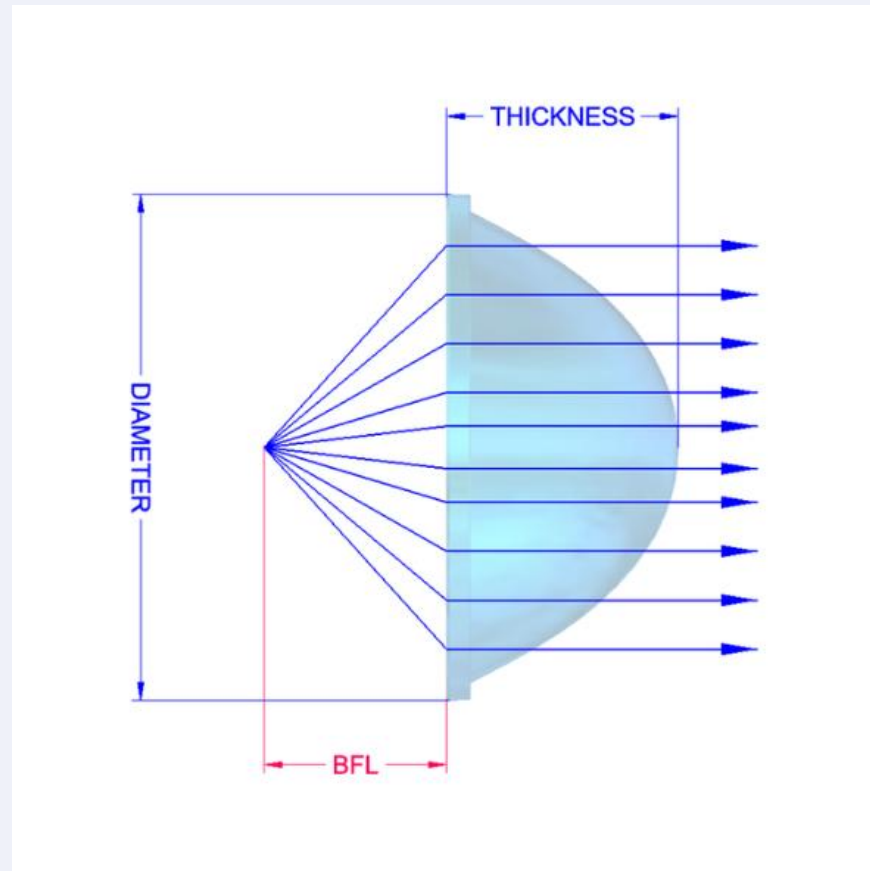


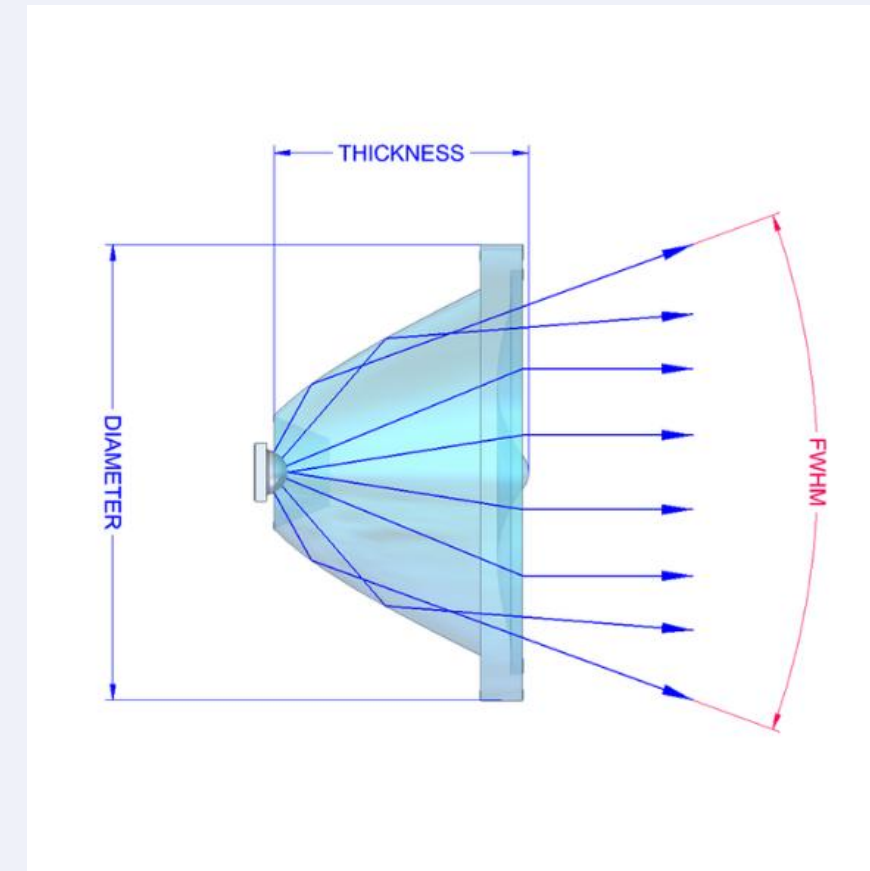
ECOGLOSS

LENS CATALOGUE

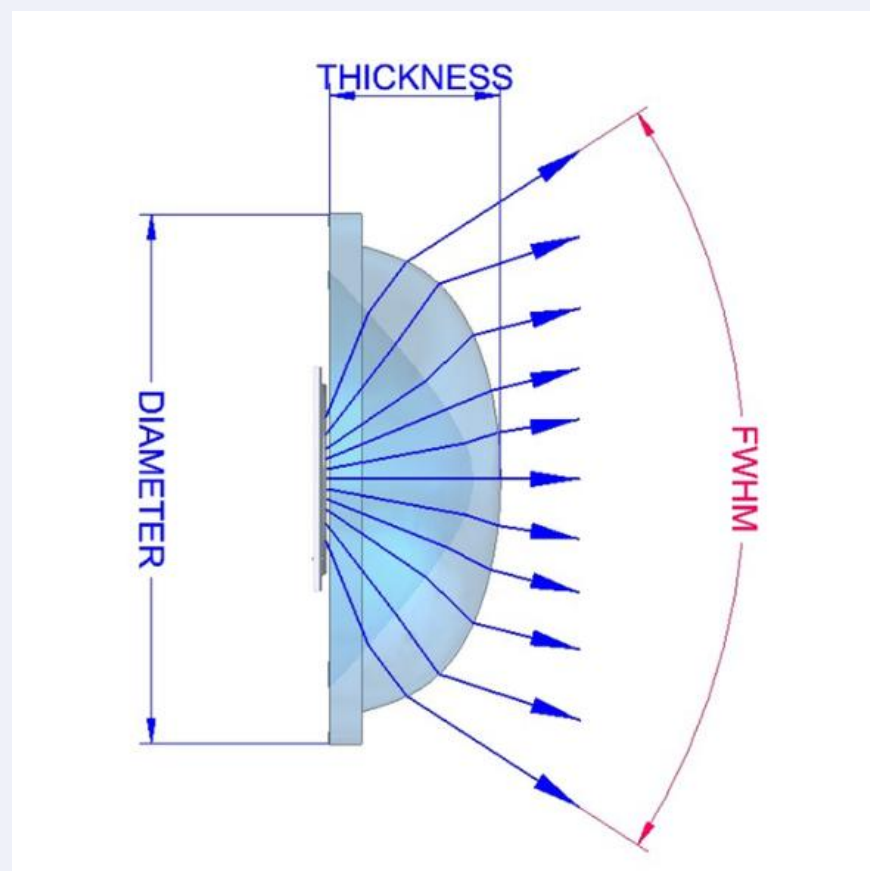
ASPHERICAL LENSES



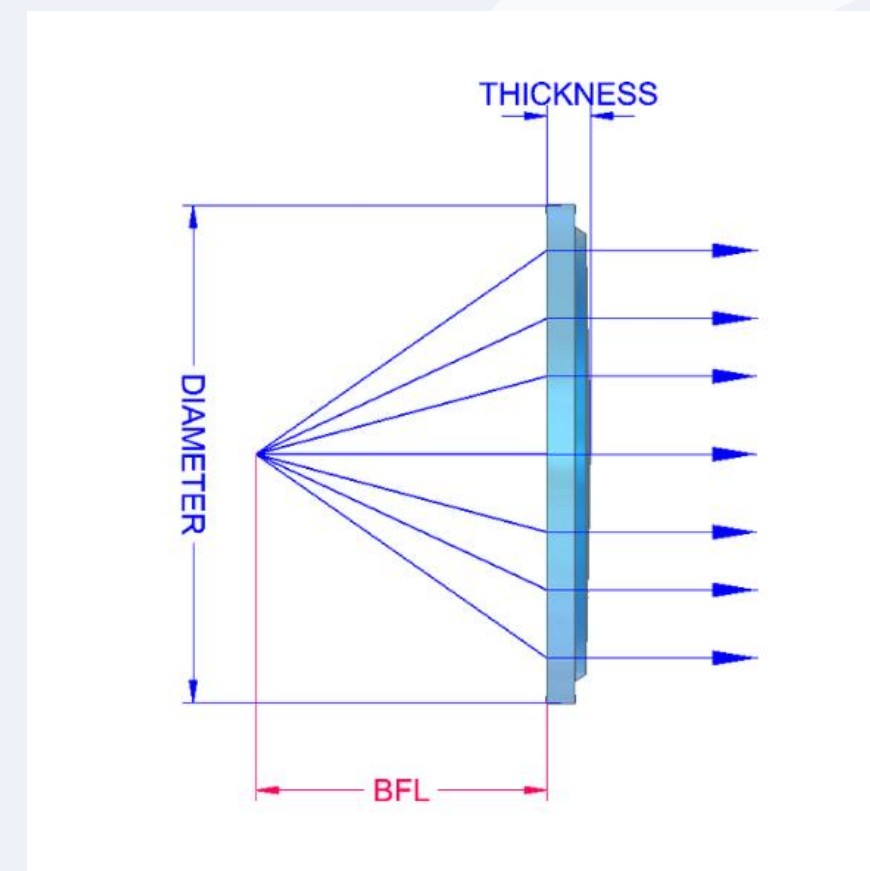
TIR LENSES



CAVITY LENSES



FRESNEL LENSES



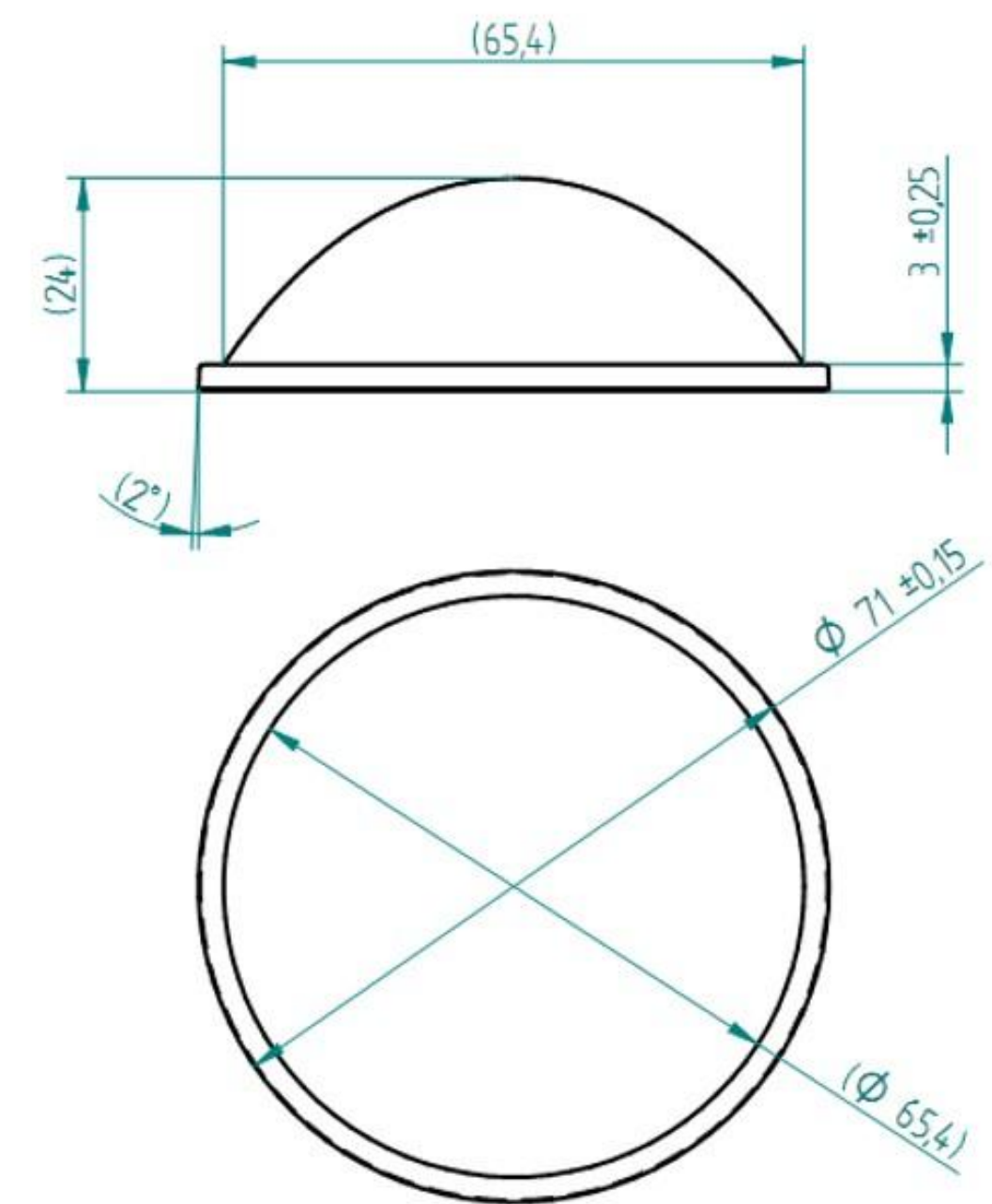
ECOGLASS Aspherical Lenses

ECOGLASS code	Lens type	BFL (mm)	Diameter (mm)	Thickness (mm)	ECOGLASS code	Lens type	BFL (mm)	Diameter (mm)	Thickness (mm)
A003 7124	Plano-convex	41,5	71,0	23,8	A194 1506	Plano-convex	8,6	15,0	5,6
A010 6515	Plano-convex	67,3	65,0	14,5	A196 7120	Plano-convex	53,5	70,4	19,7
A011 4512	Plano-convex	35,3	45,0	12,0	A234 7733	Plano-convex	38,0	77,0	33,0
A016 4923	Plano-convex	21,1	49,0	23,0	A373 4508	Plano-convex	67,2	46,0	8,4
A019 5322	Plano-convex	25,0	53,0	21,26	A413 1206	Plano-convex	6,3	12,0	6,0
A034 1807	Plano-convex	10,4	18,0	6,7	A501 2207	Plano-convex	10,0	22,0	6,9
A053 1807	Plano-convex	8,4	18,0	7,4	A581 2808	Plano-convex	25,0	28,0	8,0
A068 6015	Plano-convex	53	59,8	15,0	A582 7522	Plano-convex	53,2	75,2	22,2
A071 5224	Plano-convex	18,6	51,8	23,7	A636 5422	Plano-convex	25,8	54,0	21,6
A072 1202	Spherical	210	127,0	20,6	A650 8034	Plano-convex FWHM (5° / 15°)	34,8	80,0	33,4
A079 6422	Plano-convex	41,6	64,0	21,5	A837 3515	Plano-convex	15,6	35,0	14,8
A104 6616	Plano-convex	66,5	66,0	14,9	A838 1605	Plano-convex	16,8	16,0	4,3
A116 7727	Plano-convex	45,1	77,0	27,2	A850 6315	Plano-convex frosted	67,0	62,8	14,5
A132 6523	Plano-convex	38,6	65,0	22,5	A904 4512	Plano-convex frosted	35,3	45,0	12,0
A163 6827	Plano-convex	40,0	68,0	26,0	A912 5225	Plano-convex frosted	18,6	51,9	25,2
A175 6419	Plano-convex	40,0	64,0	21,4	A985 5019	Plano-convex frosted	26,9	50,0	18,55
A180 6016	Plano-convex	67,0	60,0	15,2	A986 5015	Plano-convex frosted	26,9	50,0	15,4
A182 1506	Plano-convex	14,3	15,0	5,2					




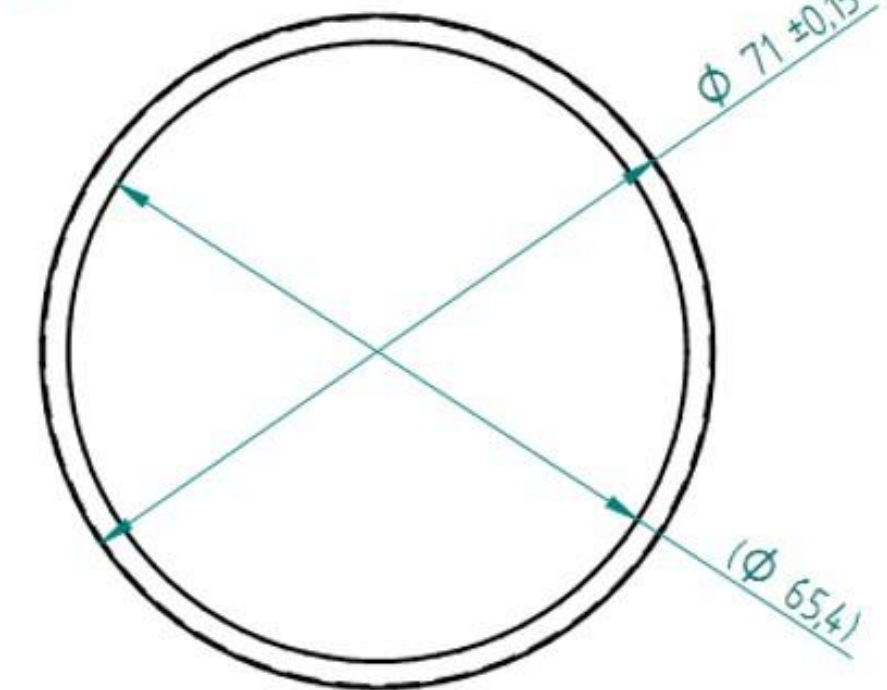
A003 7124

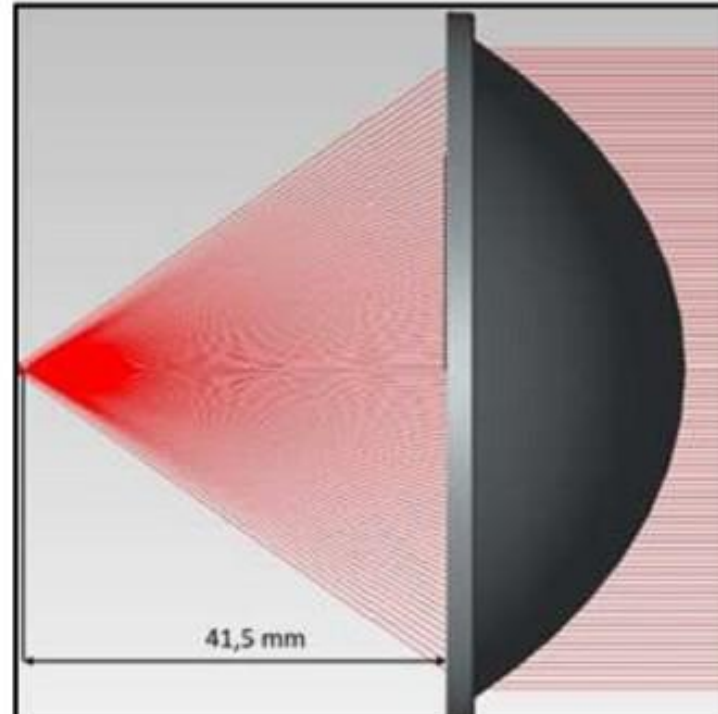
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED




SCALE 1:2





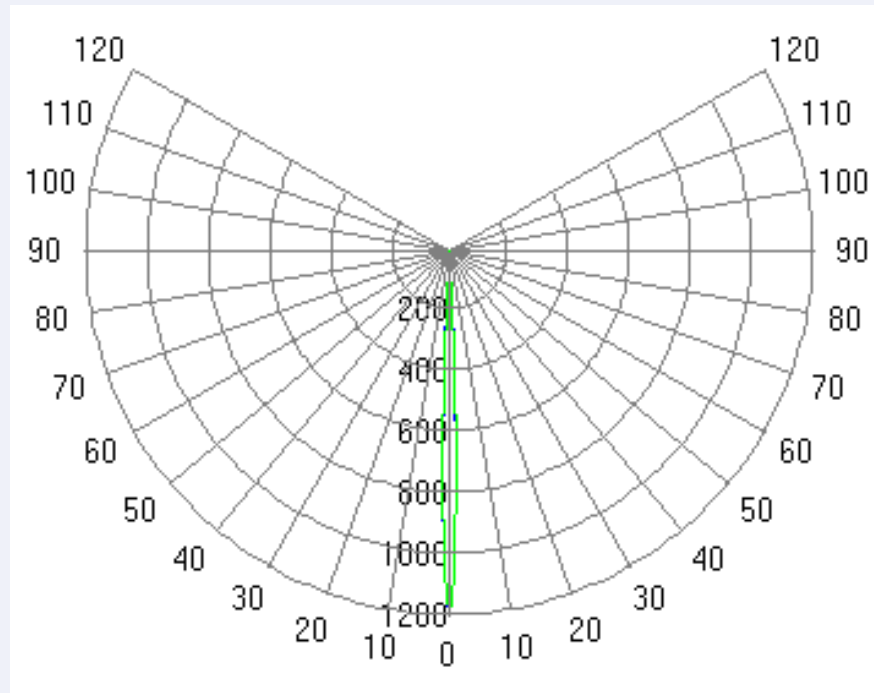


DRAWN	krulsky	DATE	05/14/20	 <p>A003 7124</p>												
CHECKED																
ENG APPR																
MER APPR																
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">SIZE</td> <td style="font-size: x-small;">DWG NO</td> <td style="font-size: x-small;">REV</td> </tr> <tr> <td style="font-size: x-small;">A4</td> <td> </td> <td> </td> </tr> <tr> <td colspan="3" style="font-size: x-small;">FILE NAME: A003_small.rpt</td> </tr> <tr> <td style="font-size: x-small;">SCALE</td> <td style="font-size: x-small;">WEIGHT: 126 g</td> <td style="font-size: x-small;">SHEET 1 OF 1</td> </tr> </table>	SIZE	DWG NO	REV	A4			FILE NAME: A003_small.rpt			SCALE	WEIGHT: 126 g	SHEET 1 OF 1
SIZE	DWG NO	REV														
A4																
FILE NAME: A003_small.rpt																
SCALE	WEIGHT: 126 g	SHEET 1 OF 1														

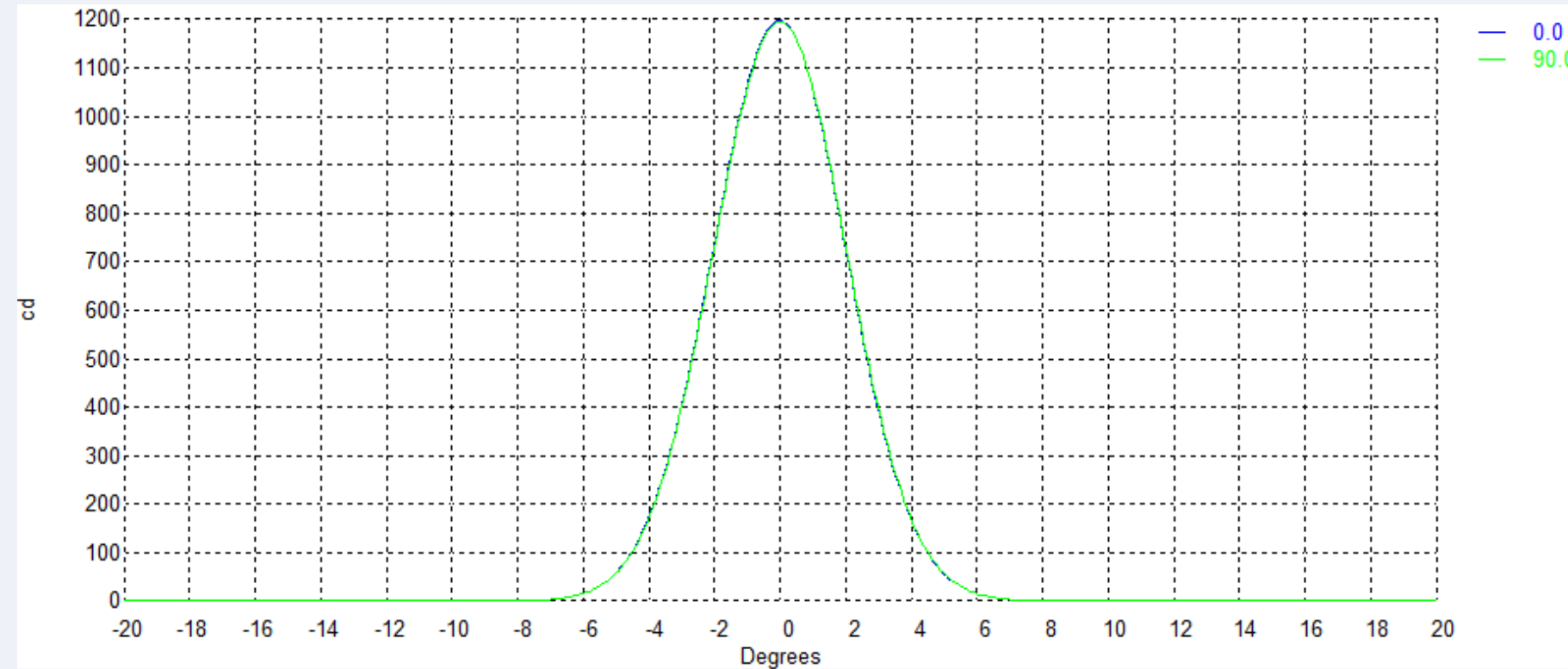
Glass: LIBA or alternative (nd = 1,521)

A003 7124 – simulation results

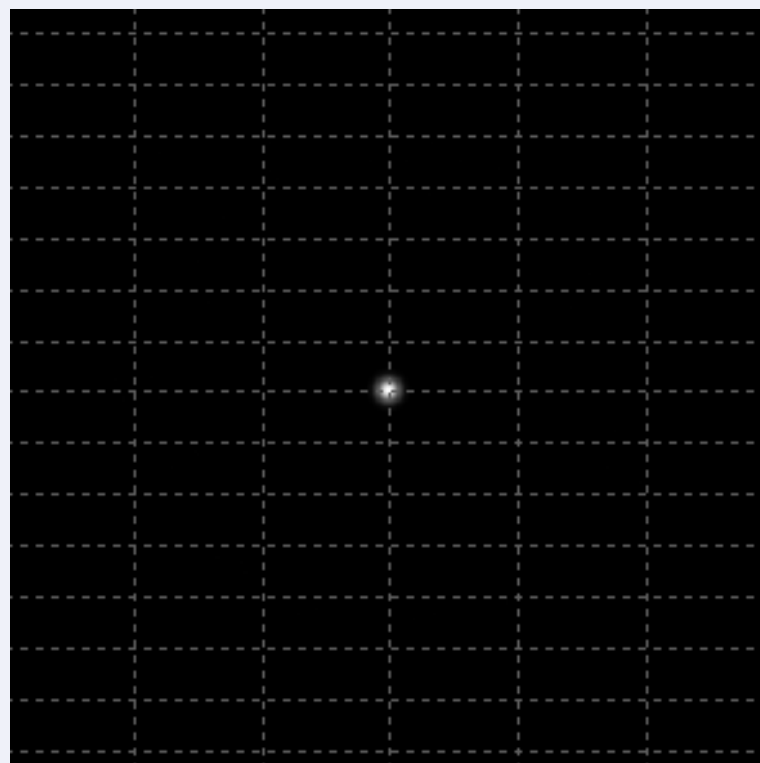
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

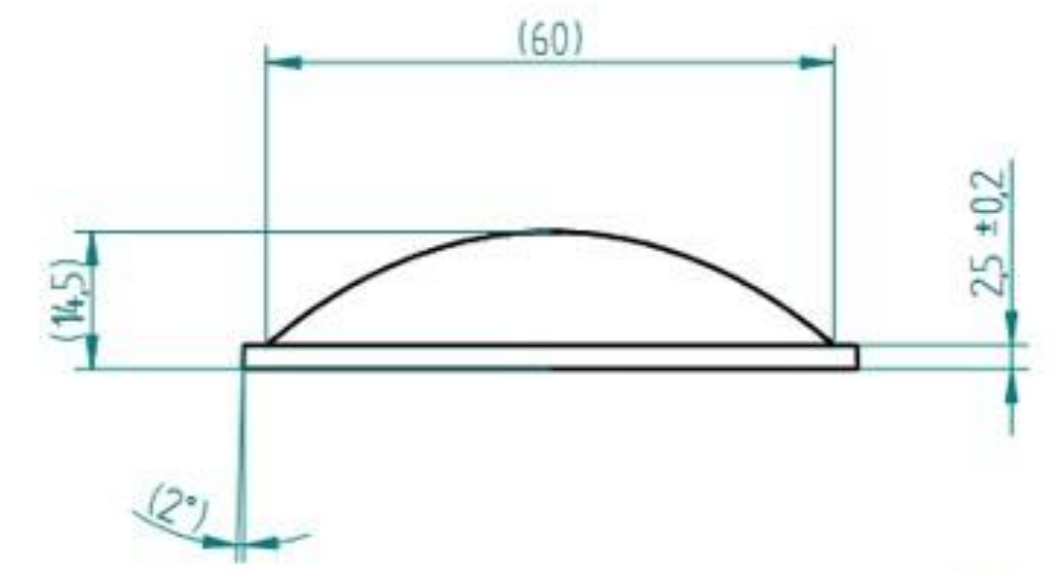
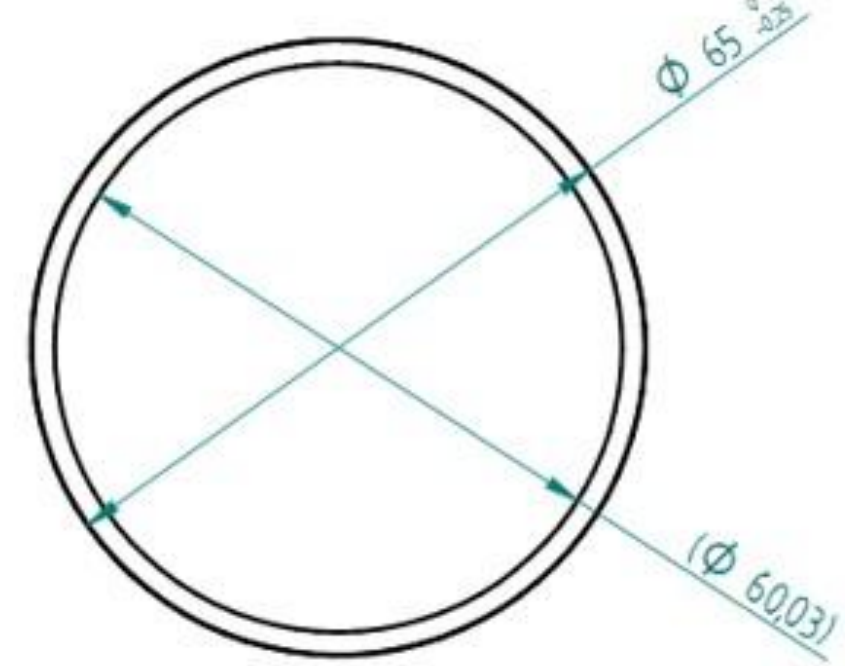


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5


* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A010 6515

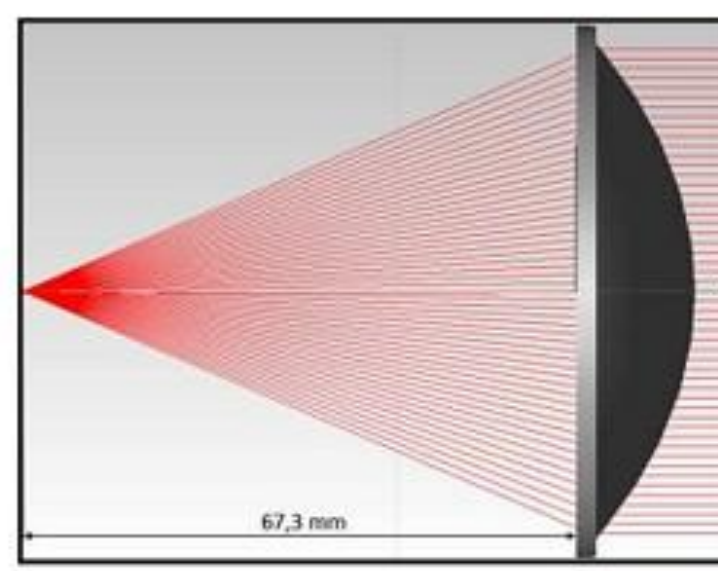
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED





SCALE 1:2



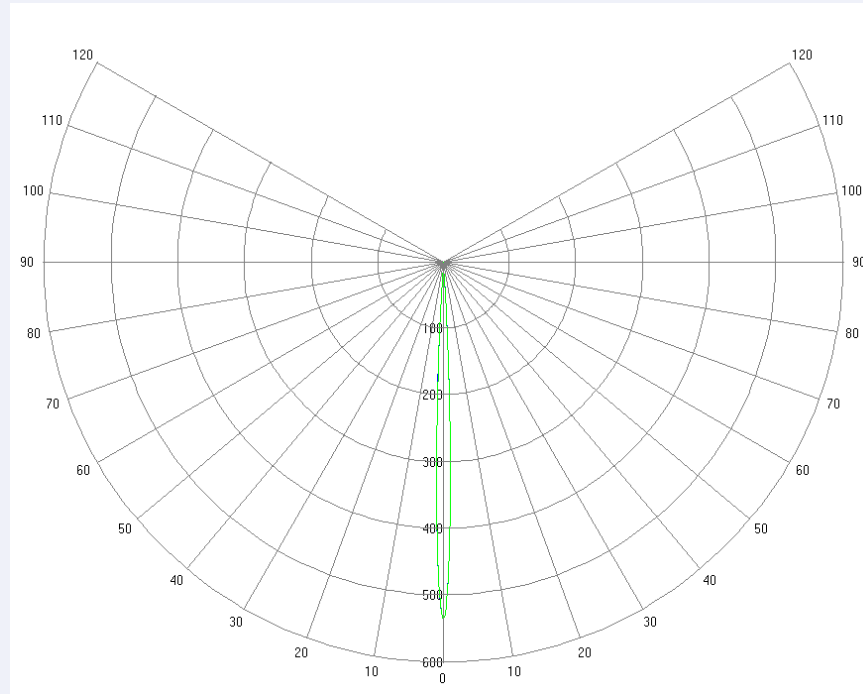
Glass: LIBA or alternative (nd = 1,521)



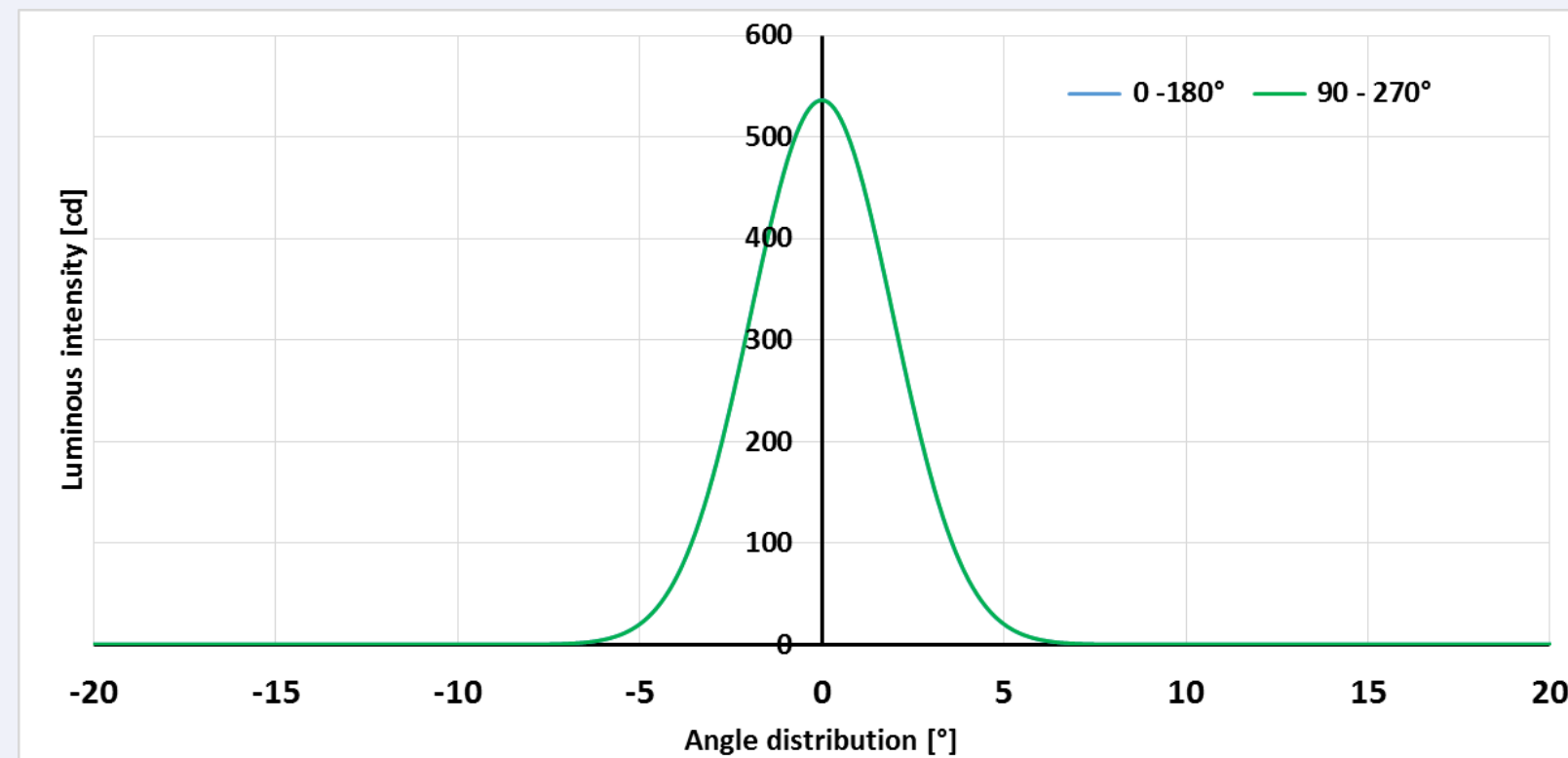
DRAW	NAME	DATE	 <p style="font-size: 1.2em; font-weight: bold;">A010 6515</p>								
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 0.8em;">SIZE</td> <td style="font-size: 0.8em;">A4</td> <td style="font-size: 0.8em;">SHEET</td> <td style="font-size: 0.8em;">1 OF 1</td> </tr> <tr> <td style="font-size: 0.8em;">SCALE</td> <td> </td> <td style="font-size: 0.8em;">WEIGHT</td> <td style="font-size: 0.8em;">66 g</td> </tr> </table>	SIZE	A4	SHEET	1 OF 1	SCALE		WEIGHT	66 g
SIZE	A4	SHEET	1 OF 1								
SCALE		WEIGHT	66 g								

A010 6515 – simulation results

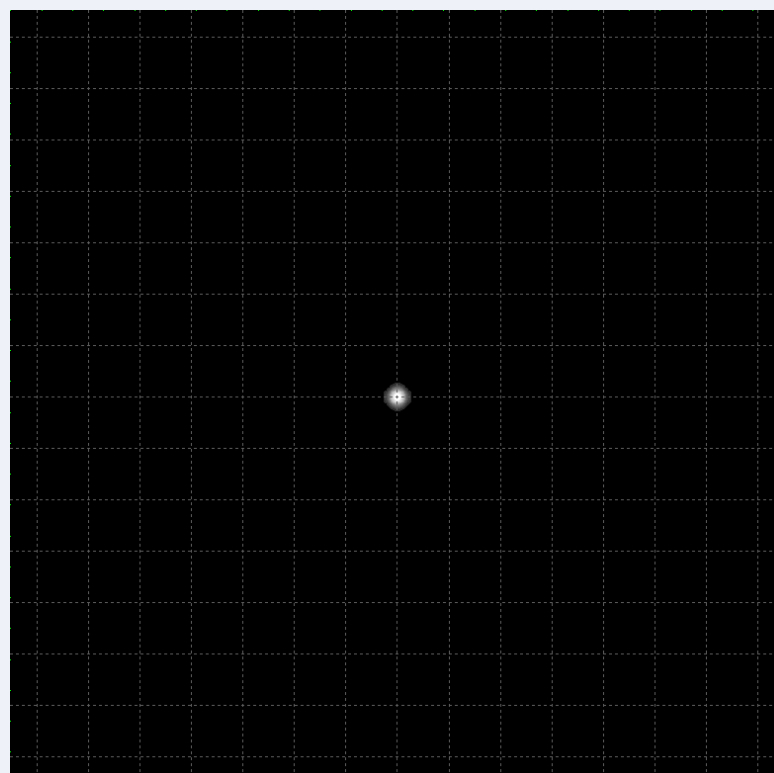
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



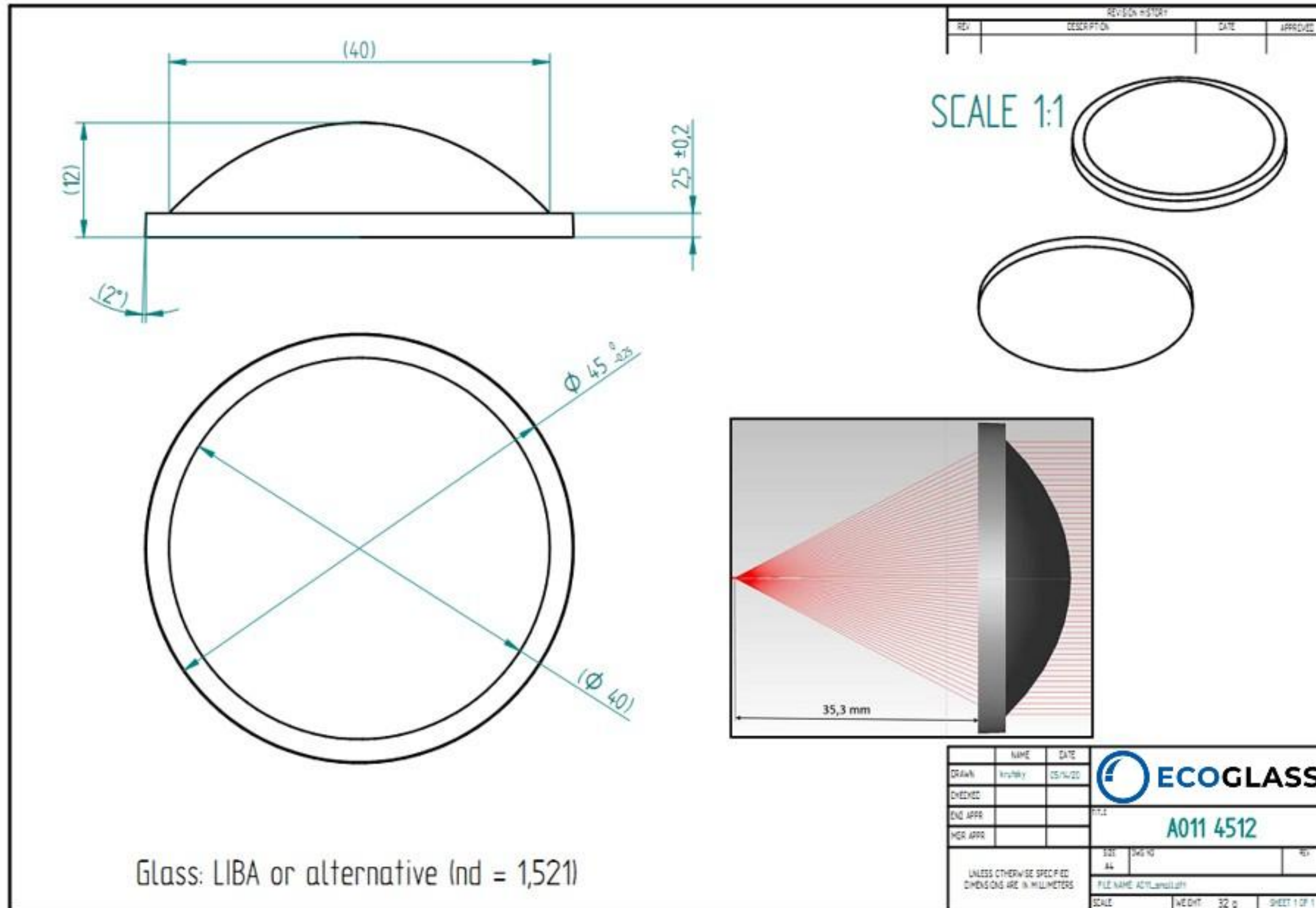
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	6
FWHM C ₉₀ [°]	6

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A011 4512



Technical drawing of a lens with the following specifications:

- Top view: Semi-circular lens with a diameter of 40 mm. The height from the base to the top of the curve is 12 mm. The base thickness is 2.5 ± 0.2 mm. The angle of the base is 2°.
- Bottom view: Circular lens with an outer diameter of 45 mm and an inner diameter of 40 mm.
- Ray diagram: Shows a light ray passing through a semi-circular lens with a diameter of 35.3 mm, illustrating the focusing effect.

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED

SCALE 1:1

Glass: LIBA or alternative (nd = 1,521)

NAME	DATE
DRAWN: kn/ky	15/11/20
CHECKED:	
ENG APPR:	
MGR APPR:	

ECOGLOSS

TITLE: **A011 4512**

SIZE: 44

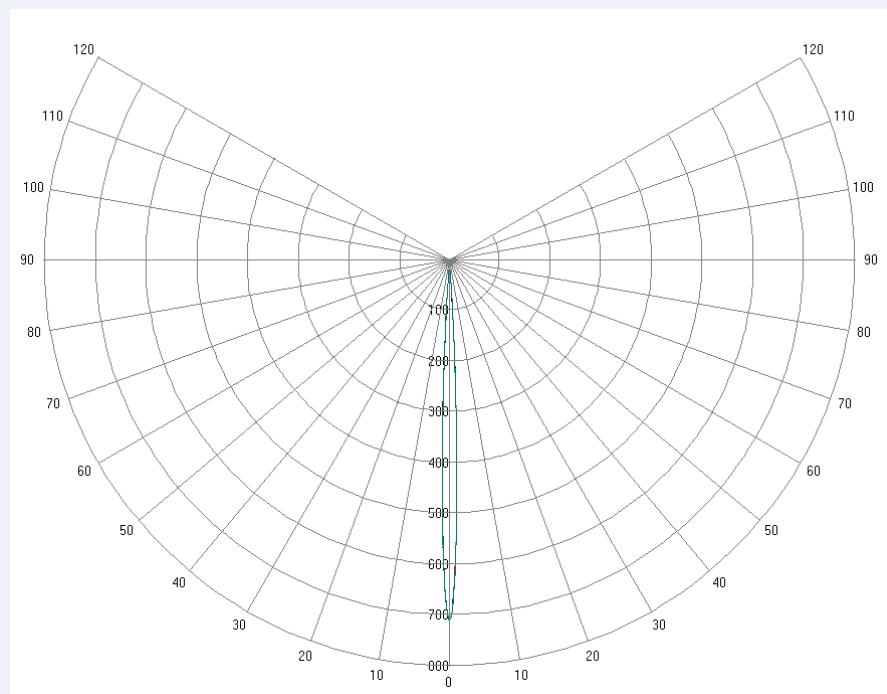
FILE NAME: ACT/Lens/121

SCALE: WEIGHT: 32 g SHEET 1 OF 1

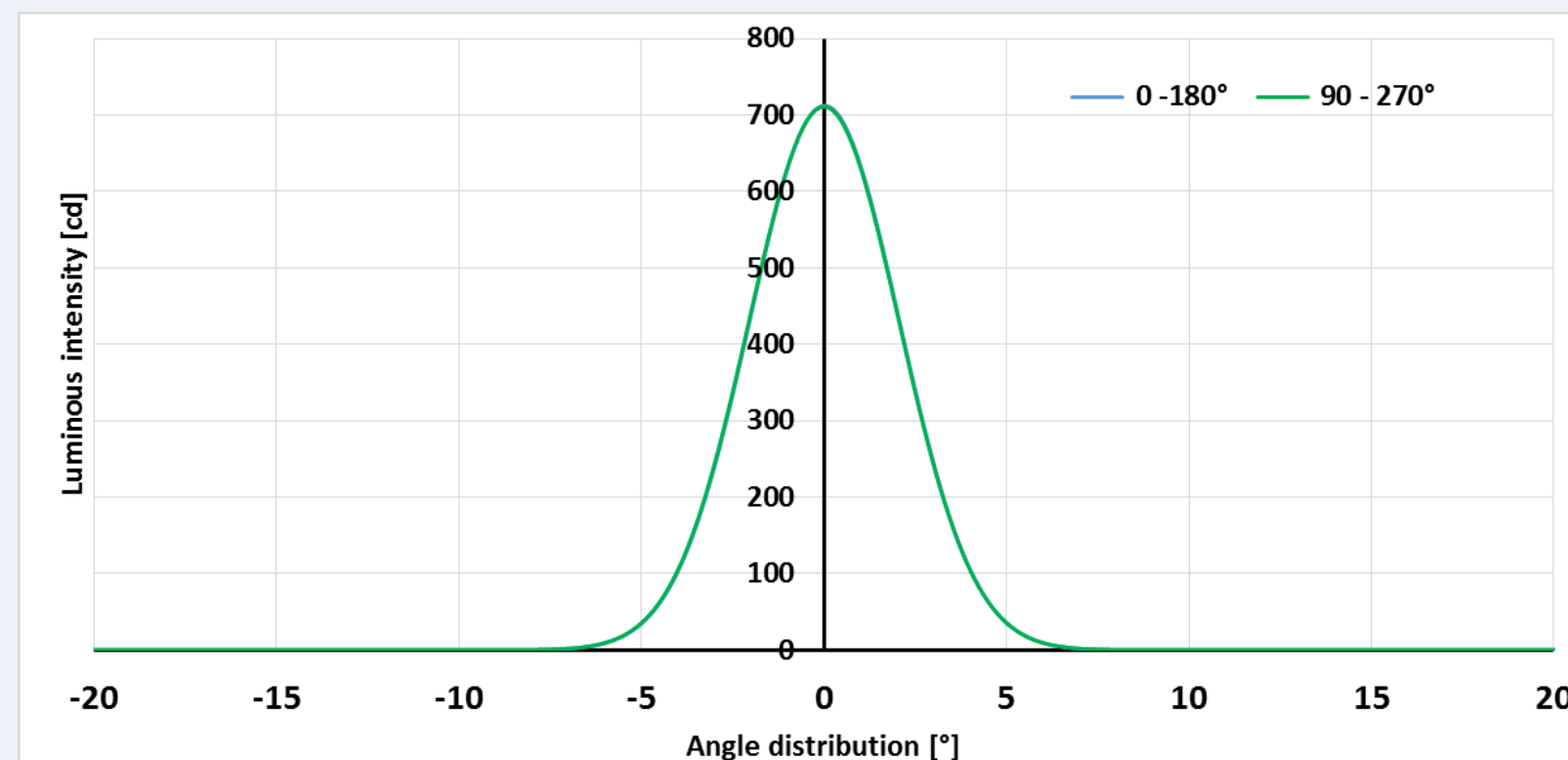
A011 4512 – simulation results



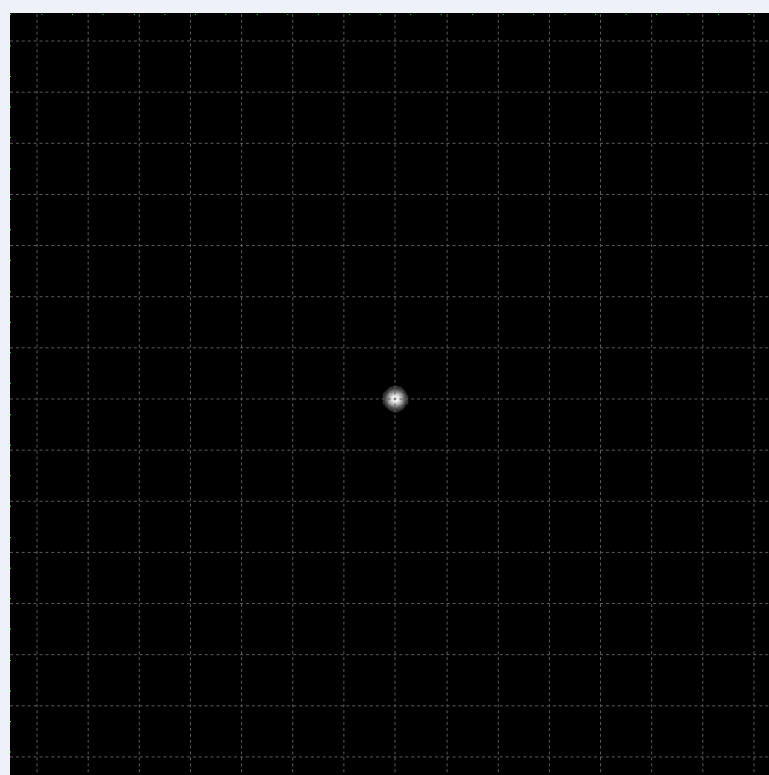
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

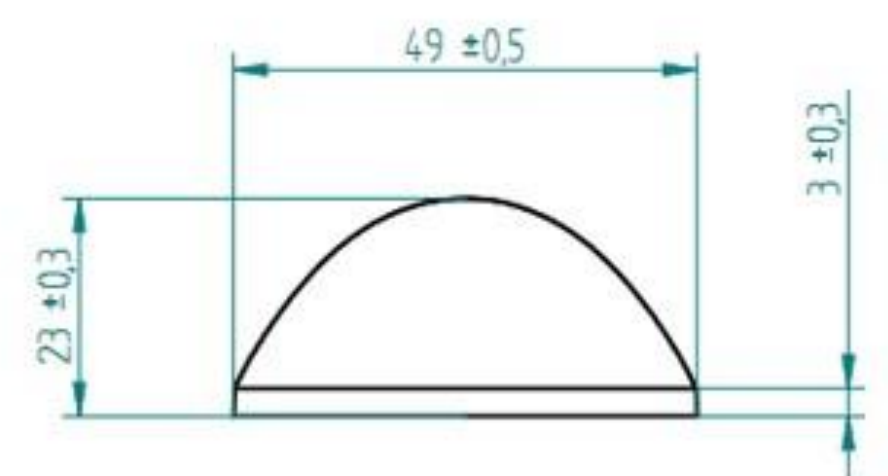


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	6
FWHM C ₉₀ [°]	6

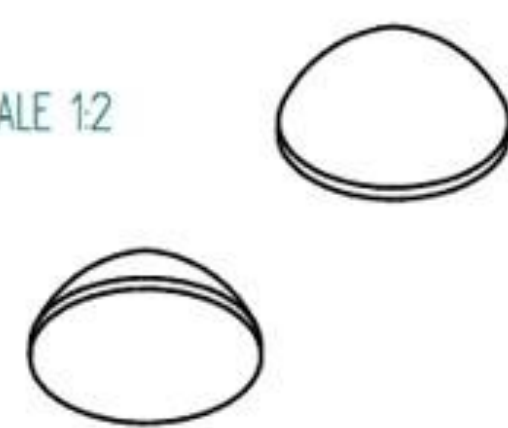
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

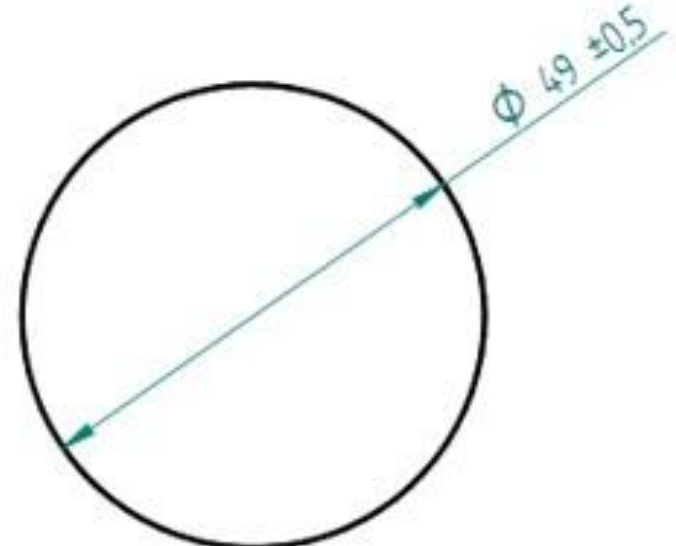
A016 4923

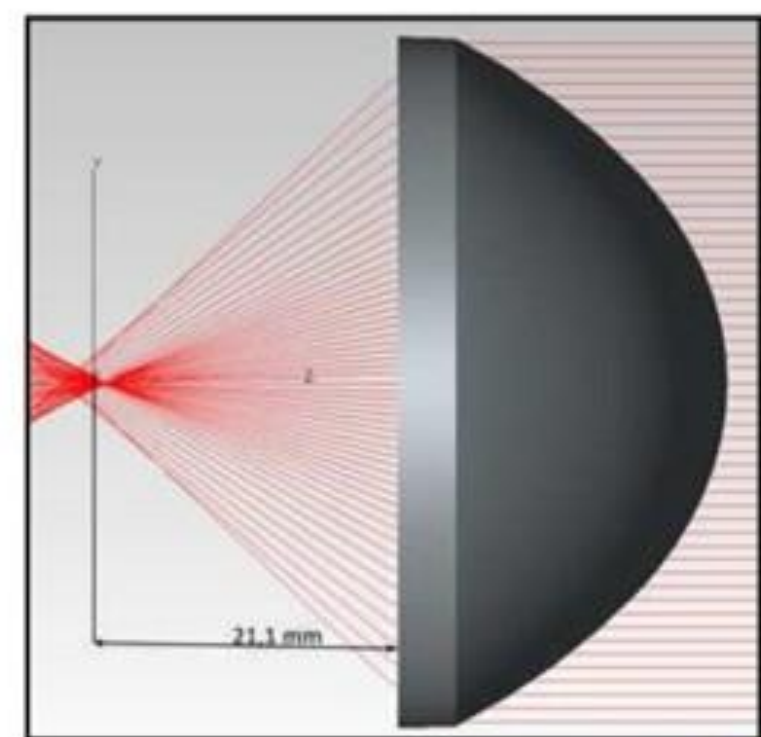
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED



SCALE 1:2








Glass: LIBA or alternative (nd = 1,521)

DRAWN	kru/ky	DATE	05/14/20
CHECKED			
ENG APPR			
MGR APPR			

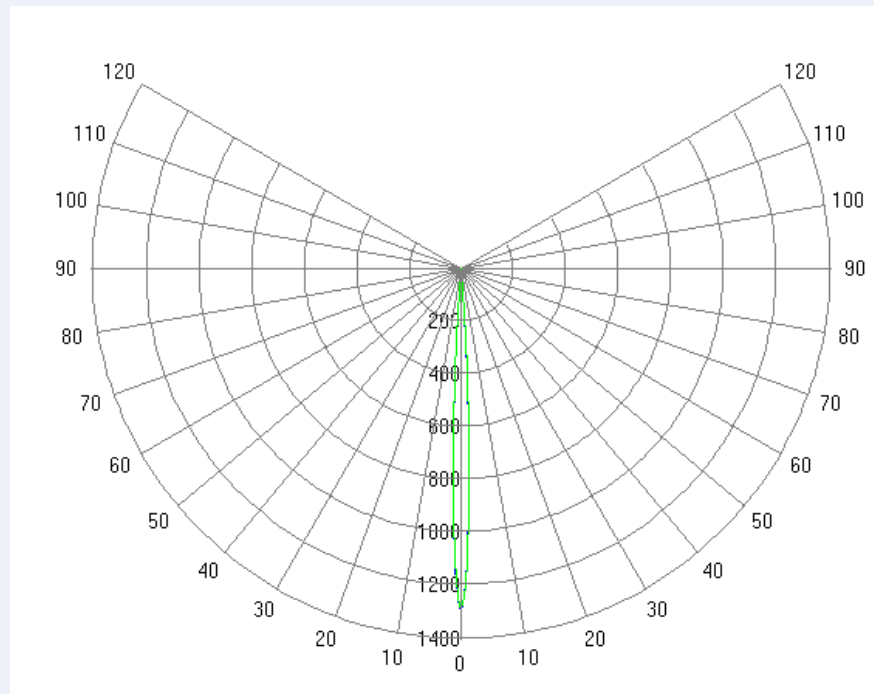


A016 4923

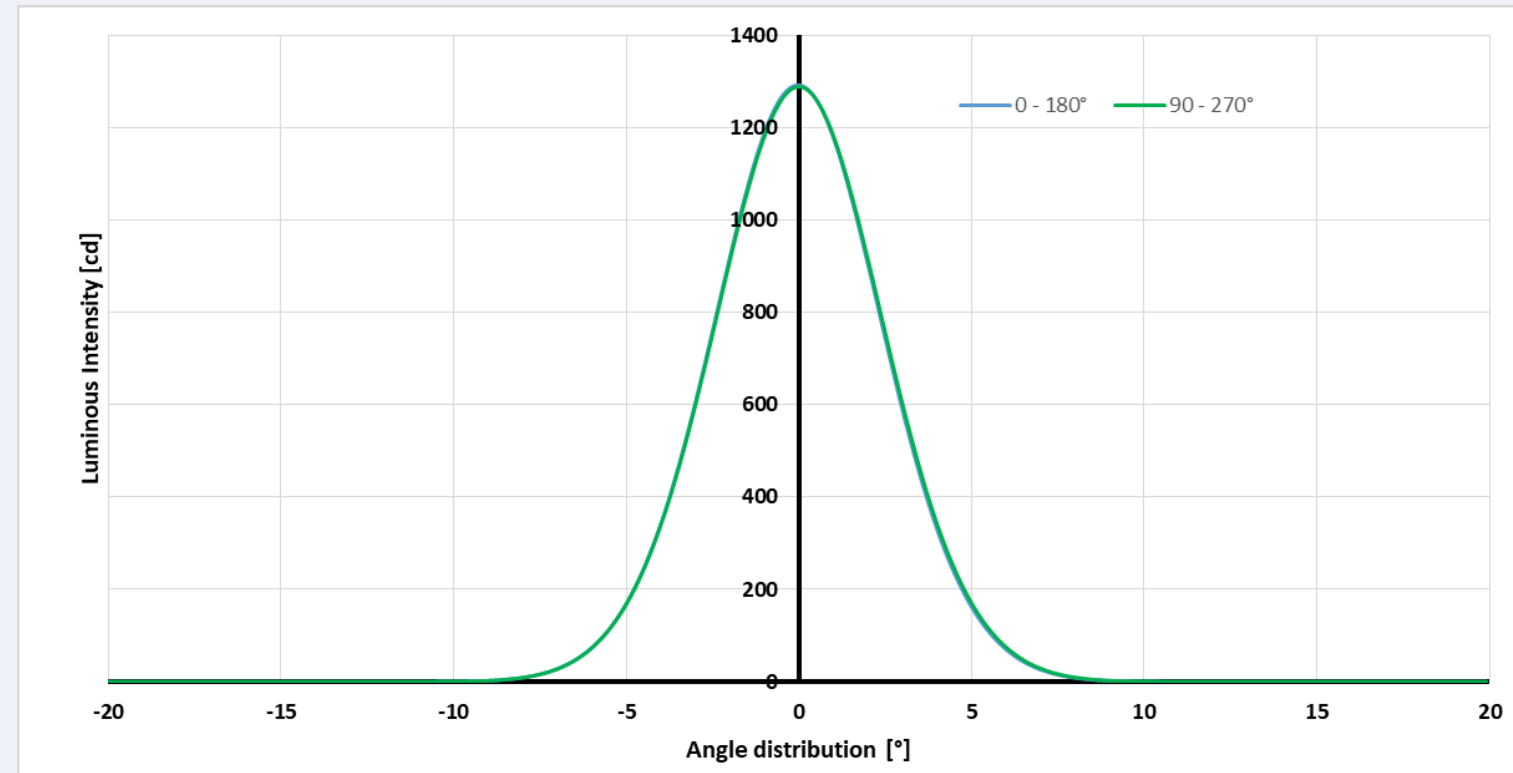
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	DIN 9130	REV.	44
SCALE	WEIGHT	66 g	SHEET 1 OF 1

A016 4923 – simulation results

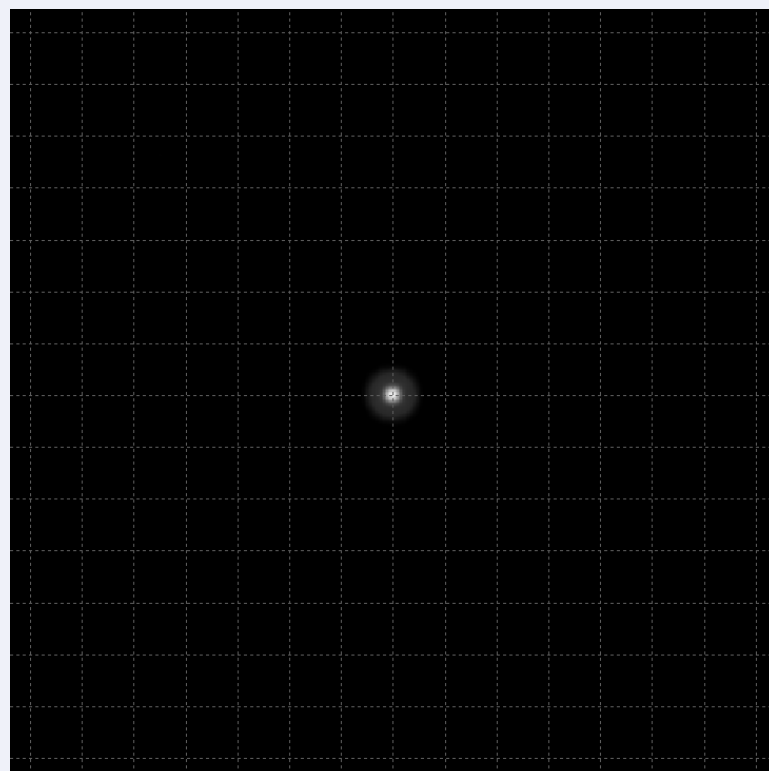
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5,6
FWHM C90 [°]	5,6

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A019 5322

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

Technical drawing of the lens showing dimensions: (21,26) for height, (49,2) for diameter, 3 ± 0,2 for thickness, 53 ± 0,15 for diameter, and (88°) for angle.

Ray diagram showing light rays passing through the lens and converging to a focal point at a distance of 25 units.

Top view of the lens showing diameters: (Φ 49,2) for the outer diameter and Φ 53 ± 0,15 for the inner diameter.

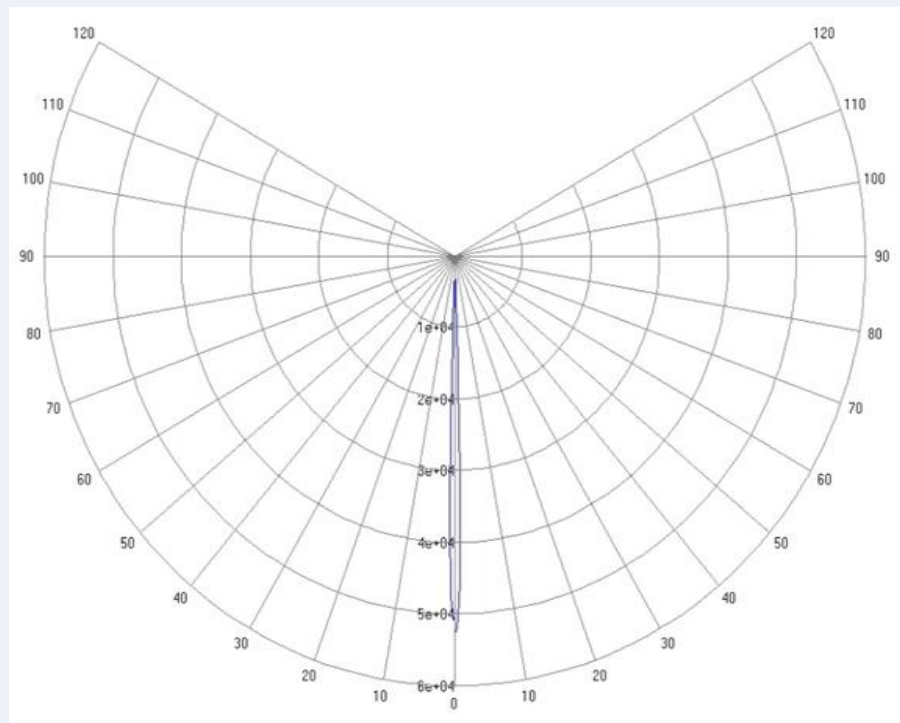
3D perspective view of the lens.

material : GLASS nd=1,520

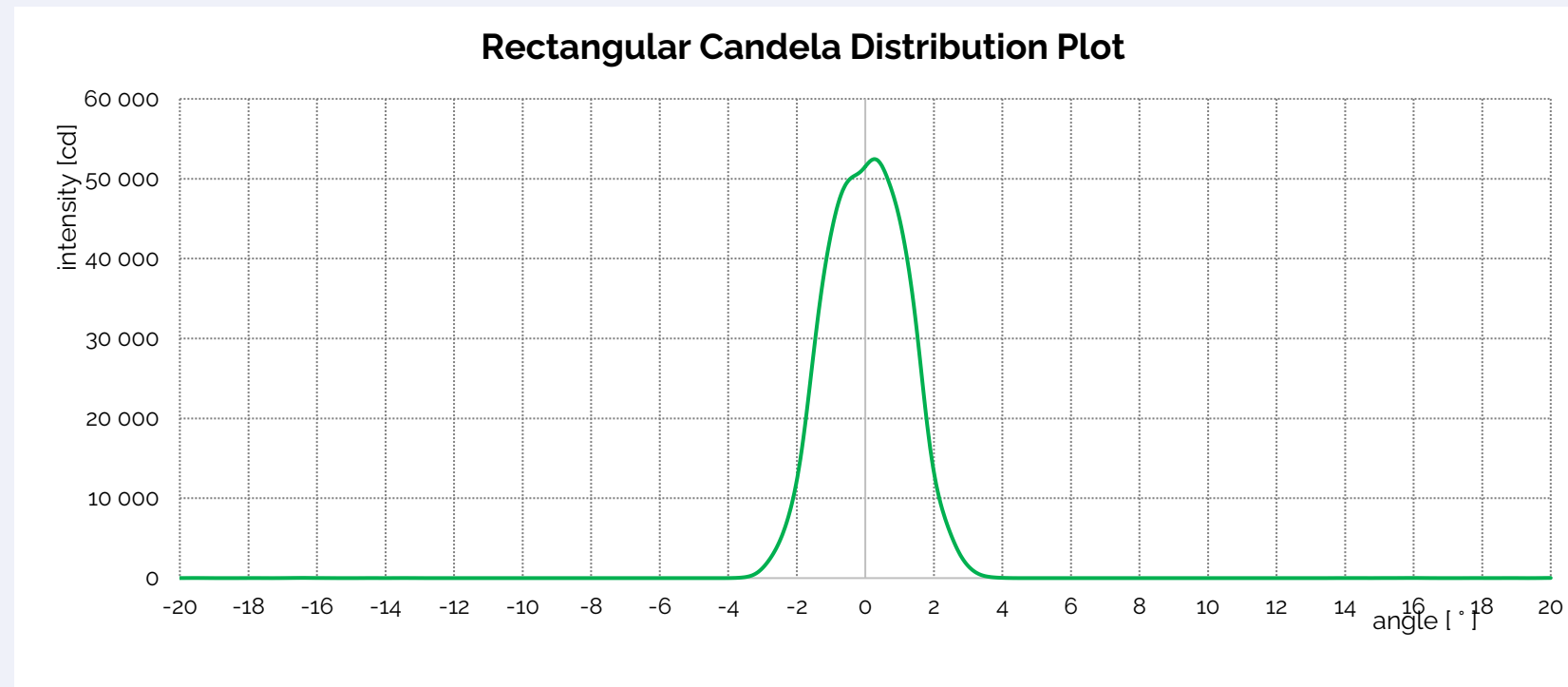
DRAWN	jkocarek	DATE	06/12/25	ECOGLASS	TITLE		
CHECKED					A019 5322		
ENG APPR					SIZE	DWG NO	REV
MGR APPR					A4	Aspheric Lens	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS					FILE NAME: A0195322 z vykresudft		
SCALE:		WEIGHT:		SHEET 1 OF 1			

A019 5322 – simulation results

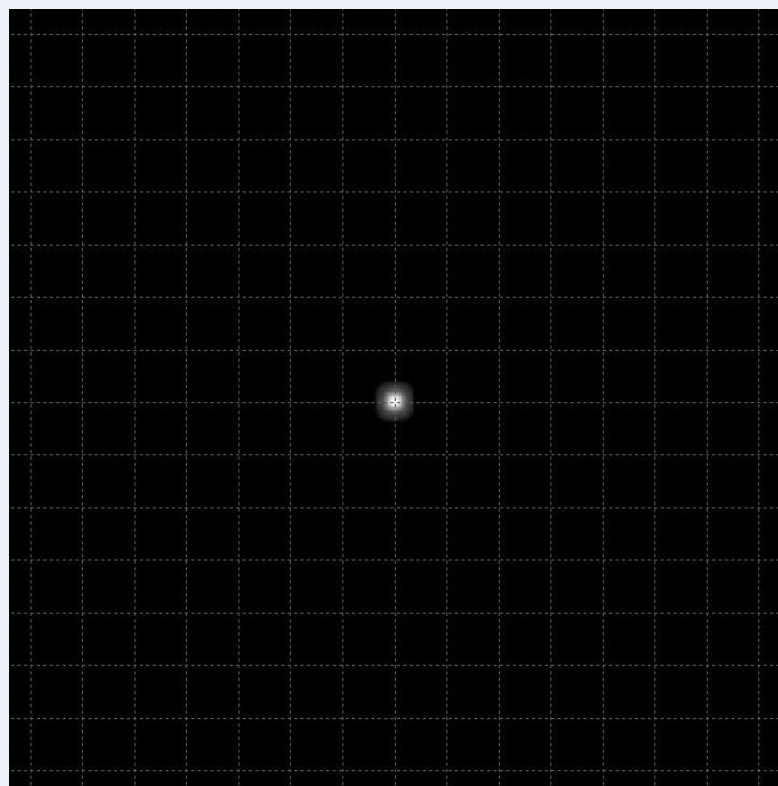
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



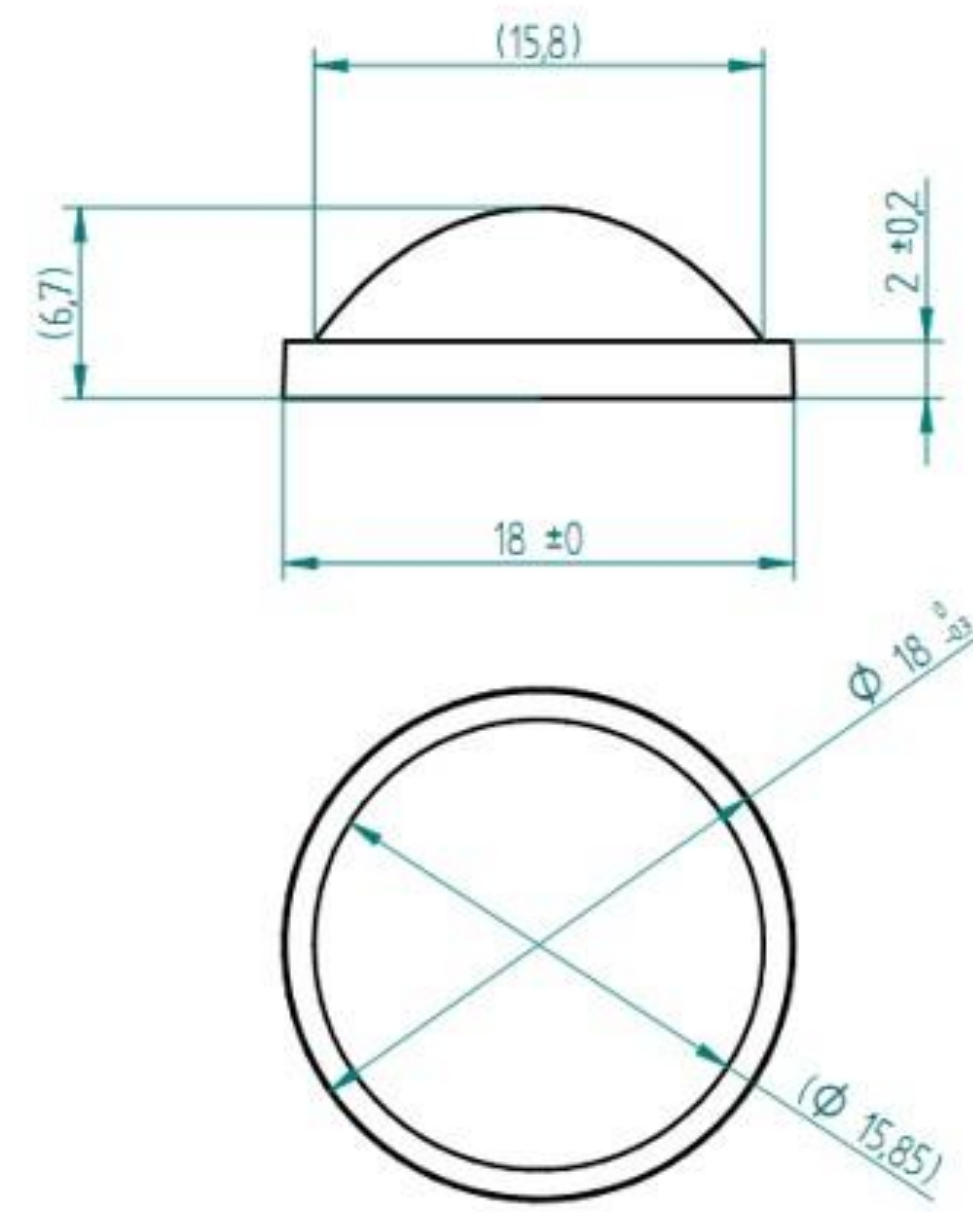
- Projection wall 3x3 m at 1m



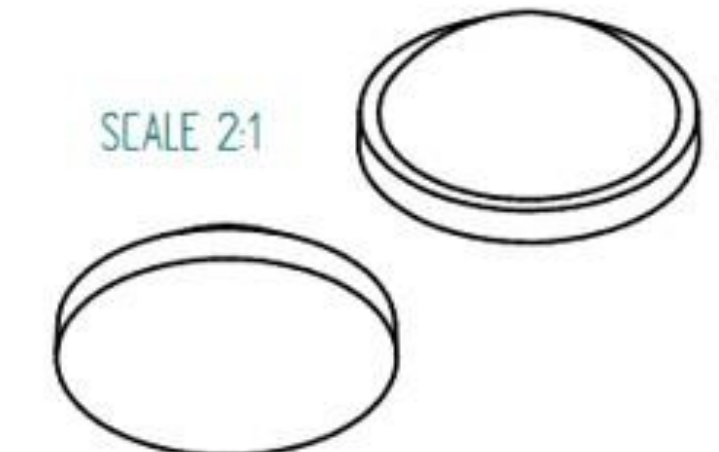
LED used for simulation	Cree XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	3
FWHM C180 [°]	3

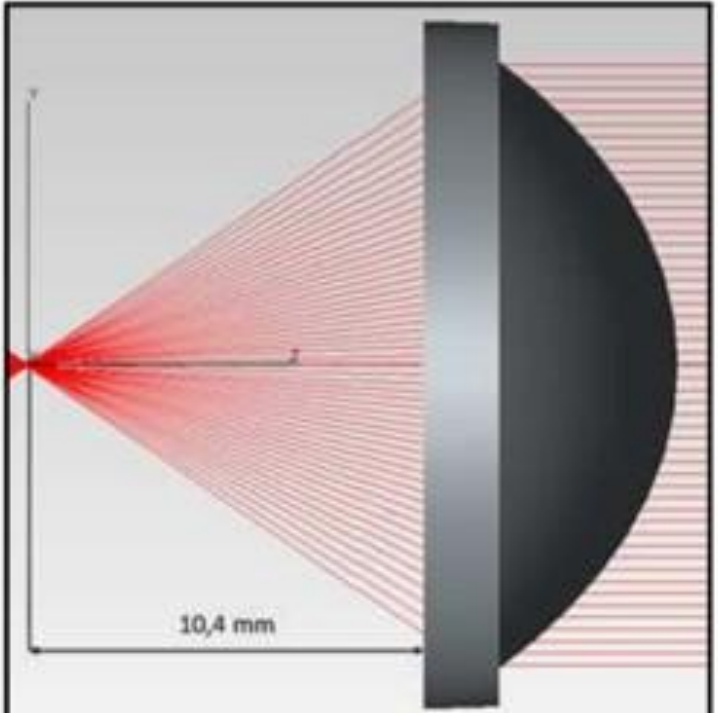
A034 1807

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED




SCALE 2:1





10,4 mm

DRAWN	kny/ky	05/14/20	 <p>A034 1807</p>
CHECKED			
ENG APPR			
MGR APPR			

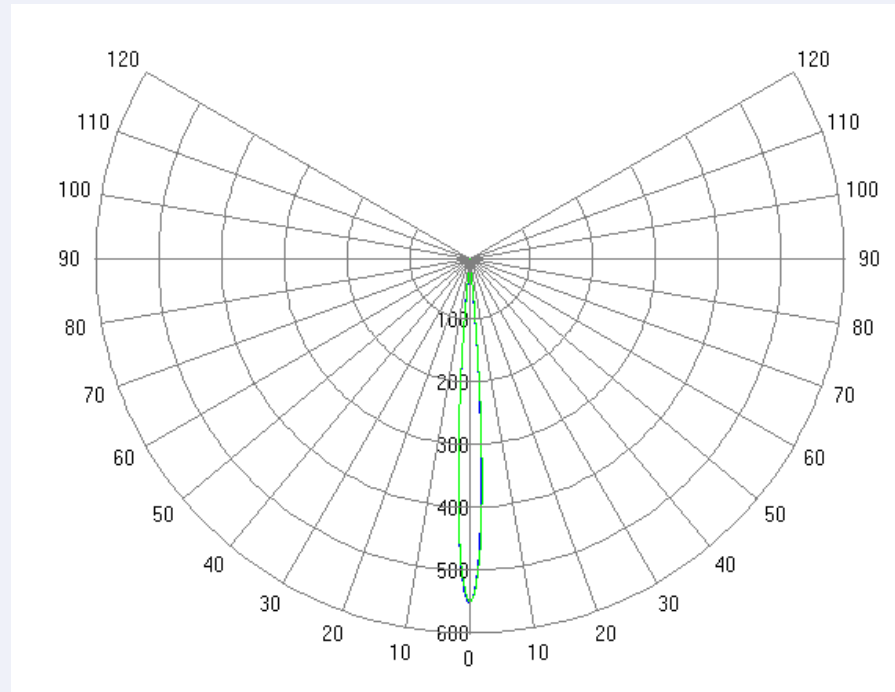
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

