

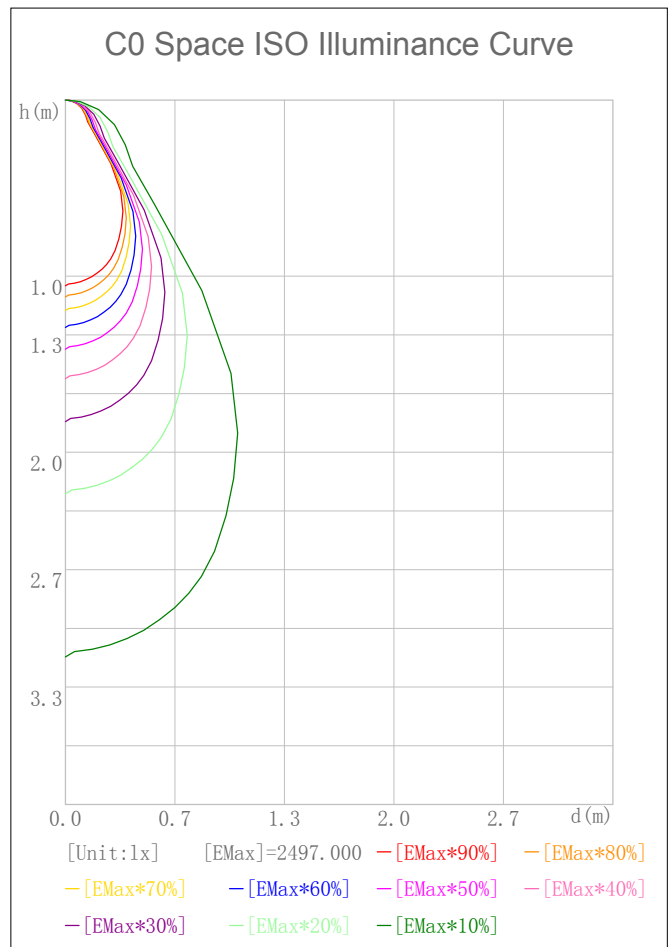
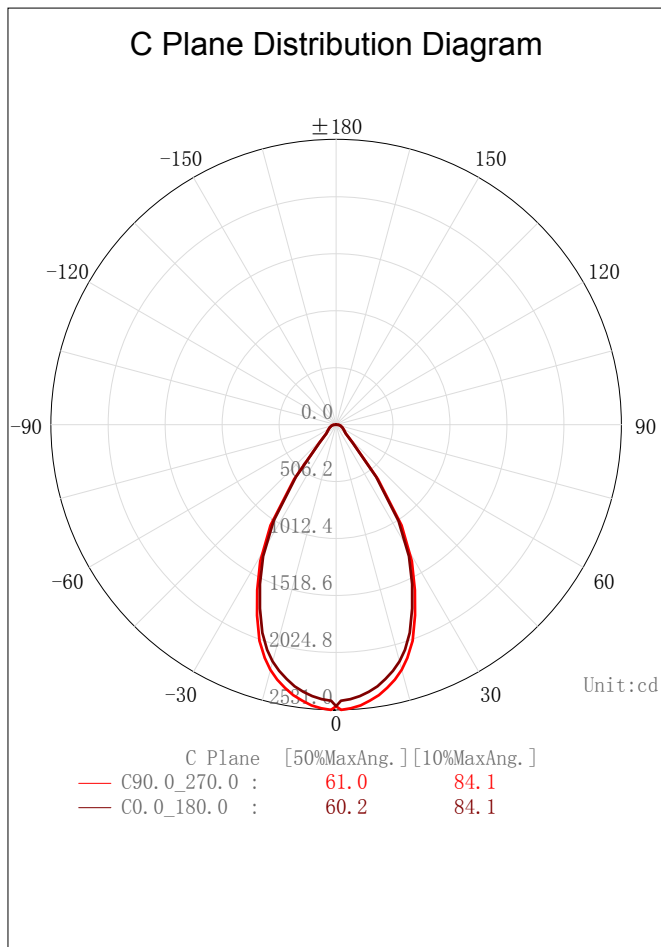
Indoor Luminaire Photometric Data

Description Information

Luminaire Name: LED LUMINAIRE		Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:		Lamp Catalog: LED	Test Date: 4/20/2021
Manufacture: Light and Green		Shld. Ang(°):	Test Machine:GON-2000
Test Lab: LIGHT LABORATORY, INC. (www.lightlaboratory.com)		Frequency (Hz):	Lamp CCT(K): Ra:
Lum. Size (W*L*H): 0.150m*0.810m*0.000m		Lum. Area (m2): 0.122	Lum. W (kg): 0.000
Test System: C, γ	Test Step: C=5.0 γ=1.0	Temp. (°C): 25	Humidity(%):

