



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

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## Nata

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LumCAT: 2-1682-M	
Luminaire: 92.70.124.00	
Report No: NT2017060503	Voltage(V): 220.2000
Test No: GC2017060503	Current(A): 0.0700
LampCAT: CITIZEN CLU028	Power (W): 14.4000
Lamp flux(lm): 1554.0	PF: 0.9280
Number of Lamps: 1	Ballast type: DC
Length(mm): 75	Width(mm): 75
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1347.83  
Efficiency(%): 86.73%  
Lumens(lm)/Power(W): 93.60  
Central intensity(cd): 2428.400  
Maximum intensity(cd): 2428.400  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=39.4  
                                  [C90/270]Total=39.4  
Field angle(10%Imax): [C0/180]Total=76.0  
                                  [C90/270]Total=76.0  
Maximum s/h(1/2): C0\_180=0.63 C90\_270=0.63  
Maximum s/h(1/4): C0\_180=0.68 C90\_270=0.68  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 87.58%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.885%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2017/6/5  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

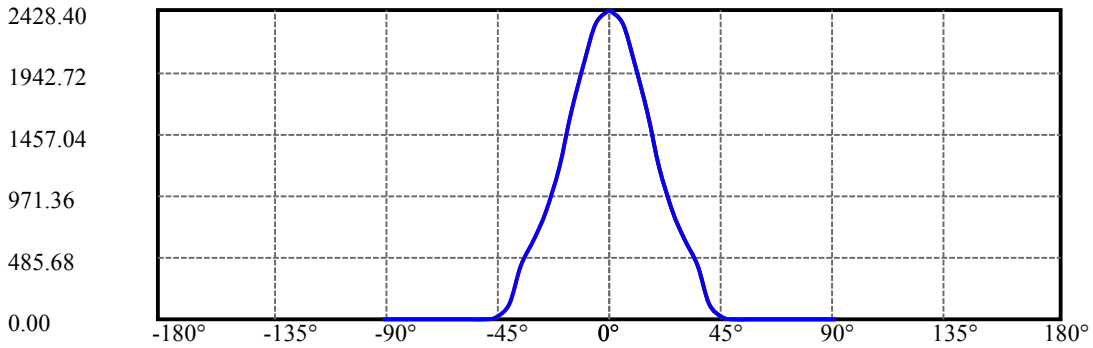
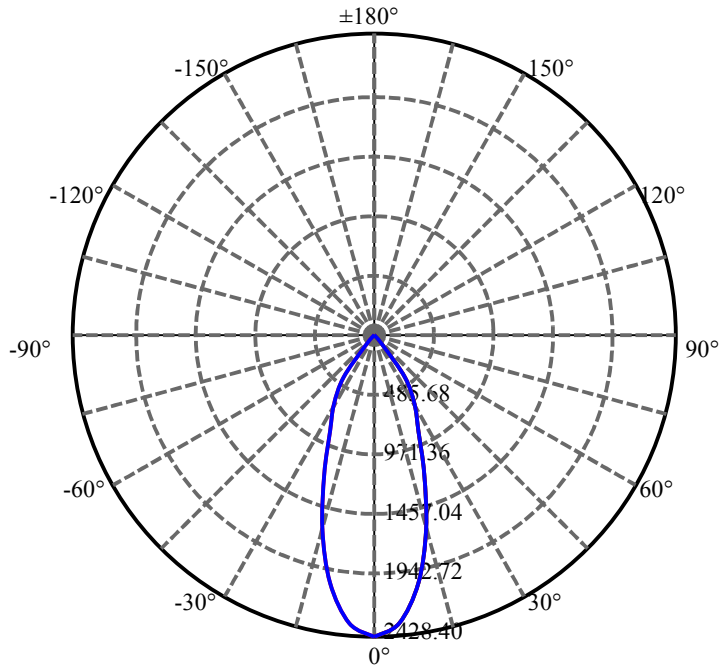
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2428.400	14.522	14.522	.935%	1.077%
5.0	2326.202	111.130	125.653	7.151%	9.323%
10.0	2025.731	192.815	318.468	12.408%	23.628%
15.0	1616.387	229.314	547.782	14.756%	40.642%
20.0	1189.996	223.093	770.876	14.356%	57.194%
25.0	846.024	195.984	966.86	12.612%	71.735%
30.0	640.767	175.614	1142.474	11.301%	84.764%
35.0	424.402	133.432	1275.905	8.586%	94.664%
40.0	122.480	43.154	1319.059	2.777%	97.866%
45.0	12.250	4.748	1323.807	.306%	98.218%
50.0	7.137	2.997	1326.804	.193%	98.440%
55.0	6.132	2.753	1329.557	.177%	98.645%
60.0	5.726	2.718	1332.275	.175%	98.846%
65.0	5.513	2.739	1335.014	.176%	99.049%
70.0	5.368	2.765	1337.779	.178%	99.255%
75.0	5.334	2.824	1340.603	.182%	99.464%
80.0	5.327	2.875	1343.478	.185%	99.677%
85.0	5.306	2.897	1346.375	.186%	99.892%
90.0	5.292	1.450	1347.826	.093%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1142.47	73.52%	84.76%
0-40	1319.06	84.88%	97.87%
0-60	1332.28	85.73%	98.85%
0-90	1346.38	86.64%	99.89%
0-120	1346.38	86.64%	99.89%
0-180	1347.83	86.73%	100.00%
60-90	16.82	1.08%	1.25%
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%
0-28.17	1078.26	69.39%	80.00%

