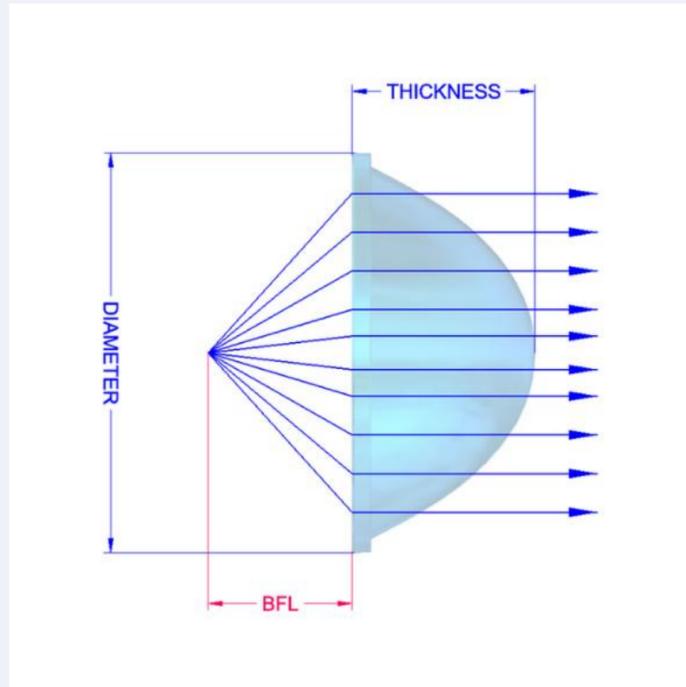




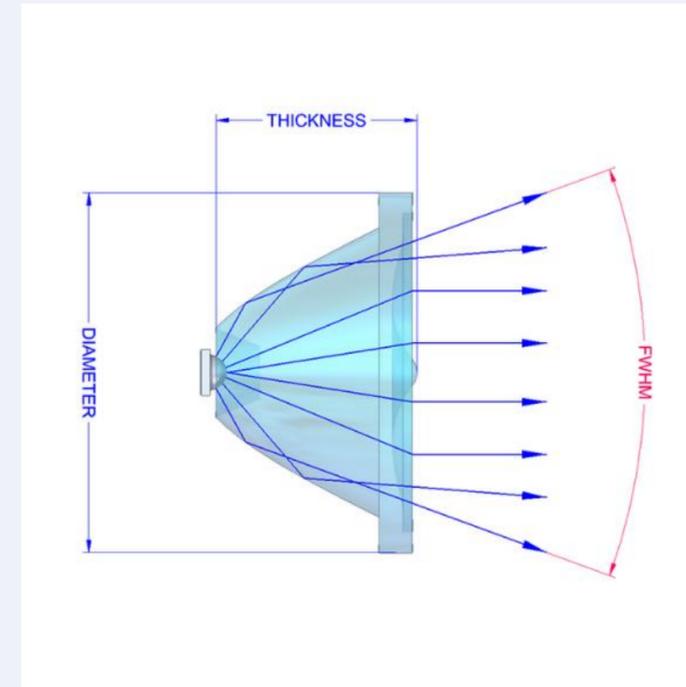
ECOGLOSS

LENS CATALOGUE

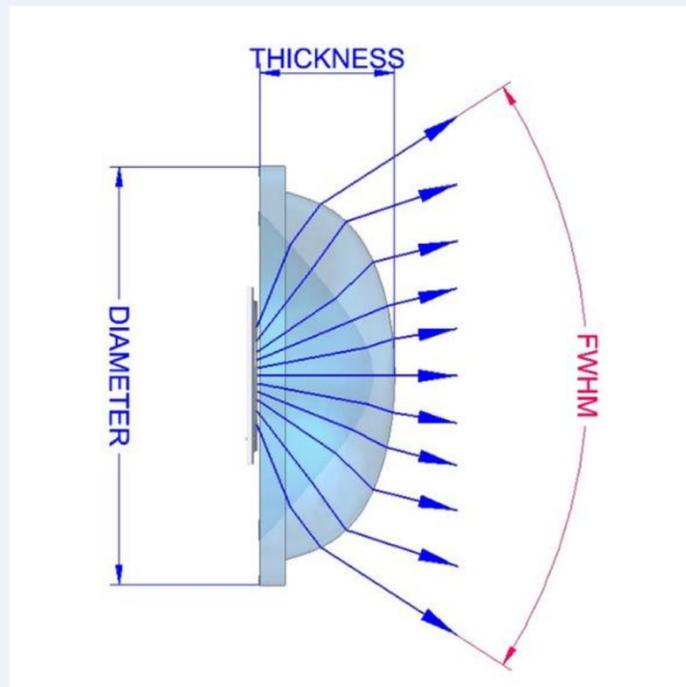
ASPHERICAL LENSES



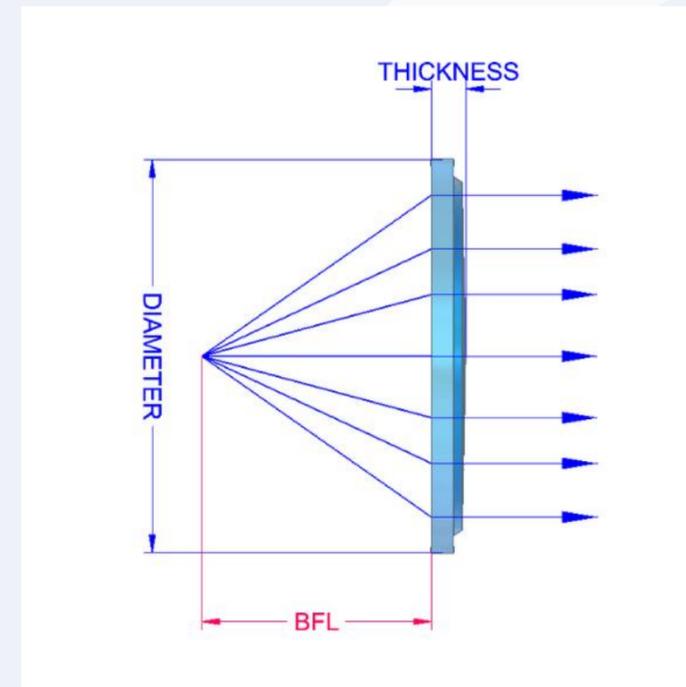
TIR LENSES



CAVITY LENSES



FRESNEL LENSES



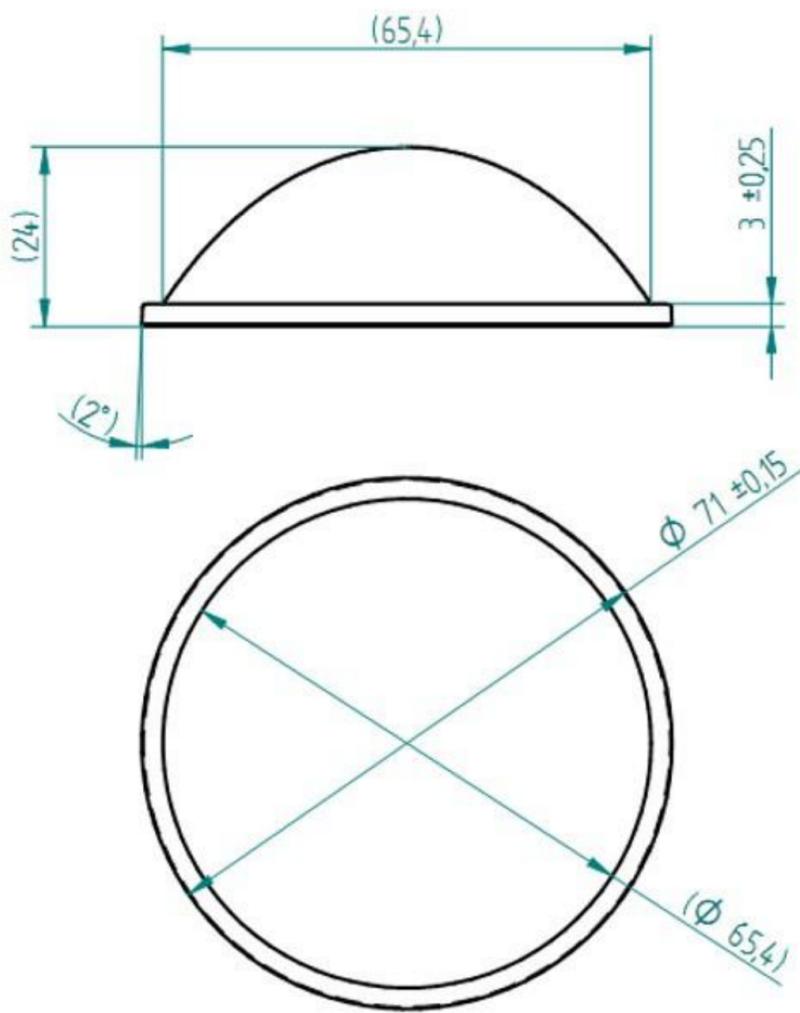
ECOGLOSS Aspherical Lenses

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

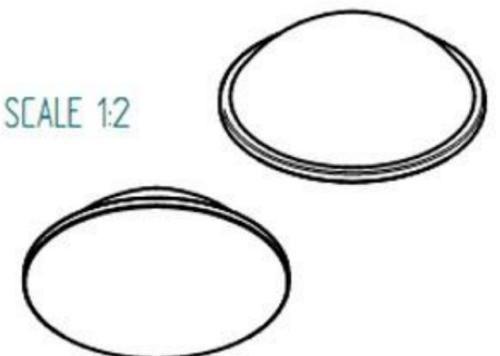


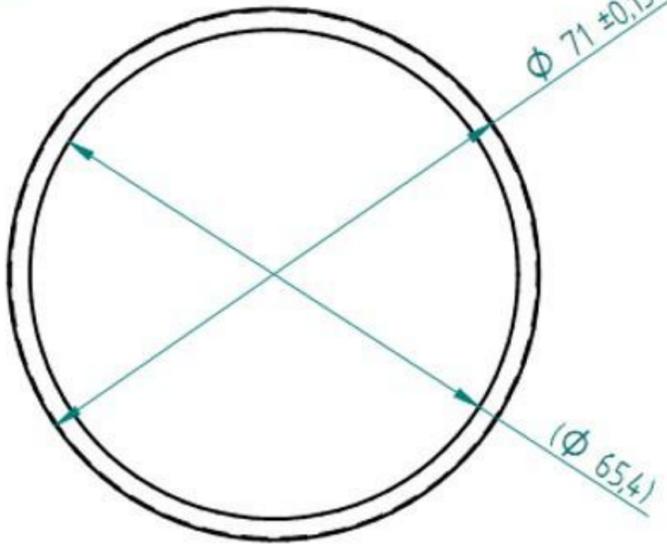
A003 7124

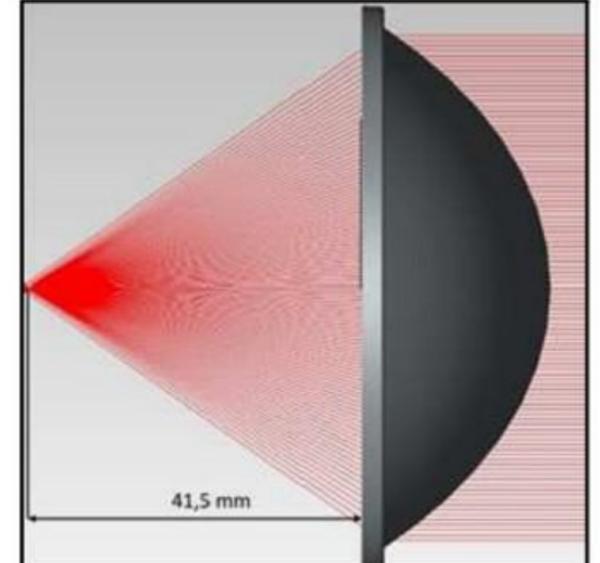
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



SCALE 1:2





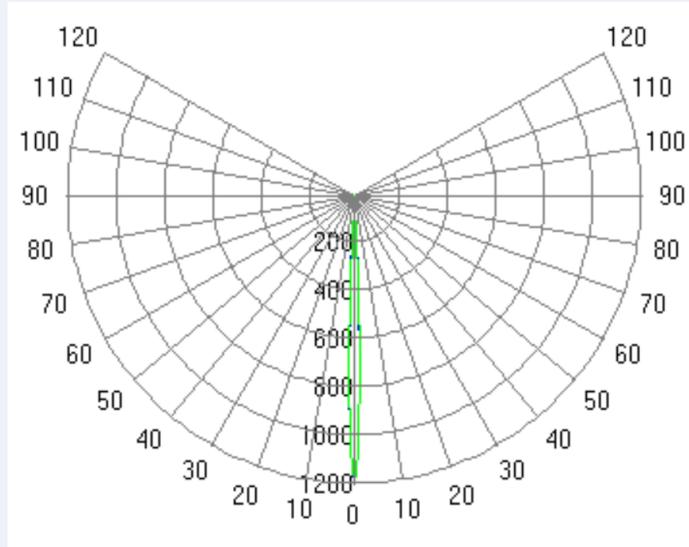


DRAWN	krutsky	DATE	05/14/20	
CHECKED				
ENG APPR				
MGR APPR				
<p>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS</p>				<p>A003 7124</p>
SIZE		DWG NO		REV
A4				
FILE NAME: A003_small.dwg				
SCALE		WEIGHT: 126 g		SHEET 1 OF 1

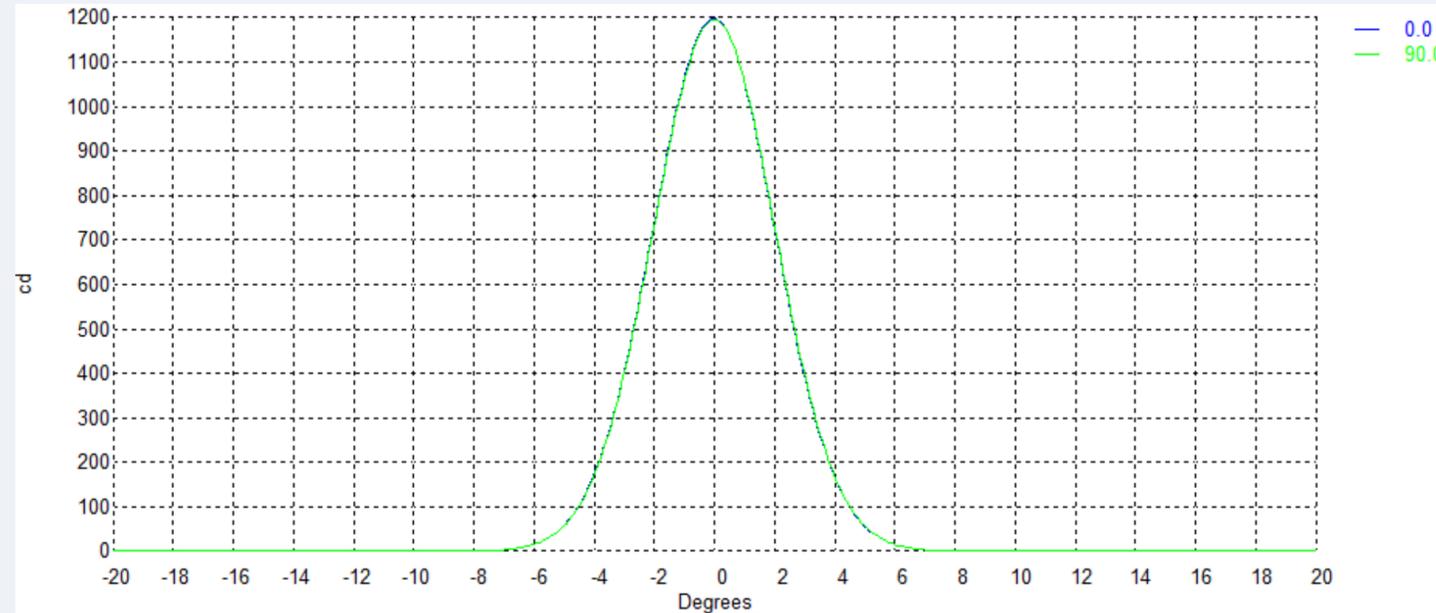
Glass: LIBA or alternative (nd = 1,521)

A003 7124 – simulation results

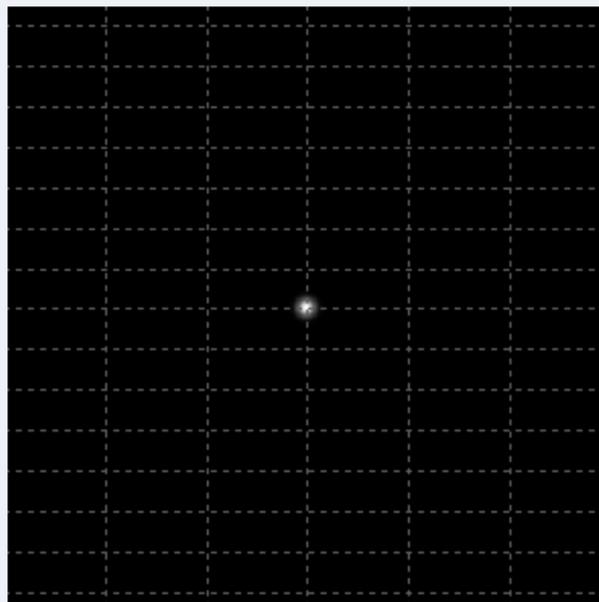
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

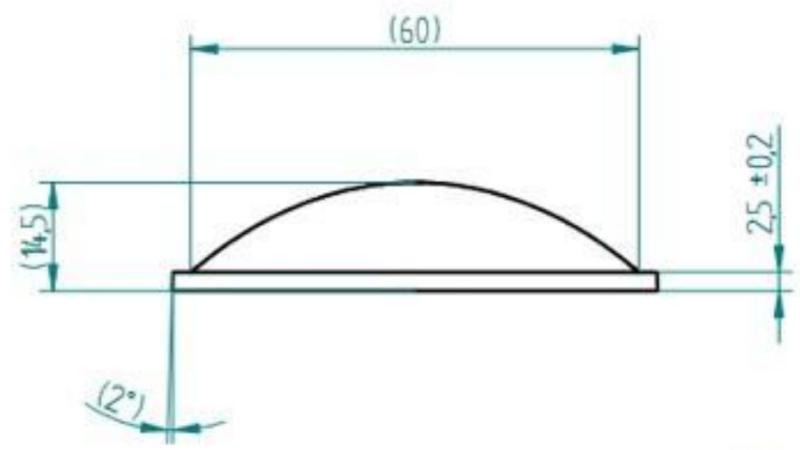
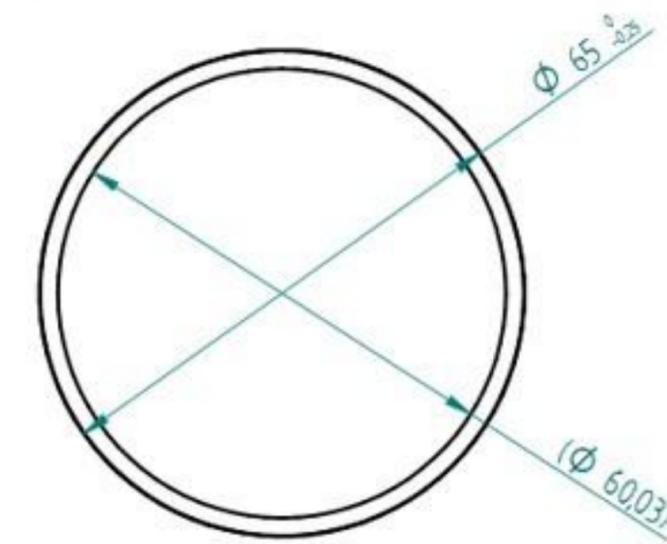


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

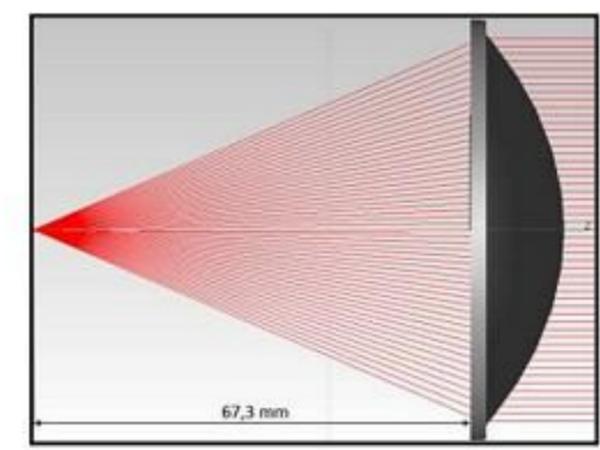
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A010 6515

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:2

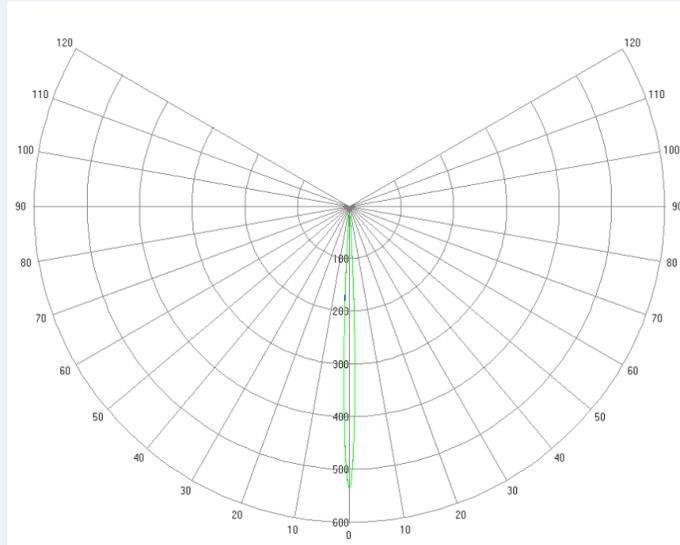



Glass: LIBA or alternative (nd = 1,521)

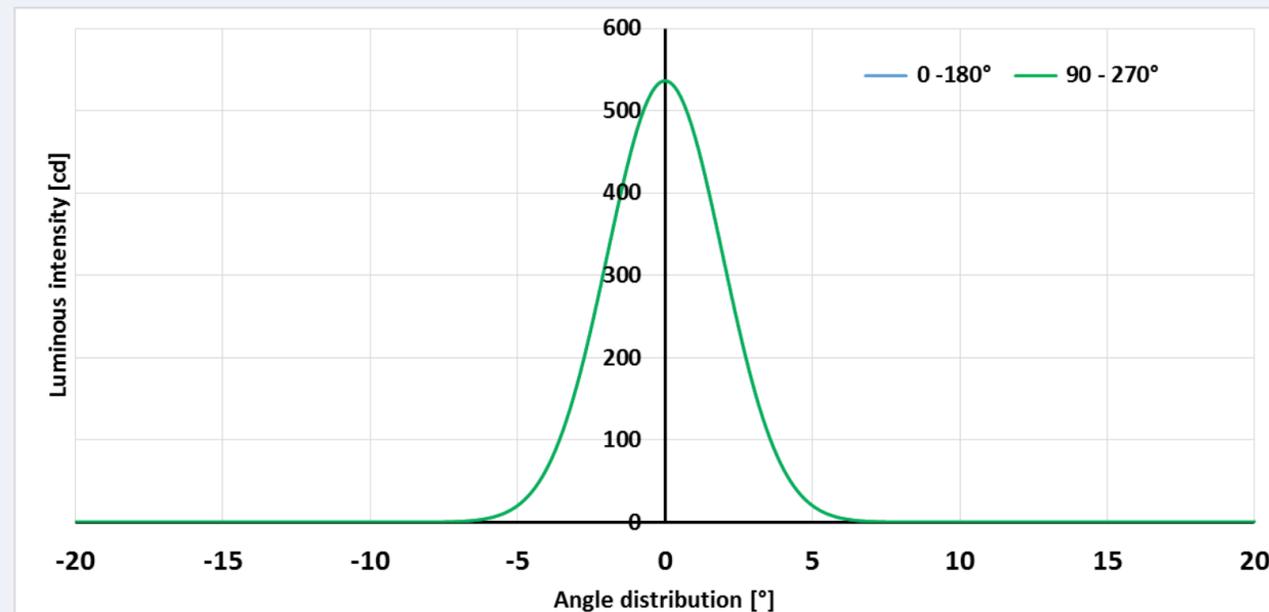
DRAWN	NAME	DATE	 A010 6515
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			TITLE A010 6515
SCALE			FILE NAME: A010_6515.dwg WEIGHT: 66 g SHEET 1 OF 1

A010 6515 – simulation results

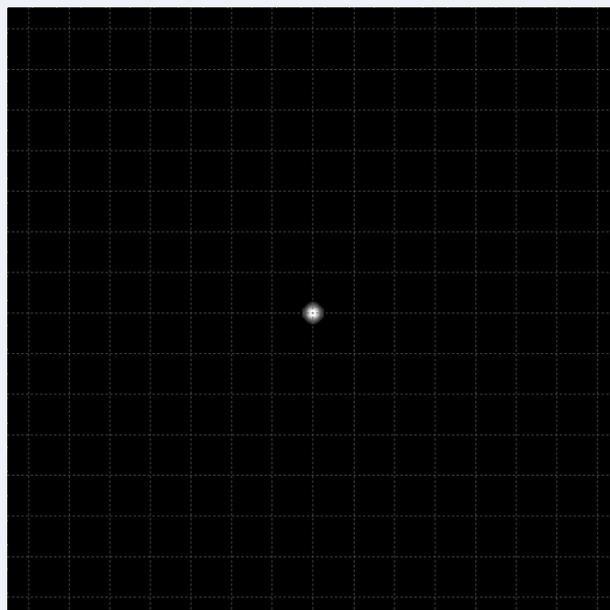
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



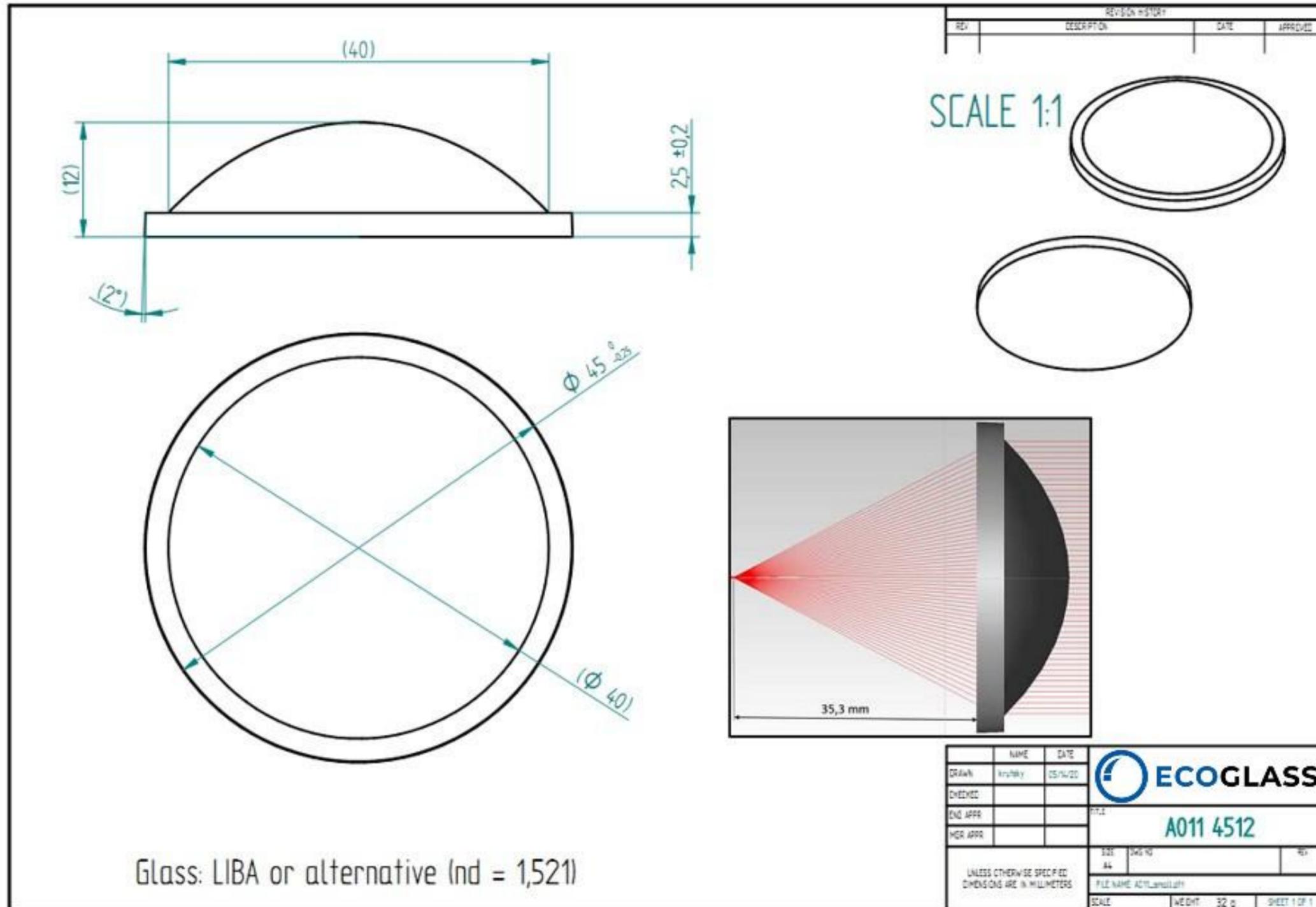
- Projection wall 3x3 m at 1m



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 dimensions and features:

- Top view: A semi-circular lens with a diameter of 40 mm. The height of the lens is 12 mm. The thickness of the lens is 2.5 ± 0.2 mm. The angle of the lens is 2°.
- Bottom view: A circular lens with an outer diameter of 45 mm and an inner diameter of 40 mm.
- Ray diagram: A ray diagram showing the lens focusing light. The focal length is 35.3 mm.

Scale: 1:1

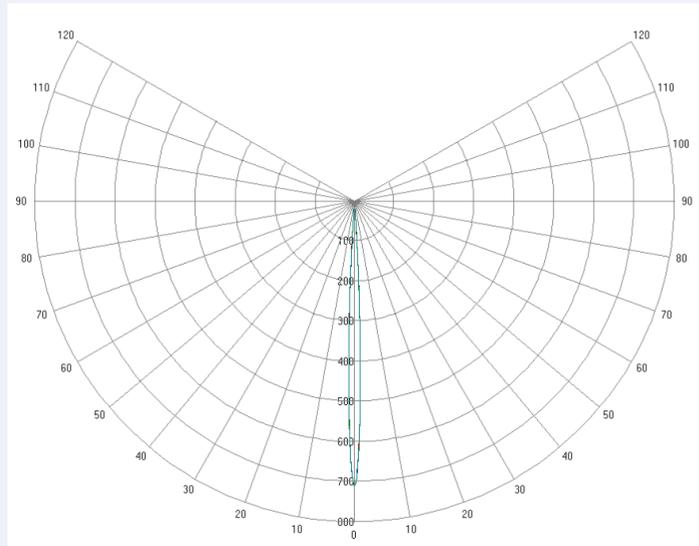
Glass: LIBA or alternative (nd = 1,521)

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

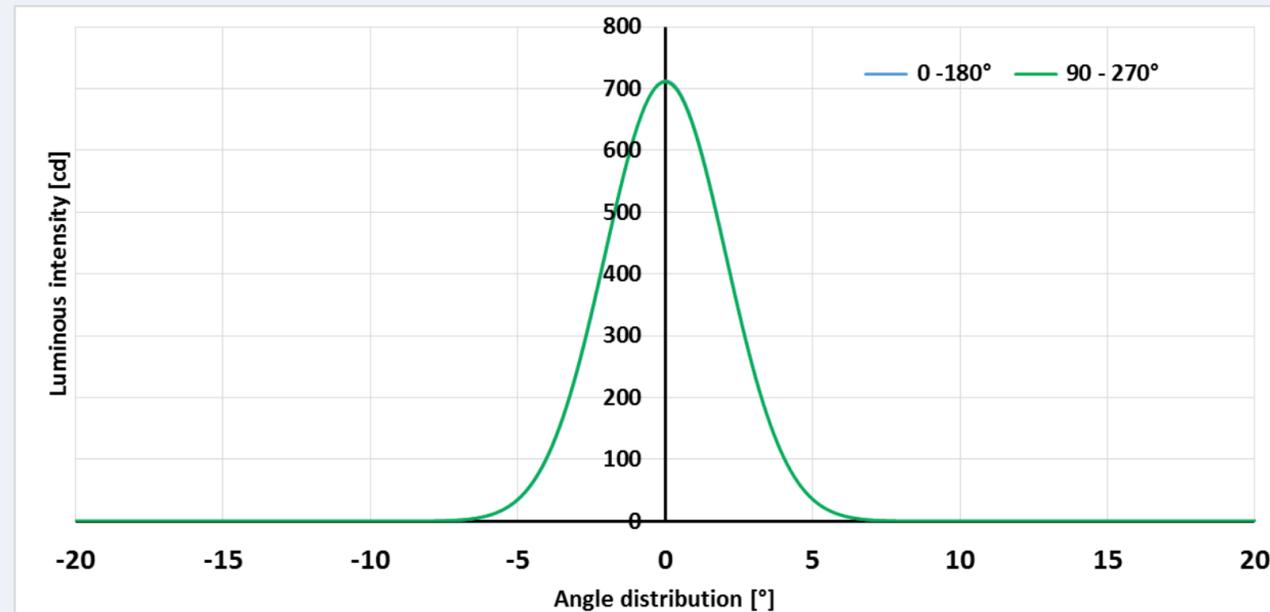
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CHECKED		
ENG APPR		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		TITLE A011 4512
FILE NAME: A011_4512.dwg		SIZE: 14610 44
SCALE		WEIGHT: 32 g SHEET 1 OF 1

A011 4512 – simulation results

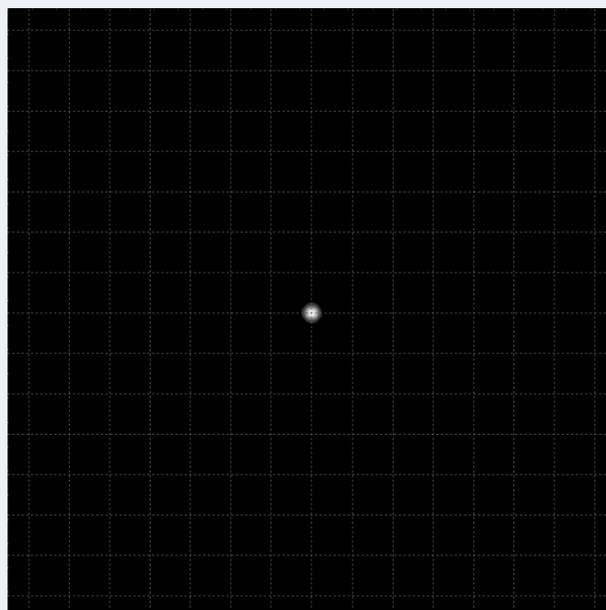
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

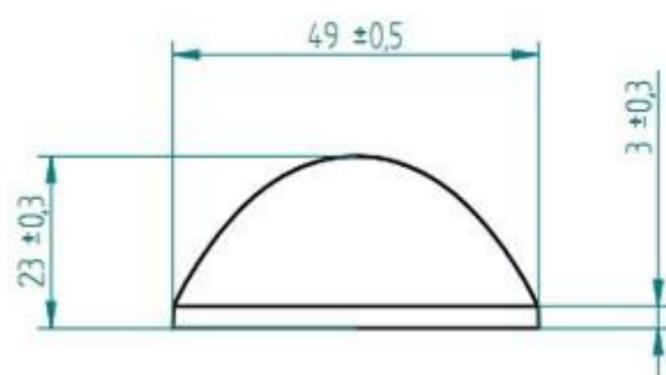


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	6
FWHM C ₉₀ [°]	6

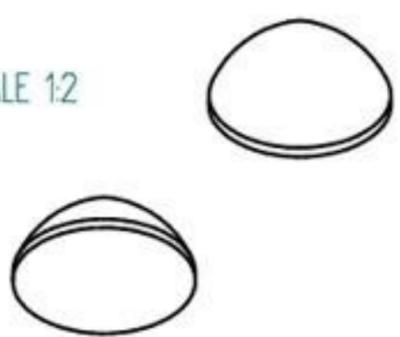
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

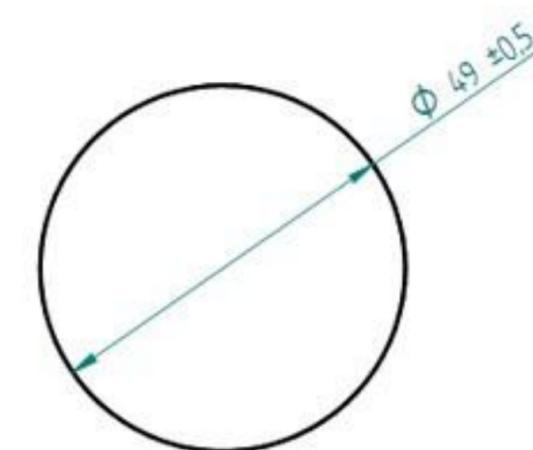
A016 4923

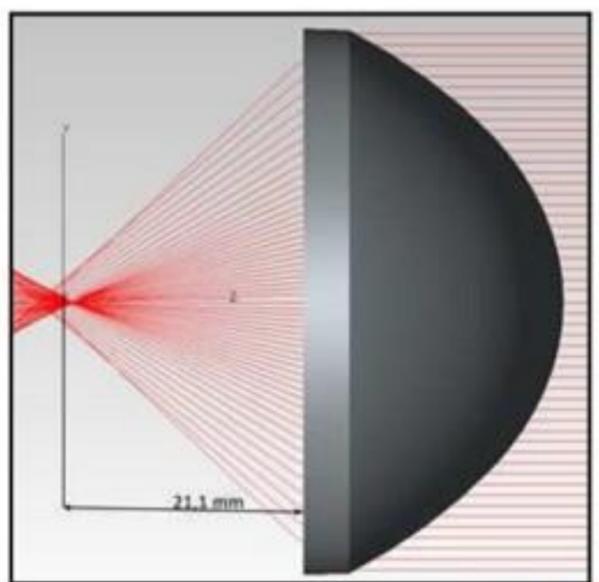
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



SCALE 1:2





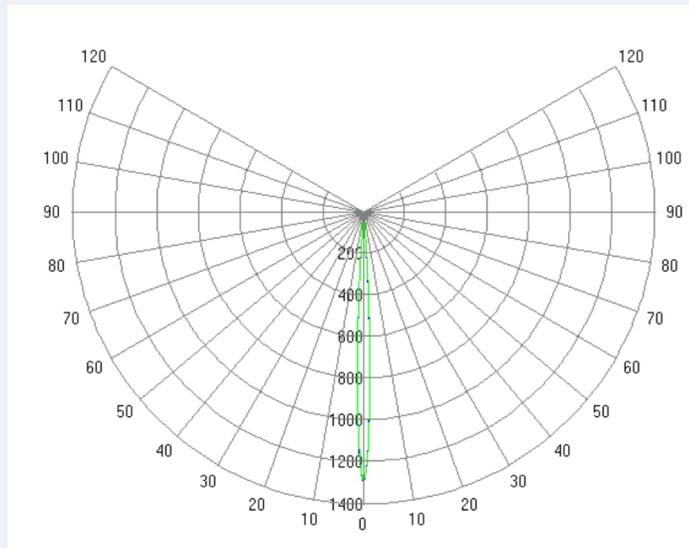


Glass: LBA or alternative (nd = 1,521)

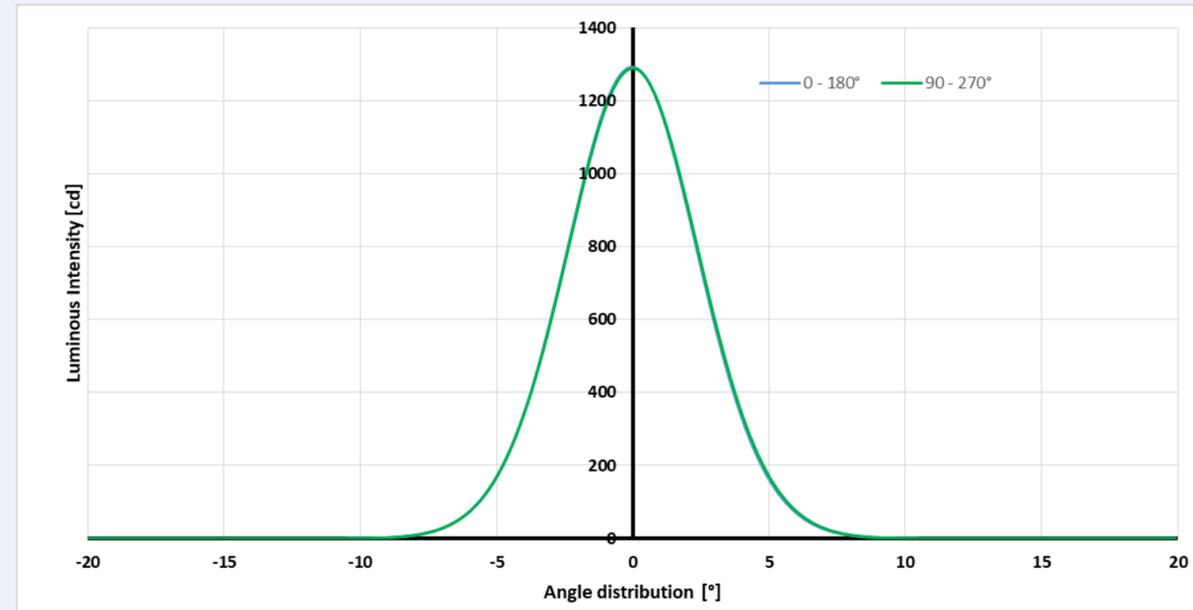
DRAW	krubky	DATE	05/14/20	 <p>A016 4923</p>															
CHECKED																			
ENG APPR																			
MGR APPR																			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">SIZE</td> <td style="font-size: x-small;">SHEET 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: A016_ansi.dwg</td> </tr> <tr> <td style="font-size: x-small;">SCALE</td> <td style="font-size: x-small;">WEIGHT</td> <td style="font-size: x-small;">SHEET 1 OF 1</td> </tr> <tr> <td> </td> <td>66 g</td> <td> </td> </tr> </table>	SIZE	SHEET NO	REV	A4			FILE NAME: A016_ansi.dwg			SCALE	WEIGHT	SHEET 1 OF 1		66 g	
SIZE	SHEET NO	REV																	
A4																			
FILE NAME: A016_ansi.dwg																			
SCALE	WEIGHT	SHEET 1 OF 1																	
	66 g																		

A016 4923 – simulation results

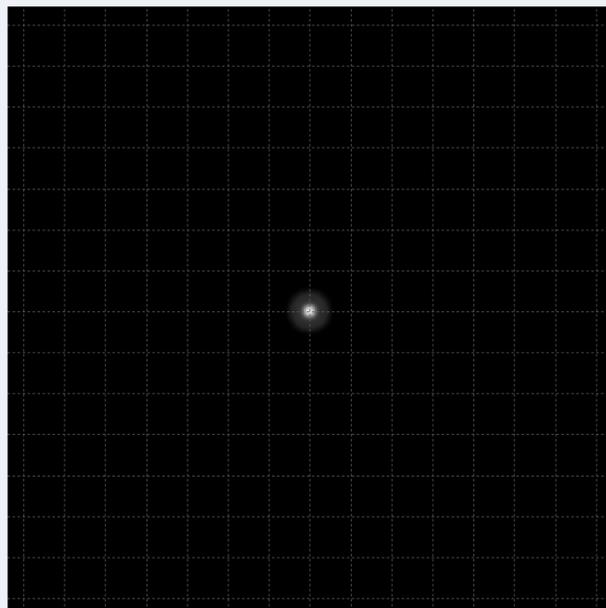
- Polar Candela Distribution Plot



- 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: diameter (49,2), height (21,26), thickness (3 ±0,2), diameter of the base (53 ±0,15), and angle (88°).

Ray diagram showing light rays converging through the lens and becoming parallel.

Top view of the lens showing diameter (φ 49,2) and diameter of the base (φ 53 ±0,15).

3D perspective view of the lens.

