
Nata

Client:

LumCAT: 2-1738-M

Luminaire: 92.70.136.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT2850

Lamp flux(lm): 3326.9

Number of Lamps: 1

Length(mm): 71

Phm Type: C

Voltage(V): 33.9000

Current(A): 0.6500

Power (W): 22.0350

PF: 0.0000

Ballast type: DC

Width(mm): 71

Height(mm): 0

Photometric Results

Lumens(lm): 2766.02, Efficiency(%): 83.14% , Luminous Efficacy(lm/W): 125.53

Central intensity(cd): 8767.182, Maximum intensity(cd): 8767.182

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.6

[C90/270]Total=25.6

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

[C90/270]Total=64.2

Maximum s/h(1/2): C0_180=0.43 C90_270=0.43

Maximum s/h(1/4): C0_180=0.43 C90_270=0.43

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.68%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.128%

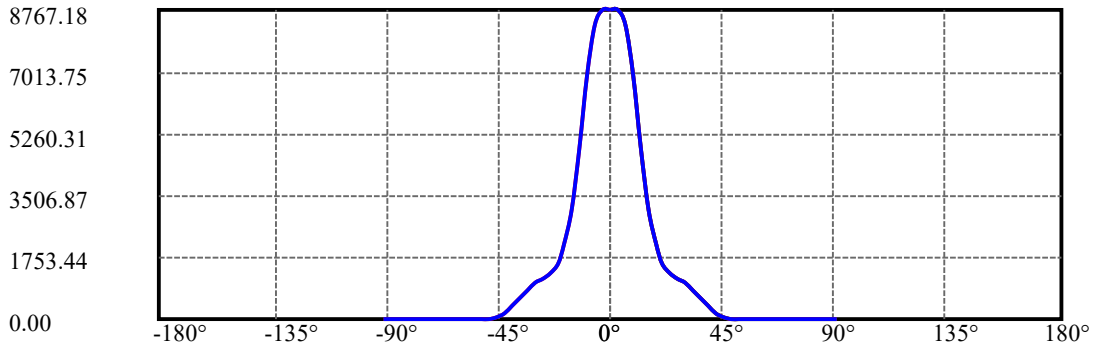
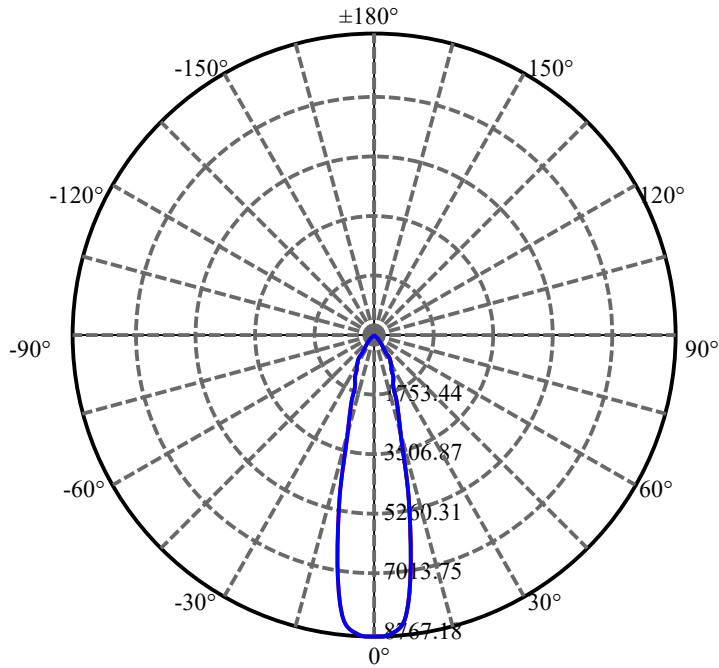
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8767.181	18.877	18.877	.567%	.682%
3.0	8743.920	150.534	169.411	4.525%	6.125%
6.0	8312.897	285.835	455.246	8.592%	16.459%
9.0	6929.880	356.605	811.851	10.719%	29.351%
12.0	4847.441	331.528	1143.379	9.965%	41.337%
15.0	3085.911	262.729	1406.108	7.897%	50.835%
18.0	2105.838	214.060	1620.168	6.434%	58.574%
21.0	1600.696	188.698	1808.866	5.672%	65.396%
24.0	1315.229	175.972	1984.838	5.289%	71.758%
27.0	1135.256	169.539	2154.377	5.096%	77.887%
30.0	1012.377	166.510	2320.888	5.005%	83.907%
33.0	821.820	147.236	2468.124	4.426%	89.230%
36.0	600.383	116.085	2584.209	3.489%	93.427%
39.0	380.866	78.845	2663.053	2.370%	96.278%
42.0	185.857	40.909	2703.962	1.230%	97.757%
45.0	47.342	11.012	2714.974	.331%	98.155%
48.0	15.347	3.752	2718.726	.113%	98.290%
51.0	12.725	3.253	2721.979	.098%	98.408%
54.0	12.236	3.256	2725.235	.098%	98.526%
57.0	11.878	3.277	2728.512	.099%	98.644%
60.0	11.658	3.321	2731.833	.100%	98.764%
63.0	11.527	3.379	2735.212	.102%	98.886%
66.0	11.465	3.445	2738.658	.104%	99.011%
69.0	11.431	3.510	2742.168	.106%	99.138%
72.0	11.397	3.565	2745.734	.107%	99.267%
75.0	11.397	3.621	2749.355	.109%	99.398%
78.0	11.383	3.663	2753.017	.110%	99.530%
81.0	11.397	3.703	2756.72	.111%	99.664%
84.0	11.445	3.744	2760.464	.113%	99.799%
87.0	11.300	3.712	2764.176	.112%	99.933%
90.0	11.197	1.842	2766.018	.055%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2320.89	69.76%	83.91%
0-40	2663.05	80.05%	96.28%
0-60	2731.83	82.11%	98.76%
0-90	2764.18	83.09%	99.93%
0-120	2764.18	83.09%	99.93%
0-180	2766.02	83.14%	100.00%
60-90	35.66	1.07%	1.29%
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%
0-28.05	2212.81	66.51%	80.00%

