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Nata

LumCAT: 2-1719-A
Luminaire: 92.70.150.00+92.70.152.00
Report No: NT2017072112
Test No: GC2017072112
LampCAT: CITIZEN LCN-C02B
Lamp flux(lm): 1991.8
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 23.5000
Current(A): 0.7000
Power (W): 16.3800
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 1692.19
Efficiency(%): 84.96%
Lumens(lm)/Power(W): 103.31
Central intensity(cd): 8903.144
Maximum intensity(cd): 8903.144
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=17.3
 [C90/270]Total=17.3
Field angle(10%Imax): [C0/180]Total=42.3
 [C90/270]Total=42.3
Maximum s/h(1/2): C0_180=0.30 C90_270=0.30
Maximum s/h(1/4): C0_180=0.32 C90_270=0.32
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.55%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.791%

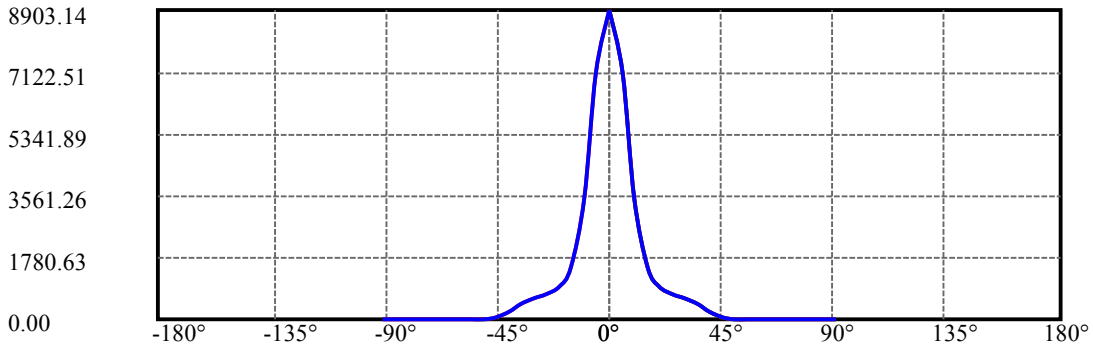
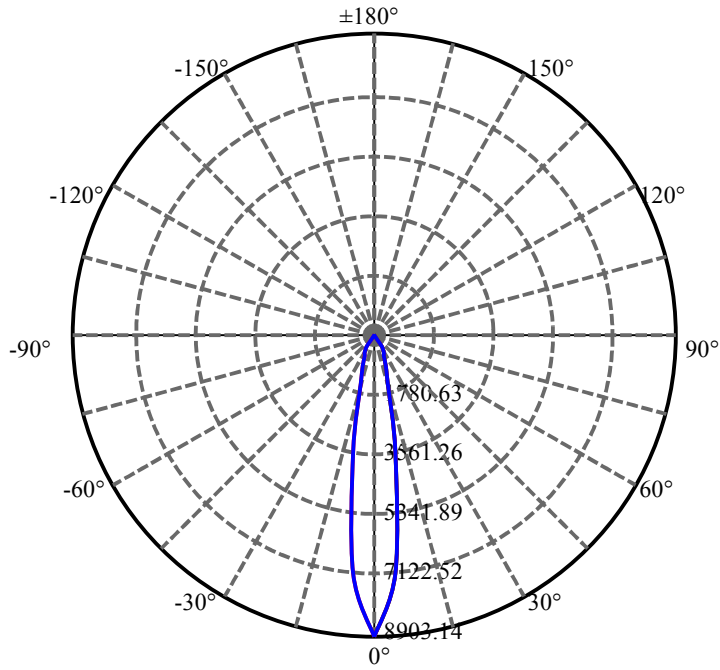
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8903.143	53.243	53.243	2.673%	3.146%
5.0	7053.506	336.969	390.212	16.918%	23.060%
10.0	3502.851	333.412	723.624	16.739%	42.763%
15.0	1488.402	211.157	934.781	10.601%	55.241%
20.0	943.253	176.835	1111.617	8.878%	65.691%
25.0	714.678	165.557	1277.174	8.312%	75.475%
30.0	606.018	166.091	1443.264	8.339%	85.290%
35.0	422.702	132.897	1576.161	6.672%	93.143%
40.0	194.864	68.658	1644.819	3.447%	97.201%
45.0	37.189	14.414	1659.233	.724%	98.052%
50.0	9.544	4.008	1663.241	.201%	98.289%
55.0	7.972	3.580	1666.82	.180%	98.501%
60.0	7.610	3.613	1670.433	.181%	98.714%
65.0	7.416	3.684	1674.117	.185%	98.932%
70.0	7.374	3.798	1677.915	.191%	99.156%
75.0	7.416	3.926	1681.841	.197%	99.388%
80.0	7.541	4.071	1685.912	.204%	99.629%
85.0	8.167	4.460	1690.371	.224%	99.893%
90.0	6.636	1.819	1692.19	.091%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1443.26	72.46%	85.29%
0-40	1644.82	82.58%	97.20%
0-60	1670.43	83.87%	98.71%
0-90	1690.37	84.87%	99.89%
0-120	1690.37	84.87%	99.89%
0-180	1692.19	84.96%	100.00%
60-90	23.55	1.18%	1.39%
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%
0-27.31	1353.75	67.97%	80.00%

