



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: LN01D03536DA-N

Luminaire: 97.70.267.00

Report No: 200623-B003

Test No: 200623-C003

LampCAT: CITIZEN CLU7A2

Lamp flux(lm): 535.8

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 35.9700

Current(A): 0.1500

Power (W): 5.3960

PF: 0.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 485.17

Efficiency(%): 90.55%

Lumens(lm)/Power(W): 89.91

Central intensity(cd): 1083.698

Maximum intensity(cd): 1083.698

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=37.1

[C90/270]Total=37.1

Field angle(10%Imax): [C0/180]Total=60.0

[C90/270]Total=60.0

Maximum s/h(1/2): C0_180=0.61 C90_270=0.61

Maximum s/h(1/4): C0_180=0.59 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.55%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.666%

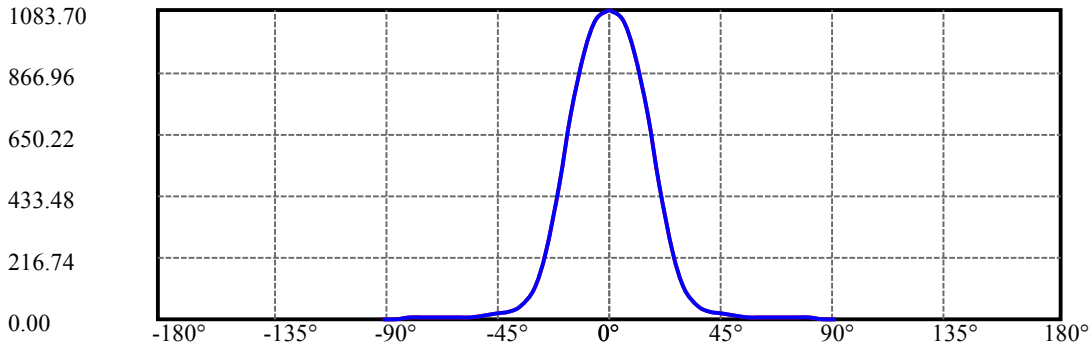
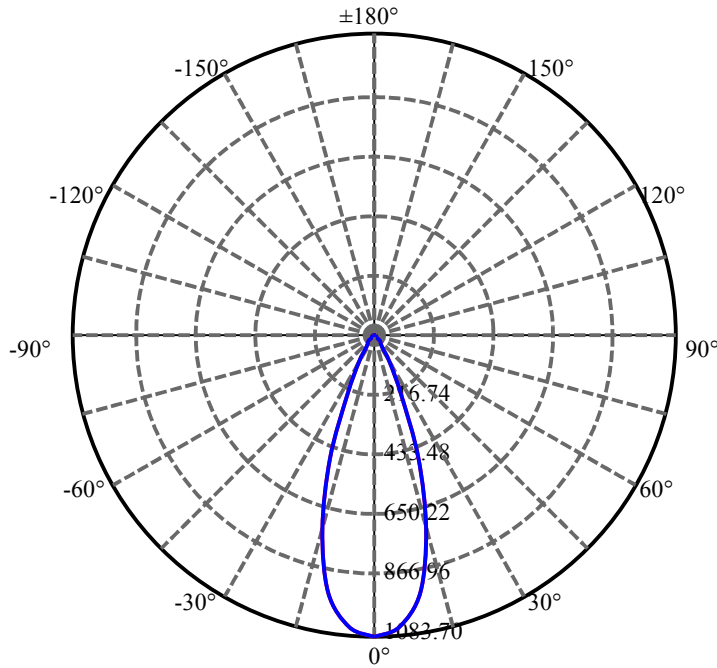
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1083.698	0.000	0	.000%	.000%
5.0	1052.409	25.537	25.537	4.766%	5.263%
10.0	936.717	71.157	96.694	13.280%	19.930%
15.0	723.333	98.473	195.167	18.378%	40.226%
20.0	468.738	98.243	293.41	18.335%	60.476%
25.0	235.069	73.816	367.227	13.776%	75.690%
30.0	107.747	43.384	410.61	8.097%	84.632%
35.0	49.943	23.221	433.831	4.334%	89.418%
40.0	28.603	13.105	446.936	2.446%	92.119%
45.0	17.409	8.520	455.456	1.590%	93.875%
50.0	11.651	5.872	461.328	1.096%	95.086%
55.0	8.191	4.314	465.642	.805%	95.975%
60.0	6.314	3.353	468.995	.626%	96.666%
65.0	5.203	2.800	471.795	.523%	97.243%
70.0	5.829	2.793	474.588	.521%	97.819%
75.0	7.995	3.613	478.201	.674%	98.564%
80.0	5.133	3.513	481.714	.656%	99.288%
85.0	2.728	2.136	483.85	.399%	99.728%
90.0	2.095	1.321	485.171	.246%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	410.61	76.63%	84.63%
0-40	446.94	83.41%	92.12%
0-60	468.99	87.53%	96.67%
0-90	483.85	90.30%	99.73%
0-120	483.85	90.30%	99.73%
0-180	485.17	90.55%	100.00%
60-90	18.21	3.40%	3.75%
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%
0-27.41	388.14	72.44%	80.00%

