

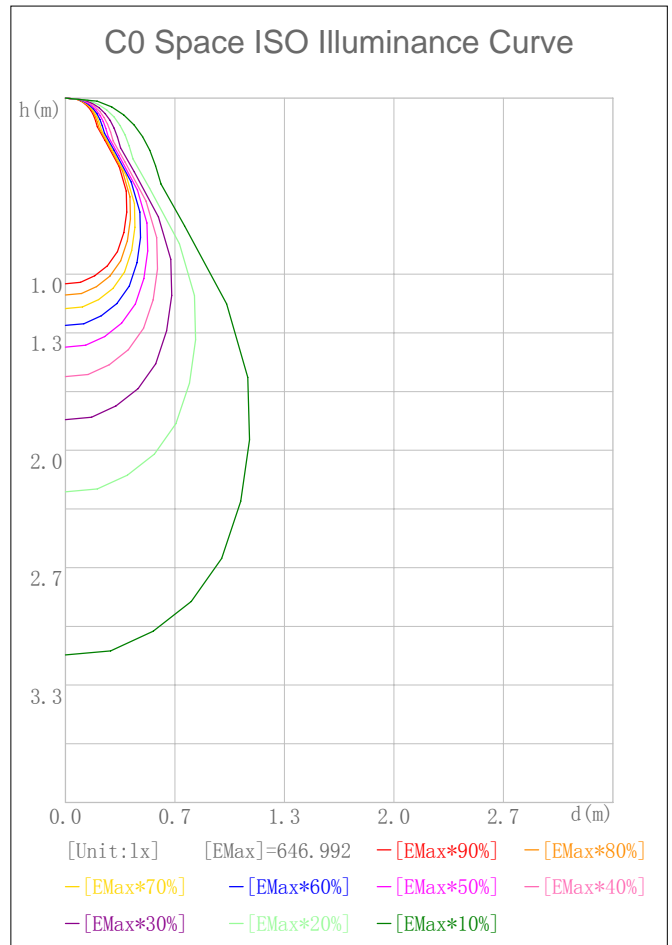
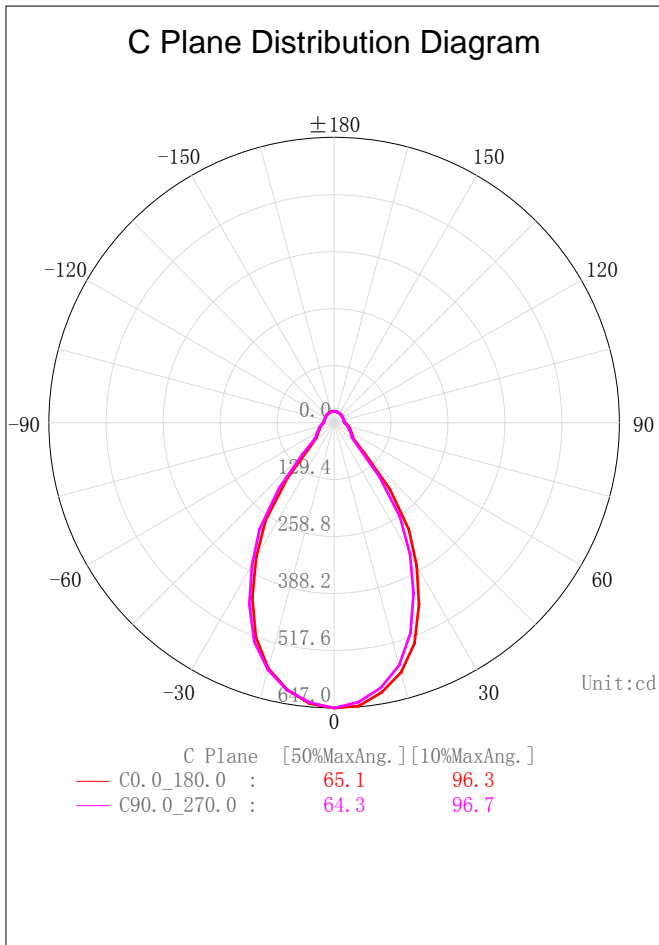
Indoor Luminaire Photometric Data

Description Information

Luminary Name: DC9W-2700K, Ra90, 60°		Lum. Catalog: 9001m	Test ID: 01
Lamp Name: CL2-9MR		Lamp Catalog: lamps and lanterns	Test Date: 2017/06/02
LED Chip: Citizen CLU028-1202C4-27XH5M3		Shld. Ang(°):	Test Machine:GON-2000
Test Lab:		Frequency (Hz):	Lamp CCT(K): 2700k Ra: 90
Lum. Size (W*L*H): 0.000m*0.000m*0.000m		Lum. Area (m2): 0.000	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

