

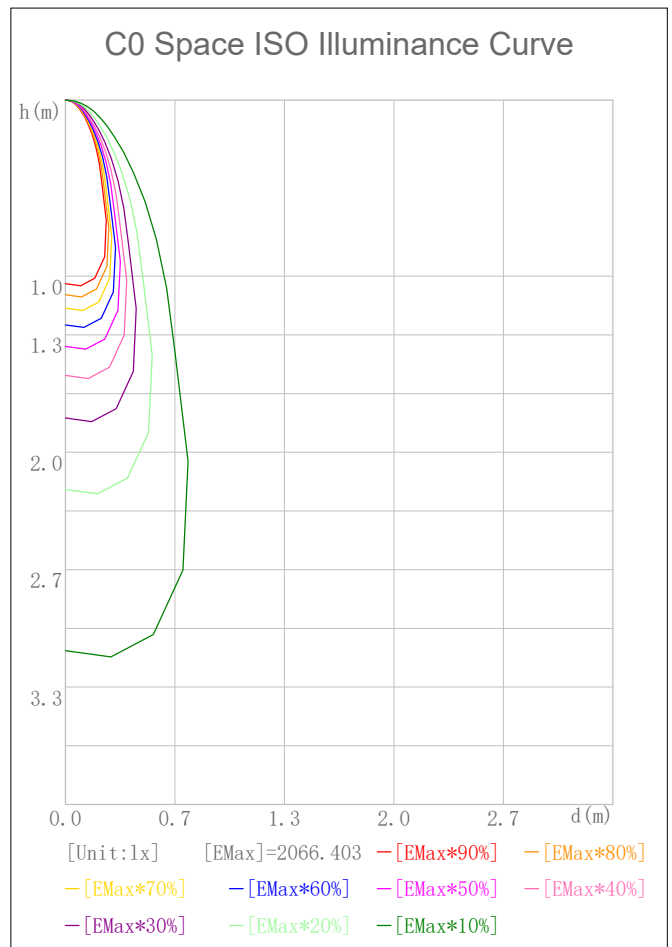
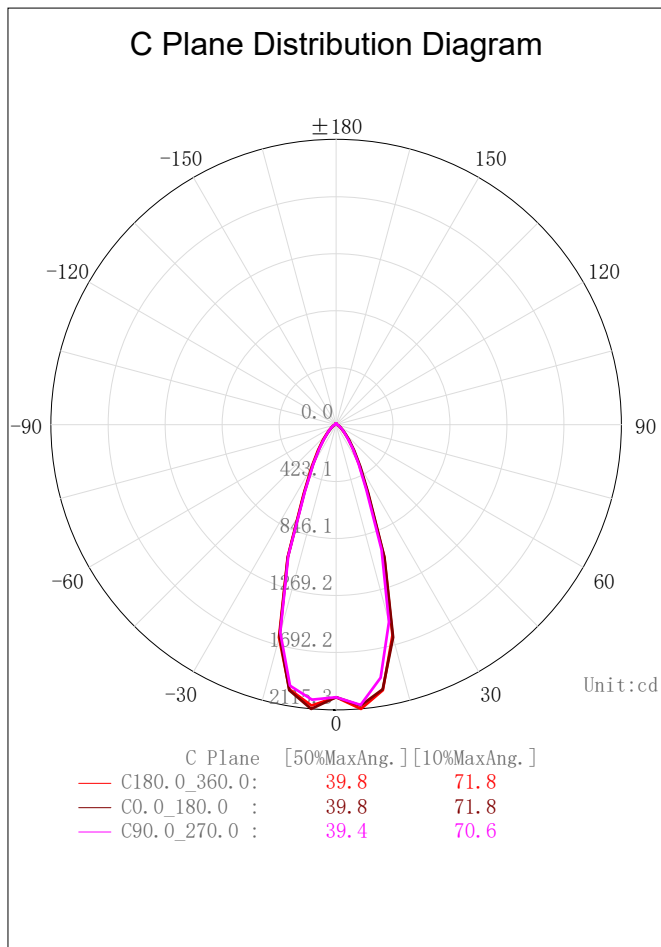
Indoor Luminaire Photometric Data

Description Information

Luminary Name: MD18-18-DW-03 1800-3000K RA90 36D		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

