



hang 180 s2

linha de luminárias composta por perfis de alumínio para iluminação direta – com módulos darklight – e/ou indireta – com difusor. disponível em 2 tamanhos, em versões pendente e aplicada, esta linha é ideal para iluminação de bancadas e estações de trabalho.

informações técnicas

fonte de luz
LED integrado

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

vida útil
30.000h/50.000h

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

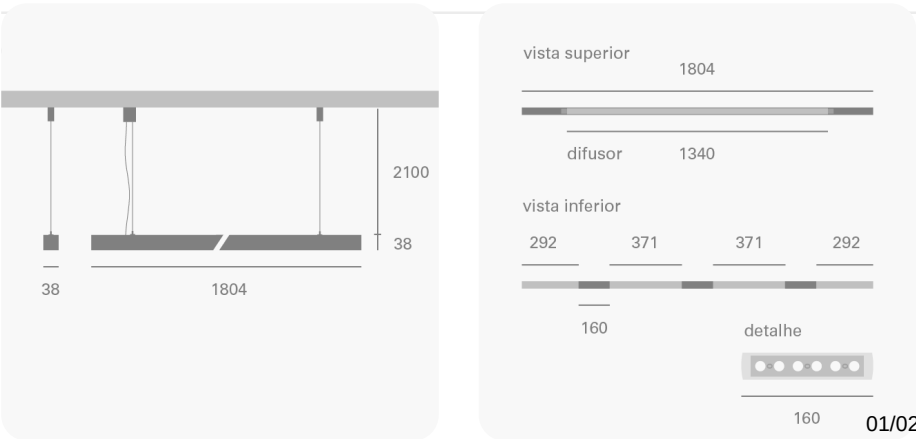
W		K	lm nominal	lm útil
7	indireta	2500		
7	indireta	2700		
7	indireta	3000	558 lm/m	330 lm/m
20	indireta	2500		
20	indireta	2700		
20	indireta	3000	1414 lm/m	828 lm/m
24	c	2700		
24	m	2700		
24	a	2700		
24	c	3000	3x715	3x555
24	m	3000	3x715	3x622
24	a	3000	3x715	3x532
24	c	4000		
24	m	4000		
24	a	4000		

equipamentos
LED line driver 12V (incluso, dentro do produto)

controle
on/off

instalação
forro de gesso
marcenaria
laje

IP
20



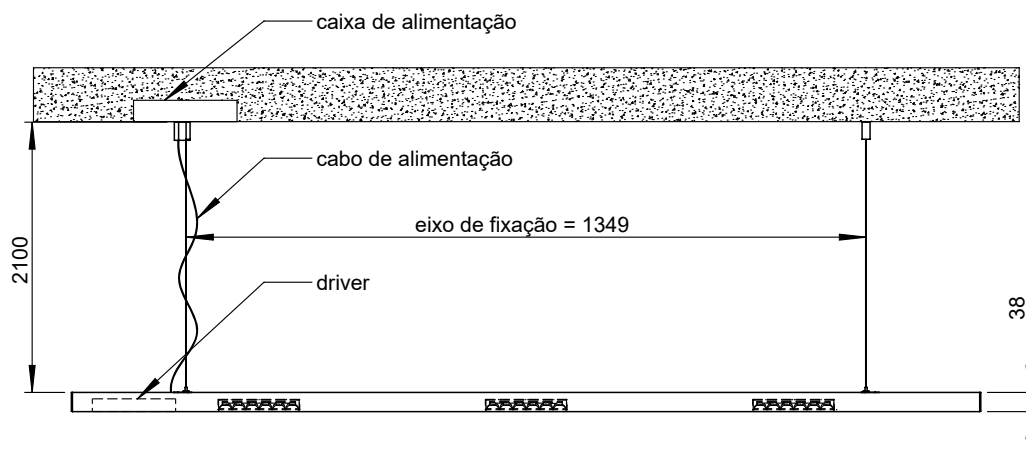
acabamentos e cores

cores



vista lateral

dimensões em milímetros



hang 180 s2

folha
1/1

escala
1:15

data
25/04/2025

desenhista
joao ferreira

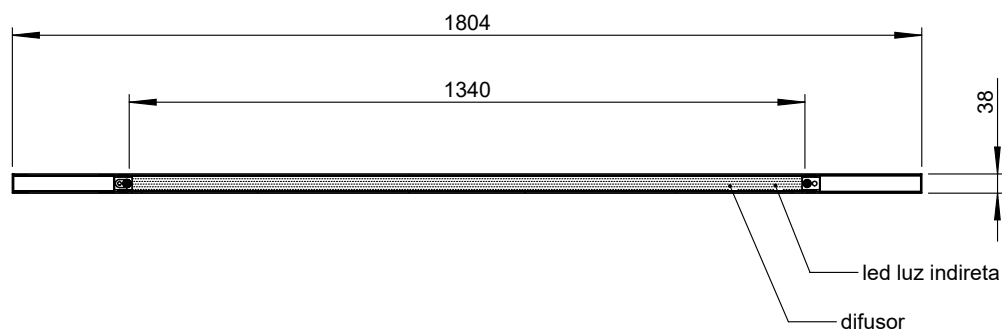
aprovação
edmilson

revisões

25/04/2025

vista superior

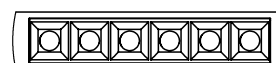
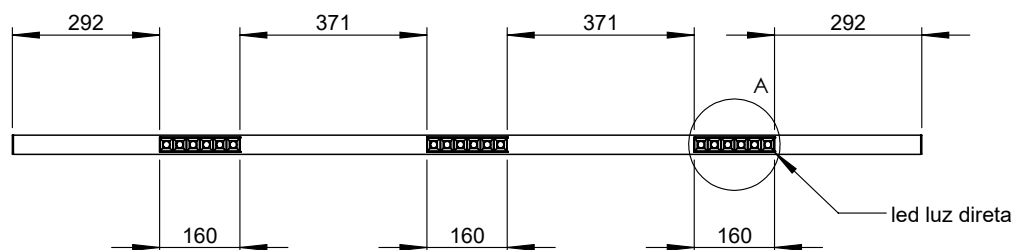
dimensões em milímetros



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

vista inferior

dimensões em milímetros



DETALHE A
ESCALA 1 : 5



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LumCAT:

Luminaire: mini track darklight serie 3 fa

LampCAT: modulo led 8W 30K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.1730

Number of Lamps: 1

Power (W): 9.9600

Lamp flux(lm): 716.0

PF: 0.4500

Length(mm): 160

Width(mm): 25

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 532.32, Efficiency(%): 74.35% , Luminous Efficacy(lm/W): 53.45

Central intensity(cd): 630.356, Maximum intensity(cd): 639.628

Angle of maximum intensity: $C=0.0$ $\gamma=7.0$

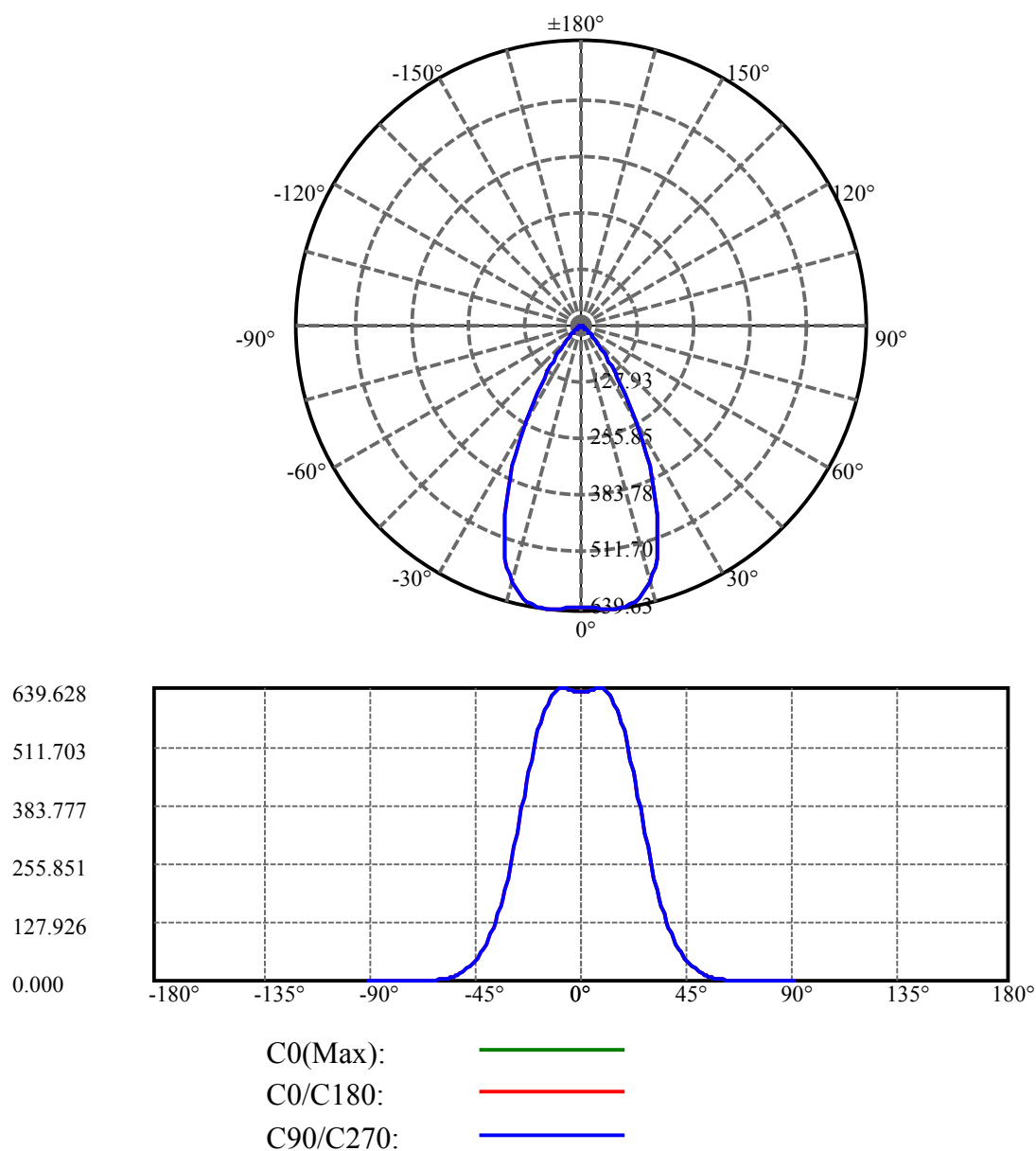
Beam angle of C0 plane : 54.47

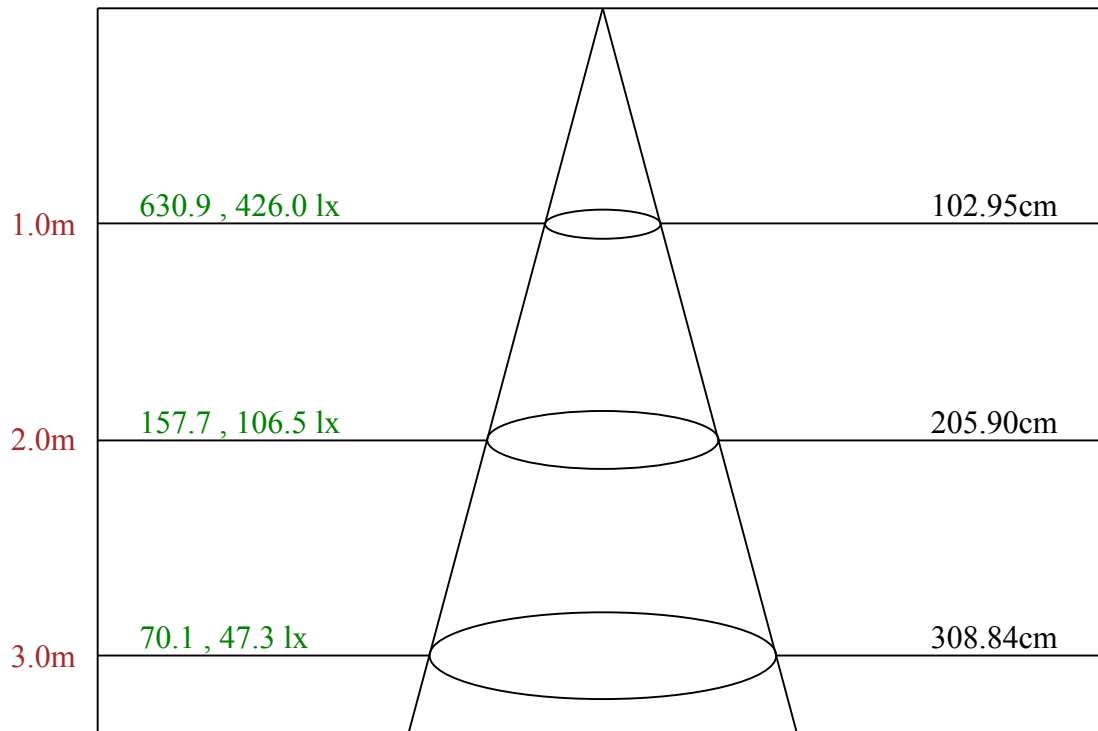
Average BeamAngle(IEC 61341): 54.47

Equipment: equipamento lumini
Temperature(°C): 25.5

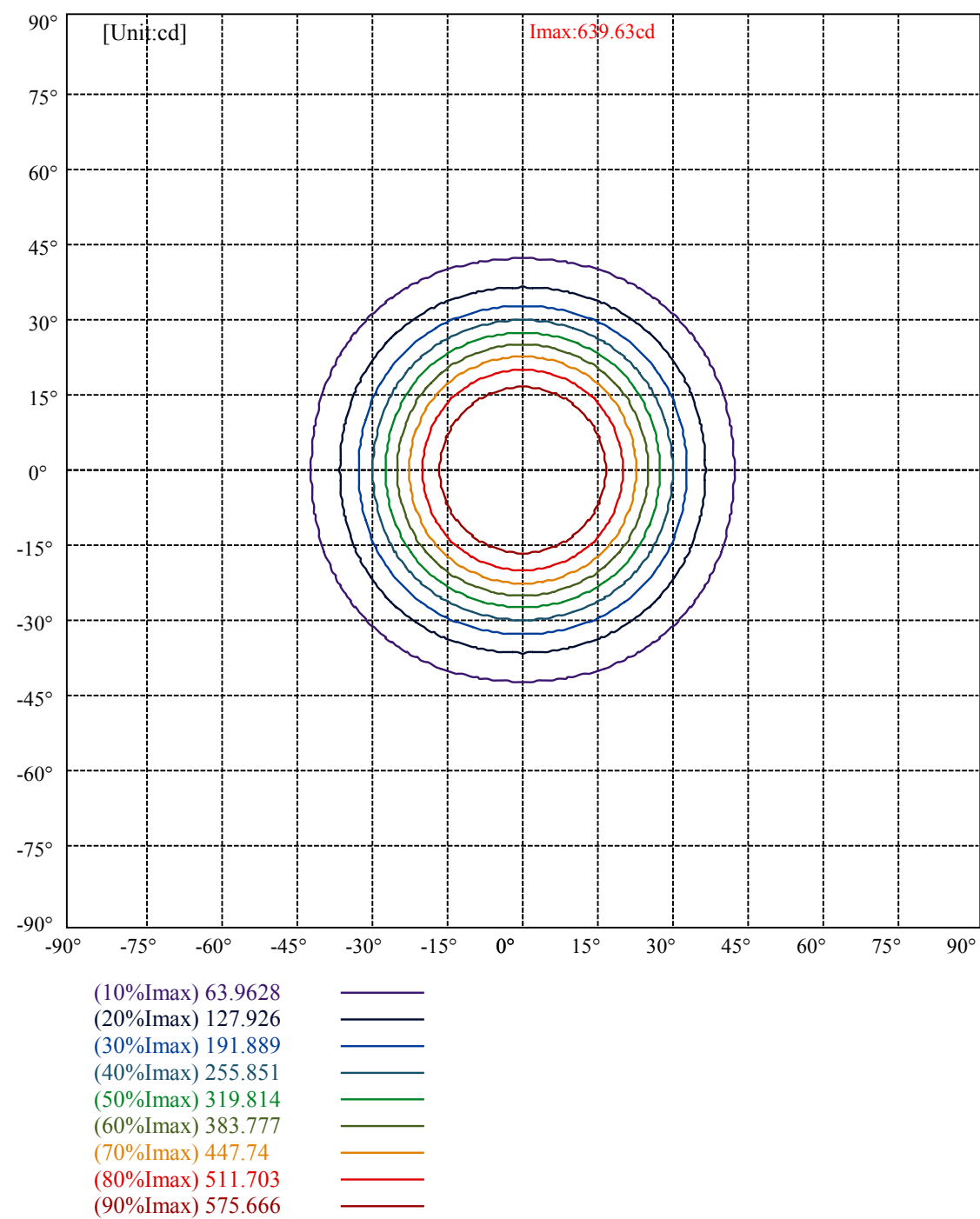
Date: 7/24/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 54.47



