



NATA LIGHTING CO.,LTD
www.nata.cn
Email:info@nata.cn
Tel:+86 0750-377 0000(10 lines) Fax:+86 0750-377 1111
Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 4-2267-M
Luminaire: 92.70.131.00
Report No: GC2017061703
Test No: NT-0010
LampCAT: CITIZEN CLU038
Lamp flux(lm): 2240.0
Number of Lamps: 1
Length(mm): 100
Phm Type: C

Voltage(V): 35.8000
Current(A): 0.5000
Power (W): 17.9000
PF: 0.0000
Ballast type: DC
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 2046.35
Efficiency(%): 91.35%
Lumens(lm)/Power(W): 114.32
Central intensity(cd): 4643.457
Maximum intensity(cd): 4643.457
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.8
 [C90/270]Total=34.8
Field angle(10%Imax): [C0/180]Total=69.3
 [C90/270]Total=69.3
Maximum s/h(1/2): C0_180=0.57 C90_270=0.57
Maximum s/h(1/4): C0_180=0.60 C90_270=0.60
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.35%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.738%

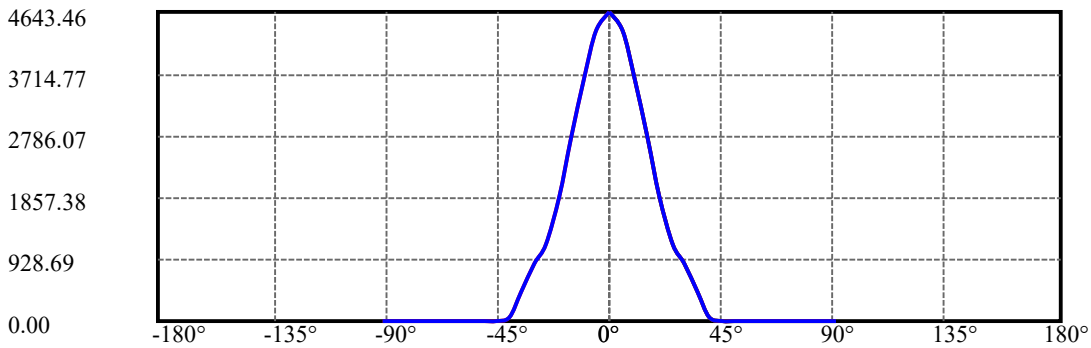
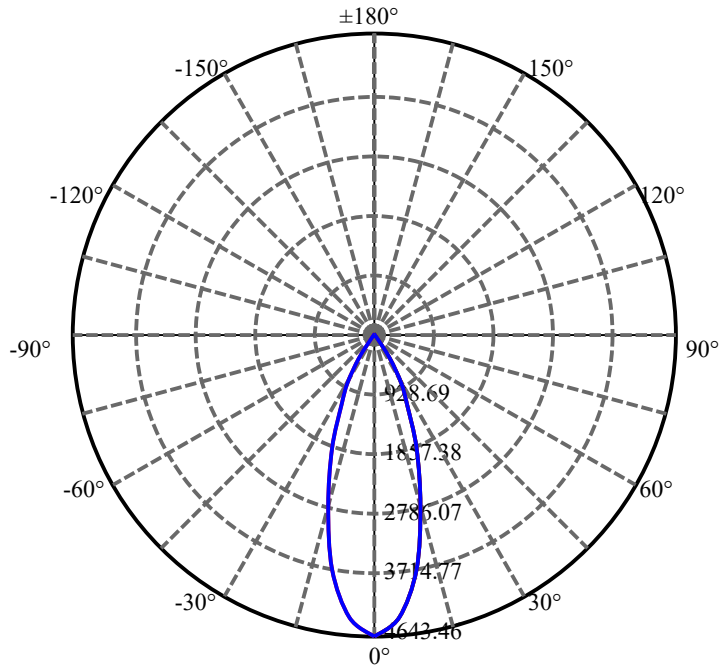
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4643.457	0.000	0	.000%	.000%
5.0	4356.819	107.596	107.596	4.803%	5.258%
10.0	3663.178	286.901	394.496	12.808%	19.278%
15.0	2740.432	379.858	774.354	16.958%	37.841%
20.0	1872.675	380.185	1154.539	16.973%	56.419%
25.0	1160.210	318.094	1472.633	14.201%	71.964%
30.0	856.712	255.243	1727.876	11.395%	84.437%
35.0	433.266	189.958	1917.834	8.480%	93.720%
40.0	46.894	80.111	1997.945	3.576%	97.635%
45.0	10.674	10.659	2008.605	.476%	98.156%
50.0	9.366	4.049	2012.654	.181%	98.353%
55.0	8.692	3.927	2016.581	.175%	98.545%
60.0	8.362	3.942	2020.523	.176%	98.738%
65.0	8.238	4.035	2024.558	.180%	98.935%
70.0	8.224	4.168	2028.726	.186%	99.139%
75.0	8.183	4.288	2033.015	.191%	99.348%
80.0	8.197	4.383	2037.397	.196%	99.563%
85.0	8.203	4.456	2041.854	.199%	99.780%
90.0	8.210	4.494	2046.348	.201%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1727.88	77.14%	84.44%
0-40	1997.95	89.19%	97.63%
0-60	2020.52	90.20%	98.74%
0-90	2041.85	91.15%	99.78%
0-120	2041.85	91.15%	99.78%
0-180	2046.35	91.35%	100.00%
60-90	25.27	1.13%	1.24%
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%
0-28.22	1637.08	73.08%	80.00%

