

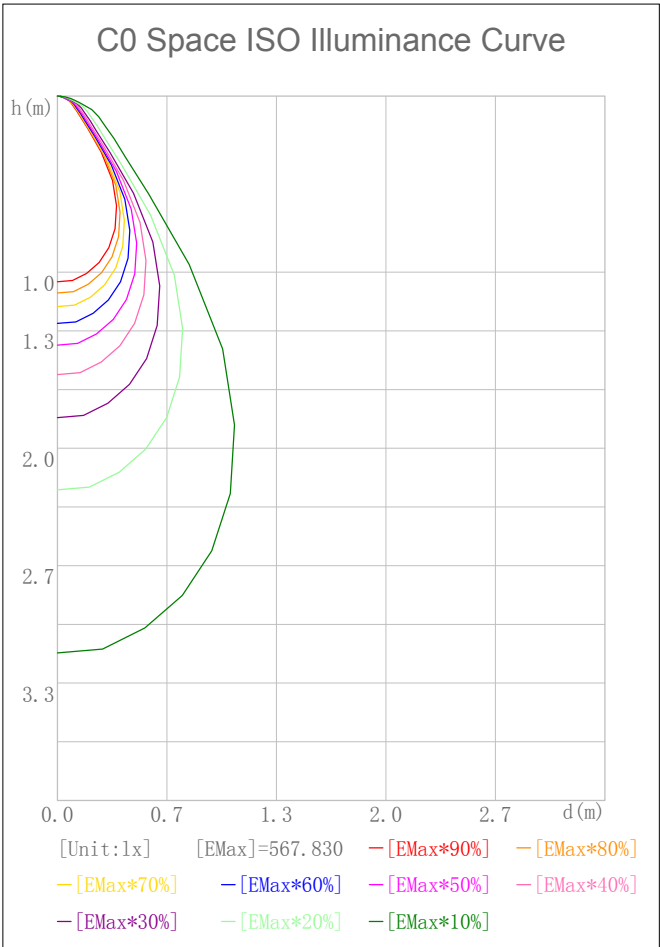
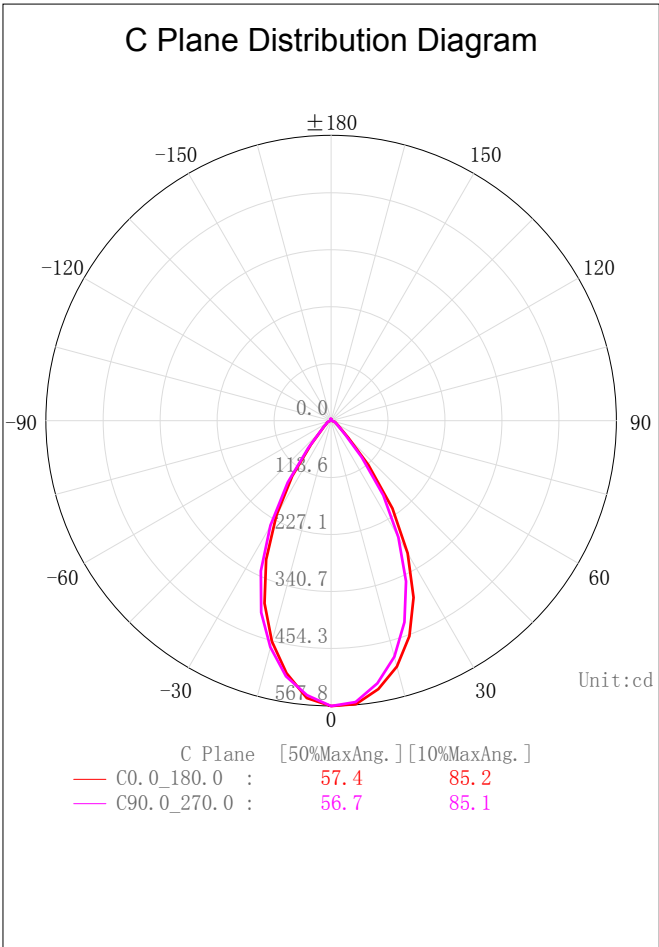
Indoor Luminaire Photometric Data

Description Information

Luminary Name:WL02-09-DW-04 1800-3000K RA90 60D		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):0.038m*0.038m*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(%): 50.0