ZONAL LUMEN SUMMARY

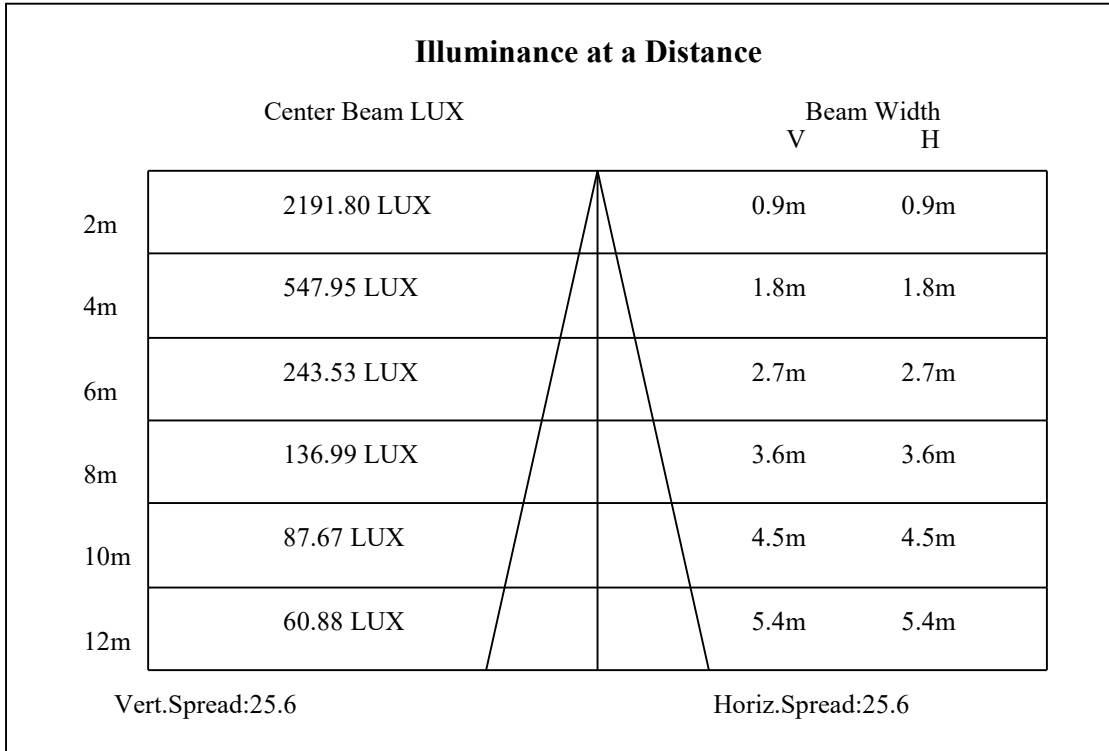
0-10	811.85
10-20	808.32
20-30	700.72
30-40	342.17
40-50	55.67
50-60	13.11
60-70	10.33
70-80	10.85
80-90	11.16
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

