



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

---

## Nata

---

LumCAT: 1-1215-L

Luminaire:

Report No: 220923-B011

Voltage(V): 35.6100

Test No: 220923-C011

Current(A): 0.2820

LampCAT: CITIZEN CLU028

Power (W): 10.0420

Lamp flux(lm): 1199.6

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 43

Width(mm): 43

Phm Type: C

Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 1019.53

Efficiency(%): 84.99%

Lumens(lm)/Power(W): 101.53

Central intensity(cd): 1852.937

Maximum intensity(cd): 1852.937

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=44.6

[C90/270]Total=44.6

Field angle(10%Imax): [C0/180]Total=65.9

[C90/270]Total=65.9

Maximum s/h(1/2): C0\_180=0.72 C90\_270=0.72

Maximum s/h(1/4): C0\_180=0.69 C90\_270=0.69

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.99%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.799%

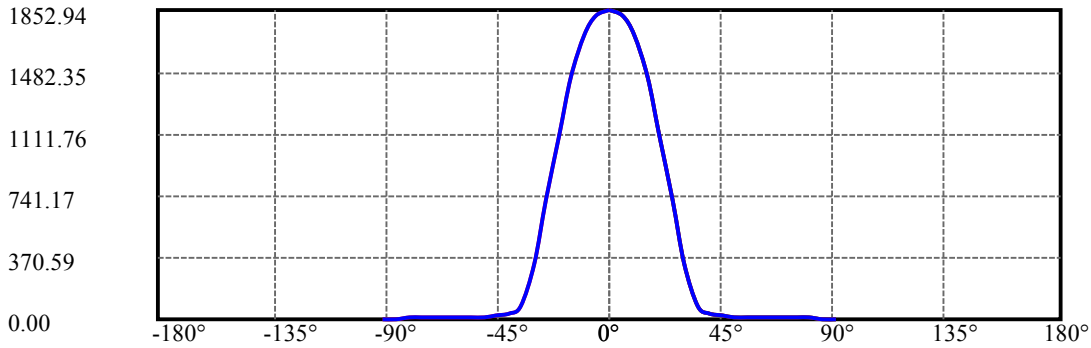
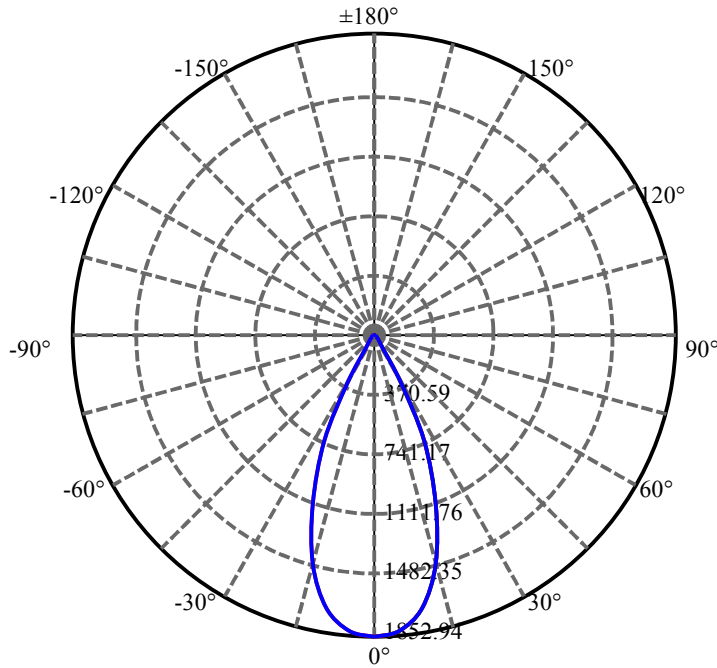
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1852.937	0.000	0	.000%	.000%
5.0	1819.476	43.903	43.903	3.660%	4.306%
10.0	1697.655	125.819	169.721	10.488%	16.647%
15.0	1451.622	186.813	356.534	15.573%	34.970%
20.0	1105.294	210.726	567.26	17.566%	55.639%
25.0	713.509	190.759	758.019	15.902%	74.350%
30.0	334.086	132.574	890.593	11.052%	87.353%
35.0	79.987	60.975	951.568	5.083%	93.334%
40.0	30.877	18.497	970.065	1.542%	95.148%
45.0	18.837	9.205	979.27	.767%	96.051%
50.0	14.908	6.819	986.089	.568%	96.720%
55.0	12.107	5.874	991.963	.490%	97.296%
60.0	10.076	5.128	997.091	.427%	97.799%
65.0	8.291	4.465	1001.556	.372%	98.237%
70.0	7.290	3.945	1005.501	.329%	98.624%
75.0	7.506	3.868	1009.368	.322%	99.003%
80.0	7.656	4.057	1013.425	.338%	99.401%
85.0	5.101	3.466	1016.892	.289%	99.741%
90.0	4.541	2.640	1019.532	.220%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	890.59	74.24%	87.35%
0-40	970.07	80.87%	95.15%
0-60	997.09	83.12%	97.80%
0-90	1016.89	84.77%	99.74%
0-120	1016.89	84.77%	99.74%
0-180	1019.53	84.99%	100.00%
60-90	24.93	2.08%	2.45%
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%
0-27.17	815.63	67.99%	80.00%

