
Nata

Client:

LumCAT: 1407-N

Luminaire: 92.70.064.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT1420

Lamp flux(lm): 1910.2

Number of Lamps: 1

Length(mm): 39

Phm Type: C

Voltage(V): 35.1000

Current(A): 0.4000

Power (W): 14.0400

PF: 0.0000

Ballast type: DC

Width(mm): 39

Height(mm): 0

Photometric Results

Lumens(lm): 1578.42, Efficiency(%): 82.63% , Luminous Efficacy(lm/W): 112.42

Central intensity(cd): 1844.114, Maximum intensity(cd): 1844.114

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=47.2

[C90/270]Total=47.2

Field angle(10%Imax): [C0/180]Total=94.8

[C90/270]Total=94.8

Maximum s/h(1/2): C0_180=0.71 C90_270=0.71

Maximum s/h(1/4): C0_180=0.80 C90_270=0.80

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.13%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.566%

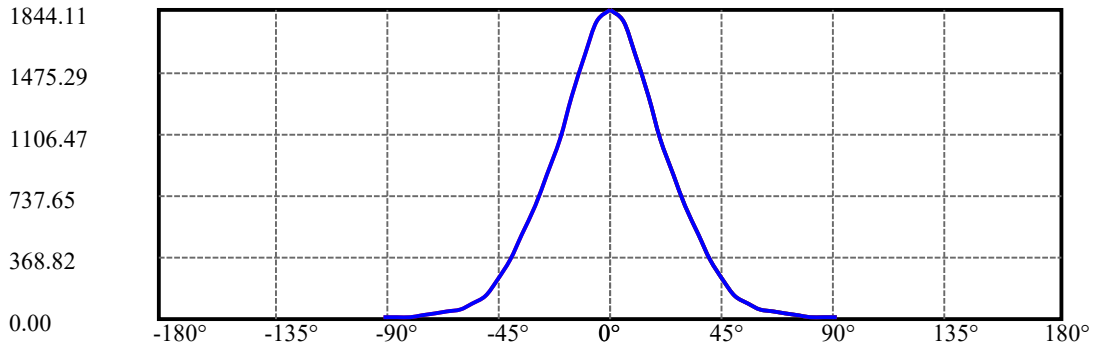
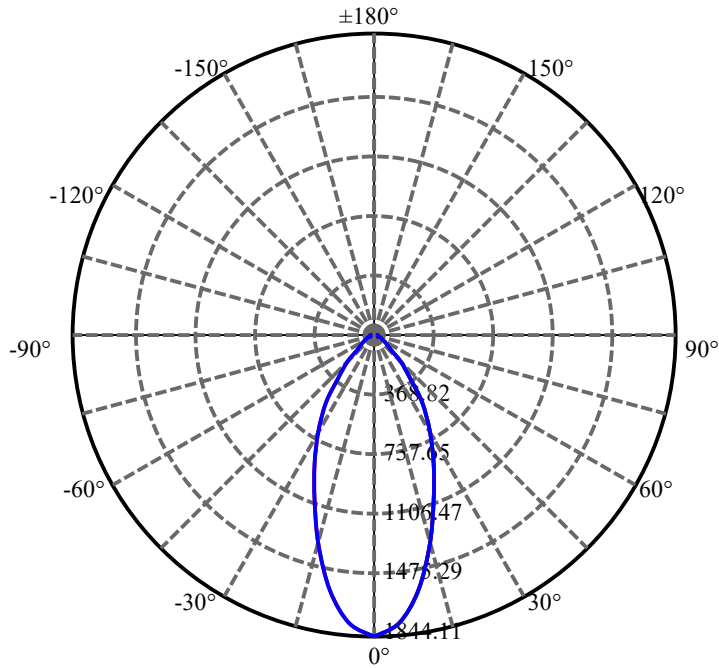
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1844.114	11.028	11.028	.577%	.699%
5.0	1769.926	84.555	95.583	4.426%	6.056%
10.0	1584.386	150.807	246.39	7.895%	15.610%
15.0	1325.173	188.000	434.39	9.842%	27.521%
20.0	1077.227	201.952	636.342	10.572%	40.315%
25.0	863.491	200.030	836.372	10.472%	52.988%
30.0	673.842	184.679	1021.051	9.668%	64.688%
35.0	503.057	158.161	1179.212	8.280%	74.708%
40.0	354.949	125.061	1304.273	6.547%	82.631%
45.0	226.468	87.777	1392.05	4.595%	88.192%
50.0	140.139	58.844	1450.894	3.081%	91.921%
55.0	86.879	39.009	1489.904	2.042%	94.392%
60.0	58.222	27.638	1517.542	1.447%	96.143%
65.0	40.577	20.158	1537.699	1.055%	97.420%
70.0	29.503	15.197	1552.896	.796%	98.383%
75.0	20.591	10.902	1563.798	.571%	99.073%
80.0	14.280	7.709	1571.507	.404%	99.562%
85.0	9.401	5.133	1576.64	.269%	99.887%
90.0	6.504	1.782	1578.422	.093%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1021.05	53.45%	64.69%
0-40	1304.27	68.28%	82.63%
0-60	1517.54	79.44%	96.14%
0-90	1576.64	82.54%	99.89%
0-120	1576.64	82.54%	99.89%
0-180	1578.42	82.63%	100.00%
60-90	86.74	4.54%	5.50%
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%
0-38.34	1262.74	66.10%	80.00%

