

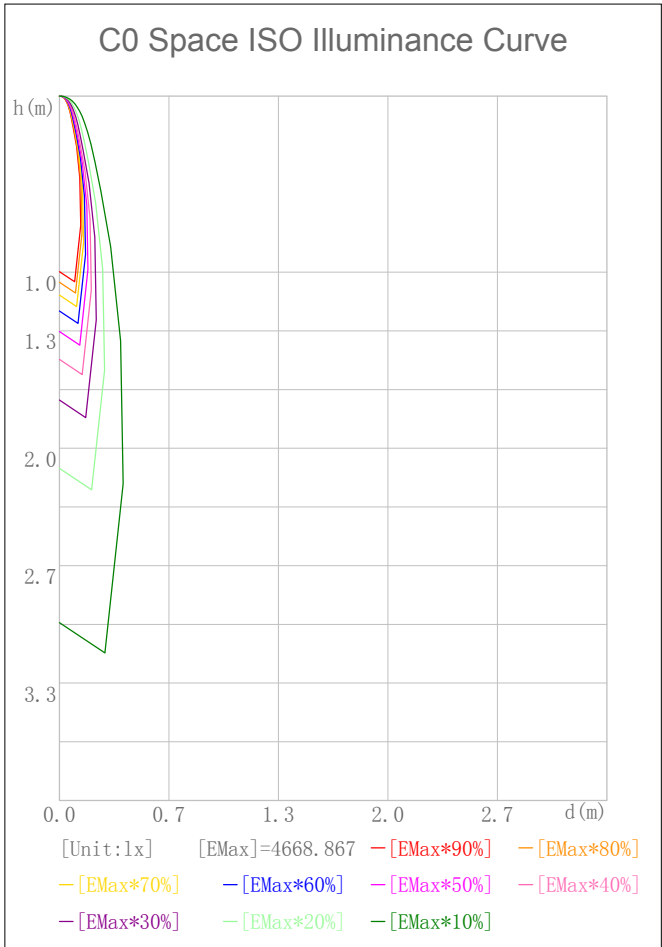
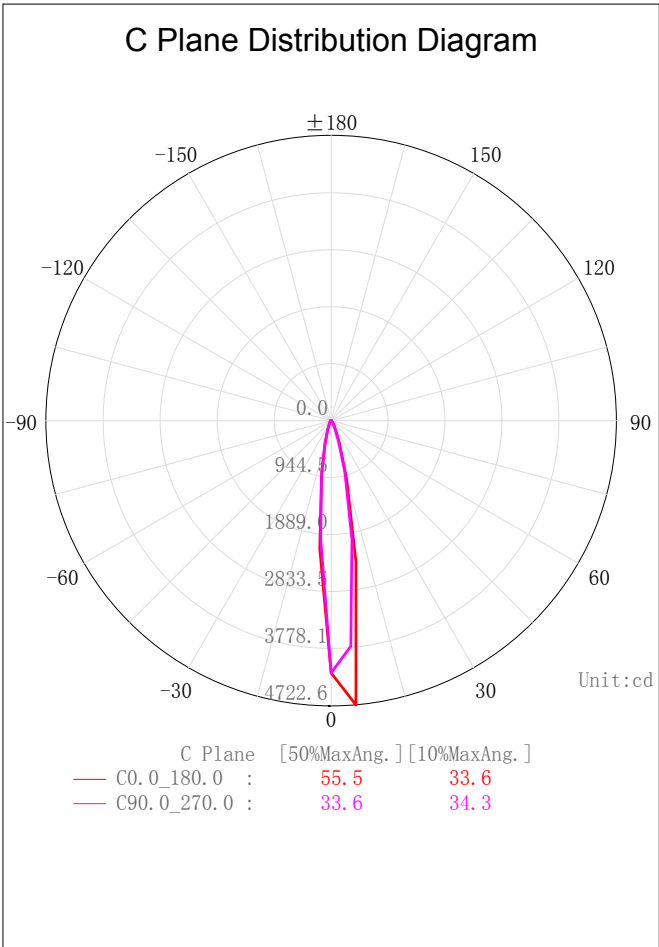
Indoor Luminaire Photometric Data

Description Information

Luminary Name:WL02-09-DW-01 1800-3000K RA90 15D		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):0.076m*0.076m*0.000m		Lum. Area (m2):0.006	Lum. W(kg): 0.000
Test System: C, γ	Test Step: C=90.0 γ=5.0	Temp. (°C): 25	Humidity(%): 50.0