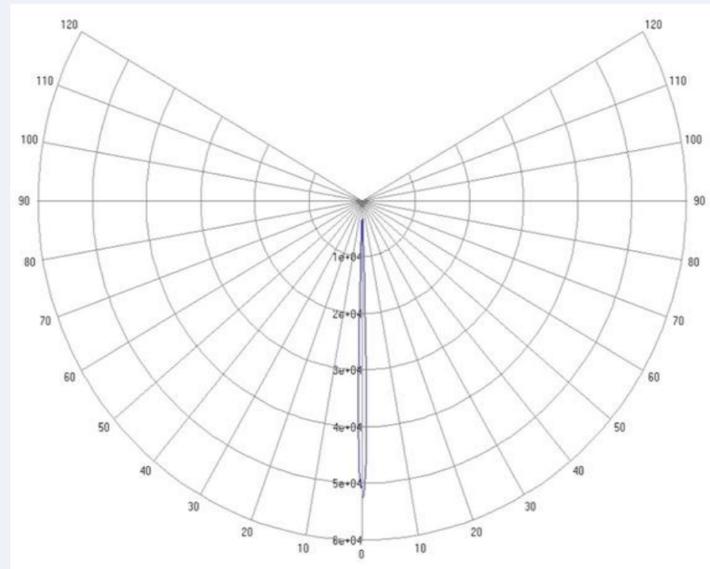
material : GLASS nd=1,520

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ENG APPR				
MGR APPR				
TITLE				<h2 style="margin: 0;">A019 5322</h2>
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				
SIZE	A4	DWG NO	Aspheric Lens	REV
SCALE:		WEIGHT:		SHEET 1 OF 1

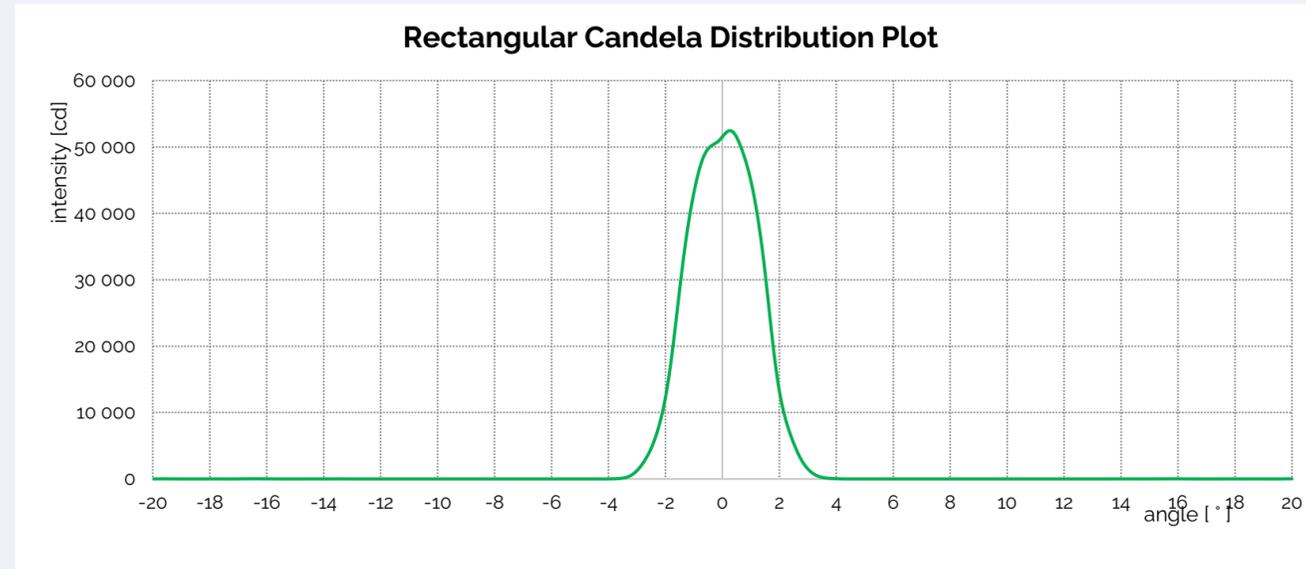
A019 5322 – simulation results



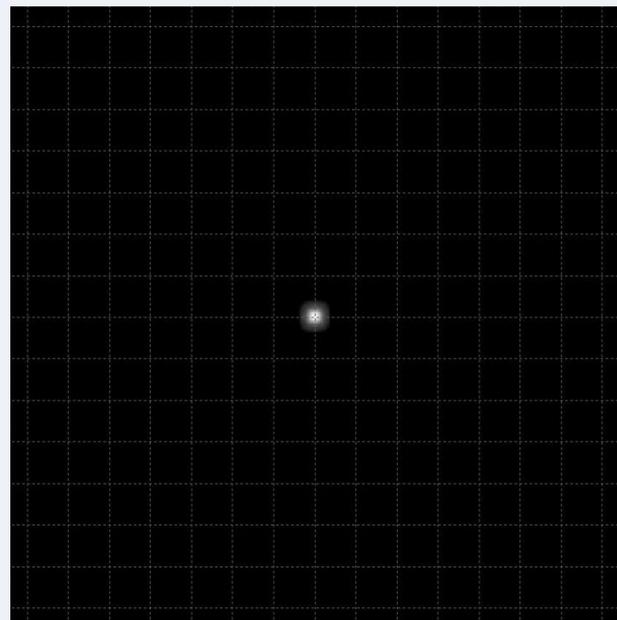
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



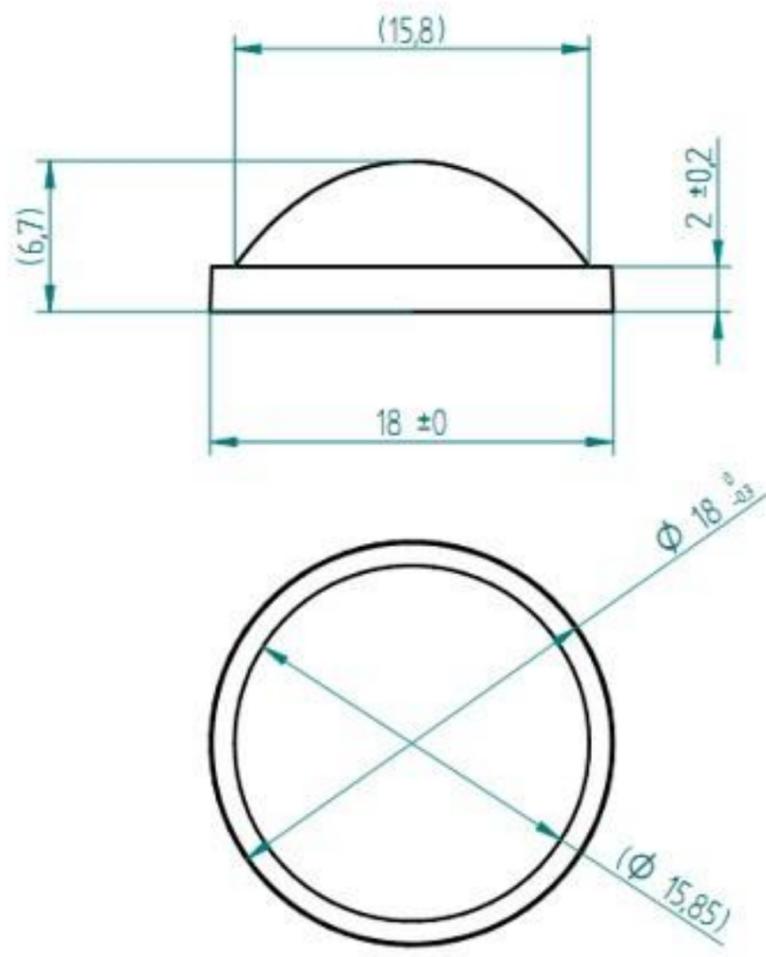
- Projection wall 3x3 m at 1m



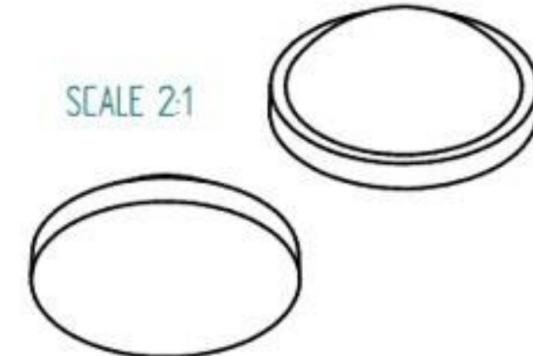
LED used for simulation	Cree XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	3
FWHM C180 [°]	3

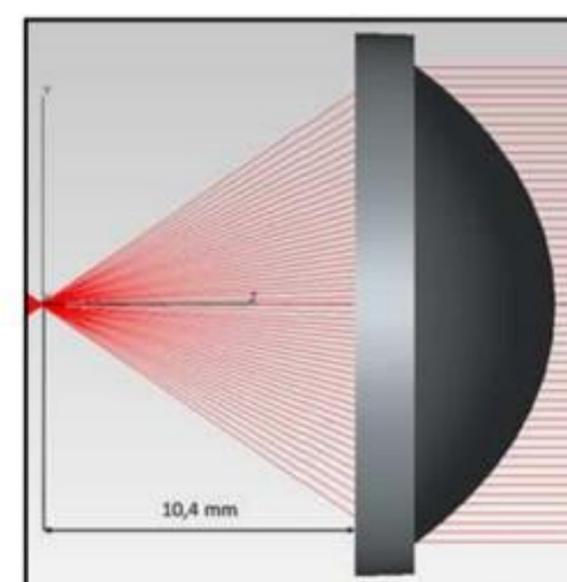
A034 1807

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVE



SCALE 2:1



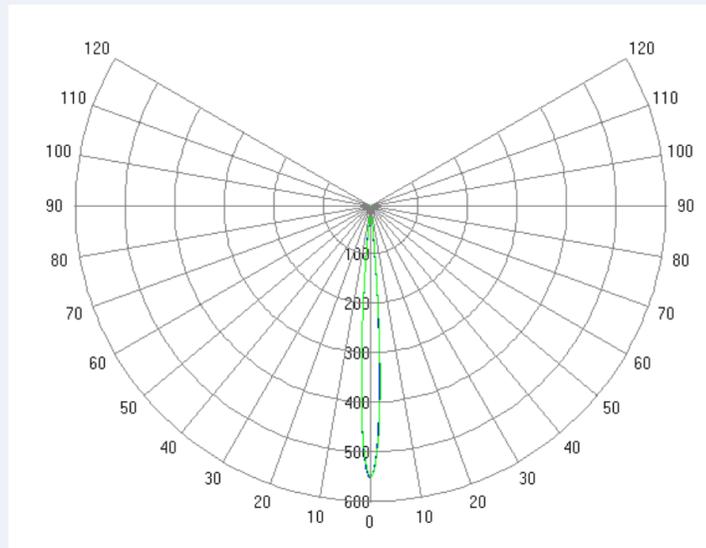


DRAWN	NAME	DATE	
A034 1807			
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS</small>			

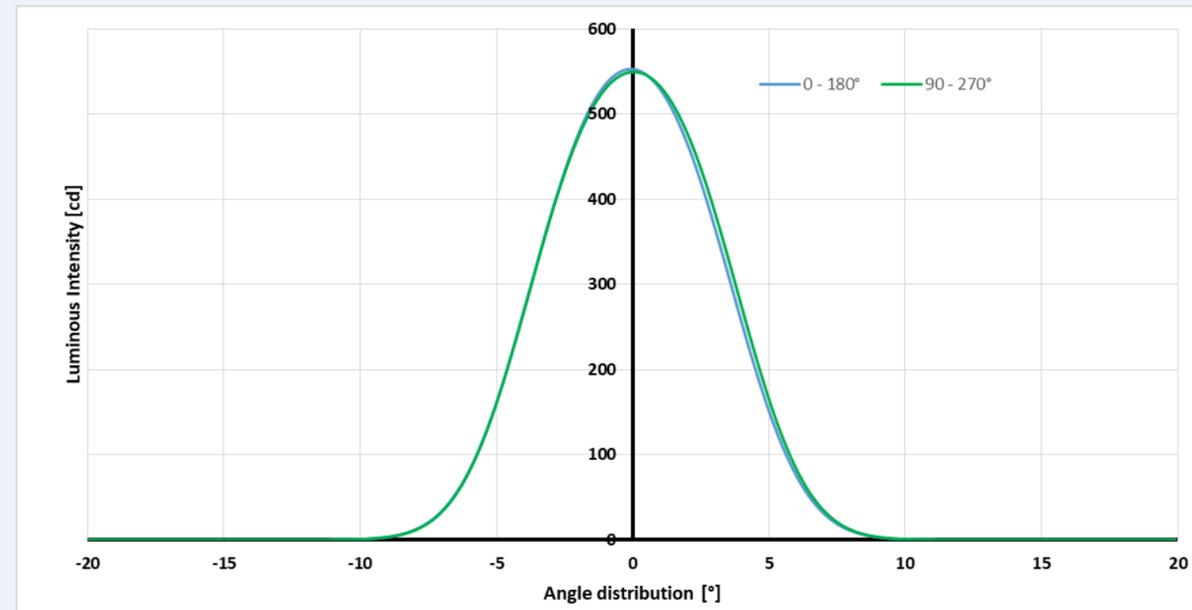
Glass: LIBA or alternative (nd = 1,521)

A034 1807 – simulation results

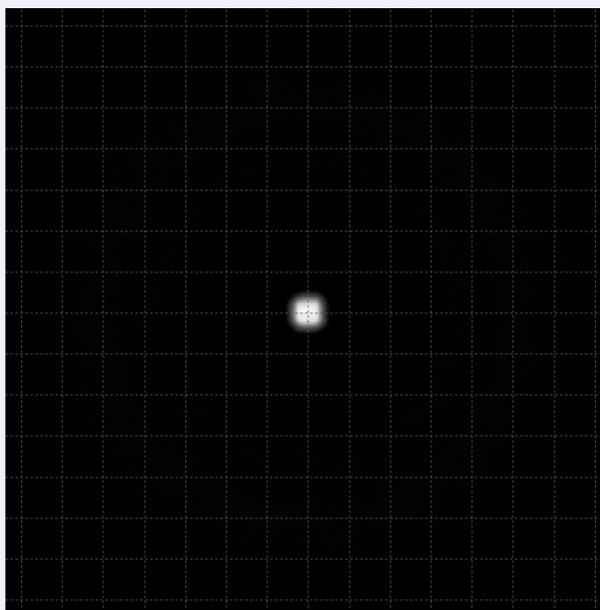
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

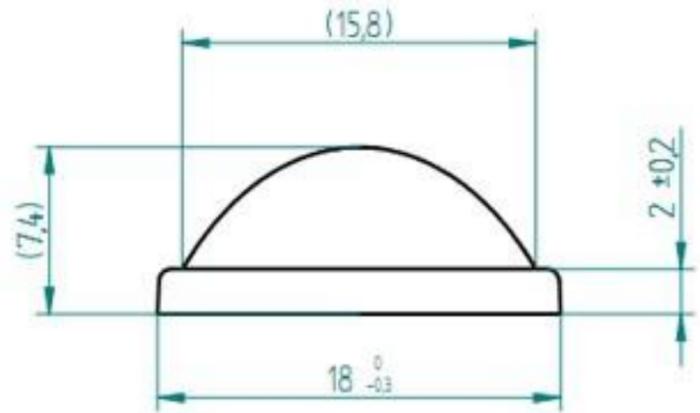
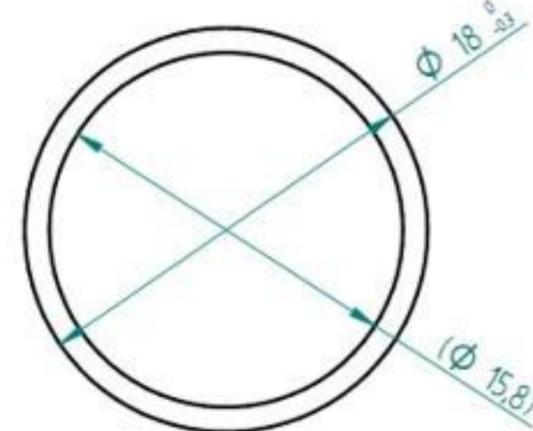


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	8
FWHM C ₉₀ [°]	8

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

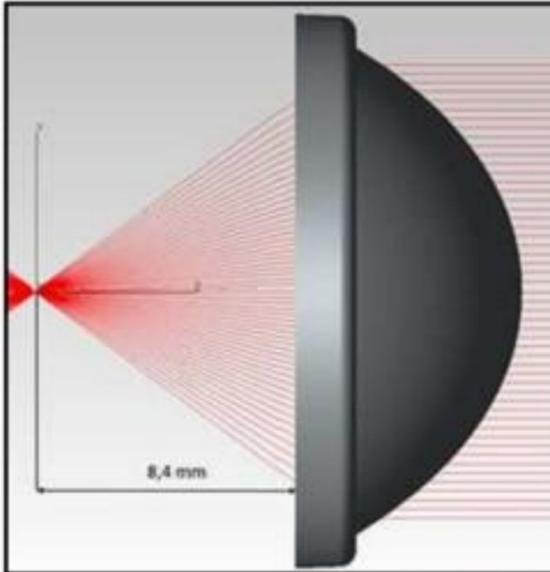
A053 1807

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

SCALE 2:1





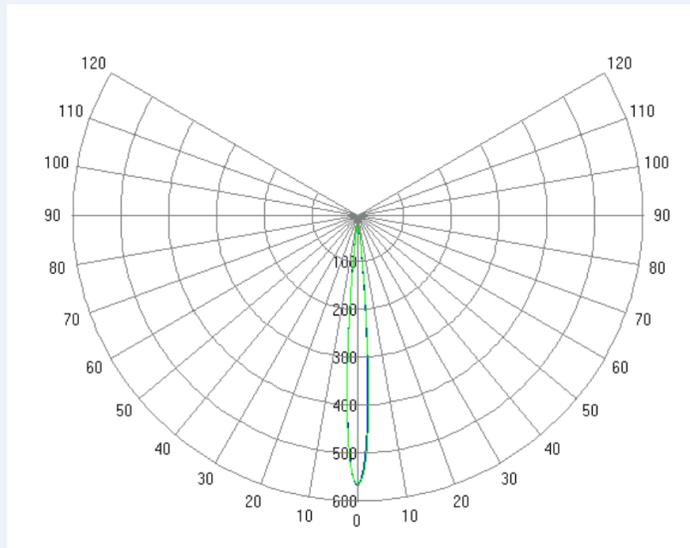
DRAWN	krubky	DATE	05/14/20	 <p>A053 1807</p>
CHECKED				
ENG. APPR.				
MGR. APPR.				

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

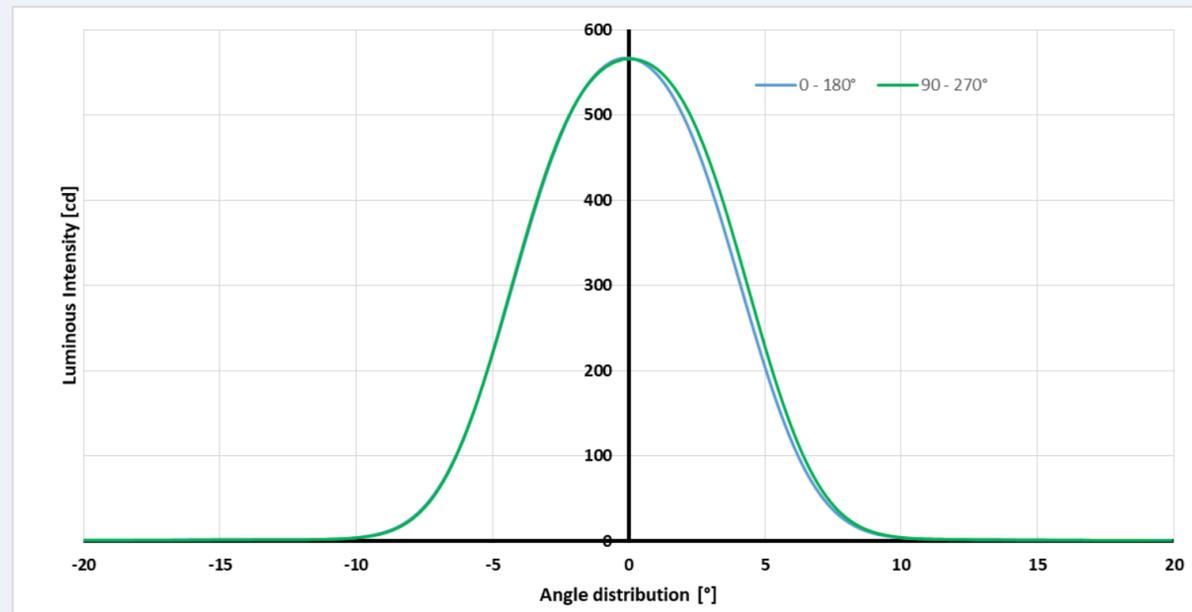
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		SIZE	A4	DATE	05/14/20	REV.	01
SCALE		WEIGHT	3 g	SHEET	1 OF 1		

A053 1807 – simulation results

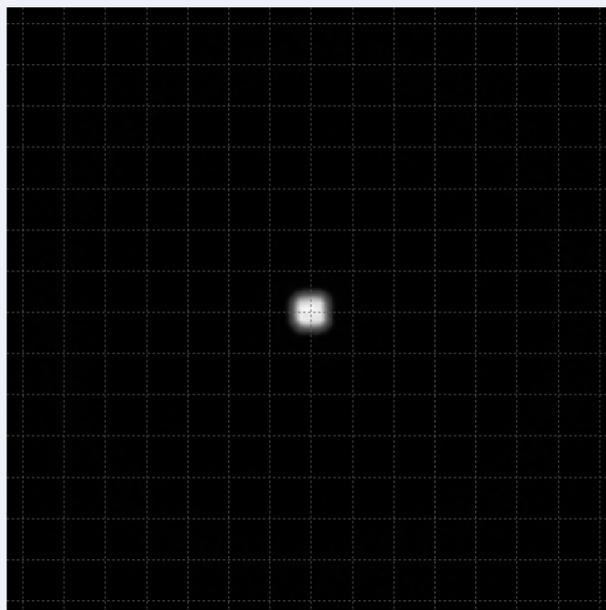
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



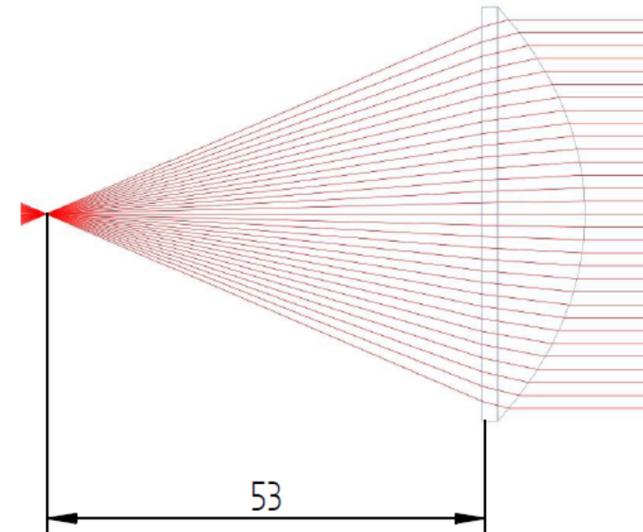
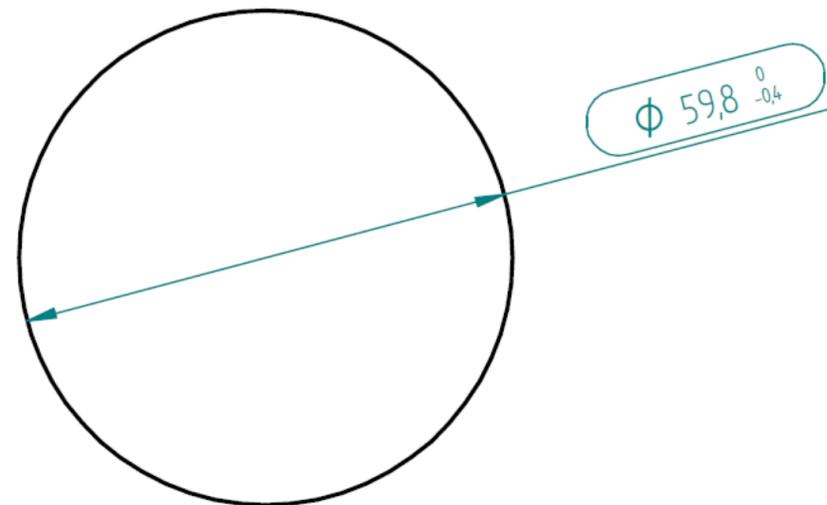
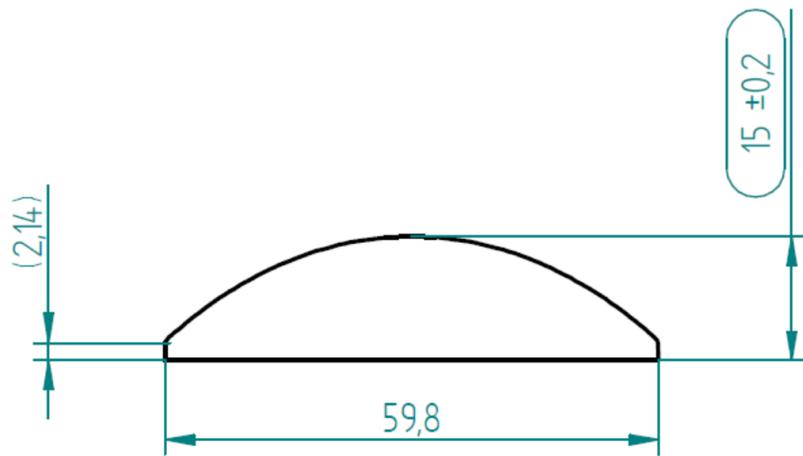
- Projection wall 3x3 m at 1m



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



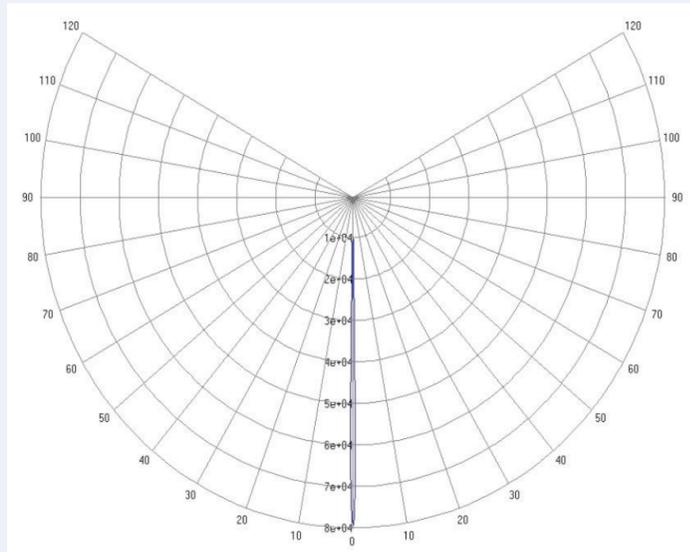
material : glass nd=1,520

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

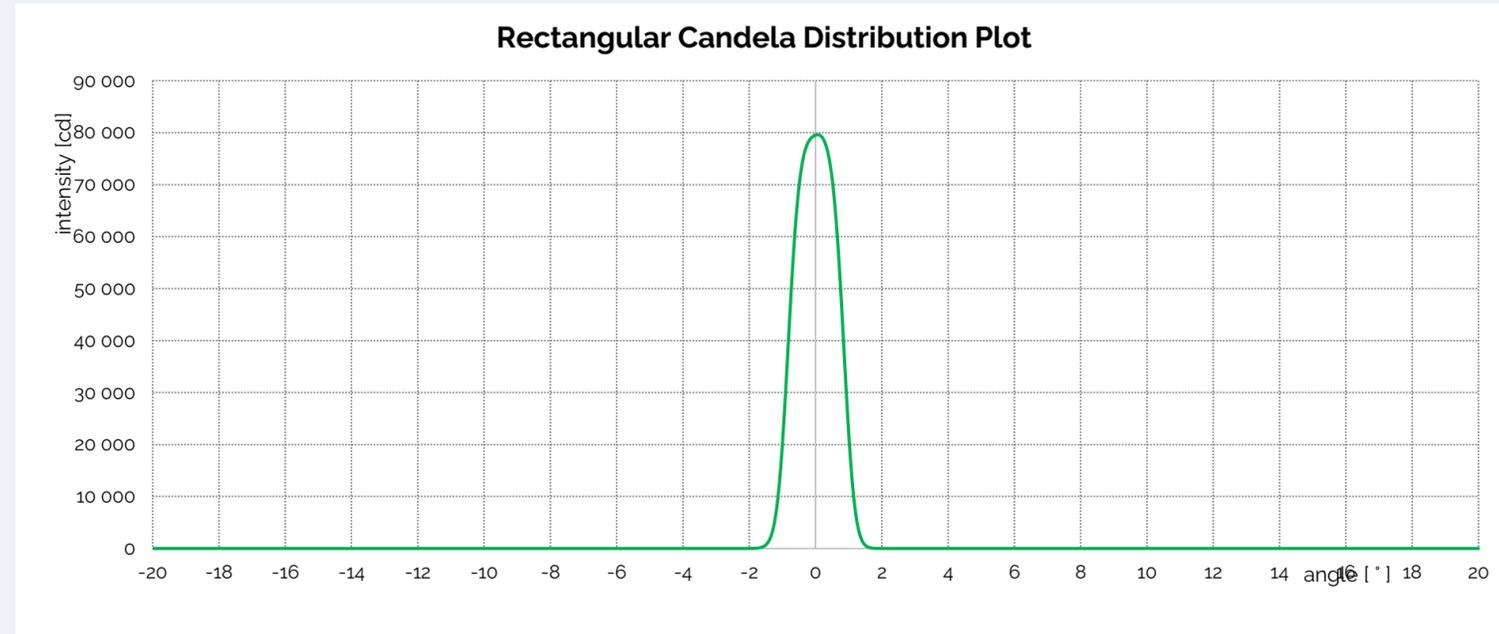
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DRAWN	jkocarek	06/09/25	
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			TITLE
			aspheric lens 60BF53
SIZE	DWG NO	REV	
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SCALE	WEIGHT	SHEET 1 OF 1	

A068 6015 – simulation results

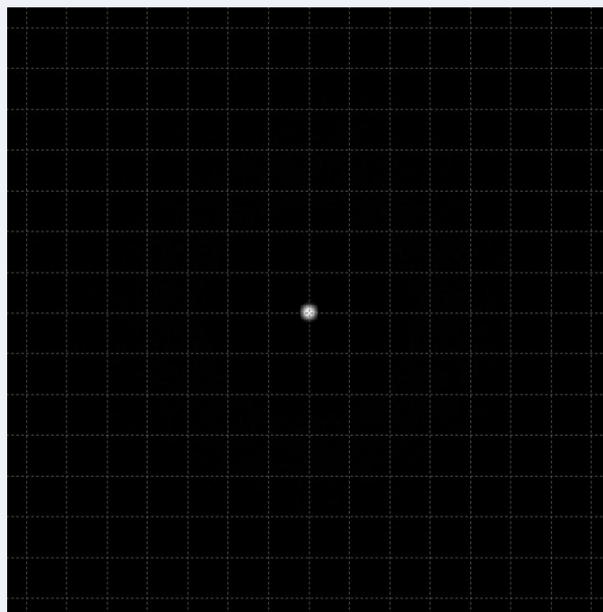
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



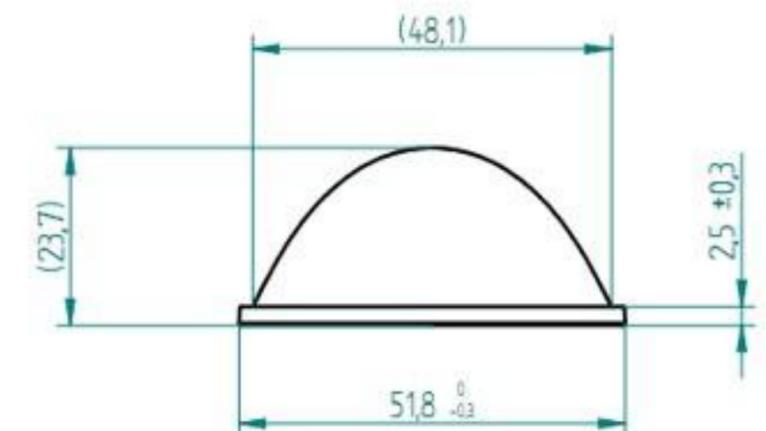
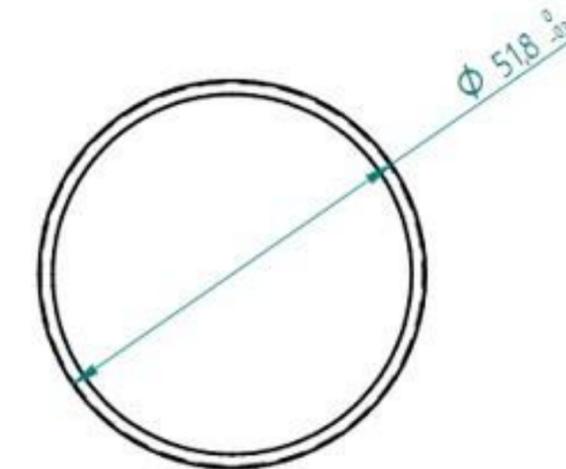
- Projection wall 3x3 m at Distance 1m



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

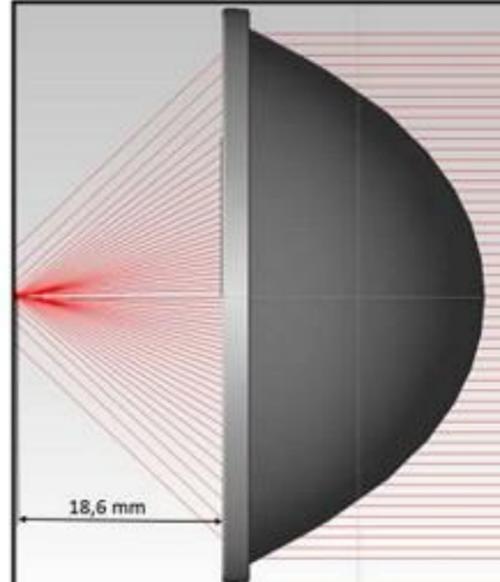
A071 5224

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

SCALE 1:2



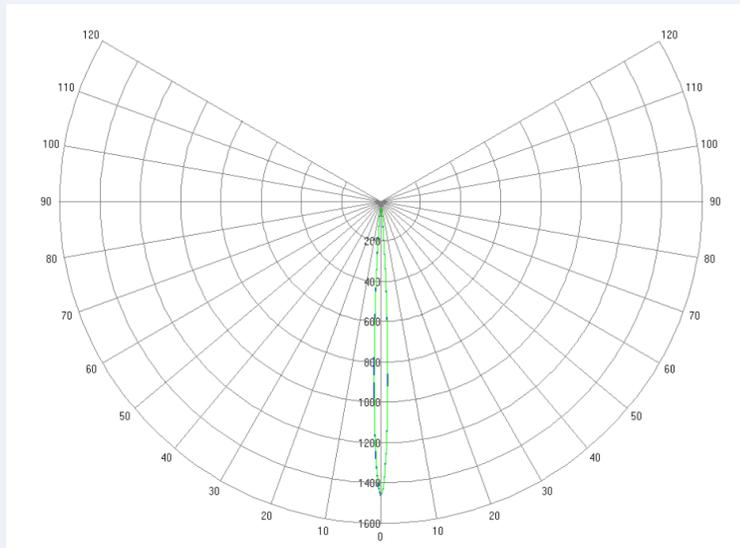


Glass: LIBA or alternative (nd = 1,521)

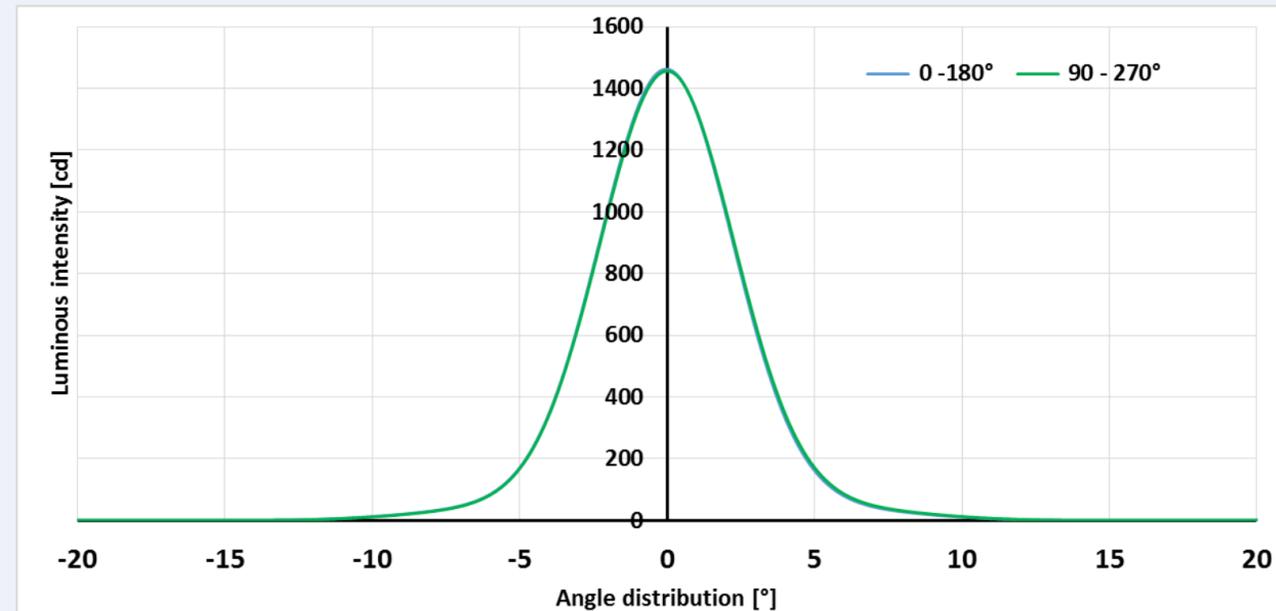
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CHECKED	kr/ky	05/14/20	
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			
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SHEET 1 OF 1			

A071 5224 – simulation results

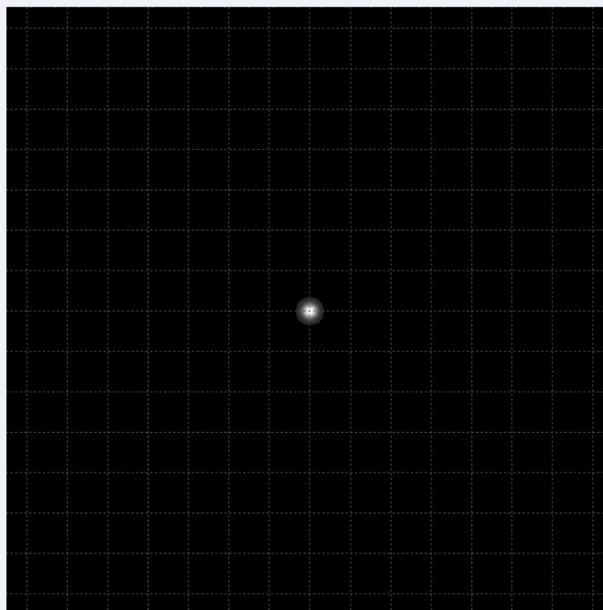
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

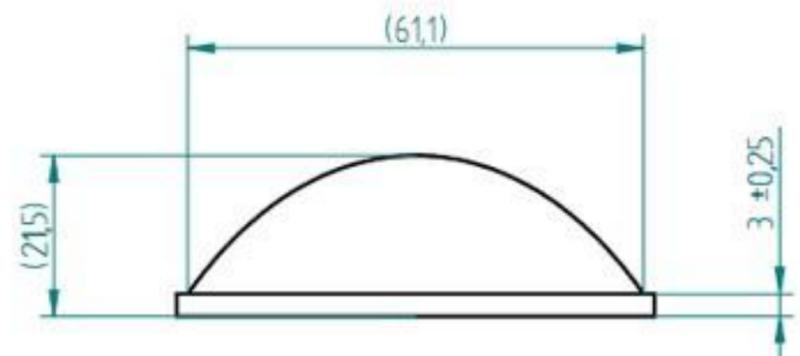
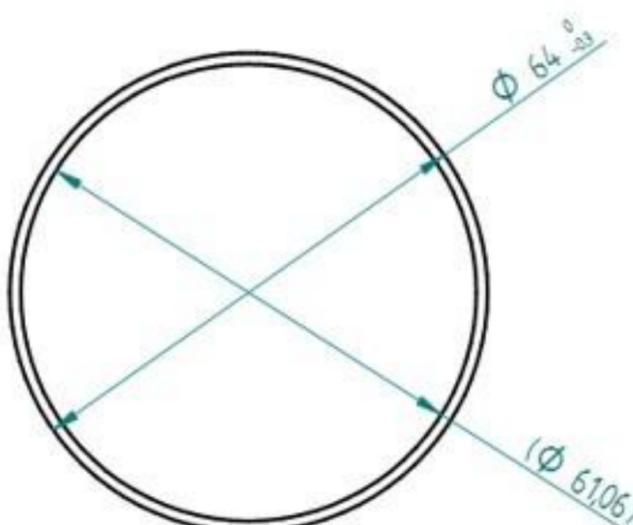


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	6
FWHM C90 [°]	6

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

A079 6422

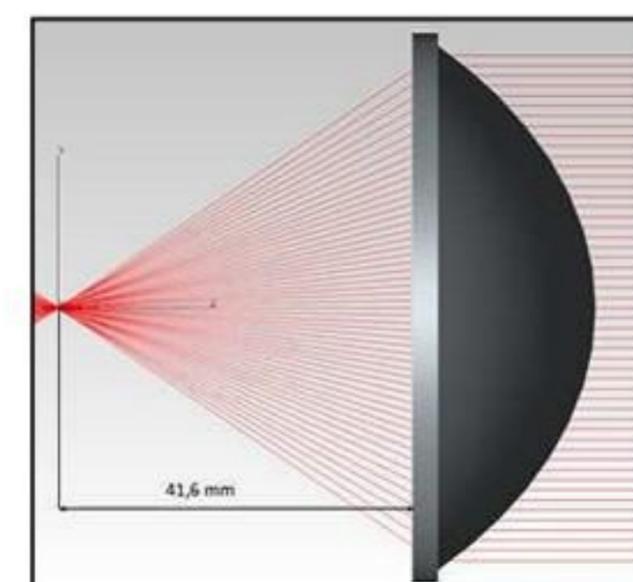
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:2



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

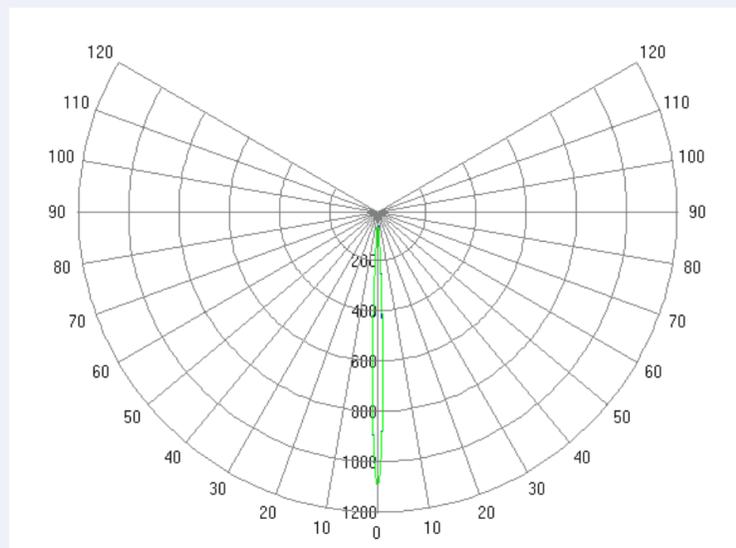


DRAWN	Krušný	DATE	05/14/20	 A079 6422																
CHECKED																				
ENG APPR																				
MGR APPR																				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SIZE</td> <td>A4</td> <td>DATE</td> <td> </td> </tr> <tr> <td>FILE NAME</td> <td colspan="3">A079_sml.dwg</td> </tr> <tr> <td>SCALE</td> <td> </td> <td>WEIGHT</td> <td>58 g</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td>SHEET 1 OF 1</td> </tr> </table>	SIZE	A4	DATE		FILE NAME	A079_sml.dwg			SCALE		WEIGHT	58 g				SHEET 1 OF 1
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FILE NAME	A079_sml.dwg																			
SCALE		WEIGHT	58 g																	
			SHEET 1 OF 1																	

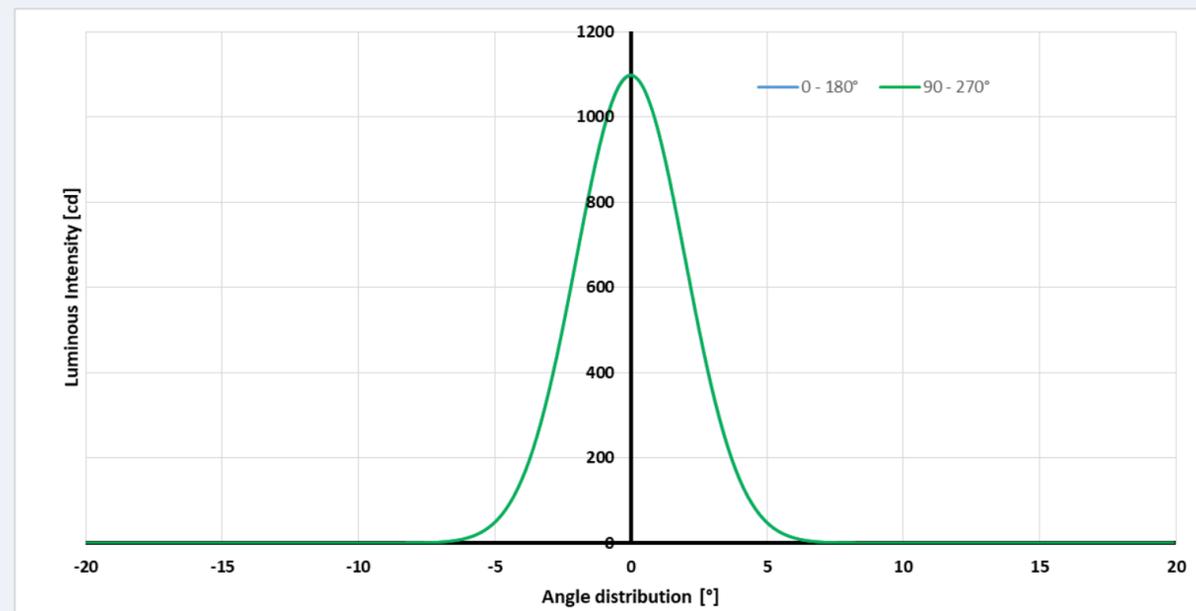
A079 6422 – simulation results



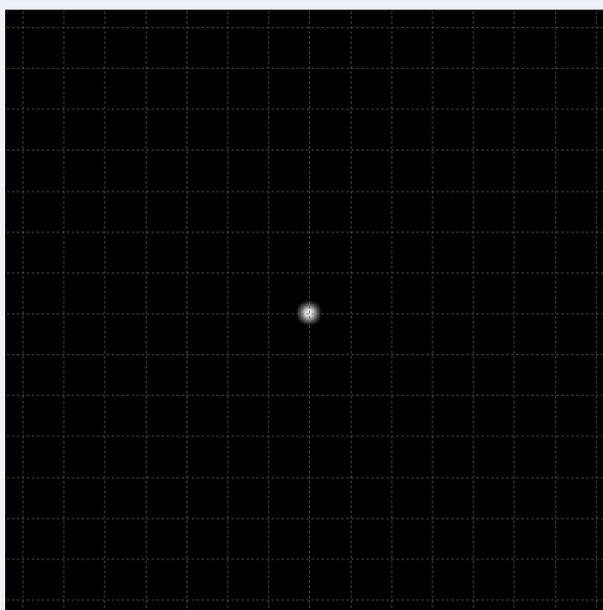
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

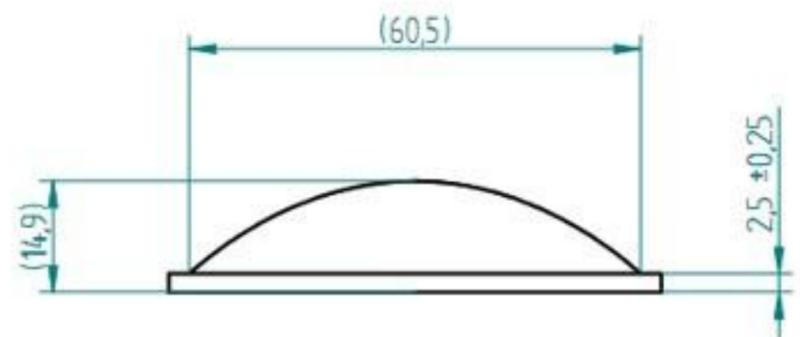
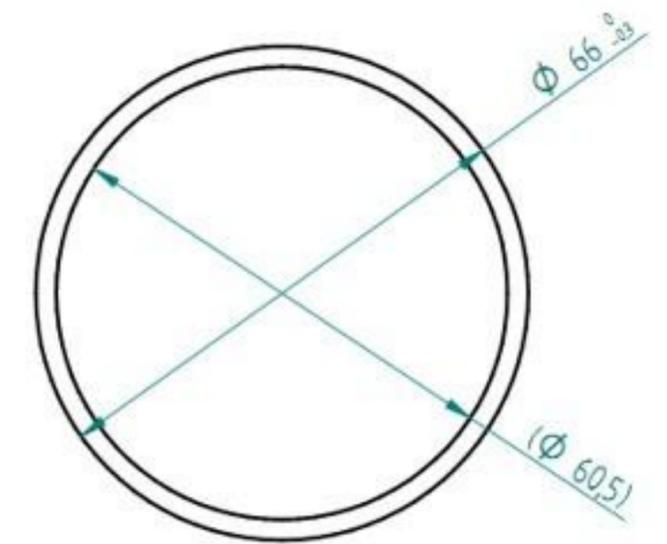


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	5
FWHM C ₉₀ [°]	5

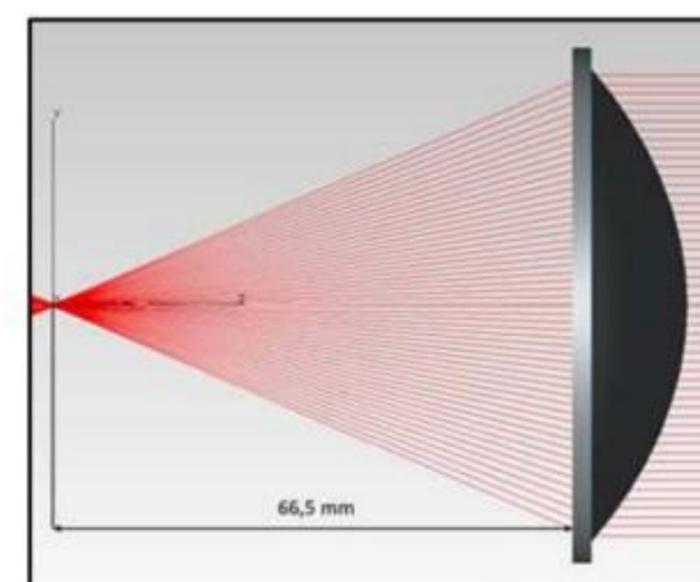
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A104 6616

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:2

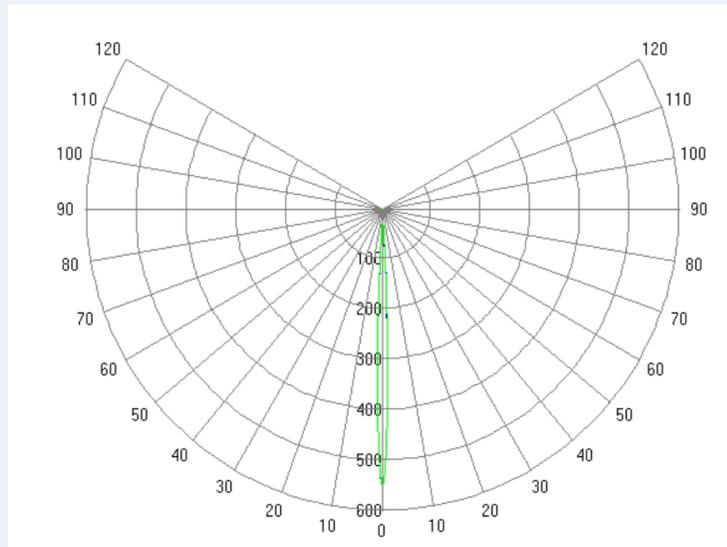



Glass: LIBA or alternative (nd = 1,521)

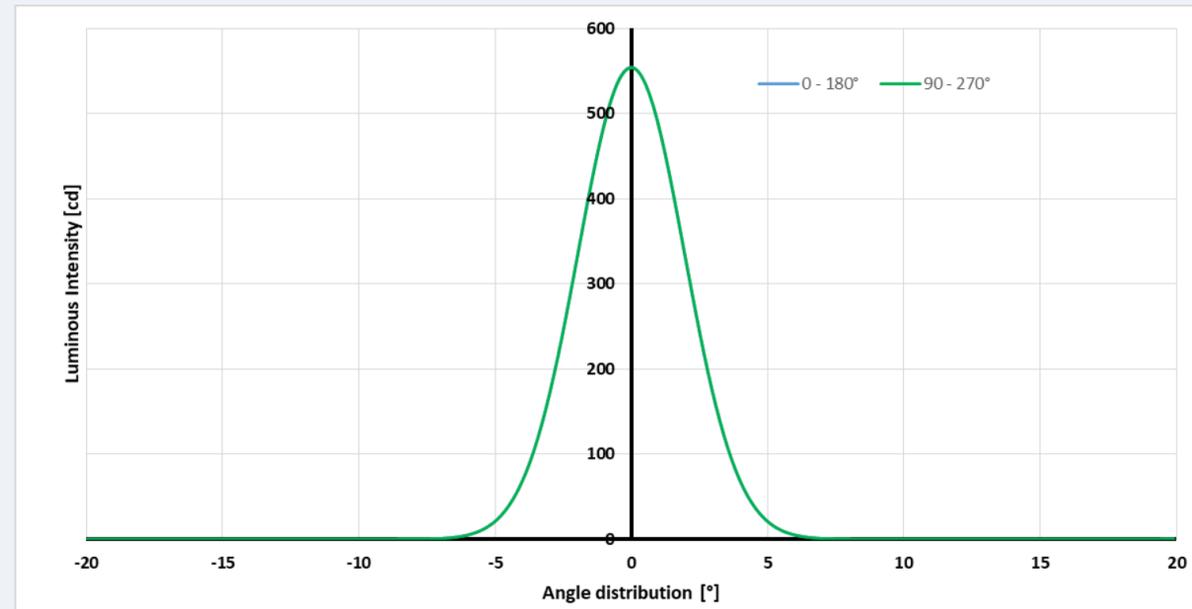
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CHIEF EC																				
ENG APPR																				
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SIZE</td> <td>A4</td> <td>NO. OF SHEETS</td> <td>45</td> </tr> <tr> <td>FILE NAME</td> <td colspan="3">A104_uml1.rtf</td> </tr> <tr> <td>SCALE</td> <td> </td> <td>WEIGHT</td> <td>69 g</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td>SHEET 1 OF 1</td> </tr> </table>	SIZE	A4	NO. OF SHEETS	45	FILE NAME	A104_uml1.rtf			SCALE		WEIGHT	69 g				SHEET 1 OF 1
SIZE	A4	NO. OF SHEETS	45																	
FILE NAME	A104_uml1.rtf																			
SCALE		WEIGHT	69 g																	
			SHEET 1 OF 1																	

A104 6616 – simulation results

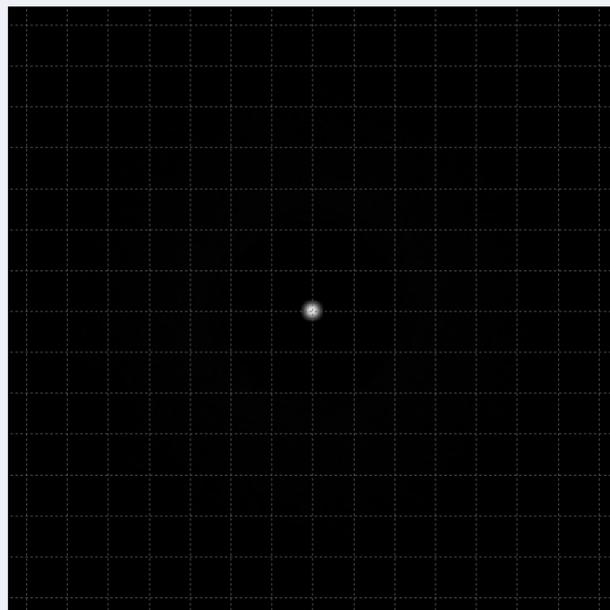
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

