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Nata

LumCAT: 2-1092-E	
Luminaire: 92.76.263.00	
Report No: NT2014121001	Voltage(V): 29.8000
Test No: GC2014121001	Current(A): 1.0500
LampCAT: VERO18	Power (W): 31.0000
Lamp flux(lm): 3684.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 3193.09
Efficiency(%): 86.67%
Lumens(lm)/Power(W): 103.00
Central intensity(cd): 6708.593
Maximum intensity(cd): 6708.593
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=35.1
[C90/270]Total=35.1
Field angle(10%Imax): [C0/180]Total=71.2
[C90/270]Total=71.2
Maximum s/h(1/2): C0_180=0.58 C90_270=0.58
Maximum s/h(1/4): C0_180=0.59 C90_270=0.59
Up flux rate of lamp(%): 3.03%
Down flux rate of lamp(%): 83.65%
Up flux rate of LUM(%): 3.49%
Down flux rate of LUM(%): 96.51%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.794%

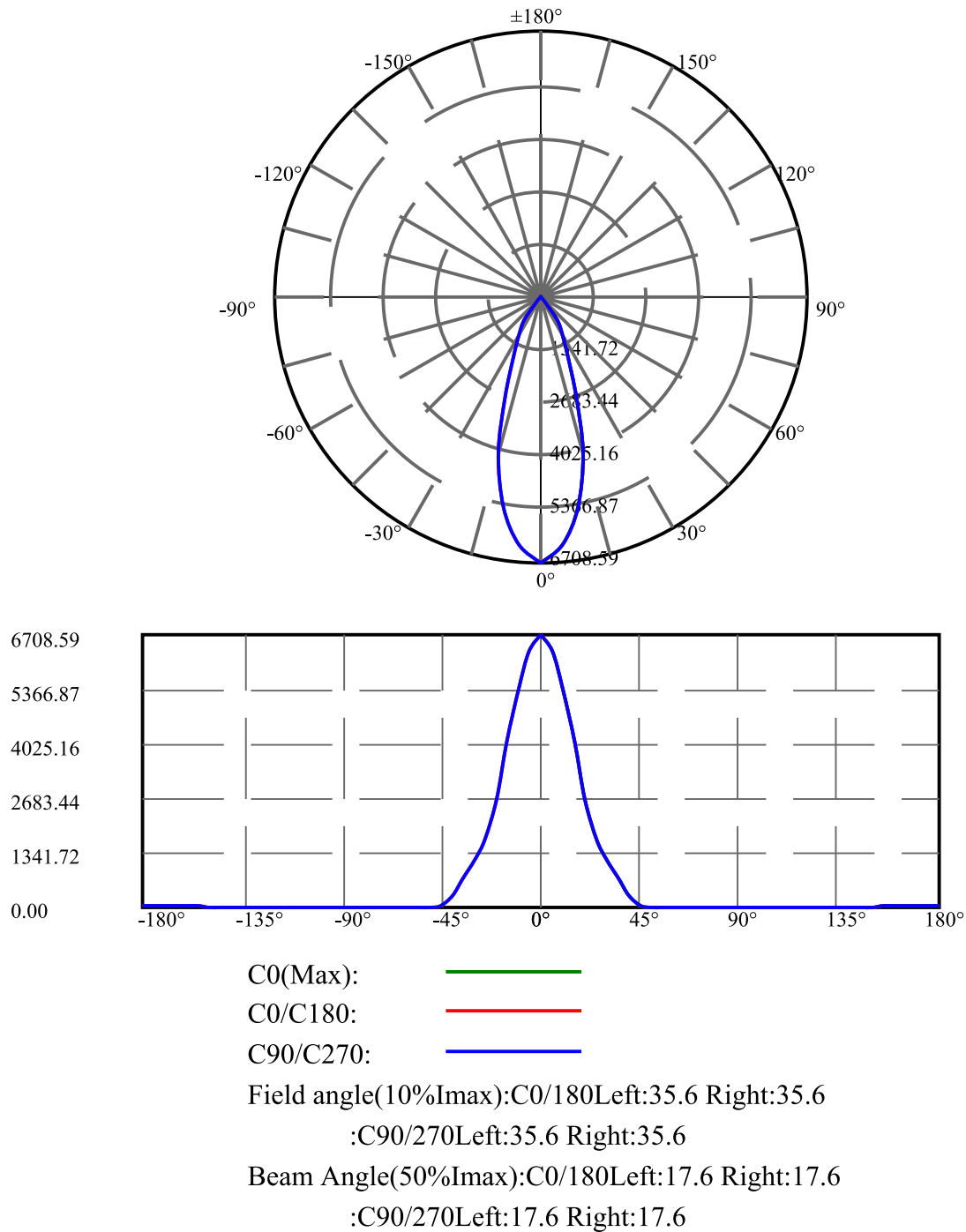
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6708.593	0.000	0	.000%	.000%
5.0	6273.509	155.197	155.197	4.213%	4.860%
10.0	5393.409	417.362	572.56	11.329%	17.931%
15.0	4069.972	561.361	1133.921	15.238%	35.512%
20.0	2676.807	556.029	1689.95	15.093%	52.925%
25.0	1657.740	454.614	2144.564	12.340%	67.163%
30.0	1152.949	355.695	2500.26	9.655%	78.302%
