



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: 2-1569-M	
Luminaire: BJB 47.319.2021	
Report No: 20170510003-1	Voltage(V): 218.3000
Test No: 20170510003	Current(A): 0.1030
LampCAT: CITIZEN CLU036	Power (W): 20.4000
Lamp flux(lm): 2279.0	PF: 0.9070
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 2073.68  
Efficiency(%): 90.99%  
Lumens(lm)/Power(W): 101.65  
Central intensity(cd): 2368.802  
Maximum intensity(cd): 2368.802  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=60.0  
                                  [C90/270]Total=60.0  
Field angle(10%Imax): [C0/180]Total=78.7  
                                  [C90/270]Total=78.7  
Maximum s/h(1/2): C0\_180=0.97 C90\_270=0.97  
Maximum s/h(1/4): C0\_180=0.89 C90\_270=0.89  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 91.53%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.211%

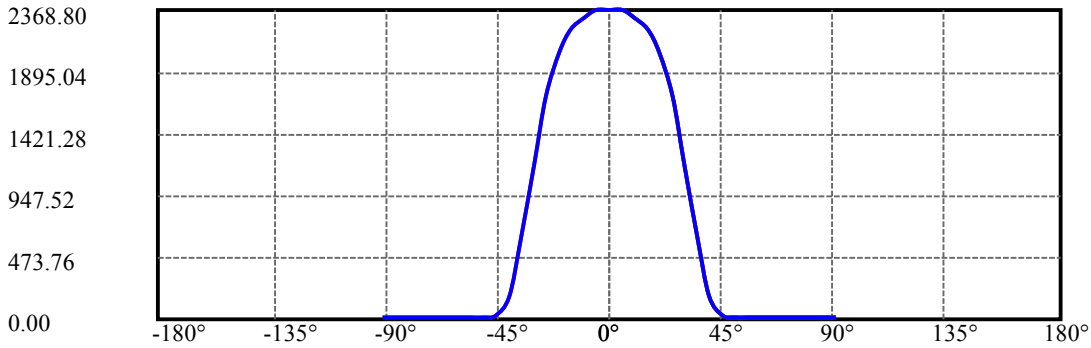
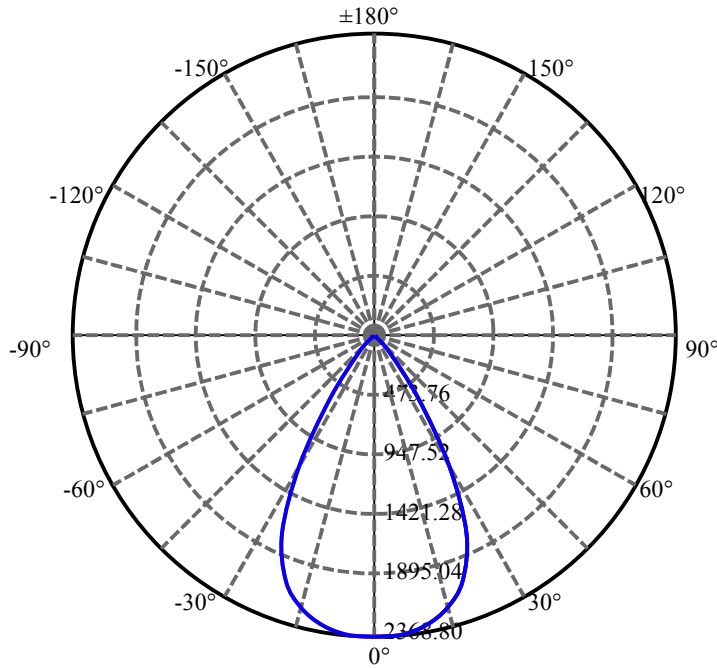
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2368.802	14.166	14.166	.622%	.683%
5.0	2361.782	112.830	126.996	4.951%	6.124%
10.0	2309.547	219.830	346.826	9.646%	16.725%
15.0	2222.007	315.233	662.058	13.832%	31.927%
20.0	2051.195	384.546	1046.604	16.873%	50.471%
25.0	1706.542	395.325	1441.93	17.346%	69.535%
30.0	1186.617	325.215	1767.144	14.270%	85.218%
35.0	614.271	193.126	1960.27	8.474%	94.531%
40.0	181.899	64.090	2024.36	2.812%	97.622%
45.0	23.420	9.077	2033.437	.398%	98.060%
50.0	13.193	5.540	2038.977	.243%	98.327%
55.0	10.770	4.836	2043.813	.212%	98.560%
60.0	9.993	4.744	2048.556	.208%	98.789%
65.0	9.387	4.663	2053.22	.205%	99.014%
70.0	8.933	4.601	2057.821	.202%	99.235%
75.0	8.575	4.540	2062.361	.199%	99.454%
80.0	8.362	4.514	2066.875	.198%	99.672%
85.0	8.300	4.532	2071.407	.199%	99.891%
90.0	8.279	2.269	2073.676	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1767.14	77.54%	85.22%
0-40	2024.36	88.83%	97.62%
0-60	2048.56	89.89%	98.79%
0-90	2071.41	90.89%	99.89%
0-120	2071.41	90.89%	99.89%
0-180	2073.68	90.99%	100.00%
60-90	27.59	1.21%	1.33%
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%
0-28.34	1658.94	72.79%	80.00%

