

HB-2X2-W

~50° wide beam

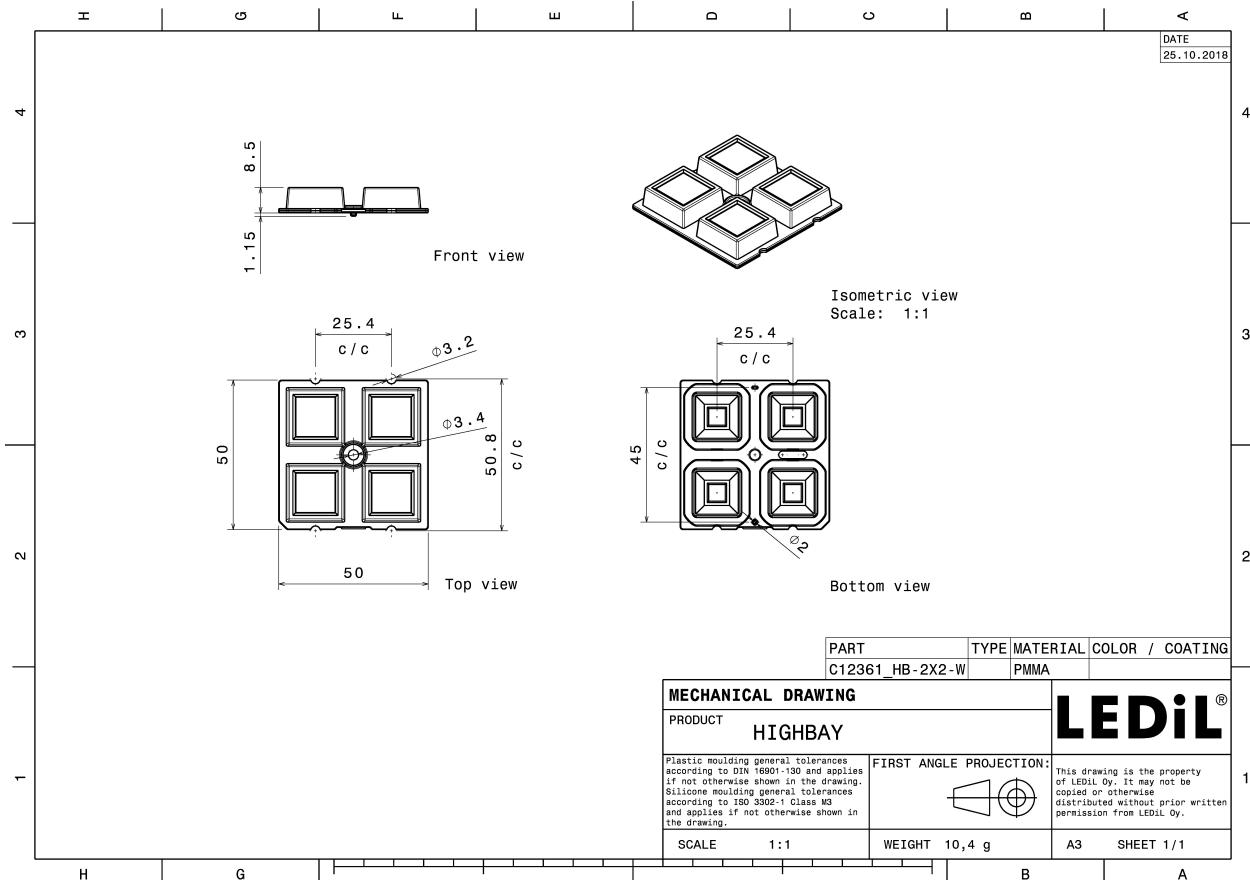
TECHNICAL SPECIFICATIONS:

Dimensions	50.0 mm
Height	8.5 mm
Fastening	glue, pin, screw
Colour	clear
Box size	480 x 280 x 300 mm
Box weight	9.1 kg
Quantity in Box	800 pcs
ROHS compliant	yes ⓘ



MATERIAL SPECIFICATIONS:

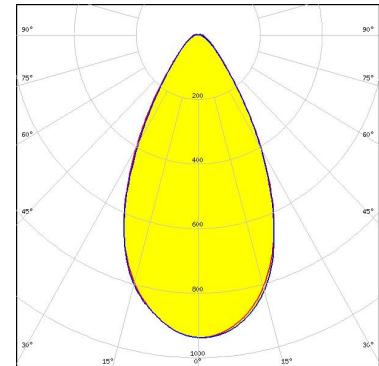
Component	Type	Material	Colour
HB-2X2-W	Multi-lens	PMMA	clear



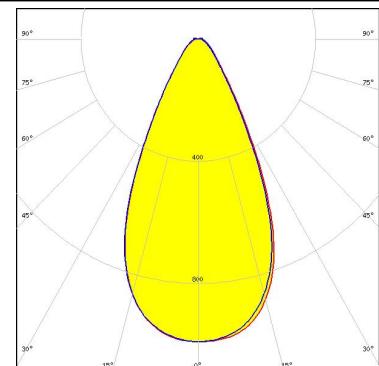
PHOTOMETRIC DATA (MEASURED):



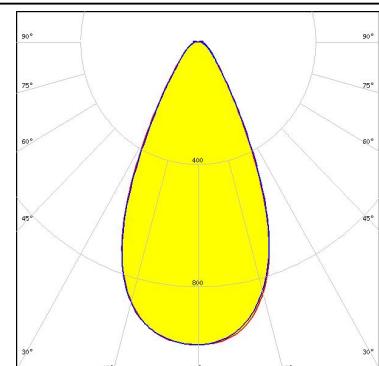
LED Bridgelux SMD 5050
FWHM 55.0°
Efficiency 94 %
Peak intensity 0.940 cd/lm
Required components:



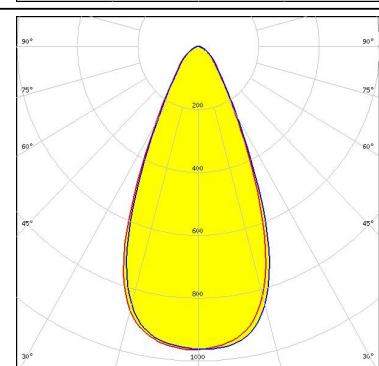
LED QUICK FLUX XTP 2x4 xxx LS G5
FWHM 52.0°
Efficiency 94 %
Peak intensity 0.990 cd/lm
Required components:



LED QUICK FLUX XTP 2x6 xxx LS G5
FWHM 52.0°
Efficiency 94 %
Peak intensity 0.990 cd/lm
Required components:



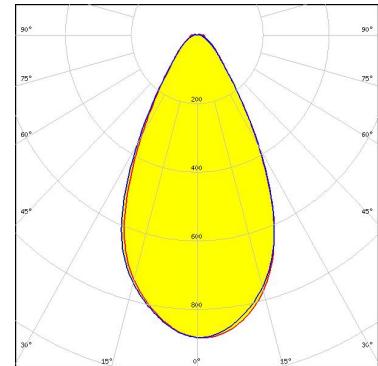
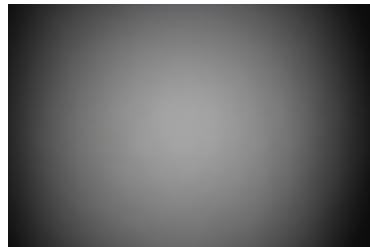
LED XB-D
FWHM 48.0°
Efficiency 86 %
Peak intensity 0.960 cd/lm
Required components:



PHOTOMETRIC DATA (MEASURED):