SIZE	A4	DATE	
FILE NAME	A034_small.dwg		
SCALE	WEIGHT	3 g	SHEET 1 OF 1

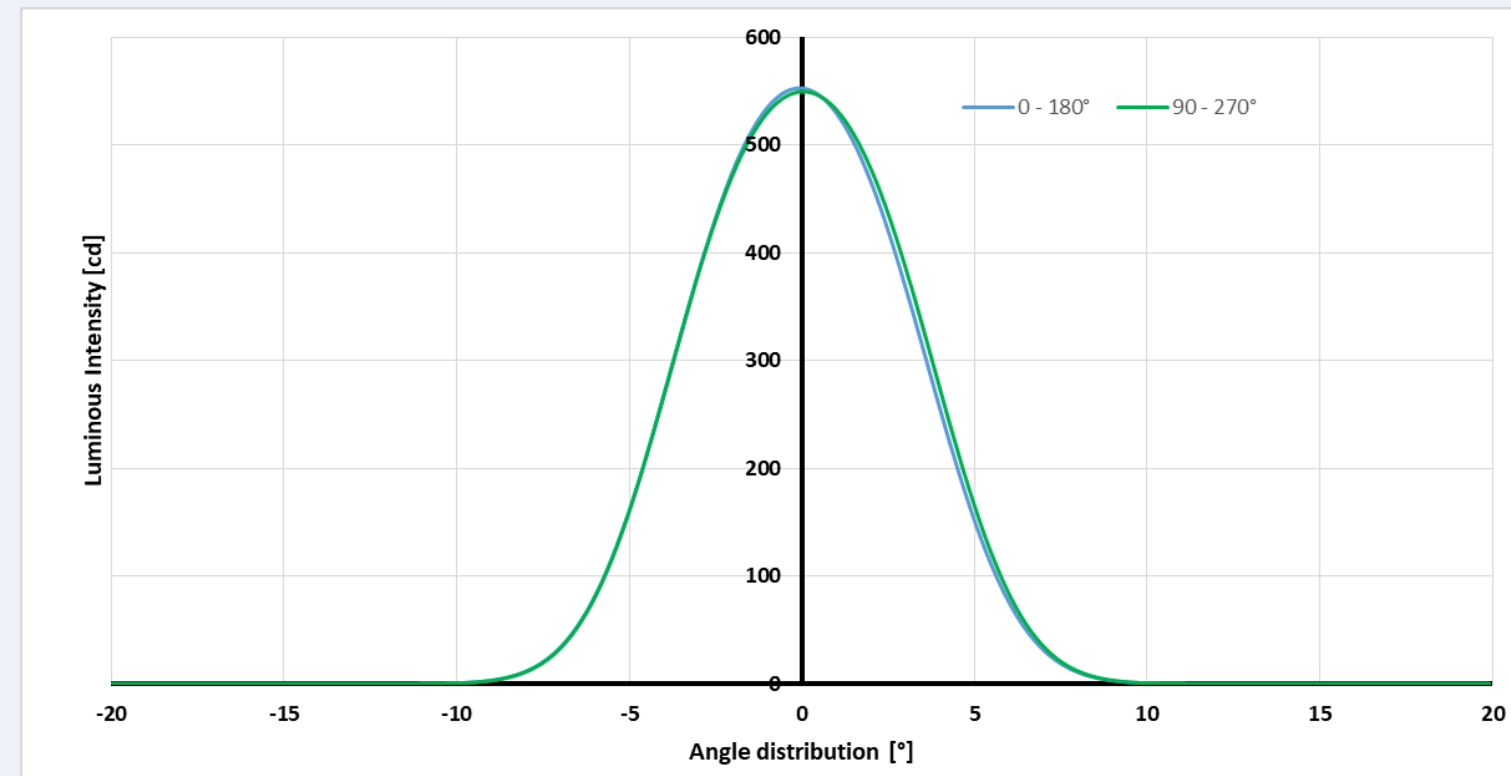
Glass: LIBA or alternative (nd = 1,521)

A034 1807 – simulation results

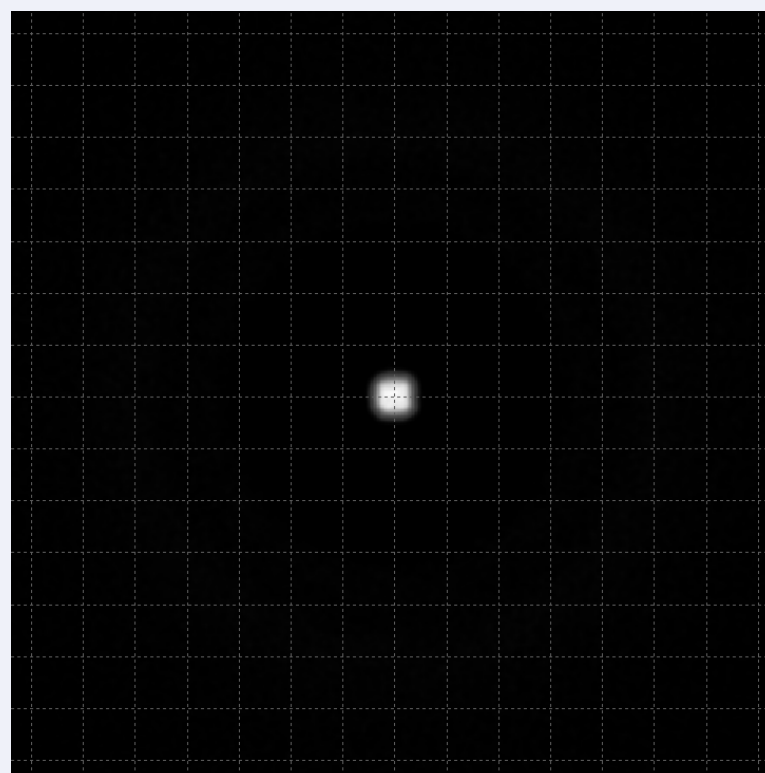
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

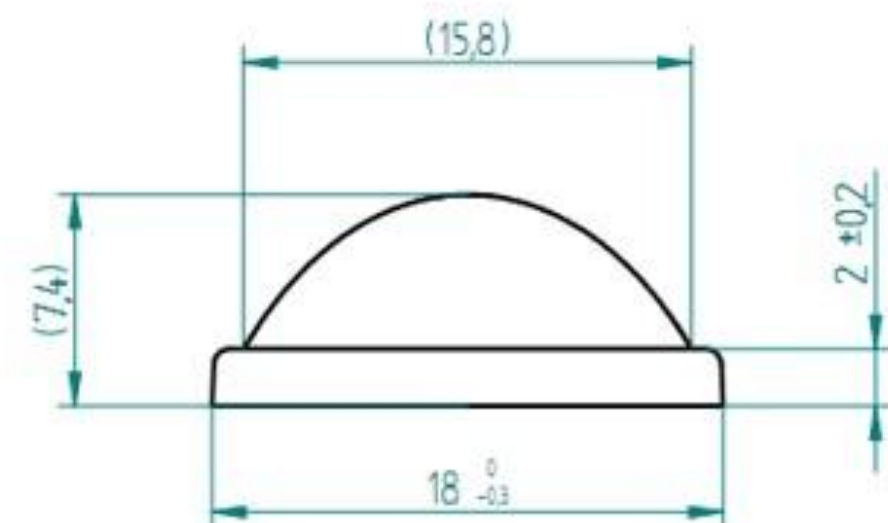
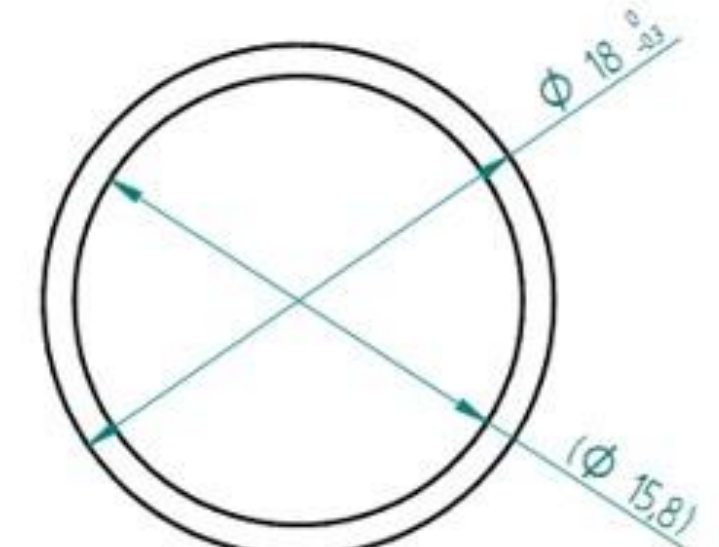


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	8
FWHM C ₉₀ [°]	8


* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

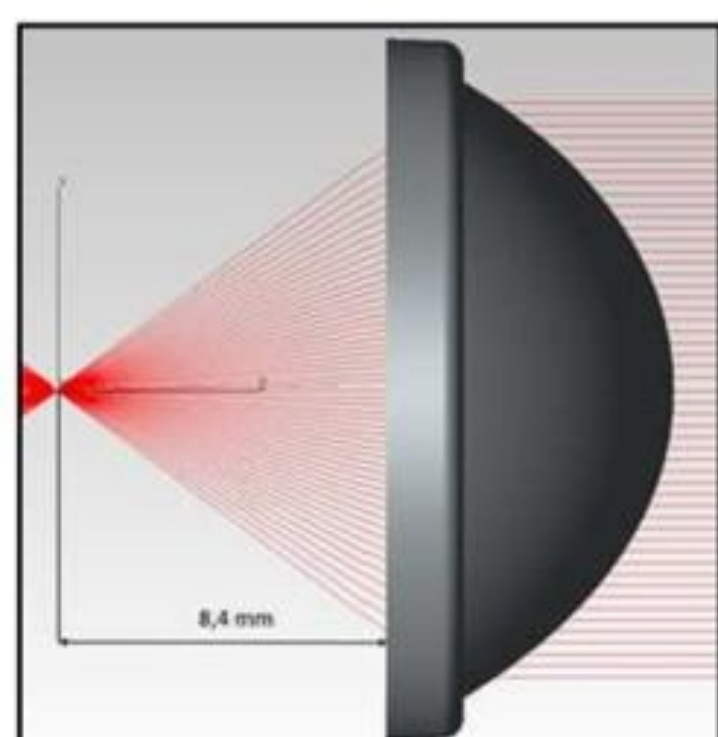
A053 1807

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED





SCALE 2:1





DRAWN	kr/hty	DATE	15/11/20
CHECKED			
ENG APPR			
MGR APPR			



A053 1807

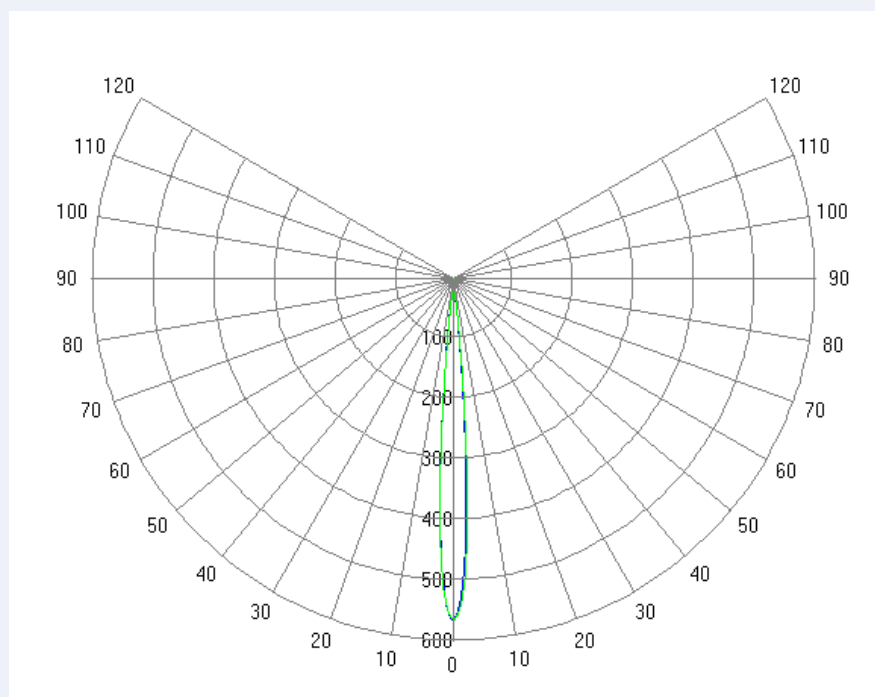
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

SIZE	DWG NO	REV
44		
FILE NAME	A053_enu107	
SCALE	WEIGHT	SHEET 1 OF 1
	3 g	

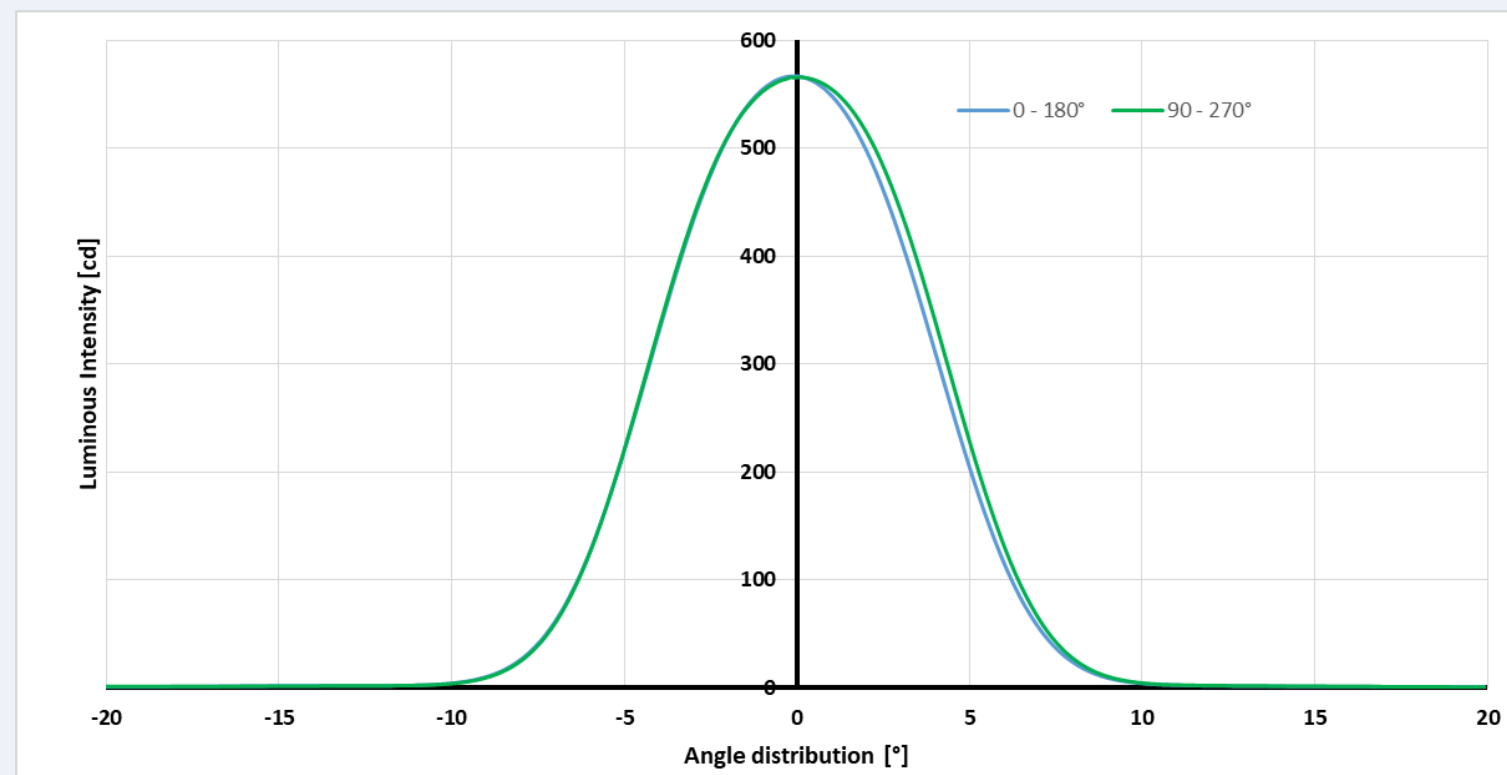
Glass: LIBA or alternative (nd = 1,521)

A053 1807 – simulation results

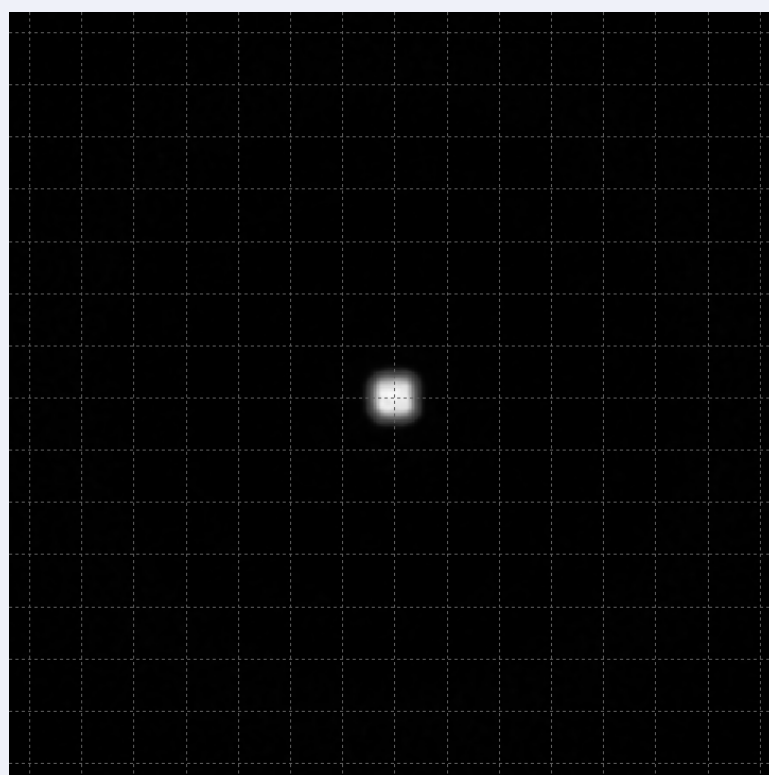
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



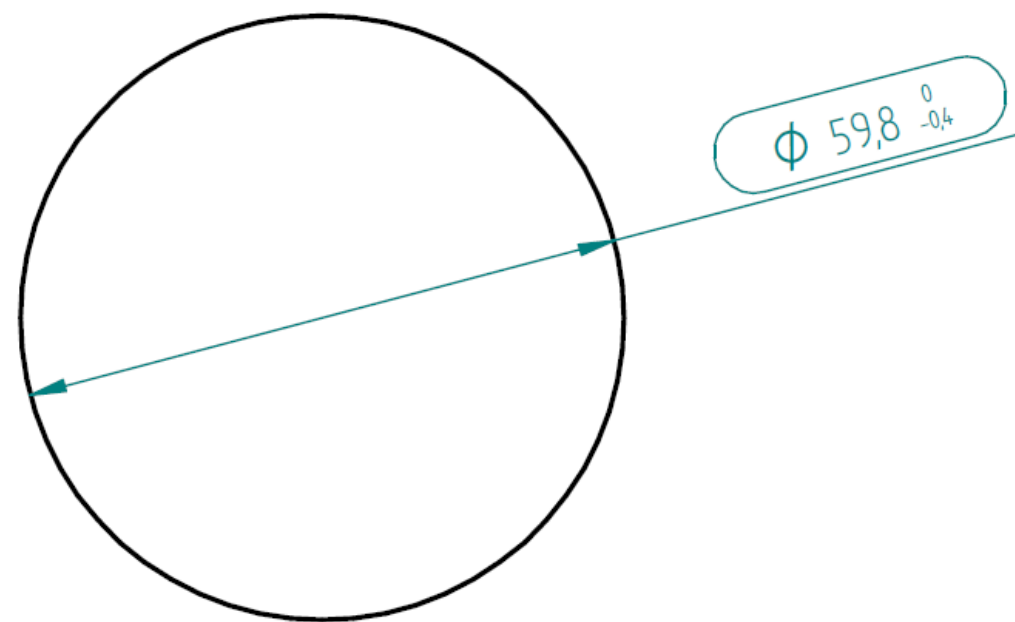
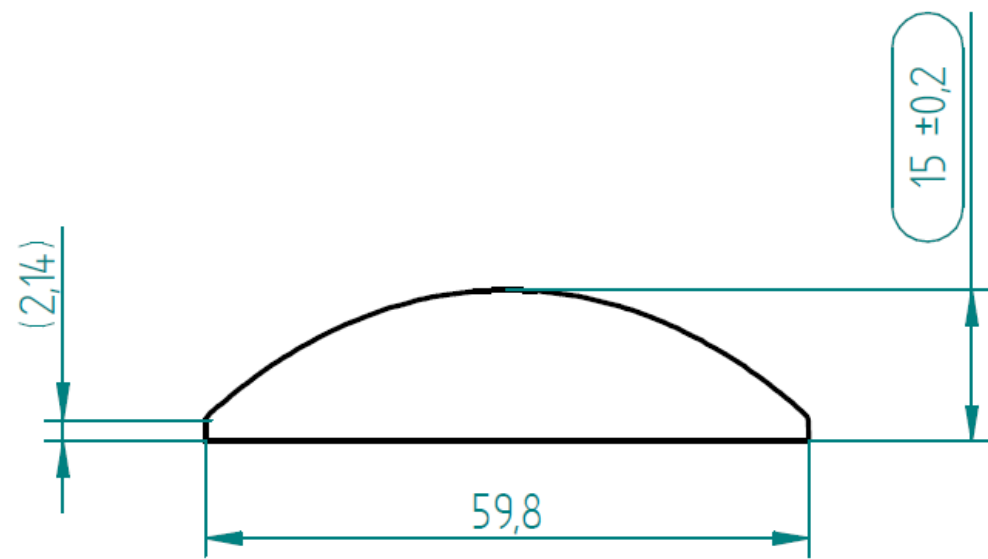
- Projection wall 3x3 m at 1m



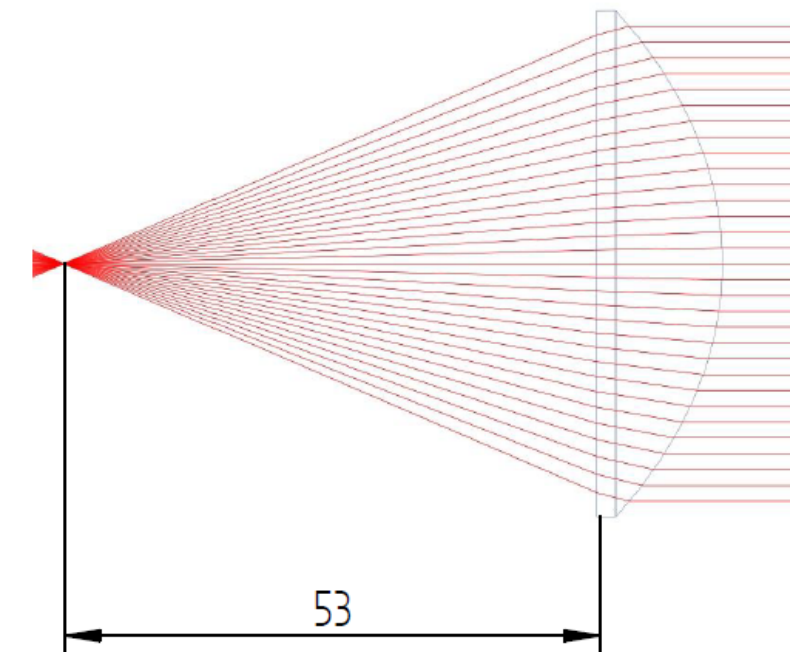
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	9
FWHM C ₉₀ [°]	9

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED


A068 6015



REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

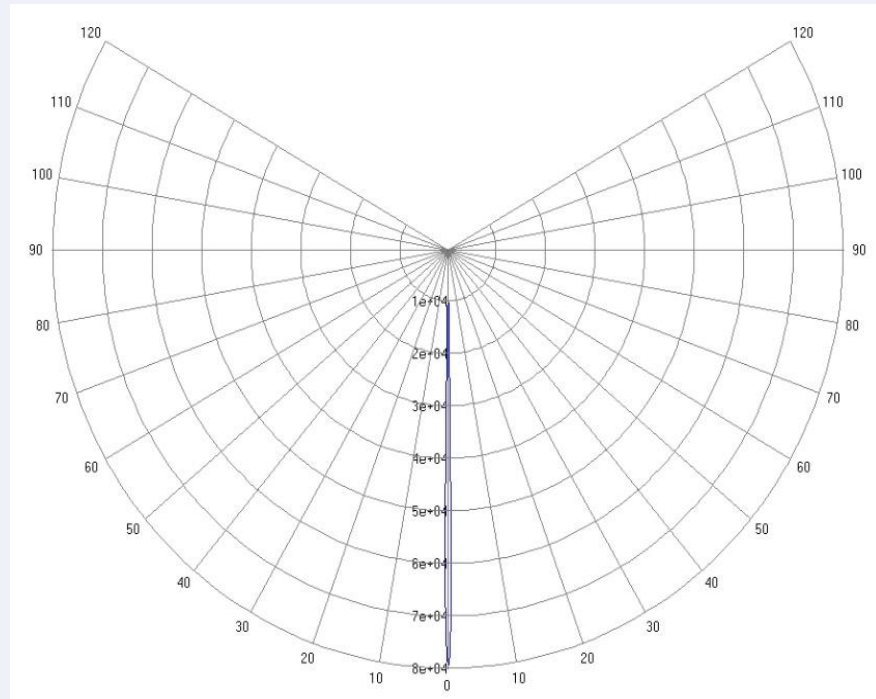


material : glass nd=1,520

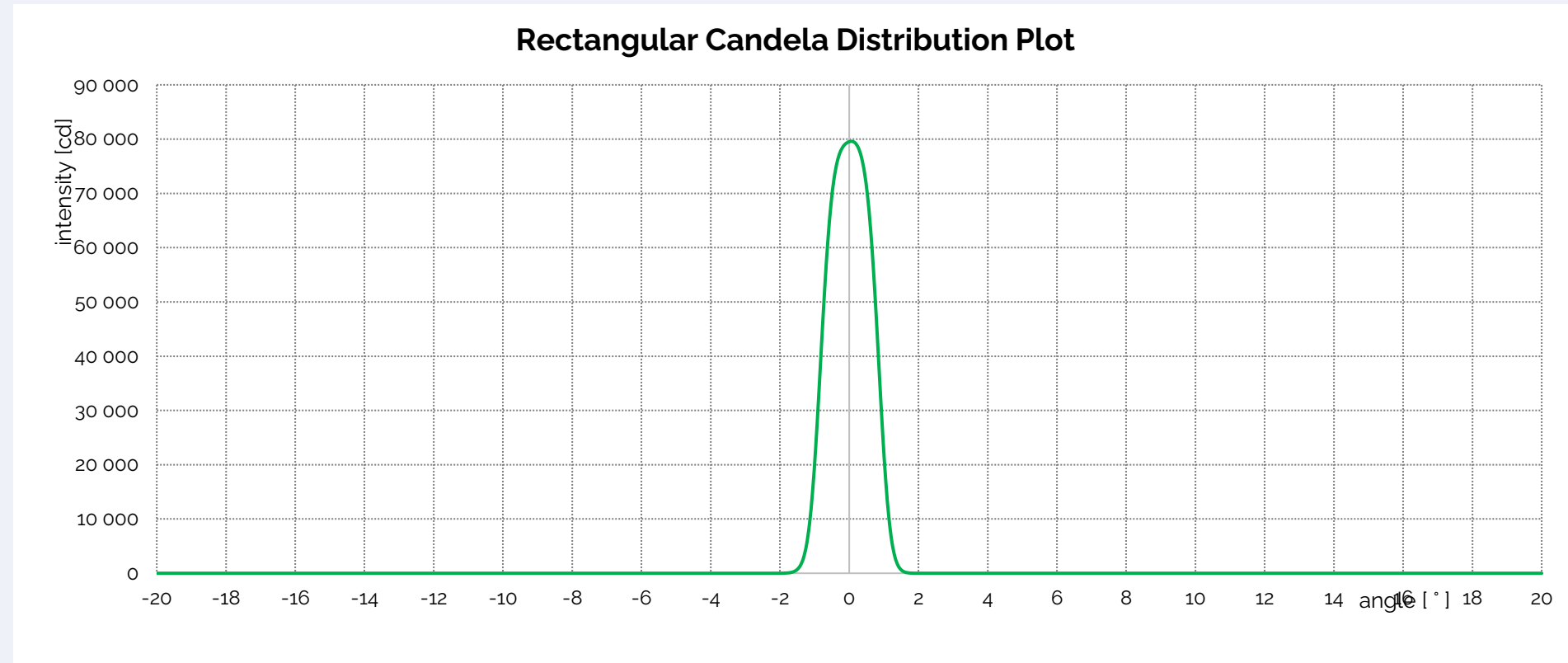
NAME	DATE	
DRAWN	06/09/25	
CHECKED		
ENG APPR		
MGR APPR		
TITLE		aspheric lens 60BF53
SIZE	DWG NO	REV
A4	A068 6015	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		FILE NAME: A068 6015.dft
SCALE:	WEIGHT:	SHEET 1 OF 1

A068 6015 – simulation results

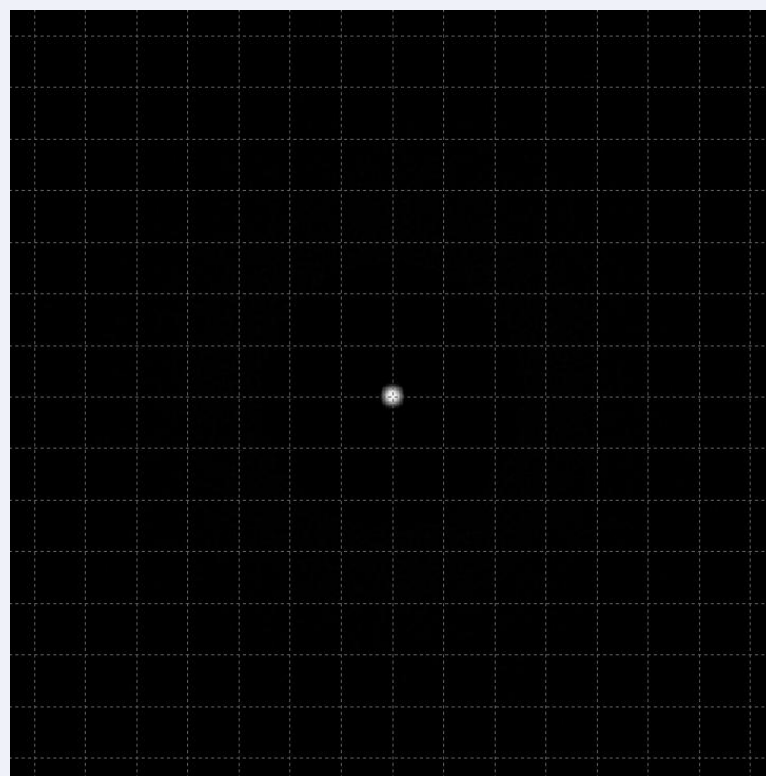
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

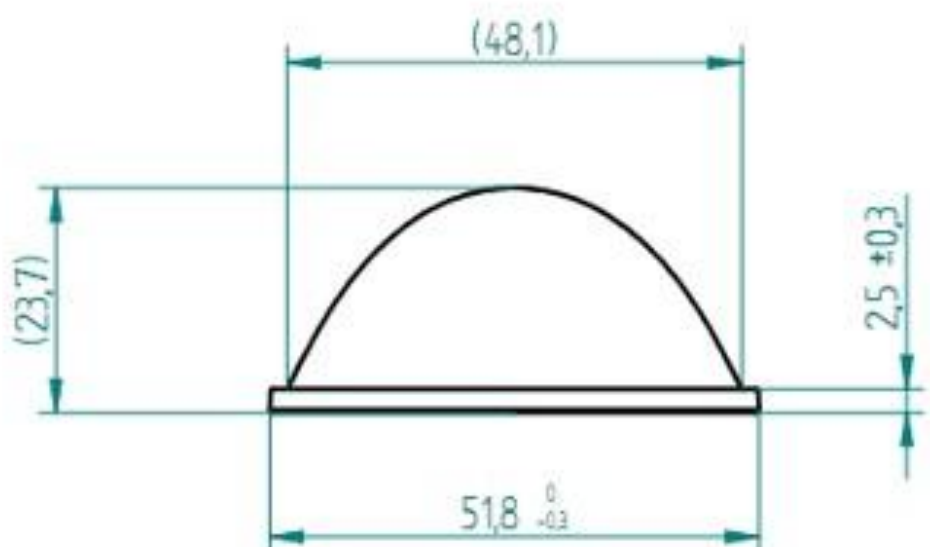
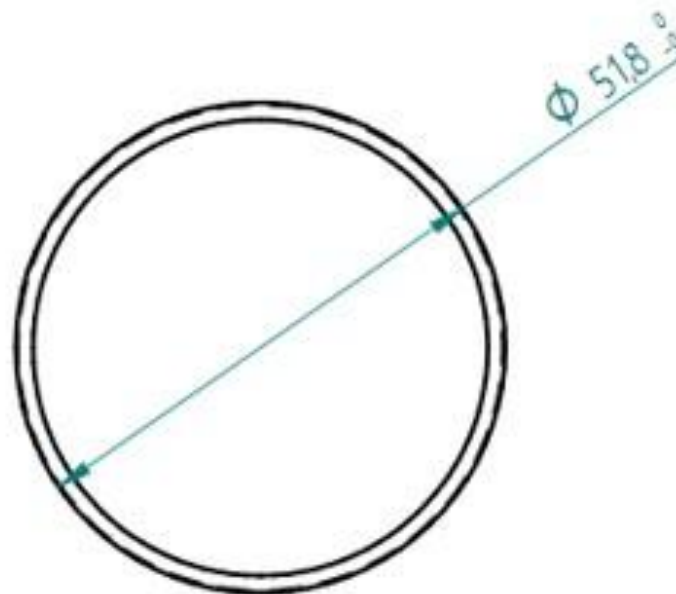


LED used for simulation	Cree XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	2
FWHM C180 [°]	2

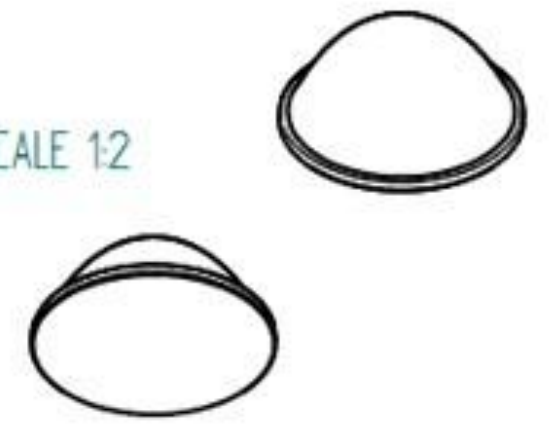
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

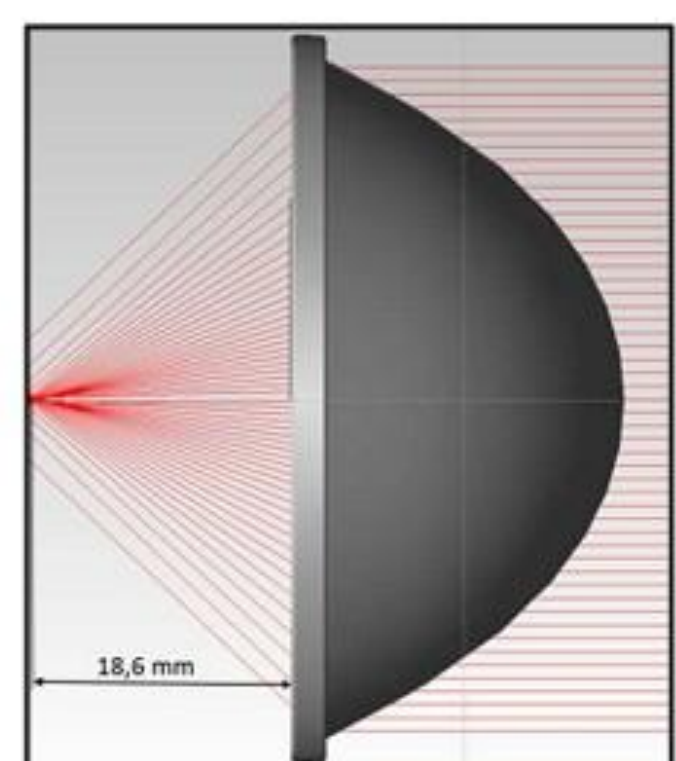
A071 5224

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED





SCALE 1:2



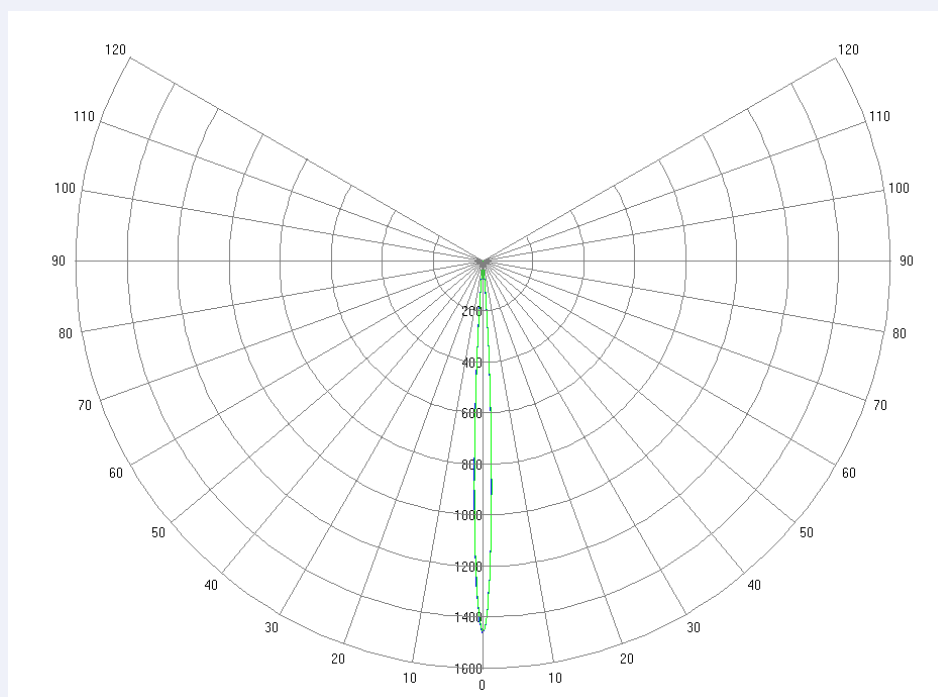


Glass: LIBA or alternative (nd = 1,521)

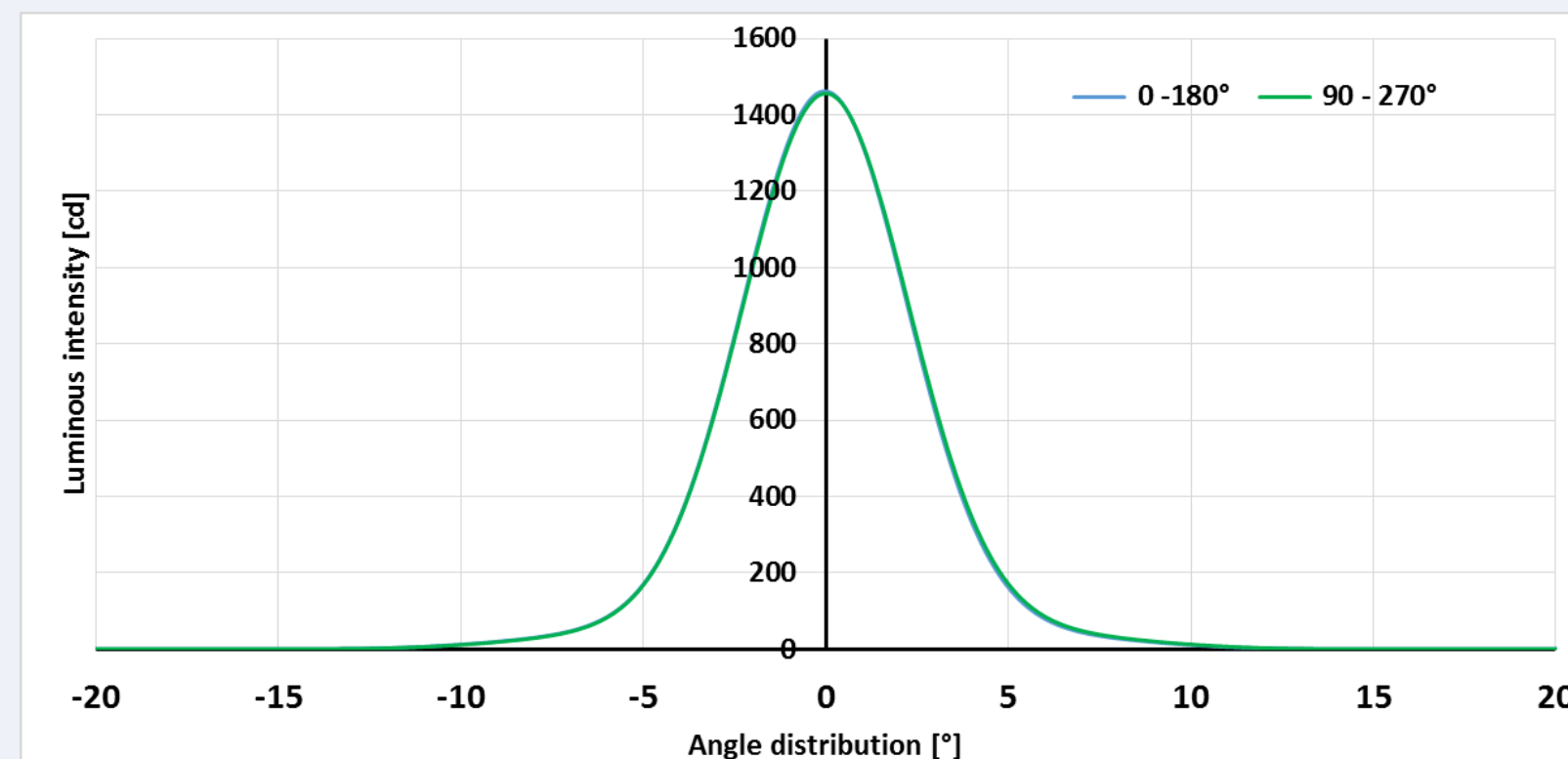
DRAWN	krutky	DATE	05/14/20	 A071 5224
CHECKED				
ENG APPR				
MGR APPR				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				SIZE: 44 FILE NAME: A071_uml.dwg SCALE: WEIGHT: 67 g SHEET 1 OF 1

A071 5224 – simulation results

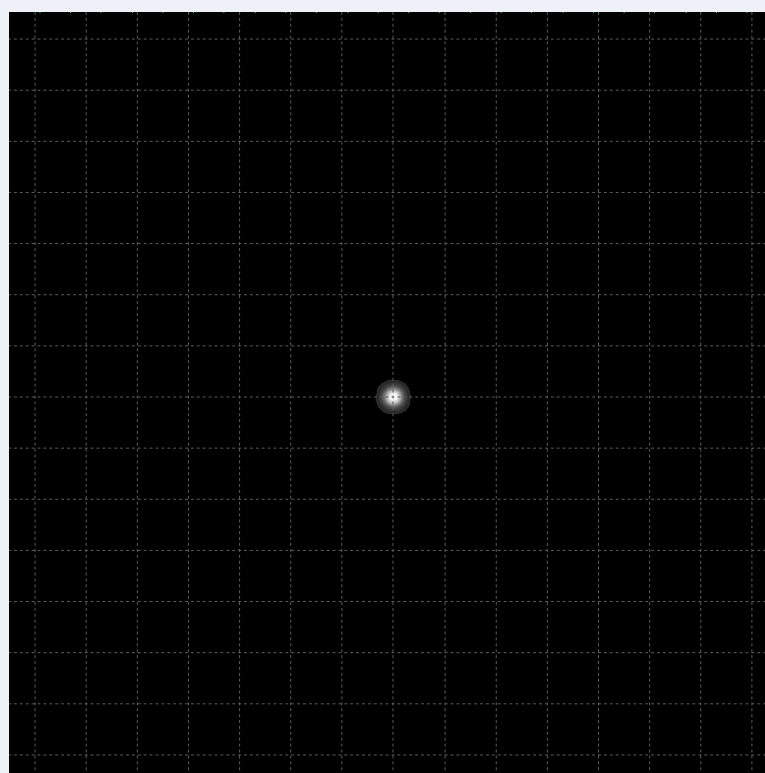
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



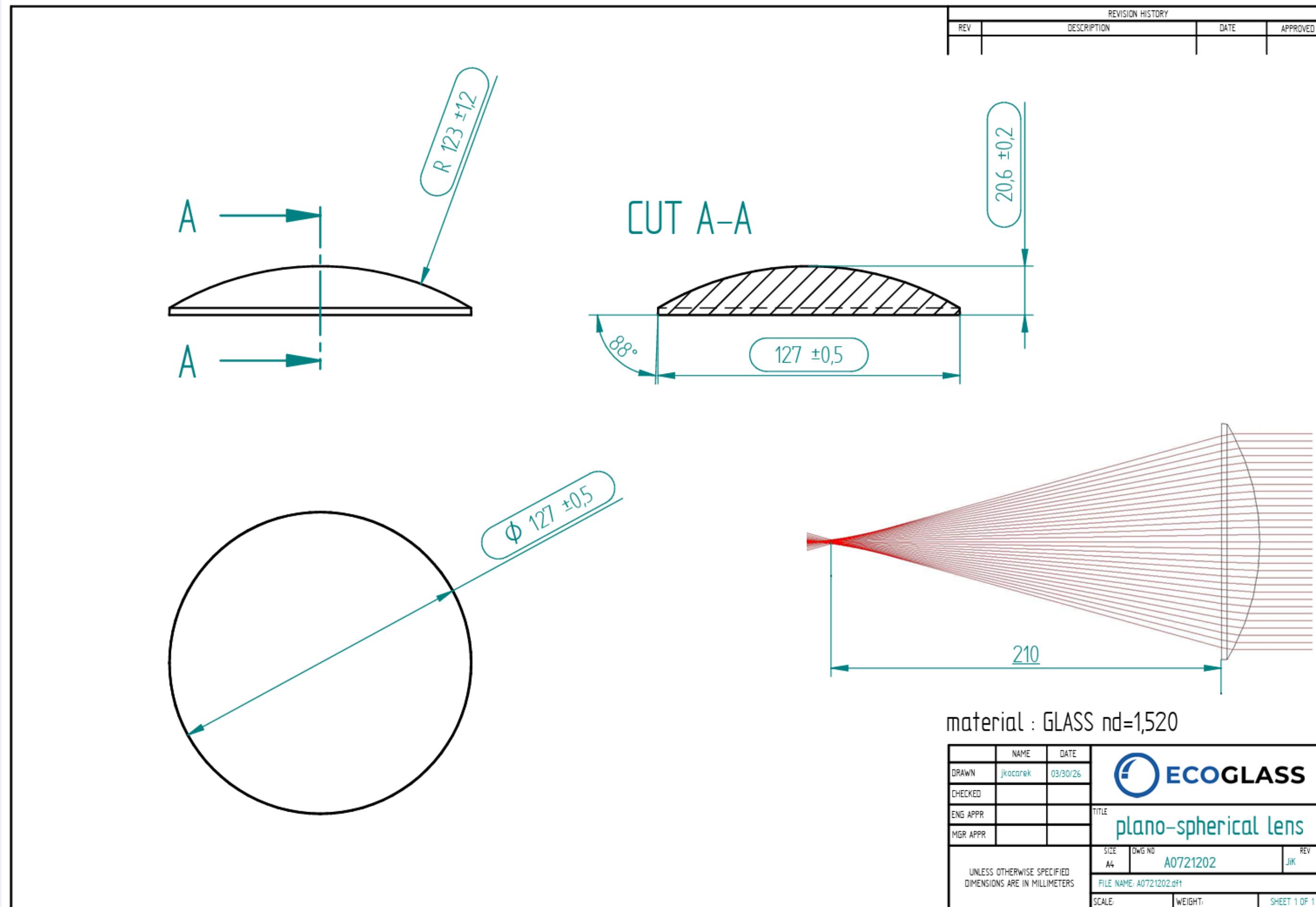
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	6
FWHM C90 [°]	6

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

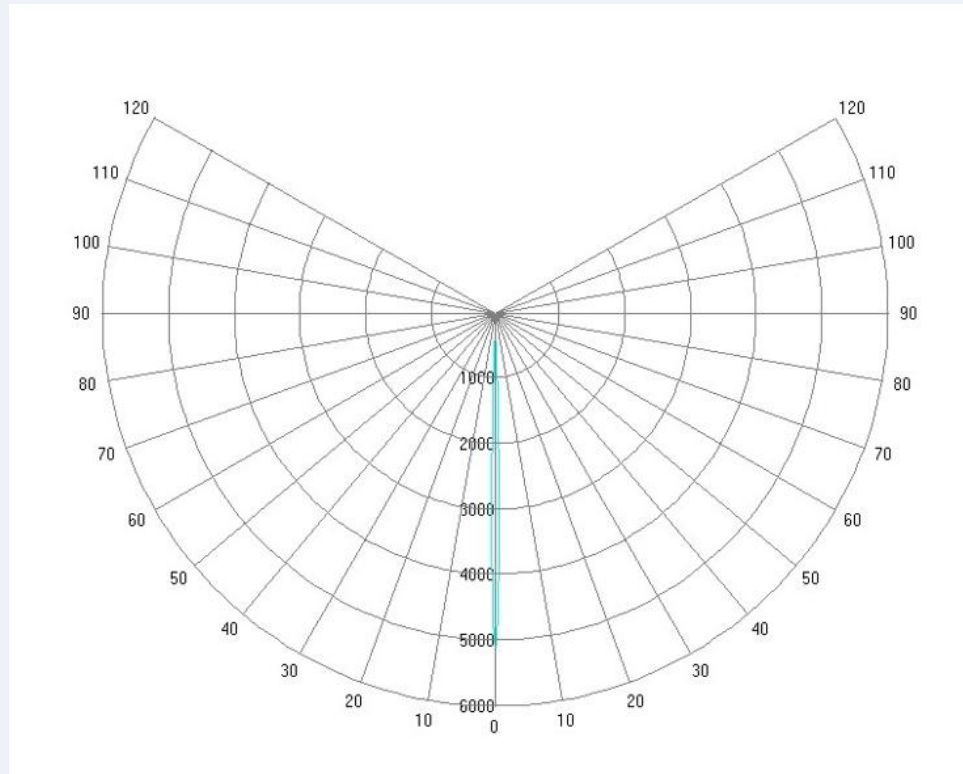
A072 1202



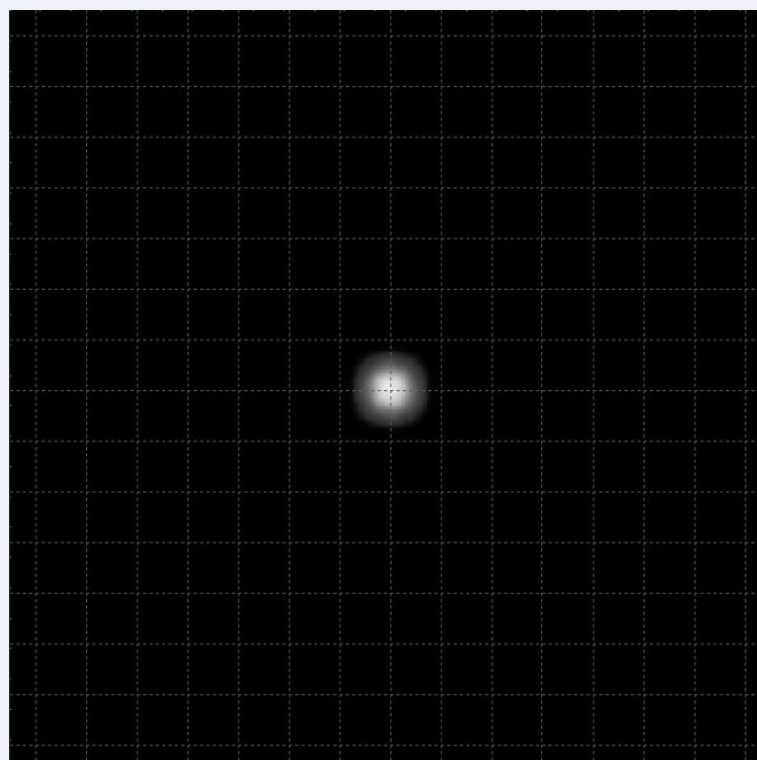
A072 1202 – simulation results



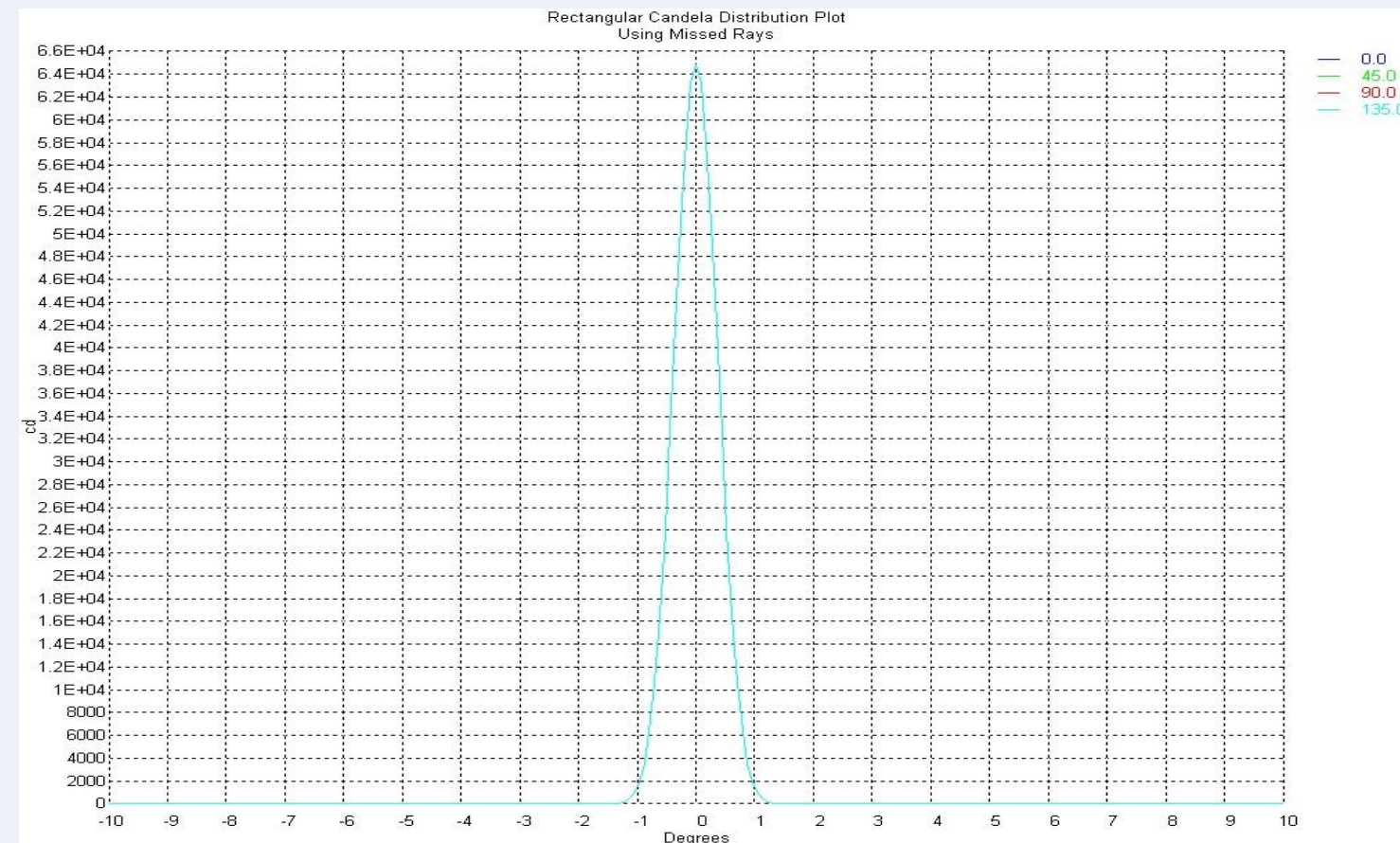
- Polar Candela Distribution Plot



- Projection wall 3x3 m at 10m



- Rectangular Candela Distribution Plot

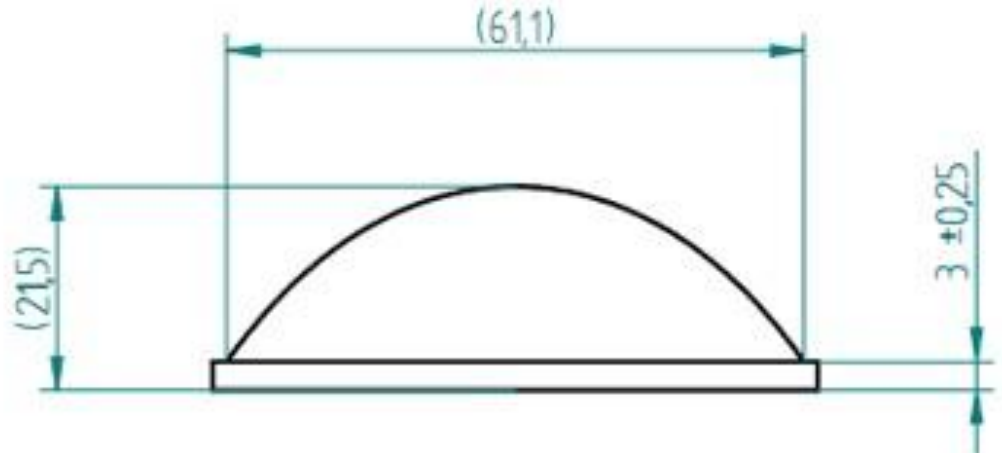
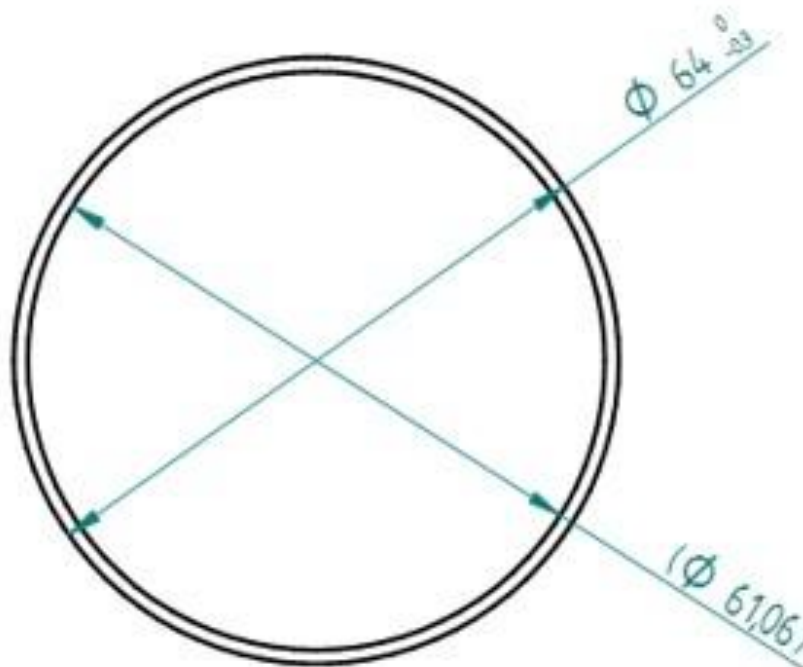


LED used for simulation	Cree XM-L2
Luminous flux of LED [lm]	235
FWHM Co [°]	1
FWHM C90 [°]	1


* The ratio between luminous flux on the projection wall (3x3 m at 10 m) and luminous flux of LED

A079 6422

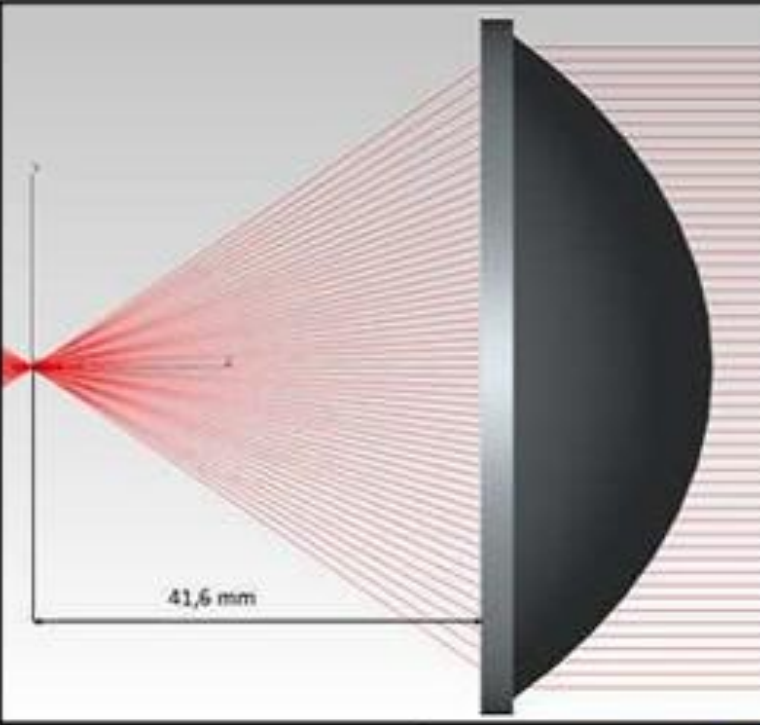
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED





SCALE 1:2



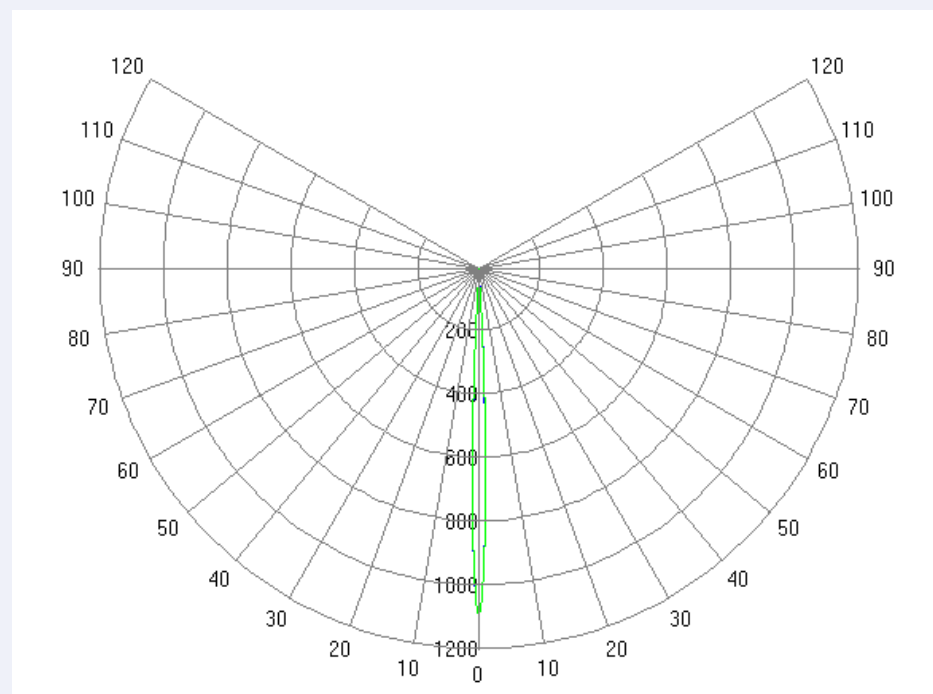
Glass: LIBA or alternative (nd = 1,521)



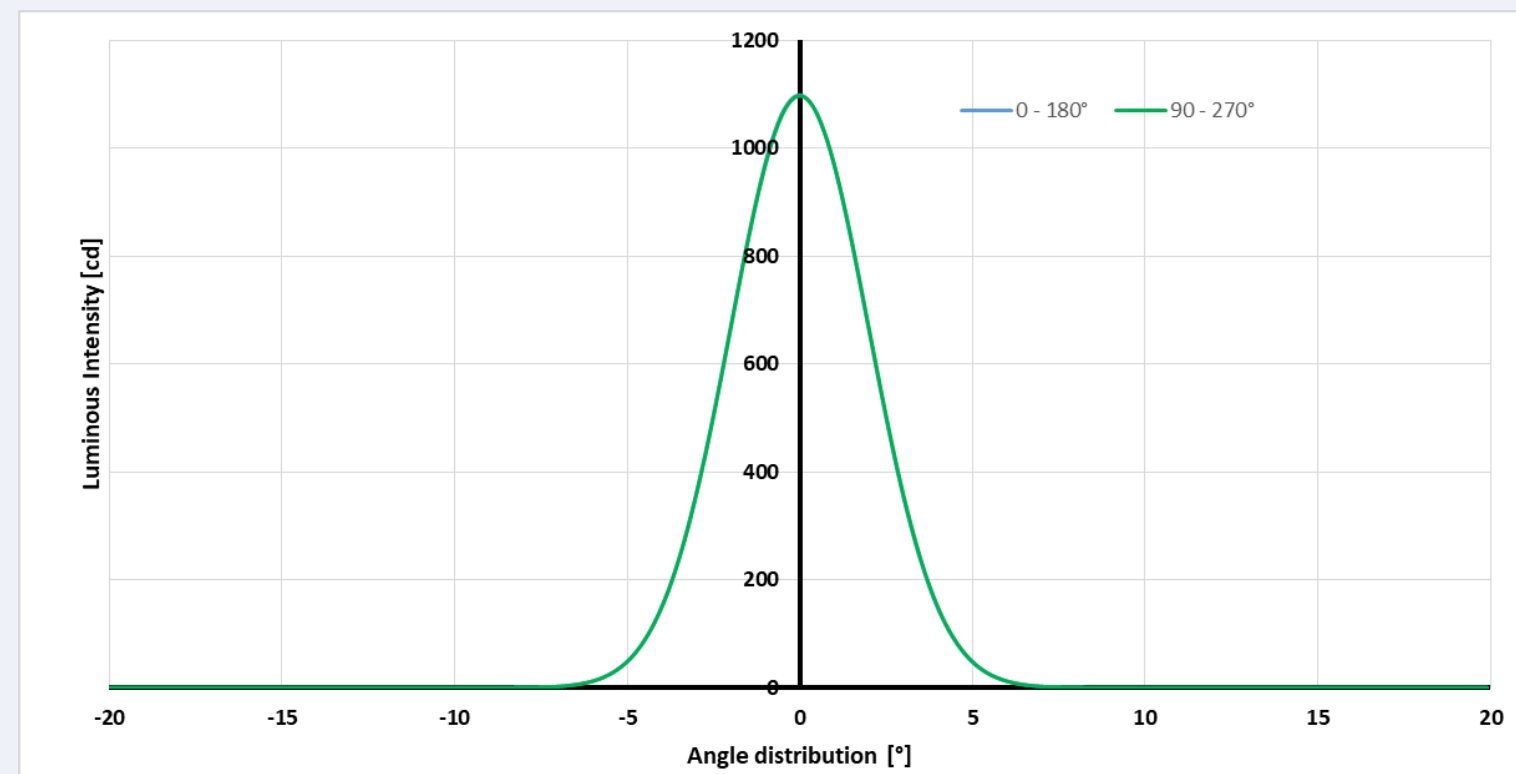
DRAW	krutky	15/11/20	 A079 6422
CHK'D			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: 44 FILE NAME: A079_enuL01 SCALE: WEIGHT: 58 g SHEET 1 OF 1

A079 6422 – simulation results

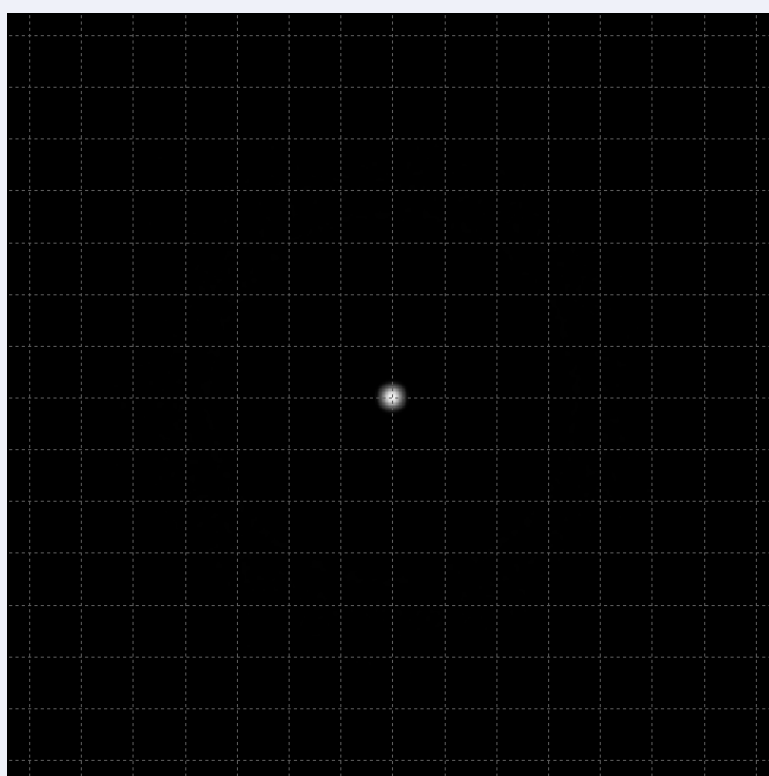
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

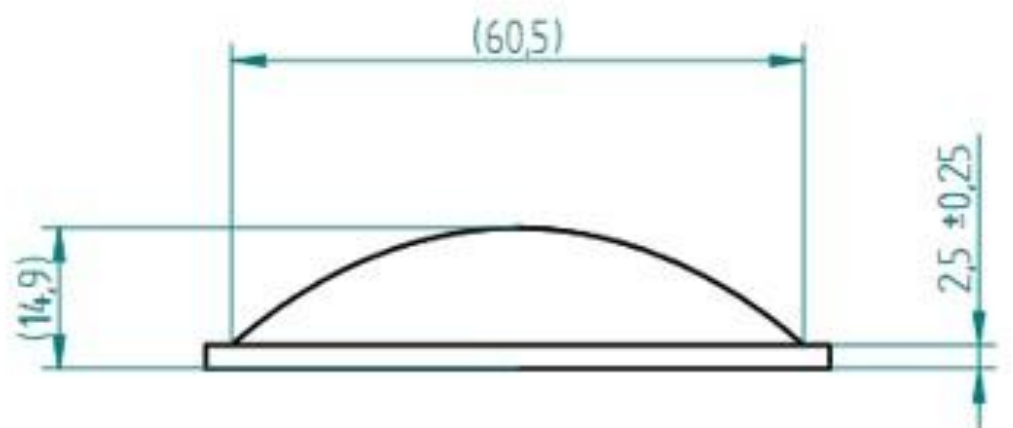
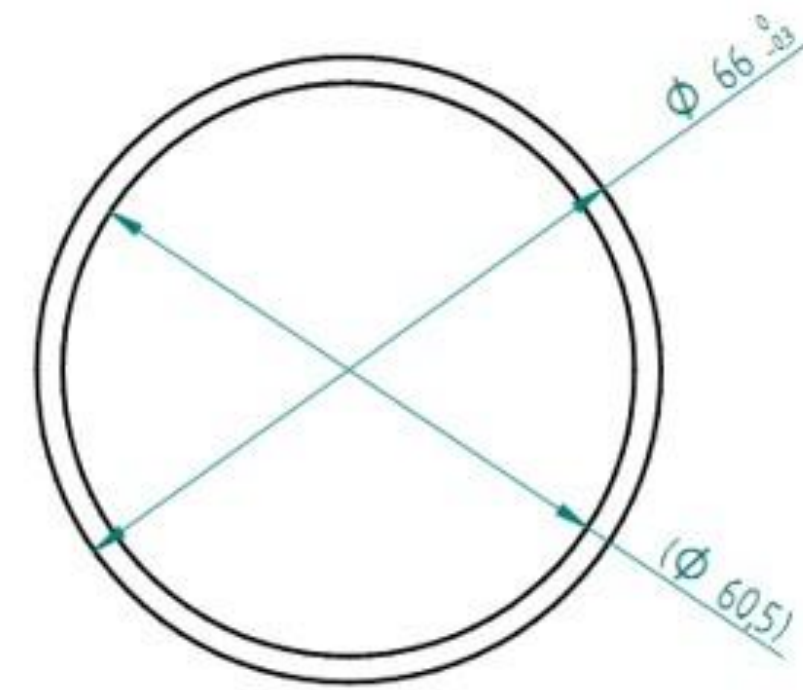


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	5
FWHM C ₉₀ [°]	5


* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A104 6616

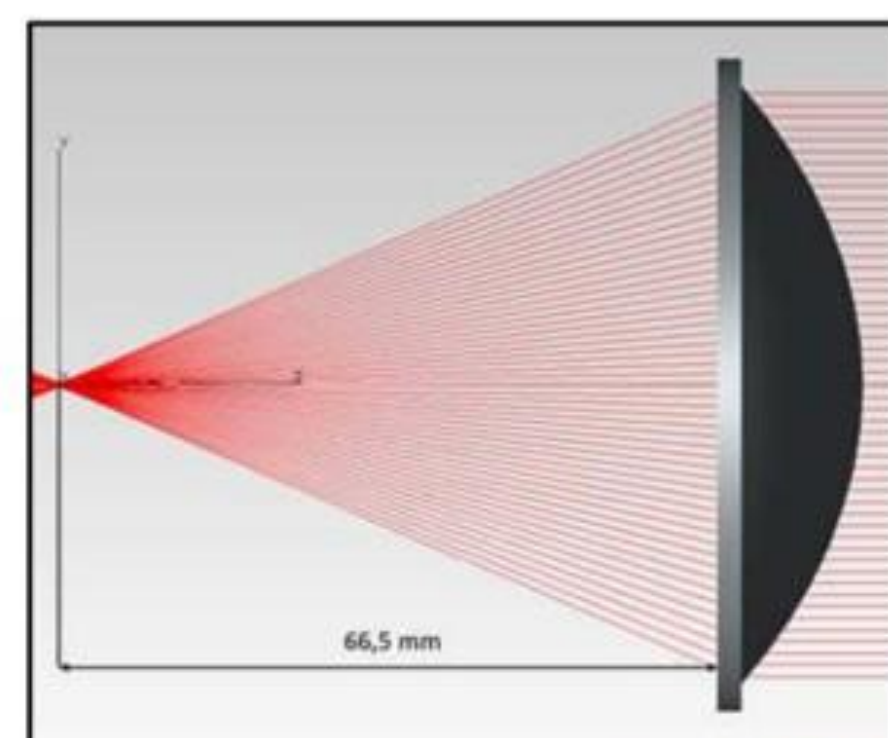
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED





SCALE 1:2



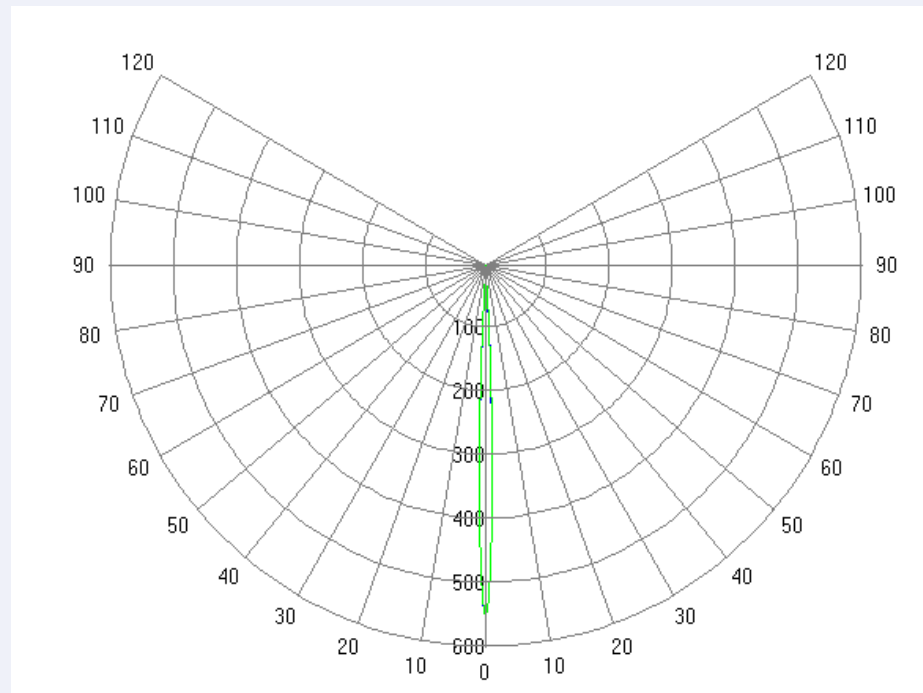
Glass: LIBA or alternative (nd = 1,521)



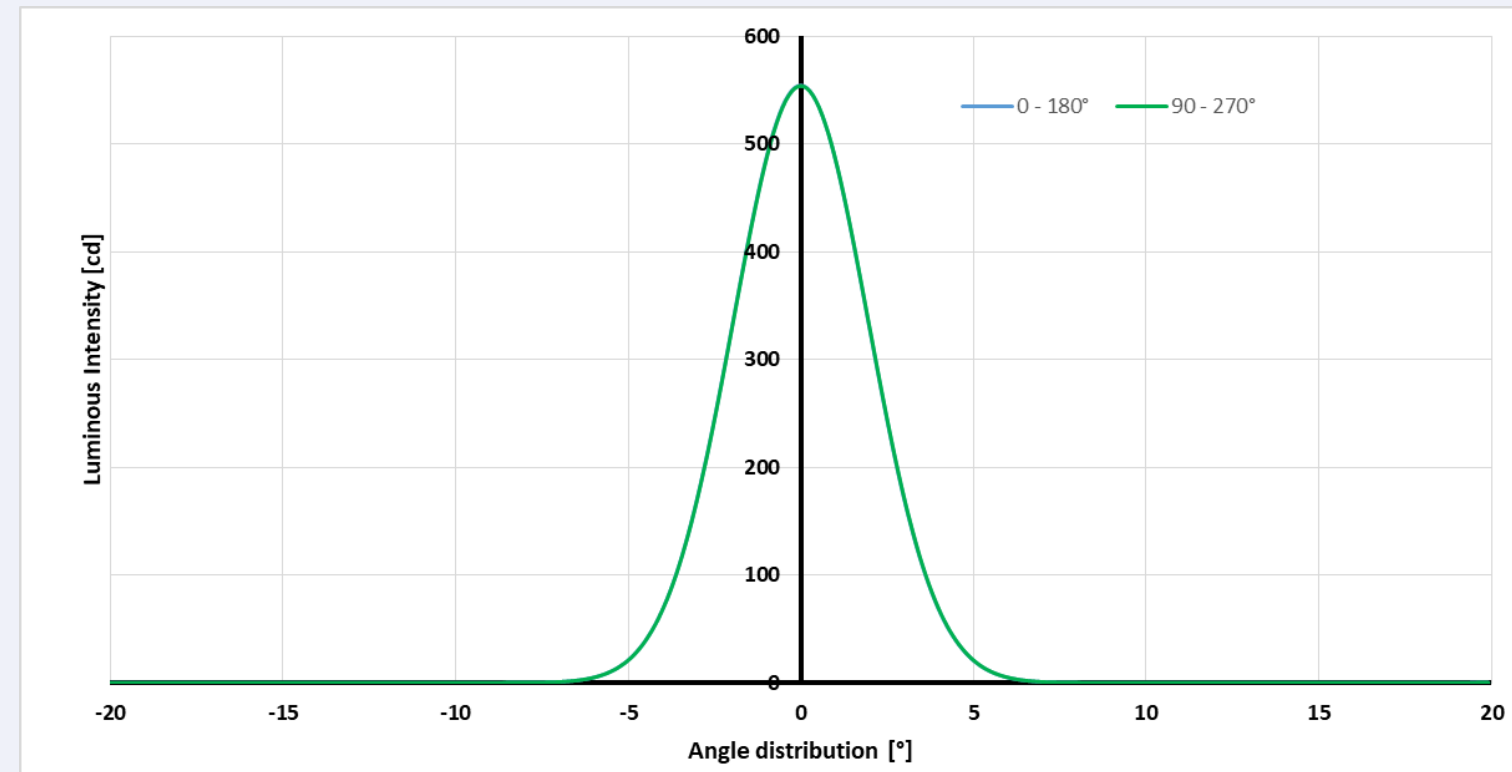
DRAWN	NAME	DATE	
	krutky	05/14/20	
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			<p style="margin: 0;">A104 6616</p> <p style="margin: 0;">SIZE: 44</p> <p style="margin: 0;">FILE NAME: A104_small.tif</p> <p style="margin: 0;">SCALE: WEIGHT: 65 g SHEET 1 OF 1</p>

A104 6616 – simulation results

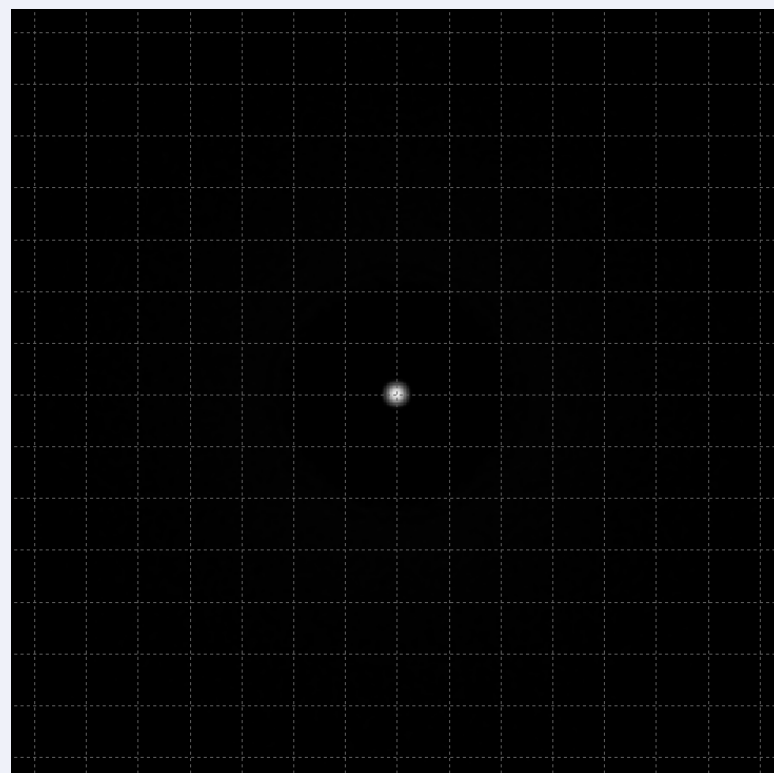
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

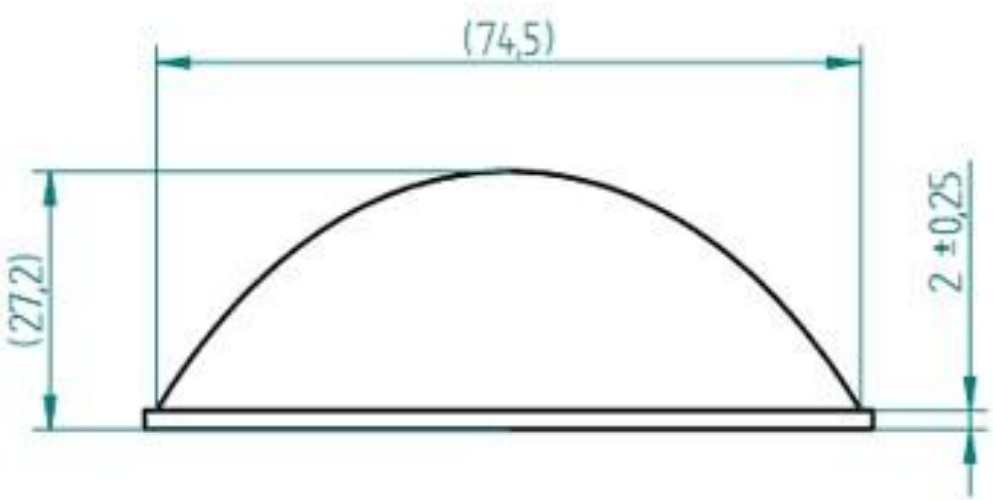
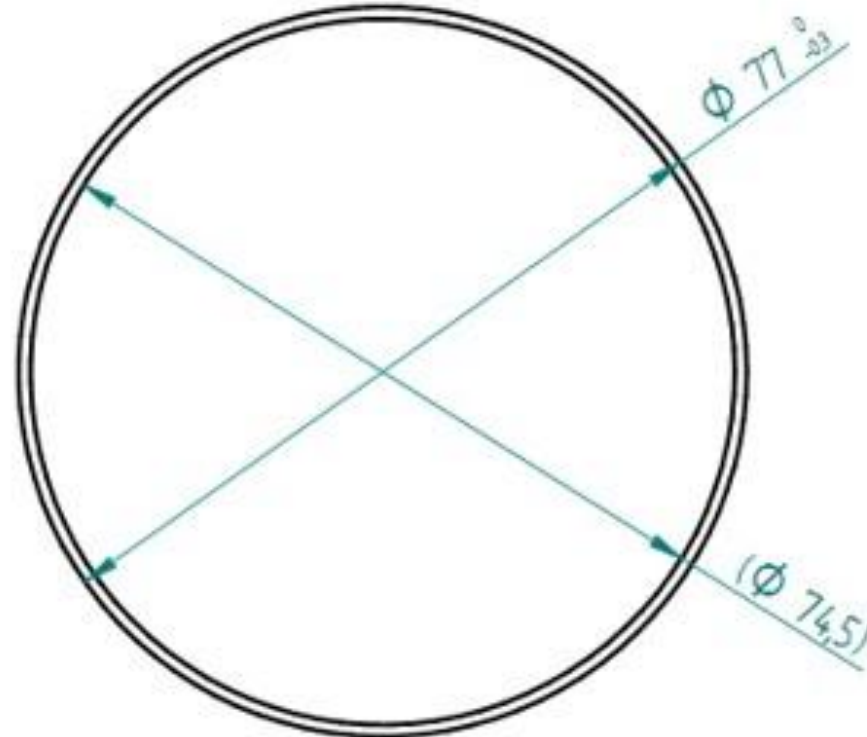


