

IES Indoor Report

Photometric Filename:24W Downlight 5000K.IES

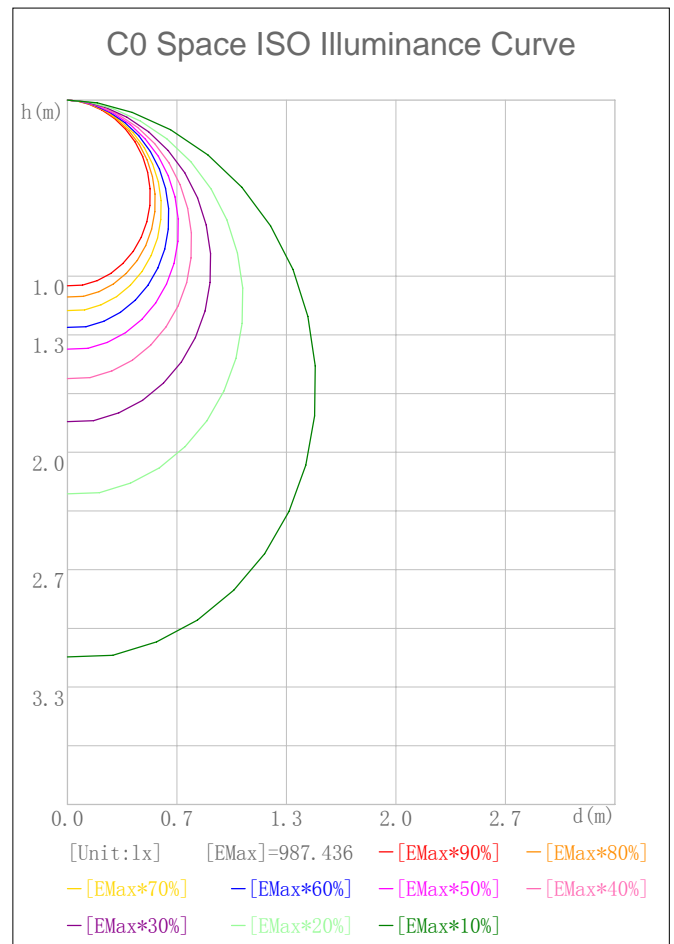
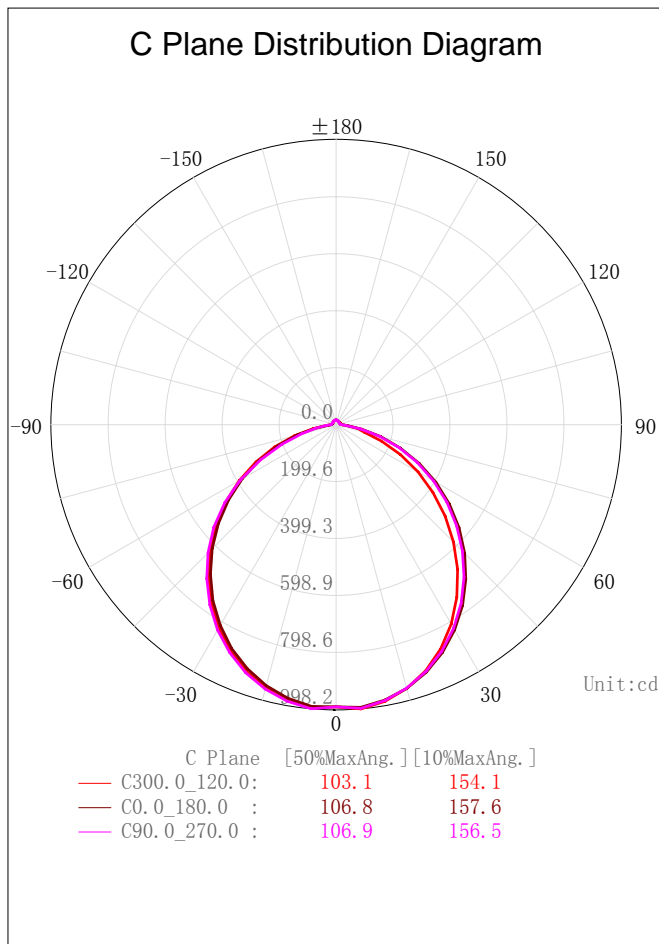
Indoor Luminaire Photometric Data

Description Information

Luminaire Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Date: 2017/02/15
Manufacture: 诺明光电	Shld. Ang(°):	Test Machine:GON-2000
Test Lab: 诺明实验室	Frequency (Hz):	Lamp CCT(K): Ra:
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=30.0 γ=5.0	Temp. (°C): 25
		Humidity(%): 50.0

Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 2500.000	Luminaire Flux(lm): 2705.007	Field Angle(10%Imax): 154.1(°)	
Rated Power(W):	Luminaire Efficiency: 108.20%	Down Lumens&Percent: 2615.946lm 96.71%	
Rated Voltage(V):	Luminaire EER(lm/W): 104.927	Up Lumens&Percent: 89.060lm 3.29%	
Tested Power(W): 25.780	Max. Candela(cd): 998.199	S/MH: C0_a180=1.235 C90_270=1.242	
Lamps' Inside: 1	Max Cand@Ang. (°): C=300.0 γ=5.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf): 219.6, 0.125, 0.937	Beam Angle(50%Imax): 103.1(°)	ErP φ use(120°): 2122.475lm	
Lamp Size (W*L*H): 0.000m*0.000m*0.000m	Left=-53.2°, Right=49.9°	IRF(%): 115.252	

