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## Nata

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LumCAT: 1-0923-M	
Luminaire: 92.70.125.00	
Report No: NATA0100	Voltage(V): 36.0500
Test No: GC2020021914	Current(A): 0.3000
LampCAT: NICHIA NTCWS024B-V3	Power (W): 10.8240
Lamp flux(lm): 988.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 30	Width(mm): 30
Phm Type: C	Height(mm): 28

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## Photometric Results

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Lumens(lm): 759.78  
Efficiency(%): 76.90%  
Lumens(lm)/Power(W): 70.19  
Central intensity(cd): 3466.406  
Maximum intensity(cd): 3466.406  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=24.8  
                                  [C90/270]Total=24.8  
Field angle(10%Imax): [C0/180]Total=47.0  
                                  [C90/270]Total=47.0  
Maximum s/h(1/2): C0\_180=0.42 C90\_270=0.42  
Maximum s/h(1/4): C0\_180=0.43 C90\_270=0.43  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 76.90%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.694%

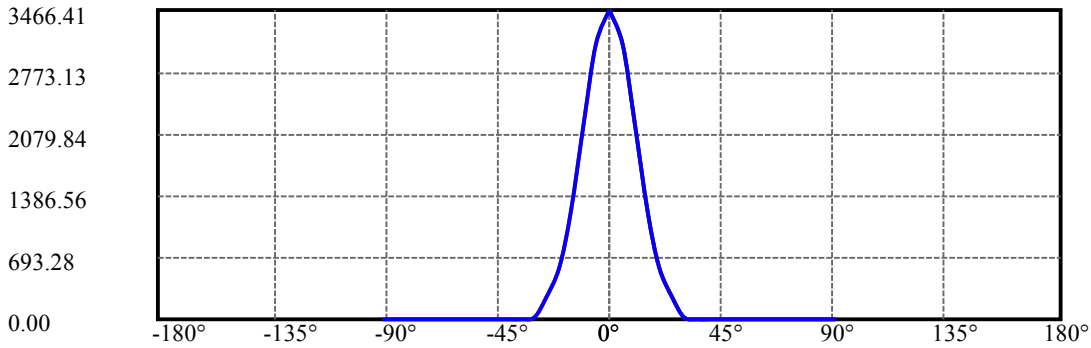
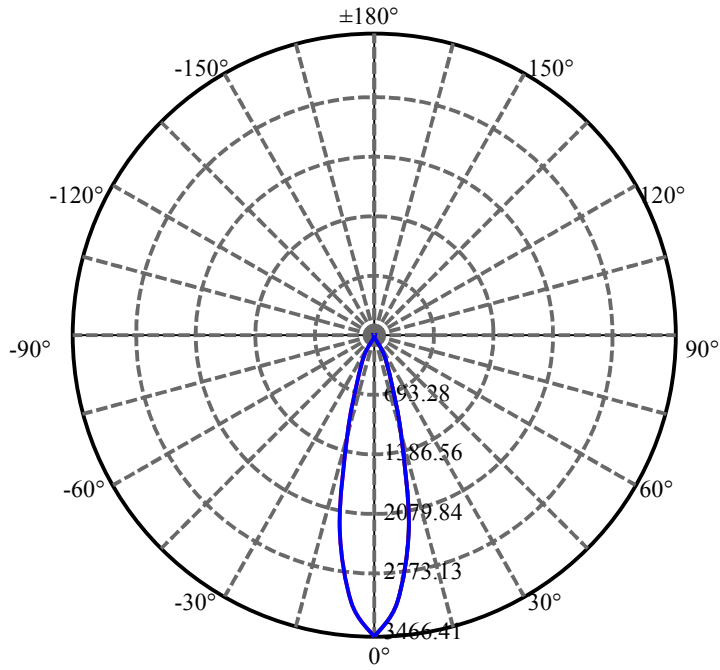
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3466.406	0.000	0	.000%	.000%
5.0	3085.453	78.326	78.326	7.928%	10.309%
10.0	2238.891	190.469	268.794	19.278%	35.378%
15.0	1195.390	203.719	472.513	20.619%	62.191%
20.0	583.249	146.585	619.098	14.837%	81.484%
25.0	242.880	86.646	705.744	8.770%	92.888%
30.0	18.977	33.138	738.882	3.354%	97.250%
35.0	5.070	3.541	742.423	.358%	97.716%
40.0	4.155	1.539	743.962	.156%	97.918%
45.0	3.698	1.454	745.417	.147%	98.110%
50.0	3.466	1.448	746.864	.147%	98.300%
55.0	3.319	1.475	748.34	.149%	98.495%
60.0	3.241	1.516	749.856	.153%	98.694%
65.0	3.192	1.564	751.42	.158%	98.900%
70.0	3.150	1.606	753.026	.163%	99.111%
75.0	3.143	1.645	754.671	.166%	99.328%
80.0	3.143	1.682	756.353	.170%	99.549%
85.0	3.171	1.716	758.069	.174%	99.775%
90.0	3.073	1.710	759.778	.173%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	738.88	74.79%	97.25%
0-40	743.96	75.30%	97.92%
0-60	749.86	75.90%	98.69%
0-90	758.07	76.73%	99.77%
0-120	758.07	76.73%	99.77%
0-180	759.78	76.90%	100.00%
60-90	9.73	0.98%	1.28%
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%
0-19.62	607.82	61.52%	80.00%