ZONAL LUMEN SUMMARY

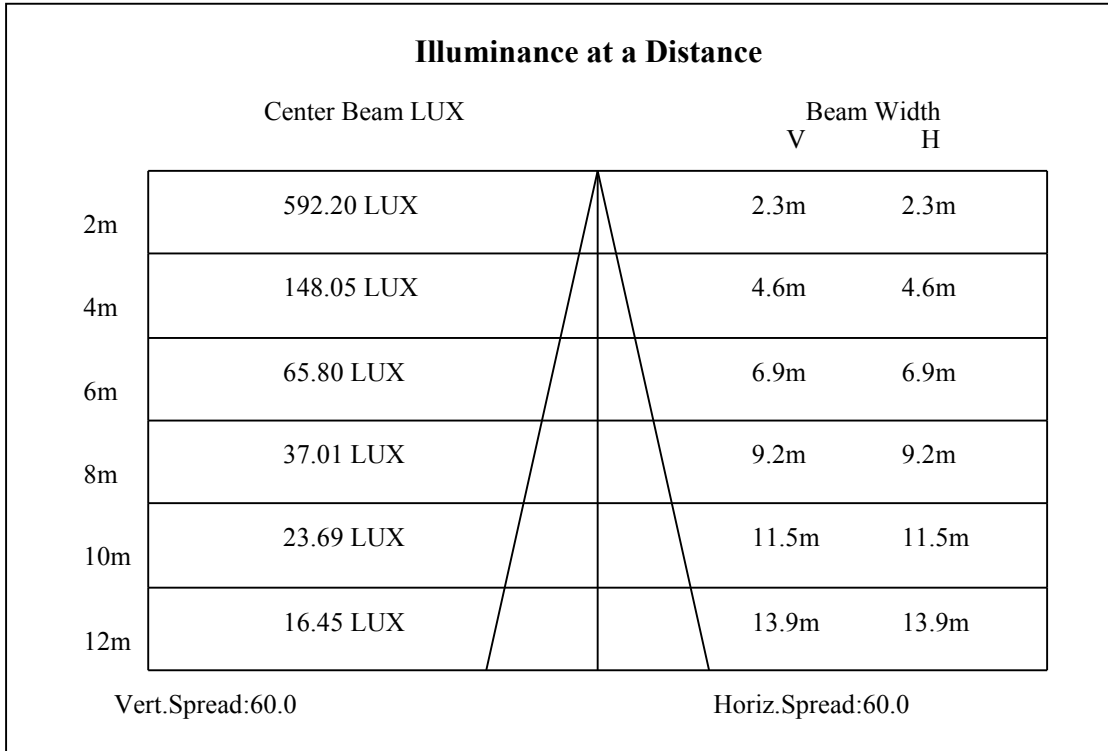
0-10	346.83
10-20	699.78
20-30	720.54
30-40	257.22
40-50	14.62
50-60	9.58
60-70	9.26
70-80	9.05
80-90	4.53
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

