

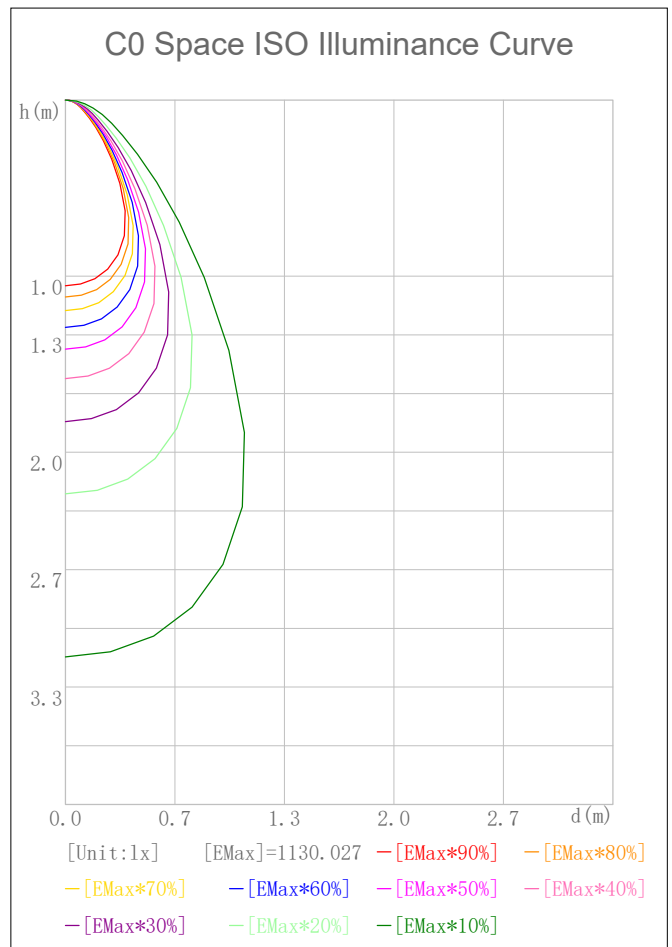
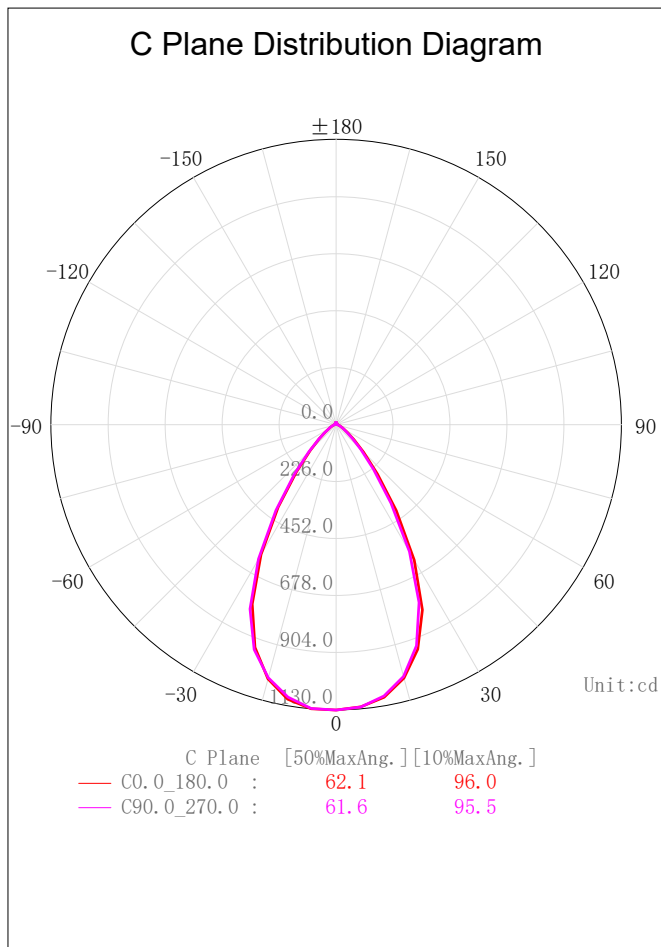
Indoor Luminaire Photometric Data

Description Information

Luminary Name: MD18-18-DW-03 1800-3000K RA90 60D		Lum. Catalog:	Test ID: 01
Lamp Name:		Lamp Catalog: LED	Test Date: 2022/09/12
Manufacture:		Shld. Ang(°):	Test Machine:GON-2000
Test Lab: Quality Department	Frequency (Hz):		Lamp CCT(K): Ra:
Lum. Size (W*L*H):0.041m*0.041m*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