ZONAL LUMEN SUMMARY

0-10	268.79
10-20	350.30
20-30	119.78
30-40	5.08
40-50	2.90
50-60	2.99
60-70	3.17
70-80	3.33
80-90	1.72
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: ———

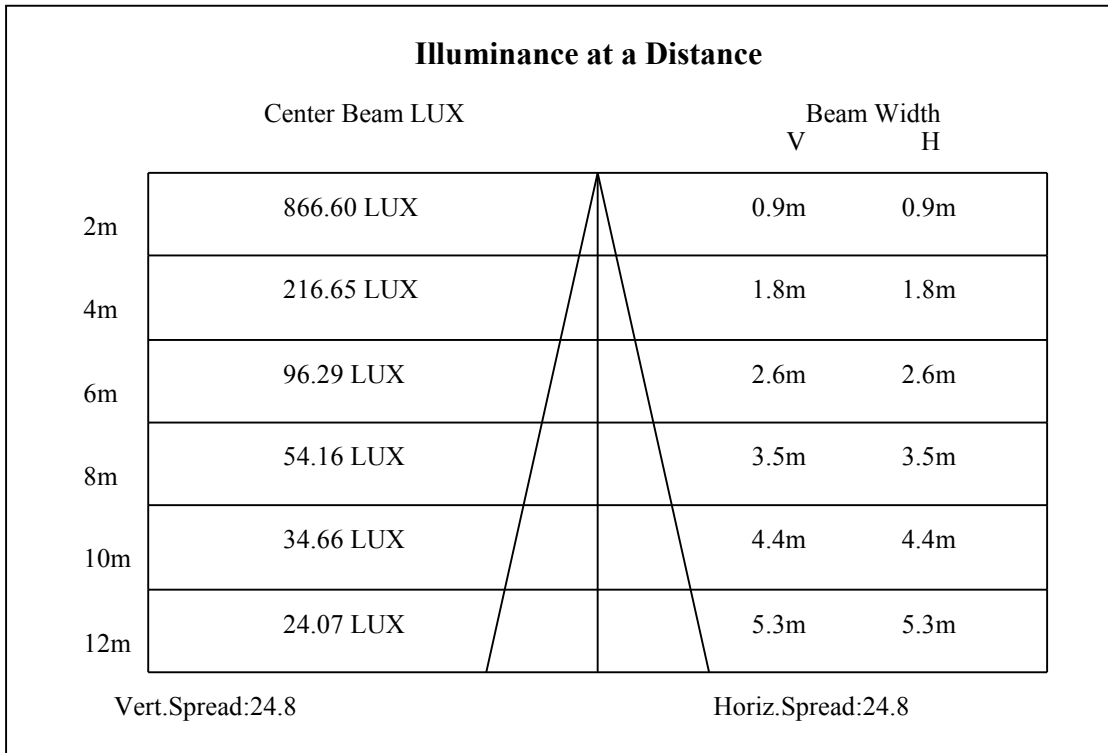