35.0	725.425	276.604	2776.863	7.508%	86.965%
40.0	274.297	166.796	2943.659	4.528%	92.188%
45.0	31.997	56.713	3000.372	1.539%	93.965%
50.0	18.925	10.290	3010.662	.279%	94.287%
55.0	17.967	8.022	3018.683	.218%	94.538%
60.0	17.401	8.175	3026.858	.222%	94.794%
65.0	17.128	8.394	3035.252	.228%	95.057%
70.0	17.058	8.656	3043.908	.235%	95.328%
75.0	17.401	9.007	3052.915	.244%	95.610%
80.0	17.960	9.462	3062.377	.257%	95.906%
85.0	18.149	9.812	3072.188	.266%	96.214%
90.0	16.317	9.437	3081.625	.256%	96.509%
95.0	16.338	8.941	3090.566	.243%	96.789%
100.0	16.345	8.880	3099.447	.241%	97.067%
105.0	16.331	8.743	3108.19	.237%	97.341%
110.0	16.331	8.537	3116.727	.232%	97.608%
115.0	16.310	8.265	3124.991	.224%	97.867%
120.0	16.324	7.933	3132.924	.215%	98.116%
125.0	16.352	7.553	3140.477	.205%	98.352%
130.0	16.477	7.138	3147.615	.194%	98.576%
135.0	16.575	6.679	3154.294	.181%	98.785%
140.0	16.897	6.198	3160.492	.168%	98.979%
145.0	17.974	5.818	3166.31	.158%	99.161%
150.0	20.121	5.610	3171.92	.152%	99.337%
155.0	22.863	5.440	3177.359	.148%	99.507%
160.0	25.513	5.074	3182.433	.138%	99.666%
165.0	27.737	4.389	3186.822	.119%	99.804%
170.0	29.458	3.393	3190.214	.092%	99.910%
175.0	30.458	2.143	3192.358	.058%	99.977%
180.0	30.843	0.733	3193.091	.020%	100.000%