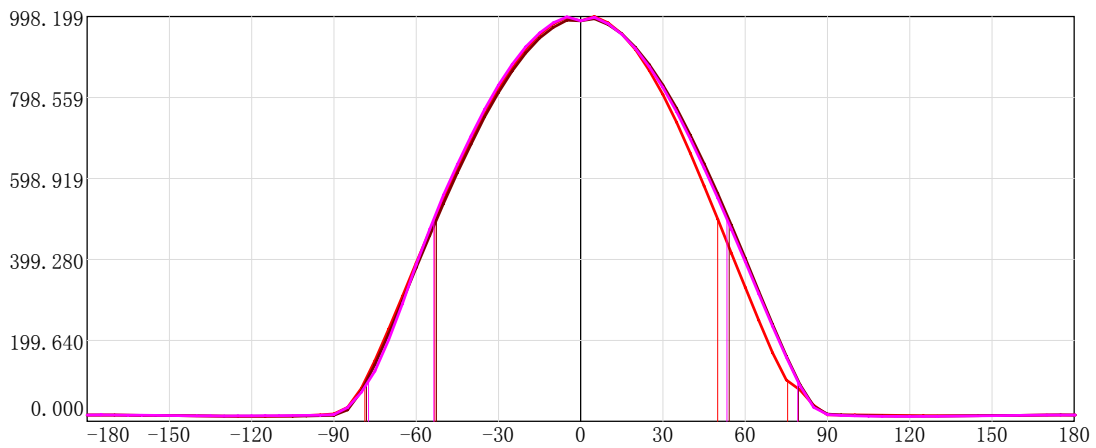
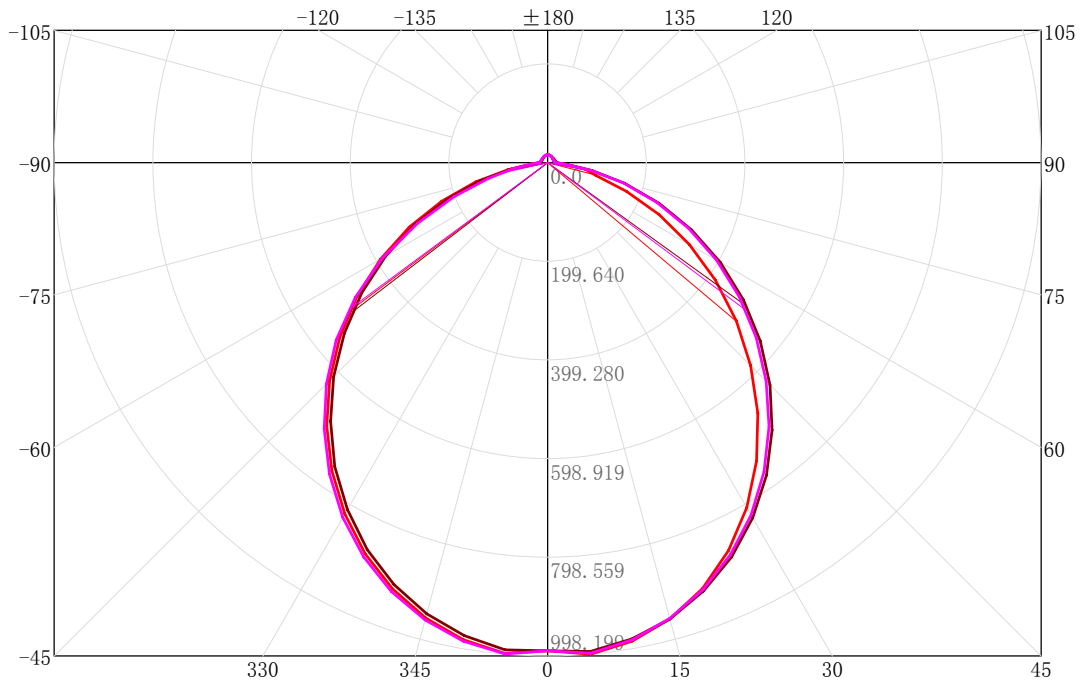


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2D Plane Light Intensity Distribution Curve

