
Nata

Client:

LumCAT: 1658-S

Luminaire: 92.70.124.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT1420

Lamp flux(lm): 1956.5

Number of Lamps: 1

Length(mm): 47

Phm Type: C

Voltage(V): 35.1000

Current(A): 0.3900

Power (W): 13.6890

PF: 0.0000

Ballast type: DC

Width(mm): 47

Height(mm): 0

Photometric Results

Lumens(lm): 1720.61, Efficiency(%): 87.94% , Luminous Efficacy(lm/W): 125.69

Central intensity(cd): 3991.038, Maximum intensity(cd): 3991.038

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.4

[C90/270]Total=35.4

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

[C90/270]Total=66.2

Maximum s/h(1/2): C0_180=0.57 C90_270=0.57

Maximum s/h(1/4): C0_180=0.61 C90_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.08%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.333%

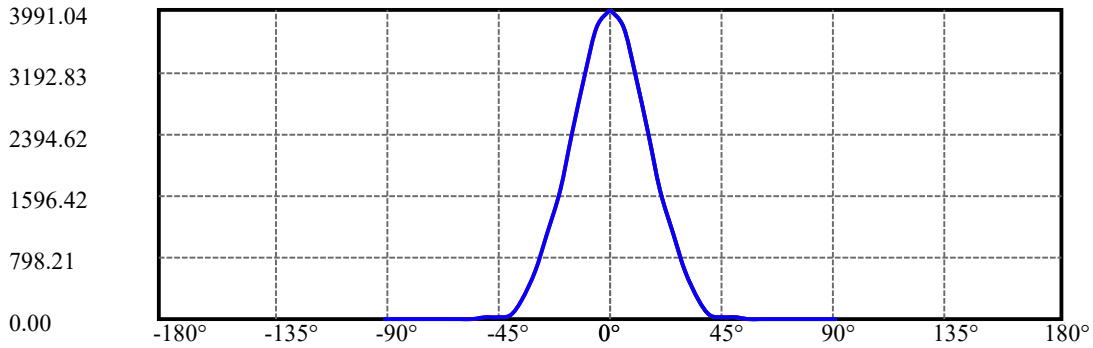
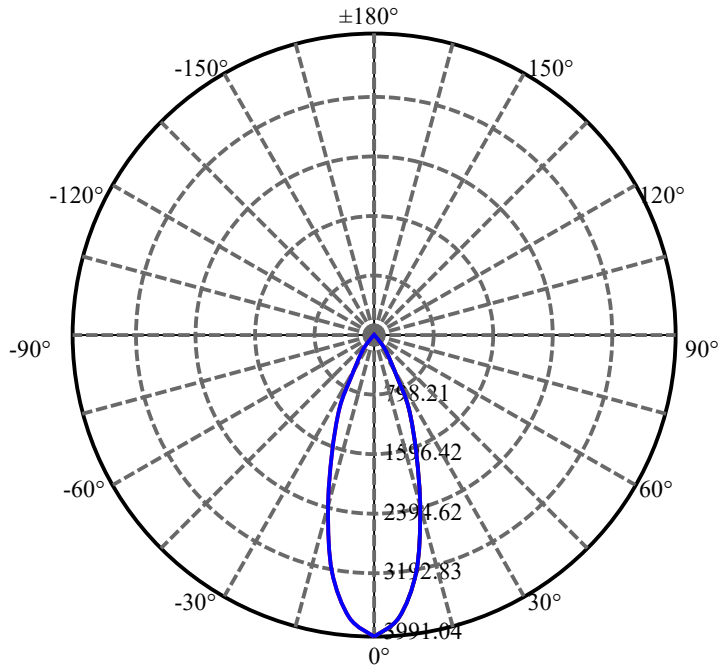
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3991.038	23.867	23.867	1.220%	1.387%
5.0	3760.903	179.671	203.538	9.183%	11.829%
10.0	3166.638	301.410	504.948	15.406%	29.347%
15.0	2384.768	338.323	843.271	17.292%	49.010%
20.0	1669.861	313.055	1156.327	16.001%	67.204%
25.0	1078.403	249.815	1406.142	12.769%	81.723%
30.0	631.937	173.194	1579.336	8.852%	91.789%
35.0	254.030	79.867	1659.203	4.082%	96.431%
40.0	41.822	14.735	1673.939	.753%	97.287%
45.0	16.345	6.335	1680.274	.324%	97.656%
50.0	13.571	5.699	1685.972	.291%	97.987%
55.0	11.865	5.327	1691.3	.272%	98.296%
60.0	10.640	5.051	1696.35	.258%	98.590%
65.0	9.635	4.786	1701.137	.245%	98.868%
70.0	8.954	4.612	1705.749	.236%	99.136%
75.0	8.417	4.456	1710.205	.228%	99.395%
80.0	8.045	4.343	1714.548	.222%	99.648%
85.0	7.529	4.111	1718.659	.210%	99.887%
90.0	7.123	1.952	1720.611	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1579.34	80.72%	91.79%
0-40	1673.94	85.56%	97.29%
0-60	1696.35	86.70%	98.59%
0-90	1718.66	87.84%	99.89%
0-120	1718.66	87.84%	99.89%
0-180	1720.61	87.94%	100.00%
60-90	27.36	1.40%	1.59%
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%
0-24.41	1376.49	70.36%	80.00%