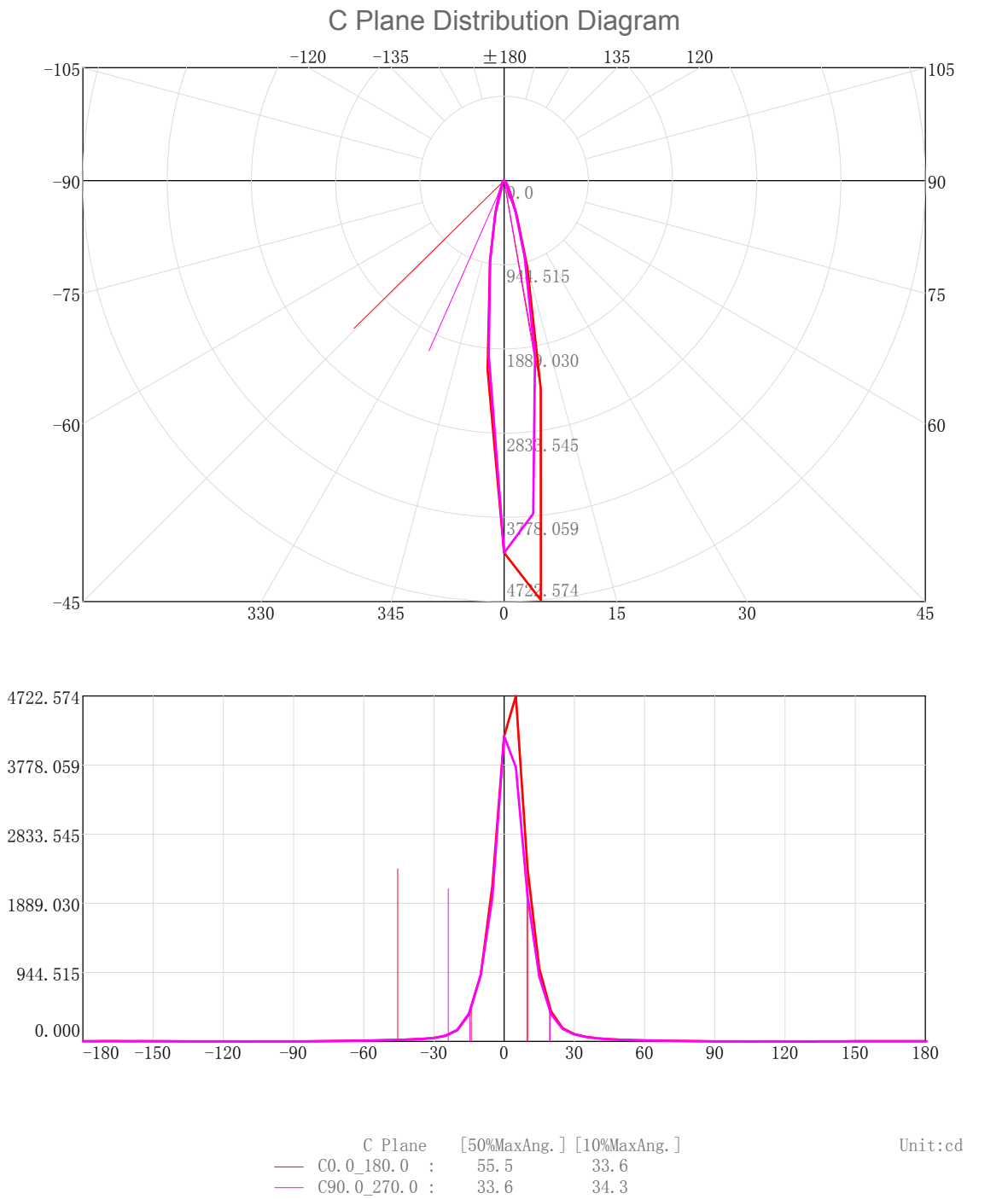
Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 632.330	Luminary Flux(lm): 632.331	Field Angle(10%Imax): 33.6(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 620.362lm 98.11%	
Rated Voltage(V):	Luminary EER(lm/W): 76.341	Up Lumens&Percent: 11.968lm 1.89%	
Tested Power(W): 8.283	Max. Candela(cd): 4722.574	S/MH: C0_a180=0.277 C90_270=0.177	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=5.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf):240.0, 0.038, 0.892	Beam Angle(50%Imax): 14.5(°)	ErP Φ use(90°): 566.176lm	
Lamp Size (W*L*H):0.076m*0.076m*0.000m	Left=-4.4°, Right=10.0°	IRF(%): 1396.688	



2D Plane Light Intensity Distribution Curve

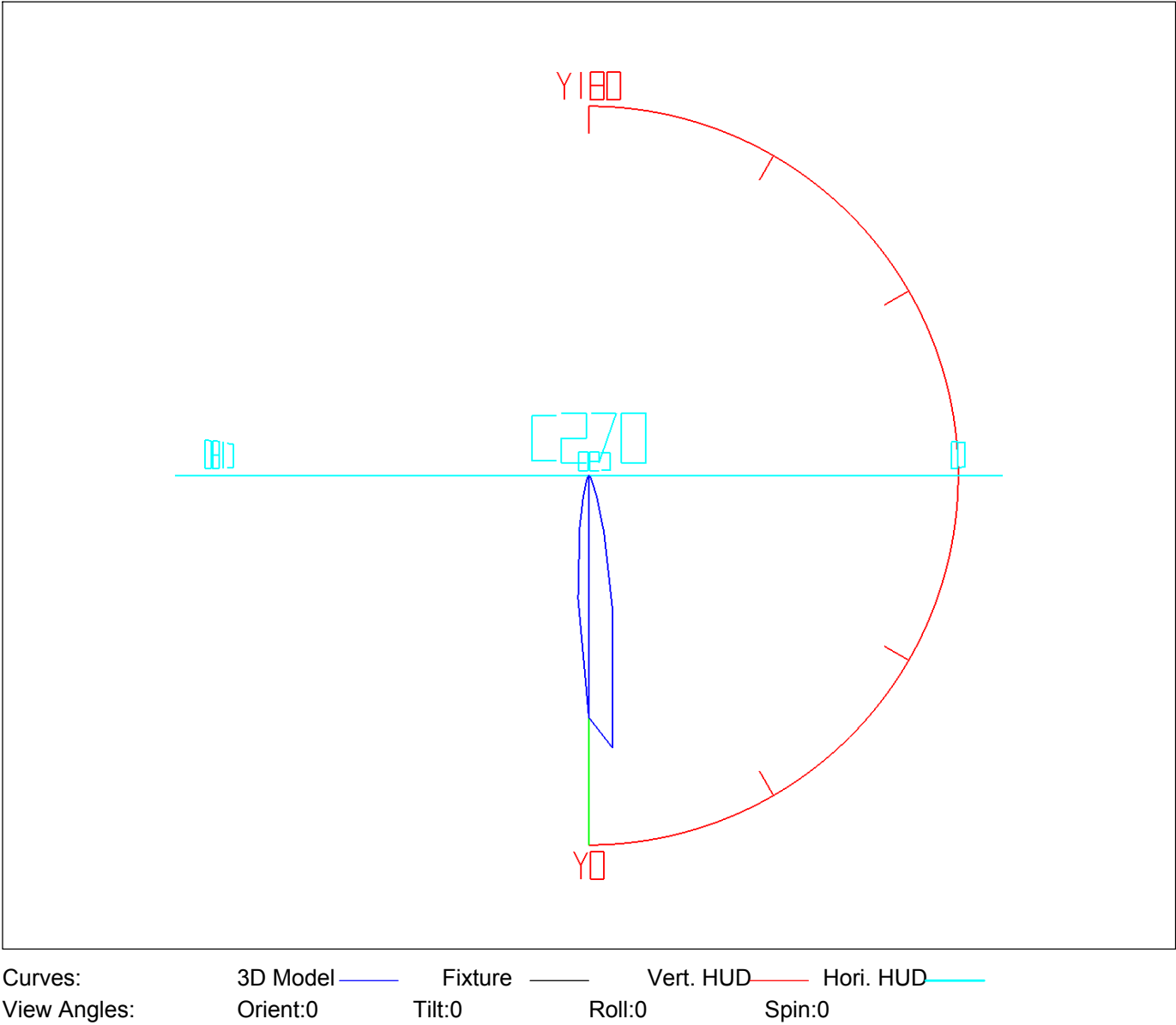
Lum. Name: WL02-09-DW-01 1800-3000K RA90 15D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/08/29



