



spy a e

linha de luminárias embutidas quadrada e circular para tecnologia led. em alumínio tratado e pintado por pintura eletrostática. possui dispositivo antiofuscamento na cor preta.

informações técnicas

fonte de luz
LED integrado

IRC
alto índice de reprodução de cor (irc>90 | r9>60)

vida útil
50.000h

potência (W), facho, temperatura de cor (K),
fluxo nominal (lm nominal), fluxo útil (lm útil)

W		K	lm nominal	lm útil
1	c	2700		
1	m	2700		
1	c	3000	131	71
1	m	3000	131	71
2	c	2700		
2	m	2700		
2	c	3000	235	126
2	m	3000	235	130

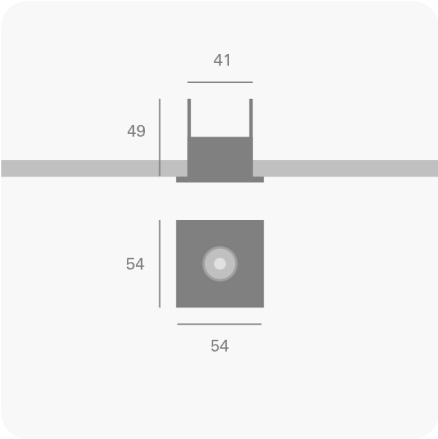
equipamentos
LED driver 350mA (incluso, ponto remoto)
LED driver 700mA (incluso, ponto remoto)

controle
on/off

instalação
forro de gesso
forro modular
marcenaria
laje

IP
20

dimensões



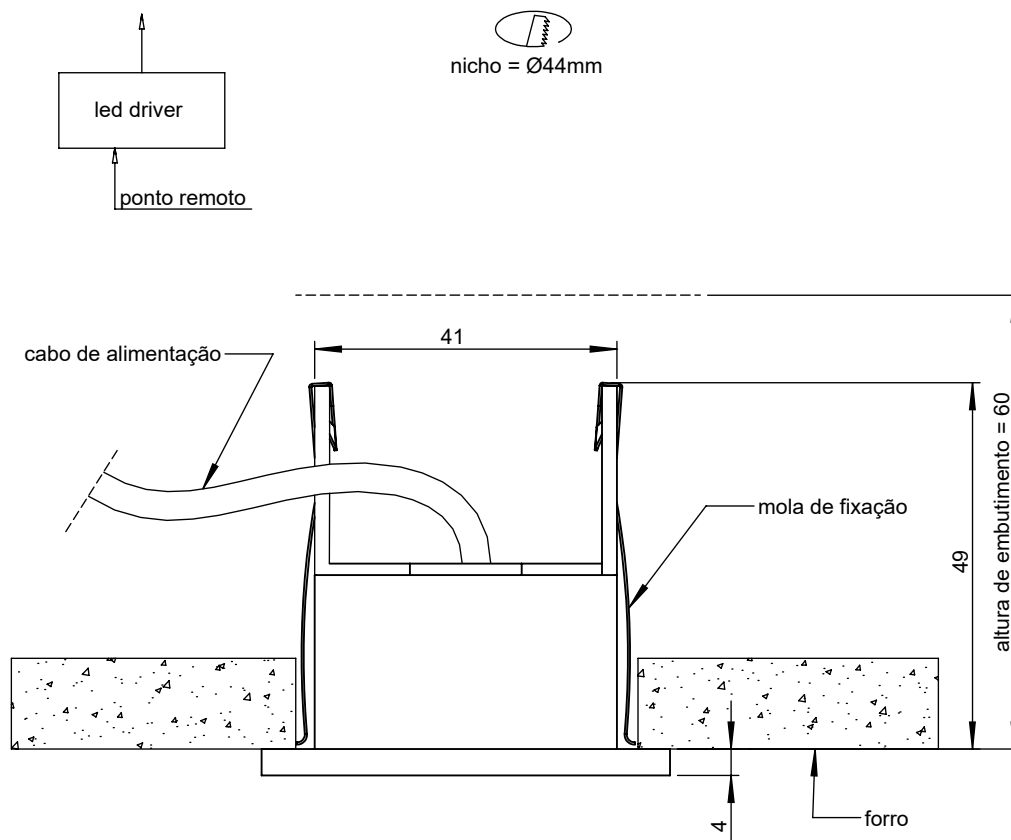
acabamentos e cores

cores



vista lateral

dimensões em milímetros



spy a e

folha
1/1

escala
1:1

data
27/09/2019

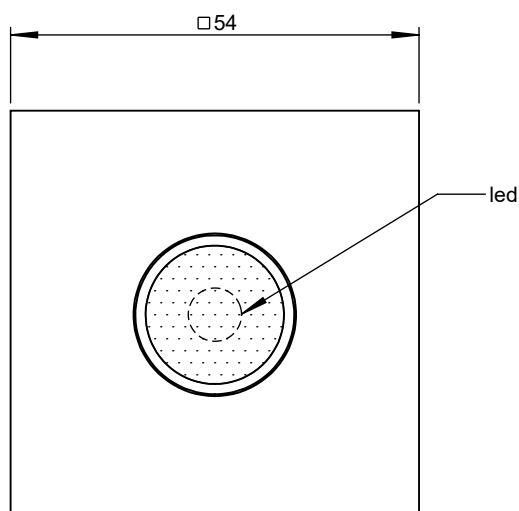
desenhista
joao ferreira

aprovação
edmilson

revisões
30/03/2022

vista inferior

dimensões em milímetros



para maiores informações,
consulte a área técnica
produto@lumini.com.br



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LumCAT:

Luminaire: spy a e fc

LampCAT: modulo led 1W 30K irc 90

Ballast type: LED driver 350mA

Report No:

Voltage(V): 127.9800

Test No:

Current(A): 0.0300

Number of Lamps: 1

Power (W): 1.5070

Lamp flux(lm): 131.0

PF: 0.3910

Length(mm): 18

Width(mm): 18

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 71.05, Efficiency(%): 54.24% , Luminous Efficacy(lm/W): 47.15

Central intensity(cd): 369.692, Maximum intensity(cd): 369.692

Angle of maximum intensity: $C=0.0$ $\gamma=0.0$

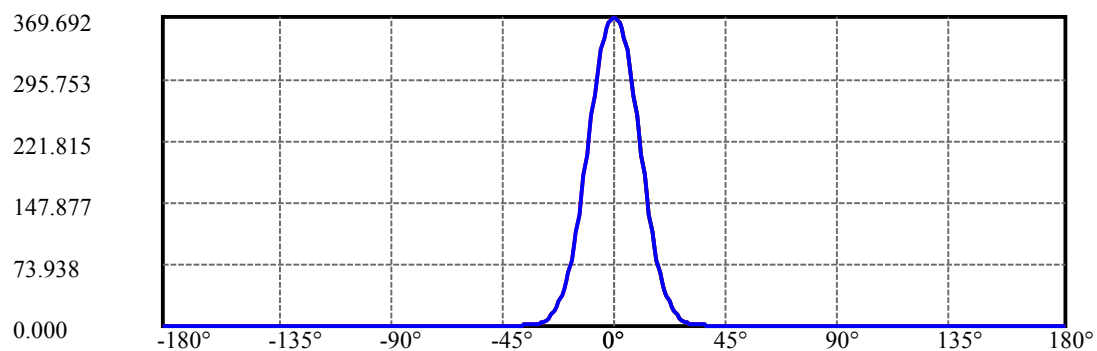
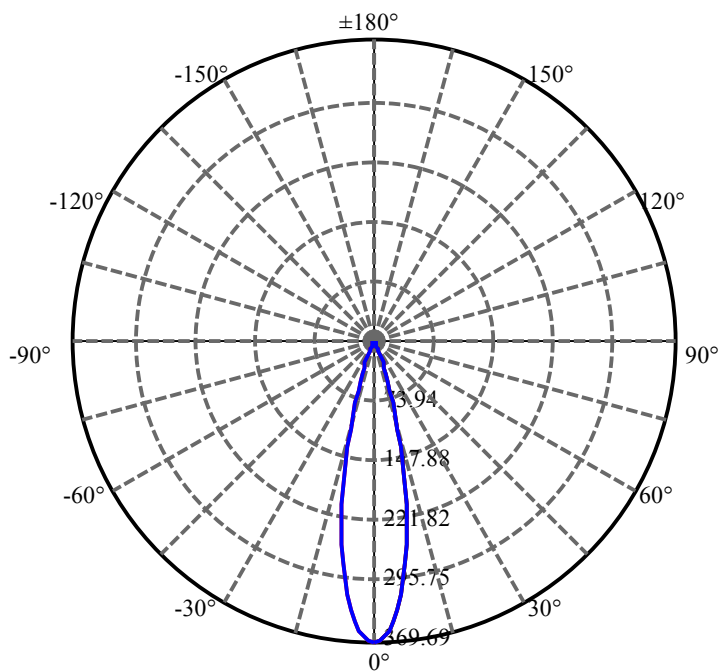
Beam angle of C0 plane : 23.62

