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Nata

LumCAT: LN01D04536DA-N

Luminaire: 97.70.234.00

Report No: 201228-B004

Test No: 201228-C004

LampCAT: CXM-9-TC40 LES9.8

Lamp flux(lm): 2079.0

Number of Lamps: 1

Length(mm): 92

Phm Type: C

Voltage(V): 35.0700

Current(A): 0.5000

Power (W): 17.5350

PF: 0.0000

Ballast type: DC

Width(mm): 92

Height(mm): 50

Photometric Results

Lumens(lm): 1910.77

Efficiency(%): 91.91%

Lumens(lm)/Power(W): 108.97

Central intensity(cd): 3666.938

Maximum intensity(cd): 3666.938

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=40.8

[C90/270]Total=40.8

Field angle(10%Imax): [C0/180]Total=66.2

[C90/270]Total=66.2

Maximum s/h(1/2): C0_180=0.67 C90_270=0.67

Maximum s/h(1/4): C0_180=0.64 C90_270=0.64

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.91%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.807%

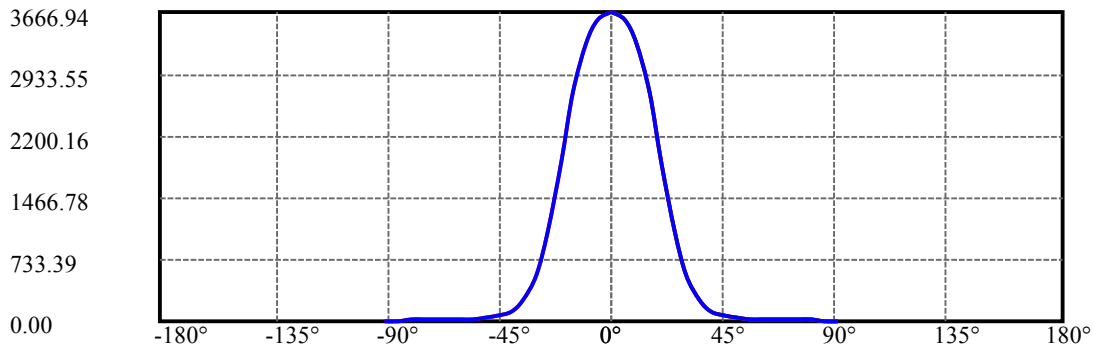
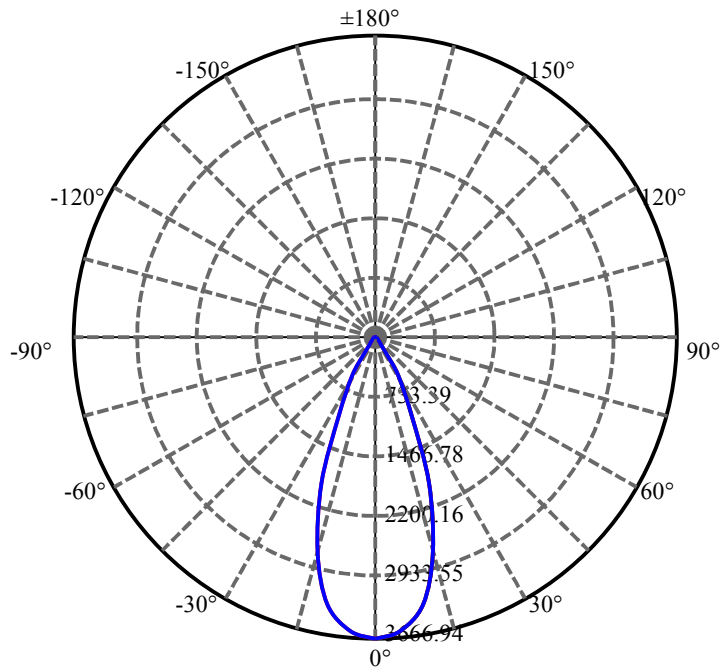
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3666.938	0.000	0	.000%	.000%
5.0	3585.375	86.699	86.699	4.170%	4.537%
10.0	3307.641	246.585	333.284	11.861%	17.442%
15.0	2701.758	356.473	689.758	17.146%	36.098%
20.0	1898.016	379.086	1068.844	18.234%	55.938%
25.0	1063.863	310.646	1379.49	14.942%	72.196%
30.0	543.220	203.378	1582.868	9.782%	82.839%
35.0	259.945	118.272	1701.14	5.689%	89.029%
40.0	123.300	63.942	1765.081	3.076%	92.376%
45.0	67.163	35.266	1800.347	1.696%	94.221%
50.0	42.574	22.174	1822.521	1.067%	95.382%
55.0	28.835	15.527	1838.048	.747%	96.194%
60.0	21.846	11.715	1849.762	.563%	96.807%
65.0	20.088	10.194	1859.957	.490%	97.341%
70.0	22.781	10.855	1870.812	.522%	97.909%
75.0	26.030	12.758	1883.57	.614%	98.577%
80.0	22.655	13.027	1896.597	.627%	99.258%
85.0	10.455	8.997	1905.593	.433%	99.729%
90.0	8.438	5.173	1910.766	.249%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1582.87	76.14%	82.84%
0-40	1765.08	84.90%	92.38%
0-60	1849.76	88.97%	96.81%
0-90	1905.59	91.66%	99.73%
0-120	1905.59	91.66%	99.73%
0-180	1910.77	91.91%	100.00%
60-90	67.55	3.25%	3.54%
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%
0-28.67	1528.61	73.53%	80.00%

