

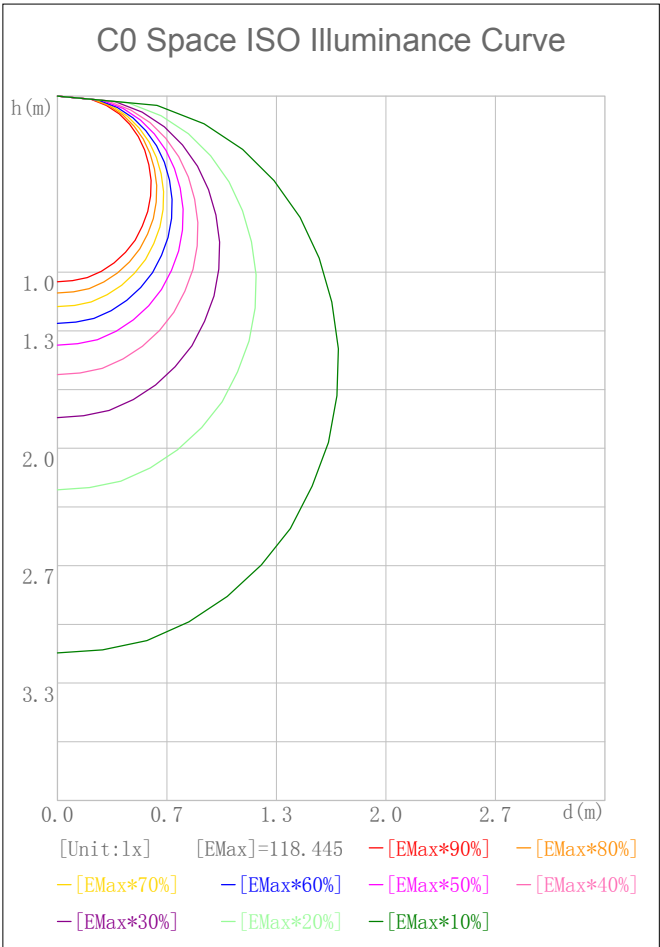
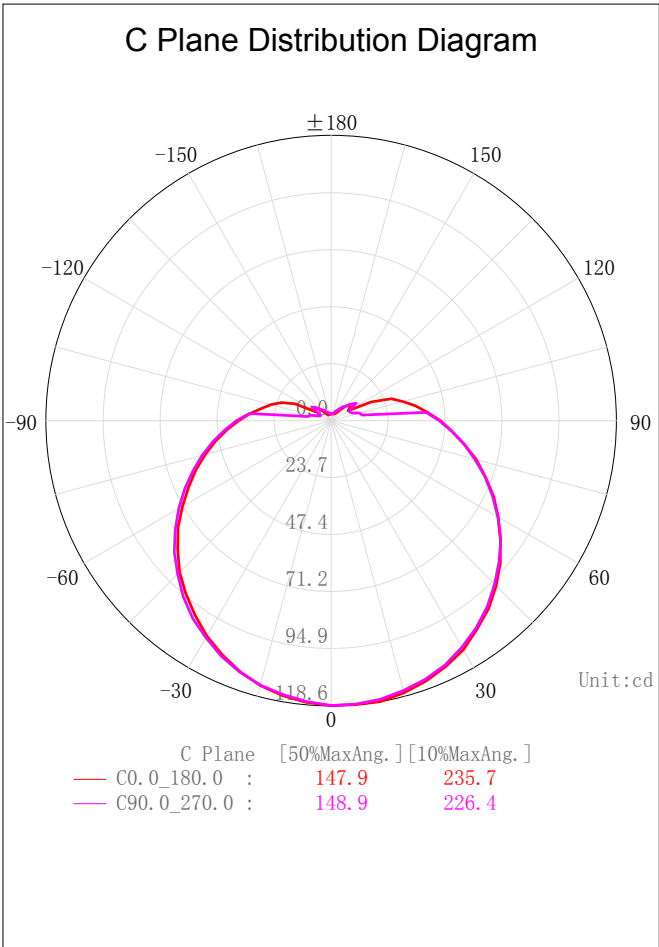
Indoor Luminaire Photometric Data

Description Information

Luminary Name:TR09-09-DW-03 1800-3000K RA90 150D		Lum. Catalog:	Test ID: 01
Lamp Name:		Lamp Catalog: LED	Test Date: 2022/08/29
Manufacture: Shenzhen Norming Lighting		Shld. Ang(°):	Test Machine:GON-2000
Test Lab: Quality Department		Frequency (Hz):	Lamp CCT(K): Ra:
Lum. Size (W*L*H):0.110m*0.110m*0.000m		Lum. Area (m2):0.012	Lum. W(kg): 0.000
Test System: C, γ	Test Step: C=90.0 γ=5.0	Temp. (°C): 25	Humidity(%): 50.0

