

# IES Indoor Report

Photometric Filename: PL03-48-XX-03 5000K RA80 120D.IES

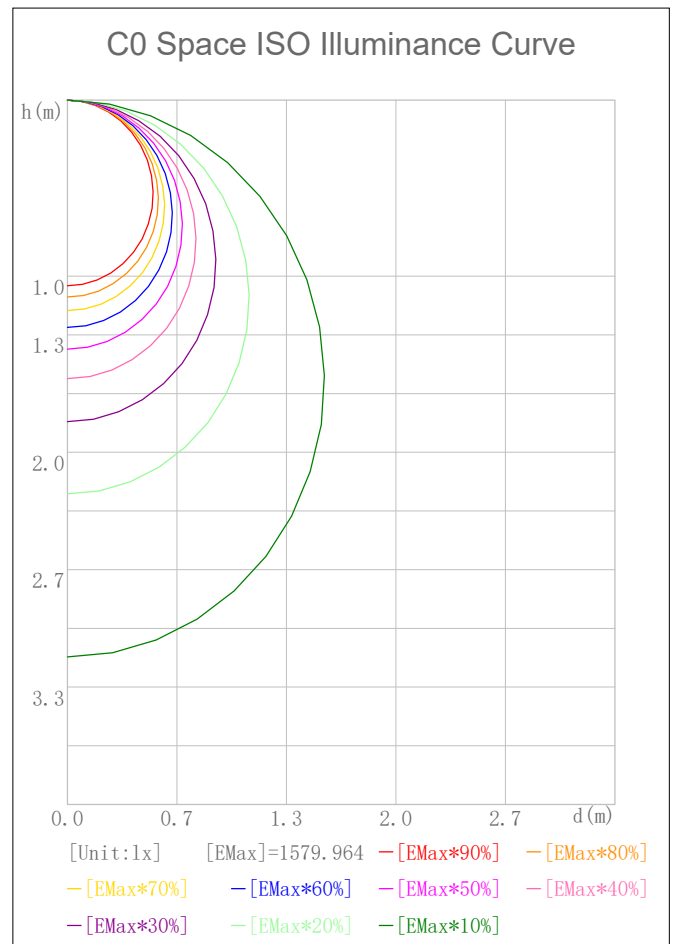
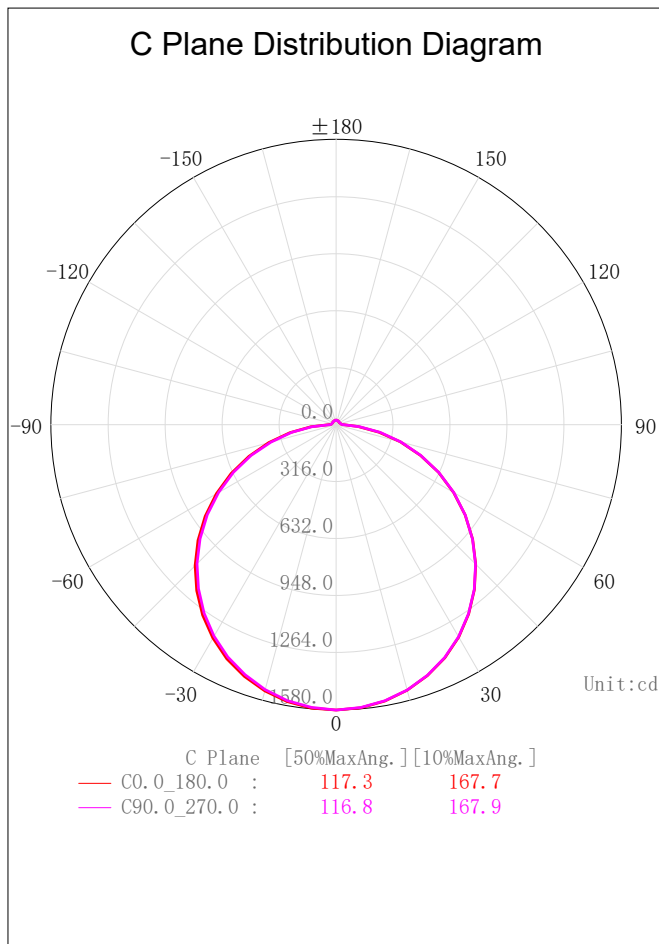
## Indoor Luminaire Photometric Data

### Description Information

Luminary Name: PL04-48-XX-03 5000K RA80 120D		Lum. Catalog:	Test ID: 01
Lamp Name:		Lamp Catalog: LED	Test Date: 2023/03/17
Manufacture: Shenzhen Norming Lightin Co.Ltd		Shld. Ang(°):	Test Machine: GON-2000
Test Lab: Quality Department		Frequency (Hz):	Lamp CCT (K): Ra:
Lum. Size (W*L*H): 0.220m*0.000m*-1.120m		Lum. Area (m2): 0.304	Lum. W (kg): 0.000
Test System: C, γ	Test Step: C=90.0 γ=5.0	Temp. (°C): 25	Humidity (%):

### Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 4983.860	Luminary Flux(lm): 4983.862	Field Angle(10%Imax): 167.7(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 4832.728lm 96.97%	
Rated Voltage(V):	Luminary EER(lm/W): 143.544	Up Lumens&Percent: 151.135lm 3.03%	
Tested Power(W): 34.720	Max. Candela(cd): 1579.964	S/MH: C0_a180=1.281 C90_270=1.275	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=0.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf): 28.9, 1.199	Beam Angle(50%Imax): 117.3(°)	ErP φ use(120°): 3666.001lm	
Lamp Size (W*L*H): 0.220m*0.000m*-1.120m	Left=-58.9°, Right=58.4°	IRF (%): 105.541	



