STELLA-FRESNEL

~25° beam for warehouse and outdoor lighting. Compatible with up to 30 mm LES size COBs. Variant with black frame.

SPECIFICATION:

Dimensions	Ø 90.0 mm
Height	23 mm
Fastening	screw
Ingress protection classes	IP67
ROHS compliant	yes ⓘ

MATERIALS:

Component	Type	Material	Colour	Finish
STELLA-FRESNEL	Single lens	Silicone	clear	
STELLA-FRAME	Holder	PA66	black	

ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FN14720_STELLA-FRESNEL	Single lens	80	80	10	4.0

» Box size: 480 x 280 x 300 mm

ϕ90
ϕ75
ϕ4.2

22.75

Isometric view
Scale: 1:1

A

A

Venting pipe:
Piercing this membrane
will Allow lens breathing

Section view A-A
Scale: 5:1

INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1	F14627	STELLA-FRESNEL	Optical grade LSR	
	F13322	STELLA-FRAME	PA66GF30	black

Tolerances if not otherwise shown
According to DIN ISO 2768-1
Linear measures: class V
Please note that due to the elasticity of
products made of silicone actual measured
values may vary, and therefore typical
tolerance values may not be applied.

THIRD ANGLE PROJECTION:

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Ledil Oy
Salorankatu 10
FIN 24240 SALO
Finland

DRAWING TITLE
FN14720_STELLA-FRESNEL

SIZE	PART NUMBER
A3	FN14720

| SCALE | 1:1 | WEIGHT | 35 g | SHEET | 1/1 |

See also our general installation guide: www.ledil.com/installation_guide
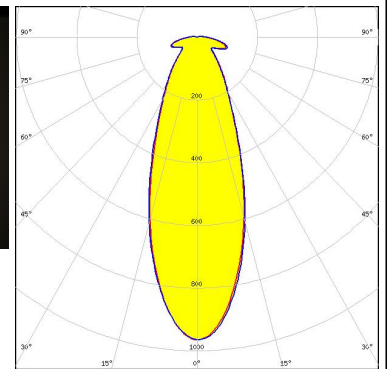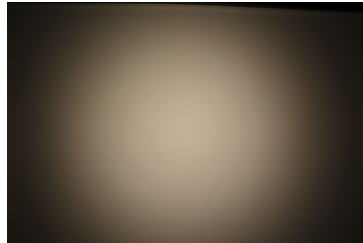
OPTICAL RESULTS (MEASURED):

bridgelux

LED	V18 Gen7
FWHM / FWTM	32.0° / 77.0°
Efficiency	85 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 439 Typ L3	

bridgelux
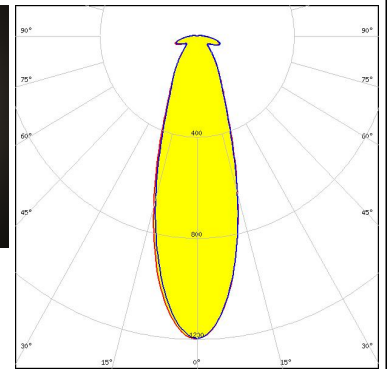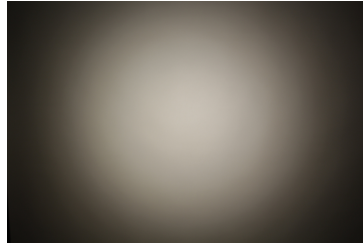
LED	V18 Gen7
FWHM / FWTM	32.0° / 77.0°
Efficiency	84 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
BJB: 47.319.2350	

bridgelux
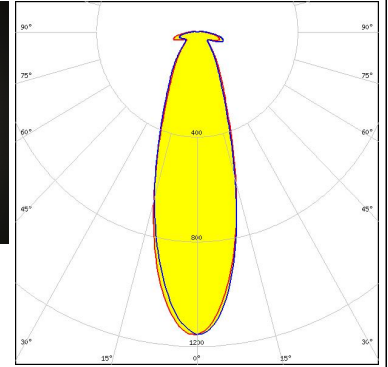
LED	V22 Gen7
FWHM / FWTM	37.0° / 118.0°
Efficiency	86 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
TE Connectivity: 2213480-1	

bridgelux

LED	V22 Gen7
FWHM / FWTM	36.0° / 118.0°
Efficiency	84 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 431 Typ Z1	

OPTICAL RESULTS (MEASURED):

bridgelux
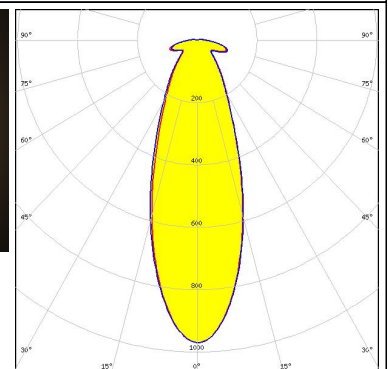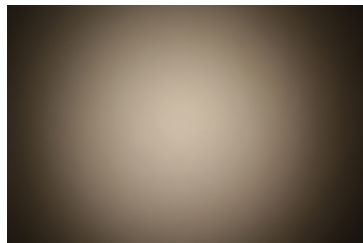
LED	Vero SE 13
FWHM / FWTM	27.0° / 63.0°
Efficiency	85 %
Peak intensity	1.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

bridgelux
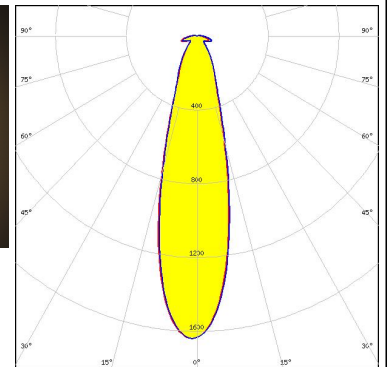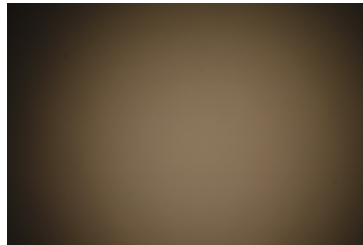
LED	Vero SE 18
FWHM / FWTM	31.0° / 73.0°
Efficiency	86 %
Peak intensity	1.3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

