CRYSTAL-RS

~5.1° spot beam. Assembly with holder.

SPECIFICATION:

Dimensions	Ø 49.7 mm
Height	28.7 mm
Fastening	pin, screw
ROHS compliant	yes

MATERIALS:

Component	Type	Material	Colour	Finish
F12916_CRYSTAL-RS	Single lens	PMMA	clear	
C13478_CRYSTAL-HLD	Holder	PC	white	

ORDERING INFORMATION:

Quantities for one set:

Single lens	1
Holder	1

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Component		Qty in box	MOQ	MPQ	Box weight (kg)
F12916_CRYSTAL-RS » Box size: 480 x 280 x 300 mm	Single lens	288	64	32	8.6
C13478_CRYSTAL-HLD » Box size: 480 x 280 x 300 mm	Holder	1152	64	32	6.1

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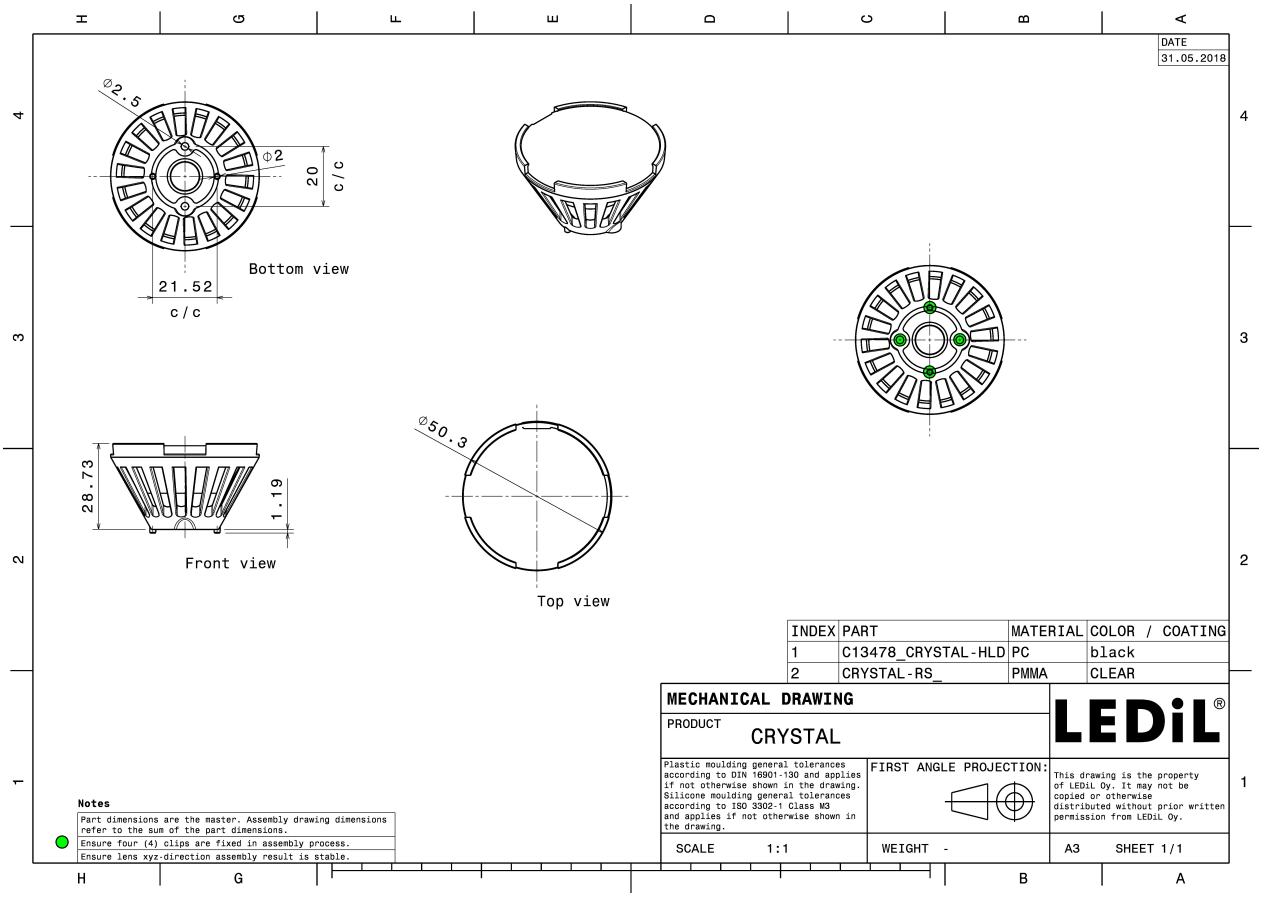

INDEX	PART	MATERIAL	COLOR / COATING
1	C13478_CRYSTAL-HLD	PC	black
2	CRYSTAL-RS_	PMMA	CLEAR

MECHANICAL DRAWING

PRODUCT
CRYSTAL

LEDiL®

Plastic moulding general tolerances according to DIN 16901-130 and applies if not otherwise shown in the drawing. Silicone moulding general tolerances according to ISO 3302-1 Class M3 and applies if not otherwise shown in the drawing.