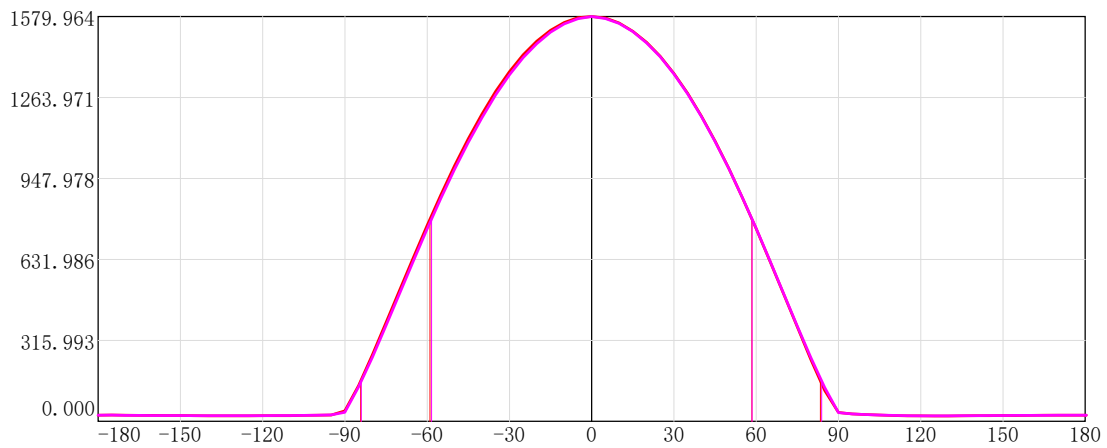
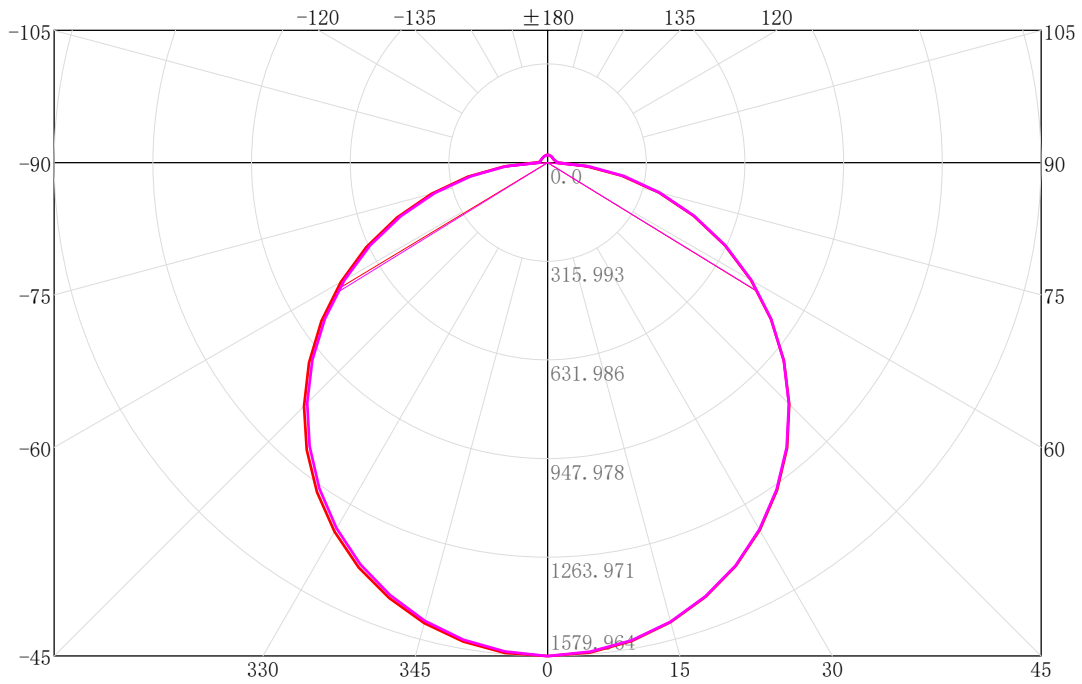
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## 2D Plane Light Intensity Distribution Curve

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

C Plane Distribution Diagram



C Plane	[50%MaxAng.]	[10%MaxAng.]
CO.0_180.0	: 117.3	167.7
C90.0_270.0	: 116.8	167.9

Unit:cd

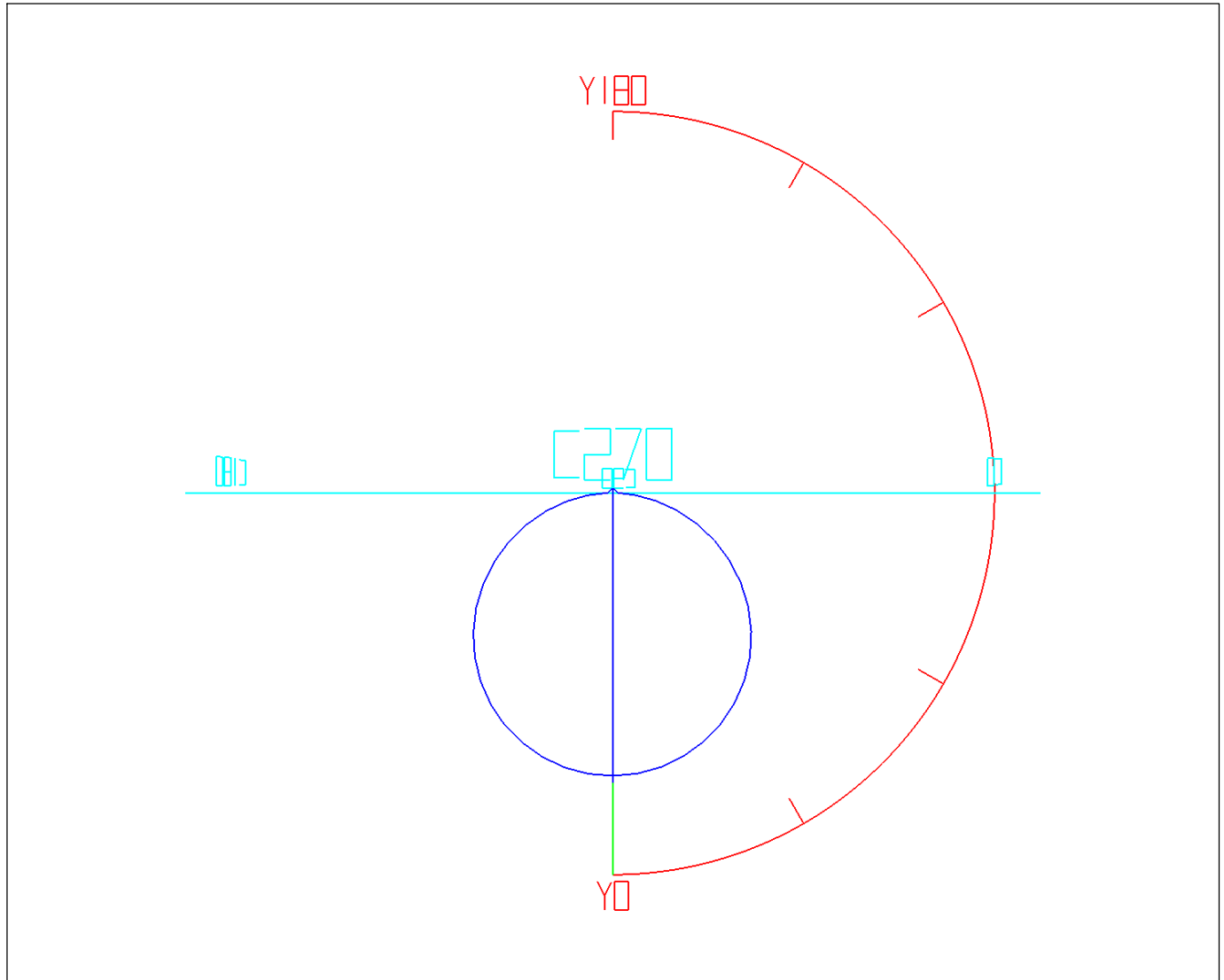
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## 3D Light Intensity Distribution Modal