ZONAL LUMEN SUMMARY

0-10	96.69
10-20	196.72
20-30	117.20
30-40	36.33
40-50	14.39
50-60	7.67
60-70	5.59
70-80	7.13
80-90	2.14
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

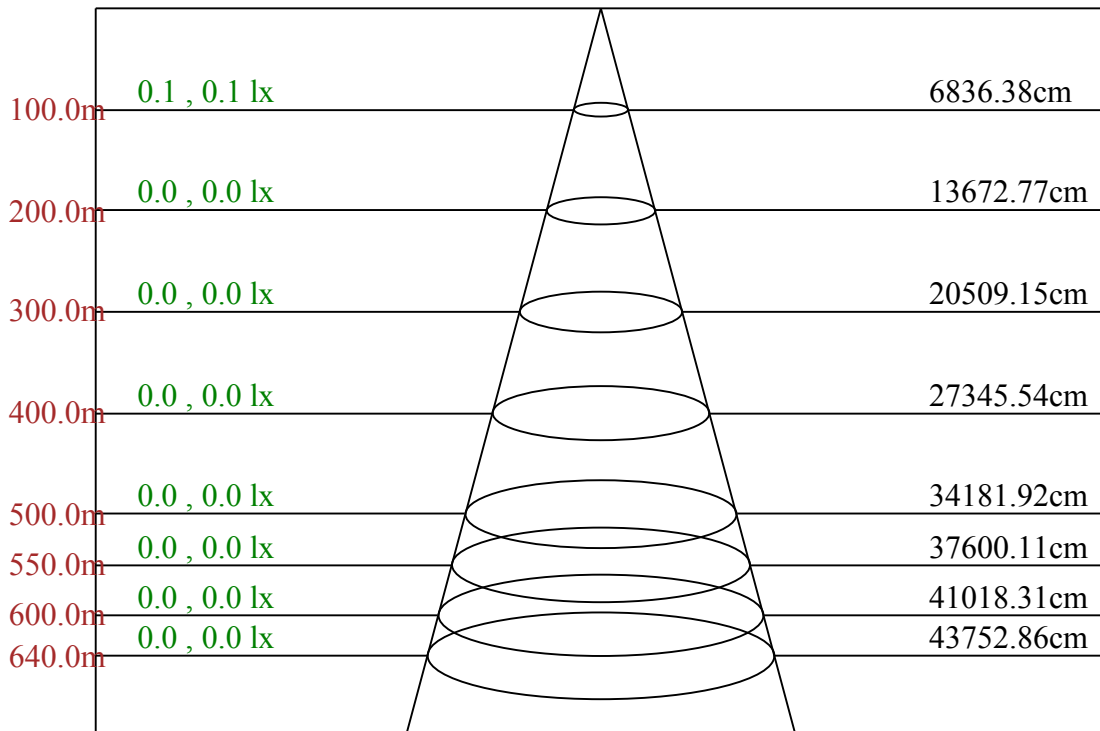


C0/C180: —