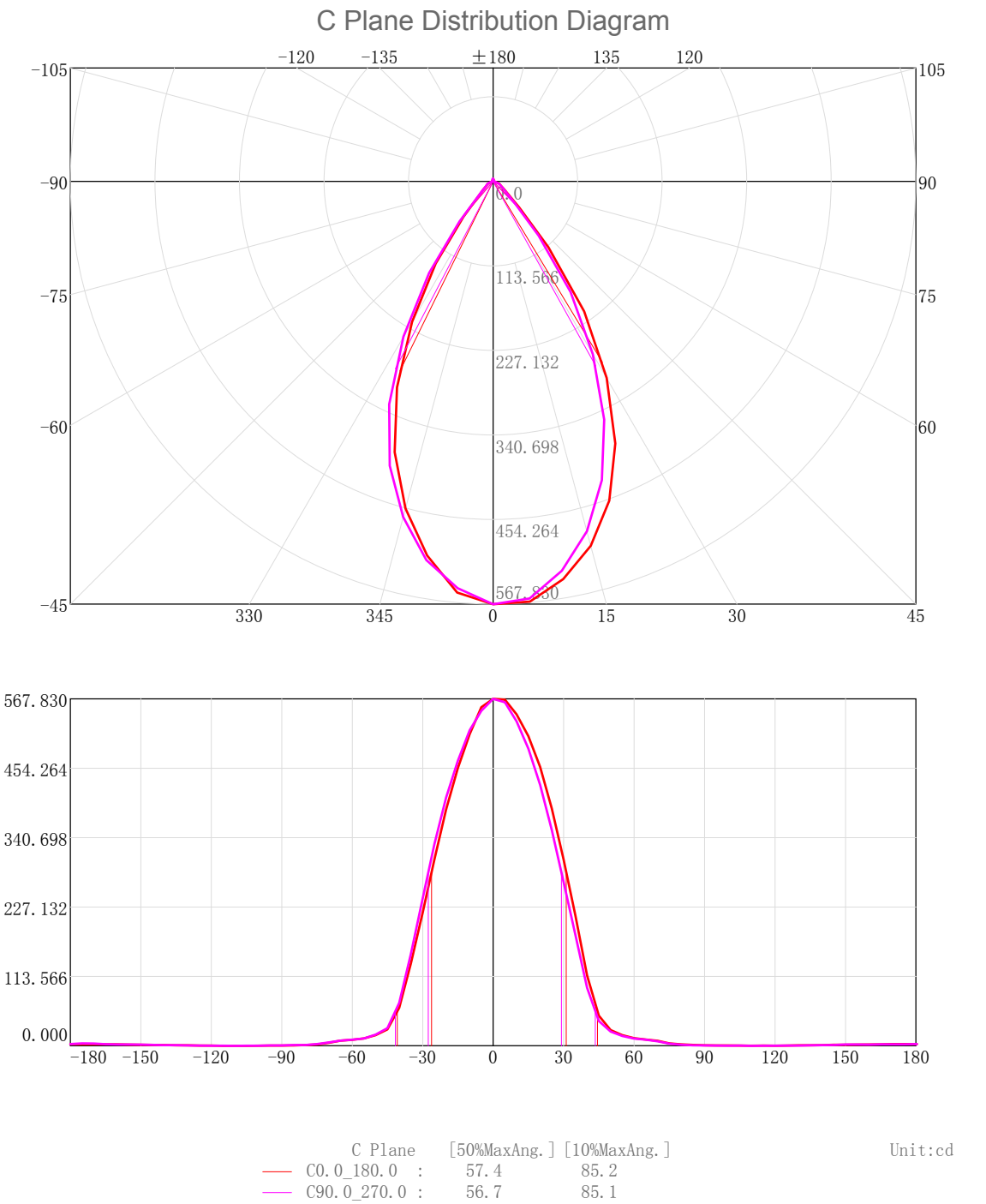
Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 514.790	Luminary Flux(lm): 514.792	Field Angle(10%Imax): 85.2(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 509.644lm 99.00%	
Rated Voltage(V):	Luminary EER(lm/W): 62.158	Up Lumens&Percent: 5.148lm 1.00%	
Tested Power(W): 8.282	Max. Candela(cd): 567.830	S/MH: C0_a180=0.876 C90_270=0.865	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=0.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf):240.0, 0.038, 0.891	Beam Angle(50%Imax): 57.4(°)	ErP ϕ use(90°): 464.191lm	
Lamp Size (W*L*H):0.038m*0.038m*0.000m	Left=-26.2°, Right=31.1°	IRF(%): 230.352	



2D Plane Light Intensity Distribution Curve

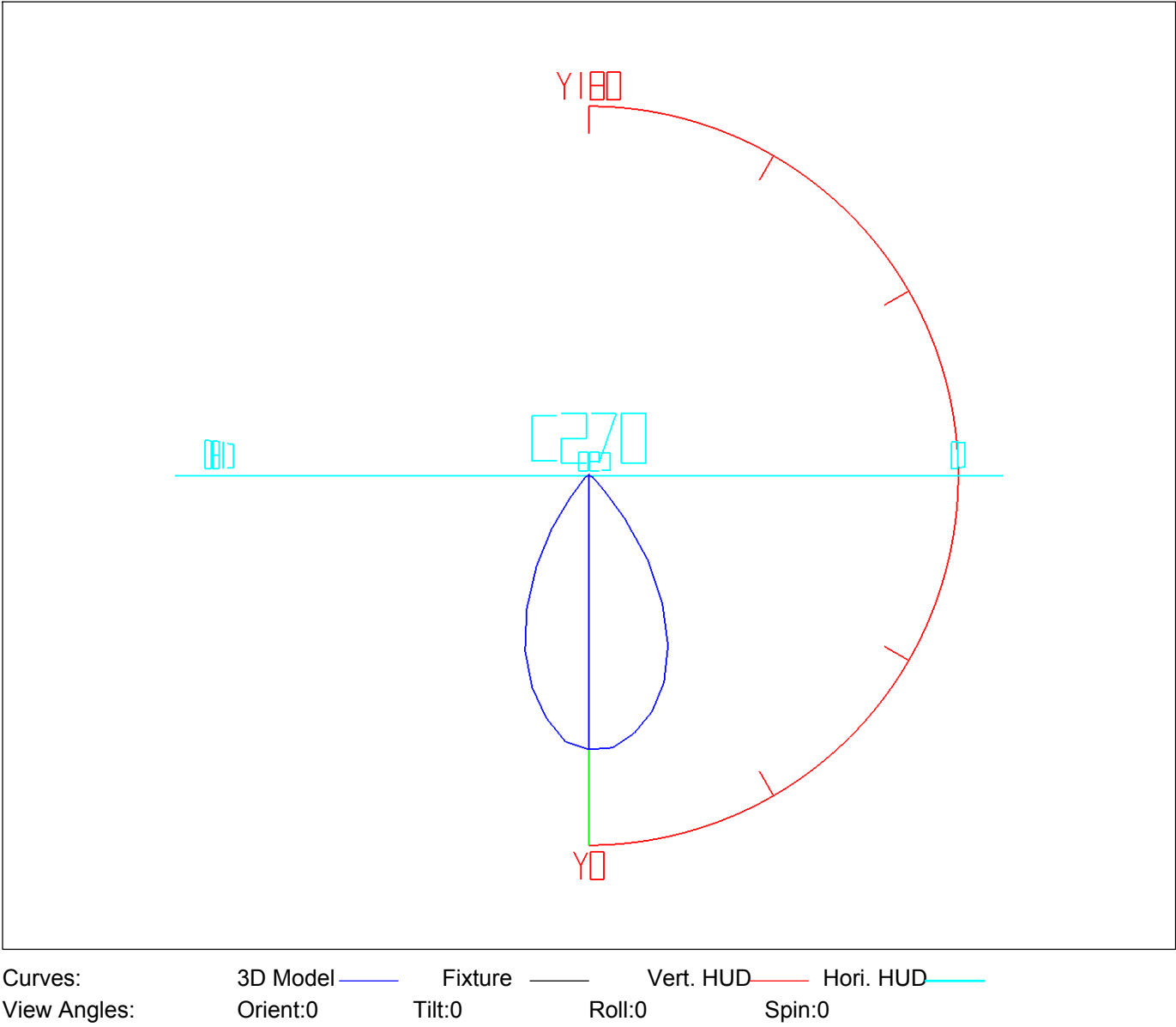
Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29



