



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

Nata

LumCAT: 3-2721-L	
Luminaire: 99.70.131.00	
Report No: 220816-B018	Voltage(V): 35.5000
Test No: 220816-C018	Current(A): 0.4810
LampCAT: CITIZEN CLU038	Power (W): 17.0750
Lamp flux(lm): 2260.9	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): 1960.87
Efficiency(%): 86.73%
Lumens(lm)/Power(W): 114.84
Central intensity(cd): 4344.484
Maximum intensity(cd): 4344.484
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=36.3
 [C90/270]Total=36.3
Field angle(10%Imax): [C0/180]Total=65.5
 [C90/270]Total=65.5
Maximum s/h(1/2): C0_180=0.59 C90_270=0.59
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.73%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.956%

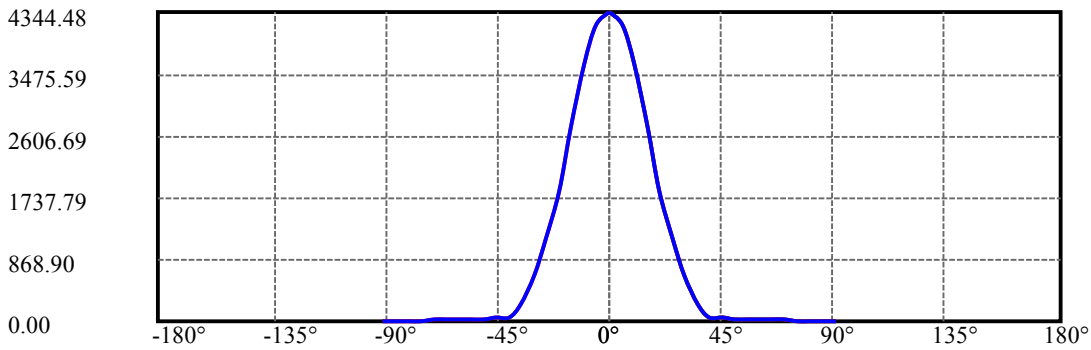
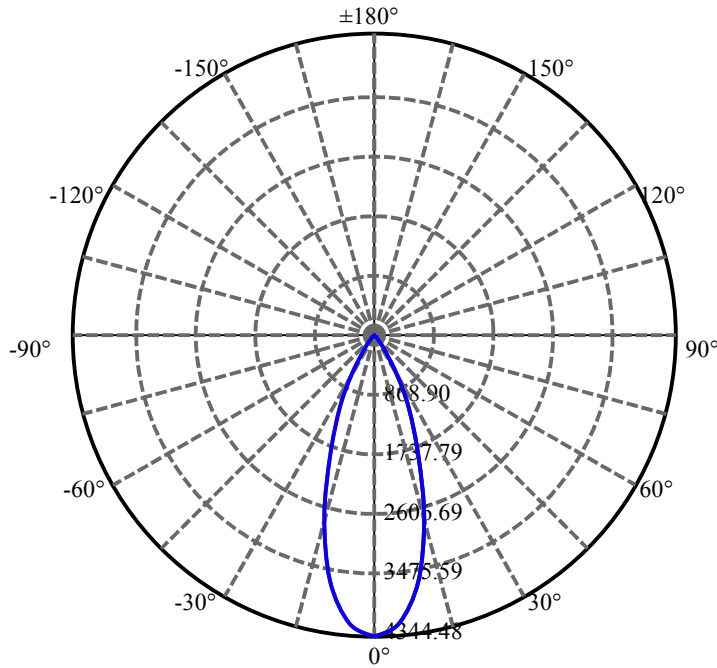
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4344.484	0.000	0	.000%	.000%
5.0	4167.989	101.764	101.764	4.501%	5.190%
10.0	3609.897	278.239	380.004	12.307%	19.379%
15.0	2729.438	376.045	756.049	16.633%	38.557%
20.0	1845.394	377.030	1133.079	16.676%	57.784%
25.0	1159.214	315.128	1448.207	13.938%	73.855%
30.0	658.664	230.054	1678.261	10.175%	85.588%
35.0	247.765	133.478	1811.739	5.904%	92.395%
40.0	54.046	50.355	1862.094	2.227%	94.963%
45.0	40.490	17.504	1879.598	.774%	95.855%
50.0	34.194	15.091	1894.689	.667%	96.625%
55.0	29.563	13.863	1908.552	.613%	97.332%
60.0	23.378	12.237	1920.789	.541%	97.956%
65.0	17.493	9.936	1930.725	.439%	98.463%
70.0	13.937	7.958	1938.683	.352%	98.868%
75.0	11.361	6.612	1945.296	.292%	99.206%
80.0	9.926	5.696	1950.991	.252%	99.496%
85.0	8.955	5.131	1956.122	.227%	99.758%
90.0	8.388	4.749	1960.871	.210%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1678.26	74.23%	85.59%
0-40	1862.09	82.36%	94.96%
0-60	1920.79	84.96%	97.96%
0-90	1956.12	86.52%	99.76%
0-120	1956.12	86.52%	99.76%
0-180	1960.87	86.73%	100.00%
60-90	47.57	2.10%	2.43%
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%
0-27.62	1568.70	69.38%	80.00%

