

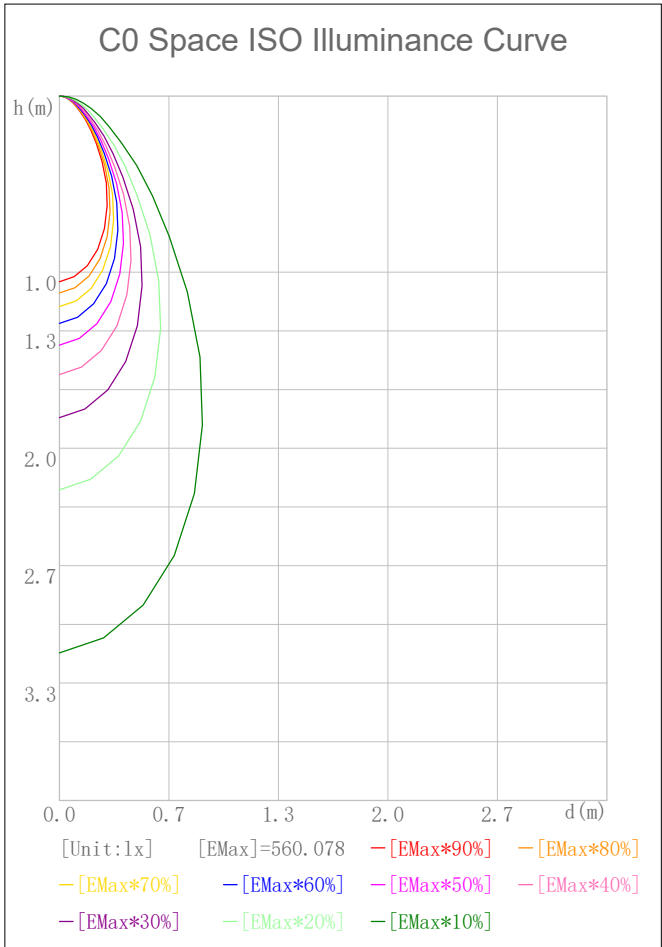
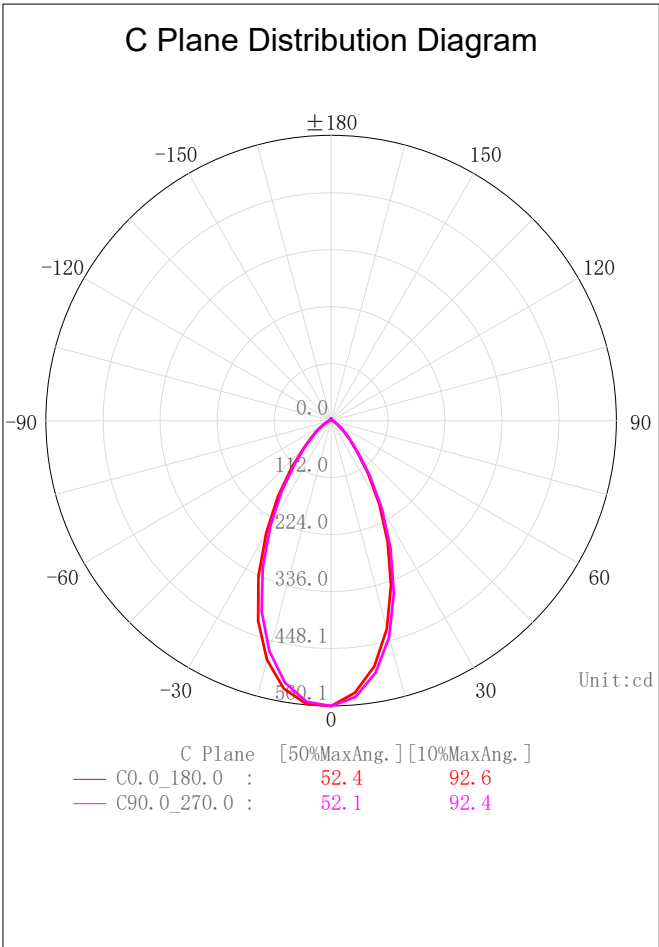
Indoor Luminaire Photometric Data

Description Information

Luminary Name: TR09-09-DW-02 3000K RA90 50D		Lum. Catalog:	Test ID: 01
Lamp Name:		Lamp Catalog: LED	Test Date: 2022/08/16
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):0.002	Lum. W (kg): 0.000
Test System: C, γ	Test Step: C=90.0 γ=5.0	Temp. (°C): 25	Humidity(%): 50.0