ZONAL LUMEN SUMMARY

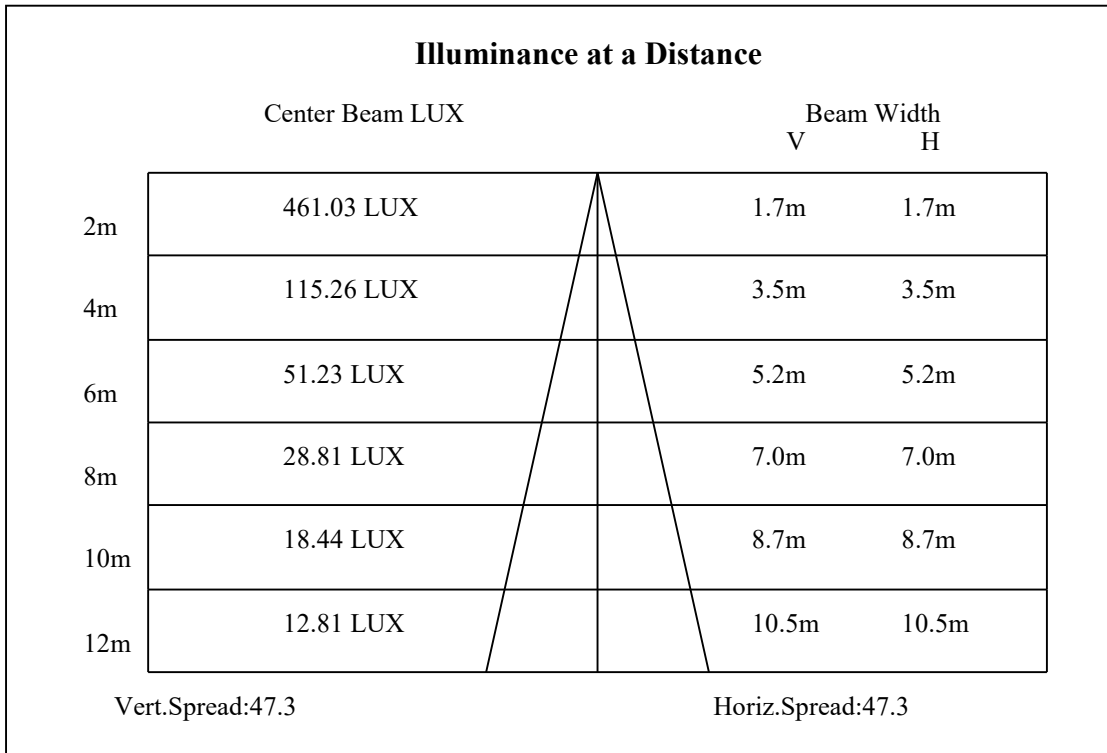
0-10	246.39
10-20	389.95
20-30	384.71
30-40	283.22
40-50	146.62
50-60	66.65
60-70	35.35
70-80	18.61
80-90	5.13
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

