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## Nata

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LumCAT: 2-1794-N	
Luminaire: 92.70.135.00	
Report No: NATA0100	Voltage(V): 33.8000
Test No: GC2018061912	Current(A): 0.5000
LampCAT: NICHIA NFCW108B-V3	Power (W): 16.9000
Lamp flux(lm): 2263.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 69	Width(mm): 69
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1894.59  
Efficiency(%): 83.72%  
Lumens(lm)/Power(W): 114.15  
Central intensity(cd): 6068.316  
Maximum intensity(cd): 6068.316  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=28.0  
                                  [C90/270]Total=28.0  
Field angle(10%Imax): [C0/180]Total=58.0  
                                  [C90/270]Total=58.0  
Maximum s/h(1/2): C0\_180=0.47 C90\_270=0.47  
Maximum s/h(1/4): C0\_180=0.49 C90\_270=0.49  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 85.24%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.490%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2018/6/19  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

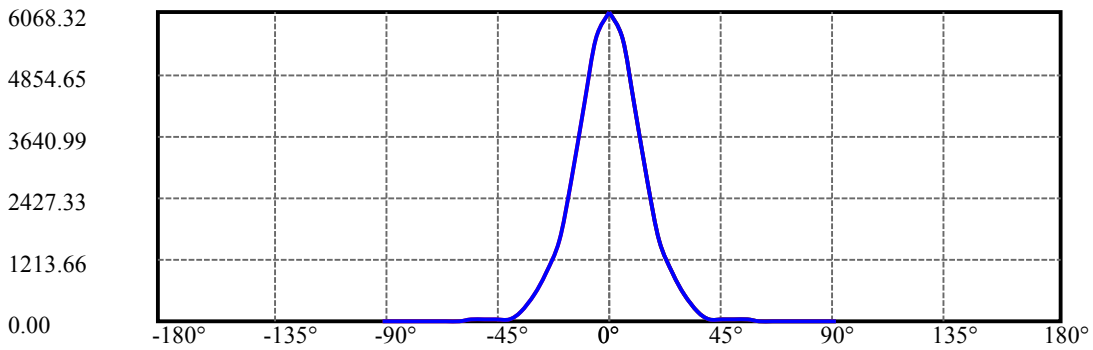
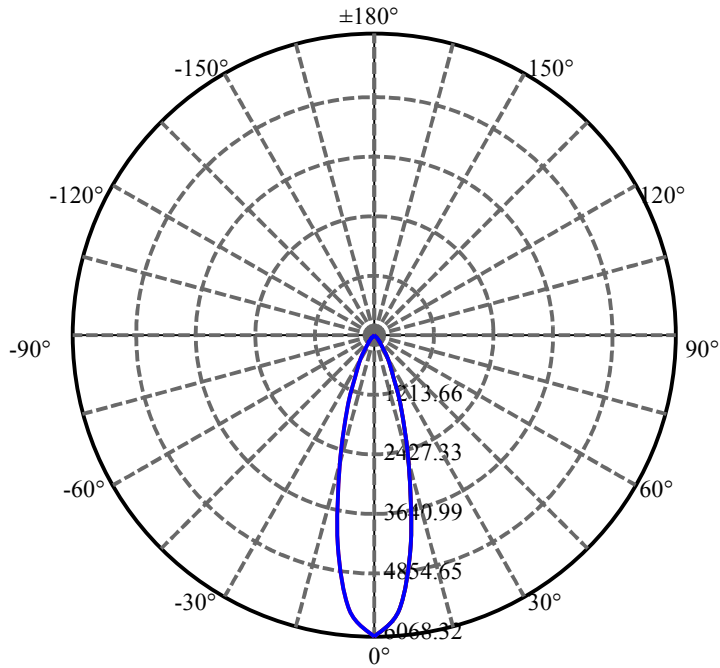
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6068.316	36.290	36.29	1.604%	1.915%
5.0	5545.005	264.903	301.193	11.706%	15.898%
10.0	4270.450	406.474	707.668	17.962%	37.352%
15.0	2729.834	387.277	1094.945	17.113%	57.793%
20.0	1572.273	294.760	1389.705	13.025%	73.351%
25.0	945.016	218.916	1608.621	9.674%	84.906%
30.0	520.792	142.733	1751.353	6.307%	92.440%
35.0	170.950	53.746	1805.1	2.375%	95.277%
40.0	47.094	16.593	1821.693	.733%	96.152%
45.0	32.346	12.537	1834.23	.554%	96.814%
50.0	24.493	10.285	1844.514	.454%	97.357%
55.0	19.875	8.924	1853.439	.394%	97.828%
60.0	16.716	7.935	1861.374	.351%	98.247%
65.0	14.163	7.036	1868.41	.311%	98.618%
70.0	12.697	6.540	1874.95	.289%	98.963%
75.0	11.534	6.107	1881.057	.270%	99.286%
80.0	10.640	5.743	1886.8	.254%	99.589%
85.0	9.917	5.415	1892.216	.239%	99.875%
90.0	8.658	2.373	1894.588	.105%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1751.35	77.39%	92.44%
0-40	1821.69	80.50%	96.15%
0-60	1861.37	82.25%	98.25%
0-90	1892.22	83.62%	99.87%
0-120	1892.22	83.62%	99.87%
0-180	1894.59	83.72%	100.00%
60-90	38.78	1.71%	2.05%
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%
0-22.88	1515.67	66.98%	80.00%

