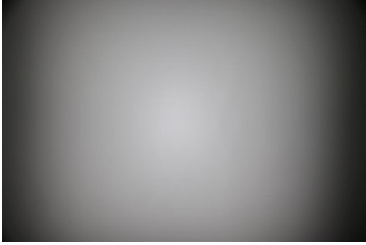
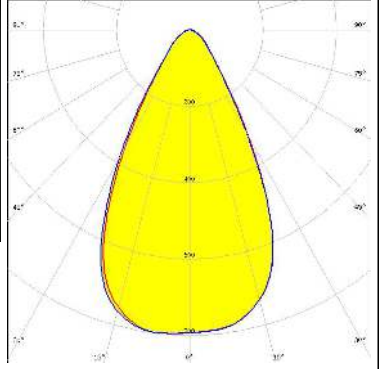
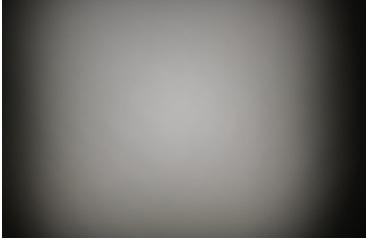
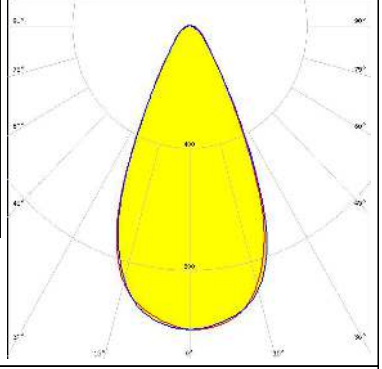

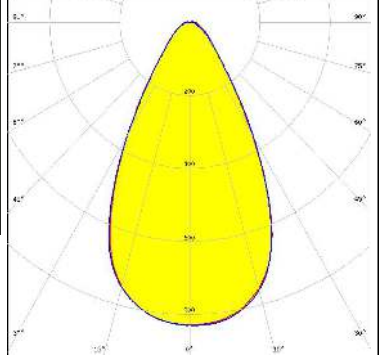
OPTICAL RESULTS (MEASURED):

<p>CREE ⇄ LED</p> <p>LED XB-D FWHM / FWTM 48.0° / 85.0° Efficiency 86 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XD16 FWHM / FWTM 48.0° / 89.0° Efficiency 91 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XD16 FWHM / FWTM 54.0° / 94.0° Efficiency 91 % Peak intensity 0.9 cd/lm LEDs/each optic 4 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XHP35 HD FWHM / FWTM 57.0° / 92.0° Efficiency 85 % Peak intensity 0.8 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

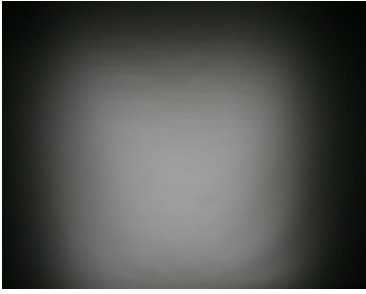
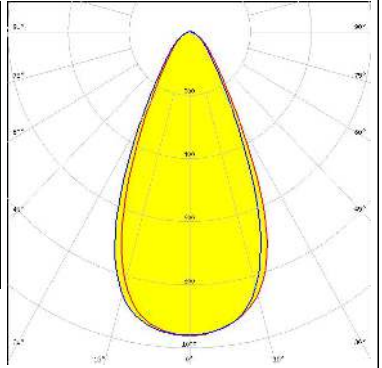
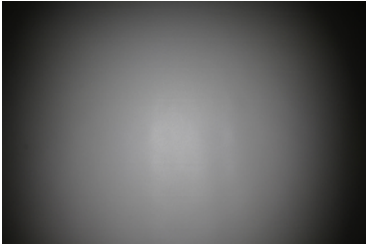
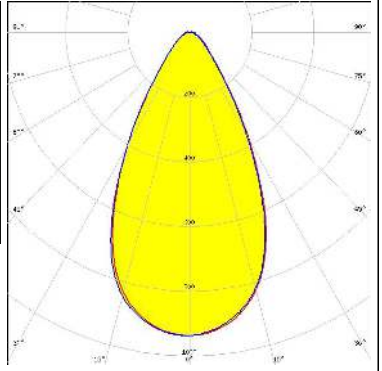

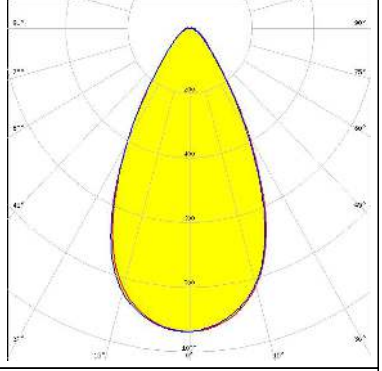

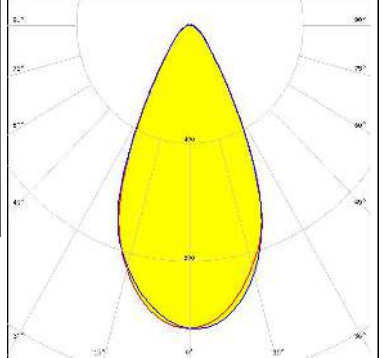
OPTICAL RESULTS (MEASURED):

<p>CREE ⇄ LED</p> <p>LED XM-L FWHM / FWTM 57.0° / 90.0° Efficiency 89 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XM-L2 FWHM / FWTM 56.0° / 85.0° Efficiency 87 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XM-L3 FWHM / FWTM 56.0° / 87.0° Efficiency 95 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XP-G FWHM / FWTM 52.0° Efficiency 88 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

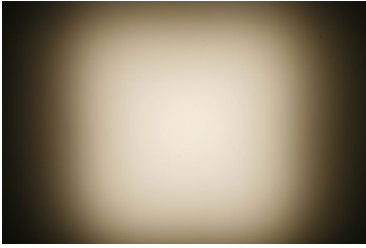
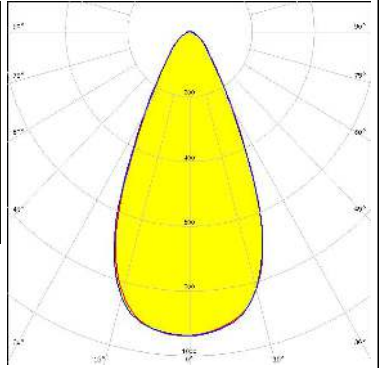
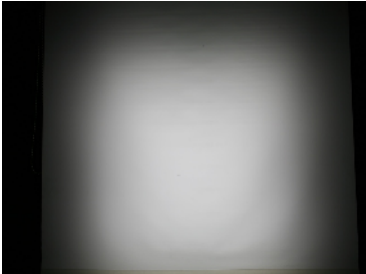
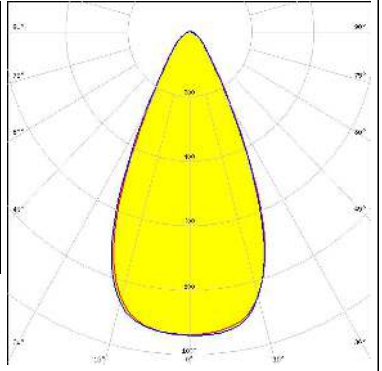
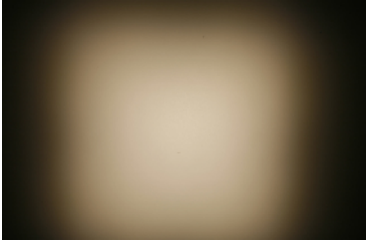
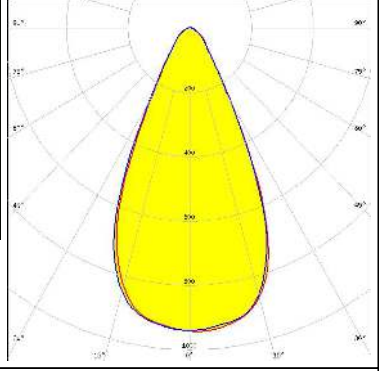
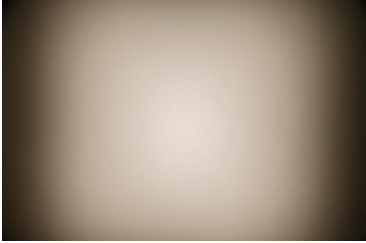
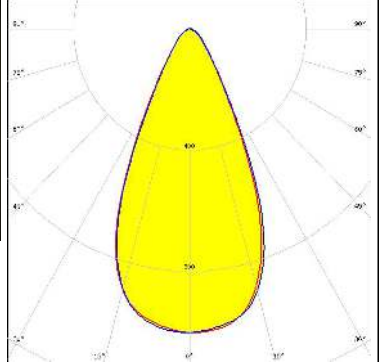
OPTICAL RESULTS (MEASURED):

<p>CREE ⇄ LED</p> <p>LED XP-G2 FWHM / FWTM 51.0° / 84.0° Efficiency 94 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XP-L HD FWHM / FWTM 56.0° / 90.0° Efficiency 87 % Peak intensity 0.8 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XP-L HI FWHM / FWTM 50.0° / 83.0° Efficiency 93 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>CREE ⇄ LED</p> <p>LED XP-L2 FWHM / FWTM 56.0° / 96.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		