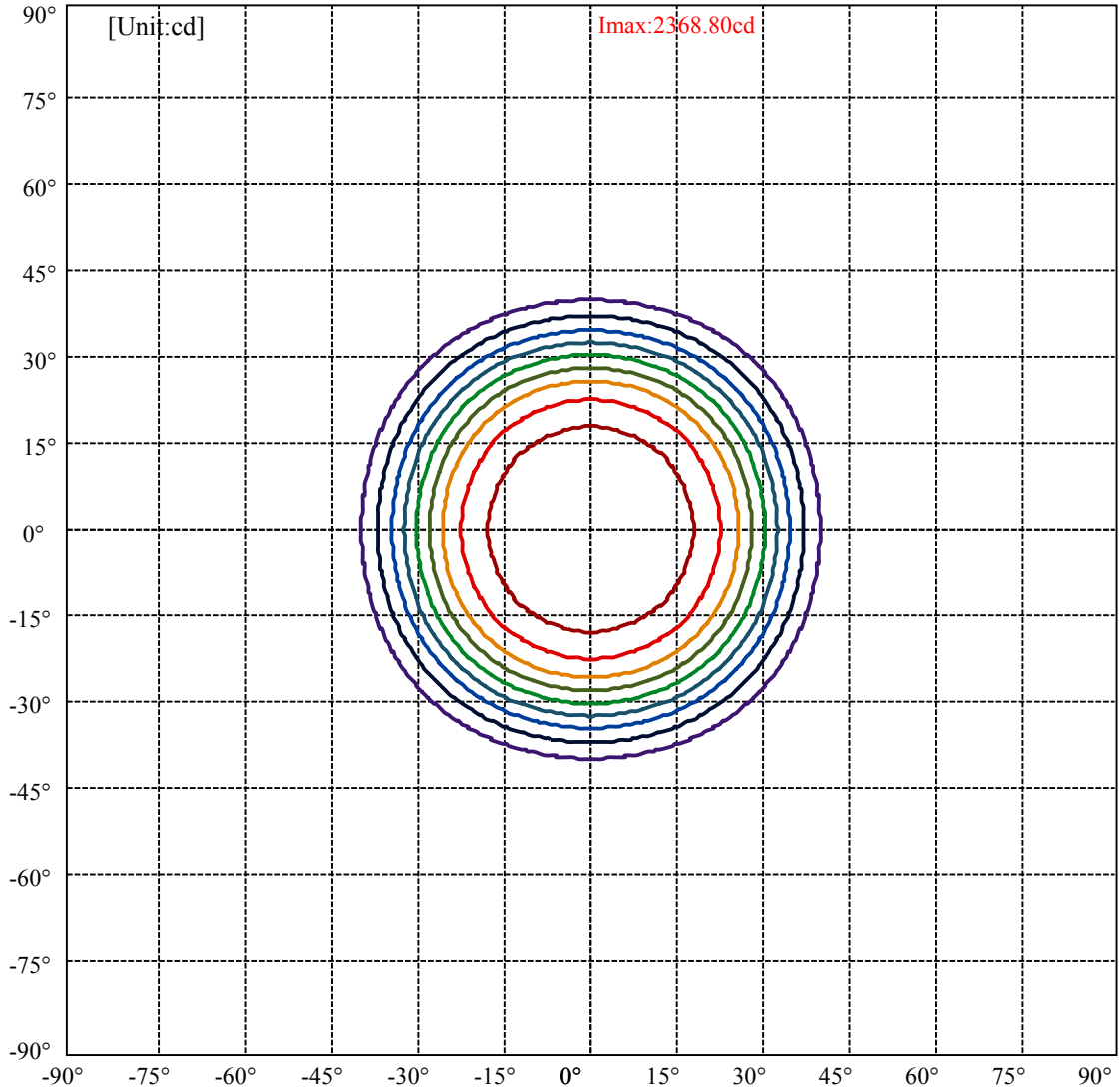


C0(Max): —  
C0/C180: —  
C90/C270: —