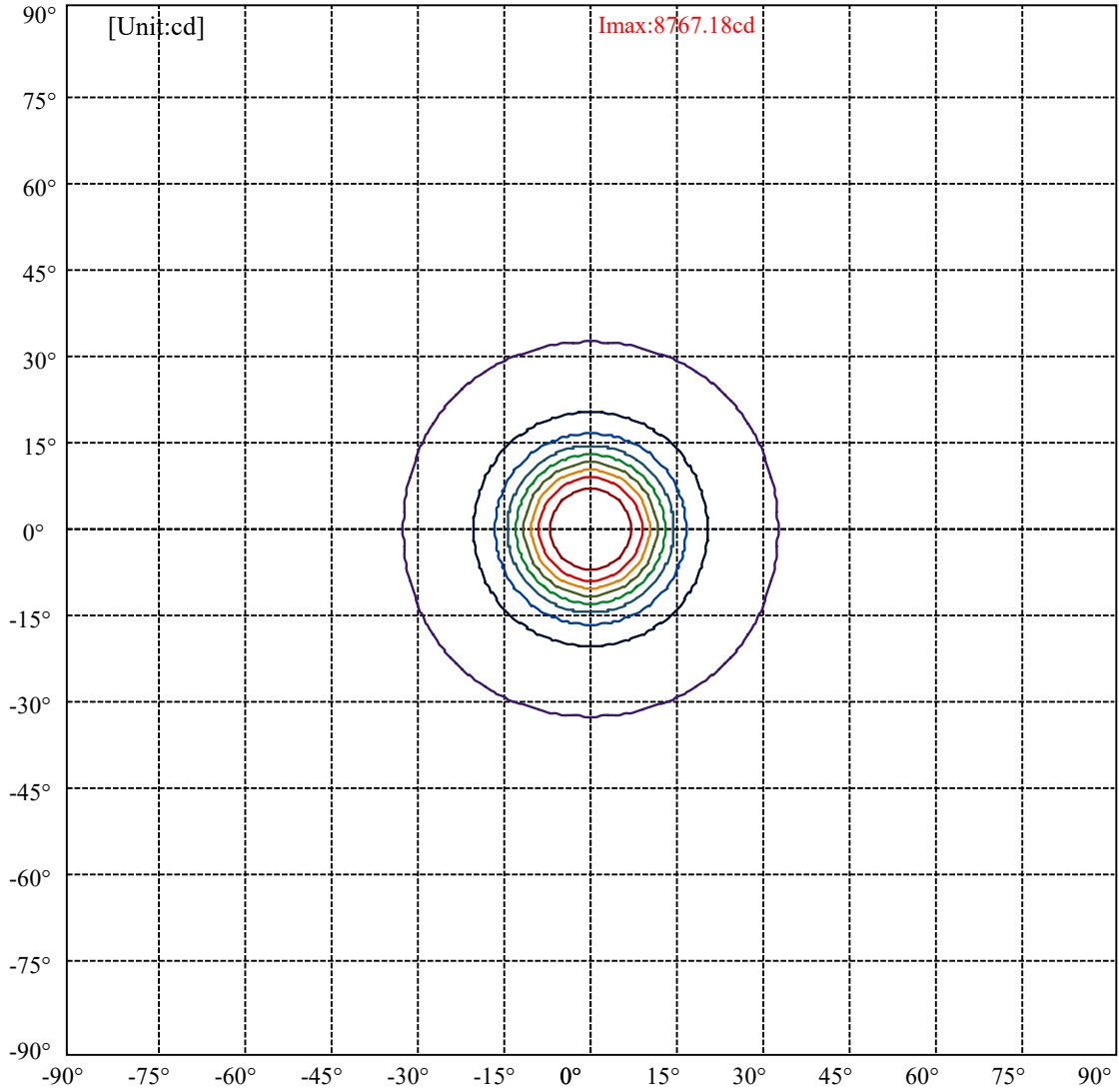


C0(Max): —————
C0/C180: —————
C90/C270: —————

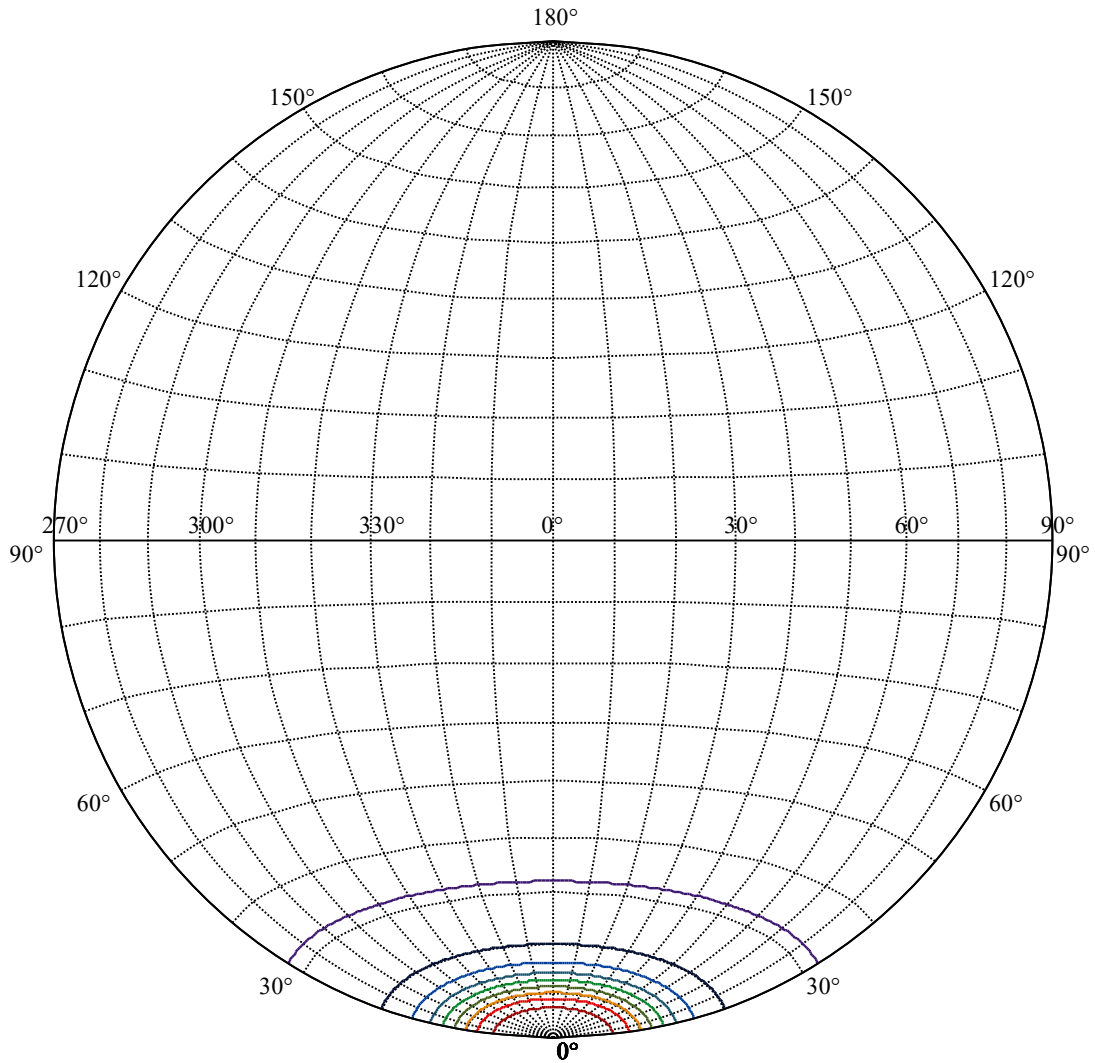
Field angle(10%Imax):C0/180Left:32.1 Right:32.1
:C90/270Left:32.1 Right:32.1

