
Nata

Client:

LumCAT: 2-1676-M

Luminaire: 92.70.131.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT1922

Lamp flux(lm): 2545.4

Number of Lamps: 1

Length(mm): 70

Phm Type: C

Voltage(V): 35.0000

Current(A): 0.6000

Power (W): 21.0000

PF: 0.0000

Ballast type: DC

Width(mm): 70

Height(mm): 0

Photometric Results

Lumens(lm): 2382.11, Efficiency(%): 93.59% , Luminous Efficacy(lm/W): 113.43

Central intensity(cd): 5347.766, Maximum intensity(cd): 5347.766

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.6

[C90/270]Total=35.6

Field angle(10%Imax): [C0/180]Total=70.6

[C90/270]Total=70.6

Maximum s/h(1/2): C0_180=0.59 C90_270=0.59

Maximum s/h(1/4): C0_180=0.58 C90_270=0.58

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.75%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.556%

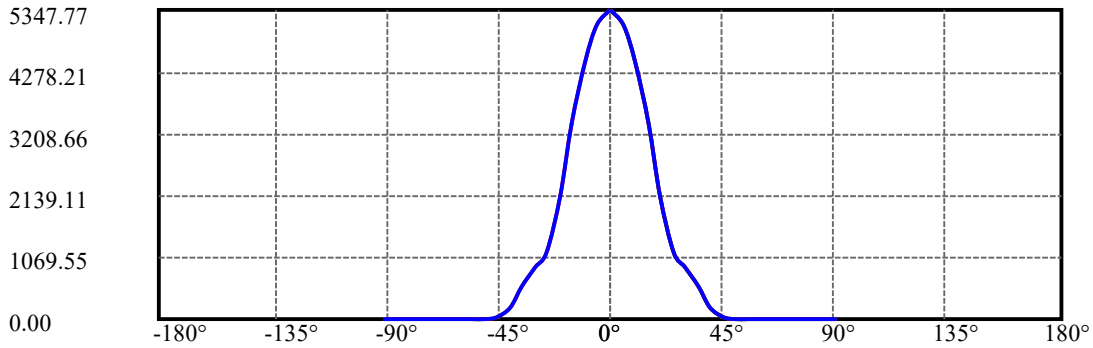
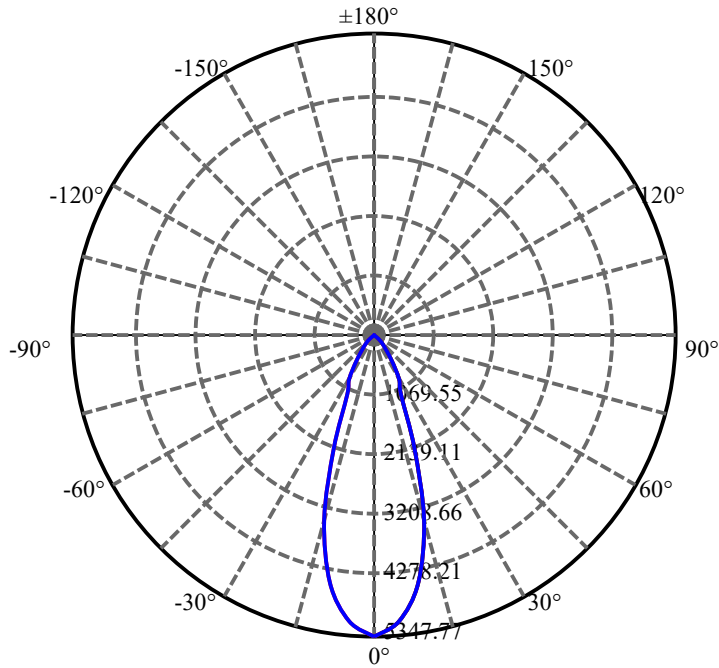
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5347.766	31.981	31.981	1.256%	1.343%
5.0	5096.502	243.477	275.458	9.565%	11.564%
10.0	4446.011	423.185	698.642	16.626%	29.329%
15.0	3375.164	478.829	1177.472	18.812%	49.430%
20.0	2137.909	400.802	1578.274	15.746%	66.255%
25.0	1159.619	268.629	1846.903	10.554%	77.532%
30.0	886.415	242.939	2089.841	9.544%	87.731%
35.0	557.873	175.394	2265.236	6.891%	95.094%
40.0	186.015	65.540	2330.776	2.575%	97.845%
45.0	18.251	7.074	2337.85	.278%	98.142%
50.0	11.899	4.996	2342.846	.196%	98.352%
55.0	11.073	4.972	2347.818	.195%	98.560%
60.0	10.640	5.051	2352.869	.198%	98.772%
65.0	10.378	5.156	2358.024	.203%	98.989%
70.0	10.206	5.257	2363.281	.207%	99.210%
75.0	10.062	5.327	2368.608	.209%	99.433%
80.0	9.979	5.387	2373.995	.212%	99.659%
85.0	9.903	5.408	2379.403	.212%	99.886%
90.0	9.883	2.709	2382.111	.106%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2089.84	82.10%	87.73%
0-40	2330.78	91.57%	97.84%
0-60	2352.87	92.44%	98.77%
0-90	2379.40	93.48%	99.89%
0-120	2379.40	93.48%	99.89%
0-180	2382.11	93.59%	100.00%
60-90	31.58	1.24%	1.33%
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%
0-26.21	1905.69	74.87%	80.00%