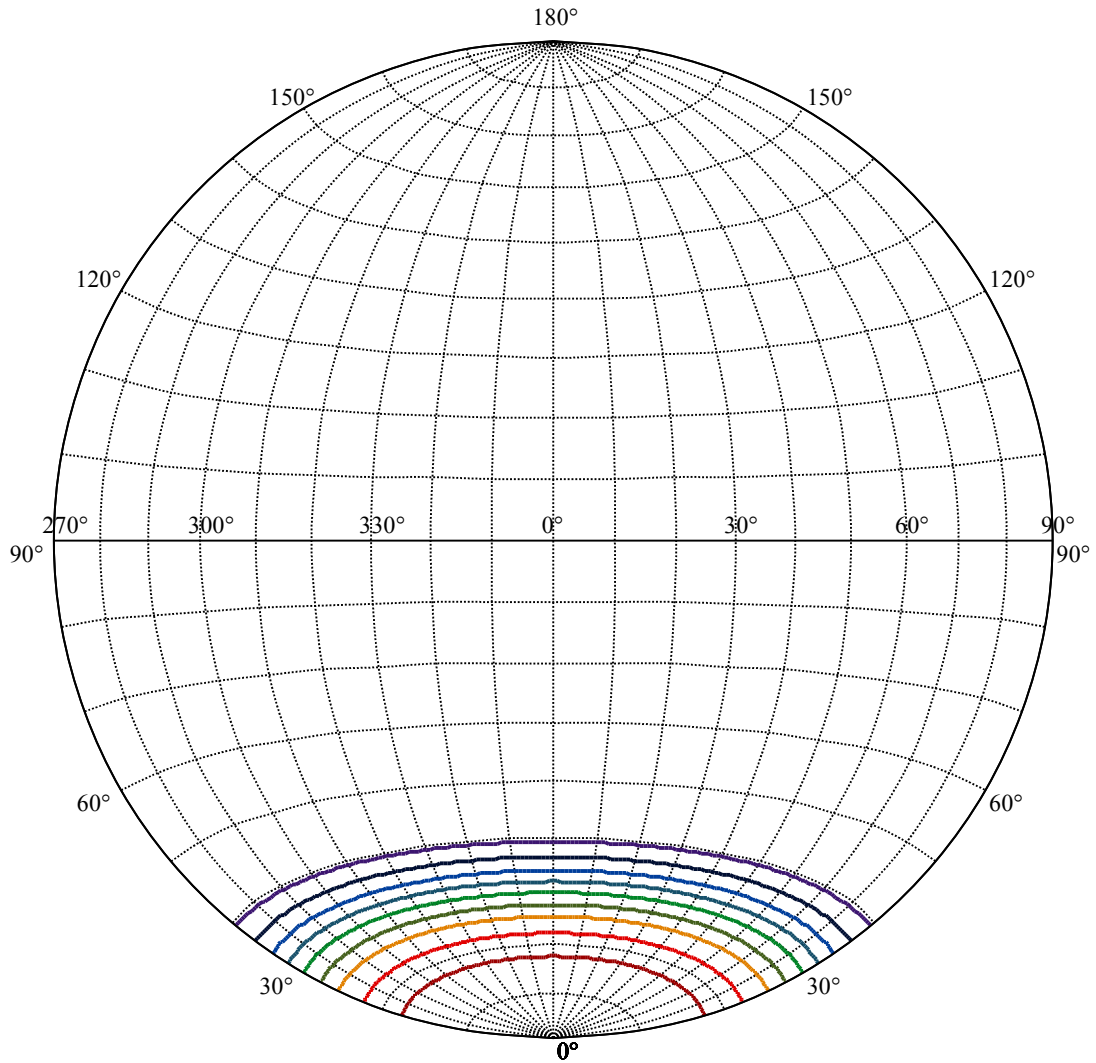
Field angle(10%Imax):C0/180Left:39.4 Right:39.4  
:C90/270Left:39.4 Right:39.4

