

# IES Indoor Report

**Photometric Filename:KO12W4K 4000K.IES**

## Description Information(From Photometric File)

Photometric File: KO12W4K 4000K.IES

IES Format: IESNA:LM-63-1995

[TEST]

[DATE] 2019/11/23

[MANUFAC] Eurotech Lighting

[LUMCAT] 1

[LUMINAIRE]

[LAMPCAT] LED

[LAMP]

[BALLASTCAT]

[BALLAST]

[OTHER] 1 GON-1800

[More] Temperature:15 Humidity:40

[More] Frequency:50.0 Voltage:229.5 Current:0.102 Power:11.9 PF:0.510

## Character

Lamp Power (w) : 11.9  
Total Rated Lamp Lumens (lm) : 1687.24  
Luminair Lumens (lm) : 893.89  
Total Luminair Efficiency : 52.98%  
Luminaire Efficacy Rating (LER) : 75.12  
Maximum Intensity (cd) : 270.59  
Max Cd Angle (deg) : C=0.0  $\gamma$ =0.0  
Downward Lumens (lm) : 824.83  
Downward Total Efficiency : 92.27%  
Spacing Criteria : C0\_180=0.64 C90\_270=0.61  
CIE Type : Semi-Direct  
Beam Angle (50%Imax) : Left=-61.8 Right=64.3  
Field Angle (10%Imax) : 218.9

## Candela Tabulation

<u><math>\gamma</math>0.0</u>	<u>C0.0</u>	<u>C30.0</u>	<u>C60.0</u>	<u>C90.0</u>	<u>C120.0</u>	<u>C150.0</u>	<u>C180.0</u>	<u>C210.0</u>	<u>C240.0</u>	<u>C270.0</u>	<u>C300.0</u>	<u>C330.0</u>	<u>C360.0</u>
270.59	270.59	270.59	270.59	270.59	270.59	270.59	270.59	270.59	270.59	270.59	270.59	270.59	270.59

# IES Indoor Report

## Photometric Filename: KO12W4K 4000K.IES

$\gamma$ 5.0	269.67	269.45	269.98	269.76	270.10	269.69	268.45	268.62	268.01	268.61	268.36	268.61	269.67
$\gamma$ 10.0	266.11	265.57	266.20	265.60	266.44	265.95	263.67	263.94	262.48	263.19	262.50	263.74	266.11
$\gamma$ 15.0	259.83	258.74	259.39	258.25	259.75	259.39	256.33	256.32	254.02	254.72	253.95	256.03	259.83
$\gamma$ 20.0	251.15	249.43	249.75	248.01	250.05	250.19	247.01	246.50	242.87	243.52	242.66	246.04	251.15
$\gamma$ 25.0	241.21	237.86	237.52	235.27	237.98	239.21	237.01	235.05	229.44	229.89	229.22	234.53	241.21
$\gamma$ 30.0	231.05	226.00	223.15	220.28	223.82	227.29	227.23	222.92	214.19	214.40	213.96	222.34	231.05
$\gamma$ 35.0	221.24	214.00	207.18	203.47	208.01	215.39	216.65	210.94	197.77	197.14	197.30	210.37	221.24
$\gamma$ 40.0	209.89	201.60	190.21	185.27	191.14	202.93	204.39	197.76	180.63	178.68	180.08	197.51	209.89
$\gamma$ 45.0	196.90	187.81	172.82	166.13	173.83	188.94	190.65	183.71	163.28	159.25	162.89	183.36	196.90
$\gamma$ 50.0	182.70	172.76	155.52	146.11	156.50	173.72	175.58	168.26	146.16	139.20	145.86	167.93	182.70
$\gamma$ 55.0	167.10	156.71	138.46	125.66	139.41	157.47	159.32	151.68	128.77	118.65	128.55	151.44	167.10
$\gamma$ 60.0	150.40	139.57	120.94	104.97	121.98	140.24	141.96	134.30	110.90	97.94	110.74	134.10	150.40
$\gamma$ 65.0	132.75	121.81	102.89	84.07	103.71	122.32	123.83	116.25	92.63	77.03	92.57	116.07	132.75
$\gamma$ 70.0	114.31	103.50	84.68	63.54	85.36	103.85	105.15	97.74	74.41	56.59	74.36	97.61	114.31
$\gamma$ 75.0	95.52	84.97	66.52	43.54	67.06	85.29	86.36	79.35	56.43	37.02	56.44	79.21	95.52
$\gamma$ 80.0	77.18	67.06	48.97	25.24	49.41	67.35	68.69	61.80	39.82	19.58	39.74	61.70	77.18
$\gamma$ 85.0	60.47	51.18	33.49	10.22	33.70	51.43	53.82	47.11	26.60	6.46	26.46	47.04	60.47
$\gamma$ 90.0	48.29	39.75	22.47	1.67	22.68	40.65	45.55	38.43	19.07	0.58	19.00	38.32	48.29
$\gamma$ 95.0	42.92	35.26	17.45	0.31	17.70	35.73	40.88	34.15	15.64	0.23	15.68	34.13	42.92
$\gamma$ 100.0	38.43	31.28	14.25	0.38	14.45	31.64	36.40	30.08	12.59	0.41	12.60	30.14	38.43
$\gamma$ 105.0	34.09	27.30	11.24	0.35	11.34	27.60	32.01	26.09	9.60	0.55	9.65	26.24	34.09
$\gamma$ 110.0	29.74	23.43	8.39	0.50	8.38	23.93	27.66	22.31	6.65	0.68	6.73	22.36	29.74
$\gamma$ 115.0	25.52	19.55	5.35	0.60	5.30	19.63	23.45	18.43	3.79	0.81	4.00	18.45	25.52
$\gamma$ 120.0	21.33	15.87	2.81	0.76	2.69	15.70	19.12	14.63	1.65	0.96	1.79	14.65	21.33
$\gamma$ 125.0	17.18	11.71	1.01	0.87	1.02	11.60	14.86	10.42	1.00	1.01	1.07	10.56	17.18
$\gamma$ 130.0	12.66	7.80	1.11	1.00	1.11	7.45	10.25	6.49	1.02	1.03	1.17	6.56	12.66
$\gamma$ 135.0	8.19	4.23	1.31	1.25	1.26	3.92	5.99	3.13	1.17	1.18	1.29	3.27	8.19
$\gamma$ 140.0	4.29	1.62	1.51	1.30	1.40	1.35	2.48	1.50	1.31	1.37	1.42	1.40	4.29
$\gamma$ 145.0	1.50	1.63	1.58	1.54	1.51	1.56	1.56	1.51	1.41	1.55	1.45	1.51	1.50
$\gamma$ 150.0	1.78	1.73	1.69	1.69	1.53	1.66	1.75	1.61	1.59	1.65	1.57	1.74	1.78
$\gamma$ 155.0	1.82	1.33	1.79	1.83	1.73	1.76	1.85	1.66	1.67	1.80	1.66	1.86	1.82
$\gamma$ 160.0	1.84	1.83	1.83	1.96	1.75	1.83	1.90	1.75	1.84	1.97	1.78	1.88	1.84
$\gamma$ 165.0	1.91	1.93	2.02	1.99	1.86	1.90	1.95	1.82	2.13	2.07	2.03	1.95	1.91
$\gamma$ 170.0	2.01	1.99	2.06	1.92	1.97	2.01	2.07	1.80	2.16	2.11	2.07	2.08	2.01
$\gamma$ 175.0	2.05	2.11	2.01	2.01	2.00	2.07	2.01	2.12	2.14	2.09	2.10	2.09	2.05
$\gamma$ 180.0	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09