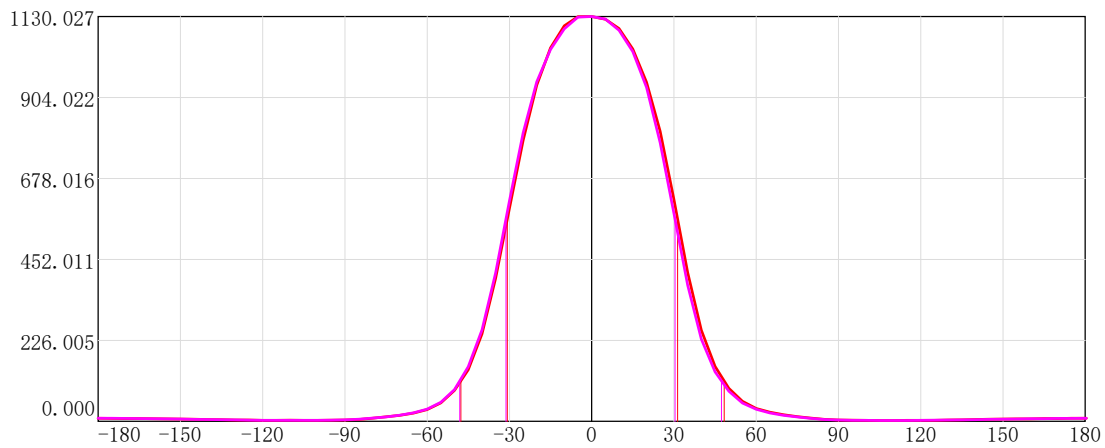
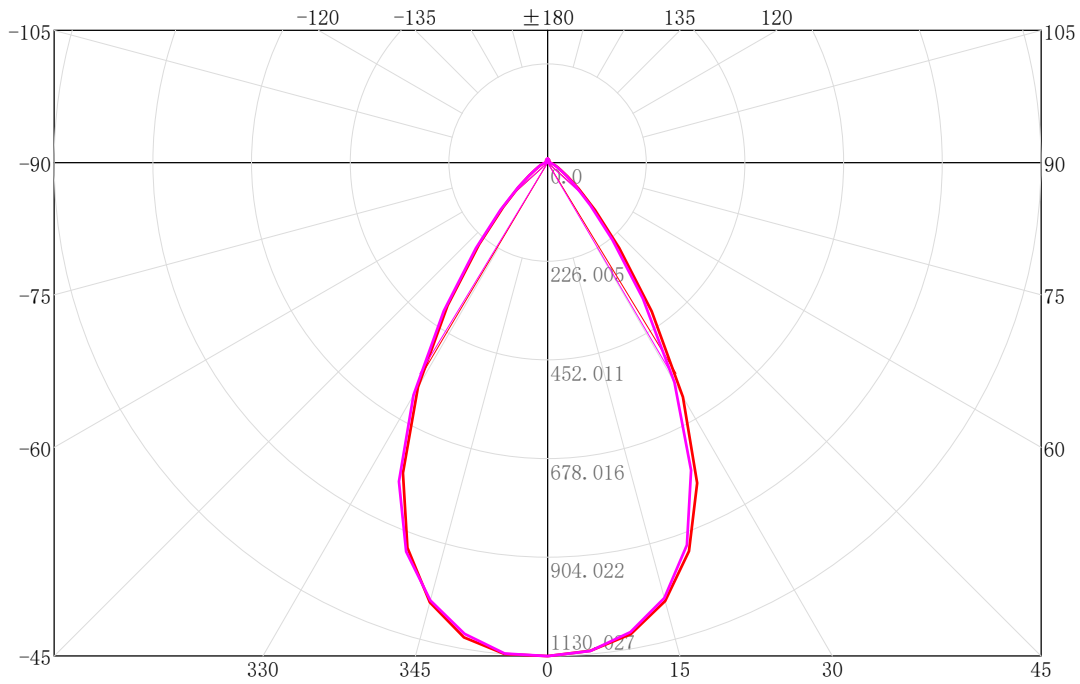
Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 1254.800	Luminary Flux(lm): 1254.799	Field Angle(10%Imax): 96.0(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 1227.857lm 97.85%	
Rated Voltage(V):	Luminary EER(lm/W): 76.934	Up Lumens&Percent: 26.942lm 2.15%	
Tested Power(W): 16.310	Max. Candela(cd): 1130.027	S/MH: C0_a180=0.963 C90_270=0.958	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=0.