3D Light Intensity Distribution Modal

Lum. Name: WL02-09-DW-01 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: 2022/08/29

3D Light Intensity Distribution Modal

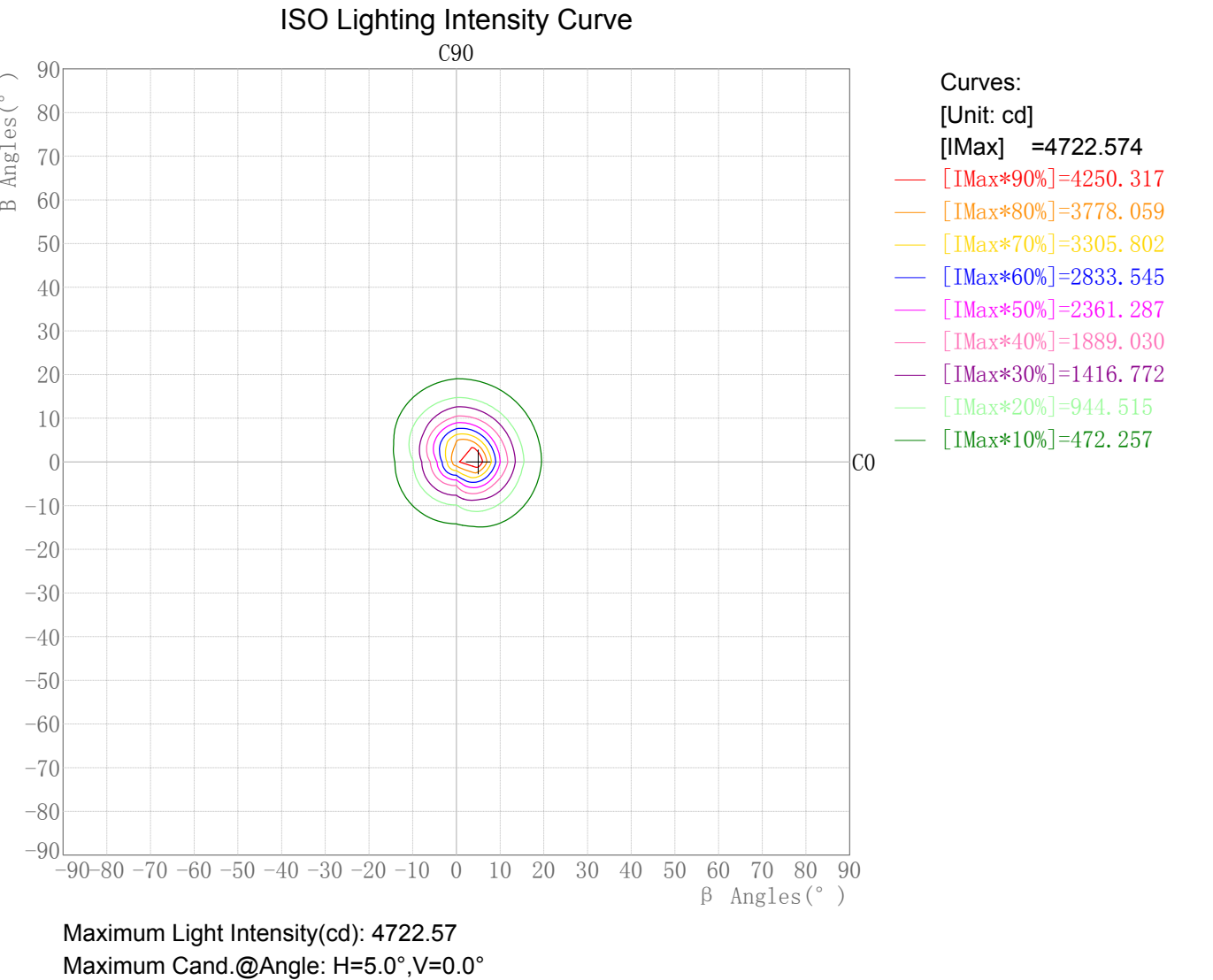


Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	87.47	87.47	13.83	13.83
5.0-10.0	167.74	255.21	26.53	40.36
10.0-15.0	130.93	386.15	20.71	61.07
15.0-20.0	77.13	463.28	12.20	73.27
20.0-25.0	42.34	505.62	6.70	79.96
25.0-30.0	25.55	531.17	4.04	84.00
30.0-35.0	18.10	549.26	2.86	86.86
35.0-40.0	14.17	563.43	2.24	89.10
40.0-45.0	11.56	574.99	1.83	90.93
45.0-50.0	9.58	584.58	1.52	92.45
50.0-55.0	8.13	592.70	1.29	93.73
55.0-60.0	6.95	599.65	1.10	94.83
60.0-65.0	5.88	605.54	0.93	95.76
65.0-70.0	4.86	610.39	0.77	96.53
70.0-75.0	3.87	614.26	0.61	97.14
75.0-80.0	2.90	617.16	0.46	97.60
80.0-85.0	1.95	619.11	0.31	97.91
85.0-90.0	1.25	620.36	0.20	98.11
90.0-95.0	0.86	621.22	0.14	98.24
95.0-100.0	0.72	621.94	0.11	98.36
