



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: 1689-M	
Luminaire: 92.70.125.00	
Report No: NATA0100	Voltage(V): 38.4000
Test No: GC2018070607	Current(A): 0.2000
LampCAT: NICHIA NTCWT012B-V3	Power (W): 7.6800
Lamp flux(lm): 741.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 46	Width(mm): 46
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 674.66
Efficiency(%): 91.05%
Lumens(lm)/Power(W): 88.26
Central intensity(cd): 642.150
Maximum intensity(cd): 642.150
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=65.6
 [C90/270]Total=65.6
Field angle(10%Imax): [C0/180]Total=92.1
 [C90/270]Total=92.1
Maximum s/h(1/2): C0_180=0.90 C90_270=0.90
Maximum s/h(1/4): C0_180=1.00 C90_270=1.00
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.48%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.295%

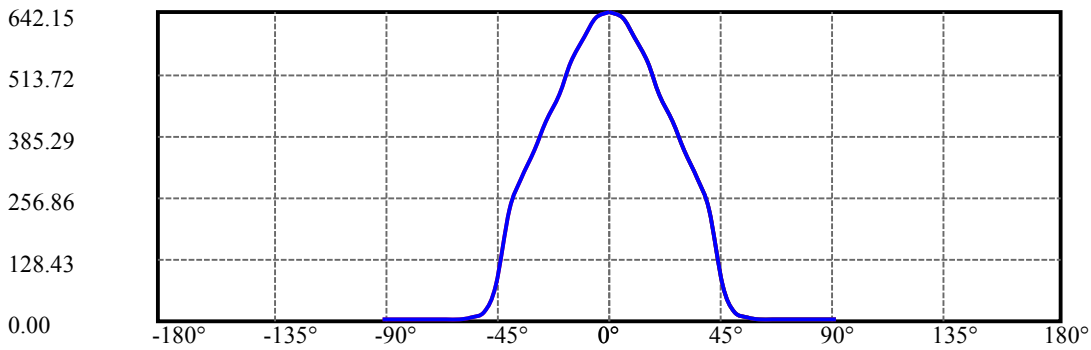
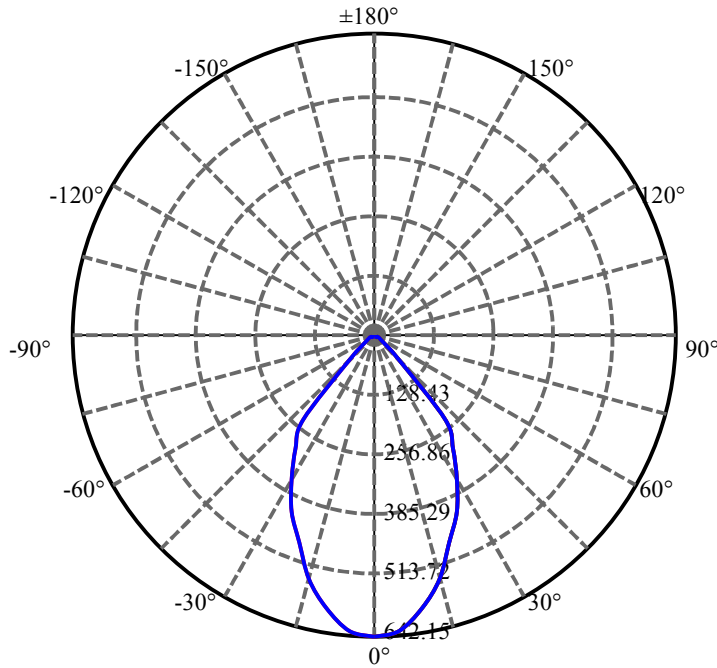
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	642.150	3.840	3.84	.518%	.569%
5.0	631.690	30.178	34.018	4.073%	5.042%
10.0	591.774	56.327	90.345	7.601%	13.391%
15.0	537.096	76.197	166.542	10.283%	24.685%
20.0	471.806	88.451	254.993	11.937%	37.796%
25.0	413.095	95.695	350.688	12.914%	51.980%
30.0	354.137	97.058	447.746	13.098%	66.366%
35.0	294.910	92.719	540.465	12.513%	80.110%
40.0	232.572	81.943	622.408	11.058%	92.255%
45.0	76.294	29.571	651.979	3.991%	96.639%
50.0	19.201	8.062	660.042	1.088%	97.834%
55.0	8.561	3.844	663.886	.519%	98.403%
60.0	5.079	2.411	666.297	.325%	98.761%
65.0	3.620	1.798	668.095	.243%	99.027%
70.0	3.035	1.563	669.658	.211%	99.259%
75.0	2.746	1.454	671.112	.196%	99.475%
80.0	2.650	1.430	672.543	.193%	99.687%
85.0	2.588	1.413	673.956	.191%	99.896%
90.0	2.560	0.702	674.657	.095%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	447.75	60.42%	66.37%
0-40	622.41	84.00%	92.26%
0-60	666.30	89.92%	98.76%
0-90	673.96	90.95%	99.90%
0-120	673.96	90.95%	99.90%
0-180	674.66	91.05%	100.00%
60-90	10.07	1.36%	1.49%
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%
0-34.96	539.73	72.84%	80.00%