ZONAL LUMEN SUMMARY

0-10	698.64
10-20	879.63
20-30	511.57
30-40	240.93
40-50	12.07
50-60	10.02
60-70	10.41
70-80	10.71
80-90	5.41
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: —————

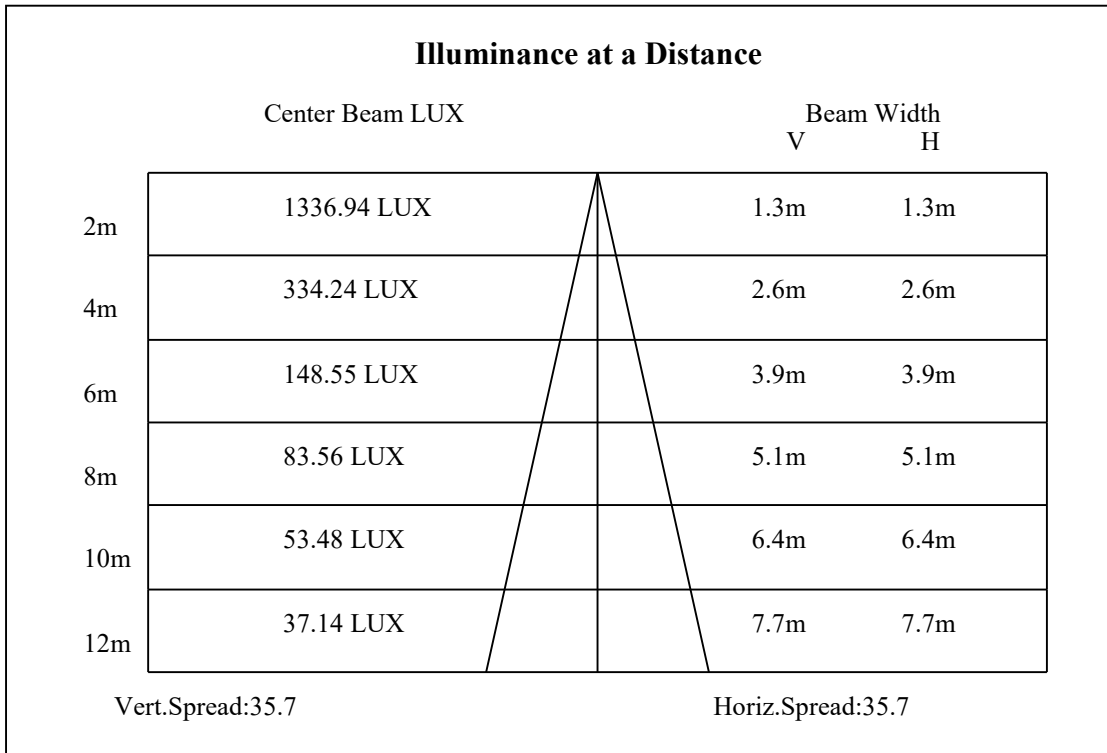