ZONAL LUMEN SUMMARY

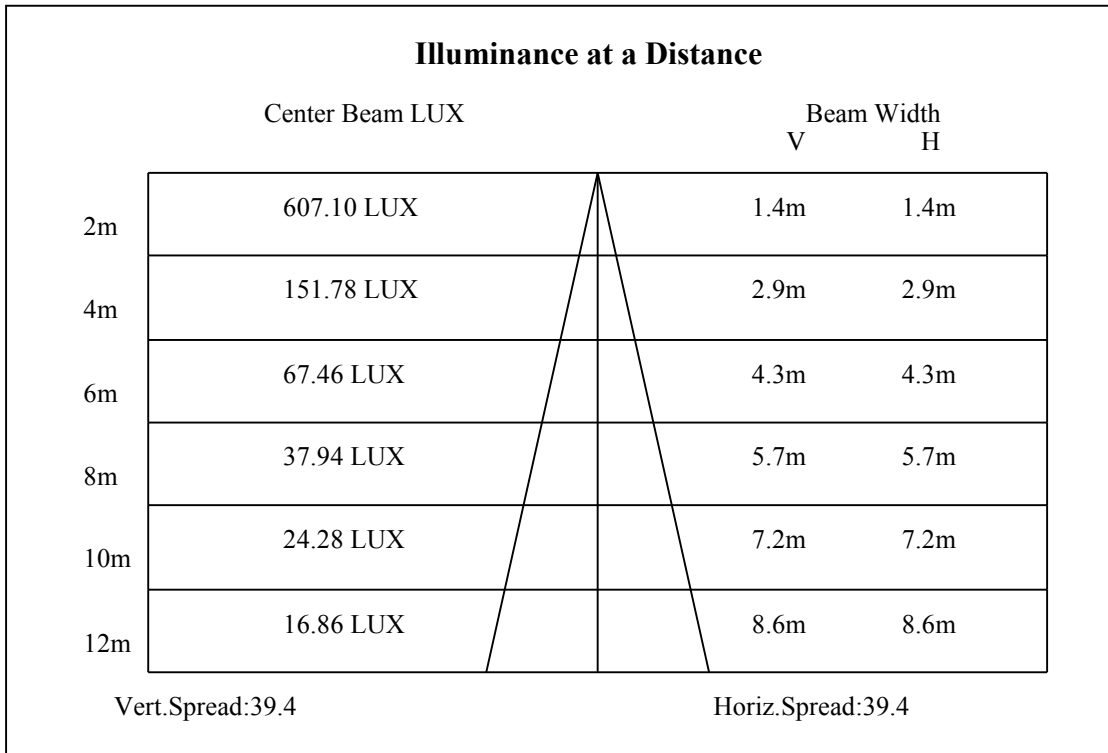
0-10	318.47
10-20	452.41
20-30	371.60
30-40	176.59
40-50	7.74
50-60	5.47
60-70	5.50
70-80	5.70
80-90	2.90
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