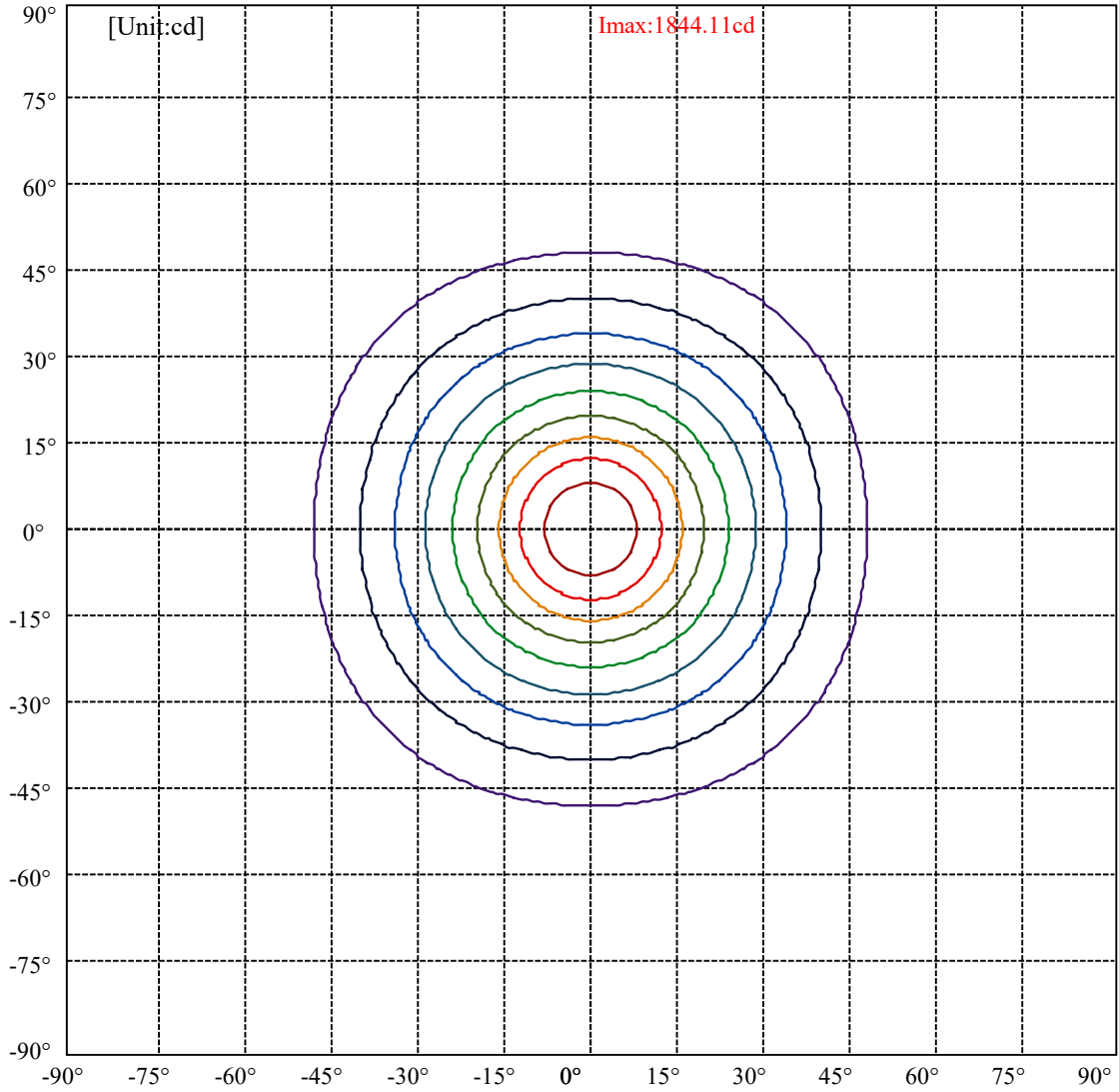


C0(Max): ———
C0/C180: ———
C90/C270: ———