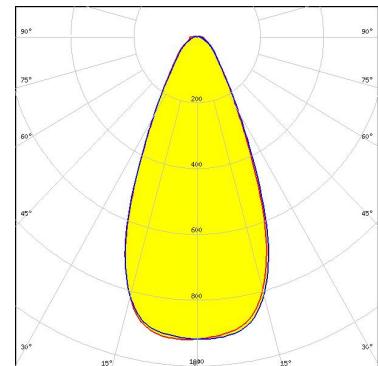
CREE 

LED XD16
FWHM 54.0°
Efficiency 91 %
Peak intensity 0.880 cd/lm
Required components:



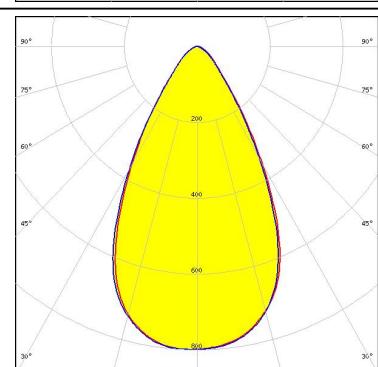
CREE 

LED XD16
FWHM 48.0°
Efficiency 91 %
Peak intensity 0.900 cd/lm
Required components:



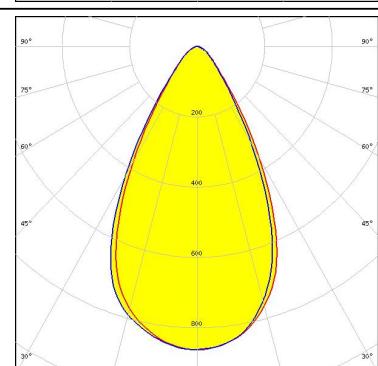
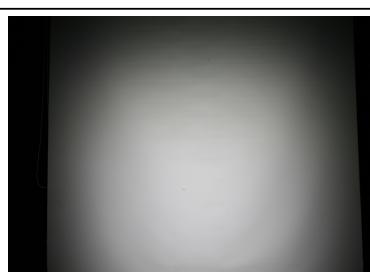
CREE 

LED XHP35 HD
FWHM 57.0°
Efficiency 85 %
Peak intensity 0.800 cd/lm
Required components:



CREE 

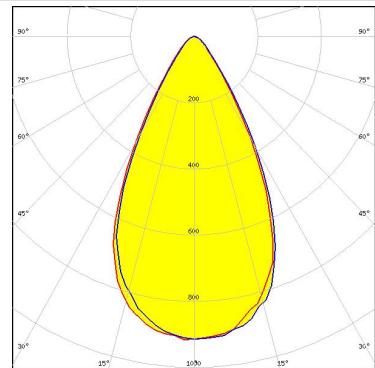
LED XM-L
FWHM 57.0°
Efficiency 89 %
Peak intensity 0.860 cd/lm
Required components:



PHOTOMETRIC DATA (MEASURED):

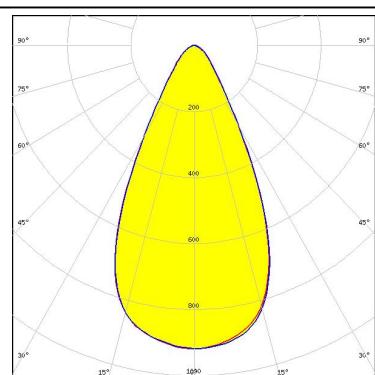
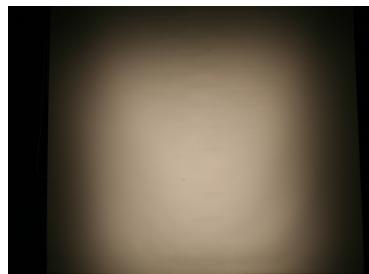
CREE 

LED XM-L2
FWHM 56.0°
Efficiency 87 %
Peak intensity 0.900 cd/lm
Required components:



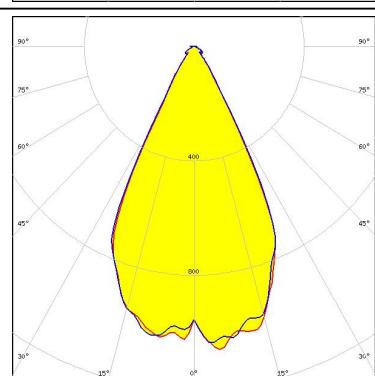
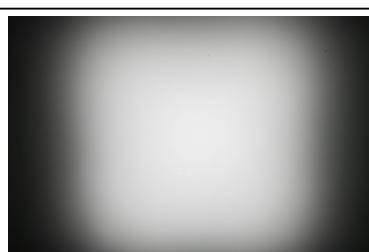
CREE 

LED XP-G
FWHM 52.0°
Efficiency 88 %
Peak intensity 0.920 cd/lm
Required components:



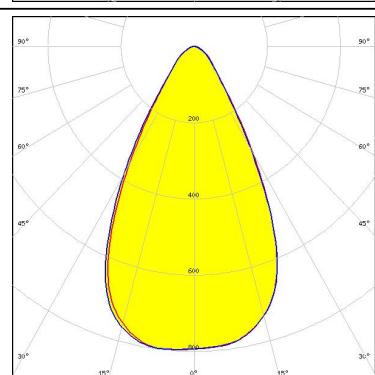
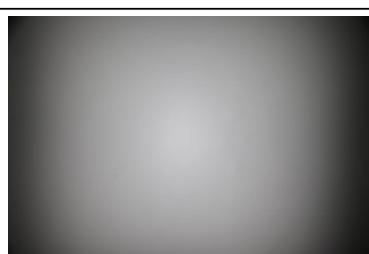
CREE 

LED XP-G2
FWHM 51.0°
Efficiency 88 %
Peak intensity 0.900 cd/lm
Required components:



CREE 

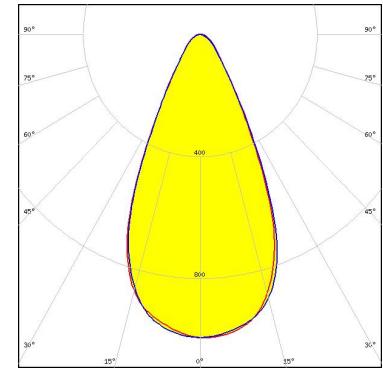
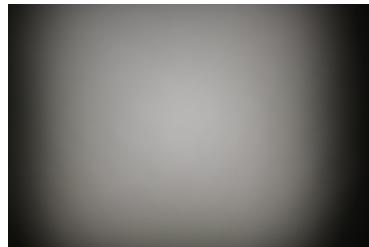
LED XP-L HD
FWHM 56.0°
Efficiency 87 %
Peak intensity 0.800 cd/lm
Required components:



PHOTOMETRIC DATA (MEASURED):

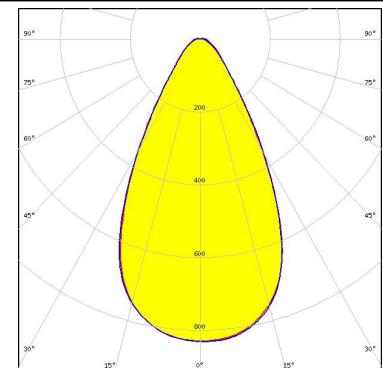
CREE

LED XP-L HI
FWHM 50.0°
Efficiency 93 %
Peak intensity 0.990 cd/lm
Required components:



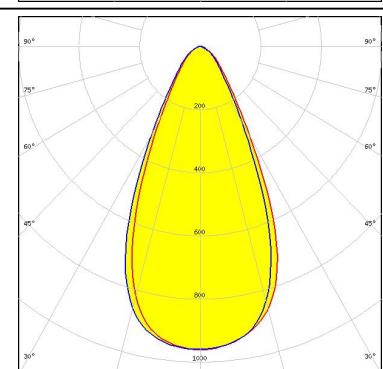
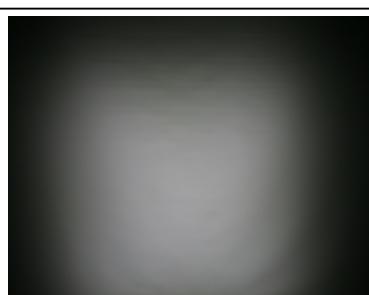
CREE

