

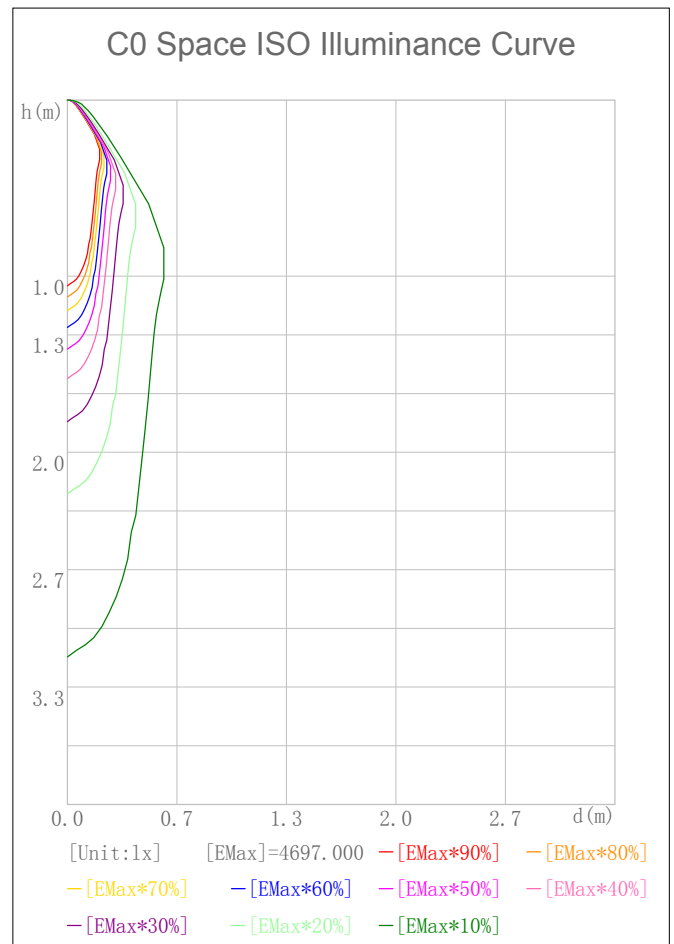
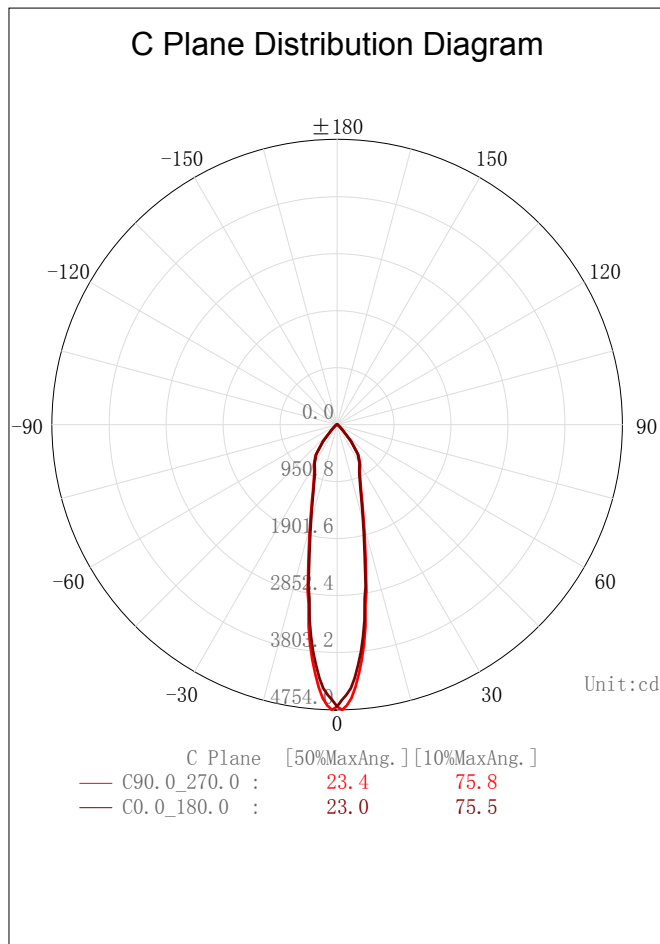
**Indoor Luminaire Photometric Data**

**Description Information**

Luminaire Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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):0.330m*0.750m*0.000m	Lum. Area (m2):0.248	Lum. W(kg): 0.000
Test System: C, $\gamma$	Test Step: C=5.0 $\gamma$ =1.0	Temp. (°C): 25
		Humidity(%):