bridgelux
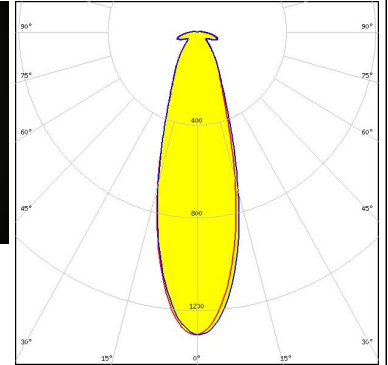
LED	Vero SE 29
FWHM / FWTM	46.0° / 161.0°
Efficiency	87 %
Peak intensity	0.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

bridgelux
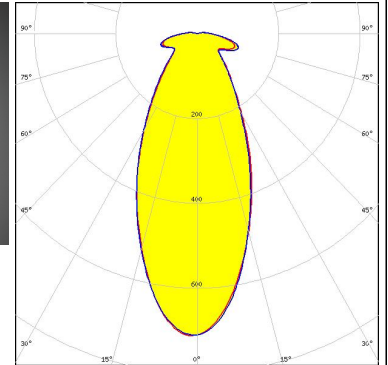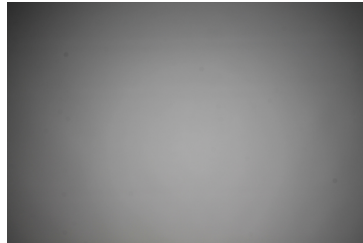
LED	VERO13
FWHM / FWTM	26.0° / 62.0°
Efficiency	84 %
Peak intensity	1.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

OPTICAL RESULTS (MEASURED):

bridgelux
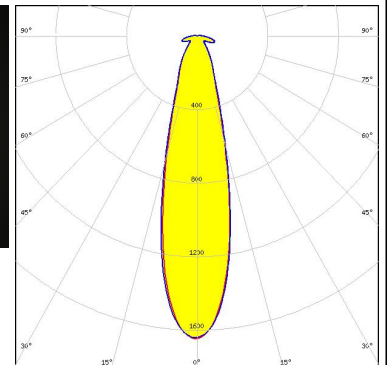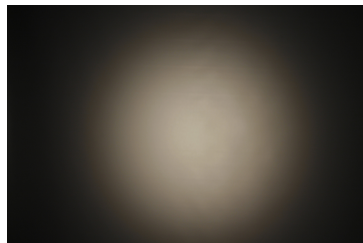
LED	VERO18
FWHM / FWTM	31.0° / 75.0°
Efficiency	85 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

bridgelux
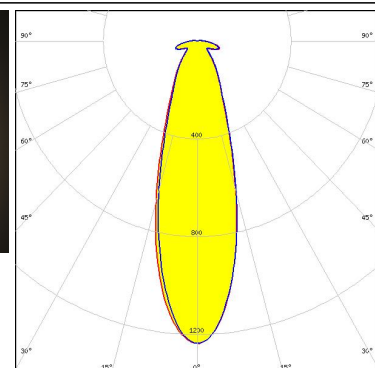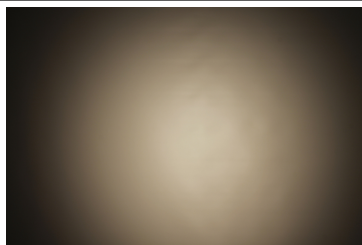
LED	VERO29
FWHM / FWTM	48.0° / 165.0°
Efficiency	87 %
Peak intensity	0.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
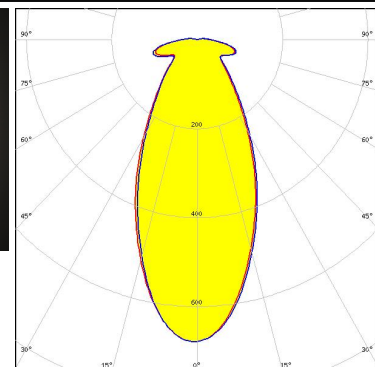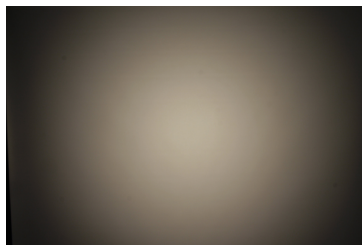
CITIZEN

LED	CLL04x/CLU04x
FWHM / FWTM	36.0° / 99.0°
Efficiency	86 %
Peak intensity	1.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
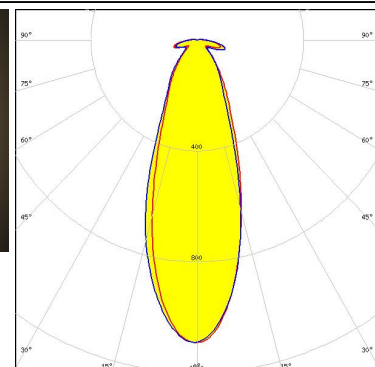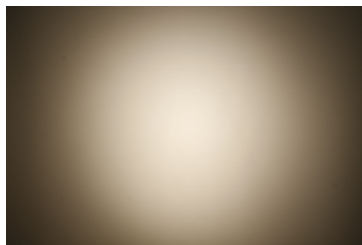
LED	CMA2550
FWHM / FWTM	30.0° / 67.0°
Efficiency	86 %
Peak intensity	1.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

OPTICAL RESULTS (MEASURED):

CREE LEDs
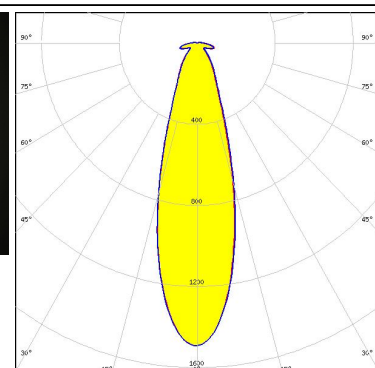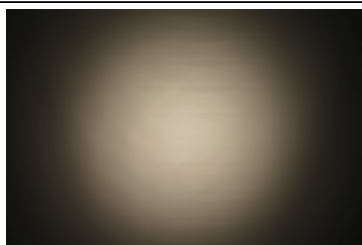
LED	CMA3090
FWHM / FWTM	35.0° / 79.0°
Efficiency	88 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
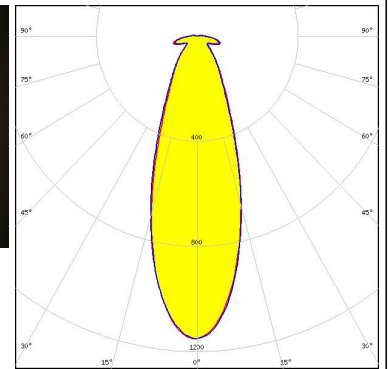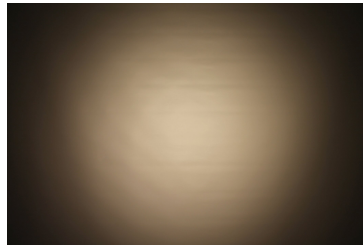
LED	CMT19xx
FWHM / FWTM	25.0° / 54.0°
Efficiency	87 %
Peak intensity	2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 477 Typ Z1	

