

## LEIA-S

~3° spot beam

### SPECIFICATION:

Dimensions	Ø 50.0 mm
Height	53 mm
Fastening	pin, screw
ROHS compliant	yes ⓘ

### MATERIALS:

Component	Type	Material	Colour	Finish
F16199_LEIA-S	Single lens	PMMA		
F16213_LEIA-HLD	Holder	HRPC	white	

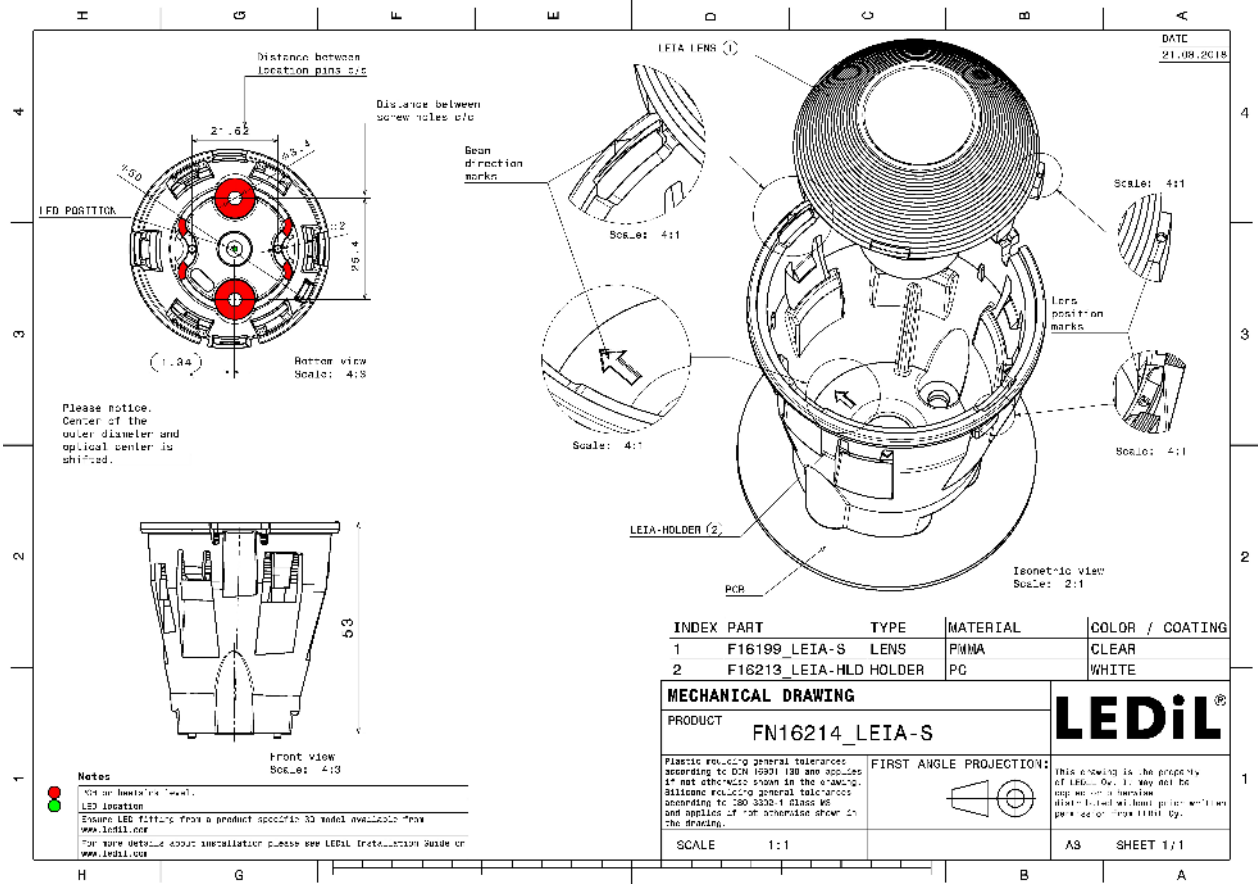
### ORDERING INFORMATION:

#### Quantities for one set:

Single lens	1
Holder	1

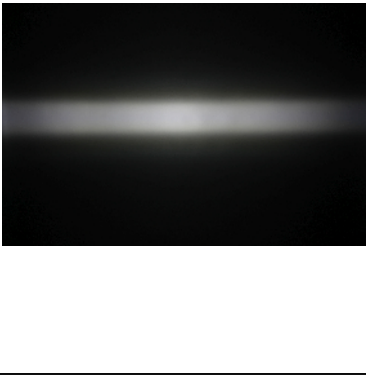
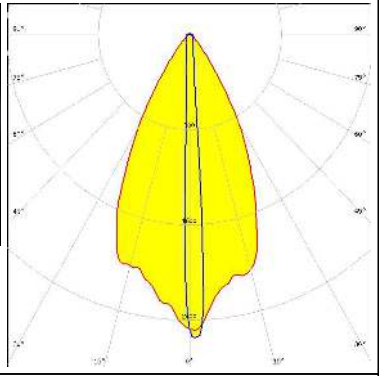

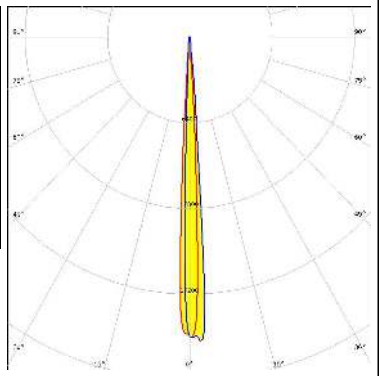
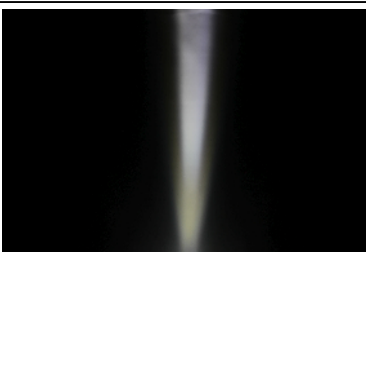
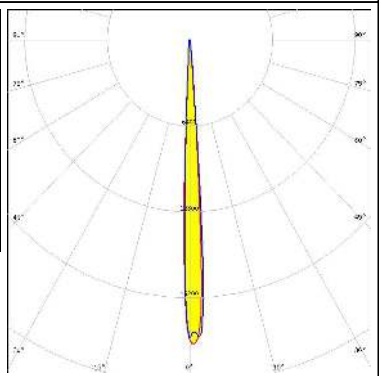

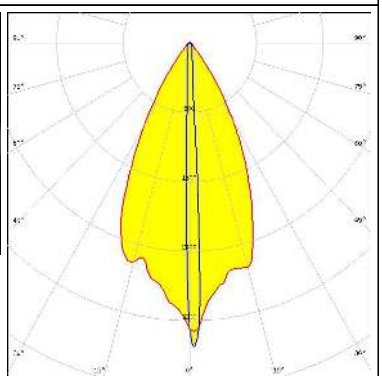


Component		Qty in box	MOQ	MPQ	Box weight (kg)
F16199_LEIA-S	Single lens	240	40	40	8.2
» Box size: 480 x 280 x 300 mm					
F16213_LEIA-HLD	Holder	400	40	20	5.8
» Box size: 398 x 298 x 265 mm					



See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

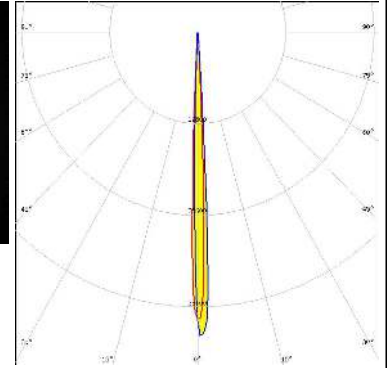
### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XHP35 HD            FWHM / FWTM 52.0 + 6.0° / 77.0 + 15.0°            Efficiency 45 %            Peak intensity 2.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F16629_LEIA-SUB-O</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XHP35 HD            FWHM / FWTM 6.0° / 9.0°            Efficiency 49 %            Peak intensity 22.8 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XHP35 HD            FWHM / FWTM 6.0° / 9.0°            Efficiency 50 %            Peak intensity 22.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED XHP35 HI            FWHM / FWTM 50.0 + 5.0° / 76.0 + 11.0°            Efficiency 47 %            Peak intensity 3.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F16629_LEIA-SUB-O</p>		

### OPTICAL RESULTS (MEASURED):

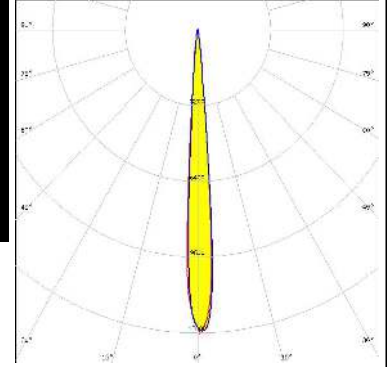
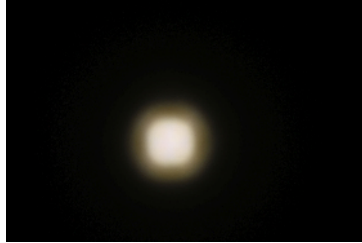
#### CREE ⇄ LED