ZONAL LUMEN SUMMARY

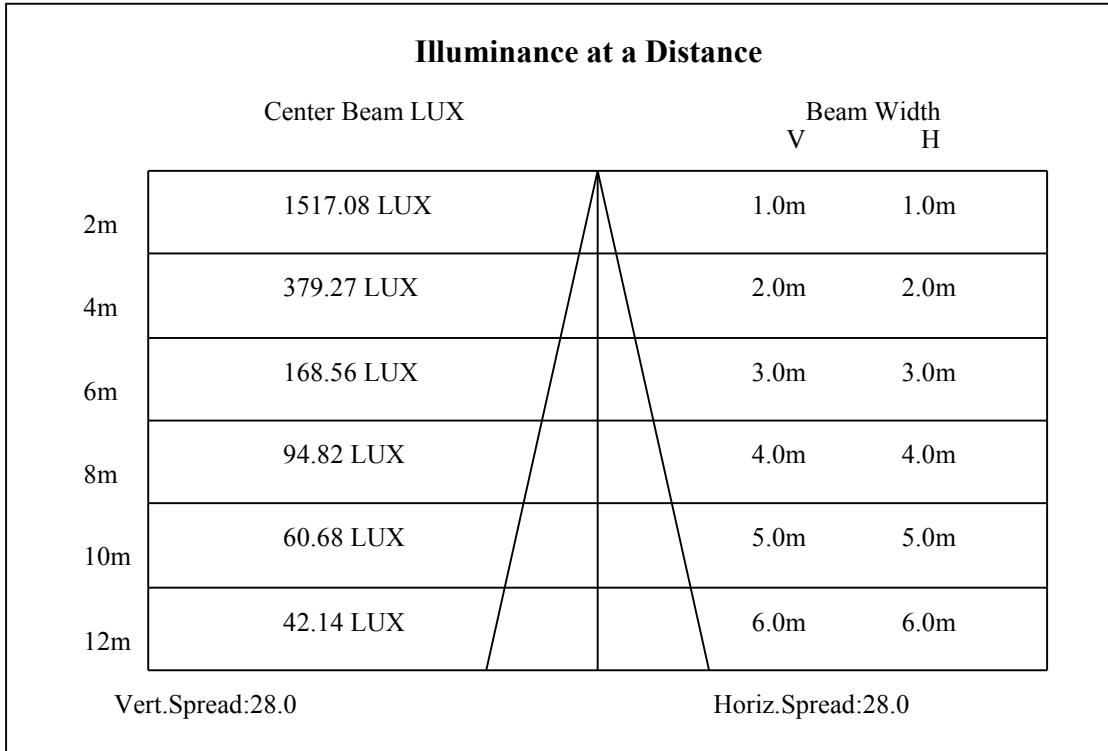
0-10	707.67
10-20	682.04
20-30	361.65
30-40	70.34
40-50	22.82
50-60	16.86
60-70	13.58
70-80	11.85
80-90	5.42
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