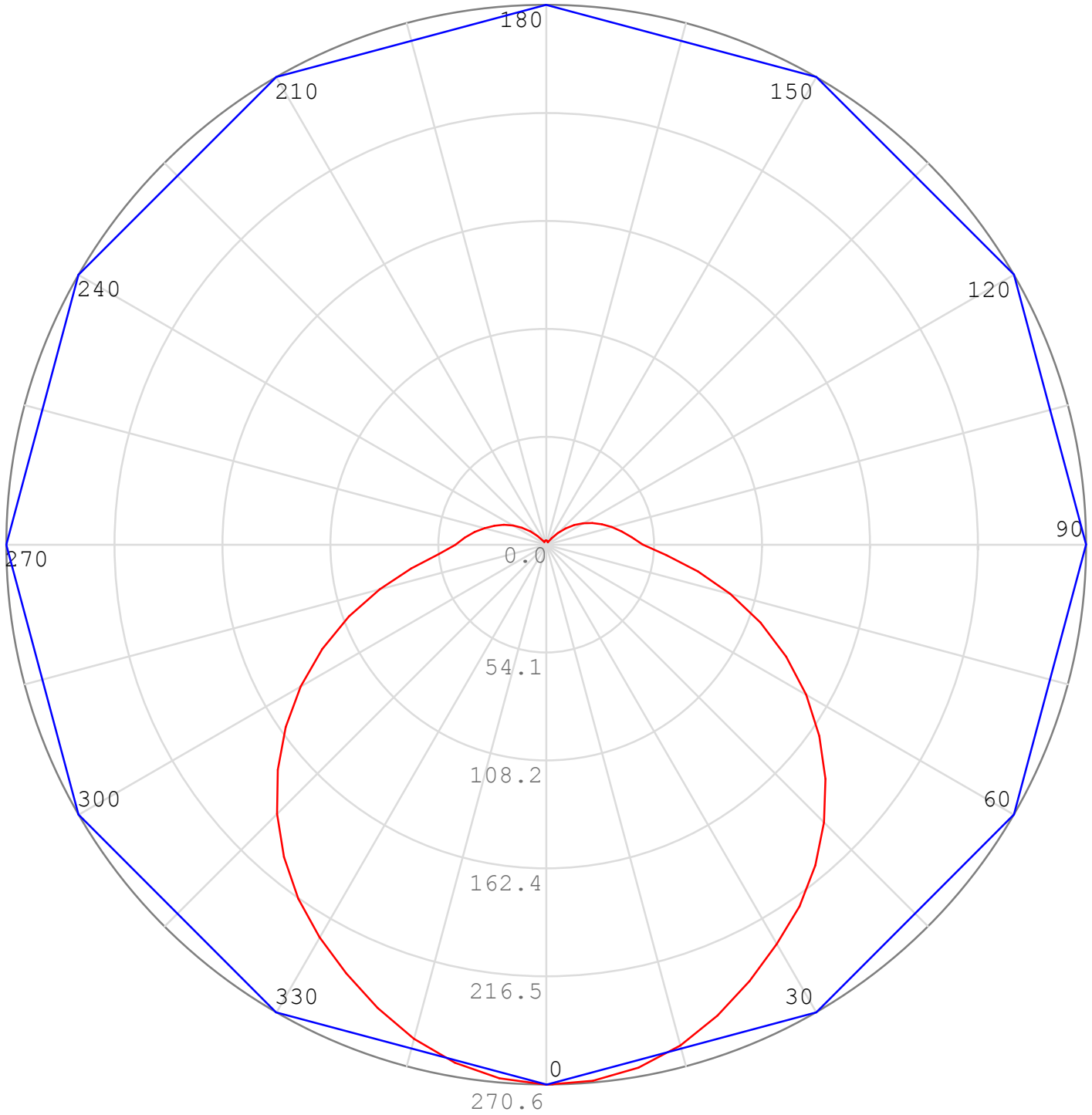
## 2D Light Intensity Distribution Curve

