

IES Indoor Report

Photometric Filename:148-126_120_127.IES

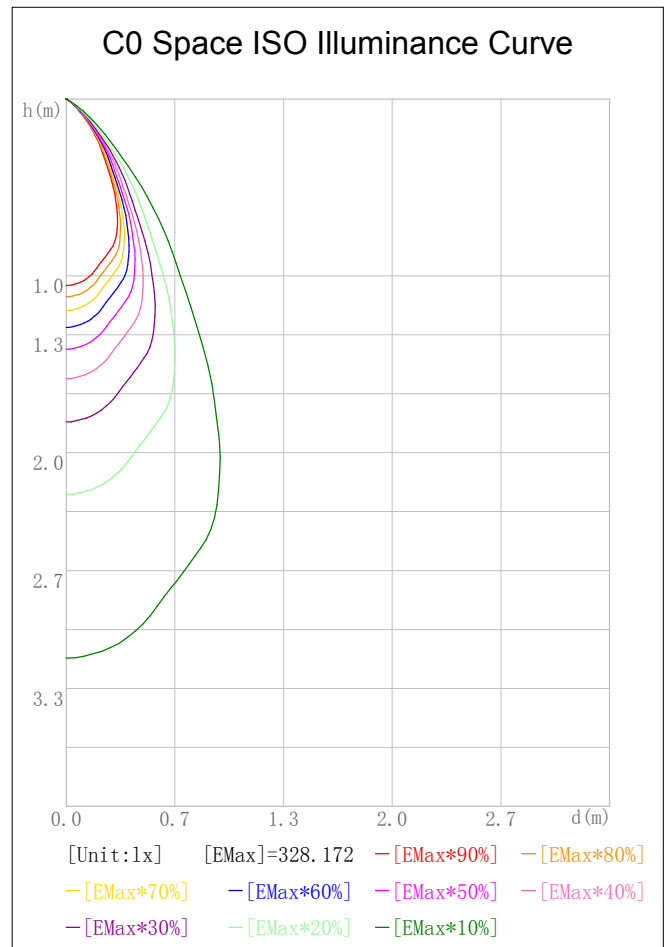
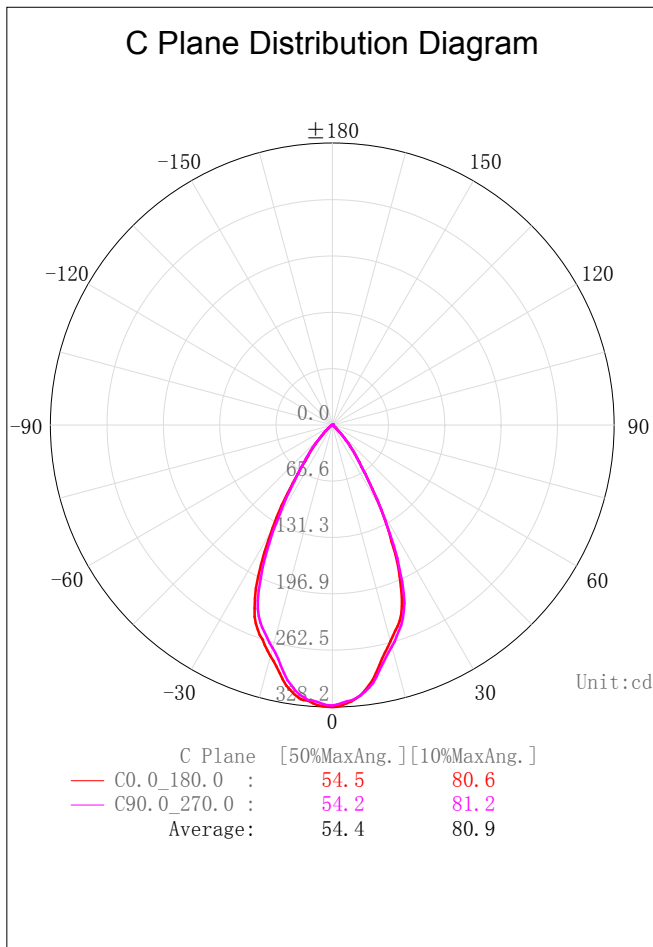
Indoor Luminaire Photometric Data

Description Information

Luminaire Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
Lamp Name: LED MODULE	Lamp Catalog: LED MODULE	Test Date: 2022/07/04
Manufacture: 5	Shld. Ang(°):	Test Machine:GON-2000
Test Lab: Volnic IES	Frequency(Hz):	Lamp CCT(K): Ra:
Lum. Size (W*L*H): 20mm*-20mm*0mm	Lum. Area (m2): 0.000	Lum. W (kg): 0.500
Test System: C, γ	Test Step: C=30.0 γ =1.0	Temp. (°C): 25
		Humidity (%): 68

Character Parameter

Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 247.873	Luminaire Flux(lm): 247.873	Field Angle(10%Imax): 80.6(°)
Rated Power(W):	Luminaire Efficiency: 100.00%	Down Lumens&Percent: 247.873lm 100.00%
Rated Voltage(V): 220	Luminaire EER(lm/W): 75.663	Up Lumens&Percent: -0.000lm 0.00%
Tested Power(W): 3.276	Max. Candela(cd): 328.172	S/MH: C0_a180=0.870 C90_270=0.867
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ =0.0	CIE Type: Semi-Direct
Tested Electrics(V, A, pf): 9.3, 0.350	Beam Angle(50%Imax): 54.5(°)	ErP Φ use(90°): 242.841lm
Lamp Size(W*L*H): 20mm*-20mm*0mm	Left=-28.3°, Right=26.2°	IRF (%): 277.882



