

Description Information:

[DATE] 2012/02/24
 [MANUFAC] topband
 [LUMCAT] 1
 [LUMINAIRE]
 [LAMPCAT] TP-Tube-4FT
 [LAMP] 18W
 [BALLASTCAT]
 [BALLAST]
 [OTHER]
 [More] Temperature:25
 Humidity:40

Character

	17.6
Lamp Power(w):	1900.00
Total Rated Lamp Lumens(lm):	1830.46
Luminair Lumens(lm):	96.34%
Luminaire Efficacy Rating(LER):	104.00
Maximum Intencity(cd):	635.43
Max Cd Angle(deg):	C=180.0 γ=10.0
Downward Lumens(lm):	1755.89
Downward Total Efficiency:	95.93%
Spacing Criteria:	C0_180=0.62 C90_270=0.64
CIE Type:	Semi-Direct
Beam Angle(50%Imax):	Left=-53.7 Right=61.4
Field Angle(10%Imax):	144.7

IES Indoor Report

T8-CW18W-C4F

Candela Tabulation

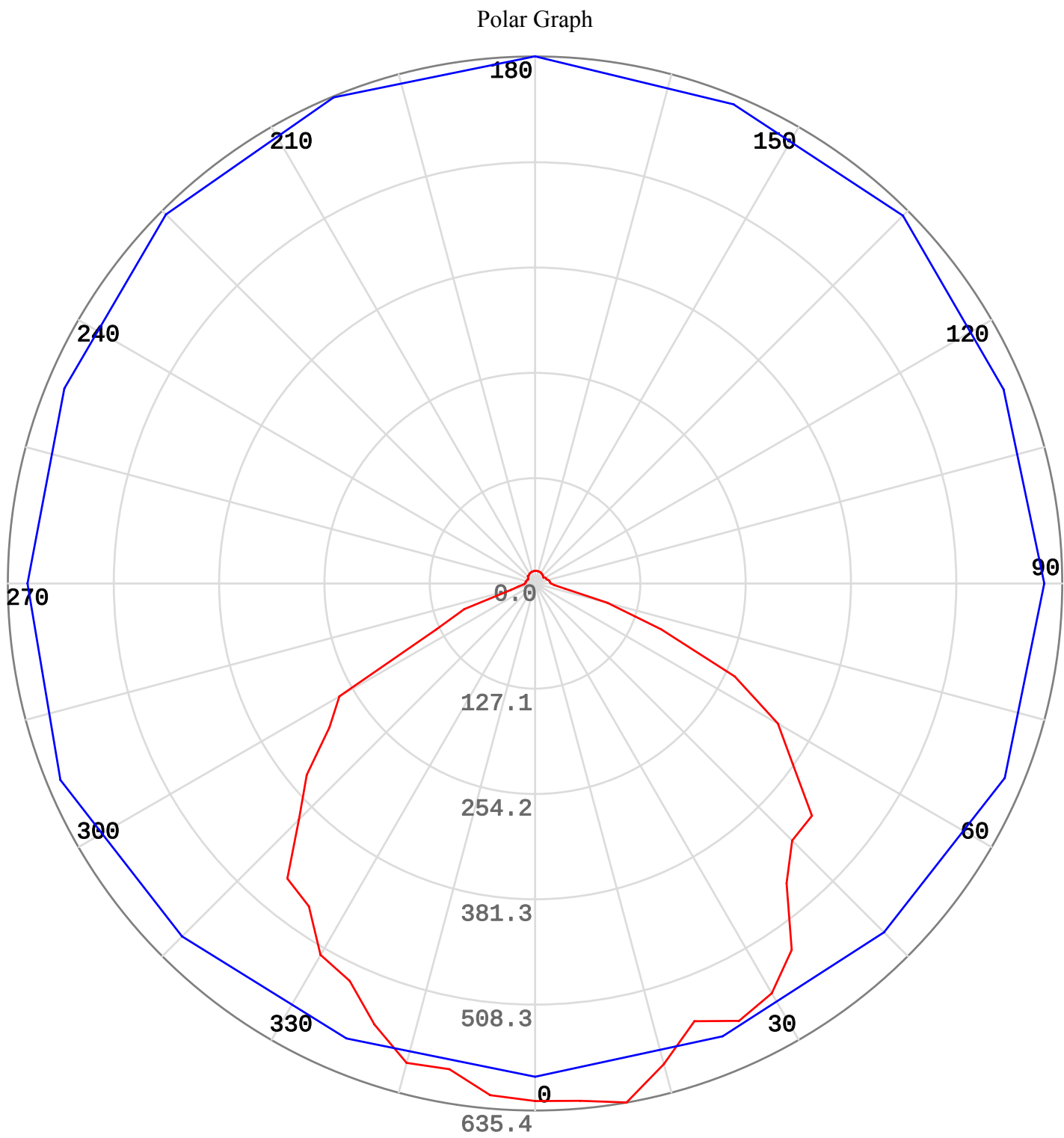
	<u>C0.0</u>	<u>C22.5</u>	<u>C45.0</u>	<u>C67.5</u>	<u>C90.0</u>	<u>C112.5</u>	<u>C135.0</u>	<u>C157.5</u>	<u>C180.0</u>	<u>C202.5</u>	<u>C225.0</u>	<u>C247.5</u>	<u>C270.0</u>
<u>Y 0.0</u>	624.03	624.03	624.03	624.03	624.03	624.03	624.03	624.03	624.03	624.03	624.03	624.03	624.03
<u>Y 5.0</u>	619.37	615.87	623.00	624.44	620.32	615.20	617.50	622.74	626.12	621.41	618.80	617.00	619.23
<u>Y 10.0</u>	594.70	591.04	594.91	612.89	613.78	611.30	627.14	625.12	635.43	634.18	629.14	614.13	611.82
<u>Y 15.0</u>	598.33	595.89	583.30	586.30	601.33	607.36	613.62	588.44	599.84	603.28	617.06	612.98	599.04
<u>Y 20.0</u>	565.93	565.63	579.49	559.46	584.06	598.09	576.32	551.08	561.75	563.03	578.78	605.47	581.32
<u>Y 25.0</u>	528.66	525.43	546.92	541.30	562.42	575.14	532.11	564.70	581.87	560.57	535.43	582.21	559.53
<u>Y 30.0</u>	517.08	513.45	505.02	526.76	535.06	536.88	518.31	560.71	570.56	577.33	528.84	543.14	531.74
<u>Y 35.0</u>	475.29	472.37	477.63	495.14	502.80	487.90	531.16	522.48	539.44	535.79	540.15	495.74	500.89
<u>Y 40.0</u>	464.58	454.94	448.79	448.09	465.81	432.57	492.49	465.81	471.76	494.48	495.81	445.41	464.47
<u>Y 45.0</u>	402.53	403.41	404.50	392.88	423.58	387.18	449.94	412.40	438.35	424.58	455.81	417.17	423.48
<u>Y 50.0</u>	359.19	359.57	376.99	345.98	373.79	372.48	375.96	413.10	435.75	423.20	378.21	410.83	375.63
<u>Y 55.0</u>	302.42	289.29	312.26	308.23	317.44	345.12	336.15	362.69	379.07	387.16	354.87	362.02	321.46
<u>Y 60.0</u>	272.24	280.21	251.20	249.73	258.52	276.42	314.45	289.13	337.86	313.83	321.14	304.51	265.20
<u>Y 65.0</u>	131.61	139.71	229.29	198.89	194.25	207.73	243.13	245.66	265.54	267.58	249.35	223.86	204.08
<u>Y 70.0</u>	90.60	105.23	115.55	137.74	130.45	154.02	188.13	148.60	161.68	182.05	198.79	186.61	143.11
<u>Y 75.0</u>	30.14	30.58	69.02	103.41	72.90	105.77	111.12	76.84	90.11	95.19	113.12	129.06	87.55