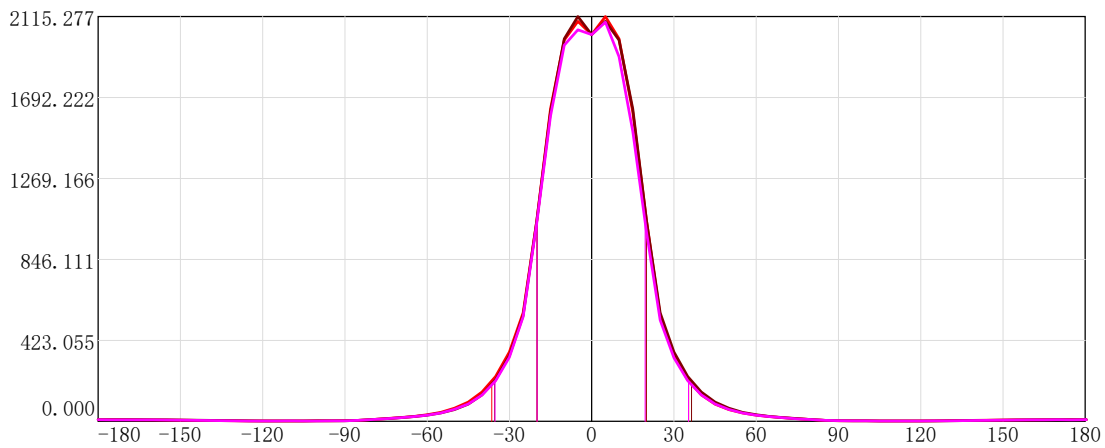
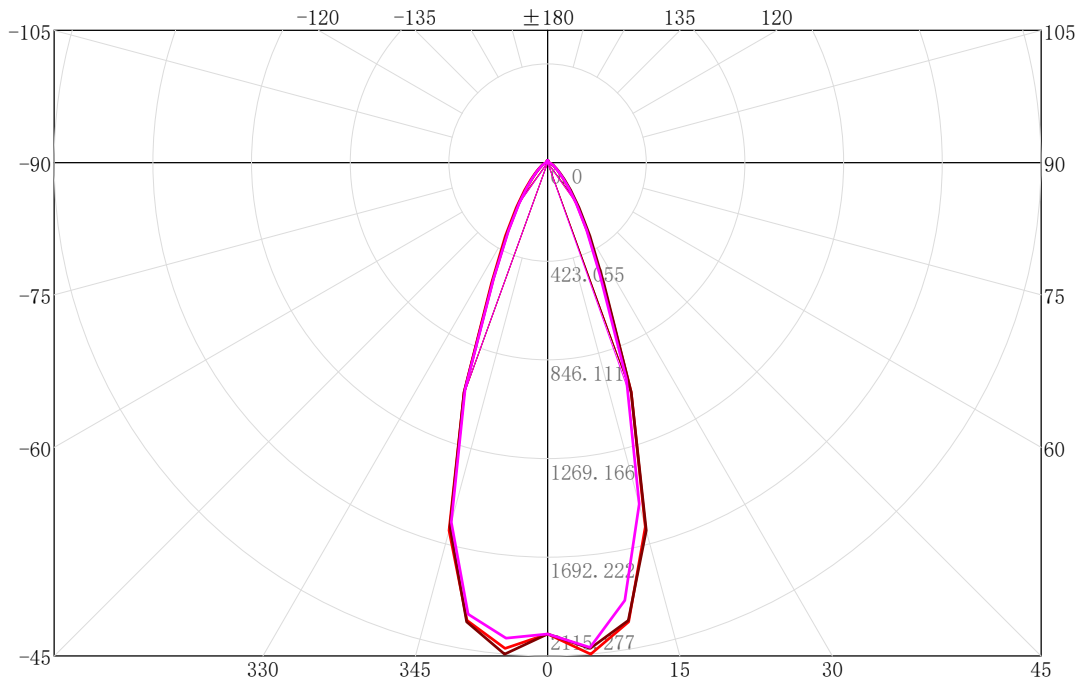
Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 1234.060	Luminary Flux(lm): 1234.065	Field Angle(10%Imax): 71.8(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 1207.984lm 97.89%	
Rated Voltage(V):	Luminary EER(lm/W): 75.709	Up Lumens&Percent: 26.080lm 2.11%	
Tested Power(W): 16.300	Max. Candela(cd): 2115.277	S/MH: C0_a180=0.681 C90_270=0.668	
Lamps' Inside: 1	Max Cand@Ang. (°): C=180.0 γ=5.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf):239.6, 0.070, 0.966	Beam Angle(50%Imax): 39.8(°)	ErP φ use(90°): 1082.003lm	
Lamp Size (W*L*H):0.041m*0.041m*0.000m	Left=-19.9°, Right=19.9°	IRF(%): 383.857	



2D Plane Light Intensity Distribution Curve

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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



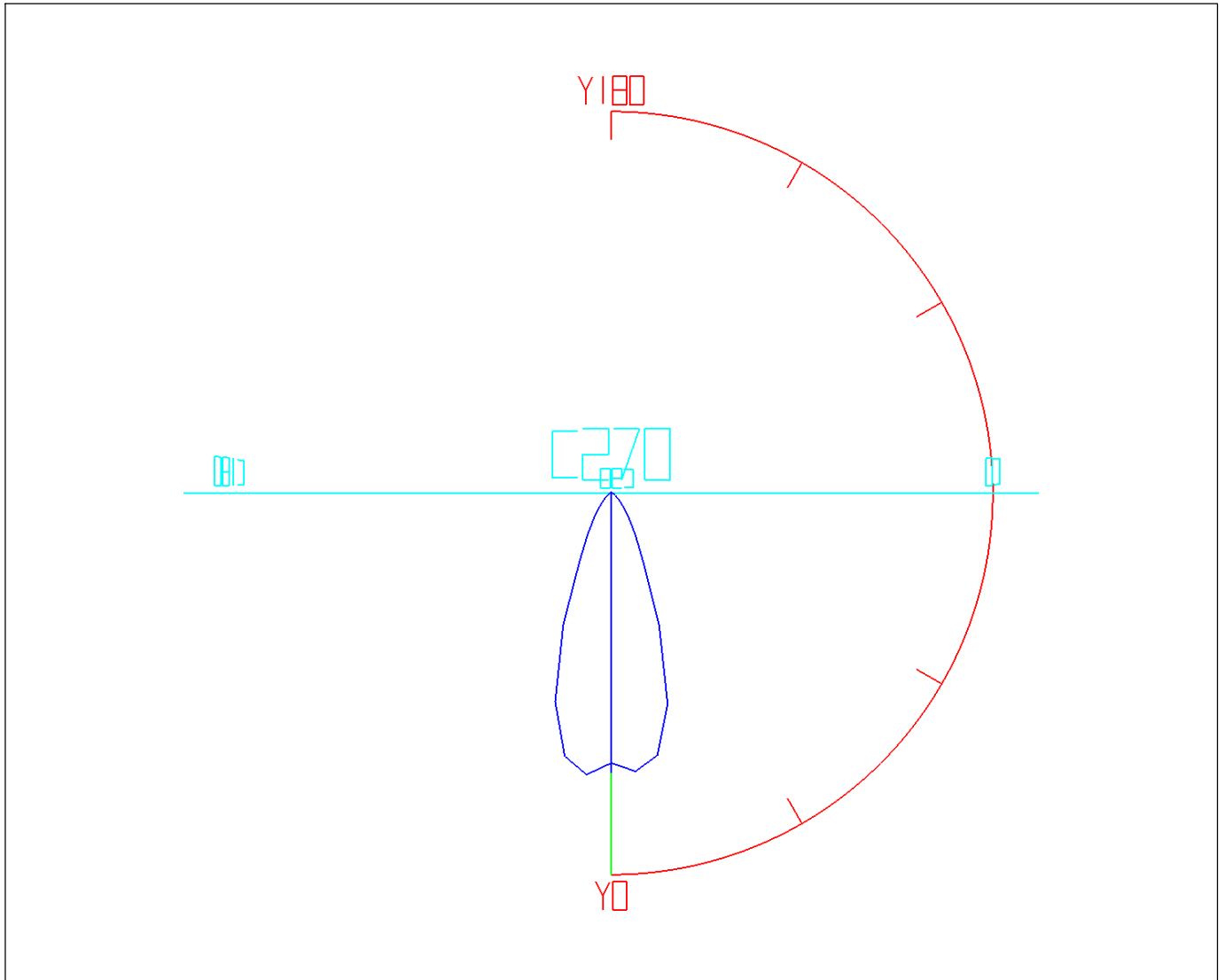
C Plane	[50%MaxAng.]	[10%MaxAng.]
C180.0_360.0 :	39.8	71.8
C0.0_180.0 :	39.8	71.8
C90.0_270.0 :	39.4	70.6