ZONAL LUMEN SUMMARY

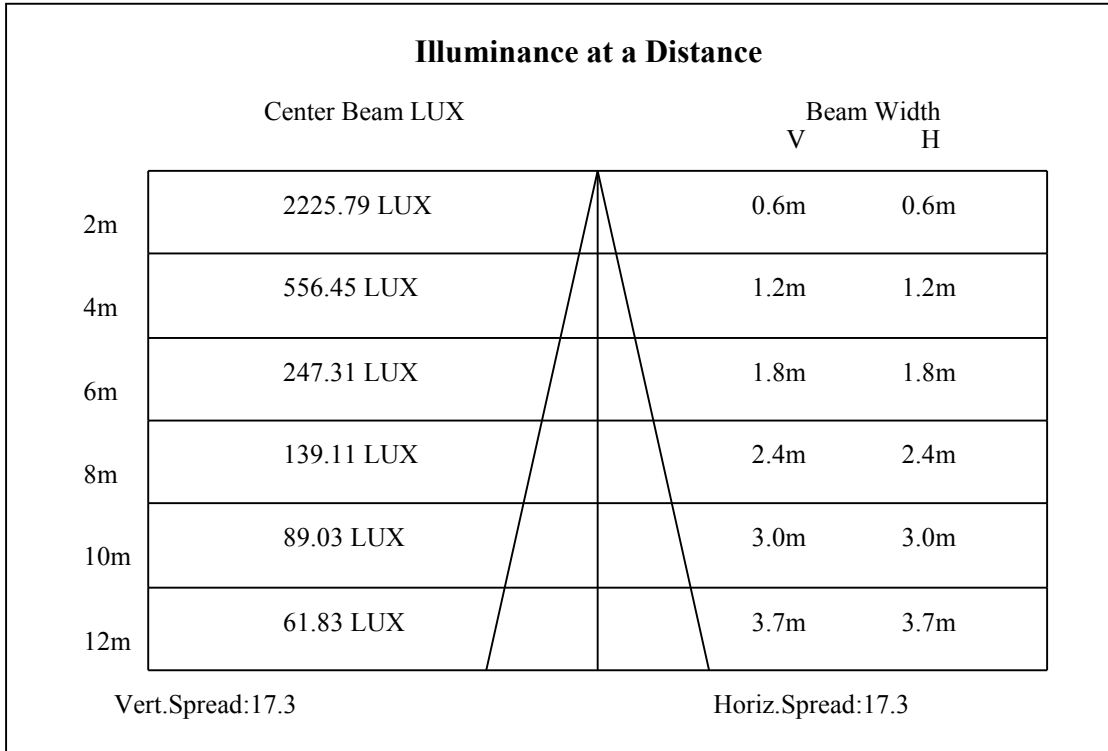
0-10	723.62
10-20	387.99
20-30	331.65
30-40	201.55
40-50	18.42
50-60	7.19
60-70	7.48
70-80	8.00
80-90	4.46
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

