

## STRADA-2X2-FS3

Forward throw beam optimized for European tunnels, resulting in extremely efficient lighting with counter-beam method.

### SPECIFICATION:

Dimensions	50.0 x 50.0 mm
Height	12 mm
Fastening	pin, screw
ROHS compliant	yes ⓘ

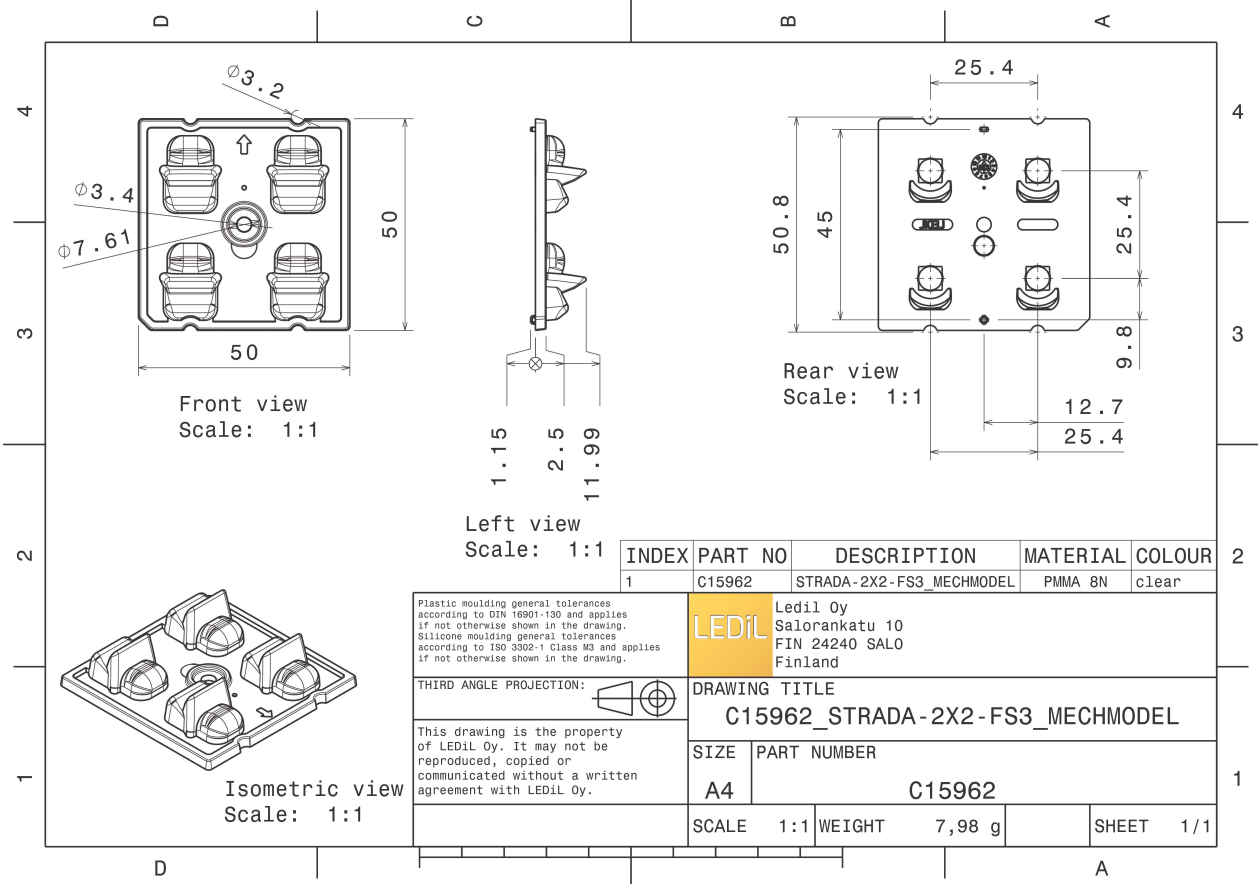


### MATERIALS:

Component	Type	Material	Colour	Finish
STRADA-2X2-FS3	Multi-lens	PMMA	clear	

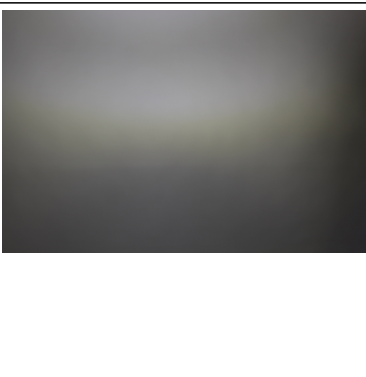
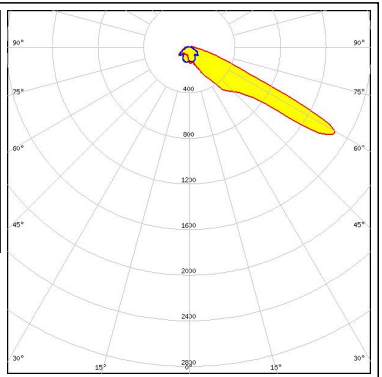

