



downled md r cob e

linha de luminárias embutidas circulares para iluminação geral. difusor de alta transmitância, dissipador em alumínio injetado, controle antiofuscamento através do próprio refletor e moldura em alumínio. fixação por meio de molas em aço inox.

informações técnicas

fonte de luz
LED integrado

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

vida útil
50.000h

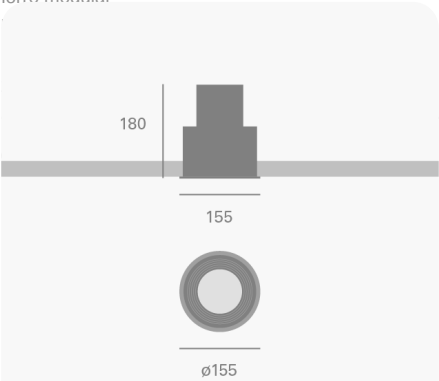
potência (W), fecho, temperatura de cor (K),
fluxo nominal (lm nominal), fluxo útil (lm útil)

W		K	lm nominal	lm útil
25	c	2700		
25	m	2700		
25	a	2700		
25	c	3000	2800	2204
25	m	3000	2800	2080
25	a	3000	2800	1983
25	c	4000		
25	m	4000		
25	a	4000		
32	c	2700		
32	m	2700		
32	a	2700		
32	c	3000	3200	2499
32	m	3000	3200	2344
32	a	3000	3200	2254
32	c	4000		
32	m	4000		
32	a	4000		

equipamentos
LED driver 700mA (incluso, ponto remoto)
LED driver 900mA (incluso, ponto remoto)

controle
on/off
dim fphase
dim dali
dim 1-10V

instalação
forro de gesso
forro modular



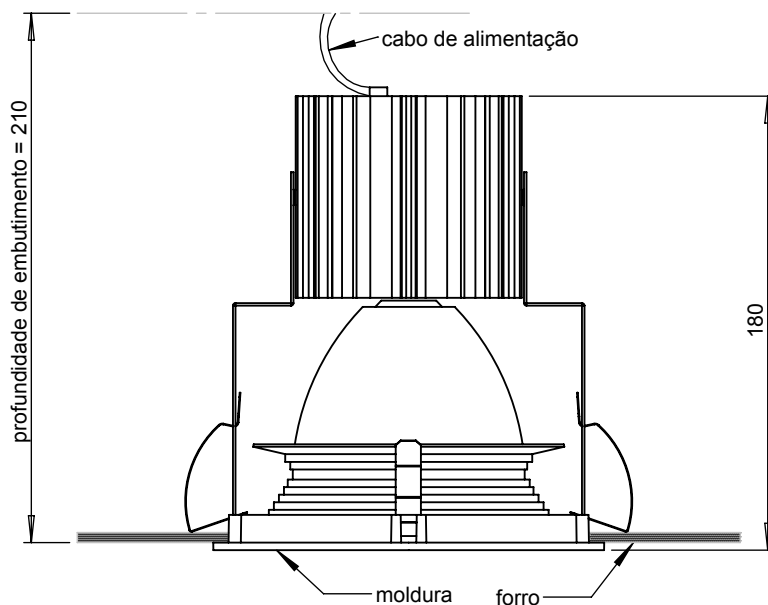
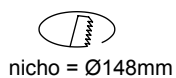
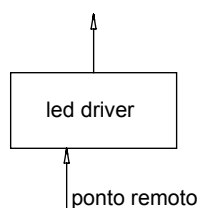
acabamentos e cores

cores



vista lateral

dimensões em milímetros



downled md cob e

folha
1/1

escala
1:3

data
09/03/2020

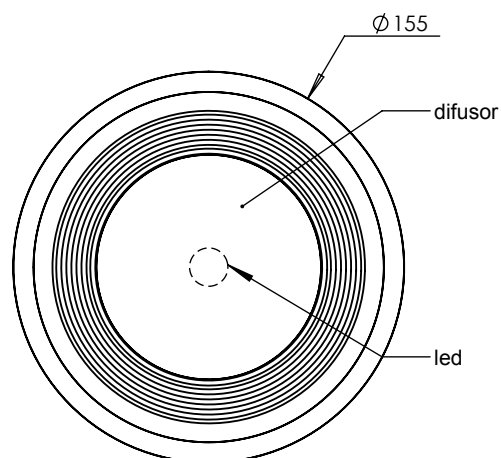
desenhista
joao ferreira

aprovação
edmilson

revisões
09/03/2020

vista inferior

dimensões em milímetros



para maiores informações,
consulte a área técnica
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LumCAT:

Luminaire: downled md r cob e fa

LampCAT: modulo led 25W 30K irc 90

Ballast type: led driver 700mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2270

Number of Lamps: 1

Power (W): 28.7200

Lamp flux(lm): 2800.0

PF: 0.9800

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1982.79, Efficiency(%): 70.81% , Luminous Efficacy(lm/W): 69.04

Central intensity(cd): 5019.665, Maximum intensity(cd): 5019.665

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

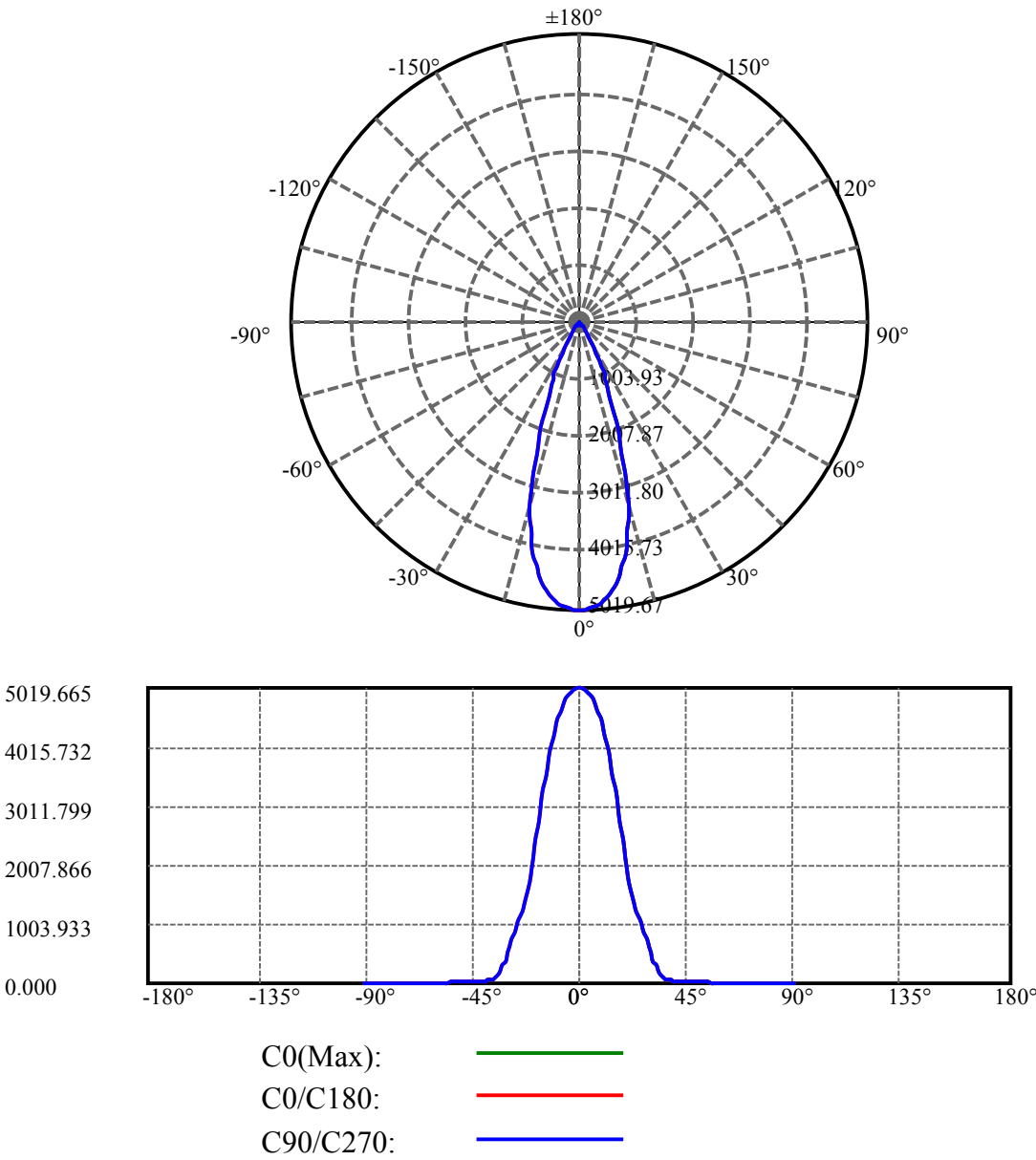
Beam angle of C0 plane : 35.47

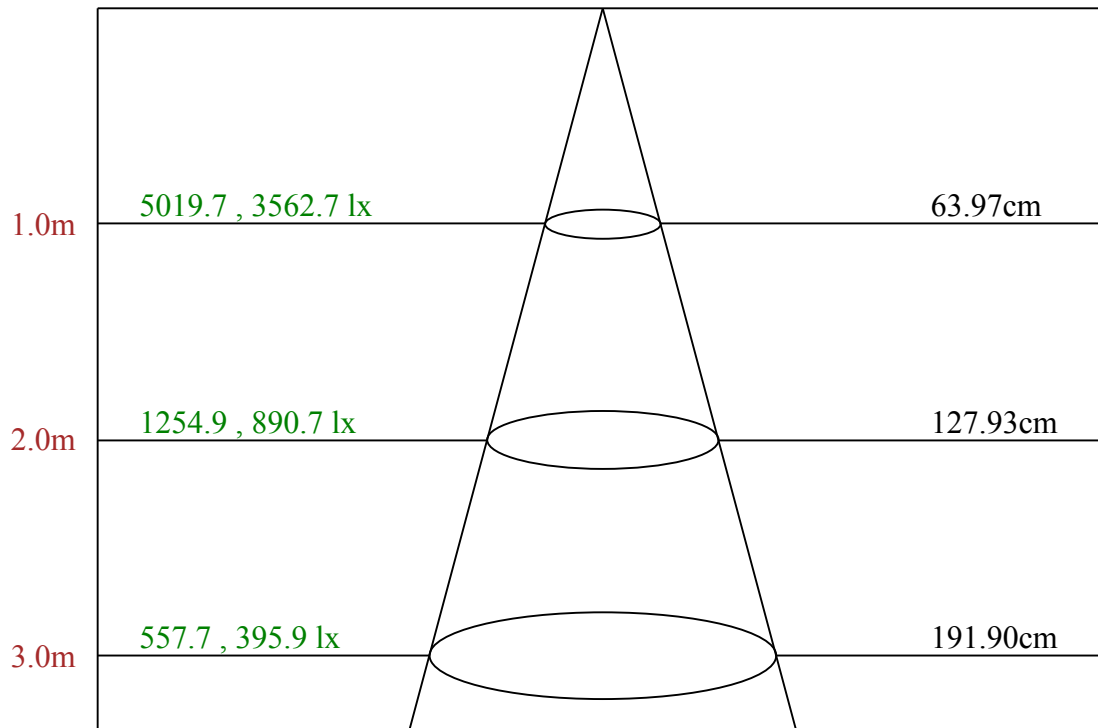
Average BeamAngle(IEC 61341): 35.47

Equipment: equipamento lumini
Temperature(°C): 25.5

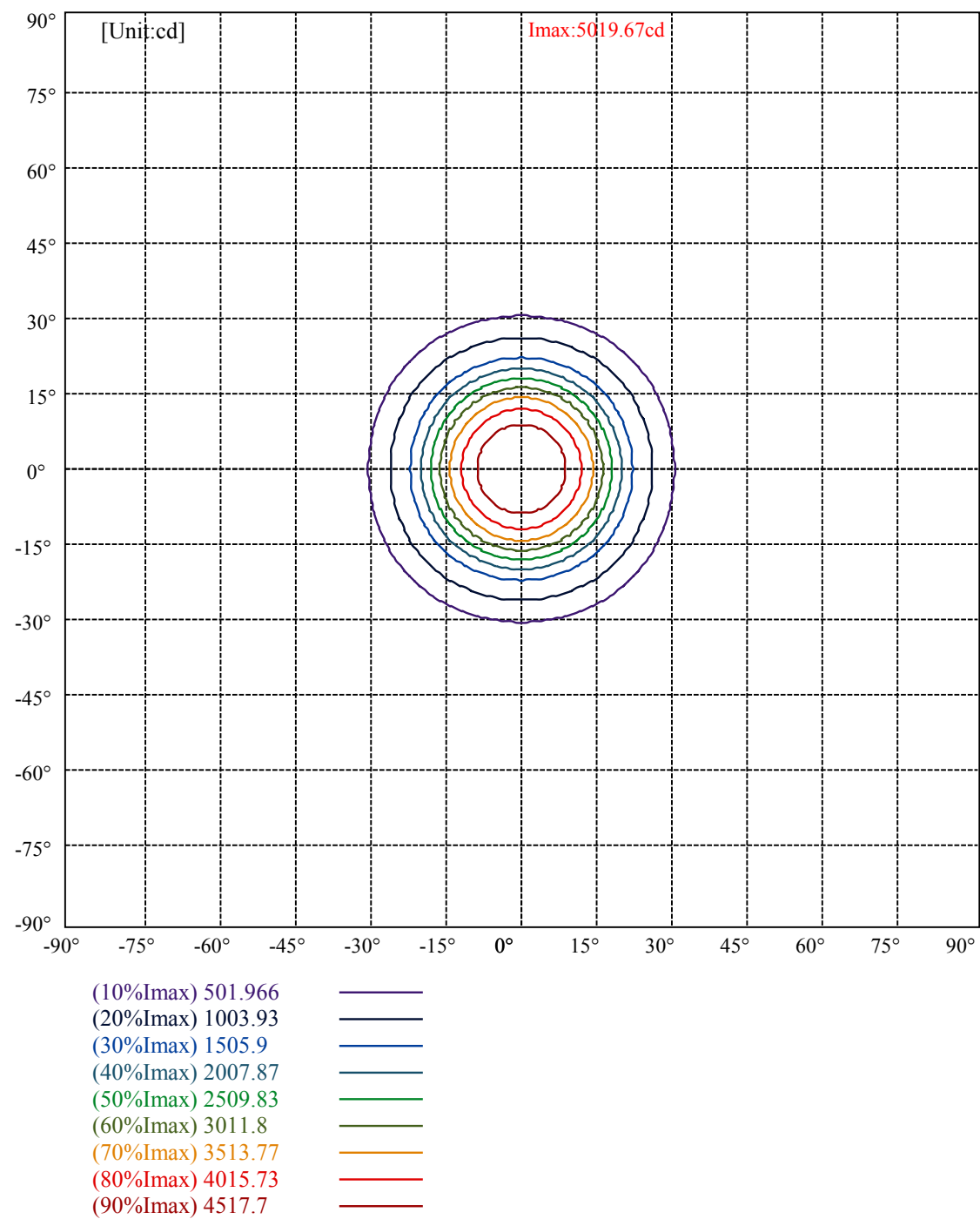
Date: 18/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 35.47



Luminance Table

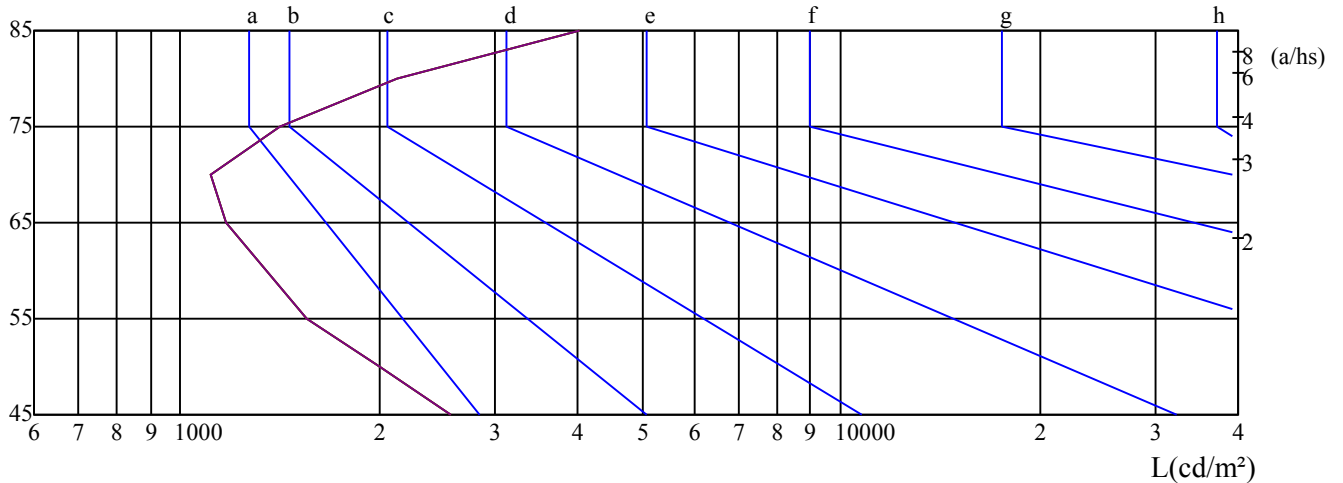
γ	45	50	55	60	65	70	75	80	85
C0	2566	2007	1557	1352	1173	1112	1415	2125	4008
C45	2566	2007	1557	1352	1173	1112	1415	2125	4008
C90	2566	2007	1557	1352	1173	1112	1415	2125	4008

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1173	1173	1173	1415	1415	1415	4008	4008	4008

