

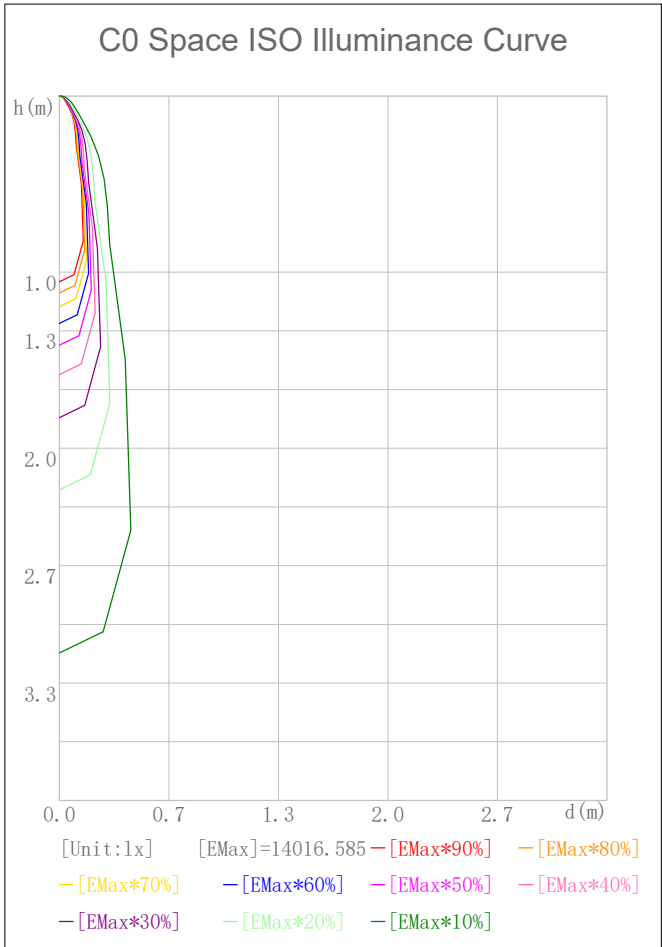
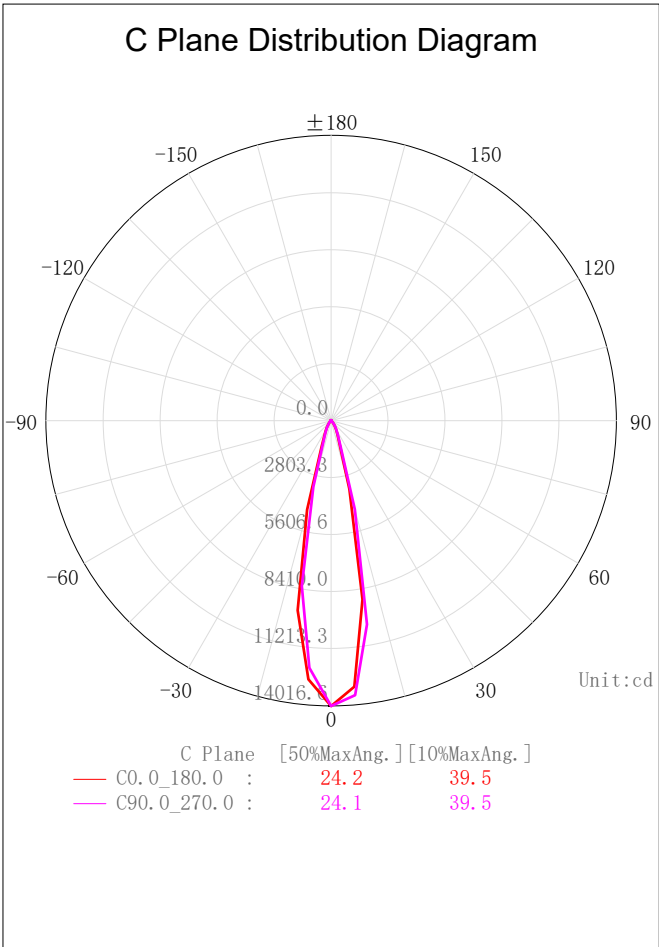
Indoor Luminaire Photometric Data

Description Information

Luminary Name: DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Date: 2022/08/11
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