Average BeamAngle(IEC 61341): 23.62

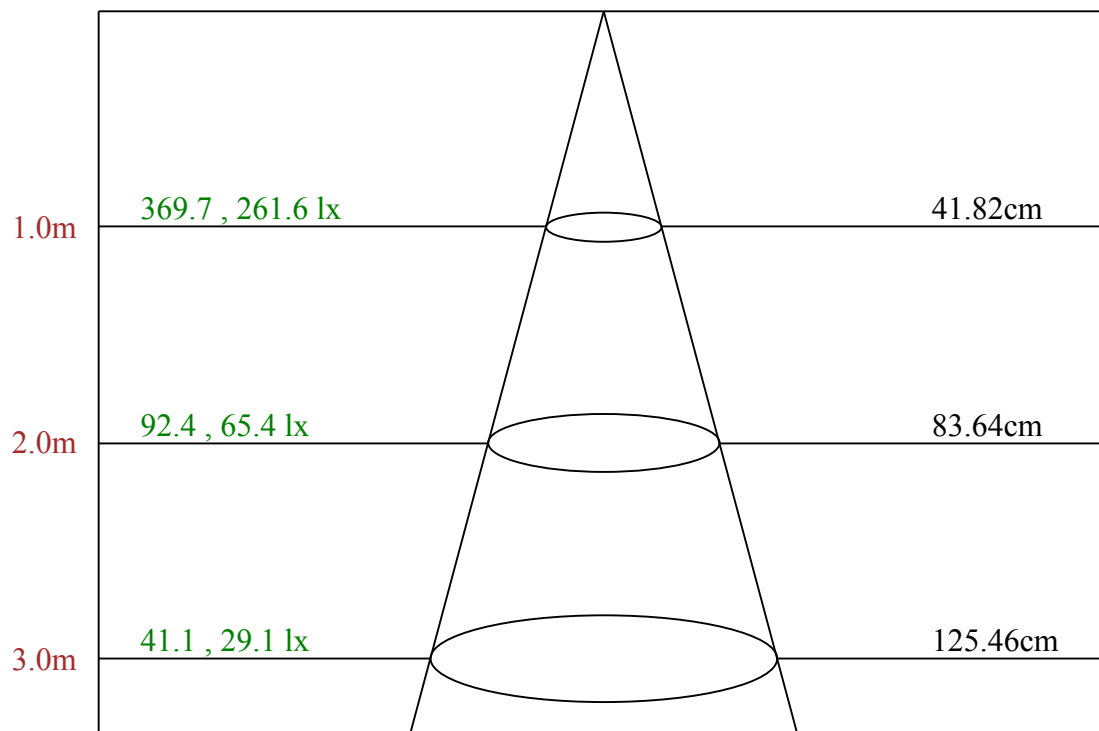
Equipment: equipamento lumini
Temperature(°C): 25.5

Date: 15/05/2025
Humidity(%): 60.0%

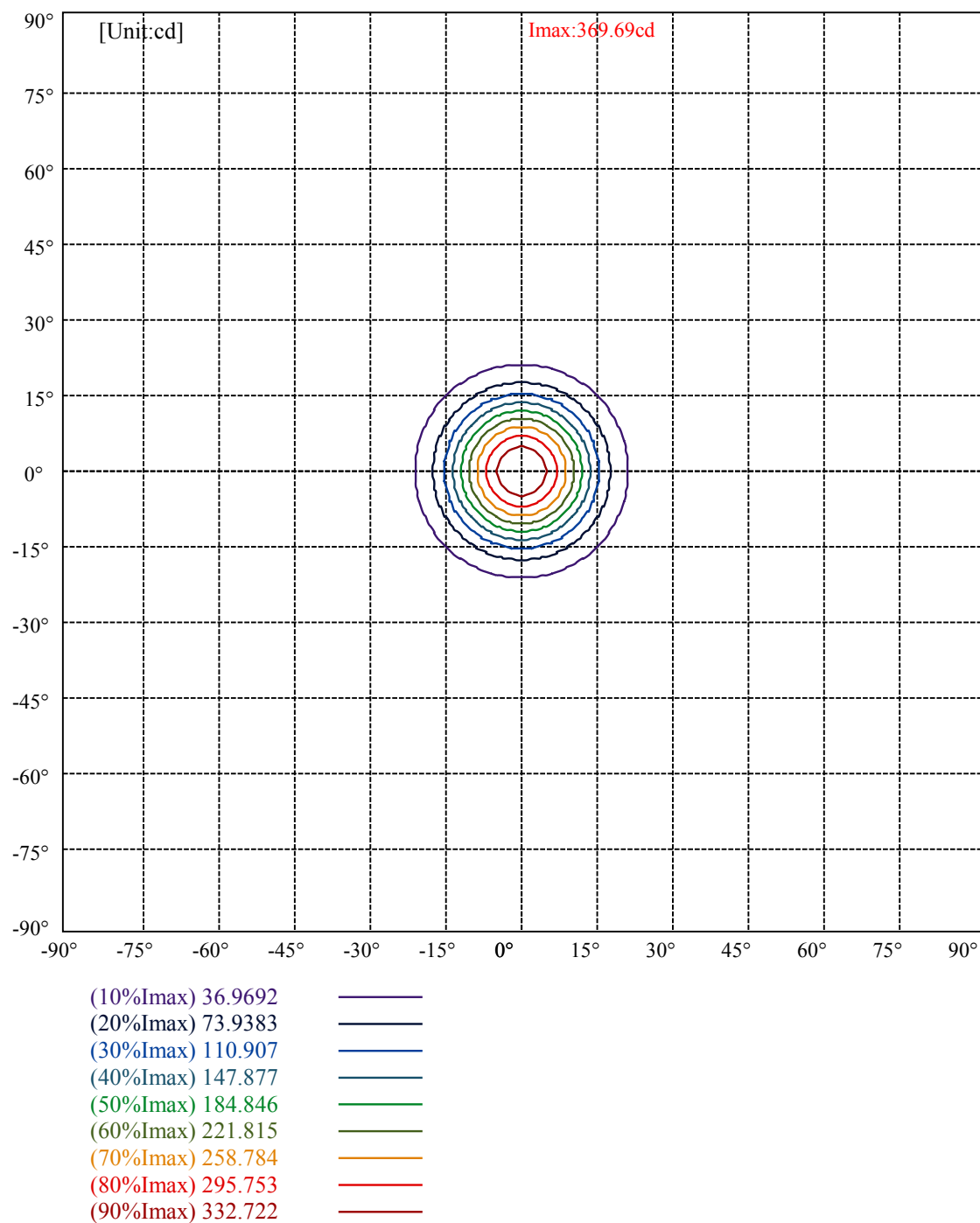
Operator: 01
Distance(m): 6.90



C0(Max):
C0/C180:
C90/C270:



Max , Ave Beam angle of C0 plane 23.62



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Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	2598	1972	1377	1653	1782	2256	2910	4231	8851
C45	2598	1972	1377	1653	1782	2256	2910	4231	8851
C90	2598	1972	1377	1653	1782	2256	2910	4231	8851

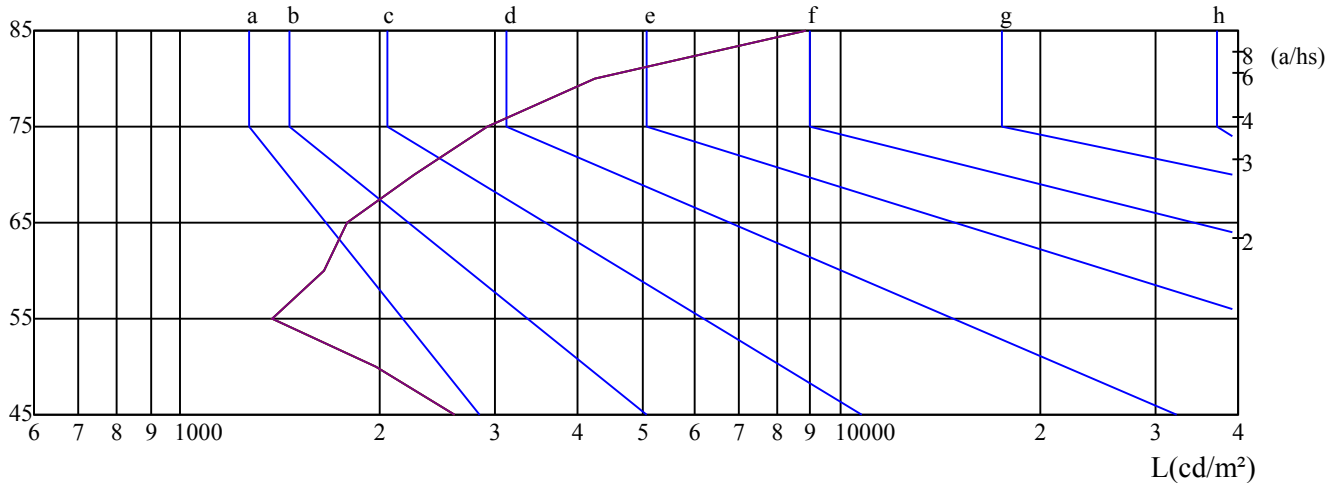
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1782	1782	1782	2910	2910	2910	8851	8851	8851

