

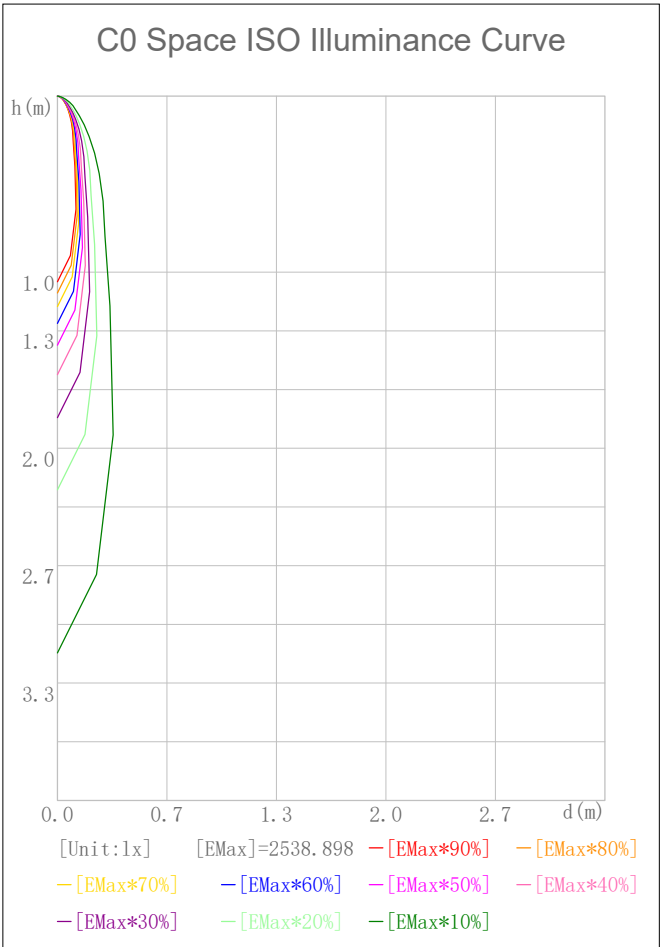
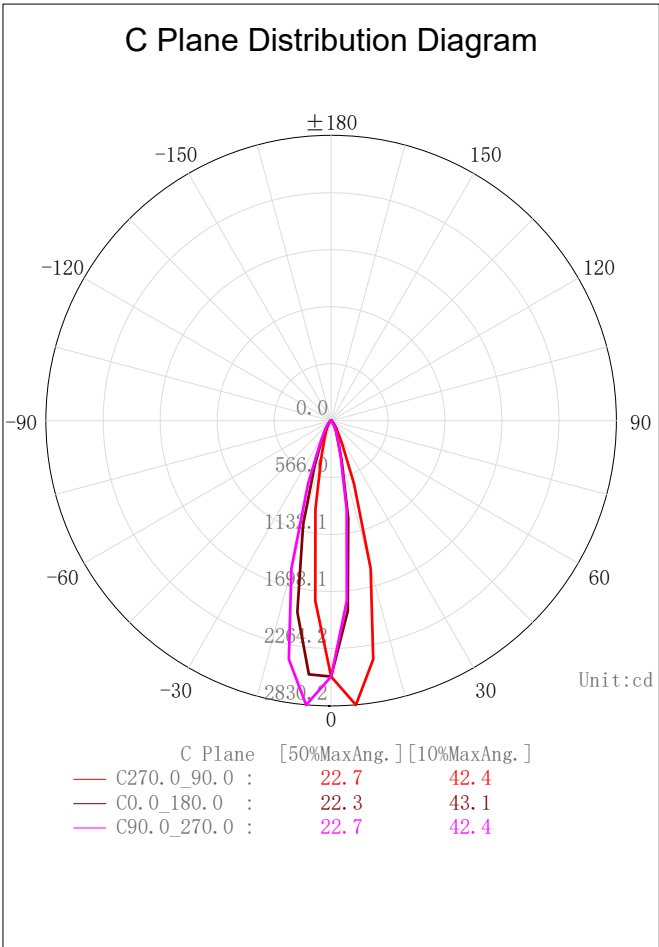
Indoor Luminaire Photometric Data

Description Information

Luminary Name: TR09-09-DW-02 1800-3000K RA90 15D		Lum. Catalog:	Test ID: 01
Lamp Name:		Lamp Catalog: LED	Test Date: 2022/08/18
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):0.039m*0.039m*0.000m		Lum. Area (m2):0.001	Lum. W (kg): 0.000
Test System: C, γ	Test Step: C=90.0 γ=5.0	Temp. (°C): 25	Humidity(%):