Unit:cd

3D Light Intensity Distribution Modal

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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

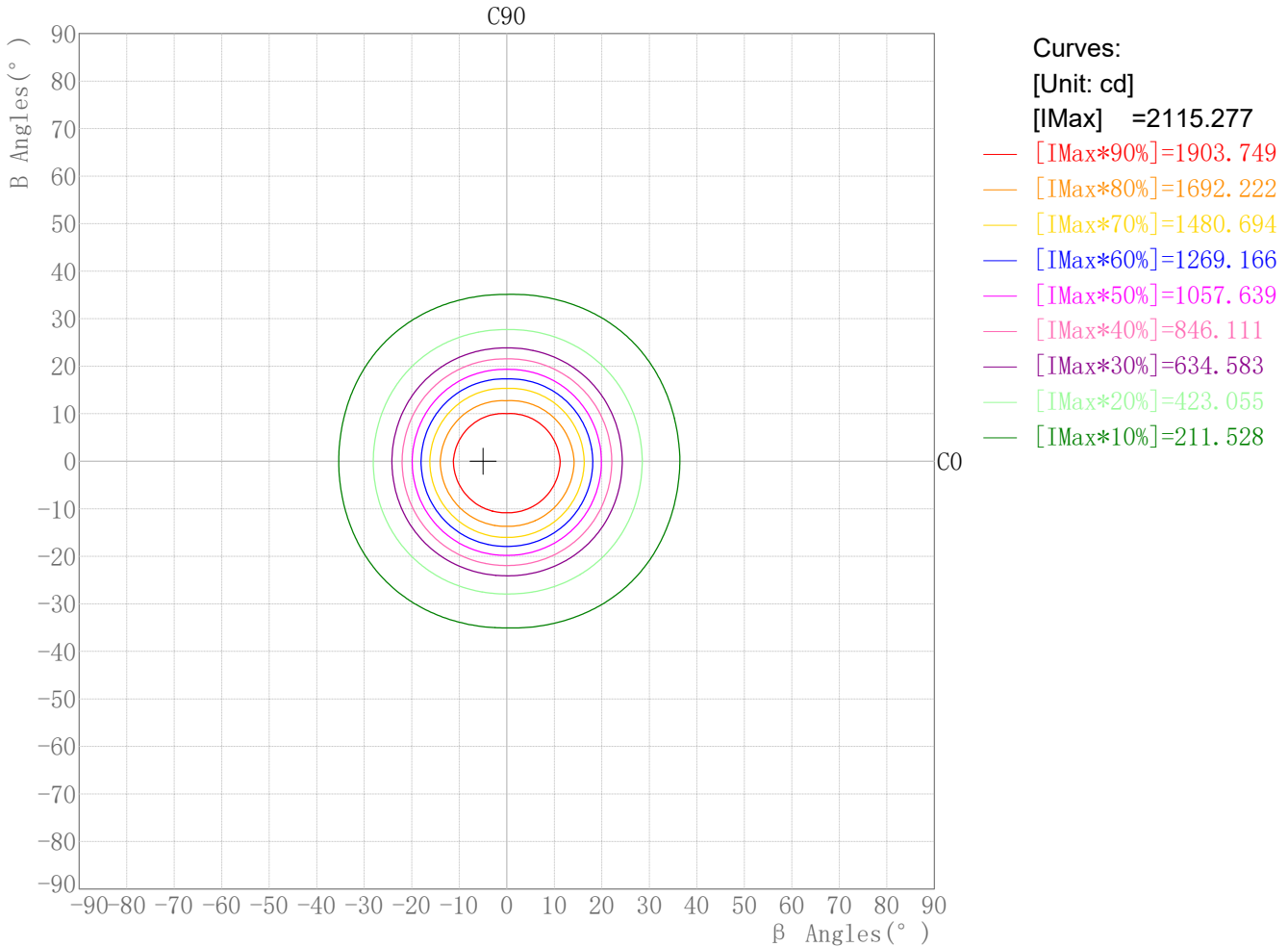
Zonal Flux Tabulation

Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	49.07	49.07	3.98	3.98
5.0-10.0	144.88	193.95	11.74	15.72
10.0-15.0	210.91	404.86	17.09	32.81
15.0-20.0	215.87	620.72	17.49	50.30
20.0-25.0	165.55	786.28	13.42	63.71
25.0-30.0	112.97	899.25	9.15	72.87
30.0-35.0	82.91	982.16	6.72	79.59
35.0-40.0	60.36	1042.53	4.89	84.48
40.0-45.0	43.67	1086.20	3.54	88.02
45.0-50.0	31.91	1118.11	2.59	90.60
50.0-55.0	23.84	1141.94	1.93	92.54
55.0-60.0	18.18	1160.12	1.47	94.01
60.0-65.0	14.24	1174.36	1.15	95.16
65.0-70.0	11.26	1185.62	0.91	96.07
70.0-75.0	8.74	1194.36	0.71	96.78
75.0-80.0	6.53	1200.89	0.53	97.31
80.0-85.0	4.39	1205.28	0.36	97.67
85.0-90.0	2.71	1207.98	0.22	97.89
90.0-95.0	1.96	1209.95	0.16	98.05
95.0-100.0	1.71	1211.66	0.14	98.18