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf):239.7, 0.070, 0.967	Beam Angle(50%Imax): 62.1(°)	ErP φ use(90°): 1078.448lm	
Lamp Size (W*L*H):0.041m*0.041m*0.000m	Left=-30.7°, Right=31.3°	IRF(%): 206.315	



2D Plane Light Intensity Distribution Curve

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

C Plane Distribution Diagram



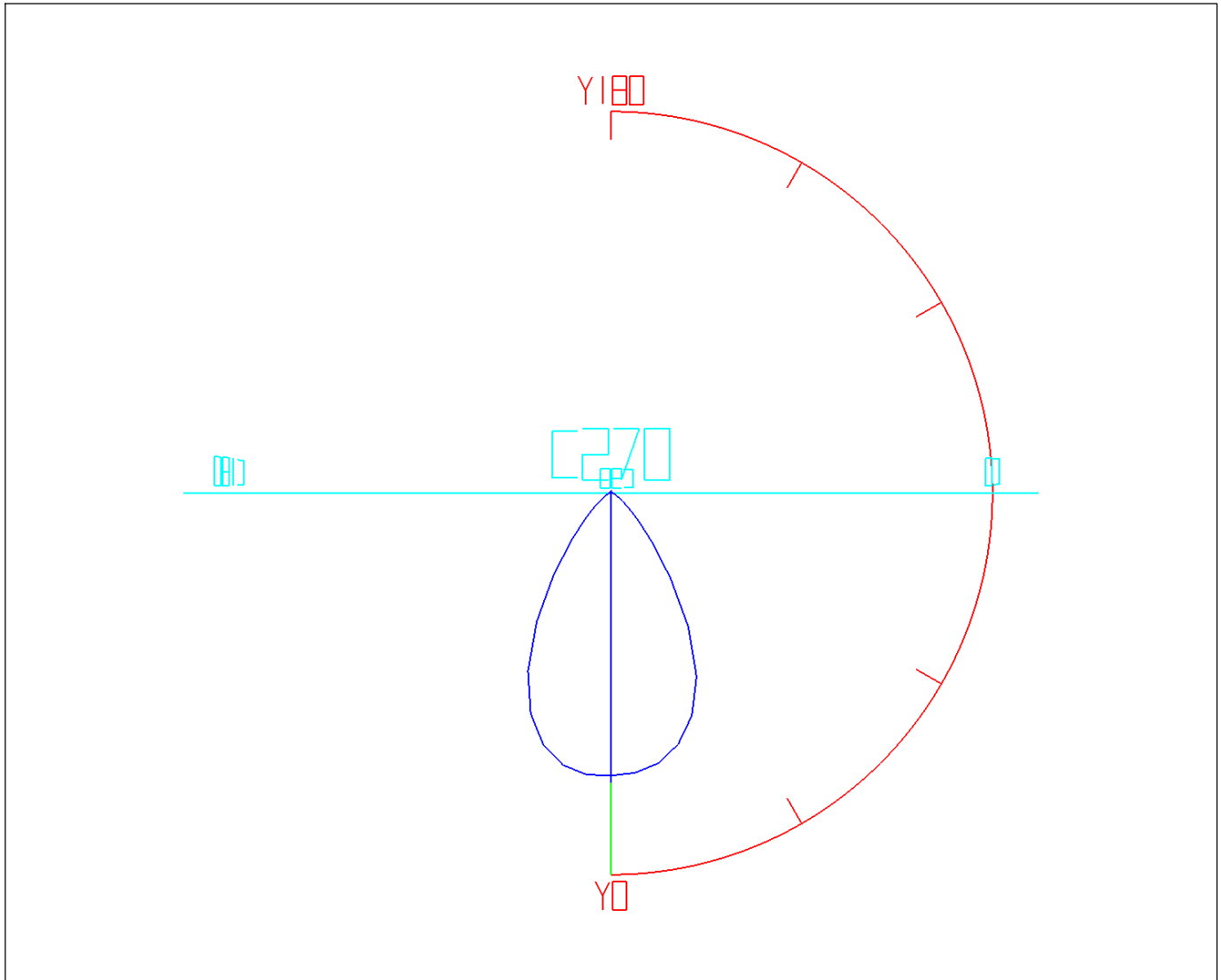
C Plane	[50%MaxAng.]	[10%MaxAng.]
— C0.0_180.0 :	62.1	96.0
— C90.0_270.0 :	61.6	95.5