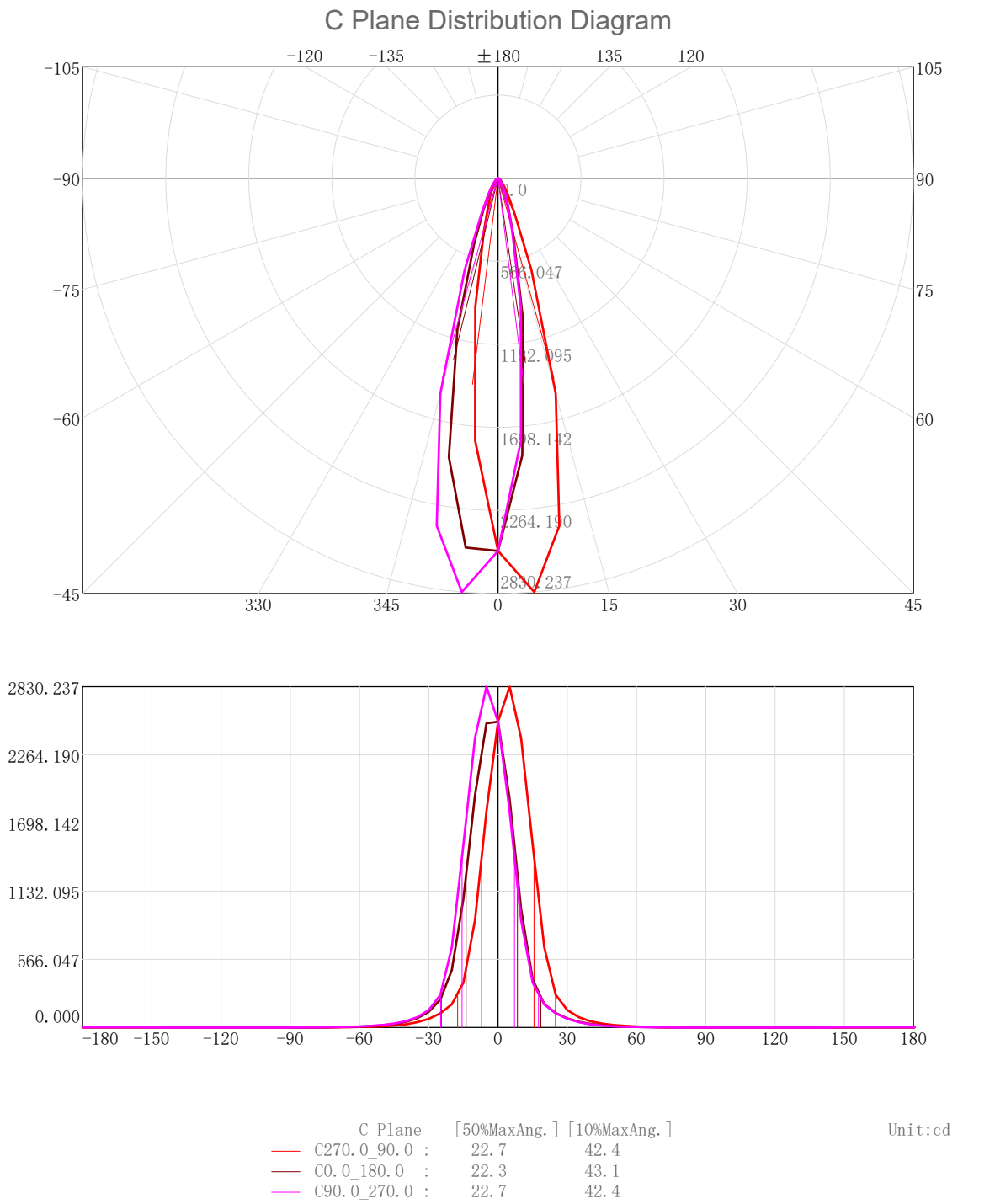
Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 615.690	Luminary Flux(lm): 615.693	Field Angle(10%Imax): 42.4(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 612.988lm 99.56%	
Rated Voltage(V):	Luminary EER(lm/W): 74.341	Up Lumens&Percent: 2.705lm 0.44%	
Tested Power(W): 8.282	Max. Candela(cd): 2830.237	S/MH: C0_a180=0.380 C90_270=0.415	
Lamps' Inside: 1	Max Cand@Ang. (°): C=270.0 γ=5.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf):239.8, 0.038, 0.891	Beam Angle(50%Imax): 22.7(°)	ErP ϕ use(90°): 570.884lm	
Lamp Size (W*L*H):0.039m*0.039m*0.000m	Left=-7.1°, Right=15.6°	IRF(%): 1136.989	



2D Plane Light Intensity Distribution Curve

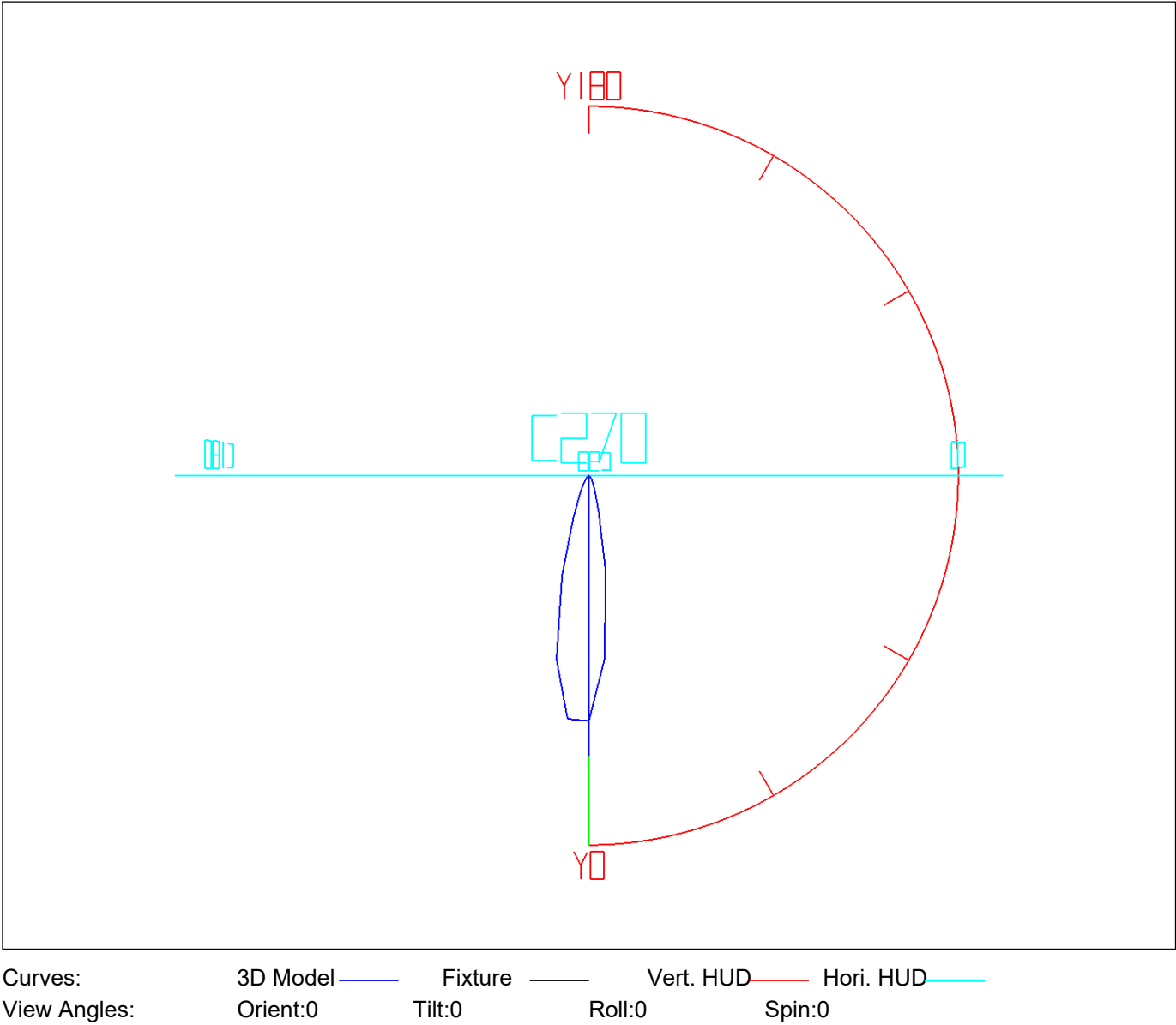
Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18