FIRST ANGLE PROJECTION:

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SCALE 1:1 | WEIGHT - | A3 SHEET 1/1

Notes

Part dimensions are the master. Assembly drawing dimensions refer to the sum of the part dimensions.
Ensure four (4) clips are fixed in assembly process.
Ensure lens xyz-direction assembly result is stable.

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

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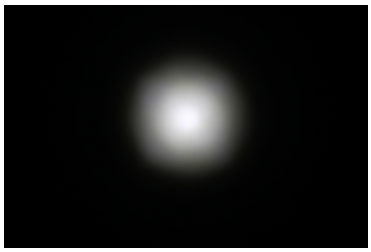
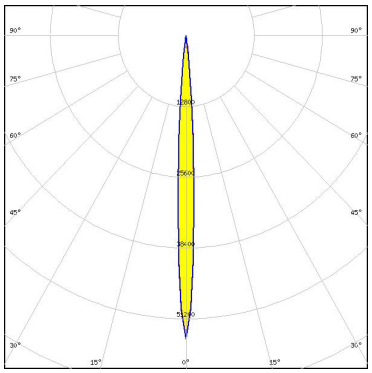
OPTICAL RESULTS (MEASURED):

CREE LEDs

LED	XHP35 HI
FWHM / FWTM	5.7° / 15.0°
Efficiency	89 %
Peak intensity	48.3 cd/lm
LEDs/each optic	1
Light colour	White

Required components:

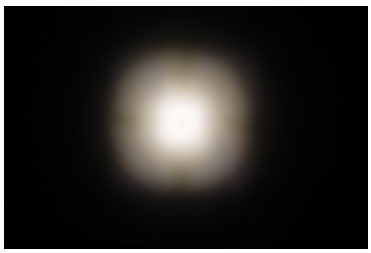


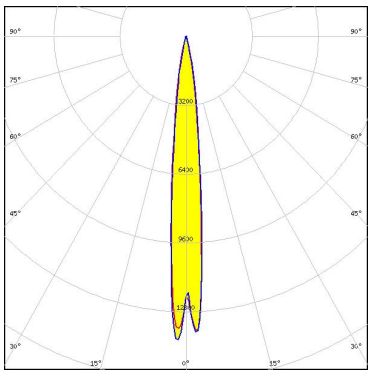


CREE LEDs

LED	XHP50
FWHM / FWTM	11.0° / 24.0°
Efficiency	93 %
Peak intensity	14.1 cd/lm
LEDs/each optic	1
Light colour	White

Required components:

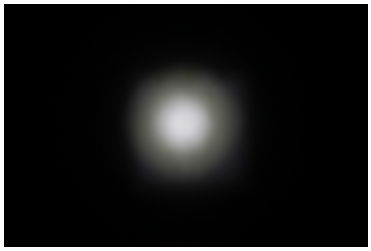


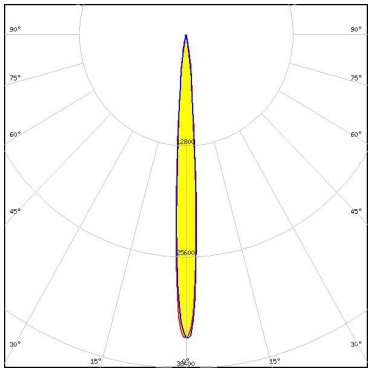


CREE LEDs

LED	XM-L
FWHM / FWTM	7.0° / 17.0°
Efficiency	94 %
Peak intensity	34.9 cd/lm
LEDs/each optic	1
Light colour	White

Required components:





CREE LEDs

LED	XP-G
FWHM / FWTM	4.9° / 11.4°
Efficiency	89 %
Peak intensity	68.3 cd/lm
LEDs/each optic	1
Light colour	White

Required components:

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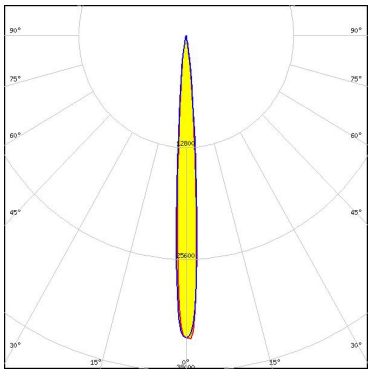
OPTICAL RESULTS (MEASURED):

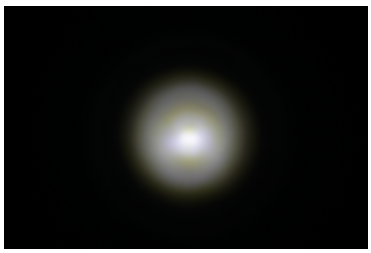
CREE LEDs

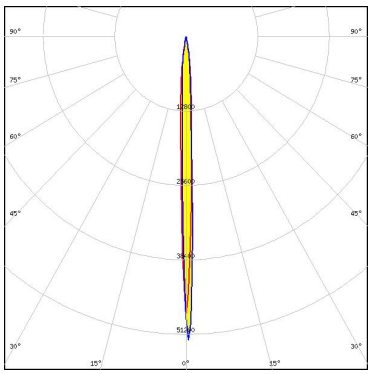
LED	XP-L HD
FWHM / FWTM	7.0° / 15.0°
Efficiency	88 %
Peak intensity	34.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