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5


* The ratio between luminous flux on the projection wall (3x3 m at 1m) and luminous flux of LED

A116 7727

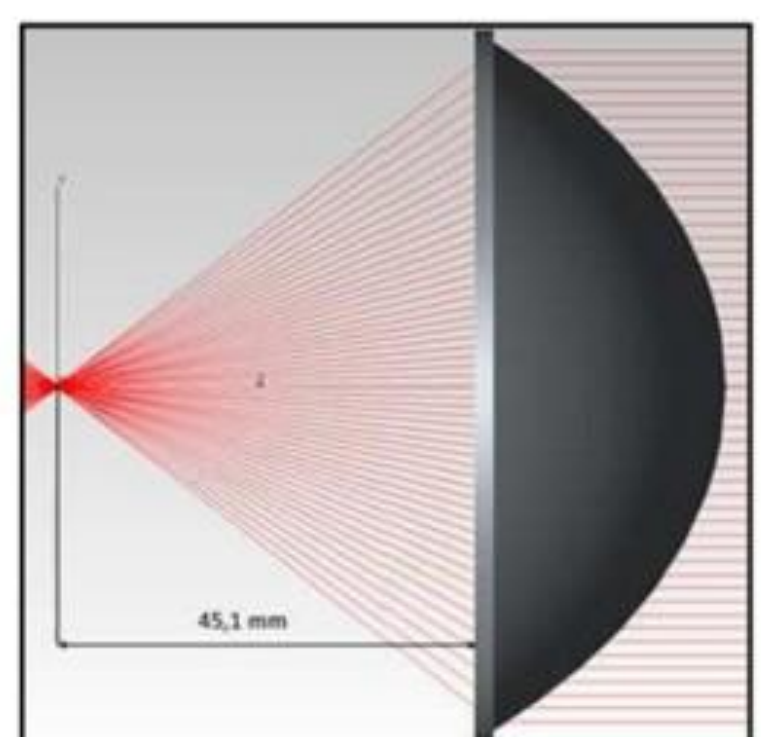
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED





SCALE 1:2



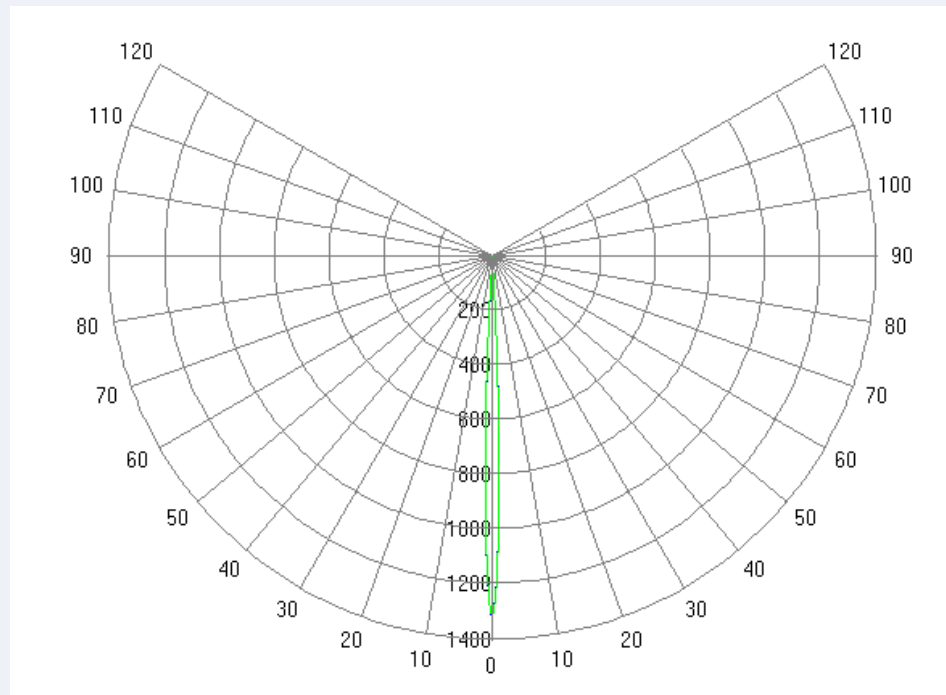
Glass: LIBA or alternative (nd = 1,521)



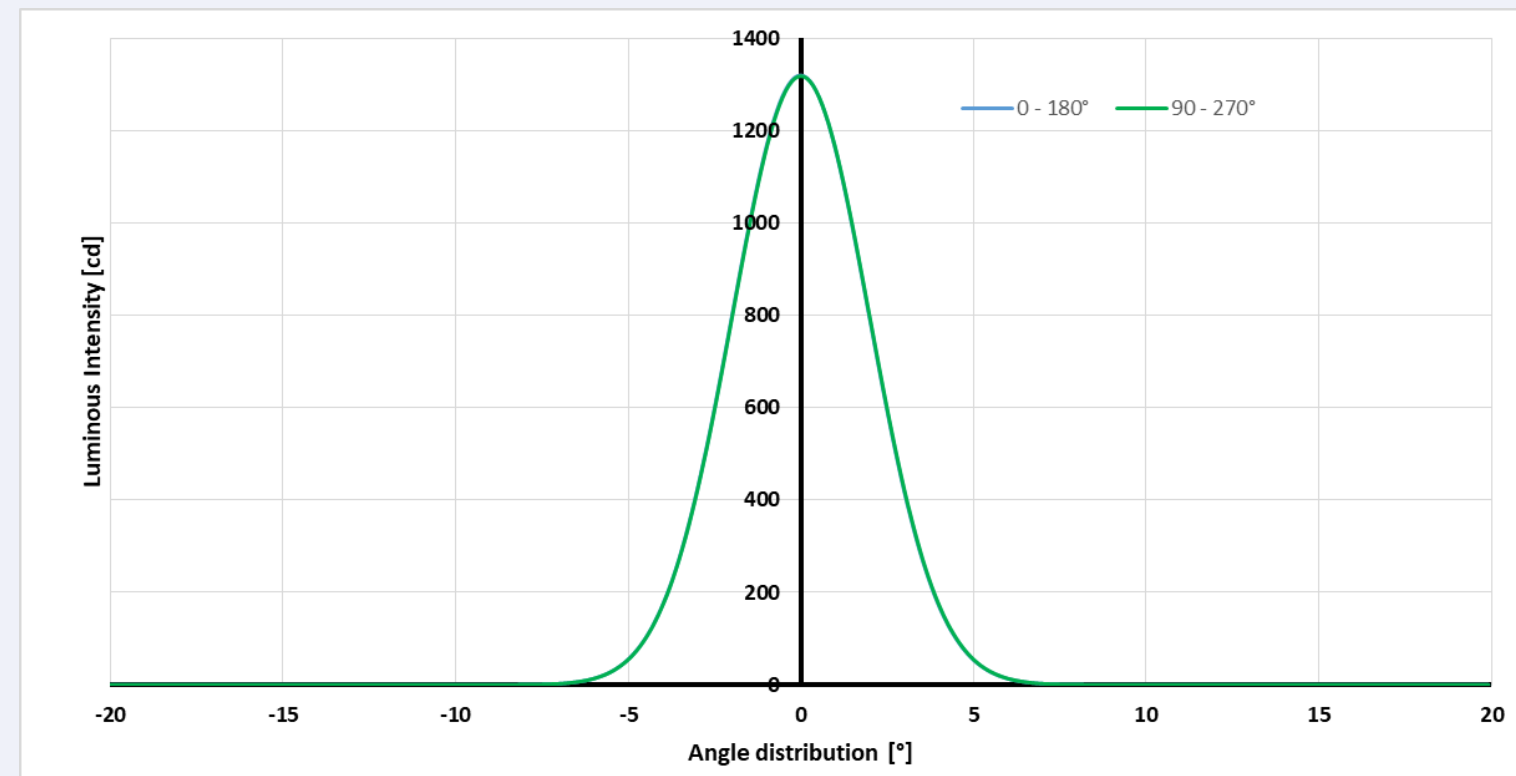
DRAWN	kr/ky	DATE	15/11/20	 A116 7727
CHECKED				
ENG APPR				
MGR APPR				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				SIZE: 44 FILE NAME: A116_LensLeft SCALE: WEIGHT: 174 g SHEET 1 OF 1

A116 7727 – simulation results

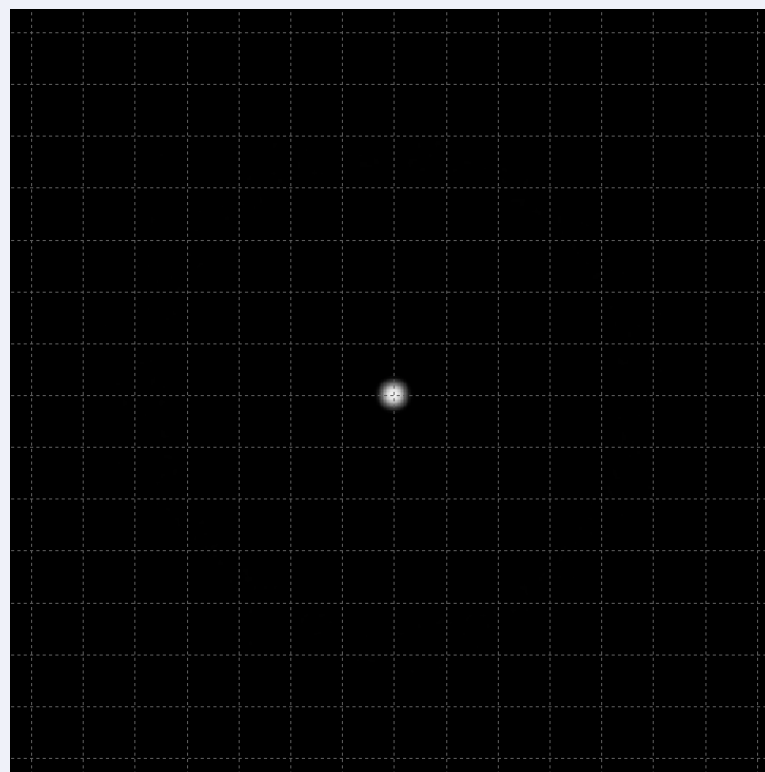
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

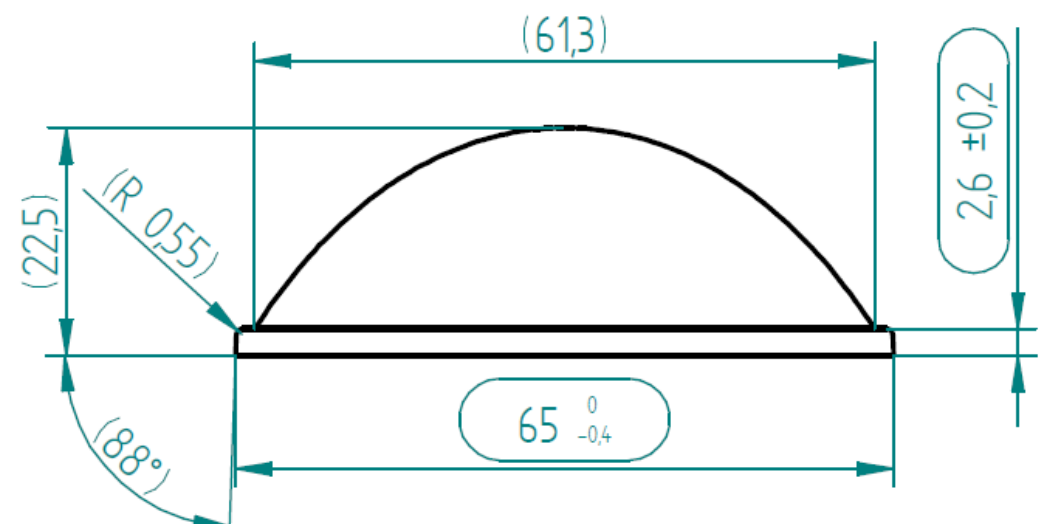
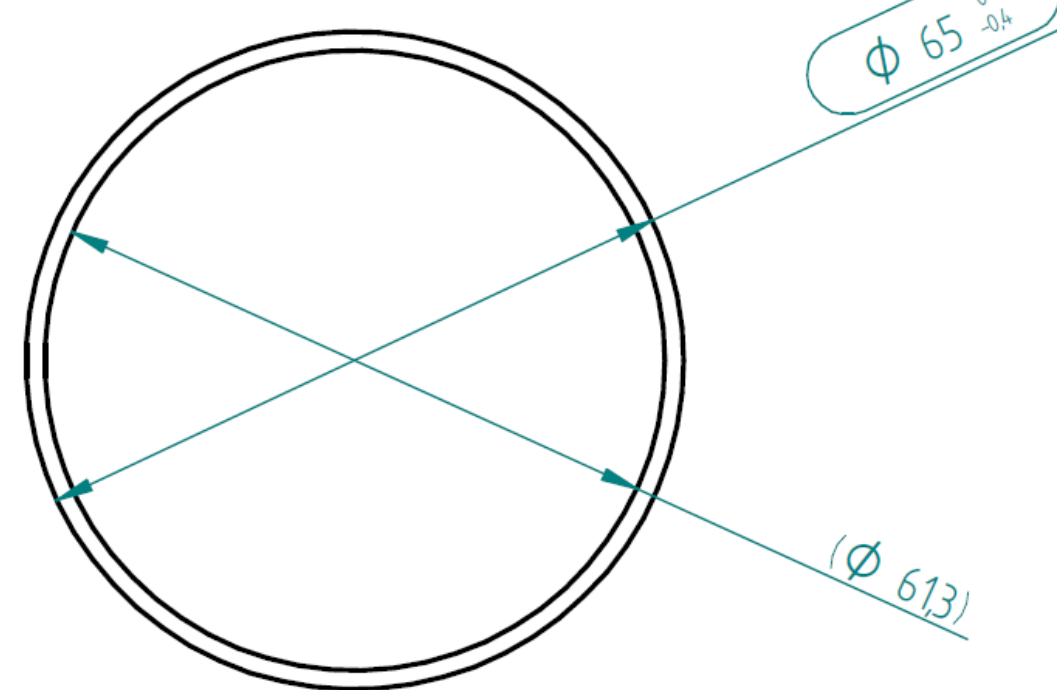


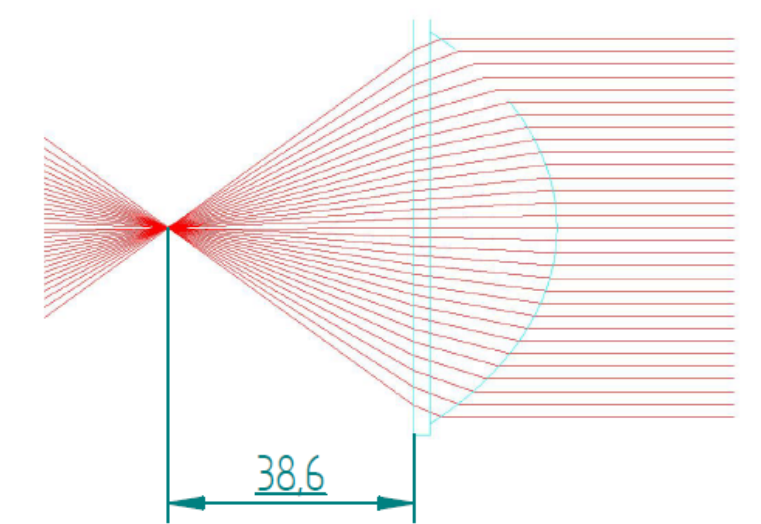
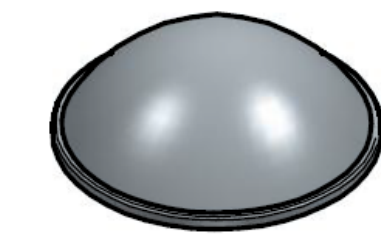
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	5
FWHM C ₉₀ [°]	5

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED


A132 6523

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

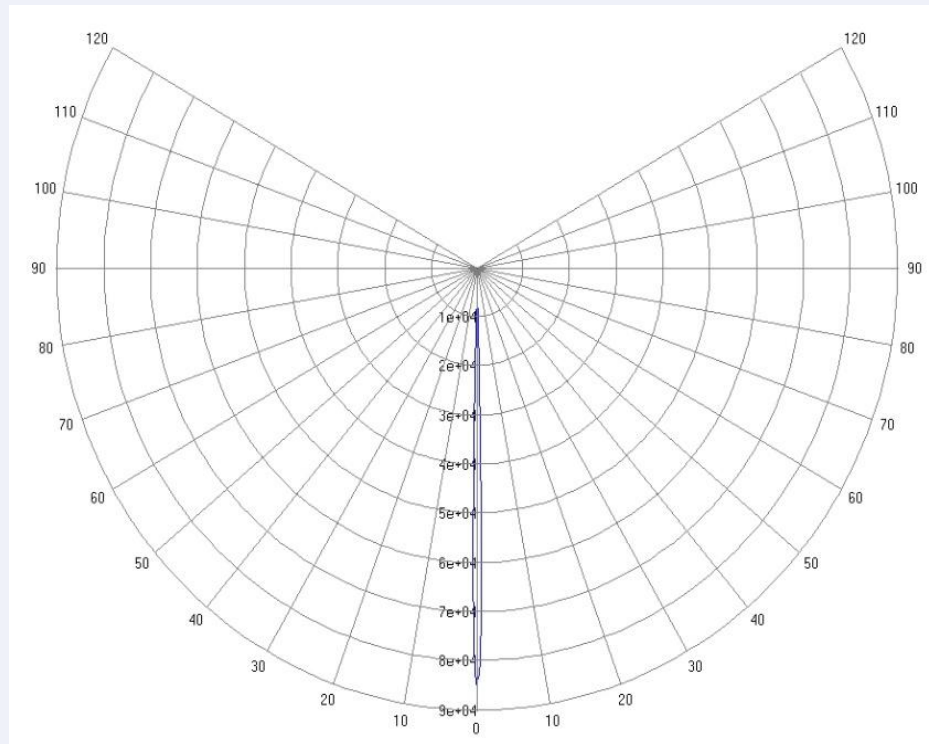



material : GLASS nd=1,520

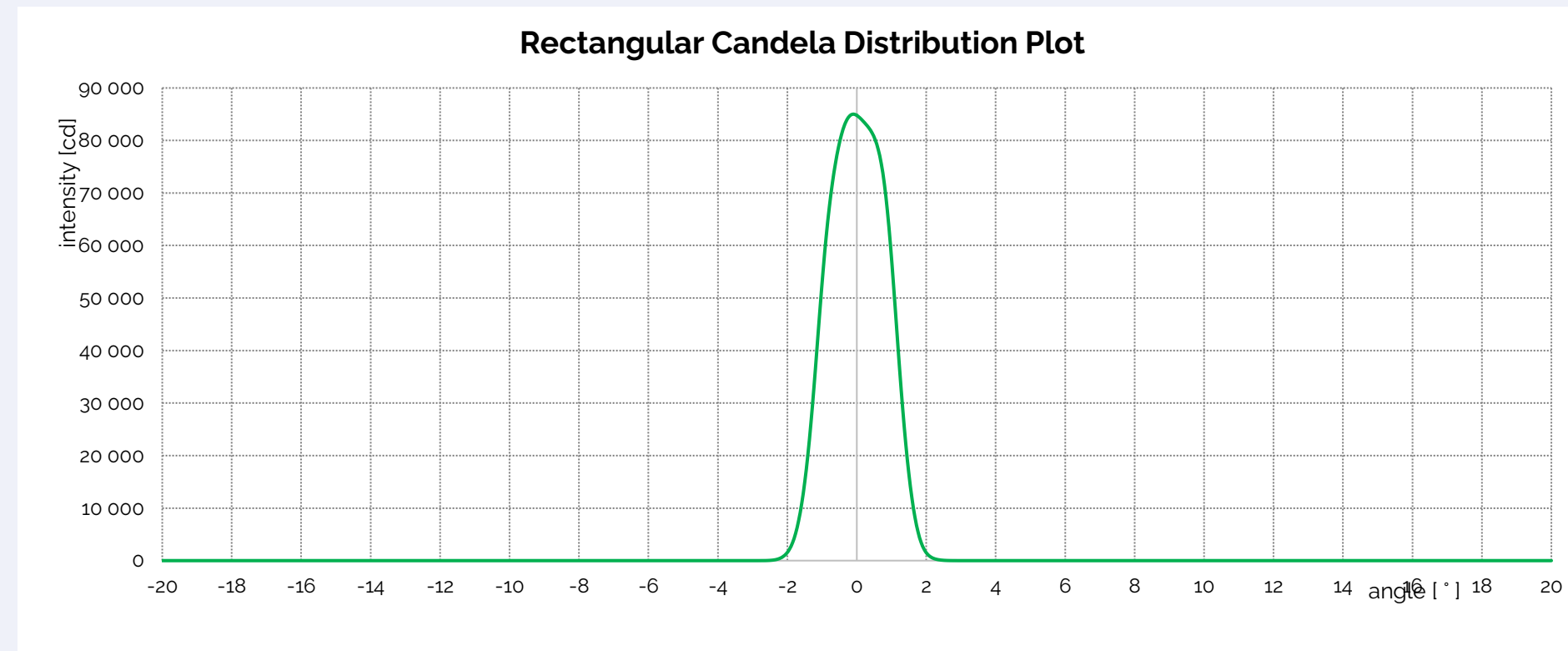
DRAWN	jkocarek	DATE	06/10/25	
CHECKED				
ENG APPR				
MGR APPR				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				TITLE Aspheric Lens
SIZE A4		DWG NO A132 6523		REV
FILE NAME: A132 6523 rekonstrukce z vykresuřt				
SCALE		WEIGHT		SHEET 1 OF 1

A132 6523 – simulation results

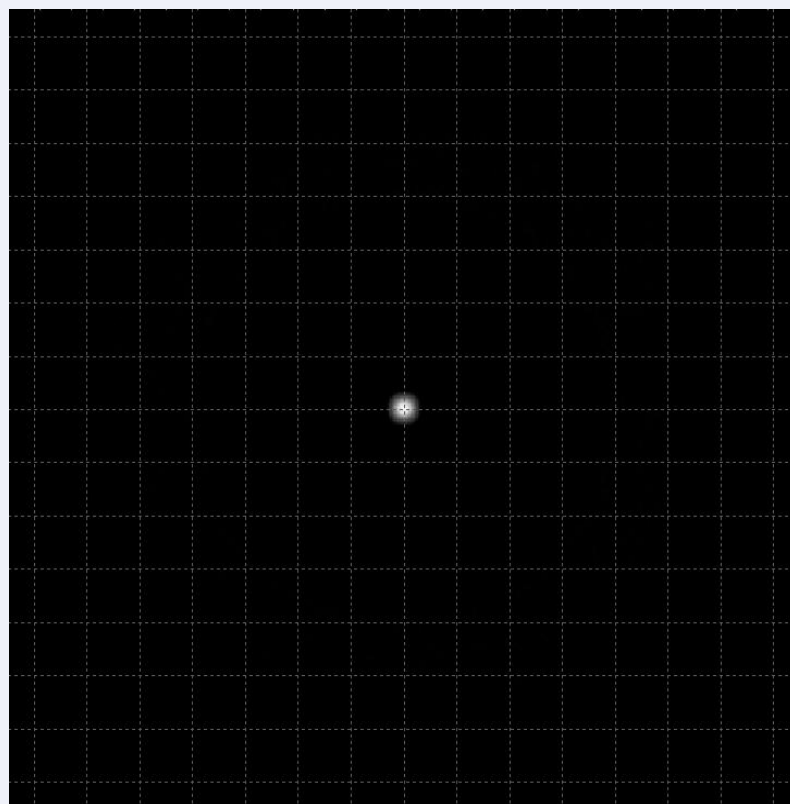
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



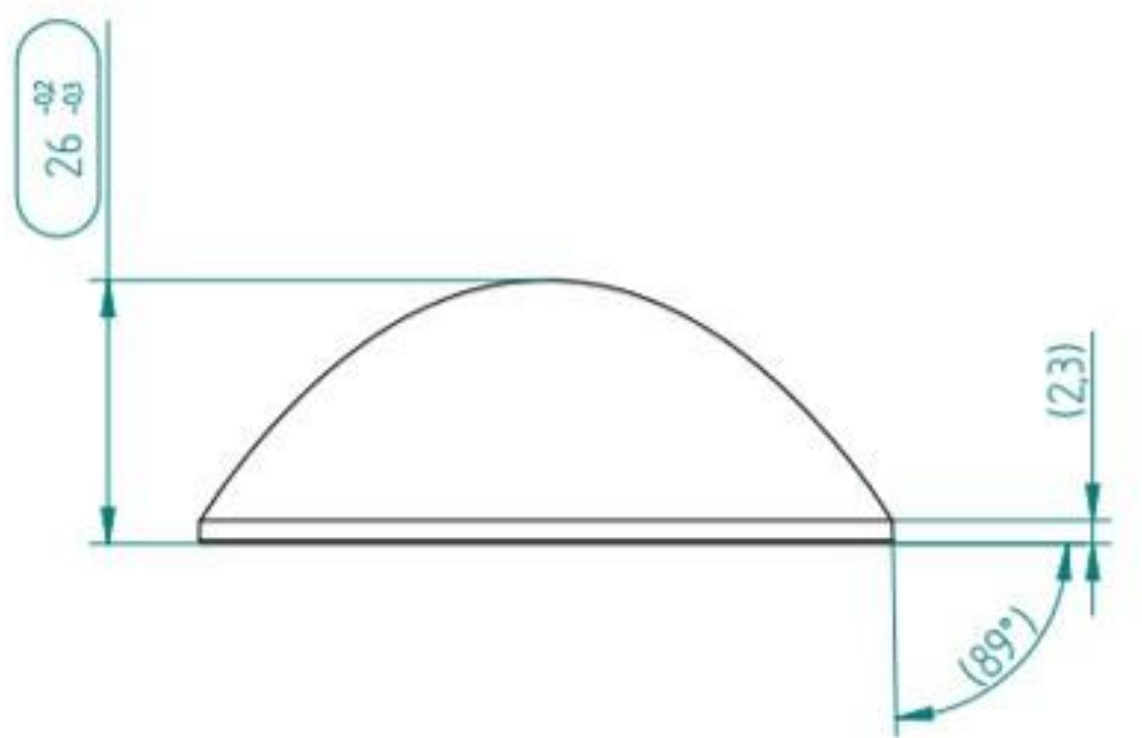
- Projection wall 3x3 m at 1m

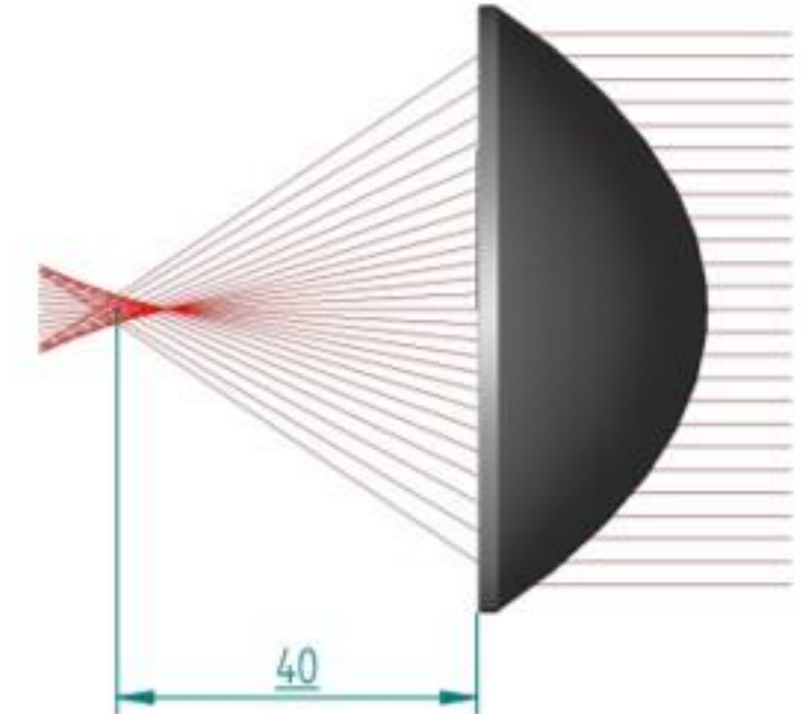


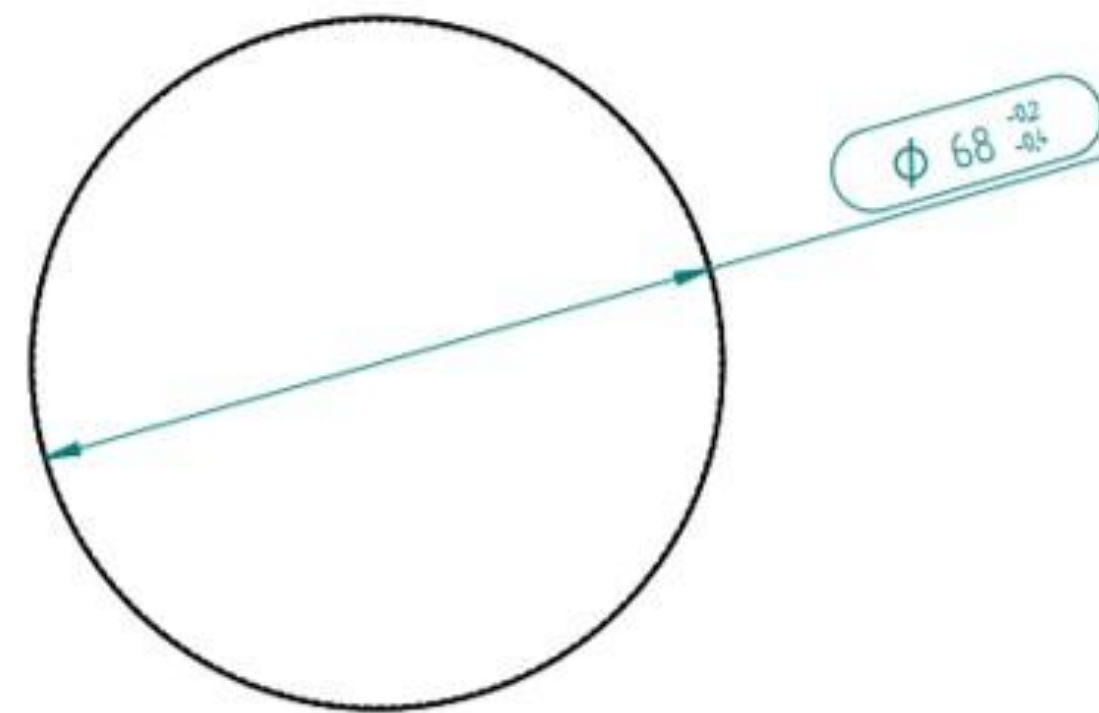
LED used for simulation	Cree XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	2,5
FWHM C180 [°]	2,5

A163 6827


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED





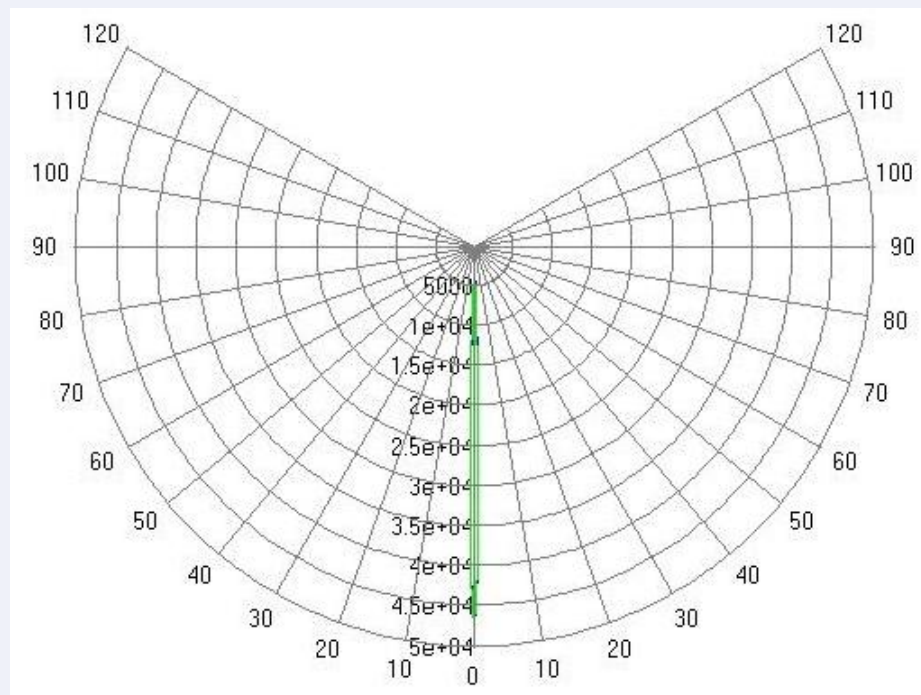


material : GLASS nd = 1,520

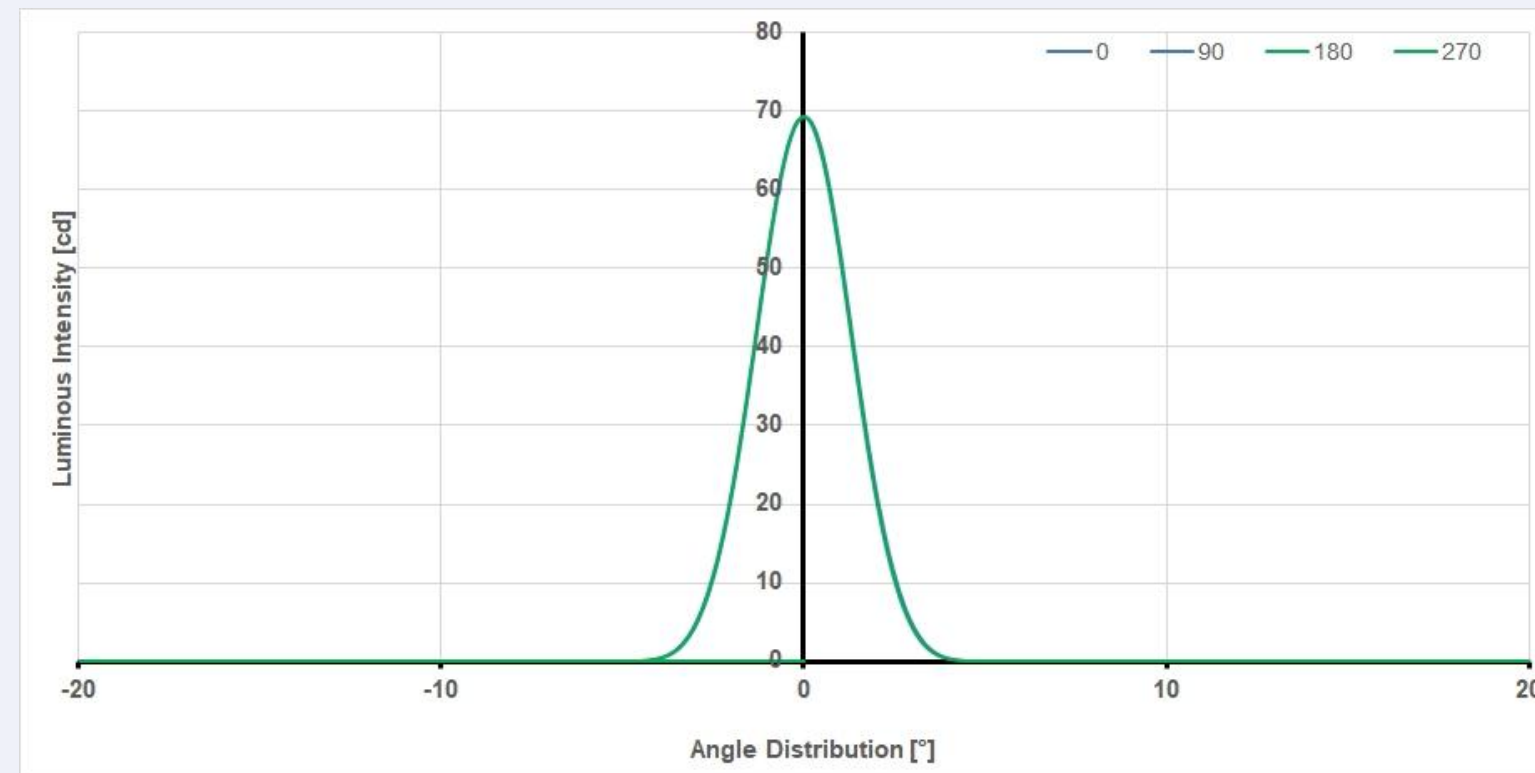
DRAWN	NAME	DATE		
CHECKED	jkocarek	09/14/23		
ENG APPR				
MGR APPR				
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±X.XX 3 PL ±X.XXX</small>			TITLE	Aspheric lens
SIZE	DWG NO	REV		
A4	A163 6827			
			FILE NAME: A163 6827.dft	
SCALE:		WEIGHT:	SHEET 1 OF 1	

A163 6827 – simulation results

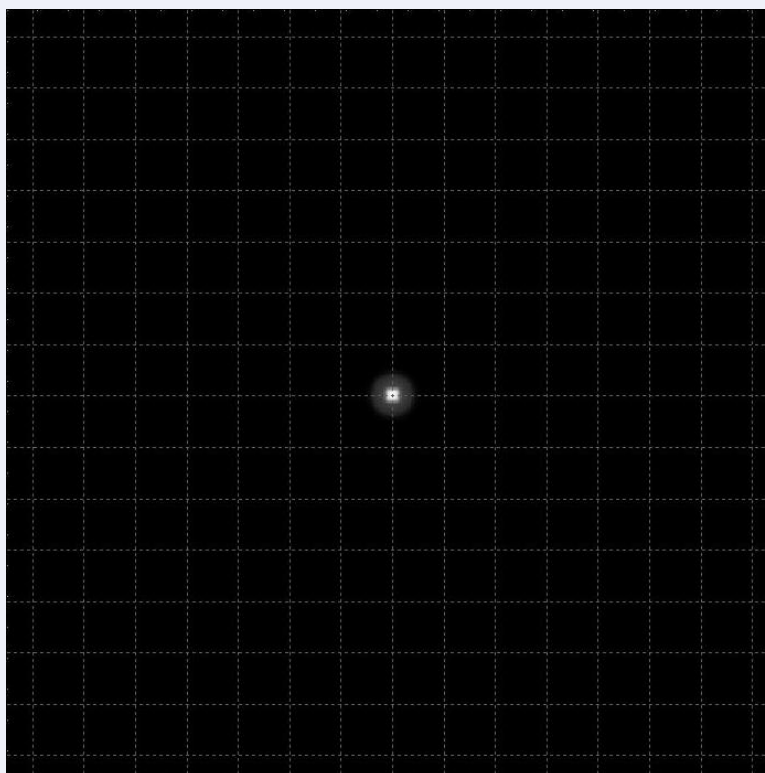
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

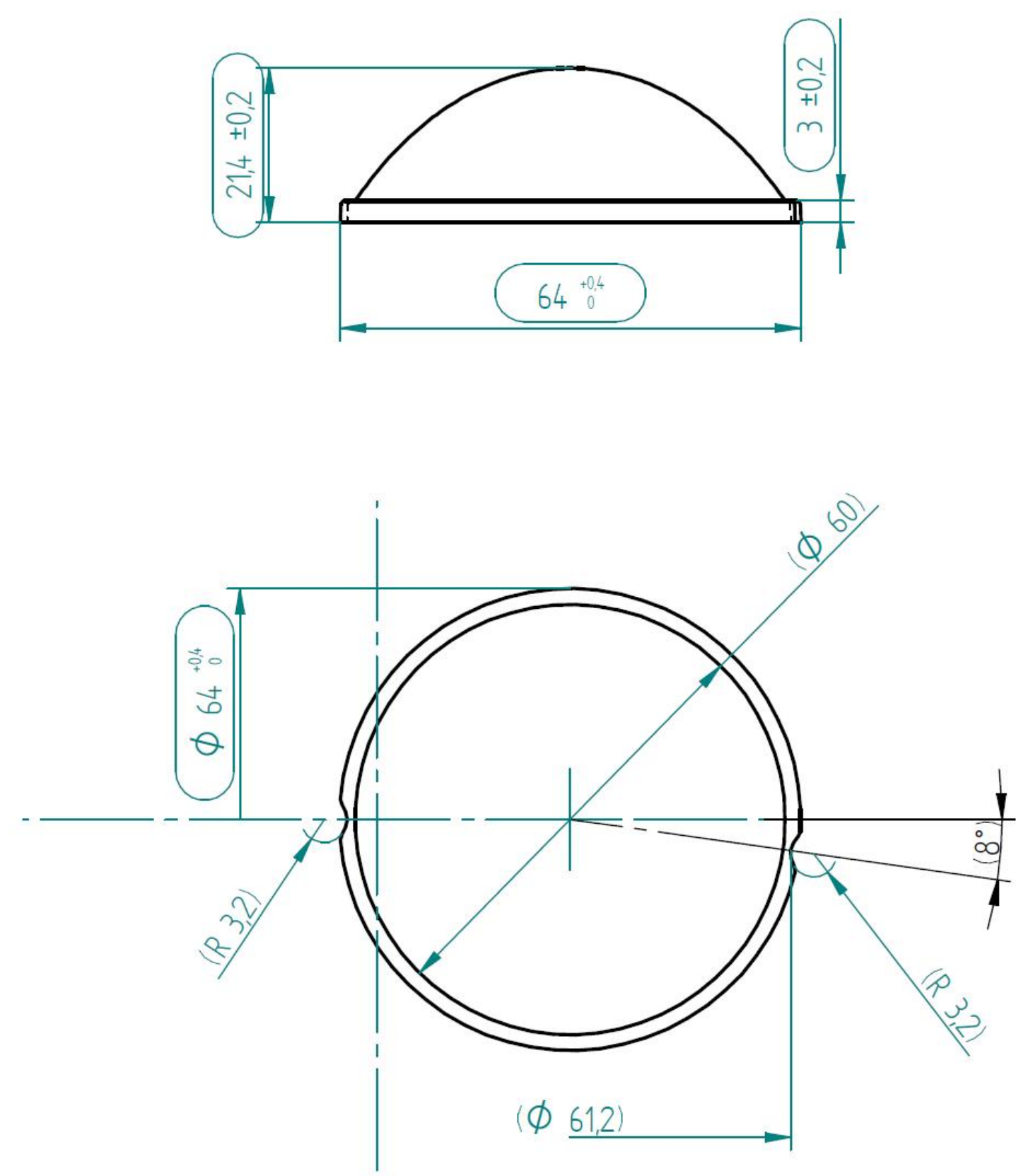


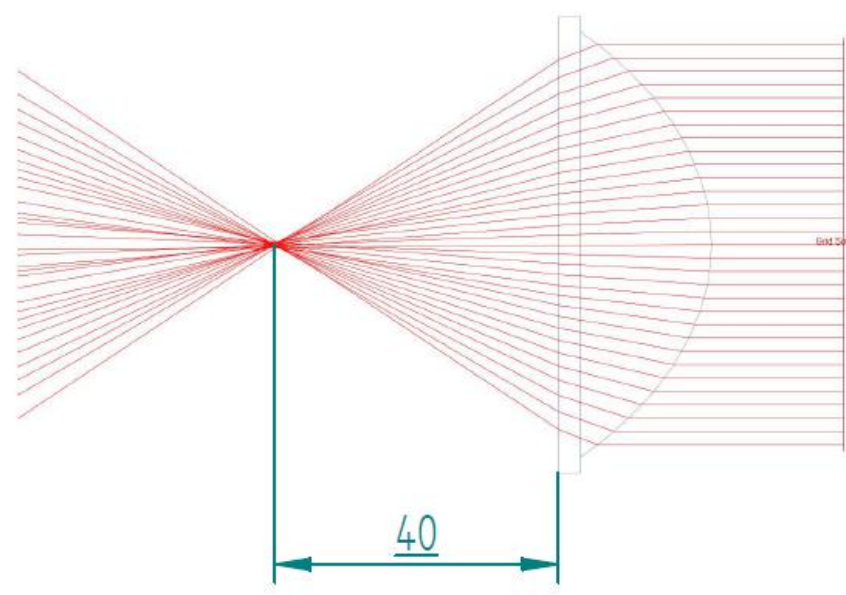

LED used for simulation	XP-G4
Luminous flux of LED [lm]	357
FWHM Co [°]	3
FWHM C90 [°]	3

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED


A175 6419

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



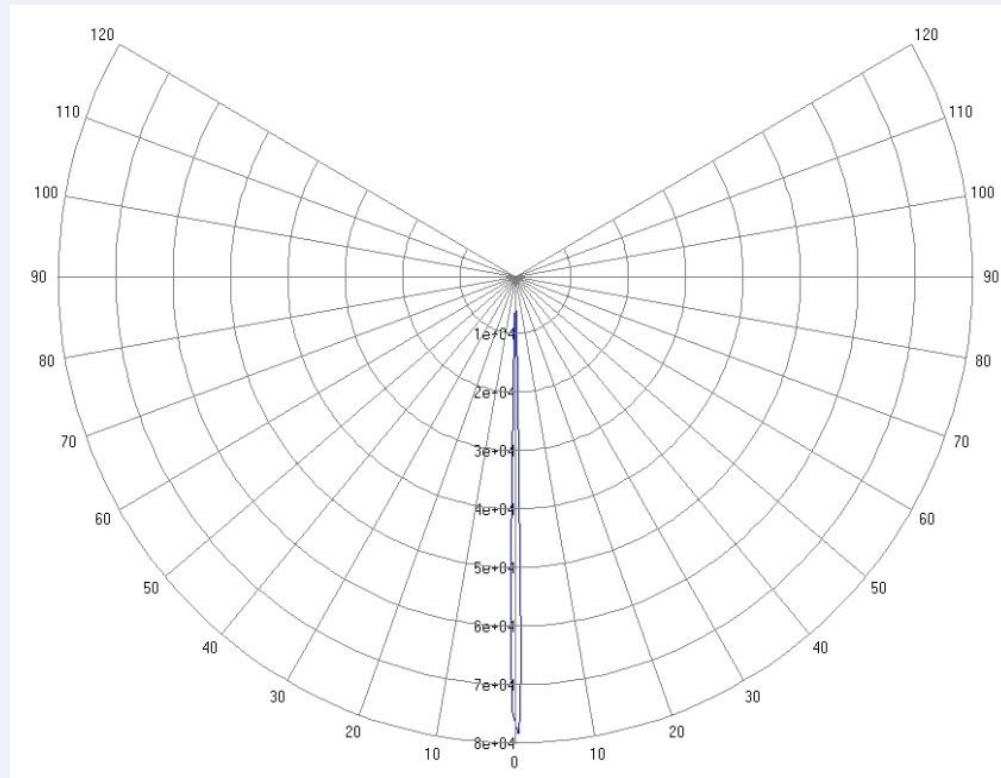
material : GLASS nd=1,520

	NAME	DATE	
DRAWN	jkocarek	06/11/25	
CHECKED			
ENG APPR			
MGR APPR			
			TITLE Aspheric Lens Modulated
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE
			DWG NO
			REV
			FILE NAME: A175-6419.dft
SCALE:	WEIGHT:	SHEET 1 OF 1	

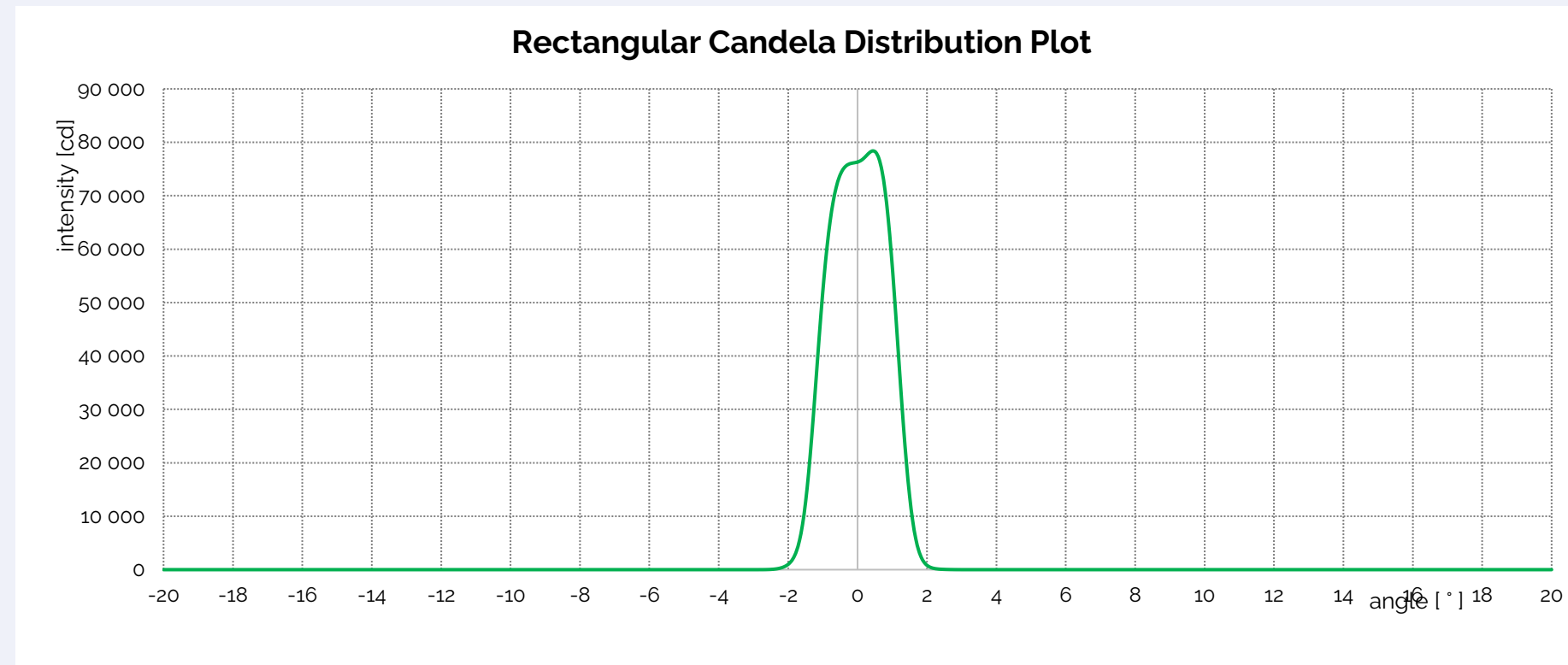
A175 6419 – simulation results



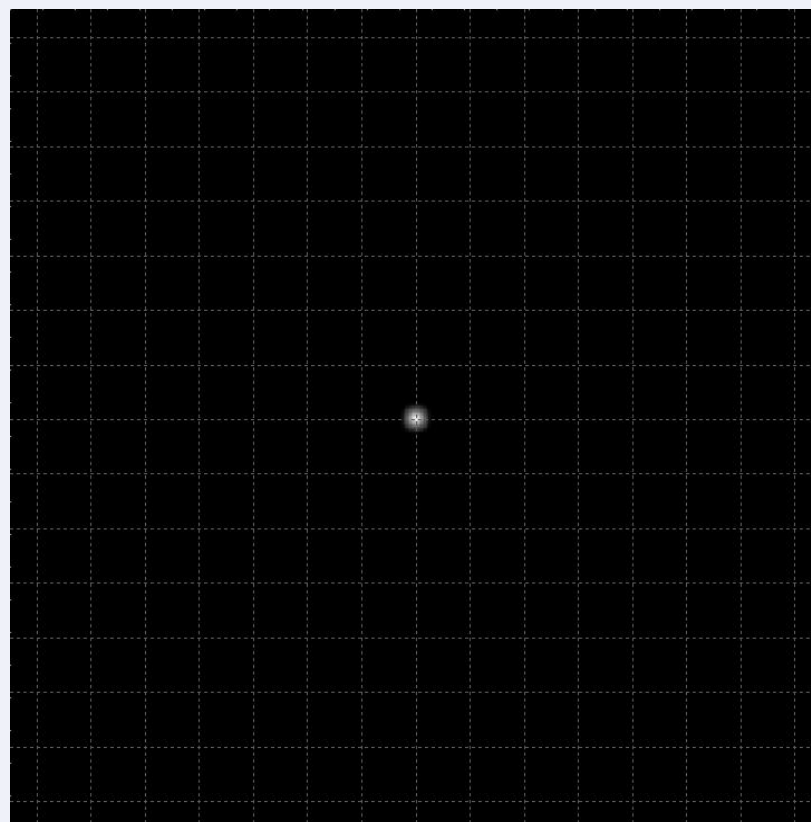
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



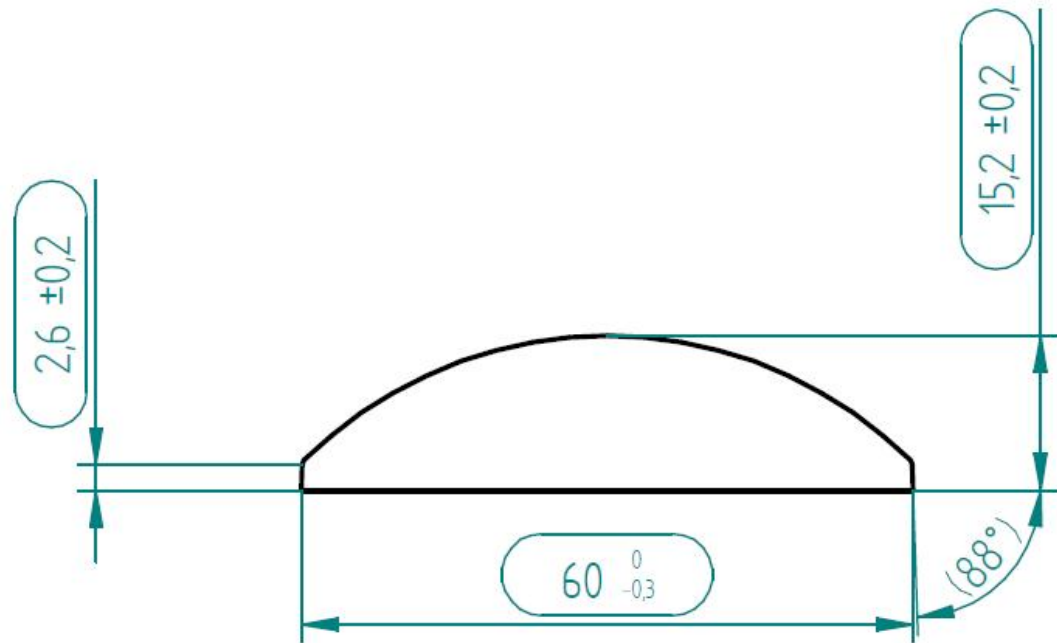
- Projection wall 3x3 m at 1m

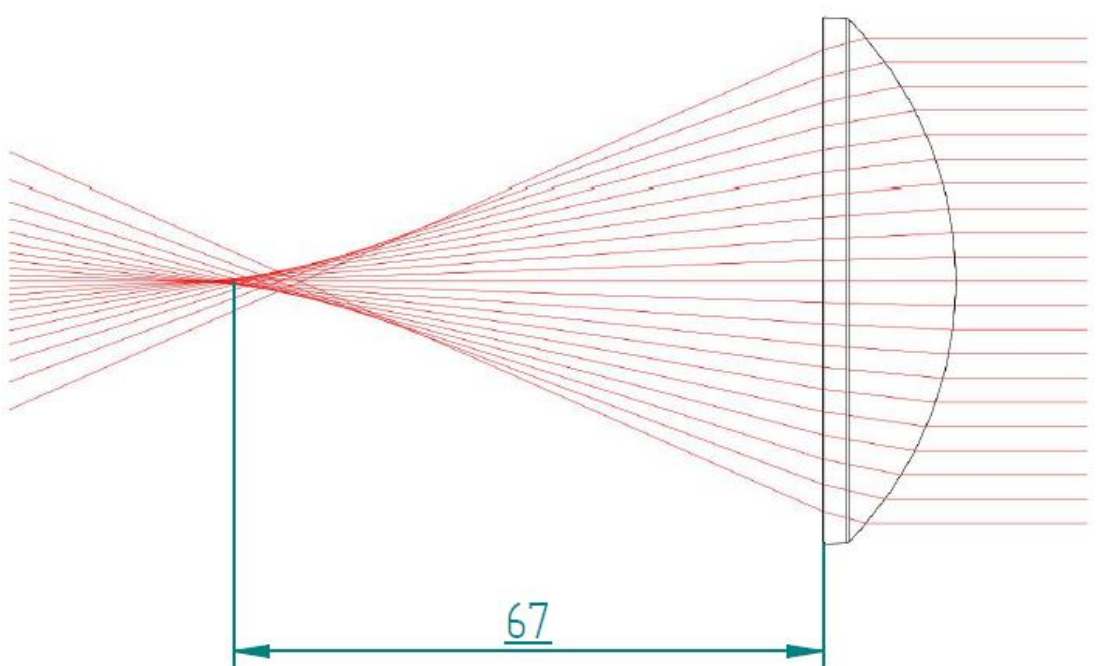


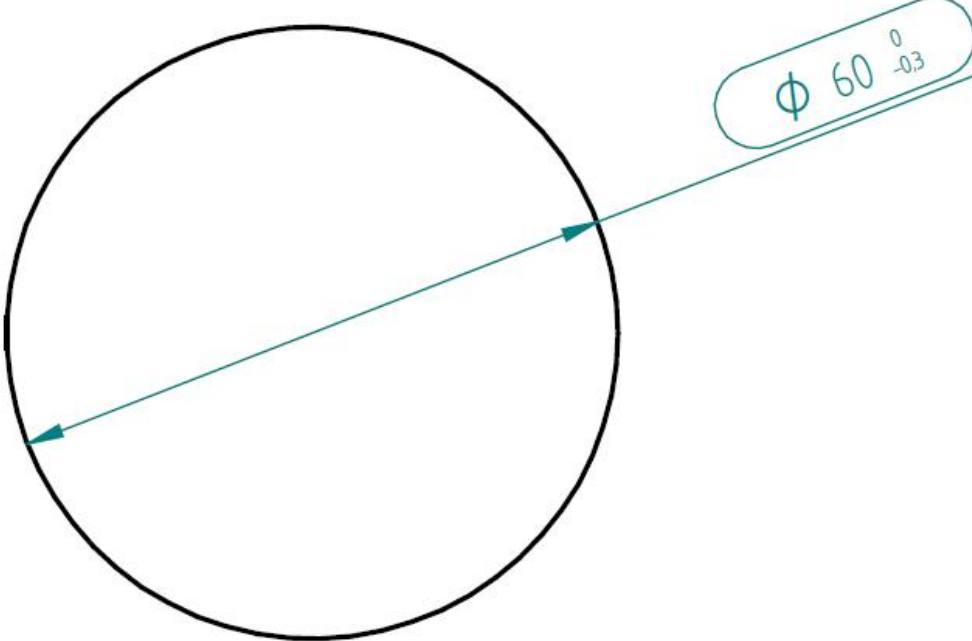
LED used for simulation	XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	2,5
FWHM C180 [°]	2,5


A180 6016

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED








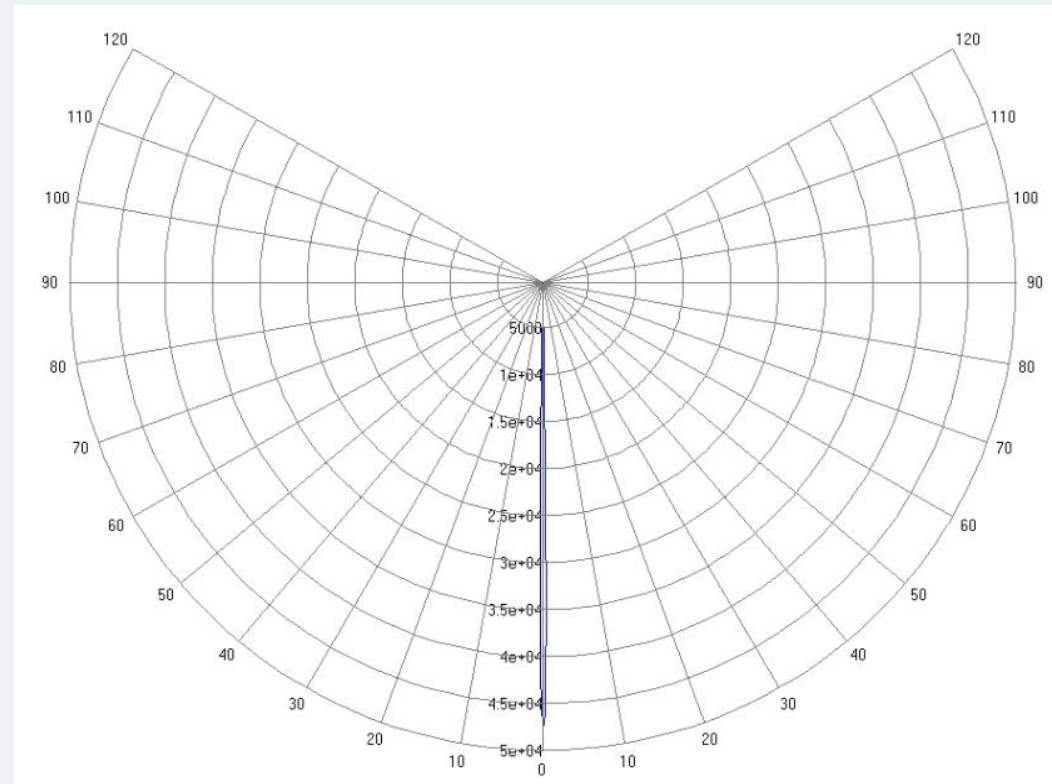


material : GLASS nd=1,520

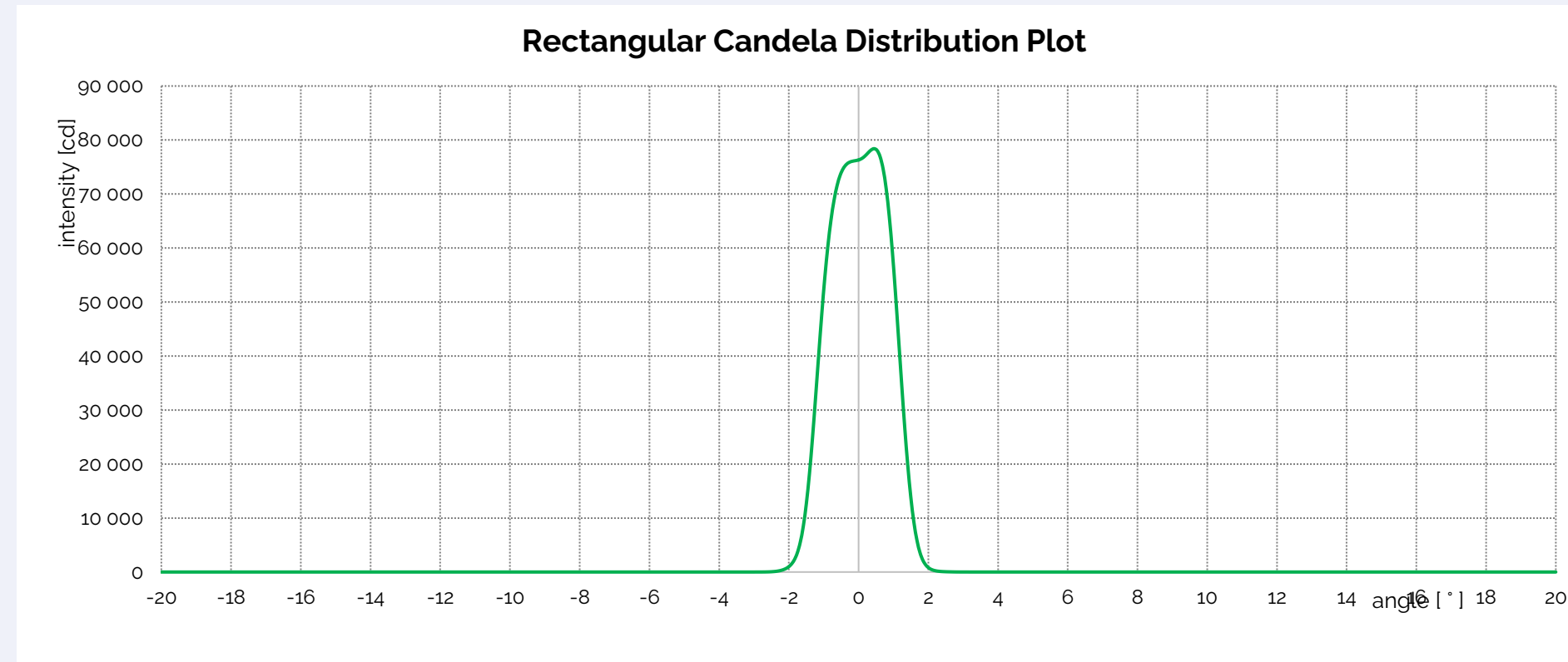
	NAME	DATE	 Spherical Lens												
DRAWN	jkocarek	06/10/25													
CHECKED															
ENG APPR															
MGR APPR															
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SIZE</td> <td style="width: 40%;">DWG NO</td> <td style="width: 50%;">REV</td> </tr> <tr> <td>A4</td> <td>A180 6016</td> <td> </td> </tr> <tr> <td colspan="3">FILE NAME: A180 6016 rekonstrukce z vykresu.dft</td> </tr> <tr> <td>SCALE:</td> <td>WEIGHT:</td> <td>SHEET 1 OF 1</td> </tr> </table>	SIZE	DWG NO	REV	A4	A180 6016		FILE NAME: A180 6016 rekonstrukce z vykresu.dft			SCALE:	WEIGHT:	SHEET 1 OF 1
SIZE	DWG NO	REV													
A4	A180 6016														
FILE NAME: A180 6016 rekonstrukce z vykresu.dft															
SCALE:	WEIGHT:	SHEET 1 OF 1													

A180 6016 – simulation results

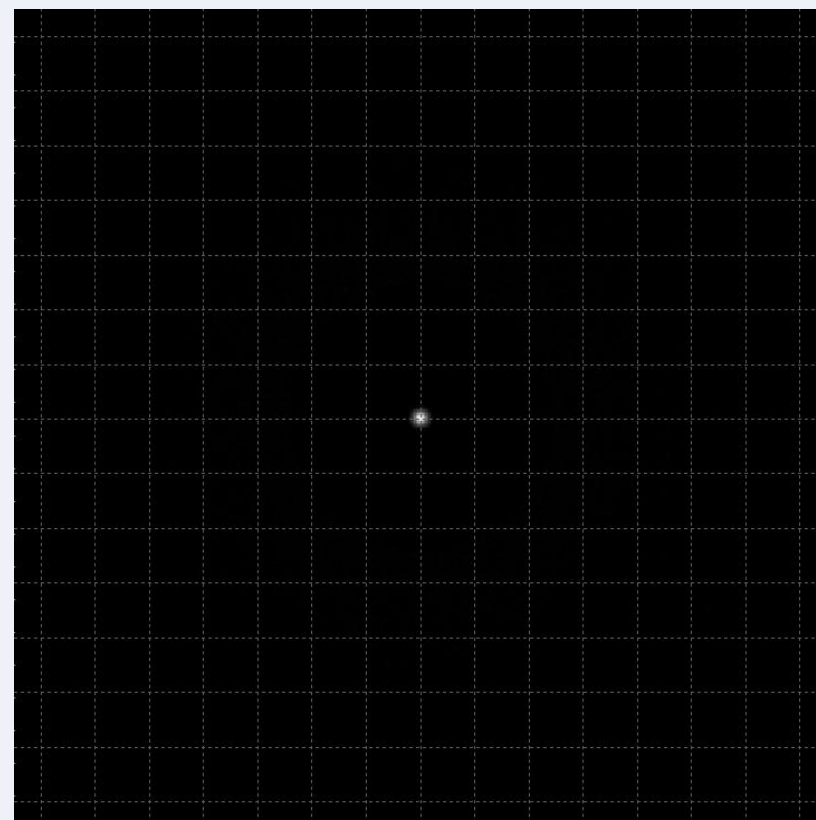
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



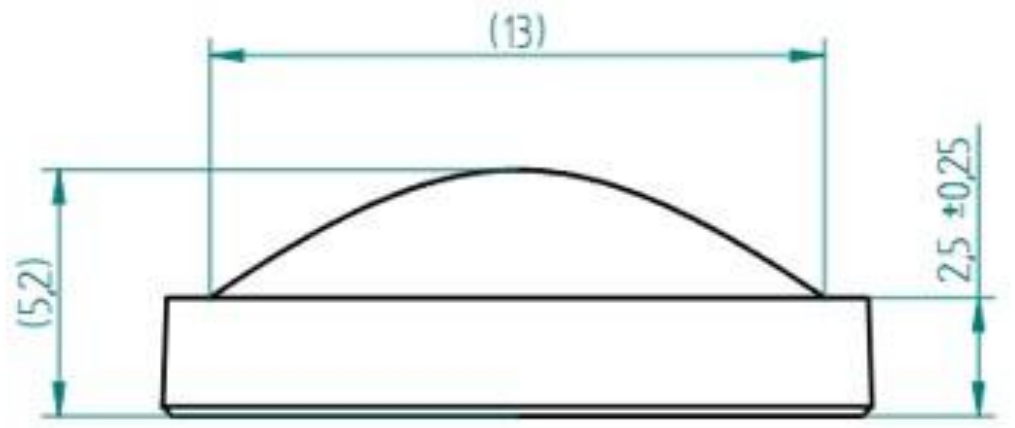
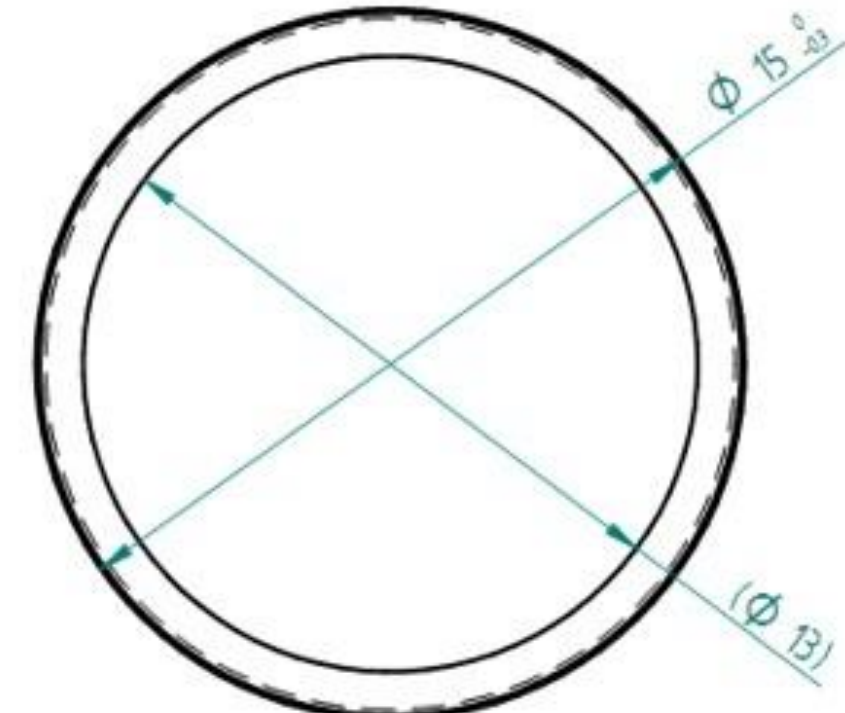
- Projection wall 3x3 m at 1m




LED used for simulation	XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	2,5
FWHM C180 [°]	2,5

A182 1506

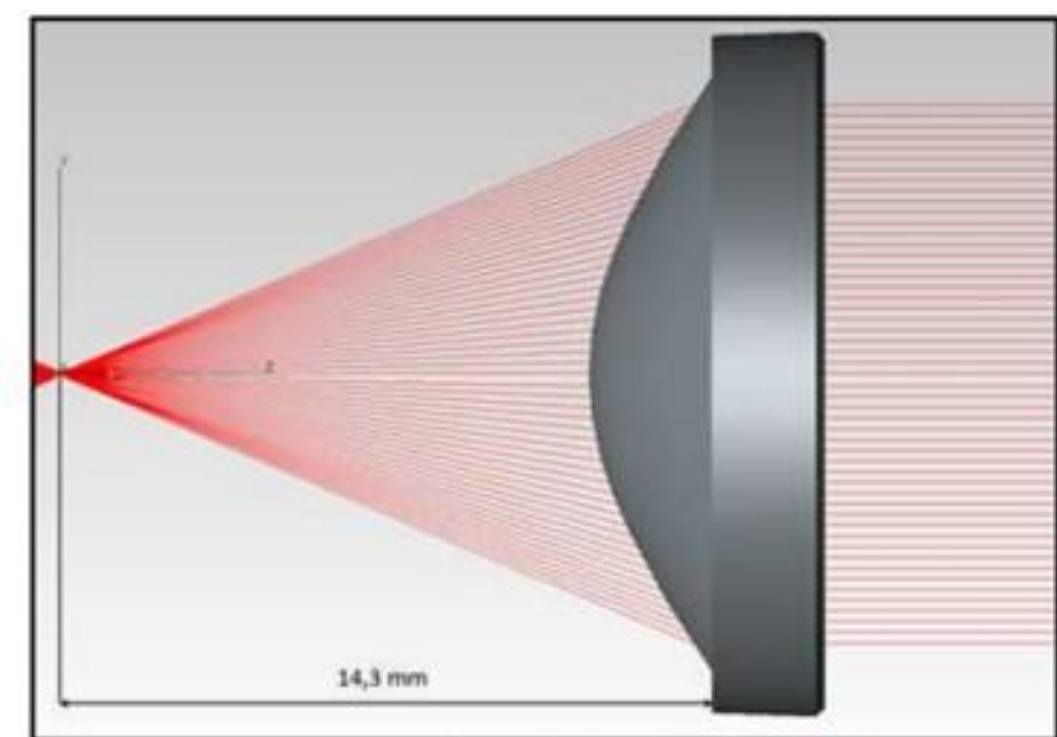
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED





SCALE 2:1



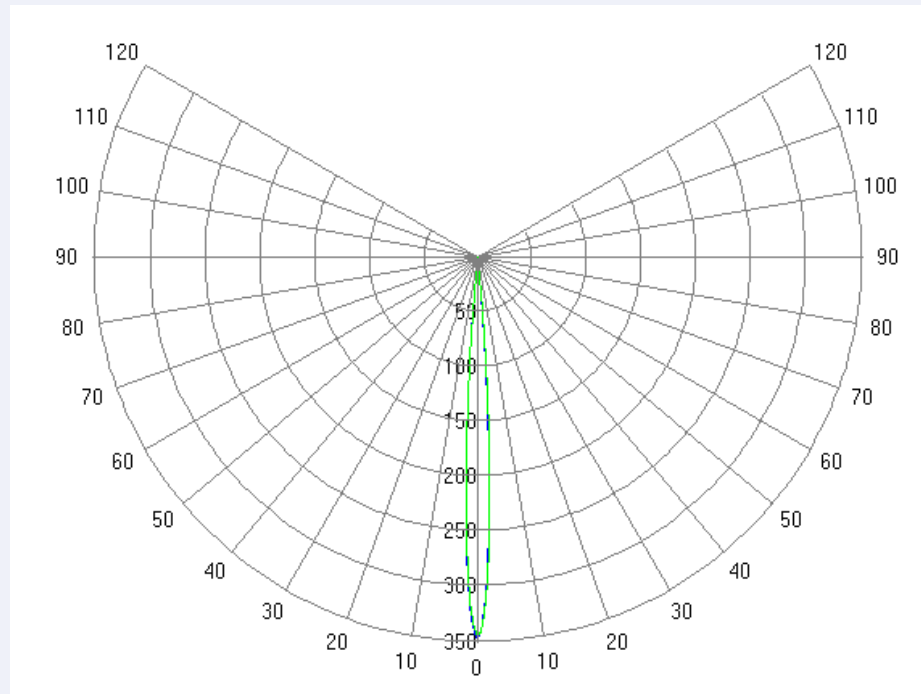
Glass: LIBA or alternative (nd = 1,521)



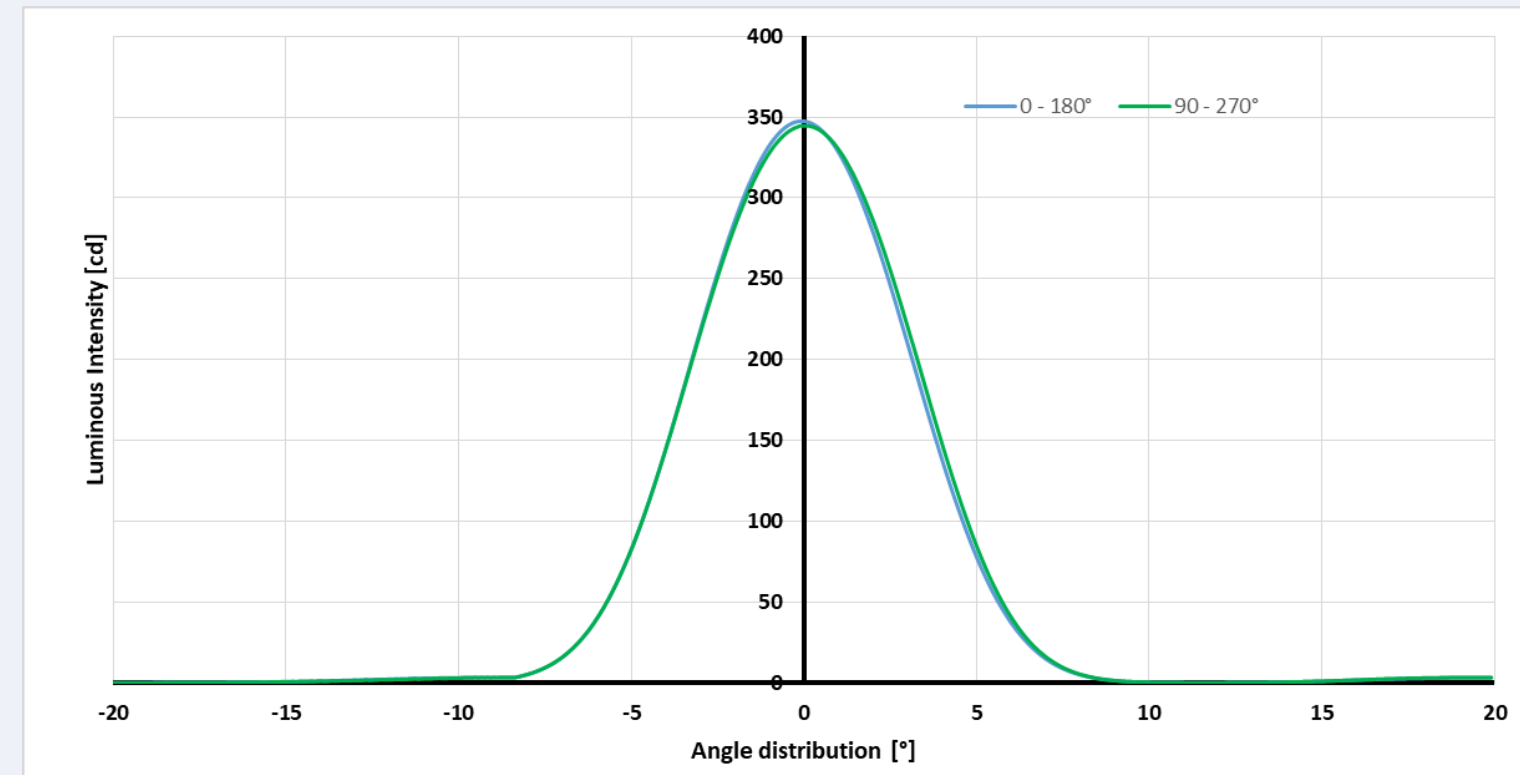
DRAW	NAME	DATE	 A182 1506
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: 44 FILE NAME: A182_small.tif SCALE: WEIGHT: 2 g SHEET 1 OF 1

A182 1506 – simulation results

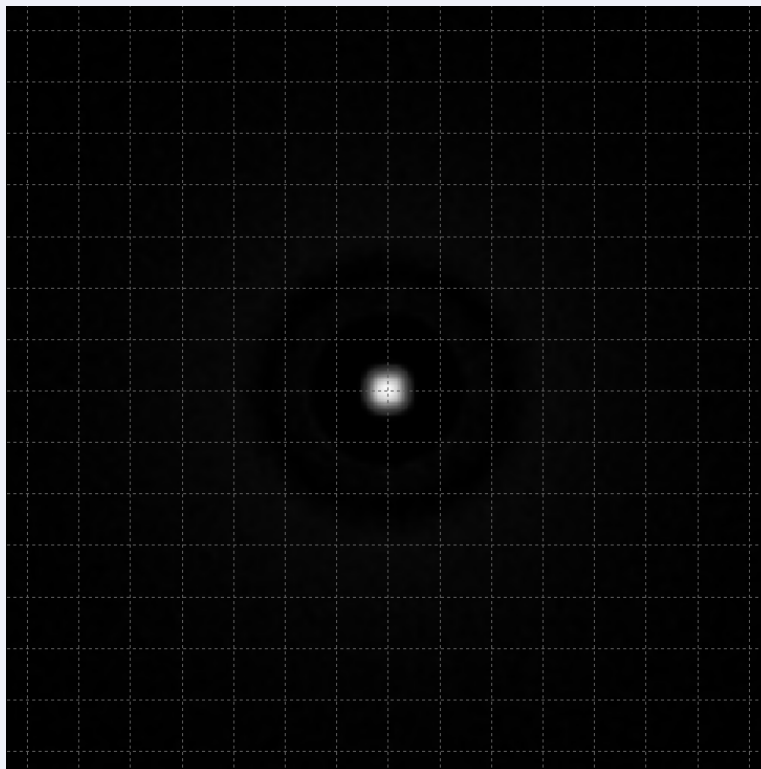
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