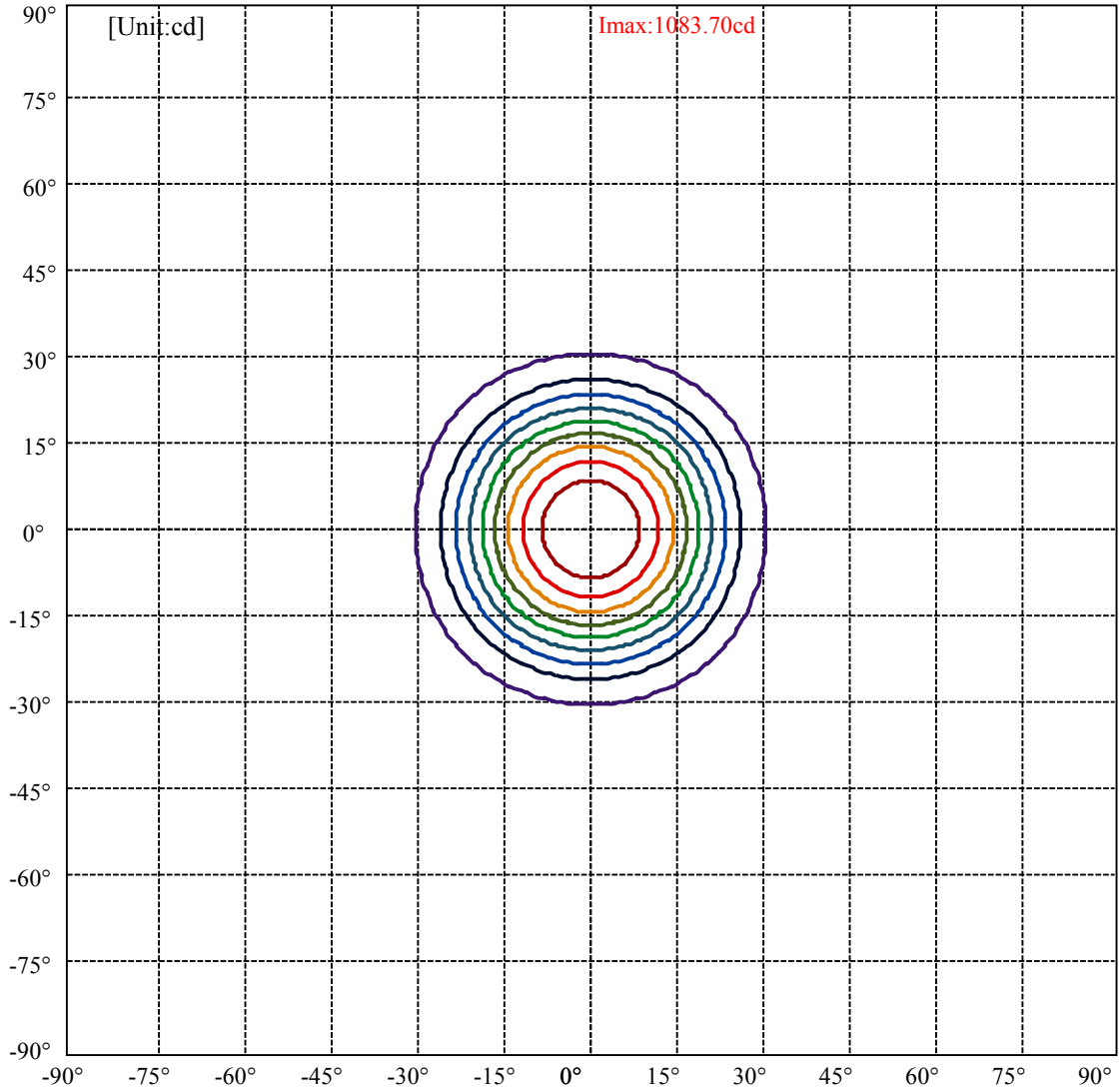
C90/C270: —

Field angle(10%Imax):C0/180Left:30.0 Right:30.0
:C90/270Left:30.0 Right:30.0

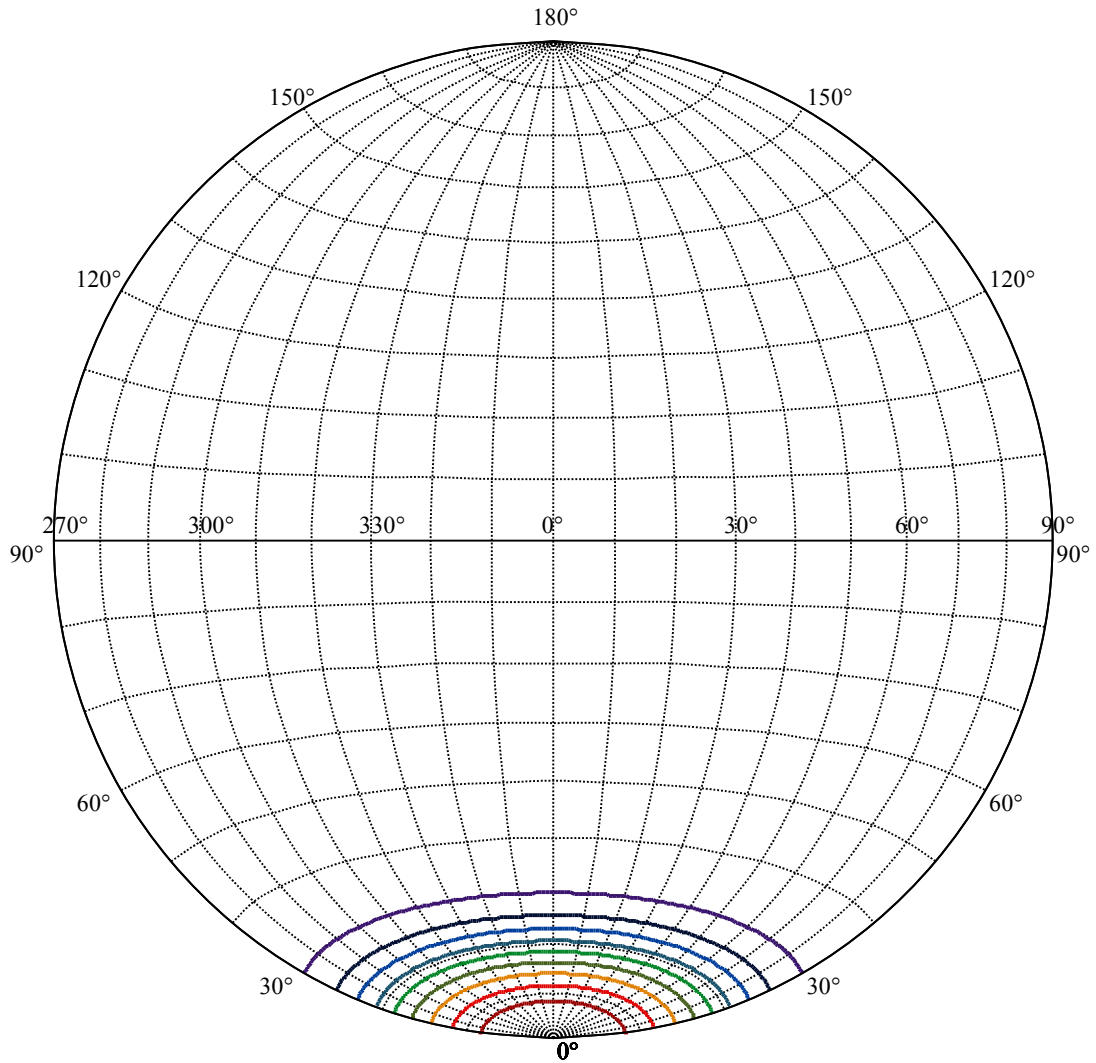
Beam Angle(50%Imax):C0/180Left:18.6 Right:18.6
:C90/270Left:18.6 Right:18.6



Max , Ave Beam angle of C0 plane 37.74



(10%Imax) 108.37	—
(20%Imax) 216.74	—
(30%Imax) 325.109	—
(40%Imax) 433.479	—
(50%Imax) 541.849	—
(60%Imax) 650.219	—
(70%Imax) 758.589	—
(80%Imax) 866.959	—
(90%Imax) 975.329	—