ZONAL LUMEN SUMMARY

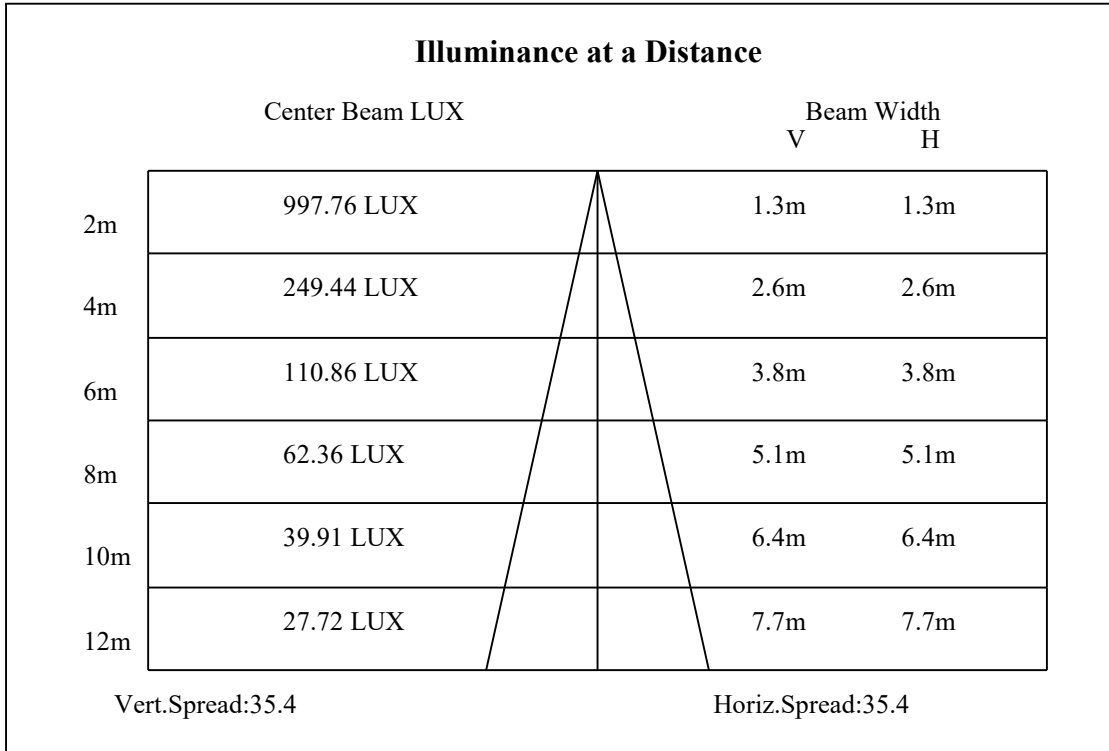
0-10	504.95
10-20	651.38
20-30	423.01
30-40	94.60
40-50	12.03
50-60	10.38
60-70	9.40
70-80	8.80
80-90	4.11
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