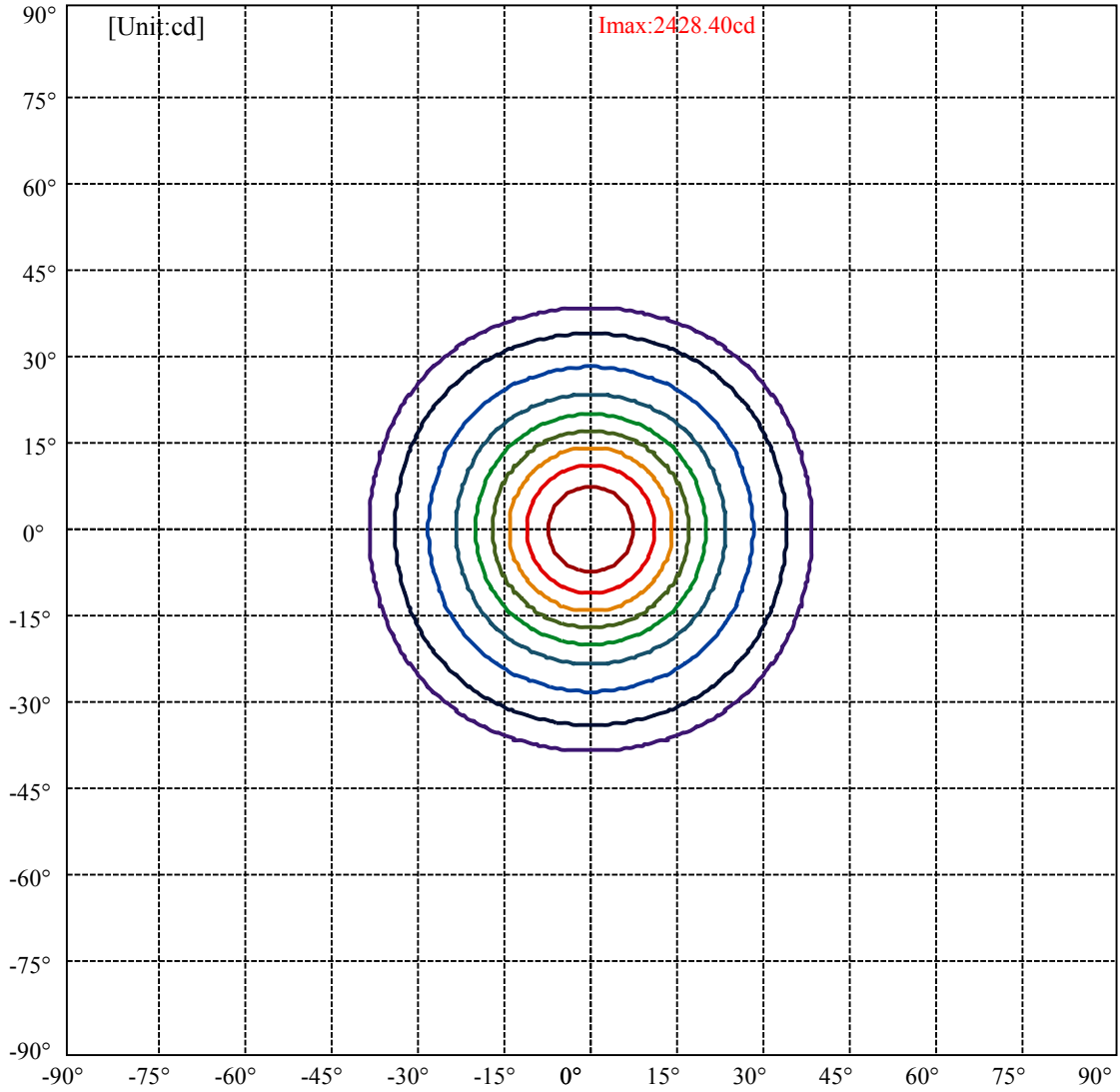


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