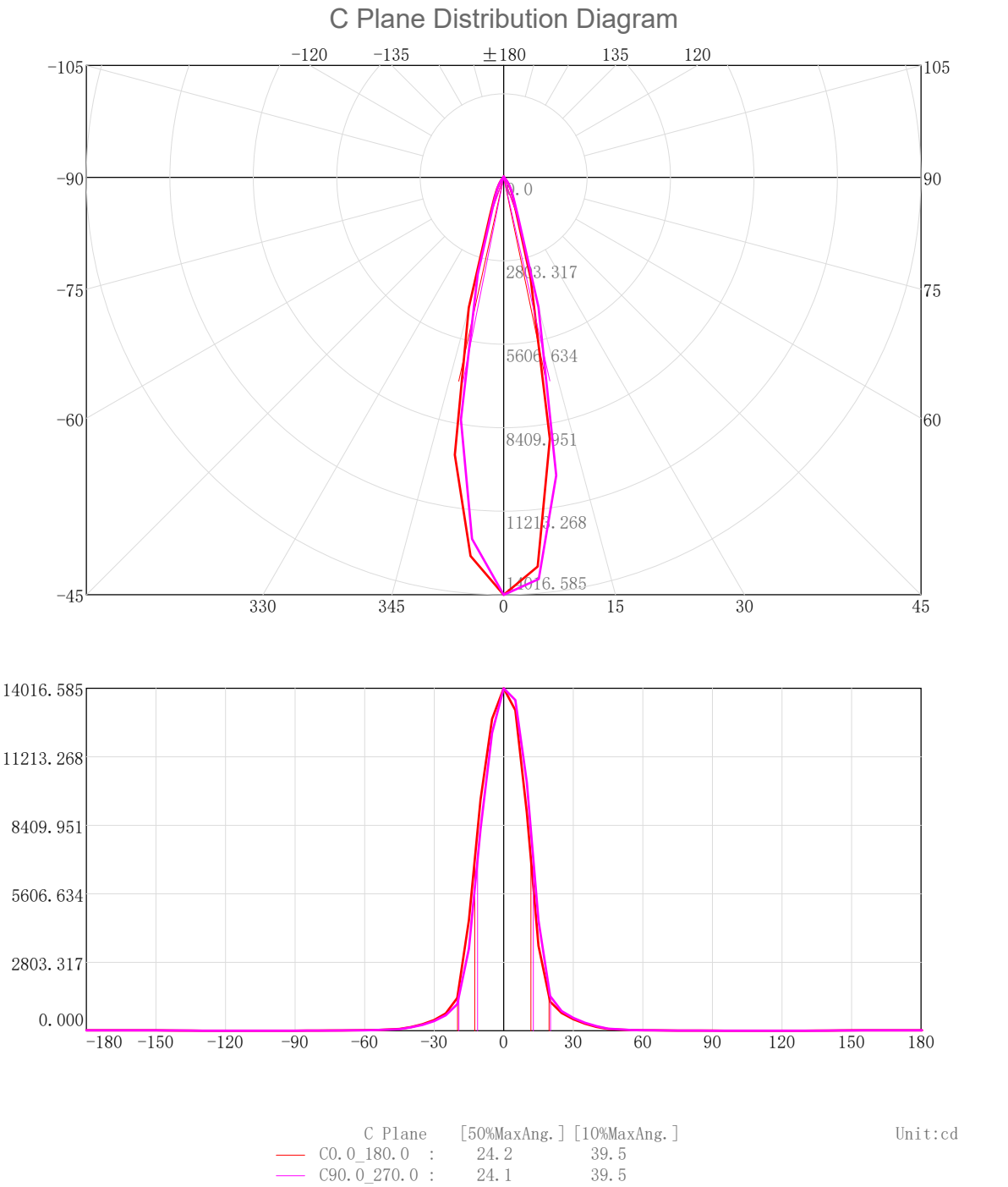
Character Parameter

Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 3078.350	Luminary Flux(lm): 3078.354	Field Angle(10%Imax): 39.5(°)
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 3018.145lm 98.04%
Rated Voltage(V):	Luminary EER(lm/W): 91.400	Up Lumens&Percent: 60.209lm 1.96%
Tested Power(W): 33.680	Max. Candela(cd): 14016.585	S/MH: C0_a180=0.415 C90_270=0.412
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=0.0	CIE Type: Semi-Direct
Tested Electrics (V, A, pf): 239.7, 0.146, 0.960	Beam Angle(50%Imax): 24.2(°)	ErP Φ use(90°): 2979.536lm
Lamp Size (W*L*H): 0.110m*0.110m*0.000m	Left=-12.5°, Right=11.8°	IRF(%): 1013.712



2D Plane Light Intensity Distribution Curve

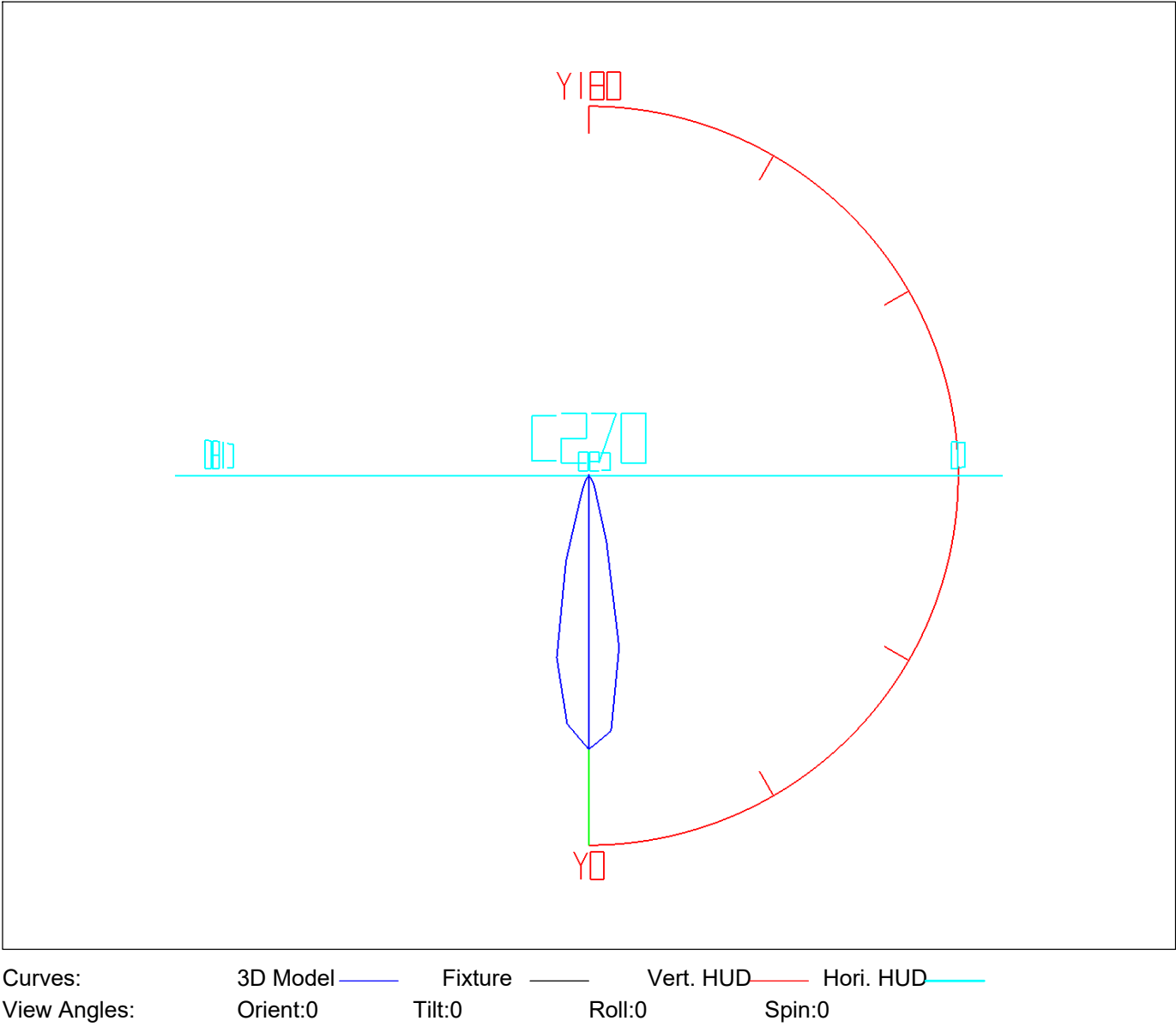
Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11