Plane [50%Ang.] [10%Ang.] Polar Graph

# IES Indoor Report

Photometric Filename: KO12W4K 4000K.IES

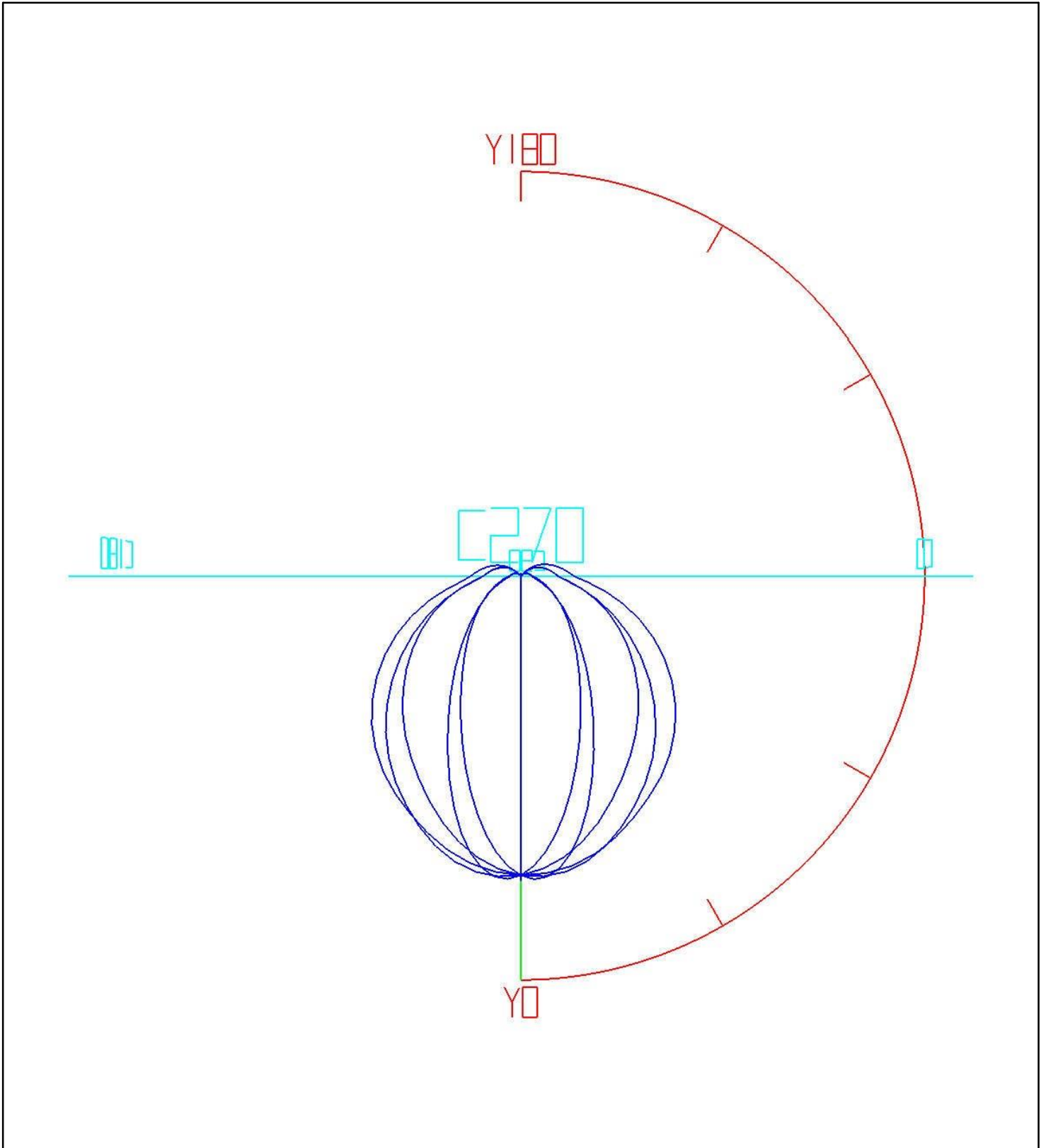
C0.0: 126.1 223.9



C Plane: C0.0 γ Cone: γ0.0

# IES Indoor Report

Photometric Filename: KO12W4K 4000K.IES  
3D Light Intensity Distribution Curve



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

# IES Indoor Report

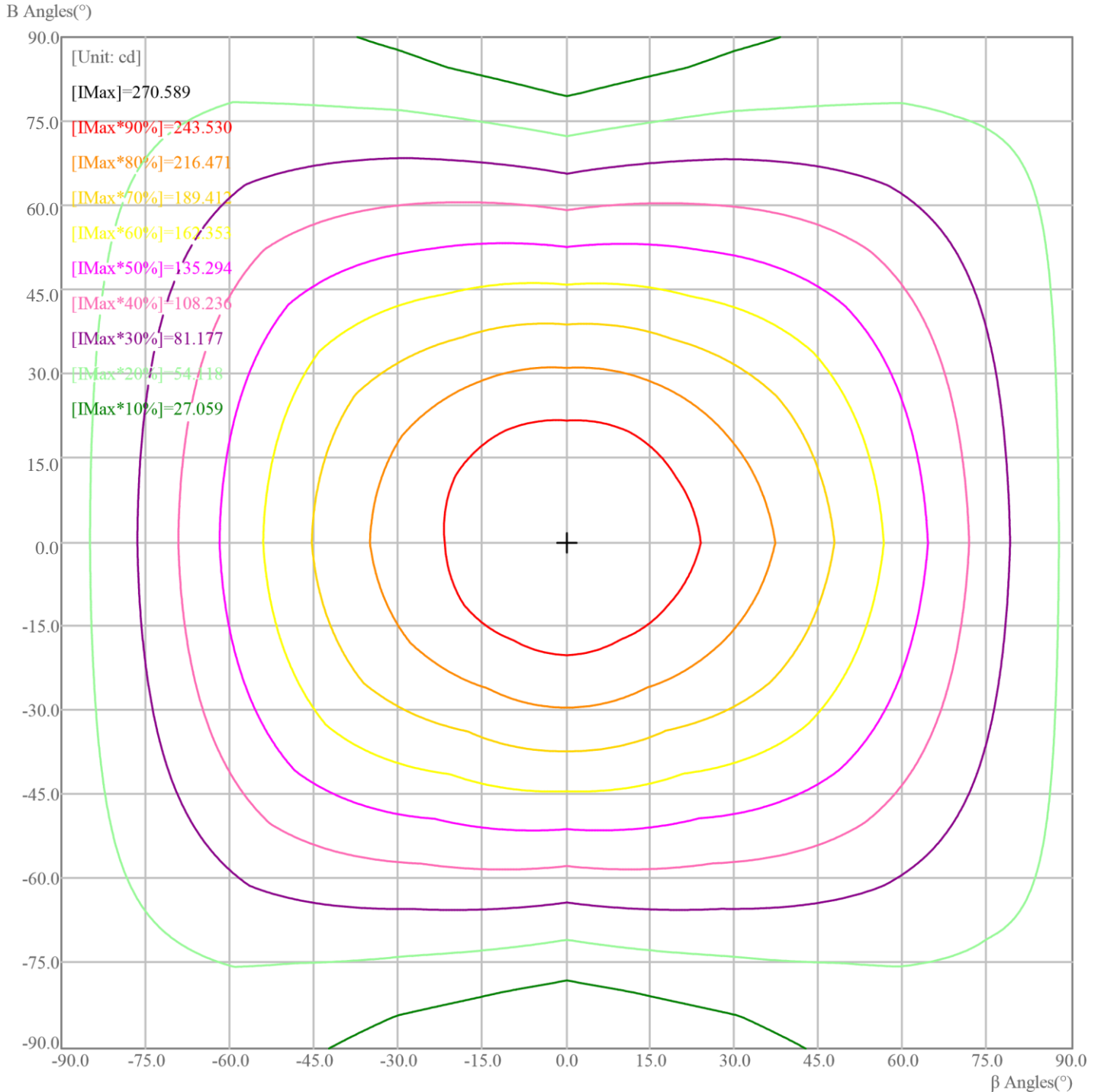
Photometric Filename:KO12W4K 4000K.IES

## Zonal Liumens Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	
0.0-5.0	6.45	6.45	0.72	0.72
5.0-10.0	19.09	25.54	2.14	2.86
10.0-15.0	30.96	56.50	3.46	6.32
15.0-20.0	41.58	98.08	4.65	10.97
20.0-25.0	50.62	148.69	5.66	16.63
25.0-30.0	57.91	206.60	6.48	23.11
30.0-35.0	63.40	270.00	7.09	30.20
35.0-40.0	67.01	337.00	7.50	37.70
40.0-45.0	68.66	405.66	7.68	45.38
45.0-50.0	68.36	474.03	7.65	53.03
50.0-55.0	66.20	540.23	7.41	60.44