Beam Angle(50%Imax):C0/180Left:12.8 Right:12.8
:C90/270Left:12.8 Right:12.8





(10%Imax) 876.718	—
(20%Imax) 1753.44	—
(30%Imax) 2630.15	—
(40%Imax) 3506.87	—
(50%Imax) 4383.59	—
(60%Imax) 5260.31	—
(70%Imax) 6137.03	—
(80%Imax) 7013.75	—
(90%Imax) 7890.46	—



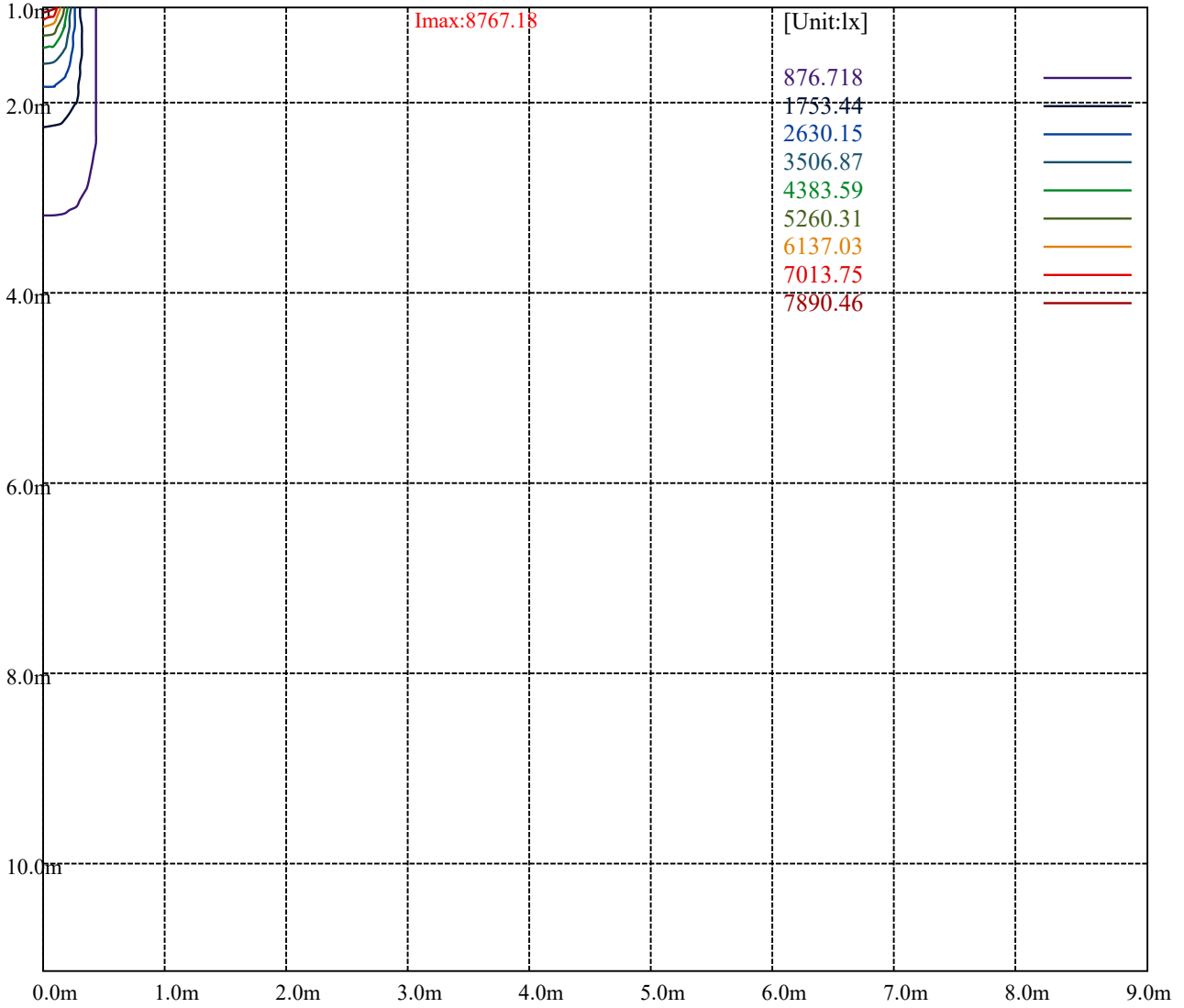
House

[Unit:cd]