Character Parameter

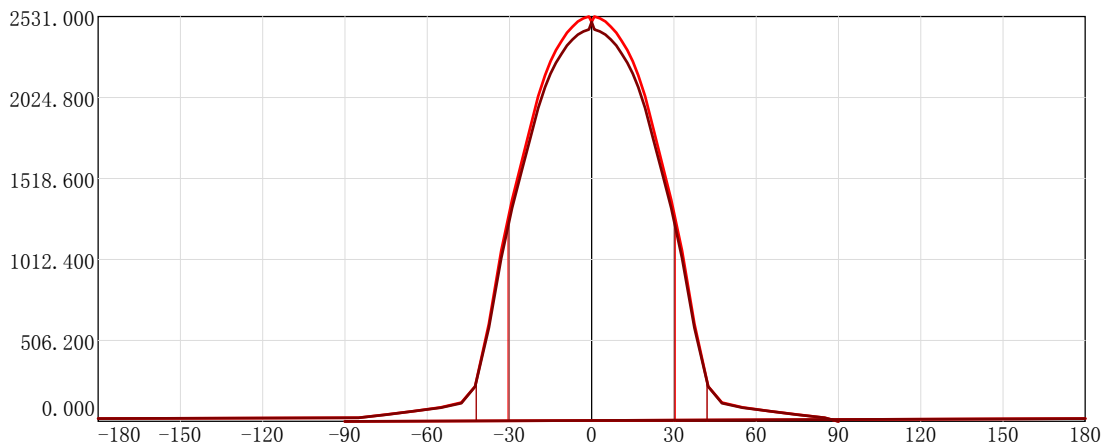
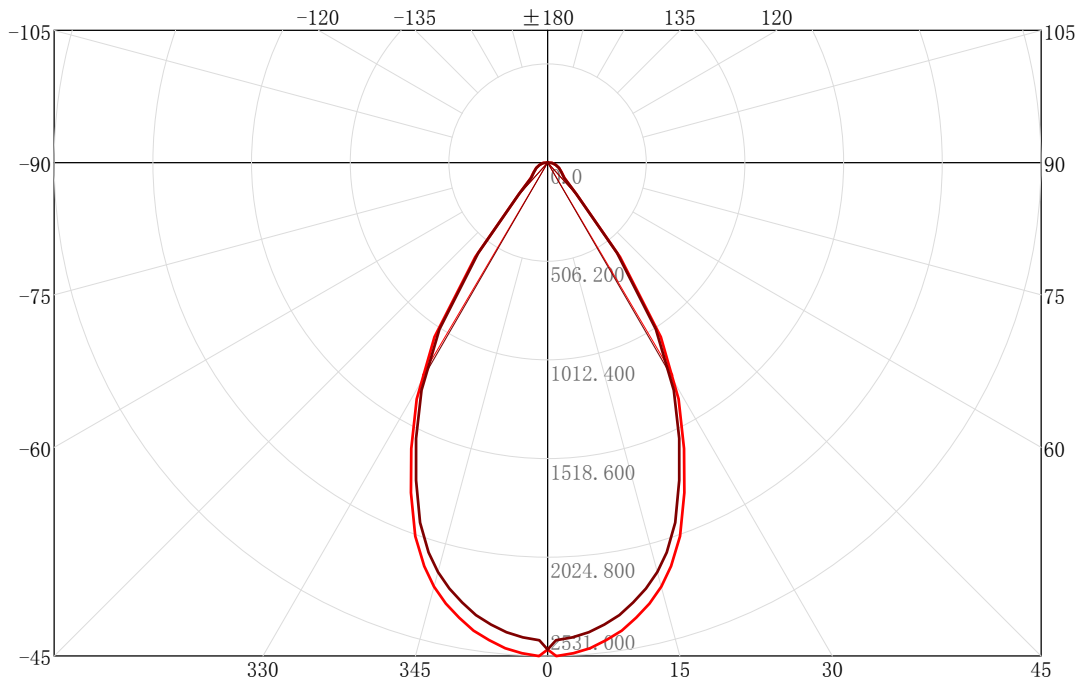
Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 2471.202	Luminaire Flux(lm): 2471.202	Field Angle(10%Imax): 84.1(°)
Rated Power(W):	Luminaire Efficiency: 100.00%	Down Lumens&Percent: 2471.202lm 100.00%
Rated Voltage(V):	Luminaire EER(lm/W): 73.156	Up Lumens&Percent: 0.000lm 0.00%
Tested Power(W): 33.780	Max. Candela(cd): 2531.000	S/MH: C0_a180=0.903 C90_270=0.926
Lamps' Inside: 1	Max Cand@Ang. (°): C=90.0 γ=1.0	CIE Type: Semi-Direct
Tested Electrics (V, A, pf): 240.0, 0.056	Beam Angle (50%Imax): 61.0(°)	ErP φ use(90°): 2209.190lm
Lamp Size (W*L*H): 0.150m*0.810m*0.000m	Left=-30.5°, Right=30.5°	IRF(%): 231.275



2D Plane Light Intensity Distribution Curve

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

C Plane Distribution Diagram



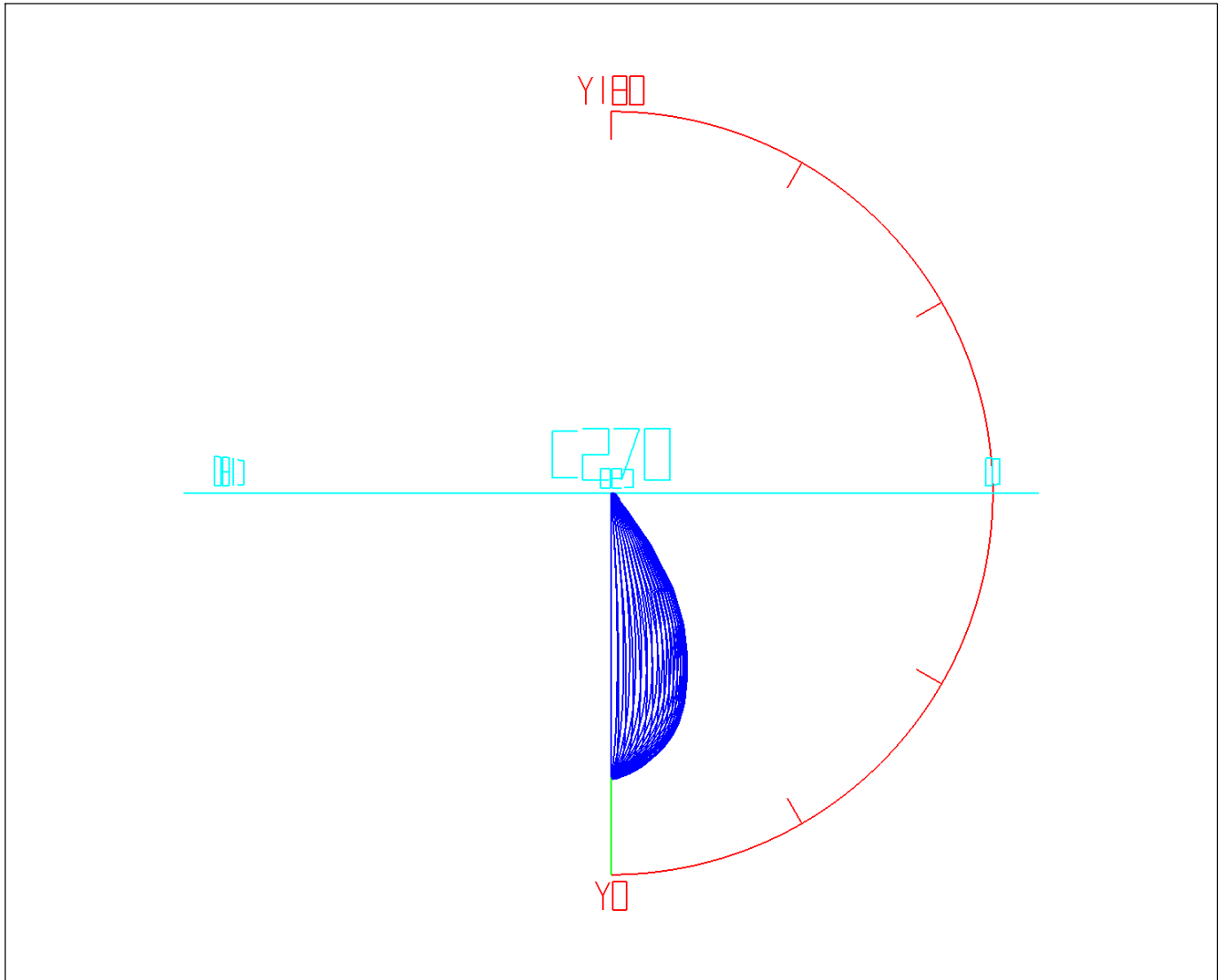
C Plane	[50%MaxAng.]	[10%MaxAng.]
— C90.0_270.0 :	61.0	84.1
— C0.0_180.0 :	60.2	84.1