Beam Angle(50%Imax):C0/180Left:30.0 Right:30.0  
:C90/270Left:30.0 Right:30.0





(10%Imax) 236.88	—
(20%Imax) 473.76	—
(30%Imax) 710.641	—
(40%Imax) 947.521	—
(50%Imax) 1184.4	—
(60%Imax) 1421.28	—
(70%Imax) 1658.16	—
(80%Imax) 1895.04	—
(90%Imax) 2131.92	—



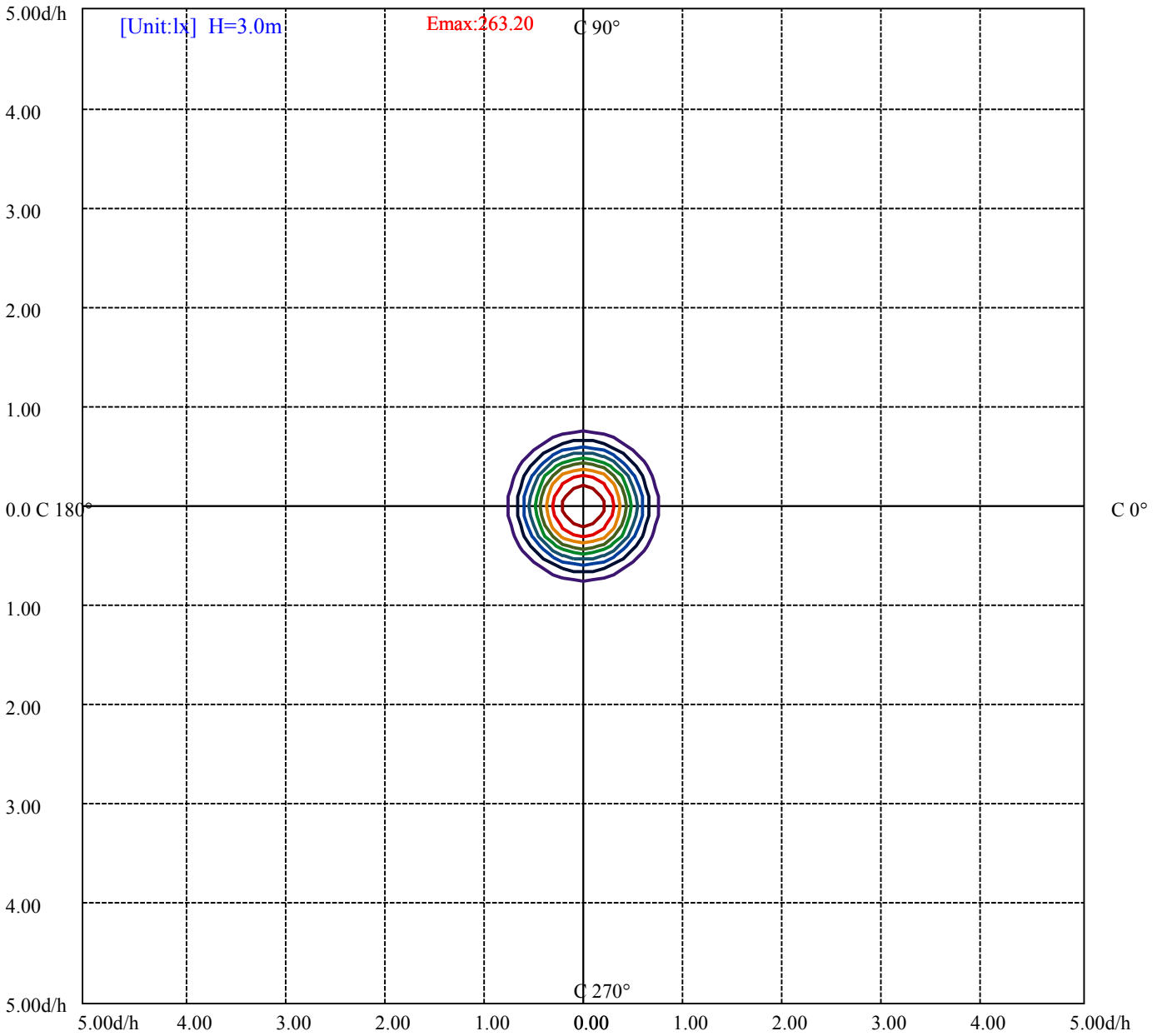
House

[Unit:cd]

