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Nata

LumCAT: 3-1939-M

Luminaire:

Report No: NATA0100

Voltage(V): 34.1500

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.4900

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): 2331.48

Efficiency(%): 91.11%

Lumens(lm)/Power(W): 113.79

Central intensity(cd): 7835.063

Maximum intensity(cd): 7835.063

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=27.4

[C90/270]Total=27.4

Field angle(10%Imax): [C0/180]Total=60.3

[C90/270]Total=60.3

Maximum s/h(1/2): C0_180=0.47 C90_270=0.47

Maximum s/h(1/4): C0_180=0.45 C90_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.11%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.520%

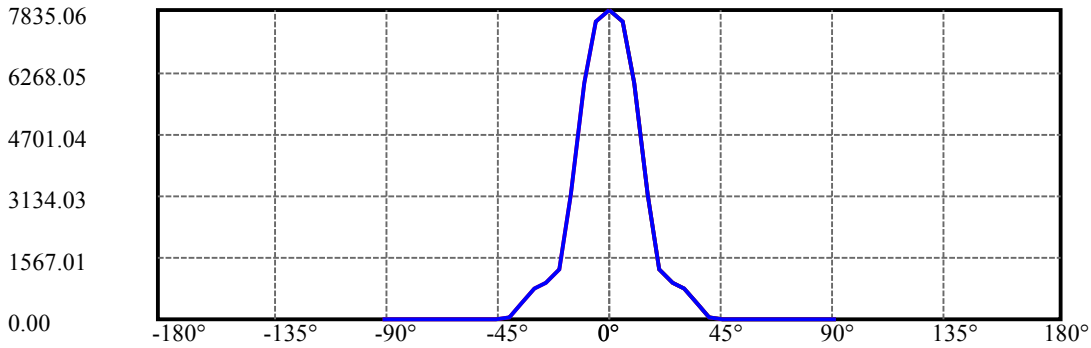
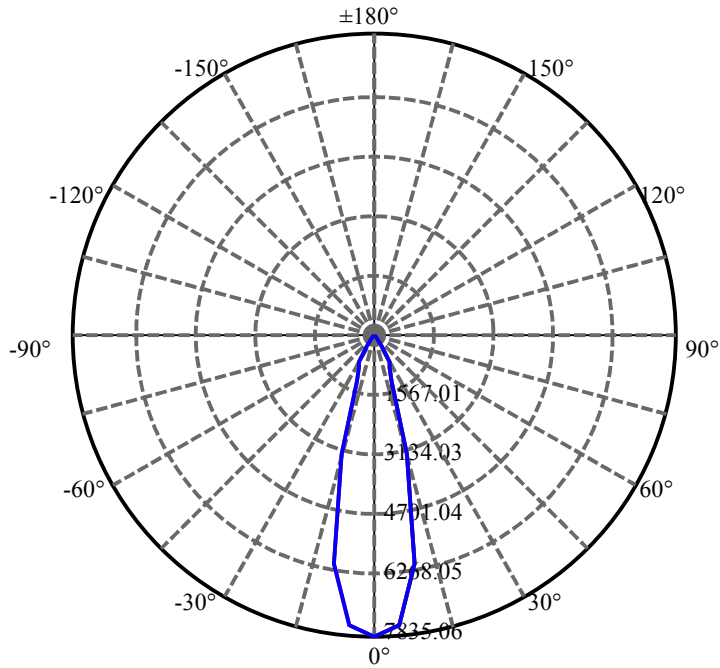
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7835.063	0.000	0	.000%	.000%
5.0	7563.938	184.091	184.091	7.194%	7.896%
10.0	6007.289	485.486	669.576	18.972%	28.719%
15.0	3182.625	545.140	1214.716	21.303%	52.101%
20.0	1251.359	365.423	1580.138	14.280%	67.774%
25.0	928.266	228.602	1808.741	8.933%	77.579%
30.0	795.509	218.145	2026.886	8.525%	86.936%
35.0	367.580	171.273	2198.159	6.693%	94.282%
40.0	39.340	67.891	2266.05	2.653%	97.194%
45.0	20.194	11.023	2277.073	.431%	97.666%
50.0	15.989	7.311	2284.384	.286%	97.980%
55.0	13.845	6.487	2290.871	.253%	98.258%
60.0	12.572	6.106	2296.977	.239%	98.520%
65.0	11.721	5.906	2302.883	.231%	98.773%
70.0	11.180	5.799	2308.682	.227%	99.022%
75.0	10.772	5.738	2314.419	.224%	99.268%
80.0	10.533	5.701	2320.12	.223%	99.513%
85.0	10.392	5.686	2325.806	.222%	99.757%
90.0	10.336	5.676	2331.481	.222%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2026.89	79.21%	86.94%
0-40	2266.05	88.55%	97.19%
0-60	2296.98	89.76%	98.52%
0-90	2325.81	90.89%	99.76%
0-120	2325.81	90.89%	99.76%
0-180	2331.48	91.11%	100.00%
60-90	34.93	1.37%	1.50%
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%
0-26.29	1865.19	72.89%	80.00%