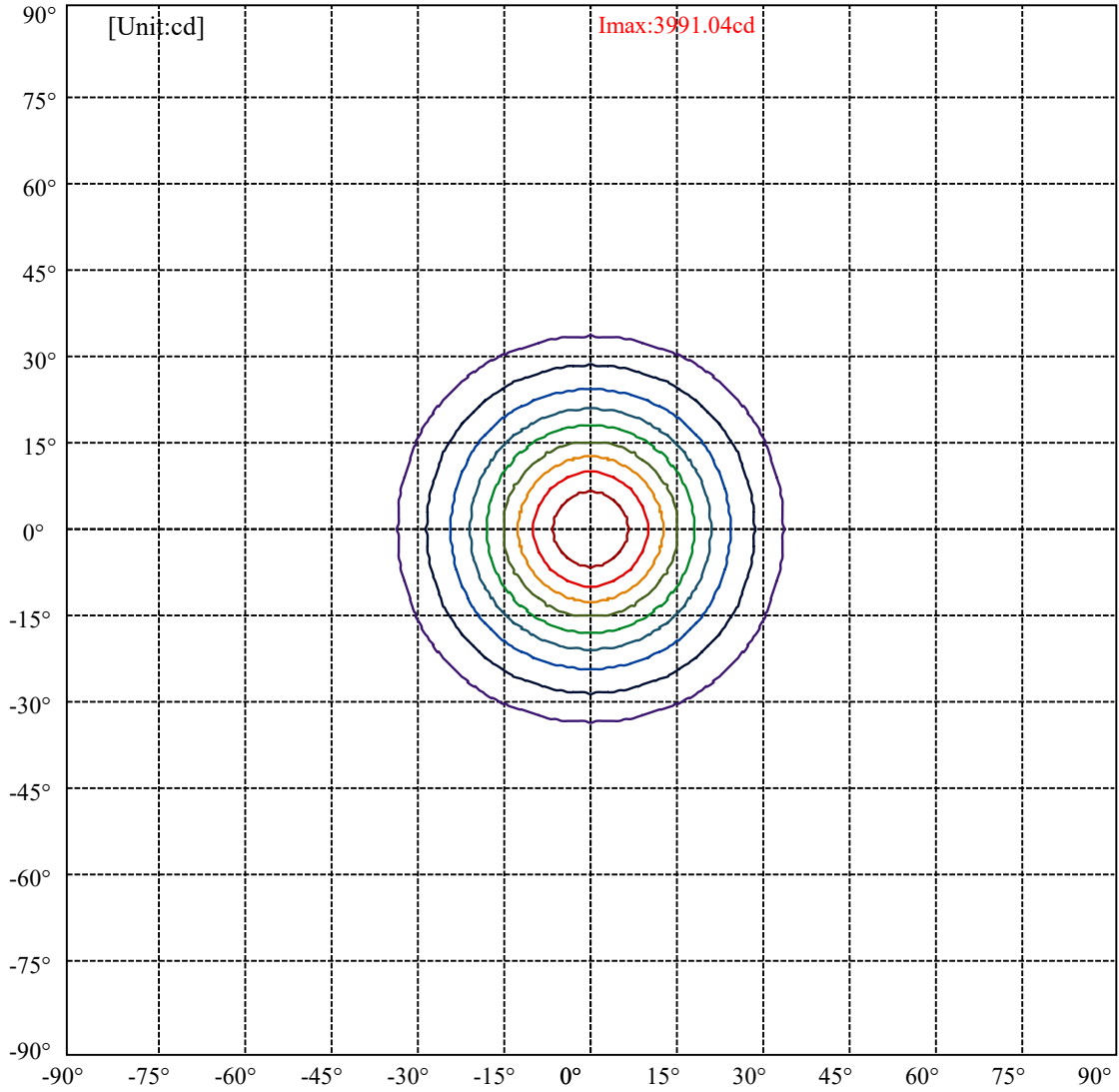


C0(Max): —————
C0/C180: —————
C90/C270: —————

