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Nata

LumCAT: 2-1779-L

Luminaire:

Report No: NATA0100

Voltage(V): 34.4900

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.6580

Lamp flux(lm): 2559.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2483.39

Efficiency(%): 97.05%

Lumens(lm)/Power(W): 120.21

Central intensity(cd): 4677.328

Maximum intensity(cd): 4677.328

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=40.7

[C90/270]Total=40.7

Field angle(10%Imax): [C0/180]Total=69.3

[C90/270]Total=69.3

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(%): 97.05%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.282%

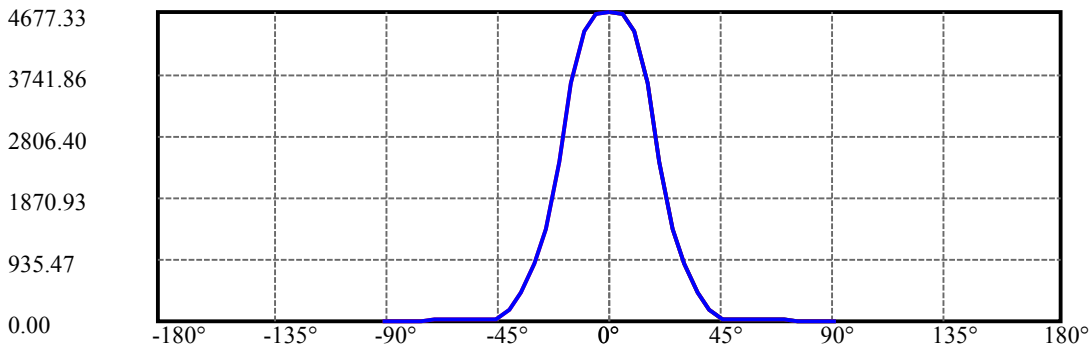
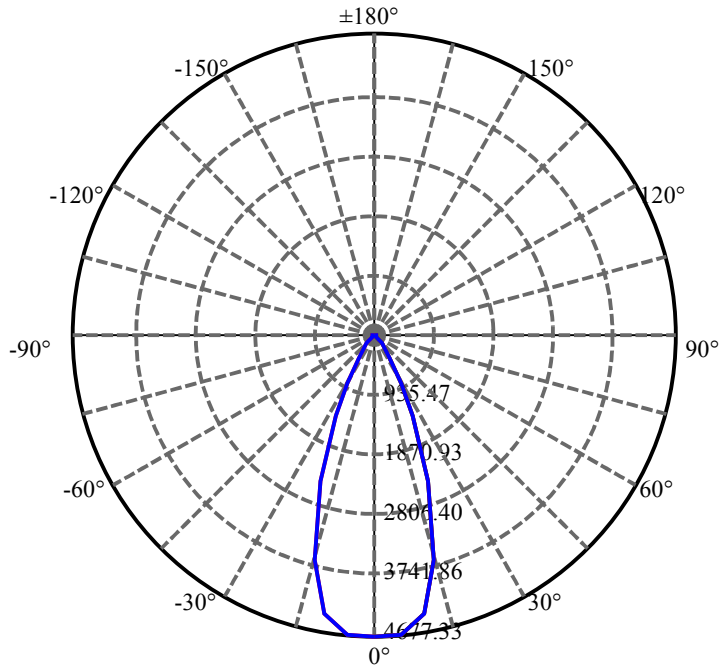
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4677.328	0.000	0	.000%	.000%
5.0	4652.508	111.536	111.536	4.359%	4.491%
10.0	4395.727	323.684	435.219	12.649%	17.525%
15.0	3597.539	474.155	909.374	18.529%	36.618%
20.0	2406.516	494.818	1404.193	19.337%	56.543%
25.0	1387.617	397.935	1802.127	15.551%	72.567%
30.0	859.050	284.318	2086.445	11.111%	84.016%
35.0	439.095	191.161	2277.606	7.470%	91.713%
40.0	162.260	100.331	2377.937	3.921%	95.754%
45.0	29.890	35.578	2413.516	1.390%	97.186%
50.0	21.551	10.394	2423.91	.406%	97.605%
55.0	18.345	8.675	2432.584	.339%	97.954%
60.0	16.889	8.144	2440.729	.318%	98.282%
65.0	15.722	7.928	2448.656	.310%	98.601%
70.0	14.639	7.688	2456.344	.300%	98.911%
75.0	13.423	7.335	2463.679	.287%	99.206%
80.0	12.438	6.920	2470.599	.270%	99.485%
85.0	11.679	6.553	2477.152	.256%	99.749%
90.0	11.116	6.242	2483.393	.244%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2086.45	81.54%	84.02%
0-40	2377.94	92.93%	95.75%
0-60	2440.73	95.38%	98.28%
0-90	2477.15	96.80%	99.75%
0-120	2477.15	96.80%	99.75%
0-180	2483.39	97.05%	100.00%
60-90	44.57	1.74%	1.79%
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%
0-28.25	1986.72	77.64%	80.00%

