



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

Nata

LumCAT: 2-1538-A
Luminaire: 99.02.73.181+92.76.323.00
Report No: NT2017032005
Test No: GC2017032005
LampCAT: LUMILEDS 1208
Lamp flux(lm): 2607.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 217.8000
Current(A): 0.1360
Power (W): 28.0000
PF: 0.9420
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 2340.28
Efficiency(%): 89.77%
Lumens(lm)/Power(W): 83.58
Central intensity(cd): 2472.445
Maximum intensity(cd): 2472.445
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=63.5
 [C90/270]Total=63.5
Field angle(10%Imax): [C0/180]Total=84.0
 [C90/270]Total=84.0
Maximum s/h(1/2): C0_180=0.98 C90_270=0.98
Maximum s/h(1/4): C0_180=0.94 C90_270=0.94
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.25%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.277%

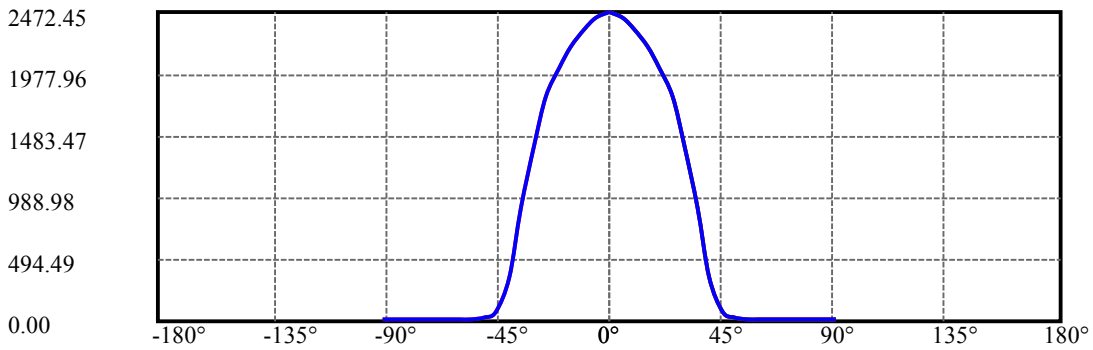
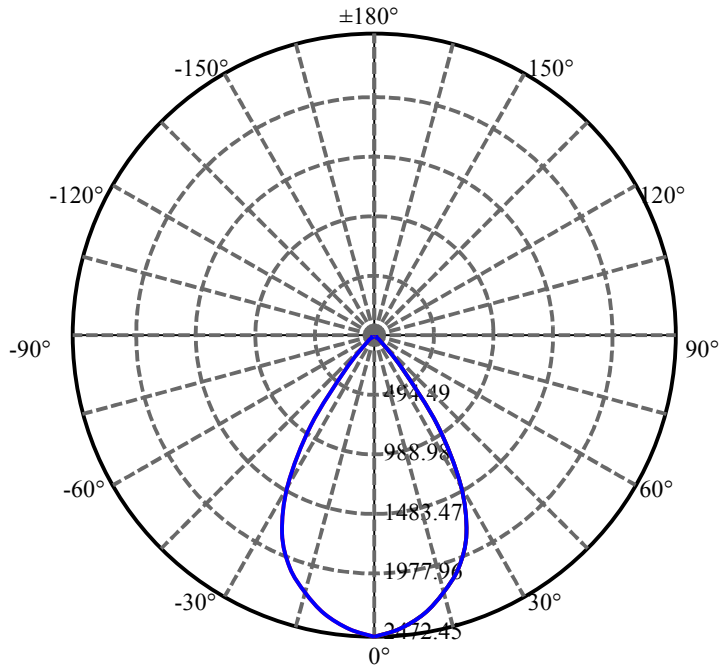
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2472.445	14.786	14.786	.567%	.632%
5.0	2420.830	115.651	130.437	4.436%	5.574%
10.0	2326.683	221.461	351.898	8.495%	15.037%
15.0	2189.799	310.663	662.561	11.917%	28.311%
20.0	2034.059	381.333	1043.894	14.627%	44.606%
25.0	1791.604	415.030	1458.924	15.920%	62.340%
30.0	1415.218	387.867	1846.791	14.878%	78.913%
35.0	907.763	285.400	2132.191	10.947%	91.108%
40.0	359.890	126.802	2258.993	4.864%	96.527%
45.0	79.825	30.939	2289.932	1.187%	97.849%
50.0	25.402	10.666	2300.599	.409%	98.304%
55.0	13.957	6.267	2306.865	.240%	98.572%
60.0	11.438	5.430	2312.295	.208%	98.804%
65.0	10.536	5.234	2317.529	.201%	99.028%
70.0	10.055	5.179	2322.708	.199%	99.249%
75.0	9.704	5.138	2327.846	.197%	99.469%
80.0	9.332	5.038	2332.883	.193%	99.684%
85.0	9.077	4.957	2337.84	.190%	99.896%
90.0	8.905	2.441	2340.281	.094%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1846.79	70.84%	78.91%
0-40	2258.99	86.65%	96.53%
0-60	2312.29	88.70%	98.80%
0-90	2337.84	89.68%	99.90%
0-120	2337.84	89.68%	99.90%
0-180	2340.28	89.77%	100.00%
60-90	30.97	1.19%	1.32%
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%
0-30.45	1872.23	71.82%	80.00%