Unit:cd

3D Light Intensity Distribution Modal

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

3D Light Intensity Distribution Modal



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

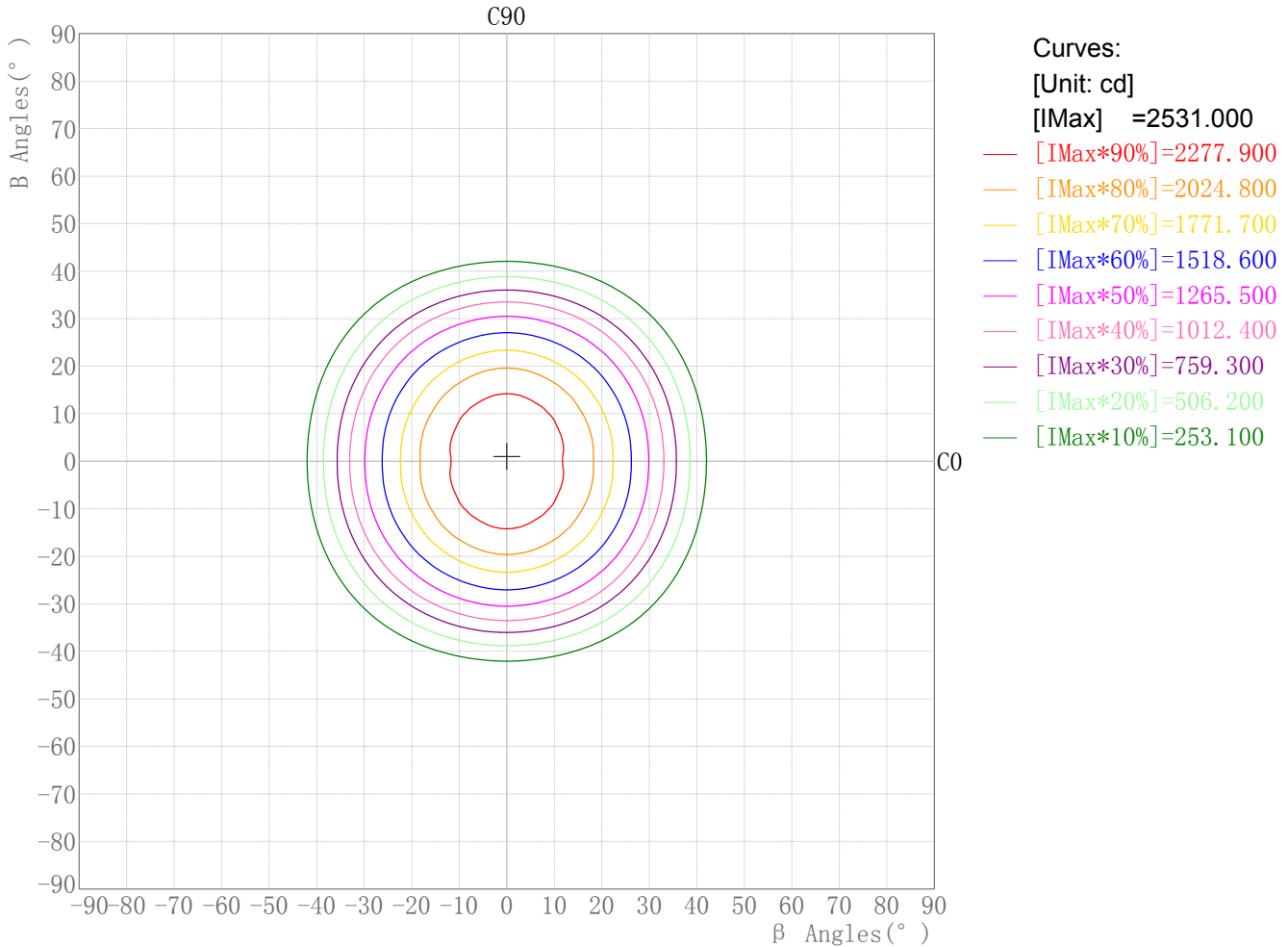
Zonal Flux Tabulation

Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-1.0	2.39	2.39	0.10	0.10
1.0-3.0	19.06	21.45	0.77	0.87
3.0-5.0	37.86	59.30	1.53	2.40
5.0-7.0	56.14	115.44	2.27	4.67
7.0-9.0	73.64	189.08	2.98	7.65
9.0-11.0	90.14	279.22	3.65	11.30
11.0-13.0	105.48	384.70	4.27	15.57
13.0-15.0	119.41	504.11	4.83	20.40
15.0-17.0	131.36	635.47	5.32	25.72
17.0-19.5	177.22	812.69	7.17	32.89
19.5-22.5	223.84	1036.53	9.06	41.94
22.5-25.5	227.16	1263.69	9.19	51.14
25.5-29.0	259.79	1523.48	10.51	61.65
29.0-33.0	271.40	1794.88	10.98	72.63
33.0-37.5	233.74	2028.62	9.46	82.09
37.5-42.5	144.00	2172.62	5.83	87.92
42.5-47.5	64.93	2237.54	2.63	90.54
47.5-55.0	65.24	2302.78	2.64	93.18
55.0-65.0	71.56	2374.34	2.90	96.08
65.0-75.0	55.02	2429.36	2.23	98.31
75.0-85.0	35.55	2464.90	1.44	99.75
85.0-90.0	6.30	2471.20	0.25	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

