
Nata

LumCAT: 3-2079-A
Luminaire: 92.70.151.00+92.70.153.00
Report No: NT2017072109
Test No: GC2017072109
LampCAT: CITIZEN LCN-C03A
Lamp flux(lm): 2968.0
Number of Lamps: 1
Length(mm): 80
Phm Type: C

Voltage(V): 34.3000
Current(A): 0.7000
Power (W): 24.0000
PF: 0.0000
Ballast type: DC
Width(mm): 80
Height(mm): 0

Photometric Results

Lumens(lm): 2623.16
Efficiency(%): 88.38%
Lumens(lm)/Power(W): 109.30
Central intensity(cd): 11110.560
Maximum intensity(cd): 11110.560
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=20.3
[C90/270]Total=20.3
Field angle(10%Imax): [C0/180]Total=49.4
[C90/270]Total=49.4
Maximum s/h(1/2): C0_180=0.35 C90_270=0.35
Maximum s/h(1/4): C0_180=0.36 C90_270=0.36
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.38%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.758%

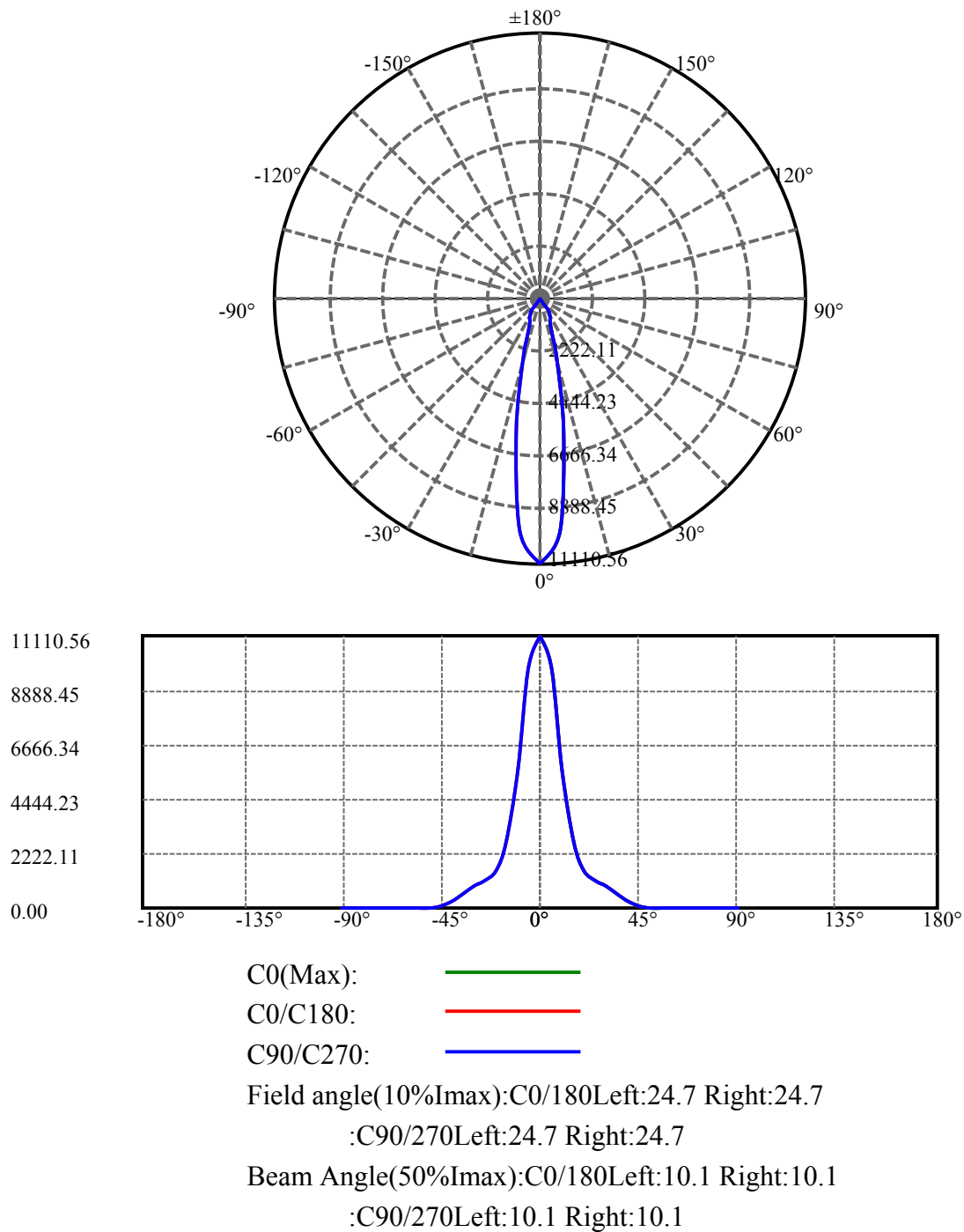
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11110.564	0.000	0	.000%	.000%
5.0	9732.018	249.167	249.167	8.395%	9.499%
10.0	5632.234	549.628	798.795	18.518%	30.452%
15.0	2668.494	492.394	1291.188	16.590%	49.223%
20.0	1521.876	345.345	1636.534	11.636%	62.388%
25.0	1083.467	273.252	1909.786	9.207%	72.805%
30.0	894.210	250.277	2160.063	8.433%	82.346%
35.0	573.531	216.135	2376.198	7.282%	90.585%
40.0	247.288	136.948	2513.146	4.614%	95.806%
45.0	49.043	54.868	2568.014	1.849%	97.898%
50.0	12.313	12.398	2580.412	.418%	98.370%
55.0	11.144	5.100	2585.512	.172%	98.565%
60.0	10.741	5.059	2590.571	.170%	98.758%
65.0	10.518	5.168	2595.739	.174%	98.955%
70.0	10.435	5.305	2601.044	.179%	99.157%
75.0	10.365	5.437	2606.481	.183%	99.364%
80.0	10.351	5.543	2612.024	.187%	99.576%
85.0	10.254	5.599	2617.623	.189%	99.789%
90.0	9.962	5.535	2623.158	.186%	100.000%