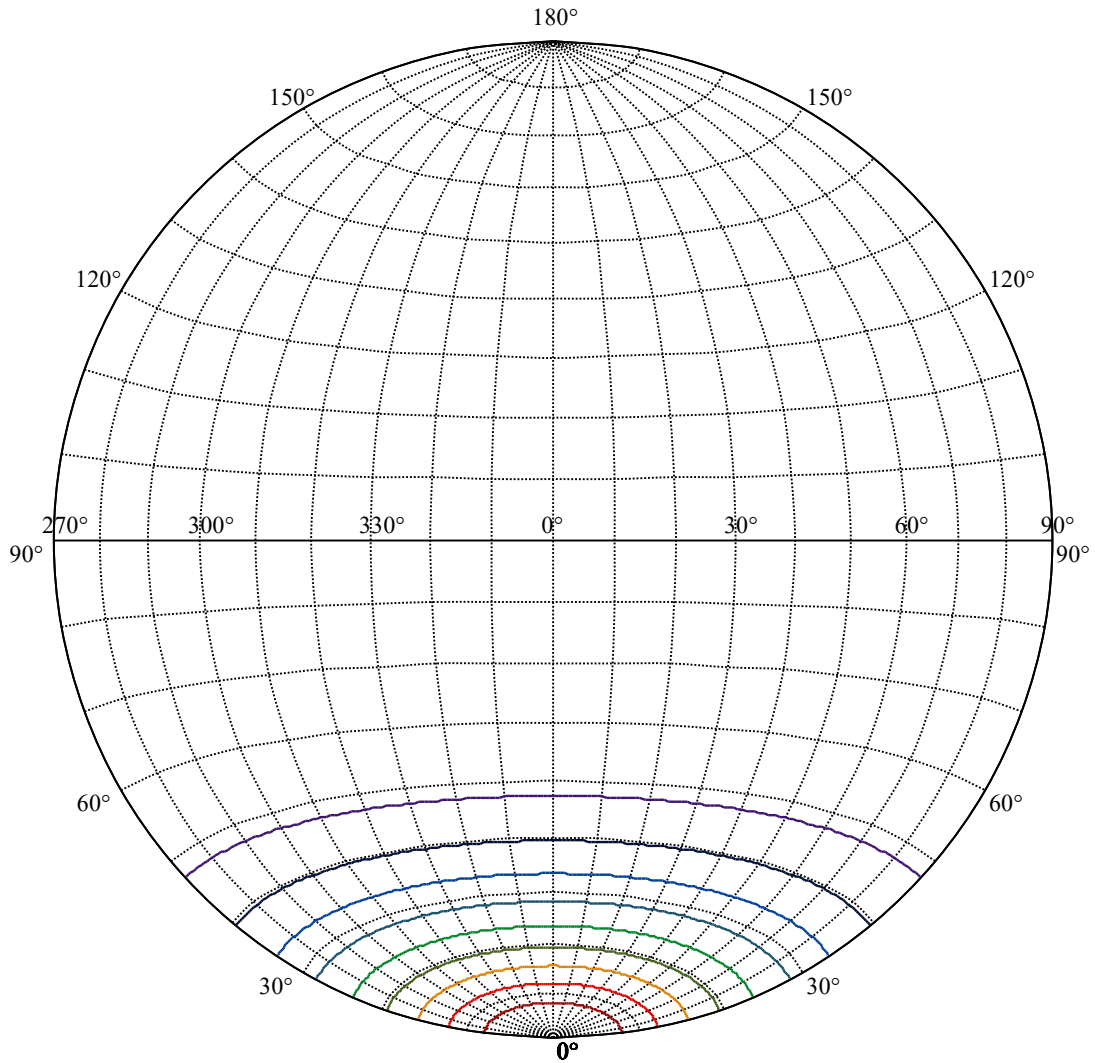
Field angle(10%Imax):C0/180Left:47.4 Right:47.4
:C90/270Left:47.4 Right:47.4