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Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

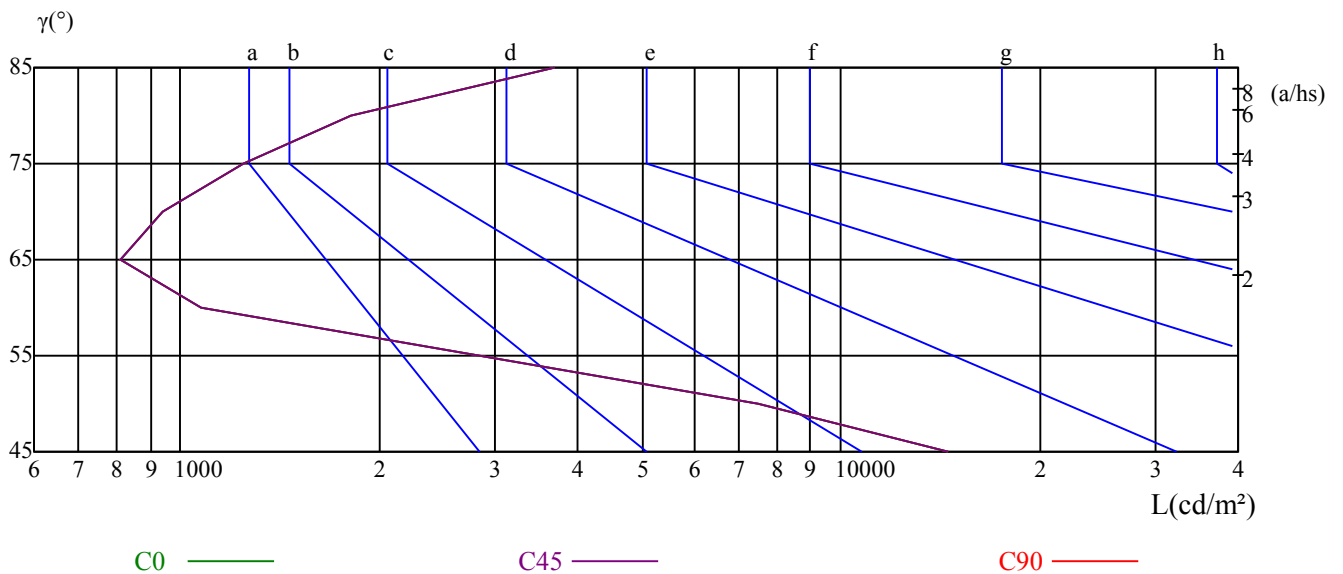
γ	45	50	55	60	65	70	75	80	85
C0	14548	7476	2843	1071	810	940	1242	1816	3687
C45	14548	7476	2843	1071	810	940	1242	1816	3687
C90	14548	7476	2843	1071	810	940	1242	1816	3687

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
810	810	810	1242	1242	1242	3687	3687	3687

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(°C): 25.5

Date: 7/24/2024
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	17.07	18.07	17.44	18.38	18.69	17.02	18.02	17.39	18.33	18.64
	3H	16.89	17.77	17.27	18.10	18.45	16.84	17.72	17.22	18.05	18.40
	4H	16.80	17.62	17.20	17.97	18.34	16.75	17.57	17.15	17.92	18.29
	6H	16.75	17.49	17.17	17.87	18.27	16.71	17.45	17.13	17.83	18.23
	8H	16.71	17.42	17.13	17.81	18.21	16.67	17.38	17.09	17.77	18.17
	12H	16.70	17.37	17.12	17.76	18.18	16.66	17.33	17.09	17.73	18.15
4H	2H	16.78	17.60	17.18	17.95	18.32	16.74	17.55	17.14	17.90	18.27
	3H	16.57	17.25	16.99	17.64	18.06	16.52	17.20	16.95	17.59	18.01
	4H	16.53	17.11	16.96	17.53	17.98	16.48	17.07	16.92	17.49	17.94
	6H	16.45	16.97	16.93	17.42	17.87	16.42	16.93	16.89	17.38	17.84
	8H	16.46	16.93	16.94	17.39	17.87	16.42	16.90	16.91	17.36	17.83
	12H	16.51	16.95	17.00	17.40	17.92	16.49	16.93	16.98	17.38	17.90
8H	4H	16.34	16.82	16.83	17.28	17.76	16.30	16.78	16.79	17.24	17.71
	6H	16.29	16.69	16.80	17.16	17.68	16.26	16.65	16.76	17.13	17.64
	8H	16.38	16.71	16.91	17.23	17.73	16.35	16.68	16.89	17.21	17.70
	12H	16.51	16.77	17.05	17.28	17.80	16.49	16.75	17.04	17.27	17.79
12H	4H	16.30	16.74	16.79	17.19	17.71	16.26	16.70	16.75	17.15	17.67
	6H	16.30	16.63	16.83	17.15	17.65	16.27	16.60	16.80	17.12	17.62
	8H	16.37	16.63	16.91	17.15	17.67	16.35	16.60	16.89	17.12	17.64
Variation with the observer position at spacings:											
S = 1.0H		4.2/-9.4					4.2/-9.4				
S = 1.5H		6.8/-10.5					6.8/-10.5				
S = 2.0H		8.7/-9.0					8.7/-9.0				
Standard tables:		BK0					BK0				
Uncorrected UGR		-1.8					-1.8				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: mini track darklight serie 3 fc

LampCAT: modulo led 8W 30K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.1730

Number of Lamps: 1

Power (W): 9.9500

Lamp flux(lm): 715.0

PF: 0.4500

Length(mm): 160

Width(mm): 25

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 555.12, Efficiency(%): 77.64% , Luminous Efficacy(lm/W): 55.79

Central intensity(cd): 3082.843, Maximum intensity(cd): 3082.843

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

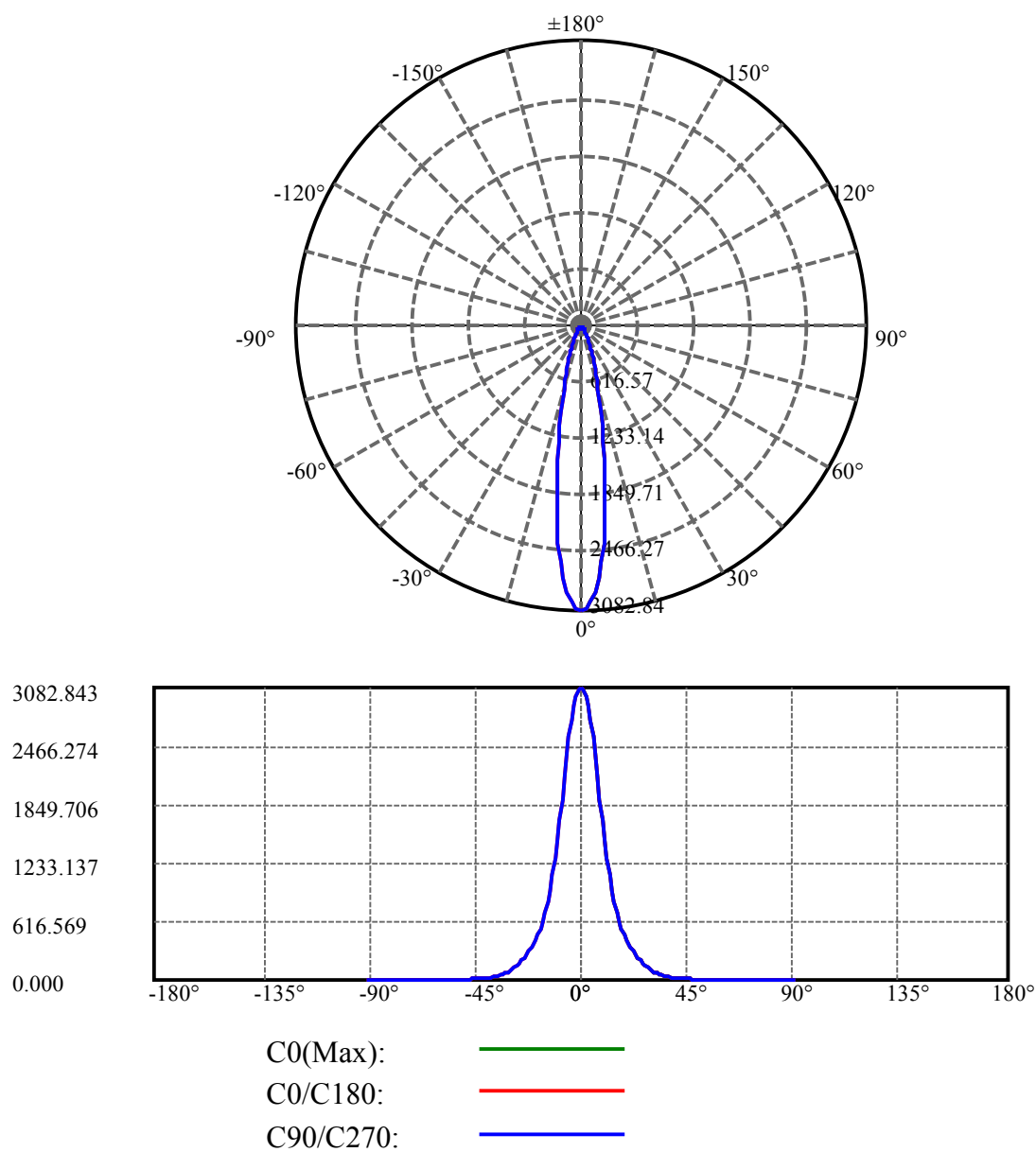
Beam angle of C0 plane : 19.38

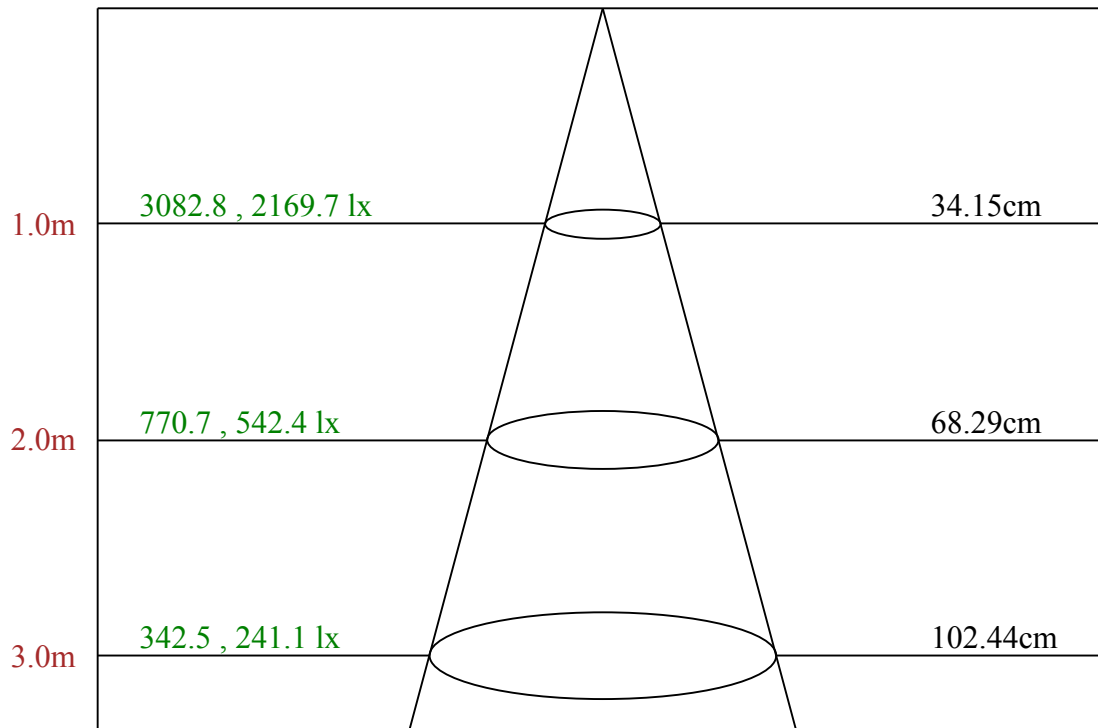
Average BeamAngle(IEC 61341): 19.38

Equipment: equipamento lumini
Temperature(°C): 25.5

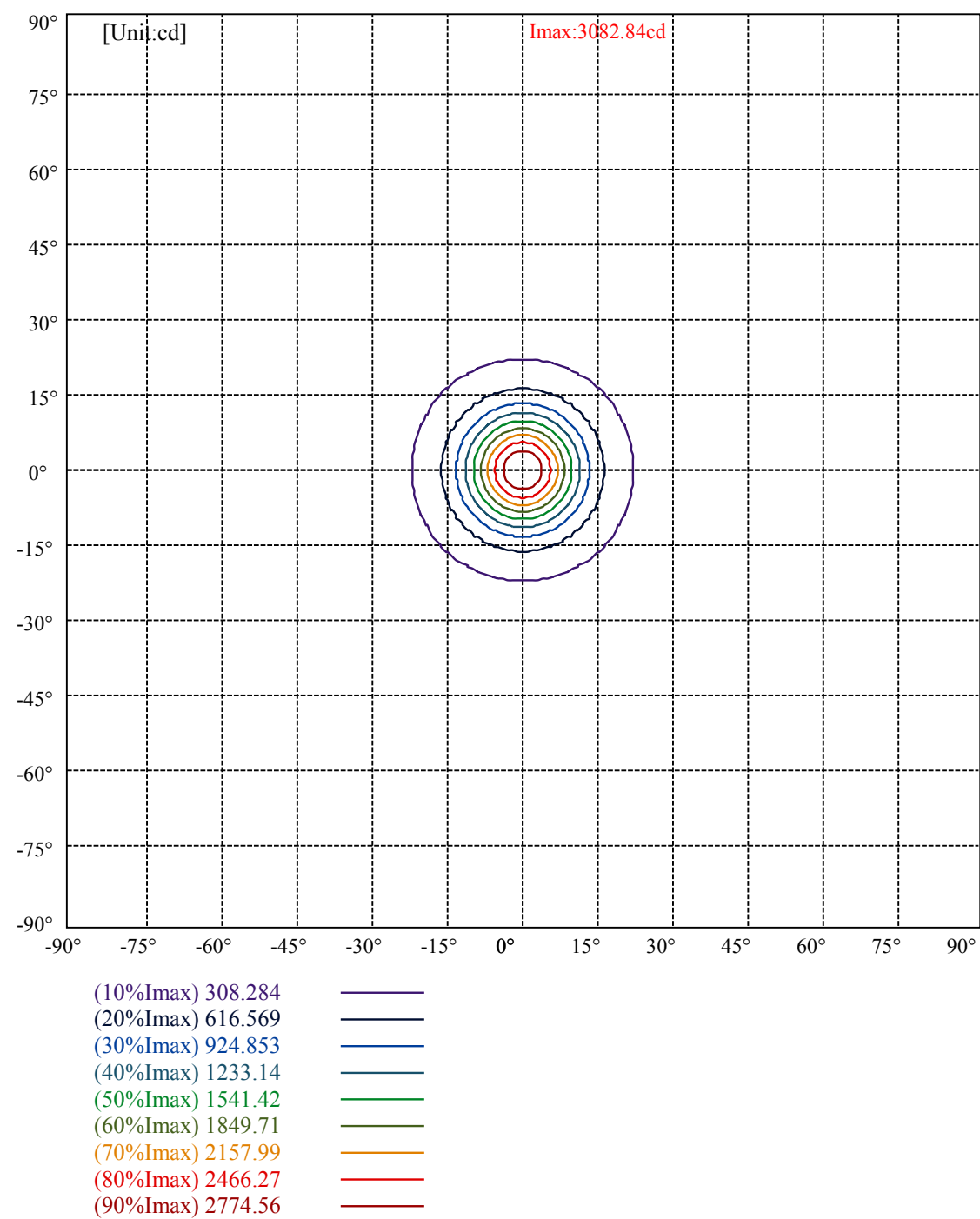
Date: 7/24/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 19.38



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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	3787	2551	1567	1131	951	1122	1472	2211	4336
C45	3787	2551	1567	1131	951	1122	1472	2211	4336
C90	3787	2551	1567	1131	951	1122	1472	2211	4336