ZONAL LUMEN SUMMARY

0-10	380.00
10-20	753.08
20-30	545.18
30-40	183.83
40-50	32.60
50-60	26.10
60-70	17.89
70-80	12.31
80-90	5.13
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: —————

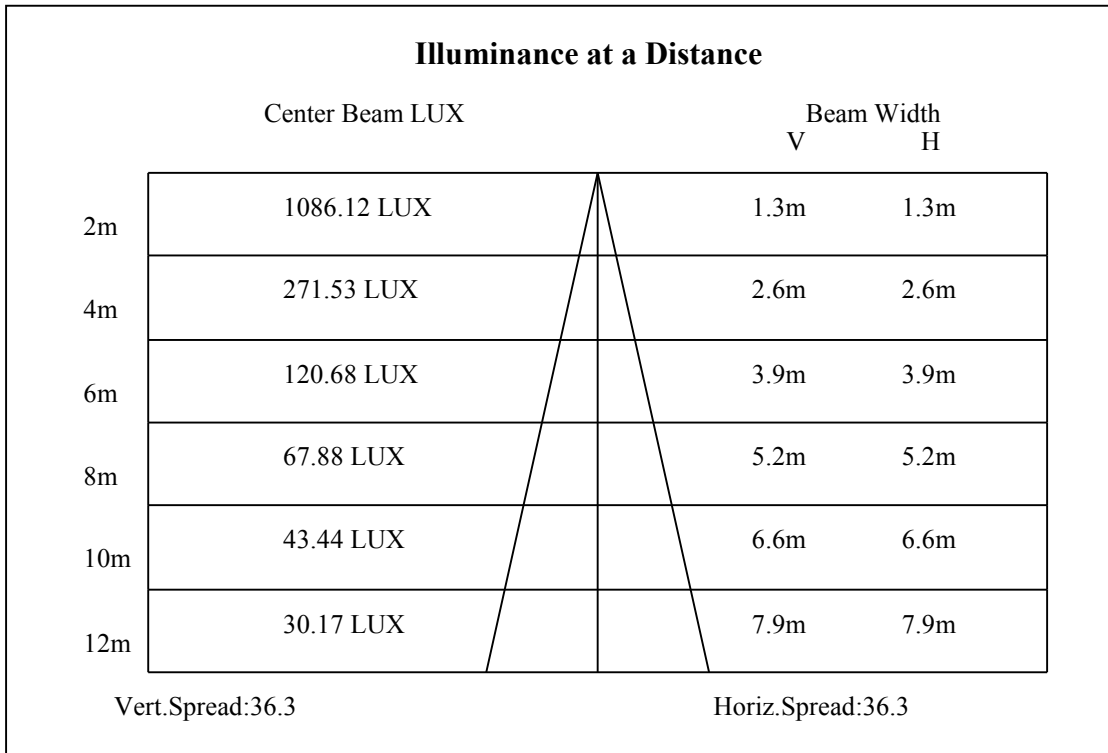