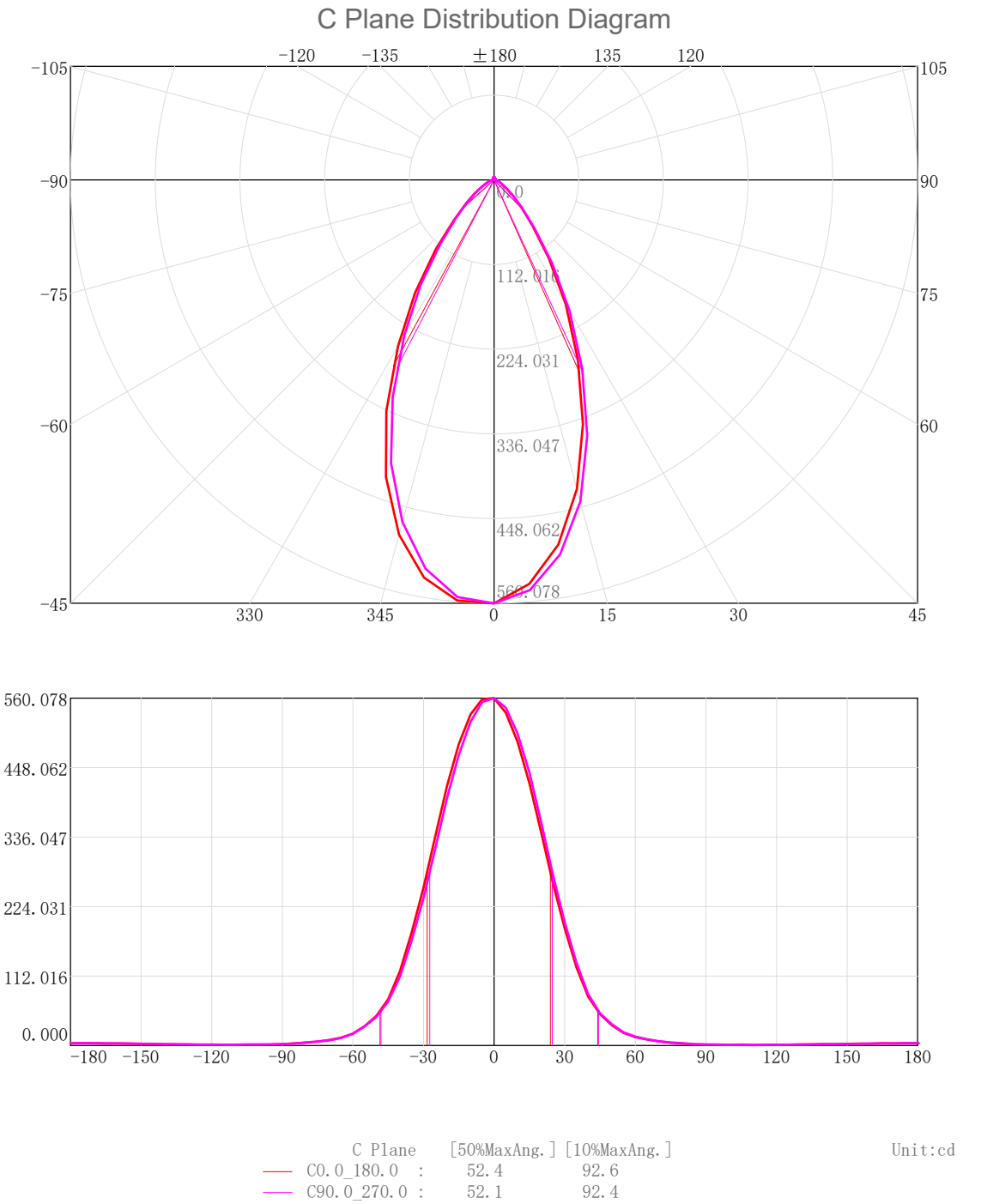
Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 519.130	Luminary Flux(lm): 519.135	Field Angle(10%Imax): 92.6(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 506.792lm 97.62%	
Rated Voltage(V):	Luminary EER(lm/W): 62.735	Up Lumens&Percent: 12.343lm 2.38%	
Tested Power(W): 8.275	Max. Candela(cd): 560.078	S/MH: C0_a180=0.804 C90_270=0.802	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=0.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf):240.2, 0.038, 0.891	Beam Angle(50%Imax): 52.4(°)	ErP Φ use(90°): 443.941lm	
Lamp Size (W*L*H):0.039m*0.039m*0.000m	Left=-28.4°, Right=23.9°	IRF(%): 267.967	



2D Plane Light Intensity Distribution Curve

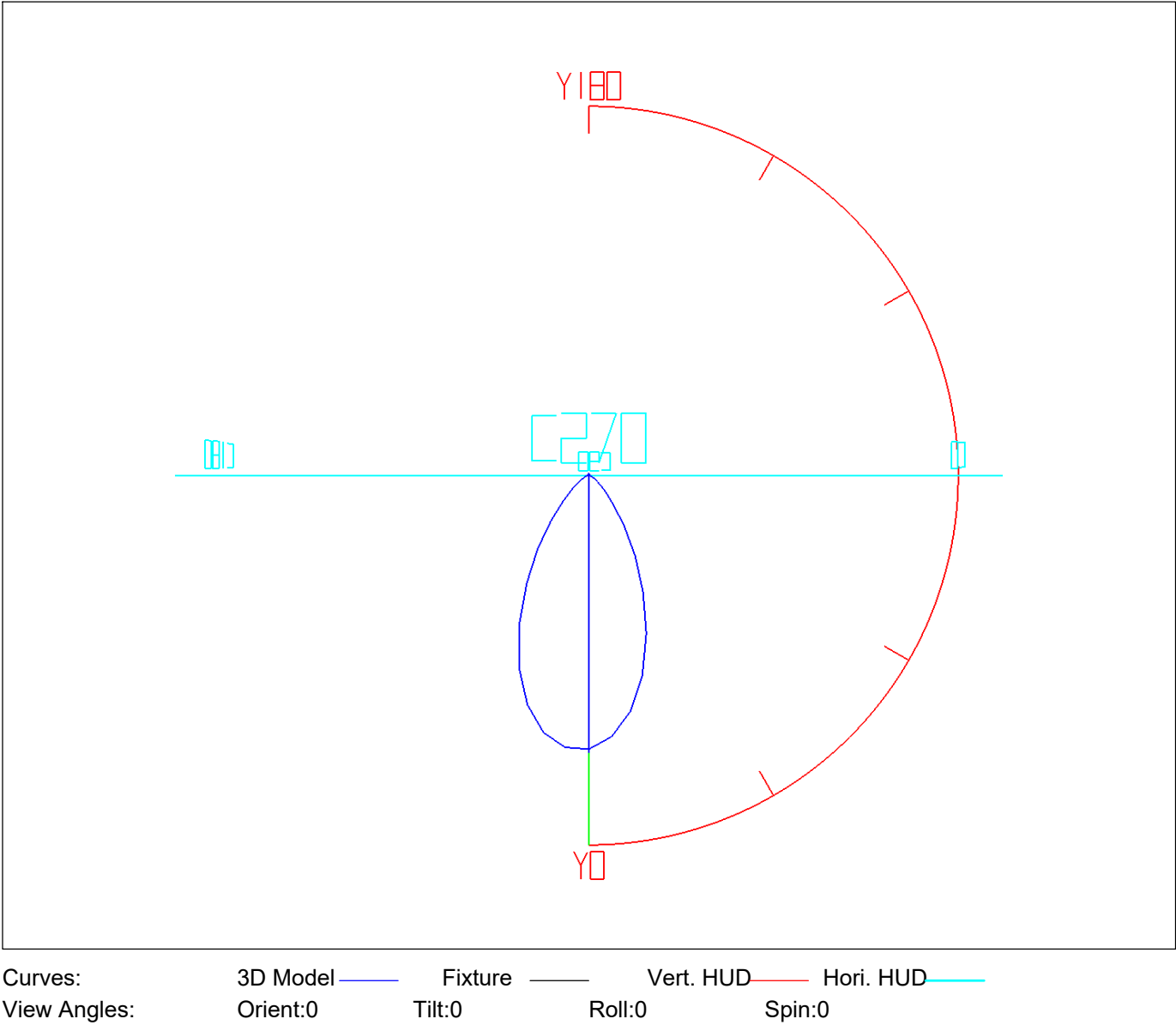
Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16