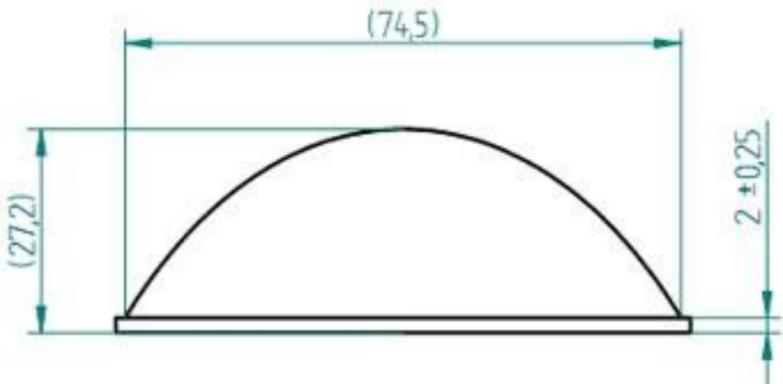
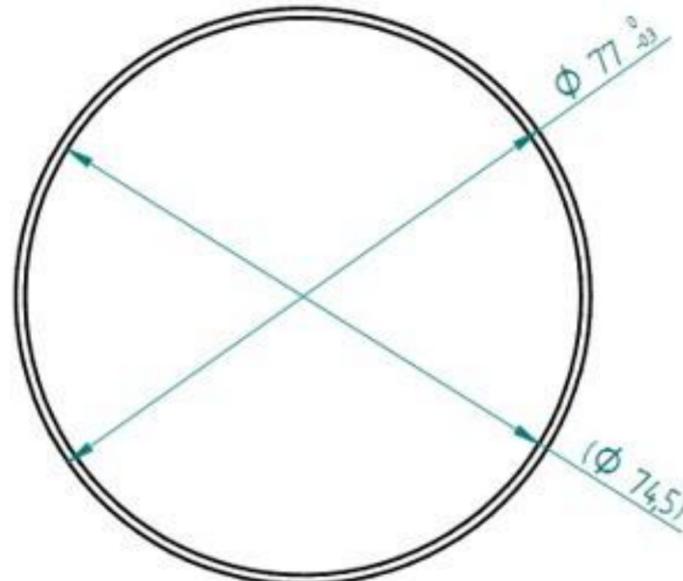


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

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

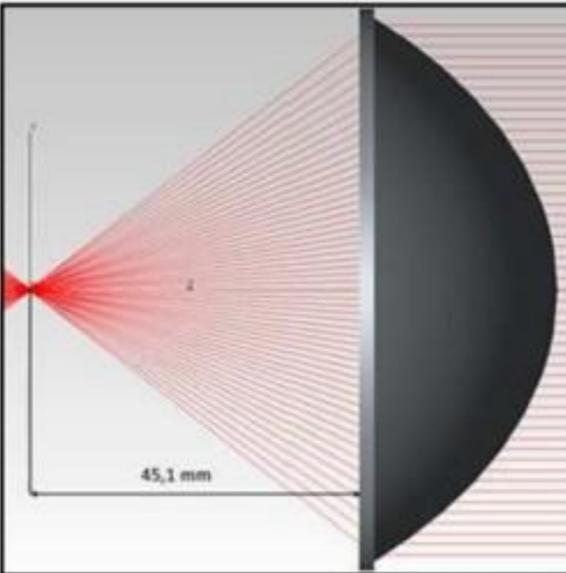
A116 7727

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:2



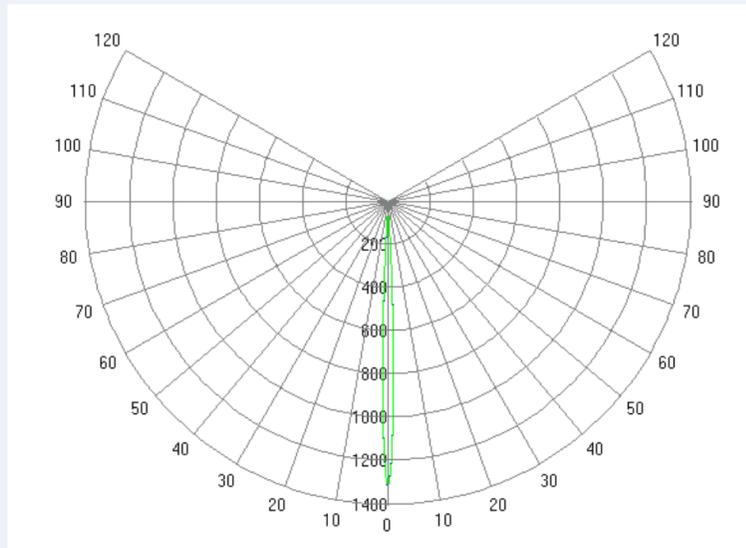


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CHECKED			
ENG APPR			
MR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: 44 FILE NAME: A116_7727.dwg SCALE: WEIGHT: 174 g SHEET 1 OF 1

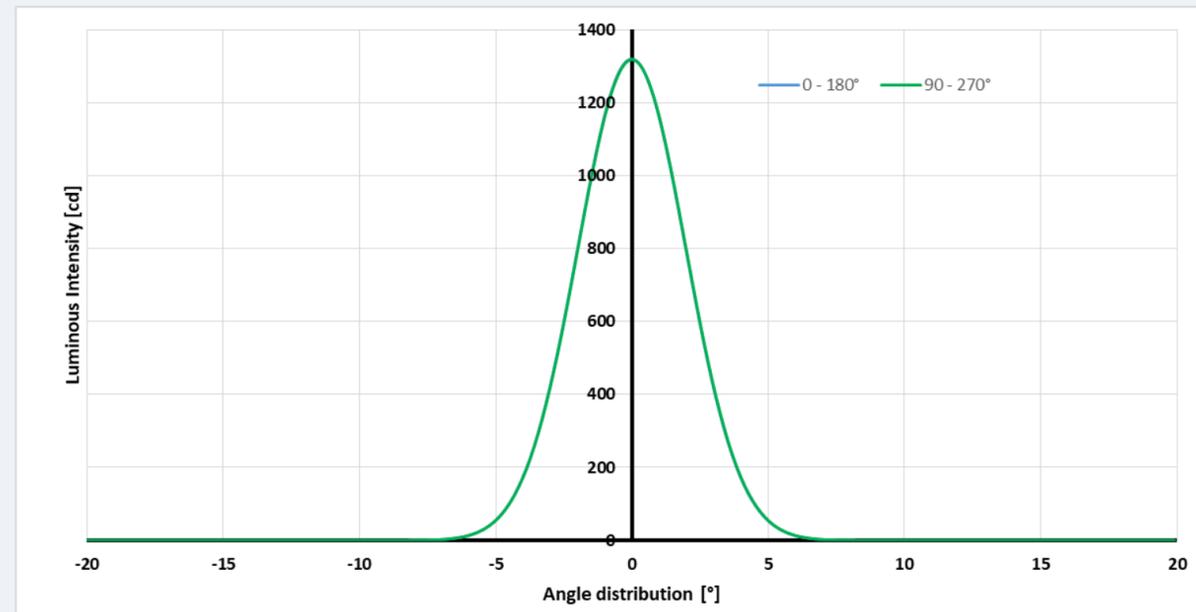
Glass: LIBA or alternative (nd = 1,521)

A116 7727 – simulation results

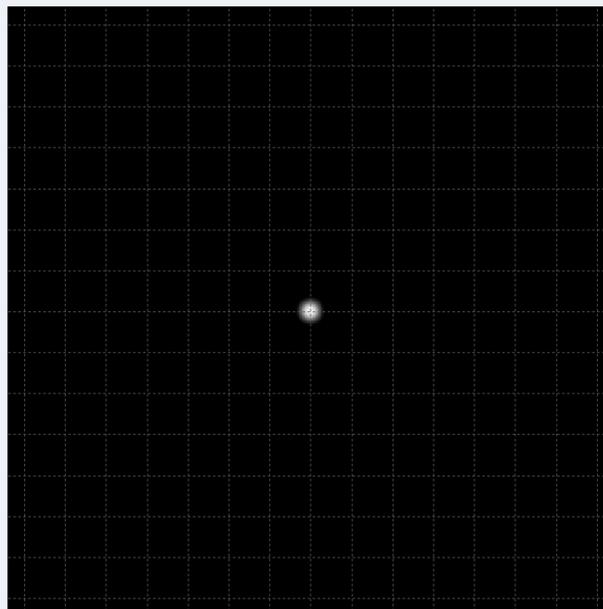
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



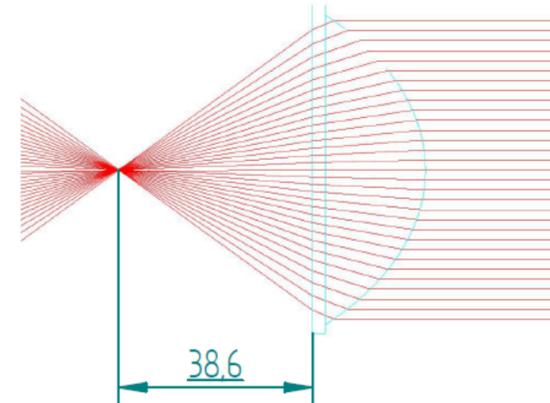
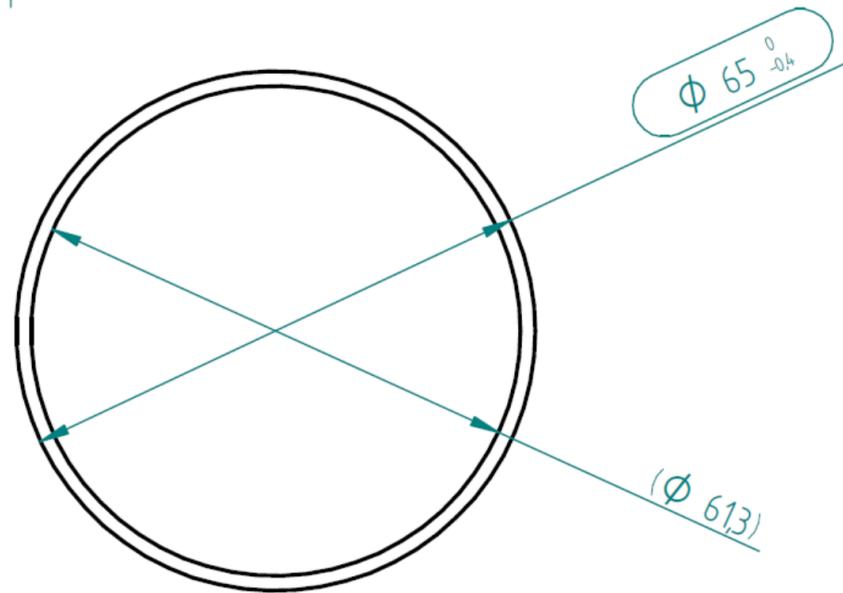
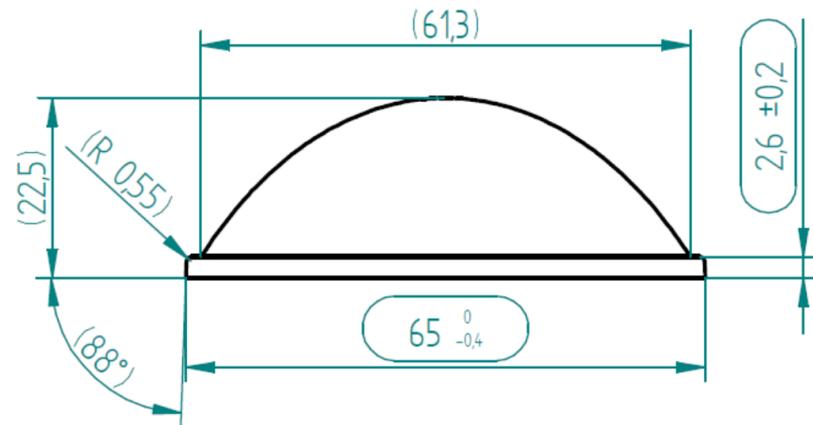
- Projection wall 3x3 m at 1m



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

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

A132 6523



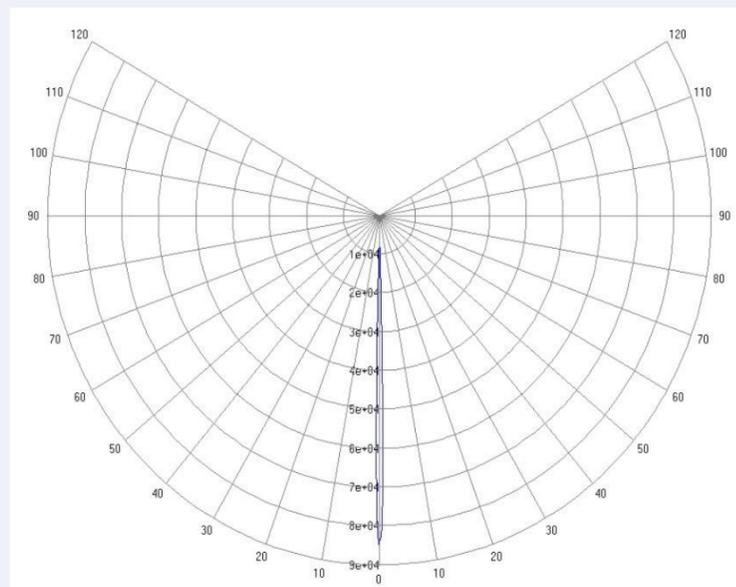
material : GLASS nd=1,520

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

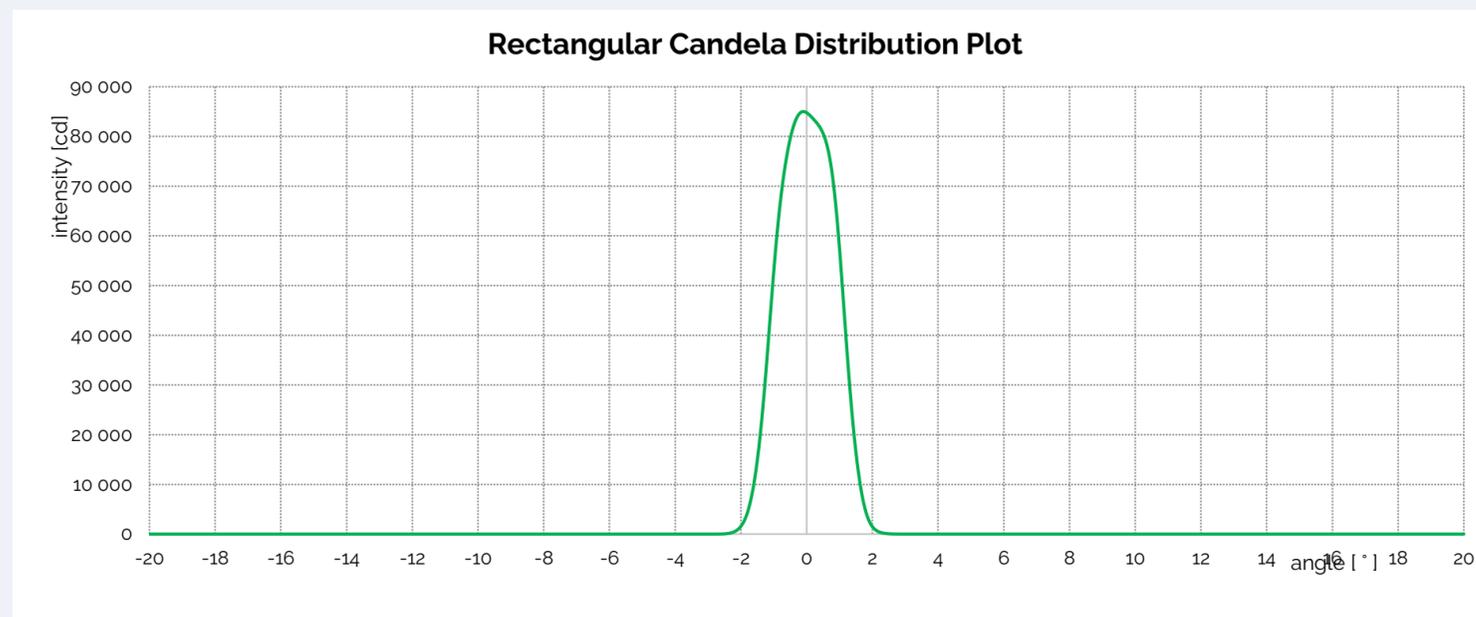
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CHECKED				
ENG APPR				
MGR APPR				
			TITLE	
			Aspheric Lens	
		SIZE	DWG NO	REV
		A4	A132 6523	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		FILE NAME: A132_6523_rekonstrukce_z_vykresudft		
SCALE:	WEIGHT:	SHEET 1 OF 1		

A132 6523 – simulation results

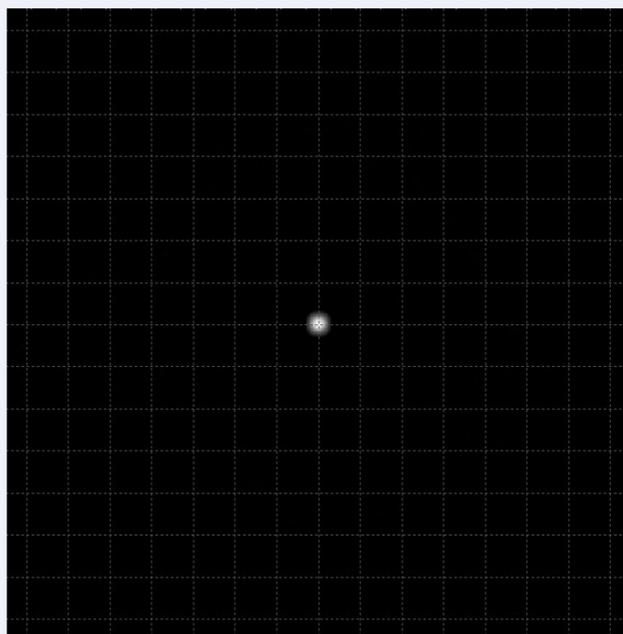
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



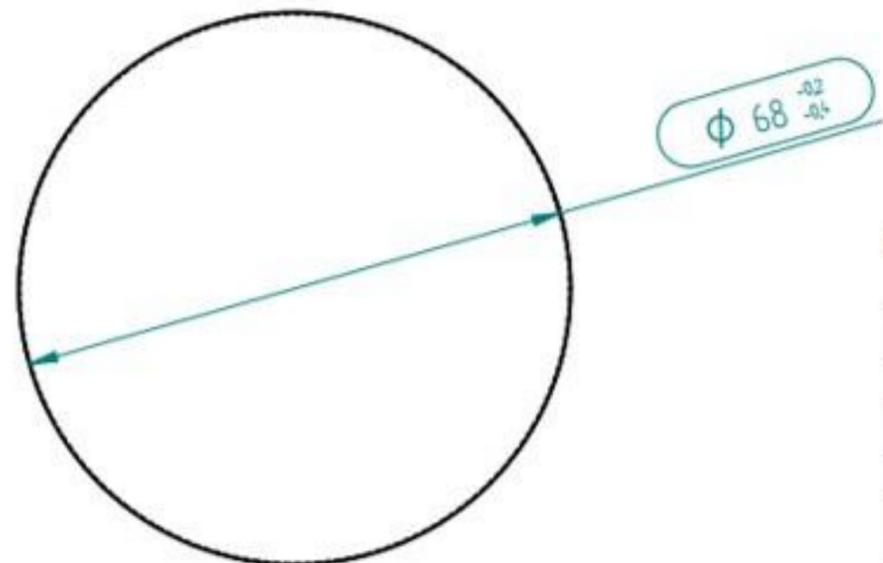
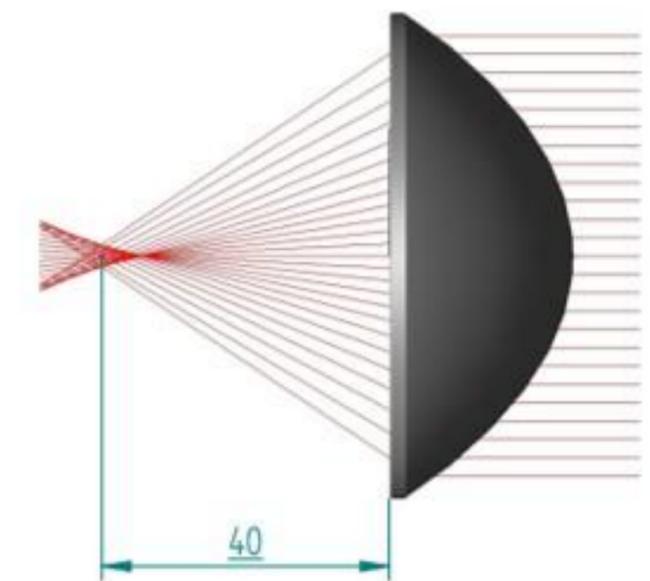
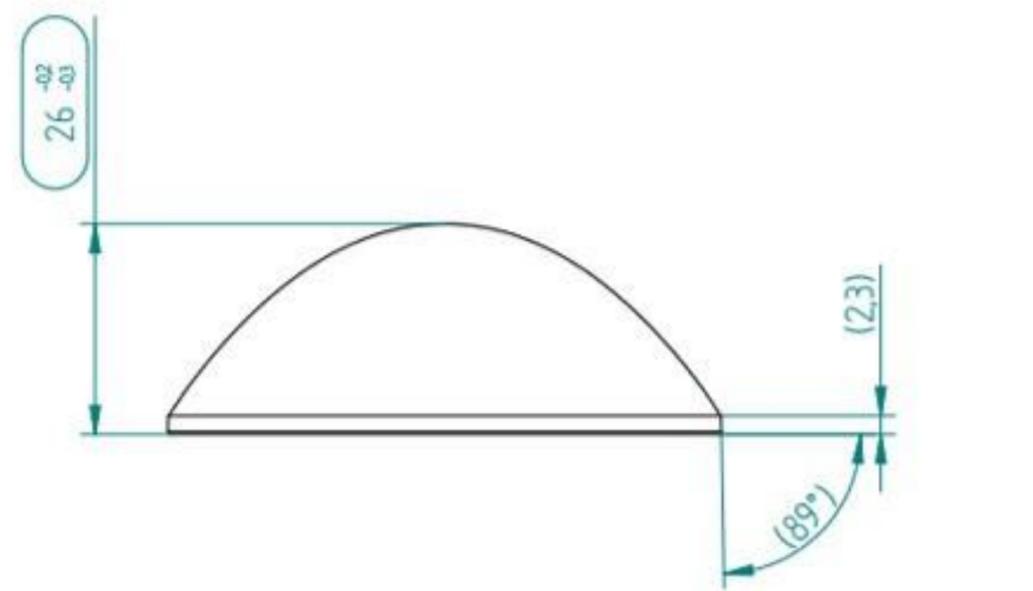
- Projection wall 3x3 m at 1m



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

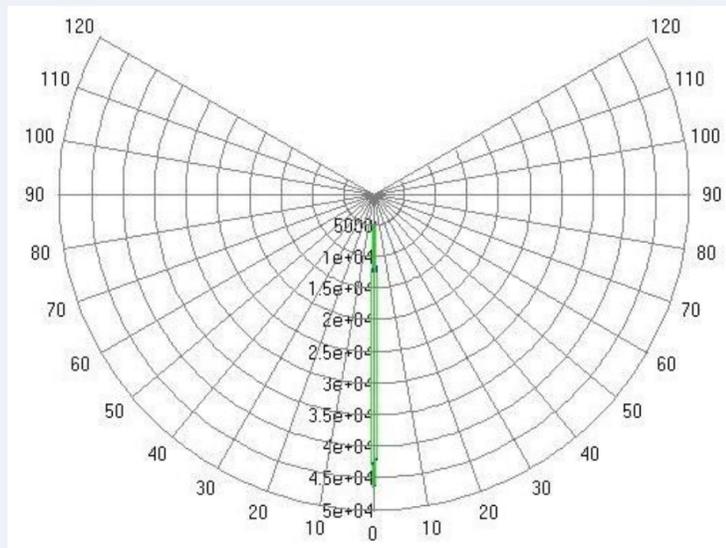


material : GLASS nd = 1,520

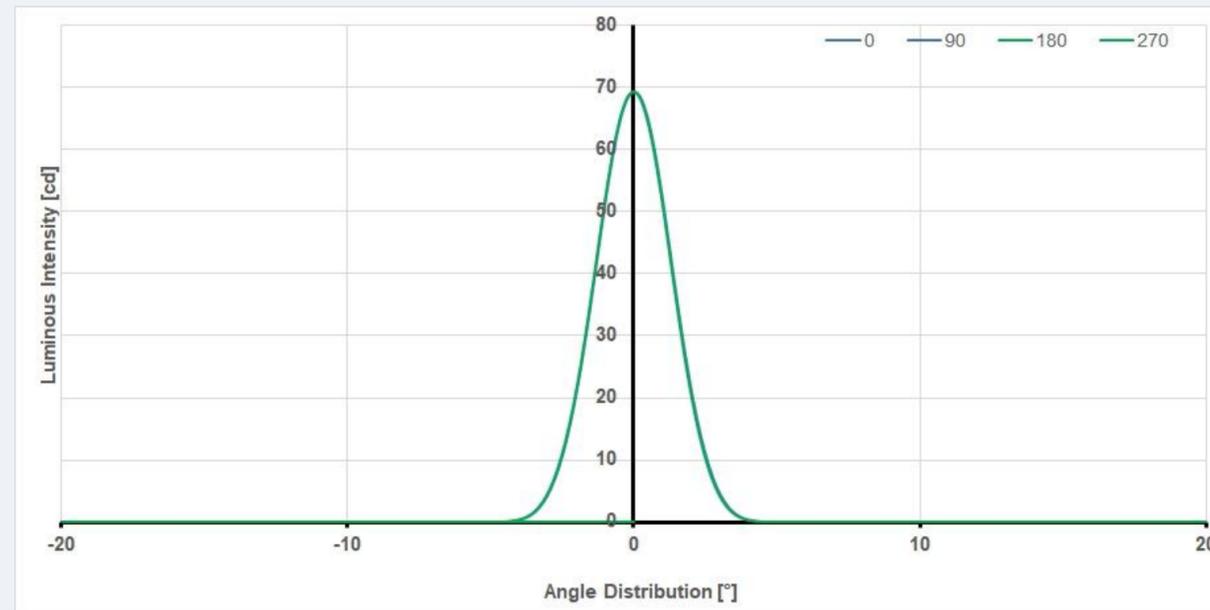
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CHECKED					
ENG APPR					
MGR APPR			TITLE Aspheric lens		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX			SIZE A4	DWG NO A163 6827	REV
			FILE NAME: A163 6827.dft		
			SCALE:	WEIGHT:	SHEET 1 OF 1

A163 6827 – simulation results

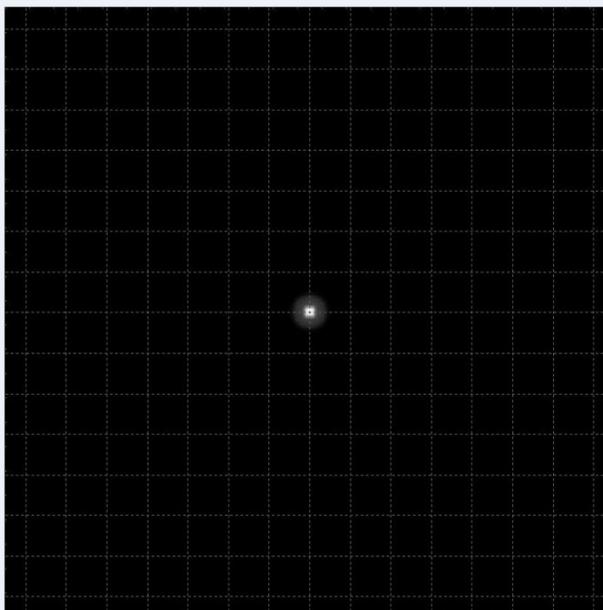
- Polar Candela Distribution Plot



- 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

Technical drawing of the lens showing side and top views with dimensions: 21,4 ±0,2, 3 ±0,2, 64 +0,4/0, (R 3,2), (8°), (Φ 60), (Φ 61,2), Φ 64 +0,4/0.

Ray diagram showing light rays passing through the lens and converging at a focal point 40 units away.

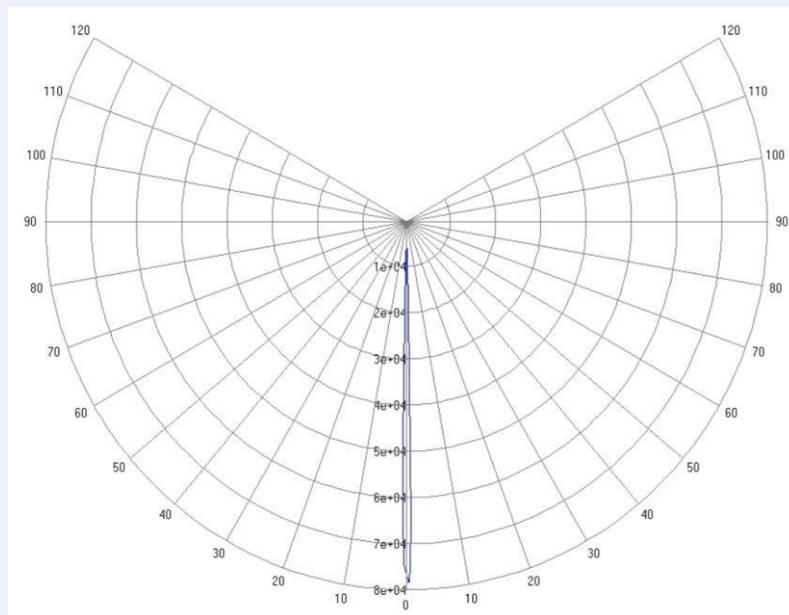
material : GLASS nd=1,520

	NAME	DATE			
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CHECKED					
ENG APPR					
MGR APPR			TITLE Aspheric Lens Modulated		
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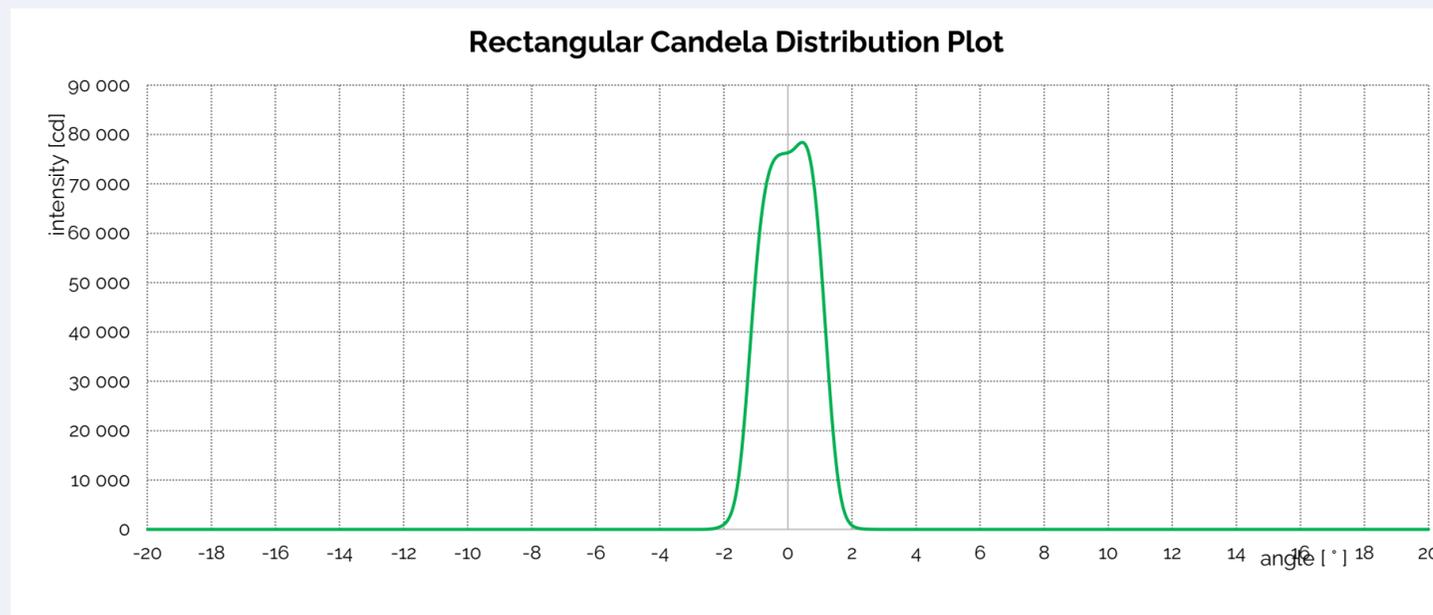
A175 6419 – simulation results



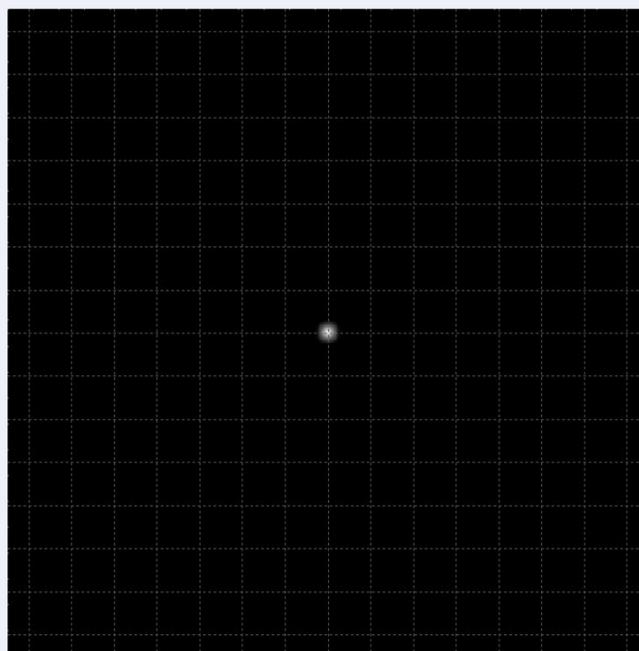
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



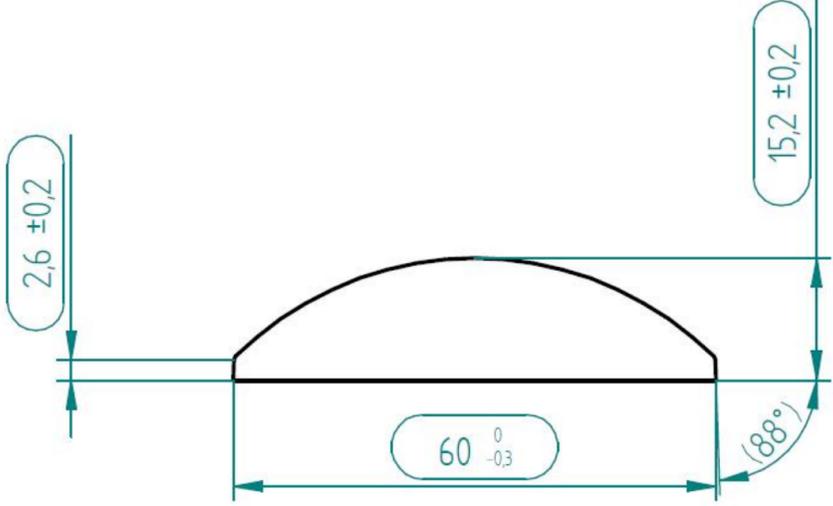
- Projection wall 3x3 m at 1m

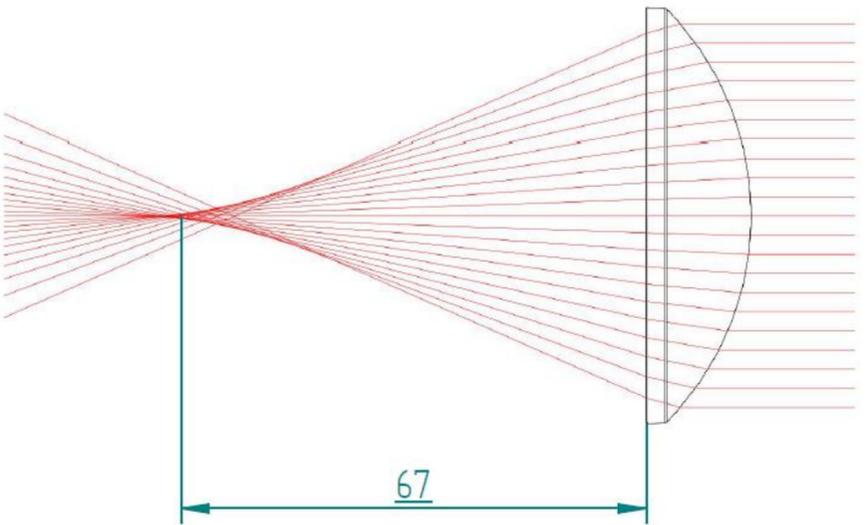


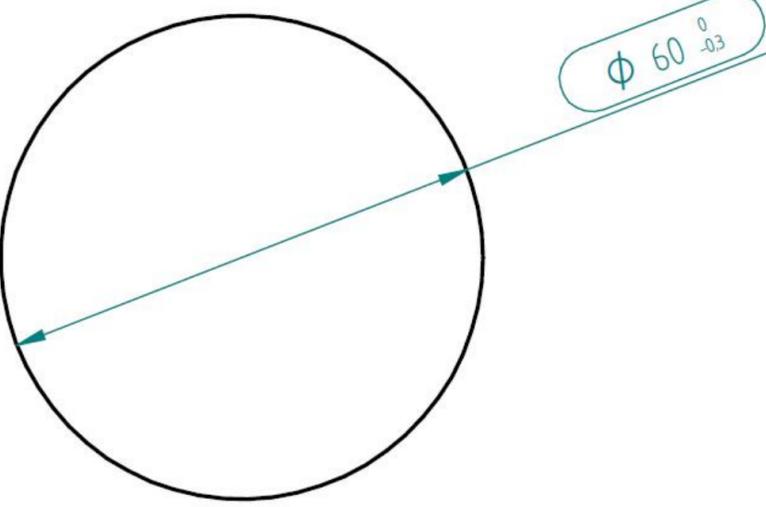
LED used for simulation	XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	2,5
FWHM C180 [°]	2,5

A180 6016

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED







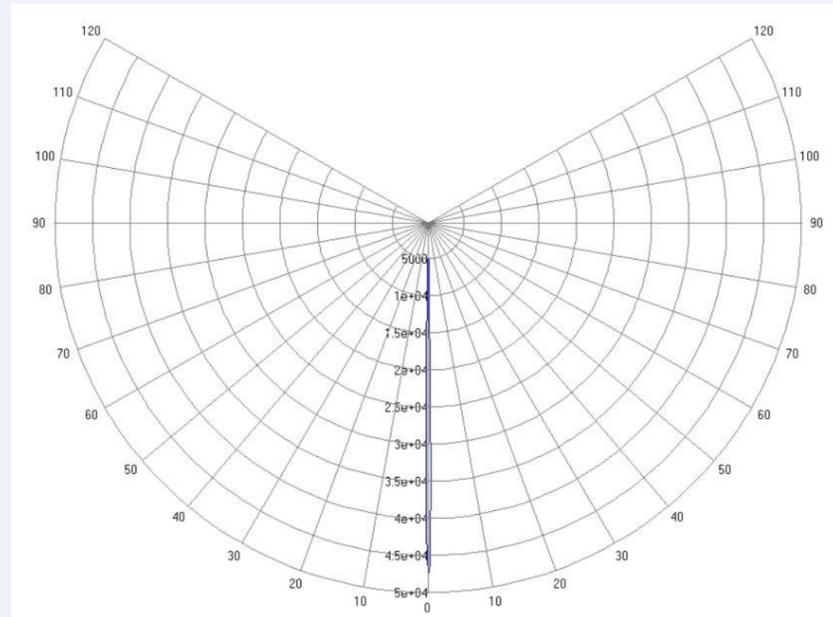


material : GLASS nd=1,520

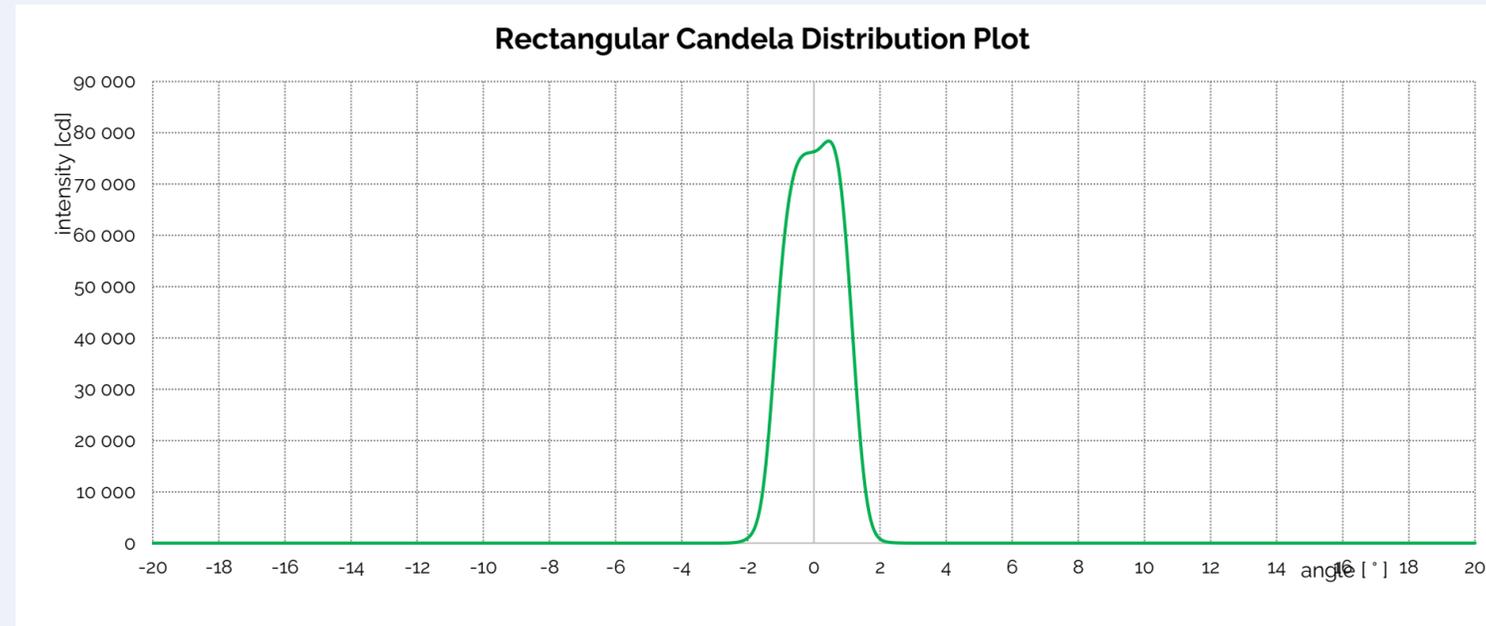
DRAWN	j.kocarek	DATE	06/10/25													
CHECKED																
ENG APPR																
MGR APPR																
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SIZE</td> <td style="width: 10%;">DWG NO</td> <td style="width: 10%;">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														
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FILE NAME: A180 6016_rekonstrukce_z_vykresu.dft																
SCALE:	WEIGHT:	SHEET 1 OF 1														
TITLE				Spherical Lens												

A180 6016 – simulation results

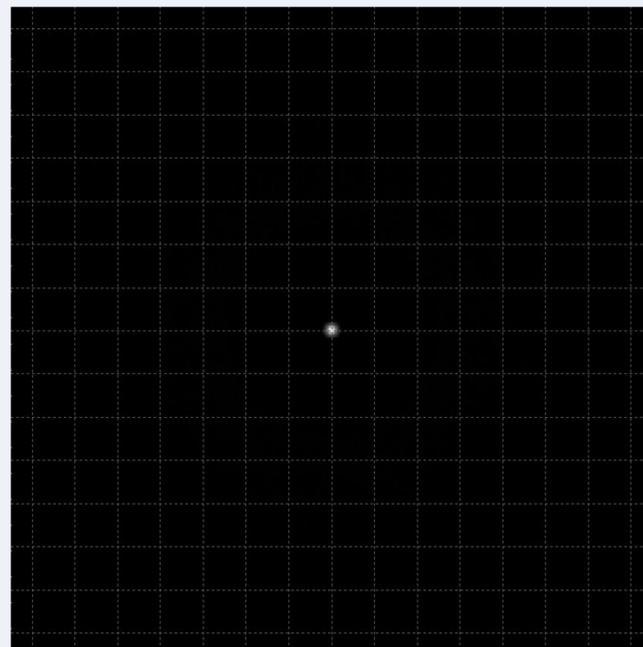
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



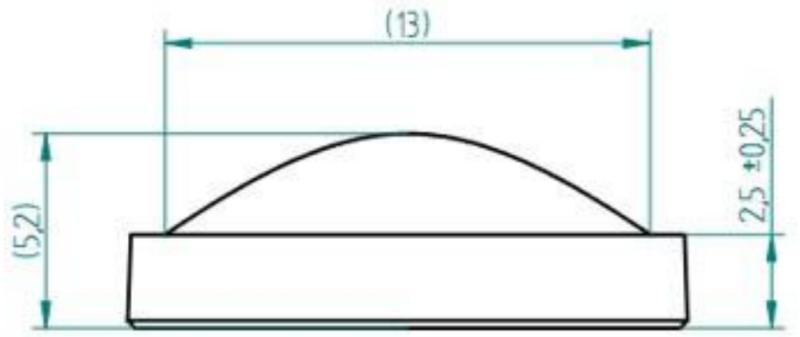
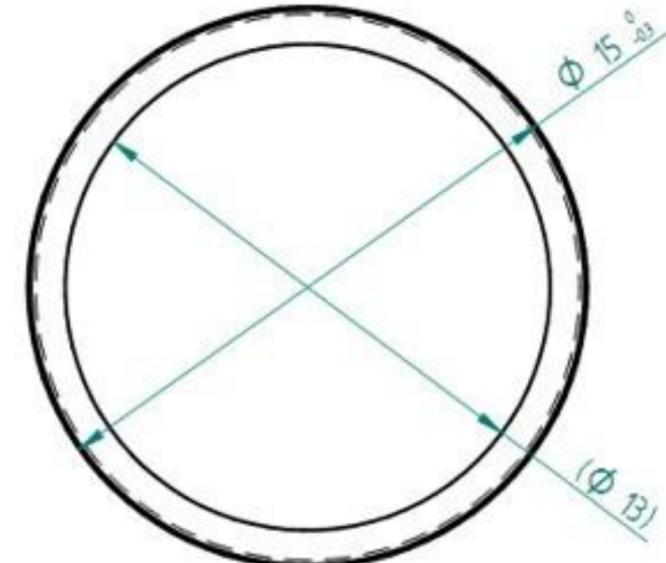
- Projection wall 3x3 m at 1m



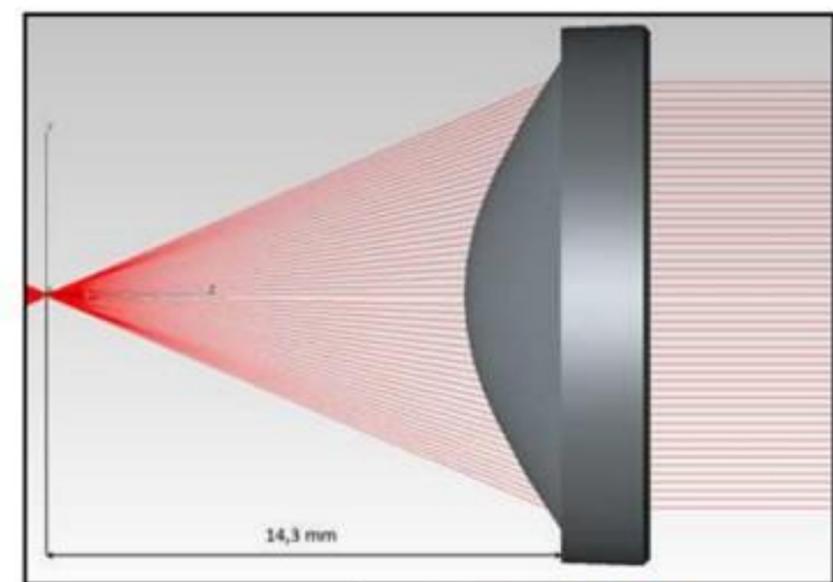
LED used for simulation	XP-G4
Luminous flux of LED [lm]	350
FWHM Co [°]	2,5
FWHM C180 [°]	2,5

A182 1506

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

SCALE 2:1

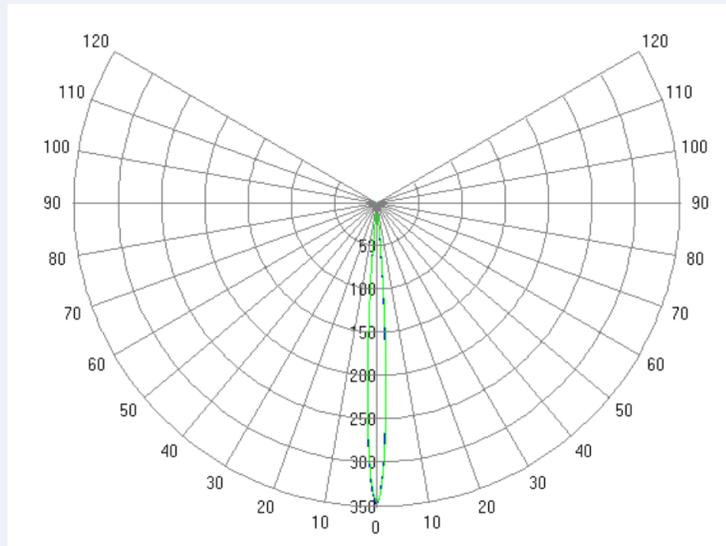



Glass: LIBA or alternative (nd = 1,521)