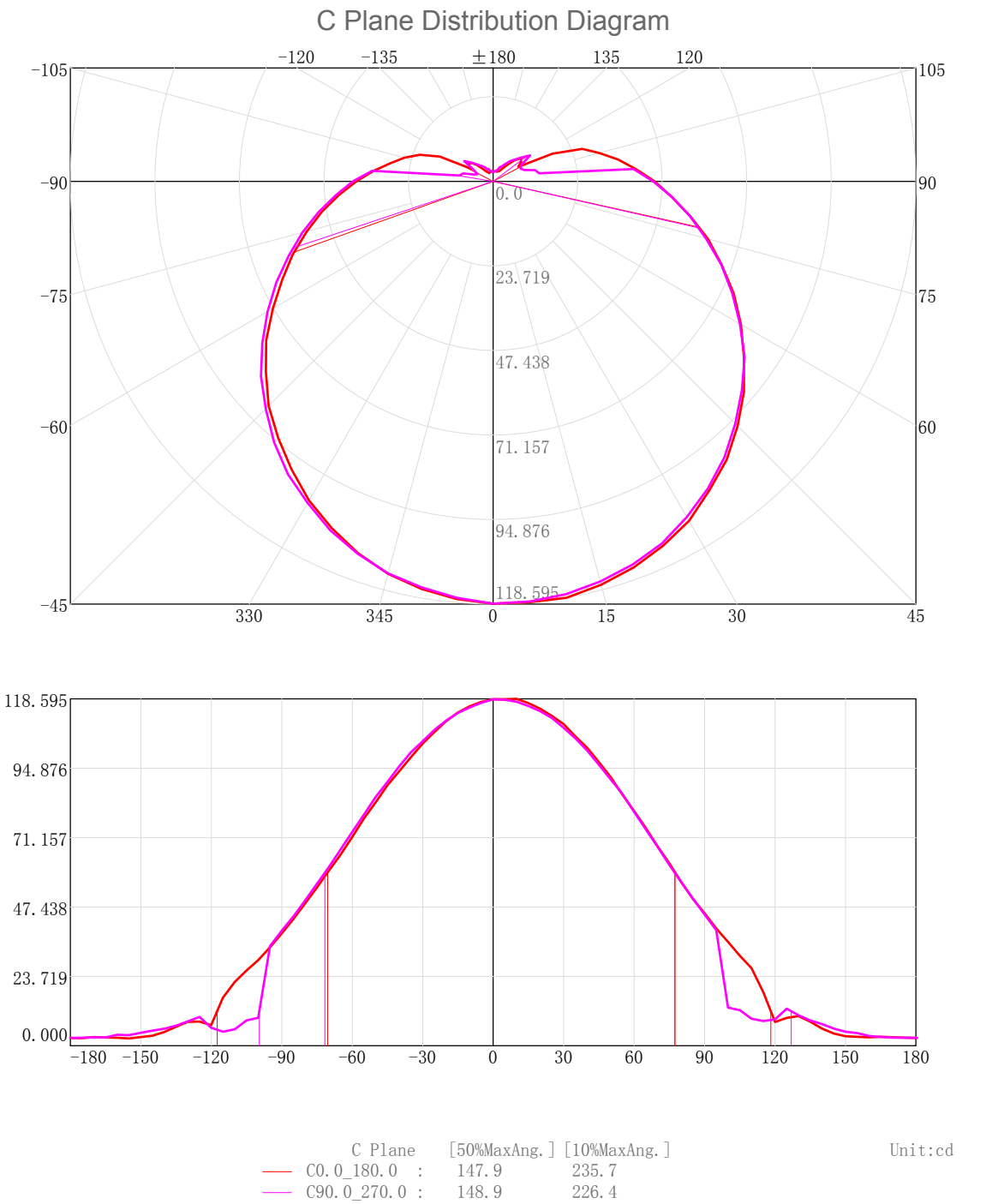
Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 576.920	Luminary Flux(lm): 576.920	Field Angle(10%Imax): 235.7(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 487.254lm 84.46%	
Rated Voltage(V):	Luminary EER(lm/W): 69.727	Up Lumens&Percent: 89.666lm 15.54%	
Tested Power(W): 8.274	Max. Candela(cd): 118.595	S/MH: C0_a180=1.340 C90_270=1.344	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=10.0	CIE Type: General Diffuse	
Tested Electrics (V, A, pf):239.8, 0.038, 0.892	Beam Angle(50%Imax): 147.9(°)	ErP ϕ use(120°): 303.844lm	
Lamp Size(W*L*H):0.110m*0.110m*0.000m	Left=-70.4°, Right=77.5°	IRF(%): 94.558	



2D Plane Light Intensity Distribution Curve

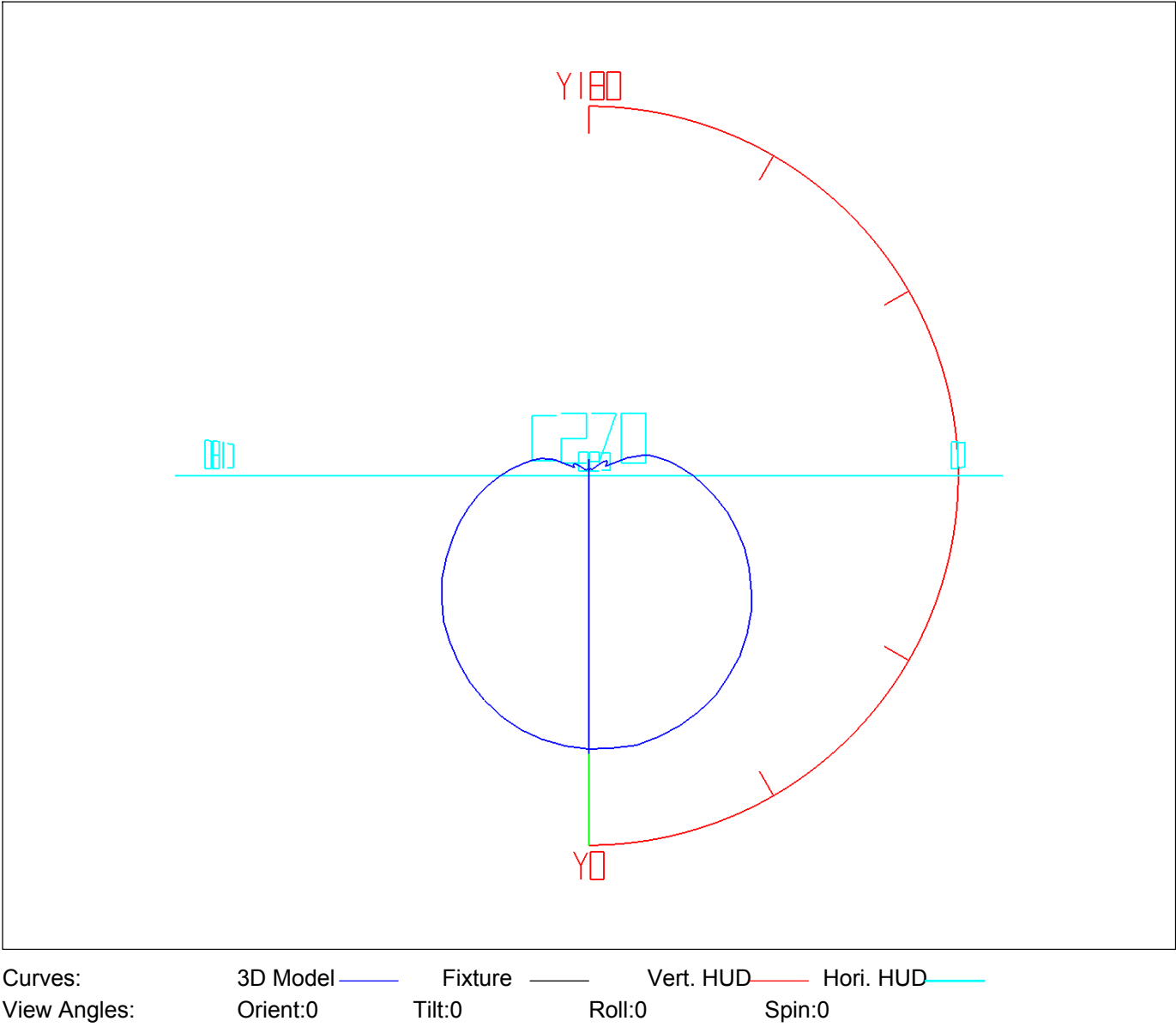
Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29