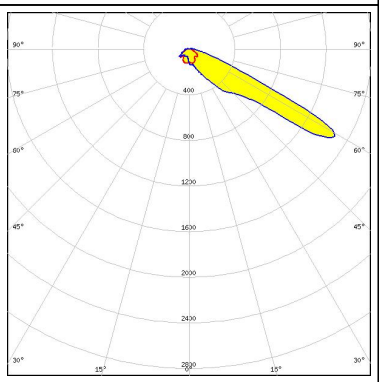

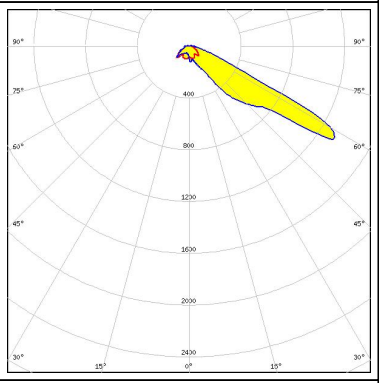
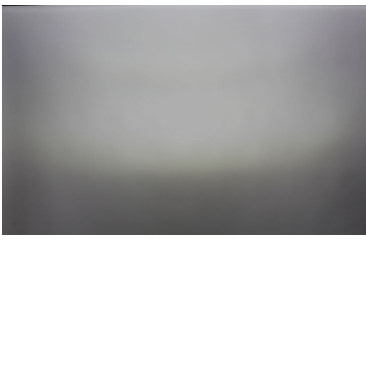
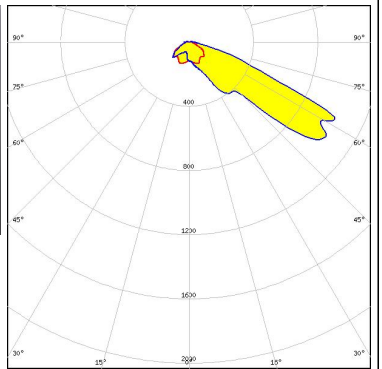
### ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C15962_STRADA-2X2-FS3 » Box size: 480 x 280 x 300 mm	800	160	160	7.1



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

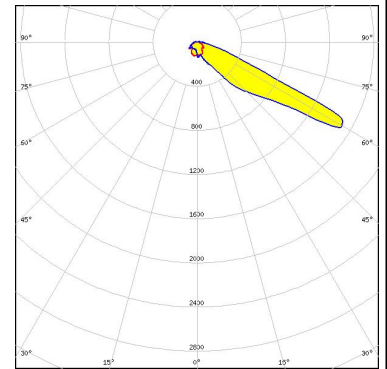
#### OPTICAL RESULTS (MEASURED):

<p><b>COMET ELECTRONICS</b></p> <p>LED QUICK FLUX XTP 2x4 xxx LS G5</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>COMET ELECTRONICS</b></p> <p>LED QUICK FLUX XTP 2x6 xxx LS G5</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>CREE LEDs</b></p> <p>LED XD16</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 2.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>CREE LEDs</b></p> <p>LED XD16</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 94 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 4</p> <p>Light colour White</p> <p>Required components:</p>		

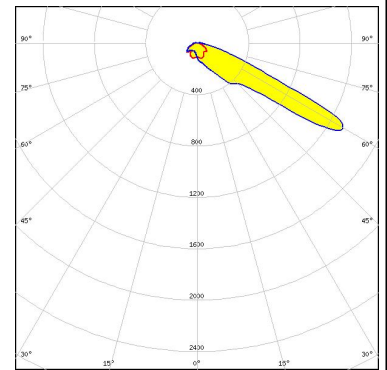
#### OPTICAL RESULTS (MEASURED):



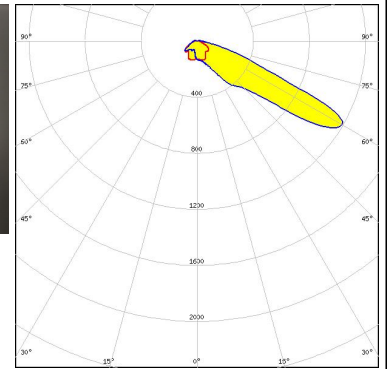
LED XP-G2  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



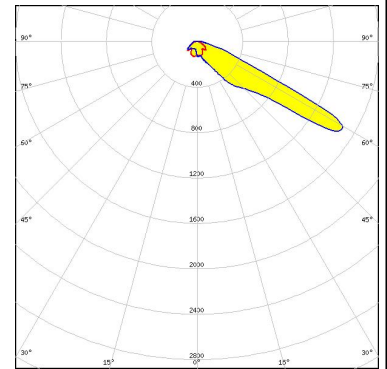
LED XP-G3  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON V  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON V2  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

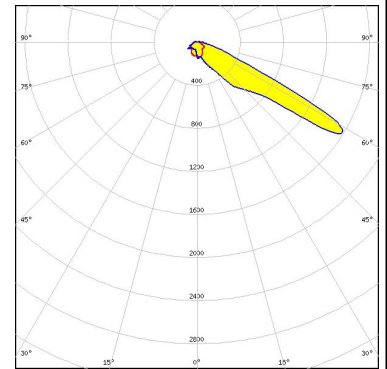




#### OPTICAL RESULTS (MEASURED):

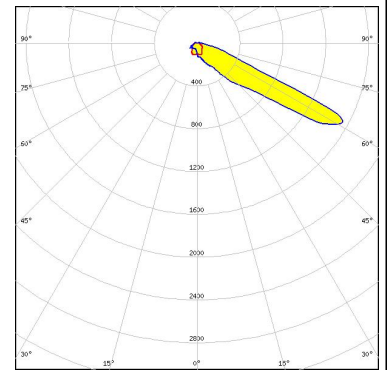
**MST** *Your solutions*

LED RecLED 122x50mm 1900lm 730 2x4 Opt G1  
 FWHM / FWTM Asymmetric  
 Efficiency 95 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