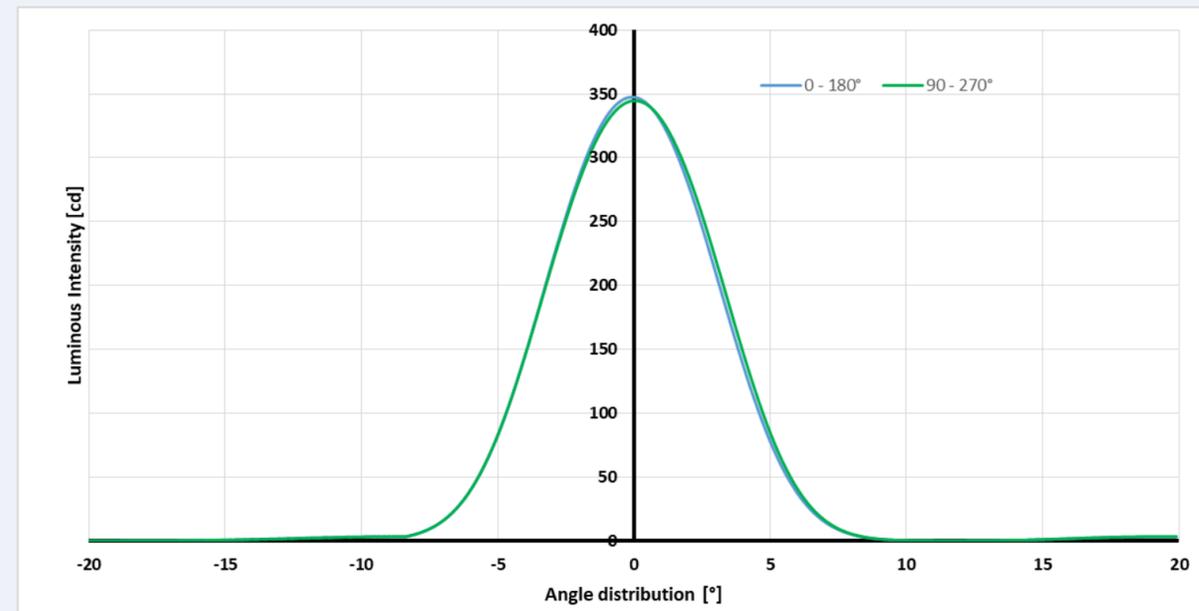
DRAWN	NAME	DATE	 ECOGLOSS A182 1506
CHECKED			
ENG. APPR.			
MGR. APPR.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: 44 FILE NAME: A182_small.tif SCALE: WEIGHT: 2 g SHEET 1 OF 1

A182 1506 – simulation results

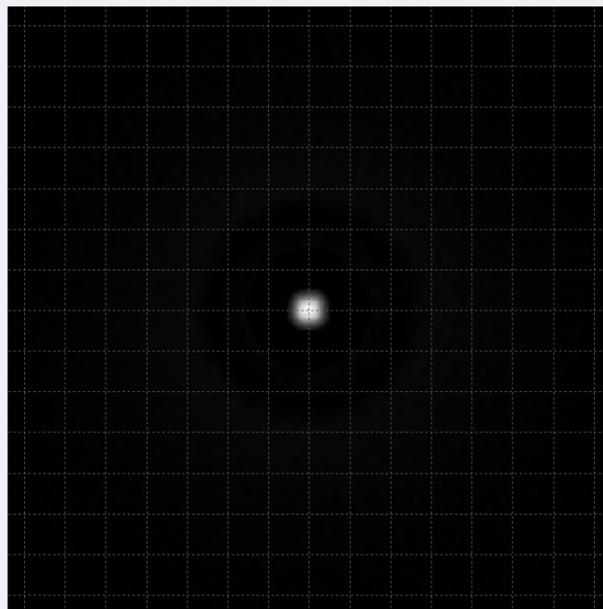
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

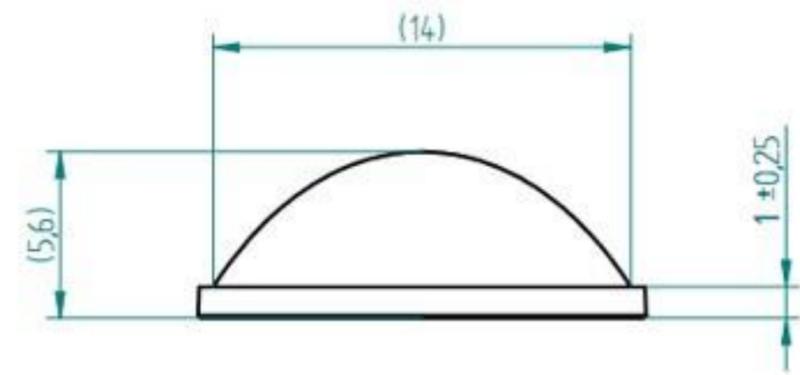
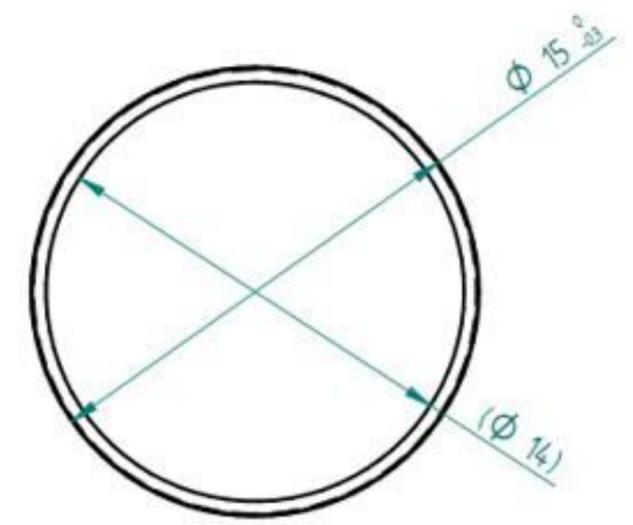


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	7
FWHM C90 [°]	7

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

A194 1506

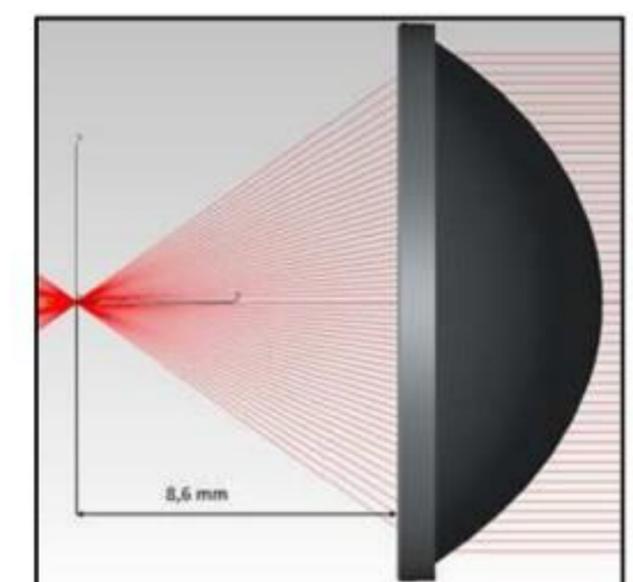
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

SCALE 2:1



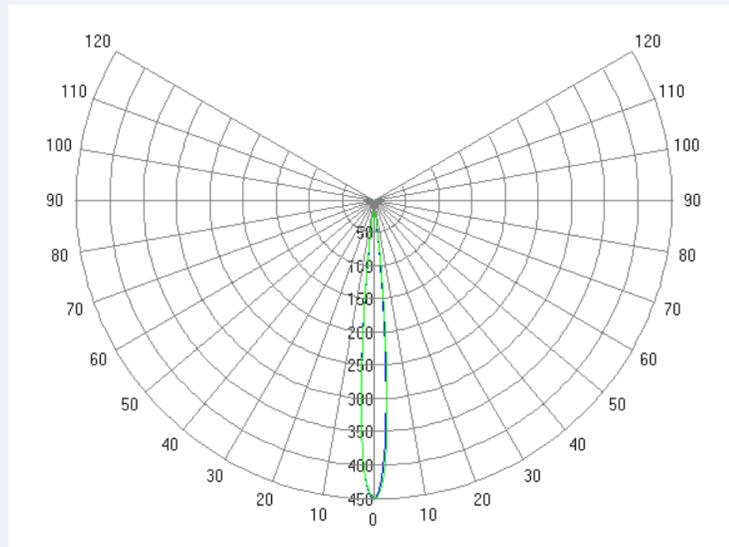
Glass: LIBA or alternative (nd = 1,521)



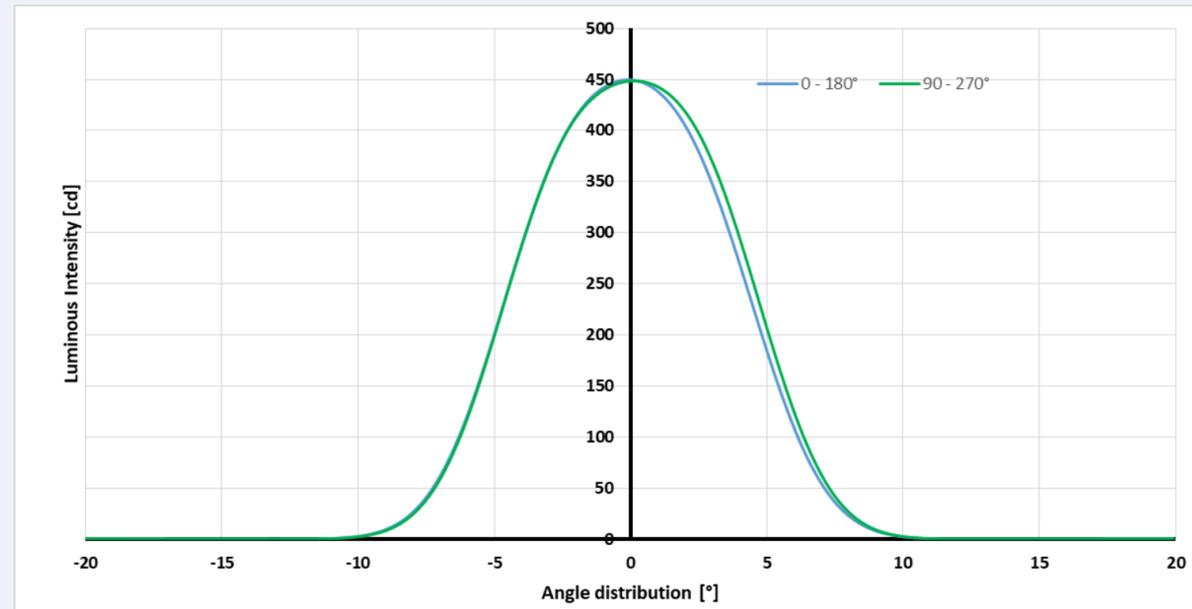
DRAWN	kru/ky	DATE	05/14/20	 <p>A194 1506</p>																
CHECKED																				
ENG APPR																				
MGR APPR																				
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SIZE</td> <td style="width: 40%;">D40 10</td> <td style="width: 10%;">No.</td> <td style="width: 40%;"> </td> </tr> <tr> <td>FILE NAME</td> <td colspan="3">A194_0001.dwg</td> </tr> <tr> <td>SCALE</td> <td>1:1</td> <td>WEIGHT</td> <td>1 g</td> </tr> <tr> <td colspan="2">SHEET</td> <td colspan="2">1 OF 1</td> </tr> </table>	SIZE	D40 10	No.		FILE NAME	A194_0001.dwg			SCALE	1:1	WEIGHT	1 g	SHEET		1 OF 1	
SIZE	D40 10	No.																		
FILE NAME	A194_0001.dwg																			
SCALE	1:1	WEIGHT	1 g																	
SHEET		1 OF 1																		

A194 1506 – simulation results

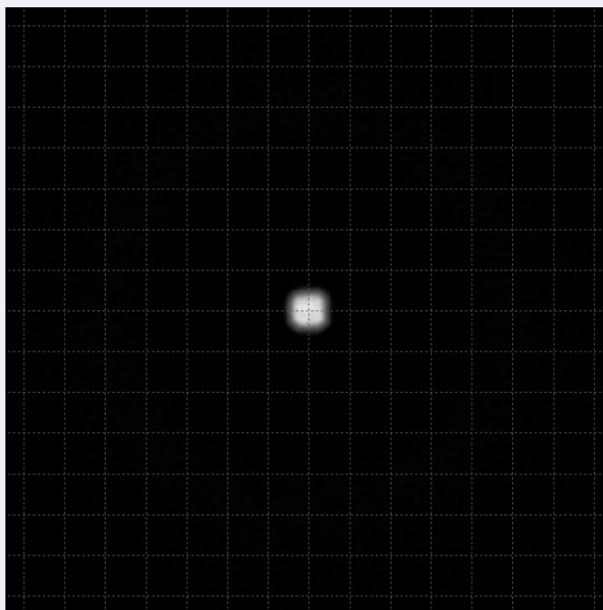
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

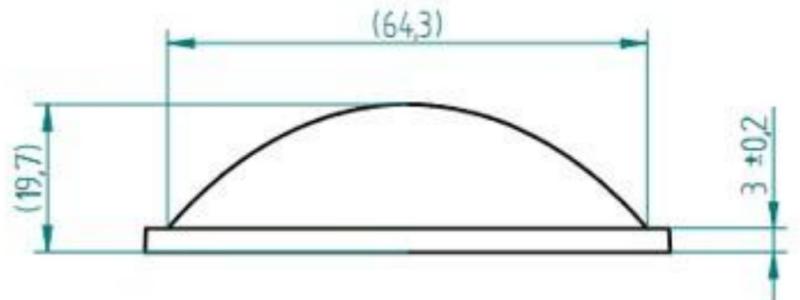


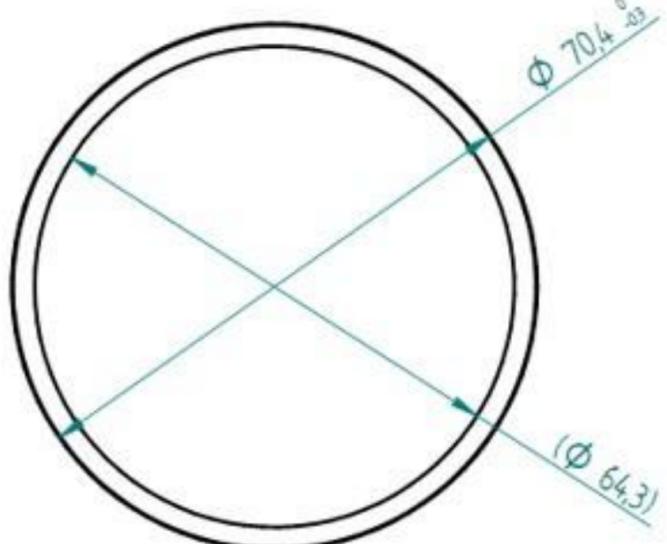
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	10
FWHM Cgo [°]	10

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

A196 7120

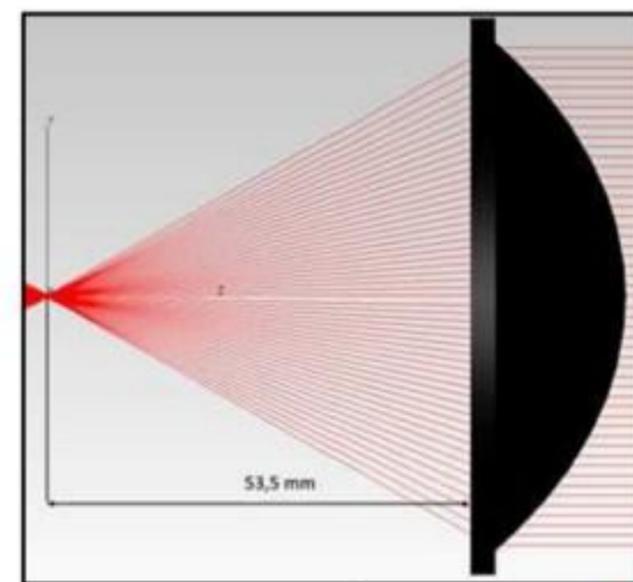
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED





SCALE 1:2



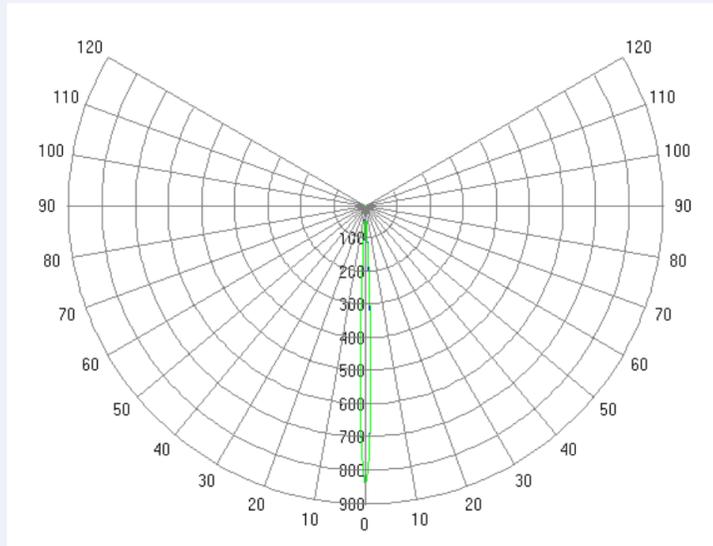


Glass: LIBA or alternative (nd = 1,521)

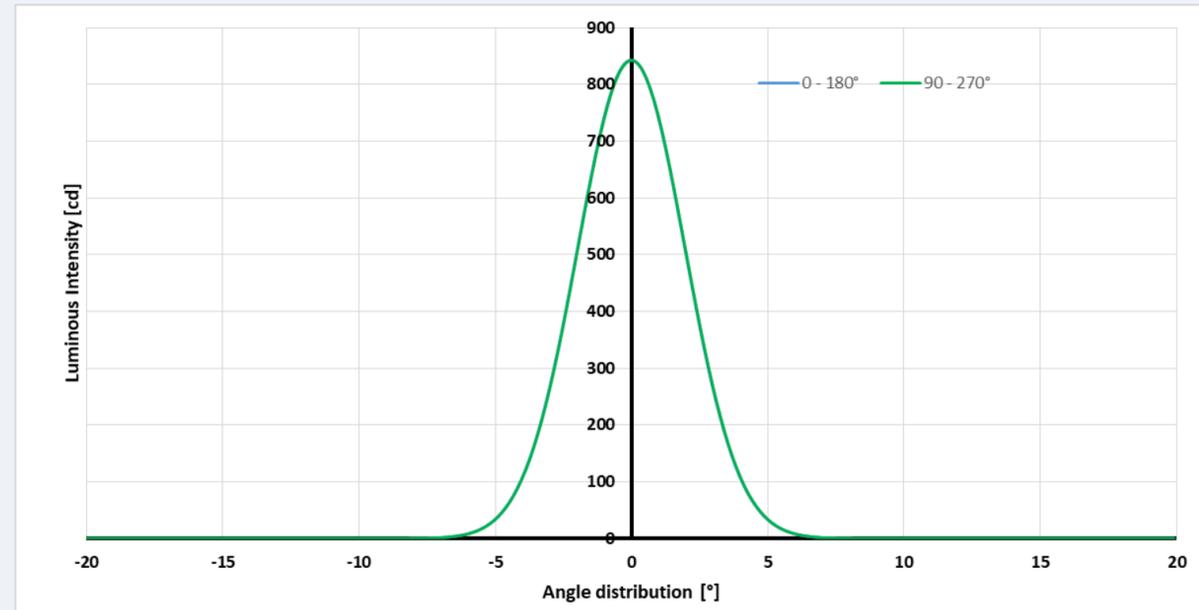
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CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: 44 FILE NAME: A196_small.jpg SCALE: WEIGHT: 103 g SHEET 1 OF 1

A196 7120 – simulation results

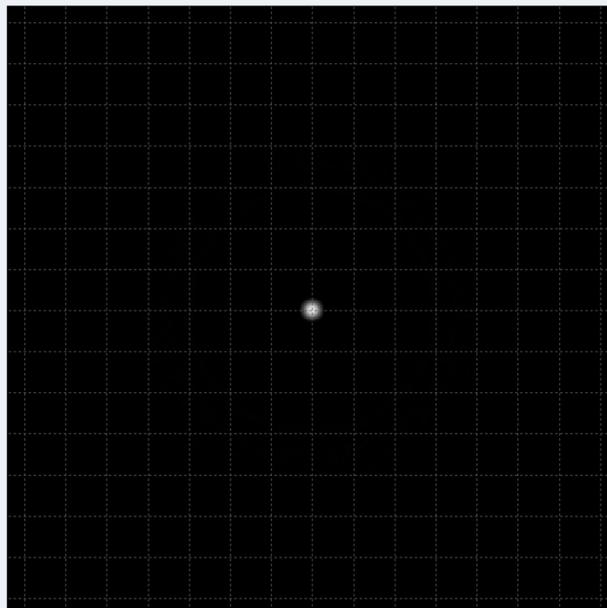
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

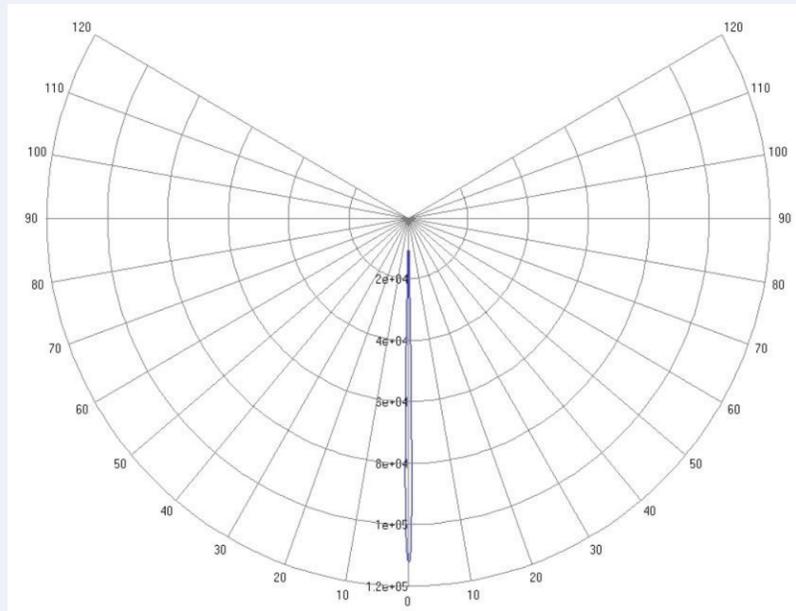


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

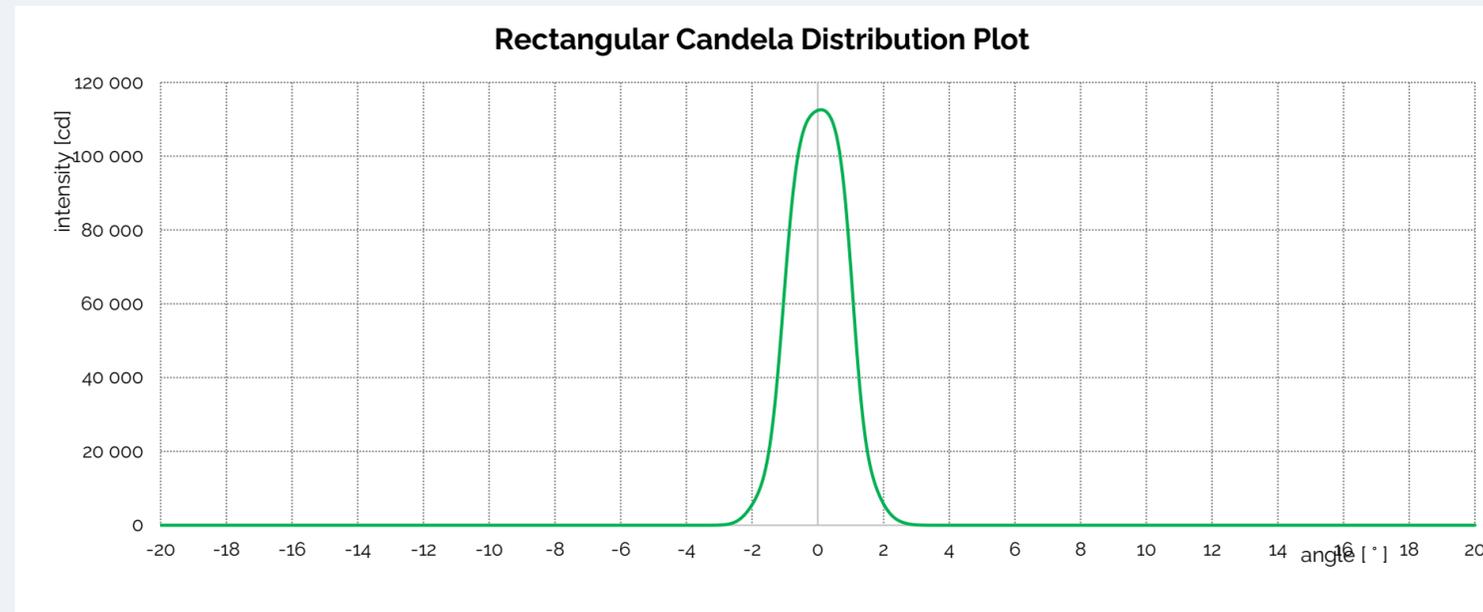
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A234 7733 – simulation results

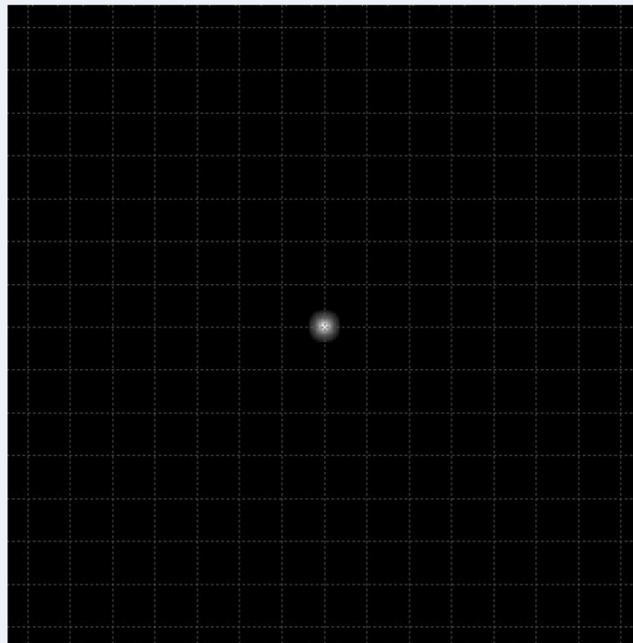
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



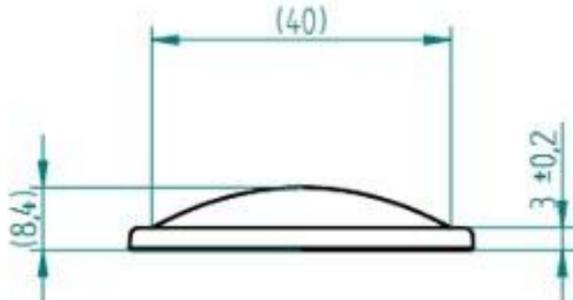
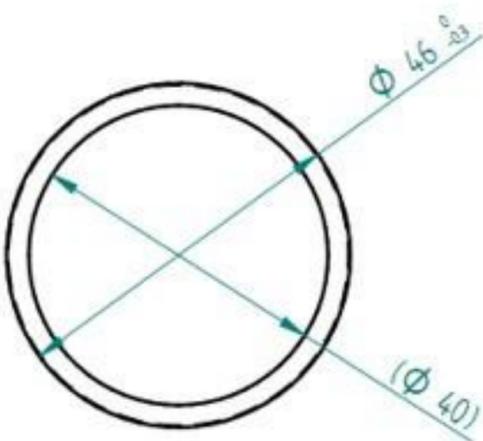
- Projection wall 3x3 m at 1m



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

A373 4508

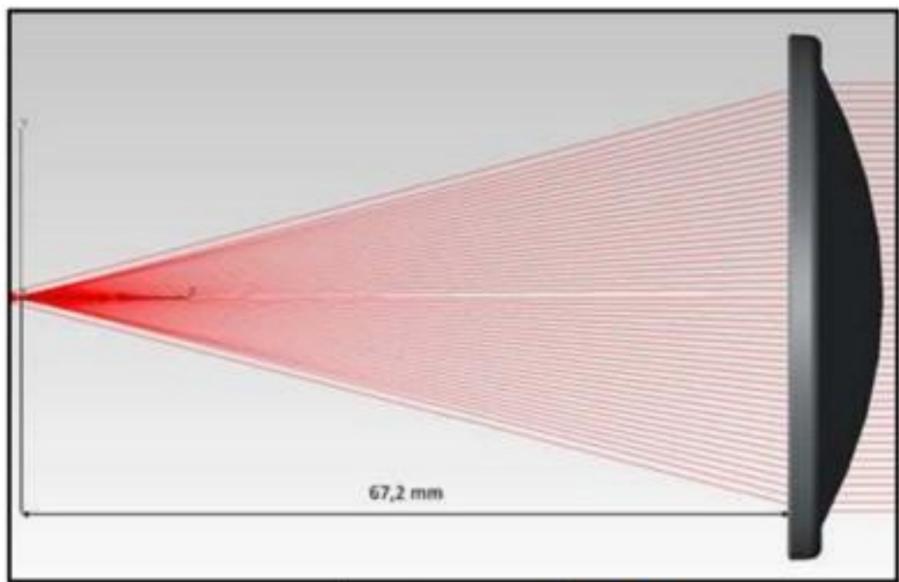
REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED

SCALE 1:2



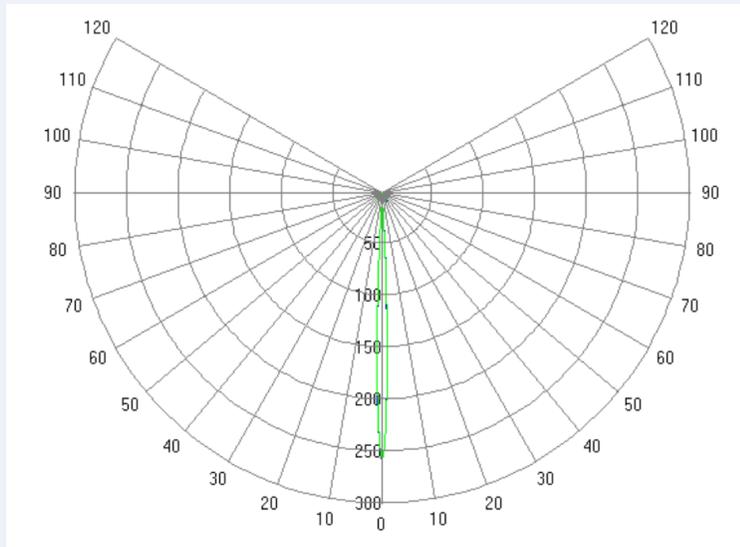
Glass: LIBA or alternative (nd = 1,521)



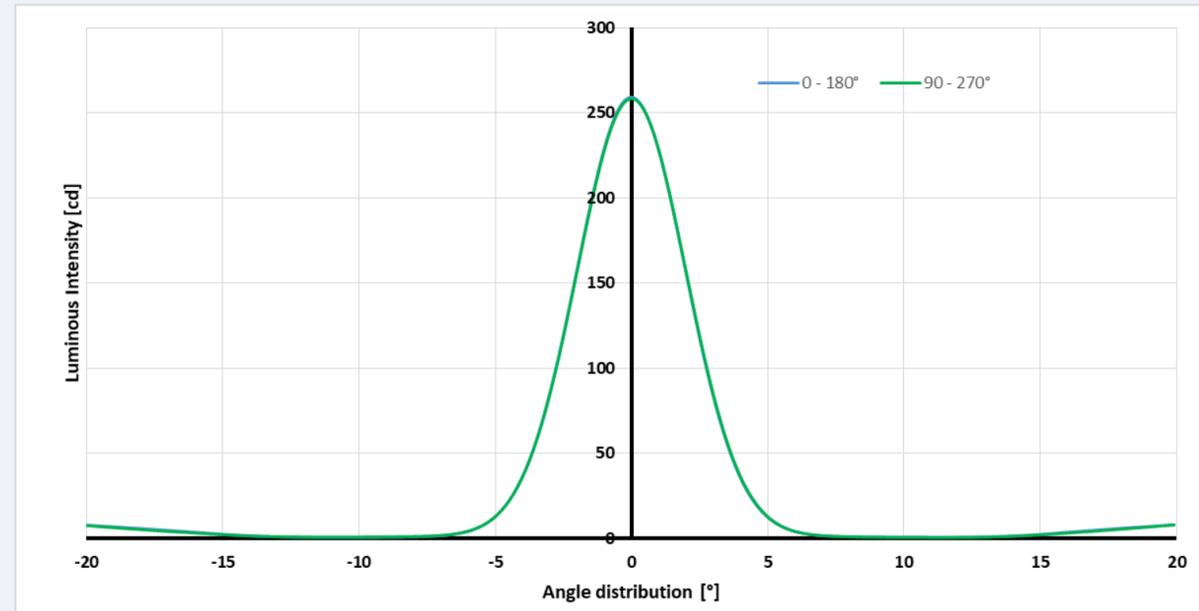
DRAWN	NAME	DATE	 A373 4508
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: A4 FILE NAME: A373L.emul101 SCALE: 1:2 WEIGHT: 21 g SHEET 1 OF 1

A373 4508 – simulation results

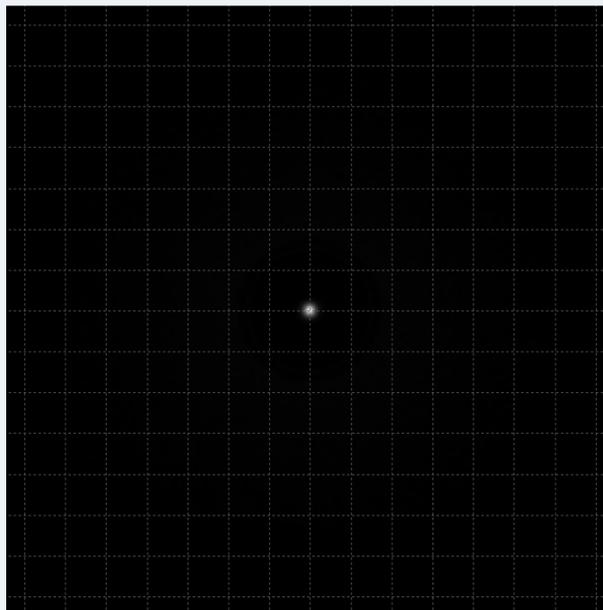
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

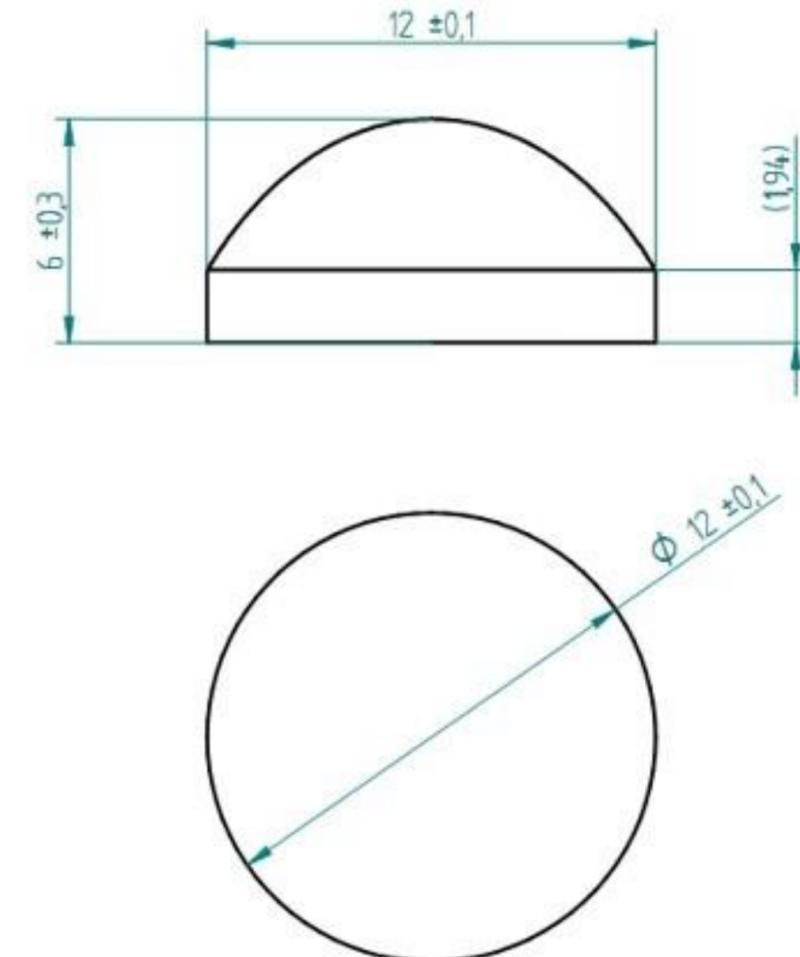


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

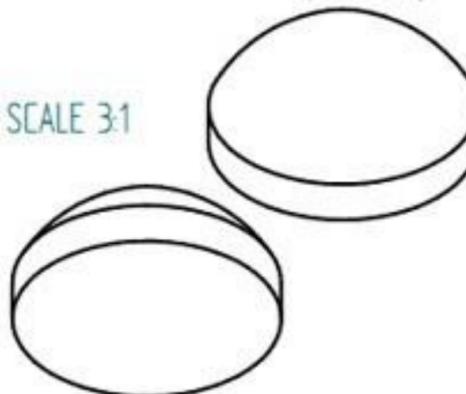
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

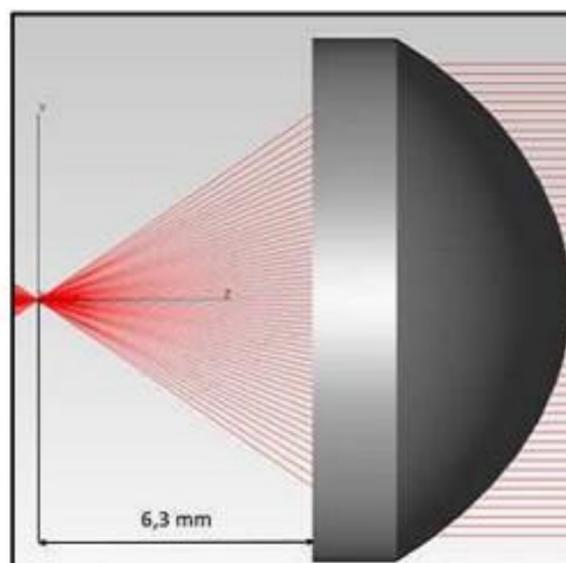
A413 1206

REVISION HISTORY			
REV.	DESCRIPTION	DATE	APPROVED



SCALE 3:1





DRAWN	Krušný	DATE	05/15/20
CHECKED			
ENG APPR			
MR APPR			



A413 1206

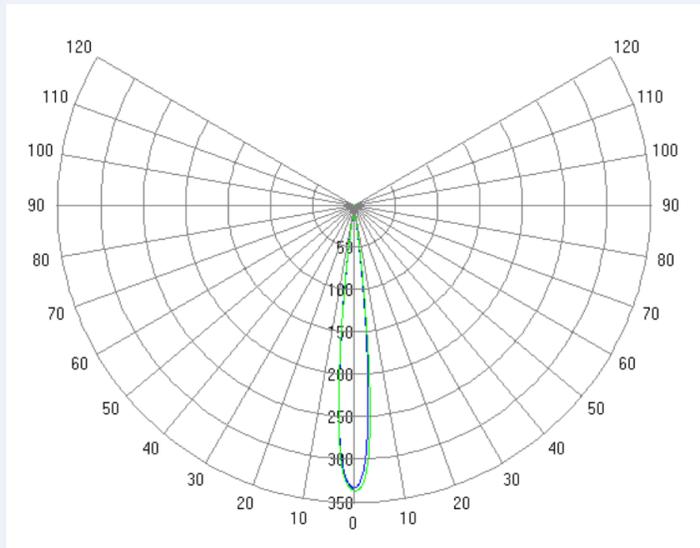
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

SIZE	A4	WEIGHT	1g	SHEET 1 OF 1
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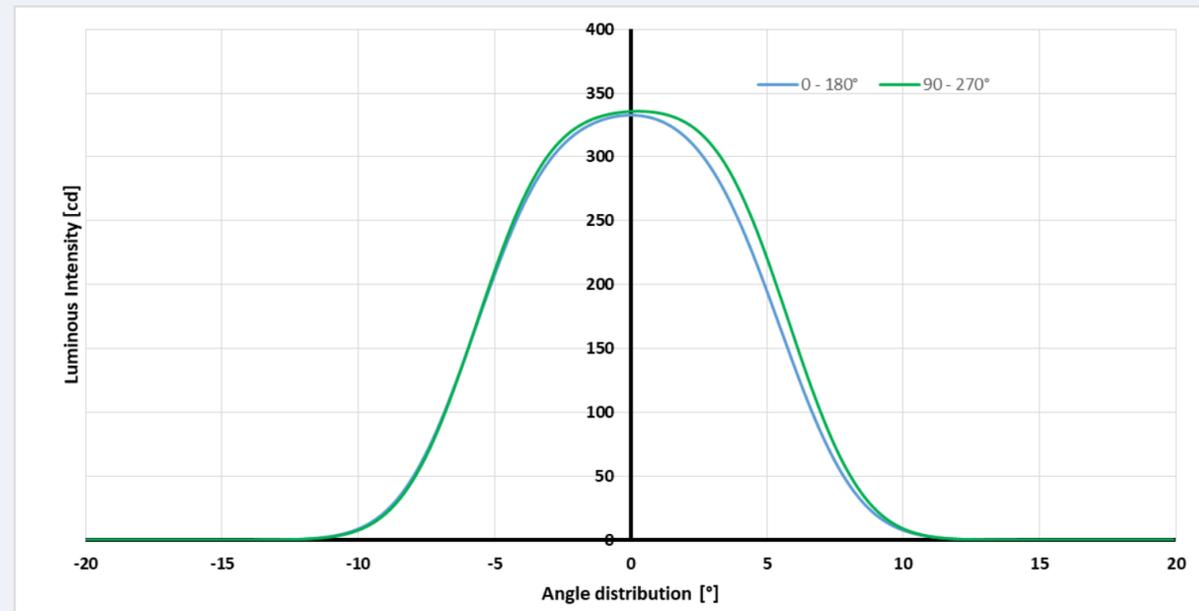
Glass: LIBA or alternative (nd = 1,521)

A413 1206 – simulation results

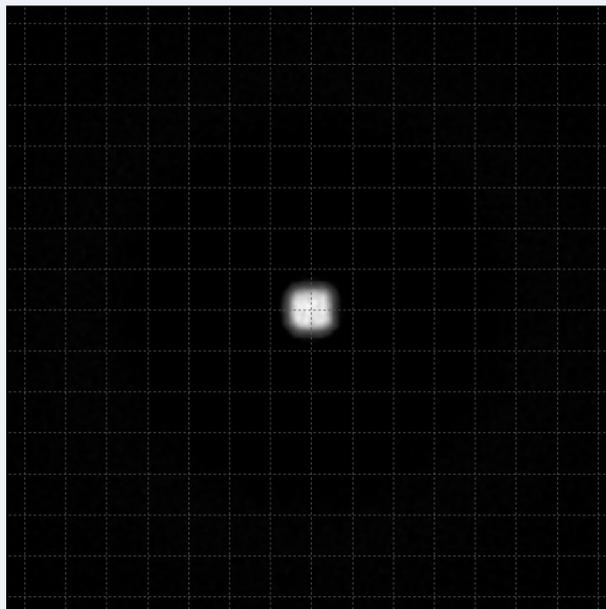
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

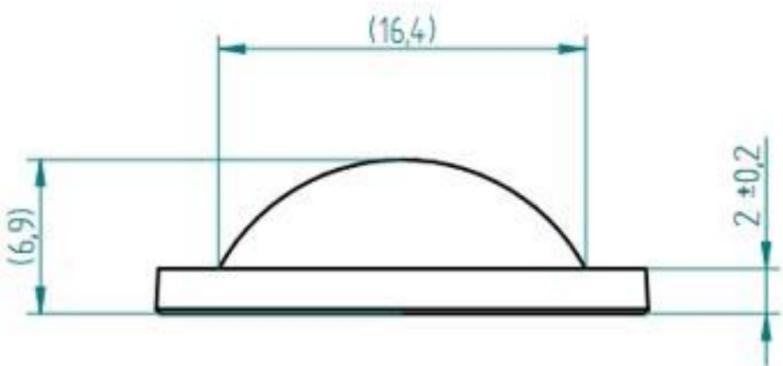
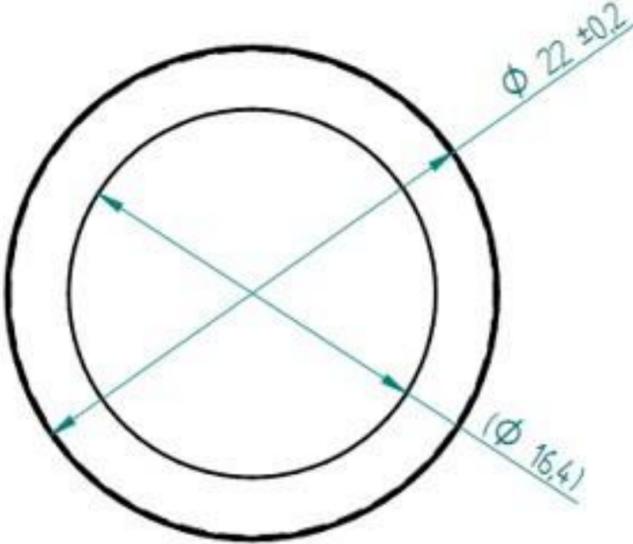


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	6
FWHM C90 [°]	6

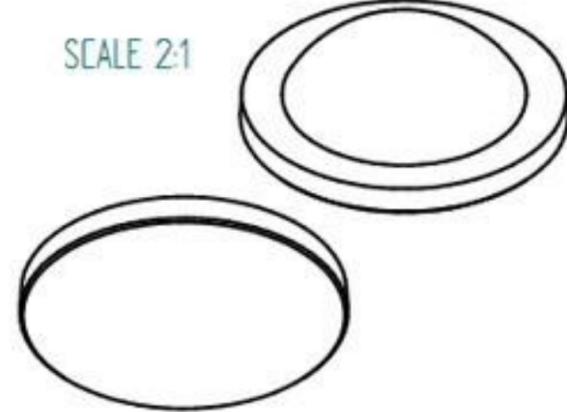
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A501 2207

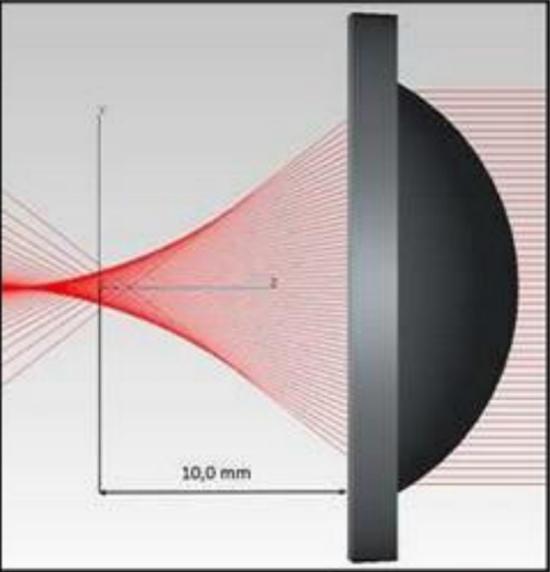
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 2:1



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



DRAWN	krutky	DATE	15/15/22
CHECKED			
ENG APPR			
MR APPR			

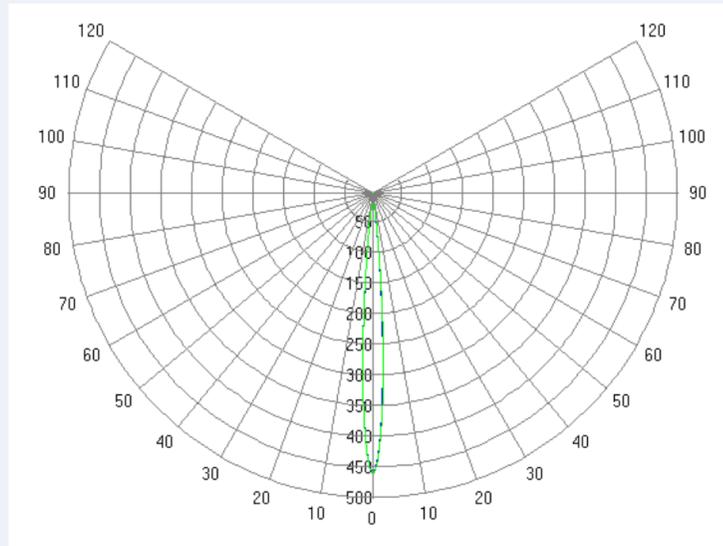


A501 2207

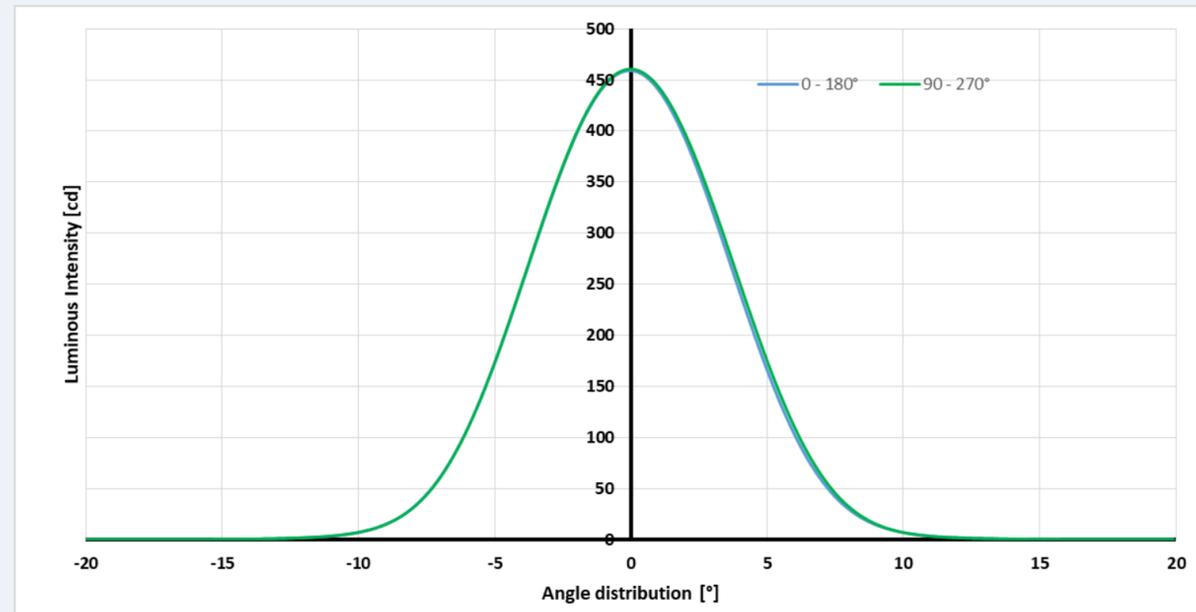
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	SIZE	DIN A4	SHEET 1 OF 1
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	SCALE	WEIGHT	3 g