3D Light Intensity Distribution Modal

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29

3D Light Intensity Distribution Modal

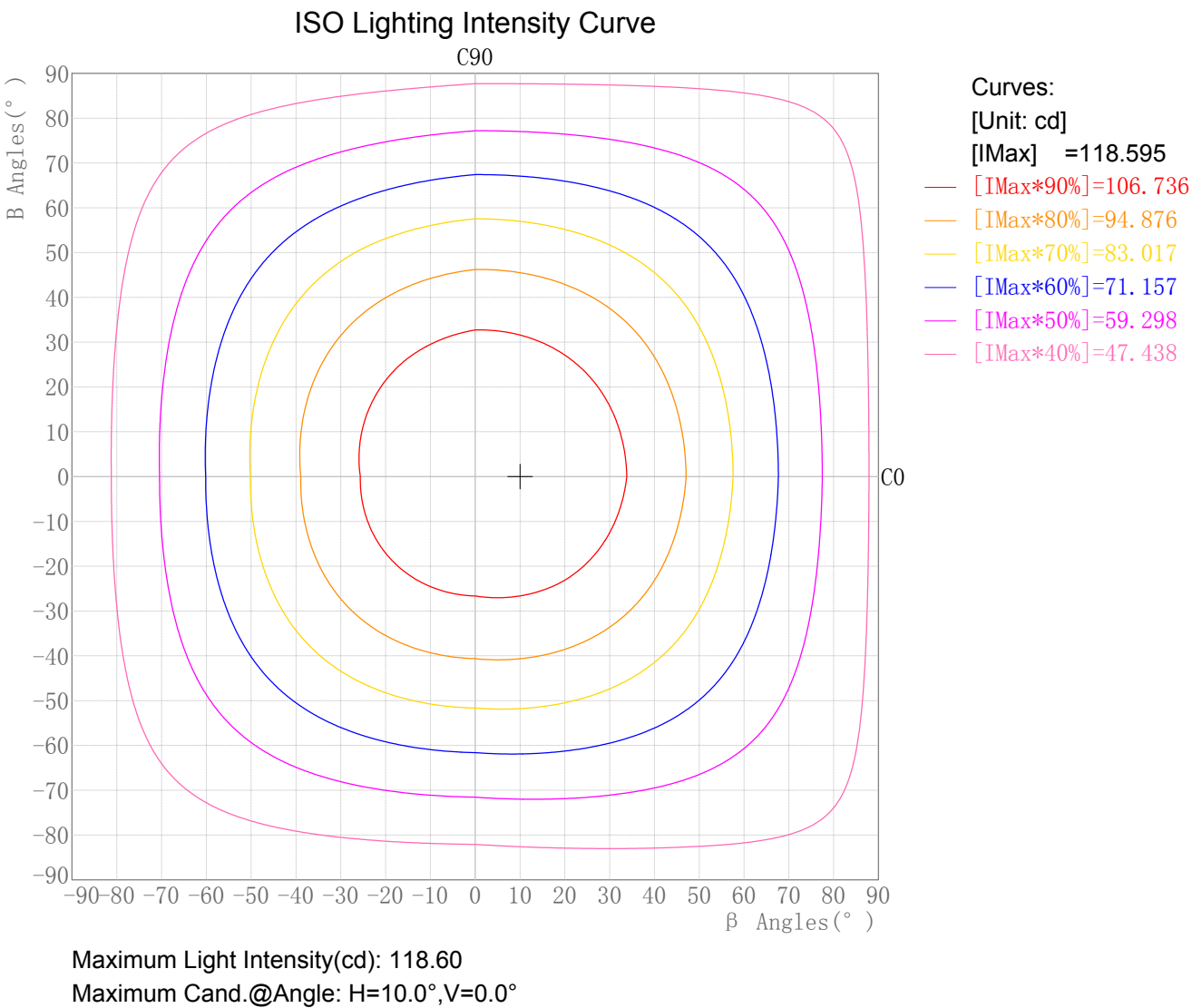


Zonal Flux Tabulation

Zone( γ )	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	2.83	2.83	0.49	0.49
5.0-10.0	8.40	11.23	1.46	1.95
10.0-15.0	13.78	25.00	2.39	4.33
15.0-20.0	18.81	43.81	3.26	7.59
20.0-25.0	23.38	67.19	4.05	11.65
25.0-30.0	27.40	94.59	4.75	16.40
30.0-35.0	30.77	125.37	5.33	21.73
35.0-40.0	33.45	158.82	5.80	27.53
40.0-45.0	35.40	194.22	6.14	33.66
45.0-50.0	36.55	230.76	6.34	40.00
50.0-55.0	36.96	267.72	6.41	46.41
55.0-60.0	36.60	304.32	6.34	52.75
60.0-65.0	35.59	339.91	6.17	58.92
65.0-70.0	34.06	373.97	5.90	64.82
70.0-75.0	32.07	406.04	5.56	70.38
75.0-80.0	29.72	435.76	5.15	75.53
80.0-85.0	27.10	462.86	4.70	80.23
85.0-90.0	24.39	487.25	4.23	84.46
90.0-95.0	21.59	508.84	3.74	88.20