C90/C270: ———

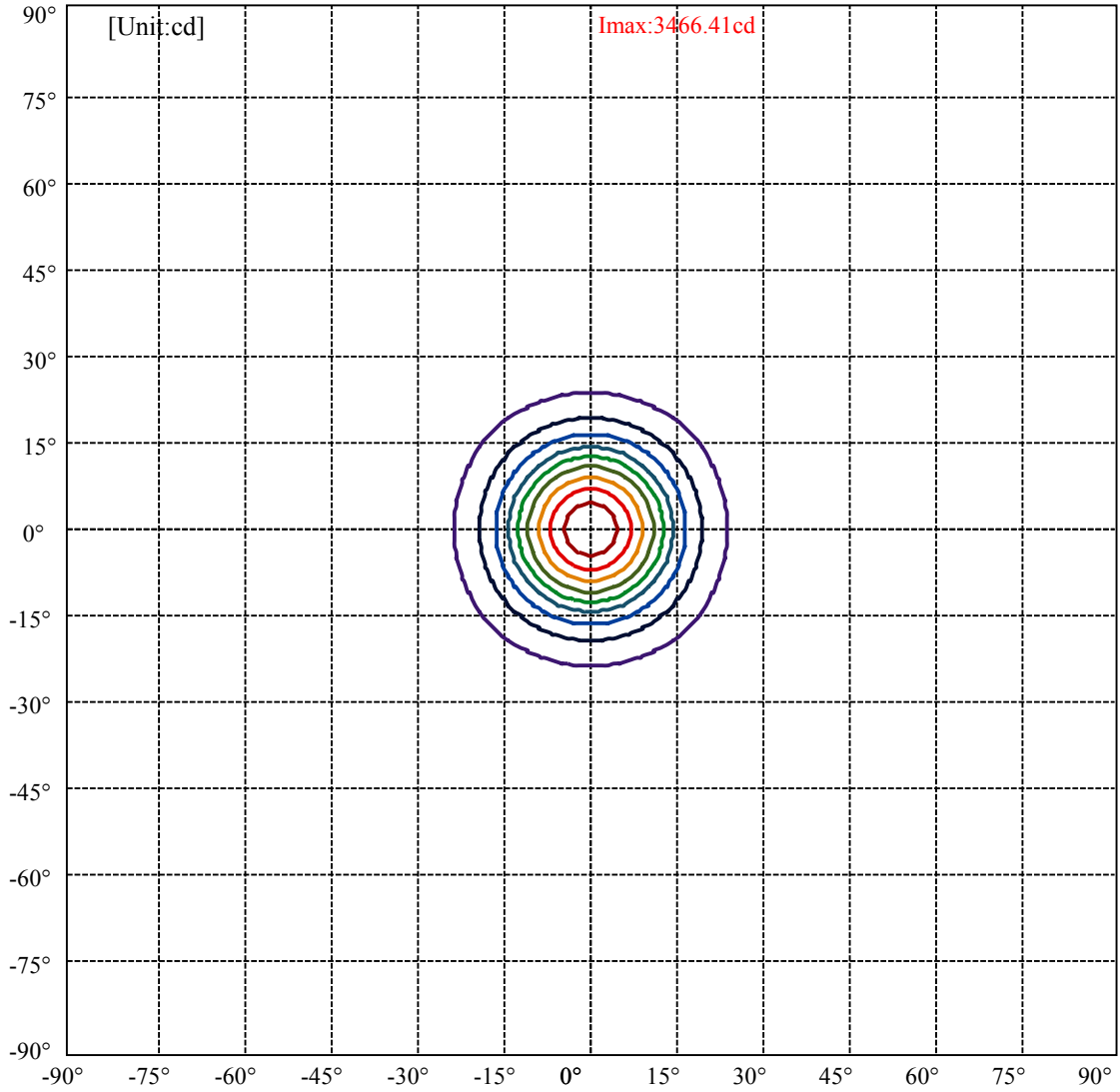
Field angle(10%Imax):C0/180Left:23.5 Right:23.5

:C90/270Left:23.5 Right:23.5

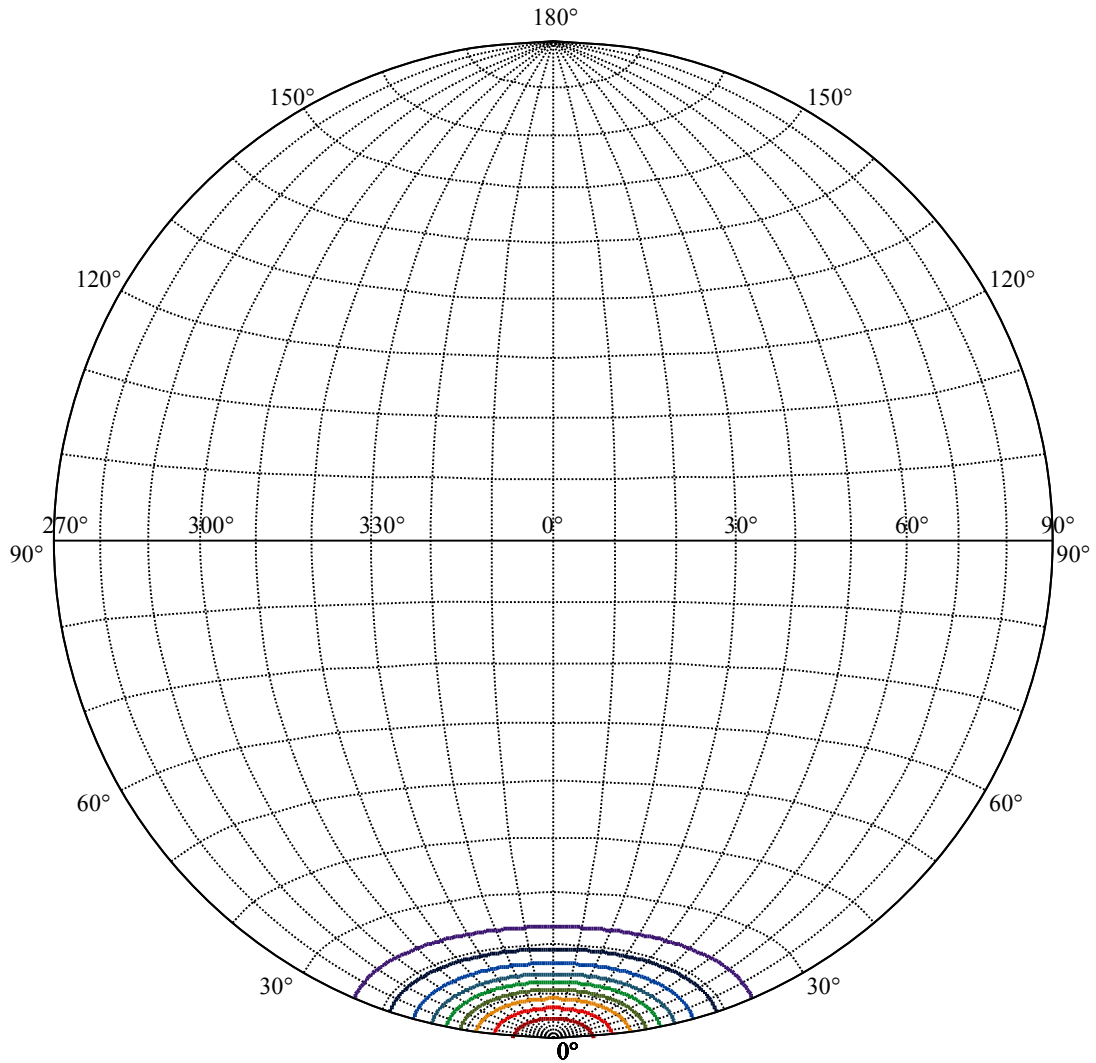
Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4