3D Light Intensity Distribution Modal

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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

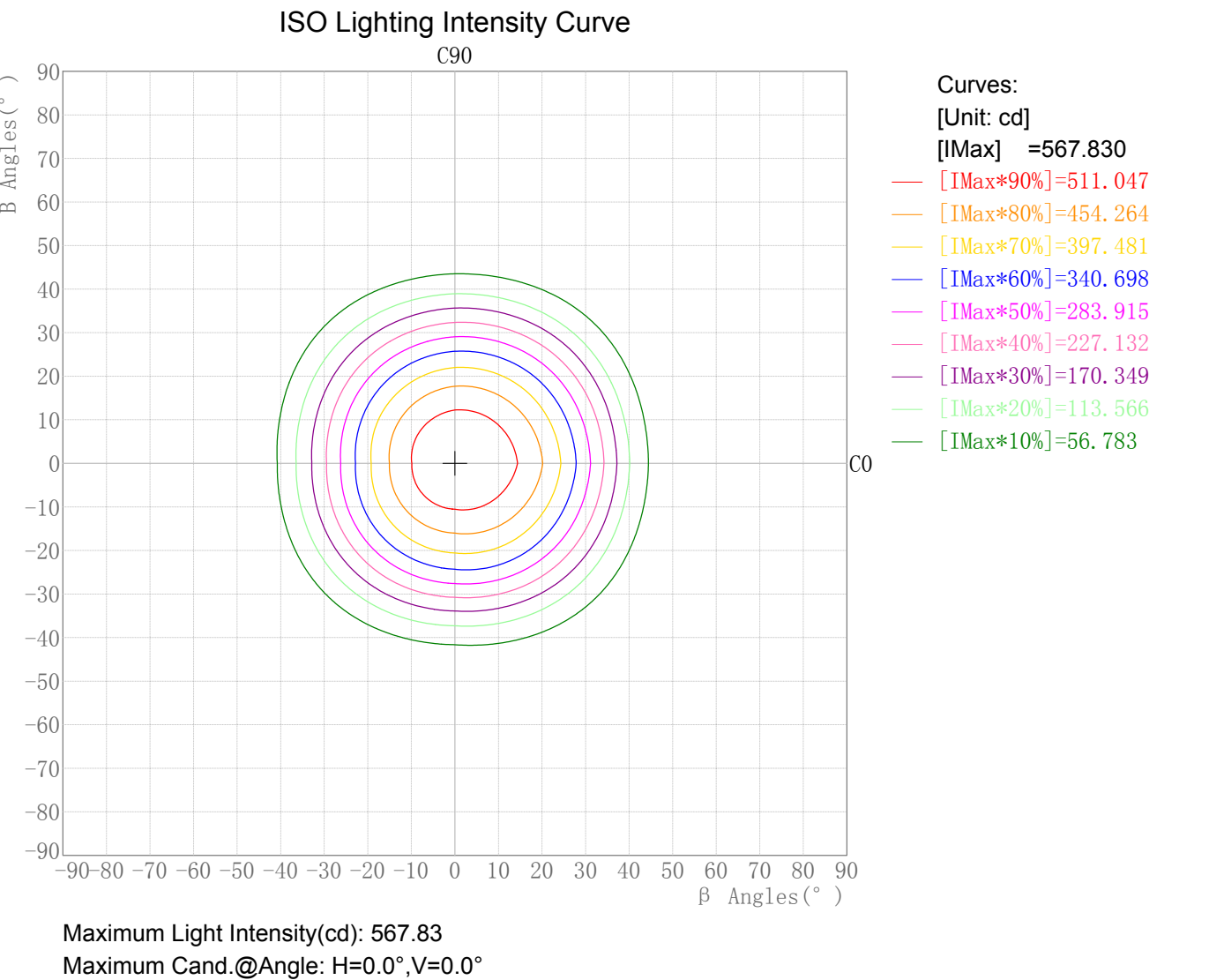


Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	13.46	13.46	2.61	2.61
5.0-10.0	38.73	52.19	7.52	10.14
10.0-15.0	59.53	111.72	11.56	21.70
15.0-20.0	73.98	185.70	14.37	36.07
20.0-25.0	80.06	265.76	15.55	51.63
25.0-30.0	76.20	341.96	14.80	66.43
30.0-35.0	62.98	404.94	12.23	78.66
35.0-40.0	42.65	447.59	8.28	86.95
40.0-45.0	22.64	470.22	4.40	91.34
45.0-50.0	11.66	481.89	2.27	93.61
50.0-55.0	7.76	489.65	1.51	95.12
55.0-60.0	5.90	495.55	1.15	96.26
60.0-65.0	4.98	500.53	0.97	97.23
65.0-70.0	4.03	504.55	0.78	98.01
70.0-75.0	2.53	507.08	0.49	98.50
75.0-80.0	1.30	508.38	0.25	98.75
80.0-85.0	0.77	509.15	0.15	98.90
85.0-90.0	0.49	509.64	0.10	99.00
90.0-95.0	0.33	509.98	0.06	99.07
95.0-100.0	0.24	510.22	0.05	99.11