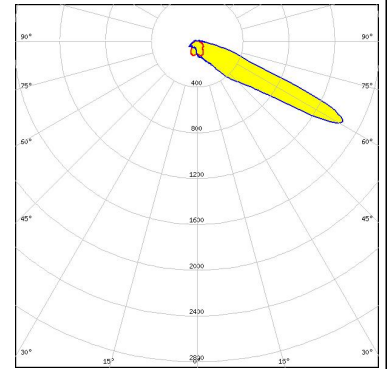
**NICHIA**

LED NVSW219F  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



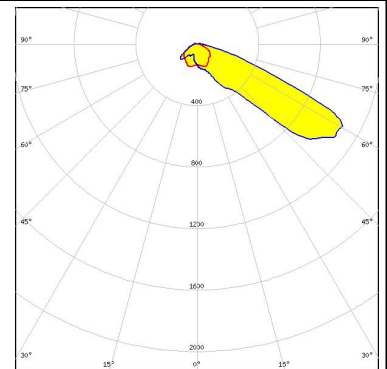
**NICHIA**

LED NVSW319B  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



**OSRAM**  
 Opto Semiconductors

LED Duris S8  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

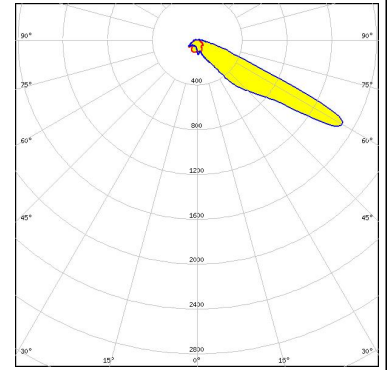


#### OPTICAL RESULTS (MEASURED):

#### OSRAM

Opto Semiconductors

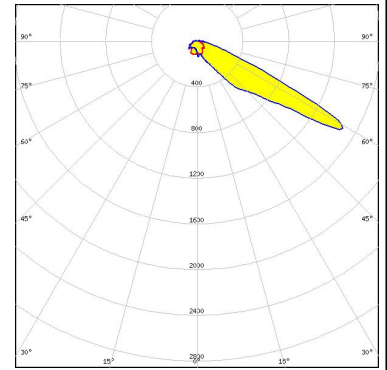
LED OSLON Square CSSRM2/CSSRM3  
 FWHM / FWTM Asymmetric  
 Efficiency 92 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OSRAM

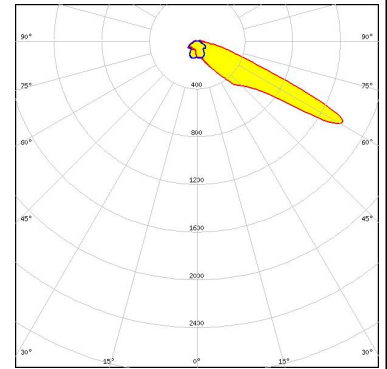
Opto Semiconductors

LED OSLON Square PC  
 FWHM / FWTM Asymmetric  
 Efficiency 93 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



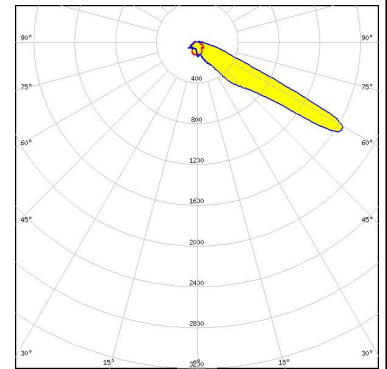
#### PHILIPS

LED Fortimo FastFlex LED 2x8 DA G4+  
 FWHM / FWTM Asymmetric  
 Efficiency 95 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### PHILIPS

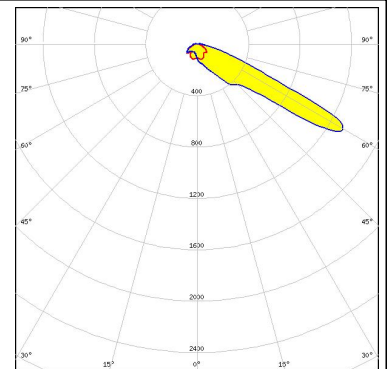
LED Fortimo FastFlex LED 2x8 DA G5  
 FWHM / FWTM Asymmetric  
 Efficiency 95 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

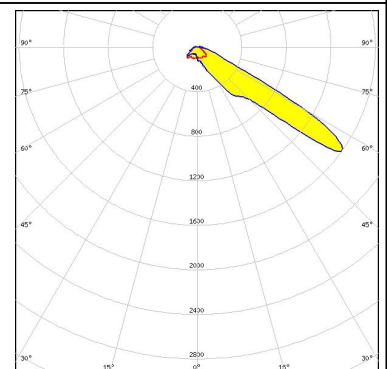
### PHILIPS

LED Fortimo FastFlex LED 2x8 DAX G4  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