ZONAL LUMEN SUMMARY

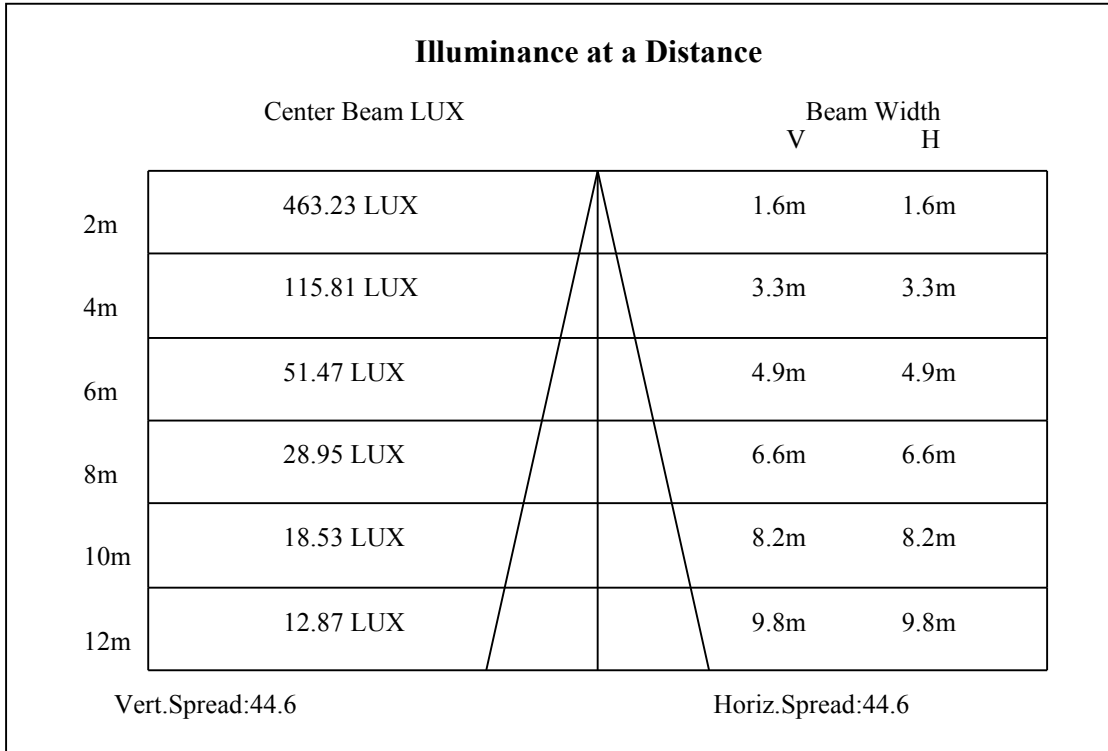
0-10	169.72
10-20	397.54
20-30	323.33
30-40	79.47
40-50	16.02
50-60	11.00
60-70	8.41
70-80	7.92
80-90	3.47
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