ZONAL LUMEN SUMMARY

0-10	351.90
10-20	692.00
20-30	802.90
30-40	412.20
40-50	41.61
50-60	11.70
60-70	10.41
70-80	10.18
80-90	4.96
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: —————

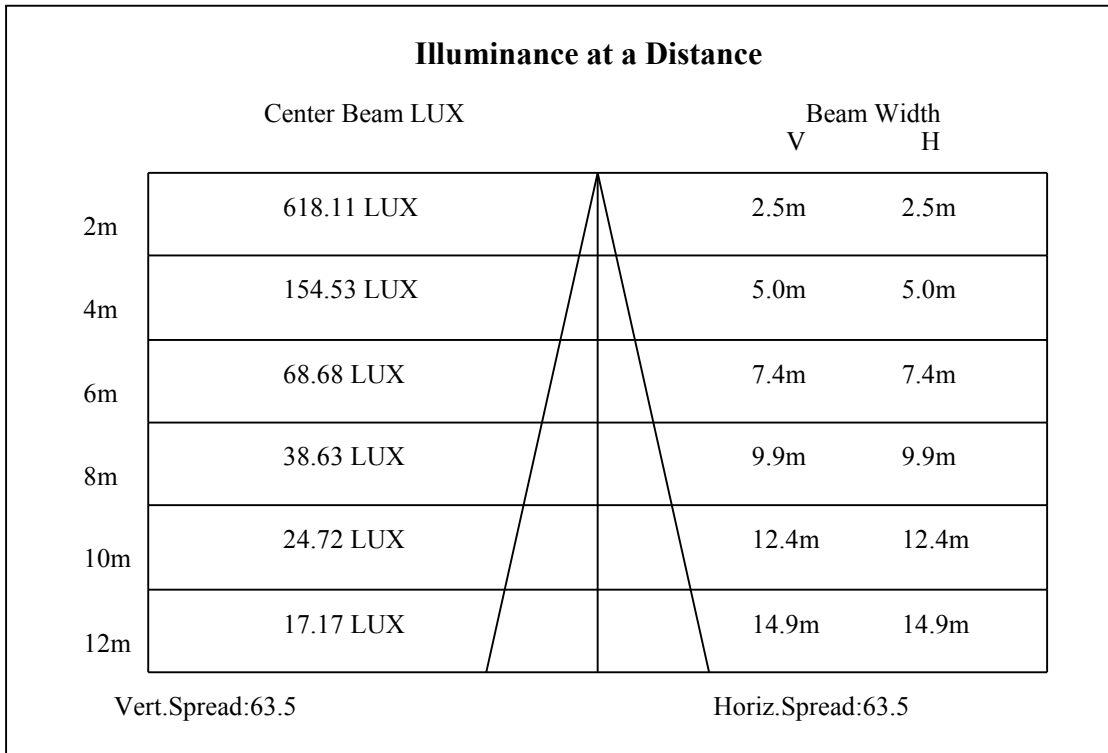