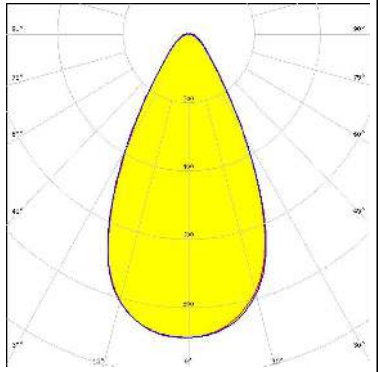


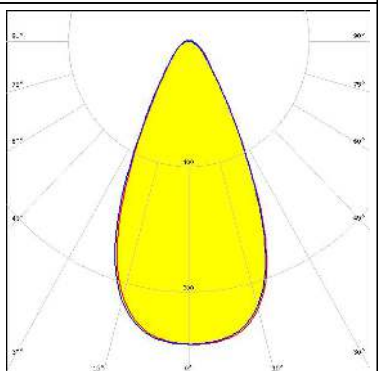

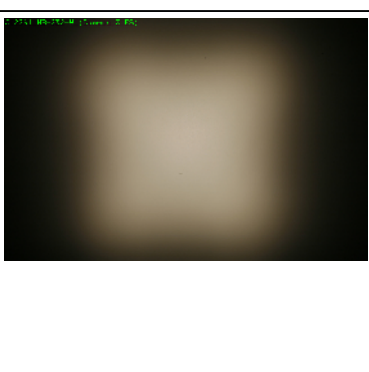
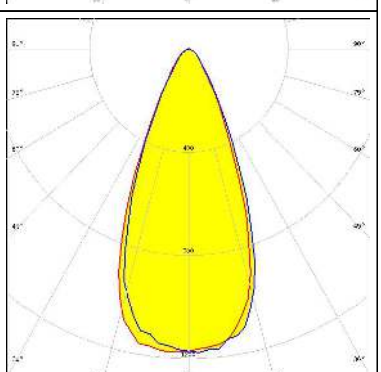


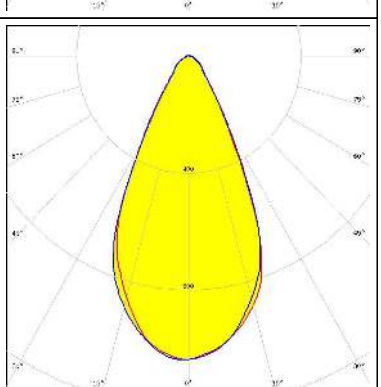
OPTICAL RESULTS (MEASURED):

<p>CREE LED</p> <p>LED XT-E FWHM / FWTM 50.0° / 88.0° Efficiency 87 % 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° / 91.0° Efficiency 94 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON 5050 Square LES FWHM / FWTM 55.0° / 91.0° Efficiency 94 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>LUMILEDS</p> <p>LED LUXEON MZ FWHM / FWTM 53.0° / 86.0° Efficiency 92 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

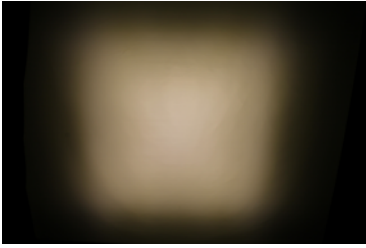
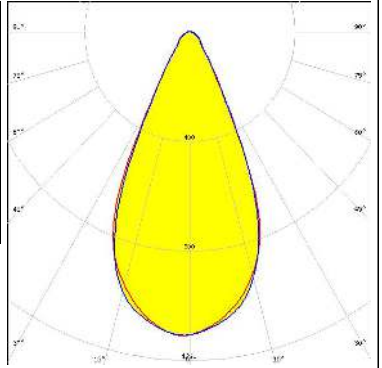
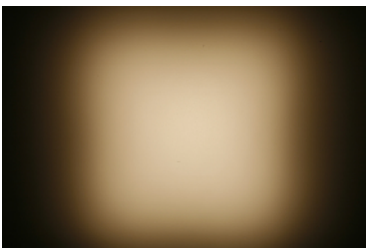
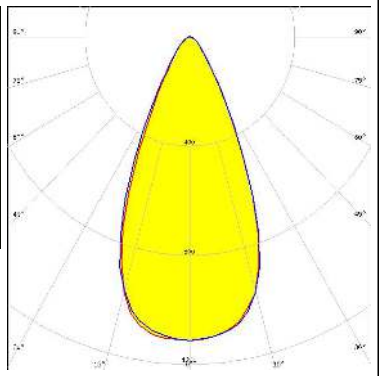

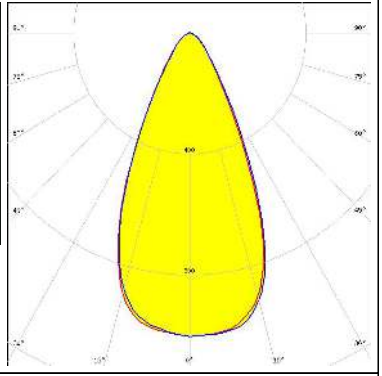
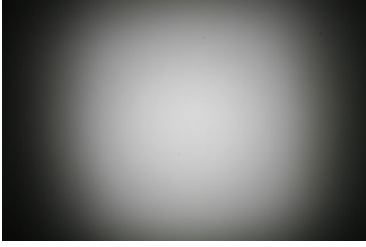
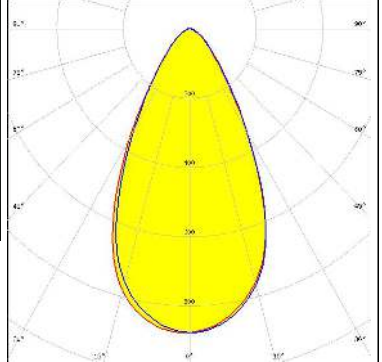
OPTICAL RESULTS (MEASURED):

<p>LUMILEDS</p> <p>LED LUXEON Q</p> <p>FWHM / FWTM 50.0° / 86.0°</p> <p>Efficiency 86 %</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>LUMILEDS</p> <p>LED LUXEON Rebel ES</p> <p>FWHM / FWTM 51.0° / 82.0°</p> <p>Efficiency 87 %</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>LUMILEDS</p> <p>LED LUXEON T</p> <p>FWHM / FWTM 55.0°</p> <p>Efficiency 87 %</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>LUMILEDS</p> <p>LED LUXEON TX</p> <p>FWHM / FWTM 50.0° / 80.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

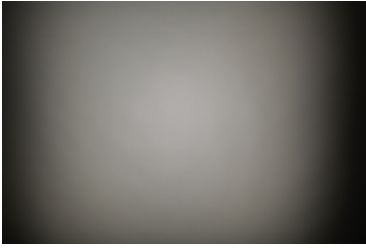
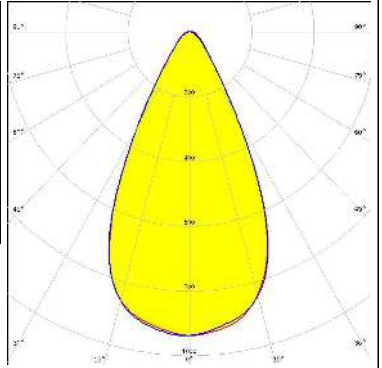
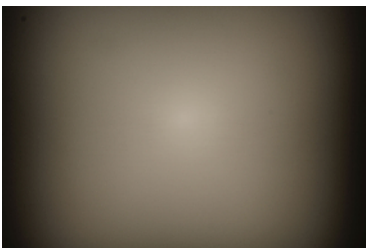
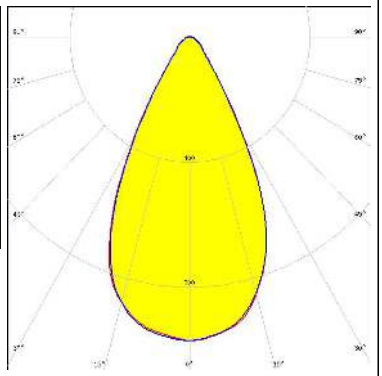

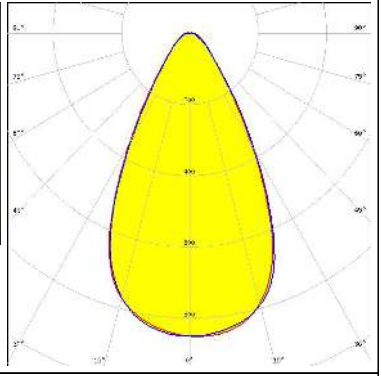
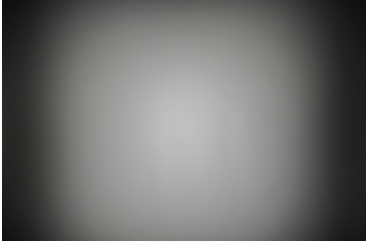
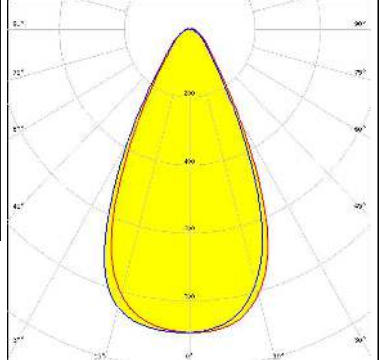
OPTICAL RESULTS (MEASURED):

	<p>LED LUXEON V</p> <p>FWHM / FWTM 55.0° / 91.0°</p> <p>Efficiency 93 %</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>LED LUXEON V2</p> <p>FWHM / FWTM 51.0° / 86.0°</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>		
	<p>LED LUXEON Z ES</p> <p>FWHM / FWTM 46.0° / 76.0°</p> <p>Efficiency 87 %</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>LED SST-10-B130</p> <p>FWHM / FWTM 51.0° / 80.0°</p> <p>Efficiency 99 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Deep Red</p> <p>Required components:</p>		

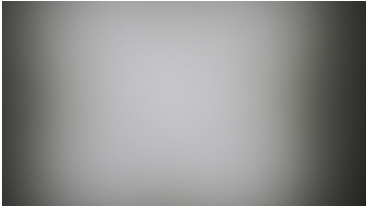
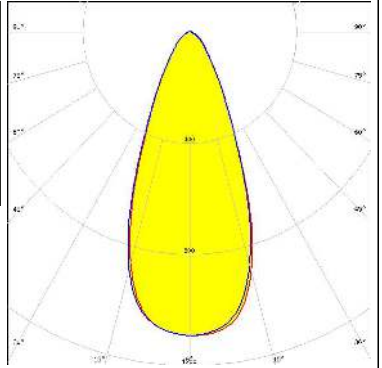