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	8.29	9.22	8.66	9.53	9.84	8.29	9.22	8.66	9.53	9.84
	3H	8.48	9.30	8.87	9.64	9.99	8.48	9.30	8.87	9.64	9.99
	4H	8.71	9.47	9.11	9.82	10.19	8.71	9.47	9.11	9.82	10.19
	6H	9.22	9.92	9.64	10.29	10.69	9.22	9.92	9.64	10.29	10.69
	8H	9.61	10.27	10.03	10.66	11.07	9.61	10.27	10.03	10.66	11.07
	12H	10.15	10.78	10.58	11.17	11.59	10.15	10.78	10.58	11.17	11.59
4H	2H	8.18	8.93	8.58	9.29	9.66	8.18	8.93	8.58	9.29	9.66
	3H	8.48	9.12	8.91	9.52	9.93	8.48	9.12	8.91	9.52	9.93
	4H	8.92	9.47	9.36	9.89	10.34	8.92	9.47	9.36	9.89	10.34
	6H	9.68	10.16	10.15	10.61	11.07	9.68	10.16	10.15	10.61	11.07
	8H	10.28	10.73	10.76	11.19	11.66	10.28	10.73	10.76	11.19	11.66
	12H	11.07	11.48	11.56	11.94	12.46	11.07	11.48	11.56	11.94	12.46
8H	4H	9.03	9.48	9.52	9.94	10.42	9.03	9.48	9.52	9.94	10.42
	6H	10.08	10.45	10.59	10.93	11.44	10.08	10.45	10.59	10.93	11.44
	8H	10.95	11.25	11.49	11.78	12.28	10.95	11.25	11.49	11.78	12.28
	12H	12.02	12.25	12.56	12.77	13.29	12.02	12.25	12.56	12.77	13.29
12H	4H	9.09	9.50	9.58	9.95	10.47	9.09	9.50	9.58	9.95	10.47
	6H	10.29	10.59	10.82	11.11	11.61	10.29	10.59	10.82	11.11	11.61
	8H	11.23	11.46	11.78	11.98	12.50	11.23	11.46	11.78	11.98	12.50
Variation with the observer position at spacings:											
S = 1.0H		4.8/-2.9					4.8/-2.9				
S = 1.5H		6.2/-2.3					6.2/-2.3				
S = 2.0H		7.0/-1.9					7.0/-1.9				
Standard tables:		BK4					BK4				
Uncorrected UGR		-7.1					-7.1				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fc

LampCAT: modulo led 25W 30K irc 90

Ballast type: led driver 700mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2270

Number of Lamps: 1

Power (W): 28.3300

Lamp flux(lm): 2800.0

PF: 0.9800

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2203.91, Efficiency(%): 78.71% , Luminous Efficacy(lm/W): 77.79

Central intensity(cd): 24515.580, Maximum intensity(cd): 24515.580

Angle of maximum intensity: C=0.0 γ =0.0

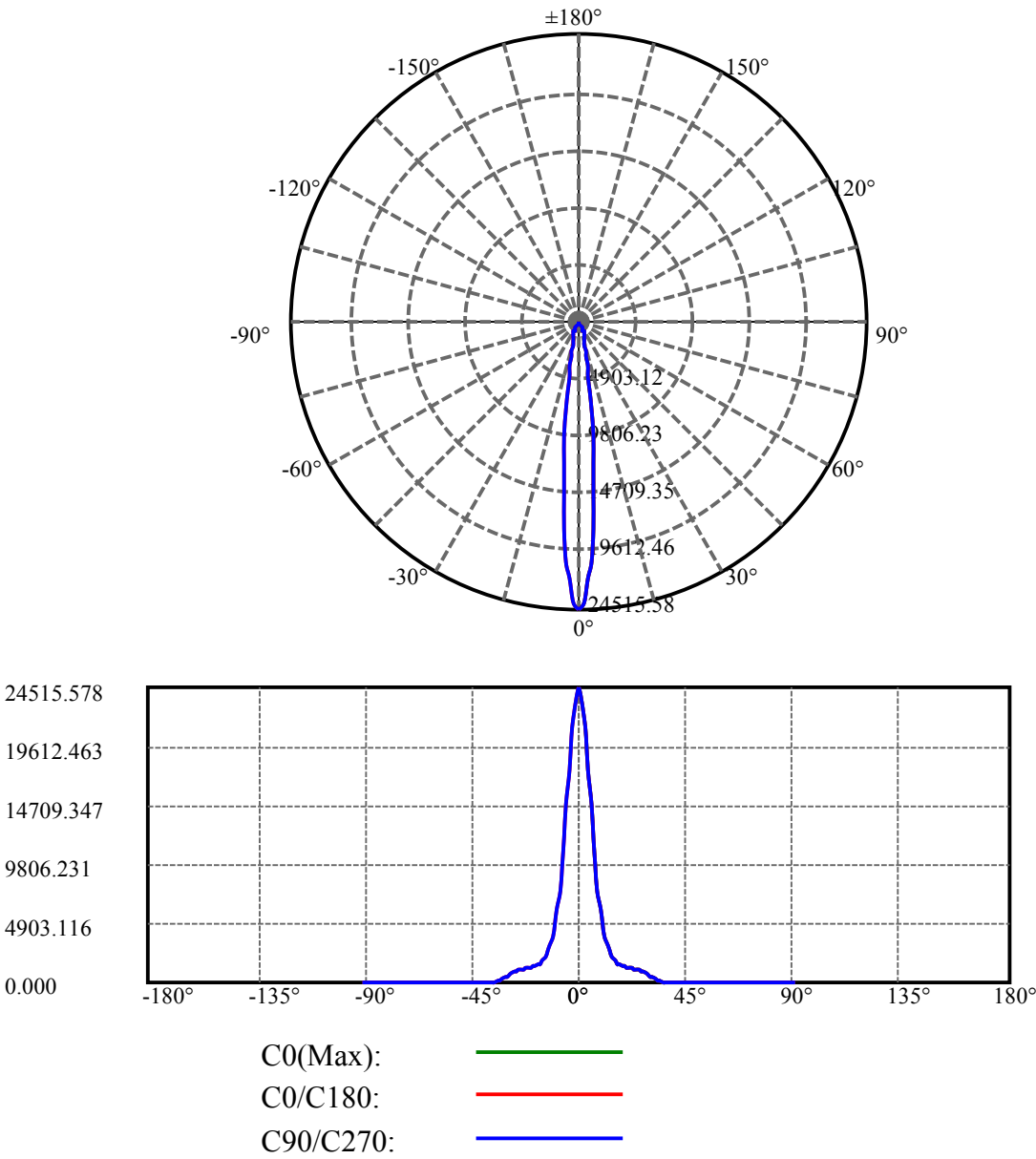
Beam angle of C0 plane : 11.86

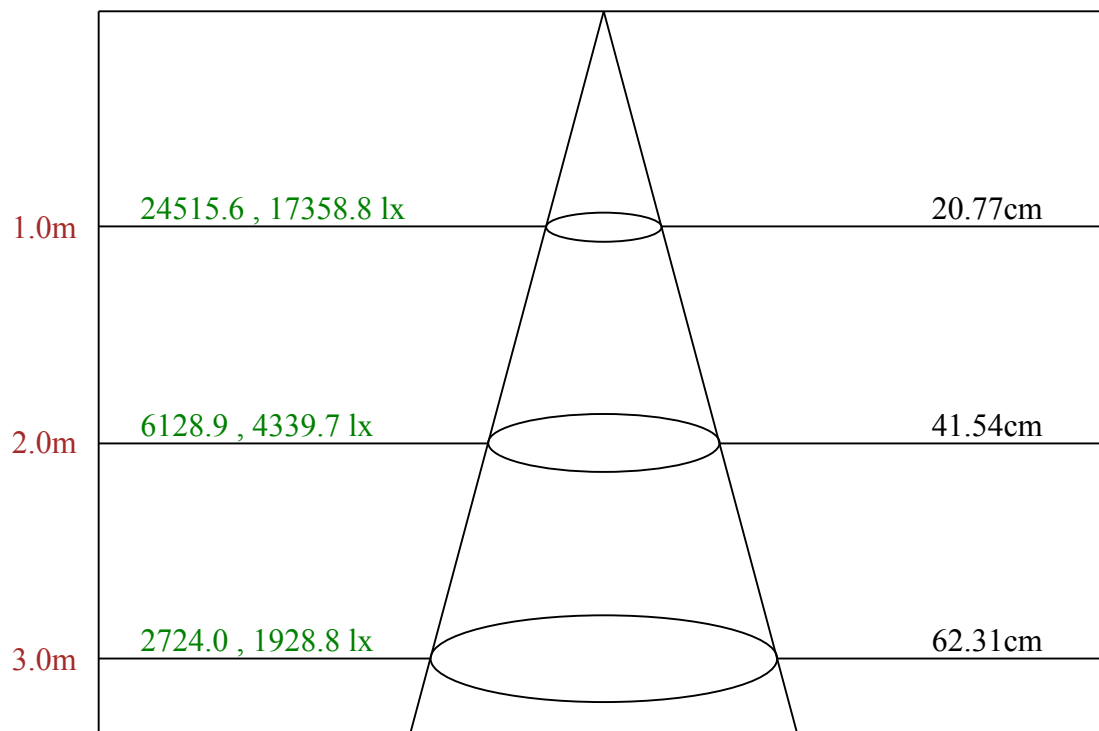
Average BeamAngle(IEC 61341): 11.86

Equipment: equipamento lumini
Temperature(°C): 25.5

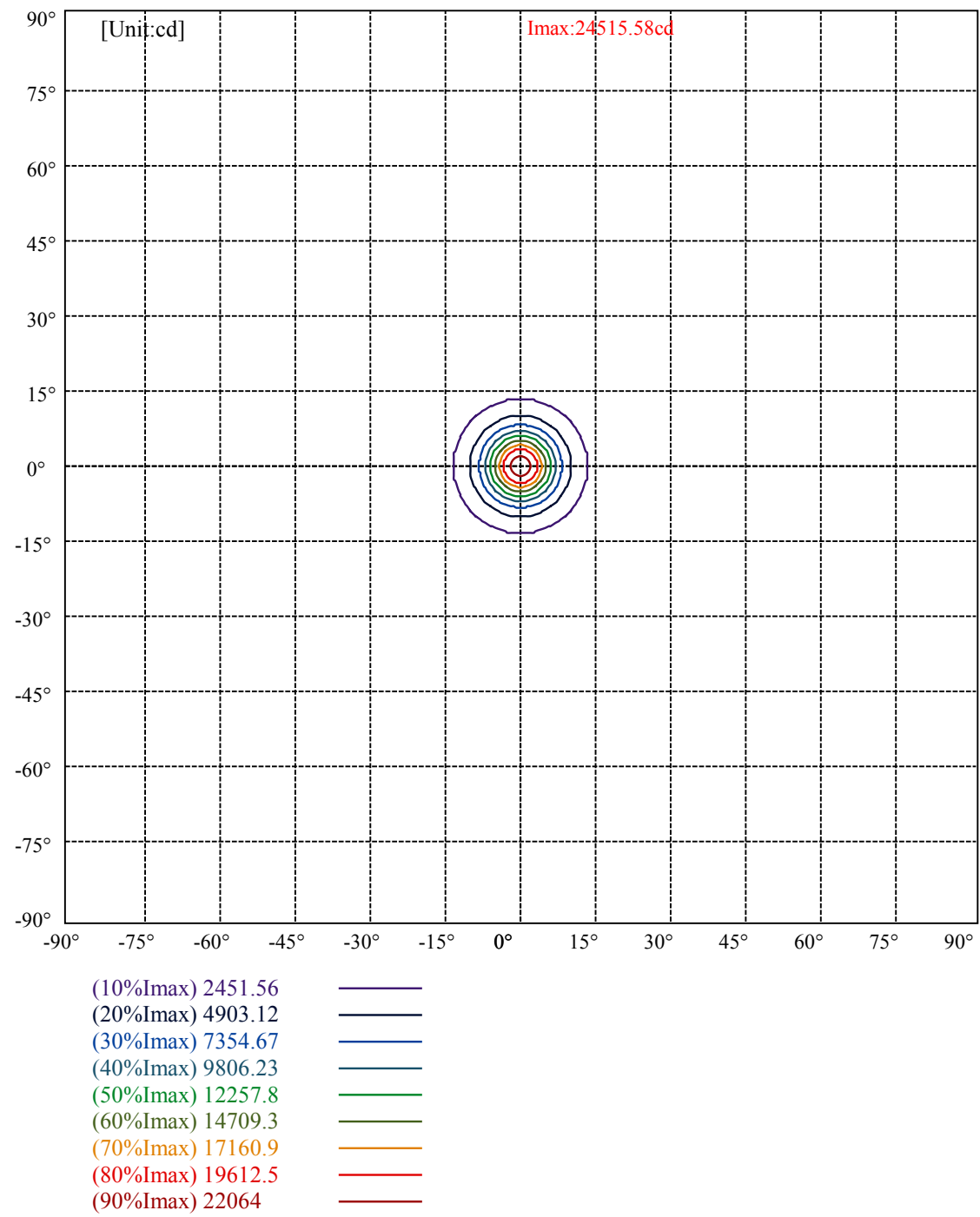
Date: 18/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 11.86



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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	1494	1385	1483	1454	1140	1120	1654	2320	4267
C45	1494	1385	1483	1454	1140	1120	1654	2320	4267
C90	1494	1385	1483	1454	1140	1120	1654	2320	4267

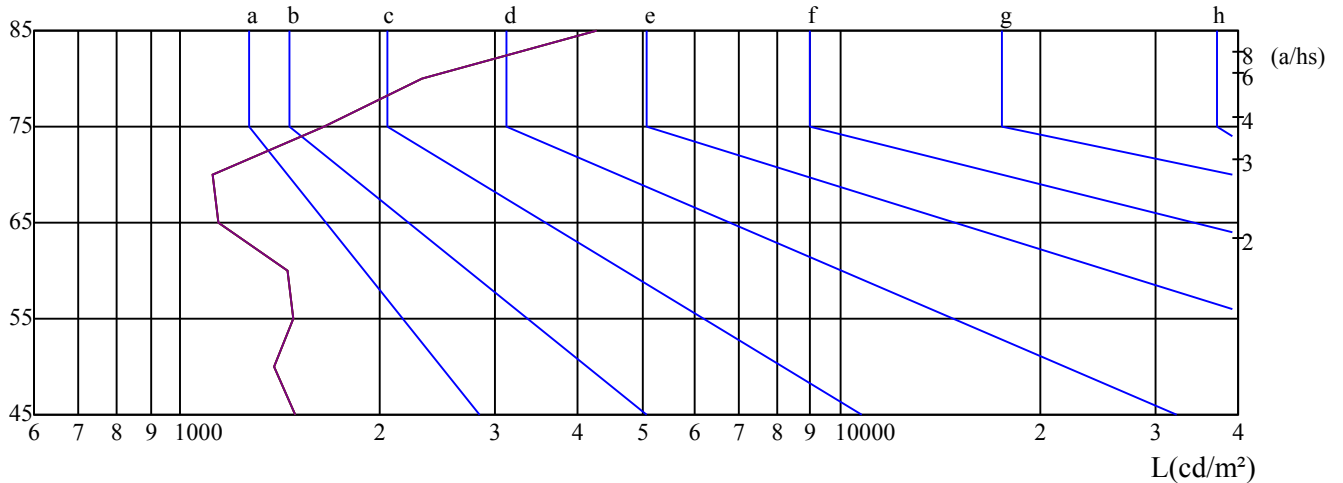
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1140	1140	1140	1654	1654	1654	4267	4267	4267

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($^{\circ}\text{C}$): 25.5

Date: 18/09/2024
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	6.38	7.30	6.75	7.61	7.92	6.38	7.30	6.75	7.61	7.92
	3H	6.78	7.59	7.17	7.93	8.28	6.78	7.59	7.17	7.93	8.28
	4H	7.30	8.05	7.70	8.41	8.78	7.30	8.05	7.70	8.41	8.78
	6H	8.18	8.86	8.60	9.24	9.64	8.18	8.86	8.60	9.24	9.64
	8H	8.74	9.39	9.16	9.78	10.18	8.74	9.39	9.16	9.78	10.18
	12H	9.45	10.07	9.88	10.47	10.88	9.45	10.07	9.88	10.47	10.88
4H	2H	6.38	7.13	6.78	7.48	7.85	6.38	7.13	6.78	7.48	7.85
	3H	6.97	7.60	7.40	8.00	8.42	6.97	7.60	7.40	8.00	8.42
	4H	7.80	8.34	8.24	8.77	9.22	7.80	8.34	8.24	8.77	9.22
	6H	8.96	9.44	9.44	9.89	10.35	8.96	9.44	9.44	9.89	10.35
	8H	9.72	10.17	10.21	10.63	11.10	9.72	10.17	10.21	10.63	11.10
	12H	10.67	11.07	11.16	11.53	12.05	10.67	11.07	11.16	11.53	12.05
8H	4H	8.10	8.54	8.59	9.00	9.48	8.10	8.54	8.59	9.00	9.48
	6H	9.57	9.93	10.07	10.41	10.92	9.57	9.93	10.07	10.41	10.92
	8H	10.59	10.89	11.12	11.41	11.91	10.59	10.89	11.12	11.41	11.91
	12H	11.78	12.01	12.33	12.53	13.05	11.78	12.01	12.33	12.53	13.05
12H	4H	8.20	8.60	8.69	9.06	9.58	8.20	8.60	8.69	9.06	9.58
	6H	9.82	10.12	10.35	10.64	11.14	9.82	10.12	10.35	10.64	11.14
	8H	10.92	11.14	11.46	11.66	12.19	10.92	11.14	11.46	11.66	12.19
Variation with the observer position at spacings:											
S = 1.0H		4.2/-2.5					4.2/-2.5				
S = 1.5H		5.0/-2.0					5.0/-2.0				
S = 2.0H		5.6/-1.4					5.6/-1.4				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-5.5					-5.5				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fm

LampCAT: modulo led 25W 30K irc 90

Ballast type: led driver 700mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2660

Number of Lamps: 1

Power (W): 28.1900

Lamp flux(lm): 2800.0

PF: 0.9800

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2079.85, Efficiency(%): 74.28% , Luminous Efficacy(lm/W): 73.78

