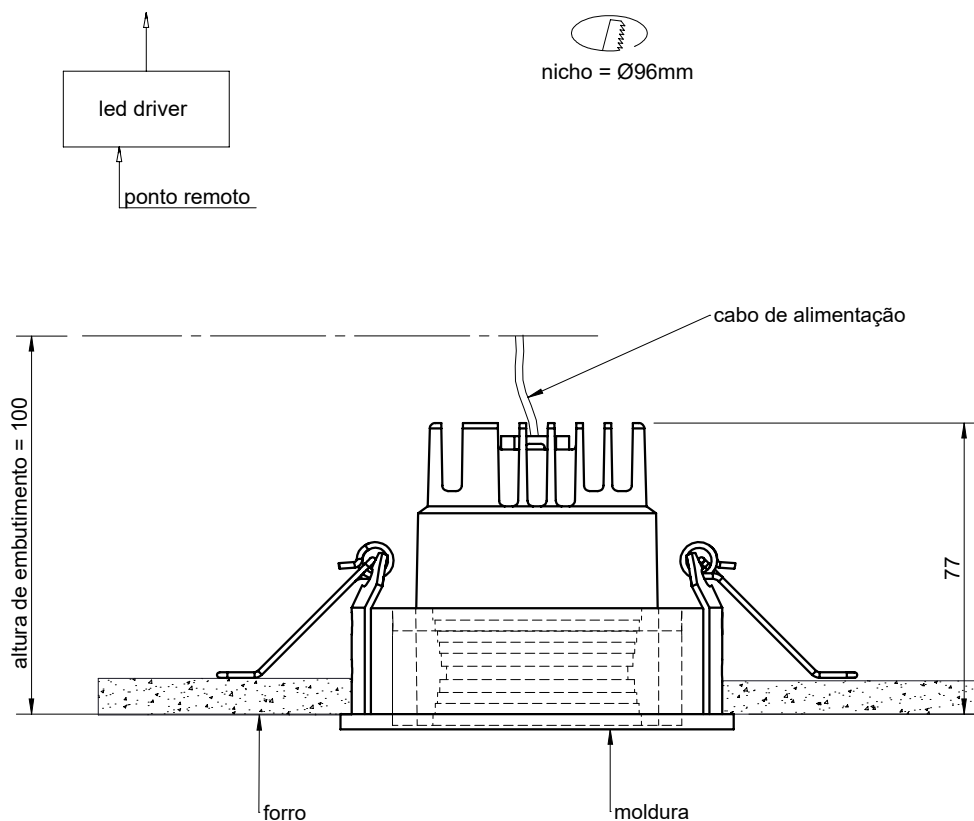


vista lateral

dimensões em milímetros



focus sm r e serie 3

folha
1/1

escala
1:2

data
18/06/2025

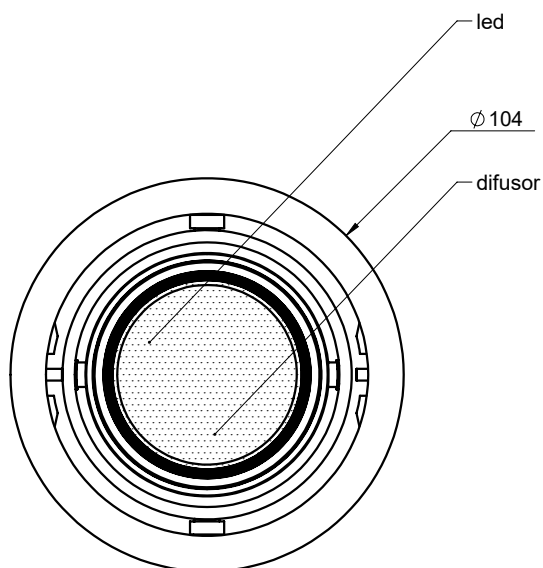
desenhista
joão v.

aprovação
severino

revisões
18/06/2025

vista inferior

dimensões em milímetros



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



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

LumCAT:

Luminaire: focus sm r e tr fm

LampCAT: modulo led tr 5W 2700K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.0390

Number of Lamps: 1

Power (W): 4.7000

Lamp flux(lm): 290.0

PF: 0.9300

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 199.90, Efficiency(%): 68.93% , Luminous Efficacy(lm/W): 42.53

Central intensity(cd): 678.704, Maximum intensity(cd): 678.704

Angle of maximum intensity: C=0.0 γ =0.0

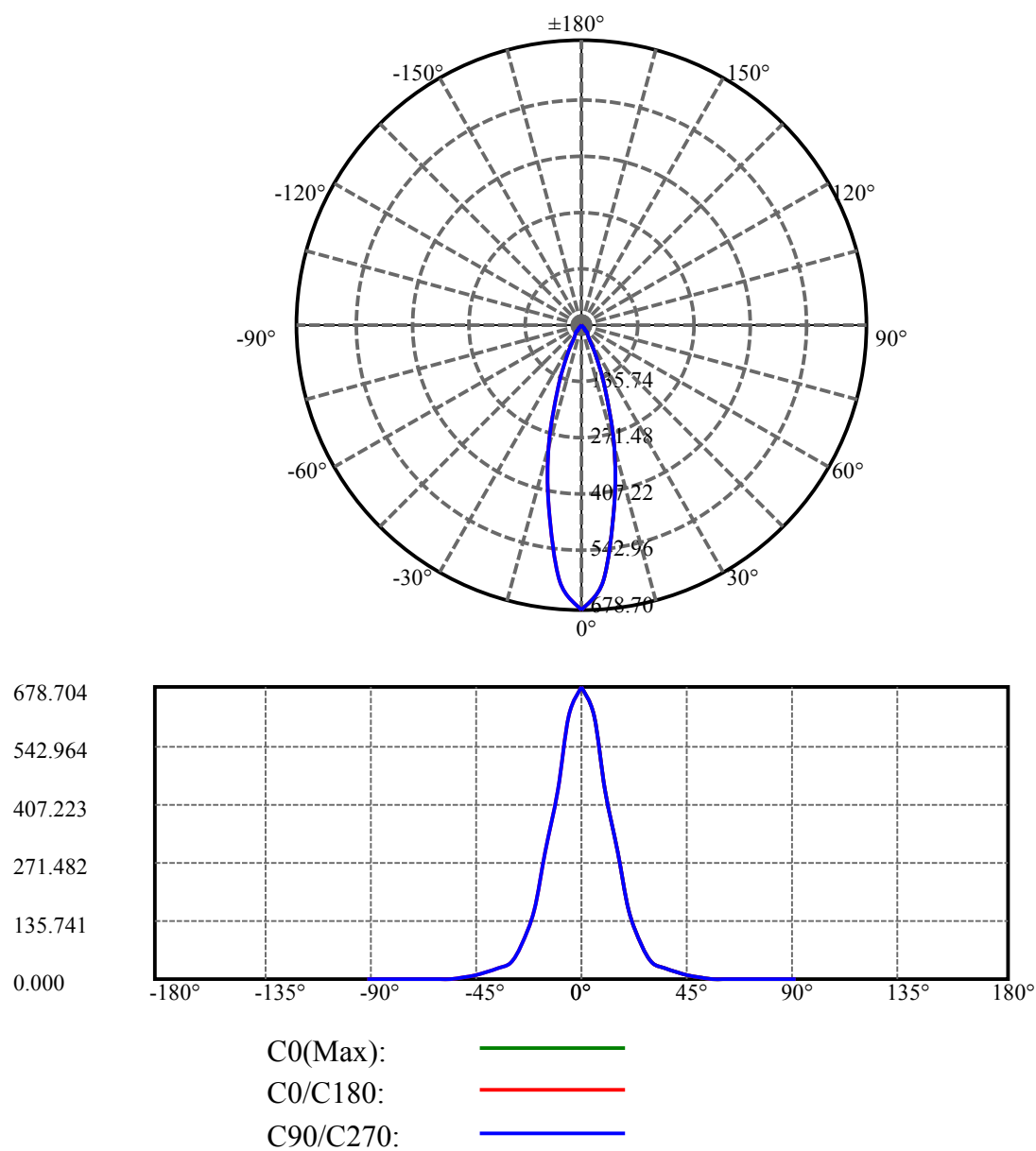
Beam angle of C0 plane : 26.91

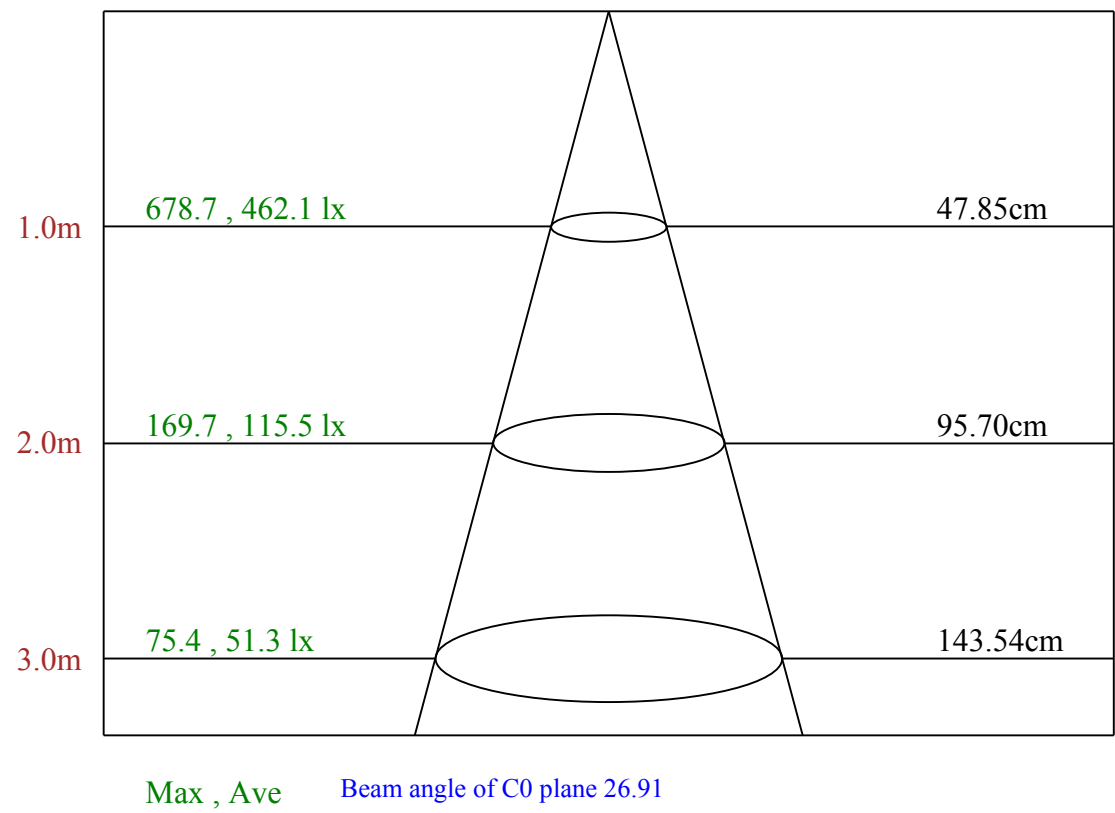
Aveage BeamAngle(IEC 61341):26.91

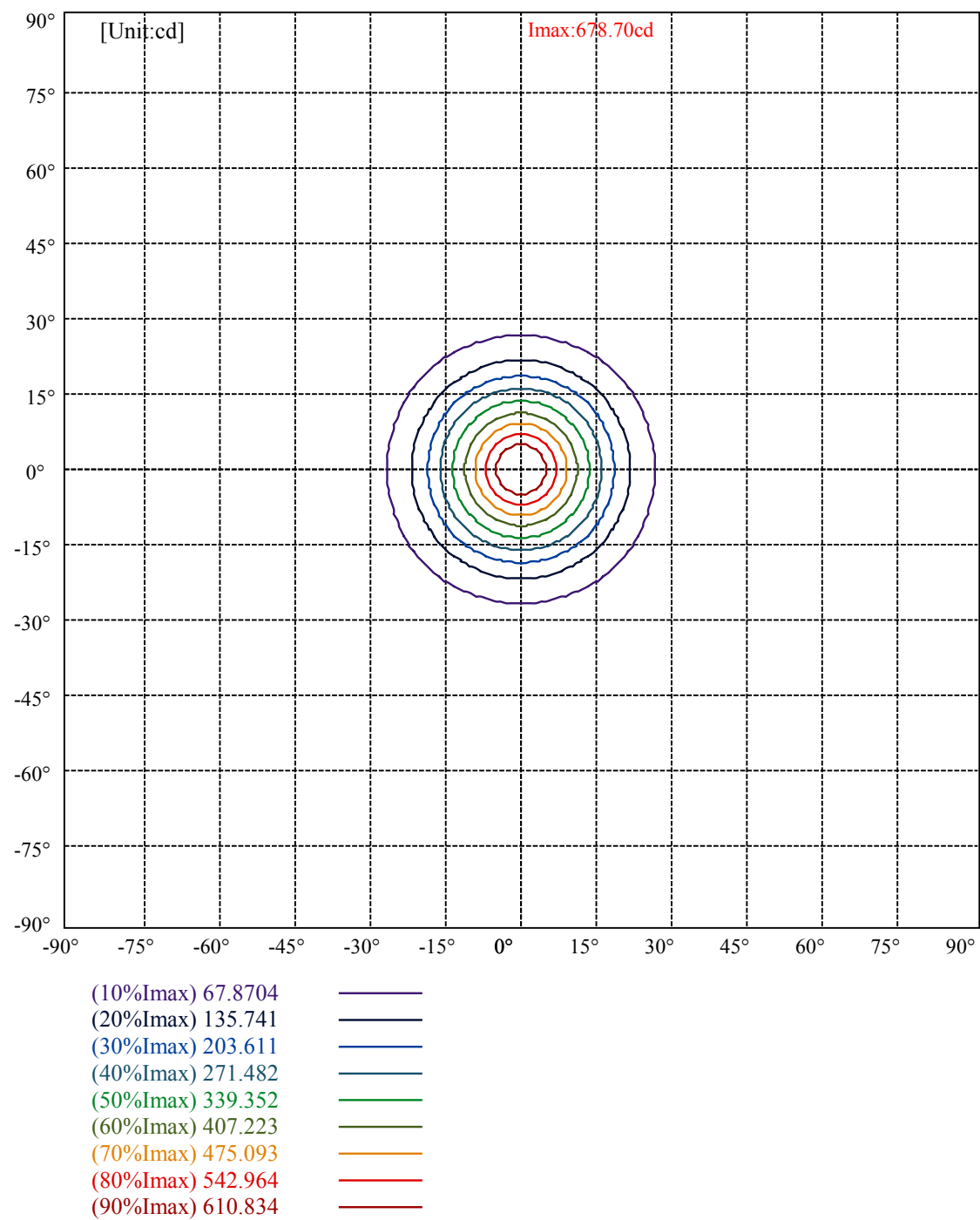
Equipment: equipamento lumini
Temperature(°C): 25.0

Date: 11/29/2023
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90







Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	4154	1907	1067	622	517	598	775	1008	1986
C45	4154	1907	1067	622	517	598	775	1008	1986
C90	4154	1907	1067	622	517	598	775	1008	1986

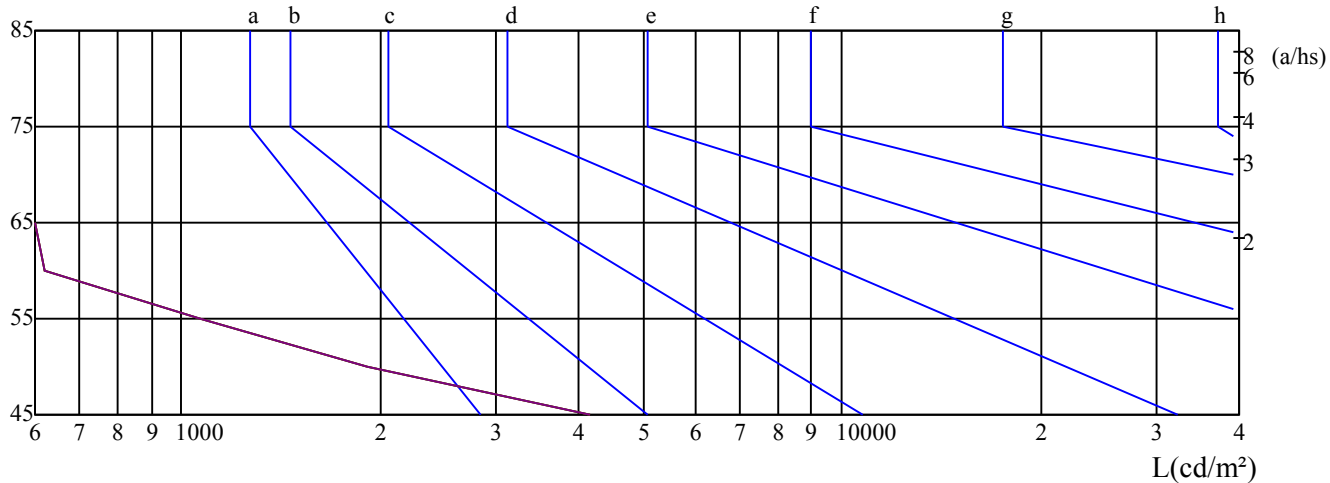
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
517	517	517	775	775	775	1986	1986	1986

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(°C): 25.0

Date: 11/29/2023
Humidity(%): 55.0%

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	11.02	11.98	11.39	12.29	12.61	10.53	11.49	10.89	11.80	12.11
	3H	10.90	11.75	11.29	12.08	12.43	10.41	11.26	10.80	11.60	11.94
	4H	10.89	11.67	11.29	12.03	12.39	10.39	11.18	10.80	11.53	11.90
	6H	10.95	11.66	11.37	12.04	12.44	10.46	11.18	10.88	11.56	11.96
	8H	10.99	11.67	11.41	12.06	12.47	10.53	11.21	10.95	11.59	12.00
	12H	11.11	11.75	11.53	12.15	12.56	10.67	11.31	11.09	11.71	12.12
4H	2H	10.77	11.55	11.17	11.90	12.27	10.28	11.07	10.68	11.42	11.79
	3H	10.65	11.30	11.08	11.70	12.12	10.18	10.84	10.61	11.23	11.65
	4H	10.73	11.29	11.17	11.72	12.17	10.25	10.82	10.69	11.24	11.69
	6H	10.85	11.35	11.32	11.80	12.25	10.39	10.89	10.86	11.34	11.80
	8H	11.00	11.46	11.48	11.92	12.39	10.57	11.03	11.06	11.49	11.96
	12H	11.26	11.68	11.75	12.14	12.66	10.87	11.30	11.36	11.75	12.27
8H	4H	10.62	11.09	11.11	11.54	12.02	10.16	10.63	10.65	11.08	11.56
	6H	10.86	11.24	11.37	11.72	12.23	10.44	10.81	10.94	11.29	11.81
	8H	11.17	11.49	11.71	12.01	12.51	10.79	11.10	11.32	11.63	12.12
	12H	11.61	11.85	12.16	12.37	12.90	11.28	11.52	11.82	12.04	12.56
12H	4H	10.60	11.03	11.09	11.48	12.00	10.15	10.57	10.64	11.03	11.55
	6H	10.93	11.25	11.47	11.77	12.27	10.52	10.83	11.05	11.36	11.86
	8H	11.27	11.51	11.81	12.03	12.55	10.90	11.14	11.44	11.66	12.18
Variation with the observer position at spacings:											
S = 1.0H		2.9/-5.3					2.9/-5.3				
S = 1.5H		5.0/-5.0					5.0/-5.0				
S = 2.0H		6.5/-4.2					6.5/-4.2				
Standard tables:		BK2					BK2				
Uncorrected UGR		-7.8					-7.8				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email: laboratorio@lumini.com.br
Tel: +55 11 3437-5555 Fax: +55 11 3437-5555
Address: Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r e tr fa

LampCAT: modulo led tr 5W 2700K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.0390

Number of Lamps: 1

Power (W): 4.7000

Lamp flux(lm): 290.0

PF: 0.9300

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 200.80, Efficiency(%): 69.24% , Luminous Efficacy(lm/W): 42.72

Central intensity(cd): 212.198, Maximum intensity(cd): 212.198

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

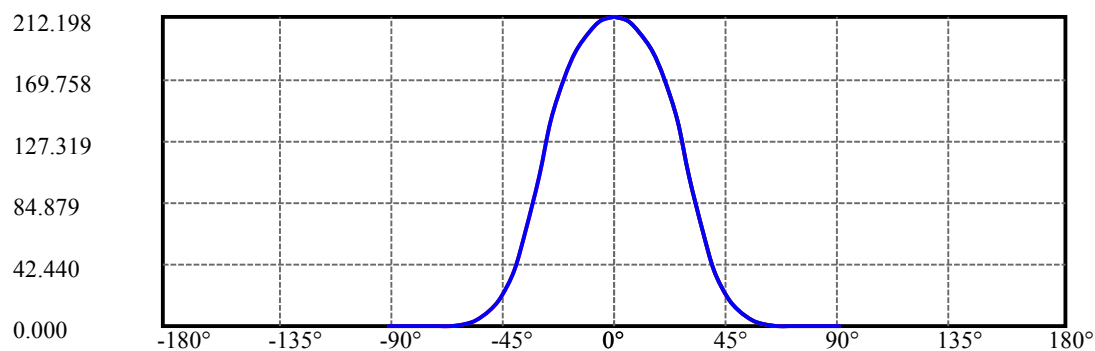
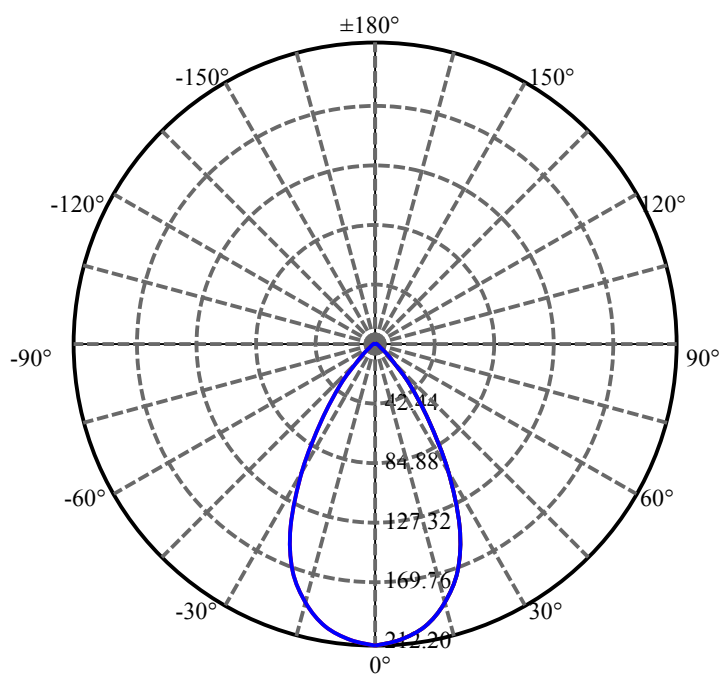
Beam angle of C0 plane : 59.11

Average BeamAngle(IEC 61341): 59.11

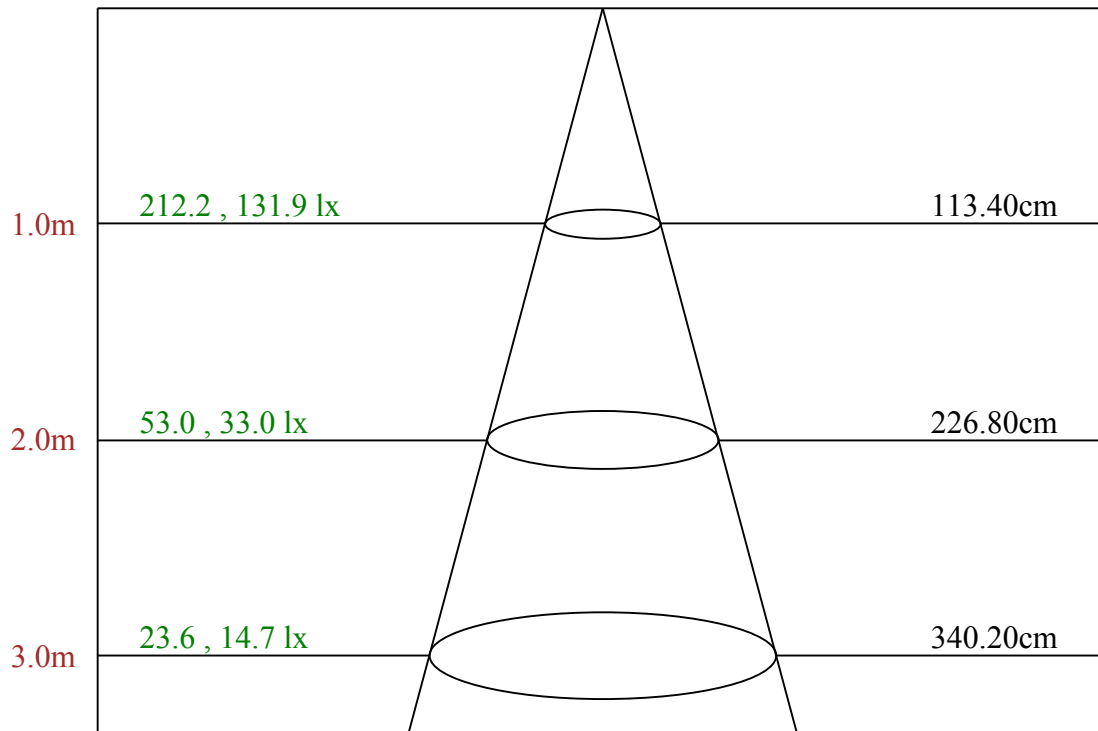
Equipment: equipamento lumini
Temperature(°C): 25.0

Date: 11/30/2023
Humidity(%): 55.0%

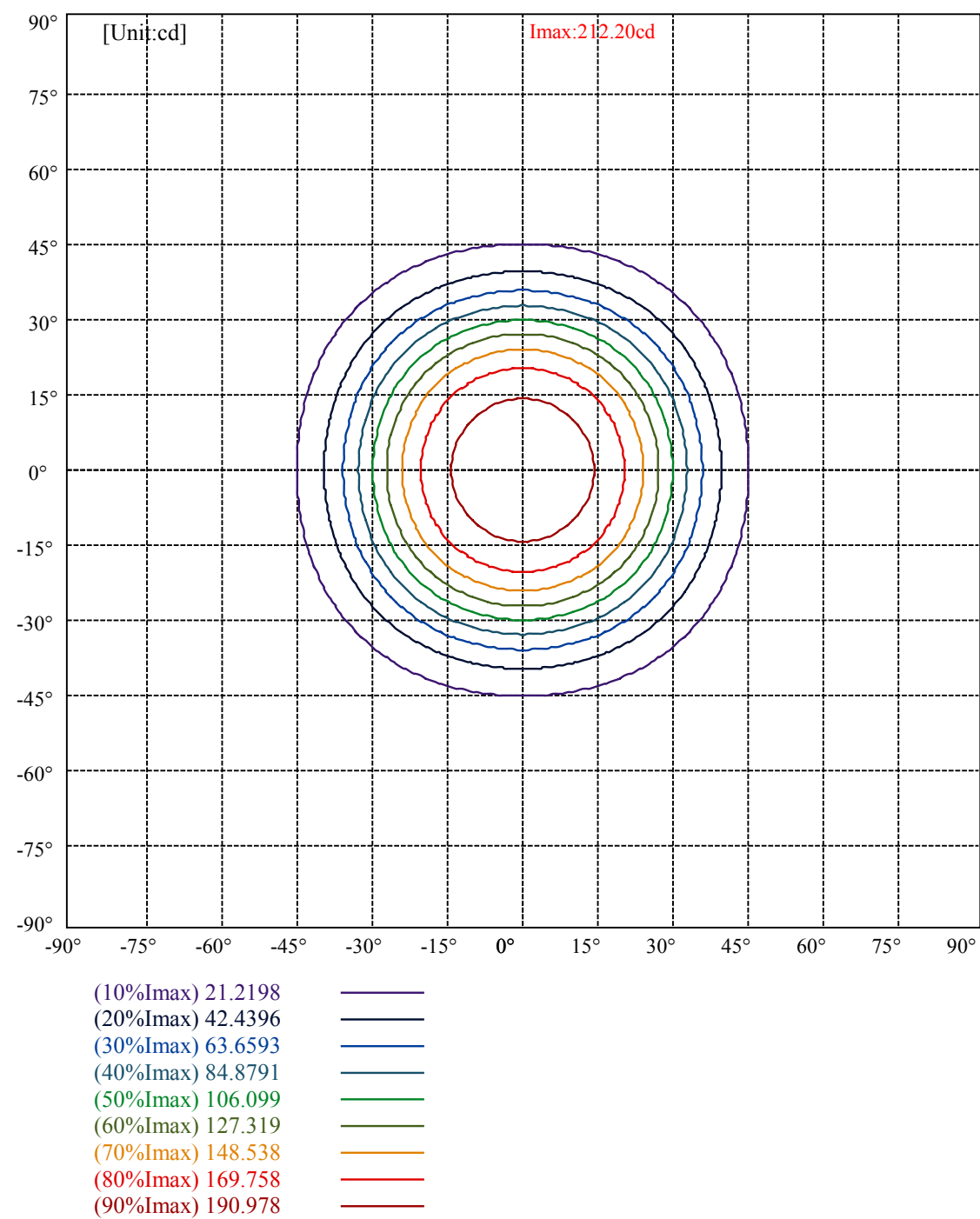
Operator: 01
Distance(m): 6.90



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



Max , Ave Beam angle of C0 plane 59.11



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	9095	5185	2449	893	452	500	623	918	1761
C45	9095	5185	2449	893	452	500	623	918	1761
C90	9095	5185	2449	893	452	500	623	918	1761