95.0-100.0	15.96	524.81	2.77	90.97
100.0-105.0	11.03	535.84	1.91	92.88
105.0-110.0	9.20	545.04	1.60	94.47
110.0-115.0	7.06	552.10	1.22	95.70
115.0-120.0	4.78	556.89	0.83	96.53
120.0-125.0	4.10	560.99	0.71	97.24
125.0-130.0	4.22	565.21	0.73	97.97
130.0-135.0	3.41	568.62	0.59	98.56
135.0-140.0	2.51	571.13	0.44	99.00
140.0-145.0	1.78	572.91	0.31	99.31
145.0-150.0	1.26	574.18	0.22	99.52
150.0-155.0	0.92	575.10	0.16	99.68
155.0-160.0	0.69	575.79	0.12	99.80
160.0-165.0	0.51	576.30	0.09	99.89
165.0-170.0	0.35	576.65	0.06	99.95
170.0-175.0	0.20	576.85	0.04	99.99
175.0-180.0	0.07	576.92	0.01	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29

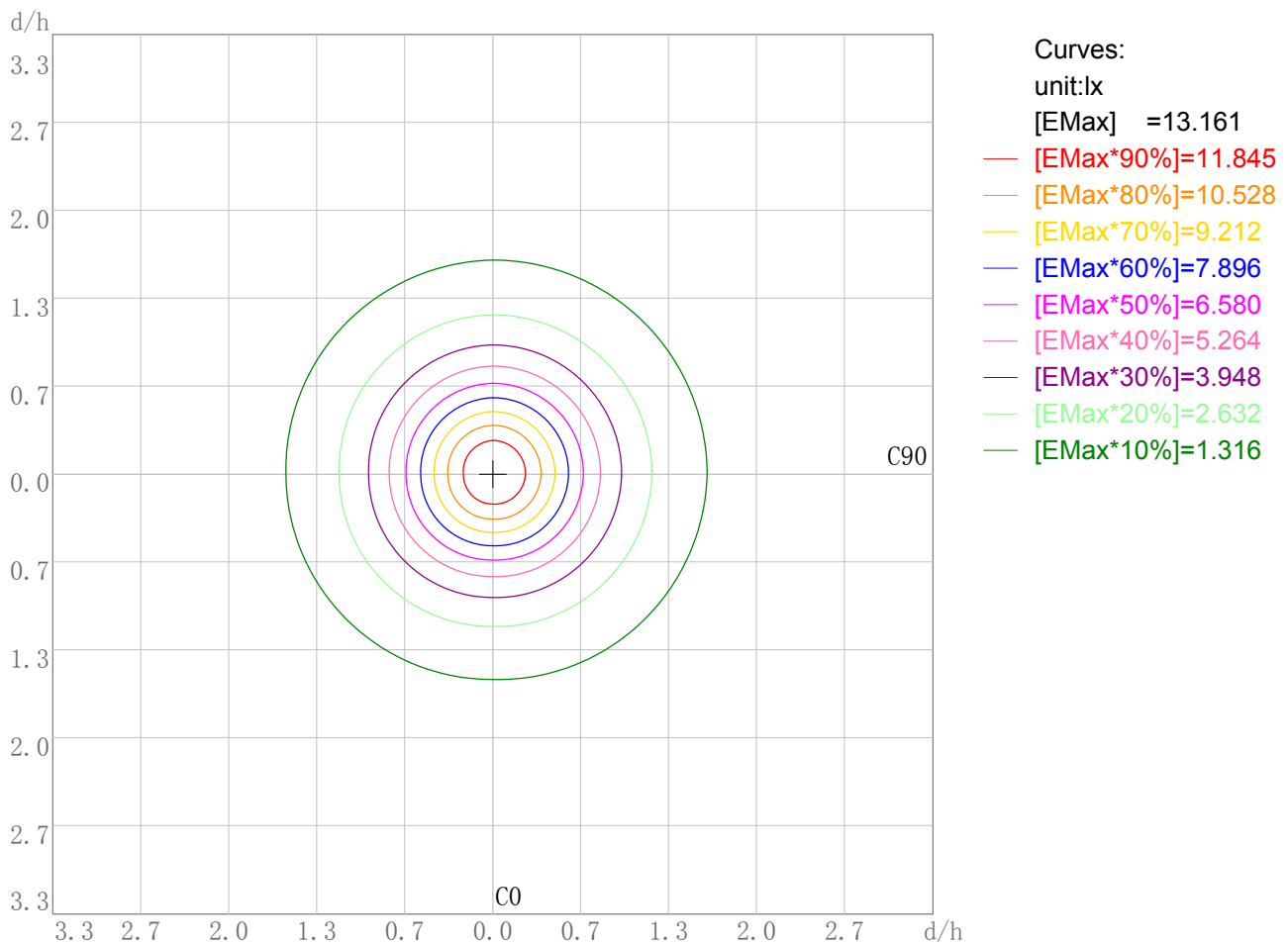


**Photometric Filename:TR09-09-DW-03 1800-3000K RA90 150D.IES**

## Plane ISO-Illuminance Diagram

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine: GON-2000	Test Date: 2022/08/29

### Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

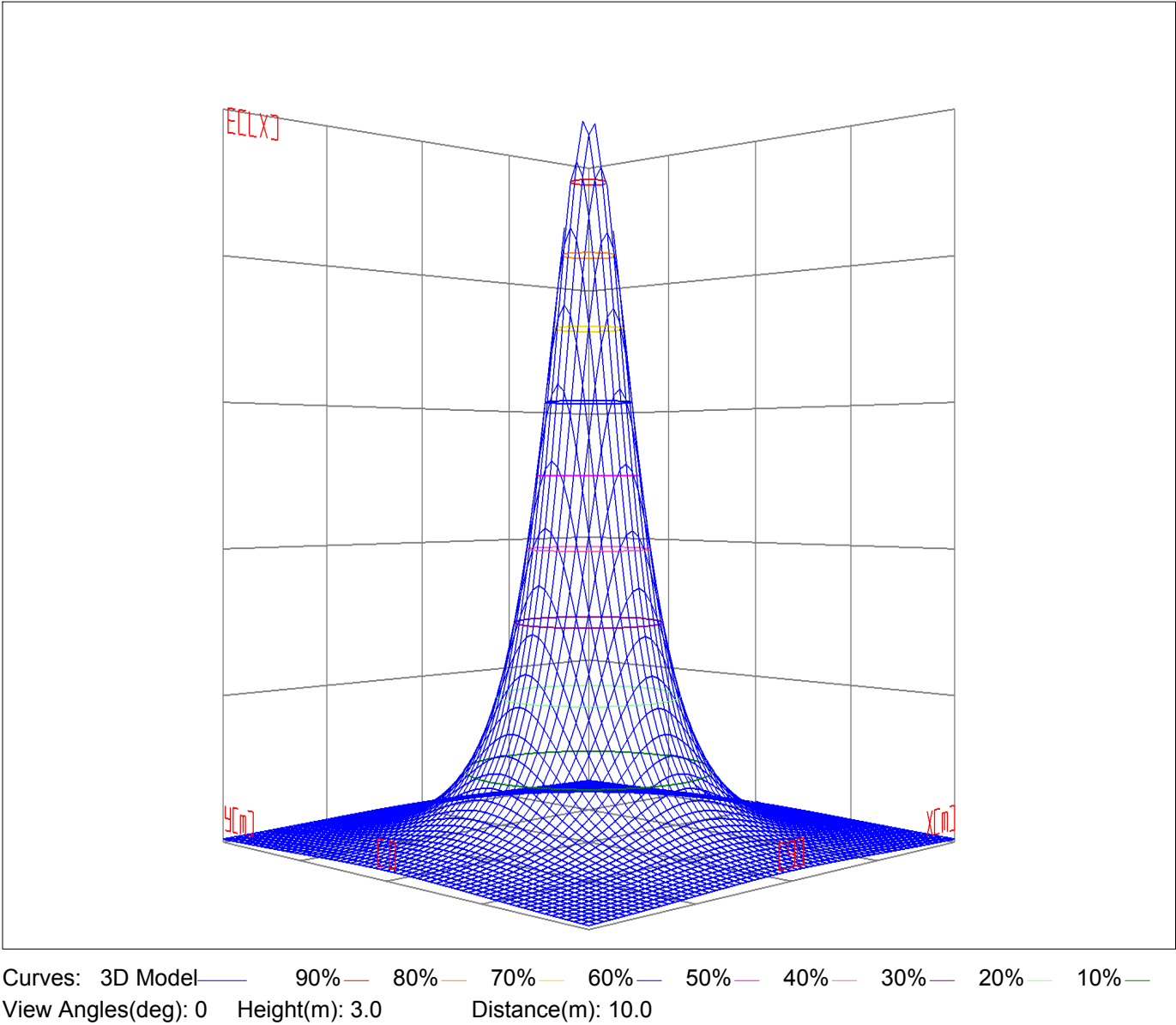
Working Plane Maximum Illuminance(lx): 13.16

Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29

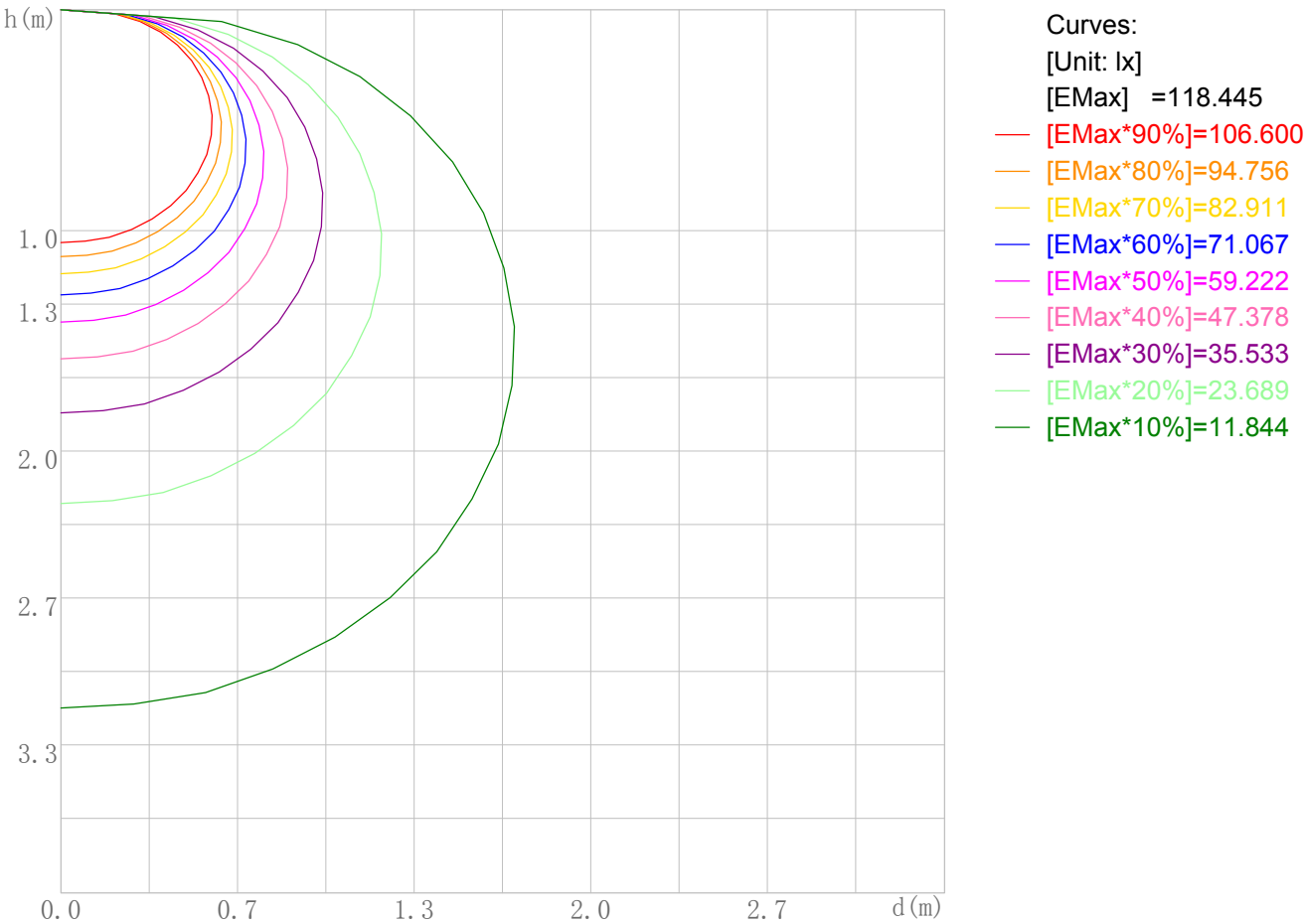
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29