ZONAL LUMEN SUMMARY

0-10	394.50
10-20	760.04
20-30	573.34
30-40	270.07
40-50	14.71
50-60	7.87
60-70	8.20
70-80	8.67
80-90	4.46
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: —————

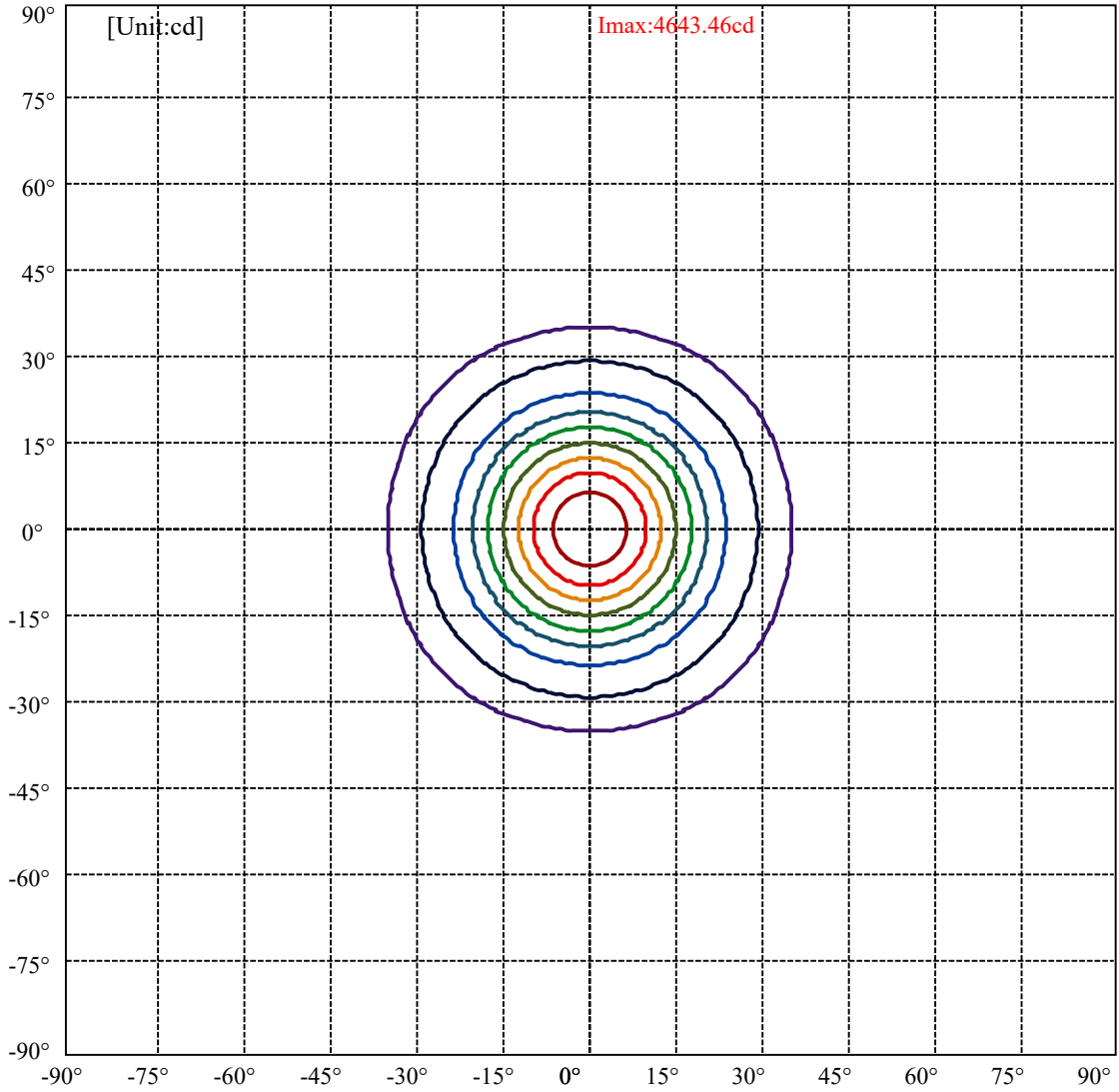