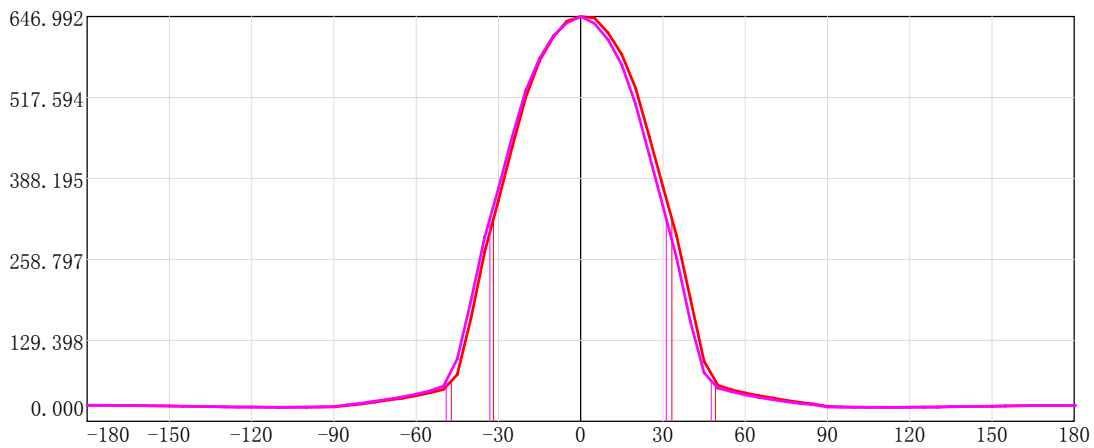
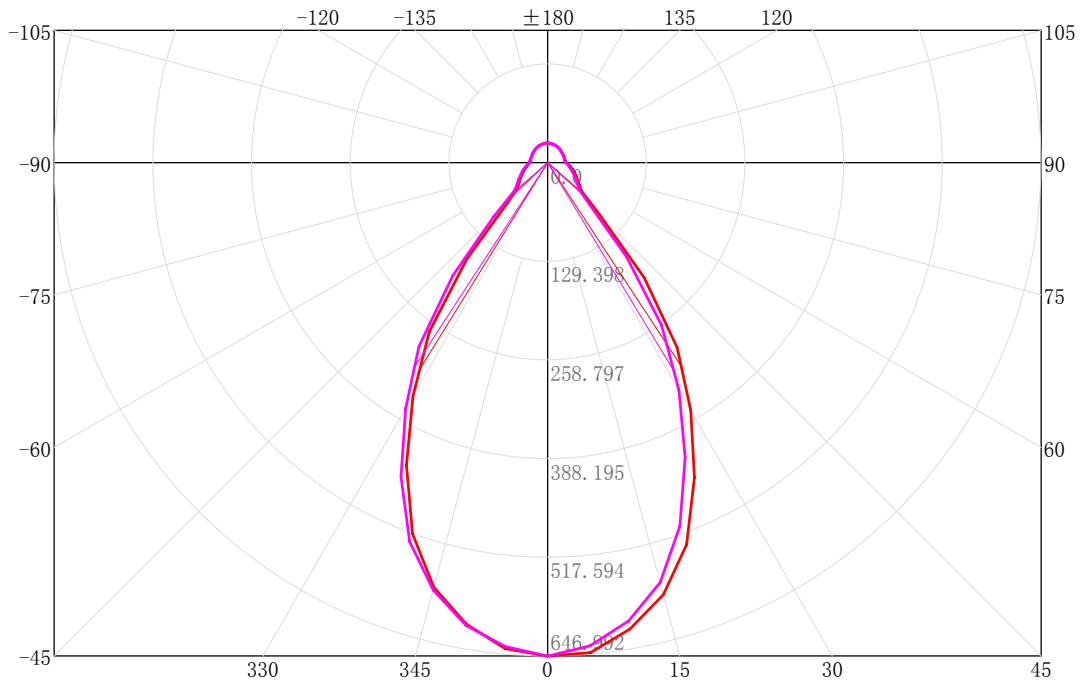
Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 805.000	Luminary Flux(lm): 965.974	Field Angle(10%Imax): 96.3(°)
Rated Power(W): 9W	Luminary Efficiency: 120.00%	Down Lumens&Percent: 819.012lm 84.79%
Rated Voltage(V): 36V 250mA	Luminary EER(lm/W): 33.858	Up Lumens&Percent: 146.961lm 15.21%
Tested Power(W): 28.530	Max. Candela(cd): 646.992	S/MH: C0_a180=0.953 C90_270=0.943