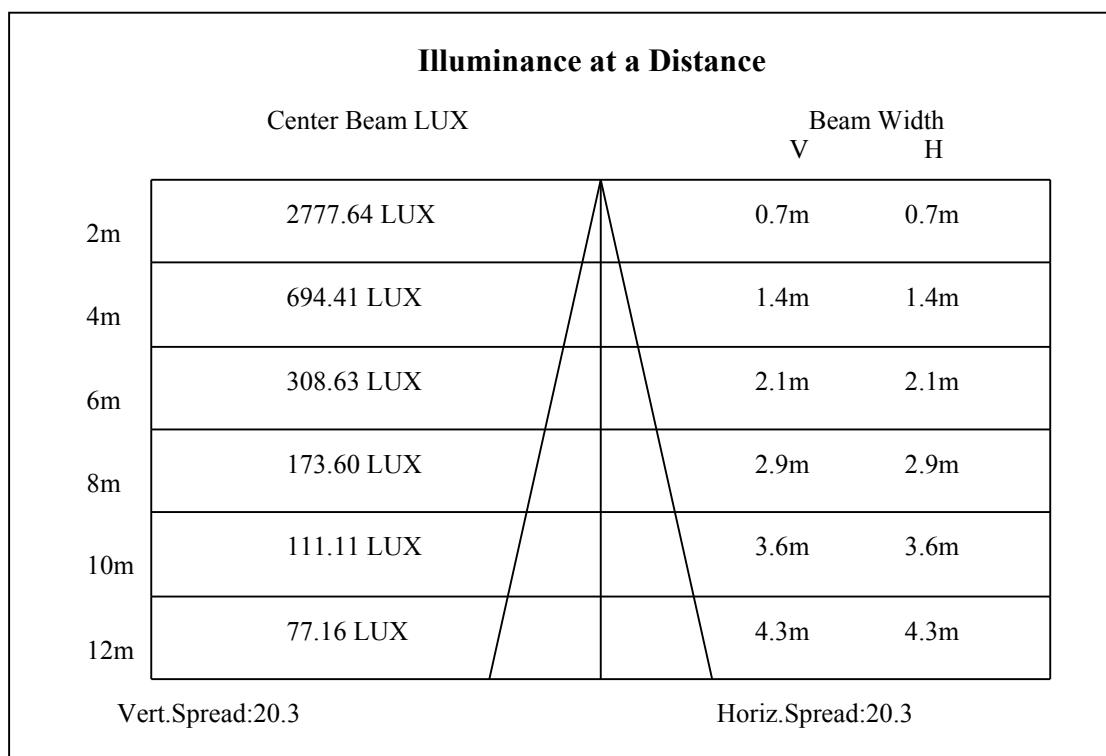
ZONAL LUMEN SUMMARY

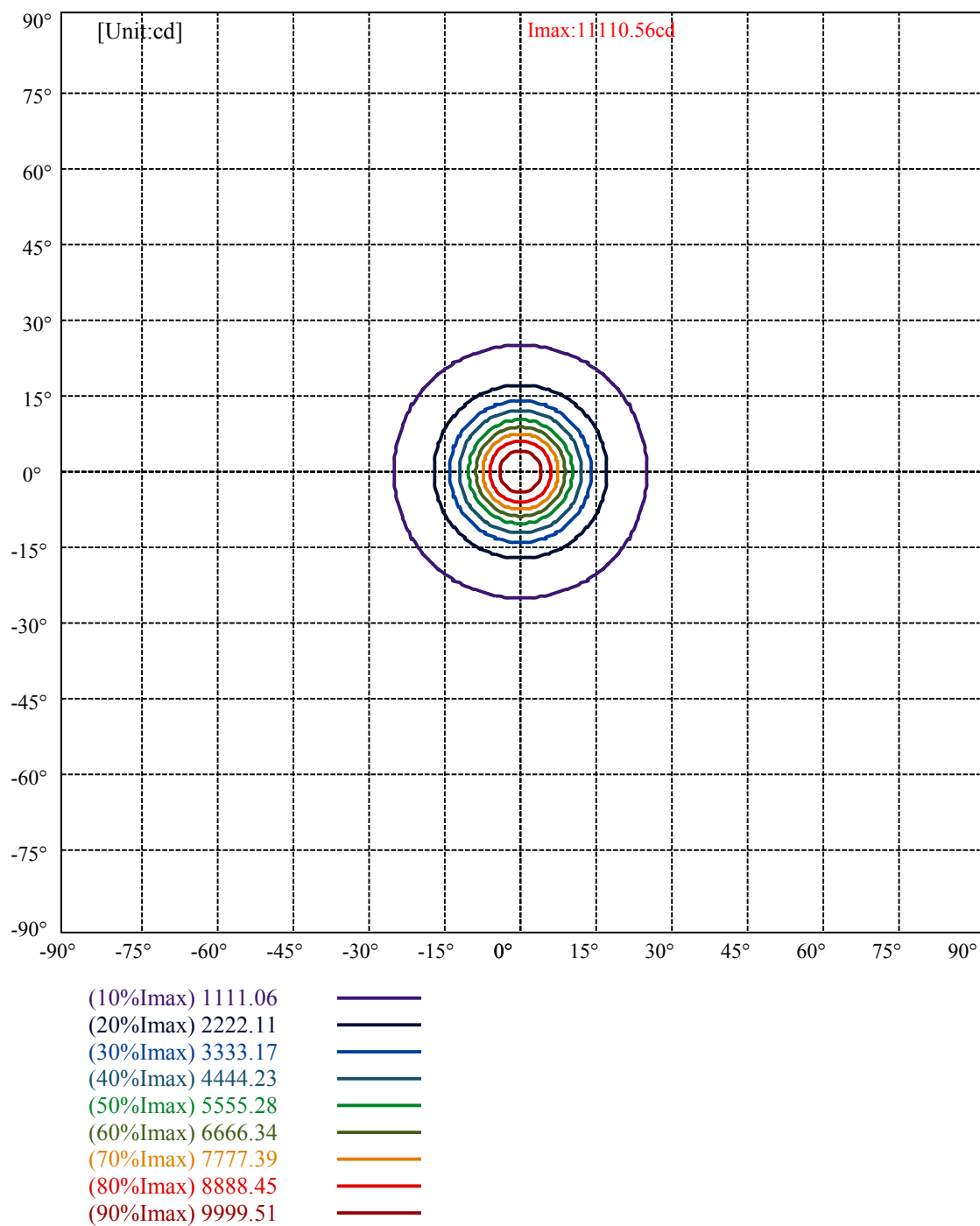
Zone	Lumens	%Lamp	%Fixt
0-30	2160.06	72.78%	82.35%
0-40	2513.15	84.67%	95.81%
0-60	2590.57	87.28%	98.76%
0-90	2617.62	88.19%	99.79%
0-120	2617.62	88.19%	99.79%
0-180	2623.16	88.38%	100.00%
60-90	32.11	1.08%	1.22%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.77	2098.53	70.71%	80.00%