C90/C270: —————

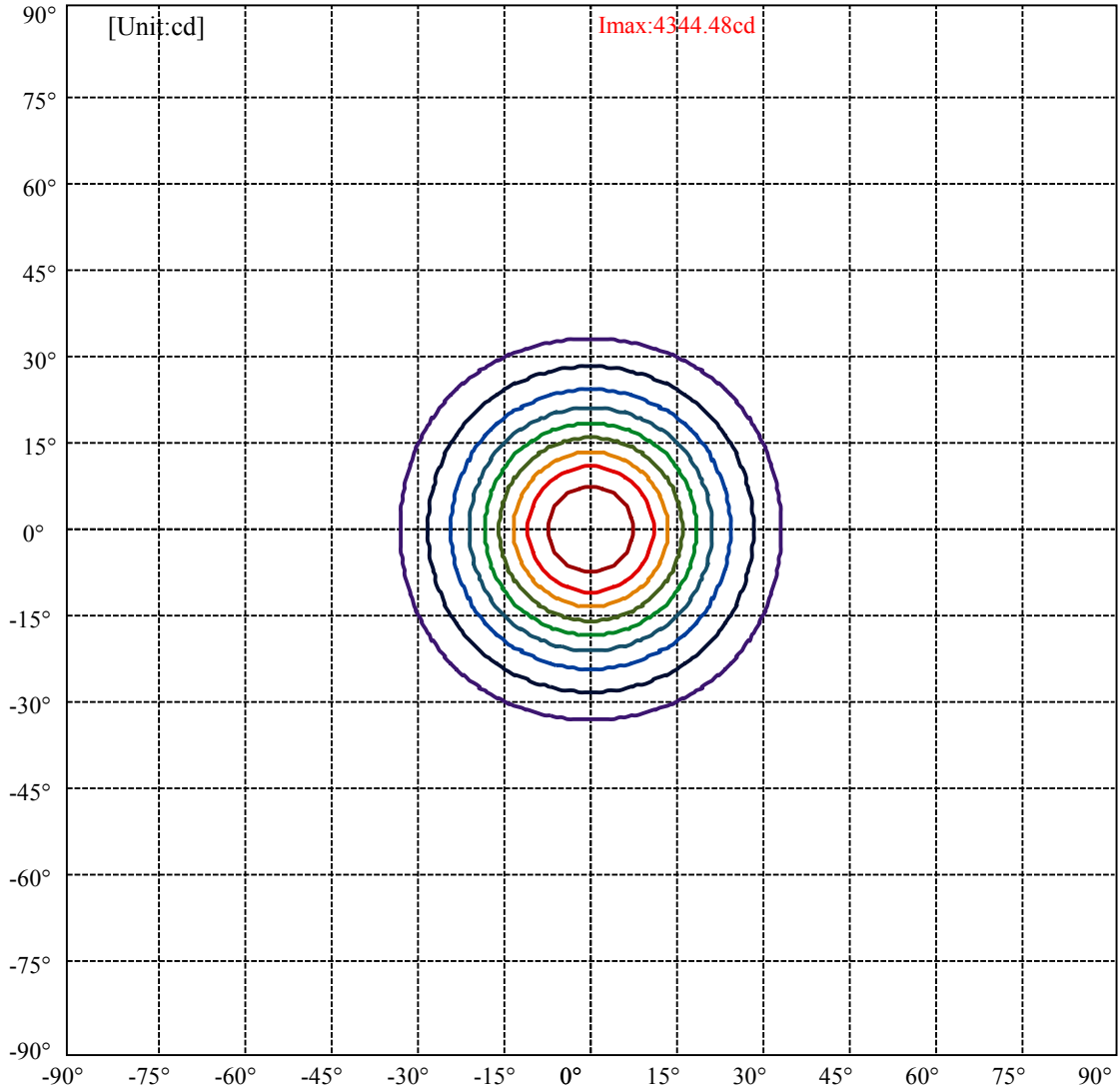
Field angle(10%Imax):C0/180Left:32.7 Right:32.7

:C90/270Left:32.7 Right:32.7

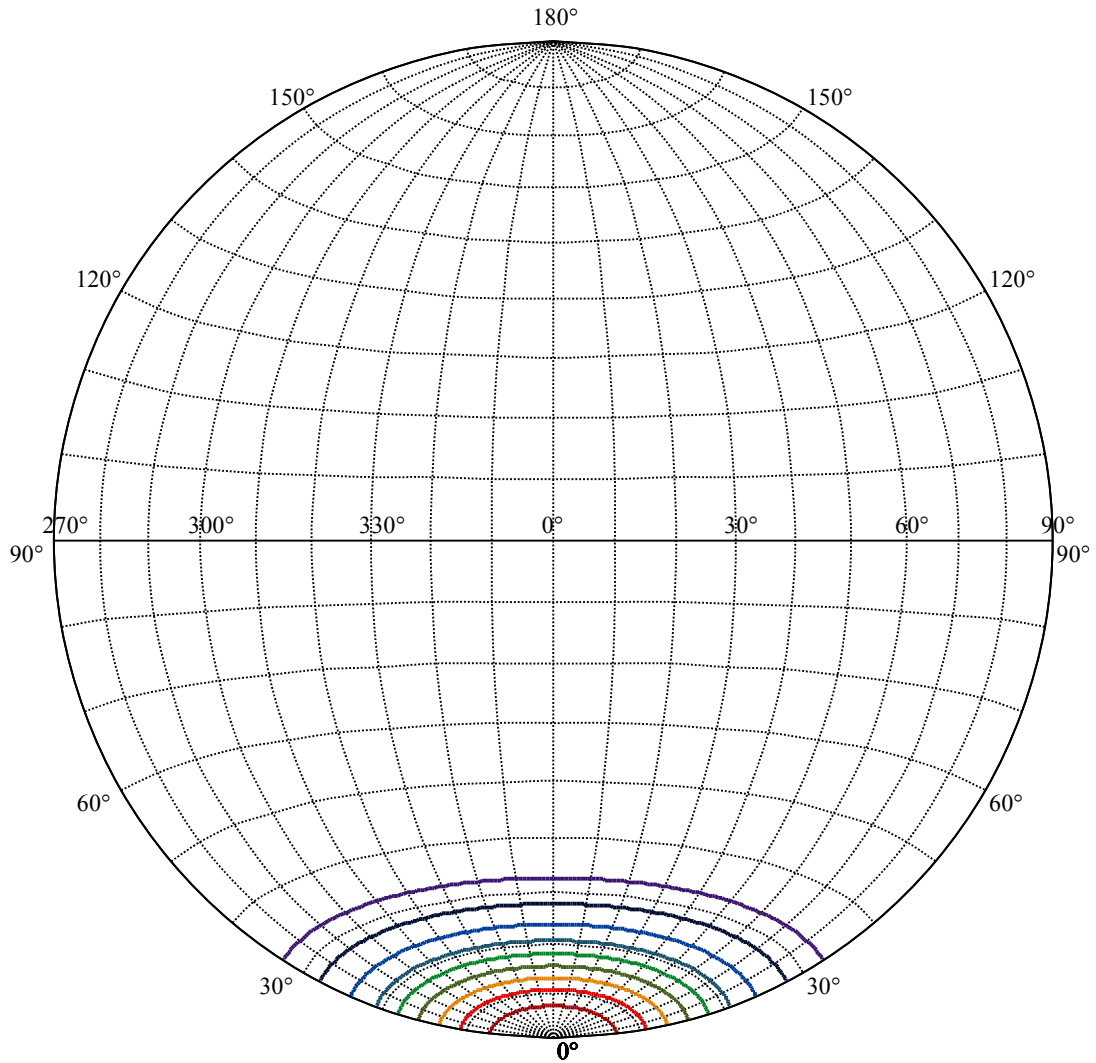
Beam Angle(50%Imax):C0/180Left:18.2 Right:18.2