<u>Y 80.0</u>	20.00	19.88	25.41	40.38	30.61	61.25	48.77	27.90	36.89	45.72	53.04	80.94	41.68
<u>Y 85.0</u>	13.63	13.64	16.18	17.60	9.56	20.12	19.41	18.14	23.52	23.38	23.16	30.58	14.03
<u>Y 90.0</u>	11.97	11.84	13.21	11.38	3.89	10.58	14.49	14.83	19.09	19.03	18.51	16.51	7.19
<u>Y 95.0</u>	11.43	11.15	11.44	8.96	4.28	8.53	12.07	14.27	17.99	17.97	15.92	13.20	7.21
<u>Y 100.0</u>	11.46	11.83	10.42	7.70	4.86	7.41	11.45	13.44	17.69	17.43	14.78	11.62	7.75
<u>Y 105.0</u>	10.97	10.43	9.62	7.18	5.41	7.08	9.91	11.80	16.23	15.86	13.53	10.78	8.48
<u>Y 110.0</u>	10.45	10.20	9.24	7.30	6.10	7.28	9.76	11.22	14.70	14.42	13.31	10.54	9.08
<u>Y 115.0</u>	10.03	9.71	8.88	7.50	6.82	7.85	9.68	11.22	14.71	14.35	12.93	10.72	9.72
<u>Y 120.0</u>	9.68	9.86	8.73	8.17	7.55	8.26	11.12	10.51	13.83	13.57	12.79	11.02	10.32
<u>Y 125.0</u>	10.26	10.11	9.25	8.87	8.37	8.93	9.39	9.84	12.35	12.38	12.44	11.32	10.94
<u>Y 130.0</u>	10.75	10.61	9.88	9.67	9.15	9.58	9.92	10.30	12.91	12.67	12.51	11.76	11.60
<u>Y 135.0</u>	12.34	11.18	10.57	10.45	9.95	10.23	10.55	10.89	13.32	13.05	12.97	12.29	12.19
<u>Y 140.0</u>	12.07	11.77	11.39	11.15	10.77	11.02	11.15	11.48	13.77	13.52	13.31	12.85	12.71
<u>Y 145.0</u>	12.57	12.35	12.17	11.76	11.55	11.69	11.97	12.03	14.20	13.98	13.76	13.51	13.27
<u>Y 150.0</u>	13.39	12.28	12.86	12.40	12.43	12.33	12.59	12.74	14.52	14.39	14.19	13.97	13.76
<u>Y 155.0</u>	13.75	13.52	13.45	13.06	13.14	12.98	13.30	13.31	14.84	14.78	14.54	14.28	14.21
<u>Y 160.0</u>	14.25	13.98	13.81	13.67	13.72	13.59	13.80	13.81	15.05	15.00	14.82	14.64	14.60
<u>Y 165.0</u>	14.57	14.29	14.21	14.24	14.29	14.14	14.15	14.24	15.20	15.18	14.86	14.94	14.88
<u>Y 170.0</u>	14.75	14.66	14.61	14.68	14.73	14.72	14.60	14.45	15.16	15.01	15.05	15.14	15.06
<u>Y 175.0</u>	15.06	15.03	14.94	14.99	15.03	15.04	14.99	14.96	15.32	15.12	15.12	15.16	15.19
<u>Y 180.0</u>	15.22	15.22	15.22	15.22	15.22	15.22	15.22	15.22	15.22	15.22	15.22	15.22	15.22
	<u>C292.5</u>	<u>C315.0</u>	<u>C337.5</u>	<u>C360.0</u>									
<u>Y 0.0</u>	624.03	624.03	624.03	624.03									
<u>Y 5.0</u>	624.69	624.18	623.27	619.37									
<u>Y 10.0</u>	619.27	601.87	593.79	594.70									
<u>Y 15.0</u>	603.04	579.84	593.89	598.33									
<u>Y 20.0</u>	573.95	578.90	579.51	565.93									
<u>Y 25.0</u>	546.79	556.08	543.14	528.66									
<u>Y 30.0</u>	523.34	519.31	513.38	517.08									
<u>Y 35.0</u>	505.65	476.46	492.81	475.29									
<u>Y 40.0</u>	474.97	457.15	453.75	464.58									

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Candela Tabulation - (Cont.)