ISO Lighting Intensity Curve

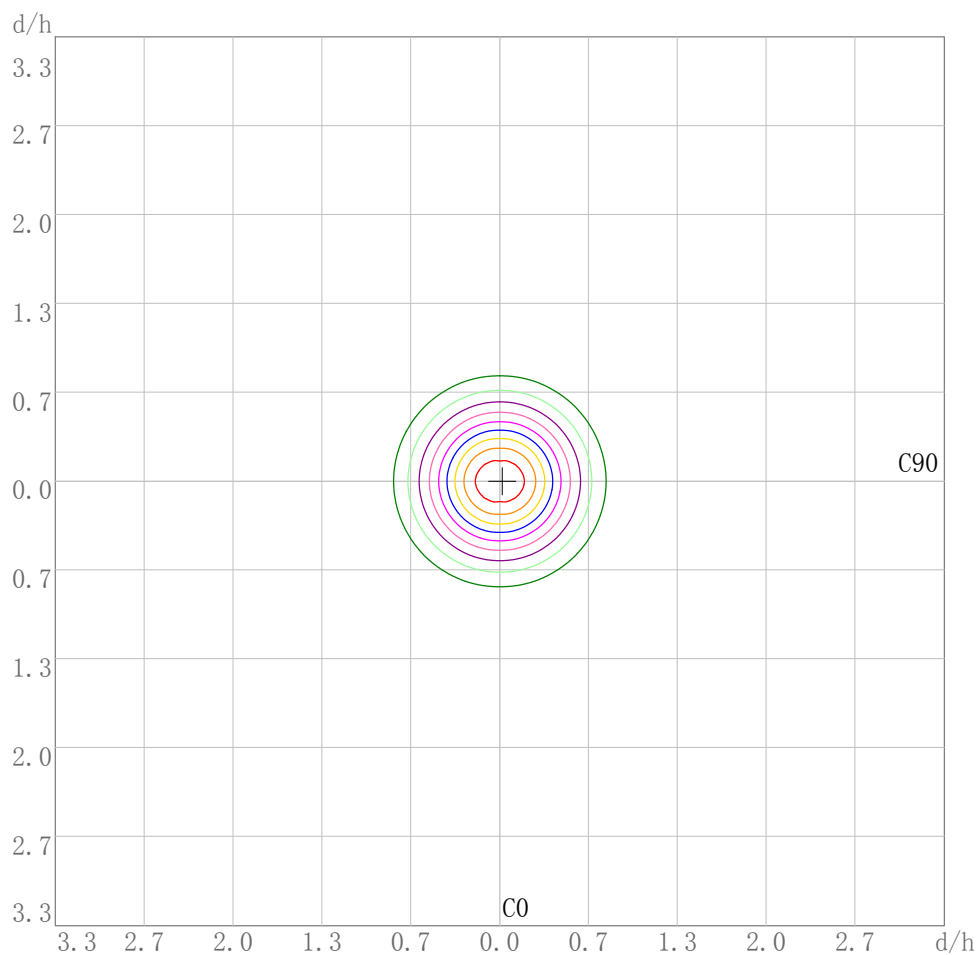


Maximum Light Intensity(cd): 2531.00
 Maximum Cand.@Angle: H=0.0°,V=1.0°

Plane ISO-Illuminance Diagram

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

Plane ISO-Illuminance Curve



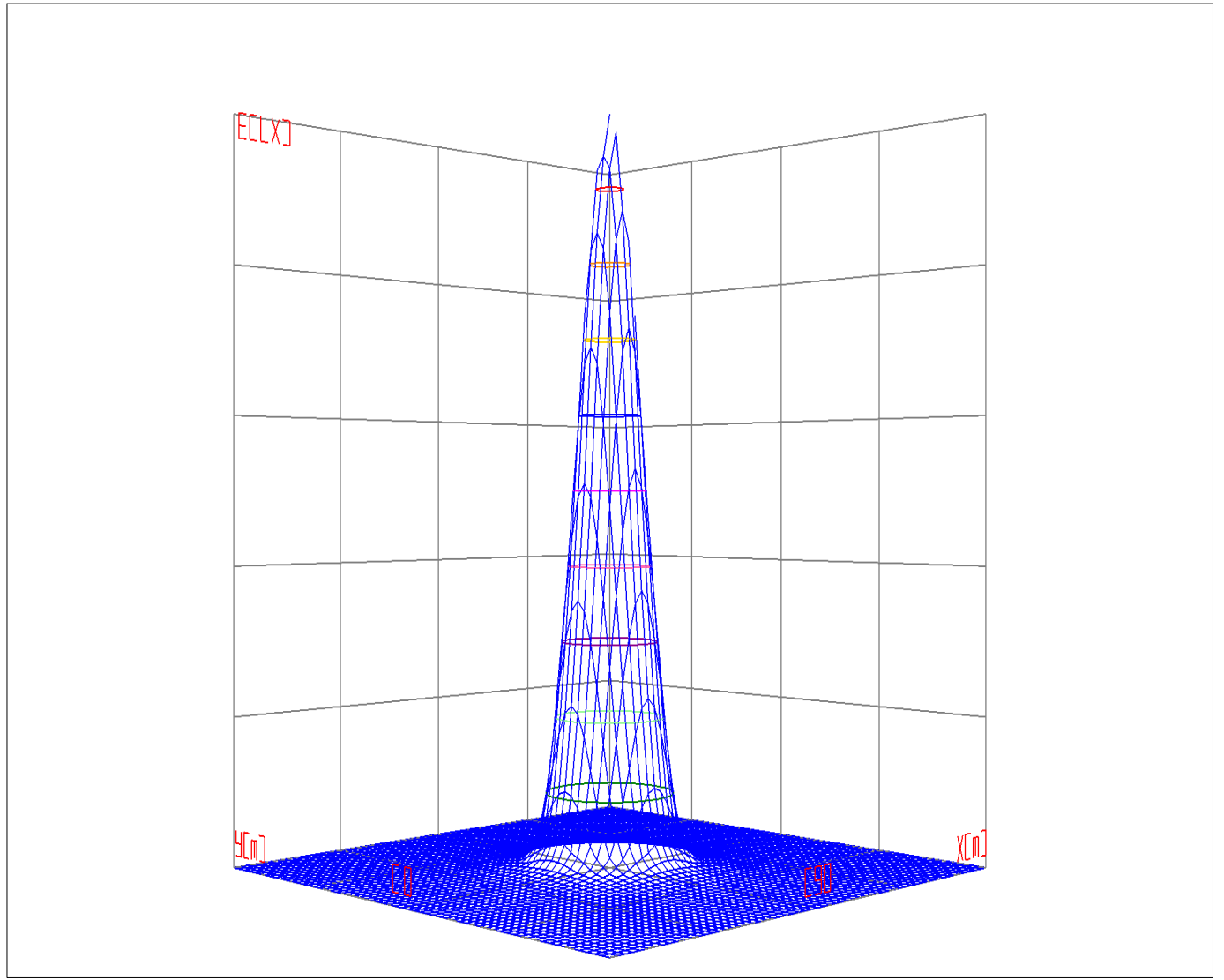
- Curves:
unit:lx
- [EMax] =281.094
 - [EMax*90%]=252.984
 - [EMax*80%]=224.875
 - [EMax*70%]=196.766
 - [EMax*60%]=168.656
 - [EMax*50%]=140.547
 - [EMax*40%]=112.437
 - [EMax*30%]=84.328
 - [EMax*20%]=56.219
 - [EMax*10%]=28.109