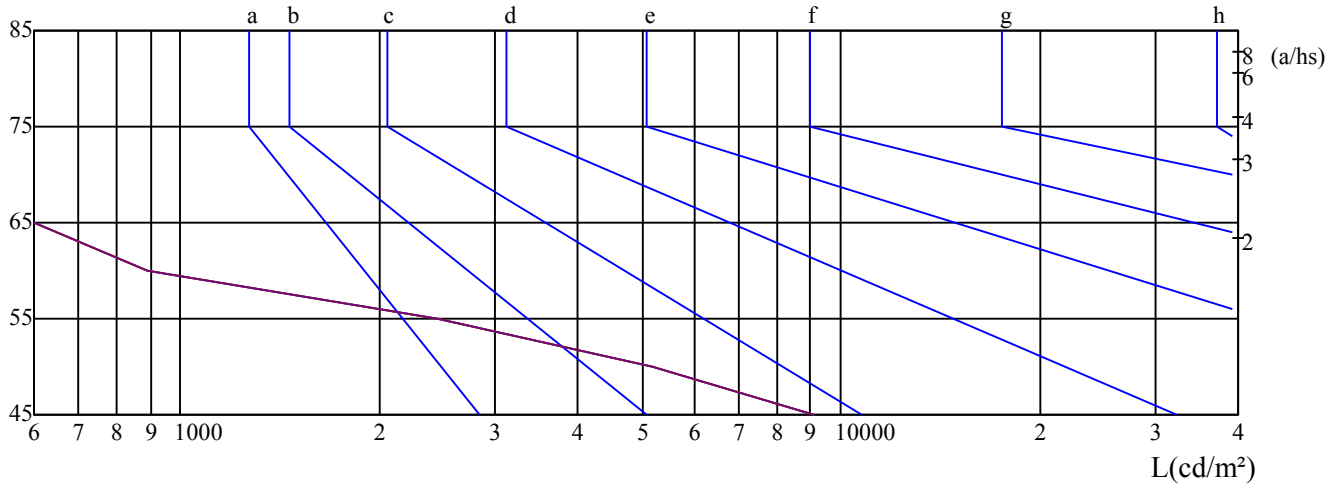
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
452	452	452	623	623	623	1761	1761	1761

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	16.72	17.75	17.08	18.06	18.38	18.05	19.08	18.41	19.39	19.71
	3H	16.53	17.45	16.92	17.79	18.13	17.86	18.77	18.24	19.11	19.46
	4H	16.45	17.29	16.85	17.65	18.01	17.76	18.61	18.16	18.96	19.33
	6H	16.38	17.15	16.80	17.53	17.93	17.69	18.47	18.11	18.84	19.24
	8H	16.33	17.07	16.75	17.45	17.86	17.63	18.37	18.05	18.76	19.16
	12H	16.29	16.99	16.71	17.38	17.80	17.58	18.28	18.01	18.68	19.10
4H	2H	16.47	17.31	16.87	17.67	18.04	17.78	18.62	18.18	18.98	19.35
	3H	16.25	16.96	16.68	17.35	17.77	17.56	18.26	17.98	18.65	19.07
	4H	16.20	16.81	16.64	17.23	17.68	17.49	18.10	17.93	18.52	18.97
	6H	16.10	16.63	16.57	17.09	17.54	17.38	17.92	17.85	18.37	18.82
	8H	16.08	16.57	16.56	17.03	17.50	17.35	17.84	17.83	18.30	18.77
	12H	16.08	16.54	16.57	16.99	17.51	17.34	17.80	17.83	18.25	18.77
8H	4H	16.01	16.51	16.50	16.97	17.44	17.30	17.80	17.79	18.26	18.73
	6H	15.92	16.32	16.42	16.80	17.31	17.19	17.60	17.69	18.07	18.59
	8H	15.96	16.30	16.49	16.83	17.32	17.21	17.56	17.74	18.08	18.58
	12H	16.01	16.28	16.55	16.80	17.32	17.23	17.50	17.77	18.02	18.54
12H	4H	15.96	16.42	16.45	16.87	17.39	17.25	17.71	17.74	18.16	18.68
	6H	15.91	16.26	16.44	16.78	17.28	17.18	17.52	17.71	18.05	18.54
	8H	15.93	16.20	16.47	16.72	17.24	17.17	17.44	17.71	17.96	18.48
Variation with the observer position at spacings:											
S = 1.0H		3.8/-7.7					3.8/-7.7				
S = 1.5H		6.4/-11.2					6.4/-11.2				
S = 2.0H		8.4/-10.3					8.4/-10.3				
Standard tables:		BK0					BK0				
Uncorrected UGR		-2.7					-2.7				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r serie 3 e fc

LampCAT: modulo led 6W 30K irc 90

Ballast type: led driver 180mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.0560

Number of Lamps: 1

Power (W): 7.0700

Lamp flux(lm): 900.0

PF: 0.9700

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 750.53, Efficiency(%): 83.39% , Luminous Efficacy(lm/W): 106.16

Central intensity(cd): 6473.293, Maximum intensity(cd): 6473.293

Angle of maximum intensity: C=0.0 γ =0.0

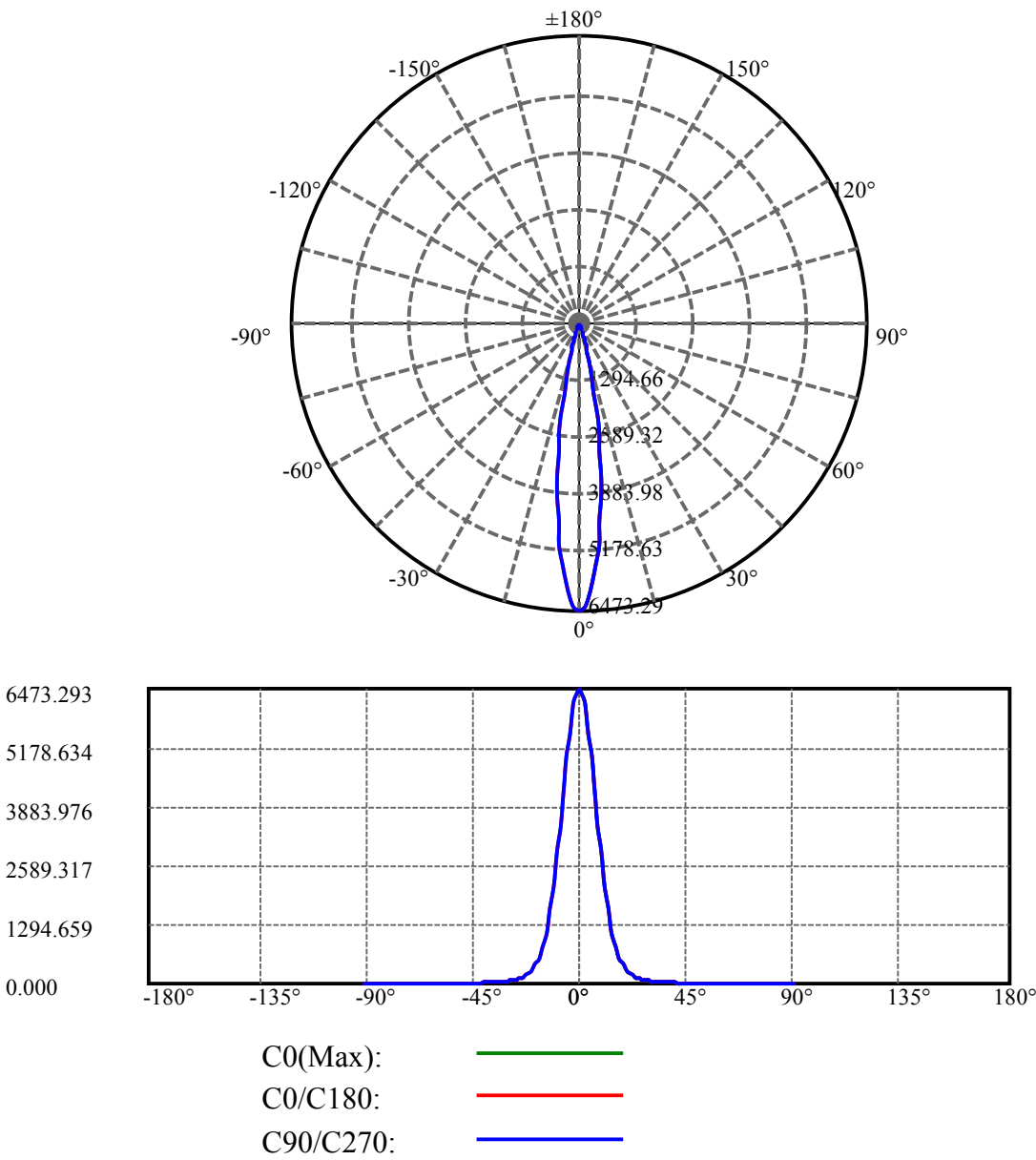
Beam angle of C0 plane : 16.81

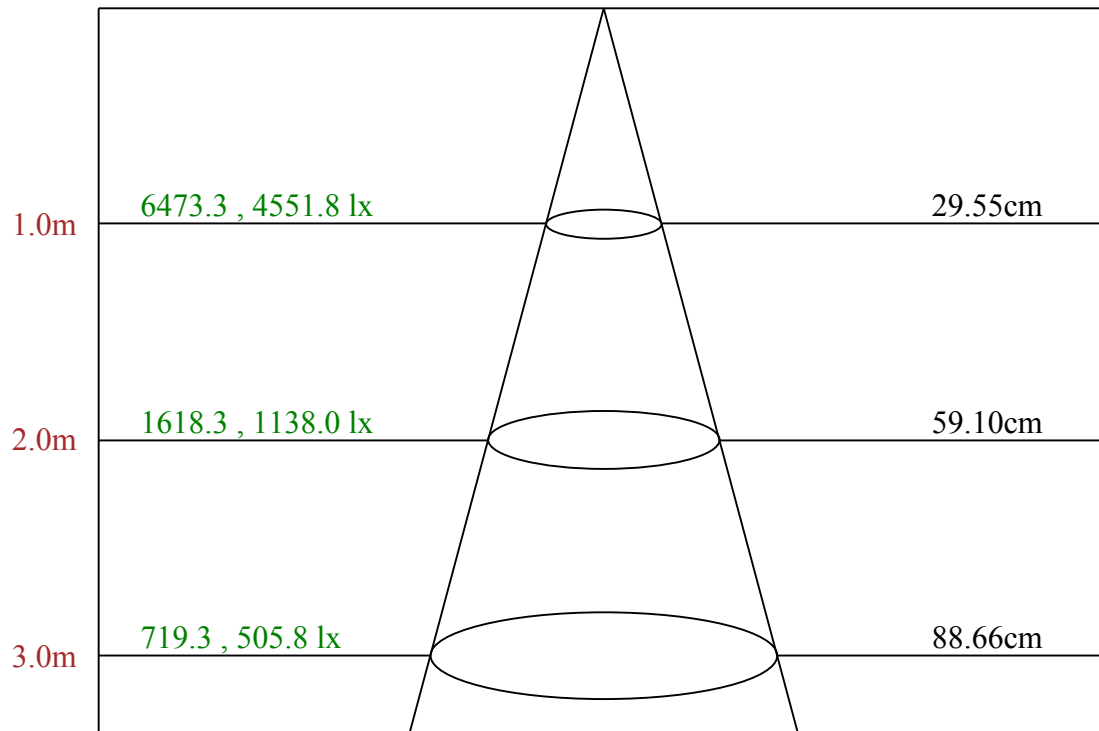
Aveage BeamAngle(IEC 61341):16.81

Equipment: equipamento lumini
Temperature(°C): 25.5

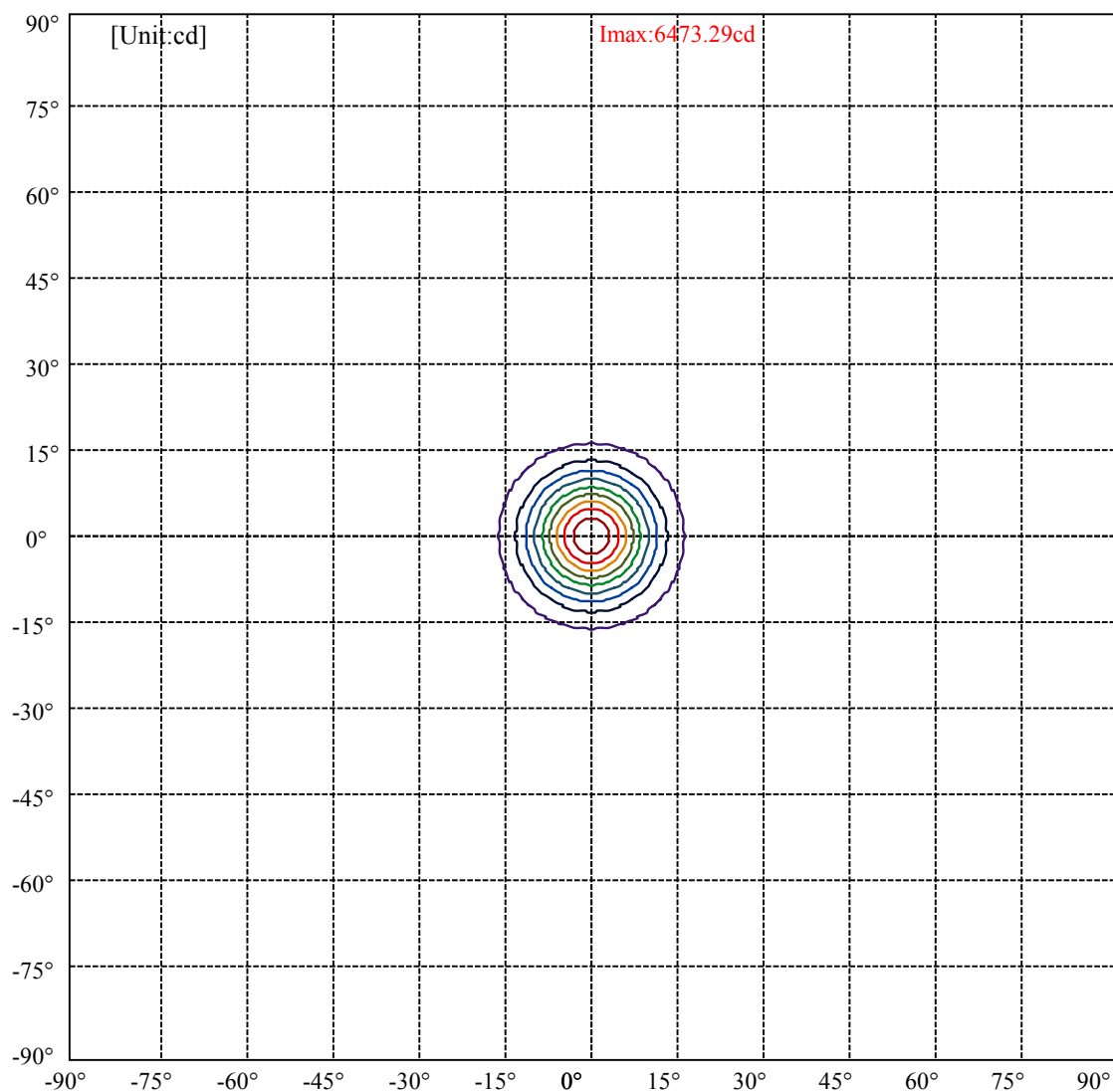
Date: 20/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 16.81



(10%Imax) 647.329	—
(20%Imax) 1294.66	—
(30%Imax) 1941.99	—
(40%Imax) 2589.32	—
(50%Imax) 3236.65	—
(60%Imax) 3883.98	—
(70%Imax) 4531.31	—
(80%Imax) 5178.63	—
(90%Imax) 5825.96	—

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	6143	4016	2250	2015	2011	2209	2858	4169	8126
C45	6143	4016	2250	2015	2011	2209	2858	4169	8126
C90	6143	4016	2250	2015	2011	2209	2858	4169	8126

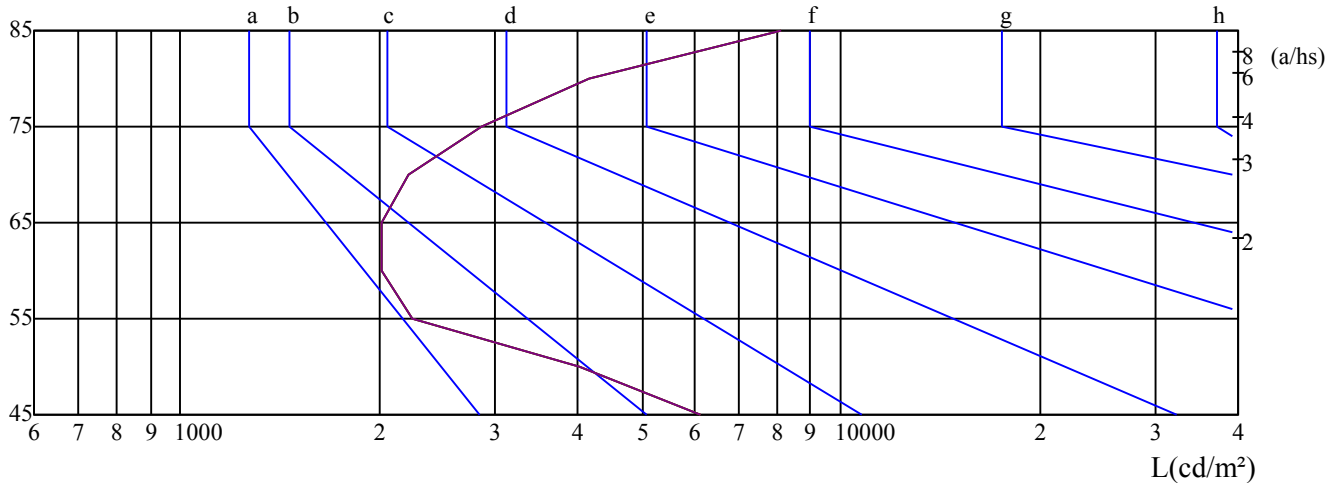
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2011	2011	2011	2858	2858	2858	8126	8126	8126

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: 20/09/2024
Humidity(%): 55.0%

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	8.17	9.09	8.53	9.40	9.72	8.17	9.09	8.53	9.40	9.72
	3H	8.63	9.45	9.02	9.79	10.13	8.63	9.45	9.02	9.79	10.13
	4H	9.12	9.88	9.52	10.23	10.60	9.12	9.88	9.52	10.23	10.60
	6H	9.98	10.67	10.40	11.04	11.44	9.98	10.67	10.40	11.04	11.44
	8H	10.57	11.22	10.99	11.61	12.02	10.57	11.22	10.99	11.61	12.02
	12H	11.35	11.97	11.78	12.37	12.79	11.35	11.97	11.78	12.37	12.79
4H	2H	8.12	8.88	8.52	9.23	9.60	8.12	8.88	8.52	9.23	9.60
	3H	8.81	9.44	9.24	9.84	10.26	8.81	9.44	9.24	9.84	10.26
	4H	9.59	10.14	10.03	10.56	11.01	9.59	10.14	10.03	10.56	11.01
	6H	10.74	11.22	11.21	11.67	12.13	10.74	11.22	11.21	11.67	12.13
	8H	11.55	11.99	12.04	12.45	12.93	11.55	11.99	12.04	12.45	12.93
	12H	12.58	12.99	13.07	13.44	13.96	12.58	12.99	13.07	13.44	13.96
8H	4H	9.88	10.32	10.36	10.78	11.26	9.88	10.32	10.36	10.78	11.26
	6H	11.35	11.71	11.85	12.19	12.71	11.35	11.71	11.85	12.19	12.71
	8H	12.43	12.73	12.97	13.26	13.76	12.43	12.73	12.97	13.26	13.76
	12H	13.73	13.96	14.27	14.48	15.00	13.73	13.96	14.27	14.48	15.00
12H	4H	9.98	10.39	10.47	10.84	11.36	9.98	10.39	10.47	10.84	11.36
	6H	11.61	11.91	12.15	12.44	12.94	11.61	11.91	12.15	12.44	12.94
	8H	12.78	13.01	13.32	13.53	14.05	12.78	13.01	13.32	13.53	14.05
Variation with the observer position at spacings:											
S = 1.0H		1.8/-2.1					1.8/-2.1				
S = 1.5H		2.5/-1.7					2.5/-1.7				
S = 2.0H		3.0/-1.5					3.0/-1.5				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-3.7					-3.7				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r serie 3 e 6W 30K fm

LampCAT: modulo led 6W 30K irc 90

Ballast type: led driver 180mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.0560

Number of Lamps: 1

Power (W): 7.0700

Lamp flux(lm): 900.0

PF: 0.9700

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 764.41, Efficiency(%): 84.93% , Luminous Efficacy(lm/W): 108.12

