
Nata

Client:

LumCAT: 3-2095-M

Luminaire: 92.70.136.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT2850

Lamp flux(lm): 3332.0

Number of Lamps: 1

Length(mm): 79

Phm Type: C

Voltage(V): 34.1000

Current(A): 0.6500

Power (W): 22.1650

PF: 0.0000

Ballast type: DC

Width(mm): 79

Height(mm): 0

Photometric Results

Lumens(lm): 2962.56, Efficiency(%): 88.91% , Luminous Efficacy(lm/W): 133.66

Central intensity(cd): 8541.450, Maximum intensity(cd): 8541.450

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=29.0

[C90/270]Total=29.0

Field angle(10%Imax): [C0/180]Total=64.2

[C90/270]Total=64.2

Maximum s/h(1/2): C0_180=0.48 C90_270=0.48

Maximum s/h(1/4): C0_180=0.50 C90_270=0.50

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.44%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.122%

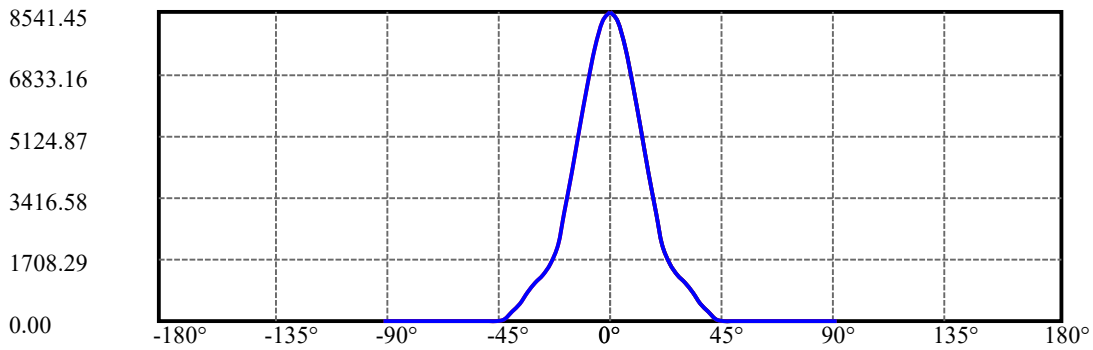
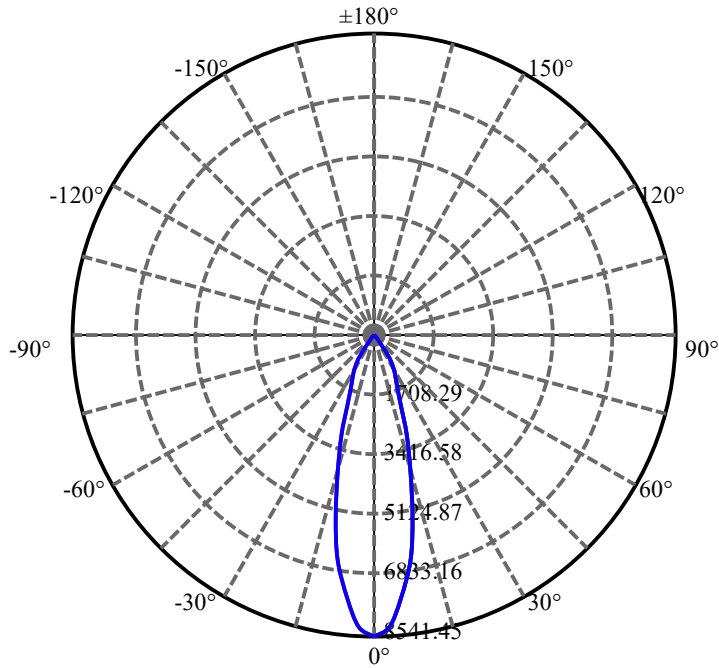
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8541.450	18.391	18.391	.552%	.621%
3.0	8284.061	142.617	161.008	4.280%	5.435%
6.0	7510.106	258.232	419.24	7.750%	14.151%
9.0	6459.423	332.395	751.635	9.976%	25.371%
12.0	5297.802	362.329	1113.964	10.874%	37.601%
15.0	4073.004	346.769	1460.733	10.407%	49.306%
18.0	2967.333	301.632	1762.365	9.053%	59.488%
21.0	2139.216	252.181	2014.546	7.569%	68.000%
24.0	1613.359	215.861	2230.407	6.478%	75.286%
27.0	1292.931	193.086	2423.493	5.795%	81.804%
30.0	1042.445	171.456	2594.949	5.146%	87.591%
33.0	772.723	138.440	2733.389	4.155%	92.264%
36.0	501.075	96.884	2830.272	2.908%	95.535%
39.0	259.887	53.800	2884.073	1.615%	97.351%
42.0	68.022	14.972	2899.045	.449%	97.856%
45.0	22.250	5.175	2904.22	.155%	98.031%
48.0	16.758	4.097	2908.317	.123%	98.169%
51.0	15.581	3.983	2912.3	.120%	98.303%
54.0	14.673	3.905	2916.205	.117%	98.435%
57.0	14.039	3.873	2920.078	.116%	98.566%
60.0	13.661	3.892	2923.97	.117%	98.697%
63.0	13.399	3.927	2927.897	.118%	98.830%
66.0	13.200	3.967	2931.864	.119%	98.964%
69.0	13.035	4.003	2935.867	.120%	99.099%
72.0	12.931	4.046	2939.912	.121%	99.235%
75.0	12.828	4.076	2943.988	.122%	99.373%
78.0	12.780	4.112	2948.1	.123%	99.512%
81.0	12.718	4.132	2952.232	.124%	99.651%
84.0	12.697	4.154	2956.386	.125%	99.792%
87.0	12.539	4.119	2960.505	.124%	99.931%
90.0	12.512	2.058	2962.563	.062%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2594.95	77.88%	87.59%
0-40	2884.07	86.56%	97.35%
0-60	2923.97	87.76%	98.70%
0-90	2960.51	88.85%	99.93%
0-120	2960.51	88.85%	99.93%
0-180	2962.56	88.91%	100.00%
60-90	40.43	1.21%	1.36%
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%
0-26.17	2370.05	71.13%	80.00%

