
Nata

Client:

LumCAT: 2-1795-N

Luminaire: 92.70.131.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT1922

Lamp flux(lm): 2839.6

Number of Lamps: 1

Length(mm): 69

Phm Type: C

Voltage(V): 35.6000

Current(A): 0.6000

Power (W): 21.3600

PF: 0.0000

Ballast type: DC

Width(mm): 69

Height(mm): 0

Photometric Results

Lumens(lm): 2347.08, Efficiency(%): 82.66% , Luminous Efficacy(lm/W): 109.88

Central intensity(cd): 4803.671, Maximum intensity(cd): 4803.671

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=40.6

[C90/270]Total=40.6

Field angle(10%Imax): [C0/180]Total=64.8

[C90/270]Total=64.8

Maximum s/h(1/2): C0_180=0.66 C90_270=0.66

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(%): 83.59%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.739%

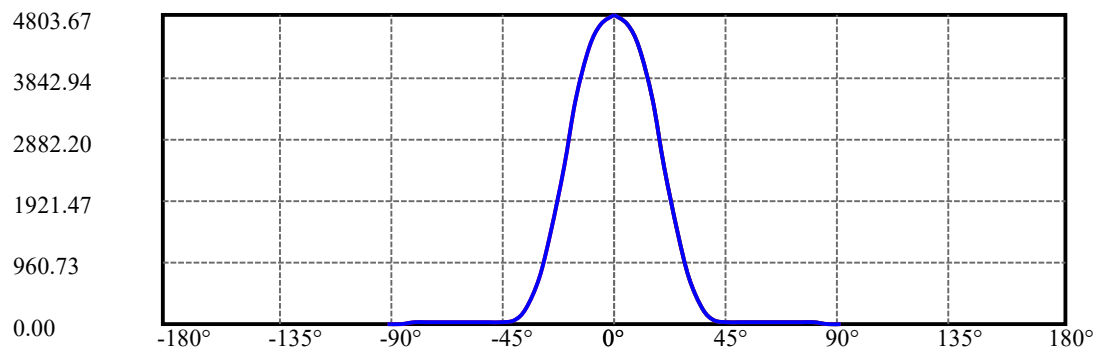
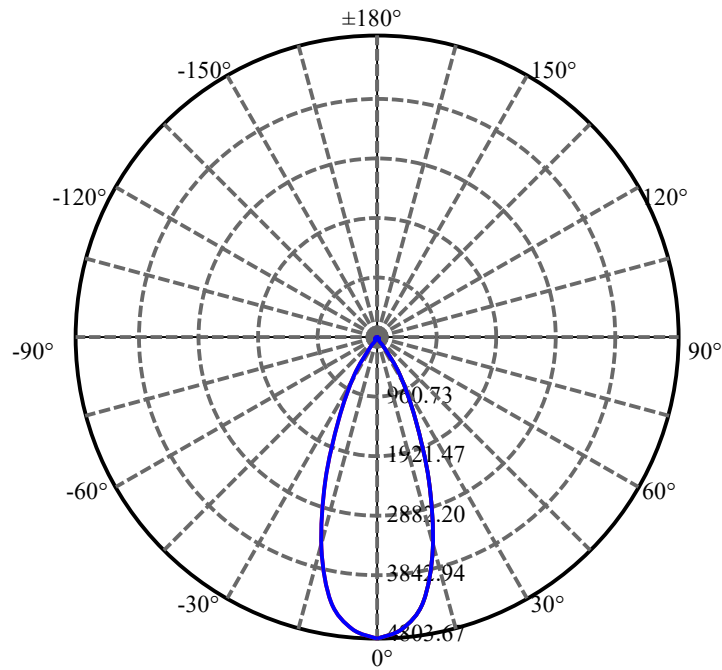
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4803.671	28.727	28.727	1.012%	1.224%
5.0	4662.314	222.734	251.461	7.844%	10.714%
10.0	4287.448	408.092	659.554	14.372%	28.101%
15.0	3477.569	493.357	1152.911	17.374%	49.121%
20.0	2458.131	460.836	1613.746	16.229%	68.755%
25.0	1439.608	333.489	1947.236	11.744%	82.964%
30.0	713.827	195.638	2142.873	6.890%	91.299%
35.0	227.293	71.461	2214.334	2.517%	94.344%
40.0	68.077	23.986	2238.32	.845%	95.366%
45.0	43.185	16.738	2255.058	.589%	96.079%
50.0	34.954	14.677	2269.735	.517%	96.704%
55.0	30.157	13.541	2283.276	.477%	97.281%
60.0	27.184	12.904	2296.18	.454%	97.831%
65.0	24.025	11.935	2308.116	.420%	98.340%
70.0	20.997	10.815	2318.931	.381%	98.800%
75.0	18.403	9.743	2328.674	.343%	99.216%
80.0	15.657	8.452	2337.126	.298%	99.576%
85.0	12.876	7.031	2344.157	.248%	99.875%
90.0	10.681	2.927	2347.084	.103%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2142.87	75.46%	91.30%
0-40	2238.32	78.83%	95.37%
0-60	2296.18	80.86%	97.83%
0-90	2344.16	82.55%	99.88%
0-120	2344.16	82.55%	99.88%
0-180	2347.08	82.66%	100.00%
60-90	60.88	2.14%	2.59%
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%
0-23.96	1877.67	66.13%	80.00%