**Character Parameter**

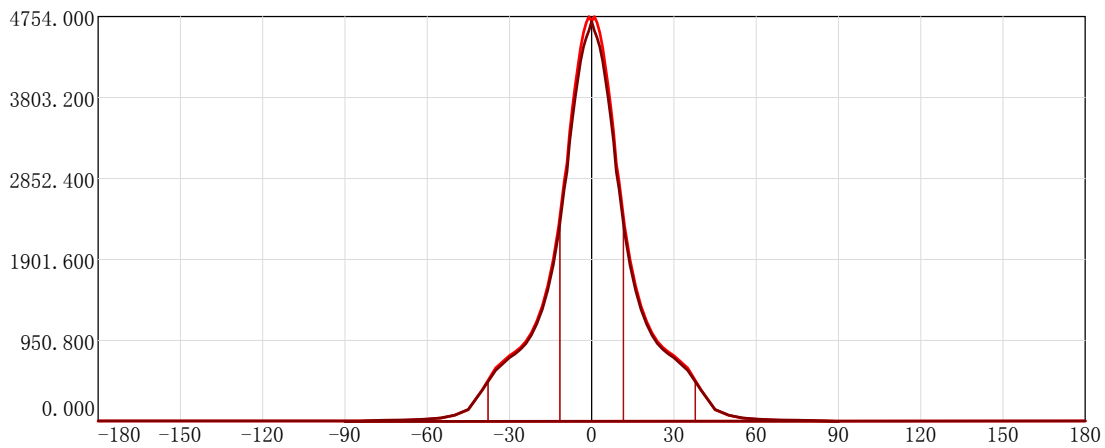
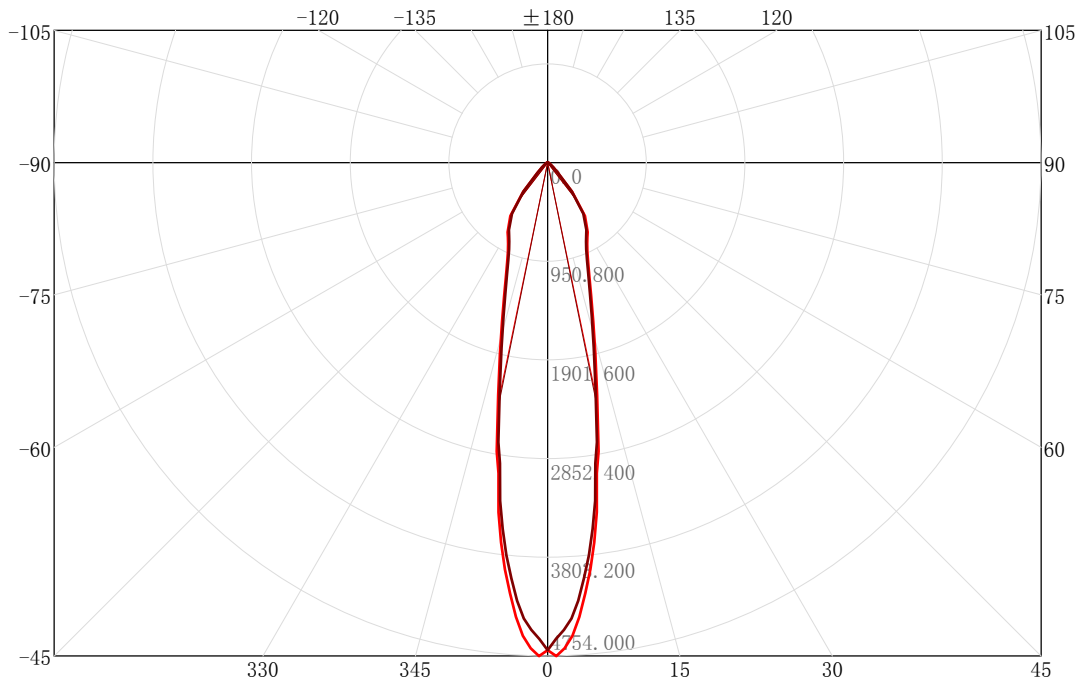
Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 1835.523	Luminaire Flux(lm): 1835.523	Field Angle(10%Imax): 75.8(°)
Rated Power(W):	Luminaire Efficiency: 100.00%	Down Lumens&Percent: 1835.523lm 100.00%
Rated Voltage(V):	Luminaire EER(lm/W): 81.254	Up Lumens&Percent: 0.000lm 0.00%
Tested Power(W): 22.590	Max. Candela(cd): 4754.000	S/MH: C0_a180=0.388 C90_270=0.398
Lamps' Inside: 1	Max Cand@Ang. (°): C=90.0 $\gamma$ =1.0	CIE Type: Semi-Direct
Tested Electrics (V, A, pf):240.1, 0.042	Beam Angle(50%Imax): 23.4(°)	ErP $\phi$ use(90°): 1714.588lm
Lamp Size (W*L*H):0.330m*0.750m*0.000m	Left=-11.7°, Right=11.7°	IRF(%): 556.257



**2D Plane Light Intensity Distribution Curve**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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**

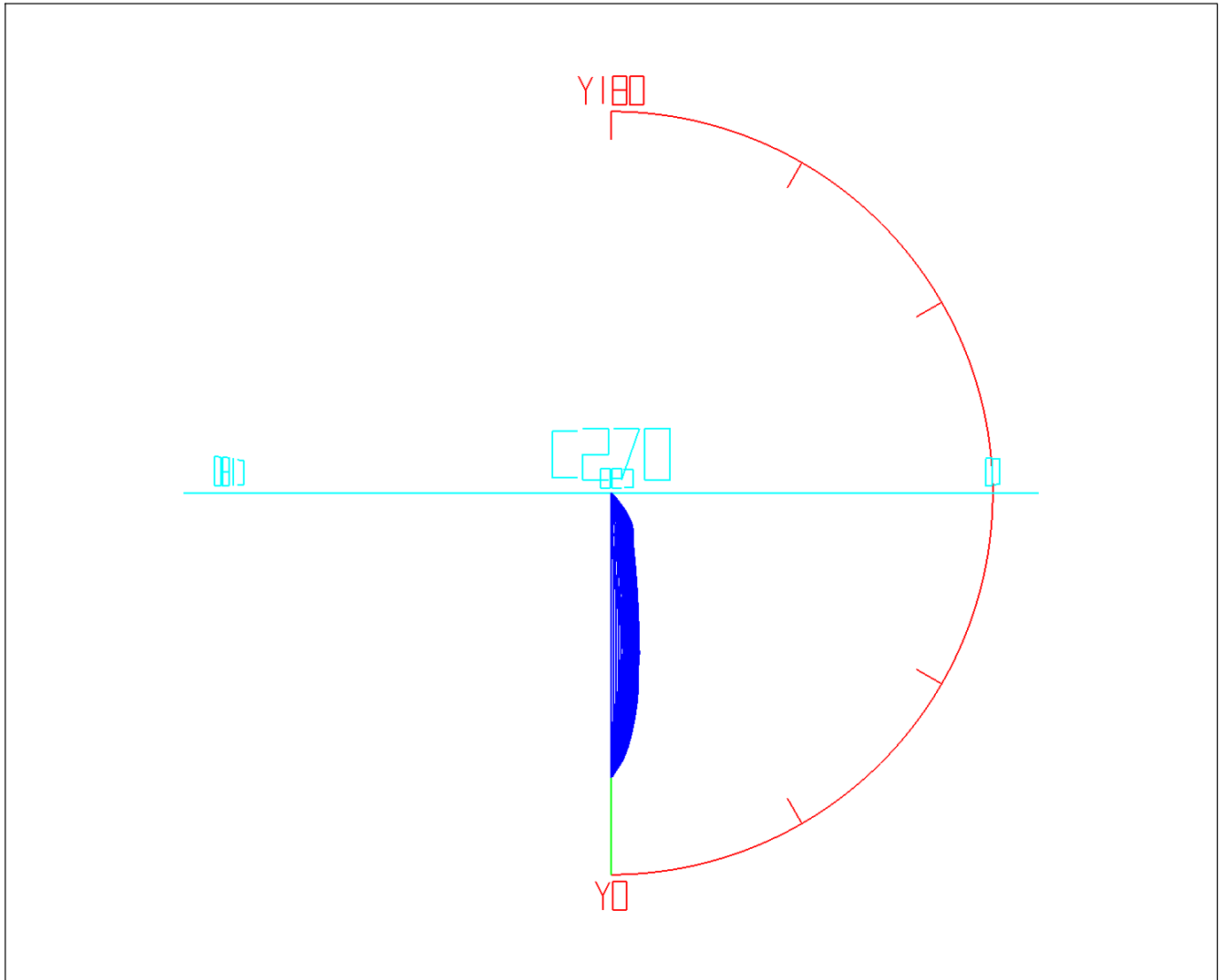


C Plane	[50%MaxAng.]	[10%MaxAng.]	Unit:cd
— C90.0_270.0 :	23.4	75.8	
— C0.0_180.0 :	23.0	75.5	