C90/C270: —————

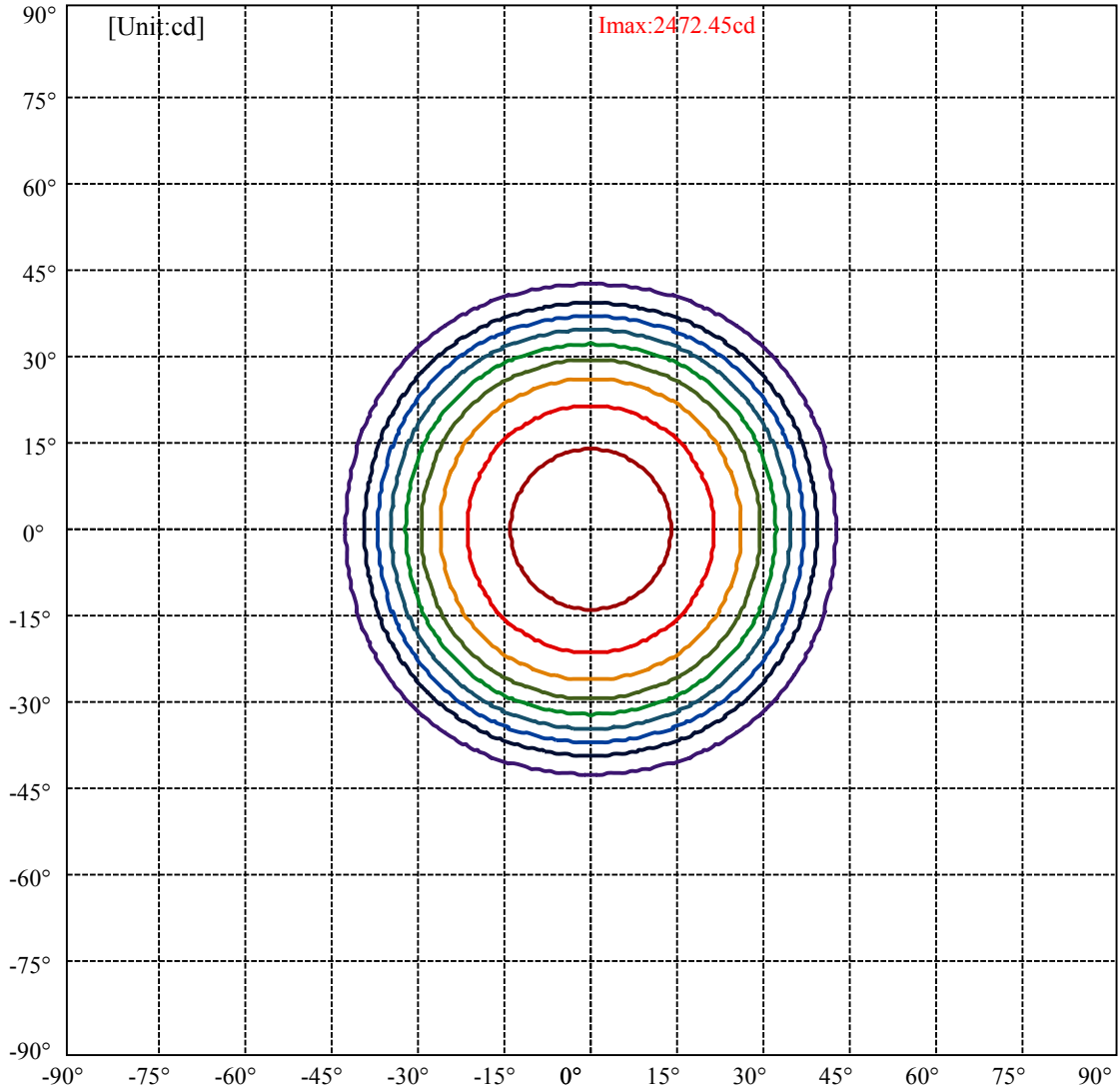
Field angle(10%Imax):C0/180Left:42.0 Right:42.0

:C90/270Left:42.0 Right:42.0

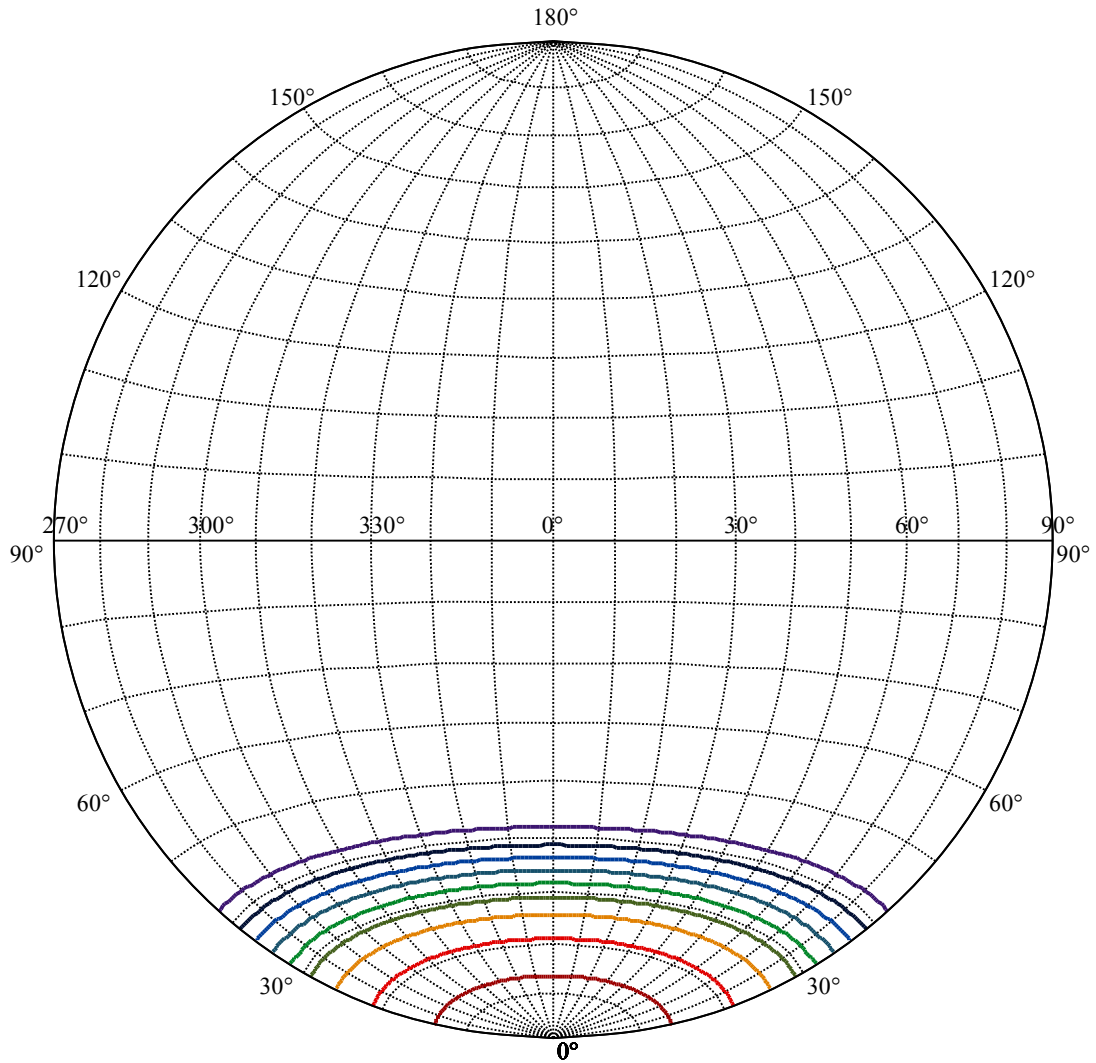
Beam Angle(50%Imax):C0/180Left:31.8 Right:31.8