ZONAL LUMEN SUMMARY

0-10	333.28
10-20	735.56
20-30	514.02
30-40	182.21
40-50	57.44
50-60	27.24
60-70	21.05
70-80	25.78
80-90	9.00
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: —————

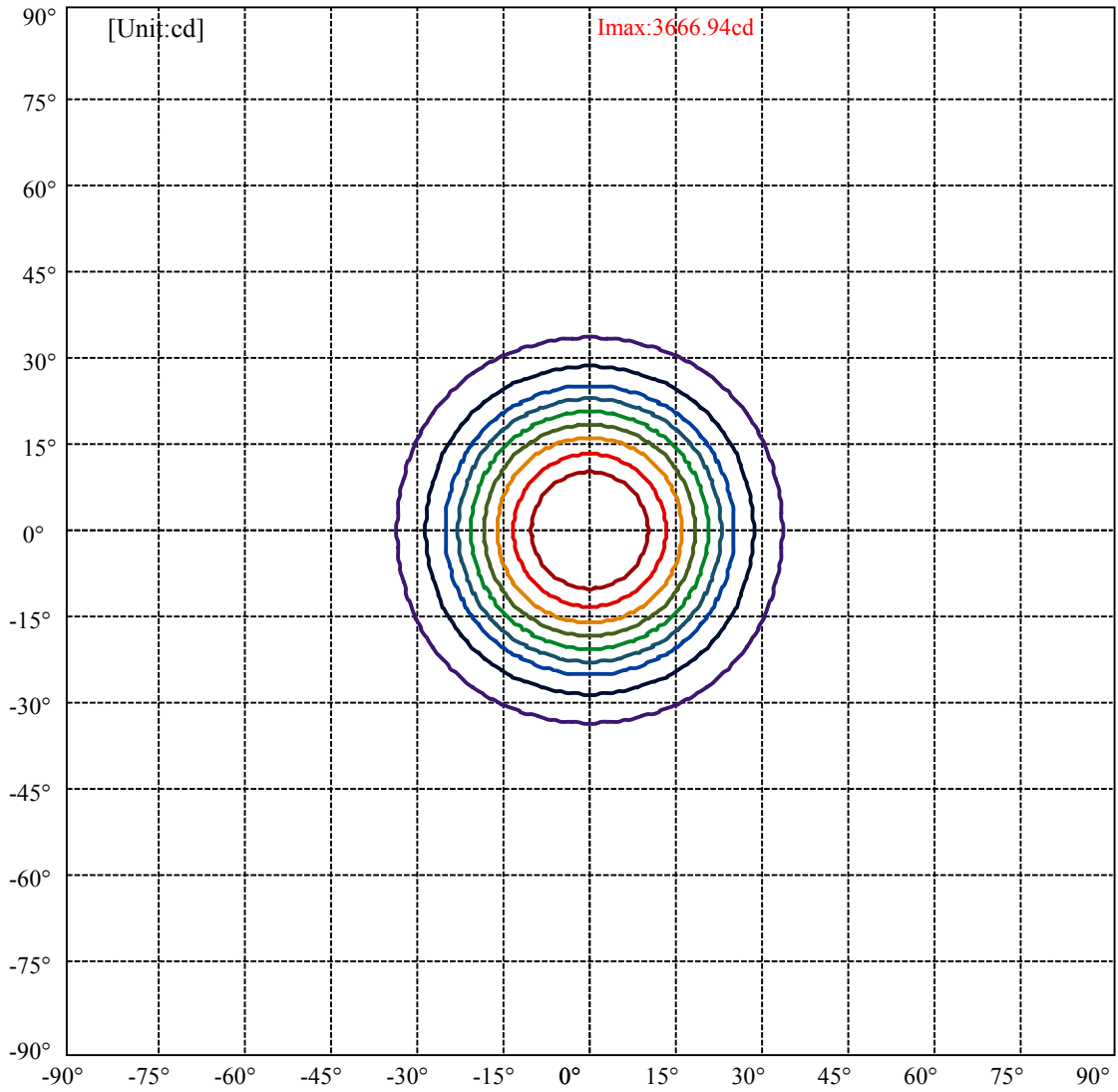