Unit:cd

3D Light Intensity Distribution Modal

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

3D Light Intensity Distribution Modal



Curves: 3D Model —— Fixture —— Vert. HUD —— Hori. HUD ——
 View Angles: Orient:0 Tilt:0 Roll:0 Spin:0

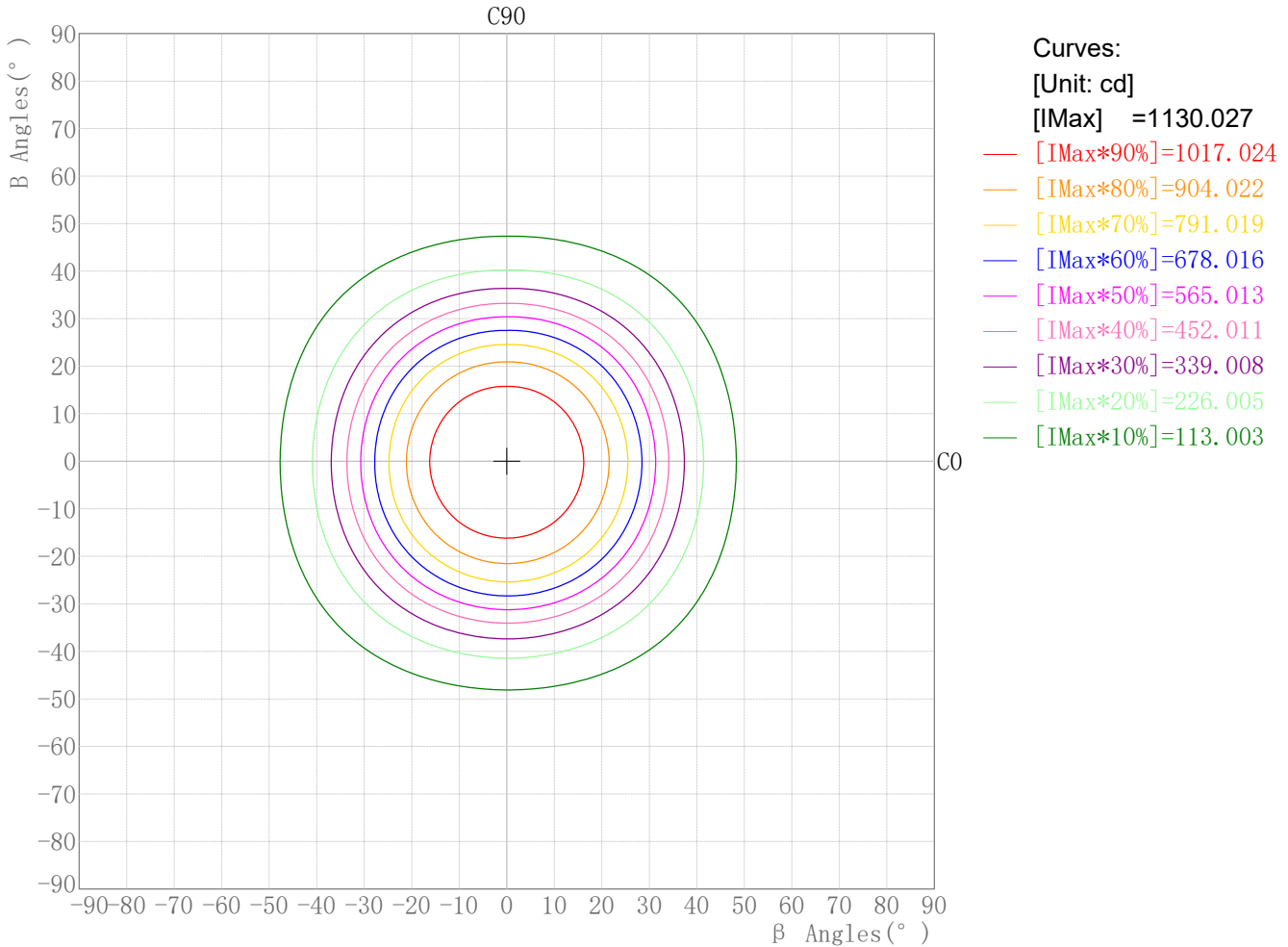
Zonal Flux Tabulation

Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	26.97	26.97	2.15	2.15
5.0-10.0	79.51	106.48	6.34	8.49
10.0-15.0	126.64	233.12	10.09	18.58
15.0-20.0	163.12	396.23	13.00	31.58
20.0-25.0	182.02	578.25	14.51	46.08
25.0-30.0	176.72	754.97	14.08	60.17
30.0-35.0	147.93	902.89	11.79	71.96
35.0-40.0	108.22	1011.11	8.62	80.58
40.0-45.0	72.86	1083.98	5.81	86.39
45.0-50.0	47.54	1131.52	3.79	90.18
50.0-55.0	30.73	1162.24	2.45	92.62
55.0-60.0	20.26	1182.50	1.61	94.24
60.0-65.0	14.22	1196.73	1.13	95.37
65.0-70.0	10.58	1207.31	0.84	96.22
70.0-75.0	7.95	1215.27	0.63	96.85
75.0-80.0	5.86	1221.13	0.47	97.32
80.0-85.0	4.05	1225.18	0.32	97.64
85.0-90.0	2.68	1227.86	0.21	97.85
90.0-95.0	2.07	1229.93	0.17	98.02
95.0-100.0	1.81	1231.74	0.14	98.16
100.0-105.0	1.62	1233.36	0.13	98.29
105.0-110.0	1.54	1234.90	0.12	98.41
110.0-115.0	1.51	1236.41	0.12	98.53
115.0-120.0	1.51	1237.91	0.12	98.65
120.0-125.0	1.57	1239.48	0.13	98.78
125.0-130.0	1.68	1241.17	0.13	98.91
130.0-135.0	1.78	1242.95	0.14	99.06
135.0-140.0	1.84	1244.79	0.15	99.20
140.0-145.0	1.87	1246.66	0.15	99.35
145.0-150.0	1.84	1248.50	0.15	99.50
150.0-155.0	1.72	1250.23	0.14	99.64
155.0-160.0	1.52	1251.74	0.12	99.76
160.0-165.0	1.27	1253.01	0.10	99.86
165.0-170.0	0.97	1253.98	0.08	99.93
170.0-175.0	0.61	1254.59	0.05	99.98
175.0-180.0	0.21	1254.80	0.02	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