100.0-105.0	1.56	1213.23	0.13	98.31
105.0-110.0	1.45	1214.68	0.12	98.43
110.0-115.0	1.36	1216.04	0.11	98.54
115.0-120.0	1.29	1217.32	0.10	98.64
120.0-125.0	1.32	1218.64	0.11	98.75
125.0-130.0	1.44	1220.08	0.12	98.87
130.0-135.0	1.59	1221.67	0.13	99.00
135.0-140.0	1.76	1223.43	0.14	99.14
140.0-145.0	1.89	1225.32	0.15	99.29
145.0-150.0	1.91	1227.23	0.15	99.45
150.0-155.0	1.85	1229.07	0.15	99.60
155.0-160.0	1.69	1230.77	0.14	99.73
160.0-165.0	1.41	1232.18	0.11	99.85
165.0-170.0	1.04	1233.21	0.08	99.93
170.0-175.0	0.63	1233.85	0.05	99.98
175.0-180.0	0.22	1234.06	0.02	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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

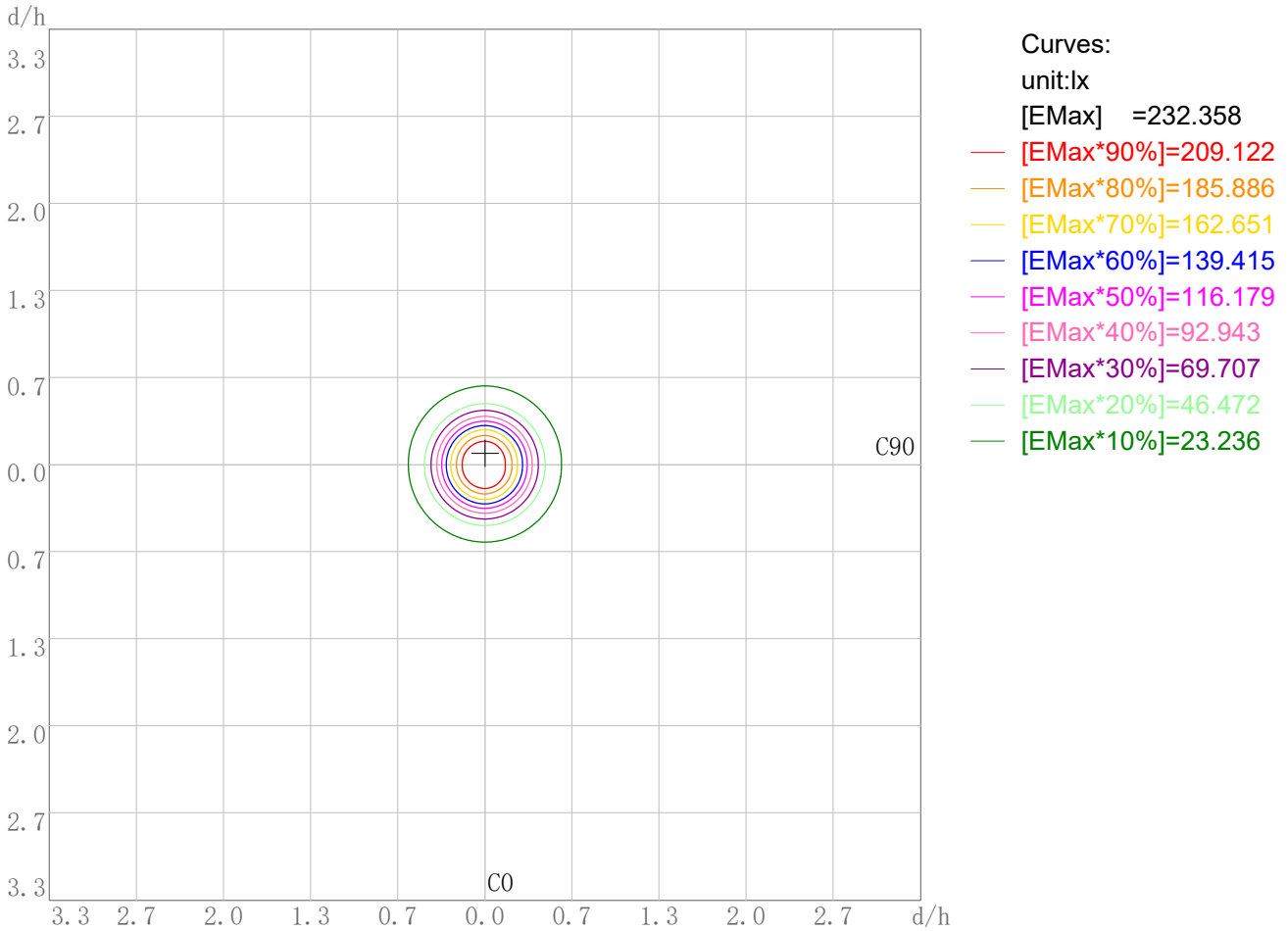


Maximum Light Intensity(cd): 2115.28
 Maximum Cand.@Angle: H=-5.0°,V=0.0°

Plane ISO-Illuminance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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