ZONAL LUMEN SUMMARY

0-10	659.55
10-20	954.19
20-30	529.13
30-40	95.45
40-50	31.42
50-60	26.45
60-70	22.75
70-80	18.20
80-90	7.03
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: —————

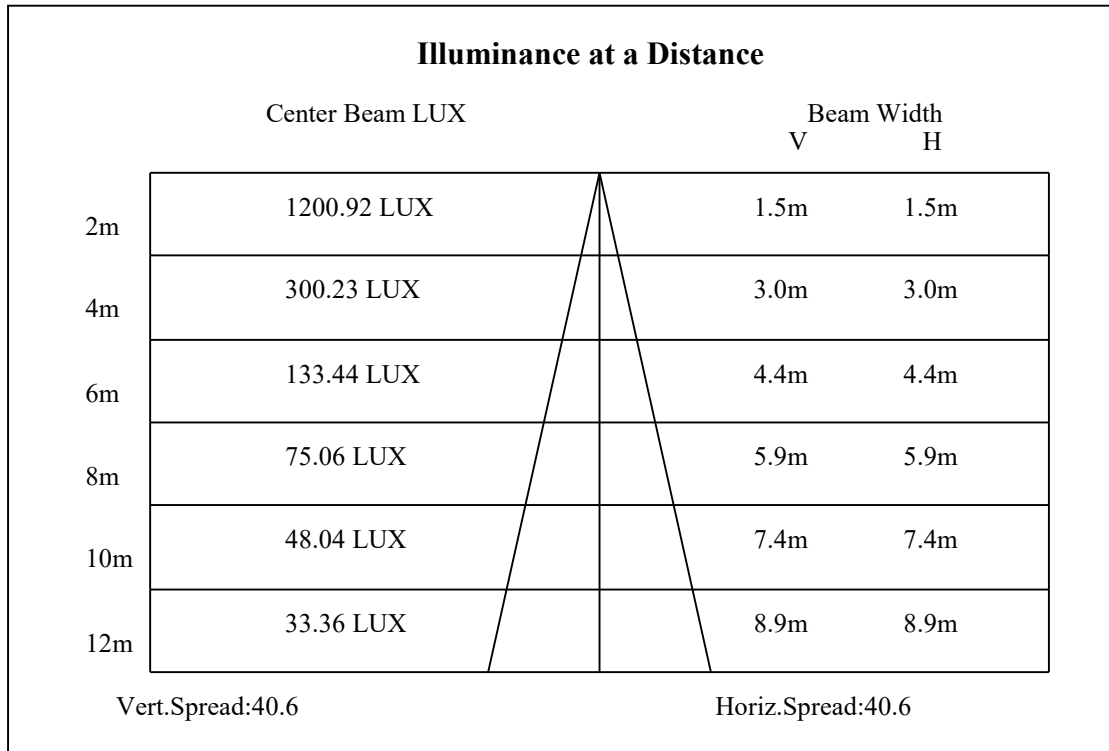
C90/C270: —————

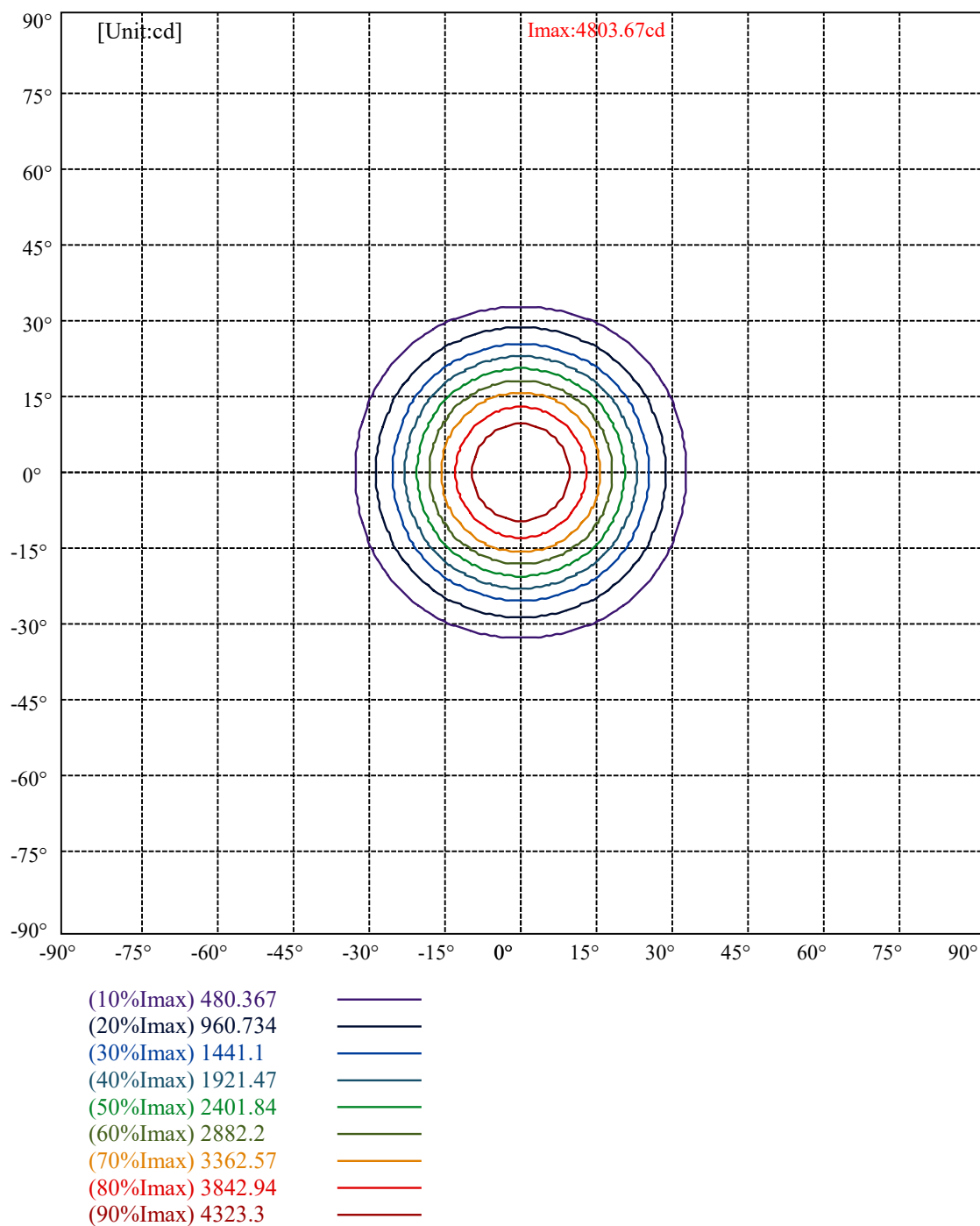
Field angle(10%Imax):C0/180Left:32.4 Right:32.4