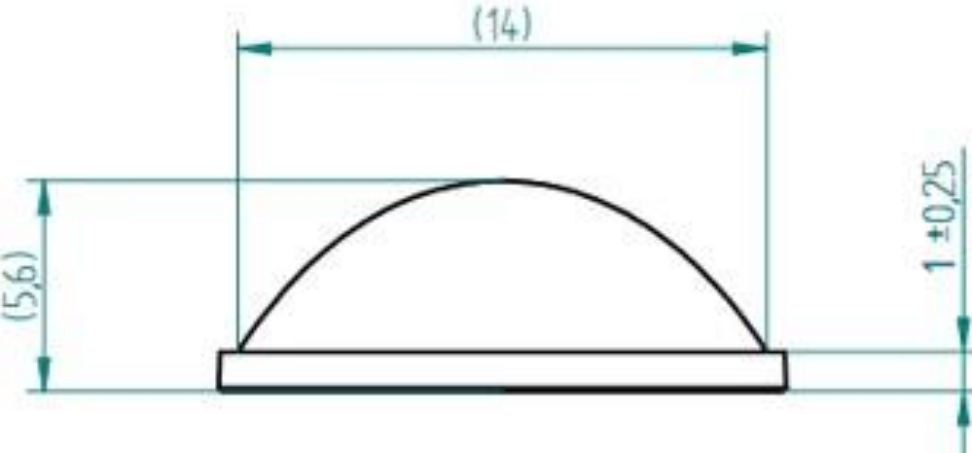
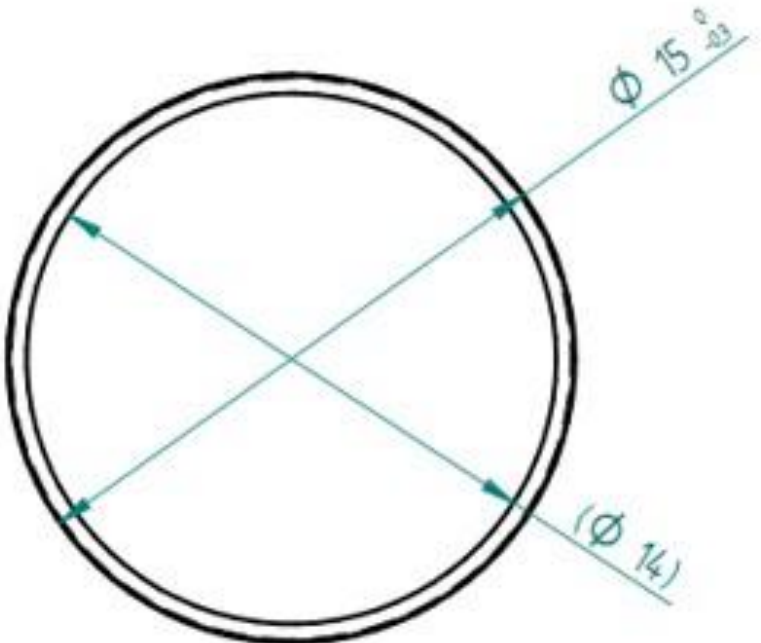


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	7
FWHM C90 [°]	7


* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

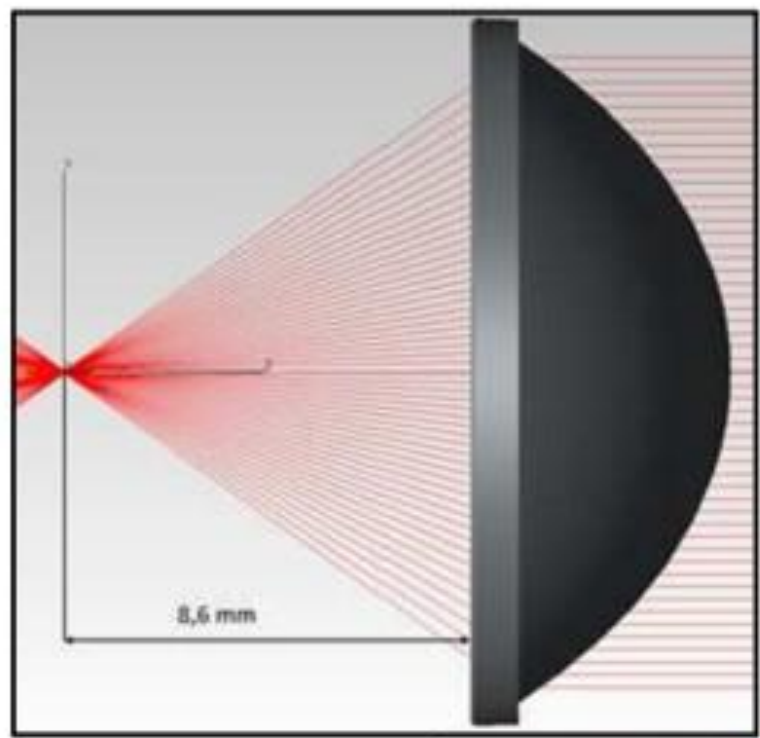
A194 1506


REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

SCALE 2:1



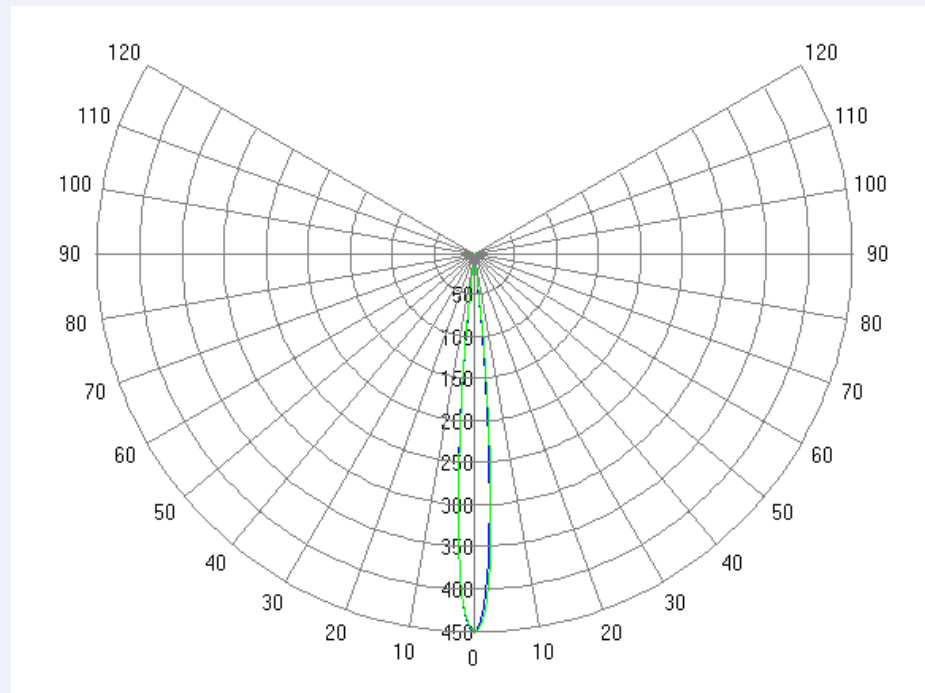


DRAWN	NAME	DATE	 A194 1506
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: A4 FILE NAME: A194_1506.dwg SCALE: WEIGHT: 1 g SHEET 1 OF 1

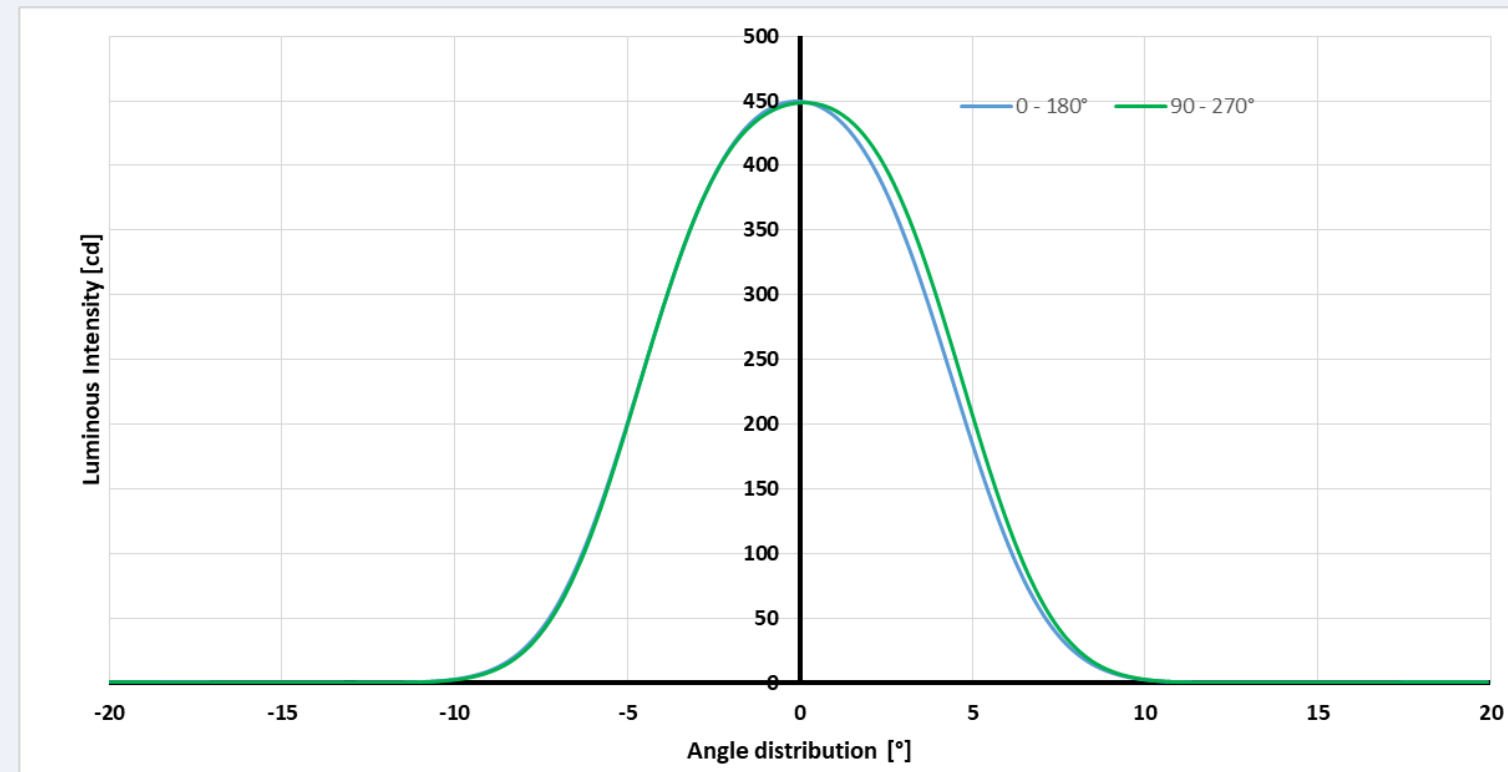
Glass: LIBA or alternative (nd = 1,521)

A194 1506 – simulation results

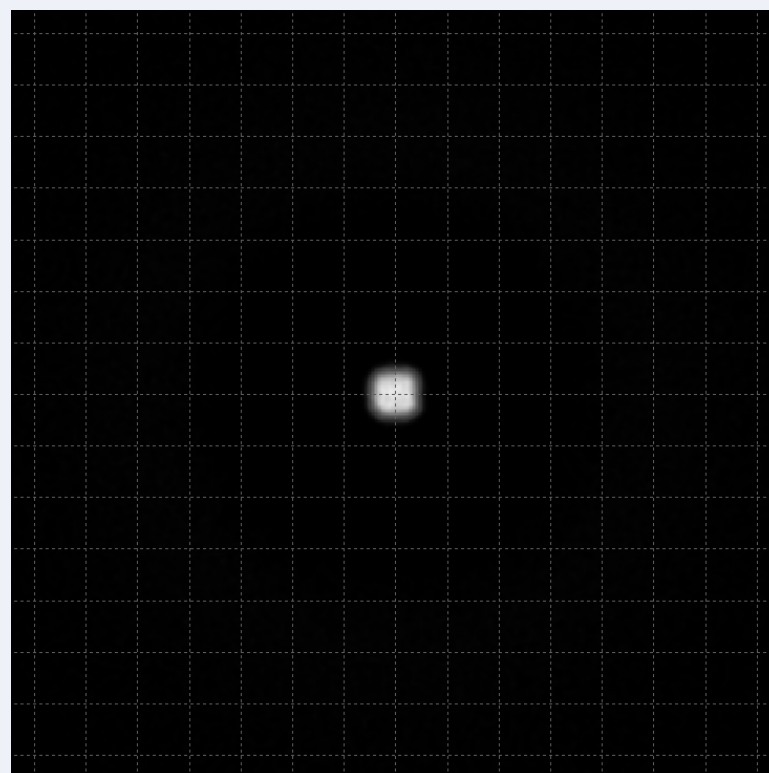
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

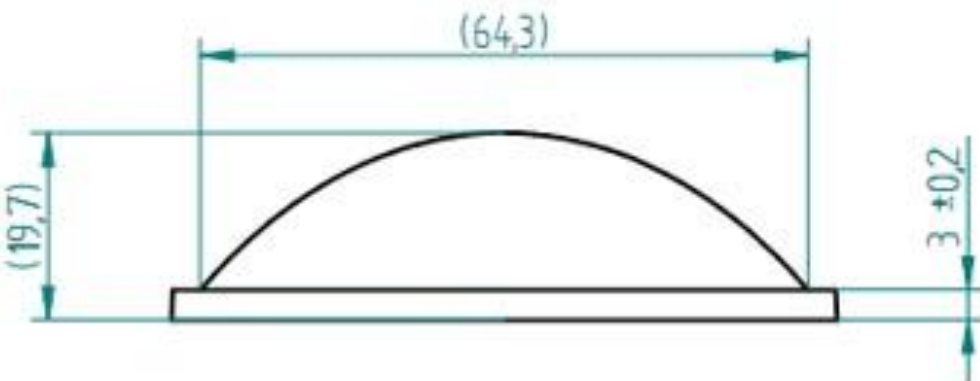


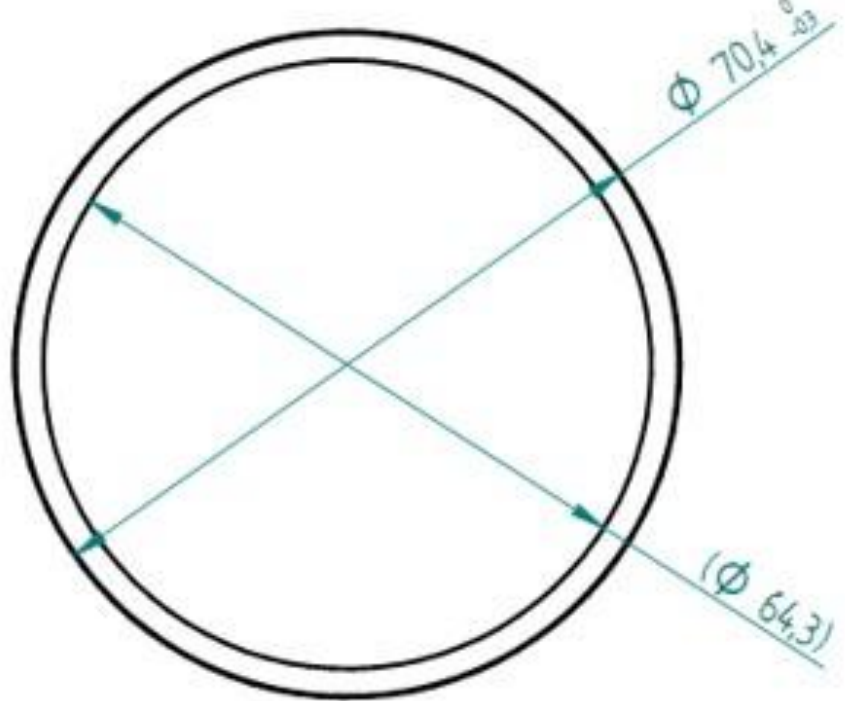
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	10
FWHM Cgo [°]	10

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED


A196 7120

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

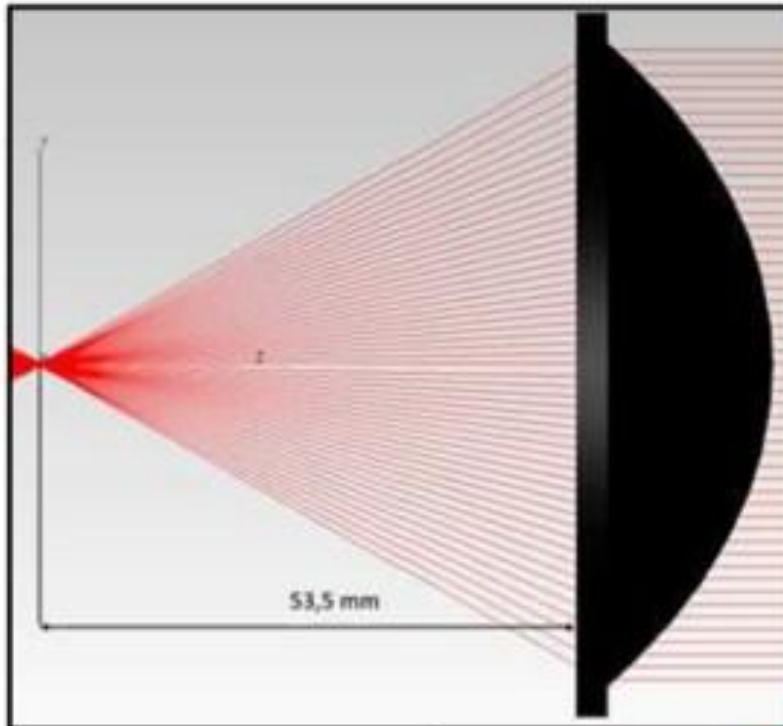





SCALE 1:2



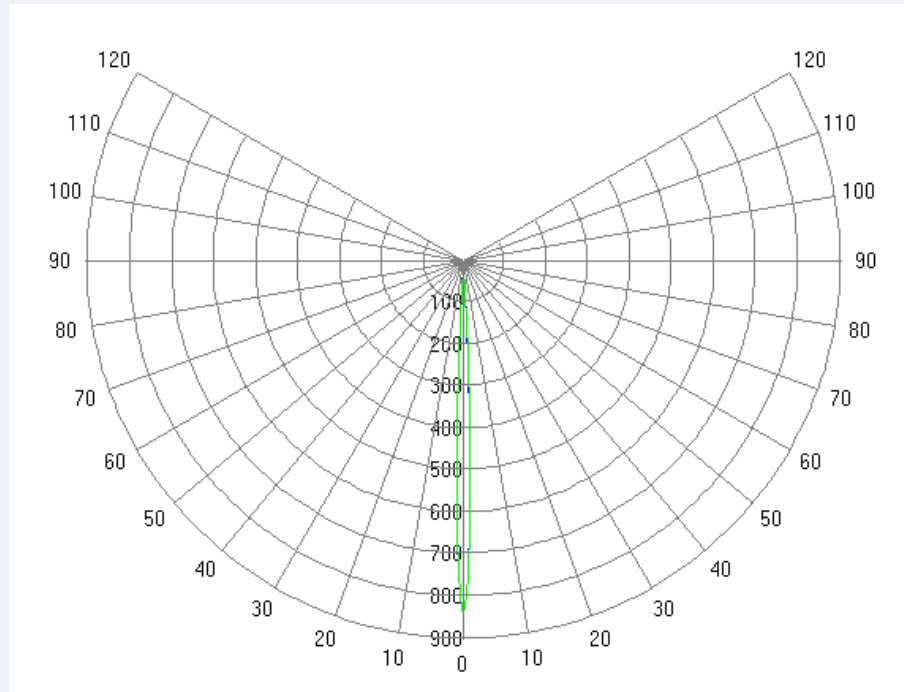
Glass: LIBA or alternative (nd = 1,521)



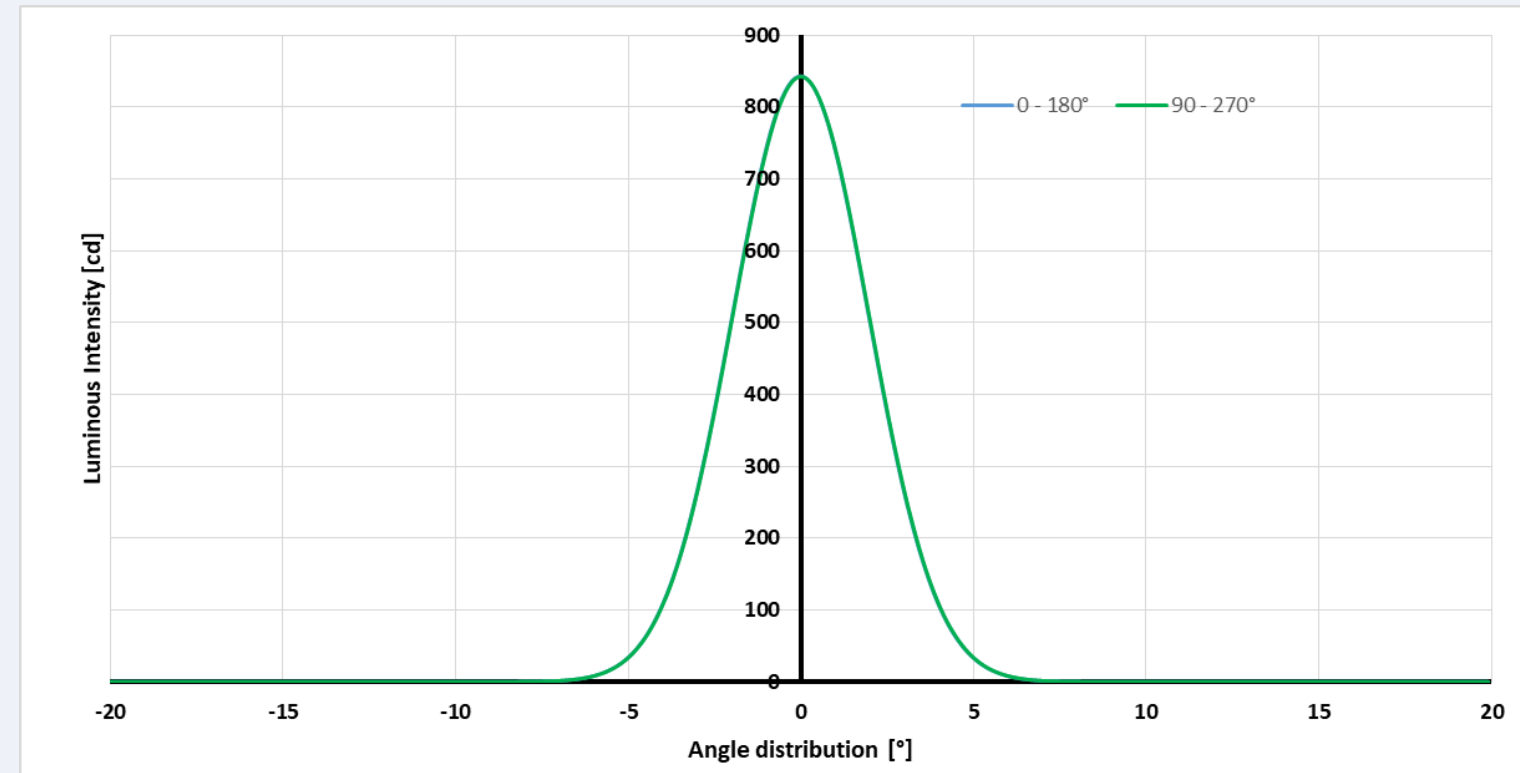
DRAW	NAME	DATE	 A196 7120
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: 44 FILE NAME: A196_small.jpg SCALE: WEIGHT: 103 g SHEET 1 OF 1

A196 7120 – simulation results

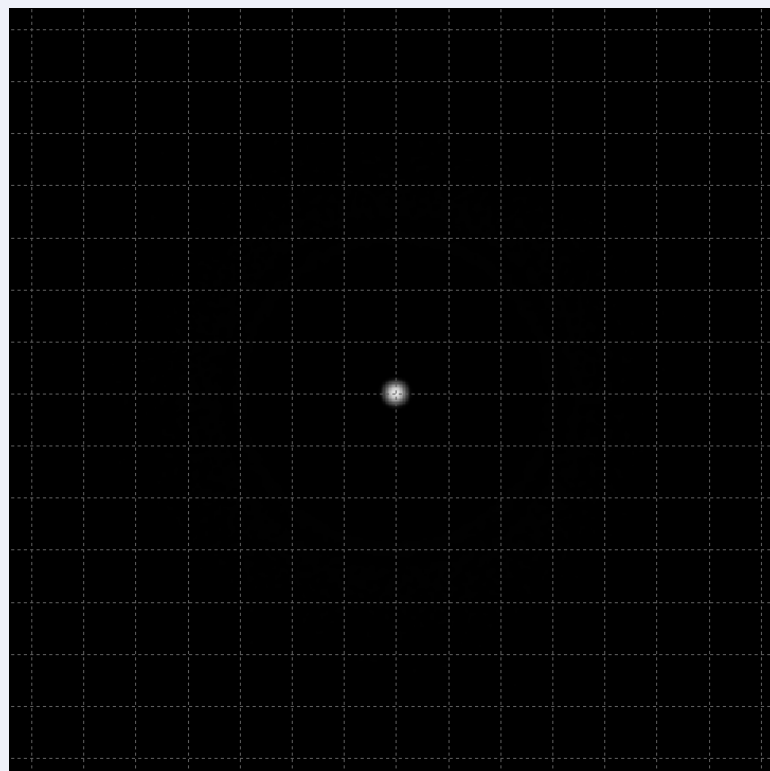
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



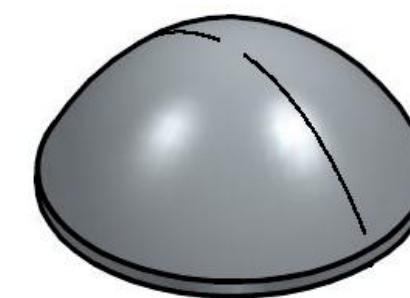
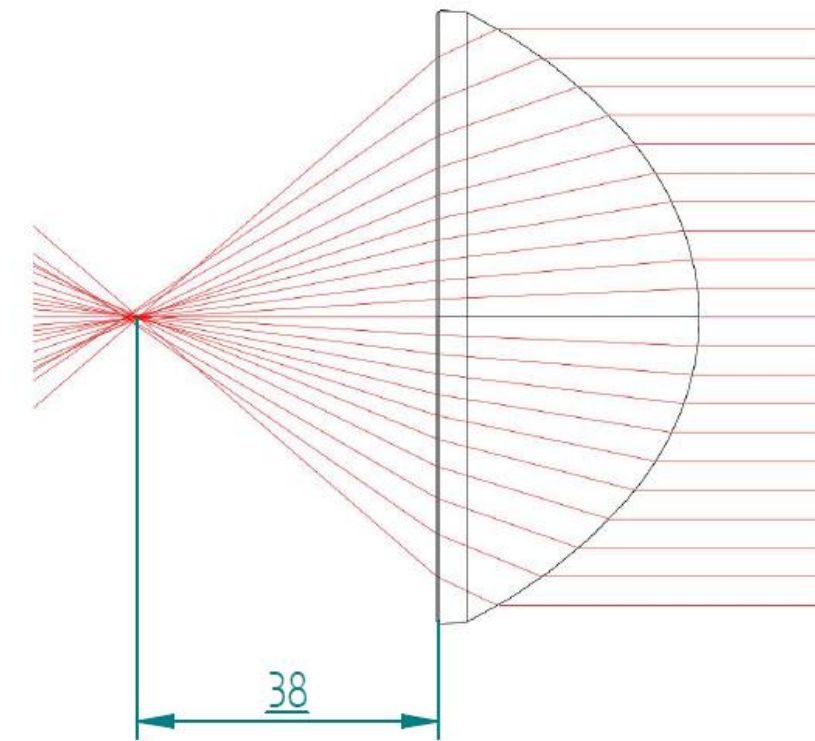
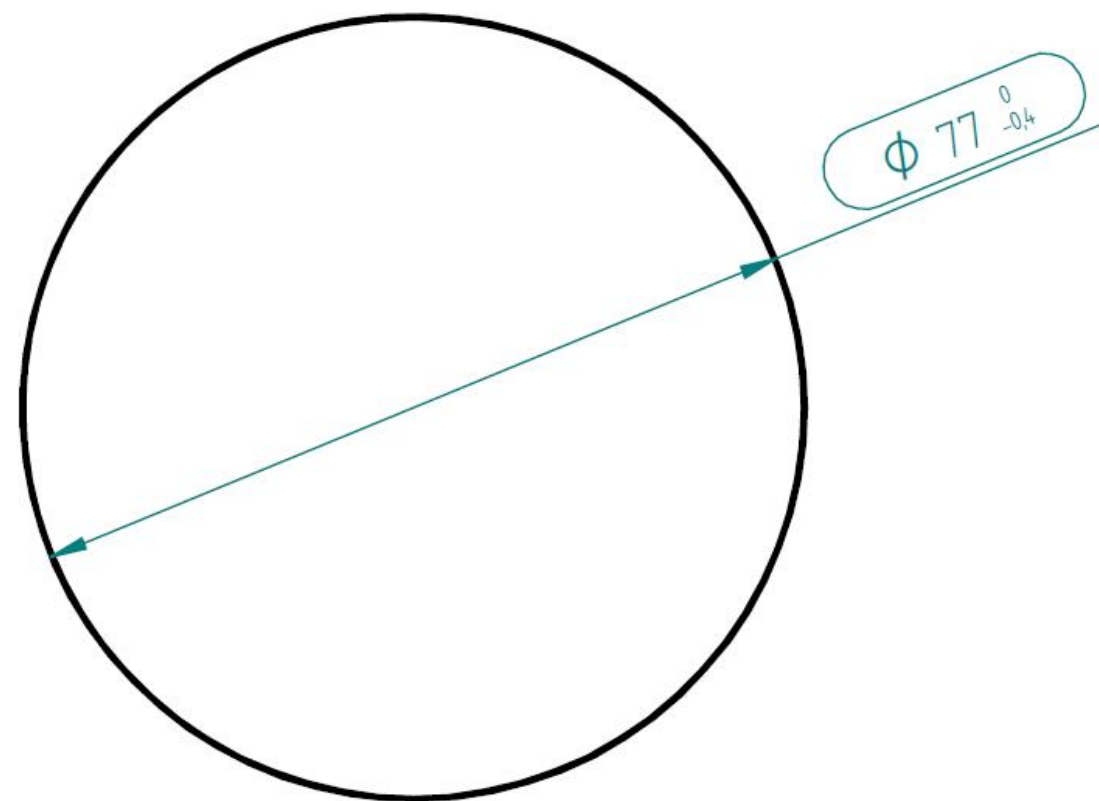
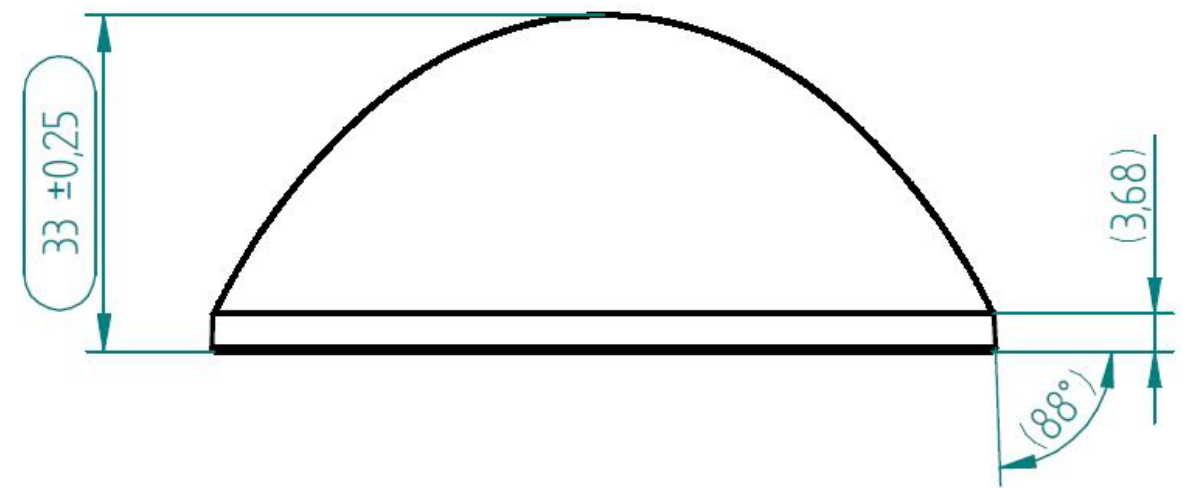
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5


* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A234 7733



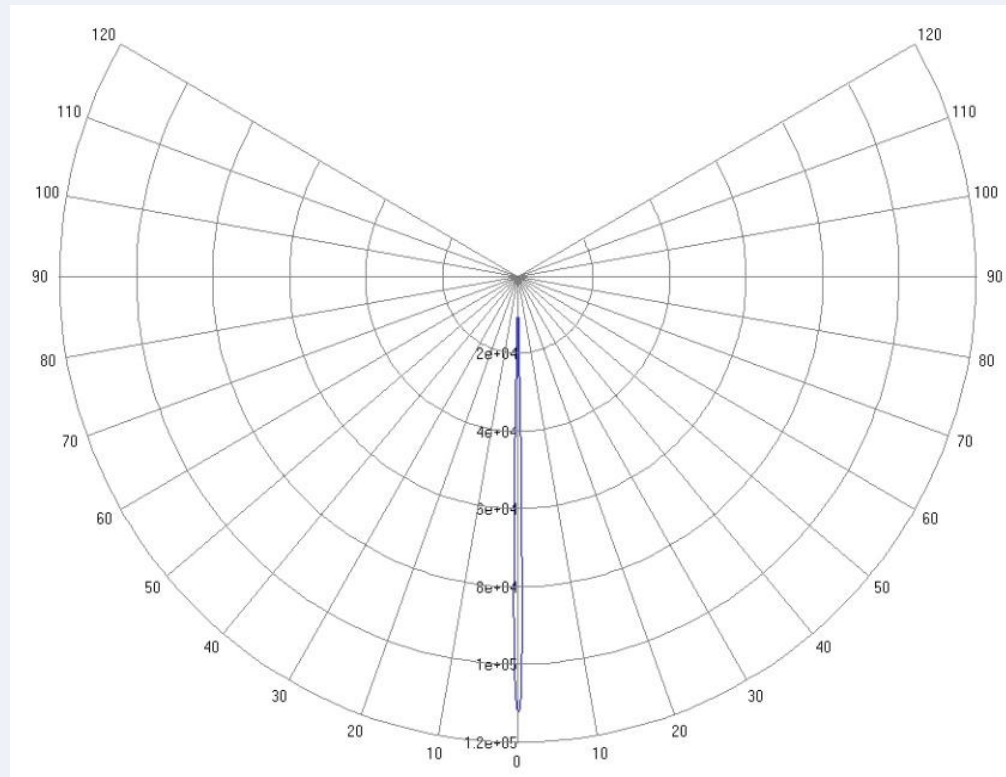
material : GLASS nd=1,520

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

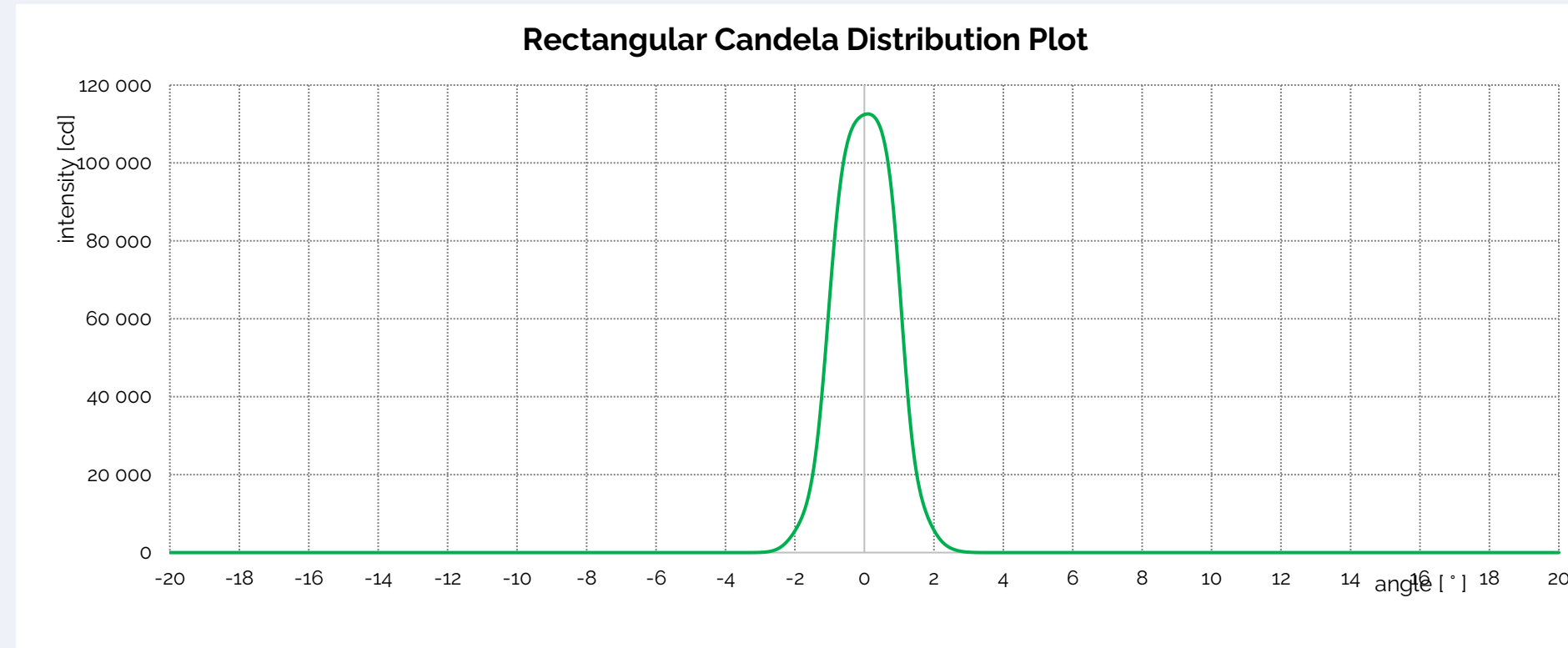
	NAME	DATE	
DRAWN	jkocarek	06/12/25	
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			TITLE A234 7733
	SIZE	DWG NO	REV
	A4	Aspheric Lens	
	SCALE:	WEIGHT:	SHEET 1 OF 1

A234 7733 – simulation results

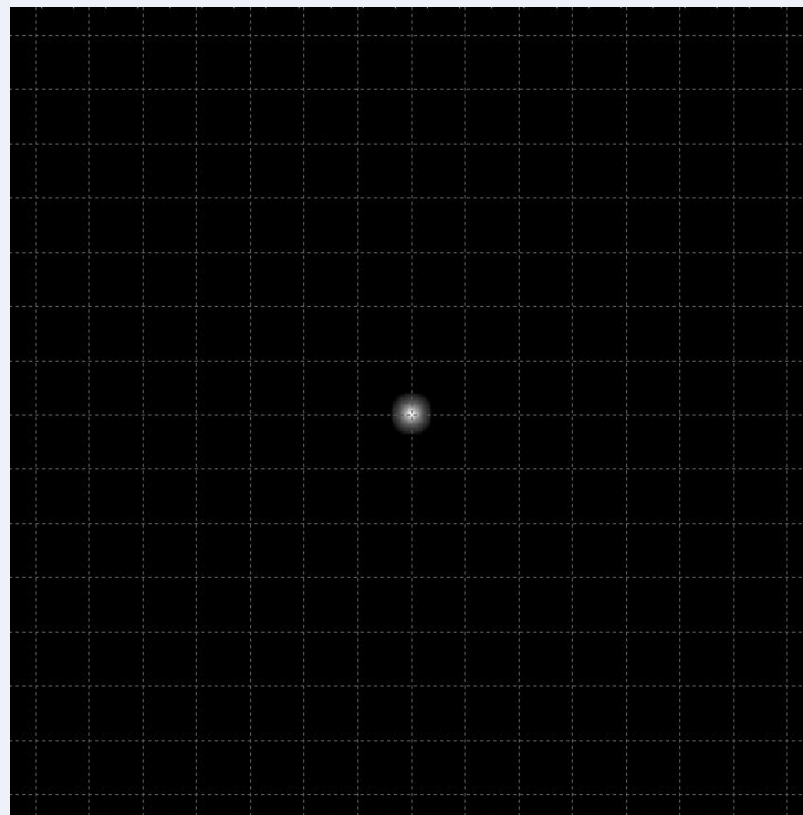
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



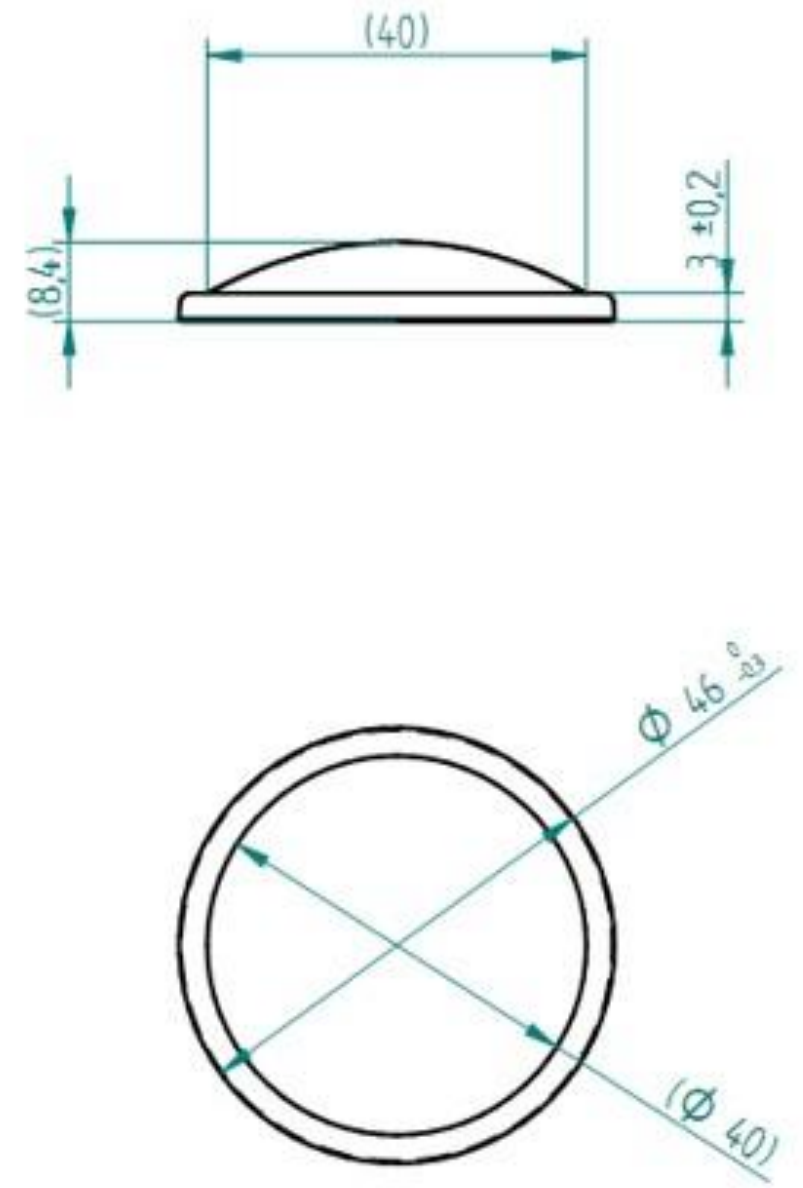
- Projection wall 3x3 m at 1m




LED used for simulation	Cree XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	2
FWHM C180 [°]	2

A373 4508

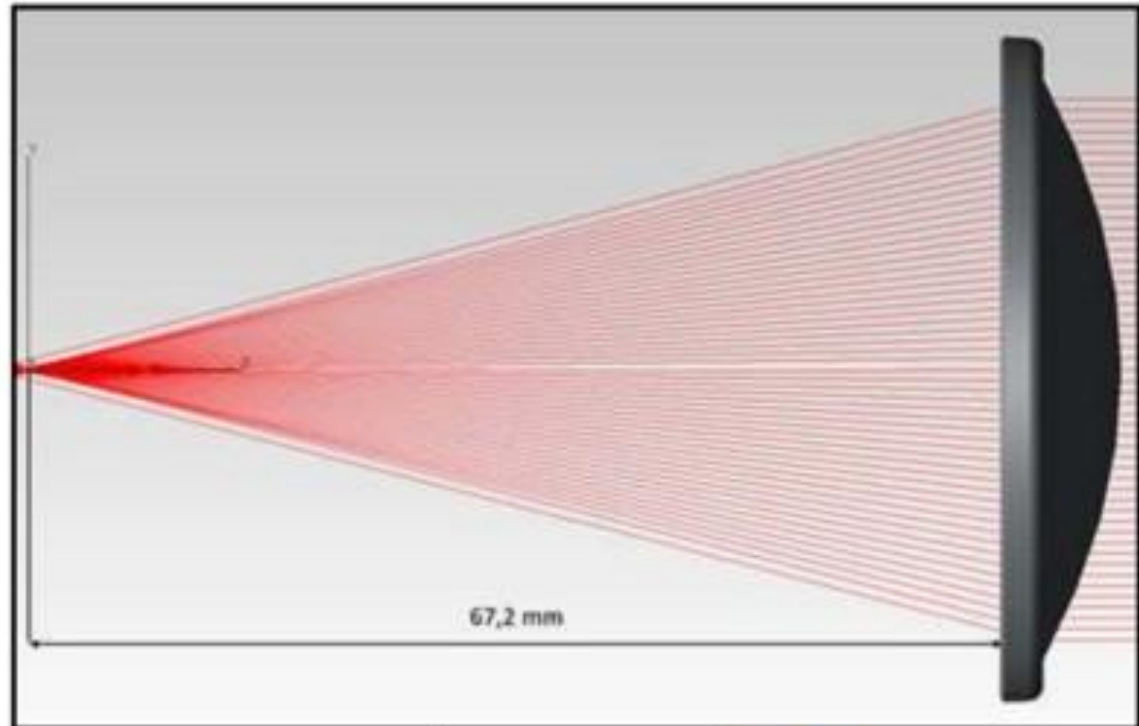
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED




SCALE 1:2



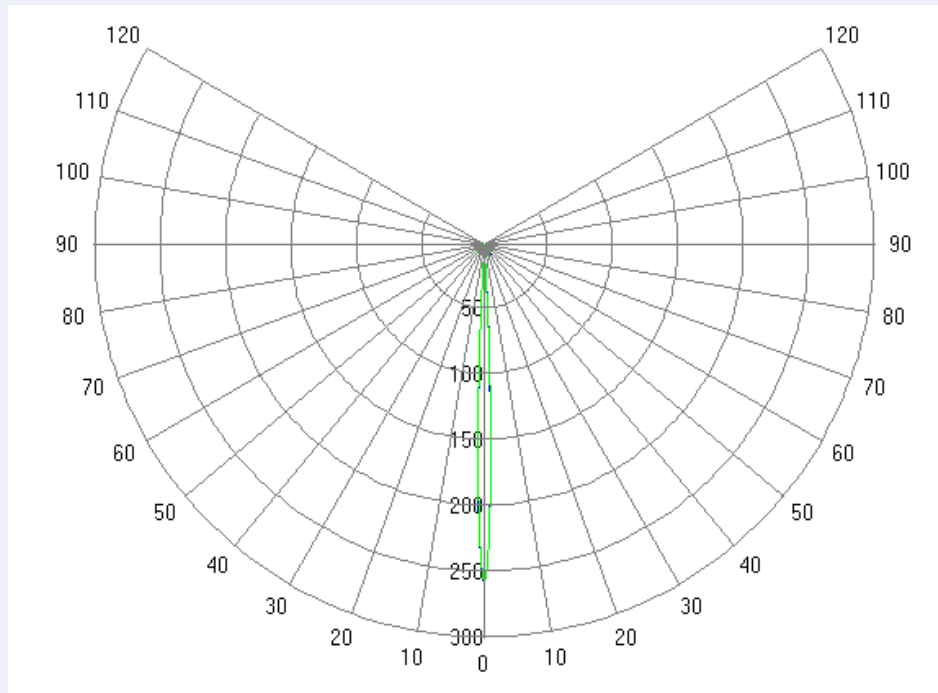
Glass: LIBA or alternative (nd = 1,521)



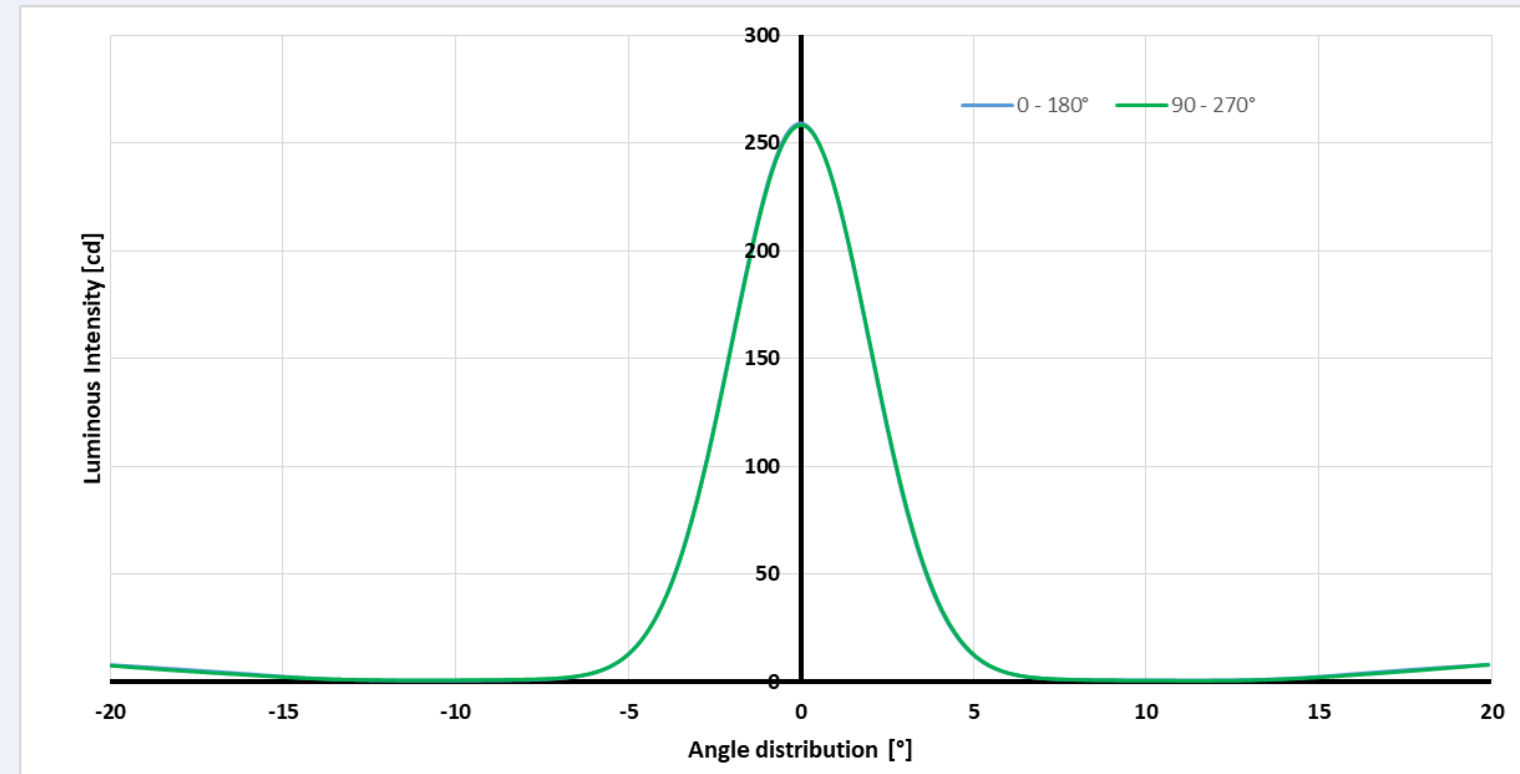
DRAWN	NAME	DATE	 A373 4508
CHECKED			
ENG. APPR.			
MGR. APPR.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			FILE NAME: A373L.dwg SCALE: WEIGHT: 21 g SHEET 1 OF 1

A373 4508 – simulation results

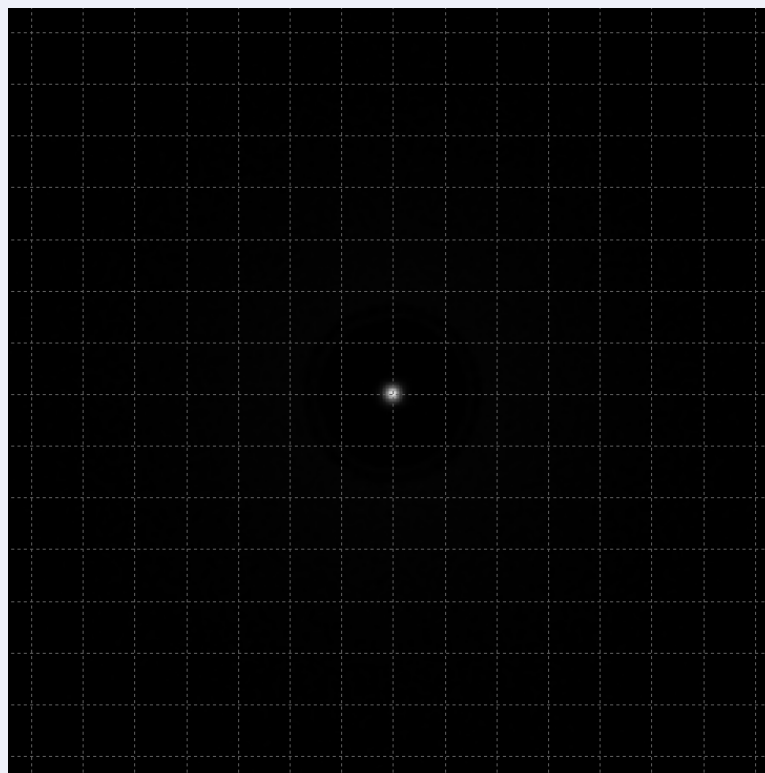
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

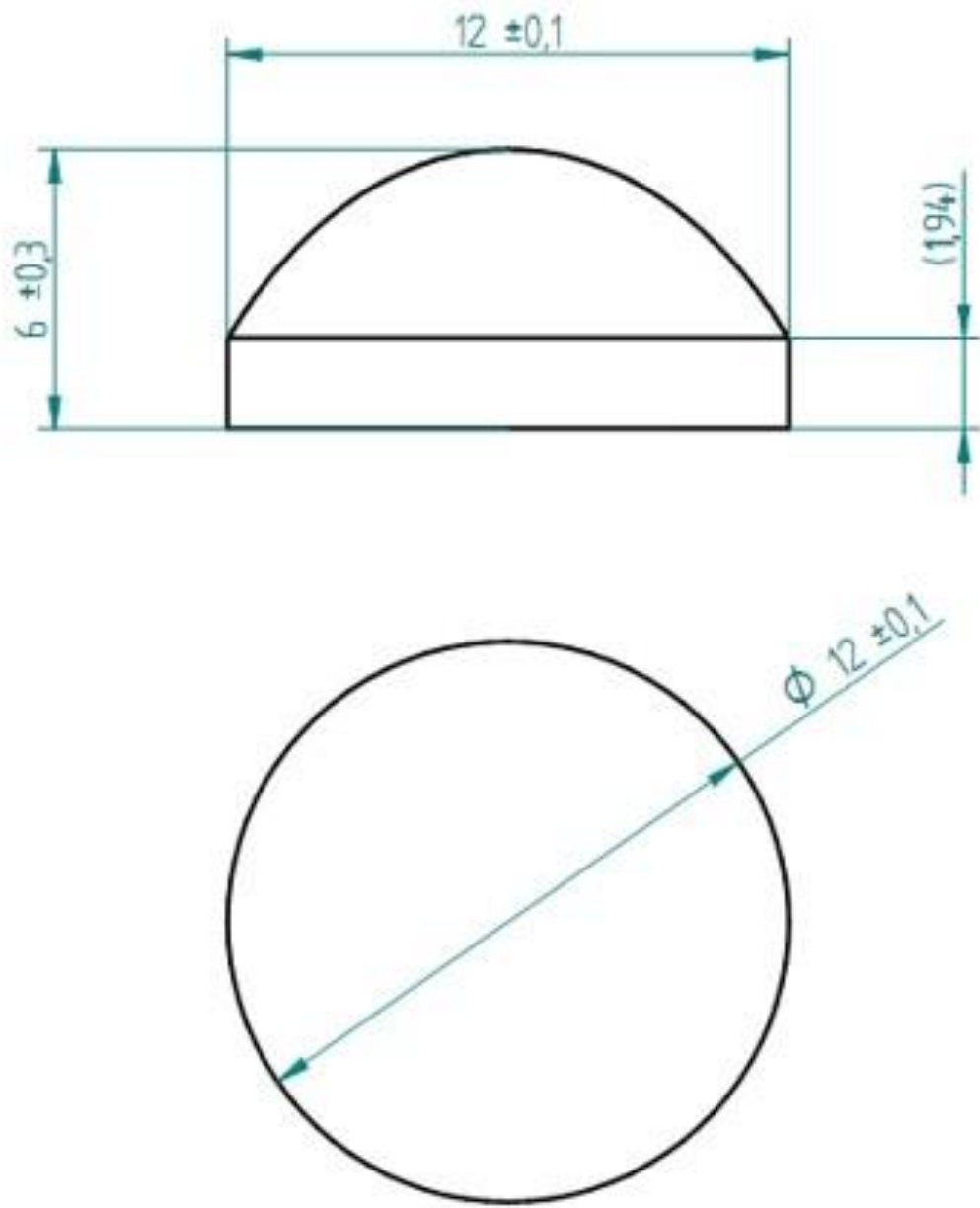


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

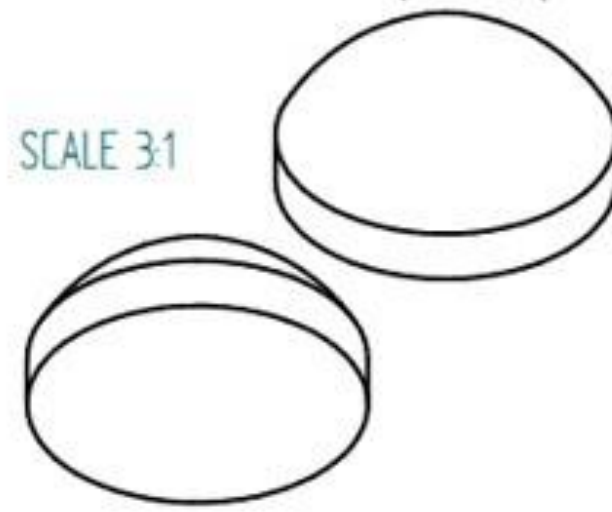
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

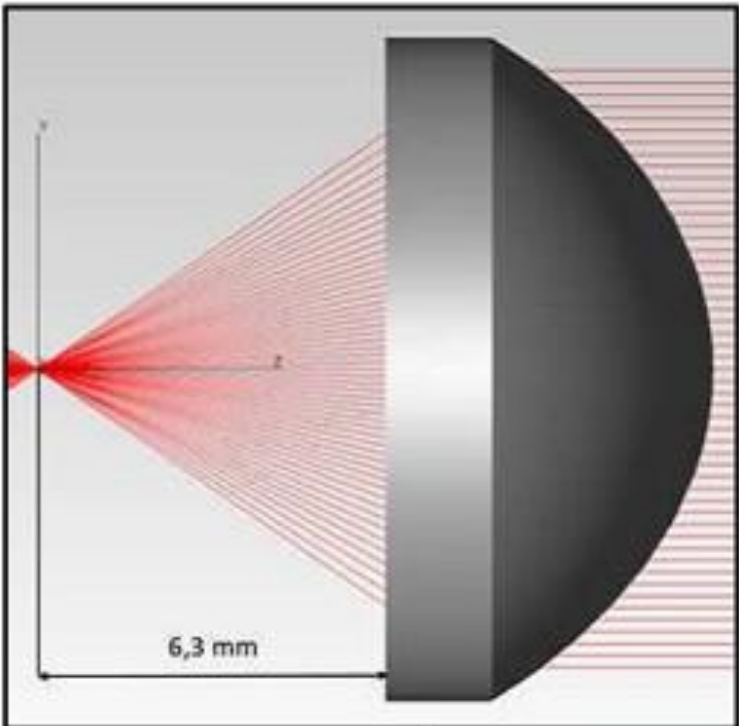
A413 1206


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



SCALE 3:1



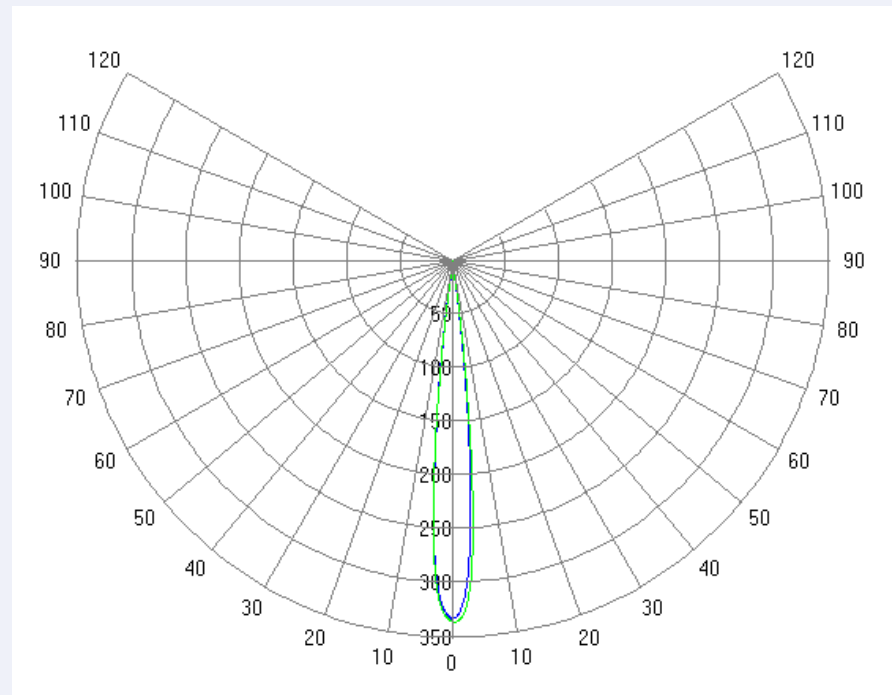


DRAWN	NAME	DATE	 A413 1206
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: 44 FILE NAME: A413_small.dwg SCALE: WEIGHT: 1g SHEET 1 OF 1

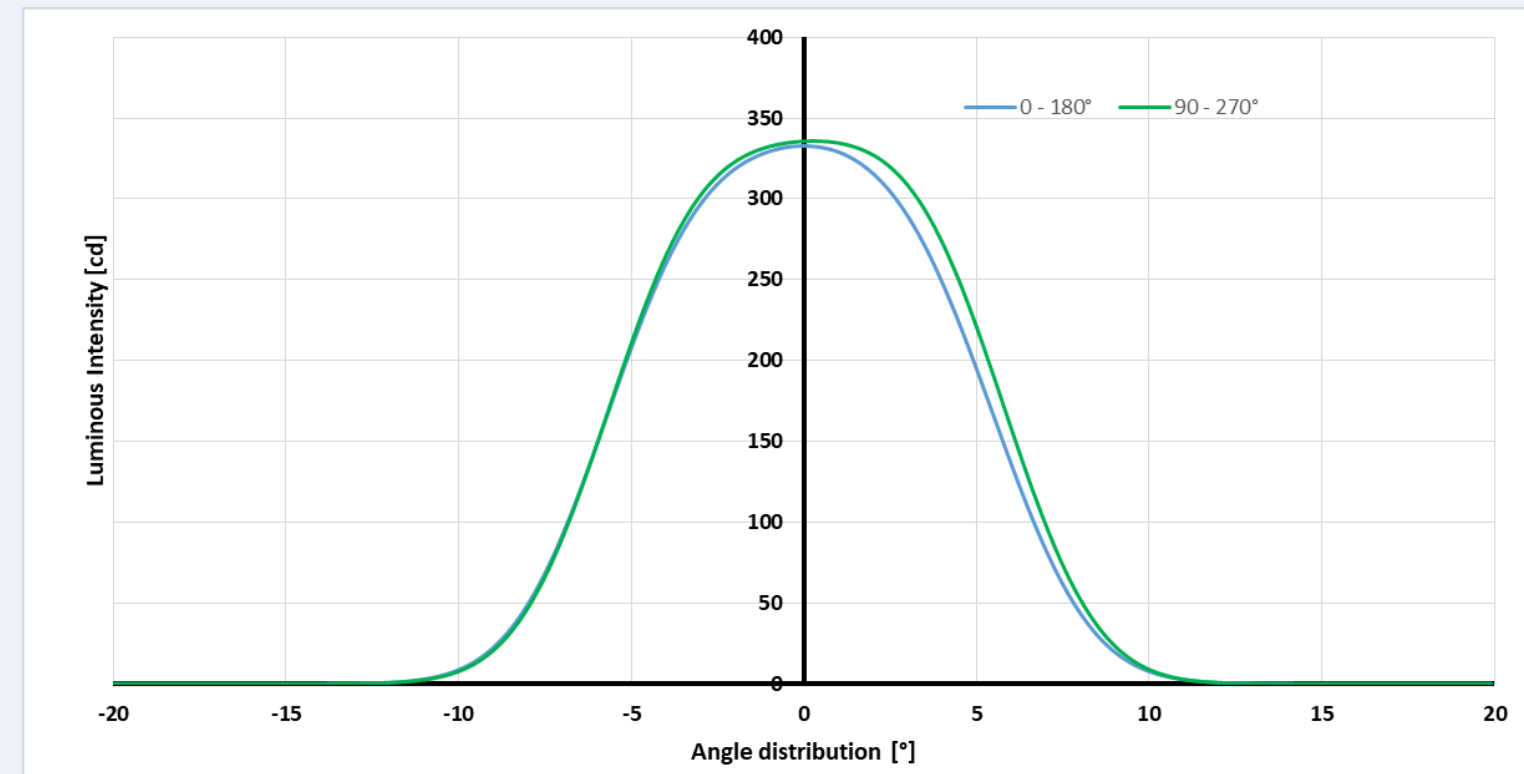
Glass: LIBA or alternative (nd = 1,521)

A413 1206 – simulation results

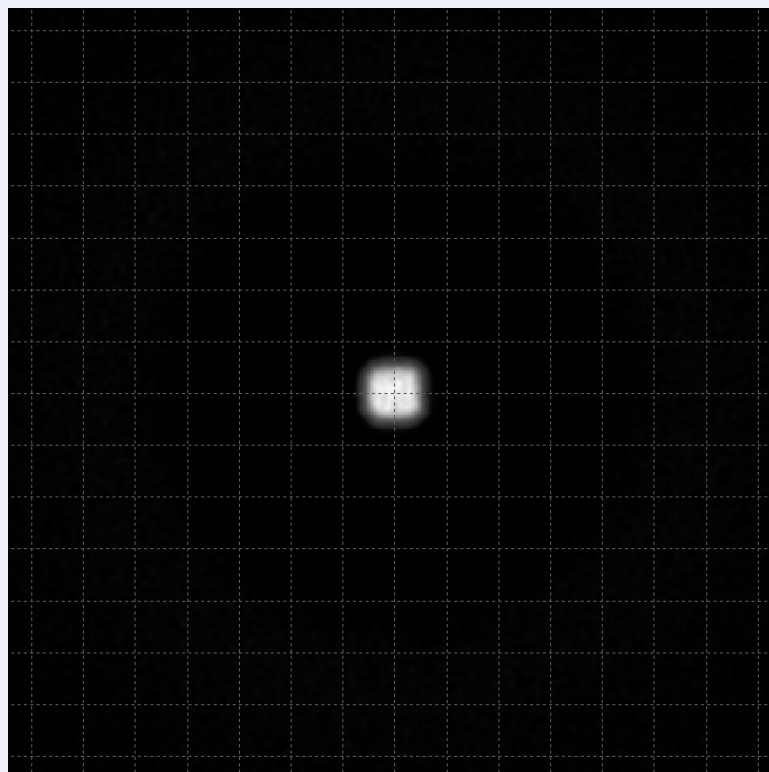
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	6
FWHM C90 [°]	6

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A501 2207

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

(16,4)

(6,9)

$2 \pm 0,2$

SCALE 2:1

$\phi 22 \pm 0,2$

$(\phi 16,4)$

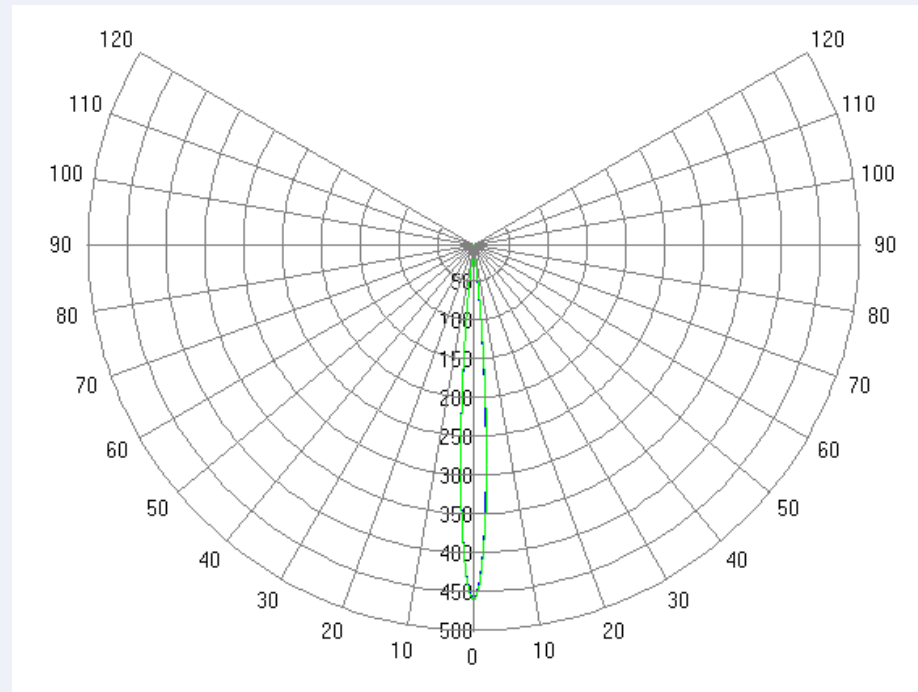
10,0 mm

Glass: LIBA or alternative (nd = 1,521)

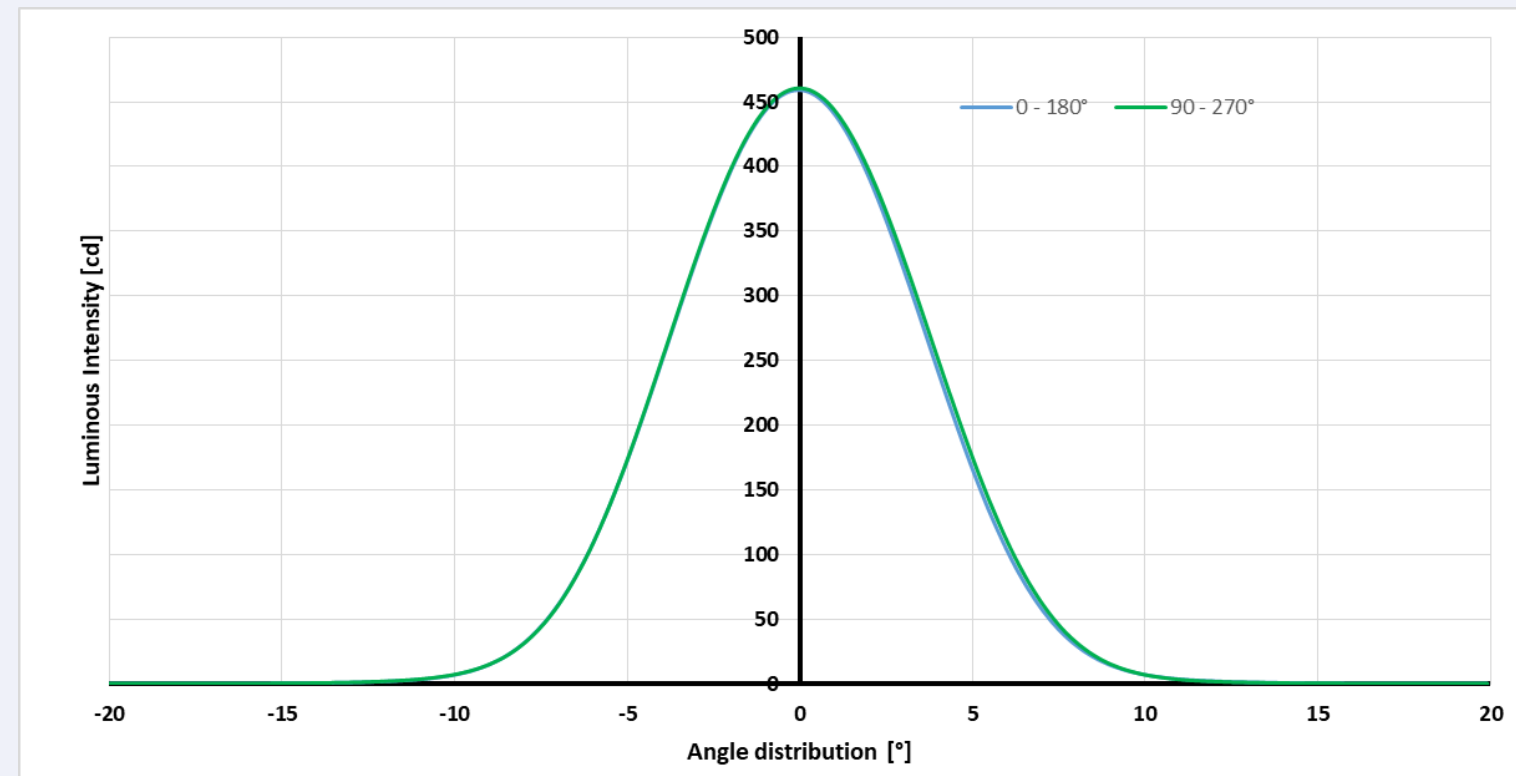
NAME	DATE	<p style="font-size: 1.2em; font-weight: bold;">A501 2207</p>
DRAWN	krutky 05/15/00	
CHECKED		
ENG APPR		
MGR APPR		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		SIZE: 44 FILE NAME: A501_ansi1.pdf SCALE: WEIGHT: 3 g SHEET 1 OF 1

A501 2207 – simulation results

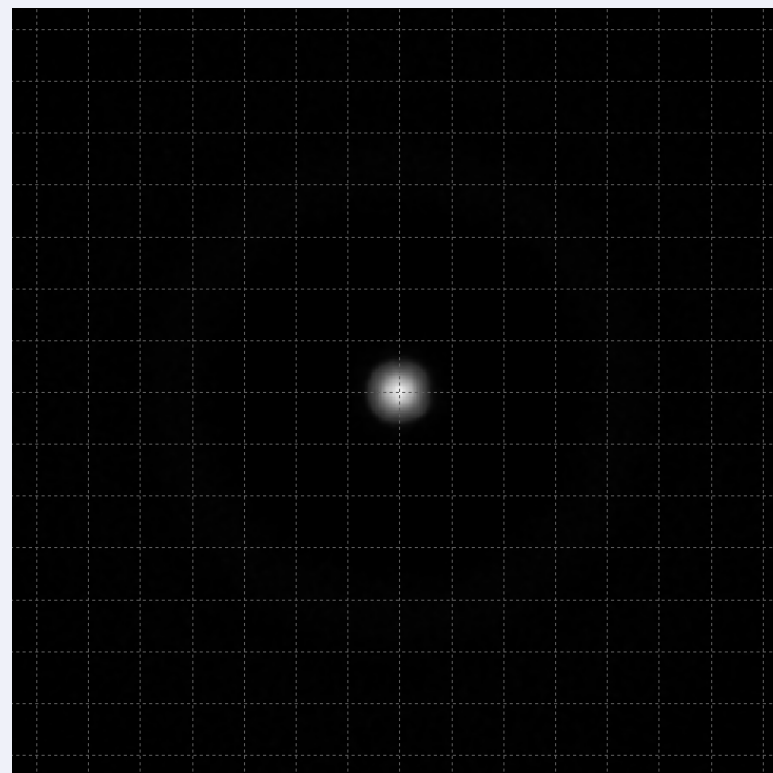
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

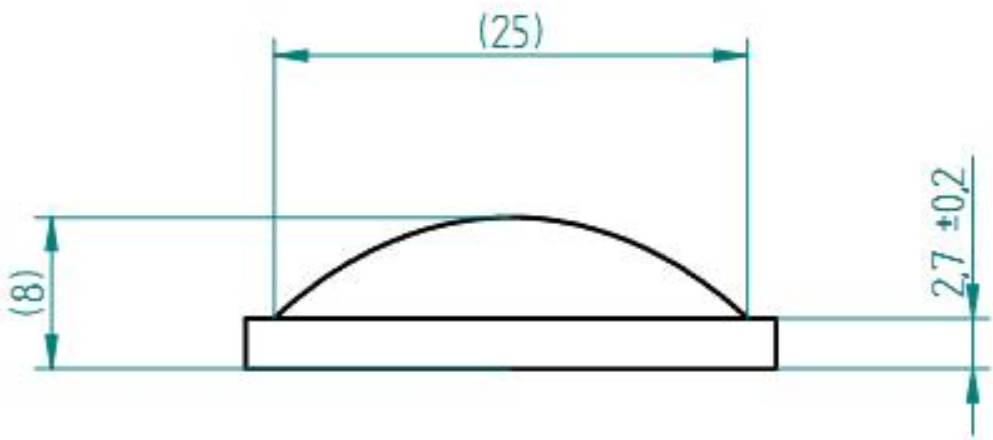
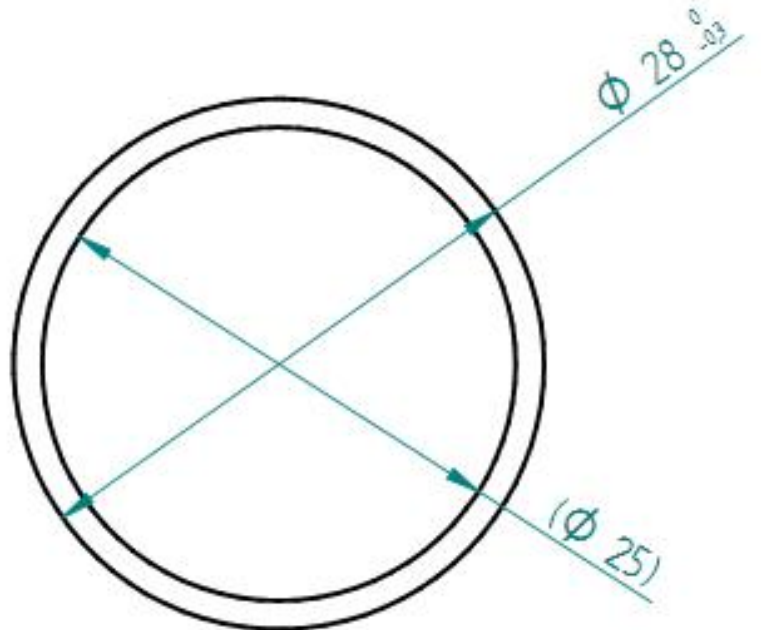


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	8,5
FWHM C ₉₀ [°]	8,5

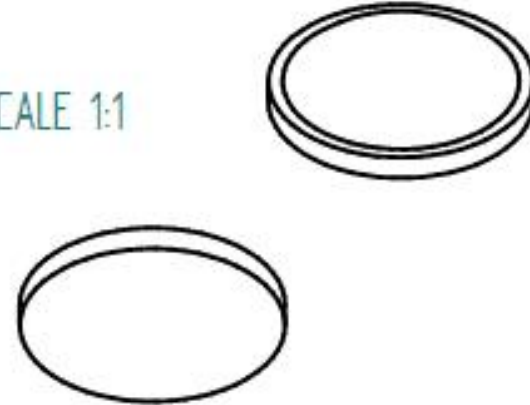
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

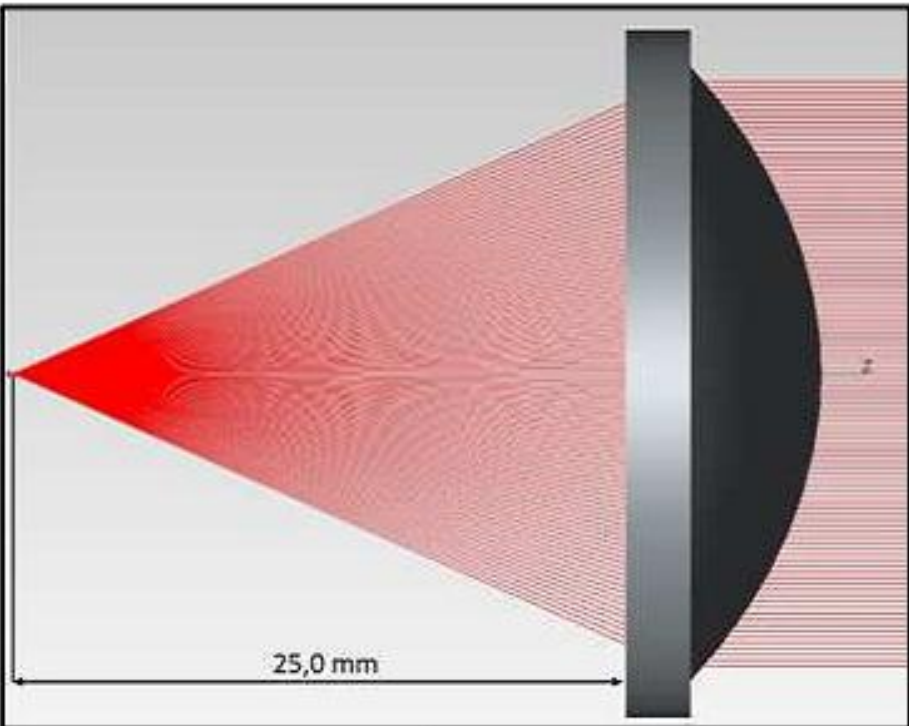
A581 2808


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:1



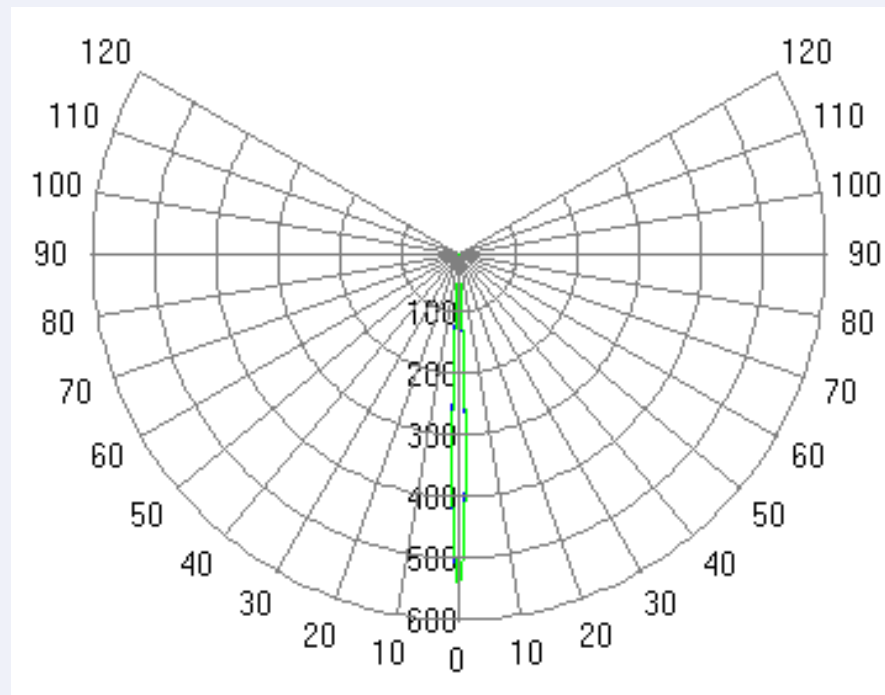


DRAWN	krutsky	DATE	05/29/20	
CHECKED				
ENG APPR				
MGR APPR				
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS				<p>A581 2808</p>
				<p>SIZE: A4 FILE NAME: A581_small.dxf SCALE: WEIGHT: 8 g SHEET 1 OF 1</p>