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

C Plane Distribution Diagram

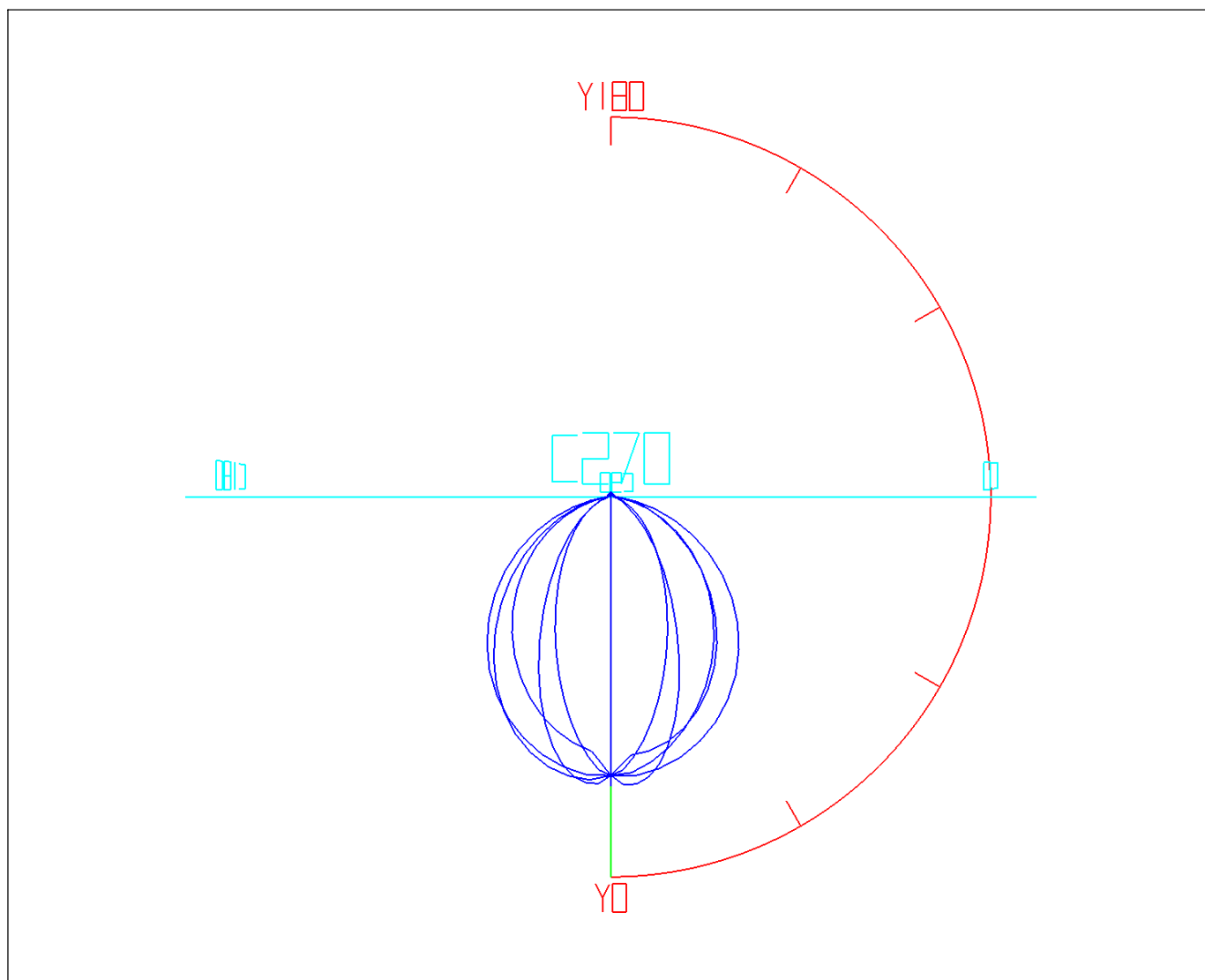


C Plane	[50%MaxAng.]	[10%MaxAng.]	Unit:cd
C300.0_120.0 :	103.1	154.1	
C0.0_180.0 :	106.8	157.6	
C90.0_270.0 :	106.9	156.5	

3D Light Intensity Distribution Modal

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

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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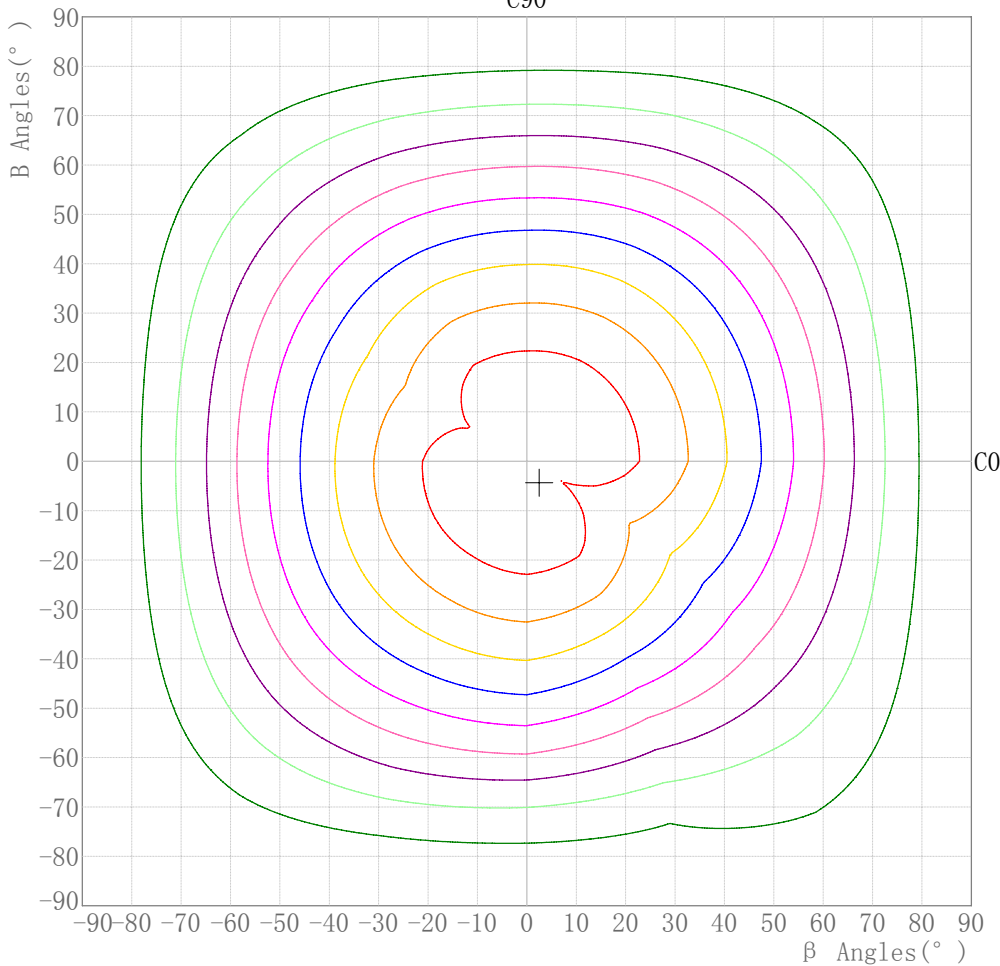
Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	23.54	23.54	0.94	0.94
5.0-10.0	69.66	93.19	2.79	3.73
10.0-15.0	113.13	206.33	4.53	8.25
15.0-20.0	152.30	358.63	6.09	14.35
20.0-25.0	185.68	544.31	7.43	21.77
25.0-30.0	212.05	756.36	8.48	30.25
30.0-35.0	230.52	986.88	9.22	39.48
35.0-40.0	240.41	1227.30	9.62	49.09
40.0-45.0	241.53	1468.82	9.66	58.75
45.0-50.0	234.17	1702.99	9.37	68.12
50.0-55.0	218.64	1921.63	8.75	76.87
55.0-60.0	195.55	2117.18	7.82	84.69
60.0-65.0	165.89	2283.07	6.64	91.32
65.0-70.0	131.35	2414.42	5.25	96.58
70.0-75.0	94.68	2509.10	3.79	100.36
75.0-80.0	60.32	2569.43	2.41	102.78
80.0-85.0	31.96	2601.39	1.28	104.06
85.0-90.0	14.56	2615.95	0.58	104.64
90.0-95.0	9.17	2625.11	0.37	105.00
95.0-100.0	8.32	2633.44	0.33	105.34
100.0-105.0	7.70	2641.14	0.31	105.65
105.0-110.0	7.22	2648.36	0.29	105.93
110.0-115.0	6.80	2655.15	0.27	106.21
115.0-120.0	6.40	2661.56	0.26	106.46
120.0-125.0	6.04	2667.59	0.24	106.70
125.0-130.0	5.69	2673.28	0.23	106.93
130.0-135.0	5.35	2678.63	0.21	107.15
135.0-140.0	5.00	2683.63	0.20	107.35
140.0-145.0	4.61	2688.24	0.18	107.53
145.0-150.0	4.16	2692.40	0.17	107.70
150.0-155.0	3.66	2696.06	0.15	107.84
155.0-160.0	3.11	2699.17	0.12	107.97
160.0-165.0	2.50	2701.67	0.10	108.07
165.0-170.0	1.83	2703.51	0.07	108.14
170.0-175.0	1.12	2704.63	0.04	108.19
175.0-180.0	0.38	2705.01	0.02	108.20