3D Light Intensity Distribution Modal

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11

3D Light Intensity Distribution Modal

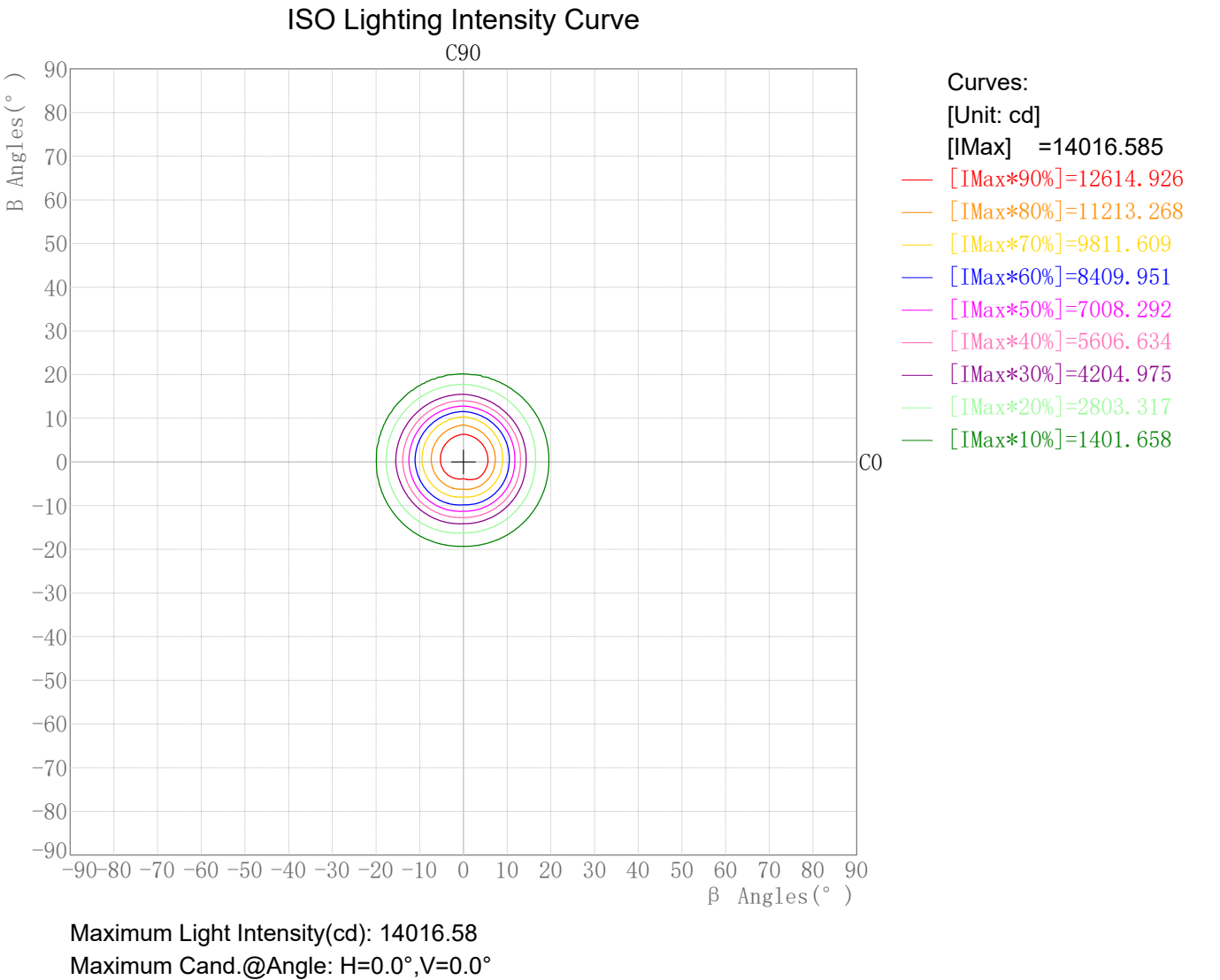


Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	321.77	321.77	10.45	10.45
5.0-10.0	790.59	1112.36	25.68	36.14
10.0-15.0	781.28	1893.65	25.38	61.51
15.0-20.0	431.47	2325.12	14.02	75.53
20.0-25.0	208.77	2533.88	6.78	82.31
25.0-30.0	150.23	2684.12	4.88	87.19
30.0-35.0	110.22	2794.34	3.58	90.77
35.0-40.0	75.08	2869.42	2.44	93.21
40.0-45.0	44.75	2914.16	1.45	94.67
45.0-50.0	26.40	2940.56	0.86	95.52
50.0-55.0	18.62	2959.18	0.60	96.13
55.0-60.0	13.49	2972.67	0.44	96.57
60.0-65.0	11.07	2983.74	0.36	96.93
65.0-70.0	9.35	2993.09	0.30	97.23
70.0-75.0	7.88	3000.97	0.26	97.49
75.0-80.0	6.69	3007.66	0.22	97.70
80.0-85.0	5.68	3013.34	0.18	97.89
85.0-90.0	4.80	3018.14	0.16	98.04
90.0-95.0	4.12	3022.26	0.13	98.18