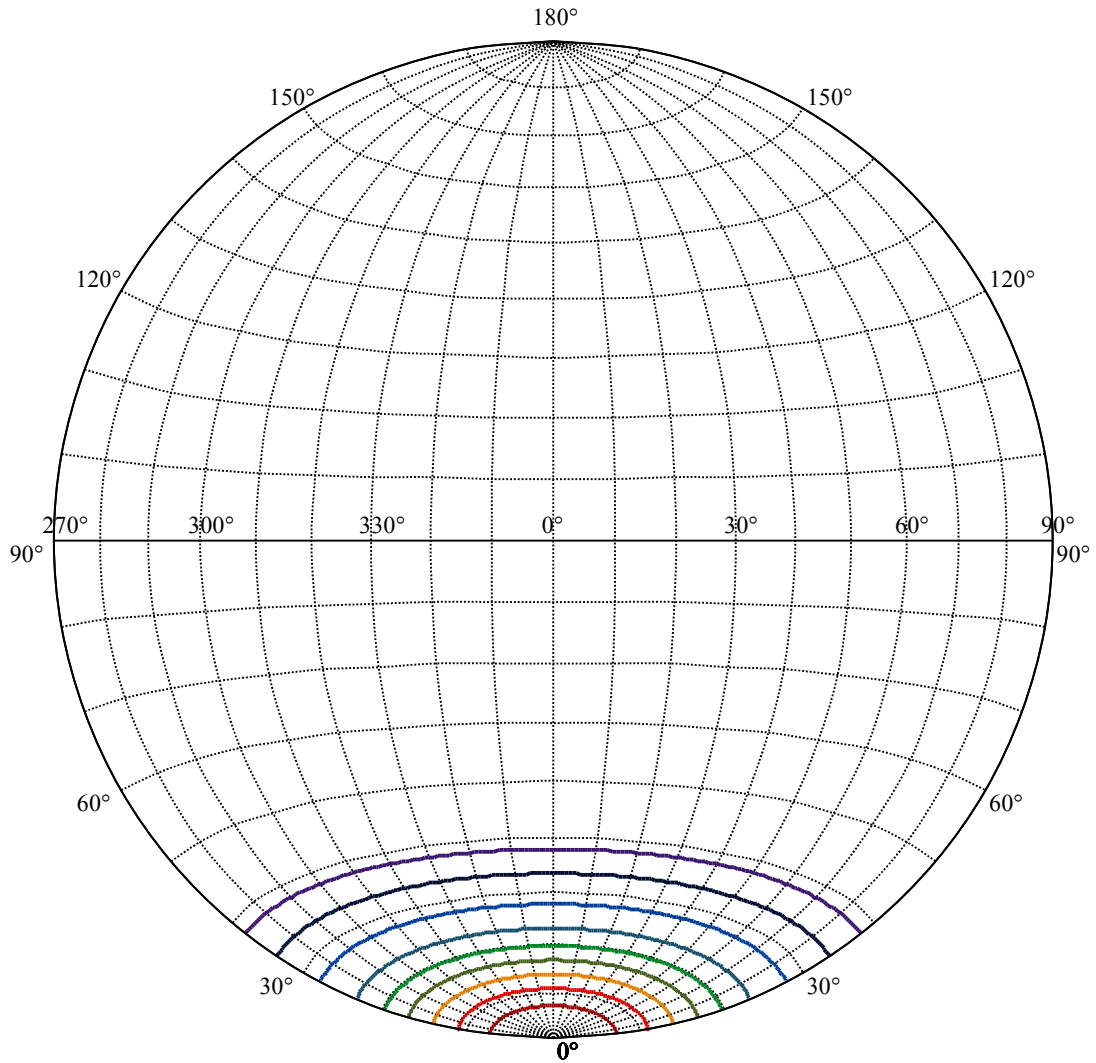
Field angle(10%Imax):C0/180Left:38.0 Right:38.0  
:C90/270Left:38.0 Right:38.0