A501 2207 – simulation results

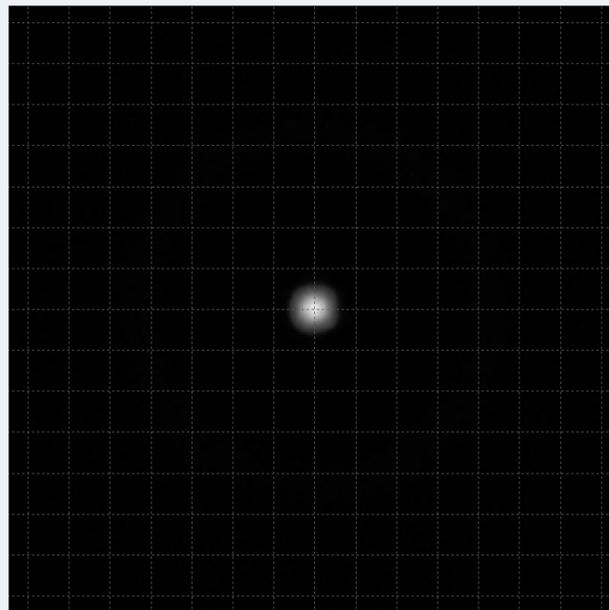
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

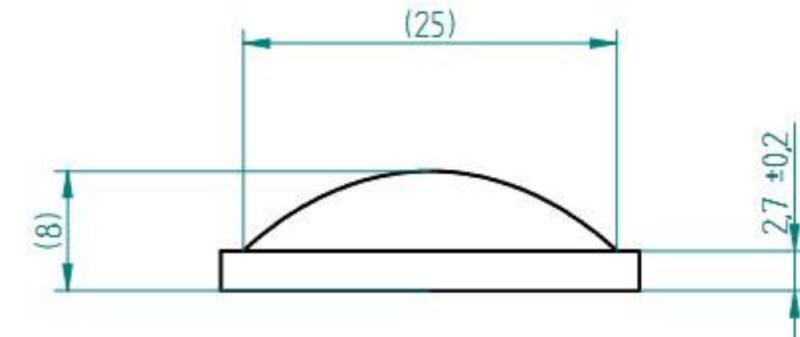
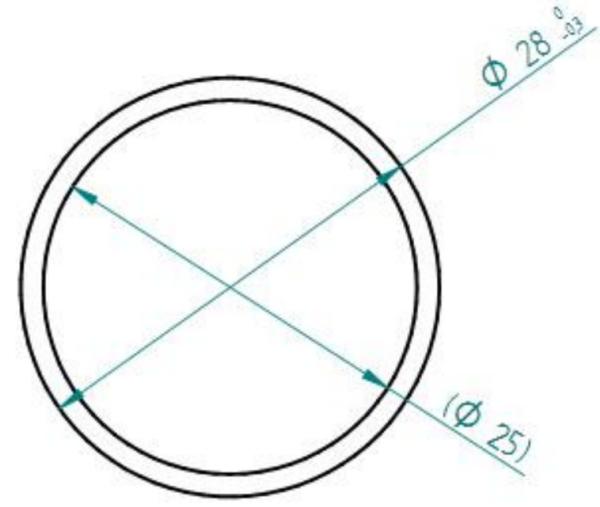


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	8,5
FWHM C ₉₀ [°]	8,5

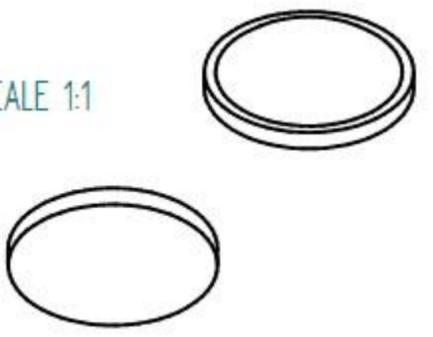
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

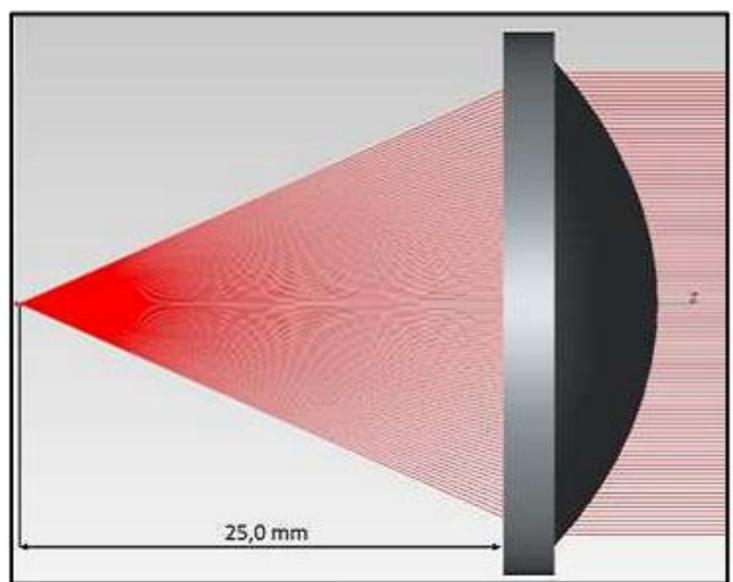
A581 2808

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:1



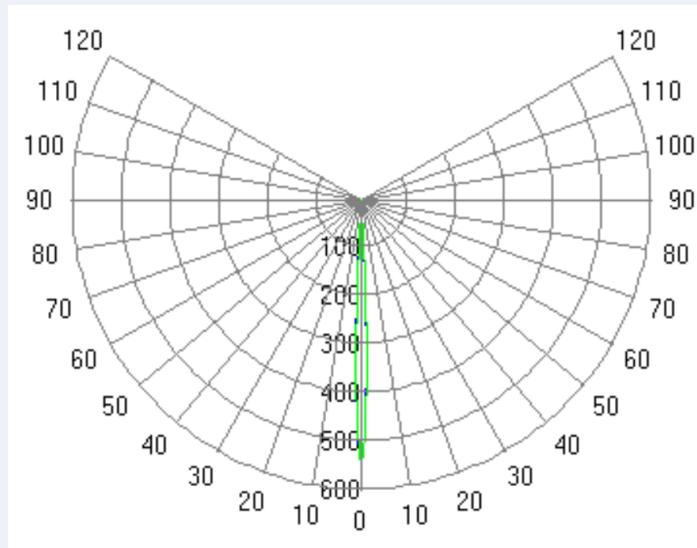


DRAWN	krutsky	DATE	05/29/20	 <p style="font-size: 1.2em; margin: 0;">A581 2808</p>															
CHECKED																			
ENG APPR																			
MGR APPR																			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SIZE</td> <td style="width: 40%;">DWG NO</td> <td style="width: 50%;">REV</td> </tr> <tr> <td>A4</td> <td> </td> <td> </td> </tr> <tr> <td colspan="3">FILE NAME: A581_ema11.dwg</td> </tr> <tr> <td>SCALE</td> <td>WEIGHT</td> <td>SHEET 1 OF 1</td> </tr> <tr> <td> </td> <td>8 g</td> <td> </td> </tr> </table>	SIZE	DWG NO	REV	A4			FILE NAME: A581_ema11.dwg			SCALE	WEIGHT	SHEET 1 OF 1		8 g	
SIZE	DWG NO	REV																	
A4																			
FILE NAME: A581_ema11.dwg																			
SCALE	WEIGHT	SHEET 1 OF 1																	
	8 g																		

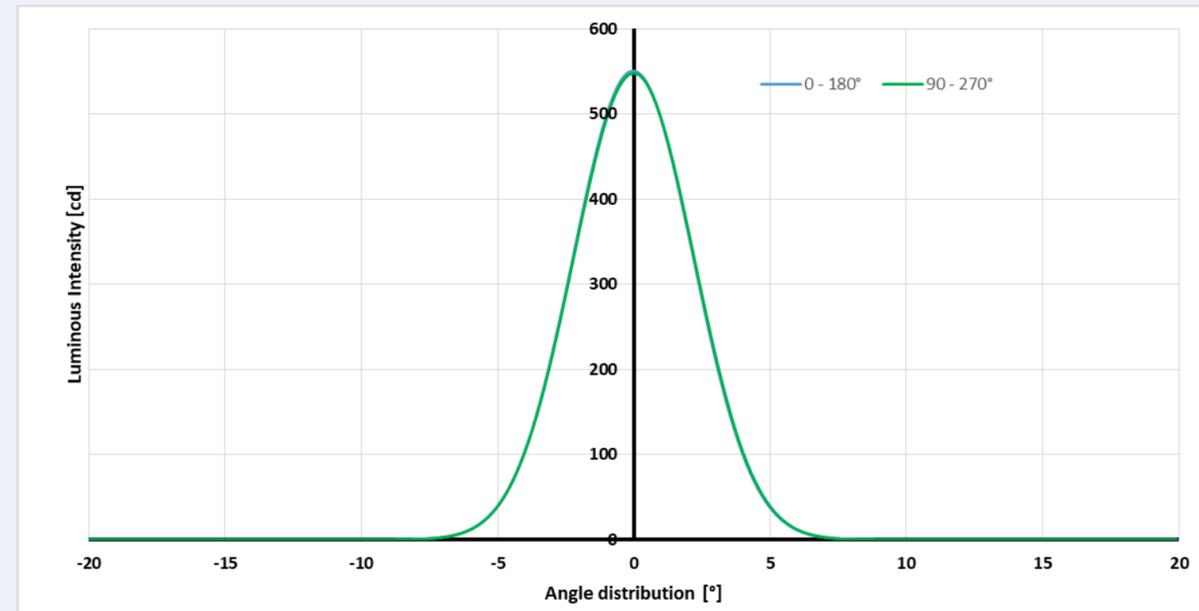
Glass: LIBA or alternative (nd = 1,521)

A581 2808 – simulation results

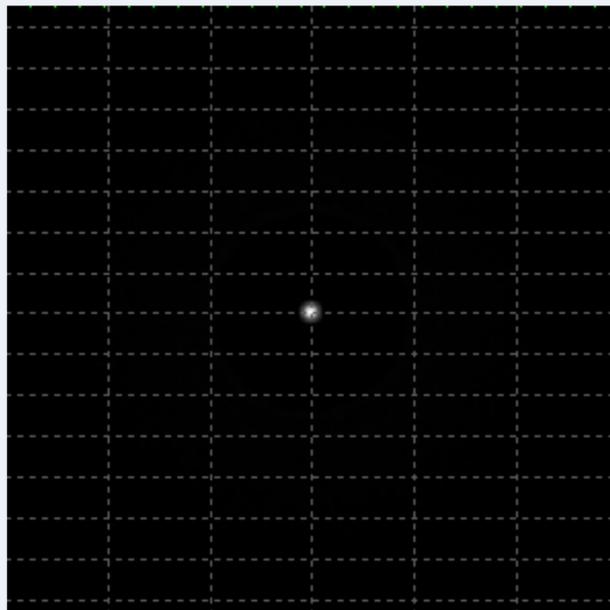
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

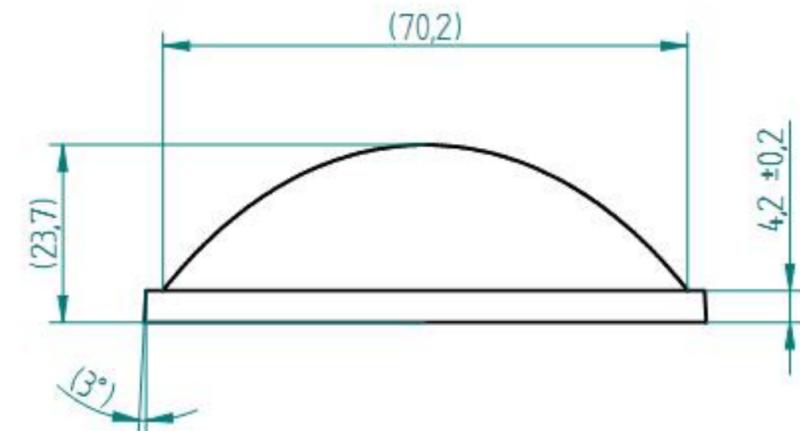
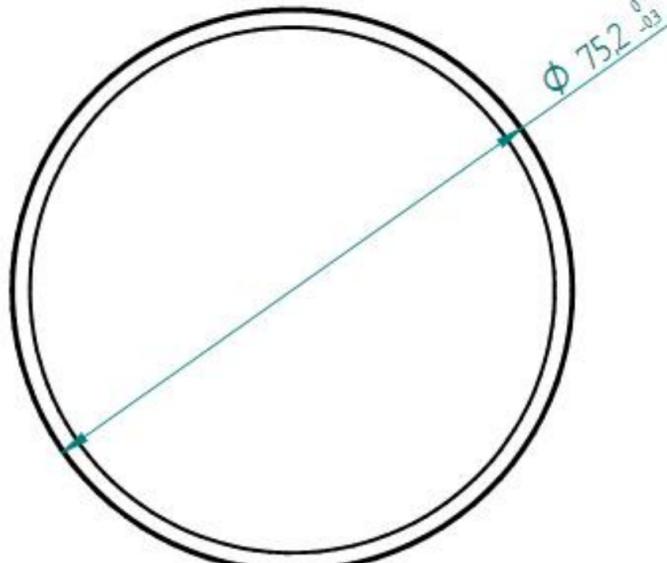


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

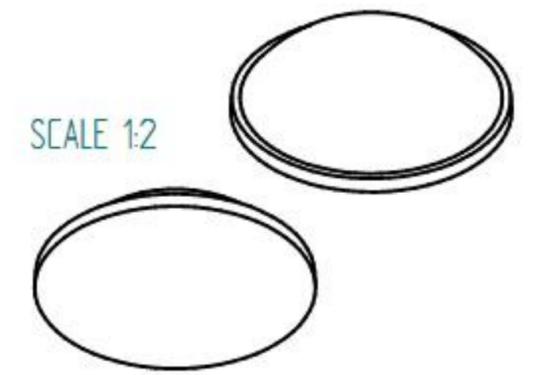
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A582 7522

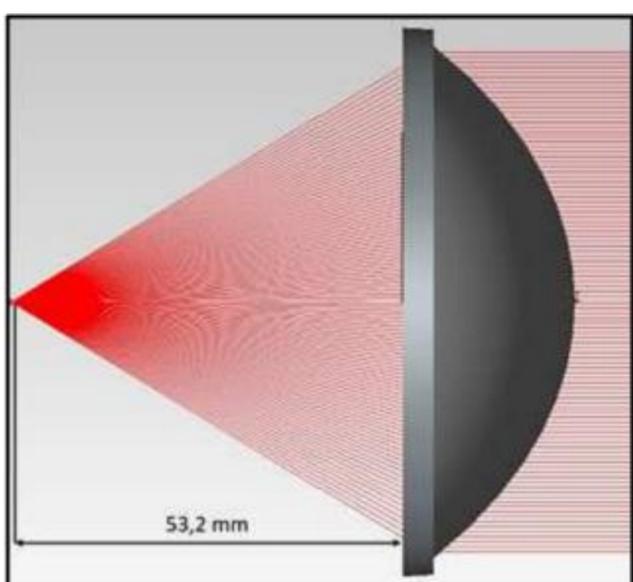
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:2



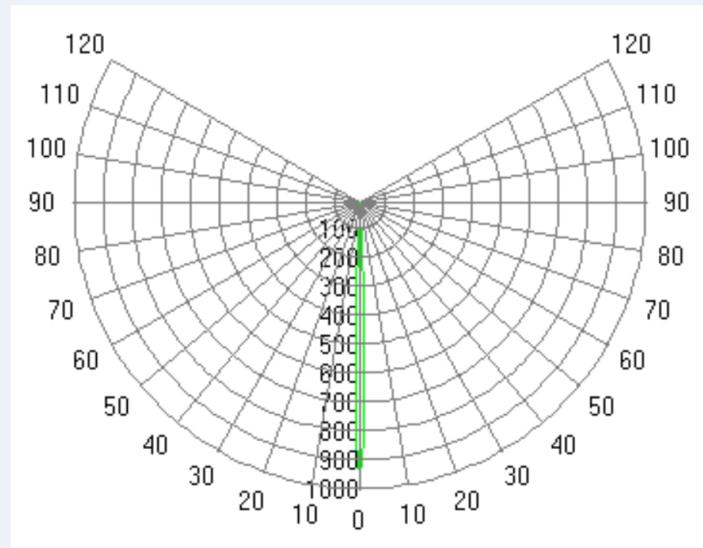
Glass: LIBA or alternative (nd = 1,521)



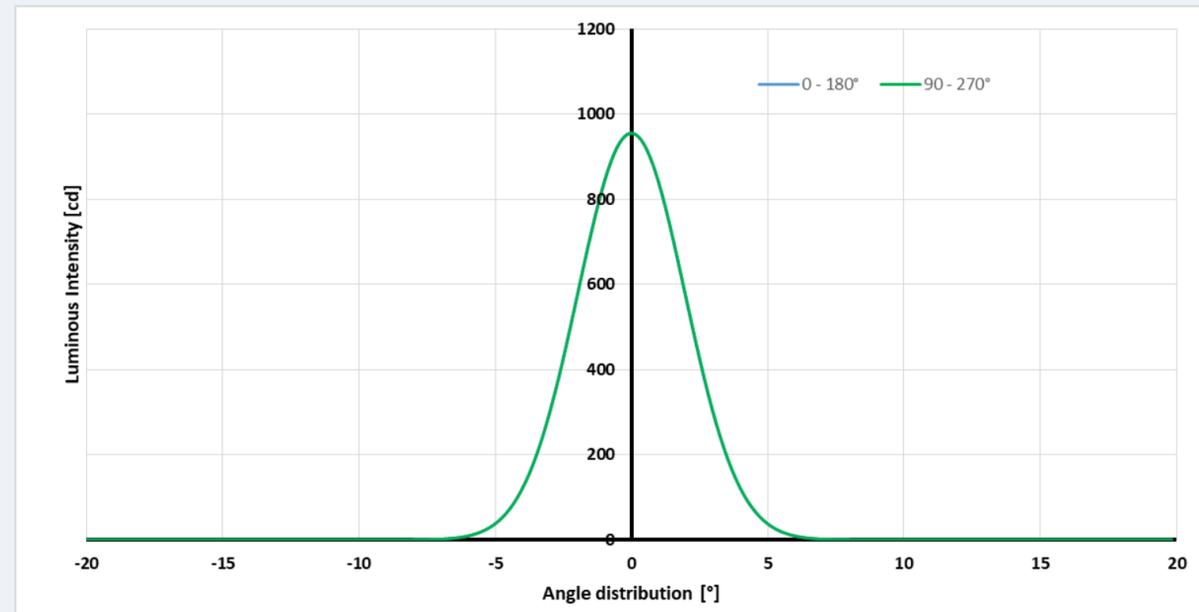
DRAWN	krutsky	DATE	05/29/20	 <p>A582 7522</p>															
CHECKED																			
ENG APPR																			
MGR APPR																			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">SIZE</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: A582_sml.dxf</td> </tr> <tr> <td style="font-size: x-small;">SCALE</td> <td style="font-size: x-small;">WEIGHT</td> <td style="font-size: x-small;">SHEET 1 OF 1</td> </tr> <tr> <td> </td> <td>150 g</td> <td> </td> </tr> </table>	SIZE	DWG NO	REV	A4			FILE NAME: A582_sml.dxf			SCALE	WEIGHT	SHEET 1 OF 1		150 g	
SIZE	DWG NO	REV																	
A4																			
FILE NAME: A582_sml.dxf																			
SCALE	WEIGHT	SHEET 1 OF 1																	
	150 g																		

A582 7522 – simulation results

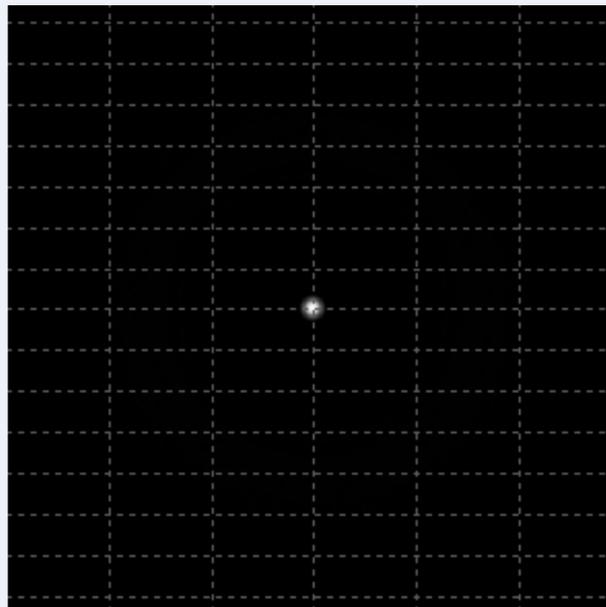
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

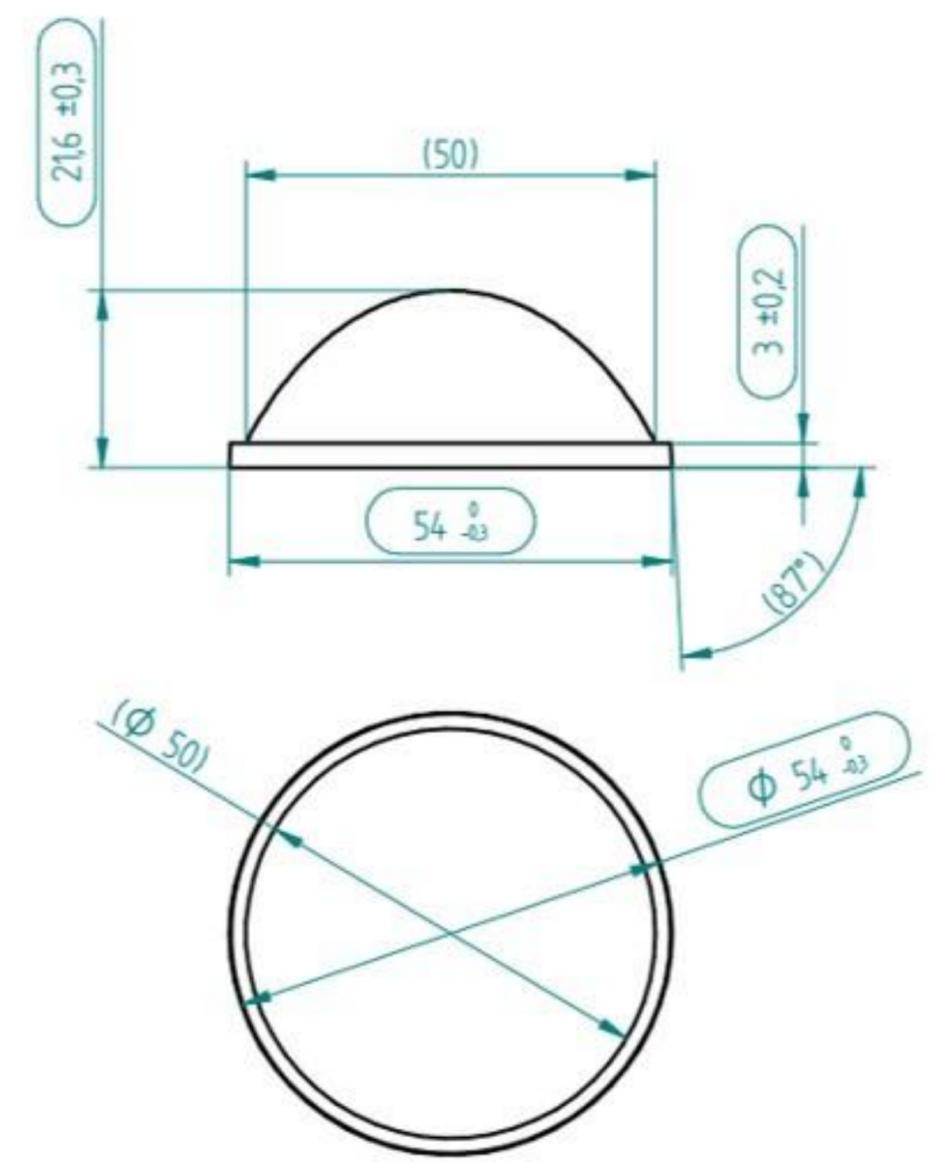


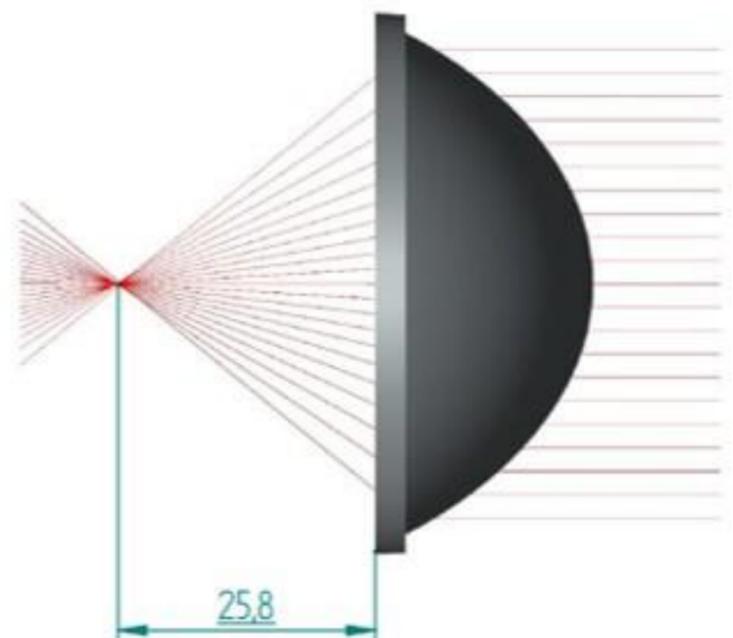
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	5

* 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



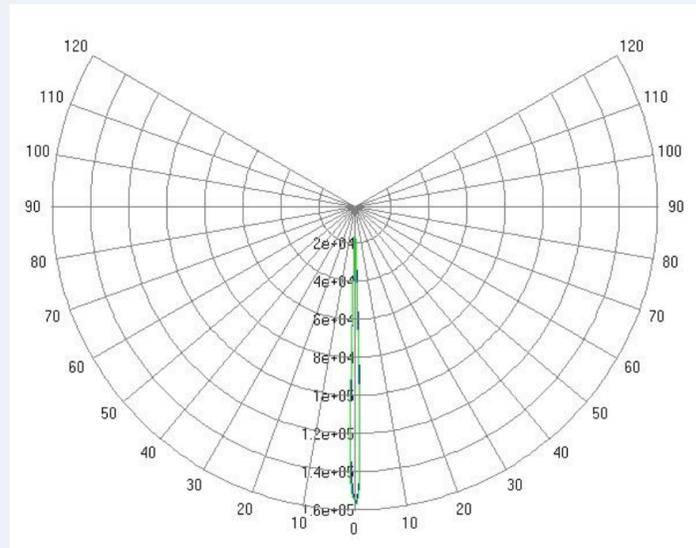


material : GLASS nd = 1.520

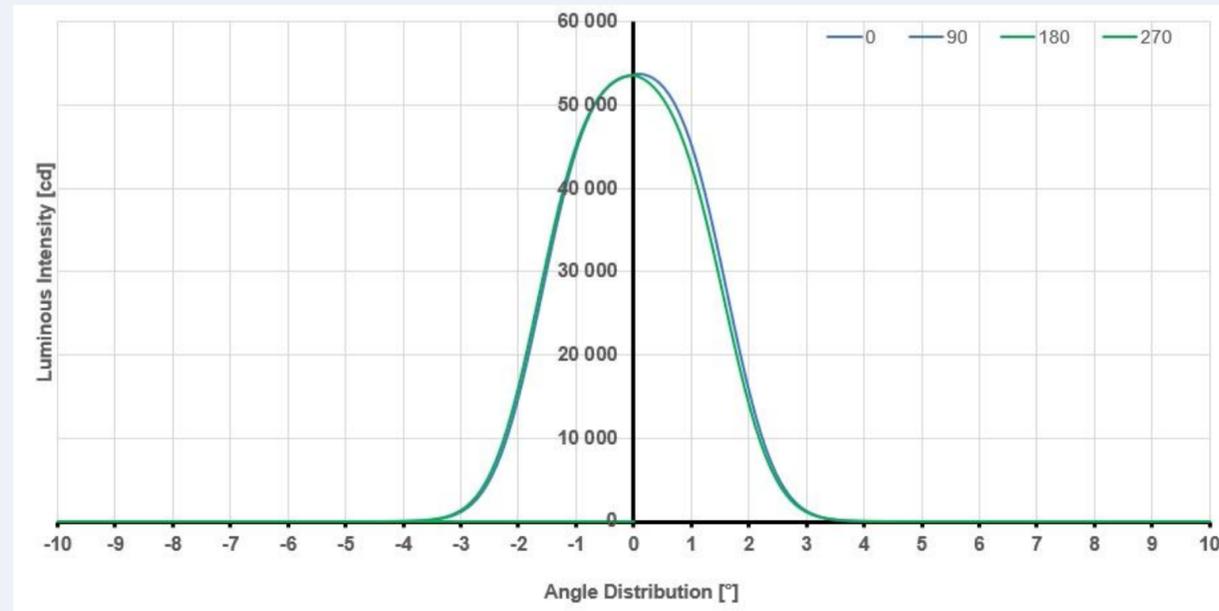
	NAME	DATE			
DRAWN	jkocarek	10/20/23			
CHECKED					
ENG APPR					
MGR APPR			TITLE aspheric lens		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±XX° 2 PL ±XXX 3 PL ±XXXX			SIZE	DWG NO	REV
			A4	A636 5422	
			FILE NAME: A636 5422.dft		
SCALE:		WEIGHT:	SHEET 1 OF 1		

A636 5422 – simulation results

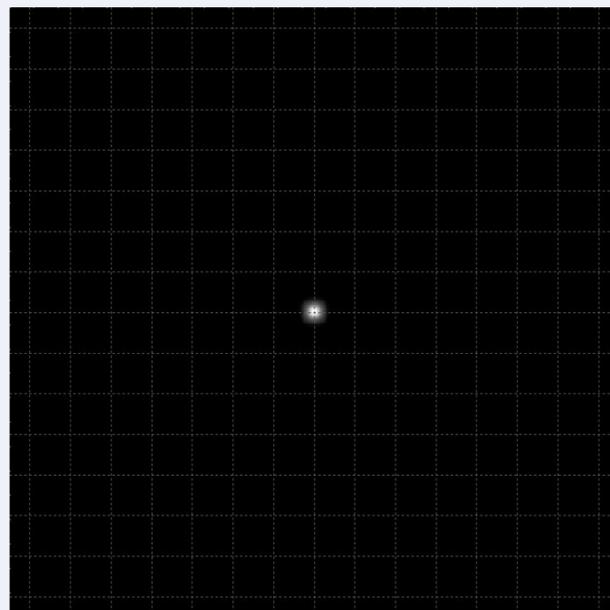
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

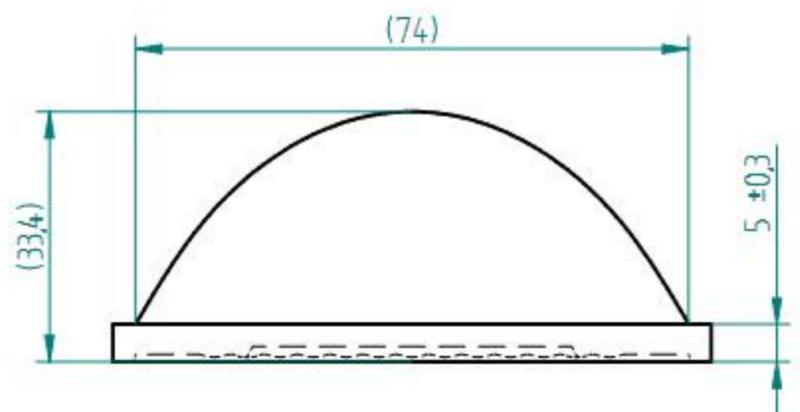
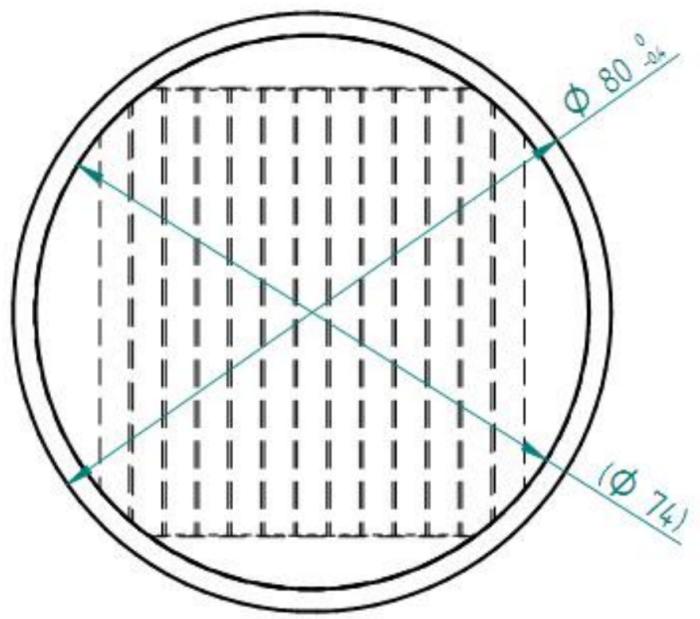


LED used for simulation	XP-G4
Luminous flux of LED [lm]	357
FWHM Co [°]	3
FWHM C90 [°]	3

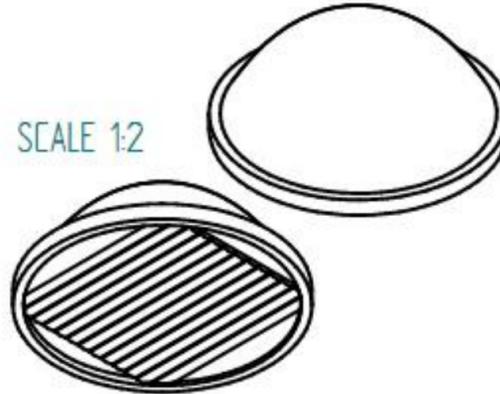
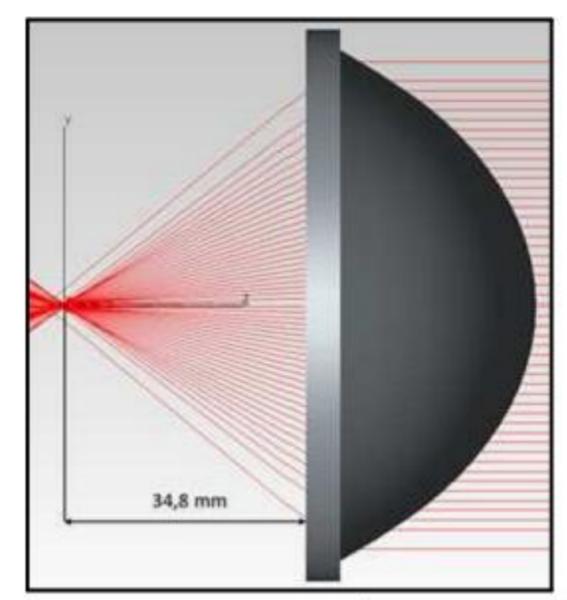
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A650 8034

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SCALE 1:2

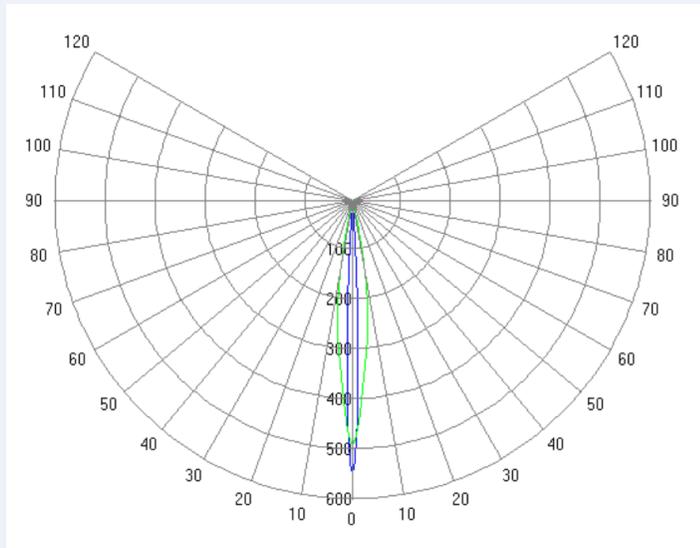



Glass: LIBA or alternative (nd = 1,521)

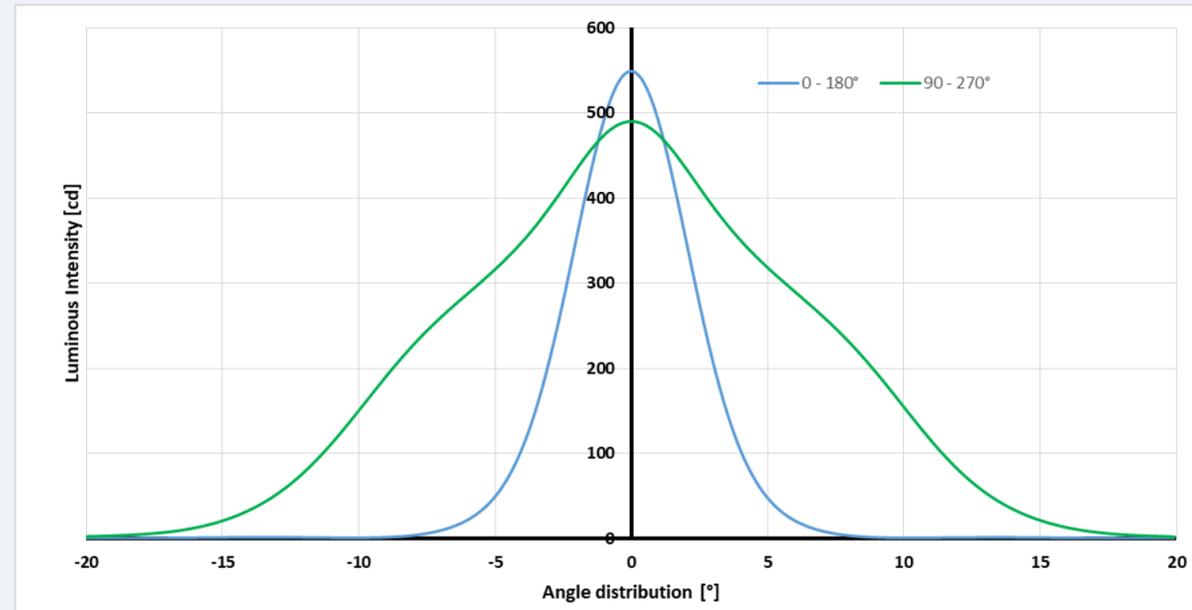
DRAWN	krutsky	DATE	05/29/20	 A650 8034												
CHECKED																
ENG APPR																
MER APPR																
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SIZE</td> <td style="width: 40%;">DWG NO</td> <td style="width: 50%;">REV</td> </tr> <tr> <td>A4</td> <td> </td> <td> </td> </tr> <tr> <td colspan="3">FILE NAME: A650_small.dwg</td> </tr> <tr> <td>SCALE</td> <td>WEIGHT: 223 g</td> <td>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

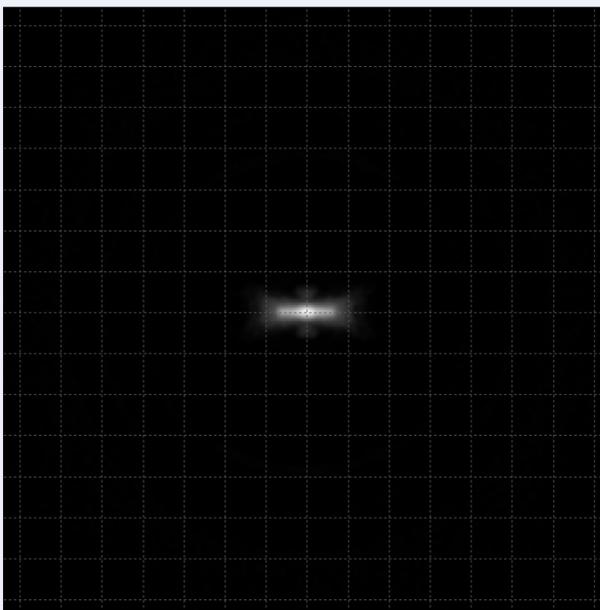
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 3x3 m at 1m

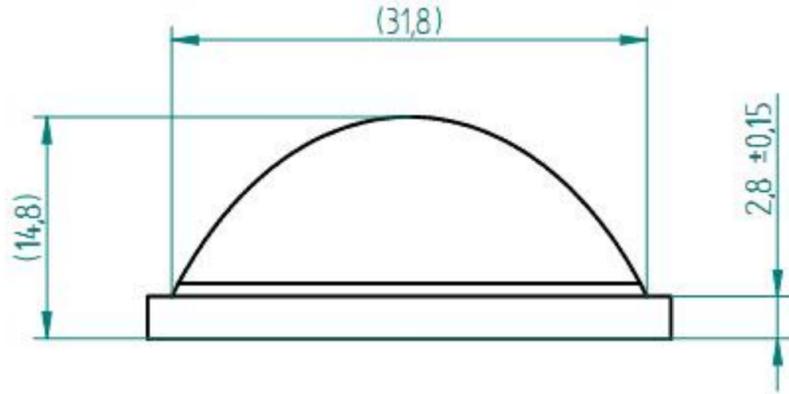


LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	5
FWHM C90 [°]	15

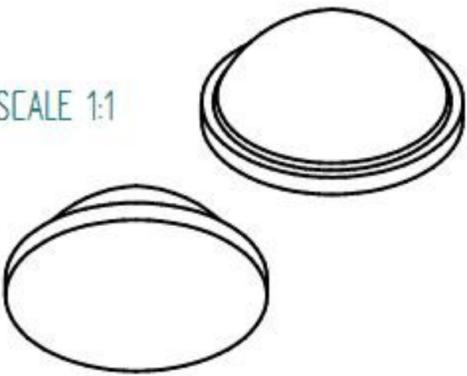
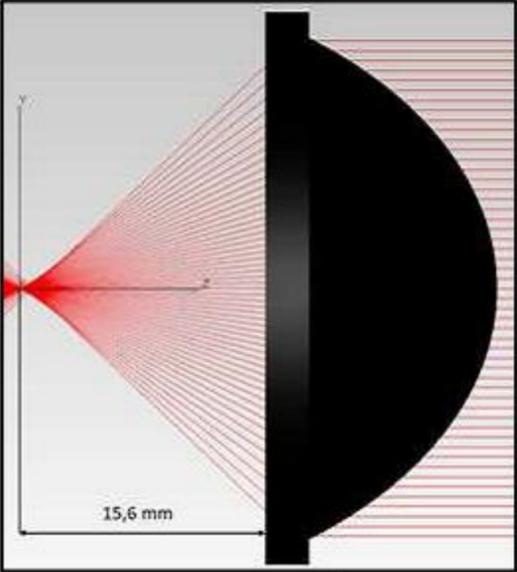
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A837 3515

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



SCALE 1:1

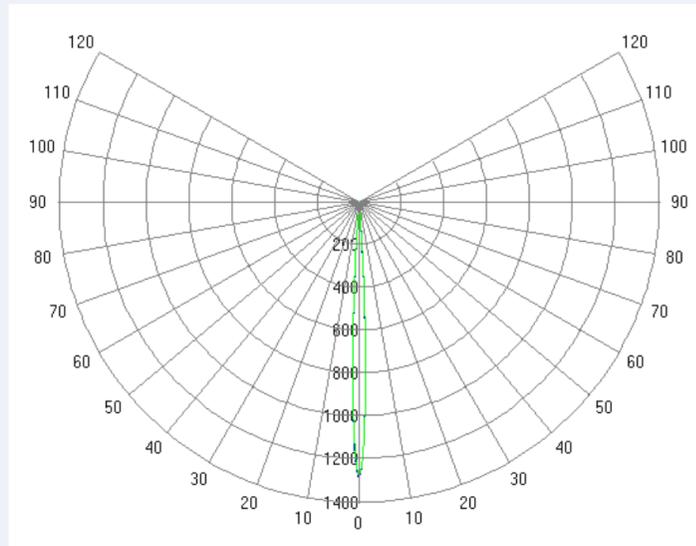



Glass: LIBA or alternative (nd = 1,521)

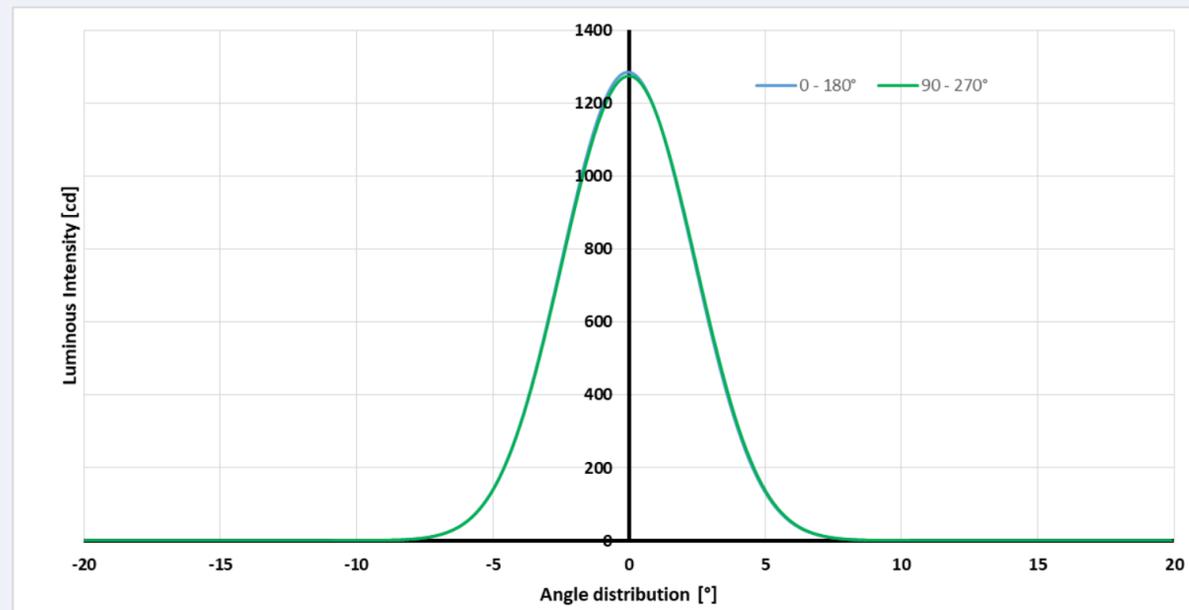
NAME	DATE	ECOGLOSS	
DRAWN: kruzsky	05/28/20	A837 3515	
CHECKED			
ENG APPR			
MGR APPR			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		SIZE: A4	REV:
		FILE NAME: A837_small.dft	
		SCALE:	WEIGHT: 20 g SHEET 1 OF 1

A837 3515 – simulation results

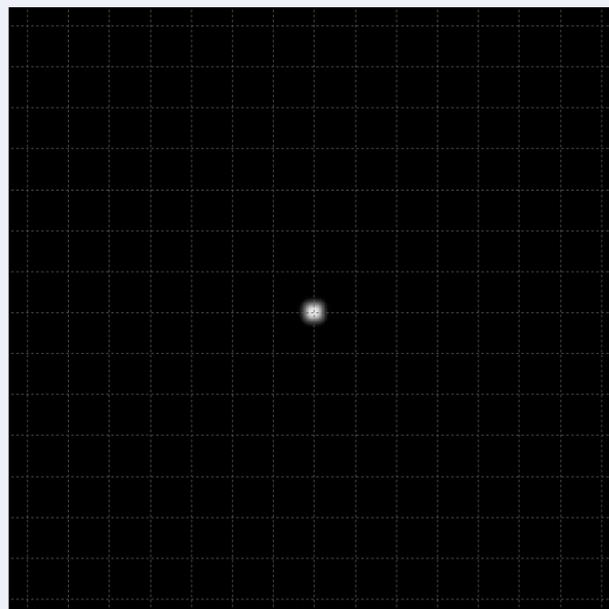
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

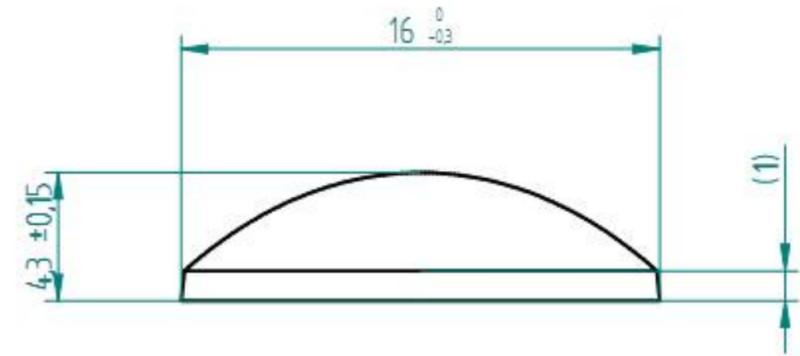


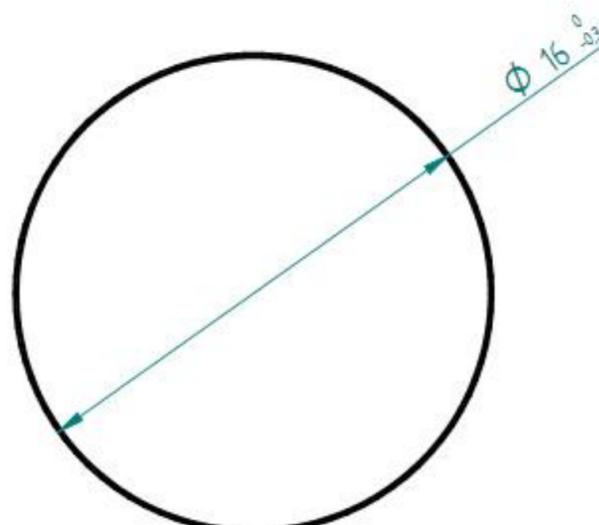
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM Co [°]	6
FWHM C90 [°]	6