Road

Imax:8767.18

(10%Imax) 876.718	—
(20%Imax) 1753.44	—
(30%Imax) 2630.15	—
(40%Imax) 3506.87	—
(50%Imax) 4383.59	—
(60%Imax) 5260.31	—
(70%Imax) 6137.03	—
(80%Imax) 7013.75	—
(90%Imax) 7890.46	—



Luminance Table

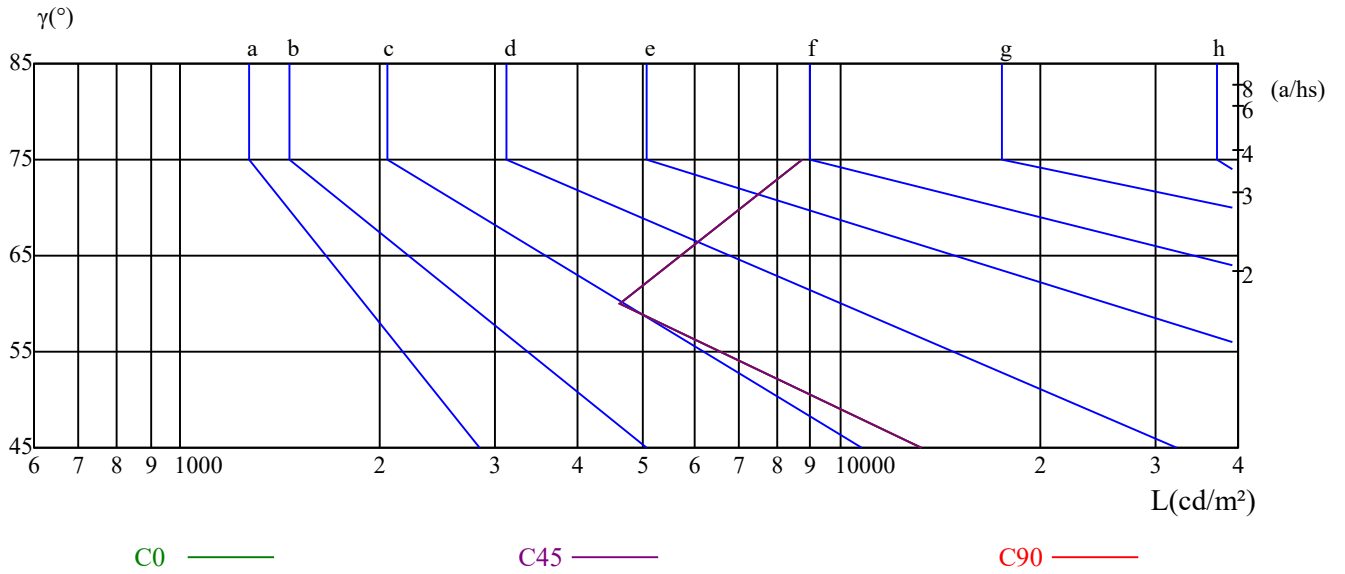
γ	45	50	55	60	65	70	75	80	85
C0	13281	0	0	4625	0	0	8735	0	0
C45	13281	0	0	4625	0	0	8735	0	0
C90	13281	0	0	4625	0	0	8735	0	0