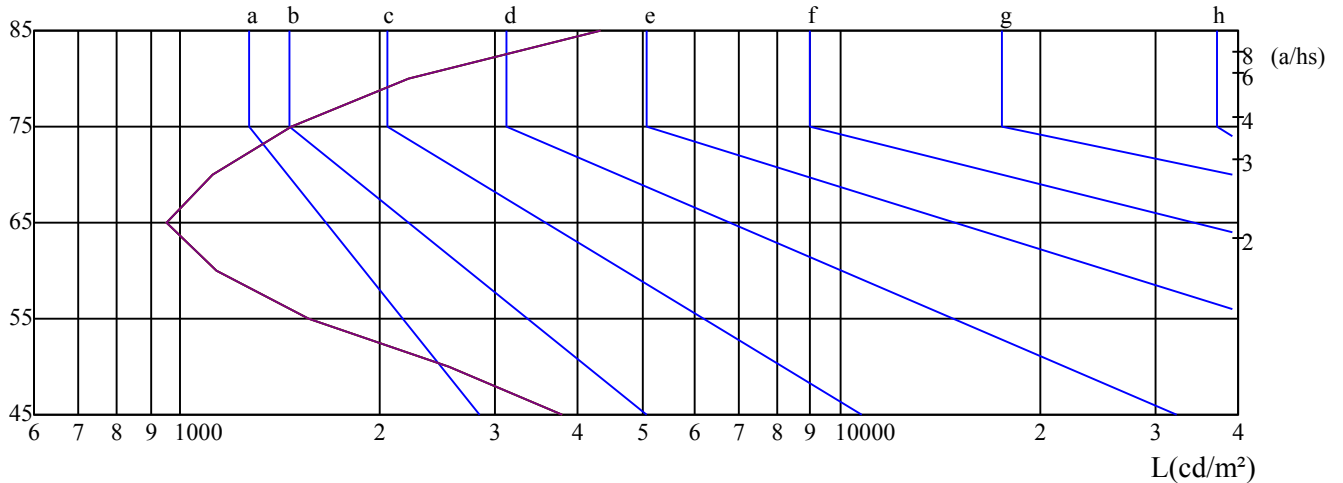
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
951	951	951	1472	1472	1472	4336	4336	4336

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: 7/24/2024
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	8.38	9.30	8.74	9.61	9.93	9.00	9.92	9.36	10.23	10.55
	3H	8.45	9.27	8.84	9.61	9.95	9.04	9.86	9.42	10.19	10.54
	4H	8.64	9.40	9.05	9.76	10.12	9.19	9.95	9.59	10.30	10.67
	6H	9.10	9.79	9.52	10.17	10.57	9.59	10.29	10.01	10.66	11.06
	8H	9.47	10.13	9.89	10.51	10.92	9.92	10.58	10.34	10.97	11.38
	12H	10.00	10.63	10.43	11.02	11.44	10.42	11.05	10.85	11.44	11.86
4H	2H	8.20	8.96	8.60	9.31	9.68	8.80	9.56	9.20	9.91	10.28
	3H	8.38	9.01	8.81	9.41	9.83	8.93	9.56	9.35	9.96	10.38
	4H	8.78	9.33	9.22	9.75	10.20	9.27	9.81	9.70	10.24	10.69
	6H	9.48	9.96	9.95	10.42	10.87	9.89	10.38	10.37	10.83	11.29
	8H	10.07	10.52	10.56	10.98	11.45	10.44	10.88	10.92	11.34	11.82
	12H	10.87	11.28	11.36	11.74	12.26	11.21	11.62	11.70	12.07	12.60
8H	4H	8.88	9.33	9.37	9.79	10.27	9.33	9.78	9.82	10.24	10.71
	6H	9.88	10.24	10.39	10.72	11.24	10.23	10.60	10.74	11.08	11.59
	8H	10.74	11.05	11.28	11.57	12.07	11.05	11.35	11.58	11.87	12.37
	12H	11.83	12.06	12.38	12.58	13.10	12.10	12.33	12.65	12.85	13.38
12H	4H	8.94	9.35	9.43	9.80	10.33	9.37	9.78	9.86	10.24	10.76
	6H	10.09	10.39	10.63	10.92	11.42	10.42	10.73	10.96	11.25	11.75
	8H	11.04	11.27	11.58	11.78	12.31	11.31	11.55	11.86	12.06	12.59
Variation with the observer position at spacings:											
S = 1.0H		4.0/-3.8					4.0/-3.8				
S = 1.5H		5.6/-3.0					5.6/-3.0				
S = 2.0H		6.5/-2.4					6.5/-2.4				
Standard tables:		BK4					BK4				
Uncorrected UGR		-7.0					-7.0				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: mini track darklight serie 3 fm

LampCAT: modulo led 8W 30K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.1730

Number of Lamps: 1

Power (W): 9.9800

Lamp flux(lm): 715.0

PF: 0.9990

Length(mm): 160

Width(mm): 25

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 621.65, Efficiency(%): 86.94% , Luminous Efficacy(lm/W): 62.29

Central intensity(cd): 2072.511, Maximum intensity(cd): 2072.511

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

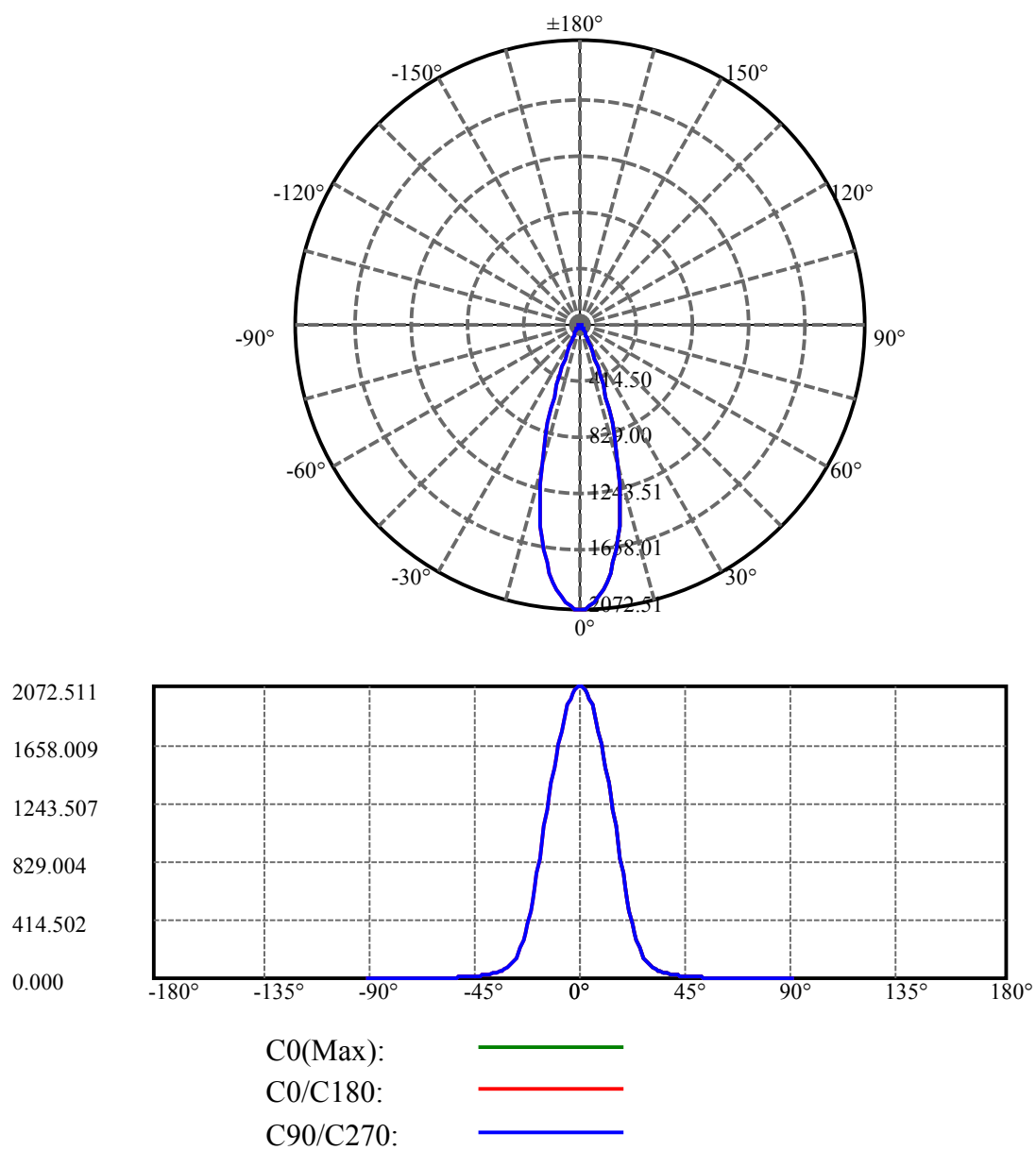
Beam angle of C0 plane : 30.76

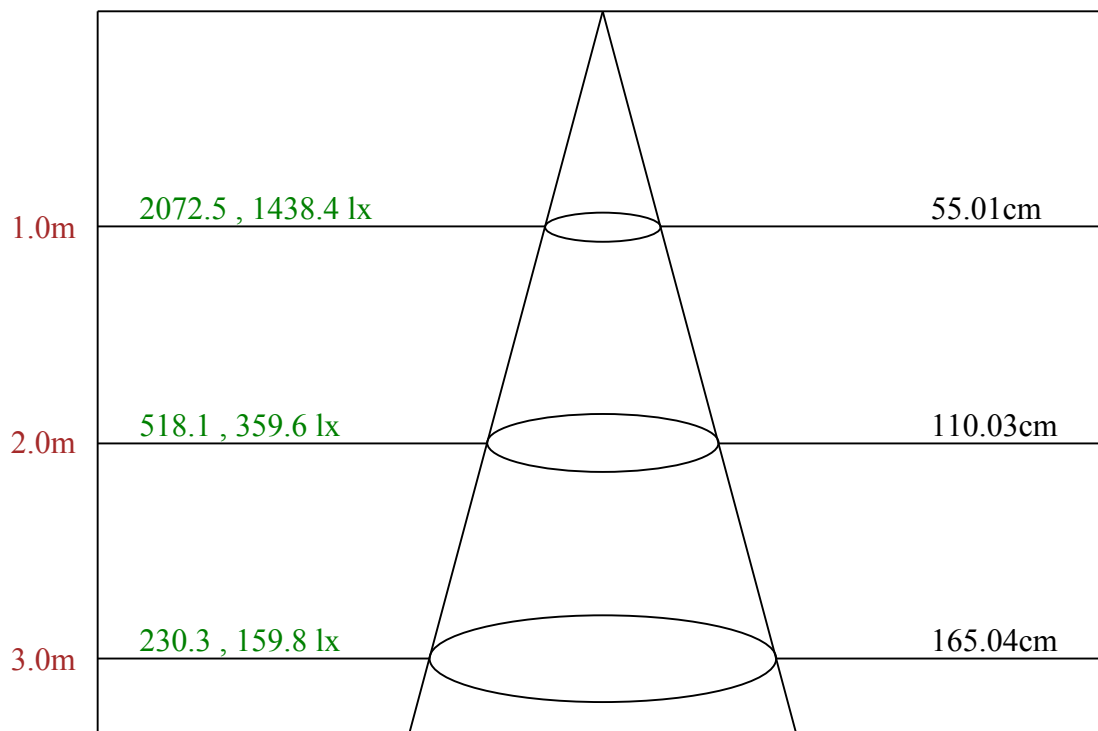
Aveage BeamAngle(IEC 61341):30.76

Equipment: equipamento lumini
Temperature(°C): 25.5

Date: 7/30/2024
Humidity(%): 55.0%

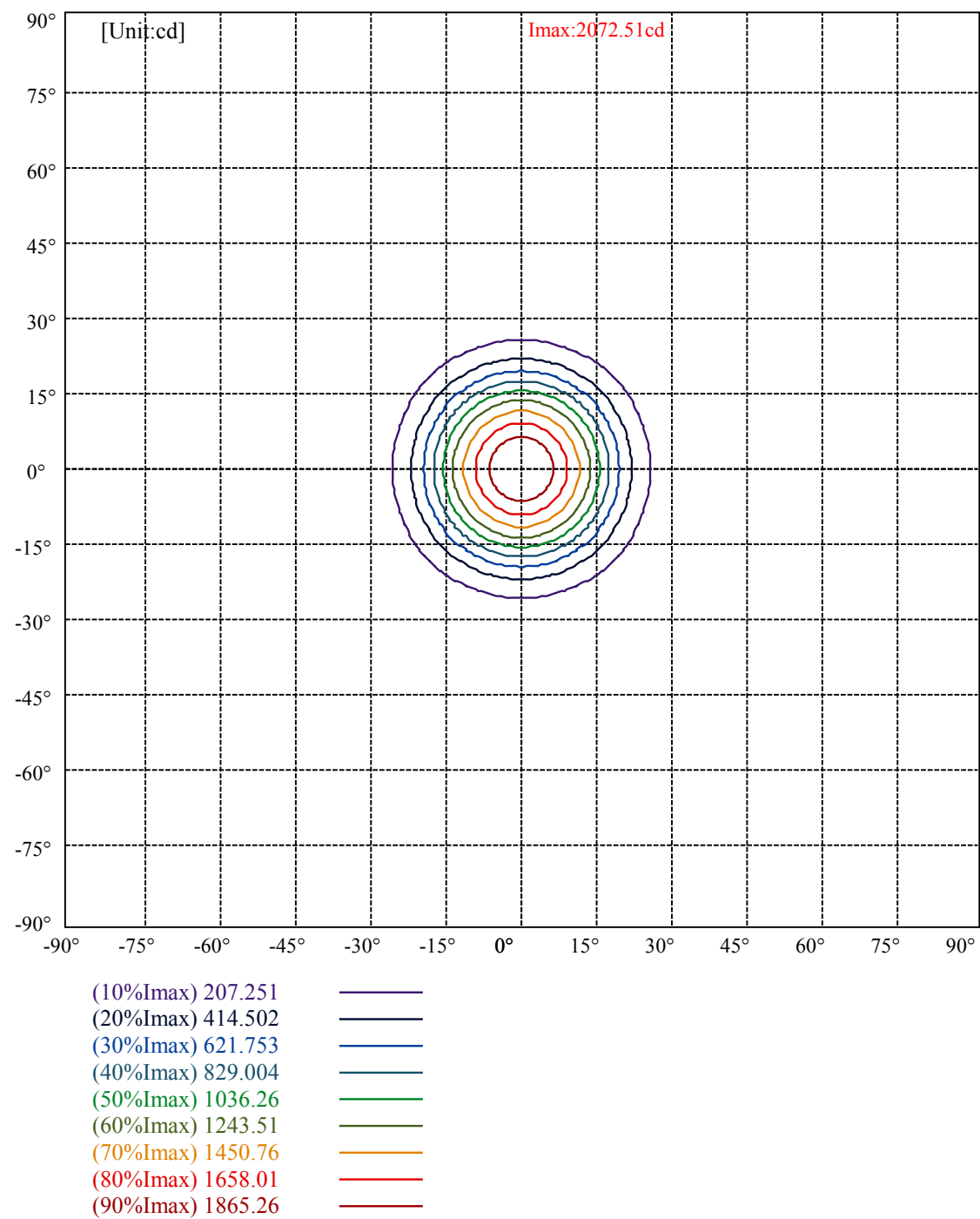
Operator: 01
Distance(m): 6.90





Max , Ave

Beam angle of C0 plane 30.76



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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	4936	3000	1785	1220	1141	1357	1794	2639	5258
C45	4936	3000	1785	1220	1141	1357	1794	2639	5258
C90	4936	3000	1785	1220	1141	1357	1794	2639	5258

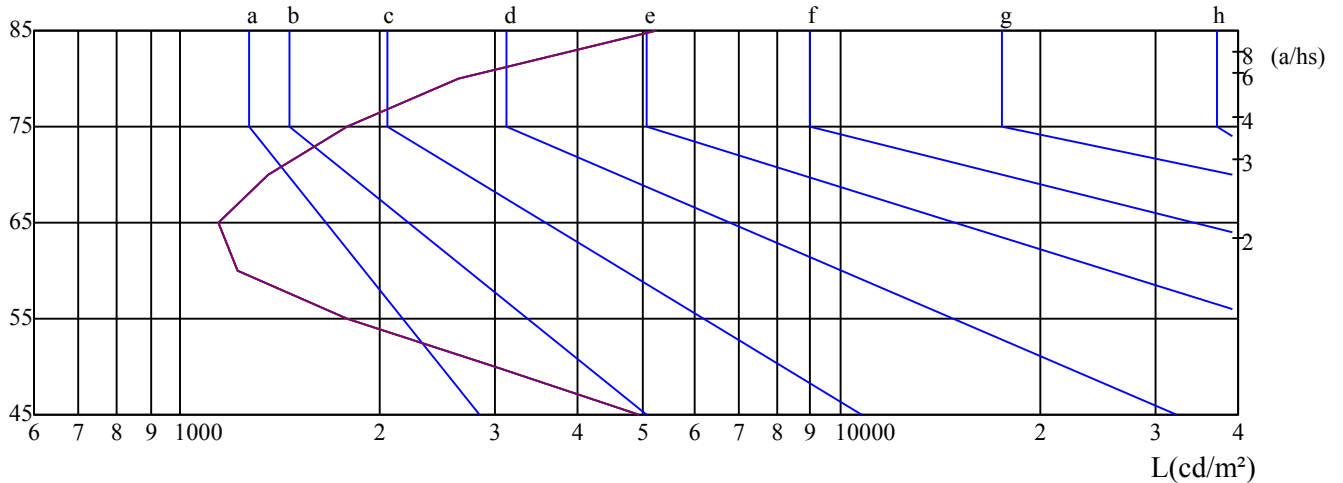
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1141	1141	1141	1794	1794	1794	5258	5258	5258