### 3D Light Intensity Distribution Modal

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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

# IES Indoor Report

Photometric Filename:LG- 9012 24° 9w .IES

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## Zonal Flux Tabulation

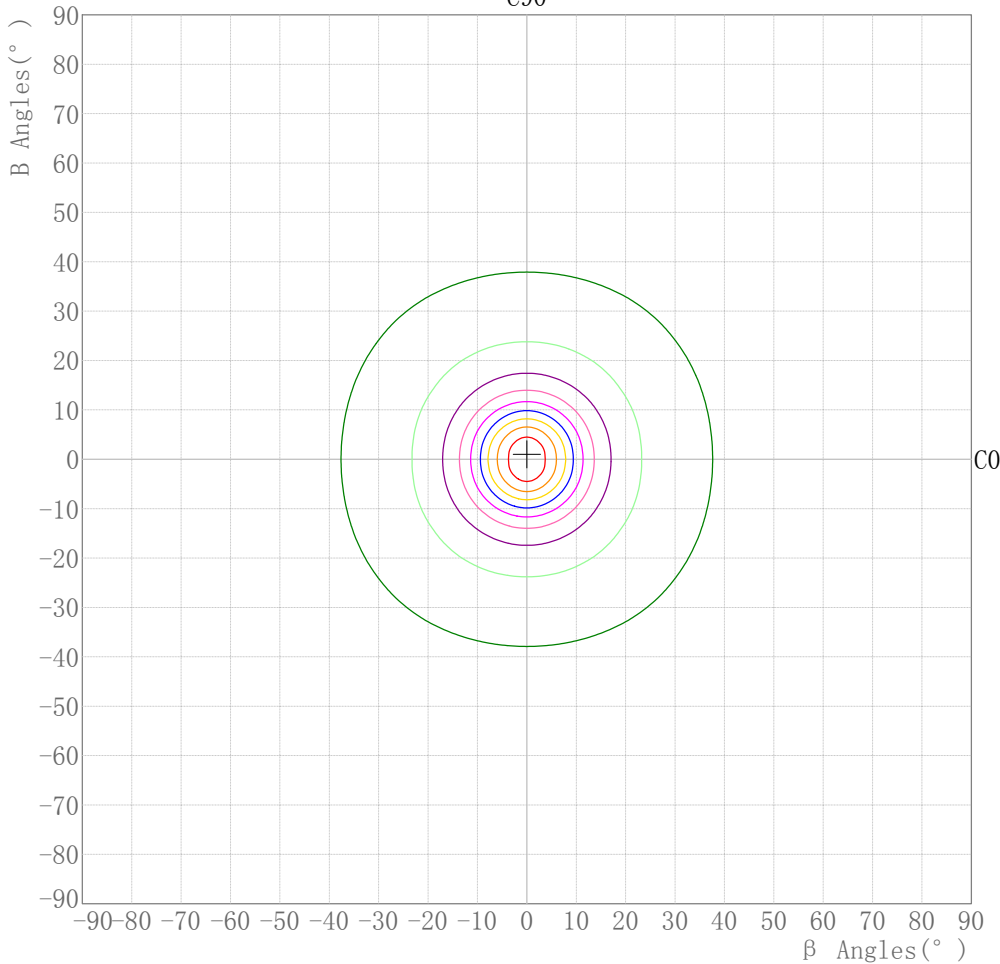
Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-1.0	4.48	4.48	0.24	0.24
1.0-2.0	13.30	17.79	0.72	0.97
2.0-3.0	21.70	39.49	1.18	2.15
3.0-4.0	29.42	68.91	1.60	3.75
4.0-5.0	36.15	105.06	1.97	5.72
5.0-6.0	41.86	146.91	2.28	8.00
6.0-7.0	46.49	193.40	2.53	10.54
7.0-8.0	49.86	243.26	2.72	13.25
8.0-9.0	51.28	294.54	2.79	16.05
9.0-10.0	52.14	346.68	2.84	18.89
10.0-12.0	105.42	452.10	5.74	24.63
12.0-14.0	101.80	553.90	5.55	30.18
14.0-16.0	97.70	651.60	5.32	35.50
16.0-18.0	93.37	744.97	5.09	40.59
18.0-20.0	89.30	834.27	4.86	45.45
20.0-22.0	86.14	920.41	4.69	50.14
22.0-24.0	84.07	1004.47	4.58	54.72
24.0-26.0	83.11	1087.58	4.53	59.25
26.0-28.0	83.03	1170.61	4.52	63.78
28.0-30.0	83.45	1254.06	4.55	68.32
30.0-35.0	203.18	1457.24	11.07	79.39
35.0-40.0	163.89	1621.13	8.93	88.32
40.0-45.0	93.45	1714.59	5.09	93.41
45.0-50.0	42.94	1757.53	2.34	95.75
50.0-55.0	24.83	1782.36	1.35	97.10
55.0-60.0	16.04	1798.40	0.87	97.98
60.0-65.0	11.91	1810.31	0.65	98.63
65.0-70.0	8.54	1818.85	0.47	99.09
70.0-75.0	6.25	1825.10	0.34	99.43
75.0-80.0	4.99	1830.08	0.27	99.70
80.0-85.0	3.80	1833.88	0.21	99.91
85.0-90.0	1.64	1835.52	0.09	100.00

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**Rectangle ISO Lighting Intensity Diagram**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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  
 C90