C90/C270: —————

Field angle(10%Imax):C0/180Left:34.6 Right:34.6

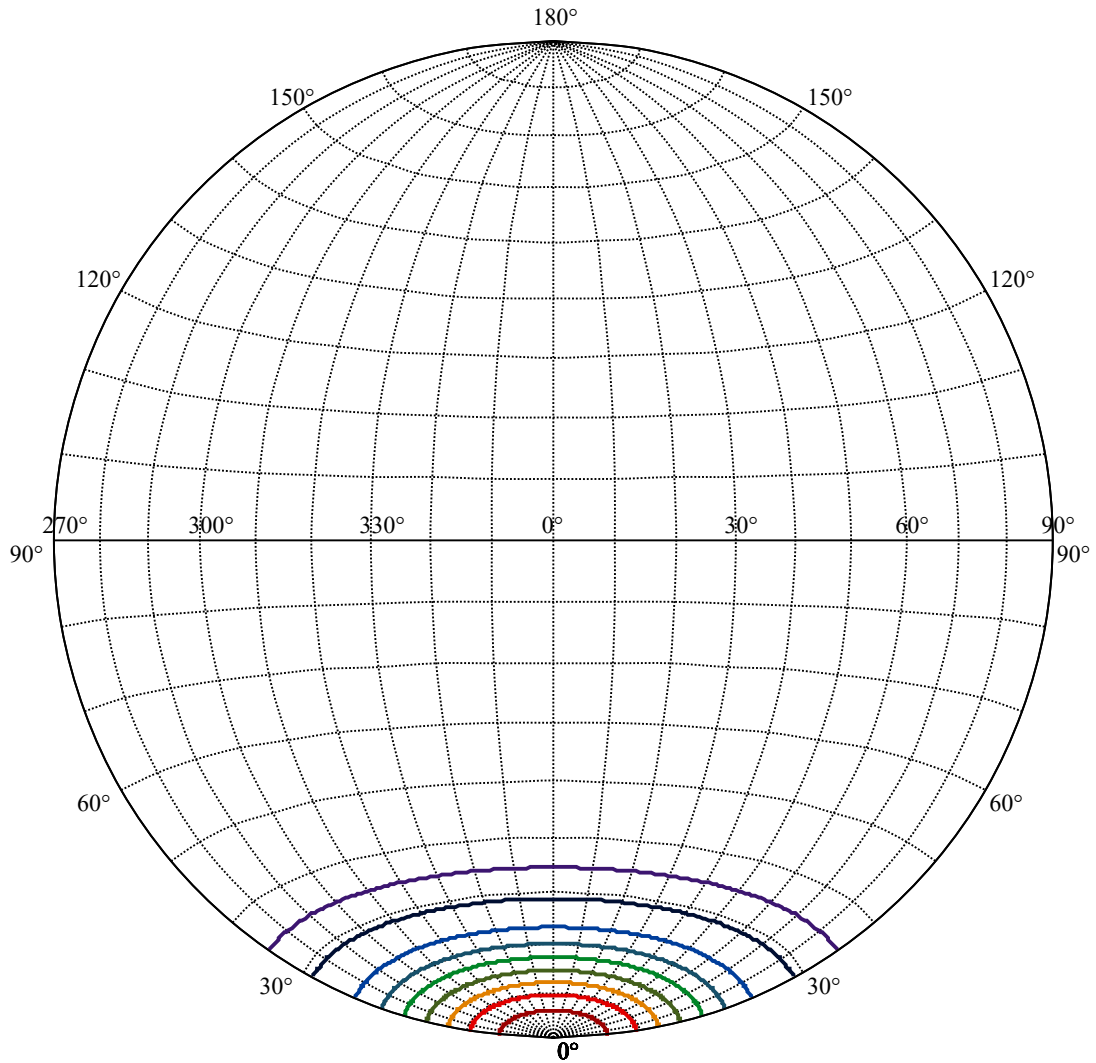
:C90/270Left:34.6 Right:34.6

Beam Angle(50%Imax):C0/180Left:17.4 Right:17.4

:C90/270Left:17.4 Right:17.4



(10%Imax) 464.346	—