95.0-100.0	3.54	3025.80	0.11	98.29
100.0-105.0	3.13	3028.93	0.10	98.39
105.0-110.0	2.90	3031.84	0.09	98.49
110.0-115.0	2.70	3034.54	0.09	98.58
115.0-120.0	2.53	3037.07	0.08	98.66
120.0-125.0	2.47	3039.54	0.08	98.74
125.0-130.0	2.67	3042.21	0.09	98.83
130.0-135.0	3.24	3045.45	0.11	98.93
135.0-140.0	4.06	3049.50	0.13	99.06
140.0-145.0	4.86	3054.36	0.16	99.22
145.0-150.0	5.32	3059.68	0.17	99.39
150.0-155.0	5.27	3064.95	0.17	99.56
155.0-160.0	4.72	3069.67	0.15	99.72
160.0-165.0	3.82	3073.49	0.12	99.84
165.0-170.0	2.74	3076.23	0.09	99.93
170.0-175.0	1.60	3077.83	0.05	99.98
175.0-180.0	0.53	3078.35	0.02	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/11

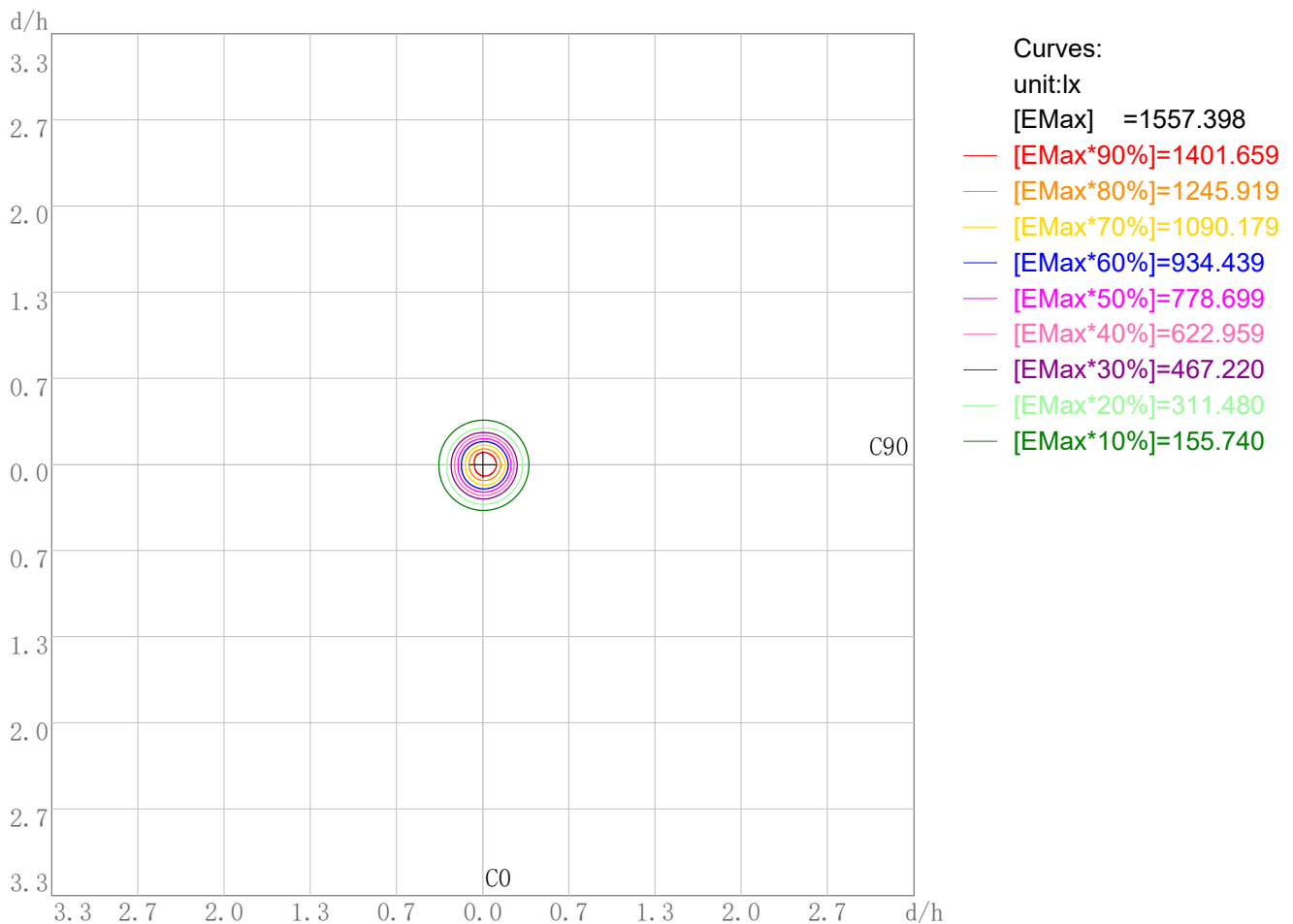


Photometric Filename:DL51-35-XX-01 4000K RA90 24D 黑色.IES

Plane ISO-Illuminance Diagram

Lum. Name: DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine: GON-2000	Test Date: 2022/08/11