Central intensity(cd): 4866.266, Maximum intensity(cd): 4866.266

Angle of maximum intensity: C=0.0 γ =0.0

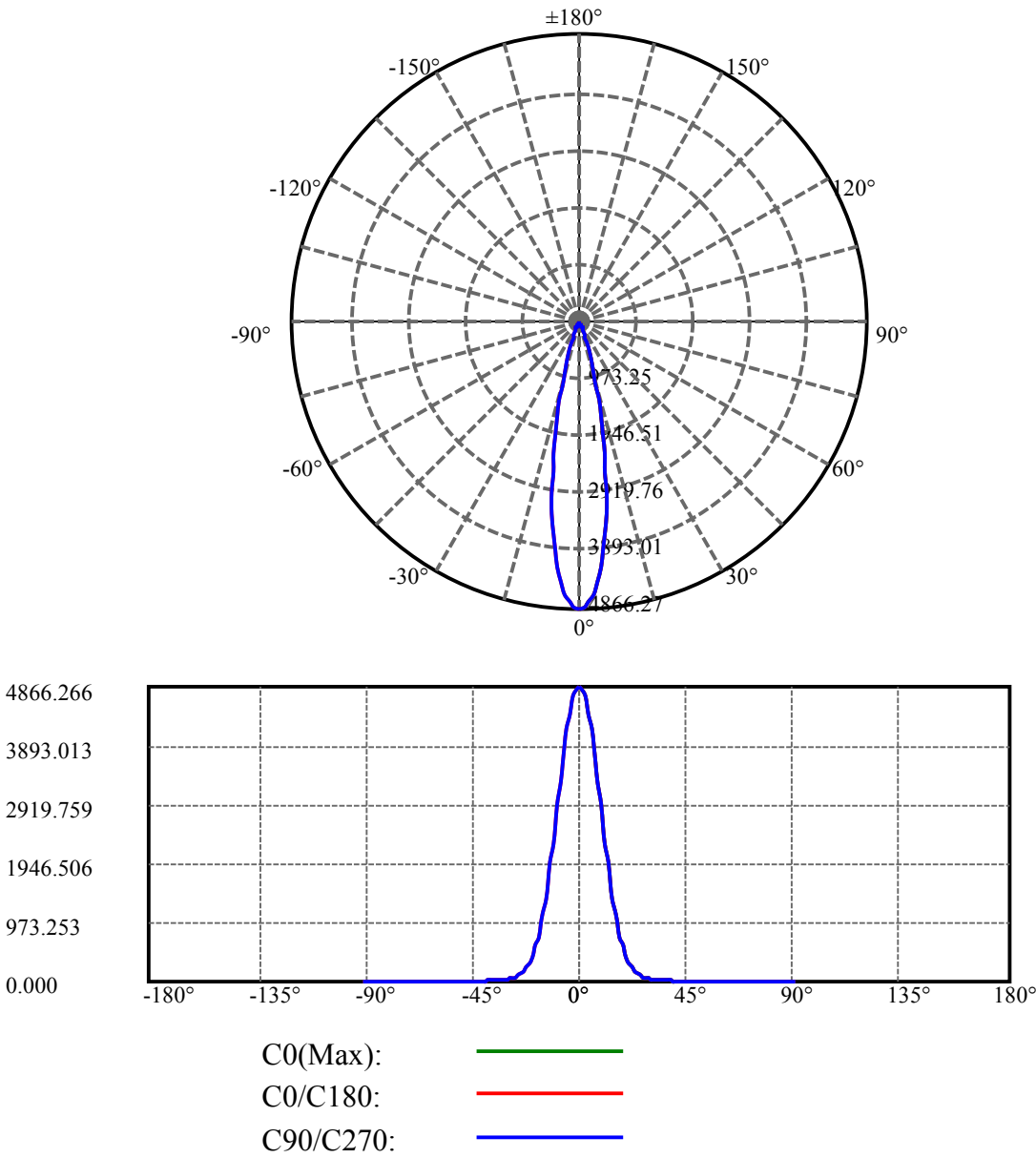
Beam angle of C0 plane : 20.91

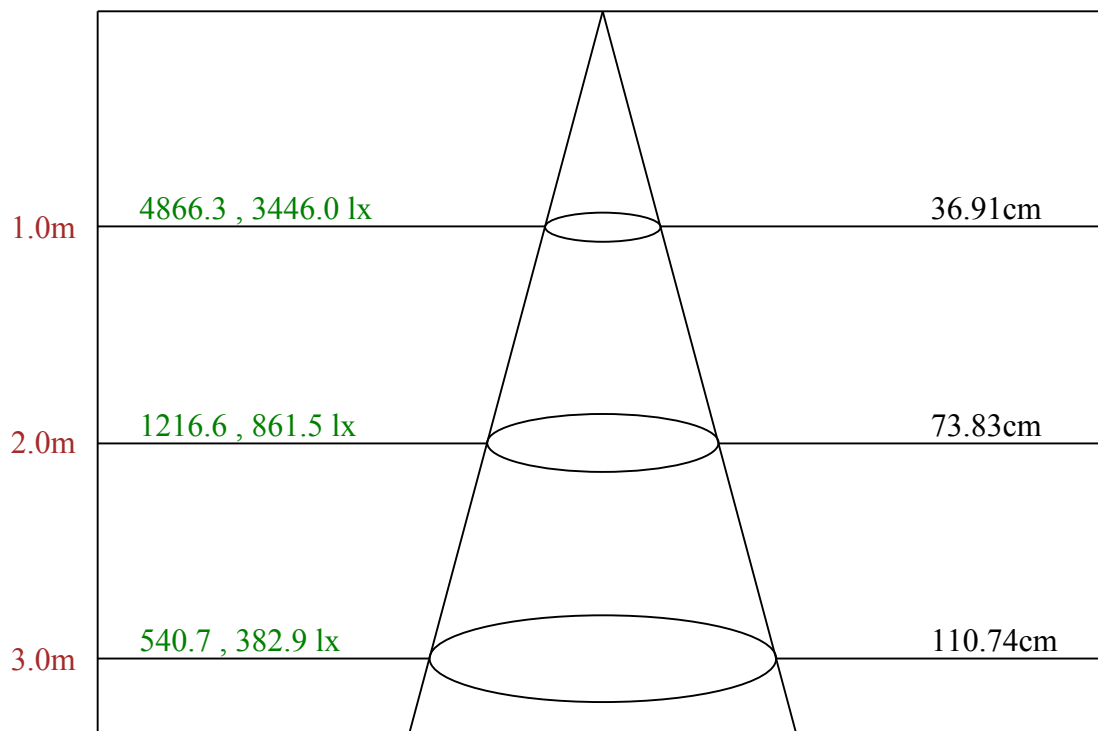
Aveage BeamAngle(IEC 61341):20.91

Equipment: equipamento lumini
Temperature(°C): 25.5

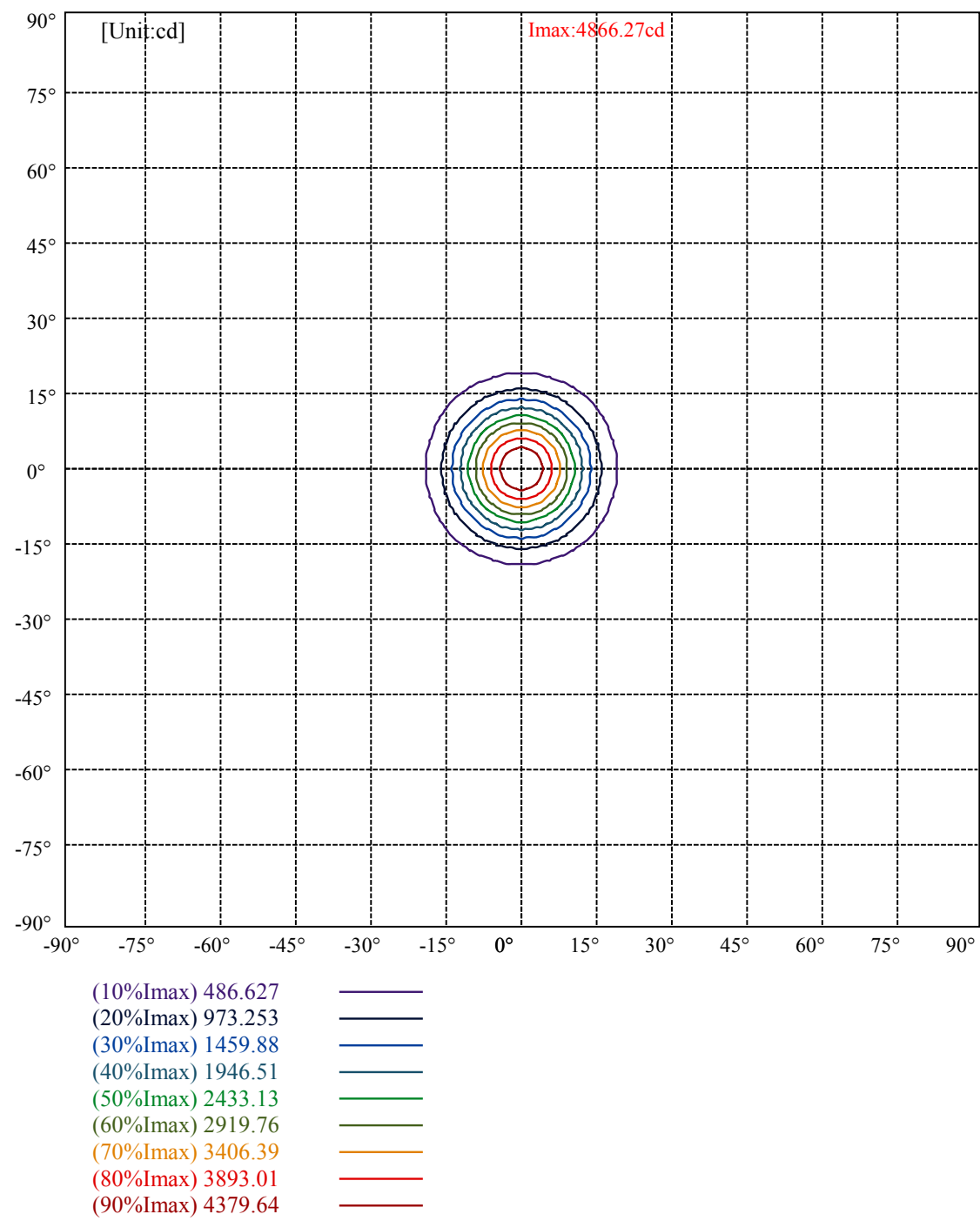
Date: 20/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 20.91



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	4029	3257	2223	2140	2197	2393	2980	4351	8487
C45	4029	3257	2223	2140	2197	2393	2980	4351	8487
C90	4029	3257	2223	2140	2197	2393	2980	4351	8487

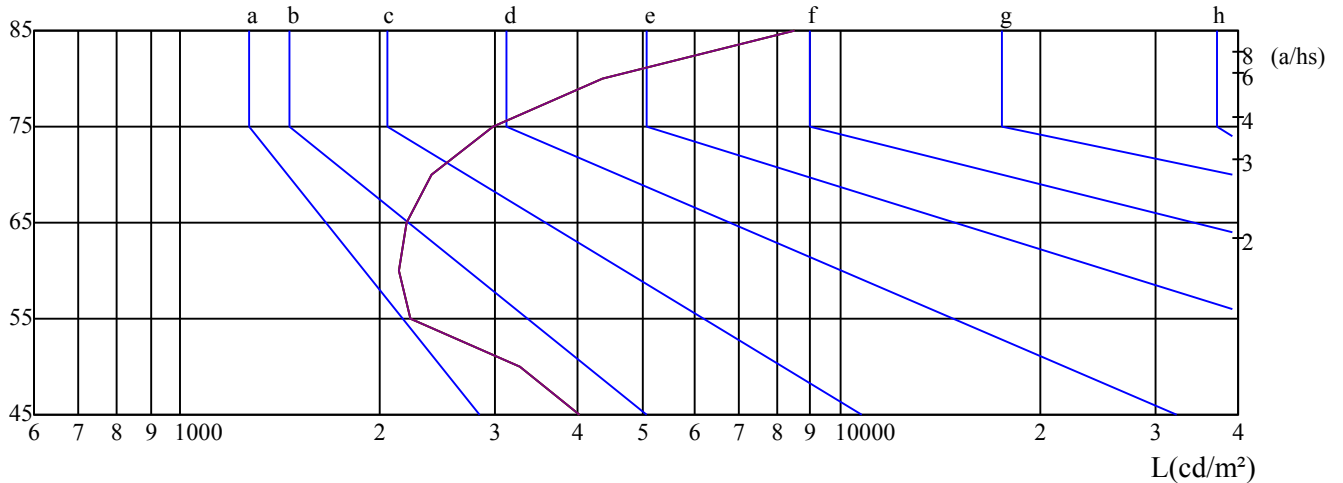
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2197	2197	2197	2980	2980	2980	8487	8487	8487

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: 20/09/2024
Humidity(%): 55.0%

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	6.36	7.27	6.72	7.58	7.90	6.36	7.27	6.72	7.58	7.90
	3H	7.38	8.19	7.77	8.53	8.88	7.38	8.19	7.77	8.53	8.88
	4H	8.15	8.91	8.56	9.26	9.63	8.15	8.91	8.56	9.26	9.63
	6H	9.33	10.01	9.75	10.39	10.79	9.33	10.01	9.75	10.39	10.79
	8H	10.10	10.75	10.52	11.14	11.55	10.10	10.75	10.52	11.14	11.55
	12H	11.04	11.66	11.47	12.06	12.48	11.04	11.66	11.47	12.06	12.48
4H	2H	6.55	7.30	6.95	7.66	8.02	6.55	7.30	6.95	7.66	8.02
	3H	7.86	8.49	8.29	8.89	9.30	7.86	8.49	8.29	8.89	9.30
	4H	8.94	9.48	9.38	9.91	10.36	8.94	9.48	9.38	9.91	10.36
	6H	10.38	10.86	10.85	11.31	11.76	10.38	10.86	10.85	11.31	11.76
	8H	11.34	11.78	11.82	12.24	12.72	11.34	11.78	11.82	12.24	12.72
	12H	12.48	12.89	12.98	13.35	13.87	12.48	12.89	12.98	13.35	13.87
8H	4H	9.36	9.80	9.84	10.26	10.73	9.36	9.80	9.84	10.26	10.73
	6H	11.12	11.48	11.63	11.96	12.48	11.12	11.48	11.63	11.96	12.48
	8H	12.34	12.64	12.88	13.17	13.66	12.34	12.64	12.88	13.17	13.66
	12H	13.74	13.97	14.29	14.49	15.01	13.74	13.97	14.29	14.49	15.01
12H	4H	9.49	9.90	9.98	10.35	10.88	9.49	9.90	9.98	10.35	10.88
	6H	11.43	11.73	11.96	12.25	12.75	11.43	11.73	11.96	12.25	12.75
	8H	12.73	12.95	13.27	13.47	14.00	12.73	12.95	13.27	13.47	14.00
Variation with the observer position at spacings:											
S = 1.0H		1.4/-1.2					1.4/-1.2				
S = 1.5H		1.6/-1.3					1.6/-1.3				
S = 2.0H		1.9/-1.2					1.9/-1.2				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-4.4					-4.4				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r serie 3 e fa

LampCAT: modulo led 6W 30K irc 90

Ballast type: led driver 180mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.0560

Number of Lamps: 1

Power (W): 7.0700

Lamp flux(lm): 900.0

PF: 0.9700

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 771.67, Efficiency(%): 85.74% , Luminous Efficacy(lm/W): 109.15

Central intensity(cd): 2620.264, Maximum intensity(cd): 2620.264

Angle of maximum intensity: C=0.0 γ =0.0

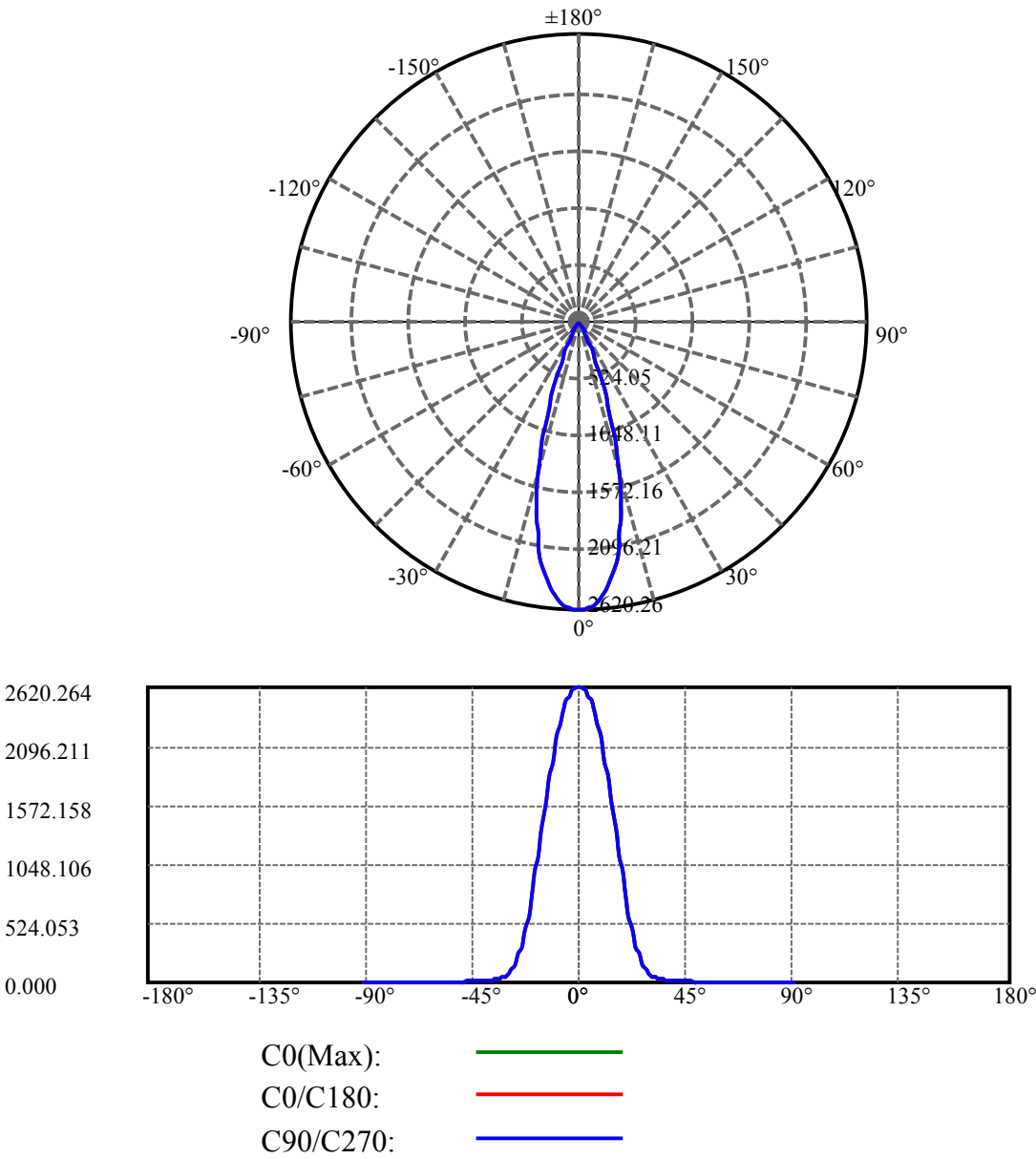
Beam angle of C0 plane : 31.52

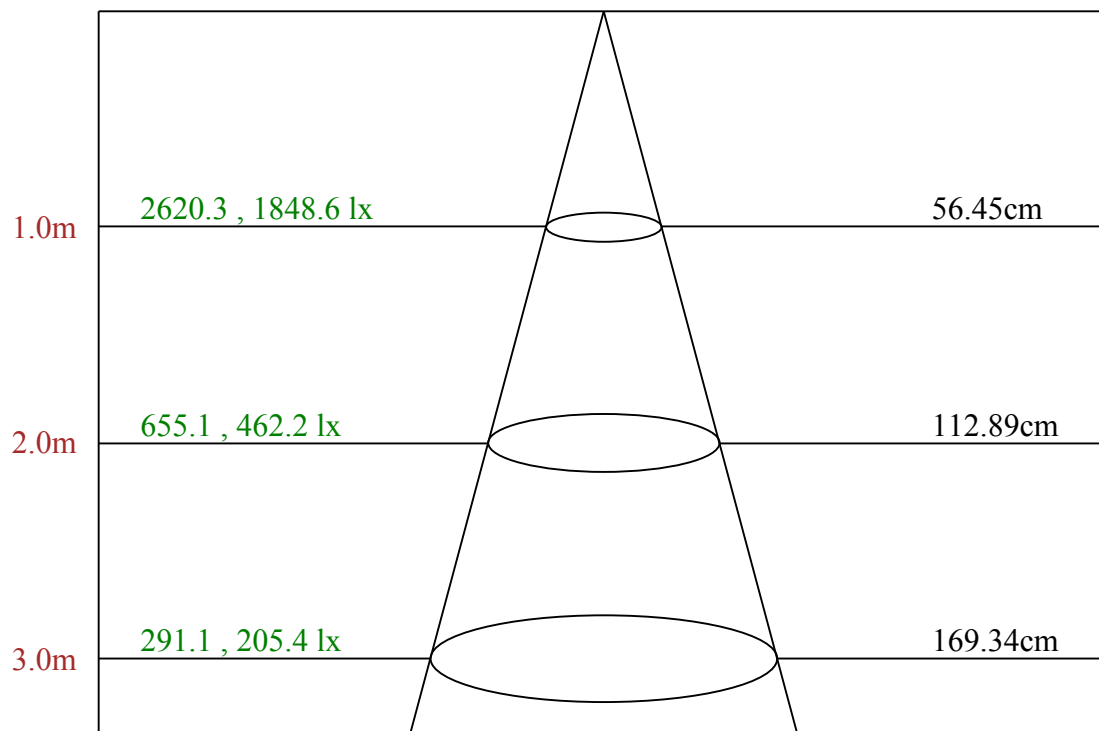
Aveage BeamAngle(IEC 61341):31.52

Equipment: equipamento lumini
Temperature(°C): 25.5

Date: 20/09/2024
Humidity(%): 55.0%

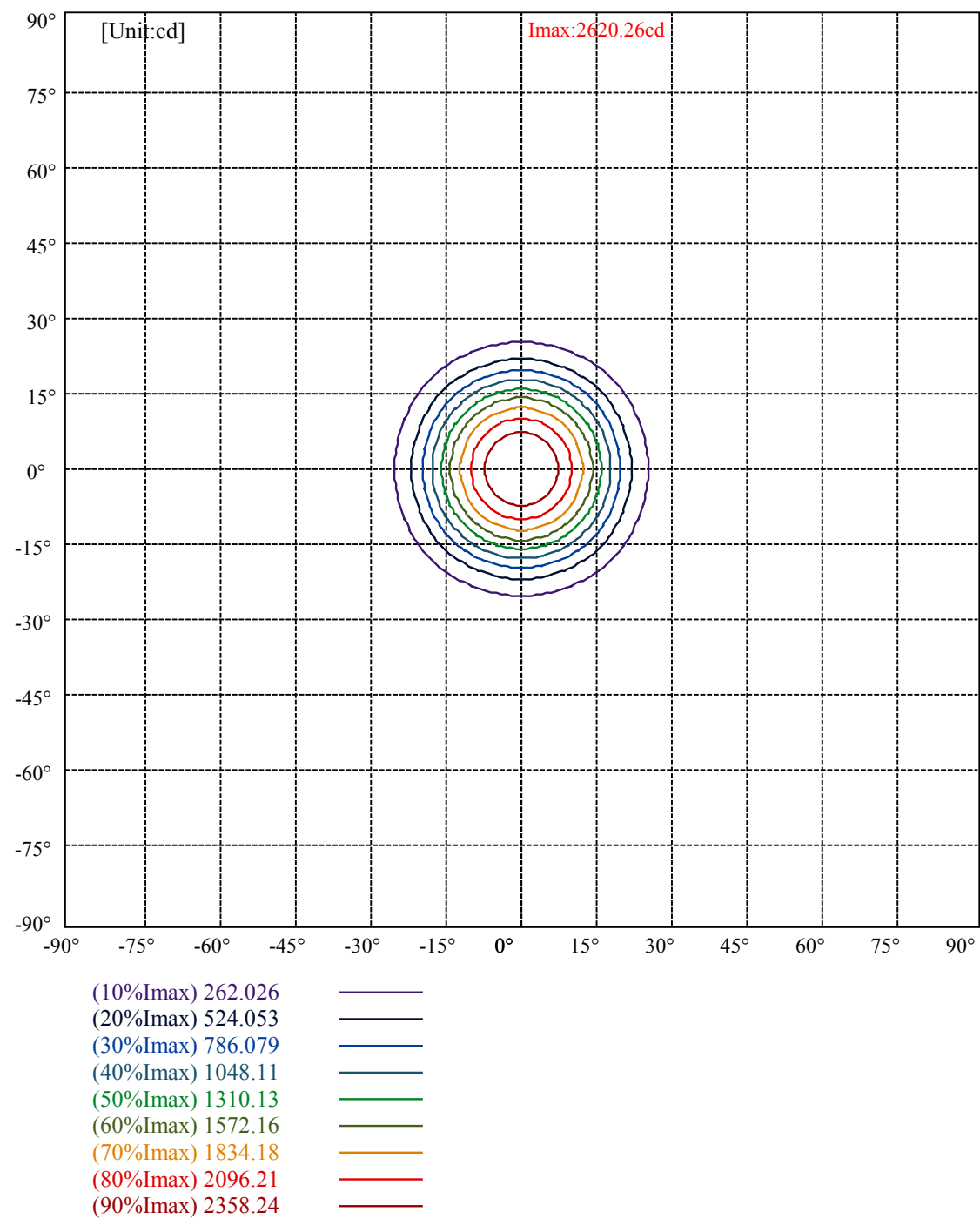
Operator: 01
Distance(m): 6.90





Max , Ave

Beam angle of C0 plane 31.52



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	4496	3208	2140	2046	2123	2393	3041	4441	8668
C45	4496	3208	2140	2046	2123	2393	3041	4441	8668
C90	4496	3208	2140	2046	2123	2393	3041	4441	8668

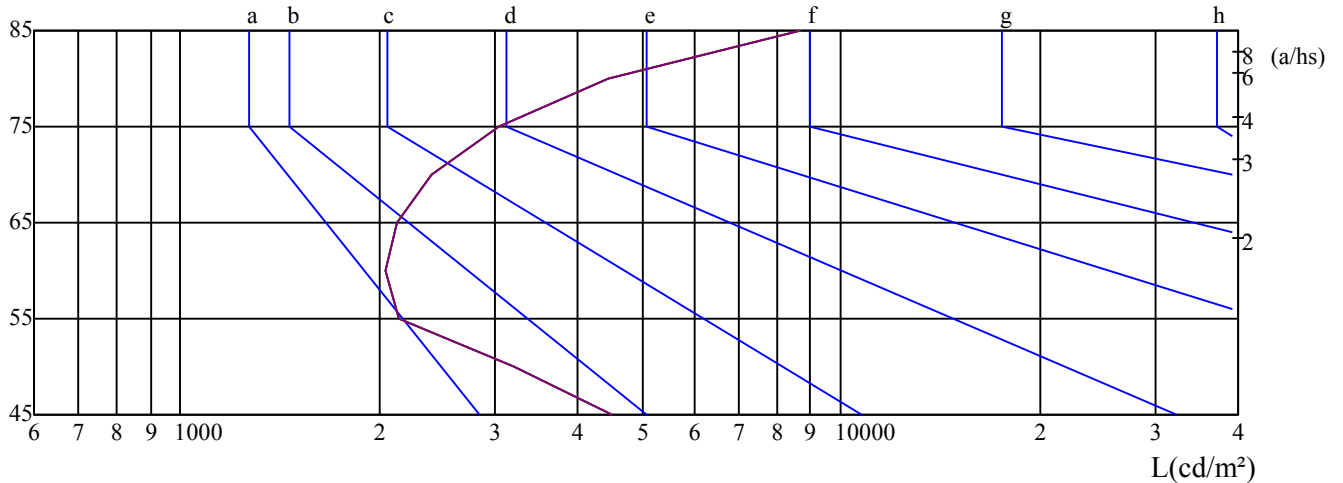
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2123	2123	2123	3041	3041	3041	8668	8668	8668

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: 20/09/2024
Humidity(%): 55.0%

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	7.06	7.97	7.42	8.28	8.60	7.06	7.97	7.42	8.28	8.60
	3H	7.84	8.65	8.23	8.99	9.34	7.84	8.65	8.23	8.99	9.34
	4H	8.54	9.29	8.94	9.65	10.02	8.54	9.29	8.94	9.65	10.02
	6H	9.64	10.33	10.06	10.70	11.10	9.64	10.33	10.06	10.70	11.10
	8H	10.37	11.03	10.80	11.41	11.82	10.37	11.03	10.80	11.41	11.82
	12H	11.29	11.91	11.71	12.30	12.72	11.29	11.91	11.71	12.30	12.72
4H	2H	7.12	7.87	7.52	8.22	8.59	7.12	7.87	7.52	8.22	8.59
	3H	8.20	8.83	8.63	9.23	9.64	8.20	8.83	8.63	9.23	9.64
	4H	9.22	9.76	9.66	10.19	10.64	9.22	9.76	9.66	10.19	10.64
	6H	10.61	11.09	11.08	11.54	11.99	10.61	11.09	11.08	11.54	11.99
	8H	11.54	11.99	12.03	12.45	12.92	11.54	11.99	12.03	12.45	12.92
	12H	12.67	13.08	13.16	13.53	14.06	12.67	13.08	13.16	13.53	14.06
8H	4H	9.61	10.06	10.10	10.52	10.99	9.61	10.06	10.10	10.52	10.99
	6H	11.33	11.69	11.83	12.17	12.68	11.33	11.69	11.83	12.17	12.68
	8H	12.53	12.83	13.07	13.36	13.85	12.53	12.83	13.07	13.36	13.85
	12H	13.91	14.14	14.46	14.66	15.18	13.91	14.14	14.46	14.66	15.18
12H	4H	9.74	10.15	10.23	10.60	11.13	9.74	10.15	10.23	10.60	11.13
	6H	11.62	11.93	12.16	12.45	12.95	11.62	11.93	12.16	12.45	12.95
	8H	12.91	13.14	13.46	13.66	14.18	12.91	13.14	13.46	13.66	14.18
Variation with the observer position at spacings:											
S = 1.0H		2.1/-1.6					2.1/-1.6				
S = 1.5H		2.5/-1.5					2.5/-1.5				
S = 2.0H		2.9/-1.3					2.9/-1.3				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-4.0					-4.0				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email: laboratorio@lumini.com.br
Tel: +55 11 3437-5555 Fax: +55 11 3437-5555
Address: Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r difusa serie 2 e

LampCAT: modulo led 6.5W 30K irc 90

Ballast type: led driver 700mA

Report No:

Voltage(V): 127.9100

Test No:

Current(A): 0.0640

Number of Lamps: 1

Power (W): 7.7730

Lamp flux(lm): 938.0

PF: 0.9540

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 316.85, Efficiency(%): 33.78% , Luminous Efficacy(lm/W): 40.76