CREE LEDs
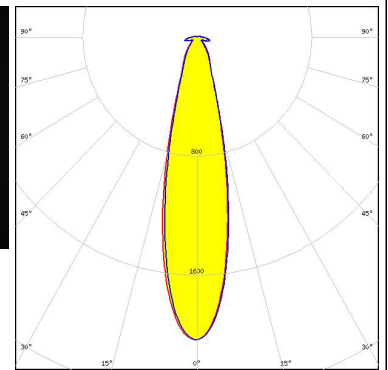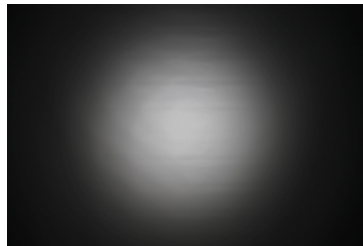
LED	CXA/B 1816 & CXA/B 1820 & CXA 1850
FWHM / FWTM	24.0° / 57.0°
Efficiency	84 %
Peak intensity	1.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
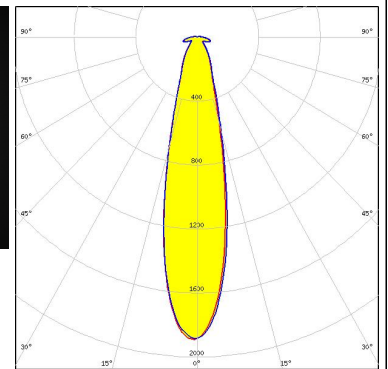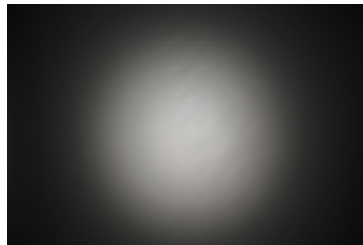
LED	CXA/B 1830
FWHM / FWTM	26.0° / 64.0°
Efficiency	85 %
Peak intensity	1.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
C14305_STELLA-CLAMP-CXA15-18	

OPTICAL RESULTS (MEASURED):

CREE LEDs
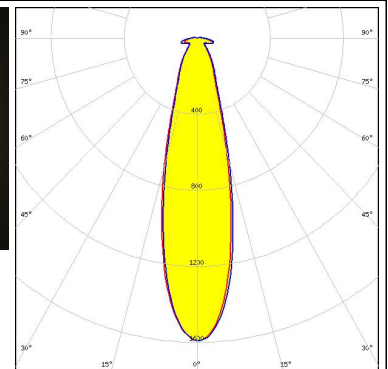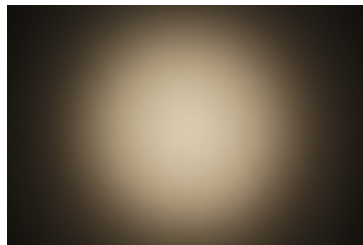
LED	CXA/B 25xx
FWHM / FWTM	31.0° / 75.0°
Efficiency	86 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
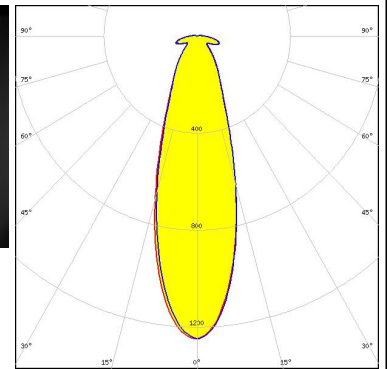
LED	CXA/B 25xx
FWHM / FWTM	32.0° / 76.0°
Efficiency	85 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 439 Typ L3	

CREE LEDs
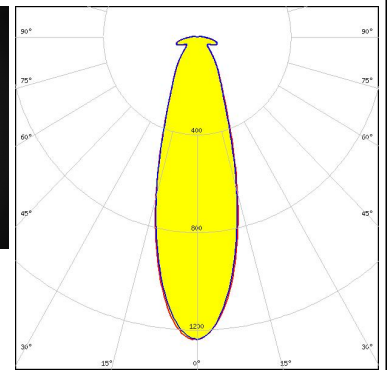
LED	CXA/B 25xx
FWHM / FWTM	33.0° / 120.0°
Efficiency	84 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
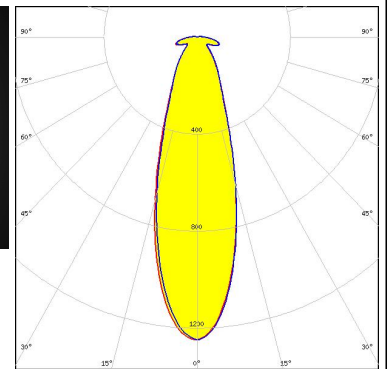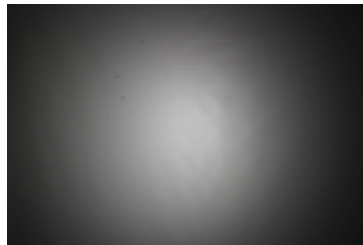
LED	CXA/B 30xx
FWHM / FWTM	37.0° / 87.0°
Efficiency	88 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
BJB: 47.319.2151	
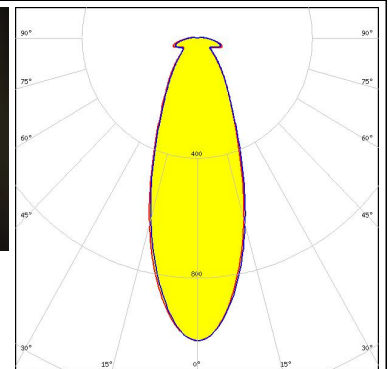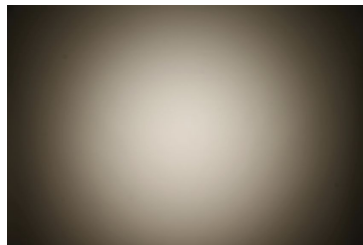
OPTICAL RESULTS (MEASURED):