C90/C270: —————

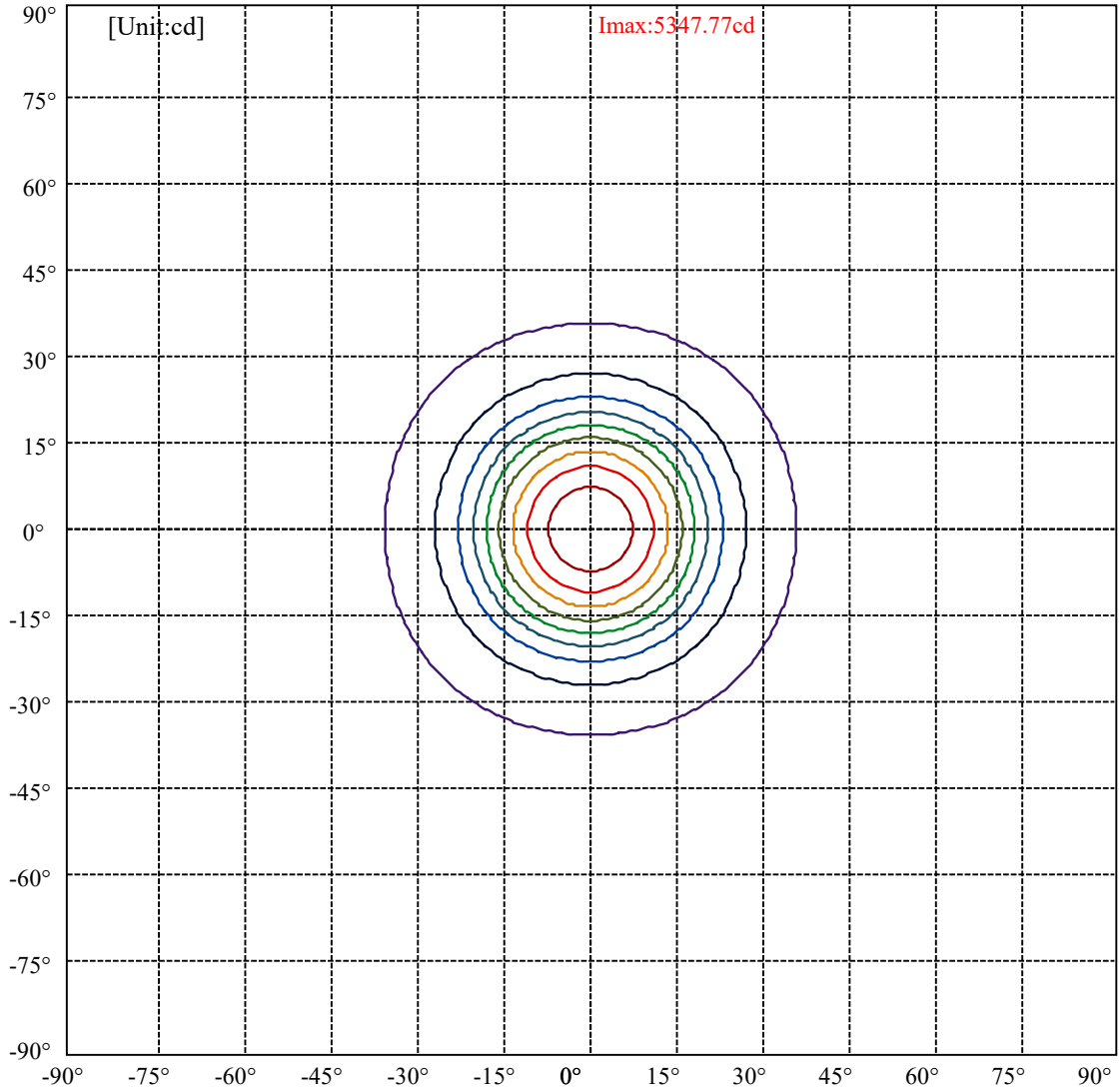
Field angle(10%Imax):C0/180Left:35.3 Right:35.3

:C90/270Left:35.3 Right:35.3

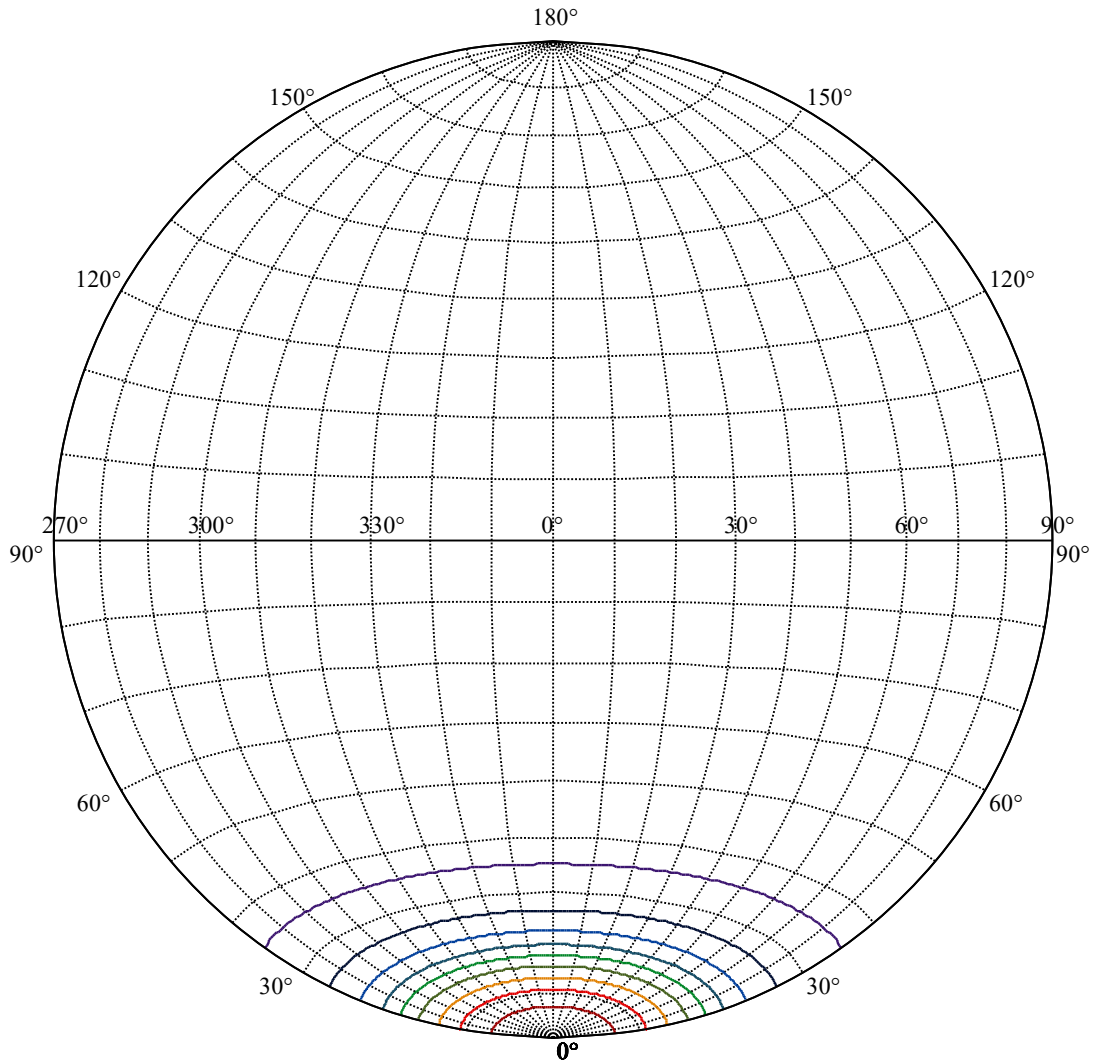
Beam Angle(50%Imax):C0/180Left:17.8 Right:17.8