Space ISO Illuminance Curve

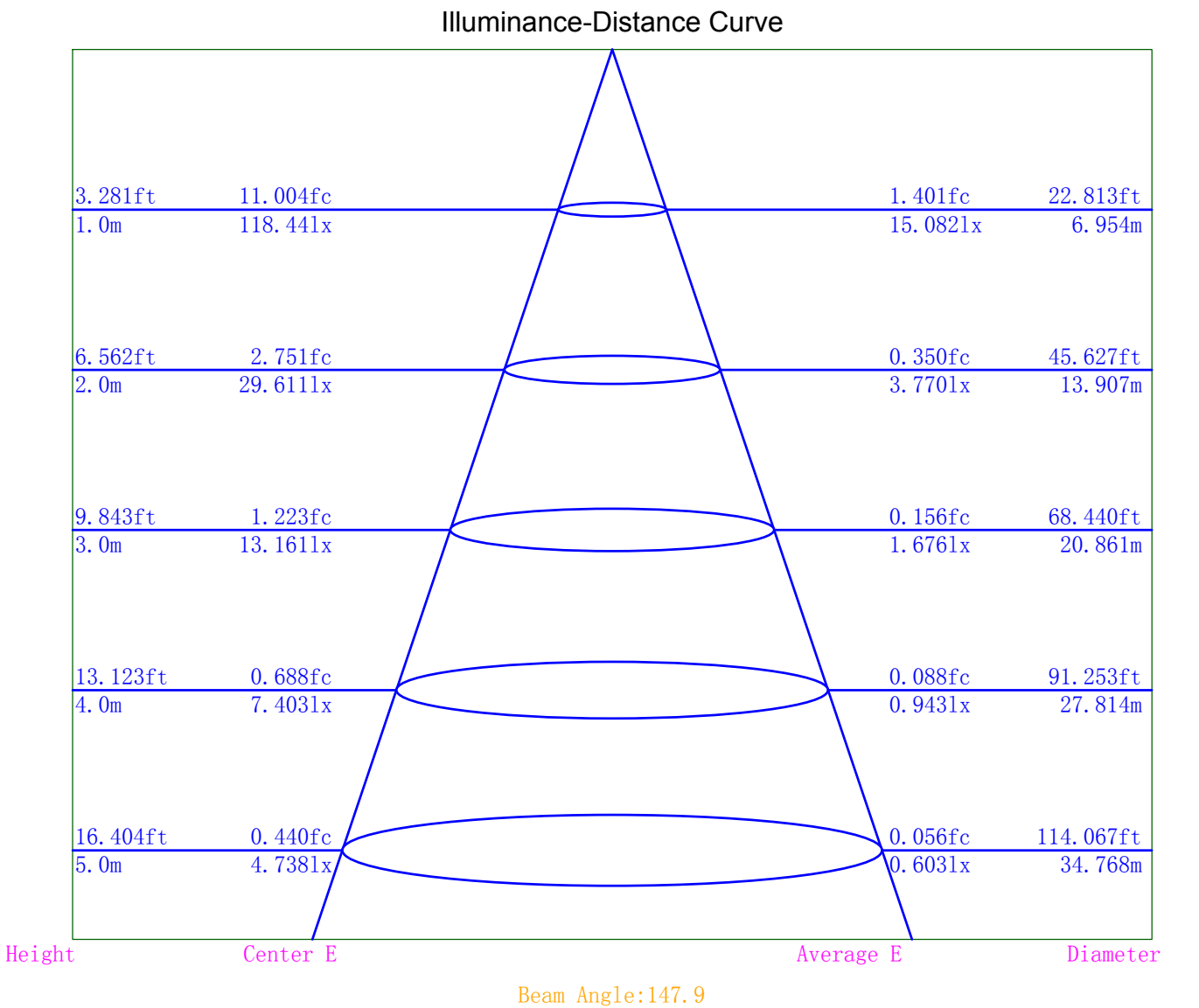


Space Plane Maximum Illuminance and @Angle:118.44lx,0.0deg  
Plane Maximum Lighting Intensity and @Angle:118.595cd,0deg