ZONAL LUMEN SUMMARY

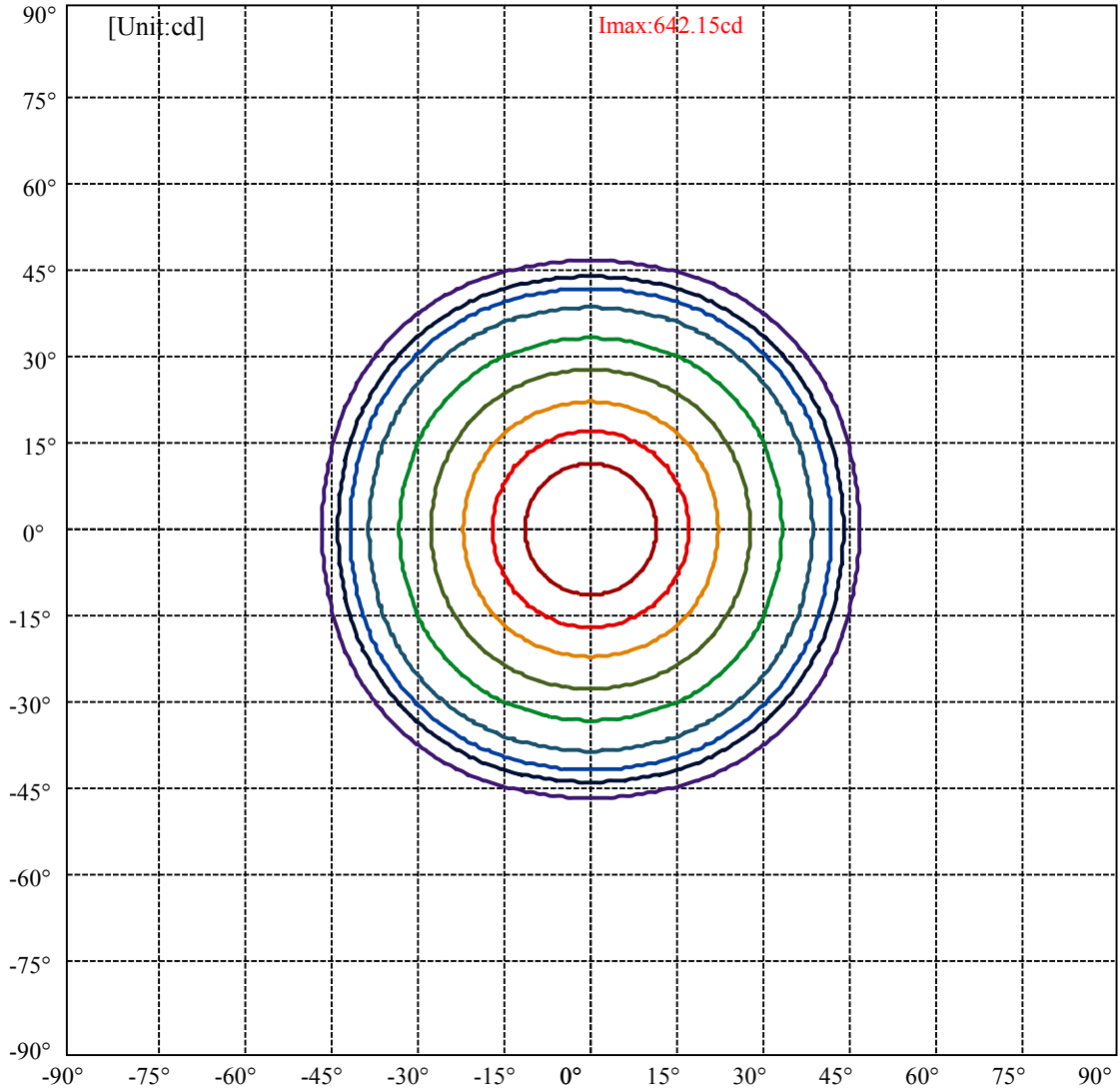
0-10	90.34
10-20	164.65
20-30	192.75
30-40	174.66
40-50	37.63
50-60	6.26
60-70	3.36
70-80	2.88
80-90	1.41
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