Working Plane Luminaire Mounting Height(m): 3.00
 Working Plane Maximum Illuminance(lx): 281.09
 Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

3D Plane Illuminance Modal

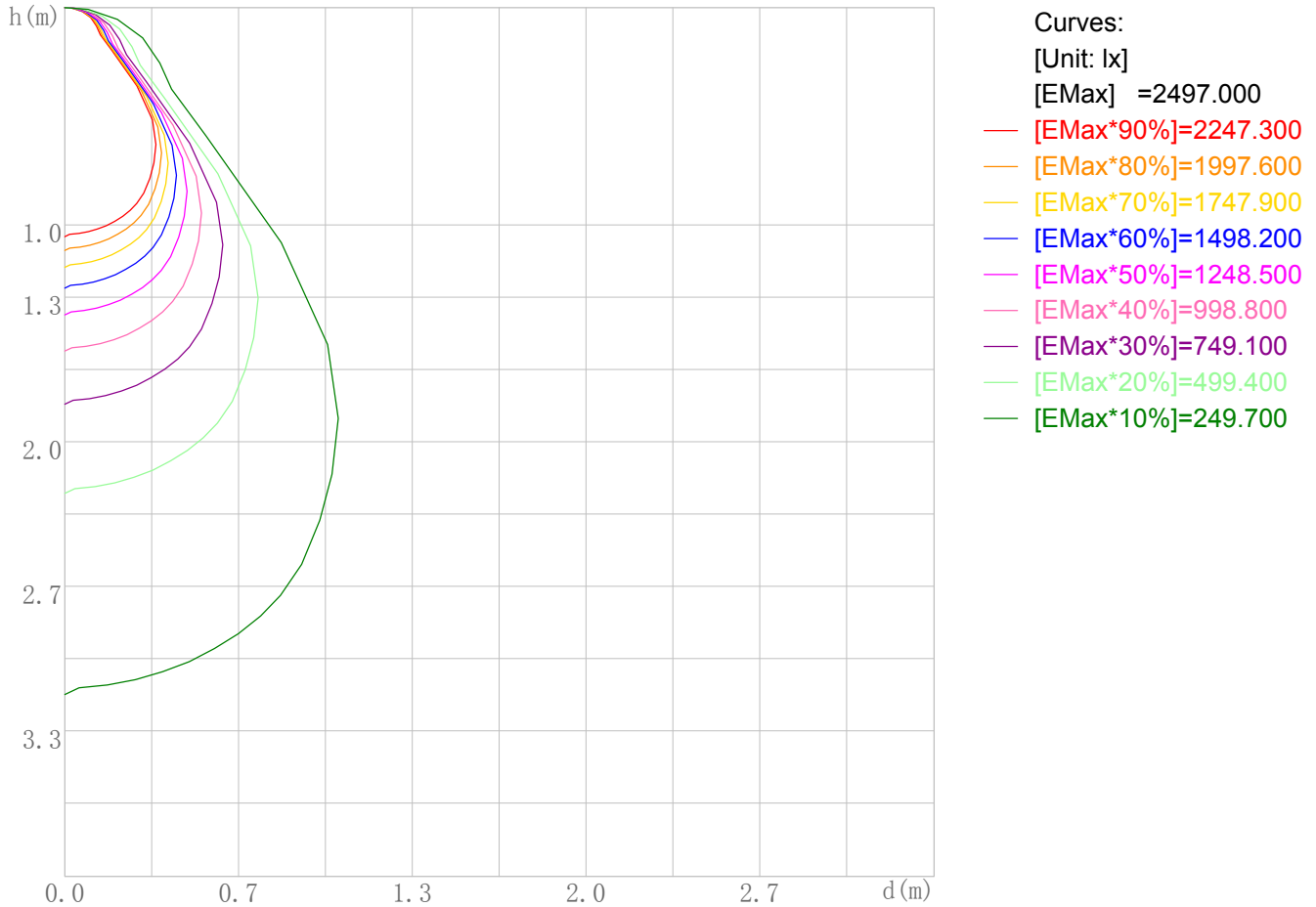


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
 View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