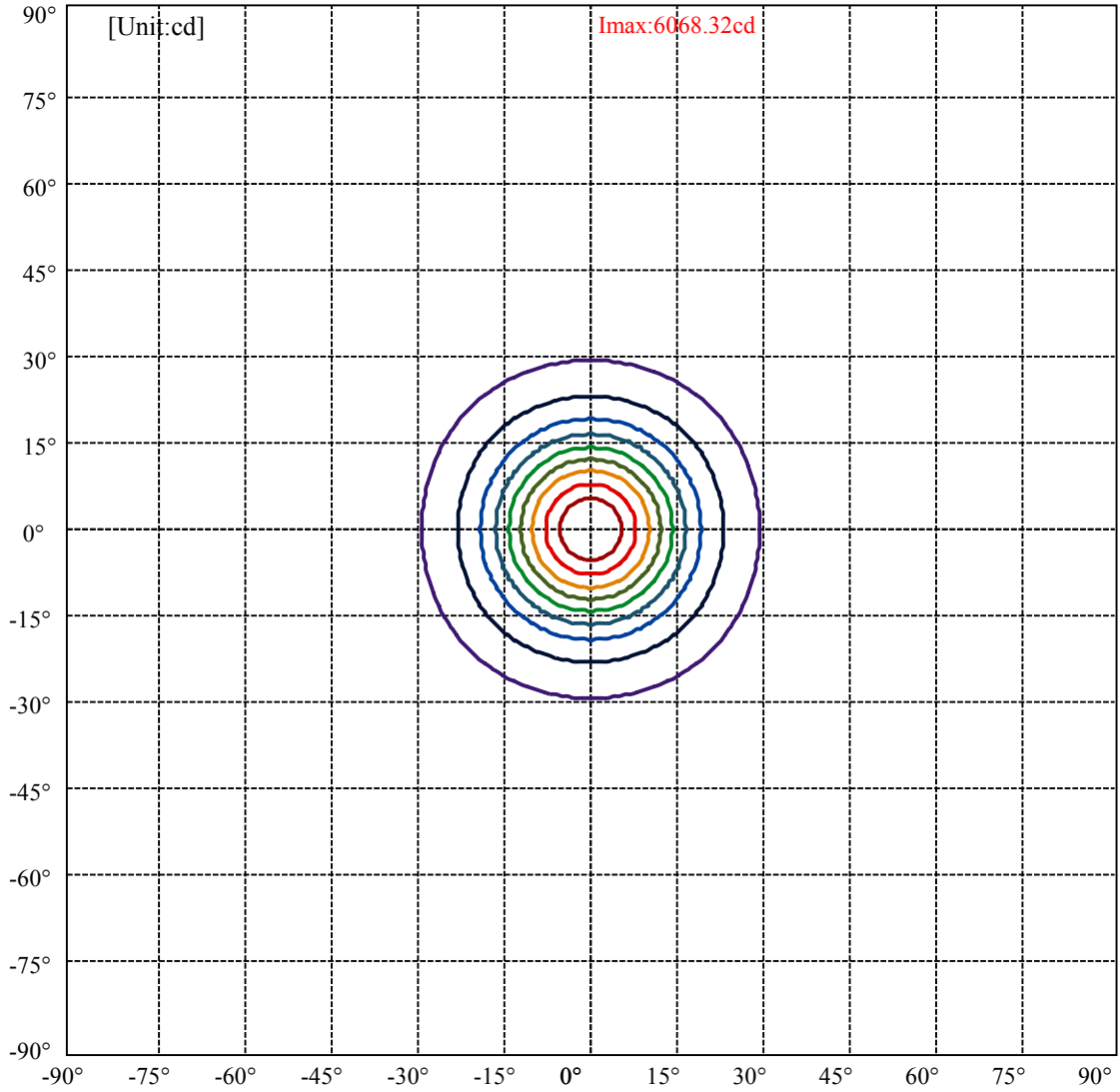


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