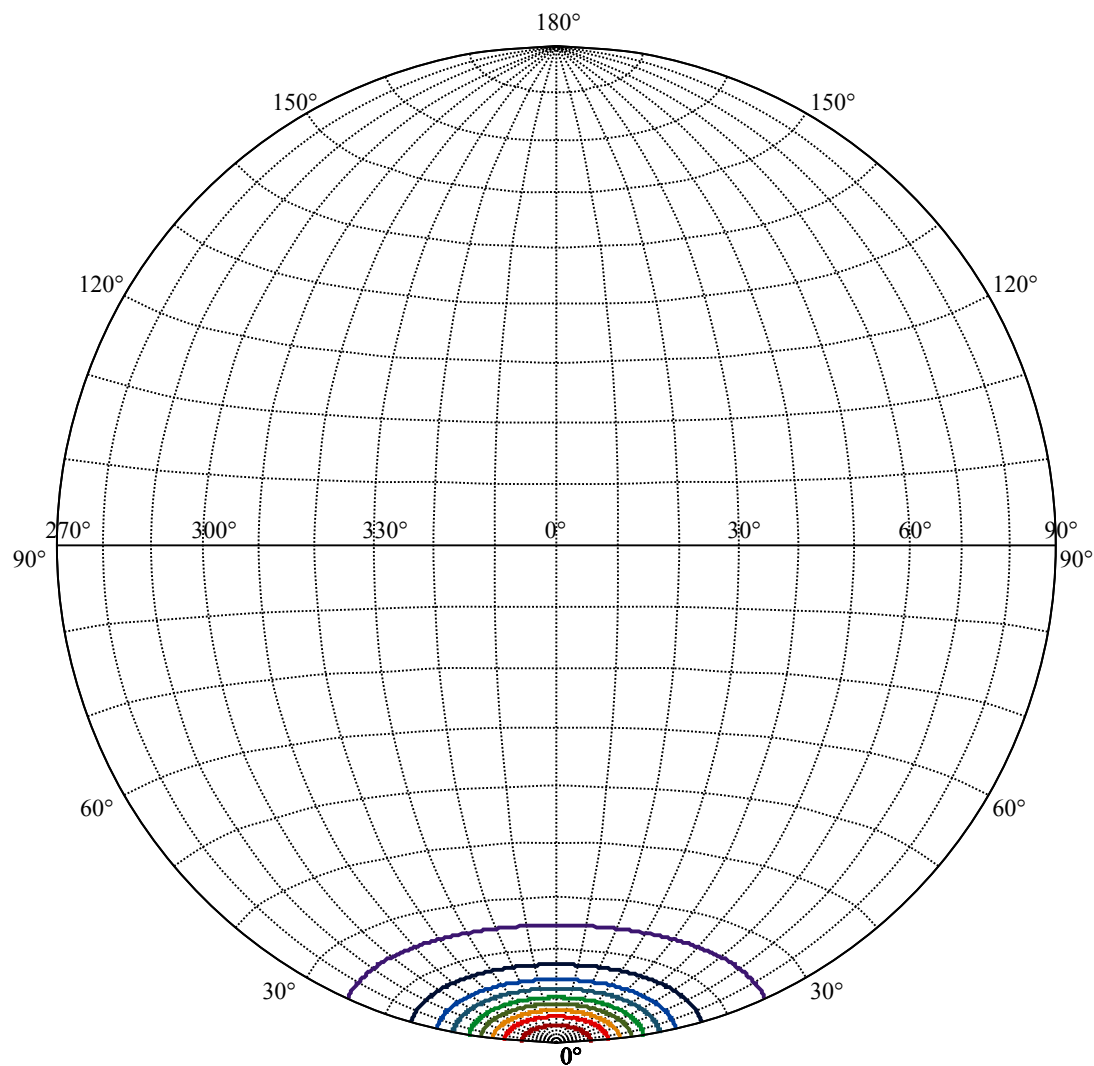
ZONAL LUMEN SUMMARY

0-10	798.79
10-20	837.74
20-30	523.53
30-40	353.08
40-50	67.27
50-60	10.16
60-70	10.47
70-80	10.98
80-90	5.60
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00