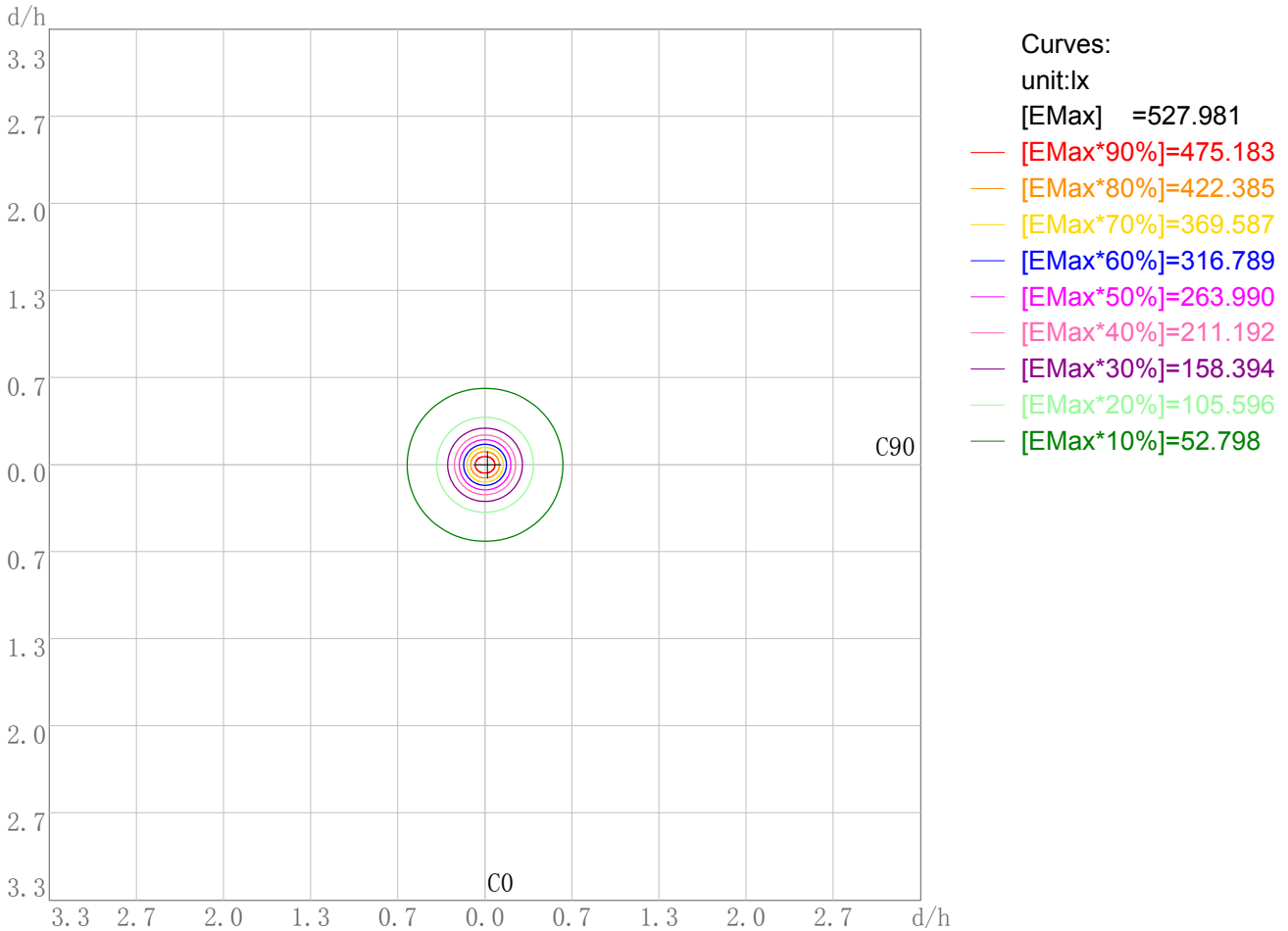
- Curves:  
 [Unit: cd]  
 [IMax] =4754.000
- [IMax\*90%]=4278.600
  - [IMax\*80%]=3803.200
  - [IMax\*70%]=3327.800
  - [IMax\*60%]=2852.400
  - [IMax\*50%]=2377.000
  - [IMax\*40%]=1901.600
  - [IMax\*30%]=1426.200
  - [IMax\*20%]=950.800
  - [IMax\*10%]=475.400

Maximum Light Intensity(cd): 4754.00  
 Maximum Cand.@Angle: H=0.0°,V=1.0°

**Plane ISO-Illuminance Diagram**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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