(20%Imax) 928.691	—
(30%Imax) 1393.04	—
(40%Imax) 1857.38	—
(50%Imax) 2321.73	—
(60%Imax) 2786.07	—
(70%Imax) 3250.42	—
(80%Imax) 3714.77	—
(90%Imax) 4179.11	—



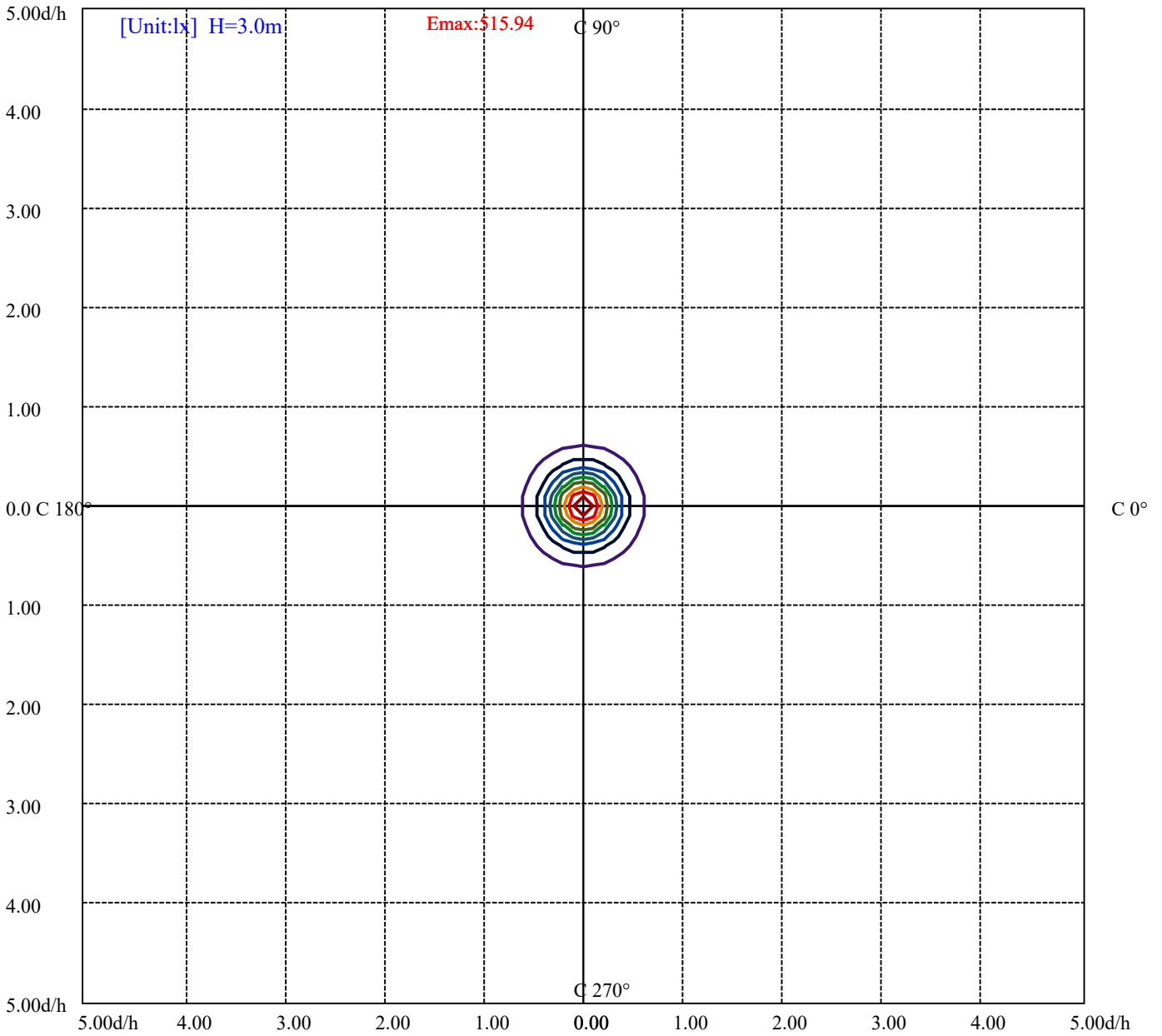
House

[Unit:cd]