ZONAL LUMEN SUMMARY

0-10	751.63
10-20	1010.73
20-30	832.58
30-40	289.12
40-50	24.24
50-60	15.65
60-70	11.90
70-80	12.23
80-90	12.41
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: —————

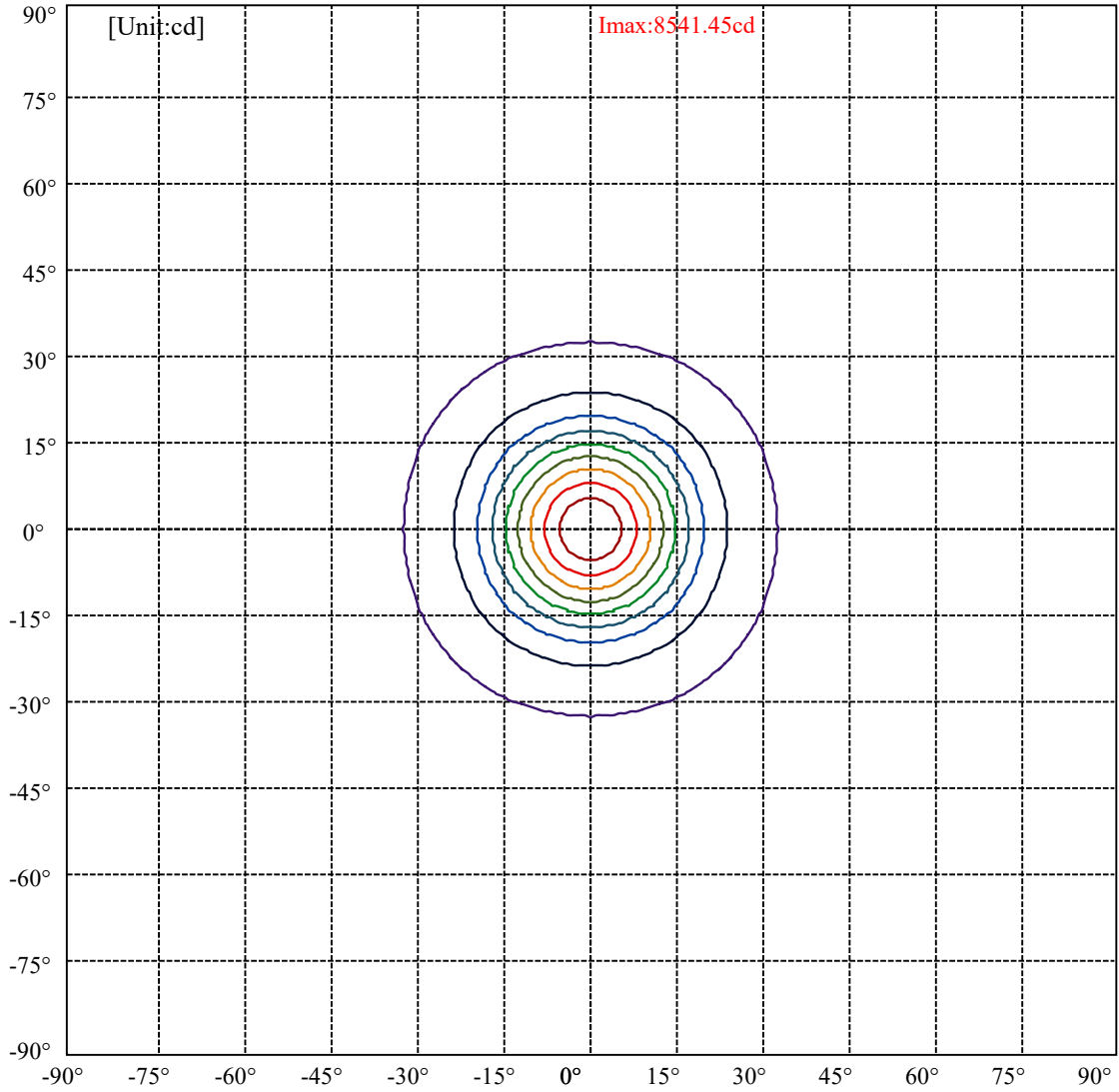
C90/C270: —————

Field angle(10%Imax):C0/180Left:32.1 Right:32.1