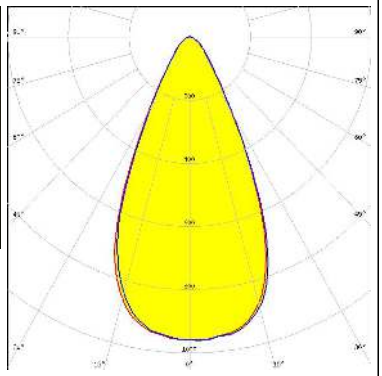
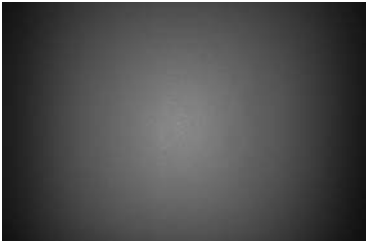
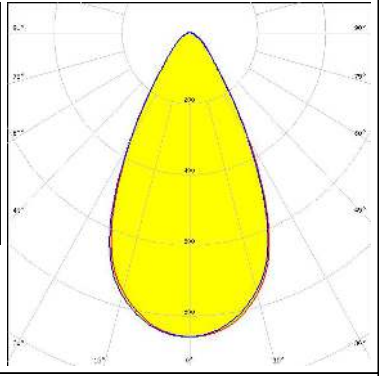
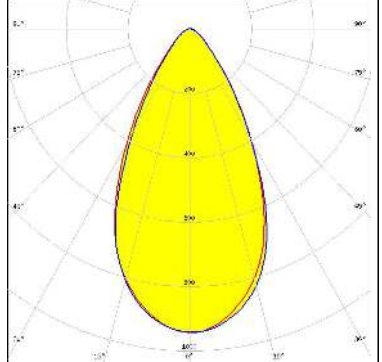
OPTICAL RESULTS (MEASURED):

<p>MST <i>Your solutions</i></p> <p>LED RecLED 122x50mm 1900lm 730 2x4 Opt G1</p> <p>FWHM / FWTM 50.0° / 75.0°</p> <p>Efficiency 98 %</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 NCSxx19A</p> <p>FWHM / FWTM 48.0° / 77.0°</p> <p>Efficiency 85 %</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 NCSxx19B</p> <p>FWHM / FWTM 50.0° / 83.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>NICHIA</p> <p>LED NS9x383</p> <p>FWHM / FWTM 54.0° / 93.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 0.9 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 NVSW219D FWHM / FWTM 53.0° / 83.0° Efficiency 94 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NVSW219F FWHM / FWTM 54.0° / 81.0° Efficiency 97 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NVSW319B FWHM / FWTM 56.0° / 93.0° Efficiency 93 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NVSW3x9A FWHM / FWTM 53.0° / 88.0° Efficiency 92 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

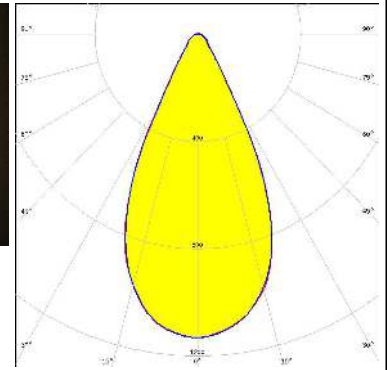
OPTICAL RESULTS (MEASURED):

<p>NICHIA</p> <p>LED NVSxxE21A FWHM / FWTM 43.0° / 80.0° Efficiency 86 % Peak intensity 1.1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NVSxx19B/NVSxx19C FWHM / FWTM 51.0° / 82.0° Efficiency 85 % Peak intensity 1 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>NICHIA</p> <p>LED NWSx229A FWHM / FWTM 57.0° / 90.0° Efficiency 86 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		
<p>OPTOGAN</p> <p>LED OLP-5065F6L-06A FWHM / FWTM 56.0° / 90.0° Efficiency 88 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components:</p>		

OPTICAL RESULTS (MEASURED):

OSRAM

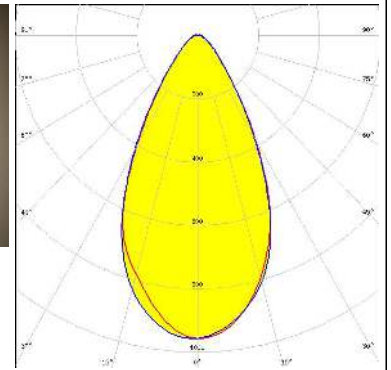
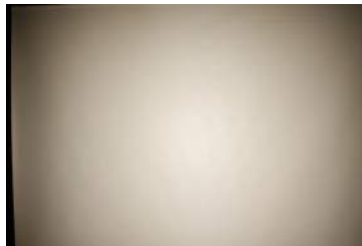
LED PL-BRICK HP 3800 2x8 SSG
 FWHM / FWTM 52.0° / 75.0°
 Efficiency 98 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

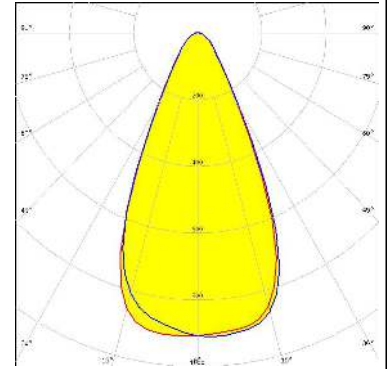
LED Duris S8
 FWHM / FWTM 55.0° / 91.0°
 Efficiency 93 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

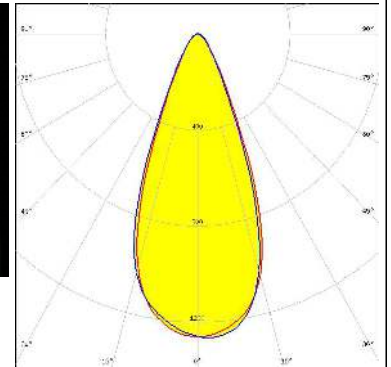
LED OSLON Square PC
 FWHM / FWTM 54.0° / 85.0°
 Efficiency 87 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OSRAM

Opto Semiconductors

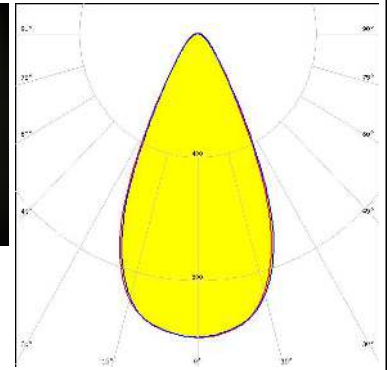
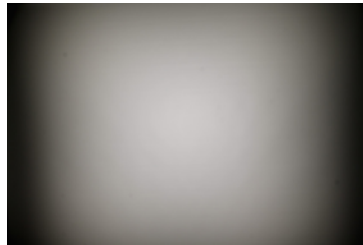
LED OSLON SSL 80
 FWHM / FWTM 43.0° / 70.0°
 Efficiency 89 %
 Peak intensity 1.3 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

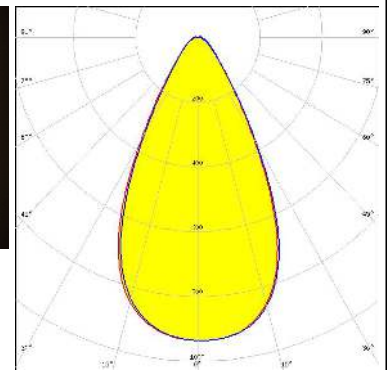
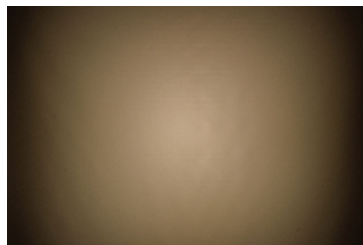
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4
 FWHM / FWTM 52.0° / 82.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



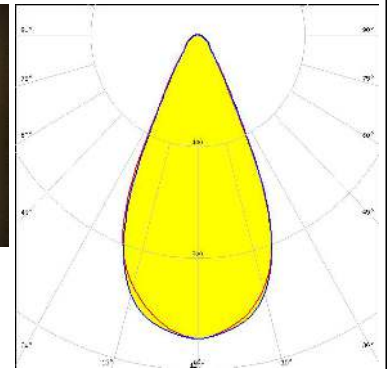
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4+
 FWHM / FWTM 55.0° / 88.0°
 Efficiency 97 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



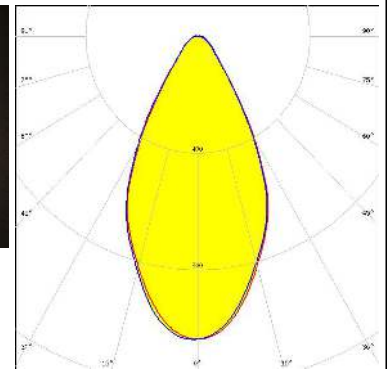
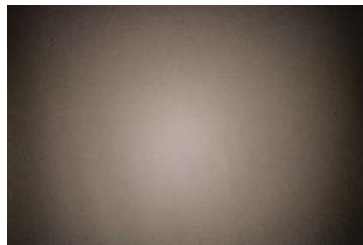
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G5
 FWHM / FWTM 50.0° / 77.0°
 Efficiency 97 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



PHILIPS

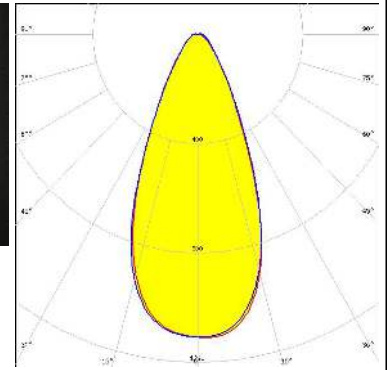
LED Fortimo FastFlex LED 2x8 DA HE
 FWHM / FWTM 54.0° / 87.0°
 Efficiency 97 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

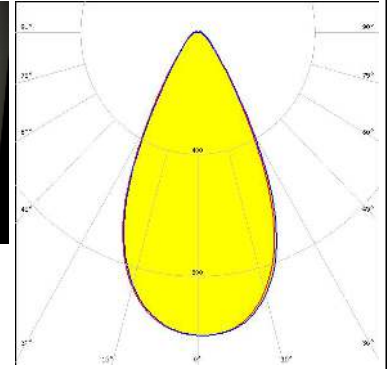
SAMSUNG

LED HiLOM RC12 Z (LH181B)
 FWHM / FWTM 46.0° / 84.0°
 Efficiency 97 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