100.0-105.0	0.16	510.38	0.03	99.14
105.0-110.0	0.08	510.45	0.01	99.16
110.0-115.0	0.06	510.52	0.01	99.17
115.0-120.0	0.11	510.62	0.02	99.19
120.0-125.0	0.17	510.80	0.03	99.22
125.0-130.0	0.26	511.06	0.05	99.28
130.0-135.0	0.34	511.40	0.07	99.34
135.0-140.0	0.41	511.81	0.08	99.42
140.0-145.0	0.47	512.28	0.09	99.51
145.0-150.0	0.52	512.81	0.10	99.61
150.0-155.0	0.52	513.33	0.10	99.72
155.0-160.0	0.46	513.79	0.09	99.81
160.0-165.0	0.39	514.18	0.08	99.88
165.0-170.0	0.33	514.51	0.06	99.95
170.0-175.0	0.21	514.72	0.04	99.99
175.0-180.0	0.07	514.79	0.01	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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

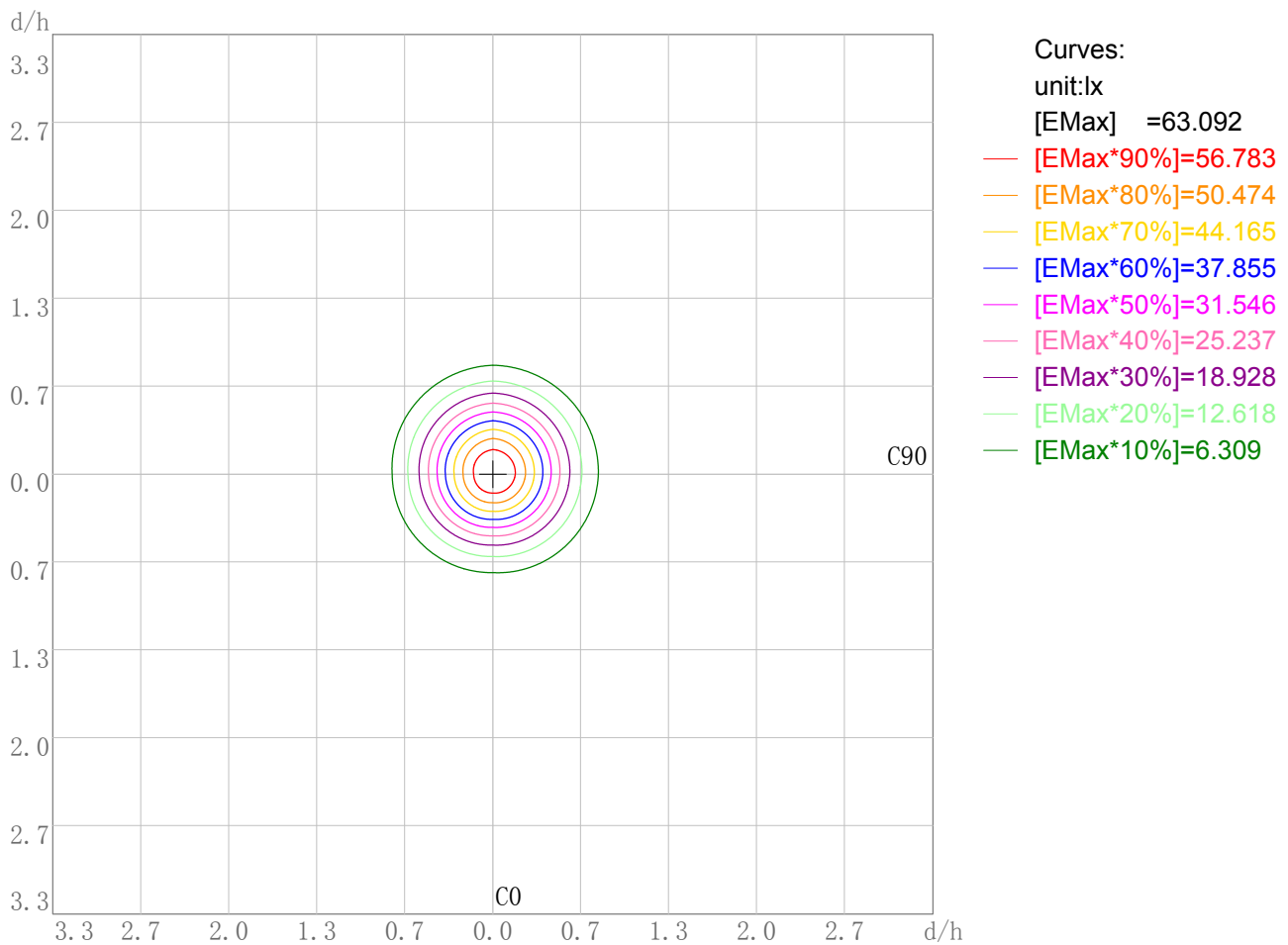


Photometric Filename:WL02-09-DW-04 1800-3000K RA90 60D.IES

Plane ISO-Illuminance Diagram

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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