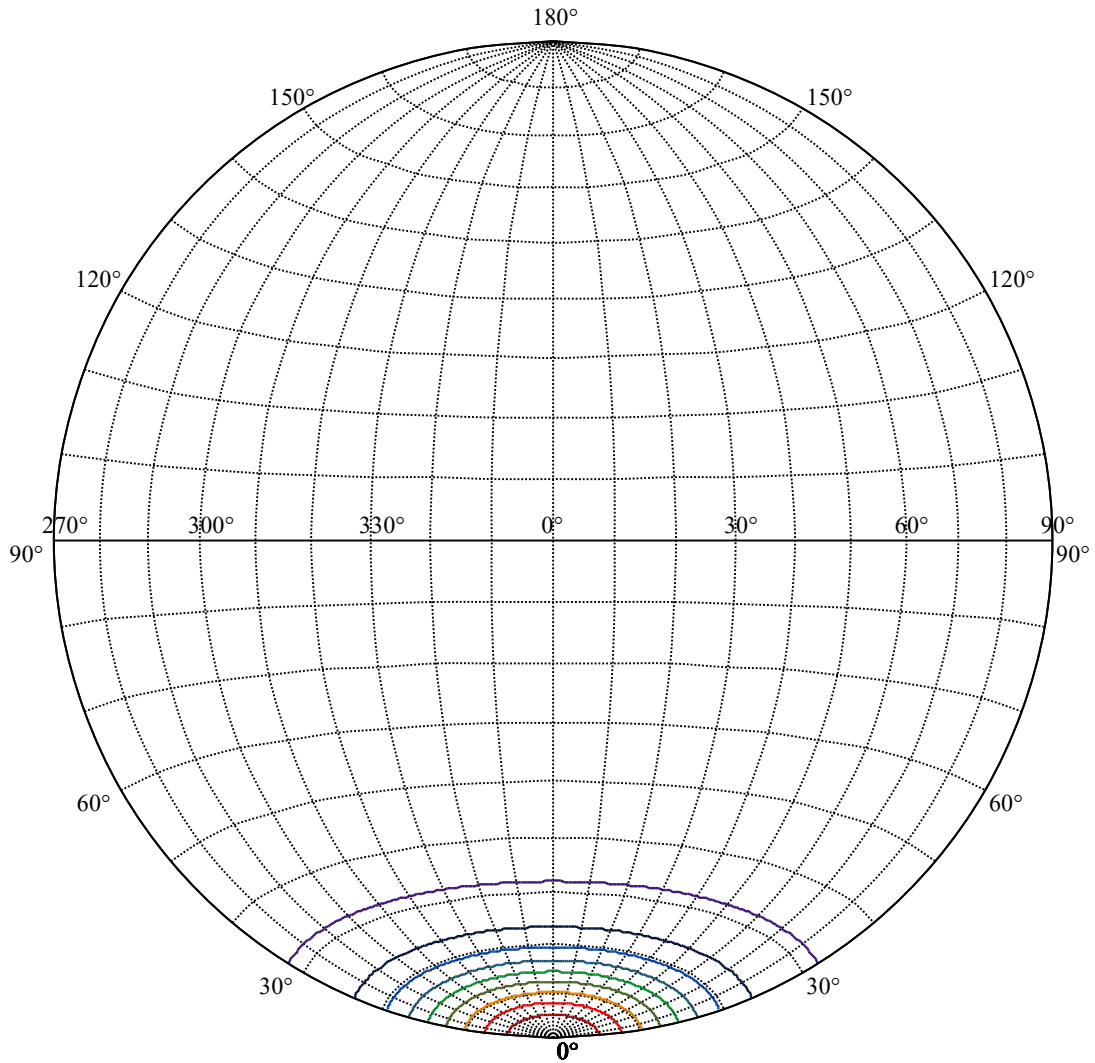
:C90/270Left:32.1 Right:32.1

Beam Angle(50%Imax):C0/180Left:14.5 Right:14.5

:C90/270Left:14.5 Right:14.5



(10%Imax) 854.145	—
(20%Imax) 1708.29	—
(30%Imax) 2562.44	—
(40%Imax) 3416.58	—
(50%Imax) 4270.73	—
(60%Imax) 5124.87	—
(70%Imax) 5979.02	—
(80%Imax) 6833.16	—
(90%Imax) 7687.31	—