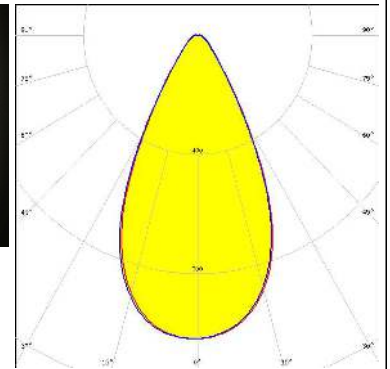
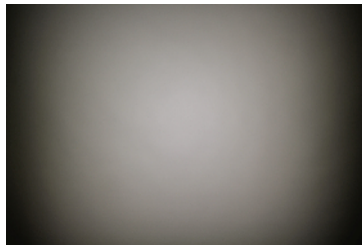
SAMSUNG

LED HiLOM RH12 Z (LH351C)
 FWHM / FWTM 54.0° / 84.0°
 Efficiency 96 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



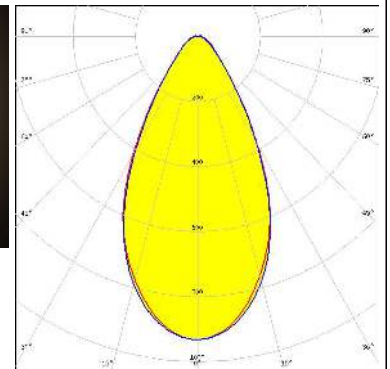
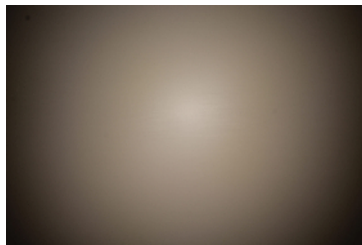
SAMSUNG

LED HiLOM RH16 (LH351C)
 FWHM / FWTM 53.0° / 83.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

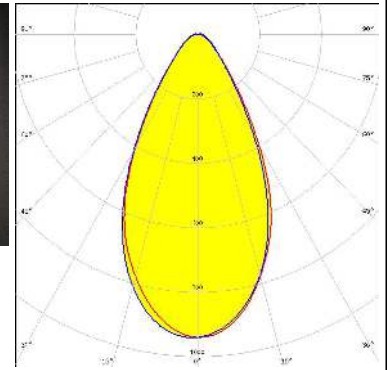
LED HiLOM RM12 Z (LH502C)
 FWHM / FWTM 55.0° / 94.0°
 Efficiency 94 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

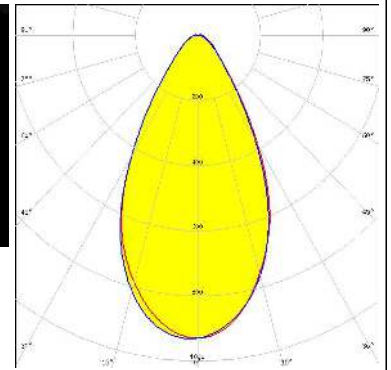
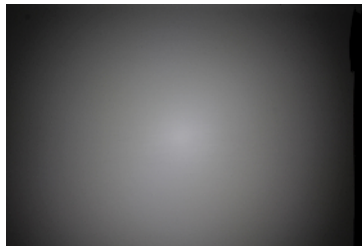
SAMSUNG

LED HiLOM RM16 Z (LH502C)
 FWHM / FWTM 55.0° / 95.0°
 Efficiency 96 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



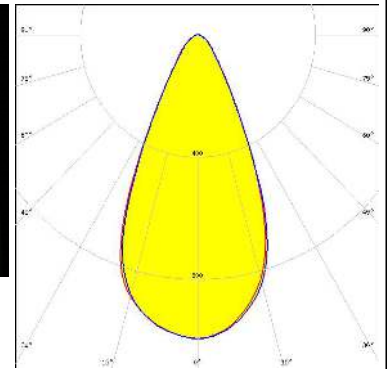
SAMSUNG

LED HiLOM RM8 Z (LH502C)
 FWHM / FWTM 56.0° / 95.0°
 Efficiency 96 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



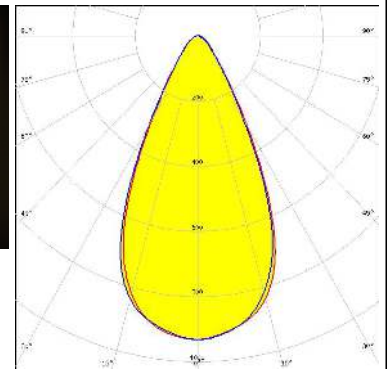
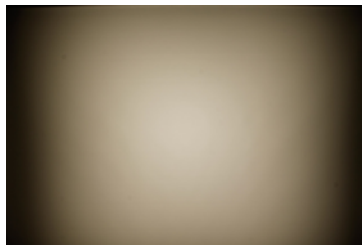
SAMSUNG

LED LH351A
 FWHM / FWTM 49.0° / 81.0°
 Efficiency 89 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



SAMSUNG

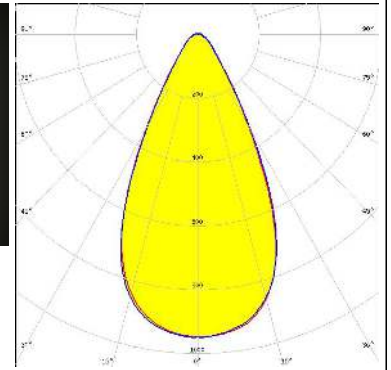
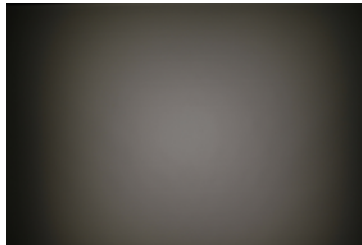
LED LH351B
 FWHM / FWTM 55.0° / 85.0°
 Efficiency 86 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

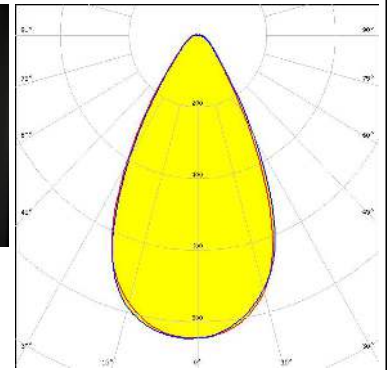
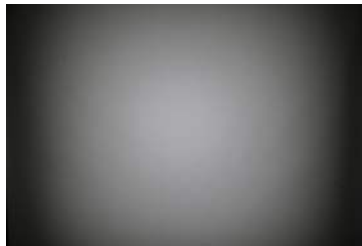
SAMSUNG

LED LH351C
 FWHM / FWTM 53.0° / 85.0°
 Efficiency 93 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



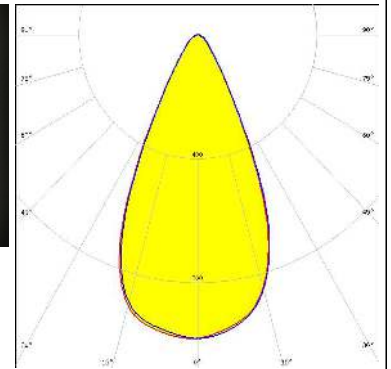
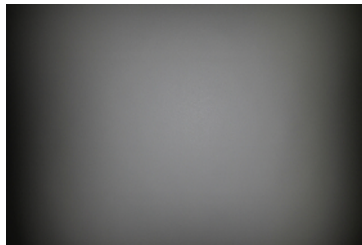
SAMSUNG

LED LH351D
 FWHM / FWTM 56.0° / 90.0°
 Efficiency 91 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



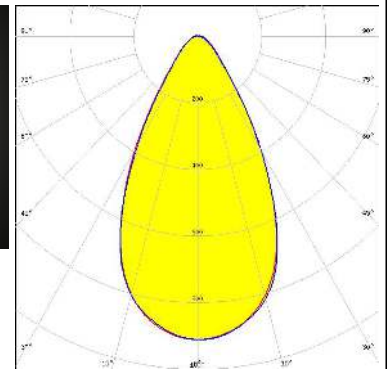
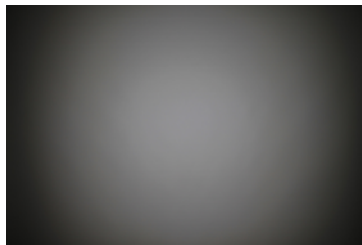
SAMSUNG

LED LH351Z
 FWHM / FWTM 50.0° / 77.0°
 Efficiency 87 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:


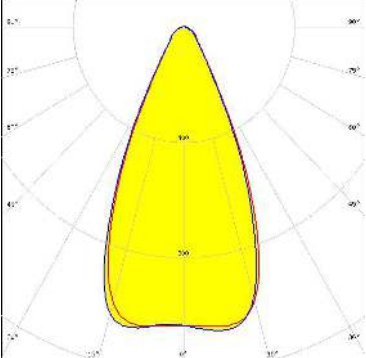

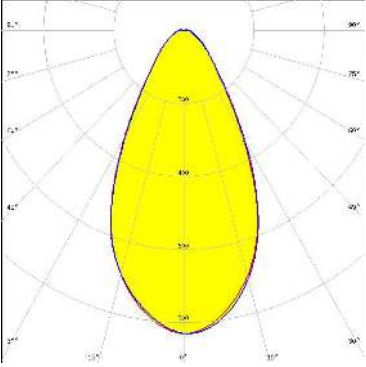

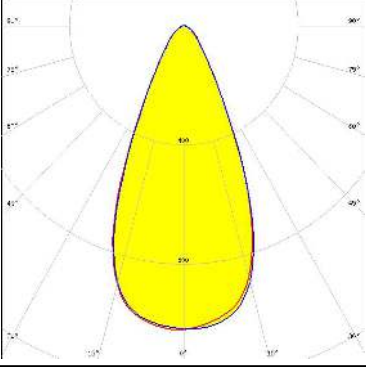
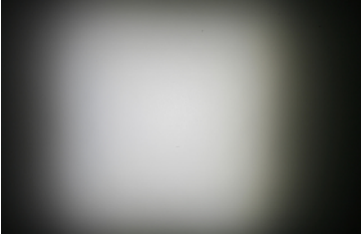
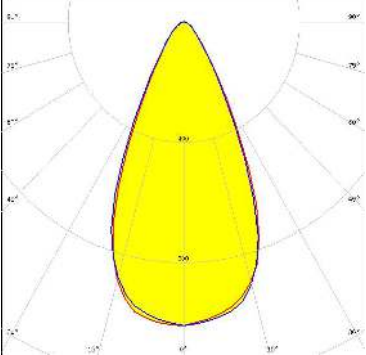


