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## Nata

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LumCAT: 3-2035-M	
Luminaire: 92.70.135.00	
Report No: NATA0100	Voltage(V): 34.0000
Test No: GC2018070407	Current(A): 0.5000
LampCAT: NICHIA NFCWD096B-V3	Power (W): 17.0000
Lamp flux(lm): 2202.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 78	Width(mm): 78
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1954.72  
Efficiency(%): 88.77%  
Lumens(lm)/Power(W): 114.98  
Central intensity(cd): 3392.740  
Maximum intensity(cd): 3392.740  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=42.9  
                                  [C90/270]Total=42.9  
Field angle(10%Imax): [C0/180]Total=73.9  
                                  [C90/270]Total=73.9  
Maximum s/h(1/2): C0\_180=0.69 C90\_270=0.69  
Maximum s/h(1/4): C0\_180=0.70 C90\_270=0.70  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 89.61%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.773%

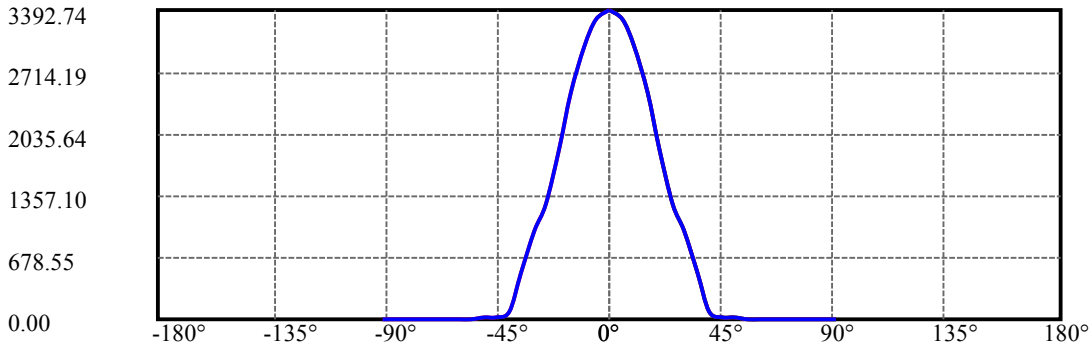
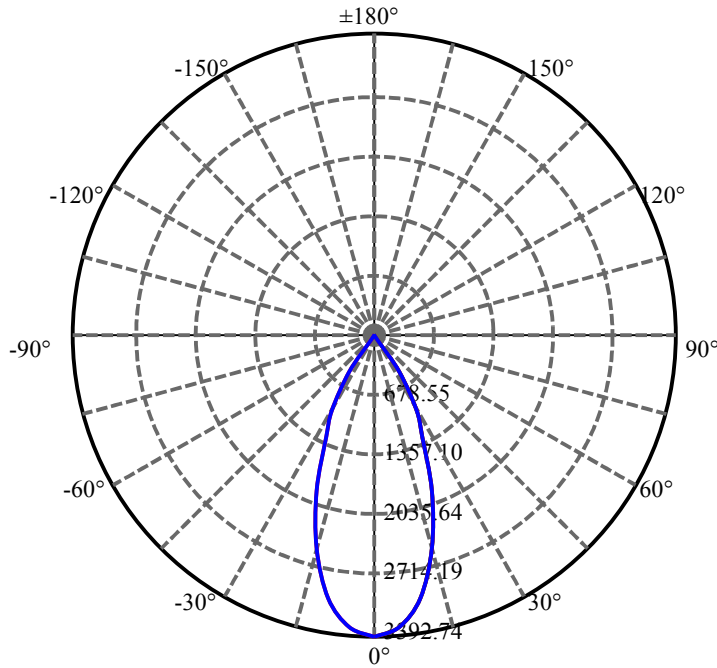
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3392.741	20.289	20.289	.921%	1.038%
5.0	3289.950	157.172	177.461	7.138%	9.079%
10.0	2998.427	285.399	462.861	12.961%	23.679%
15.0	2494.220	353.851	816.712	16.070%	41.781%
20.0	1870.211	350.616	1167.327	15.923%	59.718%
25.0	1262.443	292.449	1459.776	13.281%	74.680%
30.0	965.304	264.560	1724.336	12.015%	88.214%
35.0	505.913	159.058	1883.394	7.223%	96.351%
40.0	76.914	27.099	1910.494	1.231%	97.737%
45.0	13.269	5.143	1915.636	.234%	98.001%
50.0	10.791	4.531	1920.168	.206%	98.232%
55.0	10.020	4.499	1924.667	.204%	98.462%
60.0	9.580	4.548	1929.214	.207%	98.695%
65.0	9.194	4.568	1933.782	.207%	98.929%
70.0	8.919	4.594	1938.376	.209%	99.164%
75.0	8.754	4.635	1943.011	.210%	99.401%
80.0	8.644	4.666	1947.677	.212%	99.640%
85.0	8.589	4.690	1952.367	.213%	99.880%
90.0	8.589	2.354	1954.721	.107%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1724.34	78.31%	88.21%
0-40	1910.49	86.76%	97.74%
0-60	1929.21	87.61%	98.70%
0-90	1952.37	88.66%	99.88%
0-120	1952.37	88.66%	99.88%
0-180	1954.72	88.77%	100.00%
60-90	27.70	1.26%	1.42%
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%
0-26.97	1563.78	71.02%	80.00%