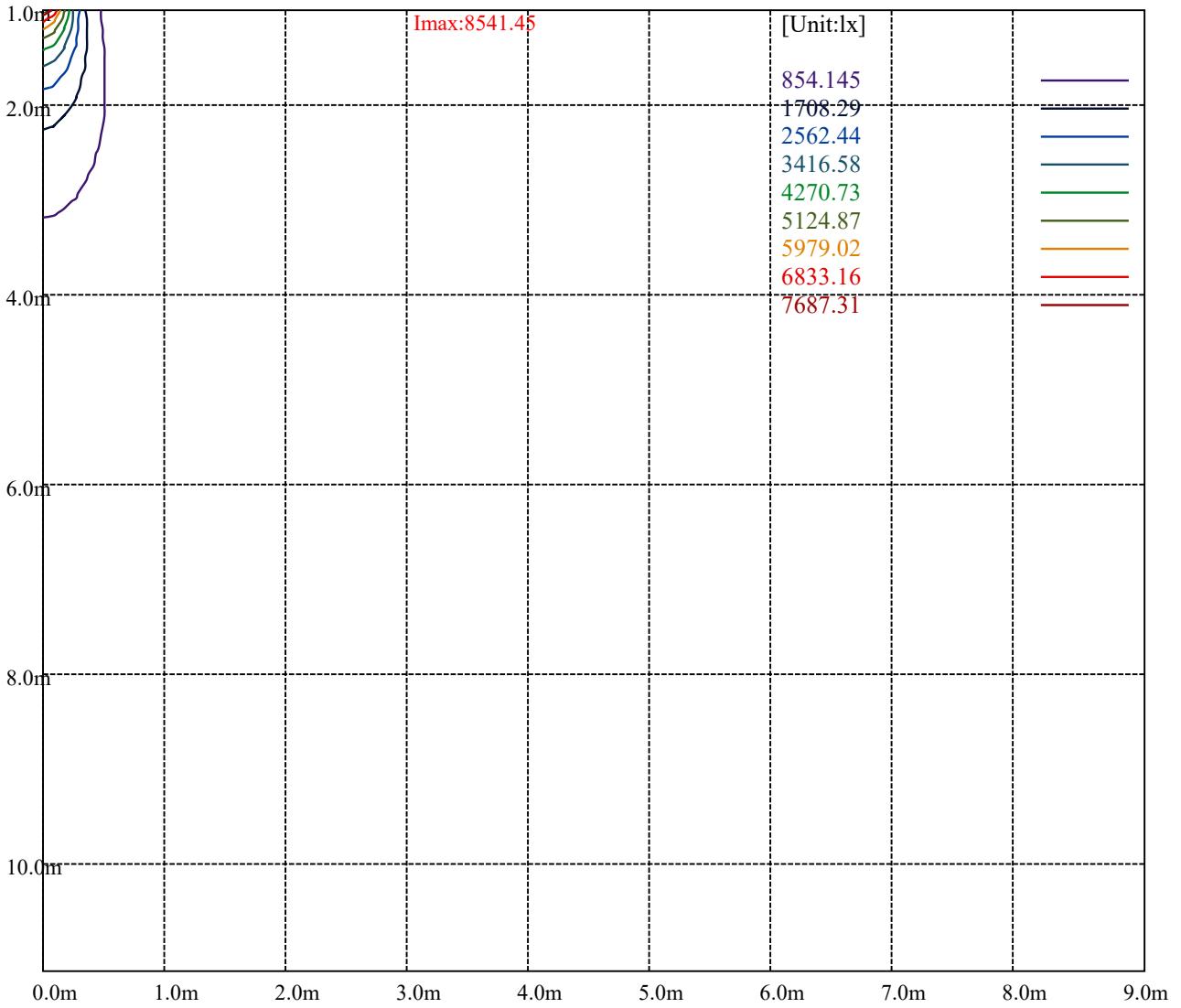
House

[Unit:cd]

Road

Imax:8541.45

(10%Imax) 854.145	—
(20%Imax) 1708.29	—
(30%Imax) 2562.44	—
(40%Imax) 3416.58	—
(50%Imax) 4270.73	—
(60%Imax) 5124.87	—
(70%Imax) 5979.02	—
(80%Imax) 6833.16	—
(90%Imax) 7687.31	—