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

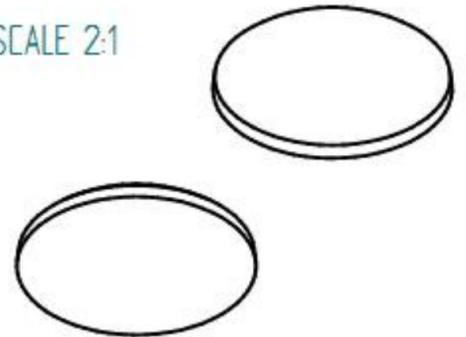
A838 1605

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

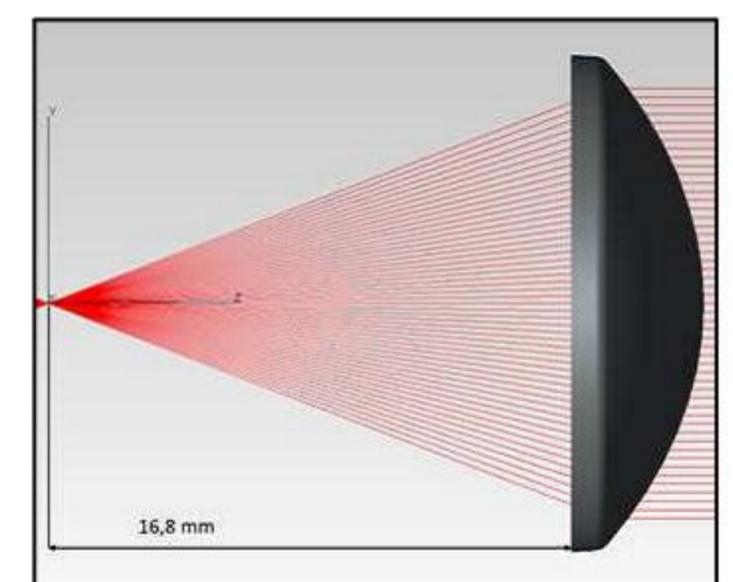




SCALE 2:1



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

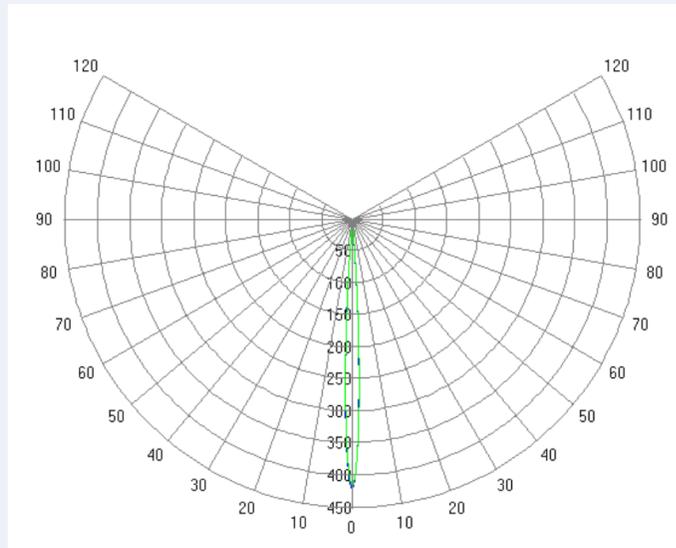


DRAWN	krutsky	DATE	05/28/20	 A838 1605															
CHECKED																			
ENG APPR																			
MGR APPR																			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SIZE</td> <td>DWG NO</td> <td>REV</td> </tr> <tr> <td>A4</td> <td> </td> <td> </td> </tr> <tr> <td colspan="3">FILE NAME: A838_small.dft</td> </tr> <tr> <td>SCALE</td> <td>wEdT</td> <td>1 g</td> </tr> <tr> <td colspan="3" style="text-align: right;">SHEET 1 OF 1</td> </tr> </table>	SIZE	DWG NO	REV	A4			FILE NAME: A838_small.dft			SCALE	wEdT	1 g	SHEET 1 OF 1		
SIZE	DWG NO	REV																	
A4																			
FILE NAME: A838_small.dft																			
SCALE	wEdT	1 g																	
SHEET 1 OF 1																			

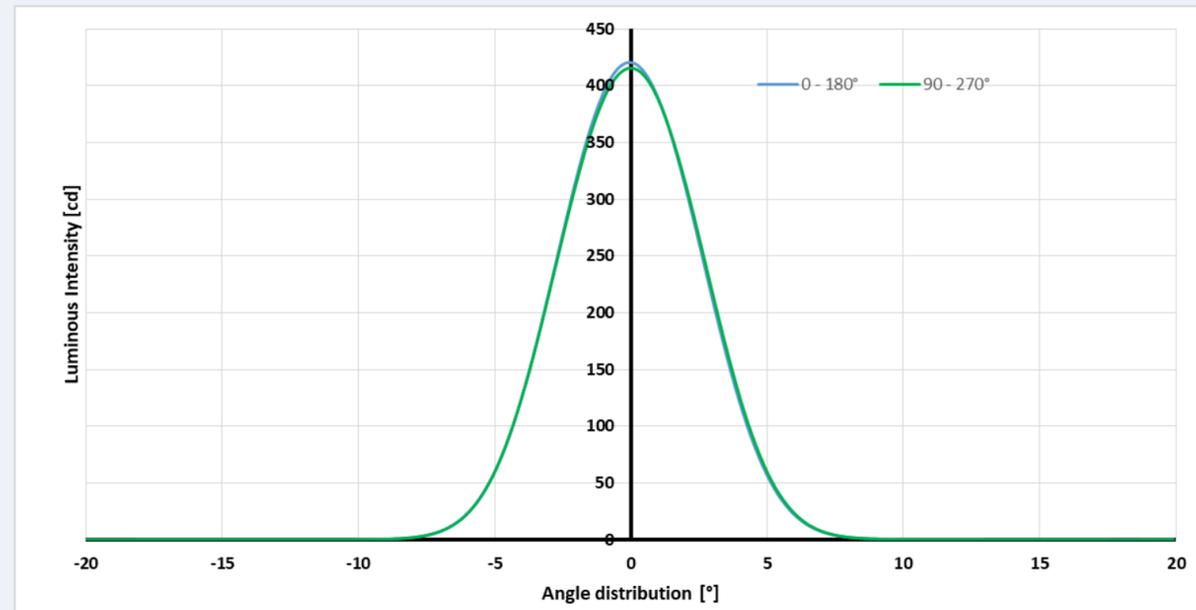
A838 1605 – simulation results



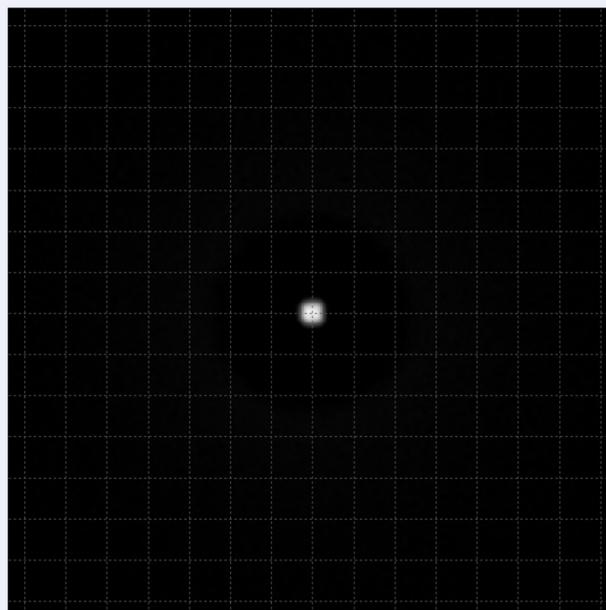
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m

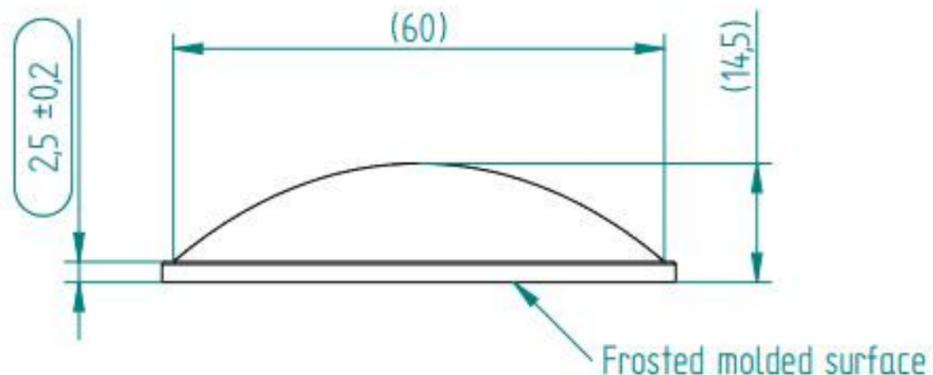
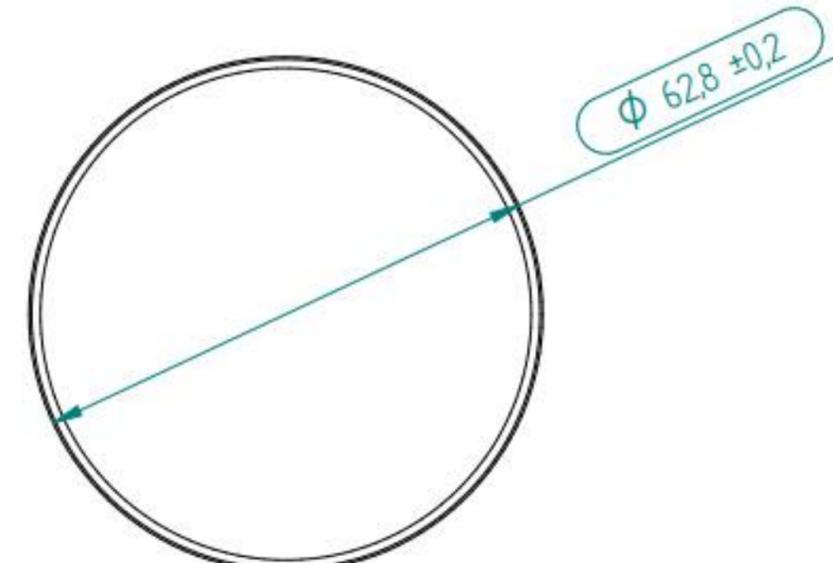


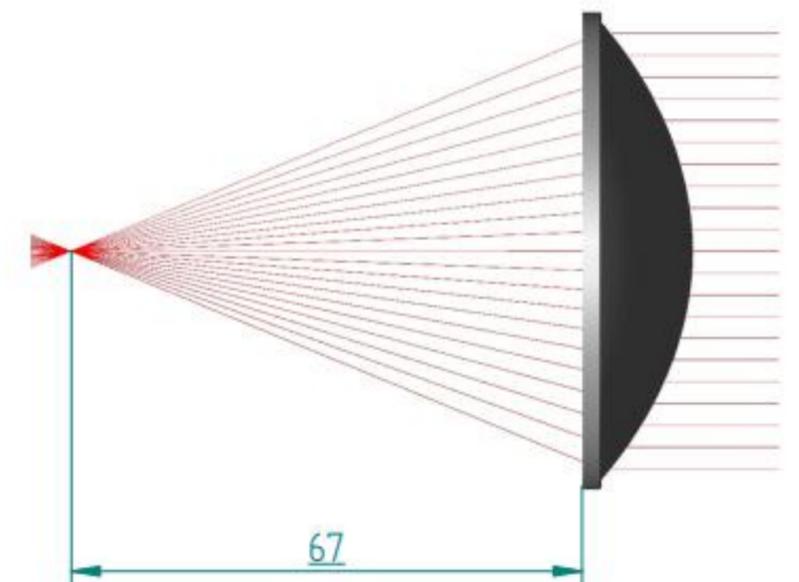
LED used for simulation	Cree XP-G
Luminous flux of LED [lm]	36
FWHM C ₀ [°]	6
FWHM C ₉₀ [°]	6

* 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

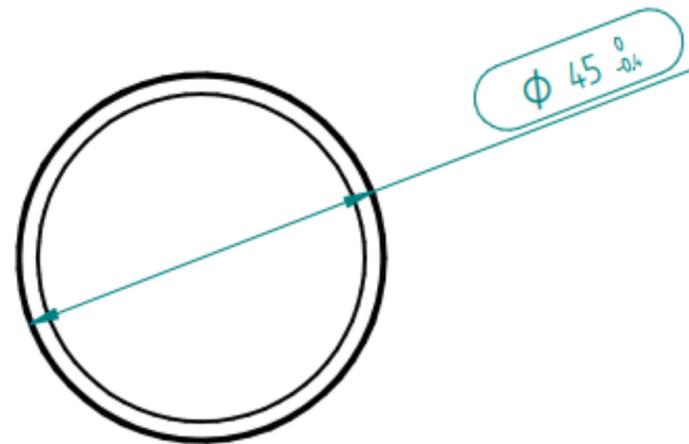
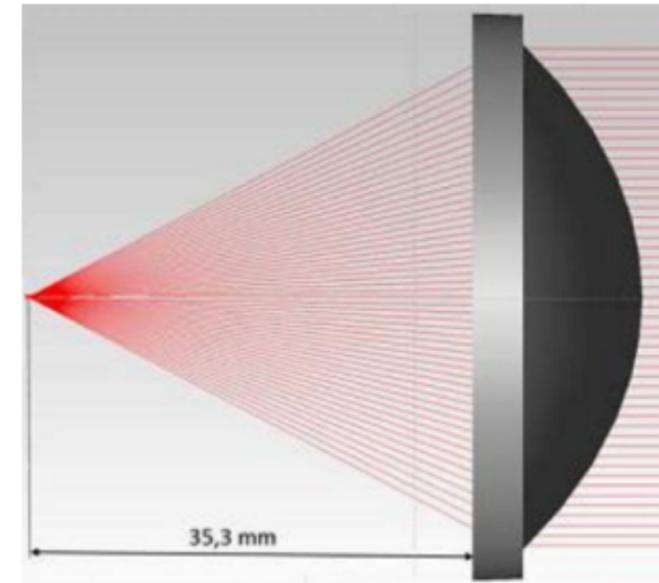
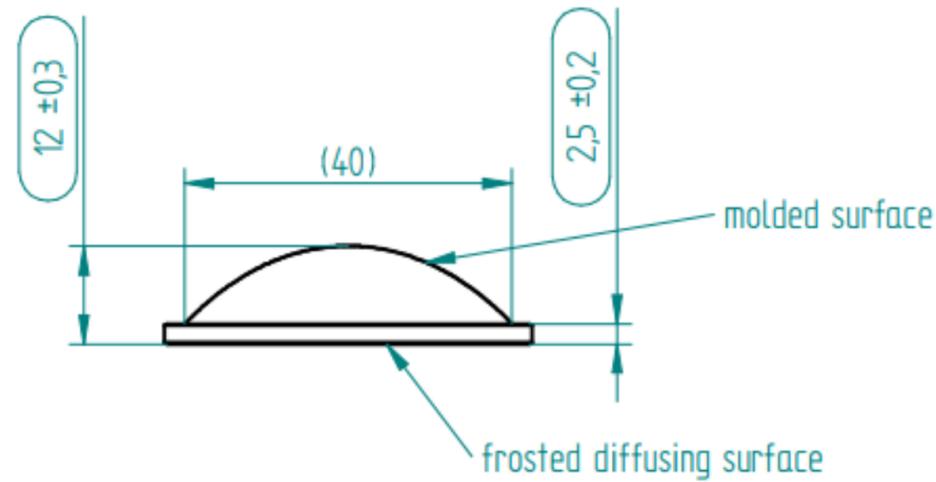


material : GLASS nd = 1,520

	NAME	DATE			
DRAWN	jkocarek	09/14/23			
CHECKED					
ENG APPR					
MGR APPR			TITLE Aspheric lens structured flat side		
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ±X.X° 2 PL ±X.XX 3 PL ±X.XXX</small>			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

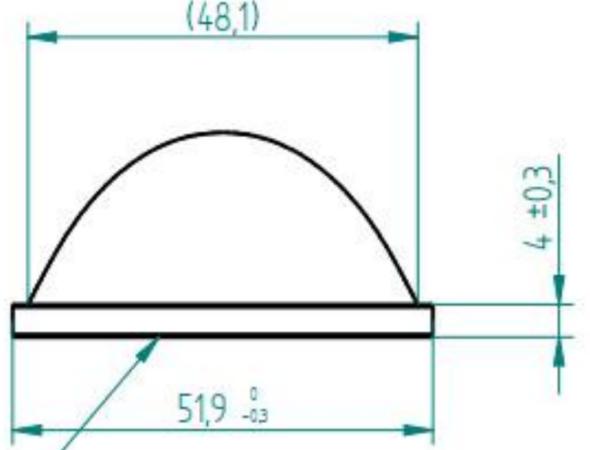


material : GLASS nd=1,520
mass: about 30g

	NAME	DATE			
DRAWN	jkocarek	03/13/23			
CHECKED			TITLE Aspheric lens D45BF35 frosted		
ENG APPR					
MGR APPR					
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

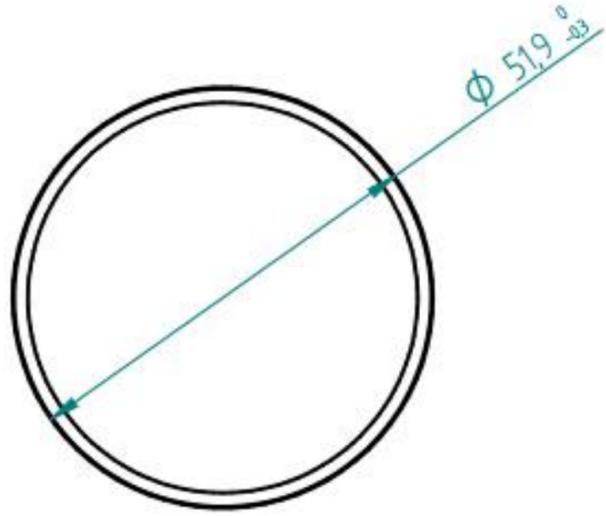


(48,1)

$4 \pm 0,3$

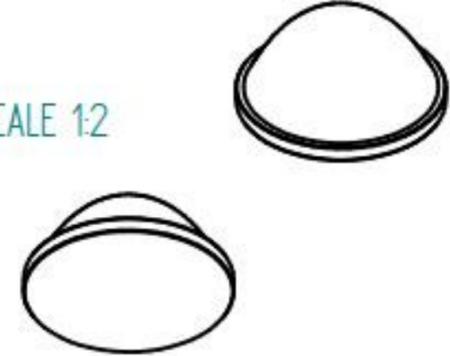
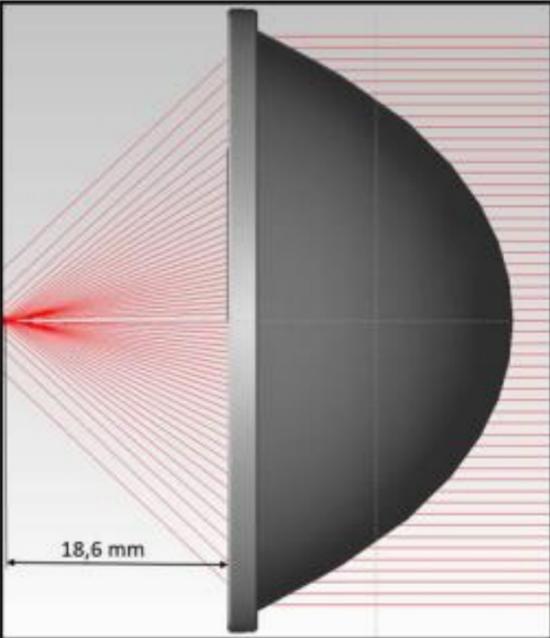
$51,9 \pm 0,3$

frosted surface



$\phi 51,9 \pm 0,3$

SCALE 1:2

18,6 mm

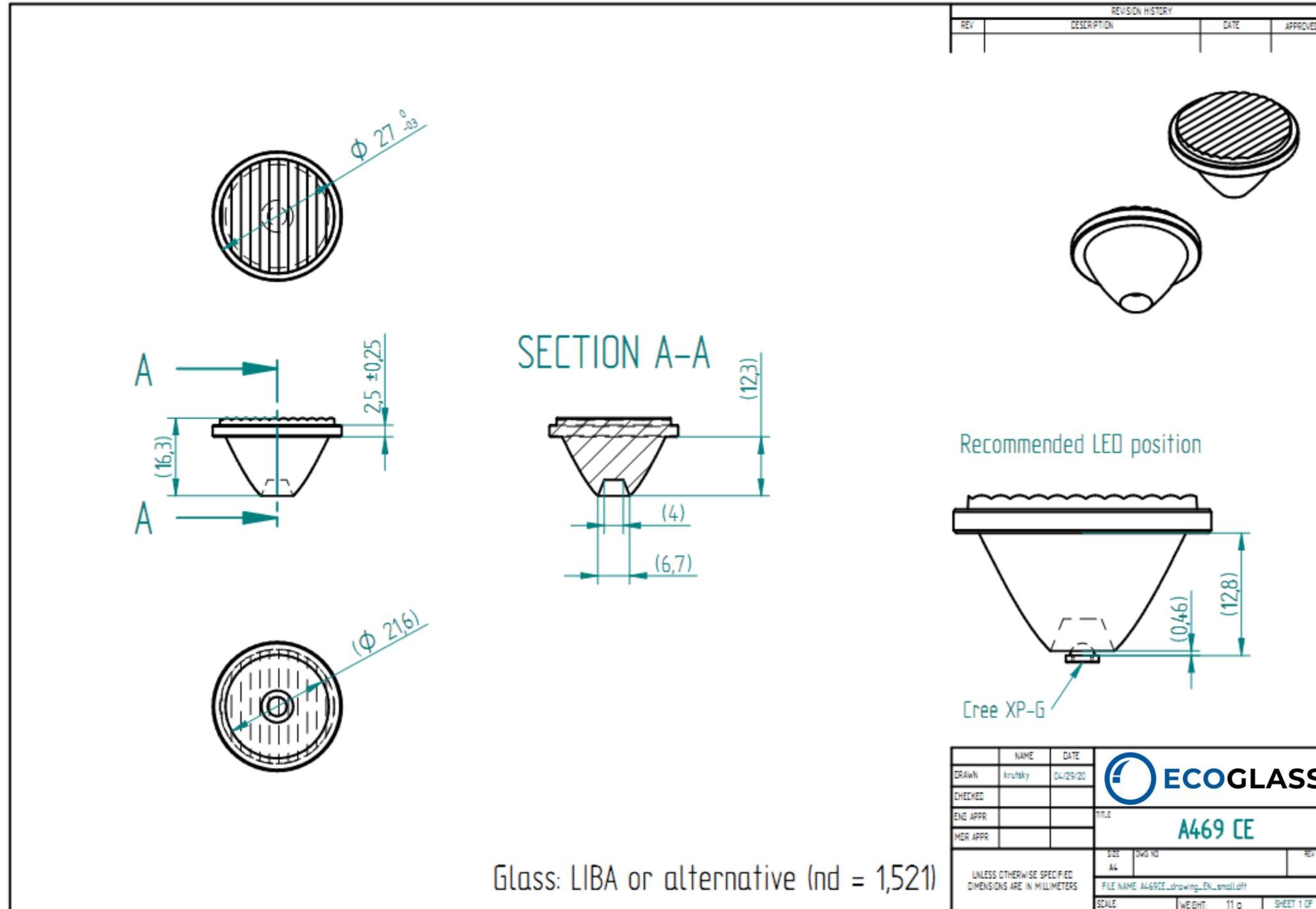
Glass: LIBA or alternative (nd = 1,521)

DRAWN	krutsky	DATE	07/16/23	 ECOGLOSS
CHECKED				
ENG APPR				
MGR APPR				
				TITLE
				A912 5225
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		SIZE	DWG NO	REV
		ALL		
		FILE NAME: A9125225.dwg		
		SCALE:	WEIGHT: 75 g	SHEET 1 OF 1

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

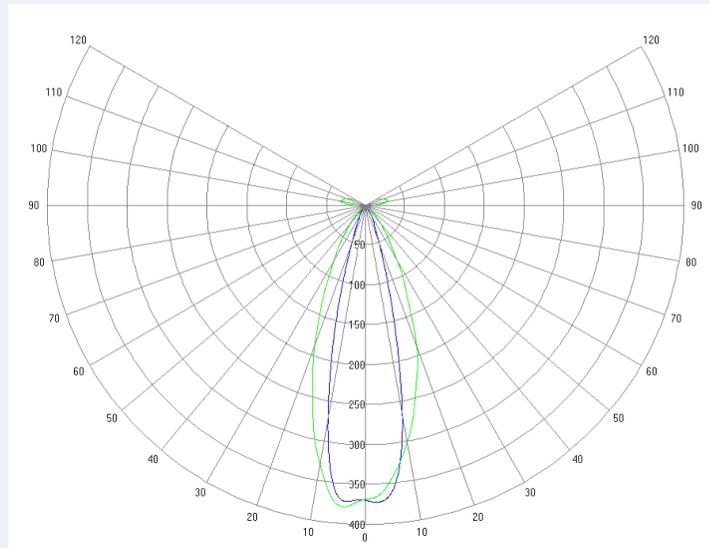


A469 CE

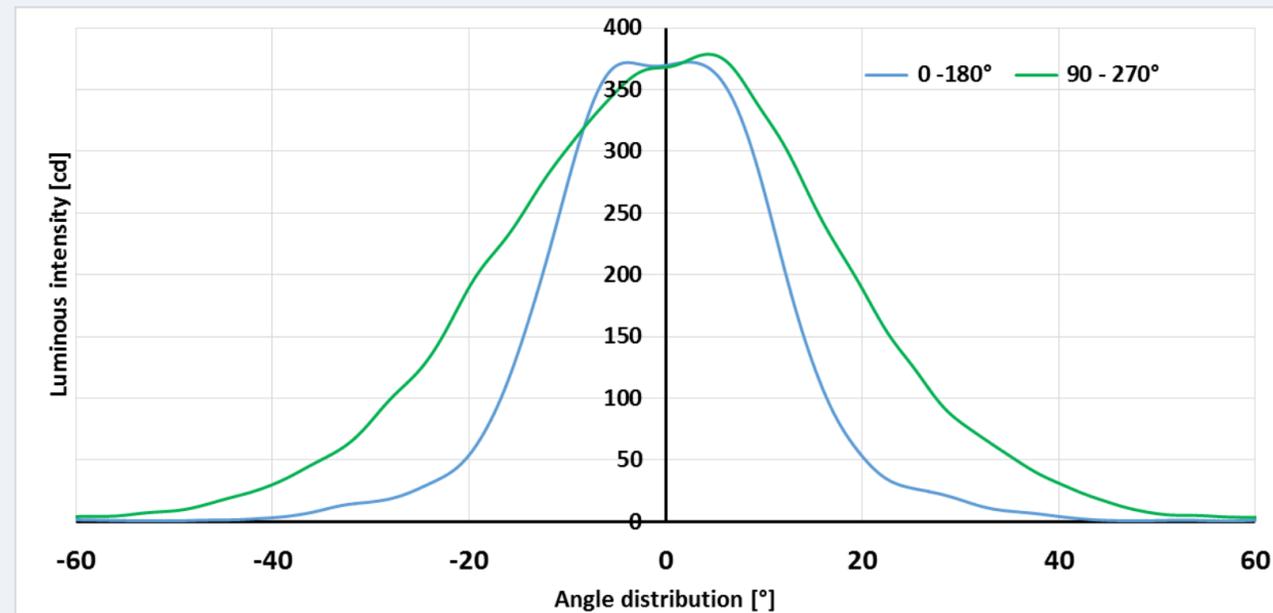


A46g CE- simulation results

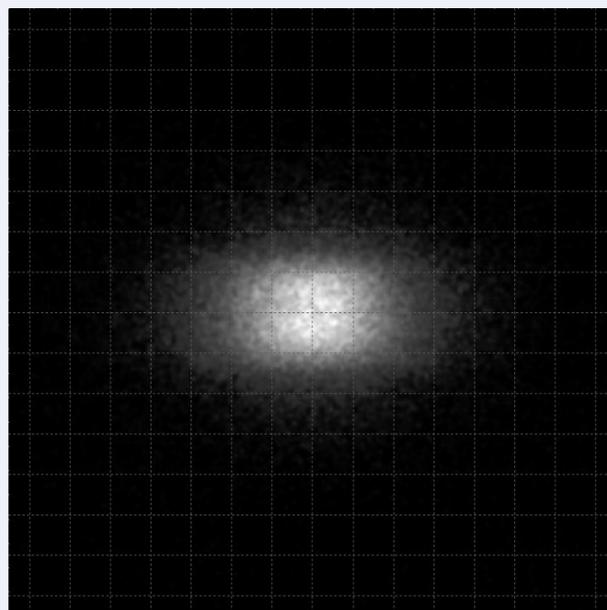
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



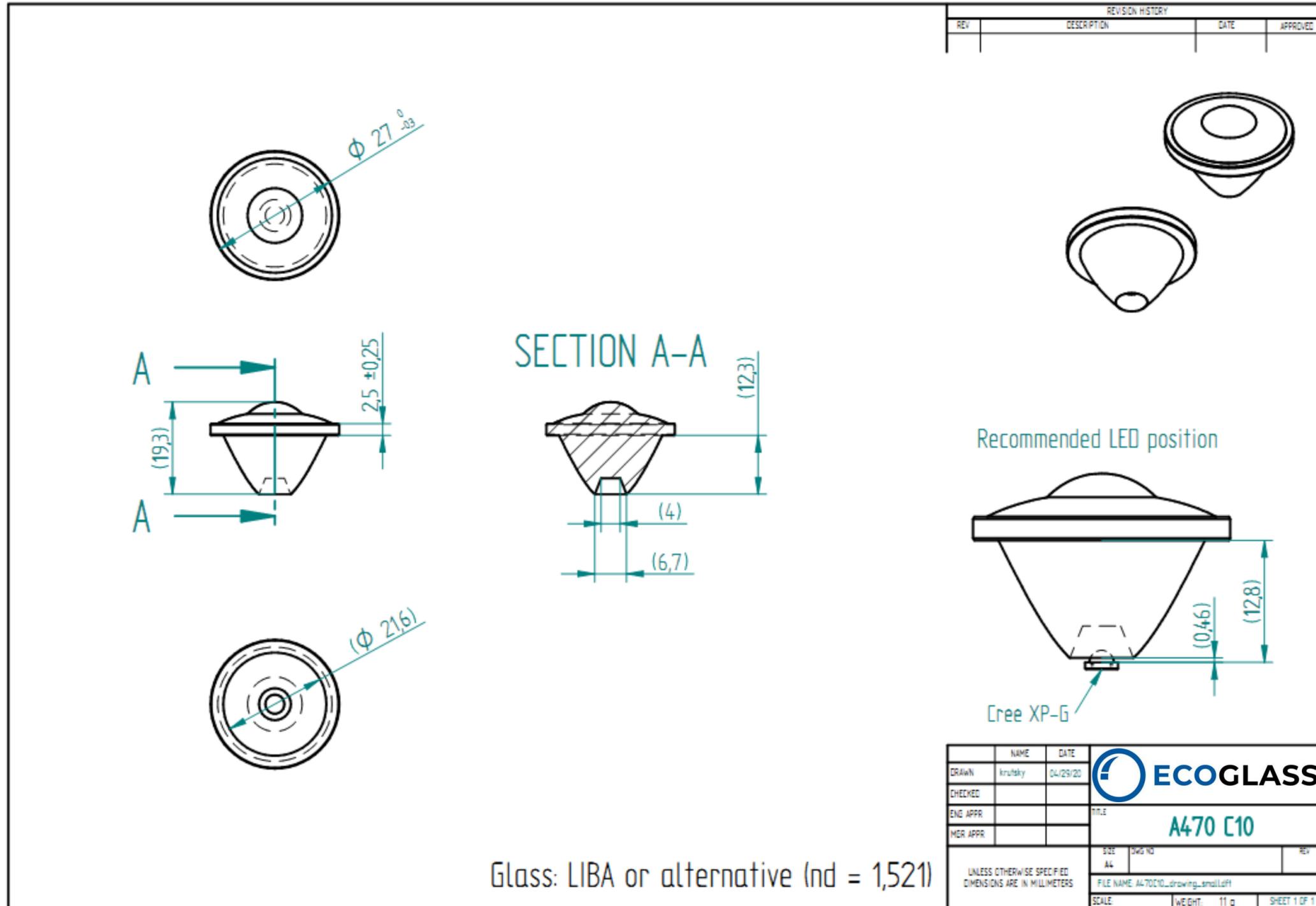
- Projection wall 3x3 m at 1m



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

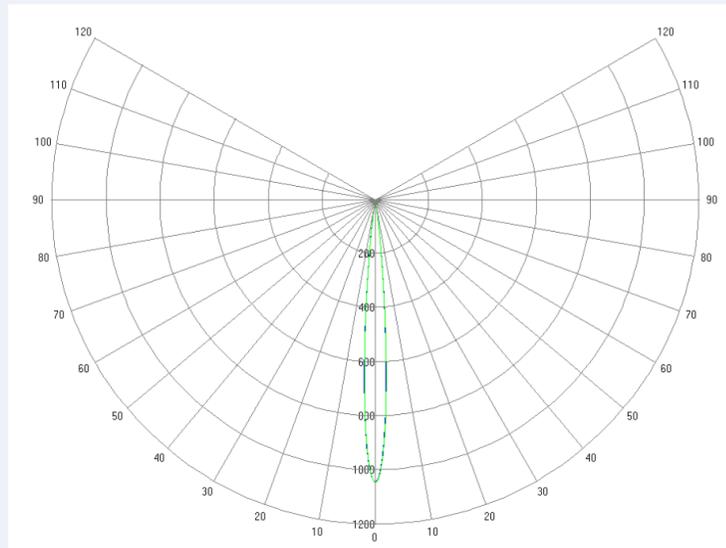
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A470 C10

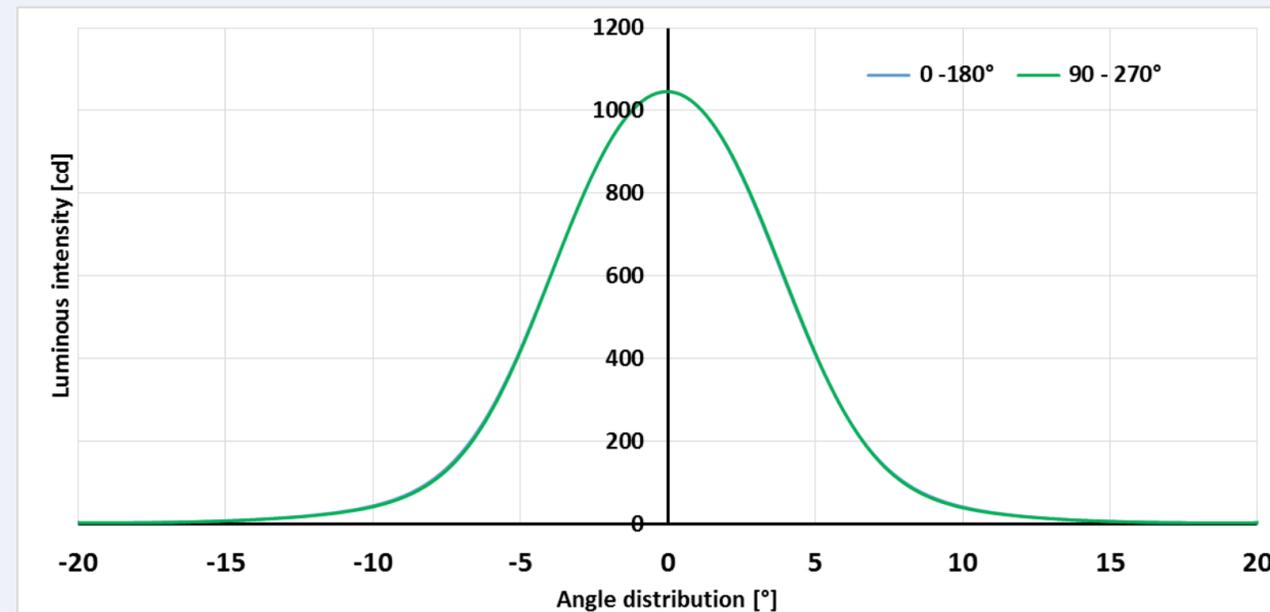


A470 C10- simulation results

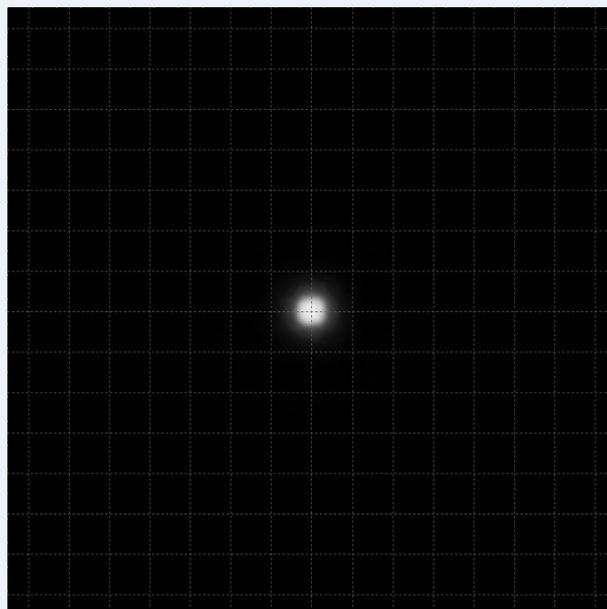
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



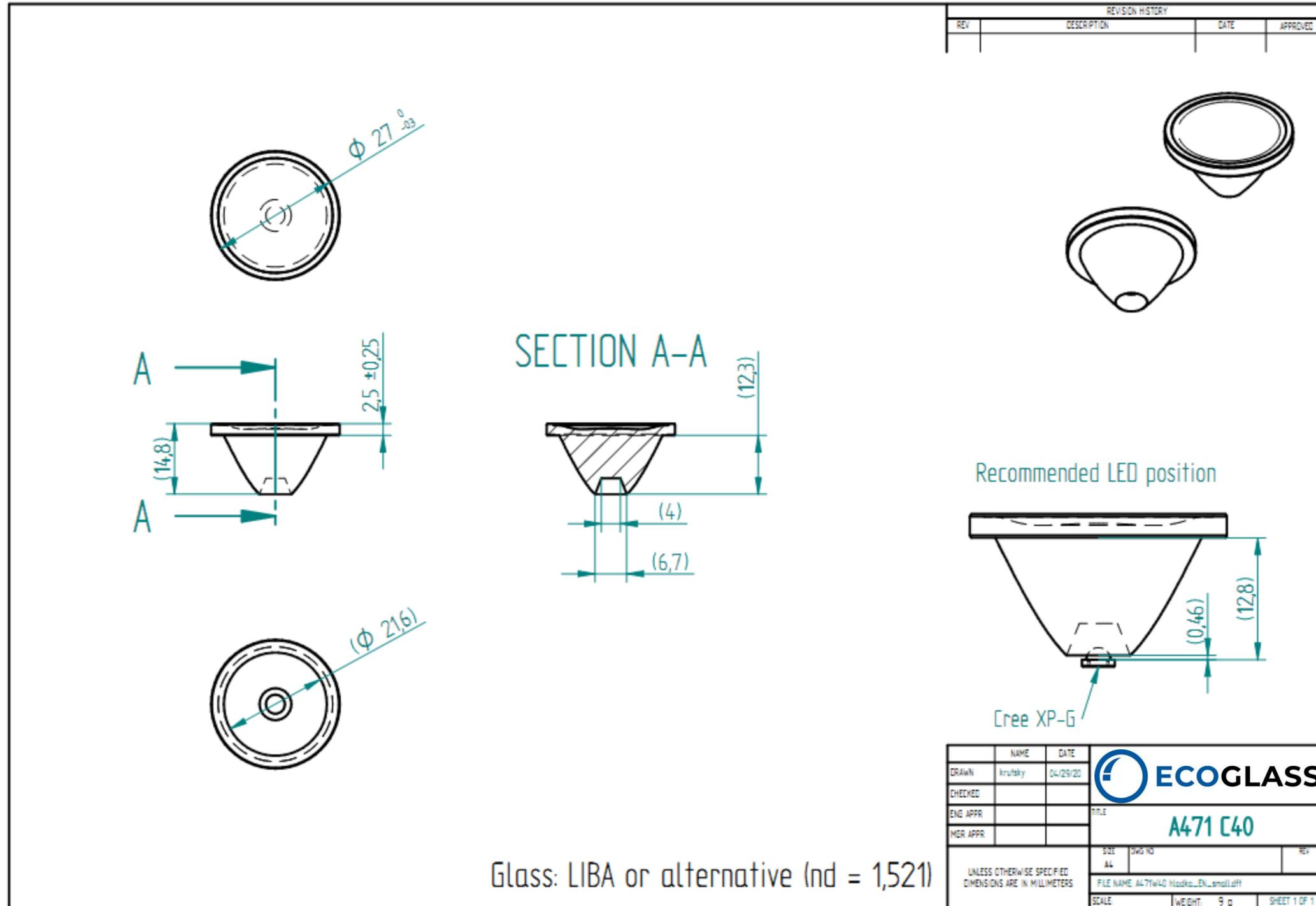
- Projection wall 3x3 m at 1m



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

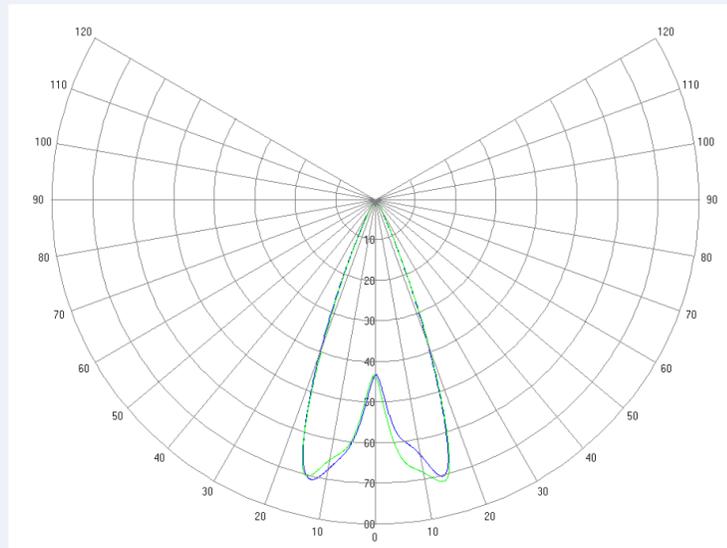
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A471 C40

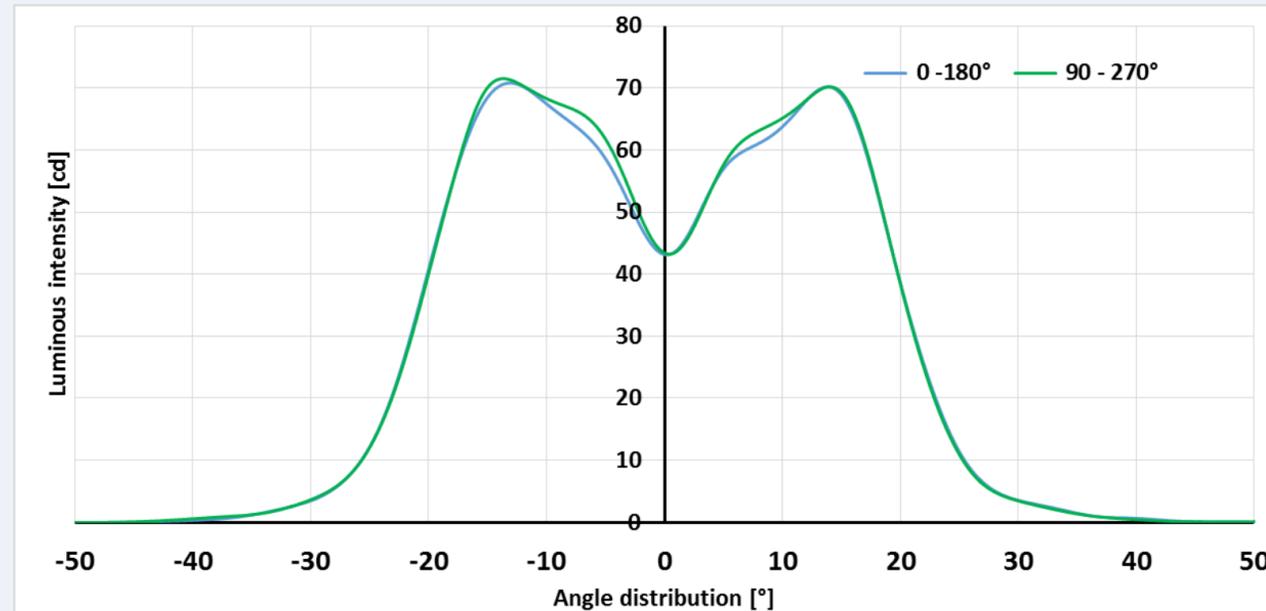


A471 C40- simulation results

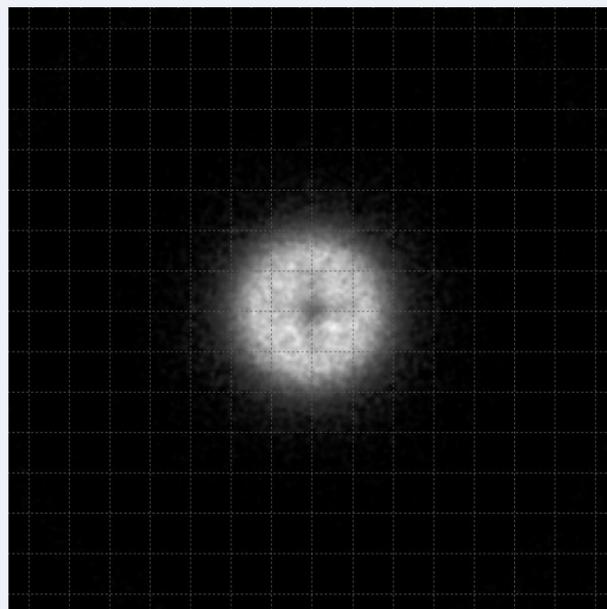
- Polar Candela Distribution Plot



- 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

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SECTION A-A

Recommended LED position

Cree XP-G

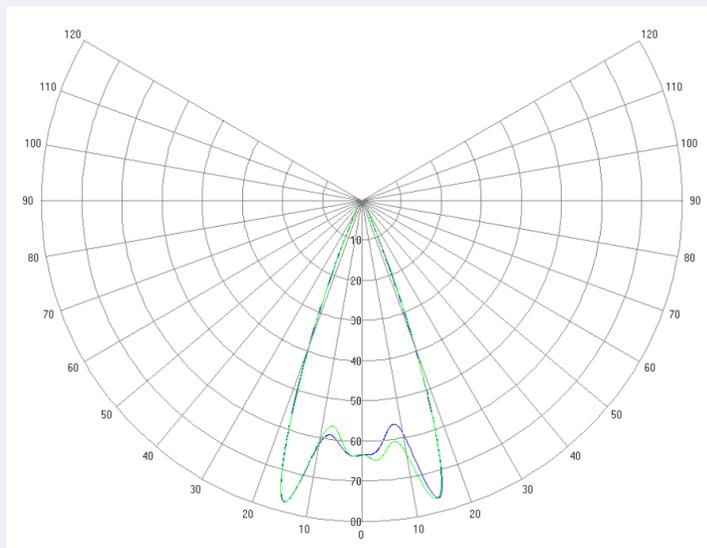
DRAWN	krutsky	DATE	04/29/20	
CHECKED				
ENG APPR.				
MGR APPR.				
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS				TITLE <h2 style="margin: 0;">A492 C40</h2>
SCALE		WEIGHT: 8 g		SHEET 1 OF 1

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

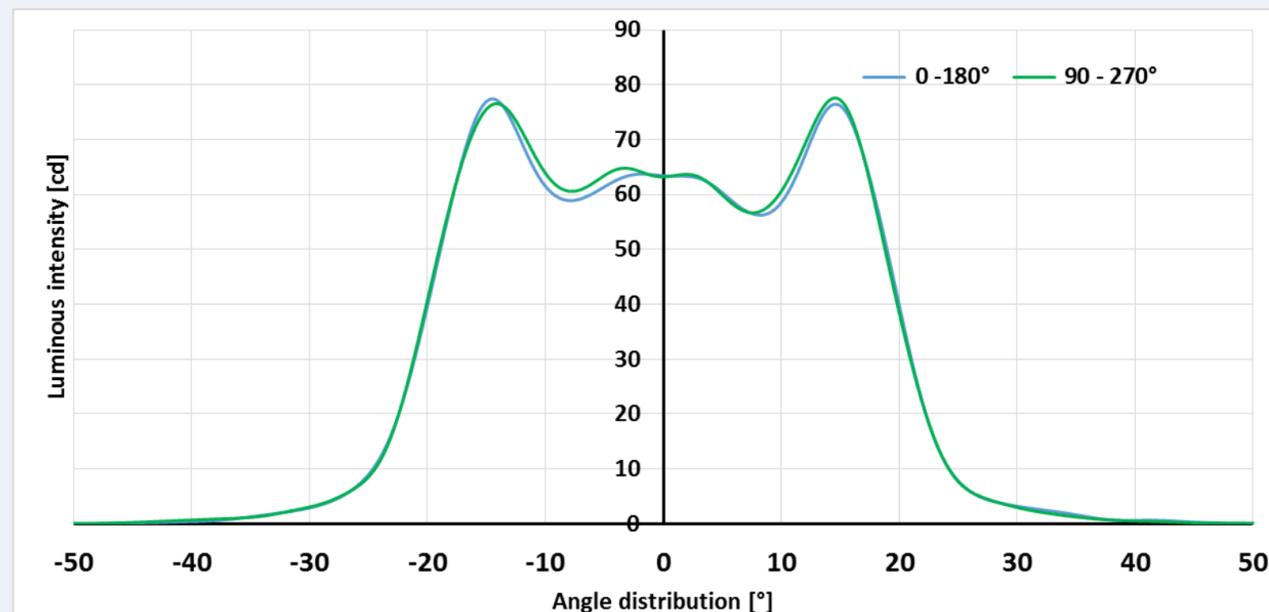
A492 C40 – simulation results



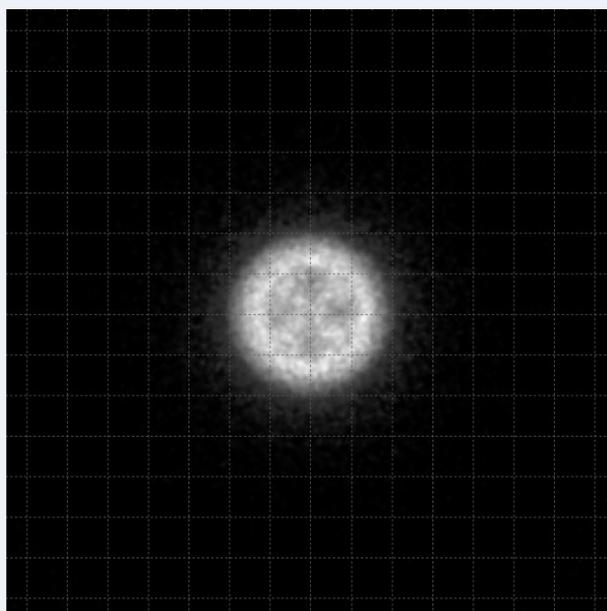
- Polar Candela Distribution Plot



- 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

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

SECTION A-A

Recommended LED position

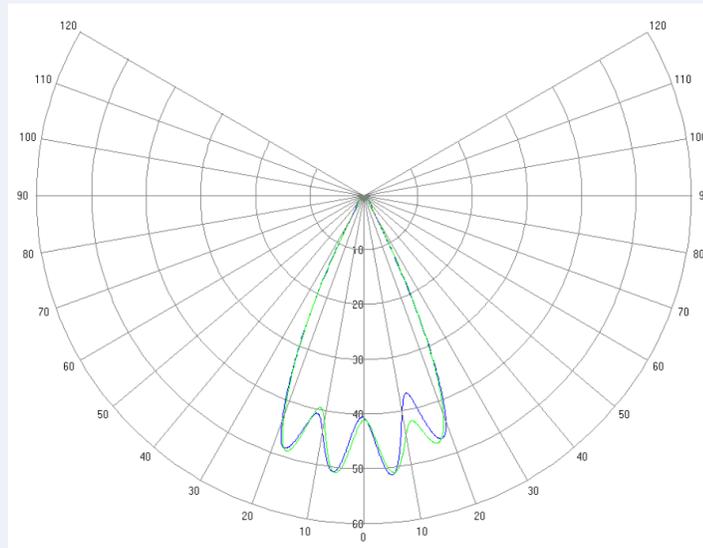
Cree XP-G

DRAWN	krutsky	DATE	04/29/20	<h2 style="margin: 0;">A493 C40</h2>												
CHECKED																
ENG APPR																
MGR APPR																
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				<table style="width: 100%; font-size: x-small;"> <tr> <td>SIZE</td> <td>DWG NO</td> <td>REV</td> </tr> <tr> <td>A4</td> <td> </td> <td> </td> </tr> <tr> <td>SCALE</td> <td>WEIGHT</td> <td>SHEET</td> </tr> <tr> <td> </td> <td>14 g</td> <td>1 OF 1</td> </tr> </table>	SIZE	DWG NO	REV	A4			SCALE	WEIGHT	SHEET		14 g	1 OF 1
SIZE	DWG NO	REV														
A4																
SCALE	WEIGHT	SHEET														
	14 g	1 OF 1														