3D Light Intensity Distribution Modal

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16

3D Light Intensity Distribution Modal

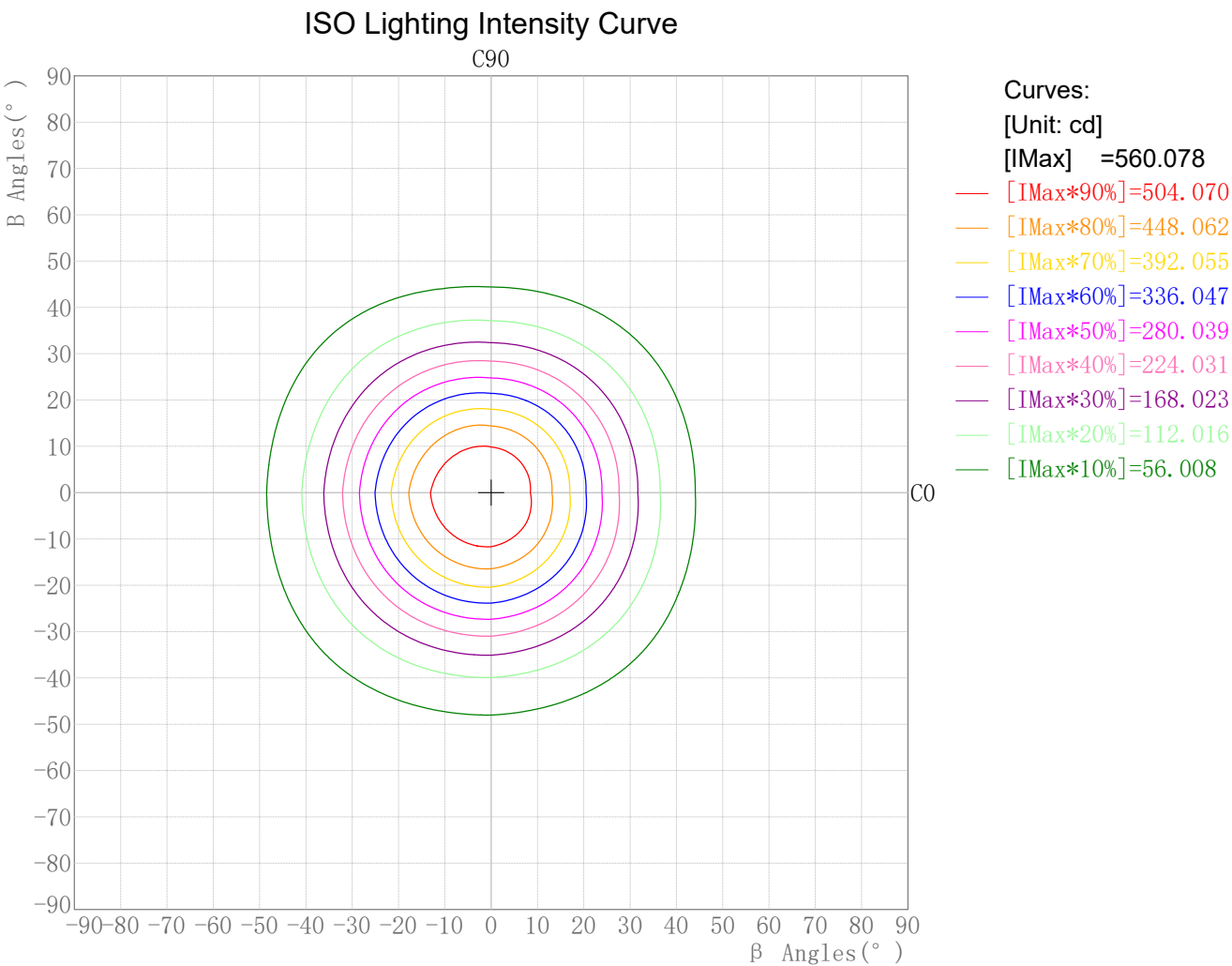


Zonal Flux Tabulation

Zone( γ )	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	13.25	13.25	2.55	2.55
5.0-10.0	37.93	51.18	7.31	9.86
10.0-15.0	57.34	108.52	11.04	20.90
15.0-20.0	68.77	177.30	13.25	34.15
20.0-25.0	71.14	248.44	13.70	47.86
25.0-30.0	65.58	314.02	12.63	60.49
30.0-35.0	54.89	368.90	10.57	71.06
35.0-40.0	41.86	410.77	8.06	79.13
40.0-45.0	29.70	440.47	5.72	84.85
45.0-50.0	20.72	461.19	3.99	88.84
50.0-55.0	14.45	475.64	2.78	91.62
55.0-60.0	9.90	485.54	1.91	93.53
60.0-65.0	6.83	492.36	1.31	94.84
65.0-70.0	4.88	497.25	0.94	95.78
70.0-75.0	3.55	500.80	0.68	96.47
75.0-80.0	2.69	503.49	0.52	96.99
80.0-85.0	1.95	505.44	0.38	97.36