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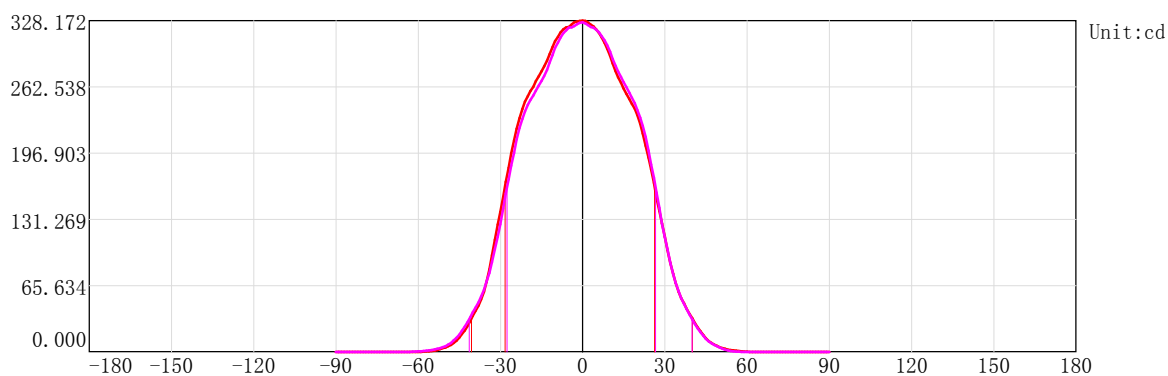
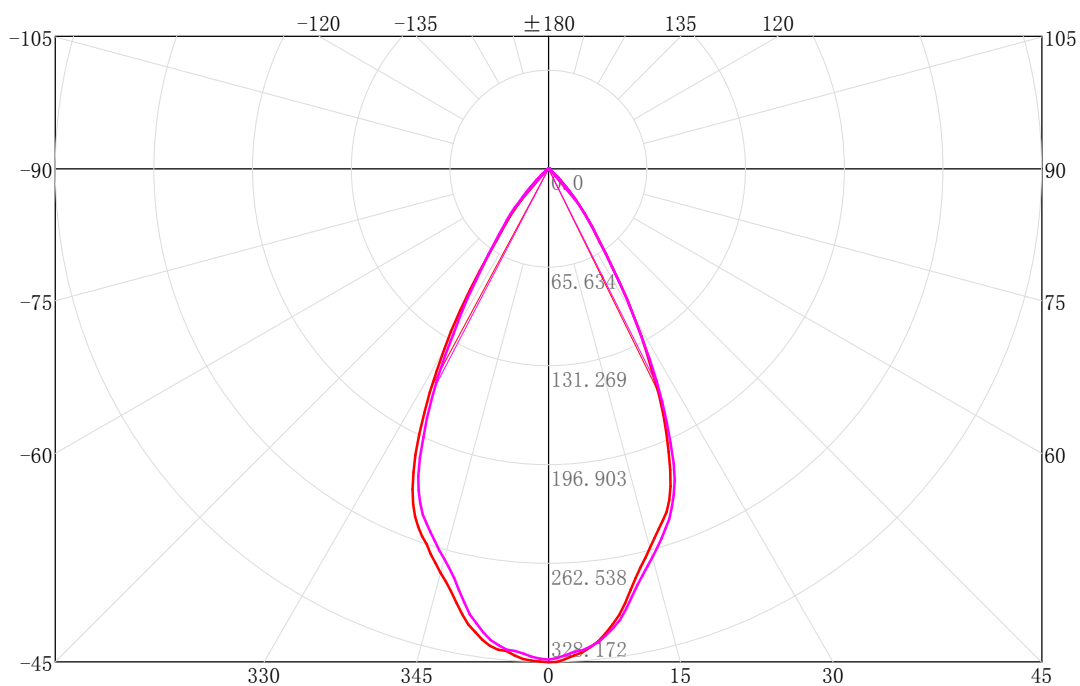
Average brightness table(cd/m2)

Angle value	Average	Average	Average
Y(°)	L0	L45	L90
45	60699	58208	57854
55	8230	6030	3291
65	0	0	0
75	0	0	0
85	0	0	0

2D Plane Light Intensity Distribution Curve

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
Lamp Name: LED MODULE	Lamp Catalog: LED MODULE	Test Lab: Volnic IES
Manufacture: 5	Test Machine:GON-2000	Test Date: 2022/07/04