LUMILEDS

LED	LUXEON CoB 1211
FWHM / FWTM	33.0° / 79.0°
Efficiency	85 %
Peak intensity	1.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 431 Typ L3	
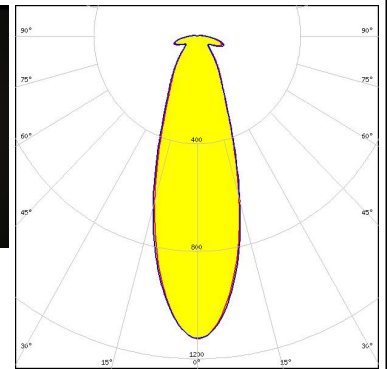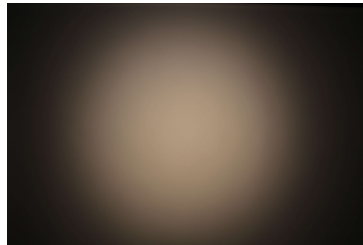
LUMILEDS

LED	LUXEON CoB 1213/1216/1812
FWHM / FWTM	39.0° / 139.0°
Efficiency	86 %
Peak intensity	0.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
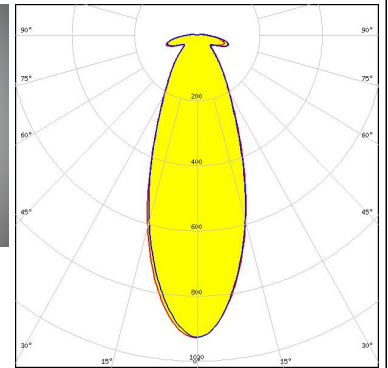
LUMILEDS

LED	LUXEON CoB 1321
FWHM / FWTM	50.0° / 165.0°
Efficiency	85 %
Peak intensity	0.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
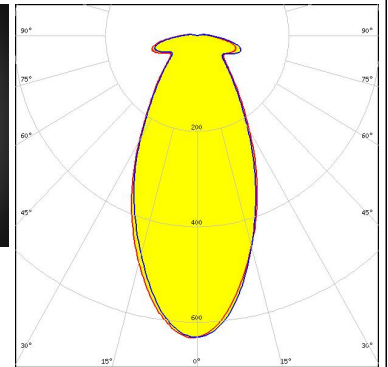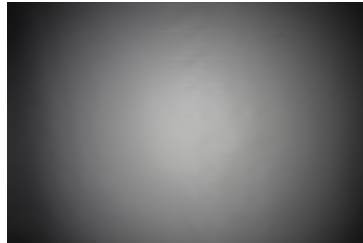
LUMILEDS

LED	LUXEON CoB 1825
FWHM / FWTM	56.0° / 169.0°
Efficiency	84 %
Peak intensity	0.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

OPTICAL RESULTS (MEASURED):

LUMINUS
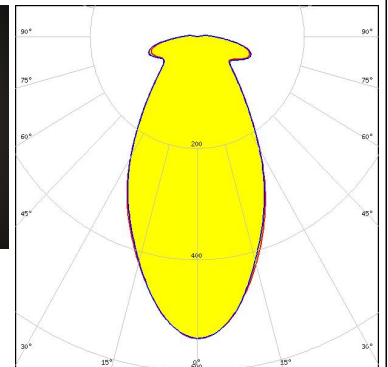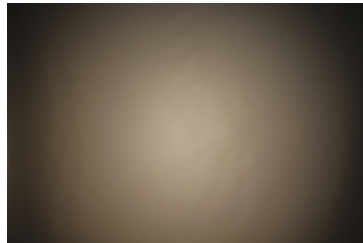
LED	CxM-22 (28x28)
FWHM / FWTM	38.0° / 136.0°
Efficiency	86 %
Peak intensity	0.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 431 Typ L3	

NICHIA
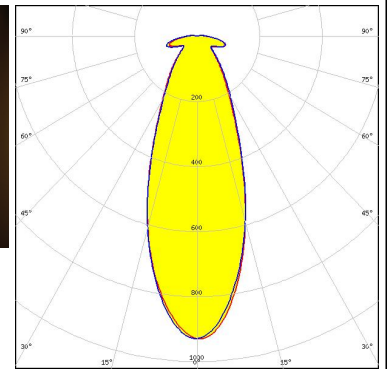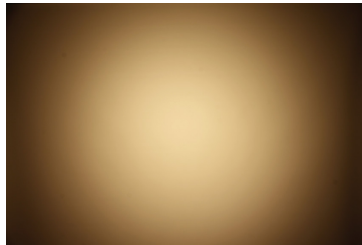
LED	COB H-Type
FWHM / FWTM	38.0° / 120.0°
Efficiency	85 %
Peak intensity	0.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

NICHIA
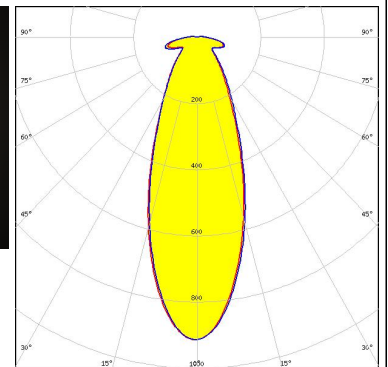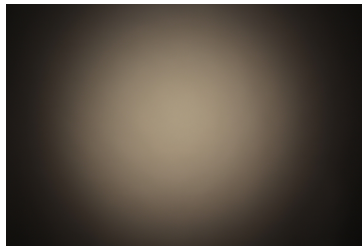
LED	COB J-Type
FWHM / FWTM	26.0° / 65.0°
Efficiency	85 %
Peak intensity	1.6 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