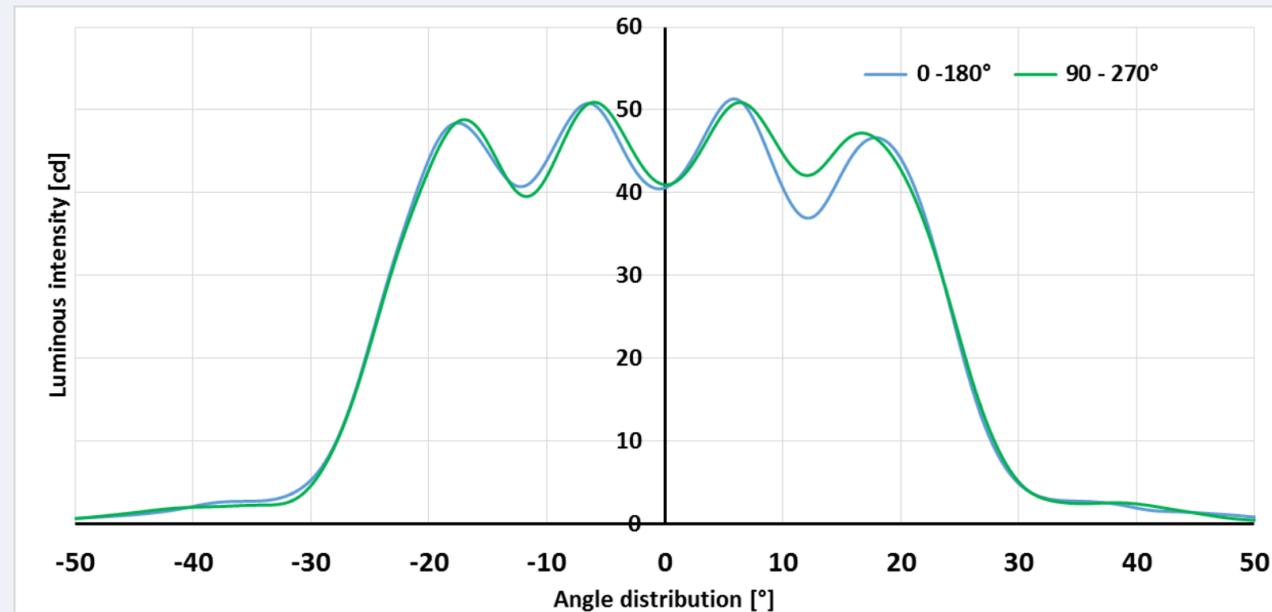
Glass: LIBA or alternative (nd = 1,521)

A493 C40- simulation results

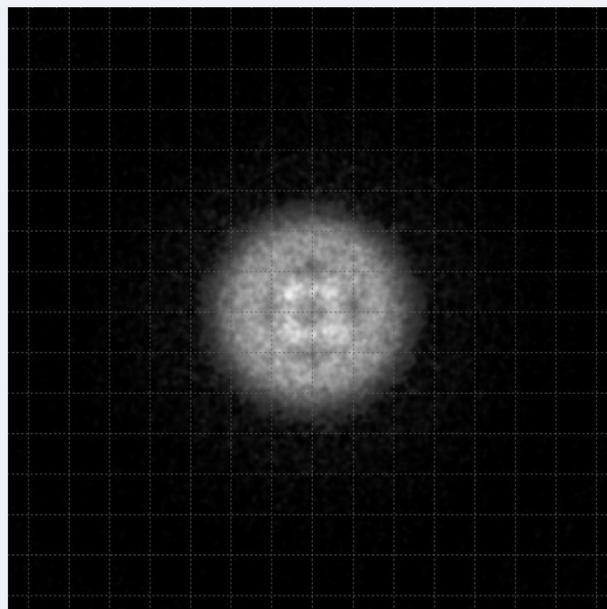
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



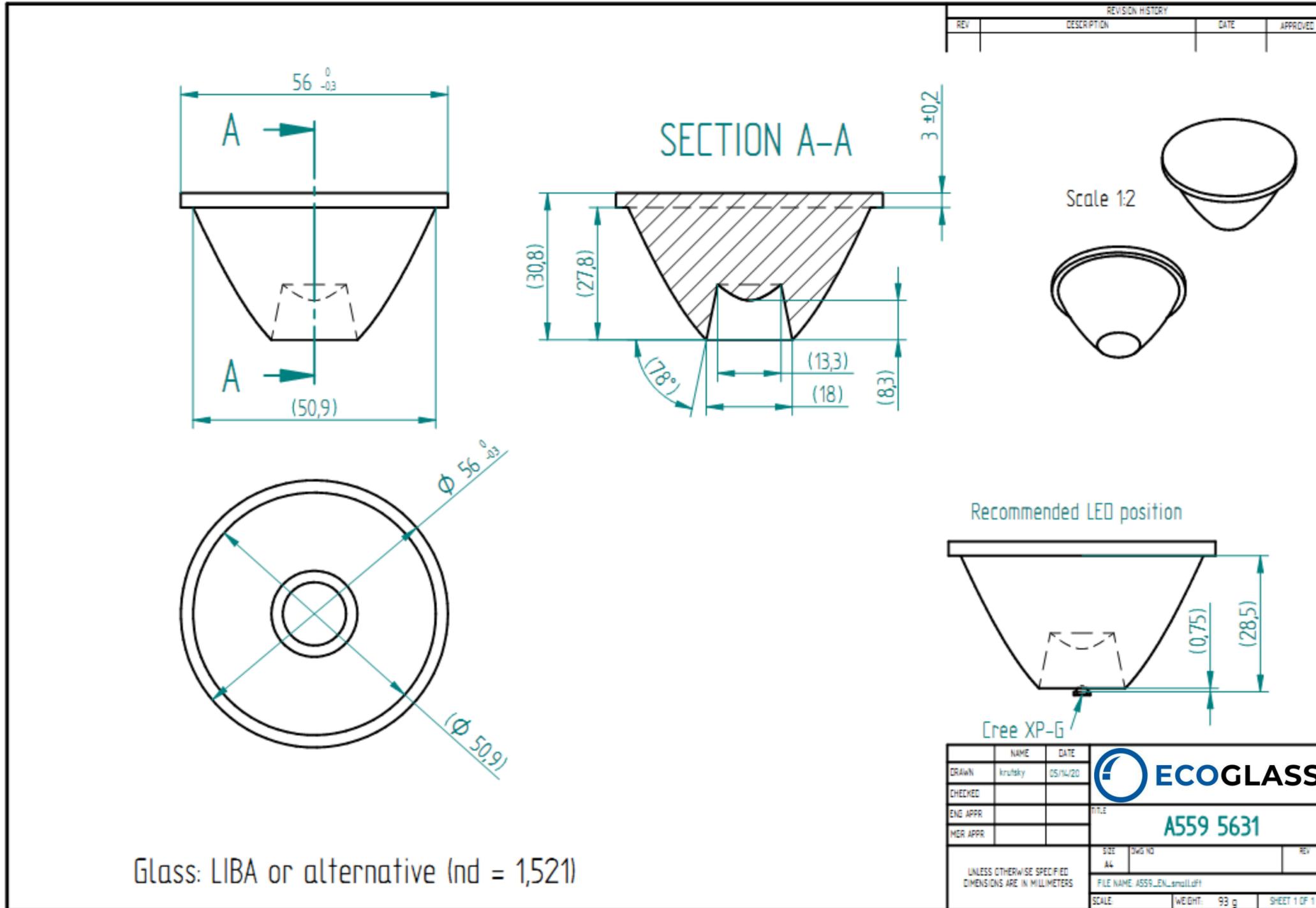
- Projection wall 3x3 m at 1m



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

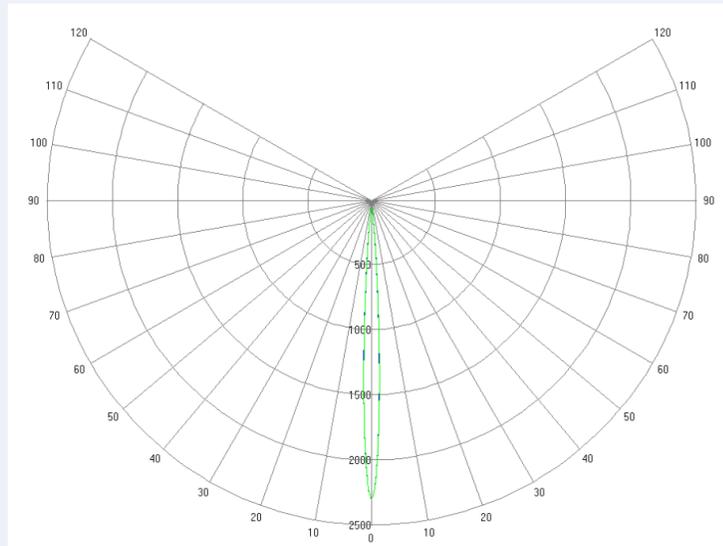
A559 5631



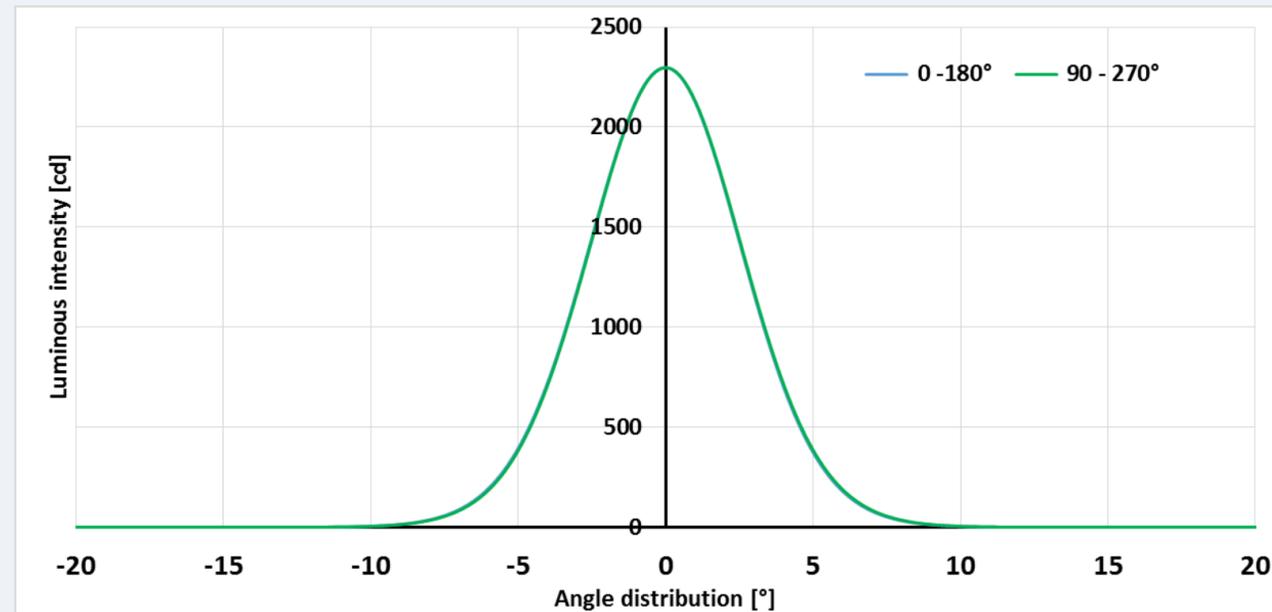
Glass: LIBA or alternative (nd = 1,521)

A559 5631- simulation results

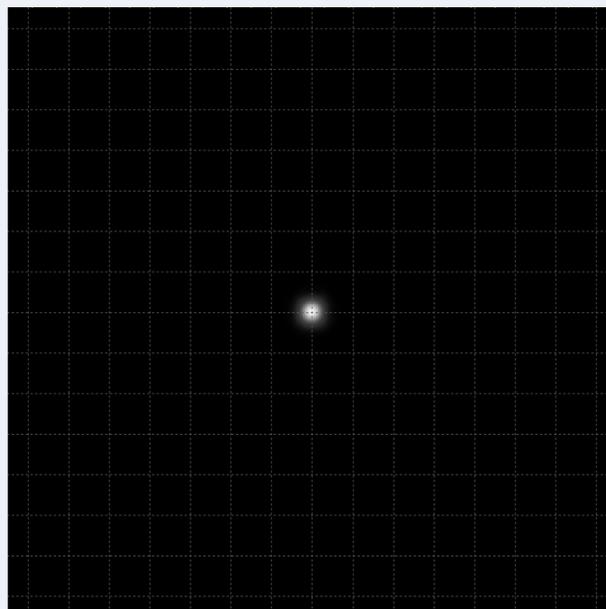
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



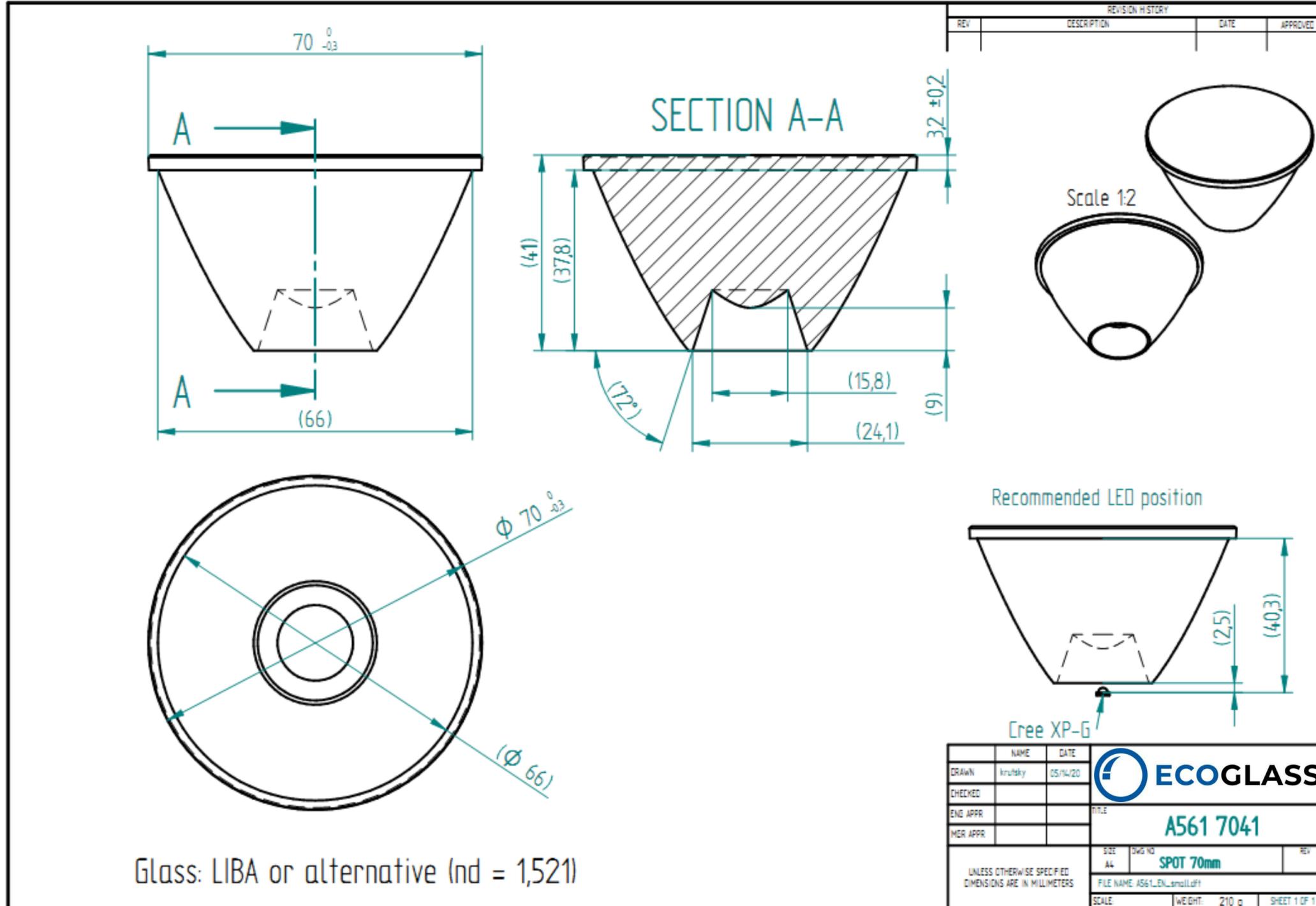
- Projection wall 3x3 m at 1m



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

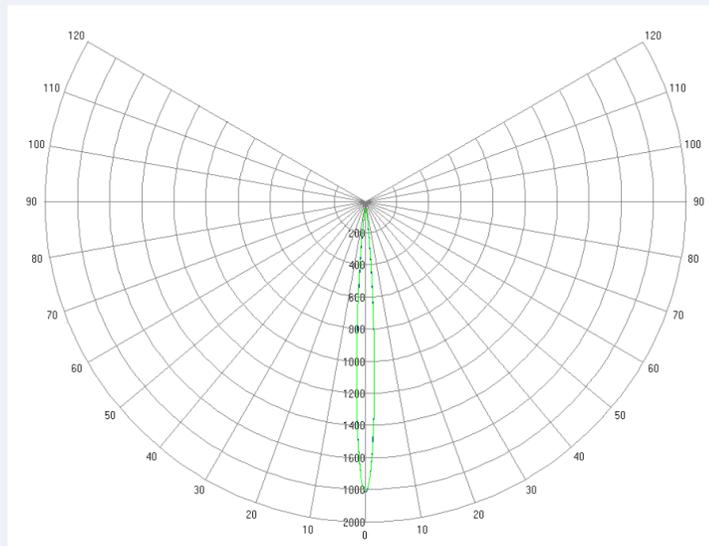
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A561 7041

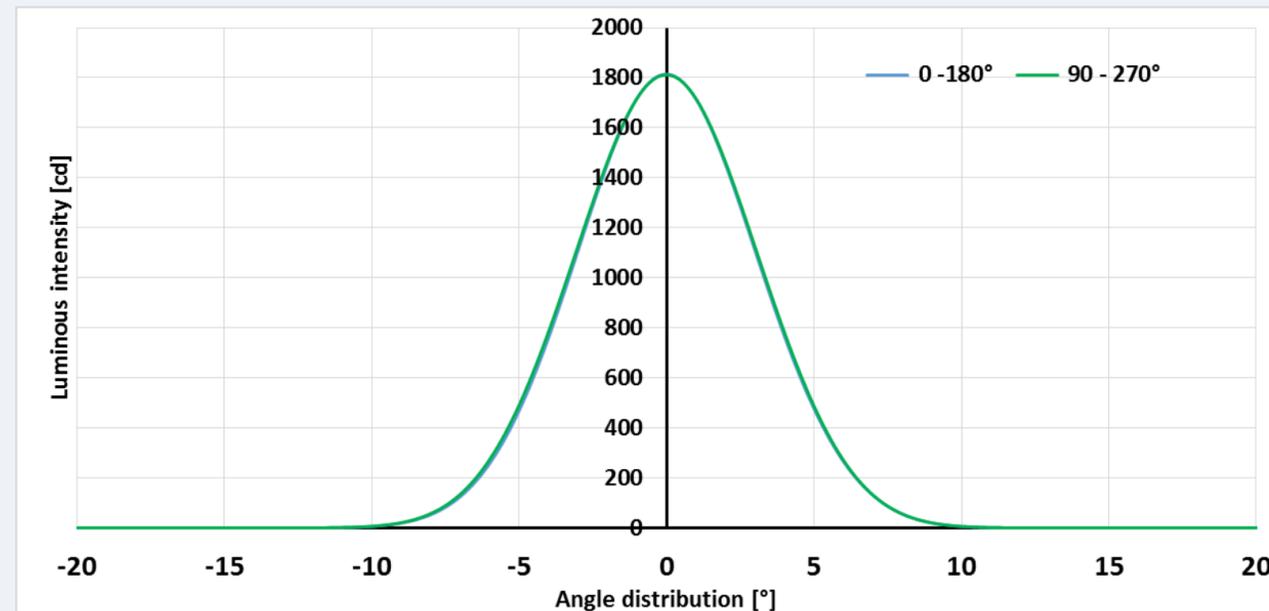


A561 7041- simulation results

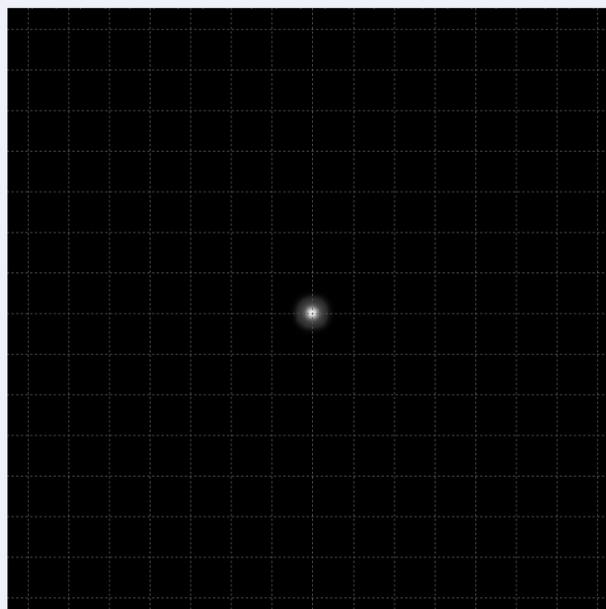
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



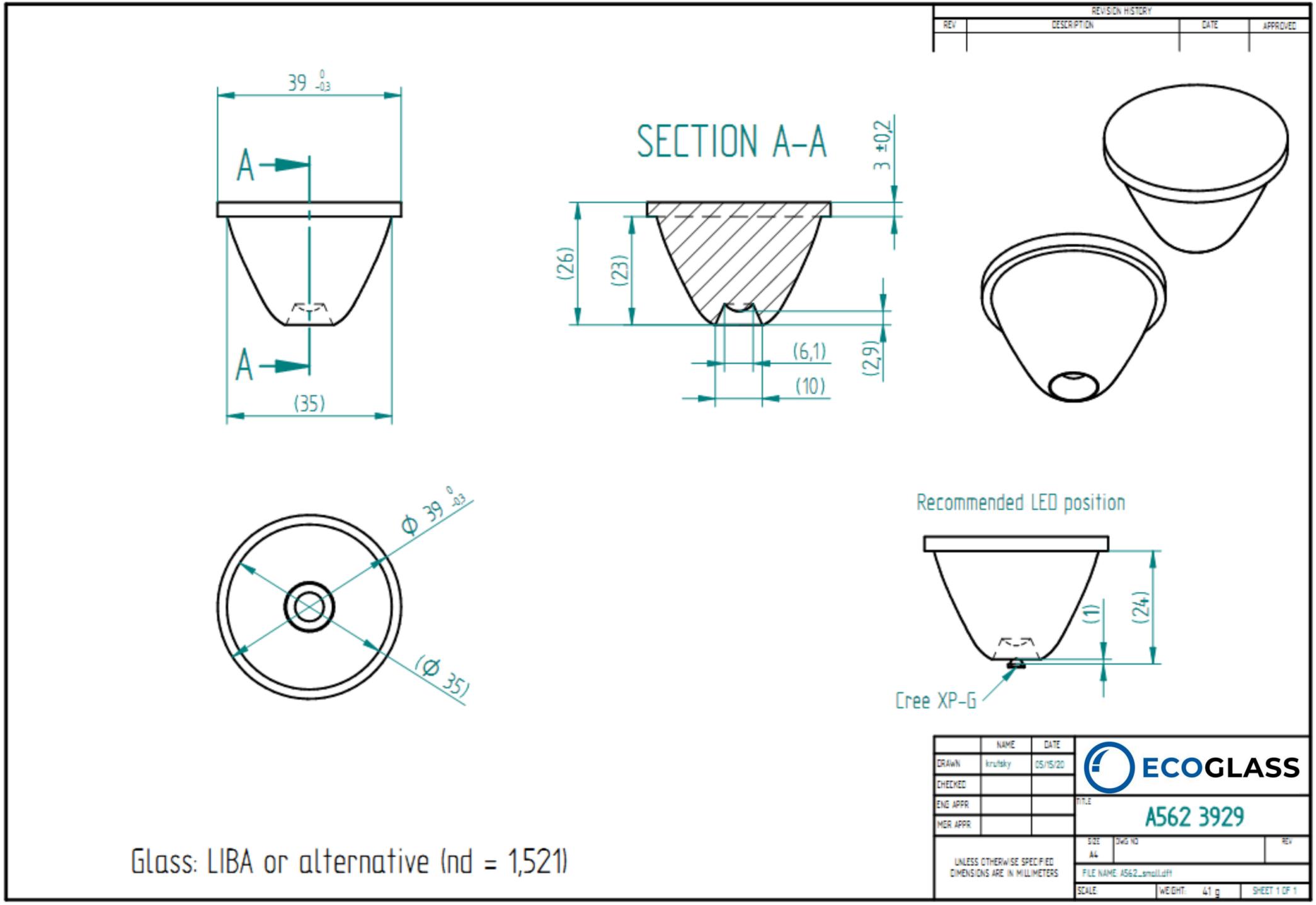
- Projection wall 3x3 m at 1m



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

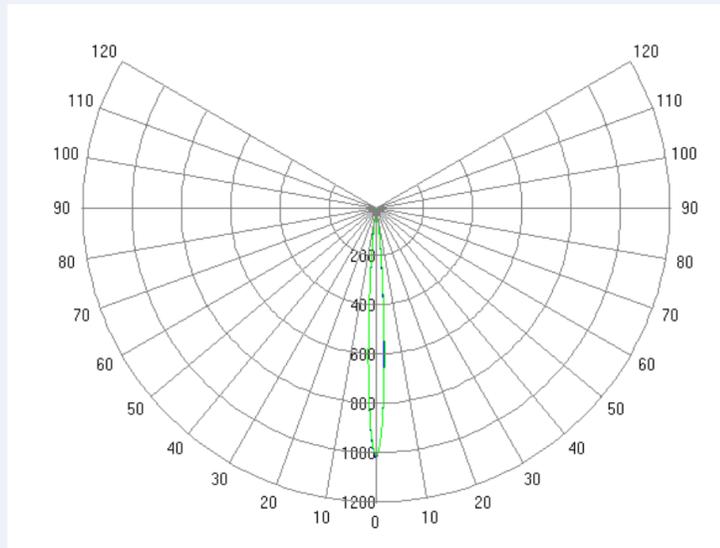
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A562 3929

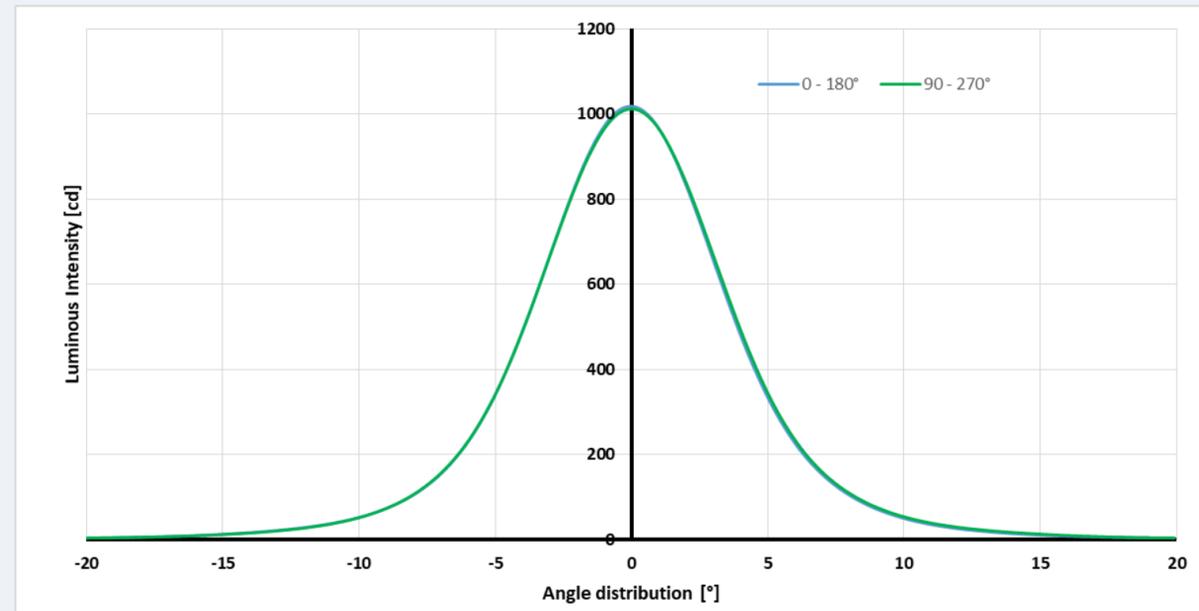


A562 3929 – simulation results

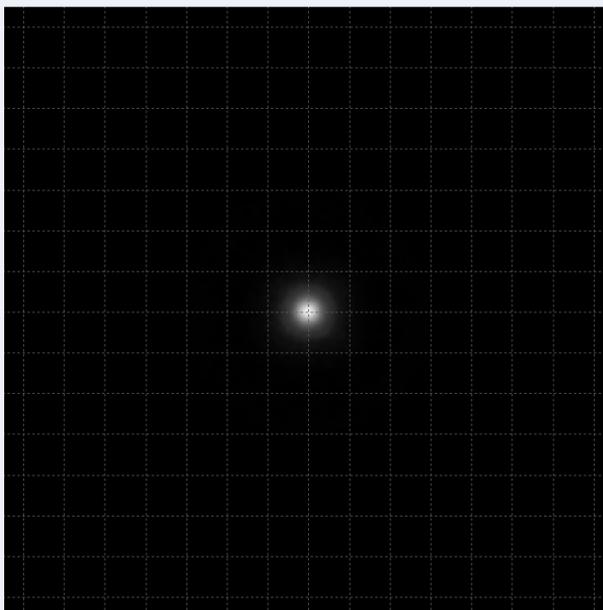
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



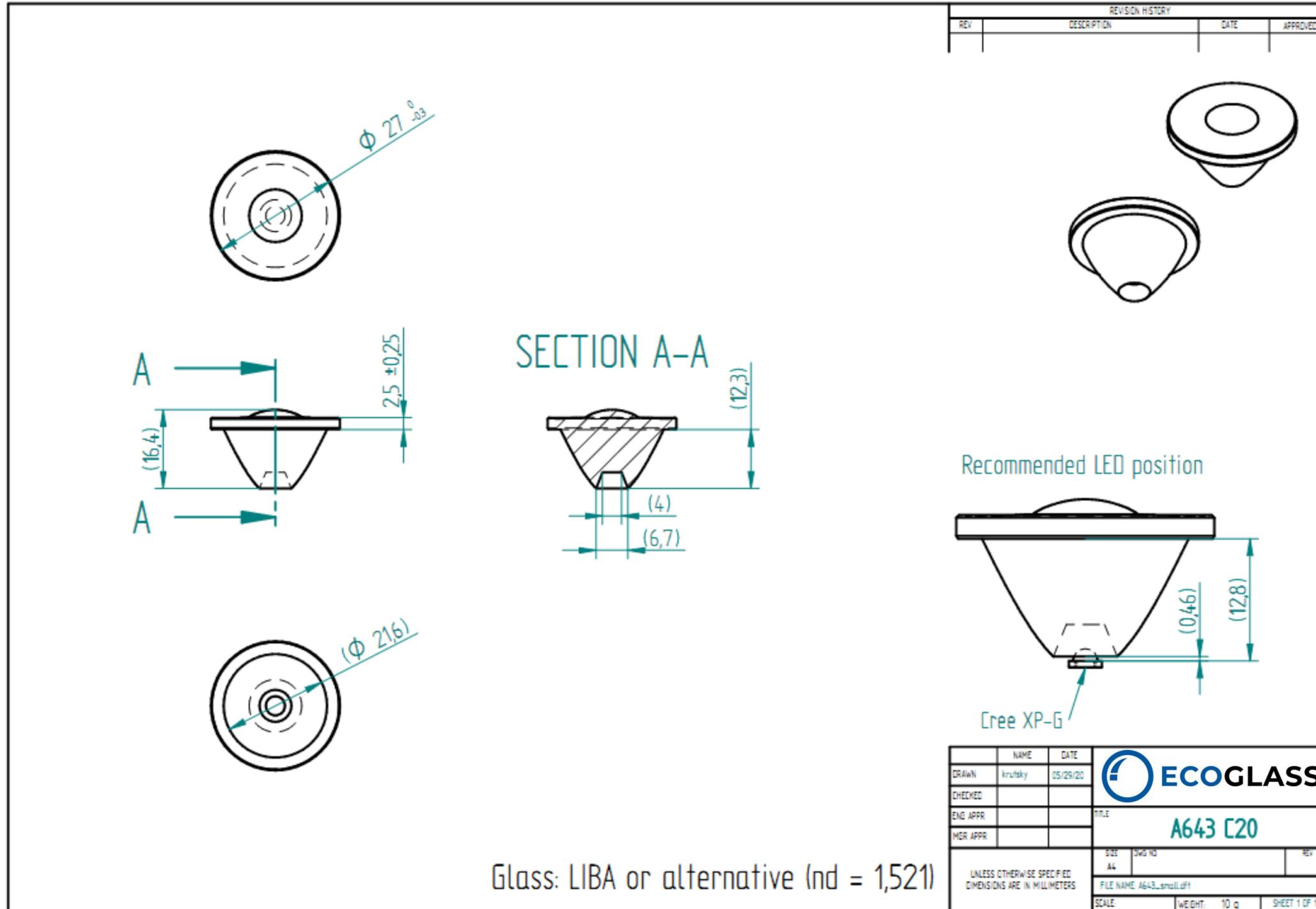
- Projection wall 3x3 m at 1m



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

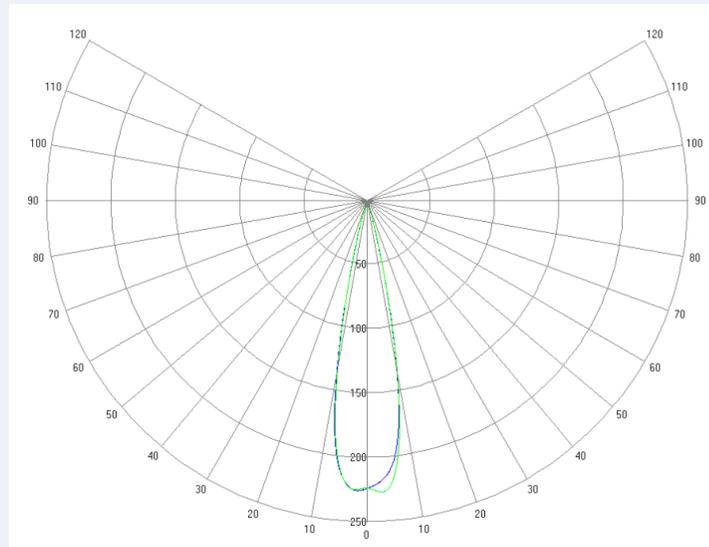
* The ratio between luminous flux on the projection wall (3x3 m at 1 m) and luminous flux of LED

A643 C20

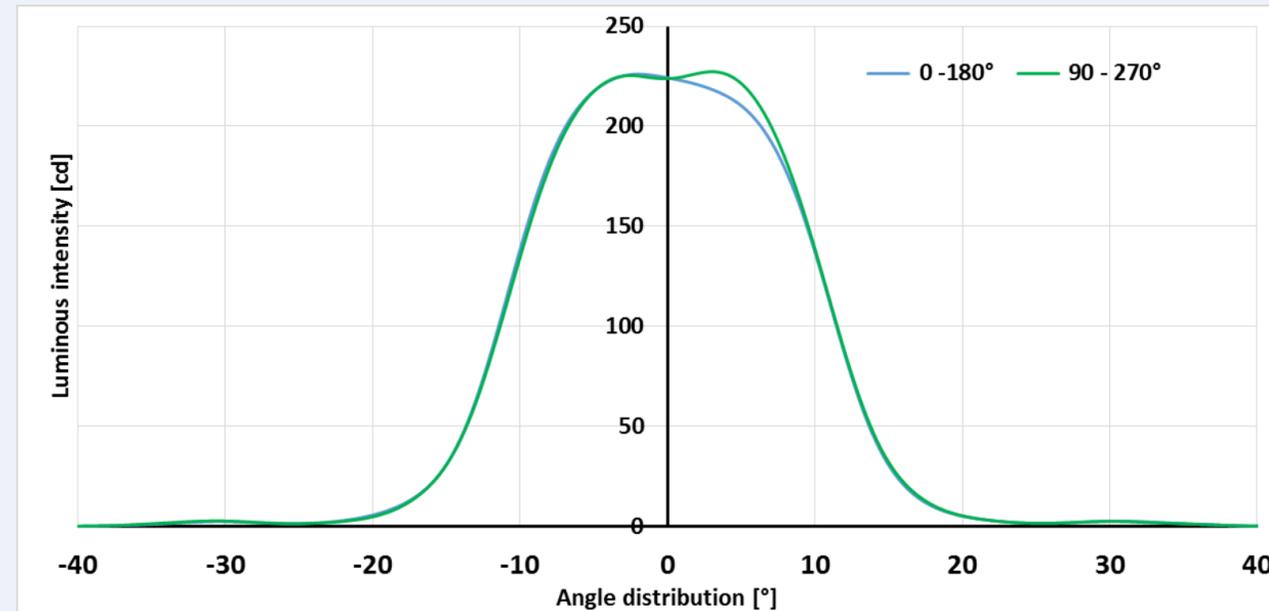


A643 C20– simulation results

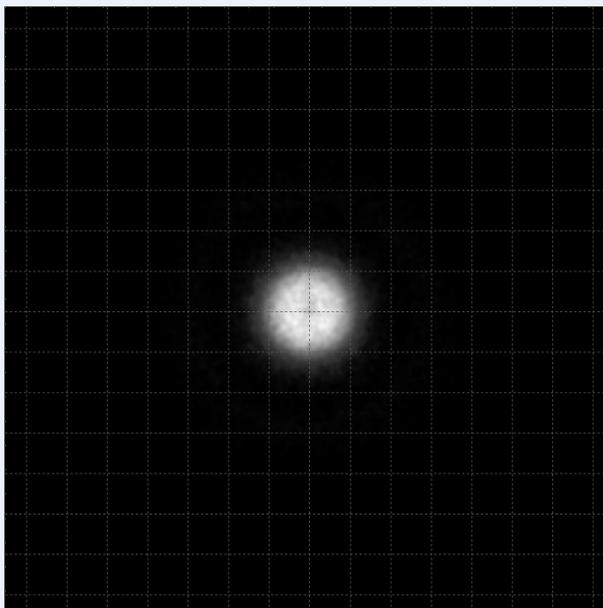
- Polar Candela Distribution Plot



- 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

ECOGLASS Cavity Lenses

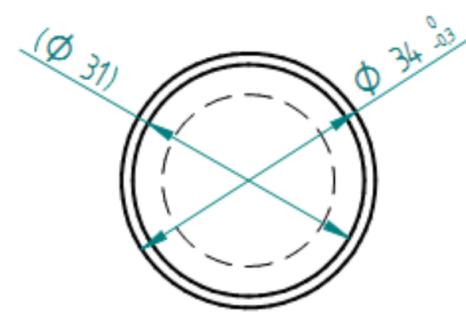
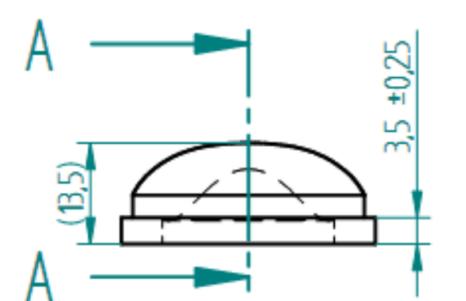
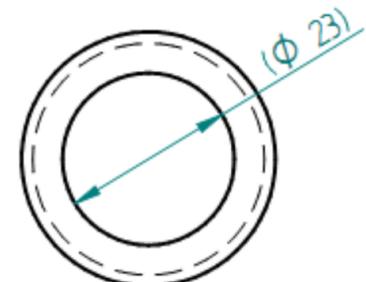
ECOGLASS code	Lens type	Beam angles FWHM (°) *		Diameter (mm)	Thickness (mm)
		Co (0°)	C90 (90°)		
A494 C120	Cavity lens	120	120	34,0	13,5
A508 4018	Cavity lens	110	110	40,0	13,5
A569 7624	Cavity lens	20	120	76,0	24,0
A886 6629	Cavity lens	60	60	66	28,7
A892 6624	Cavity lens	90	90	66	25,9
A893 6624	Cavity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

* FWHM = full width at half maximum

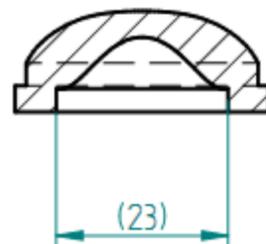


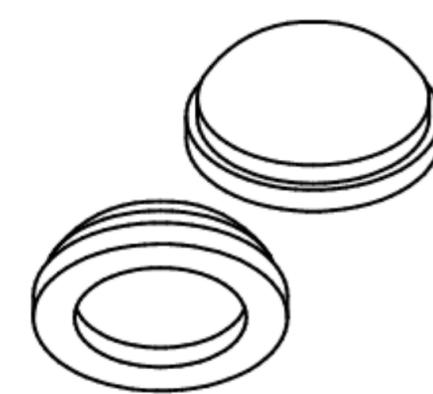
A494 C120

REVISION HISTORY			
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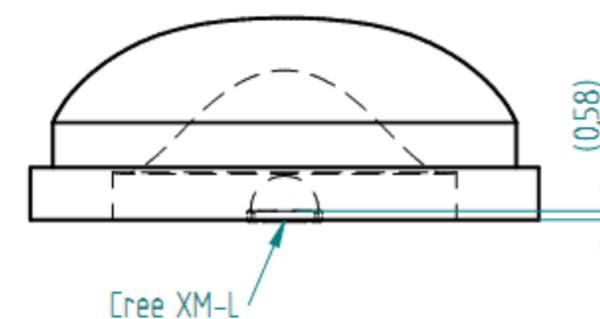




SECTION A-A





Recommended LED position

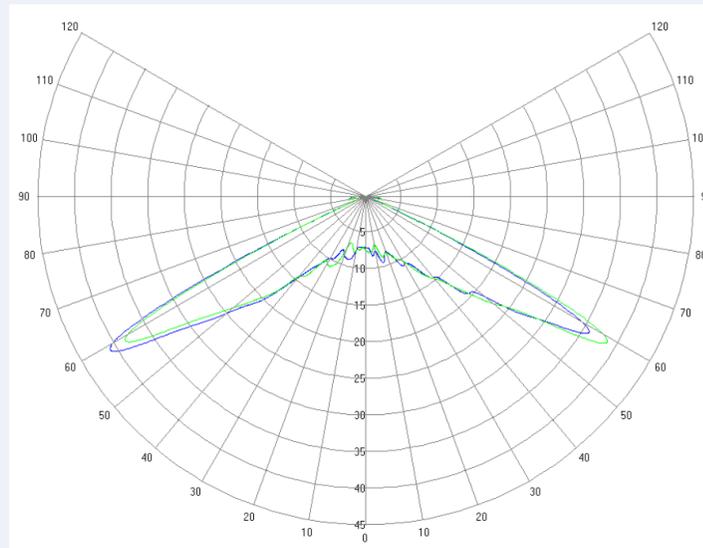


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CHECKED			
ENG APPR			
MGR APPR			
TITLE <h2 style="margin: 0;">A494 C120</h2>			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE: A4 FILE NAME: A494C120_EN_small.dwg SCALE: WEIGHT: 17 g SHEET 1 OF 1

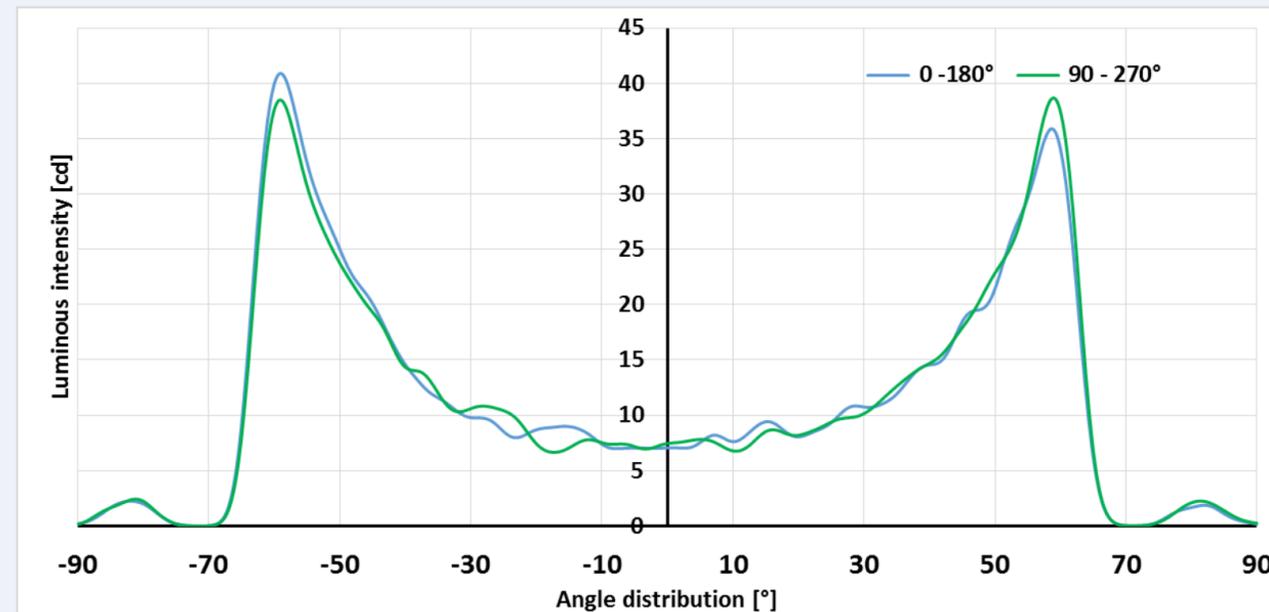
Glass: LIBA or alternative (nd = 1,521)

A494 C120 – simulation results

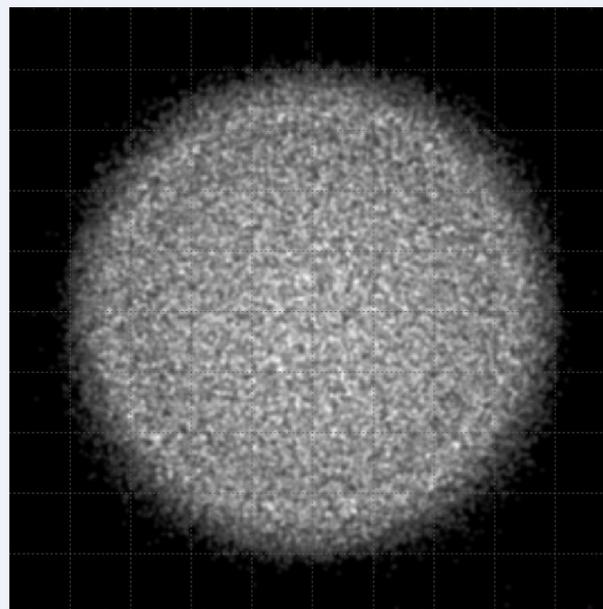
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