Plane ISO-Illuminance Curve

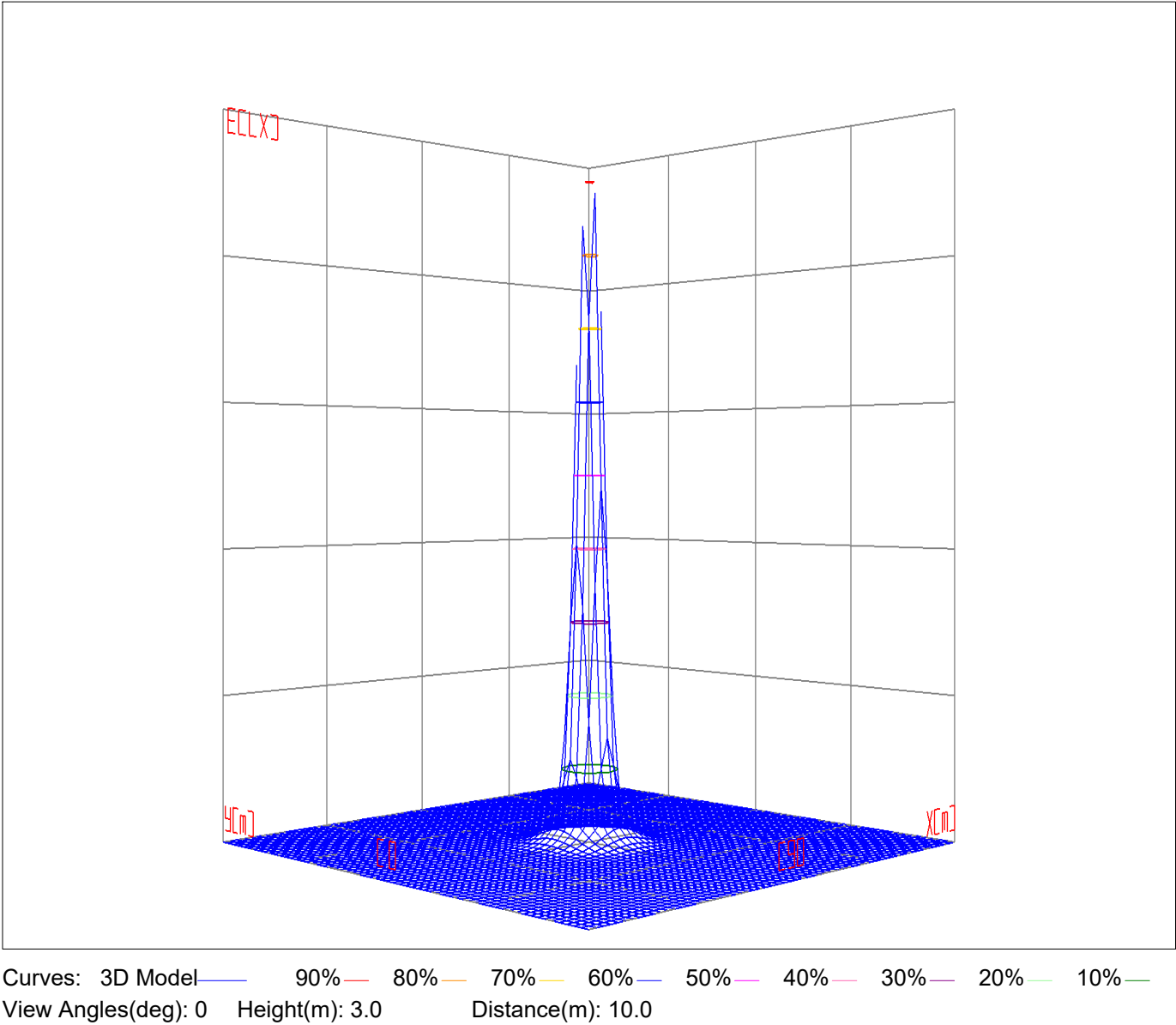


Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 1557.40
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11

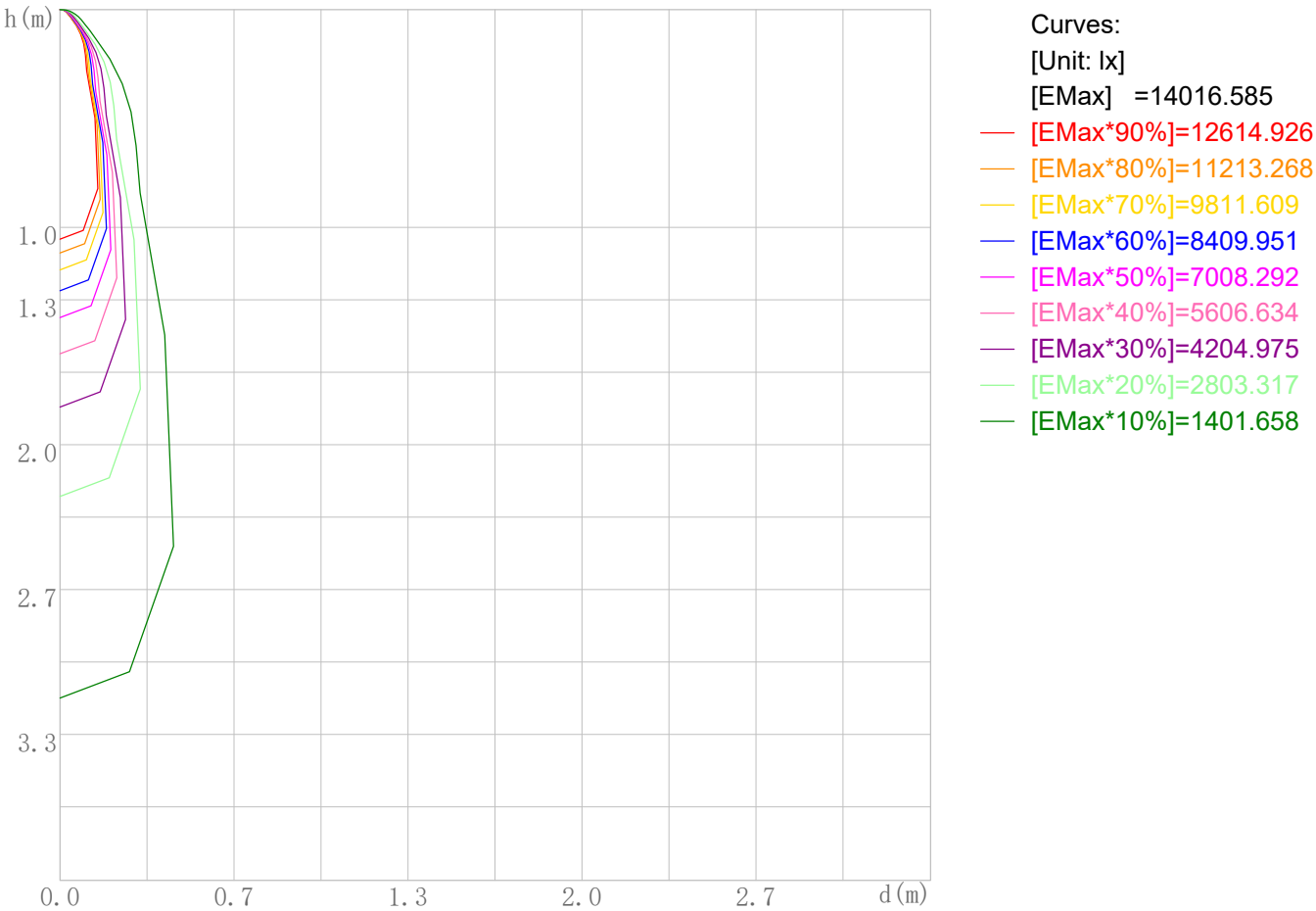
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11