SAMSUNG


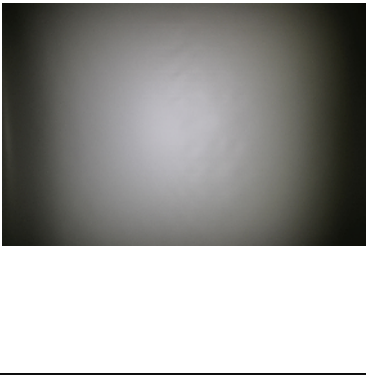
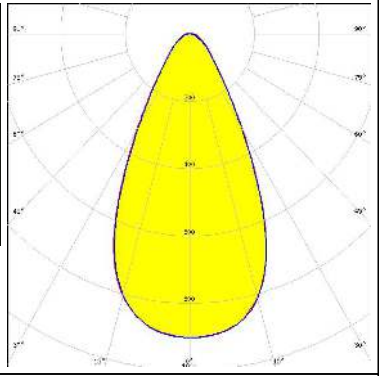


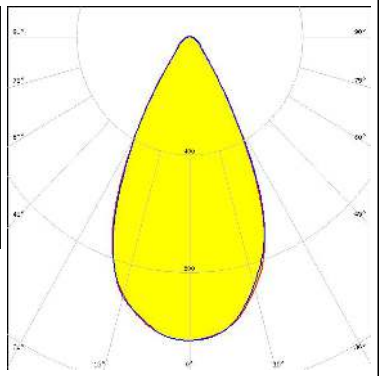

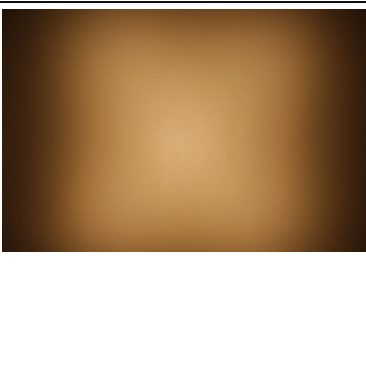
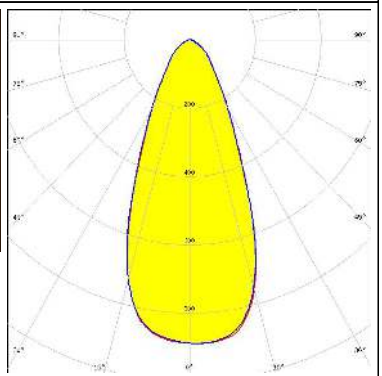


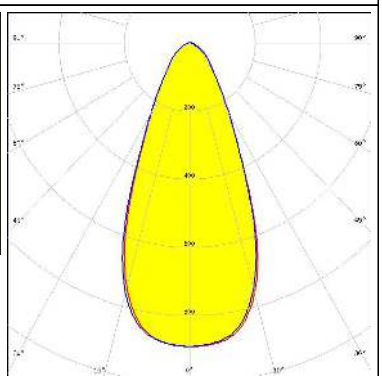
LED LH508A
 FWHM / FWTM 56.0° / 92.0°
 Efficiency 93 %
 Peak intensity 0.9 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:




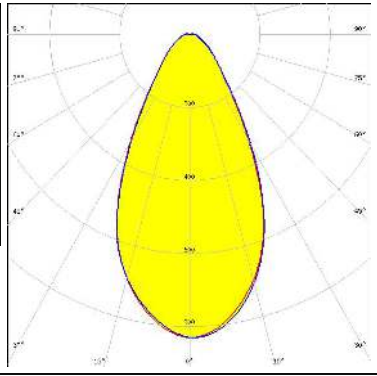

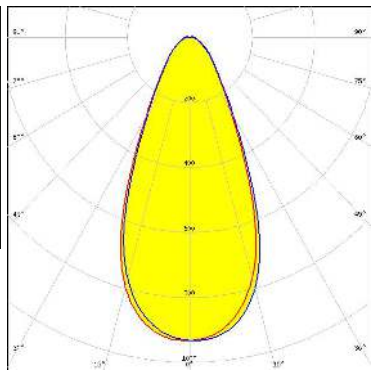
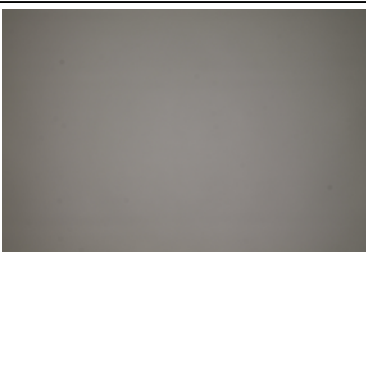
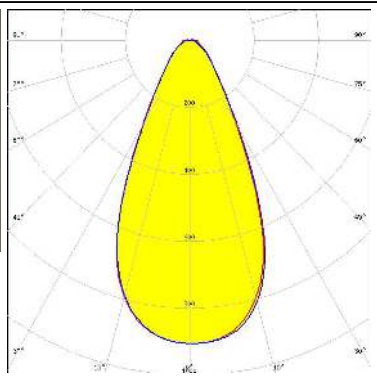
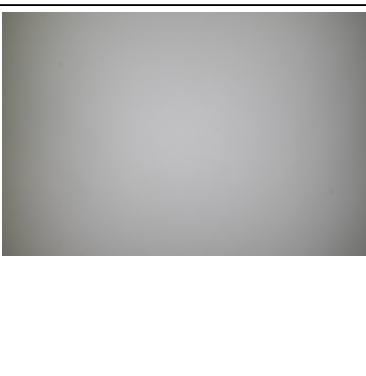
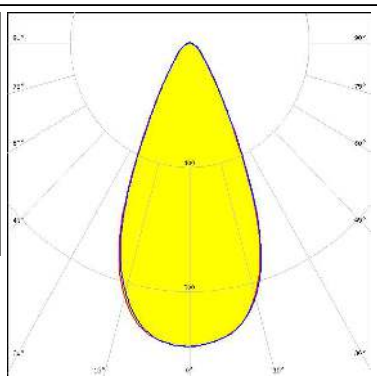
OPTICAL RESULTS (MEASURED):

<p>SEITEC Elektronik GmbH</p> <p>LED LED-Pa-L15c2W11c2-xxx-C050-01</p> <p>FWHM / FWTM 50.0° / 78.0°</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>		
<p>SEOL SEIOL SEMICONDUCTOR</p> <p>LED 2x2 Y22 module - SMJQ-D48W16AA-XX</p> <p>FWHM / FWTM 54.0° / 102.0°</p> <p>Efficiency 92 %</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>SEOL SEIOL SEMICONDUCTOR</p> <p>LED Z5</p> <p>FWHM / FWTM 48.0° / 80.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOL SEIOL SEMICONDUCTOR</p> <p>LED Z5M1/Z5M2</p> <p>FWHM / FWTM 51.0° / 82.0°</p> <p>Efficiency 85 %</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> SEOUL SEMICONDUCTOR</p> <p>LED Z5M3</p> <p>FWHM / FWTM 53.0° / 93.0°</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 Z5M4</p> <p>FWHM / FWTM 54.0° / 80.0°</p> <p>Efficiency 97 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p> SEOUL SEMICONDUCTOR</p> <p>LED Z8Y15</p> <p>FWHM / FWTM 45.0° / 89.0°</p> <p>Efficiency 79 %</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 Z8Y19</p> <p>FWHM / FWTM 46.0° / 89.0°</p> <p>Efficiency 79 %</p> <p>Peak intensity 0.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

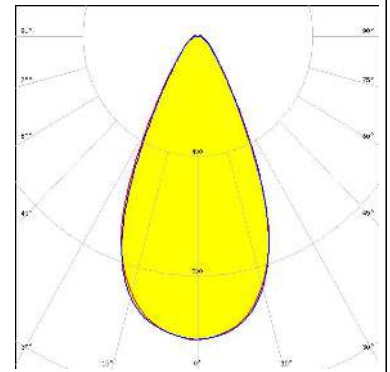
OPTICAL RESULTS (MEASURED):

<p>SEOUL SEMICONDUCTOR</p> <p>LED Z8Y19</p> <p>FWHM / FWTM 54.0° / 102.0°</p> <p>Efficiency 92 %</p> <p>Peak intensity 0.8 cd/lm</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		
<p>SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22</p> <p>FWHM / FWTM 48.0° / 94.0°</p> <p>Efficiency 92 %</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 Z8Y22P</p> <p>FWHM / FWTM 51.0° / 93.0°</p> <p>Efficiency 92 %</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>TOSHIBA Leading Innovation >>></p> <p>LED TL1L4</p> <p>FWHM / FWTM 48.0° / 78.0°</p> <p>Efficiency 81 %</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):

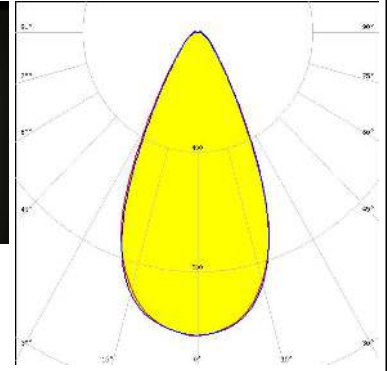
TRIDONIC

LED RLE 2x4 2000lm HP EXC2 OTD
 FWHM / FWTM 51.0° / 84.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