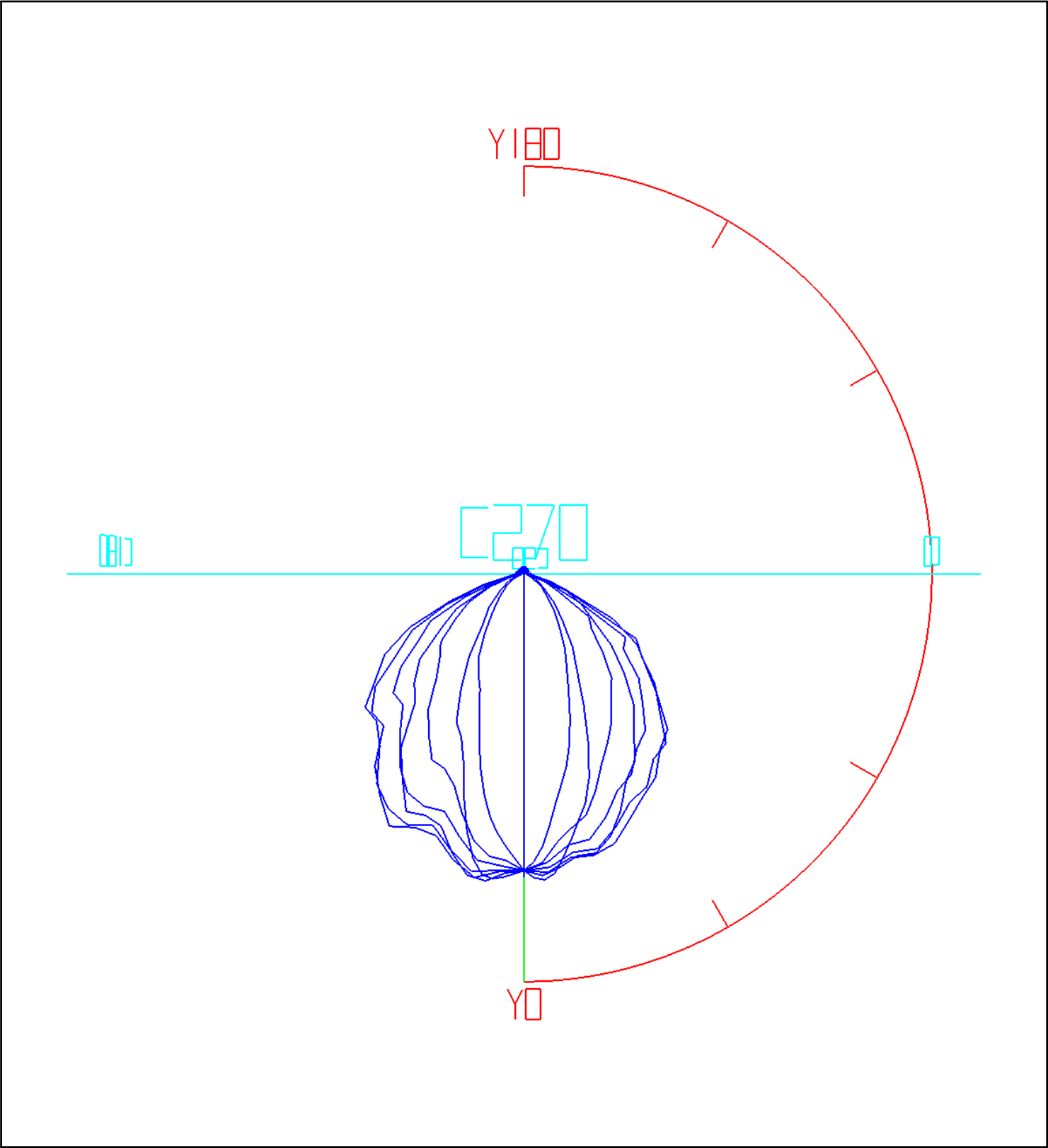
	<u>C292.5</u>	<u>C315.0</u>	<u>C337.5</u>	<u>C360.0</u>
<u>Y 45.0</u>	425.74	412.10	433.79	402.53
<u>Y 50.0</u>	369.83	379.55	373.35	359.19
<u>Y 55.0</u>	312.27	327.51	320.97	302.42
<u>Y 60.0</u>	273.34	273.99	282.92	272.24
<u>Y 65.0</u>	213.27	207.63	214.51	131.61
<u>Y 70.0</u>	163.49	168.52	106.35	90.60
<u>Y 75.0</u>	104.75	78.59	62.97	30.14
<u>Y 80.0</u>	68.61	32.76	26.93	20.00
<u>Y 85.0</u>	25.22	21.75	19.03	13.63
<u>Y 90.0</u>	15.82	16.88	15.78	11.97
<u>Y 95.0</u>	12.32	14.80	14.86	11.43
<u>Y 100.0</u>	10.74	13.51	15.15	11.46
<u>Y 105.0</u>	10.10	12.88	14.00	10.97
<u>Y 110.0</u>	9.85	12.22	13.31	10.45
<u>Y 115.0</u>	10.28	11.95	12.88	10.03
<u>Y 120.0</u>	10.59	11.72	12.45	9.68
<u>Y 125.0</u>	11.07	11.93	12.56	10.26
<u>Y 130.0</u>	11.73	12.27	12.69	10.75
<u>Y 135.0</u>	12.33	12.75	13.10	12.34
<u>Y 140.0</u>	12.91	13.27	13.38	12.07
<u>Y 145.0</u>	13.34	13.73	13.72	12.57
<u>Y 150.0</u>	13.10	14.20	14.20	13.39
<u>Y 155.0</u>	14.34	14.55	14.60	13.75
<u>Y 160.0</u>	14.71	14.69	14.93	14.25
<u>Y 165.0</u>	15.03	14.88	15.06	14.57
<u>Y 170.0</u>	15.19	15.06	15.09	14.75
<u>Y 175.0</u>	15.32	15.16	15.21	15.06
<u>Y 180.0</u>	15.22	15.22	15.22	15.22