55.0-60.0	62.24	602.47	6.96	67.40
60.0-65.0	56.60	659.07	6.33	73.73
65.0-70.0	49.52	708.59	5.54	79.27
70.0-75.0	41.36	749.95	4.63	83.90
75.0-80.0	32.65	782.60	3.65	87.55
80.0-85.0	24.33	806.93	2.72	90.27
85.0-90.0	17.90	824.83	2.00	92.27
90.0-95.0	14.30	839.13	1.60	93.87
95.0-100.0	12.29	851.42	1.37	95.25
100.0-105.0	10.45	861.87	1.17	96.42
105.0-110.0	8.64	870.51	0.97	97.38
110.0-115.0	6.87	877.38	0.77	98.15
115.0-120.0	5.20	882.58	0.58	98.74
120.0-125.0	3.74	886.33	0.42	99.15
125.0-130.0	2.54	888.86	0.28	99.44
130.0-135.0	1.58	890.44	0.18	99.61
135.0-140.0	0.88	891.33	0.10	99.71
140.0-145.0	0.55	891.87	0.06	99.77
145.0-150.0	0.47	892.34	0.05	99.83
150.0-155.0	0.43	892.77	0.05	99.87
155.0-160.0	0.38	893.15	0.04	99.92
160.0-165.0	0.31	893.46	0.04	99.95
165.0-170.0	0.24	893.70	0.03	99.98
170.0-175.0	0.15	893.84	0.02	99.99
175.0-180.0	0.05	893.89	0.01	100.00
			Sums%Lamp	