ZONAL LUMEN SUMMARY

0-10	435.22
10-20	968.97
20-30	682.25
30-40	291.49
40-50	45.97
50-60	16.82
60-70	15.62
70-80	14.25
80-90	6.55
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: —————

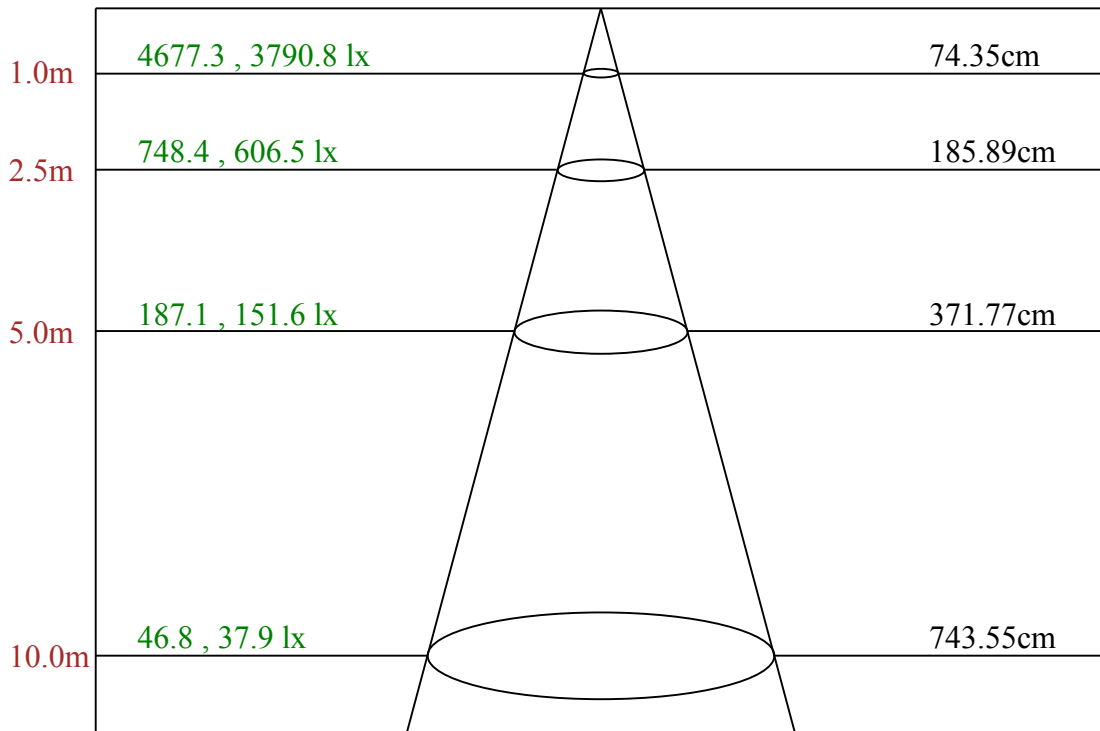
C90/C270: —————

Field angle(10%Imax):C0/180Left:34.7 Right:34.7

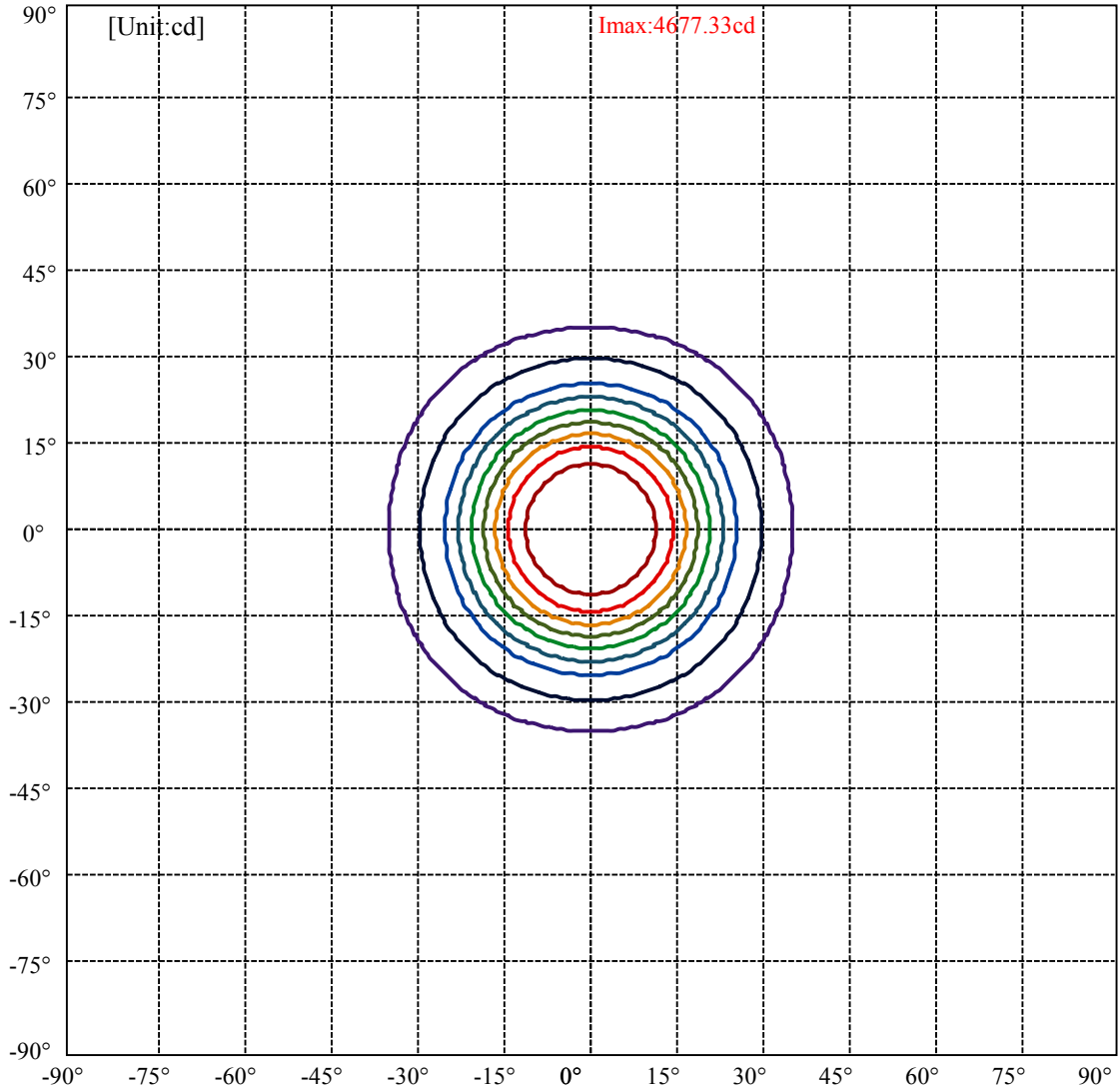
:C90/270Left:34.7 Right:34.7