C Plane Distribution Diagram

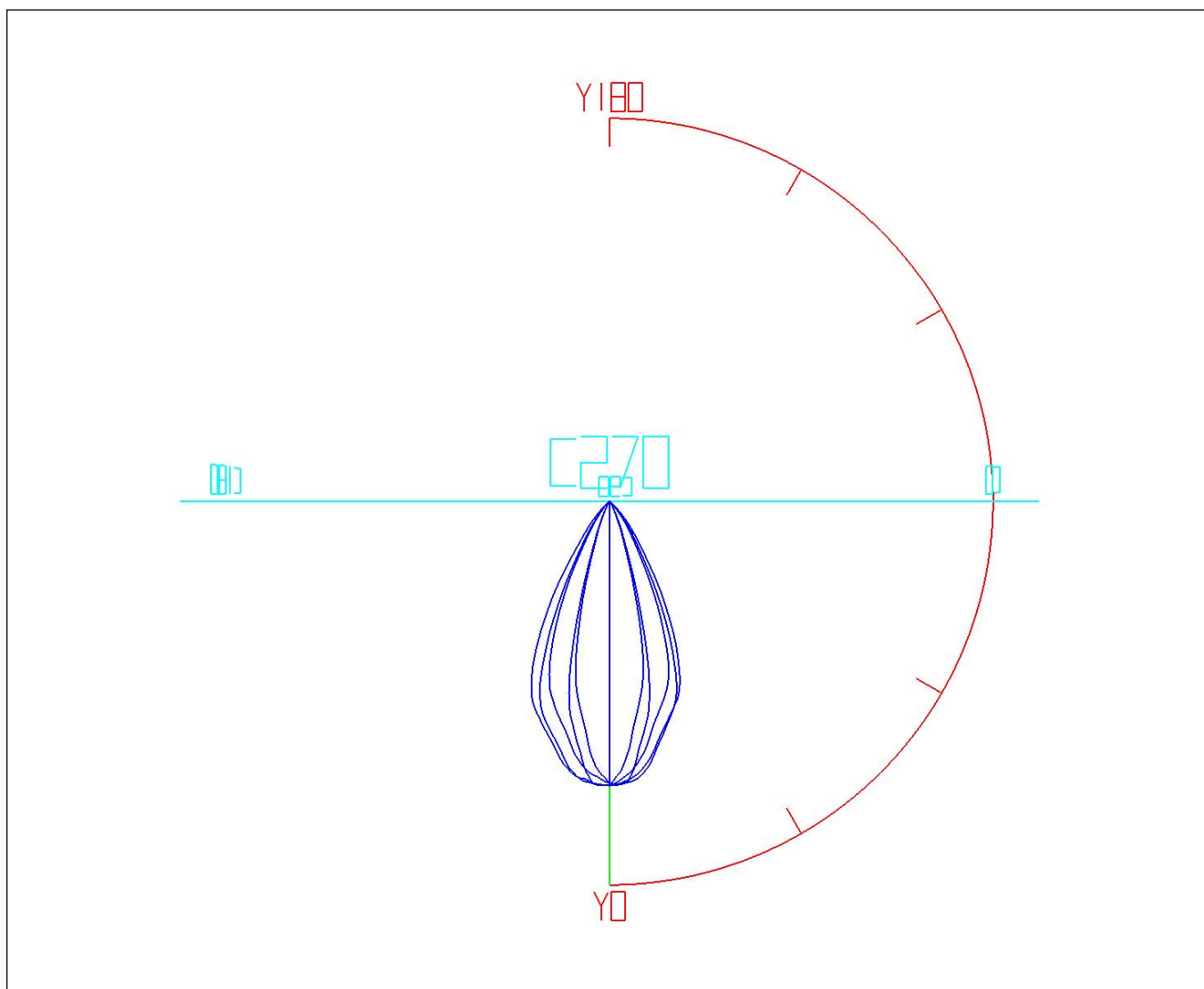


C Plane	[50%MaxAng.]	[10%MaxAng.]
C0.0_180.0 :	54.5	80.6
C90.0_270.0 :	54.2	81.2
Average:	54.4	80.9

3D Light Intensity Distribution Modal

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
Lamp Name: LED MODULE	Lamp Catalog: LED MODULE	Test Lab: Volnic IES
Manufacture: 5	Test Machine:GON-2000	Test Date: 2022/07/04

3D Light Intensity Distribution Modal



Curves: 3D Model ——— Fixture ——— Vert. HUD ——— Hori. HUD ———
View Angles: Orient:0 Tilt:0 Roll:0 Spin:0

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Zonal Flux Tabulation

Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp	Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-1.0	0.31	0.31	0.13	0.13	47.0-48.0	0.69	245.31	0.28	98.96
1.0-2.0	0.93	1.25	0.38	0.50	48.0-49.0	0.57	245.87	0.23	99.19
2.0-3.0	1.55	2.80	0.63	1.13	49.0-50.0	0.47	246.34	0.19	99.38
3.0-4.0	2.16	4.96	0.87	2.00	50.0-51.0	0.38	246.72	0.15	99.53
4.0-5.0	2.76	7.72	1.11	3.11	51.0-52.0	0.30	247.02	0.12	99.65
5.0-6.0	3.35	11.07	1.35	4.46	52.0-53.0	0.23	247.25	0.09	99.75
6.0-7.0	3.92	14.99	1.58	6.05	53.0-54.0	0.17	247.42	0.07	99.82
7.0-8.0	4.47	19.45	1.80	7.85	54.0-55.0	0.13	247.55	0.05	99.87
8.0-9.0	4.98	24.43	2.01	9.86	55.0-56.0	0.10	247.65	0.04	99.91
9.0-10.0	5.47	29.90	2.20	12.06	56.0-57.0	0.08	247.73	0.03	99.94
10.0-11.0	5.91	35.81	2.38	14.45	57.0-58.0	0.05	247.78	0.02	99.96
11.0-12.0	6.31	42.12	2.55	16.99	58.0-59.0	0.04	247.82	0.01	99.98
12.0-13.0	6.69	48.80	2.70	19.69	59.0-60.0	0.02	247.84	0.01	99.99
13.0-14.0	7.06	55.87	2.85	22.54	60.0-61.0	0.02	247.86	0.01	99.99
14.0-15.0	7.43	63.30	3.00	25.54	61.0-62.0	0.01	247.87	0.00	100.00
15.0-16.0	7.78	71.09	3.14	28.68	62.0-63.0	0.00	247.87	0.00	100.00
16.0-17.0	8.12	79.20	3.27	31.95	63.0-64.0	0.00	247.87	0.00	100.00
17.0-18.0	8.43	87.63	3.40	35.35	64.0-65.0	0.00	247.87	0.00	100.00
18.0-19.0	8.72	96.34	3.52	38.87	65.0-66.0	0.00	247.87	0.00	100.00
19.0-20.0	8.98	105.32	3.62	42.49	66.0-67.0	0.00	247.87	0.00	100.00
20.0-21.0	9.18	114.49	3.70	46.19	67.0-68.0	0.00	247.87	0.00	100.00
21.0-22.0	9.30	123.79	3.75	49.94	68.0-69.0	0.00	247.87	0.00	100.00
22.0-23.0	9.32	133.12	3.76	53.70	69.0-70.0	0.00	247.87	0.00	100.00
23.0-24.0	9.24	142.36	3.73	57.43	70.0-71.0	0.00	247.87	0.00	100.00
24.0-25.0	9.06	151.41	3.65	61.09	71.0-72.0	0.00	247.87	0.00	100.00
25.0-26.0	8.78	160.20	3.54	64.63	72.0-73.0	0.00	247.87	0.00	100.00
26.0-27.0	8.43	168.62	3.40	68.03	73.0-74.0	0.00	247.87	0.00	100.00
27.0-28.0	8.01	176.63	3.23	71.26	74.0-75.0	0.00	247.87	0.00	100.00
28.0-29.0	7.53	184.17	3.04	74.30	75.0-76.0	0.00	247.87	0.00	100.00
29.0-30.0	7.00	191.17	2.82	77.12	76.0-77.0	0.00	247.87	0.00	100.00
30.0-31.0	6.46	197.63	2.61	79.73	77.0-78.0	0.00	247.87	0.00	100.00
31.0-32.0	5.90	203.53	2.38	82.11	78.0-79.0	0.00	247.87	0.00	100.00
32.0-33.0	5.31	208.84	2.14	84.25	79.0-80.0	0.00	247.87	0.00	100.00
33.0-34.0	4.76	213.60	1.92	86.17	80.0-81.0	0.00	247.87	0.00	100.00
34.0-35.0	4.27	217.87	1.72	87.90	81.0-82.0	0.00	247.87	0.00	100.00
35.0-36.0	3.85	221.72	1.55	89.45	82.0-83.0	0.00	247.87	0.00	100.00
36.0-37.0	3.50	225.21	1.41	90.86	83.0-84.0	0.00	247.87	0.00	100.00
37.0-38.0	3.19	228.41	1.29	92.15	84.0-85.0	0.00	247.87	0.00	100.00
38.0-39.0	2.91	231.31	1.17	93.32	85.0-86.0	0.00	247.87	0.00	100.00
39.0-40.0	2.62	233.93	1.06	94.38	86.0-87.0	0.00	247.87	0.00	100.00
40.0-41.0	2.32	236.25	0.94	95.31	87.0-88.0	0.00	247.87	0.00	100.00
41.0-42.0	2.02	238.27	0.81	96.13	88.0-89.0	0.00	247.87	0.00	100.00
42.0-43.0	1.74	240.01	0.70	96.83	89.0-90.0	0.00	247.87	0.00	100.00
43.0-44.0	1.49	241.49	0.60	97.43					
44.0-45.0	1.24	242.74	0.50	97.93					
45.0-46.0	1.03	243.77	0.41	98.34					
46.0-47.0	0.85	244.61	0.34	98.68					

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Zonal Flux Tabulation - (Cont.)