LUMILEDS

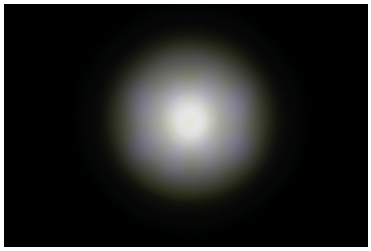
LED	LUXEON 3030 2D (Round LES)
FWHM / FWTM	4.0° / 15.0°
Efficiency	94 %
Peak intensity	52.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

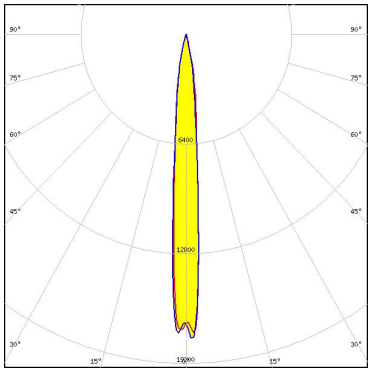




LUMILEDS

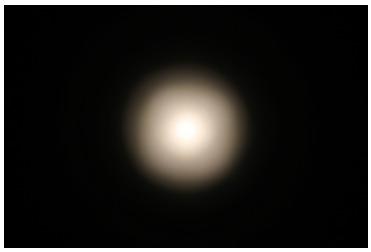
LED	LUXEON 5050 Round LES
FWHM / FWTM	9.0° / 24.0°
Efficiency	94 %
Peak intensity	17.8 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	





LUMILEDS

LED	LUXEON A
FWHM / FWTM	5.1° / 14.0°
Efficiency	89 %
Peak intensity	58.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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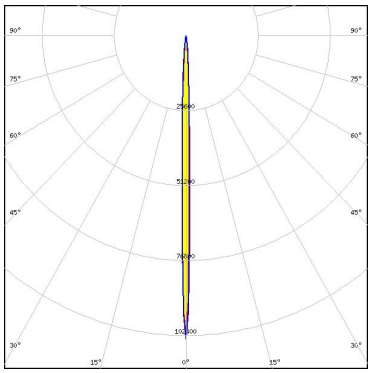
OPTICAL RESULTS (MEASURED):

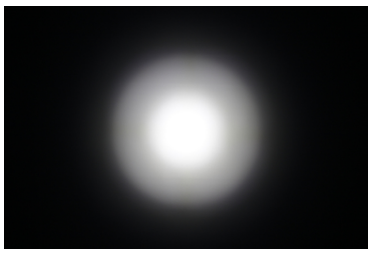
LUMILEDS

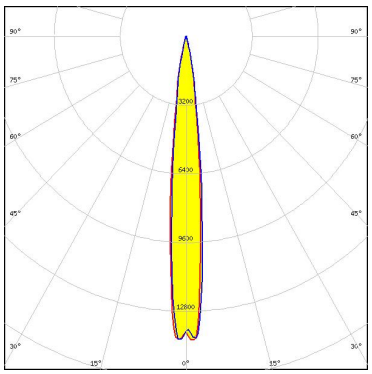
LED	LUXEON Z ES
FWHM / FWTM	3.0° / 9.0°
Efficiency	93 %
Peak intensity	103.8 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



NICHIA

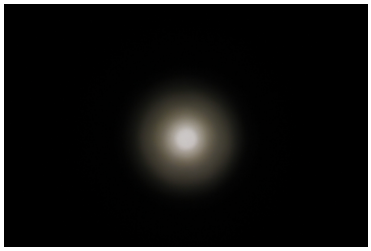
LED	NV4x144A
FWHM / FWTM	12.0° / 25.0°
Efficiency	92 %
Peak intensity	14.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

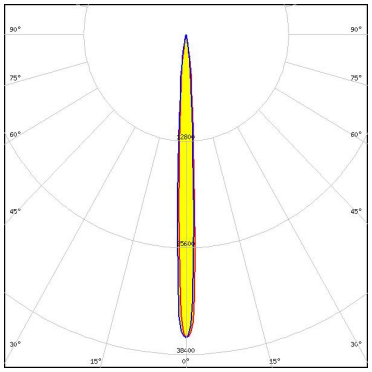




NICHIA

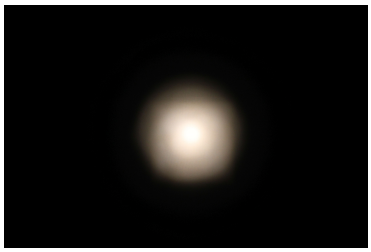
LED	NVSW3x9A
FWHM / FWTM	6.0° / 16.0°
Efficiency	89 %
Peak intensity	36.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

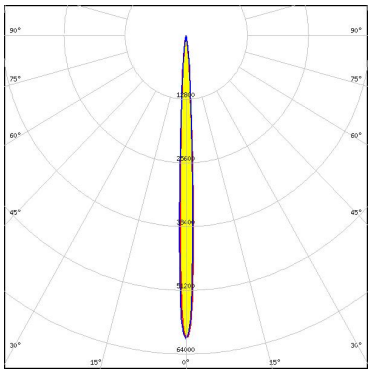




NICHIA

LED	NVSW719AC
FWHM / FWTM	5.0° / 12.0°
Efficiency	93 %
Peak intensity	61 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	