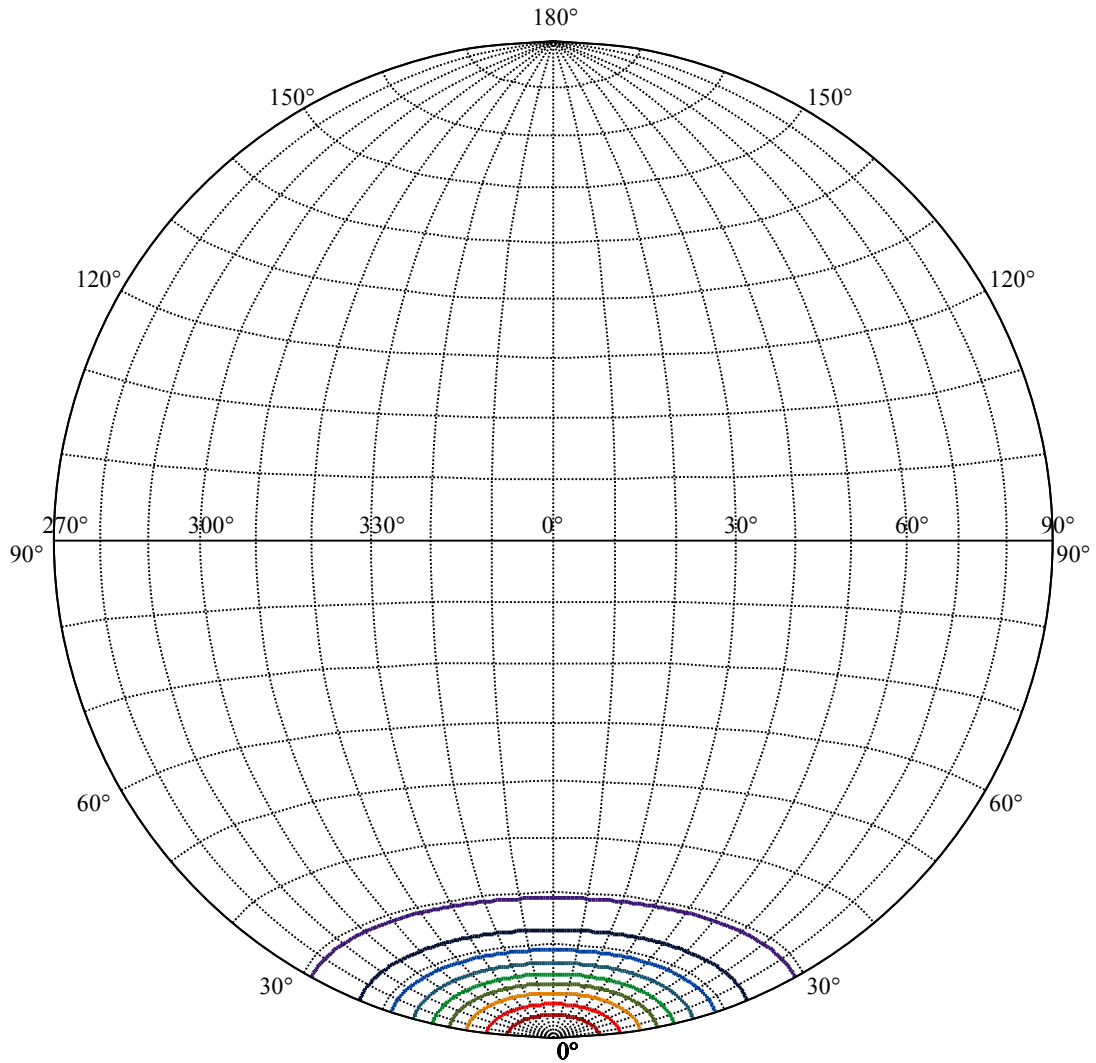
Field angle(10%Imax):C0/180Left:29.0 Right:29.0  
:C90/270Left:29.0 Right:29.0