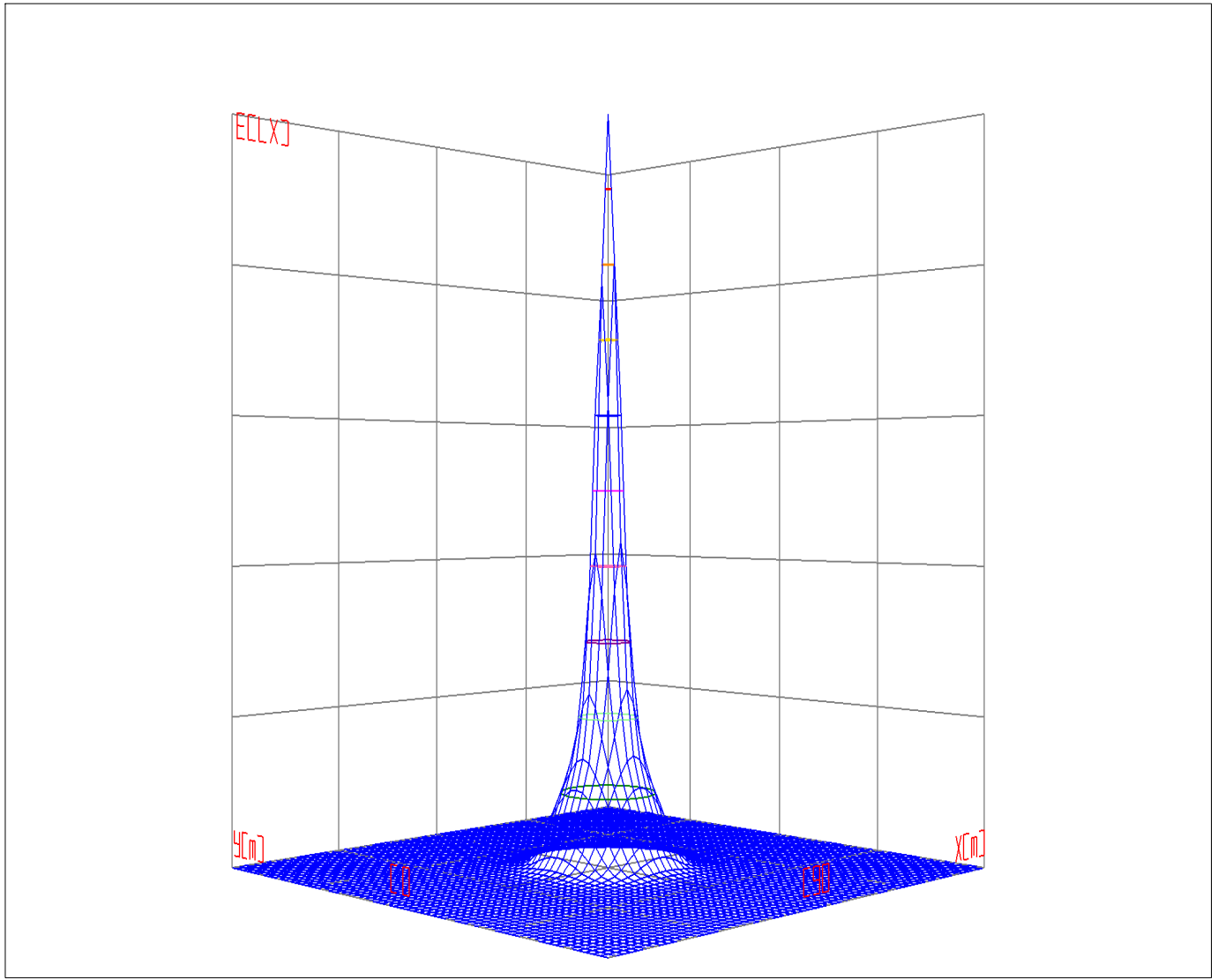
Working Plane Luminaire Mounting Height(m): 3.00  
Working Plane Maximum Illuminance(lx): 527.98  
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

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**3D Plane ISO Illuminance Diagram**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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**

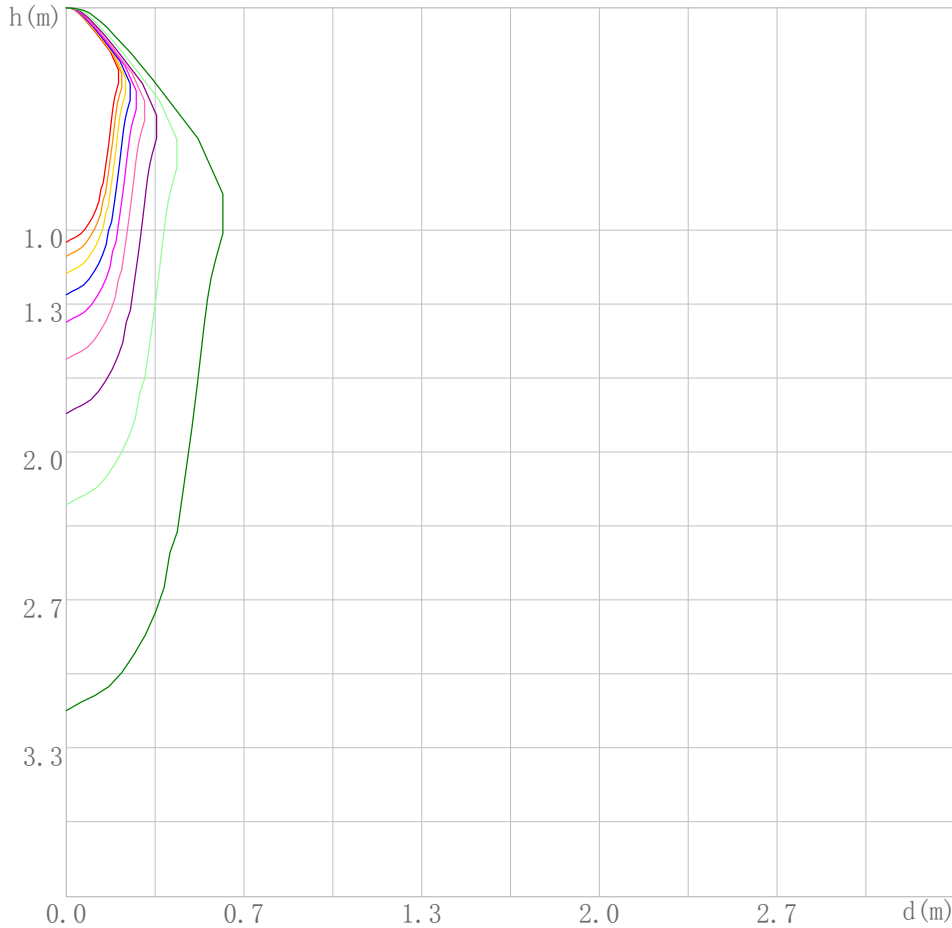


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —  
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

**Space ISO Illuminance Diagram**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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



- Curves:  
 [Unit: lx]  
 [EMax] =4697.000
- [EMax\*90%]=4227.300
  - [EMax\*80%]=3757.600
  - [EMax\*70%]=3287.900
  - [EMax\*60%]=2818.200
  - [EMax\*50%]=2348.500
  - [EMax\*40%]=1878.800
  - [EMax\*30%]=1409.100
  - [EMax\*20%]=939.400
  - [EMax\*10%]=469.700

Space Plane Maximum Illuminance and @Angle:4697.00lx,0.0deg  
 Plane Maximum Lighting Intensity and @Angle:4697.000cd,0deg