Central intensity(cd): 216.911, Maximum intensity(cd): 216.911

Angle of maximum intensity: C=0.0 γ =0.0

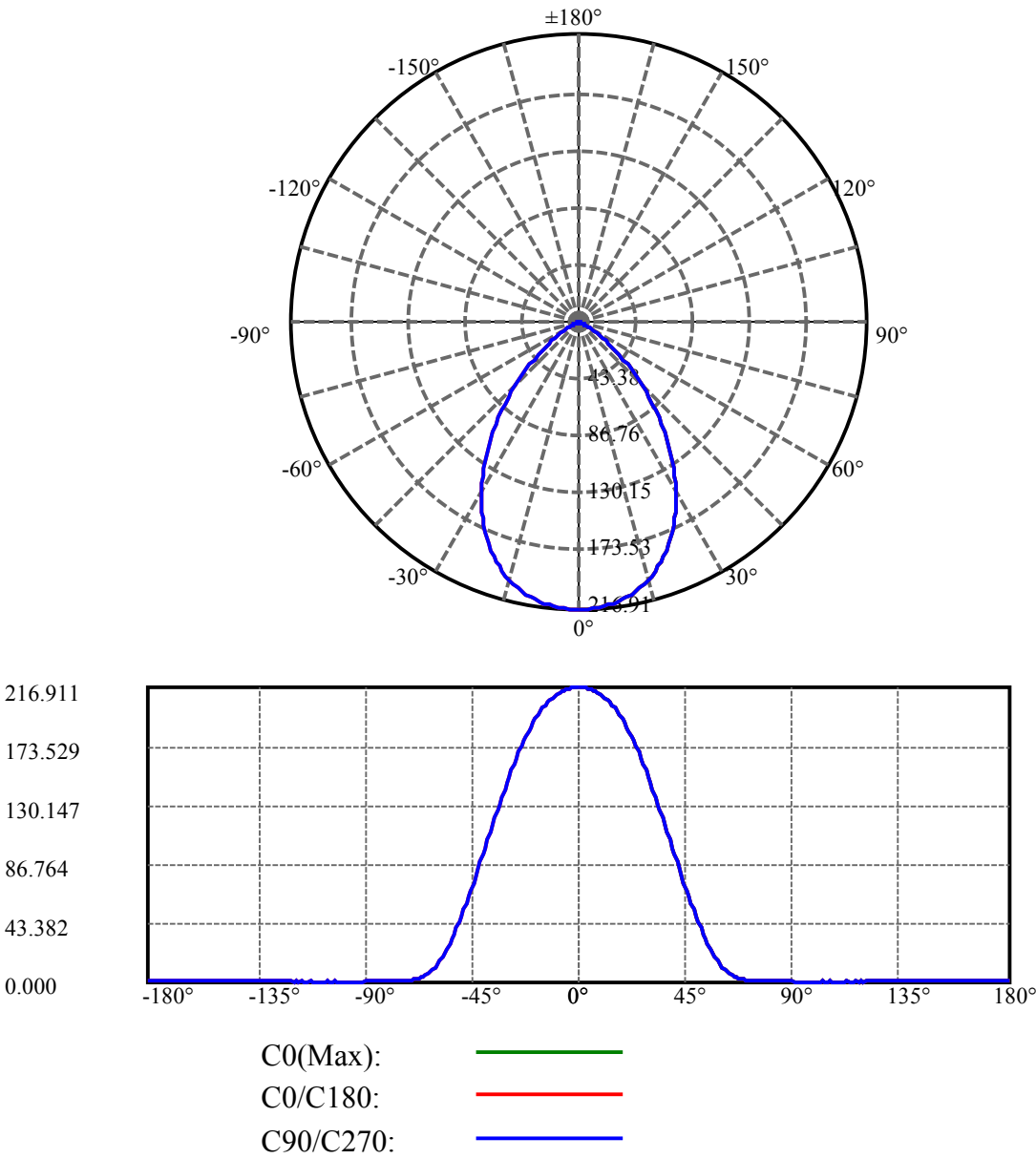
Beam angle of C0 plane : 74.58

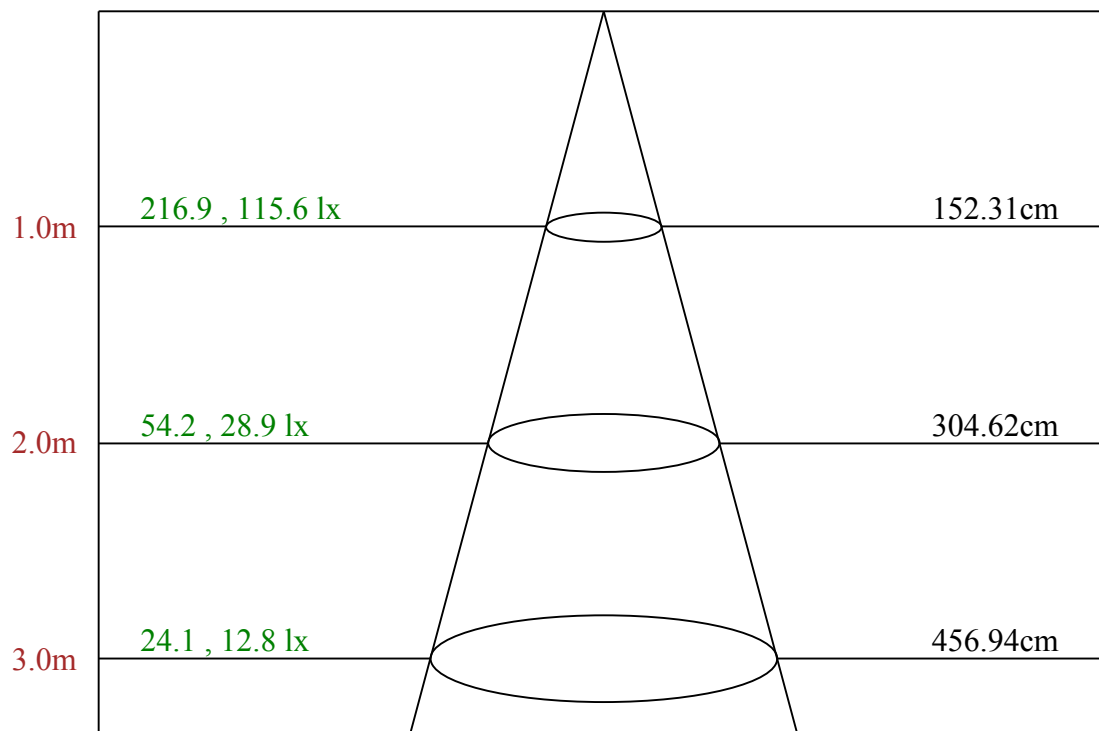
Average BeamAngle(IEC 61341): 74.58

Equipment: equipamento lumini
Temperature(°C): 25.0

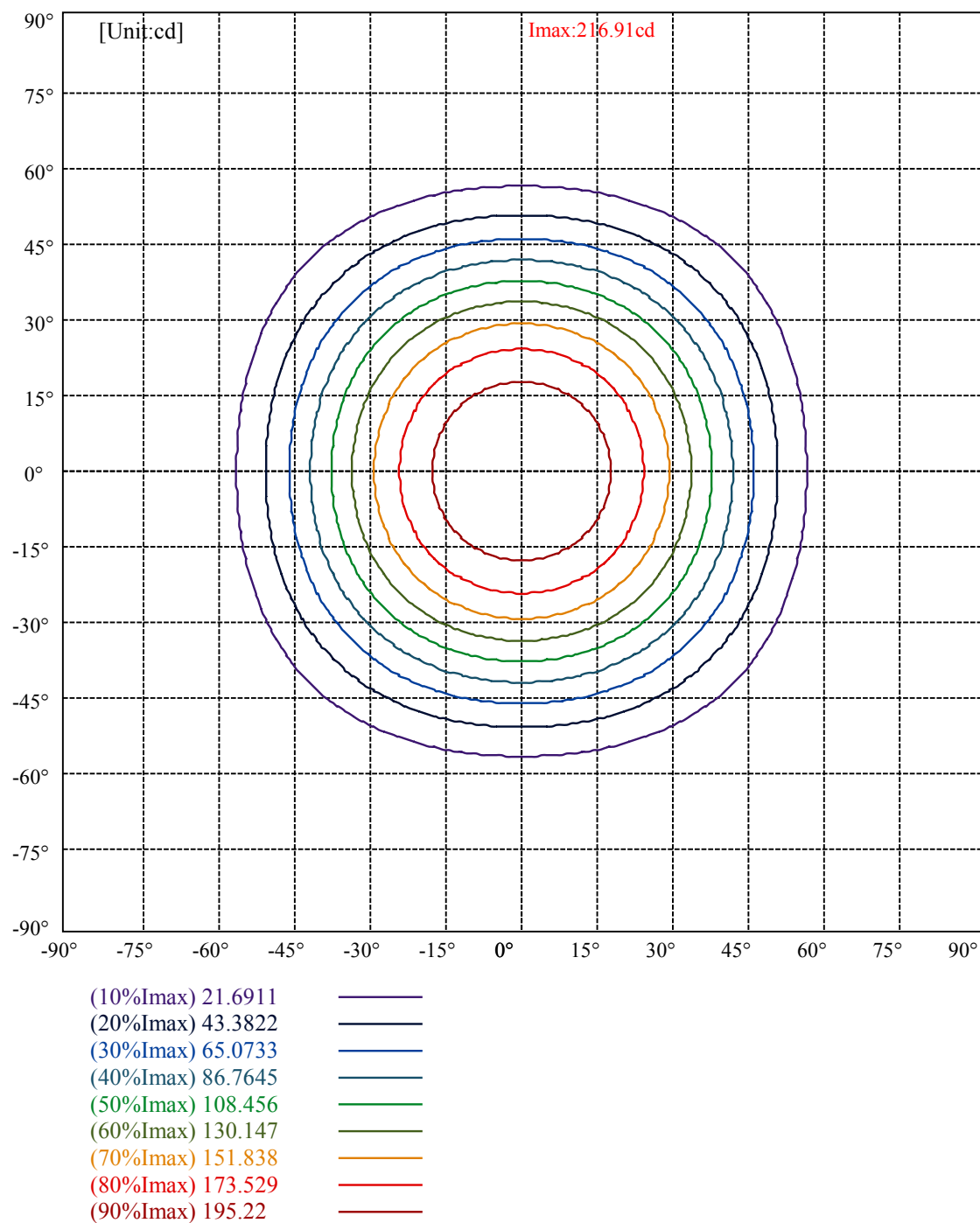
Date: 02/06/2025
Humidity(%): 58.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 74.58



Luminance Table

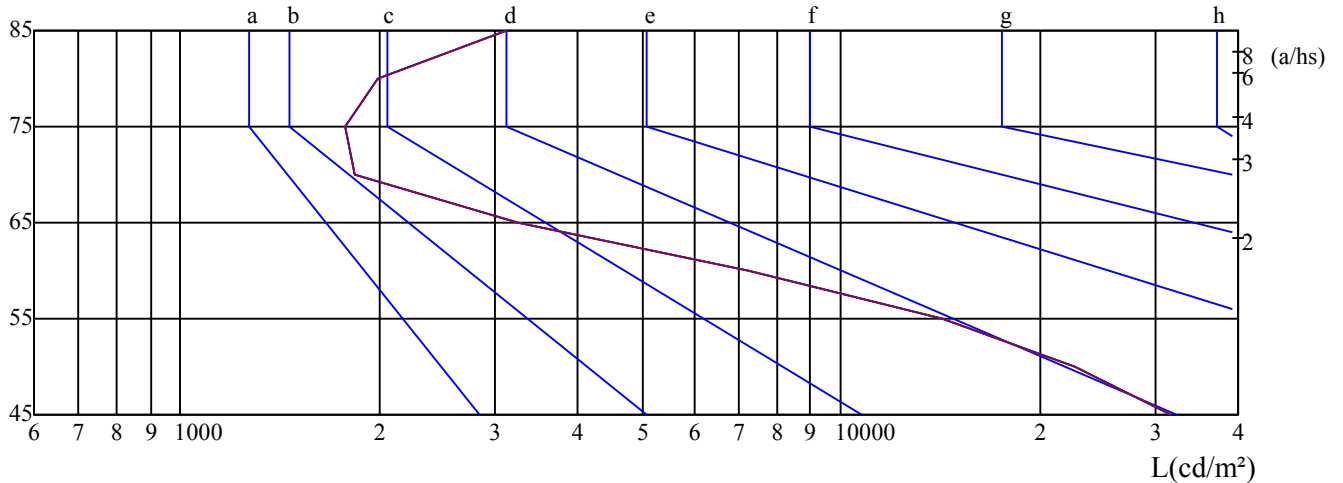
γ	45	50	55	60	65	70	75	80	85
C0	31723	22673	14241	7236	3235	1841	1779	1994	3115
C45	31723	22673	14241	7236	3235	1841	1779	1994	3115
C90	31723	22673	14241	7236	3235	1841	1779	1994	3115

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3235	3235	3235	1779	1779	1779	3115	3115	3115

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	22.21	23.42	22.60	23.77	24.13	22.60	23.81	22.99	24.16	24.52
	3H	22.09	23.16	22.50	23.53	23.92	22.49	23.56	22.91	23.94	24.32
	4H	22.02	23.01	22.44	23.40	23.80	22.42	23.41	22.85	23.80	24.21
	6H	21.96	22.87	22.40	23.28	23.72	22.37	23.28	22.81	23.68	24.12
	8H	21.90	22.77	22.35	23.19	23.64	22.31	23.18	22.75	23.59	24.04
	12H	21.85	22.68	22.30	23.10	23.56	22.26	23.08	22.71	23.51	23.97
4H	2H	22.17	23.16	22.60	23.55	23.96	22.53	23.52	22.96	23.91	24.32
	3H	22.03	22.85	22.49	23.28	23.73	22.41	23.23	22.86	23.65	24.11
	4H	22.00	22.71	22.47	23.16	23.65	22.38	23.09	22.84	23.54	24.03
	6H	21.90	22.53	22.40	23.01	23.50	22.28	22.91	22.78	23.39	23.88
	8H	21.87	22.45	22.38	22.94	23.44	22.24	22.83	22.75	23.31	23.82
	12H	21.84	22.38	22.36	22.86	23.42	22.22	22.76	22.74	23.24	23.79
8H	4H	21.84	22.42	22.35	22.91	23.42	22.21	22.80	22.72	23.28	23.79
	6H	21.73	22.22	22.26	22.72	23.27	22.11	22.59	22.64	23.10	23.65
	8H	21.75	22.17	22.30	22.72	23.25	22.12	22.54	22.68	23.09	23.62
	12H	21.73	22.08	22.29	22.62	23.18	22.11	22.45	22.67	23.00	23.55
12H	4H	21.80	22.33	22.31	22.81	23.37	22.17	22.71	22.68	23.19	23.74
	6H	21.73	22.15	22.28	22.69	23.23	22.10	22.52	22.66	23.07	23.60
	8H	21.71	22.05	22.27	22.60	23.15	22.08	22.43	22.64	22.97	23.52
Variation with the observer position at spacings:											
S = 1.0H		1.1/-3.0					1.1/-3.0				
S = 1.5H		2.8/-7.7					2.8/-7.7				
S = 2.0H		5.5/-9.8					5.5/-9.8				
Standard tables:		BK0					BK0				
Uncorrected UGR		2.6					2.6				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email: laboratorio@lumini.com.br
Tel: +55 11 3437-5555 Fax: +55 11 3437-5555
Address: Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

LumCAT:

Luminaire: focus sm r e tr fm

LampCAT: modulo led tr 9W 2700K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.0730

Number of Lamps: 1

Power (W): 8.3800

Lamp flux(lm): 525.0

PF: 0.9300

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 333.37, Efficiency(%): 63.50% , Luminous Efficacy(lm/W): 39.78

Central intensity(cd): 573.808, Maximum intensity(cd): 573.808

Angle of maximum intensity: C=0.0 γ =0.0

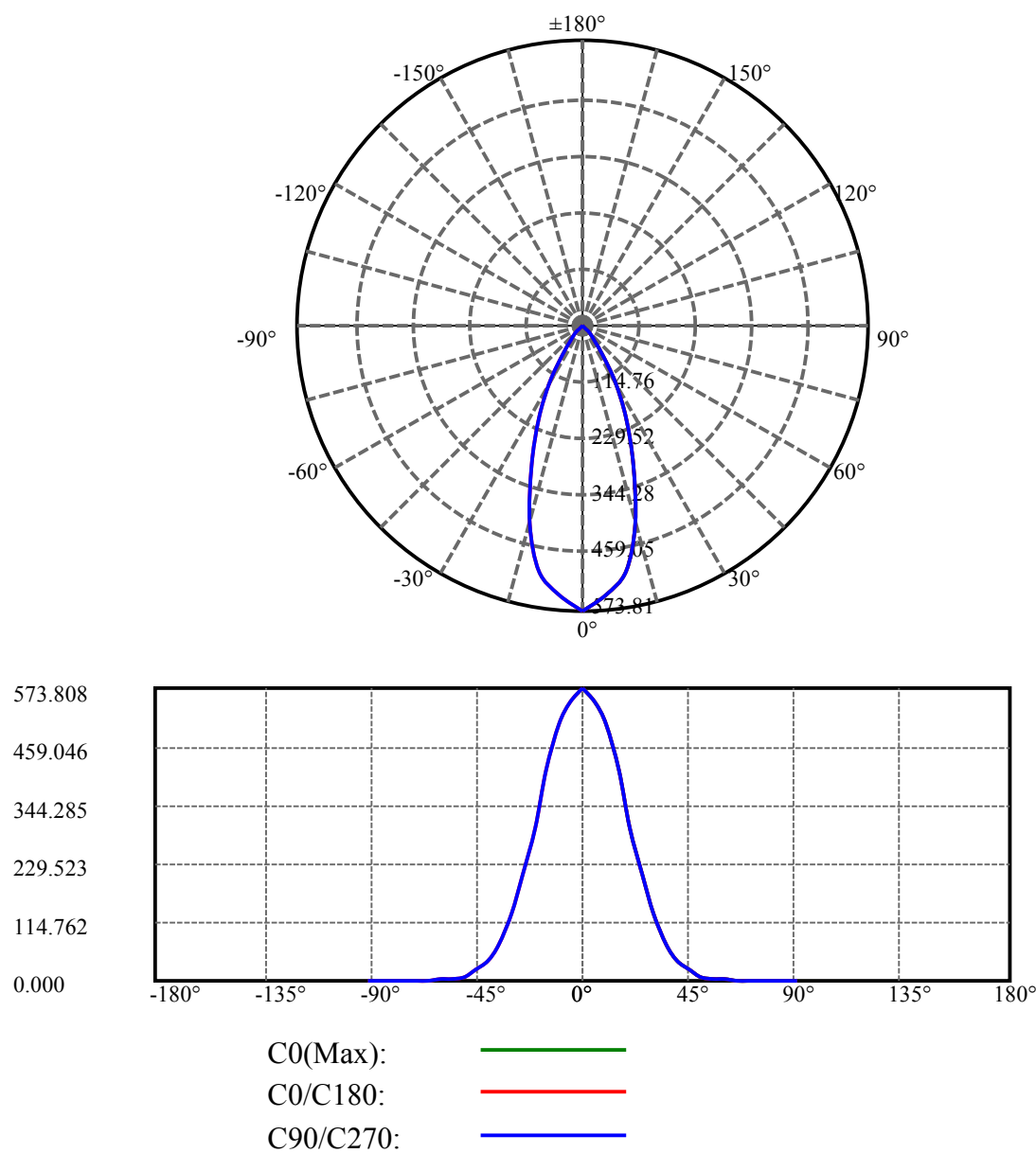
Beam angle of C0 plane : 41.40

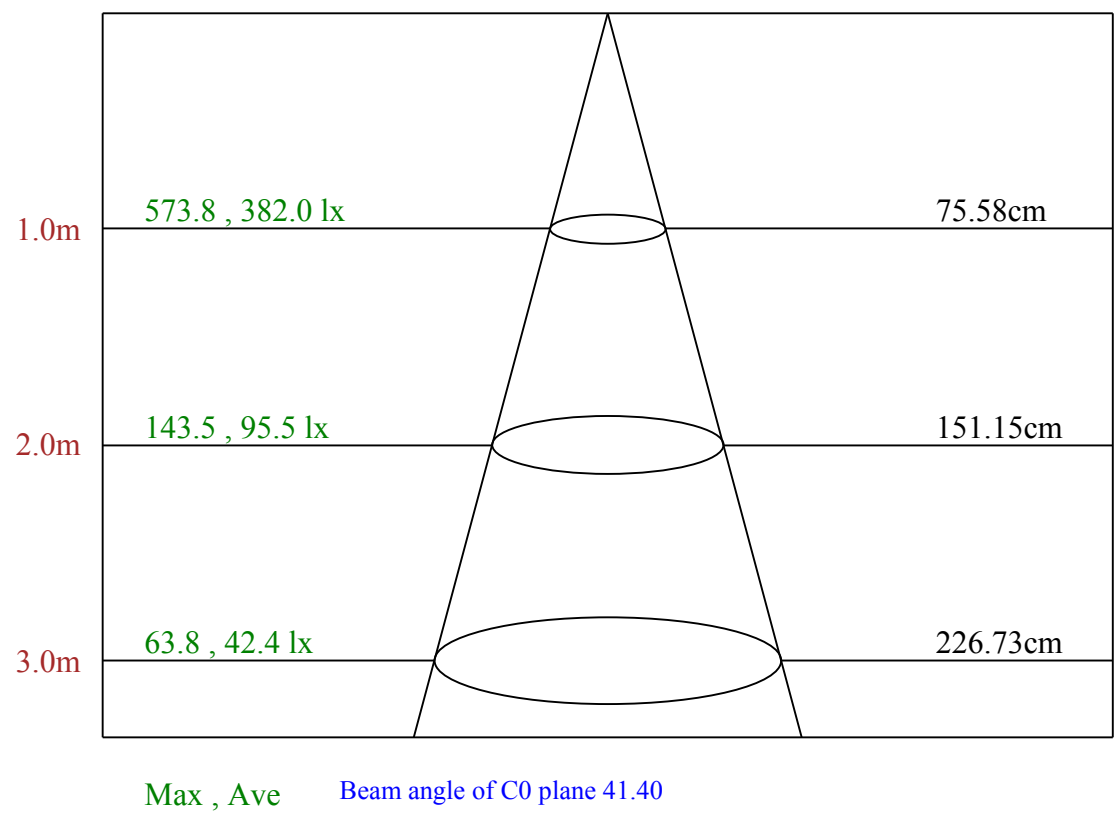
Aveage BeamAngle(IEC 61341):41.40

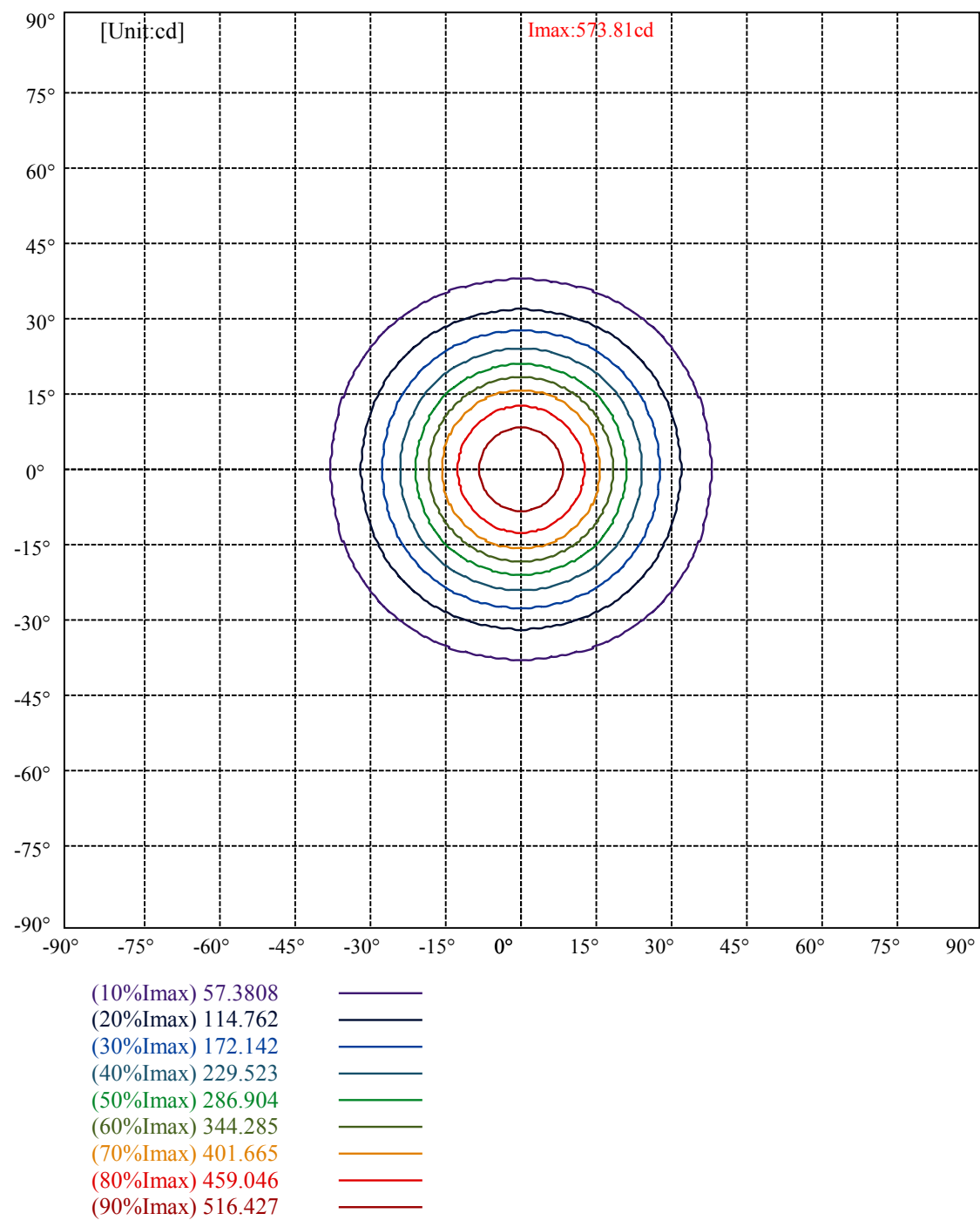
Equipment: equipamento lumini
Temperature(°C): 25.0

Date: 11/29/2023
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90







Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

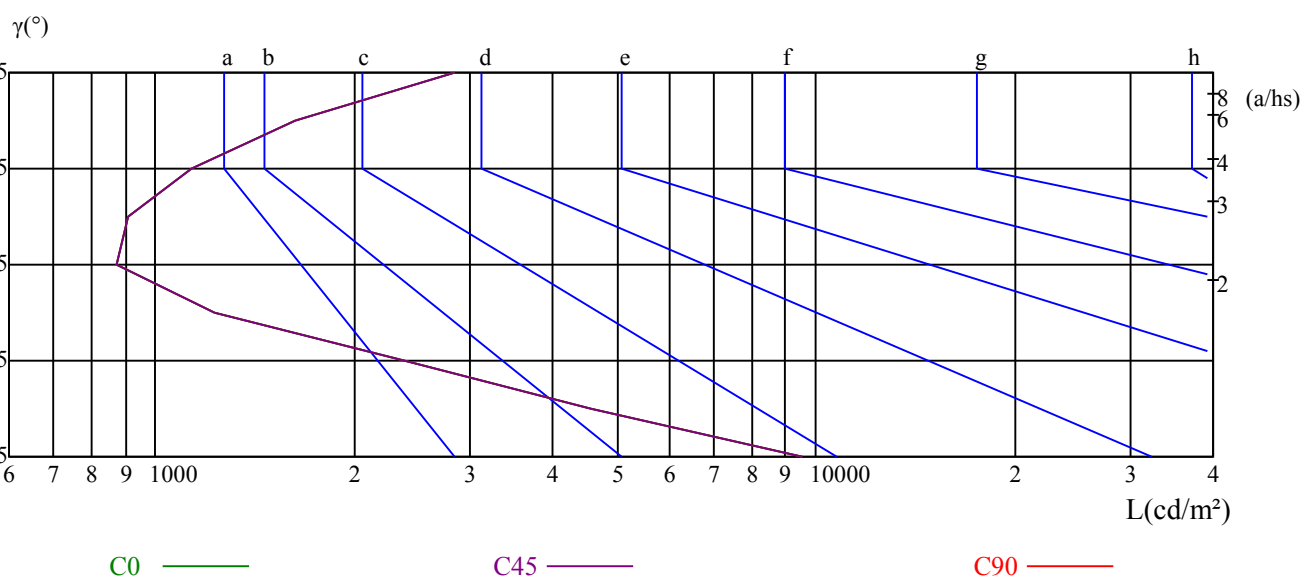
γ	45	50	55	60	65	70	75	80	85
C0	9549	4563	2384	1232	871	909	1133	1631	2844
C45	9549	4563	2384	1232	871	909	1133	1631	2844
C90	9549	4563	2384	1232	871	909	1133	1631	2844

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
871	871	871	1133	1133	1133	2844	2844	2844