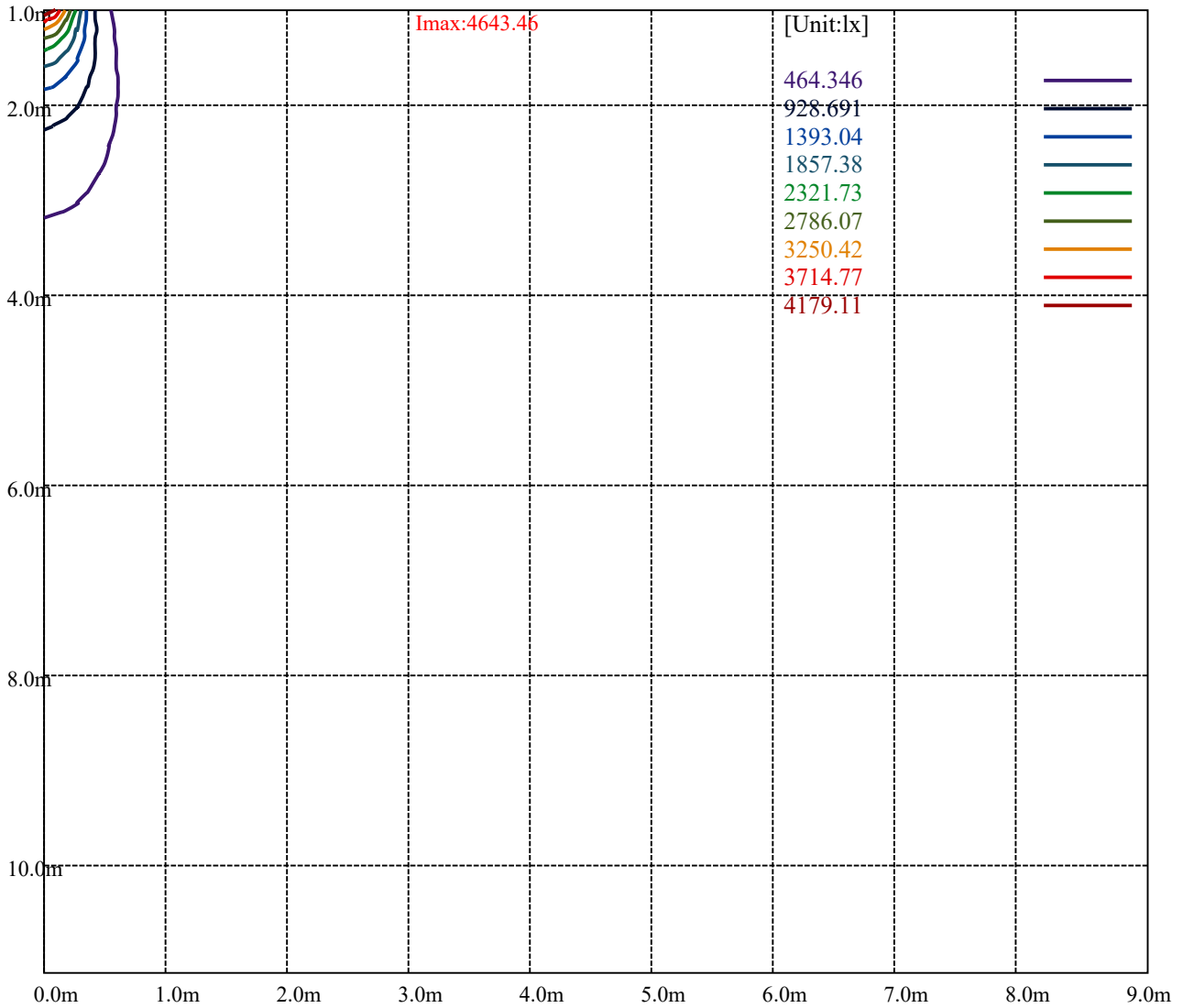
Road

Imax:4643.46

(10%Imax)	464.346	—
(20%Imax)	928.691	—
(30%Imax)	1393.04	—
(40%Imax)	1857.38	—
(50%Imax)	2321.73	—
(60%Imax)	2786.07	—
(70%Imax)	3250.42	—
(80%Imax)	3714.77	—
(90%Imax)	4179.11	—