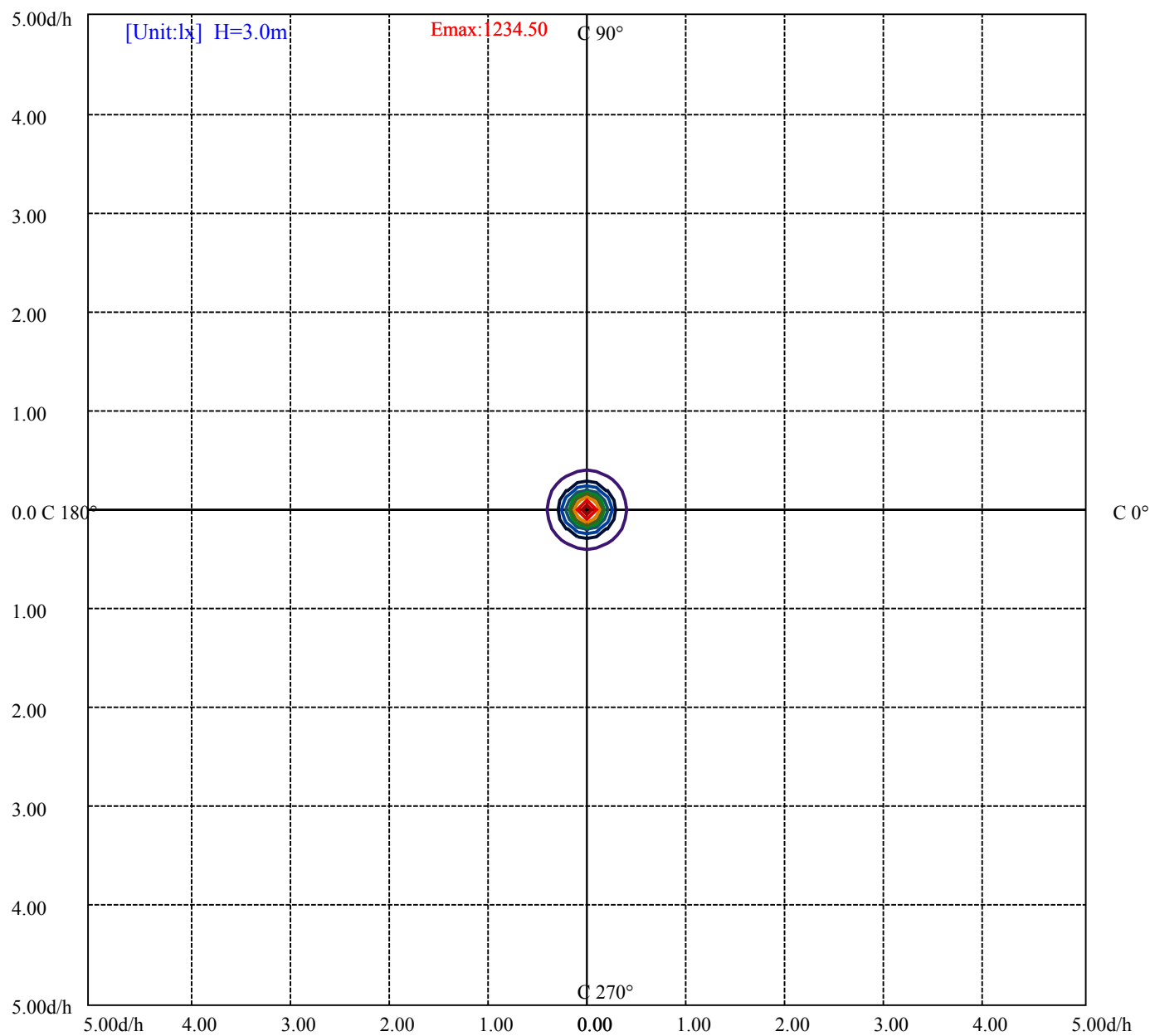
House

[Unit:cd]