Rectangle ISO Lighting Intensity Diagram

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

ISO Lighting Intensity Curve
 C90



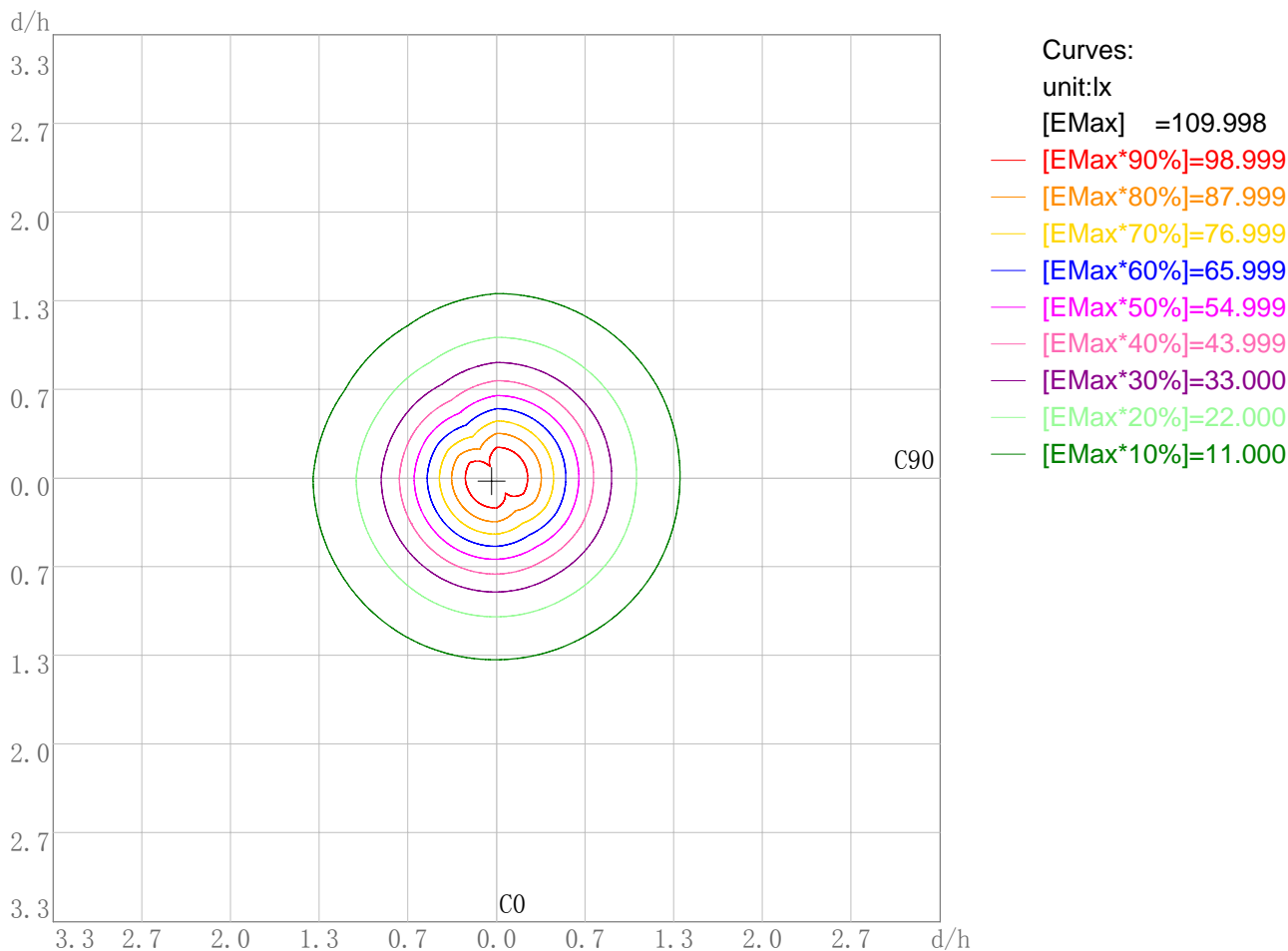
- Curves:
 [Unit: cd]
 [IMax] =998.199
- [IMax*90%]=898.379
 - [IMax*80%]=798.559
 - [IMax*70%]=698.739
 - [IMax*60%]=598.919
 - [IMax*50%]=499.099
 - [IMax*40%]=399.280
 - [IMax*30%]=299.460
 - [IMax*20%]=199.640
 - [IMax*10%]=99.820