:C90/270Left:12.4 Right:12.4





(10%Imax) 346.641	—
(20%Imax) 693.281	—
(30%Imax) 1039.92	—
(40%Imax) 1386.56	—
(50%Imax) 1733.2	—
(60%Imax) 2079.84	—
(70%Imax) 2426.48	—
(80%Imax) 2773.13	—
(90%Imax) 3119.77	—



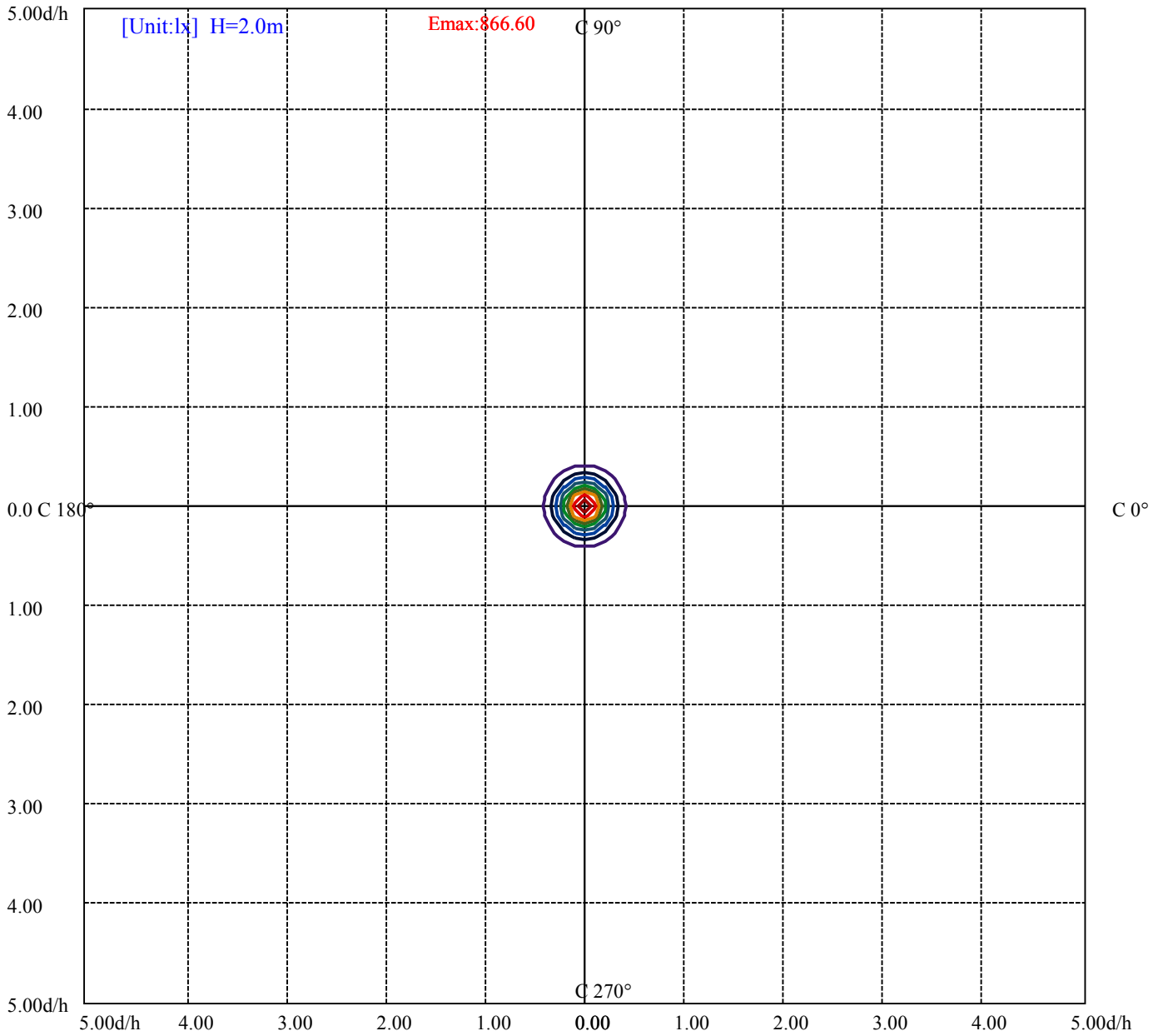
House