Space ISO Illuminance Curve

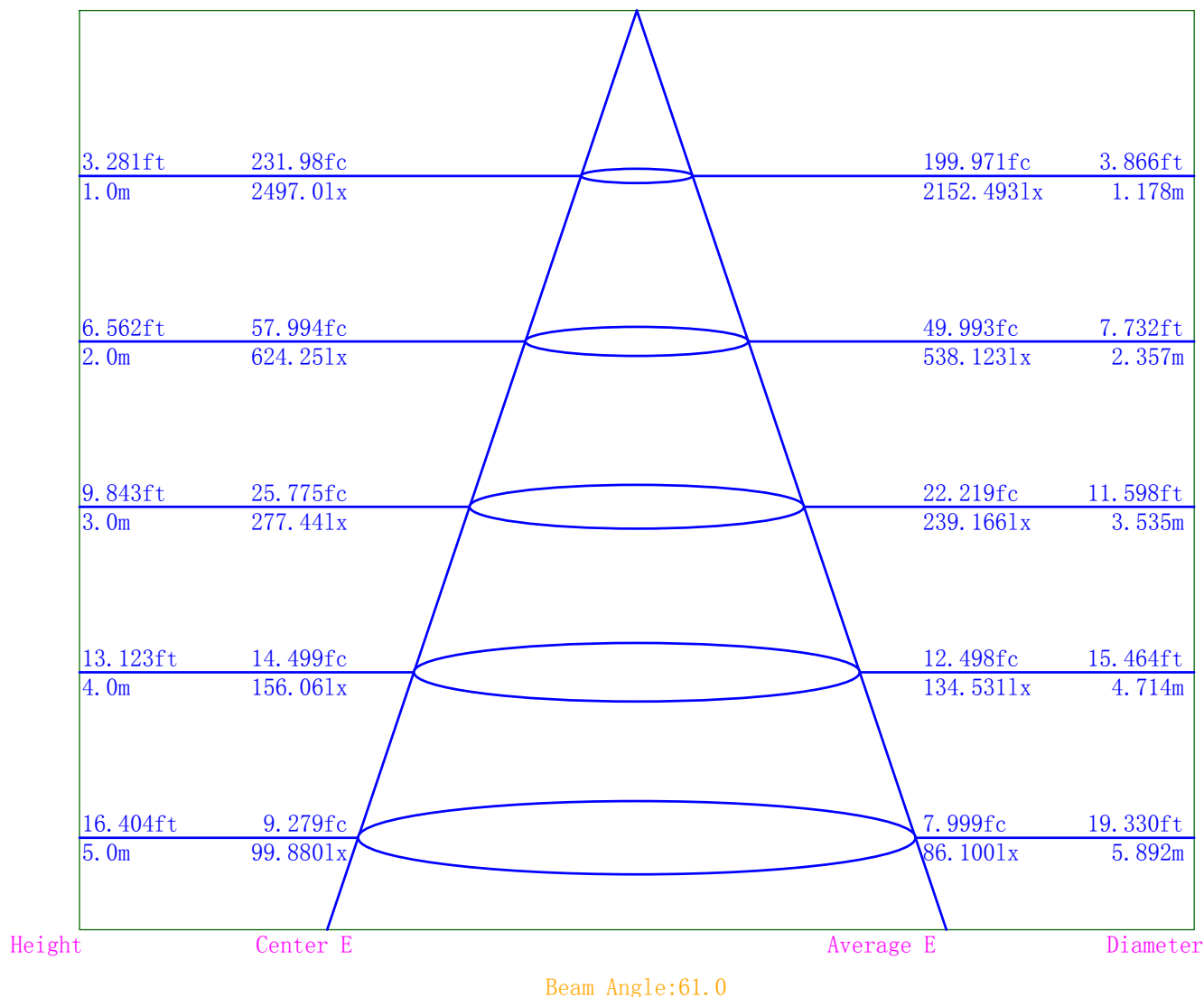


Space Plane Maximum Illuminance and @Angle:2497.00lx,0.0deg
 Plane Maximum Lighting Intensity and @Angle:2497.000cd,0deg

Illuminance-Distance Diagram

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

Illuminance-Distance Curve



Indoor Luminance Limiting Curves

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

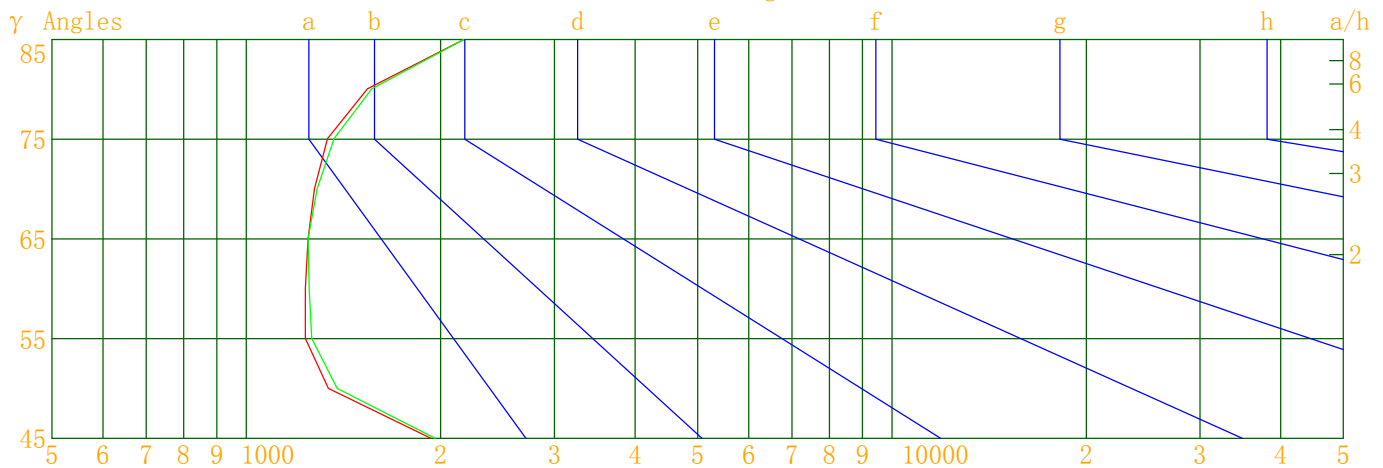
Glare Grade Table

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	1932	1340	1234	1235	1246	1275	1336	1540	2172
C90	1961	1383	1263	1251	1246	1287	1367	1564	2172