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): 25.5

Date: 7/30/2024
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	8.91	9.83	9.27	10.14	10.46	8.82	9.75	9.19	10.06	10.38
	3H	9.02	9.85	9.41	10.19	10.53	8.93	9.75	9.32	10.09	10.44
	4H	9.28	10.04	9.68	10.39	10.76	9.16	9.92	9.56	10.28	10.65
	6H	9.82	10.51	10.24	10.89	11.29	9.68	10.37	10.09	10.75	11.15
	8H	10.24	10.90	10.66	11.29	11.70	10.07	10.74	10.50	11.12	11.53
	12H	10.85	11.48	11.28	11.87	12.29	10.66	11.28	11.08	11.68	12.10
4H	2H	8.72	9.48	9.12	9.84	10.20	8.64	9.40	9.05	9.76	10.13
	3H	8.97	9.60	9.39	10.00	10.42	8.88	9.51	9.30	9.91	10.33
	4H	9.44	9.99	9.88	10.42	10.87	9.33	9.88	9.77	10.30	10.75
	6H	10.24	10.73	10.71	11.18	11.63	10.10	10.58	10.57	11.03	11.49
	8H	10.89	11.34	11.38	11.80	12.28	10.72	11.17	11.21	11.63	12.10
	12H	11.78	12.19	12.27	12.65	13.17	11.58	11.99	12.07	12.44	12.96
8H	4H	9.56	10.01	10.05	10.47	10.94	9.46	9.91	9.94	10.37	10.84
	6H	10.65	11.02	11.16	11.50	12.01	10.51	10.88	11.02	11.36	11.88
	8H	11.58	11.88	12.11	12.41	12.90	11.42	11.72	11.95	12.25	12.74
	12H	12.75	12.99	13.30	13.50	14.03	12.56	12.79	13.10	13.31	13.83
12H	4H	9.61	10.03	10.10	10.48	11.00	9.51	9.93	10.01	10.38	10.90
	6H	10.85	11.16	11.39	11.68	12.18	10.73	11.04	11.27	11.56	12.06
	8H	11.86	12.09	12.40	12.61	13.13	11.71	11.94	12.26	12.46	12.99
Variation with the observer position at spacings:											
S = 1.0H		3.2/-3.4					3.2/-3.4				
S = 1.5H		4.5/-2.7					4.5/-2.7				
S = 2.0H		5.3/-2.2					5.3/-2.2				
Standard tables:		BK4					BK4				
Uncorrected UGR		-6.6					-6.6				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: mini track darklight serie 3 fa

LampCAT: modulo led 8W 30K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.1730

Number of Lamps: 1

Power (W): 9.9600

Lamp flux(lm): 716.0

PF: 0.4500

Length(mm): 160

Width(mm): 25

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 532.32, Efficiency(%): 74.35% , Luminous Efficacy(lm/W): 53.45

Central intensity(cd): 630.356, Maximum intensity(cd): 639.628

Angle of maximum intensity: C=0.0 γ =7.0

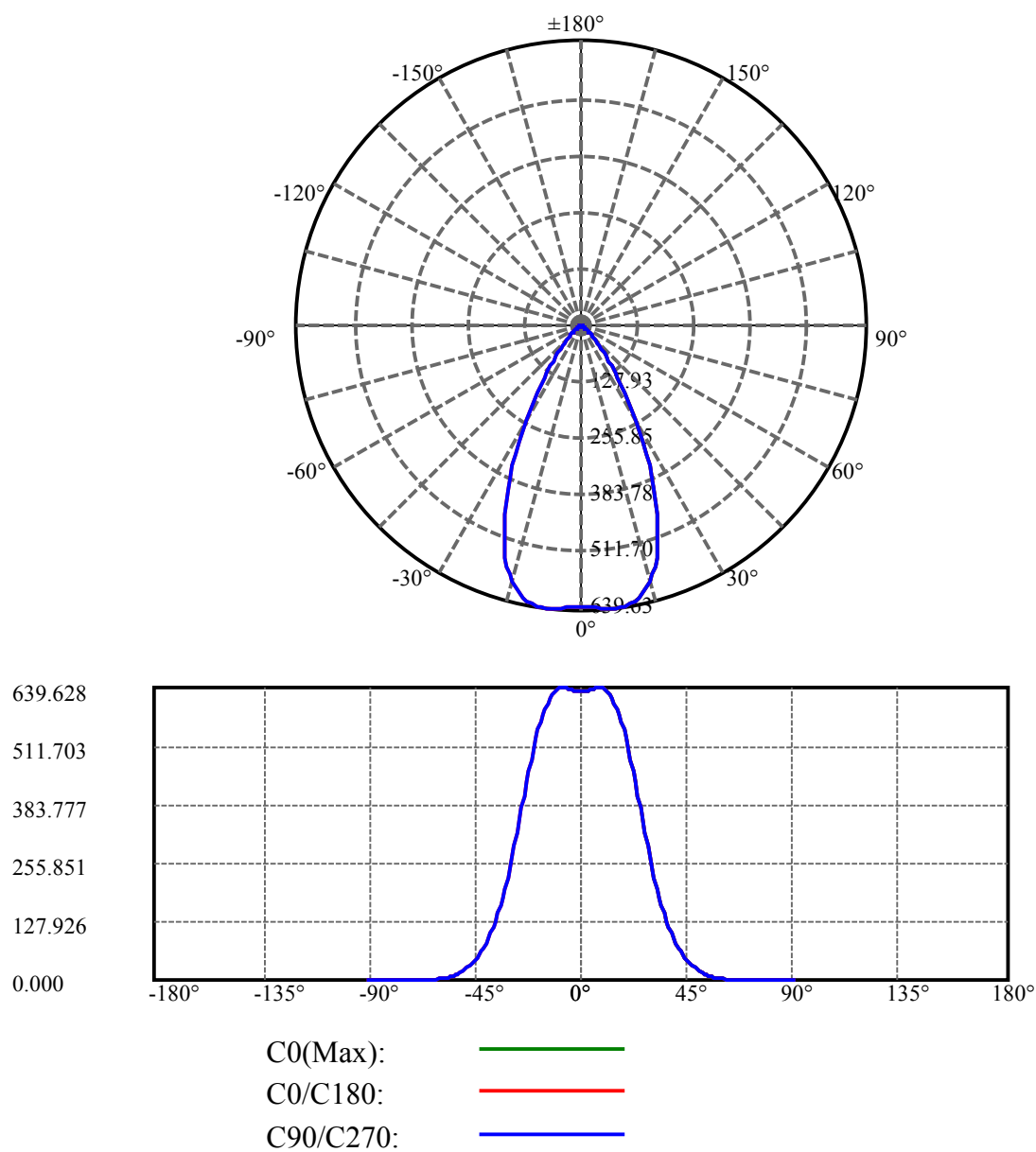
Beam angle of C0 plane : 54.47

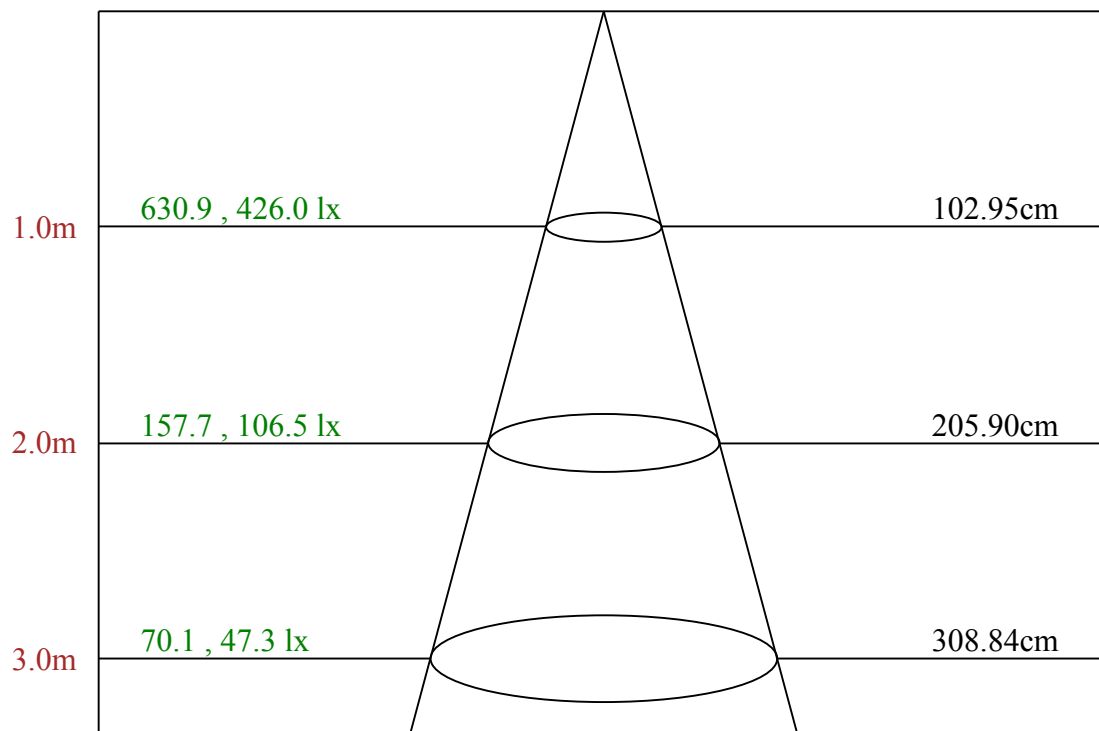
Aveage BeamAngle(IEC 61341):54.47

Equipment: equipamento lumini
Temperature(°C): 25.5

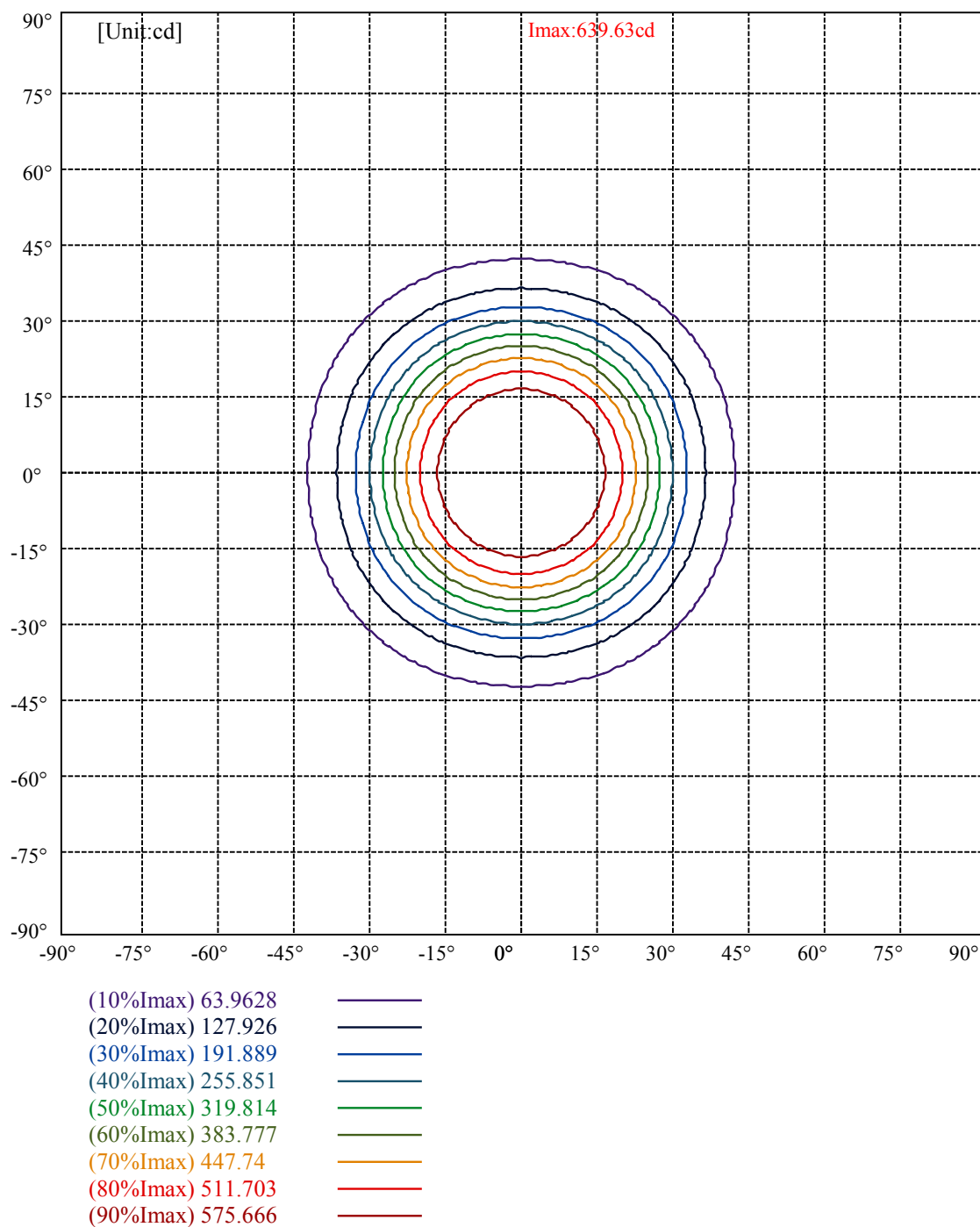
Date: 7/24/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 54.47



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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	14548	7476	2843	1071	810	940	1242	1816	3687
C45	14548	7476	2843	1071	810	940	1242	1816	3687
C90	14548	7476	2843	1071	810	940	1242	1816	3687

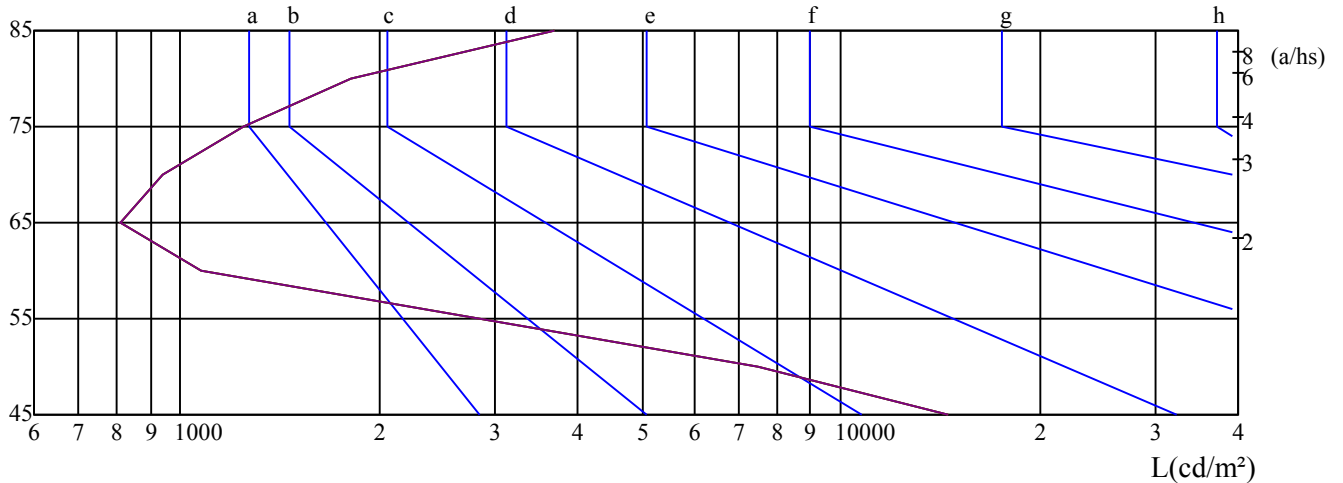
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
810	810	810	1242	1242	1242	3687	3687	3687