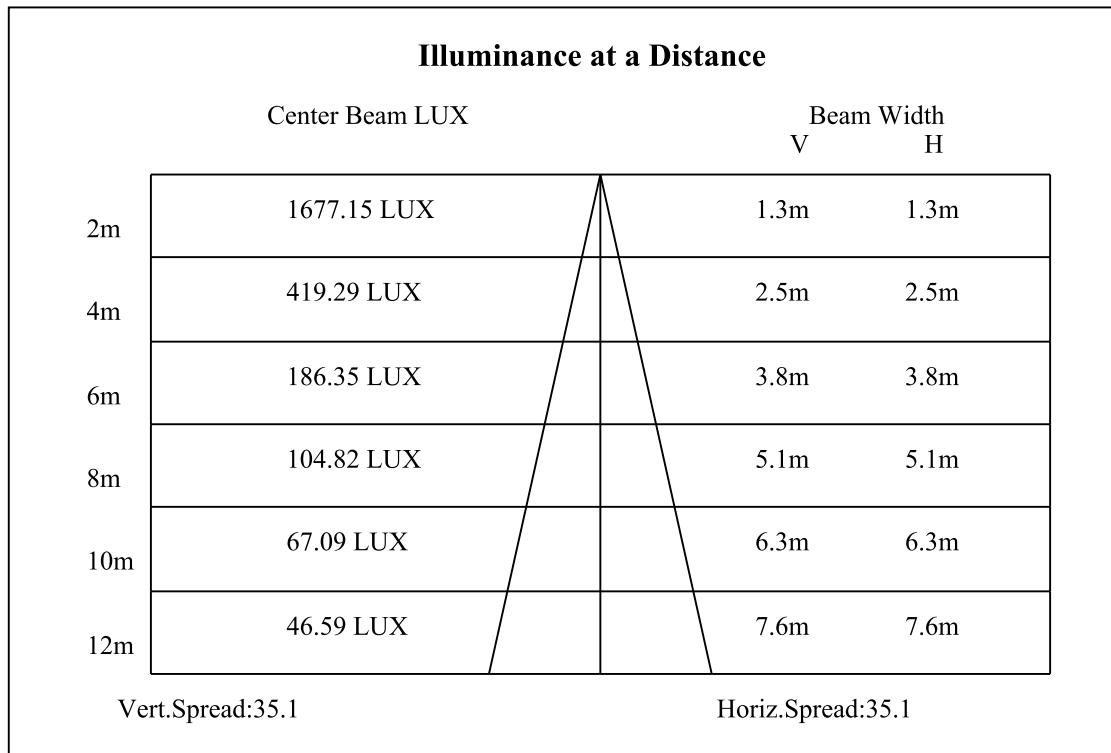
ZONAL LUMEN SUMMARY

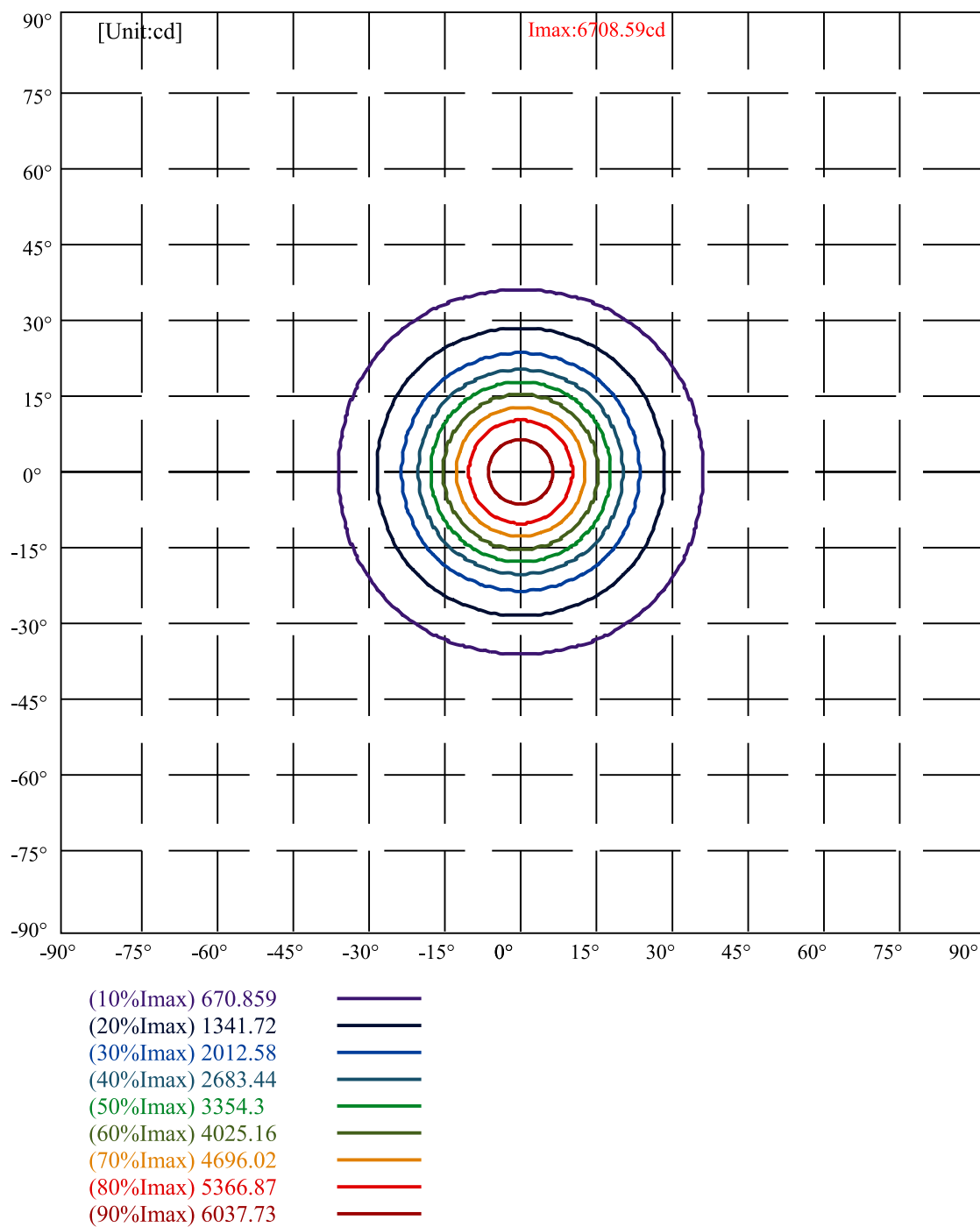
Zone	Lumens	%Lamp	%Fixt
0-30	2500.26	67.87%	78.30%
0-40	2943.66	79.90%	92.19%
0-60	3026.86	82.16%	94.79%
0-90	3081.63	83.65%	96.51%
0-120	3132.92	85.04%	98.12%
0-180	3193.09	86.67%	100.00%
60-90	62.94	1.71%	1.97%
90-120	60.74	1.65%	1.90%
90-130	75.43	2.05%	2.36%
90-150	99.73	2.71%	3.12%
90-180	120.17	3.26%	3.76%
0-30.98	2554.47	69.34%	80.00%