LED XHP35 HI  
 FWHM / FWTM 4.0° / 7.0°  
 Efficiency 52 %  
 Peak intensity 43.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



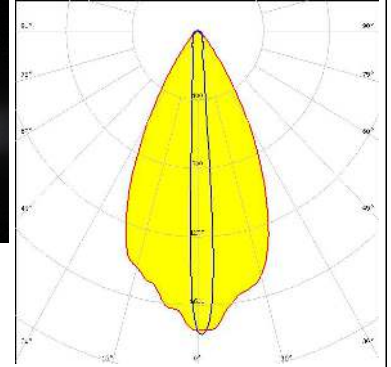
#### CREE ⇄ LED

LED XHP50.2  
 FWHM / FWTM 8.0° / 14.0°  
 Efficiency 48 %  
 Peak intensity 13 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



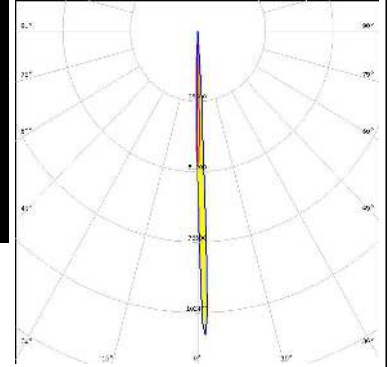
#### CREE ⇄ LED

LED XHP50.2  
 FWHM / FWTM 52.0 + 8.0° / 78.0 + 20.0°  
 Efficiency 42 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F16629\_LEIA-SUB-O



#### CREE ⇄ LED

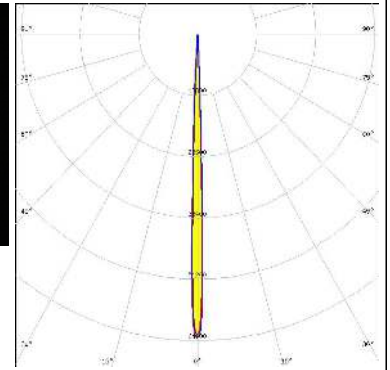
LED XP-E2  
 FWHM / FWTM 2.6° / 5.7°  
 Efficiency 59 %  
 Peak intensity 128.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (MEASURED):

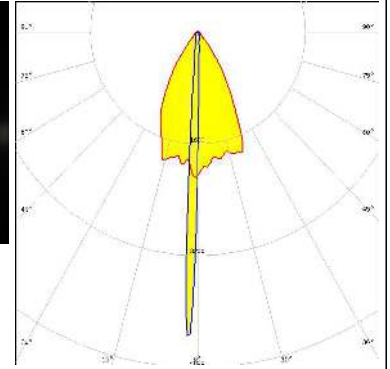
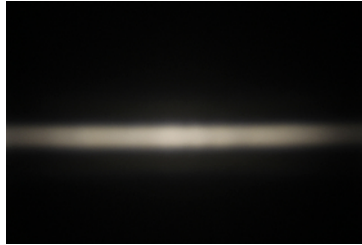
#### CREE LED

LED XP-G2  
 FWHM / FWTM 4.0° / 6.0°  
 Efficiency 50 %  
 Peak intensity 63.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



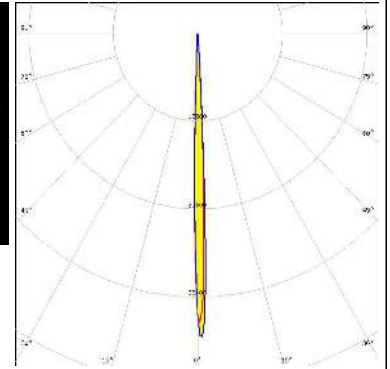
#### CREE LED

LED XP-G2  
 FWHM / FWTM 57.0 + 4.0° / 82.0 + 9.0°  
 Efficiency 40 %  
 Peak intensity 4.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



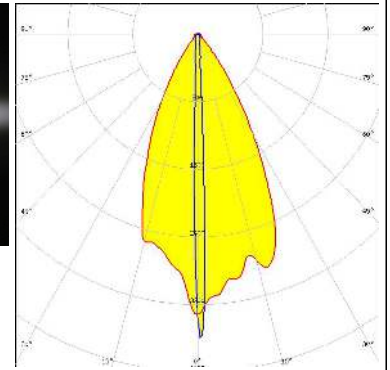
#### CREE LED

LED XP-G3  
 FWHM / FWTM 4.0° / 7.0°  
 Efficiency 51 %  
 Peak intensity 48.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

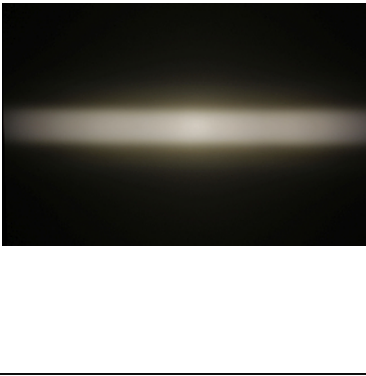
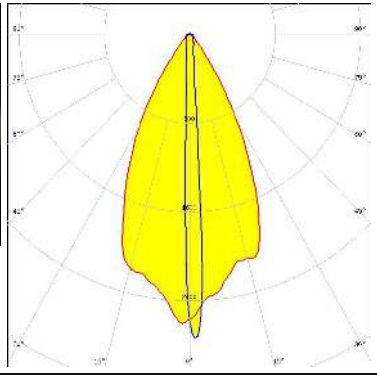

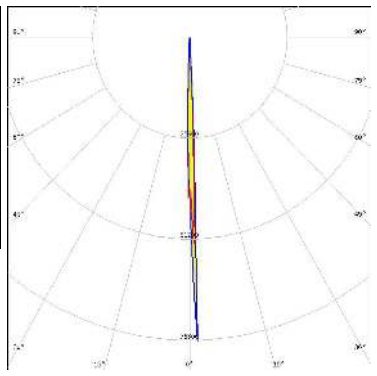

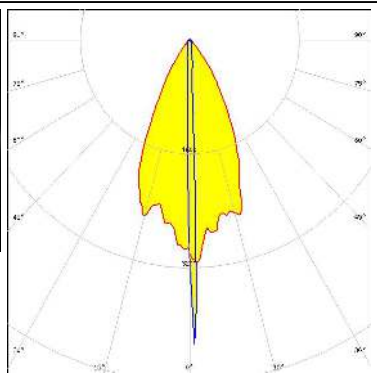

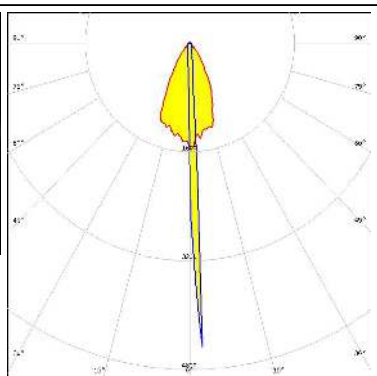


#### CREE LED

LED XP-G3  
 FWHM / FWTM 50.0 + 4.0° / 76.0 + 9.0°  
 Efficiency 47 %  
 Peak intensity 3.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F16629\_LEIA-SUB-O



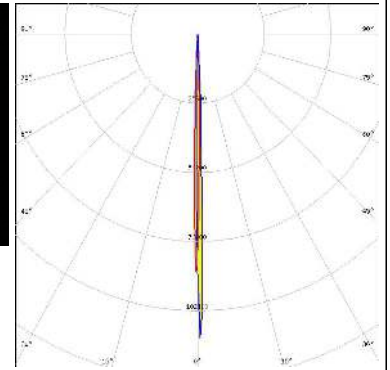
### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED            XP-L2            FWHM / FWTM    51.0 + 6.0° / 77.0 + 16.0°            Efficiency        49 %            Peak intensity    2.8 cd/lm            LEDs/each optic   1            Light colour      White            Required components:                                F16629_LEIA-SUB-O</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED            XQ-E HD            FWHM / FWTM    3.0° / 6.0°            Efficiency        47 %            Peak intensity    91 cd/lm            LEDs/each optic   1            Light colour      White            Required components:</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED            XQ-E HD            FWHM / FWTM    50.0 + 3.0° / 76.0 + 9.0°            Efficiency        42 %            Peak intensity    4.6 cd/lm            LEDs/each optic   1            Light colour      White            Required components:                                F16629_LEIA-SUB-O</p>		
<p><b>CREE</b> ⇄ <b>LED</b></p> <p>LED            XQ-E HI            FWHM / FWTM    52.0 + 3.0° / 79.0 + 9.0°            Efficiency        44 %            Peak intensity    6 cd/lm            LEDs/each optic   1            Light colour      White            Required components:                                F16629_LEIA-SUB-O</p>		