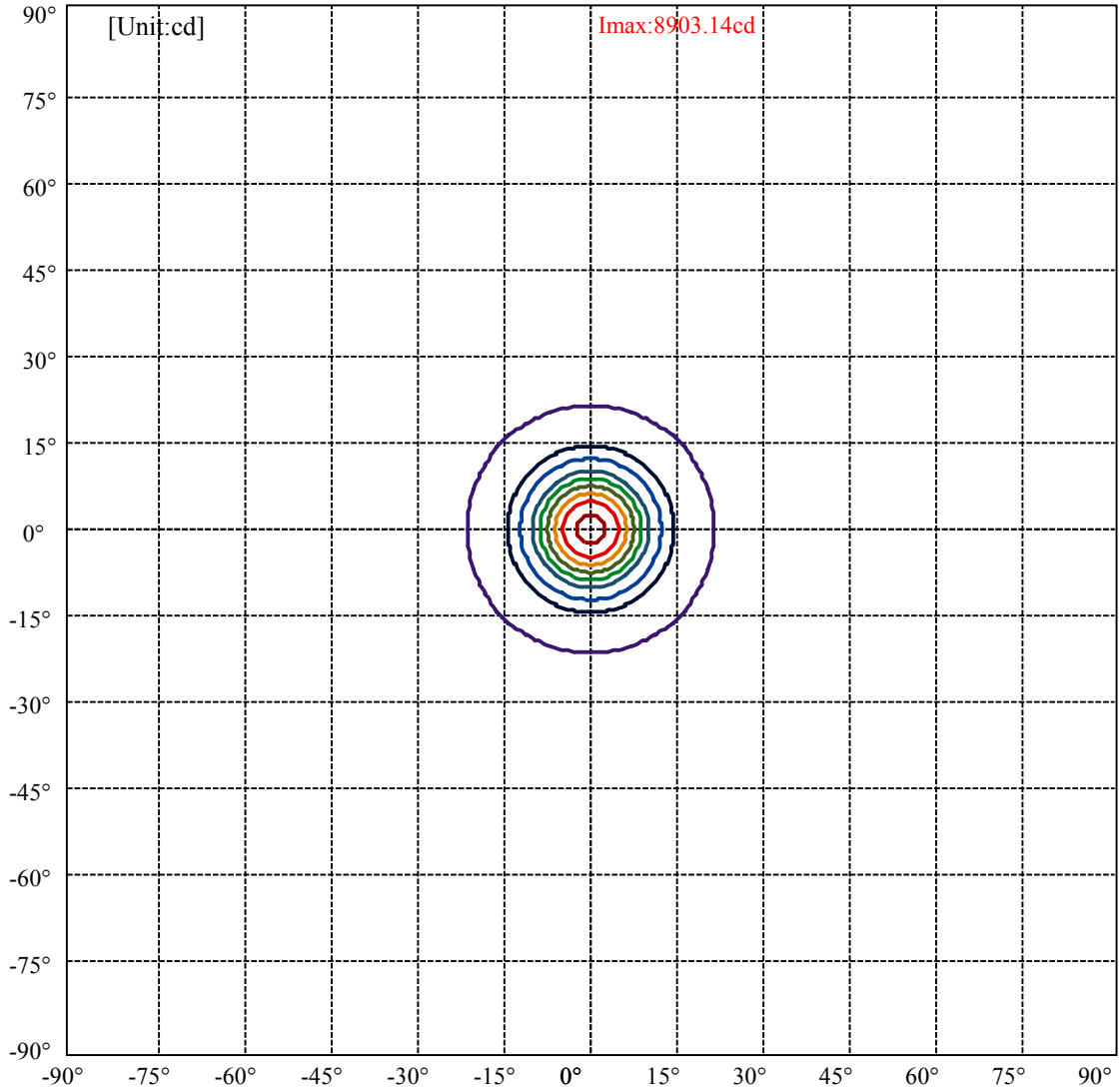


C0(Max): —————
C0/C180: —————
C90/C270: —————