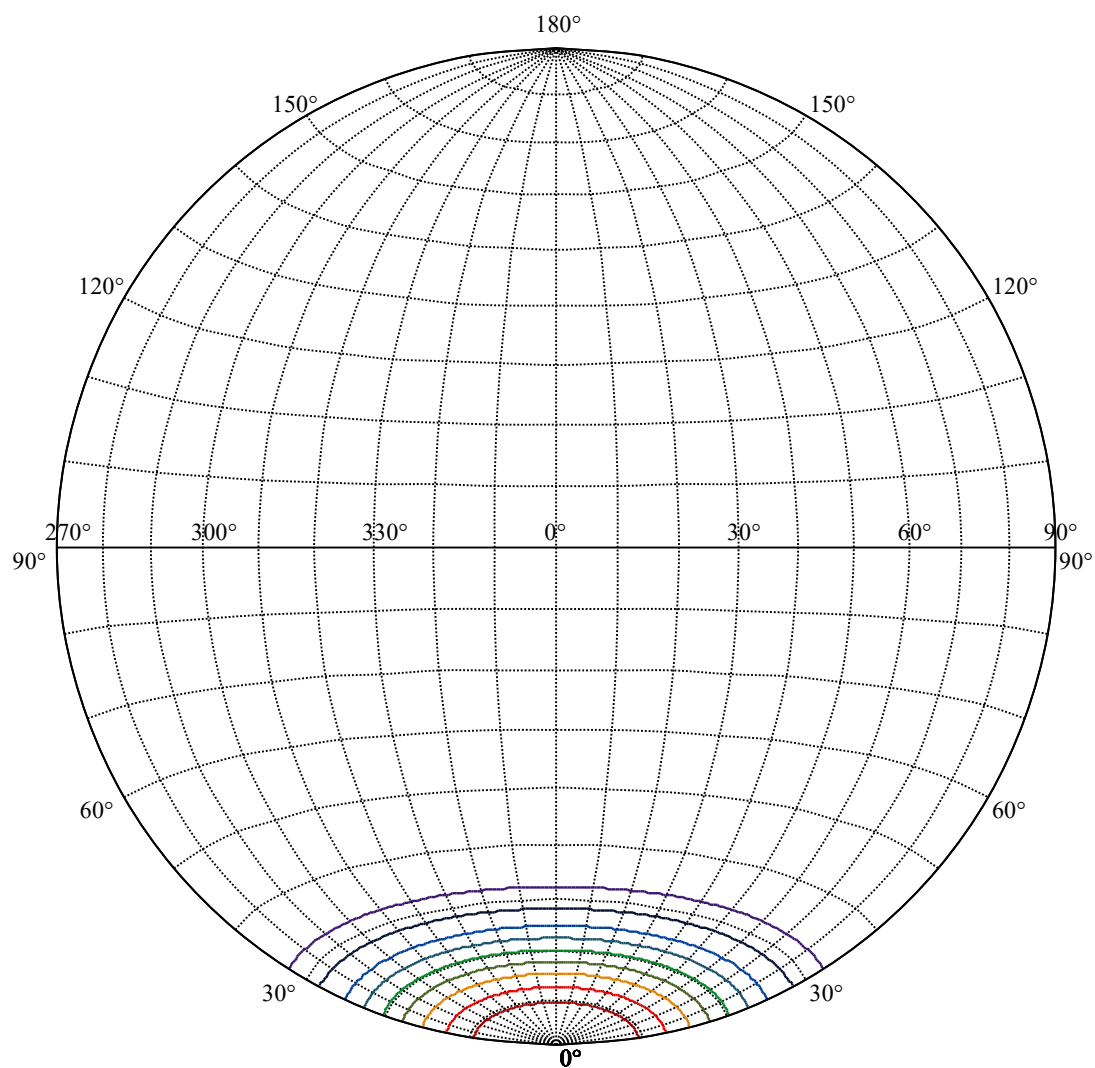
:C90/270Left:32.4 Right:32.4

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

:C90/270Left:20.3 Right:20.3







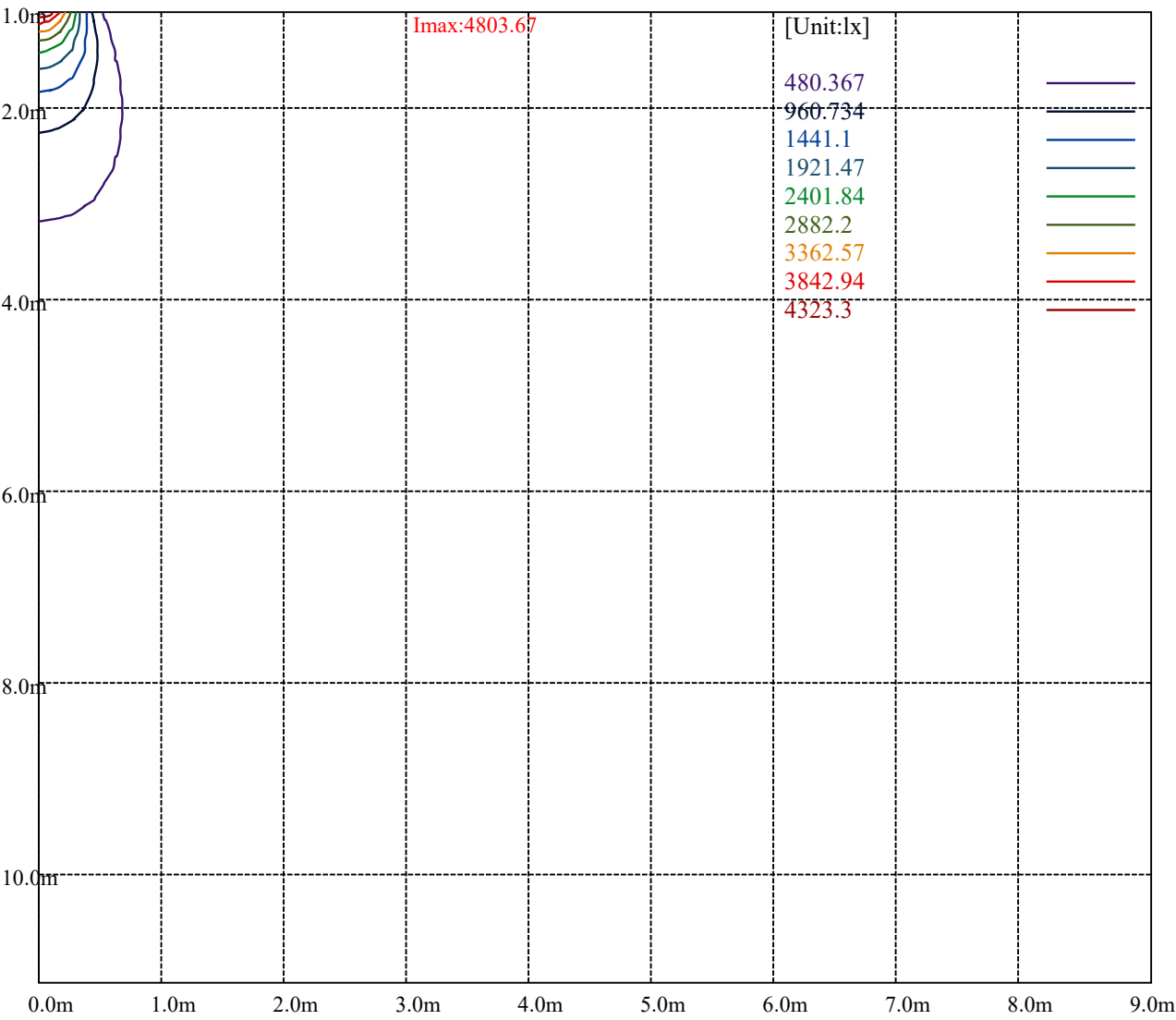
House

[Unit:cd]

Road

Imax:4803.67

(10%Imax)	480.367	—
(20%Imax)	960.734	—
(30%Imax)	1441.1	—
(40%Imax)	1921.47	—
(50%Imax)	2401.84	—