Maximum Light Intensity(cd): 998.20
 Maximum Cand.@Angle: H=2.5°,V=-4.3°

Plane ISO-Illuminance Diagram

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

Plane ISO-Illuminance Curve

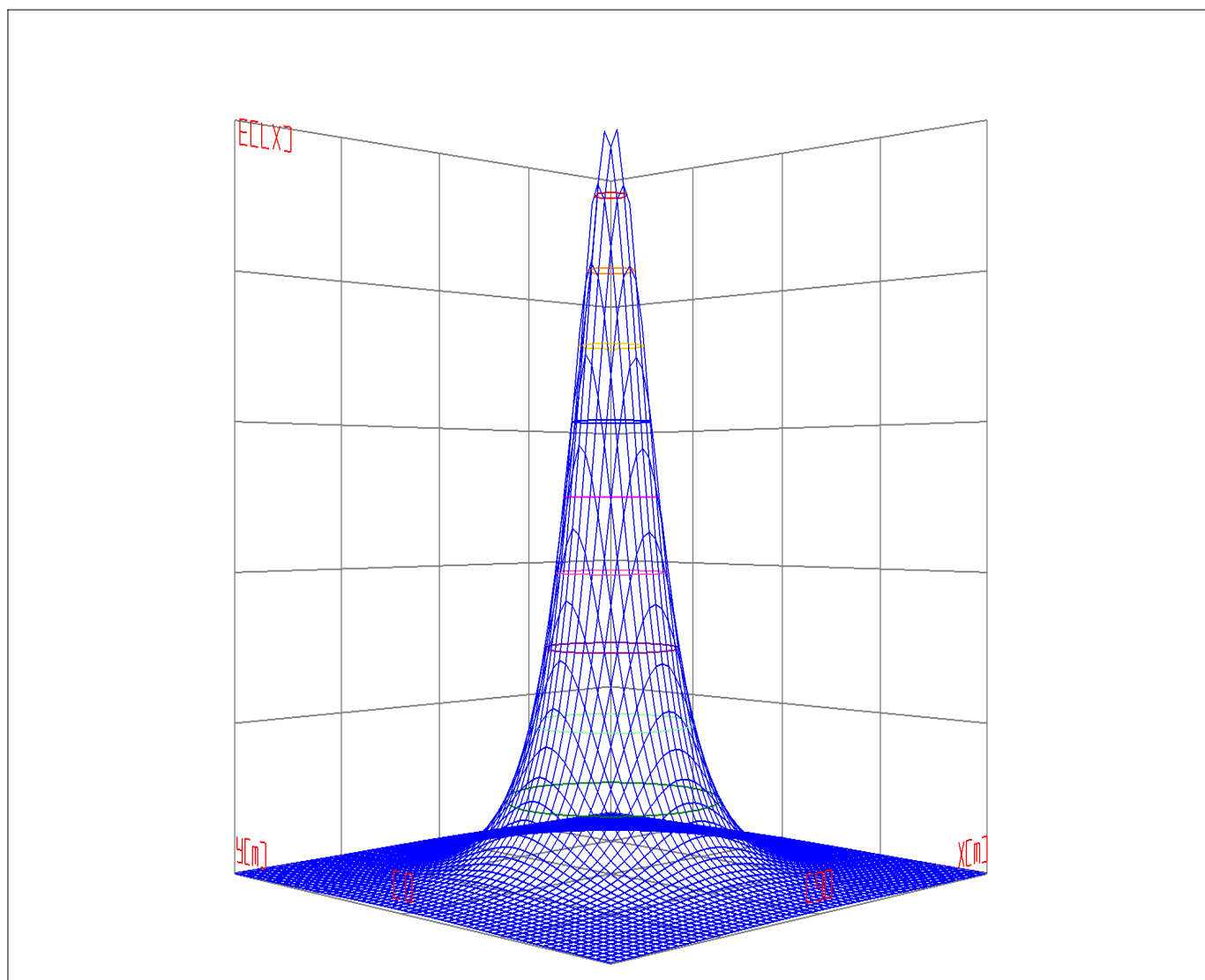


Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 110.00
Working Plane Maximum Illuminance Position(d/h):H-0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