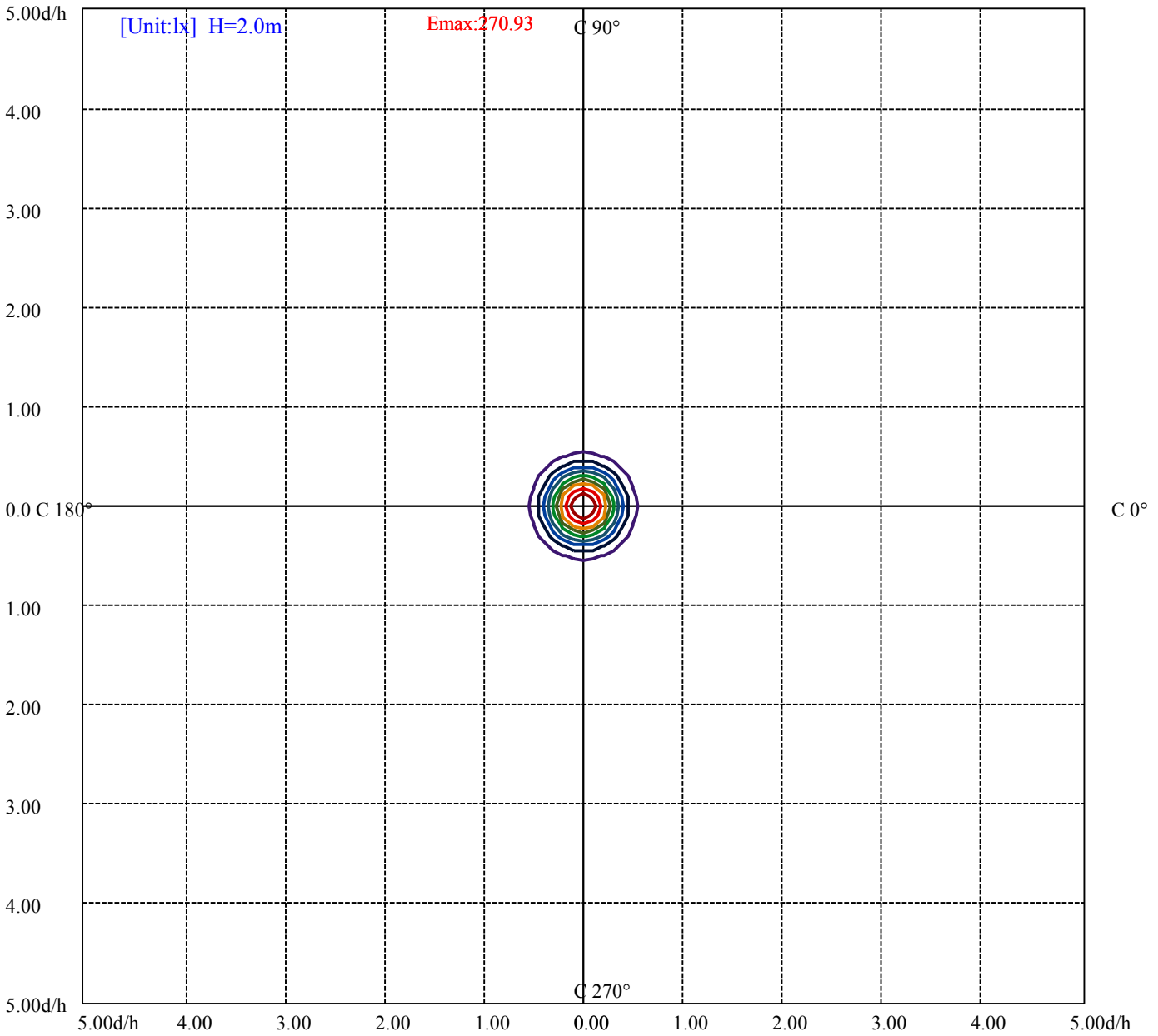
House

[Unit:cd]