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



Equipment: equipamento lumini
Temperature($^{\circ}$ C): 25.0

Date: 11/29/2023
Humidity(%): 55.0%

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	16.24	17.22	16.60	17.53	17.85	18.26	19.24	18.62	19.55	19.86
	3H	16.06	16.93	16.45	17.27	17.61	18.06	18.93	18.45	19.27	19.62
	4H	15.98	16.79	16.38	17.14	17.51	17.98	18.78	18.38	19.13	19.50
	6H	15.94	16.68	16.36	17.05	17.45	17.91	18.65	18.33	19.02	19.42
	8H	15.91	16.61	16.33	16.99	17.40	17.86	18.56	18.28	18.95	19.35
	12H	15.90	16.56	16.32	16.95	17.37	17.82	18.49	18.25	18.88	19.30
4H	2H	15.97	16.78	16.37	17.13	17.50	17.96	18.77	18.37	19.12	19.49
	3H	15.77	16.44	16.20	16.84	17.25	17.74	18.41	18.17	18.81	19.23
	4H	15.74	16.31	16.18	16.74	17.19	17.69	18.27	18.13	18.69	19.14
	6H	15.68	16.19	16.15	16.64	17.10	17.60	18.11	18.07	18.56	19.01
	8H	15.69	16.17	16.18	16.63	17.10	17.58	18.05	18.07	18.51	18.99
	12H	15.75	16.19	16.24	16.64	17.16	17.59	18.03	18.08	18.48	19.00
8H	4H	15.56	16.03	16.05	16.49	16.97	17.50	17.98	17.99	18.43	18.91
	6H	15.54	15.92	16.04	16.40	16.91	17.42	17.81	17.93	18.29	18.80
	8H	15.64	15.96	16.17	16.49	16.98	17.47	17.80	18.01	18.32	18.82
	12H	15.77	16.02	16.31	16.53	17.06	17.53	17.78	18.07	18.29	18.82
12H	4H	15.52	15.95	16.01	16.41	16.93	17.46	17.89	17.95	18.34	18.86
	6H	15.55	15.87	16.08	16.39	16.89	17.42	17.74	17.95	18.27	18.76
	8H	15.63	15.88	16.18	16.40	16.92	17.45	17.70	17.99	18.22	18.74
Variation with the observer position at spacings:											
S = 1.0H		4.3/-7.7					4.3/-7.7				
S = 1.5H		6.8/-8.3					6.8/-8.3				
S = 2.0H		8.6/-7.4					8.6/-7.4				
Standard tables:		BK1					BK1				
Uncorrected UGR		-3.3					-3.3				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

LumCAT:

Luminaire: focus sm r e tr fa

LampCAT: modulo led tr 9W 2700K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.0730

Number of Lamps: 1

Power (W): 8.3800

Lamp flux(lm): 525.0

PF: 0.9300

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 315.33, Efficiency(%): 60.06% , Luminous Efficacy(lm/W): 37.63

Central intensity(cd): 251.940, Maximum intensity(cd): 258.260

Angle of maximum intensity: C=0.0 γ =10.0

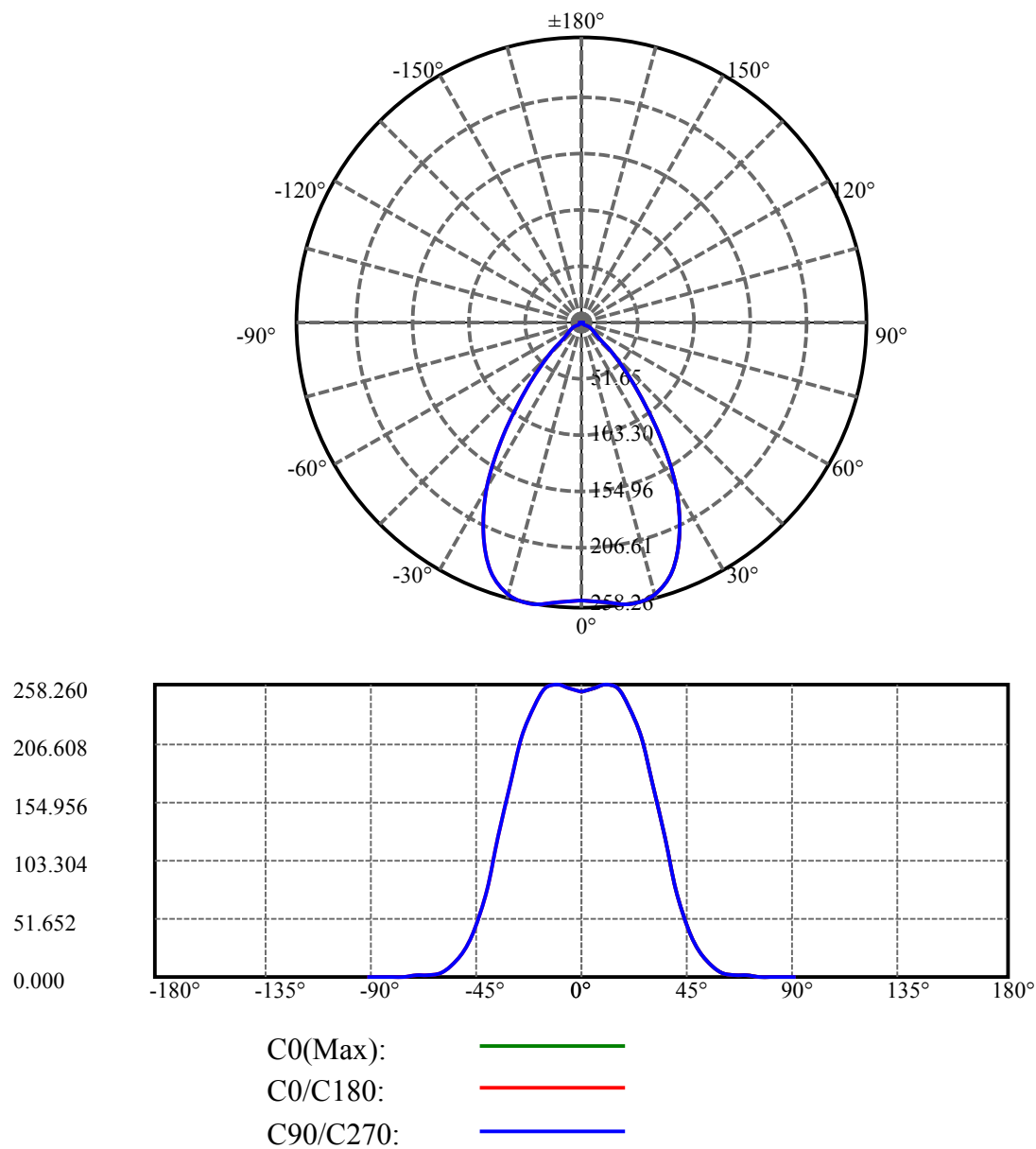
Beam angle of C0 plane : 69.29

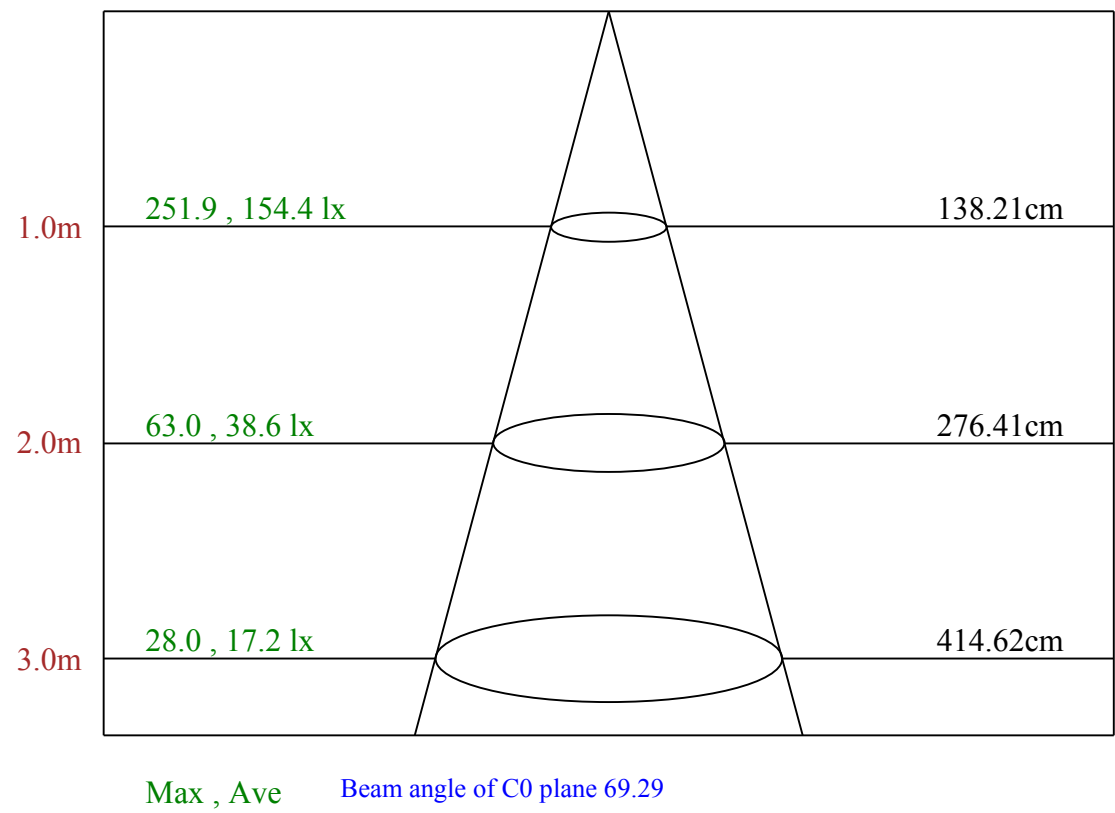
Aveage BeamAngle(IEC 61341):69.29

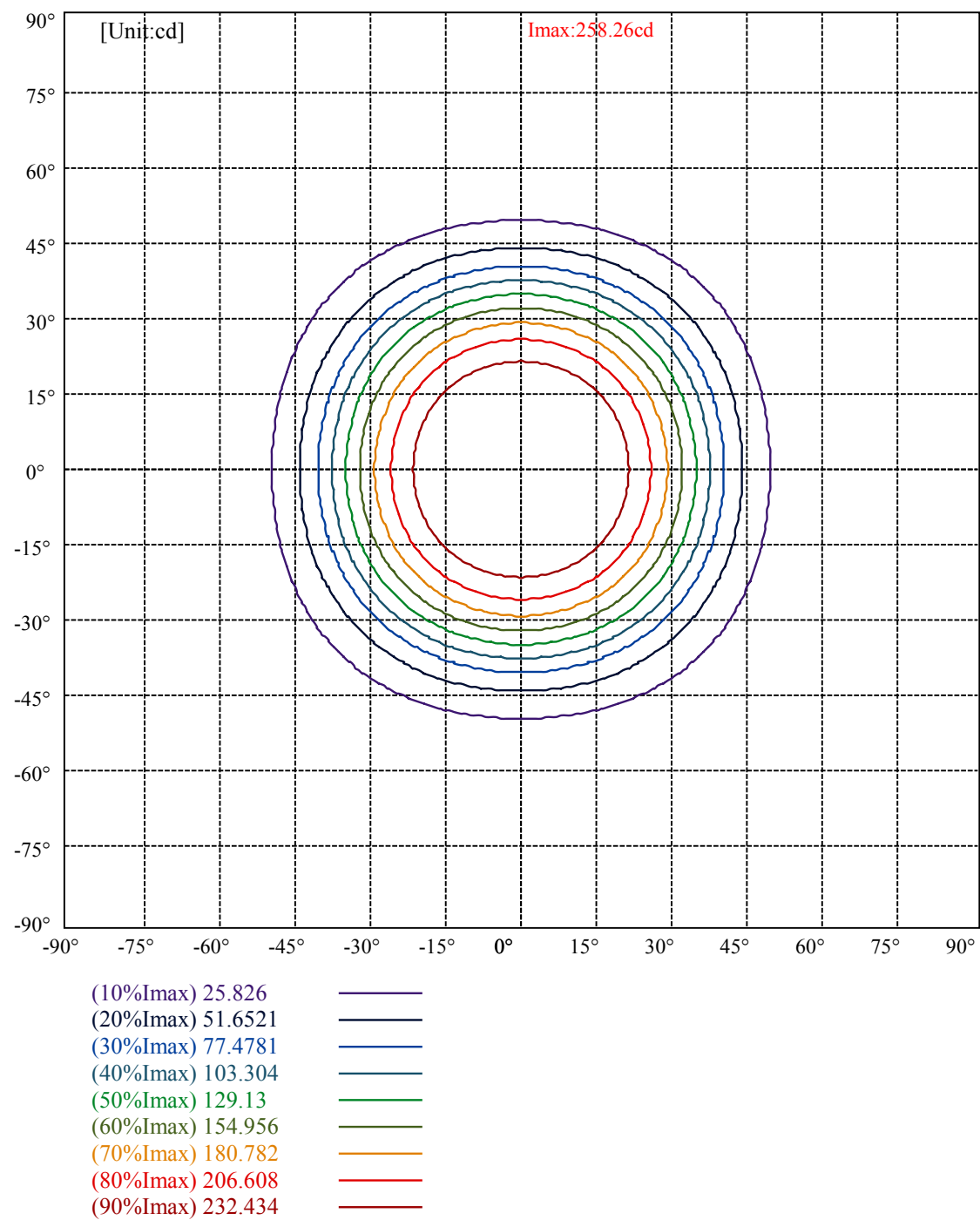
Equipment: equipamento lumini
Temperature(°C): 25.0

Date: 11/29/2023
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90







Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

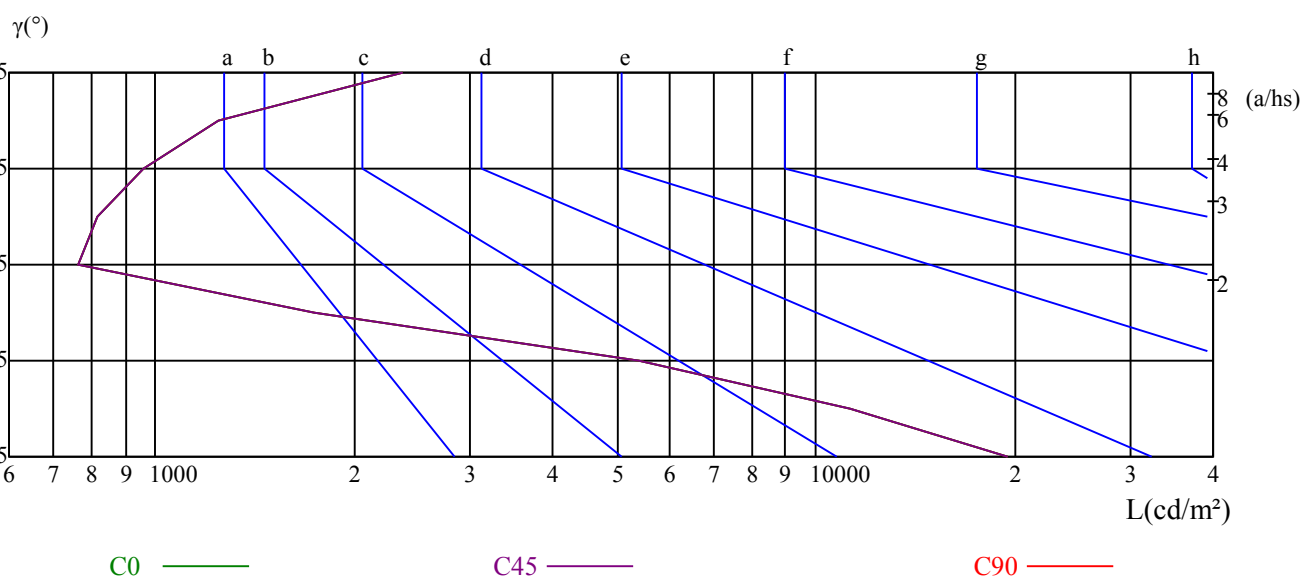
γ	45	50	55	60	65	70	75	80	85
C0	19573	11251	5402	1739	763	817	958	1246	2370
C45	19573	11251	5402	1739	763	817	958	1246	2370
C90	19573	11251	5402	1739	763	817	958	1246	2370

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
763	763	763	958	958	958	2370	2370	2370

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



Equipment: equipamento lumini
Temperature($^{\circ}$ C): 25.0

Date: 11/29/2023
Humidity(%): 55.0%

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	20.34	21.42	20.70	21.74	22.05	21.48	22.57	21.85	22.88	23.19
	3H	20.16	21.12	20.55	21.46	21.80	21.30	22.26	21.69	22.60	22.94
	4H	20.07	20.96	20.47	21.31	21.68	21.21	22.09	21.61	22.45	22.81
	6H	20.00	20.81	20.42	21.18	21.58	21.13	21.94	21.55	22.32	22.72
	8H	19.93	20.71	20.35	21.09	21.50	21.07	21.84	21.49	22.22	22.63
	12H	19.88	20.61	20.30	21.01	21.42	21.01	21.74	21.43	22.13	22.55
4H	2H	20.13	21.01	20.53	21.37	21.73	21.24	22.13	21.64	22.48	22.85
	3H	19.91	20.65	20.34	21.04	21.46	21.03	21.76	21.45	22.15	22.57
	4H	19.86	20.49	20.29	20.91	21.36	20.97	21.60	21.40	22.02	22.47
	6H	19.74	20.30	20.21	20.75	21.20	20.84	21.40	21.31	21.85	22.30
	8H	19.69	20.21	20.18	20.67	21.14	20.80	21.31	21.28	21.77	22.24
	12H	19.67	20.15	20.16	20.60	21.11	20.76	21.24	21.25	21.69	22.21
8H	4H	19.67	20.19	20.15	20.64	21.12	20.78	21.29	21.26	21.75	22.22
	6H	19.54	19.97	20.04	20.45	20.96	20.64	21.07	21.14	21.55	22.06
	8H	19.55	19.91	20.08	20.43	20.93	20.64	21.01	21.17	21.53	22.02
	12H	19.53	19.82	20.07	20.34	20.86	20.61	20.90	21.15	21.42	21.94
12H	4H	19.62	20.10	20.11	20.55	21.07	20.73	21.20	21.21	21.66	22.17
	6H	19.53	19.89	20.06	20.41	20.91	20.63	20.99	21.16	21.51	22.01
	8H	19.50	19.79	20.04	20.31	20.83	20.59	20.88	21.13	21.40	21.92
Variation with the observer position at spacings:											
S = 1.0H		3.1/-7.1					3.1/-7.1				
S = 1.5H		5.7/-12.5					5.7/-12.5				
S = 2.0H		7.8/-12.2					7.8/-12.2				
Standard tables:		BK0					BK0				
Uncorrected UGR		0.3					0.3				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email: laboratorio@lumini.com.br
Tel: +55 11 3437-5555 Fax: +55 11 3437-5555
Address: Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r e sr3 fc

LampCAT: modulo led 12W 30K irc 90

Ballast type: led driver 350mA

Report No:

Voltage(V): 127.7900

Test No:

Current(A): 0.1110

Number of Lamps: 1

Power (W): 13.8210

Lamp flux(lm): 1478.0

PF: 0.9790

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1088.66, Efficiency(%): 73.66% , Luminous Efficacy(lm/W): 78.77

Central intensity(cd): 6102.234, Maximum intensity(cd): 6102.234

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

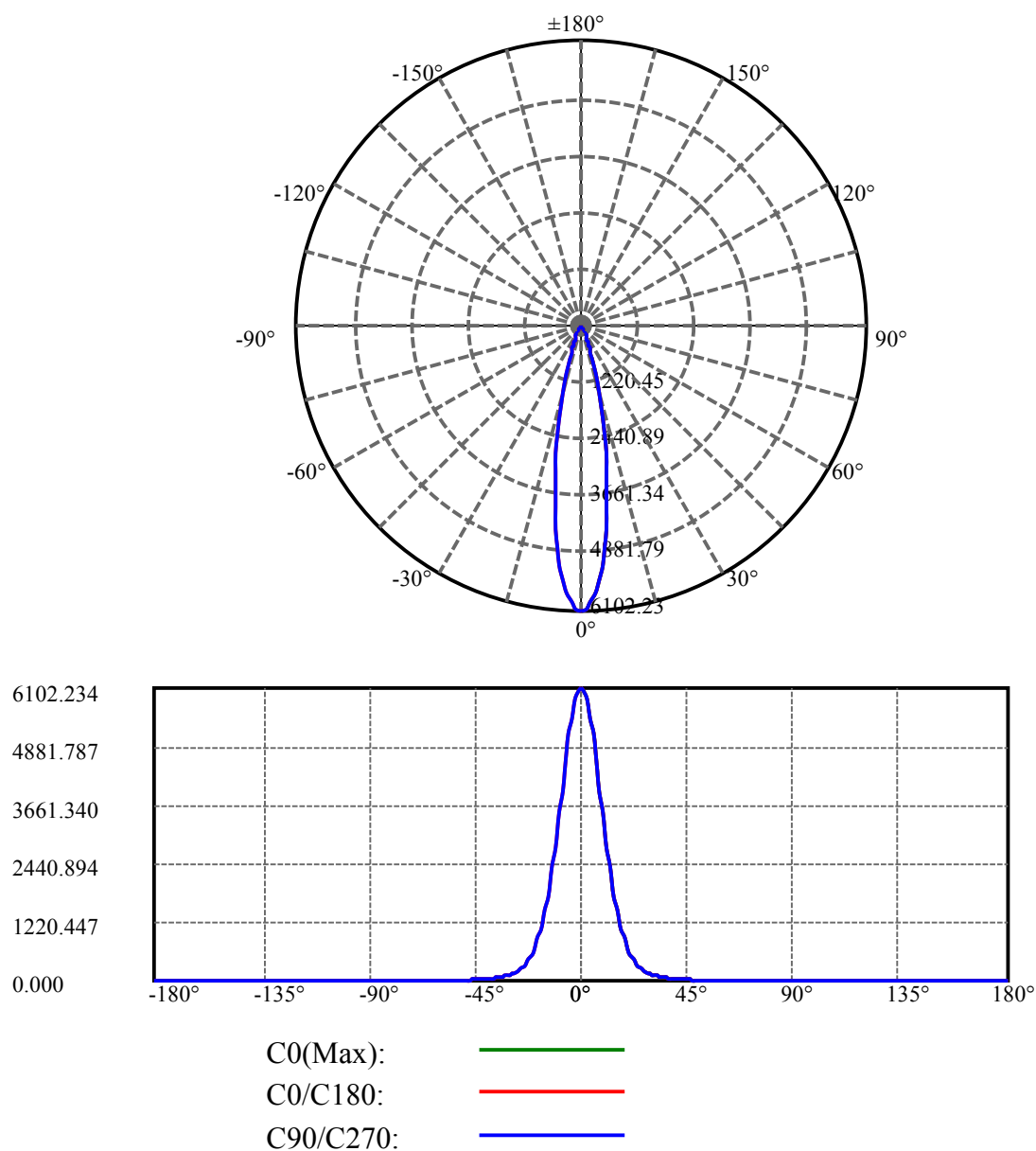
Beam angle of C0 plane : 20.48

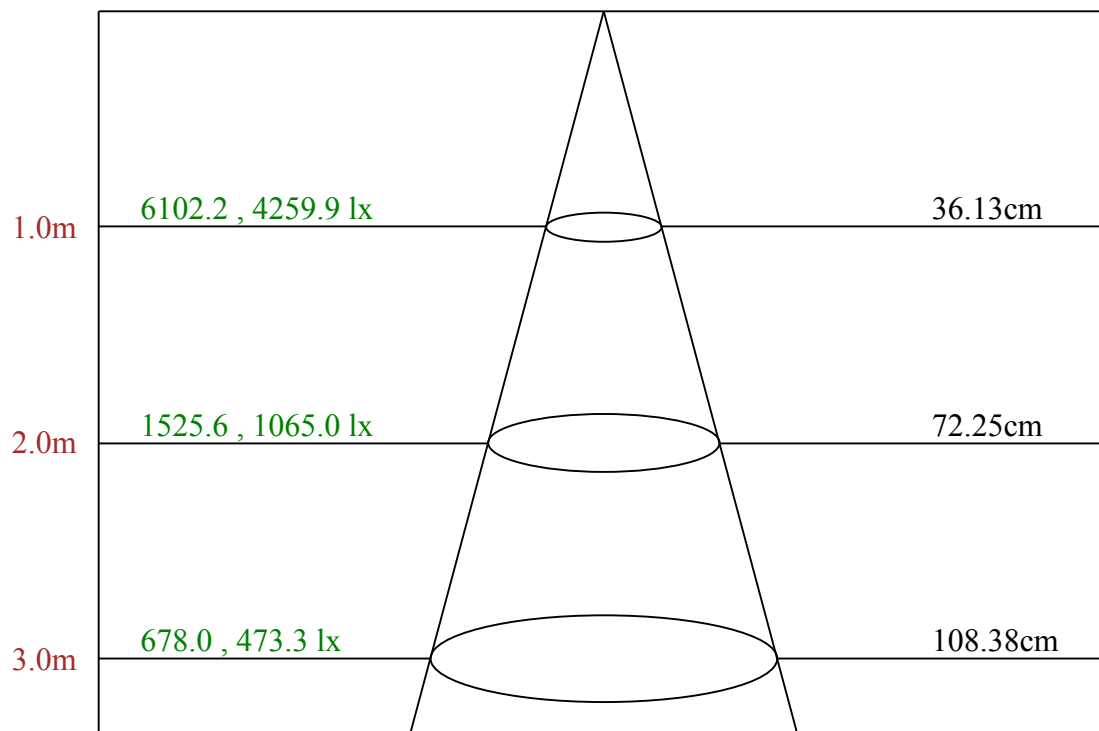
Average BeamAngle(IEC 61341): 20.48

Equipment: equipamento lumini
Temperature(°C): 26.5

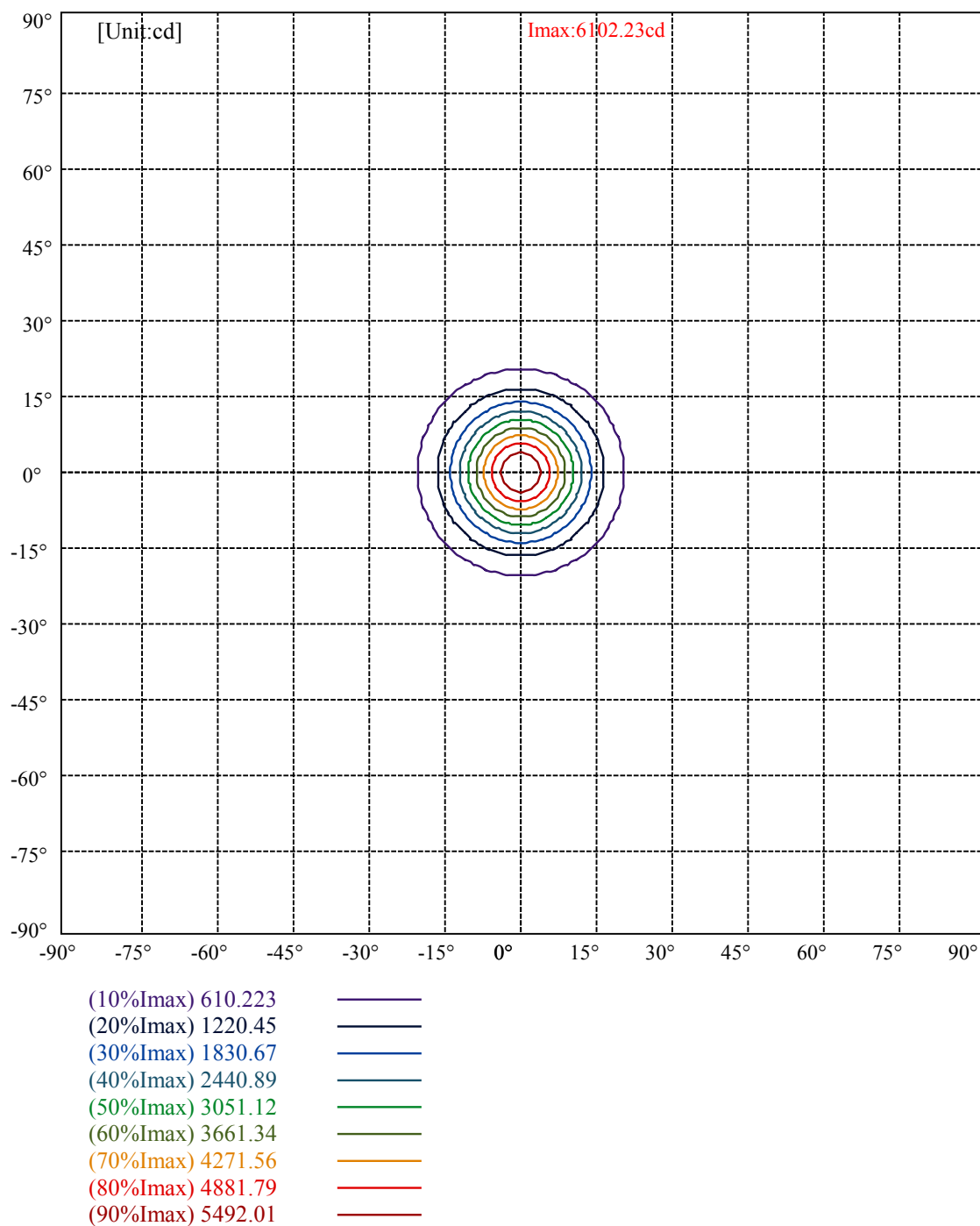
Date: 04/08/2025
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 20.48