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=0.0	CIE Type: General Diffuse
Tested Electrics (V, A, pf): 220.1, 0.174, 0.744	Beam Angle (50%Imax): 65.1(°)	ErP φ use(90°): 637.974lm
Lamp Size (W*L*H): 0.000m*0.000m*0.000m	Left=-31.8°, Right=33.3°	IRF(%): 195.123



2D Plane Light Intensity Distribution Curve

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

C Plane Distribution Diagram



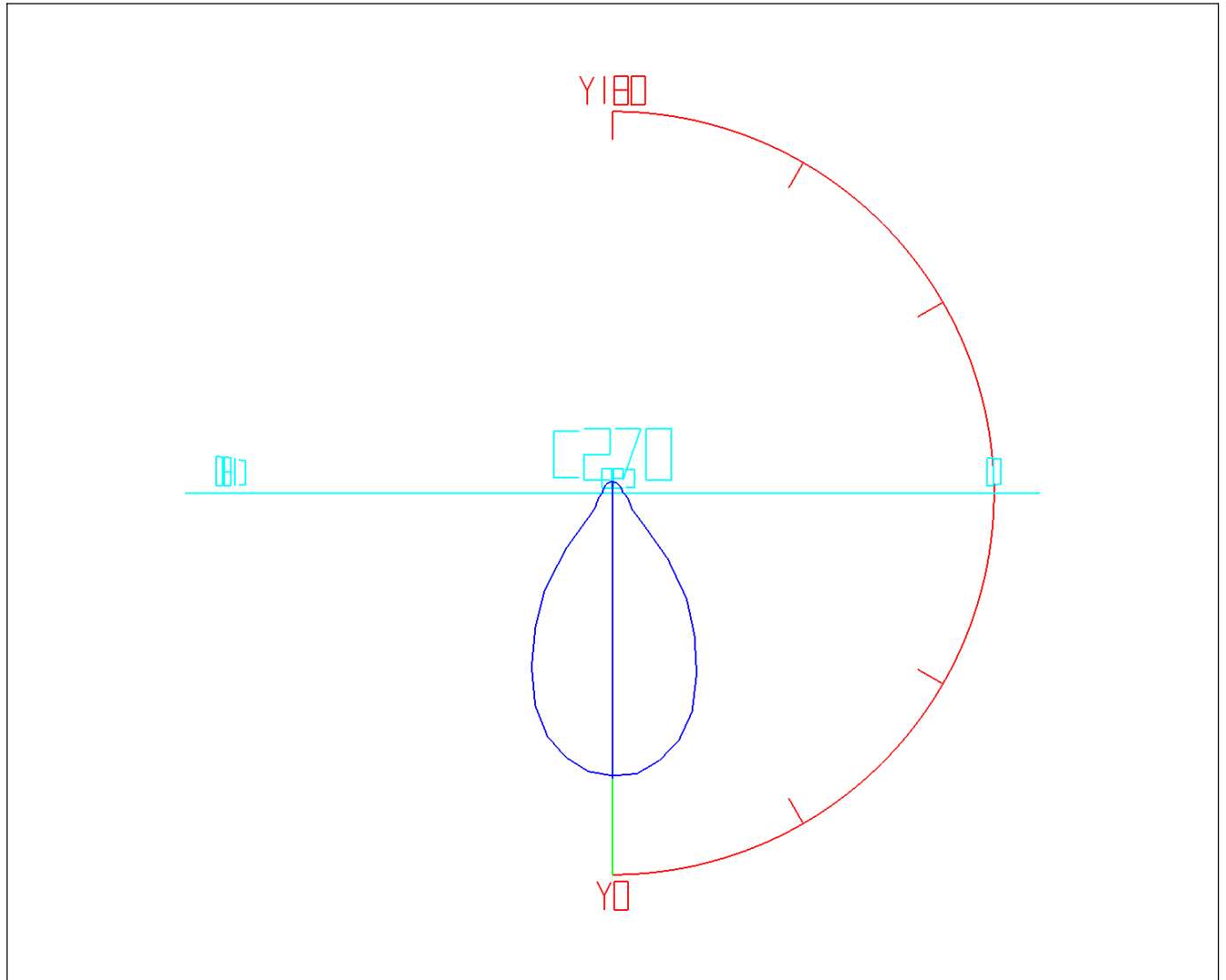
C Plane [50%MaxAng.] [10%MaxAng.] Unit:cd