3D Plane Illuminance Modal

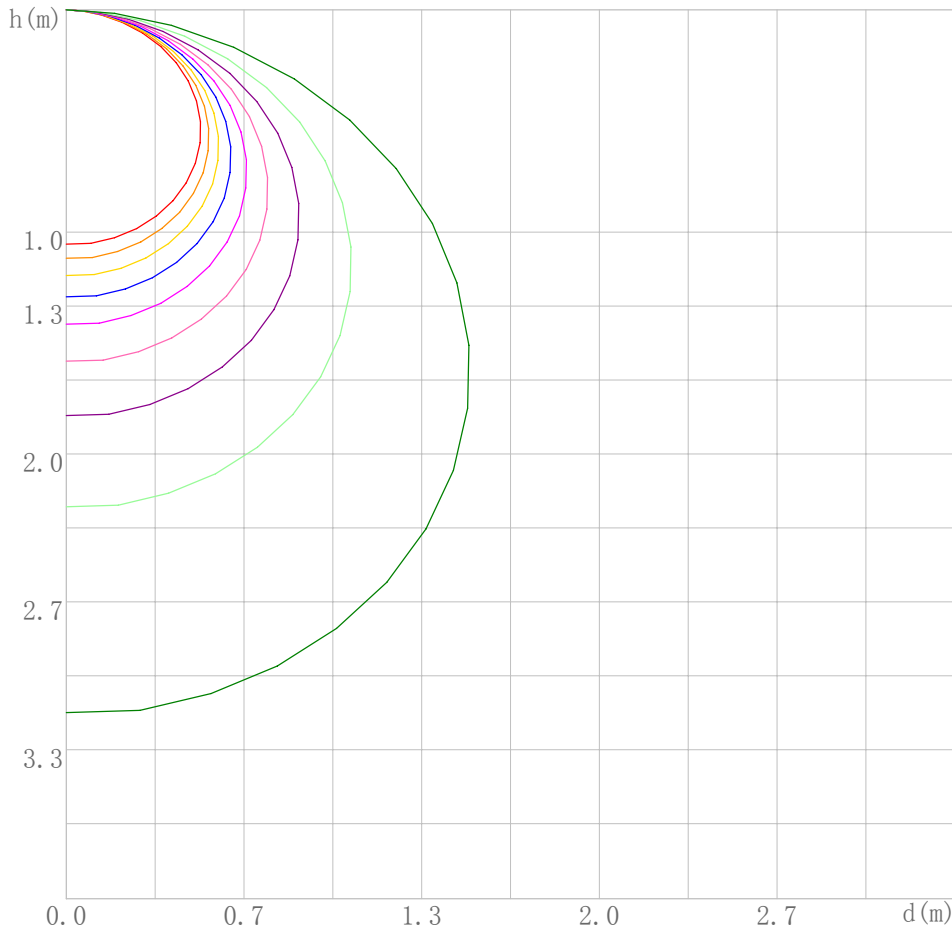


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

Space ISO Illuminance Curve



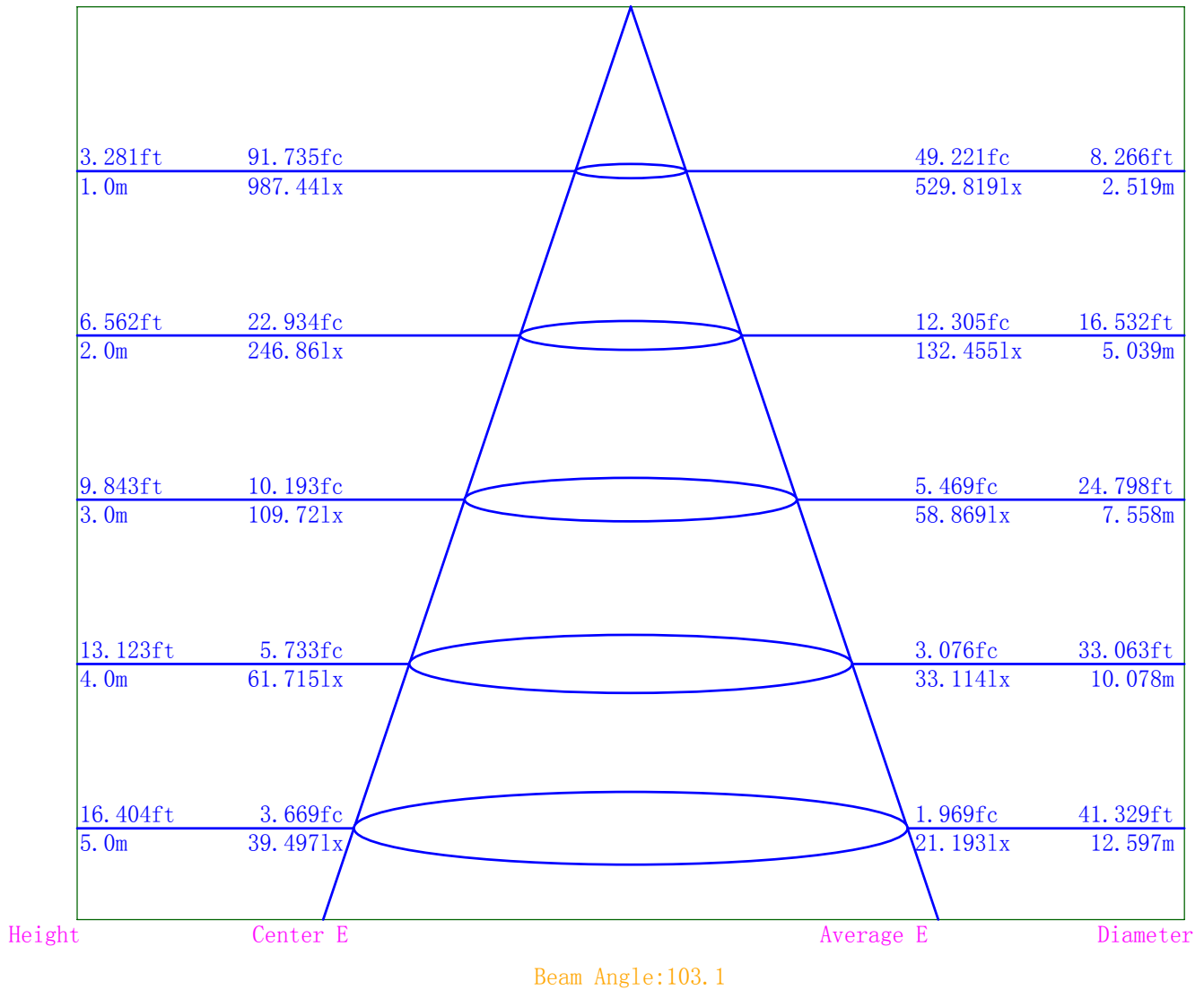
- Curves:
 [Unit: lx]
 [EMax] =987.436
- [EMax*90%]=888.692
 - [EMax*80%]=789.949
 - [EMax*70%]=691.205
 - [EMax*60%]=592.462
 - [EMax*50%]=493.718
 - [EMax*40%]=394.974
 - [EMax*30%]=296.231
 - [EMax*20%]=197.487
 - [EMax*10%]=98.744

Space Plane Maximum Illuminance and @Angle:987.44lx,0.0deg
 Plane Maximum Lighting Intensity and @Angle:992.633cd,0deg

Illuminance-Distance Diagram

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

Illuminance-Distance Curve



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Indoor Luminance Limiting Curves