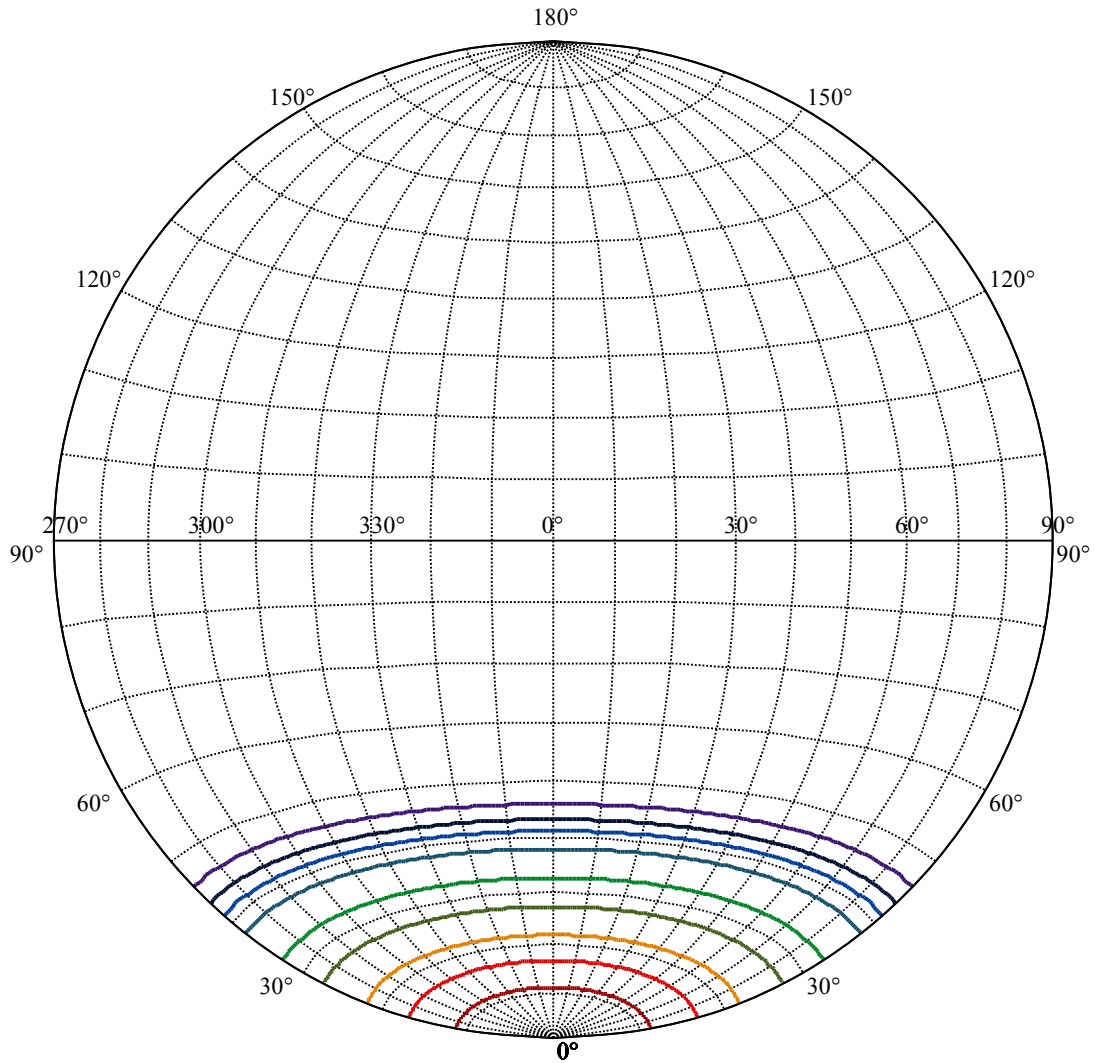
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:46.1 Right:46.1
:C90/270Left:46.1 Right:46.1