[Unit:cd]

Road

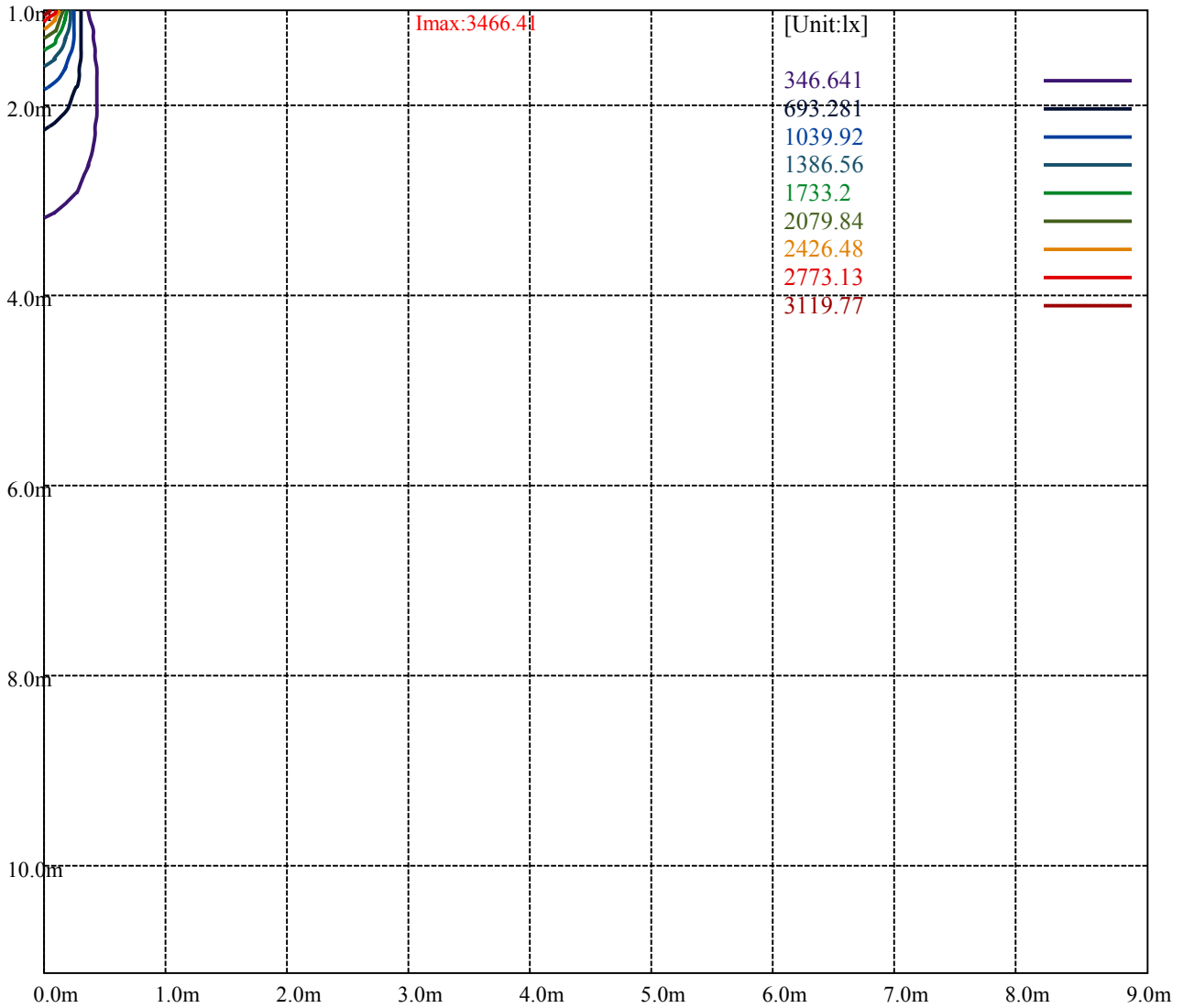
**Imax:3466.41**

(10%Imax)	346.641	—
(20%Imax)	693.281	—
(30%Imax)	1039.92	—
(40%Imax)	1386.56	—
(50%Imax)	1733.2	—
(60%Imax)	2079.84	—
(70%Imax)	2426.48	—
(80%Imax)	2773.13	—
(90%Imax)	3119.77	—