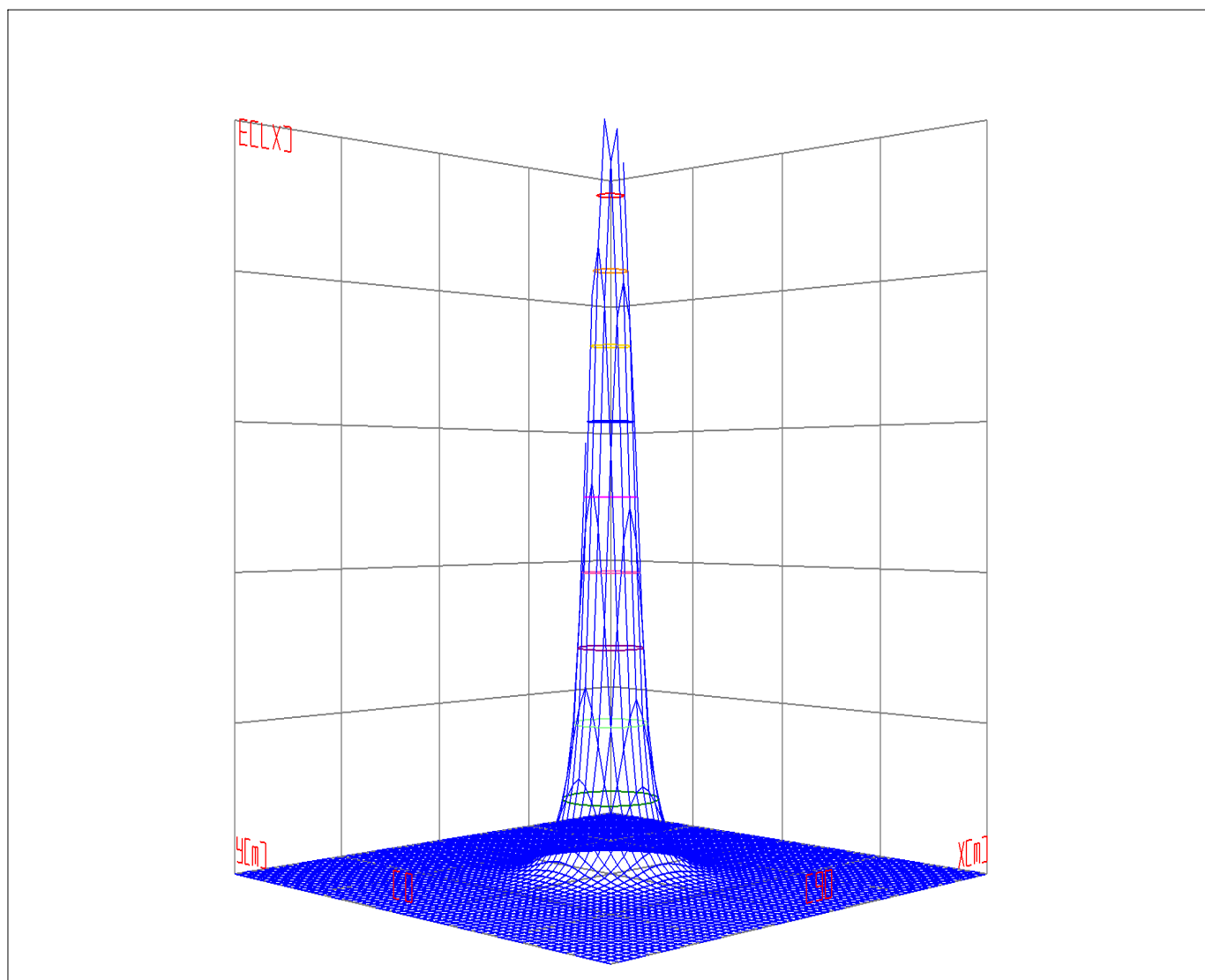


Working Plane Luminaire Mounting Height(m): 3.00
 Working Plane Maximum Illuminance(lx): 232.36
 Working Plane Maximum Illuminance Position(d/h):H0.0 V-0.1

3D Plane ISO Illuminance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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