- (10%Emax) 51.59389
- (20%Emax) 103.1878
- (30%Emax) 154.7811
- (40%Emax) 206.3755
- (50%Emax) 257.9689
- (60%Emax) 309.5634
- (70%Emax) 361.1566
- (80%Emax) 412.7511
- (90%Emax) 464.3445



Luminance Table

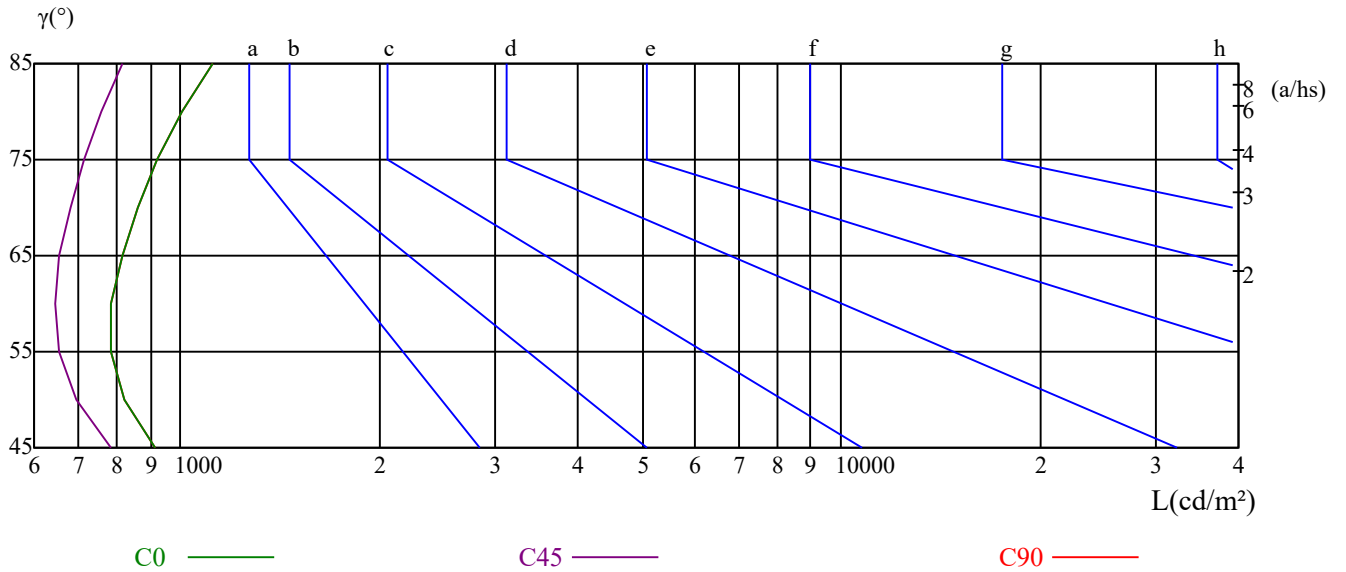
γ	45	50	55	60	65	70	75	80	85
C0	915	821	786	787	814	863	923	1007	1117
C45	787	695	655	645	656	682	714	760	818
C90	915	821	786	787	814	863	923	1007	1117