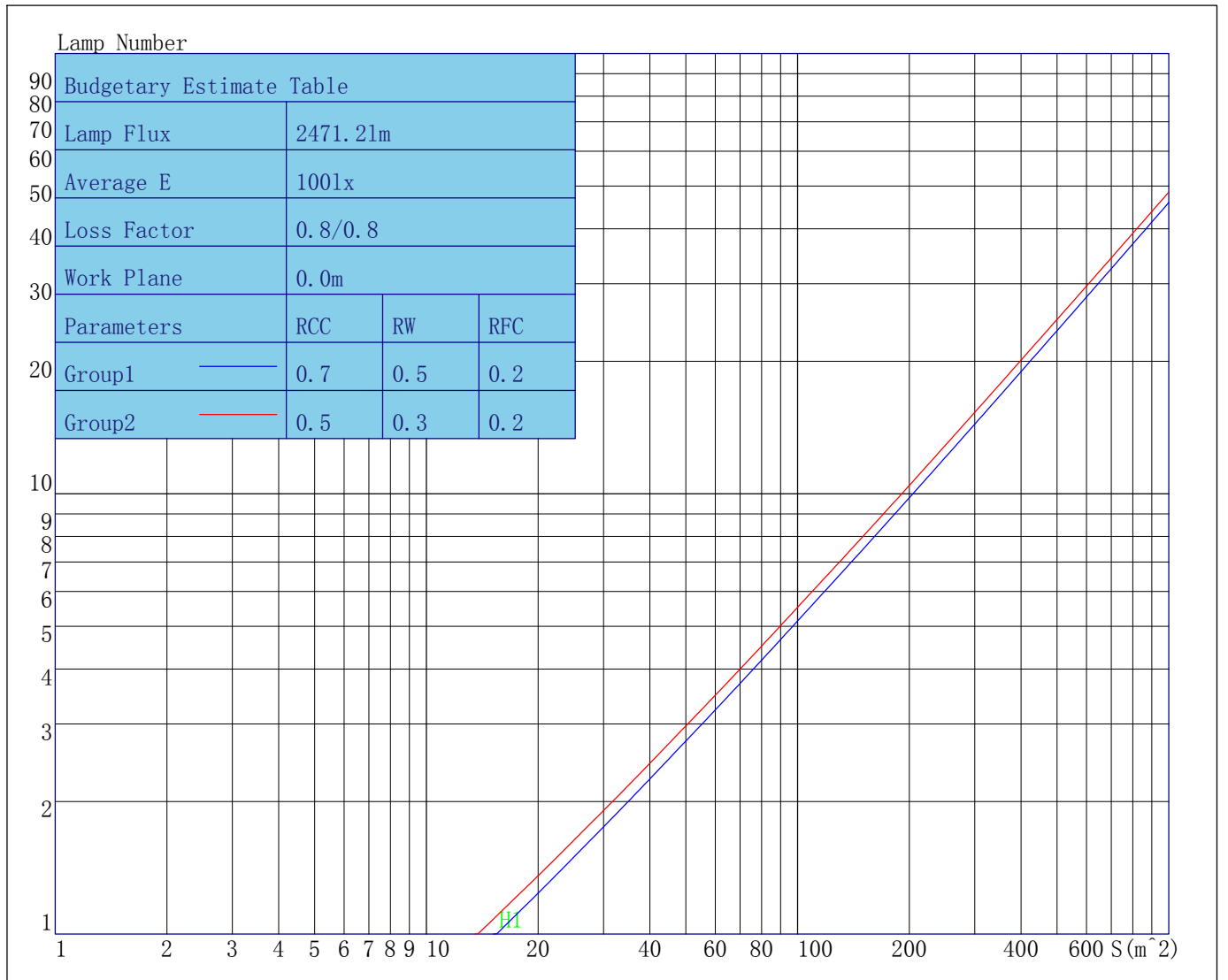
Luminance Limiting Curve



Luminous Size: Length(m)=0.810 Width(m)=0.150 Height(m)=0.000 Area(m^2)=0.121500
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: ——— C90-C270 Color: ———

Indoor Budgetary Estimate Table

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021



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: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

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	50	30	10	0
RCR	Coefficient of Utilization (%)																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91			
2	106	101	96	92	104	99	95	91	95	92	89	92	90	87	90	87	85	83			
3	100	93	87	83	98	92	86	82	89	84	81	86	83	80	84	81	78	77			
4	95	86	80	75	93	85	79	75	83	78	74	81	77	73	79	75	72	71			
5	89	80	74	69	88	79	73	69	78	72	68	76	71	68	74	70	67	65			
6	85	75	69	64	83	74	68	64	73	67	63	71	66	63	70	66	62	61			
7	80	70	64	59	79	70	63	59	68	63	59	67	62	58	66	61	58	57			
8	76	66	60	55	75	65	59	55	64	59	55	63	58	55	62	58	54	53			
9	72	62	56	52	71	62	56	52	61	55	51	60	55	51	59	54	51	50			
10	69	59	53	48	68	58	52	48	57	52	48	57	52	48	56	51	48	47			

Unified Glare Rating Table

Lum. Name: LED LUMINAIRE	Lum. Catalog: LG-9112 60° 9W	Test ID: IESNA:LM-79-08
Lamp Name:	Lamp Catalog: LED	Test Lab: LIGHT LABORATORY, INC. (www.lig
Manufacture: Light and Green	Test Machine:GON-2000	Test Date: 4/20/2021

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	12.1	13.2	12.5	13.5	13.8	12.2	13.3	12.6	13.6	14.0
Y=3H	12.7	13.7	13.1	14.0	14.4	12.9	13.8	13.2	14.2	14.5
Y=4H	13.2	14.1	13.6	14.4	14.8	13.3	14.2	13.7	14.5	14.9
Y=6H	13.6	14.5	14.0	14.8	15.2	13.7	14.6	14.1	14.9	15.3
Y=8H	13.9	14.7	14.3	15.1	15.5	14.0	14.8	14.4	15.1	15.6
Y=12H	14.2	14.9	14.6	15.3	15.7	14.2	15.0	14.7	15.4	15.8
X=4H Y=2H	12.2	13.1	12.6	13.4	13.8	12.3	13.2	12.7	13.6	14.0
Y=3H	13.1	13.8	13.5	14.2	14.6	13.2	13.9	13.6	14.3	14.7
Y=4H	13.7	14.3	14.1	14.8	15.2	13.8	14.4	14.2	14.8	15.3
Y=6H	14.4	14.9	14.8	15.4	15.9	14.4	15.0	14.9	15.5	15.9
Y=8H	14.7	15.3	15.2	15.7	16.2	14.8	15.3	15.3	15.8	16.2
Y=12H	15.1	15.6	15.6	16.1	16.5	15.2	15.6	15.7	16.1	16.6
X=8H Y=4H	13.9	14.4	14.4	14.9	15.4	14.0	14.5	14.4	15.0	15.4
Y=6H	14.8	15.2	15.3	15.7	16.2	14.9	15.3	15.4	15.8	16.3
Y=8H	15.3	15.7	15.8	16.2	16.7	15.3	15.7	15.9	16.2	16.7
Y=12H	15.9	16.2	16.4	16.7	17.3	15.9	16.2	16.4	16.7	17.3
X=12H Y=4H	13.9	14.4	14.4	14.9	15.4	14.0	14.5	14.5	14.9	15.4
Y=6H	14.9	15.3	15.4	15.7	16.3	14.9	15.3	15.5	15.8	16.3
Y=8H	15.5	15.8	16.0	16.3	16.9	15.5	15.9	16.0	16.3	16.9
Variations with the objerver position at spacings										
S=1.0H	0.2/-0.2					0.2/-0.2				
S=1.5H	0.4/-0.4					0.4/-0.4				
S=2.0H	0.4/-0.5					0.4/-0.5				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	2.5					2.5				