ZONAL LUMEN SUMMARY

0-10	669.58
10-20	910.56
20-30	446.75
30-40	239.16
40-50	18.33
50-60	12.59
60-70	11.70
70-80	11.44
80-90	5.69
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: —————

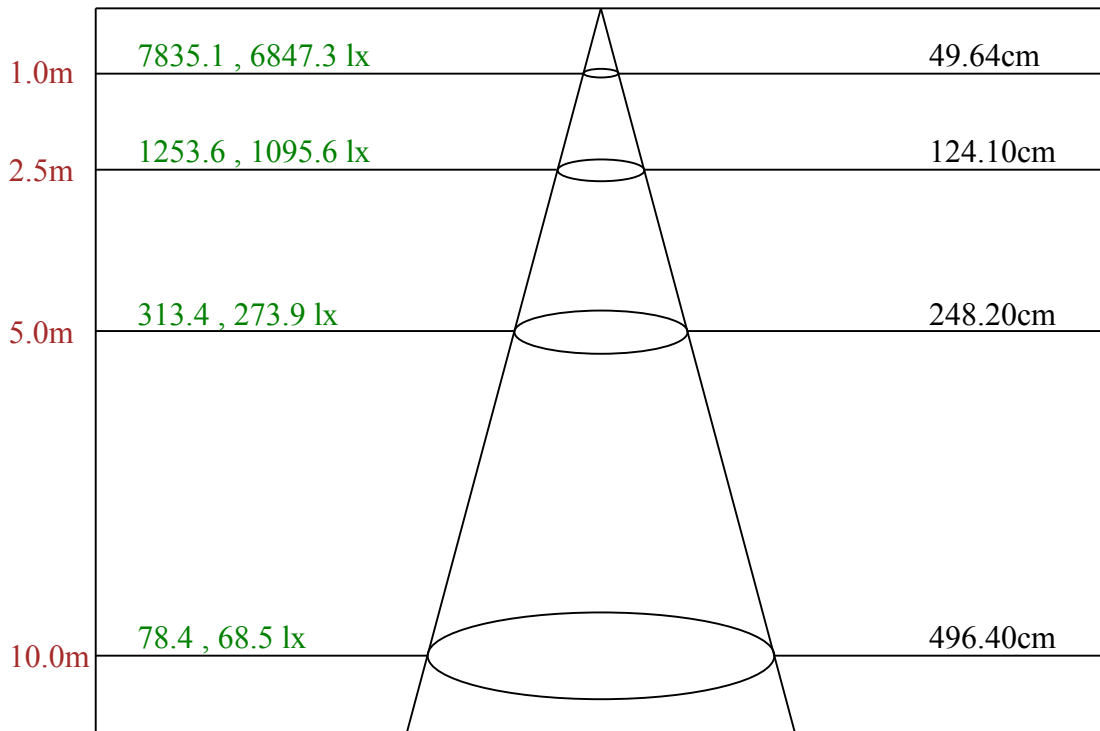
C90/C270: —————

Field angle(10%Imax):C0/180Left:30.1 Right:30.1

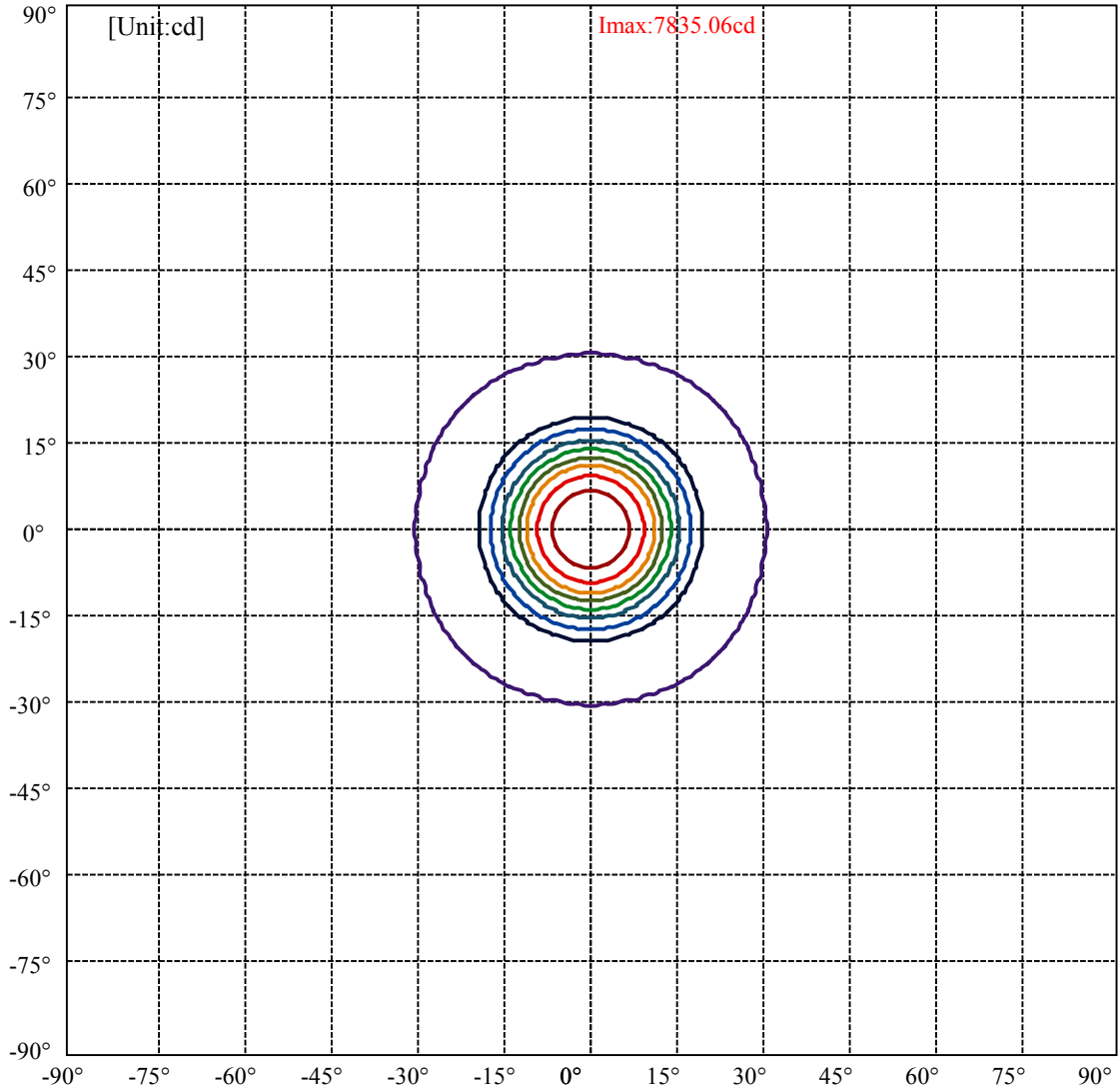
:C90/270Left:30.1 Right:30.1