100.0-105.0	0.64	622.59	0.10	98.46
105.0-110.0	0.60	623.19	0.10	98.55
110.0-115.0	0.60	623.78	0.09	98.65
115.0-120.0	0.56	624.35	0.09	98.74
120.0-125.0	0.51	624.86	0.08	98.82
125.0-130.0	0.50	625.36	0.08	98.90
130.0-135.0	0.56	625.92	0.09	98.99
135.0-140.0	0.75	626.67	0.12	99.10
140.0-145.0	0.94	627.61	0.15	99.25
145.0-150.0	1.04	628.65	0.16	99.42
150.0-155.0	1.04	629.70	0.16	99.58
155.0-160.0	0.93	630.62	0.15	99.73
160.0-165.0	0.74	631.37	0.12	99.85
165.0-170.0	0.54	631.91	0.09	99.93
170.0-175.0	0.32	632.23	0.05	99.98
175.0-180.0	0.10	632.33	0.02	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: WL02-09-DW-01 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: 2022/08/29

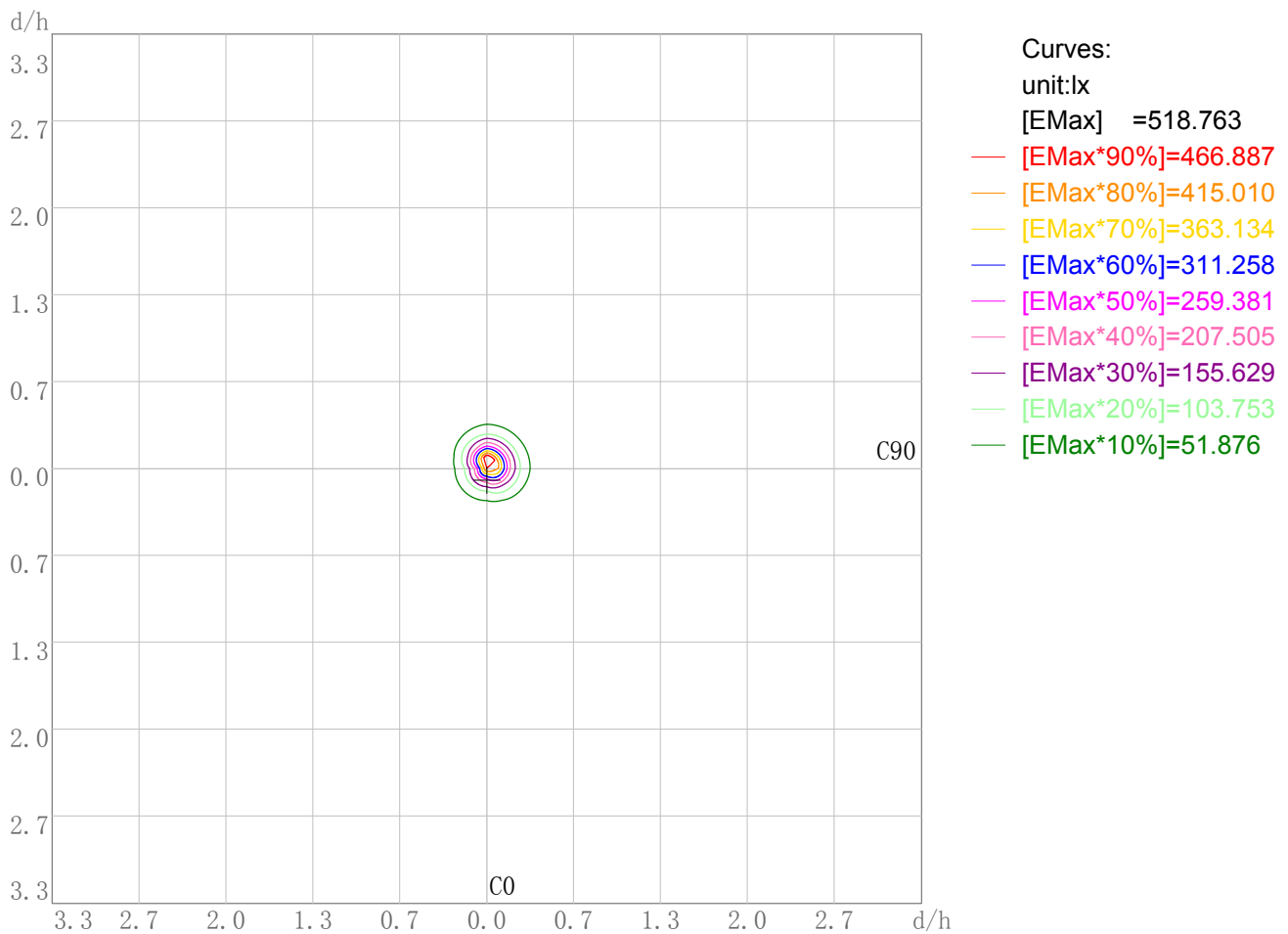


Photometric Filename:WL02-09-DW-01 1800-3000K RA90 15D.IES

Plane ISO-Illuminance Diagram

Lum. Name: WL02-09-DW-01 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: 2022/08/29