:C90/270Left:18.2 Right:18.2





(10%Imax) 434.448	—
(20%Imax) 868.897	—
(30%Imax) 1303.35	—
(40%Imax) 1737.79	—
(50%Imax) 2172.24	—
(60%Imax) 2606.69	—
(70%Imax) 3041.14	—
(80%Imax) 3475.59	—
(90%Imax) 3910.04	—



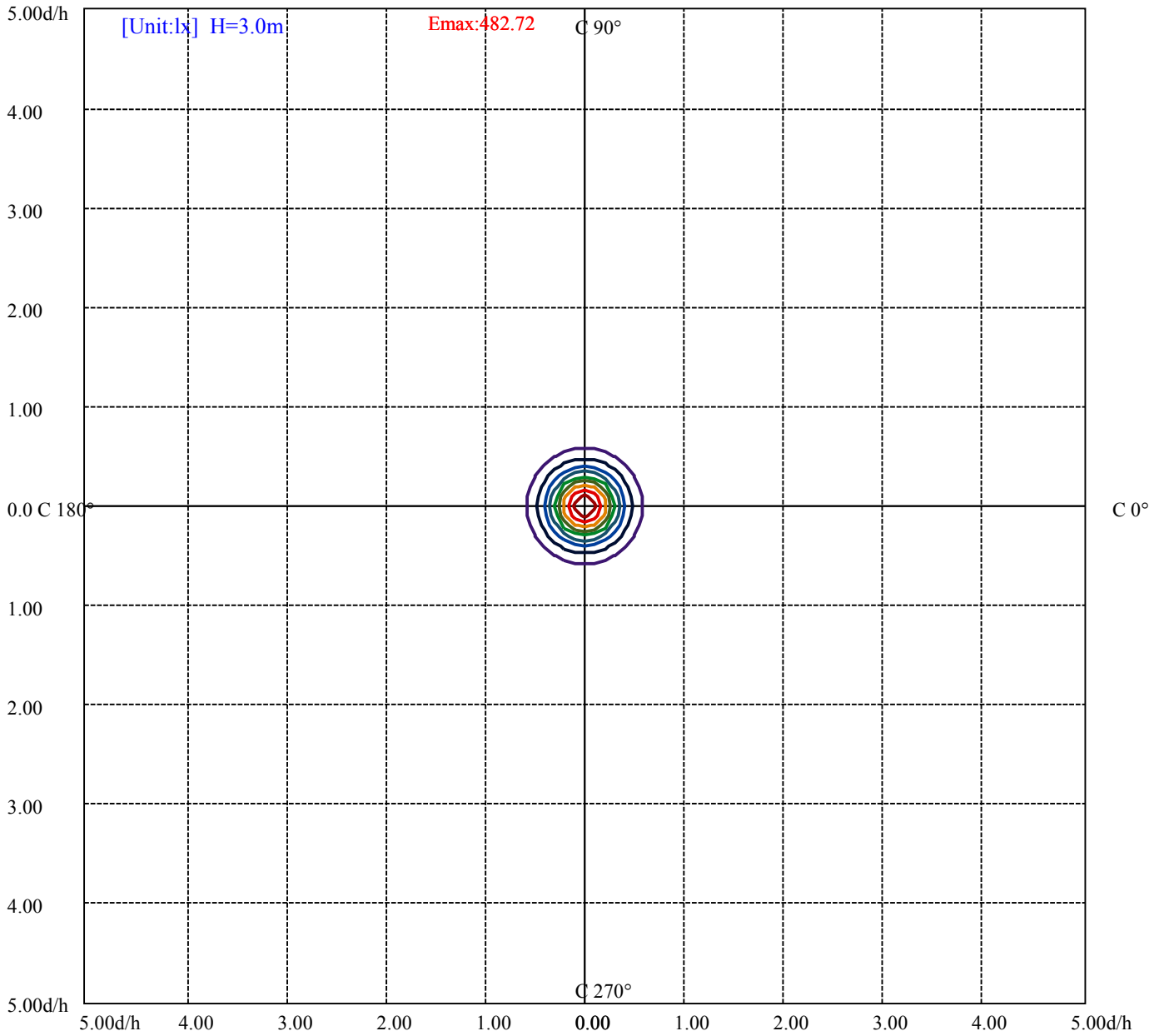
House

[Unit:cd]