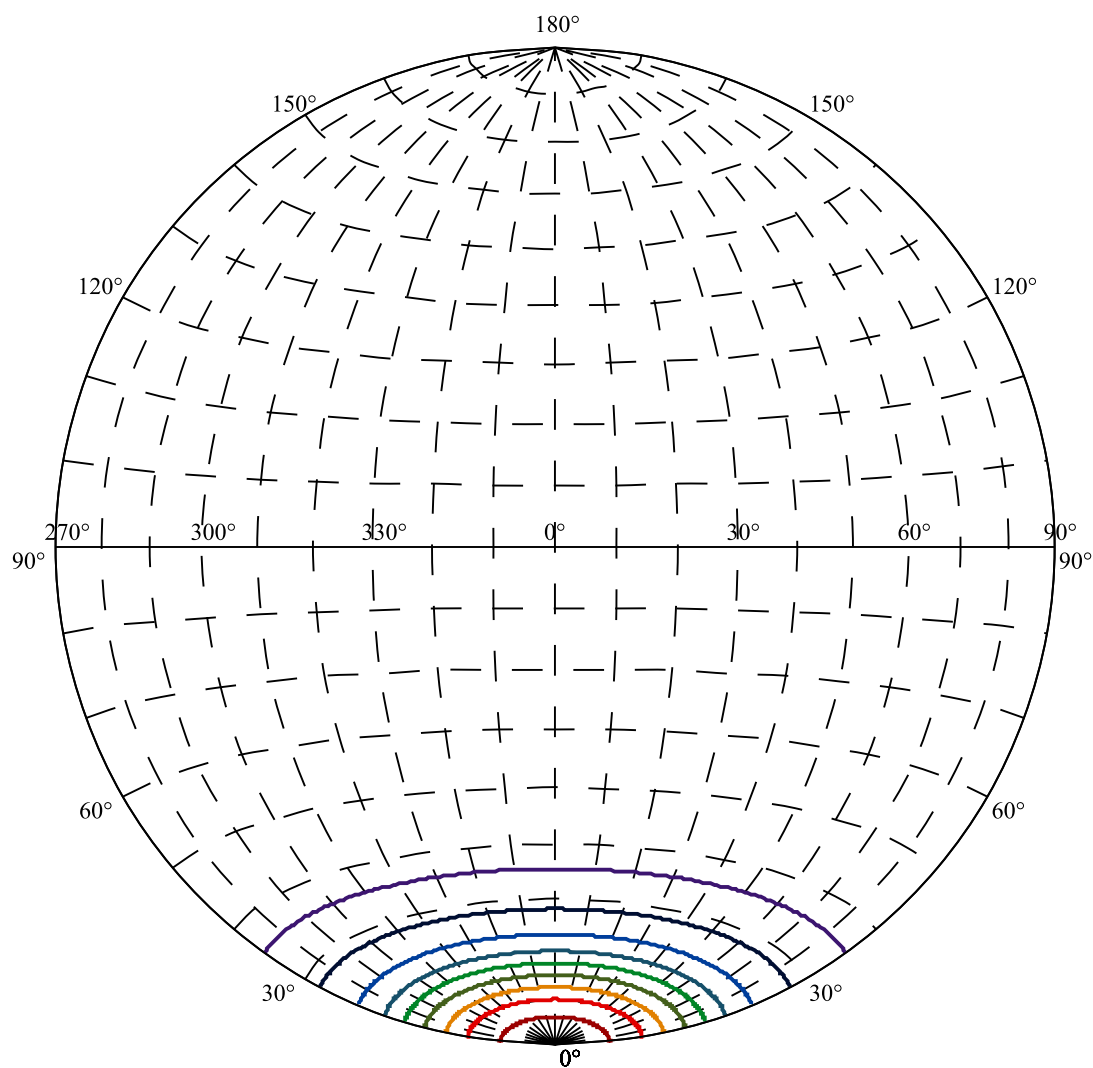
ZONAL LUMEN SUMMARY

0-10	572.56
10-20	1117.39
20-30	810.31
30-40	443.40
40-50	67.00
50-60	16.20
60-70	17.05
70-80	18.47
80-90	19.25
90-100	17.82
100-110	17.28
110-120	16.20
120-130	14.69
130-140	12.88
140-150	11.43
150-160	10.51
160-170	7.78
170-180	2.14









House

[Unit:cd]