Luminance Table

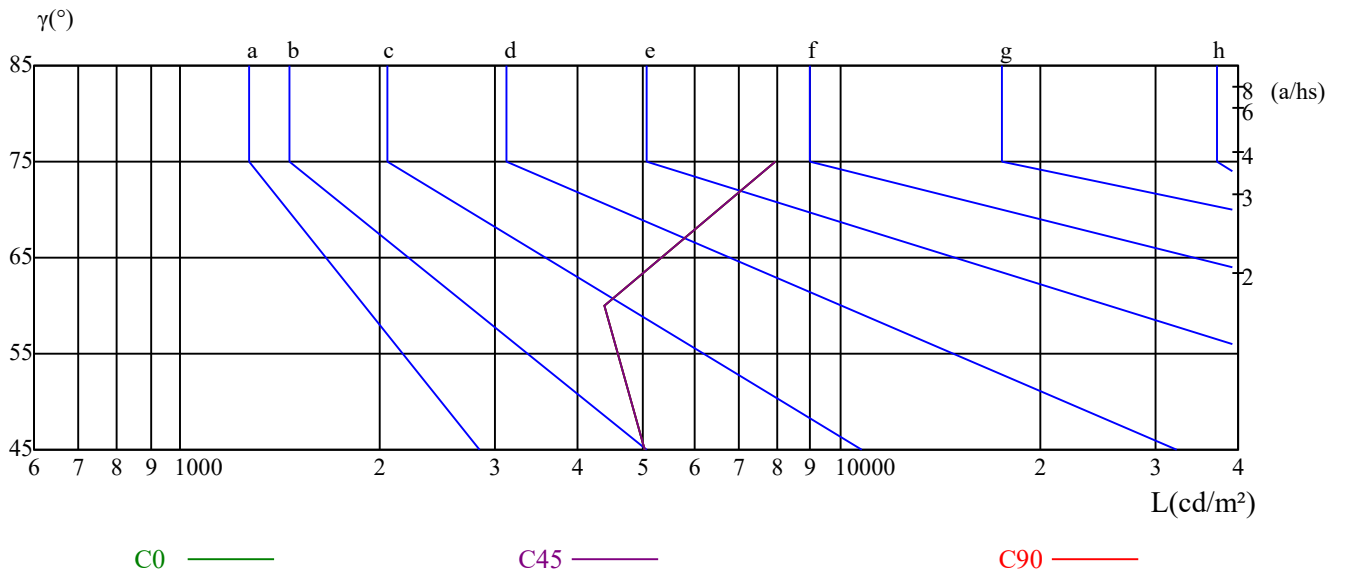
γ	45	50	55	60	65	70	75	80	85
C0	5042	0	0	4378	0	0	7942	0	0
C45	5042	0	0	4378	0	0	7942	0	0
C90	5042	0	0	4378	0	0	7942	0	0

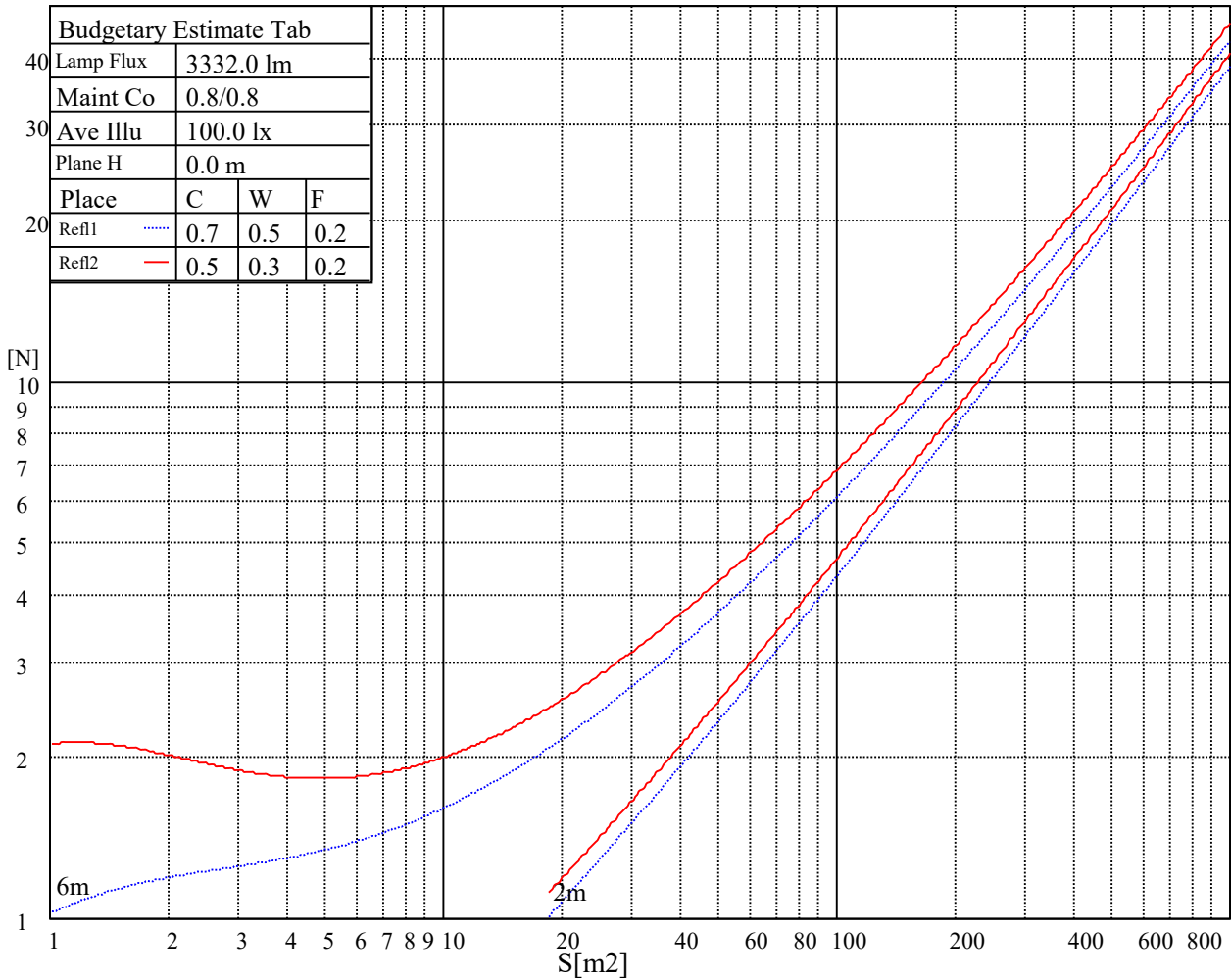
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5106	5106	5106	7942	7942	7942	22951	22951	22951