ISO Lighting Intensity Curve

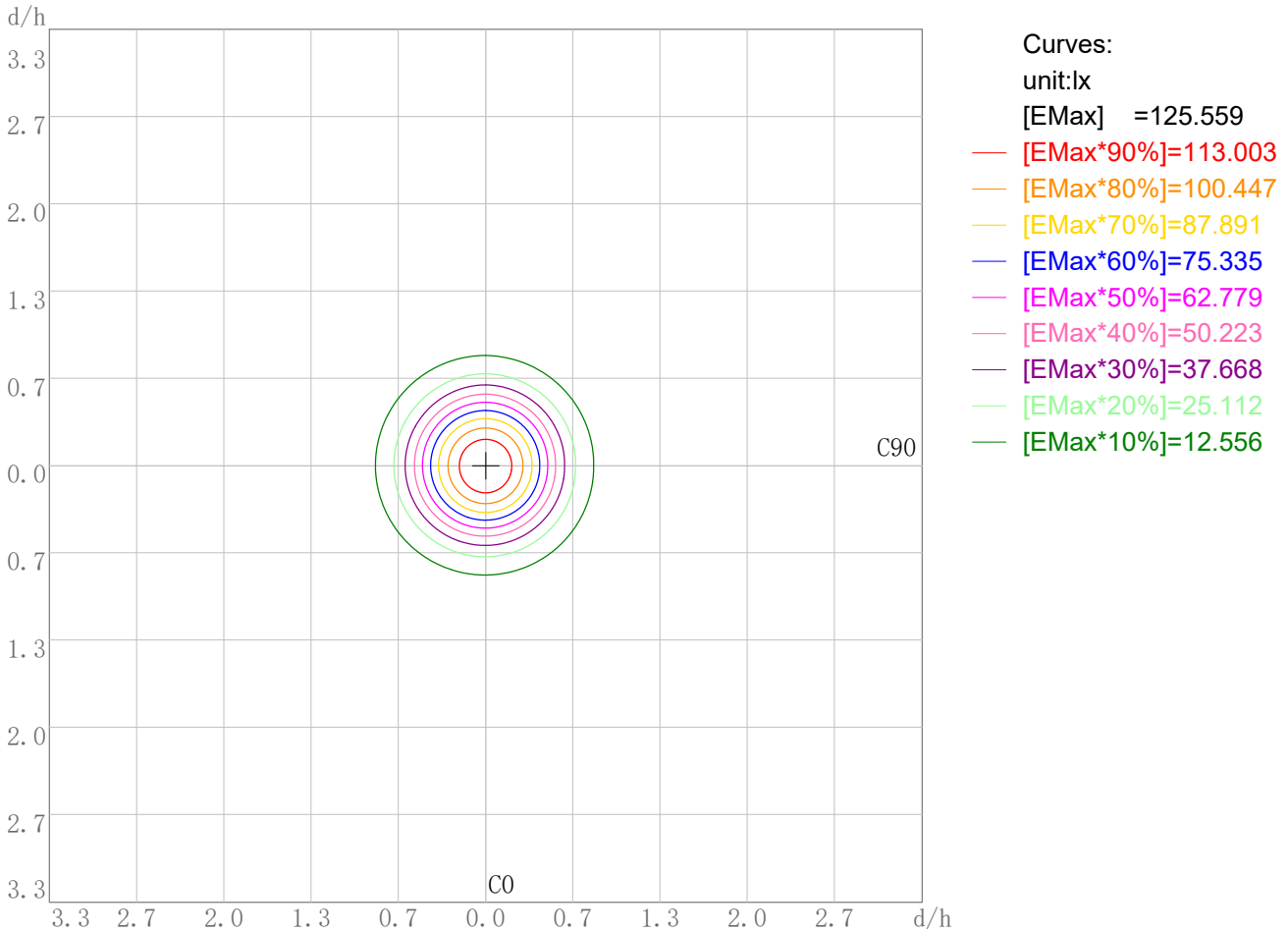


Maximum Light Intensity(cd): 1130.03
 Maximum Cand.@Angle: H=0.0°,V=0.0°

Plane ISO-Illuminance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

Plane ISO-Illuminance Curve

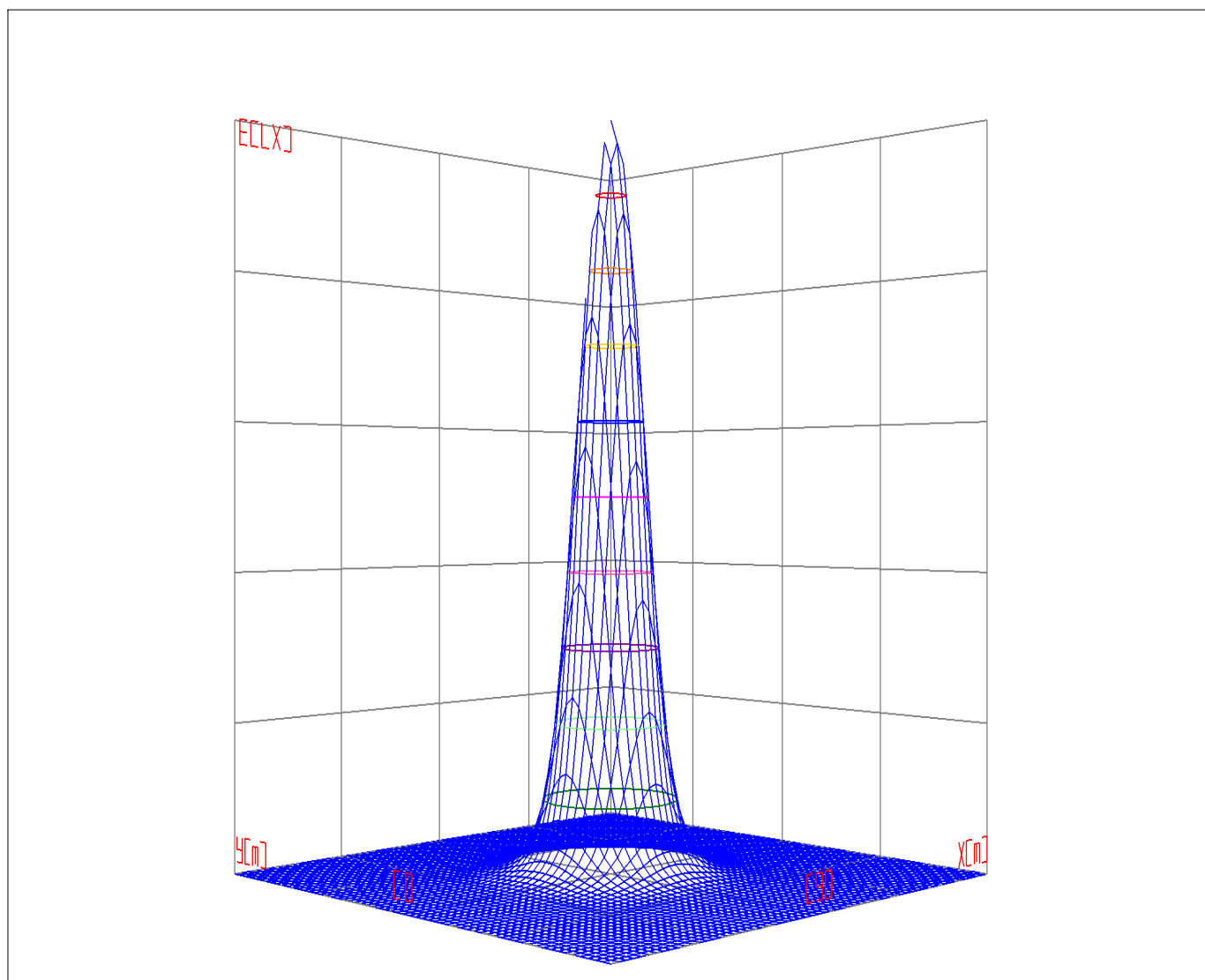


Working Plane Luminaire Mounting Height(m): 3.00
 Working Plane Maximum Illuminance(lx): 125.56
 Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