85.0-90.0	1.35	506.79	0.26	97.62
90.0-95.0	1.05	507.84	0.20	97.83
95.0-100.0	0.88	508.73	0.17	98.00
100.0-105.0	0.83	509.56	0.16	98.16
105.0-110.0	0.74	510.30	0.14	98.30
110.0-115.0	0.66	510.96	0.13	98.43
115.0-120.0	0.71	511.67	0.14	98.56
120.0-125.0	0.72	512.39	0.14	98.70
125.0-130.0	0.74	513.13	0.14	98.84
130.0-135.0	0.78	513.91	0.15	98.99
135.0-140.0	0.81	514.72	0.16	99.15
140.0-145.0	0.81	515.53	0.16	99.31
145.0-150.0	0.78	516.31	0.15	99.46
150.0-155.0	0.75	517.07	0.15	99.60
155.0-160.0	0.69	517.76	0.13	99.74
160.0-165.0	0.58	518.33	0.11	99.85
165.0-170.0	0.43	518.77	0.08	99.93
170.0-175.0	0.27	519.04	0.05	99.98
175.0-180.0	0.09	519.13	0.02	100.00

Rectangle ISO Lighting Intensity Diagram

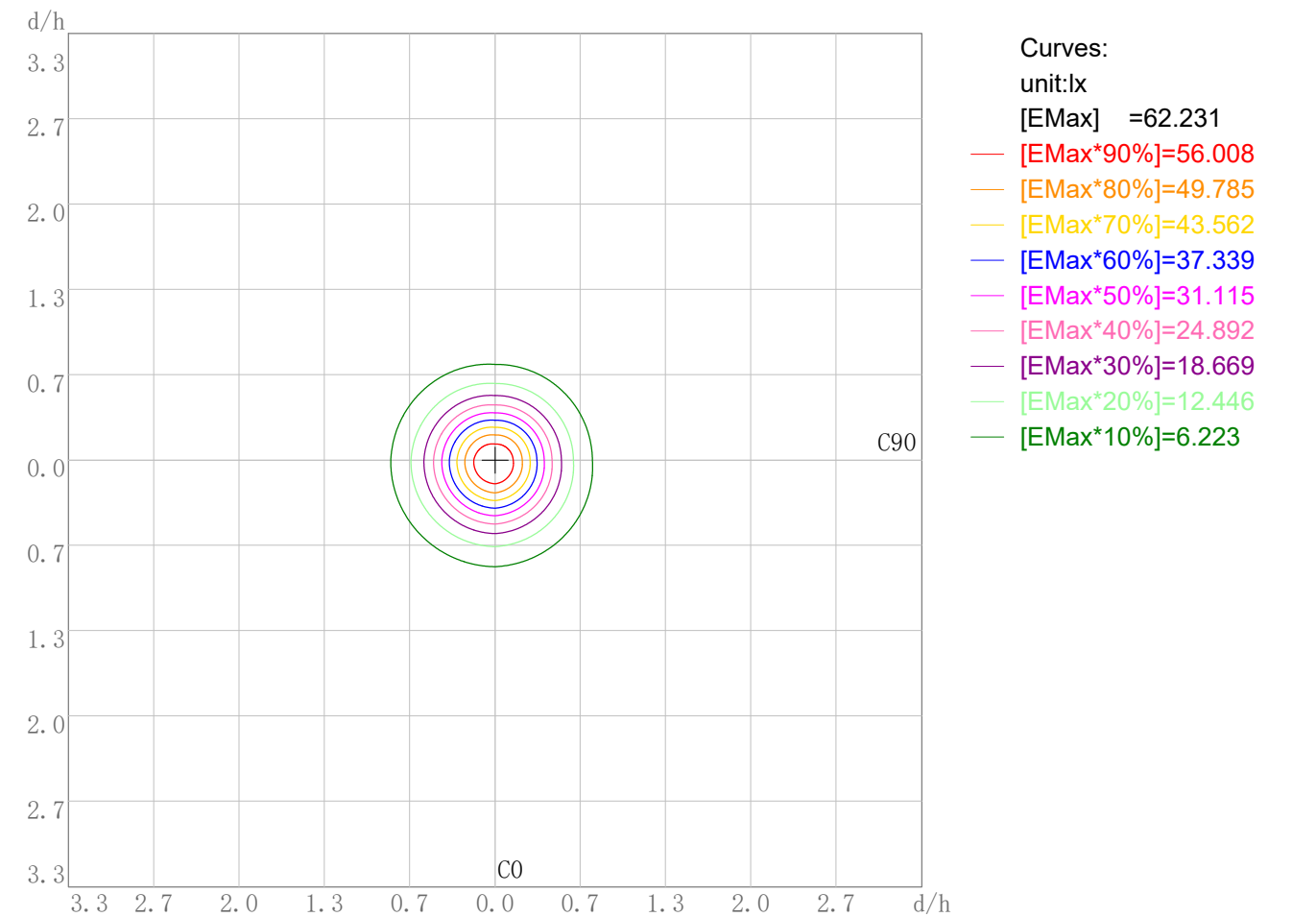
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Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16