:C90/270Left:17.8 Right:17.8





- (10%Imax) 534.777
- (20%Imax) 1069.55
- (30%Imax) 1604.33
- (40%Imax) 2139.11
- (50%Imax) 2673.88
- (60%Imax) 3208.66
- (70%Imax) 3743.44
- (80%Imax) 4278.21
- (90%Imax) 4812.99



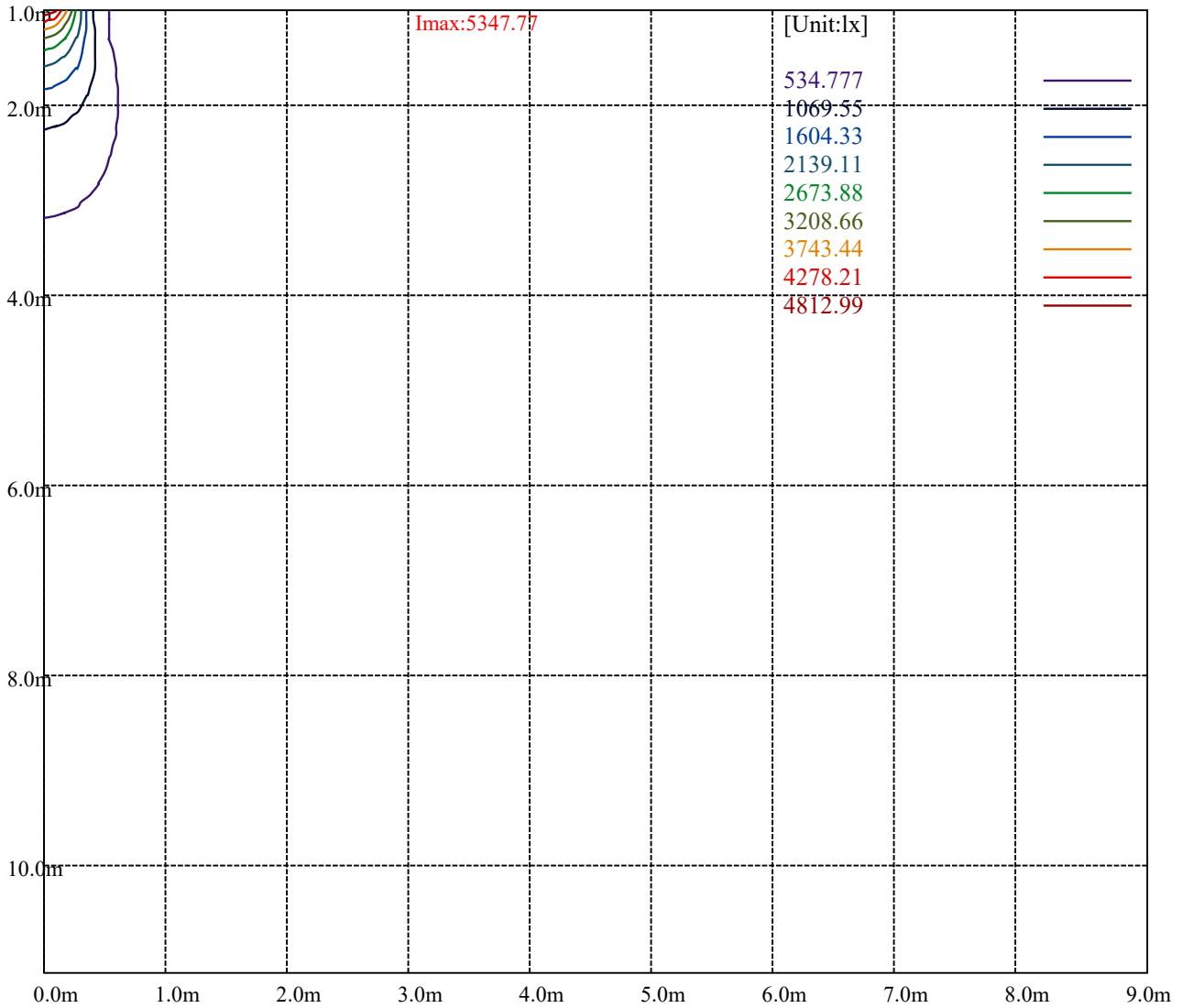
House

[Unit:cd]

Road

I_{max}:5347.77

(10%I _{max}) 534.777	—
(20%I _{max}) 1069.55	—
(30%I _{max}) 1604.33	—