Beam Angle(50%Imax):C0/180Left:19.7 Right:19.7  
:C90/270Left:19.7 Right:19.7





(10%Imax) 242.84	—
(20%Imax) 485.68	—
(30%Imax) 728.52	—
(40%Imax) 971.36	—
(50%Imax) 1214.2	—
(60%Imax) 1457.04	—
(70%Imax) 1699.88	—
(80%Imax) 1942.72	—
(90%Imax) 2185.56	—



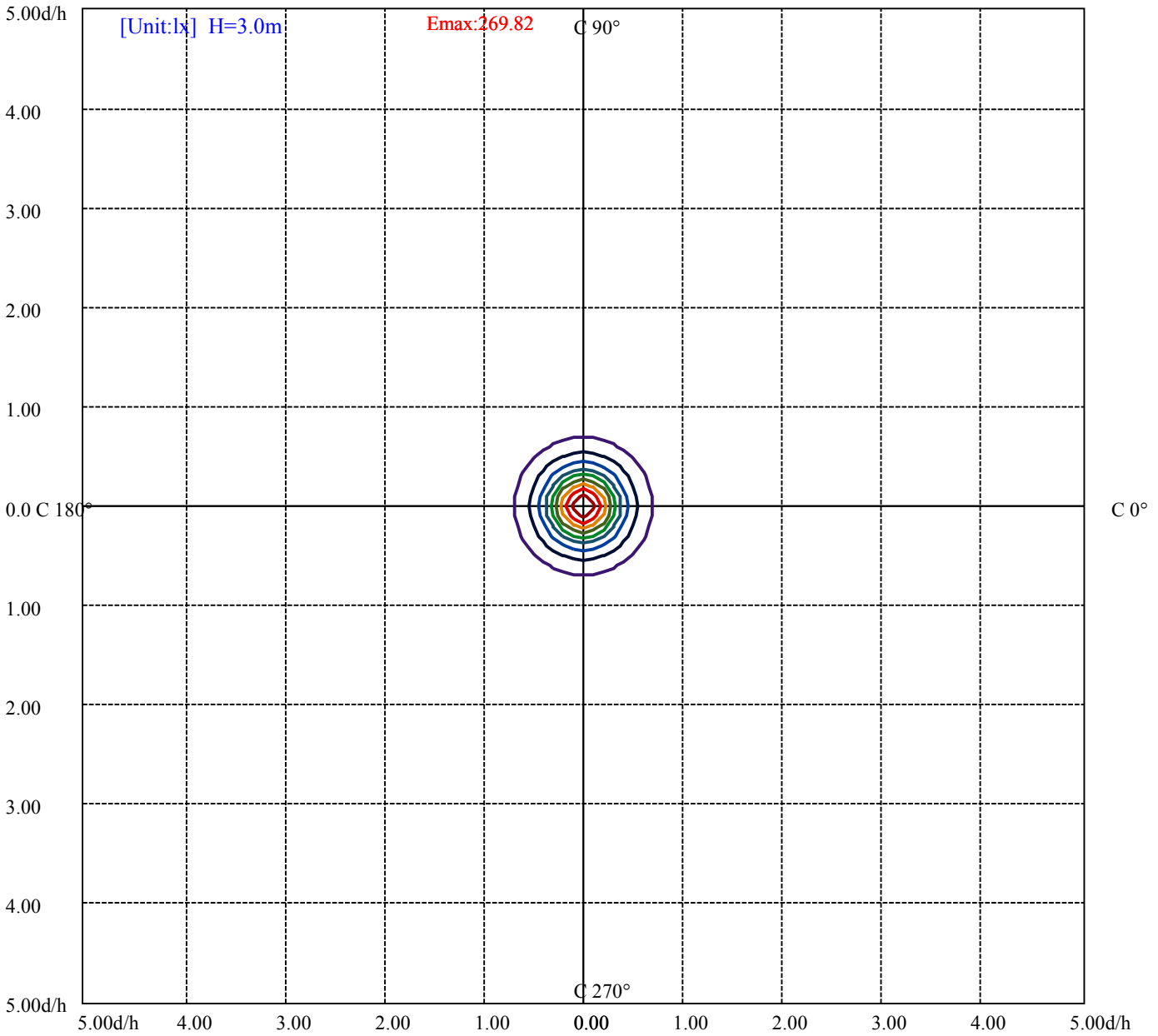
House

[Unit:cd]