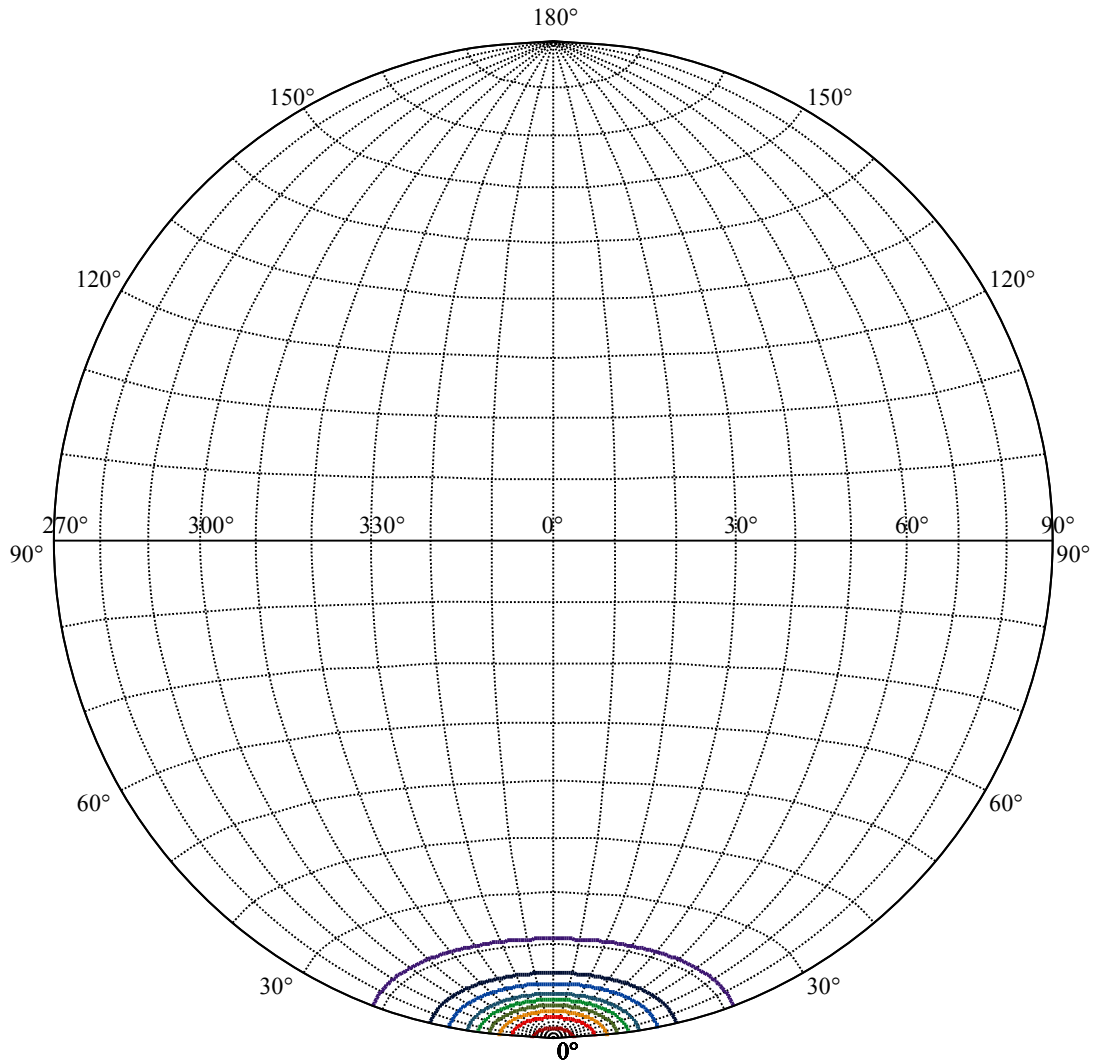
Field angle(10%Imax):C0/180Left:21.2 Right:21.2
:C90/270Left:21.2 Right:21.2