3D Light Intensity Distribution Modal

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18

3D Light Intensity Distribution Modal

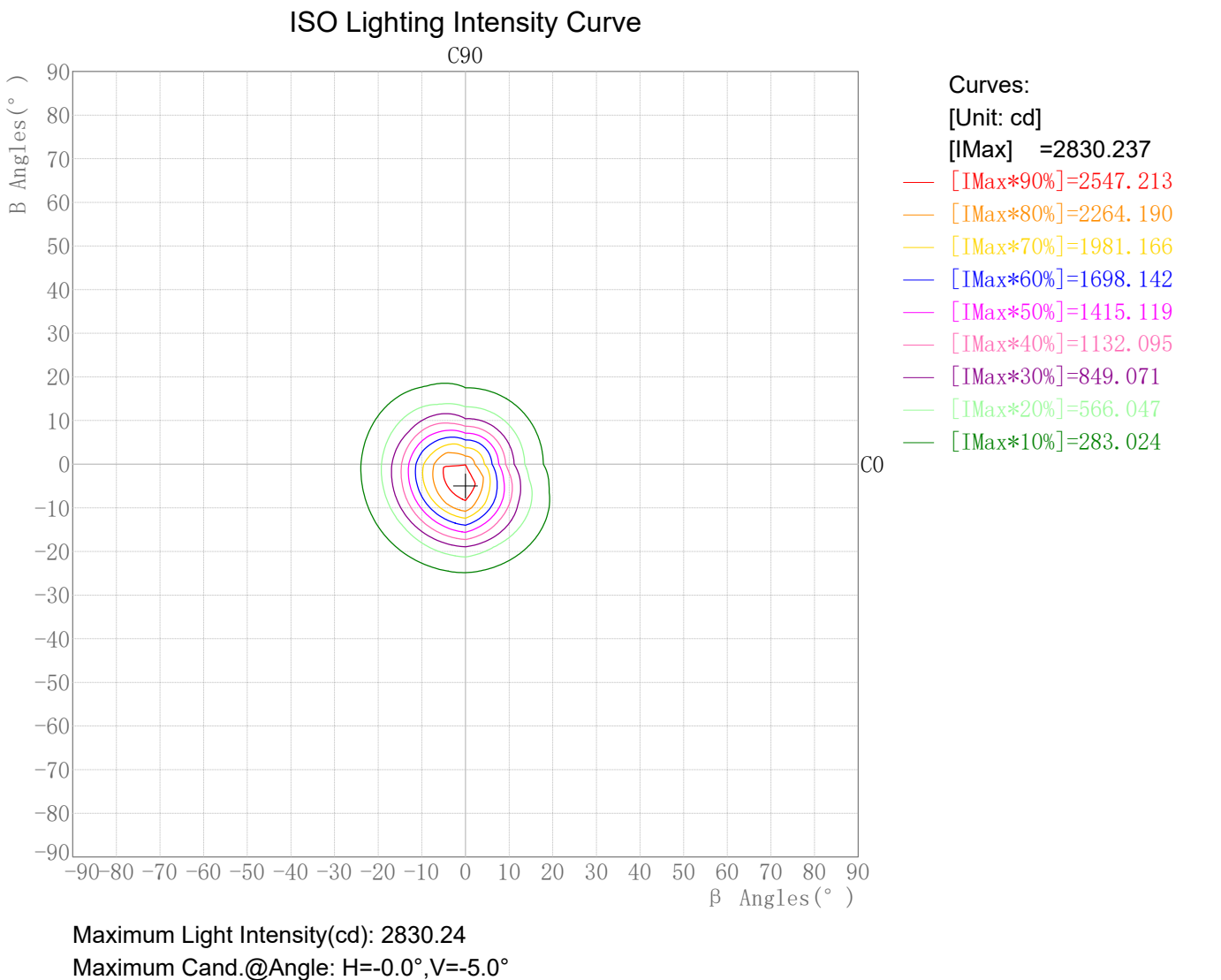


Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	57.39	57.39	9.32	9.32
5.0-10.0	136.43	193.82	22.16	31.48
10.0-15.0	141.93	335.75	23.05	54.53
15.0-20.0	100.81	436.55	16.37	70.90
20.0-25.0	59.67	496.22	9.69	80.60
25.0-30.0	37.00	533.23	6.01	86.61
30.0-35.0	25.10	558.33	4.08	90.68
35.0-40.0	17.28	575.60	2.81	93.49
40.0-45.0	11.85	587.45	1.92	95.41
45.0-50.0	8.15	595.60	1.32	96.74
50.0-55.0	5.66	601.26	0.92	97.66
55.0-60.0	4.07	605.33	0.66	98.32
60.0-65.0	3.00	608.33	0.49	98.81
65.0-70.0	2.15	610.48	0.35	99.15
70.0-75.0	1.39	611.87	0.23	99.38
75.0-80.0	0.73	612.60	0.12	99.50
80.0-85.0	0.31	612.91	0.05	99.55
85.0-90.0	0.08	612.99	0.01	99.56