Luminance Table

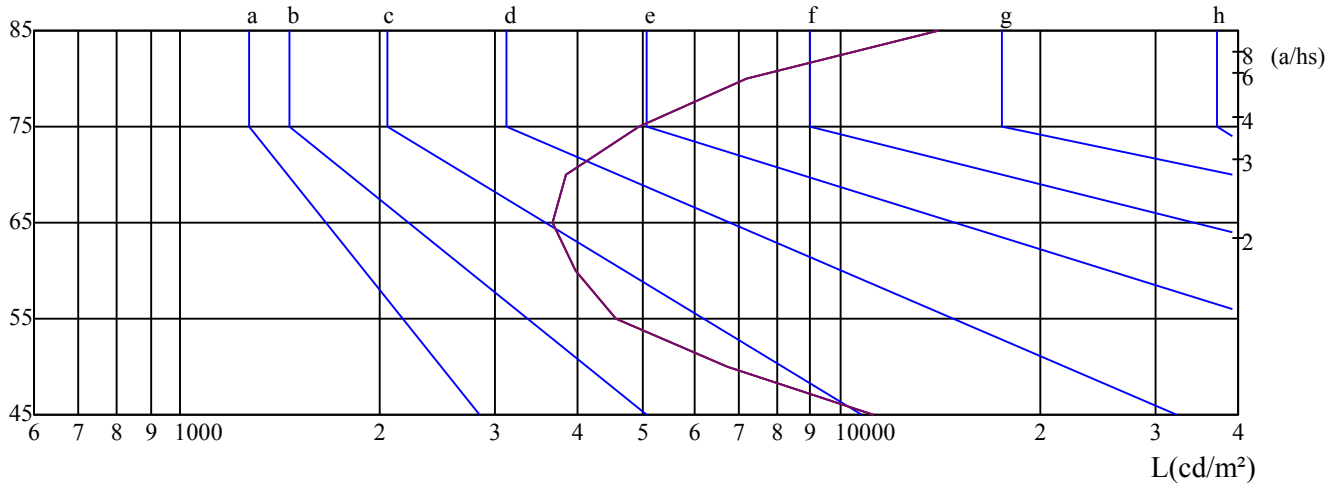
γ	45	50	55	60	65	70	75	80	85
C0	11232	6749	4572	3958	3654	3842	4956	7206	14085
C45	11232	6749	4572	3958	3654	3842	4956	7206	14085
C90	11232	6749	4572	3958	3654	3842	4956	7206	14085

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3654	3654	3654	4956	4956	4956	14085	14085	14085

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	11.70	12.61	12.11	12.97	13.35	11.97	12.88	12.38	13.24	13.62
	3H	12.00	12.81	12.43	13.20	13.60	12.26	13.07	12.69	13.45	13.86
	4H	12.34	13.09	12.79	13.50	13.92	12.59	13.34	13.03	13.74	14.16
	6H	13.00	13.69	13.46	14.11	14.57	13.20	13.89	13.66	14.31	14.76
	8H	13.48	14.14	13.95	14.57	15.03	13.65	14.30	14.11	14.74	15.20
	12H	14.14	14.76	14.61	15.20	15.68	14.31	14.93	14.78	15.37	15.84
4H	2H	11.62	12.37	12.07	12.78	13.20	11.88	12.62	12.32	13.03	13.45
	3H	12.10	12.73	12.57	13.17	13.64	12.33	12.96	12.80	13.40	13.87
	4H	12.69	13.24	13.17	13.70	14.21	12.90	13.44	13.38	13.91	14.41
	6H	13.61	14.09	14.13	14.59	15.10	13.77	14.25	14.29	14.75	15.25
	8H	14.32	14.76	14.85	15.27	15.79	14.44	14.88	14.97	15.39	15.91
	12H	15.23	15.64	15.76	16.13	16.71	15.36	15.77	15.89	16.26	16.83
8H	4H	12.89	13.34	13.42	13.84	14.36	13.07	13.52	13.60	14.02	14.55
	6H	14.12	14.48	14.67	15.00	15.57	14.25	14.61	14.79	15.13	15.70
	8H	15.10	15.40	15.67	15.97	16.52	15.19	15.50	15.77	16.06	16.61
	12H	16.29	16.52	16.87	17.08	17.65	16.39	16.62	16.97	17.18	17.76
12H	4H	12.96	13.37	13.50	13.87	14.44	13.14	13.55	13.67	14.05	14.62
	6H	14.36	14.66	14.93	15.22	15.77	14.48	14.78	15.05	15.34	15.89
	8H	15.42	15.65	16.00	16.21	16.78	15.50	15.73	16.08	16.29	16.87
Variation with the observer position at spacings:											
S = 1.0H		2.5/-2.4					2.5/-2.4				
S = 1.5H		3.5/-1.9					3.5/-1.9				
S = 2.0H		4.1/-1.6					4.1/-1.6				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-0.6					-0.6				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r e sr3 fm

LampCAT: modulo led 12W 30K irc 90

Ballast type: led driver 350mA

Report No:

Voltage(V): 127.8200

Test No:

Current(A): 0.1110

Number of Lamps: 1

Power (W): 13.8230

Lamp flux(lm): 1478.0

PF: 0.9790

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1121.76, Efficiency(%): 75.90% , Luminous Efficacy(lm/W): 81.15

Central intensity(cd): 5395.796, Maximum intensity(cd): 5395.796

Angle of maximum intensity: C=0.0 γ =0.0

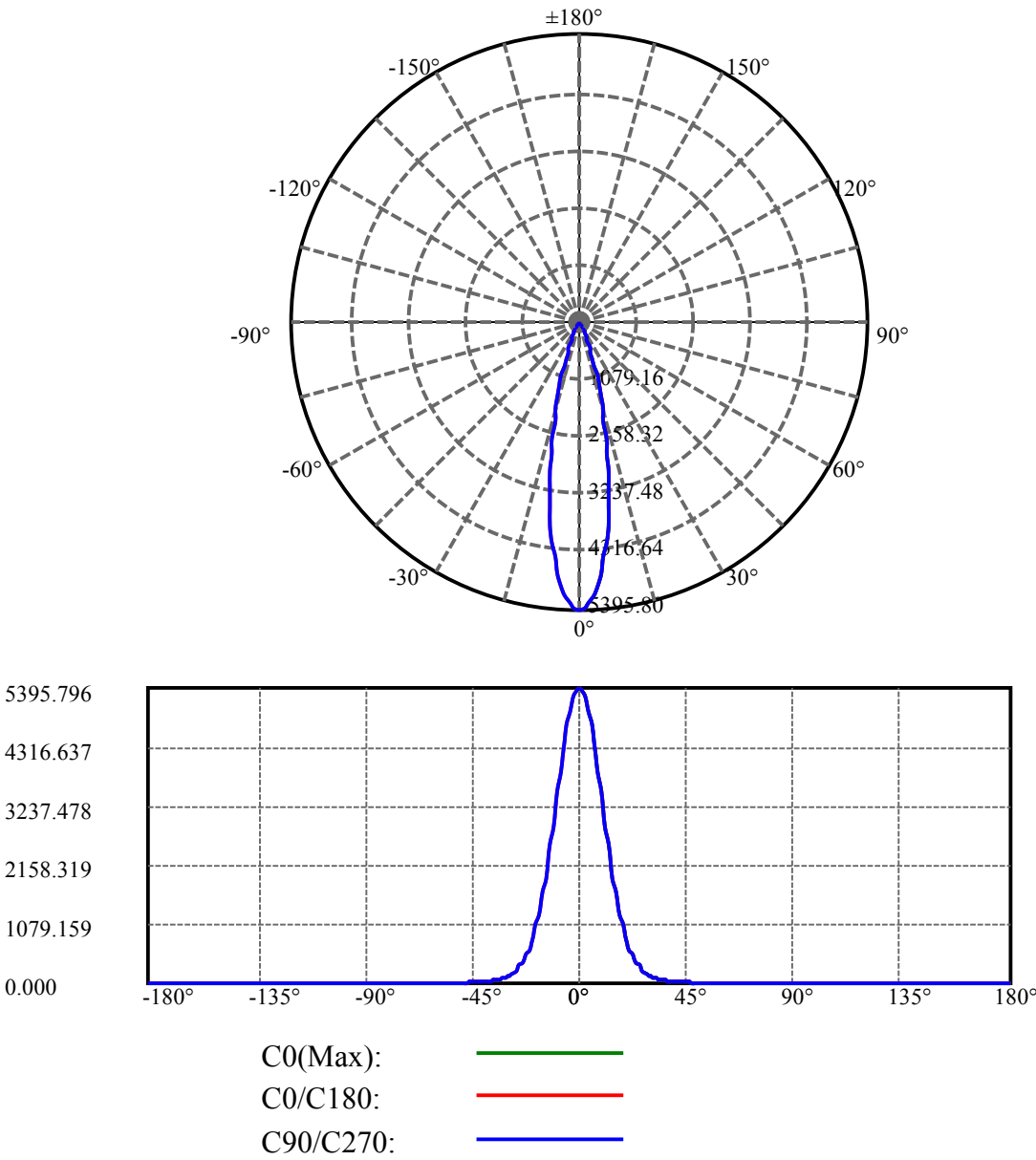
Beam angle of C0 plane : 22.95

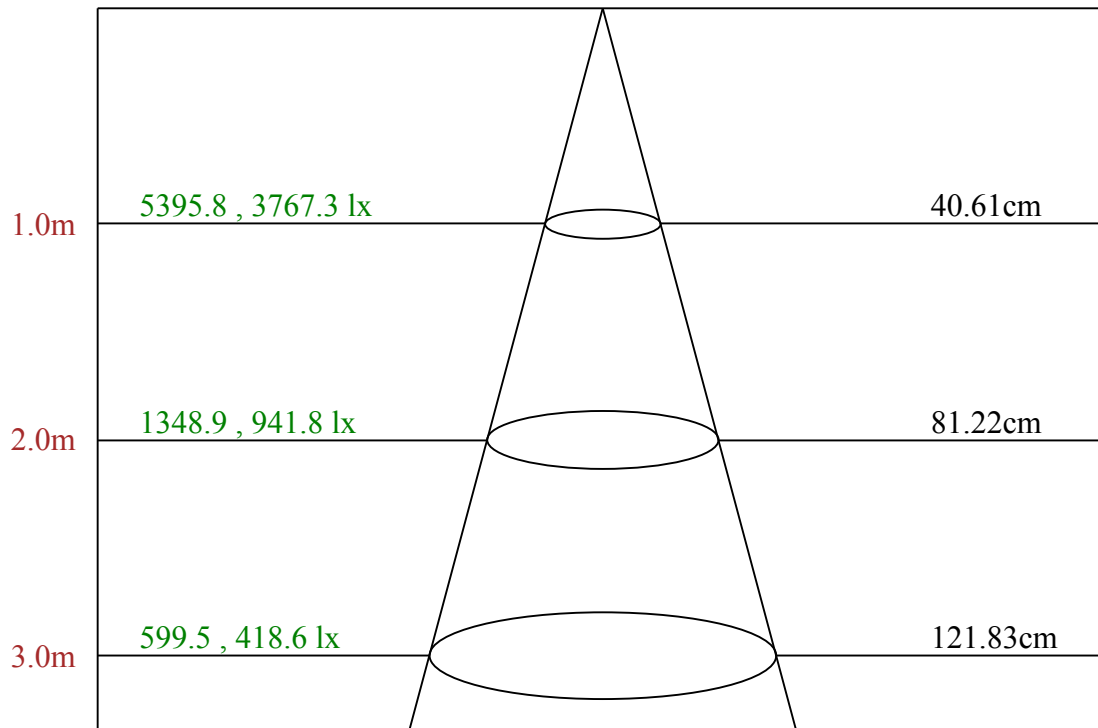
Aveage BeamAngle(IEC 61341):22.95

Equipment: equipamento lumini
Temperature(°C): 26.5

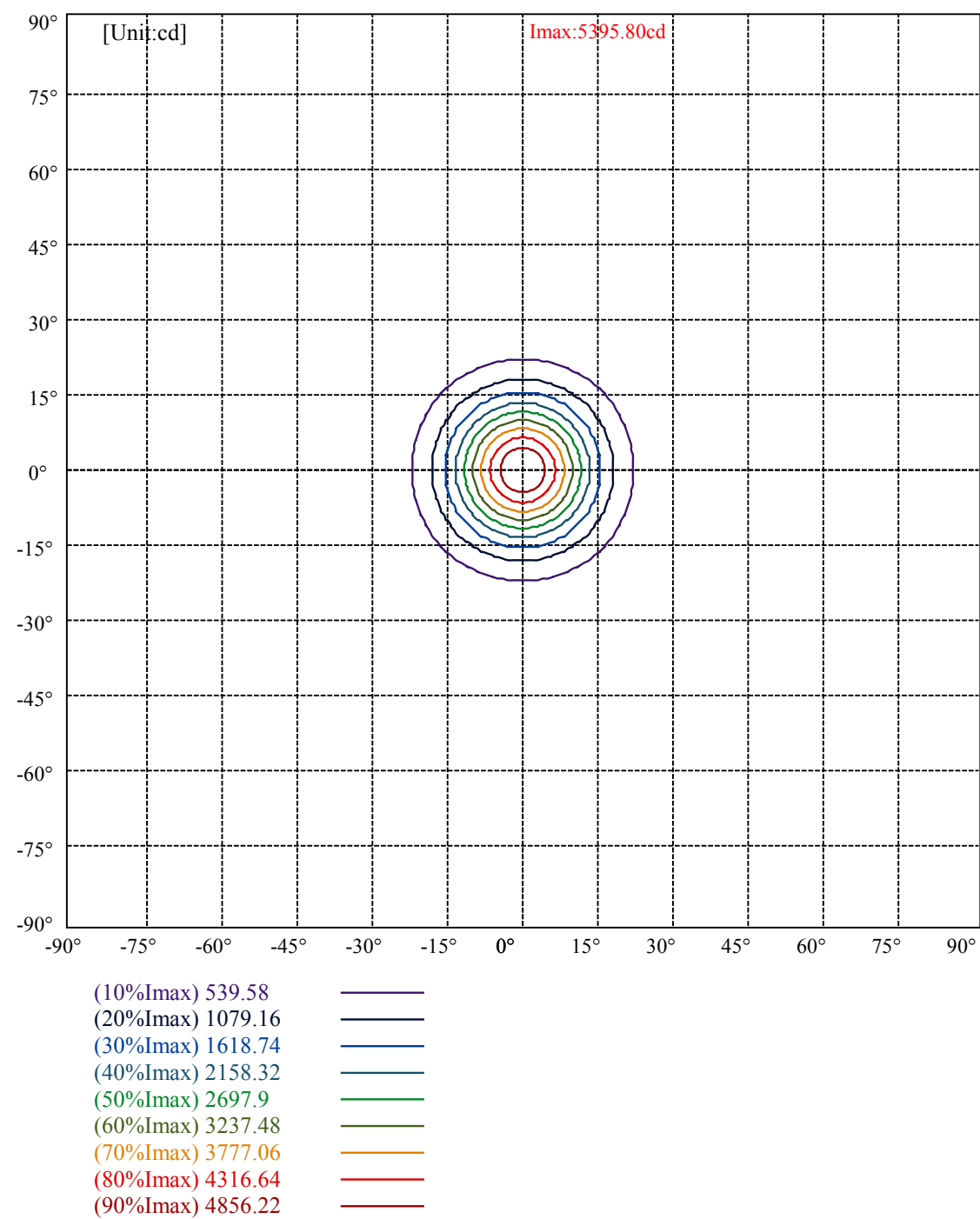
Date: 04/08/2025
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 22.95



Luminance Table

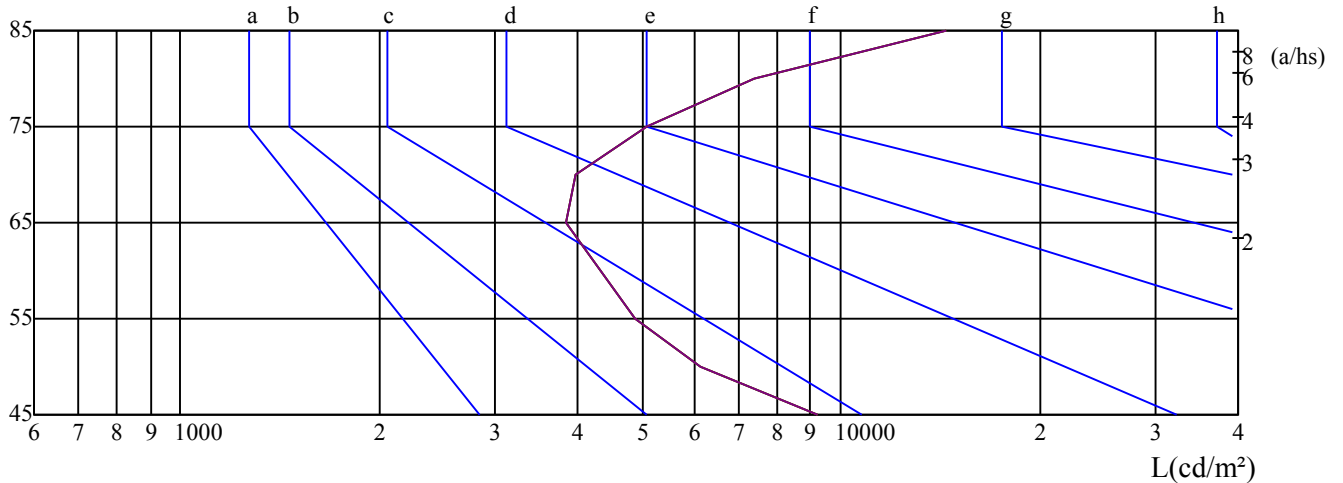
γ	45	50	55	60	65	70	75	80	85
C0	9229	6131	4871	4320	3841	3963	5070	7398	14492
C45	9229	6131	4871	4320	3841	3963	5070	7398	14492
C90	9229	6131	4871	4320	3841	3963	5070	7398	14492

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3841	3841	3841	5070	5070	5070	14492	14492	14492

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	10.06	10.96	10.47	11.32	11.70	9.92	10.83	10.33	11.19	11.56
	3H	10.65	11.46	11.08	11.84	12.25	10.53	11.34	10.96	11.72	12.13
	4H	11.21	11.96	11.66	12.36	12.79	11.11	11.85	11.55	12.26	12.68
	6H	12.13	12.82	12.60	13.24	13.70	12.08	12.76	12.54	13.18	13.64
	8H	12.76	13.42	13.23	13.85	14.31	12.72	13.37	13.18	13.80	14.27
	12H	13.61	14.22	14.08	14.66	15.14	13.57	14.19	14.04	14.63	15.10
4H	2H	10.09	10.84	10.54	11.24	11.67	9.97	10.72	10.41	11.12	11.54
	3H	10.93	11.56	11.40	12.00	12.47	10.83	11.46	11.30	11.90	12.37
	4H	11.79	12.33	12.27	12.80	13.30	11.70	12.25	12.19	12.71	13.22
	6H	12.99	13.47	13.50	13.96	14.47	12.95	13.43	13.47	13.93	14.44
	8H	13.83	14.27	14.36	14.78	15.30	13.81	14.25	14.33	14.75	15.28
	12H	14.91	15.31	15.44	15.81	16.38	14.89	15.30	15.42	15.79	16.36
8H	4H	12.11	12.55	12.63	13.05	13.58	12.03	12.48	12.56	12.98	13.51
	6H	13.63	13.99	14.17	14.51	15.08	13.61	13.97	14.15	14.49	15.05
	8H	14.74	15.05	15.32	15.61	16.16	14.73	15.03	15.30	15.59	16.14
	12H	16.09	16.32	16.67	16.88	17.45	16.08	16.31	16.66	16.87	17.44
12H	4H	12.21	12.62	12.74	13.12	13.69	12.14	12.55	12.68	13.05	13.62
	6H	13.90	14.20	14.48	14.77	15.32	13.88	14.18	14.45	14.75	15.30
	8H	15.10	15.33	15.68	15.89	16.46	15.09	15.32	15.67	15.87	16.45
Variation with the observer position at spacings:											
S = 1.0H		2.4/-1.9					2.4/-1.9				
S = 1.5H		3.2/-1.5					3.2/-1.5				
S = 2.0H		3.7/-1.4					3.7/-1.4				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-0.9					-0.9				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email: laboratorio@lumini.com.br
Tel: +55 11 3437-5555 Fax: +55 11 3437-5555
Address: Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r e sr3 fa

LampCAT: modulo led 12W 30K irc 90

Ballast type: led driver 350mA

Report No:

Voltage(V): 127.8300

Test No:

Current(A): 0.1110

Number of Lamps: 1

Power (W): 13.8400

Lamp flux(lm): 1478.0

PF: 0.9790

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1225.86, Efficiency(%): 82.94% , Luminous Efficacy(lm/W): 88.57

Central intensity(cd): 3608.469, Maximum intensity(cd): 3608.469

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

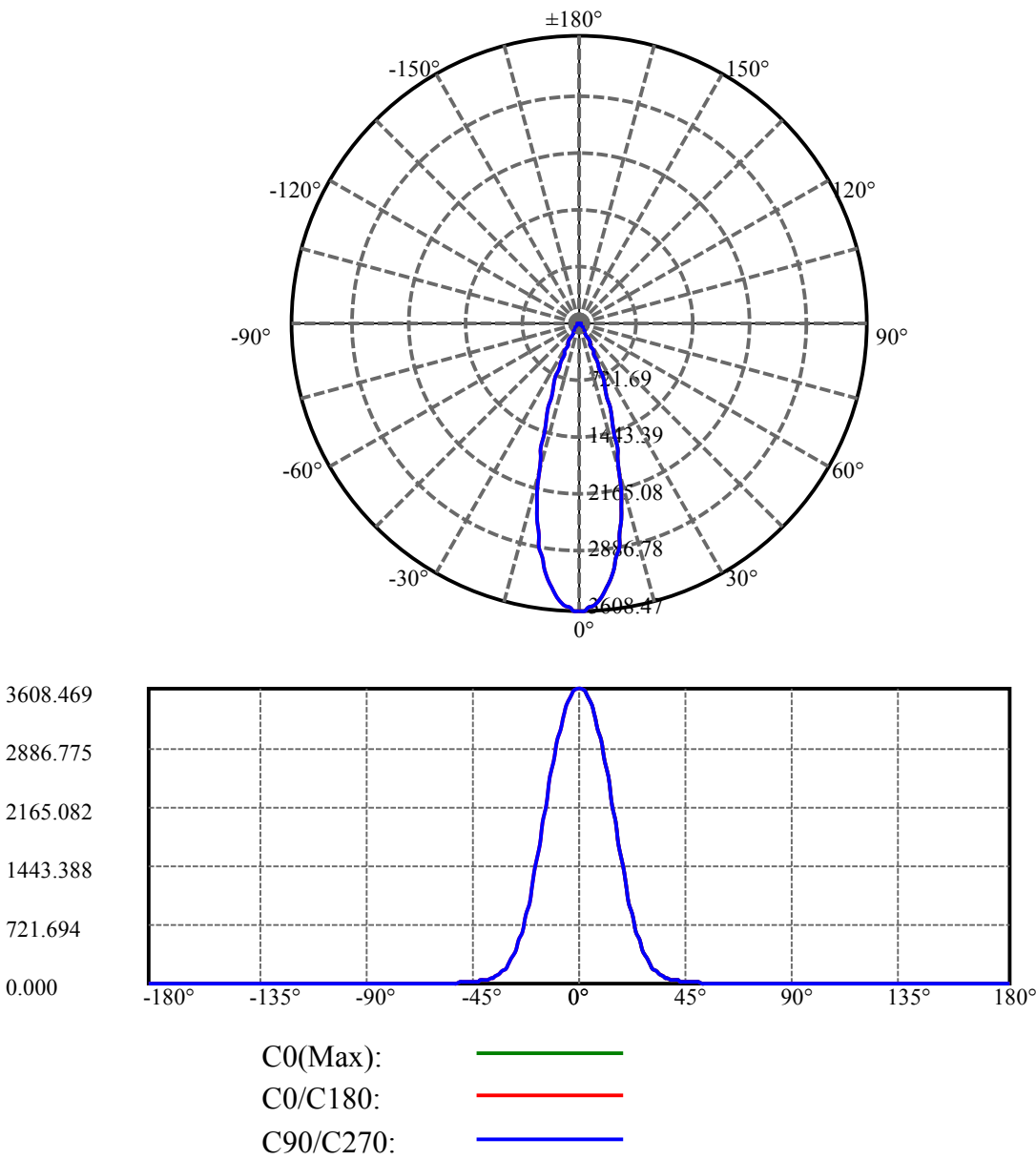
Beam angle of C0 plane : 31.63

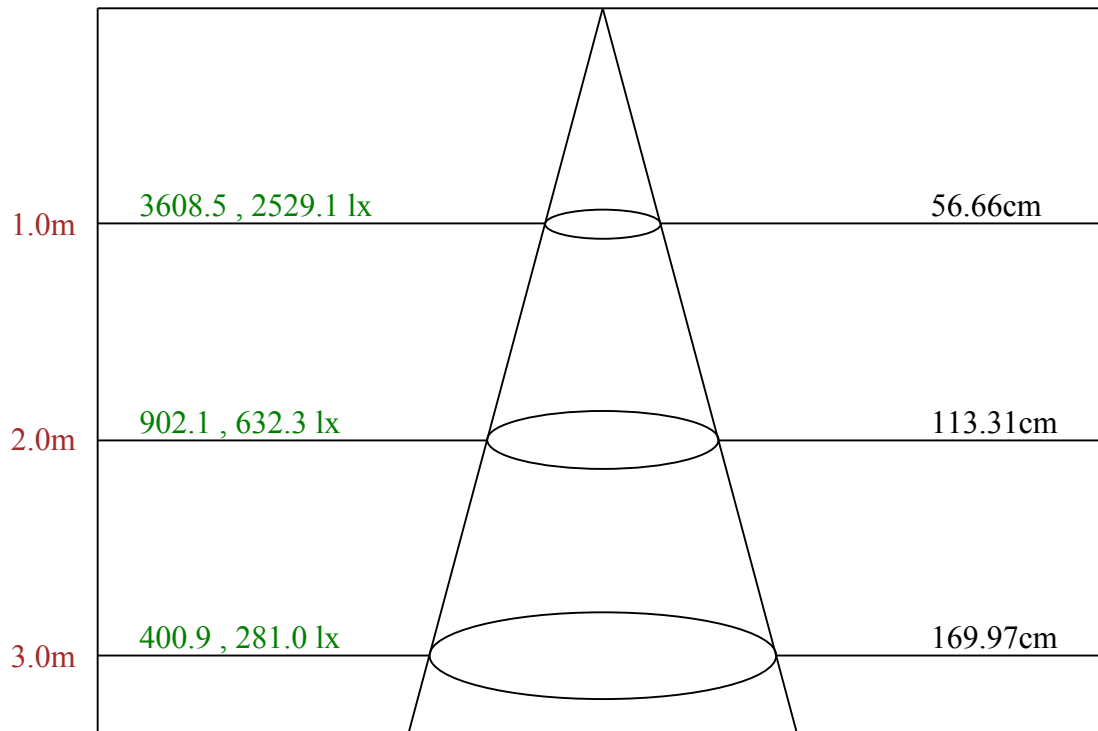
Average BeamAngle(IEC 61341): 31.63

Equipment: equipamento lumini
Temperature(°C): 26.5

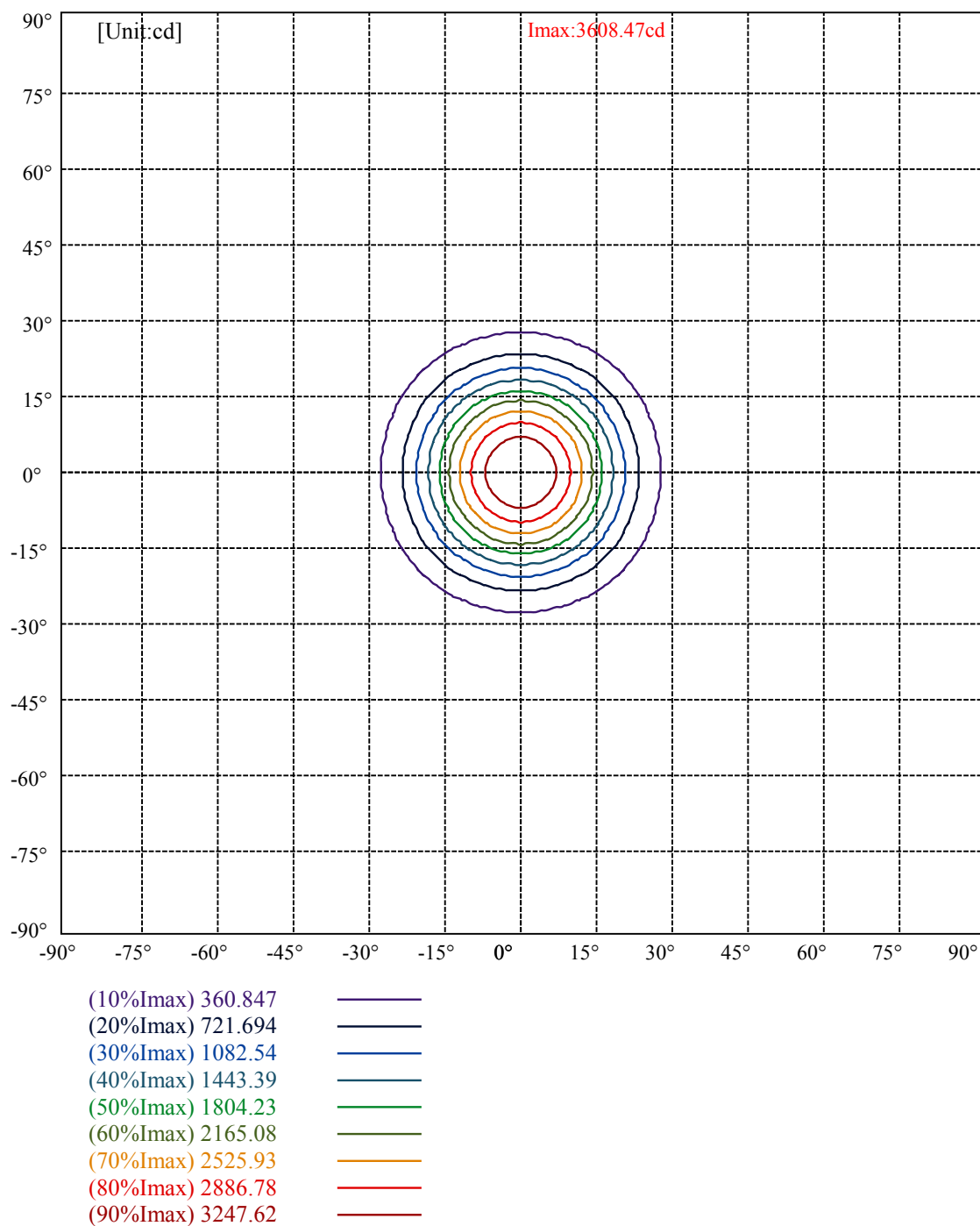
Date: 04/08/2025
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 31.63