ZONAL LUMEN SUMMARY

0-10	462.86
10-20	704.47
20-30	557.01
30-40	186.16
40-50	9.67
50-60	9.05
60-70	9.16
70-80	9.30
80-90	4.69
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

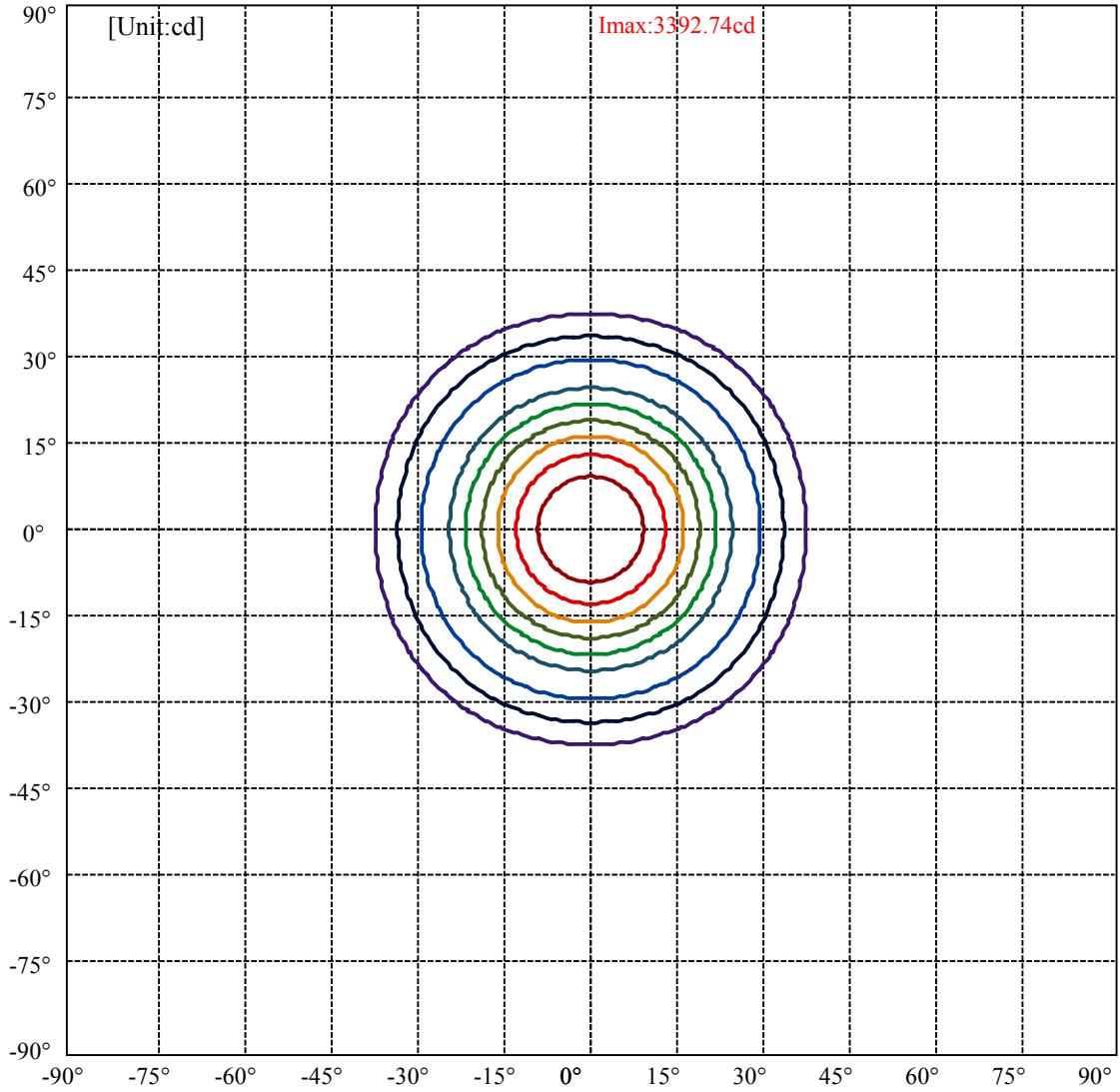


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

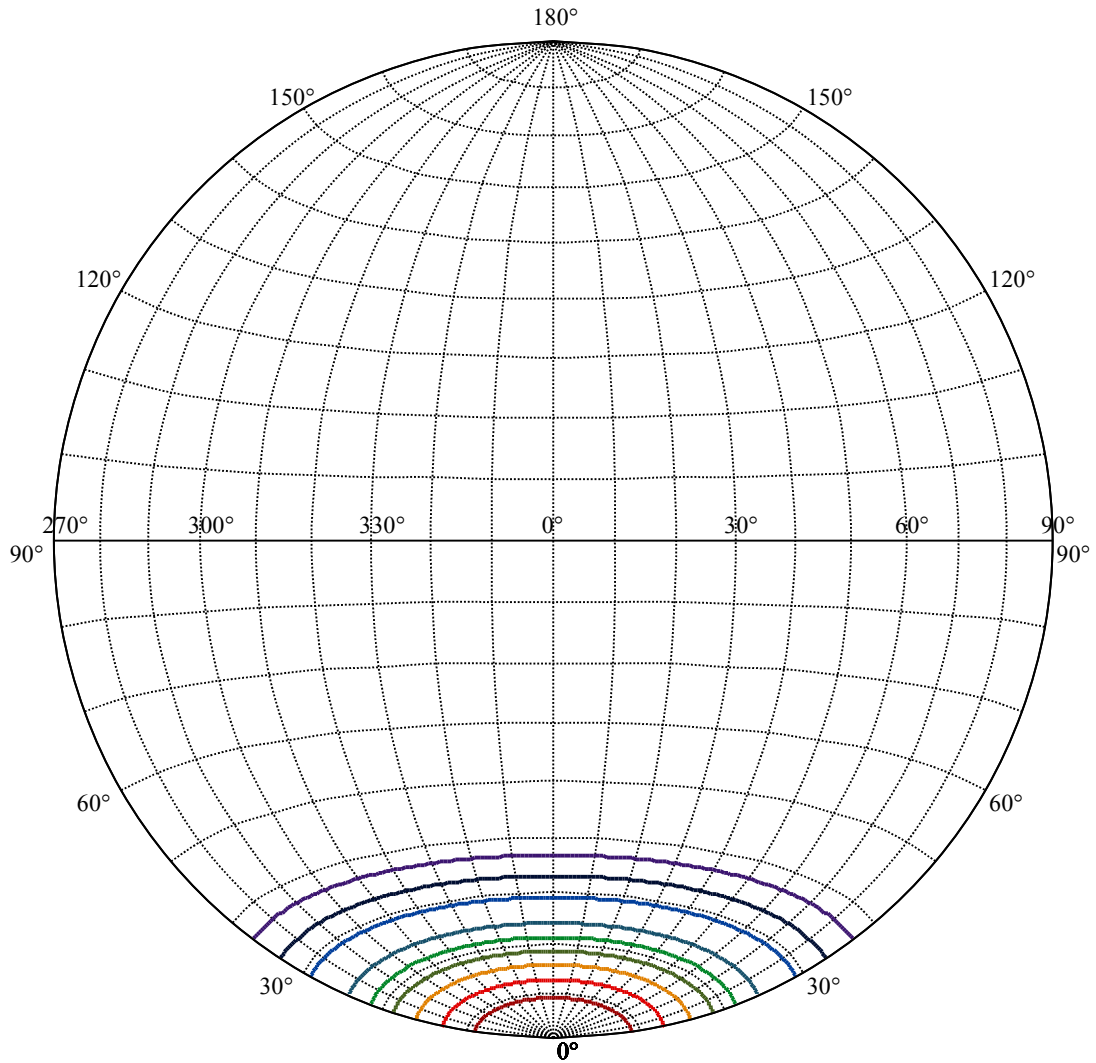
Field angle(10%Imax):C0/180Left:36.9 Right:36.9  
:C90/270Left:36.9 Right:36.9