### OPTICAL RESULTS (MEASURED):

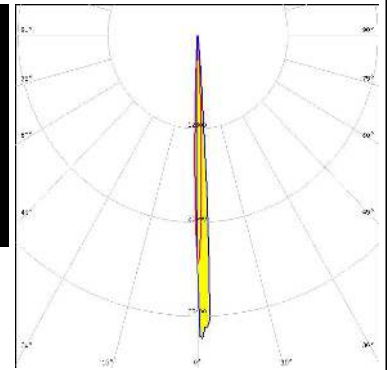
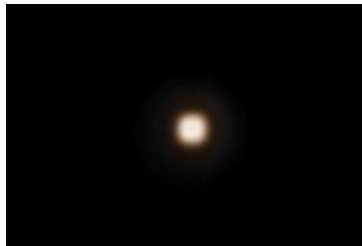
#### CREE LED

LED XQ-E HI  
 FWHM / FWTM 2.0° / 4.0°  
 Efficiency 48 %  
 Peak intensity 112.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



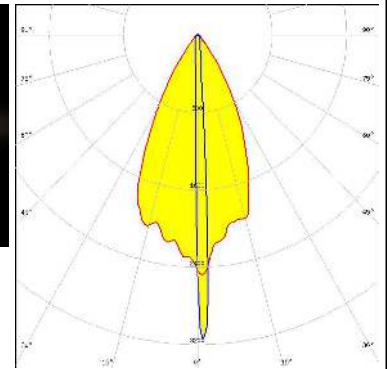
#### CREE LED

LED XT-E  
 FWHM / FWTM 4.0° / 7.0°  
 Efficiency 49 %  
 Peak intensity 42.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



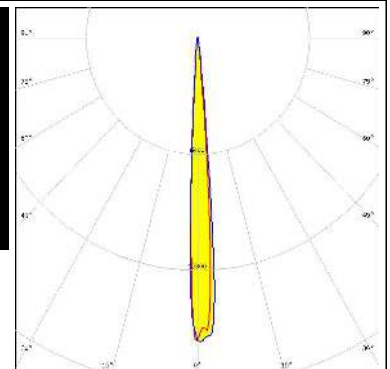
#### CREE LED

LED XT-E  
 FWHM / FWTM 50.0 + 4.0° / 76.0 + 11.0°  
 Efficiency 46 %  
 Peak intensity 6.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F16629\_LEIA-SUB-O




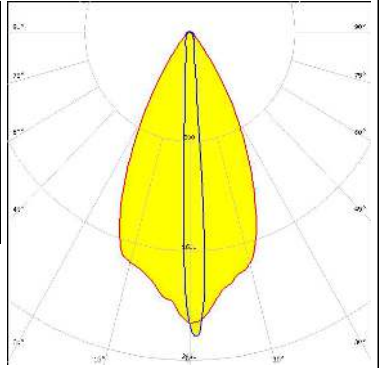
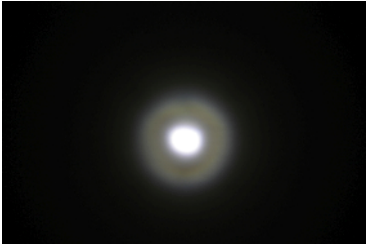
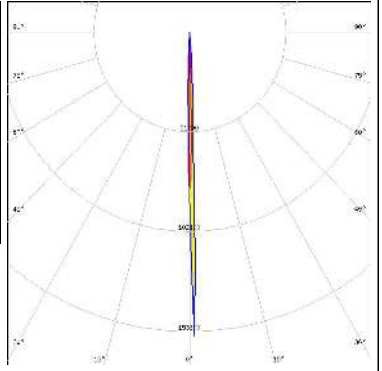
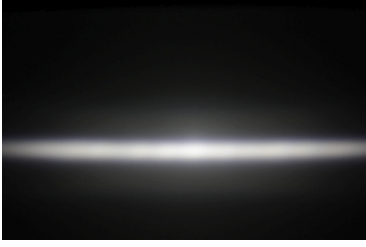
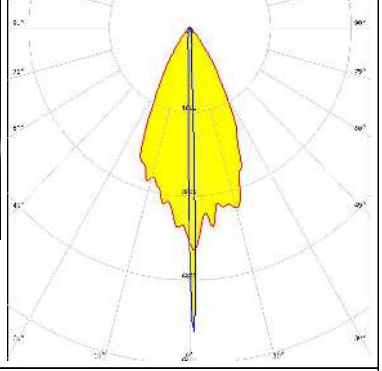
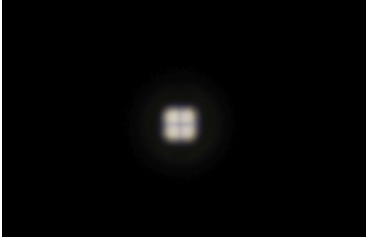
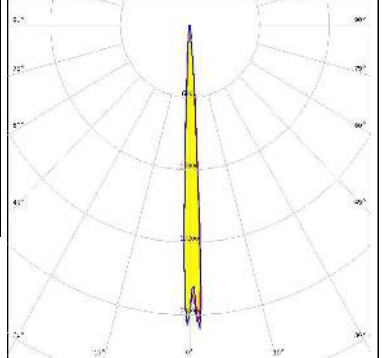
#### LUMILEDS

LED LUXEON 5050 Round LES  
 FWHM / FWTM 7.0° / 11.0°  
 Efficiency 51 %  
 Peak intensity 16.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

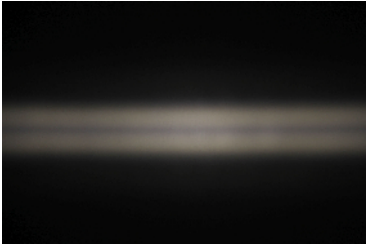
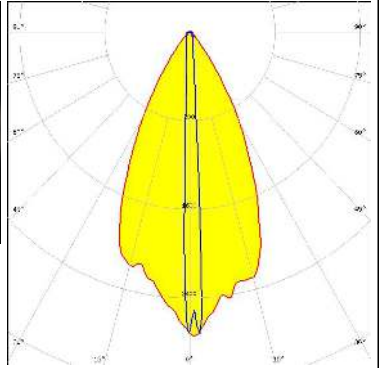

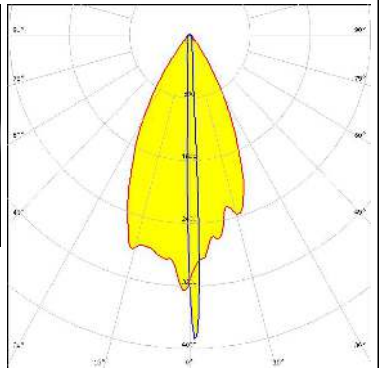

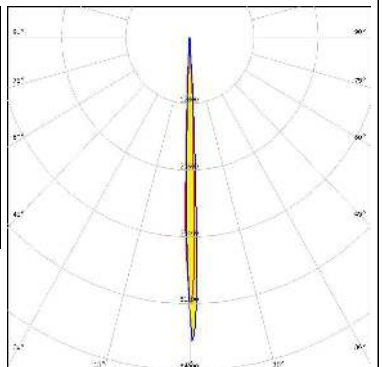

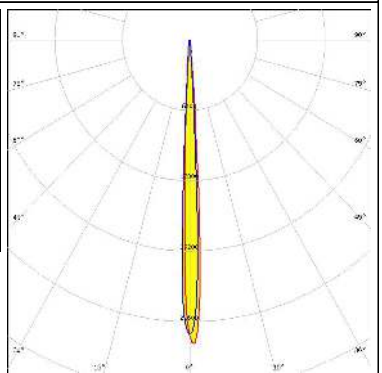





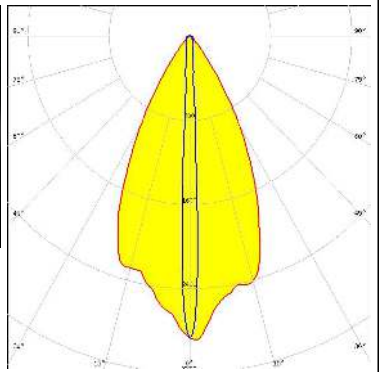
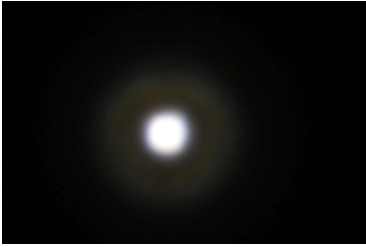
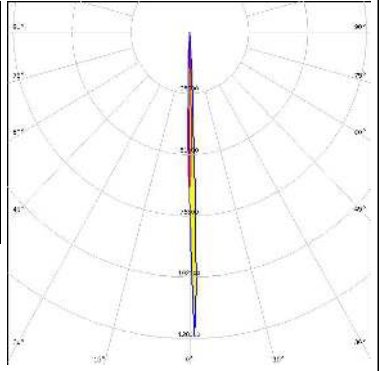