Conical surface Flux(90deg):123.791

%lm = 49.94

%lamp = 49.94

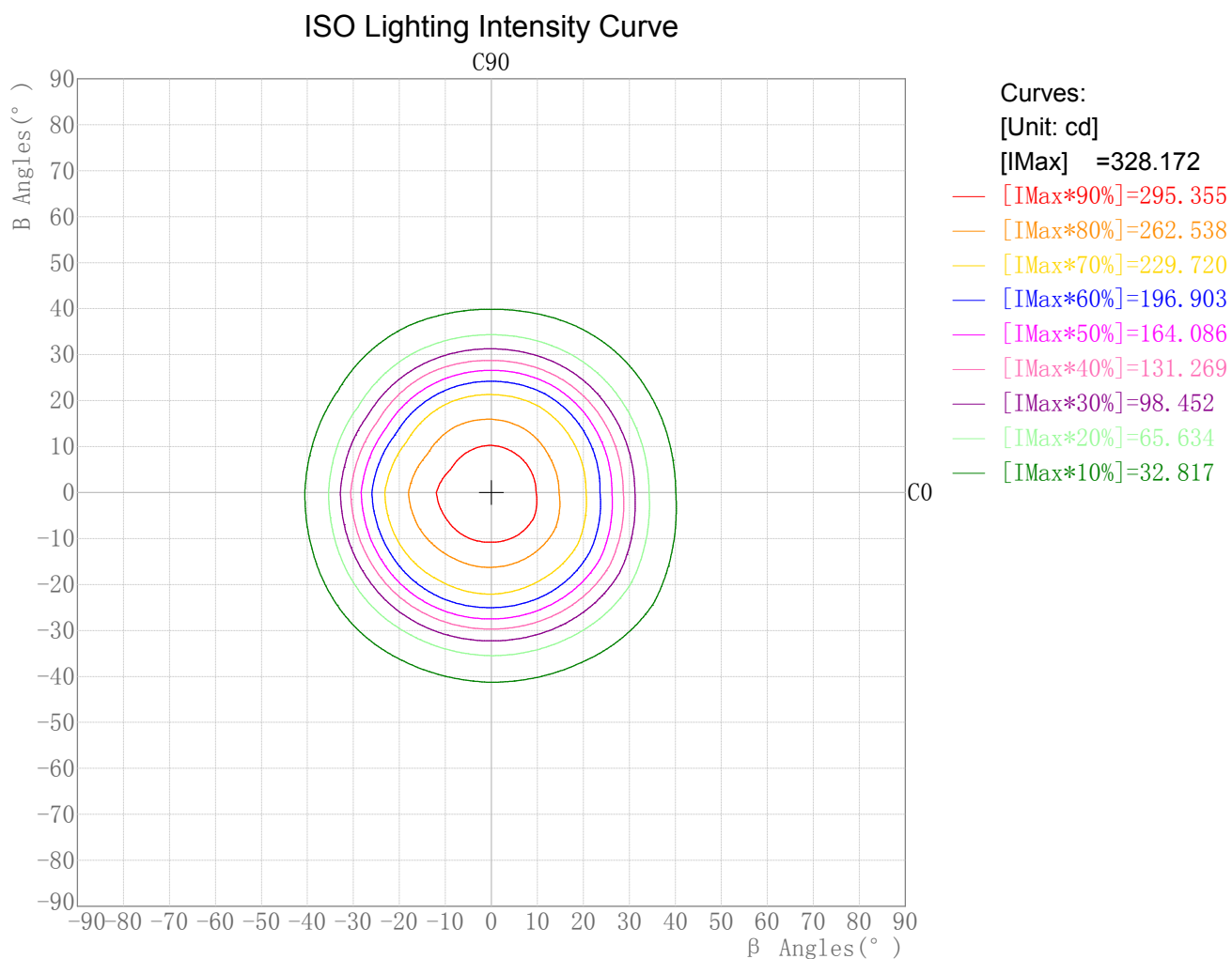
Conical surface Flux(120deg):191.168

%lm = 77.12

%lamp = 77.12

Rectangle ISO Lighting Intensity Diagram

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
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Manufacture: 5	Test Machine:GON-2000	Test Date: 2022/07/04