(60%Imax)	2882.2	—
(70%Imax)	3362.57	—
(80%Imax)	3842.94	—
(90%Imax)	4323.3	—



Luminance Table

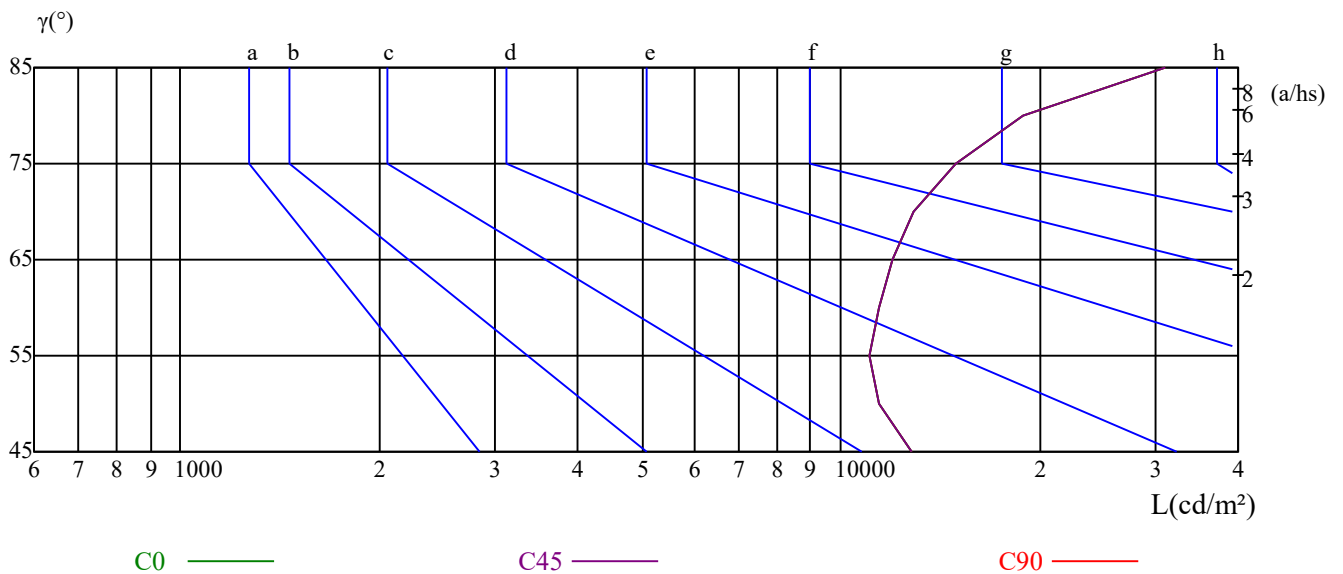
γ	45	50	55	60	65	70	75	80	85
C0	12828	11422	11043	11419	11940	12895	14934	18938	31031
C45	12828	11422	11043	11419	11940	12895	14934	18938	31031
C90	12828	11422	11043	11419	11940	12895	14934	18938	31031