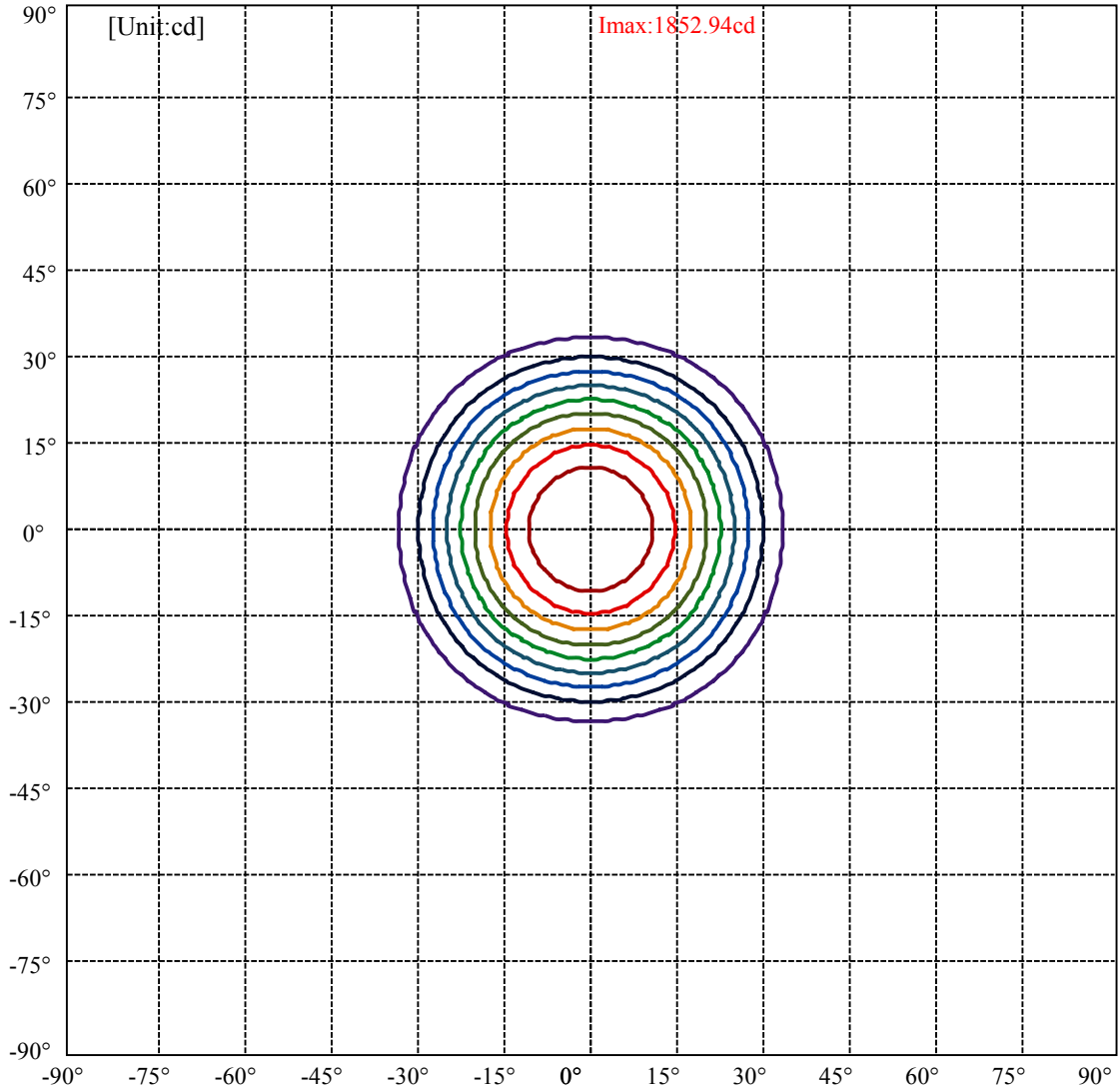


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