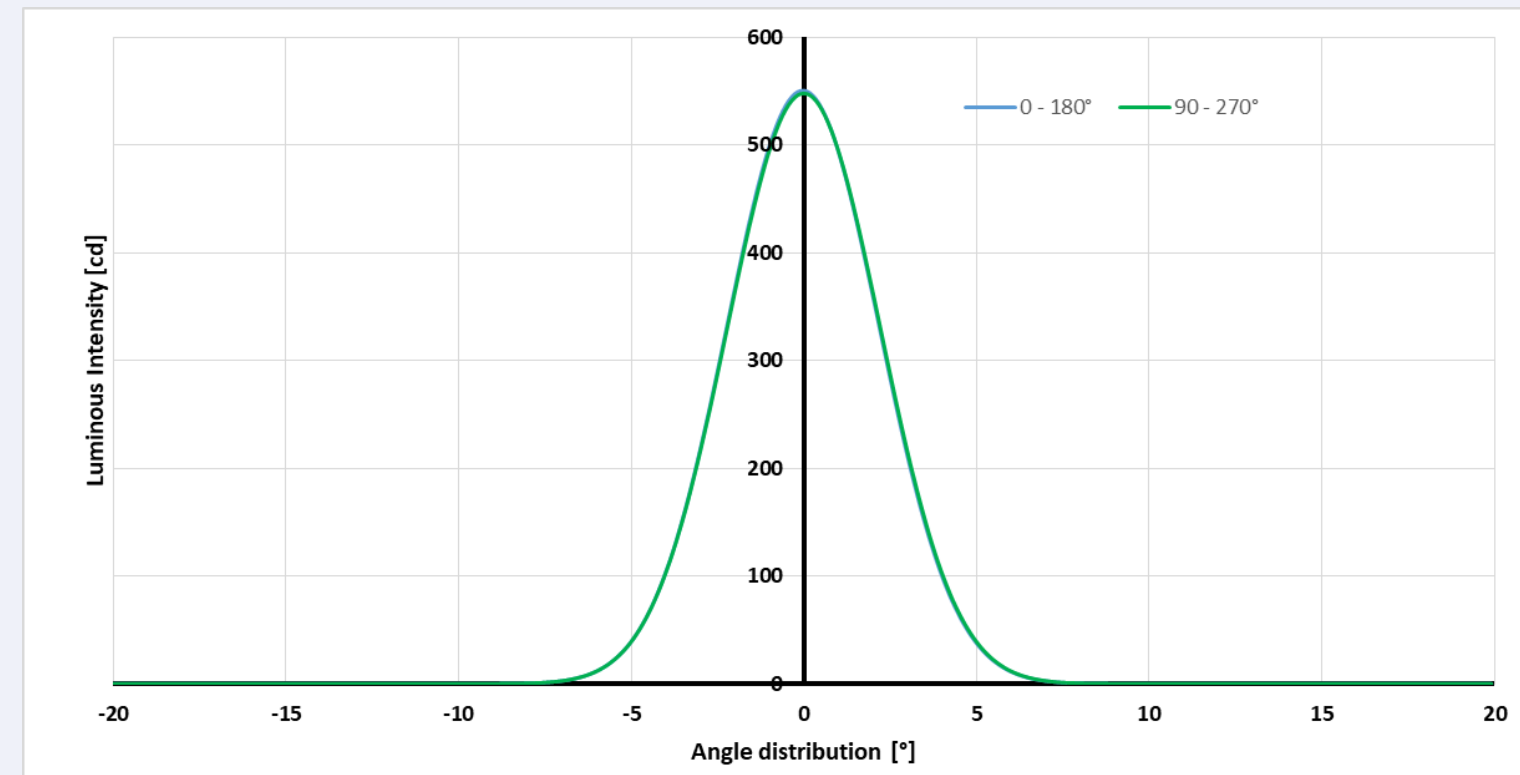
Glass: LIBA or alternative (nd = 1,521)

A581 2808 – simulation results

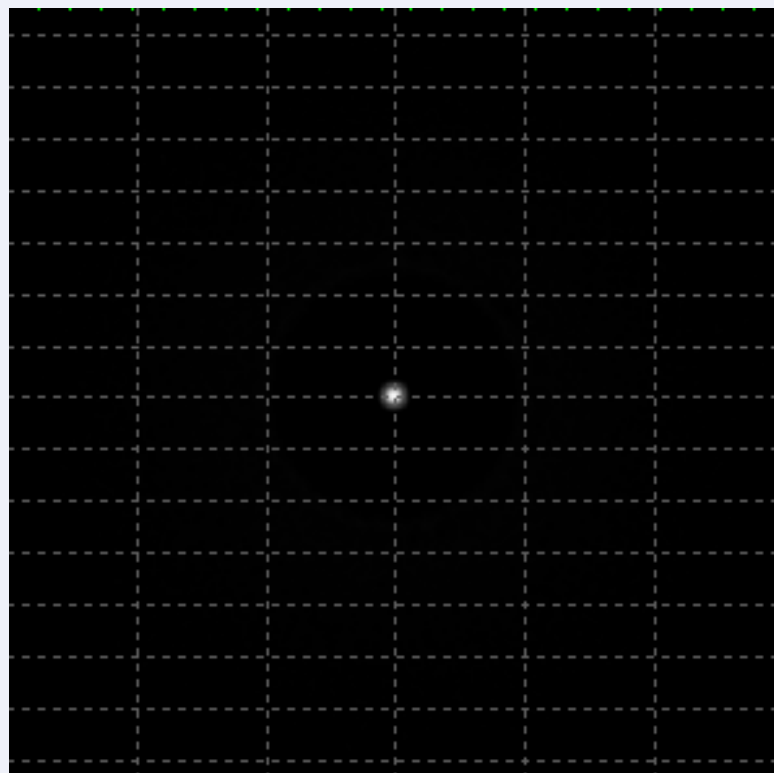
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

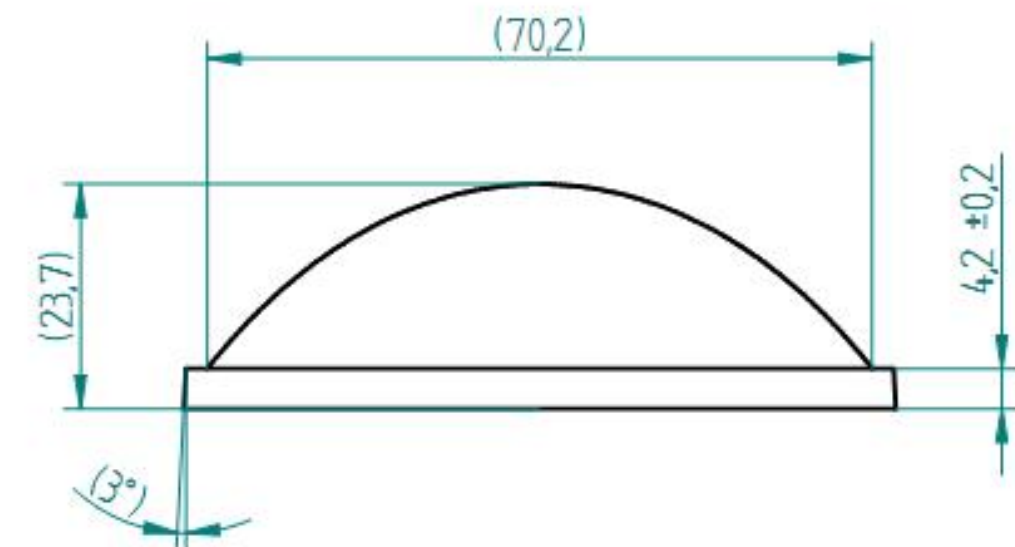
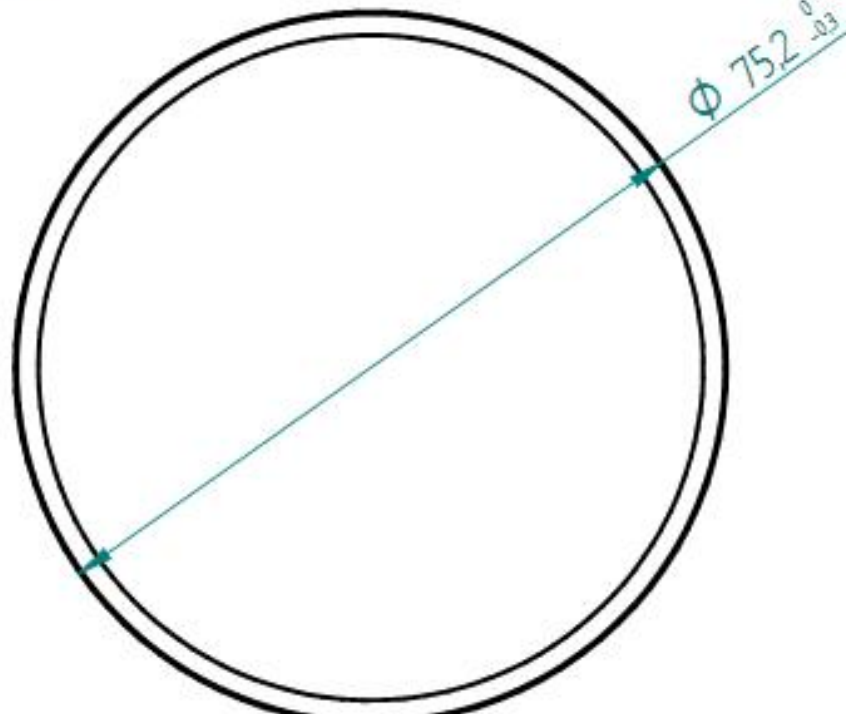


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

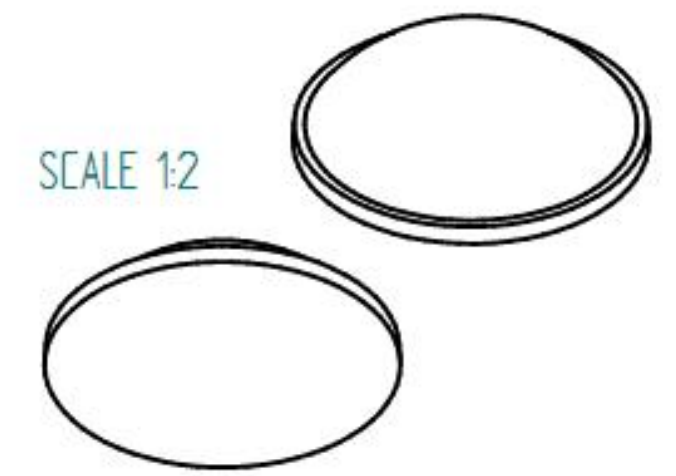
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A582 7522

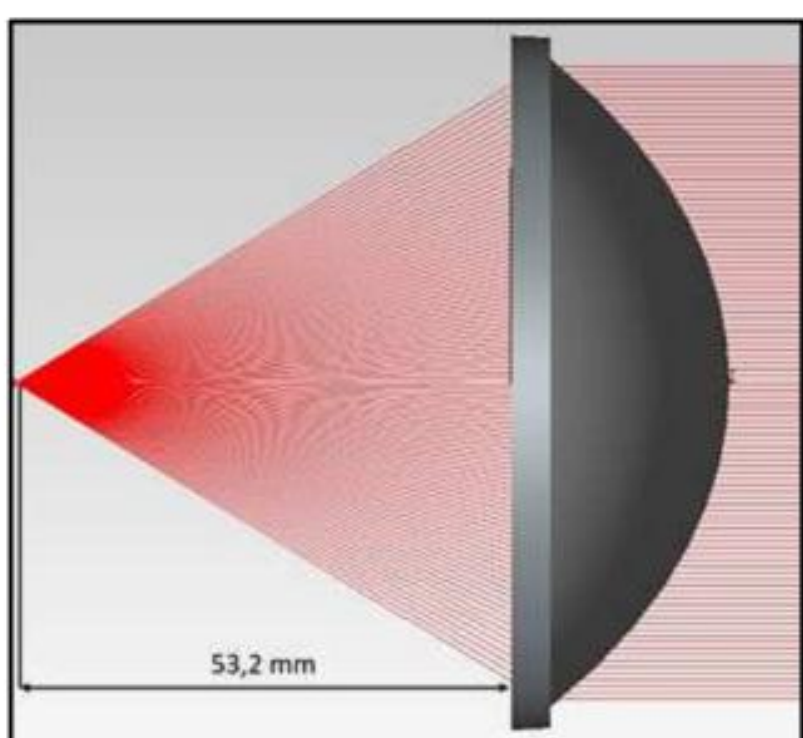
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED





SCALE 1:2



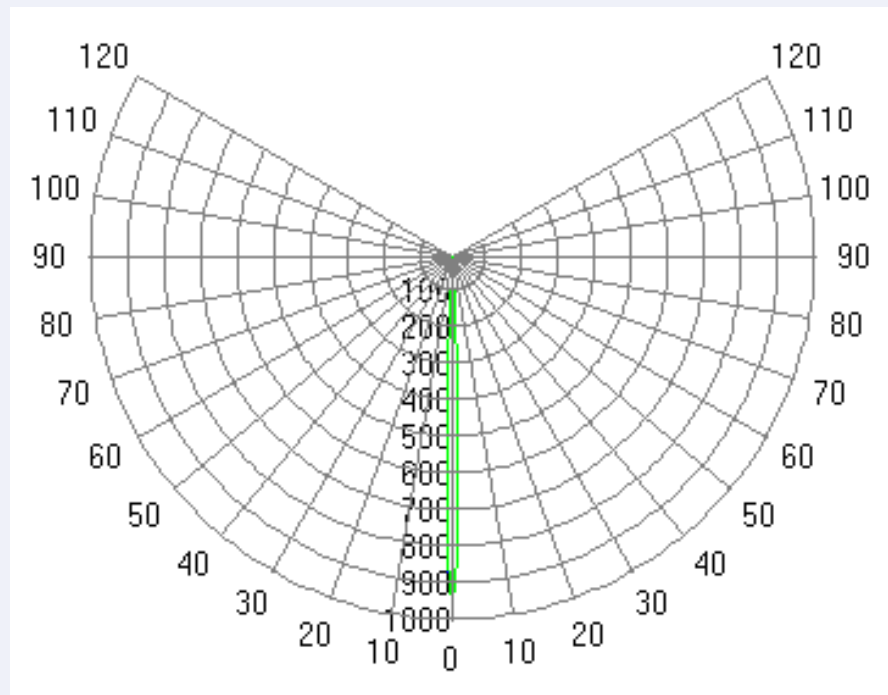
Glass: LIBA or alternative (nd = 1,521)



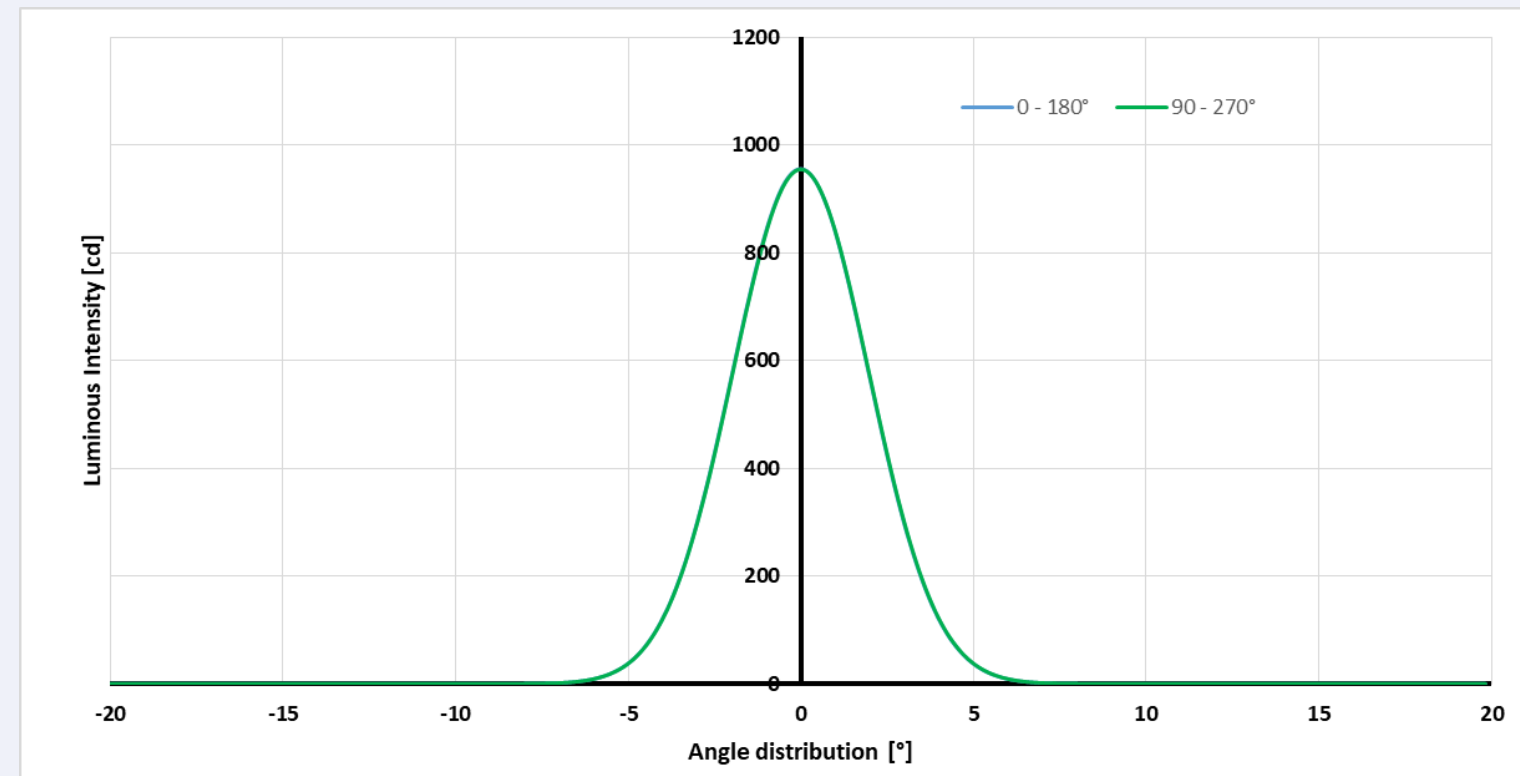
DRAWN	krutsky	DATE	05/29/20	
CHECKED				
ENG APPR				
MGR APPR				
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS</small>				A582 7522
		SIZE	A4	
		FILE NAME	A582_smal.dxf	
		SCALE		WEIGHT: 150 g SHEET 1 OF 1

A582 7522 – simulation results

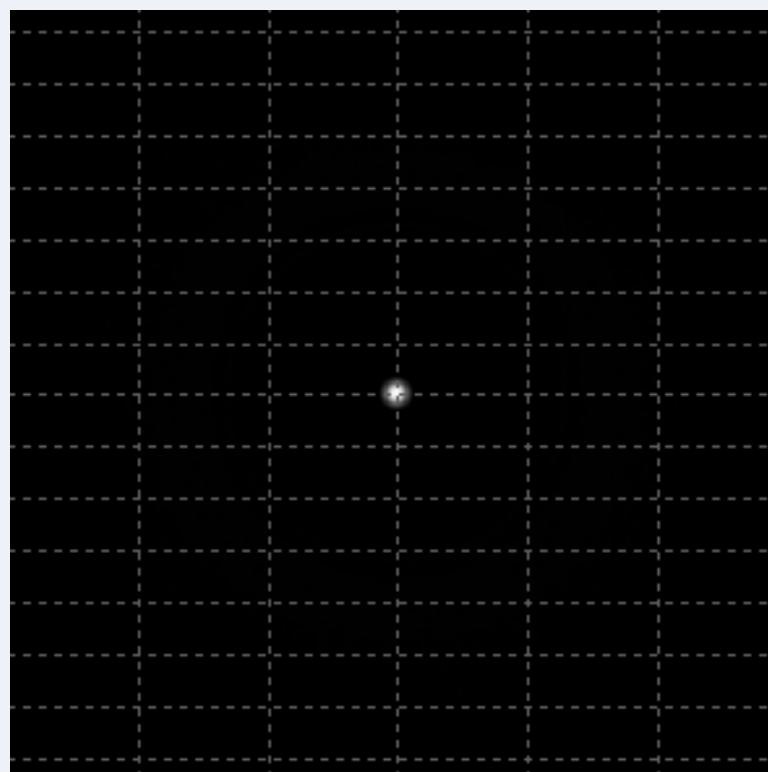
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

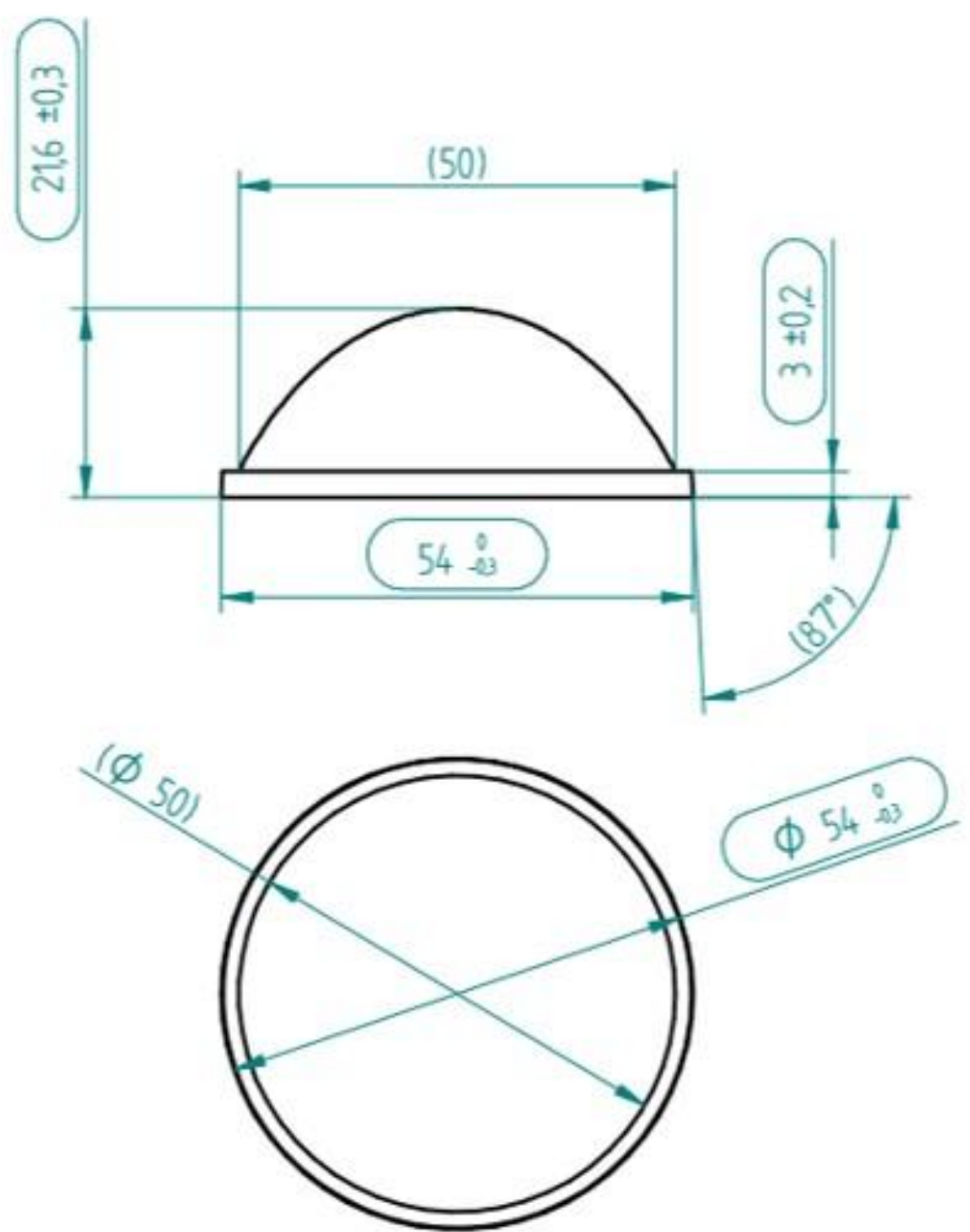


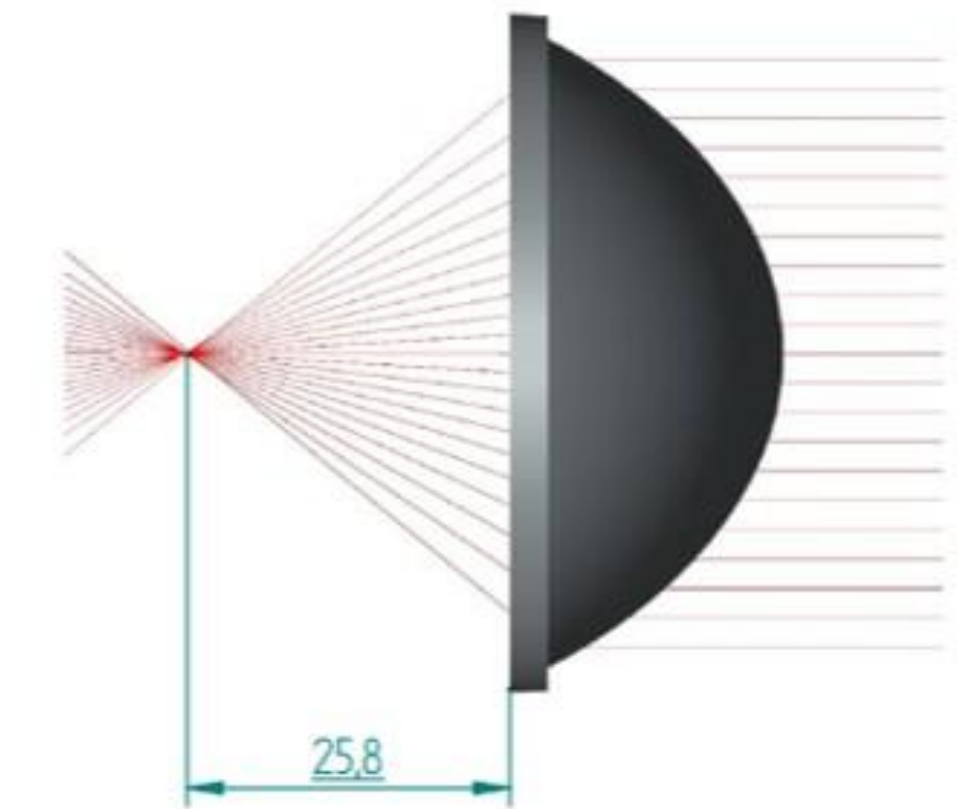
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED


A636 5422

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



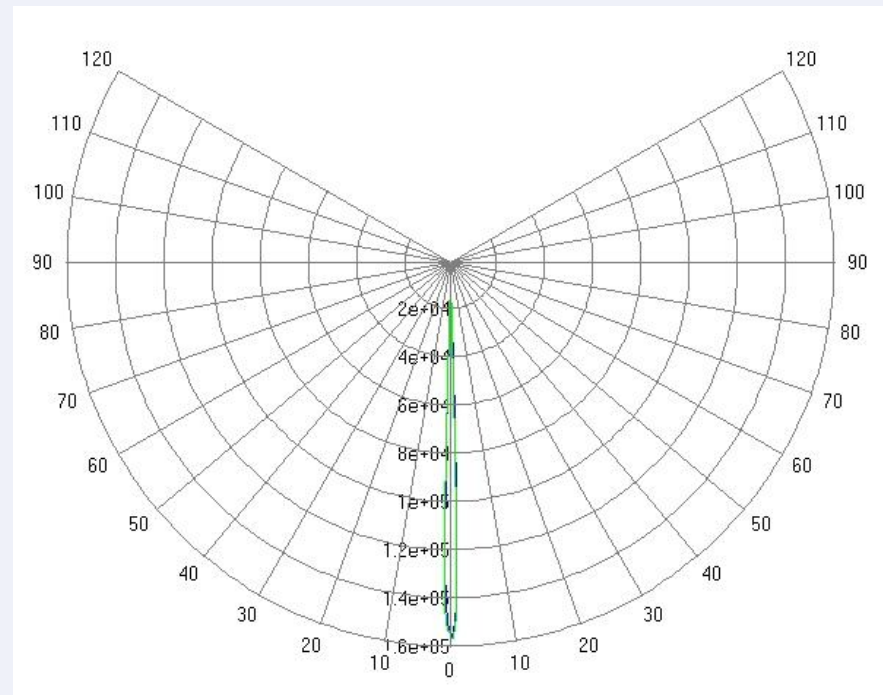


material : GLASS nd = 1.520

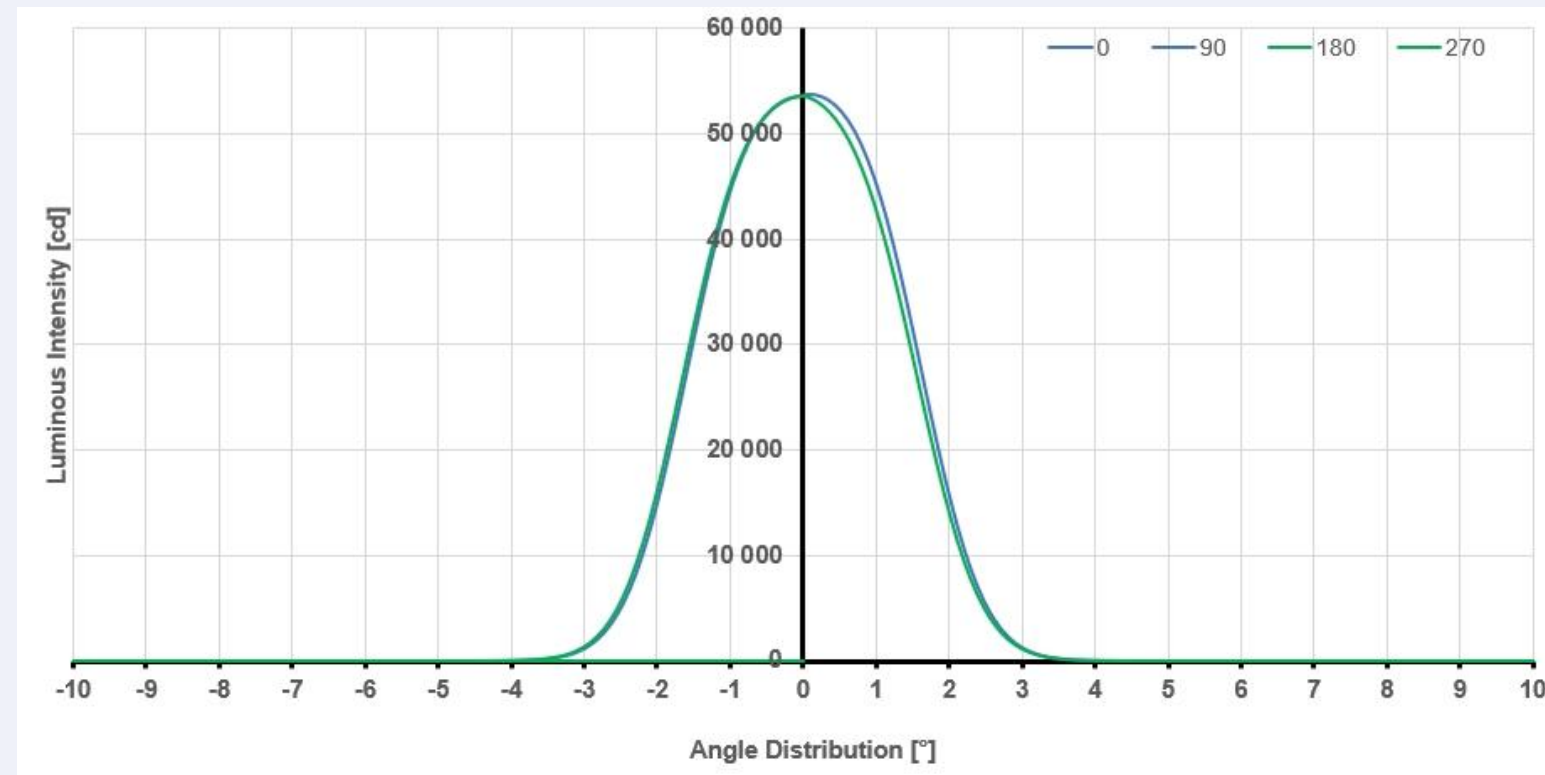
	NAME	DATE		
DRAWN	jkocarek	10/20/23		
CHECKED				
ENG APPR				
MGR APPR				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±XXX 3 PL ±XXXX			TITLE aspheric lens	
SIZE	DWG NO	REV		
A4	A636 5422			
FILE NAME: A636 5422.dft				
SCALE:	WEIGHT:	SHEET 1 OF 1		

A636 5422 – simulation results

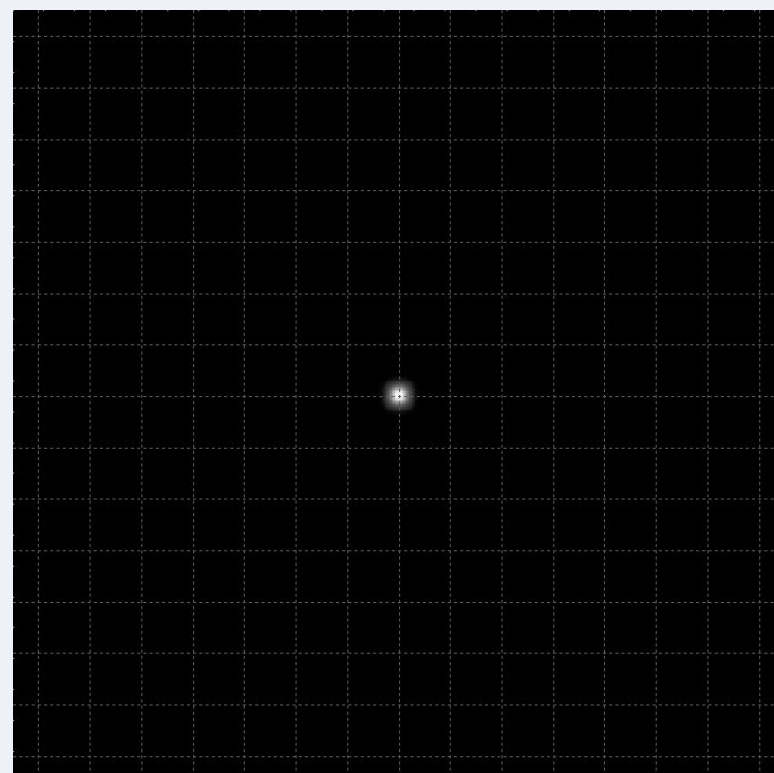
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

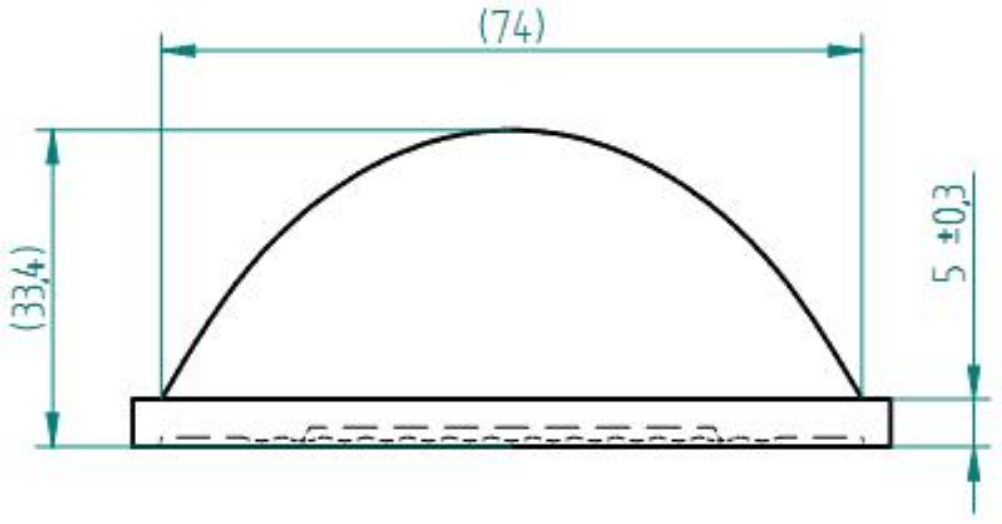
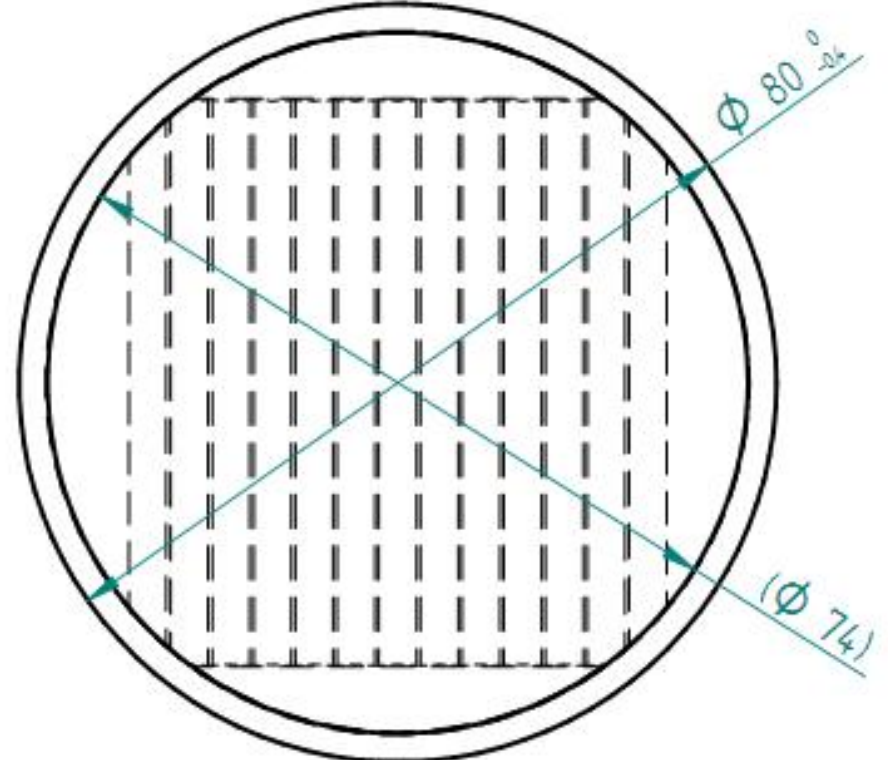


LED used for simulation	XP-G4
Luminous flux of LED [lm]	357
FWHM Co [°]	3
FWHM C90 [°]	3

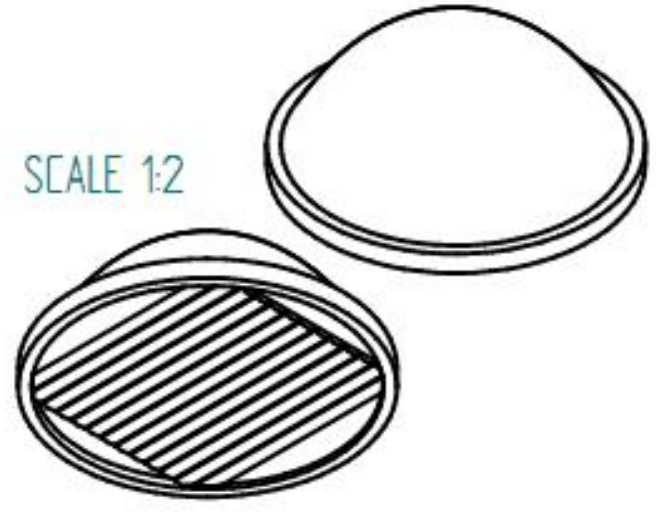
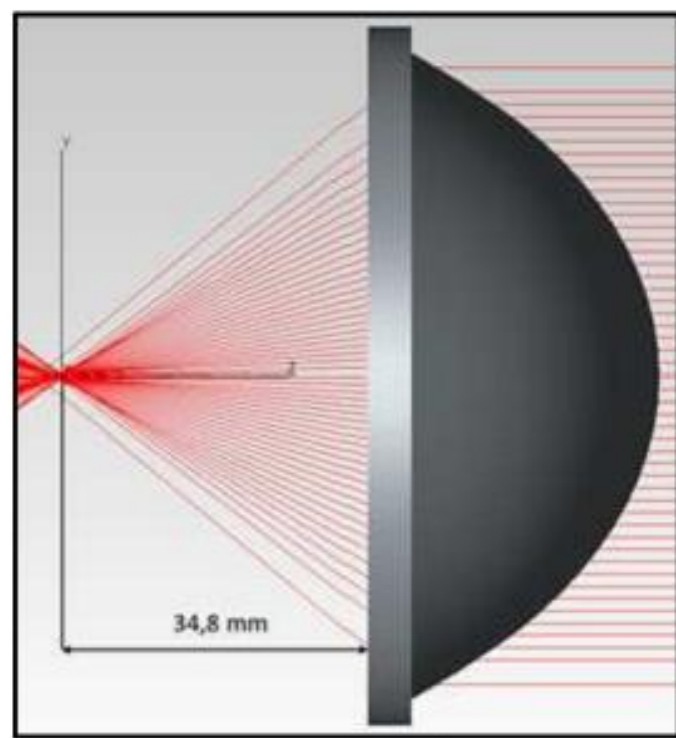
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A650 8034


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:2

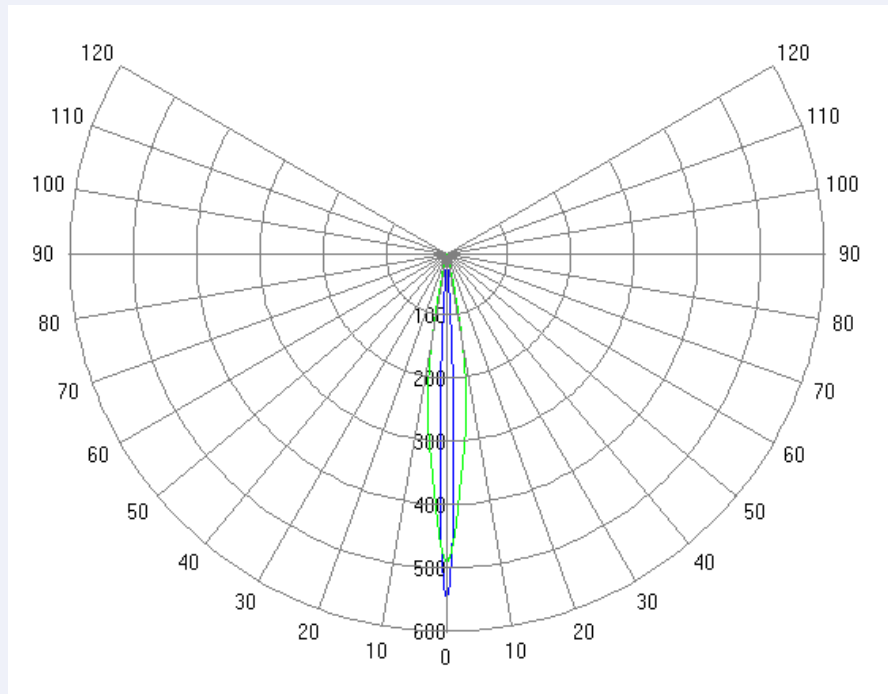



Glass: LIBA or alternative (nd = 1,521)

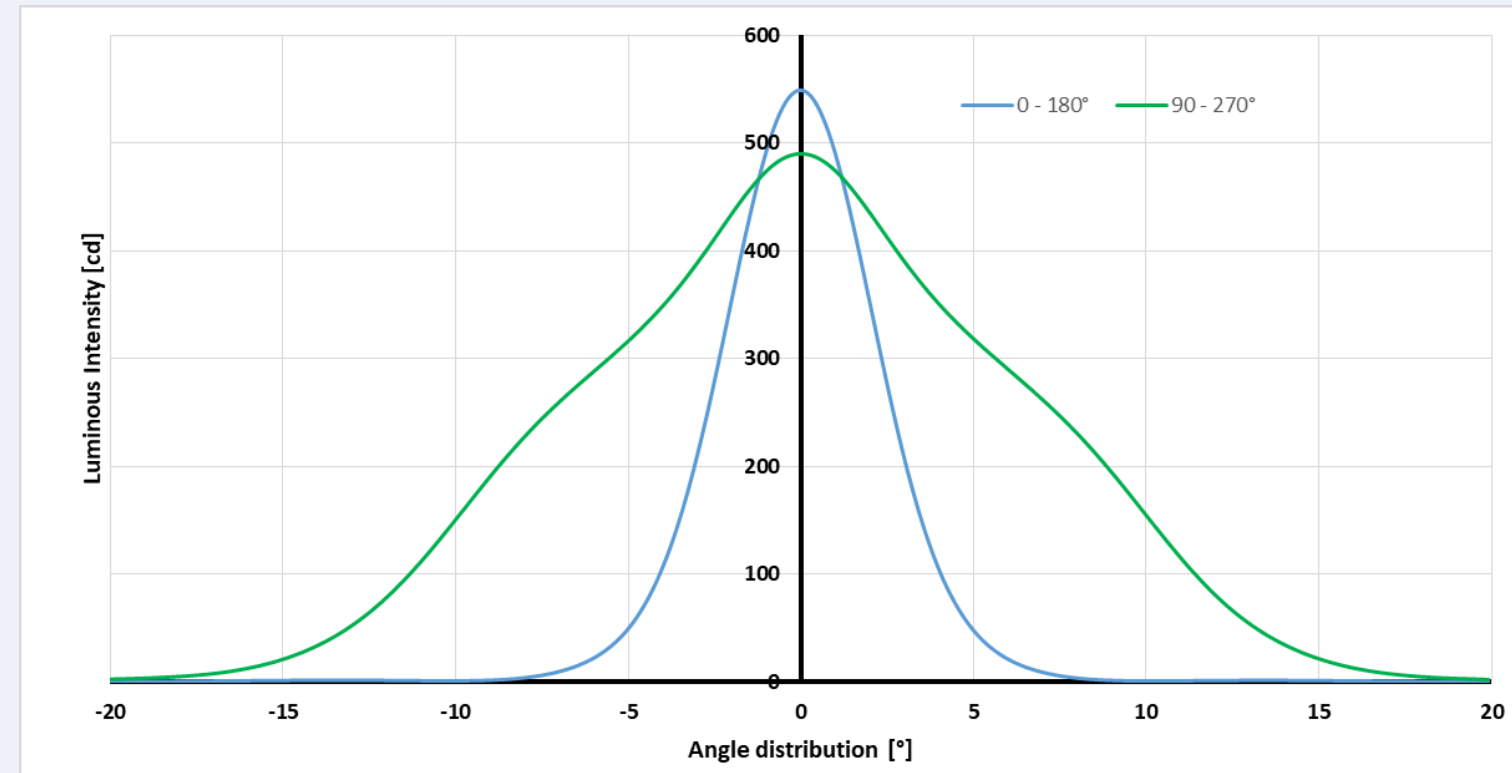
DRAWN	krutsky	DATE	05/29/20	 A650 8034												
CHECKED																
ENG APPR																
MER APPR																
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">SIZE</td> <td style="font-size: x-small;">DWG NO</td> <td style="font-size: x-small;">REV</td> </tr> <tr> <td style="font-size: x-small;">A4</td> <td> </td> <td> </td> </tr> <tr> <td colspan="3" style="font-size: x-small;">FILE NAME: A650_small.dwg</td> </tr> <tr> <td style="font-size: x-small;">SCALE</td> <td style="font-size: x-small;">WEIGHT: 223 g</td> <td style="font-size: x-small;">SHEET 1 OF 1</td> </tr> </table>	SIZE	DWG NO	REV	A4			FILE NAME: A650_small.dwg			SCALE	WEIGHT: 223 g	SHEET 1 OF 1
SIZE	DWG NO	REV														
A4																
FILE NAME: A650_small.dwg																
SCALE	WEIGHT: 223 g	SHEET 1 OF 1														

A650 8034 – simulation results

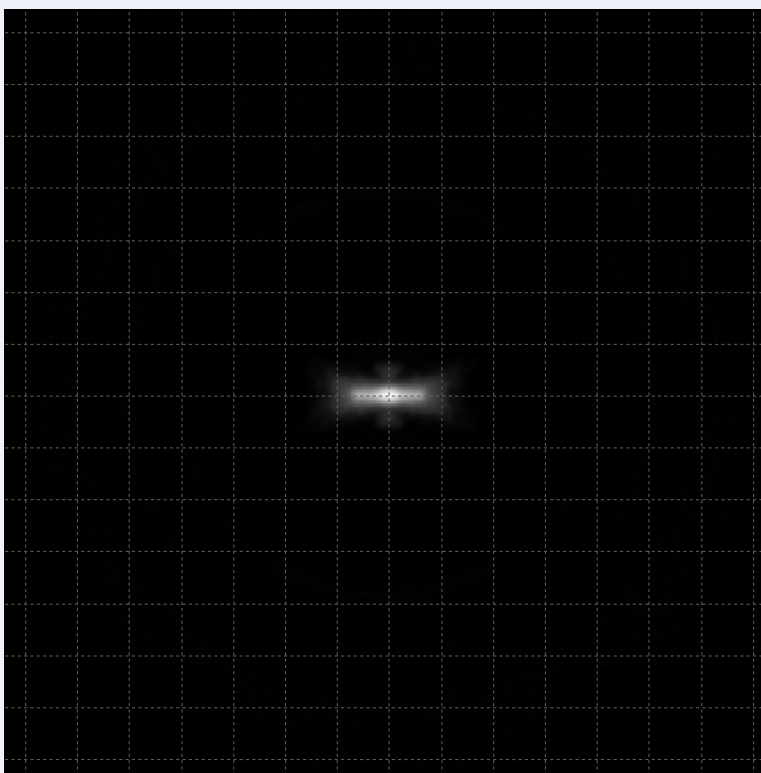
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

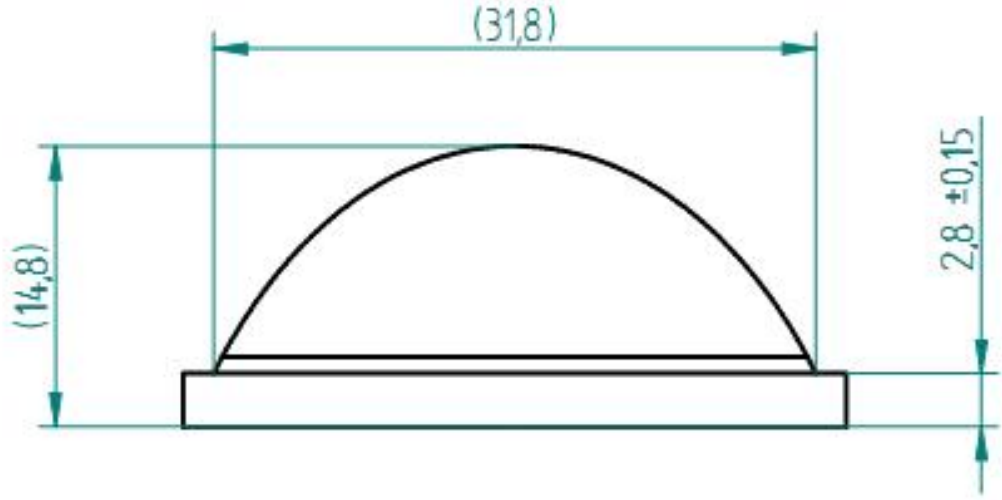
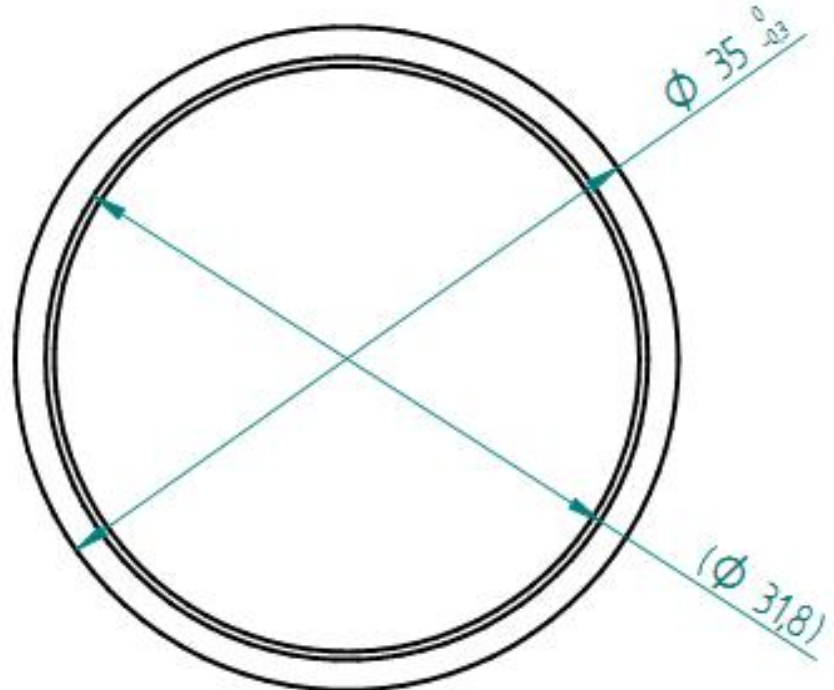


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	15

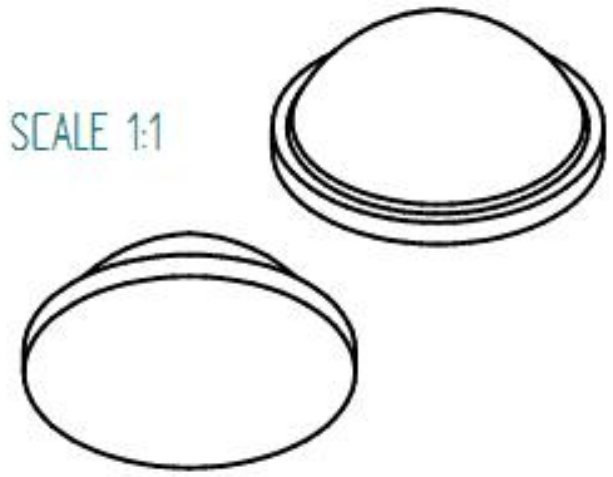
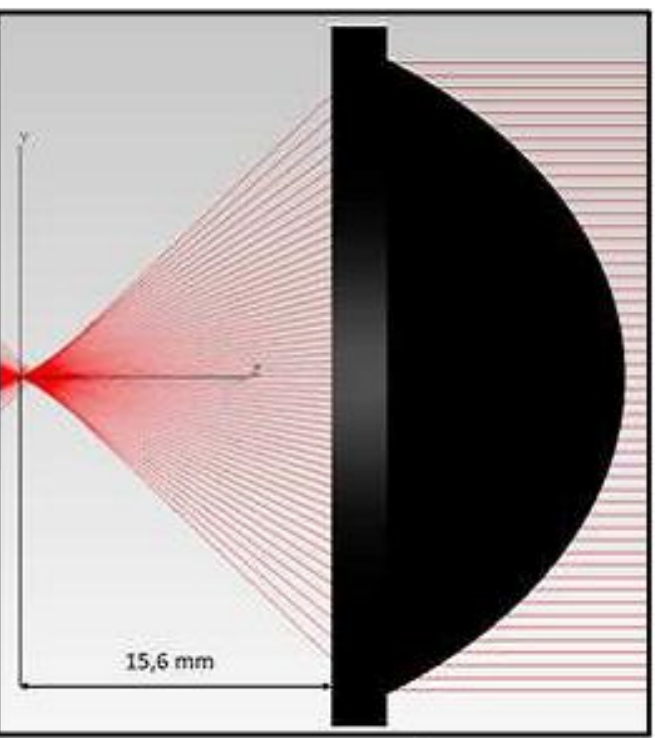
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A837 3515


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:1

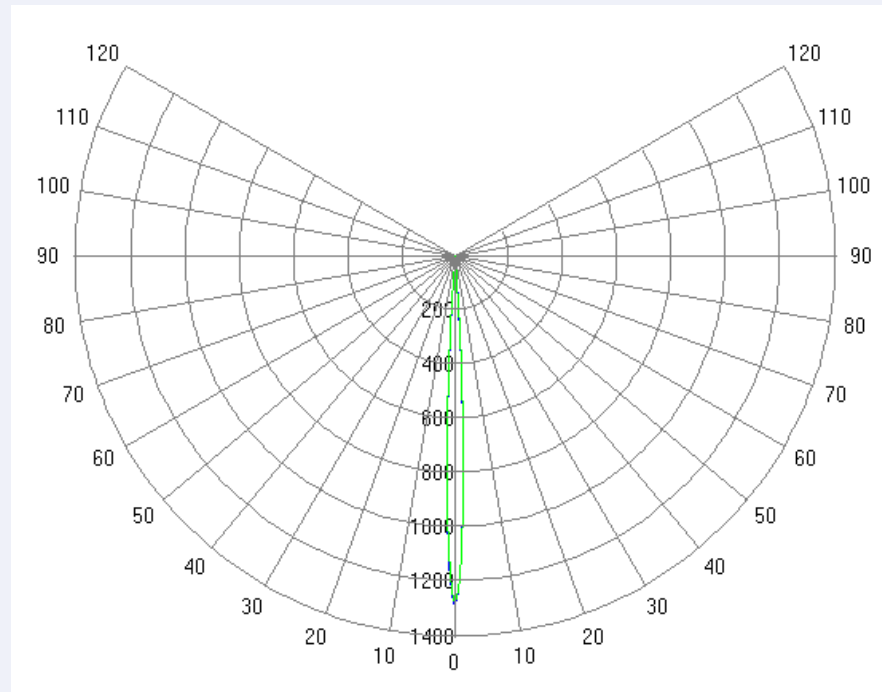



Glass: LIBA or alternative (nd = 1,521)

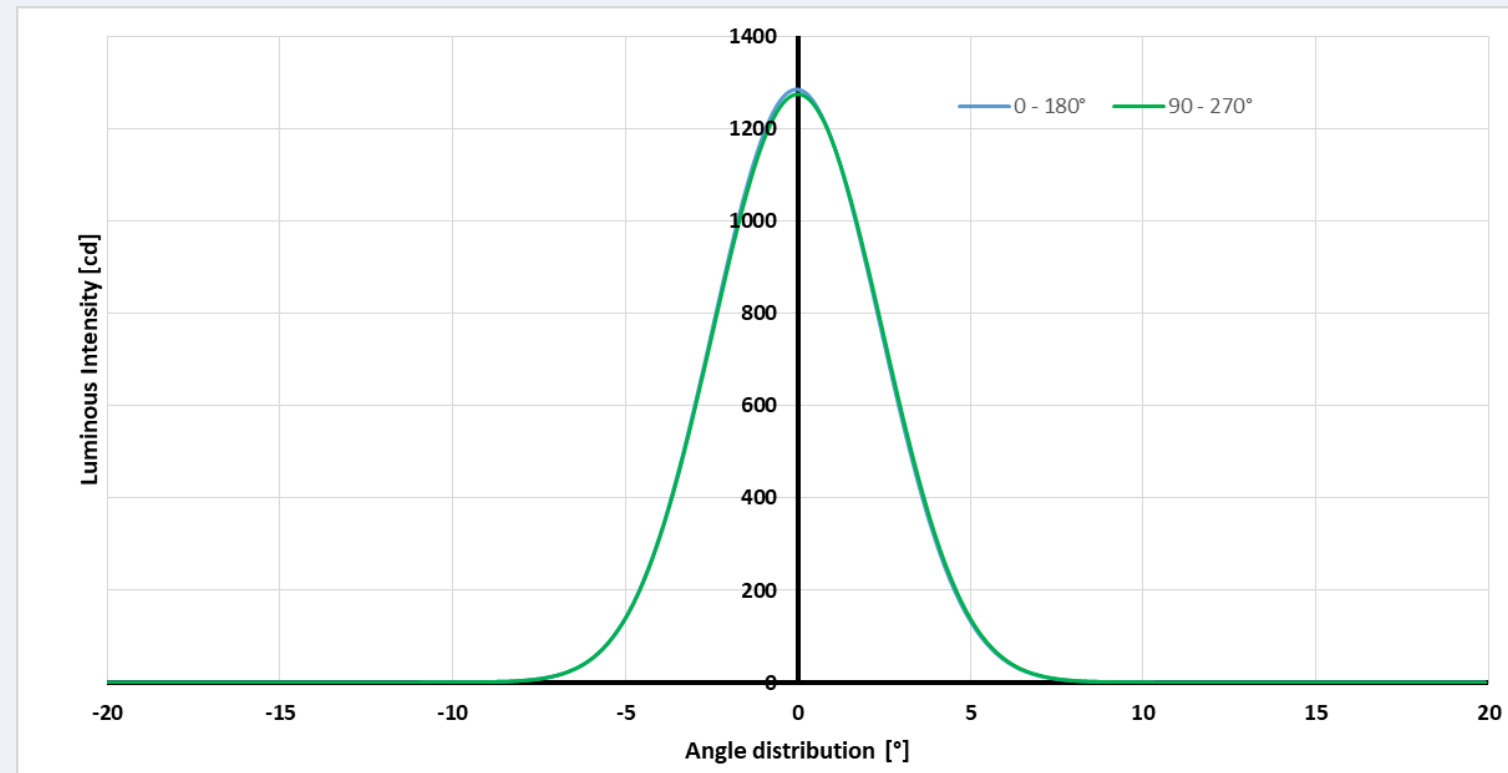
DRAWN	krutsky	DATE	05/28/20	 <p style="font-size: 1.2em; margin: 0;">A837 3515</p>												
CHECKED																
ENG APPR																
MER APPR																
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SIZE</td> <td style="width: 40%;">A4</td> <td style="width: 10%;">DWG NO</td> <td style="width: 10%;"> </td> <td style="width: 10%;">REV</td> <td style="width: 10%;"> </td> </tr> <tr> <td>SCALE</td> <td> </td> <td>WEIGHT</td> <td>20 g</td> <td>SHEET</td> <td>1 OF 1</td> </tr> </table>	SIZE	A4	DWG NO		REV		SCALE		WEIGHT	20 g	SHEET	1 OF 1
SIZE	A4	DWG NO		REV												
SCALE		WEIGHT	20 g	SHEET	1 OF 1											

A837 3515 – simulation results

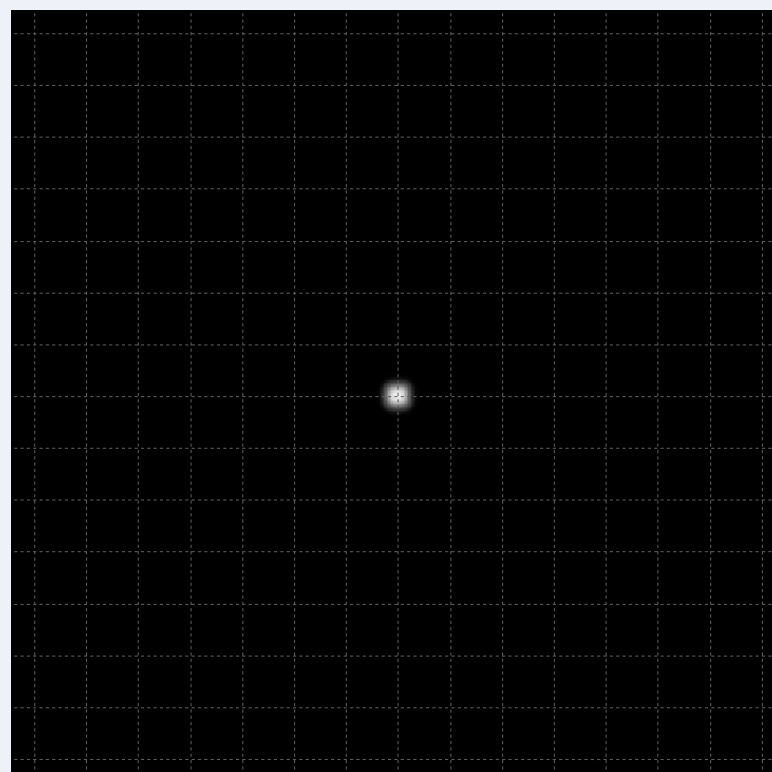
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

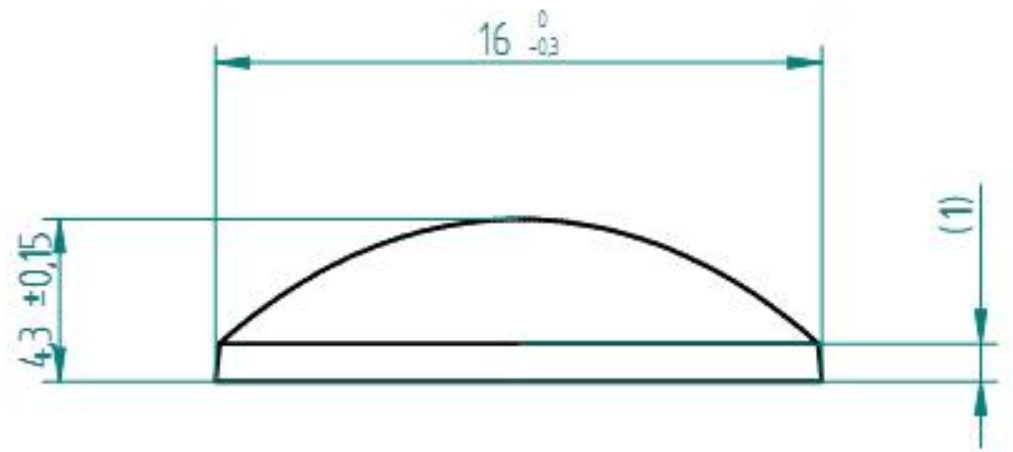
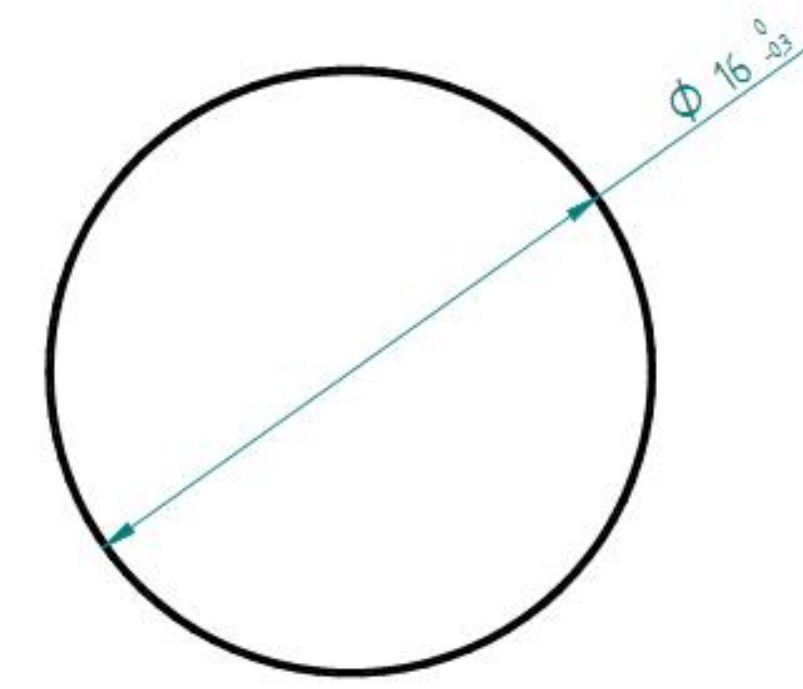


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	6
FWHM C90 [°]	6

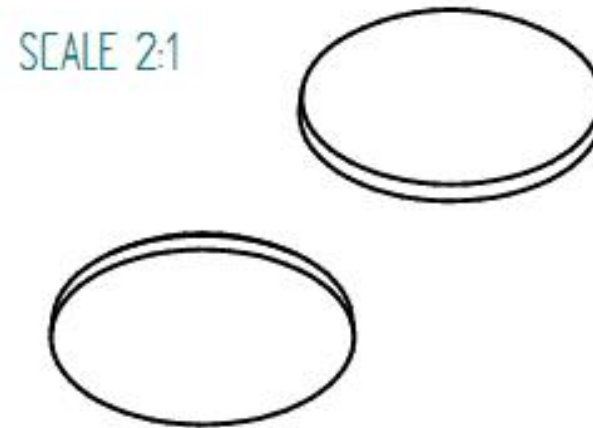
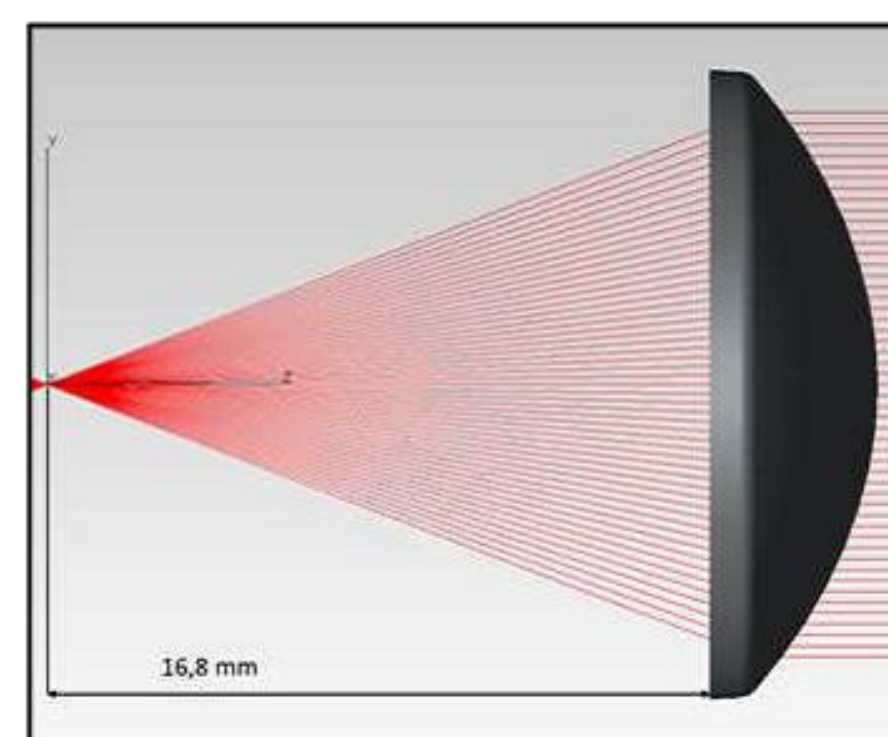
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A838 1605


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 2:1

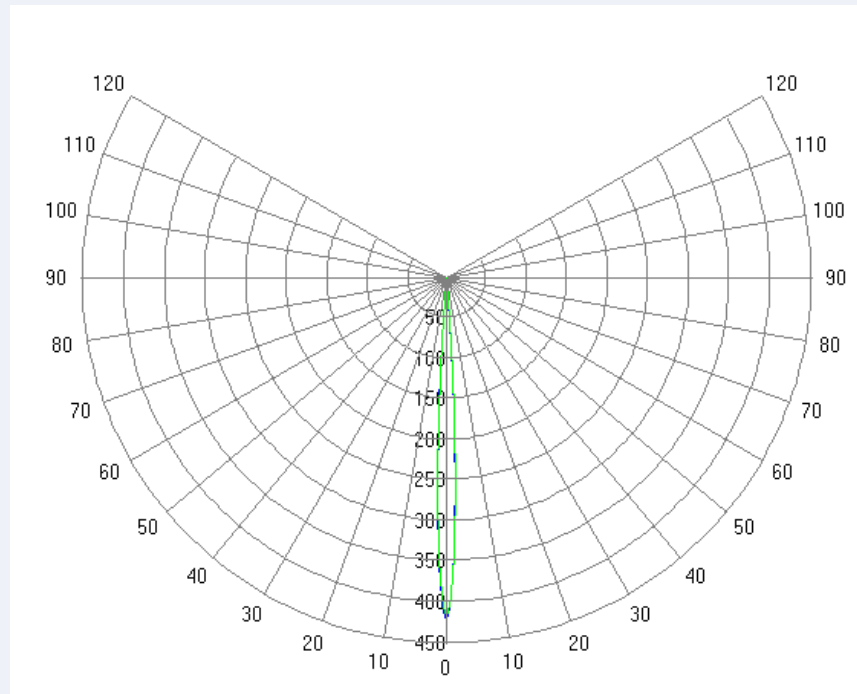



Glass: LIBA or alternative (nd = 1,521)

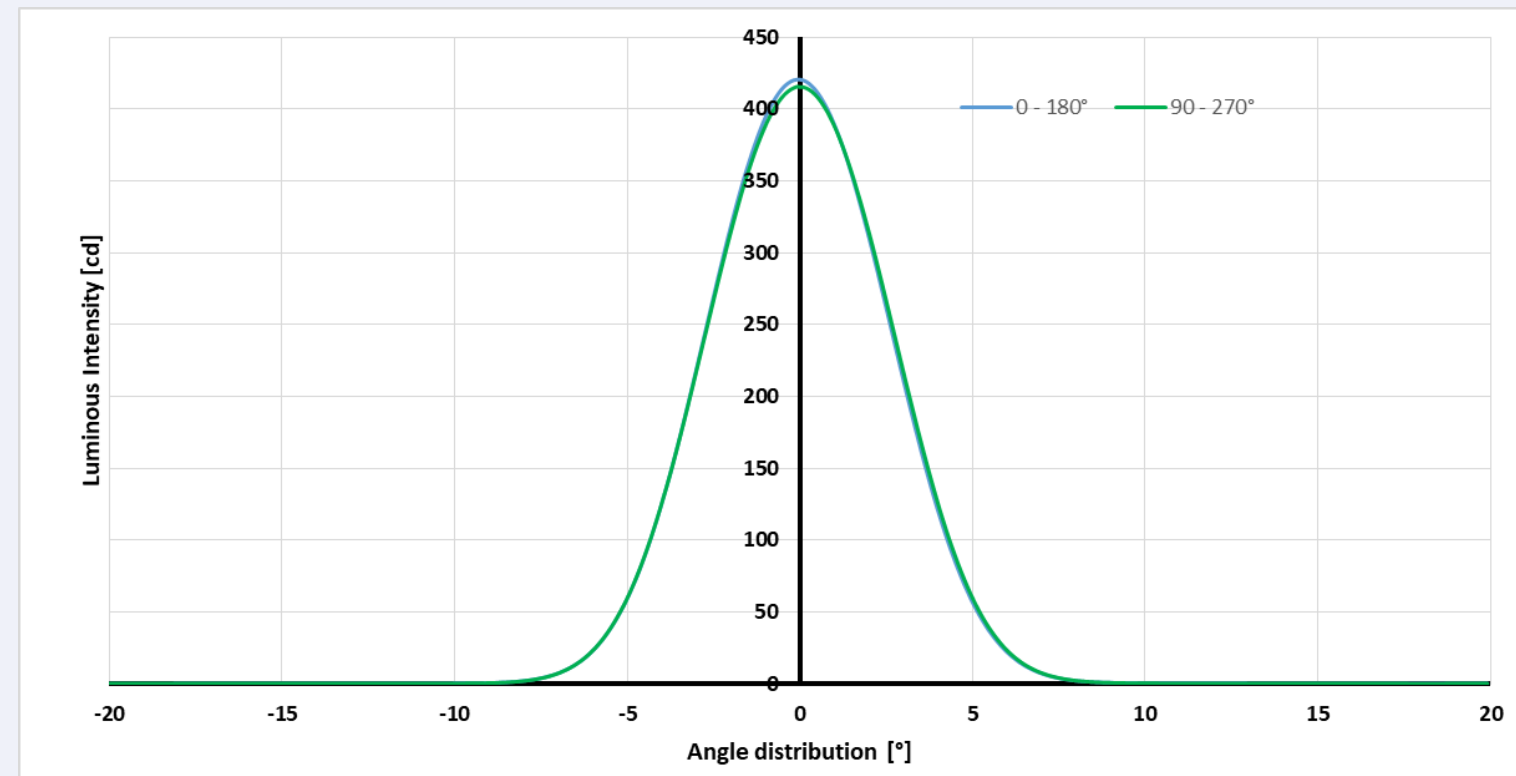
DRAWN	krutsky	DATE	05/28/20	 <p>ECOGLOSS</p> <p style="font-size: 1.2em; color: green;">A838 1605</p>															
CHECKED																			
ENG APPR																			
MGR APPR																			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SIZE</td> <td style="width: 10%;">DWG NO</td> <td style="width: 10%;">REV</td> </tr> <tr> <td>A4</td> <td> </td> <td> </td> </tr> <tr> <td colspan="3">FILE NAME: A838_small.dwg</td> </tr> <tr> <td>SCALE</td> <td>WEIGHT</td> <td>SHEET 1 OF 1</td> </tr> <tr> <td> </td> <td>1 g</td> <td> </td> </tr> </table>	SIZE	DWG NO	REV	A4			FILE NAME: A838_small.dwg			SCALE	WEIGHT	SHEET 1 OF 1		1 g	
SIZE	DWG NO	REV																	
A4																			
FILE NAME: A838_small.dwg																			
SCALE	WEIGHT	SHEET 1 OF 1																	
	1 g																		

A838 1605 – simulation results

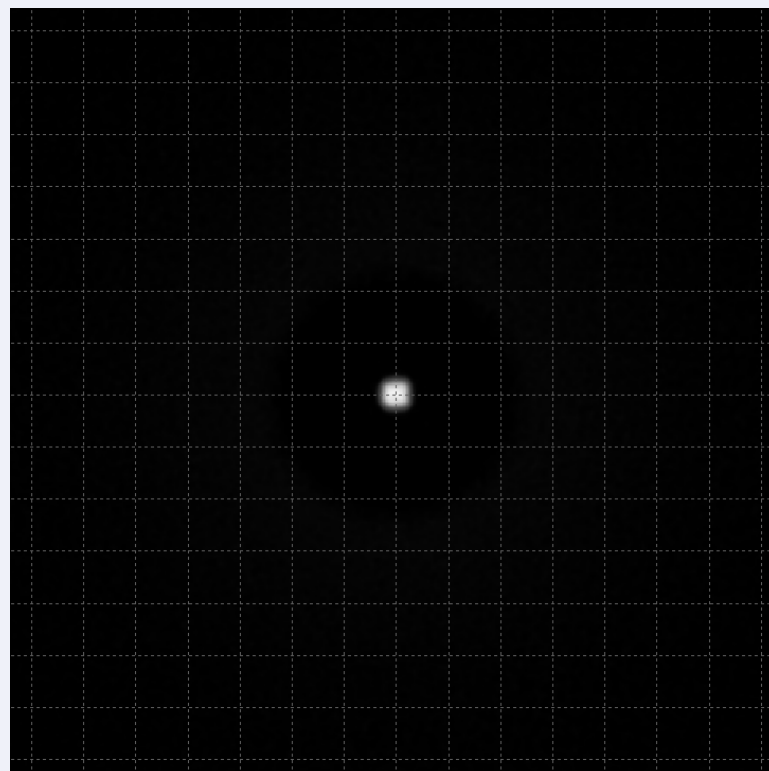
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



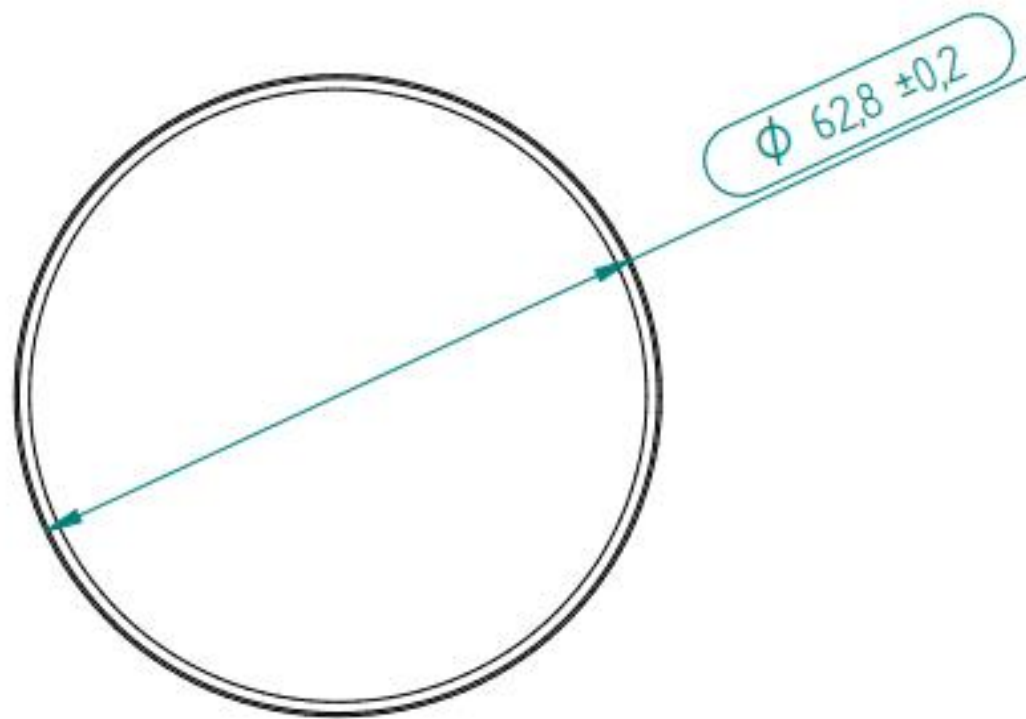
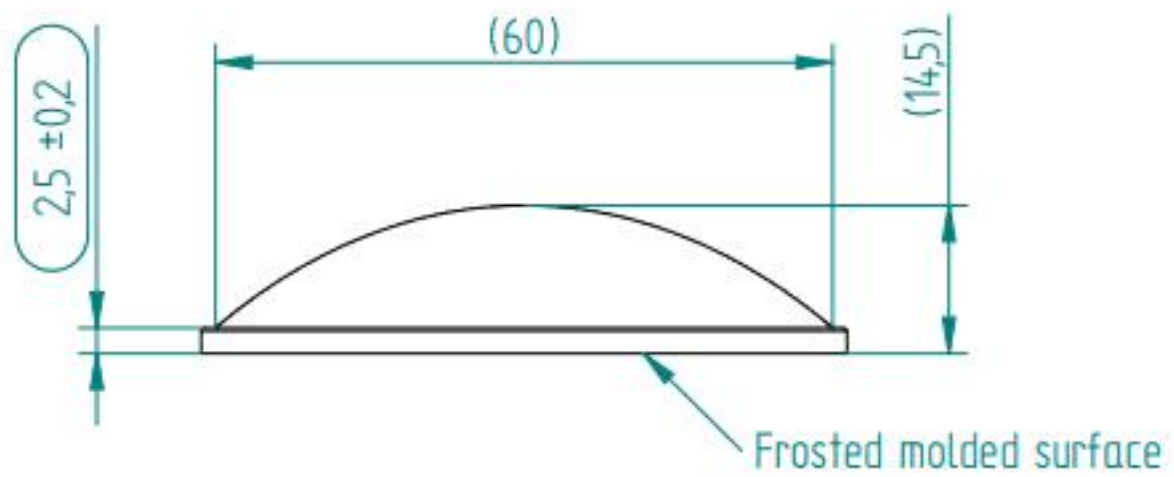
- Projection wall 5x5 m at 1m



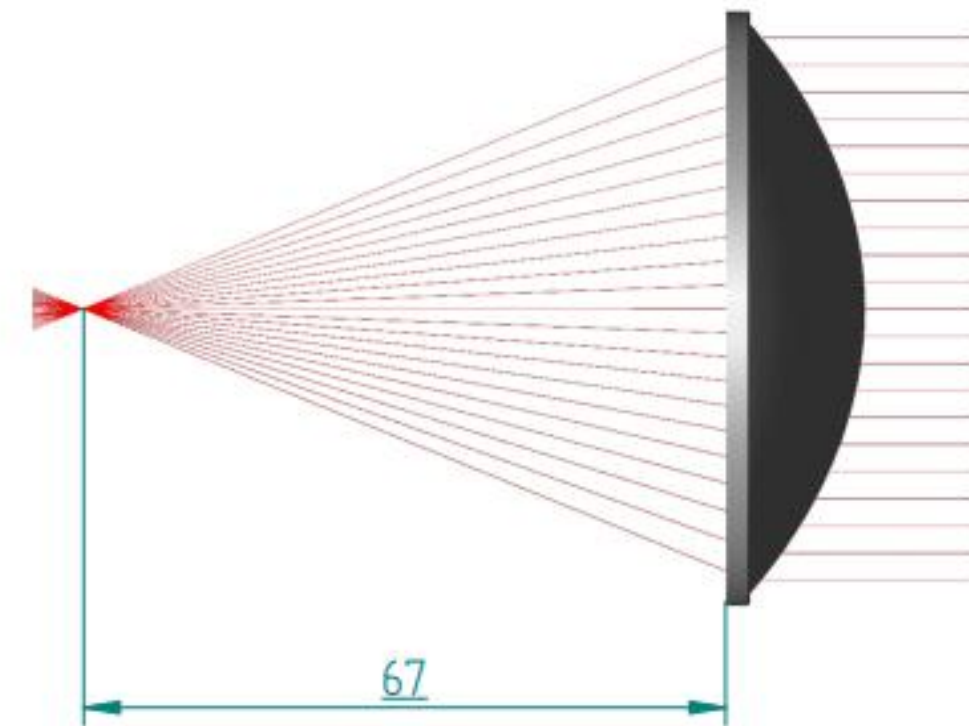
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	6
FWHM C ₉₀ [°]	6

* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED


A850 6315



REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

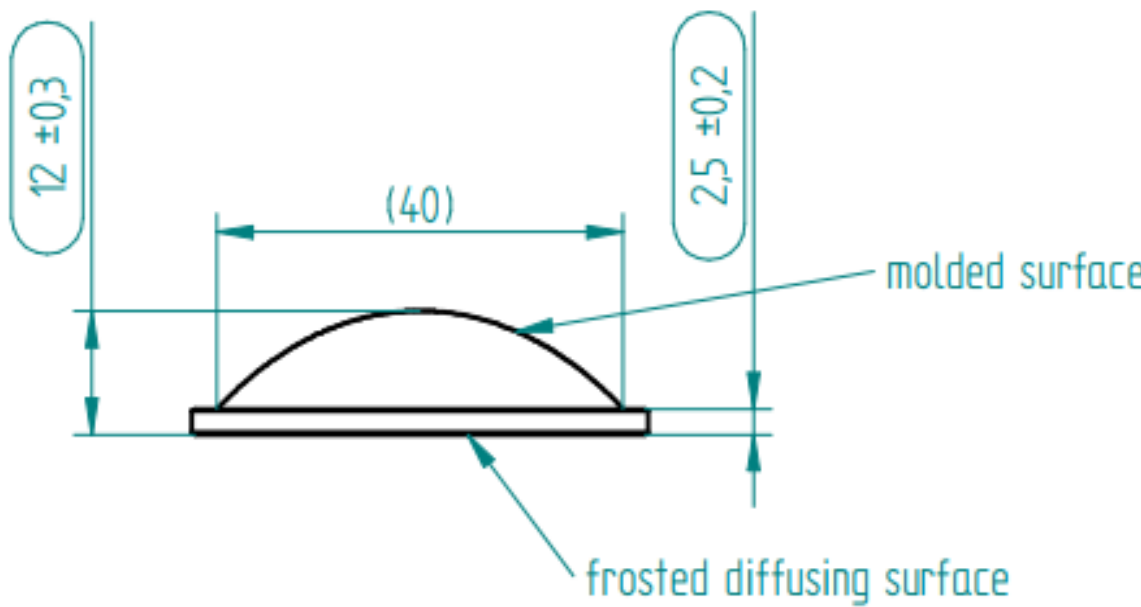


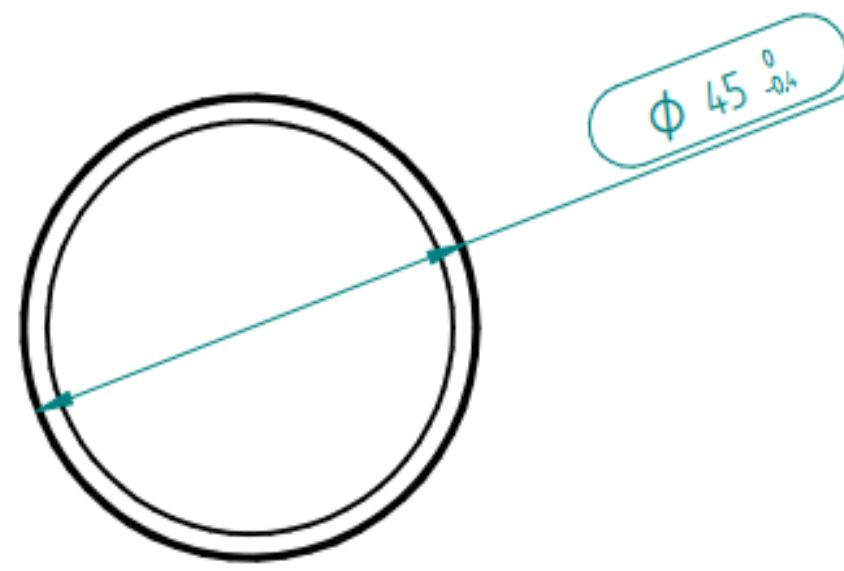
material : GLASS nd = 1,520

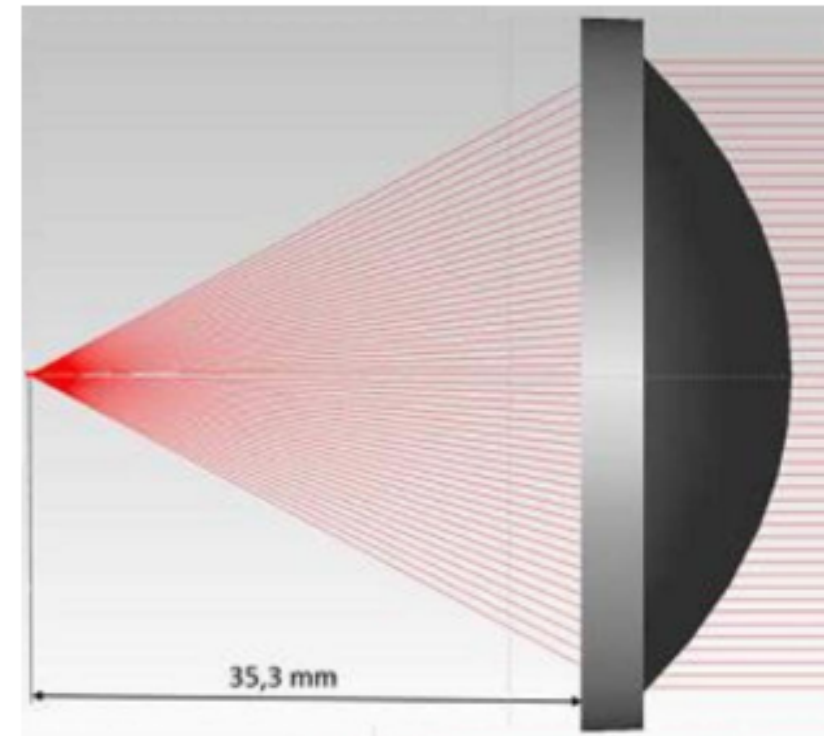
	NAME	DATE			
DRAWN	jkocarek	09/14/23			
CHECKED					
ENG APPR					
MGR APPR			TITLE Aspheric lens structured flat side		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			SIZE A4	DWG NO A850 6315	REV
			FILE NAME: A850 6315.dft		
			SCALE:	WEIGHT:	SHEET 1 OF 1

A904 4512


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED





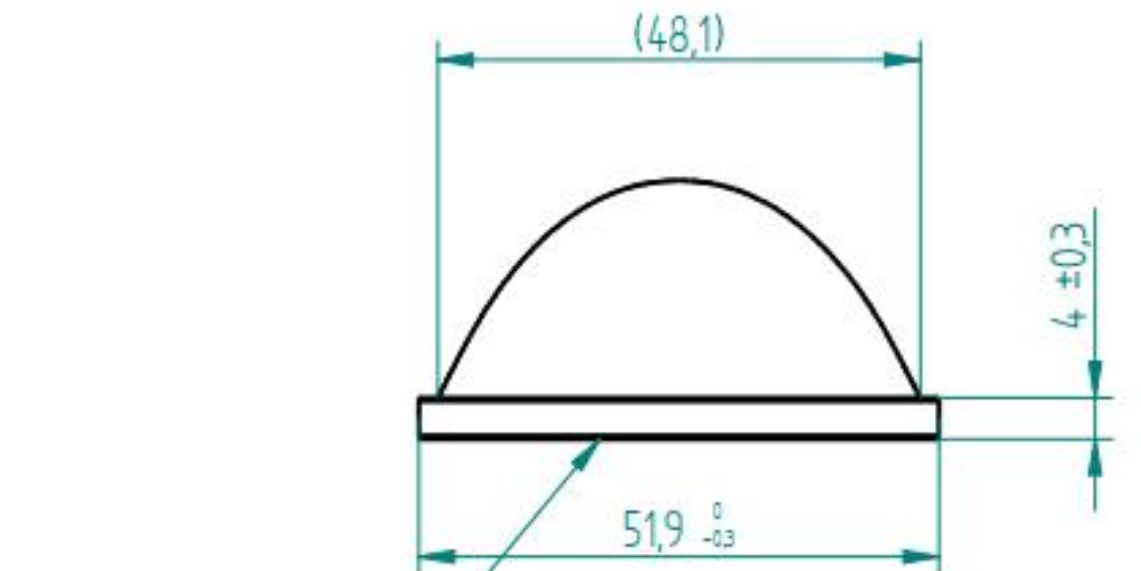


material : GLASS nd=1,520
mass: about 30g

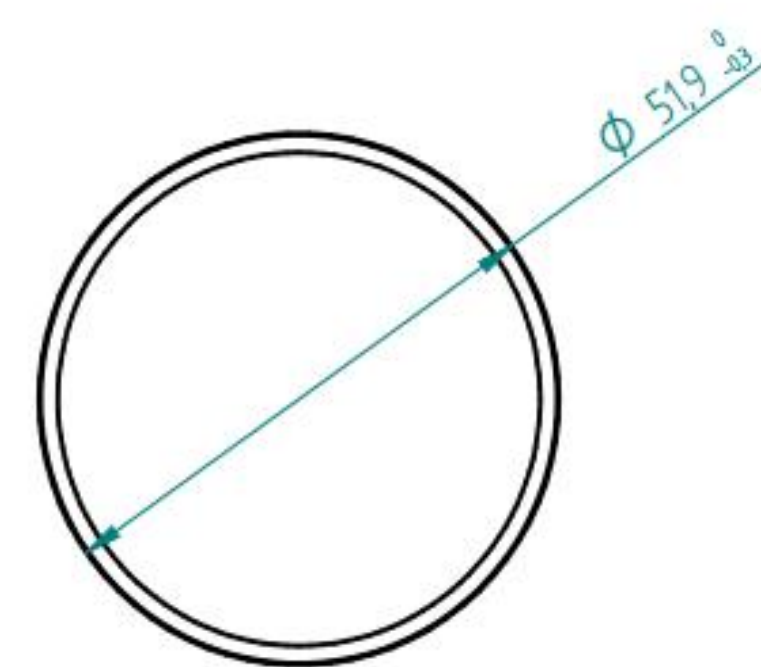
	NAME	DATE			
DRAWN	jkocarek	03/13/23			
CHECKED					
ENG APPR					
MGR APPR			TITLE Aspheric Lens D45BF35 frosted		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			SIZE A4	DWG NO A904 4512	REV AP01
			FILE NAME: A904 4512.dft		
			SCALE:	WEIGHT:	SHEET 1 OF 1

A912 5225

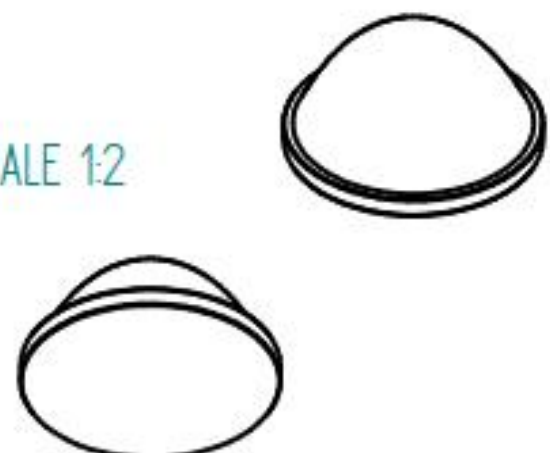
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

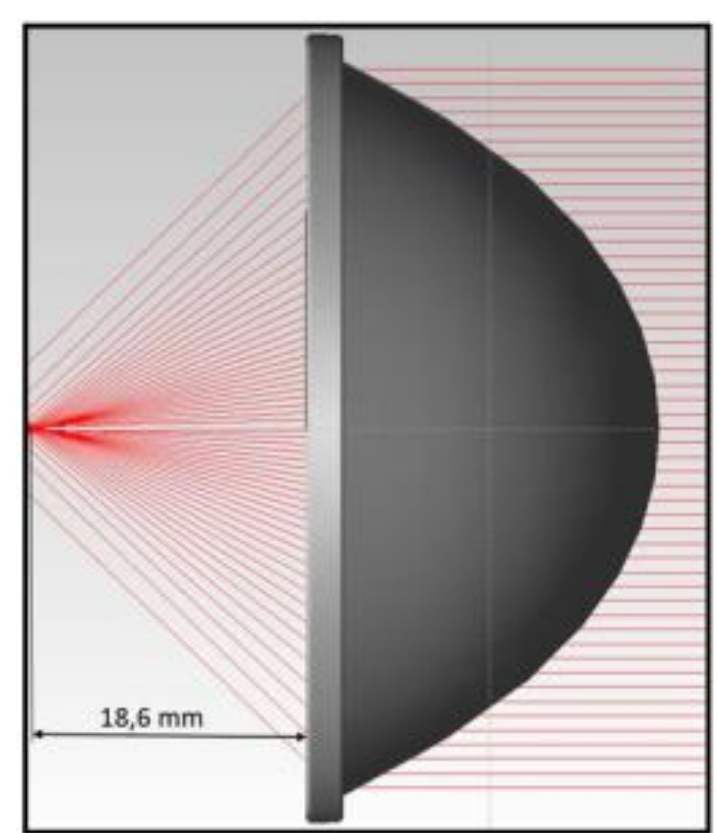



frosted surface



SCALE 1:2

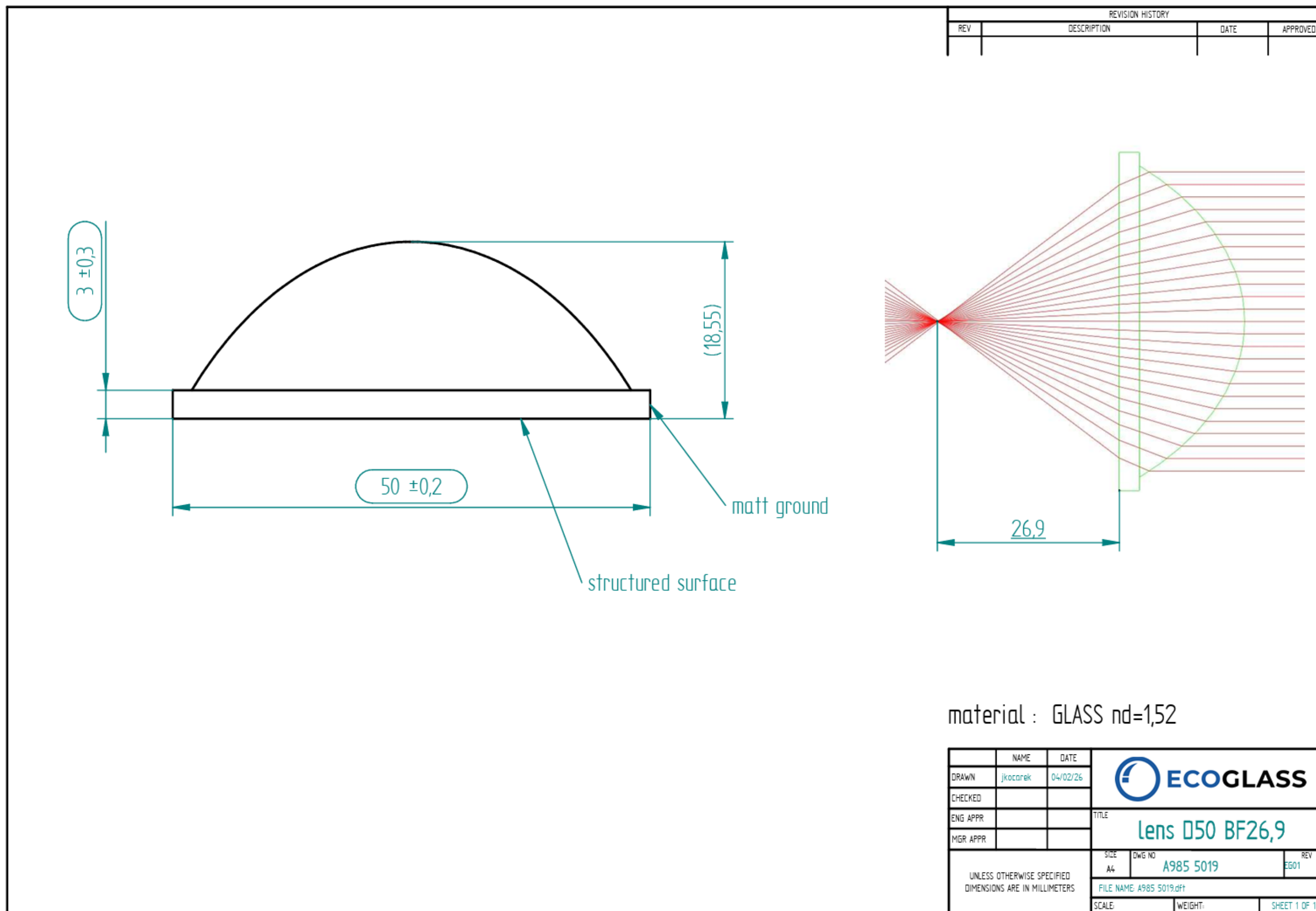




DRAWN	krutsky	DATE	07/15/23	 <p>ECOGLOSS</p> <p>TITLE</p> <p style="font-size: 1.2em;">A912 5225</p>
CHECKED				
ENG APPR				
MGR APPR				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				SEE DWG NO AL FILE NAME: A9125225.dft SCALE: WEIGHT: 75 g SHEET 1 OF 1

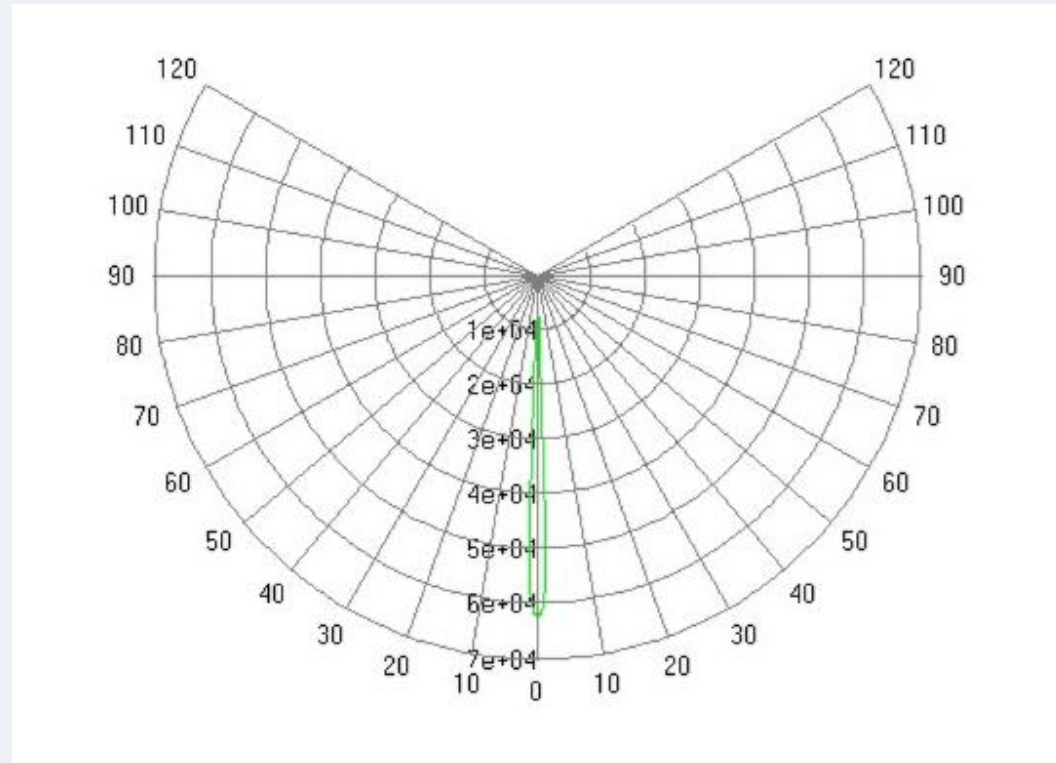
Glass: LIBA or alternative (nd = 1,521)

A985 5019

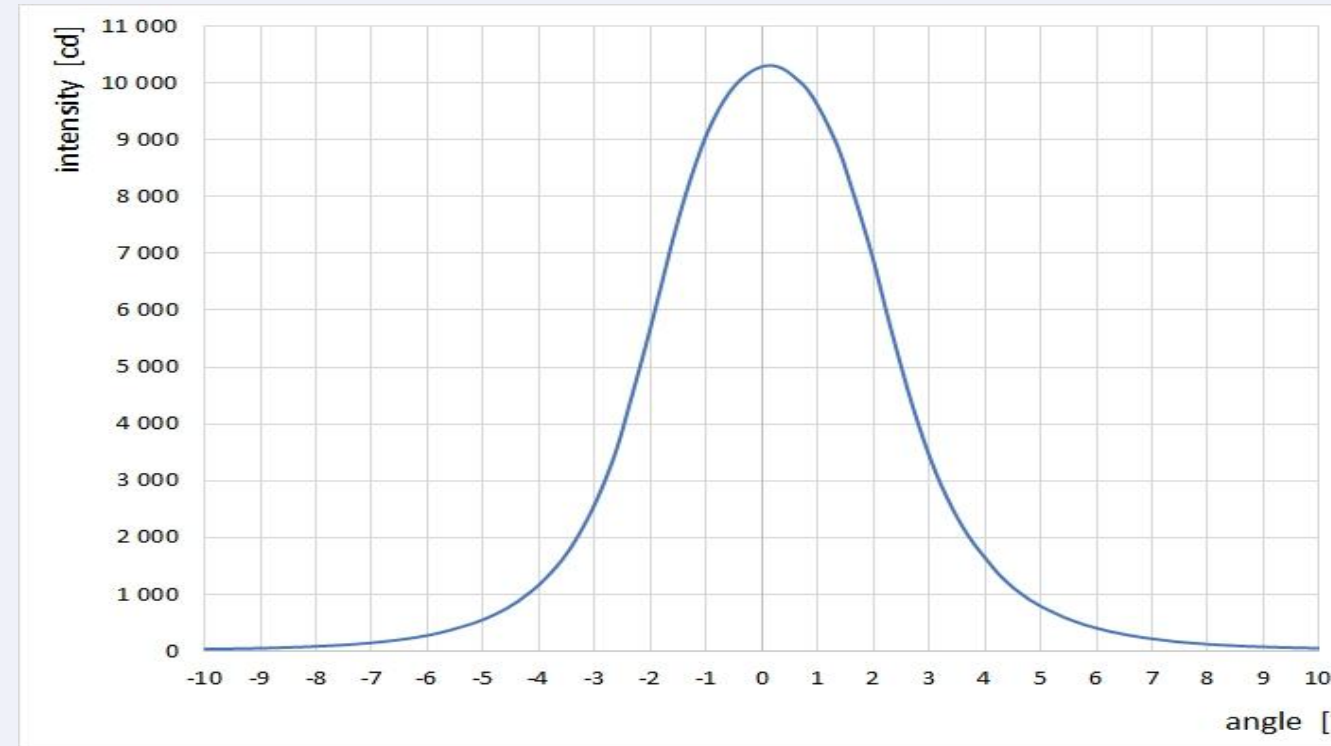


Ag85 5019 – simulation results

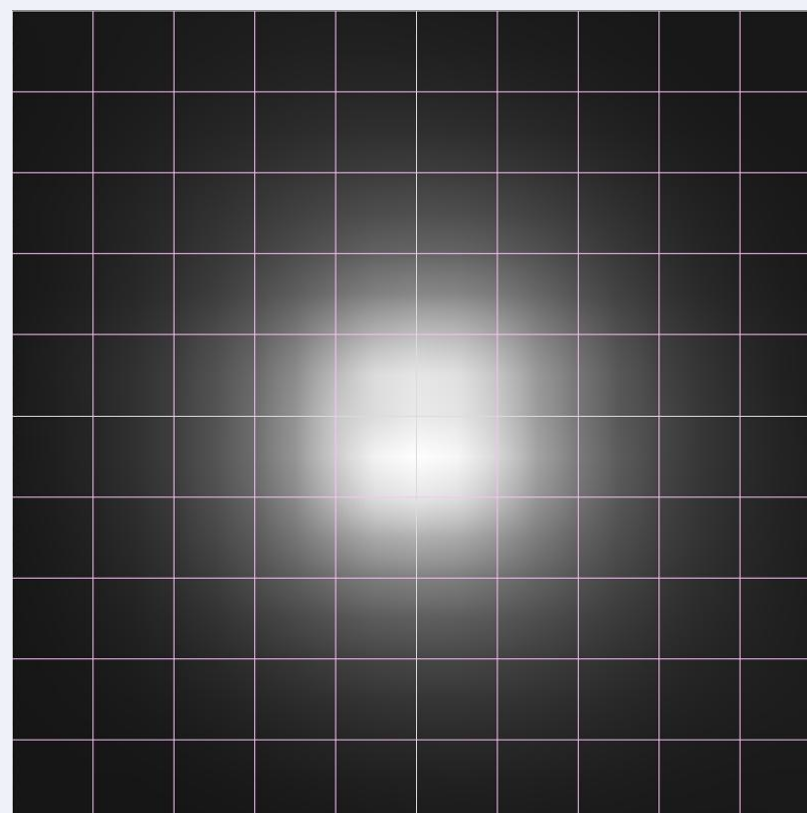
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3,5 x 3,5 m at 10m

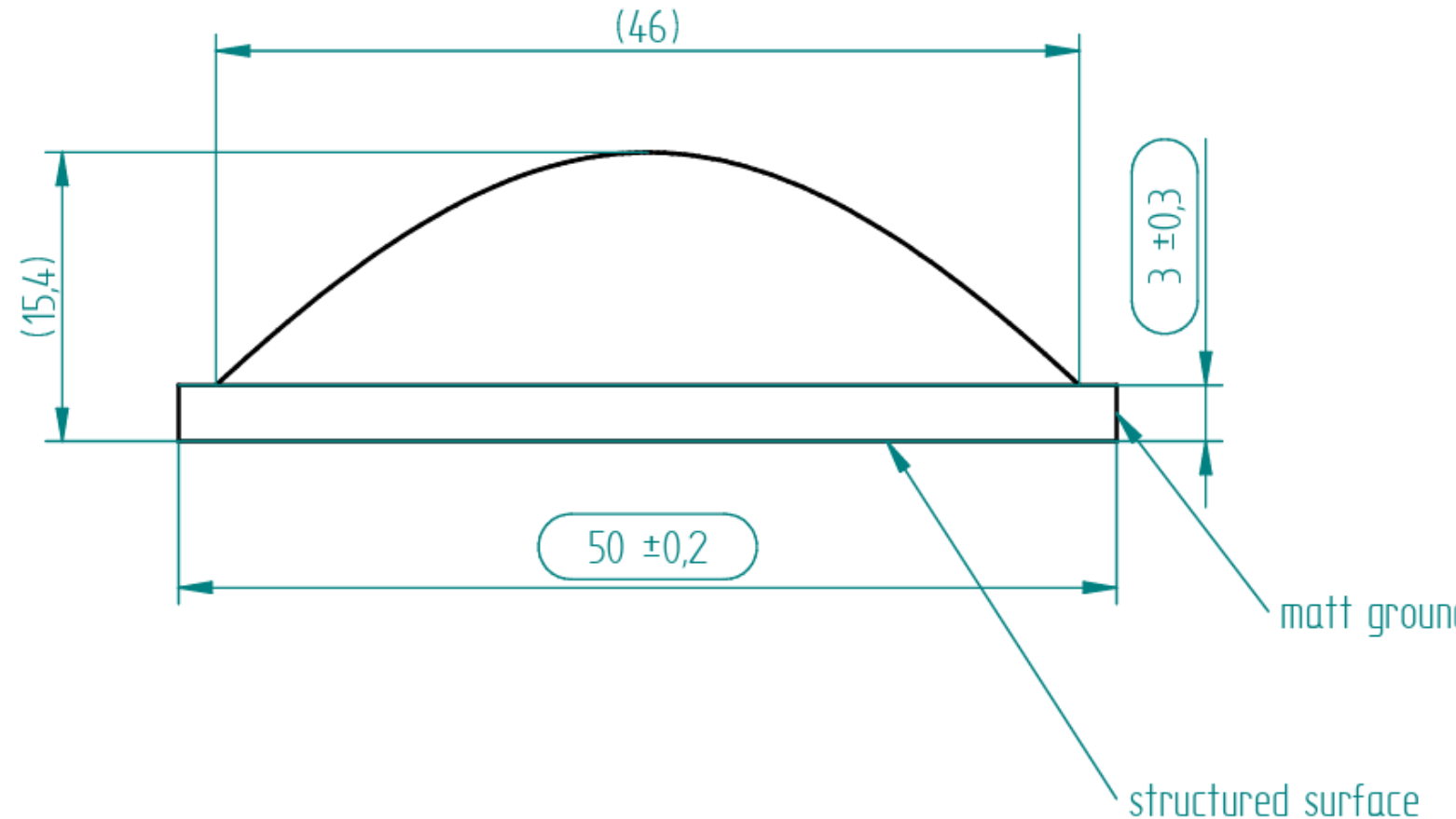


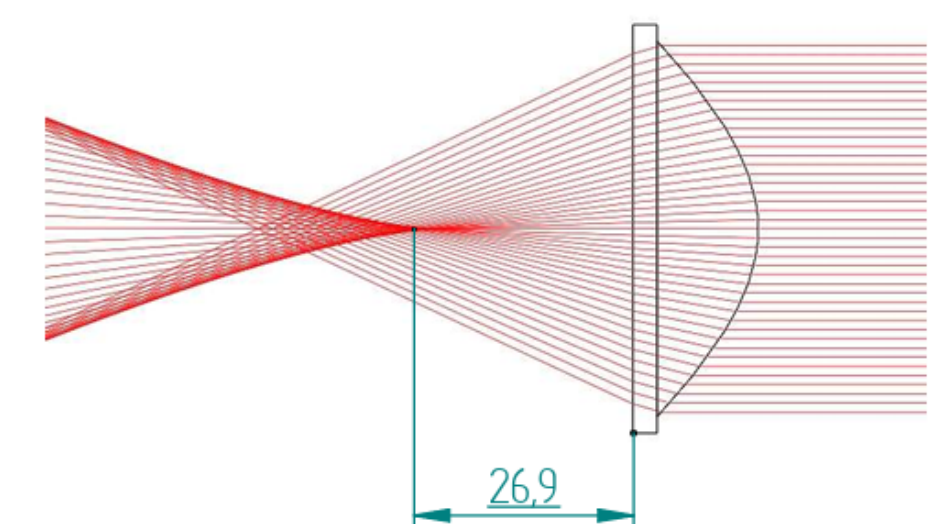
LED used for simulation	Cree XM-L2
Luminous flux of LED [lm]	235
FWHM C ₀ [°]	4
FWHM C ₉₀ [°]	4

* The ratio between luminous flux on the projection wall (3,5 x 3,5 m at 10 m) and luminous flux of LED


Ag86 5015

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED





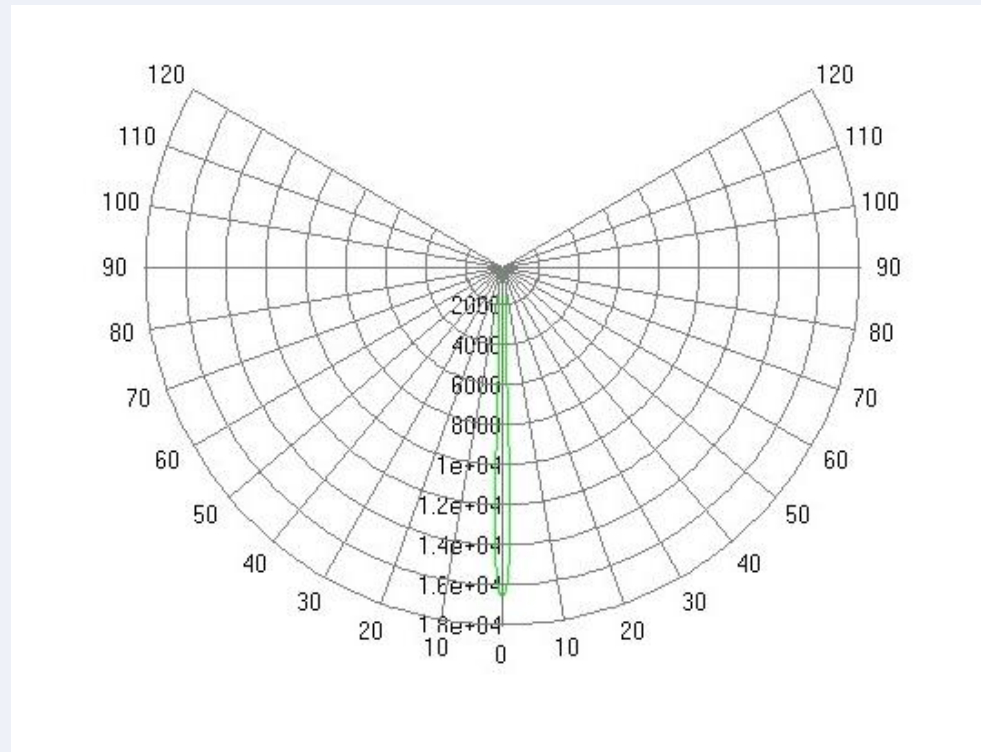
material : GLASS nd=1,520

	NAME	DATE	
DRAWN	jkacarek	04/02/26	
CHECKED			
ENG APPR			
MGR APPR			TITLE
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			lens D50 smooth focus
SIZE	DWG NO	REV	
A4	A986 5015	EG01	
SCALE:	WEIGHT:	SHEET 1 OF 1	

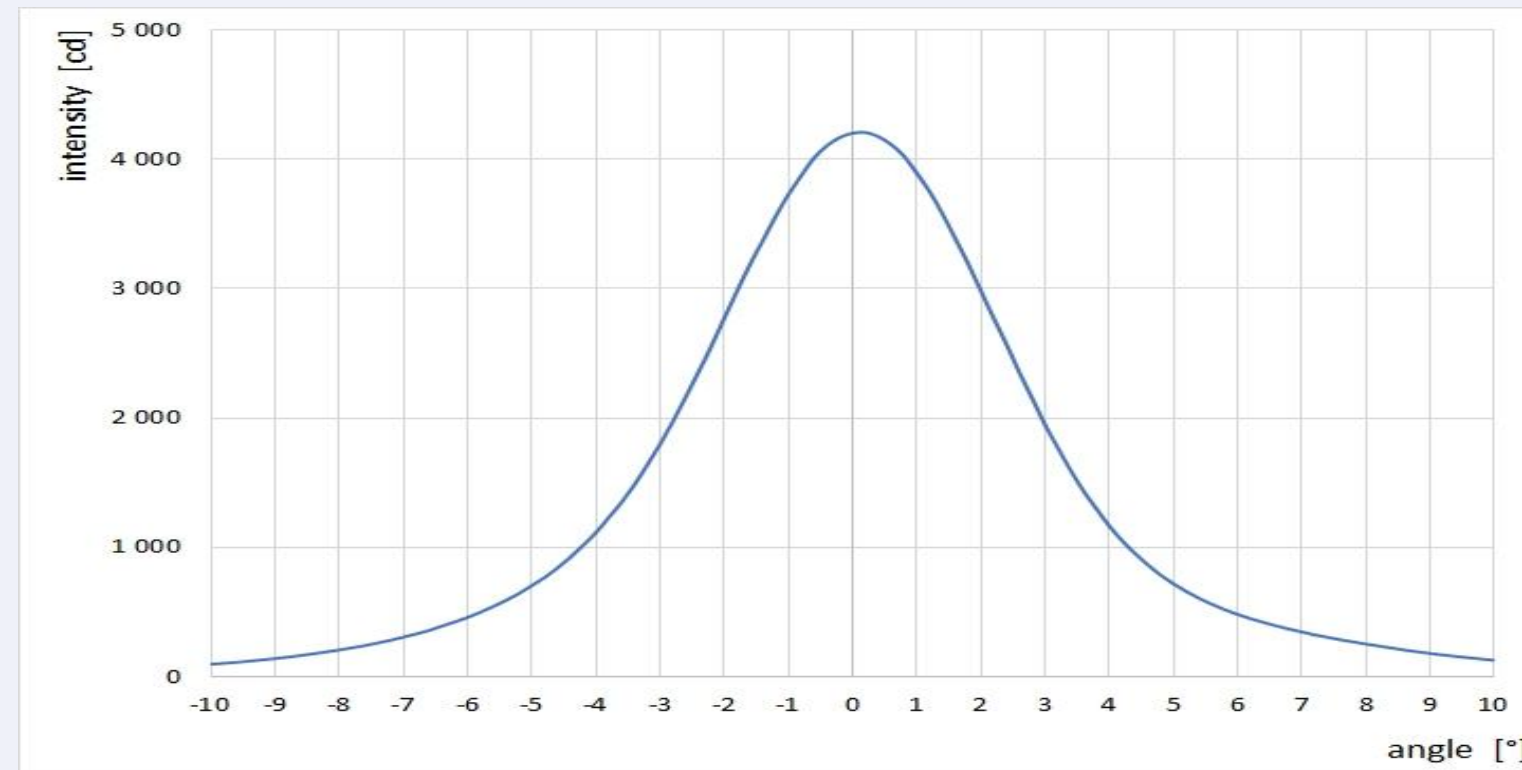
Ag86 5015 – simulation results



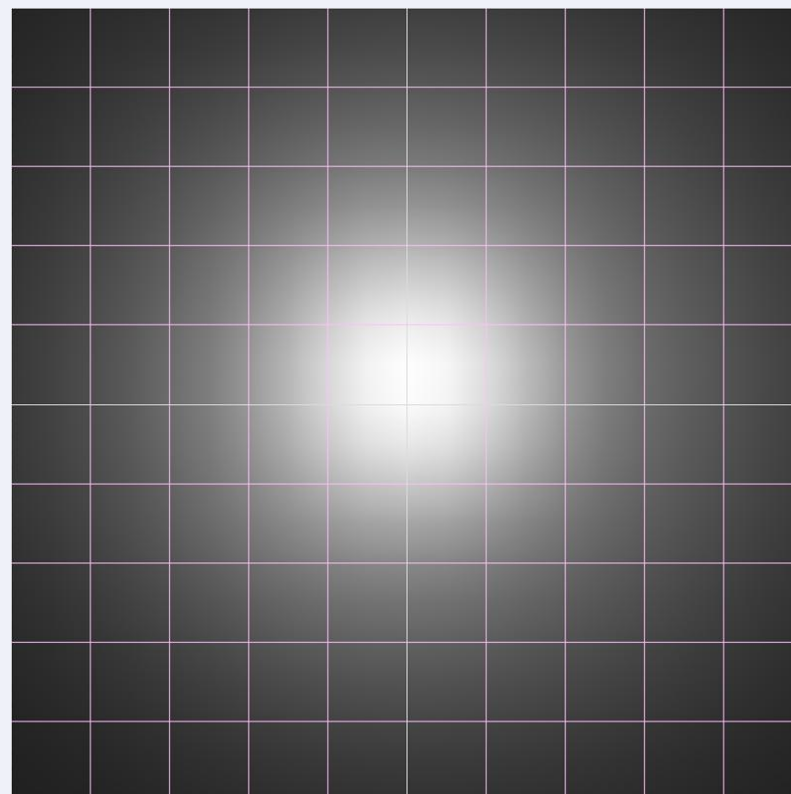
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3,5 x 3,5 m at 10m



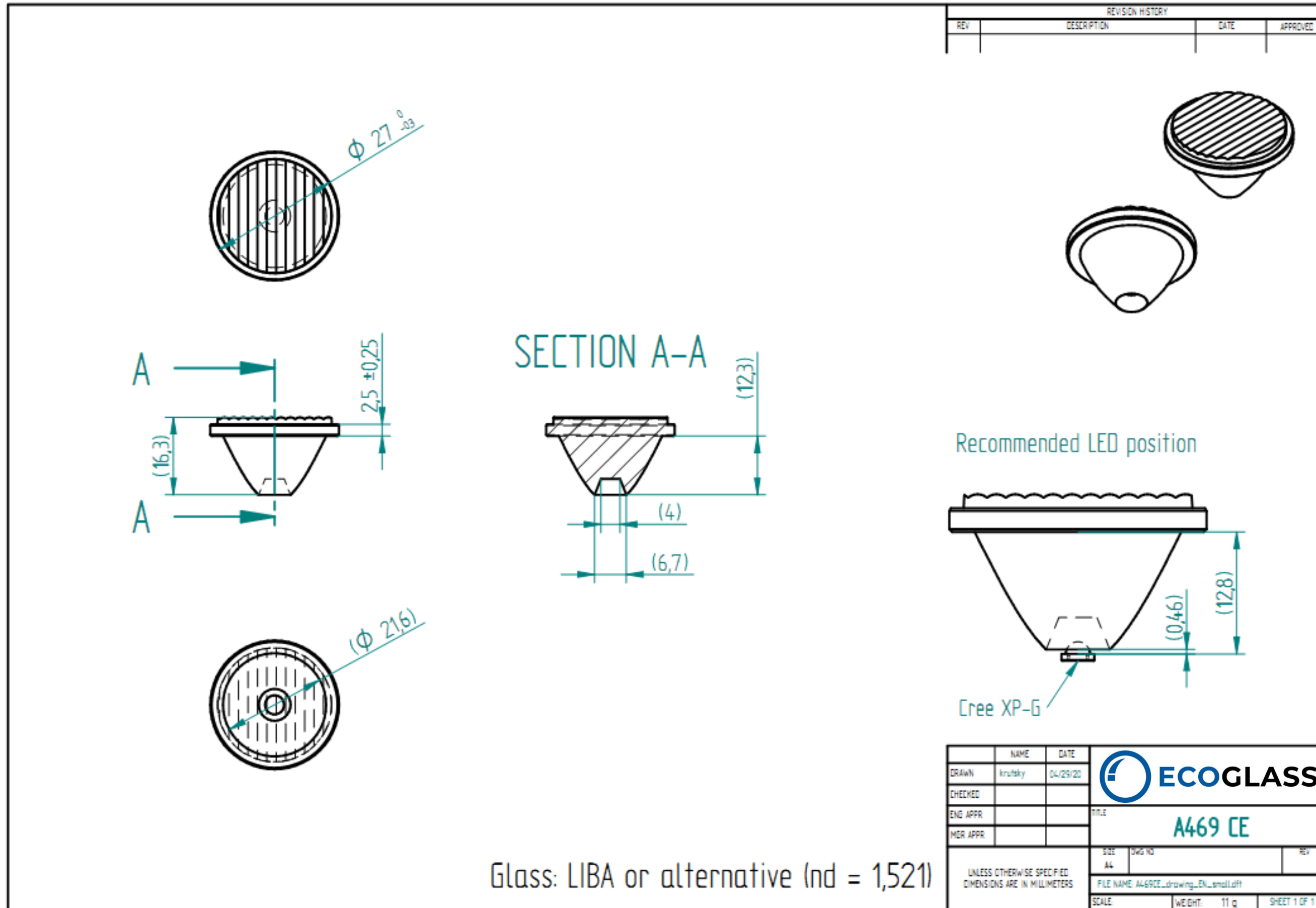
LED used for simulation	Cree XM-L2
Luminous flux of LED [lm]	235
FWHM C ₀ [°]	5
FWHM C ₉₀ [°]	5

* The ratio between luminous flux on the projection wall (3,5 x 3,5 m at 10 m) and luminous flux of LED

ECOGLOSS TIR Lenses					
ECOGLOSS code	Lens type	Beam angles FWHM (°) *		Diameter (mm)	Thickness (mm)
		Co (0°)	C90 (90°)		
A469 CE	Collimator	20	40	27,0	16,3
A470 C10	Collimator	10	10	27,0	19,3
A471 C40	Collimator	40	40	27,0	14,8
A492 C40	Collimator	40	40	27,0	15,2
A493 C40	Collimator	50	50	27,0	19,8
A559 5631	Collimator	6,5	6,5	56,0	30,8
A561 7041	Collimator	5,6	5,6	70,0	41,0
A562 3929	Collimator	7,8	7,8	39,0	26,0
A643 C20	Collimator	20	20	27,0	16,4

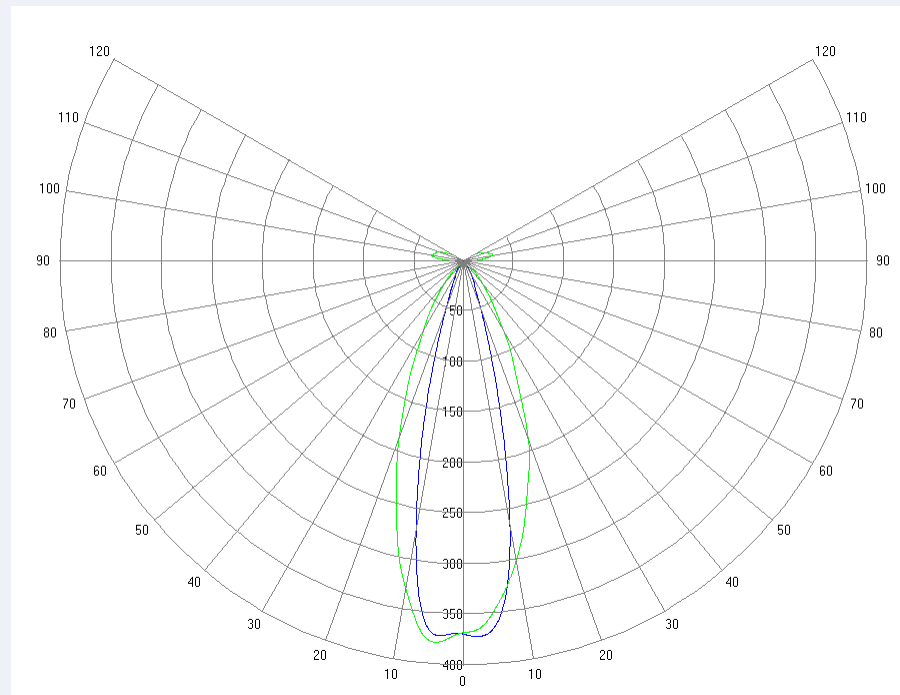


A469 CE

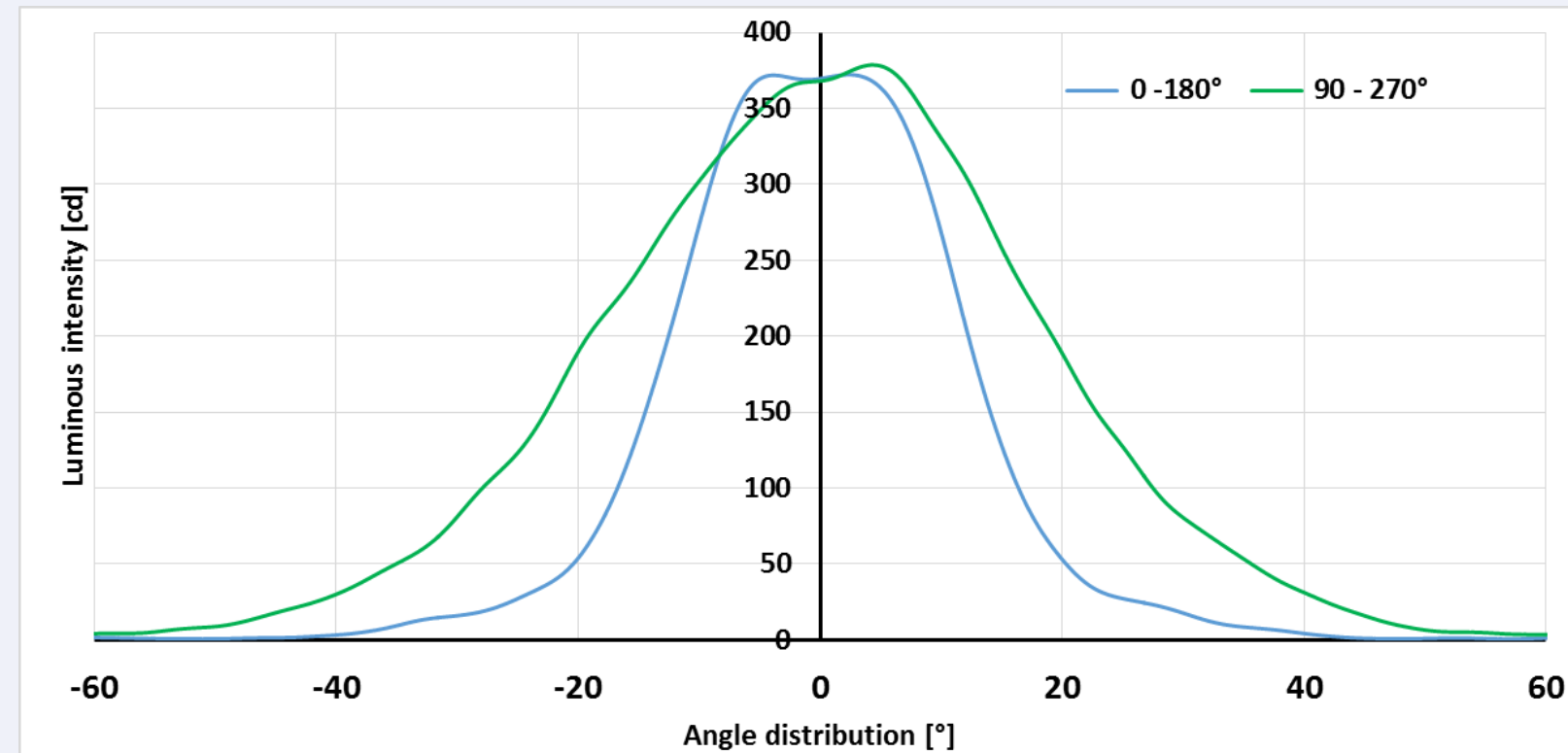


A46g CE- simulation results

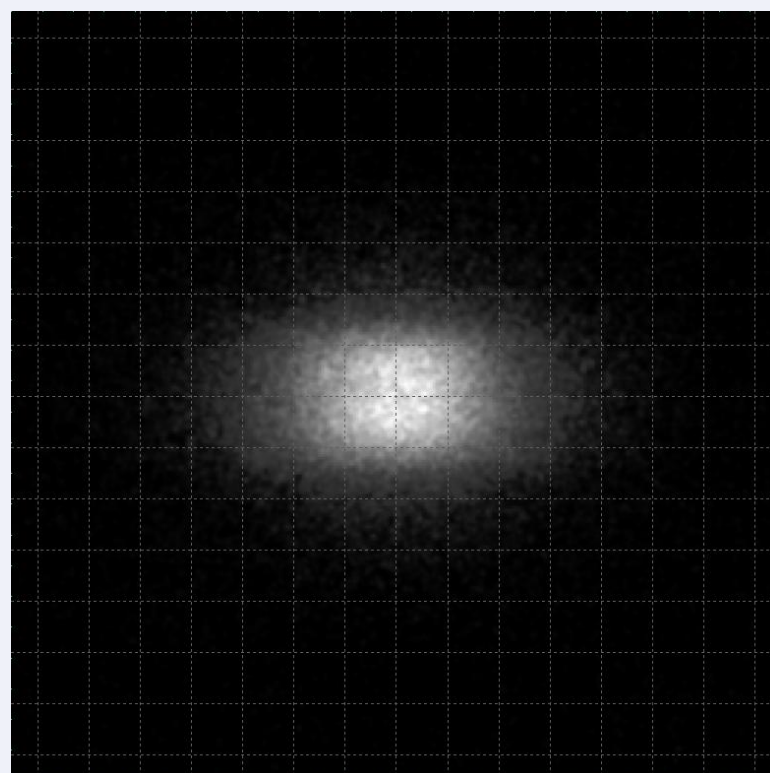
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



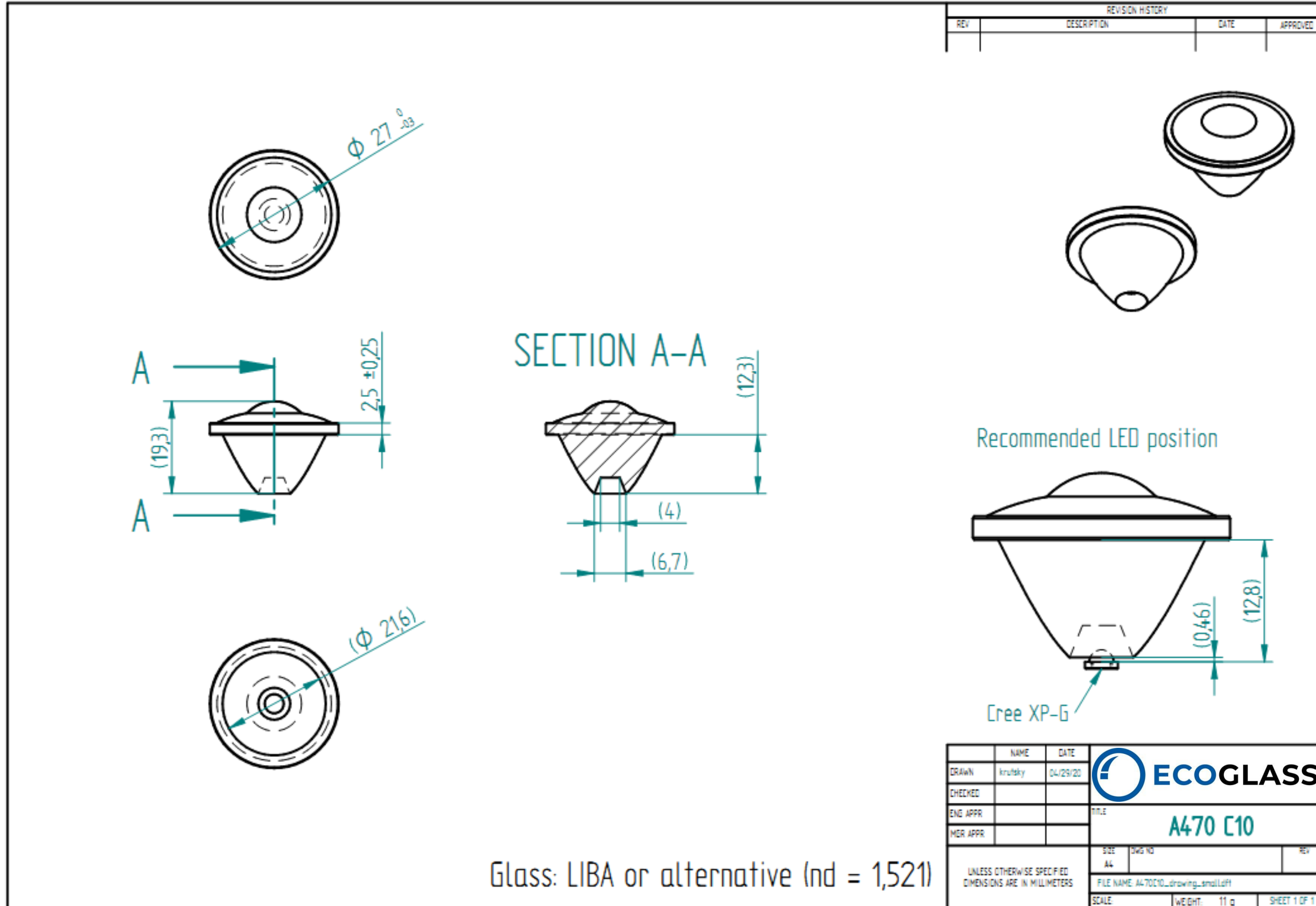
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	81
FWHM Co [°]	20
FWHM C90 [°]	40

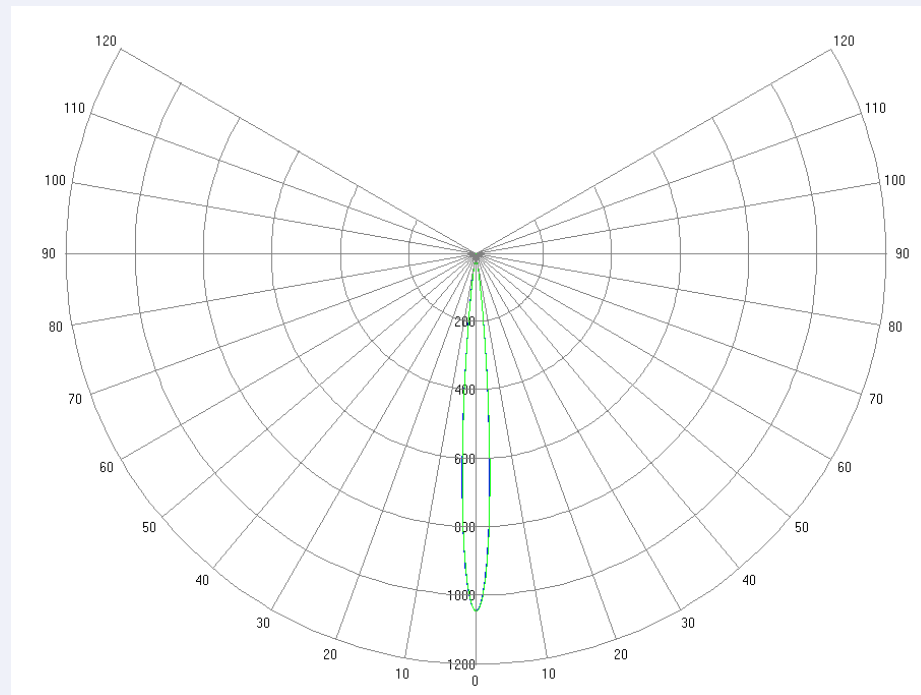
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A470 C10

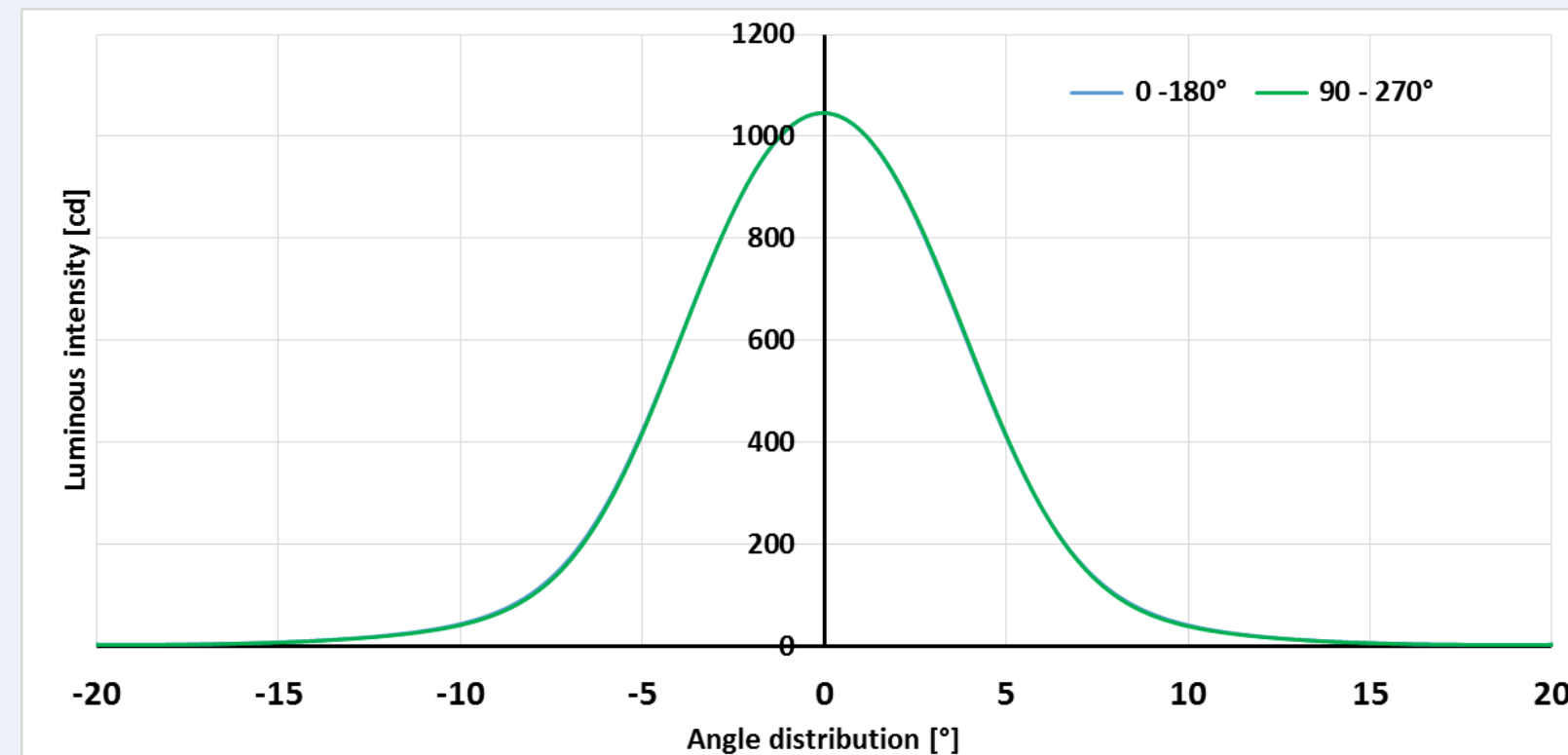


A470 C10- simulation results

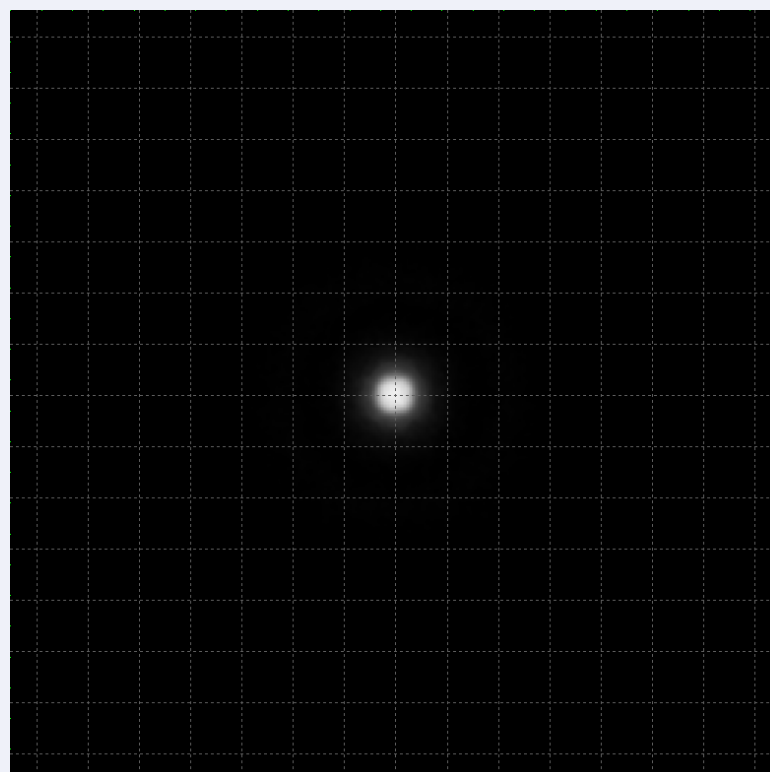
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



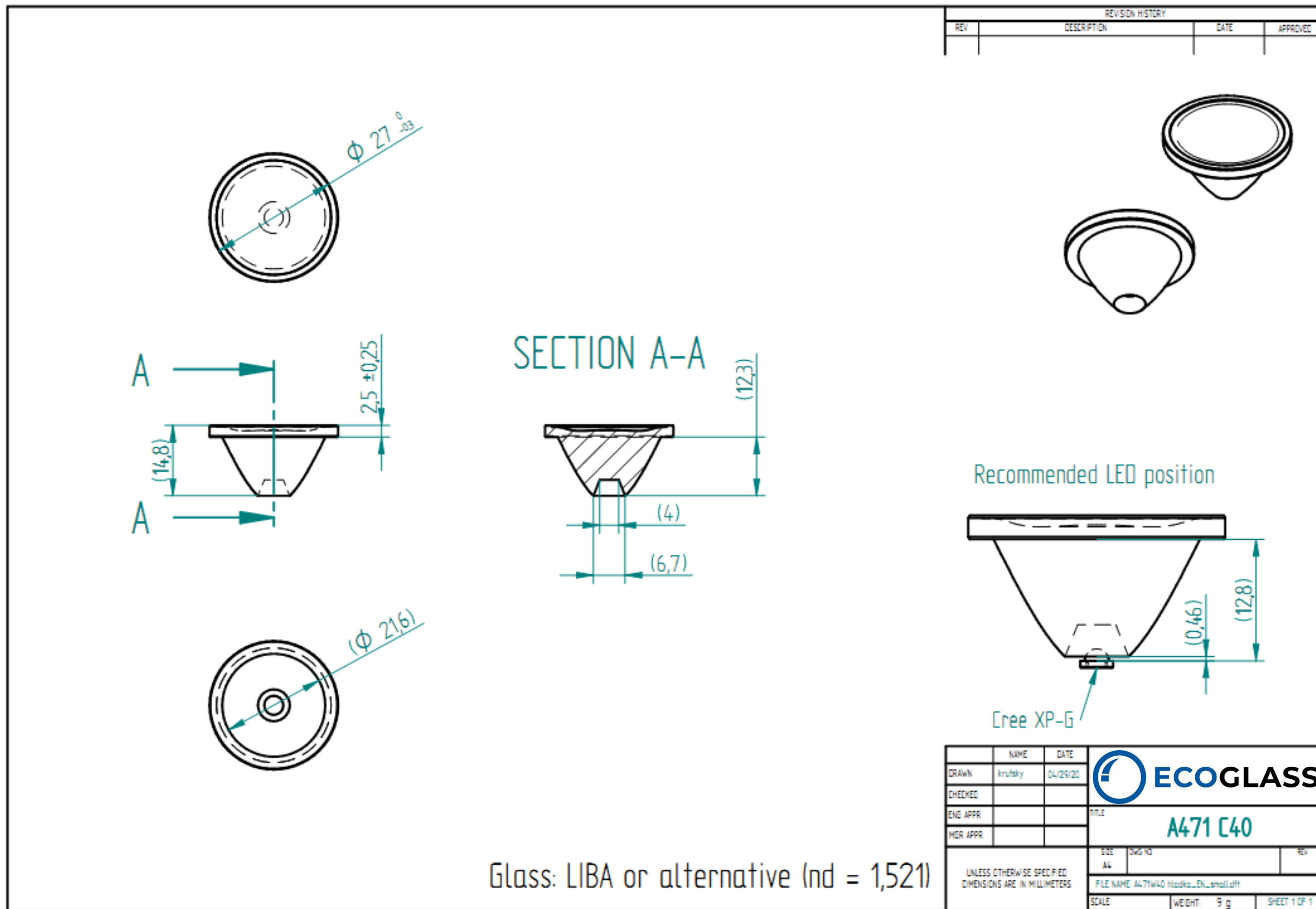
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	87
FWHM Co [°]	10
FWHM C90 [°]	10

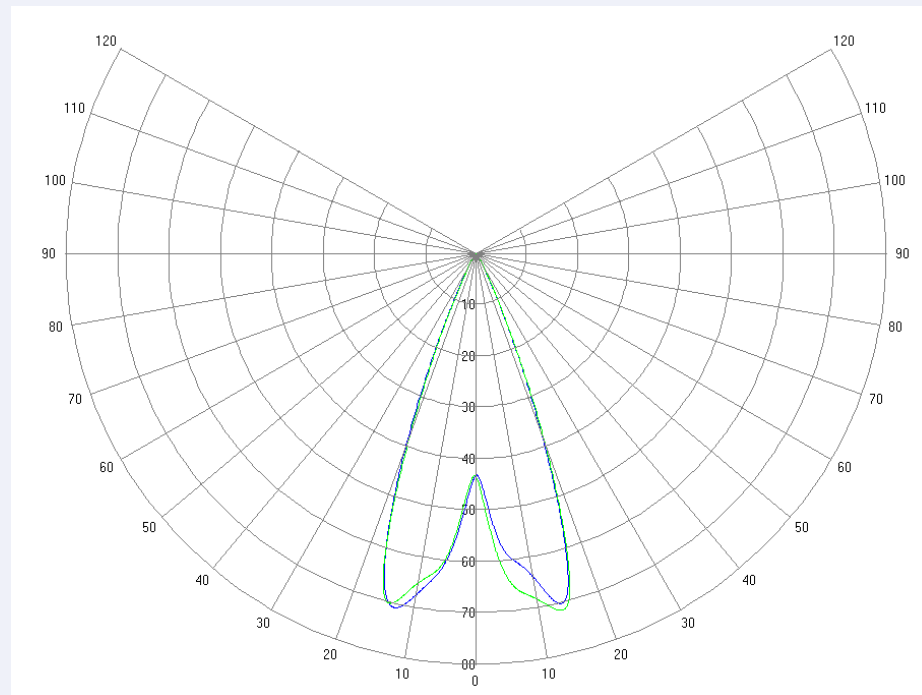
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A471 C40

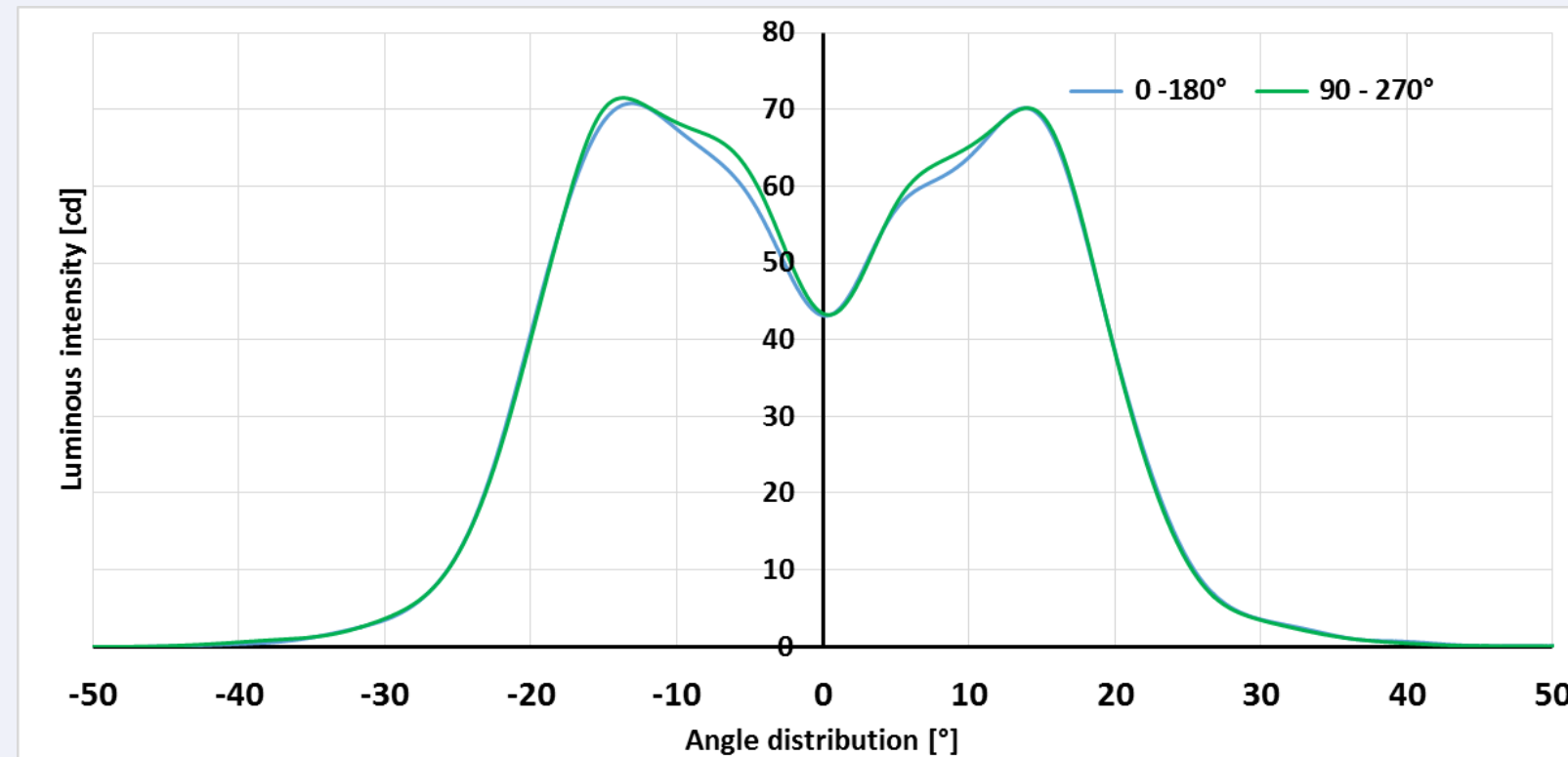


A471 C40- simulation results

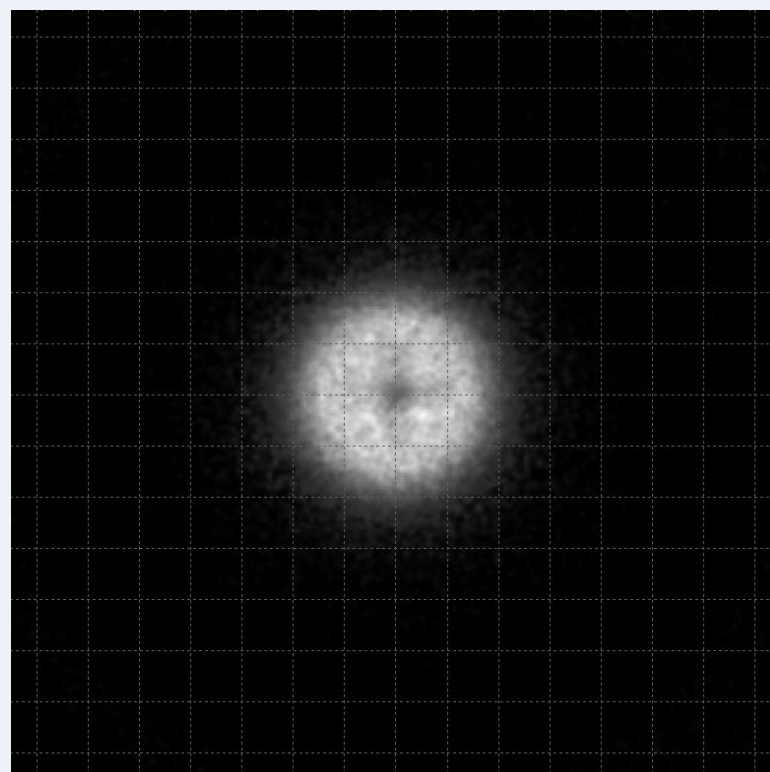
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



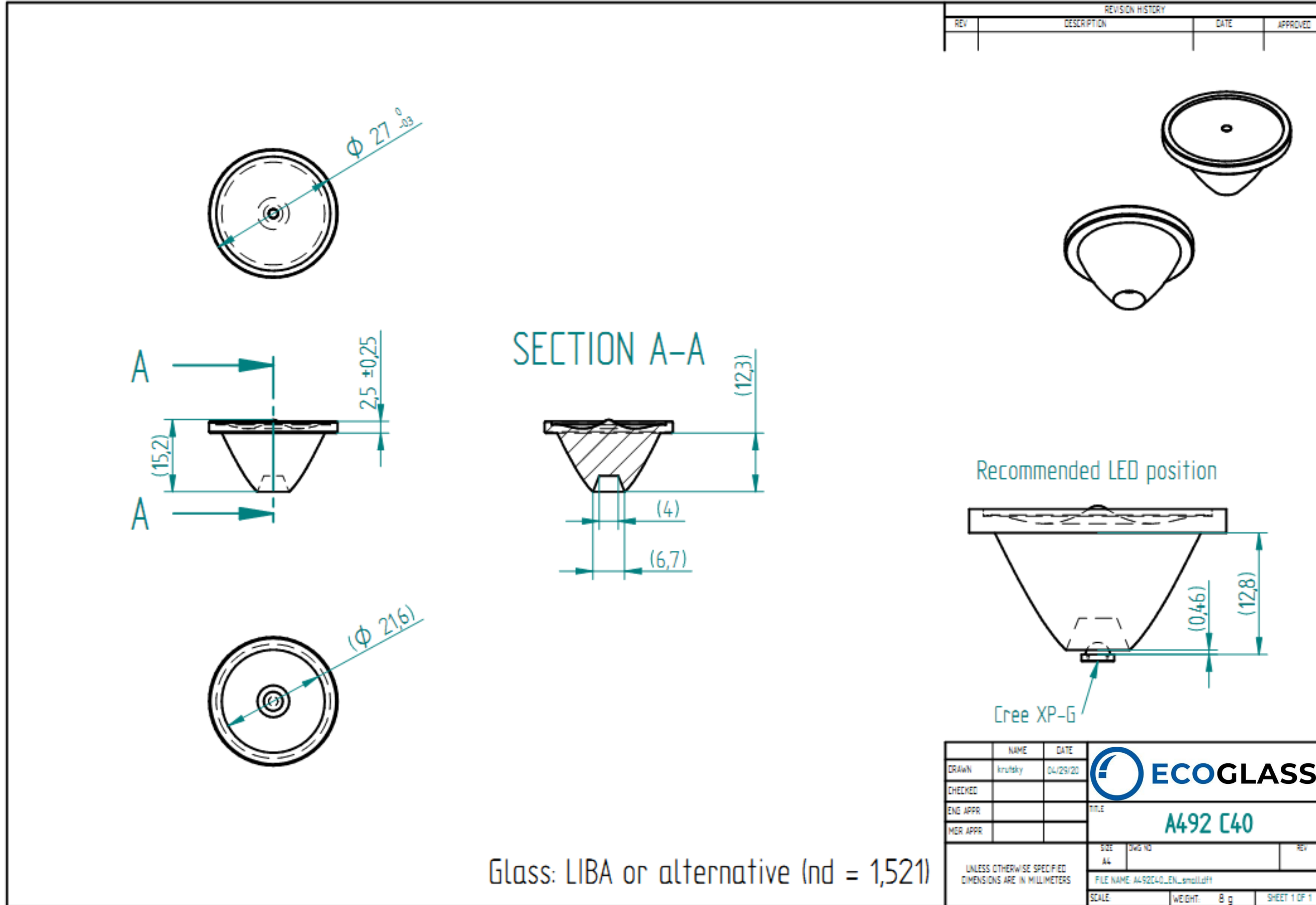
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	88
FWHM Co [°]	40
FWHM C90 [°]	40

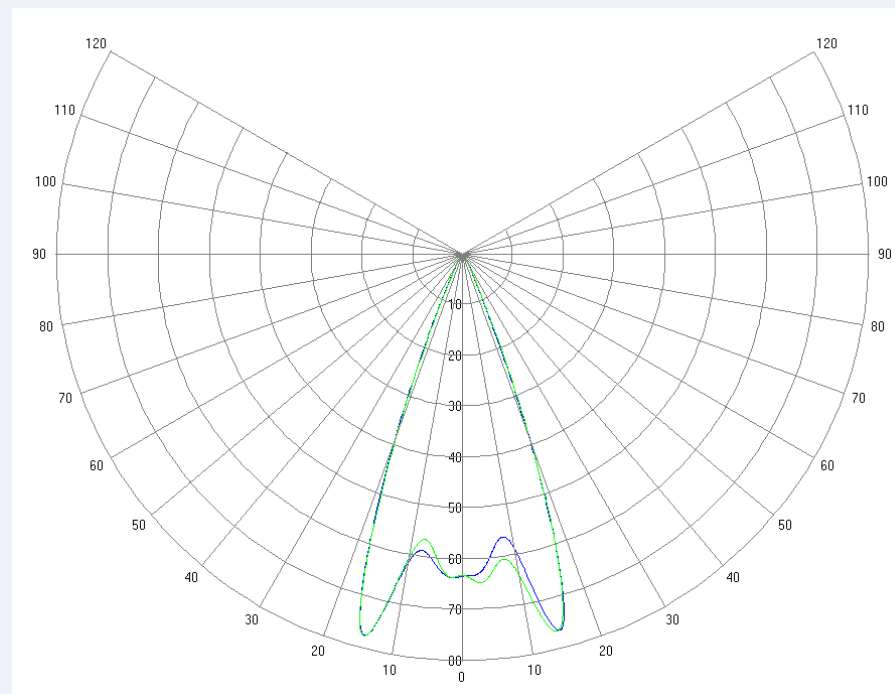
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A492 C40

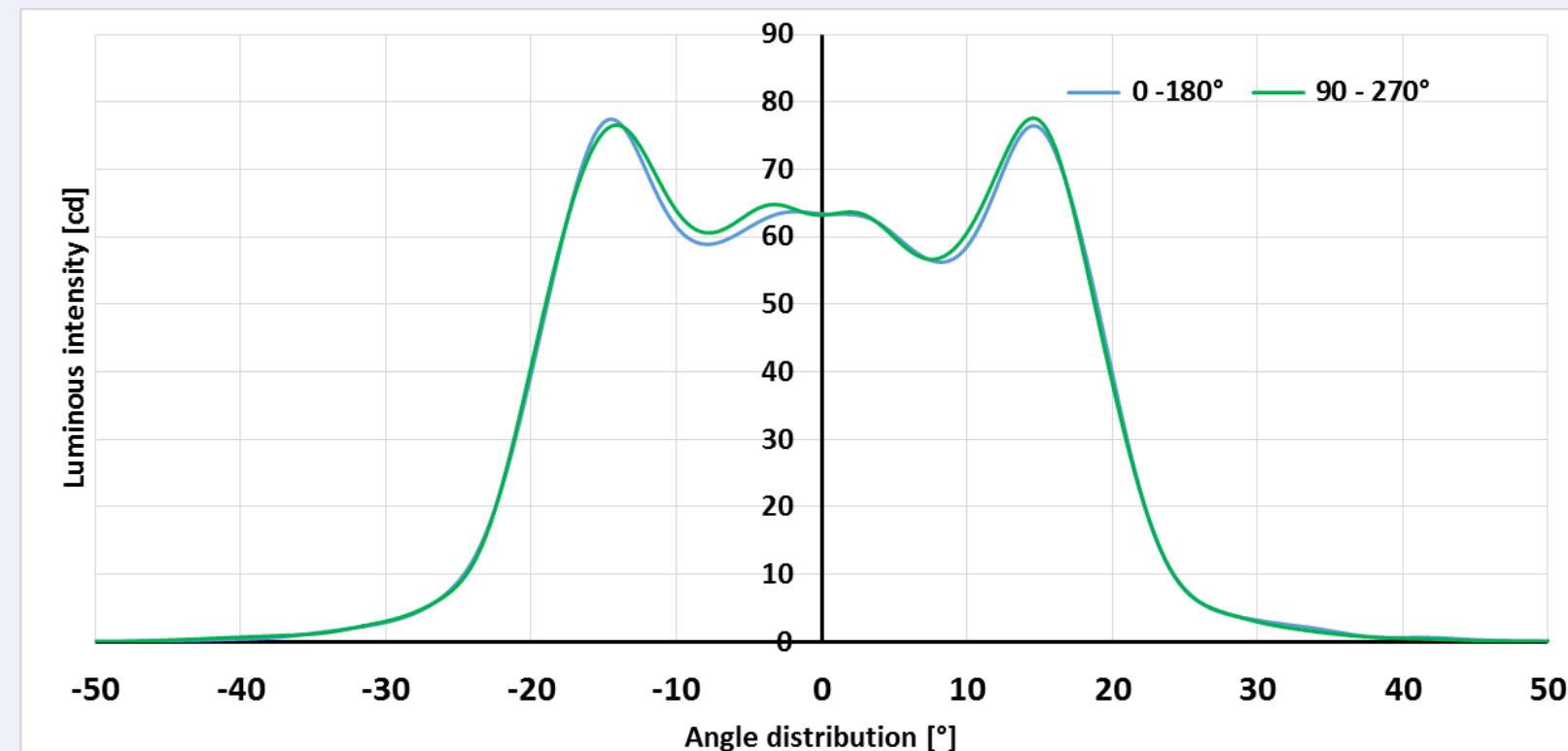


A492 C40 – simulation results

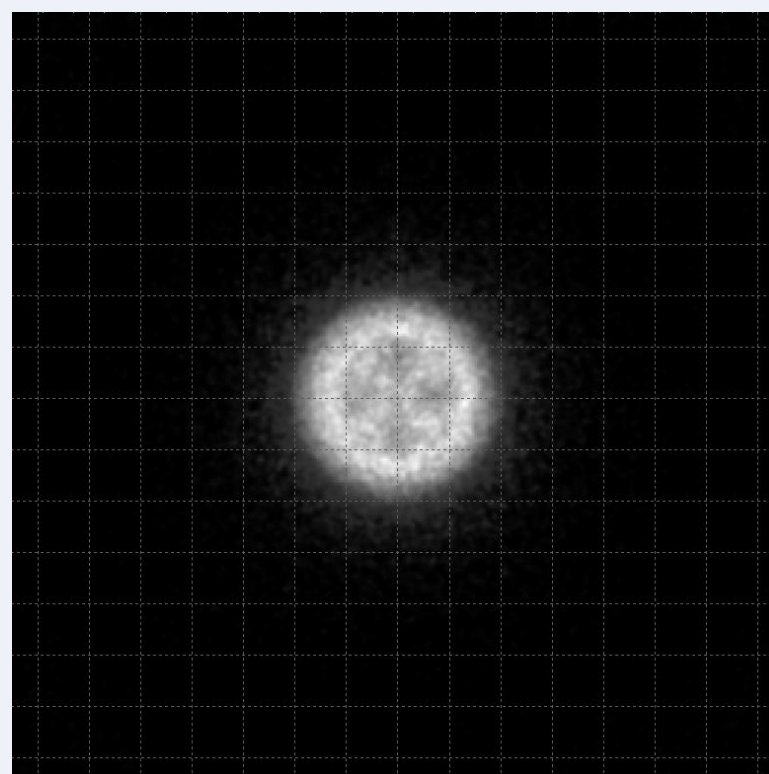
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