Central intensity(cd): 9696.205, Maximum intensity(cd): 9696.205

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

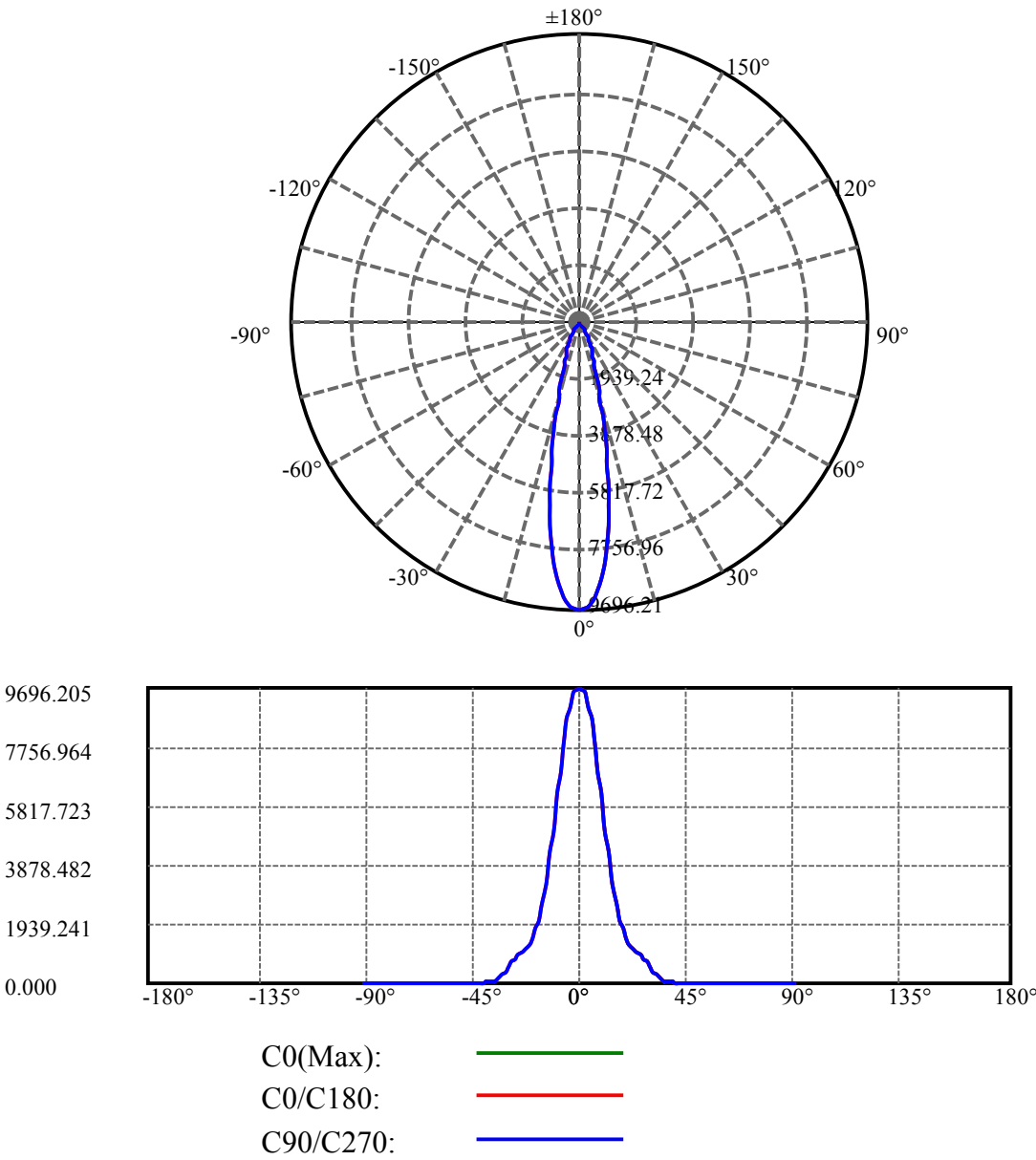
Beam angle of C0 plane : 22.31

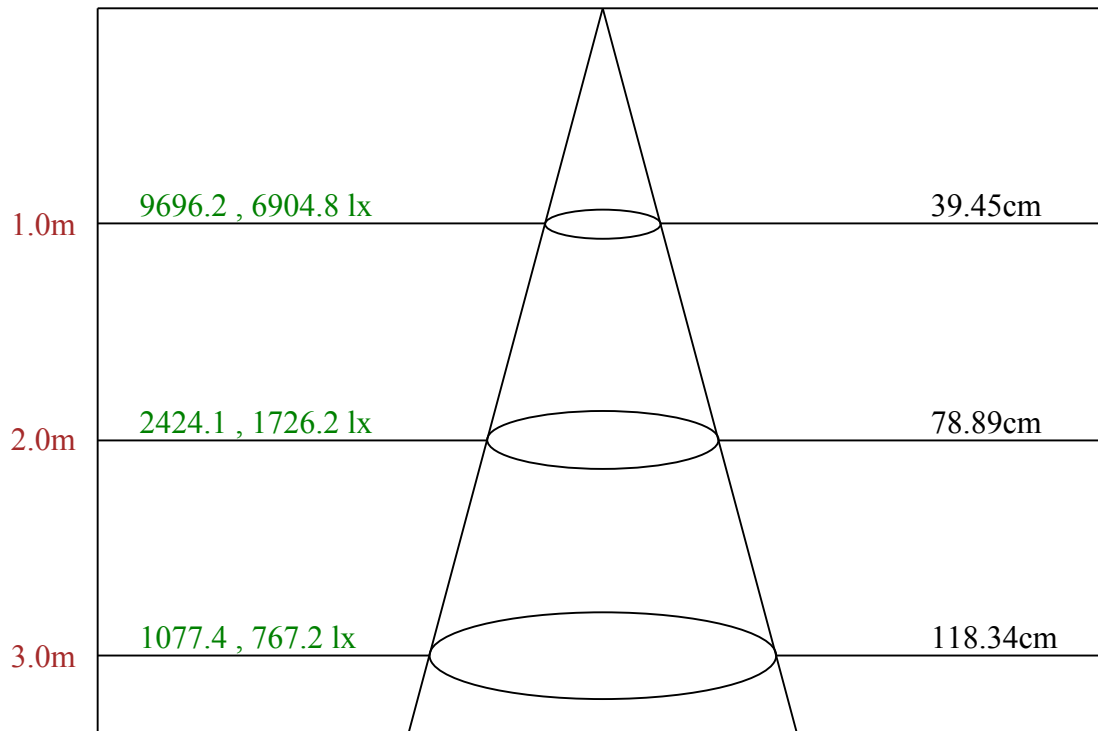
Average BeamAngle(IEC 61341): 22.31

Equipment: equipamento lumini
Temperature(°C): 25.5

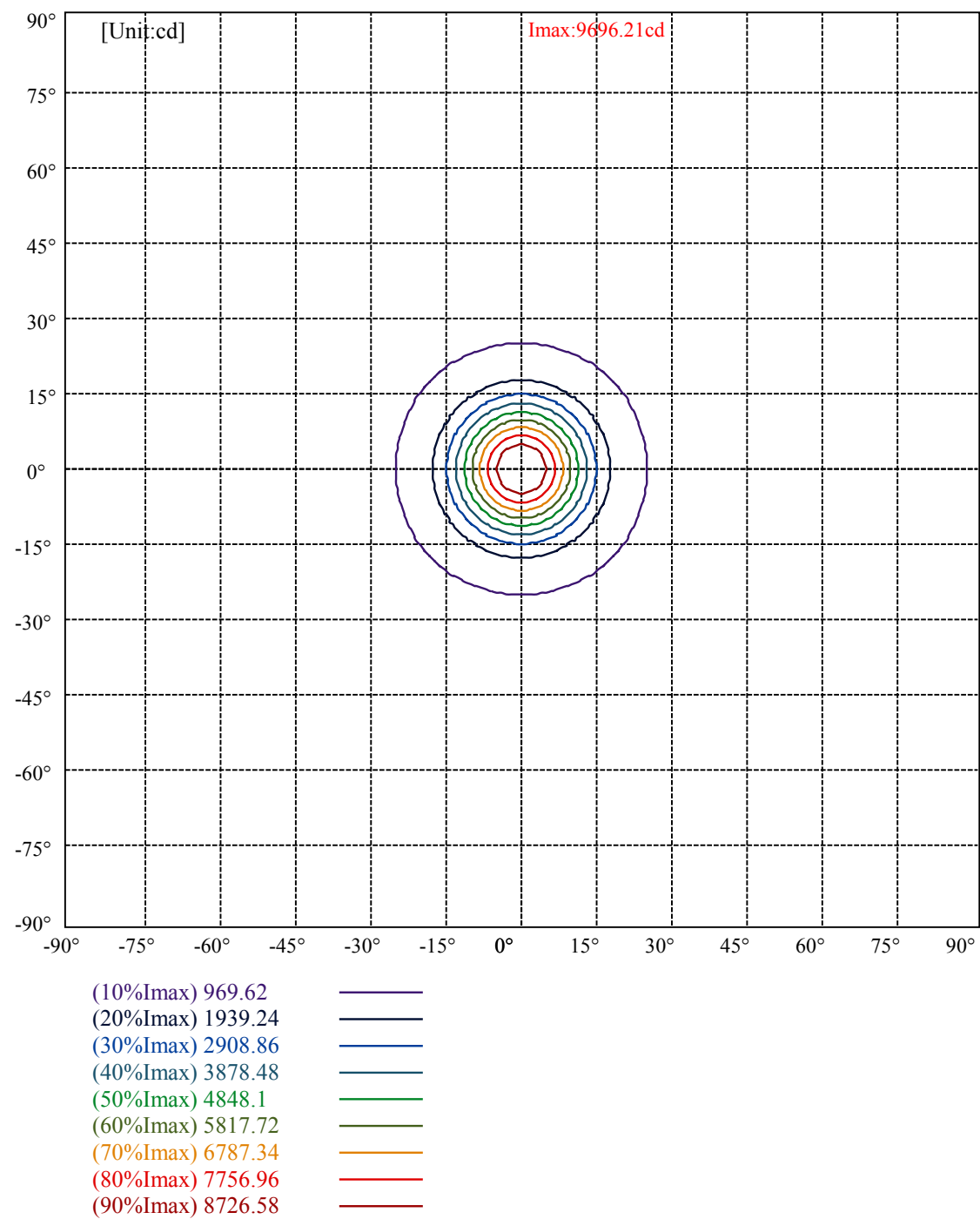
Date: 18/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 22.31



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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	1434	1201	1184	1149	1073	1112	1927	2563	4234
C45	1434	1201	1184	1149	1073	1112	1927	2563	4234
C90	1434	1201	1184	1149	1073	1112	1927	2563	4234

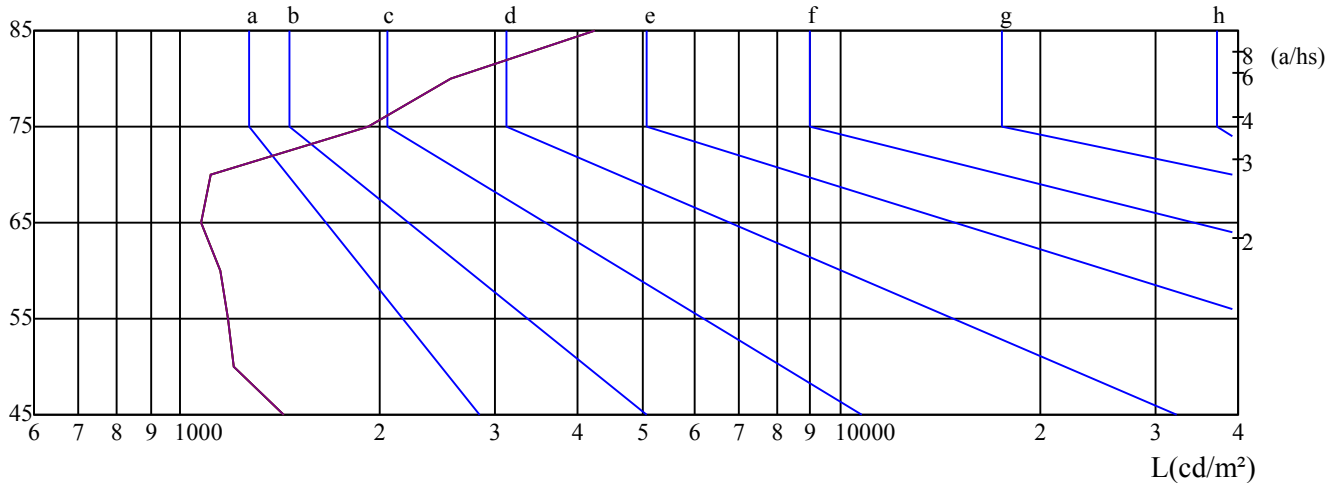
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1073	1073	1073	1927	1927	1927	4234	4234	4234

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: 18/09/2024
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	7.42	8.33	7.79	8.64	8.96	7.42	8.33	7.79	8.64	8.96
	3H	7.67	8.48	8.06	8.82	9.17	7.67	8.48	8.06	8.82	9.17
	4H	8.19	8.94	8.60	9.30	9.67	8.19	8.94	8.60	9.30	9.67
	6H	9.08	9.77	9.50	10.14	10.54	9.08	9.77	9.50	10.14	10.54
	8H	9.58	10.23	10.00	10.62	11.03	9.58	10.23	10.00	10.62	11.03
	12H	10.16	10.78	10.59	11.18	11.60	10.16	10.78	10.59	11.18	11.60
4H	2H	7.29	8.04	7.69	8.40	8.77	7.29	8.04	7.69	8.40	8.77
	3H	7.72	8.35	8.14	8.74	9.16	7.72	8.35	8.14	8.74	9.16
	4H	8.61	9.15	9.04	9.57	10.02	8.61	9.15	9.04	9.57	10.02
	6H	9.80	10.28	10.28	10.74	11.19	9.80	10.28	10.28	10.74	11.19
	8H	10.50	10.94	10.99	11.40	11.88	10.50	10.94	10.99	11.40	11.88
	12H	11.29	11.70	11.78	12.15	12.67	11.29	11.70	11.78	12.15	12.67
8H	4H	8.92	9.37	9.41	9.83	10.30	8.92	9.37	9.41	9.83	10.30
	6H	10.41	10.77	10.92	11.26	11.77	10.41	10.77	10.92	11.26	11.77
	8H	11.34	11.64	11.87	12.16	12.66	11.34	11.64	11.87	12.16	12.66
	12H	12.36	12.58	12.90	13.10	13.63	12.36	12.58	12.90	13.10	13.63
12H	4H	9.02	9.43	9.51	9.88	10.40	9.02	9.43	9.51	9.88	10.40
	6H	10.65	10.95	11.18	11.47	11.97	10.65	10.95	11.18	11.47	11.97
	8H	11.63	11.86	12.17	12.37	12.90	11.63	11.86	12.17	12.37	12.90
Variation with the observer position at spacings:											
S = 1.0H		4.9/-3.3					4.9/-3.3				
S = 1.5H		5.8/-2.4					5.8/-2.4				
S = 2.0H		6.5/-1.4					6.5/-1.4				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-4.8					-4.8				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fa

LampCAT: modulo led 32W 30K irc 90

Ballast type: led driver 900mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2880

Number of Lamps: 1

Power (W): 36.1600

Lamp flux(lm): 3200.0

PF: 0.9800

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2253.78, Efficiency(%): 70.43% , Luminous Efficacy(lm/W): 62.33