Beam Angle(50%Imax):C0/180Left:20.3 Right:20.3

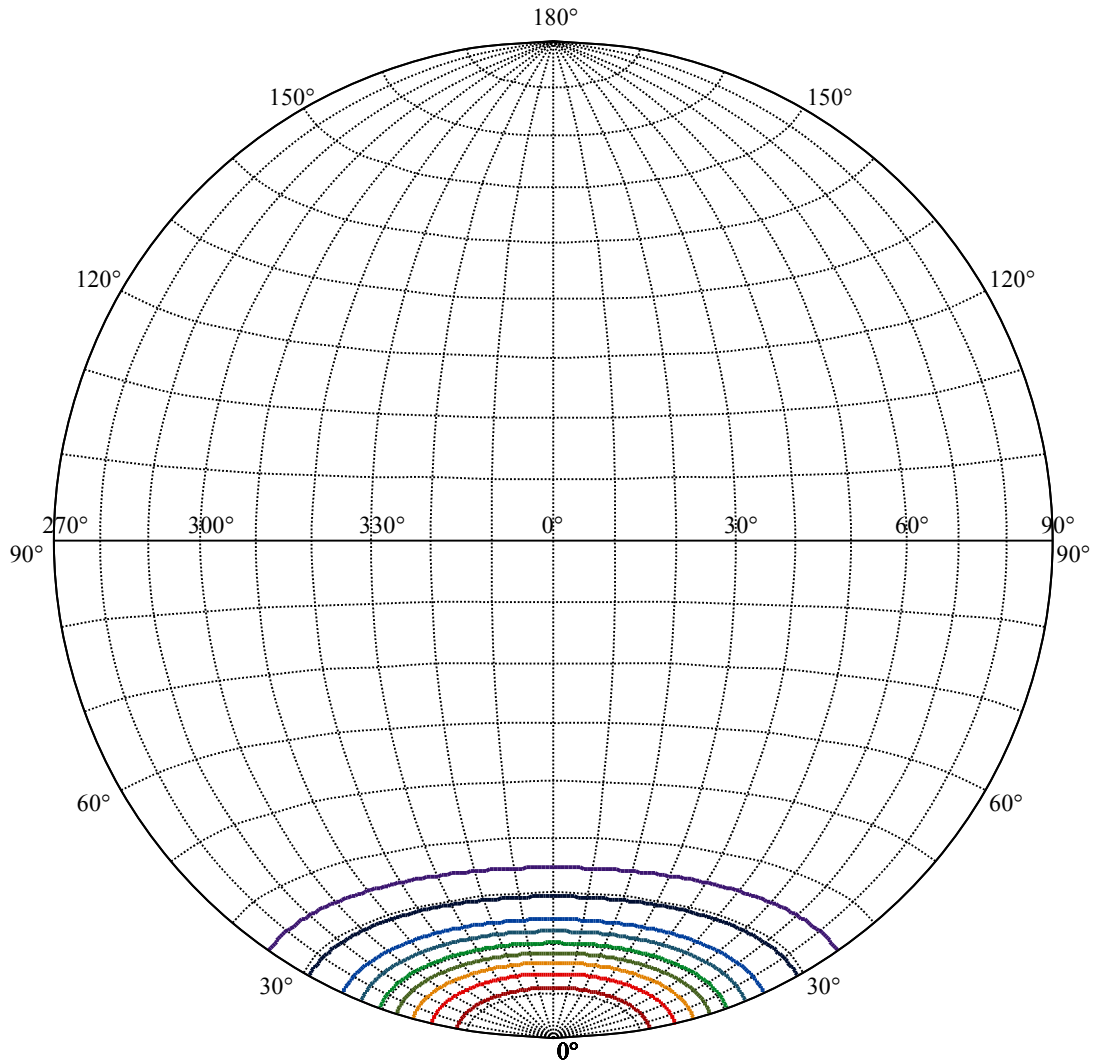
:C90/270Left:20.3 Right:20.3



Max , Ave Beam angle of C0 plane 40.79



(10%Imax) 467.733	—
(20%Imax) 935.466	—
(30%Imax) 1403.2	—
(40%Imax) 1870.93	—
(50%Imax) 2338.66	—
(60%Imax) 2806.4	—
(70%Imax) 3274.13	—
(80%Imax) 3741.86	—
(90%Imax) 4209.6	—