Glare Table

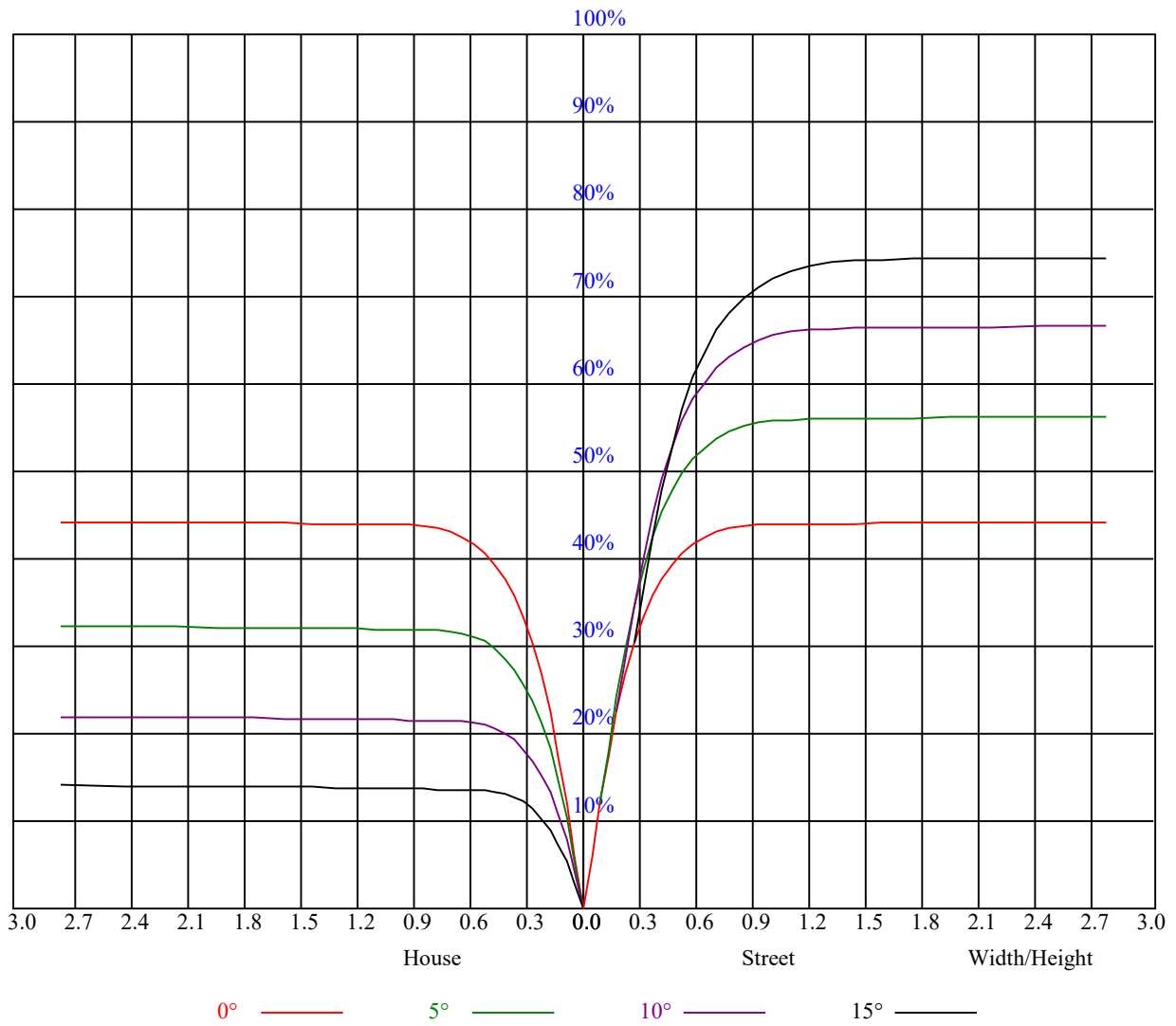
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