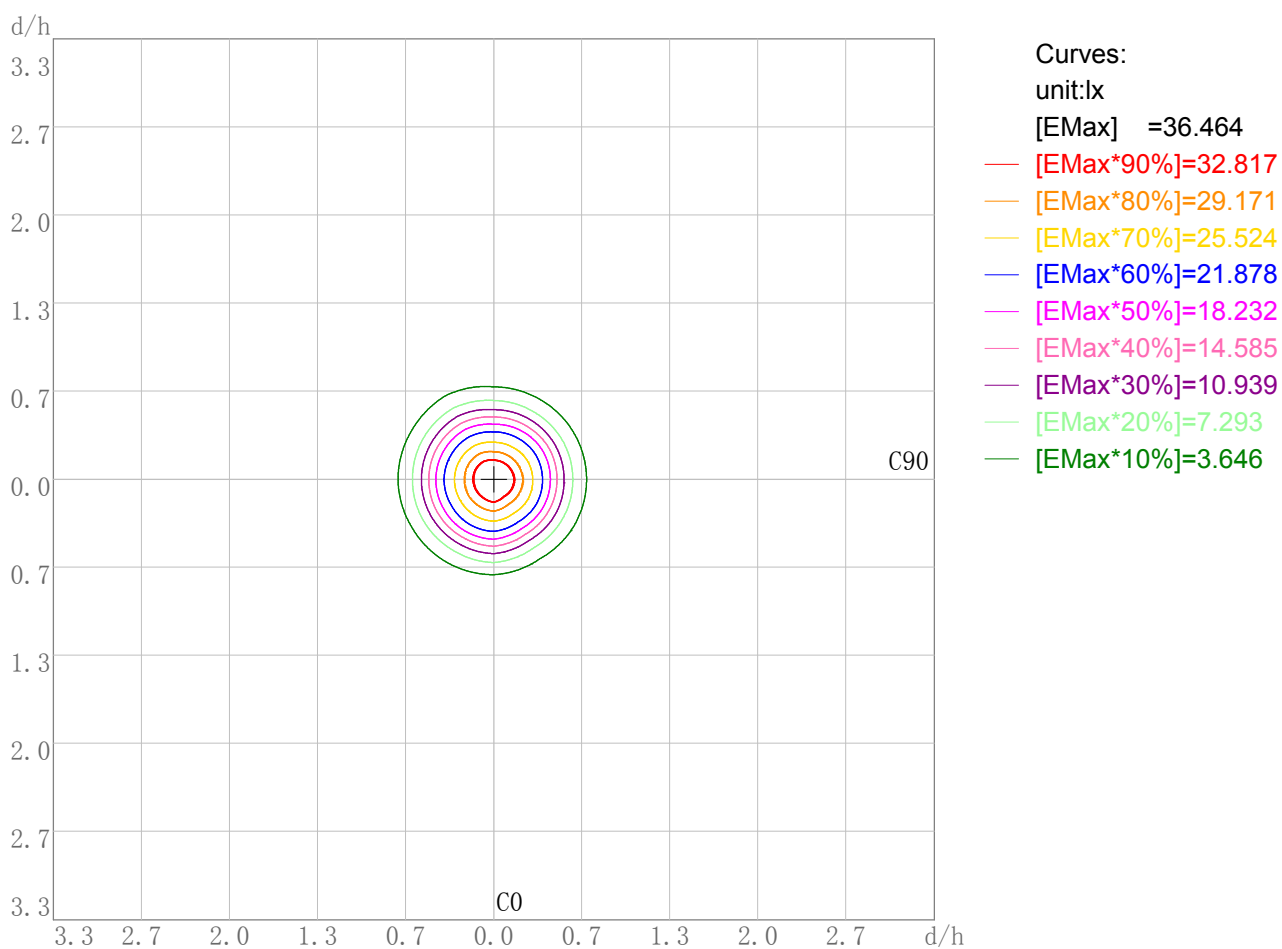


Maximum Light Intensity(cd): 328.17
Maximum Cand.@Angle: H=0.0°,V=0.0°

Plane ISO-Illuminance Diagram

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
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Manufacture: 5	Test Machine: GON-2000	Test Date: 2022/07/04

Plane ISO-Illuminance Curve

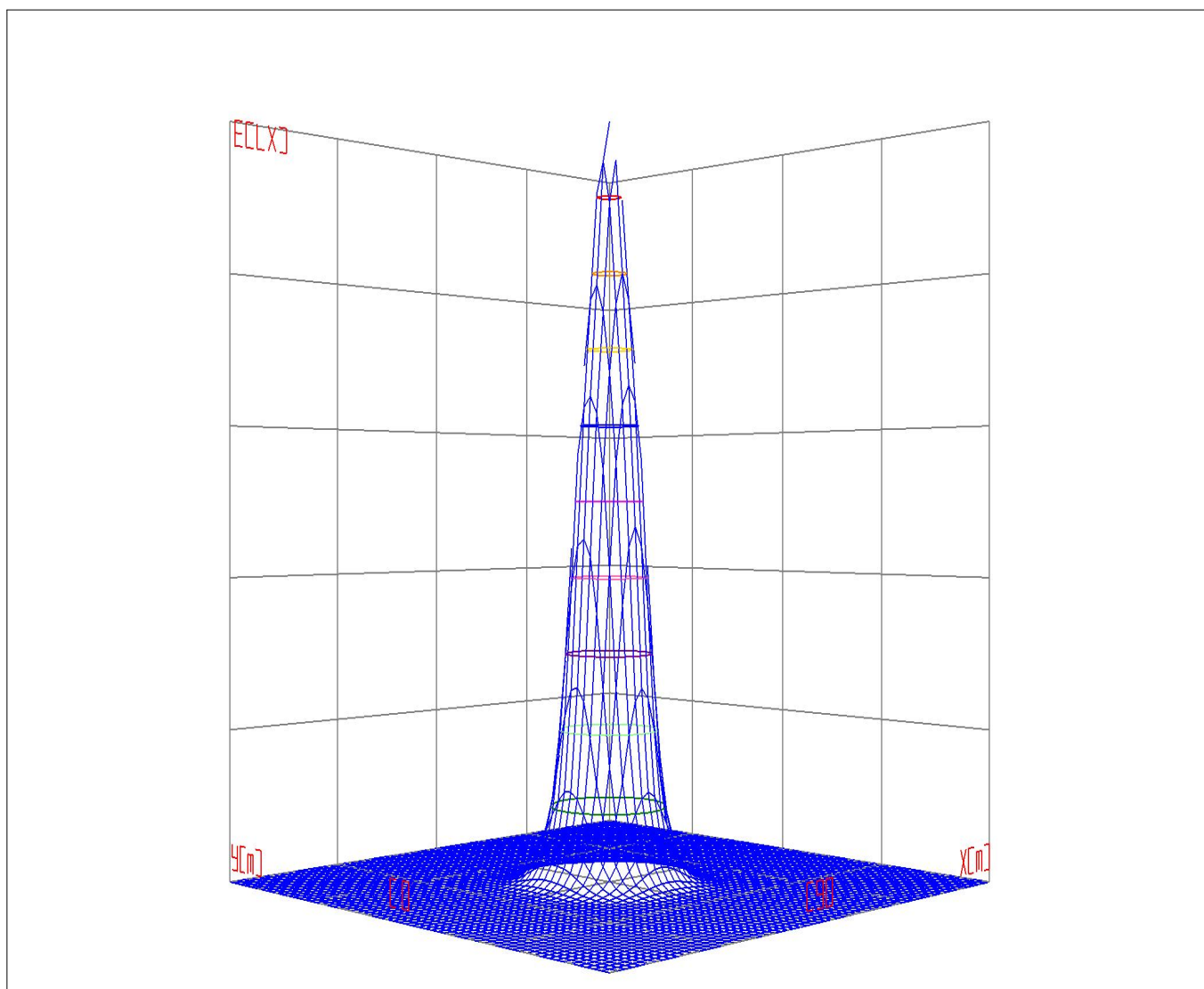


Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 36.46
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
Lamp Name: LED MODULE	Lamp Catalog: LED MODULE	Test Lab: Volnic IES
Manufacture: 5	Test Machine:GON-2000	Test Date: 2022/07/04