90.0-95.0	0.00	612.99	0.00	99.56
95.0-100.0	0.00	612.99	0.00	99.56
100.0-105.0	0.00	612.99	0.00	99.56
105.0-110.0	0.00	612.99	0.00	99.56
110.0-115.0	0.00	612.99	0.00	99.56
115.0-120.0	0.00	612.99	0.00	99.56
120.0-125.0	0.00	612.99	0.00	99.56
125.0-130.0	0.00	612.99	0.00	99.56
130.0-135.0	0.00	612.99	0.00	99.56
135.0-140.0	0.07	613.06	0.01	99.57
140.0-145.0	0.26	613.32	0.04	99.62
145.0-150.0	0.44	613.76	0.07	99.69
150.0-155.0	0.53	614.29	0.09	99.77
155.0-160.0	0.49	614.79	0.08	99.85
160.0-165.0	0.39	615.18	0.06	99.92
165.0-170.0	0.29	615.46	0.05	99.96
170.0-175.0	0.17	615.64	0.03	99.99
175.0-180.0	0.06	615.69	0.01	100.00

Rectangle ISO Lighting Intensity Diagram

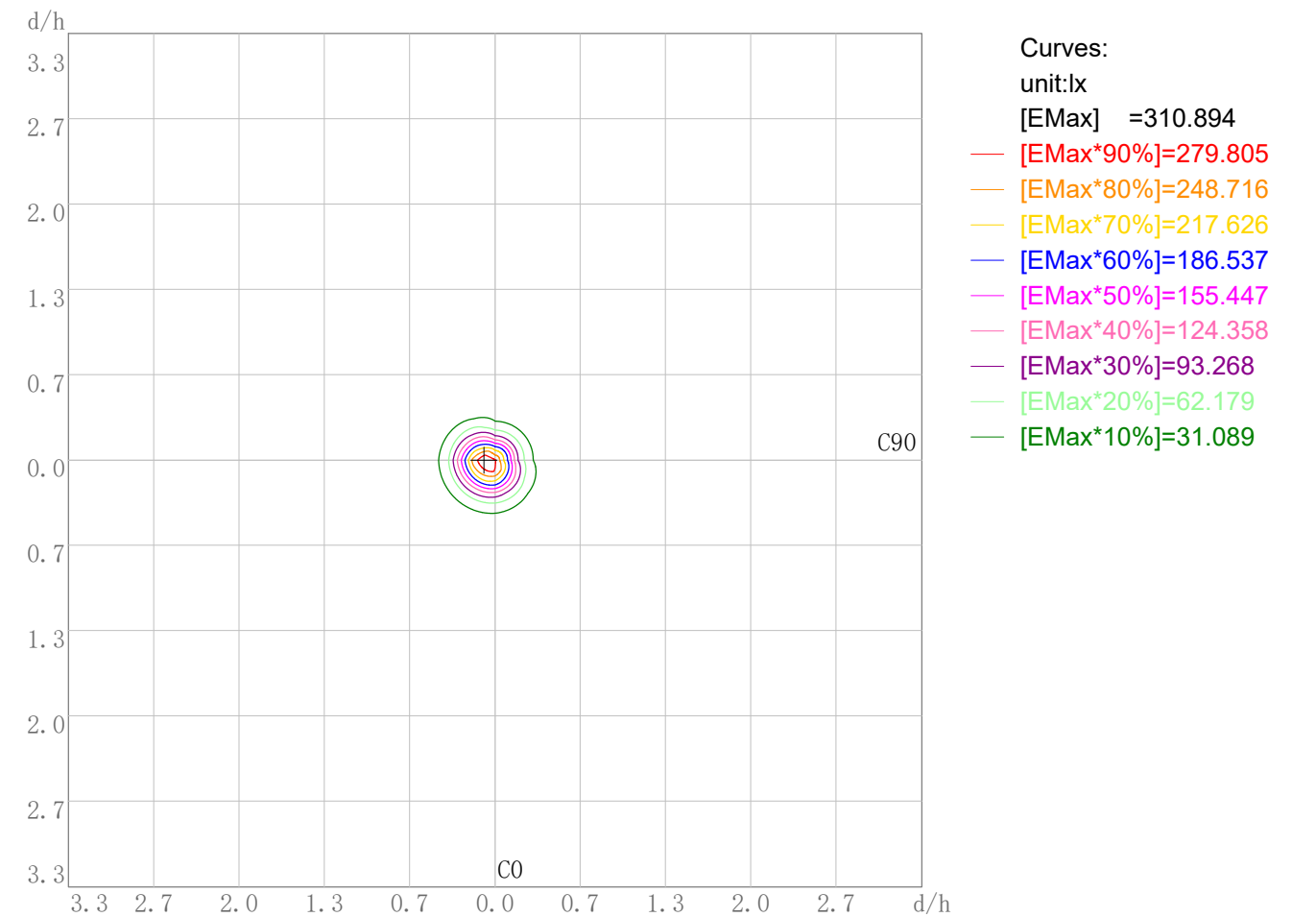
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Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18