Plane ISO-Illuminance Diagram

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/16

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

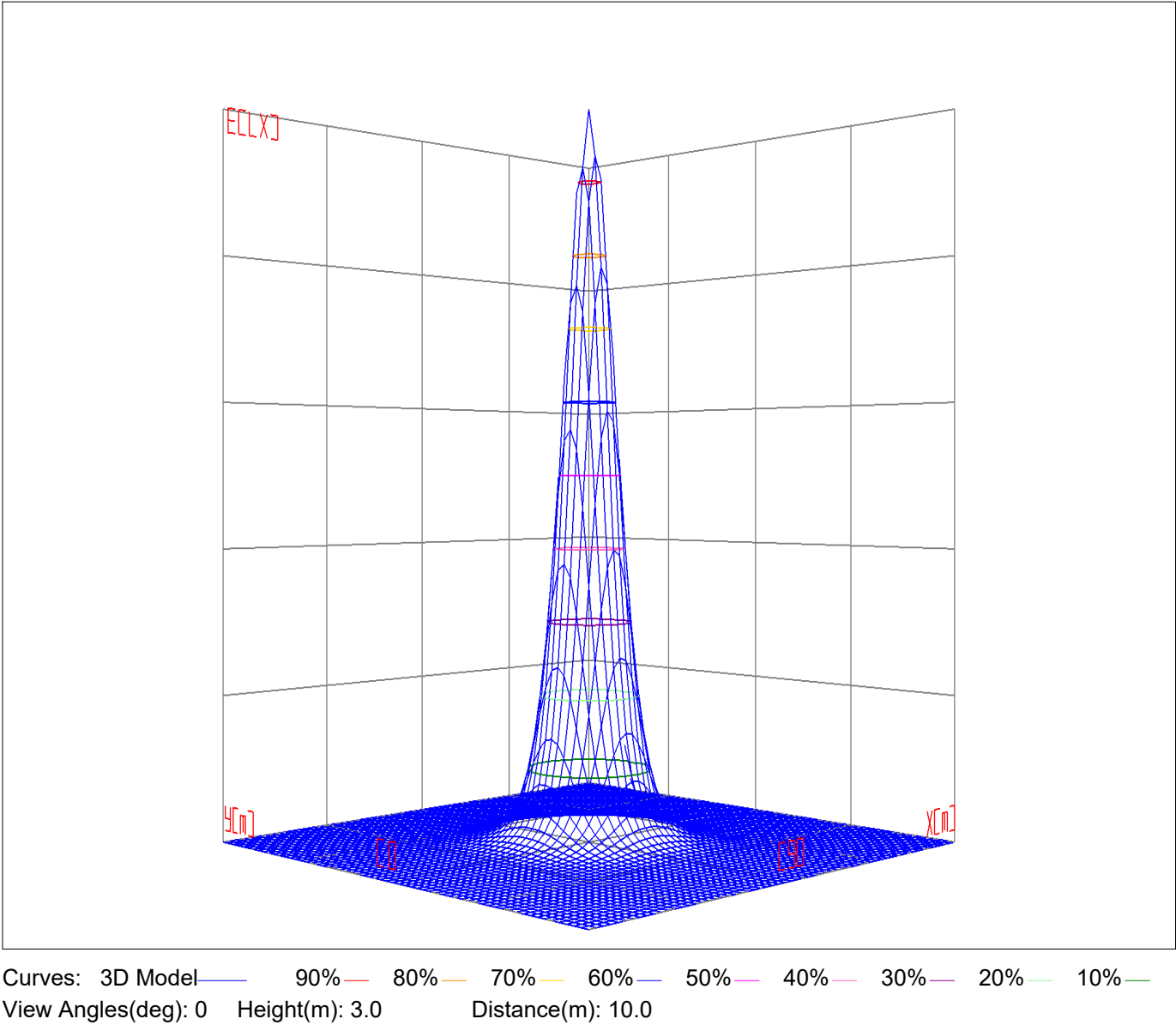
Working Plane Maximum Illuminance(lx): 62.23

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

3D Plane ISO Illuminance Diagram

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16

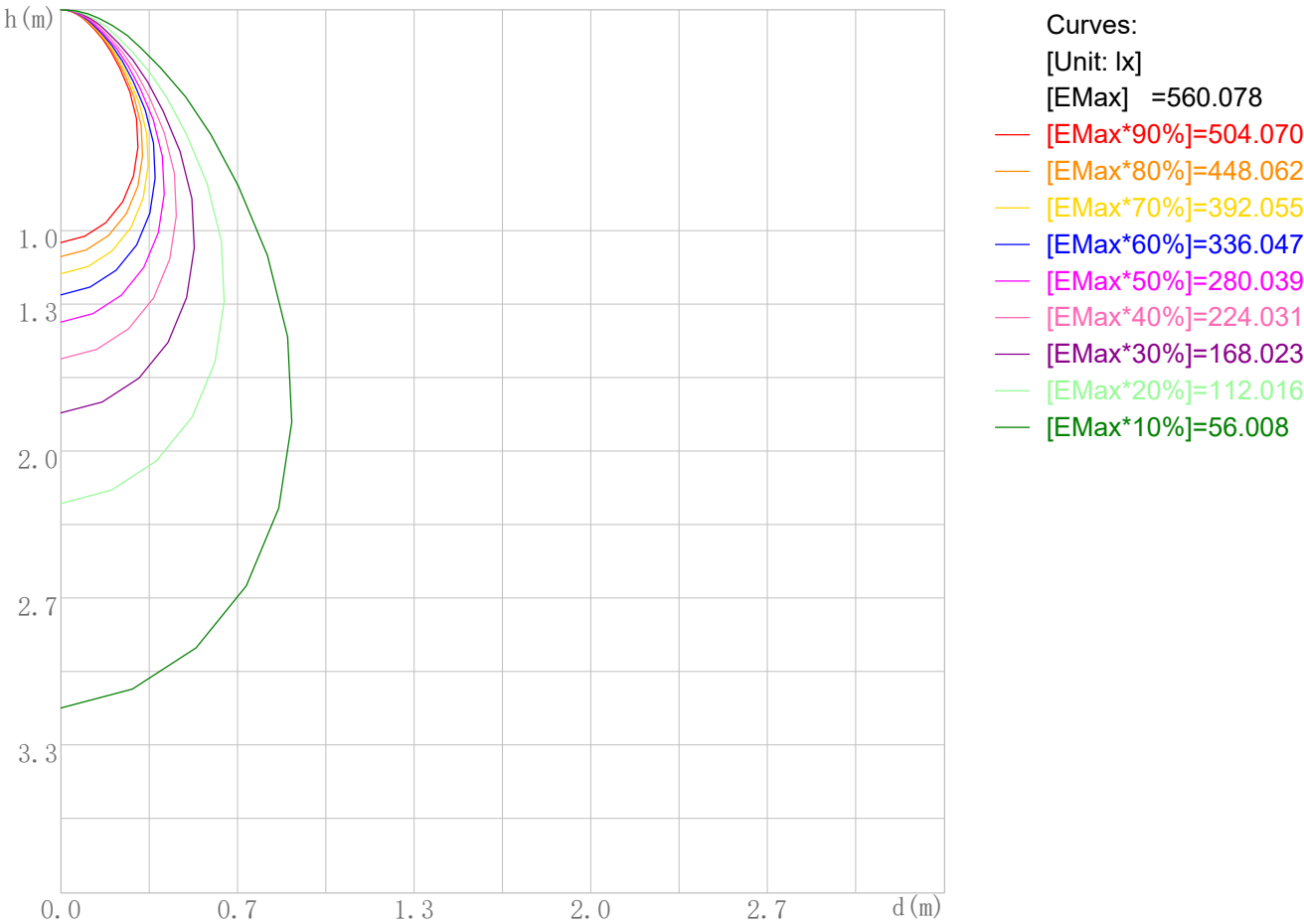
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16