LED XP-L2
FWHM 56.0°
Efficiency 92 %
Peak intensity 0.830 cd/lm
Required components:



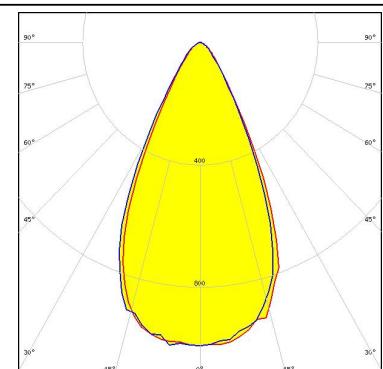
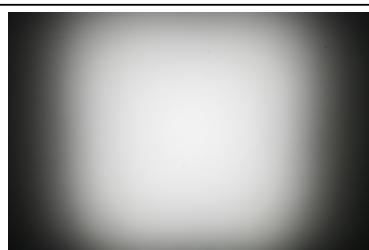
CREE

LED XT-E
FWHM 50.0°
Efficiency 87 %
Peak intensity 0.970 cd/lm
Required components:

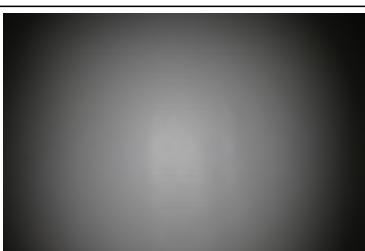
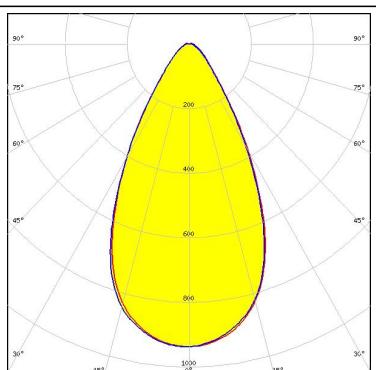
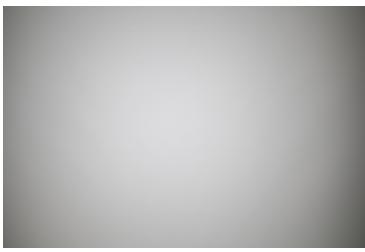
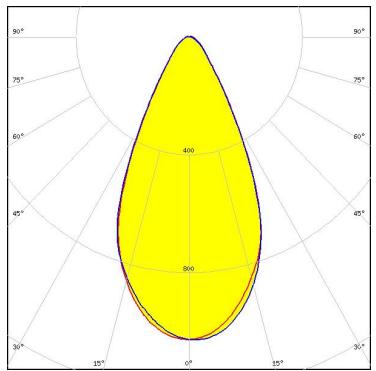
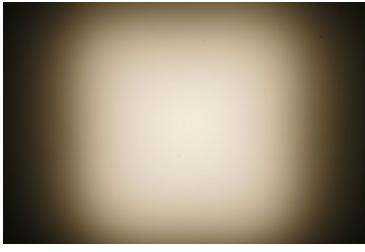
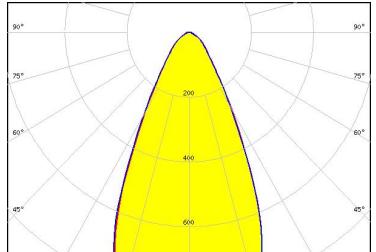
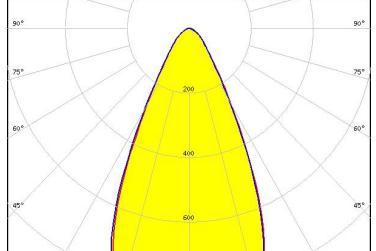


LG Innotek

LED H35C1 (LEMWA33)
FWHM 53.0°
Efficiency 86 %
Peak intensity 1.000 cd/lm
Required components:



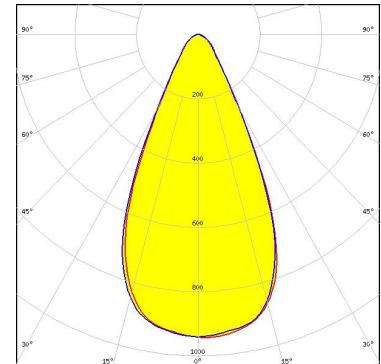
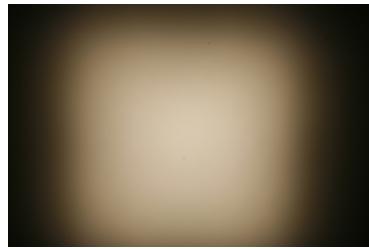
PHOTOMETRIC DATA (MEASURED):

 LUMILEDS LED LUXEON 5050 FWHM 55.0° Efficiency 94 % Peak intensity 0.940 cd/lm Required components:		
 LUMILEDS LED LUXEON MZ FWHM 53.0° Efficiency 92 % Peak intensity 1.000 cd/lm Required components:		
 LUMILEDS LED LUXEON Q FWHM 50.0° Efficiency 86 % Peak intensity 0.900 cd/lm Required components:		
 LUMILEDS LED LUXEON Rebel ES FWHM 51.0° Efficiency 87 % Peak intensity 0.940 cd/lm Required components:		

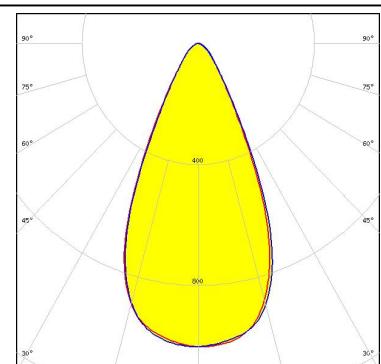
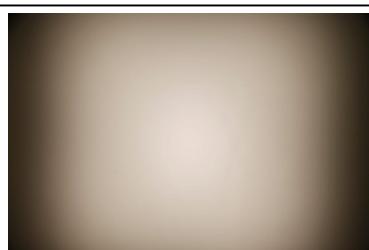
PHOTOMETRIC DATA (MEASURED):



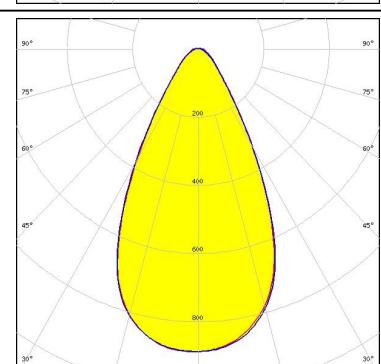
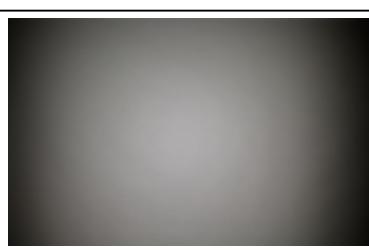
LED LUXEON T
FWHM 55.0°
Efficiency 87 %
Peak intensity 0.900 cd/lm
Required components:



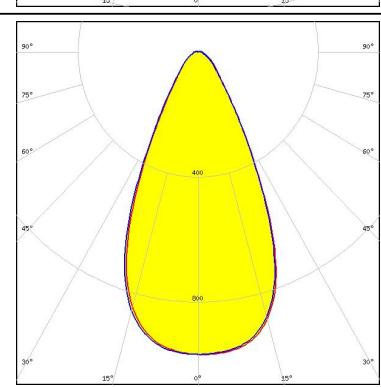
LED LUXEON TX
FWHM 50.0°
Efficiency 88 %
Peak intensity 1.000 cd/lm
Required components:



LED LUXEON V
FWHM 55.0°
Efficiency 93 %
Peak intensity 0.890 cd/lm
Required components:



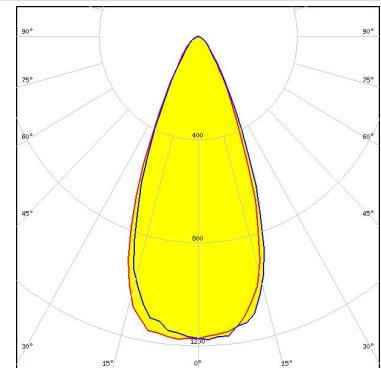
LED LUXEON V2
FWHM 51.0°
Efficiency 94 %
Peak intensity 0.970 cd/lm
Required components:



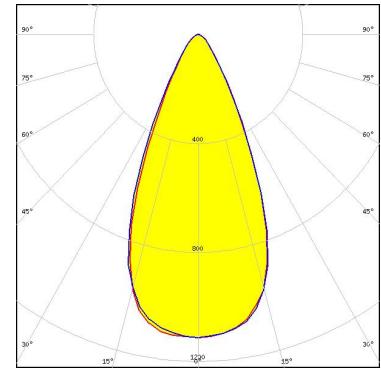
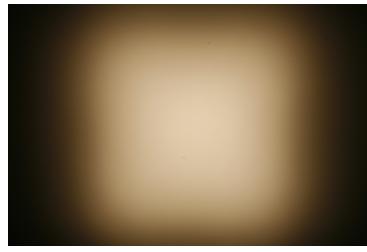
PHOTOMETRIC DATA (MEASURED):



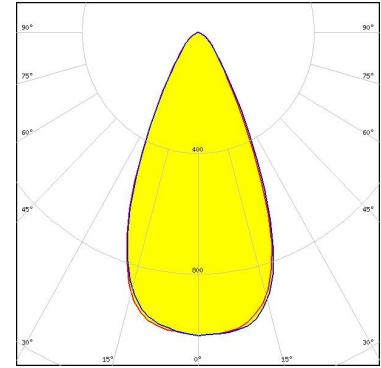
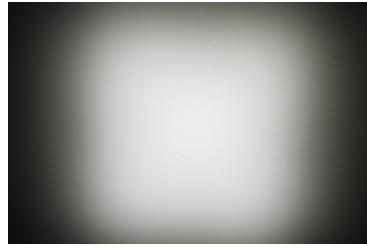
LED LUXEON Z ES
FWHM 46.0°
Efficiency 87 %
Peak intensity 1.180 cd/lm
Required components:



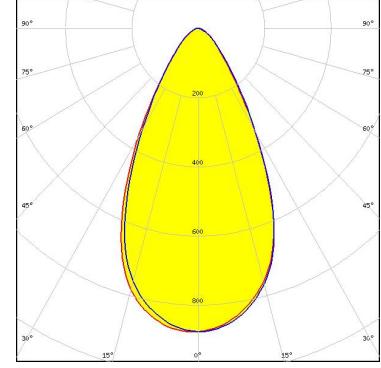
LED NCSxx19A
FWHM 48.0°
Efficiency 85 %
Peak intensity 1.100 cd/lm
Required components:



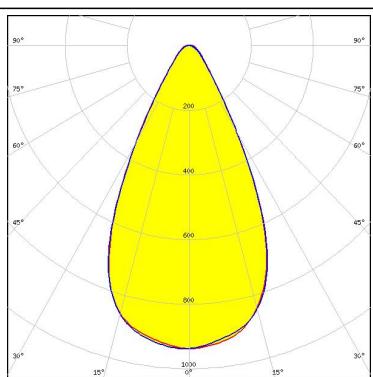
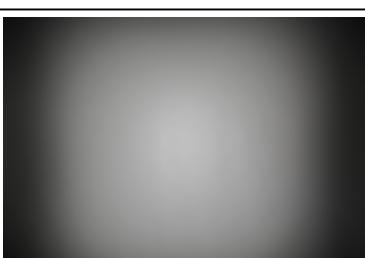
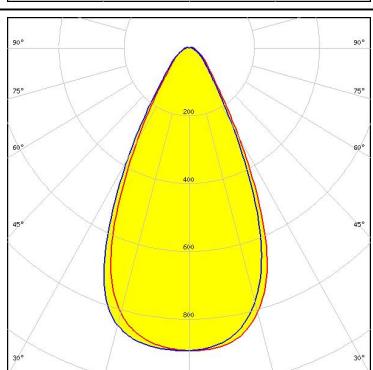
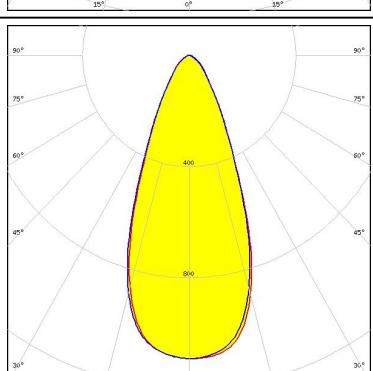
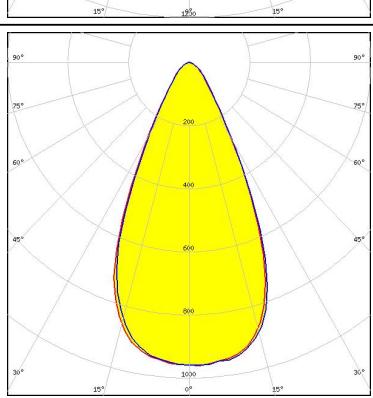
LED NCSxx19B
FWHM 50.0°
Efficiency 85 %
Peak intensity 1.000 cd/lm
Required components:



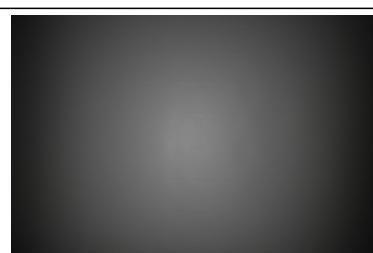
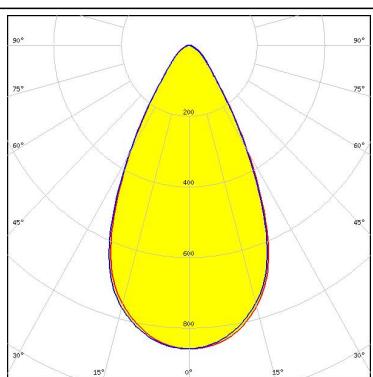
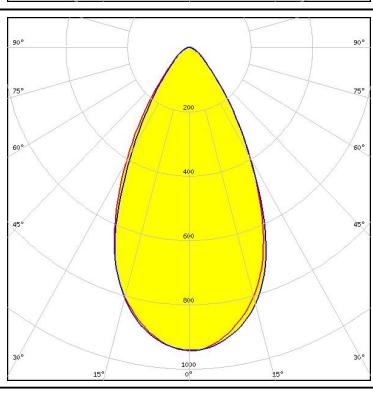
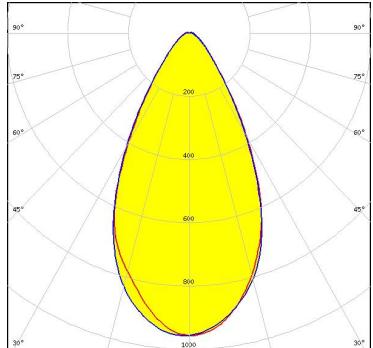
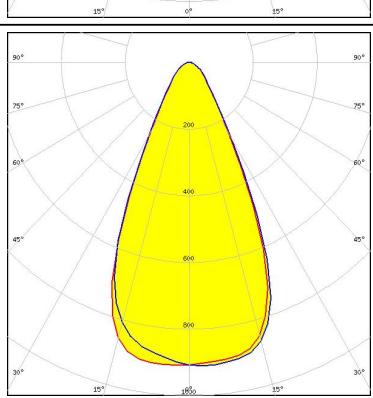
LED NS9x383
FWHM 54.0°
Efficiency 86 %
Peak intensity 0.880 cd/lm
Required components:



PHOTOMETRIC DATA (MEASURED):

	LED NVSW219D / NVSW219F	FWHM 53.0°		
	LED NVSW3x9A	FWHM 53.0°		
	LED NVSxE21A	FWHM 43.0°		
	LED NVSxx19B/NVSxx19C	FWHM 51.0°		

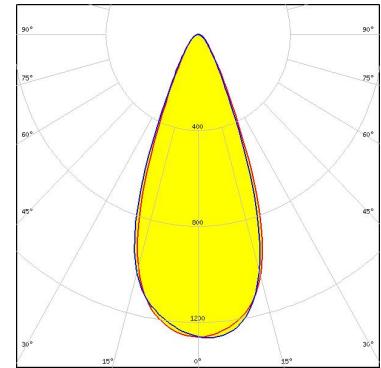
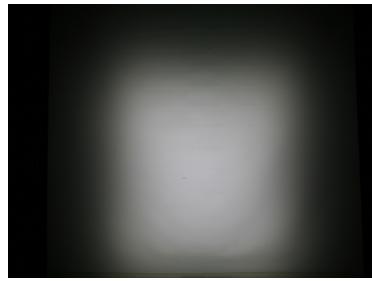
PHOTOMETRIC DATA (MEASURED):

	LED NWSx229A		
	LED OLP-5065F6L-06A		
 <small>Opto Semiconductors</small>	LED Duris S8		
 <small>Opto Semiconductors</small>	LED OsloN Square PC		

PHOTOMETRIC DATA (MEASURED):

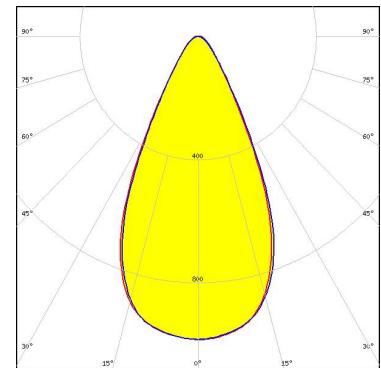
OSRAM
Opto Semiconductors

LED Oslon SSL 80
FWHM 43.0°
Efficiency 89 %
Peak intensity 1.260 cd/lm
Required components:



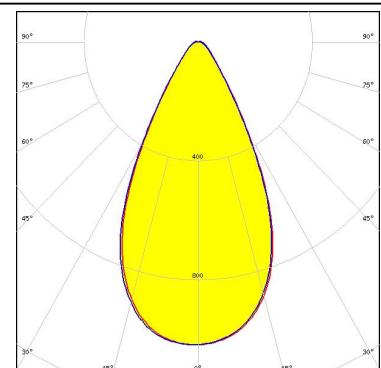
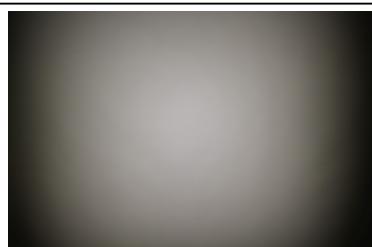
PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4
FWHM 52.0°
Efficiency 94 %
Peak intensity 0.990 cd/lm
Required components:



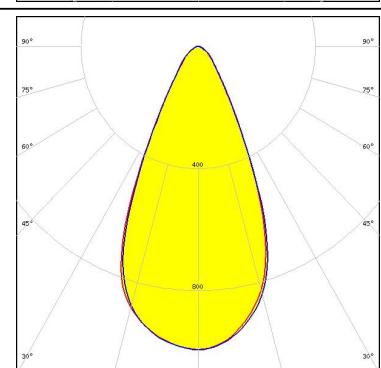
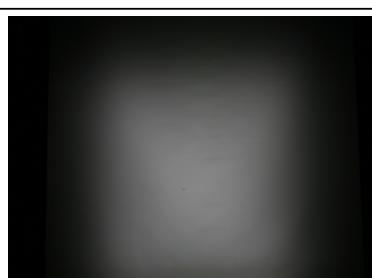
SAMSUNG

LED HiLOM RH16 (LH351C)
FWHM 53.0°
Efficiency 94 %
Peak intensity 1.000 cd/lm
Required components:



SAMSUNG

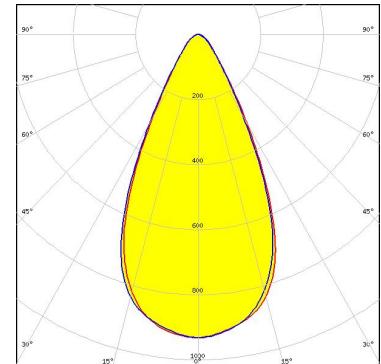
LED LH351A
FWHM 49.0°
Efficiency 89 %
Peak intensity 1.000 cd/lm
Required components:



PHOTOMETRIC DATA (MEASURED):

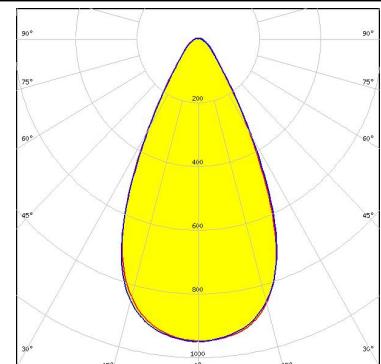
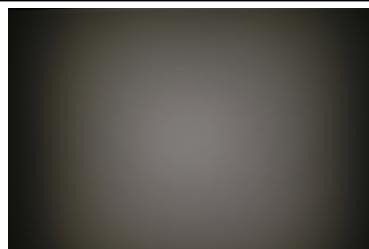
SAMSUNG

LED LH351B
FWHM 55.0°
Efficiency 86 %
Peak intensity 0.930 cd/lm
Required components:



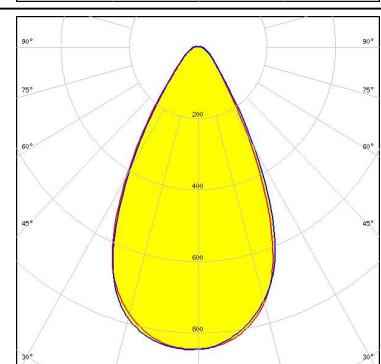
SAMSUNG

LED LH351C
FWHM 53.0°
Efficiency 93 %
Peak intensity 1.000 cd/lm
Required components:



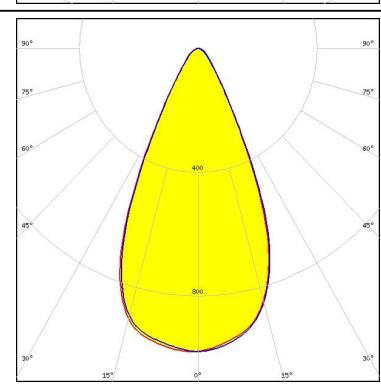
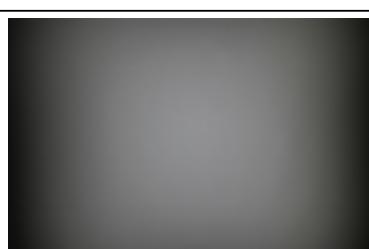
SAMSUNG

LED LH351D
FWHM 56.0°
Efficiency 91 %
Peak intensity 0.850 cd/lm
Required components:



SAMSUNG

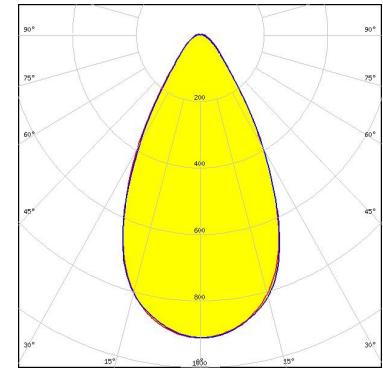
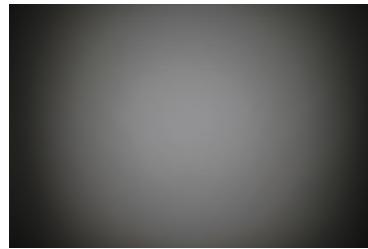
LED LH351Z
FWHM 50.0°
Efficiency 87 %
Peak intensity 1.000 cd/lm
Required components:



PHOTOMETRIC DATA (MEASURED):

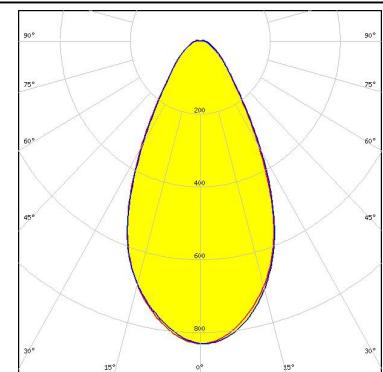
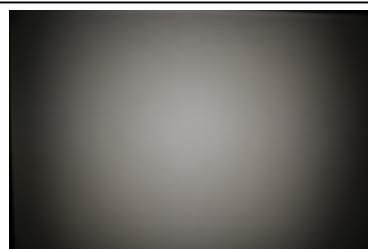
SAMSUNG

LED LH508A
 FWHM 56.0°
 Efficiency 93 %
 Peak intensity 0.900 cd/lm
 Required components:



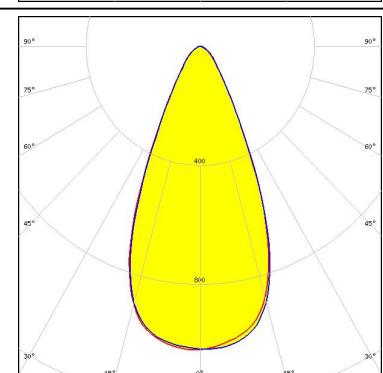
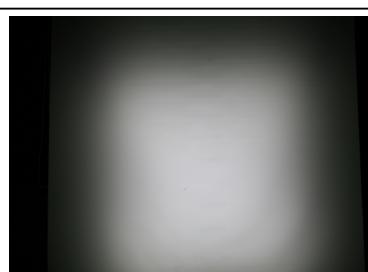
SEOUL SEMICONDUCTOR

LED SMJQ-D48W16AA-XX
 FWHM 54.0°
 Efficiency 92 %
 Peak intensity 0.830 cd/lm
 Required components:



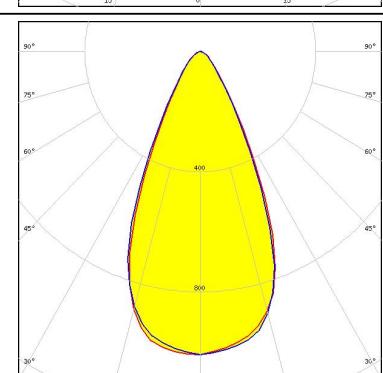
SEOUL SEMICONDUCTOR

LED Z5
 FWHM 48.0°
 Efficiency 88 %
 Peak intensity 1.000 cd/lm
 Required components:

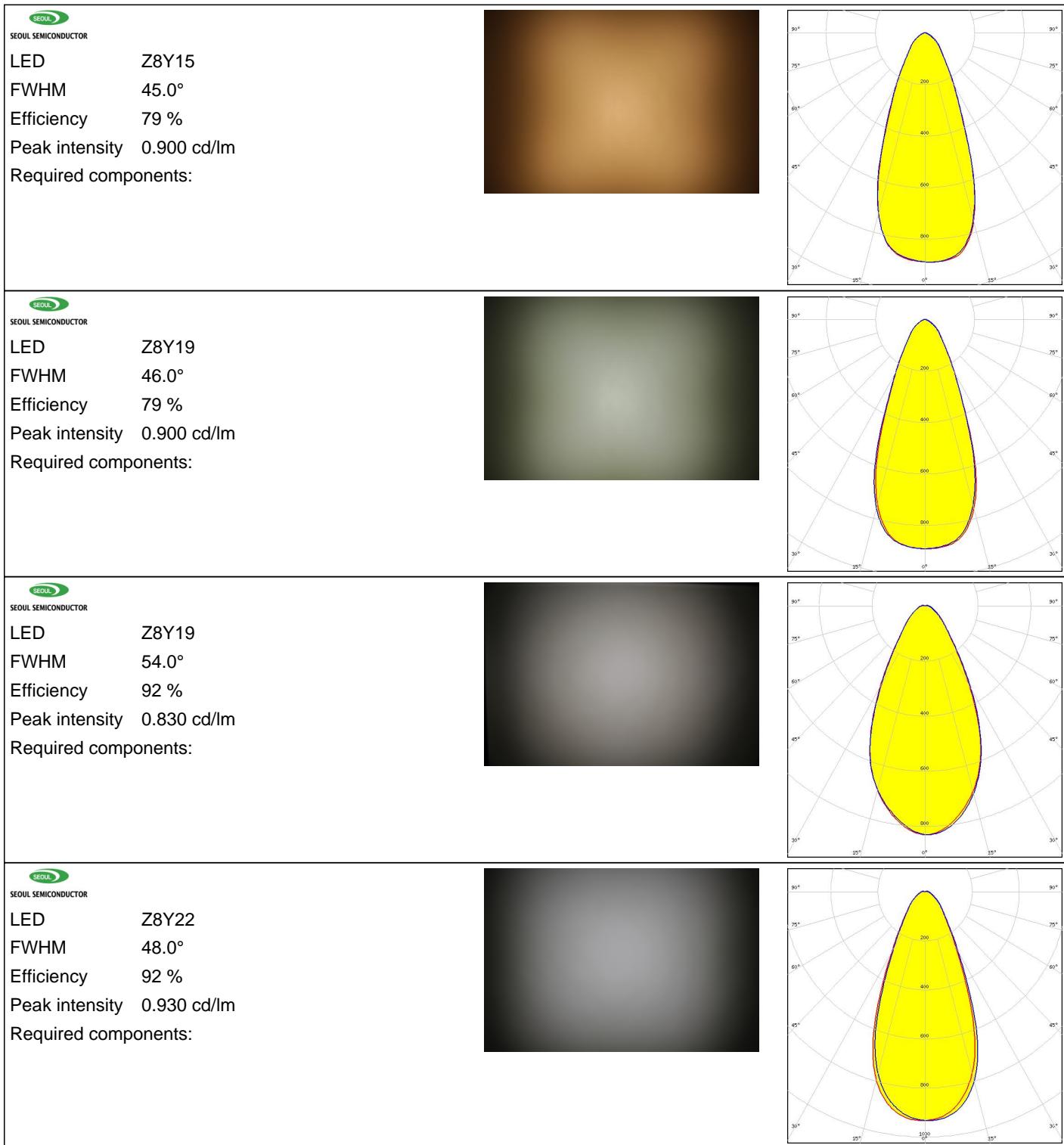


SEOUL SEMICONDUCTOR

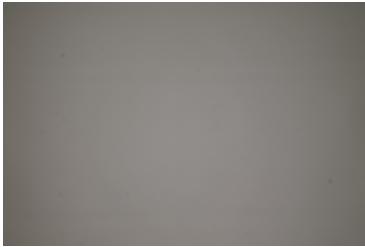
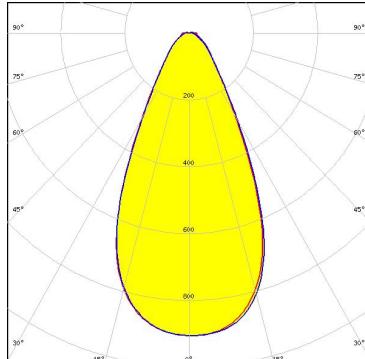
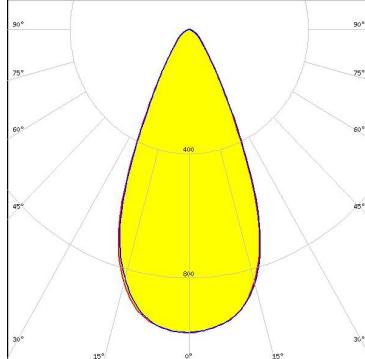
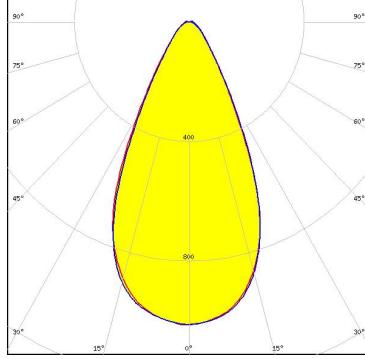
LED Z5M1/Z5M2
 FWHM 51.0°
 Efficiency 85 %
 Peak intensity 1.000 cd/lm
 Required components:



PHOTOMETRIC DATA (MEASURED):



PHOTOMETRIC DATA (MEASURED):

 <p>SEOUL SEMICONDUCTOR</p> <p>LED Z8Y22P FWHM 51.0° Efficiency 92 % Peak intensity 0.910 cd/lm Required components:</p>		
TOSHIBA <small>Leading Innovation >></small> <p>LED TL1L4 FWHM 48.0° Efficiency 81 % Peak intensity 0.980 cd/lm Required components:</p>		
TRIDONIC <p>LED RLE 2x4 2000lm HP EXC2 OTD FWHM 51.0° Efficiency 94 % Peak intensity 1.000 cd/lm Required components:</p>		

PHOTOMETRIC DATA (MEASURED):

TRIDONIC

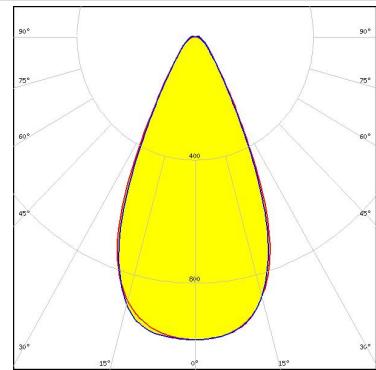
LED RLE G1 49x121mm 2000lm xxx EXC OTD

FWHM 52.0°

Efficiency 94 %

Peak intensity 0.980 cd/lm

Required components:



TRIDONIC

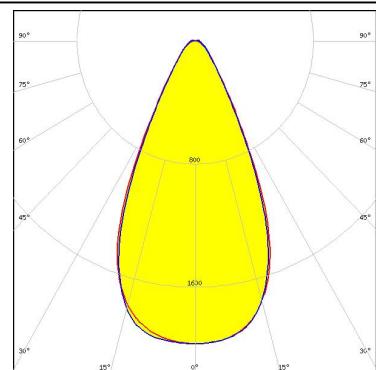
LED RLE G1 49x133mm 2000lm xxx EXC OTD

FWHM 52.0°

Efficiency 94 %

Peak intensity 0.980 cd/lm

Required components:



TRIDONIC

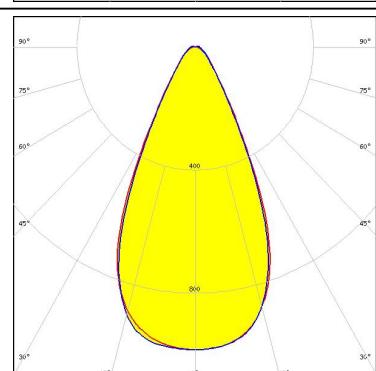
LED RLE G1 49x223mm 4000lm xxx EXC OTD

FWHM 52.0°

Efficiency 94 %

Peak intensity 0.980 cd/lm

Required components:



TRIDONIC

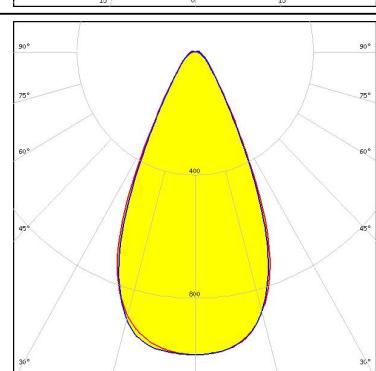
LED RLE G1 49x245mm 4000lm xxx EXC OTD

FWHM 52.0°

Efficiency 94 %

Peak intensity 0.980 cd/lm

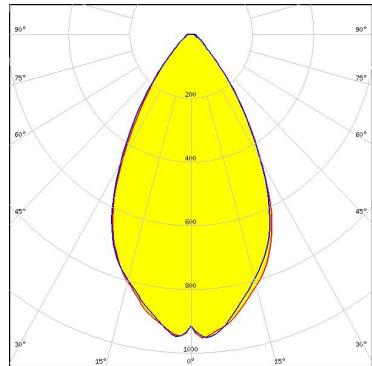
Required components:



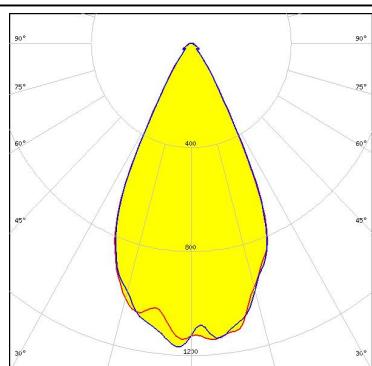
PHOTOMETRIC DATA (SIMULATED):

CREE

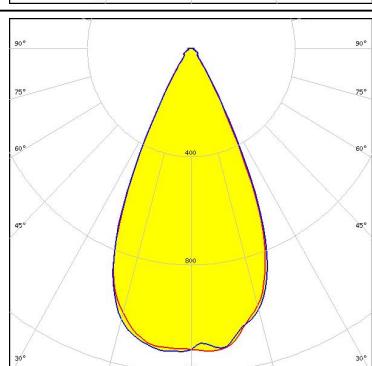
LED MHB-A/B
FWHM 58.0°
Efficiency 94 %
Peak intensity 0.960 cd/lm
Required components:

**CREE**

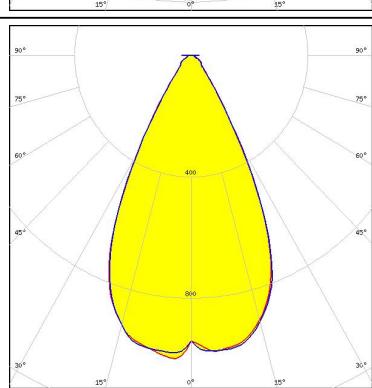
LED XHP35 HI
FWHM 52.0°
Efficiency 93 %
Peak intensity 1.200 cd/lm
Required components:

**CREE**

LED XP-E
FWHM 50.0°
Efficiency 94 %
Peak intensity 1.200 cd/lm
Required components:

**CREE**

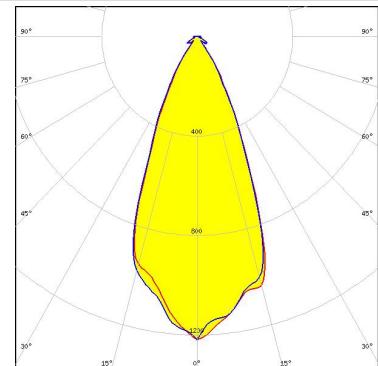
LED XP-G3
FWHM 54.0°
Efficiency 94 %
Peak intensity 1.000 cd/lm
Required components:



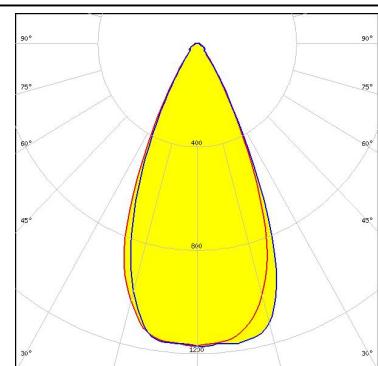
PHOTOMETRIC DATA (SIMULATED):



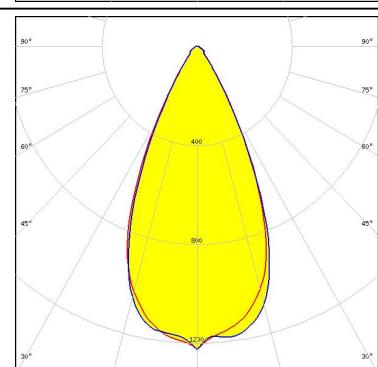
LED XQ-E HI
 FWHM 42.0°
 Efficiency 93 %
 Peak intensity 1.370 cd/lm
 Required components:



LED LUXEON 3030 2D (Round LES)
 FWHM 49.0°
 Efficiency 94 %
 Peak intensity 1.200 cd/lm
 Required components:



LED LUXEON 3535L
 FWHM 49.0°
 Efficiency 94 %
 Peak intensity 1.200 cd/lm
 Required components:



LED LUXEON A
 FWHM 52.0°
 Efficiency %
 Peak intensity cd/lm
 Required components:

PHOTOMETRIC DATA (SIMULATED):

LUMILEDS

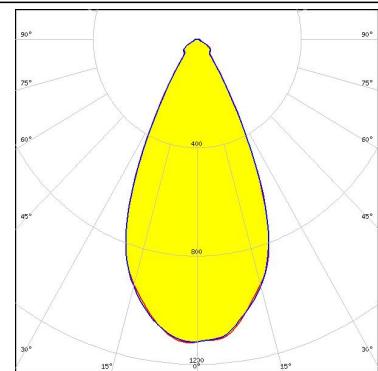
LED LUXEON C

FWHM 50.0°

Efficiency 94 %

Peak intensity 1.100 cd/lm

Required components:



LUMILEDS

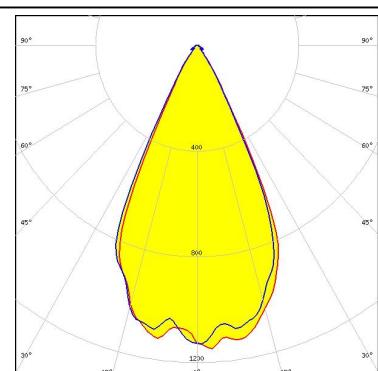
LED LUXEON H50-2

FWHM 52.0°

Efficiency 91 %

Peak intensity 4.700 cd/lm

Required components:



LUMILEDS

LED LUXEON Rebel

FWHM 52.0°

Efficiency %

Peak intensity cd/lm

Required components:

NICHIA

LED NVSxx19A

FWHM 50.0°

Efficiency %

Peak intensity cd/lm

Required components:

PHOTOMETRIC DATA (SIMULATED):

OSRAM

Opto Semiconductors

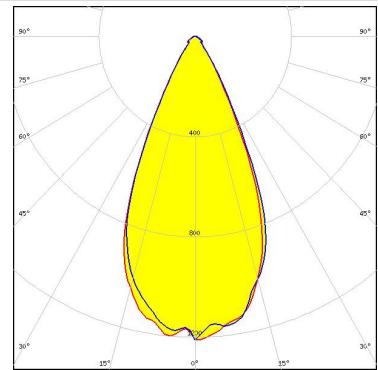
LED OSCONIQ P 3737 (2W version)

FWHM 48.0°

Efficiency 93 %

Peak intensity 1.200 cd/lm

Required components:



OSRAM

Opto Semiconductors

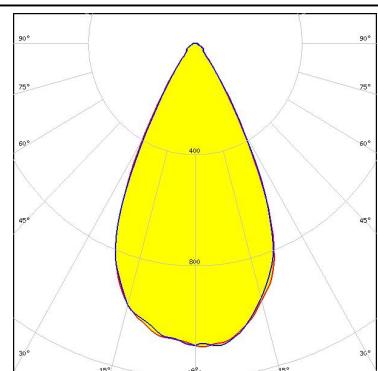
LED OSCONIQ P 3737 (3W version)

FWHM 54.0°

Efficiency 94 %

Peak intensity 1.100 cd/lm

Required components:



OSRAM

Opto Semiconductors

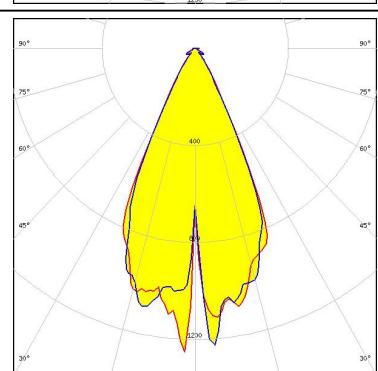
LED OsloN Square Gen3

FWHM 50.0°

Efficiency 93 %

Peak intensity 1.300 cd/lm

Required components:



PHILIPS

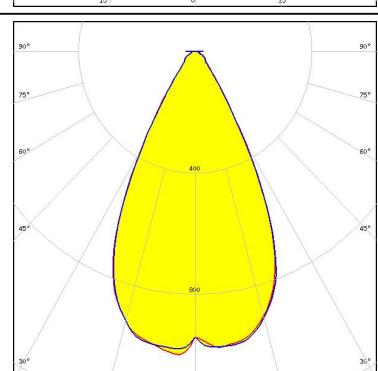
LED Fortimo FastFlex LED 2x8 DAX G4

FWHM 54.0°

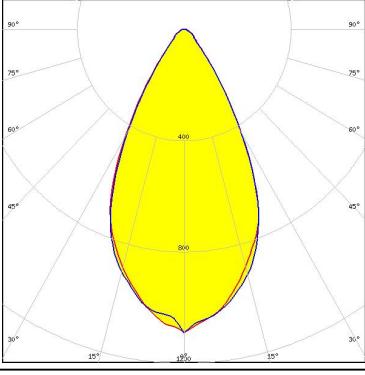
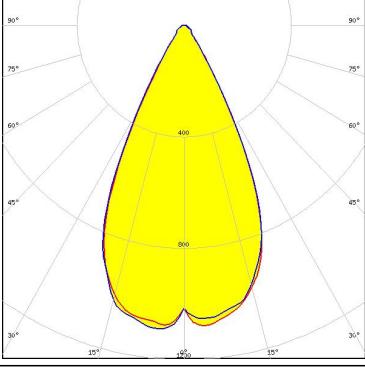
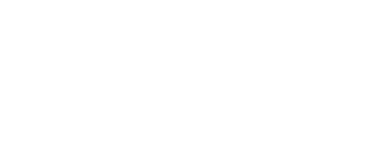
Efficiency 94 %

Peak intensity 1.000 cd/lm

Required components:



PHOTOMETRIC DATA (SIMULATED):

 <p>SEoul SEMICONDUCTOR</p> <p>LED Acrich MJT 4040</p> <p>FWHM 52.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.100 cd/lm</p> <p>Required components:</p>	
 <p>SEoul SEMICONDUCTOR</p> <p>LED SEOUL DC 5050 6V</p> <p>FWHM 54.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.100 cd/lm</p> <p>Required components:</p>	
 <p>SEoul SEMICONDUCTOR</p> <p>LED Z5M1/Z5M2</p> <p>FWHM 52.0°</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.100 cd/lm</p> <p>Required components:</p>	

GENERAL INFORMATION:

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

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