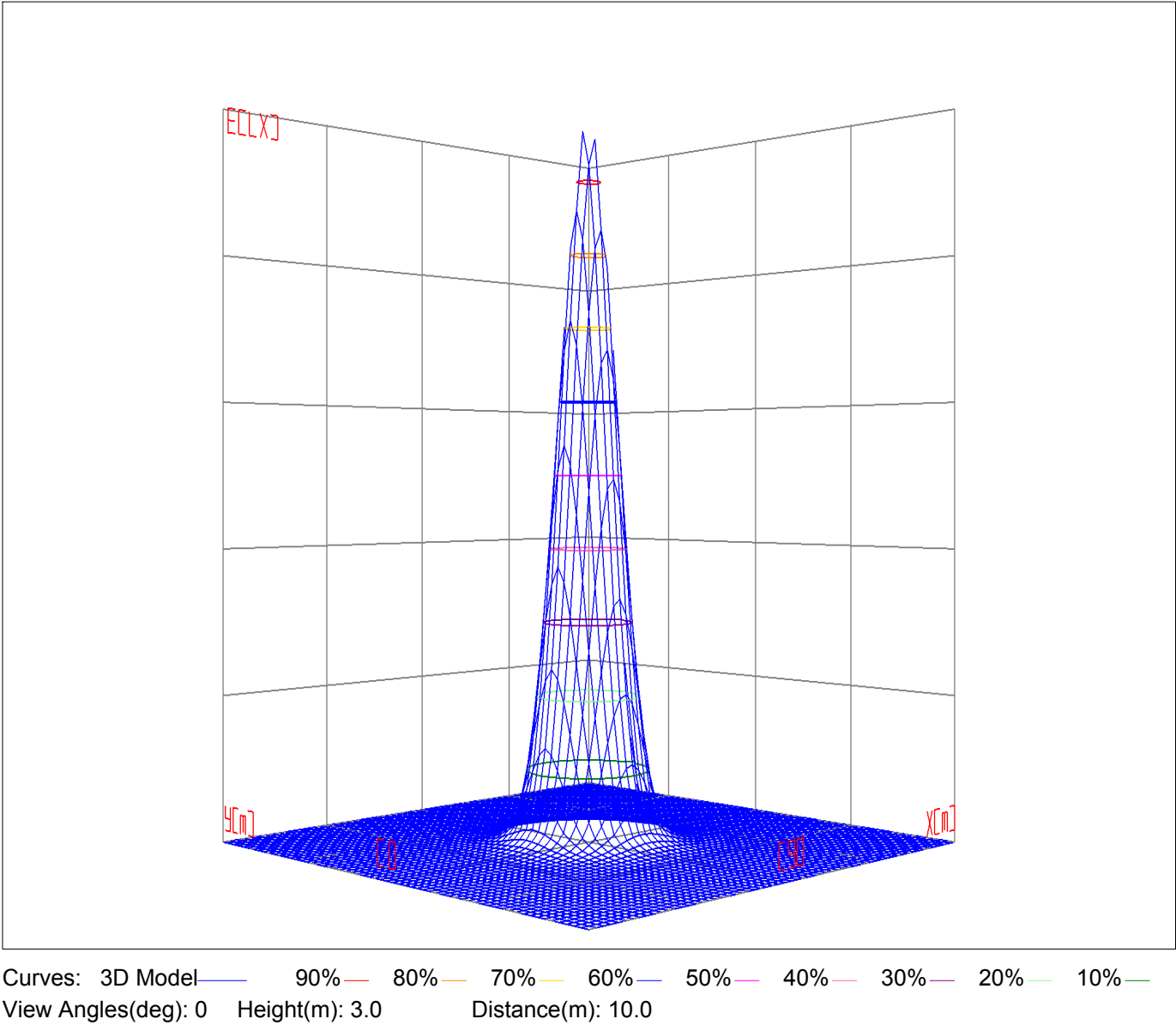
Working Plane Maximum Illuminance(lx): 63.09

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

3D Plane ISO Illuminance Diagram

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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

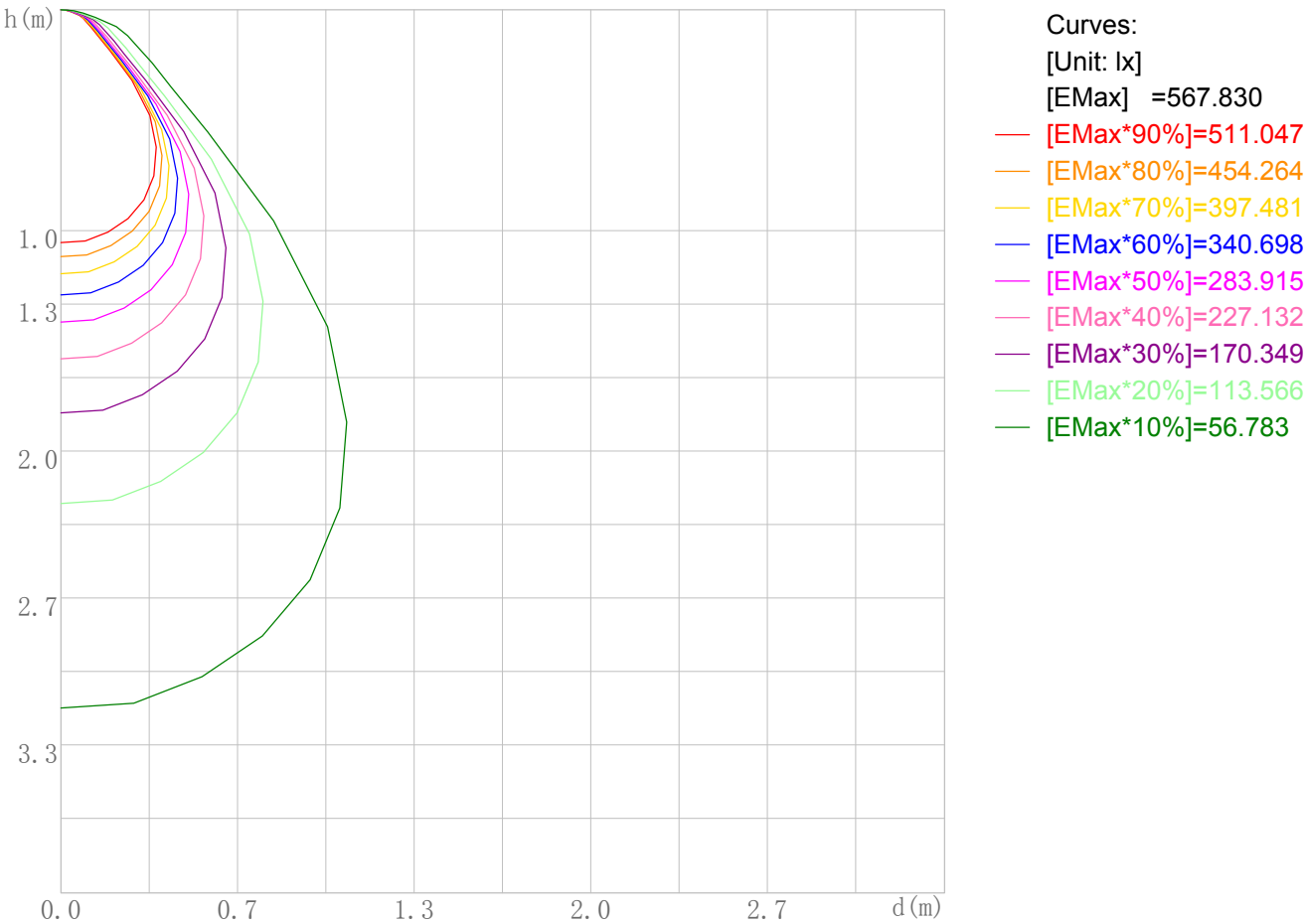
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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