Beam Angle(50%Imax):C0/180Left:13.7 Right:13.7

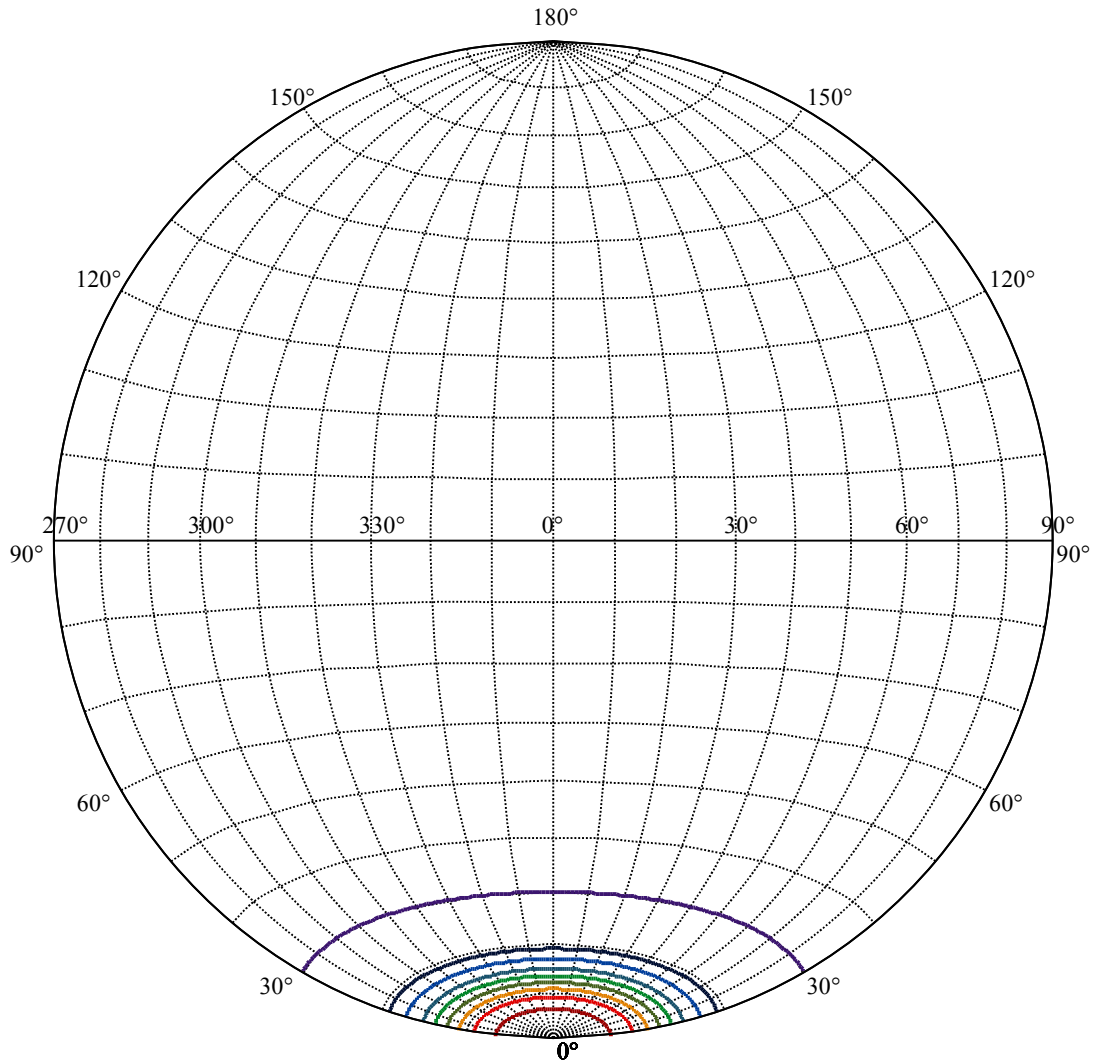
:C90/270Left:13.7 Right:13.7



Max , Ave Beam angle of C0 plane 27.88



(10%Imax) 783.506	—
(20%Imax) 1567.01	—
(30%Imax) 2350.52	—
(40%Imax) 3134.03	—
(50%Imax) 3917.53	—
(60%Imax) 4701.04	—
(70%Imax) 5484.54	—
(80%Imax) 6268.05	—
(90%Imax) 7051.56	—