Beam Angle(50%Imax):C0/180Left:32.8 Right:32.8
:C90/270Left:32.8 Right:32.8



- (10%I_{max}) 64.215
- (20%I_{max}) 128.43
- (30%I_{max}) 192.645
- (40%I_{max}) 256.86
- (50%I_{max}) 321.075
- (60%I_{max}) 385.29
- (70%I_{max}) 449.505
- (80%I_{max}) 513.72
- (90%I_{max}) 577.935



House

[Unit:cd]

Road

Imax:642.15

(10%Imax) 64.215

(20%Imax) 128.43

(30%Imax) 192.645

(40%Imax) 256.86

(50%Imax) 321.075

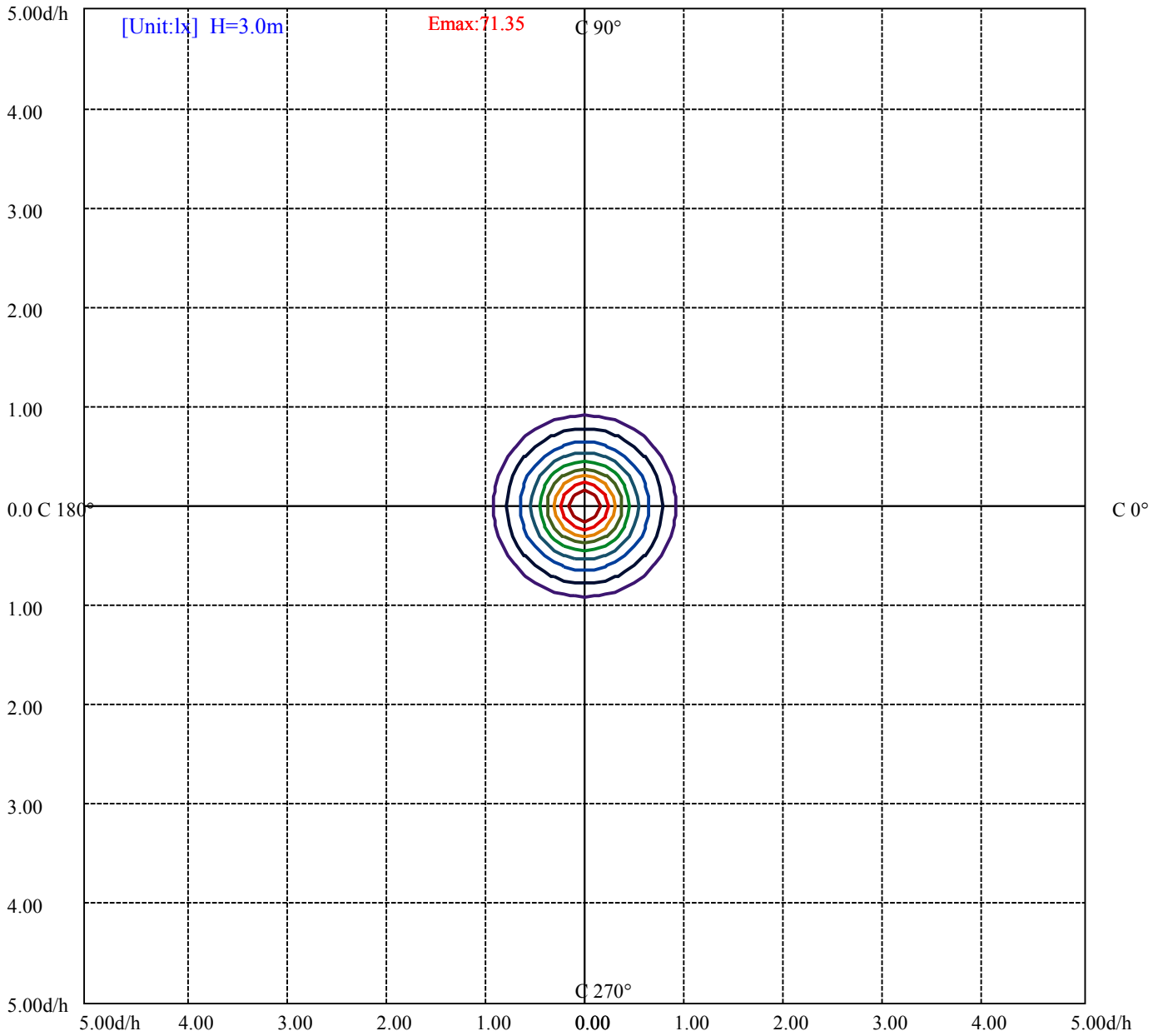
(60%Imax) 385.29

(70%Imax) 449.505

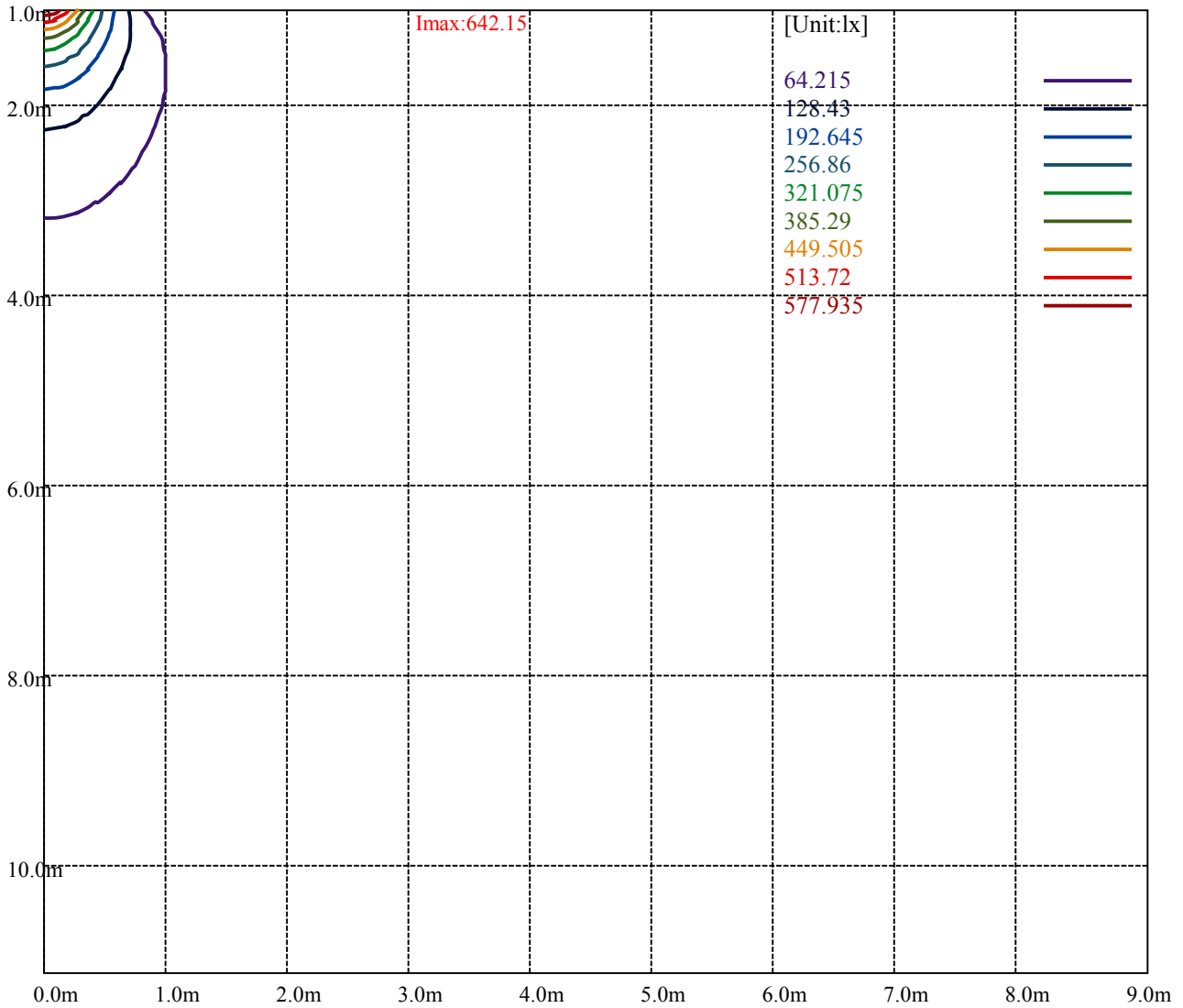
(80%Imax) 513.72

(90%Imax) 577.935





(10%Emax) 7.135	—
(20%Emax) 14.27	—
(30%Emax) 21.405	—
(40%Emax) 28.54	—
(50%Emax) 35.675	—
(60%Emax) 42.81	—
(70%Emax) 49.945	—
(80%Emax) 57.08	—
(90%Emax) 64.215	—