— C0.0_180.0 :	65.1	96.3
— C90.0_270.0 :	64.3	96.7

3D Light Intensity Distribution Modal

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

3D Light Intensity Distribution Modal



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

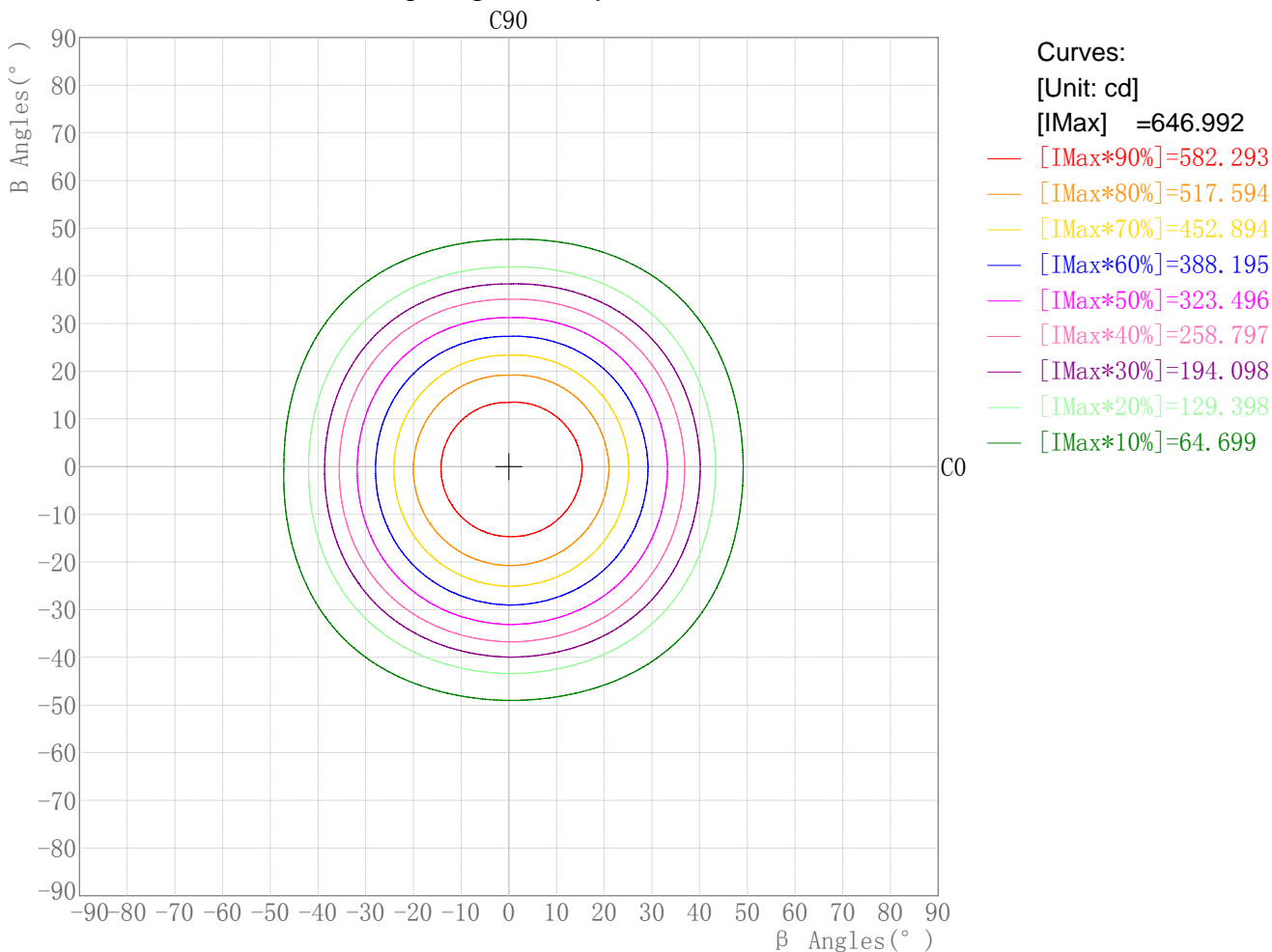
Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	15.38	15.38	1.91	1.91
5.0-10.0	44.88	60.26	5.58	7.49
10.0-15.0	70.80	131.06	8.80	16.28
15.0-20.0	90.64	221.70	11.26	27.54
20.0-25.0	101.24	322.94	12.58	40.12
25.0-30.0	101.84	424.79	12.65	52.77
30.0-35.0	94.45	519.23	11.73	64.50
35.0-40.0	76.59	595.82	9.51	74.01
40.0-45.0	49.23	645.05	6.12	80.13
45.0-50.0	28.67	673.72	3.56	83.69
50.0-55.0	22.38	696.11	2.78	86.47
55.0-60.0	21.15	717.26	2.63	89.10
60.0-65.0	20.00	737.26	2.48	91.58
65.0-70.0	18.87	756.13	2.34	93.93
70.0-75.0	17.69	773.82	2.20	96.13
75.0-80.0	16.35	790.17	2.03	98.16
80.0-85.0	15.10	805.27	1.88	100.03
85.0-90.0	13.75	819.01	1.71	101.74
90.0-95.0	12.79	831.80	1.59	103.33
95.0-100.0	12.48	844.28	1.55	104.88
100.0-105.0	12.18	856.47	1.51	106.39
105.0-110.0	11.85	868.31	1.47	107.87
110.0-115.0	11.47	879.79	1.42	109.29
115.0-120.0	11.05	890.84	1.37	110.66
120.0-125.0	10.58	901.42	1.31	111.98
125.0-130.0	10.05	911.47	1.25	113.23
130.0-135.0	9.45	920.92	1.17	114.40
135.0-140.0	8.79	929.71	1.09	115.49
140.0-145.0	8.02	937.74	1.00	116.49
145.0-150.0	7.17	944.90	0.89	117.38
150.0-155.0	6.23	951.13	0.77	118.15
155.0-160.0	5.22	956.36	0.65	118.80
160.0-165.0	4.15	960.51	0.52	119.32
165.0-170.0	3.02	963.52	0.37	119.69
170.0-175.0	1.83	965.36	0.23	119.92
175.0-180.0	0.62	965.97	0.08	120.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