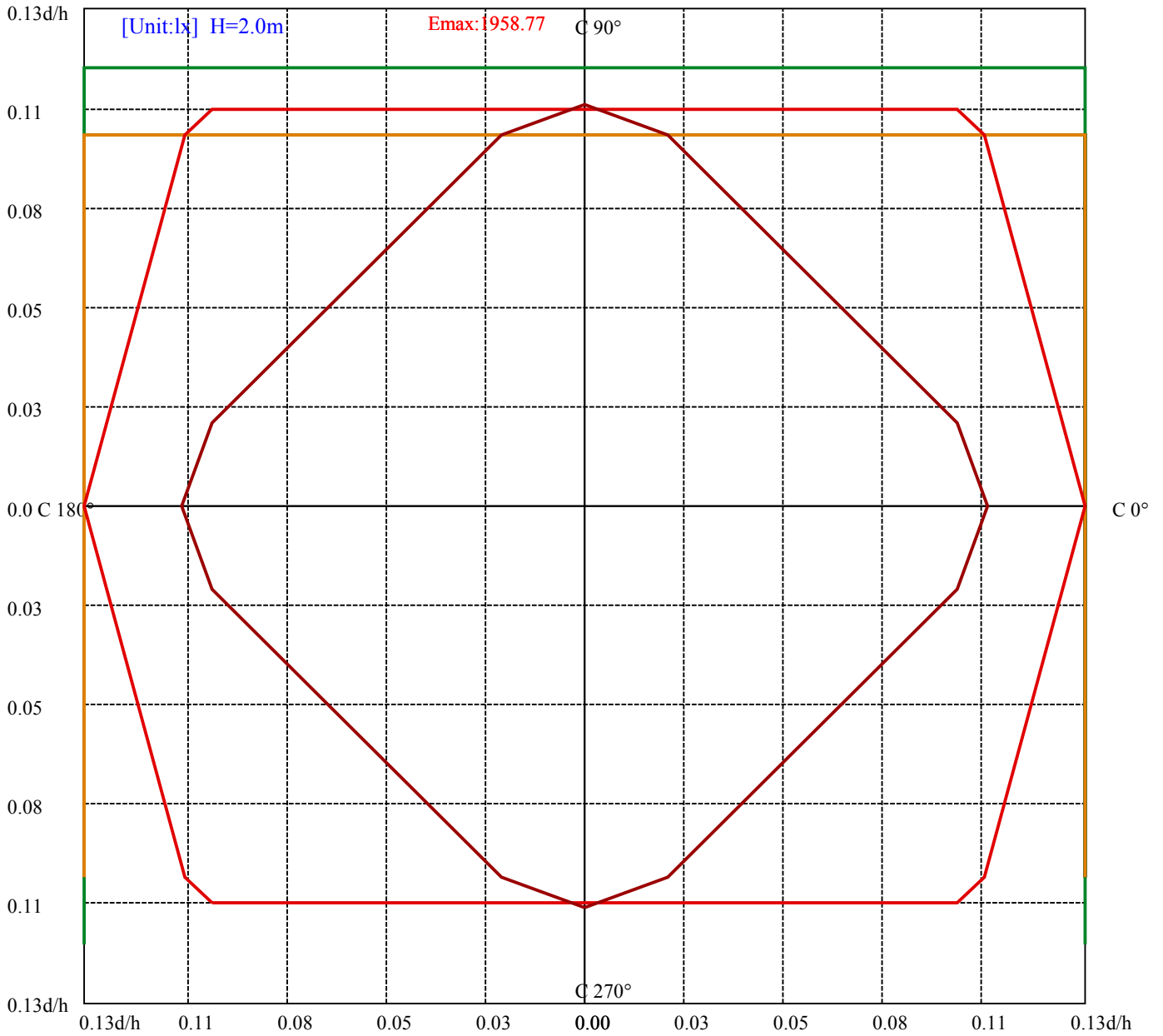
House

[Unit:cd]