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

Working Plane Maximum Illuminance(lx): 518.76

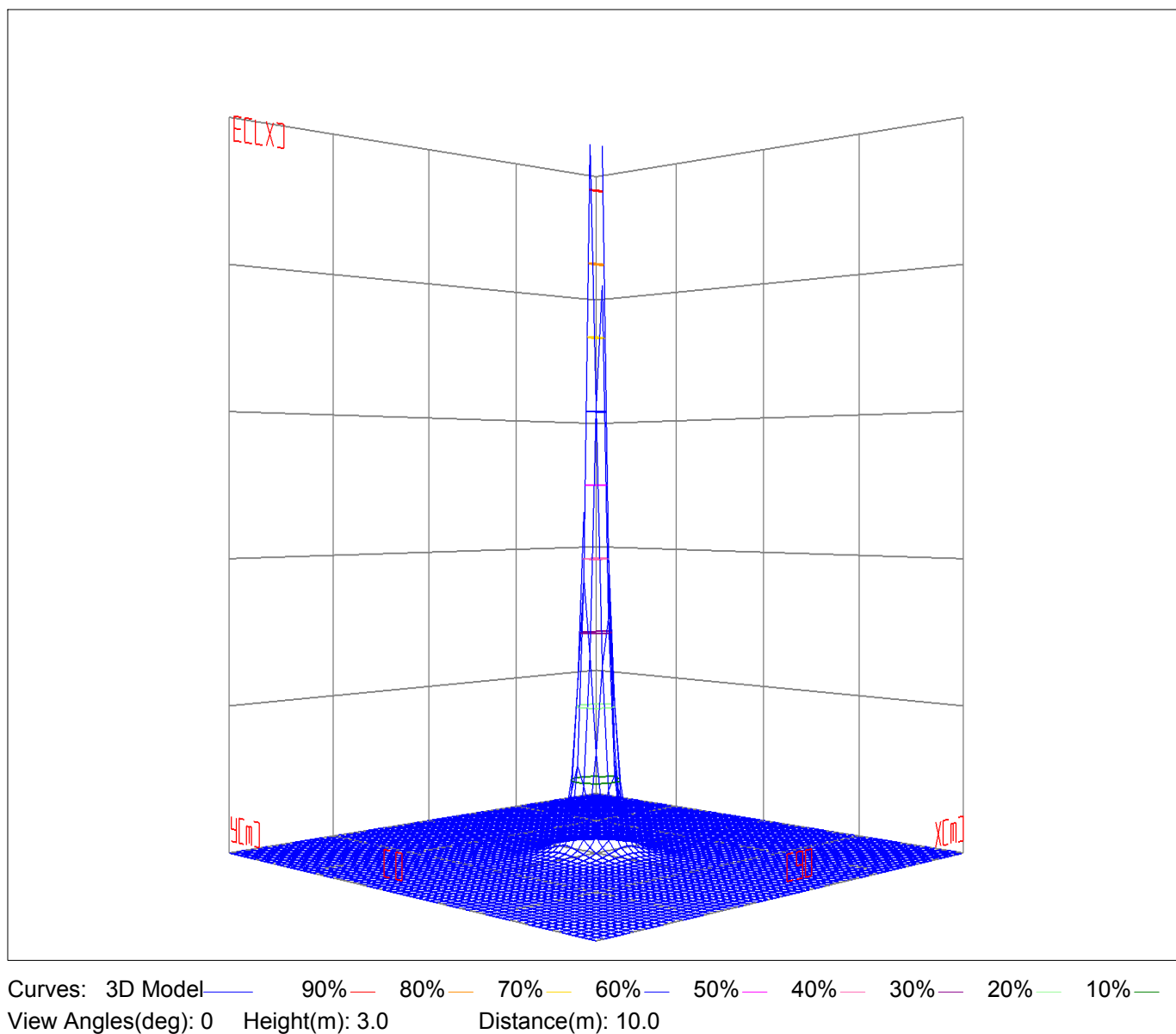
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.1

Photometric Filename:WL02-09-DW-01 1800-3000K RA90 15D.IES

3D Plane ISO Illuminance Diagram

Lum. Name: WL02-09-DW-01 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: 2022/08/29