Central intensity(cd): 5689.252, Maximum intensity(cd): 5689.252

Angle of maximum intensity: C=0.0 γ =0.0

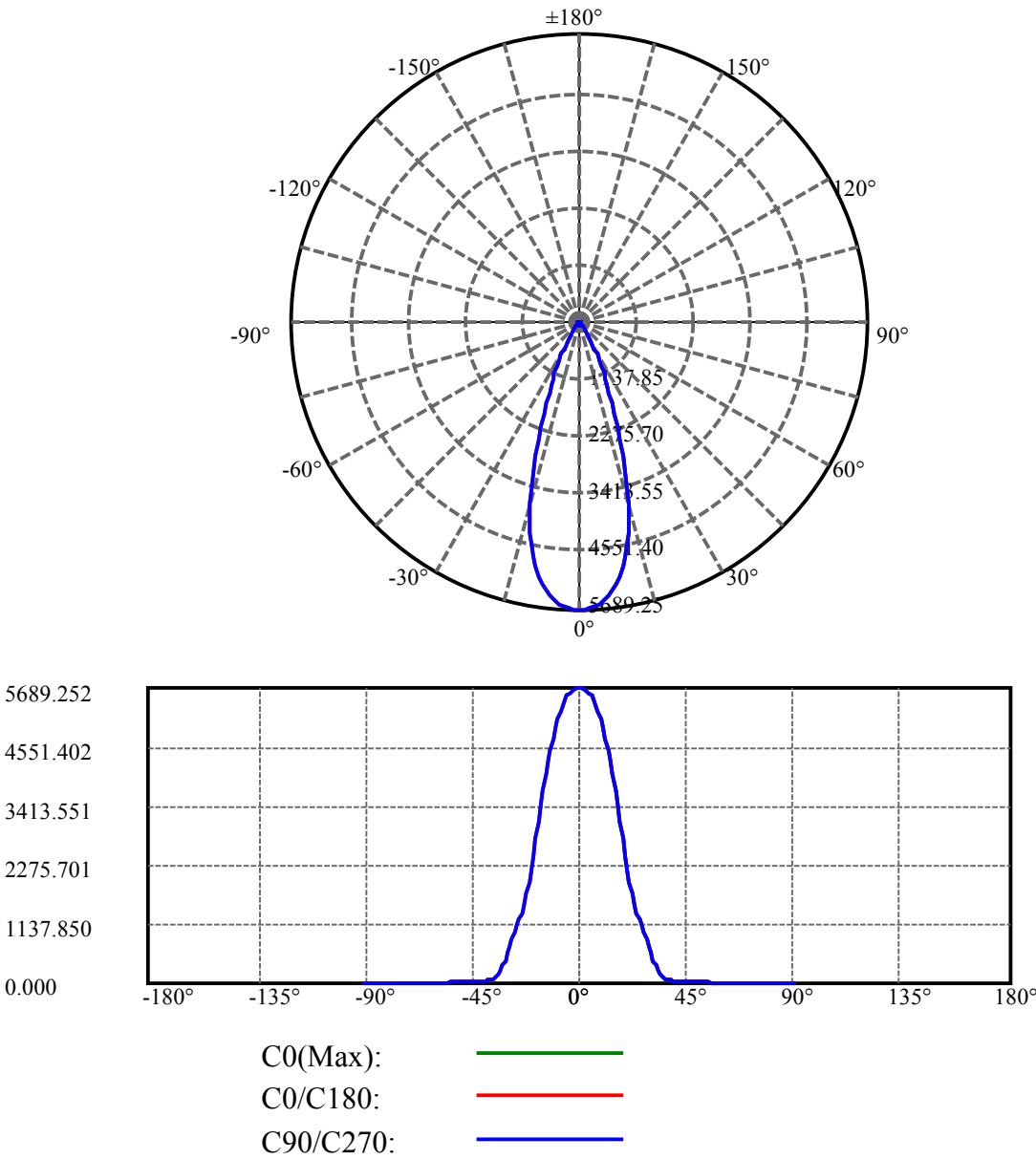
Beam angle of C0 plane : 35.60

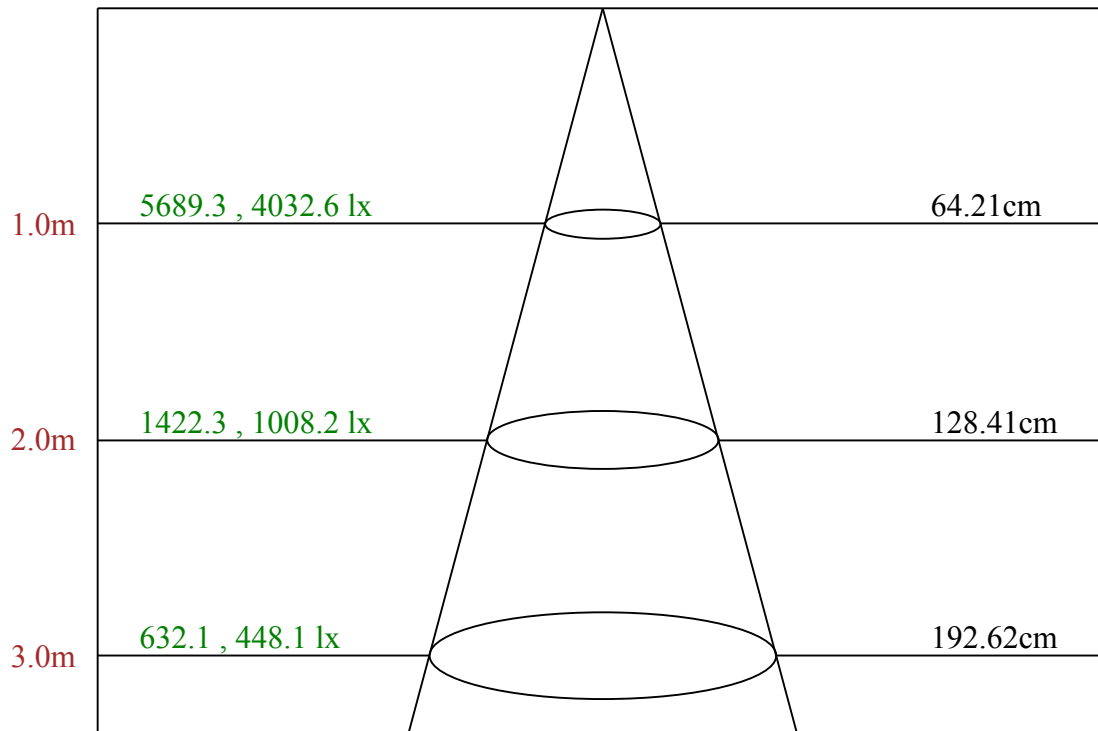
Aveage BeamAngle(IEC 61341):35.60

Equipment: equipamento lumini
Temperature(°C): 25.5

Date: 18/09/2024
Humidity(%): 55.0%

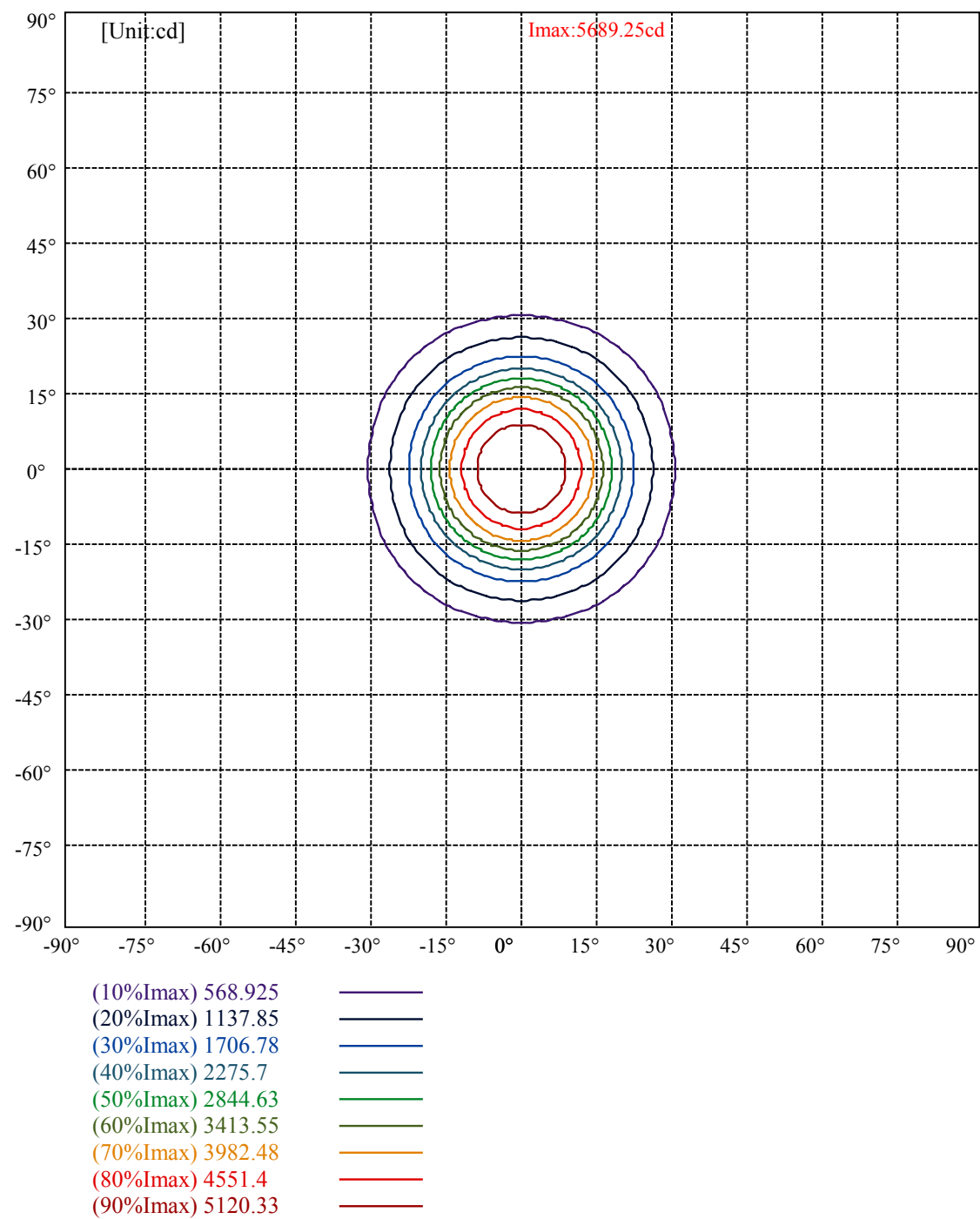
Operator: 01
Distance(m): 6.90





Max , Ave

Beam angle of C0 plane 35.60



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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	2904	2270	1763	1527	1333	1260	1589	2401	4525
C45	2904	2270	1763	1527	1333	1260	1589	2401	4525
C90	2904	2270	1763	1527	1333	1260	1589	2401	4525

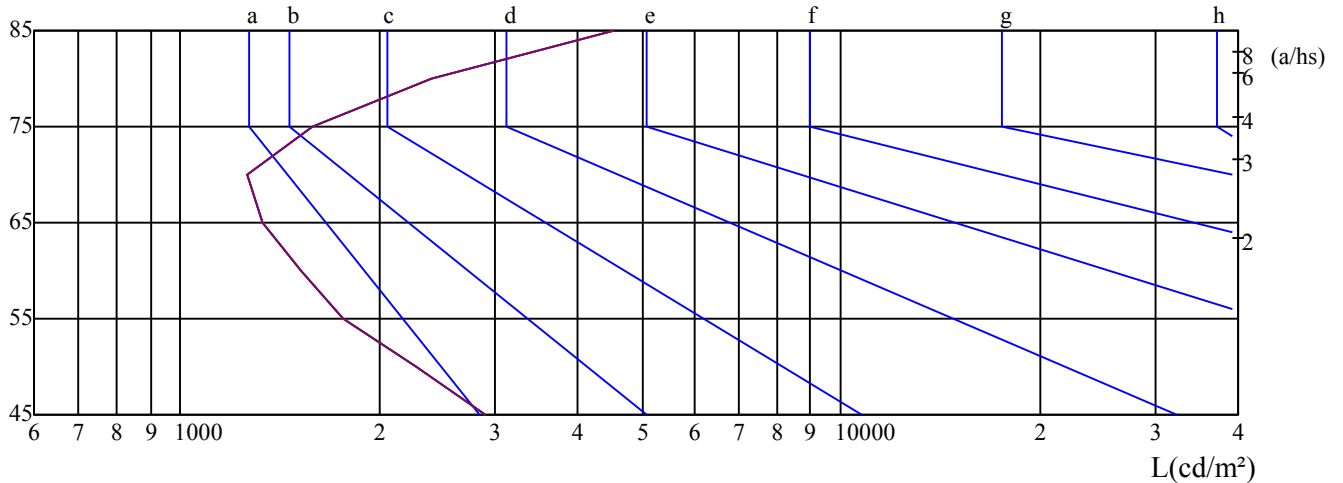
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1333	1333	1333	1589	1589	1589	4525	4525	4525

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: 18/09/2024
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	8.72	9.64	9.08	9.95	10.27	8.72	9.64	9.08	9.95	10.27
	3H	8.91	9.73	9.30	10.07	10.41	8.91	9.73	9.30	10.07	10.41
	4H	9.13	9.89	9.53	10.24	10.61	9.13	9.89	9.53	10.24	10.61
	6H	9.64	10.33	10.06	10.71	11.11	9.64	10.33	10.06	10.71	11.11
	8H	10.03	10.69	10.45	11.07	11.48	10.03	10.69	10.45	11.07	11.48
	12H	10.57	11.19	11.00	11.59	12.01	10.57	11.19	11.00	11.59	12.01
4H	2H	8.60	9.36	9.00	9.71	10.08	8.60	9.36	9.00	9.71	10.08
	3H	8.91	9.55	9.34	9.94	10.36	8.91	9.55	9.34	9.94	10.36
	4H	9.34	9.89	9.78	10.31	10.76	9.34	9.89	9.78	10.31	10.76
	6H	10.09	10.57	10.56	11.03	11.48	10.09	10.57	10.56	11.03	11.48
	8H	10.69	11.14	11.18	11.60	12.07	10.69	11.14	11.18	11.60	12.07
	12H	11.48	11.90	11.97	12.35	12.87	11.48	11.90	11.97	12.35	12.87
8H	4H	9.45	9.90	9.94	10.36	10.83	9.45	9.90	9.94	10.36	10.83
	6H	10.49	10.86	11.00	11.34	11.85	10.49	10.86	11.00	11.34	11.85
	8H	11.36	11.67	11.90	12.19	12.69	11.36	11.67	11.90	12.19	12.69
	12H	12.43	12.66	12.97	13.18	13.70	12.43	12.66	12.97	13.18	13.70
12H	4H	9.50	9.92	10.00	10.37	10.89	9.50	9.92	10.00	10.37	10.89
	6H	10.70	11.00	11.23	11.52	12.02	10.70	11.00	11.23	11.52	12.02
	8H	11.64	11.87	12.19	12.39	12.92	11.64	11.87	12.19	12.39	12.92
Variation with the observer position at spacings:											
S = 1.0H		4.8/-2.9					4.8/-2.9				
S = 1.5H		6.2/-2.3					6.2/-2.3				
S = 2.0H		7.0/-1.9					7.0/-1.9				
Standard tables:		BK4					BK4				
Uncorrected UGR		-6.7					-6.7				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fc

LampCAT: modulo led 32W 30K irc 90

Ballast type: led driver 900mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2890

Number of Lamps: 1

Power (W): 36.2000

Lamp flux(lm): 3200.0

PF: 0.9900

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2498.76, Efficiency(%): 78.09% , Luminous Efficacy(lm/W): 69.03