Road

Imax:6708.59

(10%Imax) 670.859

(20%Imax) 1341.72

(30%Imax) 2012.58

(40%Imax) 2683.44

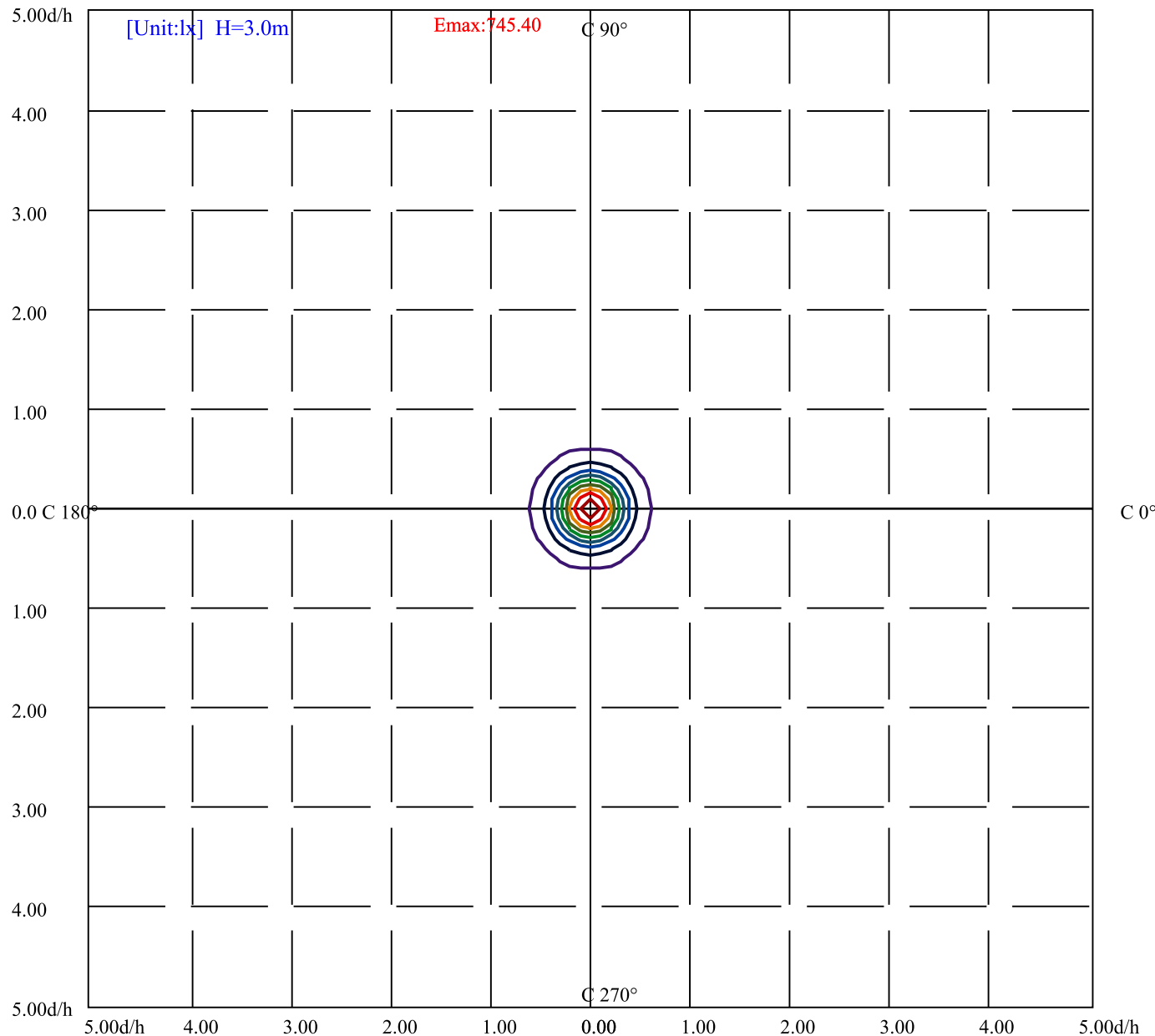
(50%Imax) 3354.3

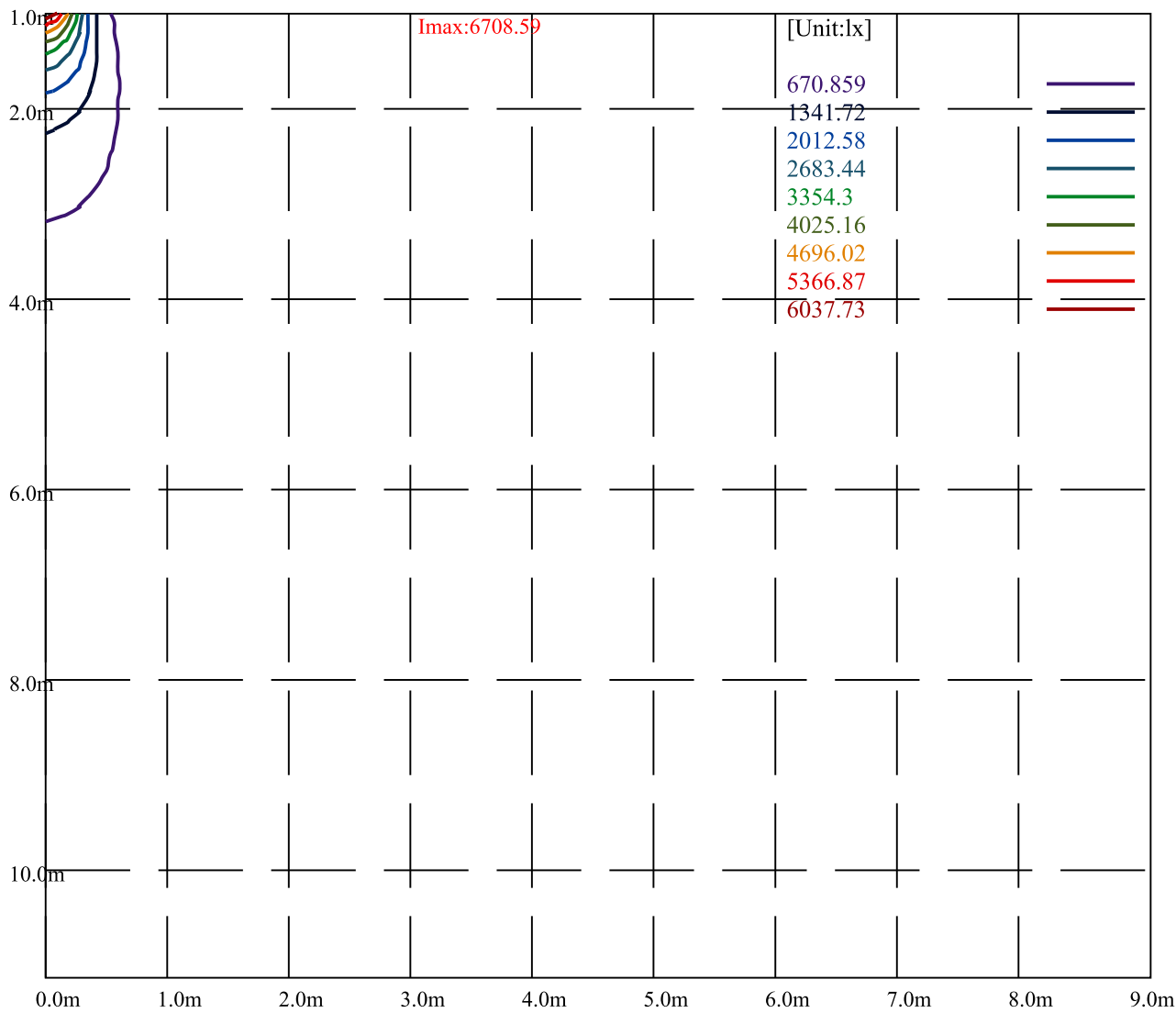
(60%Imax) 4025.16