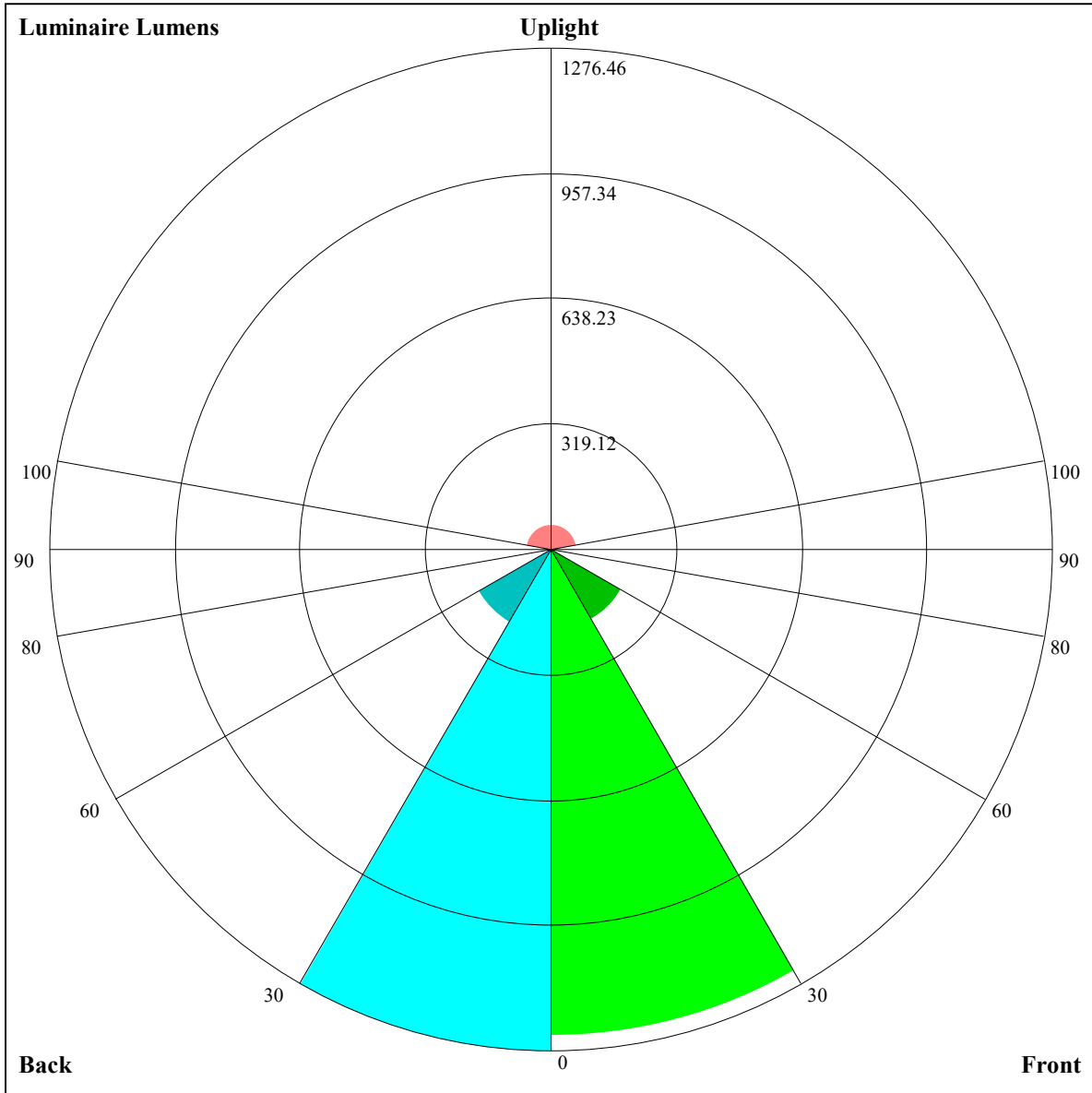
Luminance Limiting Curve





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	0.97	0.94	0.91	0.95	0.92	0.90	0.91	0.89	0.87	0.88	0.86	0.85	0.85	0.83	0.82	0.80
2	0.89	0.85	0.81	0.87	0.83	0.80	0.84	0.81	0.78	0.82	0.79	0.76	0.79	0.77	0.75	0.73
3	0.82	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.67
4	0.75	0.69	0.65	0.74	0.69	0.65	0.72	0.67	0.64	0.70	0.66	0.63	0.68	0.65	0.62	0.61
5	0.69	0.63	0.59	0.68	0.63	0.58	0.67	0.62	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.55
6	0.64	0.58	0.53	0.63	0.57	0.53	0.62	0.57	0.53	0.60	0.56	0.52	0.59	0.55	0.52	0.51
7	0.59	0.53	0.49	0.59	0.53	0.48	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.46
8	0.55	0.49	0.44	0.54	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.42
9	0.51	0.45	0.41	0.50	0.45	0.41	0.50	0.44	0.40	0.49	0.44	0.40	0.48	0.43	0.40	0.39
10	0.47	0.41	0.37	0.47	0.41	0.37	0.46	0.41	0.37	0.45	0.40	0.37	0.45	0.40	0.37	0.36





Luminaire Lumens:

FL=1238.64,FM=203.91,FH=13.34,FVH=6.89

BL=1276.46,BM=216.18,BH=13.45,BVH=6.89

UL=13.65,UH=64.96

BUG Rating:B3-U2-G0

Intensity data(cd)

C/γ(°)	0.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0
0.0	8545.85	8298.10	7482.16	6412.42	5279.91	4051.05	2940.56	2119.67	1597.19
45.0	8554.11	8097.70	7174.40	6051.25	4871.94	3656.85	2635.00	1912.11	1468.90
90.0	8518.88	7987.58	7079.70	5940.03	4723.29	3531.87	2534.25	1846.04	1447.98
135.0	8546.96	8248.55	7439.77	6372.78	5226.50	4000.40	2909.18	2098.20	1572.96
180.0	8545.85	8313.52	7554.84	6485.09	5311.84	4095.65	2983.51	2142.24	1630.22
225.0	8554.11	8489.70	7857.10	6905.72	5748.44	4506.92	3324.86	2387.25	1770.06
270.0	8518.88	8516.12	7934.73	6970.69	5872.32	4629.14	3416.80	2453.86	1791.54