Beam Angle(50%Imax):C0/180Left:21.4 Right:21.4  
:C90/270Left:21.4 Right:21.4





(10%Imax) 339.274	—
(20%Imax) 678.548	—
(30%Imax) 1017.82	—
(40%Imax) 1357.1	—
(50%Imax) 1696.37	—
(60%Imax) 2035.64	—
(70%Imax) 2374.92	—
(80%Imax) 2714.19	—
(90%Imax) 3053.47	—



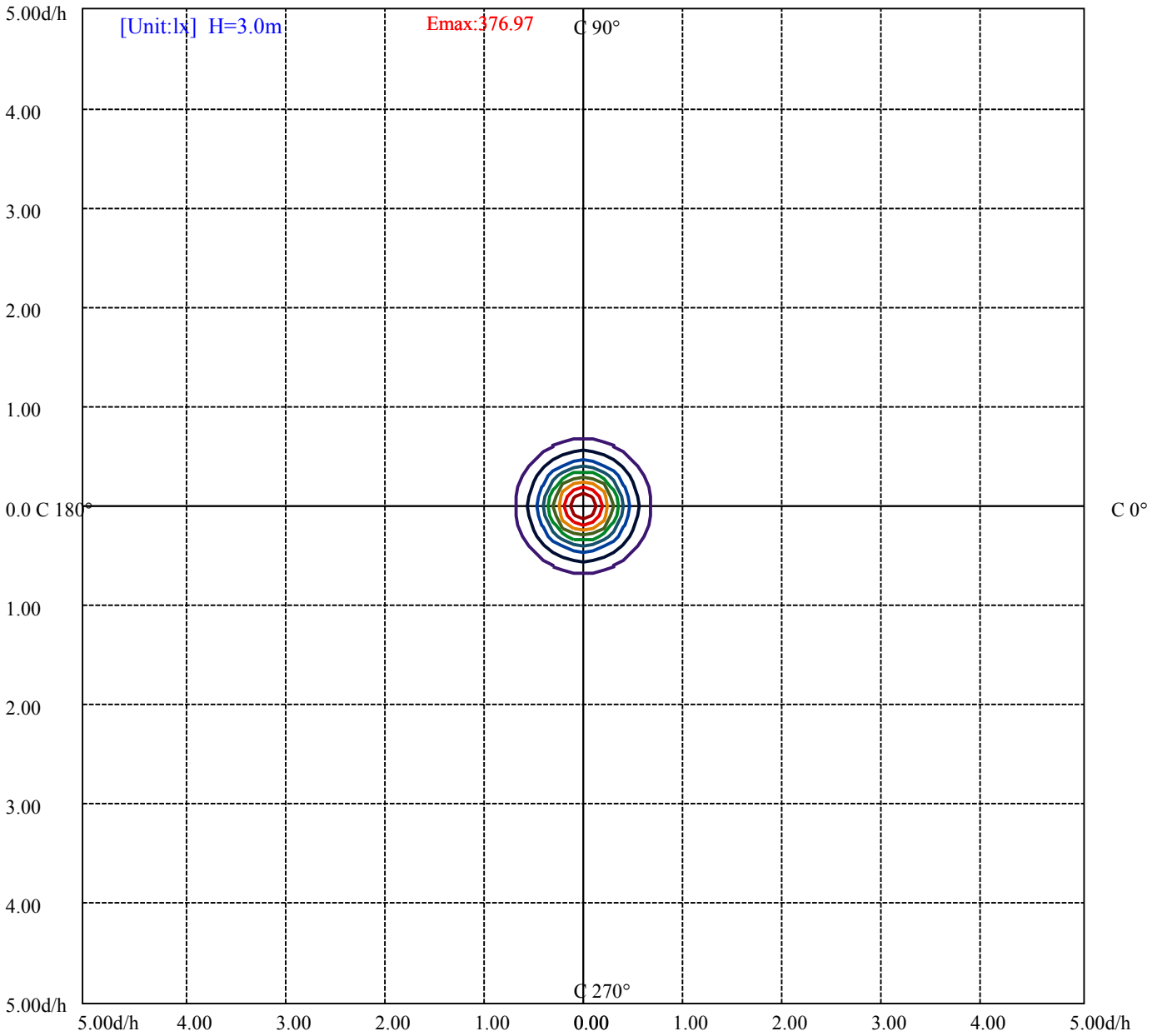
House

[Unit:cd]