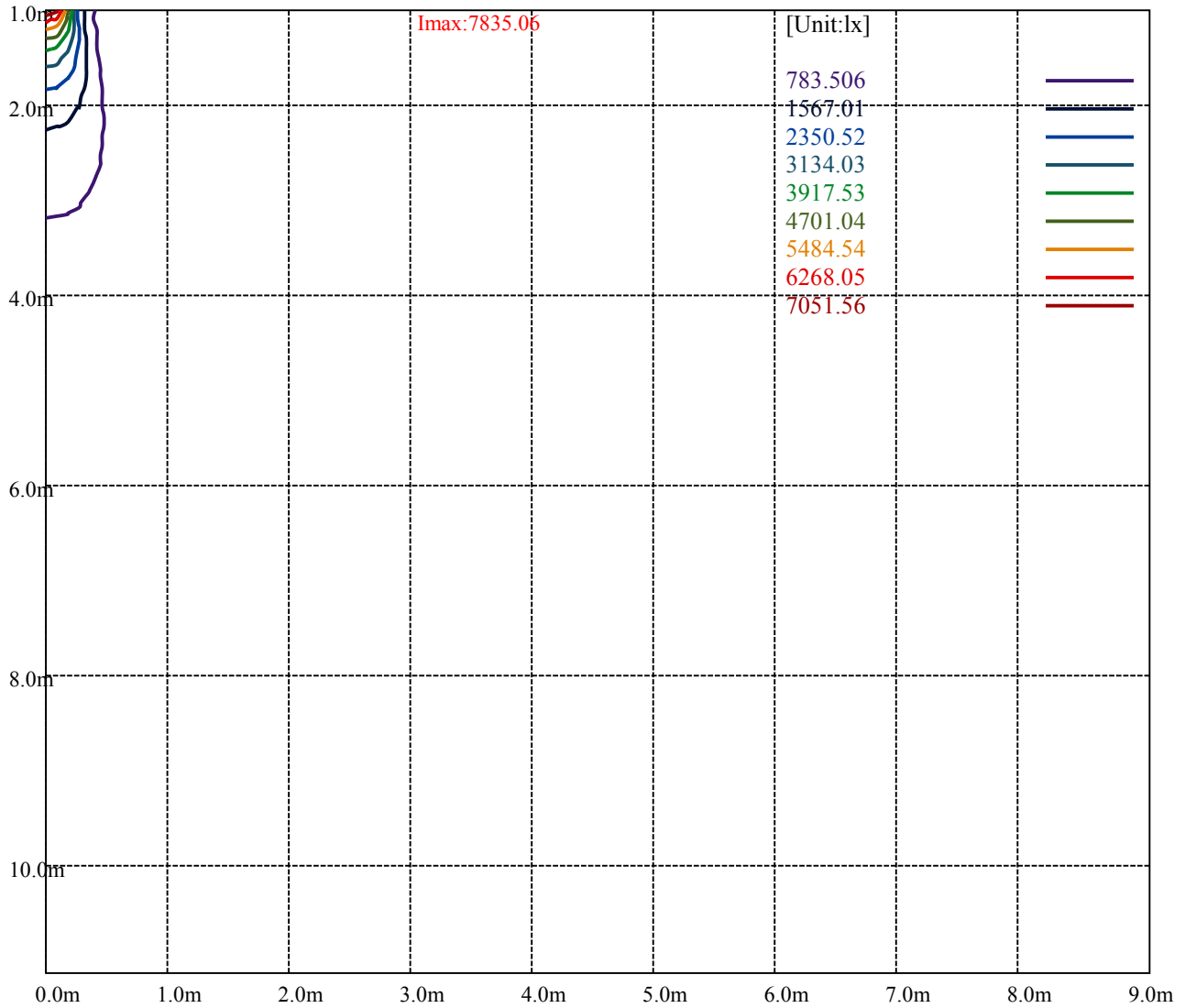
Road

Imax:7835.06

(10%Imax) 783.506	—
(20%Imax) 1567.01	—
(30%Imax) 2350.52	—
(40%Imax) 3134.03	—
(50%Imax) 3917.53	—
(60%Imax) 4701.04	—
(70%Imax) 5484.54	—
(80%Imax) 6268.05	—
(90%Imax) 7051.56	—



(10%Emax) 195.8763	—