Road

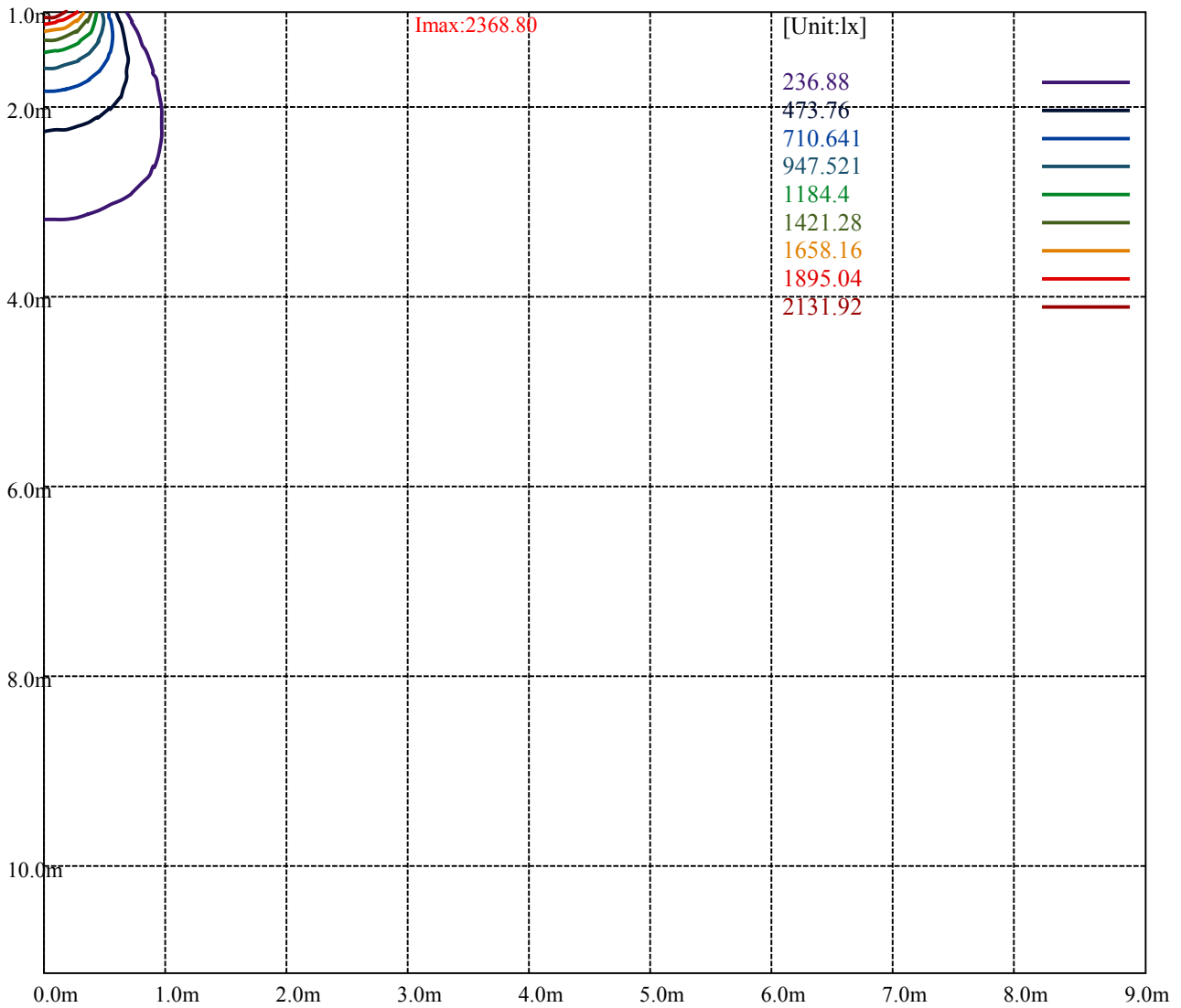
**Imax:2368.80**

(10%Imax) 236.88	—
(20%Imax) 473.76	—
(30%Imax) 710.641	—
(40%Imax) 947.521	—
(50%Imax) 1184.4	—
(60%Imax) 1421.28	—
(70%Imax) 1658.16	—
(80%Imax) 1895.04	—
(90%Imax) 2131.92	—



(10%Emax) 26.32	—
(20%Emax) 52.64	—
(30%Emax) 78.96	—
(40%Emax) 105.2801	—
(50%Emax) 131.6	—
(60%Emax) 157.92	—
(70%Emax) 184.24	—
(80%Emax) 210.56	—
(90%Emax) 236.88	—





Luminance Table

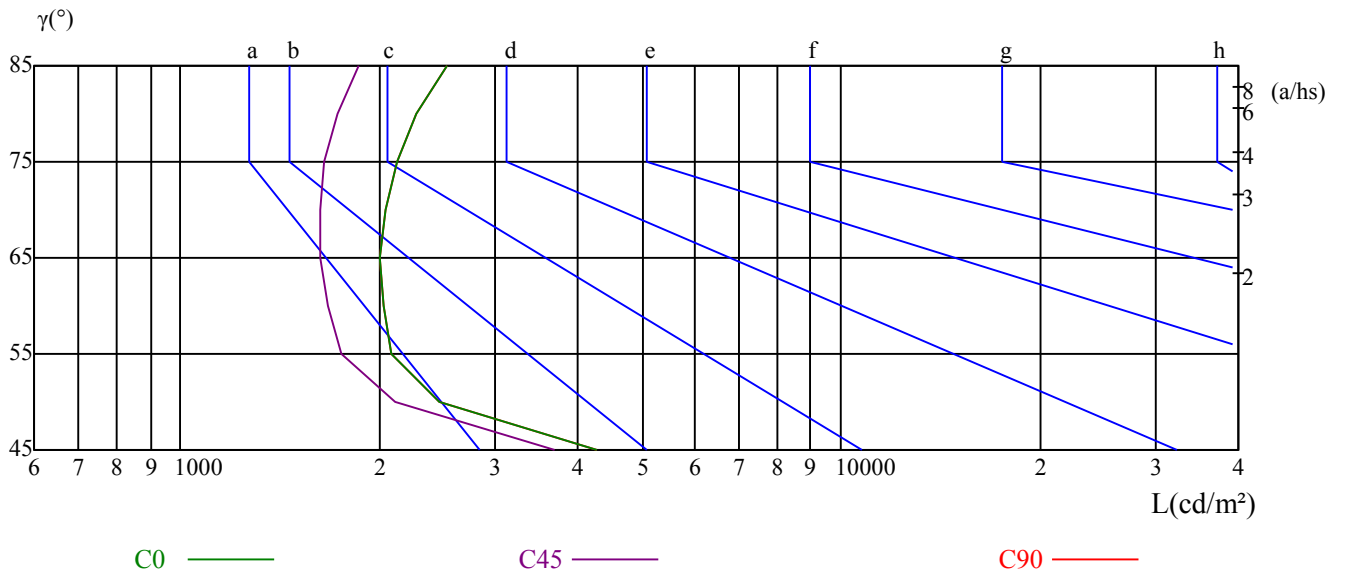
$\gamma$	45	50	55	60	65	70	75	80	85
C0	4263	2467	2087	2025	2009	2043	2122	2274	2526
C45	3697	2108	1755	1675	1633	1627	1653	1725	1857
C90	4263	2467	2087	2025	2009	2043	2122	2274	2526