Road

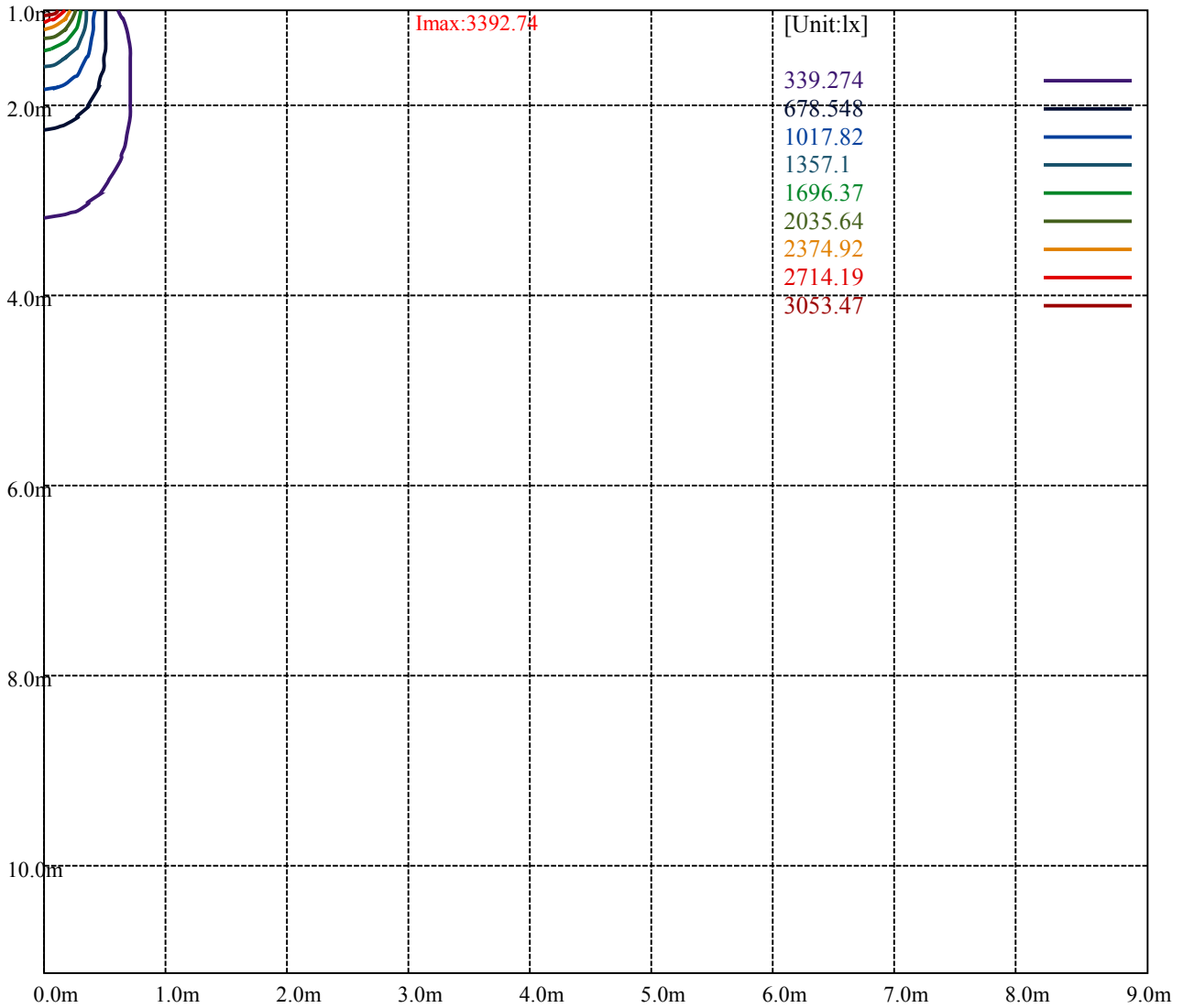
**Imax:3392.74**

(10%Imax) 339.274	—
(20%Imax) 678.548	—
(30%Imax) 1017.82	—
(40%Imax) 1357.1	—
(50%Imax) 1696.37	—
(60%Imax) 2035.64	—
(70%Imax) 2374.92	—
(80%Imax) 2714.19	—
(90%Imax) 3053.47	—



- (10%Emax) 37.69711
- (20%Emax) 75.39411
- (30%Emax) 113.0911
- (40%Emax) 150.7878
- (50%Emax) 188.4855