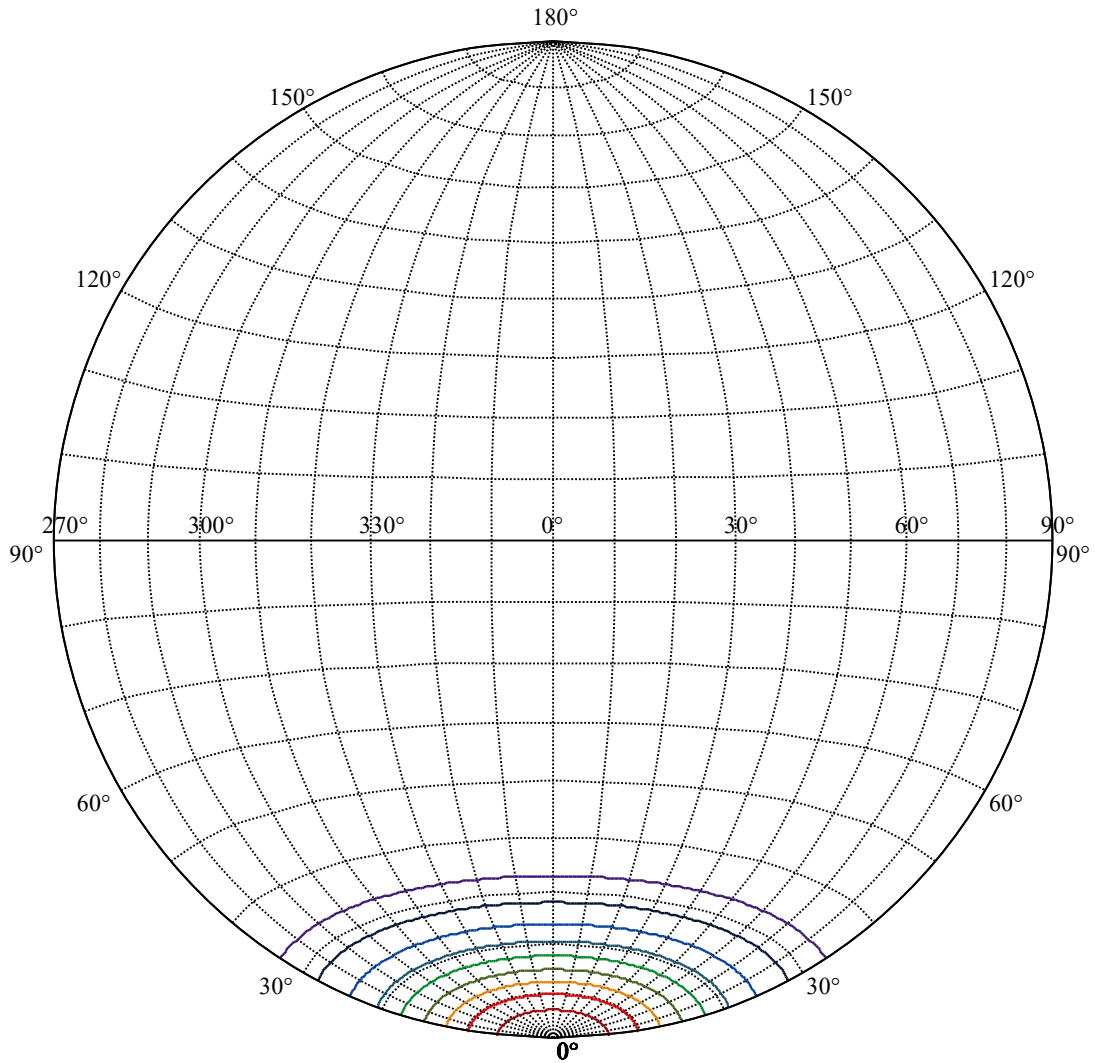
Field angle(10%Imax):C0/180Left:33.1 Right:33.1
:C90/270Left:33.1 Right:33.1