315.0	8546.96	8321.22	7558.14	6537.40	5348.18	4112.16	2994.52	2154.36	1628.02
360.0	8545.85	8298.10	7482.16	6412.42	5279.91	4051.05	2940.56	2119.67	1597.19
C/γ(°)	27.0	30.0	33.0	36.0	39.0	42.0	45.0	48.0	51.0
0.0	1277.86	1032.31	756.47	483.95	283.54	50.93	20.65	16.57	15.36
45.0	1204.63	962.39	682.70	412.92	171.23	33.31	18.28	16.19	15.20
90.0	1200.23	946.97	670.20	402.79	163.52	32.70	18.33	16.08	15.14
135.0	1268.50	1035.61	749.32	485.05	281.34	54.89	20.04	16.68	15.58
180.0	1303.74	1045.25	764.07	492.20	244.45	59.30	21.42	16.79	15.69
225.0	1388.52	1094.69	872.92	593.84	327.04	116.99	28.46	17.62	16.19
270.0	1393.48	1164.99	904.58	631.50	357.87	128.34	28.35	17.62	16.13
315.0	1306.49	1057.36	781.53	506.35	250.12	67.72	22.46	16.52	15.36
360.0	1277.86	1032.31	756.47	483.95	283.54	50.93	20.65	16.57	15.36
C/γ(°)	54.0	57.0	60.0	63.0	66.0	69.0	72.0	75.0	78.0
0.0	14.42	13.82	13.43	13.21	13.05	12.94	12.88	12.77	12.77
45.0	14.31	13.76	13.49	13.27	13.05	12.94	12.83	12.77	12.72
90.0	14.31	13.82	13.49	13.27	13.10	12.99	12.88	12.77	12.77
135.0	14.65	13.98	13.65	13.43	13.27	13.10	13.05	12.94	12.88
180.0	14.76	14.20	13.87	13.54	13.32	13.10	12.94	12.88	12.77
225.0	15.25	14.48	13.93	13.65	13.38	13.16	12.99	12.83	12.77
270.0	15.14	14.37	13.87	13.54	13.32	13.10	12.99	12.88	12.77
315.0	14.53	13.87	13.54	13.27	13.10	12.94	12.88	12.77	12.77
360.0	14.42	13.82	13.43	13.21	13.05	12.94	12.88	12.77	12.77
C/γ(°)	81.0	84.0	87.0	90.0					
0.0	12.72	12.72	12.50	12.50					
45.0	12.72	12.66	12.50	12.50					
90.0	12.72	12.72	12.55	12.50					
135.0	12.83	12.83	12.55	12.55					
180.0	12.72	12.66	12.50	12.50					
225.0	12.66	12.61	12.55	12.50					
270.0	12.72	12.72	12.61	12.50					
315.0	12.66	12.66	12.55	12.55					
360.0	12.72	12.72	12.50	12.50					