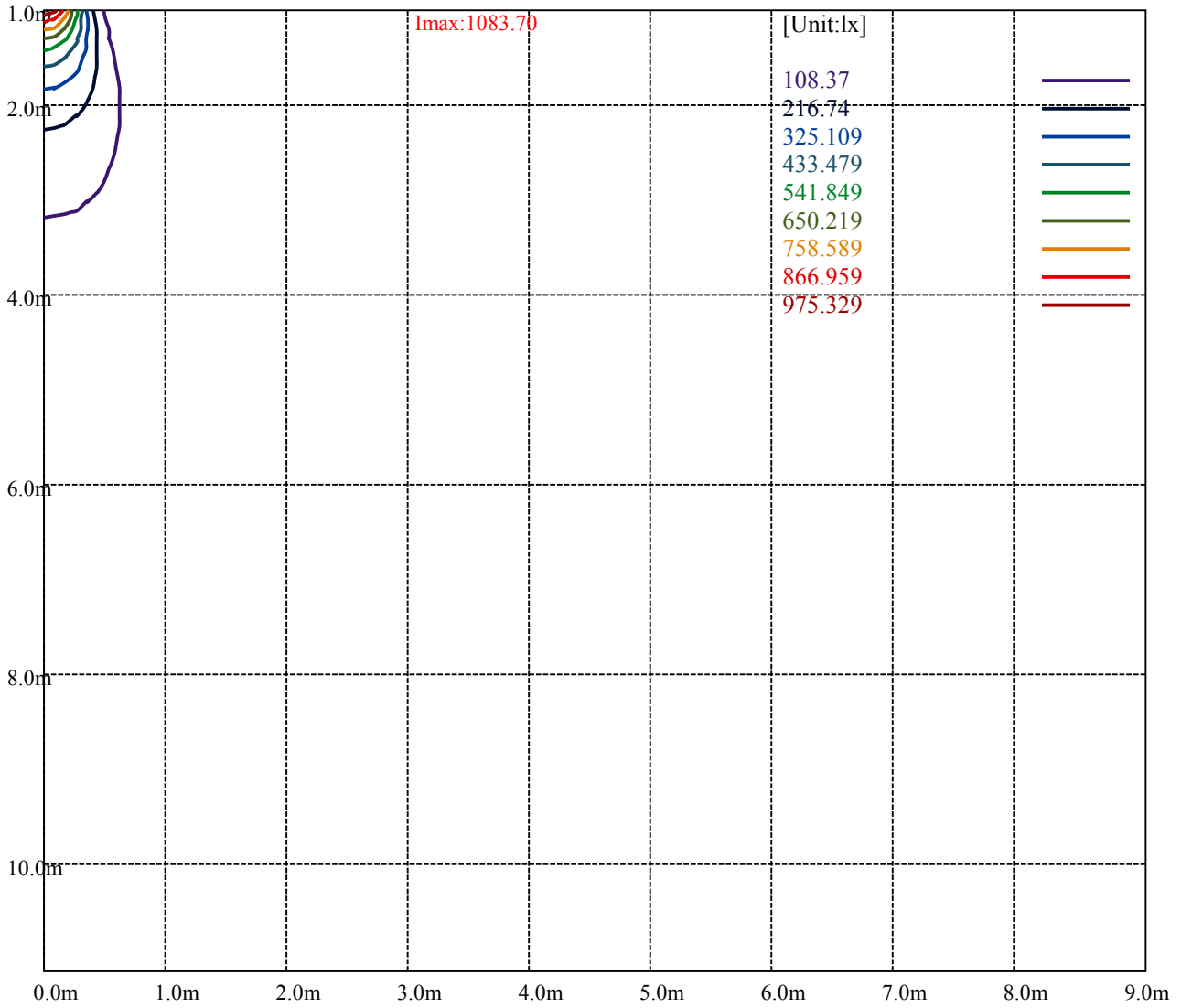
Road

I_{max}:1083.70

(10%I _{max}) 108.37	—
(20%I _{max}) 216.74	—
(30%I _{max}) 325.109	—
(40%I _{max}) 433.479	—
(50%I _{max}) 541.849	—
(60%I _{max}) 650.219	—
(70%I _{max}) 758.589	—
(80%I _{max}) 866.959	—
(90%I _{max}) 975.329	—



(10%Emax) 27.0925	—
(20%Emax) 54.18475	—
(30%Emax) 81.27725	—
(40%Emax) 108.3698	—
(50%Emax) 135.4622	—
(60%Emax) 162.5545	—
(70%Emax) 189.647	—
(80%Emax) 216.7395	—
(90%Emax) 243.832	—