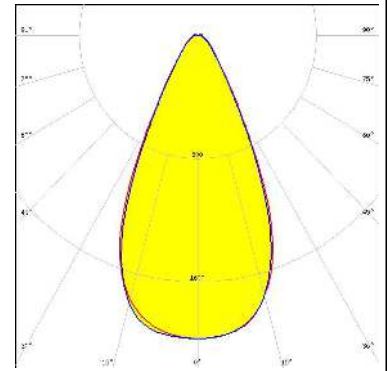
TRIDONIC

LED RLE 2x8 4000lm HP EXC2 OTD
 FWHM / FWTM 51.0° / 84.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



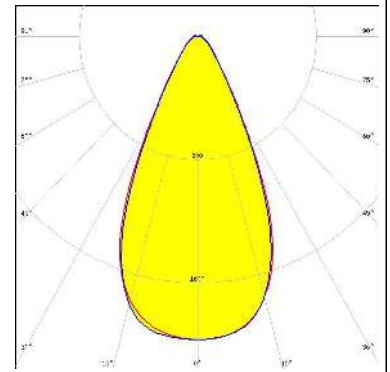
TRIDONIC

LED RLE G1 49x121mm 2000lm xxx EXC OTD
 FWHM / FWTM 52.0° / 83.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



TRIDONIC

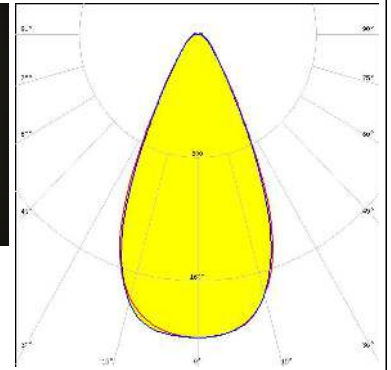
LED RLE G1 49x133mm 2000lm xxx EXC OTD
 FWHM / FWTM 52.0° / 83.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



OPTICAL RESULTS (MEASURED):

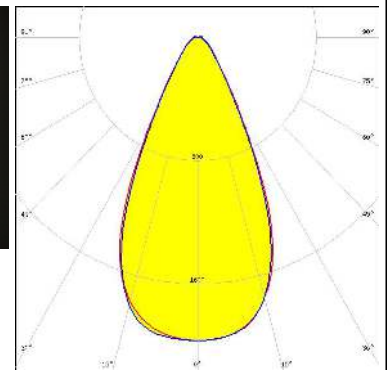
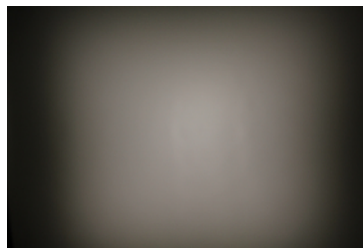
TRIDONIC

LED RLE G1 49x223mm 4000lm xxx EXC OTD
 FWHM / FWTM 52.0° / 83.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

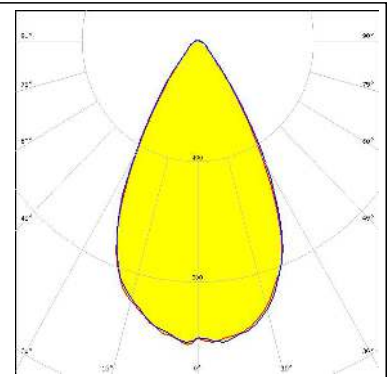
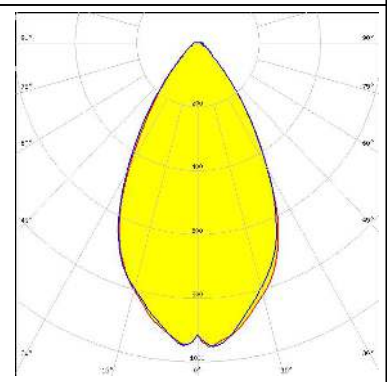
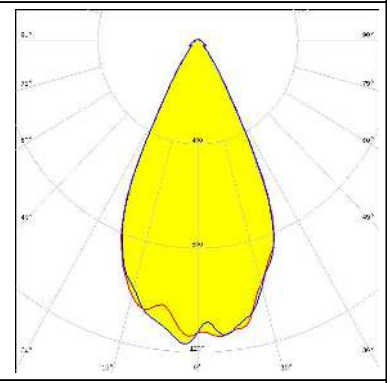
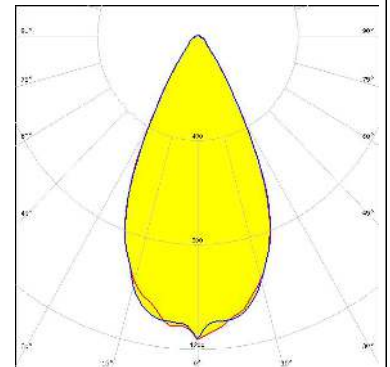


TRIDONIC


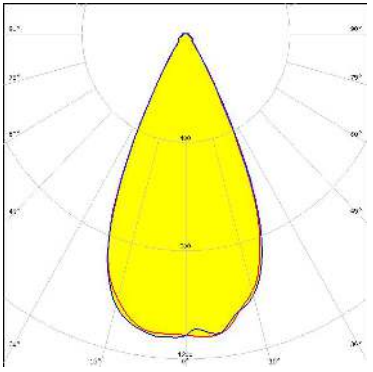

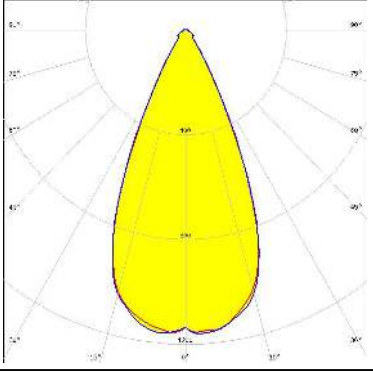

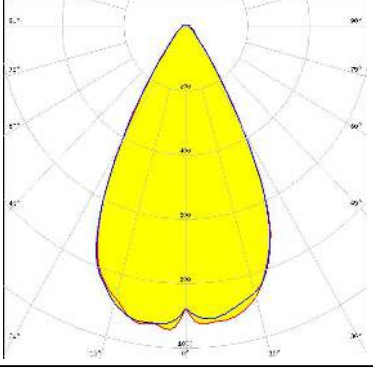

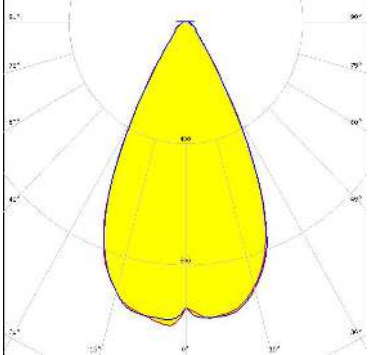
LED RLE G1 49x245mm 4000lm xxx EXC OTD
 FWHM / FWTM 52.0° / 83.0°
 Efficiency 94 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



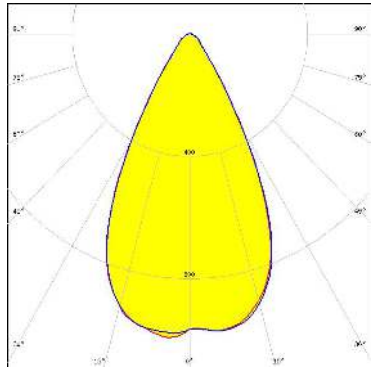
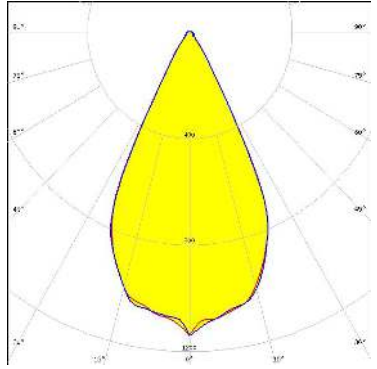
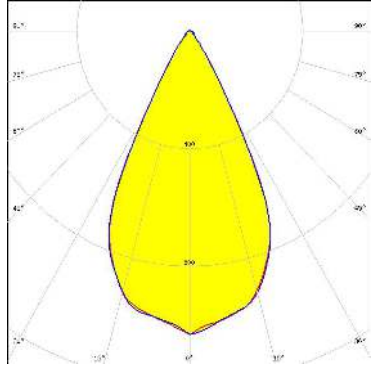
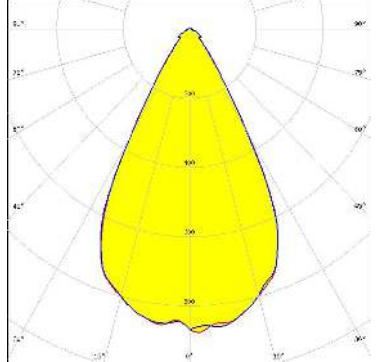
OPTICAL RESULTS (SIMULATED):

<p>CREE → LED</p> <p>LED J Series 5050 Round LES</p> <p>FWHM / FWTM 57.0° / 84.0°</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>	
<p>CREE → LED</p> <p>LED MHB-A/B</p> <p>FWHM / FWTM 58.0° / 93.0°</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>	
<p>CREE → LED</p> <p>LED XHP35 HI</p> <p>FWHM / FWTM 52.0° / 73.0°</p> <p>Efficiency 93 %</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>CREE → LED</p> <p>LED XM-L RGBW (XMLDCL HI)</p> <p>FWHM / FWTM 52.0° / 78.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour RGBW</p> <p>Required components:</p>	

OPTICAL RESULTS (SIMULATED):

	<p>LED: XP-E FWHM / FWTM: 50.0° / 68.0° Efficiency: 94 % Peak intensity: 1.2 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
	<p>LED: XP-E2 FWHM / FWTM: 48.0° / 70.0° Efficiency: 96 % Peak intensity: 1.2 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
	<p>LED: XP-G2 HE FWHM / FWTM: 57.0° / 82.0° Efficiency: 95 % Peak intensity: 0.9 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
	<p>LED: XP-G3 FWHM / FWTM: 54.0° / 79.0° Efficiency: 94 % Peak intensity: 1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	