C90/C270: —————

Field angle(10%Imax):C0/180Left:33.1 Right:33.1

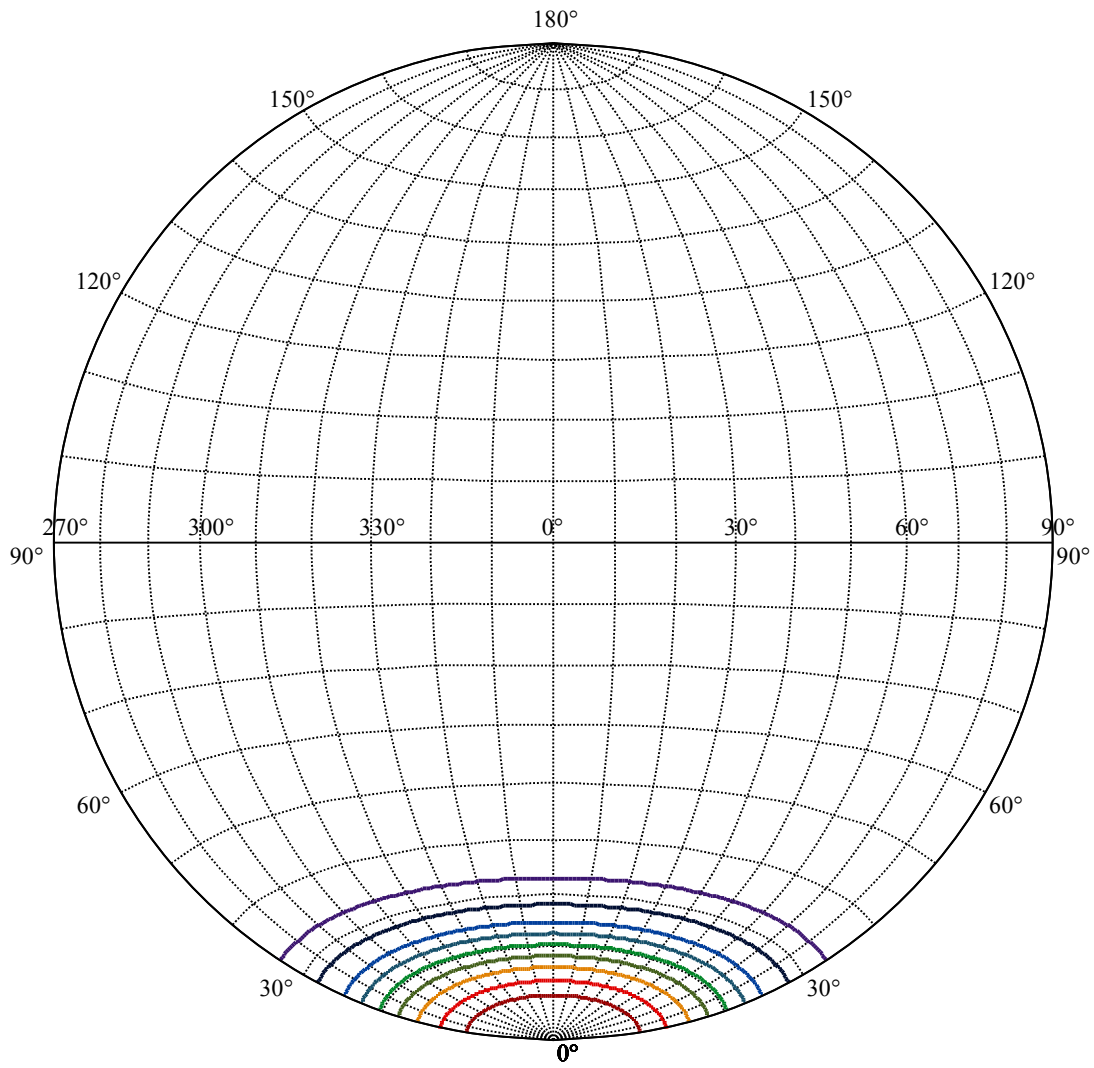
:C90/270Left:33.1 Right:33.1

Beam Angle(50%Imax):C0/180Left:20.4 Right:20.4

:C90/270Left:20.4 Right:20.4



(10%Imax) 366.694	—