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

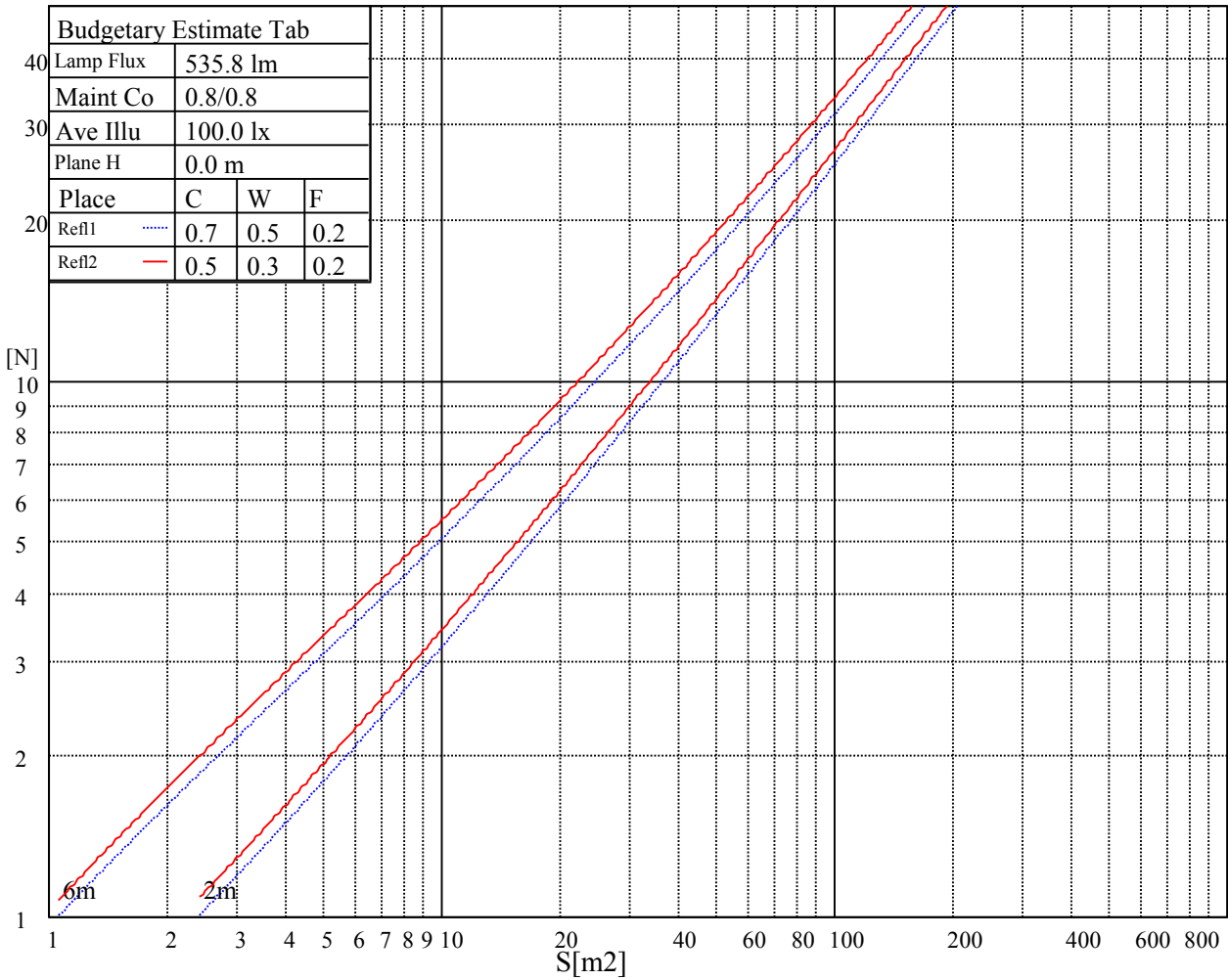
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