(40%I _{max}) 2139.11	—
(50%I _{max}) 2673.88	—
(60%I _{max}) 3208.66	—
(70%I _{max}) 3743.44	—
(80%I _{max}) 4278.21	—
(90%I _{max}) 4812.99	—



Luminance Table

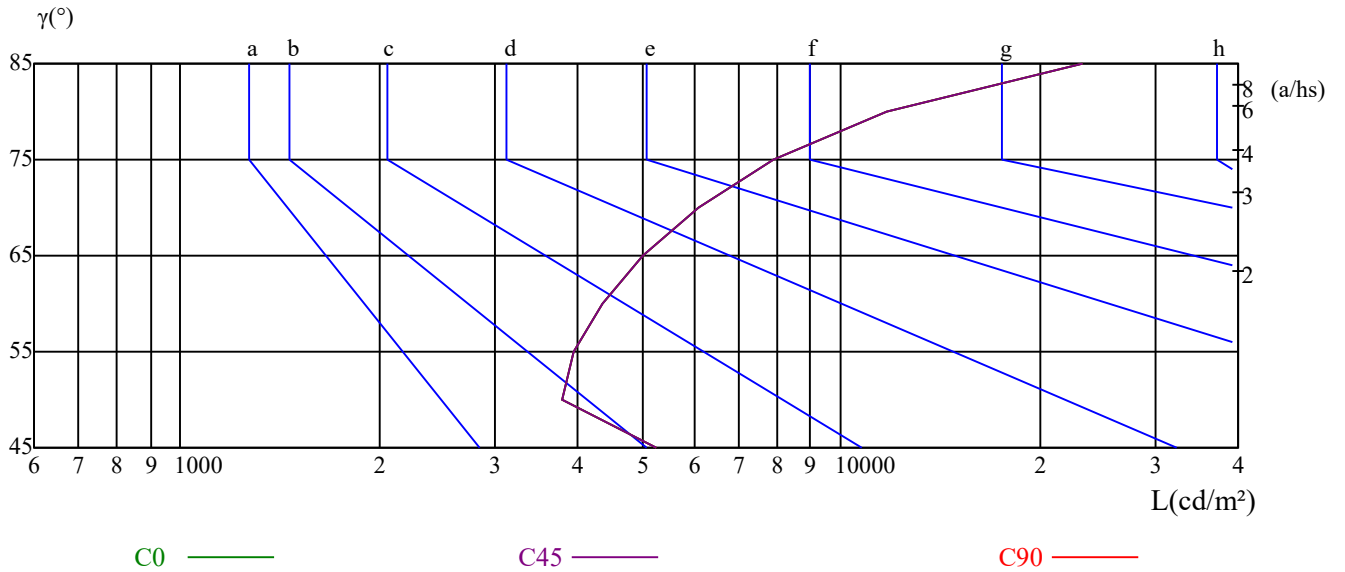
γ	45	50	55	60	65	70	75	80	85
C0	5268	3778	3940	4343	5012	6090	7934	11728	23189
C45	5268	3778	3940	4343	5012	6090	7934	11728	23189
C90	5268	3778	3940	4343	5012	6090	7934	11728	23189