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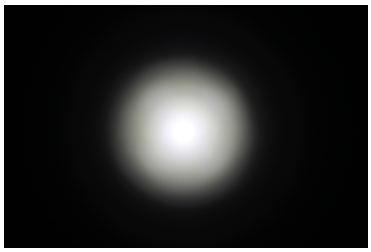
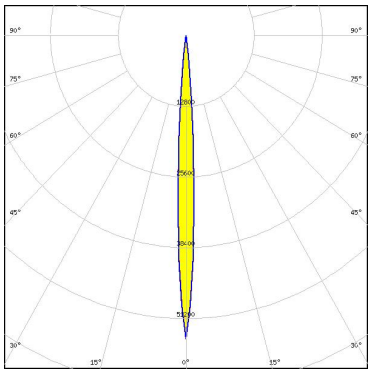
OPTICAL RESULTS (MEASURED):

NICHIA

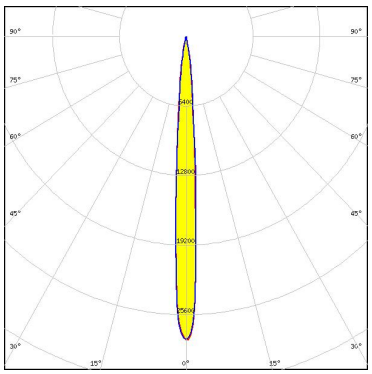
LED	NVSxx19B/NVSxx19C
FWHM / FWTM	5.3° / 17.0°
Efficiency	89 %
Peak intensity	42.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	





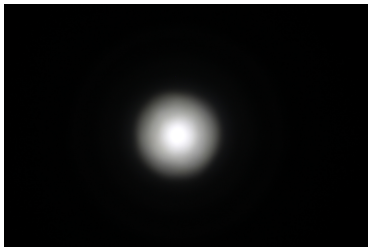
NICHIA

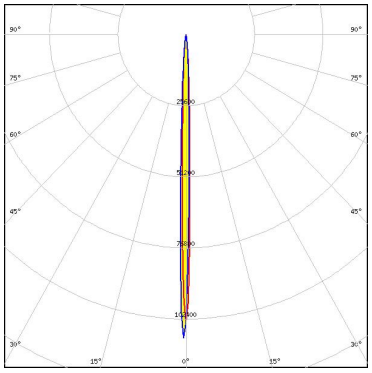
LED	NWSx229A
FWHM / FWTM	8.0° / 18.0°
Efficiency	92 %
Peak intensity	27.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



OSRAM
Opto Semiconductors

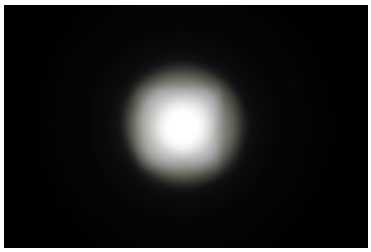
LED	OSLON SSL 150
FWHM / FWTM	3.0° / 9.0°
Efficiency	94 %
Peak intensity	108.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	





SAMSUNG

LED	LH351Z
FWHM / FWTM	4.4° / 12.0°
Efficiency	90 %
Peak intensity	77 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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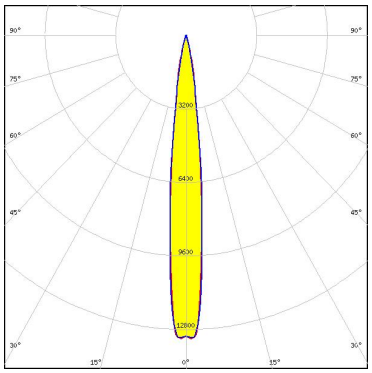
OPTICAL RESULTS (MEASURED):

SEOUL SEMICONDUCTOR

LED	WICOP 5050
FWHM / FWTM	12.0° / 25.0°
Efficiency	92 %
Peak intensity	13.3 cd/lm
LEDs/each optic	1
Light colour	White

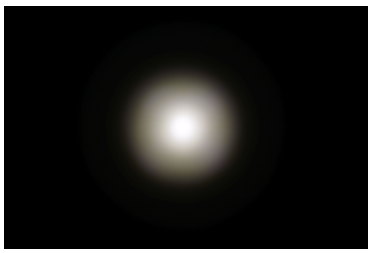
Required components:

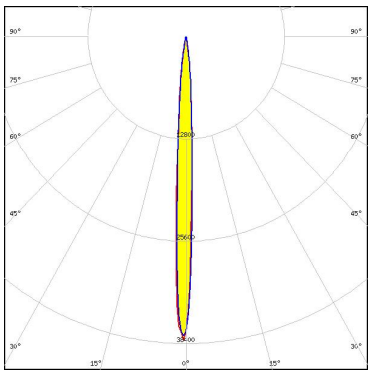


SEOUL SEMICONDUCTOR

LED	Z5M3
FWHM / FWTM	6.0° / 16.0°
Efficiency	94 %
Peak intensity	3.8 cd/lm
LEDs/each optic	1
Light colour	White