Beam Angle(50%Imax):C0/180Left:8.7 Right:8.7
:C90/270Left:8.7 Right:8.7





(10%Imax) 890.314	—
(20%Imax) 1780.63	—
(30%Imax) 2670.94	—
(40%Imax) 3561.26	—
(50%Imax) 4451.57	—
(60%Imax) 5341.89	—
(70%Imax) 6232.2	—
(80%Imax) 7122.51	—
(90%Imax) 8012.83	—



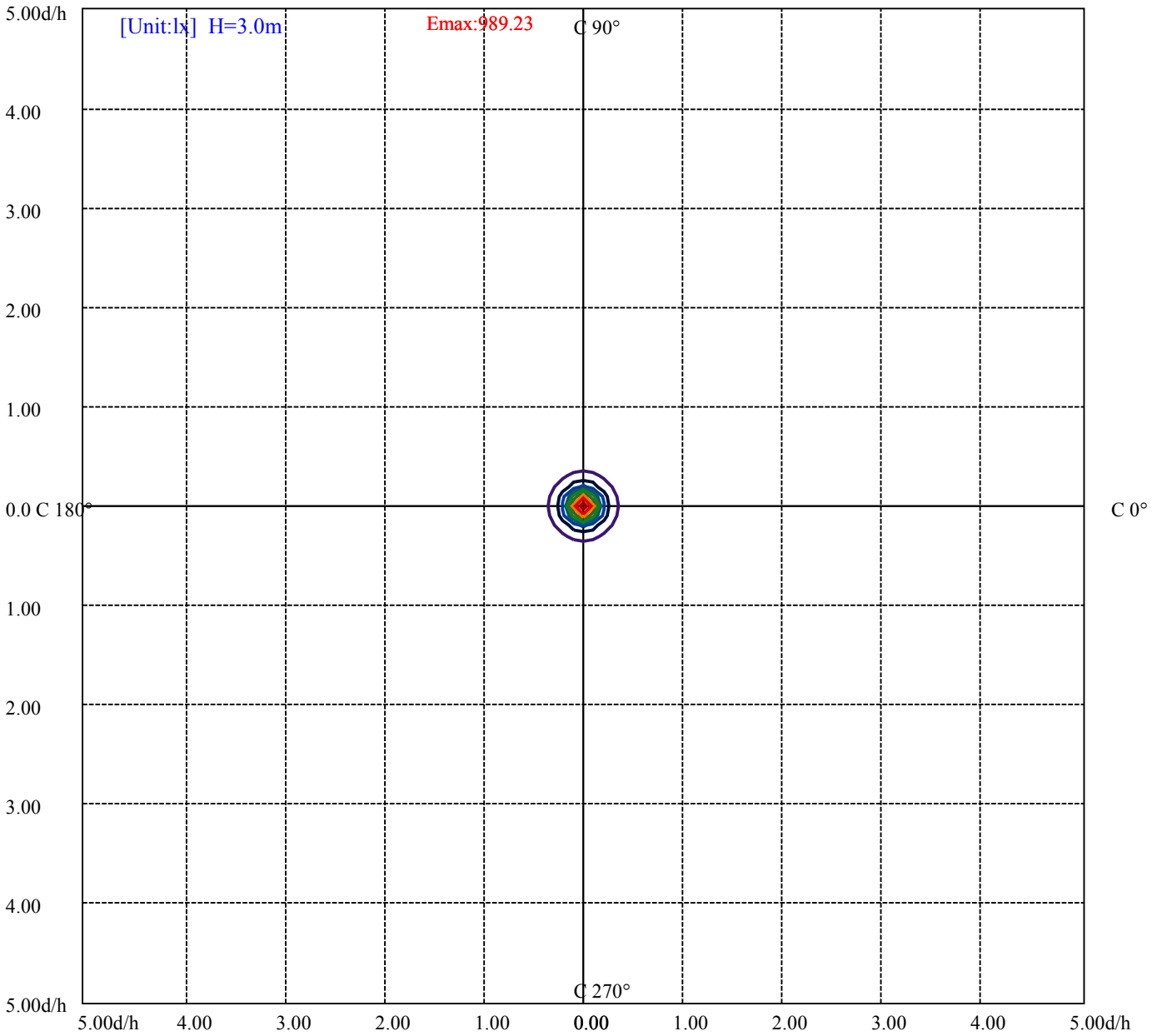
House

[Unit:cd]