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co. Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

## 3D Light Intensity Distribution Modal



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

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## Zonal Flux Tabulation

Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	37.69	37.69	0.76	0.76
5.0-10.0	111.87	149.56	2.24	3.00
10.0-15.0	182.49	332.05	3.66	6.66
15.0-20.0	247.30	579.35	4.96	11.62
20.0-25.0	304.47	883.83	6.11	17.73
25.0-30.0	352.08	1235.90	7.06	24.80
30.0-35.0	388.37	1624.27	7.79	32.59
35.0-40.0	412.42	2036.69	8.28	40.87
40.0-45.0	423.36	2460.05	8.49	49.36
45.0-50.0	420.90	2880.95	8.45	57.81
50.0-55.0	405.21	3286.16	8.13	65.94
55.0-60.0	376.79	3662.95	7.56	73.50
60.0-65.0	336.79	3999.75	6.76	80.25
65.0-70.0	286.86	4286.61	5.76	86.01
70.0-75.0	229.30	4515.90	4.60	90.61
75.0-80.0	167.05	4682.96	3.35	93.96
80.0-85.0	103.68	4786.64	2.08	96.04
85.0-90.0	46.09	4832.73	0.92	96.97
90.0-95.0	17.47	4850.20	0.35	97.32
95.0-100.0	14.42	4864.62	0.29	97.61
100.0-105.0	13.40	4878.02	0.27	97.88
105.0-110.0	12.42	4890.44	0.25	98.13
110.0-115.0	11.58	4902.02	0.23	98.36
115.0-120.0	10.86	4912.88	0.22	98.58
120.0-125.0	10.19	4923.07	0.20	98.78
125.0-130.0	9.56	4932.63	0.19	98.97
130.0-135.0	8.91	4941.54	0.18	99.15
135.0-140.0	8.24	4949.78	0.17	99.32
140.0-145.0	7.51	4957.28	0.15	99.47
145.0-150.0	6.72	4964.00	0.13	99.60
150.0-155.0	5.84	4969.85	0.12	99.72
155.0-160.0	4.90	4974.75	0.10	99.82
160.0-165.0	3.91	4978.66	0.08	99.90
165.0-170.0	2.86	4981.52	0.06	99.95
170.0-175.0	1.75	4983.27	0.04	99.99
175.0-180.0	0.59	4983.86	0.01	100.00

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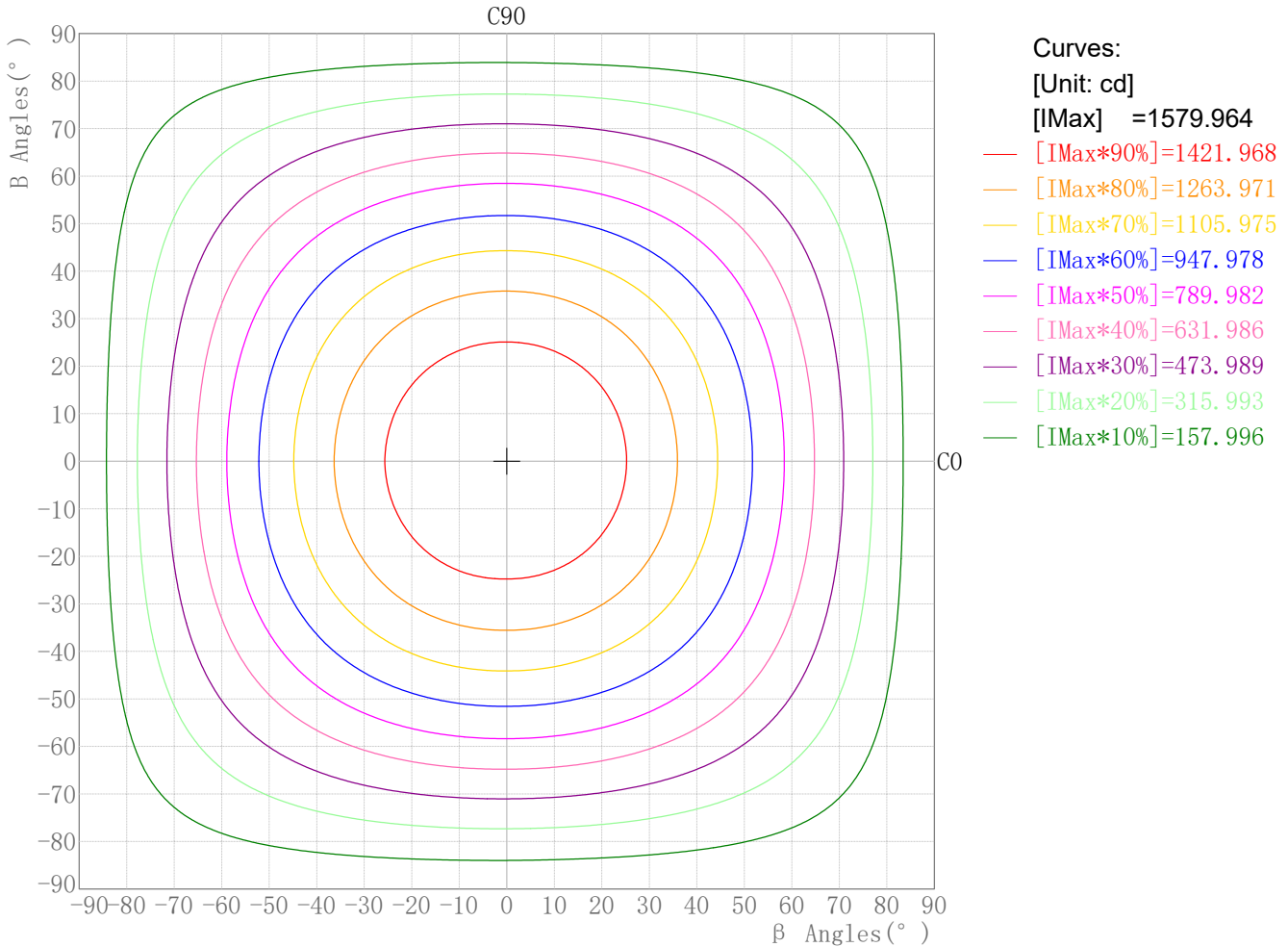
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## Rectangle ISO Lighting Intensity Diagram