(70%Imax) 4696.02

(80%Imax) 5366.87

(90%Imax) 6037.73





Luminance Table

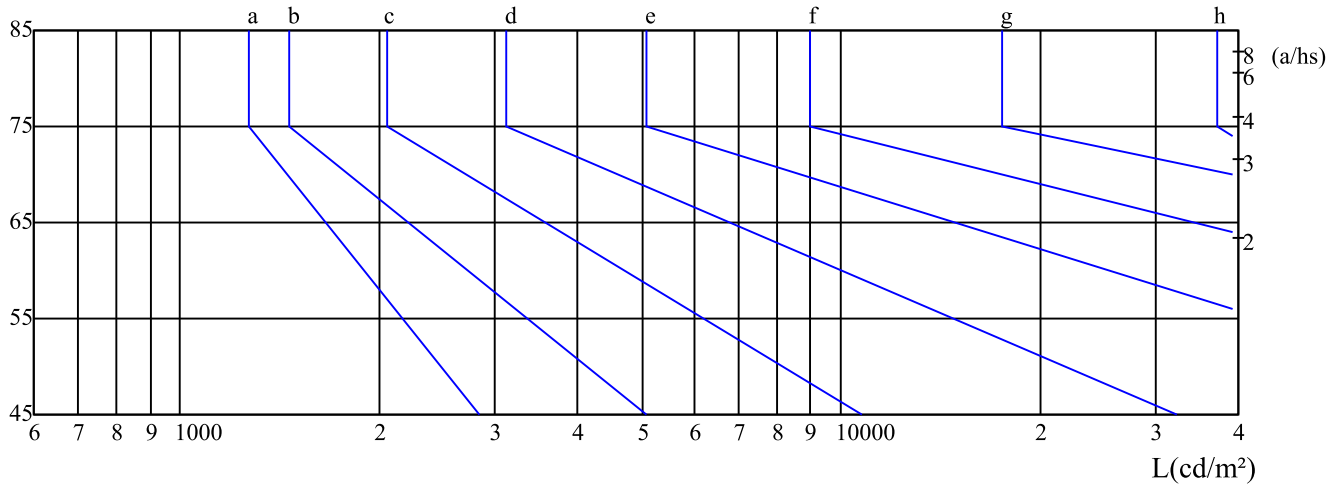
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
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