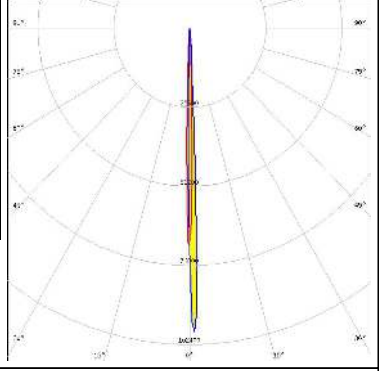

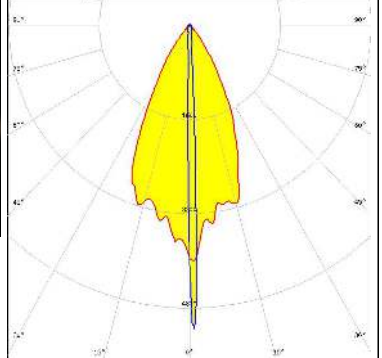
### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Round LES</p> <p>FWHM / FWTM 51.0 + 7.0° / 78.0 + 18.0°</p> <p>Efficiency 46 %</p> <p>Peak intensity 2.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CZ</p> <p>FWHM / FWTM 2.0° / 5.0°</p> <p>Efficiency 55 %</p> <p>Peak intensity 157 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON CZ</p> <p>FWHM / FWTM 51.0 + 3.0° / 76.0 + 7.0°</p> <p>Efficiency 48 %</p> <p>Peak intensity 6.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON MZ</p> <p>FWHM / FWTM 6.0° / 9.0°</p> <p>Efficiency 49 %</p> <p>Peak intensity 27.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

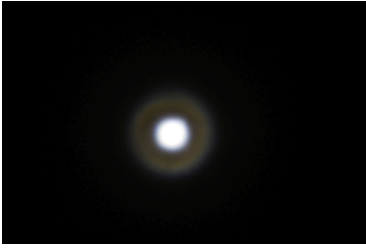
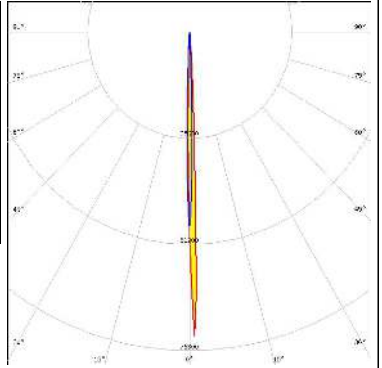
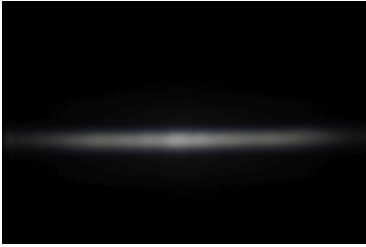
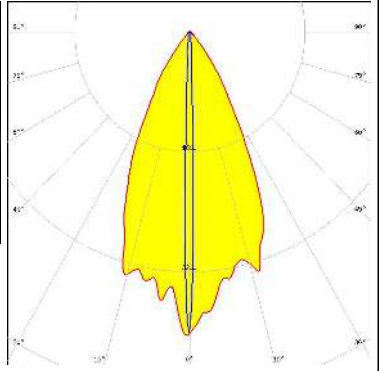

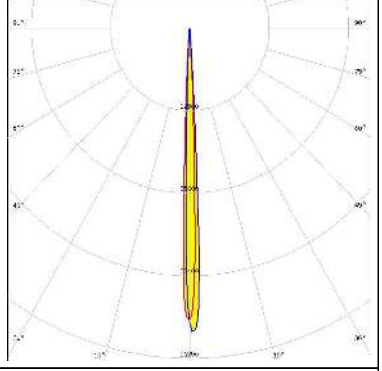

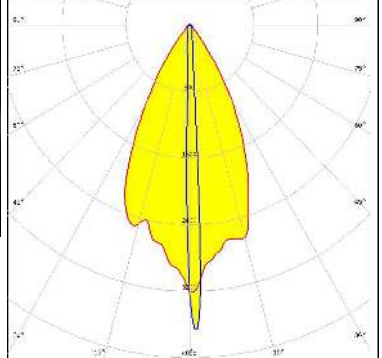
### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON MZ</p> <p>FWHM / FWTM 50.0 + 6.0° / 77.0 + 15.0°</p> <p>Efficiency 45 %</p> <p>Peak intensity 2.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON TX</p> <p>FWHM / FWTM 50.0 + 4.0° / 76.0 + 9.0°</p> <p>Efficiency 48 %</p> <p>Peak intensity 4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON TX</p> <p>FWHM / FWTM 4.0° / 7.0°</p> <p>Efficiency 51 %</p> <p>Peak intensity 58.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON V</p> <p>FWHM / FWTM 6.0° / 9.0°</p> <p>Efficiency 53 %</p> <p>Peak intensity 27.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

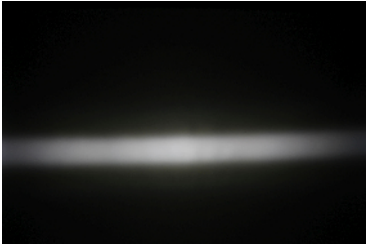
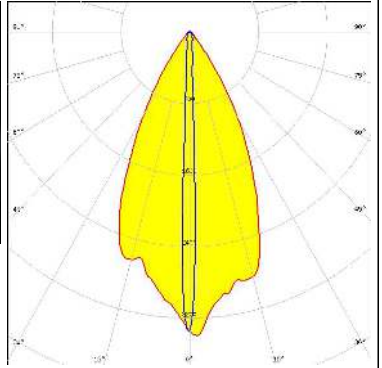

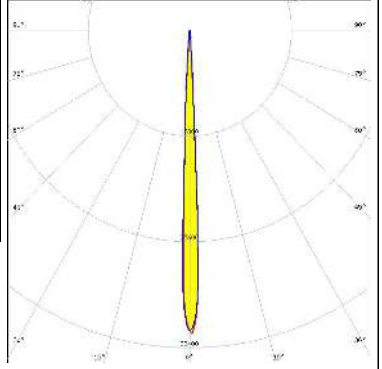

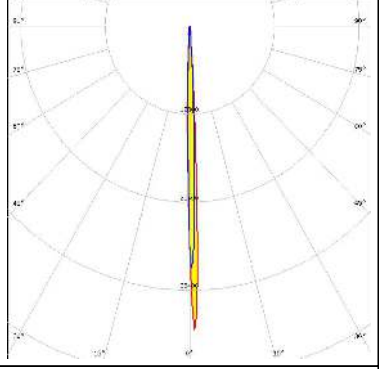

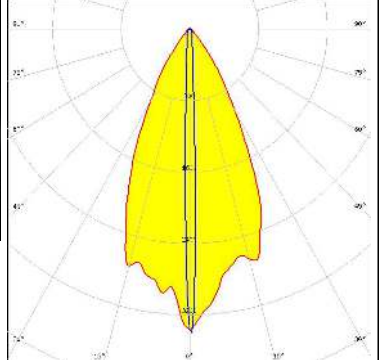
### OPTICAL RESULTS (MEASURED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON V</p> <p>FWHM / FWTM 51.0 + 6.0° / 77.0 + 15.0°</p> <p>Efficiency 49 %</p> <p>Peak intensity 2.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON Z</p> <p>FWHM / FWTM 2.0° / 5.0°</p> <p>Efficiency 50 %</p> <p>Peak intensity 131 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON Z ES</p> <p>FWHM / FWTM 3.0° / 6.0°</p> <p>Efficiency 55 %</p> <p>Peak intensity 98.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>LUMILEDS</b></p> <p>LED LUXEON Z ES</p> <p>FWHM / FWTM 49.0 + 3.0° / 76.0 + 7.0°</p> <p>Efficiency 49 %</p> <p>Peak intensity 5.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		


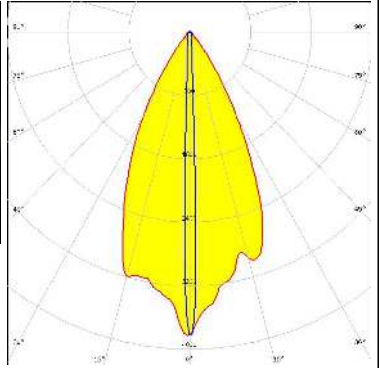

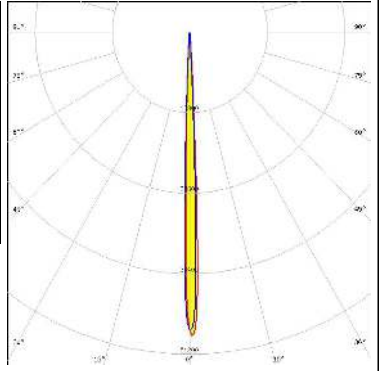

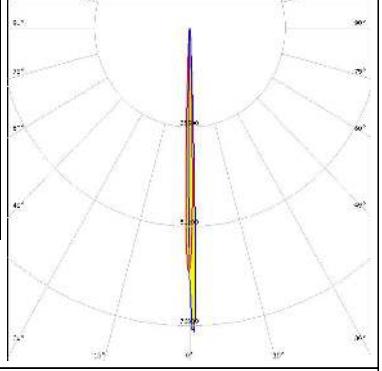

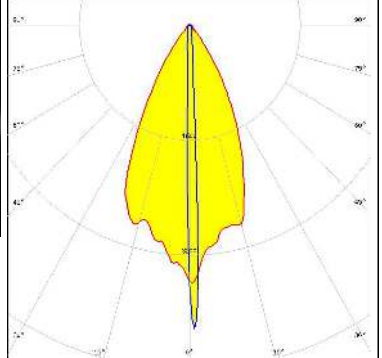
### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED NCSxE17A            FWHM / FWTM 3.0° / 6.0°            Efficiency 40 %            Peak intensity 73.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NCSxE17A            FWHM / FWTM 50.0 + 3.0° / 77.0 + 7.0°            Efficiency 36 %            Peak intensity 4.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F16629_LEIA-SUB-O</p>		
<p><b>NICHIA</b></p> <p>LED NVSW219F            FWHM / FWTM 4.0° / 7.0°            Efficiency 50 %            Peak intensity 47.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW219F            FWHM / FWTM 51.0 + 5.0° / 76.0 + 10.0°            Efficiency 48 %            Peak intensity 3.8 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F16629_LEIA-SUB-O</p>		