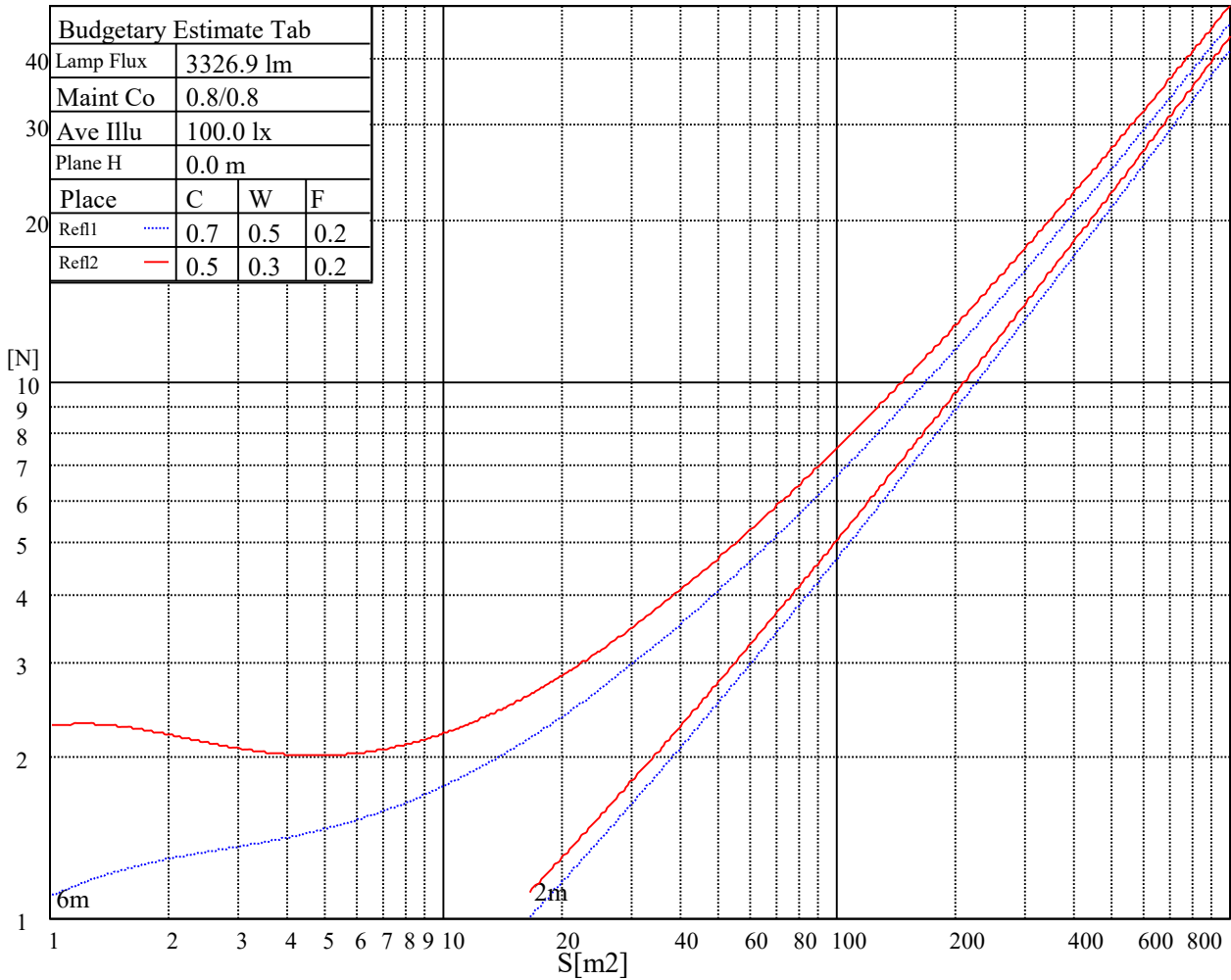
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4636	4636	4636	8735	8735	8735	22071	22071	22071

Glare Table

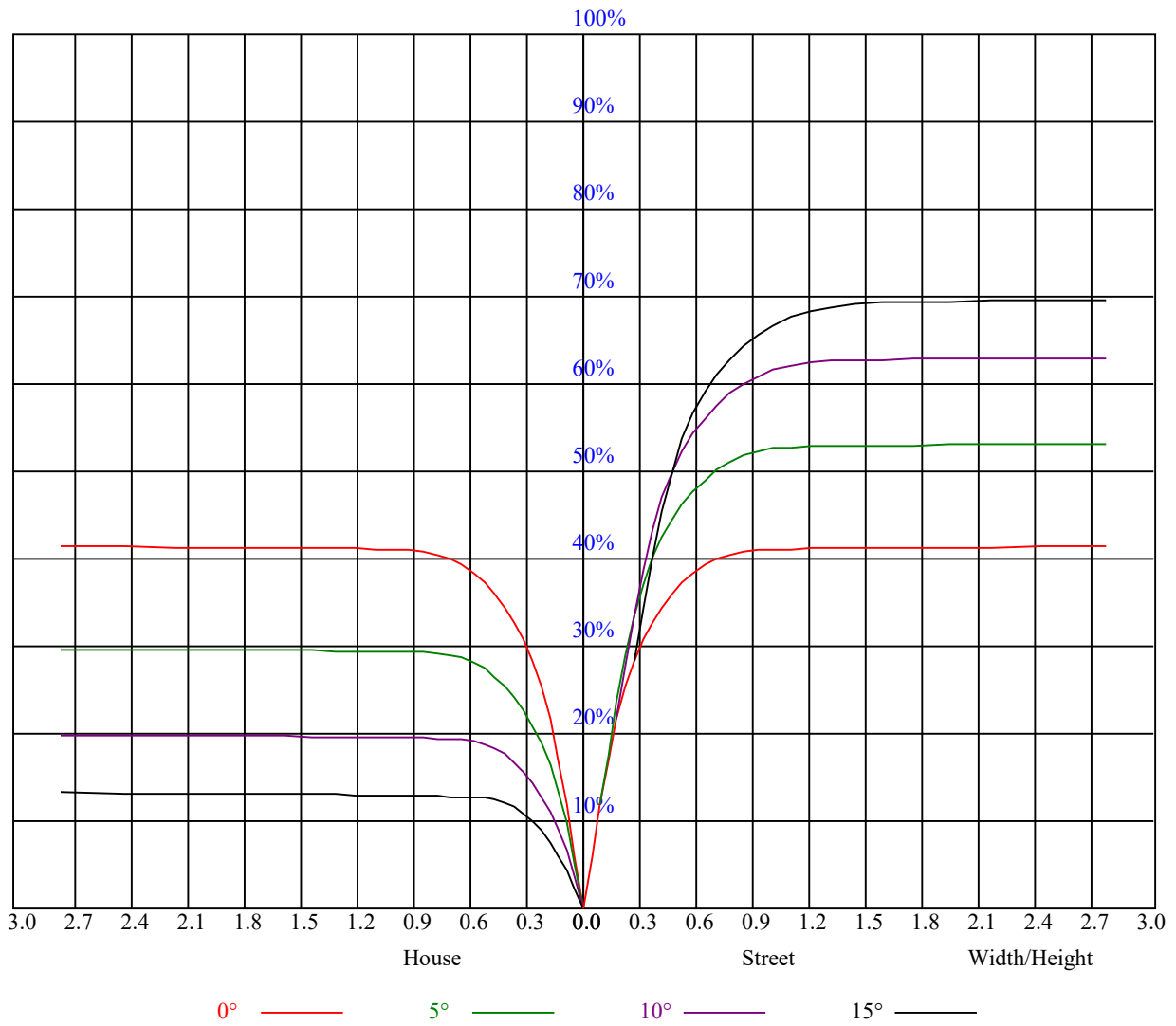
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