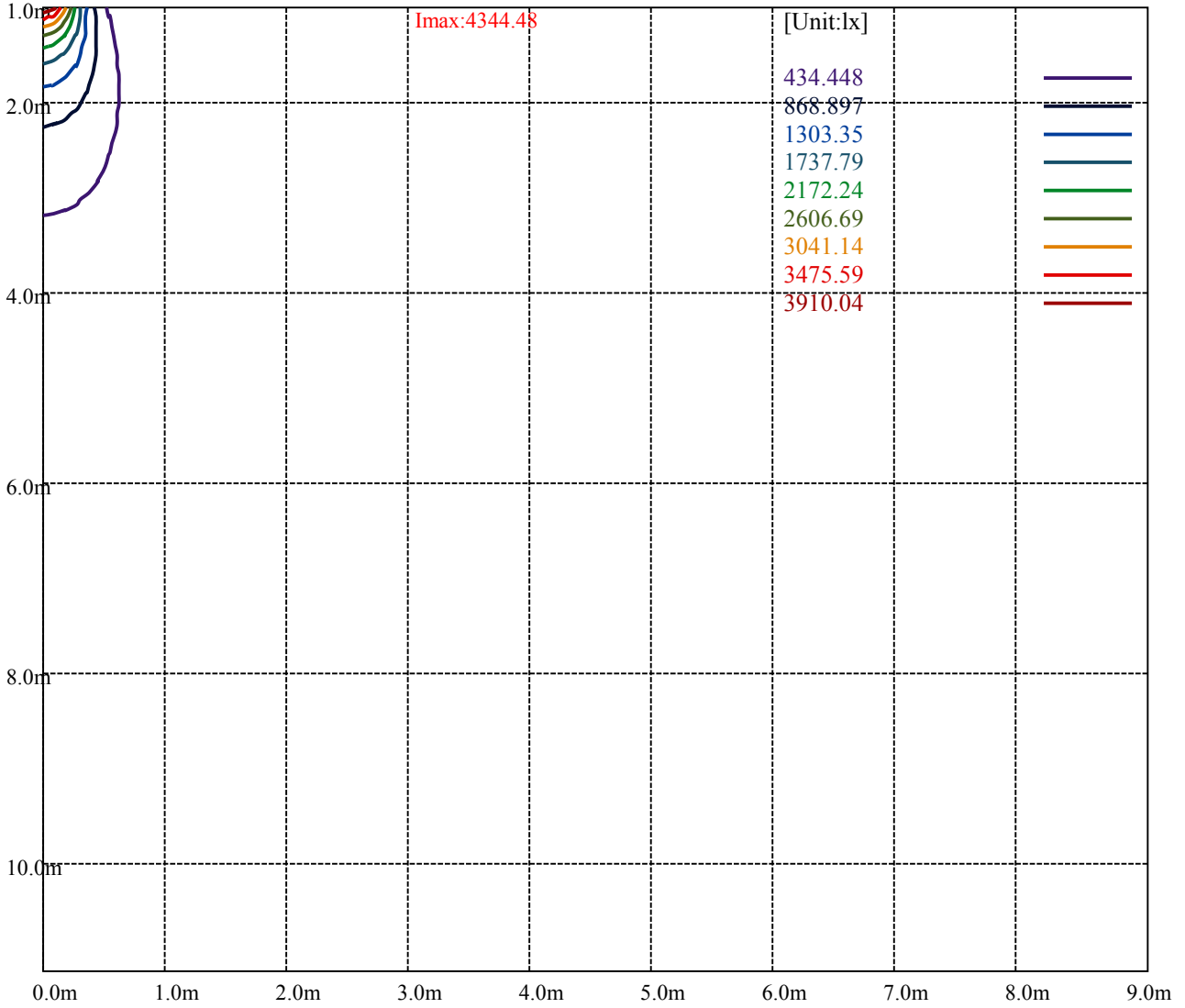
Road

Imax:4344.48

(10%Imax) 434.448	—
(20%Imax) 868.897	—
(30%Imax) 1303.35	—
(40%Imax) 1737.79	—
(50%Imax) 2172.24	—
(60%Imax) 2606.69	—
(70%Imax) 3041.14	—
(80%Imax) 3475.59	—
(90%Imax) 3910.04	—



- (10%Emax) 48.272
- (20%Emax) 96.544
- (30%Emax) 144.8156
- (40%Emax) 193.0878
- (50%Emax) 241.36