(20%Emax) 391.7525	—
(30%Emax) 587.63	—
(40%Emax) 783.505	—
(50%Emax) 979.3825	—
(60%Emax) 1175.257	—
(70%Emax) 1371.135	—
(80%Emax) 1567.01	—
(90%Emax) 1762.887	—



Luminance Table

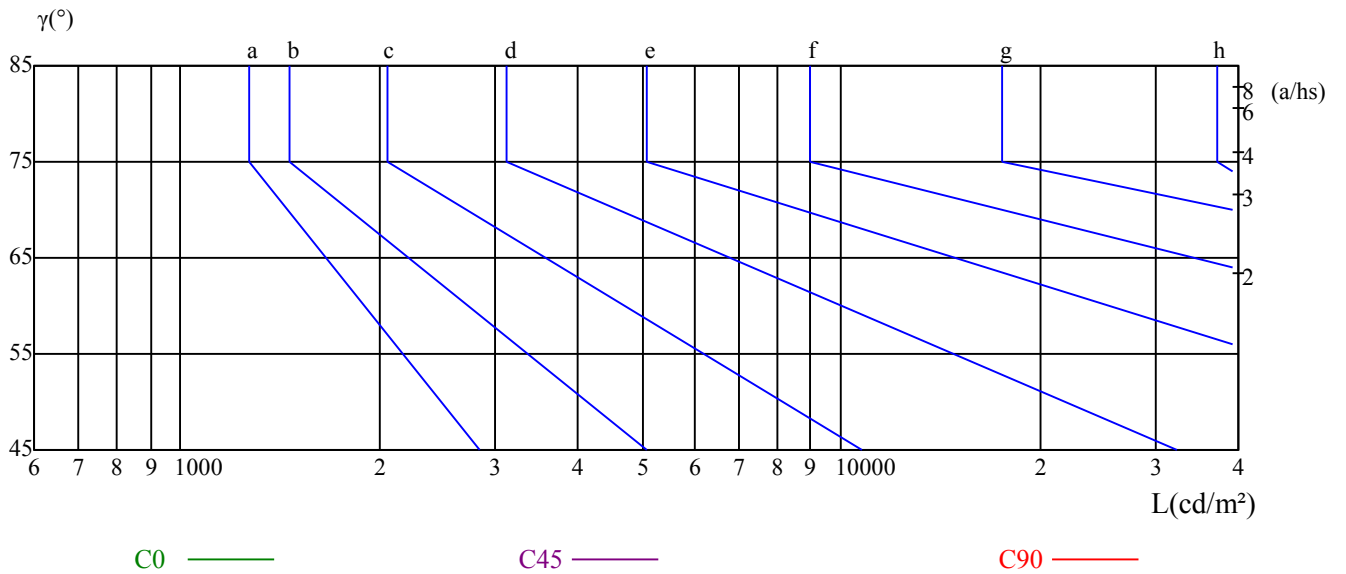
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