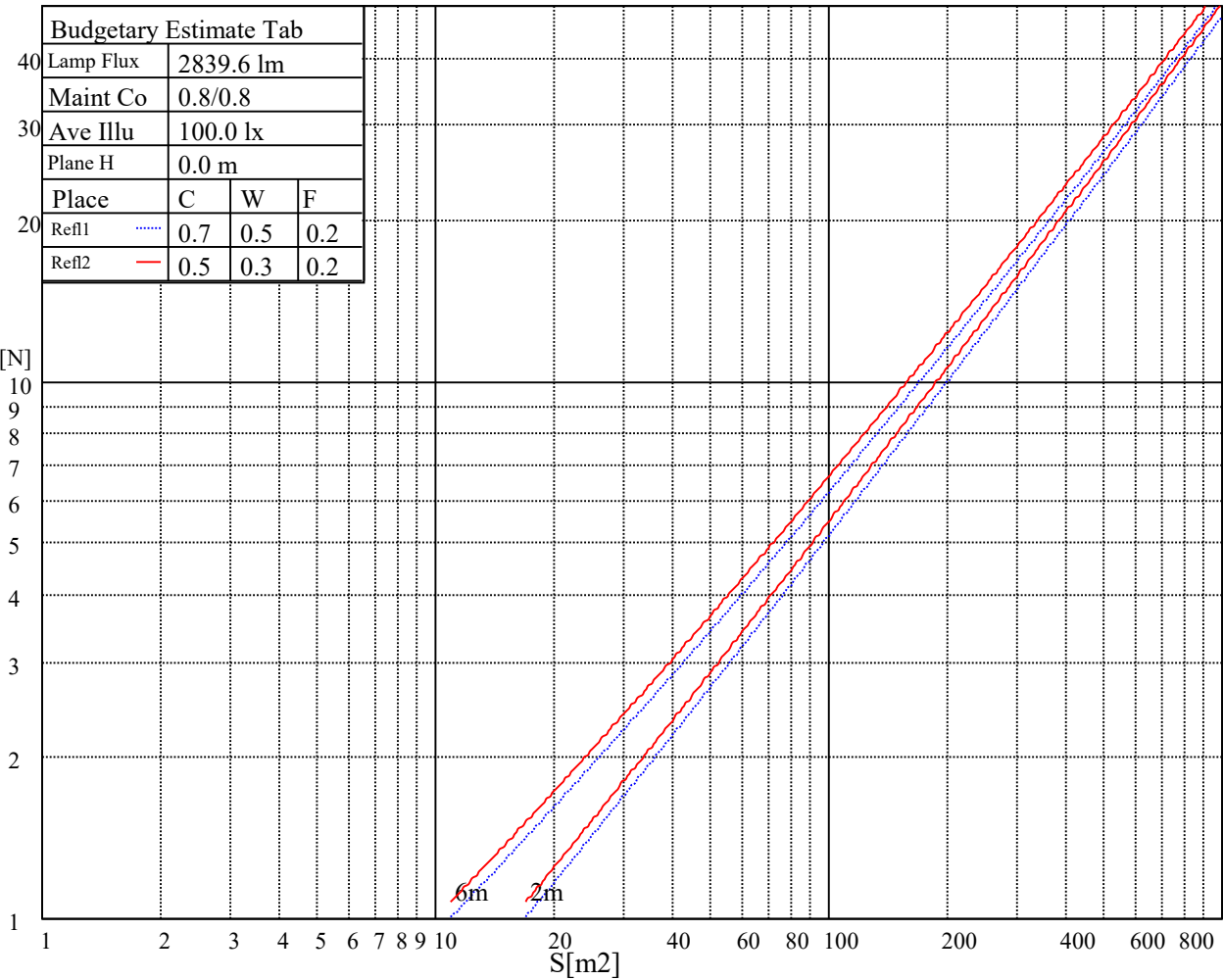
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11940	11940	11940	14934	14934	14934	31031	31031	31031