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: 7/24/2024
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	17.07	18.07	17.44	18.38	18.69	17.02	18.02	17.39	18.33	18.64
	3H	16.89	17.77	17.27	18.10	18.45	16.84	17.72	17.22	18.05	18.40
	4H	16.80	17.62	17.20	17.97	18.34	16.75	17.57	17.15	17.92	18.29
	6H	16.75	17.49	17.17	17.87	18.27	16.71	17.45	17.13	17.83	18.23
	8H	16.71	17.42	17.13	17.81	18.21	16.67	17.38	17.09	17.77	18.17
	12H	16.70	17.37	17.12	17.76	18.18	16.66	17.33	17.09	17.73	18.15
4H	2H	16.78	17.60	17.18	17.95	18.32	16.74	17.55	17.14	17.90	18.27
	3H	16.57	17.25	16.99	17.64	18.06	16.52	17.20	16.95	17.59	18.01
	4H	16.53	17.11	16.96	17.53	17.98	16.48	17.07	16.92	17.49	17.94
	6H	16.45	16.97	16.93	17.42	17.87	16.42	16.93	16.89	17.38	17.84
	8H	16.46	16.93	16.94	17.39	17.87	16.42	16.90	16.91	17.36	17.83
	12H	16.51	16.95	17.00	17.40	17.92	16.49	16.93	16.98	17.38	17.90
8H	4H	16.34	16.82	16.83	17.28	17.76	16.30	16.78	16.79	17.24	17.71
	6H	16.29	16.69	16.80	17.16	17.68	16.26	16.65	16.76	17.13	17.64
	8H	16.38	16.71	16.91	17.23	17.73	16.35	16.68	16.89	17.21	17.70
	12H	16.51	16.77	17.05	17.28	17.80	16.49	16.75	17.04	17.27	17.79
12H	4H	16.30	16.74	16.79	17.19	17.71	16.26	16.70	16.75	17.15	17.67
	6H	16.30	16.63	16.83	17.15	17.65	16.27	16.60	16.80	17.12	17.62
	8H	16.37	16.63	16.91	17.15	17.67	16.35	16.60	16.89	17.12	17.64
Variation with the observer position at spacings:											
S = 1.0H		4.2/-9.4					4.2/-9.4				
S = 1.5H		6.8/-10.5					6.8/-10.5				
S = 2.0H		8.7/-9.0					8.7/-9.0				
Standard tables:		BK0					BK0				
Uncorrected UGR		-1.8					-1.8				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: mini track darklight serie 3 fc

LampCAT: modulo led 8W 30K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.1730

Number of Lamps: 1

Power (W): 9.9500

Lamp flux(lm): 715.0

PF: 0.4500

Length(mm): 160

Width(mm): 25

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 555.12, Efficiency(%): 77.64% , Luminous Efficacy(lm/W): 55.79

Central intensity(cd): 3082.843, Maximum intensity(cd): 3082.843

Angle of maximum intensity: C=0.0 γ =0.0

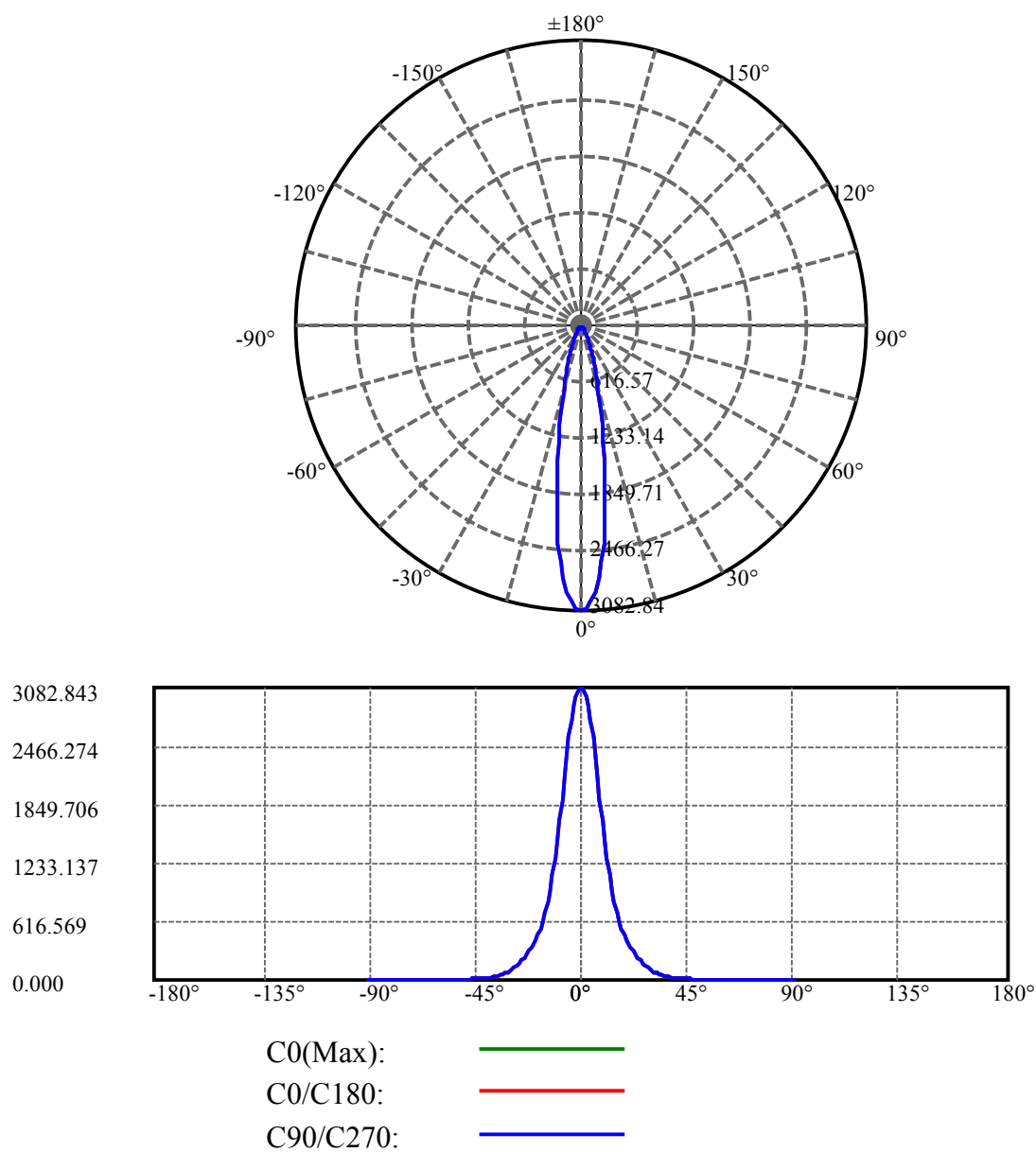
Beam angle of C0 plane : 19.38

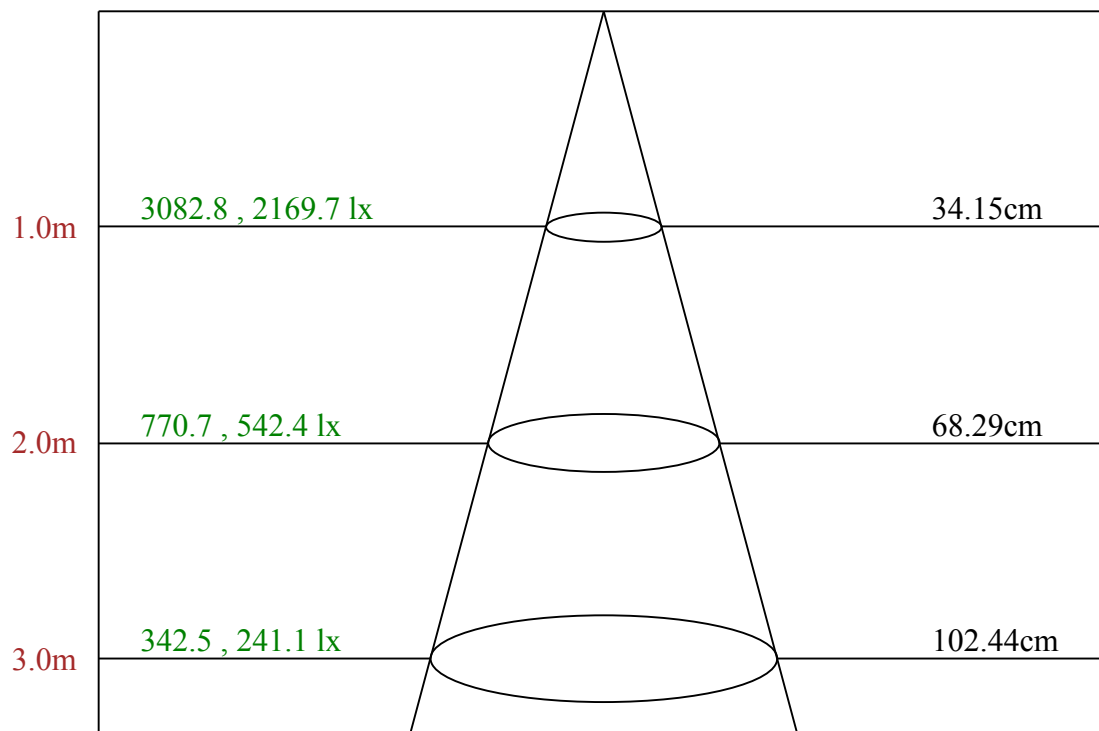
Aveage BeamAngle(IEC 61341):19.38

Equipment: equipamento lumini
Temperature(°C): 25.5

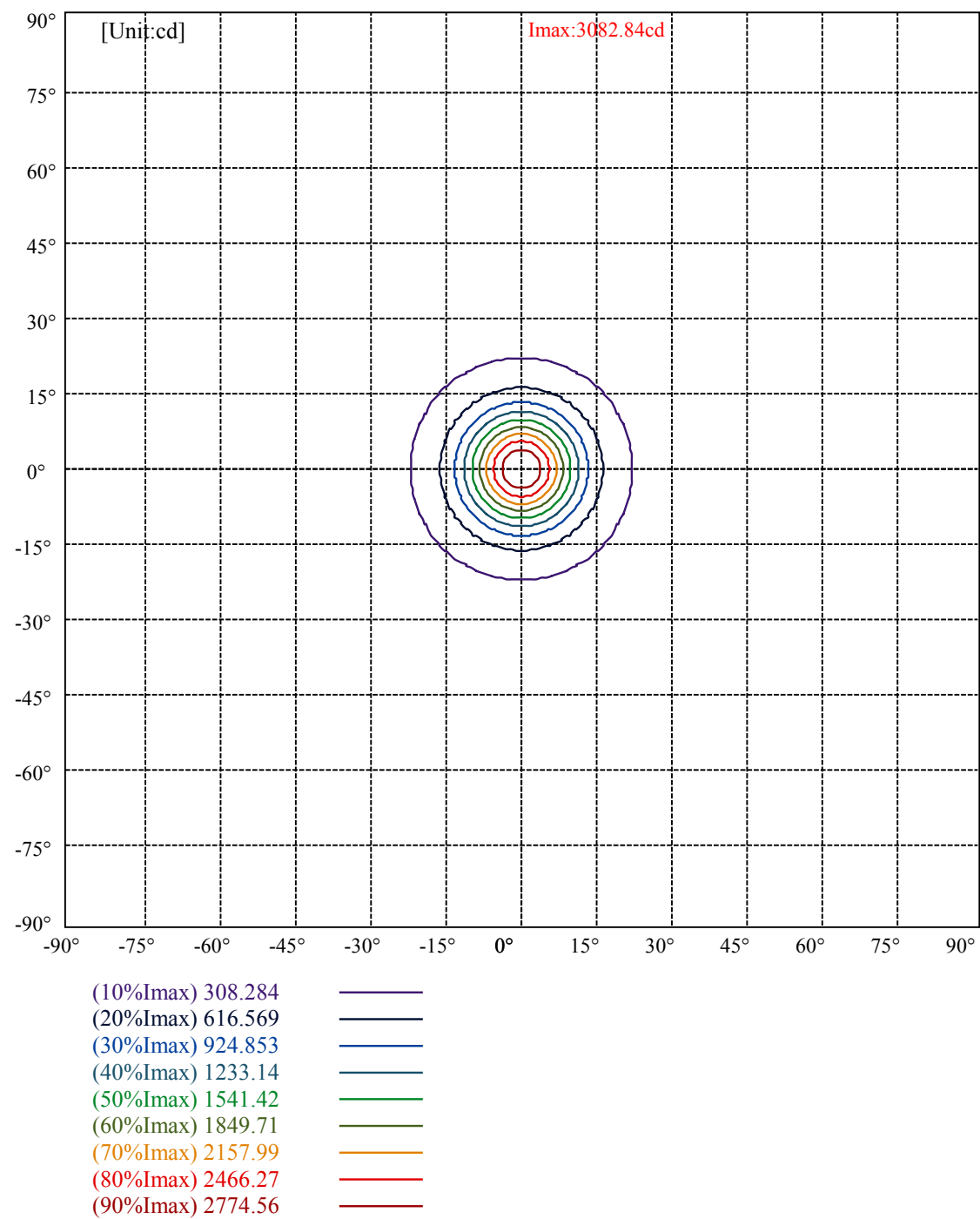
Date: 7/24/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 19.38



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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	3787	2551	1567	1131	951	1122	1472	2211	4336
C45	3787	2551	1567	1131	951	1122	1472	2211	4336
C90	3787	2551	1567	1131	951	1122	1472	2211	4336

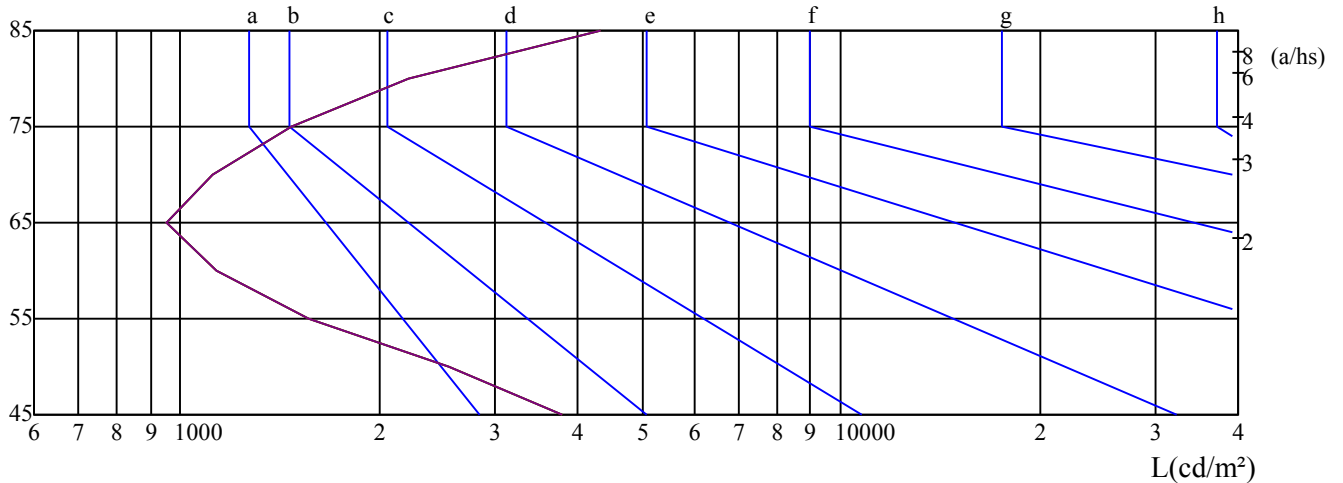
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
951	951	951	1472	1472	1472	4336	4336	4336

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: 7/24/2024
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	8.38	9.30	8.74	9.61	9.93	9.00	9.92	9.36	10.23	10.55
	3H	8.45	9.27	8.84	9.61	9.95	9.04	9.86	9.42	10.19	10.54
	4H	8.64	9.40	9.05	9.76	10.12	9.19	9.95	9.59	10.30	10.67
	6H	9.10	9.79	9.52	10.17	10.57	9.59	10.29	10.01	10.66	11.06
	8H	9.47	10.13	9.89	10.51	10.92	9.92	10.58	10.34	10.97	11.38
	12H	10.00	10.63	10.43	11.02	11.44	10.42	11.05	10.85	11.44	11.86
4H	2H	8.20	8.96	8.60	9.31	9.68	8.80	9.56	9.20	9.91	10.28
	3H	8.38	9.01	8.81	9.41	9.83	8.93	9.56	9.35	9.96	10.38
	4H	8.78	9.33	9.22	9.75	10.20	9.27	9.81	9.70	10.24	10.69
	6H	9.48	9.96	9.95	10.42	10.87	9.89	10.38	10.37	10.83	11.29
	8H	10.07	10.52	10.56	10.98	11.45	10.44	10.88	10.92	11.34	11.82
	12H	10.87	11.28	11.36	11.74	12.26	11.21	11.62	11.70	12.07	12.60
8H	4H	8.88	9.33	9.37	9.79	10.27	9.33	9.78	9.82	10.24	10.71
	6H	9.88	10.24	10.39	10.72	11.24	10.23	10.60	10.74	11.08	11.59
	8H	10.74	11.05	11.28	11.57	12.07	11.05	11.35	11.58	11.87	12.37
	12H	11.83	12.06	12.38	12.58	13.10	12.10	12.33	12.65	12.85	13.38
12H	4H	8.94	9.35	9.43	9.80	10.33	9.37	9.78	9.86	10.24	10.76
	6H	10.09	10.39	10.63	10.92	11.42	10.42	10.73	10.96	11.25	11.75
	8H	11.04	11.27	11.58	11.78	12.31	11.31	11.55	11.86	12.06	12.59
Variation with the observer position at spacings:											
S = 1.0H		4.0/-3.8					4.0/-3.8				
S = 1.5H		5.6/-3.0					5.6/-3.0				
S = 2.0H		6.5/-2.4					6.5/-2.4				
Standard tables:		BK4					BK4				
Uncorrected UGR		-7.0					-7.0				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: mini track darklight serie 3 fm