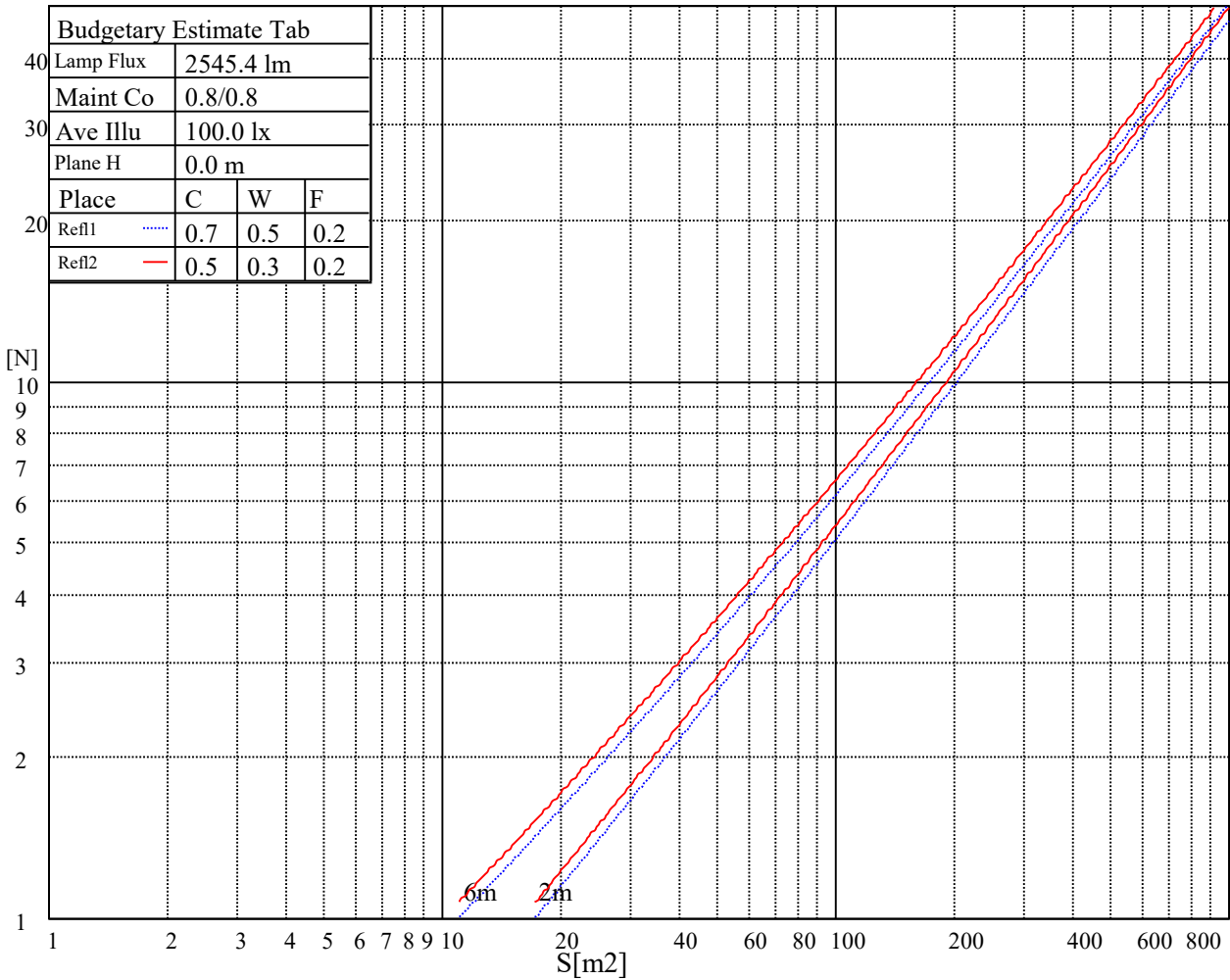
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5012	5012	5012	7934	7934	7934	23189	23189	23189