2D Light Intensity Distribution Curve



C Plane: C180.0
γ Cone: γ10.0

3D Light Intensity Distribution Curve



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

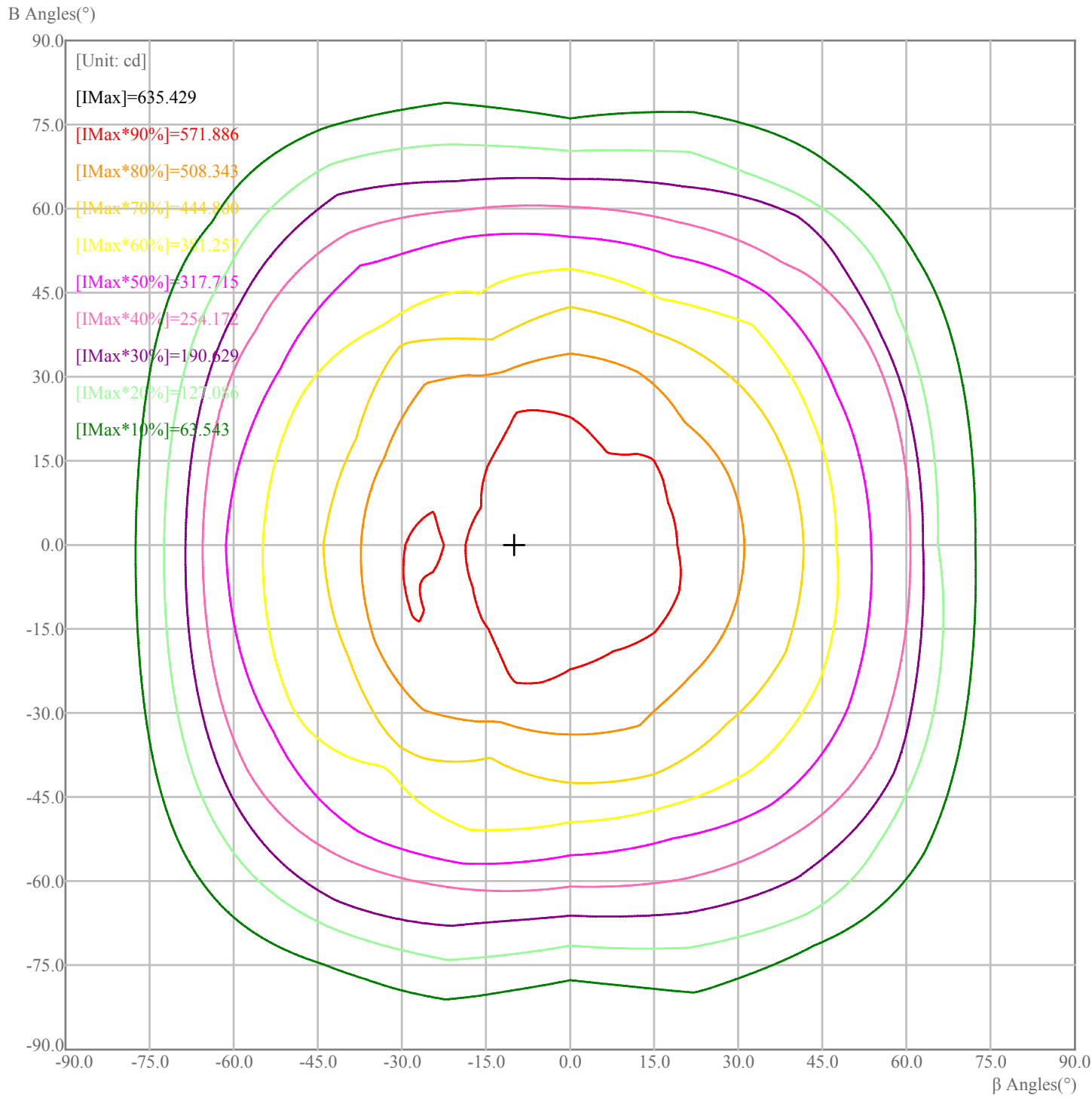
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Zonal Liumens Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	14.88	14.88	0.81	0.81
5.0-10.0	44.14	59.03	2.41	3.22
10.0-15.0	71.90	130.93	3.93	7.15
15.0-20.0	96.77	227.69	5.29	12.44
20.0-25.0	118.29	345.98	6.46	18.90
25.0-30.0	137.33	483.31	7.50	26.40
30.0-35.0	152.53	635.84	8.33	34.74
35.0-40.0	161.45	797.29	8.82	43.56
40.0-45.0	163.61	960.90	8.94	52.50
45.0-50.0	162.04	1122.94	8.85	61.35
50.0-55.0	155.77	1278.71	8.51	69.86
55.0-60.0	143.07	1421.79	7.82	77.67
60.0-65.0	121.56	1543.35	6.64	84.31
65.0-70.0	92.06	1635.41	5.03	89.34
70.0-75.0	61.13	1696.54	3.34	92.68
75.0-80.0	33.81	1730.35	1.85	94.53
80.0-85.0	16.47	1746.82	0.90	95.43
85.0-90.0	9.07	1755.89	0.50	95.93
90.0-95.0	7.14	1763.03	0.39	96.32
95.0-100.0	6.52	1769.55	0.36	96.67
100.0-105.0	6.05	1775.59	0.33	97.00
105.0-110.0	5.61	1781.20	0.31	97.31
110.0-115.0	5.35	1786.55	0.29	97.60
115.0-120.0	5.16	1791.71	0.28	97.88
120.0-125.0	4.91	1796.62	0.27	98.15
125.0-130.0	4.73	1801.35	0.26	98.41
130.0-135.0	4.62	1805.98	0.25	98.66
135.0-140.0	4.45	1810.43	0.24	98.91
140.0-145.0	4.19	1814.62	0.23	99.13
145.0-150.0	3.86	1818.48	0.21	99.35
150.0-155.0	3.45	1821.93	0.19	99.53
155.0-160.0	2.96	1824.89	0.16	99.70
160.0-165.0	2.39	1827.27	0.13	99.83
165.0-170.0	1.75	1829.02	0.10	99.92
170.0-175.0	1.07	1830.10	0.06	99.98
175.0-180.0	0.36	1830.46	0.02	100.00