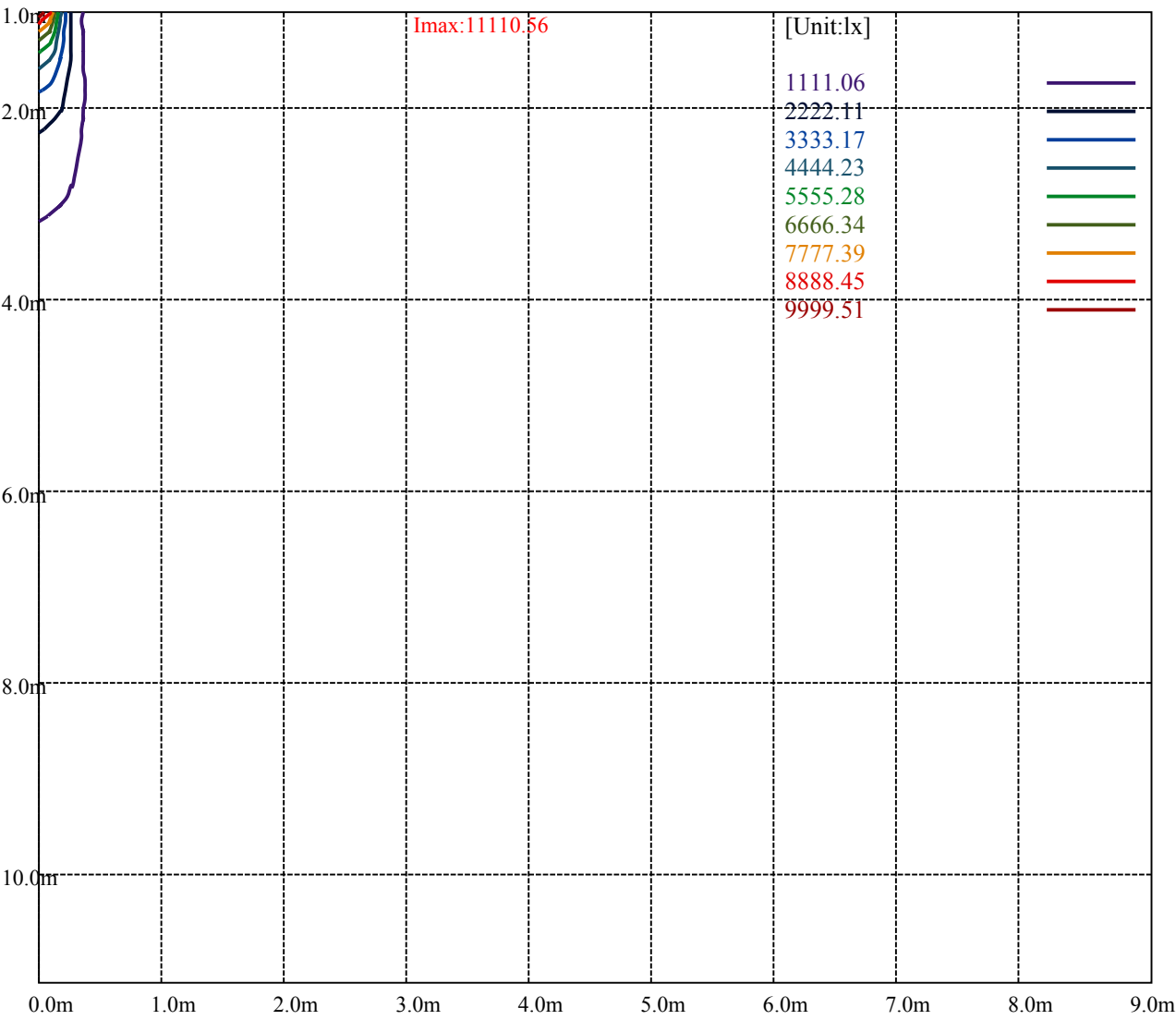
Road

Imax:11110.56

(10%Imax)	1111.06	—
(20%Imax)	2222.11	—
(30%Imax)	3333.17	—
(40%Imax)	4444.23	—
(50%Imax)	5555.28	—
(60%Imax)	6666.34	—
(70%Imax)	7777.39	—
(80%Imax)	8888.45	—
(90%Imax)	9999.51	—



(10%E _{max}) 123.45	—
(20%E _{max}) 246.9	—
(30%E _{max}) 370.3511	—
(40%E _{max}) 493.8011	—
(50%E _{max}) 617.2511	—
(60%E _{max}) 740.7011	—
(70%E _{max}) 864.1522	—
(80%E _{max}) 987.6022	—
(90%E _{max}) 1111.052	—