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

$\gamma(^{\circ})$



C0 ———

C45 ———

C90 ———

Equipment: equipamento lumini
Temperature($^{\circ}$ C): 25.5

Date: 15/05/2025
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.90

Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	4.98	5.87	5.39	6.23	6.60	6.01	6.90	6.41	7.26	7.63
	3H	6.49	7.28	6.92	7.66	8.07	7.17	7.97	7.60	8.35	8.75
	4H	7.68	8.41	8.12	8.81	9.24	8.03	8.77	8.48	9.17	9.59
	6H	9.18	9.85	9.65	10.28	10.73	9.32	9.98	9.78	10.41	10.86
	8H	10.17	10.81	10.64	11.24	11.71	10.13	10.77	10.60	11.21	11.67
	12H	11.19	11.79	11.66	12.23	12.70	11.16	11.77	11.63	12.21	12.68
4H	2H	5.29	6.02	5.73	6.42	6.85	6.16	6.89	6.61	7.30	7.72
	3H	7.19	7.81	7.66	8.25	8.72	7.71	8.33	8.18	8.77	9.24
	4H	8.74	9.28	9.23	9.75	10.25	8.92	9.45	9.40	9.92	10.42
	6H	10.44	10.91	10.95	11.41	11.91	10.46	10.93	10.98	11.43	11.93
	8H	11.58	12.02	12.11	12.52	13.05	11.46	11.89	11.98	12.39	12.92
	12H	12.76	13.16	13.29	13.65	14.22	12.68	13.08	13.21	13.57	14.14
8H	4H	9.33	9.76	9.85	10.26	10.79	9.46	9.89	9.98	10.39	10.92
	6H	11.29	11.64	11.83	12.16	12.72	11.29	11.65	11.84	12.17	12.73
	8H	12.66	12.96	13.23	13.52	14.07	12.53	12.83	13.10	13.39	13.94
	12H	14.07	14.29	14.65	14.85	15.42	13.99	14.22	14.57	14.77	15.35
12H	4H	9.48	9.88	10.01	10.37	10.95	9.60	10.01	10.13	10.50	11.07
	6H	11.60	11.90	12.17	12.46	13.01	11.60	11.90	12.18	12.46	13.01
	8H	13.04	13.27	13.62	13.82	14.40	12.93	13.15	13.51	13.71	14.28
Variation with the observer position at spacings:											
S = 1.0H		0.7/-1.1					0.7/-1.1				
S = 1.5H		0.6/-1.2					0.6/-1.2				
S = 2.0H		0.6/-1.1					0.6/-1.1				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-5.4					-5.4				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: spy a e fm

LampCAT: modulo led 1W 30K irc 90

Ballast type: LED driver 350mA

Report No:

Voltage(V): 127.9900

Test No:

Current(A): 0.0300

Number of Lamps: 1

Power (W): 1.5050

Lamp flux(lm): 131.0

PF: 0.3900

Length(mm): 18

Width(mm): 18

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 71.50, Efficiency(%): 54.58% , Luminous Efficacy(lm/W): 47.51