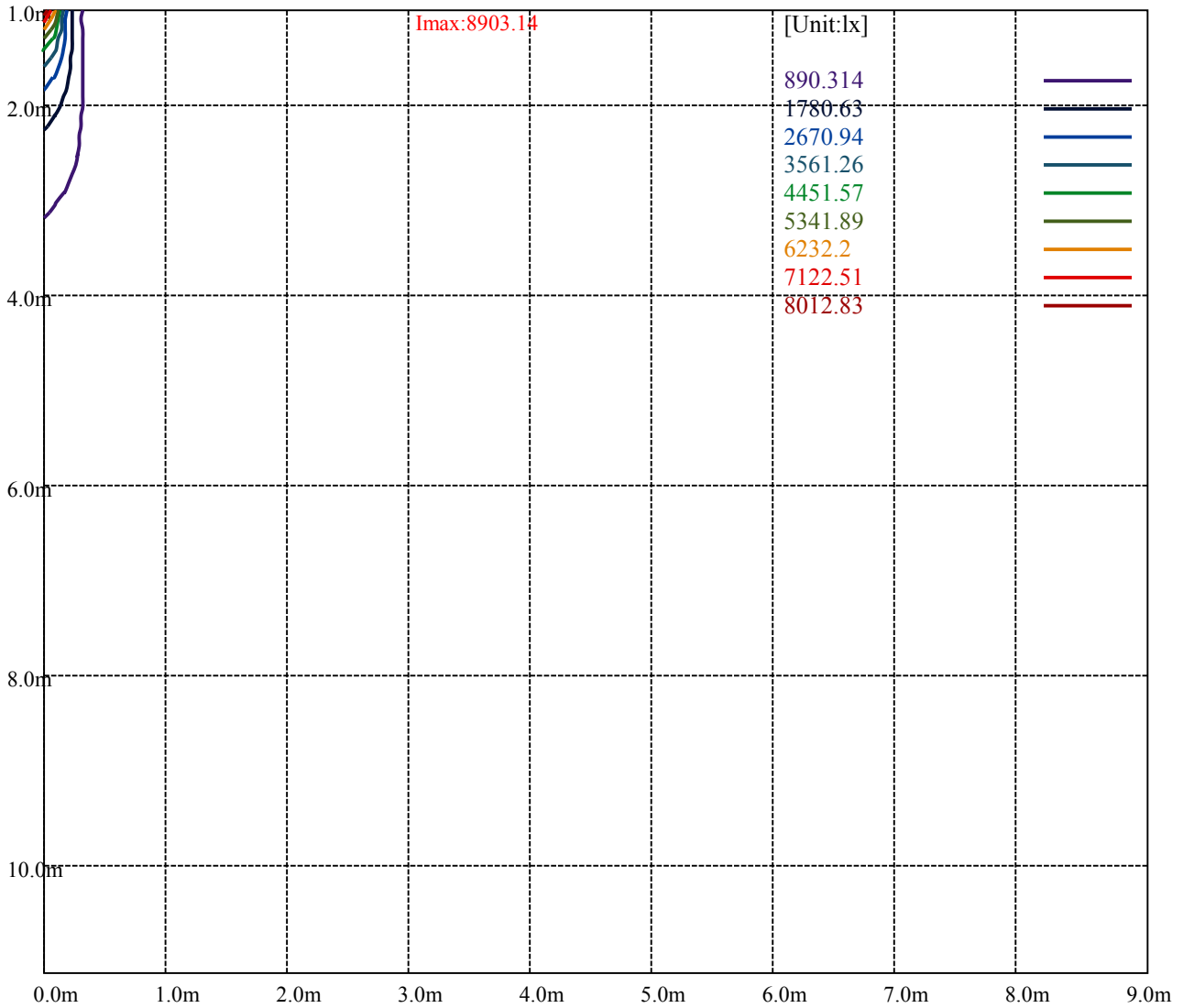
Road

Imax:8903.14

(10%Imax)	890.314	—
(20%Imax)	1780.63	—
(30%Imax)	2670.94	—
(40%Imax)	3561.26	—
(50%Imax)	4451.57	—
(60%Imax)	5341.89	—
(70%Imax)	6232.2	—
(80%Imax)	7122.51	—
(90%Imax)	8012.83	—



(10%Emax) 98.92323	—
(20%Emax) 197.8467	—
(30%Emax) 296.77	—
(40%Emax) 395.6933	—
(50%Emax) 494.6156	—
(60%Emax) 593.5389	—
(70%Emax) 692.4622	—
(80%Emax) 791.3856	—
(90%Emax) 890.3088	—



Luminance Table

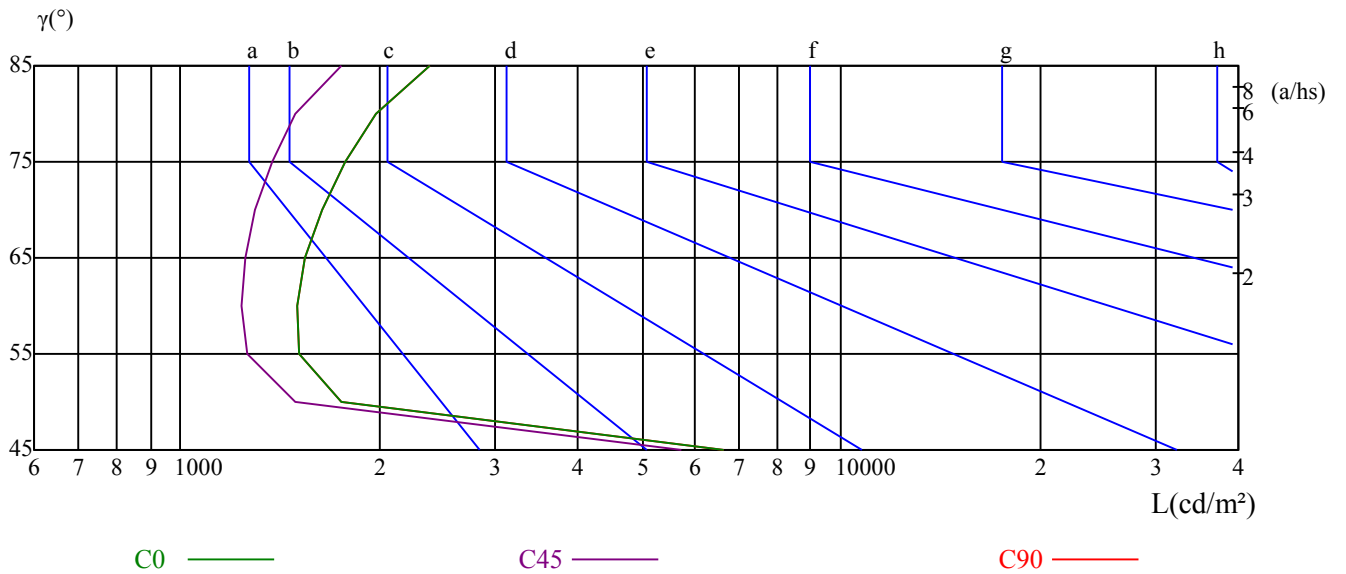
γ	45	50	55	60	65	70	75	80	85
C0	6649	1749	1511	1505	1545	1637	1776	1977	2384
C45	5744	1489	1266	1240	1251	1299	1378	1495	1750
C90	6649	1749	1511	1505	1545	1637	1776	1977	2384