# IES Indoor Report

## Photometric Filename: KO12W4K 4000K.IES Rectangle ISO Light Intensity Curve



Curves: 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10%

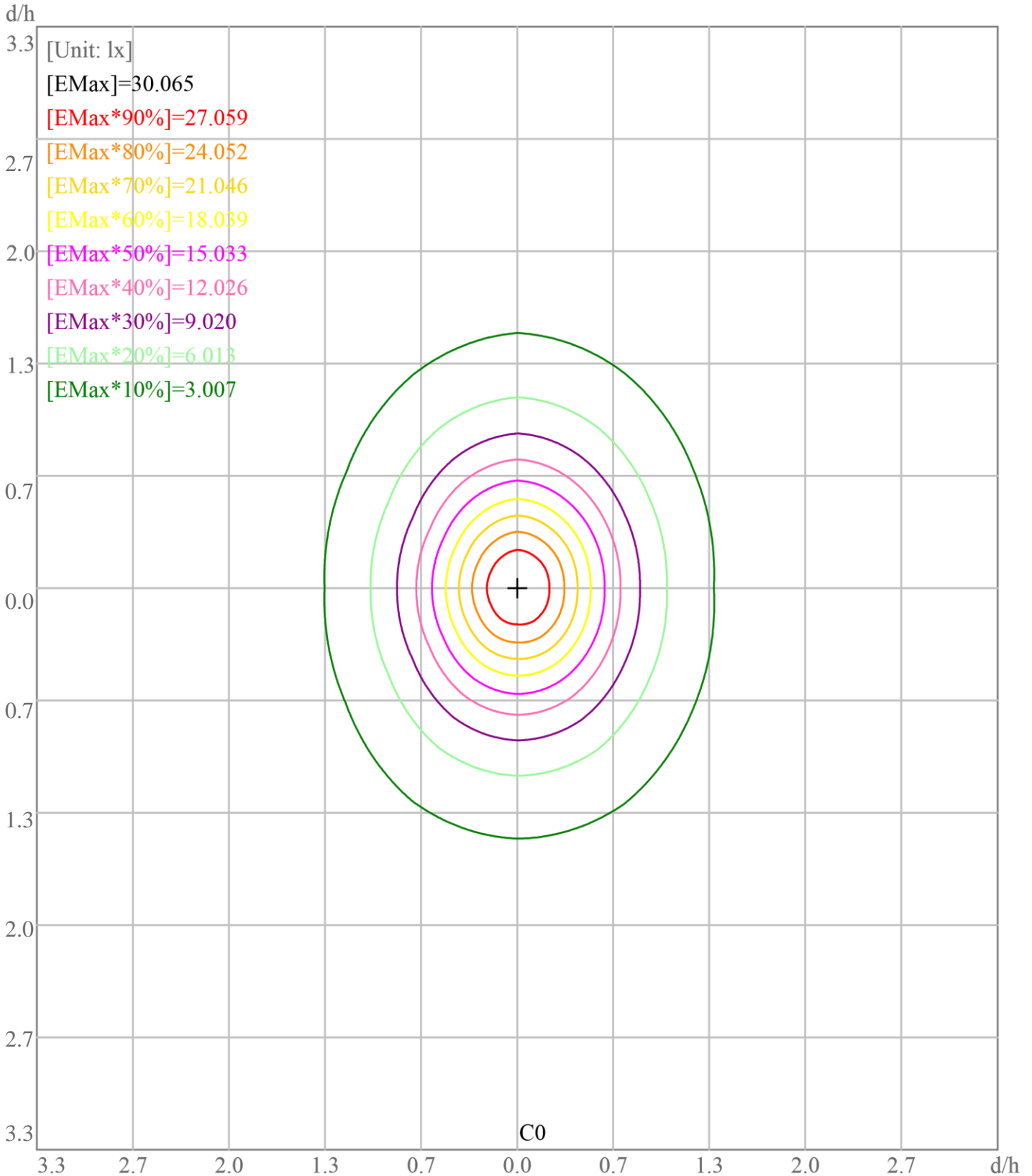
Maximum Light Intensity(cd): 270.59

Maximum Cd. Angles: H0.0 V0.0

# IES Indoor Report

Photometric Filename: KO12W4K 4000K.IES

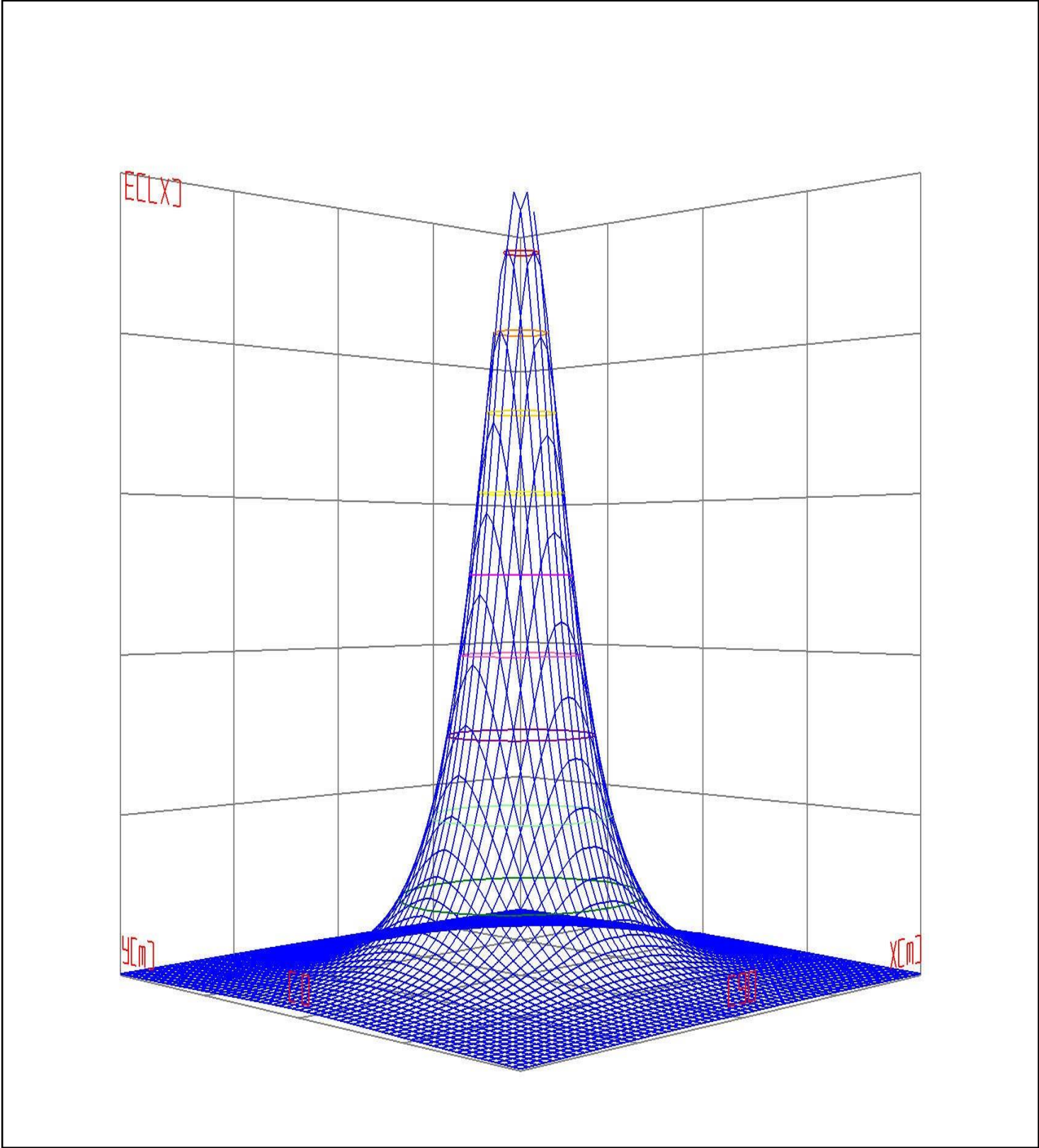
## Plane ISO-Illuminance Curve



Curves: 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —  
Maximum Illuminance(lx): 270.59 Max. E Postion(d/h): 0.0 V0.0  
Mount Height(m): 3.0