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	9660	6290	4888	4383	3845	4101	5252	7704	15124
C45	9660	6290	4888	4383	3845	4101	5252	7704	15124
C90	9660	6290	4888	4383	3845	4101	5252	7704	15124

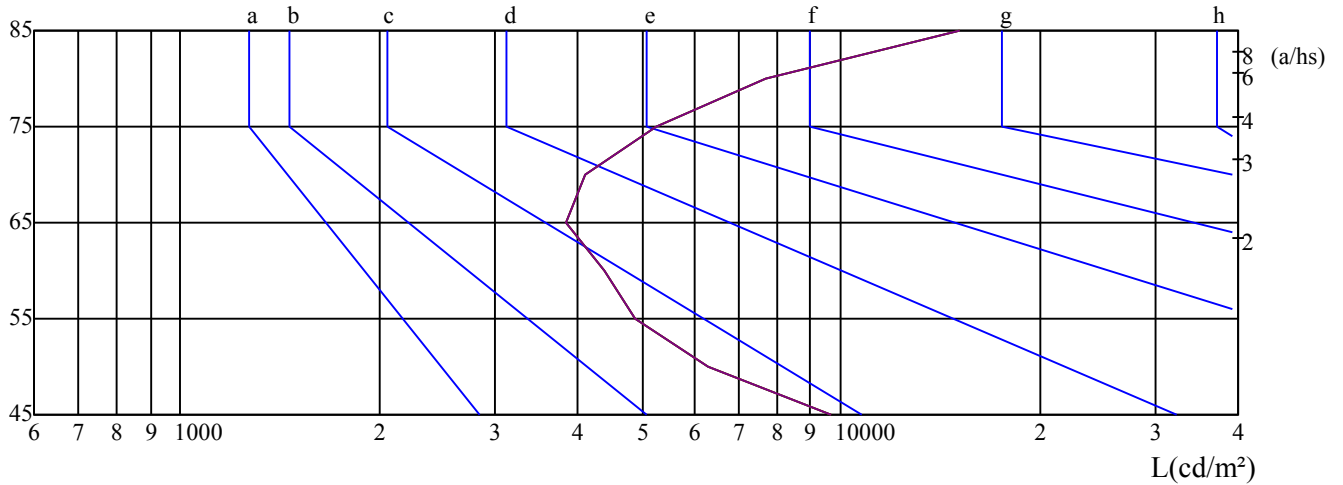
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3845	3845	3845	5252	5252	5252	15124	15124	15124

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

$\gamma(^{\circ})$



Equipment: equipamento lumini
Temperature($^{\circ}\text{C}$): 26.5

Date: 04/08/2025
Humidity(%): 55.0%

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	11.30	12.20	11.71	12.56	12.94	11.22	12.13	11.63	12.49	12.86
	3H	11.62	12.43	12.06	12.81	13.22	11.55	12.36	11.98	12.74	13.15
	4H	12.03	12.78	12.48	13.18	13.60	11.96	12.70	12.40	13.10	13.53
	6H	12.79	13.47	13.25	13.89	14.35	12.69	13.37	13.16	13.80	14.25
	8H	13.32	13.97	13.79	14.40	14.86	13.23	13.88	13.70	14.31	14.77
	12H	14.06	14.67	14.53	15.11	15.58	13.95	14.57	14.42	15.01	15.48
4H	2H	11.20	11.94	11.64	12.34	12.76	11.12	11.87	11.57	12.27	12.69
	3H	11.72	12.35	12.19	12.79	13.26	11.66	12.28	12.12	12.72	13.19
	4H	12.40	12.94	12.88	13.41	13.91	12.33	12.87	12.81	13.34	13.84
	6H	13.45	13.93	13.96	14.42	14.92	13.35	13.83	13.87	14.33	14.83
	8H	14.20	14.64	14.73	15.14	15.67	14.12	14.56	14.65	15.06	15.59
	12H	15.20	15.60	15.73	16.10	16.67	15.10	15.50	15.63	16.00	16.57
8H	4H	12.63	13.07	13.16	13.57	14.10	12.57	13.01	13.10	13.51	14.04
	6H	13.99	14.35	14.54	14.87	15.43	13.91	14.27	14.45	14.79	15.35
	8H	15.02	15.32	15.59	15.88	16.43	14.95	15.25	15.52	15.81	16.36
	12H	16.29	16.52	16.87	17.08	17.65	16.20	16.43	16.78	16.99	17.56
12H	4H	12.71	13.12	13.24	13.61	14.19	12.66	13.07	13.19	13.56	14.13
	6H	14.23	14.54	14.81	15.10	15.65	14.16	14.46	14.73	15.02	15.57
	8H	15.34	15.57	15.92	16.13	16.70	15.28	15.51	15.86	16.07	16.64
Variation with the observer position at spacings:											
S = 1.0H		3.8/-2.8					3.8/-2.8				
S = 1.5H		5.0/-2.2					5.0/-2.2				
S = 2.0H		5.8/-1.8					5.8/-1.8				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-0.2					-0.2				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email: laboratorio@lumini.com.br
Tel: +55 11 3437-5555 Fax: +55 11 3437-5555
Address: Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r dtw e fc

LampCAT: modulo led dtw 12W 27K irc 90

Ballast type: led driver 700mA

Report No:

Voltage(V): 127.7800

Test No:

Current(A): 0.1130

Number of Lamps: 1

Power (W): 14.1220

Lamp flux(lm): 924.0

PF: 0.9760

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 650.56, Efficiency(%): 70.41% , Luminous Efficacy(lm/W): 46.07

Central intensity(cd): 3030.769, Maximum intensity(cd): 3030.769

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

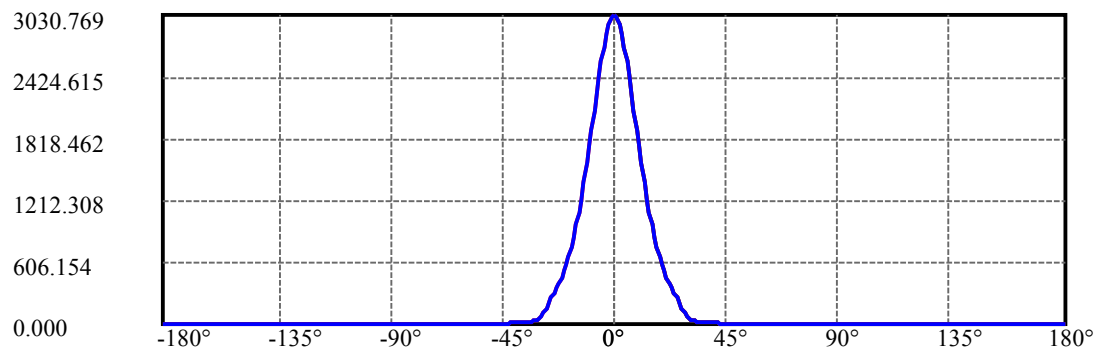
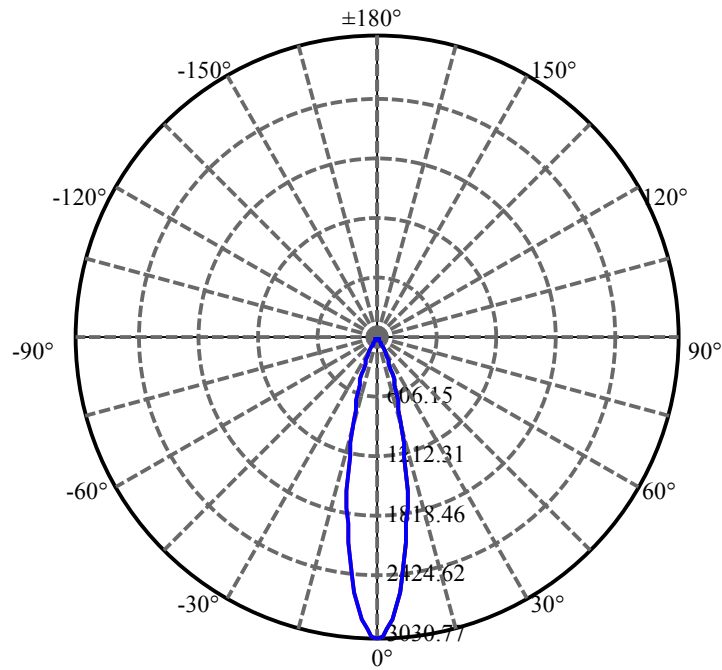
Beam angle of C0 plane : 22.69

Average BeamAngle(IEC 61341): 22.69

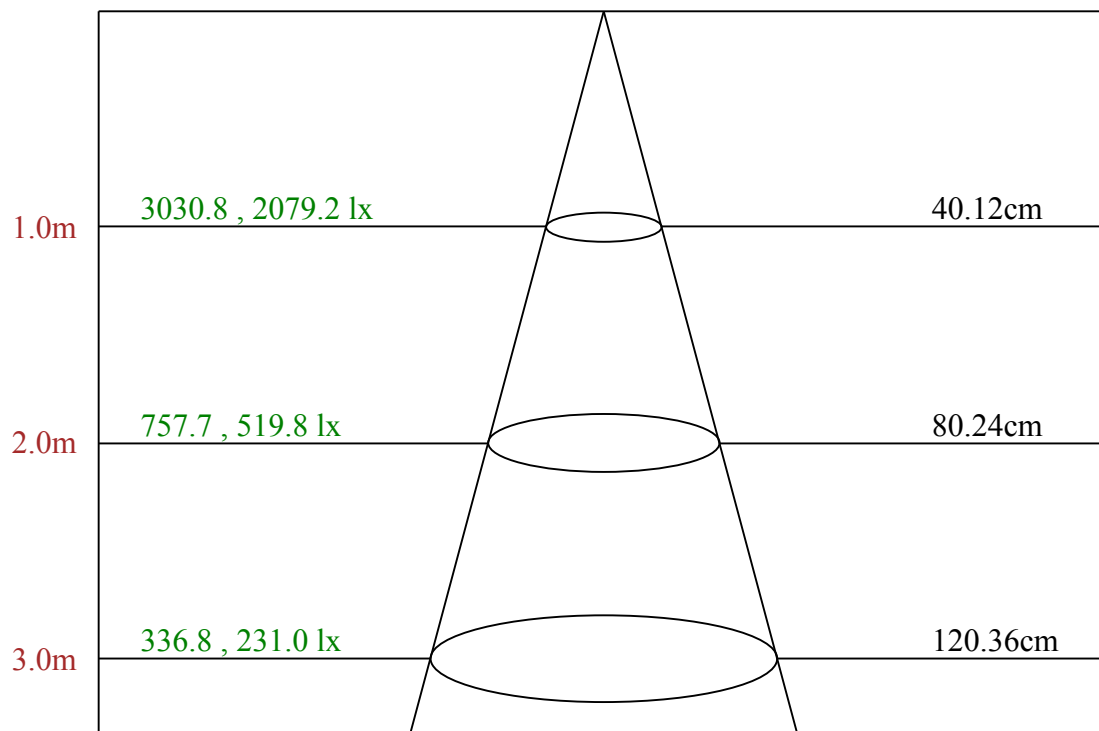
Equipment: equipamento lumini
Temperature(°C): 25.0

Date: 29/05/2025
Humidity(%): 58.0%

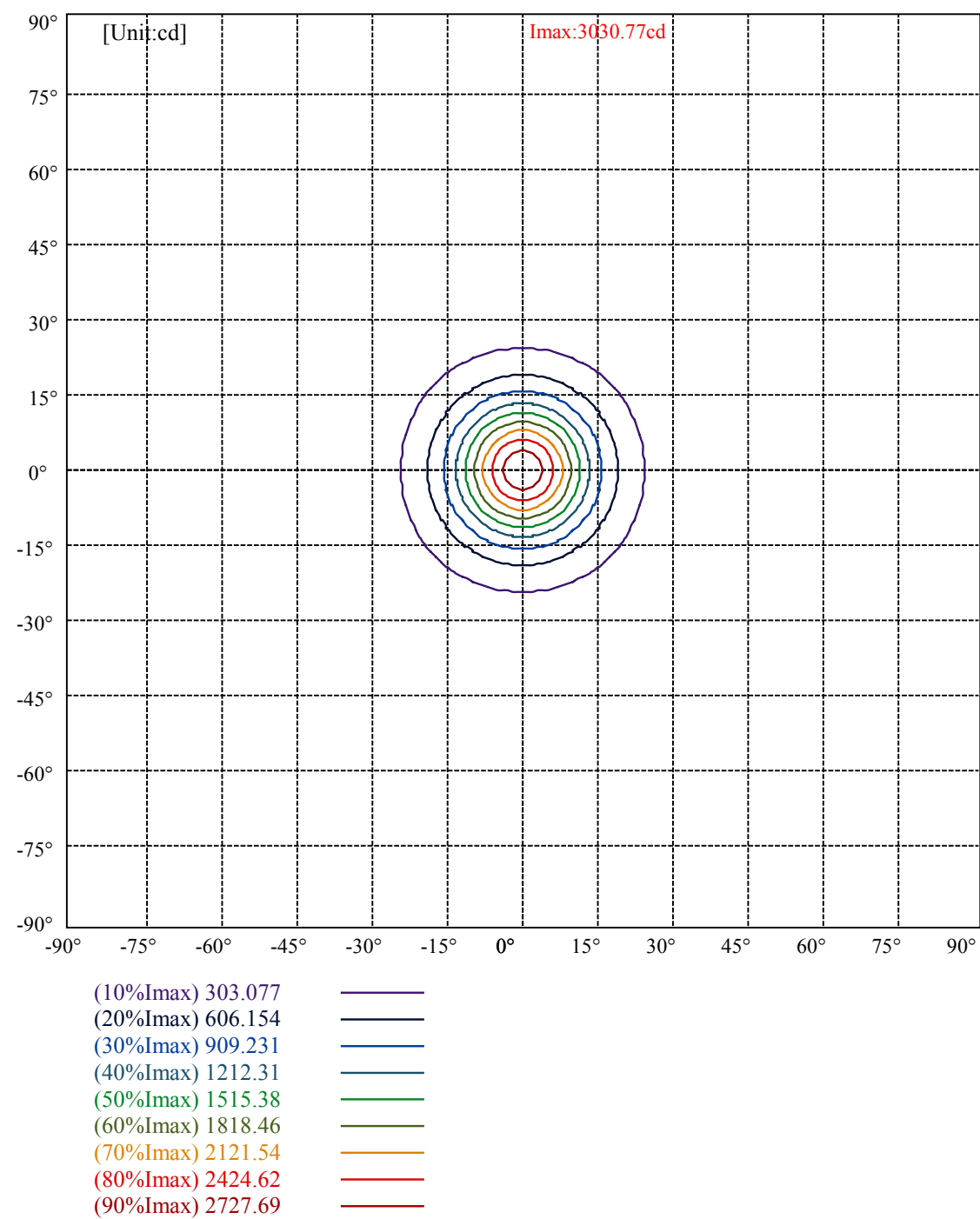
Operator: 01
Distance(m): 6.90



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



Max , Ave Beam angle of C0 plane 22.69



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	3411	2831	2813	2829	2705	2318	2896	4056	7788
C45	3411	2831	2813	2829	2705	2318	2896	4056	7788
C90	3411	2831	2813	2829	2705	2318	2896	4056	7788

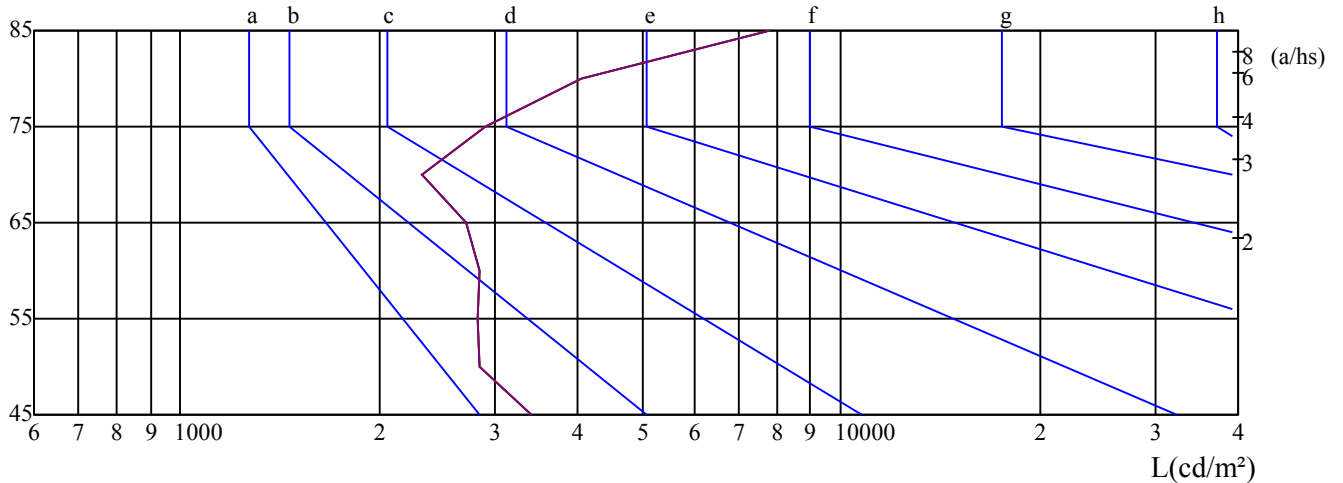
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2705	2705	2705	2896	2896	2896	7788	7788	7788

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): 25.0

Date: 29/05/2025
Humidity(%): 58.0%

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	7.09	7.99	7.50	8.35	8.72	7.43	8.33	7.83	8.68	9.05
	3H	8.19	9.00	8.62	9.38	9.78	8.59	9.39	9.02	9.77	10.17
	4H	8.86	9.60	9.30	10.00	10.42	9.18	9.92	9.62	10.32	10.74
	6H	9.90	10.58	10.36	11.00	11.45	10.12	10.80	10.58	11.22	11.67
	8H	10.55	11.20	11.01	11.62	12.08	10.70	11.35	11.16	11.78	12.24
	12H	11.40	12.01	11.87	12.45	12.92	11.47	12.08	11.94	12.52	12.99
4H	2H	7.56	8.31	8.01	8.70	9.12	7.84	8.58	8.28	8.98	9.40
	3H	8.82	9.45	9.29	9.88	10.35	9.13	9.76	9.60	10.20	10.67
	4H	9.73	10.27	10.20	10.73	11.23	9.97	10.50	10.44	10.97	11.47
	6H	10.97	11.44	11.48	11.94	12.44	11.11	11.59	11.62	12.08	12.58
	8H	11.78	12.22	12.30	12.72	13.24	11.87	12.31	12.39	12.80	13.33
	12H	12.82	13.23	13.35	13.72	14.29	12.83	13.23	13.36	13.72	14.29
8H	4H	10.06	10.50	10.58	11.00	11.52	10.27	10.71	10.79	11.20	11.73
	6H	11.61	11.97	12.15	12.48	13.05	11.71	12.07	12.26	12.59	13.15
	8H	12.68	12.98	13.25	13.54	14.08	12.73	13.03	13.30	13.59	14.13
	12H	13.99	14.21	14.57	14.77	15.34	13.96	14.19	14.54	14.74	15.31
12H	4H	10.16	10.57	10.69	11.06	11.63	10.36	10.77	10.89	11.26	11.83
	6H	11.87	12.17	12.44	12.73	13.28	11.97	12.27	12.54	12.83	13.38
	8H	13.02	13.25	13.60	13.80	14.37	13.06	13.29	13.64	13.85	14.42
Variation with the observer position at spacings:											
S = 1.0H		1.0/-0.9					1.0/-0.9				
S = 1.5H		1.2/-1.2					1.2/-1.2				
S = 2.0H		1.4/-0.9					1.4/-0.9				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-3.8					-3.8				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r dtw e fm

LampCAT: modulo led dtw 12W 27K irc 90

Ballast type: led driver 700mA

Report No:

Voltage(V): 127.7900

Test No:

Current(A): 0.1140

Number of Lamps: 1

Power (W): 14.1610

Lamp flux(lm): 924.0

PF: 0.9760

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 649.02, Efficiency(%): 70.24% , Luminous Efficacy(lm/W): 45.83

Central intensity(cd): 2982.635, Maximum intensity(cd): 2982.635

Angle of maximum intensity: C=0.0 γ =0.0

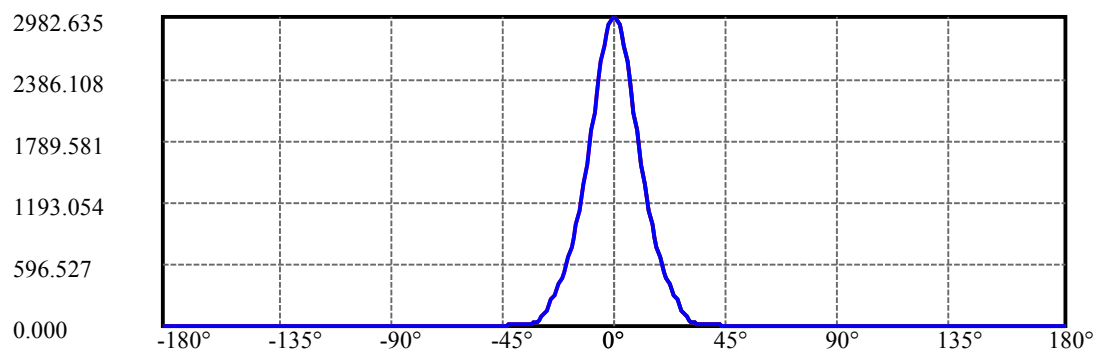
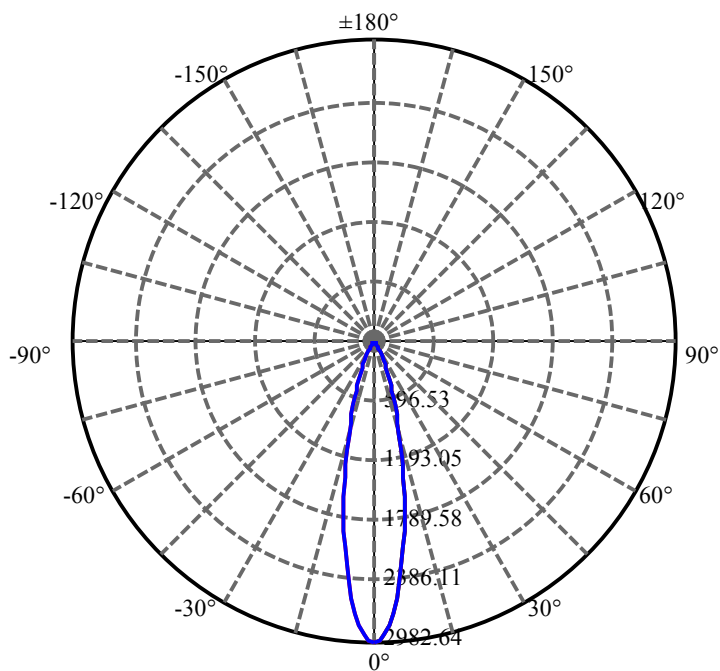
Beam angle of C0 plane : 22.77

Aveage BeamAngle(IEC 61341):22.77

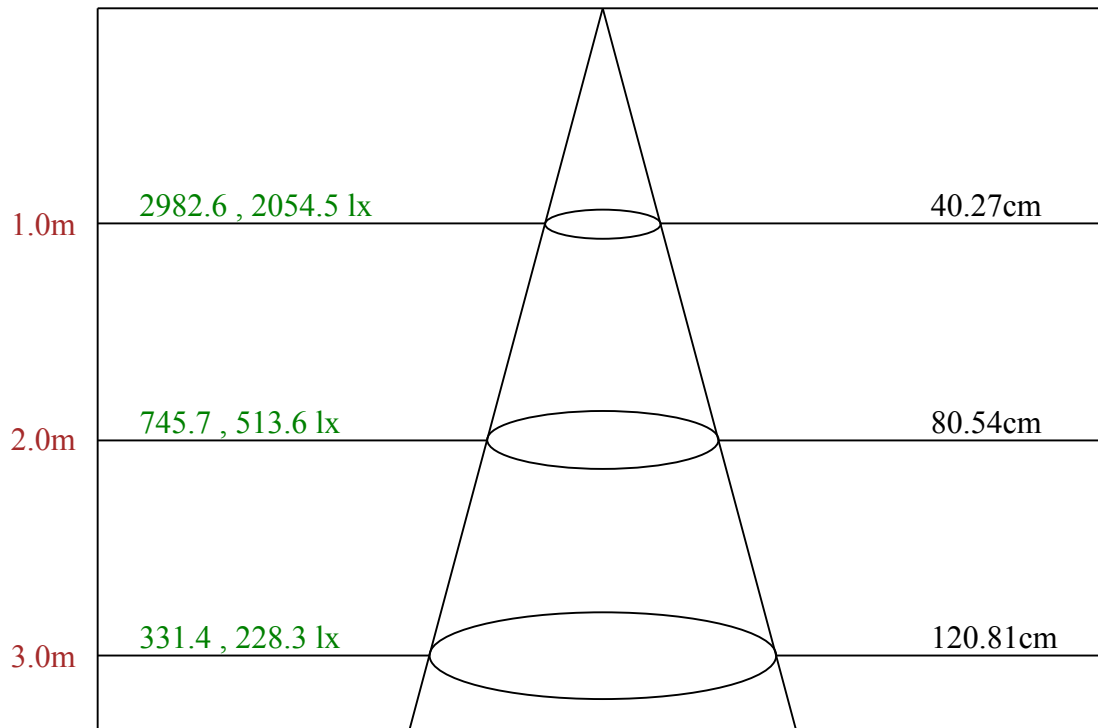
Equipment: equipamento lumini
Temperature(°C): 25.0