Luminance Table

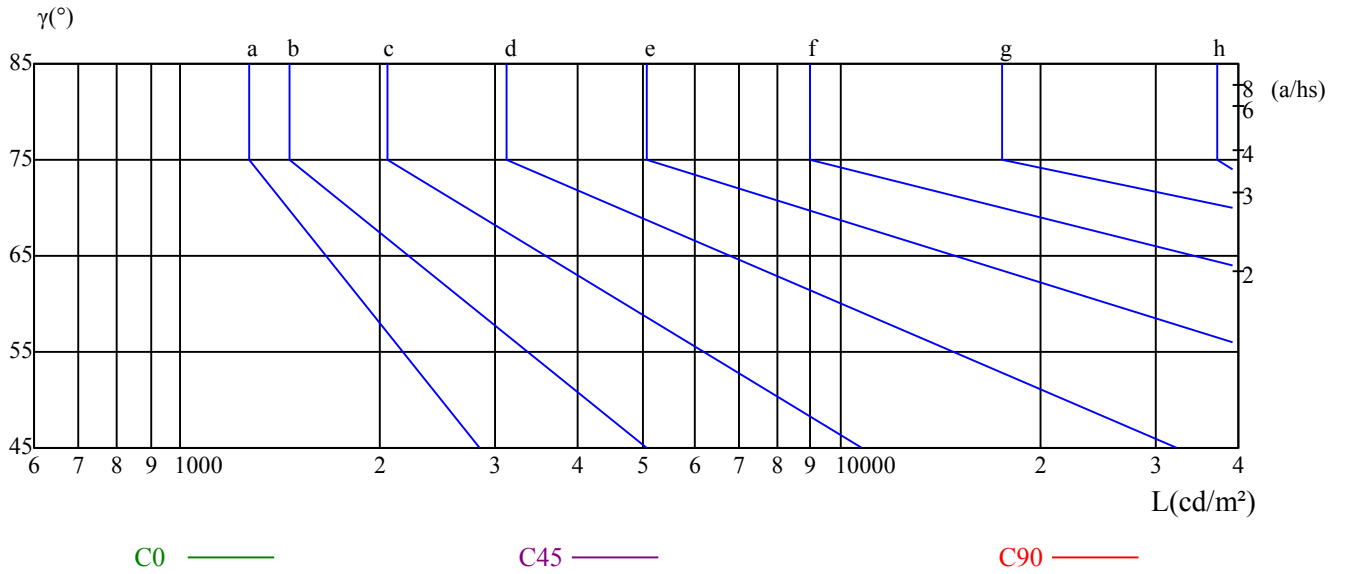
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