# IES Indoor Report

Photometric Filename: KO12W4K 4000K.IES  
3D Plane ISO Illuminance Curve



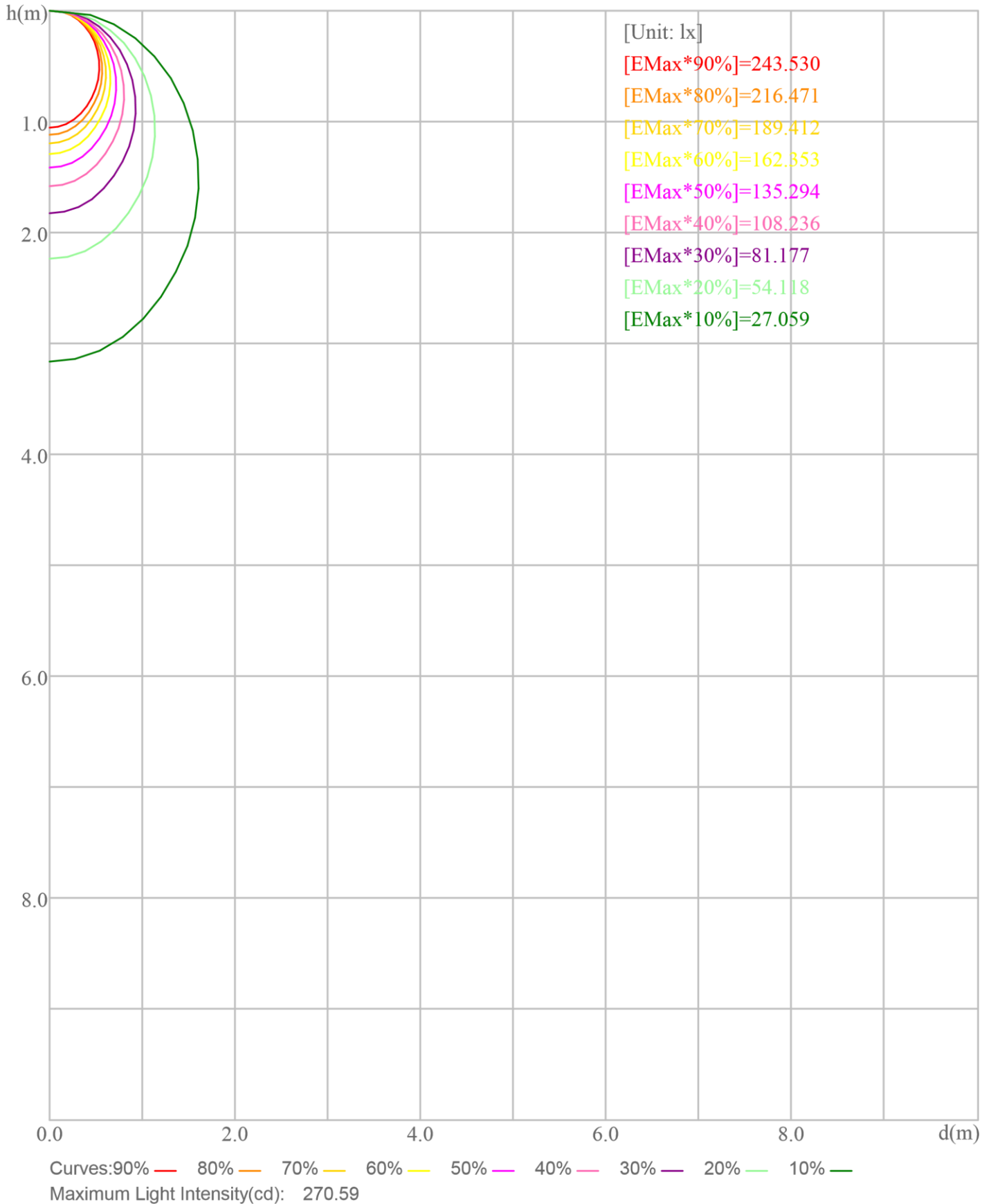
Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —  
View Angles(deg): 0      Height(m): 3.0      Distance(m): 10.0