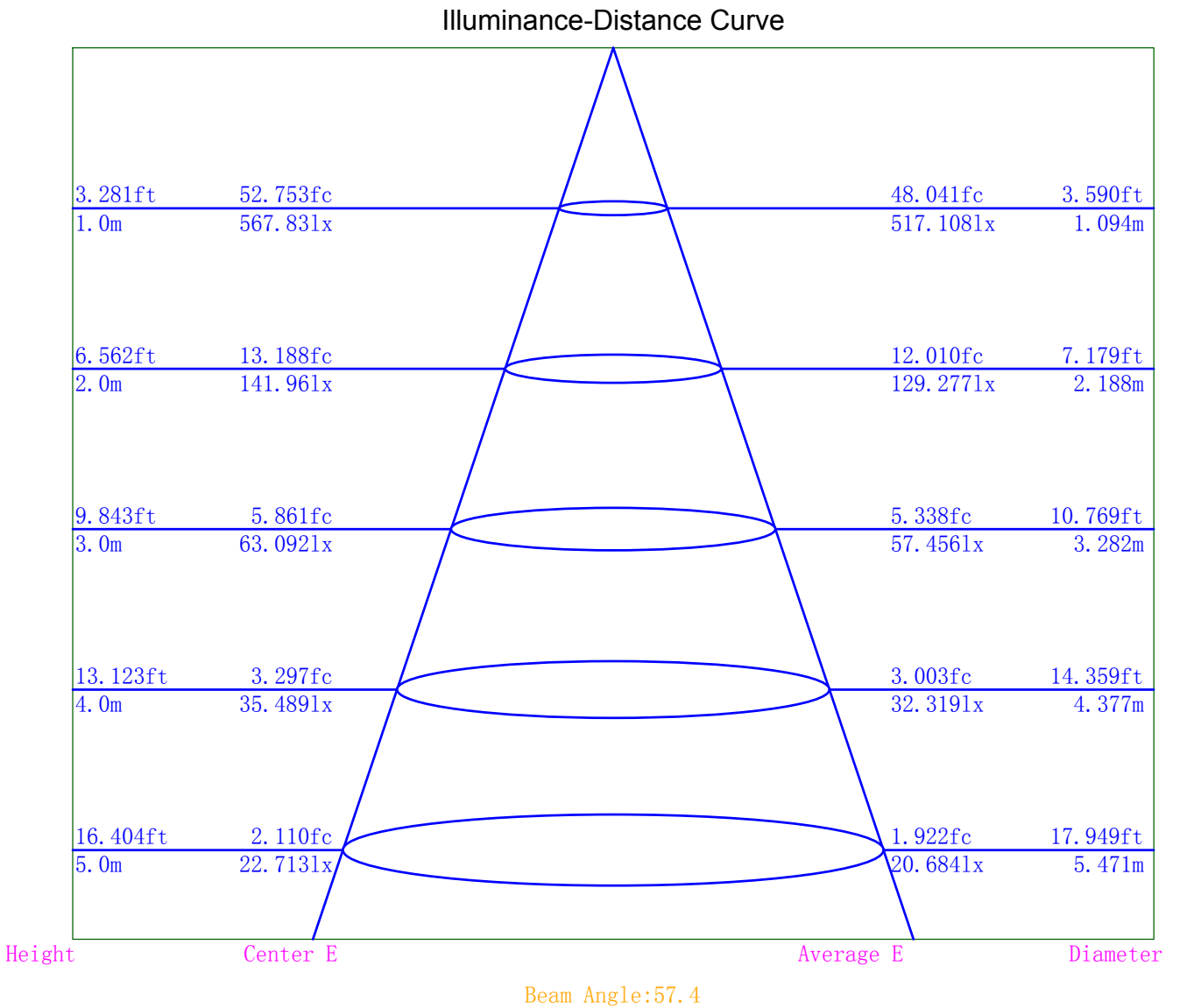
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:567.83lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:567.830cd,0deg

Illuminance-Distance Diagram

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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 Luminance Limiting Curves

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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