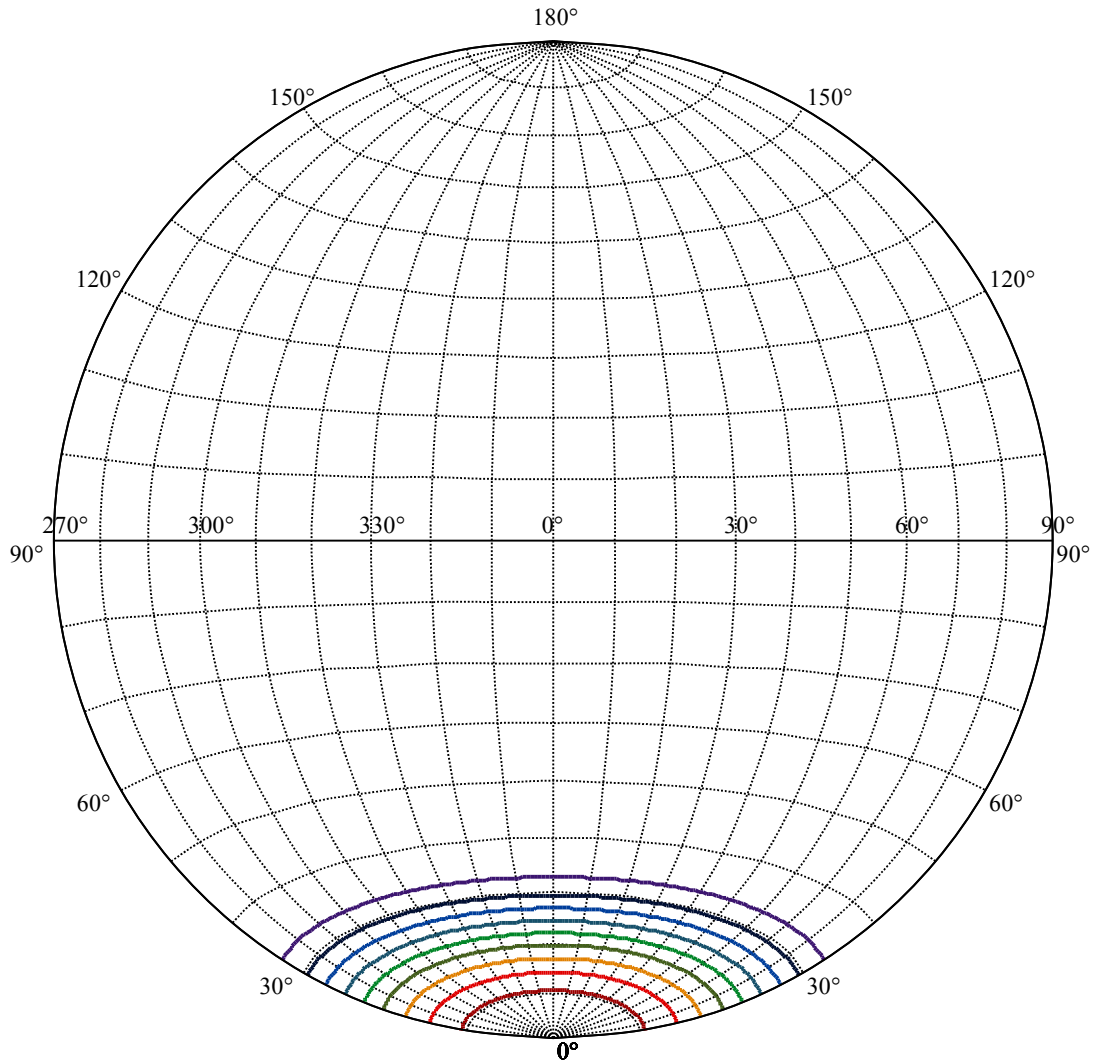
Field angle(10%Imax):C0/180Left:32.9 Right:32.9  
:C90/270Left:32.9 Right:32.9