:C90/270Left:31.8 Right:31.8





(10%Imax) 247.245	—
(20%Imax) 494.489	—
(30%Imax) 741.734	—
(40%Imax) 988.978	—
(50%Imax) 1236.22	—
(60%Imax) 1483.47	—
(70%Imax) 1730.71	—
(80%Imax) 1977.96	—
(90%Imax) 2225.2	—












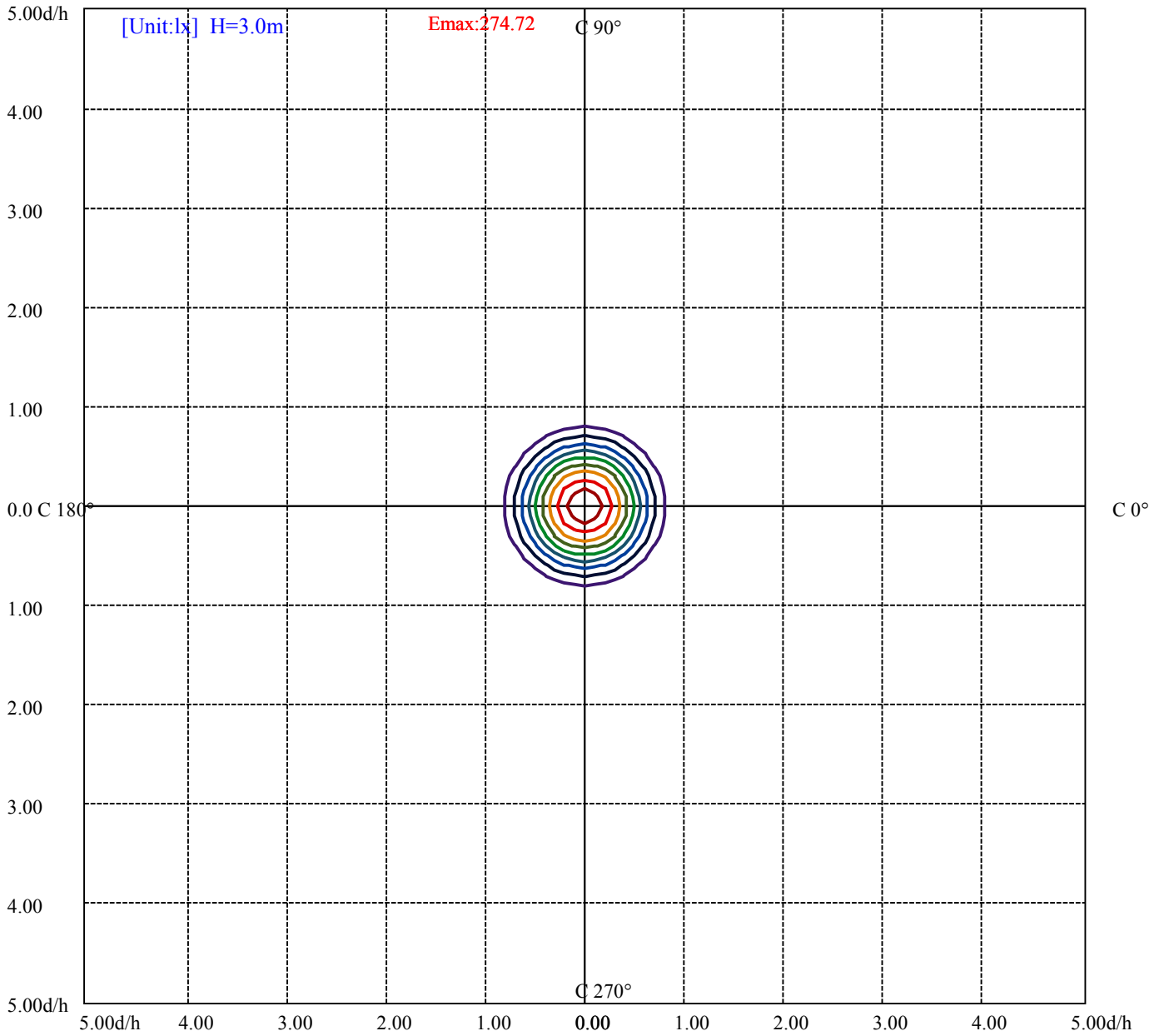