Central intensity(cd): 26960.780, Maximum intensity(cd): 26960.780

Angle of maximum intensity: C=0.0 γ =0.0

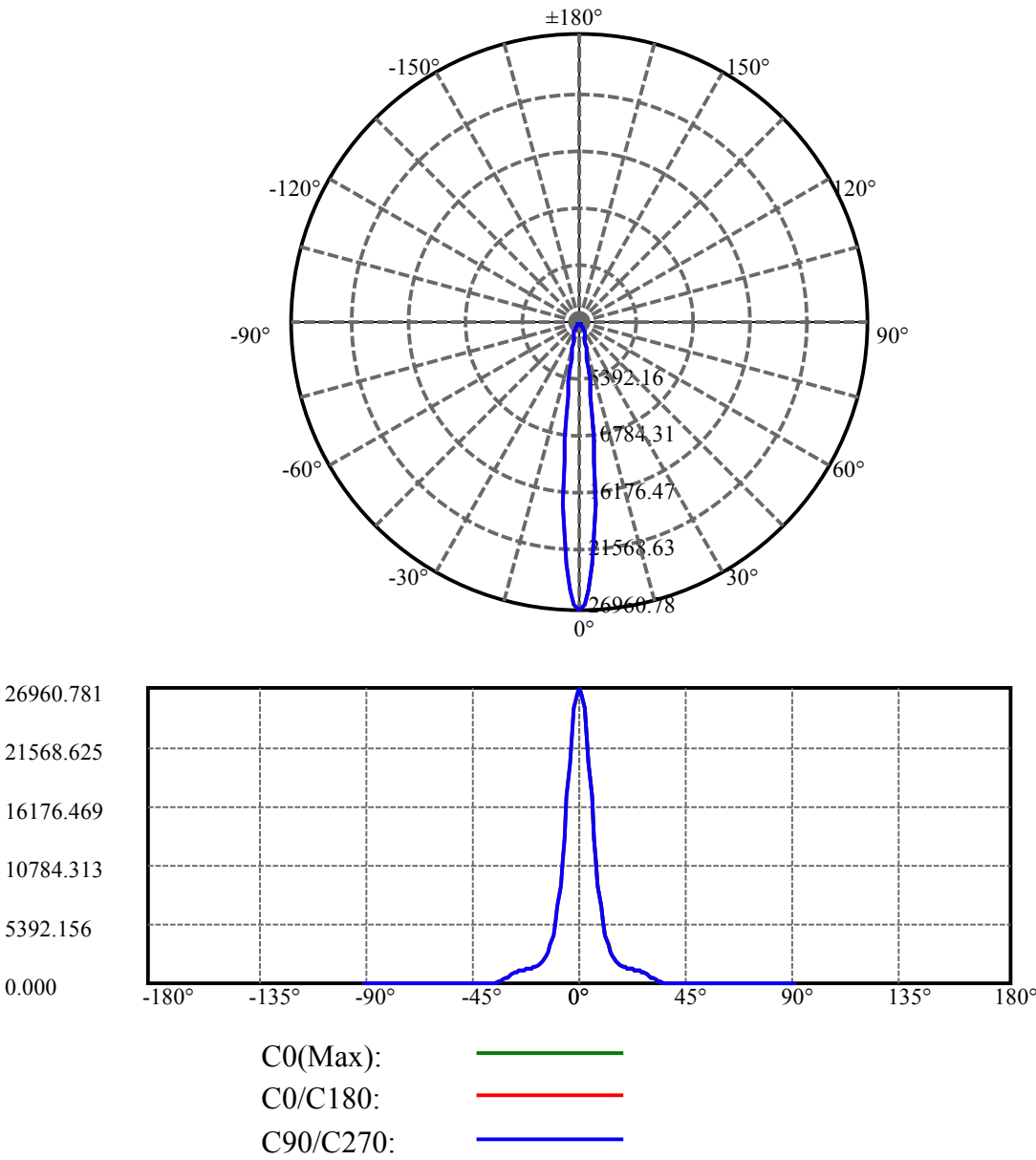
Beam angle of C0 plane : 11.86

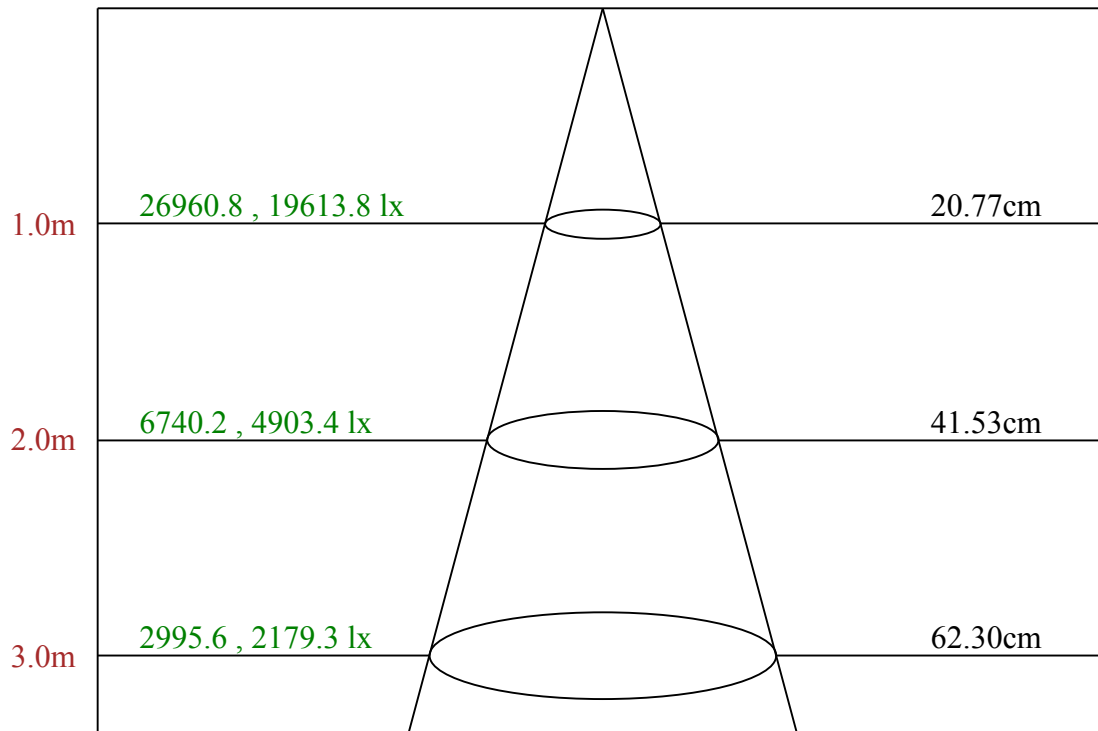
Aveage BeamAngle(IEC 61341):11.86

Equipment: equipamento lumini
Temperature(°C): 25.5

Date: 18/09/2024
Humidity(%): 55.0%

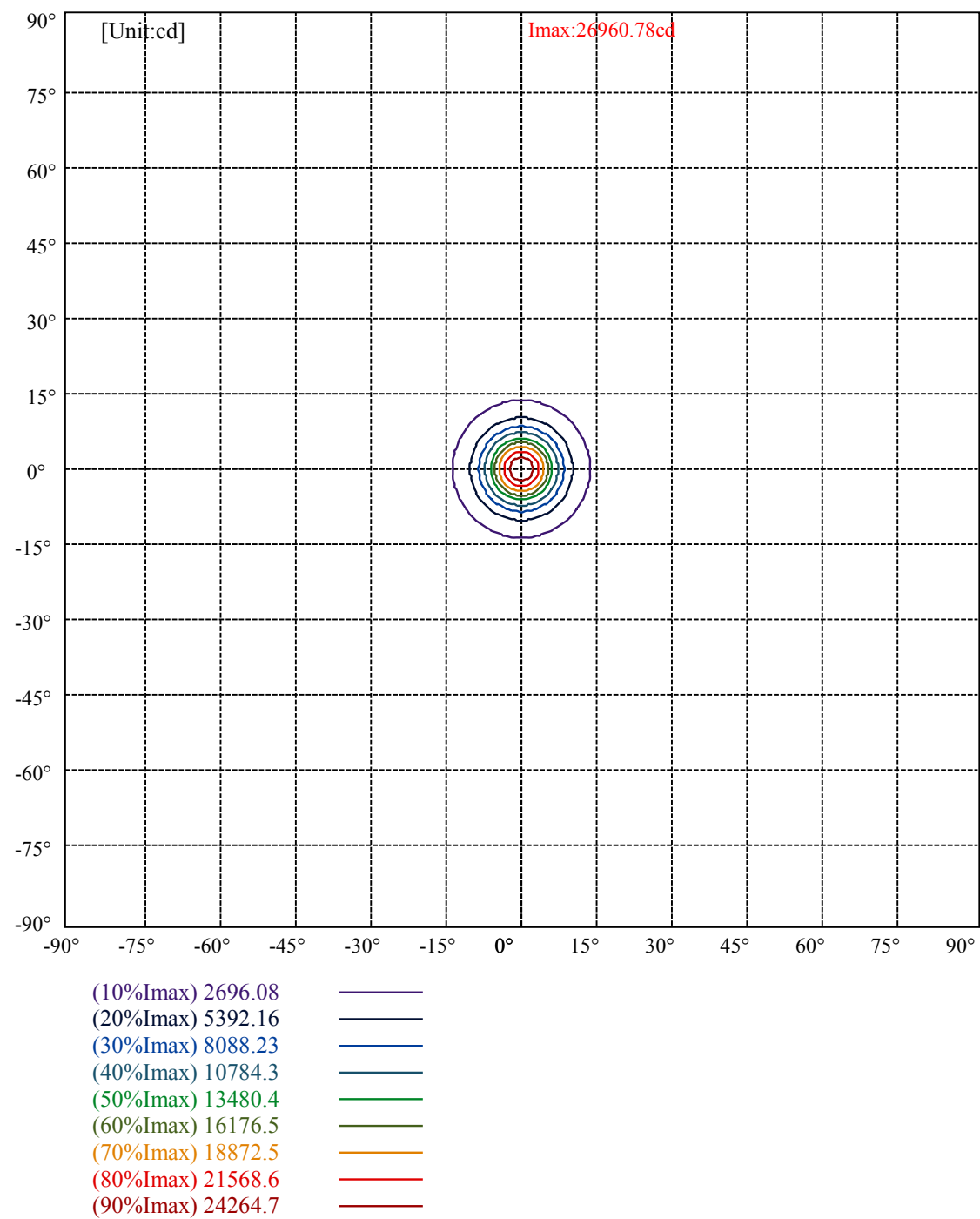
Operator: 01
Distance(m): 6.90





Max , Ave

Beam angle of C0 plane 11.86



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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	1669	1565	1655	1623	1287	1318	1665	2498	4687
C45	1669	1565	1655	1623	1287	1318	1665	2498	4687
C90	1669	1565	1655	1623	1287	1318	1665	2498	4687

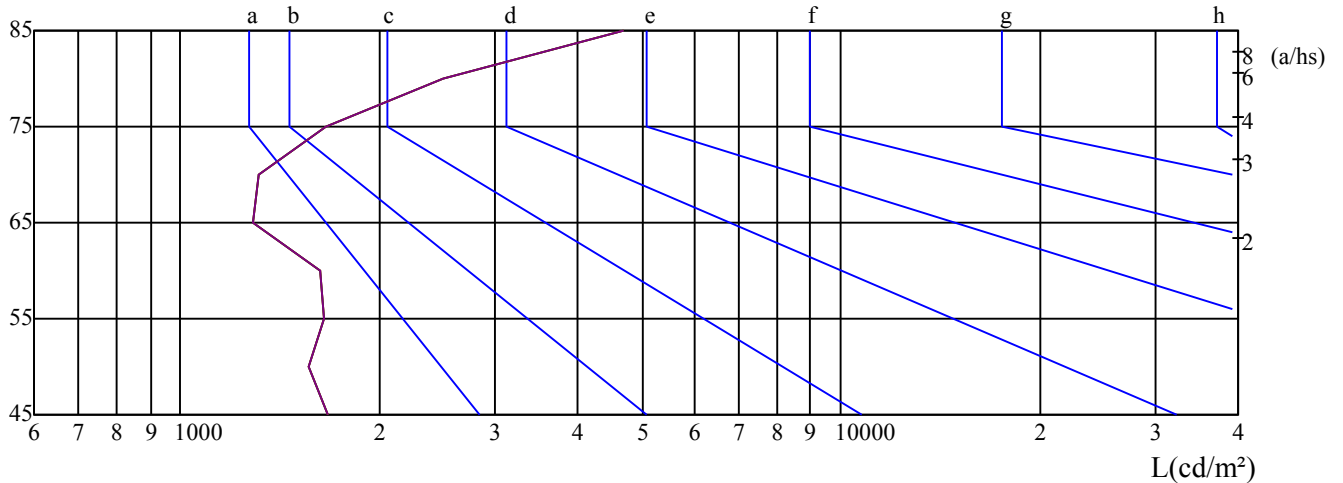
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1287	1287	1287	1665	1665	1665	4687	4687	4687

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: 18/09/2024
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	6.72	7.63	7.09	7.94	8.26	6.72	7.63	7.09	7.94	8.26
	3H	7.14	7.95	7.53	8.29	8.63	7.14	7.95	7.53	8.29	8.63
	4H	7.56	8.31	7.97	8.67	9.04	7.56	8.31	7.97	8.67	9.04
	6H	8.37	9.05	8.79	9.43	9.83	8.37	9.05	8.79	9.43	9.83
	8H	8.93	9.58	9.35	9.96	10.37	8.93	9.58	9.35	9.96	10.37
	12H	9.65	10.27	10.08	10.66	11.08	9.65	10.27	10.08	10.66	11.08
4H	2H	6.72	7.47	7.12	7.82	8.19	6.72	7.47	7.12	7.82	8.19
	3H	7.32	7.95	7.75	8.35	8.77	7.32	7.95	7.75	8.35	8.77
	4H	8.01	8.56	8.45	8.98	9.43	8.01	8.56	8.45	8.98	9.43
	6H	9.10	9.58	9.58	10.03	10.49	9.10	9.58	9.58	10.03	10.49
	8H	9.88	10.32	10.36	10.78	11.25	9.88	10.32	10.36	10.78	11.25
	12H	10.84	11.24	11.33	11.70	12.22	10.84	11.24	11.33	11.70	12.22
8H	4H	8.26	8.71	8.75	9.17	9.64	8.26	8.71	8.75	9.17	9.64
	6H	9.68	10.04	10.18	10.52	11.03	9.68	10.04	10.18	10.52	11.03
	8H	10.72	11.02	11.26	11.55	12.04	10.72	11.02	11.26	11.55	12.04
	12H	11.95	12.17	12.49	12.69	13.21	11.95	12.17	12.49	12.69	13.21
12H	4H	8.36	8.76	8.85	9.22	9.74	8.36	8.76	8.85	9.22	9.74
	6H	9.93	10.23	10.47	10.75	11.25	9.93	10.23	10.47	10.75	11.25
	8H	11.06	11.28	11.60	11.80	12.33	11.06	11.28	11.60	11.80	12.33
Variation with the observer position at spacings:											
S = 1.0H		4.2/-2.3					4.2/-2.3				
S = 1.5H		5.2/-2.0					5.2/-2.0				
S = 2.0H		5.7/-1.4					5.7/-1.4				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-5.3					-5.3				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fm

LampCAT: modulo led 32W 30K irc 90

Ballast type: led driver 900mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2880

Number of Lamps: 1

Power (W): 36.1600

Lamp flux(lm): 3200.0

PF: 0.9800

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2343.75, Efficiency(%): 73.24% , Luminous Efficacy(lm/W): 64.82

Central intensity(cd): 10914.400, Maximum intensity(cd): 10914.400

Angle of maximum intensity: C=0.0 γ =0.0

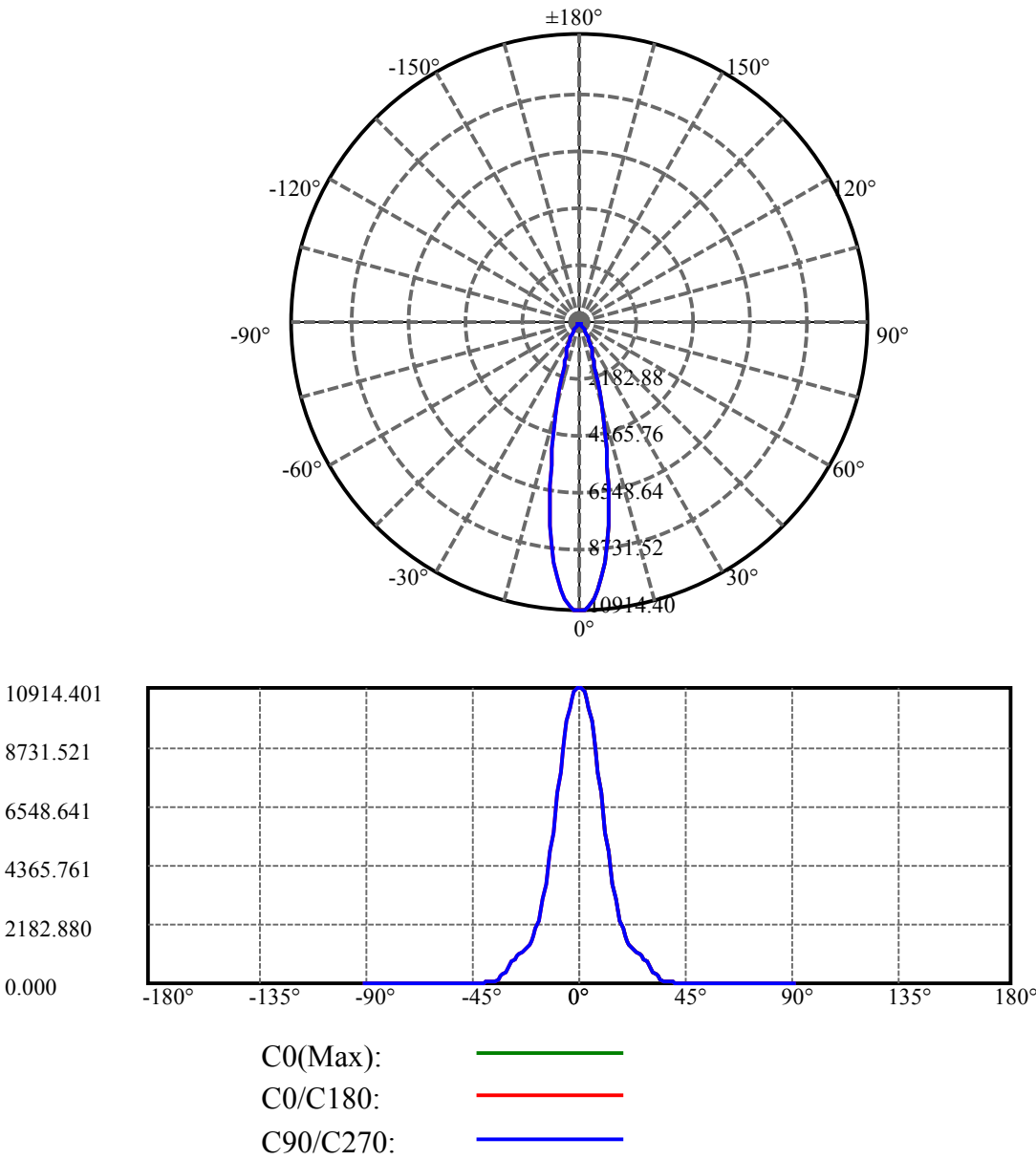
Beam angle of C0 plane : 22.31

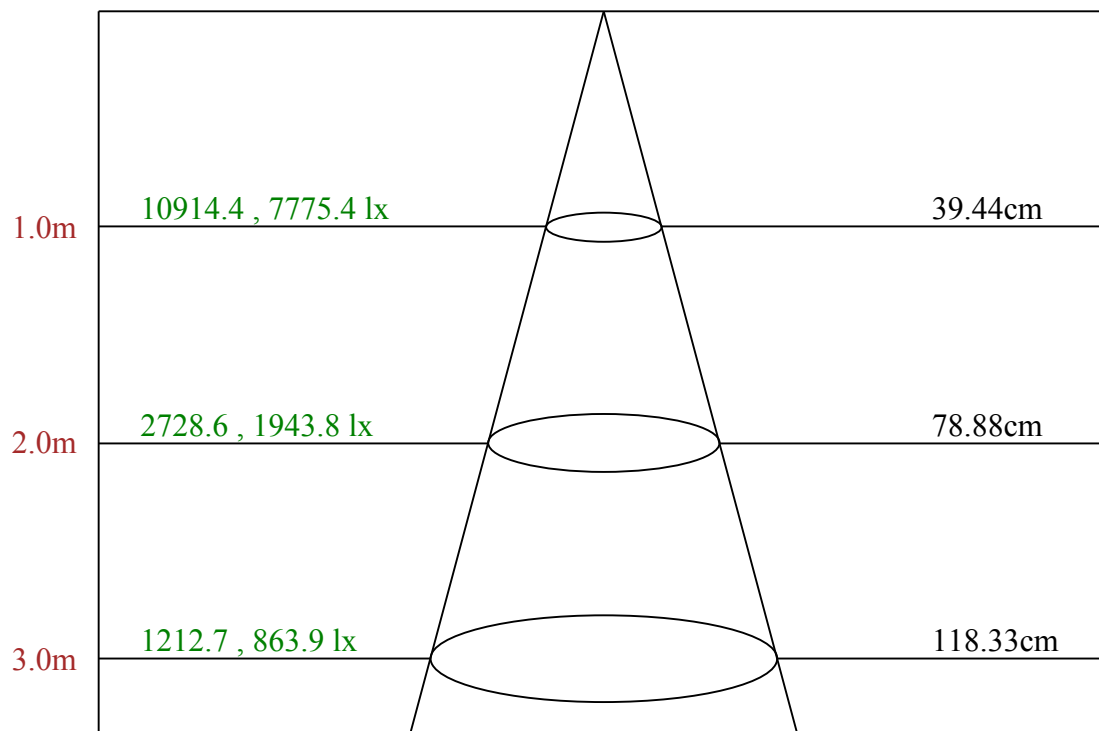
Average BeamAngle(IEC 61341): 22.31

Equipment: equipamento lumini
Temperature(°C): 25.5

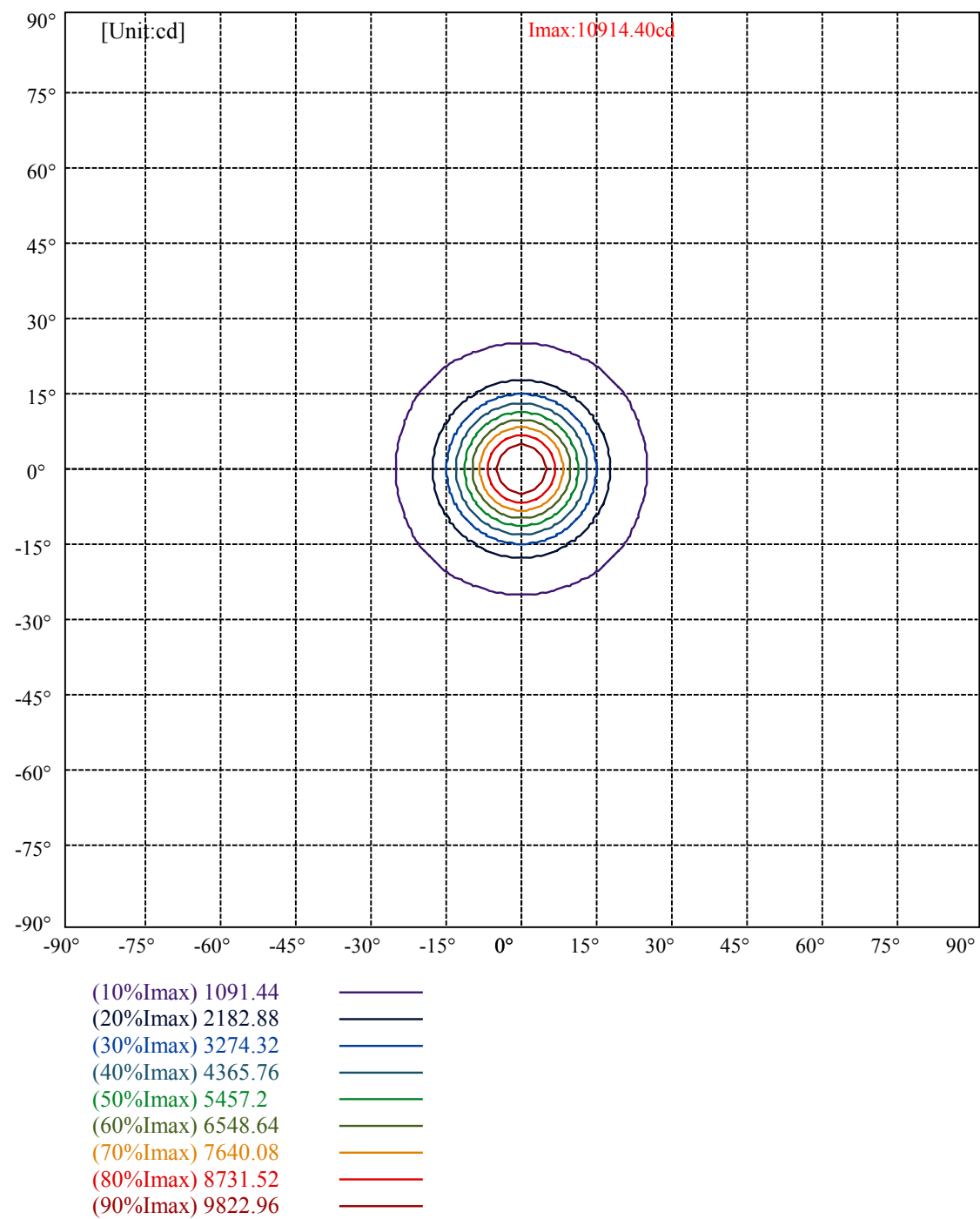
Date: 18/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 22.31