(20%Imax) 733.388	—
(30%Imax) 1100.08	—
(40%Imax) 1466.78	—
(50%Imax) 1833.47	—
(60%Imax) 2200.16	—
(70%Imax) 2566.86	—
(80%Imax) 2933.55	—
(90%Imax) 3300.24	—












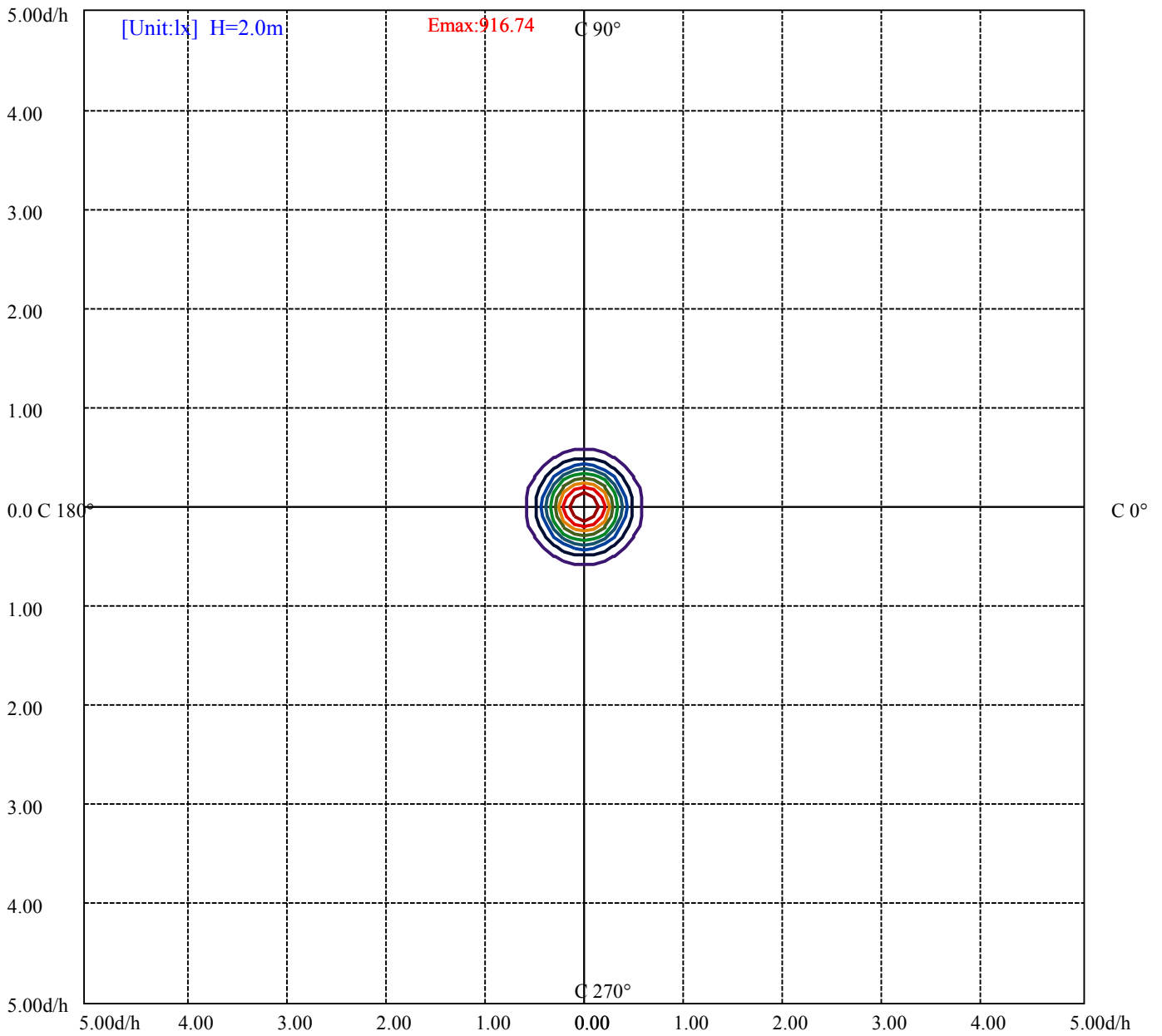
House

[Unit:cd]