Space ISO Illuminance Curve

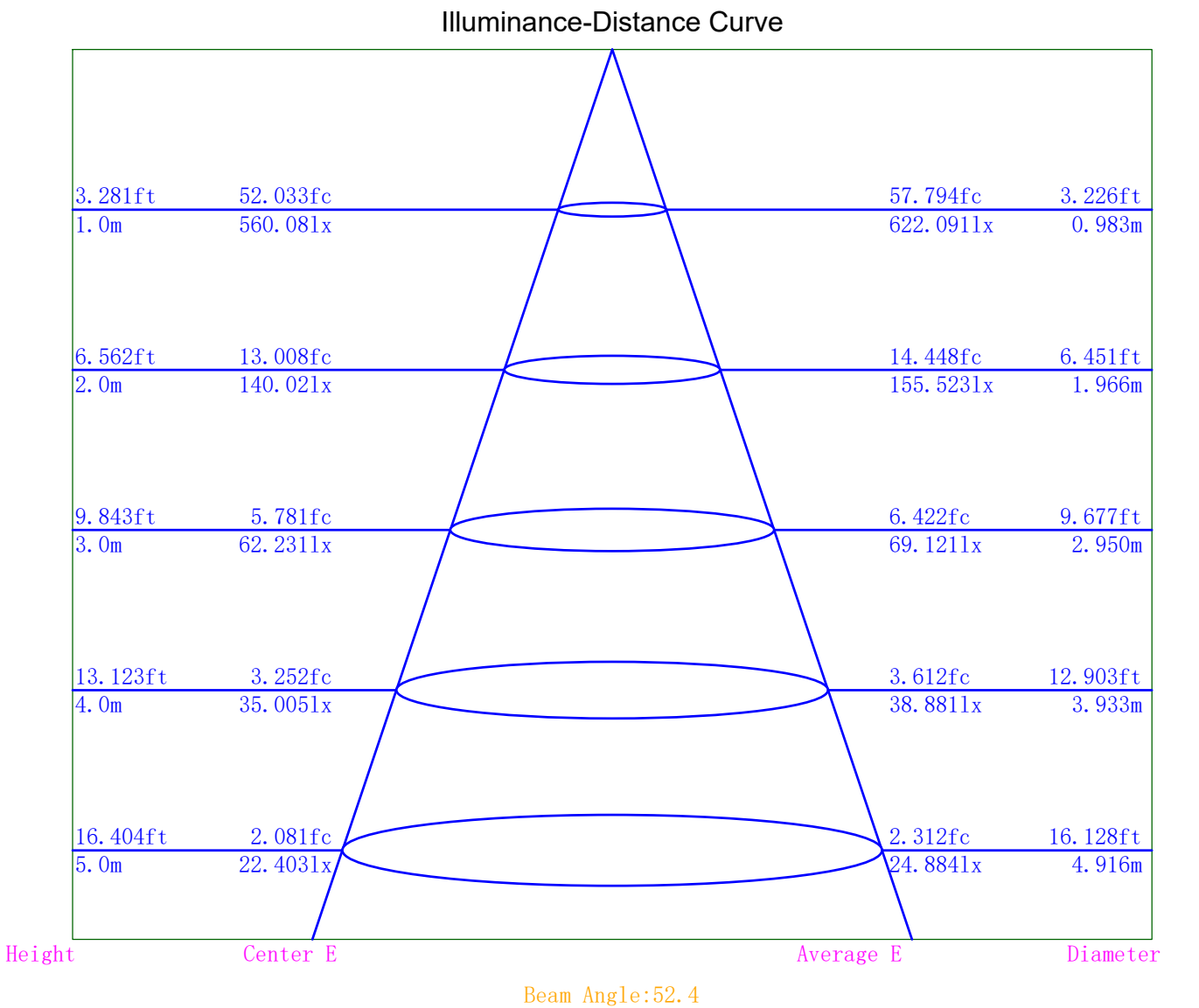


Space Plane Maximum Illuminance and @Angle:560.08lx,0.0deg  
Plane Maximum Lighting Intensity and @Angle:560.078cd,0deg