Plane ISO-Illuminance Diagram

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

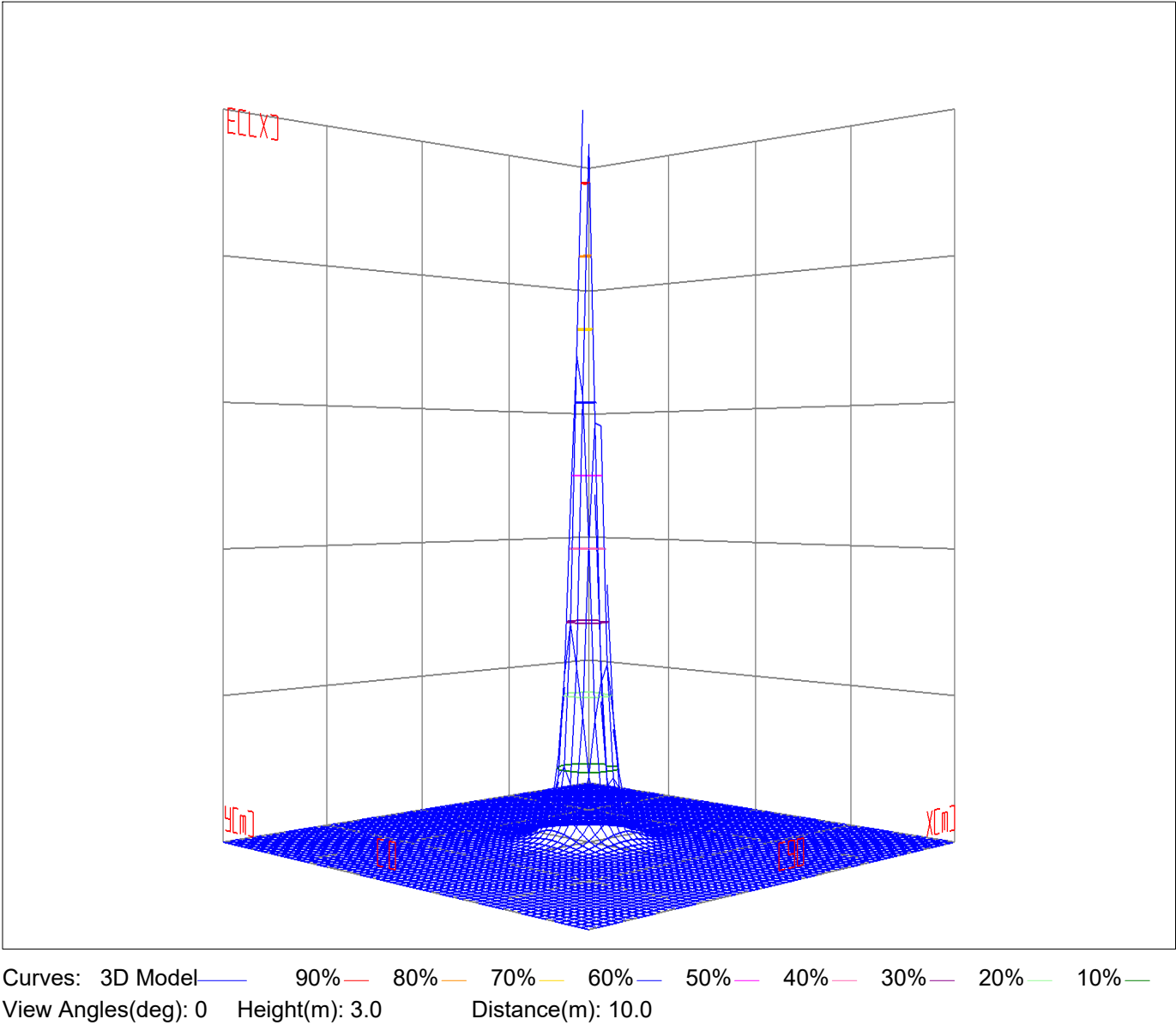
Working Plane Maximum Illuminance(lx): 310.89

Working Plane Maximum Illuminance Position(d/h):H-0.1 V-0.0

3D Plane ISO Illuminance Diagram

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18

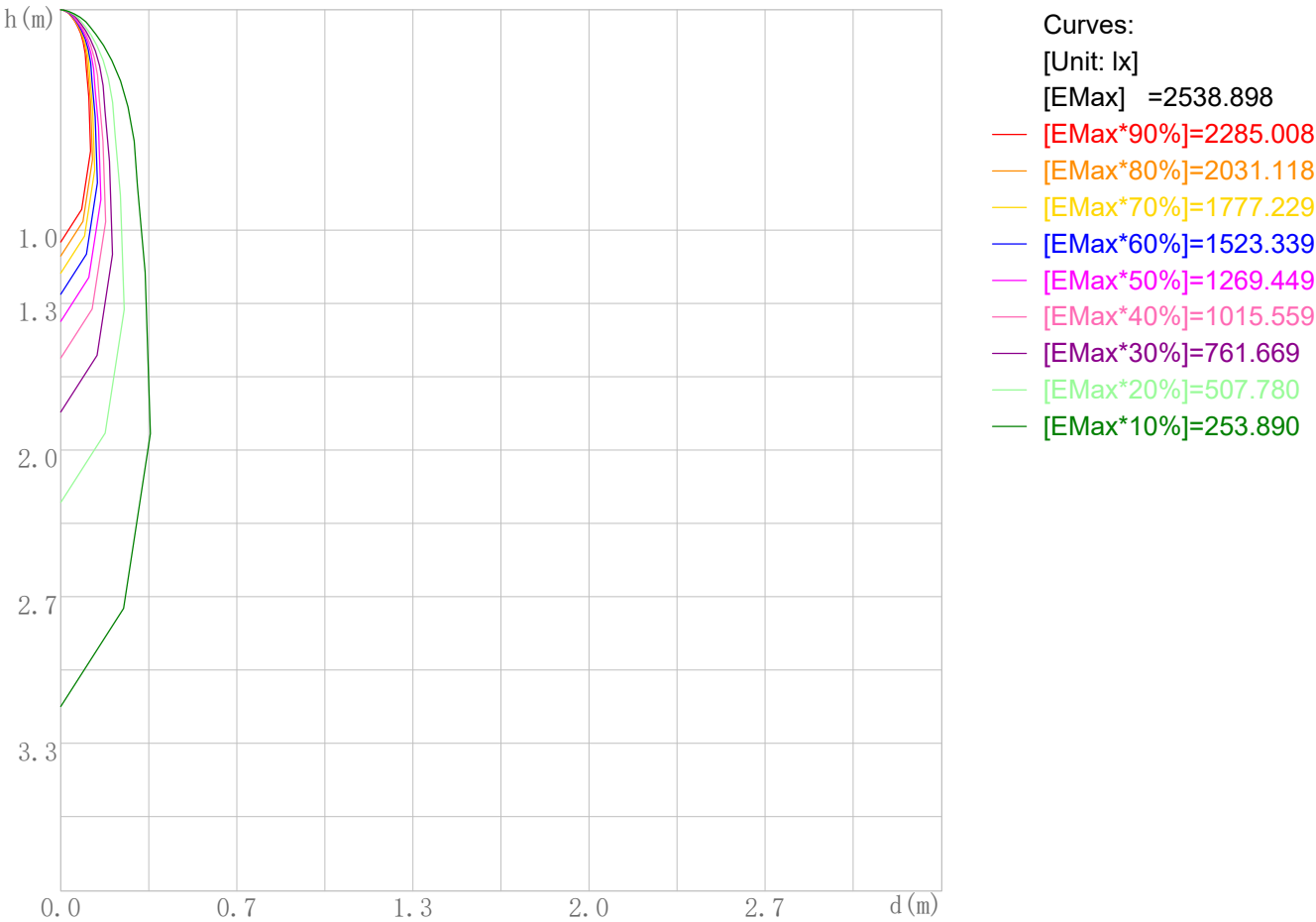
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18