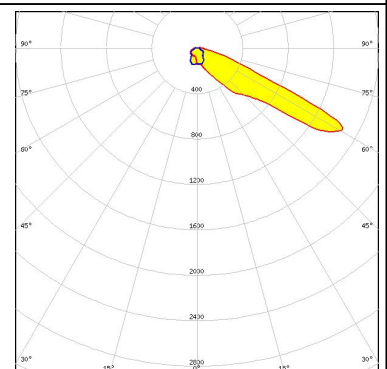
### SAMSUNG

LED HiLOM RC12 Z (LH181B)  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



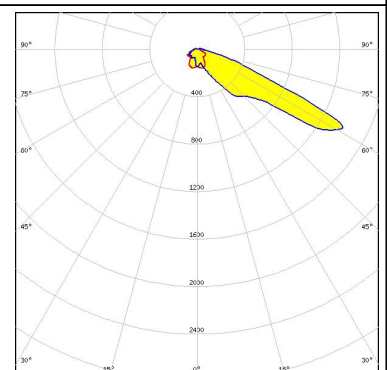
### SAMSUNG

LED HiLOM RH16 (LH351C)  
 FWHM / FWTM Asymmetric  
 Efficiency 94 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### SAMSUNG

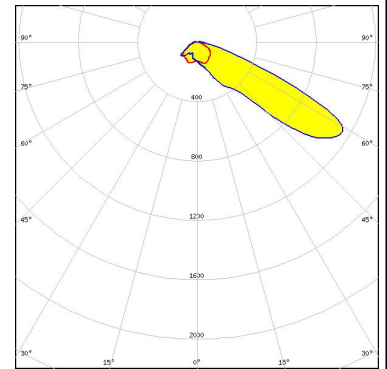
LED HiLOM RM12 Z (LH502C)  
 FWHM / FWTM Asymmetric  
 Efficiency 95 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

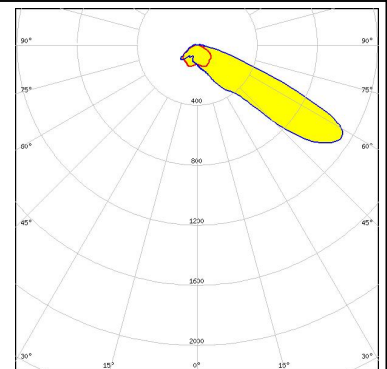
### SAMSUNG

LED HiLOM RM12 Z (LH502C)  
 FWHM / FWTM Asymmetric  
 Efficiency 95 %  
 Peak intensity 1.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



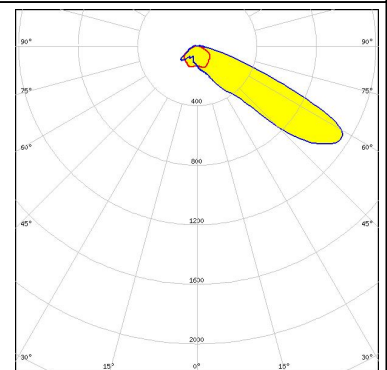
### SAMSUNG

LED HiLOM RM16 Z (LH502C)  
 FWHM / FWTM Asymmetric  
 Efficiency 96 %  
 Peak intensity 1.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:

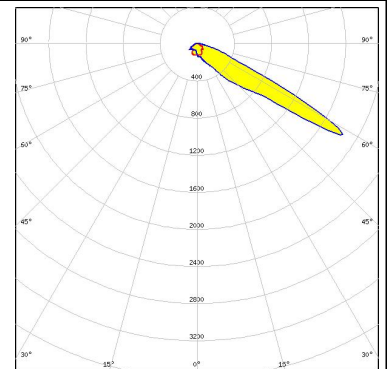


### SAMSUNG

LED HiLOM RM8 Z (LH502C)  
 FWHM / FWTM Asymmetric  
 Efficiency 96 %  
 Peak intensity 1.2 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:




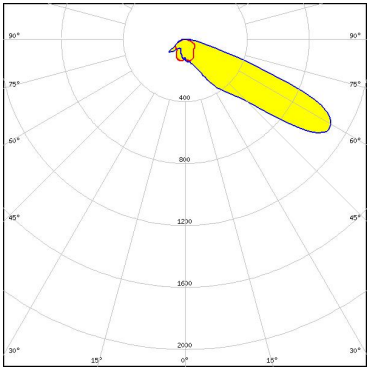

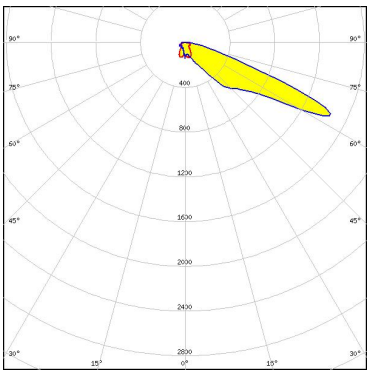

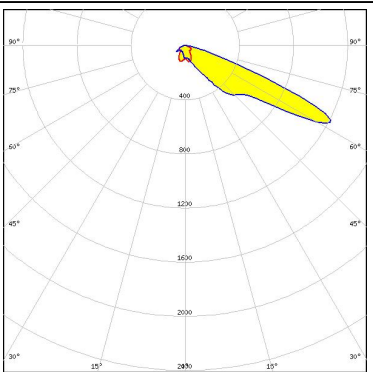

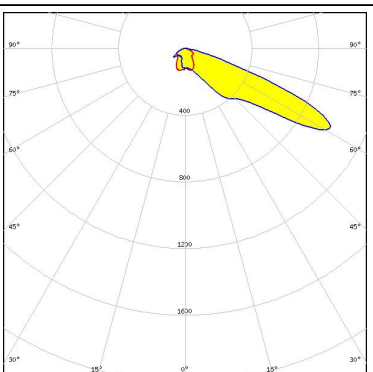
LED LED-Pa-L15c2W11c2-xxx-C050-01  
 FWHM / FWTM Asymmetric  
 Efficiency 96 %  
 Peak intensity 2.1 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z5M3            FWHM / FWTM Asymmetric            Efficiency 94 %            Peak intensity 1.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED Z8Y22            FWHM / FWTM Asymmetric            Efficiency 94 %            Peak intensity 1.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>TRIDONIC</b></p> <p>LED RLE 2x4 2000lm HP EXC2 OTD            FWHM / FWTM Asymmetric            Efficiency 94 %            Peak intensity 2.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>TRIDONIC</b></p> <p>LED RLE 2x8 4000lm HP EXC2 OTD            FWHM / FWTM Asymmetric            Efficiency 94 %            Peak intensity 2.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

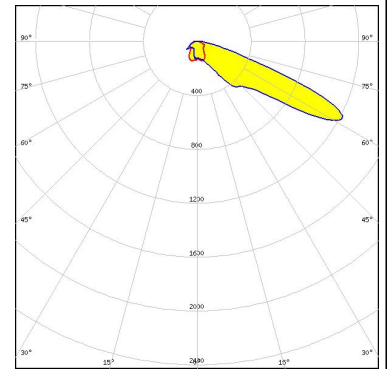
<p> <b>bridgelux</b></p> <p>LED: Bridgelux SMD 5050            FWHM / FWTM: Asymmetric            Efficiency: 86 %            Peak intensity: 1.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p> <b>CREE LEDs</b></p> <p>LED: XP-G2 HE            FWHM / FWTM: Asymmetric            Efficiency: 87 %            Peak intensity: 1.5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p> <b>CREE LEDs</b></p> <p>LED: XP-G3            FWHM / FWTM: Asymmetric            Efficiency: 73 %            Peak intensity: 1.2 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p> <p style="background-color: #e0f2f7; padding: 2px;">Protective plate, glass</p>	
<p> <b>CREE LEDs</b></p> <p>LED: XP-L2            FWHM / FWTM: Asymmetric            Efficiency: 72 %            Peak intensity: 1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p> <p style="background-color: #e0f2f7; padding: 2px;">Protective plate, glass</p>	



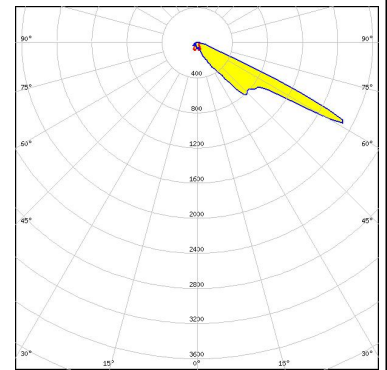
#### OPTICAL RESULTS (SIMULATED):



LED XP-L2  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



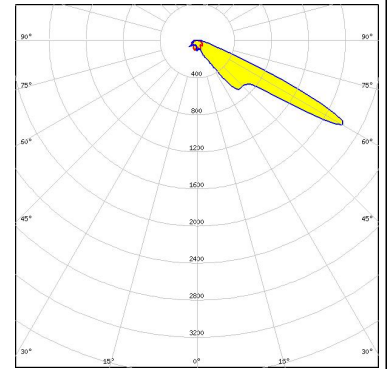
LED XP-P  
 FWHM / FWTM Asymmetric  
 Efficiency 76 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



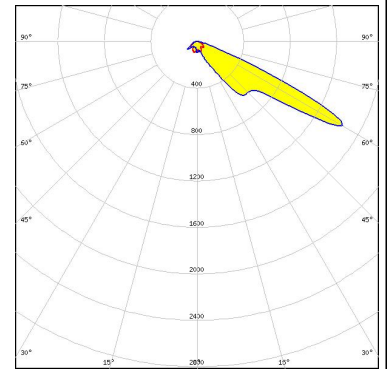
Protective plate, glass



LED LUXEON 3030 2D (Round LES)  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON 3030 2D (Round LES)  
 FWHM / FWTM Asymmetric  
 Efficiency 76 %  
 Peak intensity 1.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