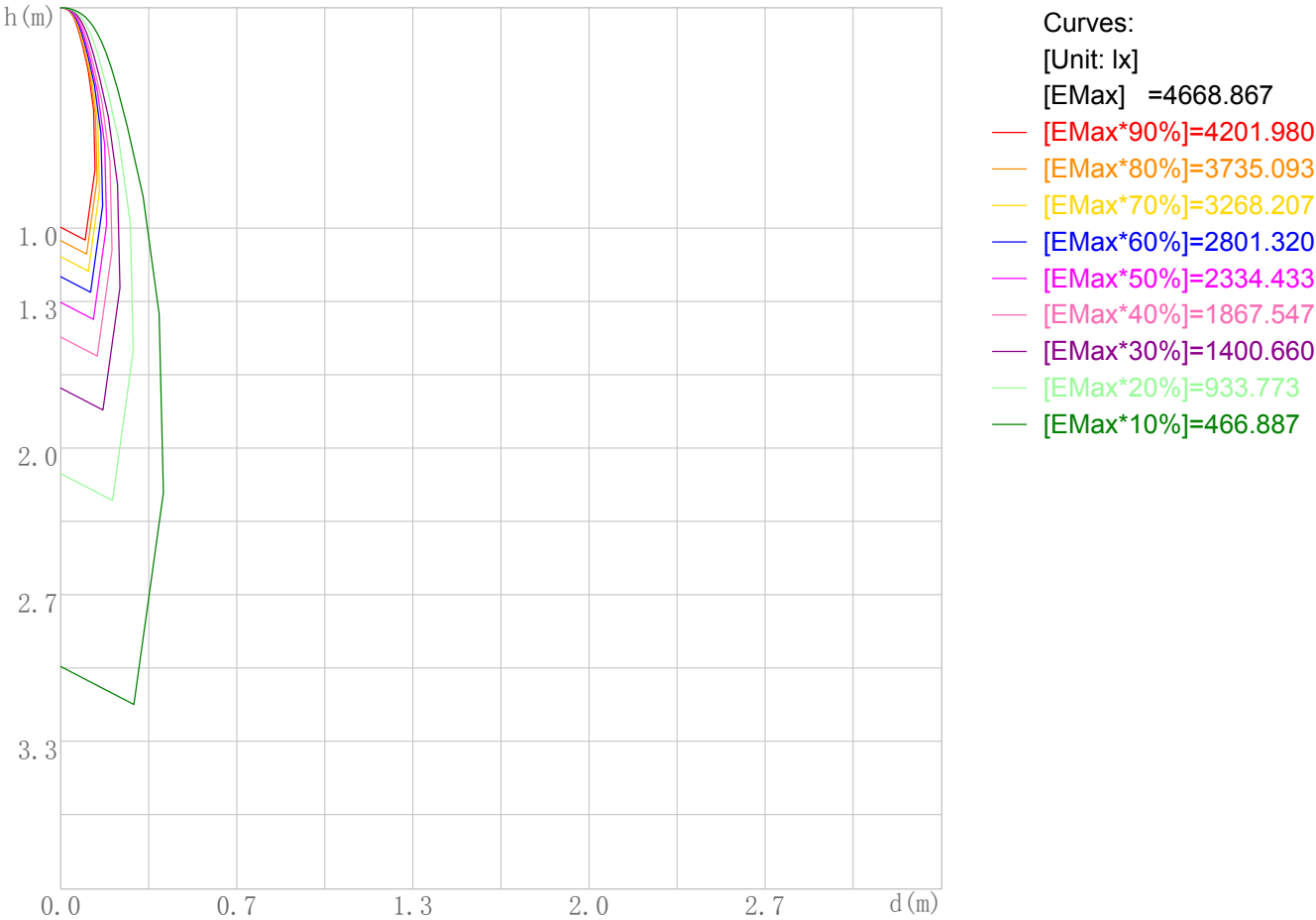
3D Plane Illuminance Modal



Space ISO Illuminance Diagram

Lum. Name: WL02-09-DW-01 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: 2022/08/29

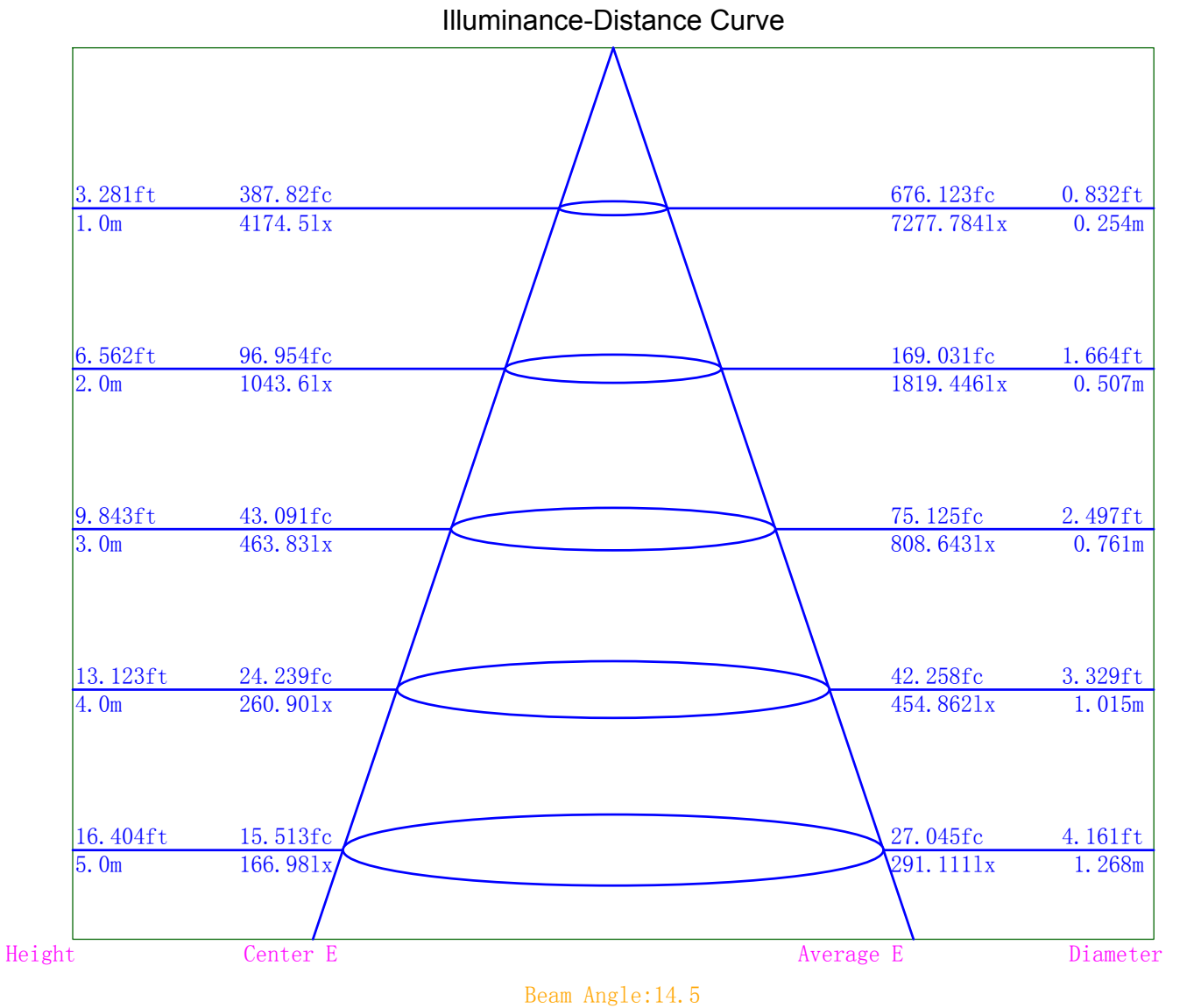
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:4668.87lx,5.0deg
Plane Maximum Lighting Intensity and @Angle:4722.574cd,0deg

Illuminance-Distance Diagram

Lum. Name: WL02-09-DW-01 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: 2022/08/29



Indoor Luminance Limiting Curves

Lum. Name: WL02-09-DW-01 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: 2022/08/29