Required components:





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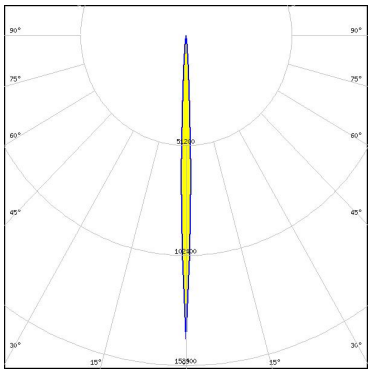
OPTICAL RESULTS (SIMULATED):

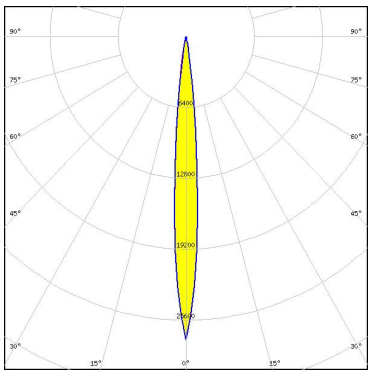
CREE LEDs

LED	XE-G
FWHM / FWTM	4.0° / 8.0°
Efficiency	94 %
Peak intensity	141.3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



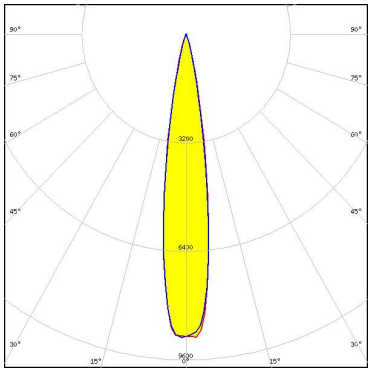
CREE LEDs

LED	XHP50.3 HI
FWHM / FWTM	10.0 + 8.0° / 18.0°
Efficiency	97 %
Peak intensity	27.4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



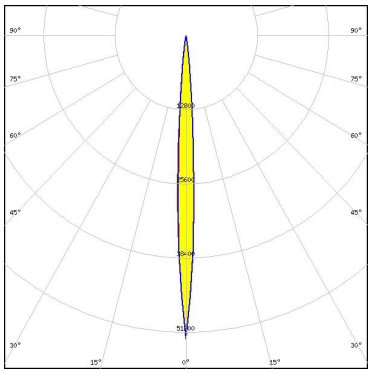
CREE LEDs

LED	XHP70.2
FWHM / FWTM	16.0° / 30.0°
Efficiency	95 %
Peak intensity	9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



CREE LEDs

LED	XP-G3
FWHM / FWTM	6.0° / 14.0°
Efficiency	95 %
Peak intensity	52.3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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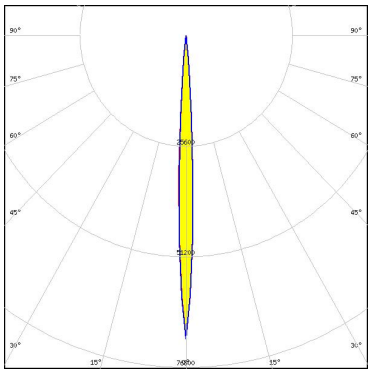
OPTICAL RESULTS (SIMULATED):

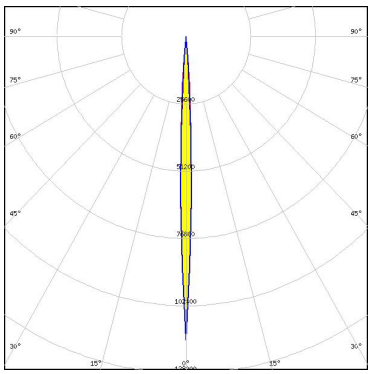
CREE LEDs

LED	XP-L HI
FWHM / FWTM	5.6° / 12.0°
Efficiency	94 %
Peak intensity	70.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



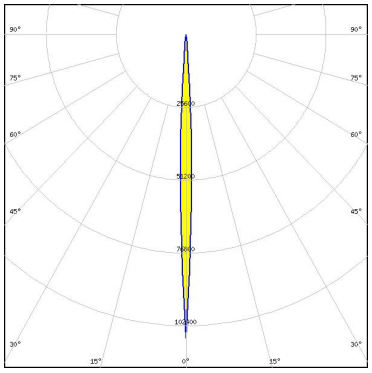
CREE LEDs

LED	XP-P
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	115.4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



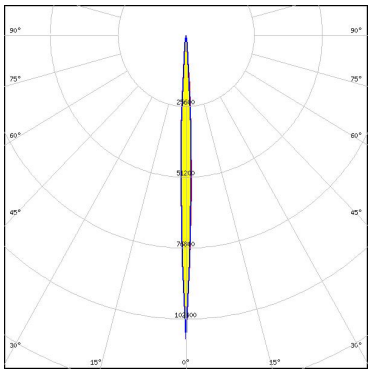
CREE LEDs

LED	XQ-E HI
FWHM / FWTM	4.5° / 10.0°
Efficiency	95 %
Peak intensity	106.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