Illuminance-Distance Diagram

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29



Indoor Luminance Limiting Curves

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29

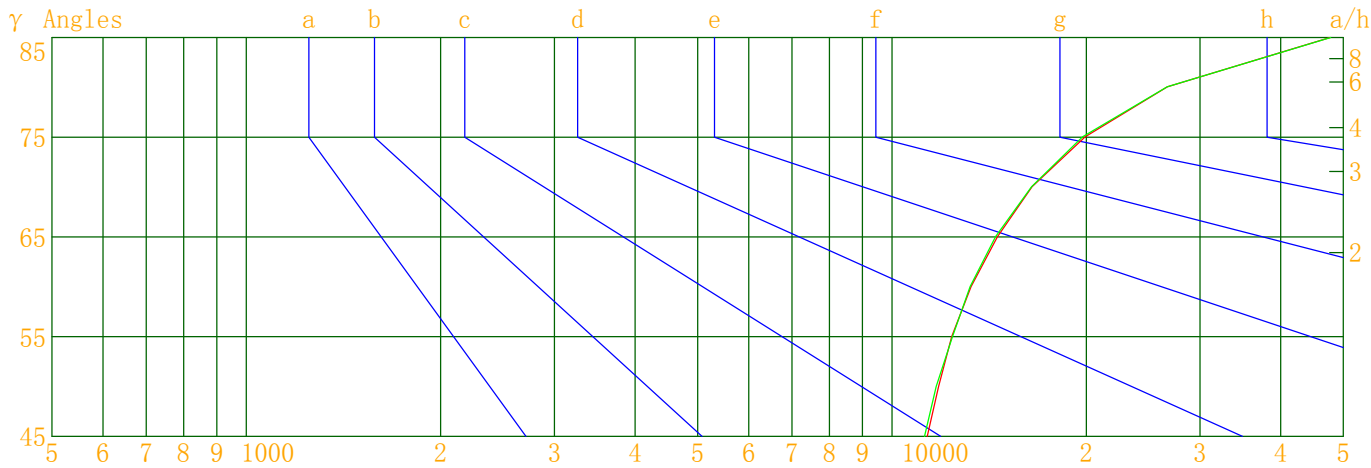
Glare Grade Table

GI	Quality	Using Illuminance							
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	11337	11811	12377	13263	14570	16483	19924	26705	47715
C90	11232	11711	12411	13218	14470	16451	19737	26681	47798

Luminance Limiting Curve



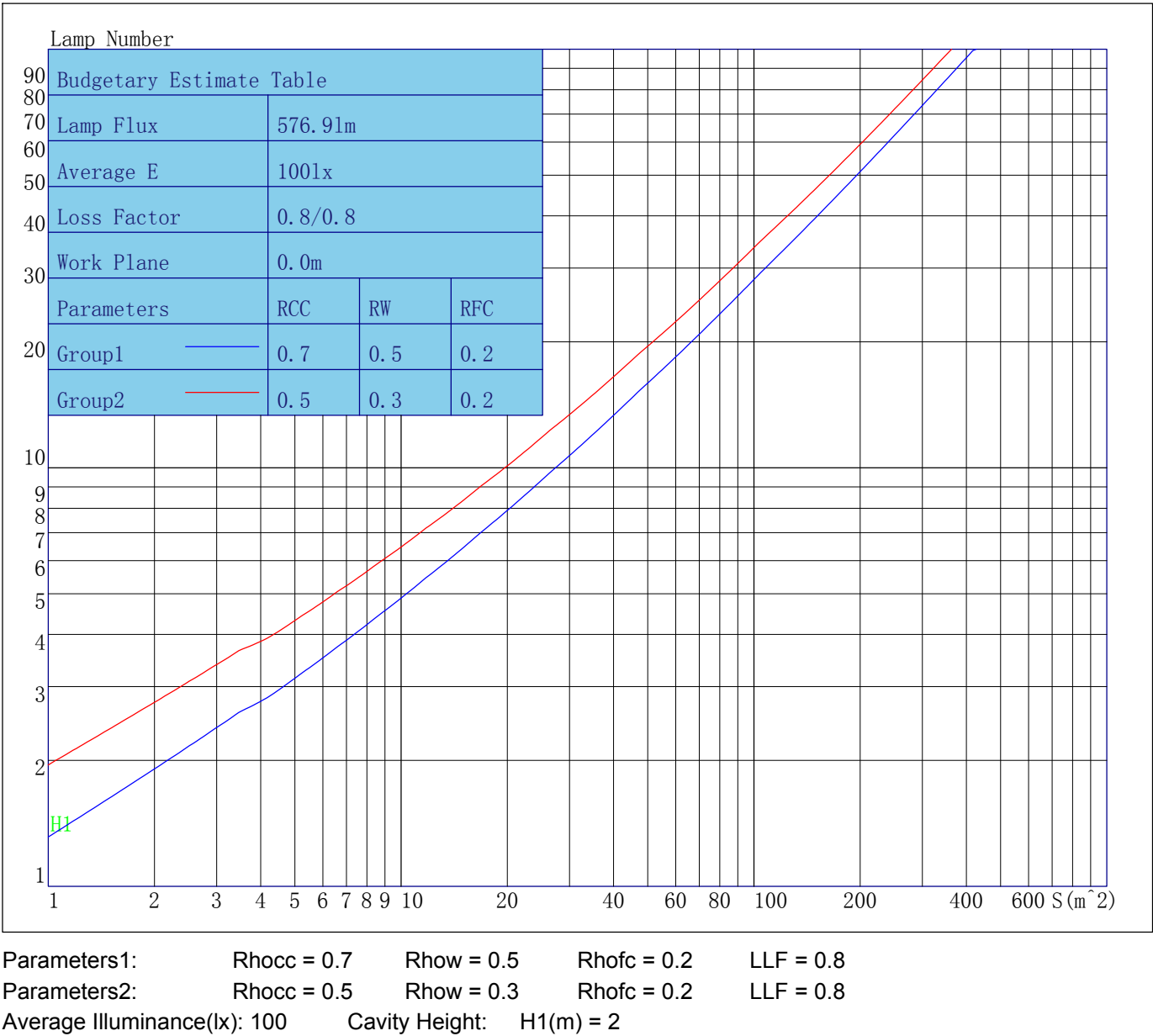
Luminous Size: Length(m)=0.110 Width(m)=0.110 Height(m)=0.000 Area(m^2)=0.012100