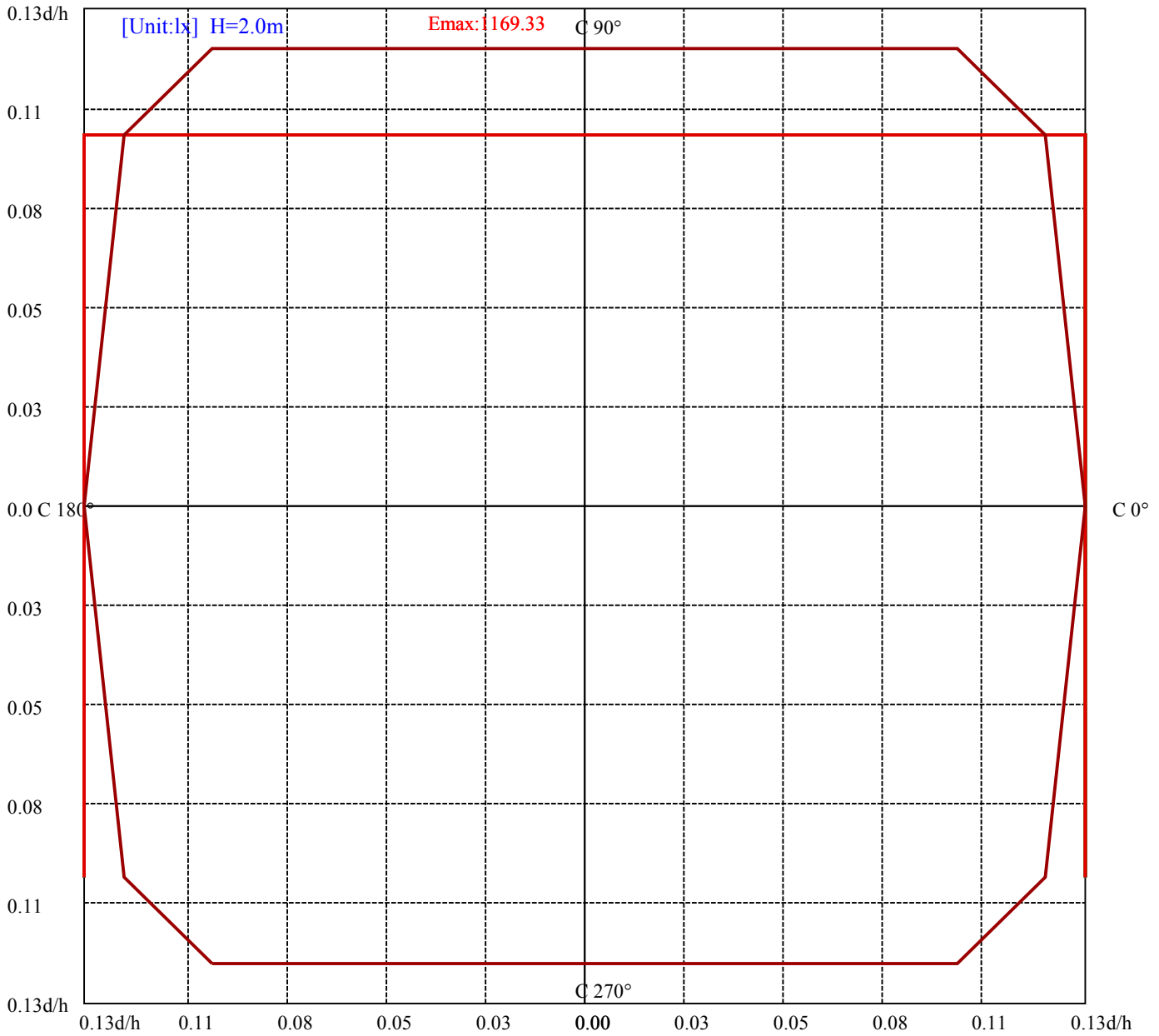
House

[Unit:cd]