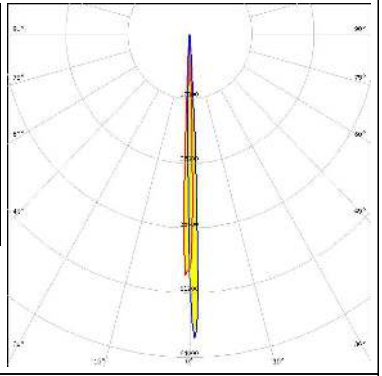
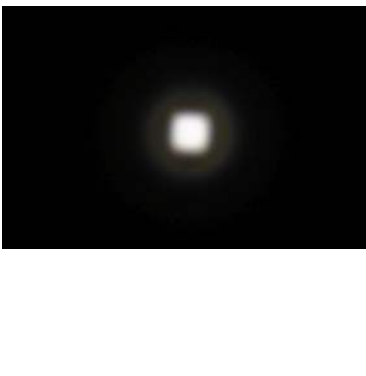
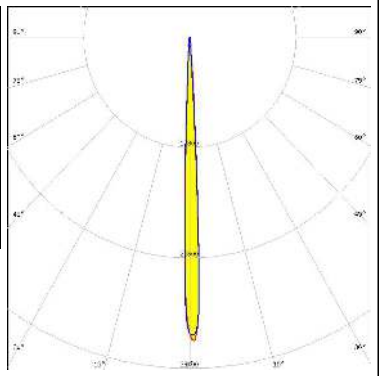

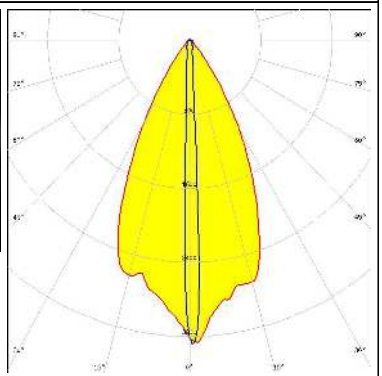

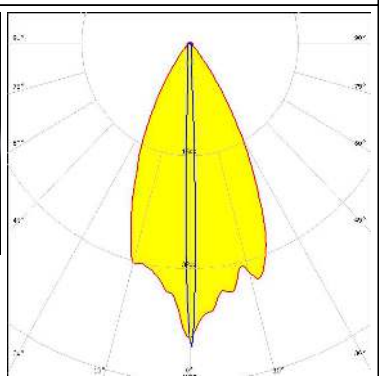
### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVSW319B            FWHM / FWTM 50.0 + 5.0° / 76.0 + 13.0°            Efficiency 46 %            Peak intensity 3.4 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F16629_LEIA-SUB-O</p>		
<p><b>NICHIA</b></p> <p>LED NVSW319B            FWHM / FWTM 5.0° / 8.0°            Efficiency 52 %            Peak intensity 36.8 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSxE21A            FWHM / FWTM 3.0° / 7.0°            Efficiency 46 %            Peak intensity 51 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSxE21A            FWHM / FWTM 49.0 + 4.0° / 77.0 + 13.0°            Efficiency 41 %            Peak intensity 3.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F16629_LEIA-SUB-O</p>		

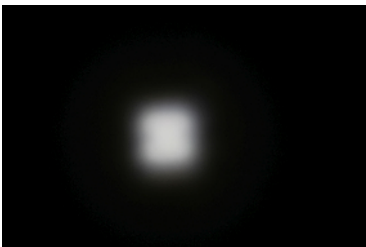
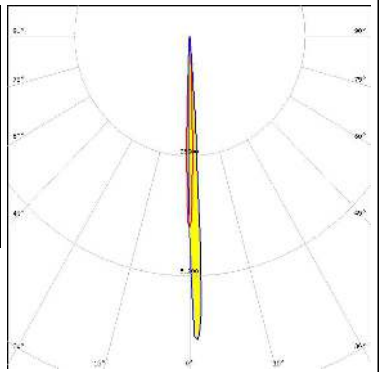
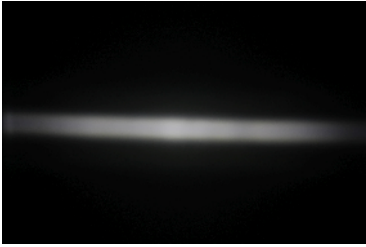
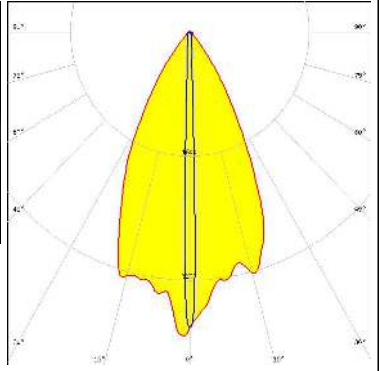

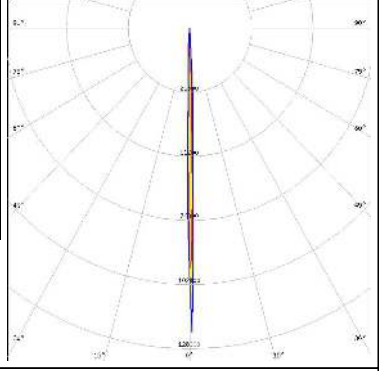

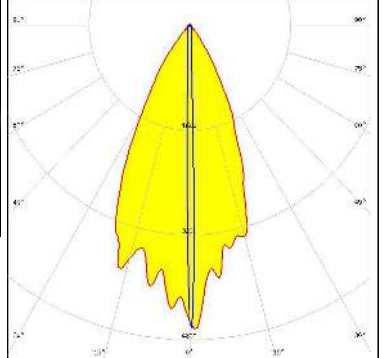
### OPTICAL RESULTS (MEASURED):

<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C            FWHM / FWTM 50.0 + 4.0° / 76.0 + 9.0°            Efficiency 44 %            Peak intensity 3.9 cd/lm            LEDs/each optic 1            Light colour White            Required components:            F16629_LEIA-SUB-O</p>		
<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C            FWHM / FWTM 4.0° / 7.0°            Efficiency 49 %            Peak intensity 48.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>OSRAM</b>  <small>Opto Semiconductors</small></p> <p>LED KW CULPM1.TG            FWHM / FWTM 3.0° / 5.0°            Efficiency 54 %            Peak intensity 96.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>OSRAM</b>  <small>Opto Semiconductors</small></p> <p>LED OSCONIQ P 3737 (2W version)            FWHM / FWTM 50.0 + 4.0° / 76.0 + 9.0°            Efficiency 49 %            Peak intensity 4.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		