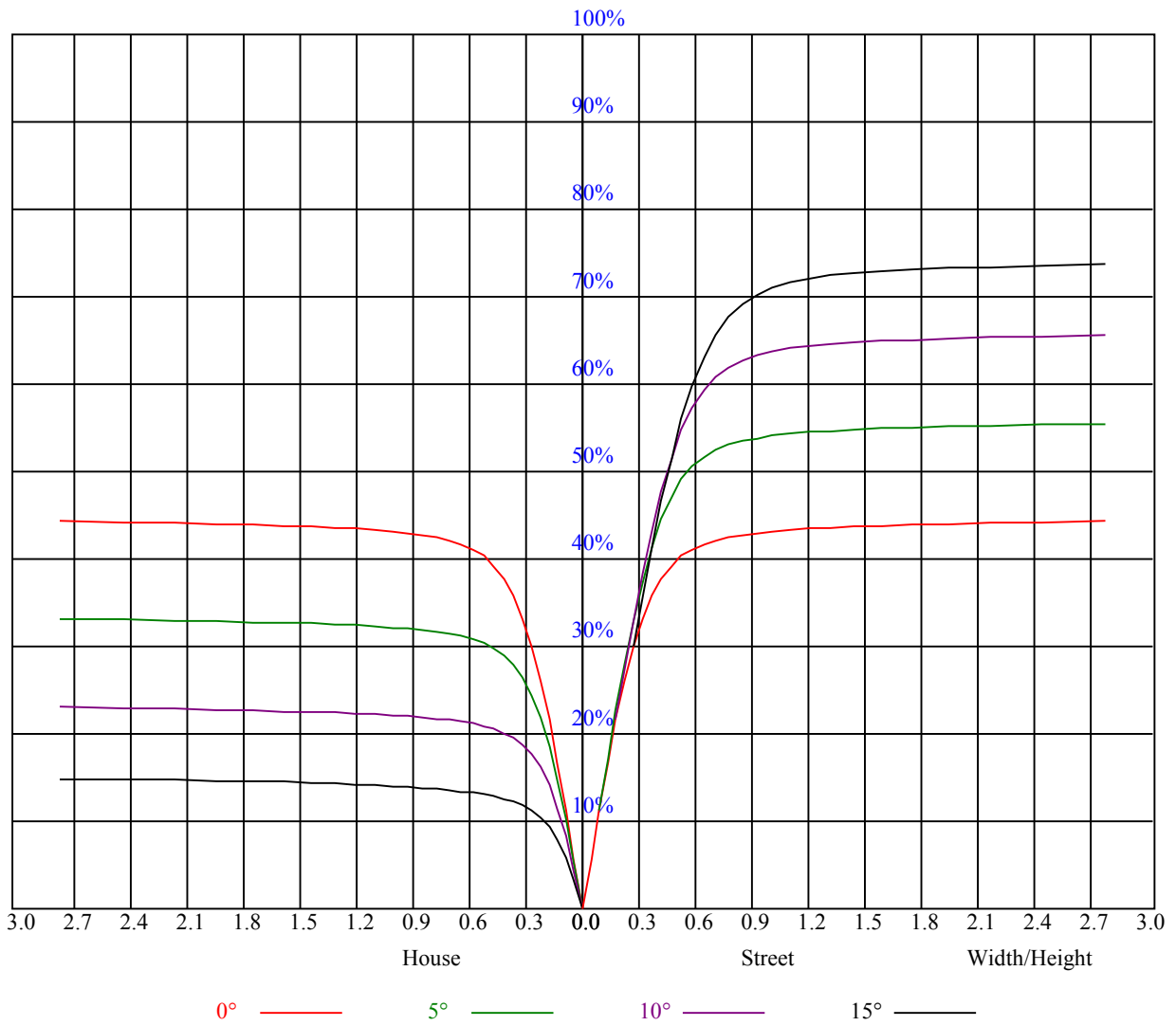
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.91
1	1.00	0.98	0.96	0.98	0.96	0.95	0.95	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.89	0.85	0.81	0.88	0.84	0.81	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.80	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.68
6	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
7	0.73	0.68	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
8	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
9	0.67	0.62	0.59	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
10	0.64	0.60	0.57	0.64	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.55



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	1085.46	1063.97	958.73	758.19	483.53	239.63	116.72	50.74	29.03
45.0	1083.49	1044.45	933.75	729.34	490.22	250.54	113.57	51.92	29.48
90.0	1080.17	1011.54	884.48	691.26	476.72	252.45	118.63	53.94	29.03
135.0	1085.68	1028.31	895.33	721.46	508.44	275.51	132.86	62.10	33.69
180.0	1085.46	1034.72	910.52	706.44	451.74	235.46	107.16	49.84	29.59
225.0	1083.49	1073.70	966.54	729.28	451.46	211.61	92.31	45.45	26.55
270.0	1080.17	1094.18	999.51	758.03	468.68	221.12	94.89	46.18	26.49
315.0	1085.68	1068.41	944.89	692.66	419.12	194.23	85.84	39.38	24.98
360.0	1085.46	1063.97	958.73	758.19	483.53	239.63	116.72	50.74	29.03
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.00	12.09	8.38	6.41	5.23	4.50	4.05	3.38	2.70
45.0	18.00	11.87	8.38	6.41	5.29	4.56	4.95	3.83	2.70
90.0	17.38	11.42	8.04	6.24	5.23	9.96	18.39	9.73	3.26
135.0	20.03	13.39	9.06	6.81	5.51	4.67	4.11	3.43	2.64
180.0	18.06	12.21	8.66	6.64	5.46	4.73	4.78	3.38	2.70
225.0	16.09	10.91	7.71	6.02	5.01	4.33	4.56	3.26	2.70
270.0	16.14	10.86	7.71	6.08	5.12	9.73	19.46	11.08	2.76
315.0	15.58	10.46	7.59	5.91	4.78	4.16	3.66	2.98	2.36
360.0	18.00	12.09	8.38	6.41	5.23	4.50	4.05	3.38	2.70
C/ γ (°)	90.0								
0.0	2.25								
45.0	2.03								
90.0	2.03								
135.0	2.14								
180.0	2.14								
225.0	2.08								
270.0	2.03								
315.0	2.08								
360.0	2.25								