Beam Angle(50%Imax):C0/180Left:23.6 Right:23.6
:C90/270Left:23.6 Right:23.6





(10%I _{max}) 184.411	—
(20%I _{max}) 368.823	—
(30%I _{max}) 553.234	—
(40%I _{max}) 737.646	—
(50%I _{max}) 922.057	—
(60%I _{max}) 1106.47	—
(70%I _{max}) 1290.88	—
(80%I _{max}) 1475.29	—
(90%I _{max}) 1659.7	—



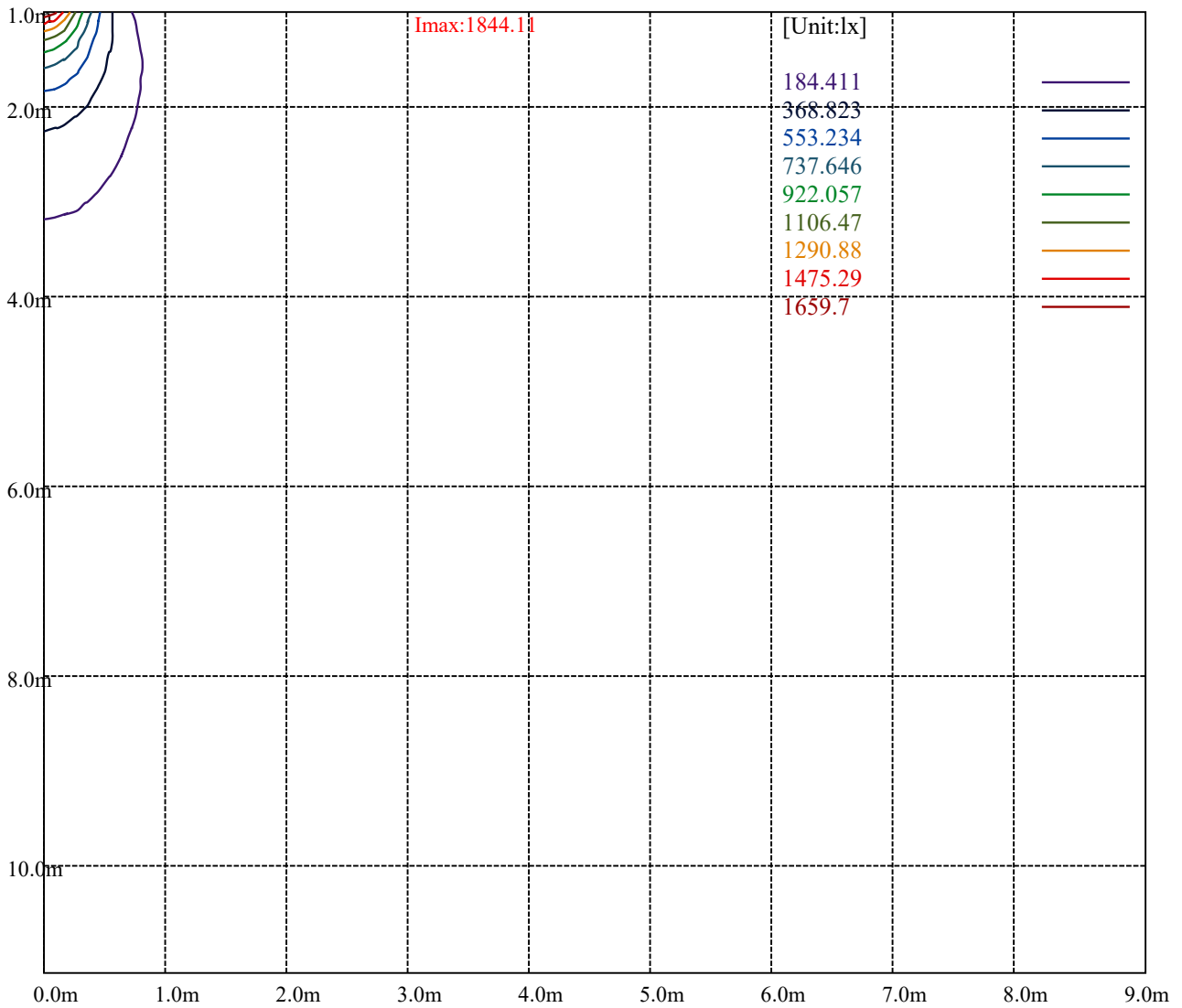
House

[Unit:cd]

Road

Imax:1844.11

(10%Imax) 184.411	—
(20%Imax) 368.823	—