ISO Lighting Intensity Curve

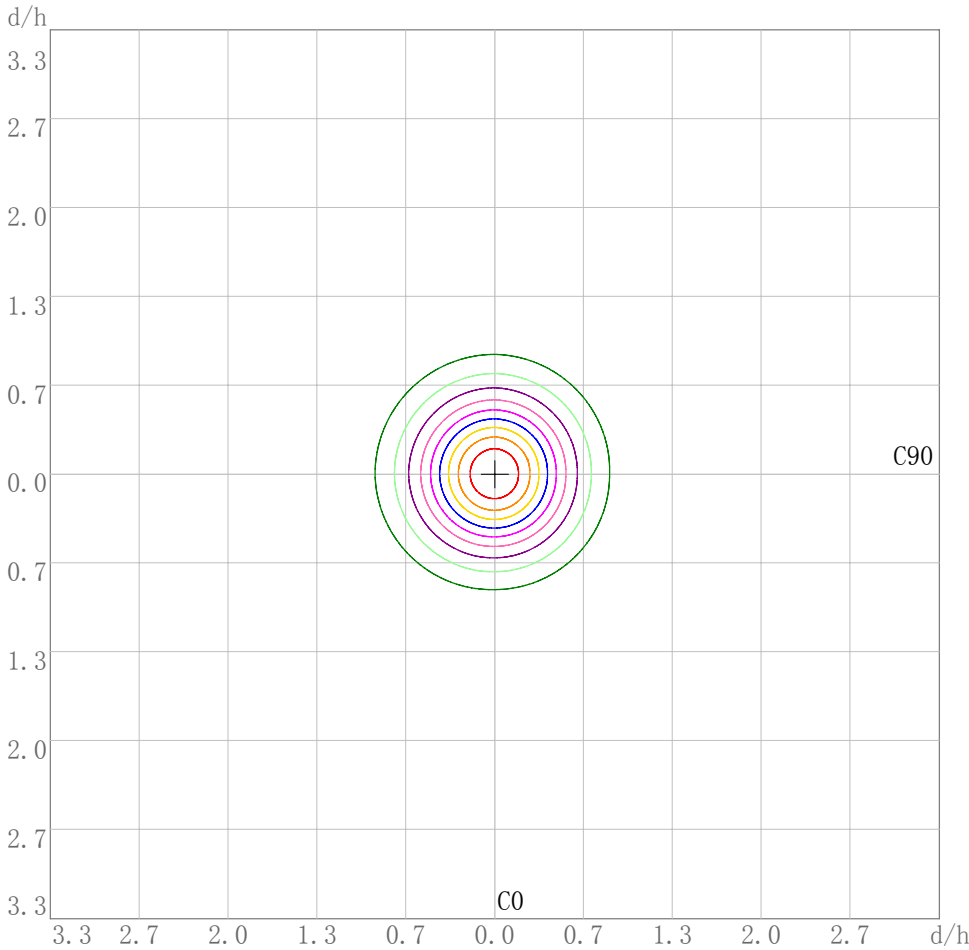


Maximum Light Intensity(cd): 646.99
 Maximum Cand.@Angle: H=0.0°,V=0.0°

Plane ISO-Illuminance Diagram

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

Plane ISO-Illuminance Curve

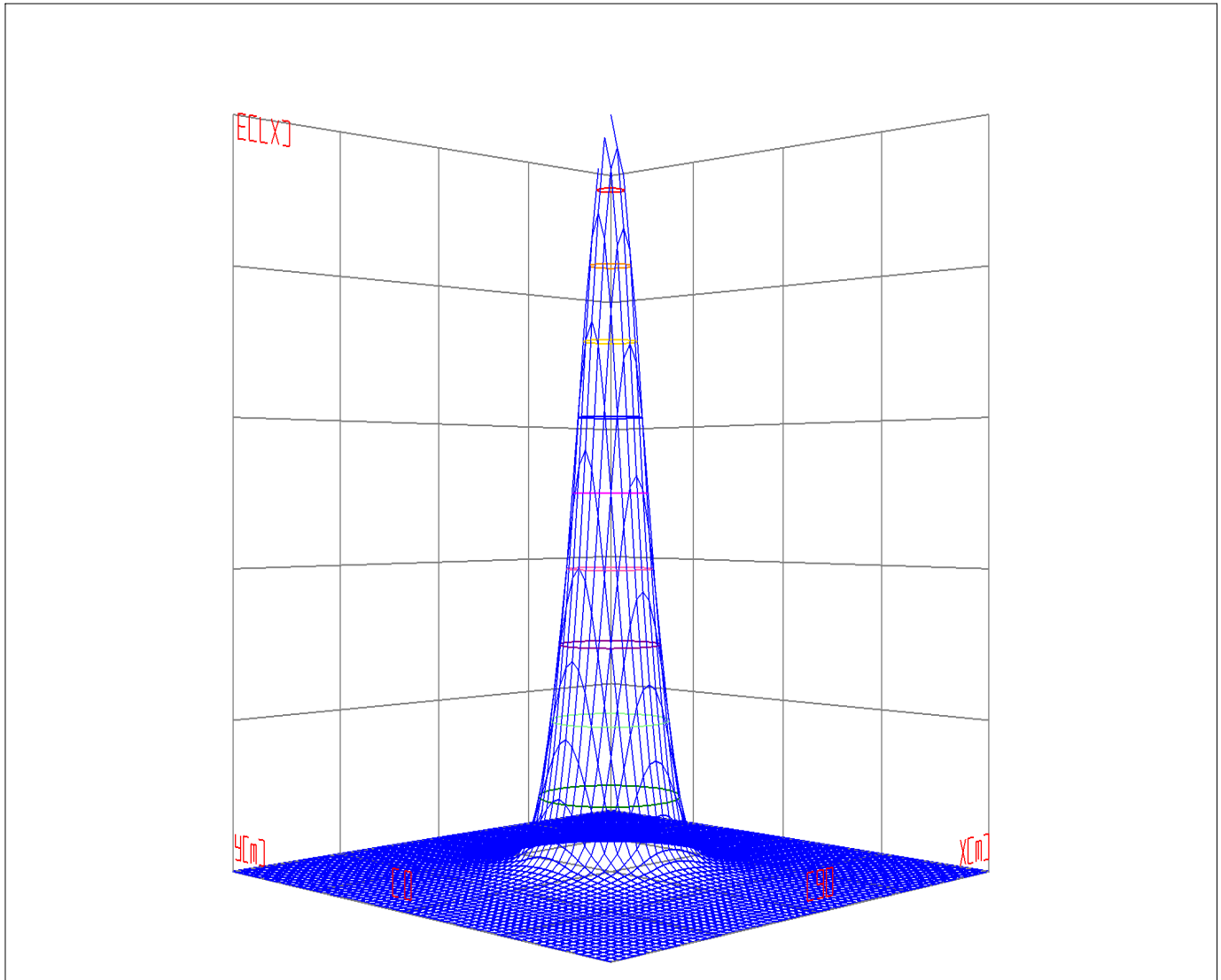


Working Plane Luminaire Mounting Height(m): 3.00
 Working Plane Maximum Illuminance(lx): 71.89
 Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