LUMILEDS

LED	LUXEON C
FWHM / FWTM	4.0° / 10.0°
Efficiency	91 %
Peak intensity	109.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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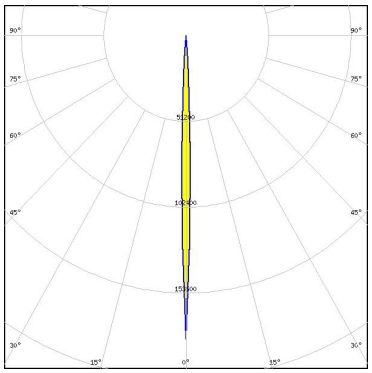
OPTICAL RESULTS (SIMULATED):

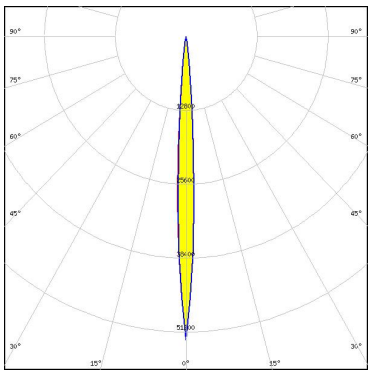
LUMILEDS

LED	LUXEON CZ
FWHM / FWTM	4.0° / 8.0°
Efficiency	93 %
Peak intensity	181 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



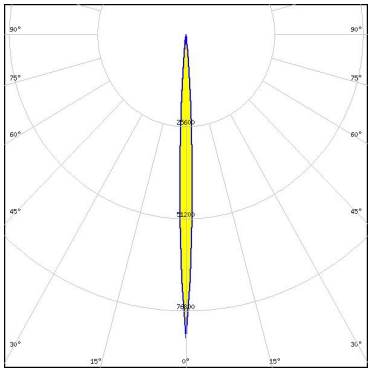
LUMILEDS

LED	LUXEON HL2X
FWHM / FWTM	6.0° / 14.0°
Efficiency	95 %
Peak intensity	52.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



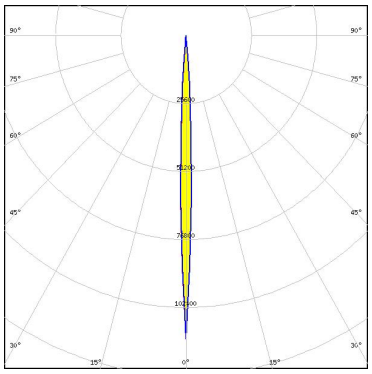
LUMILEDS

LED	LUXEON Rebel Plus
FWHM / FWTM	6.0° / 10.0°
Efficiency	95 %
Peak intensity	84.3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



LUMILEDS

LED	LUXEON Rubix
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	114.3 cd/lm
LEDs/each optic	1
Light colour	Green
Required components:	



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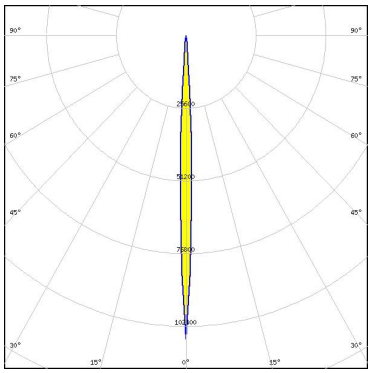
OPTICAL RESULTS (SIMULATED):

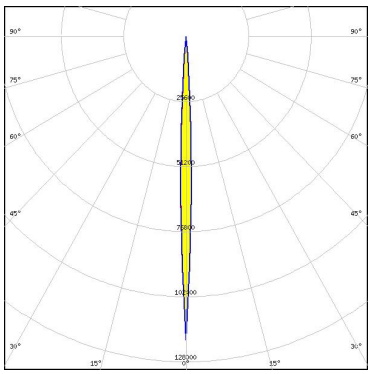
LUMILEDS

LED	LUXEON Rubix
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	106.8 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



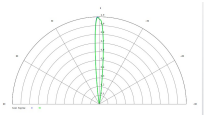
LUMILEDS

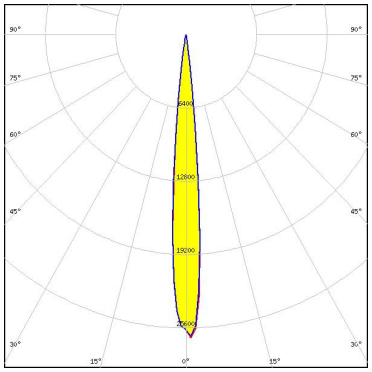
LED	LUXEON Rubix
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	119.4 cd/lm
LEDs/each optic	1
Light colour	Red
Required components:	