# IES Indoor Report

Photometric Filename: KO12W4K 4000K.IES

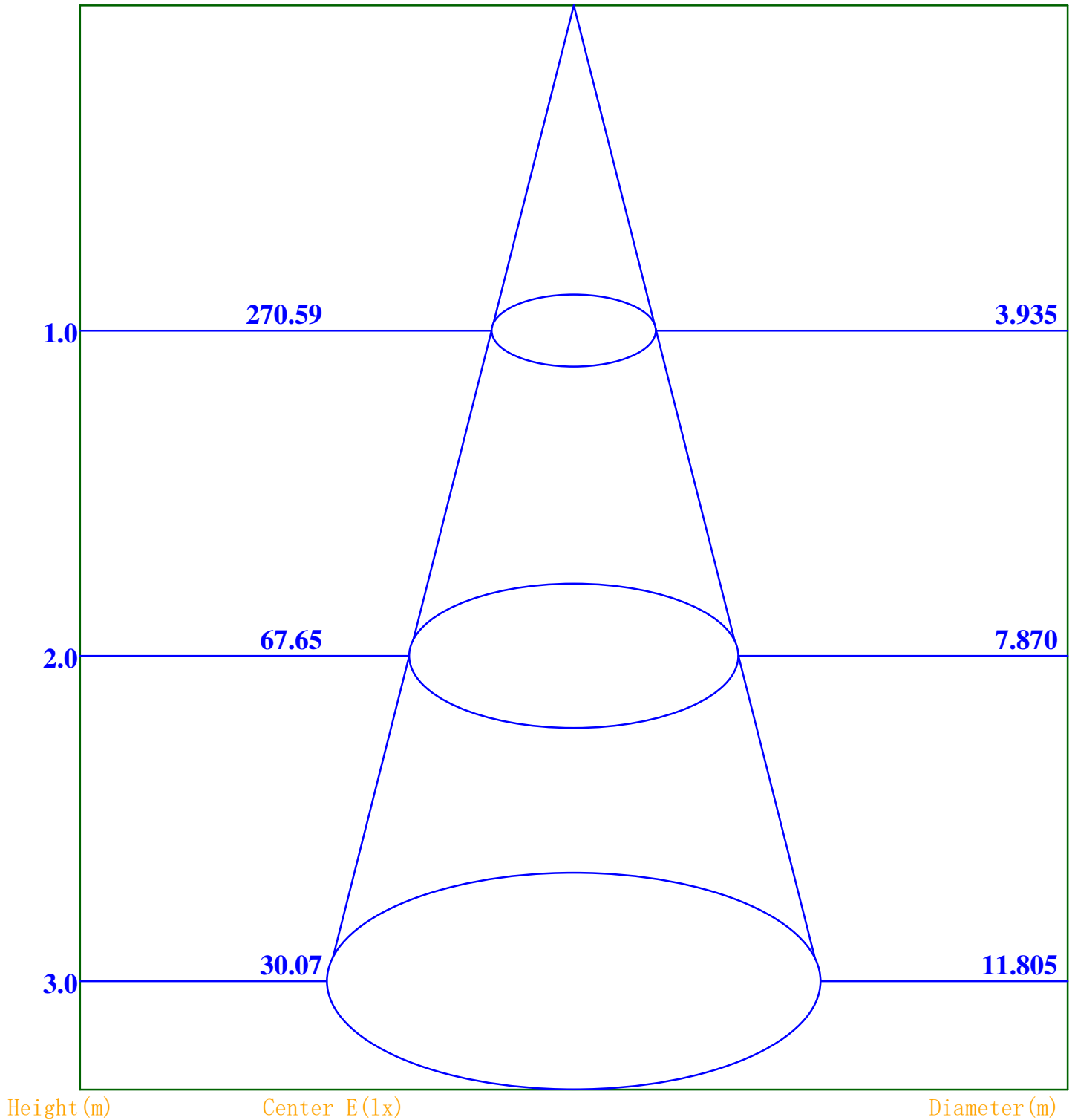
## Space ISO Illuminance Curve



# IES Indoor Report

Photometric Filename: KO12W4K 4000K.IES

Illuminance-Distance Curve



Indoor Luminance Limiting Curve

Glare Grade Table

# IES Indoor Report

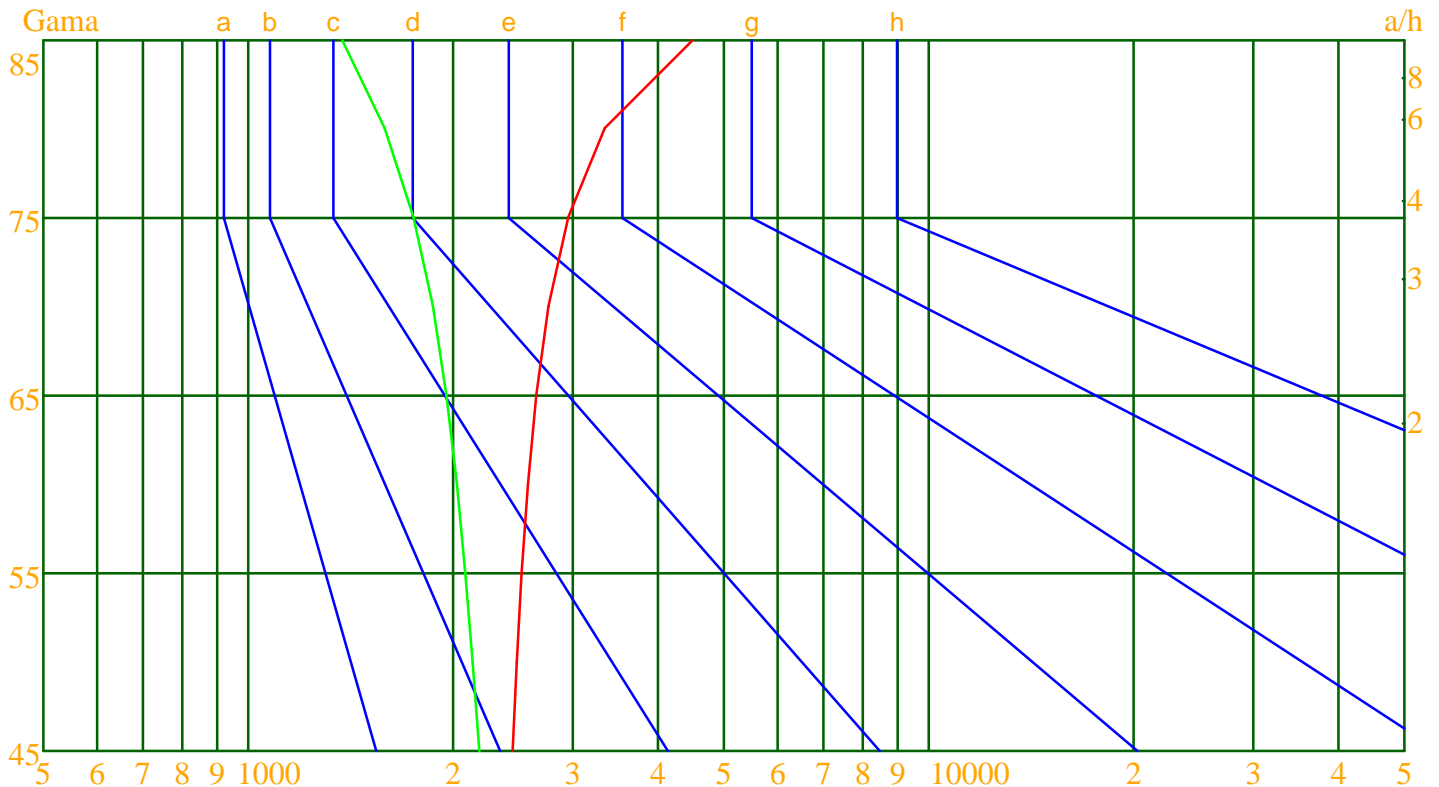
Photometric Filename: KO12W4K 4000K.IES

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					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Table