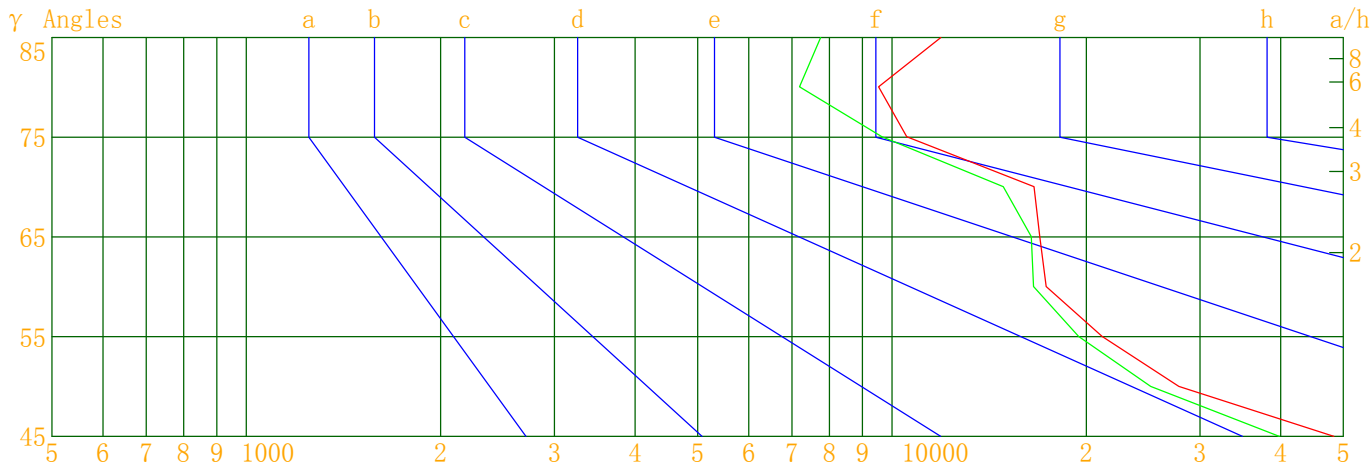
Glare Grade Table

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	48357	27820	21169	17331	16944	16591	10540	9531	11903
C90	39782	25162	19463	16571	16439	14876	9646	7190	7755

Luminance Limiting Curve



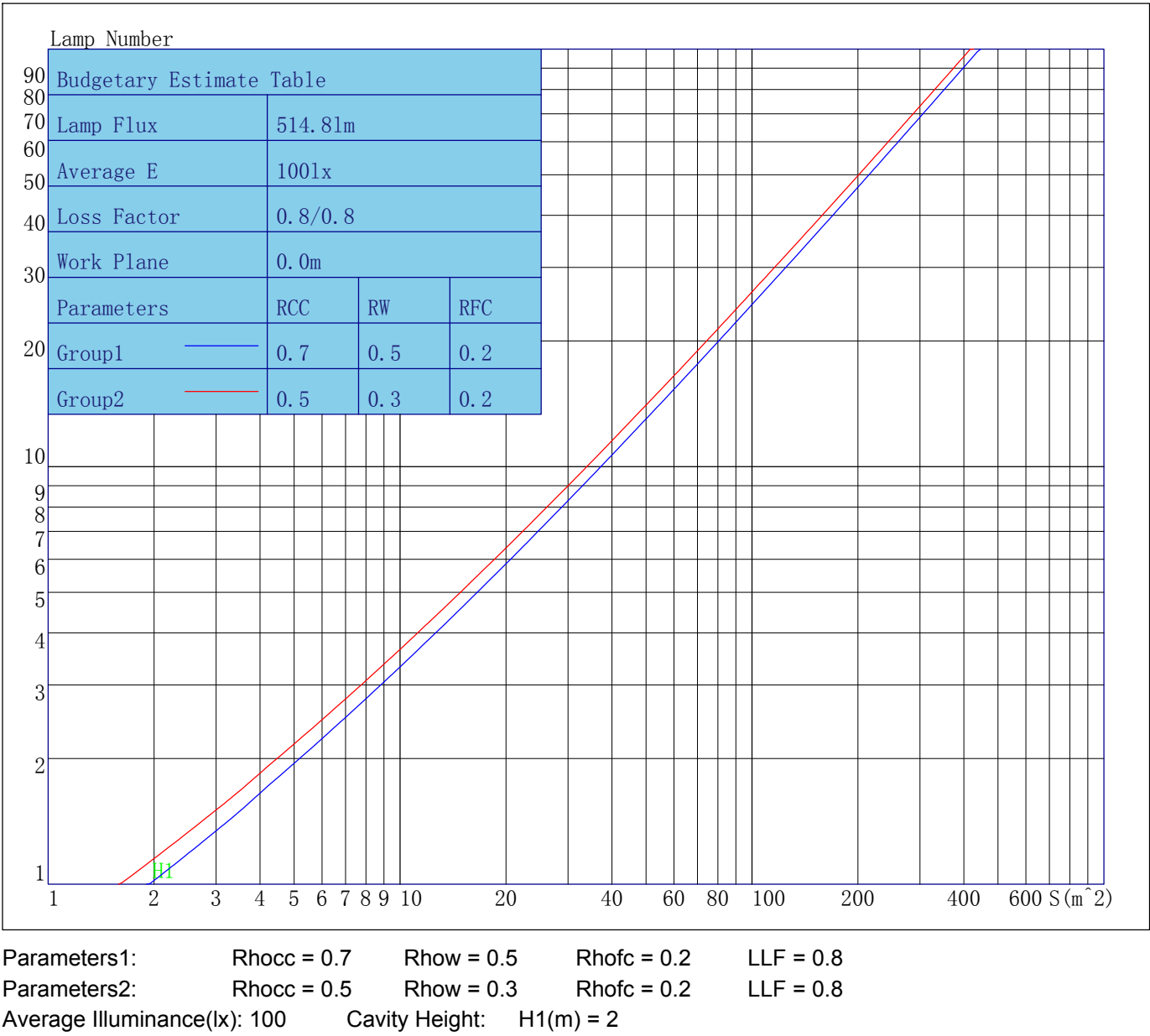
Luminous Size: Length(m)=0.038 Width(m)=0.038 Height(m)=0.000 Area(m^2)=0.001444