- (60%Emax) 226.1822
- (70%Emax) 263.88
- (80%Emax) 301.5767
- (90%Emax) 339.2733





Luminance Table

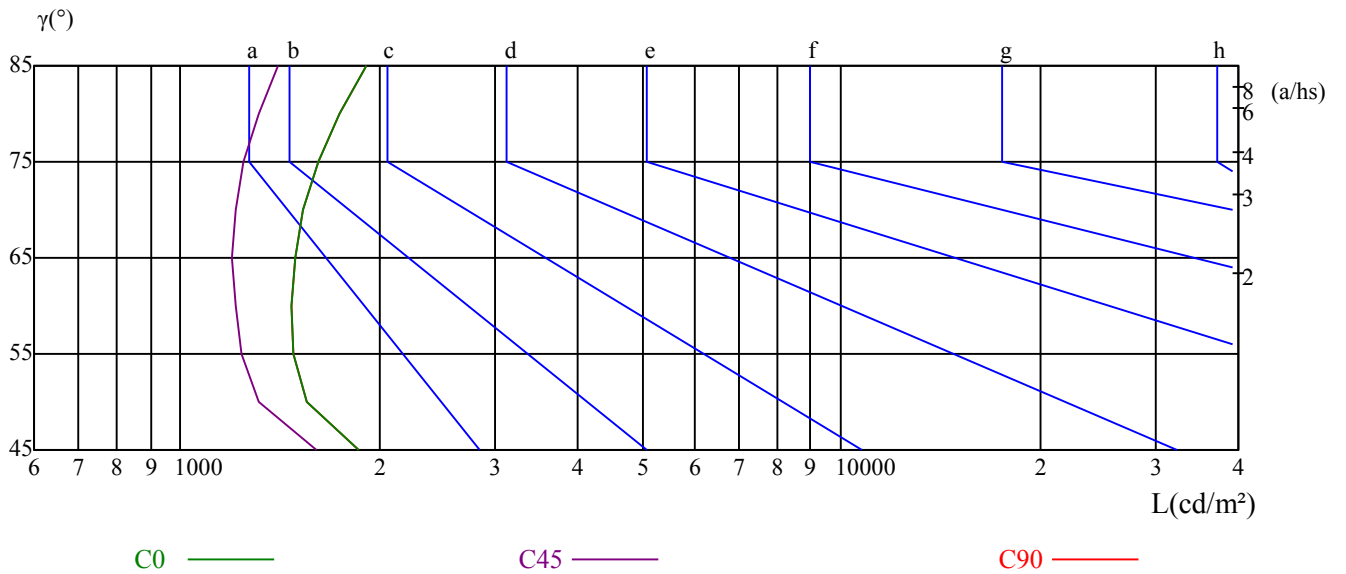
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1865	1551	1485	1477	1489	1533	1616	1738	1912
C45	1602	1313	1237	1210	1199	1211	1249	1310	1400
C90	1865	1551	1485	1477	1489	1533	1616	1738	1912