Central intensity(cd): 327.866, Maximum intensity(cd): 327.866

Angle of maximum intensity: C=0.0 γ =0.0

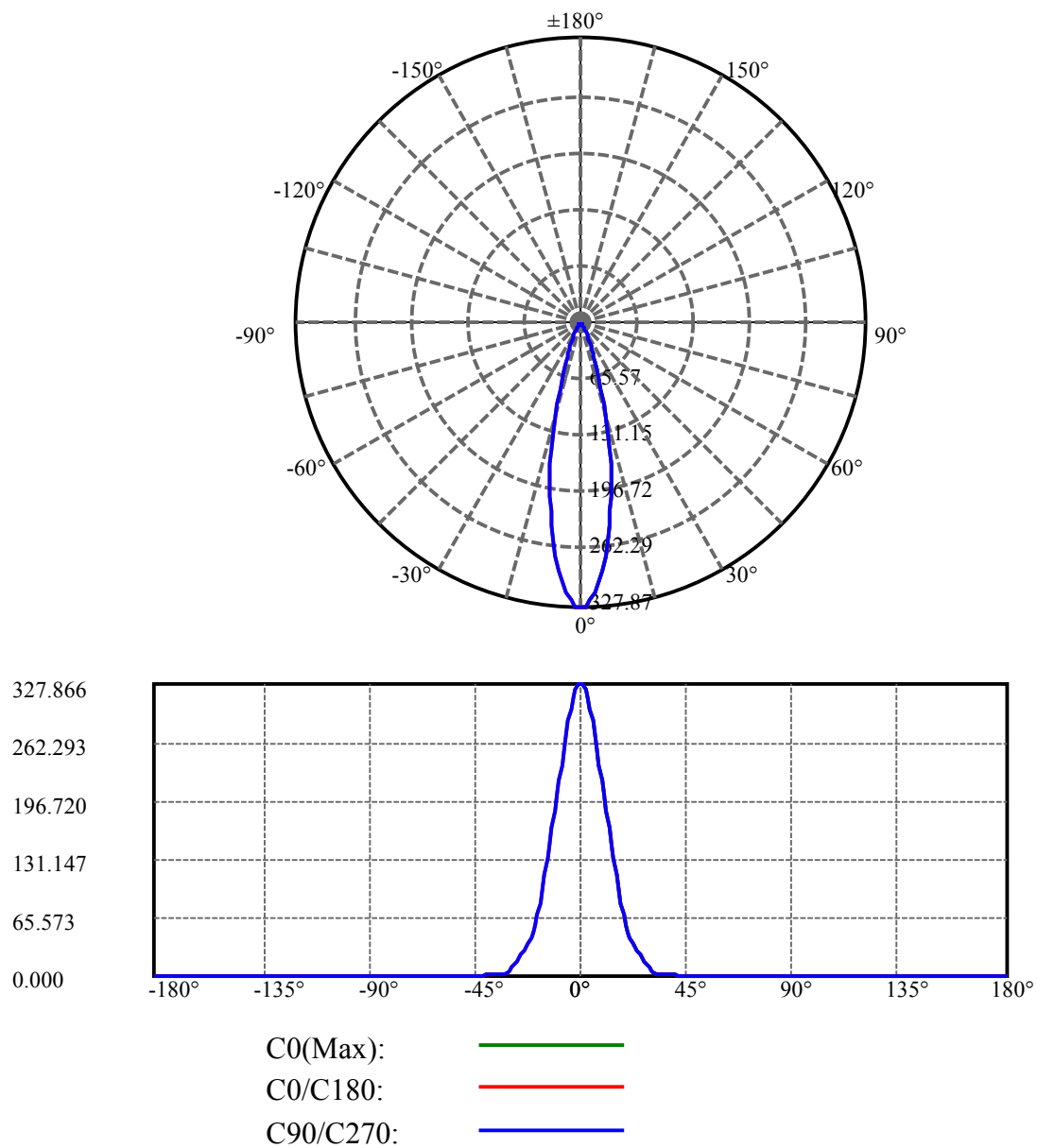
Beam angle of C0 plane : 24.30

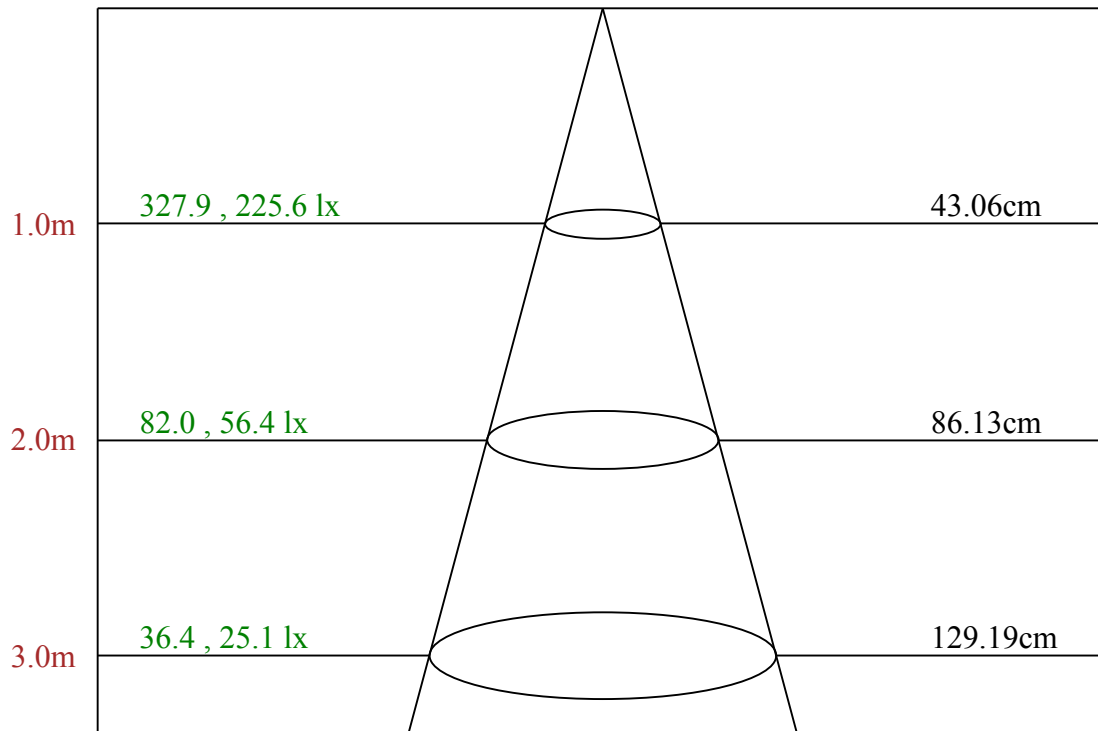
Aveage BeamAngle(IEC 61341):24.30

Equipment: equipamento lumini
Temperature(°C): 25.5

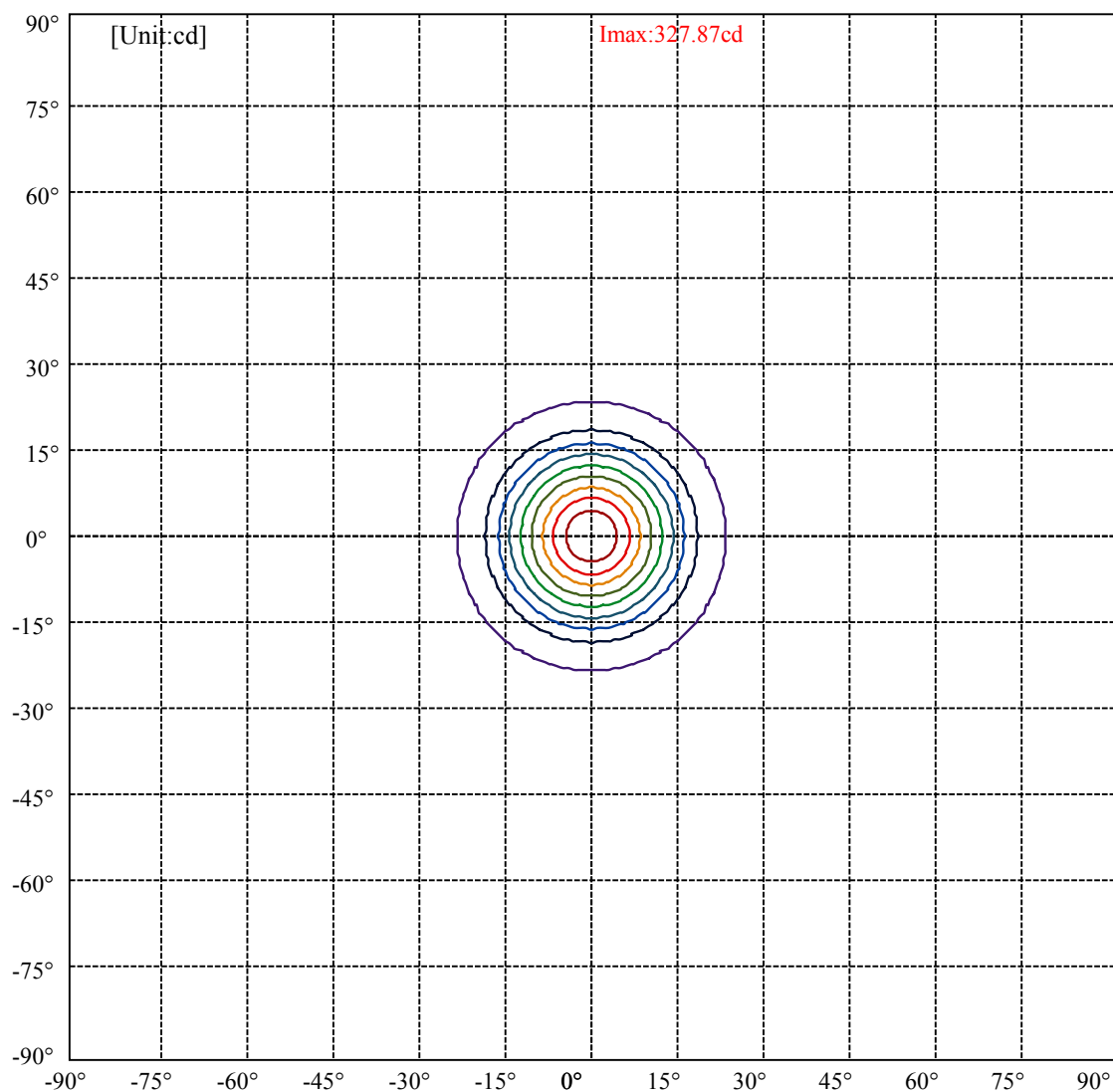
Date: 15/05/2025
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 24.30



(10%Imax)	32.7866	—
(20%Imax)	65.5733	—
(30%Imax)	98.3599	—
(40%Imax)	131.147	—
(50%Imax)	163.933	—
(60%Imax)	196.72	—
(70%Imax)	229.506	—
(80%Imax)	262.293	—
(90%Imax)	295.08	—

Luminance Table

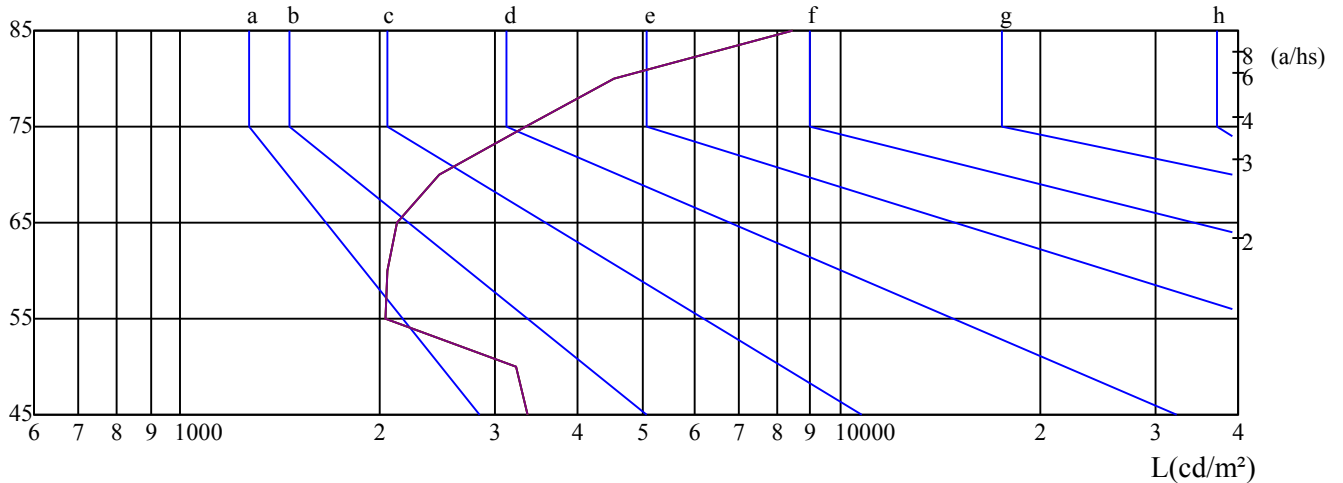
γ	45	50	55	60	65	70	75	80	85
C0	3351	3229	2050	2057	2130	2470	3336	4548	8430
C45	3351	3229	2050	2057	2130	2470	3336	4548	8430
C90	3351	3229	2050	2057	2130	2470	3336	4548	8430

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2130	2130	2130	3336	3336	3336	8430	8430	8430

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

 $\gamma(^{\circ})$ 

C0 ———

C45 ———

C90 ———

Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	7.23	8.12	7.63	8.48	8.86	8.30	9.20	8.71	9.56	9.93
	3H	8.21	9.00	8.64	9.39	9.80	9.00	9.80	9.43	10.18	10.59
	4H	9.03	9.77	9.48	10.17	10.60	9.70	10.43	10.14	10.84	11.26
	6H	10.35	11.02	10.81	11.45	11.90	10.82	11.49	11.28	11.92	12.37
	8H	11.12	11.76	11.59	12.20	12.66	11.56	12.21	12.03	12.64	13.11
	12H	11.97	12.58	12.44	13.02	13.50	12.32	12.93	12.79	13.37	13.85
4H	2H	7.46	8.20	7.91	8.60	9.03	8.40	9.13	8.84	9.54	9.96
	3H	8.75	9.37	9.22	9.81	10.29	9.38	10.00	9.85	10.44	10.91
	4H	9.89	10.43	10.38	10.90	11.41	10.39	10.93	10.87	11.40	11.90
	6H	11.45	11.93	11.97	12.42	12.93	11.79	12.26	12.31	12.76	13.27
	8H	12.40	12.84	12.93	13.34	13.87	12.73	13.16	13.25	13.67	14.19
	12H	13.44	13.84	13.97	14.34	14.91	13.68	14.09	14.22	14.58	15.16
8H	4H	10.37	10.81	10.90	11.31	11.84	10.78	11.22	11.31	11.72	12.25
	6H	12.20	12.56	12.75	13.08	13.65	12.48	12.84	13.03	13.36	13.93
	8H	13.39	13.69	13.97	14.25	14.80	13.65	13.95	14.22	14.51	15.06
	12H	14.69	14.92	15.27	15.47	16.05	14.87	15.10	15.46	15.66	16.23
12H	4H	10.51	10.91	11.04	11.41	11.98	10.90	11.30	11.43	11.80	12.37
	6H	12.48	12.78	13.06	13.34	13.90	12.74	13.03	13.31	13.60	14.15
	8H	13.75	13.98	14.33	14.53	15.11	13.97	14.20	14.56	14.76	15.33
Variation with the observer position at spacings:											
S = 1.0H		1.0/-1.1					1.0/-1.1				
S = 1.5H		1.0/-1.2					1.0/-1.2				
S = 2.0H		1.1/-1.2					1.1/-1.2				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-4.3					-4.3				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: spy a e fc