Luminance Table

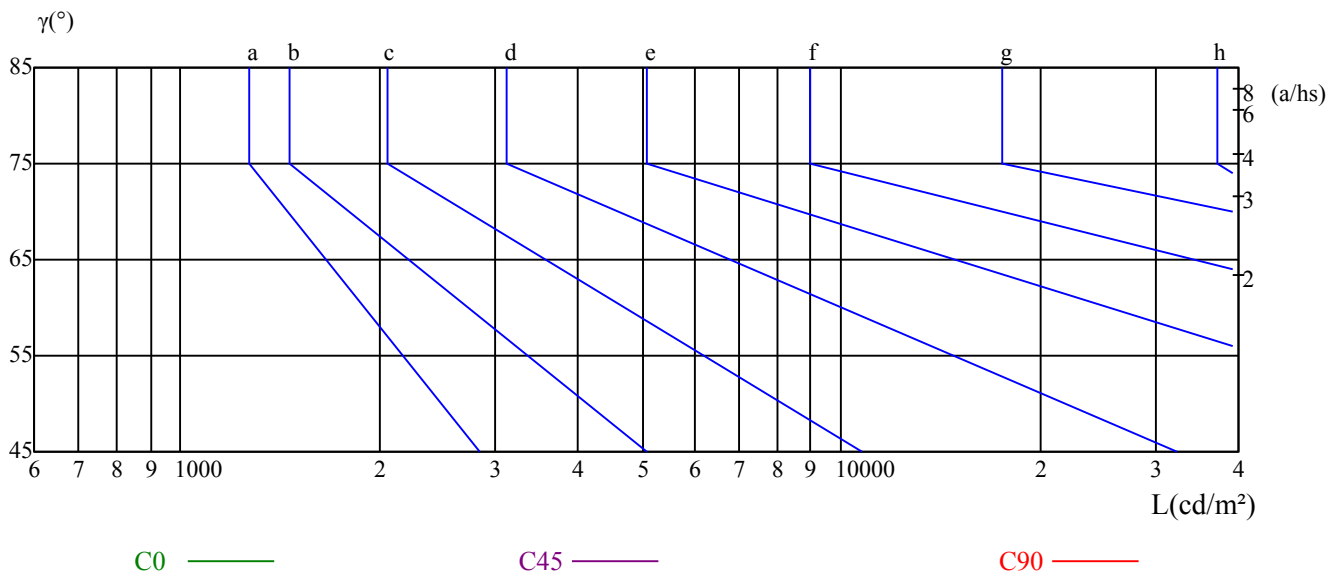
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