Road

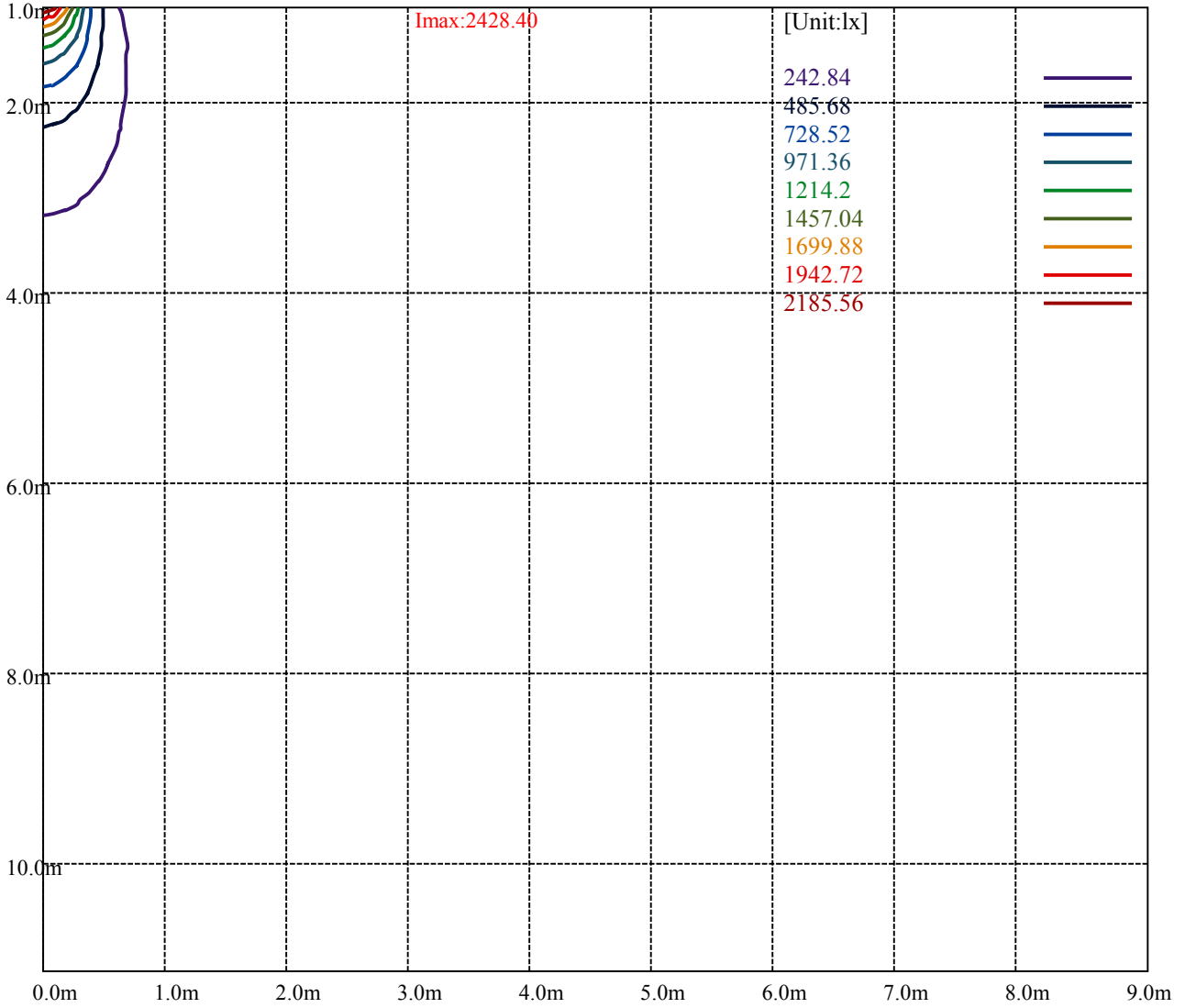
Imax:2428.40

(10%Imax) 242.84	—
(20%Imax) 485.68	—
(30%Imax) 728.52	—
(40%Imax) 971.36	—
(50%Imax) 1214.2	—
(60%Imax) 1457.04	—
(70%Imax) 1699.88	—
(80%Imax) 1942.72	—
(90%Imax) 2185.56	—



(10%Emax) 26.98222	—
(20%Emax) 53.96433	—
(30%Emax) 80.94656	—
(40%Emax) 107.9288	—
(50%Emax) 134.9111	—
(60%Emax) 161.8933	—
(70%Emax) 188.8755	—
(80%Emax) 215.8578	—
(90%Emax) 242.84	—





Luminance Table

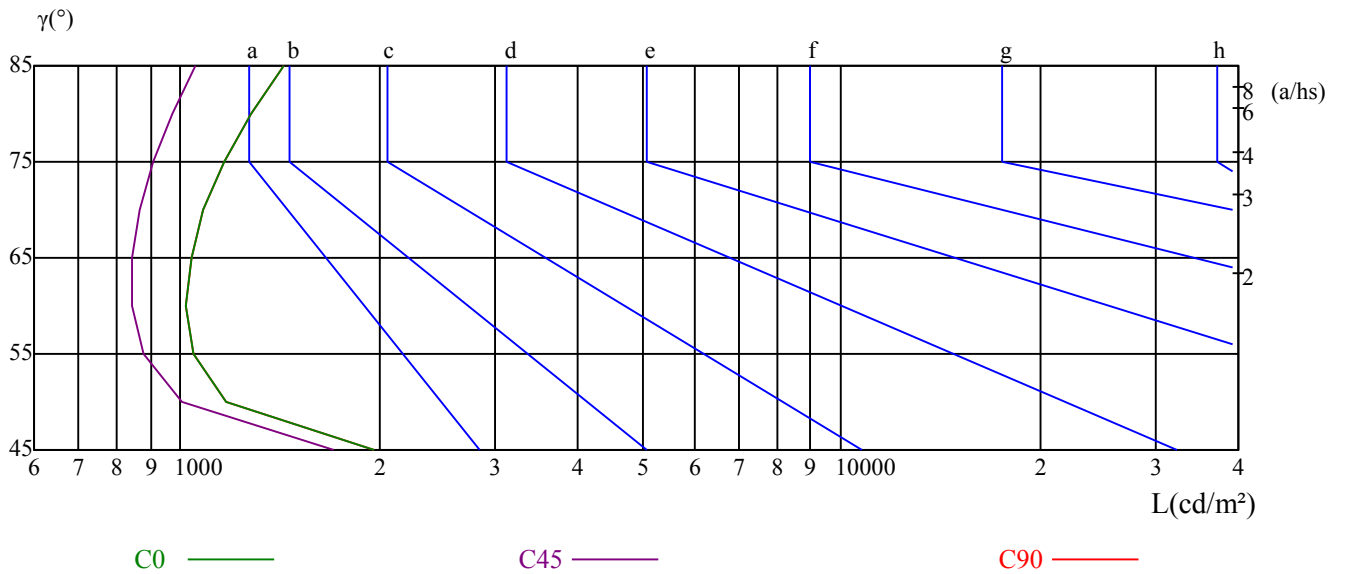
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1958	1173	1045	1021	1040	1083	1167	1283	1433
C45	1701	1004	881	847	847	864	910	974	1054
C90	1958	1173	1045	1021	1040	1083	1167	1283	1433