Beam Angle(50%Imax):C0/180Left:14.0 Right:14.0  
:C90/270Left:14.0 Right:14.0





(10%Imax) 606.832	—
(20%Imax) 1213.66	—
(30%Imax) 1820.49	—
(40%Imax) 2427.33	—
(50%Imax) 3034.16	—
(60%Imax) 3640.99	—
(70%Imax) 4247.82	—
(80%Imax) 4854.65	—
(90%Imax) 5461.48	—



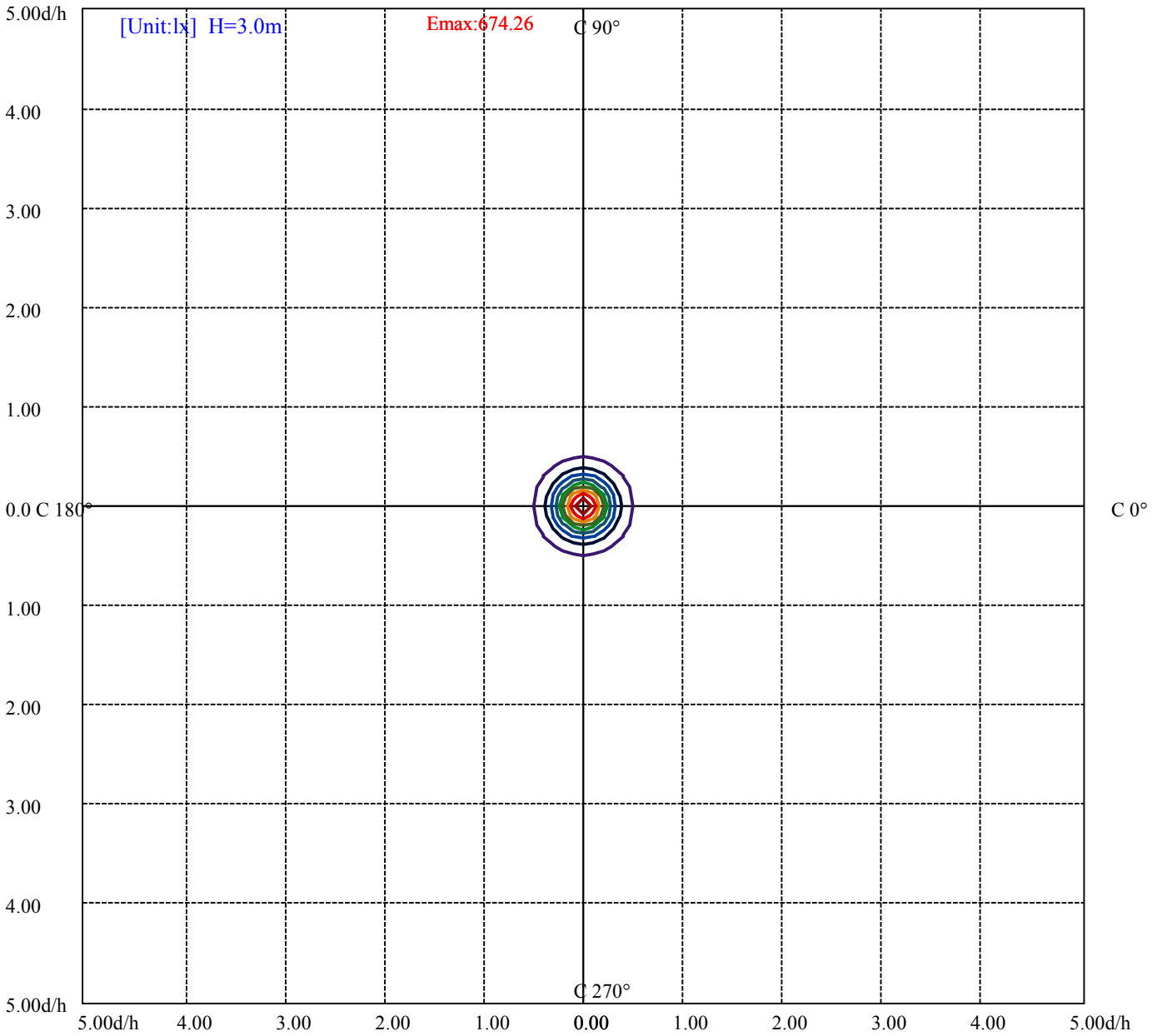
House

[Unit:cd]