### OPTICAL RESULTS (MEASURED):


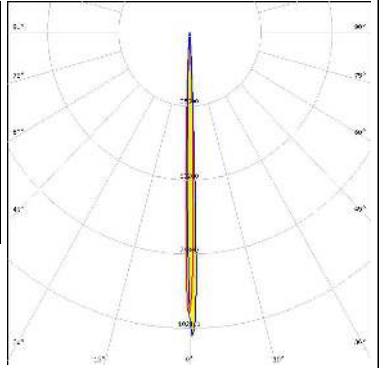

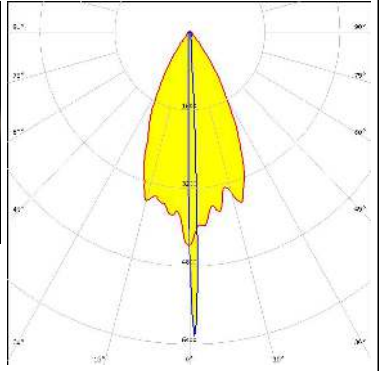

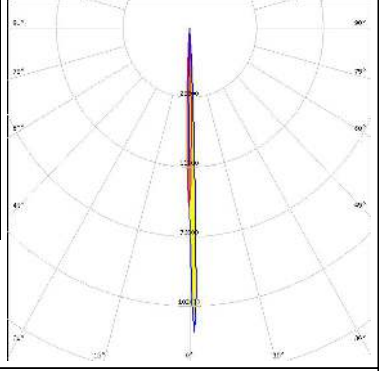
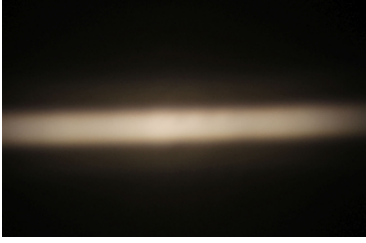
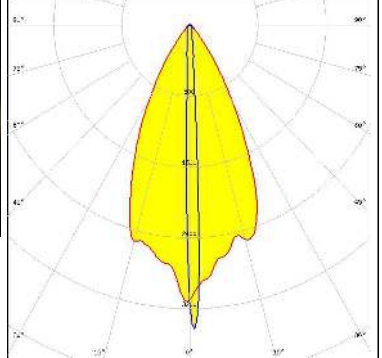
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                    OSCONIQ P 3737 (2W version)</p> <p>FWHM / FWTM      3.0° / 7.0°</p> <p>Efficiency            54 %</p> <p>Peak intensity      62.4 cd/lm</p> <p>LEDs/each optic    1</p> <p>Light colour        White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                    OSCONIQ P 3737 (3W version)</p> <p>FWHM / FWTM      5.0° / 8.0°</p> <p>Efficiency            53 %</p> <p>Peak intensity      36 cd/lm</p> <p>LEDs/each optic    1</p> <p>Light colour        White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                    OSCONIQ P 3737 (3W version)</p> <p>FWHM / FWTM      51.0 + 5.0° / 76.0 + 14.0°</p> <p>Efficiency            48 %</p> <p>Peak intensity      3.4 cd/lm</p> <p>LEDs/each optic    1</p> <p>Light colour        White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED                    OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM      50.0 + 4.0° / 75.0 + 8.0°</p> <p>Efficiency            46 %</p> <p>Peak intensity      4.4 cd/lm</p> <p>LEDs/each optic    1</p> <p>Light colour        White</p> <p>Required components: F16629_LEIA-SUB-O</p>		

### OPTICAL RESULTS (MEASURED):

<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM 4.0° / 7.0°</p> <p>Efficiency 49 %</p> <p>Peak intensity 64.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Square PC</p> <p>FWHM / FWTM 52.0 + 4.0° / 77.0 + 9.0°</p> <p>Efficiency 42 %</p> <p>Peak intensity 3.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON SSL 150</p> <p>FWHM / FWTM 2.0° / 5.0°</p> <p>Efficiency 46 %</p> <p>Peak intensity 122 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON SSL 150</p> <p>FWHM / FWTM 47.0 + 3.0° / 73.0 + 7.0°</p> <p>Efficiency 40 %</p> <p>Peak intensity 4.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		



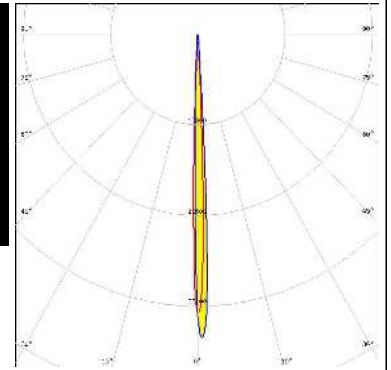
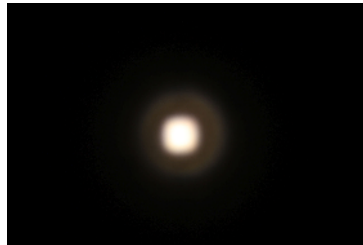
### OPTICAL RESULTS (MEASURED):

<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON SSL 80</p> <p>FWHM / FWTM 3.0° / 6.0°</p> <p>Efficiency 62 %</p> <p>Peak intensity 106.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON SSL 80</p> <p>FWHM / FWTM 51.0 + 3.0° / 77.0 + 7.0°</p> <p>Efficiency 56 %</p> <p>Peak intensity 6.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSTAR Projection Compact (Kx.CSLNM1.xx)</p> <p>FWHM / FWTM 3.0° / 5.0°</p> <p>Efficiency 49 %</p> <p>Peak intensity 120.8 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>SAMSUNG</b></p> <p>LED LH231B</p> <p>FWHM / FWTM 50.0 + 4.0° / 76.0 + 13.0°</p> <p>Efficiency 46 %</p> <p>Peak intensity 3.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F16629_LEIA-SUB-O</p>		

### OPTICAL RESULTS (MEASURED):

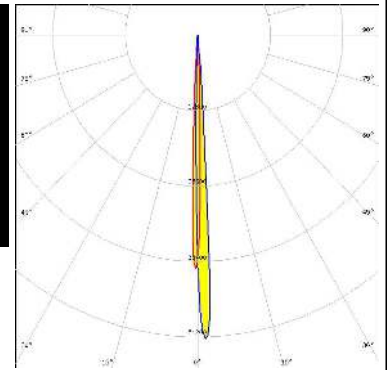
#### SAMSUNG

LED LH231B  
 FWHM / FWTM 4.0° / 7.0°  
 Efficiency 50 %  
 Peak intensity 43.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



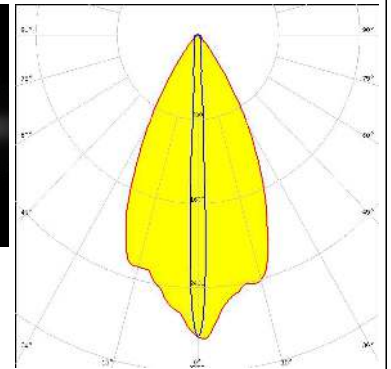
#### SAMSUNG

LED LH351B  
 FWHM / FWTM 4.0° / 7.0°  
 Efficiency 55 %  
 Peak intensity 54.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



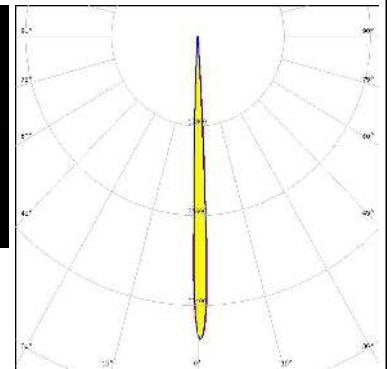
#### SAMSUNG

LED LH351B  
 FWHM / FWTM 52.0 + 4.0° / 77.0 + 10.0°  
 Efficiency 50 %  
 Peak intensity 4.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F16629\_LEIA-SUB-O



#### SAMSUNG

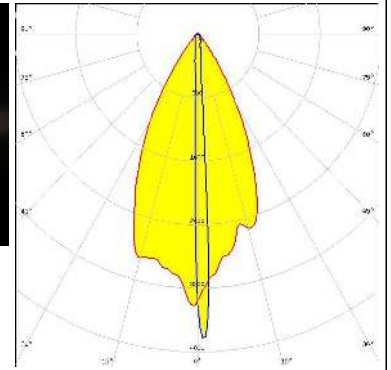
LED LH351C  
 FWHM / FWTM 4.0° / 7.0°  
 Efficiency 57 %  
 Peak intensity 46.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (MEASURED):

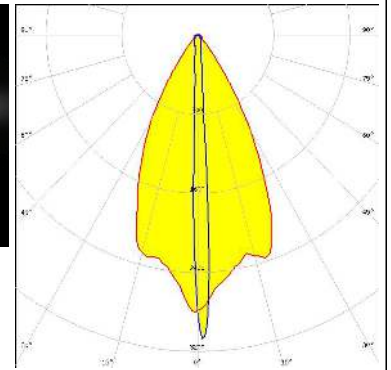
#### SAMSUNG

LED LH351C  
 FWHM / FWTM 50.0 + 5.0° / 76.0 + 12.0°  
 Efficiency 52 %  
 Peak intensity 3.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



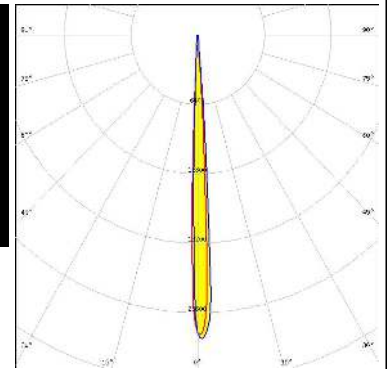
#### SAMSUNG

LED LH351D  
 FWHM / FWTM 53.0 + 5.0° / 77.0 + 14.0°  
 Efficiency 50 %  
 Peak intensity 3.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F16629\_LEIA-SUB-O



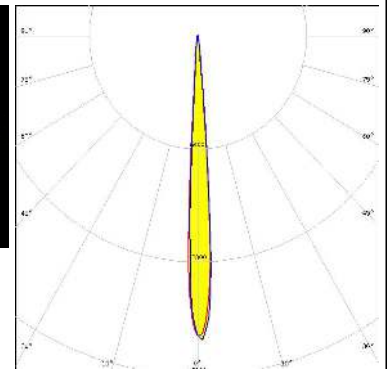
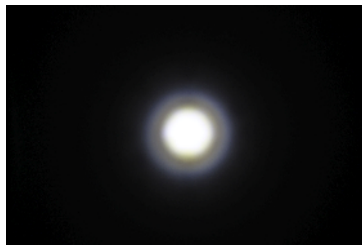
#### SAMSUNG

LED LH351D  
 FWHM / FWTM 5.0° / 9.0°  
 Efficiency 54 %  
 Peak intensity 29 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### SAMSUNG