(10%Emax) 86.65975	—
(20%Emax) 173.3197	—
(30%Emax) 259.98	—
(40%Emax) 346.64	—
(50%Emax) 433.3	—
(60%Emax) 519.96	—
(70%Emax) 606.62	—
(80%Emax) 693.28	—
(90%Emax) 779.94	—





Luminance Table

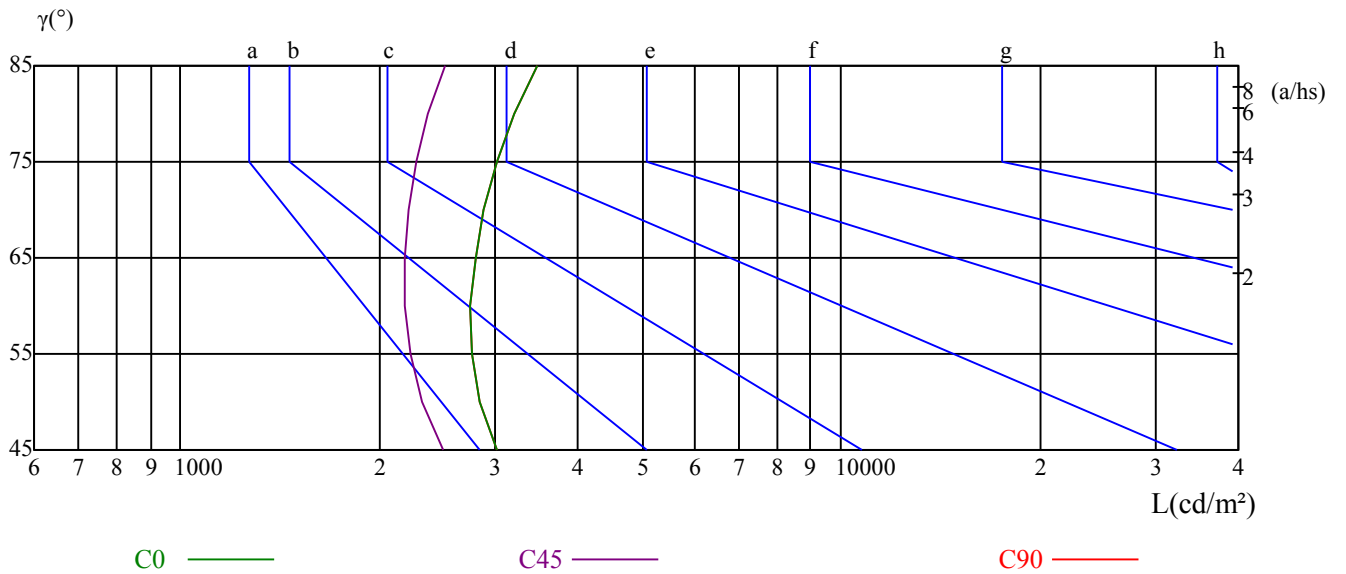
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3006	2837	2756	2753	2796	2871	3010	3196	3465
C45	2505	2329	2228	2192	2191	2212	2277	2370	2513
C90	3006	2837	2756	2753	2796	2871	3010	3196	3465