Road

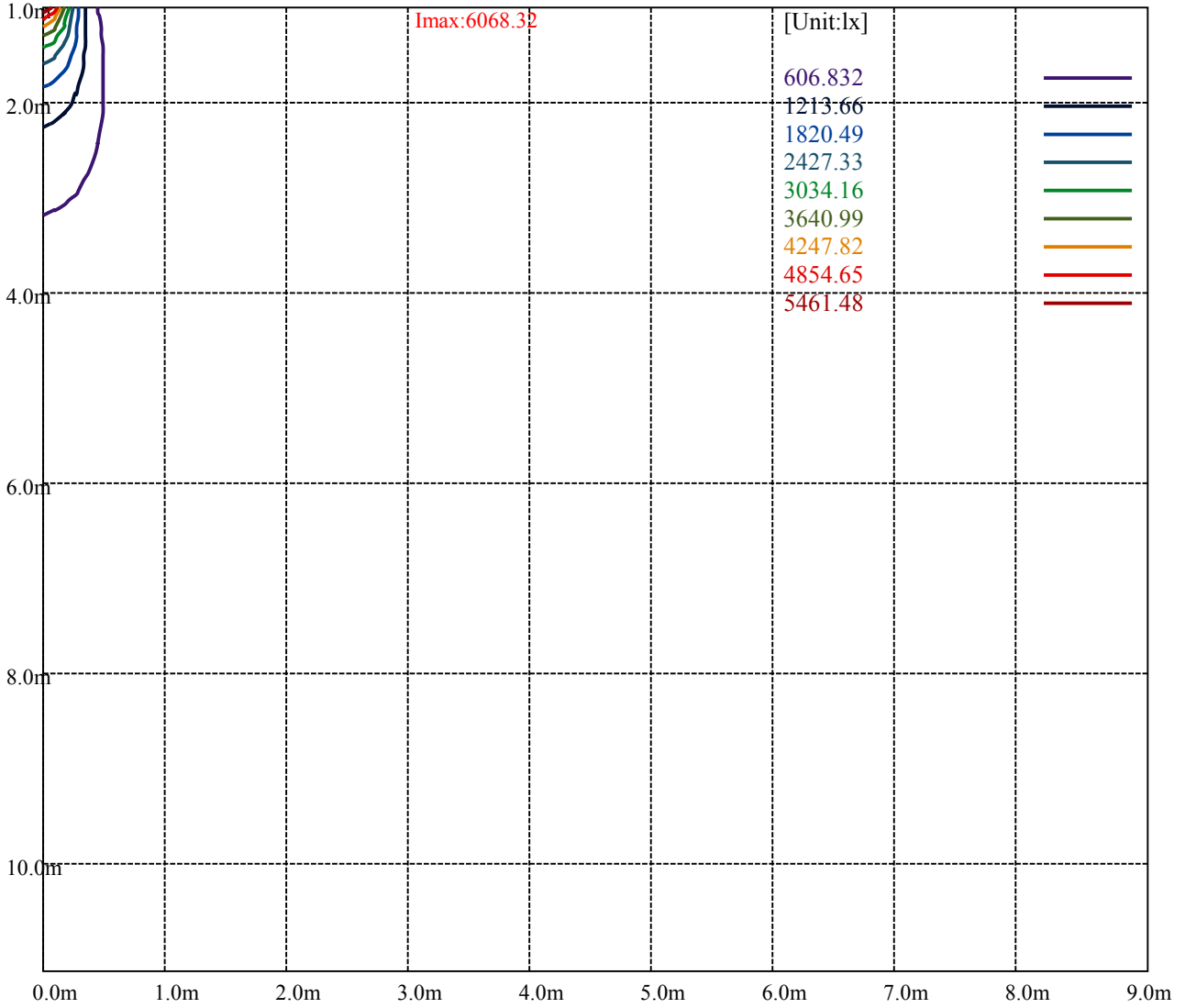
**Imax:6068.32**

(10%Imax) 606.832	—
(20%Imax) 1213.66	—
(30%Imax) 1820.49	—
(40%Imax) 2427.33	—
(50%Imax) 3034.16	—
(60%Imax) 3640.99	—
(70%Imax) 4247.82	—
(80%Imax) 4854.65	—
(90%Imax) 5461.48	—



(10%Emax) 67.42556	—
(20%Emax) 134.8511	—
(30%Emax) 202.2767	—
(40%Emax) 269.7022	—
(50%Emax) 337.1278	—
(60%Emax) 404.5533	—
(70%Emax) 471.9789	—
(80%Emax) 539.4045	—
(90%Emax) 606.83	—





Luminance Table

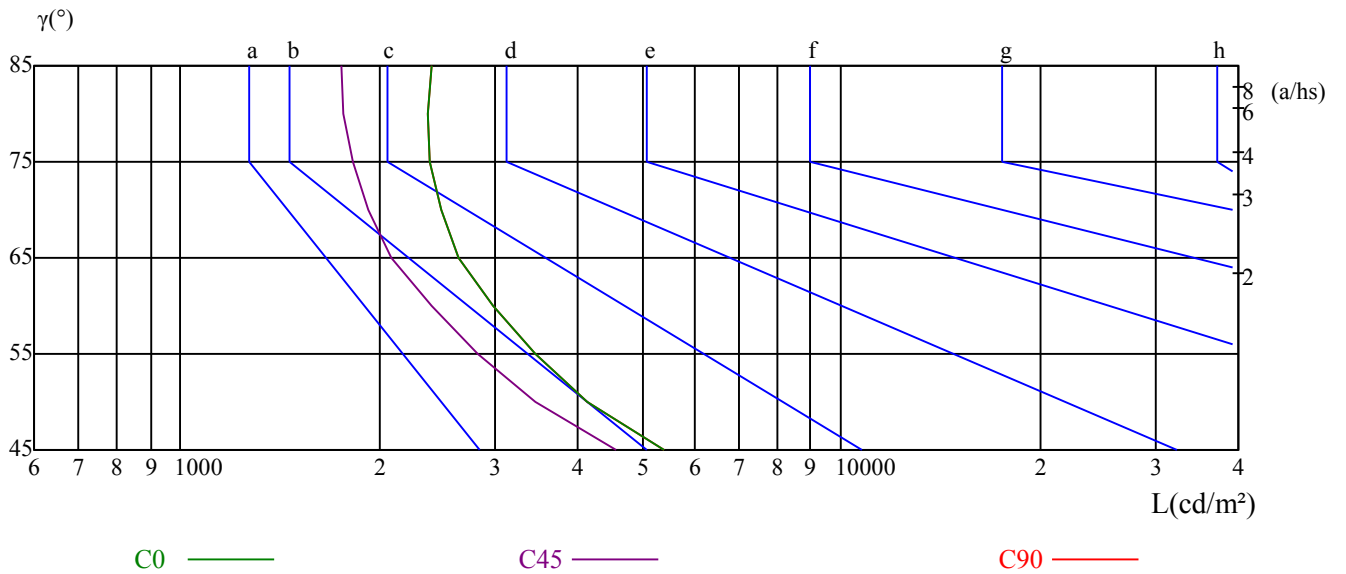
$\gamma$	45	50	55	60	65	70	75	80	85
C0	5390	4141	3437	2981	2628	2475	2387	2366	2403
C45	4561	3451	2820	2407	2087	1930	1824	1769	1751
C90	5390	4141	3437	2981	2628	2475	2387	2366	2403