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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	1622	1350	1331	1296	1213	1252	2112	2790	4752
C45	1622	1350	1331	1296	1213	1252	2112	2790	4752
C90	1622	1350	1331	1296	1213	1252	2112	2790	4752

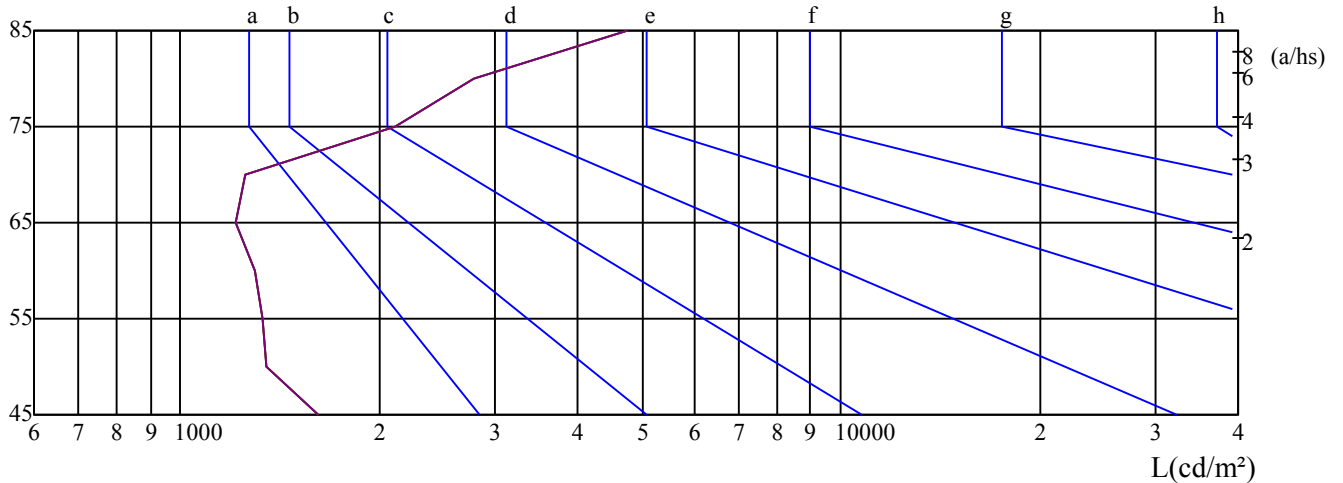
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1213	1213	1213	2112	2112	2112	4752	4752	4752

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: 18/09/2024
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	7.86	8.77	8.22	9.08	9.39	7.86	8.77	8.22	9.08	9.39
	3H	8.10	8.91	8.49	9.25	9.60	8.10	8.91	8.49	9.25	9.60
	4H	8.59	9.34	8.99	9.70	10.06	8.59	9.34	8.99	9.70	10.06
	6H	9.43	10.12	9.85	10.50	10.89	9.43	10.12	9.85	10.50	10.89
	8H	9.91	10.56	10.33	10.95	11.36	9.91	10.56	10.33	10.95	11.36
	12H	10.50	11.12	10.93	11.51	11.93	10.50	11.12	10.93	11.51	11.93
4H	2H	7.73	8.48	8.13	8.83	9.20	7.73	8.48	8.13	8.83	9.20
	3H	8.14	8.77	8.57	9.16	9.58	8.14	8.77	8.57	9.16	9.58
	4H	8.98	9.52	9.42	9.95	10.40	8.98	9.52	9.42	9.95	10.40
	6H	10.12	10.60	10.60	11.06	11.51	10.12	10.60	10.60	11.06	11.51
	8H	10.80	11.24	11.29	11.70	12.18	10.80	11.24	11.29	11.70	12.18
	12H	11.61	12.01	12.10	12.47	12.99	11.61	12.01	12.10	12.47	12.99
8H	4H	9.28	9.72	9.76	10.18	10.66	9.28	9.72	9.76	10.18	10.66
	6H	10.71	11.07	11.22	11.55	12.07	10.71	11.07	11.22	11.55	12.07
	8H	11.62	11.92	12.15	12.44	12.94	11.62	11.92	12.15	12.44	12.94
	12H	12.66	12.89	13.21	13.41	13.93	12.66	12.89	13.21	13.41	13.93
12H	4H	9.37	9.78	9.86	10.23	10.75	9.37	9.78	9.86	10.23	10.75
	6H	10.94	11.24	11.47	11.76	12.26	10.94	11.24	11.47	11.76	12.26
	8H	11.91	12.14	12.45	12.65	13.18	11.91	12.14	12.45	12.65	13.18
Variation with the observer position at spacings:											
S = 1.0H		4.9/-3.3					4.9/-3.3				
S = 1.5H		5.9/-2.4					5.9/-2.4				
S = 2.0H		6.6/-1.5					6.6/-1.5				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-4.4					-4.4				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fc

LampCAT: modulo led 32W 30K irc 90

Ballast type: led driver 900mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2890

Number of Lamps: 1

Power (W): 36.2000

Lamp flux(lm): 3200.0

PF: 0.9900

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2498.76, Efficiency(%): 78.09% , Luminous Efficacy(lm/W): 69.03

Central intensity(cd): 26960.780, Maximum intensity(cd): 26960.780

Angle of maximum intensity: C=0.0 γ =0.0

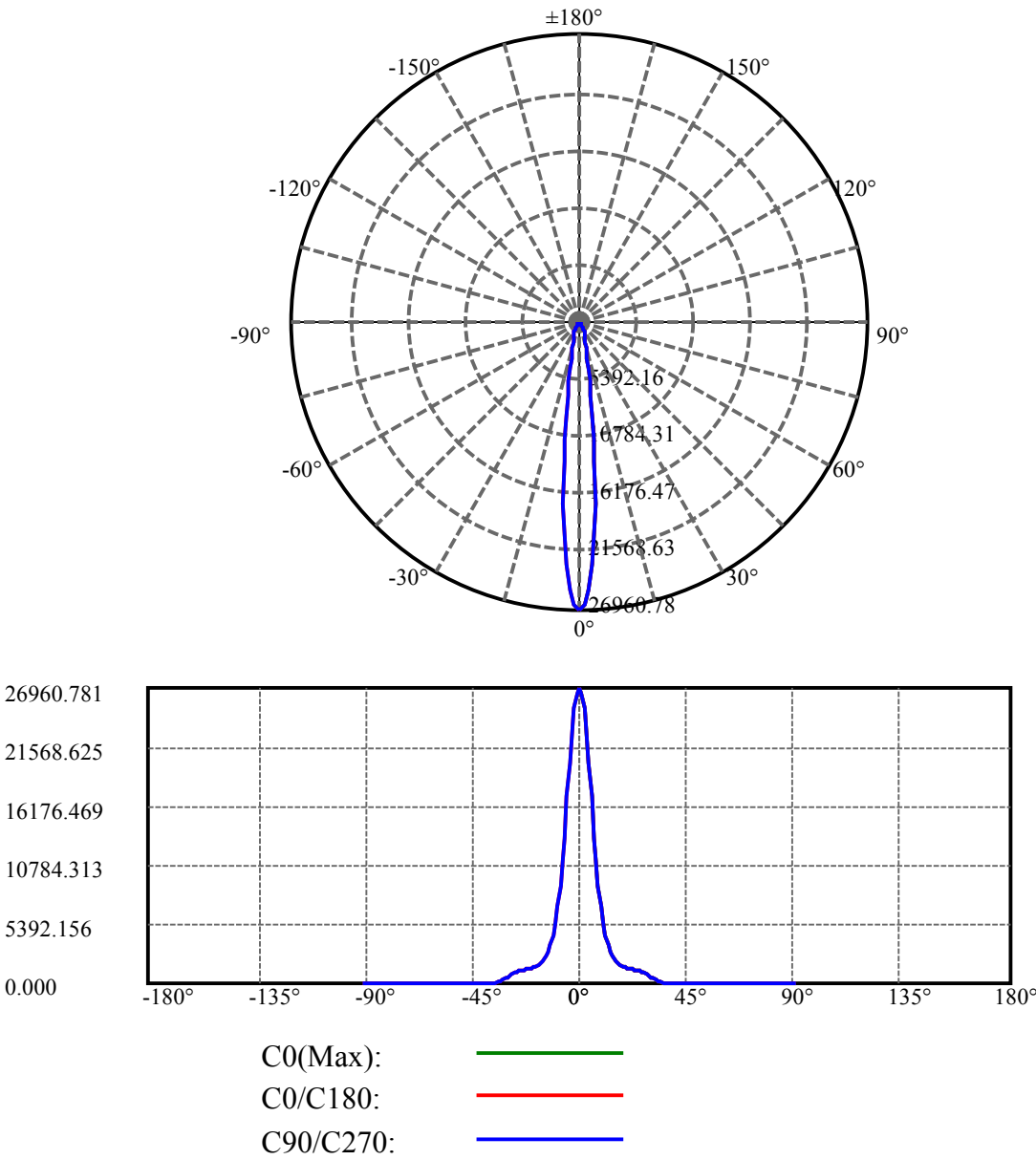
Beam angle of C0 plane : 11.86

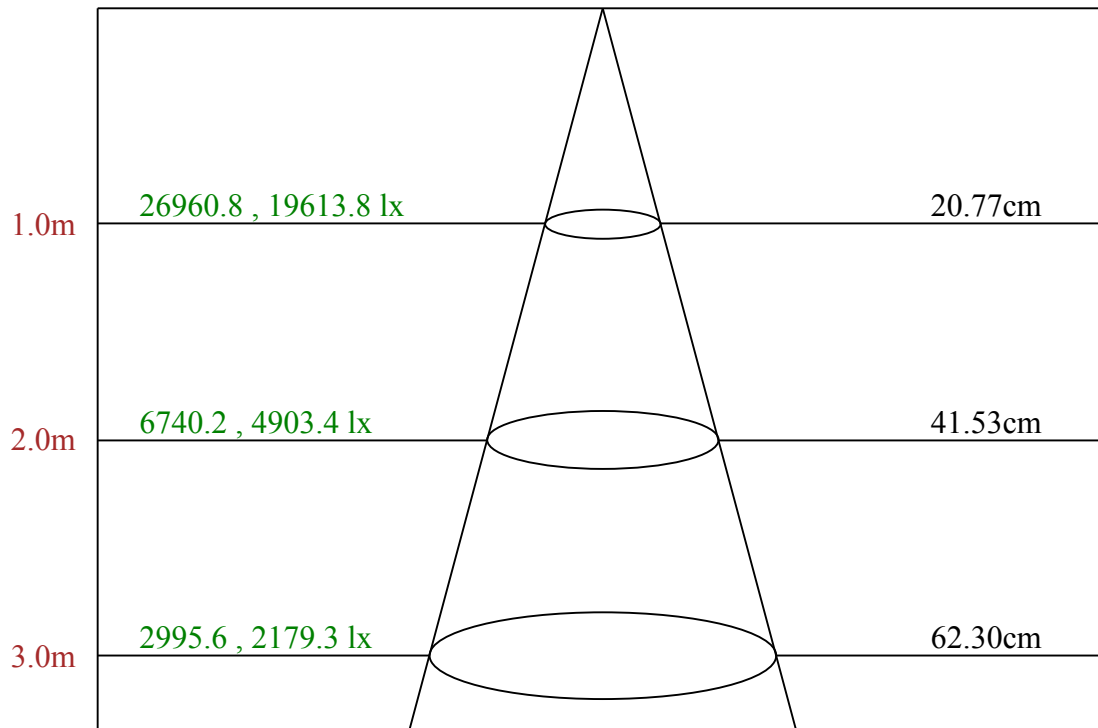
Aveage BeamAngle(IEC 61341):11.86

Equipment: equipamento lumini
Temperature(°C): 25.5

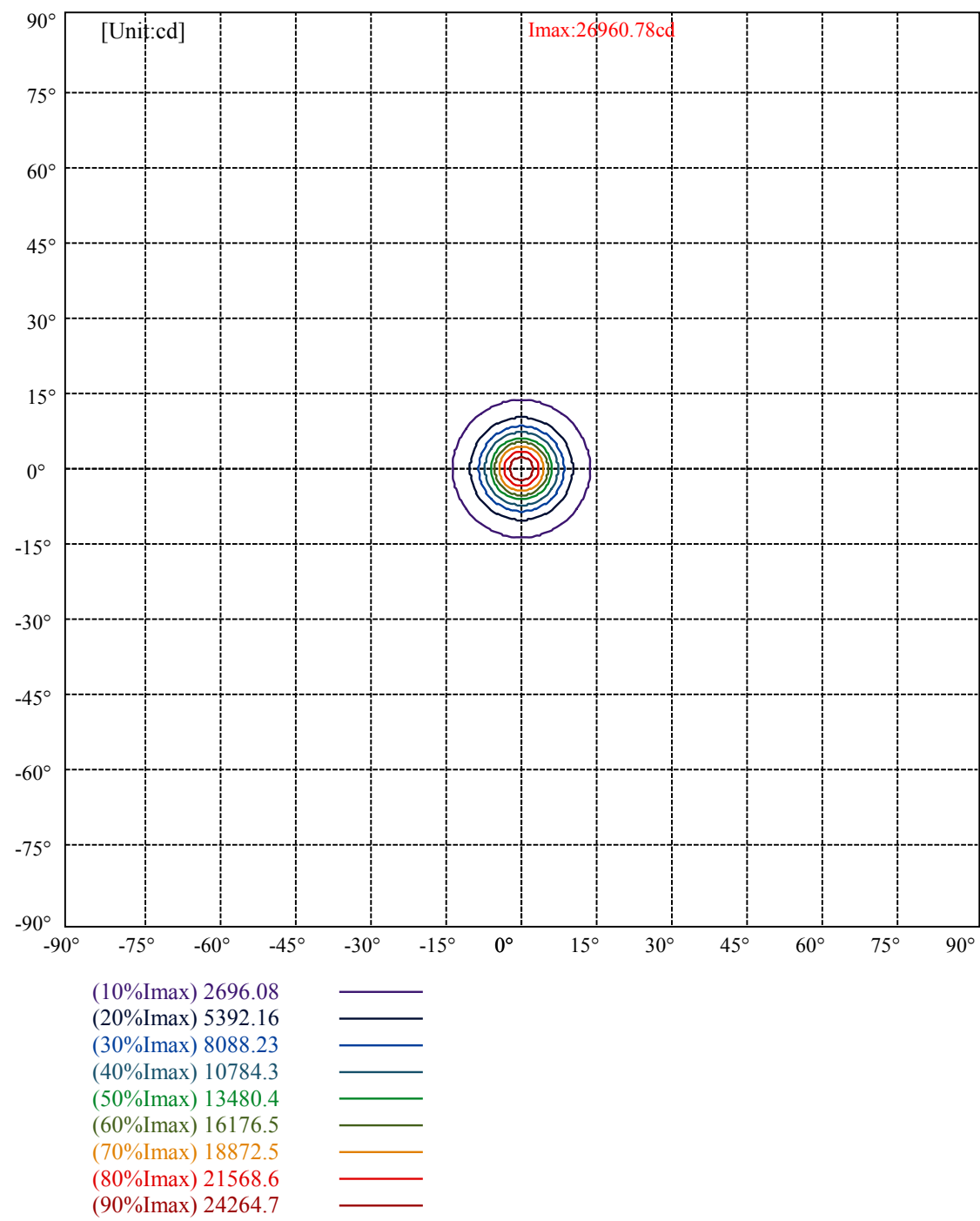
Date: 18/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 11.86



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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	1669	1565	1655	1623	1287	1318	1665	2498	4687
C45	1669	1565	1655	1623	1287	1318	1665	2498	4687
C90	1669	1565	1655	1623	1287	1318	1665	2498	4687

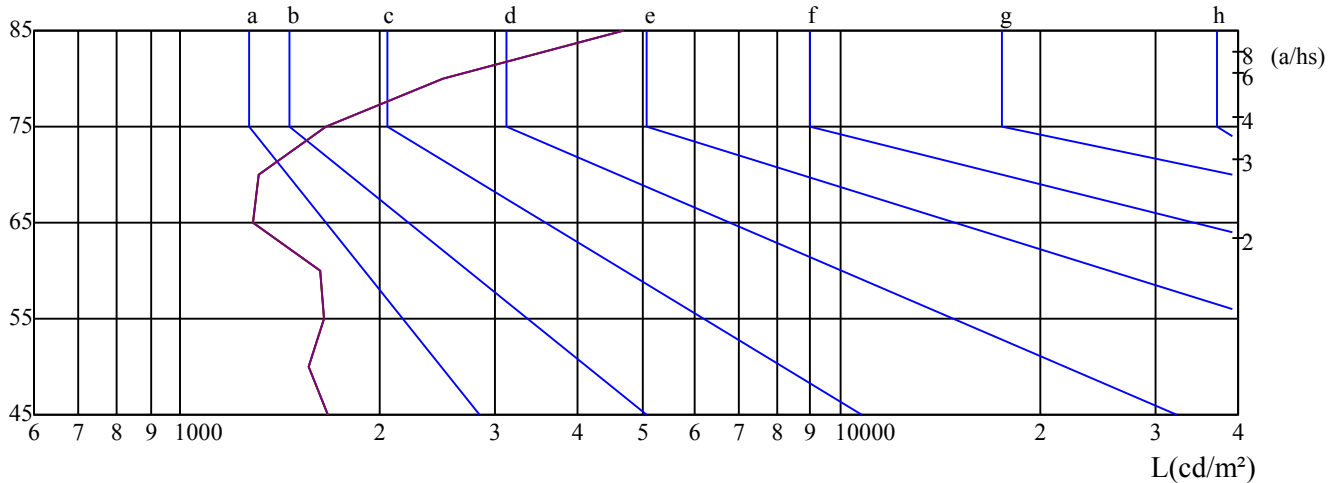
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1287	1287	1287	1665	1665	1665	4687	4687	4687