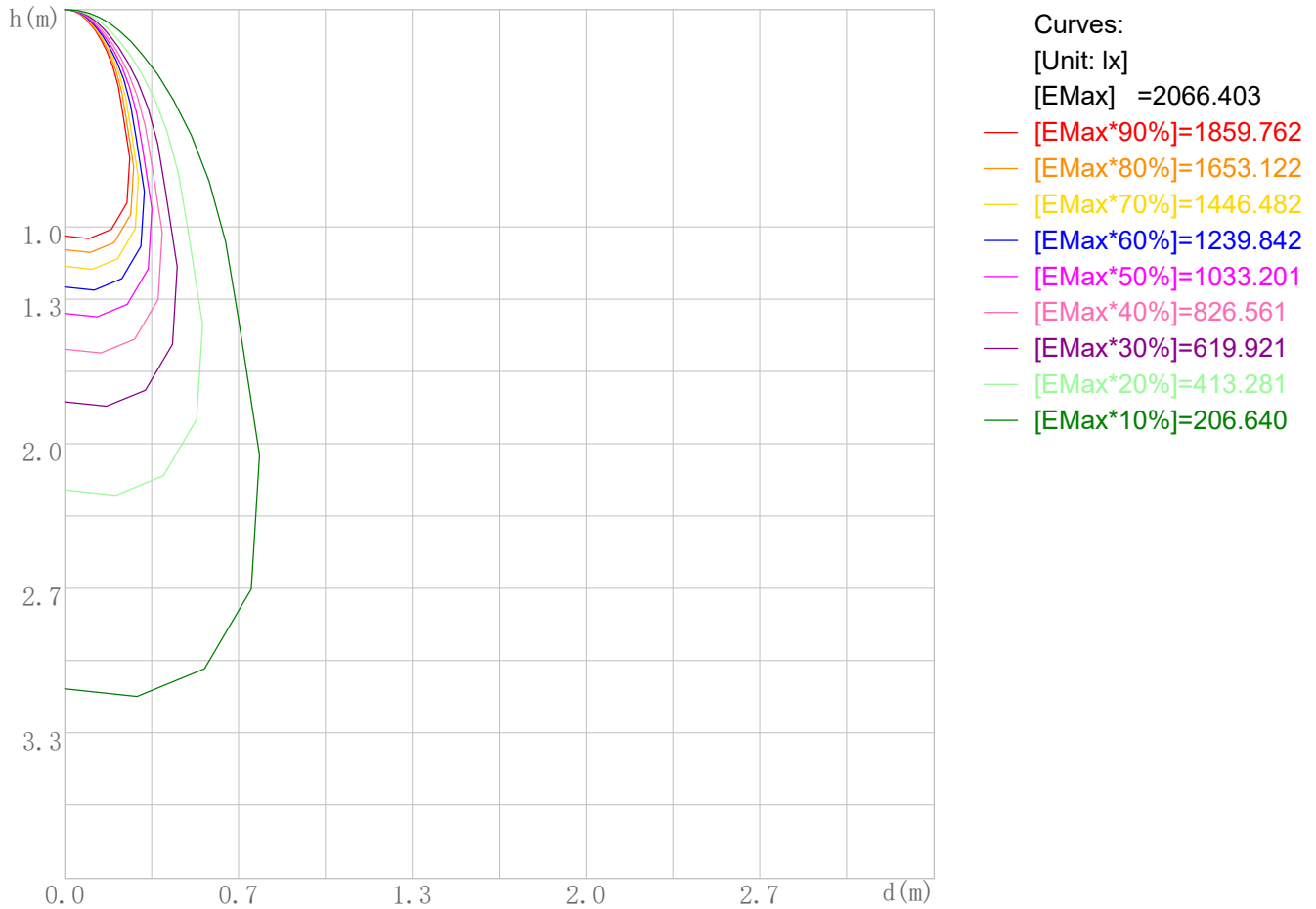


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
 View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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

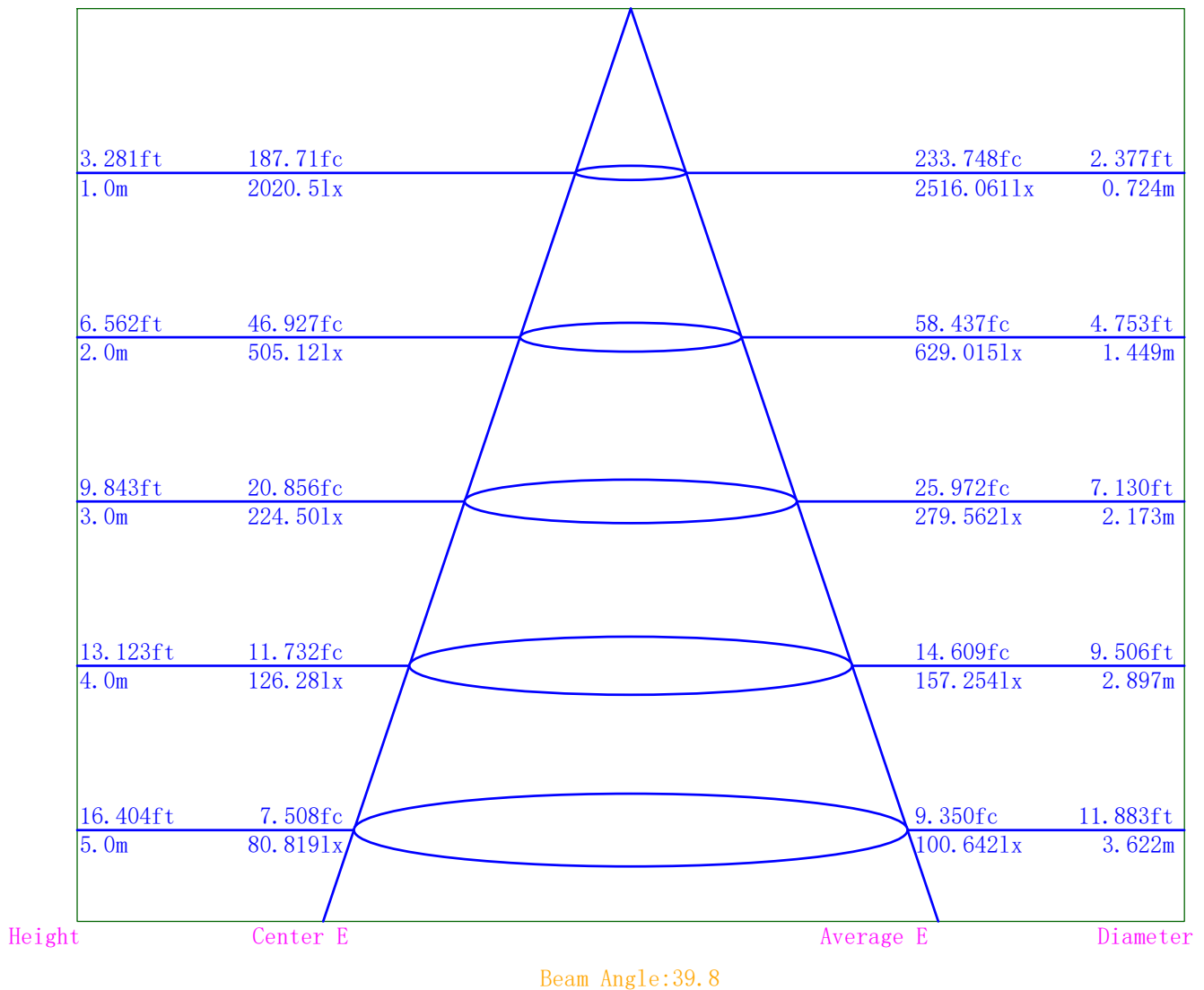


Space Plane Maximum Illuminance and @Angle:2066.40lx,5.0deg
 Plane Maximum Lighting Intensity and @Angle:2090.173cd,0deg

Illuminance-Distance Diagram

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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 36D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture:	Test Machine:GON-2000	Test Date: 2022/09/12