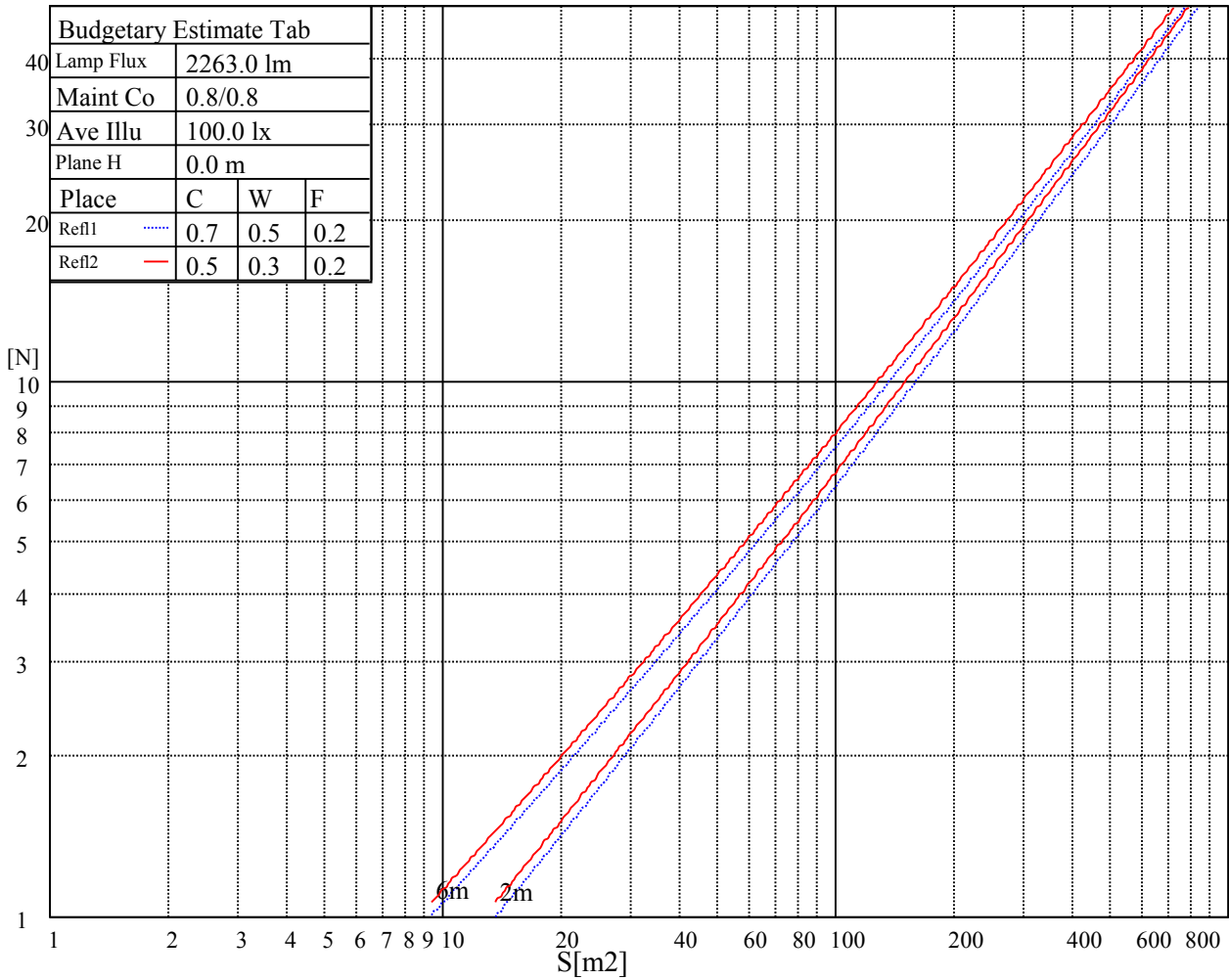
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7039	7039	7039	9360	9360	9360	23899	23899	23899