Beam Angle(50%Imax):C0/180Left:17.7 Right:17.7
:C90/270Left:17.7 Right:17.7





(10%Imax) 399.104	—
(20%Imax) 798.208	—
(30%Imax) 1197.31	—
(40%Imax) 1596.42	—
(50%Imax) 1995.52	—
(60%Imax) 2394.62	—
(70%Imax) 2793.73	—
(80%Imax) 3192.83	—
(90%Imax) 3591.93	—



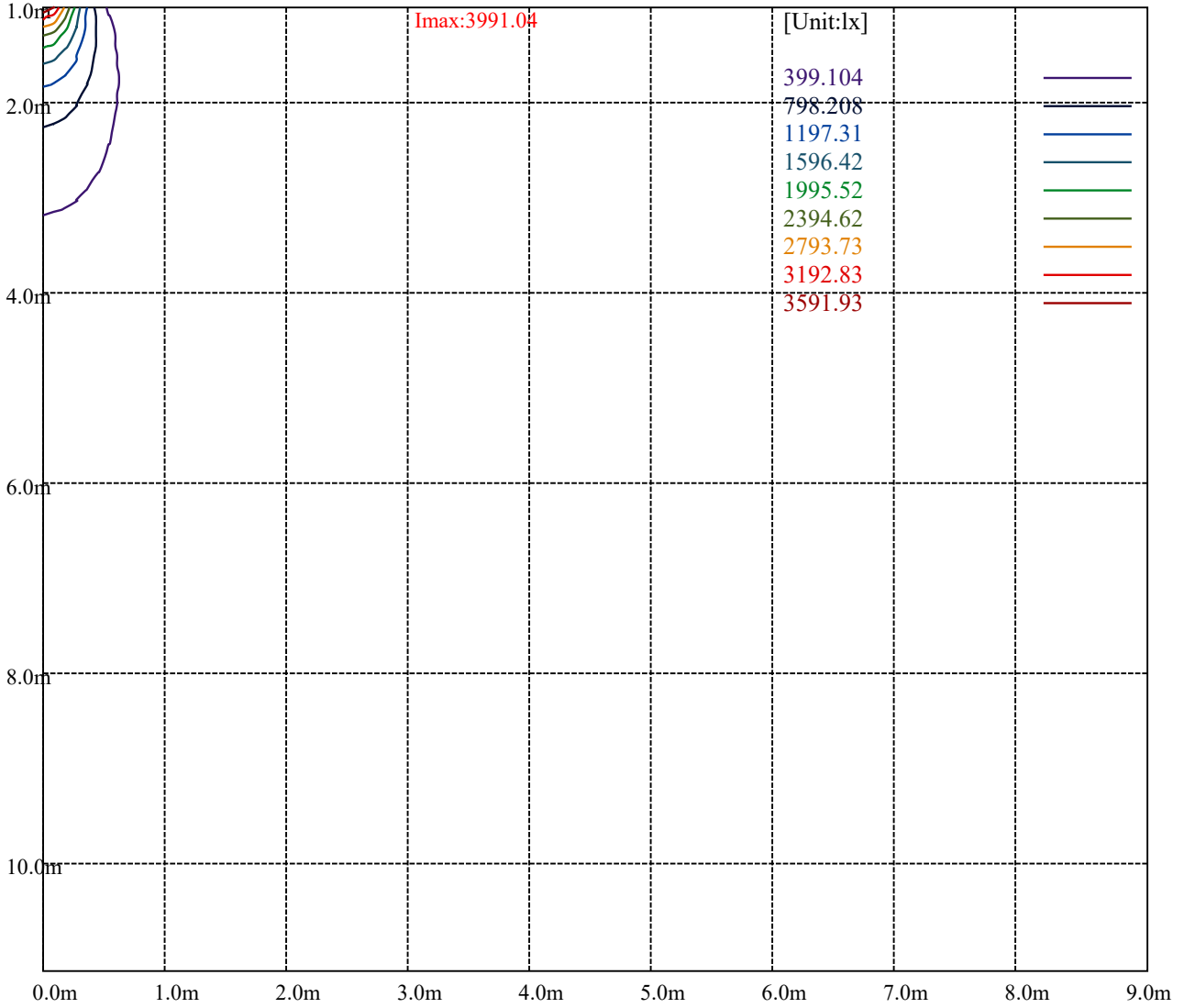
House

[Unit:cd]

Road

Imax:3991.04

(10%Imax)	399.104	—
(20%Imax)	798.208	—
(30%Imax)	1197.31	—
(40%Imax)	1596.42	—
(50%Imax)	1995.52	—
(60%Imax)	2394.62	—
(70%Imax)	2793.73	—
(80%Imax)	3192.83	—
(90%Imax)	3591.93	—



Luminance Table

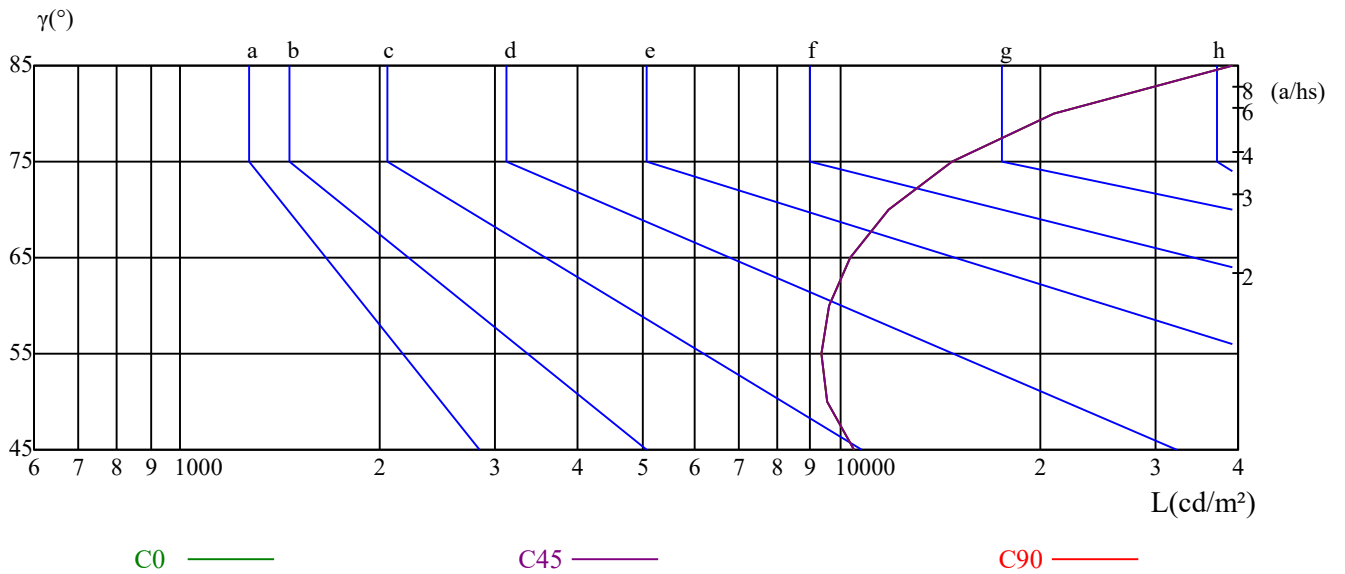
γ	45	50	55	60	65	70	75	80	85
C0	10464	9558	9364	9633	10321	11851	14722	20973	39106
C45	10464	9558	9364	9633	10321	11851	14722	20973	39106
C90	10464	9558	9364	9633	10321	11851	14722	20973	39106