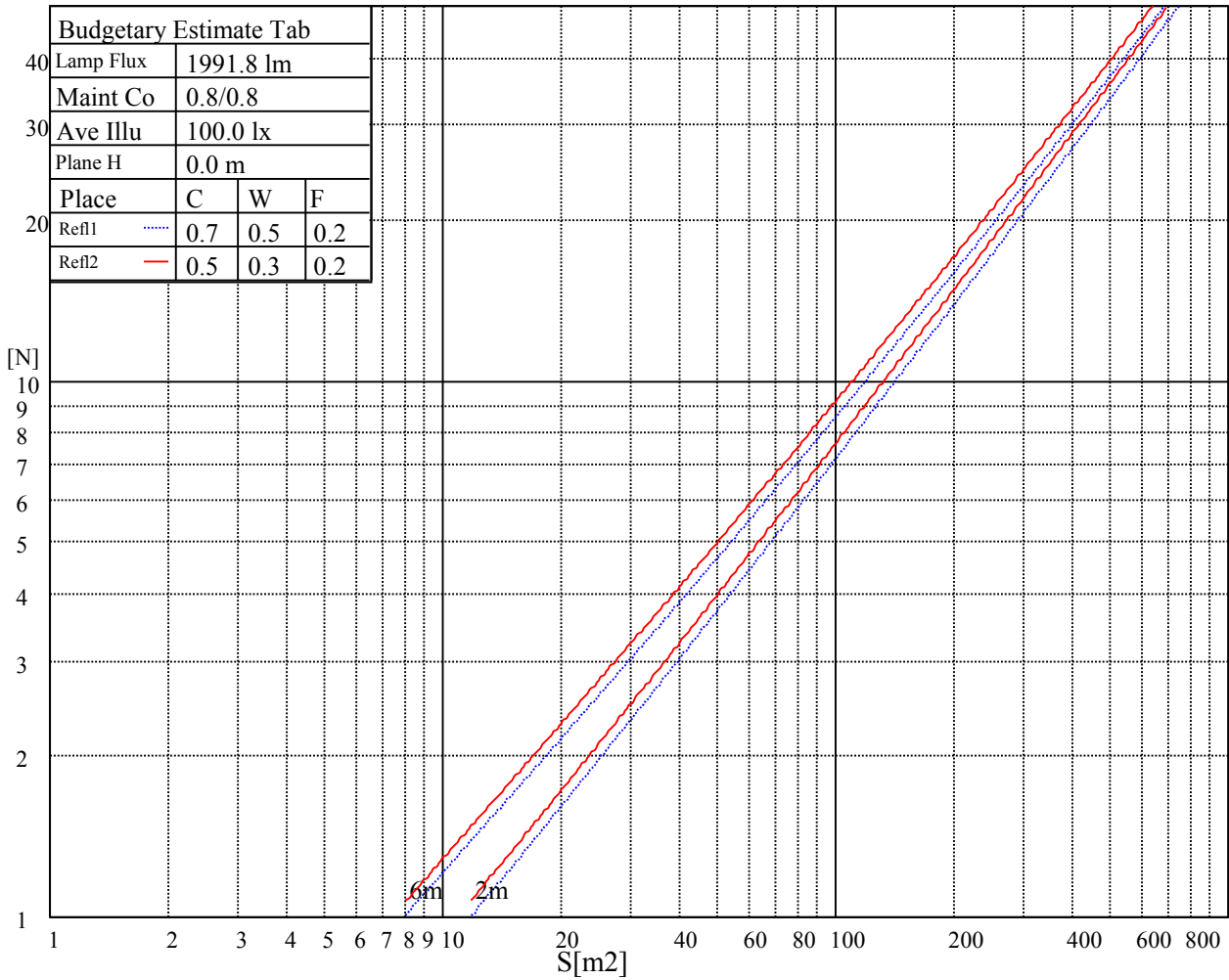
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3581	3581	3581	5847	5847	5847	19123	19123	19123