Beam Angle(50%Imax):C0/180Left:22.3 Right:22.3  
:C90/270Left:22.3 Right:22.3





(10%Imax) 185.294	—
(20%Imax) 370.587	—
(30%Imax) 555.881	—
(40%Imax) 741.175	—
(50%Imax) 926.469	—
(60%Imax) 1111.76	—
(70%Imax) 1297.06	—
(80%Imax) 1482.35	—
(90%Imax) 1667.64	—



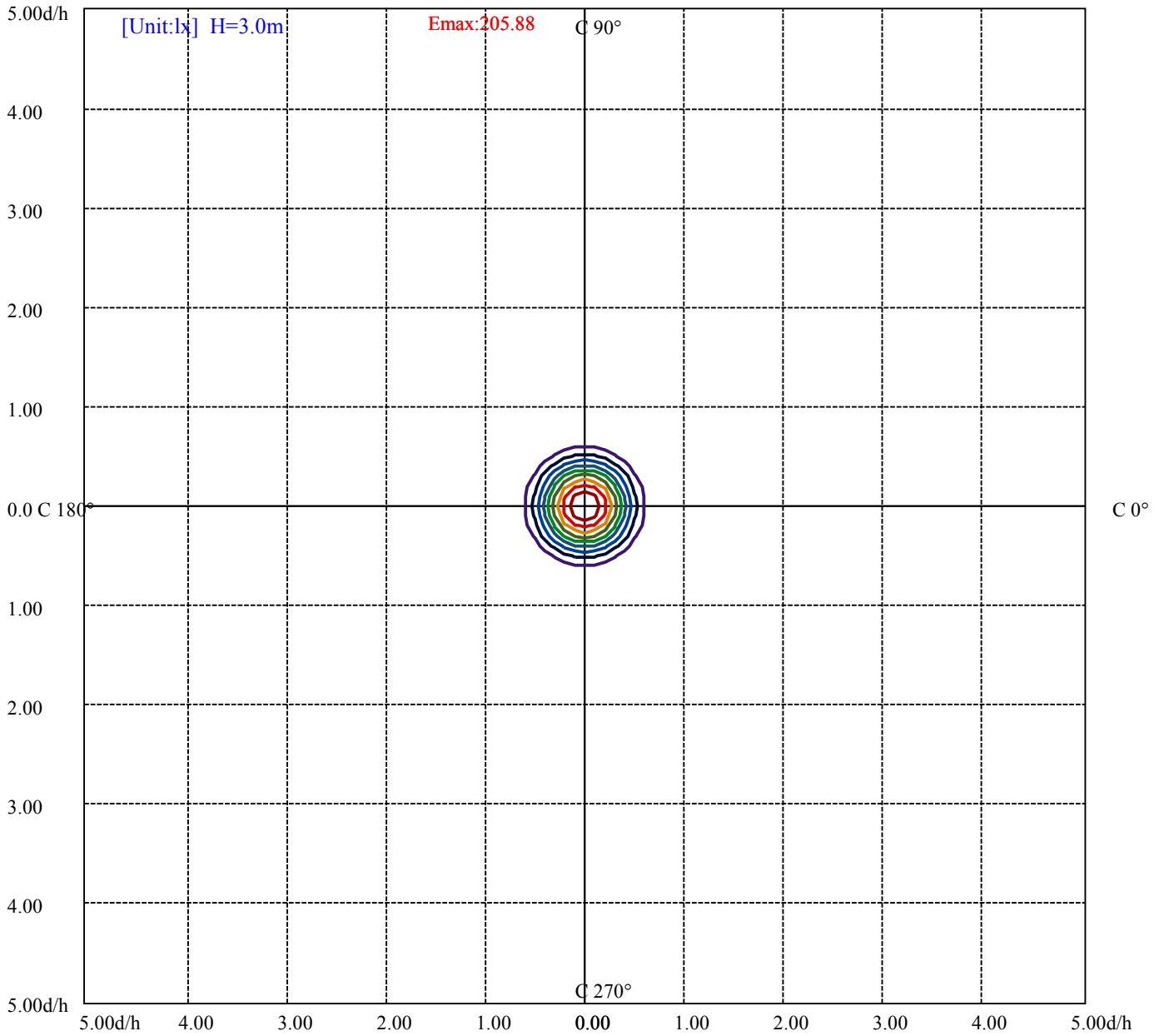
House

[Unit:cd]