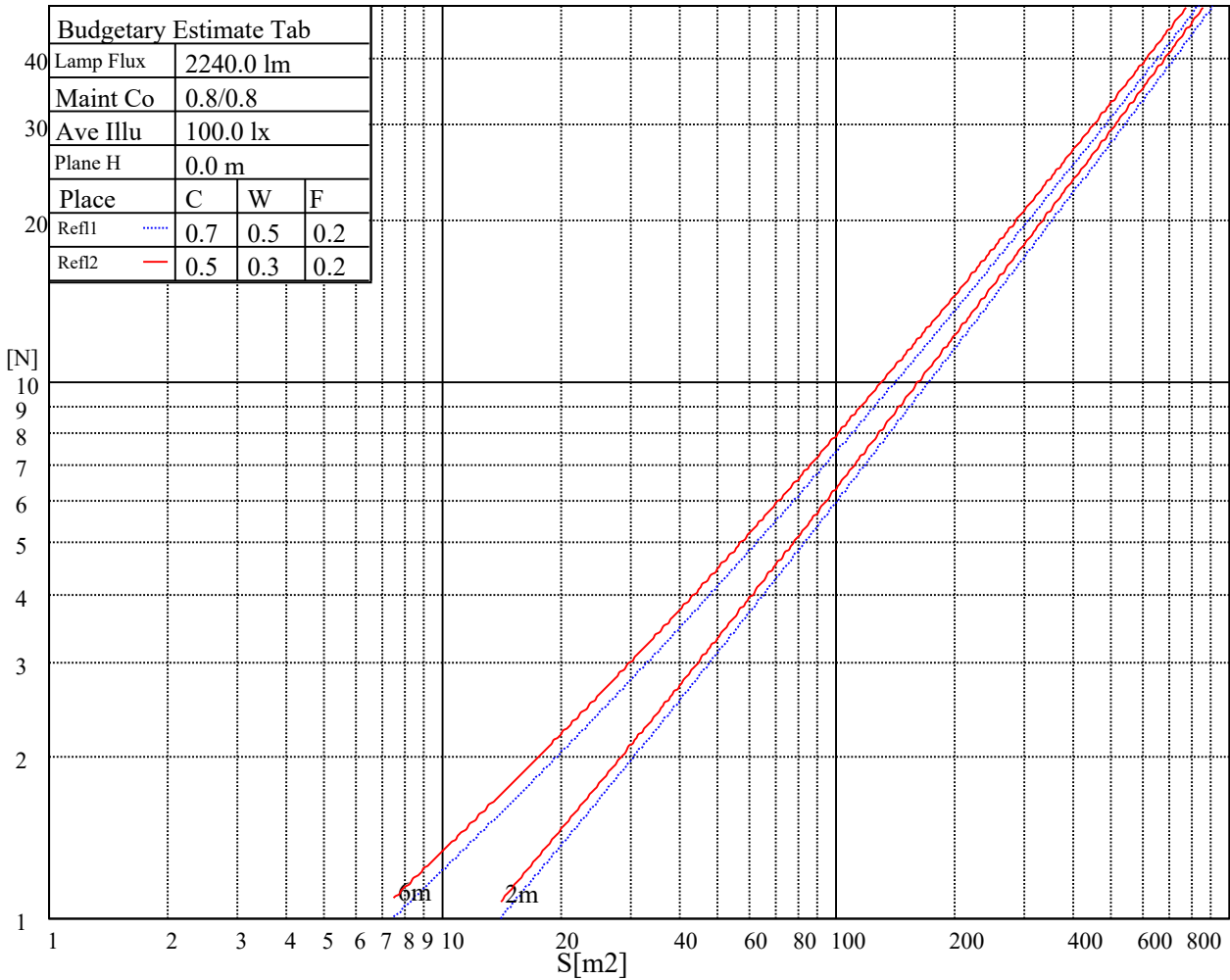
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1949	1949	1949	3162	3162	3162	9412	9412	9412