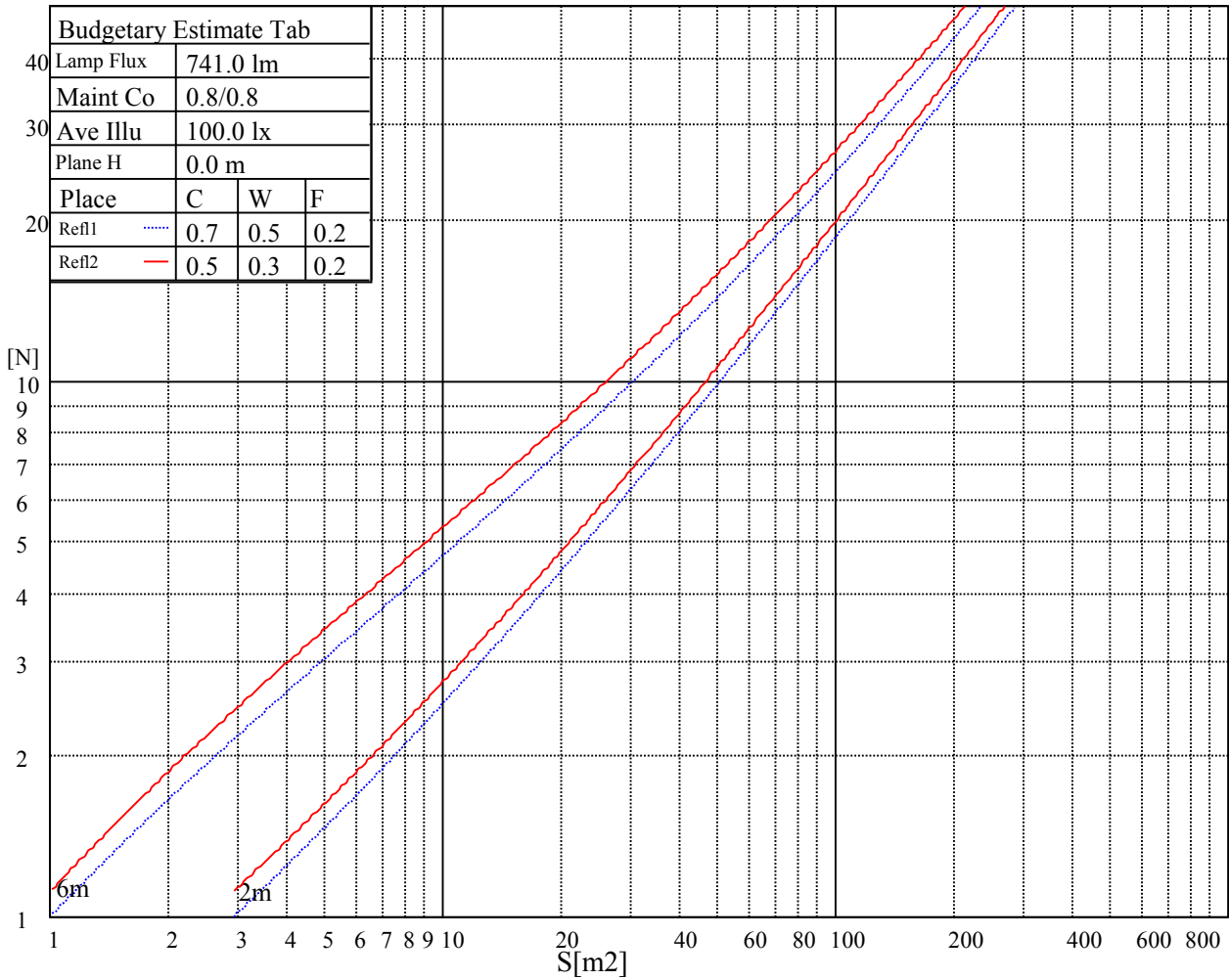
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