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

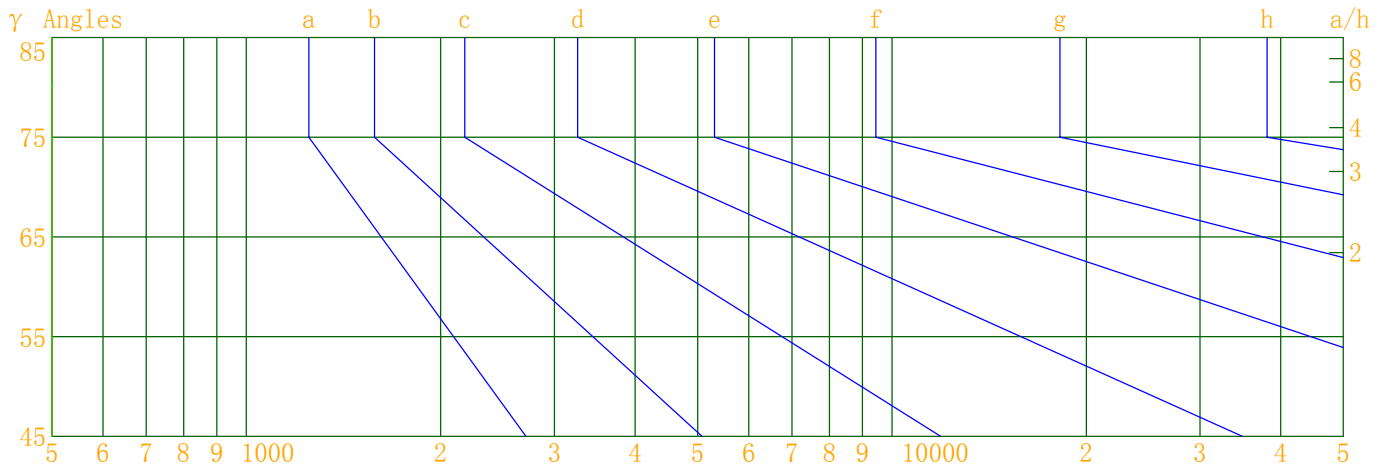
Glare Grade Table

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

Luminance Limiting Curve

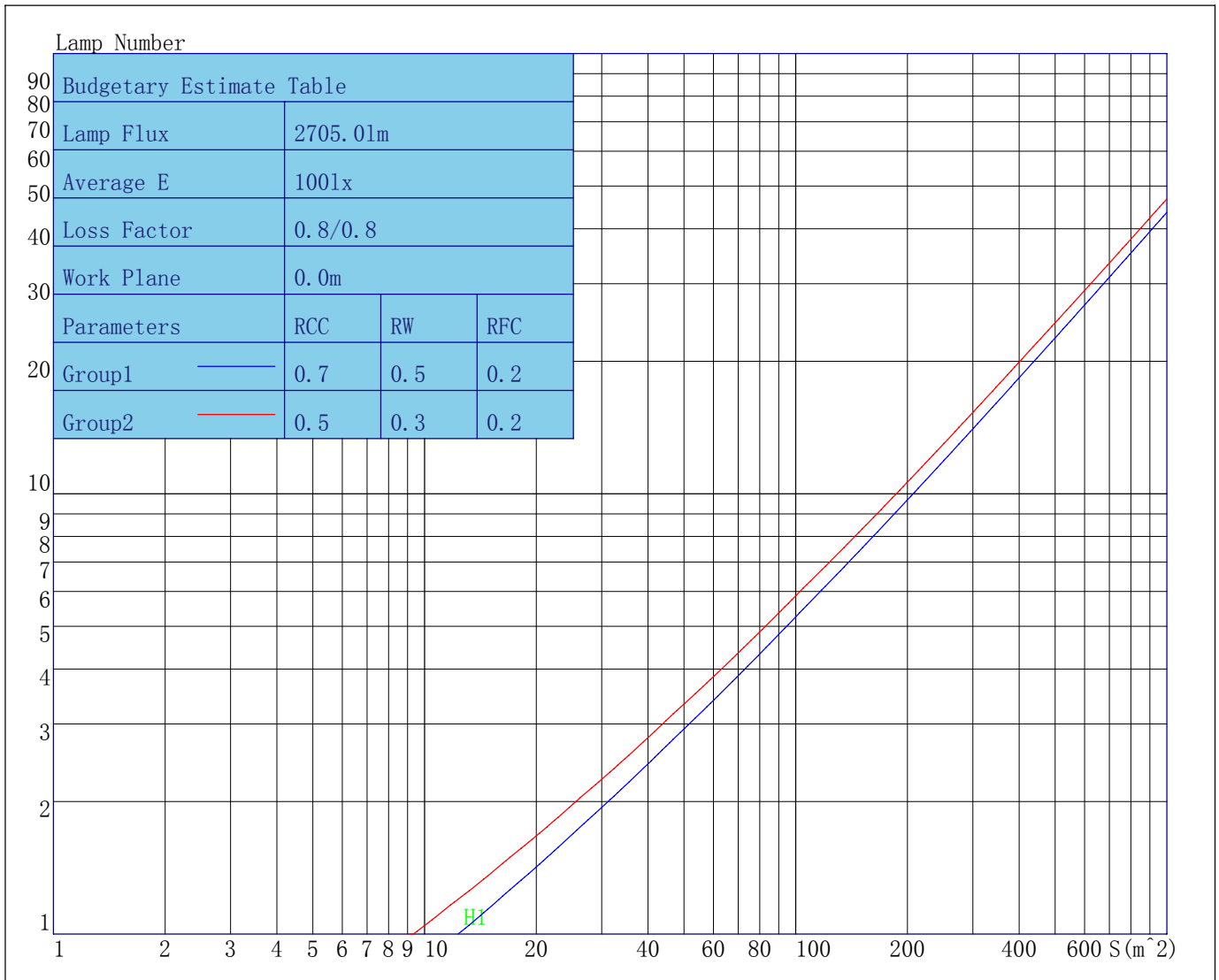


Luminous Size: Length(m)=0.000 Width(m)=0.000 Height(m)=0.000 Area(m²)=0.000000
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

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Indoor Budgetary Estimate Table

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
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Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15



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: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

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	128	128	128	128	125	125	125	125	118	118	118	112	112	112	107	107	107	105
1	117	112	108	104	114	109	105	102	104	101	98	99	97	94	95	93	91	88
2	107	98	91	85	104	96	89	84	91	86	81	87	83	79	84	80	77	74
3	98	86	78	71	95	84	77	70	81	74	68	77	72	67	74	69	65	63
4	89	77	67	60	87	75	66	60	72	64	59	69	63	57	66	61	56	54
5	82	69	59	52	80	67	58	52	65	57	51	62	55	50	60	54	49	47
6	76	62	52	46	74	61	52	45	58	50	45	56	49	44	54	48	43	41
7	71	56	47	40	68	55	46	40	53	45	39	51	44	39	50	43	38	36
8	66	51	42	36	64	50	42	36	49	41	35	47	40	35	46	39	34	32
9	61	47	38	32	60	46	38	32	45	37	32	43	36	32	42	36	31	29
10	58	43	35	29	56	43	35	29	41	34	29	40	33	29	39	33	28	26

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Unified Glare Rating Table

Lum. Name: 24W Downlight 5000K	Lum. Catalog:	Test ID: 01
Lamp Name:	Lamp Catalog: 灯具	Test Lab: 诺明实验室
Manufacture: 诺明光电	Test Machine:GON-2000	Test Date: 2017/02/15