Glare Table

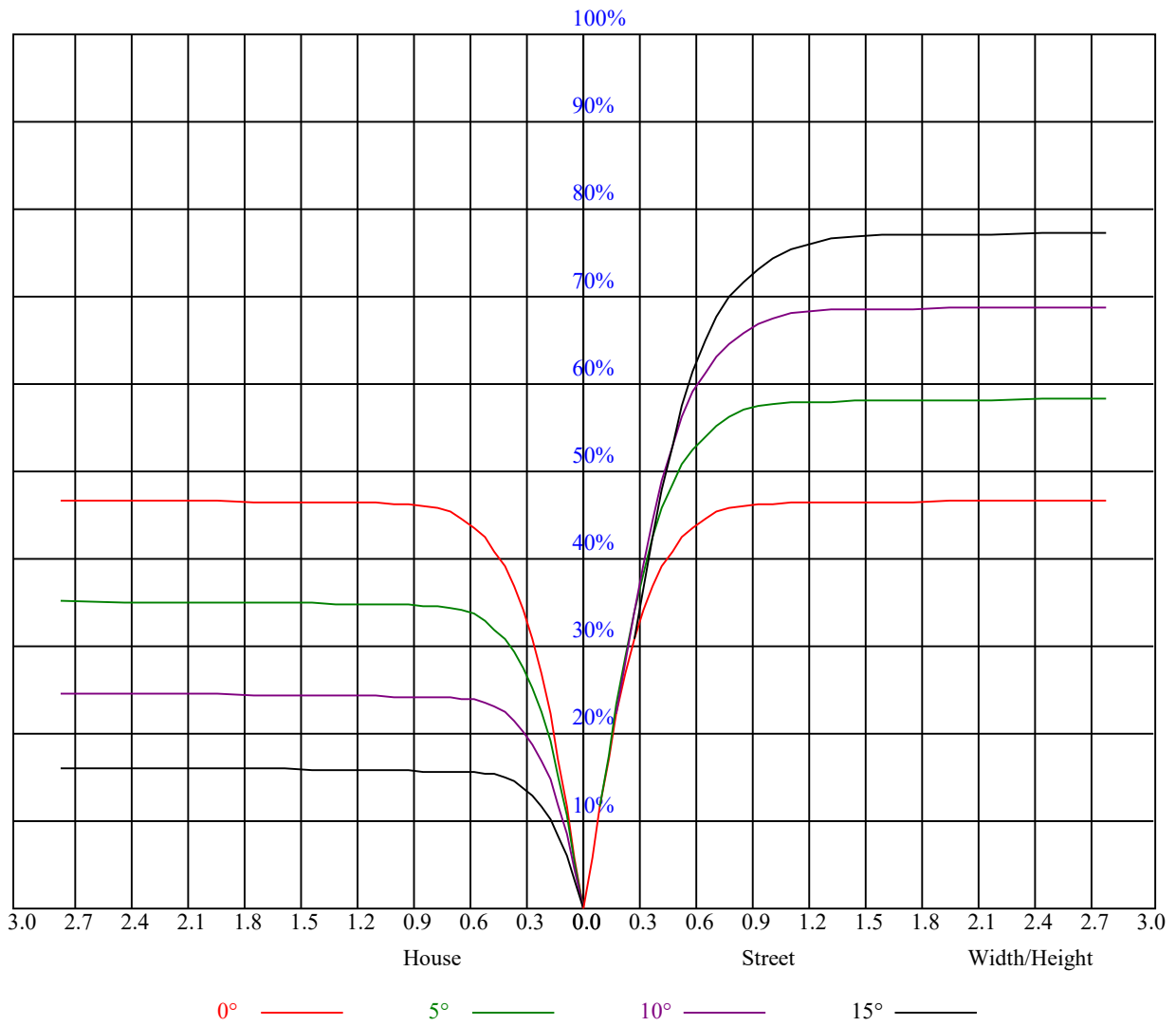
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