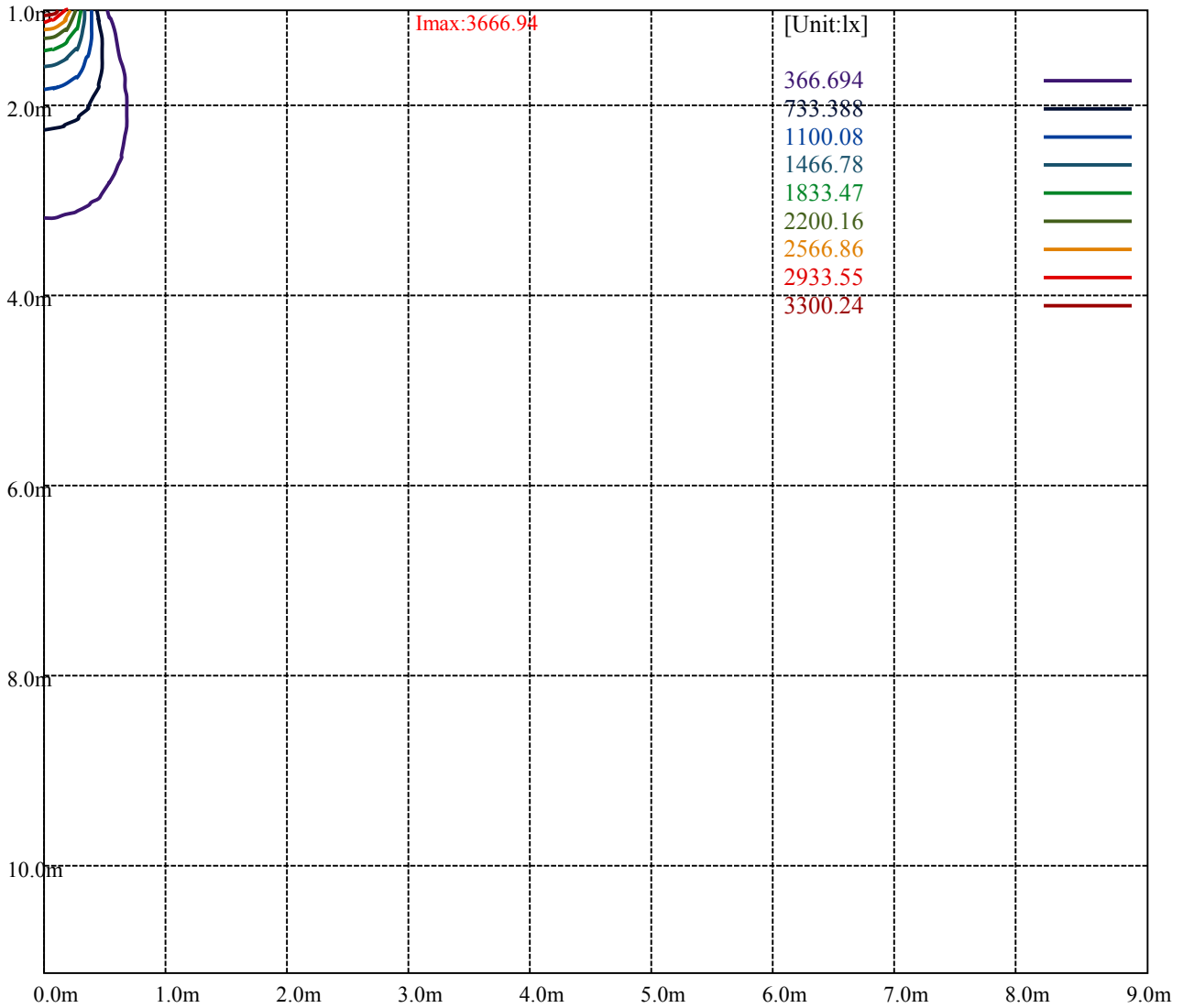
Road

Imax:3666.94

(10%Imax)	366.694	
(20%Imax)	733.388	
(30%Imax)	1100.08	
(40%Imax)	1466.78	
(50%Imax)	1833.47	
(60%Imax)	2200.16	
(70%Imax)	2566.86	
(80%Imax)	2933.55	
(90%Imax)	3300.24	



- (10%Emax) 91.6735
- (20%Emax) 183.3468
- (30%Emax) 275.02
- (40%Emax) 366.6925
- (50%Emax) 458.3675
- (60%Emax) 550.04
- (70%Emax) 641.7125
- (80%Emax) 733.3875
- (90%Emax) 825.06