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: 18/09/2024
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	6.72	7.63	7.09	7.94	8.26	6.72	7.63	7.09	7.94	8.26
	3H	7.14	7.95	7.53	8.29	8.63	7.14	7.95	7.53	8.29	8.63
	4H	7.56	8.31	7.97	8.67	9.04	7.56	8.31	7.97	8.67	9.04
	6H	8.37	9.05	8.79	9.43	9.83	8.37	9.05	8.79	9.43	9.83
	8H	8.93	9.58	9.35	9.96	10.37	8.93	9.58	9.35	9.96	10.37
	12H	9.65	10.27	10.08	10.66	11.08	9.65	10.27	10.08	10.66	11.08
4H	2H	6.72	7.47	7.12	7.82	8.19	6.72	7.47	7.12	7.82	8.19
	3H	7.32	7.95	7.75	8.35	8.77	7.32	7.95	7.75	8.35	8.77
	4H	8.01	8.56	8.45	8.98	9.43	8.01	8.56	8.45	8.98	9.43
	6H	9.10	9.58	9.58	10.03	10.49	9.10	9.58	9.58	10.03	10.49
	8H	9.88	10.32	10.36	10.78	11.25	9.88	10.32	10.36	10.78	11.25
	12H	10.84	11.24	11.33	11.70	12.22	10.84	11.24	11.33	11.70	12.22
8H	4H	8.26	8.71	8.75	9.17	9.64	8.26	8.71	8.75	9.17	9.64
	6H	9.68	10.04	10.18	10.52	11.03	9.68	10.04	10.18	10.52	11.03
	8H	10.72	11.02	11.26	11.55	12.04	10.72	11.02	11.26	11.55	12.04
	12H	11.95	12.17	12.49	12.69	13.21	11.95	12.17	12.49	12.69	13.21
12H	4H	8.36	8.76	8.85	9.22	9.74	8.36	8.76	8.85	9.22	9.74
	6H	9.93	10.23	10.47	10.75	11.25	9.93	10.23	10.47	10.75	11.25
	8H	11.06	11.28	11.60	11.80	12.33	11.06	11.28	11.60	11.80	12.33
Variation with the observer position at spacings:											
S = 1.0H		4.2/-2.3					4.2/-2.3				
S = 1.5H		5.2/-2.0					5.2/-2.0				
S = 2.0H		5.7/-1.4					5.7/-1.4				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-5.3					-5.3				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fm

LampCAT: modulo led 32W 30K irc 90

Ballast type: led driver 900mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2880

Number of Lamps: 1

Power (W): 36.1600

Lamp flux(lm): 3200.0

PF: 0.9800

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2343.75, Efficiency(%): 73.24% , Luminous Efficacy(lm/W): 64.82

Central intensity(cd): 10914.400, Maximum intensity(cd): 10914.400

Angle of maximum intensity: C=0.0 γ =0.0

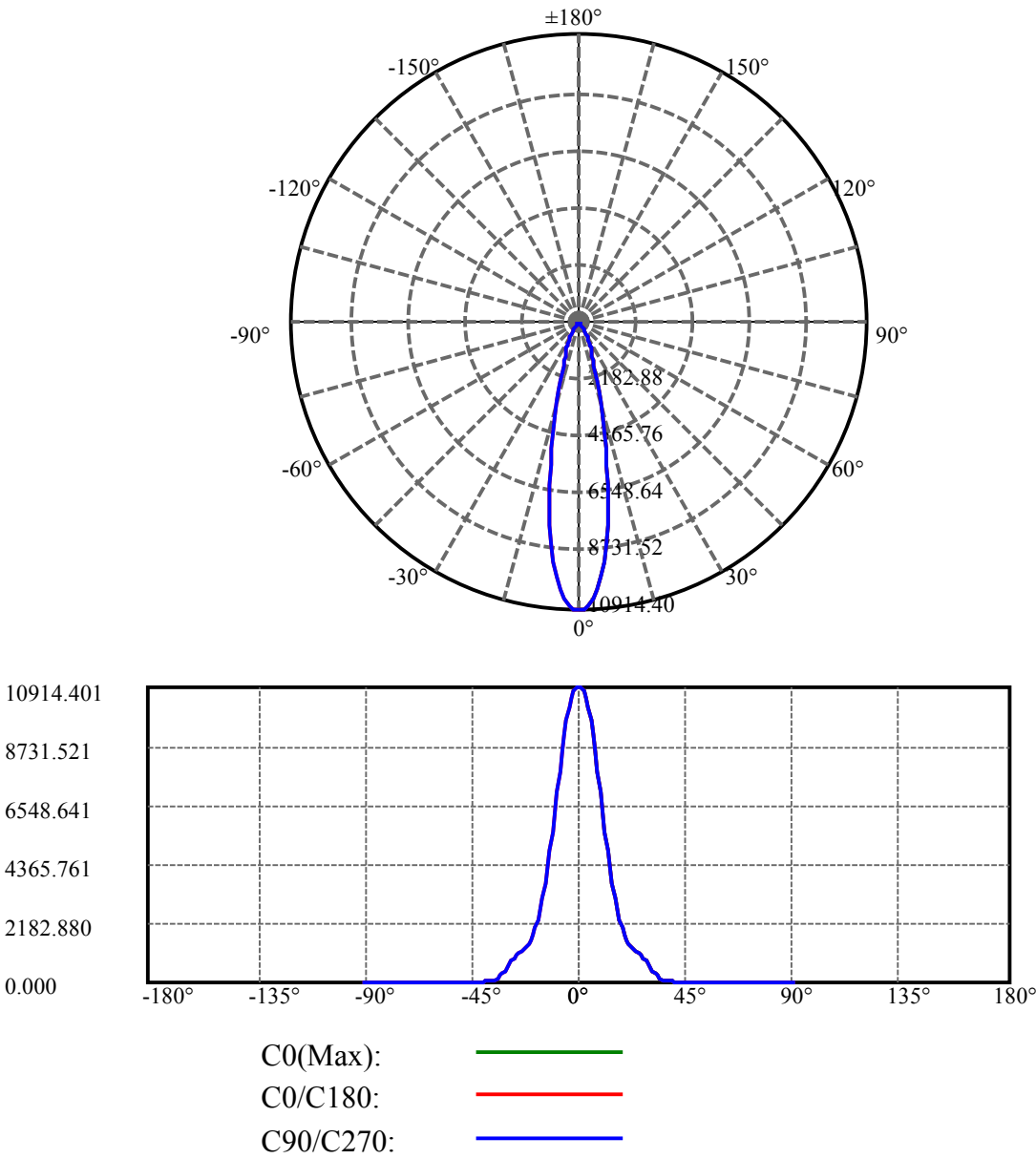
Beam angle of C0 plane : 22.31

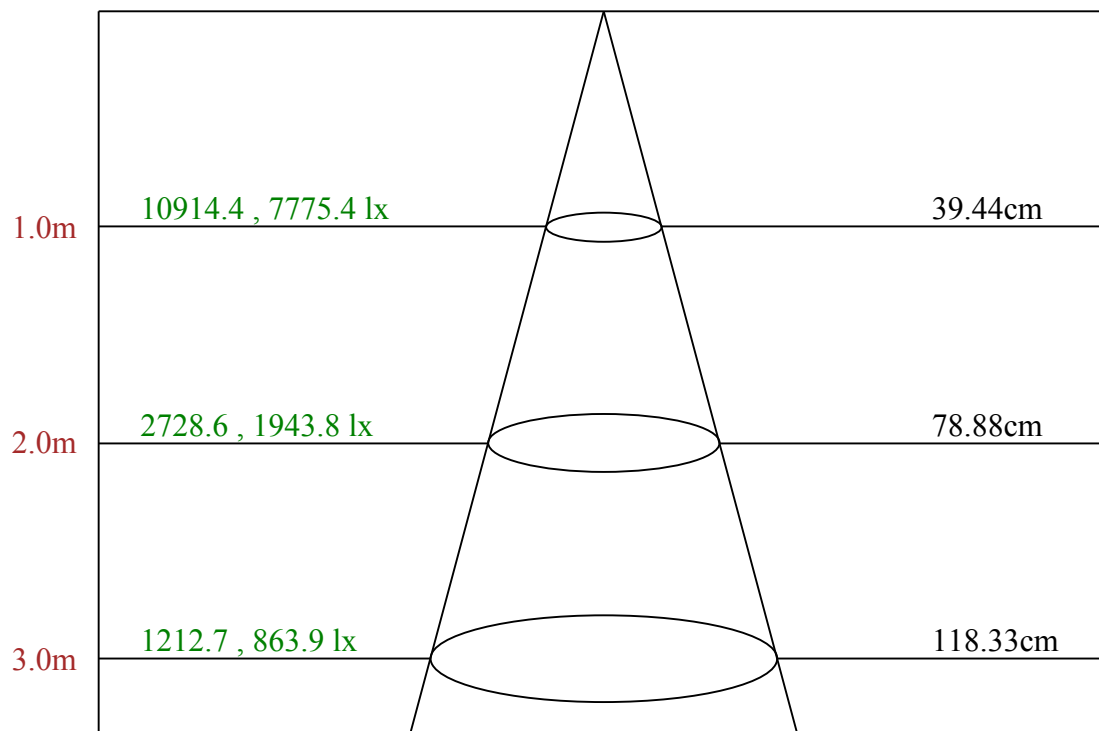
Average BeamAngle(IEC 61341): 22.31

Equipment: equipamento lumini
Temperature(°C): 25.5

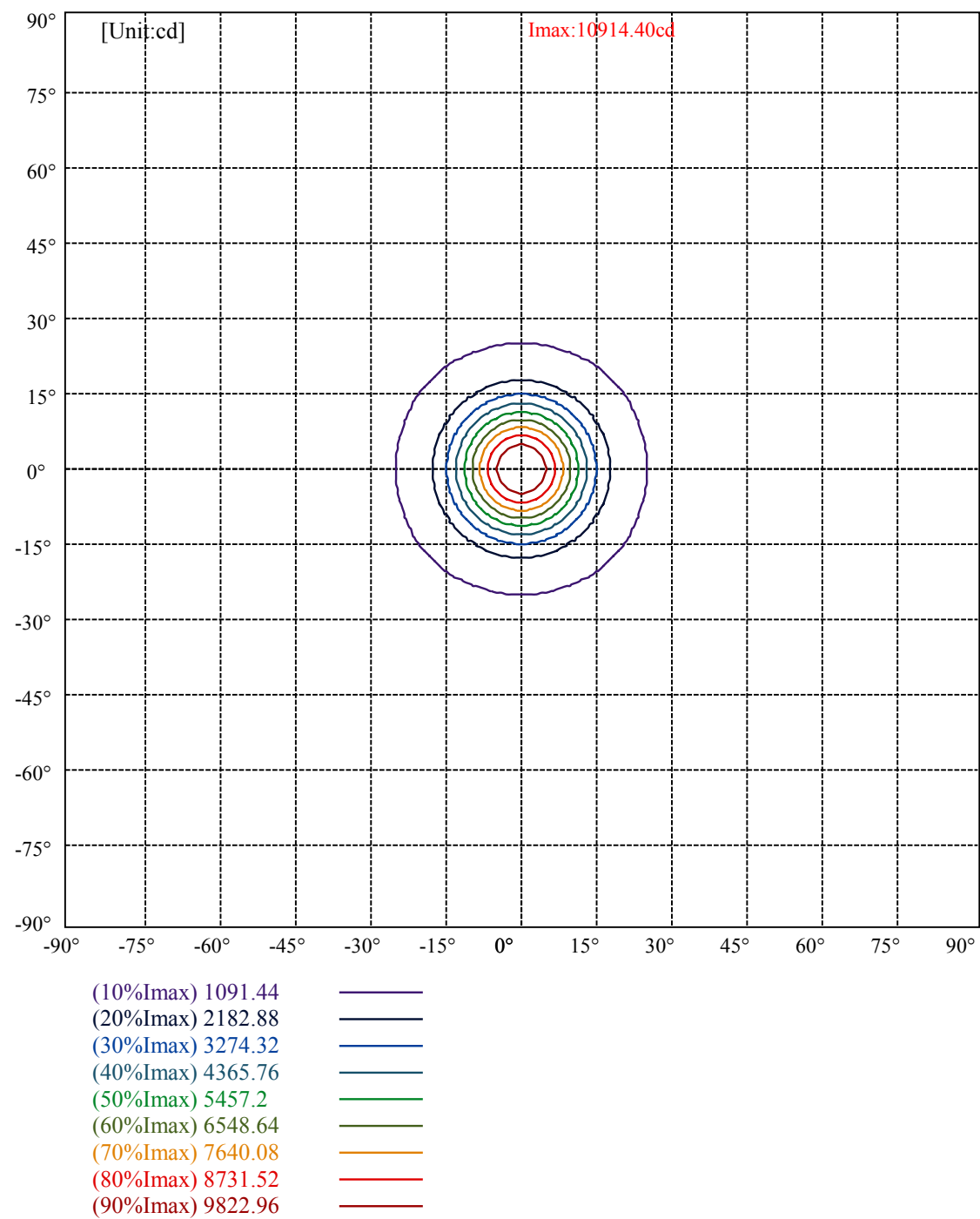
Date: 18/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 22.31



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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	1622	1350	1331	1296	1213	1252	2112	2790	4752
C45	1622	1350	1331	1296	1213	1252	2112	2790	4752
C90	1622	1350	1331	1296	1213	1252	2112	2790	4752

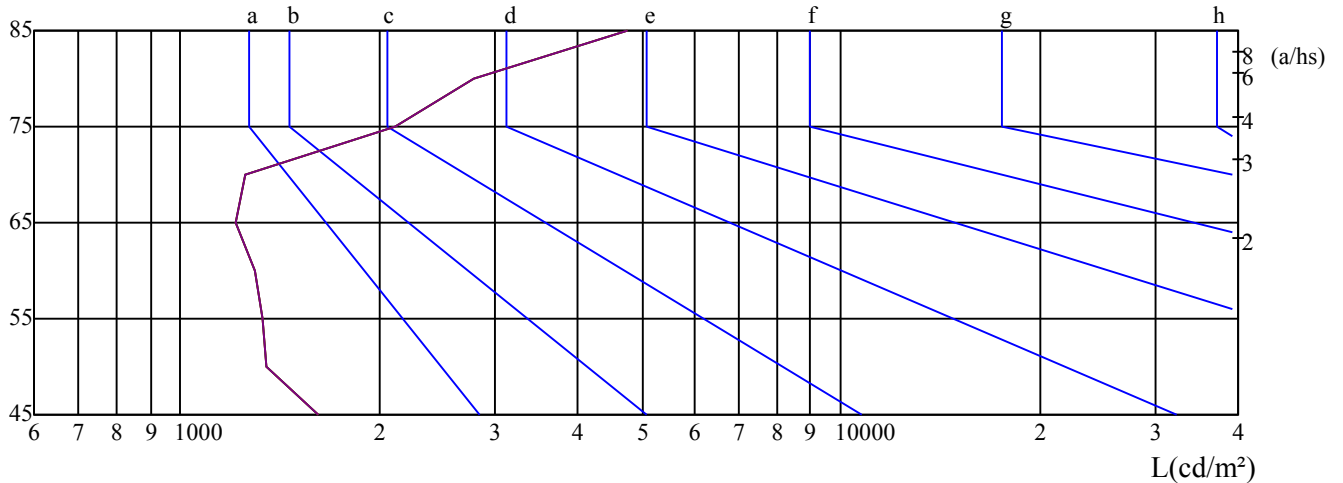
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1213	1213	1213	2112	2112	2112	4752	4752	4752

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: 18/09/2024
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	7.86	8.77	8.22	9.08	9.39	7.86	8.77	8.22	9.08	9.39
	3H	8.10	8.91	8.49	9.25	9.60	8.10	8.91	8.49	9.25	9.60
	4H	8.59	9.34	8.99	9.70	10.06	8.59	9.34	8.99	9.70	10.06
	6H	9.43	10.12	9.85	10.50	10.89	9.43	10.12	9.85	10.50	10.89
	8H	9.91	10.56	10.33	10.95	11.36	9.91	10.56	10.33	10.95	11.36
	12H	10.50	11.12	10.93	11.51	11.93	10.50	11.12	10.93	11.51	11.93
4H	2H	7.73	8.48	8.13	8.83	9.20	7.73	8.48	8.13	8.83	9.20
	3H	8.14	8.77	8.57	9.16	9.58	8.14	8.77	8.57	9.16	9.58
	4H	8.98	9.52	9.42	9.95	10.40	8.98	9.52	9.42	9.95	10.40
	6H	10.12	10.60	10.60	11.06	11.51	10.12	10.60	10.60	11.06	11.51
	8H	10.80	11.24	11.29	11.70	12.18	10.80	11.24	11.29	11.70	12.18
	12H	11.61	12.01	12.10	12.47	12.99	11.61	12.01	12.10	12.47	12.99
8H	4H	9.28	9.72	9.76	10.18	10.66	9.28	9.72	9.76	10.18	10.66
	6H	10.71	11.07	11.22	11.55	12.07	10.71	11.07	11.22	11.55	12.07
	8H	11.62	11.92	12.15	12.44	12.94	11.62	11.92	12.15	12.44	12.94
	12H	12.66	12.89	13.21	13.41	13.93	12.66	12.89	13.21	13.41	13.93
12H	4H	9.37	9.78	9.86	10.23	10.75	9.37	9.78	9.86	10.23	10.75
	6H	10.94	11.24	11.47	11.76	12.26	10.94	11.24	11.47	11.76	12.26
	8H	11.91	12.14	12.45	12.65	13.18	11.91	12.14	12.45	12.65	13.18
Variation with the observer position at spacings:											
S = 1.0H		4.9/-3.3					4.9/-3.3				
S = 1.5H		5.9/-2.4					5.9/-2.4				
S = 2.0H		6.6/-1.5					6.6/-1.5				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		-4.4					-4.4				

依据CIE Publ. 117 计算 UGR, S/H = 0.25



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LumCAT:

Luminaire: downled md r cob e fa

LampCAT: modulo led 32W 30K irc 90

Ballast type: led driver 900mA

Report No:

Voltage(V): 127.0000

Test No:

Current(A): 0.2880

Number of Lamps: 1

Power (W): 36.1600

Lamp flux(lm): 3200.0

PF: 0.9800

Length(mm): 130

Width(mm): 130

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2253.78, Efficiency(%): 70.43% , Luminous Efficacy(lm/W): 62.33