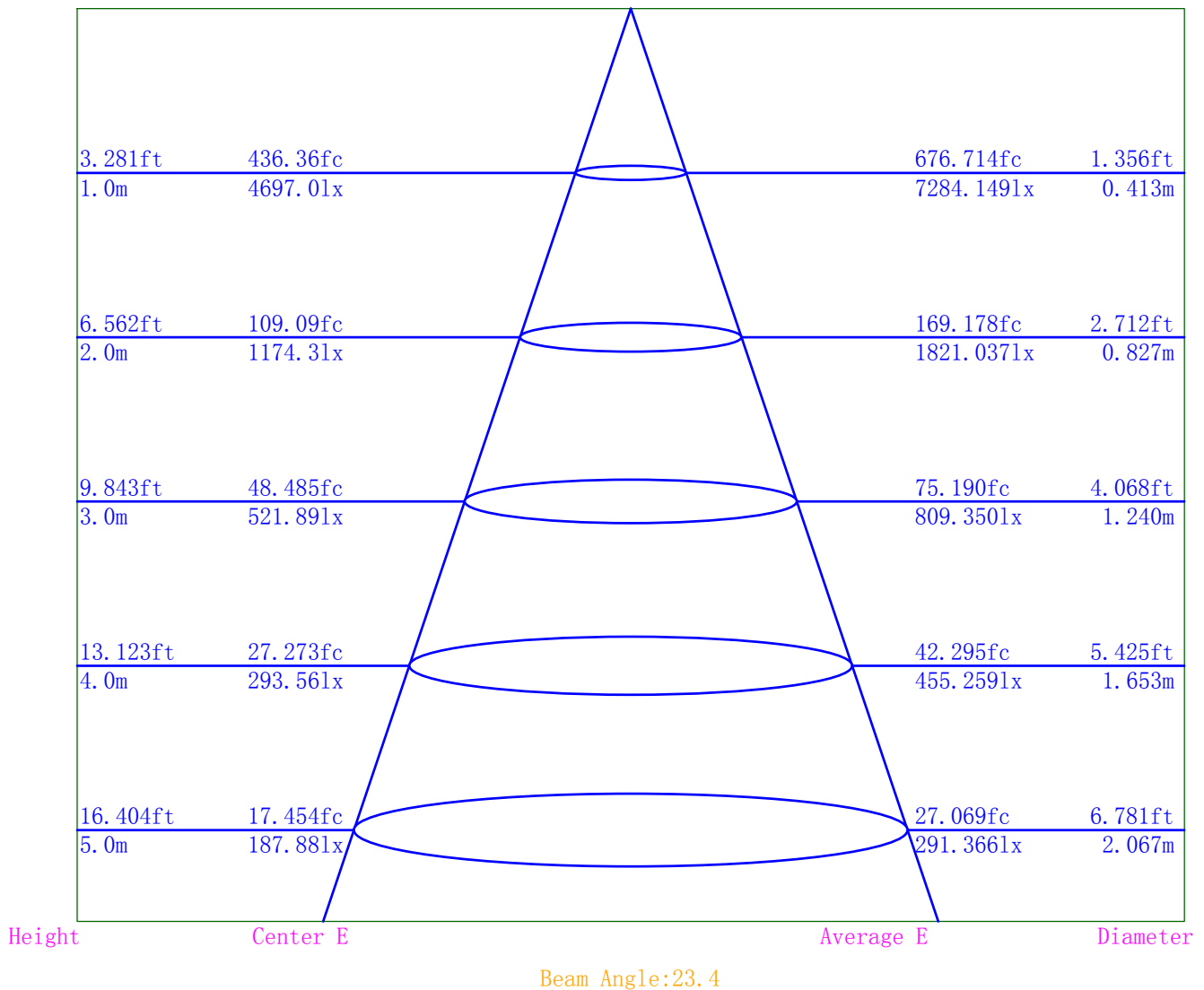
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**Illuminance-Distance Diagram**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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: 9012 - 24 deg	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

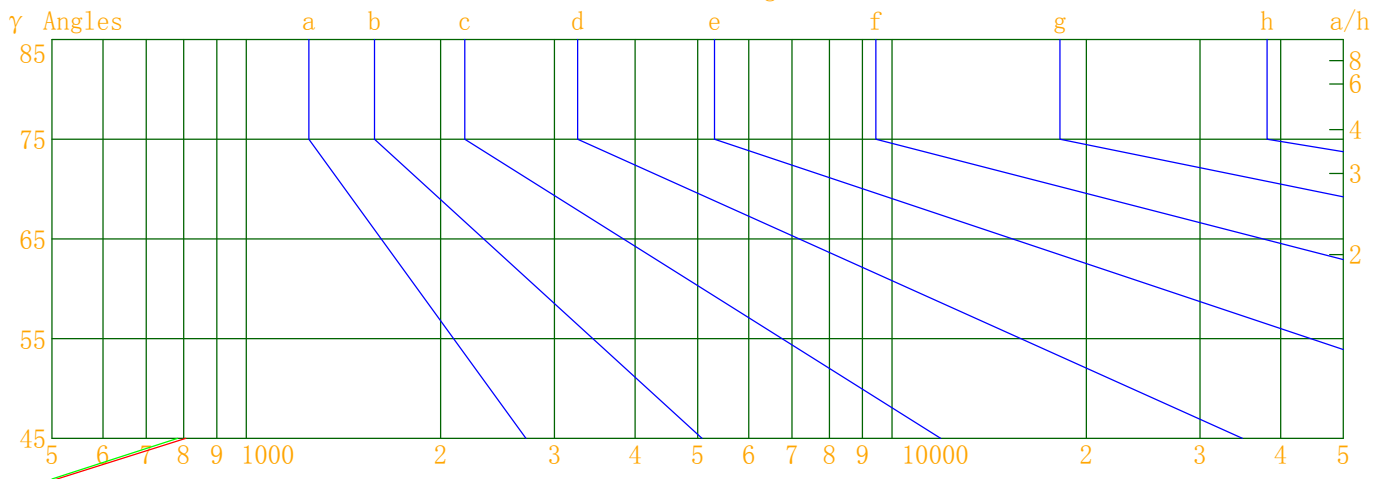
Glare Grade Table

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	806	459	289	234	201	189	234	279	278
C90	783	453	275	218	172	106	140	163	278