LampCAT: modulo led 8W 30K irc 90

Ballast type:

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.1730

Number of Lamps: 1

Power (W): 9.9800

Lamp flux(lm): 715.0

PF: 0.9990

Length(mm): 160

Width(mm): 25

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 621.65, Efficiency(%): 86.94% , Luminous Efficacy(lm/W): 62.29

Central intensity(cd): 2072.511, Maximum intensity(cd): 2072.511

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

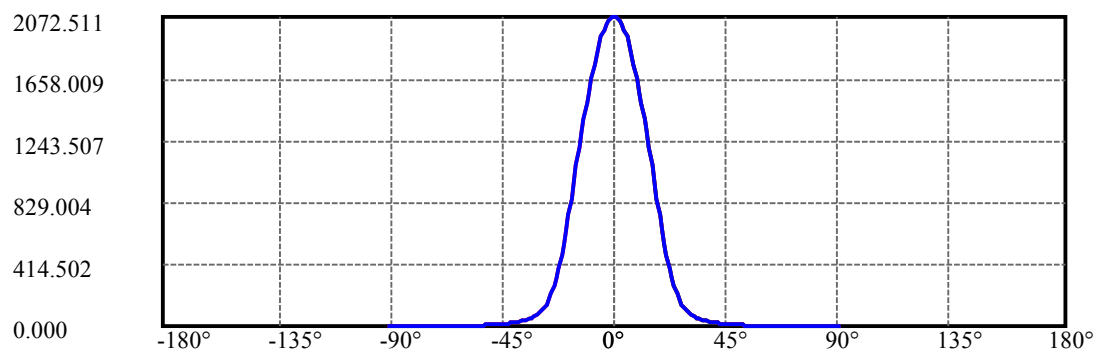
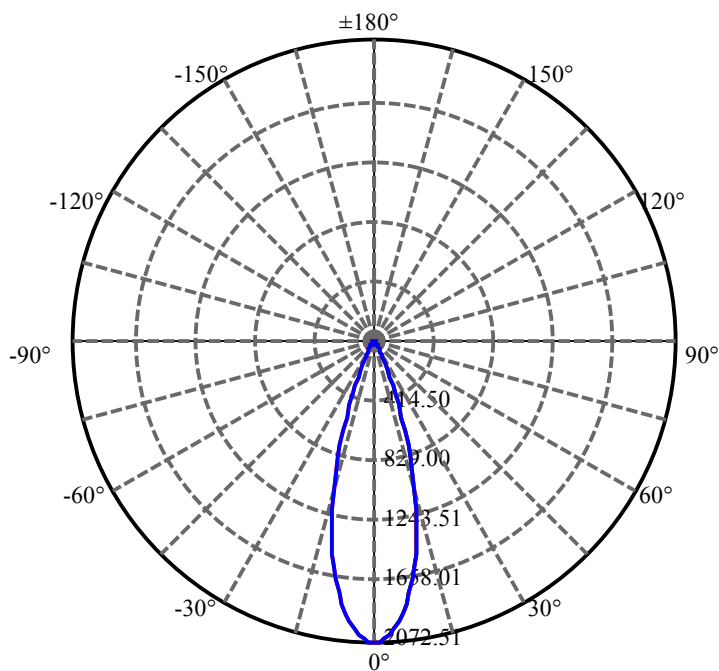
Beam angle of C0 plane : 30.76

Average BeamAngle(IEC 61341): 30.76

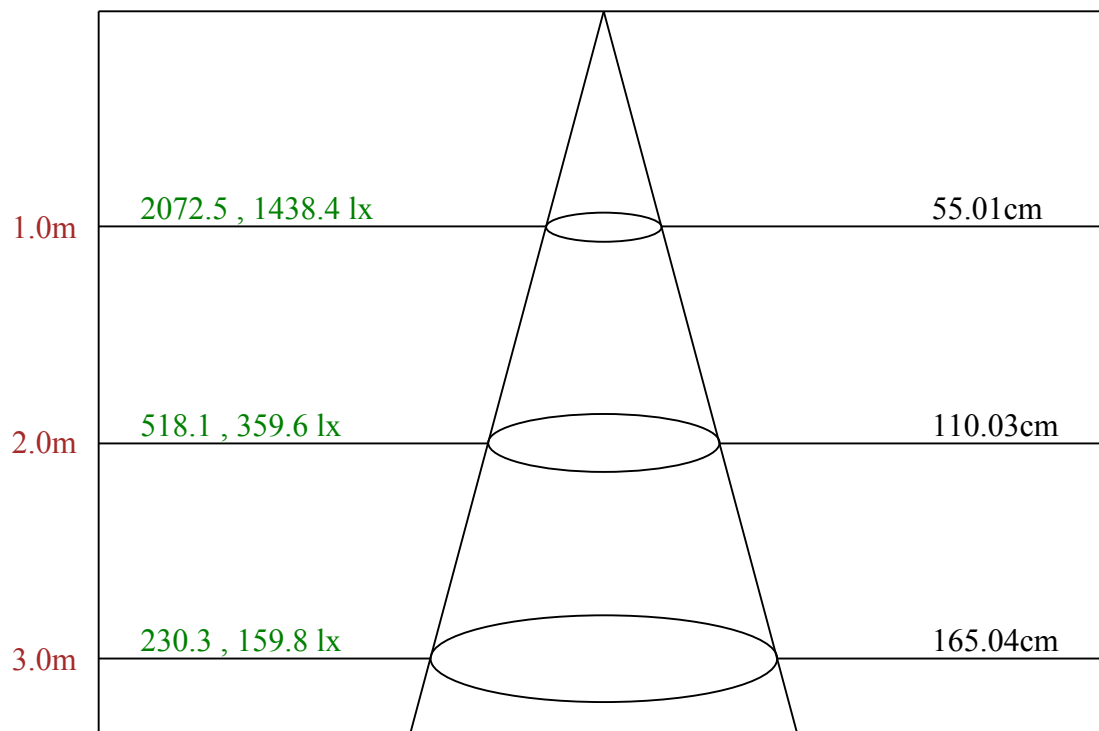
Equipment: equipamento lumini
Temperature(°C): 25.5

Date: 7/30/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90

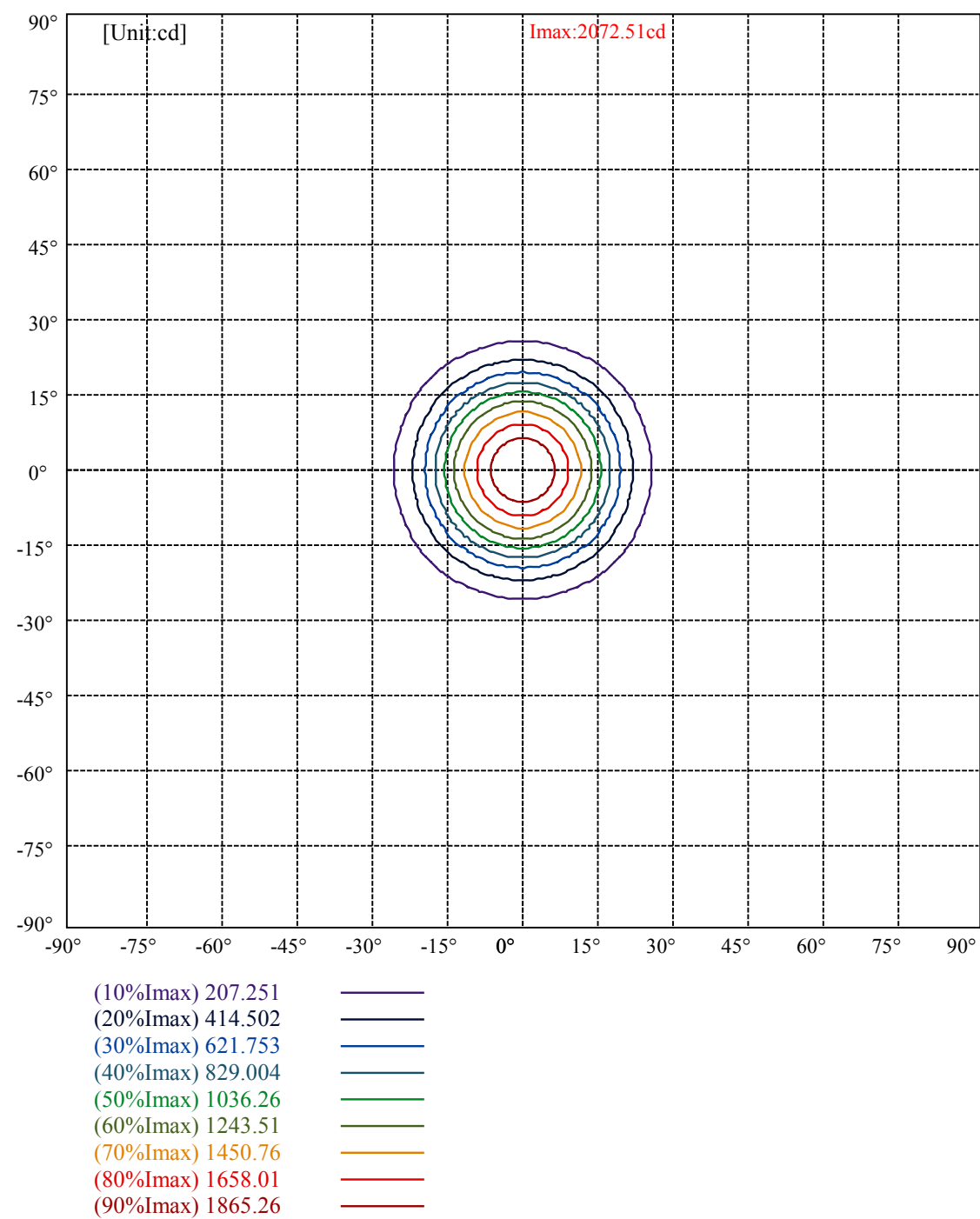


C0(Max):
C0/C180:
C90/C270:



Max , Ave

Beam angle of C0 plane 30.76



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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	4936	3000	1785	1220	1141	1357	1794	2639	5258
C45	4936	3000	1785	1220	1141	1357	1794	2639	5258
C90	4936	3000	1785	1220	1141	1357	1794	2639	5258

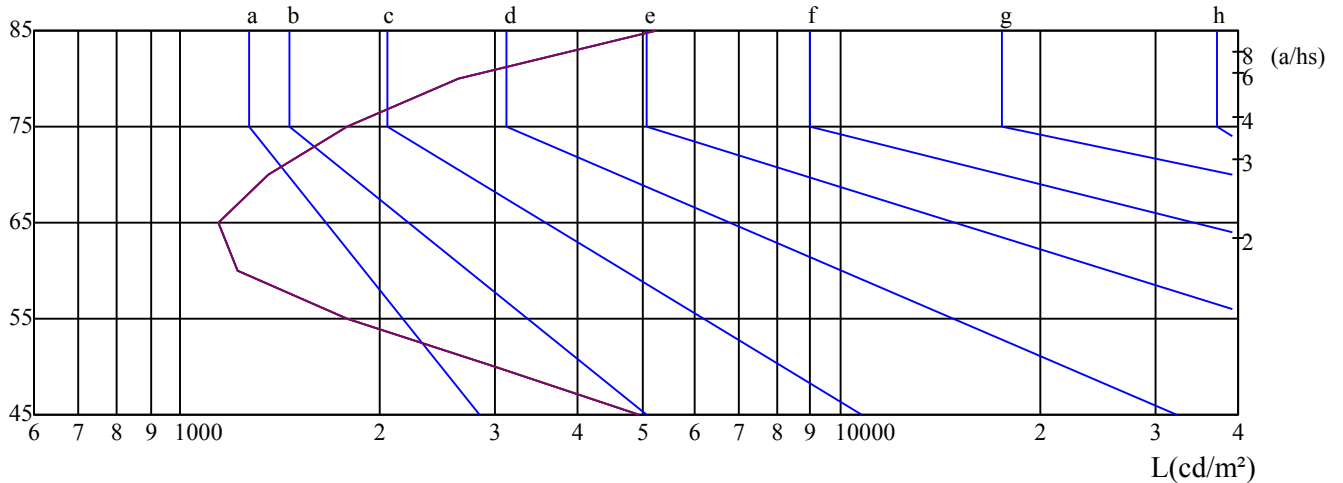
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1141	1141	1141	1794	1794	1794	5258	5258	5258

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: 7/30/2024
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	8.91	9.83	9.27	10.14	10.46	8.82	9.75	9.19	10.06	10.38
	3H	9.02	9.85	9.41	10.19	10.53	8.93	9.75	9.32	10.09	10.44
	4H	9.28	10.04	9.68	10.39	10.76	9.16	9.92	9.56	10.28	10.65
	6H	9.82	10.51	10.24	10.89	11.29	9.68	10.37	10.09	10.75	11.15
	8H	10.24	10.90	10.66	11.29	11.70	10.07	10.74	10.50	11.12	11.53
	12H	10.85	11.48	11.28	11.87	12.29	10.66	11.28	11.08	11.68	12.10
4H	2H	8.72	9.48	9.12	9.84	10.20	8.64	9.40	9.05	9.76	10.13
	3H	8.97	9.60	9.39	10.00	10.42	8.88	9.51	9.30	9.91	10.33
	4H	9.44	9.99	9.88	10.42	10.87	9.33	9.88	9.77	10.30	10.75
	6H	10.24	10.73	10.71	11.18	11.63	10.10	10.58	10.57	11.03	11.49
	8H	10.89	11.34	11.38	11.80	12.28	10.72	11.17	11.21	11.63	12.10
	12H	11.78	12.19	12.27	12.65	13.17	11.58	11.99	12.07	12.44	12.96
8H	4H	9.56	10.01	10.05	10.47	10.94	9.46	9.91	9.94	10.37	10.84
	6H	10.65	11.02	11.16	11.50	12.01	10.51	10.88	11.02	11.36	11.88
	8H	11.58	11.88	12.11	12.41	12.90	11.42	11.72	11.95	12.25	12.74
	12H	12.75	12.99	13.30	13.50	14.03	12.56	12.79	13.10	13.31	13.83
12H	4H	9.61	10.03	10.10	10.48	11.00	9.51	9.93	10.01	10.38	10.90
	6H	10.85	11.16	11.39	11.68	12.18	10.73	11.04	11.27	11.56	12.06
	8H	11.86	12.09	12.40	12.61	13.13	11.71	11.94	12.26	12.46	12.99
Variation with the observer position at spacings:											
S = 1.0H		3.2/-3.4					3.2/-3.4				
S = 1.5H		4.5/-2.7					4.5/-2.7				
S = 2.0H		5.3/-2.2					5.3/-2.2				
Standard tables:		BK4					BK4				
Uncorrected UGR		-6.6					-6.6				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: led line perfil 12V e lp 2.5W (com difusor)

LampCAT: modulo led line 5W/m 12Vdc 30K irc 90

Ballast type: led line driver 12V

Report No:

Voltage(V): 125.5000

Test No:

Current(A): 0.4200

Number of Lamps: 1

Power (W): 5.2710

Lamp flux(lm): 279.0

PF: 0.0000

Length(mm): 500

Width(mm): 21

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 165.07, Efficiency(%): 59.17% , Luminous Efficacy(lm/W): 31.32