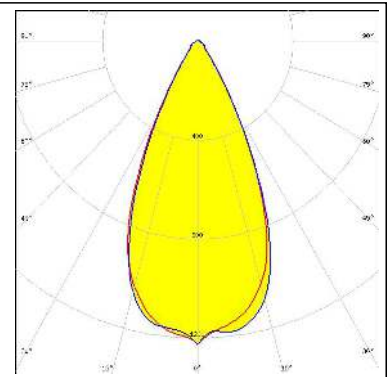
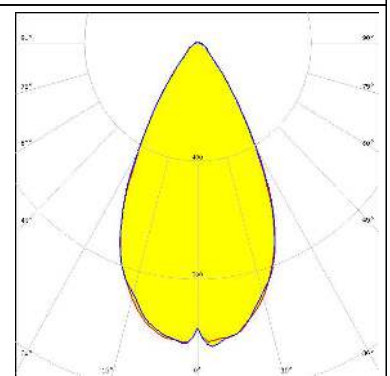
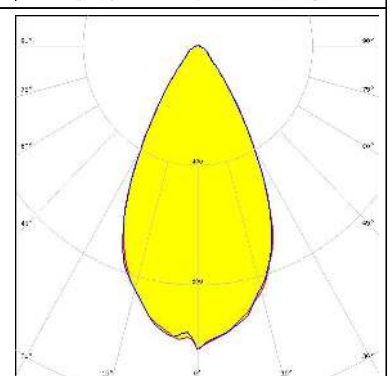
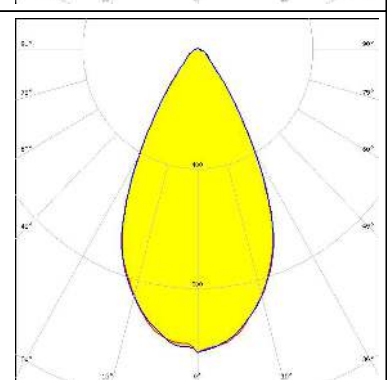
OPTICAL RESULTS (SIMULATED):

<p>CREE ⇄ LED</p> <p>LED: XP-G3 FWHM / FWTM: 55.0° / 81.0° Efficiency: 88 % 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-G4 FWHM / FWTM: 52.0° / 69.0 + 68.0° Efficiency: 96 % Peak intensity: 1.1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
<p>CREE ⇄ LED</p> <p>LED: XP-G4 FWHM / FWTM: 54.0° / 70.0° Efficiency: 88 % 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-L HD FWHM / FWTM: 58.0° / 80.0° Efficiency: 87 % Peak intensity: 0.9 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	

OPTICAL RESULTS (SIMULATED):

<p>CREE → LED</p> <p>LED: XP-L HI FWHM / FWTM: 52.0° / 72.0° Efficiency: 88 % 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-L2 FWHM / FWTM: 58.0° / 86.0° Efficiency: 89 % Peak intensity: 0.9 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p>	
<p>CREE → LED</p> <p>LED: XQ-E HI FWHM / FWTM: 42.0° / 68.0° Efficiency: 93 % Peak intensity: 1.4 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	
<p>LUMILEDS</p> <p>LED: LUXEON 3030 2D (Round LES) FWHM / FWTM: 49.0° / 73.0° Efficiency: 94 % Peak intensity: 1.2 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	

OPTICAL RESULTS (SIMULATED):

<p>LUMILEDS</p> <p>LED LUXEON 3535L</p> <p>FWHM / FWTM 49.0° / 73.0°</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 5050 HE</p> <p>FWHM / FWTM 56.0° / 84.0°</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>	
<p>LUMILEDS</p> <p>LED LUXEON 5050 HE</p> <p>FWHM / FWTM 54.0° / 84.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p>LUMILEDS</p> <p>LED LUXEON 5050 Square LES</p> <p>FWHM / FWTM 54.0° / 84.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	

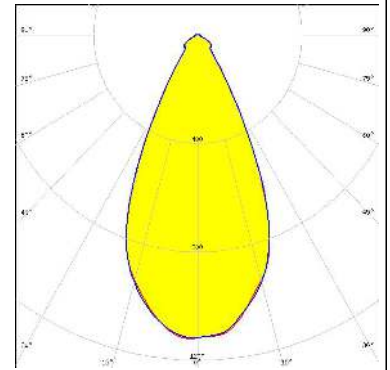
OPTICAL RESULTS (SIMULATED):

LUMILEDS

LED LUXEON A
 FWHM / FWTM 52.0°
 Efficiency %
 LEDs/each optic 1
 Light colour White
 Required components:

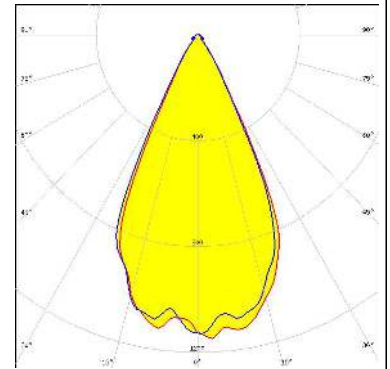
LUMILEDS

LED LUXEON C
 FWHM / FWTM 50.0° / 75.0°
 Efficiency 94 %
 Peak intensity 1.1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



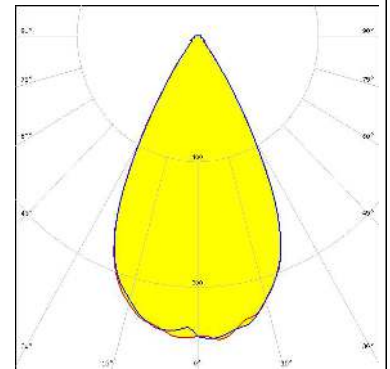
LUMILEDS

LED LUXEON H50-2
 FWHM / FWTM 52.0° / 68.0°
 Efficiency 91 %
 Peak intensity 4.7 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:

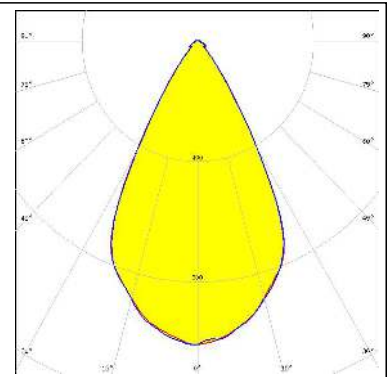
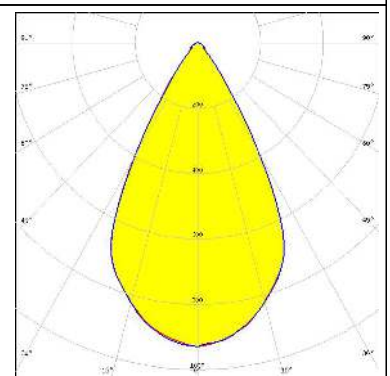
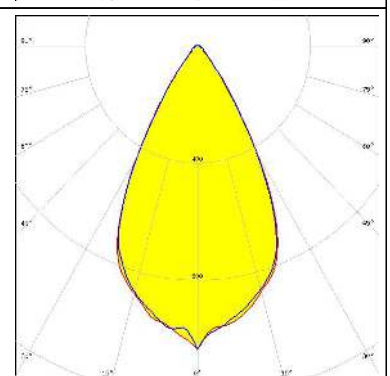


LUMILEDS

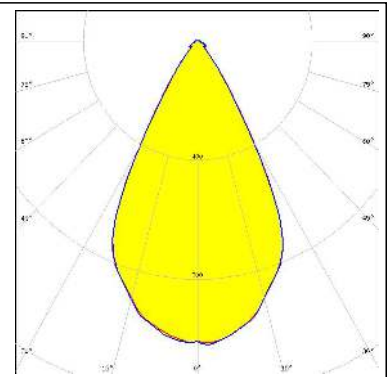
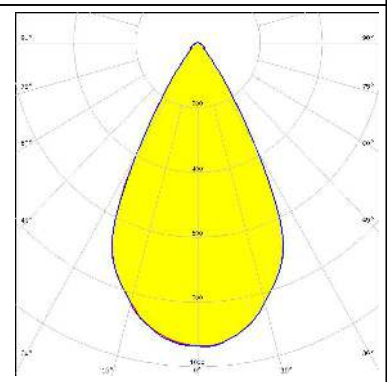
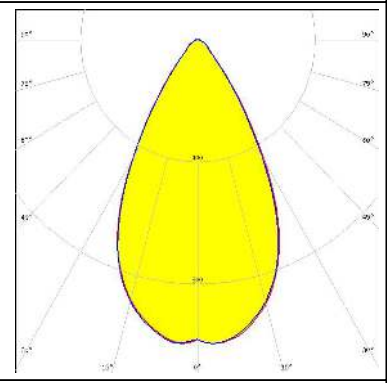
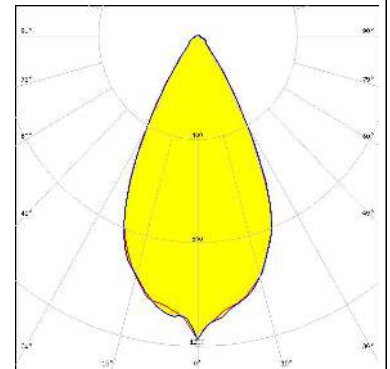
LED LUXEON HL2X
 FWHM / FWTM 56.0° / 76.0°
 Efficiency 93 %
 Peak intensity 1 cd/lm
 LEDs/each optic 1
 Light colour White
 Required components:



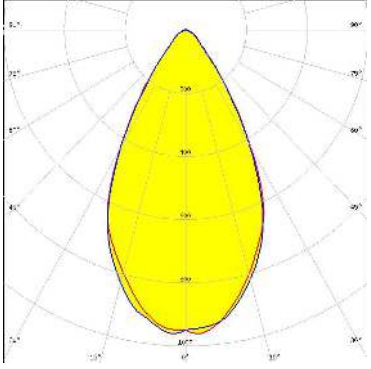
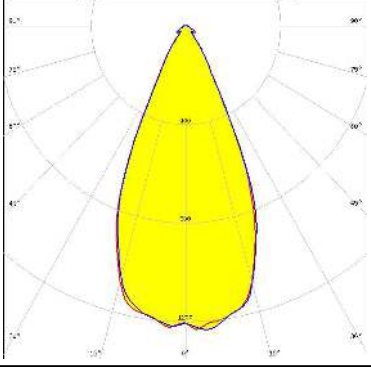
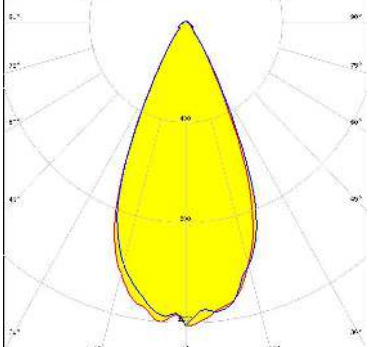
OPTICAL RESULTS (SIMULATED):

<p>LUMILEDS</p> <p>LED LUXEON HL2X-D</p> <p>FWHM / FWTM 58.0° / 78.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 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 HL2X-D</p> <p>FWHM / FWTM 58.0° / 80.0°</p> <p>Efficiency 88 %</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>Protective plate, glass</p>	
<p>LUMILEDS</p> <p>LED LUXEON HL2X-P</p> <p>FWHM / FWTM 56.0° / 80.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 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 Rebel</p> <p>FWHM / FWTM 52.0°</p> <p>Efficiency %</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

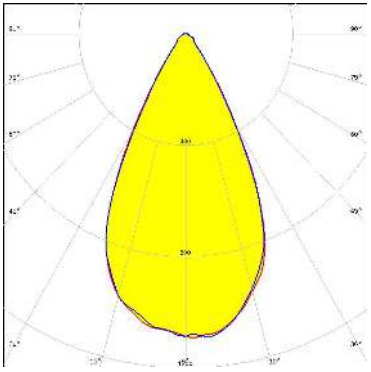
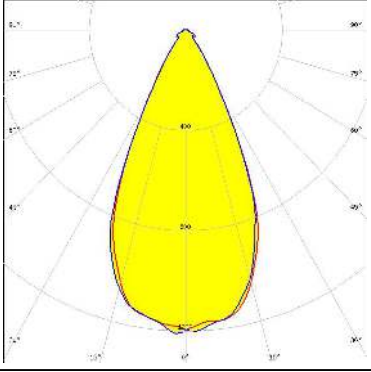
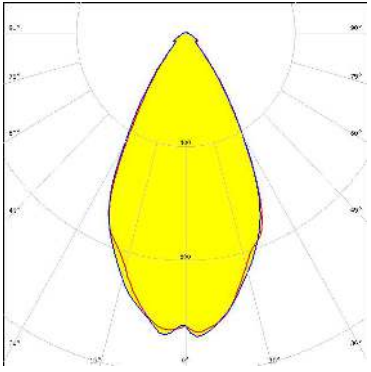
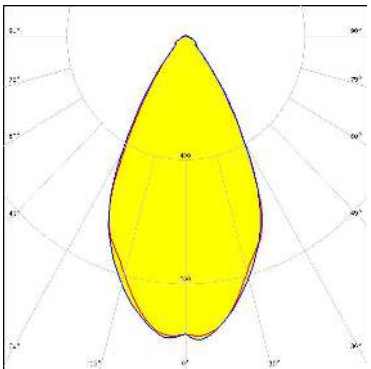
OPTICAL RESULTS (SIMULATED):

<p>LUMILEDS</p> <p>LED LUXEON XR-HL2X (L2H2-xxxxxxxMLU010)</p> <p>FWHM / FWTM 56.0° / 78.0 + 76.0°</p> <p>Efficiency 96 %</p> <p>Peak intensity 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 XR-HL2X (L2H2-xxxxxxxMLU010)</p> <p>FWHM / FWTM 57.0 + 56.0° / 78.0°</p> <p>Efficiency 87 %</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>Protective plate, glass</p>	
<p>NICHIA</p> <p>LED NFMW48xA</p> <p>FWHM / FWTM 57.0° / 86.0°</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>	
<p>NICHIA</p> <p>LED NV4WB35AM</p> <p>FWHM / FWTM 54.0° / 78.0°</p> <p>Efficiency 95 %</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):

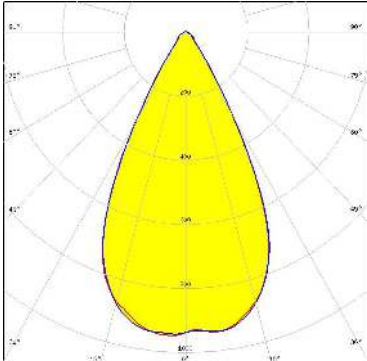
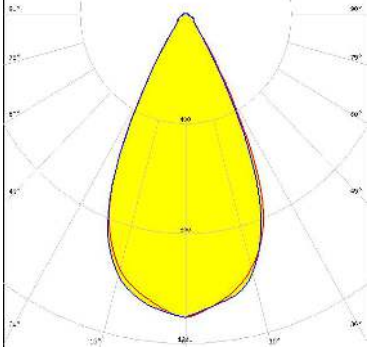
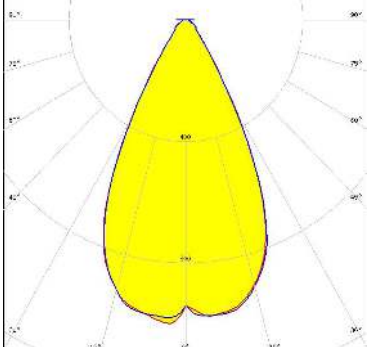
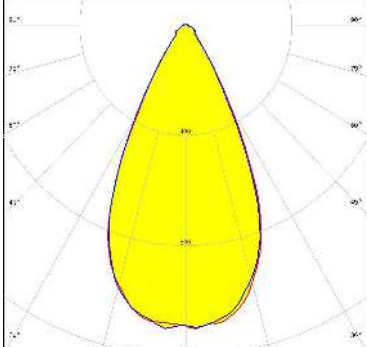
<p>NICHIA</p> <p>LED: NVSxx19A FWHM / FWTM: 50.0° Efficiency: % LEDs/each optic: 1 Light colour: White Required components:</p>	<p>OSRAM <small>Opto Semiconductors</small></p> <p>LED: Duris S8 FWHM / FWTM: 57.0° / 88.0° Efficiency: 90 % Peak intensity: 1 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p> <p>Protective plate, glass</p> 
<p>OSRAM <small>Opto Semiconductors</small></p> <p>LED: OSCONIQ C 2424 FWHM / FWTM: 48.0° / 70.0 + 69.0° Efficiency: 96 % 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: OSCONIQ P 3737 (2W version) FWHM / FWTM: 48.0° / 70.0° Efficiency: 93 % Peak intensity: 1.2 cd/lm LEDs/each optic: 1 Light colour: White Required components:</p>	

OPTICAL RESULTS (SIMULATED):



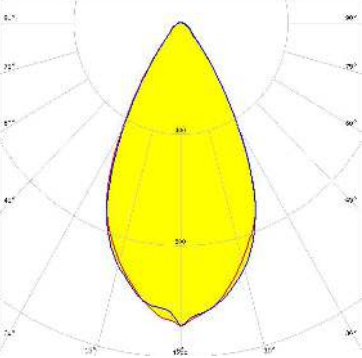

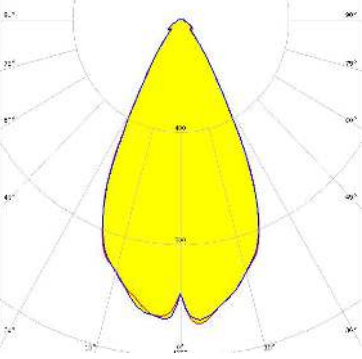

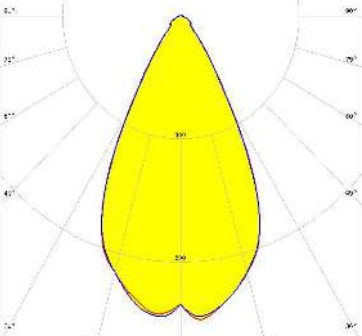
OSRAM <small>Opto Semiconductors</small>	<p>LED OSCONIQ P 3737 (3W version)</p> <p>FWHM / FWTM 54.0° / 77.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
OSRAM <small>Opto Semiconductors</small>	<p>LED OSCONIQ P 3737 Flat</p> <p>FWHM / FWTM 50.0° / 73.0°</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>	
OSRAM <small>Opto Semiconductors</small>	<p>LED OSCONIQ S 5050</p> <p>FWHM / FWTM 56.0° / 82.0 + 84.0°</p> <p>Efficiency 95 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
OSRAM <small>Opto Semiconductors</small>	<p>LED OSCONIQ S 5050</p> <p>FWHM / FWTM 56.0° / 84.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

Protective plate, glass

OPTICAL RESULTS (SIMULATED):

<p>OSRAM Opto Semiconductors</p> <p>LED OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM 54.0° / 76.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p>OSRAM Opto Semiconductors</p> <p>LED OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM 52.0° / 74.0°</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>	
<p>PHILIPS</p> <p>LED Fortimo FastFlex LED 2x8 DAX G4</p> <p>FWHM / FWTM 54.0° / 79.0°</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>	
<p>SEOL SEOUL SEMICONDUCTOR</p> <p>LED Acrich MJT 4040</p> <p>FWHM / FWTM 52.0° / 77.0°</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>	

OPTICAL RESULTS (SIMULATED):

<p> SEOULED SEMICONDUCTOR</p> <p>LED MJT 5050</p> <p>FWHM / FWTM 57.0° / 88.0°</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>	
<p> SEOULED SEMICONDUCTOR</p> <p>LED SEOUL DC 5050 6V</p> <p>FWHM / FWTM 54.0° / 84.0°</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> SEOULED SEMICONDUCTOR</p> <p>LED Z5M5</p> <p>FWHM / FWTM 54.0° / 78.0°</p> <p>Efficiency 95 %</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> SEOULED SEMICONDUCTOR</p> <p>LED Z5M5</p> <p>FWHM / FWTM 54.0° / 80.0°</p> <p>Efficiency 87 %</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>	

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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