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

### ISO Lighting Intensity Curve



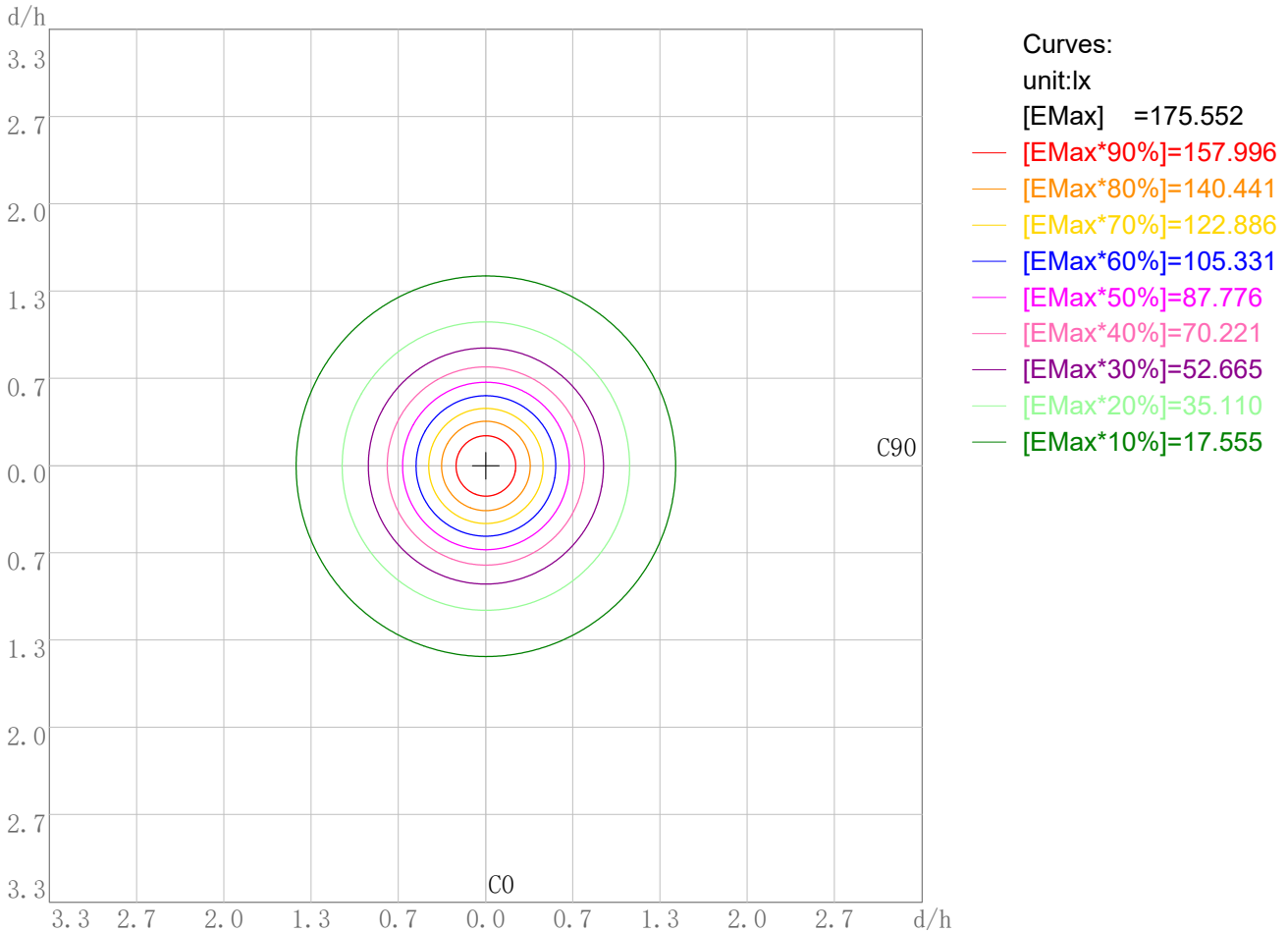
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## Plane ISO-Illuminance Diagram

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

### Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00  
Working Plane Maximum Illuminance(lx): 175.55  
Working Plane Maximum Illuminance Position(d/h): H0.0 V0.0