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	1.3	2.9	1.8	3.3	3.7	1.3	2.9	1.8	3.3	3.7
Y=3H	1.2	2.6	1.6	3.0	3.5	1.2	2.6	1.6	3.0	3.5
Y=4H	1.1	2.5	1.6	2.9	3.4	1.1	2.5	1.6	2.9	3.4
Y=6H	1.0	2.3	1.5	2.8	3.2	1.0	2.3	1.5	2.8	3.2
Y=8H	1.0	2.2	1.5	2.7	3.2	1.0	2.2	1.5	2.7	3.2
Y=12H	1.0	2.2	1.5	2.6	3.1	1.0	2.2	1.5	2.6	3.1
X=4H Y=2H	1.1	2.5	1.6	2.9	3.4	1.1	2.5	1.6	2.9	3.4
Y=3H	1.0	2.1	1.4	2.6	3.1	1.0	2.1	1.4	2.6	3.1
Y=4H	0.9	2.0	1.4	2.4	3.0	0.9	2.0	1.4	2.4	3.0
Y=6H	0.8	1.8	1.3	2.3	2.8	0.8	1.8	1.3	2.3	2.8
Y=8H	0.8	1.7	1.3	2.2	2.7	0.8	1.7	1.3	2.2	2.7
Y=12H	0.8	1.6	1.3	2.1	2.7	0.8	1.6	1.3	2.1	2.7
X=8H Y=4H	0.8	1.7	1.3	2.2	2.7	0.8	1.7	1.3	2.2	2.7
Y=6H	0.7	1.5	1.2	2.0	2.7	0.7	1.5	1.2	2.0	2.7
Y=8H	0.6	1.4	1.2	1.9	2.5	0.6	1.4	1.2	1.9	2.5
Y=12H	0.6	1.3	1.2	1.8	2.4	0.6	1.3	1.2	1.8	2.4
X=12H Y=4H	0.8	1.6	1.3	2.1	2.7	0.8	1.6	1.3	2.1	2.7
Y=6H	0.7	1.4	1.2	1.9	2.5	0.7	1.4	1.2	1.9	2.5
Y=8H	0.6	1.3	1.2	1.8	2.4	0.6	1.3	1.2	1.8	2.4
Variations with the observer 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				

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	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0	C300.0	C330.0
γ 0.0	987.44	987.44	987.44	987.44	987.44	987.44	987.44	987.44	987.44	987.44	987.44	987.44
γ 5.0	992.63	995.51	996.96	996.19	996.38	917.18	989.19	992.74	995.03	997.53	998.20	907.49
γ 10.0	978.46	980.81	981.56	980.50	980.20	908.81	971.56	975.96	978.19	982.89	982.95	890.27
γ 15.0	955.52	957.11	957.42	954.41	953.47	891.48	945.08	949.84	952.37	957.74	955.48	864.54
γ 20.0	921.93	923.22	923.63	919.07	917.64	865.92	908.38	913.84	916.39	923.56	916.61	831.54
γ 25.0	880.23	880.47	881.28	874.82	873.07	831.03	863.74	869.51	872.12	880.20	865.53	790.70
γ 30.0	829.49	829.93	830.10	822.83	820.66	787.60	810.33	816.66	819.53	828.76	805.59	743.31
γ 35.0	771.85	772.01	772.46	762.97	761.07	735.39	750.68	757.69	760.54	769.30	736.83	689.50
γ 40.0	706.11	707.05	707.79	696.47	695.15	674.97	683.01	691.37	694.14	703.35	661.36	630.55
γ 45.0	636.15	636.30	637.62	625.15	623.60	608.02	612.42	620.27	622.88	632.80	580.79	565.80
γ 50.0	561.37	561.64	562.93	550.53	548.60	535.12	536.87	545.43	547.60	558.18	498.18	498.10
γ 55.0	483.53	483.05	485.39	473.15	470.49	456.22	458.81	467.22	469.25	474.61	414.09	426.39
γ 60.0	403.00	401.27	405.25	394.33	390.18	374.09	378.22	385.48	388.36	386.33	331.05	352.08
γ 65.0	320.86	318.23	324.23	314.25	309.11	291.30	297.06	303.29	303.77	290.54	248.89	277.70
γ 70.0	239.30	235.71	243.02	234.49	228.20	209.29	216.37	221.54	216.78	201.15	169.38	210.43
γ 75.0	161.28	156.60	164.23	158.14	150.40	132.62	140.54	144.30	134.59	124.34	102.08	152.11
γ 80.0	91.29	86.52	93.55	87.82	81.66	67.83	74.57	78.67	70.24	71.86	77.81	102.34
γ 85.0	37.42	35.59	41.07	34.71	34.54	27.99	28.33	32.80	29.99	34.51	39.97	50.21
γ 90.0	18.02	16.92	19.03	17.04	18.66	18.40	15.11	16.85	15.19	16.84	16.37	22.63
γ 95.0	16.15	15.14	16.55	15.01	16.34	16.74	14.23	15.52	14.26	15.46	15.92	19.39
γ 100.0	14.95	14.01	15.06	13.85	14.57	13.56	13.56	14.59	13.63	14.81	16.00	18.27
γ 105.0	14.04	13.20	14.13	13.14	13.59	12.47	13.16	13.99	13.22	14.45	15.68	17.43
γ 110.0	13.41	12.73	13.46	12.68	12.98	11.96	12.96	13.63	12.98	14.23	15.23	16.71
γ 115.0	13.08	12.49	13.11	12.45	12.68	11.73	12.88	13.43	12.85	14.04	14.88	15.59
γ 120.0	12.94	12.50	12.96	12.43	12.59	11.75	12.84	13.30	12.79	13.82	14.56	14.42
γ 125.0	12.96	12.72	12.99	12.54	12.67	11.93	12.90	13.30	12.85	13.64	14.31	13.61
γ 130.0	13.12	12.93	13.16	12.80	12.84	12.11	13.09	13.41	13.02	13.58	14.19	13.24
γ 135.0	13.37	13.21	13.61	13.07	13.32	12.36	13.37	13.66	13.30	13.71	14.16	13.17
γ 140.0	13.67	13.55	13.99	13.53	13.73	12.66	13.72	13.95	13.63	13.93	14.21	13.31
γ 145.0	14.03	13.92	14.12	13.84	14.06	13.01	14.06	14.26	13.99	14.24	14.36	13.54
γ 150.0	14.40	14.30	14.45	14.28	14.45	13.34	14.44	14.59	14.36	14.57	14.58	13.82
γ 155.0	14.77	14.63	14.85	14.70	14.82	13.70	14.83	14.95	14.73	14.93	14.86	14.11
γ 160.0	15.17	14.99	15.20	15.10	15.19	14.06	15.19	15.26	15.09	15.25	15.16	14.39
γ 165.0	15.50	15.35	15.55	15.46	15.48	14.37	15.50	15.58	15.41	15.57	15.43	14.64
γ 170.0	15.80	15.63	15.81	15.81	15.78	14.62	15.75	15.82	15.68	15.85	15.68	14.83
γ 175.0	15.99	15.82	16.00	15.96	15.96	14.80	15.91	15.97	15.85	16.04	15.86	14.96
γ 180.0	15.86	15.86	15.86	15.86	15.86	15.86	15.86	15.86	15.86	15.86	15.86	15.86