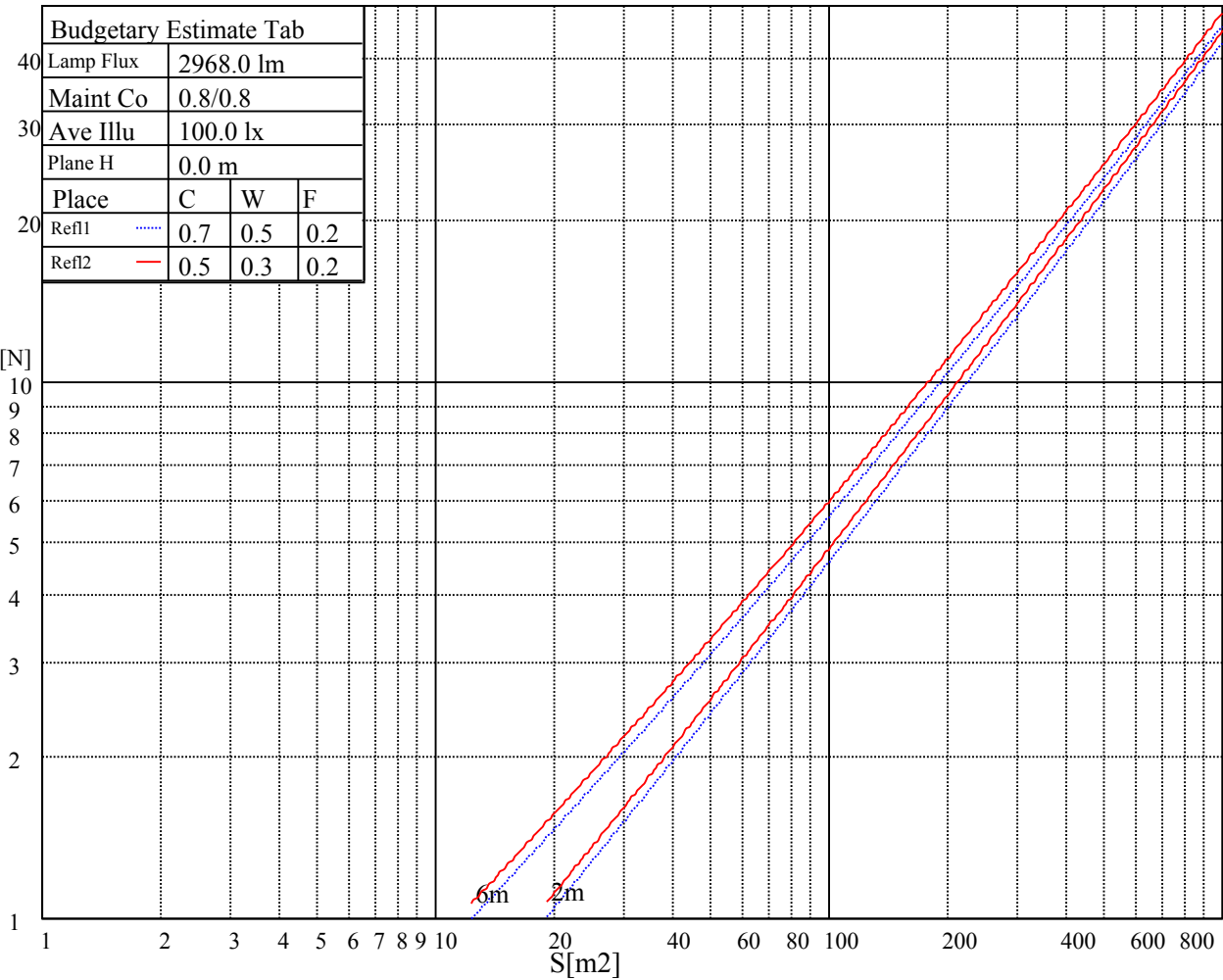
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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





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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.99	0.97	0.95	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.84
2	0.93	0.90	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.84	0.83	0.81	0.80
3	0.88	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.76
4	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
5	0.80	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.70
6	0.77	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
7	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
8	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
9	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.58	0.58

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	11029.59	9664.74	5619.70	2611.17	1519.57	1080.53	883.91	579.56	239.69
45.0	11055.19	9799.58	5595.38	2709.40	1523.07	1079.86	899.44	573.21	255.00
90.0	11104.72	9664.18	5718.48	2644.01	1521.79	1093.61	894.04	568.15	239.47
135.0	11252.75	9799.58	5595.38	2709.40	1523.07	1079.86	899.44	573.21	255.00
180.0	11029.59	9664.74	5619.70	2611.17	1519.57	1080.53	883.91	579.56	239.69
225.0	11055.19	9799.58	5595.38	2709.40	1523.07	1079.86	899.44	573.21	255.00
270.0	11104.72	9664.18	5718.48	2644.01	1521.79	1093.61	894.04	568.15	239.47
315.0	11252.75	9799.58	5595.38	2709.40	1523.07	1079.86	899.44	573.21	255.00
360.0	11029.59	9664.74	5619.70	2611.17	1519.57	1080.53	883.91	579.56	239.69

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	56.32	13.08	11.24	10.80	10.63	10.57	10.52	10.52	10.24
45.0	45.30	12.08	11.13	10.74	10.52	10.46	10.35	10.35	10.30
90.0	49.25	12.02	11.07	10.69	10.41	10.24	10.24	10.18	10.18
135.0	45.30	12.08	11.13	10.74	10.52	10.46	10.35	10.35	10.30
180.0	56.32	13.08	11.24	10.80	10.63	10.57	10.52	10.52	10.24
225.0	45.30	12.08	11.13	10.74	10.52	10.46	10.35	10.35	10.30
270.0	49.25	12.02	11.07	10.69	10.41	10.24	10.24	10.18	10.18
315.0	45.30	12.08	11.13	10.74	10.52	10.46	10.35	10.35	10.30
360.0	56.32	13.08	11.24	10.80	10.63	10.57	10.52	10.52	10.24

C/γ(°)	90.0
0.0	9.96
45.0	9.96
90.0	9.96
135.0	9.96
180.0	9.96
225.0	9.96
270.0	9.96
315.0	9.96
360.0	9.96