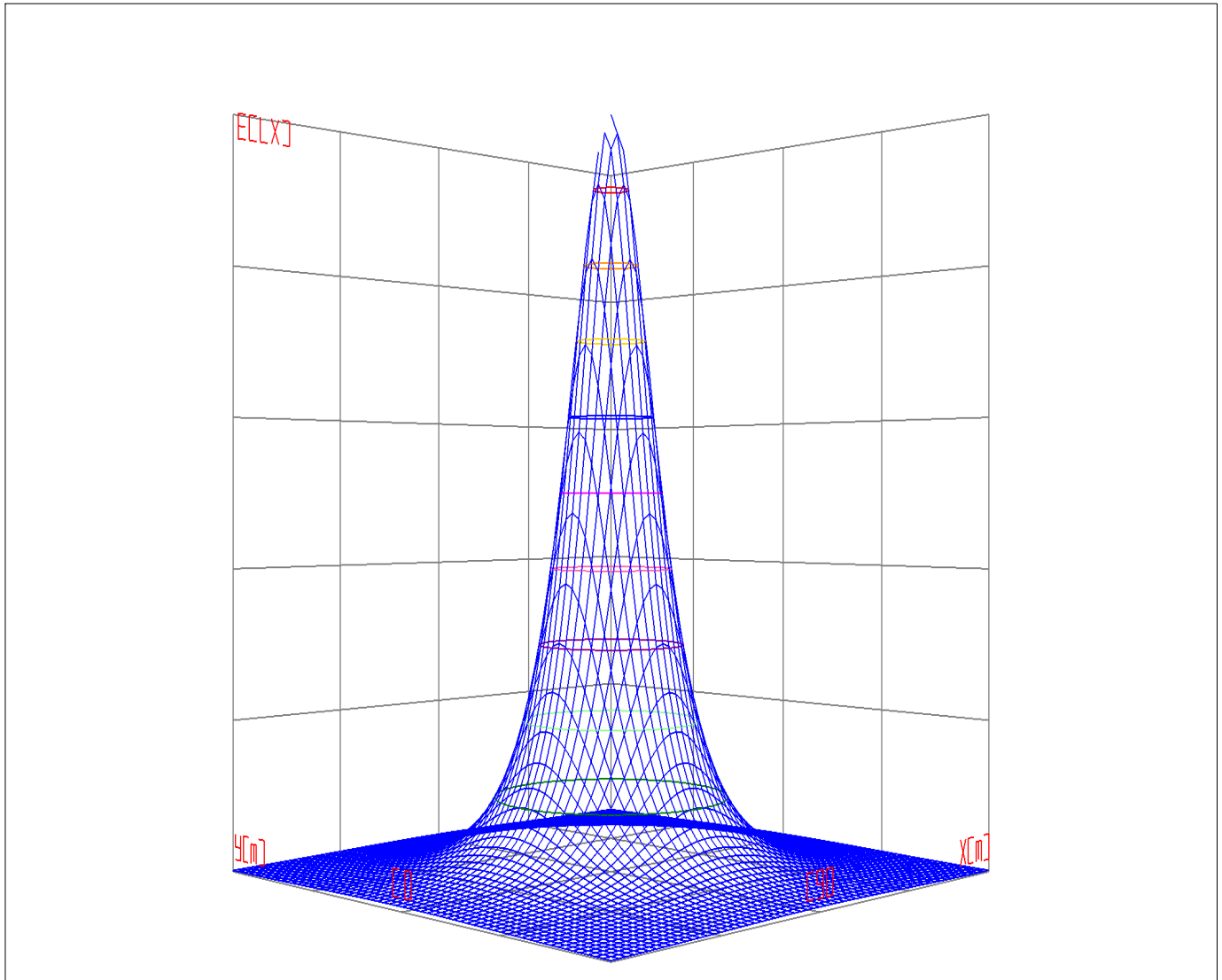
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## 3D Plane ISO Illuminance Diagram

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

### 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

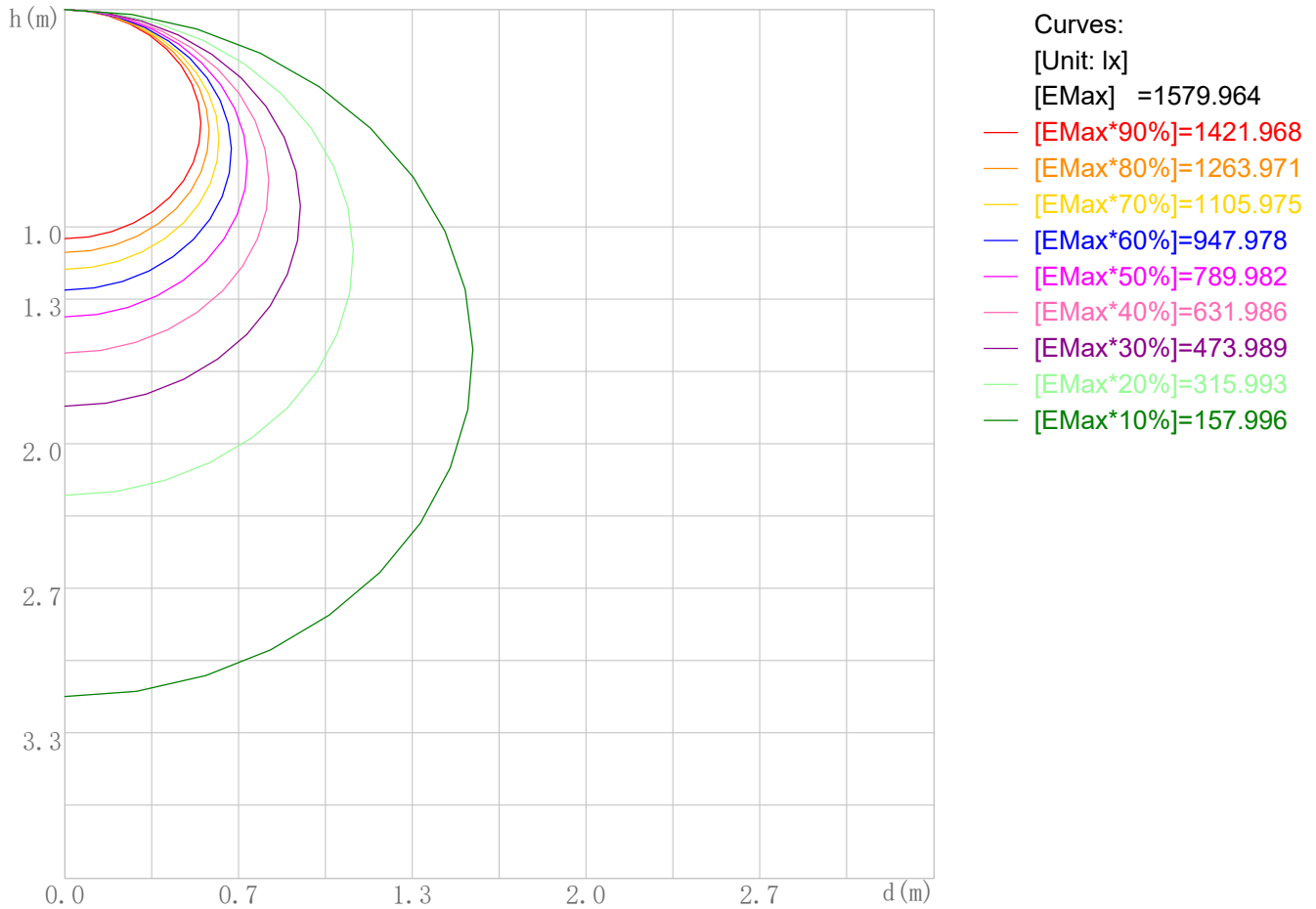
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## Space ISO Illuminance Diagram