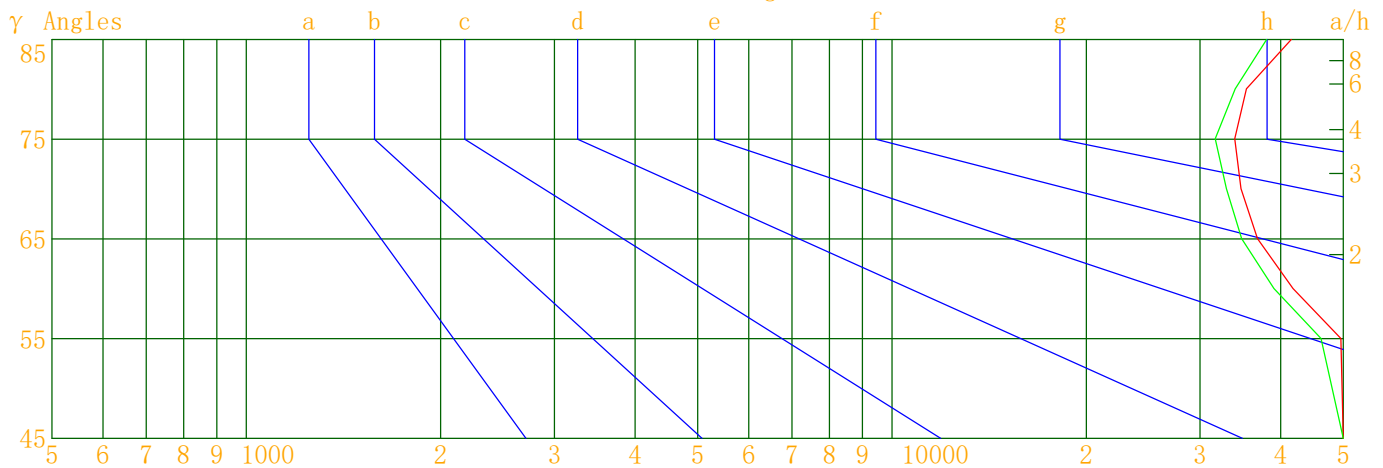
Glare Grade Table

GI	Quality	Using Illuminance							
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	85261	64148	49563	41788	36815	34719	33962	35392	41527
C90	76657	58055	46196	39046	34803	32955	31666	34004	38039