Date: 29/05/2025
Humidity(%): 58.0%

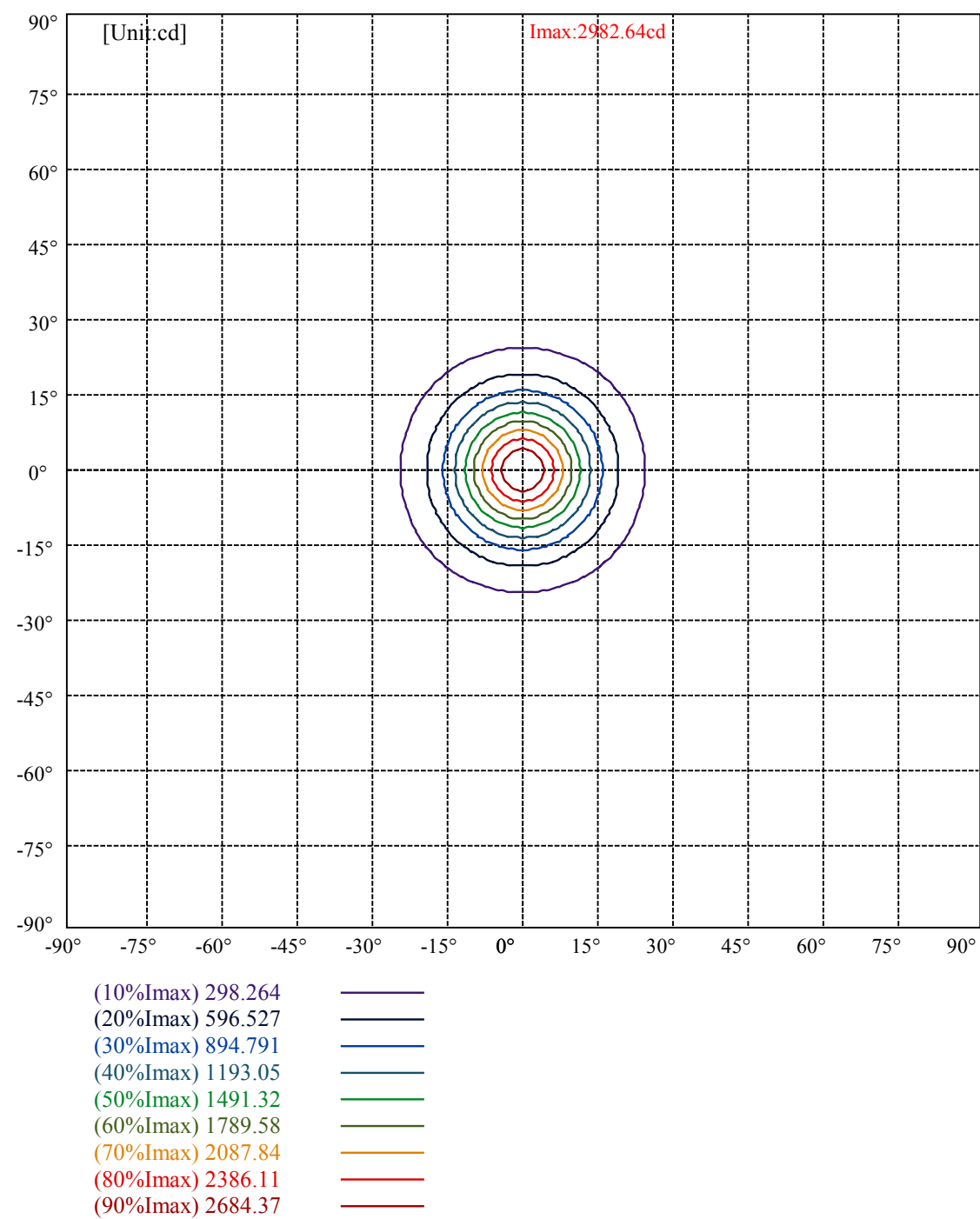
Operator: 01
Distance(m): 6.90



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



Max , Ave Beam angle of C0 plane 22.77



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	3417	2834	2778	2790	2681	2347	2866	4101	7788
C45	3417	2834	2778	2790	2681	2347	2866	4101	7788
C90	3417	2834	2778	2790	2681	2347	2866	4101	7788

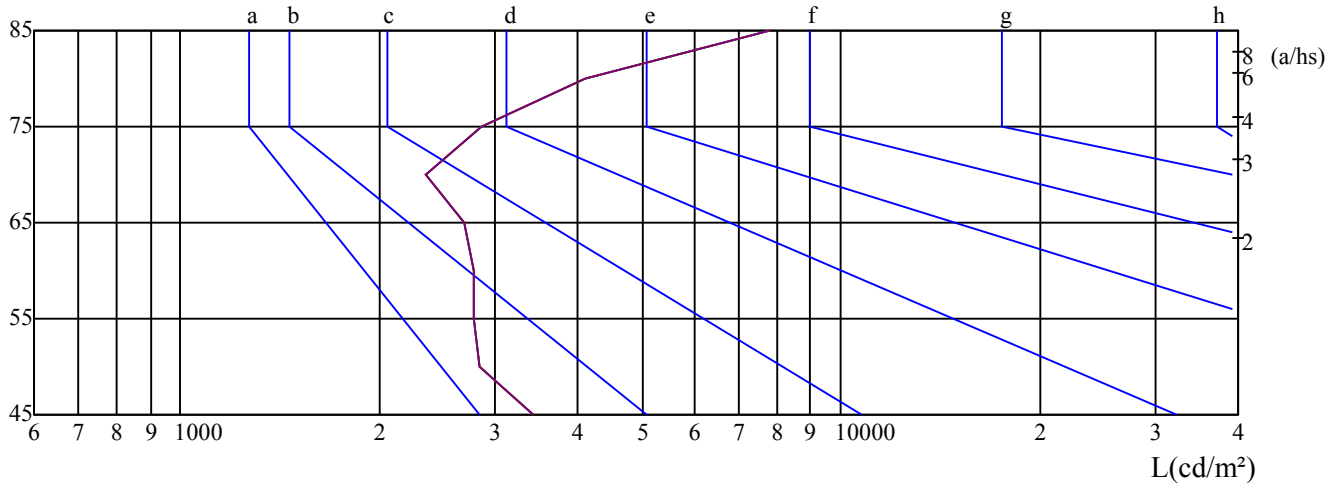
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2681	2681	2681	2866	2866	2866	7788	7788	7788

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): 25.0

Date: 29/05/2025
Humidity(%): 58.0%

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	6.80	7.70	7.21	8.06	8.43	7.22	8.12	7.62	8.47	8.84
	3H	7.91	8.71	8.33	9.09	9.49	8.34	9.14	8.77	9.52	9.92
	4H	8.61	9.36	9.05	9.75	10.17	8.96	9.71	9.41	10.10	10.53
	6H	9.67	10.34	10.13	10.77	11.22	9.93	10.60	10.38	11.02	11.48
	8H	10.32	10.97	10.78	11.39	11.85	10.55	11.19	11.01	11.62	12.08
	12H	11.15	11.76	11.61	12.20	12.67	11.35	11.96	11.82	12.40	12.87
4H	2H	7.25	7.99	7.69	8.39	8.81	7.59	8.33	8.03	8.73	9.15
	3H	8.53	9.15	8.99	9.59	10.06	8.87	9.50	9.34	9.94	10.40
	4H	9.49	10.02	9.96	10.49	10.99	9.75	10.29	10.23	10.75	11.25
	6H	10.75	11.22	11.26	11.72	12.22	10.93	11.41	11.44	11.90	12.40
	8H	11.57	12.01	12.09	12.51	13.03	11.73	12.17	12.25	12.67	13.19
	12H	12.58	12.99	13.11	13.48	14.05	12.73	13.13	13.26	13.63	14.19
8H	4H	9.85	10.29	10.37	10.79	11.31	10.07	10.51	10.59	11.01	11.53
	6H	11.42	11.78	11.96	12.30	12.86	11.57	11.93	12.11	12.44	13.00
	8H	12.51	12.81	13.08	13.37	13.91	12.63	12.93	13.20	13.49	14.04
	12H	13.78	14.01	14.36	14.56	15.13	13.90	14.12	14.47	14.68	15.25
12H	4H	9.96	10.37	10.49	10.86	11.43	10.17	10.58	10.70	11.07	11.64
	6H	11.70	12.00	12.27	12.56	13.11	11.84	12.13	12.41	12.69	13.24
	8H	12.87	13.10	13.45	13.65	14.22	12.98	13.21	13.56	13.76	14.33
Variation with the observer position at spacings:											
S = 1.0H		1.0/-0.9					1.0/-0.9				
S = 1.5H		1.2/-1.2					1.2/-1.2				
S = 2.0H		1.4/-0.9					1.4/-0.9				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-3.8					-3.8				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



lumini Solucoes em Iluminacao LTDA
www.lumini.com.br
Email:laboratorio@lumini.com.br
Tel:+55 11 3437-5555 Fax:+55 11 3437-5555
Address:Rua Ferreira Viana, 716 - Socorro - São Paulo/SP

lumini

LumCAT:

Luminaire: focus sm r dtw e fa

LampCAT: modulo led dtw 12W 27K irc 90

Ballast type: led driver 700mA

Report No:

Voltage(V): 127.7900

Test No:

Current(A): 0.1130

Number of Lamps: 1

Power (W): 14.1510

Lamp flux(lm): 924.0

PF: 0.9760

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 631.32, Efficiency(%): 68.32% , Luminous Efficacy(lm/W): 44.61

Central intensity(cd): 1533.506, Maximum intensity(cd): 1533.923

Angle of maximum intensity: C=0.0 γ =1.0

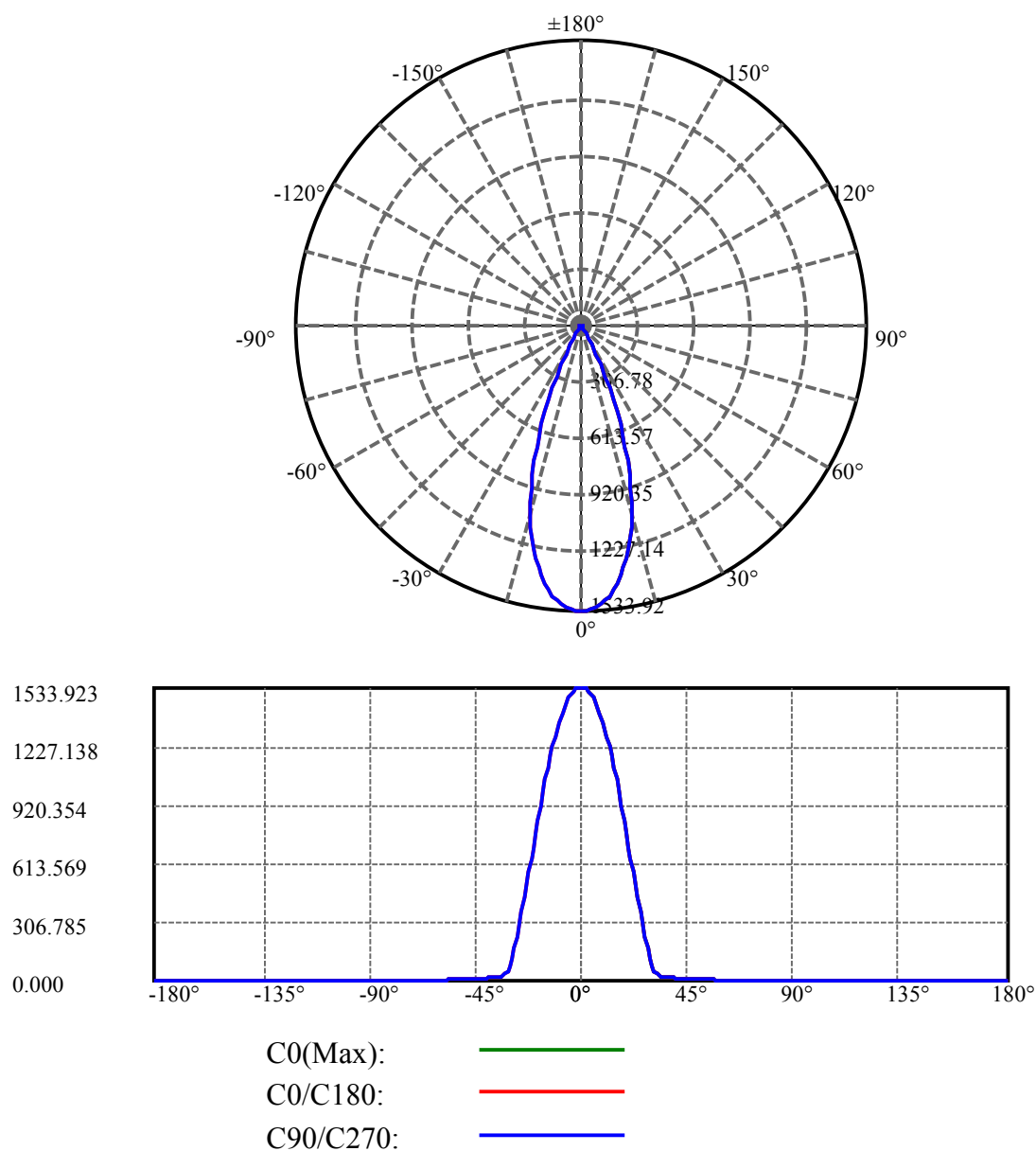
Beam angle of C0 plane : 38.01

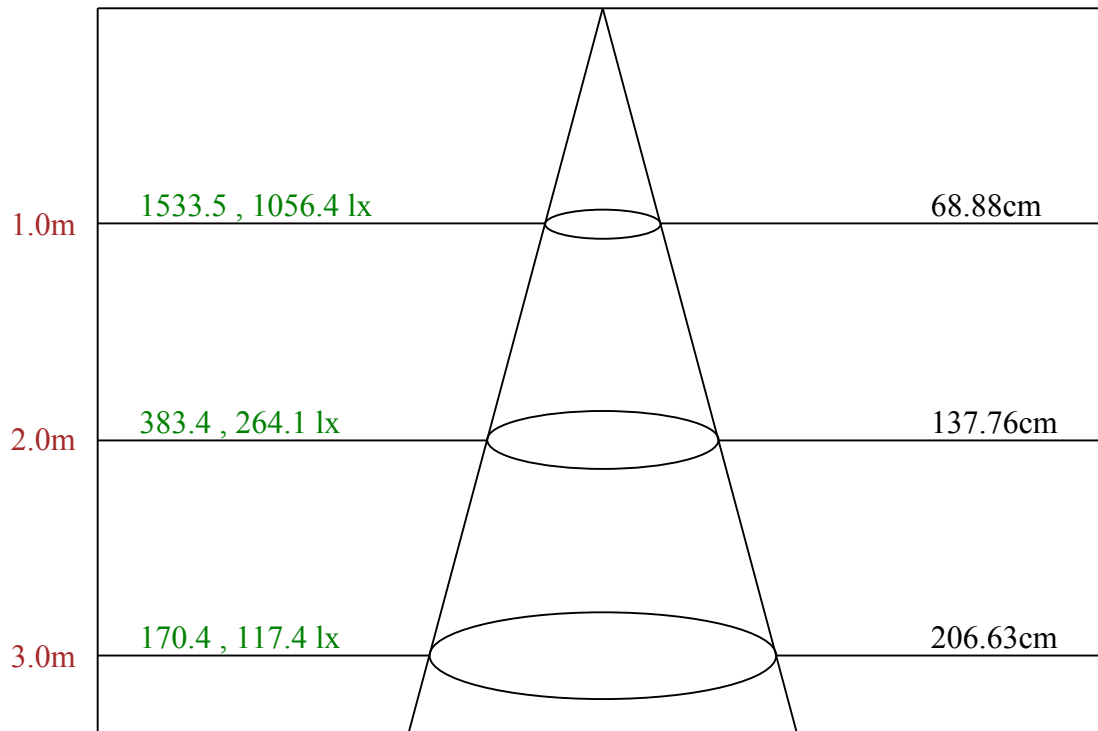
Aveage BeamAngle(IEC 61341):38.01

Equipment: equipamento lumini
Temperature(°C): 25.0

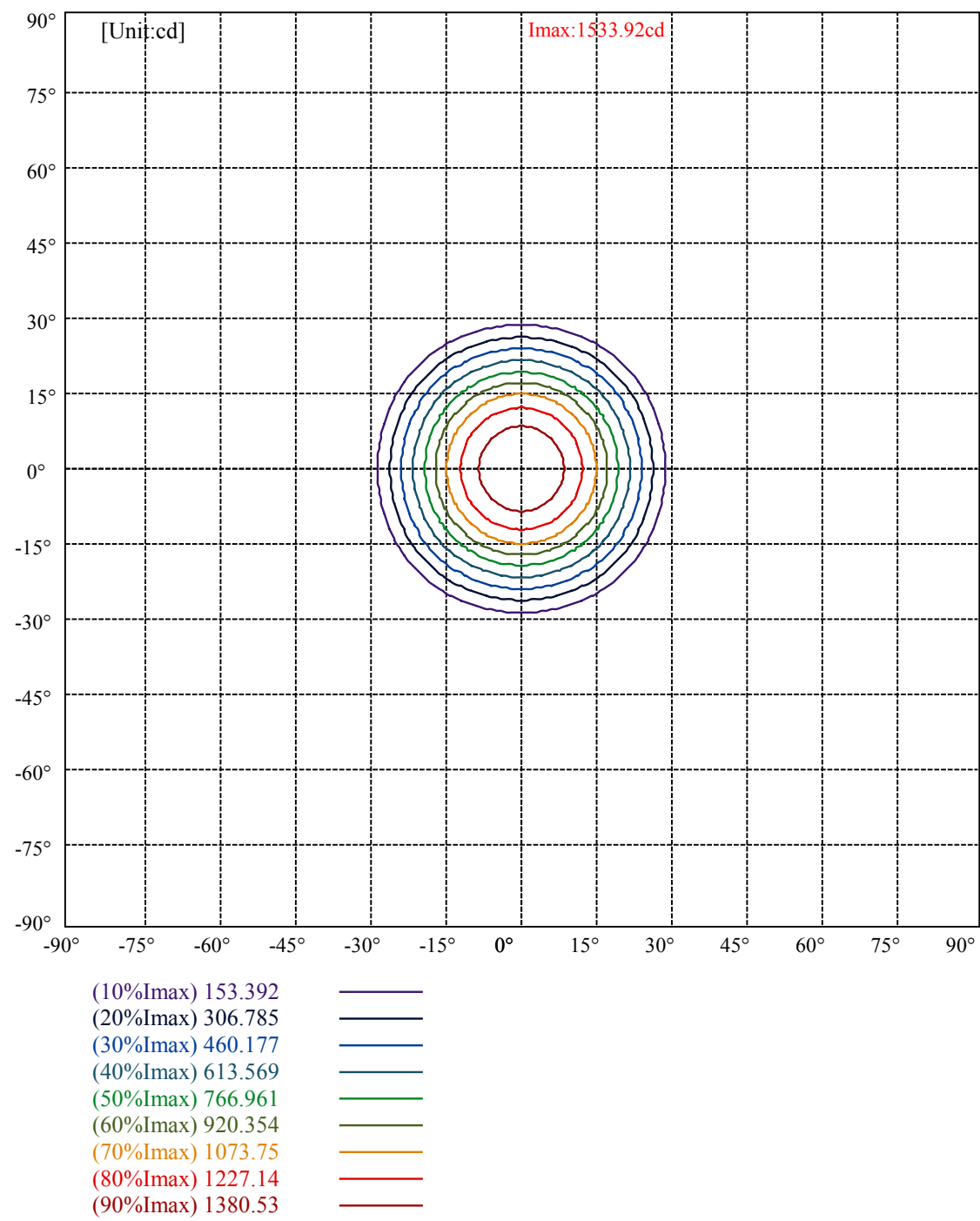
Date: 29/05/2025
Humidity(%): 58.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 38.01



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	4463	3578	3025	2758	2616	2238	2721	3841	7246
C45	4463	3578	3025	2758	2616	2238	2721	3841	7246
C90	4463	3578	3025	2758	2616	2238	2721	3841	7246

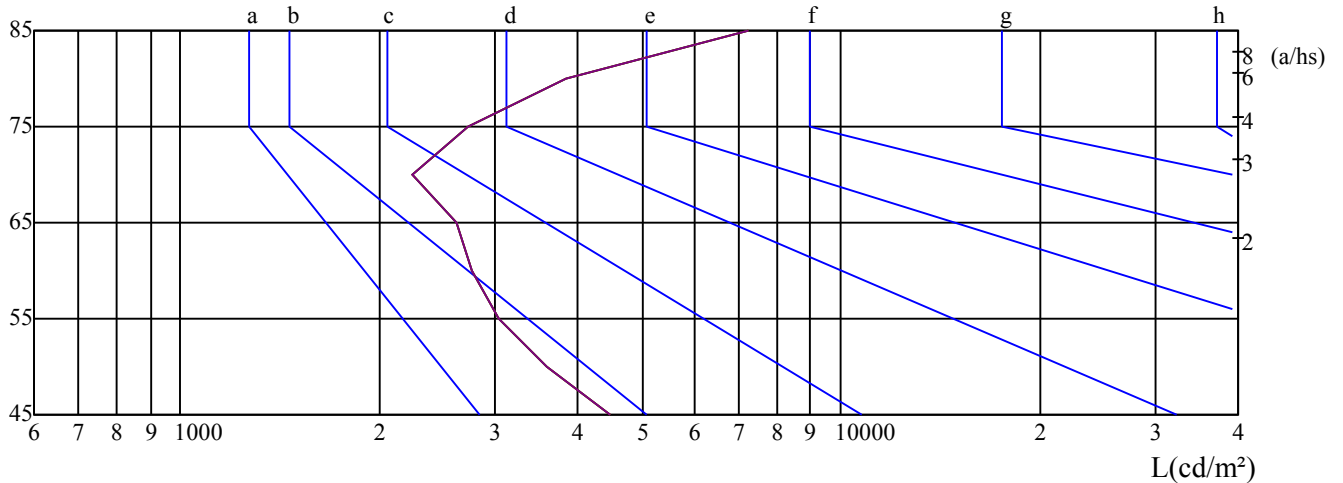
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2616	2616	2616	2721	2721	2721	7246	7246	7246

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): 25.0

Date: 29/05/2025
Humidity(%): 58.0%

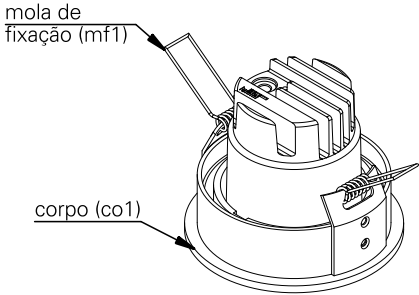
Operator: 01
Distance(m): 6.90

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	8.70	8.20	9.06	9.43	8.25	9.15	8.65	9.51	9.88
	3H	8.64	9.45	9.07	9.83	10.23	9.08	9.88	9.50	10.26	10.66
	4H	9.18	9.93	9.62	10.32	10.74	9.53	10.28	9.97	10.67	11.09
	6H	10.02	10.70	10.48	11.12	11.57	10.28	10.96	10.74	11.38	11.83
	8H	10.58	11.23	11.04	11.66	12.12	10.80	11.45	11.26	11.87	12.33
	12H	11.32	11.93	11.78	12.37	12.84	11.47	12.08	11.93	12.52	12.98
4H	2H	8.12	8.87	8.56	9.26	9.68	8.50	9.25	8.94	9.64	10.06
	3H	9.13	9.75	9.59	10.19	10.66	9.48	10.10	9.94	10.54	11.01
	4H	9.90	10.44	10.38	10.90	11.40	10.16	10.70	10.64	11.16	11.66
	6H	10.95	11.43	11.46	11.92	12.42	11.13	11.60	11.64	12.10	12.60
	8H	11.69	12.14	12.22	12.63	13.15	11.83	12.27	12.35	12.77	13.29
	12H	12.63	13.04	13.16	13.53	14.10	12.71	13.11	13.23	13.60	14.17
8H	4H	10.17	10.61	10.69	11.11	11.63	10.40	10.84	10.92	11.33	11.86
	6H	11.53	11.90	12.08	12.41	12.97	11.67	12.03	12.21	12.55	13.11
	8H	12.54	12.84	13.10	13.39	13.94	12.64	12.94	13.21	13.50	14.04
	12H	13.74	13.97	14.32	14.52	15.09	13.78	14.01	14.36	14.56	15.13
12H	4H	10.26	10.67	10.79	11.16	11.72	10.48	10.88	11.00	11.37	11.94
	6H	11.78	12.08	12.35	12.64	13.19	11.91	12.21	12.48	12.77	13.31
	8H	12.87	13.09	13.44	13.65	14.22	12.95	13.18	13.53	13.74	14.30
Variation with the observer position at spacings:											
S = 1.0H		1.2/-1.0					1.2/-1.0				
S = 1.5H		1.7/-1.1					1.7/-1.1				
S = 2.0H		2.2/-1.1					2.2/-1.1				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-3.5					-3.5				

依据CIE Publ. 117 计算 UGR, S/H = 0.25

focus

focus sm r cob série 2 e	nicho Ø96mm
focus sm r série 3 e	Ø96mm
focus sm r-d série 2 e	Ø96mm
focus sm r bath série 3 e	Ø96mm
focus sm r e tr	Ø96mm
focus sm r dtw e	Ø96mm



especificações técnicas
fonte de luz módulo led integrado (incluso)
índice de proteção IP20 - luminária para uso interno

peso
focus sm r cob série 2 e - 0,6 kg
focus sm r série 2 e - 0,5 kg
focus sm r-d série 2 e - 0,5 kg
focus sm r bath série 2 e - 0,4 kg
focus sm r e tr - 0,5 kg
focus sm r dtw e - 0,5 kg

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

ferramentas necessárias
serra

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

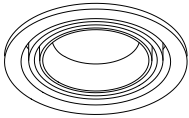
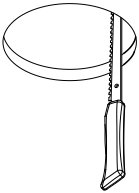
leia atentamente todas as instruções relacionadas ao seu produto antes de utilizá-lo.

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

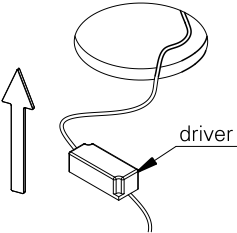
não são permitidas modificações no produto, esse deve atender à finalidade para a qual foi projetado e ser utilizado de acordo com as especificações técnicas.

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

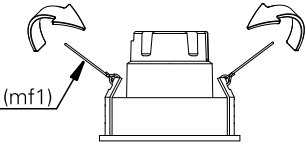
1. faça um nicho no forro conforme o modelo do produto na tabela.



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. obs: drivers não se aplicam para as versões tr.



3. levante as molas de fixação (mf1) conforme a ilustração abaixo.



4. segurando as molas de fixação, encaixe o corpo (co1) no nicho.