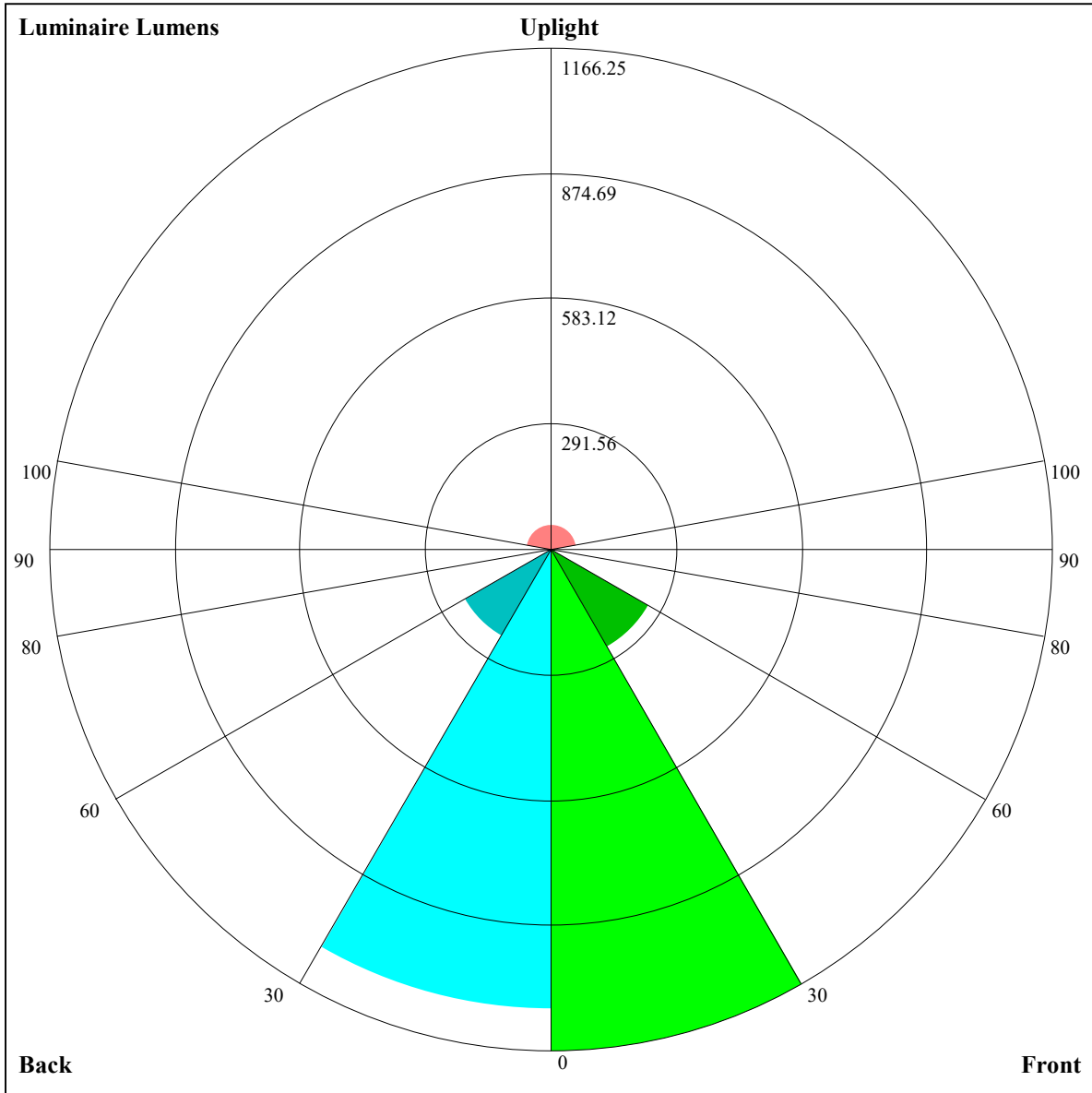
Luminance Limiting Curve





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	1.00	1.00	1.00	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.84
1	0.90	0.88	0.85	0.88	0.86	0.84	0.85	0.83	0.81	0.82	0.80	0.79	0.79	0.78	0.76	0.75
2	0.83	0.78	0.75	0.81	0.77	0.74	0.78	0.75	0.72	0.76	0.73	0.71	0.73	0.71	0.69	0.68
3	0.76	0.71	0.66	0.74	0.70	0.66	0.72	0.68	0.65	0.70	0.67	0.64	0.68	0.65	0.63	0.61
4	0.69	0.64	0.59	0.68	0.63	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.63	0.60	0.57	0.55
5	0.64	0.58	0.54	0.63	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.52	0.58	0.55	0.52	0.50
6	0.59	0.53	0.48	0.58	0.52	0.48	0.57	0.52	0.48	0.55	0.51	0.48	0.54	0.50	0.47	0.46
7	0.54	0.48	0.44	0.54	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.43	0.50	0.46	0.43	0.42
8	0.50	0.44	0.40	0.50	0.44	0.40	0.49	0.44	0.40	0.48	0.43	0.40	0.47	0.43	0.39	0.38
9	0.46	0.41	0.37	0.46	0.40	0.37	0.45	0.40	0.36	0.44	0.40	0.36	0.44	0.39	0.36	0.35
10	0.43	0.37	0.34	0.43	0.37	0.34	0.42	0.37	0.33	0.41	0.37	0.33	0.41	0.36	0.33	0.32





Luminaire Lumens:

FL=1166.25,FM=262.96,FH=11.75,FVH=6.19

BL=1070.97,BM=232.23,BH=11.72,BVH=6.19

UL=12.22,UH=58.14

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	8756.17	8741.30	8658.72	7729.37	5914.71	3780.17	2456.62	1780.52	1419.35
45.0	8777.09	8786.45	8608.07	7449.13	5398.83	3356.79	2218.22	1641.23	1334.02
90.0	8767.18	8758.92	8345.45	6884.25	4640.70	2918.54	1993.04	1530.57	1267.95
135.0	8768.28	8756.17	8194.59	6609.52	4449.11	2830.45	1974.87	1533.87	1271.80
180.0	8756.17	8669.18	7783.32	5992.34	3869.91	2534.80	1835.58	1455.69	1226.66
225.0	8777.09	8729.19	8107.05	6521.98	4351.11	2803.47	1981.48	1547.64	1292.17