LampCAT: modulo led 2W 30K irc 90

Ballast type: LED driver 700mA

Report No:

Voltage(V): 127.9600

Test No:

Current(A): 0.0520

Number of Lamps: 1

Power (W): 2.9940

Lamp flux(lm): 235.0

PF: 0.4470

Length(mm): 18

Width(mm): 18

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 125.96, Efficiency(%): 53.60% , Luminous Efficacy(lm/W): 42.07

Central intensity(cd): 734.718, Maximum intensity(cd): 734.718

Angle of maximum intensity: C=0.0 γ =0.0

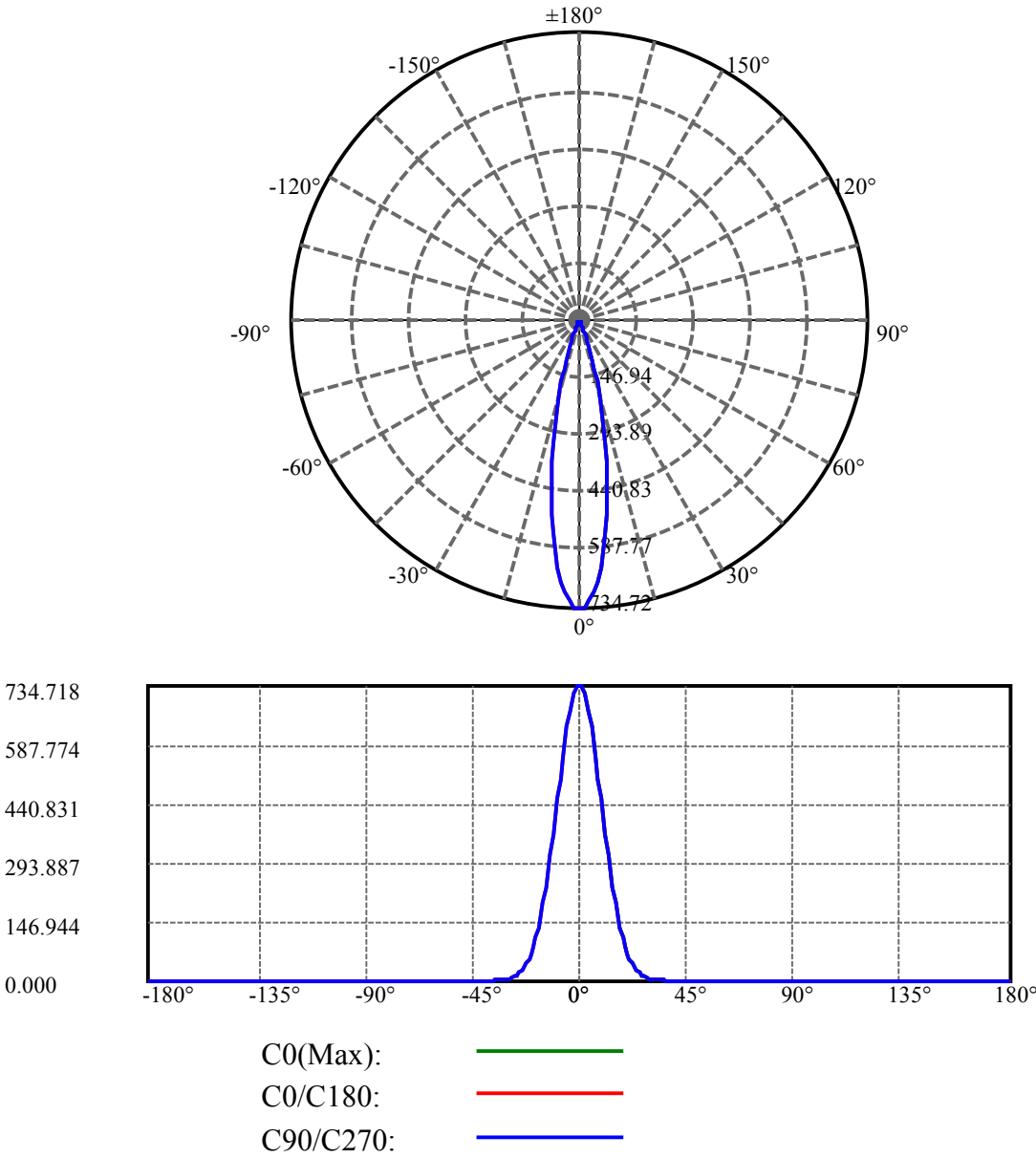
Beam angle of C0 plane : 21.91

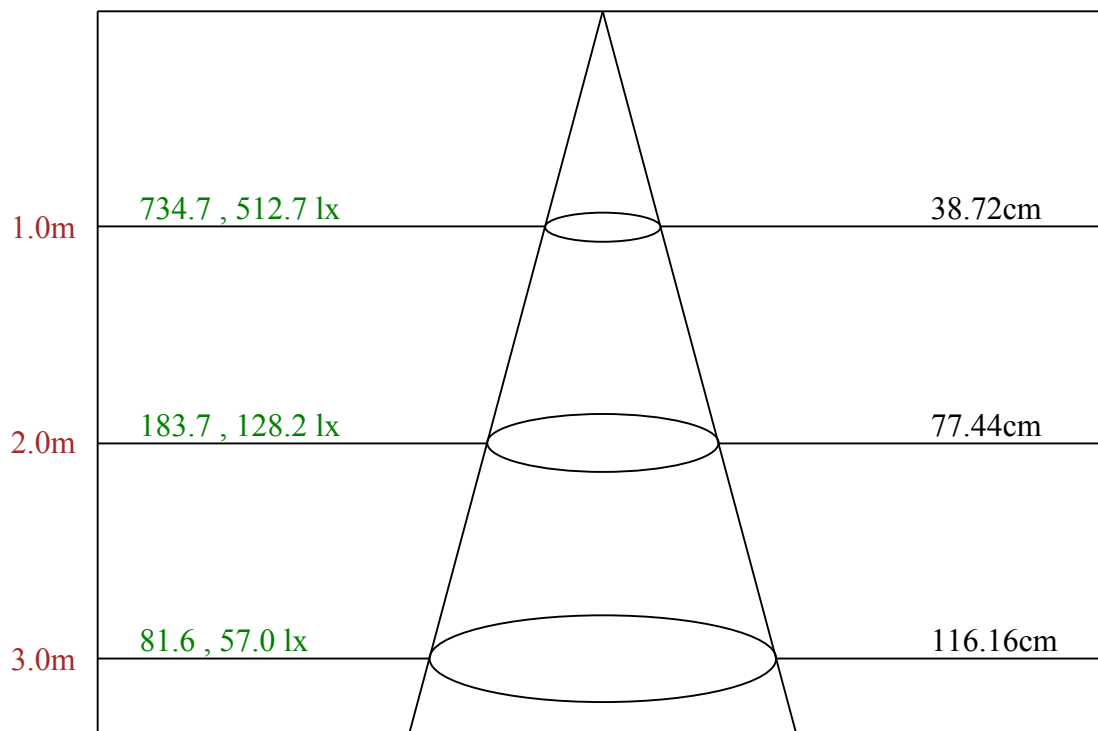
Average BeamAngle(IEC 61341): 21.91

Equipment: equipamento lumini
Temperature(°C): 25.5

Date: 15/05/2025
Humidity(%): 60.0%

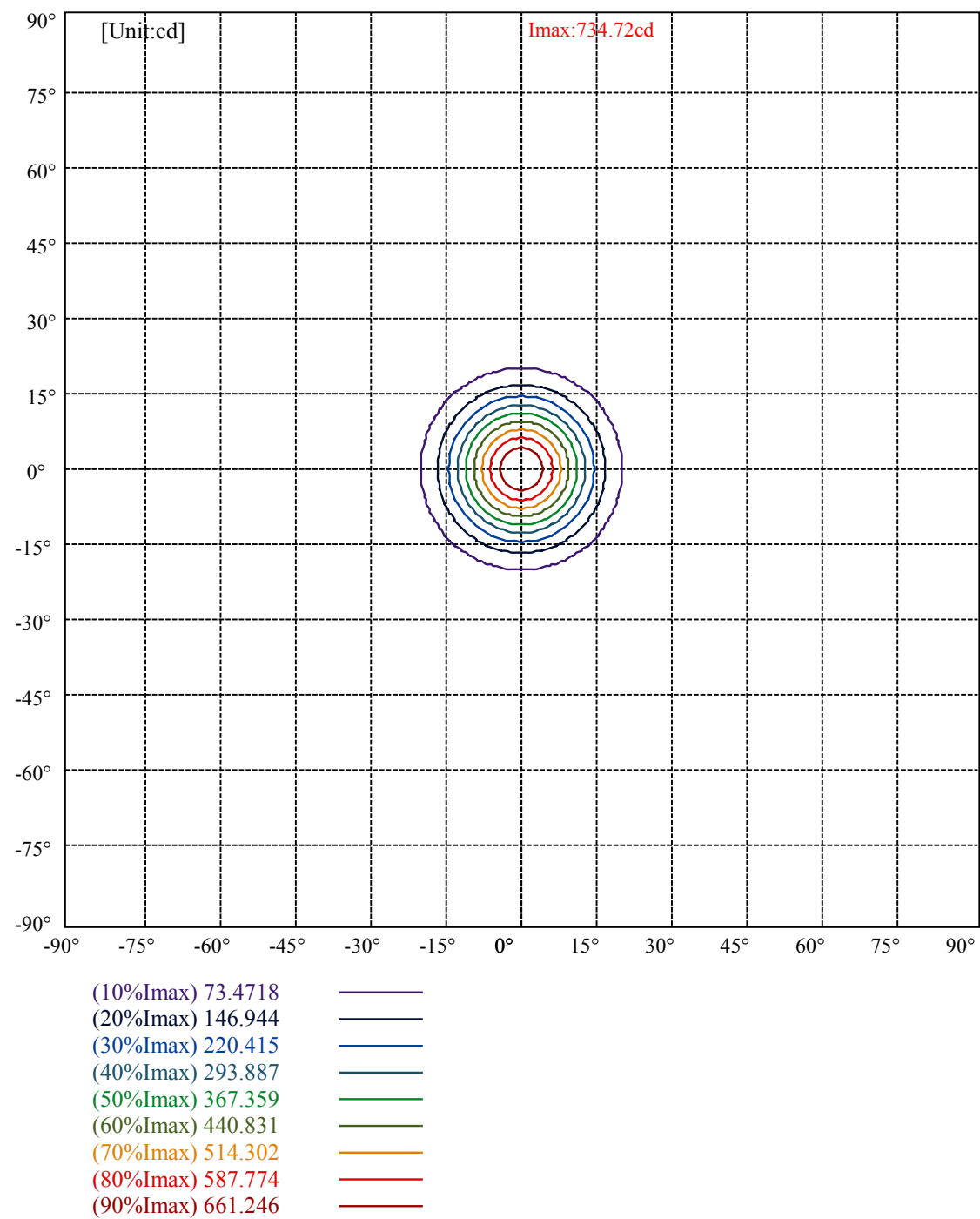
Operator: 01
Distance(m): 6.90





Max , Ave

Beam angle of C0 plane 21.91



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Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	4572	3372	2562	2902	3303	3974	5110	7193	14331
C45	4572	3372	2562	2902	3303	3974	5110	7193	14331
C90	4572	3372	2562	2902	3303	3974	5110	7193	14331

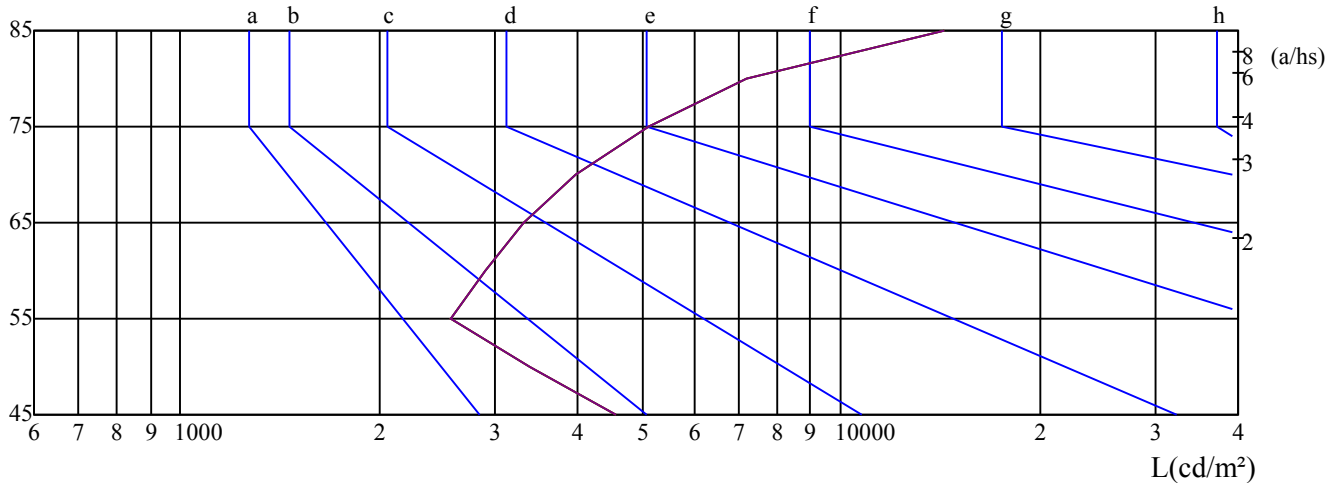
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3303	3303	3303	5110	5110	5110	14331	14331	14331

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

$\gamma(^{\circ})$



C0 ———

C45 ———

C90 ———

Equipment: equipamento lumini
Temperature($^{\circ}$ C): 25.5

Date: 15/05/2025
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.90

Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	6.45	7.34	6.85	7.70	8.07	7.42	8.31	7.83	8.67	9.04
	3H	8.02	8.81	8.45	9.20	9.60	8.80	9.59	9.23	9.97	10.37
	4H	9.42	10.16	9.87	10.56	10.98	9.90	10.64	10.35	11.04	11.46