3D Plane Illuminance Modal

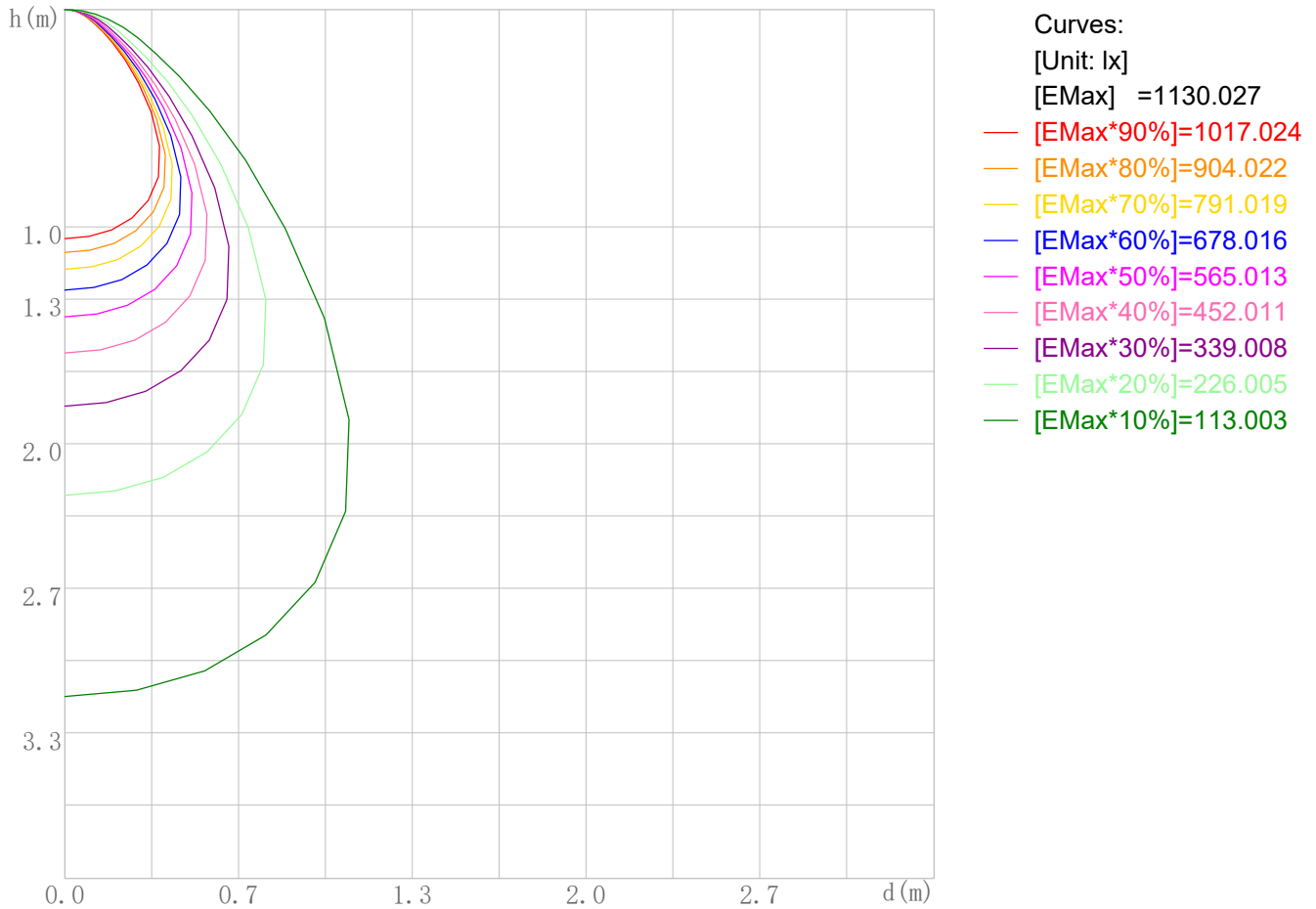


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
 View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

Space ISO Illuminance Curve

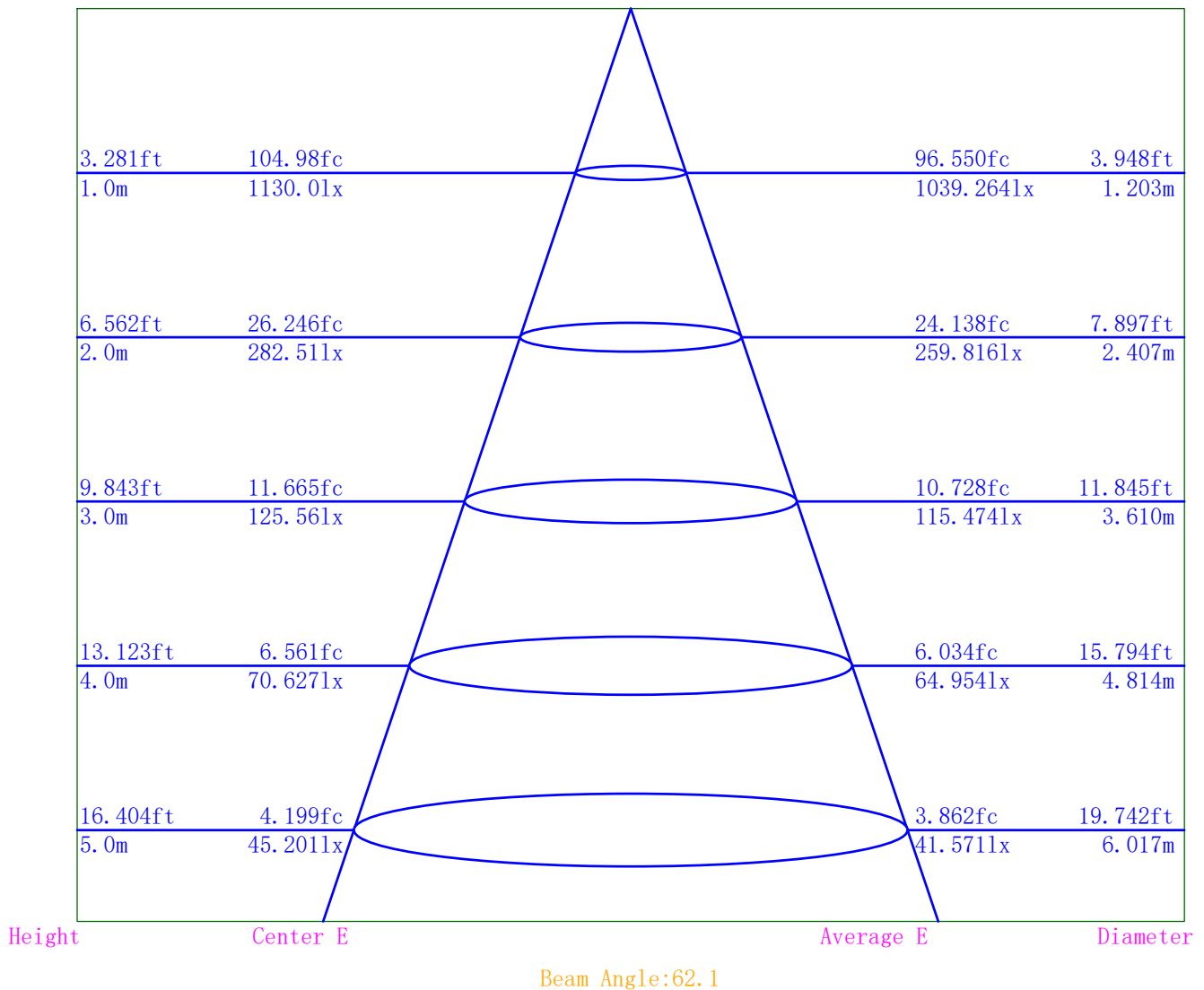


Space Plane Maximum Illuminance and @Angle:1130.03lx,0.0deg
 Plane Maximum Lighting Intensity and @Angle:1130.027cd,0deg