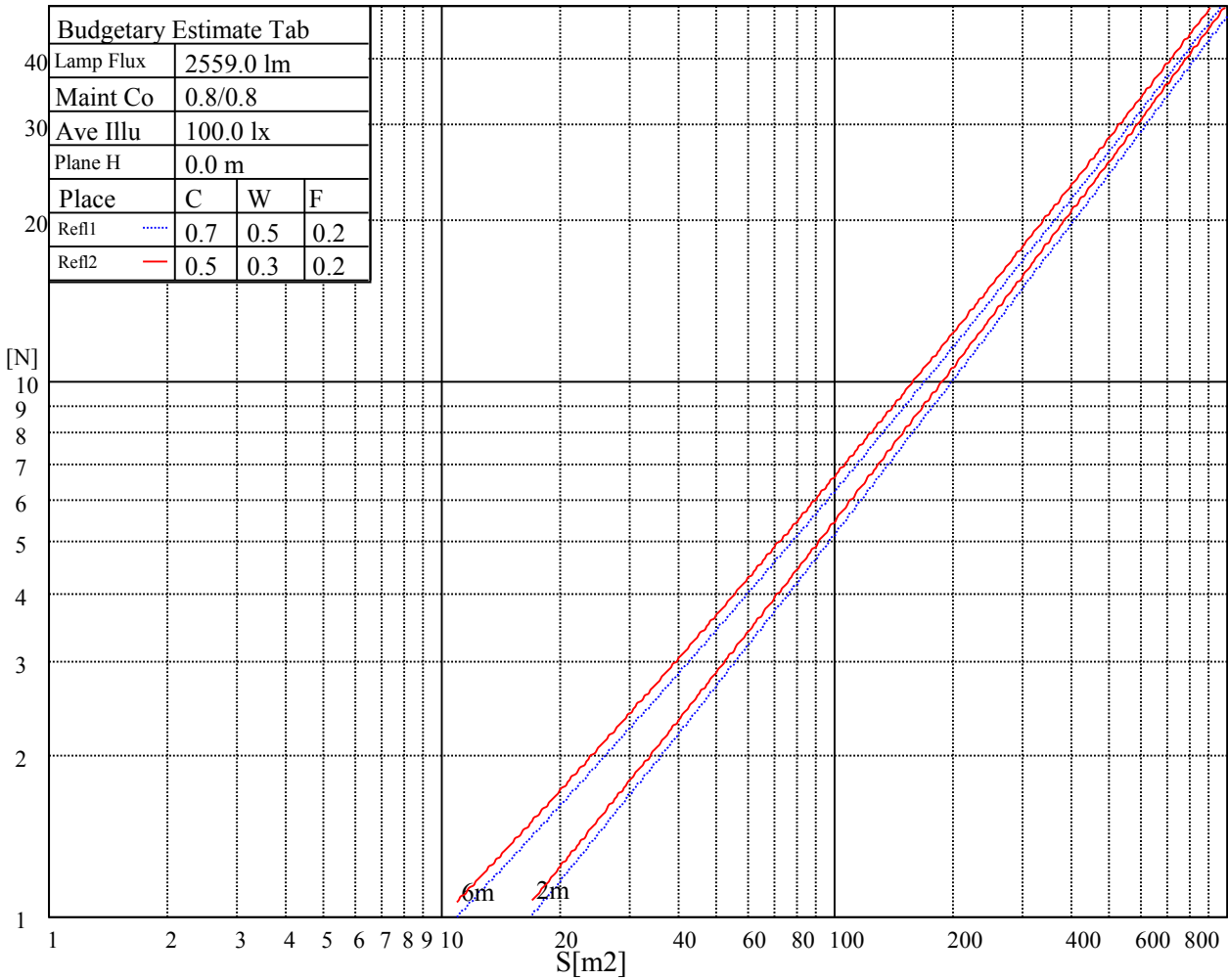
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