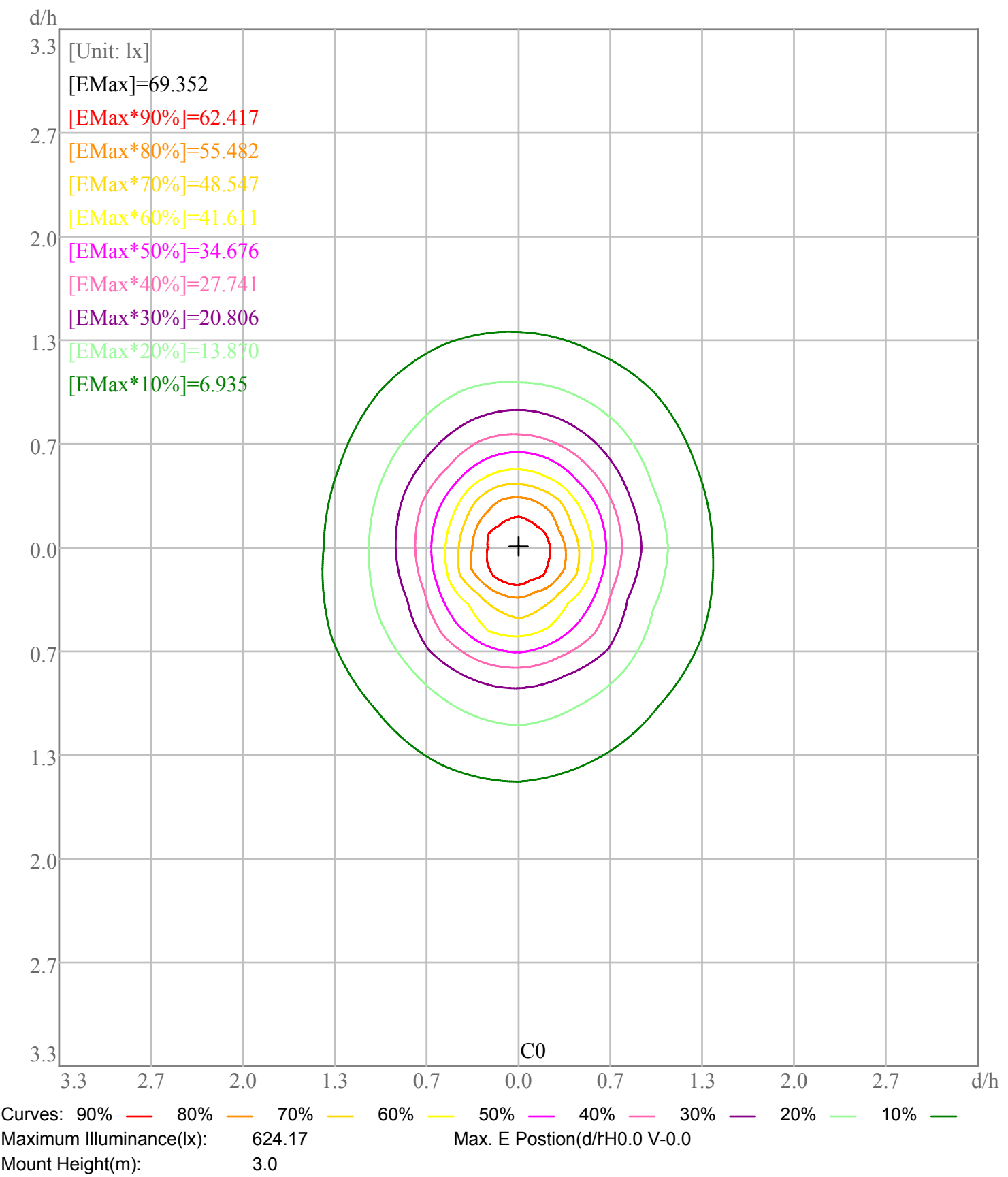
Rectangle ISO Light Intensity Curve



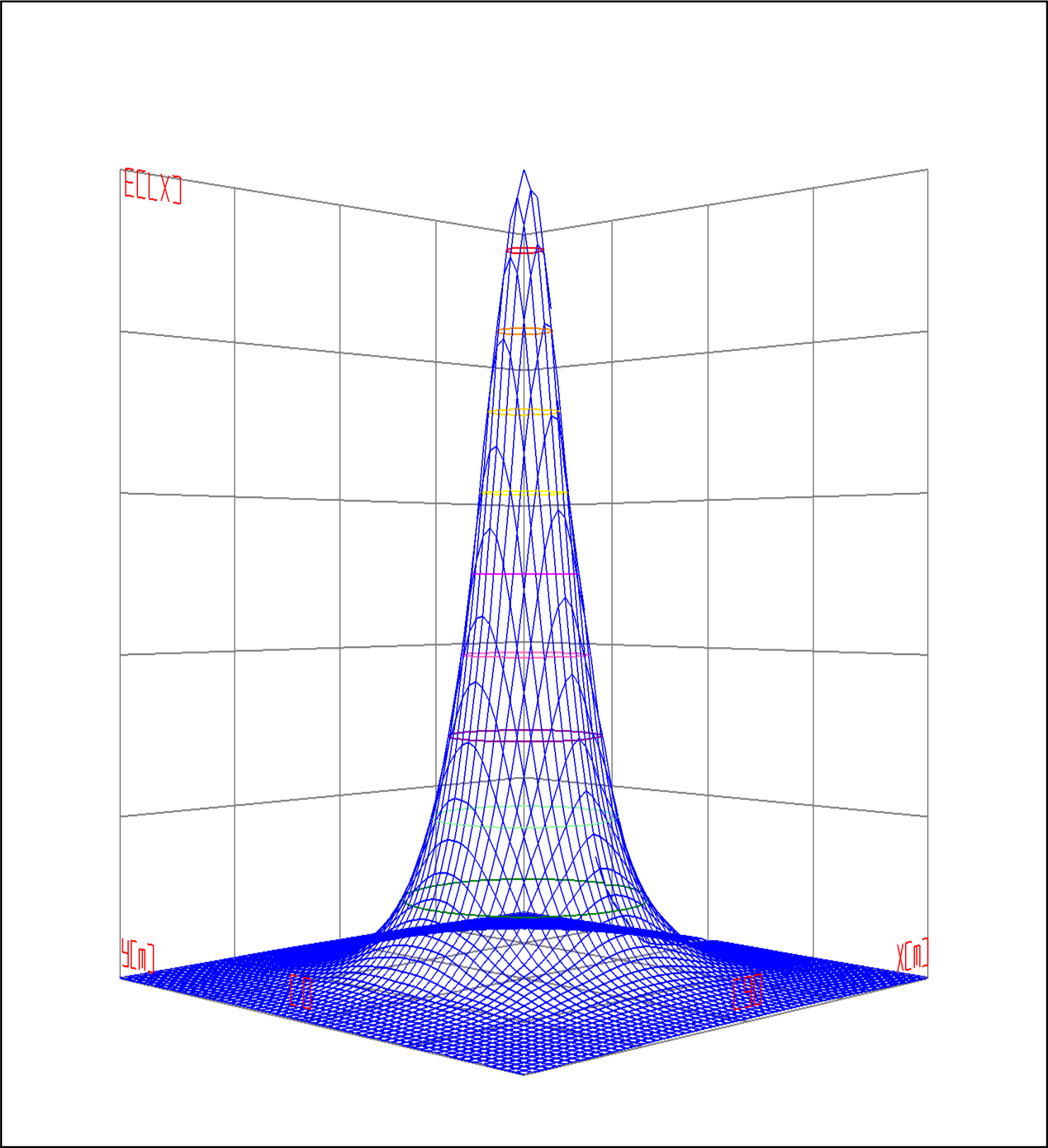
Curves: 90% 80% 70% 60% 50% 40% 30% 20% 10%