Luminance Table

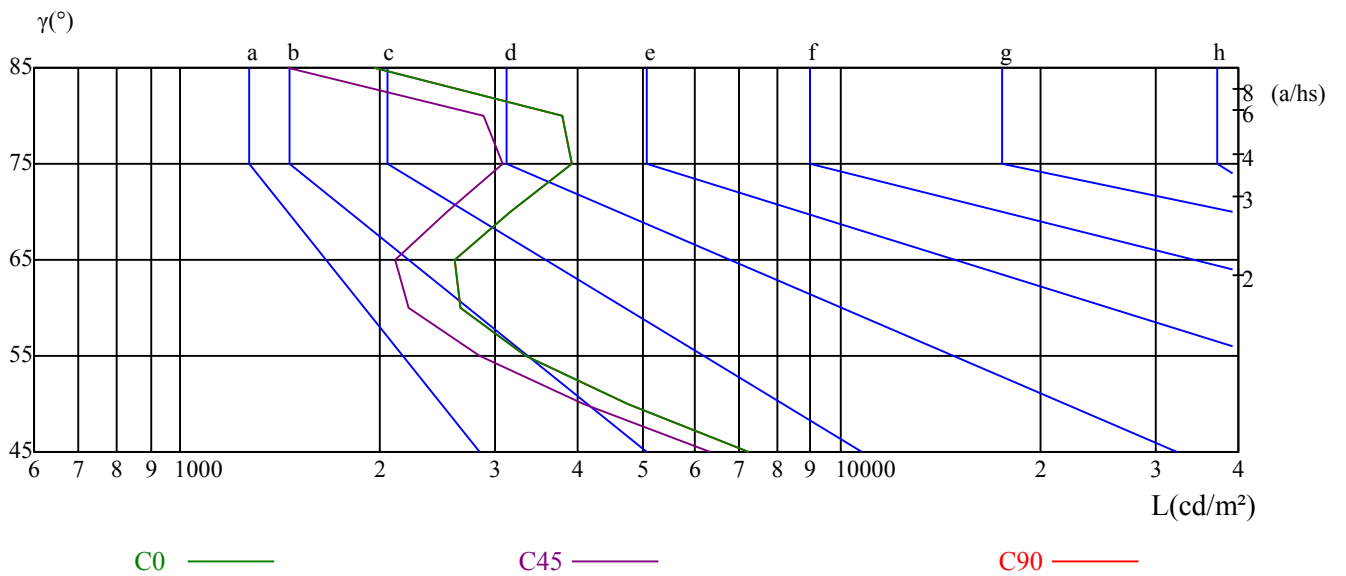
γ	45	50	55	60	65	70	75	80	85
C0	7271	4749	3344	2659	2593	3156	3924	3776	1965
C45	6345	4084	2832	2214	2121	2529	3072	2876	1448
C90	7271	4749	3344	2659	2593	3156	3924	3776	1965