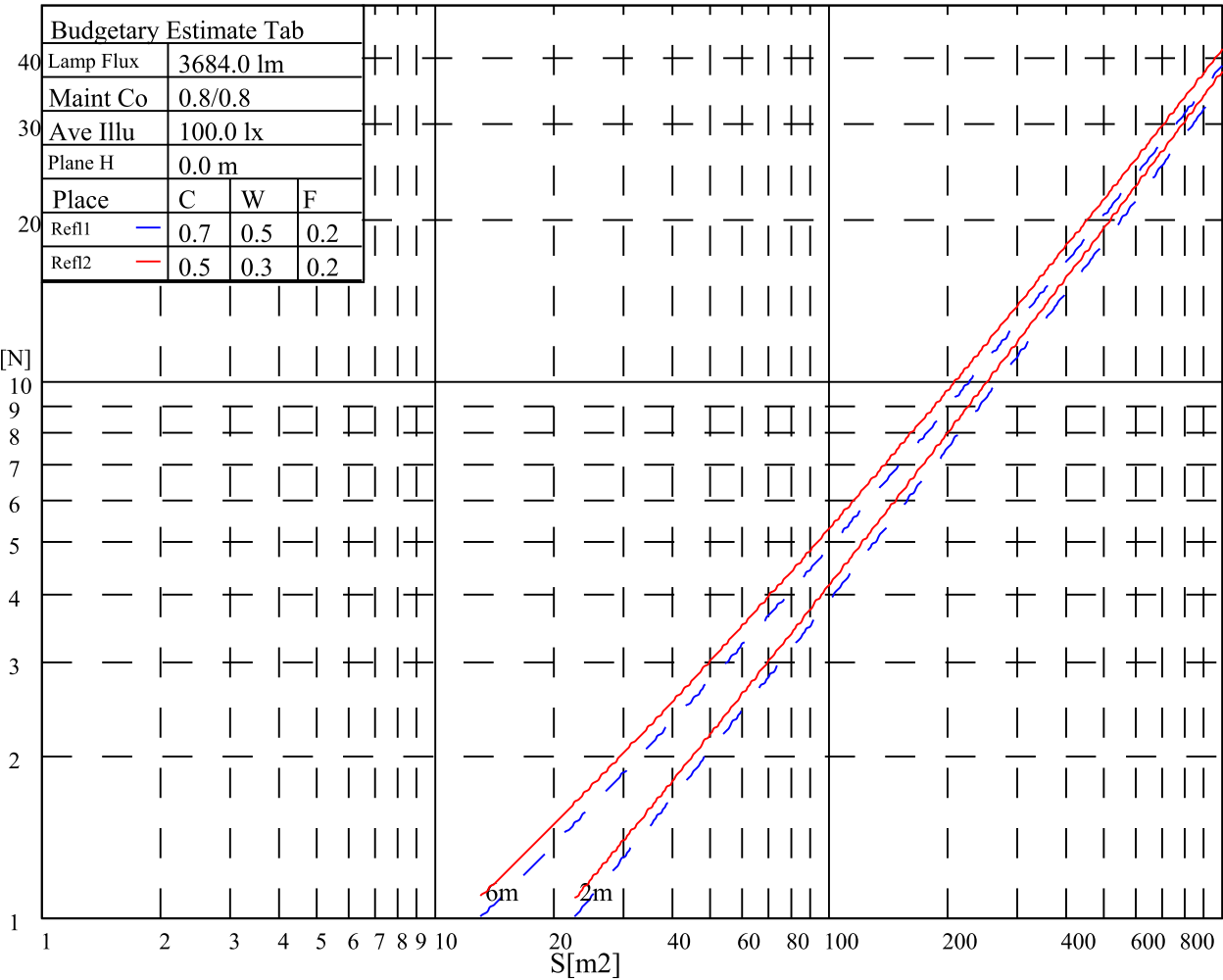
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