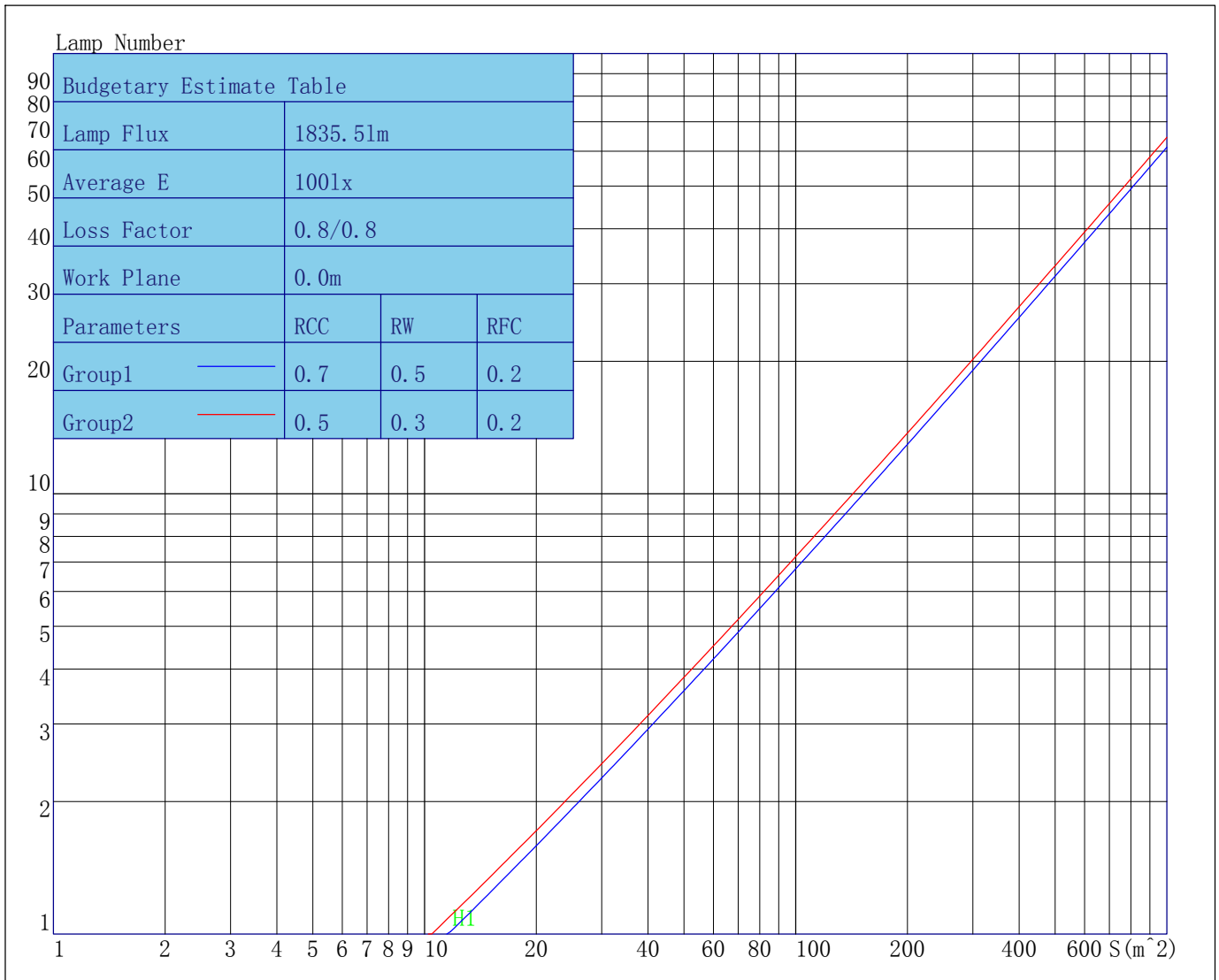
Luminance Limiting Curve



Luminous Size: Length(m)=0.750 Width(m)=0.330 Height(m)=0.000 Area(m^2)=0.247500  
 Luminous Type: Without Luminous Side  
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

**Indoor Budgetary Estimate Table**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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: 9012 - 24 deg	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	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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93			
2	108	103	99	95	106	101	98	94	98	95	92	95	93	90	92	90	88	87			
3	103	96	91	87	101	95	90	87	92	88	85	90	86	84	87	85	83	81			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71			
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67			
7	84	75	70	66	83	75	69	65	74	69	65	72	68	65	71	67	64	63			
8	81	72	66	62	80	71	65	62	70	65	61	69	64	61	68	64	61	60			
9	77	68	62	58	76	68	62	58	67	62	58	66	61	58	65	61	58	56			
10	74	65	59	56	73	64	59	55	64	59	55	63	58	55	62	58	55	54			

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**Unified Glare Rating Table**

Lum. Name: LED LUMINAIRE	Lum. Catalog: 9012 - 24 deg	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	8.2	9.3	8.6	9.6	9.9	8.3	9.3	8.7	9.6	10.0
Y=3H	8.2	9.1	8.6	9.5	9.8	8.2	9.1	8.6	9.4	9.8
Y=4H	8.3	9.1	8.7	9.5	9.9	8.1	9.0	8.6	9.3	9.7
Y=6H	8.4	9.2	8.8	9.5	9.9	8.1	8.9	8.5	9.3	9.7
Y=8H	8.4	9.2	8.9	9.6	10.0	8.1	8.8	8.5	9.2	9.6
Y=12H	8.5	9.2	8.9	9.6	10.0	8.1	8.8	8.6	9.2	9.6
X=4H Y=2H	8.0	8.9	8.4	9.2	9.6	8.1	8.9	8.5	9.3	9.7
Y=3H	8.1	8.8	8.5	9.2	9.6	8.0	8.7	8.5	9.1	9.5
Y=4H	8.2	8.8	8.7	9.3	9.7	8.0	8.6	8.4	9.0	9.5
Y=6H	8.4	9.0	8.9	9.4	9.9	8.0	8.5	8.5	9.0	9.5
Y=8H	8.5	9.0	9.0	9.5	10.0	8.0	8.5	8.5	9.0	9.5
Y=12H	8.6	9.0	9.1	9.5	10.0	8.1	8.5	8.6	9.0	9.5
X=8H Y=4H	8.1	8.6	8.6	9.1	9.5	7.9	8.4	8.4	8.8	9.3
Y=6H	8.4	8.8	8.9	9.3	9.8	8.0	8.3	8.5	8.8	9.4
Y=8H	8.5	8.9	9.1	9.4	9.9	8.0	8.4	8.6	8.9	9.4
Y=12H	8.7	9.0	9.2	9.5	10.1	8.2	8.5	8.7	9.0	9.6
X=12H Y=4H	8.1	8.5	8.6	9.0	9.5	7.8	8.3	8.3	8.8	9.2
Y=6H	8.3	8.7	8.9	9.2	9.7	7.9	8.3	8.5	8.7	9.3
Y=8H	8.5	8.8	9.0	9.3	9.9	8.0	8.3	8.6	8.8	9.4
Variations with the objerver position at spacings										
S=1.0H	0.2/-0.2					0.1/-0.1				
S=1.5H	0.4/-0.5					0.1/-0.2				
S=2.0H	0.6/-0.6					0.8/-0.4				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	0.8					0.5				