3D Plane Illuminance Modal

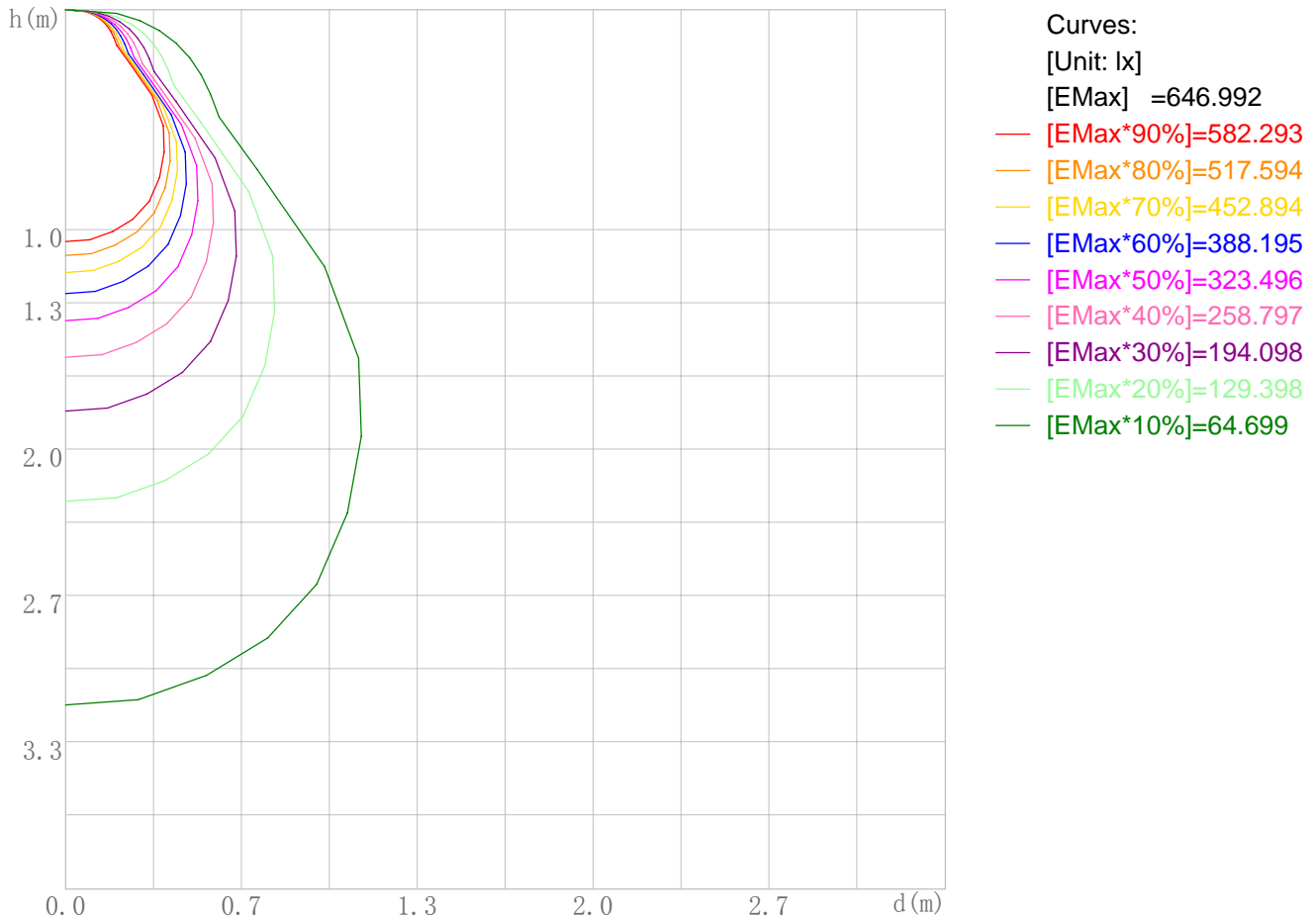


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
 View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

Space ISO Illuminance Curve

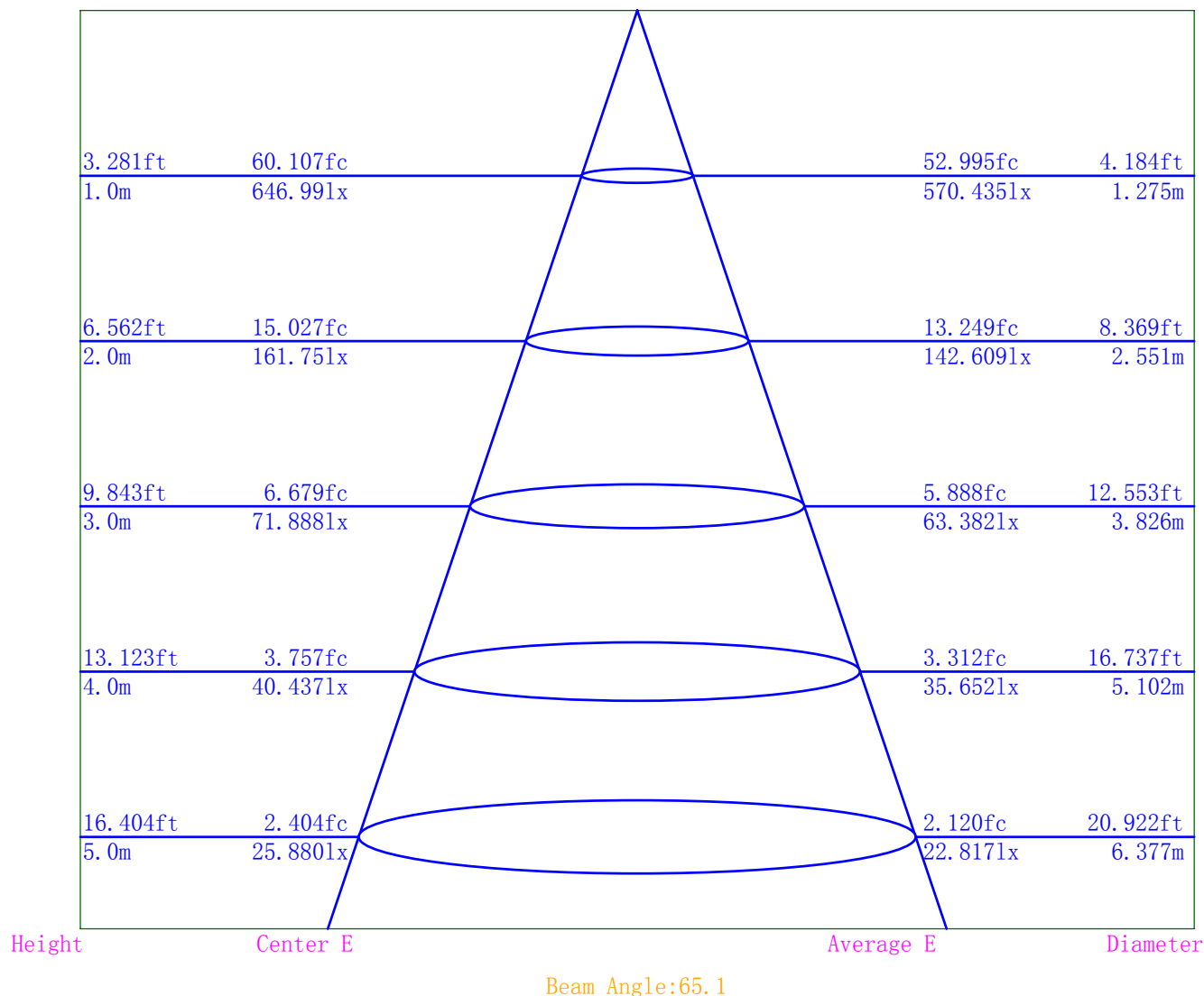


Space Plane Maximum Illuminance and @Angle:646.99lx,0.0deg
 Plane Maximum Lighting Intensity and @Angle:646.992cd,0deg