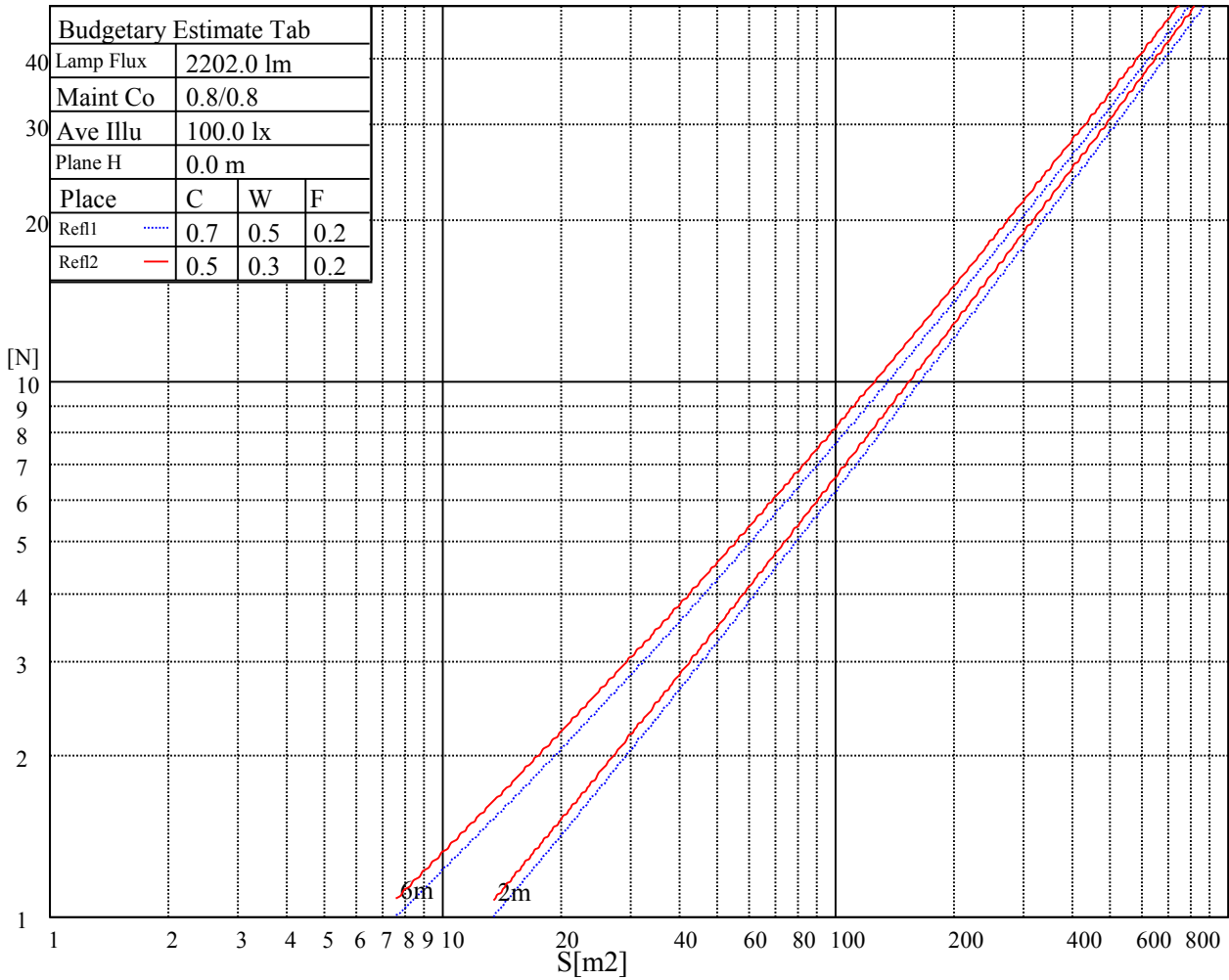
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3576	3576	3576	5559	5559	5559	16197	16197	16197