Glare Table

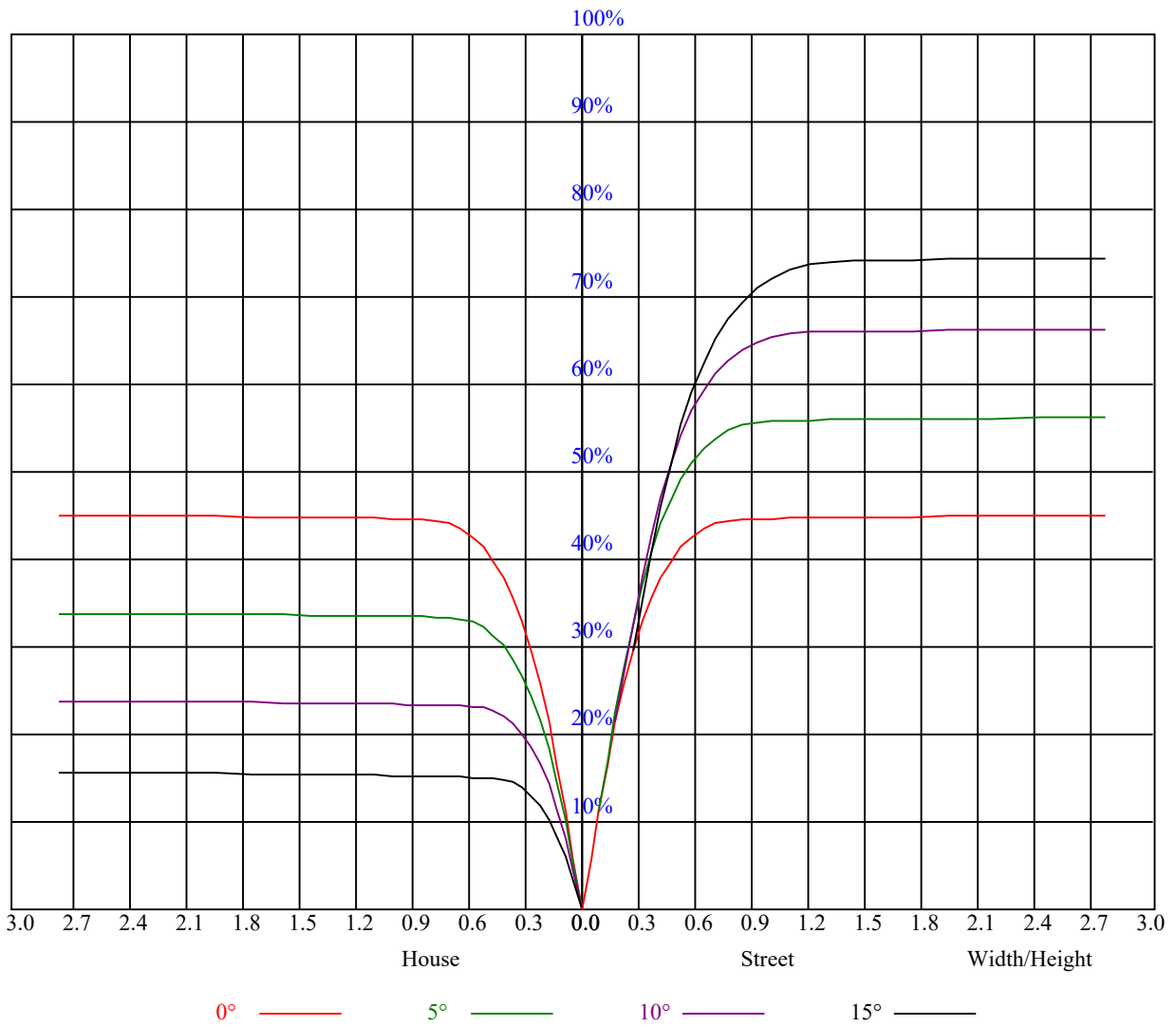
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	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	0.91
1	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.96	0.92	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.90	0.86	0.83	0.89	0.86	0.83	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.77
4	0.86	0.81	0.78	0.85	0.81	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.81	0.77	0.73	0.81	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.77	0.73	0.69	0.77	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
7	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.63
8	0.71	0.66	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.58
10	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



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	4637.95	4373.13	3701.44	2770.99	1931.93	1227.21	878.15	452.01	37.11
45.0	4642.36	4386.34	3699.79	2760.53	1912.11	1194.17	861.08	432.74	36.23
90.0	4639.05	4278.98	3482.87	2530.39	1697.94	1091.88	769.19	333.04	22.13
135.0	4654.47	4351.11	3758.15	2775.94	1877.97	1184.81	864.39	432.19	30.89
180.0	4637.95	4325.78	3583.07	2753.92	1815.76	1088.24	848.75	416.50	28.13
225.0	4642.36	4332.94	3605.09	2610.22	1837.23	1098.54	840.11	421.29	28.13
270.0	4639.05	4457.37	3829.17	3010.48	2071.77	1308.14	929.90	557.17	158.78
315.0	4654.47	4348.91	3645.83	2710.98	1836.68	1088.69	862.13	421.18	33.75
360.0	4637.95	4373.13	3701.44	2770.99	1931.93	1227.21	878.15	452.01	37.11
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.85	9.41	8.70	8.42	8.26	8.26	8.26	8.20	8.20
45.0	10.46	9.36	8.70	8.37	8.20	8.20	8.15	8.15	8.15
90.0	10.13	9.19	8.59	8.37	8.20	8.20	8.15	8.20	8.15
135.0	10.52	9.41	8.75	8.42	8.26	8.31	8.20	8.26	8.26
180.0	10.30	9.25	8.64	8.31	8.26	8.26	8.15	8.20	8.20
225.0	10.30	9.25	8.59	8.26	8.20	8.15	8.15	8.15	8.15
270.0	12.17	9.63	8.86	8.37	8.26	8.20	8.15	8.15	8.26
315.0	10.68	9.41	8.70	8.37	8.26	8.20	8.26	8.26	8.26
360.0	10.85	9.41	8.70	8.42	8.26	8.26	8.26	8.20	8.20
C/γ(°)	90.0								
0.0	8.26								
45.0	8.15								
90.0	8.20								
135.0	8.20								
180.0	8.20								
225.0	8.09								
270.0	8.37								
315.0	8.20								
360.0	8.26								