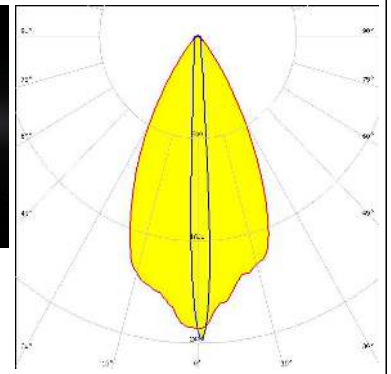
LED LH508A  
 FWHM / FWTM 7.0° / 11.0°  
 Efficiency 50 %  
 Peak intensity 17.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (MEASURED):

#### SAMSUNG

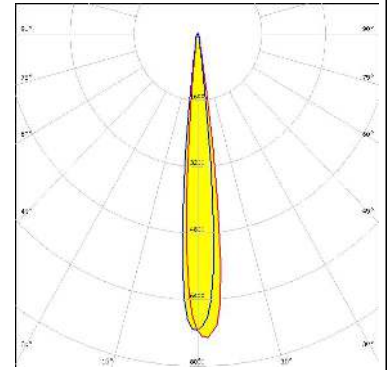
LED LH508A  
FWHM / FWTM 52.0 + 7.0° / 78.0 + 17.0°  
Efficiency 45 %  
Peak intensity 2.4 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
F16629\_LEIA-SUB-O



### OPTICAL RESULTS (SIMULATED):

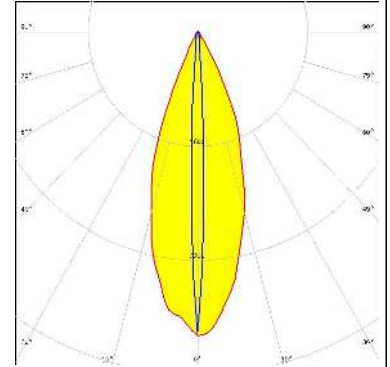
#### CREE LED

LED XHP70.2  
 FWHM / FWTM 12.0° / 18.0°  
 Efficiency 48 %  
 Peak intensity 7.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



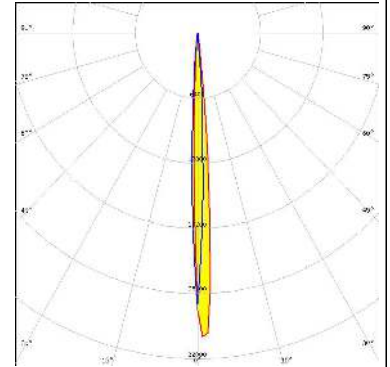
#### CREE LED

LED XP-G2 HE  
 FWHM / FWTM 36.0 + 5.0° / 58.0 + 12.0°  
 Efficiency 44 %  
 Peak intensity 4.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F16629\_LEIA-SUB-O



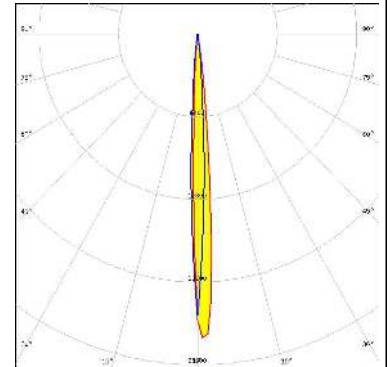
#### CREE LED

LED XP-G2 HE  
 FWHM / FWTM 5.0° / 11.0°  
 Efficiency 48 %  
 Peak intensity 29.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

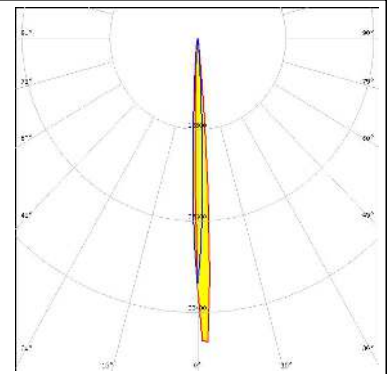
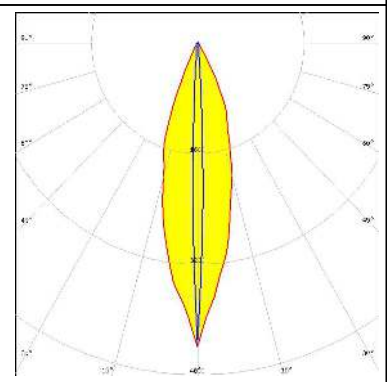
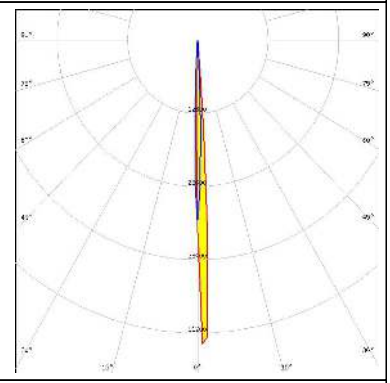
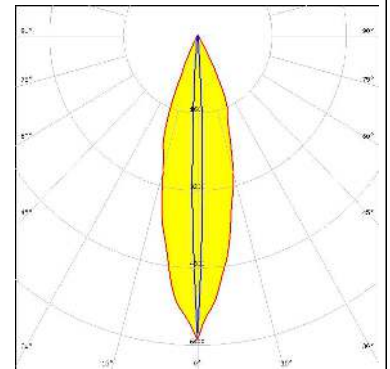


#### CREE LED

LED XP-L HD  
 FWHM / FWTM 6.3° / 12.9°  
 Efficiency 51 %  
 Peak intensity 23.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



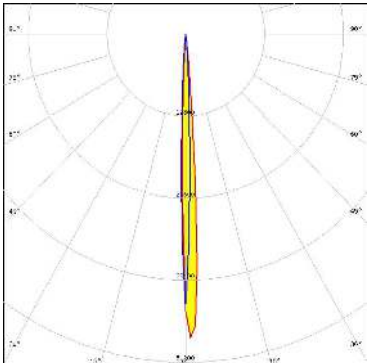
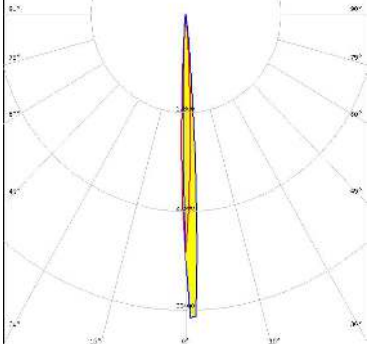
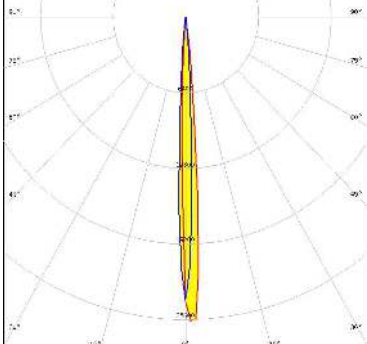
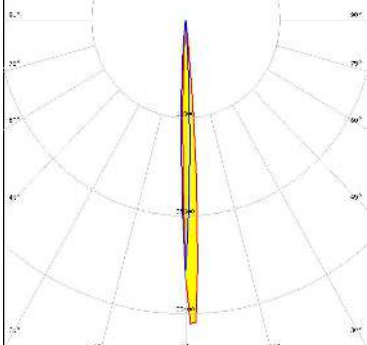
### OPTICAL RESULTS (SIMULATED):

<p><b>CREE</b> → <b>LED</b></p> <p>LED: XP-L HI            FWHM / FWTM: 4.5° / 9.5°            Efficiency: 53 %            Peak intensity: 42.6 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON C            FWHM / FWTM: 27.0 + 4.0° / 54.0 + 10.0°            Efficiency: 35 %            Peak intensity: 4.4 cd/lm            LEDs/each optic: 1            Light colour: Red            Required components:            F16629_LEIA-SUB-O</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON C            FWHM / FWTM: 3.6° / 7.0°            Efficiency: 36 %            Peak intensity: 53.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON CZ            FWHM / FWTM: 28.0 + 4.0° / 54.0 + 10.0°            Efficiency: 47 %            Peak intensity: 6.3 cd/lm            LEDs/each optic: 1            Light colour: Red            Required components:            F16629_LEIA-SUB-O</p>	