Glare Table

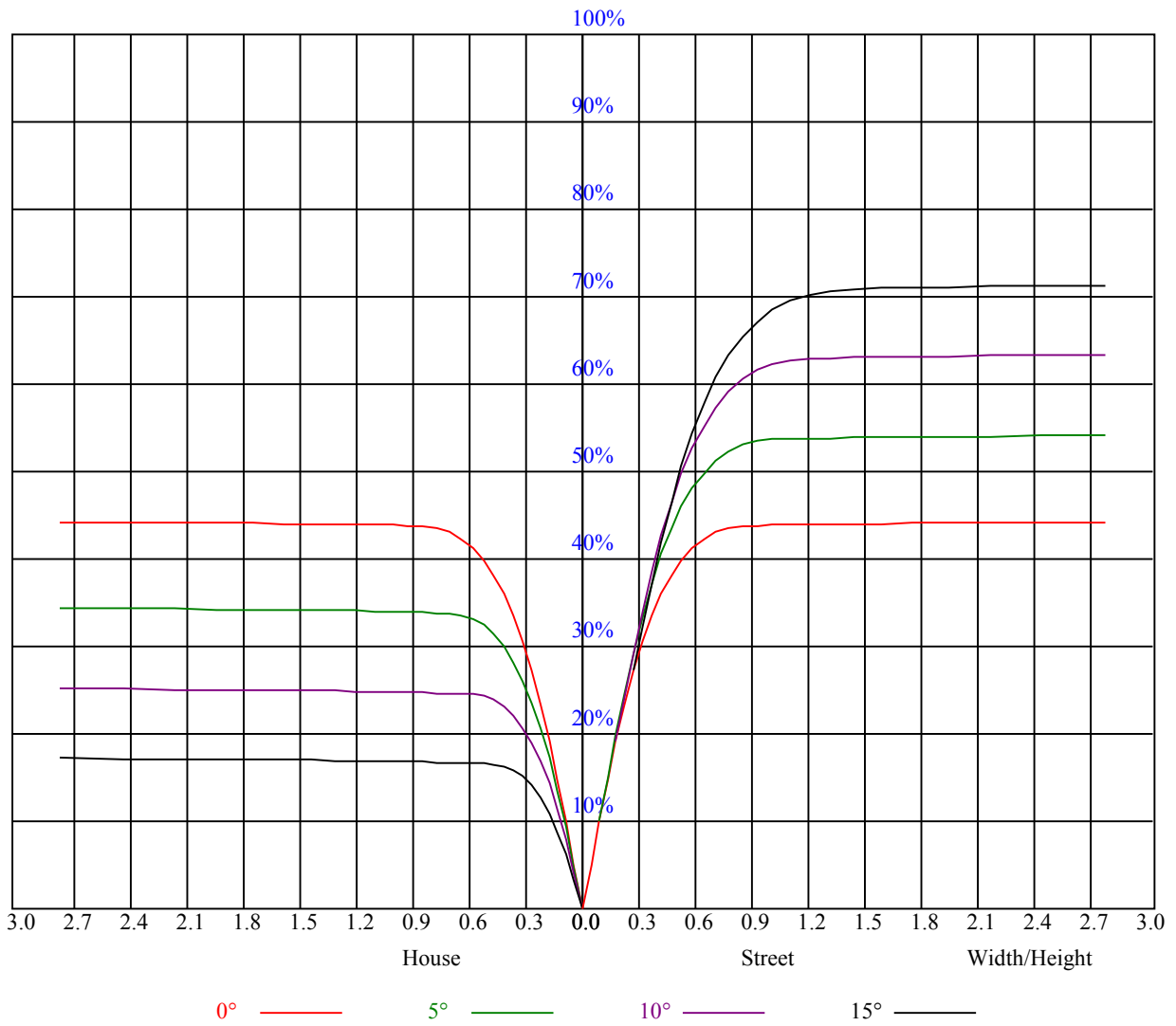
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.97	0.95	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.83
2	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.81	0.79
3	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.78	0.77	0.75
4	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.69
6	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.60
9	0.67	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58
10	0.64	0.60	0.57	0.64	0.60	0.57	0.63	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	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
45.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
90.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
135.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
180.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
225.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
270.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
315.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
360.0	3392.74	3289.95	2998.43	2494.22	1870.21	1262.44	965.30	505.91	76.91
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
45.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
90.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
135.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
180.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
225.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
270.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
315.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
360.0	13.27	10.79	10.02	9.58	9.19	8.92	8.75	8.64	8.59
C/γ(°)	90.0								
0.0	8.59								
45.0	8.59								
90.0	8.59								
135.0	8.59								
180.0	8.59								
225.0	8.59								
270.0	8.59								
315.0	8.59								
360.0	8.59								