Gama(deg)	45	50	55	60	65	70	75	80	85
C0	5412	5524	5662	5846	6105	6496	7173	8638	13486
C90	4566	4418	4258	4080	3866	3611	3269	2825	2279

Luminance Limiting Curve



Luminous Size: Length(m)=0.245 Width(m)=0.120 Height(m)=0.090 Area(m<sup>2</sup>)=0.051450

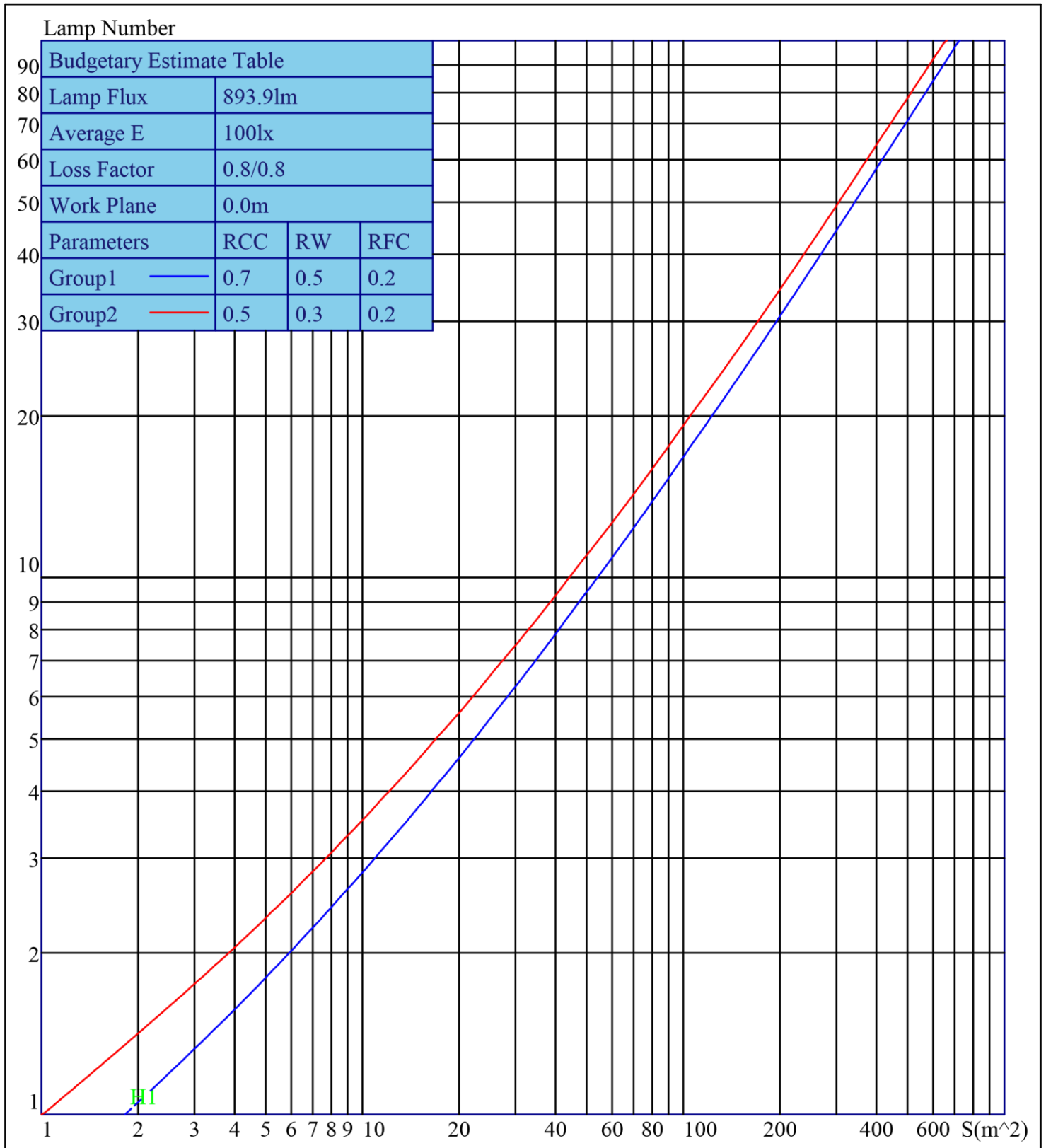
Luminous Type: Without Luminous Side

Luminous Curves: C0-C180 Color: — C90-C270 Color: —

# IES Indoor Report

Photometric Filename: KO12W4K 4000K.IES

## Indoor Budgetary Estimate Table



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

# IES Indoor Report

Photometric Filename:KO12W4K 4000K.IES

## Indoor Coefficient of Utilization Table

Coefficients of Utilization - Zonal Cavity Method																		
Coefficient 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	0			
RCR	Coefficient of Utilization(%)																	
0	62	62	62	62	60	60	60	60	57	57	57	53	53	53	50	50	50	49
1	56	53	50	48	54	51	49	47	48	46	45	46	44	43	43	42	41	39
2	51	46	42	39	49	44	41	38	42	39	36	39	37	35	37	35	34	32
3	46	40	35	32	44	39	35	31	37	33	30	35	32	29	33	30	28	27
4	42	35	30	27	40	34	30	26	32	29	26	31	27	25	29	26	24	23
5	38	31	27	23	37	31	26	23	29	25	22	28	24	21	26	23	21	19
6	36	28	23	20	34	28	23	20	26	22	19	25	21	19	24	21	18	17
7	33	26	21	18	32	25	20	17	24	20	17	23	19	17	22	18	16	15
8	31	23	19	16	30	23	18	15	22	18	15	21	17	15	20	17	14	13

# IES Indoor Report

---

## Photometric Filename: KO12W4K 4000K.IES

9	29 21 17 14	28 21 17 14	20 16 14	19 16 13	18 15 13	12
10	27 20 15 13	26 19 15 13	18 15 12	18 14 12	17 14 12	11