### OPTICAL RESULTS (SIMULATED):

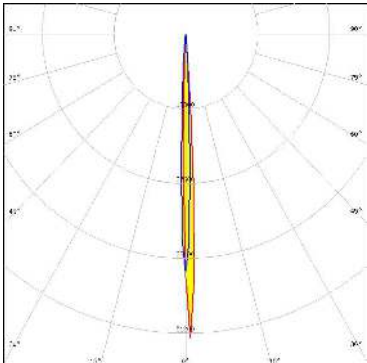
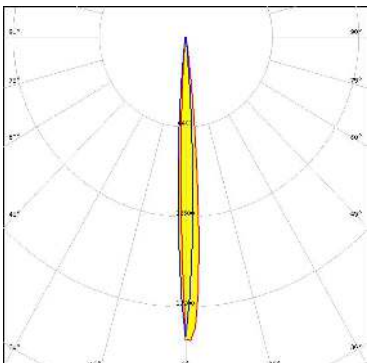
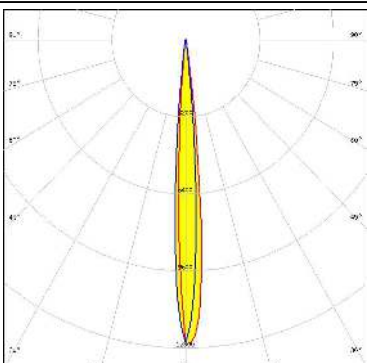
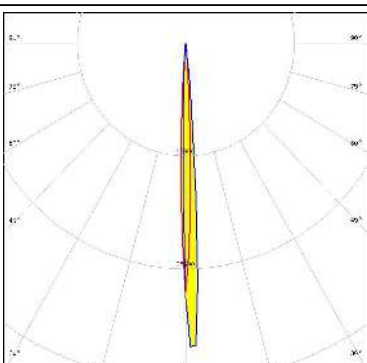
<p><b>LUMILEDS</b></p> <p>LED LUXEON CZ</p> <p>FWHM / FWTM 10.0° / 16.0°</p> <p>Efficiency 42 %</p> <p>Peak intensity 11 cd/lm</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON Rubix</p> <p>FWHM / FWTM 5.0° / 9.0°</p> <p>Efficiency 49 %</p> <p>Peak intensity 44.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Blue</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON Rubix</p> <p>FWHM / FWTM 5.0° / 9.0°</p> <p>Efficiency 49 %</p> <p>Peak intensity 44.5 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Green</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON Rubix</p> <p>FWHM / FWTM 4.0° / 7.0°</p> <p>Efficiency 45 %</p> <p>Peak intensity 74.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

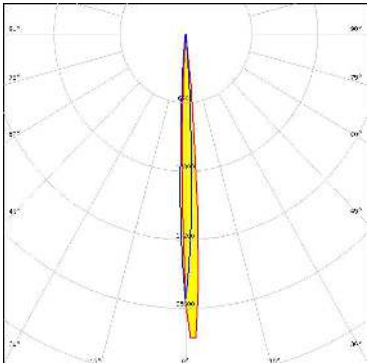
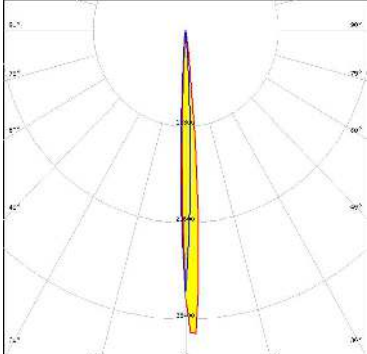
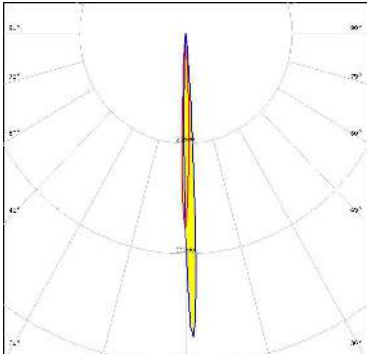
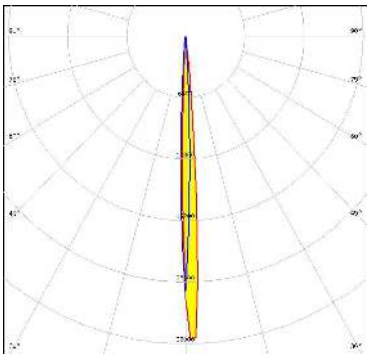
<p><b>LUMILEDS</b></p> <p>LED: LUXEON Rubix</p> <p>FWHM / FWTM: 5.0° / 9.0°</p> <p>Efficiency: 51 %</p> <p>Peak intensity: 47.4 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: Red</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON V2</p> <p>FWHM / FWTM: 4.8° / 9.5°</p> <p>Efficiency: 46 %</p> <p>Peak intensity: 39.5 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>LUMINUS</b></p> <p>LED: SBT-90</p> <p>FWHM / FWTM: 6.0° / 11.0°</p> <p>Efficiency: 44 %</p> <p>Peak intensity: 26 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>LUMINUS</b></p> <p>LED: SST-10-B130</p> <p>FWHM / FWTM: 4.0° / 9.0°</p> <p>Efficiency: 45 %</p> <p>LEDs/each optic: 1</p> <p>Light colour: IR</p> <p>Required components:</p>	



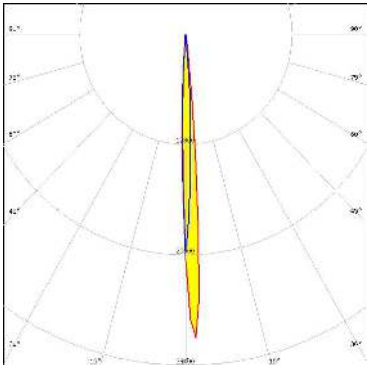
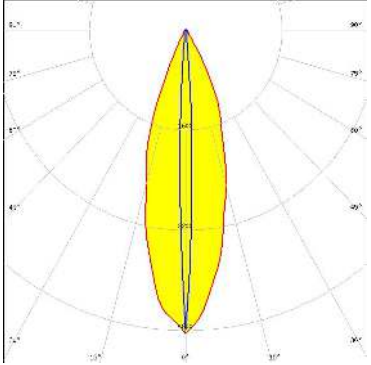
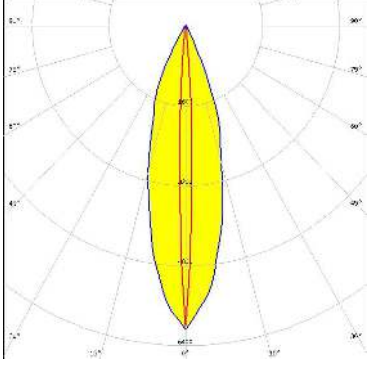
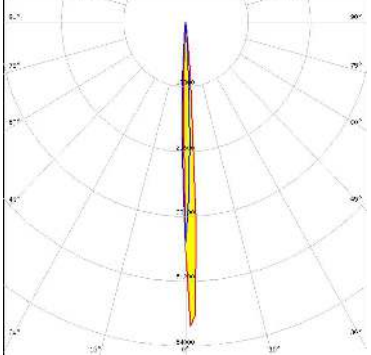
### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED NF2x757G            FWHM / FWTM 4.6° / 9.2°            Efficiency 50 %            Peak intensity 52.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED NV4WB35AM            FWHM / FWTM 7.0° / 13.0°            Efficiency 46 %            Peak intensity 21.9 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED NV4x144A            FWHM / FWTM 9.0° / 15.0°            Efficiency 44 %            Peak intensity 12.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED NVSW3x9A            FWHM / FWTM 2.4° / 4.8°            Efficiency 44 %            Peak intensity 34.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NVSW519A            FWHM / FWTM: 5.0° / 10.0°            Efficiency: 45 %            Peak intensity: 28.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSLOM Black Flat            FWHM / FWTM: 4.5° / 11.0°            Efficiency: 50 %            Peak intensity: 40.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSLOM Square EC            FWHM / FWTM: 4.0° / 8.0°            Efficiency: 57 %            Peak intensity: 68 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSLOM SSL 150            FWHM / FWTM: 5.0° / 10.0°            Efficiency: 41 %            Peak intensity: 31.6 cd/lm            LEDs/each optic: 1            Light colour: Red            Required components:</p>	

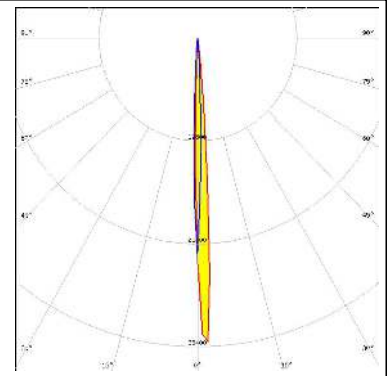
### OPTICAL RESULTS (SIMULATED):

<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSTAR Stage (S2WM)</p> <p>FWHM / FWTM: 6.0° / 11.0°</p> <p>Efficiency: 49 %</p> <p>Peak intensity: 35.2 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSTAR Stage (S2WM)</p> <p>FWHM / FWTM: 32.0 + 4.0° / 56.0 + 12.0°</p> <p>Efficiency: 47 %</p> <p>Peak intensity: 4.9 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components: F16629_LEIA-SUB-O</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: SFH 4715AS</p> <p>FWHM / FWTM: 29.0 + 4.0° / 56.0 + 12.0°</p> <p>Efficiency: 53 %</p> <p>Peak intensity: 6.1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components: F16629_LEIA-SUB-O</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: SFH 4715AS</p> <p>FWHM / FWTM: 4.0° / 9.0°</p> <p>Efficiency: 47 %</p> <p>LEDs/each optic: 1</p> <p>Light colour: IR</p> <p>Required components:</p>	

### OPTICAL RESULTS (SIMULATED):

**OSRAM**  
Opto Semiconductors

LED	SFH 4716AS
FWHM / FWTM	5.0° / 9.0°
Efficiency	36 %
LEDs/each optic	1
Light colour	IR
Required components:	



### 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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