OSRAM
Opto Semiconductors
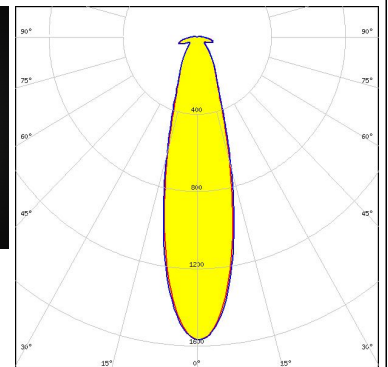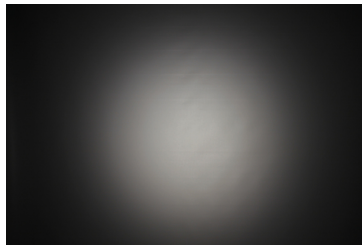
LED	Soleriq S19
FWHM / FWTM	32.1° / 72.5°
Efficiency	84 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
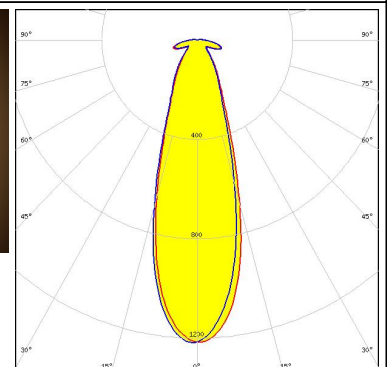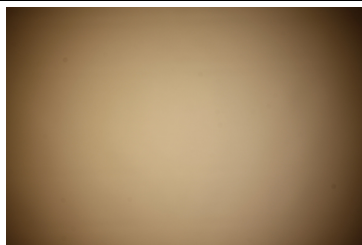
OPTICAL RESULTS (MEASURED):

PHILIPS

LED	Fortimo SLM L06 CoB
FWHM / FWTM	18.0° / 44.0°
Efficiency	86 %
Peak intensity	2.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
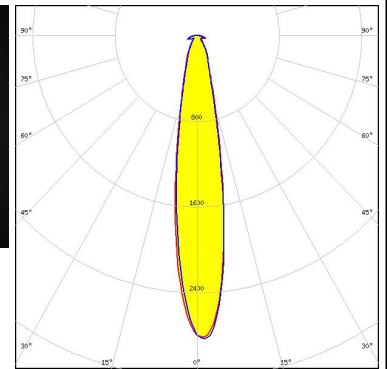
PHILIPS

LED	Fortimo SLM L19 + SLM holder (PI)
FWHM / FWTM	33.0° / 78.0°
Efficiency	87 %
Peak intensity	1.2 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
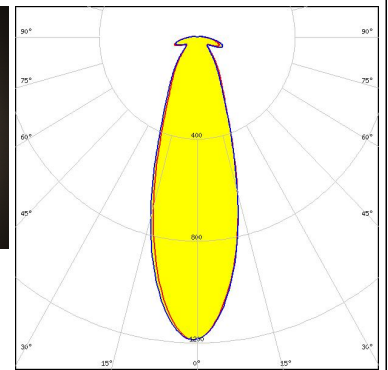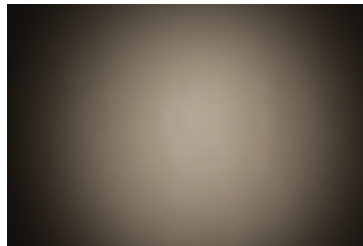
PHILIPS

LED	Fortimo SLM L23 CoB
FWHM / FWTM	38.0° / 87.0°
Efficiency	87 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
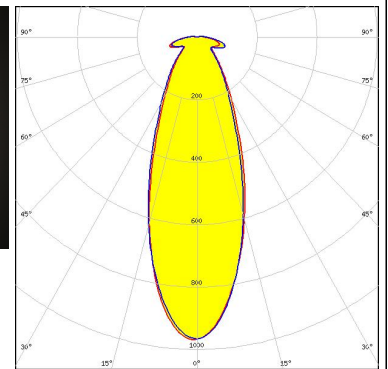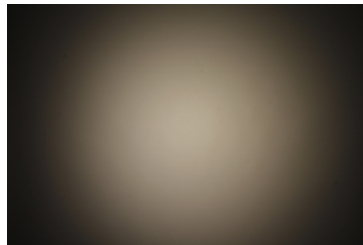
SAMSUNG

LED	LC016D / LC019D / LC026D / LC033D
FWHM / FWTM	27.0° / 65.0°
Efficiency	83 %
Peak intensity	1.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
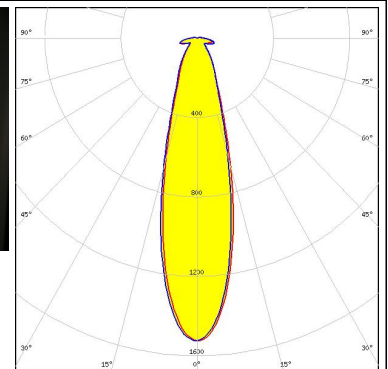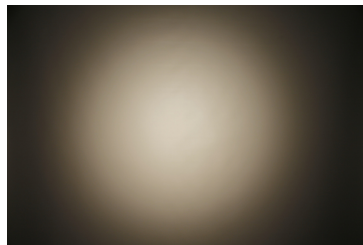
OPTICAL RESULTS (MEASURED):

SAMSUNG

LED	LC040D / LC060D / LC080D
FWHM / FWTM	37.0° / 119.0°
Efficiency	84 %
Peak intensity	0.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
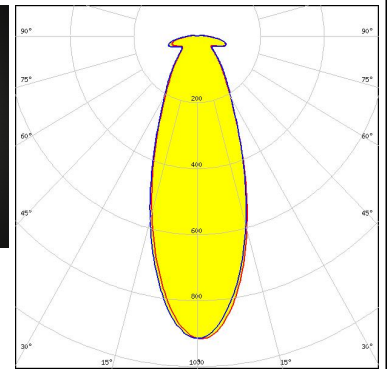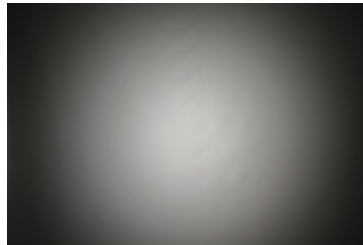
SEOUL SEMICONDUCTOR

LED	MJT COB LES 14.5
FWHM / FWTM	28.0° / 67.0°
Efficiency	84 %
Peak intensity	1.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
IDEAL: 50-2103CT	
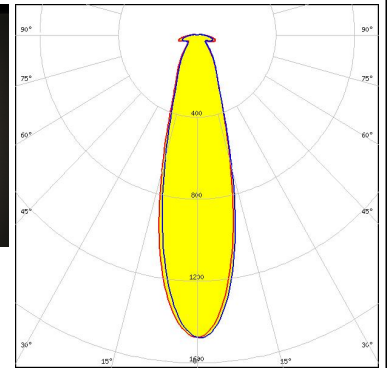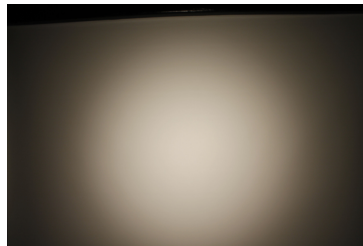
SEOUL SEMICONDUCTOR