	6H	11.11	11.78	11.57	12.20	12.65	11.20	11.87	11.67	12.30	12.75
	8H	12.19	12.83	12.66	13.26	13.73	12.10	12.74	12.56	13.17	13.63
	12H	13.30	13.90	13.76	14.34	14.81	13.07	13.67	13.54	14.11	14.58
4H	2H	6.86	7.59	7.30	7.99	8.42	7.67	8.40	8.11	8.80	9.22
	3H	8.82	9.44	9.29	9.88	10.35	9.40	10.02	9.87	10.46	10.93
	4H	10.56	11.09	11.04	11.56	12.06	10.87	11.40	11.35	11.87	12.37
	6H	12.44	12.92	12.96	13.41	13.91	12.42	12.89	12.93	13.39	13.89
	8H	13.68	14.12	14.21	14.62	15.14	13.50	13.94	14.03	14.44	14.96
	12H	14.93	15.33	15.46	15.83	16.40	14.64	15.04	15.17	15.54	16.11
8H	4H	11.15	11.59	11.68	12.09	12.62	11.40	11.83	11.92	12.33	12.86
	6H	13.38	13.74	13.93	14.26	14.82	13.33	13.69	13.87	14.20	14.77
	8H	14.87	15.16	15.44	15.72	16.27	14.67	14.97	15.25	15.53	16.08
	12H	16.32	16.55	16.90	17.10	17.67	16.04	16.26	16.62	16.82	17.39
12H	4H	11.35	11.75	11.88	12.24	12.82	11.59	11.99	12.12	12.48	13.05
	6H	13.76	14.05	14.33	14.61	15.16	13.71	14.01	14.28	14.57	15.12
	8H	15.31	15.54	15.90	16.09	16.67	15.14	15.37	15.72	15.92	16.49
Variation with the observer position at spacings:											
S = 1.0H		0.7/-1.1					0.7/-1.1				
S = 1.5H		0.6/-1.2					0.6/-1.2				
S = 2.0H		0.6/-1.2					0.6/-1.2				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-3.5					-3.5				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: spy a e fm

LampCAT: modulo led 2W 30K irc 90

Ballast type: LED driver 700mA

Report No:

Voltage(V): 127.9300

Test No:

Current(A): 0.0520

Number of Lamps: 1

Power (W): 2.9930

Lamp flux(lm): 235.0

PF: 0.4470

Length(mm): 18

Width(mm): 18

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 130.17, Efficiency(%): 55.39% , Luminous Efficacy(lm/W): 43.49