Illuminance-Distance Diagram

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16



Indoor Luminance Limiting Curves

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/16

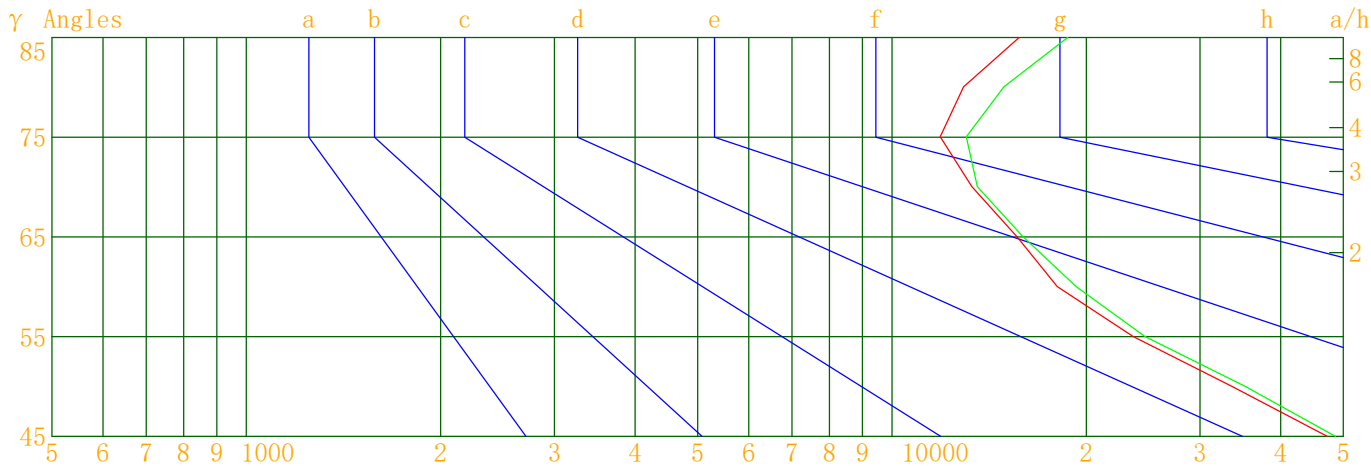
Glare Grade Table

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	47216	33634	23630	18032	15616	13295	11878	12911	15736
C90	48614	35250	24642	19283	15950	13556	13034	14910	18708

Luminance Limiting Curve



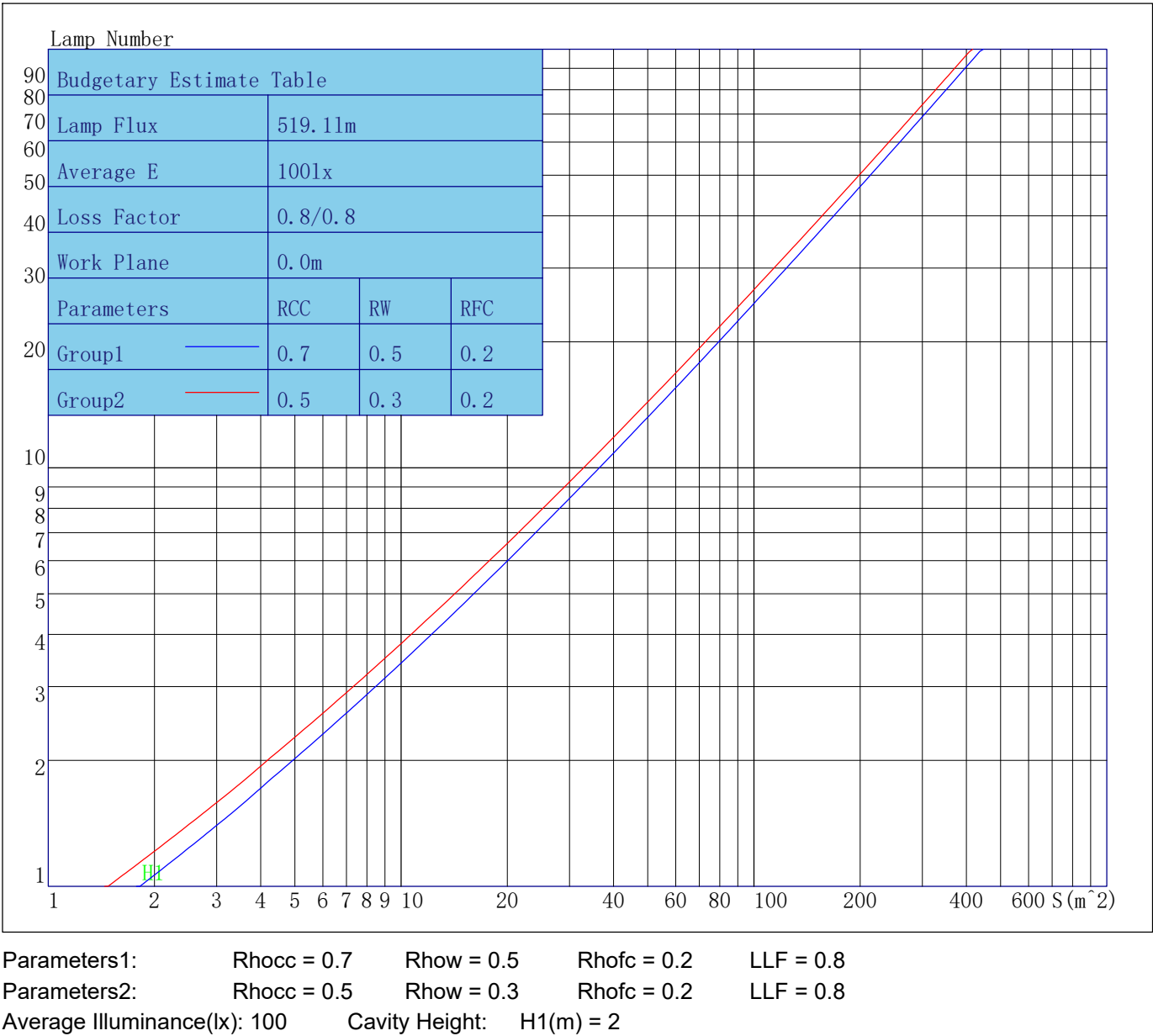
Luminous Size:Length(m)=0.039Width(m)=0.039Height(m)=0.000Area(m^2)=0.001521