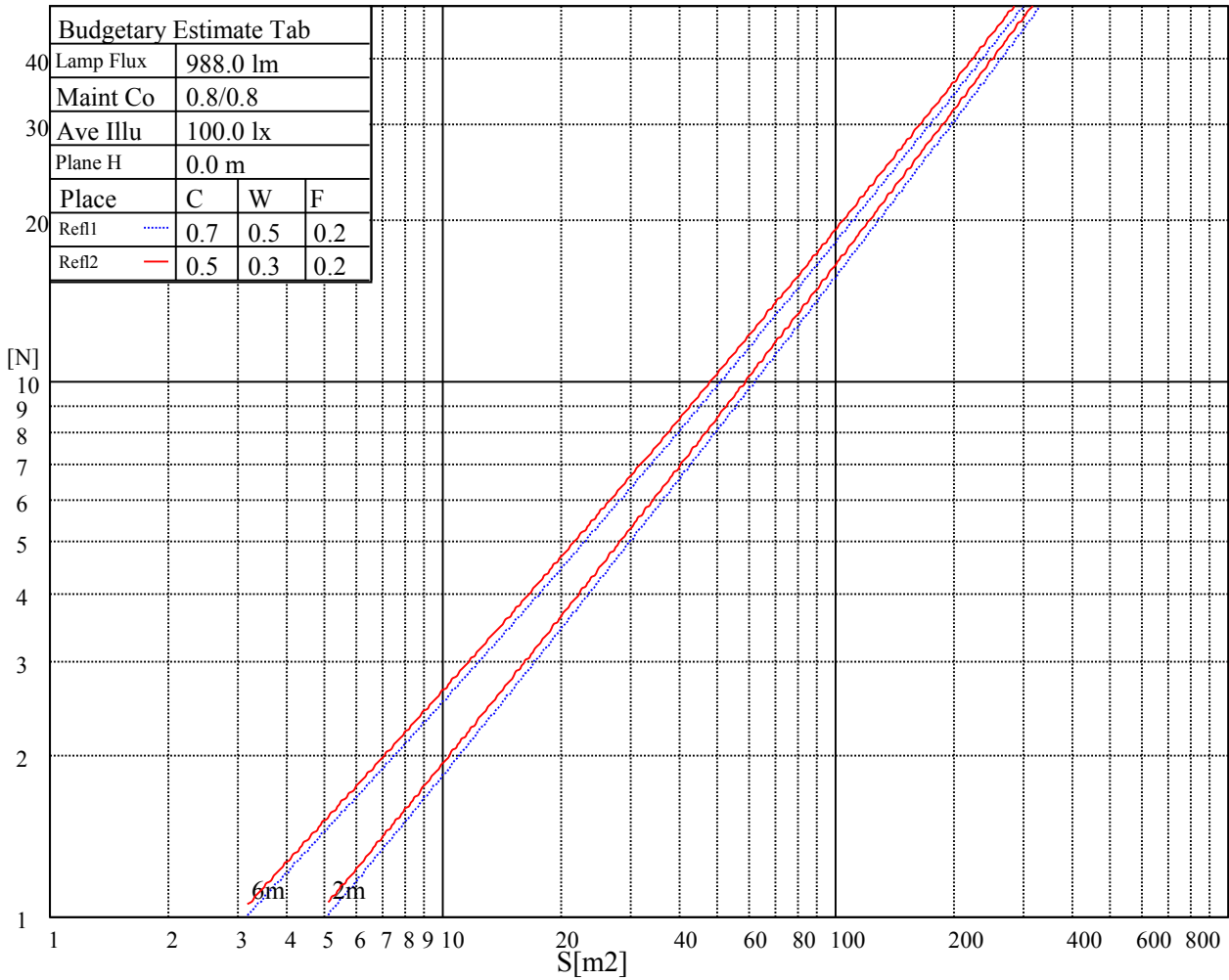
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8393	8393	8393	13493	13493	13493	40427	40427	40427