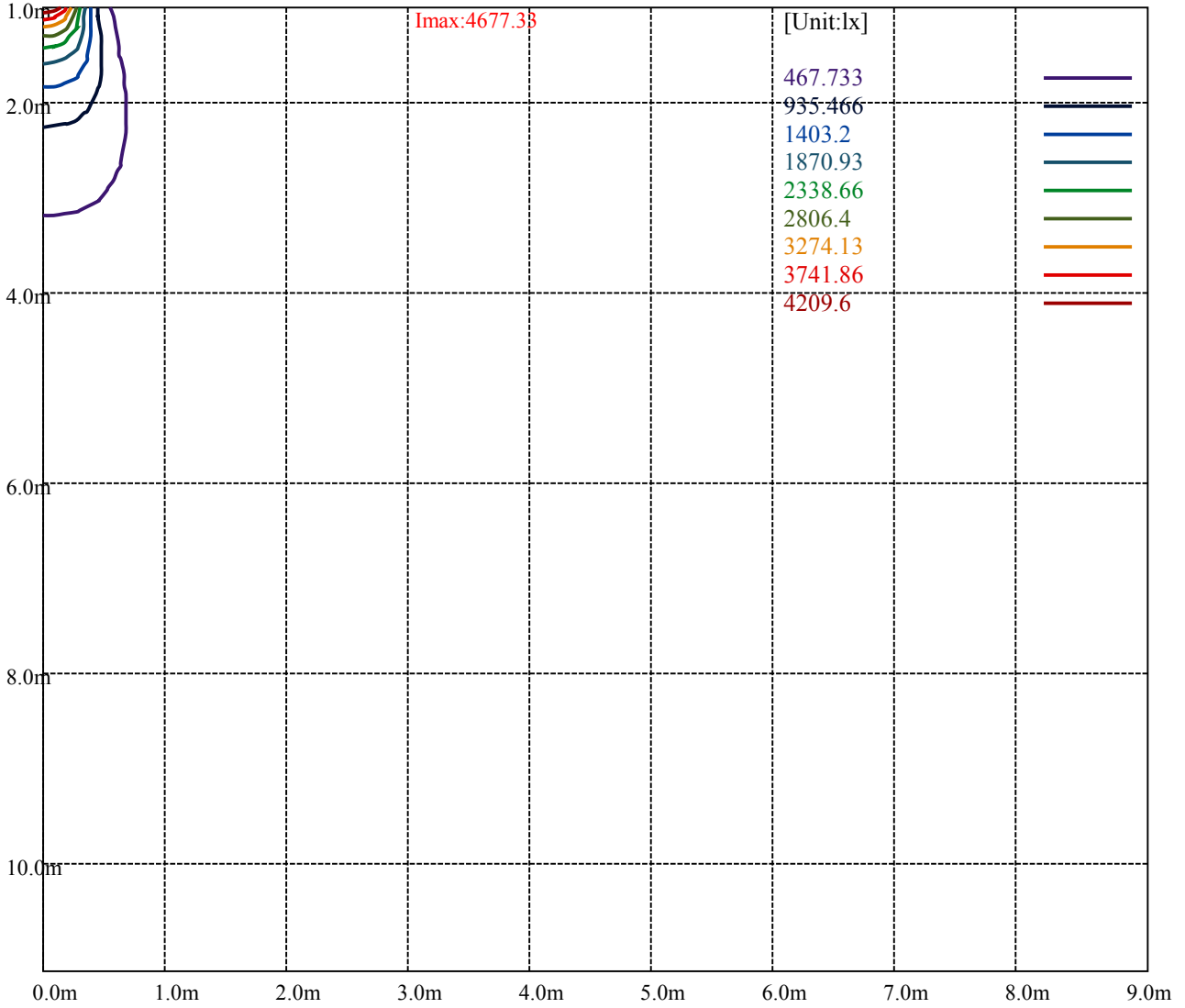
Road

Imax:4677.33

(10%Imax) 467.733	—
(20%Imax) 935.466	—
(30%Imax) 1403.2	—
(40%Imax) 1870.93	—
(50%Imax) 2338.66	—
(60%Imax) 2806.4	—
(70%Imax) 3274.13	—
(80%Imax) 3741.86	—
(90%Imax) 4209.6	—



(10%Emax) 116.9333	—
(20%Emax) 233.8663	—
(30%Emax) 350.8	—
(40%Emax) 467.7325	—
(50%Emax) 584.665	—
(60%Emax) 701.6	—
(70%Emax) 818.5325	—
(80%Emax) 935.465	—
(90%Emax) 1052.397	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