Illuminance-Distance Diagram

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

Illuminance-Distance Curve



Indoor Luminance Limiting Curves

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

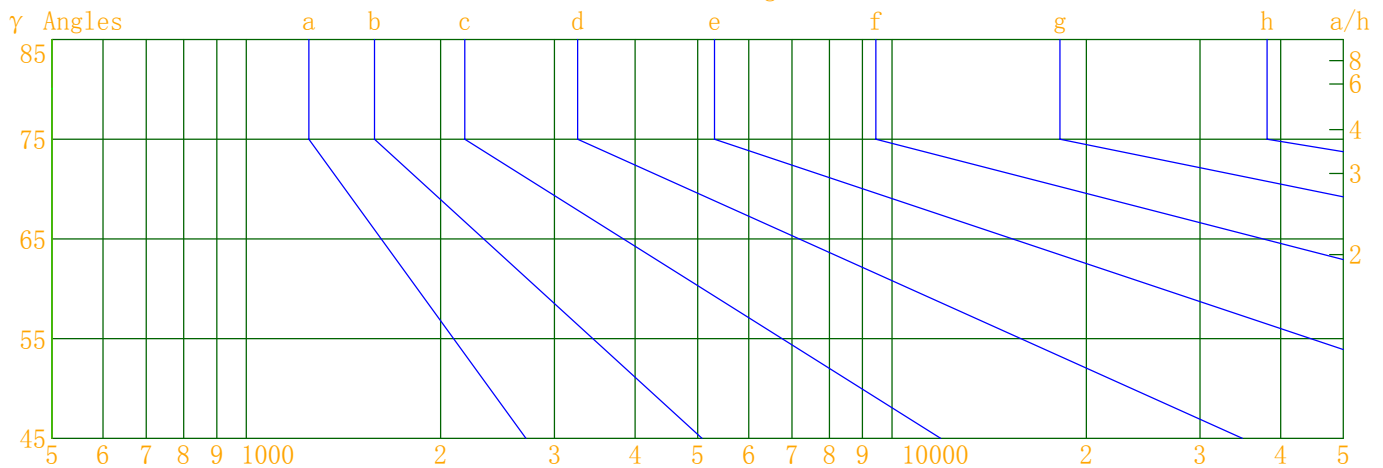
Glare Grade Table

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	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

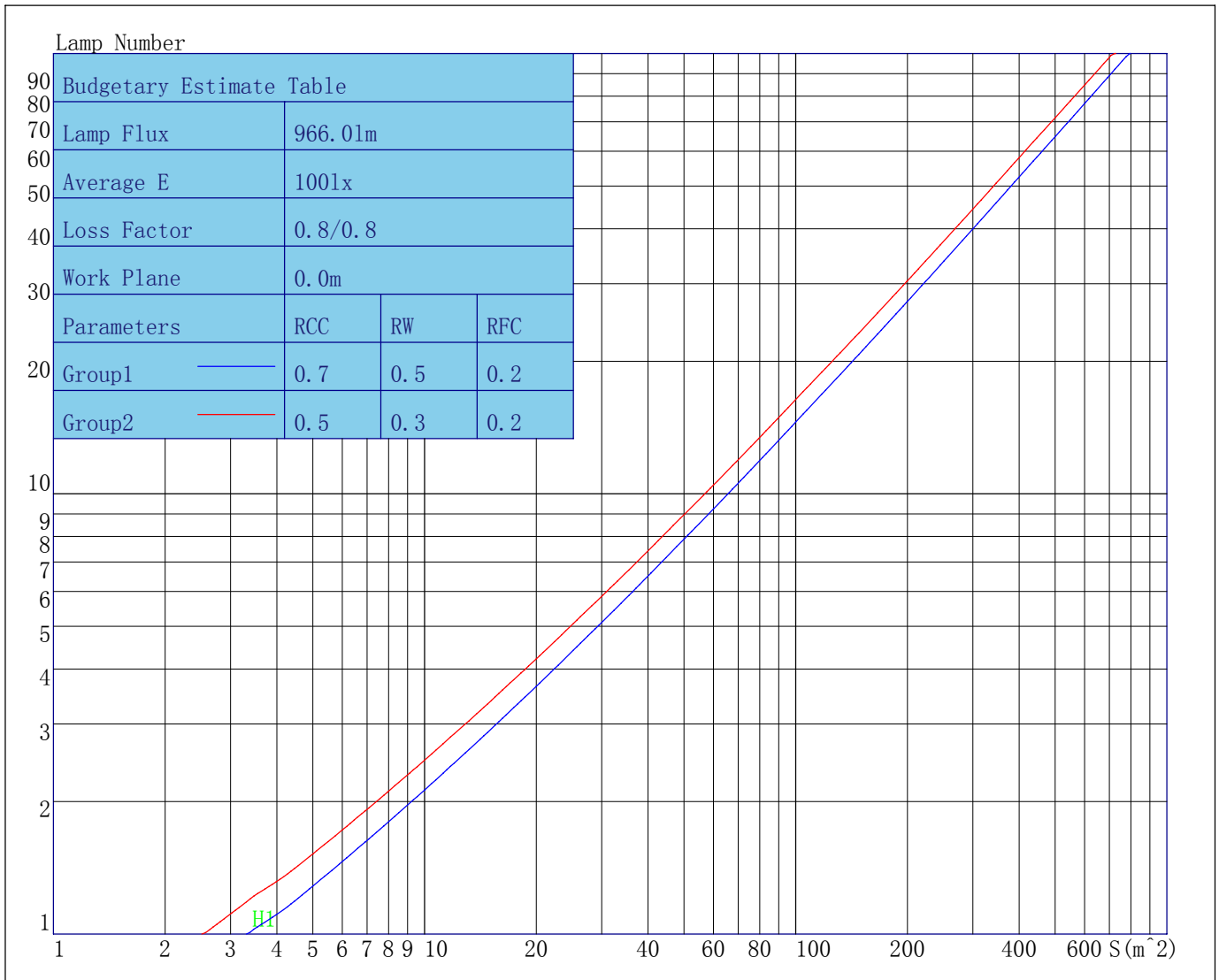
Luminance Limiting Curve



Luminous Size: Length(m)=0.000 Width(m)=0.000 Height(m)=0.000 Area(m²)=0.000000
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

Indoor Budgetary Estimate Table

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02



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: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