Glare Table

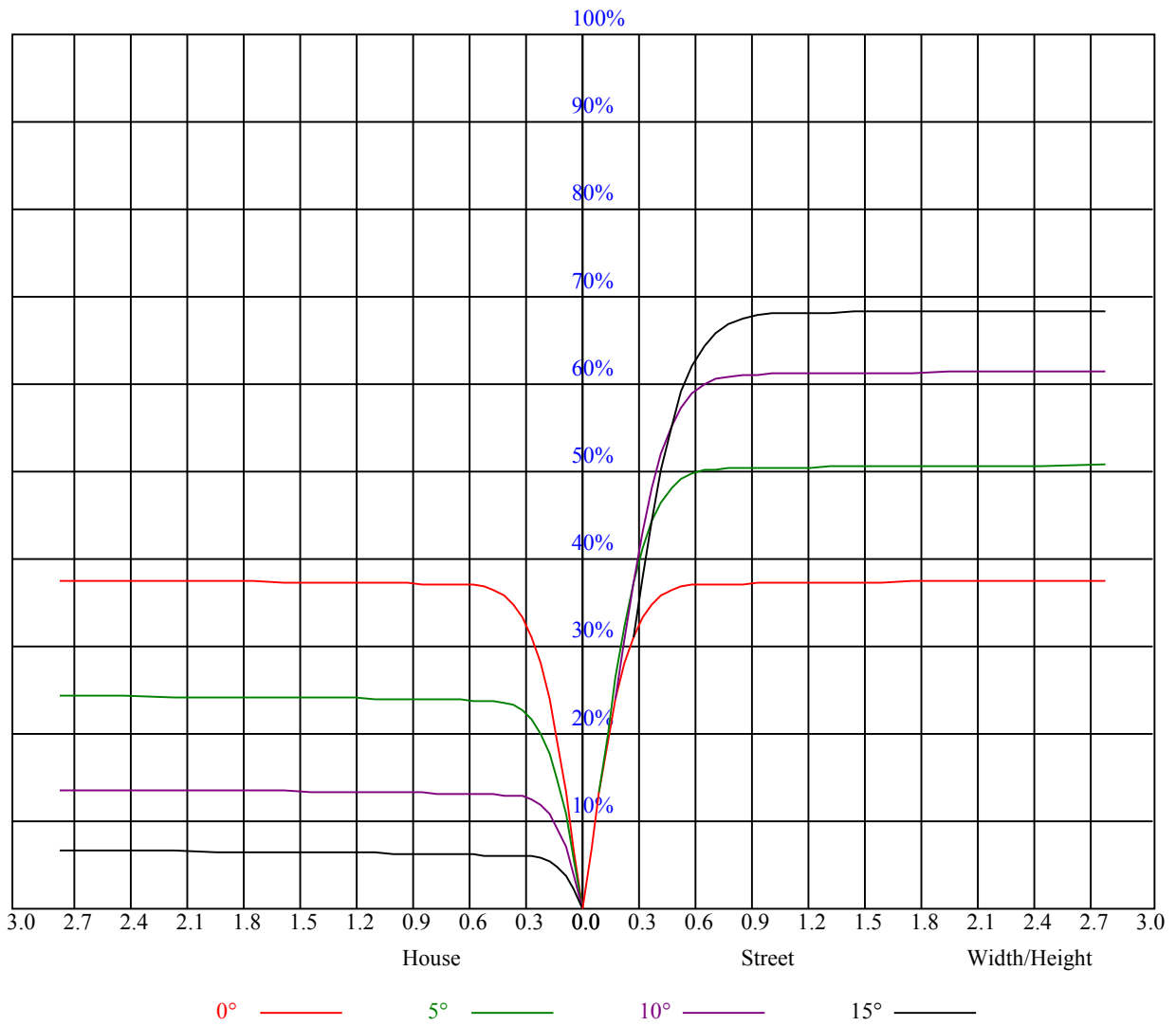
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.92	0.92	0.92	0.89	0.89	0.89	0.85	0.85	0.85	0.82	0.82	0.82	0.78	0.78	0.78	0.77
1	0.87	0.85	0.84	0.85	0.84	0.82	0.82	0.81	0.80	0.79	0.78	0.77	0.76	0.76	0.75	0.74
2	0.83	0.80	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.77	0.75	0.74	0.75	0.74	0.73	0.71
3	0.79	0.76	0.74	0.78	0.76	0.73	0.76	0.74	0.72	0.74	0.73	0.71	0.73	0.71	0.70	0.69
4	0.76	0.73	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.69	0.71	0.69	0.68	0.67
5	0.73	0.70	0.68	0.73	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.65
6	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.68	0.66	0.64	0.63
7	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.63	0.66	0.64	0.62	0.62
8	0.67	0.64	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.64	0.62	0.61	0.60
9	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.58
10	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.62	0.59	0.58	0.61	0.59	0.58	0.57



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	3467.25	3087.56	2179.69	1230.19	534.94	297.56	14.18	5.06	4.11
45.0	3466.13	3134.81	2356.88	1320.75	616.50	301.50	21.38	5.12	4.28
90.0	3482.44	3132.56	2274.75	1110.38	601.20	205.43	19.18	5.06	4.22
135.0	3449.81	3269.25	2569.50	1523.25	735.75	302.63	45.00	5.46	4.28
180.0	3467.25	3052.69	2287.13	1080.00	571.50	218.76	18.45	5.01	4.16
225.0	3466.13	3043.69	2120.06	1080.56	559.35	206.38	13.11	5.06	4.16
270.0	3482.44	3108.94	2205.00	1199.81	574.31	292.50	13.39	5.01	4.11
315.0	3449.81	2854.13	1918.13	1018.18	472.44	118.29	7.14	4.78	3.94
360.0	3467.25	3087.56	2179.69	1230.19	534.94	297.56	14.18	5.06	4.11
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	3.71	3.38	3.21	3.15	3.15	3.09	3.04	3.09	3.09
45.0	3.77	3.54	3.38	3.38	3.26	3.32	3.32	3.26	3.15
90.0	3.77	3.54	3.38	3.26	3.21	3.15	3.09	3.09	3.09
135.0	3.77	3.54	3.38	3.21	3.15	3.09	3.09	3.09	3.04
180.0	3.66	3.43	3.26	3.21	3.15	3.04	3.04	2.98	3.04
225.0	3.66	3.49	3.38	3.32	3.26	3.26	3.26	3.38	3.71
270.0	3.71	3.43	3.32	3.21	3.21	3.15	3.15	3.09	3.15
315.0	3.54	3.38	3.26	3.21	3.15	3.09	3.15	3.15	3.09
360.0	3.71	3.38	3.21	3.15	3.15	3.09	3.04	3.09	3.09
C/ $\gamma$ (°)	90.0								
0.0	3.04								
45.0	3.09								
90.0	3.04								
135.0	3.04								
180.0	3.04								
225.0	3.15								
270.0	3.15								
315.0	3.04								
360.0	3.04								