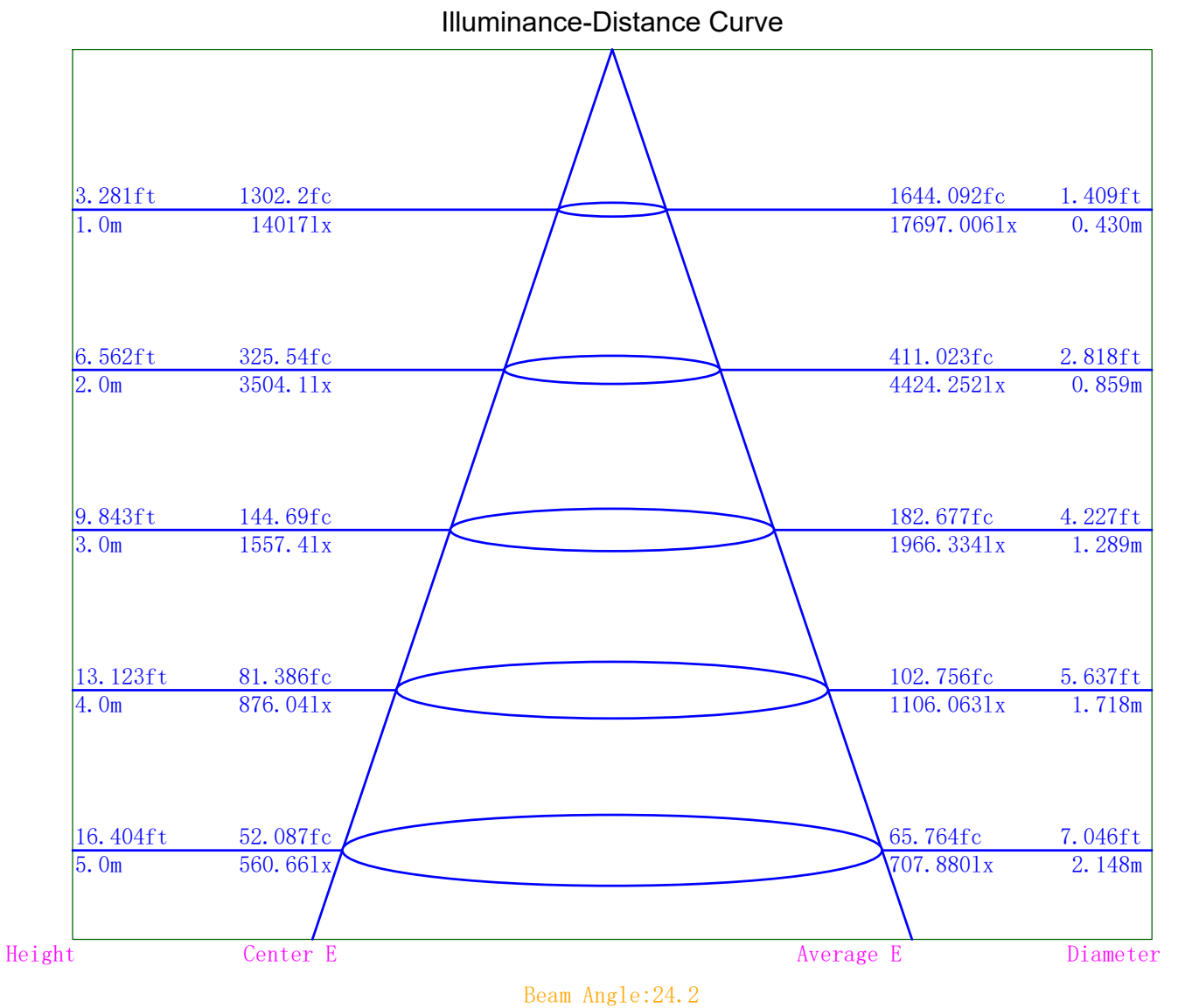
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:14016.58lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:14016.585cd,0deg