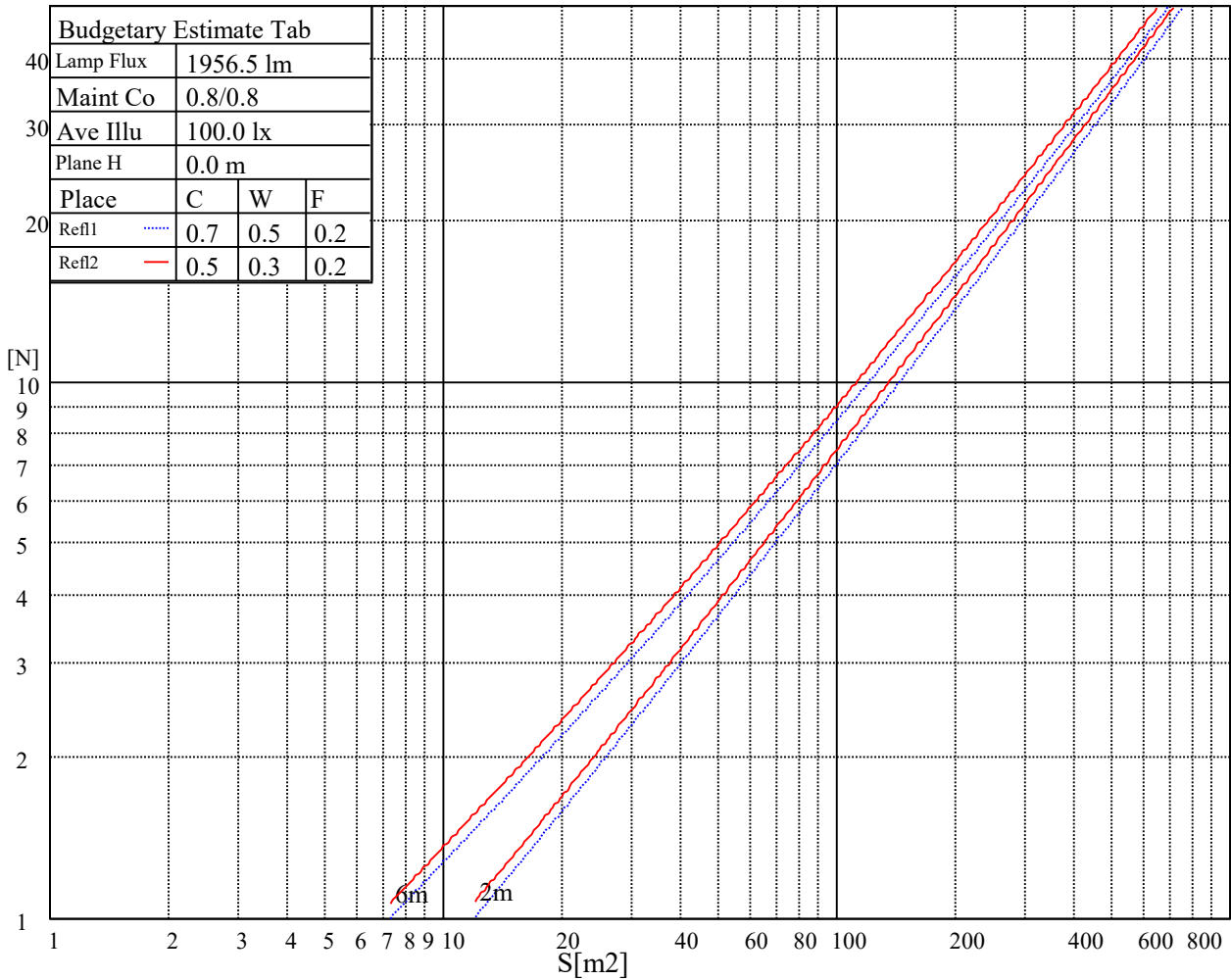
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10321	10321	10321	14722	14722	14722	39106	39106	39106