Luminous Type:Without Luminous Side

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

Indoor Budgetary Estimate Table

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/16



Indoor Coefficient of Utilization Table

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16

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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	100	100	100	98
1	112	109	106	103	109	106	104	101	102	100	98	98	96	94	94	93	91	89
2	105	100	95	91	103	98	94	90	94	91	88	91	88	86	88	85	83	82
3	99	92	86	82	97	90	85	81	87	83	80	85	81	78	82	79	76	75
4	94	85	79	74	92	84	78	74	81	76	73	79	75	71	77	73	70	69
5	88	79	73	68	87	78	72	67	76	71	67	74	69	66	72	68	65	63
6	84	74	67	62	82	73	67	62	71	66	62	69	65	61	68	64	60	59
7	79	69	62	58	78	68	62	58	67	61	57	65	60	57	64	59	56	55
8	75	65	58	54	74	64	58	54	63	57	53	61	56	53	60	56	52	51
9	71	61	55	50	70	60	54	50	59	54	50	58	53	49	57	52	49	48
10	68	57	51	47	67	57	51	47	56	50	47	55	50	46	54	49	46	45

Unified Glare Rating Table

Lum. Name:TR09-09-DW-02 3000K RA90 50D	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/16

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	21.6	22.7	22.0	23.1	23.5	21.9	23.0	22.3	23.4	23.7
	21.9	22.8	22.3	23.2	23.7	22.1	23.1	22.6	23.5	23.9
	22.0	22.9	22.4	23.3	23.7	22.2	23.1	22.7	23.5	24.0
	22.1	22.9	22.5	23.3	23.8	22.4	23.2	22.8	23.6	24.1
	22.1	22.9	22.6	23.4	23.8	22.5	23.2	22.9	23.7	24.1
	22.2	22.9	22.7	23.4	23.9	22.5	23.3	23.0	23.7	24.2
X=4H    Y=2H	21.7	22.6	22.1	23.0	23.4	21.9	22.8	22.4	23.2	23.7
	22.1	22.8	22.5	23.2	23.7	22.3	23.0	22.8	23.5	23.9
	22.2	22.9	22.7	23.3	23.9	22.5	23.1	23.0	23.6	24.1
	22.4	23.0	23.0	23.5	24.0	22.7	23.3	23.3	23.8	24.3
	22.5	23.1	23.1	23.6	24.1	22.9	23.4	23.4	23.9	24.4
	22.7	23.1	23.2	23.6	24.2	23.0	23.5	23.6	24.0	24.5
X=8H    Y=4H	22.3	22.8	22.8	23.3	23.8	22.5	23.0	23.0	23.5	24.1
	22.6	23.0	23.1	23.5	24.1	22.9	23.3	23.4	23.8	24.4
	22.8	23.1	23.3	23.7	24.3	23.1	23.5	23.7	24.0	24.6
	23.0	23.3	23.5	23.8	24.5	23.4	23.7	23.9	24.2	24.9
X=12H    Y=4H	22.2	22.7	22.8	23.2	23.8	22.5	22.9	23.0	23.5	24.0
	22.6	23.0	23.2	23.5	24.1	22.9	23.3	23.5	23.8	24.4
	22.9	23.2	23.4	23.7	24.3	23.2	23.5	23.7	24.1	24.7
Variations with the objerver position at spacings										
S=1.0H	0.3/-0.3					0.3/-0.3				
S=1.5H	0.6/-0.6					0.5/-0.5				
S=2.0H	1.0/-0.9					0.9/-0.8				
Reduced UGR Table:										
Nordic Standard Table:	BK0					BK0				
Correction Value	1.3					1.3				

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	560.08	560.08	560.08	560.08
γ 5.0	536.33	544.56	558.35	553.78
γ 10.0	489.77	502.86	534.06	521.97
γ 15.0	423.21	440.52	485.68	468.22
γ 20.0	343.89	360.07	417.98	398.45
γ 25.0	262.38	275.91	337.20	317.35
γ 30.0	189.23	199.35	254.12	237.35
γ 35.0	126.09	133.44	182.21	169.12
γ 40.0	79.12	82.76	120.09	110.87
γ 45.0	50.78	52.28	74.70	71.10
γ 50.0	32.88	34.46	47.79	46.13
γ 55.0	20.61	21.50	31.50	30.92
γ 60.0	13.71	14.66	19.36	19.01
γ 65.0	10.04	10.25	12.93	12.35
γ 70.0	6.92	7.05	9.06	8.51
γ 75.0	4.68	5.13	6.47	6.57
γ 80.0	3.41	3.94	4.97	5.04
γ 85.0	2.09	2.48	3.48	3.34
γ 90.0	1.47	1.93	2.48	2.47
γ 95.0	1.63	1.69	1.74	1.95
γ 100.0	1.08	1.43	1.67	1.82
γ 105.0	1.16	1.75	1.56	1.91
γ 110.0	0.90	1.42	1.18	1.50
γ 115.0	1.07	1.58	1.35	1.50
γ 120.0	1.45	1.45	1.55	1.77
γ 125.0	1.46	1.48	1.41	1.84
γ 130.0	1.99	1.63	1.57	2.20
γ 135.0	1.93	2.06	1.99	2.12
γ 140.0	2.36	2.50	2.27	2.30
γ 145.0	2.30	2.36	2.55	2.81
γ 150.0	2.78	2.76	2.53	3.04
γ 155.0	3.12	3.08	3.05	3.46
γ 160.0	3.19	3.24	3.39	3.81
γ 165.0	3.70	3.59	3.41	3.76
γ 170.0	3.64	3.50	3.66	3.93
γ 175.0	3.78	4.18	4.03	3.95
γ 180.0	3.81	3.81	3.81	3.81