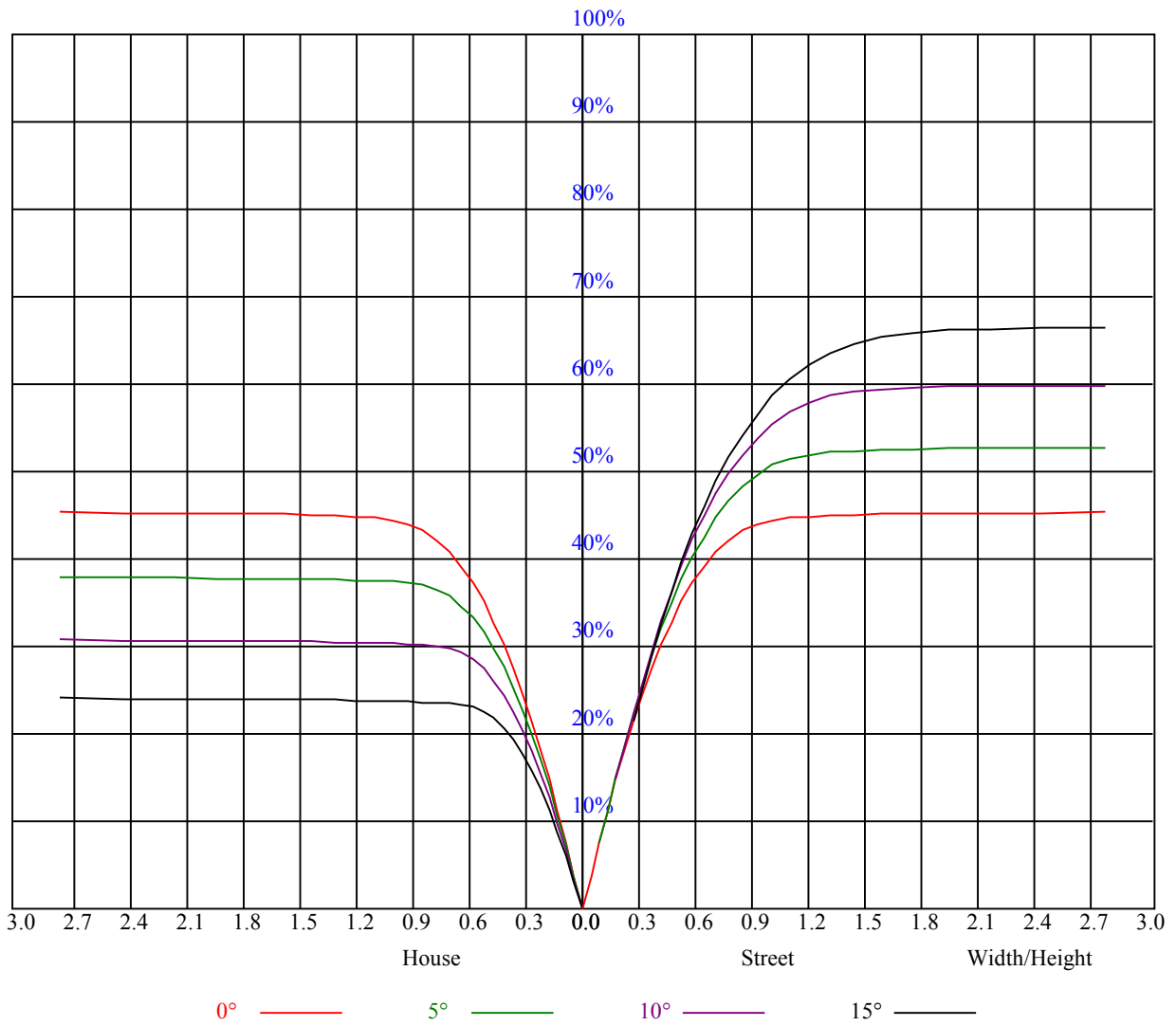
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.00	0.98	0.96	0.98	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.93	0.89	0.86	0.92	0.88	0.85	0.89	0.86	0.83	0.86	0.84	0.81	0.83	0.82	0.80	0.78
3	0.87	0.82	0.78	0.86	0.81	0.78	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.73
4	0.81	0.76	0.72	0.80	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.69	0.68
5	0.76	0.70	0.66	0.75	0.70	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.70	0.67	0.64	0.63
6	0.71	0.66	0.62	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.60	0.66	0.63	0.60	0.59
7	0.67	0.61	0.57	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.55
8	0.63	0.57	0.54	0.62	0.57	0.53	0.61	0.57	0.53	0.60	0.56	0.53	0.60	0.56	0.53	0.51
9	0.59	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.57	0.53	0.50	0.48
10	0.56	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.54	0.50	0.47	0.46



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	643.99	650.27	625.94	572.15	498.26	430.87	370.58	309.97	257.22
45.0	637.77	642.12	610.52	561.08	497.05	435.00	372.73	311.89	257.77
90.0	641.24	629.24	577.49	526.28	468.20	408.57	348.51	283.82	234.15
135.0	645.59	626.98	586.08	537.08	474.48	414.57	356.27	291.80	232.06
180.0	643.99	617.13	565.48	511.36	450.36	395.36	337.94	279.74	192.42
225.0	637.77	613.88	564.33	504.70	447.94	391.07	334.41	281.17	191.65
270.0	641.24	632.65	600.45	543.35	469.25	413.97	357.21	306.22	249.52
315.0	645.59	641.24	603.91	540.76	468.92	415.35	355.44	294.66	245.77
360.0	643.99	650.27	625.94	572.15	498.26	430.87	370.58	309.97	257.22
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	132.96	26.37	12.00	6.88	4.35	3.30	2.81	2.64	2.59
45.0	127.35	24.50	10.85	6.22	4.13	3.30	2.86	2.70	2.64
90.0	66.78	16.96	7.27	4.46	3.30	2.92	2.70	2.64	2.59
135.0	57.64	17.89	7.76	4.51	3.41	2.92	2.70	2.64	2.59
180.0	35.46	13.10	5.56	3.80	3.08	2.81	2.64	2.59	2.59
225.0	31.49	13.16	6.00	3.85	3.08	2.86	2.70	2.64	2.53
270.0	77.35	20.32	8.75	4.68	3.41	2.92	2.75	2.64	2.59
315.0	81.32	21.31	10.30	6.22	4.18	3.25	2.81	2.70	2.59
360.0	132.96	26.37	12.00	6.88	4.35	3.30	2.81	2.64	2.59
C/ γ (°)	90.0								
0.0	2.53								
45.0	2.53								
90.0	2.59								
135.0	2.59								
180.0	2.53								
225.0	2.59								
270.0	2.59								
315.0	2.53								
360.0	2.53								