Road

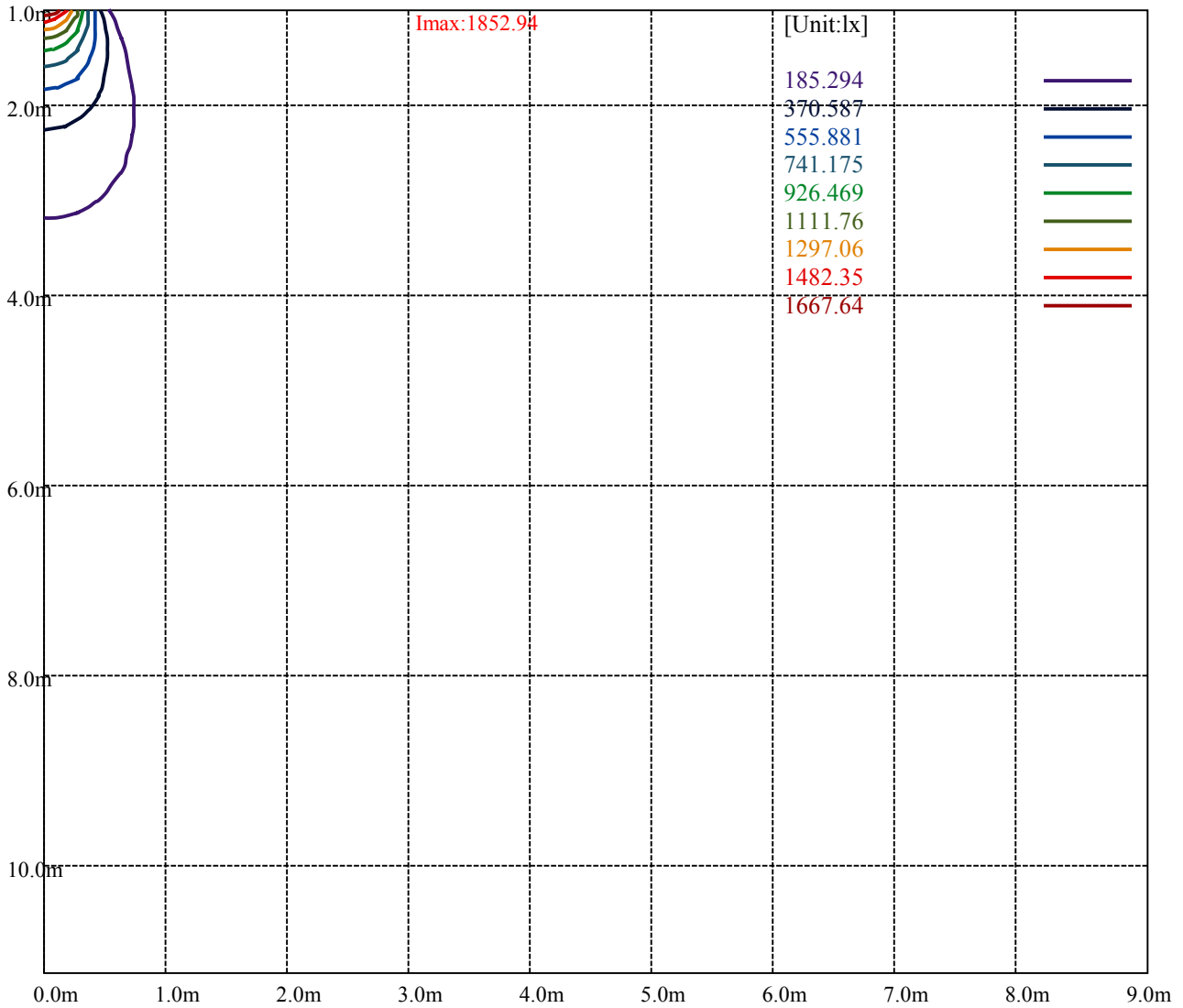
**Imax:1852.94**

(10%Imax) 185.294	—
(20%Imax) 370.587	—
(30%Imax) 555.881	—
(40%Imax) 741.175	—
(50%Imax) 926.469	—
(60%Imax) 1111.76	—
(70%Imax) 1297.06	—
(80%Imax) 1482.35	—
(90%Imax) 1667.64	—



- (10%Emax) 20.58822
- (20%Emax) 41.17633
- (30%Emax) 61.76455
- (40%Emax) 82.35267
- (50%Emax) 102.9409
- (60%Emax) 123.5289
- (70%Emax) 144.1178
- (80%Emax) 164.7056
- (90%Emax) 185.2933





Luminance Table

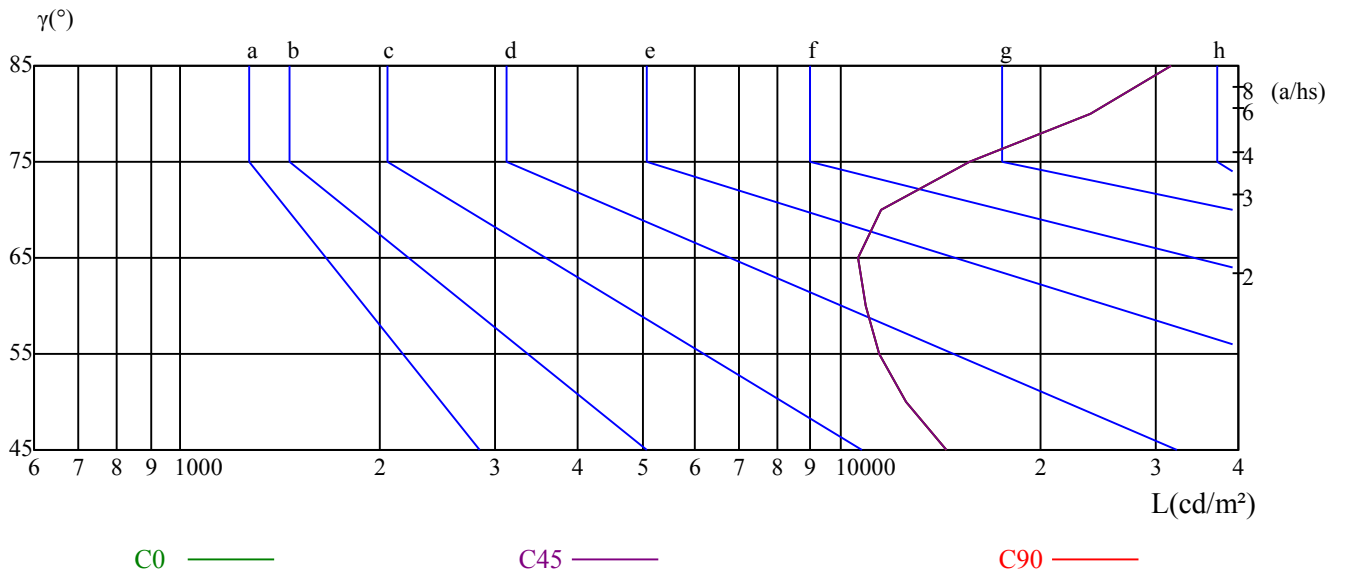
$\gamma$	45	50	55	60	65	70	75	80	85
C0	14408	12544	11416	10899	10610	11527	15686	23844	31656
C45	14408	12544	11416	10899	10610	11527	15686	23844	31656
C90	14408	12544	11416	10899	10610	11527	15686	23844	31656