LED	MJT COB LES 22
FWHM / FWTM	36.0° / 118.0°
Efficiency	84 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
IDEAL: 50-2204CT	
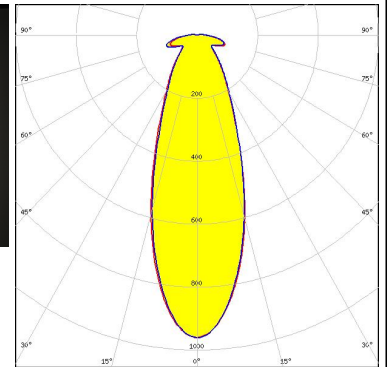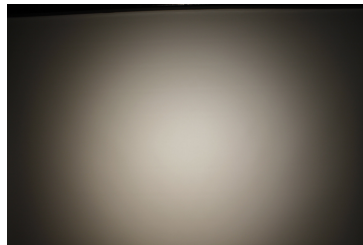
SEOUL SEMICONDUCTOR

LED	MJT COB LES 22
FWHM / FWTM	36.0° / 118.0°
Efficiency	84 %
Peak intensity	1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
IDEAL: 50-2204CT	

OPTICAL RESULTS (SIMULATED):

bridgelux
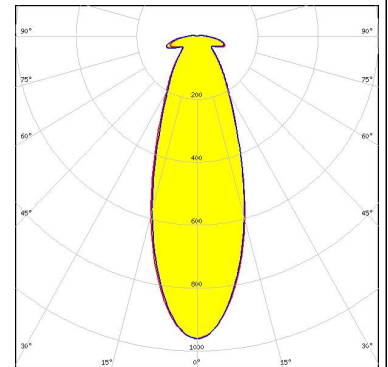
LED	V10 Gen7
FWHM / FWTM	18.0° / 35.0°
Efficiency	85 %
Peak intensity	4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
Bender Wirth: 486 Typ L1	

bridgelux
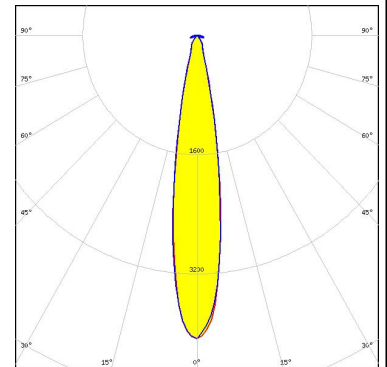
LED	V13 Gen7
FWHM / FWTM	20.0° / 90.0°
Efficiency	86 %
Peak intensity	0.4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

bridgelux
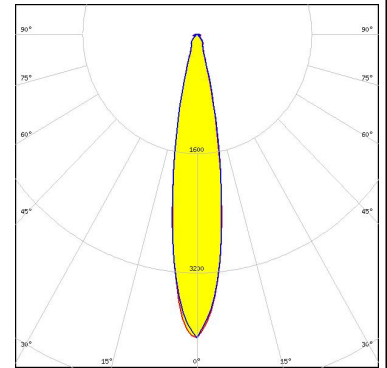
LED	V22 Gen7
FWHM / FWTM	30.0° / 70.0°
Efficiency	84 %
Peak intensity	0.5 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
IDEAL: 50-2204CT	
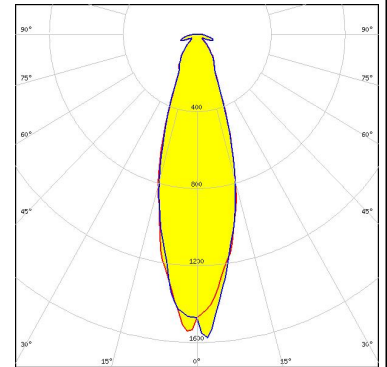
CITIZEN

LED	CLL02x/CLU02x (LES10)
FWHM / FWTM	17.0° / 35.0°
Efficiency	86 %
Peak intensity	4 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
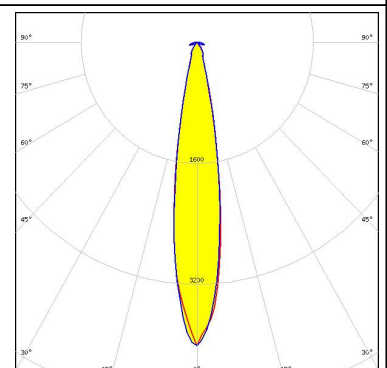
OPTICAL RESULTS (SIMULATED):

CITIZEN

LED	CLL05x/CLU05x
FWHM / FWTM	46.0° / 144.0°
Efficiency	91 %
Peak intensity	0.8 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
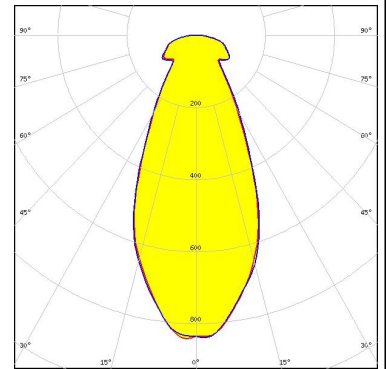
LED	CMB3090
FWHM / FWTM	34.0° / 74.0°
Efficiency	85 %
Peak intensity	1.3 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
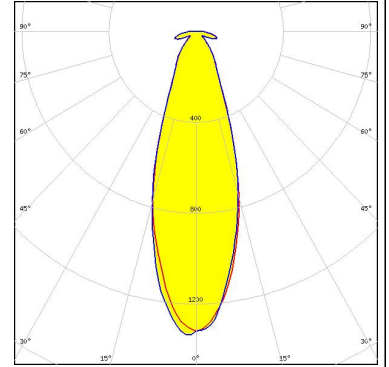
LED	CXA/B 3590
FWHM / FWTM	37.0° / 80.0°
Efficiency	83 %
Peak intensity	1.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