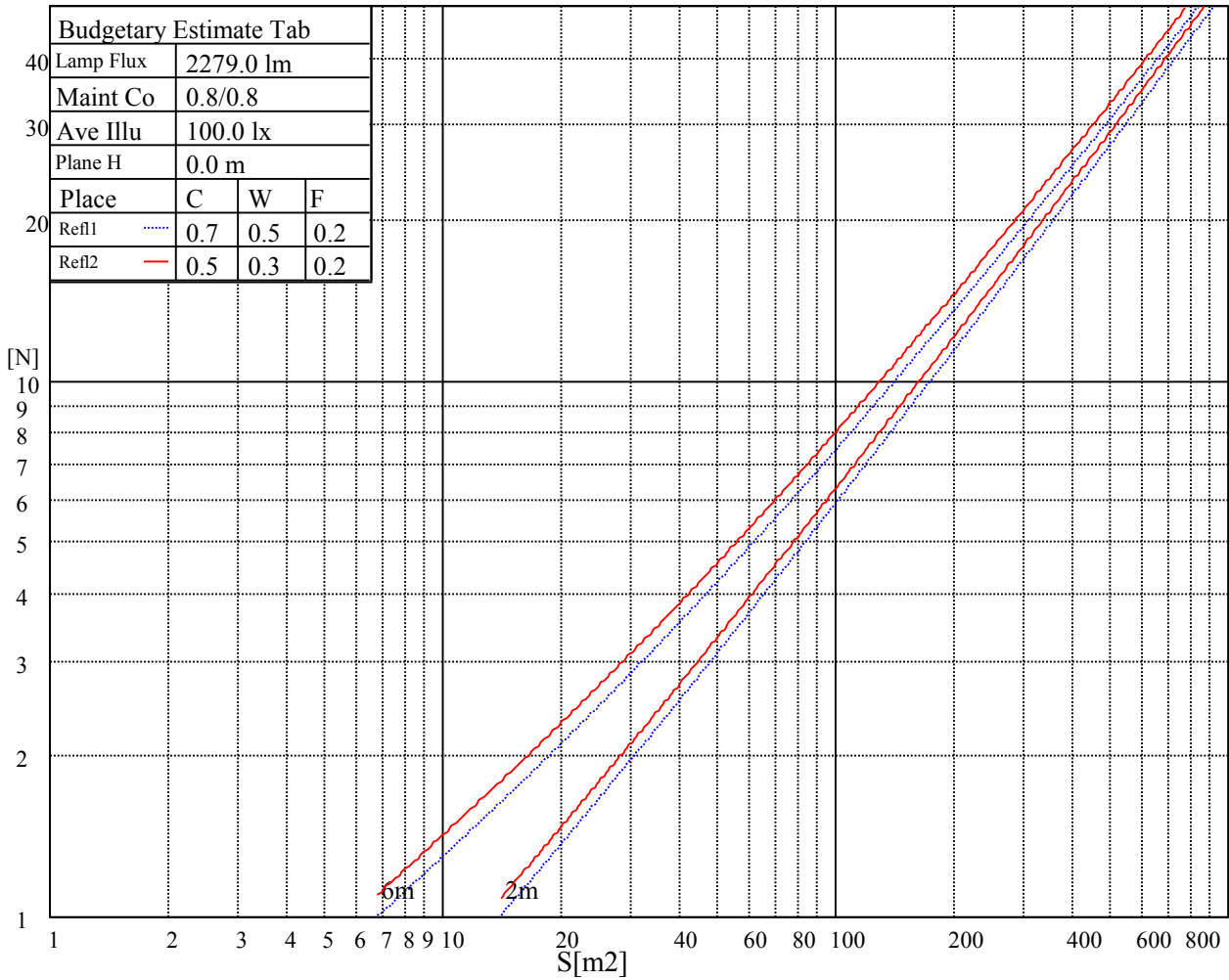
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4533	4533	4533	6762	6762	6762	19434	19434	19434