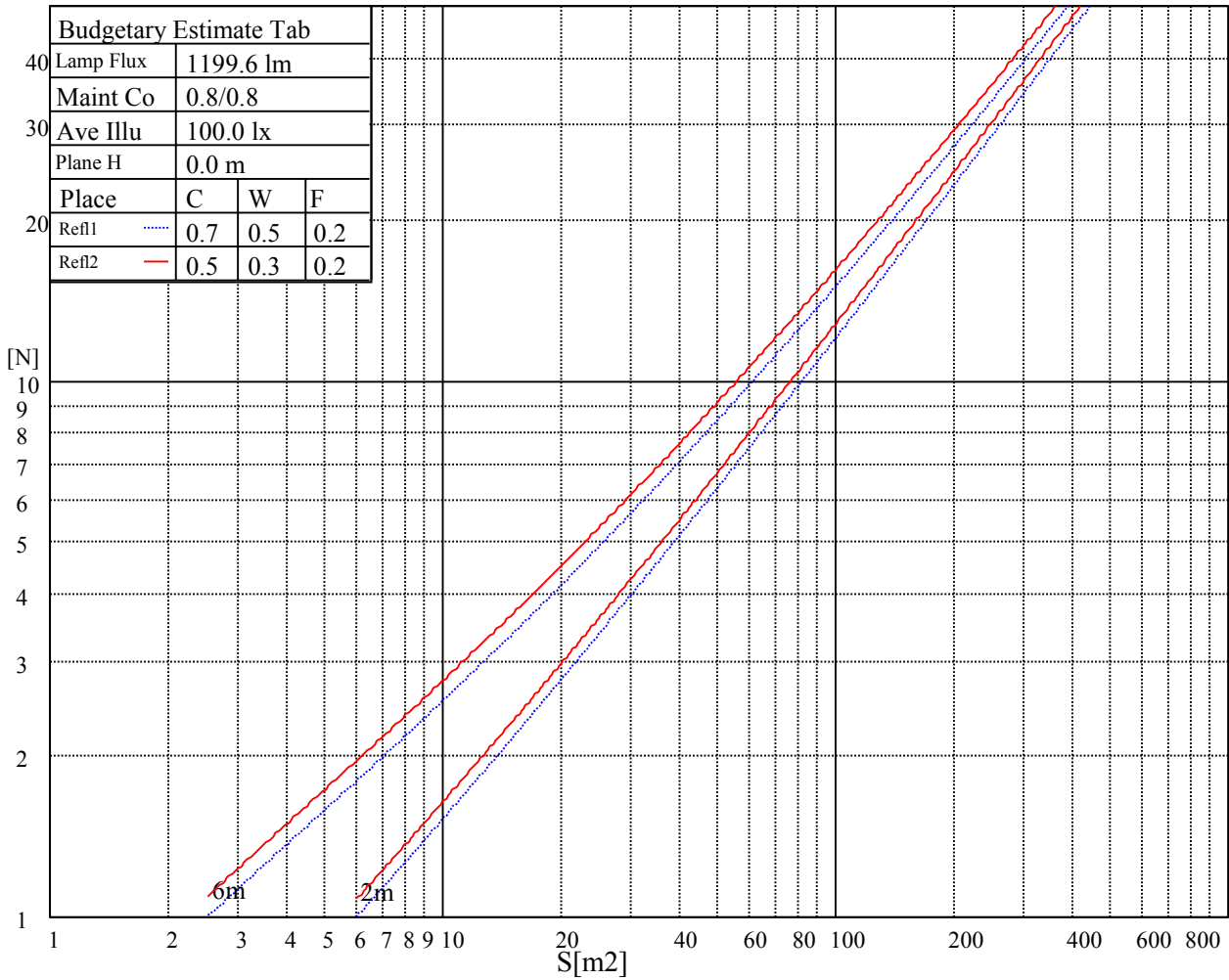
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10610	10610	10610	15686	15686	15686	31656	31656	31656