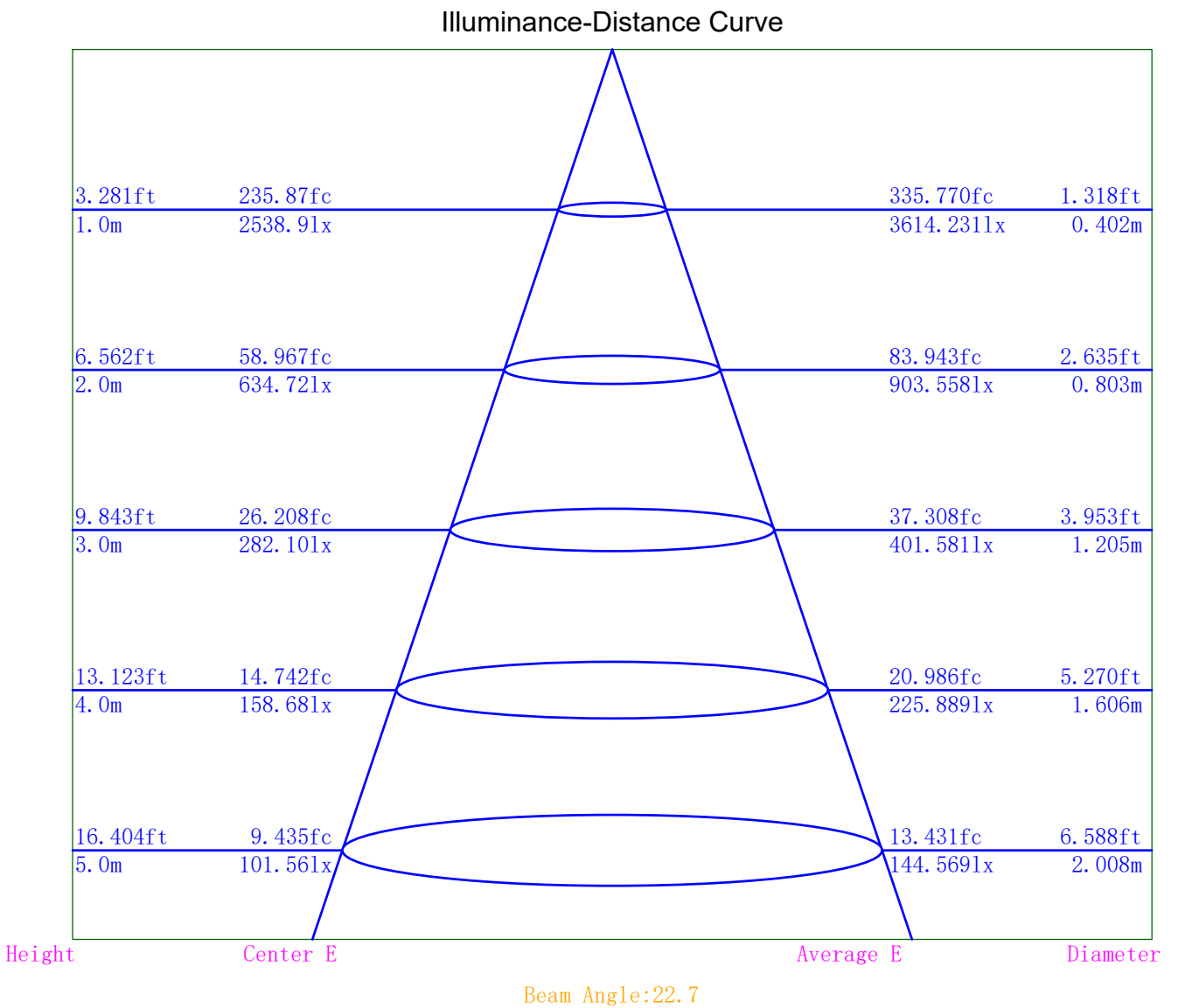
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:2538.90lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:2538.898cd,0deg