Central intensity(cd): 5689.252, Maximum intensity(cd): 5689.252

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

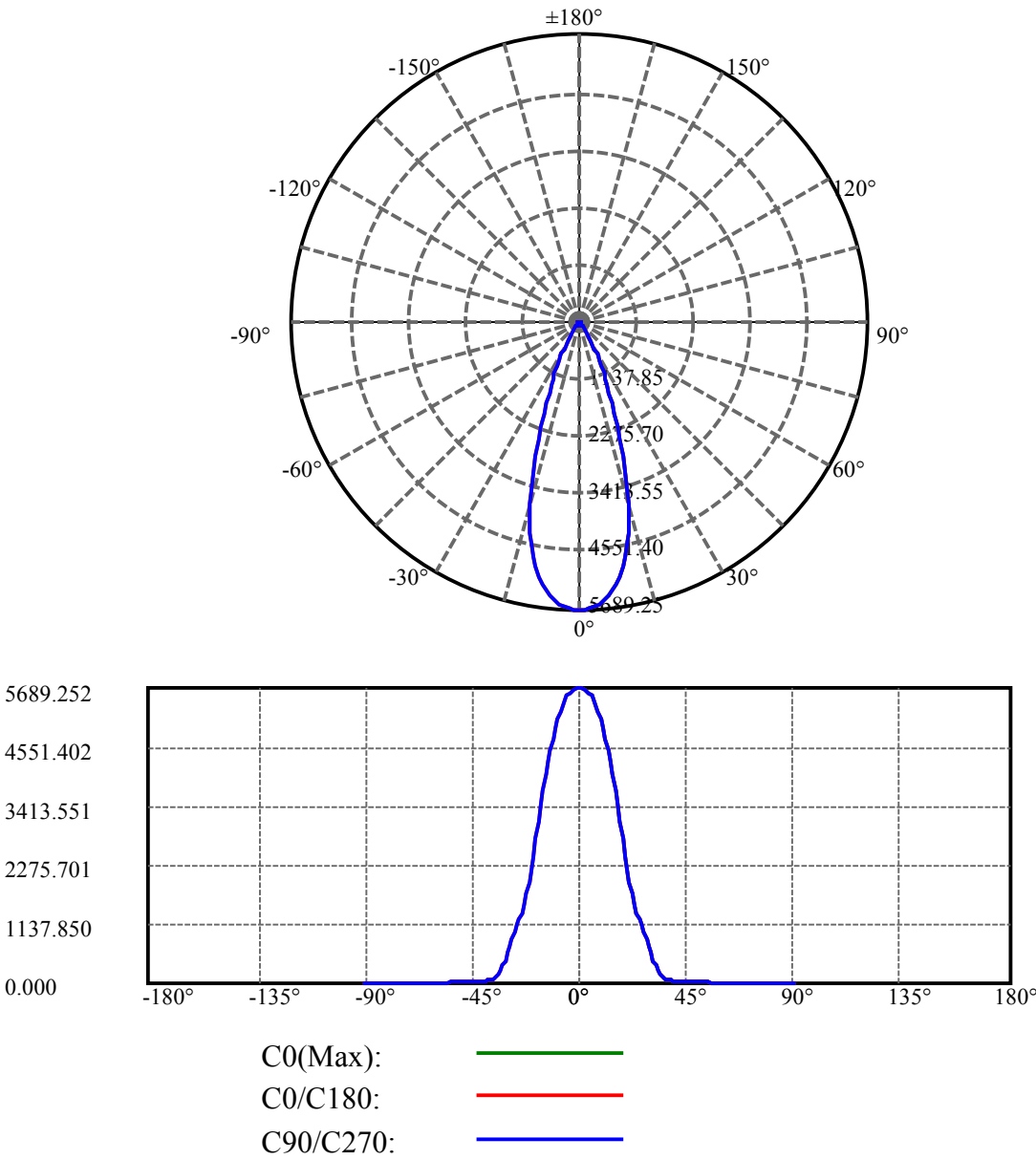
Beam angle of C0 plane : 35.60

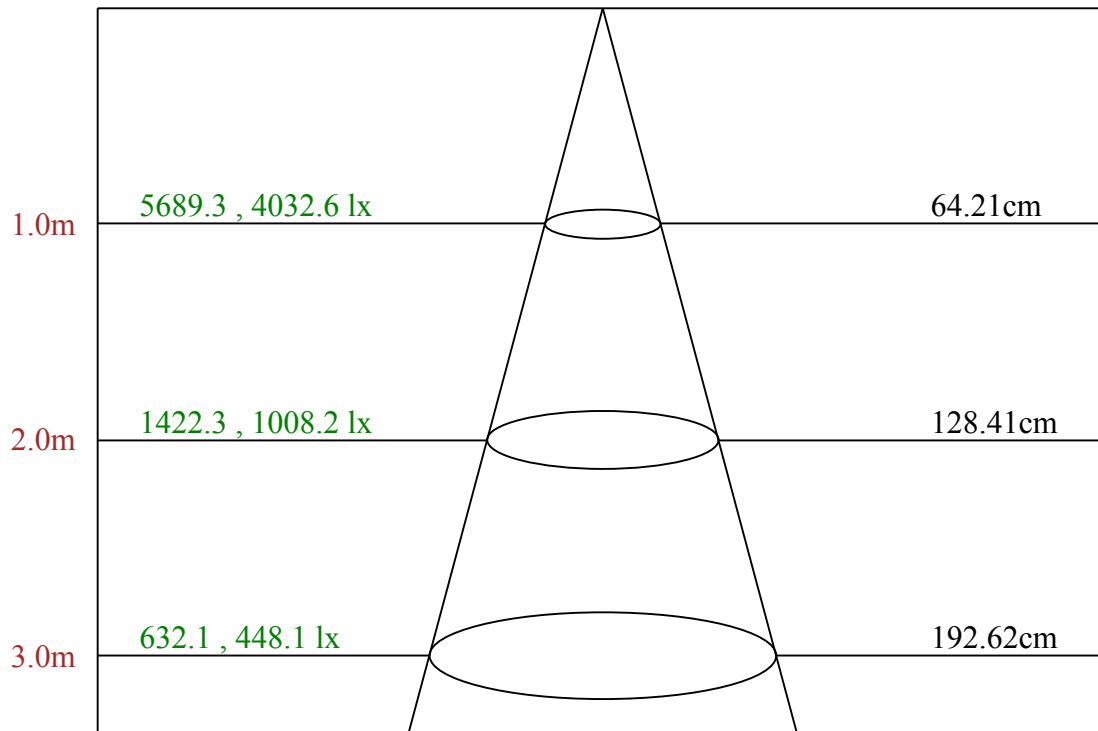
Average BeamAngle(IEC 61341): 35.60

Equipment: equipamento lumini
Temperature(°C): 25.5

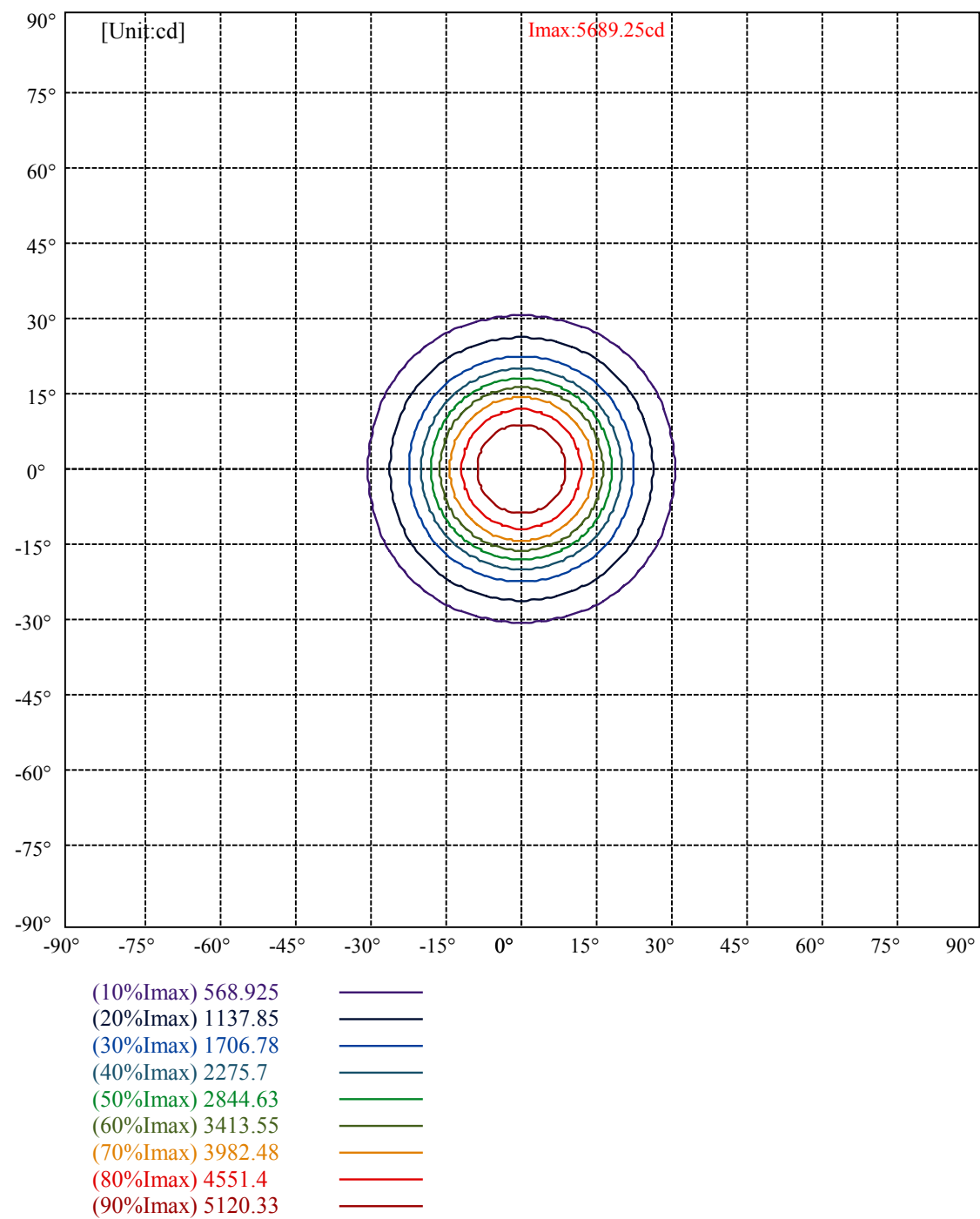
Date: 18/09/2024
Humidity(%): 55.0%

Operator: 01
Distance(m): 6.90





Max , Ave Beam angle of C0 plane 35.60



Luminance Table

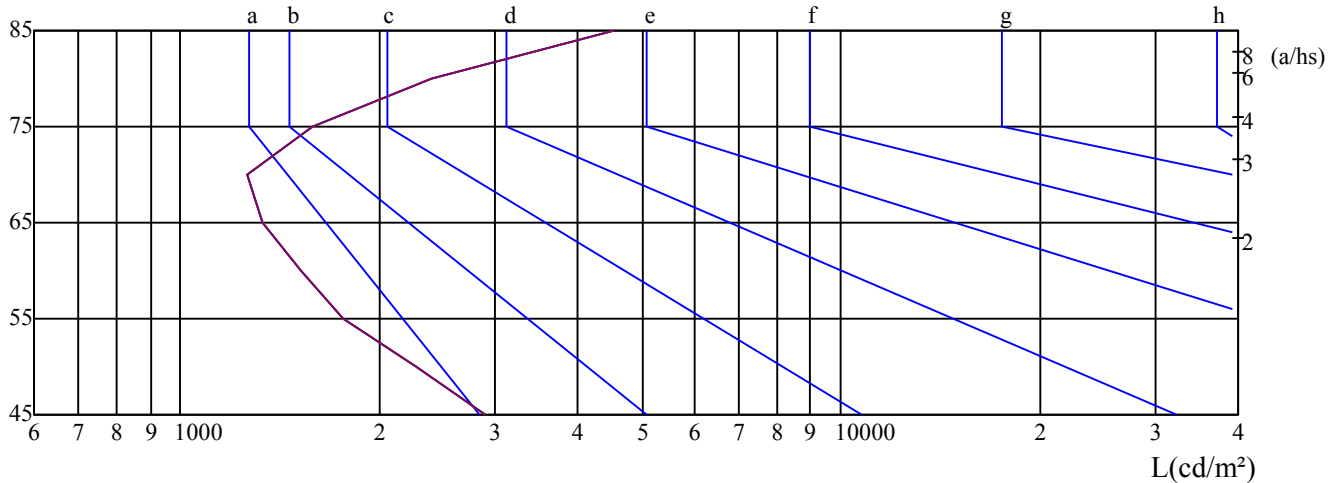
γ	45	50	55	60	65	70	75	80	85
C0	2904	2270	1763	1527	1333	1260	1589	2401	4525
C45	2904	2270	1763	1527	1333	1260	1589	2401	4525
C90	2904	2270	1763	1527	1333	1260	1589	2401	4525

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1333	1333	1333	1589	1589	1589	4525	4525	4525

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 ———

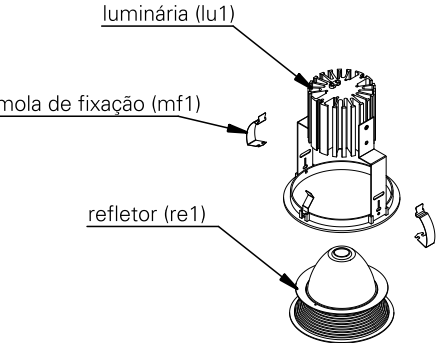
C90 ———

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	8.72	9.64	9.08	9.95	10.27	8.72	9.64	9.08	9.95	10.27
	3H	8.91	9.73	9.30	10.07	10.41	8.91	9.73	9.30	10.07	10.41
	4H	9.13	9.89	9.53	10.24	10.61	9.13	9.89	9.53	10.24	10.61
	6H	9.64	10.33	10.06	10.71	11.11	9.64	10.33	10.06	10.71	11.11
	8H	10.03	10.69	10.45	11.07	11.48	10.03	10.69	10.45	11.07	11.48
	12H	10.57	11.19	11.00	11.59	12.01	10.57	11.19	11.00	11.59	12.01
4H	2H	8.60	9.36	9.00	9.71	10.08	8.60	9.36	9.00	9.71	10.08
	3H	8.91	9.55	9.34	9.94	10.36	8.91	9.55	9.34	9.94	10.36
	4H	9.34	9.89	9.78	10.31	10.76	9.34	9.89	9.78	10.31	10.76
	6H	10.09	10.57	10.56	11.03	11.48	10.09	10.57	10.56	11.03	11.48
	8H	10.69	11.14	11.18	11.60	12.07	10.69	11.14	11.18	11.60	12.07
	12H	11.48	11.90	11.97	12.35	12.87	11.48	11.90	11.97	12.35	12.87
8H	4H	9.45	9.90	9.94	10.36	10.83	9.45	9.90	9.94	10.36	10.83
	6H	10.49	10.86	11.00	11.34	11.85	10.49	10.86	11.00	11.34	11.85
	8H	11.36	11.67	11.90	12.19	12.69	11.36	11.67	11.90	12.19	12.69
	12H	12.43	12.66	12.97	13.18	13.70	12.43	12.66	12.97	13.18	13.70
12H	4H	9.50	9.92	10.00	10.37	10.89	9.50	9.92	10.00	10.37	10.89
	6H	10.70	11.00	11.23	11.52	12.02	10.70	11.00	11.23	11.52	12.02
	8H	11.64	11.87	12.19	12.39	12.92	11.64	11.87	12.19	12.39	12.92
Variation with the observer position at spacings:											
S = 1.0H		4.8/-2.9					4.8/-2.9				
S = 1.5H		6.2/-2.3					6.2/-2.3				
S = 2.0H		7.0/-1.9					7.0/-1.9				
Standard tables:		BK4					BK4				
Uncorrected UGR		-6.7					-6.7				

依据CIE Publ. 117 计算 UGR, S/H = 0.25

downled

downled md r cob e	Ø148mm
downled sm r cob e	Ø95mm
downled sm r dual color e	Ø95mm
downled md r s2 e	Ø149mm
downled sm r s2 e	Ø97mm
downled md r wide s2 e	Ø149mm
downled sm r wide s2 e	Ø97mm
downled sm r-d e	Ø95mm
downled sm r-d dual color e	Ø95mm



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

downled md r cob e - 1,0 kg
downled sm r cob e - 0,5 kg
downled sm r dual color e - 0,5 kg
downled md r e - 1,0 kg
downled sm r e - 0,5 kg
downled sm r-d e - 0,5 kg
downled sm r-d dual color 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

furadeira
serra copo

informações importantes

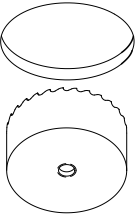
para a instalação, lave as mãos e seque as mãos, use luvas descartáveis.

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

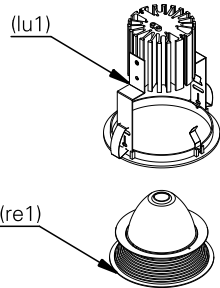
retire a luminária da embalagem com cuidado e apoie-o em uma superfície limpa e seca.

instalação passo a passo

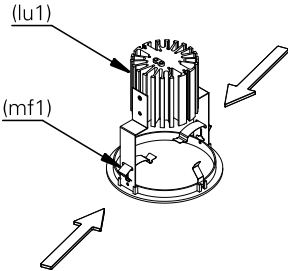
1. faça um nicho no forro conforme o modelo do produto na tabela.



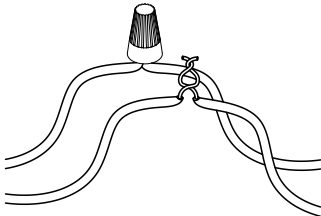
2. retire o refletor (re1) da luminária (lu1) puxando-o para baixo.



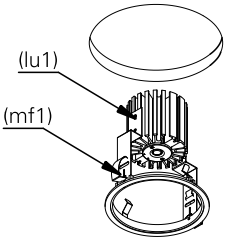
3. pressione as molas de fixação (mf1) para dentro da luminária (lu1).



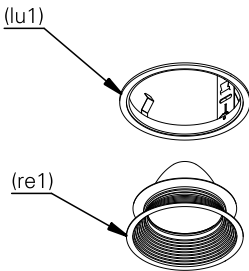
4. faça a ligação do cabo de energia não esquecendo o fio terra.



5. encaixe a luminária no nicho. por dentro da luminária (lu1), pressione as molas de fixação (mf1) para fora de modo a travar a luminária.



6. encaixe o refletor (re1) na luminária (lu1).



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