3D Plane Illuminance Modal

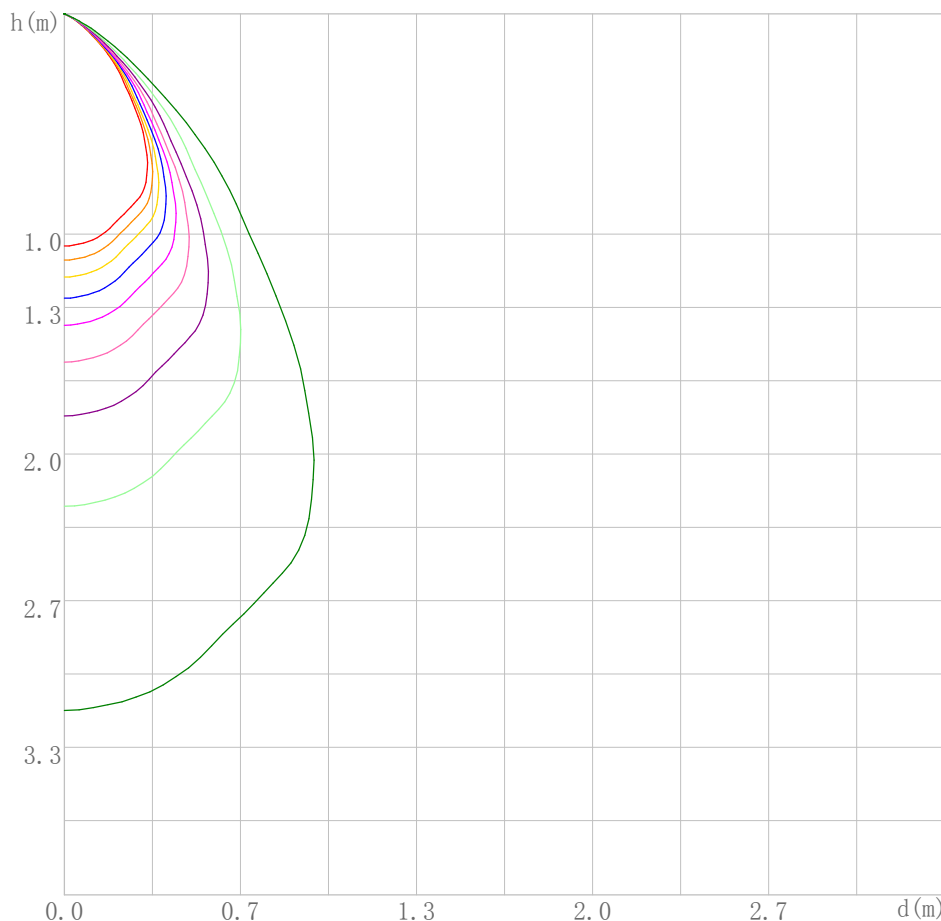


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
Lamp Name: LED MODULE	Lamp Catalog: LED MODULE	Test Lab: Volnic IES
Manufacture: 5	Test Machine: GON-2000	Test Date: 2022/07/04

Space ISO Illuminance Curve



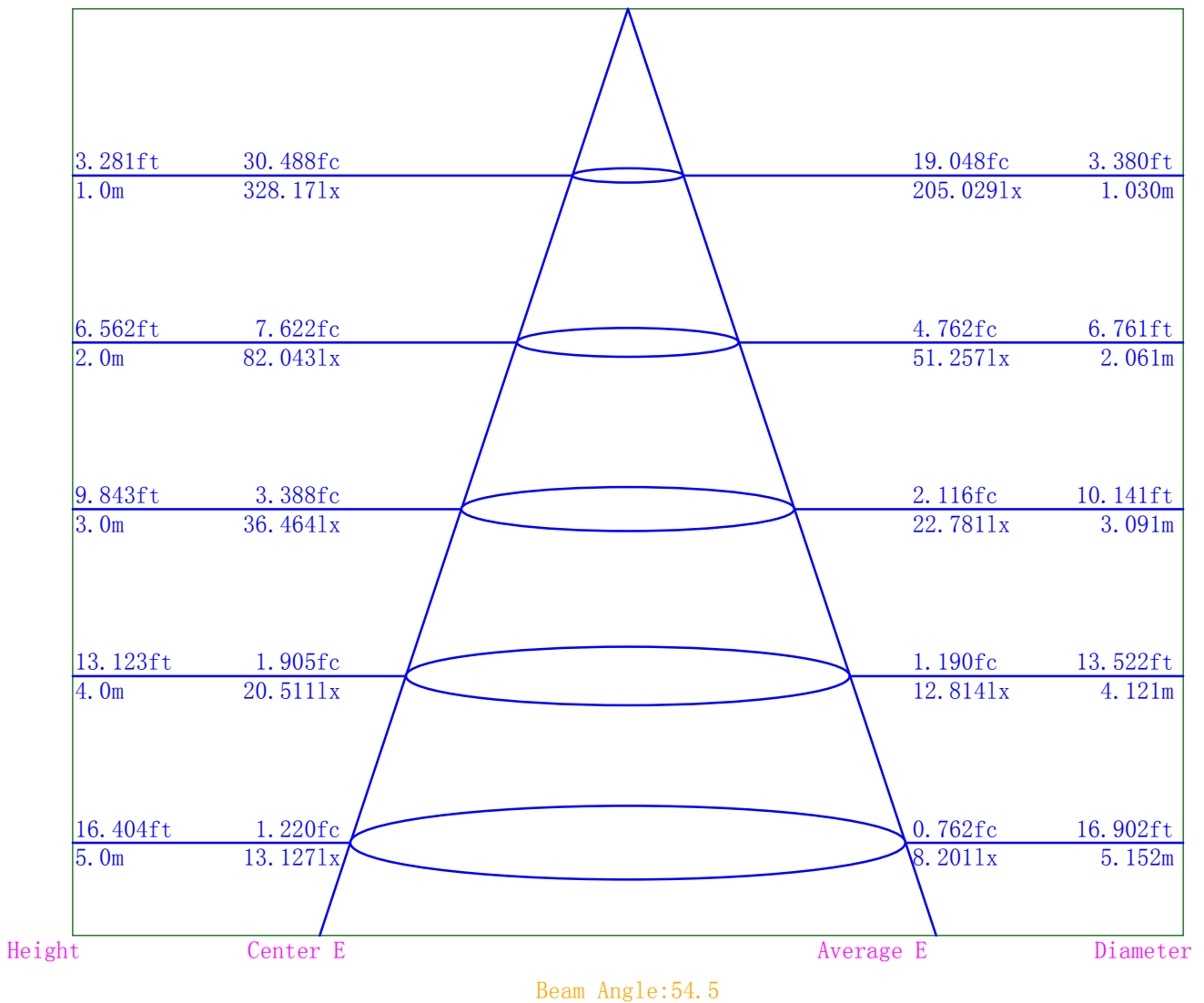
- Curves:
 [Unit: lx]
 [EMax] =328.172
- [EMax*90%]=295.355
 - [EMax*80%]=262.538
 - [EMax*70%]=229.720
 - [EMax*60%]=196.903
 - [EMax*50%]=164.086
 - [EMax*40%]=131.269
 - [EMax*30%]=98.452
 - [EMax*20%]=65.634
 - [EMax*10%]=32.817