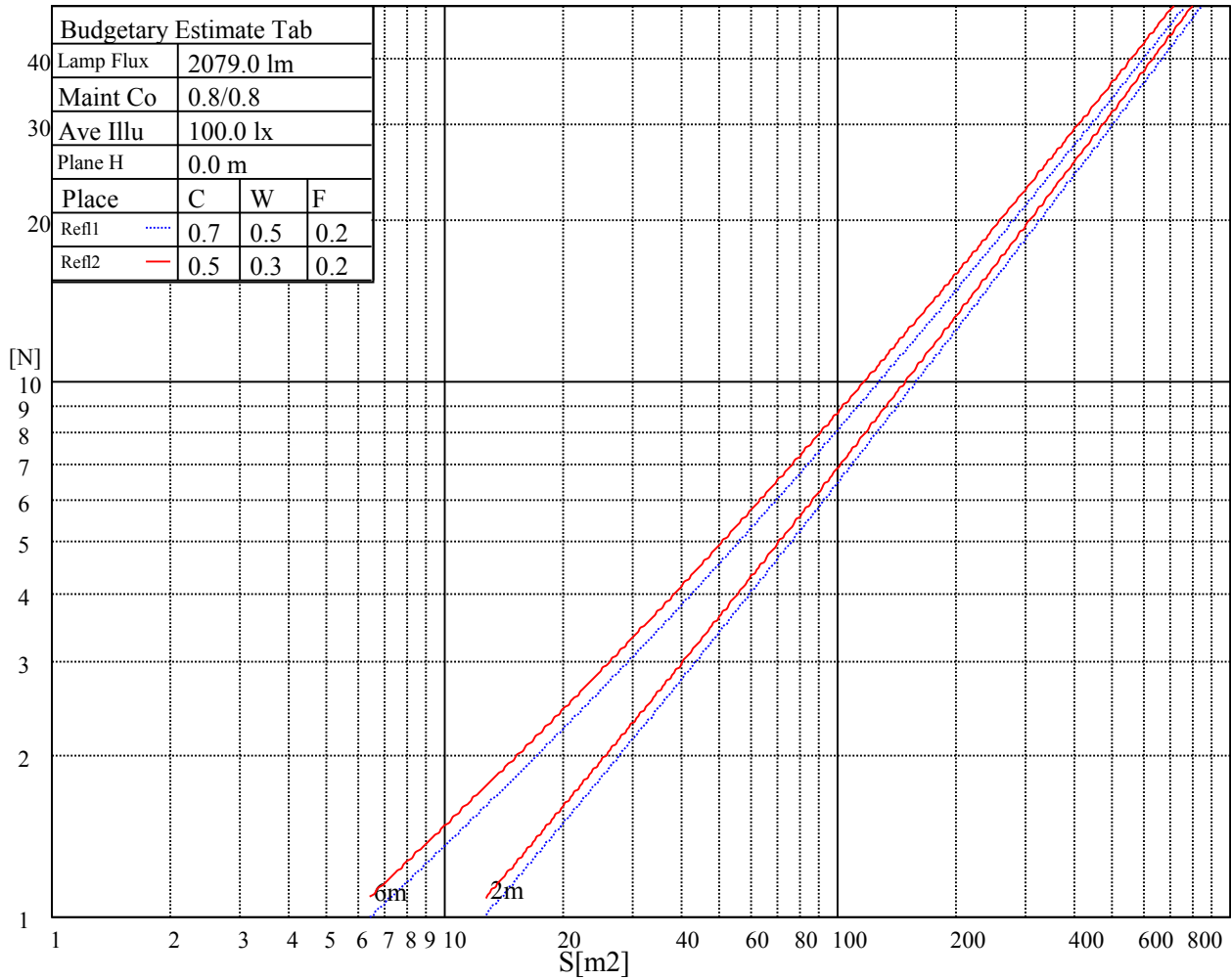
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5616	5616	5616	11882	11882	11882	14173	14173	14173