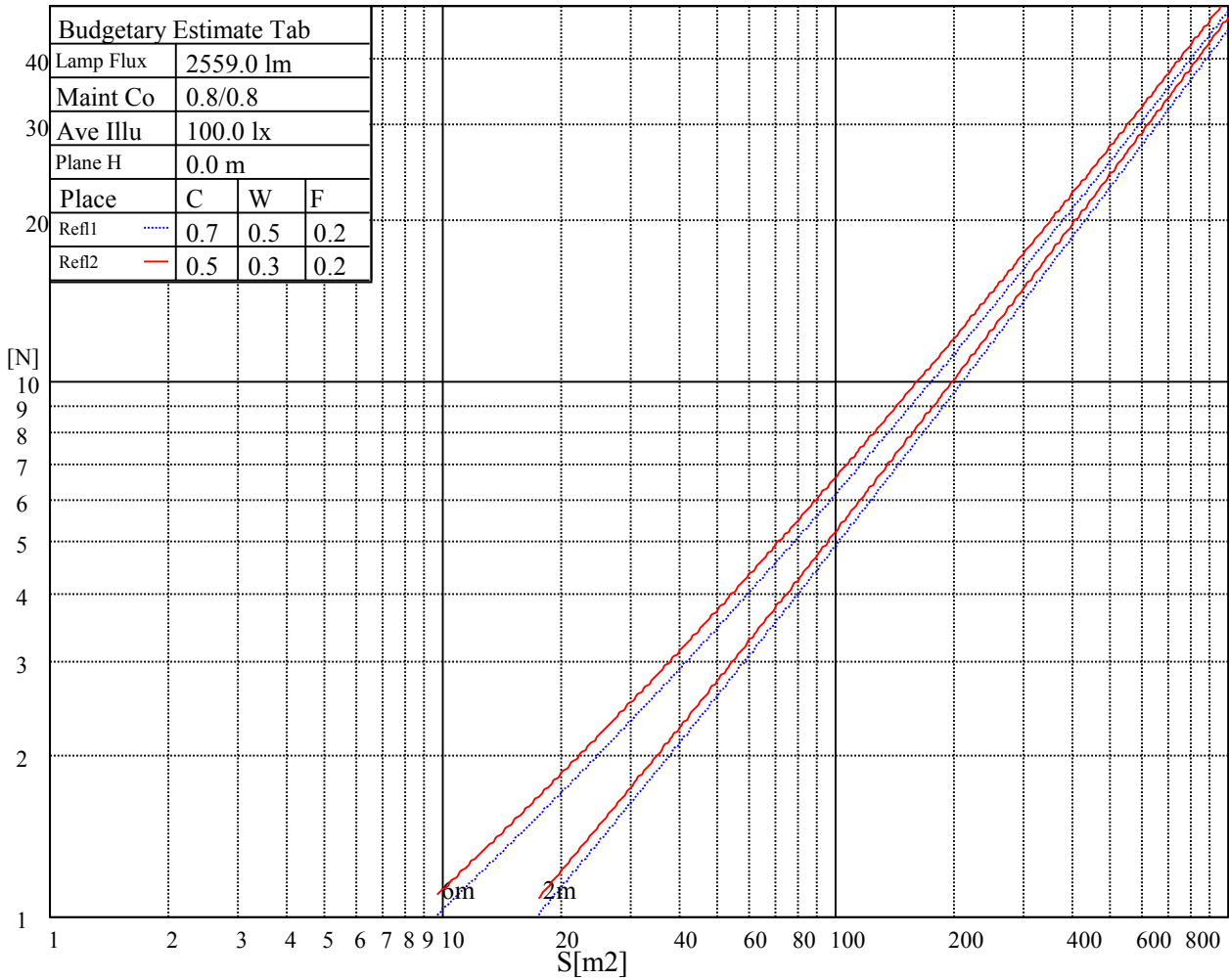
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

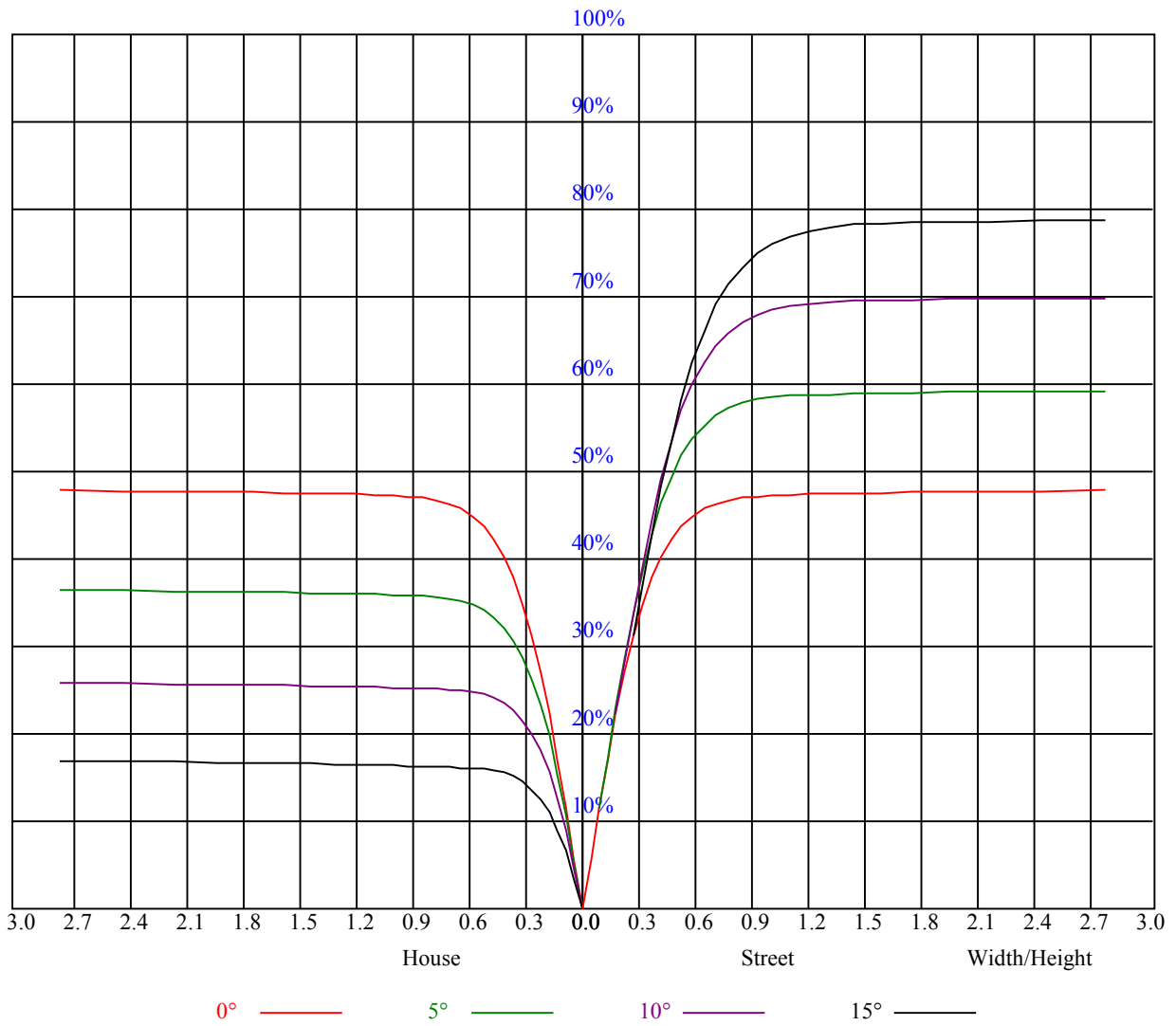
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.16	1.16	1.16	1.13	1.13	1.13	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.97
1	1.08	1.06	1.04	1.06	1.04	1.02	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.91
2	1.01	0.98	0.95	1.00	0.96	0.94	0.97	0.94	0.92	0.94	0.92	0.90	0.91	0.89	0.88	0.86
3	0.96	0.91	0.88	0.94	0.90	0.87	0.92	0.88	0.86	0.89	0.87	0.84	0.87	0.85	0.83	0.82
4	0.90	0.86	0.82	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.77
5	0.86	0.81	0.77	0.85	0.80	0.77	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.75	0.73
6	0.82	0.76	0.73	0.81	0.76	0.73	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.70
7	0.78	0.73	0.69	0.77	0.72	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.67
8	0.74	0.69	0.66	0.74	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.64
9	0.71	0.66	0.63	0.70	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.61
10	0.68	0.63	0.60	0.68	0.63	0.60	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.58