Glare Table

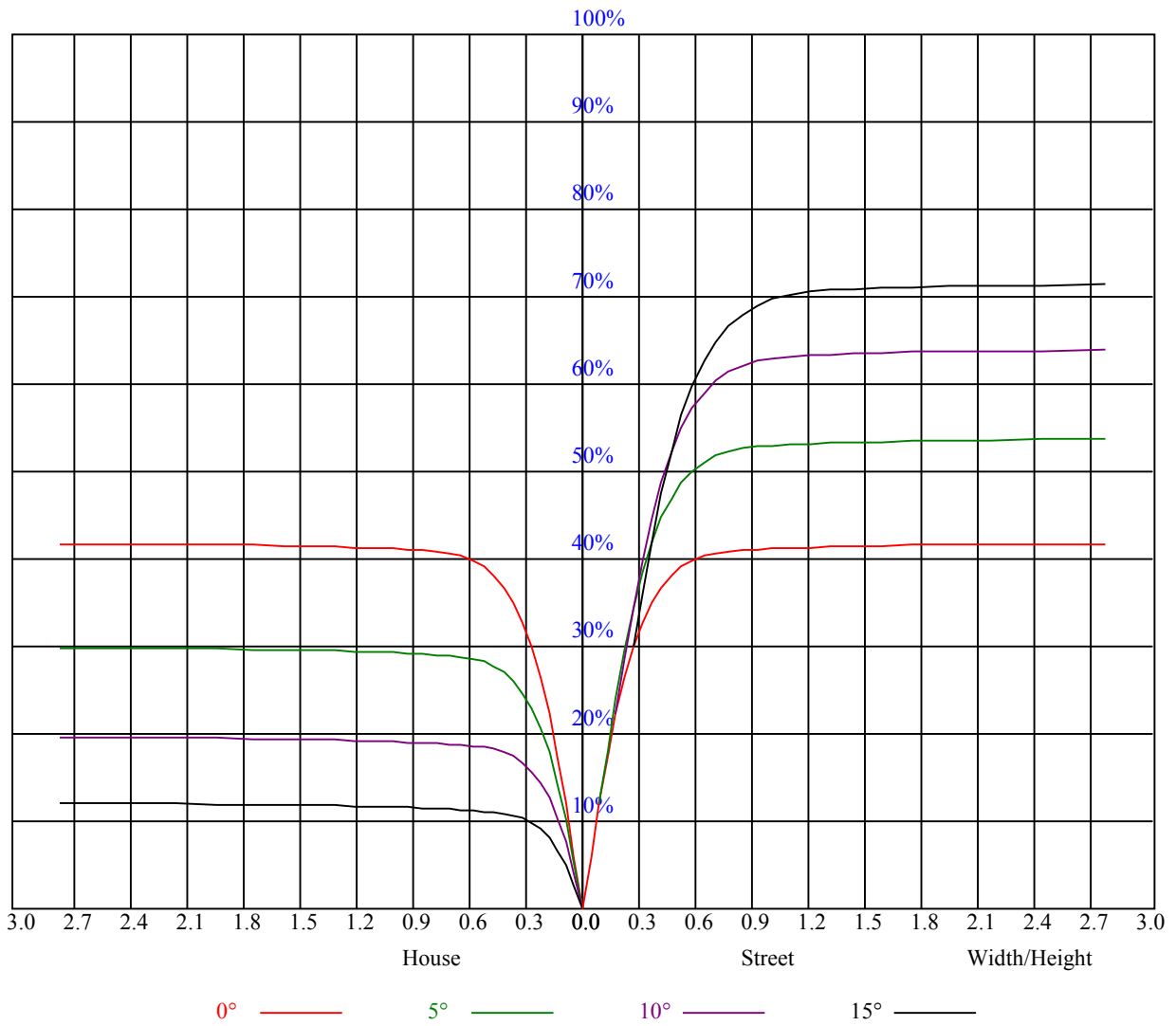
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.01	1.01	1.01	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.94	0.91	0.89	0.92	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.82	0.81	0.80	0.79
2	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.77	0.75
3	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.74	0.73
4	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.72	0.69	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.67	0.66
7	0.72	0.68	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.64
8	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62
9	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.58



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	6025.92	5817.26	4806.97	3281.36	1891.74	1079.11	673.89	296.75	52.08
45.0	6074.92	5723.11	4497.01	2854.67	1667.66	998.17	571.49	290.15	49.00
90.0	6093.64	5442.33	4043.89	2378.99	1419.35	836.03	388.92	93.76	45.53
135.0	6078.78	5641.63	4289.99	2833.20	1596.09	959.63	552.22	114.08	44.21
180.0	6025.92	5234.76	3905.70	2372.93	1244.83	852.11	413.97	73.72	41.90
225.0	6074.92	5396.08	3996.54	2581.04	1507.99	906.56	485.98	99.16	45.70
270.0	6093.64	5635.57	4364.32	2843.66	1663.80	969.54	547.81	294.55	51.48
315.0	6078.78	5469.30	4259.16	2692.81	1586.73	958.97	532.07	105.43	46.85
360.0	6025.92	5817.26	4806.97	3281.36	1891.74	1079.11	673.89	296.75	52.08
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	35.29	26.15	20.81	17.62	14.98	13.32	12.06	11.23	10.35
45.0	33.14	24.83	20.37	16.96	14.26	12.72	11.62	10.68	9.91
90.0	31.71	24.61	19.77	16.41	13.87	12.50	11.34	10.35	9.63
135.0	31.11	23.78	19.49	16.35	13.87	12.44	11.34	10.52	9.86
180.0	29.23	22.57	18.61	15.97	13.93	12.55	11.51	10.74	10.30
225.0	31.71	23.84	19.49	16.46	13.93	12.50	11.34	10.52	9.86
270.0	34.58	26.21	20.70	17.34	14.48	12.94	11.67	10.57	9.58
315.0	31.99	23.95	19.77	16.63	13.98	12.61	11.40	10.52	9.86
360.0	35.29	26.15	20.81	17.62	14.98	13.32	12.06	11.23	10.35
C/ $\gamma$ (°)	90.0								
0.0	9.08								
45.0	8.64								
90.0	8.42								
135.0	8.59								
180.0	8.70								
225.0	8.75								
270.0	8.42								
315.0	8.64								
360.0	9.08								