270.0	8767.18	8756.72	8348.75	7008.13	4982.05	3173.45	2164.82	1650.59	1354.39
315.0	8768.28	8753.42	8457.21	7244.32	5173.10	3289.62	2222.08	1665.46	1355.49
360.0	8756.17	8741.30	8658.72	7729.37	5914.71	3780.17	2456.62	1780.52	1419.35

C/γ(°)	27.0	30.0	33.0	36.0	39.0	42.0	45.0	48.0	51.0
0.0	1206.29	1069.75	915.59	700.87	473.49	284.64	100.64	22.74	13.16
45.0	1149.03	1041.67	857.78	634.25	417.88	205.97	52.14	17.45	12.77
90.0	1095.35	982.70	784.28	564.27	350.05	159.39	34.52	13.21	12.55
135.0	1115.44	989.36	780.70	559.92	347.96	154.93	30.39	13.43	12.66
180.0	1082.08	934.09	726.91	507.29	291.80	111.10	25.27	12.99	12.39
225.0	1096.17	995.58	793.09	564.77	347.30	147.88	29.57	13.32	12.55
270.0	1168.85	1046.62	859.43	634.80	403.01	205.03	48.67	15.09	12.83
315.0	1168.85	1039.24	856.79	636.89	415.46	217.91	57.53	14.53	12.88
360.0	1206.29	1069.75	915.59	700.87	473.49	284.64	100.64	22.74	13.16

C/γ(°)	54.0	57.0	60.0	63.0	66.0	69.0	72.0	75.0	78.0
0.0	12.55	12.06	11.78	11.56	11.51	11.51	11.45	11.45	11.45
45.0	12.33	11.95	11.73	11.56	11.51	11.45	11.40	11.40	11.34
90.0	12.11	11.78	11.62	11.51	11.45	11.45	11.40	11.40	11.34
135.0	12.22	11.89	11.67	11.56	11.51	11.45	11.40	11.40	11.40
180.0	12.00	11.73	11.56	11.51	11.45	11.40	11.40	11.40	11.45
225.0	12.06	11.78	11.56	11.45	11.40	11.34	11.34	11.34	11.34
270.0	12.28	11.89	11.67	11.51	11.45	11.40	11.40	11.34	11.34
315.0	12.33	11.95	11.67	11.56	11.45	11.45	11.40	11.45	11.40
360.0	12.55	12.06	11.78	11.56	11.51	11.51	11.45	11.45	11.45

C/γ(°)	81.0	84.0	87.0	90.0
0.0	11.45	11.40	11.45	11.23
45.0	11.34	11.34	11.29	11.18
90.0	11.40	11.40	11.23	11.18
135.0	11.34	11.34	11.23	11.18
180.0	11.45	11.62	11.23	11.23
225.0	11.40	11.51	11.23	11.23
270.0	11.34	11.40	11.40	11.18
315.0	11.45	11.56	11.34	11.18
360.0	11.45	11.40	11.45	11.23