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog: LED	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle: 1579.96lx, 0.0deg  
Plane Maximum Lighting Intensity and @Angle: 1579.964cd, 0deg



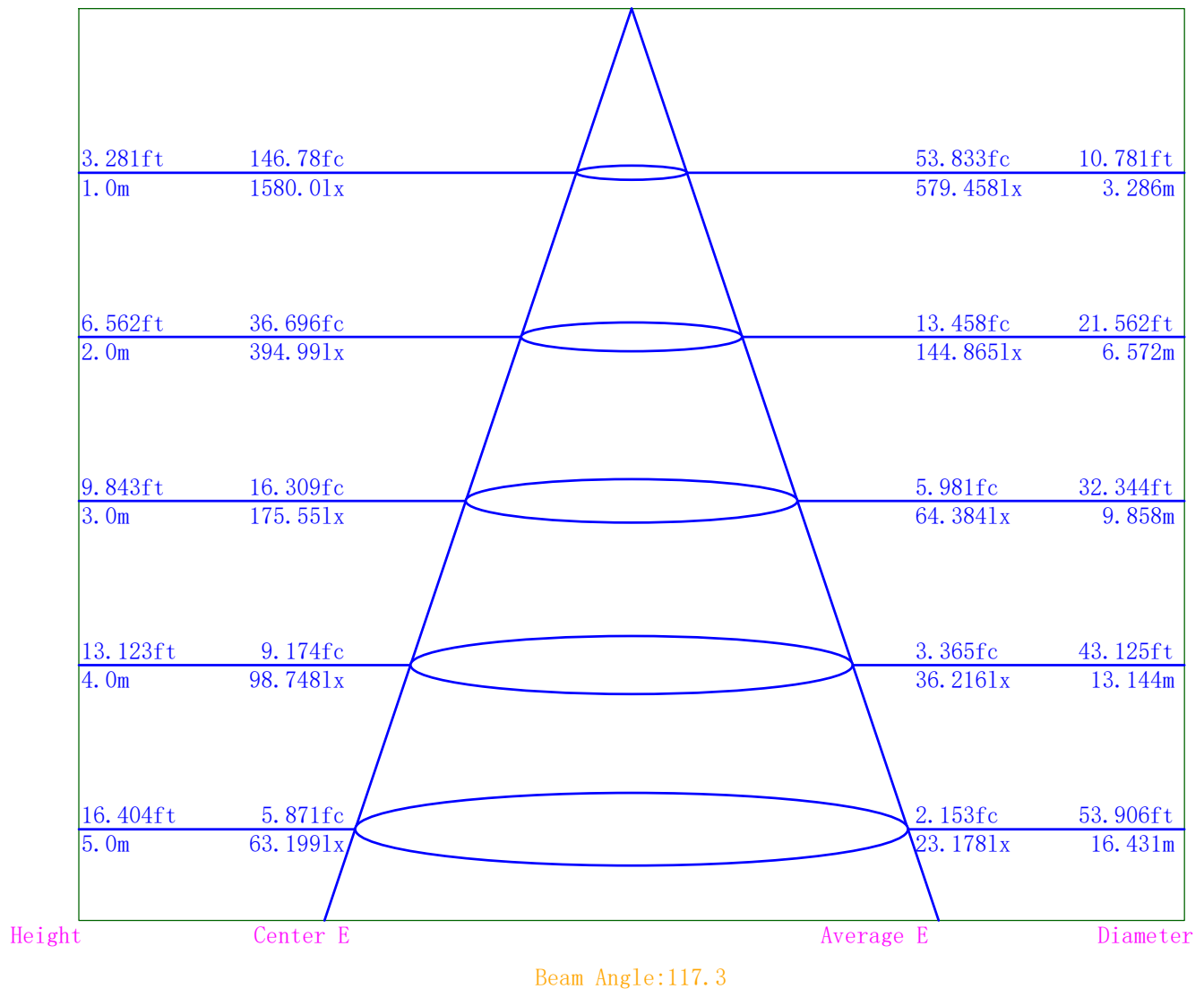
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## Illuminance-Distance Diagram

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co. Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

Illuminance-Distance Curve



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## Indoor Luminance Limiting Curves