Glare Table

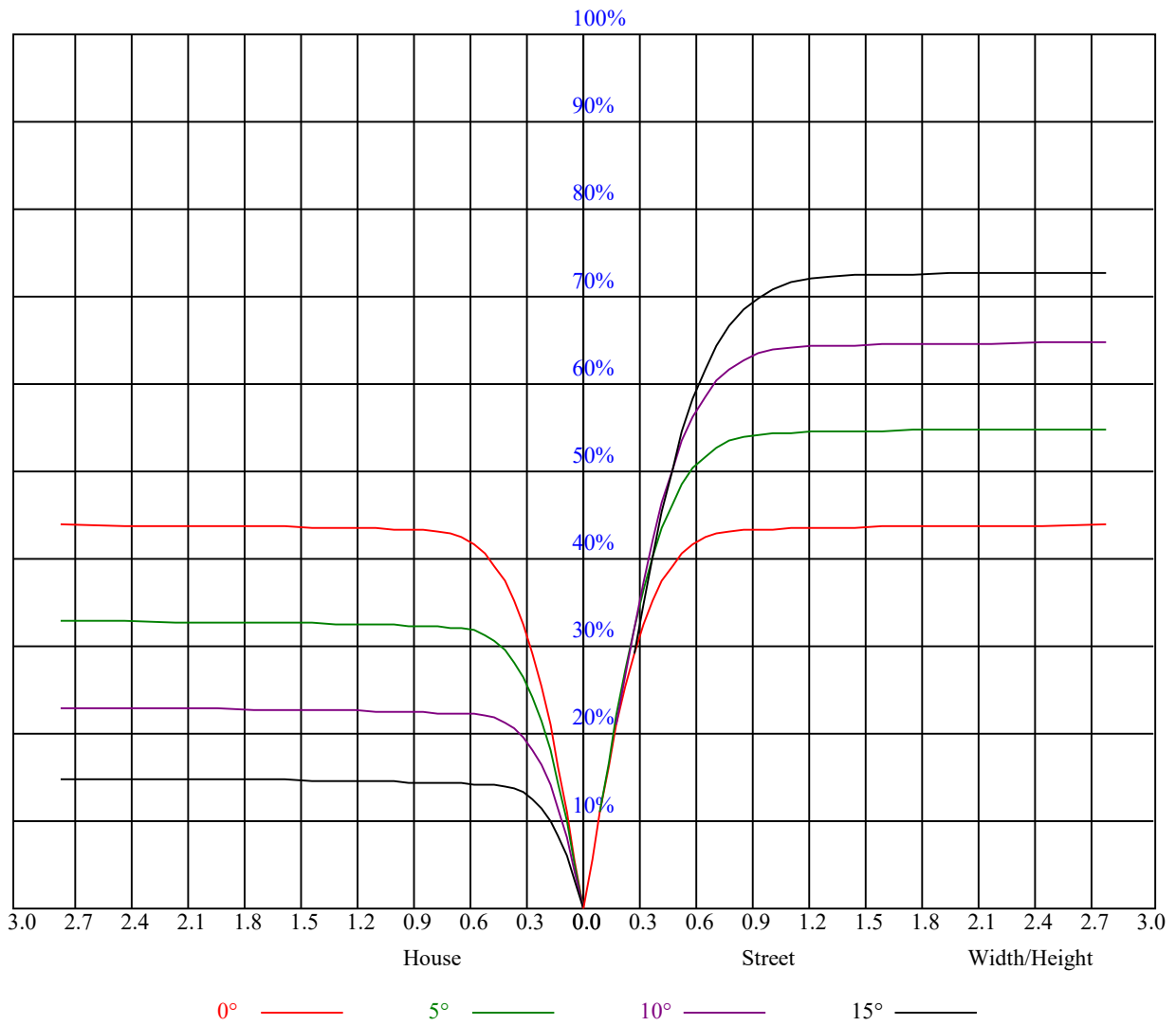
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