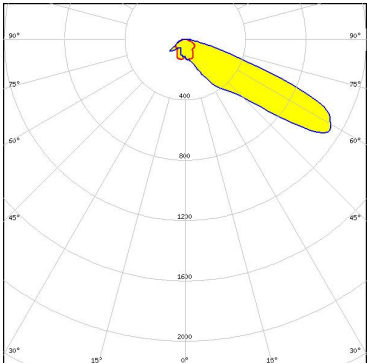
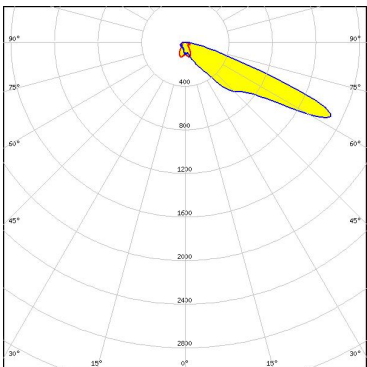
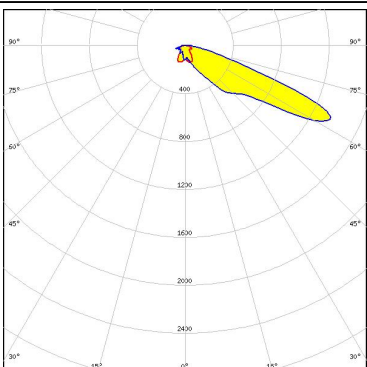
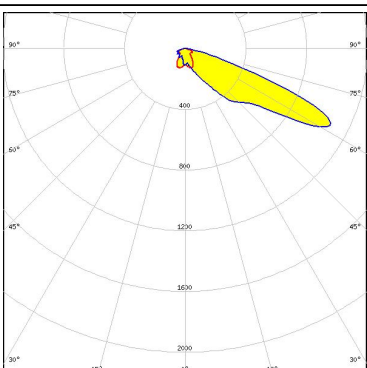


Protective plate, glass

#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 HE</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 75 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Round LES</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 75 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Round LES</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 75 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 5050 Square LES</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 78 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	

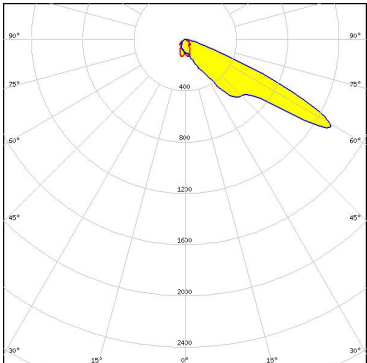
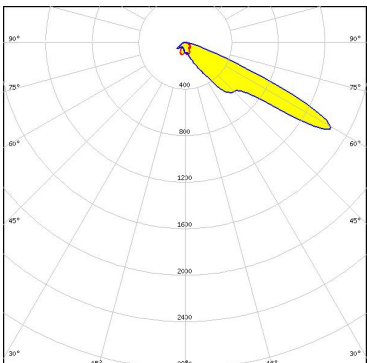
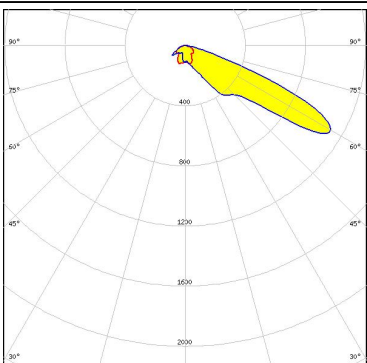
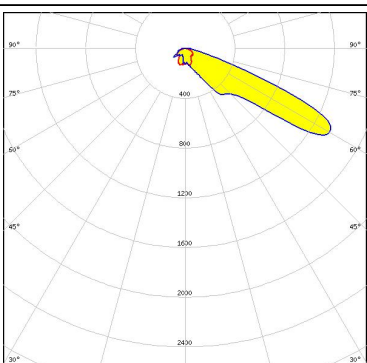
#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED: LUXEON 5050 Square LES</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 87 %</p> <p>Peak intensity: 1.1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON HL2X</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 87 %</p> <p>Peak intensity: 1.5 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 HL2X-D</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 92 %</p> <p>Peak intensity: 1.4 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 HL2X-D</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 76 %</p> <p>Peak intensity: 1.1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p> <p>Protective plate, glass</p>	

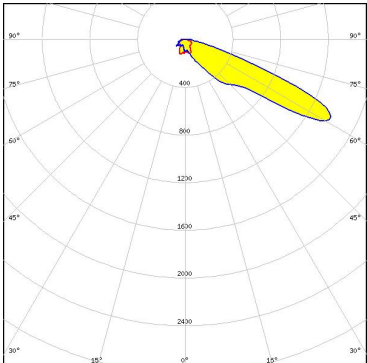
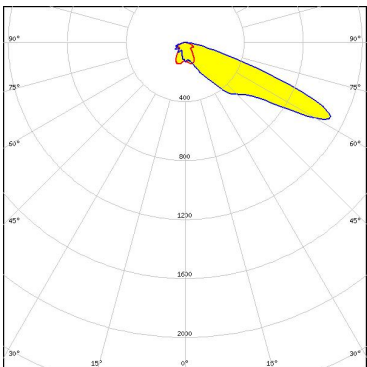
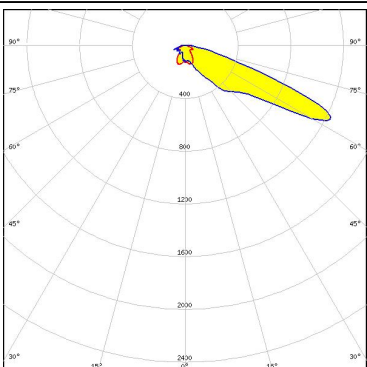
#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED: LUXEON HL2X-P</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 87 %</p> <p>Peak intensity: 1.3 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 TX</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 88 %</p> <p>Peak intensity: 1.7 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 XR-HL2X (L2H2-xxxxxxxMLU010)</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 92 %</p> <p>Peak intensity: 1.4 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 XR-HL2X (L2H2-xxxxxxxMLU010)</p> <p>FWHM / FWTM: Asymmetric</p> <p>Efficiency: 76 %</p> <p>Peak intensity: 1.1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p> <p>Protective plate, glass</p>	

#### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED NF2x757G            FWHM / FWTM Asymmetric            Efficiency 68 %            Peak intensity 1.3 cd/lm            LEDs/each optic 1            Light colour White            Required components:            C17580_STRADA-2X2-SHD-WHT</p> <p>Protective plate, glass</p>	
<p><b>NICHIA</b></p> <p>LED NF2x757G            FWHM / FWTM Asymmetric            Efficiency 76 %            Peak intensity 1.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p> <p>Protective plate, glass</p>	
<p><b>NICHIA</b></p> <p>LED NV4WB35AM            FWHM / FWTM Asymmetric            Efficiency 76 %            Peak intensity 1.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p> <p>Protective plate, glass</p>	
<p><b>NICHIA</b></p> <p>LED NV4WB35AM            FWHM / FWTM Asymmetric            Efficiency 91 %            Peak intensity 1.3 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NVSW3x9A            FWHM / FWTM: Asymmetric            Efficiency: 89 %            Peak intensity: 1.4 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSW519A            FWHM / FWTM: Asymmetric            Efficiency: 82 %            Peak intensity: 1.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p> <p style="background-color: #ADD8E6; padding: 2px; display: inline-block;">Protective plate, glass</p>	
<p><b>NICHIA</b></p> <p>LED: NVSW519A            FWHM / FWTM: Asymmetric            Efficiency: 89 %            Peak intensity: 1.2 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxE21A            FWHM / FWTM: Asymmetric            Efficiency: 90 %            Peak intensity: 1.9 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	



#### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED NVSxx19B/NVSxx19C</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 90 %</p> <p>Peak intensity 1.5 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 Duris S5 (2 chip)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 1.9 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 (2W version)</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 91 %</p> <p>Peak intensity 1.8 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 OSCONIQ P 3737 Flat</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.6 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

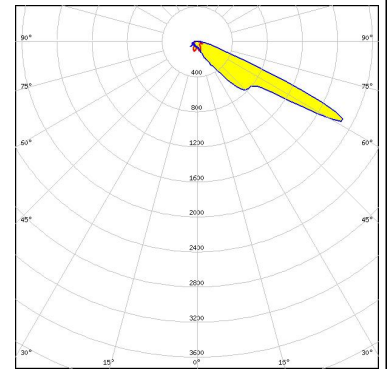
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSCONIQ S 5050</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 86 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 68 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>C17580_STRADA-2X2-SHD-WHT</p> <p>Protective plate, glass</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Square CSSRM2/CSSRM3</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 80 %</p> <p>Peak intensity 1.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p> <p>Protective plate, glass</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Square Flat</p> <p>FWHM / FWTM Asymmetric</p> <p>Efficiency 93 %</p> <p>Peak intensity 1.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

#### OSRAM

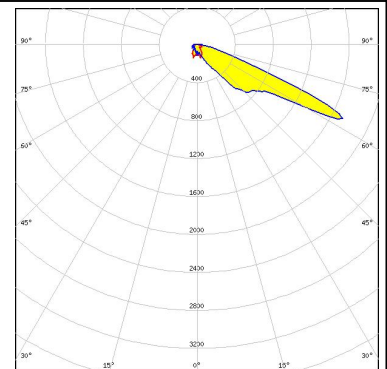
Opto Semiconductors

LED	OSTAR Projection Compact (KW.CSLNM1.TG)
FWHM / FWTM	Asymmetric
Efficiency	93 %
Peak intensity	1.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



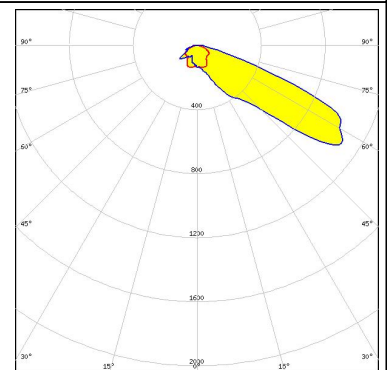
#### PHILIPS

LED	Fortimo FastFlex LED 2x8 DA G4
FWHM / FWTM	Asymmetric
Efficiency	91 %
Peak intensity	1.7 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



#### PHILIPS

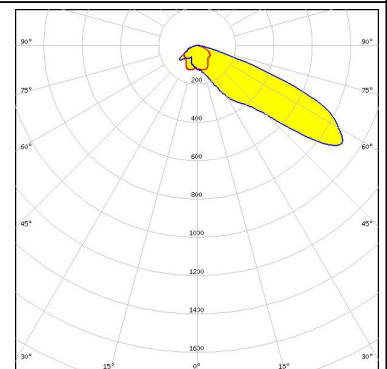
LED	Fortimo FastFlex LED 2x8 DA HE
FWHM / FWTM	Asymmetric
Efficiency	92 %
Peak intensity	1.1 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	