Central intensity(cd): 677.050, Maximum intensity(cd): 677.050

Angle of maximum intensity: $C=0.0$ $\gamma=0.0$

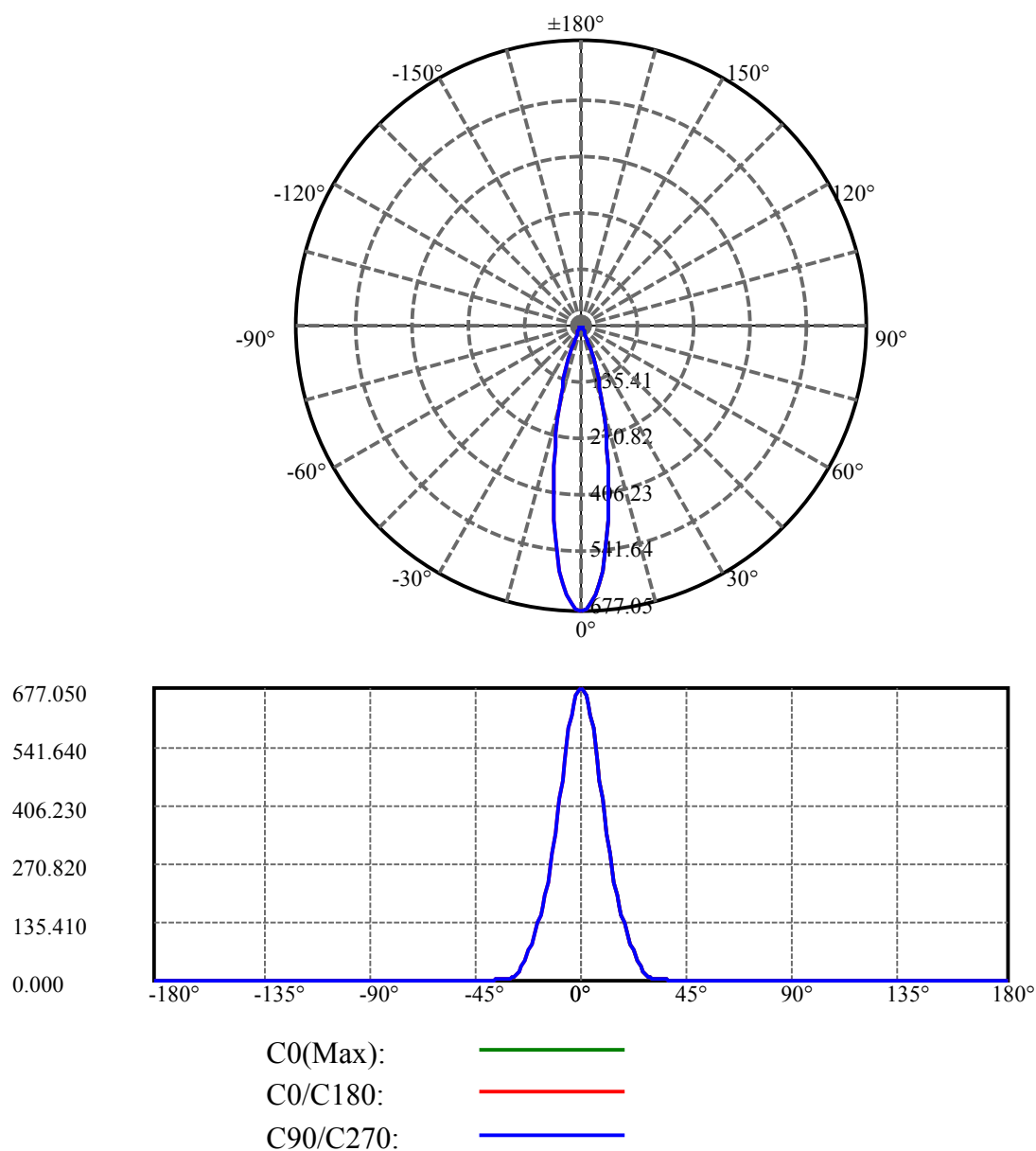
Beam angle of C0 plane : 22.03

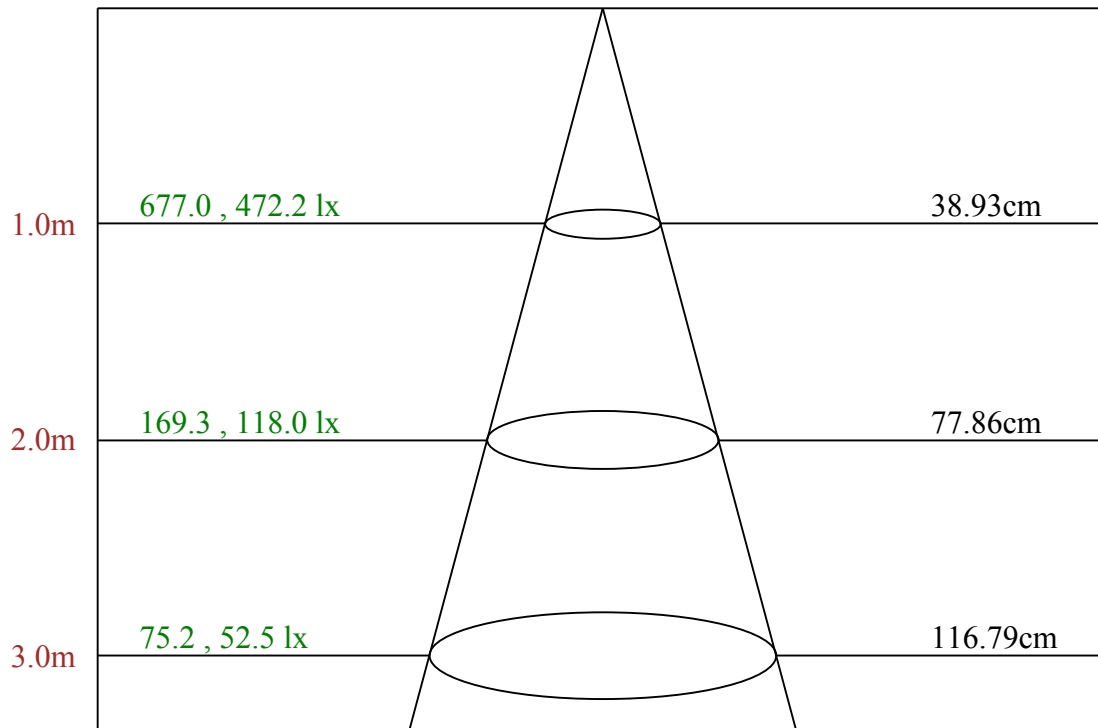
Average BeamAngle(IEC 61341): 22.03

Equipment: equipamento lumini
Temperature(°C): 25.5

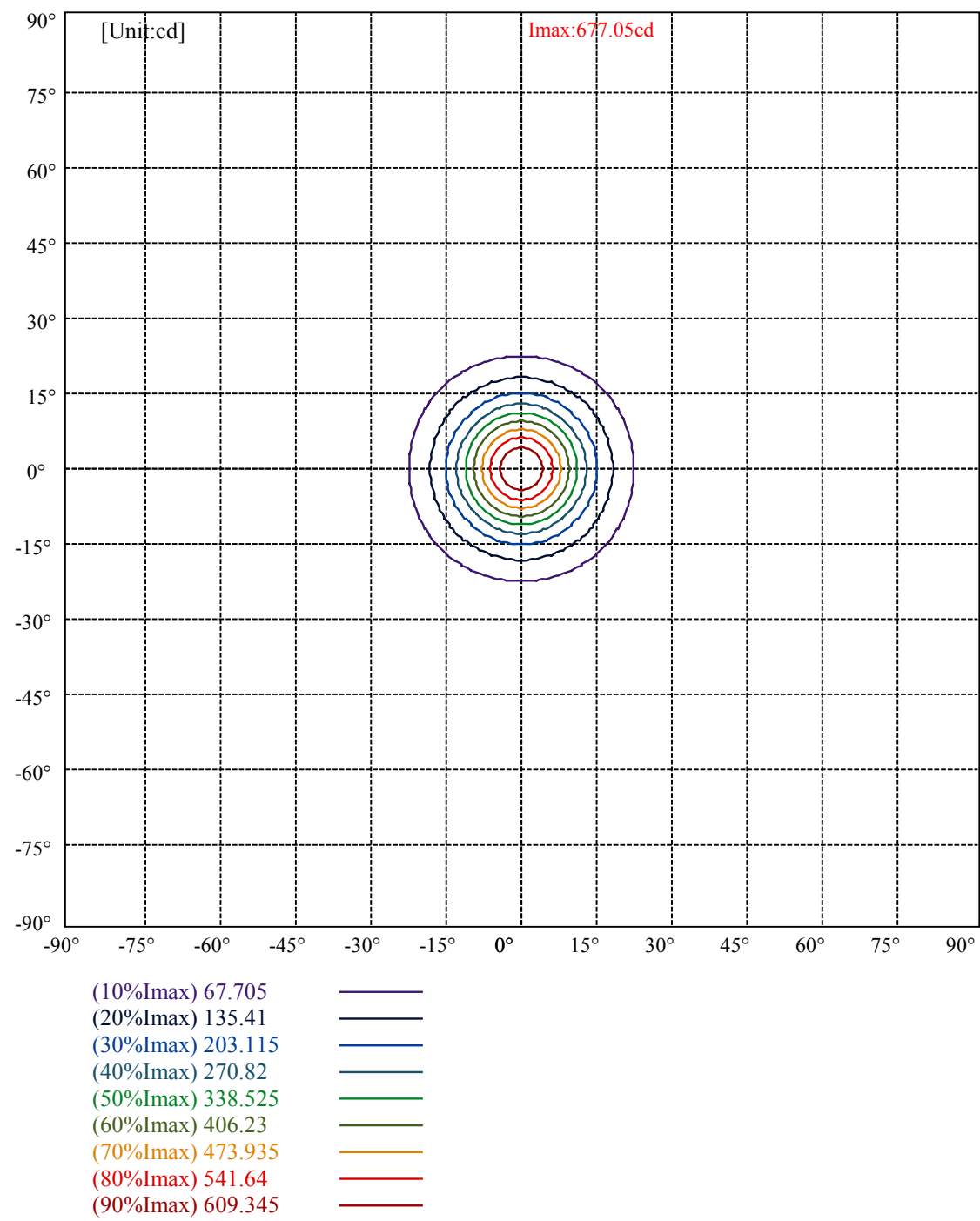
Date: 15/05/2025
Humidity(%): 60.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 22.03



lumini

Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	6027	3972	3330	3380	3738	4457	5748	8462	16438
C45	6027	3972	3330	3380	3738	4457	5748	8462	16438
C90	6027	3972	3330	3380	3738	4457	5748	8462	16438