- (60%Emax) 289.6322
- (70%Emax) 337.9044
- (80%Emax) 386.1756
- (90%Emax) 434.4478



Luminance Table

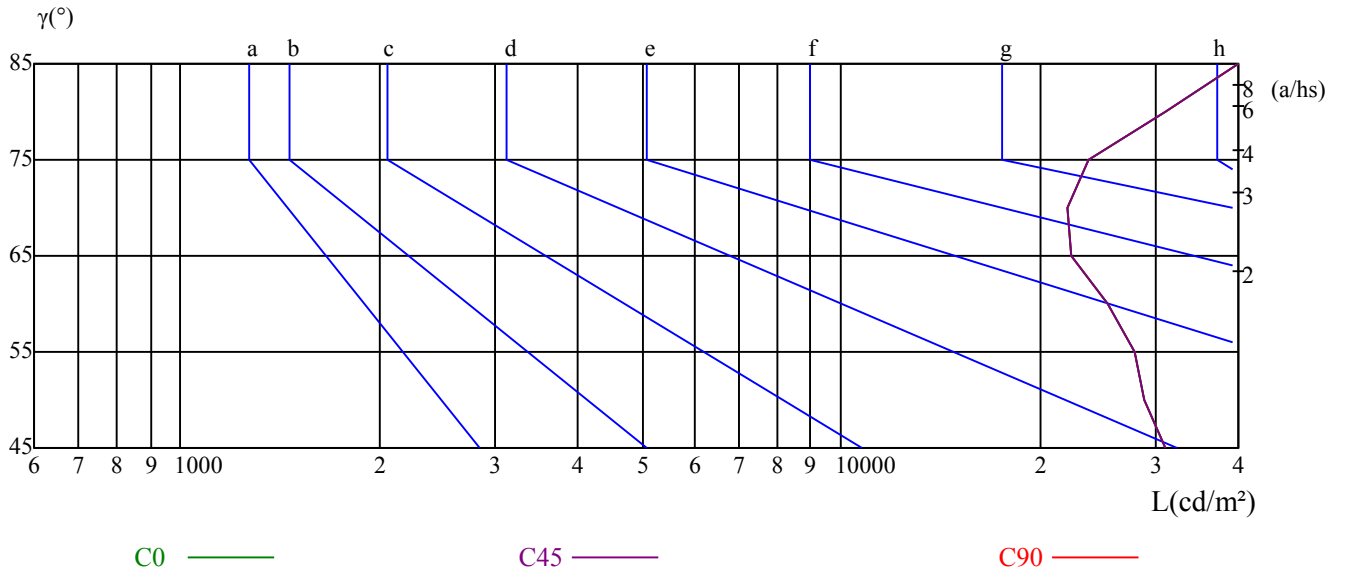
γ	45	50	55	60	65	70	75	80	85
C0	30969	28770	27875	25288	22386	22039	23739	30916	55572
C45	30969	28770	27875	25288	22386	22039	23739	30916	55572
C90	30969	28770	27875	25288	22386	22039	23739	30916	55572