Space Plane Maximum Illuminance and @Angle:328.17lx,0.0deg
 Plane Maximum Lighting Intensity and @Angle:328.172cd,0deg

Illuminance-Distance Diagram

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
Lamp Name: LED MODULE	Lamp Catalog: LED MODULE	Test Lab: Volnic IES
Manufacture: 5	Test Machine:GON-2000	Test Date: 2022/07/04

Illuminance-Distance Curve



Indoor Luminance Limiting Curves

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
Lamp Name: LED MODULE	Lamp Catalog: LED MODULE	Test Lab: Volnic IES
Manufacture: 5	Test Machine: GON-2000	Test Date: 2022/07/04

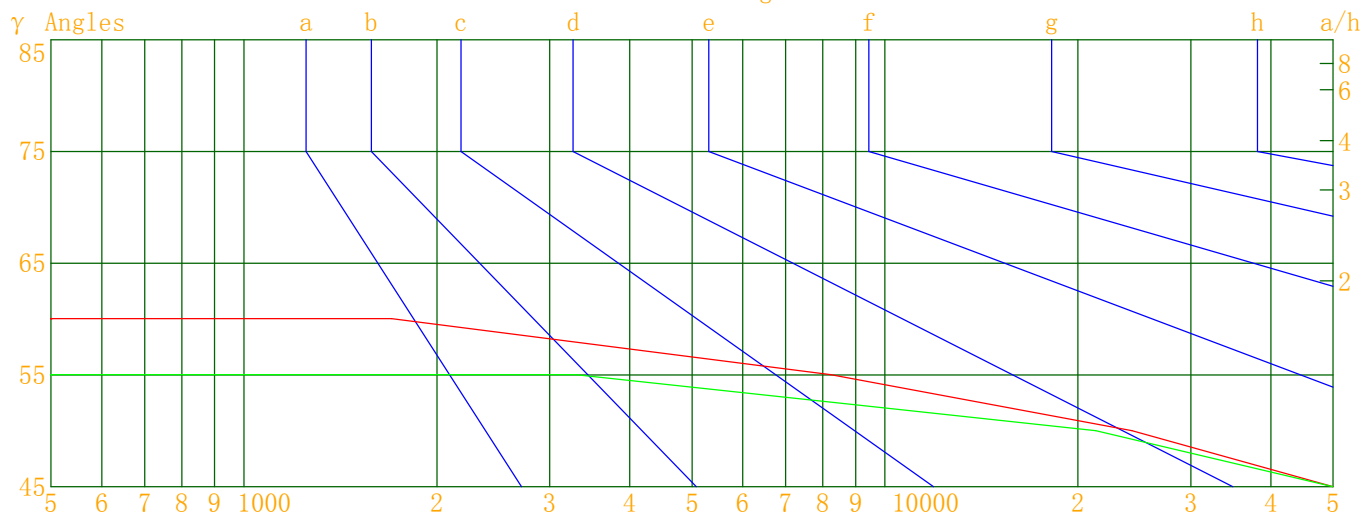
Glare Grade Table

GI	Quality	Using Illuminance							
		a	b	c	d	e	f	g	h
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	a				2000	1000	500	<=300
			b	c	d	e	f	g	h

Luminance Table

Gama (deg)	45	50	55	60	65	70	75	80	85
C0	60699	24295	8230	1700	0	0	0	0	0
C90	57854	21328	3291	0	0	0	0	0	0