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

**IES Indoor Report**  
**Photometric Filename:LG- 9012 24° 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	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00
γ 1.0	4589.00	4589.00	4596.00	4608.00	4619.00	4629.00	4643.00	4655.00	4665.00	4674.00	4685.00	4696.00
γ 2.0	4504.00	4509.00	4515.00	4526.00	4536.00	4545.00	4562.00	4573.00	4584.00	4590.00	4603.00	4616.00
γ 3.0	4397.00	4399.00	4408.00	4416.00	4426.00	4437.00	4450.00	4461.00	4472.00	4480.00	4488.00	4503.00
γ 4.0	4231.00	4232.00	4238.00	4247.00	4255.00	4265.00	4276.00	4287.00	4297.00	4305.00	4313.00	4327.00
γ 5.0	4019.00	4020.00	4027.00	4036.00	4044.00	4053.00	4064.00	4074.00	4086.00	4094.00	4101.00	4114.00
γ 6.0	3802.00	3802.00	3808.00	3815.00	3821.00	3832.00	3840.00	3849.00	3859.00	3867.00	3876.00	3888.00
γ 7.0	3555.00	3557.00	3561.00	3569.00	3577.00	3586.00	3595.00	3604.00	3612.00	3618.00	3625.00	3635.00
γ 8.0	3291.00	3290.00	3293.00	3302.00	3309.00	3318.00	3328.00	3334.00	3343.00	3347.00	3352.00	3359.00
γ 9.0	2933.00	2934.00	2938.00	2945.00	2951.00	2958.00	2963.00	2969.00	2977.00	2981.00	2985.00	2993.00
γ 10.0	2734.00	2734.00	2739.00	2745.00	2751.00	2759.00	2764.00	2769.00	2777.00	2781.00	2785.00	2792.00
γ 12.0	2214.00	2215.00	2220.00	2227.00	2233.00	2240.00	2247.00	2251.00	2259.00	2263.00	2265.00	2270.00
γ 14.0	1834.00	1837.00	1839.00	1843.00	1849.00	1853.00	1859.00	1862.00	1868.00	1871.00	1874.00	1880.00
γ 16.0	1544.00	1546.00	1550.00	1554.00	1557.00	1560.00	1563.00	1566.00	1573.00	1576.00	1576.00	1583.00
γ 18.0	1318.00	1318.00	1321.00	1323.00	1326.00	1329.00	1332.00	1334.00	1340.00	1342.00	1342.00	1346.00
γ 20.0	1144.00	1145.00	1146.00	1148.00	1152.00	1155.00	1157.00	1158.00	1162.00	1164.00	1167.00	1169.00
γ 22.0	1012.00	1013.00	1015.00	1019.00	1021.00	1024.00	1025.00	1026.00	1030.00	1032.00	1034.00	1037.00
γ 24.0	914.00	916.00	918.00	921.00	924.00	927.00	928.00	928.00	932.00	935.00	938.00	940.00
γ 26.0	845.00	846.00	848.00	851.00	854.00	856.00	857.00	858.00	861.00	864.00	866.00	868.00
γ 28.0	791.00	791.00	794.00	796.00	799.00	801.00	801.00	803.00	807.00	810.00	813.00	814.00
γ 30.0	747.00	748.00	751.00	753.00	754.00	757.00	758.00	759.00	763.00	766.00	768.00	770.00
γ 35.0	600.00	601.00	603.00	605.00	608.00	610.00	611.00	612.00	616.00	620.00	622.00	625.00
γ 40.0	362.00	362.00	361.00	362.00	364.00	364.00	366.00	366.00	368.00	369.00	368.00	369.00
γ 45.0	141.00	141.00	141.00	141.00	141.00	140.00	140.00	140.00	139.00	139.00	139.00	138.00
γ 50.0	73.00	73.00	73.00	73.00	73.00	73.00	73.00	73.00	74.00	74.00	74.00	74.00
γ 55.0	41.00	41.00	41.00	41.00	41.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
γ 60.0	29.00	29.00	29.00	29.00	29.00	29.00	30.00	30.00	30.00	29.00	29.00	28.00
γ 65.0	21.00	21.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	21.00	21.00	20.00
γ 70.0	16.00	16.00	16.00	17.00	17.00	17.00	16.00	15.00	15.00	13.00	13.00	12.00
γ 75.0	15.00	15.00	15.00	15.00	15.00	14.00	12.00	11.00	10.00	9.00	8.00	8.00
γ 80.0	12.00	12.00	12.00	10.00	8.00	8.00	7.00	7.00	7.00	7.00	7.00	7.00
γ 85.0	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
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	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00	4697.00					
γ 1.0	4709.00	4722.00	4733.00	4741.00	4749.00	4752.00	4754.00					
γ 2.0	4627.00	4643.00	4653.00	4661.00	4670.00	4675.00	4681.00					
γ 3.0	4516.00	4527.00	4539.00	4550.00	4557.00	4562.00	4564.00					
γ 4.0	4340.00	4351.00	4362.00	4372.00	4378.00	4385.00	4387.00					
γ 5.0	4128.00	4138.00	4149.00	4157.00	4162.00	4165.00	4166.00					
γ 6.0	3901.00	3910.00	3921.00	3928.00	3933.00	3938.00	3940.00					
γ 7.0	3646.00	3655.00	3664.00	3673.00	3679.00	3684.00	3686.00					
γ 8.0	3366.00	3375.00	3383.00	3388.00	3396.00	3401.00	3401.00					
γ 9.0	3000.00	3007.00	3014.00	3018.00	3022.00	3028.00	3030.00					
γ 10.0	2799.00	2805.00	2812.00	2815.00	2819.00	2824.00	2824.00					
γ 12.0	2274.00	2278.00	2281.00	2285.00	2288.00	2290.00	2291.00					
γ 14.0	1884.00	1887.00	1890.00	1892.00	1895.00	1896.00	1897.00					