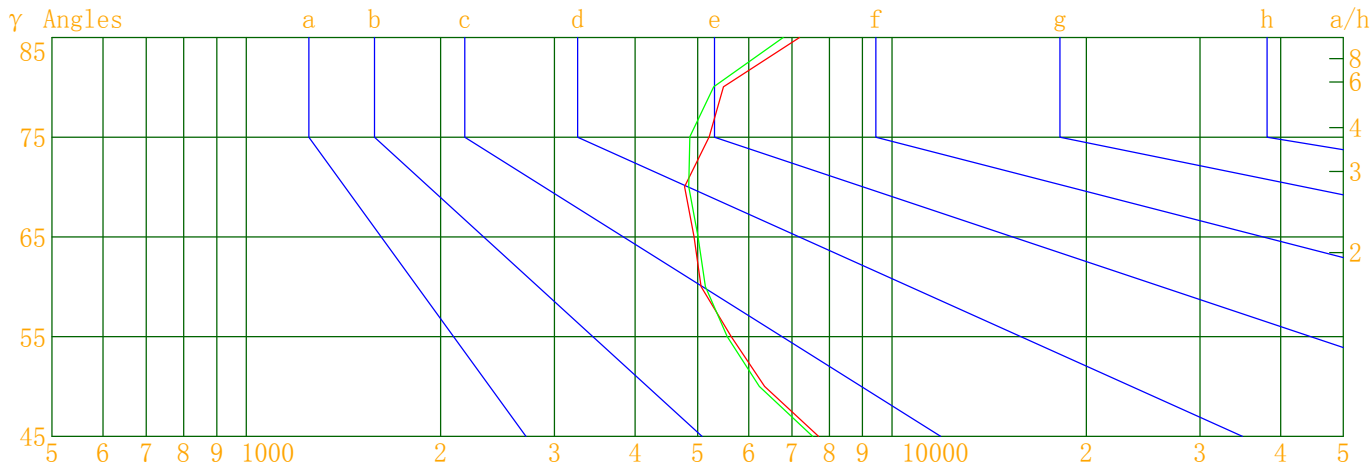
Glare Grade Table

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	7696	6351	5634	5062	4936	4773	5210	5482	7189
C90	7537	6230	5555	5140	5006	4843	4863	5295	6784

Luminance Limiting Curve



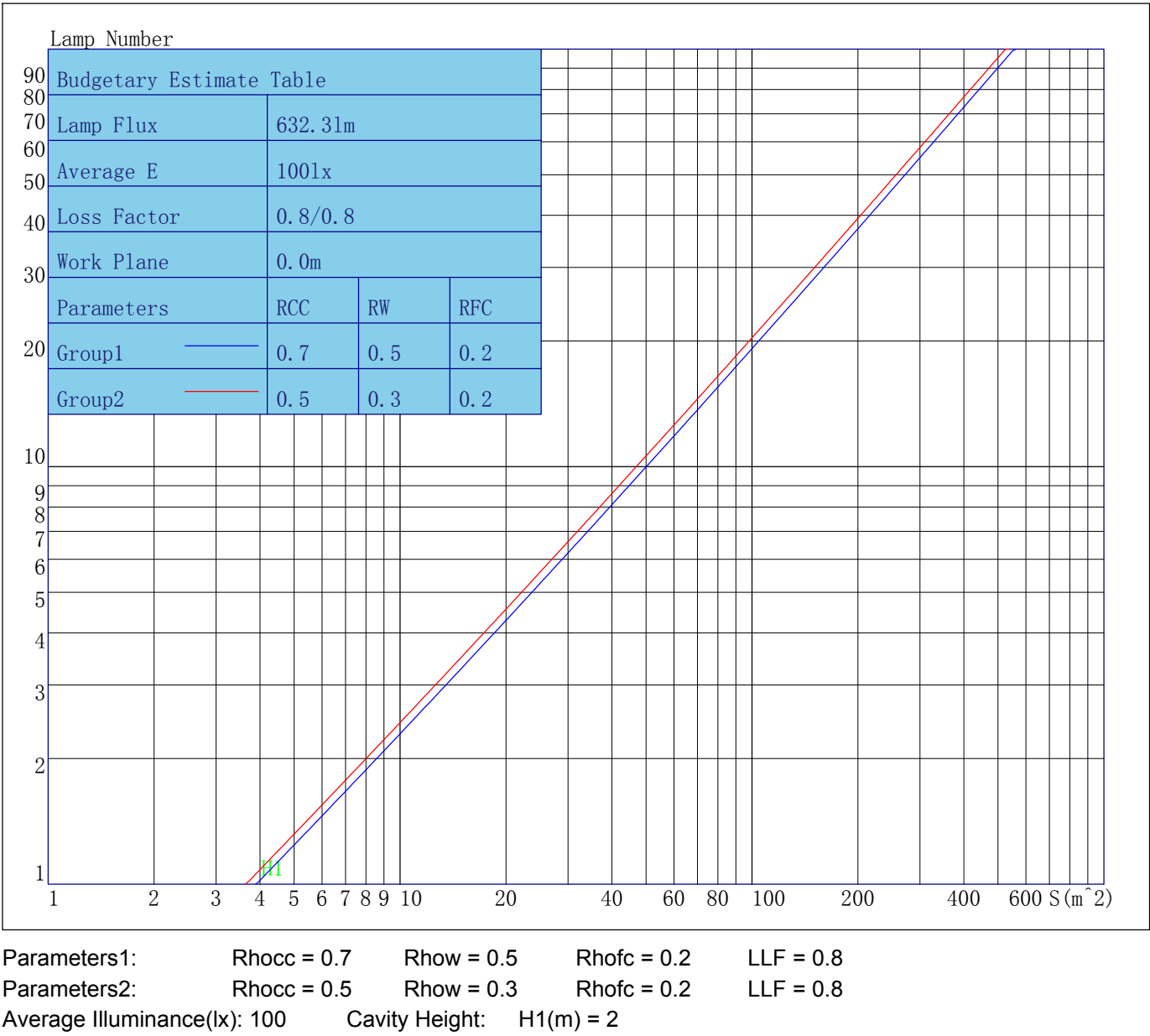
Luminous Size: Length(m)=0.076 Width(m)=0.076 Height(m)=0.000 Area(m^2)=0.005776