LUMILEDS

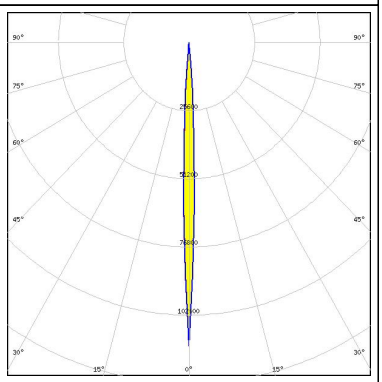
LED	LUXEON Rubix
FWHM / FWTM	10.0° / 17.0°
Efficiency	97 %
Peak intensity	26.8 cd/lm
LEDs/each optic	4
Light colour	RGBW
Required components:	





LUMILEDS

LED	LUXEON Rubix
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	114 cd/lm
LEDs/each optic	1
Light colour	Blue
Required components:	



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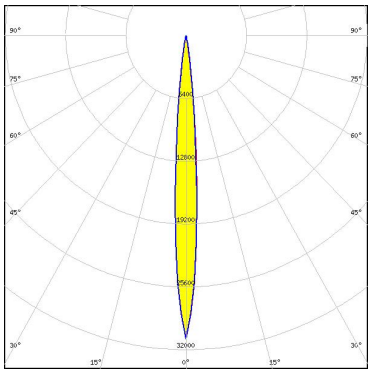
OPTICAL RESULTS (SIMULATED):

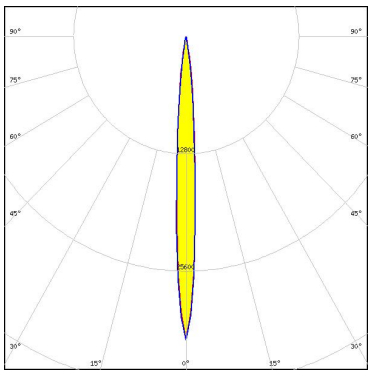
LUMILEDS

LED	LUXEON V
FWHM / FWTM	8.0° / 17.0°
Efficiency	95 %
Peak intensity	30.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



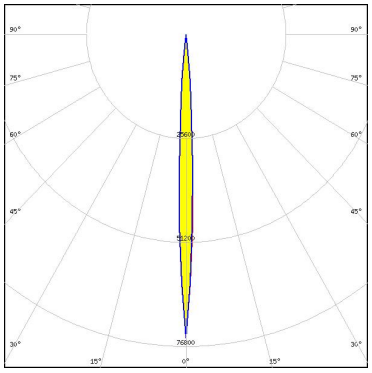
LUMINUS

LED	SBT-90
FWHM / FWTM	8.0° / 18.0°
Efficiency	97 %
Peak intensity	33.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



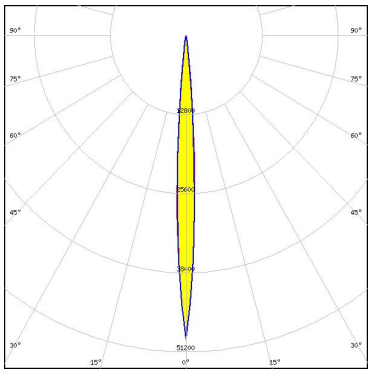
LUMINUS

LED	SFT-40-WCS
FWHM / FWTM	6.0° / 12.0°
Efficiency	96 %
Peak intensity	74.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



LUMINUS

LED	SFT-70X-WCS
FWHM / FWTM	6.0° / 14.0°
Efficiency	97 %
Peak intensity	49.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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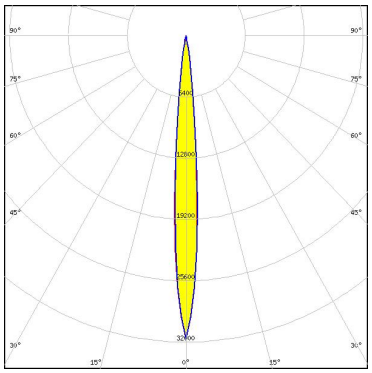
OPTICAL RESULTS (SIMULATED):

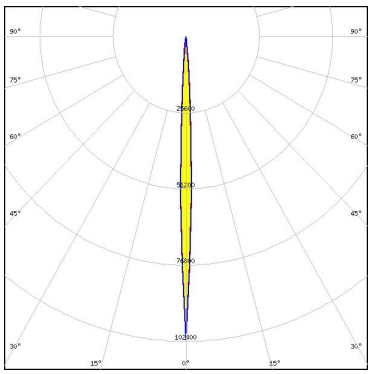
LUMINUS

LED	SST-40
FWHM / FWTM	8.0° / 16.0°
Efficiency	97 %
Peak intensity	31.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



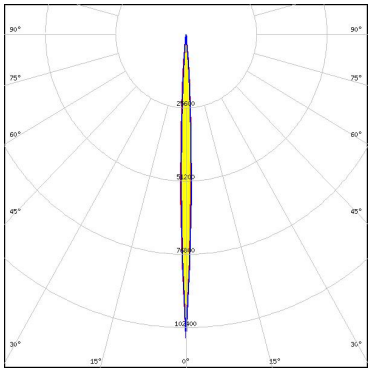
OSRAM
Opto Semiconductors

LED	Duris S5 (Single chip)
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	101.9 cd/lm
LEDs/each optic	1
Light colour	Green
Required components:	