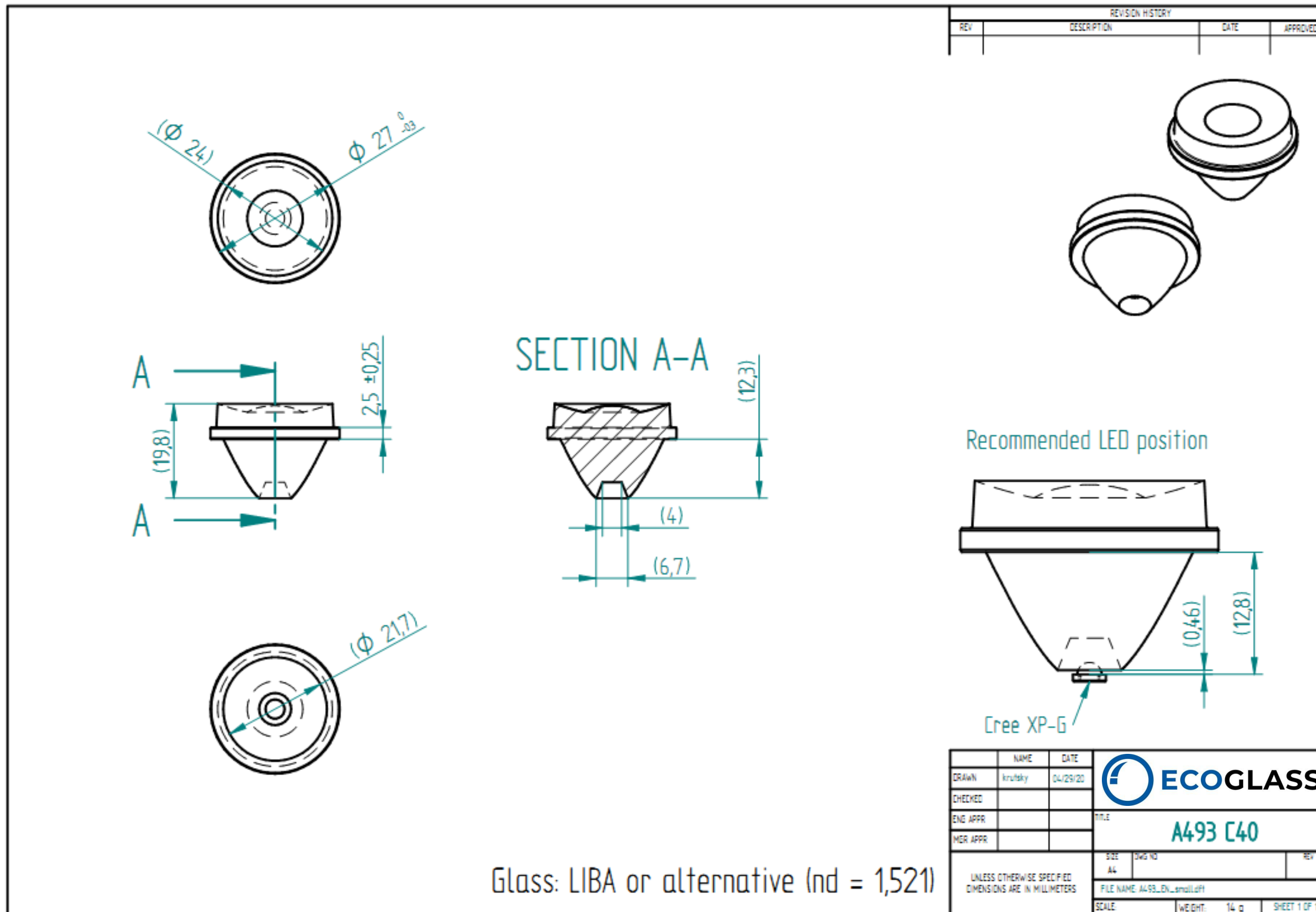
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	87
FWHM Co [°]	40
FWHM C90 [°]	40

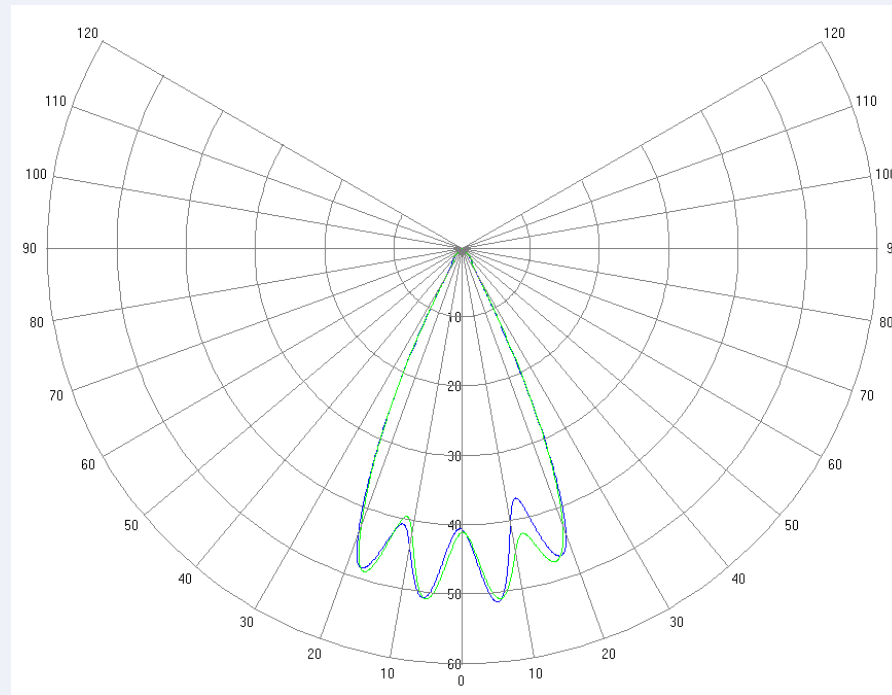
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A493 C40

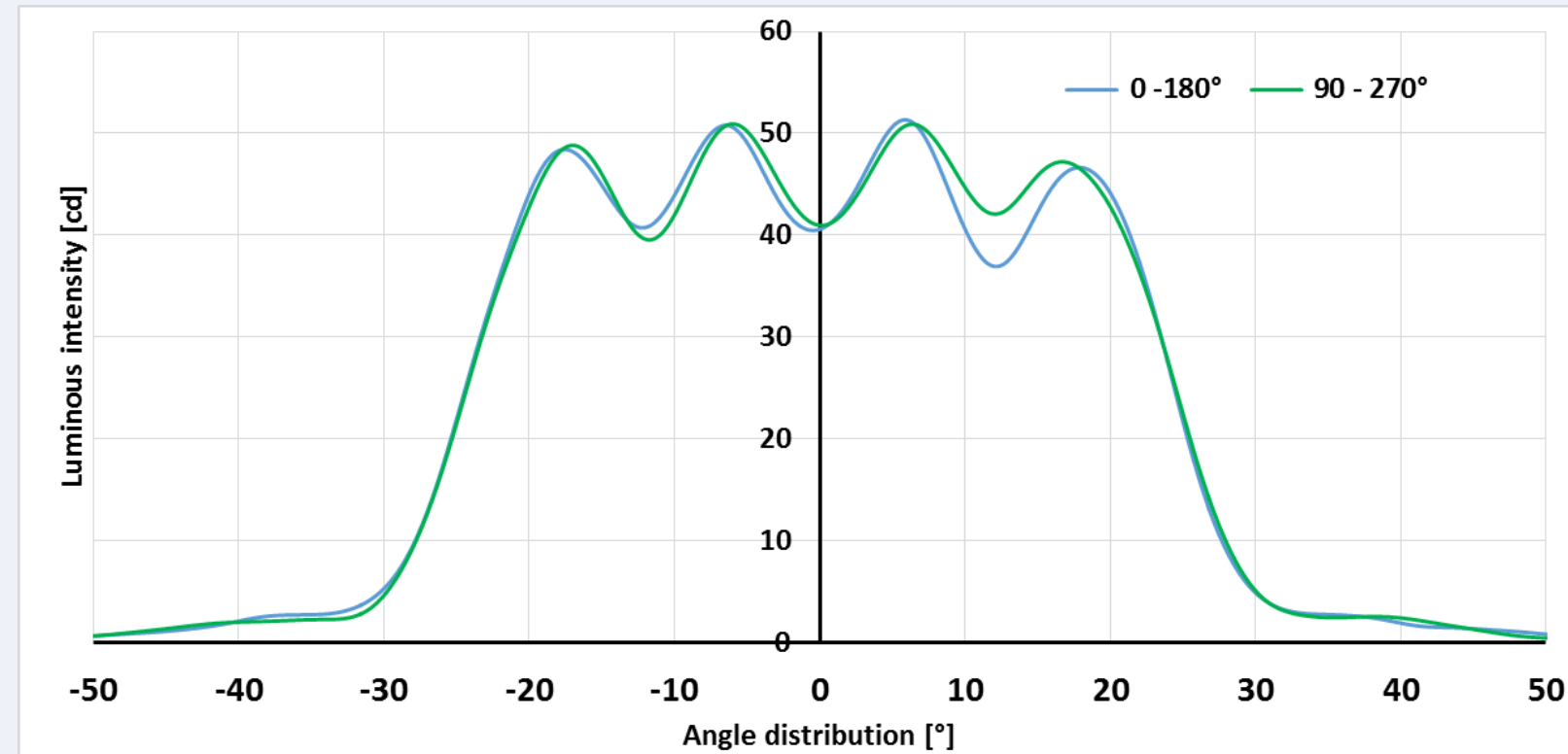


A493 C40- simulation results

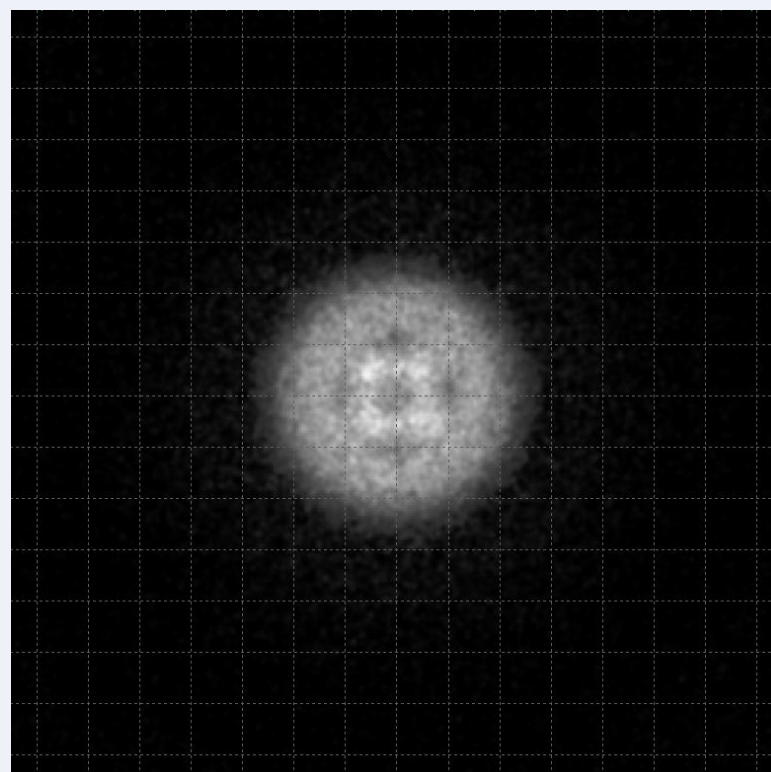
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



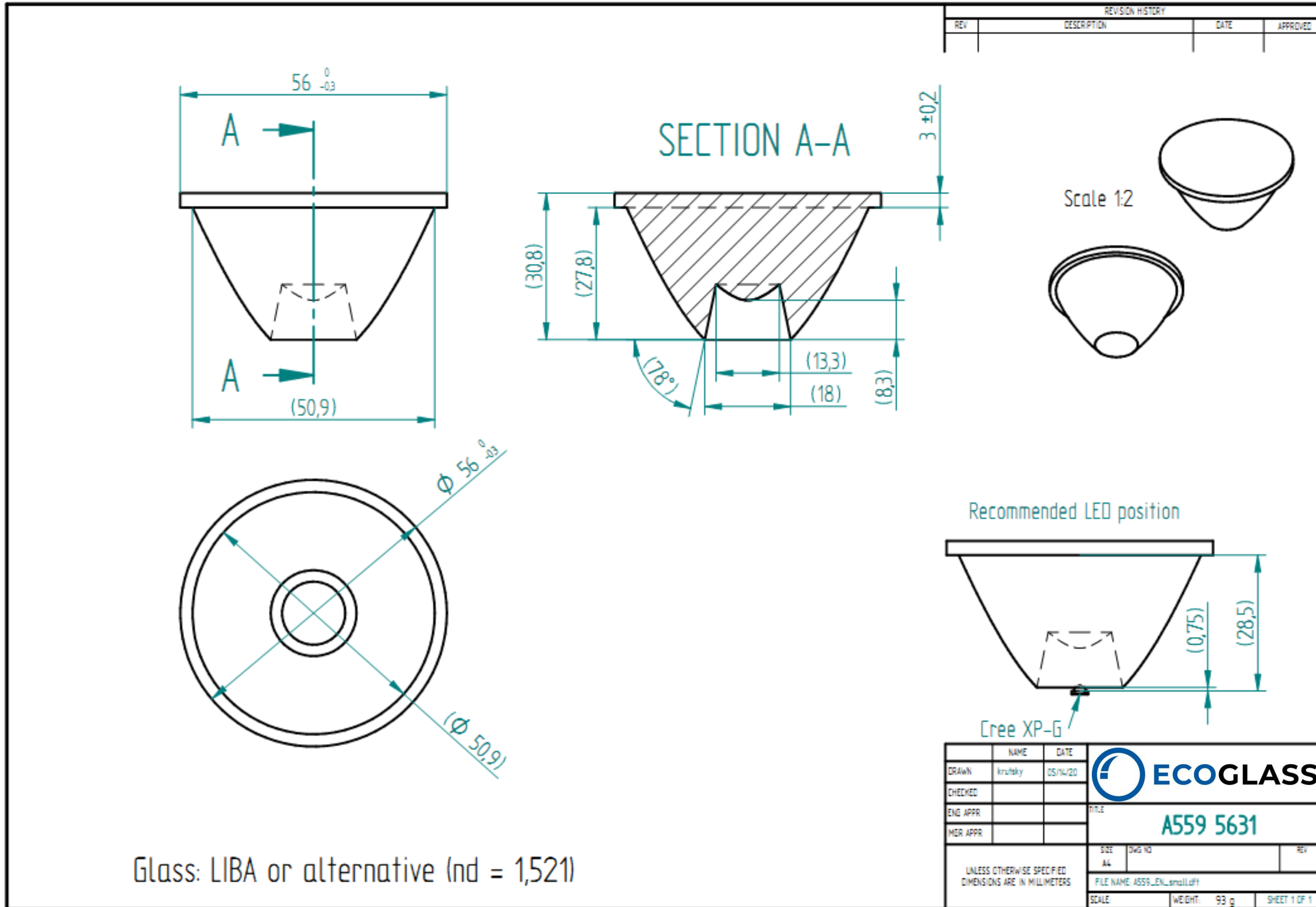
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	87
FWHM Co [°]	50
FWHM C90 [°]	50

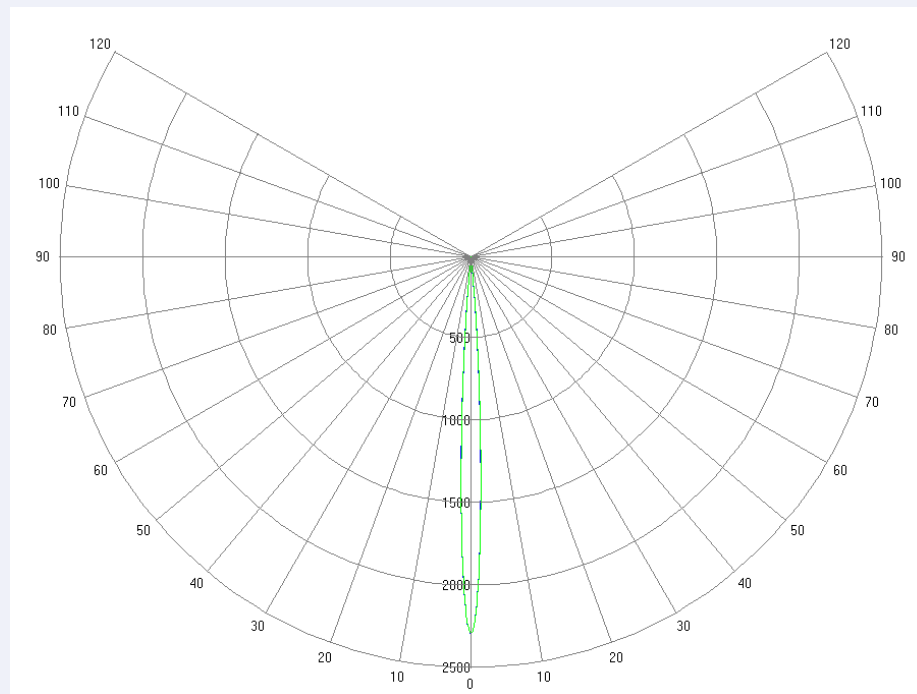
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A559 5631

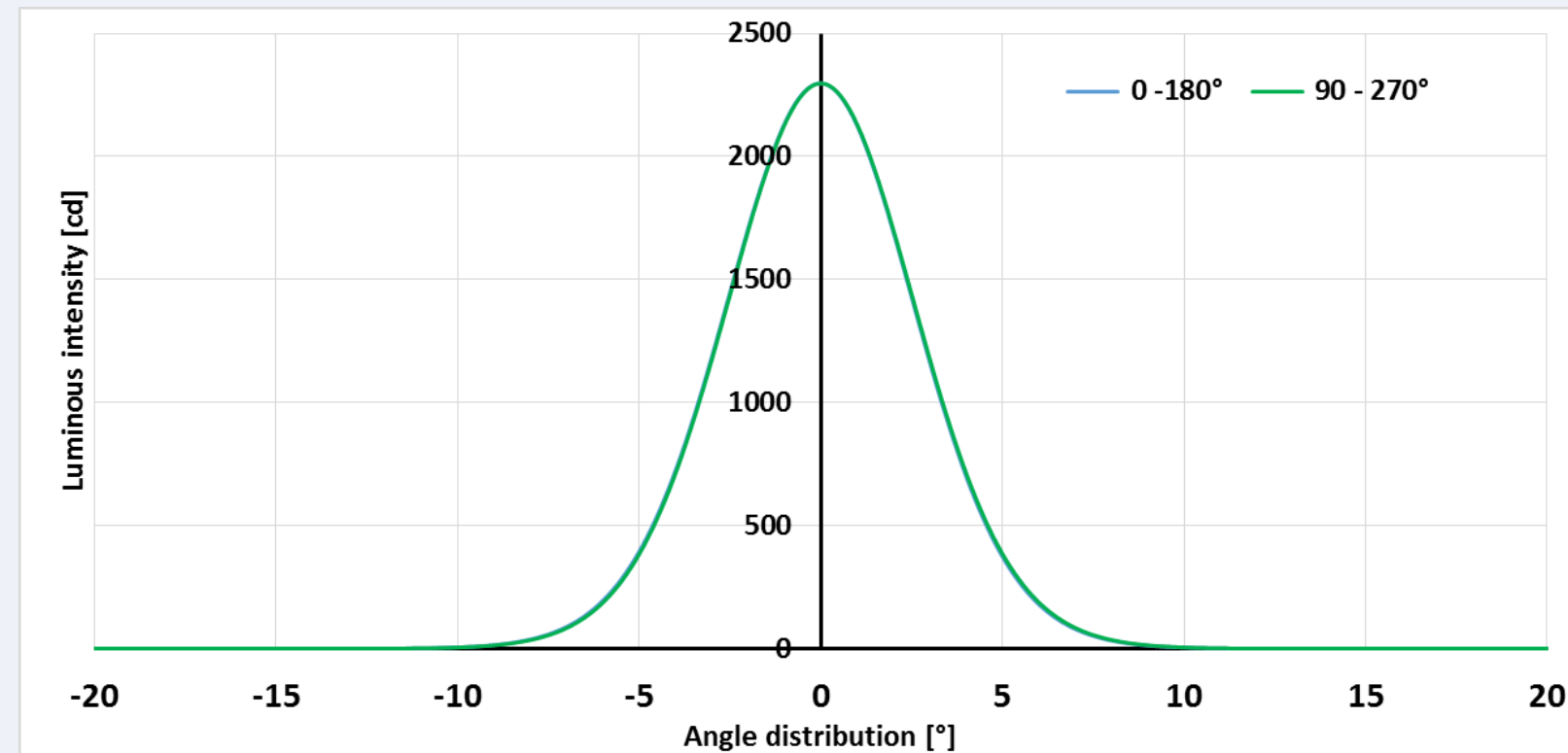


A559 5631- simulation results

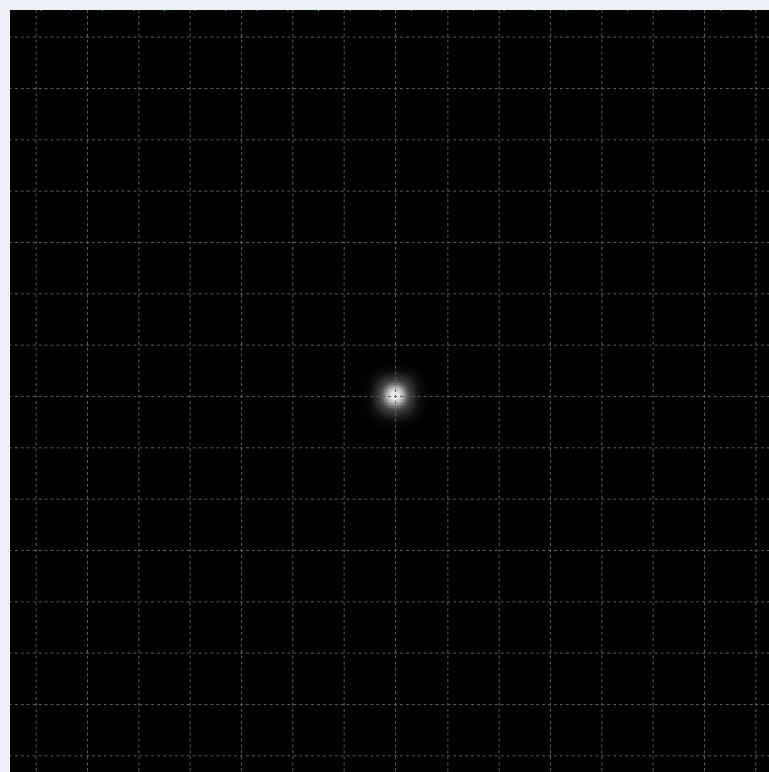
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



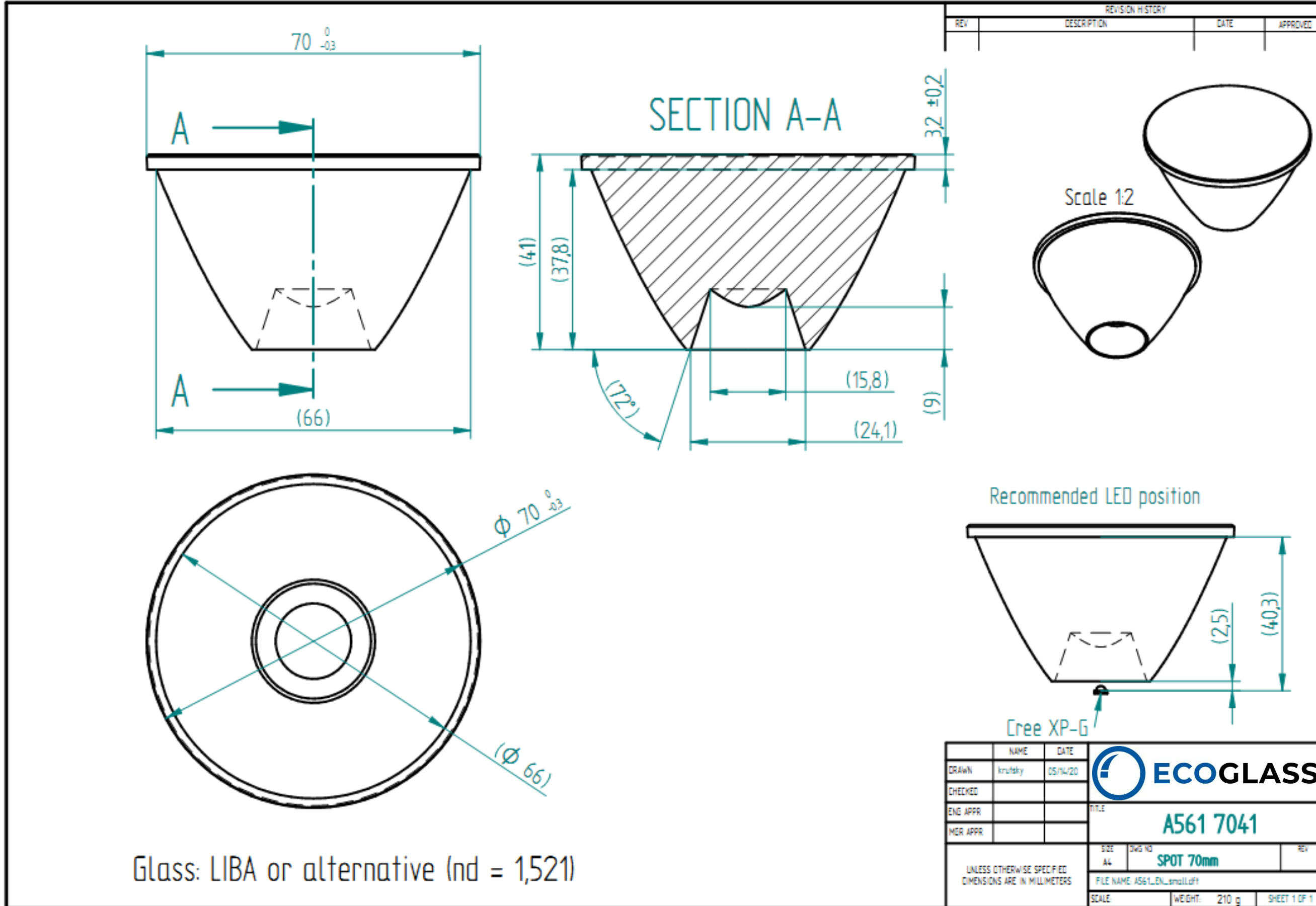
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	89
FWHM Co [°]	6,5
FWHM C90 [°]	6,5

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

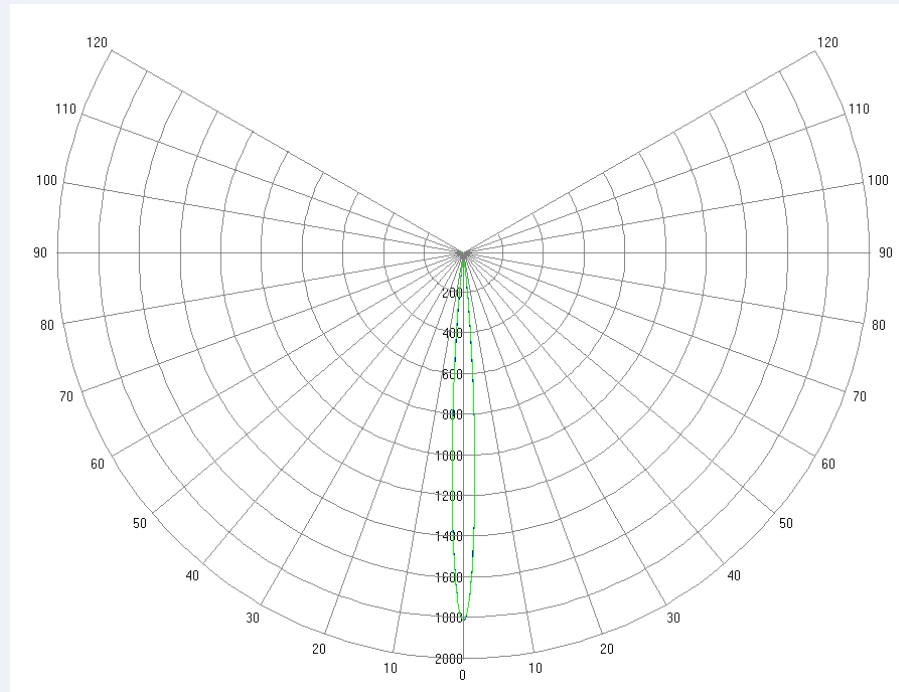
A561 7041



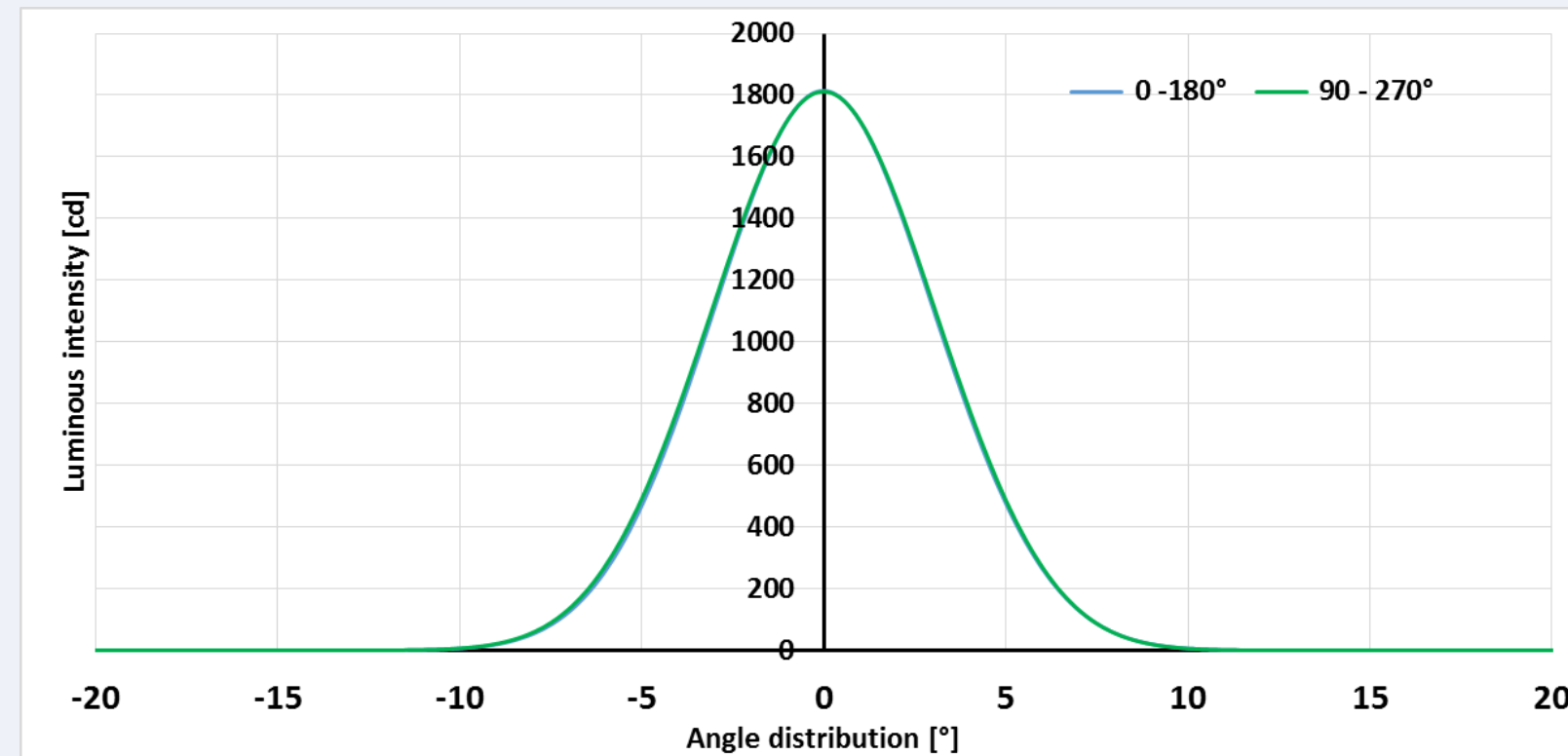
Glass: LIBA or alternative (nd = 1,521)

A561 7041- simulation results

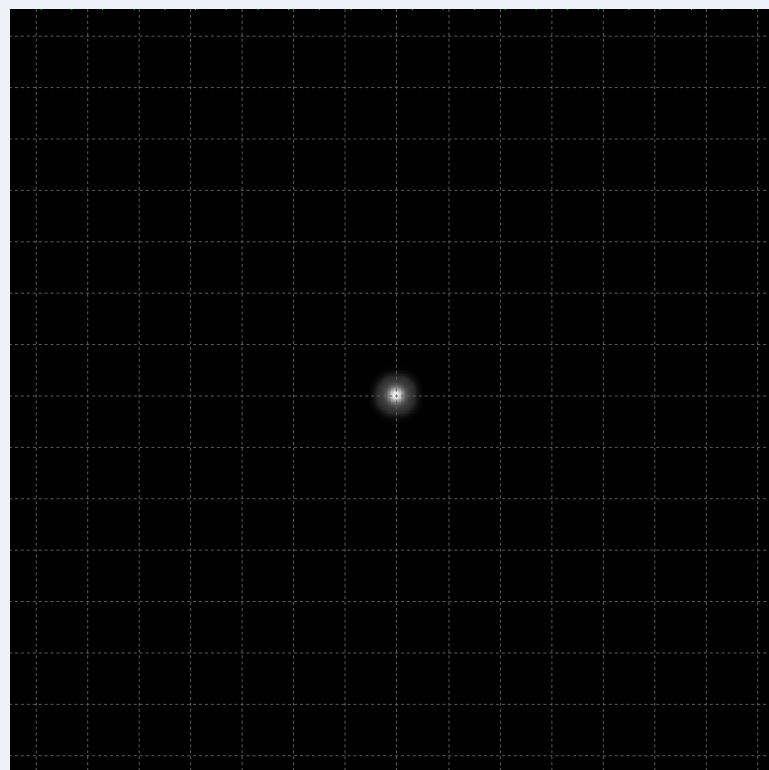
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



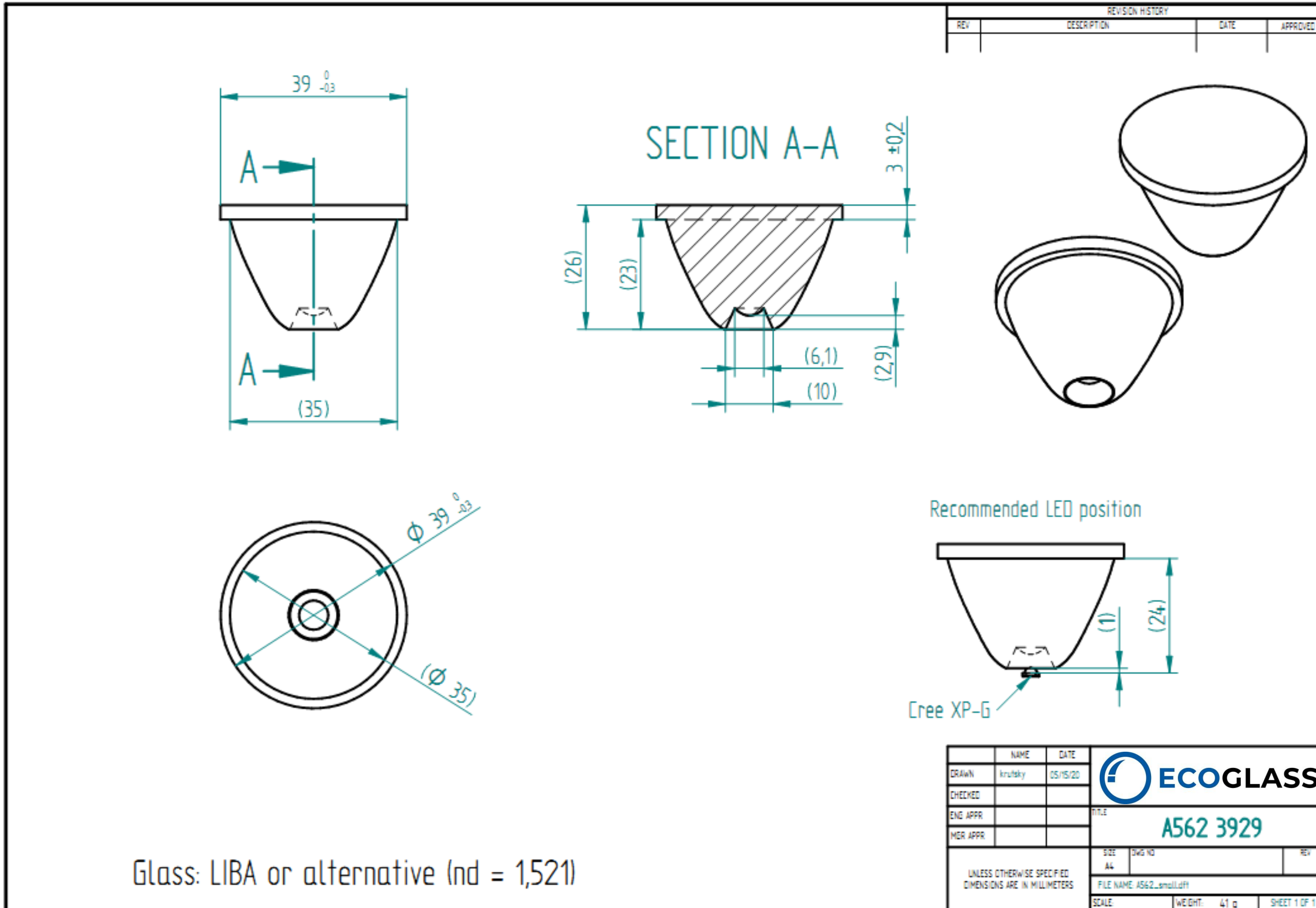
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	87
FWHM Co [°]	5,6
FWHM C90 [°]	5,6

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

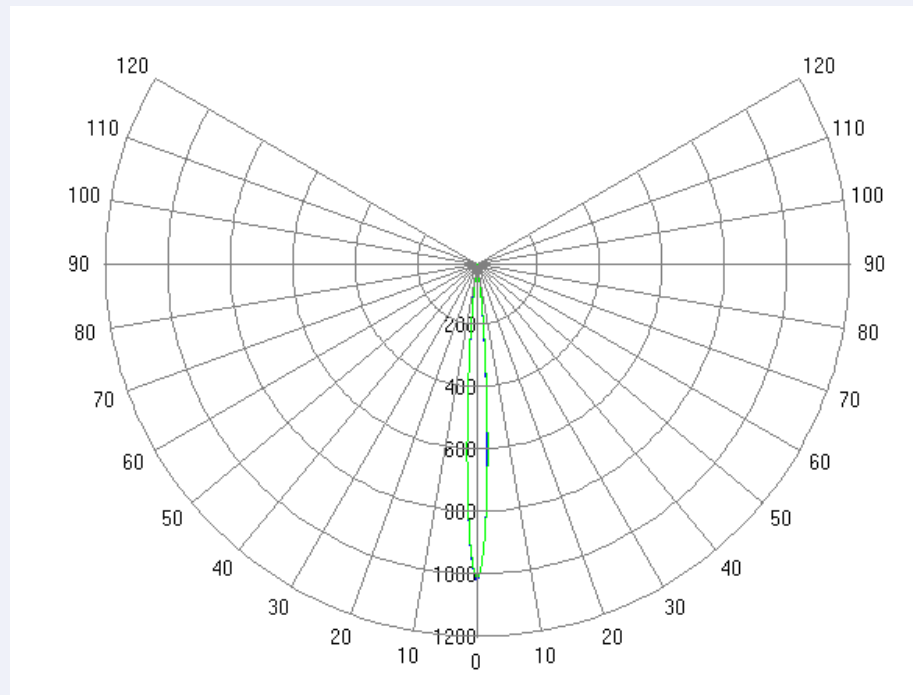
A562 3929



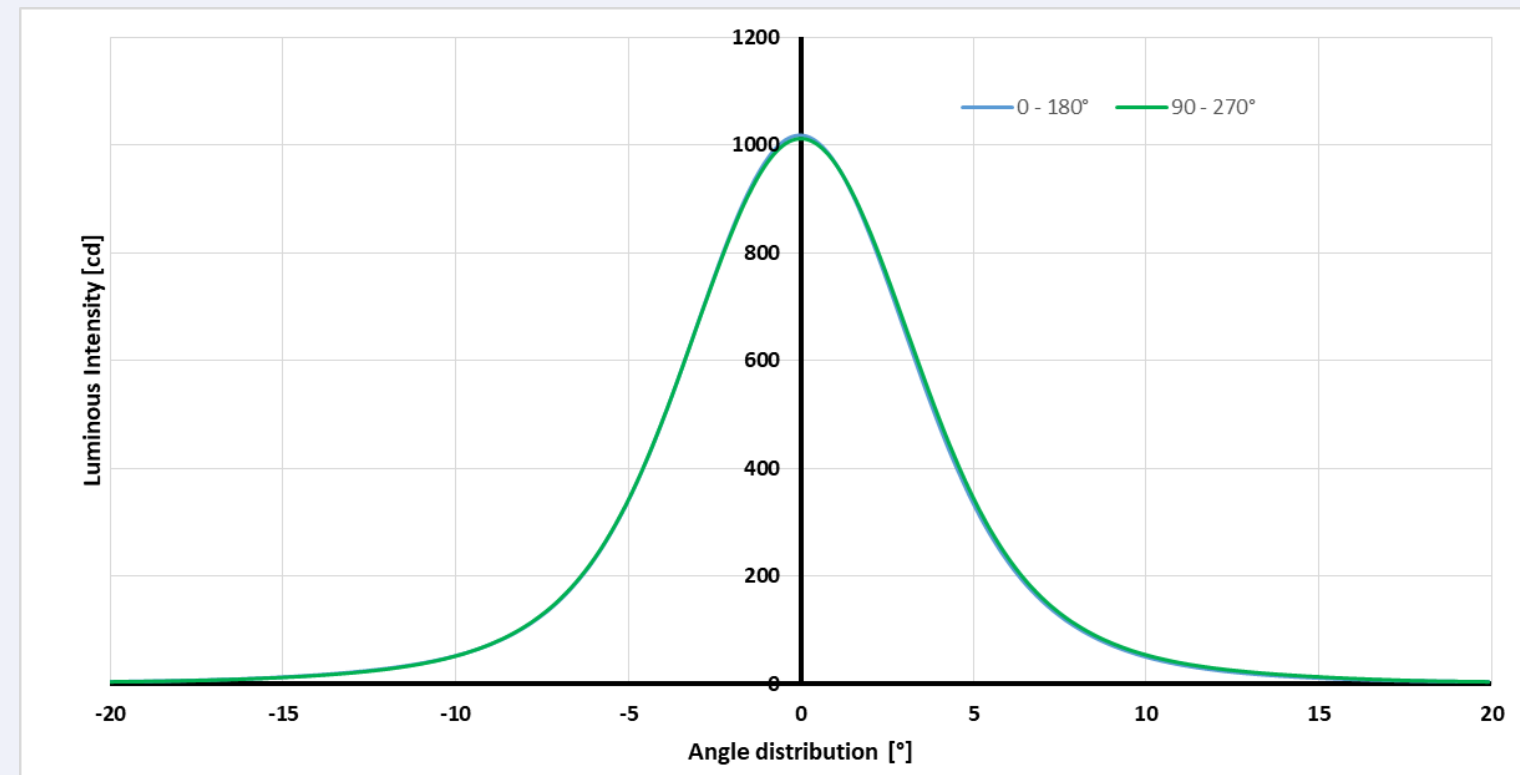
Glass: LIBA or alternative (nd = 1,521)

A562 3929 – simulation results

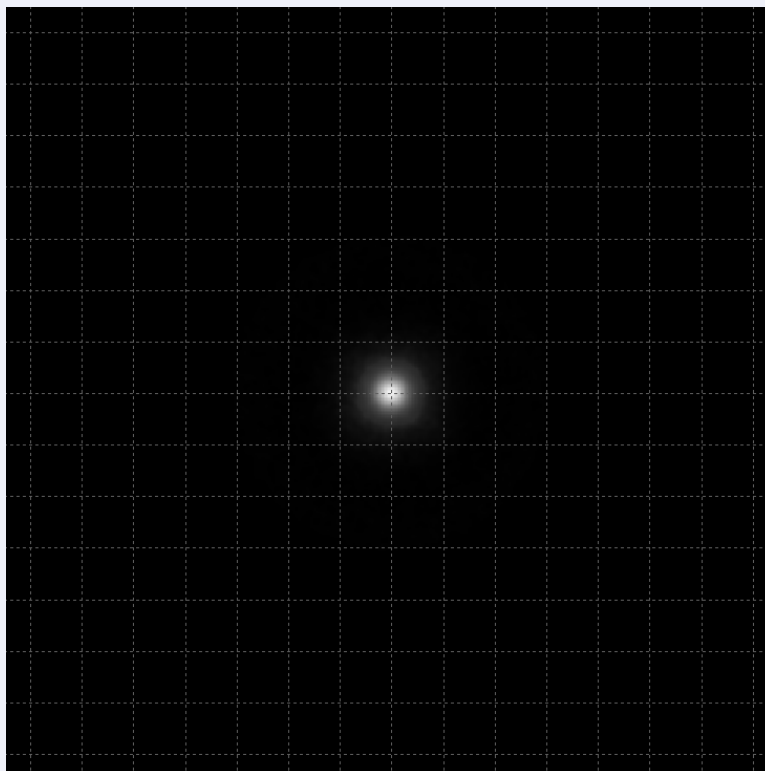
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



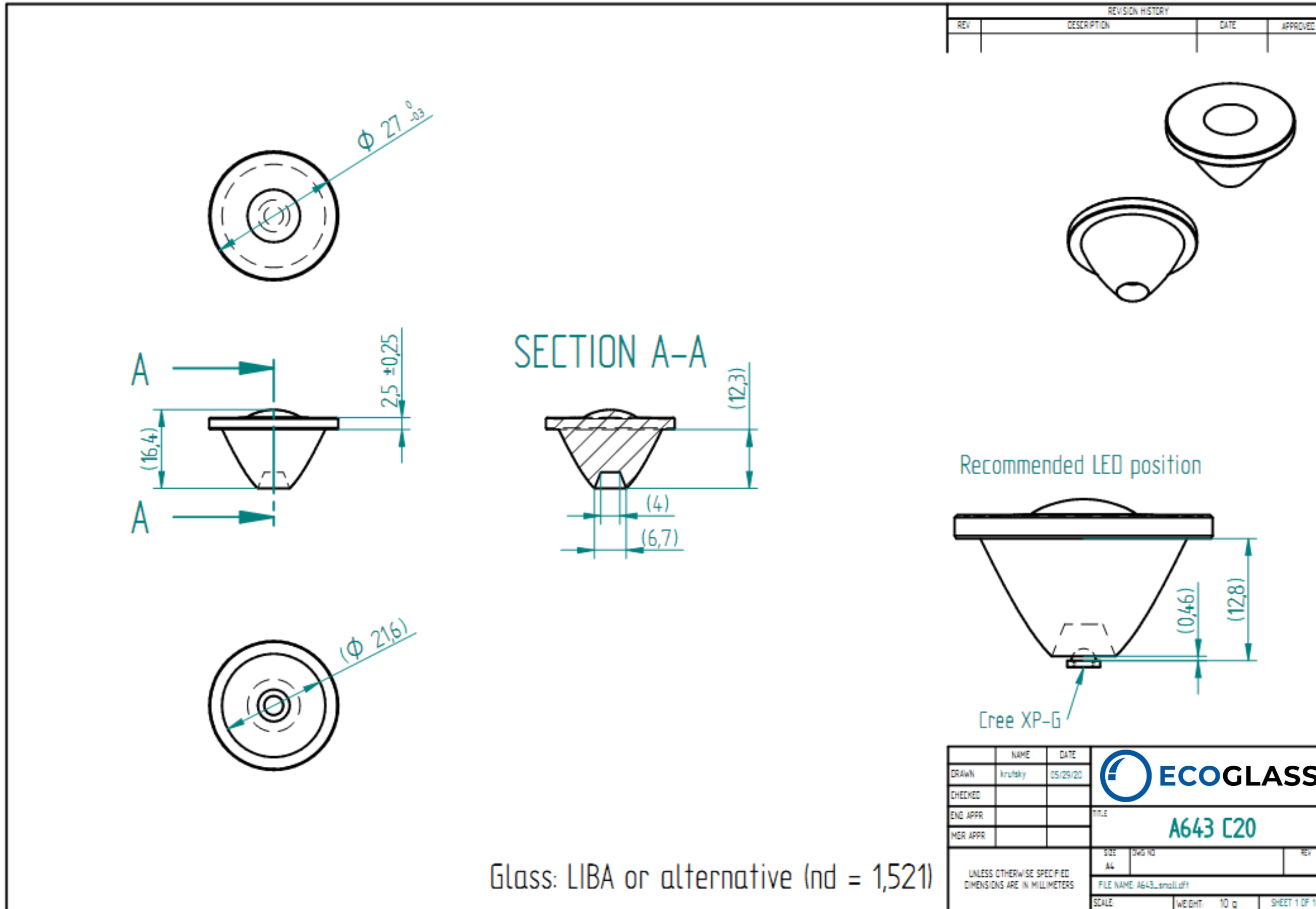
- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	88
FWHM Co [°]	7,8
FWHM C90 [°]	7,8

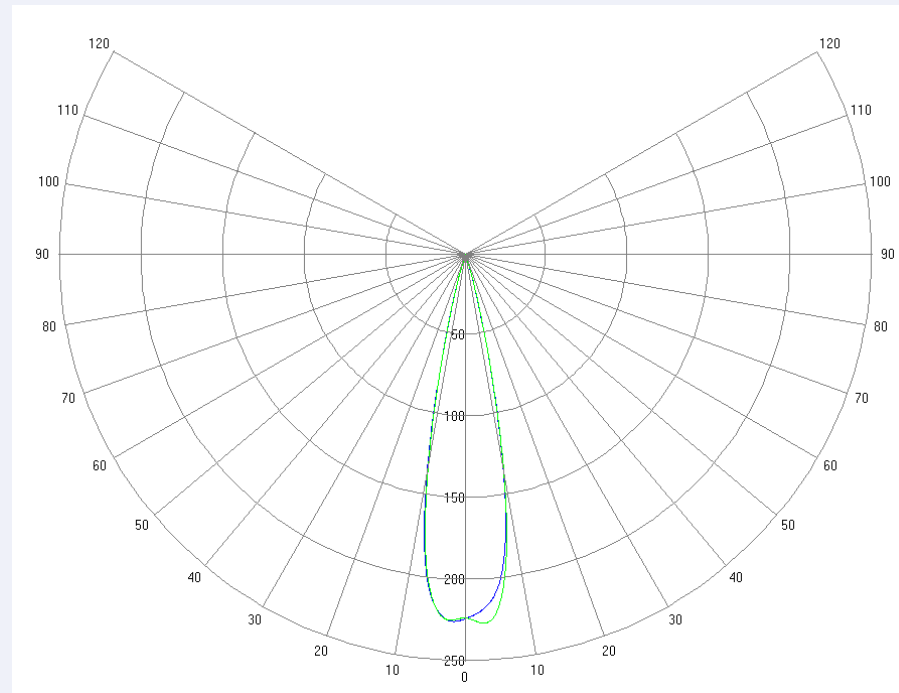
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A643 C20

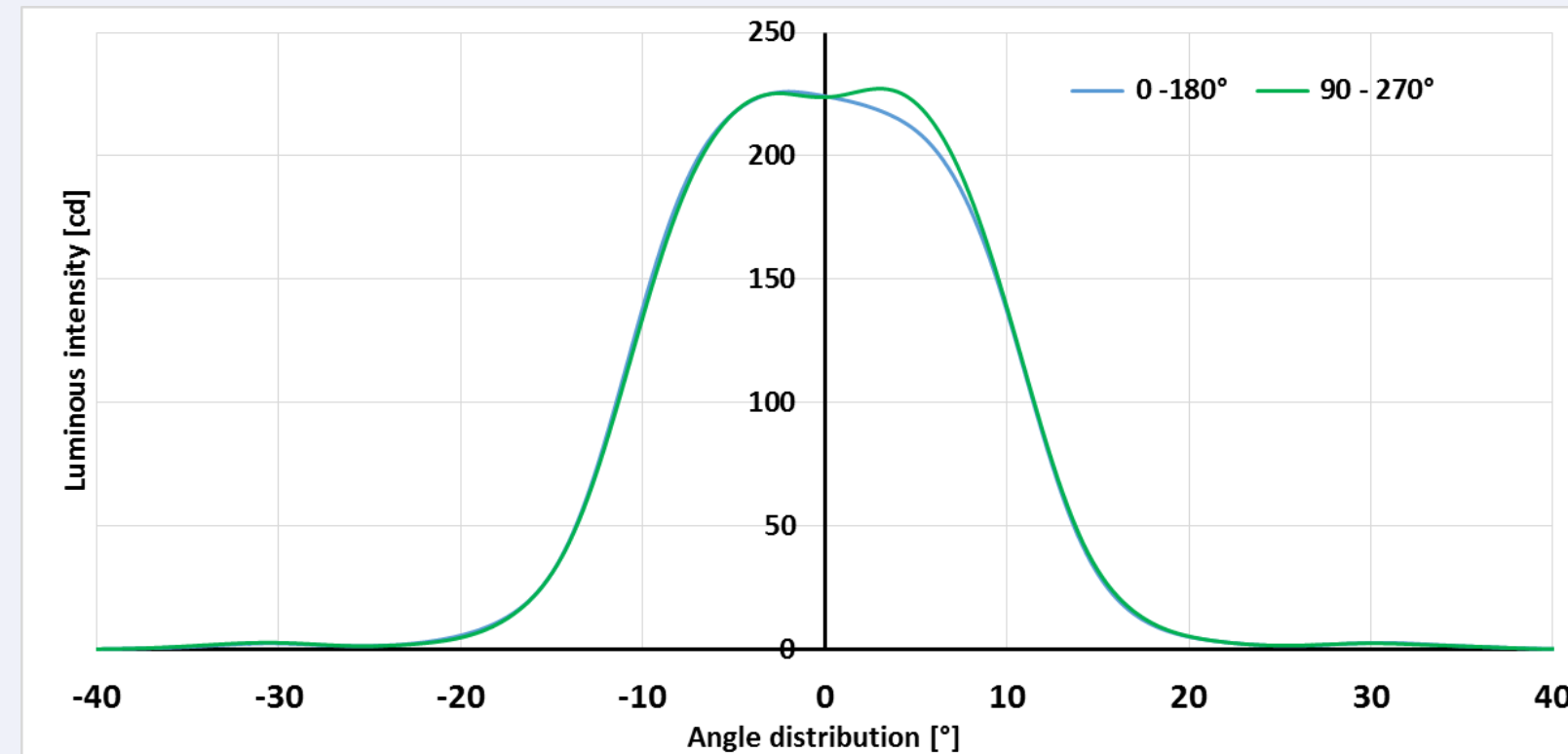


A643 C20- simulation results

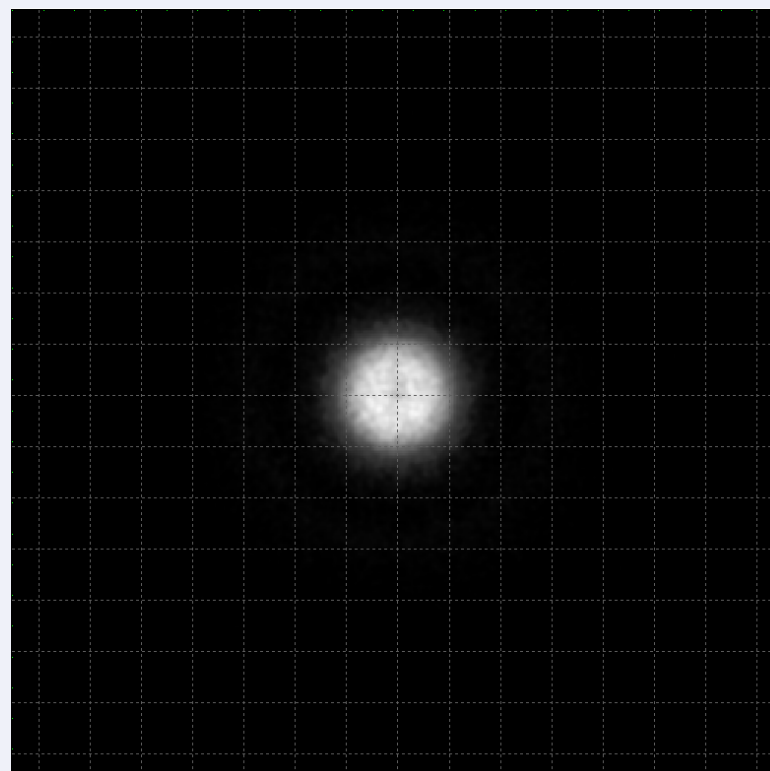
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	87
FWHM Co [°]	20
FWHM C90 [°]	20

* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

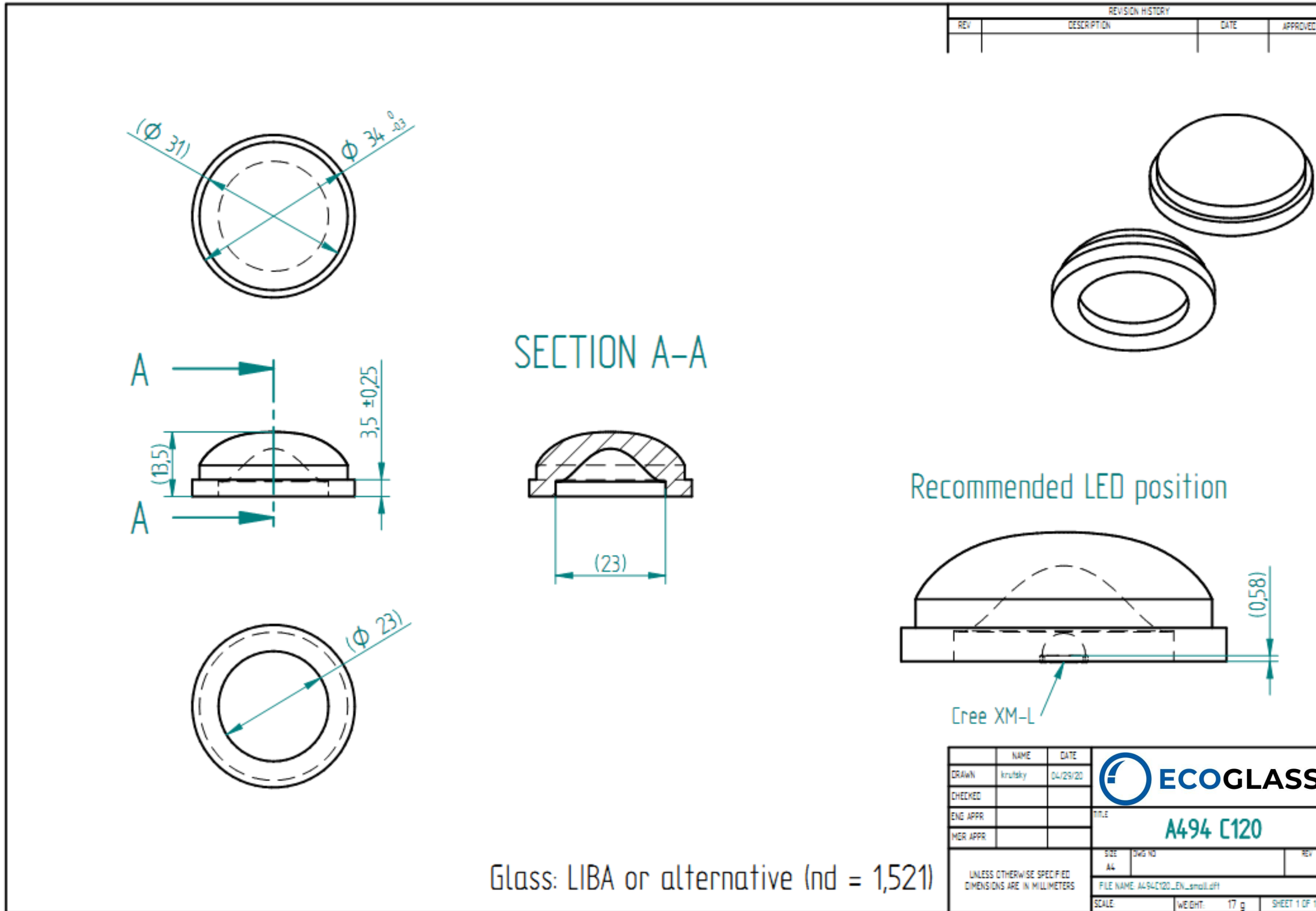
ECOGLOSS Cavity Lenses

ECOGLOSS code	Lens type	Beam angles FWHM (°) *		Diameter (mm)	Thickness (mm)
		Co (0°)	C90 (90°)		
A494 C120	Cavity lens	120	120	34,0	13,5
A508 4018	Cavity lens	110	110	40,0	13,5
A569 7624	Cavity lens	20	120	76,0	24,0
A886 6629	Cavity lens	60	60	66	28,7
A892 6624	Cavity lens	90	90	66	25,9
A893 6624	Cavity lens	120	120	66	21,4
A958 7625	Cavity lens	140	50	76	25

* FWHM = full width at half maximum

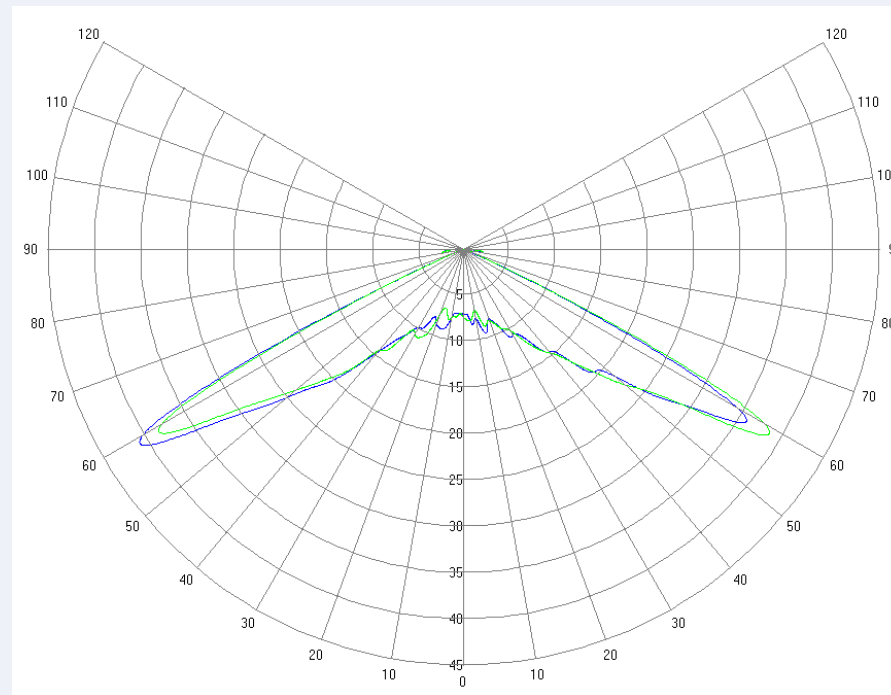


A494 C120

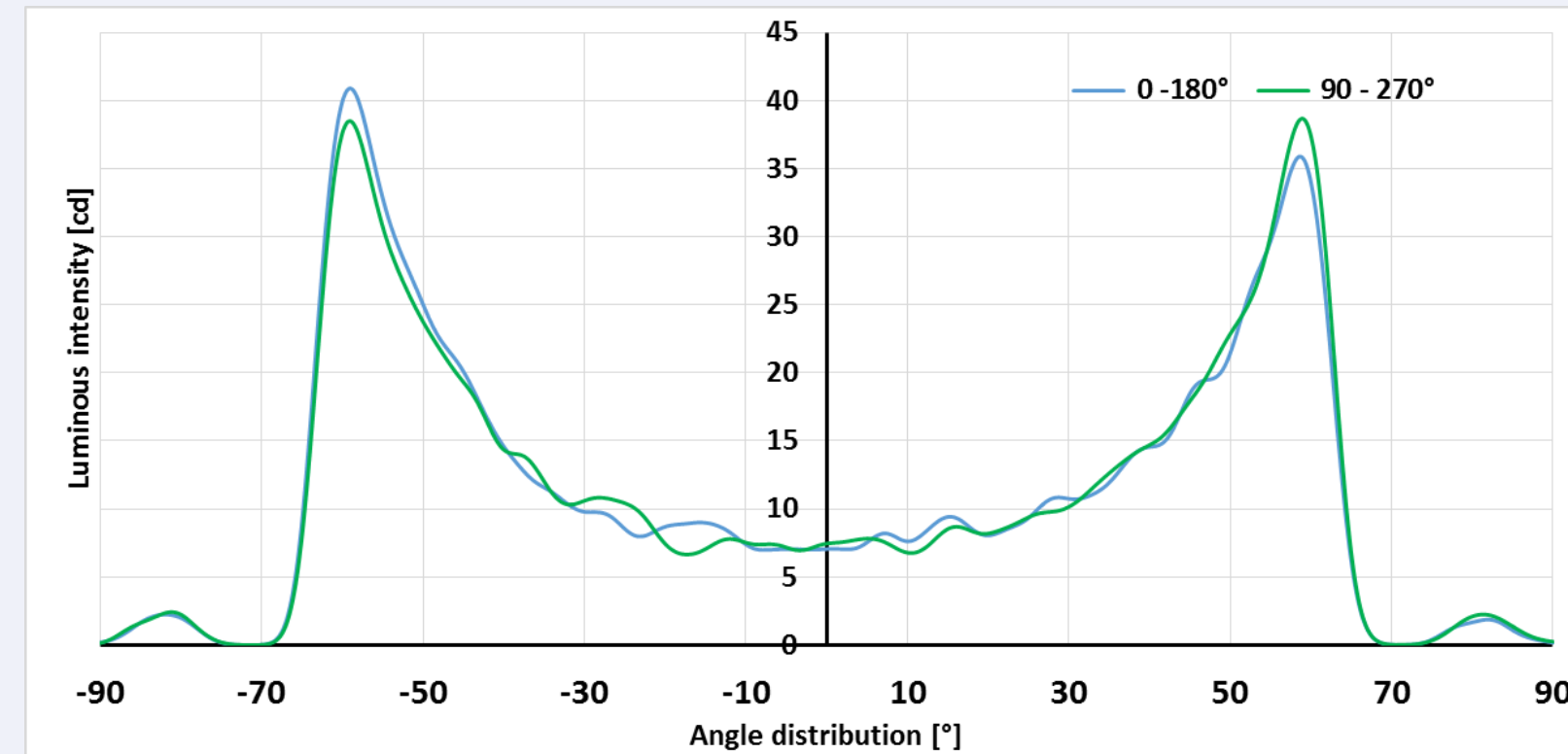


A494 C120 – simulation results

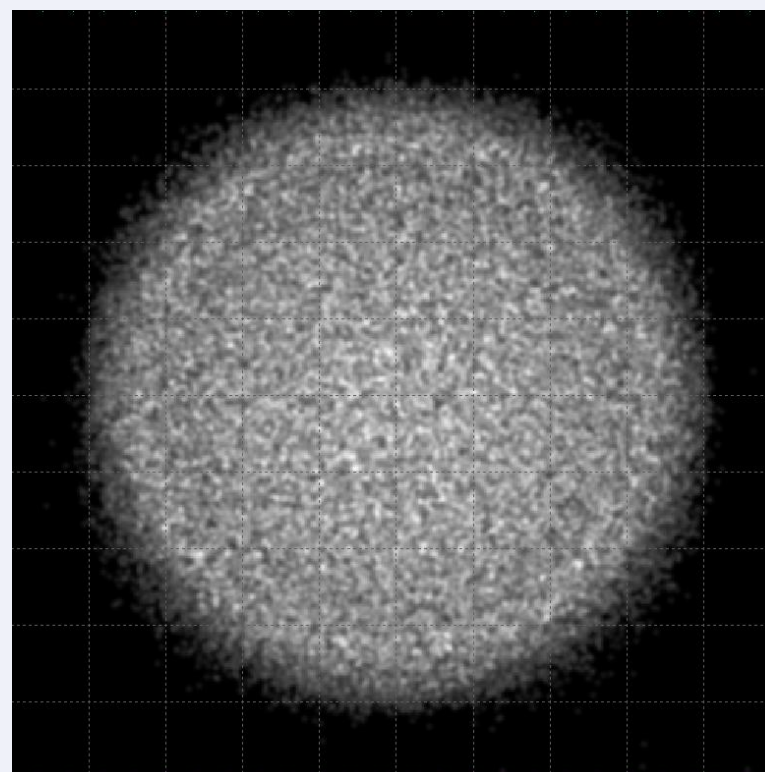
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



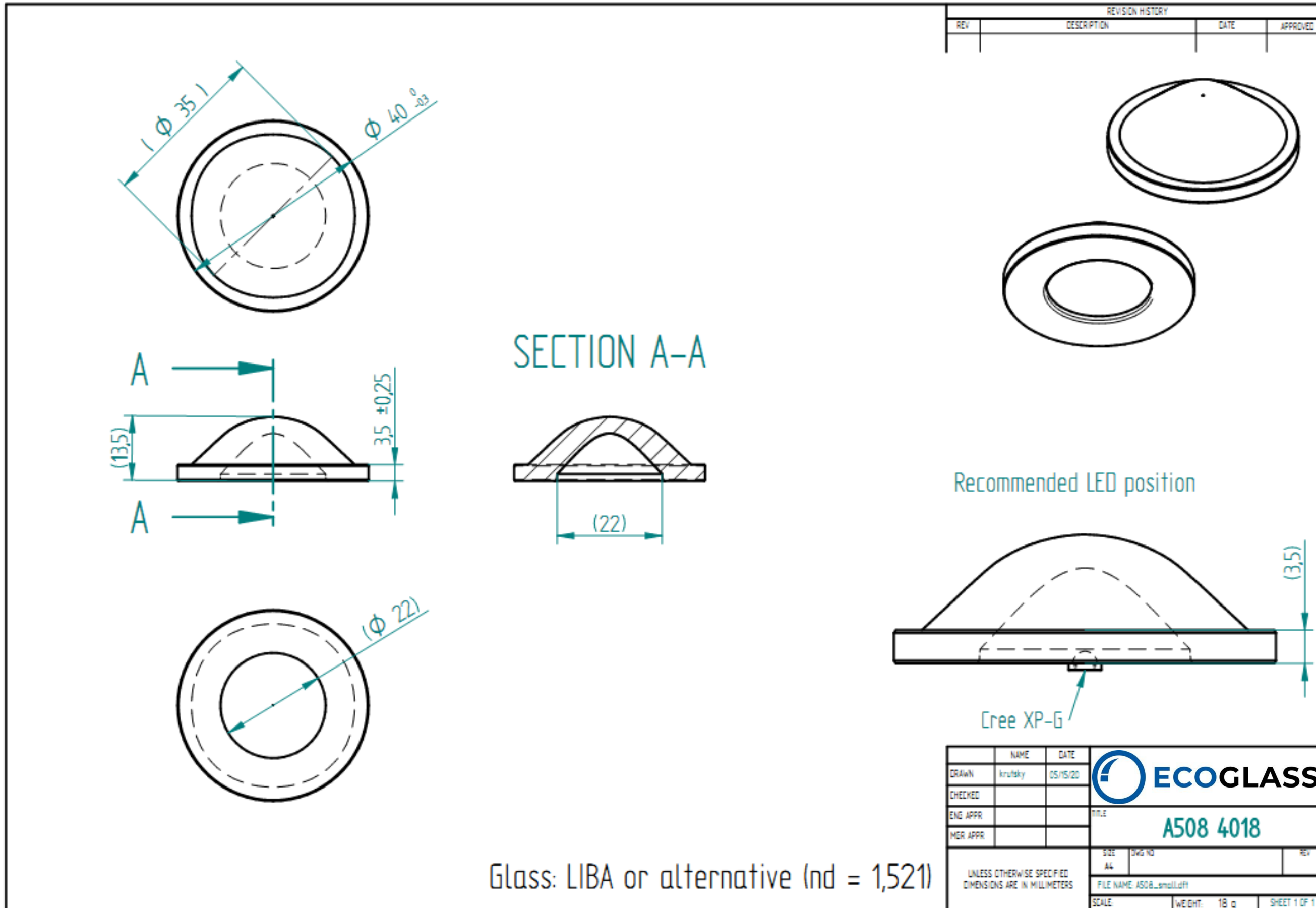
- Projection wall 5x5 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	79
Efficiency [%]*	89
FWHM Co [°]	120
FWHM C90 [°]	120

* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A508 4018

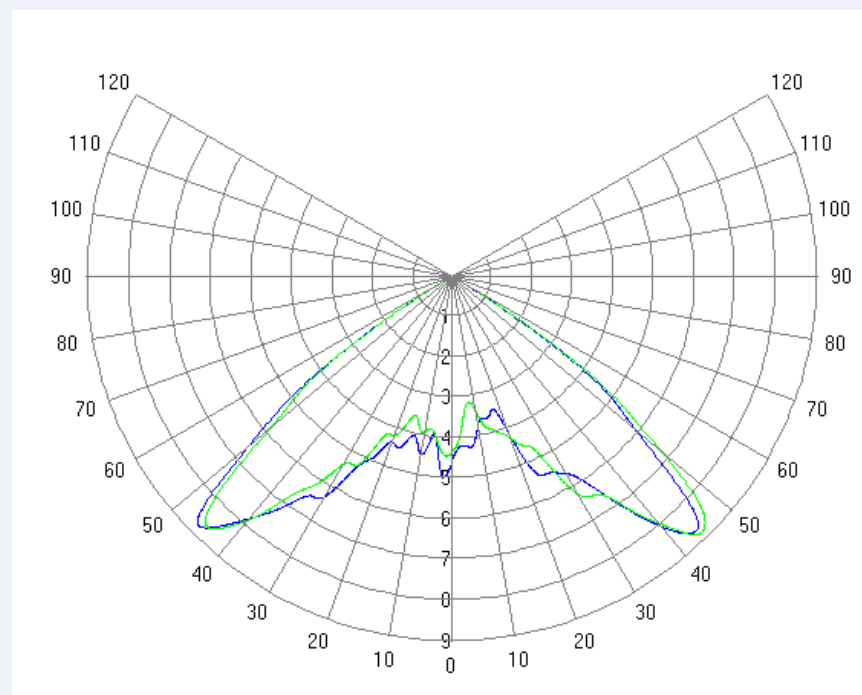


Glass: LIBA or alternative (nd = 1,521)

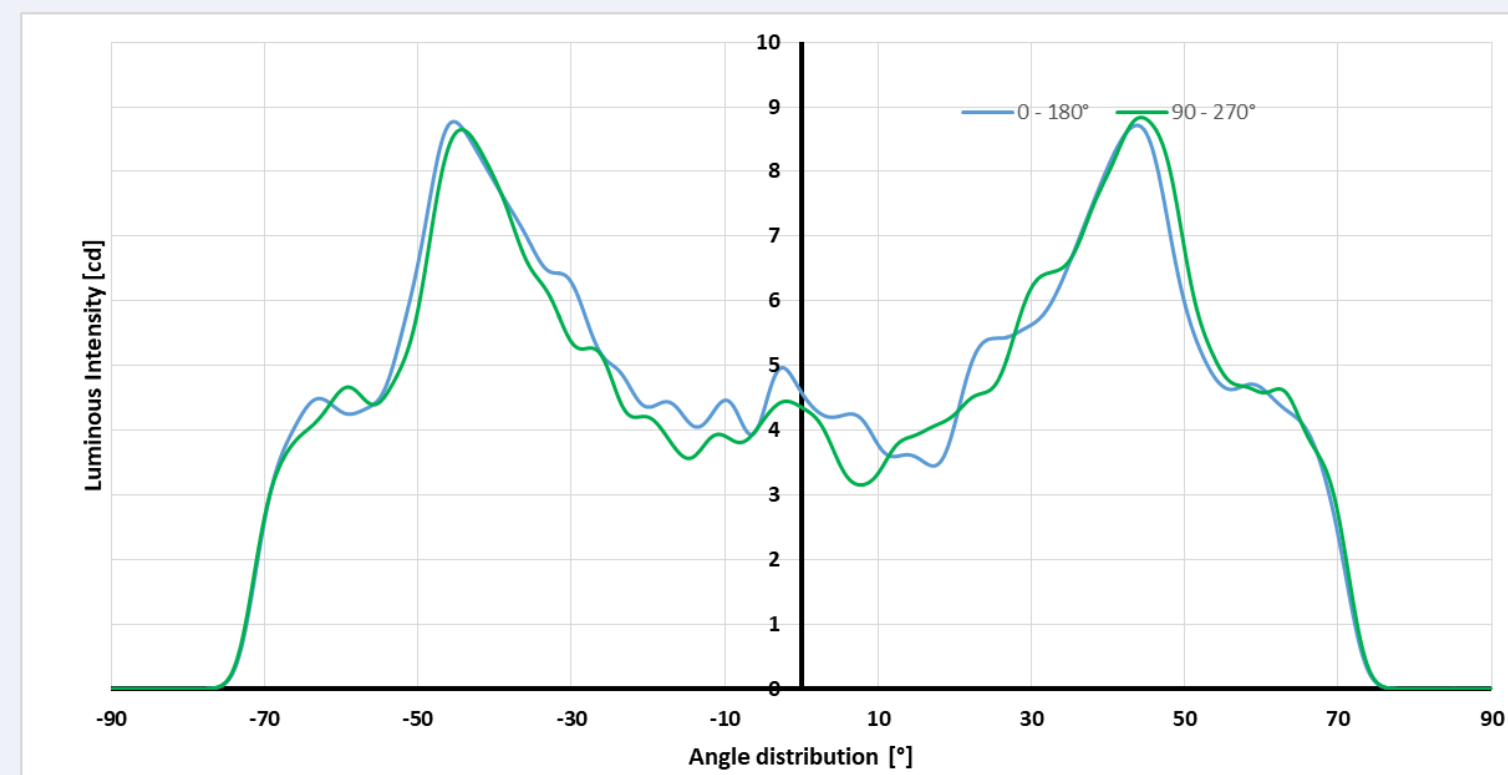
A508 4018 – simulation results



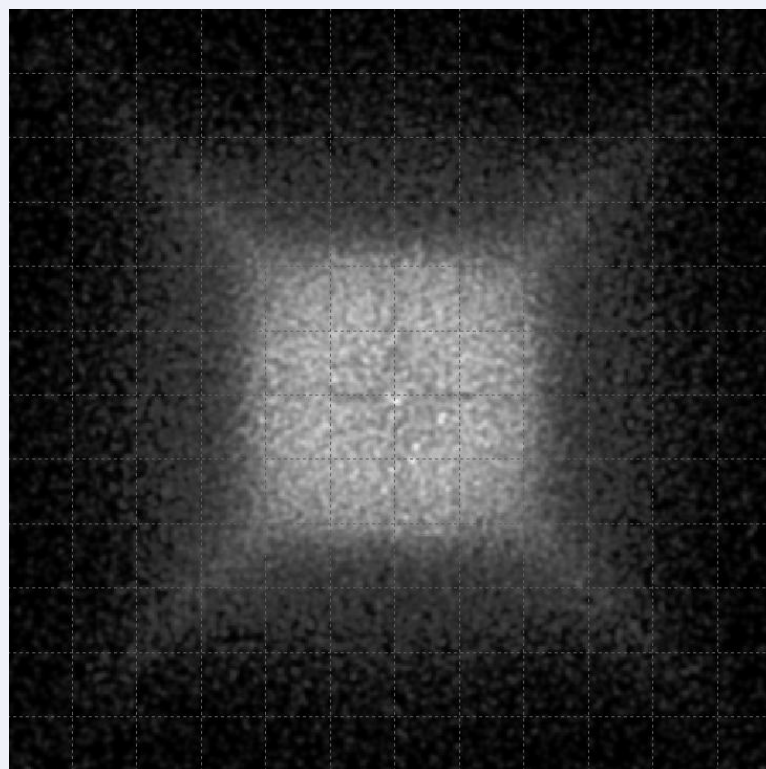
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