Glare Table

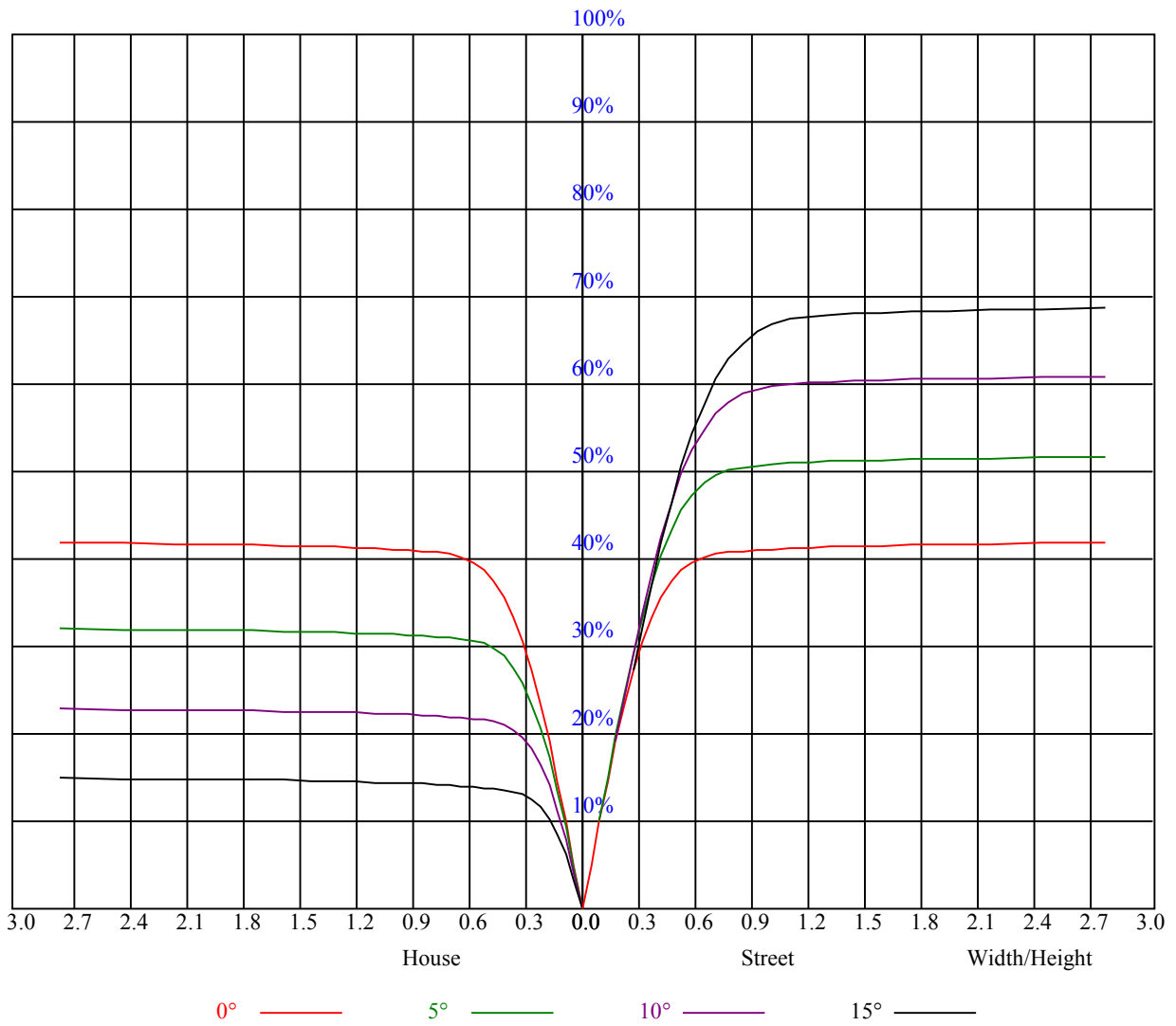
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.87	0.87	0.87	0.85
1	0.94	0.92	0.91	0.93	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.89	0.85	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.77	0.75
3	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.76	0.74	0.73	0.71
4	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.73	0.71	0.69	0.68
5	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.64
6	0.71	0.67	0.64	0.71	0.67	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
7	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.59	0.58
8	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56
9	0.62	0.58	0.55	0.62	0.57	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53
10	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.51



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	1853.53	1819.48	1700.57	1456.78	1147.85	740.94	348.36	89.69	32.57
45.0	1854.13	1808.12	1679.06	1419.73	1085.71	684.17	317.29	74.15	30.41
90.0	1849.35	1805.73	1671.89	1403.60	1020.82	658.36	272.11	65.43	29.46
135.0	1854.73	1830.23	1729.85	1513.54	1154.43	779.78	372.86	88.14	34.12
180.0	1853.53	1821.87	1695.79	1447.81	1082.96	688.35	322.13	72.66	28.86
225.0	1854.13	1835.01	1717.30	1465.74	1139.07	742.91	353.20	87.66	31.43
270.0	1849.35	1830.83	1721.48	1503.38	1163.39	770.81	396.76	96.08	32.63
315.0	1854.73	1804.54	1665.31	1402.40	1048.13	642.76	289.98	66.09	27.55
360.0	1853.53	1819.48	1700.57	1456.78	1147.85	740.94	348.36	89.69	32.57
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	19.12	15.00	12.25	10.16	8.37	7.47	7.65	7.41	5.26
45.0	18.58	14.88	12.07	9.98	8.37	7.47	7.71	7.65	5.08
90.0	18.46	14.64	11.71	9.80	8.07	7.29	7.47	7.65	4.96
135.0	19.90	15.48	12.49	10.40	8.48	7.35	7.47	7.95	5.02
180.0	18.34	14.82	11.95	9.86	8.13	6.99	7.41	7.71	4.90
225.0	19.06	15.06	12.37	10.28	8.43	7.35	7.41	7.77	5.20
270.0	19.48	15.18	12.37	10.40	8.48	7.35	7.41	7.71	5.32
315.0	17.75	14.22	11.65	9.74	8.01	7.05	7.53	7.41	5.08
360.0	19.12	15.00	12.25	10.16	8.37	7.47	7.65	7.41	5.26
C/γ(°)	90.0								
0.0	4.48								
45.0	4.60								
90.0	4.60								
135.0	4.54								
180.0	4.48								
225.0	4.60								
270.0	4.54								
315.0	4.48								
360.0	4.48								