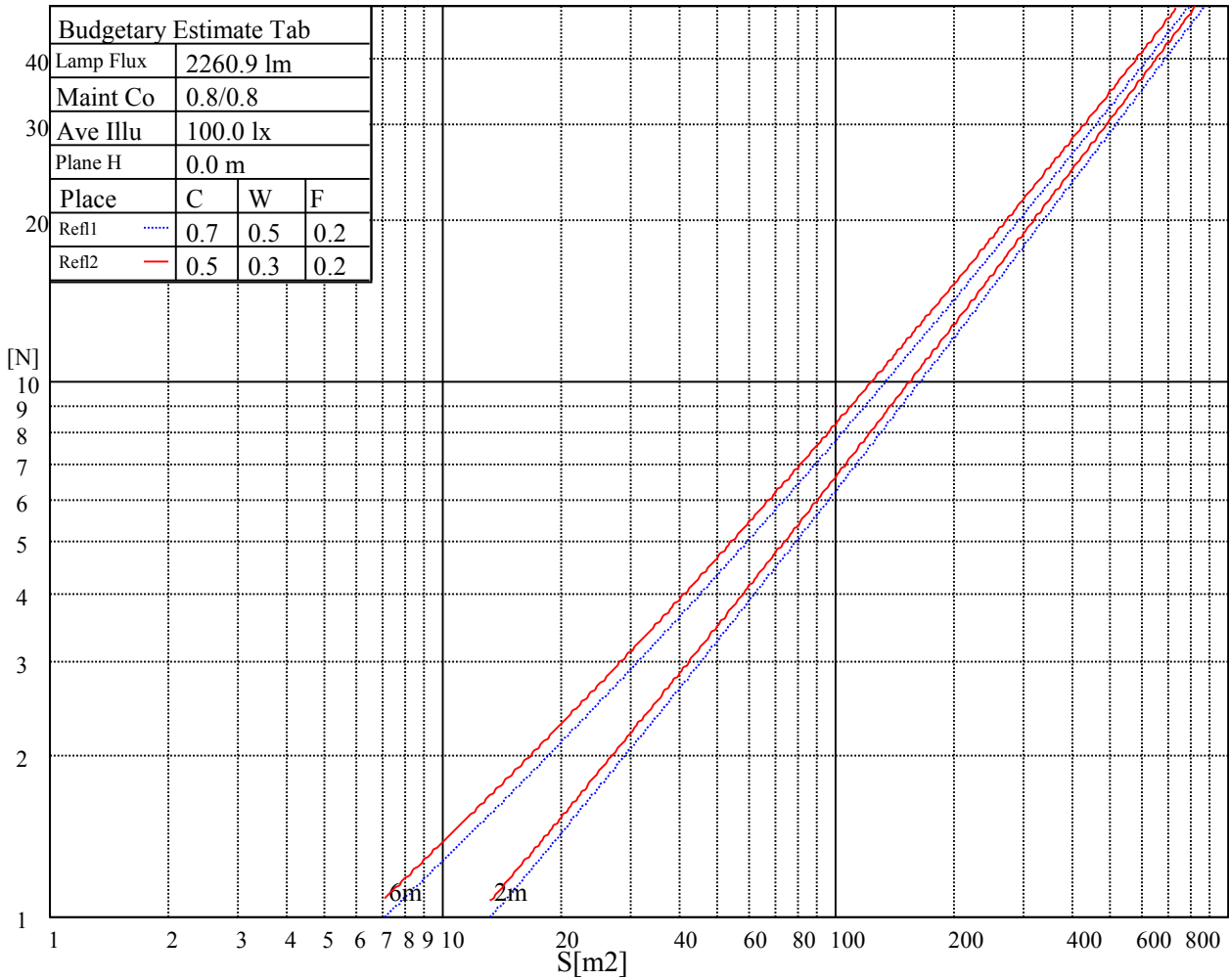
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
22386	22386	22386	23739	23739	23739	55572	55572	55572