Maximum Light Intensity(cd): 635.43 Maximum Cd. Angles: H-10.0 V0.0

Plane ISO-Illuminance Curve

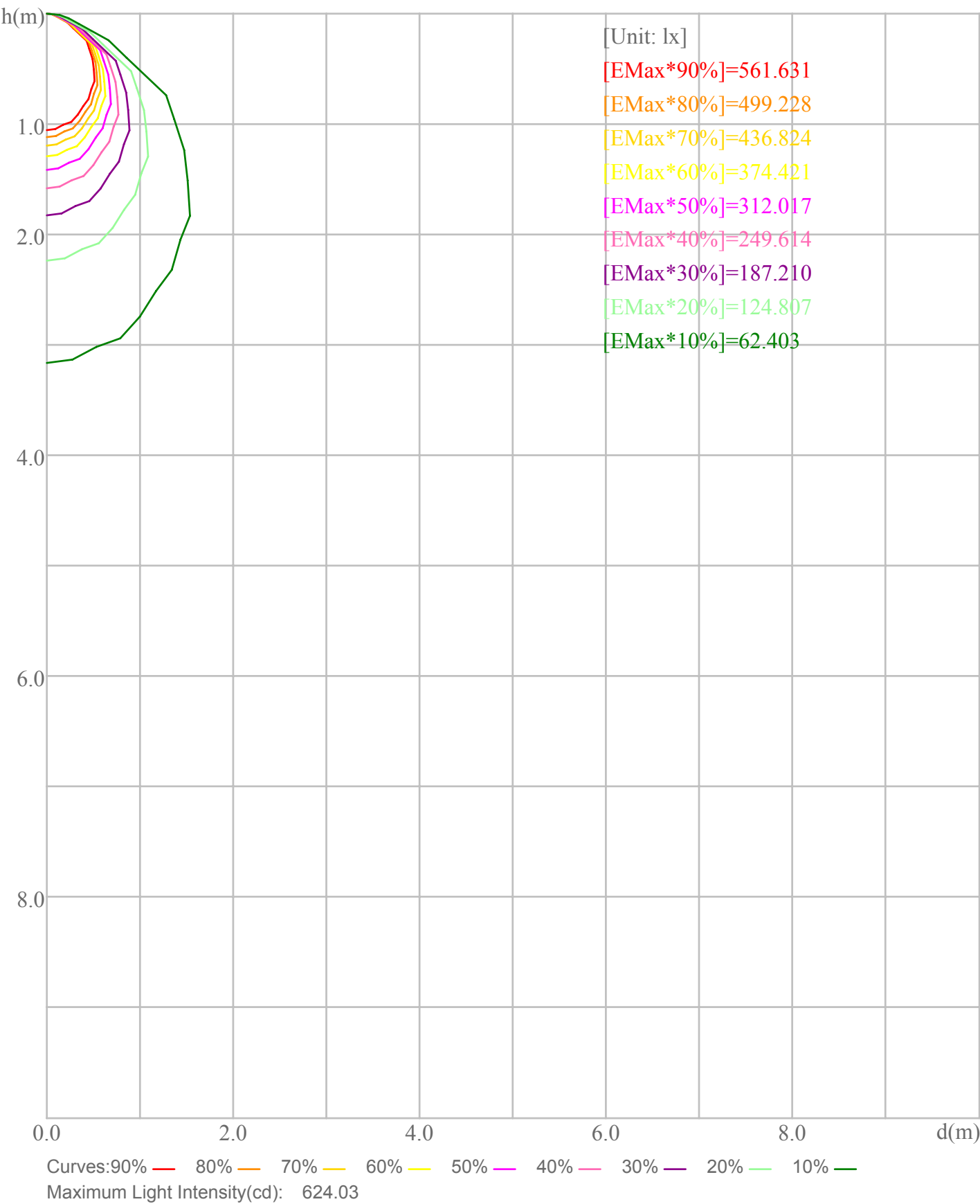


3D Plane ISO Illuminance Curve

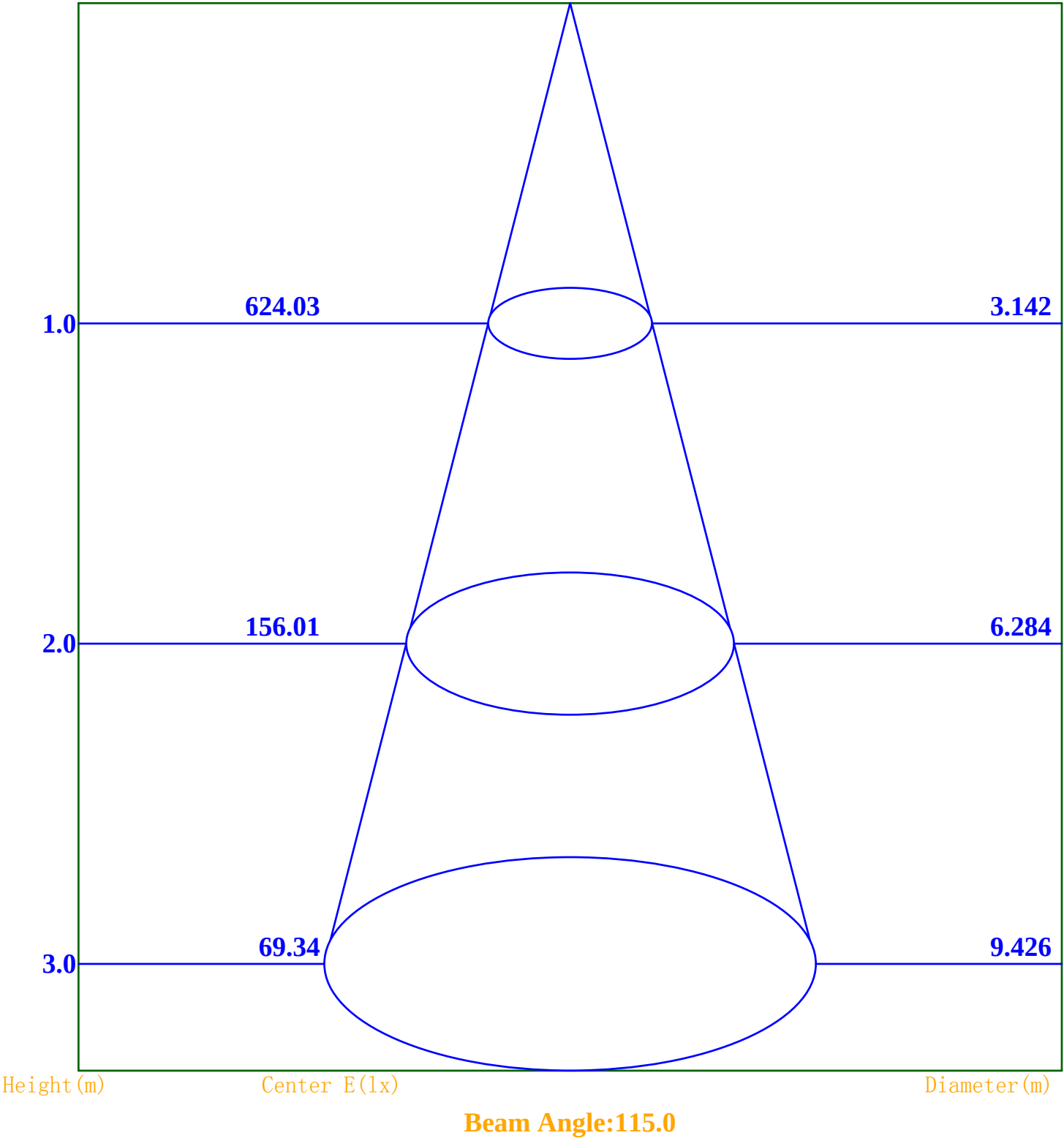


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Curve



Illuminance-Distance Curve



Indoor Luminance Limiting Curve

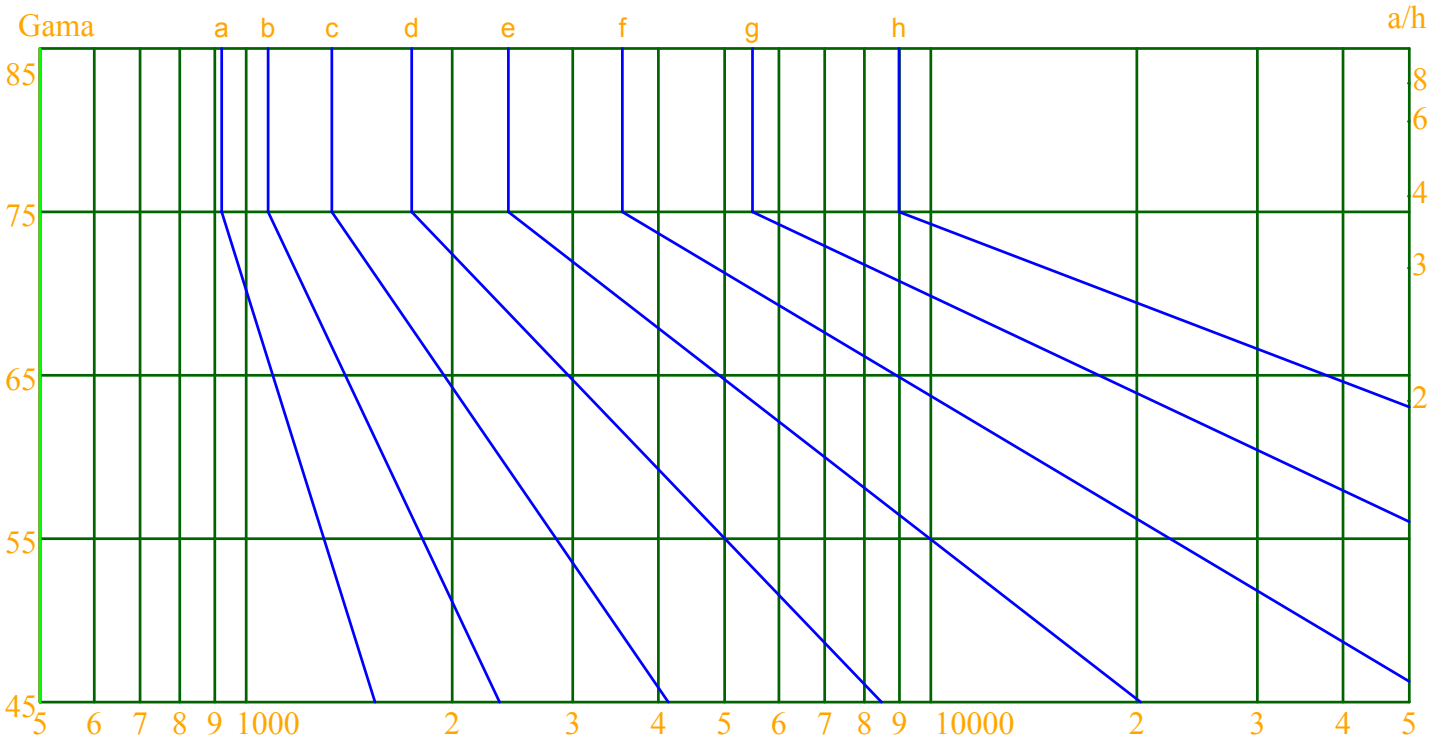
Glare Grade Table

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

Luminance Table

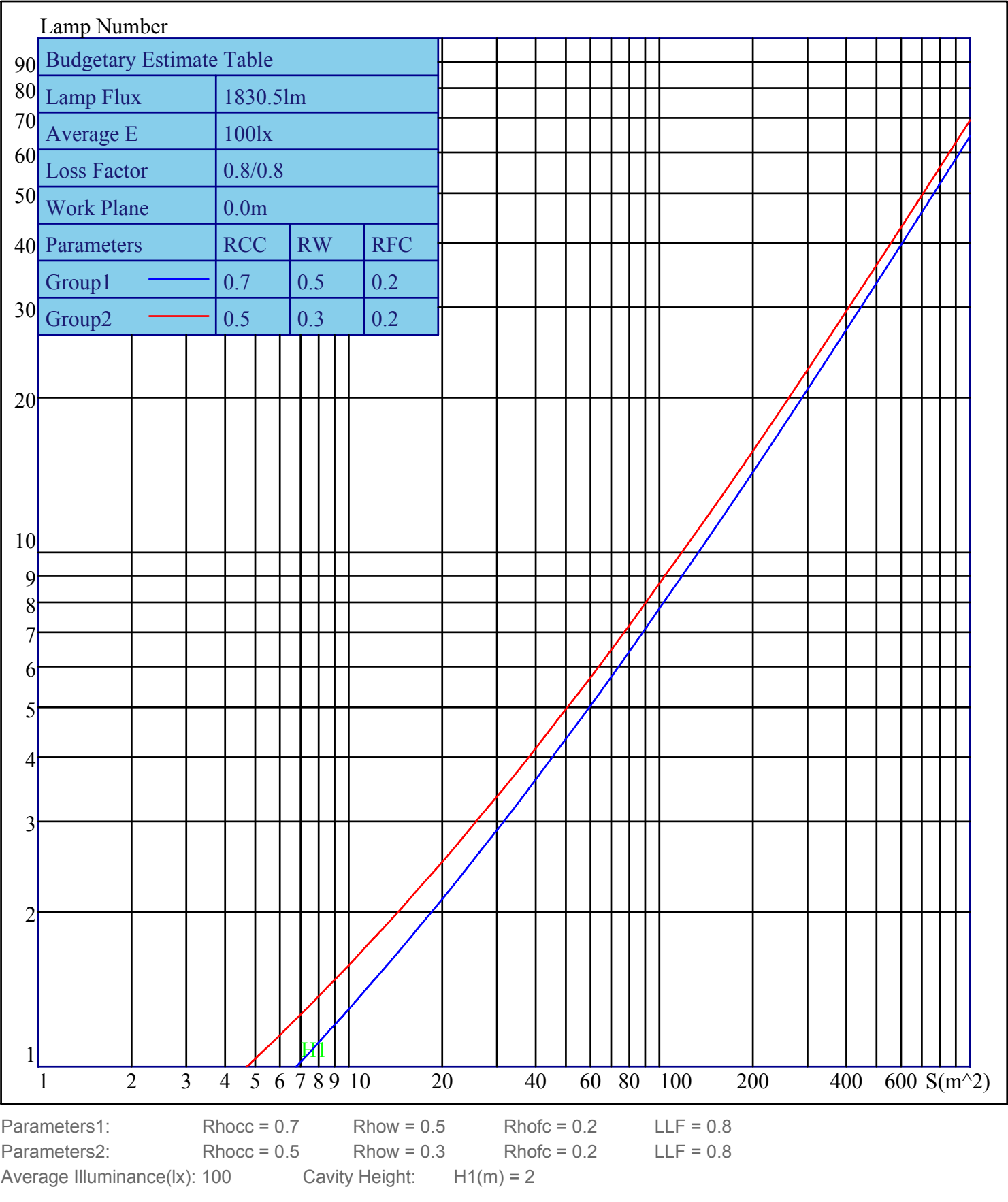