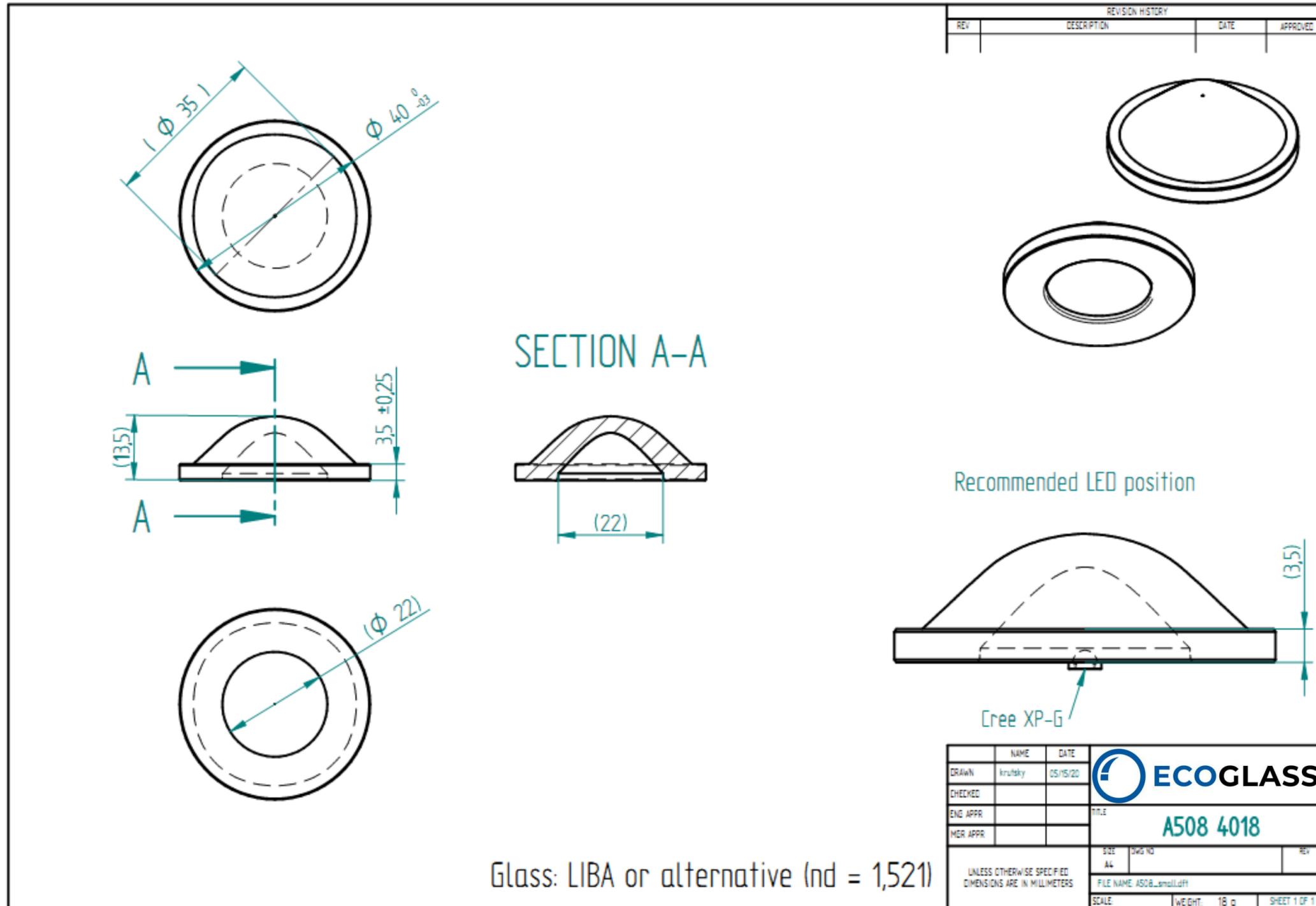
- Projection wall 5x5 m at 1m



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

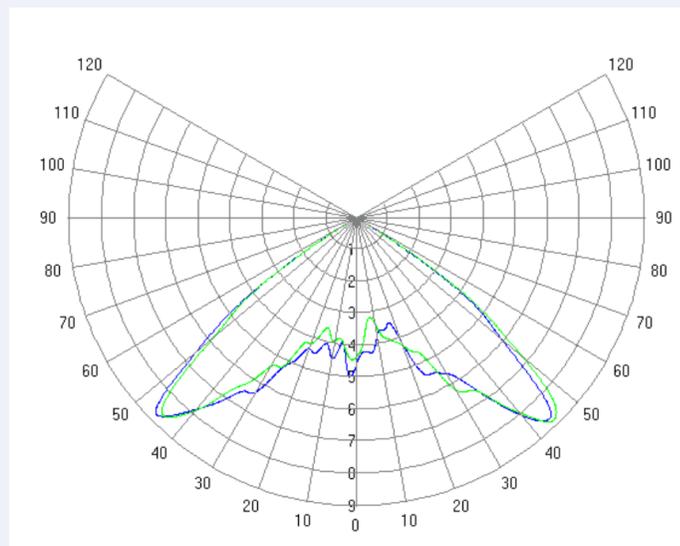
A508 4018



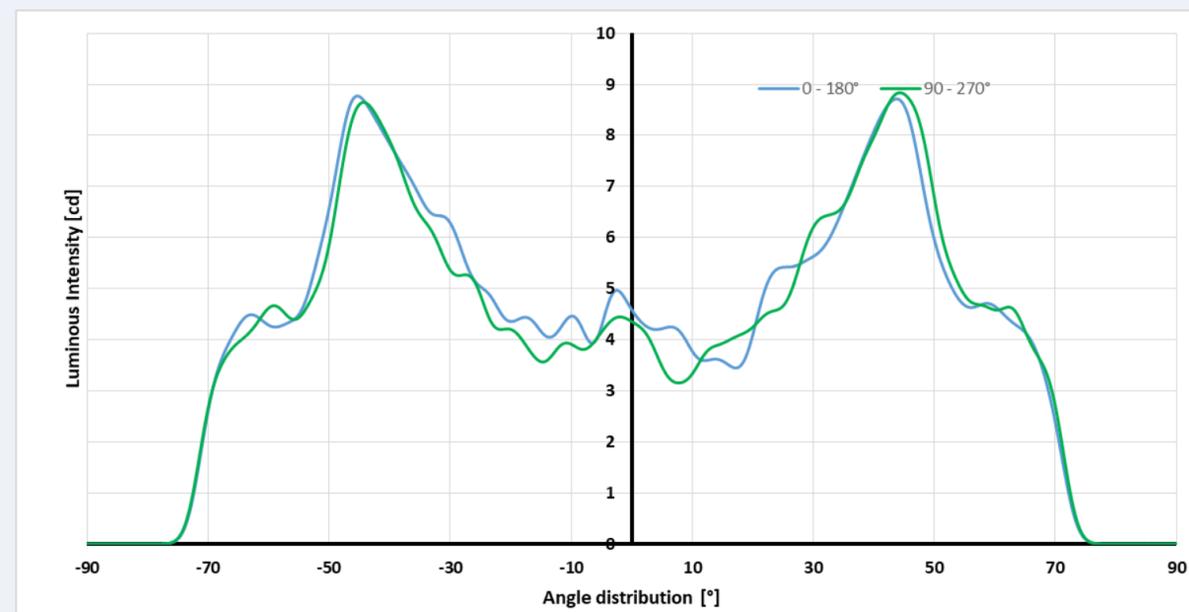
A508 4018 – simulation results



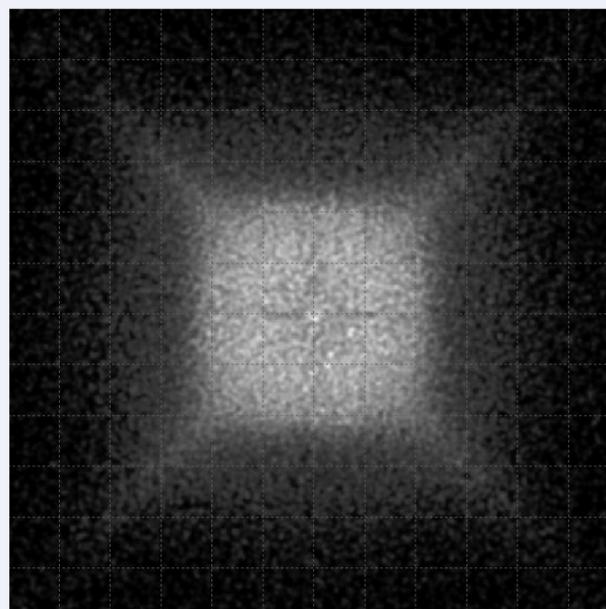
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



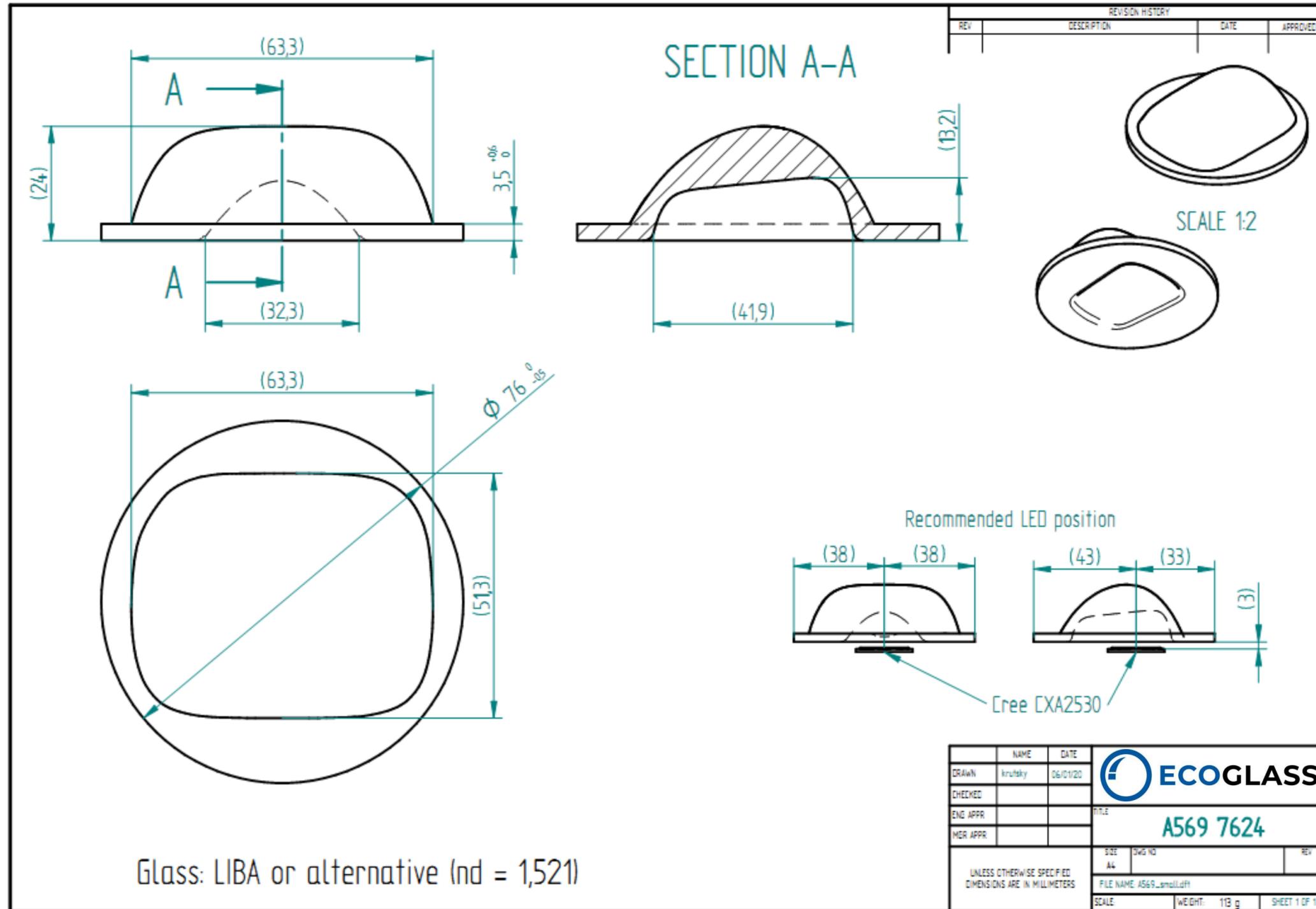
- Projection wall 5x5 m at 1m



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

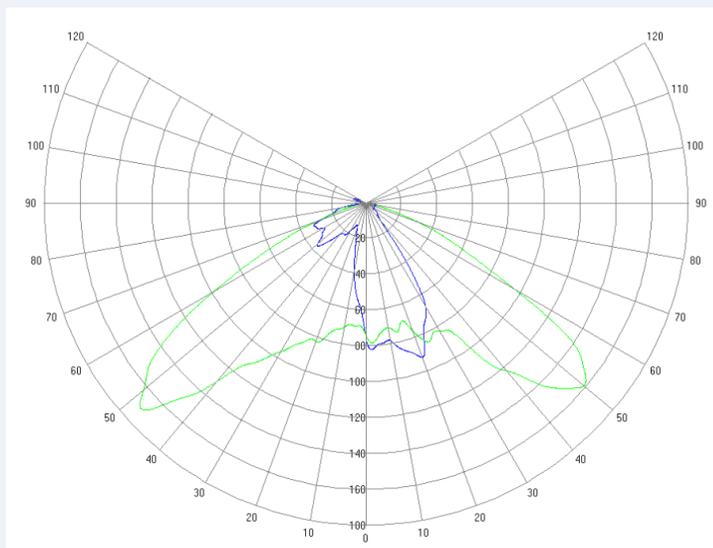
A569 7624



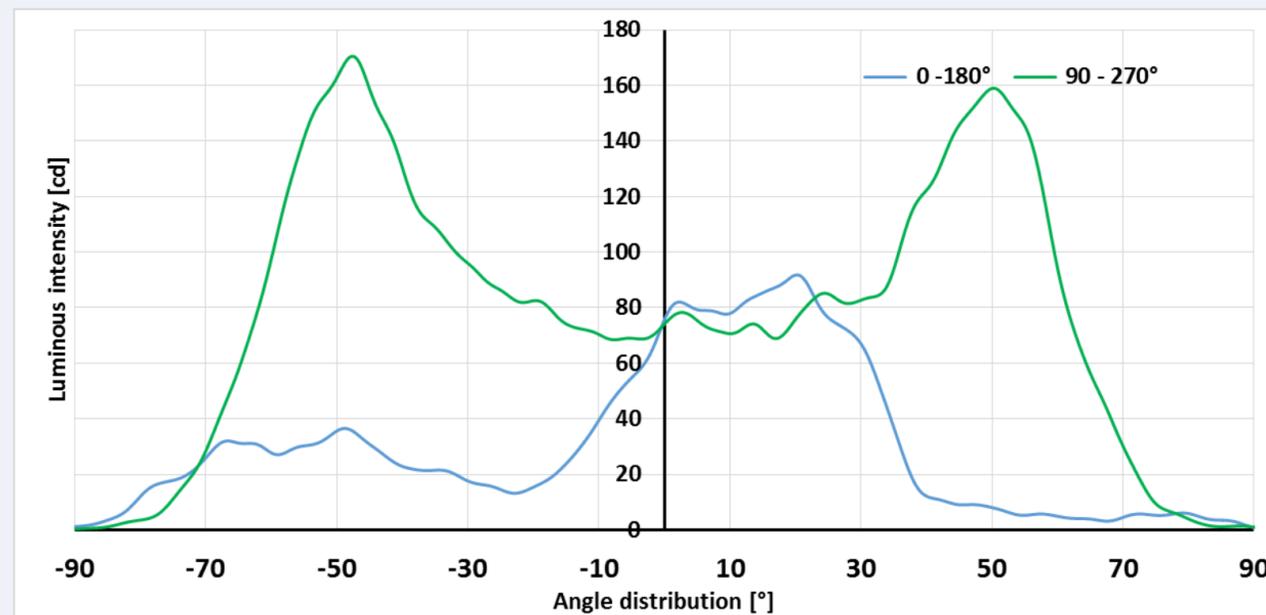
Glass: LIBA or alternative (nd = 1,521)

A569 7624- simulation results

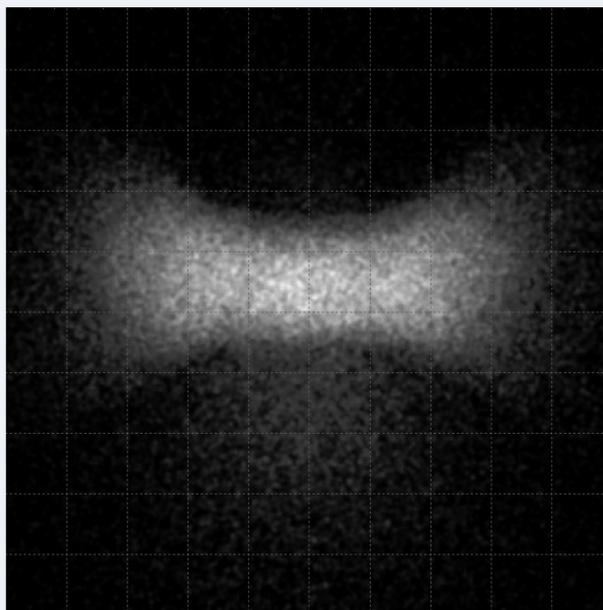
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



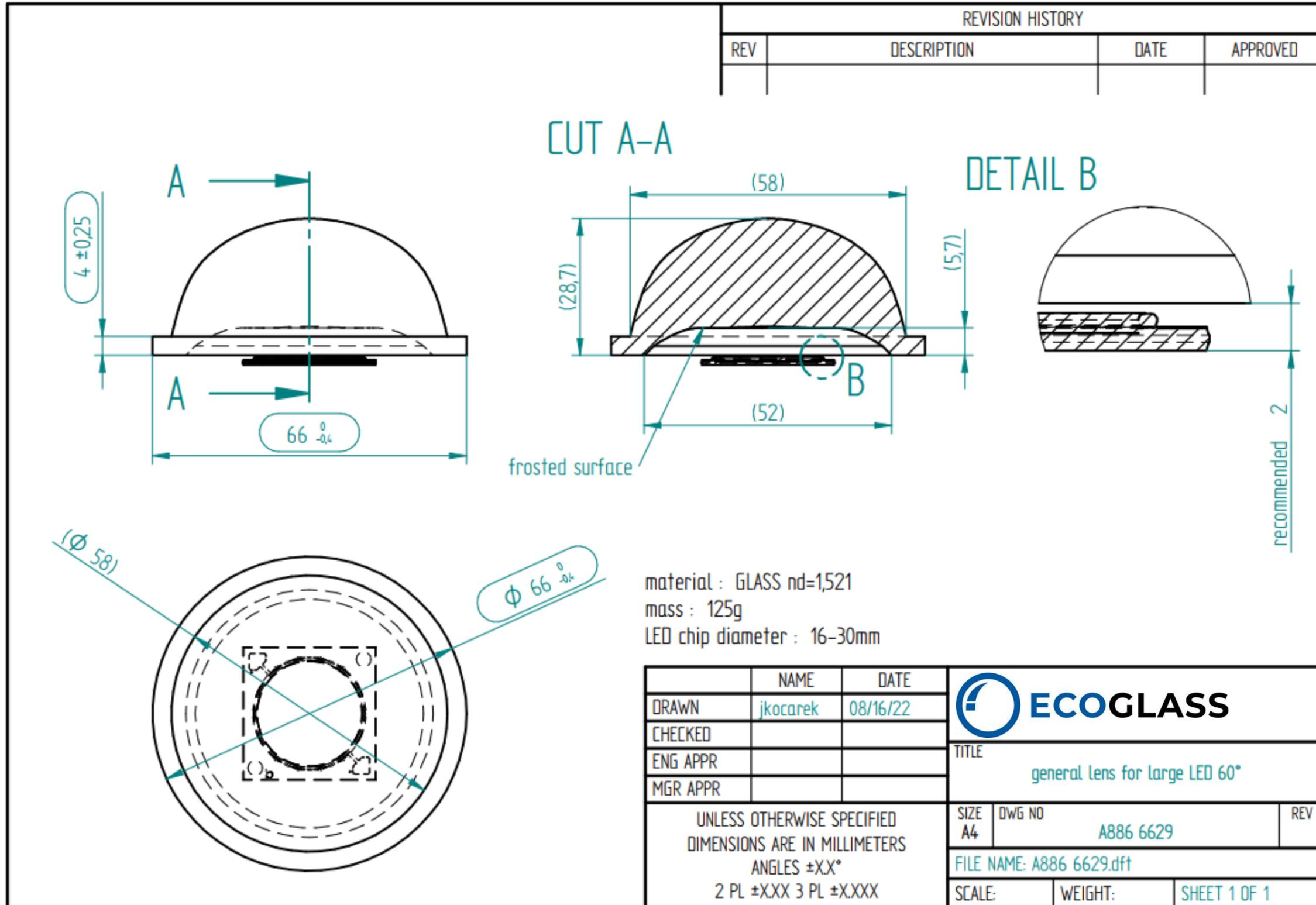
- Projection wall 5x5 m at 1m



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

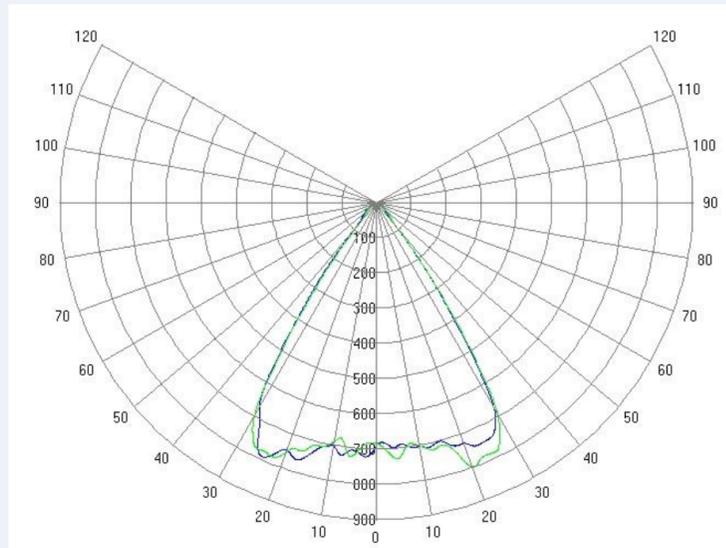
* The ratio between luminous flux on the projection wall (5x5 m at 1m) and luminous flux of LED

A886 6629

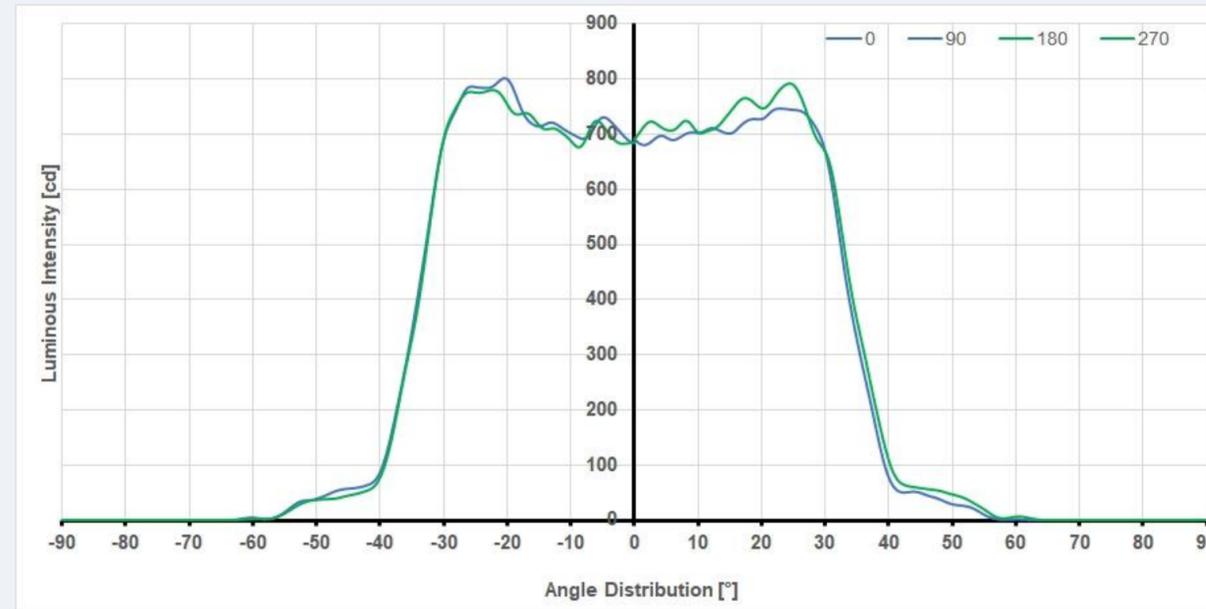


A886 6629 – simulation results

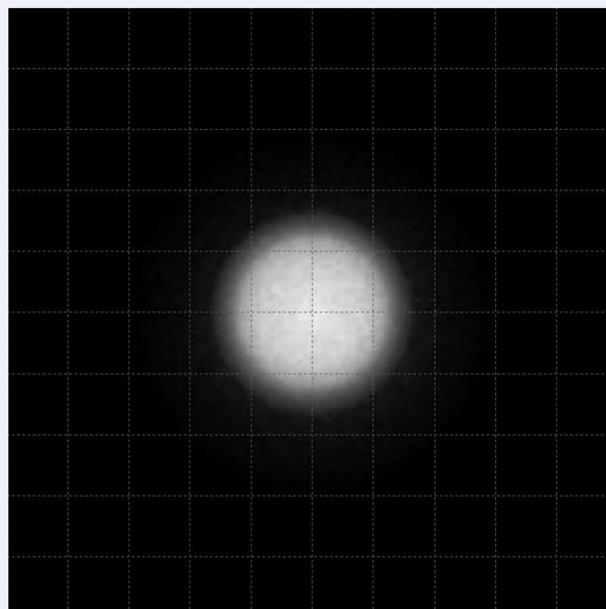
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



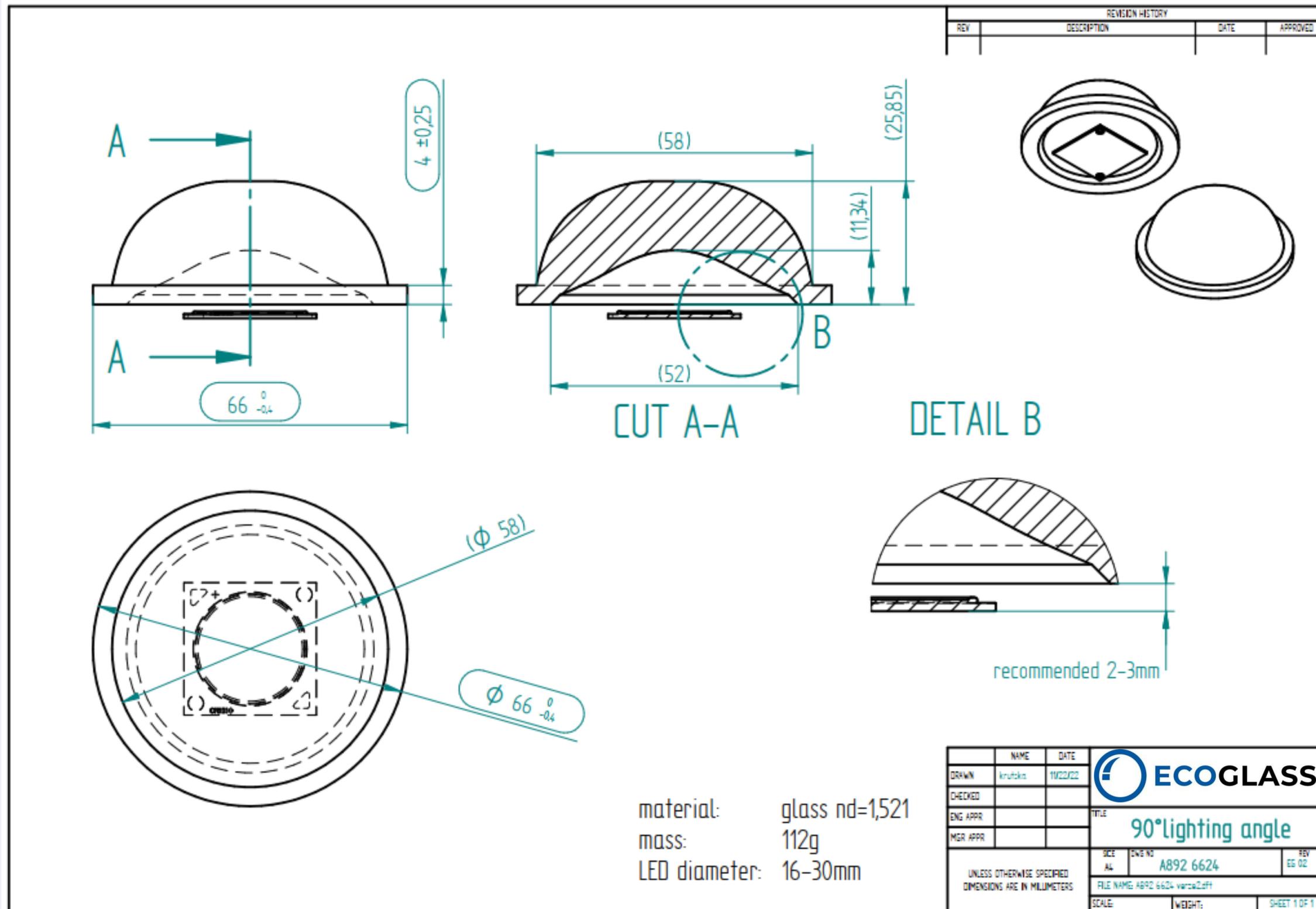
- Projection wall 5x5 m at 1m



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

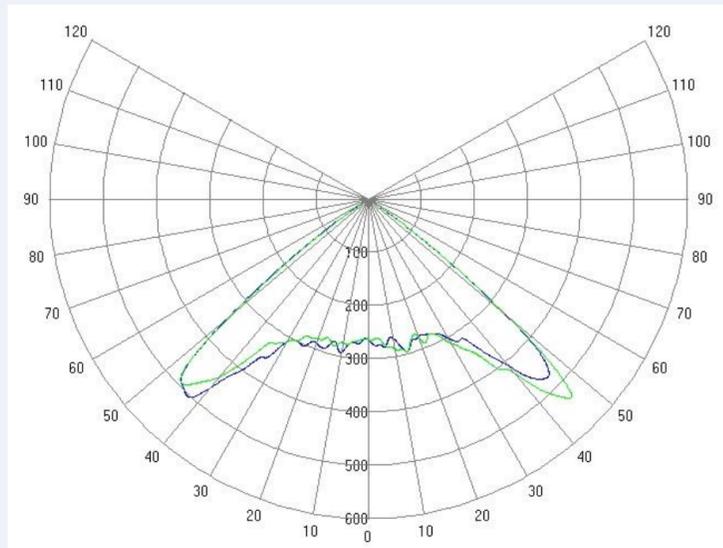
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A892 6624

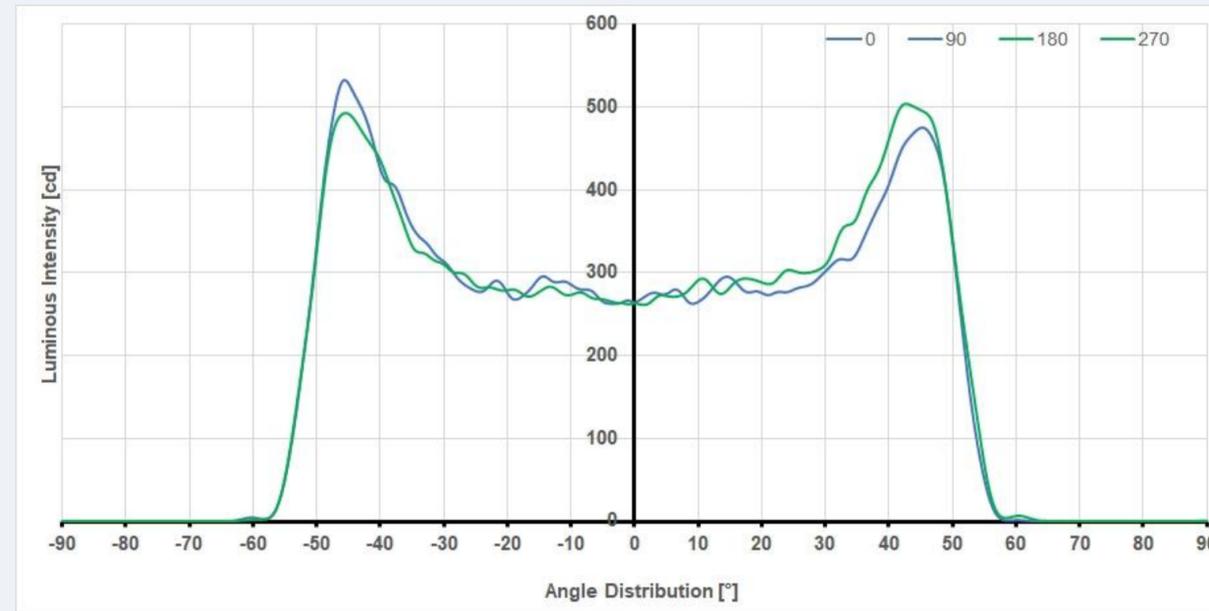


A892 6624- simulation results

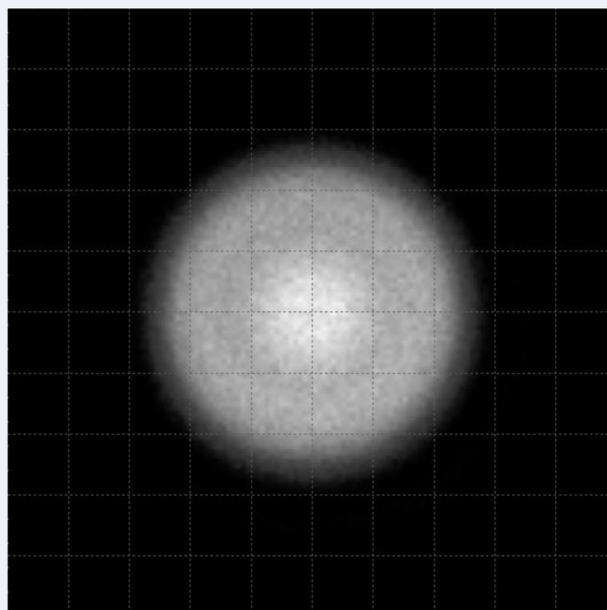
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



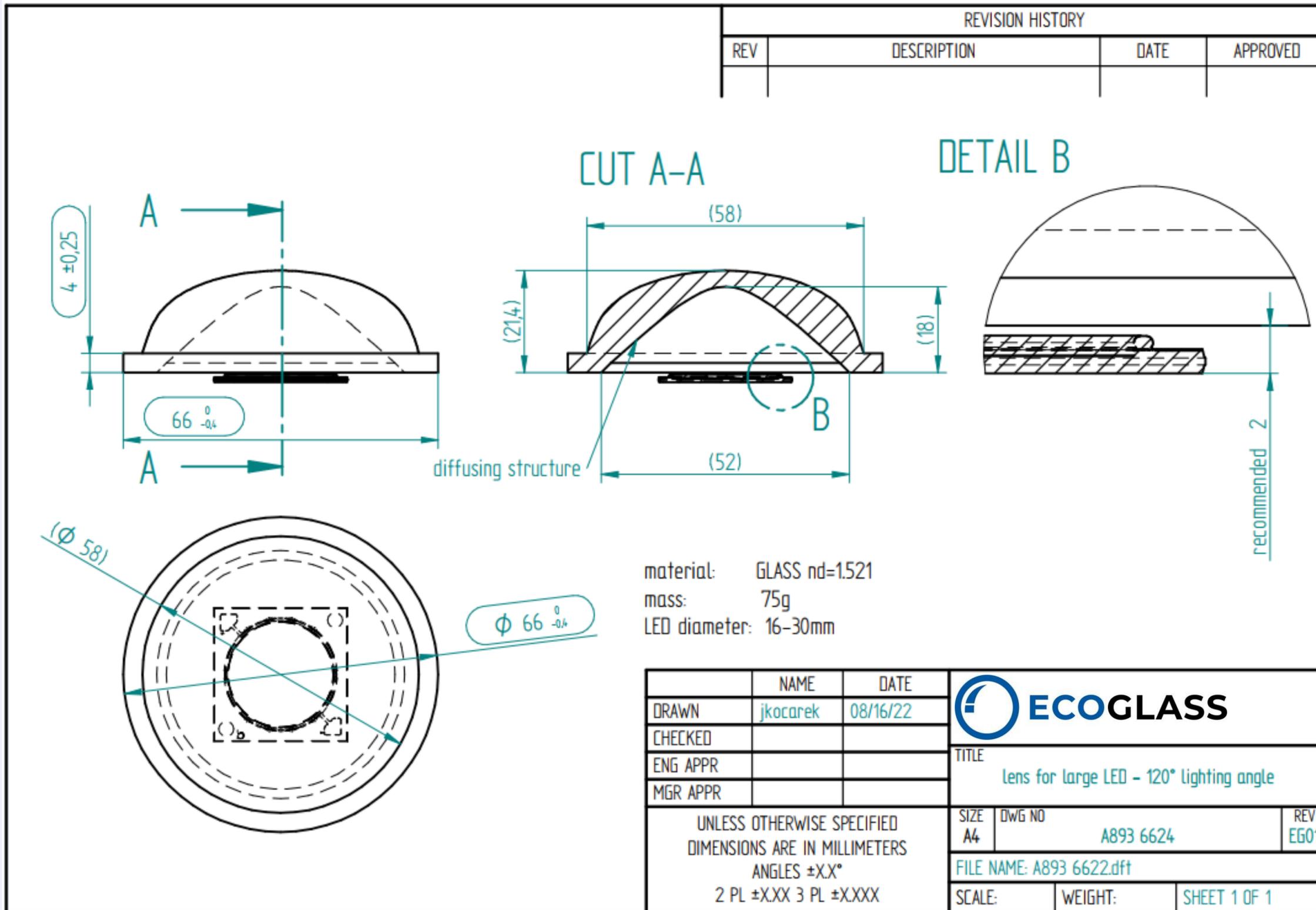
- Projection wall 5x5 m at 1m



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

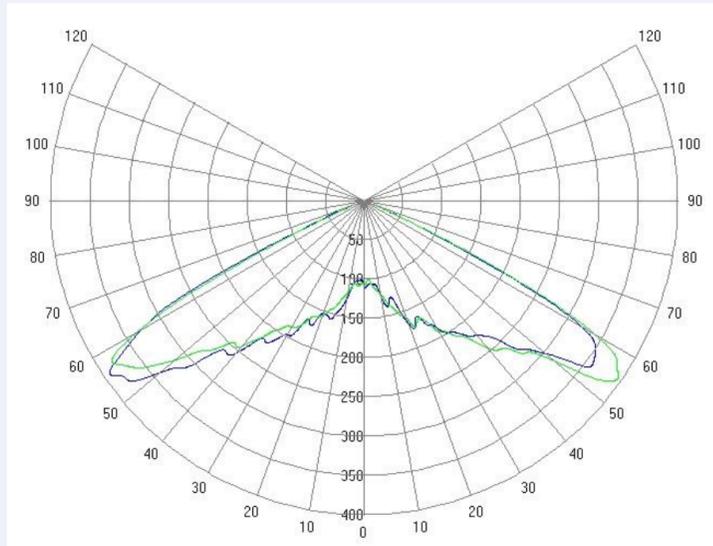
* The ratio between luminous flux on the projection wall (5x5 m at 1 m) and luminous flux of LED

A893 6624

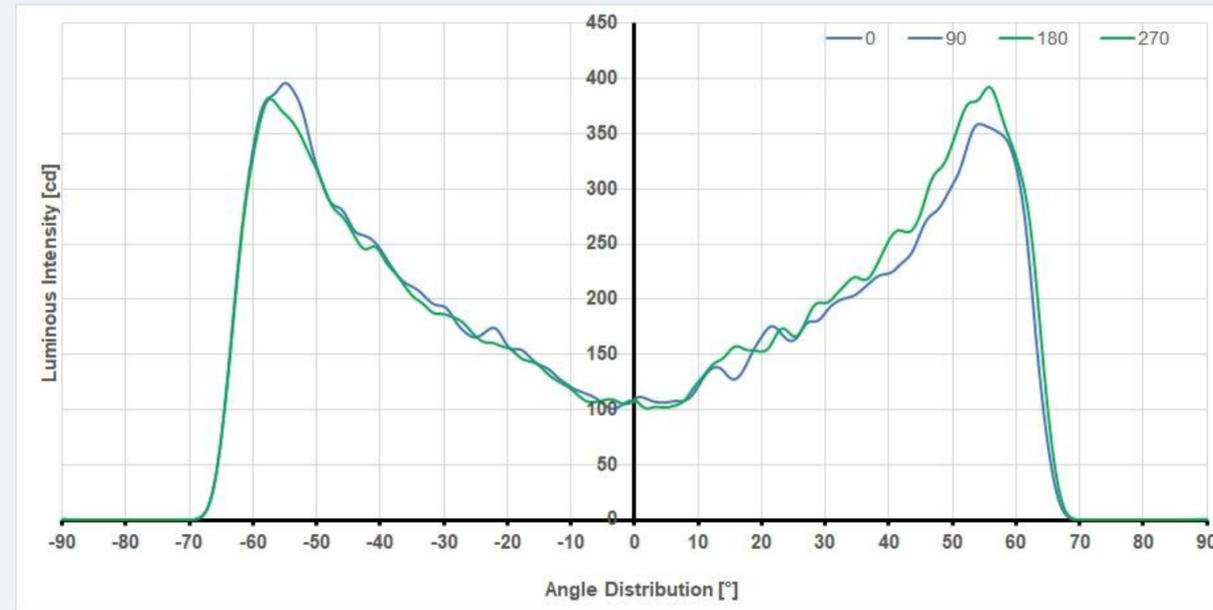


A893 6624– simulation results

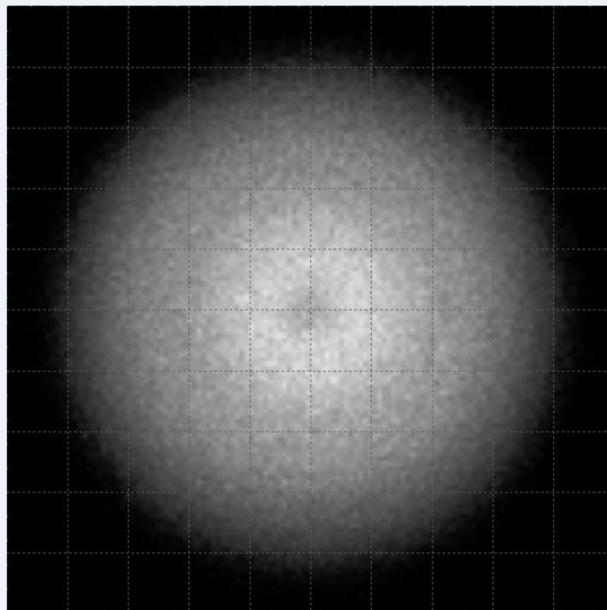
- Polar Candela Distribution Plot



- Rectangular Candela Distribution Plot



- Projection wall 5x5 m at 1m



LED used for simulation	CXA2530
Luminous flux of LED [lm]	3600
Efficiency [%]*	90
FWHM C ₀ [°]	120
FWHM C ₉₀ [°]	120

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

A958 7625

REVISION HISTORY			
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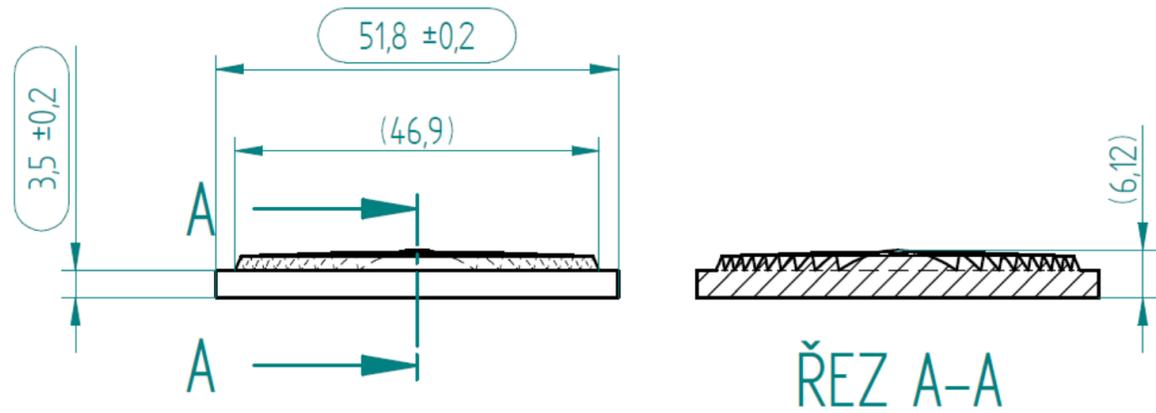
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mass : 145g

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CHECKED					
ENG APPR					
MGR APPR					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS				SIZE	DWG NO
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				SHEET 1 OF 1	

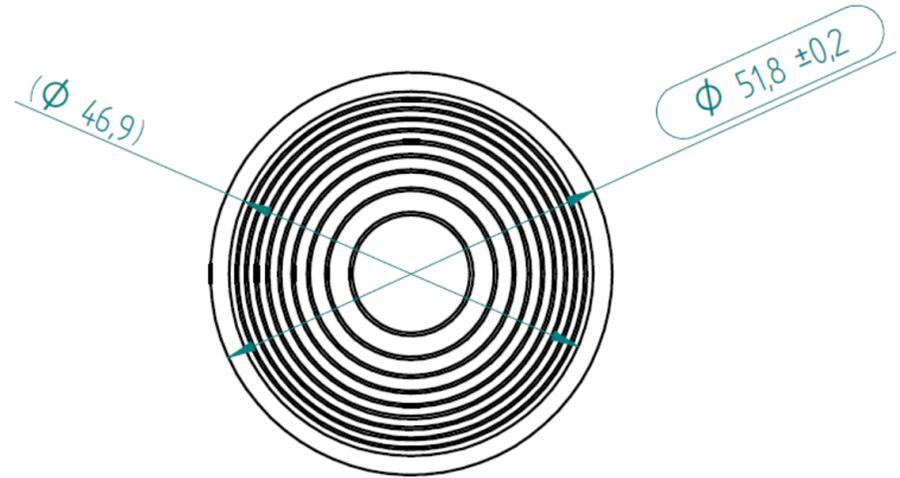
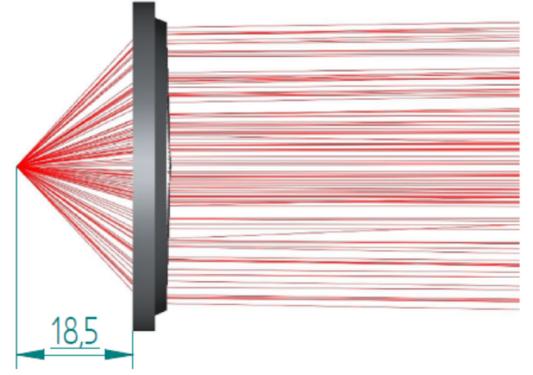
ECOGLOSS Fresnel Lenses				
ECOGLOSS code	Lens type	BFL (mm)	Diameter (mm)	Thickness (mm)
<u>A968 5206</u>	Fresnel	18,6	52	6
<u>A969 7106</u>	Fresnel	41,5	71	6



A968 5106



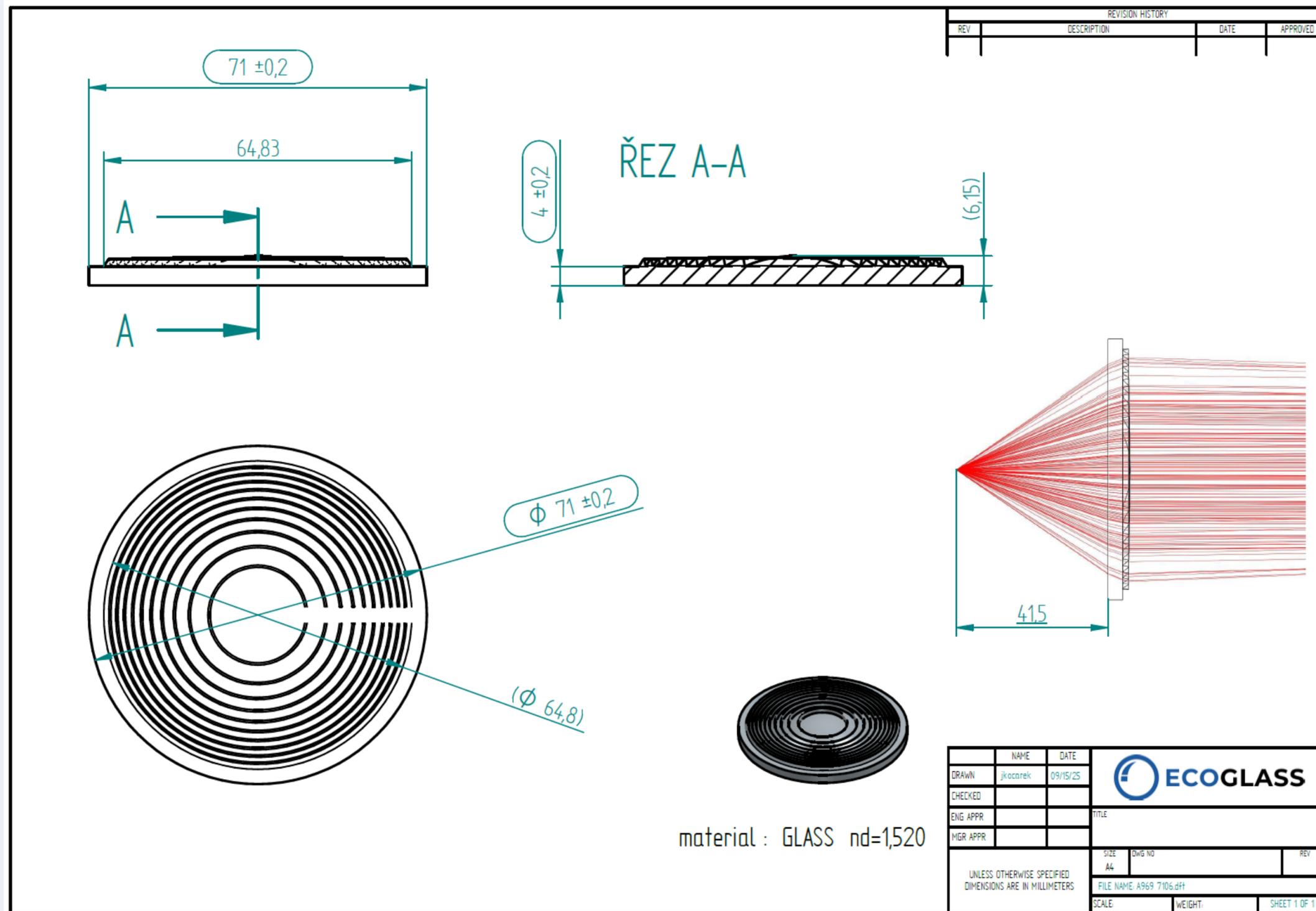
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



material : GLASS nd=1,520

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CHECKED				
ENG APPR				
MGR APPR			TITLE	
			Fresnel lens	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE	DWG NO
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			FILE NAME: A968_5216.dft	REV
			SCALE:	WEIGHT:
			SHEET 1 OF 1	

Ag69 7106





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