Glare Table

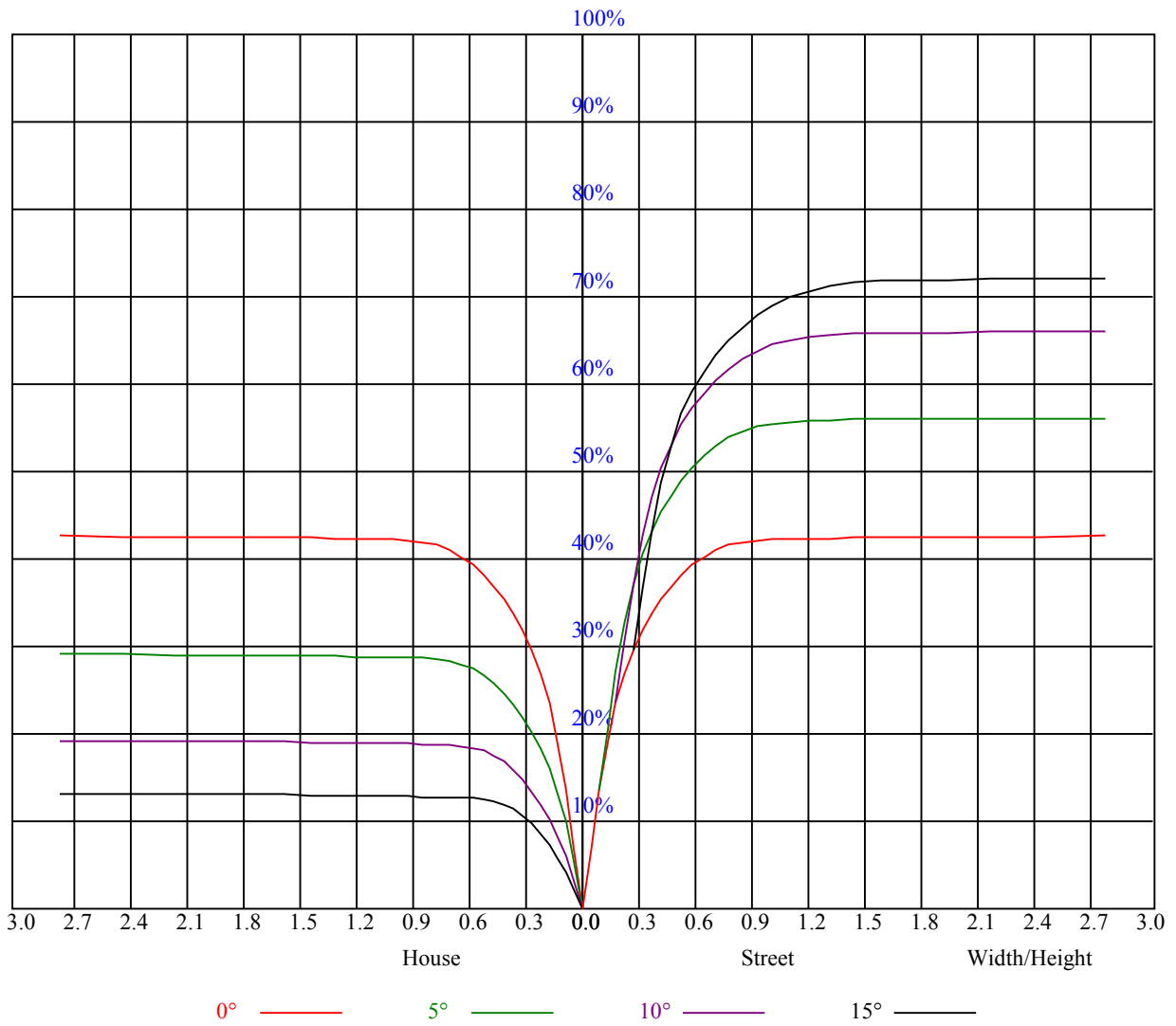
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.95	0.92	0.89	0.93	0.90	0.88	0.89	0.87	0.85	0.86	0.84	0.83	0.83	0.82	0.80	0.79
2	0.90	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.80	0.83	0.80	0.78	0.80	0.78	0.77	0.75
3	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.72
4	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
6	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.57



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	8762.90	6742.75	3381.11	1454.73	929.38	718.46	615.17	424.57	210.42
45.0	8871.42	7066.81	3543.89	1482.84	949.47	716.07	603.65	421.28	197.23
90.0	9171.38	7337.66	3542.50	1533.20	944.69	708.11	601.59	423.68	174.58
135.0	8806.87	7066.81	3543.89	1482.84	949.47	716.07	603.65	421.28	197.23
180.0	8762.90	6742.75	3381.11	1454.73	929.38	718.46	615.17	424.57	210.42
225.0	8871.42	7066.81	3543.89	1482.84	949.47	716.07	603.65	421.28	197.23
270.0	9171.38	7337.66	3542.50	1533.20	944.69	708.11	601.59	423.68	174.58
315.0	8806.87	7066.81	3543.89	1482.84	949.47	716.07	603.65	421.28	197.23
360.0	8762.90	6742.75	3381.11	1454.73	929.38	718.46	615.17	424.57	210.42
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	34.34	8.63	7.79	7.46	7.23	7.18	7.12	7.12	7.35
45.0	37.95	9.91	8.01	7.62	7.46	7.40	7.46	7.62	8.29
90.0	38.51	9.74	8.07	7.74	7.51	7.51	7.62	7.79	8.74
135.0	37.95	9.91	8.01	7.62	7.46	7.40	7.46	7.62	8.29
180.0	34.34	8.63	7.79	7.46	7.23	7.18	7.12	7.12	7.35
225.0	37.95	9.91	8.01	7.62	7.46	7.40	7.46	7.62	8.29
270.0	38.51	9.74	8.07	7.74	7.51	7.51	7.62	7.79	8.74
315.0	37.95	9.91	8.01	7.62	7.46	7.40	7.46	7.62	8.29
360.0	34.34	8.63	7.79	7.46	7.23	7.18	7.12	7.12	7.35
C/ γ (°)	90.0								
0.0	6.51								
45.0	6.68								
90.0	6.68								
135.0	6.68								
180.0	6.51								
225.0	6.68								
270.0	6.68								
315.0	6.68								
360.0	6.51								