Glare Table

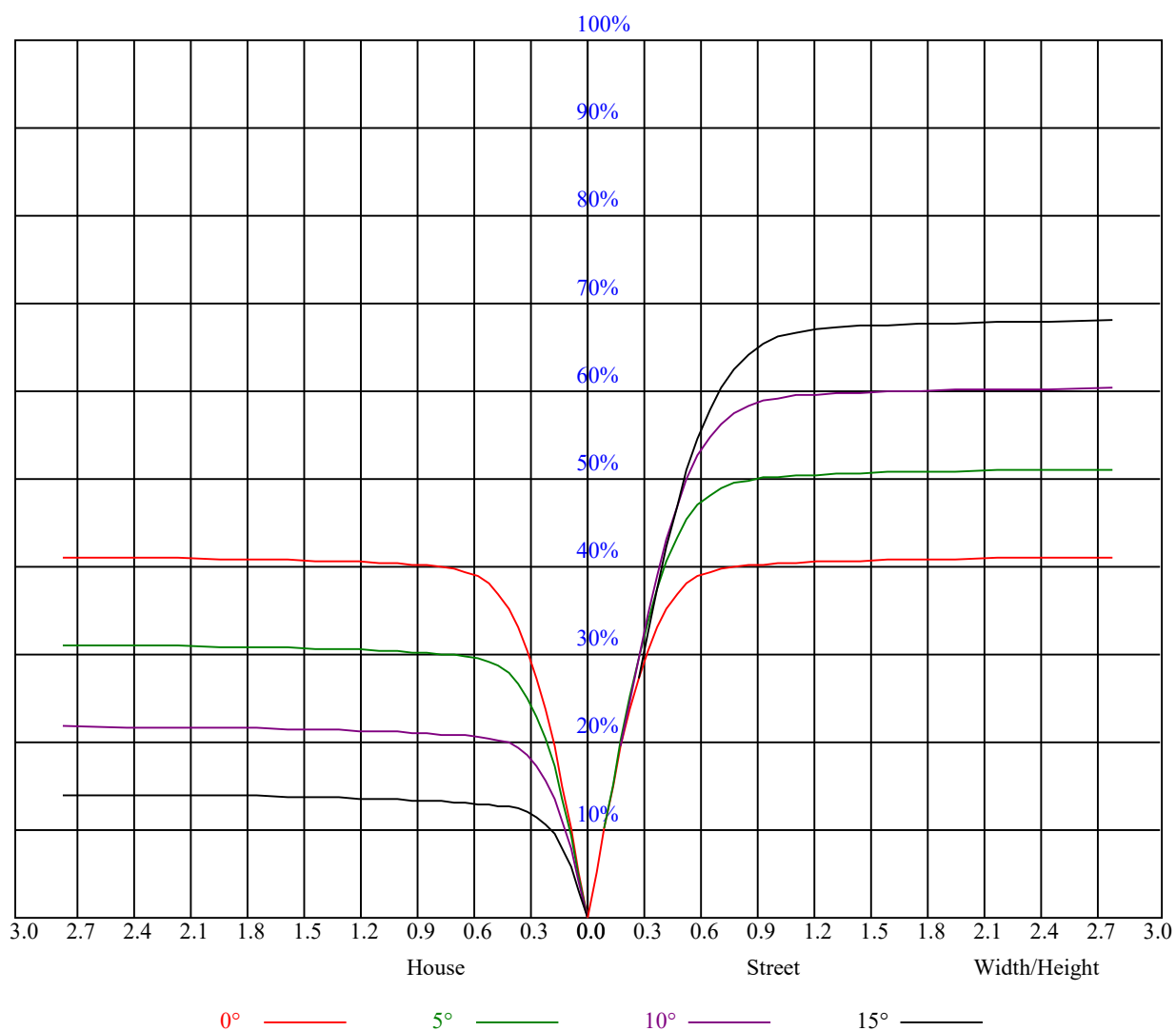
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