Luminous Type: Without Luminous Side

Luminous Curves: C0-C180 Color: C90-C270 Color:

Indoor Budgetary Estimate Table

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29



Indoor Coefficient of Utilization Table

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29

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	115	115	115	115	111	111	111	111	102	102	102	95	95	95	88	88	88	84
1	101	95	89	84	97	91	86	81	84	80	76	77	74	71	71	68	66	63
2	91	81	73	66	86	78	70	64	71	65	60	66	61	56	60	56	53	49
3	82	70	60	53	78	67	58	52	62	55	49	57	51	46	52	47	43	40
4	74	61	51	44	71	59	50	43	54	47	41	50	43	38	46	41	36	33
5	68	54	44	37	65	52	43	36	48	40	34	44	38	33	41	35	31	28
6	63	48	39	32	60	47	38	31	43	35	30	40	33	28	37	31	27	24
7	58	44	34	28	55	42	33	27	39	32	26	36	30	25	34	28	24	21
8	54	40	31	25	51	38	30	24	36	28	23	33	27	22	31	25	21	19
9	50	36	28	22	48	35	27	21	33	26	21	30	24	20	28	23	19	17
10	47	33	25	20	45	32	24	19	30	23	18	28	22	18	26	21	17	15

Unified Glare Rating Table

Lum. Name: TR09-09-DW-03 1800-3000K RA90 150D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29

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	20.0	21.4	20.6	22.0	22.7	20.0	21.4	20.5	22.0	22.7
	22.6	24.0	23.2	24.6	25.3	22.6	23.9	23.2	24.5	25.2
	24.1	25.3	24.7	25.9	26.7	24.0	25.3	24.6	25.9	26.6
	25.6	26.8	26.2	27.4	28.2	25.6	26.8	26.2	27.4	28.1
	26.5	27.6	27.1	28.3	29.0	26.5	27.6	27.1	28.3	29.0
	27.5	28.6	28.1	29.2	30.0	27.5	28.5	28.1	29.2	30.0
X=4H    Y=2H	21.0	22.2	21.6	22.9	23.6	20.9	22.2	21.6	22.8	23.5
	23.8	24.9	24.4	25.6	26.3	23.8	24.9	24.4	25.5	26.3
	25.4	26.4	26.1	27.1	27.9	25.4	26.4	26.0	27.1	27.8
	27.2	28.1	27.8	28.8	29.5	27.1	28.0	27.8	28.7	29.5
	28.1	29.0	28.8	29.7	30.5	28.1	29.0	28.8	29.6	30.4
	29.2	30.0	29.9	30.7	31.5	29.2	30.0	29.9	30.7	31.5
X=8H    Y=4H	26.1	26.9	26.8	27.6	28.4	26.0	26.9	26.7	27.6	28.4
	28.1	28.8	28.8	29.6	30.5	28.1	28.8	28.8	29.5	30.5
	29.2	29.9	30.0	30.6	31.5	29.2	29.9	29.9	30.6	31.4
	30.6	31.2	31.3	31.9	32.8	30.6	31.2	31.3	31.9	32.7
X=12H    Y=4H	26.3	27.0	26.9	27.8	28.5	26.2	27.0	26.9	27.7	28.5
	28.4	29.1	29.1	29.8	30.6	28.3	29.0	29.1	29.7	30.6
	29.6	30.2	30.3	31.0	31.8	29.6	30.2	30.3	30.9	31.8
Variations with the objverver position at spacings										
S=1.0H	0.0/-0.0					0.1/-0.1				
S=1.5H	0.1/-0.1					0.1/-0.1				
S=2.0H	0.1/-0.2					0.1/-0.2				
Reduced UGR Table:										
Nordic Standard Table:	BK0					BK0				
Correction Value	6.0					6.0				

o the CIE Pub.117, data has been corrected, refers to the lamp’s lumens 8.2flm.

Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
γ 0.0	118.44	118.44	118.44	118.44
γ 5.0	118.46	118.28	117.56	117.22
γ 10.0	118.60	117.59	116.05	115.62
γ 15.0	117.13	116.16	113.93	113.81
γ 20.0	115.23	114.39	110.95	111.14
γ 25.0	112.79	112.06	107.24	108.01
γ 30.0	109.95	108.69	103.32	104.12
γ 35.0	105.74	105.11	98.61	100.30
γ 40.0	101.92	100.97	93.86	95.55
γ 45.0	97.00	96.10	89.07	90.20
γ 50.0	91.86	91.08	83.19	85.01
γ 55.0	85.90	86.14	77.70	79.02
γ 60.0	80.24	79.97	71.34	73.08
γ 65.0	74.51	74.00	65.28	67.10
γ 70.0	68.21	68.08	59.80	61.04
γ 75.0	62.40	61.81	54.08	55.38
γ 80.0	56.11	56.06	48.75	49.72
γ 85.0	50.32	50.41	43.35	44.25
γ 90.0	45.33	44.90	38.40	39.35
γ 95.0	40.10	39.55	33.73	34.07
γ 100.0	35.54	13.09	29.28	9.60
γ 105.0	30.81	12.20	25.71	8.69
γ 110.0	26.60	9.28	21.85	5.68
γ 115.0	18.37	8.50	16.50	4.83
γ 120.0	8.15	9.05	7.10	6.19
γ 125.0	9.58	12.69	8.30	9.90
γ 130.0	10.18	10.48	8.19	8.34
γ 135.0	8.27	8.65	6.52	6.91
γ 140.0	5.89	7.44	4.74	5.86
γ 145.0	4.21	5.90	3.45	5.18
γ 150.0	3.29	4.84	2.98	4.47
γ 155.0	3.08	4.38	2.55	3.65
γ 160.0	2.88	3.36	2.78	3.78
γ 165.0	3.10	3.04	2.88	2.86
γ 170.0	2.93	2.79	3.00	2.92
γ 175.0	2.80	2.76	2.64	2.76
γ 180.0	2.74	2.74	2.74	2.74