CREE LEDs
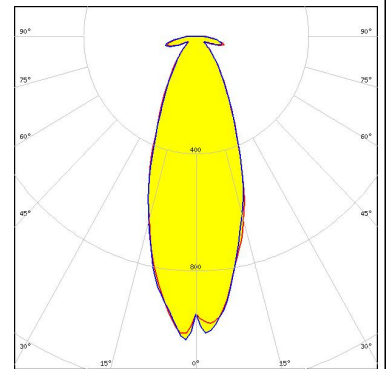
LED	CXA/B 3590
FWHM / FWTM	42.0° / 153.0°
Efficiency	85 %
Peak intensity	0.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	
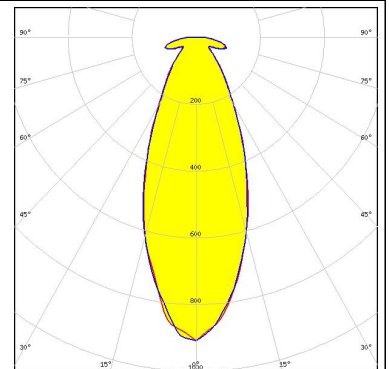
OPTICAL RESULTS (SIMULATED):

LITEON

LED	LTPL-G35UV275GR-E
FWHM / FWTM	16.0° / 26.0°
Efficiency	61 %
LEDs/each optic	4
Light colour	UV-C
Required components:	

The UVC LED result tolerance is ±10 %
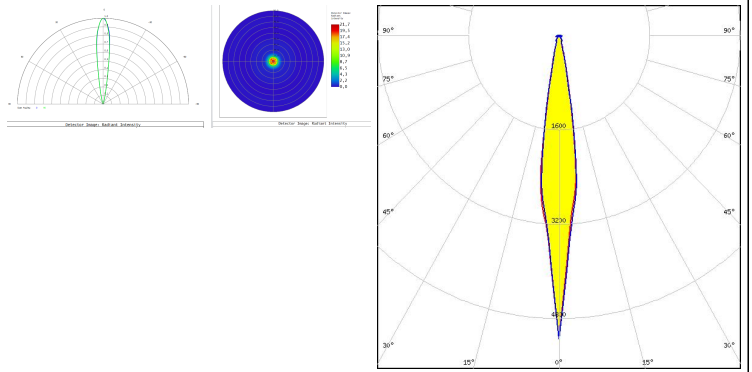
LITEON

LED	LTPL-G35UV275GR-E
FWHM / FWTM	23.0° / 40.0°
Efficiency	59 %
LEDs/each optic	13
Light colour	UV-C
Required components:	

The UVC LED result tolerance is ±10 %
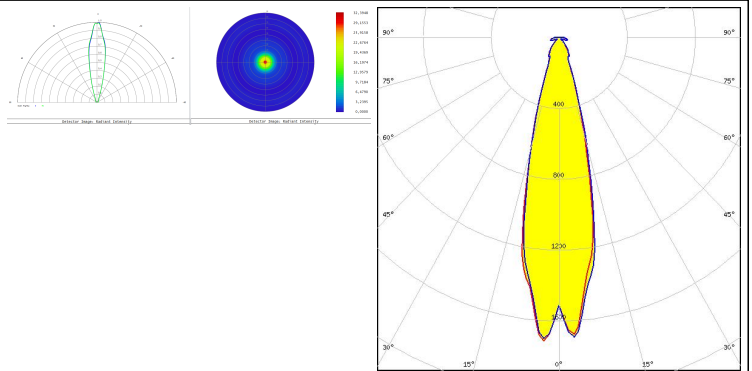
LITEON

LED	LTPL-G35UV275GR-E
FWHM / FWTM	14.0° / 25.0°
Efficiency	60 %
LEDs/each optic	3
Light colour	UV-C
Required components:	

The UVC LED result tolerance is ±10 %
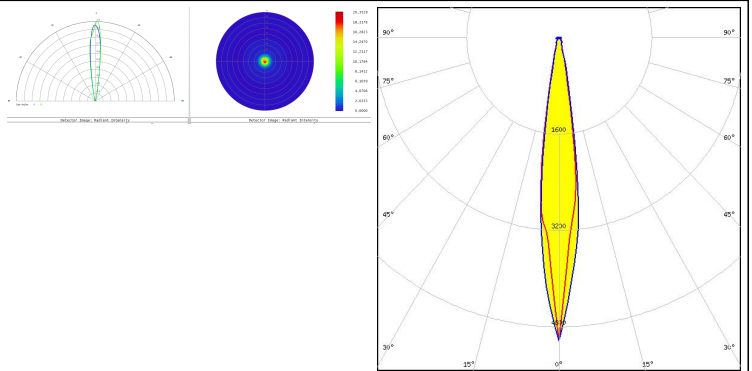
LUMILEDS

LED	LUXEON CoB 1208
FWHM / FWTM	23.0° / 43.0°
Efficiency	82 %
Peak intensity	2.8 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

OPTICAL RESULTS (SIMULATED):

LUMINUS
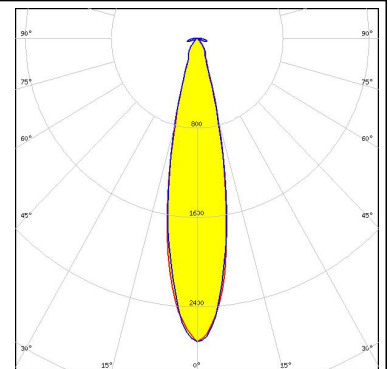
LED	CXM-32
FWHM / FWTM	47.0° / 98.0°
Efficiency	85 %
Peak intensity	0.8 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

LUMINUS
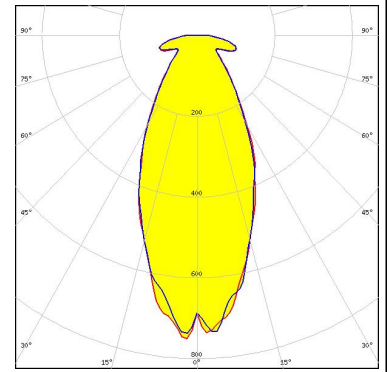
LED	XFM-5050 3 Die
FWHM / FWTM	26.0° / 62.0°
Efficiency	66 %
LEDs/each optic	21
Light colour	UV-C
Required components:	