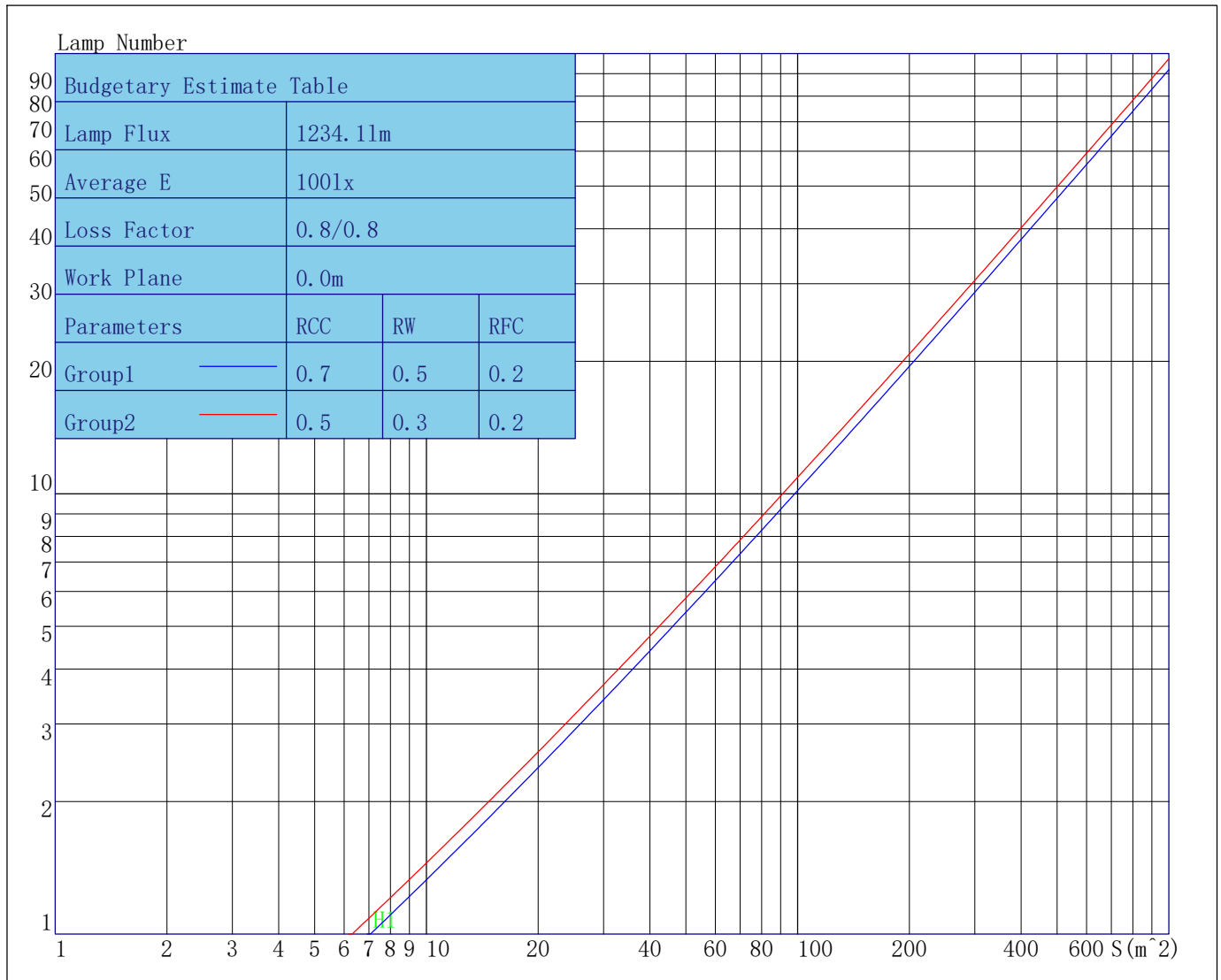
Luminance Limiting Curve



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 36D	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 36D	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	113	110	107	105	110	107	105	103	103	101	99	99	97	96	95	94	93	91
2	107	102	98	94	104	100	96	93	96	93	91	93	91	88	90	88	86	84
3	102	95	90	86	99	94	89	85	91	87	84	88	85	82	85	83	80	79
4	97	89	84	79	95	88	83	79	85	81	78	83	79	76	81	78	75	74
5	92	84	78	74	90	83	77	73	81	76	73	79	75	72	77	74	71	69
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66
7	84	75	69	65	83	74	69	65	73	68	64	71	67	64	70	66	63	62
8	80	71	66	62	79	71	65	61	69	64	61	68	64	61	67	63	60	59
9	77	68	62	58	76	67	62	58	66	61	58	65	61	58	64	60	57	56
10	74	65	59	56	73	64	59	55	63	59	55	62	58	55	62	58	55	53

IES Indoor Report

Photometric Filename:MD18-18-DW-03 1800-3000K RA90 36D.IES

Unified Glare Rating Table

Lum. Name: MD18-18-DW-03 1800-3000K RA90 36D	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	23.0	24.1	23.4	24.4	24.8	22.6	23.6	23.0	24.0	24.4
Y=3H	23.6	24.5	24.0	24.9	25.3	23.2	24.1	23.6	24.5	24.9
Y=4H	23.9	24.7	24.3	25.1	25.6	23.5	24.4	23.9	24.7	25.2
Y=6H	24.2	25.0	24.6	25.4	25.8	23.8	24.6	24.2	25.0	25.5
Y=8H	24.3	25.1	24.8	25.5	26.0	23.9	24.7	24.4	25.1	25.6
Y=12H	24.4	25.2	24.9	25.6	26.1	24.0	24.8	24.5	25.2	25.7
X=4H Y=2H	23.1	24.0	23.6	24.4	24.8	22.7	23.6	23.2	24.0	24.5
Y=3H	23.9	24.6	24.4	25.1	25.5	23.5	24.3	24.0	24.7	25.2
Y=4H	24.3	25.0	24.8	25.4	25.9	24.0	24.6	24.4	25.1	25.6
Y=6H	24.8	25.3	25.3	25.8	26.3	24.4	25.0	24.9	25.5	26.0
Y=8H	25.0	25.5	25.5	26.0	26.5	24.6	25.2	25.2	25.6	26.2
Y=12H	25.2	25.6	25.7	26.2	26.7	24.8	25.3	25.4	25.8	26.3
X=8H Y=4H	24.4	25.0	25.0	25.5	26.0	24.1	24.6	24.6	25.1	25.6
Y=6H	25.1	25.5	25.6	26.0	26.6	24.7	25.1	25.3	25.7	26.3
Y=8H	25.4	25.7	25.9	26.3	26.8	25.0	25.4	25.6	26.0	26.5
Y=12H	25.7	26.0	26.2	26.5	27.2	25.3	25.7	25.9	26.2	26.8
X=12H Y=4H	24.4	24.9	25.0	25.4	25.9	24.1	24.6	24.6	25.1	25.6
Y=6H	25.1	25.5	25.7	26.0	26.6	24.8	25.1	25.3	25.7	26.2
Y=8H	25.5	25.8	26.0	26.3	26.9	25.1	25.5	25.7	26.0	26.6
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	0.7/-0.8					0.7/-0.8				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	2.0					2.0				

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 36D.IES

Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
γ 0.0	2020.48	2020.48	2020.48	2020.48
γ 5.0	2090.17	2085.84	2115.28	2046.06
γ 10.0	1992.42	1905.26	1999.10	1965.41
γ 15.0	1632.62	1515.04	1616.73	1595.32
γ 20.0	1047.61	987.42	1046.79	1035.61
γ 25.0	567.62	529.02	553.31	546.52
γ 30.0	362.51	332.89	343.67	335.31
γ 35.0	234.97	213.15	217.31	212.42
γ 40.0	153.71	138.40	139.16	138.05
γ 45.0	101.35	91.12	90.39	91.28
γ 50.0	69.31	62.73	61.76	63.70
γ 55.0	47.79	44.54	44.10	44.58
γ 60.0	35.12	32.82	32.73	32.88
γ 65.0	26.15	24.73	24.77	25.15
γ 70.0	19.96	18.95	18.94	19.19
γ 75.0	14.78	13.78	14.04	14.15
γ 80.0	10.33	9.93	10.13	10.41
γ 85.0	6.08	5.57	6.00	6.17
γ 90.0	4.32	4.00	3.66	3.74
γ 95.0	3.28	3.19	3.11	3.38
γ 100.0	3.06	3.06	3.25	2.87
γ 105.0	2.67	2.82	2.79	2.89
γ 110.0	2.51	2.90	2.69	2.94
γ 115.0	2.46	2.45	2.86	2.65
γ 120.0	2.56	2.46	2.89	2.87
γ 125.0	2.72	2.94	3.49	2.91
γ 130.0	3.54	3.34	3.82	3.68
γ 135.0	4.05	4.02	4.60	4.36
γ 140.0	5.04	5.27	5.54	5.12
γ 145.0	6.06	5.72	6.35	6.10
γ 150.0	6.76	6.76	7.27	6.85
γ 155.0	7.65	7.36	8.10	7.71
γ 160.0	8.28	8.23	8.72	8.60
γ 165.0	8.73	8.29	8.87	8.62
γ 170.0	9.23	8.80	8.81	8.62
γ 175.0	8.89	8.75	9.00	8.77
γ 180.0	9.22	9.22	9.22	9.22