Gama(deg)	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

Luminance Limiting Curve



Luminous Size: Length(m)=1.200 Width(m)=0.000 Height(m)=0.000 Area(m^2)=0.000000
Luminous Type: Without Luminous Side
Luminous Curves: C0-C180 Color: C90-C270 Color:

Indoor Budgetary Estimate Table



Indoor Coefficient of Utilization Table

Coefficients of Utilization - Zonal Cavity Method														
Coefficient	Effective Floor Cavity Reflectance RFC=0.20													
RhoCC (%)	80				70				50			30		
RhoW (%)	70	50	30	10	70	50	30	10	50	30	10	50	30	10
RCR	Coefficient of Utilization(%)													
0	114	114	114	114	111	111	111	111	105	105	105	100	100	100
1	104	100	96	92	101	97	94	90	92	90	87	88	86	83
2	95	87	81	75	92	85	79	74	81	76	72	77	73	70
3	87	77	69	63	84	75	68	62	71	65	60	68	63	59
4	79	68	60	53	77	66	59	53	63	57	51	61	55	50
5	73	61	52	46	71	59	51	45	57	50	44	54	48	44
6	67	54	46	40	65	53	45	39	51	44	39	49	43	38
7	62	49	41	35	60	48	40	35	47	39	34	45	38	34
8	58	45	37	31	56	44	36	31	43	36	31	41	35	30
9	54	41	33	28	52	40	33	28	39	32	28	38	32	27
10	51	38	30	25	49	37	30	25	36	29	25	35	29	25