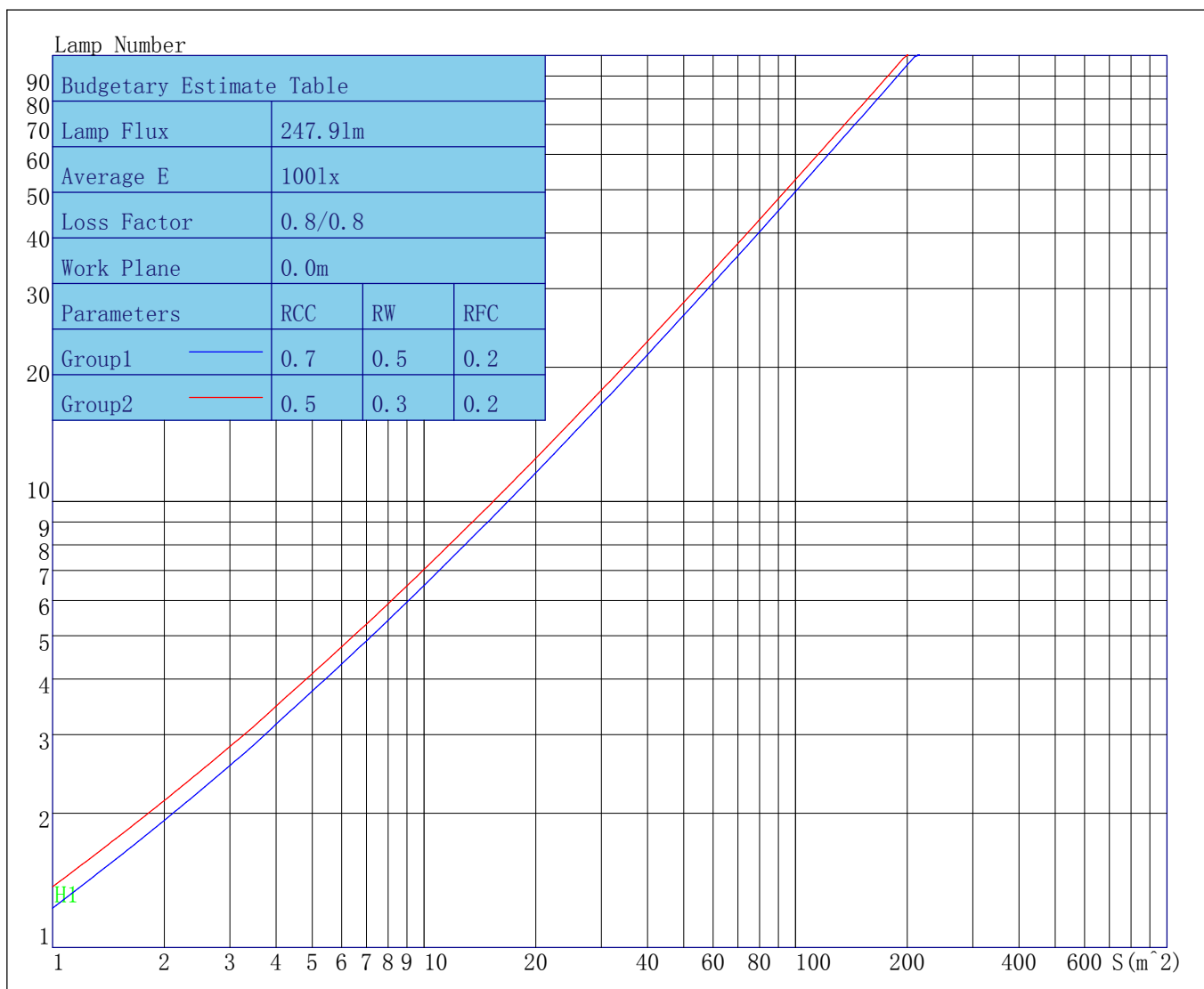
Luminance Limiting Curve



Luminous Size: Length(m)=-0.020 Width(m)=-0.020 Height(m)=0.000 Area(m²)=0.000314
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

Indoor Budgetary Estimate Table

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
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Parameters1: Rhocc = 0.7 Rhow = 0.5 Rhofc = 0.2 LLF = 0.8
Parameters2: Rhocc = 0.5 Rhow = 0.3 Rhofc = 0.2 LLF = 0.8
Average Illuminance(lx): 100 Cavity Height: H1(m) = 2

Indoor Coefficient of Utilization Table

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
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Manufacture: 5	Test Machine:GON-2000	Test Date: 2022/07/04

Coefficients of Utilization - Zonal Cavity Method																		
Coef.	Effective Floor Cavity Reflectance RFC=0.20																	
RhoCC (%)	80				70				50			30			10			0
RhoW (%)	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	Coefficient of Utilization(%)																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82
4	98	91	86	82	97	90	85	81	88	84	80	86	82	80	84	81	79	77
5	94	86	80	76	92	85	80	76	83	79	75	81	77	74	80	76	74	72
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68
7	85	76	70	66	84	76	70	66	74	69	66	73	69	66	72	68	65	64
8	81	72	66	62	80	72	66	62	70	66	62	69	65	62	68	65	62	60
9	78	68	63	59	76	68	62	59	67	62	59	66	62	58	65	61	58	57
10	74	65	59	56	73	64	59	55	64	59	55	63	58	55	62	58	55	54

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Unified Glare Rating Table

Lum. Name: 148-126_120_127	Lum. Catalog: LED MODULE	Test ID: 001
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Manufacture: 5	Test Machine:GON-2000	Test Date: 2022/07/04

Unified Glare Rating Table

Ceiling RCC	0.70	0.70	0.50	0.50	0.30	0.70	0.70	0.50	0.50	0.30
Wall RW	0.50	0.30	0.50	0.30	0.30	0.50	0.30	0.50	0.30	0.30
Floor RFC	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Room Size	Vewed crosswise					Vewed endwise				
X=2H Y=2H	22.7	23.6	23.0	23.9	24.2	22.2	23.1	22.6	23.5	23.8
Y=3H	22.5	23.3	22.9	23.6	24.0	22.0	22.8	22.4	23.2	23.5
Y=4H	22.4	23.1	22.8	23.5	23.9	21.9	22.7	22.3	23.0	23.4
Y=6H	22.3	23.0	22.7	23.3	23.7	21.8	22.5	22.2	22.8	23.2
Y=8H	22.2	22.8	22.6	23.2	23.7	21.7	22.4	22.2	22.8	23.2
Y=12H	22.1	22.8	22.6	23.1	23.6	21.7	22.3	22.1	22.7	23.1
X=4H Y=2H	22.4	23.1	22.8	23.5	23.9	21.9	22.7	22.3	23.0	23.4
Y=3H	22.2	22.8	22.6	23.2	23.6	21.7	22.3	22.1	22.7	23.1
Y=4H	22.0	22.6	22.5	23.0	23.5	21.5	22.1	22.0	22.5	23.0
Y=6H	21.9	22.4	22.4	22.8	23.3	21.4	21.9	21.9	22.3	22.8
Y=8H	21.8	22.3	22.3	22.7	23.2	21.4	21.8	21.8	22.2	22.7
Y=12H	21.8	22.1	22.3	22.6	23.1	21.3	21.7	21.8	22.1	22.6
X=8H Y=4H	21.8	22.3	22.3	22.7	23.2	21.4	21.8	21.8	22.2	22.7
Y=6H	21.7	22.1	22.2	22.6	23.1	21.2	21.6	21.7	22.1	22.6
Y=8H	21.6	21.9	22.2	22.5	23.0	21.1	21.5	21.7	22.0	22.5
Y=12H	21.6	21.8	22.1	22.3	22.9	21.1	21.4	21.6	21.9	22.4
X=12H Y=4H	21.8	22.1	22.3	22.6	23.1	21.3	21.7	21.8	22.1	22.6
Y=6H	21.6	21.9	22.2	22.4	23.0	21.2	21.5	21.7	21.9	22.5
Y=8H	21.6	21.8	22.1	22.3	22.9	21.1	21.4	21.6	21.9	22.4
Variations with the objerver position at spacings										
S=1.0H	0.0/0.0					0.0/0.0				
S=1.5H	0.0/0.0					0.0/0.0				
S=2.0H	0.0/0.0					0.0/0.0				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	0.0					0.0				

Calculation is according to the CIE Pub.117, data has been corrected, refers to the lamp's lumen