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

IES Indoor Report

Photometric Filename:LG-9112 60° 9W.IES

Candela Tabulation

V/H	C0.0	C5.0	C10.0	C15.0	C20.0	C25.0	C30.0	C35.0	C40.0	C45.0	C50.0	C55.0
γ 0.0	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00
γ 1.0	2450.00	2454.00	2462.00	2471.00	2474.00	2476.00	2479.00	2482.00	2490.00	2496.00	2502.00	2509.00
γ 3.0	2438.00	2441.00	2451.00	2459.00	2461.00	2465.00	2468.00	2470.00	2480.00	2486.00	2490.00	2499.00
γ 5.0	2418.00	2422.00	2431.00	2439.00	2443.00	2446.00	2449.00	2452.00	2462.00	2468.00	2471.00	2480.00
γ 7.0	2387.00	2391.00	2400.00	2408.00	2411.00	2414.00	2417.00	2420.00	2429.00	2436.00	2437.00	2446.00
γ 9.0	2350.00	2353.00	2361.00	2369.00	2371.00	2375.00	2377.00	2380.00	2388.00	2395.00	2395.00	2404.00
γ 11.0	2298.00	2301.00	2310.00	2316.00	2319.00	2323.00	2326.00	2330.00	2340.00	2344.00	2344.00	2353.00
γ 13.0	2242.00	2245.00	2253.00	2260.00	2263.00	2267.00	2270.00	2274.00	2283.00	2289.00	2290.00	2299.00
γ 15.0	2174.00	2178.00	2185.00	2191.00	2195.00	2199.00	2201.00	2205.00	2213.00	2219.00	2220.00	2228.00
γ 17.0	2090.00	2093.00	2100.00	2106.00	2108.00	2113.00	2116.00	2120.00	2128.00	2133.00	2135.00	2141.00
γ 19.5	1959.00	1962.00	1969.00	1976.00	1978.00	1982.00	1985.00	1988.00	1996.00	2002.00	2003.00	2010.00
γ 22.5	1764.00	1766.00	1773.00	1777.00	1779.00	1783.00	1786.00	1789.00	1796.00	1801.00	1803.00	1807.00
γ 25.5	1567.00	1568.00	1574.00	1578.00	1581.00	1584.00	1587.00	1589.00	1595.00	1598.00	1599.00	1604.00
γ 29.0	1335.00	1336.00	1342.00	1344.00	1347.00	1350.00	1351.00	1353.00	1358.00	1361.00	1361.00	1366.00
γ 33.0	1019.00	1021.00	1024.00	1027.00	1029.00	1031.00	1035.00	1035.00	1040.00	1045.00	1046.00	1050.00
γ 37.5	585.00	588.00	590.00	593.00	595.00	594.00	595.00	596.00	598.00	599.00	599.00	602.00
γ 42.5	218.00	218.00	219.00	220.00	220.00	220.00	220.00	219.00	219.00	219.00	218.00	218.00
γ 47.5	114.00	115.00	115.00	115.00	116.00	116.00	116.00	116.00	117.00	117.00	117.00	117.00
γ 55.0	86.00	86.00	86.00	86.00	86.00	86.00	87.00	87.00	87.00	87.00	87.00	87.00
γ 65.0	64.00	64.00	64.00	64.00	64.00	64.00	64.00	64.00	64.00	64.00	64.00	64.00
γ 75.0	42.00	42.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00
γ 85.0	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
γ 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V/H	C60.0	C65.0	C70.0	C75.0	C80.0	C85.0	C90.0					
γ 0.0	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00	2497.00					
γ 1.0	2512.00	2516.00	2522.00	2526.00	2529.00	2530.00	2531.00					
γ 3.0	2500.00	2503.00	2510.00	2515.00	2518.00	2519.00	2520.00					
γ 5.0	2482.00	2485.00	2491.00	2495.00	2498.00	2500.00	2500.00					
γ 7.0	2448.00	2451.00	2457.00	2461.00	2464.00	2466.00	2467.00					
γ 9.0	2406.00	2410.00	2417.00	2422.00	2425.00	2429.00	2430.00					
γ 11.0	2354.00	2359.00	2365.00	2371.00	2374.00	2377.00	2378.00					
γ 13.0	2299.00	2303.00	2309.00	2314.00	2317.00	2320.00	2321.00					
γ 15.0	2229.00	2233.00	2238.00	2243.00	2248.00	2249.00	2251.00					
γ 17.0	2143.00	2147.00	2151.00	2156.00	2160.00	2162.00	2164.00					
γ 19.5	2010.00	2014.00	2020.00	2025.00	2029.00	2032.00	2033.00					
γ 22.5	1811.00	1815.00	1819.00	1822.00	1826.00	1830.00	1832.00					
γ 25.5	1606.00	1609.00	1613.00	1616.00	1620.00	1622.00	1625.00					
γ 29.0	1368.00	1370.00	1375.00	1377.00	1382.00	1385.00	1386.00					
γ 33.0	1052.00	1053.00	1056.00	1058.00	1062.00	1063.00	1066.00					
γ 37.5	602.00	604.00	605.00	606.00	609.00	610.00	610.00					
γ 42.5	217.00	217.00	216.00	217.00	217.00	218.00	219.00					
γ 47.5	117.00	118.00	118.00	118.00	118.00	118.00	118.00					
γ 55.0	87.00	87.00	87.00	88.00	88.00	88.00	88.00					
γ 65.0	64.00	64.00	64.00	64.00	64.00	64.00	64.00					
γ 75.0	43.00	43.00	43.00	43.00	43.00	43.00	43.00					
γ 85.0	23.00	23.00	23.00	23.00	23.00	23.00	23.00					
γ 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00					