Central intensity(cd): 59.370, Maximum intensity(cd): 59.370

Angle of maximum intensity: C=0.0 γ =0.0

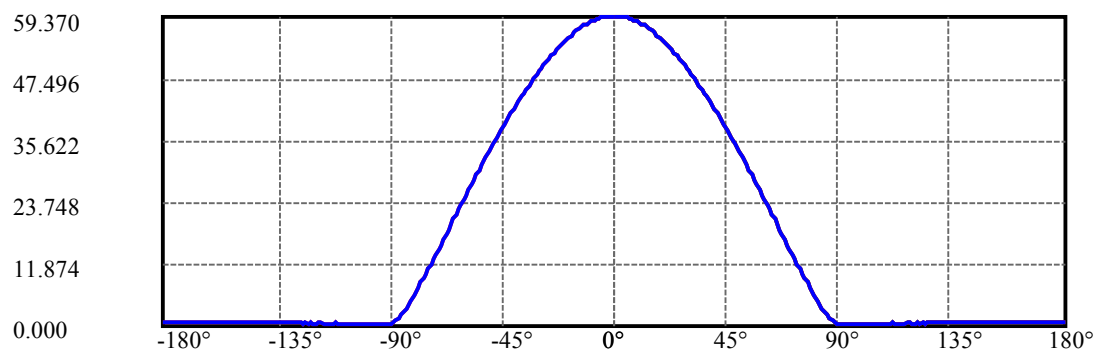
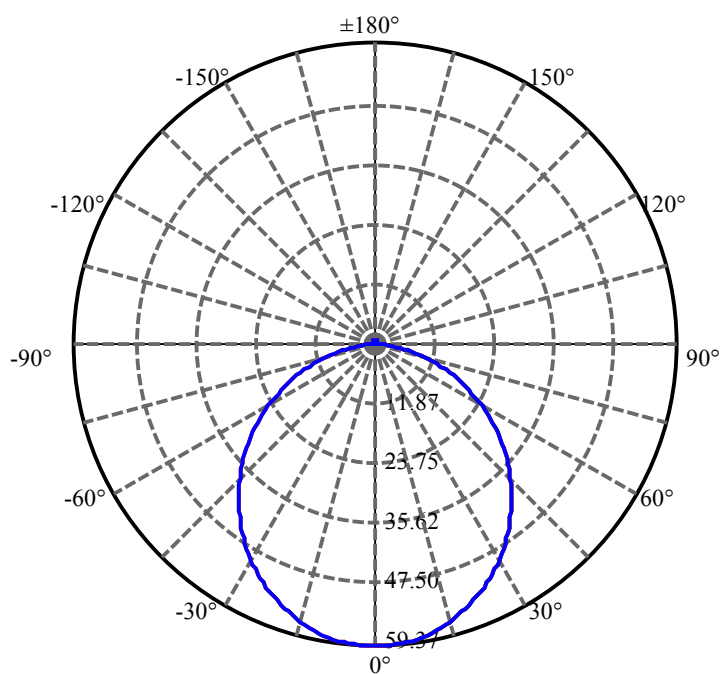
Beam angle of C0 plane : 108.29

Aveage BeamAngle(IEC 61341):108.29

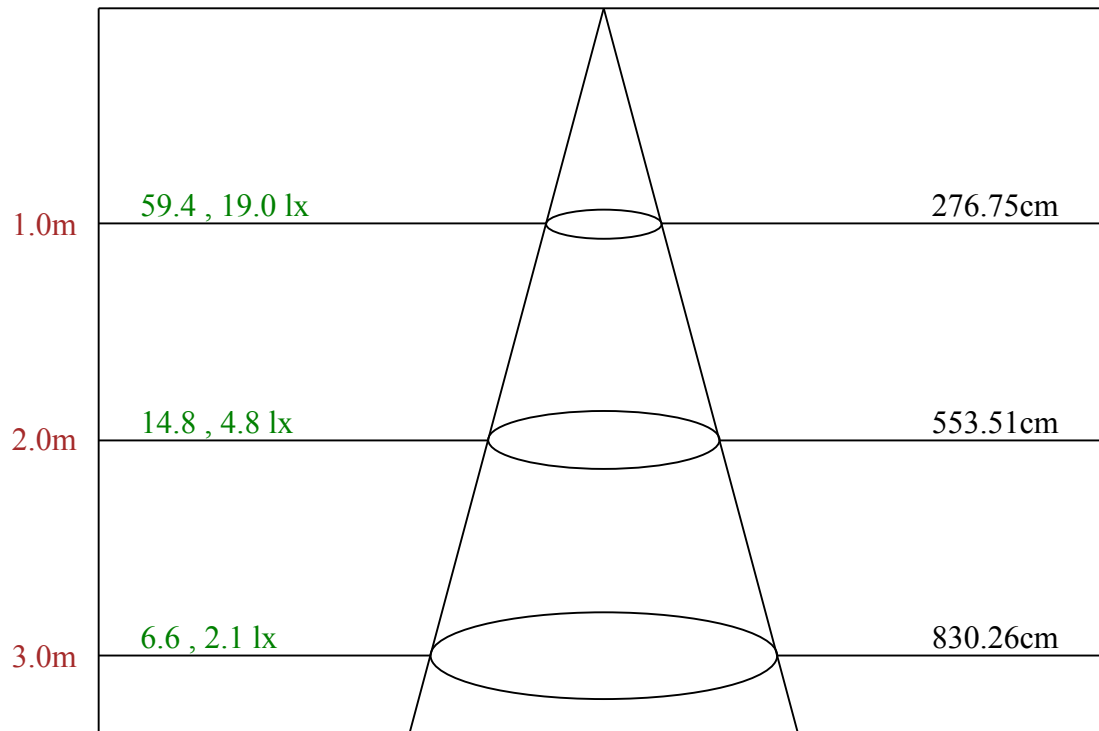
Equipment: equipamento lumini
Temperature(°C): 27.5

Date: 24/01/2025
Humidity(%): 45.0%

Operator: 01
Distance(m): 6.90

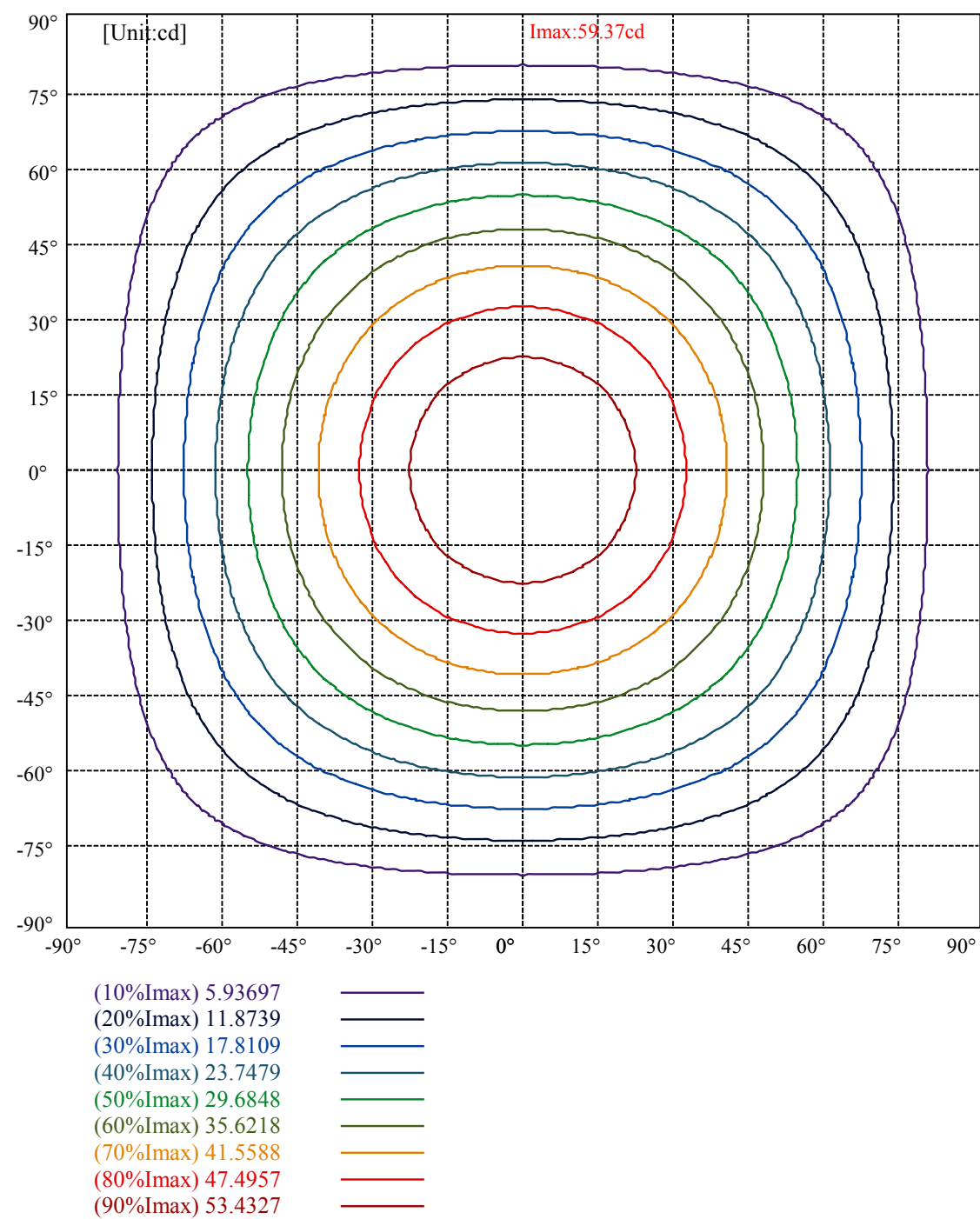


C0(Max):
C0/C180:
C90/C270:



Max , Ave

Beam angle of C0 plane 108.29



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Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

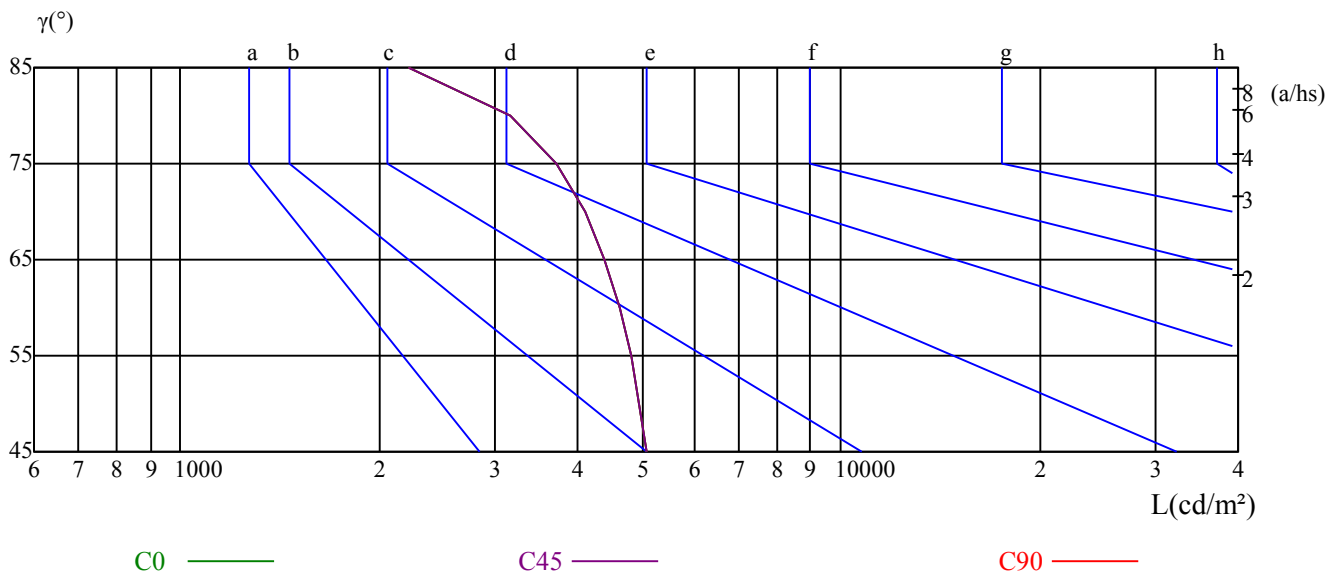
γ	45	50	55	60	65	70	75	80	85
C0	5073	4955	4807	4623	4383	4092	3699	3166	2218
C45	5073	4955	4807	4623	4383	4092	3699	3166	2218
C90	5073	4955	4807	4623	4383	4092	3699	3166	2218

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4383	4383	4383	3699	3699	3699	2218	2218	2218

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): 27.5

Date: 24/01/2025
Humidity(%): 45.0%

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	17.74	19.32	18.14	19.68	20.05	18.00	19.57	18.39	19.93	20.30
	3H	19.31	20.74	19.73	21.12	21.52	19.64	21.07	20.06	21.45	21.84
	4H	19.87	21.21	20.30	21.61	22.02	20.23	21.57	20.65	21.96	22.38
	6H	20.28	21.53	20.72	21.94	22.38	20.64	21.89	21.08	22.30	22.74
	8H	20.36	21.56	20.80	21.98	22.43	20.74	21.94	21.18	22.36	22.81
	12H	20.37	21.52	20.82	21.95	22.41	20.77	21.93	21.22	22.35	22.81
4H	2H	18.49	19.83	18.91	20.22	20.64	18.68	20.02	19.11	20.42	20.83
	3H	20.20	21.34	20.65	21.77	22.23	20.47	21.61	20.92	22.04	22.50
	4H	20.92	21.94	21.39	22.39	22.88	21.22	22.23	21.68	22.69	23.17
	6H	21.40	22.30	21.90	22.78	23.27	21.70	22.61	22.20	23.09	23.58
	8H	21.54	22.38	22.05	22.87	23.38	21.87	22.71	22.37	23.20	23.71
	12H	21.60	22.39	22.11	22.86	23.41	21.96	22.74	22.47	23.22	23.77
8H	4H	21.21	22.05	21.71	22.53	23.04	21.47	22.31	21.97	22.79	23.30
	6H	21.81	22.51	22.33	23.01	23.56	22.07	22.78	22.60	23.28	23.83
	8H	22.05	22.67	22.60	23.21	23.75	22.35	22.97	22.89	23.51	24.05
	12H	22.15	22.67	22.71	23.22	23.77	22.48	23.01	23.04	23.55	24.11
12H	4H	21.23	22.02	21.74	22.49	23.04	21.49	22.27	22.00	22.75	23.30
	6H	21.91	22.53	22.45	23.07	23.61	22.17	22.79	22.72	23.33	23.87
	8H	22.14	22.66	22.70	23.21	23.76	22.43	22.95	22.99	23.50	24.05
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.6					0.3/-0.6				
S = 1.5H		0.6/-0.7					0.6/-0.7				
S = 2.0H		0.8/-0.8					0.8/-0.8				
Standard tables:		BK3					BK3				
Uncorrected UGR		3.4					3.4				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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lumini

LumCAT:

Luminaire: led line perfil 12V e lp 7.5W (com difusor)

LampCAT: modulo led line 15W/m 12Vdc 30K irc 90

Ballast type: led line driver 12V

Report No:

Voltage(V): 124.0000

Test No:

Current(A): 0.1040

Number of Lamps: 1

Power (W): 12.8960

Lamp flux(lm): 707.0

PF: 0.0000

Length(mm): 500

Width(mm): 21

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 414.20, Efficiency(%): 58.59% , Luminous Efficacy(lm/W): 32.12

Central intensity(cd): 148.769, Maximum intensity(cd): 148.769

Angle of maximum intensity: C=0.0 γ =0.0

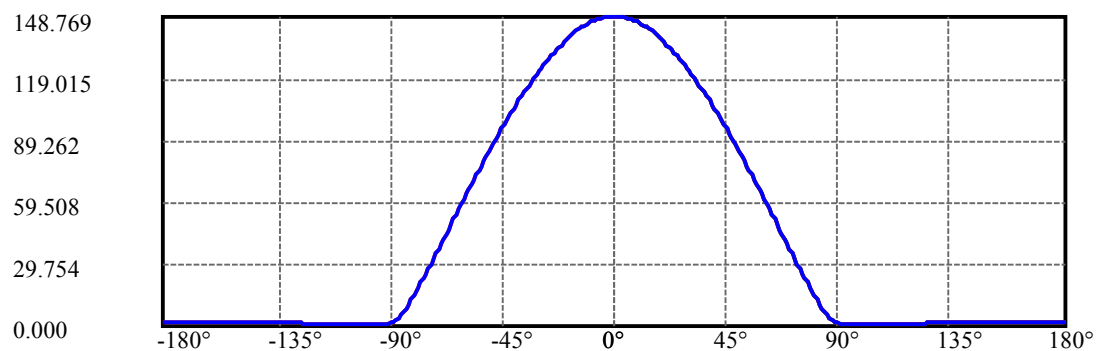
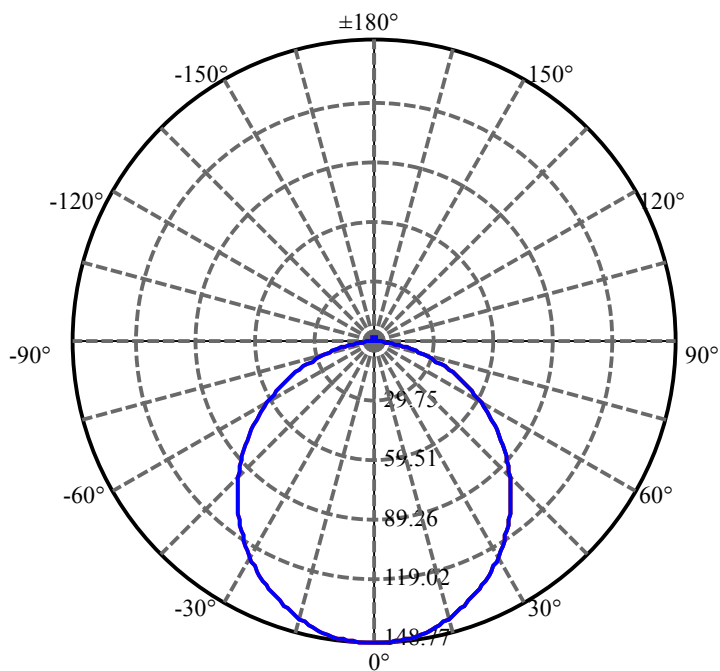
Beam angle of C0 plane : 108.46