Illuminance-Distance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

Illuminance-Distance Curve



Indoor Luminance Limiting Curves

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

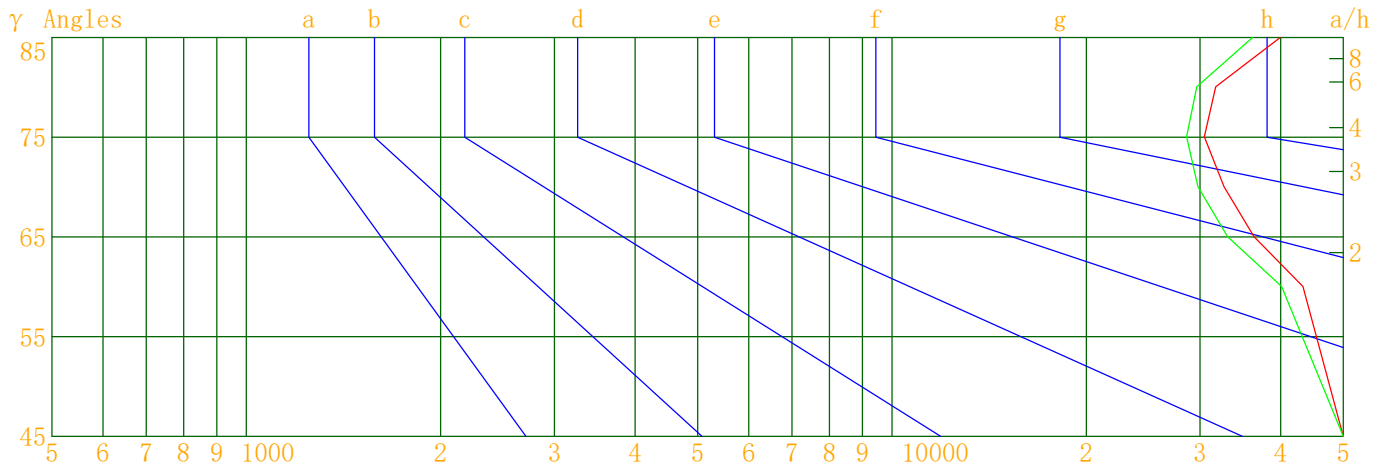
Glare Grade Table

GI	Quality	Using Illuminance							
		a	b	c	d	e	f	g	h
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	129266	85453	58579	43304	36353	32684	30455	31723	39936
C90	116538	78024	53338	40138	33100	29777	28586	29650	36182

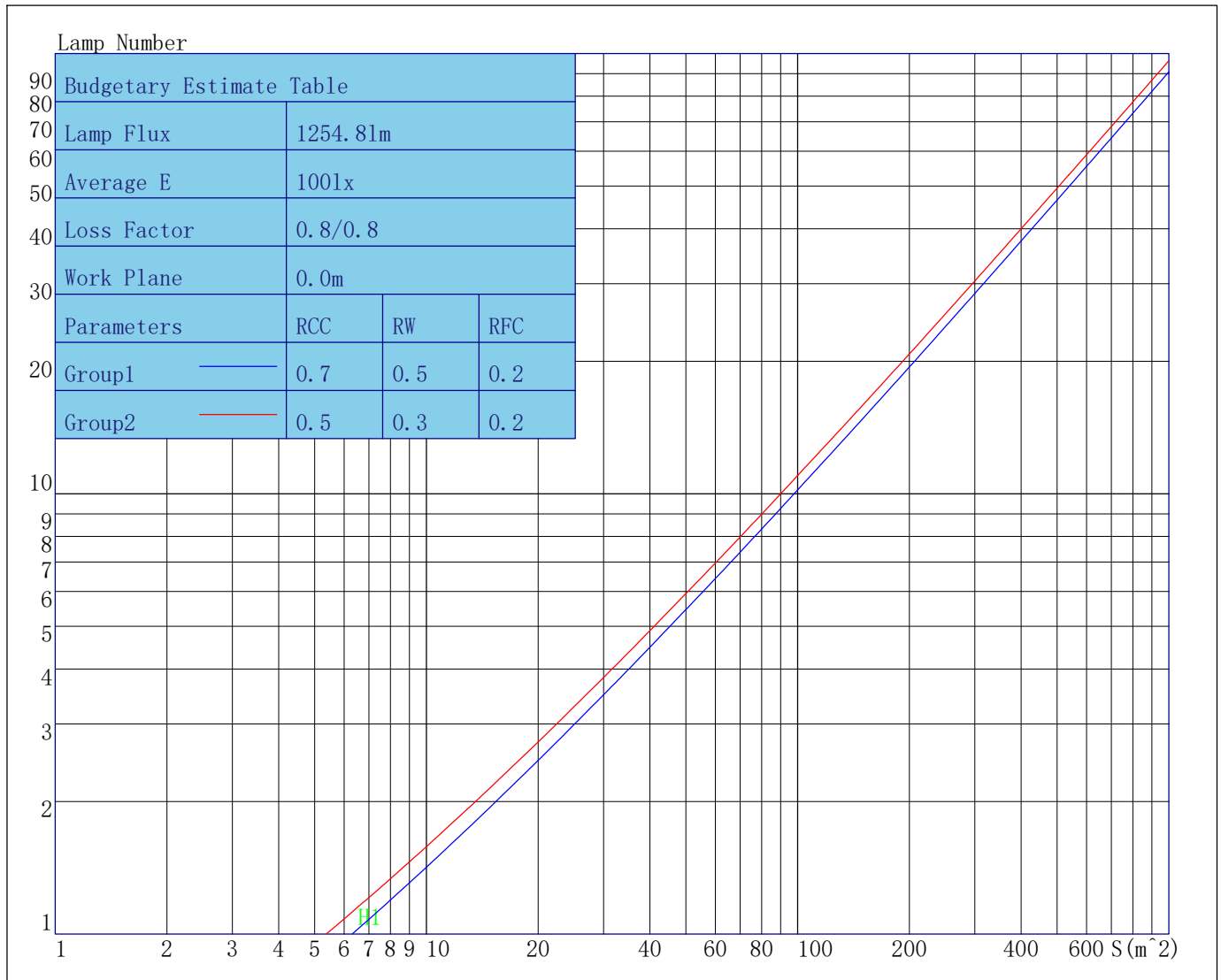
Luminance Limiting Curve



Luminous Size: Length(m)=0.041 Width(m)=0.041 Height(m)=0.000 Area(m^2)=0.001681
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: ——— C90-C270 Color: ———

Indoor Budgetary Estimate Table

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog: LED	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12