The UVC LED result tolerance is ±10 %

NICHIA
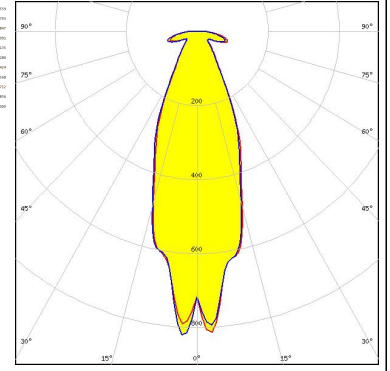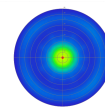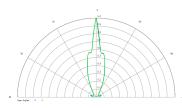
LED	NCSU334A
FWHM / FWTM	4.0° / 12.0°
Efficiency	64 %
LEDs/each optic	1
Light colour	UV-C
Required components:	

The UVC LED result tolerance is ±10 %

SEOUL SEMICONDUCTOR
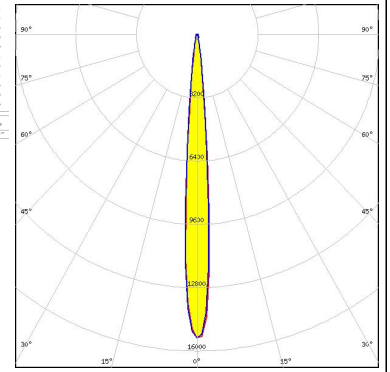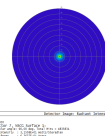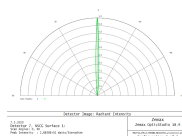
LED	CUN66A1B
FWHM / FWTM	4.1° / 12.0°
Efficiency	85 %
LEDs/each optic	1
Light colour	UV-A
Required components:	

OPTICAL RESULTS (SIMULATED):

SEOUL SEMICONDUCTOR

LED	CUN66B1B
FWHM / FWTM	4.3° / 13.0°
Efficiency	83 %
LEDs/each optic	1
Light colour	UV-A
Required components:	

SEOUL SEMICONDUCTOR

LED	WICOP DY9560-27
FWHM / FWTM	15.0° / 26.0°
Efficiency	63 %
LEDs/each optic	24
Light colour	UV-C
Required components:	

The UVC LED result tolerance is ±10 %
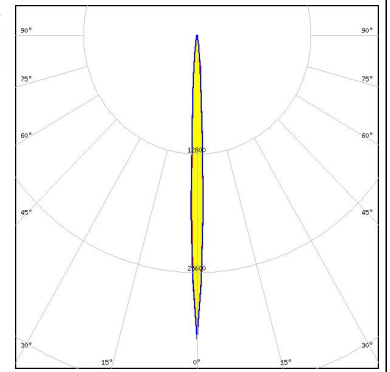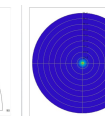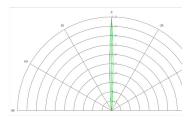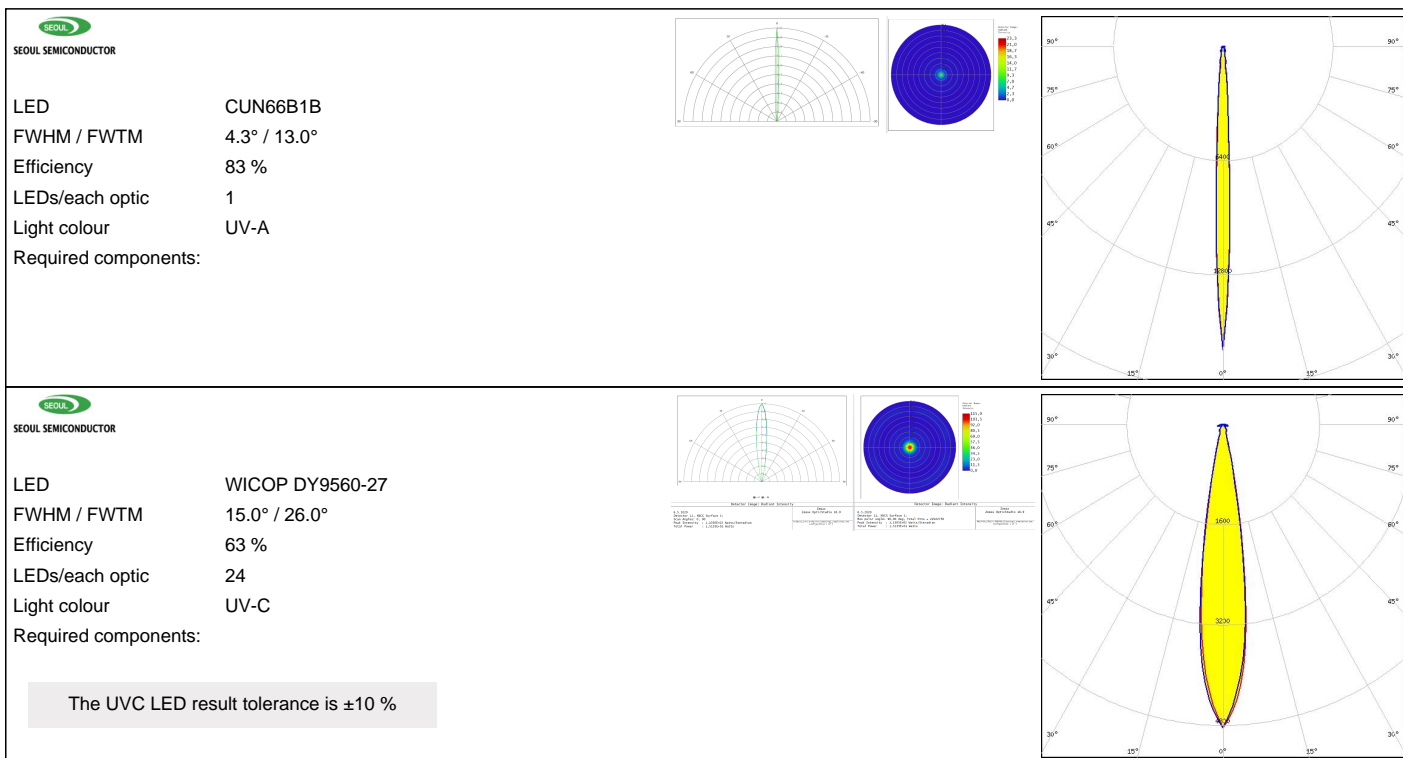
GENERAL INFORMATION:

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.

Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.

MATERIALS:

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

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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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