House

[Unit:cd]

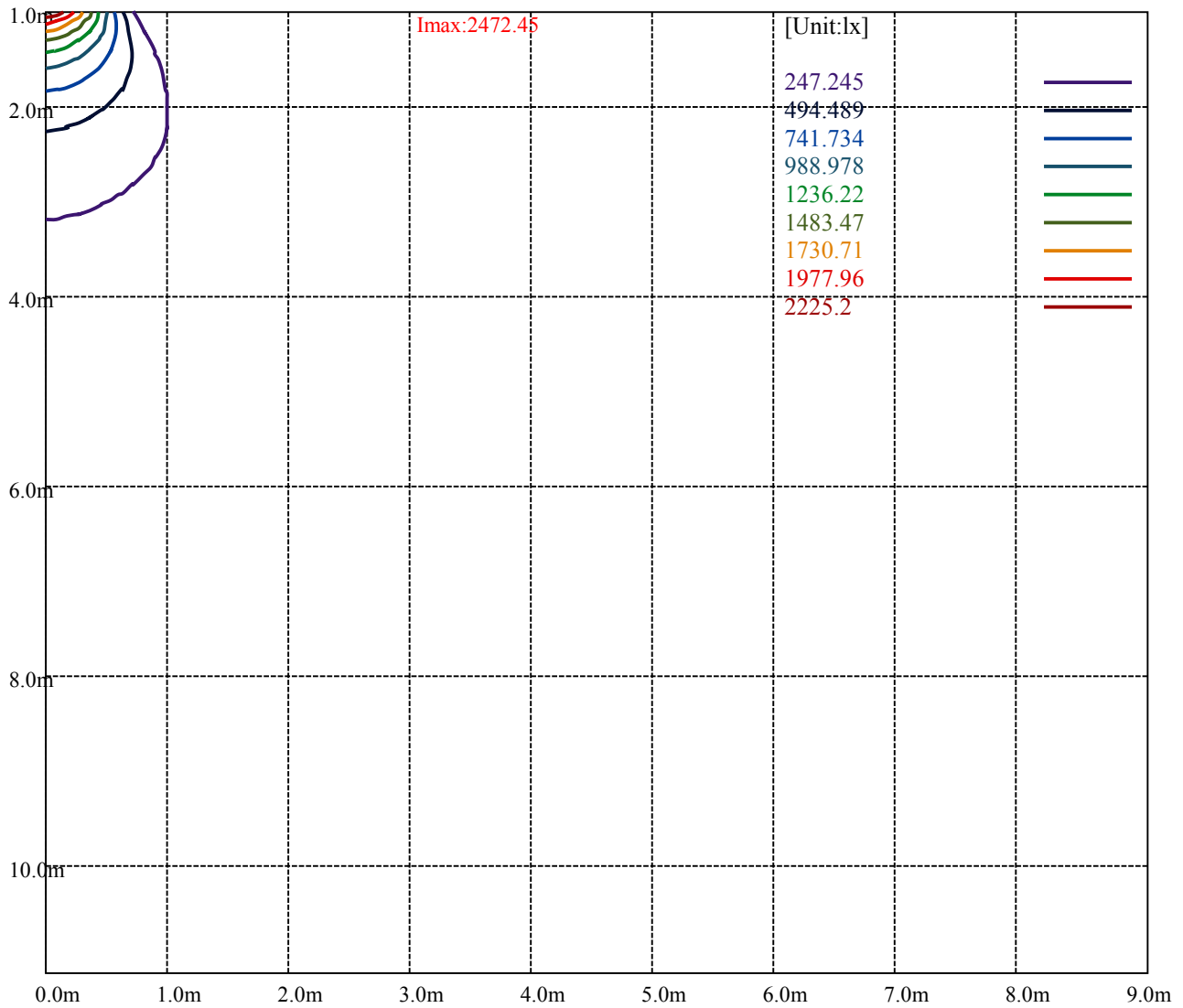
Road

Imax:2472.45

(10%Imax) 247.245	
(20%Imax) 494.489	
(30%Imax) 741.734	
(40%Imax) 988.978	
(50%Imax) 1236.22	
(60%Imax) 1483.47	
(70%Imax) 1730.71	
(80%Imax) 1977.96	
(90%Imax) 2225.2	