Glare Table

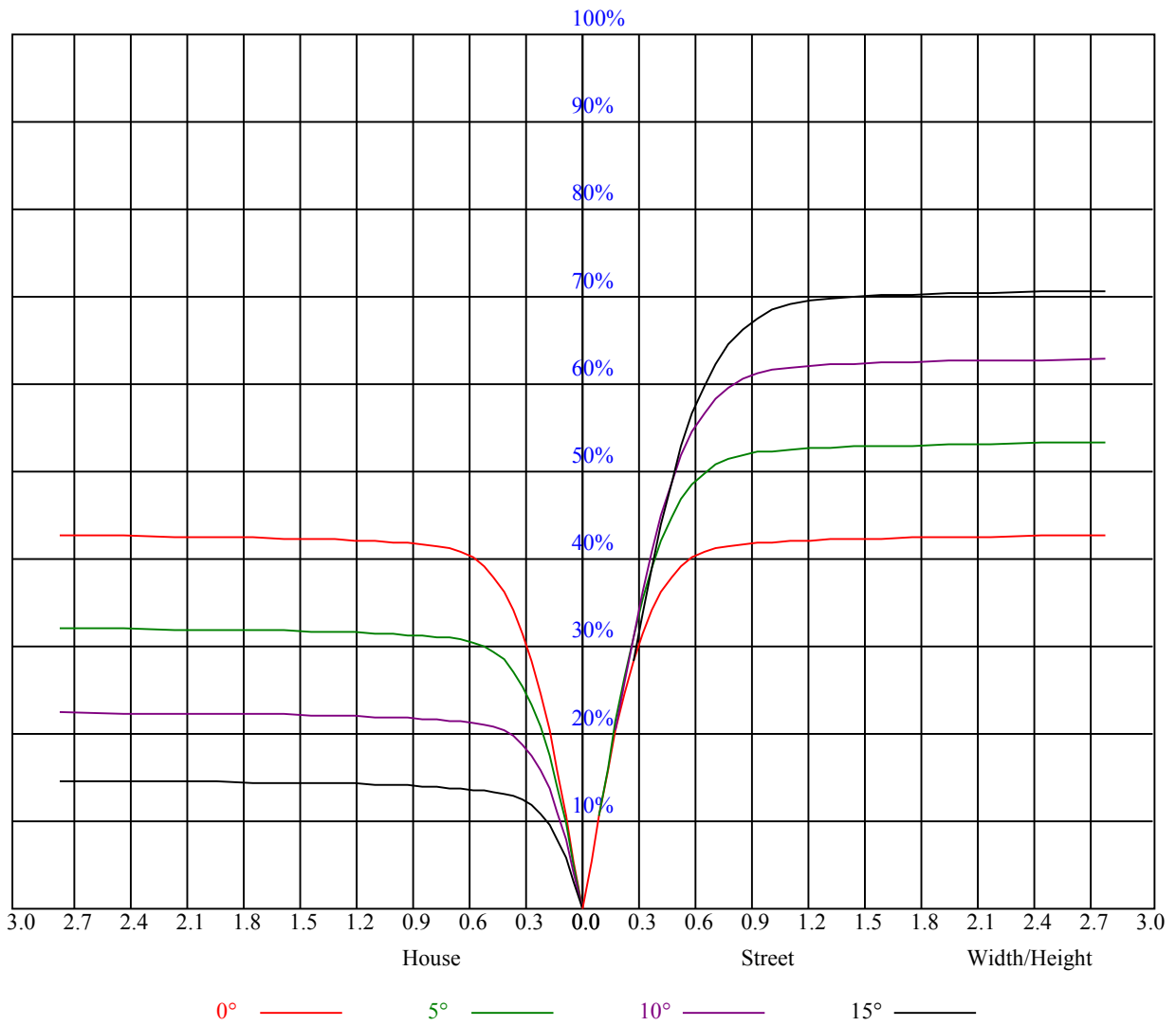
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89	0.87
1	0.97	0.94	0.93	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.91	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.79	0.77
3	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.74	0.73
4	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.69
5	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
6	0.73	0.69	0.65	0.73	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
7	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
8	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
9	0.64	0.60	0.57	0.64	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.55
10	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.53



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	4327.90	4273.53	3851.67	2993.62	2082.39	1303.81	799.49	307.13	59.45
45.0	4357.18	4199.43	3601.31	2733.70	1847.56	1158.01	635.77	335.21	52.52
90.0	4341.65	4111.60	3438.18	2613.59	1692.20	1056.79	583.25	177.71	51.99
135.0	4351.21	4165.37	3650.90	2724.13	1834.41	1158.01	671.03	317.29	55.87
180.0	4327.90	4007.03	3358.71	2443.30	1608.55	994.71	525.89	116.16	48.94
225.0	4357.18	4172.55	3597.12	2743.26	1874.45	1150.48	679.99	218.04	52.64
270.0	4341.65	4235.29	3750.09	2874.11	1986.19	1300.22	730.78	323.26	59.69
315.0	4351.21	4179.12	3631.18	2709.79	1837.40	1151.68	643.12	187.33	51.27
360.0	4327.90	4273.53	3851.67	2993.62	2082.39	1303.81	799.49	307.13	59.45
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	41.95	34.90	30.18	24.86	18.46	14.40	11.71	10.16	9.02
45.0	39.86	33.58	29.58	23.00	17.39	14.10	11.29	9.86	8.84
90.0	40.75	34.12	29.04	22.71	16.97	13.68	11.05	9.80	8.78
135.0	41.11	34.72	29.64	23.48	17.45	14.04	11.41	9.92	8.84
180.0	38.42	33.10	28.02	21.81	16.37	13.21	10.88	9.62	8.84
225.0	40.51	34.48	30.00	23.54	17.75	13.92	11.29	9.92	9.08
270.0	41.89	35.02	30.83	24.50	18.40	14.40	11.95	10.28	9.26
315.0	39.44	33.64	29.22	23.12	17.15	13.74	11.29	9.86	8.96
360.0	41.95	34.90	30.18	24.86	18.46	14.40	11.71	10.16	9.02
C/ γ (°)	90.0								
0.0	8.43								
45.0	8.43								
90.0	8.37								
135.0	8.31								
180.0	8.37								
225.0	8.43								
270.0	8.43								
315.0	8.37								
360.0	8.43								