Illuminance-Distance Diagram

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11



Indoor Luminance Limiting Curves

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11

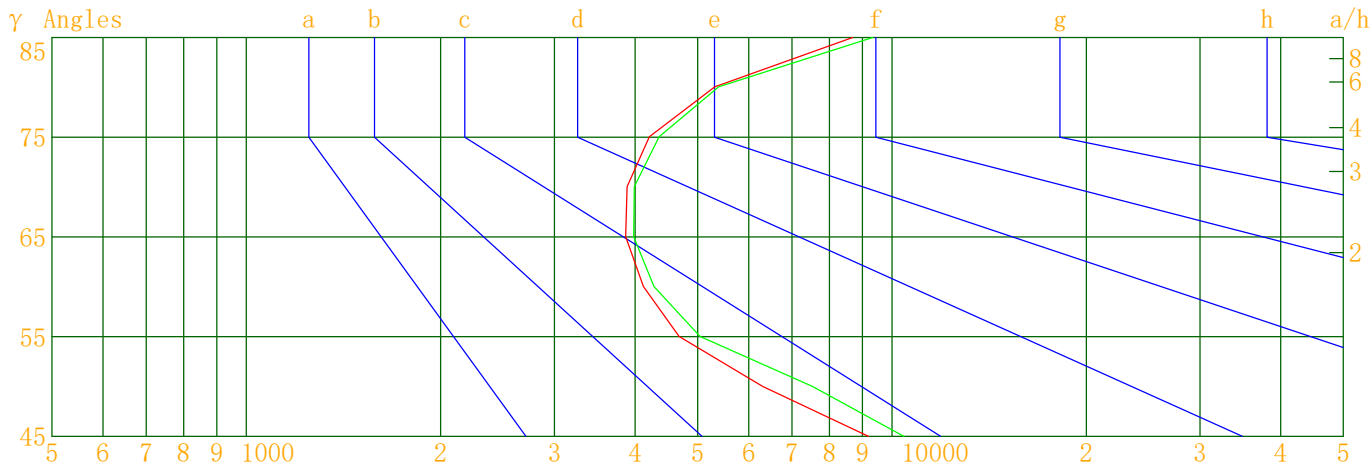
Glare Grade Table

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	9198	6307	4682	4120	3868	3887	4209	5317	8692
C90	10431	7531	5044	4279	3980	3989	4358	5388	9332

Luminance Limiting Curve



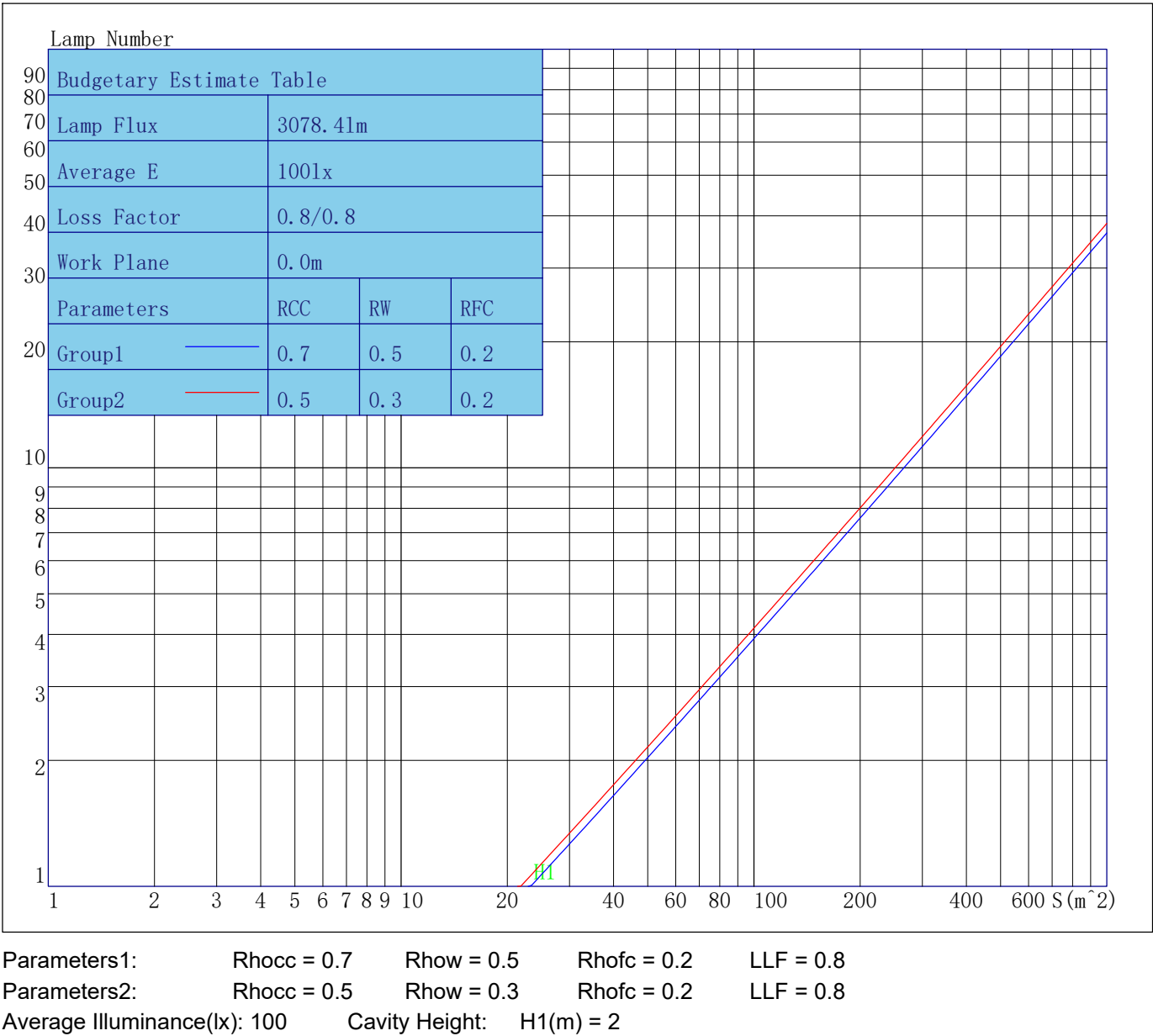
Luminous Size:Length(m)=0.110Width(m)=0.110Height(m)=0.000Area(m^2)=0.012100

Luminous Type:Without Luminous Side

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

Indoor Budgetary Estimate Table

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catalog:	Test ID:01
Lamp Name:	Lamp Catalog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11