Luminous Type: Without Luminous Side

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

Indoor Budgetary Estimate Table

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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: WL02-09-DW-04 1800-3000K RA90 60D	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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	113	110	107	105	110	108	105	103	103	101	100	99	98	96	96	95	93	92
2	107	102	97	94	104	100	96	92	96	93	90	93	90	88	90	88	86	84
3	101	94	89	85	99	93	88	84	90	86	82	87	84	81	85	82	80	78
4	96	88	82	77	94	86	81	77	84	79	76	82	78	75	80	77	74	72
5	90	82	76	71	89	81	75	71	79	74	70	77	73	69	75	72	69	67
6	86	76	70	66	84	76	70	65	74	69	65	72	68	64	71	67	64	62
7	81	72	65	61	80	71	65	61	70	64	60	68	64	60	67	63	60	58
8	77	67	61	57	76	67	61	57	66	60	56	64	60	56	63	59	56	54
9	74	64	57	53	72	63	57	53	62	57	53	61	56	53	60	56	52	51
10	70	60	54	50	69	60	54	50	59	53	50	58	53	50	57	53	49	48

Unified Glare Rating Table

Lum. Name: WL02-09-DW-04 1800-3000K RA90 60D	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 Y=3H Y=4H Y=6H Y=8H Y=12H	23.0	24.0	23.4	24.4	24.7	22.2	23.3	22.6	23.6	24.0
	23.1	24.1	23.5	24.4	24.8	22.4	23.4	22.8	23.7	24.1
	23.2	24.0	23.6	24.4	24.8	22.5	23.3	22.9	23.7	24.1
	23.1	23.9	23.6	24.3	24.8	22.4	23.2	22.9	23.6	24.0
	23.1	23.9	23.6	24.3	24.7	22.4	23.1	22.8	23.6	24.0
	23.1	23.8	23.6	24.2	24.7	22.4	23.1	22.8	23.5	23.9
X=4H Y=2H Y=3H Y=4H Y=6H Y=8H Y=12H	22.9	23.7	23.3	24.1	24.5	22.1	23.0	22.6	23.4	23.8
	23.1	23.8	23.6	24.3	24.7	22.4	23.2	22.9	23.6	24.0
	23.2	23.8	23.6	24.3	24.7	22.5	23.1	23.0	23.6	24.1
	23.2	23.8	23.7	24.2	24.7	22.5	23.1	23.0	23.5	24.0
	23.2	23.7	23.7	24.2	24.7	22.5	23.0	23.0	23.5	24.0
	23.2	23.7	23.7	24.2	24.7	22.5	22.9	23.0	23.4	23.9
X=8H Y=4H Y=6H Y=8H Y=12H	23.1	23.6	23.6	24.1	24.6	22.4	22.9	22.9	23.4	23.9
	23.1	23.6	23.7	24.1	24.6	22.4	22.9	23.0	23.4	23.9
	23.2	23.5	23.7	24.1	24.6	22.4	22.8	23.0	23.4	23.9
	23.2	23.6	23.8	24.1	24.7	22.5	22.8	23.0	23.3	23.9
X=12H Y=4H Y=6H Y=8H	23.0	23.5	23.5	24.0	24.5	22.4	22.8	22.9	23.3	23.8
	23.1	23.5	23.6	24.0	24.5	22.4	22.8	23.0	23.3	23.8
	23.1	23.5	23.7	24.0	24.6	22.4	22.8	23.0	23.3	23.9
Variations with the objerver position at spacings										
S=1.0H	0.4/-0.4					0.6/-0.6				
S=1.5H	1.2/-1.0					1.4/-1.3				
S=2.0H	1.4/-2.0					1.8/-2.4				
Reduced UGR Table:										
Nordic Standard Table:	BK0					BK0				
Correction Value	0.7					0.7				

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	567.83	567.83	567.83	567.83
γ 5.0	566.47	562.29	554.19	548.28
γ 10.0	542.37	530.96	510.11	516.45
γ 15.0	506.69	486.42	454.73	466.53
γ 20.0	456.25	426.98	386.82	406.27
γ 25.0	388.33	353.08	305.32	330.30
γ 30.0	304.85	267.89	217.78	240.82
γ 35.0	213.15	181.51	134.63	150.09
γ 40.0	115.46	95.10	62.27	70.32
γ 45.0	49.38	40.62	27.04	28.86
γ 50.0	25.82	23.35	17.50	18.31
γ 55.0	17.53	16.12	12.05	12.04
γ 60.0	12.51	11.96	9.89	10.04
γ 65.0	10.34	10.03	8.52	8.61
γ 70.0	8.19	7.35	4.99	5.57
γ 75.0	3.94	3.61	2.20	2.83
γ 80.0	2.39	1.80	1.29	1.35
γ 85.0	1.50	0.98	0.76	1.25
γ 90.0	0.98	0.69	0.41	0.65
γ 95.0	0.67	0.55	0.35	0.56
γ 100.0	0.78	0.23	0.24	0.16
γ 105.0	0.36	0.40	0.00	0.17
γ 110.0	0.15	0.09	0.01	0.00
γ 115.0	0.52	0.12	0.00	0.12
γ 120.0	0.30	0.15	0.38	0.17
γ 125.0	0.56	0.47	0.46	0.54
γ 130.0	0.98	0.48	0.80	0.60
γ 135.0	0.90	0.98	0.97	1.08
γ 140.0	1.23	1.09	1.36	1.22
γ 145.0	1.70	1.44	1.63	1.58
γ 150.0	1.81	2.24	1.84	1.95
γ 155.0	2.10	2.16	2.08	2.28
γ 160.0	2.19	2.11	2.40	2.28
γ 165.0	2.48	2.38	2.49	2.75
γ 170.0	2.96	2.47	2.61	3.81
γ 175.0	2.91	2.52	2.63	3.93
γ 180.0	3.00	3.00	3.00	3.00