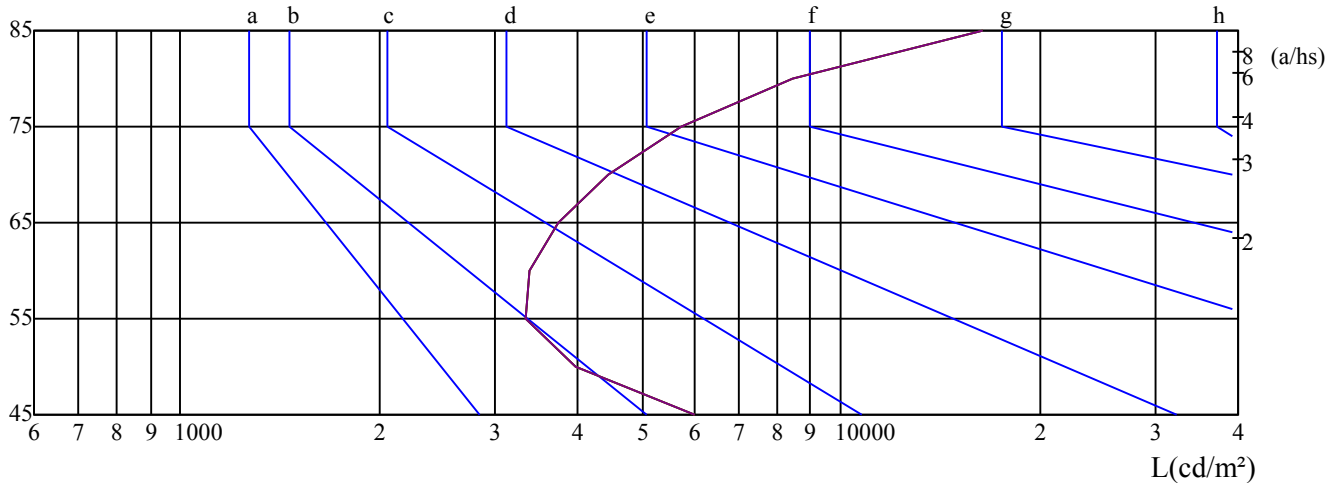
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3738	3738	3738	5748	5748	5748	16438	16438	16438

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

$\gamma(^{\circ})$



C0 ———

C45 ———

C90 ———

Equipment: equipamento lumini
Temperature($^{\circ}$ C): 25.5

Date: 15/05/2025
Humidity(%): 60.0%

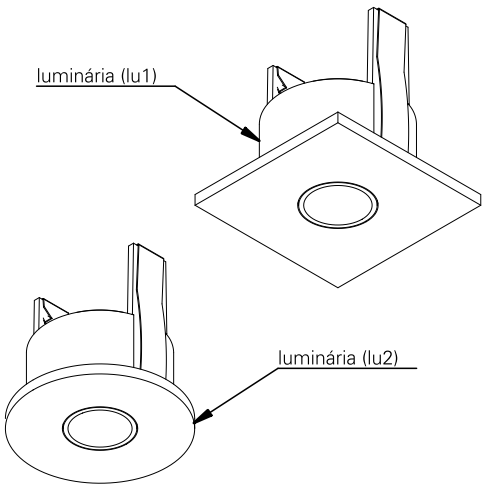
Operator: 01
Distance(m): 6.90

Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	7.80	8.69	8.21	9.06	9.43	7.17	8.07	7.58	8.43	8.80
	3H	9.21	10.01	9.64	10.39	10.80	8.79	9.59	9.22	9.98	10.38
	4H	10.27	11.00	10.71	11.41	11.83	9.95	10.69	10.40	11.09	11.52
	6H	11.69	12.36	12.15	12.79	13.25	11.47	12.14	11.93	12.57	13.02
	8H	12.58	13.23	13.05	13.66	14.12	12.32	12.96	12.78	13.39	13.86
	12H	13.67	14.28	14.14	14.72	15.20	13.48	14.09	13.95	14.53	15.01
4H	2H	8.08	8.82	8.53	9.22	9.65	7.57	8.30	8.01	8.71	9.13
	3H	9.87	10.49	10.34	10.93	11.40	9.55	10.17	10.02	10.61	11.08
	4H	11.22	11.76	11.70	12.23	12.73	11.00	11.54	11.48	12.00	12.51
	6H	12.89	13.37	13.41	13.86	14.37	12.73	13.20	13.25	13.70	14.21
	8H	13.95	14.39	14.48	14.89	15.42	13.74	14.17	14.26	14.68	15.20
	12H	15.21	15.62	15.75	16.11	16.69	15.07	15.47	15.60	15.97	16.54
8H	4H	11.74	12.18	12.27	12.68	13.21	11.56	12.00	12.09	12.50	13.03
	6H	13.73	14.09	14.28	14.61	15.17	13.58	13.94	14.13	14.46	15.03
	8H	15.01	15.30	15.58	15.87	16.42	14.83	15.13	15.41	15.69	16.24
	12H	16.52	16.75	17.11	17.31	17.88	16.41	16.64	17.00	17.20	17.77
12H	4H	11.90	12.30	12.43	12.80	13.37	11.74	12.14	12.27	12.64	13.21
	6H	14.04	14.34	14.62	14.90	15.46	13.91	14.21	14.49	14.77	15.32
	8H	15.38	15.60	15.96	16.16	16.74	15.23	15.45	15.81	16.01	16.58
Variation with the observer position at spacings:											
S = 1.0H		0.5/-1.0					0.5/-1.0				
S = 1.5H		0.5/-1.2					0.5/-1.2				
S = 2.0H		0.5/-1.1					0.5/-1.1				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-2.7					-2.7				

依据CIE Publ. 117 计算 UGR, S/H = 0.25

spy led

spy a e
spy r e



especificações técnicas

fonte de luz
módulo led integrado (incluso)

índice de proteção
IP20 - luminária para uso interno

peso
spy a e - 0,1kg
spy r e - 0,1kg

cuidados com o produto
o produto deve ser manuseado com cuidado para evitar riscos e deformações.

para limpeza, utilize detergente neutro e um pano de algodão macio. finalize com um pano de algodão seco.

instalação
conteúdo da embalagem
1 luminária

informações importantes
para a instalação, lave as mãos e seque as mãos, use luvas descartáveis.

antes de iniciar a instalação, certifique-se que a energia elétrica esteja desligada.

retire a luminária da embalagem com cuidado e apoie-o em uma superfície limpa e seca.

atenção

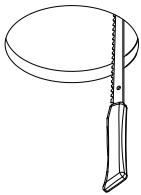
leia atentamente todas as instruções relacionadas ao seu produto antes de utilizá-lo.

antes de iniciar a instalação, certifique-se que a energia elétrica esteja desligada.

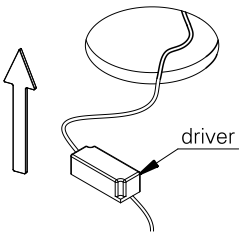
não são permitidas modificações no produto, esse deve atender à finalidade para a qual foi projetado e ser utilizado de acordo com as especificações técnicas.

em caso de dúvidas, entre em contato com o fabricante.

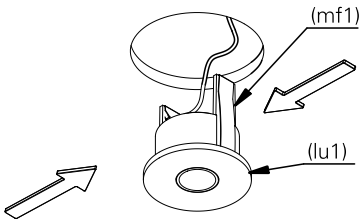
1. faça um nicho no forro conforme o modelo do produto na tabela.
spy a e - nicho = Ø44mm
spy r e - nicho = Ø44mm



2. aloje o driver sobre o forro.
faça a ligação elétrica. isole os fios separadamente com fita isolante. repita a operação envolvendo o conjunto dos fios, vedando completamente a emenda.



3. segurando as molas de fixação (mf1), encaixe a luminária (lu1) no nicho.



4. a luminária após instalada deverá ficar como ilustrado na imagem.
ligue a rede elétrica e teste o seu funcionamento.