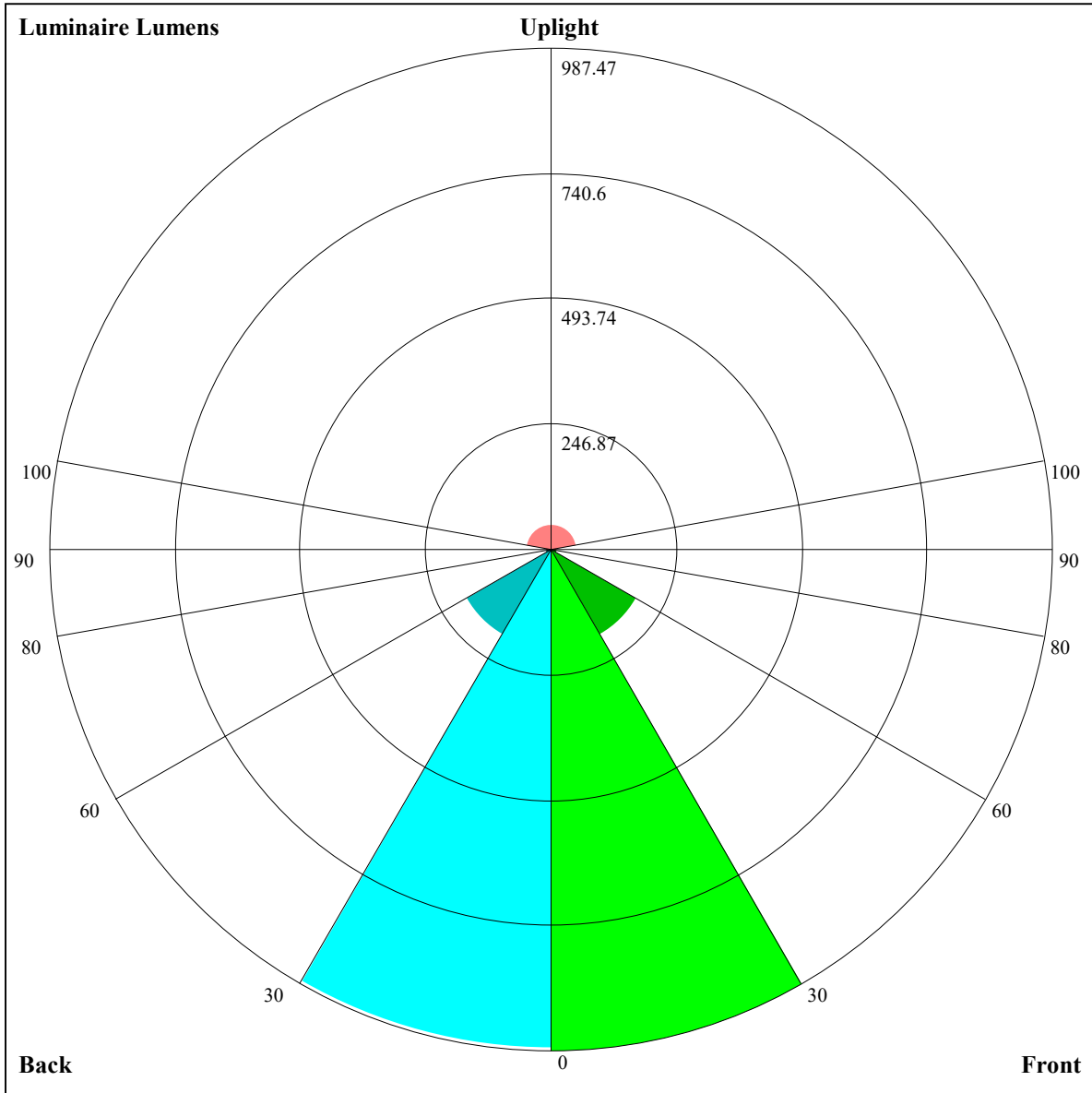
Luminance Limiting Curve





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	1.13	1.13	1.13	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.97	0.97	0.97	0.95
1	1.04	1.02	1.00	1.02	1.00	0.98	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.88
2	0.99	0.95	0.92	0.97	0.94	0.91	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.84
3	0.94	0.90	0.86	0.92	0.89	0.86	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.80
4	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.77
5	0.85	0.81	0.77	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.82	0.77	0.74	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.71
7	0.79	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.68
8	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.66
9	0.73	0.68	0.65	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
10	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61





Luminaire Lumens:

FL=987.47,FM=192.33,FH=10.48,FVH=5.41

BL=982.51,BM=194.82,BH=10.5,BVH=5.41

UL=10.78,UH=51.31

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	5349.28	5131.26	4543.25	3509.85	2320.08	1272.35	917.79	592.41	295.65
45.0	5357.54	5021.69	4326.33	3165.19	1962.76	1109.39	840.71	488.35	88.86
90.0	5326.16	4942.41	4113.81	2872.84	1582.32	1021.13	793.36	388.86	48.34
135.0	5358.09	5054.73	4418.83	3302.28	2029.38	1184.26	867.14	520.83	281.34
180.0	5349.28	5065.74	4357.16	3303.93	2028.28	1083.68	871.05	509.22	108.68
225.0	5357.54	5179.71	4563.07	3535.17	2357.52	1094.58	919.33	638.87	216.26
270.0	5326.16	5240.82	4718.33	3831.37	2606.37	1419.35	975.05	732.25	305.01
315.0	5358.09	5135.66	4527.29	3480.67	2216.57	1092.21	906.89	592.19	143.97
360.0	5349.28	5131.26	4543.25	3509.85	2320.08	1272.35	917.79	592.41	295.65
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.77	12.00	11.12	10.68	10.35	10.24	10.02	9.97	9.91
45.0	15.58	11.62	10.96	10.57	10.30	10.19	10.02	9.97	9.86
90.0	14.04	11.45	10.85	10.52	10.35	10.19	10.08	9.97	9.91
135.0	16.63	11.89	11.12	10.74	10.46	10.24	10.13	10.02	9.97
180.0	15.75	11.84	11.12	10.63	10.41	10.19	10.08	9.97	9.91
225.0	20.26	12.06	11.12	10.63	10.35	10.19	10.02	9.97	9.86
270.0	25.93	12.33	11.23	10.74	10.41	10.24	10.08	10.02	9.91
315.0	19.05	12.00	11.07	10.63	10.41	10.19	10.08	9.97	9.91
360.0	18.77	12.00	11.12	10.68	10.35	10.24	10.02	9.97	9.91
C/ γ (°)	90.0								
0.0	9.91								
45.0	9.86								
90.0	9.91								
135.0	9.91								
180.0	9.86								
225.0	9.86								
270.0	9.86								
315.0	9.91								
360.0	9.91								