- (10%Emax) 27.47156
- (20%Emax) 54.94322
- (30%Emax) 82.41477
- (40%Emax) 109.8863
- (50%Emax) 137.3578
- (60%Emax) 164.83
- (70%Emax) 192.3011
- (80%Emax) 219.7722
- (90%Emax) 247.2444



Luminance Table

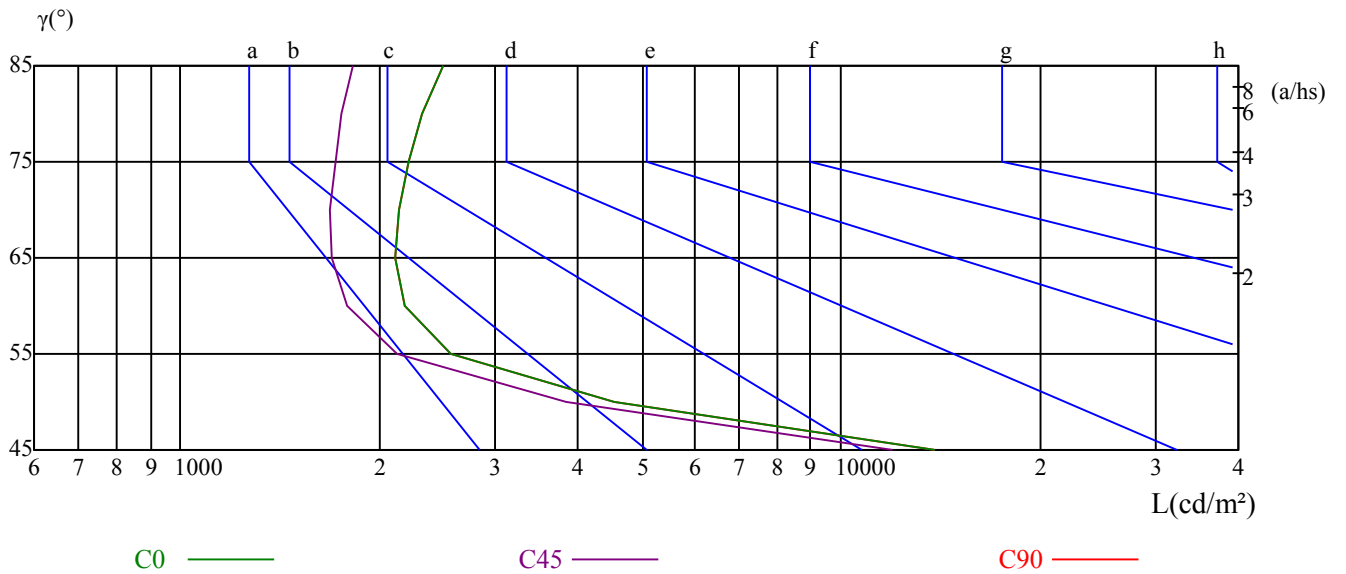
γ	45	50	55	60	65	70	75	80	85
C0	13903	4523	2562	2183	2112	2139	2216	2320	2497
C45	11941	3827	2134	1789	1700	1688	1712	1749	1829
C90	13903	4523	2562	2183	2112	2139	2216	2320	2497