Luminous Type: Without Luminous Side

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

Indoor Budgetary Estimate Table

Lum. Name: WL02-09-DW-01 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: 2022/08/29



Indoor Coefficient of Utilization Table

Lum. Name: WL02-09-DW-01 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: 2022/08/29

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	110	110	110	105	105	105	100	100	100	98
1	114	111	109	107	111	109	107	105	105	103	102	101	99	98	97	96	95	93
2	109	105	102	99	107	103	100	98	100	97	95	97	95	93	94	92	91	89
3	105	100	96	93	103	99	95	92	96	93	90	93	91	89	91	89	87	86
4	102	96	91	88	100	94	90	87	92	89	86	90	87	85	88	86	84	82
5	98	92	87	84	97	91	87	83	89	85	83	87	84	82	86	83	81	80
6	95	88	84	81	94	88	83	80	86	82	80	85	81	79	83	81	78	77
7	93	86	81	78	91	85	81	78	84	80	77	82	79	77	81	78	76	75
8	90	83	78	75	89	82	78	75	81	77	75	80	77	74	79	76	74	73
9	88	80	76	73	87	80	76	73	79	75	73	78	75	72	77	74	72	71
10	85	78	74	71	85	78	74	71	77	73	71	76	73	71	76	73	70	69

Unified Glare Rating Table

Lum. Name: WL02-09-DW-01 1800-3000K RA90 15D	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	13.5	14.5	13.9	14.9	15.2	13.5	14.5	13.9	14.8	15.2
	14.6	15.6	15.1	15.9	16.3	14.6	15.5	15.0	15.9	16.3
	15.3	16.1	15.7	16.5	17.0	15.2	16.1	15.7	16.5	16.9
	15.9	16.7	16.4	17.1	17.5	15.8	16.6	16.2	17.0	17.4
	16.2	16.9	16.7	17.3	17.8	16.1	16.8	16.5	17.2	17.7
	16.5	17.2	16.9	17.6	18.1	16.3	17.0	16.8	17.4	17.9
X=4H Y=2H	13.9	14.7	14.3	15.1	15.5	13.8	14.7	14.3	15.0	15.5
	15.2	15.9	15.7	16.4	16.8	15.2	15.9	15.7	16.4	16.8
	16.0	16.7	16.5	17.1	17.6	16.0	16.6	16.4	17.0	17.5
	16.8	17.4	17.3	17.9	18.4	16.7	17.2	17.2	17.7	18.2
	17.2	17.7	17.7	18.2	18.7	17.1	17.6	17.6	18.0	18.6
	17.6	18.0	18.1	18.5	19.1	17.4	17.9	17.9	18.4	18.9
X=8H Y=4H	16.3	16.8	16.8	17.3	17.8	16.2	16.7	16.7	17.2	17.7
	17.2	17.7	17.8	18.2	18.8	17.1	17.5	17.7	18.1	18.6
	17.7	18.1	18.3	18.7	19.2	17.6	18.0	18.2	18.5	19.1
	18.3	18.6	18.8	19.1	19.8	18.1	18.4	18.7	19.0	19.6
X=12H Y=4H	16.3	16.7	16.8	17.3	17.8	16.2	16.6	16.7	17.2	17.7
	17.3	17.7	17.9	18.2	18.8	17.2	17.6	17.7	18.1	18.6
	17.9	18.2	18.4	18.7	19.4	17.7	18.1	18.3	18.6	19.2
Variations with the objerver position at spacings										
S=1.0H	0.3/-0.3					0.3/-0.3				
S=1.5H	0.5/-0.5					0.5/-0.5				
S=2.0H	0.5/-0.6					0.6/-0.7				
Reduced UGR Table:										
Nordic Standard Table:	BK0					BK0				
Correction Value	3.1					3.0				

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	4174.46	4174.46	4174.46	4174.46
γ 5.0	4722.57	3748.13	2128.12	1970.04
γ 10.0	2368.36	1996.01	910.90	912.15
γ 15.0	1000.25	886.06	371.44	384.00
γ 20.0	412.73	374.66	154.90	159.67
γ 25.0	183.55	171.97	77.68	79.58
γ 30.0	100.60	96.30	48.64	49.16
γ 35.0	63.69	61.92	35.67	35.64
γ 40.0	43.50	42.78	28.39	28.12
γ 45.0	31.43	30.78	22.20	22.49
γ 50.0	23.58	23.13	18.03	18.05
γ 55.0	18.67	18.40	14.64	15.02
γ 60.0	14.62	14.85	11.98	12.07
γ 65.0	12.05	12.22	9.37	9.66
γ 70.0	9.43	9.57	7.07	7.33
γ 75.0	7.79	7.27	5.26	5.53
γ 80.0	5.50	5.31	3.28	3.34
γ 85.0	3.62	3.41	2.24	2.05
γ 90.0	1.78	1.95	1.48	1.72
γ 95.0	1.60	1.55	1.12	1.35
γ 100.0	1.52	1.37	0.96	1.18
γ 105.0	0.93	1.23	1.20	1.23
γ 110.0	1.28	1.51	0.73	1.11
γ 115.0	1.19	1.36	1.02	1.22
γ 120.0	0.77	1.13	1.05	1.52
γ 125.0	0.72	1.05	1.24	1.35
γ 130.0	0.79	0.80	1.50	1.70
γ 135.0	0.95	1.27	1.91	2.22
γ 140.0	1.57	1.85	2.77	3.68
γ 145.0	2.39	2.65	3.49	4.16
γ 150.0	3.37	3.54	4.41	4.31
γ 155.0	3.98	4.08	4.43	4.79
γ 160.0	4.55	4.51	4.52	4.58
γ 165.0	4.42	4.24	4.73	4.55
γ 170.0	4.55	4.59	4.68	4.74
γ 175.0	4.34	4.52	3.98	4.37
γ 180.0	4.13	4.13	4.13	4.13