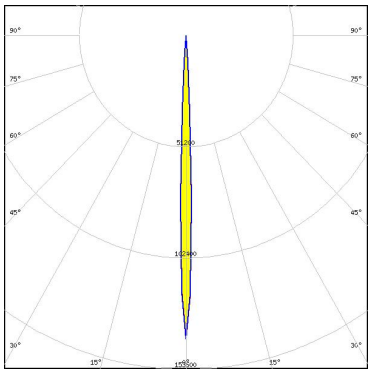
OSRAM
Opto Semiconductors

LED	Duris S5 (Single chip)
FWHM / FWTM	4.0° / 10.0°
Efficiency	95 %
Peak intensity	106 cd/lm
LEDs/each optic	1
Light colour	Red
Required components:	



OSRAM
Opto Semiconductors

LED	OSTAR Projection Compact (KW.CSLNM1.TG)
FWHM / FWTM	4.0° / 8.0°
Efficiency	94 %
Peak intensity	139.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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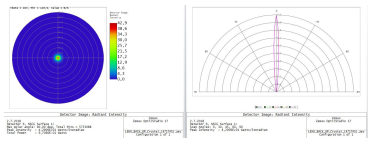
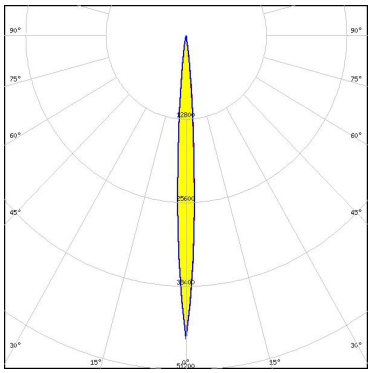
OPTICAL RESULTS (SIMULATED):

OSRAM
Opto Semiconductors

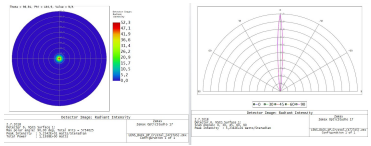
LED	SFH 4717AS
FWHM / FWTM	6.7° / 14.5°
Efficiency	94 %
Peak intensity	46.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

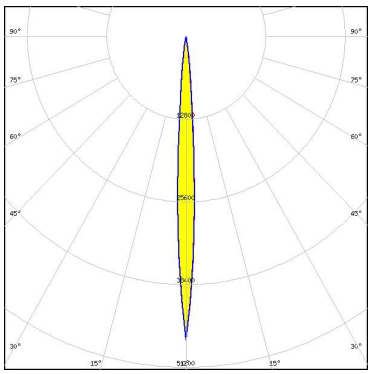




OSRAM
Opto Semiconductors

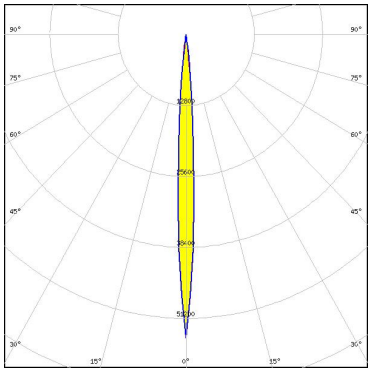
LED	SFH 4727AS
FWHM / FWTM	6.7° / 14.5°
Efficiency	94 %
Peak intensity	47 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	





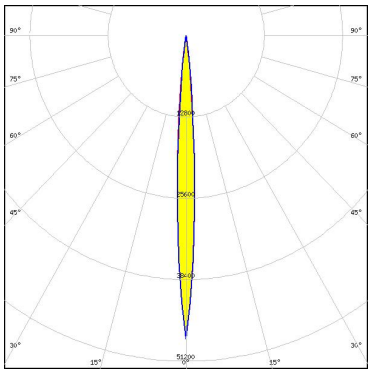
SAMSUNG

LED	LH351B
FWHM / FWTM	6.0° / 14.0°
Efficiency	96 %
Peak intensity	54.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



SAMSUNG

LED	LH351C
FWHM / FWTM	6.0° / 14.0°
Efficiency	96 %
Peak intensity	47.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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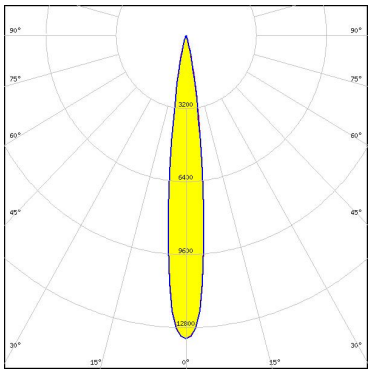
OPTICAL RESULTS (SIMULATED):

SEOUL SEMICONDUCTOR

LED	Z8Y50P
FWHM / FWTM	14.0° / 26.0°
Efficiency	97 %
Peak intensity	13.3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



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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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The measured data in the provided downloadable LEDiL Product Datasheets and Mechanical 2D-Drawings is rounded and provided as reference for planning. LEDiL Oy's optical specifications have been verified by conducting performance testing of the products in accordance with the company's quality system. The reported data are averaged results of multiple measurements with typical variation. LEDiL Oy reserves the right to without prior notification make changes and improvements to its products.

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