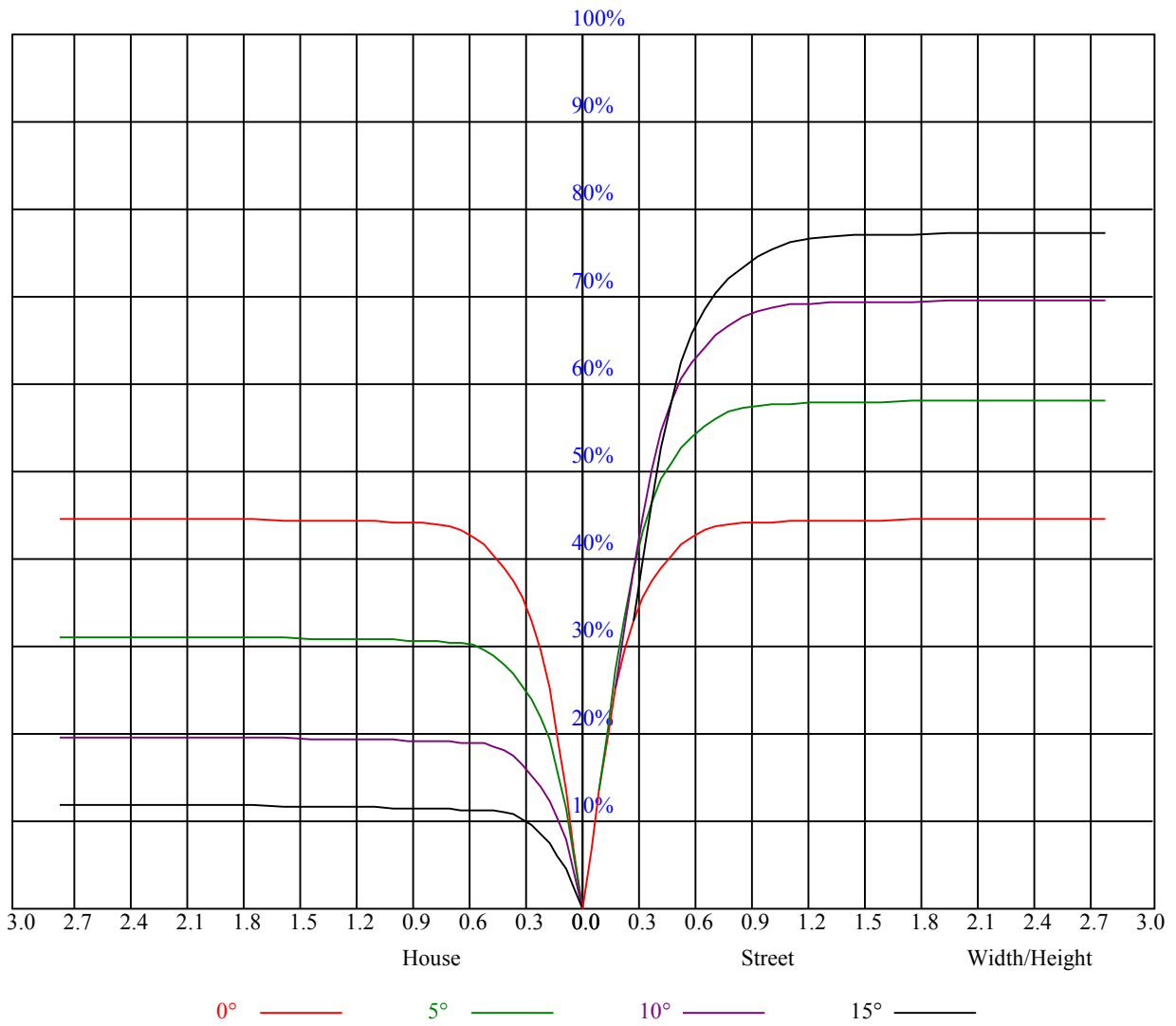
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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



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	7805.25	7577.44	5770.69	2909.81	1203.19	911.25	790.88	331.88	32.12
45.0	7842.94	7583.63	5724.56	2799.56	1158.75	890.44	768.38	297.56	30.66
90.0	7862.06	7485.19	5700.38	2703.94	1105.93	885.43	747.00	264.60	29.87
135.0	7830.00	7696.13	6504.75	3765.38	1535.06	970.88	829.13	469.13	52.54
180.0	7805.25	7480.69	6198.75	3466.69	1116.62	953.94	817.65	408.99	44.94
225.0	7842.94	7526.25	6307.88	3555.00	1271.81	967.11	834.41	431.21	48.94
270.0	7862.06	7698.38	6336.56	3727.13	1511.44	960.19	836.44	458.44	44.49
315.0	7830.00	7463.81	5514.75	2533.50	1108.07	886.89	740.19	278.83	31.16
360.0	7805.25	7577.44	5770.69	2909.81	1203.19	911.25	790.88	331.88	32.12

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	19.63	15.53	13.44	12.32	11.48	11.03	10.58	10.41	10.29
45.0	19.01	15.47	13.44	12.32	11.59	11.08	10.69	10.52	10.41
90.0	18.51	15.41	13.50	12.32	11.48	11.03	10.69	10.52	10.41
135.0	21.38	16.54	14.18	12.71	11.87	11.25	10.86	10.58	10.41
180.0	20.59	16.31	14.06	12.71	11.76	11.14	10.80	10.52	10.35
225.0	21.49	16.48	14.29	12.83	11.98	11.36	10.97	10.63	10.46
270.0	22.39	16.65	14.23	12.94	11.98	11.42	10.91	10.63	10.46
315.0	18.56	15.53	13.61	12.43	11.64	11.14	10.69	10.46	10.35
360.0	19.63	15.53	13.44	12.32	11.48	11.03	10.58	10.41	10.29

C/γ(°)	90.0
0.0	10.24
45.0	10.35
90.0	10.35
135.0	10.35
180.0	10.24
225.0	10.41
270.0	10.41
315.0	10.35
360.0	10.24