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	4681.69	4718.25	4664.81	4044.94	2830.50	1599.19	1080.56	599.63	293.63
45.0	4666.50	4786.88	4912.31	4627.69	3389.63	1902.38	1100.81	743.06	318.38
90.0	4687.88	4797.00	4840.88	4433.63	3147.19	1679.63	959.46	555.69	239.12
135.0	4673.25	4727.25	4632.75	4026.94	2942.44	1769.63	1119.38	645.19	295.88
180.0	4681.69	4600.69	4199.63	3179.25	1958.63	1107.11	750.43	267.81	37.74
225.0	4666.50	4493.25	3875.63	2709.56	1541.81	982.86	547.14	122.01	28.13
270.0	4687.88	4537.13	3957.19	2758.50	1542.94	955.69	561.94	302.63	38.59
315.0	4673.25	4559.63	4082.63	2999.81	1899.00	1104.47	752.68	276.75	46.63
360.0	4681.69	4718.25	4664.81	4044.94	2830.50	1599.19	1080.56	599.63	293.63

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	31.11	21.32	17.49	16.03	15.02	14.40	13.73	12.77	11.81
45.0	36.34	23.63	19.24	16.99	15.64	14.96	14.29	13.16	12.26
90.0	44.04	26.89	20.98	18.45	16.88	15.75	14.23	12.94	12.32
135.0	34.03	23.29	19.41	17.72	16.88	15.53	13.95	12.54	11.64
180.0	22.39	18.68	17.16	16.37	15.24	14.12	12.94	12.09	11.36
225.0	21.21	18.51	16.88	16.14	15.13	14.01	12.83	11.98	11.48
270.0	23.91	19.63	17.66	16.59	15.24	13.95	12.60	12.04	11.19
315.0	26.10	20.48	17.94	16.82	15.75	14.40	12.83	11.98	11.36
360.0	31.11	21.32	17.49	16.03	15.02	14.40	13.73	12.77	11.81

C/γ(°)	90.0
0.0	11.19
45.0	11.53
90.0	11.36
135.0	11.03
180.0	10.86
225.0	11.19
270.0	10.91
315.0	10.86
360.0	11.19