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	139	139	139	139	133	133	133	133	123	123	123	114	114	114	106	106	106	102
1	128	123	119	115	123	119	115	111	110	107	105	103	100	98	96	94	92	89
2	119	111	104	99	114	107	101	96	100	95	91	94	90	87	88	85	82	79
3	111	101	93	86	107	98	90	85	92	86	81	86	81	77	81	77	74	71
4	104	92	83	77	100	89	81	75	84	78	73	79	74	70	75	71	67	64
5	97	84	76	69	93	82	74	68	78	71	66	74	68	63	70	65	61	59
6	91	78	69	63	88	76	68	62	72	65	60	68	63	58	65	60	56	54
7	86	72	63	57	83	70	62	56	67	60	55	64	58	53	61	56	52	50
8	81	67	58	53	78	65	58	52	63	56	51	60	54	49	57	52	48	46
9	76	63	54	49	74	61	53	48	59	52	47	56	50	46	54	49	45	43
10	72	59	50	45	70	57	50	45	55	48	44	53	47	43	51	46	42	40

Unified Glare Rating Table

Lum. Name: DC9W-2700K, Ra90, 60°	Lum. Catalog: 900lm	Test ID: 01
Lamp Name: CL2-9MR	Lamp Catalog: lamps and lanterns	Test Lab:
LED Chip: Citizen CLU028-1202C4-27XH5M3	Test Machine:GON-2000	Test Date: 2017/06/02

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	-2.8	-1.6	-2.2	-1.0	-0.3	-2.8	-1.6	-2.2	-1.0	-0.3
Y=3H	-3.0	-1.9	-2.4	-1.3	-0.6	-3.0	-1.9	-2.4	-1.3	-0.6
Y=4H	-3.1	-2.0	-2.5	-1.4	-0.7	-3.1	-2.0	-2.5	-1.4	-0.7
Y=6H	-3.2	-2.2	-2.6	-1.6	-0.8	-3.2	-2.2	-2.6	-1.6	-0.8
Y=8H	-3.3	-2.3	-2.6	-1.6	-0.9	-3.3	-2.3	-2.6	-1.6	-0.9
Y=12H	-3.3	-2.4	-2.7	-1.7	-1.0	-3.3	-2.4	-2.7	-1.7	-1.0
X=4H Y=2H	-3.1	-2.0	-2.5	-1.4	-0.7	-3.1	-2.0	-2.5	-1.4	-0.7
Y=3H	-3.3	-2.4	-2.7	-1.7	-1.0	-3.3	-2.4	-2.7	-1.7	-1.0
Y=4H	-3.4	-2.5	-2.8	-1.9	-1.1	-3.4	-2.5	-2.8	-1.9	-1.1
Y=6H	-3.5	-2.7	-2.9	-2.0	-1.3	-3.5	-2.7	-2.9	-2.0	-1.3
Y=8H	-3.6	-2.8	-2.9	-2.1	-1.4	-3.6	-2.8	-2.9	-2.1	-1.4
Y=12H	-3.7	-2.9	-3.0	-2.2	-1.4	-3.7	-2.9	-3.0	-2.2	-1.4
X=8H Y=4H	-3.6	-2.8	-2.9	-2.1	-1.4	-3.6	-2.8	-2.9	-2.1	-1.4
Y=6H	-3.7	-3.0	-3.0	-2.3	-1.4	-3.7	-3.0	-3.0	-2.3	-1.4
Y=8H	-3.8	-3.1	-3.1	-2.4	-1.6	-3.8	-3.1	-3.1	-2.4	-1.6
Y=12H	-3.9	-3.2	-3.2	-2.5	-1.7	-3.9	-3.2	-3.2	-2.5	-1.7
X=12H Y=4H	-3.7	-2.9	-3.0	-2.2	-1.4	-3.7	-2.9	-3.0	-2.2	-1.4
Y=6H	-3.8	-3.1	-3.1	-2.4	-1.6	-3.8	-3.1	-3.1	-2.4	-1.6
Y=8H	-3.9	-3.2	-3.2	-2.5	-1.7	-3.9	-3.2	-3.2	-2.5	-1.7
Variations with the objerver position at spacings										
S=1.0H	0.0/0.0					0.0/0.0				
S=1.5H	0.0/0.0					0.0/0.0				
S=2.0H	0.0/0.0					0.0/0.0				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	0.0					0.0				

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	646.99	646.99	646.99	646.99
γ 5.0	644.78	636.02	639.55	636.88
γ 10.0	620.98	610.24	614.31	616.02
γ 15.0	586.40	569.81	576.39	580.03
γ 20.0	532.77	507.11	517.82	528.80
γ 25.0	455.58	426.35	438.11	454.63
γ 30.0	375.15	344.04	352.99	372.20
γ 35.0	296.01	260.61	270.45	294.07
γ 40.0	196.73	160.14	164.94	193.18
γ 45.0	96.21	77.81	74.82	99.80
γ 50.0	58.01	53.18	51.27	56.46
γ 55.0	50.69	47.48	45.88	48.85
γ 60.0	45.51	42.57	41.22	43.81
γ 65.0	41.21	38.35	37.15	39.22
γ 70.0	37.51	34.79	34.15	35.70
γ 75.0	33.81	31.43	30.92	32.41
γ 80.0	30.39	28.53	27.77	29.15
γ 85.0	27.88	26.49	25.50	26.58
γ 90.0	24.13	23.12	23.28	23.84
γ 95.0	23.23	22.80	23.03	23.37
γ 100.0	22.92	22.61	22.79	23.02
γ 105.0	22.78	22.47	22.70	22.87
γ 110.0	22.67	22.46	22.61	22.76
γ 115.0	22.62	22.51	22.71	22.85
γ 120.0	22.70	22.67	22.92	22.90
γ 125.0	22.92	22.84	23.07	23.09
γ 130.0	23.08	23.11	23.39	23.35
γ 135.0	23.42	23.42	23.71	23.67
γ 140.0	23.77	23.75	24.08	24.00
γ 145.0	24.07	24.04	24.42	24.24
γ 150.0	24.36	24.35	24.68	24.55
γ 155.0	24.69	24.64	24.96	24.72
γ 160.0	24.95	24.96	25.26	25.05
γ 165.0	25.21	25.21	25.48	25.30
γ 170.0	25.50	25.41	25.68	25.57
γ 175.0	25.67	25.66	25.84	25.73
γ 180.0	25.80	25.80	25.80	25.80