Aveage BeamAngle(IEC 61341):108.46

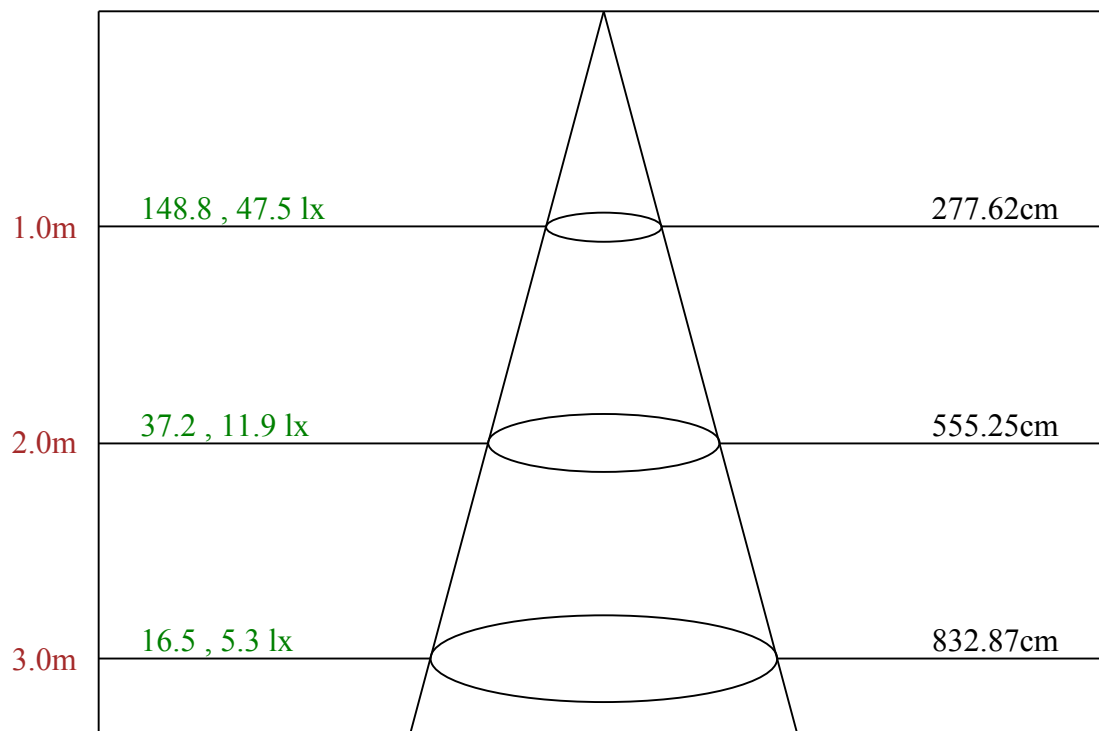
Equipment: equipamento lumini
Temperature(°C): 27.5

Date: 23/01/2025
Humidity(%): 45.0%

Operator: 01
Distance(m): 6.90

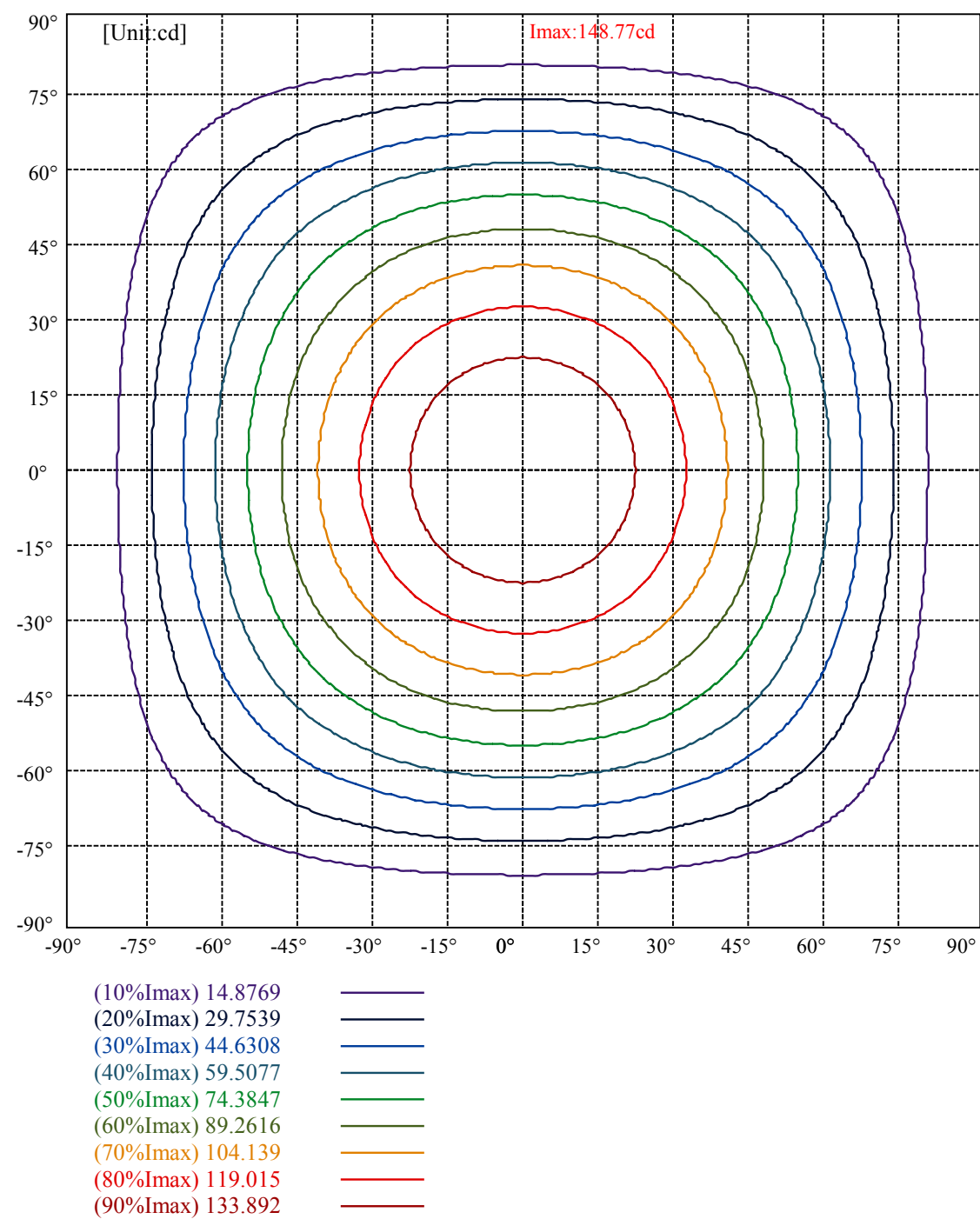


C0(Max):
C0/C180:
C90/C270:



Max , Ave

Beam angle of C0 plane 108.46



lumini

Luminance Limiting Curve(no luminous side)

Appendix Page: 5 Total:6

Luminance Table

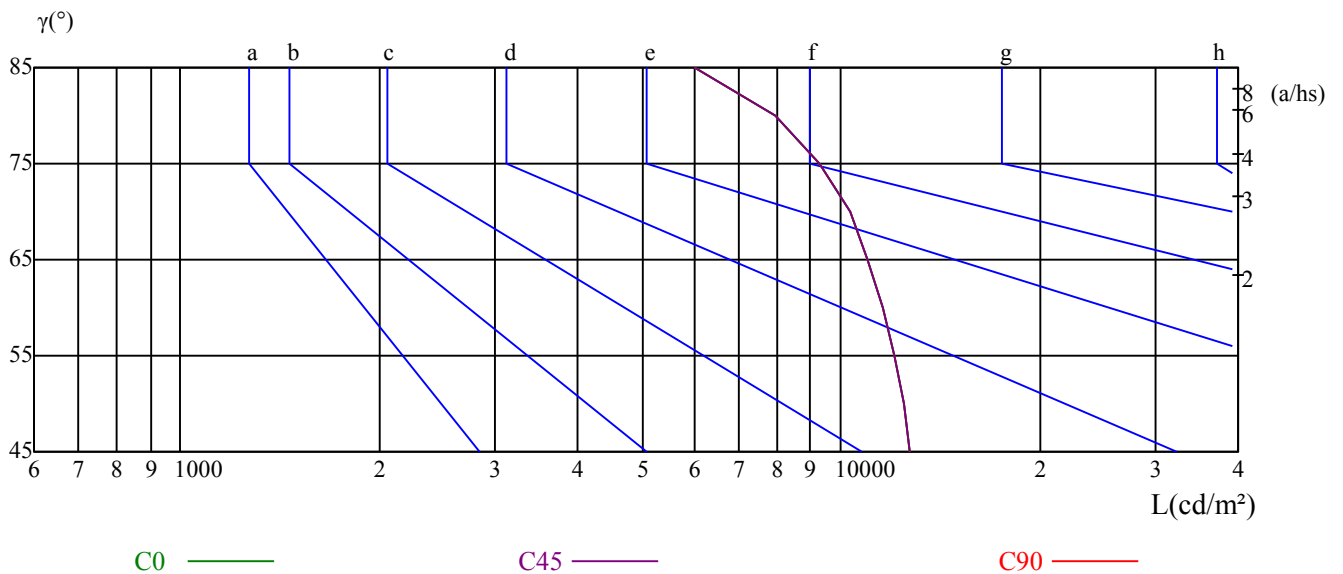
γ	45	50	55	60	65	70	75	80	85
C0	12758	12446	12061	11606	11011	10318	9311	7951	5989
C45	12758	12446	12061	11606	11011	10318	9311	7951	5989
C90	12758	12446	12061	11606	11011	10318	9311	7951	5989

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11011	11011	11011	9311	9311	9311	5989	5989	5989

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($^{\circ}\text{C}$): 27.5

Date: 23/01/2025
Humidity(%): 45.0%

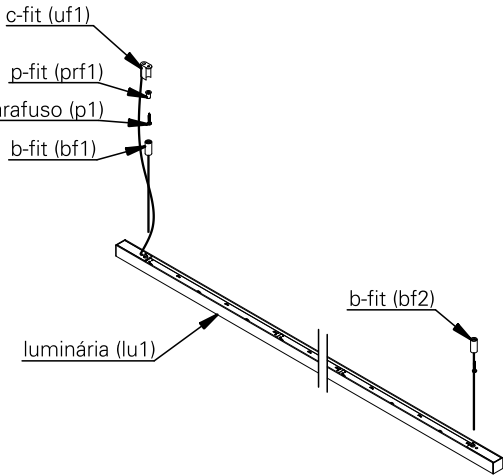
Operator: 01
Distance(m): 6.90

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	21.25	22.83	21.64	23.19	23.56	21.52	23.10	21.91	23.46	23.83
	3H	22.93	24.36	23.34	24.74	25.13	23.27	24.70	23.68	25.08	25.47
	4H	23.55	24.90	23.98	25.29	25.70	23.93	25.28	24.36	25.67	26.08
	6H	24.04	25.29	24.48	25.70	26.14	24.45	25.70	24.89	26.11	26.55
	8H	24.18	25.39	24.62	25.80	26.25	24.60	25.81	25.05	26.22	26.67
	12H	24.25	25.41	24.70	25.84	26.29	24.68	25.84	25.13	26.27	26.72
4H	2H	22.03	23.37	22.46	23.77	24.18	22.24	23.58	22.66	23.97	24.39
	3H	23.86	25.00	24.31	25.43	25.89	24.13	25.28	24.58	25.70	26.16
	4H	24.65	25.67	25.12	26.12	26.61	24.97	25.99	25.44	26.44	26.93
	6H	25.23	26.13	25.72	26.61	27.10	25.58	26.48	26.07	26.96	27.45
	8H	25.44	26.29	25.94	26.77	27.28	25.81	26.65	26.31	27.14	27.64
	12H	25.58	26.36	26.09	26.84	27.39	25.96	26.74	26.46	27.22	27.77
8H	4H	24.98	25.82	25.48	26.31	26.82	25.26	26.10	25.76	26.59	27.10
	6H	25.70	26.41	26.23	26.91	27.46	26.01	26.72	26.53	27.22	27.77
	8H	26.05	26.67	26.59	27.21	27.74	26.37	26.99	26.92	27.53	28.07
	12H	26.25	26.77	26.80	27.32	27.87	26.59	27.11	27.14	27.66	28.21
12H	4H	25.02	25.81	25.53	26.28	26.83	25.29	26.08	25.80	26.55	27.10
	6H	25.84	26.46	26.38	27.00	27.53	26.13	26.75	26.68	27.30	27.83
	8H	26.18	26.70	26.73	27.25	27.80	26.49	27.01	27.04	27.56	28.11
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.6					0.3/-0.6				
S = 1.5H		0.6/-0.6					0.6/-0.6				
S = 2.0H		0.8/-0.8					0.8/-0.8				
Standard tables:		BK3					BK3				
Uncorrected UGR		6.6					6.6				

依据CIE Publ. 117 计算 UGR, S/H = 0.25

hang

hang 180 down s1	1379mm
hang 250 down s1	2079mm
hang 180 up s1	1379mm
hang 250 up s1	2079mm
hang 180 s2	1379mm
hang 250 s2	2079mm



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.

especificações técnicas

fonte de luz
módulo led integrado (incluso)

índice de proteção
IP20 - luminária para uso interno

peso
hang 180 down s1 - 2,2 kg
hang 250 down s1 - 3,1 kg
hang 180 up s1 - 2,2 kg
hang 250 up s1 - 3,1 kg
hang 180 s2 - 2,2 kg
hang 250 s2 - 3,1 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
2 parafusos atarrachantes
2 buchas

ferramentas necessárias
chave philips

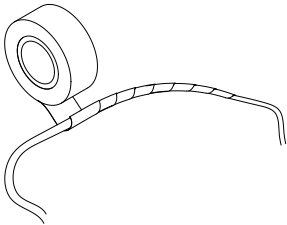
informações importantes
para a instalação, lave as mãos e seque as mãos, use luvas descartáveis.

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

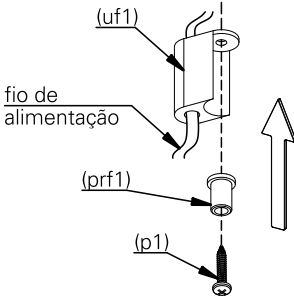
retire a luminária da embalagem com cuidado e apoie-o em uma superfície limpa e seca.

instalação passo a passo

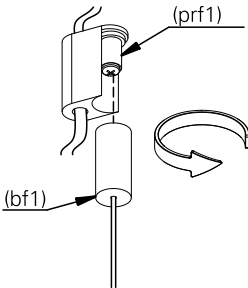
1. faça a ligação elétrica. isole os fios separadamente com fita isolante. repita a operação envolvendo o conjunto dos fios, vedando completamente a emenda.



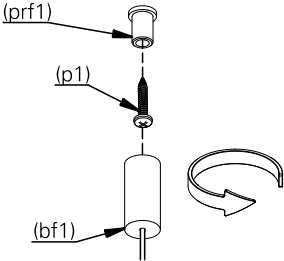
2. utilize o parafuso (p1) para fixar o p-fit (prf1) e o c-fit (cf1) no forro conforme a imagem abaixo.



3. rosqueie o b-fit (bf1) no p-fit (prf1).



4. no lado oposto da luminária (lu1), utilize o parafuso (p1) para fixar o p-fit (prf1) no forro e em seguida rosqueie o b-fit (bf1).



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