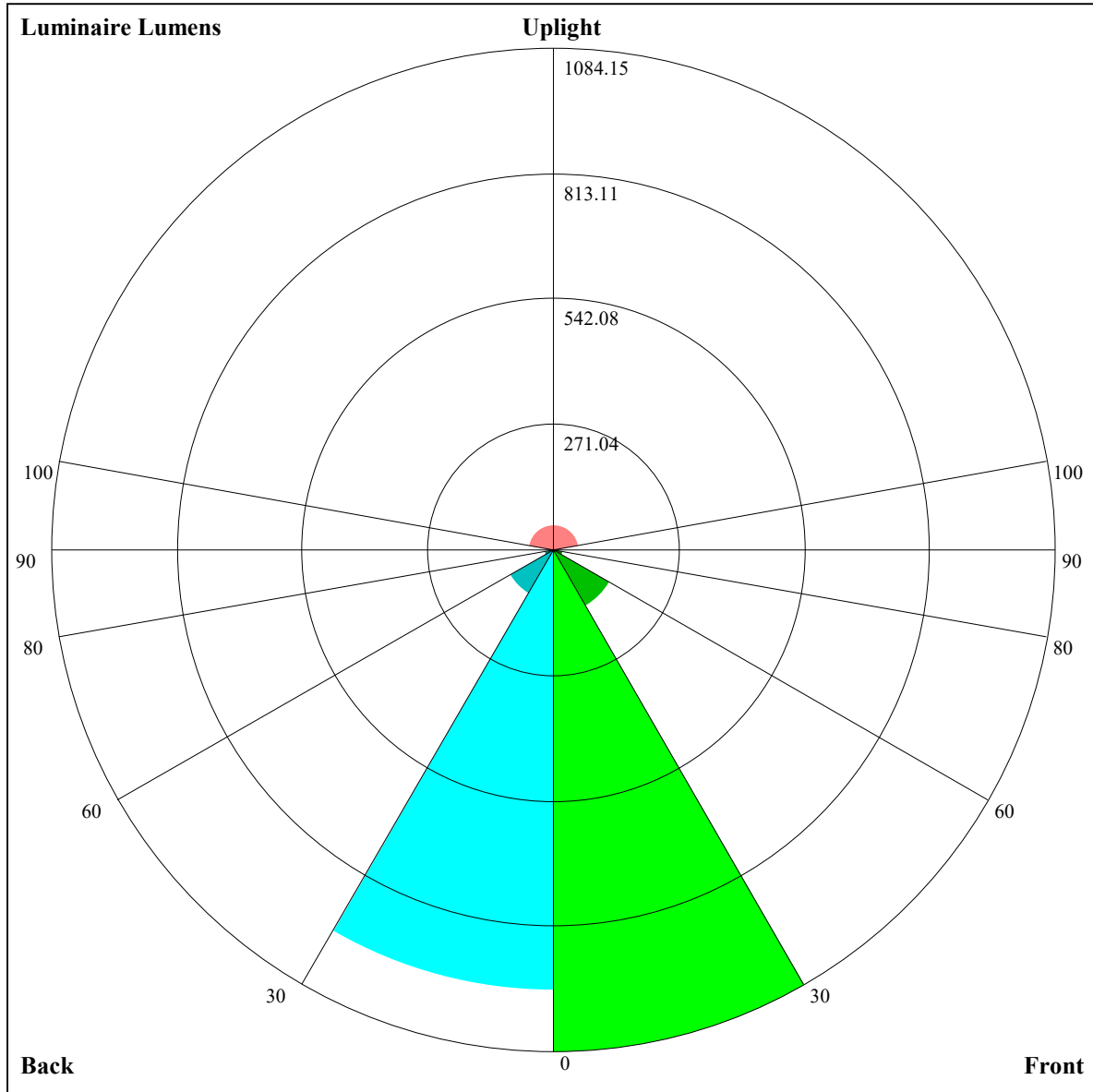
Luminance Limiting Curve





RHOC	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	0.92	0.90	0.88	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.81	0.81	0.80	0.79	0.78
2	0.87	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.79	0.80	0.79	0.77	0.78	0.77	0.75	0.74
3	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
4	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.68
5	0.75	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
6	0.72	0.68	0.65	0.72	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.63
7	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
8	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.55





Luminaire Lumens:

FL=1084.15,FM=140.45,FH=22.02,FVH=7.18

BL=950.73,BM=107.29,BH=21.39,BVH=6.86

UL=11.65,UH=55.46

BUG Rating:B2-U2-G0

Intensity data(cd)

Appendix Page: 15 Total:15

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	4791.56	4783.30	4572.98	4030.68	3019.84	1964.41	1119.30	358.42	97.89
45.0	4797.06	4748.61	4512.97	3862.21	2816.13	1859.25	961.84	304.46	83.14
90.0	4813.58	4671.54	4268.52	3469.10	2393.85	1096.78	680.11	158.51	61.55
135.0	4812.48	4659.97	4263.02	3409.64	2431.84	1439.17	643.61	296.75	62.43
180.0	4791.56	4542.15	4001.50	2975.80	1948.45	1072.39	416.34	103.89	52.91
225.0	4797.06	4552.61	4070.32	3112.34	2121.87	1072.17	482.57	112.37	52.41
270.0	4813.58	4667.68	4258.61	3417.35	2378.99	1467.25	677.74	296.20	64.25
315.0	4812.48	4672.64	4351.66	3543.43	2554.07	1545.43	729.11	187.74	70.03
360.0	4791.56	4783.30	4572.98	4030.68	3019.84	1964.41	1119.30	358.42	97.89
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	52.25	39.31	32.10	28.46	25.44	22.24	20.10	17.29	14.42
45.0	46.19	36.39	30.17	27.14	24.22	21.09	18.44	16.68	13.16
90.0	42.45	35.46	30.78	27.58	24.67	21.91	18.72	15.36	11.78
135.0	41.57	34.41	30.06	26.98	23.62	20.32	18.00	15.03	12.66
180.0	39.26	33.14	29.90	26.87	23.67	20.43	17.84	15.14	13.65
225.0	38.87	32.32	28.79	26.43	22.96	19.88	17.56	14.53	12.44
270.0	41.84	34.47	30.34	27.58	24.33	21.80	18.66	15.31	11.84
315.0	43.05	34.13	29.12	26.43	23.29	20.32	17.89	15.91	13.05
360.0	52.25	39.31	32.10	28.46	25.44	22.24	20.10	17.29	14.42
C/ γ (°)	90.0								
0.0	11.89								
45.0	11.07								
90.0	10.24								
135.0	10.30								
180.0	10.35								
225.0	10.35								
270.0	10.41								
315.0	10.85								
360.0	11.89								