Parameters1: Rhocc = 0.7 Rhow = 0.5 Rhofc = 0.2 LLF = 0.8
 Parameters2: Rhocc = 0.5 Rhow = 0.3 Rhofc = 0.2 LLF = 0.8
 Average Illuminance(lx): 100 Cavity Height: H1(m) = 2

Indoor Coefficient of Utilization Table

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

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	112	109	106	103	109	106	104	102	102	100	98	98	96	95	94	93	92	90
2	106	100	95	92	103	98	94	90	94	91	88	91	88	86	88	86	84	82
3	99	92	87	82	97	91	85	81	88	83	80	85	81	78	82	79	77	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	86	78	72	67	76	71	67	74	69	66	72	68	65	63
6	83	74	67	62	82	73	66	62	71	65	61	69	64	61	68	63	60	58
7	79	69	62	57	77	68	62	57	66	61	57	65	60	56	64	59	56	54
8	75	64	58	53	73	64	57	53	62	57	53	61	56	52	60	55	52	50
9	71	60	54	50	70	60	54	49	59	53	49	57	52	49	56	52	49	47
10	67	57	50	46	66	56	50	46	55	50	46	54	49	46	53	49	45	44

IES Indoor Report

Photometric Filename:MD18-18-DW-03 1800-3000K RA90 60D.IES

Unified Glare Rating Table

Lum. Name: MD18-18-DW-03 1800-3000K RA90 60D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine: GON-2000	Test Date: 2022/09/12

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	25.5	26.6	26.0	27.0	27.4	25.1	26.2	25.5	26.6	26.9
Y=3H	25.7	26.7	26.1	27.1	27.5	25.3	26.2	25.7	26.6	27.0
Y=4H	25.8	26.7	26.2	27.1	27.5	25.3	26.2	25.8	26.6	27.1
Y=6H	25.9	26.7	26.3	27.1	27.6	25.4	26.3	25.9	26.7	27.1
Y=8H	25.9	26.7	26.4	27.1	27.6	25.5	26.3	25.9	26.7	27.2
Y=12H	26.0	26.7	26.4	27.1	27.6	25.5	26.3	26.0	26.7	27.2
X=4H Y=2H	25.5	26.4	25.9	26.8	27.2	25.1	26.0	25.5	26.4	26.8
Y=3H	25.8	26.5	26.2	26.9	27.4	25.3	26.1	25.8	26.5	27.0
Y=4H	25.9	26.6	26.4	27.0	27.5	25.5	26.1	26.0	26.6	27.1
Y=6H	26.1	26.7	26.6	27.2	27.7	25.7	26.2	26.2	26.7	27.3
Y=8H	26.2	26.7	26.7	27.2	27.7	25.8	26.3	26.3	26.8	27.3
Y=12H	26.3	26.8	26.8	27.3	27.8	25.9	26.3	26.4	26.8	27.4
X=8H Y=4H	25.9	26.4	26.4	26.9	27.4	25.5	26.0	26.0	26.5	27.0
Y=6H	26.2	26.6	26.7	27.1	27.7	25.8	26.2	26.3	26.7	27.3
Y=8H	26.3	26.7	26.9	27.3	27.8	25.9	26.3	26.5	26.9	27.4
Y=12H	26.5	26.9	27.1	27.4	28.0	26.1	26.4	26.7	27.0	27.6
X=12H Y=4H	25.9	26.3	26.4	26.9	27.4	25.4	25.9	26.0	26.4	27.0
Y=6H	26.2	26.6	26.7	27.1	27.7	25.8	26.1	26.3	26.7	27.3
Y=8H	26.4	26.7	26.9	27.2	27.9	26.0	26.3	26.5	26.8	27.5
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					0.6/-0.6				
S=2.0H	0.8/-0.9					0.8/-0.9				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	1.1					1.1				

to the CIE Pub.117, data has been corrected, refers to the lamp's lumens 8.2flm.

IES Indoor Report

Photometric Filename:MD18-18-DW-03 1800-3000K RA90 60D.IES

Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
γ 0.0	1130.03	1130.03	1130.03	1130.03
γ 5.0	1122.22	1122.66	1129.60	1128.35
γ 10.0	1096.36	1091.47	1103.91	1095.81
γ 15.0	1039.31	1032.23	1042.58	1037.97
γ 20.0	946.53	932.03	938.35	947.88
γ 25.0	809.75	777.45	784.36	805.45
γ 30.0	619.71	580.85	593.58	614.54
γ 35.0	415.59	380.10	399.21	414.58
γ 40.0	255.12	230.21	244.15	255.62
γ 45.0	153.65	138.52	144.19	152.62
γ 50.0	92.33	84.31	86.43	89.08
γ 55.0	56.48	51.43	51.75	53.44
γ 60.0	36.40	33.74	33.10	34.27
γ 65.0	25.83	23.51	23.30	23.90
γ 70.0	18.79	17.12	17.10	17.62
γ 75.0	13.25	12.44	12.80	12.61
γ 80.0	9.26	8.65	9.09	9.55
γ 85.0	5.85	5.30	5.58	6.26
γ 90.0	3.99	3.81	4.05	4.33
γ 95.0	3.43	3.31	3.68	3.68
γ 100.0	3.31	2.96	2.93	3.34
γ 105.0	2.77	2.85	3.13	2.91
γ 110.0	2.75	2.78	3.38	3.01
γ 115.0	2.99	2.73	2.94	3.25
γ 120.0	3.27	3.00	3.28	3.34
γ 125.0	3.20	3.53	3.90	3.63
γ 130.0	4.19	3.97	4.19	4.36
γ 135.0	4.49	4.52	4.74	4.85
γ 140.0	5.44	5.10	5.30	5.38
γ 145.0	6.07	5.66	6.07	5.84
γ 150.0	6.61	6.34	6.60	6.80
γ 155.0	7.11	6.80	6.93	7.24
γ 160.0	7.28	7.45	7.41	7.65
γ 165.0	7.84	7.76	7.91	8.19
γ 170.0	8.20	8.52	8.23	8.61
γ 175.0	8.75	8.68	8.53	8.88
γ 180.0	8.89	8.89	8.89	8.89