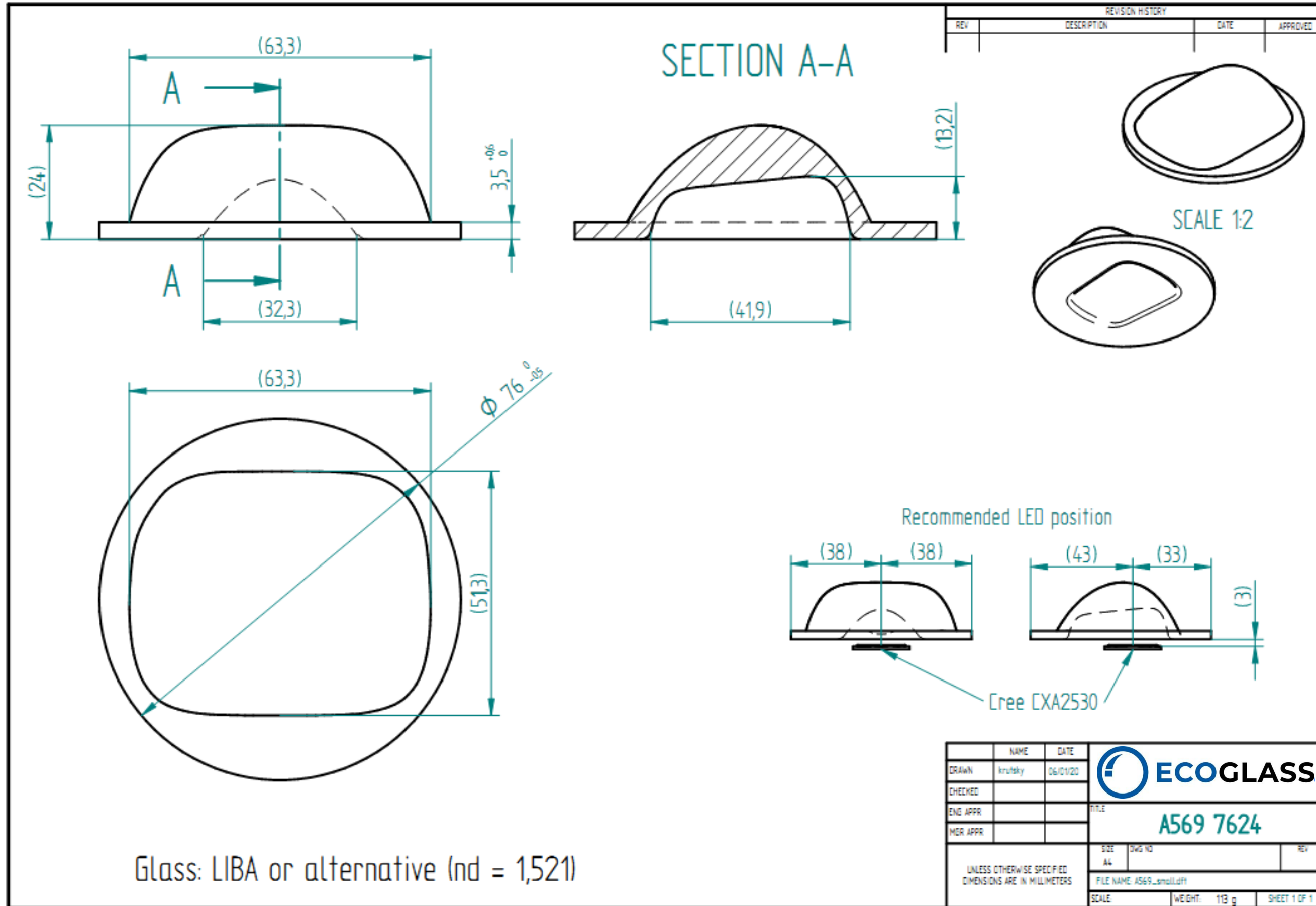
- Projection wall 5x5 m at 1m



LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
Efficiency [%]*	62
FWHM C ₀ [°]	110
FWHM C ₉₀ [°]	110

* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

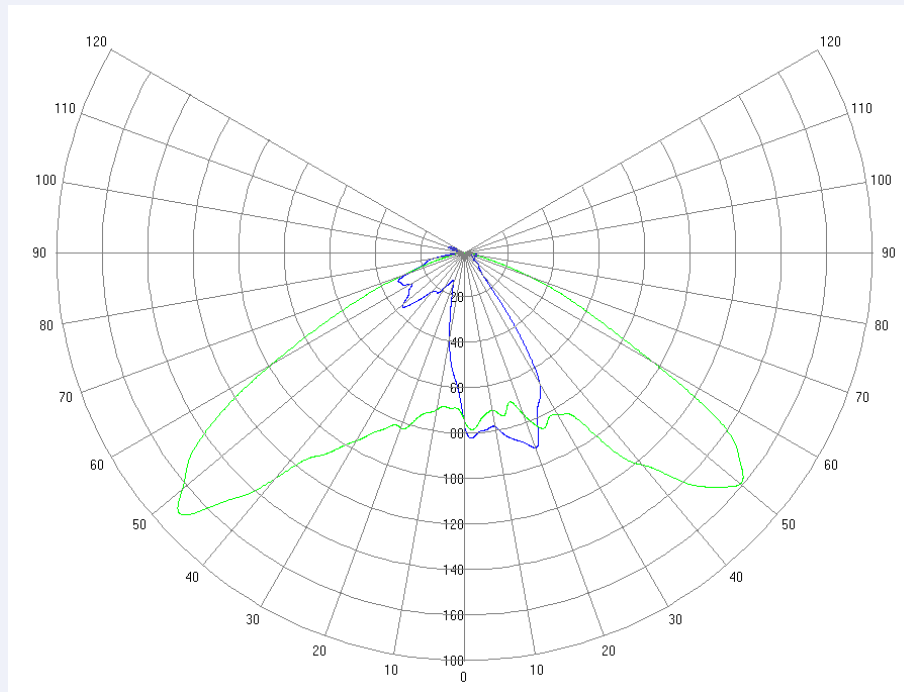
A569 7624



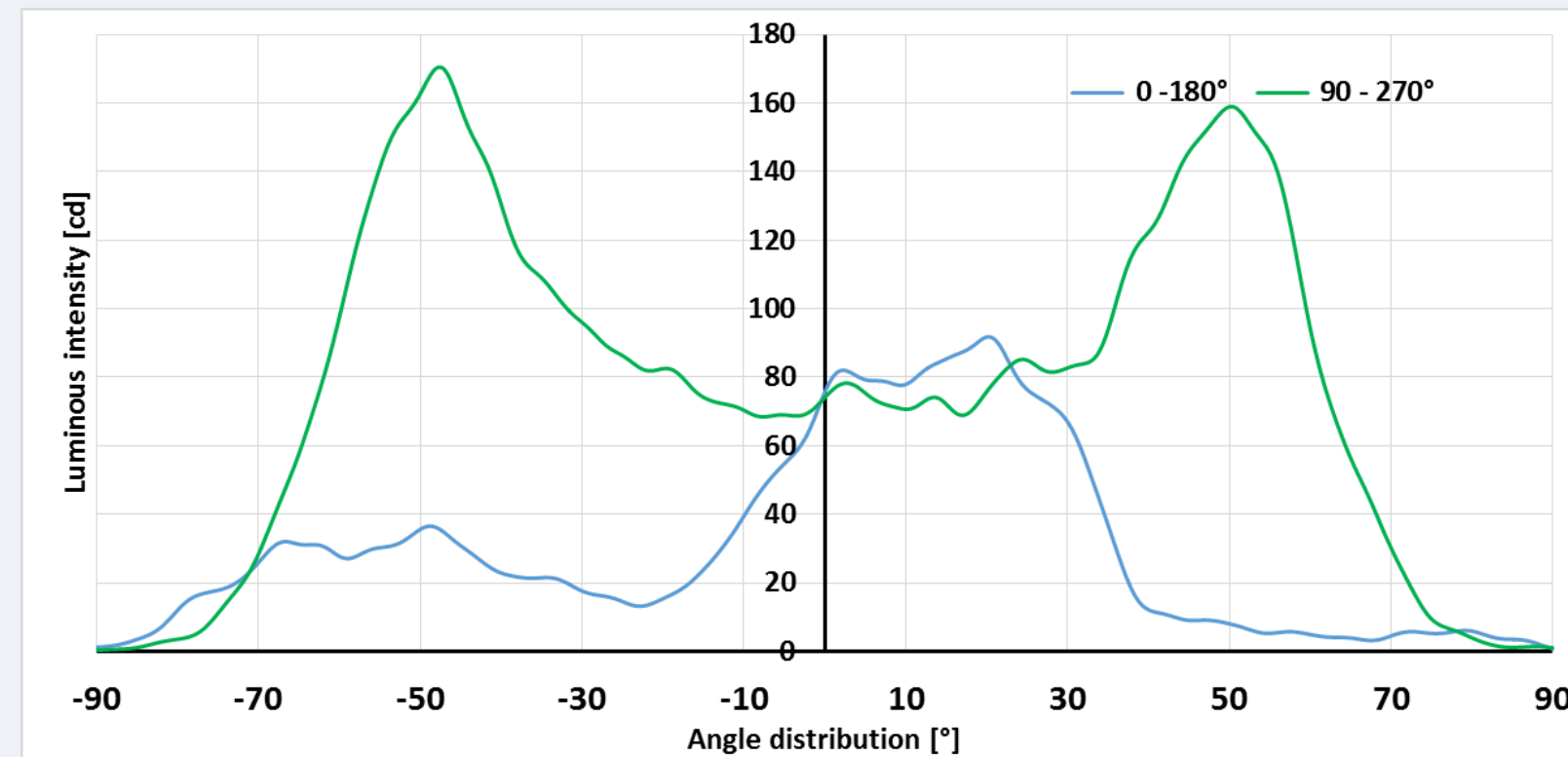
Glass: LIBA or alternative (nd = 1,521)

A569 7624- simulation results

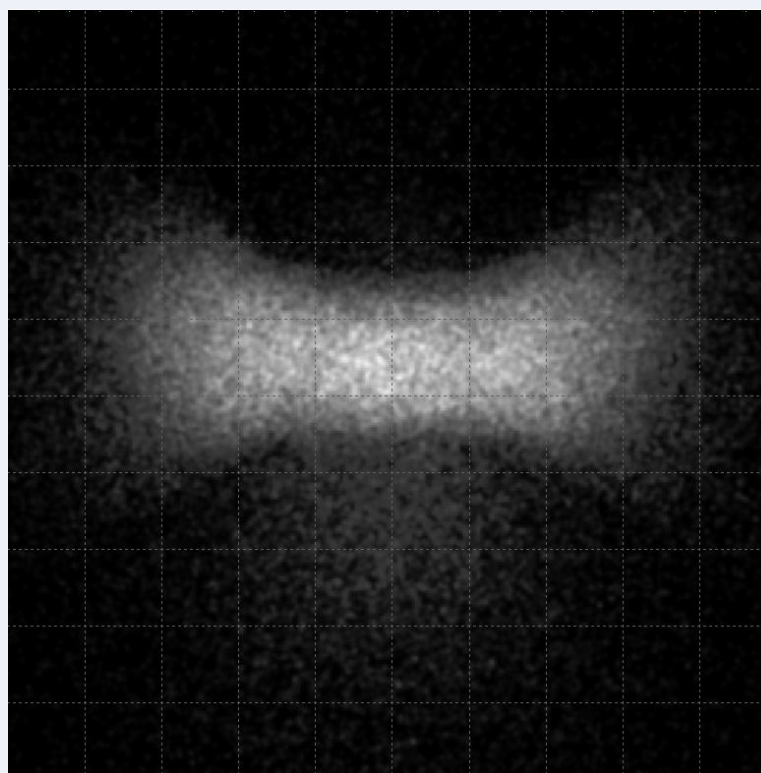
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



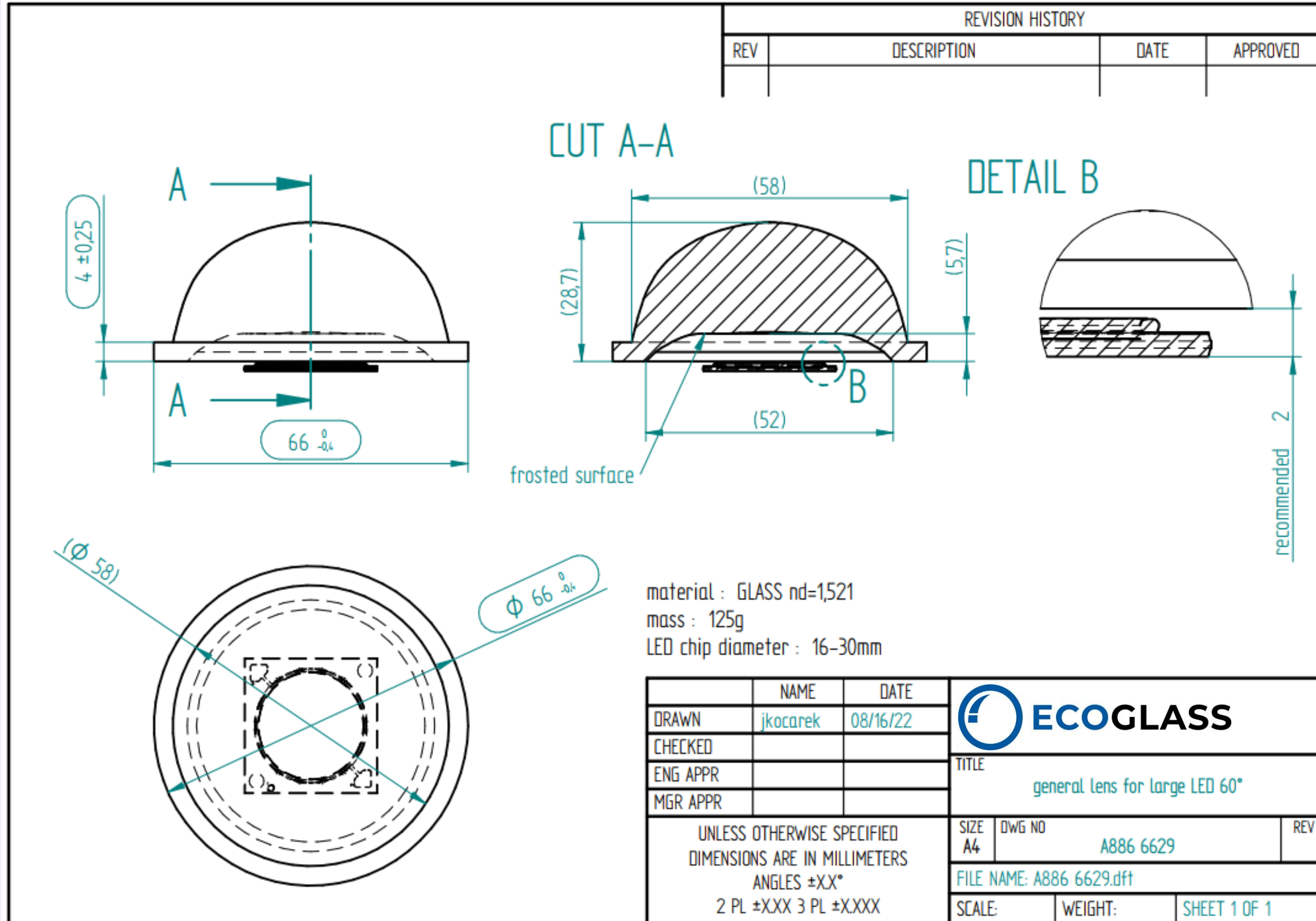
- Projection wall 5x5 m at 1m



LED used for simulation	Cree CXA 2530
Luminous flux of LED [lm]	267
Efficiency [%]*	84
FWHM Co [°]	20
FWHM C90 [°]	120

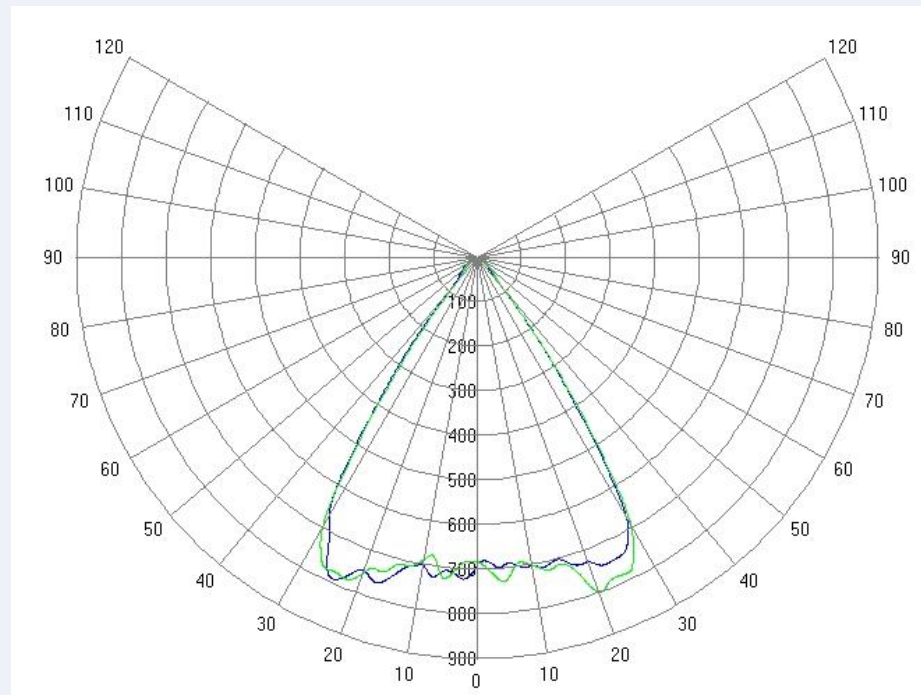
* The ratio between luminous flux on the projection wall (5x5 m at 1m) and luminous flux of LED

A886 6629

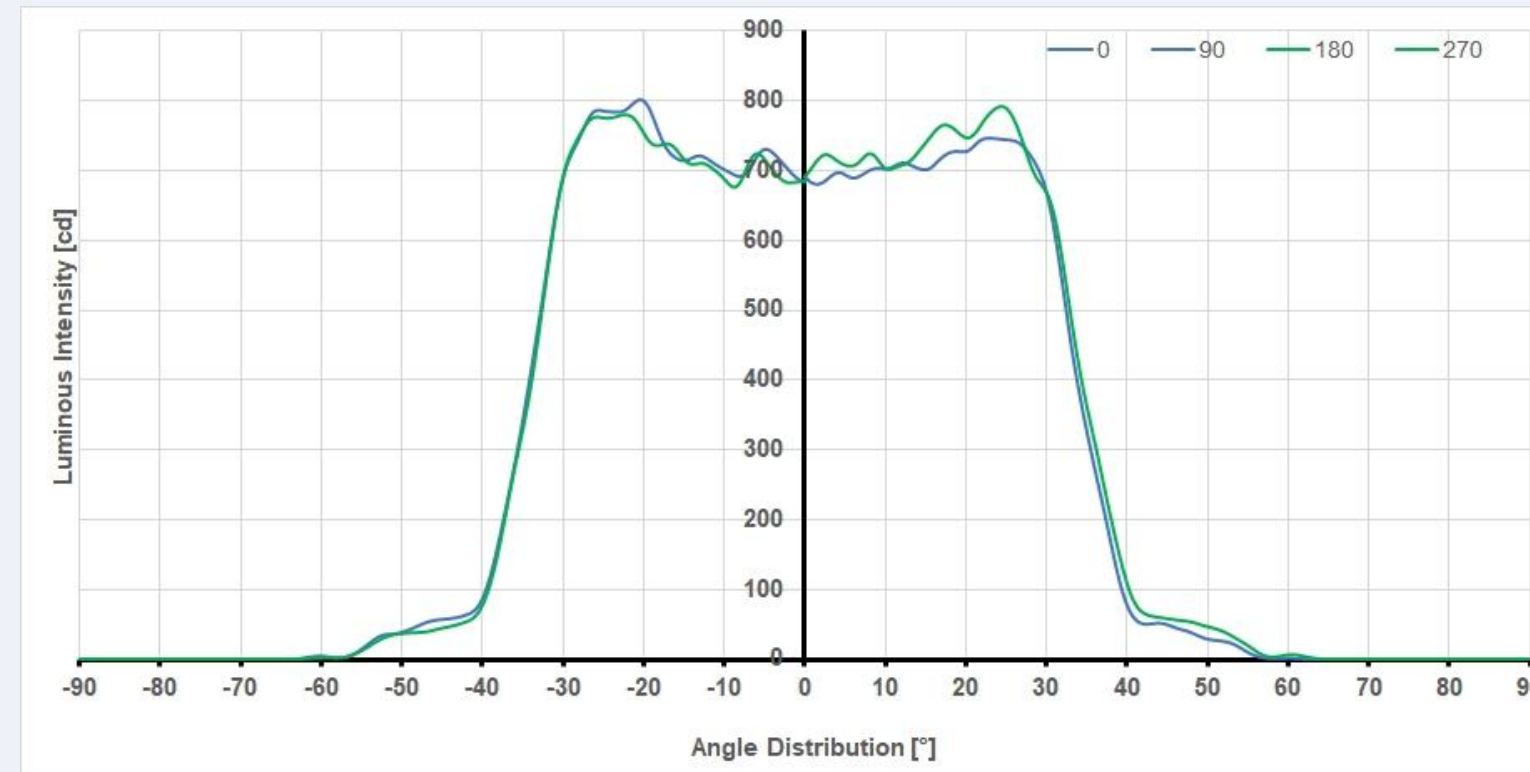


A886 6629– simulation results

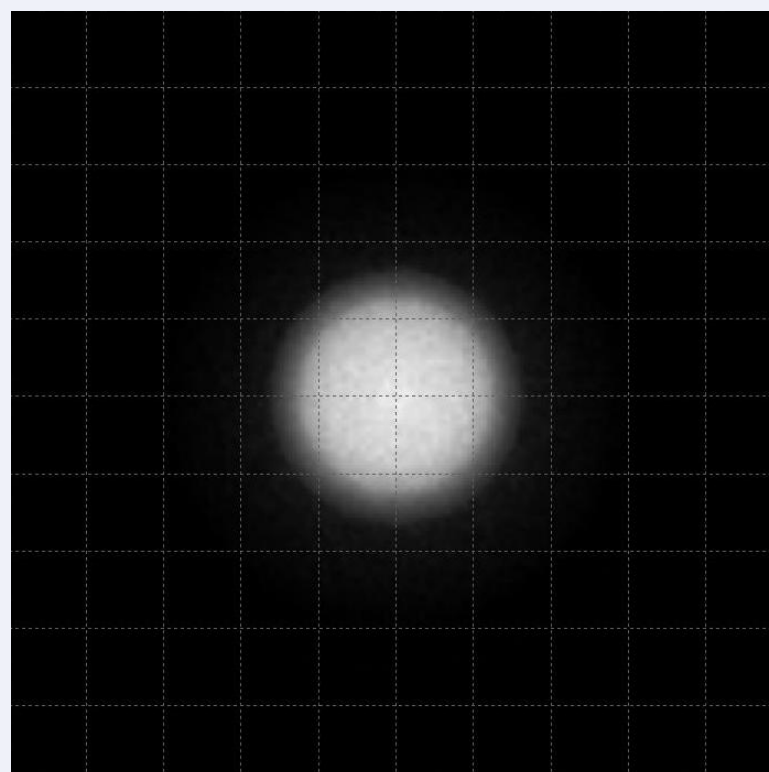
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



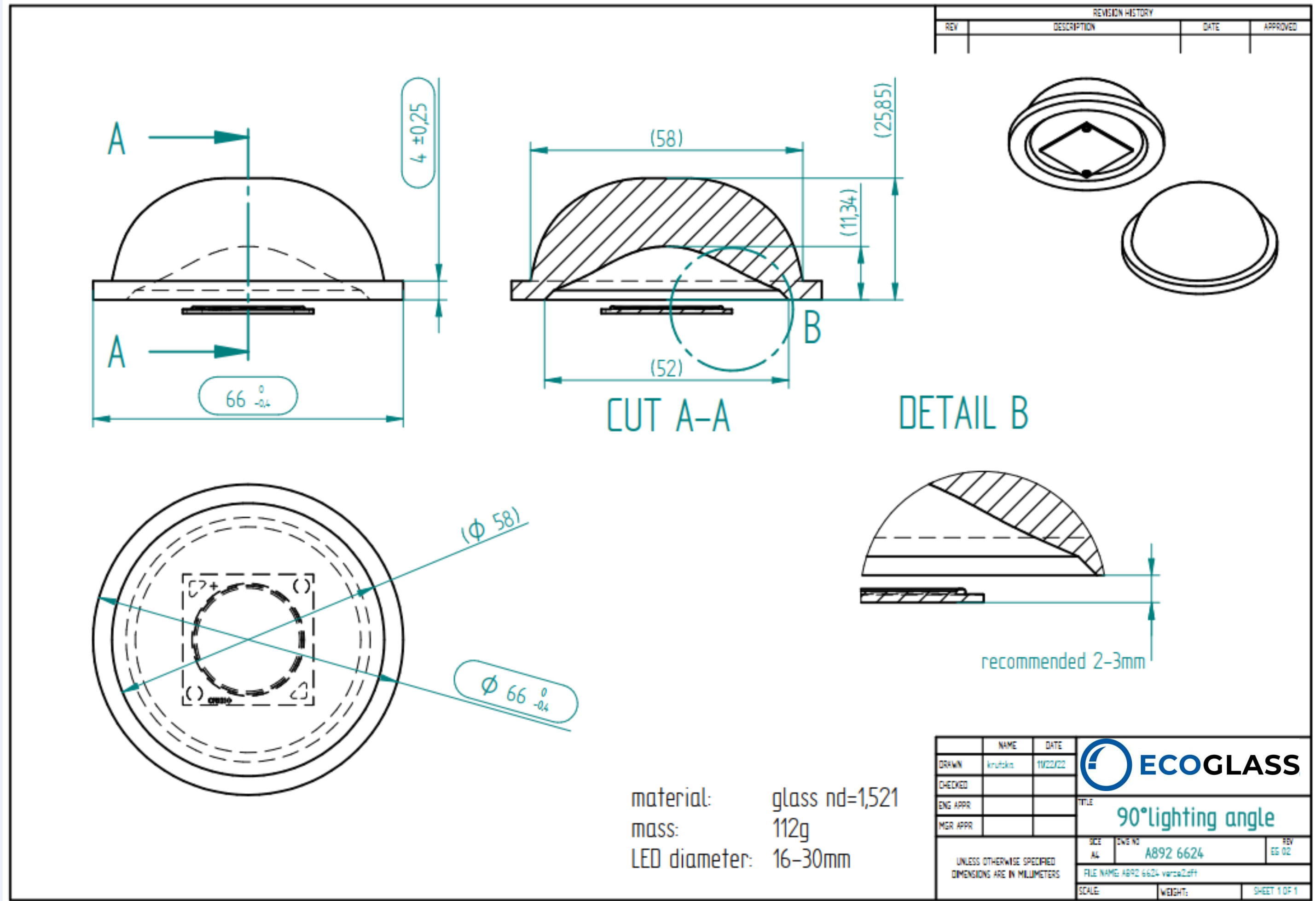
- Projection wall 5x5 m at 1m



LED used for simulation	CXA2530
Luminous flux of LED [lm]	3600
Efficiency [%]*	90
FWHM Co [°]	60
FWHM C90 [°]	60

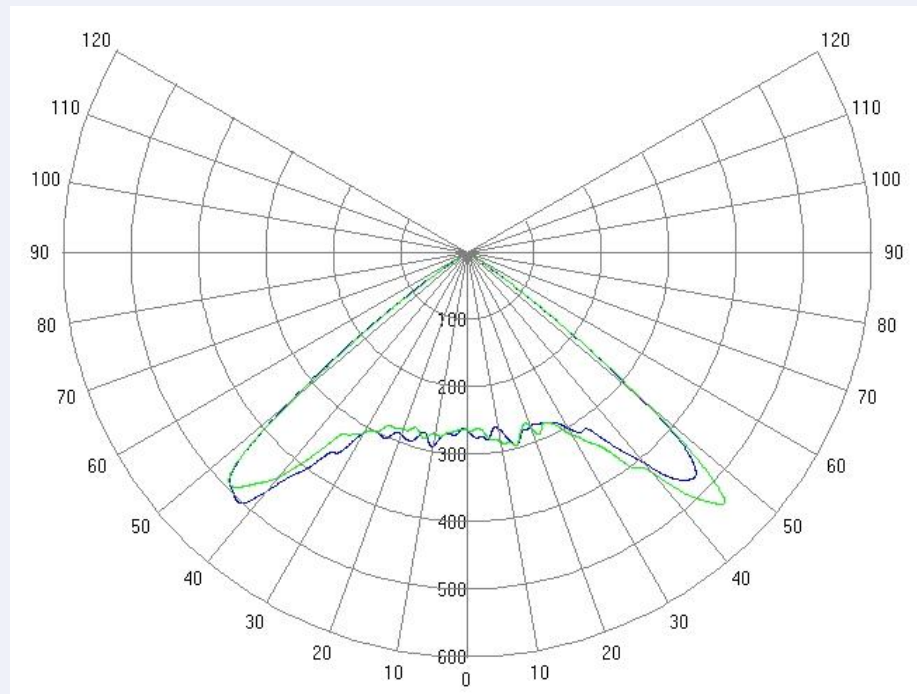
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A892 6624

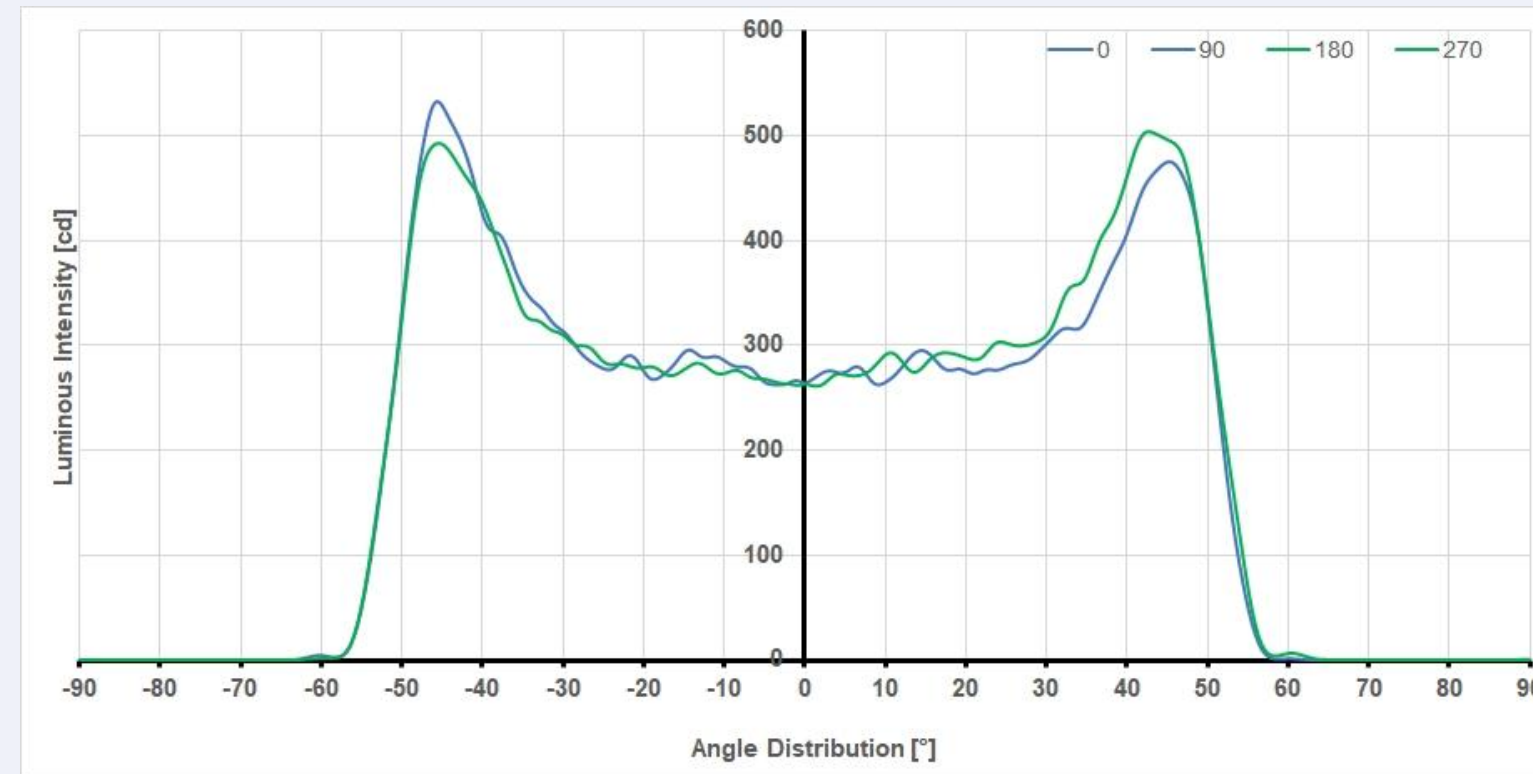


A892 6624- simulation results

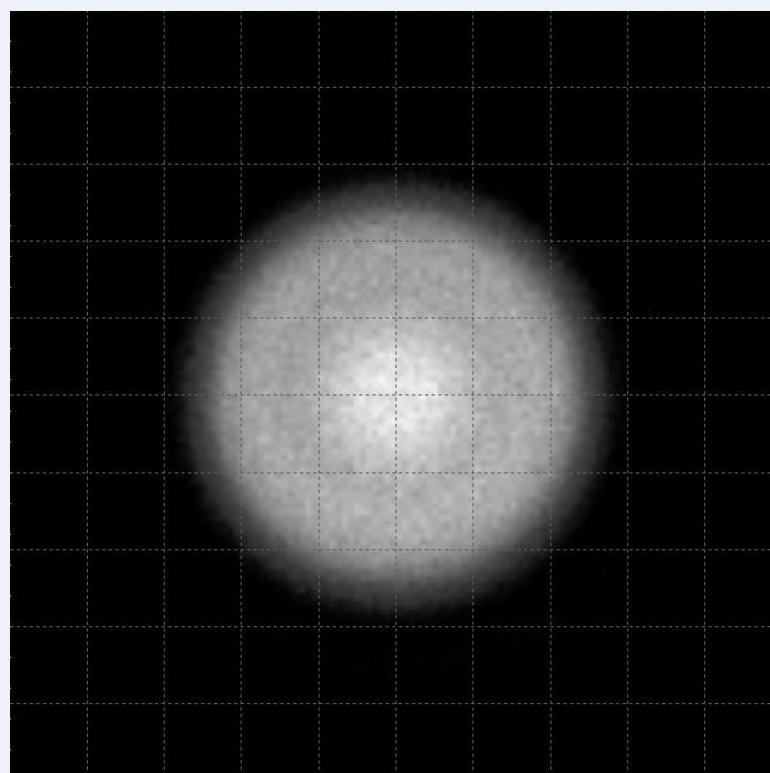
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m



LED used for simulation	CXA2530
Luminous flux of LED [lm]	3600
Efficiency [%]*	90
FWHM Co [°]	90
FWHM C90 [°]	90

* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A893 6624



REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

4 ±0,25

66⁰_{-0,4}

A-A

CUT A-A

(58)

(21,4)

(18)

(52)

DETAIL B

recommended 2

(ϕ 58)

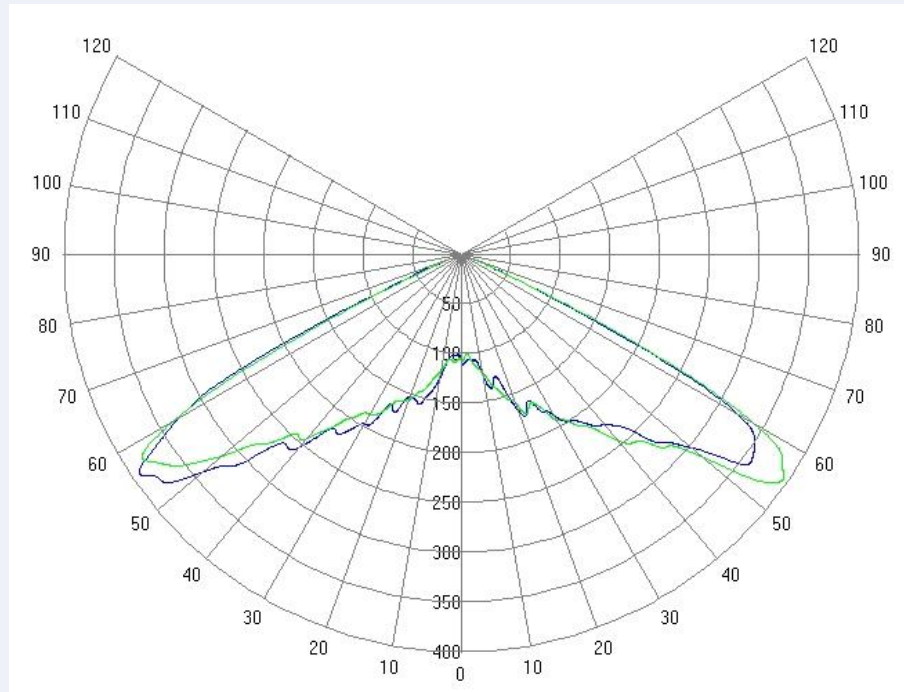
ϕ 66⁰_{-0,4}

material: GLASS nd=1.521
 mass: 75g
 LED diameter: 16-30mm

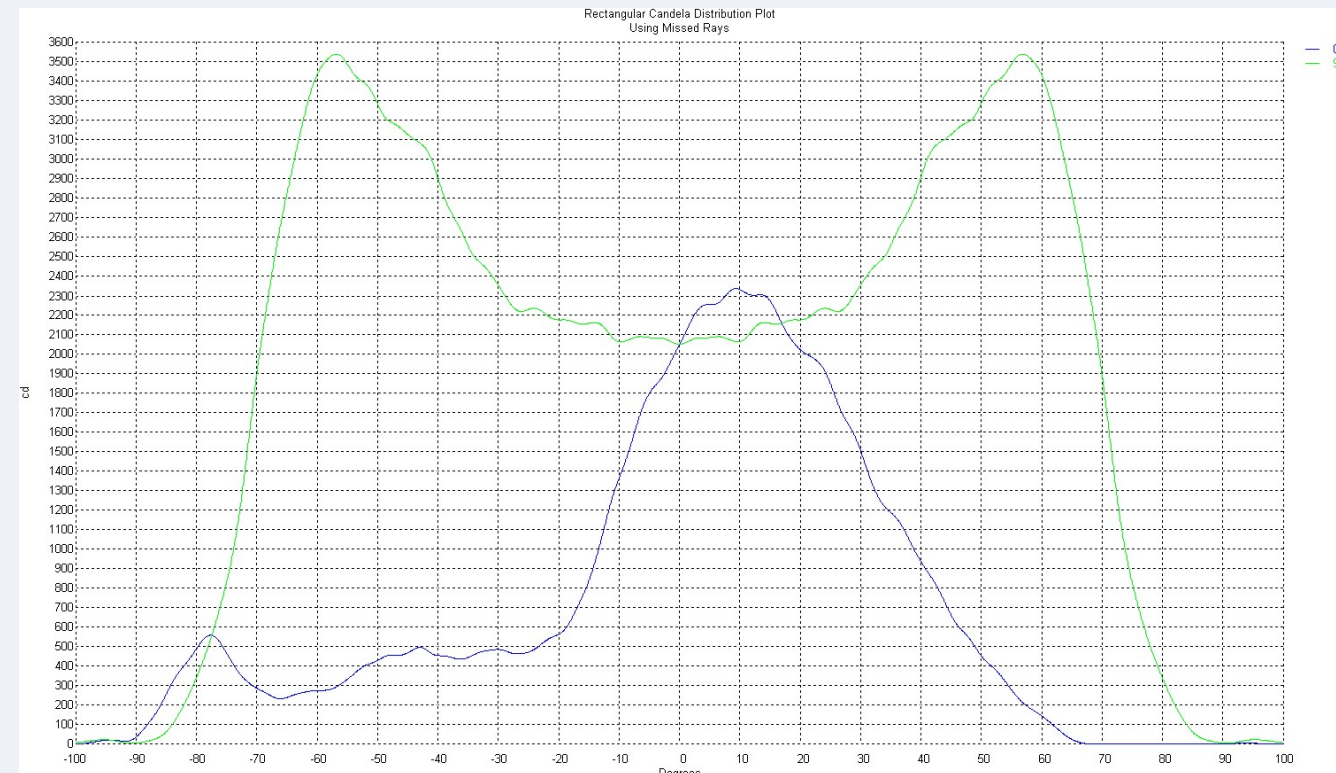
	NAME	DATE		
DRAWN	jkocarek	08/16/22		
CHECKED				
ENG APPR				
MGR APPR			TITLE lens for large LED - 120° lighting angle	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			SIZE A4	DWG NO A893 6624
			FILE NAME: A893 6622.dft	
			SCALE:	WEIGHT:
			SHEET 1 OF 1	

A893 6624- simulation results

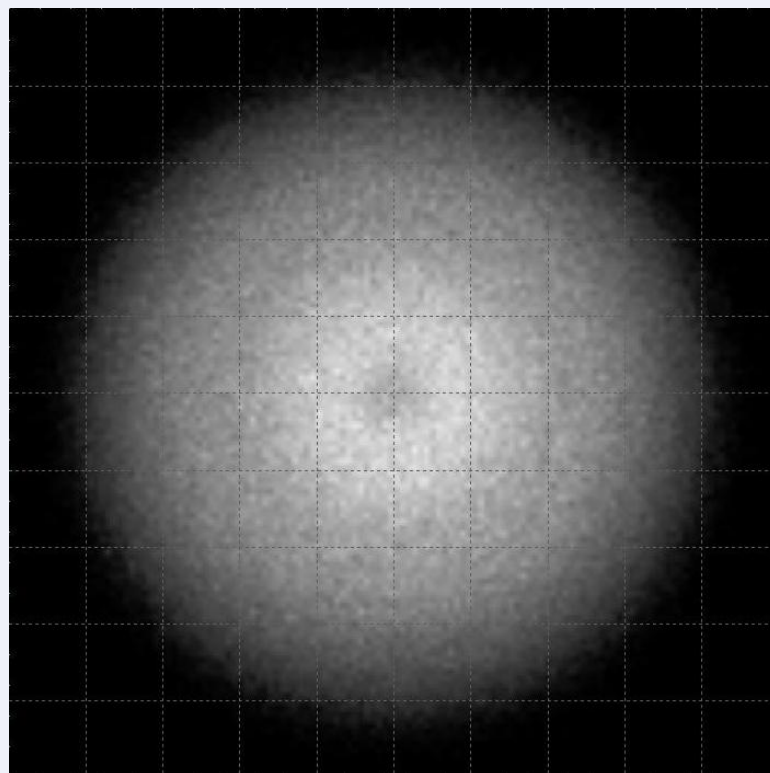
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



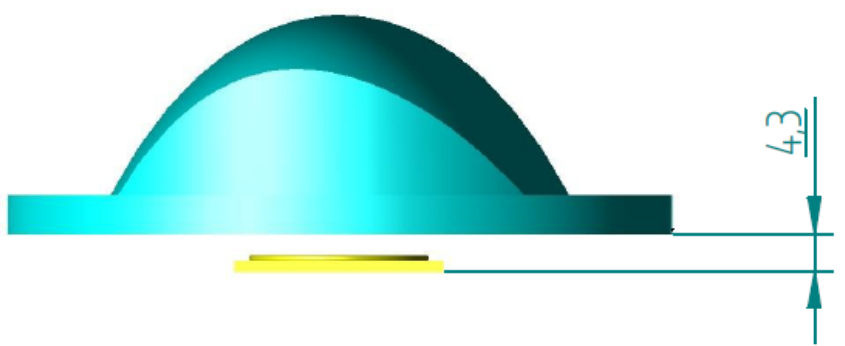
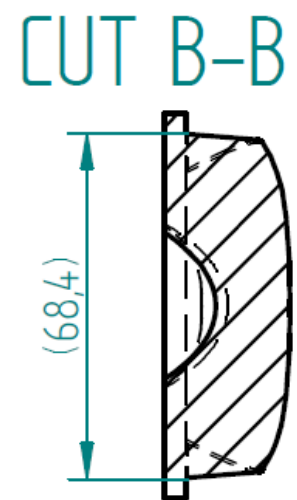
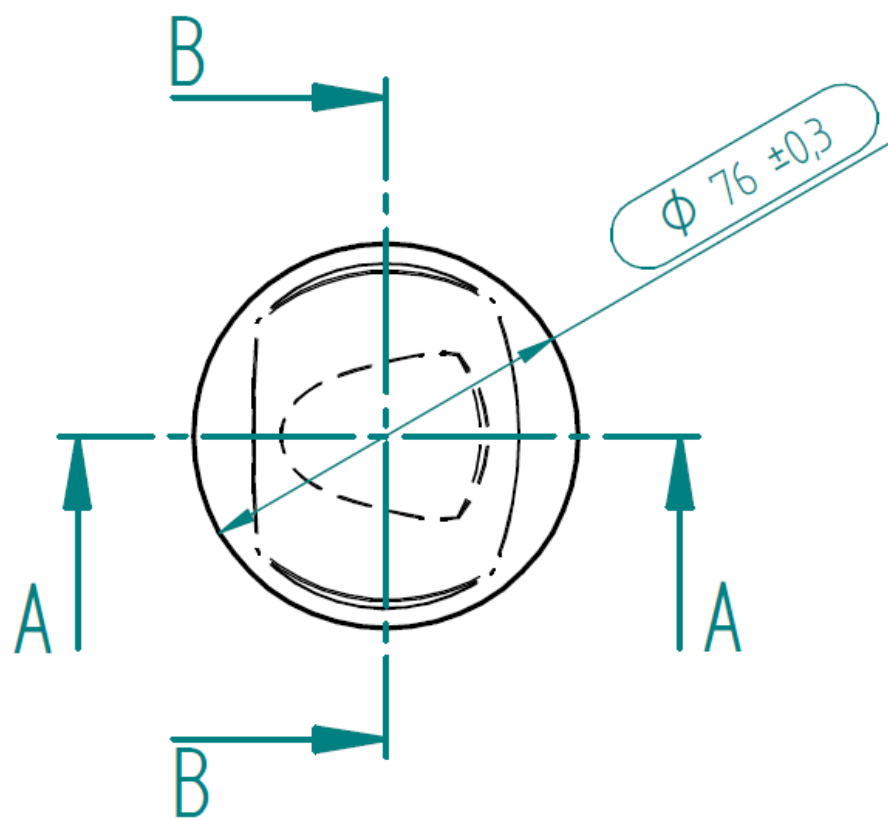
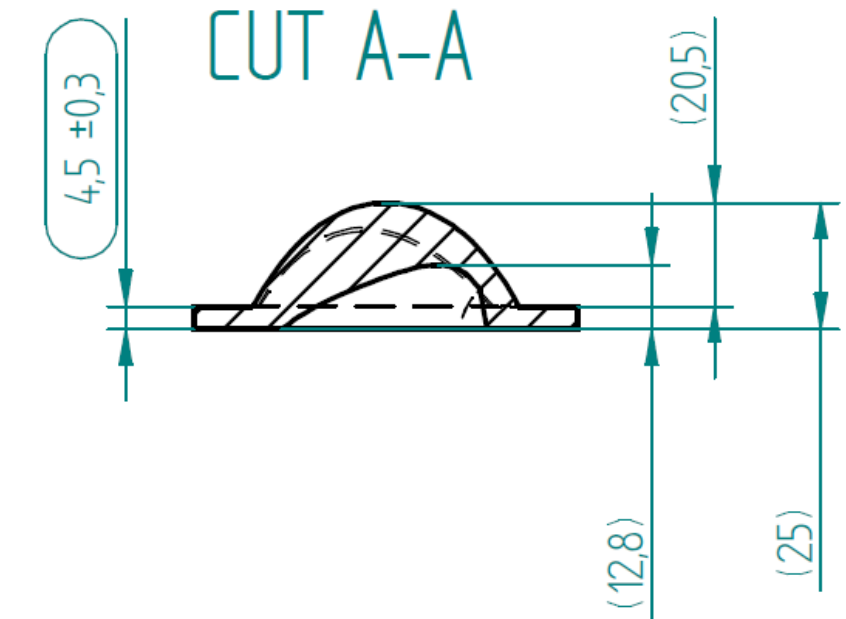
- Projection wall 5x5 m at 1m



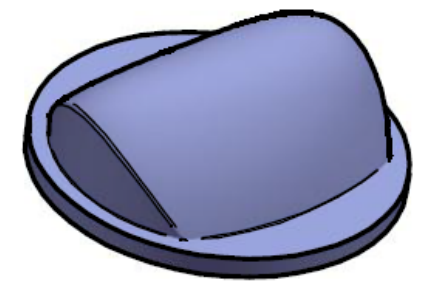
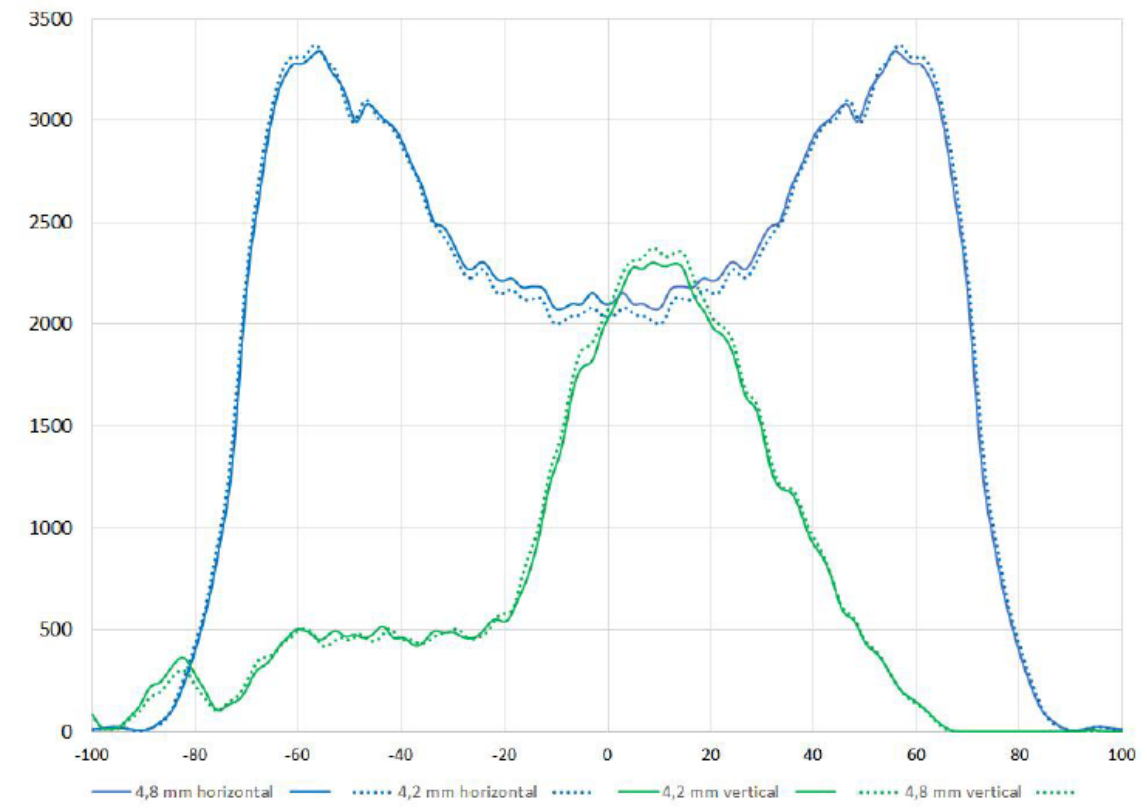
LED used for simulation	CXA2530
Luminous flux of LED [lm]	3600
Efficiency [%]*	90
FWHM Co [°]	120
FWHM C90 [°]	120

* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A958 7625



REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

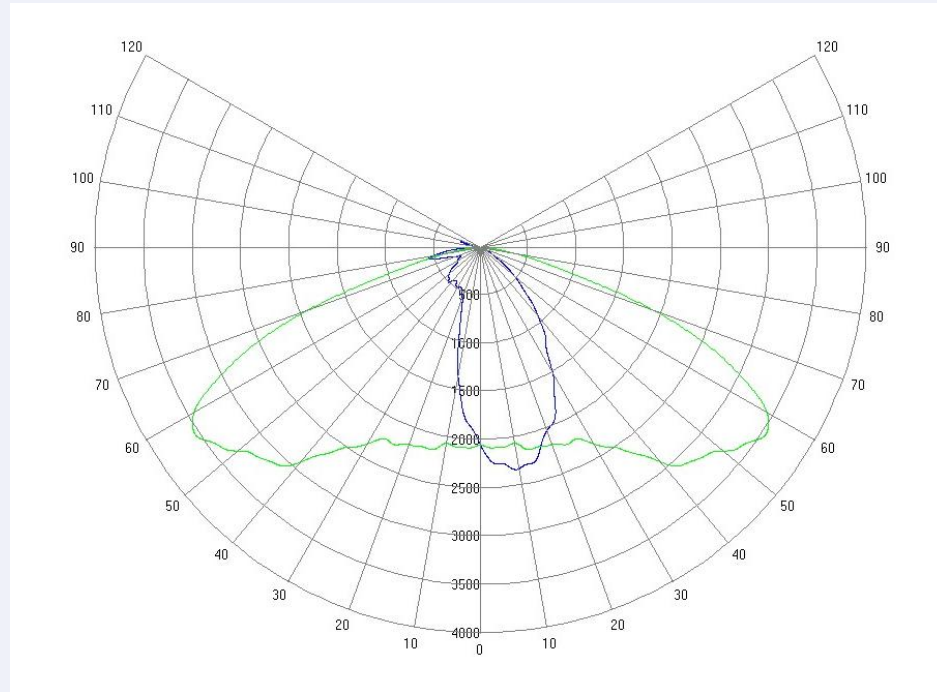


material : GLASS nd=1,520
mass : 145g

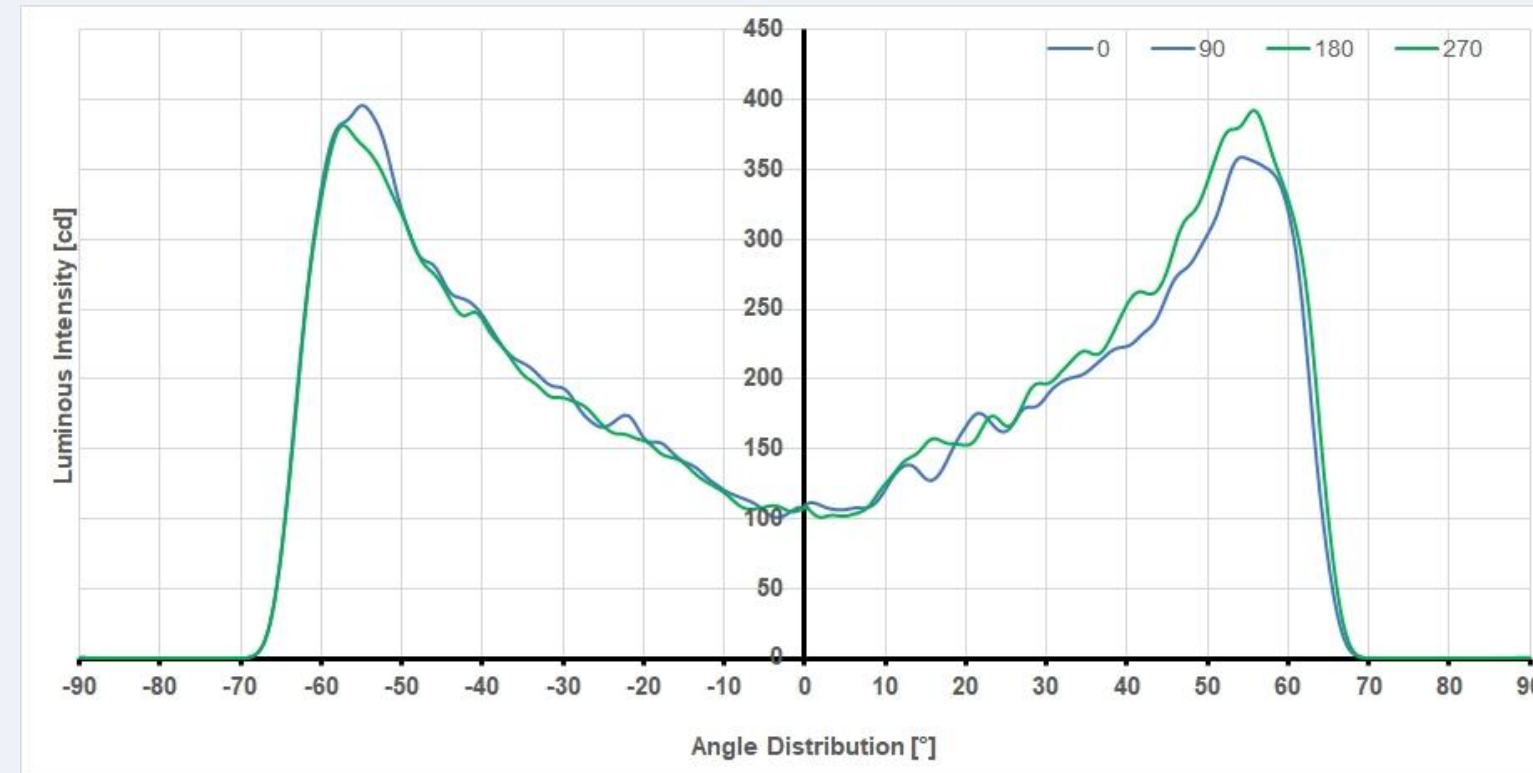
	NAME	DATE	ECOGLASS	
DRAWN	jkocarek	06/11/25		
CHECKED			TITLE street lens 140°x 50°	
ENG APPR				
MGR APPR			SIZE A4	DWG NO A958 7625
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			FILE NAME: A958 7625.dft	REV
			SCALE:	WEIGHT:
			SHEET 1 OF 1	

A958 7625 – simulation results

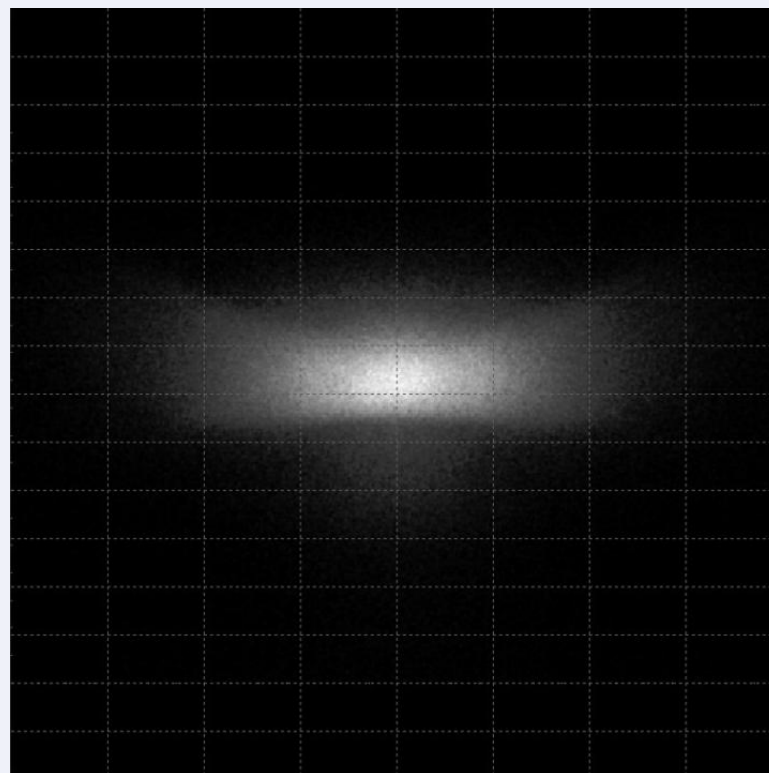
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 80x80 m at 10m



LED used for simulation	CXA2530
Luminous flux of LED [lm]	6 300
Efficiency [%]*	85
FWHM Co [°]	145
FWHM C90 [°]	45

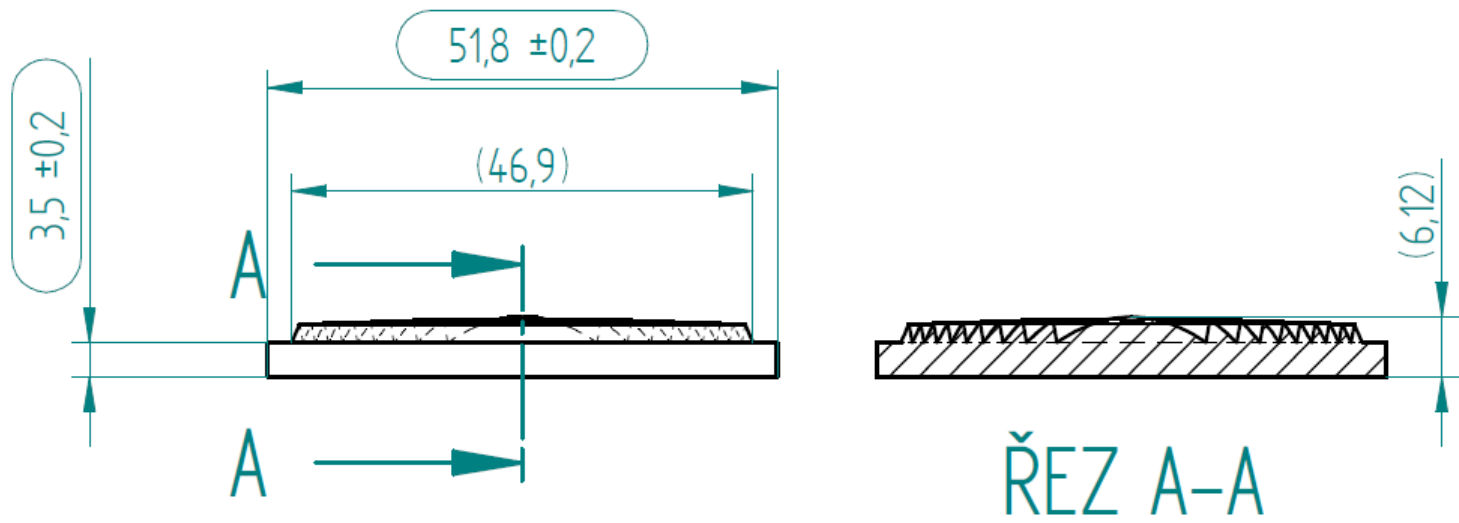
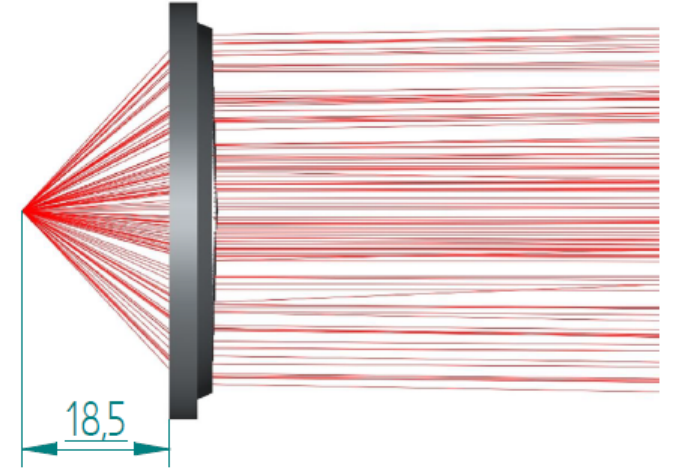
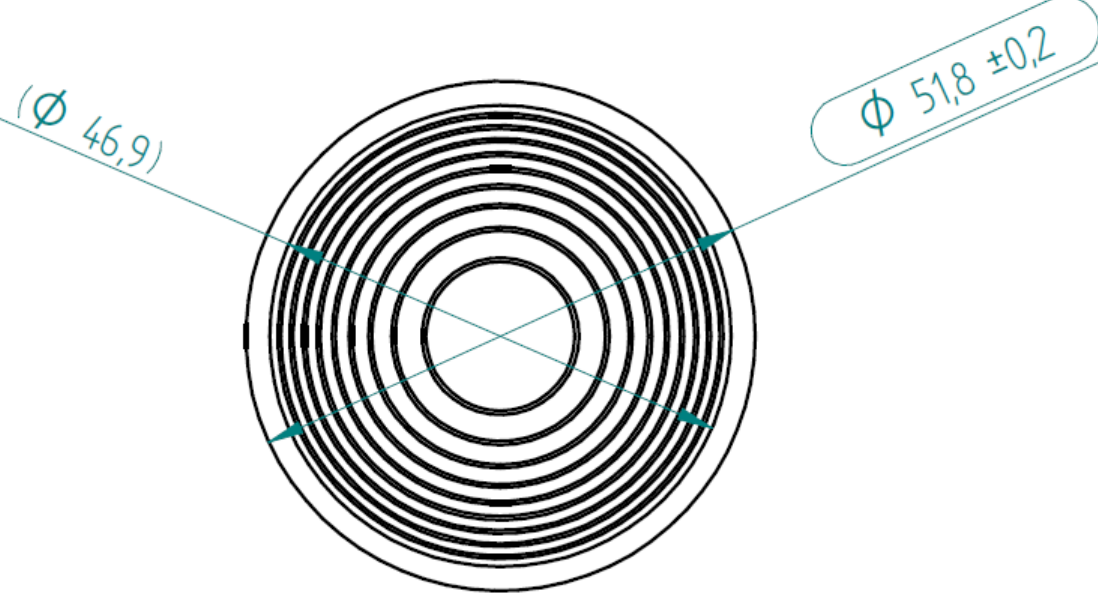
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

ECOGLASS Fresnel Lenses				
ECOGLASS code	Lens type	BFL (mm)	Diameter (mm)	Thickness (mm)
<u>A968 5206</u>	Fresnel	18,6	52	6
<u>A969 7106</u>	Fresnel	41,5	71	6




A968 5216

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

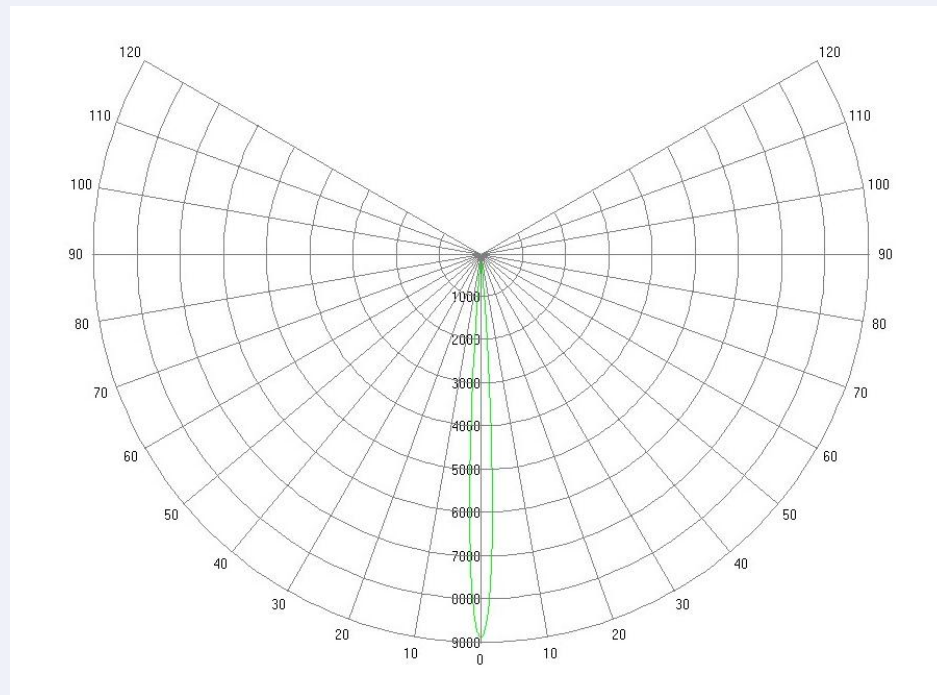
ŘEZ A-A

material : GLASS nd=1,520

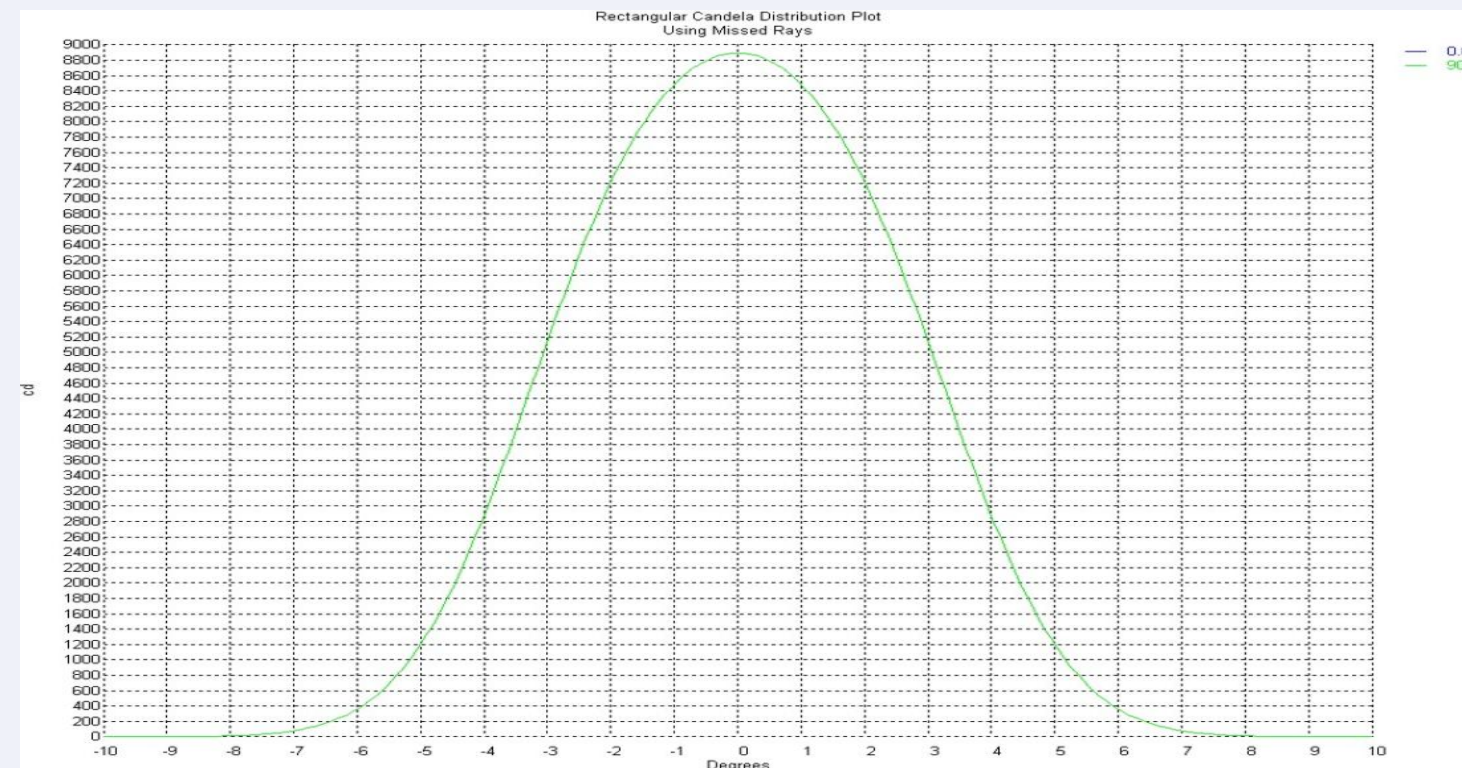
	NAME	DATE	
DRAWN	jkocarek	09/09/25	
CHECKED			
ENG APPR			
MGR APPR			TITLE
			Fresnel lens
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE A4
			DWG NO. A968 5216
			FILE NAME: A968_5216.dft
			SCALE: WEIGHT: SHEET 1 OF 1

Ag68 5216– simulation results

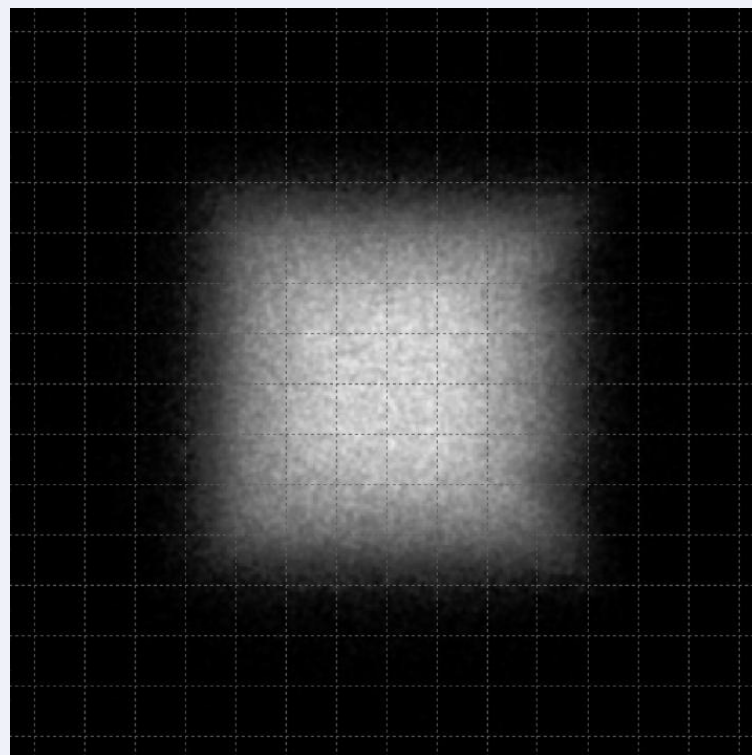
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



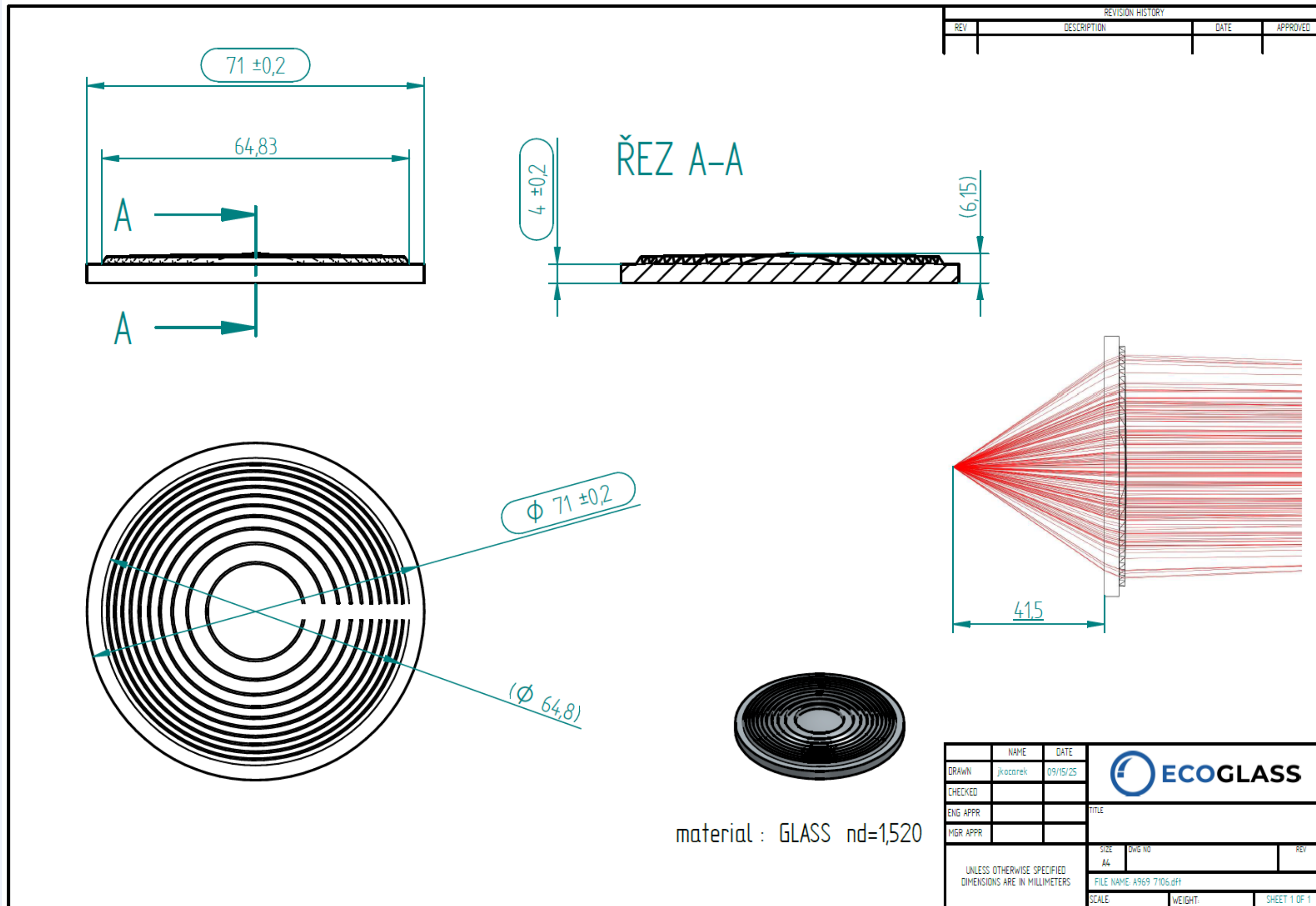
- Projection wall 3x3 m at 10m



LED used for simulation	Cree XM-L2
Luminous flux of LED [lm]	235
Efficiency [%]*	52
FWHM Co [°]	7
FWHM C90 [°]	7

* The ratio between luminous flux on the projection wall (3x3 m at 10 m) and luminous flux of LED

Ag69 7106

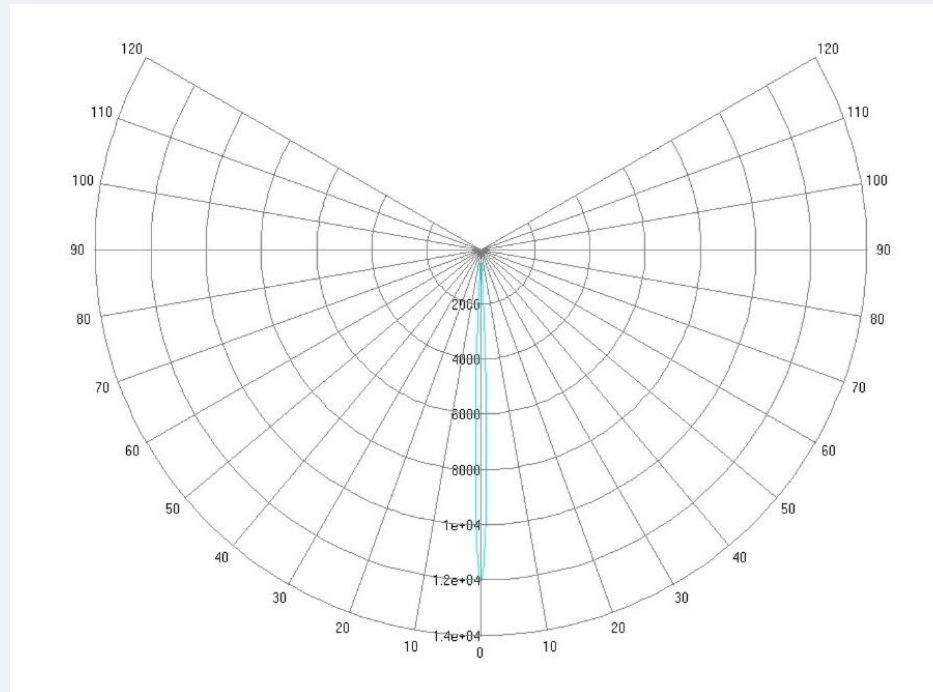


REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

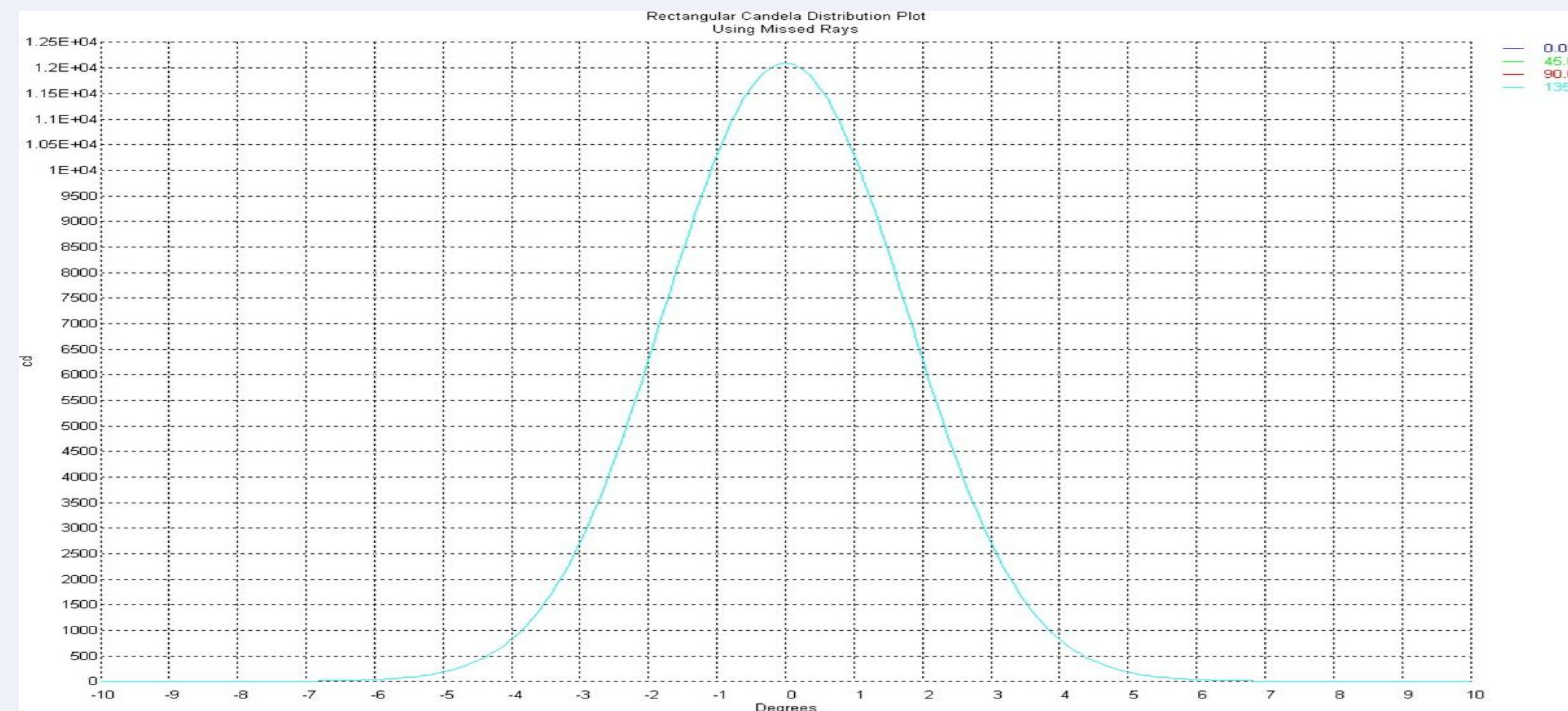
NAME	DATE	
DRAWN: jkocarek	09/15/25	
CHECKED		TITLE
ENG APPR		
MGR APPR		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		SIZE: A4
		FILE NAME: A969 7106.dft
SCALE	WEIGHT	SHEET 1 OF 1

Ag69 7106– simulation results

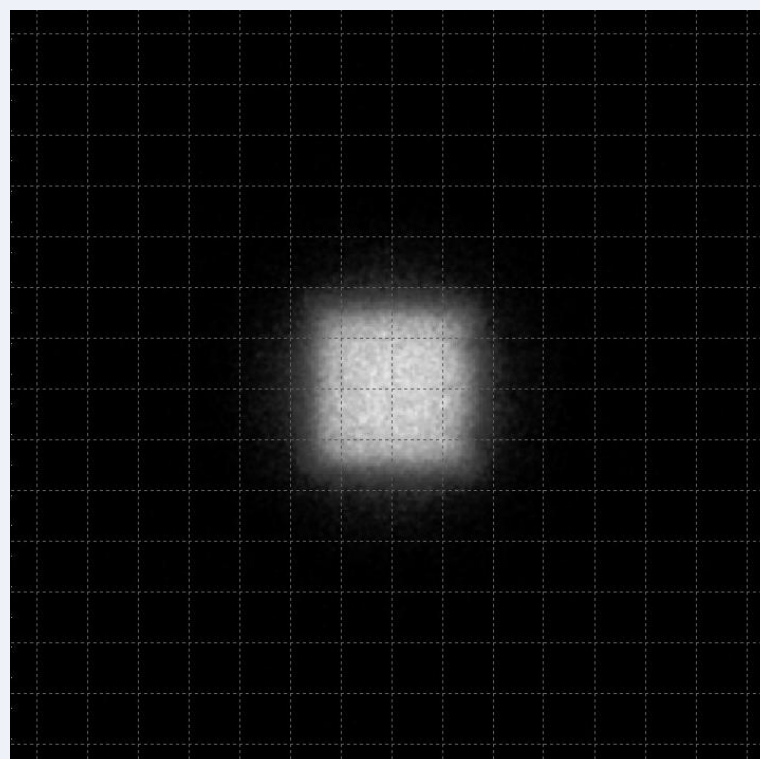
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 10m



LED used for simulation	Cree XM-L2
Luminous flux of LED [lm]	235
Efficiency [%]*	30
FWHM Co [°]	4
FWHM C90 [°]	4

* The ratio between luminous flux on the projection wall (3x3 m at 10 m) and luminous flux of LED



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