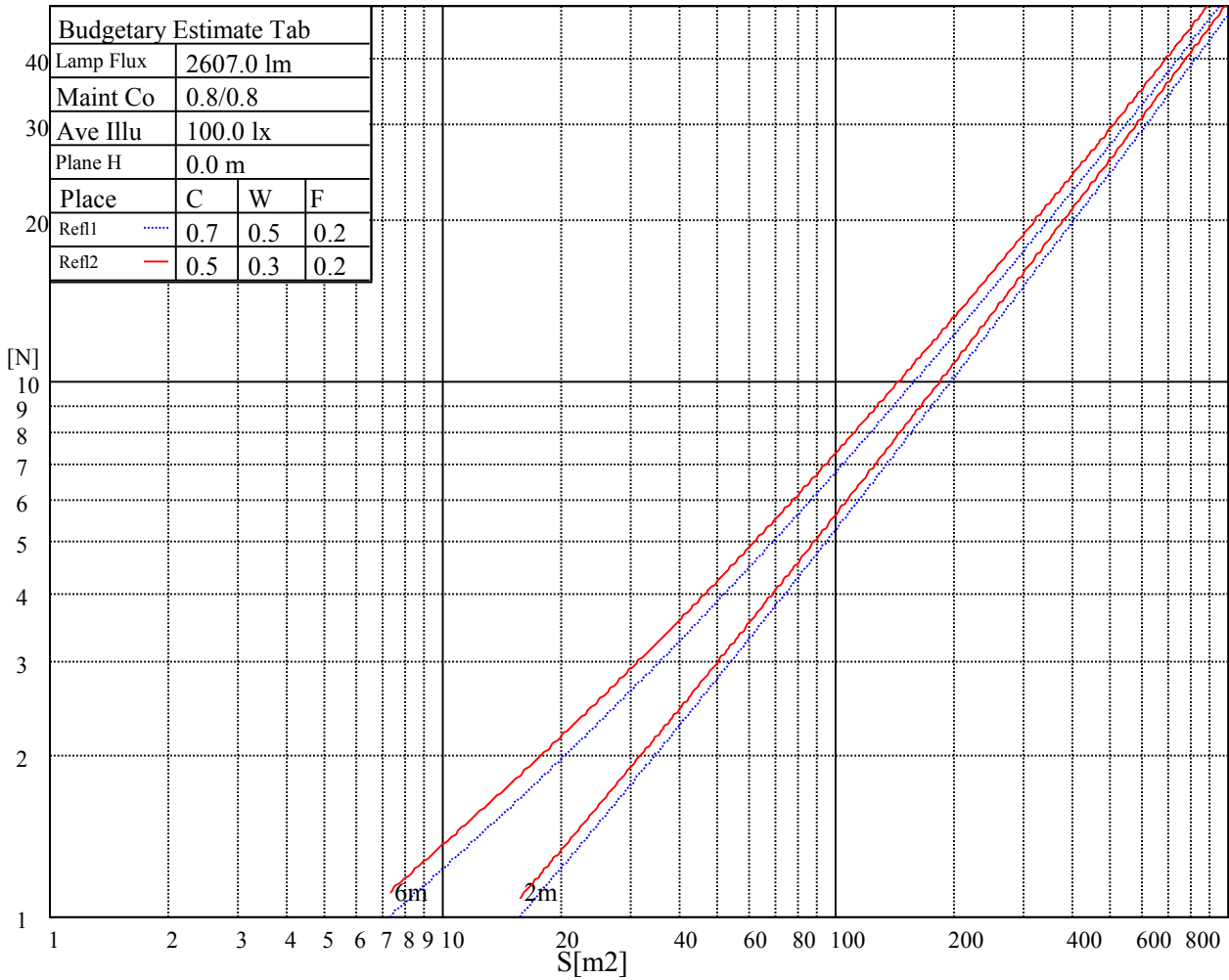
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5088	5088	5088	7651	7651	7651	21255	21255	21255