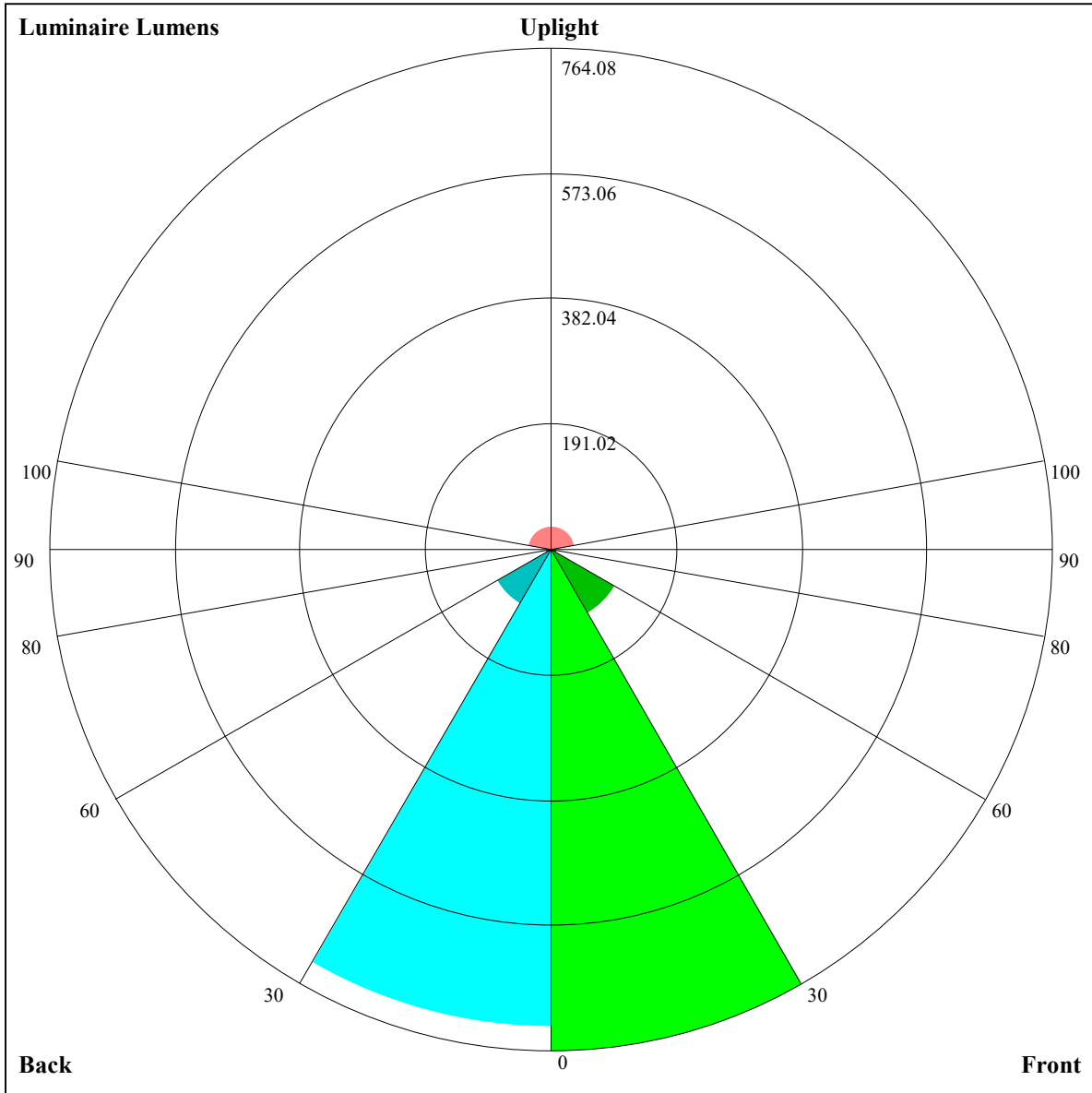
Luminance Limiting Curve





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





Luminaire Lumens:

FL=764.08,FM=110.97,FH=9.47,FVH=4.15

BL=728.32,BM=94.81,BH=9.35,BVH=4.13

UL=7.77,UH=36.98

BUG Rating:B2-U2-G0

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	3981.68	3855.60	3339.17	2551.86	1861.46	1215.65	749.87	339.70	59.52
45.0	3987.74	3858.90	3339.17	2566.73	1884.03	1238.77	772.44	349.06	61.44
90.0	3999.85	3752.09	3196.57	2398.81	1670.96	1089.40	645.37	246.65	44.87
135.0	3994.89	3800.54	3252.18	2485.80	1708.40	1133.61	692.61	278.03	45.64
180.0	3981.68	3661.25	2988.46	2186.29	1512.95	975.38	527.50	171.17	28.52
225.0	3987.74	3681.62	3023.15	2205.01	1548.19	973.23	518.47	164.01	27.91
270.0	3999.85	3771.91	3158.04	2405.41	1613.70	1020.20	583.60	291.25	33.31
315.0	3994.89	3705.30	3036.36	2278.23	1559.20	980.99	565.65	192.37	33.36
360.0	3981.68	3855.60	3339.17	2551.86	1861.46	1215.65	749.87	339.70	59.52
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.11	14.48	12.06	10.57	9.47	8.75	8.20	7.76	7.60
45.0	17.62	14.15	11.73	10.41	9.36	8.70	8.15	7.82	7.60
90.0	19.38	16.74	14.70	12.44	10.41	9.69	9.19	8.75	8.09
135.0	15.75	12.77	11.29	10.52	9.91	9.19	8.70	8.26	7.65
180.0	13.82	11.73	10.24	9.41	8.92	8.53	8.09	7.65	7.38
225.0	13.54	11.40	10.13	9.41	8.97	8.53	8.09	7.76	7.49
270.0	16.02	13.82	12.39	11.01	10.08	9.30	8.59	8.20	7.21
315.0	16.52	13.49	12.39	11.34	9.97	8.92	8.31	8.15	7.21
360.0	18.11	14.48	12.06	10.57	9.47	8.75	8.20	7.76	7.60
C/ γ (°)	90.0								
0.0	7.54								
45.0	7.38								
90.0	7.10								
135.0	6.99								
180.0	6.99								
225.0	7.05								
270.0	6.88								
315.0	7.05								
360.0	7.54								