Indoor Coefficient of Utilization Table

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11

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	110	110	110	105	105	105	100	100	100	98
1	114	112	110	108	111	109	108	106	105	104	102	101	100	99	97	97	96	94
2	110	106	103	100	108	104	101	99	101	98	96	98	96	94	95	93	92	90
3	106	101	97	94	104	100	96	93	97	94	91	94	92	90	92	90	88	87
4	103	97	92	89	101	96	92	89	93	90	87	91	88	86	89	87	85	84
5	99	93	89	85	98	92	88	85	90	87	84	88	85	83	87	84	82	81
6	96	90	85	82	95	89	85	82	87	84	81	86	83	80	84	82	80	78
7	93	86	82	79	92	86	82	79	85	81	78	83	80	78	82	79	77	76
8	91	84	79	76	90	83	79	76	82	78	76	81	78	75	80	77	75	74
9	88	81	77	74	87	81	77	74	80	76	74	79	76	73	78	75	73	72
10	86	79	75	72	85	78	74	72	78	74	72	77	74	71	76	73	71	70

Unified Glare Rating Table

Lum. Name:DL51-35-XX-01 4000K RA90 24D 黑色	Lum. Catelog:	Test ID:01
Lamp Name:	Lamp Catelog:LED	Test Lab:Quality Department
Manufacture:Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date:2022/08/11

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	12.9	13.8	13.3	14.2	14.5	13.6	14.5	14.0	14.8	15.2
	13.2	14.0	13.7	14.4	14.8	13.8	14.6	14.3	15.0	15.4
	13.5	14.2	13.9	14.6	15.1	14.0	14.8	14.5	15.2	15.6
	13.9	14.5	14.3	14.9	15.4	14.4	15.0	14.8	15.4	15.9
	14.1	14.7	14.6	15.1	15.6	14.6	15.2	15.1	15.6	16.1
	14.4	15.0	14.9	15.4	15.9	14.9	15.5	15.4	15.9	16.4
X=4H Y=2H	12.9	13.6	13.3	14.0	14.4	13.5	14.2	13.9	14.6	15.0
	13.4	14.0	13.8	14.4	14.9	13.9	14.5	14.4	15.0	15.4
	13.8	14.3	14.3	14.8	15.3	14.3	14.8	14.8	15.3	15.7
	14.4	14.8	14.9	15.3	15.8	14.8	15.2	15.3	15.7	16.2
	14.7	15.1	15.3	15.6	16.2	15.1	15.5	15.7	16.0	16.6
	15.2	15.5	15.7	16.1	16.6	15.6	16.0	16.1	16.5	17.0
X=8H Y=4H	13.9	14.3	14.4	14.8	15.3	14.4	14.8	14.9	15.3	15.8
	14.7	15.0	15.3	15.6	16.1	15.1	15.4	15.7	15.9	16.5
	15.3	15.5	15.8	16.1	16.6	15.6	15.9	16.2	16.4	17.0
	16.0	16.2	16.5	16.7	17.3	16.3	16.5	16.9	17.1	17.7
X=12H Y=4H	13.9	14.3	14.5	14.8	15.3	14.4	14.7	14.9	15.2	15.8
	14.8	15.1	15.4	15.6	16.2	15.2	15.4	15.8	16.0	16.6
	15.4	15.7	16.0	16.2	16.8	15.8	16.0	16.4	16.6	17.2
Variations with the objerver position at spacings										
S=1.0H	0.1/-0.1					0.1/-0.1				
S=1.5H	0.2/-0.2					0.2/-0.2				
S=2.0H	0.2/-0.3					0.2/-0.2				
Reduced UGR Table:										
Nordic Standard Table:	BK0					BK0				
Correction Value	2.3					2.1				

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	14016.6	14016.6	14016.6	14016.6
γ 5.0	13116.6	13535.0	12758.4	12187.2
γ 10.0	8918.1	10163.1	9461.4	8260.9
γ 15.0	3477.7	4509.9	4526.7	3365.6
γ 20.0	1197.3	1422.7	1348.9	1092.9
γ 25.0	733.5	811.5	715.5	639.7
γ 30.0	477.9	529.2	444.4	396.9
γ 35.0	295.7	334.2	272.5	243.3
γ 40.0	160.8	196.0	154.5	142.9
γ 45.0	78.7	89.2	75.8	68.7
γ 50.0	49.1	58.6	53.8	48.7
γ 55.0	32.5	35.0	33.5	31.4
γ 60.0	24.9	25.9	25.8	24.4
γ 65.0	19.8	20.4	21.0	20.1
γ 70.0	16.1	16.5	17.5	16.4
γ 75.0	13.2	13.6	14.0	13.3
γ 80.0	11.2	11.3	12.2	11.2
γ 85.0	9.2	9.8	9.7	9.1
γ 90.0	8.4	8.2	8.2	7.6
γ 95.0	7.5	7.3	6.7	6.3
γ 100.0	6.8	6.3	5.6	5.6
γ 105.0	6.0	6.2	5.4	5.0
γ 110.0	5.7	5.9	5.0	5.2
γ 115.0	5.3	5.3	5.2	5.1
γ 120.0	4.9	5.1	5.6	5.2
γ 125.0	5.2	5.1	5.7	5.9
γ 130.0	6.4	5.9	7.3	7.5
γ 135.0	9.1	8.1	9.5	10.2
γ 140.0	12.5	11.3	13.0	13.9
γ 145.0	16.2	14.7	16.8	18.1
γ 150.0	19.6	18.4	20.0	20.7
γ 155.0	22.1	20.9	22.4	22.4
γ 160.0	23.2	22.3	23.5	23.1
γ 165.0	23.9	22.7	23.8	23.1
γ 170.0	22.6	22.5	23.2	22.6
γ 175.0	22.0	21.9	22.3	21.5
γ 180.0	22.0	22.0	22.0	22.0