Glare Table

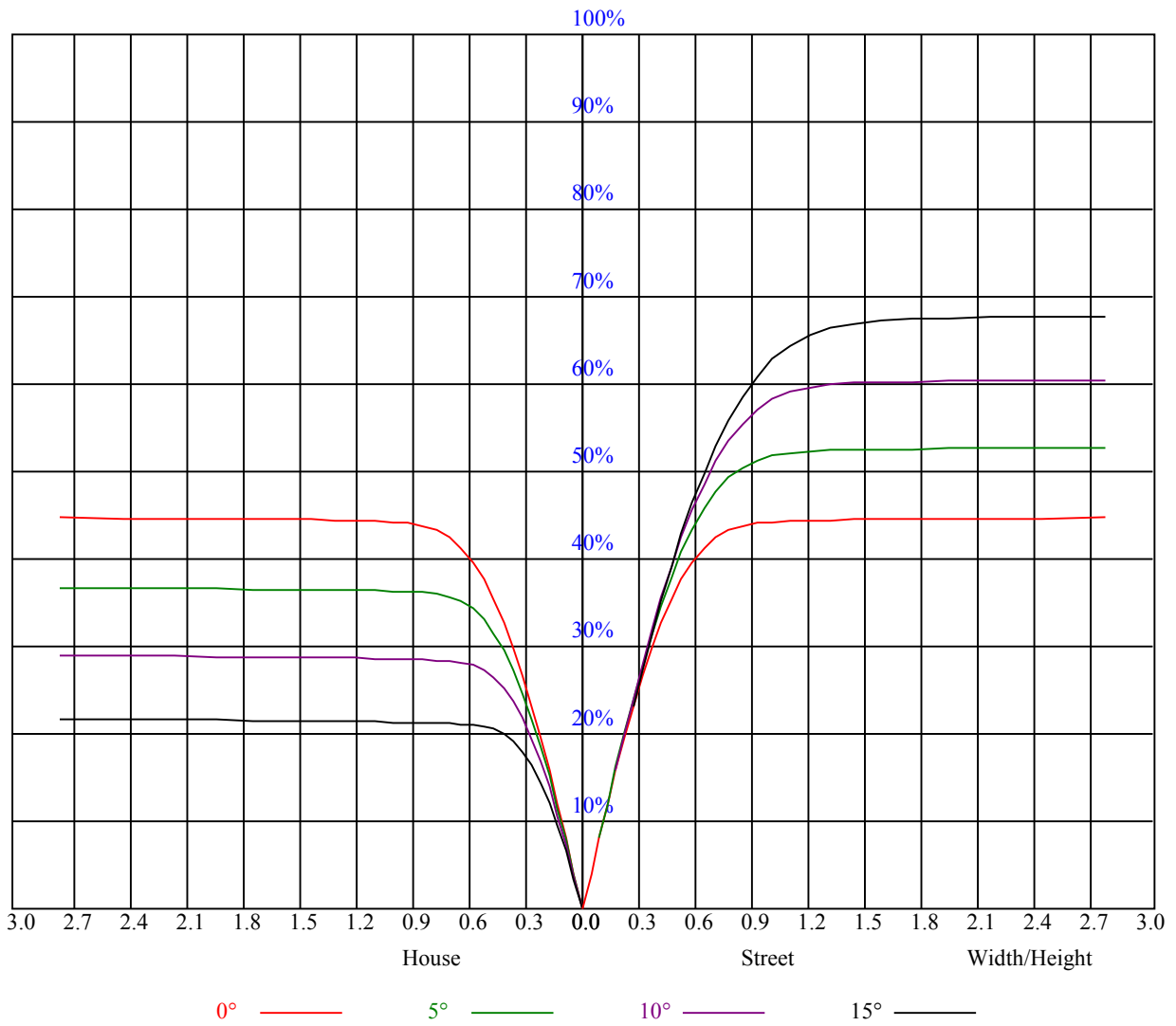
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.99	0.97	0.95	0.98	0.95	0.93	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.83	0.86	0.84	0.82	0.83	0.82	0.80	0.79
3	0.87	0.83	0.79	0.86	0.82	0.79	0.84	0.80	0.77	0.81	0.79	0.76	0.79	0.77	0.75	0.74
4	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.69
5	0.77	0.72	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.66	0.65
6	0.73	0.68	0.64	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.61
7	0.69	0.64	0.60	0.69	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.58
8	0.66	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.55
9	0.62	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.59	0.56	0.53	0.52
10	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.57	0.53	0.50	0.49



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	2470.38	2393.30	2278.23	2131.23	1971.57	1730.42	1391.83	827.50	294.55
45.0	2482.49	2427.99	2329.99	2181.89	2022.77	1780.52	1452.39	932.10	360.07
90.0	2473.68	2434.04	2343.75	2213.27	2048.10	1805.85	1470.01	973.40	398.66
135.0	2463.22	2461.57	2392.75	2290.90	2153.26	1938.54	1609.30	1188.67	599.01
180.0	2470.38	2439.00	2359.17	2246.30	2102.05	1866.41	1494.23	984.74	428.67
225.0	2482.49	2431.84	2339.35	2202.81	2040.39	1800.89	1421.56	864.55	333.26
270.0	2473.68	2408.17	2315.67	2169.22	2002.40	1768.41	1394.03	836.31	299.51
315.0	2463.22	2370.73	2254.56	2082.78	1931.93	1641.78	1088.41	654.84	165.39
360.0	2470.38	2393.30	2278.23	2131.23	1971.57	1730.42	1391.83	827.50	294.55
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	66.89	24.61	13.98	11.34	10.52	10.08	9.63	9.36	9.08
45.0	84.02	27.31	14.70	11.73	10.68	10.13	9.74	9.36	9.08
90.0	97.06	29.90	15.03	11.84	10.74	10.08	9.63	9.30	9.08
135.0	115.51	35.07	14.81	11.78	10.74	10.24	9.74	9.36	9.08
180.0	91.12	24.33	13.76	11.34	10.46	10.08	9.63	9.30	9.08
225.0	73.28	21.53	13.05	11.29	10.46	9.97	9.58	9.25	9.03
270.0	62.49	21.31	13.82	11.29	10.41	9.97	9.58	9.25	8.97
315.0	48.23	19.16	12.50	10.90	10.30	9.91	10.08	9.47	9.19
360.0	66.89	24.61	13.98	11.34	10.52	10.08	9.63	9.36	9.08
C/γ(°)	90.0								
0.0	8.97								
45.0	8.92								
90.0	8.92								
135.0	8.86								
180.0	8.92								
225.0	8.86								
270.0	8.86								
315.0	8.92								
360.0	8.97								