Glare Table

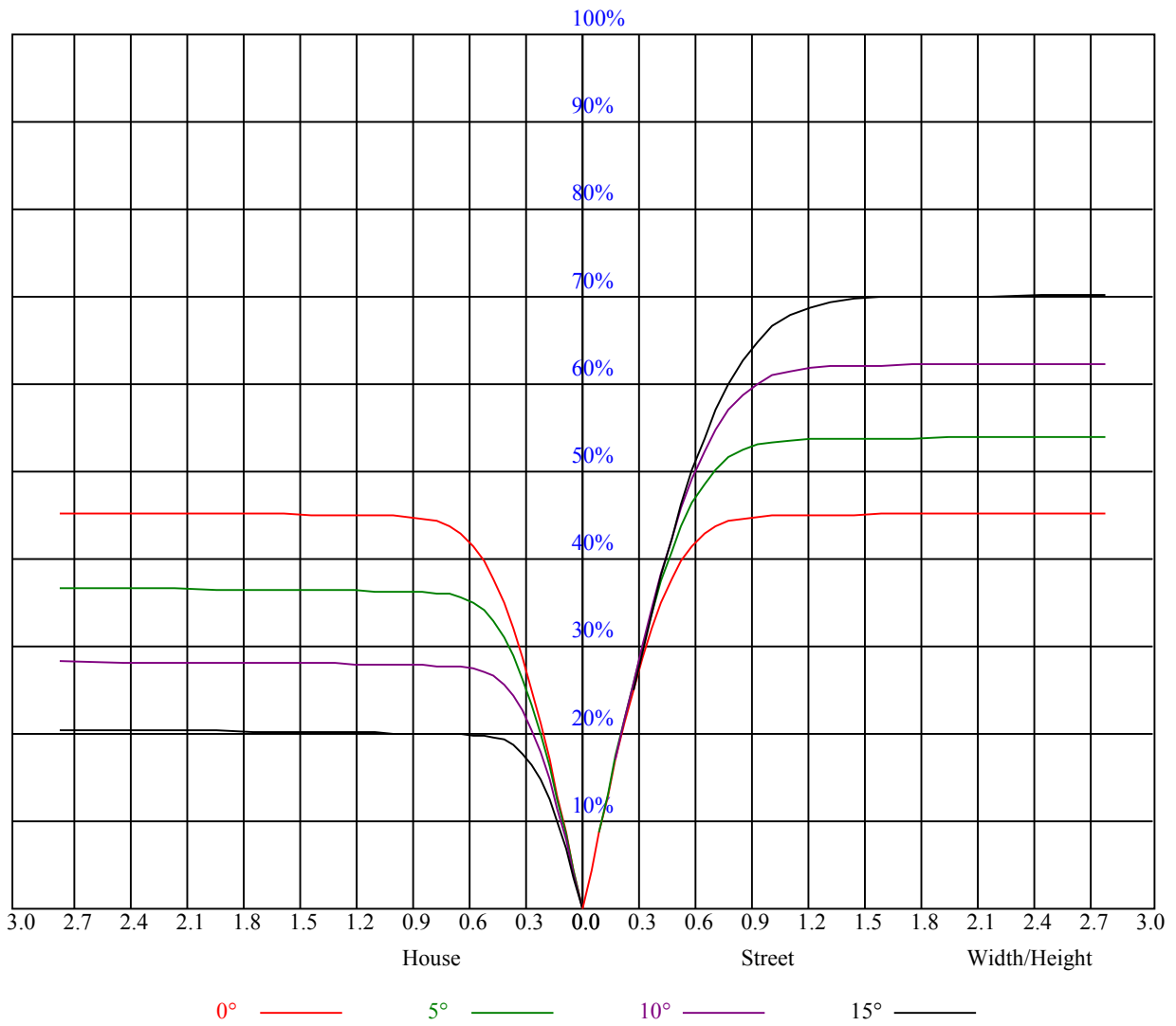
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.92
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
2	0.95	0.91	0.88	0.93	0.90	0.87	0.90	0.88	0.85	0.88	0.85	0.84	0.85	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.82	0.80	0.84	0.81	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	0.80	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.64
7	0.72	0.67	0.64	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.61
8	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.58
9	0.65	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.55
10	0.62	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53



Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2360.82	2318.98	2253.46	2154.91	1946.79	1594.43	1037.81	420.08	58.64
45.0	2377.89	2356.41	2303.01	2209.41	2037.64	1669.31	1190.87	579.74	189.83
90.0	2375.68	2374.03	2312.92	2219.87	2026.63	1652.79	1088.47	593.62	132.36
135.0	2360.82	2388.35	2365.77	2298.05	2147.20	1850.45	1427.06	844.01	298.96
180.0	2360.82	2387.25	2346.50	2283.74	2135.64	1852.65	1422.66	796.94	269.78
225.0	2377.89	2385.04	2326.68	2226.48	2086.64	1747.49	1068.04	636.84	159.99
270.0	2375.68	2362.47	2312.92	2238.04	2091.59	1743.64	1255.29	638.65	294.55
315.0	2360.82	2321.73	2255.11	2145.55	1937.43	1541.58	1002.74	404.28	51.09
360.0	2360.82	2318.98	2253.46	2154.91	1946.79	1594.43	1037.81	420.08	58.64
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	17.62	11.56	10.35	9.69	9.19	8.75	8.48	8.26	8.26
45.0	21.91	13.05	10.90	10.02	9.41	8.97	8.59	8.42	8.37
90.0	23.23	13.49	11.07	10.19	9.52	9.03	8.59	8.37	8.31
135.0	33.75	15.91	11.34	10.41	9.63	9.08	8.70	8.42	8.26
180.0	29.57	14.31	10.90	10.08	9.41	8.97	8.59	8.31	8.20
225.0	22.68	12.72	10.74	9.97	9.36	8.97	8.59	8.37	8.31
270.0	22.19	13.21	10.68	9.97	9.41	8.97	8.59	8.42	8.37
315.0	16.41	11.29	10.19	9.63	9.14	8.70	8.48	8.31	8.31
360.0	17.62	11.56	10.35	9.69	9.19	8.75	8.48	8.26	8.26
C/ $\gamma$ (°)	90.0								
0.0	8.20								
45.0	8.31								
90.0	8.31								
135.0	8.26								
180.0	8.20								
225.0	8.31								
270.0	8.31								
315.0	8.31								
360.0	8.20								