Glare Table

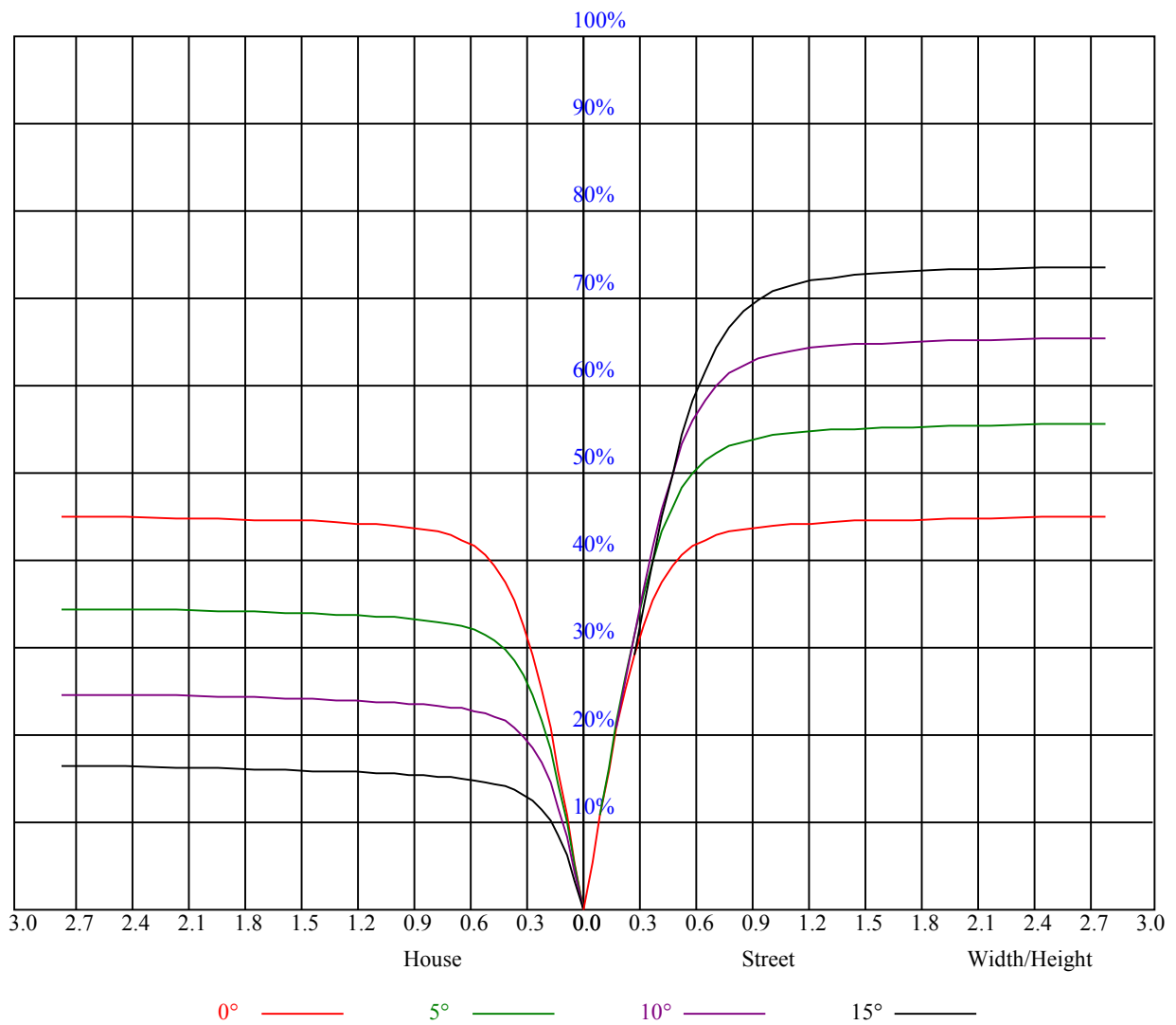
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	1.00	0.97	1.00	0.98	0.96	0.96	0.94	0.93	0.93	0.91	0.90	0.90	0.89	0.88	0.86
2	0.95	0.92	0.89	0.94	0.90	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.81
3	0.90	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.78	0.76
4	0.85	0.80	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.68
6	0.76	0.71	0.68	0.76	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
7	0.73	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.62
8	0.69	0.64	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.59
9	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.64	0.60	0.57	0.56
10	0.63	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.54



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	3661.88	3634.88	3434.63	2958.75	2214.56	1318.50	684.00	326.81	154.35
45.0	3670.88	3621.38	3398.63	2874.94	2091.38	1213.88	654.75	298.13	144.11
90.0	3664.13	3569.06	3258.56	2650.50	1800.56	955.29	507.66	229.16	110.53
135.0	3670.88	3559.50	3250.13	2608.88	1860.75	991.69	497.25	294.75	111.54
180.0	3661.88	3517.88	3110.63	2370.94	1545.19	807.92	387.06	175.05	94.11
225.0	3670.88	3551.63	3244.50	2534.06	1652.06	907.48	444.83	201.77	105.53
270.0	3664.13	3620.81	3420.00	2856.38	2031.19	1198.69	604.69	288.56	136.01
315.0	3670.88	3607.88	3344.06	2759.63	1988.44	1117.46	565.54	265.33	130.22
360.0	3661.88	3634.88	3434.63	2958.75	2214.56	1318.50	684.00	326.81	154.35
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	80.78	50.34	32.91	23.96	18.96	16.20	14.18	12.99	11.31
45.0	78.64	49.84	32.85	24.47	19.29	16.09	13.95	12.66	10.52
90.0	61.71	39.32	26.55	20.76	27.23	45.45	57.26	42.98	9.84
135.0	61.71	39.71	27.56	20.98	17.21	14.85	16.99	13.78	9.39
180.0	54.11	34.88	25.43	20.03	16.88	14.85	13.44	11.70	9.73
225.0	59.96	38.93	26.66	20.64	16.99	14.34	13.11	11.48	9.56
270.0	70.43	43.09	28.86	21.60	25.99	44.94	61.76	59.96	12.38
315.0	69.98	44.49	29.87	22.33	18.17	15.53	17.55	15.69	10.91
360.0	80.78	50.34	32.91	23.96	18.96	16.20	14.18	12.99	11.31
C/γ(°)	90.0								
0.0	8.89								
45.0	8.61								
90.0	8.10								
135.0	8.10								
180.0	8.66								
225.0	8.66								
270.0	8.21								
315.0	8.27								
360.0	8.89								