(30%Imax) 553.234	—
(40%Imax) 737.646	—
(50%Imax) 922.057	—
(60%Imax) 1106.47	—
(70%Imax) 1290.88	—
(80%Imax) 1475.29	—
(90%Imax) 1659.7	—



Luminance Table

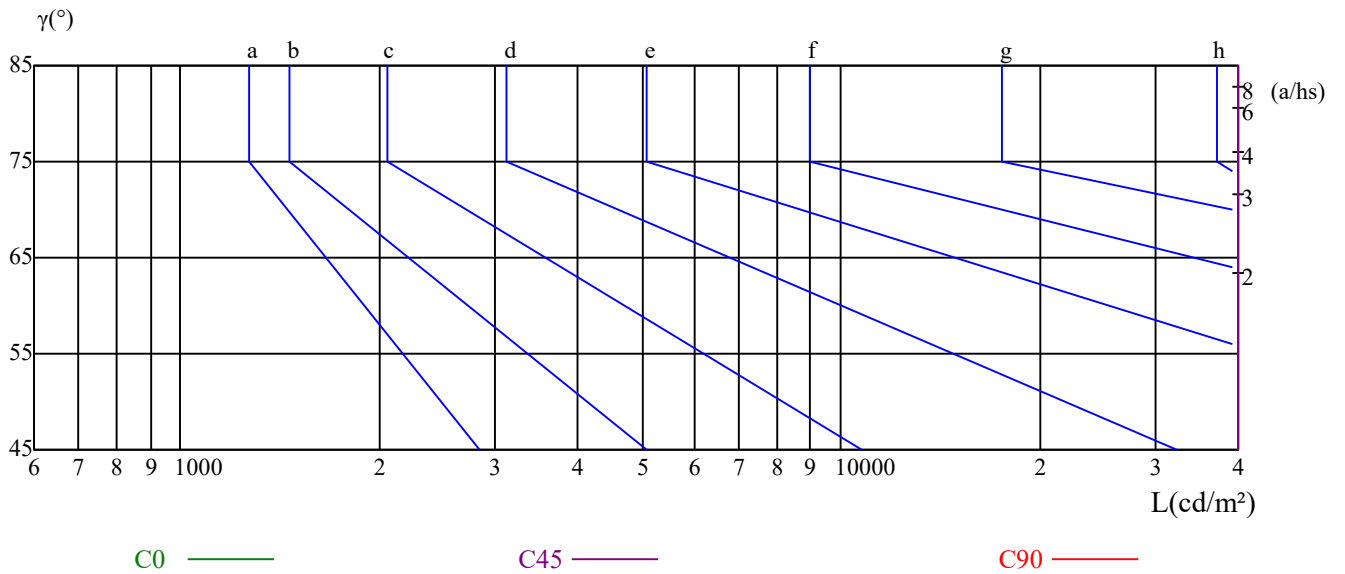
γ	45	50	55	60	65	70	75	80	85
C0	210568	143339	99585	76558	63124	56714	52306	54068	70916
C45	210568	143339	99585	76558	63124	56714	52306	54068	70916
C90	210568	143339	99585	76558	63124	56714	52306	54068	70916