Illuminance-Distance Diagram

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18



Indoor Luminance Limiting Curves

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18

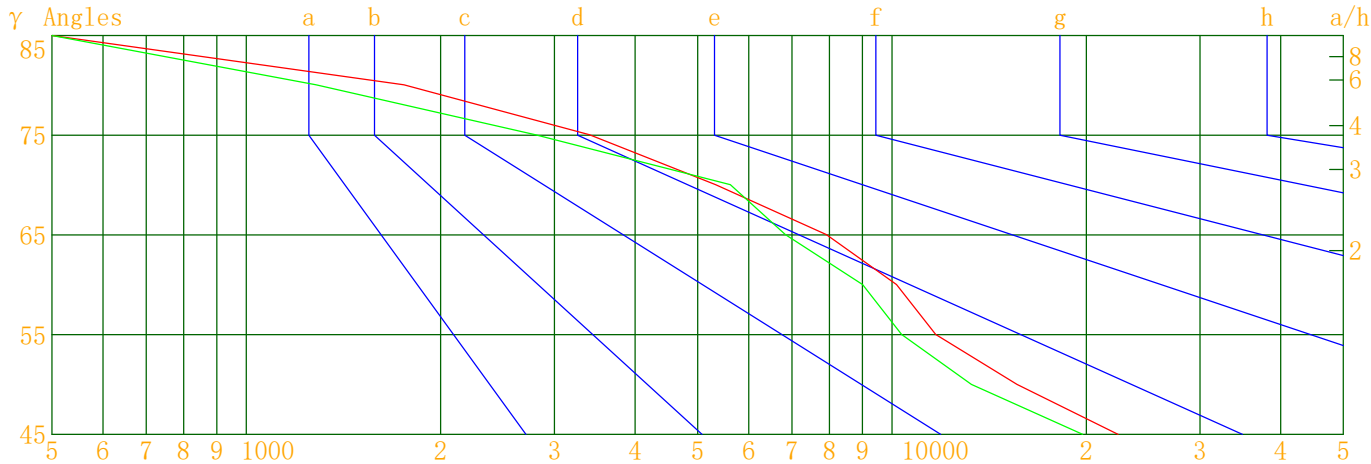
Glare Grade Table

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	22400	15620	11689	10161	7913	5331	3399	1755	0
C90	19745	13272	10350	9006	6840	5620	2804	1282	0

Luminance Limiting Curve



Luminous Size:

Length(m)=-0.039

Width(m)=-0.039

Height(m)=0.000

Area(m^2)=0.001195

Luminous Type:

Without Luminous Side

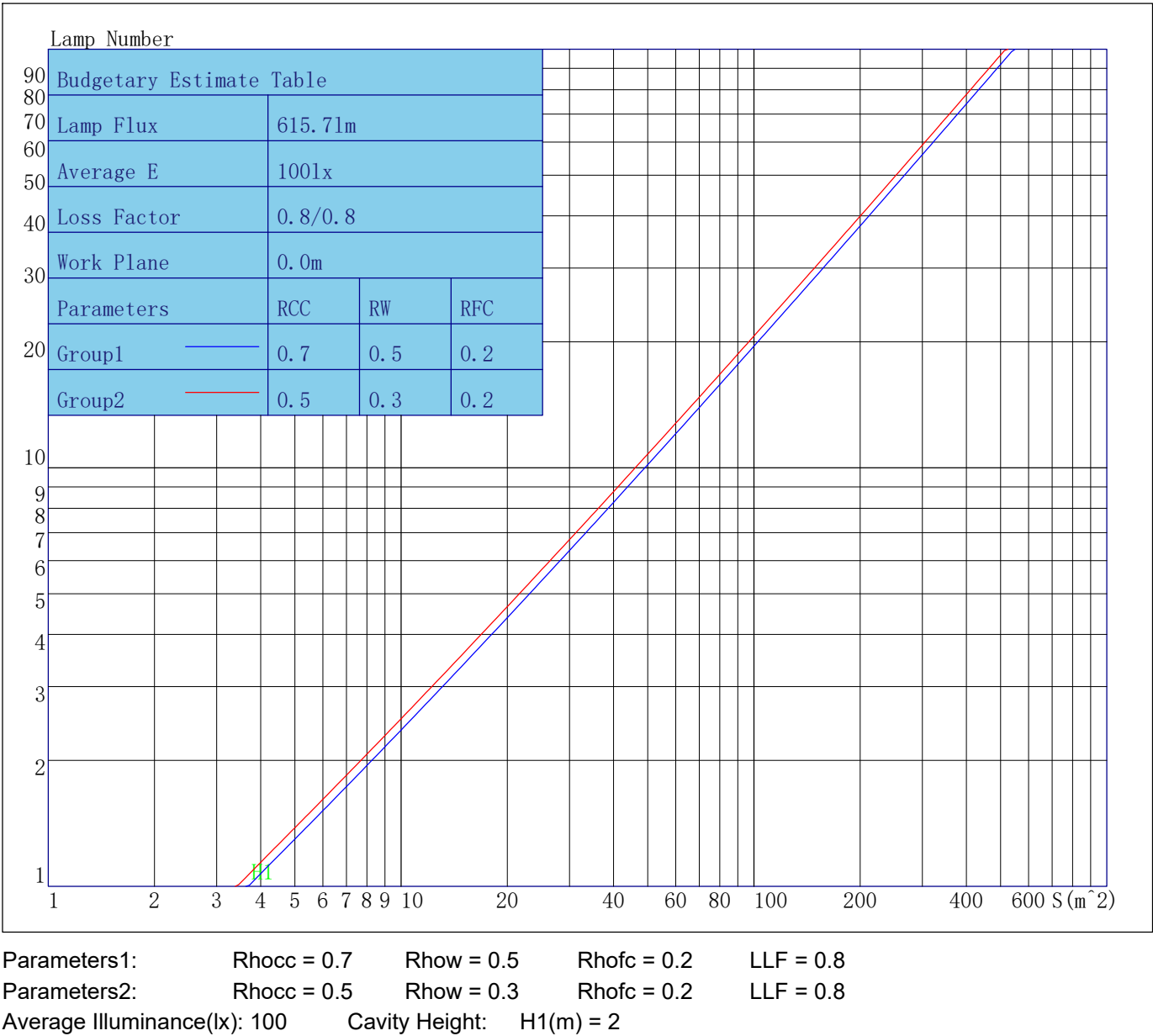
Luminous Curves:

C0-C180 Color: —

C90-C270 Color: —

Indoor Budgetary Estimate Table

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/18



Indoor Coefficient of Utilization Table

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18

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	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	103	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87
4	102	96	92	88	100	95	91	88	93	89	87	91	88	86	89	87	85	83
5	99	92	87	84	97	91	87	84	89	86	83	88	85	82	86	84	81	80
6	95	88	84	80	94	88	83	80	86	82	79	85	81	79	84	81	78	77
7	92	85	80	77	91	84	80	77	83	79	76	82	79	76	81	78	76	74
8	89	82	77	74	88	81	77	74	80	76	74	79	76	73	79	75	73	72
9	87	79	75	72	86	79	74	71	78	74	71	77	74	71	76	73	71	70
10	84	77	72	69	83	76	72	69	76	72	69	75	71	69	74	71	69	68

Unified Glare Rating Table

Lum. Name:TR09-09-DW-02 1800-3000K RA90 15D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/18

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	15.7	16.7	16.1	17.1	17.4	15.1	16.1	15.5	16.4	16.8
	15.9	16.8	16.3	17.1	17.5	15.3	16.2	15.7	16.5	16.9
	15.9	16.7	16.3	17.1	17.5	15.3	16.1	15.7	16.5	16.9
	15.8	16.6	16.2	16.9	17.3	15.2	16.0	15.6	16.3	16.7
	15.7	16.5	16.2	16.9	17.3	15.1	15.9	15.6	16.3	16.7
	15.7	16.4	16.1	16.8	17.2	15.1	15.8	15.5	16.2	16.6
X=4H Y=2H	15.8	16.6	16.2	17.0	17.4	15.2	16.0	15.6	16.4	16.8
	16.0	16.7	16.4	17.1	17.5	15.4	16.1	15.9	16.6	17.0
	16.0	16.7	16.5	17.1	17.5	15.4	16.1	15.9	16.5	17.0
	16.0	16.5	16.5	17.0	17.5	15.4	15.9	15.8	16.4	16.9
	15.9	16.4	16.4	16.9	17.4	15.3	15.8	15.8	16.3	16.8
	15.9	16.3	16.3	16.8	17.3	15.2	15.7	15.7	16.2	16.7
X=8H Y=4H	16.0	16.5	16.5	16.9	17.4	15.4	15.9	15.8	16.3	16.8
	15.9	16.3	16.4	16.9	17.4	15.3	15.7	15.8	16.2	16.8
	15.9	16.2	16.4	16.8	17.3	15.2	15.6	15.8	16.1	16.7
	15.8	16.2	16.4	16.7	17.2	15.2	15.5	15.7	16.0	16.6
X=12H Y=4H	15.9	16.4	16.4	16.9	17.4	15.3	15.8	15.8	16.3	16.7
	15.9	16.3	16.4	16.7	17.3	15.3	15.6	15.8	16.1	16.7
	15.8	16.2	16.4	16.7	17.3	15.2	15.5	15.7	16.0	16.6
Variations with the objverver position at spacings										
S=1.0H	1.0/-1.1					1.1/-1.4				
S=1.5H	1.9/-2.3					2.2/-2.7				
S=2.0H	2.7/-3.6					2.7/-4.4				
Reduced UGR Table:										
Nordic Standard Table:	BK0					BK0				
Correction Value	0.6					0.6				

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	2538.90	2538.90	2538.90	2538.90
γ 5.0	1895.75	1793.75	2526.29	2830.24
γ 10.0	983.78	892.35	1928.55	2404.49
γ 15.0	400.04	373.19	1069.43	1518.67
γ 20.0	194.14	193.77	477.23	666.22
γ 25.0	121.16	118.75	232.35	272.04
γ 30.0	76.08	72.86	130.76	145.58
γ 35.0	48.32	44.79	77.11	86.34
γ 40.0	29.96	27.16	47.69	52.83
γ 45.0	18.92	16.68	29.57	33.22
γ 50.0	11.99	10.19	19.03	21.66
γ 55.0	8.01	7.09	11.95	14.18
γ 60.0	6.07	5.38	8.31	9.43
γ 65.0	3.99	3.45	6.08	6.70
γ 70.0	2.18	2.30	4.27	4.96
γ 75.0	1.05	0.87	2.41	3.21
γ 80.0	0.36	0.27	1.23	1.54
γ 85.0	0.00	0.00	0.53	0.60
γ 90.0	0.00	0.00	0.00	0.03
γ 95.0	0.00	0.00	0.00	0.00
γ 100.0	0.00	0.00	0.00	0.00
γ 105.0	0.00	0.00	0.00	0.00
γ 110.0	0.00	0.00	0.00	0.00
γ 115.0	0.00	0.00	0.00	0.00
γ 120.0	0.00	0.00	0.00	0.00
γ 125.0	0.00	0.00	0.00	0.00
γ 130.0	0.00	0.00	0.00	0.00
γ 135.0	0.00	0.01	0.00	0.00
γ 140.0	0.95	0.53	0.00	0.00
γ 145.0	1.76	1.65	0.95	0.52
γ 150.0	2.18	2.04	1.45	1.41
γ 155.0	2.70	2.28	2.37	2.32
γ 160.0	2.50	2.41	2.05	2.18
γ 165.0	2.65	2.49	2.35	2.20
γ 170.0	2.40	2.35	2.39	2.51
γ 175.0	2.34	2.73	2.40	2.35
γ 180.0	2.32	2.32	2.32	2.32