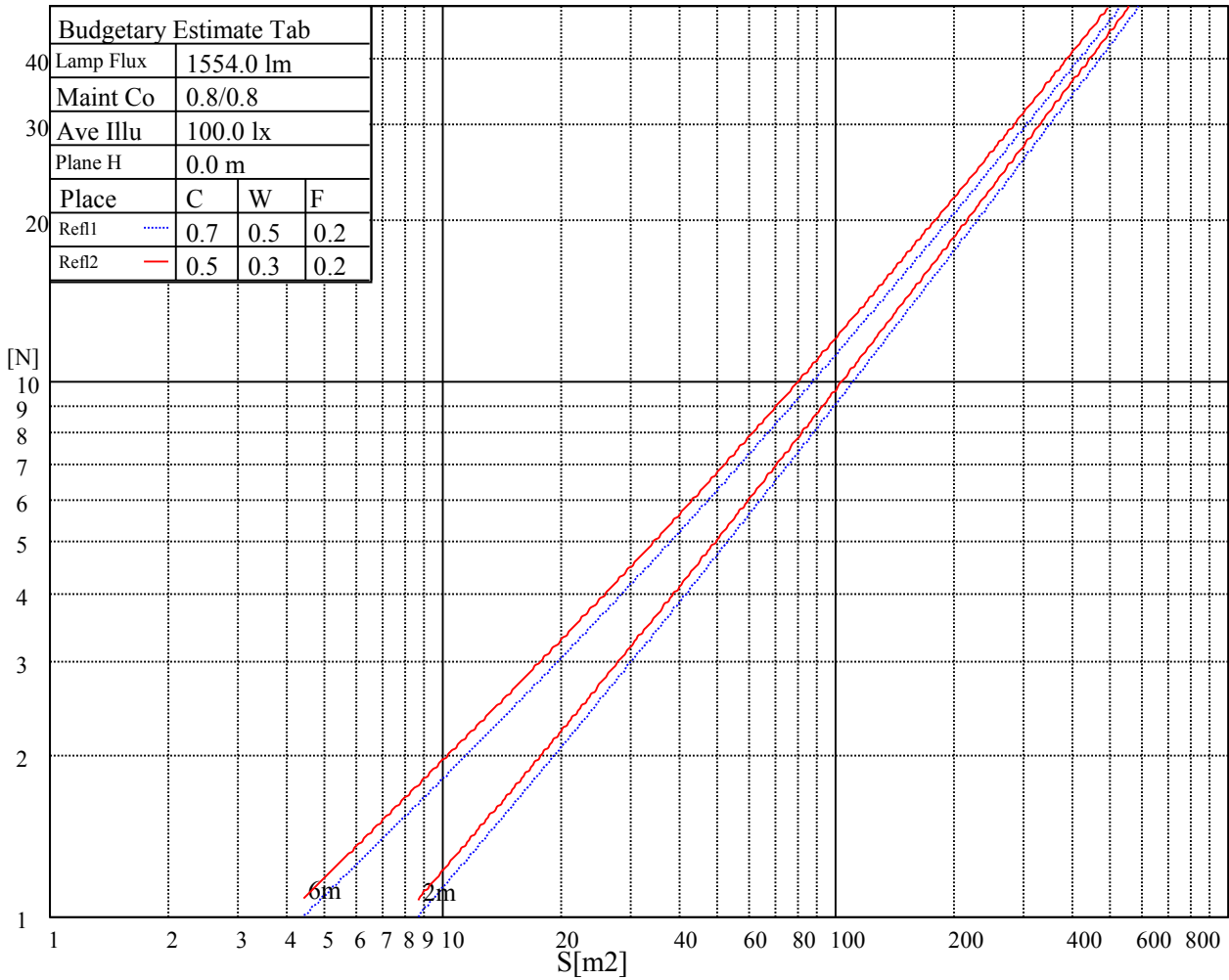
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2319	2319	2319	3664	3664	3664	10823	10823	10823