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

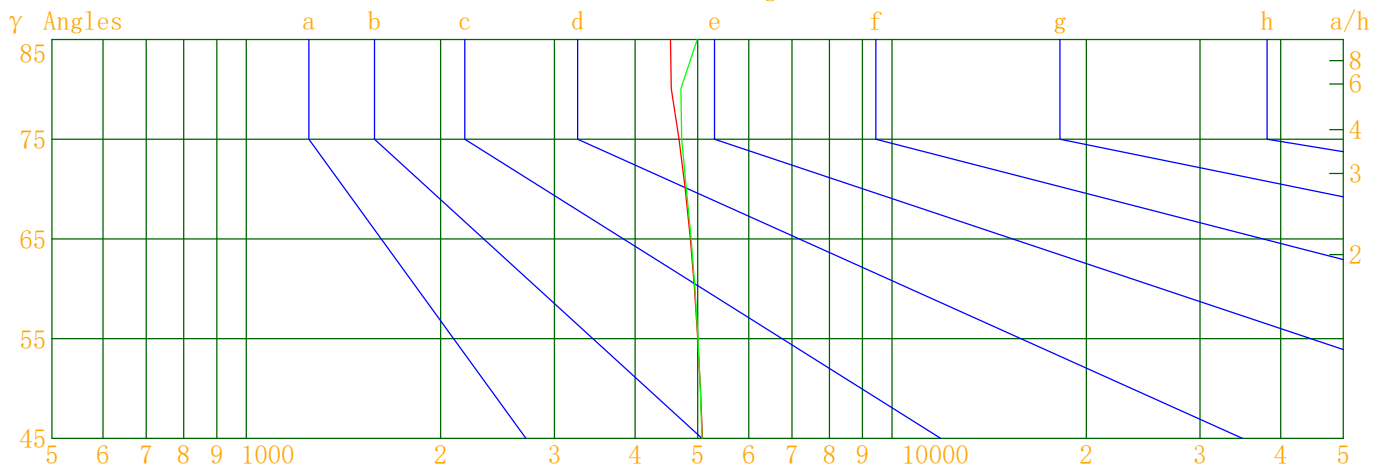
Glare Grade Table

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	5087	5050	5002	4944	4871	4783	4678	4552	4538
C90	5080	5047	5006	4954	4886	4804	4725	4710	4992

Luminance Limiting Curve



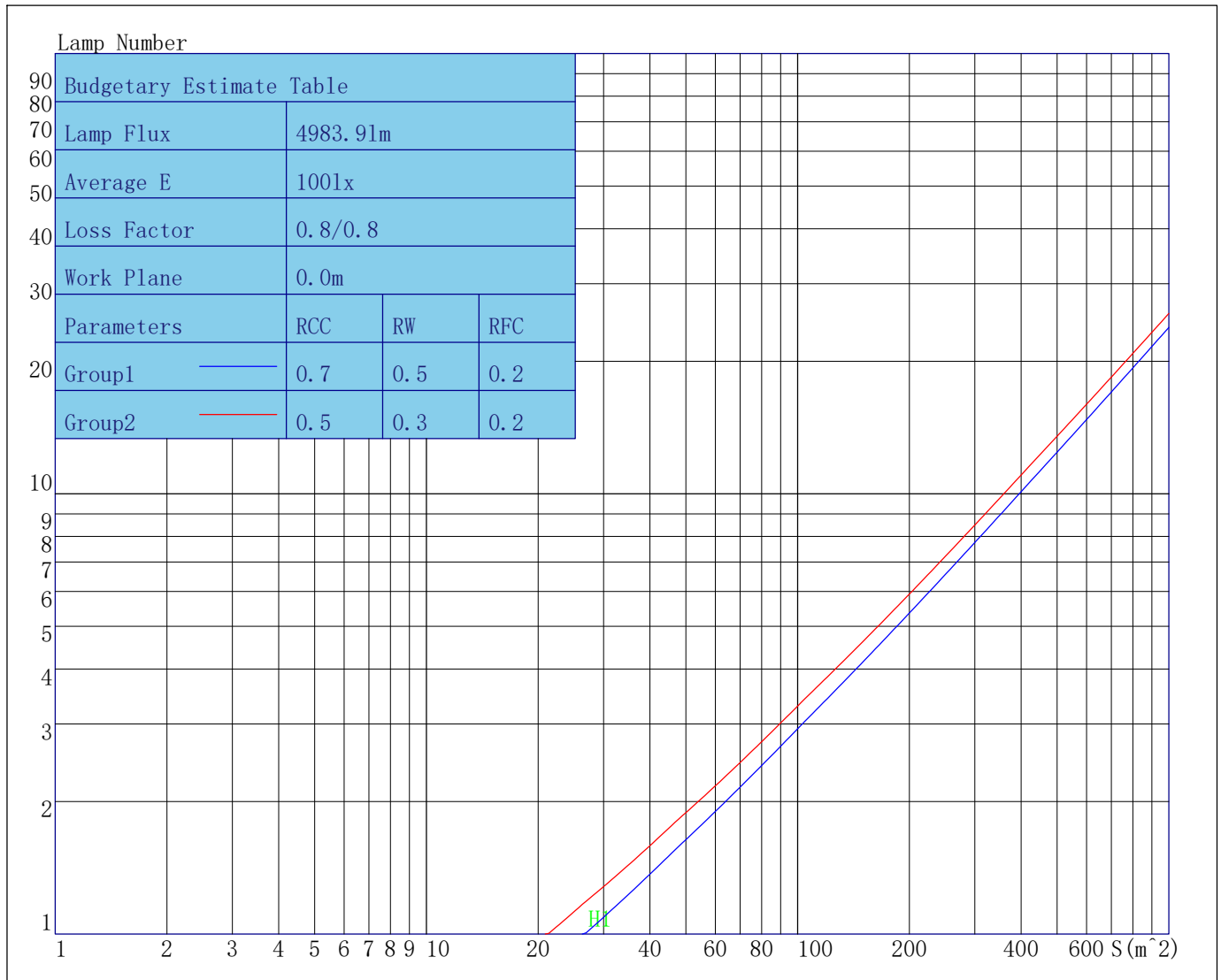
Luminous Size: Length(m)=0.000 Width(m)=-0.220 Height(m)=-1.120 Area(m<sup>2</sup>)=0.304106  
 Luminous Type: Without Luminous Side  
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