#### PHILIPS

LED	Fortimo FastFlex LED 2x8 DA HE
FWHM / FWTM	Asymmetric
Efficiency	78 %
Peak intensity	0.9 cd/lm
LEDs/each optic	1
Light colour	White
Required components:	

Protective plate, glass

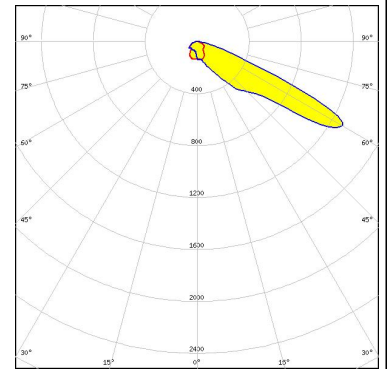


#### OPTICAL RESULTS (SIMULATED):

### SAMSUNG

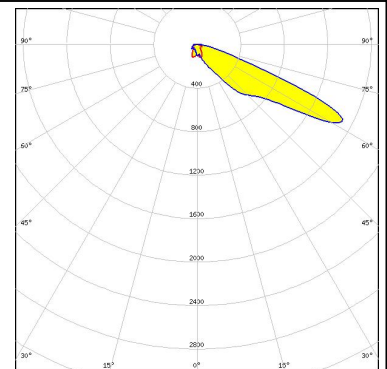
LED HiLOM RH16 (LH351C)  
 FWHM / FWTM Asymmetric  
 Efficiency 83 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



### SAMSUNG

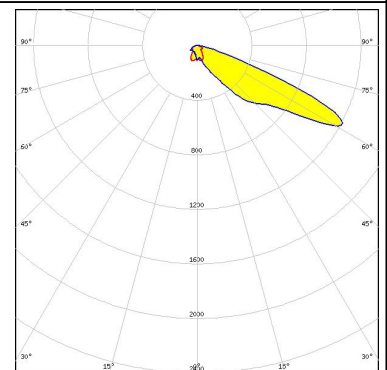
LED LH351B  
 FWHM / FWTM Asymmetric  
 Efficiency 87 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### SAMSUNG

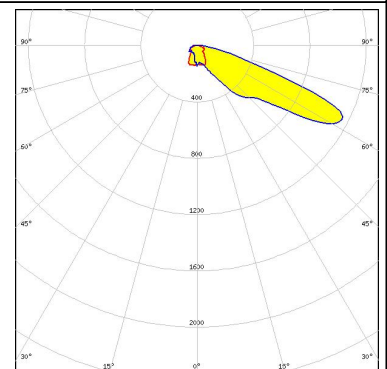
LED LH351B  
 FWHM / FWTM Asymmetric  
 Efficiency 75 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



### SAMSUNG

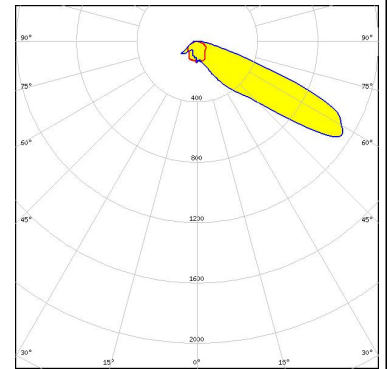
LED LH351D  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



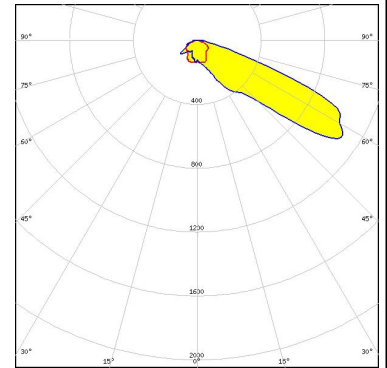
#### OPTICAL RESULTS (SIMULATED):

### SAMSUNG

LED LH502D  
 FWHM / FWTM Asymmetric  
 Efficiency 86 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

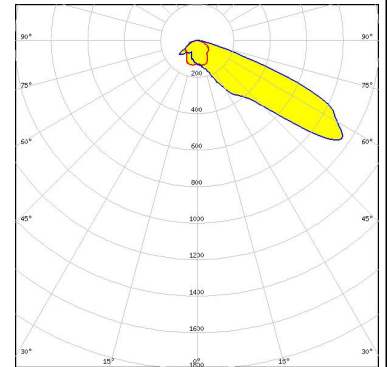


SEOUL SEMICONDUCTOR  
 LED SEOUL DC 5050 6V  
 FWHM / FWTM Asymmetric  
 Efficiency 90 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



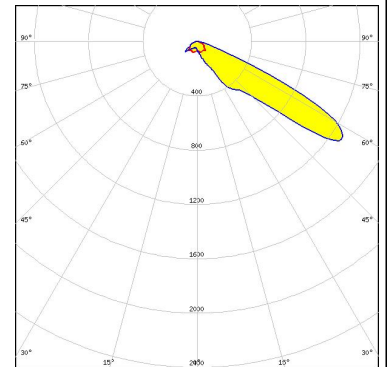
SEOUL SEMICONDUCTOR  
 LED SEOUL DC 5050 6V  
 FWHM / FWTM Asymmetric  
 Efficiency 78 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



SEOUL SEMICONDUCTOR  
 LED Z8Y22  
 FWHM / FWTM Asymmetric  
 Efficiency 78 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

Protective plate, glass



### 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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