Glare Table

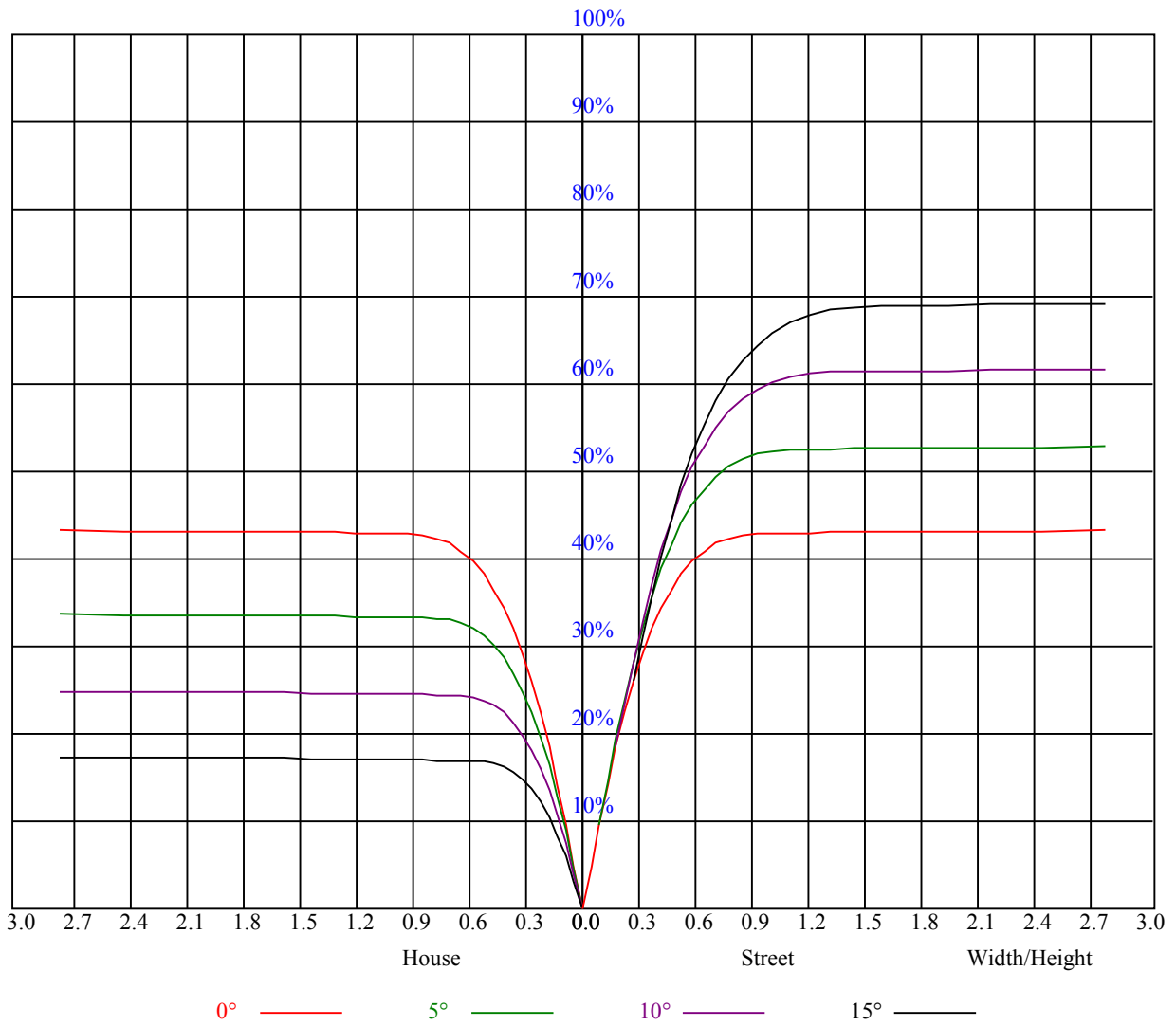
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.97	0.94	0.92	0.95	0.93	0.91	0.91	0.89	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.81
2	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.77
3	0.86	0.82	0.79	0.85	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.73
4	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.77	0.73	0.70	0.77	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.72	0.70	0.67	0.66
6	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
7	0.70	0.66	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.60
8	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.55
10	0.62	0.58	0.55	0.62	0.57	0.55	0.61	0.57	0.55	0.60	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	2426.34	2271.08	1944.04	1541.03	1119.30	784.55	618.83	368.33	37.66
45.0	2432.39	2396.61	2154.91	1756.85	1341.72	934.86	699.22	540.10	281.89
90.0	2434.04	2380.64	2076.73	1695.74	1200.78	877.43	659.69	489.40	124.54
135.0	2420.83	2404.31	2167.57	1779.97	1387.42	963.49	696.46	545.61	287.39
180.0	2426.34	2372.38	2092.14	1699.59	1209.04	899.84	662.16	490.33	144.47
225.0	2432.39	2256.21	1913.76	1486.52	1074.10	764.24	595.77	300.61	32.81
270.0	2434.04	2284.84	1977.63	1555.34	1136.91	807.68	620.49	372.73	43.66
315.0	2420.83	2243.55	1879.07	1416.05	1050.70	736.10	573.52	288.11	27.42
360.0	2426.34	2271.08	1944.04	1541.03	1119.30	784.55	618.83	368.33	37.66
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	9.86	6.88	6.11	5.73	5.51	5.34	5.34	5.34	5.29
45.0	16.85	7.82	6.22	5.78	5.56	5.40	5.34	5.34	5.34
90.0	13.16	7.16	6.06	5.78	5.51	5.40	5.34	5.34	5.29
135.0	16.96	7.87	6.33	5.84	5.56	5.45	5.34	5.34	5.34
180.0	13.38	7.38	6.28	5.73	5.51	5.34	5.29	5.34	5.29
225.0	9.36	6.61	5.95	5.62	5.45	5.34	5.34	5.34	5.34
270.0	9.91	6.72	6.11	5.67	5.56	5.34	5.34	5.29	5.29
315.0	8.53	6.66	6.00	5.67	5.45	5.34	5.34	5.29	5.29
360.0	9.86	6.88	6.11	5.73	5.51	5.34	5.34	5.34	5.29
C/ $\gamma$ (°)	90.0								
0.0	5.23								
45.0	5.34								
90.0	5.34								
135.0	5.23								
180.0	5.34								
225.0	5.29								
270.0	5.34								
315.0	5.23								
360.0	5.23								