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## Indoor Budgetary Estimate Table

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
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Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17



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

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## Indoor Coefficient of Utilization Table

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97			
1	107	102	98	93	104	100	95	92	95	91	88	90	88	85	86	84	82	80			
2	97	89	81	75	94	86	80	74	82	77	72	79	74	70	75	71	68	65			
3	88	77	69	62	86	76	68	61	72	65	60	69	63	58	66	61	57	55			
4	81	68	59	52	78	67	58	52	64	57	51	61	55	50	59	53	49	46			
5	74	61	52	45	72	60	51	44	57	49	44	55	48	43	53	47	42	40			
6	68	55	46	39	66	54	45	39	51	44	38	49	43	38	48	42	37	35			
7	63	50	41	34	61	49	40	34	47	39	34	45	38	33	43	37	33	31			
8	59	45	36	31	57	44	36	30	43	35	30	41	34	30	40	34	29	27			
9	55	41	33	27	53	41	33	27	39	32	27	38	31	27	37	31	26	24			
10	51	38	30	25	50	37	30	25	36	29	24	35	29	24	34	28	24	22			

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## Unified Glare Rating Table

Lum. Name: PL04-48-XX-03 5000K RA80 120D	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lightin Co.Ltd	Test Machine: GON-2000	Test Date: 2023/03/17

## 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	Viewed crosswise					Viewed endwise				
X=2H Y=2H	17.8	19.4	18.2	19.8	20.1	17.8	19.4	18.2	19.8	20.2
Y=3H	19.6	21.0	20.0	21.4	21.8	19.6	21.0	20.0	21.4	21.9
Y=4H	20.3	21.7	20.8	22.1	22.6	20.4	21.7	20.8	22.2	22.6
Y=6H	21.0	22.2	21.4	22.7	23.1	21.0	22.3	21.5	22.7	23.2
Y=8H	21.2	22.4	21.7	22.9	23.4	21.3	22.5	21.8	23.0	23.4
Y=12H	21.4	22.6	21.9	23.0	23.5	21.5	22.7	22.0	23.1	23.6
X=4H Y=2H	18.6	20.0	19.0	20.4	20.8	18.6	20.0	19.0	20.4	20.8
Y=3H	20.6	21.7	21.0	22.2	22.6	20.6	21.8	21.1	22.2	22.7
Y=4H	21.5	22.5	21.9	23.0	23.5	21.5	22.6	22.0	23.0	23.5
Y=6H	22.2	23.2	22.7	23.7	24.2	22.3	23.2	22.8	23.7	24.2
Y=8H	22.5	23.4	23.0	23.9	24.4	22.6	23.5	23.1	24.0	24.5
Y=12H	22.8	23.6	23.3	24.1	24.6	22.9	23.7	23.4	24.2	24.8
X=8H Y=4H	21.9	22.7	22.4	23.2	23.8	21.9	22.8	22.4	23.3	23.8
Y=6H	22.8	23.5	23.3	24.1	24.7	22.9	23.6	23.4	24.1	24.8
Y=8H	23.2	23.8	23.7	24.4	24.9	23.3	23.9	23.8	24.5	25.0
Y=12H	23.5	24.1	24.1	24.7	25.3	23.7	24.3	24.2	24.8	25.4
X=12H Y=4H	21.9	22.7	22.4	23.2	23.8	22.0	22.7	22.5	23.3	23.8
Y=6H	22.9	23.5	23.5	24.1	24.7	23.0	23.6	23.5	24.1	24.7
Y=8H	23.4	23.9	23.9	24.5	25.1	23.5	24.0	24.0	24.6	25.2
Variations with the objerver position at spacings										
S=1.0H	0.4/-0.4					0.4/-0.4				
S=1.5H	0.7/-0.7					0.6/-0.7				
S=2.0H	0.8/-0.9					0.7/-0.9				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	3.3					3.4				

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

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## Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
γ 0.0	1579.96	1579.96	1579.96	1579.96
γ 5.0	1574.13	1571.82	1575.64	1570.94
γ 10.0	1554.72	1553.00	1557.08	1551.36
γ 15.0	1522.69	1521.40	1526.40	1518.79
γ 20.0	1479.18	1477.14	1483.60	1473.79
γ 25.0	1424.97	1423.25	1430.84	1419.28
γ 30.0	1357.92	1355.85	1364.47	1351.78
γ 35.0	1280.27	1277.96	1287.41	1273.77
γ 40.0	1192.37	1190.37	1199.95	1185.42
γ 45.0	1093.84	1092.33	1102.93	1088.68
γ 50.0	987.22	986.48	997.46	983.12
γ 55.0	872.51	873.18	884.07	870.35
γ 60.0	751.72	753.26	764.45	750.89
γ 65.0	626.07	627.96	640.45	626.82
γ 70.0	497.47	499.63	513.23	500.01
γ 75.0	368.17	371.88	385.32	373.29
γ 80.0	240.37	248.73	259.83	249.74
γ 85.0	120.29	132.32	140.16	134.77
γ 90.0	34.69	34.33	41.47	35.33
γ 95.0	29.22	29.34	25.29	25.62
γ 100.0	26.84	27.05	24.39	24.56
γ 105.0	24.98	25.14	23.69	23.65
γ 110.0	23.20	23.82	22.61	22.97
γ 115.0	22.10	22.62	22.77	22.84
γ 120.0	21.64	22.06	22.19	22.50
γ 125.0	21.37	22.05	22.16	22.38
γ 130.0	21.33	22.08	22.12	22.30
γ 135.0	21.82	22.39	22.01	22.32
γ 140.0	22.27	22.57	22.08	22.46
γ 145.0	22.47	22.80	22.59	22.75
γ 150.0	23.06	23.04	22.90	22.98
γ 155.0	22.92	23.70	23.00	23.15
γ 160.0	23.69	23.44	23.66	23.39
γ 165.0	24.28	23.80	23.87	23.66
γ 170.0	24.58	24.32	24.46	24.00
γ 175.0	24.44	24.20	25.08	24.70
γ 180.0	24.59	24.59	24.59	24.59

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