C0 ———

C45 ———

C90 ———



RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.02	1.02	1.02	1.00	1.00	1.00	0.95	0.95	0.95	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.95	0.93	0.91	0.93	0.91	0.90	0.89	0.88	0.86	0.86	0.84	0.83	0.82	0.81	0.80	0.79
2	0.89	0.86	0.83	0.88	0.85	0.82	0.84	0.82	0.80	0.81	0.79	0.78	0.79	0.77	0.76	0.74
3	0.84	0.80	0.77	0.83	0.79	0.76	0.80	0.77	0.75	0.78	0.75	0.73	0.75	0.73	0.72	0.70
4	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.66
5	0.75	0.71	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.67	0.65	0.69	0.66	0.64	0.63
6	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
7	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.61	0.59	0.63	0.60	0.58	0.57
8	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.54
9	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.52
10	0.59	0.55	0.52	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.50

Intensity data(cd)

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	6698.38	6239.03	5330.95	4081.02	2663.24	1632.63	1143.63	702.18	299.33
45.0	6745.38	6287.71	5416.56	3997.10	2666.04	1627.60	1197.90	716.17	303.25
90.0	6710.13	6190.91	5270.53	3932.75	2521.13	1589.55	1103.34	684.22	221.23
135.0	6680.48	6385.06	5584.41	4297.55	2911.10	1780.34	1246.02	809.60	356.40
180.0	6698.38	6297.78	5407.61	4100.60	2665.48	1715.44	1108.04	744.59	270.97
225.0	6745.38	6336.94	5454.60	4129.70	2706.88	1647.18	1114.08	744.76	267.22
270.0	6710.13	6340.86	5493.21	4195.72	2830.53	1732.78	1221.96	771.00	310.52
315.0	6680.48	6109.78	5189.40	3825.33	2450.07	1536.40	1088.63	630.90	165.45
360.0	6698.38	6239.03	5330.95	4081.02	2663.24	1632.63	1143.63	702.18	299.33
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	33.63	18.91	17.79	17.23	16.95	17.01	17.57	18.52	18.52
45.0	33.91	18.97	18.02	17.51	17.23	17.23	17.46	18.46	17.57
90.0	27.58	18.80	18.02	17.57	17.34	17.34	18.13	18.91	19.47
135.0	35.64	19.14	18.13	17.51	17.12	16.90	17.06	17.29	17.46
180.0	31.16	18.80	17.85	17.23	16.84	16.67	16.51	16.45	16.39
225.0	32.34	18.97	17.96	17.29	17.01	16.79	16.73	16.95	17.01
270.0	35.53	19.08	18.07	17.46	17.23	17.06	17.40	17.79	18.30
315.0	26.18	18.74	17.90	17.40	17.29	17.46	18.35	19.30	20.48
360.0	33.63	18.91	17.79	17.23	16.95	17.01	17.57	18.52	18.52
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	16.23	16.23	16.23	16.23	16.23	16.23	16.23	16.28	16.45
45.0	16.45	16.45	16.39	16.39	16.45	16.39	16.39	16.39	16.51
90.0	16.34	16.39	16.39	16.34	16.34	16.34	16.34	16.34	16.45
135.0	16.28	16.34	16.34	16.34	16.28	16.28	16.28	16.28	16.34
180.0	16.17	16.17	16.23	16.17	16.17	16.11	16.17	16.17	16.23
225.0	16.39	16.45	16.39	16.45	16.45	16.45	16.45	16.51	16.67
270.0	16.39	16.39	16.45	16.45	16.45	16.39	16.39	16.45	16.62
315.0	16.28	16.28	16.34	16.28	16.28	16.28	16.34	16.39	16.56
360.0	16.23	16.23	16.23	16.23	16.23	16.23	16.23	16.28	16.45
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	16.67	17.12	18.52	21.04	24.23	26.91	29.15	30.77	31.67
45.0	16.51	16.73	17.68	19.53	22.10	24.62	26.91	28.59	29.82
90.0	16.45	16.67	17.62	19.58	21.99	24.56	26.74	28.53	29.65
135.0	16.34	16.51	17.23	18.97	21.65	24.11	26.58	28.42	29.88
180.0	16.23	16.51	17.51	19.64	22.27	25.07	27.47	29.32	30.60
225.0	16.90	17.23	18.35	20.59	23.22	26.02	28.14	29.88	30.60
270.0	16.79	17.12	18.24	20.37	23.39	25.96	28.09	29.71	30.44
315.0	16.73	17.29	18.63	21.26	24.06	26.86	28.81	30.44	31.00
360.0	16.67	17.12	18.52	21.04	24.23	26.91	29.15	30.77	31.67
C/ γ (°)	180.0								
0.0	31.56								
45.0	30.55								
90.0	30.44								
135.0	30.83								
180.0	31.56								
225.0	30.55								
270.0	30.44								
315.0	30.83								
360.0	31.56								