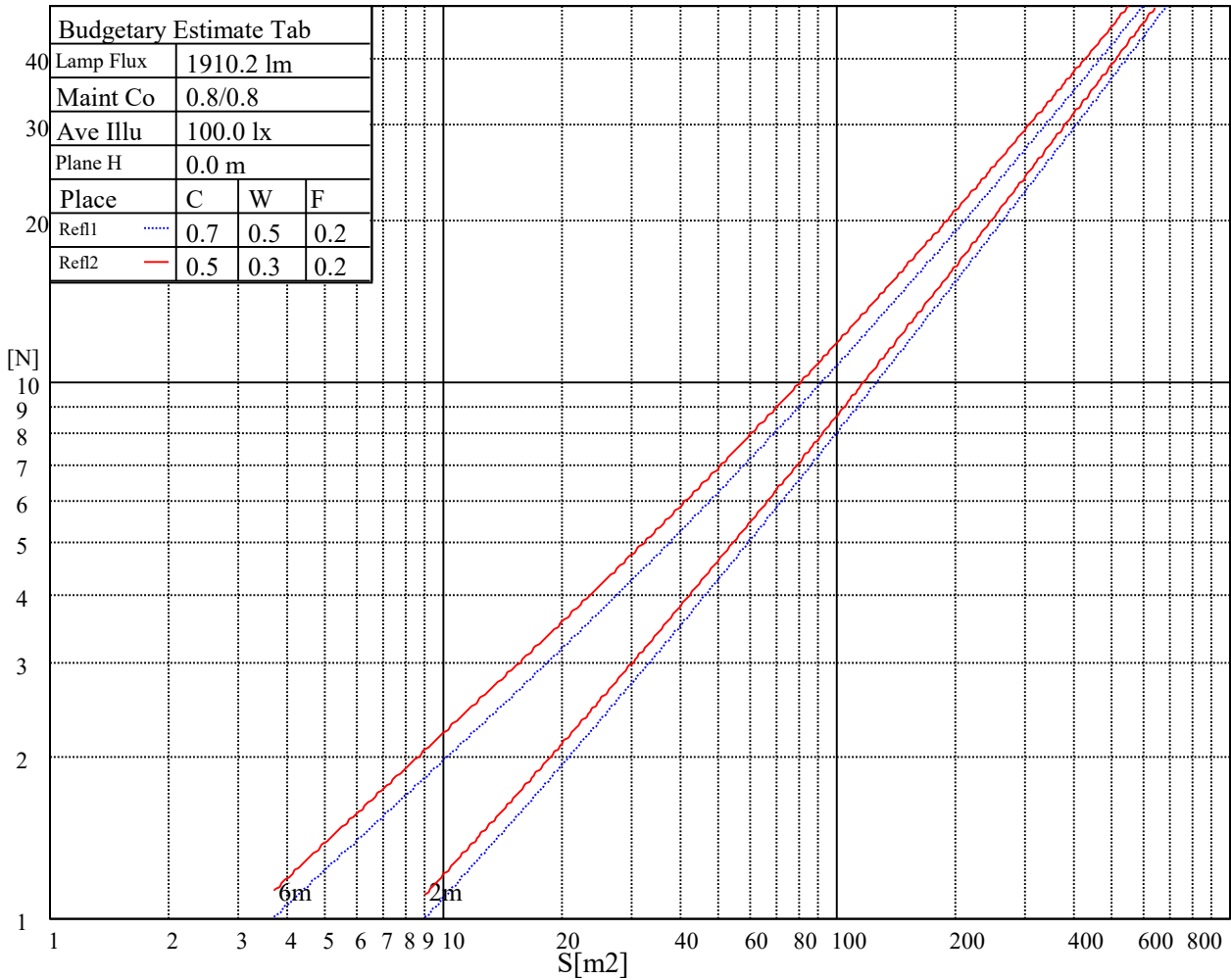
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
63124	63124	63124	52306	52306	52306	70916	70916	70916

Glare Table

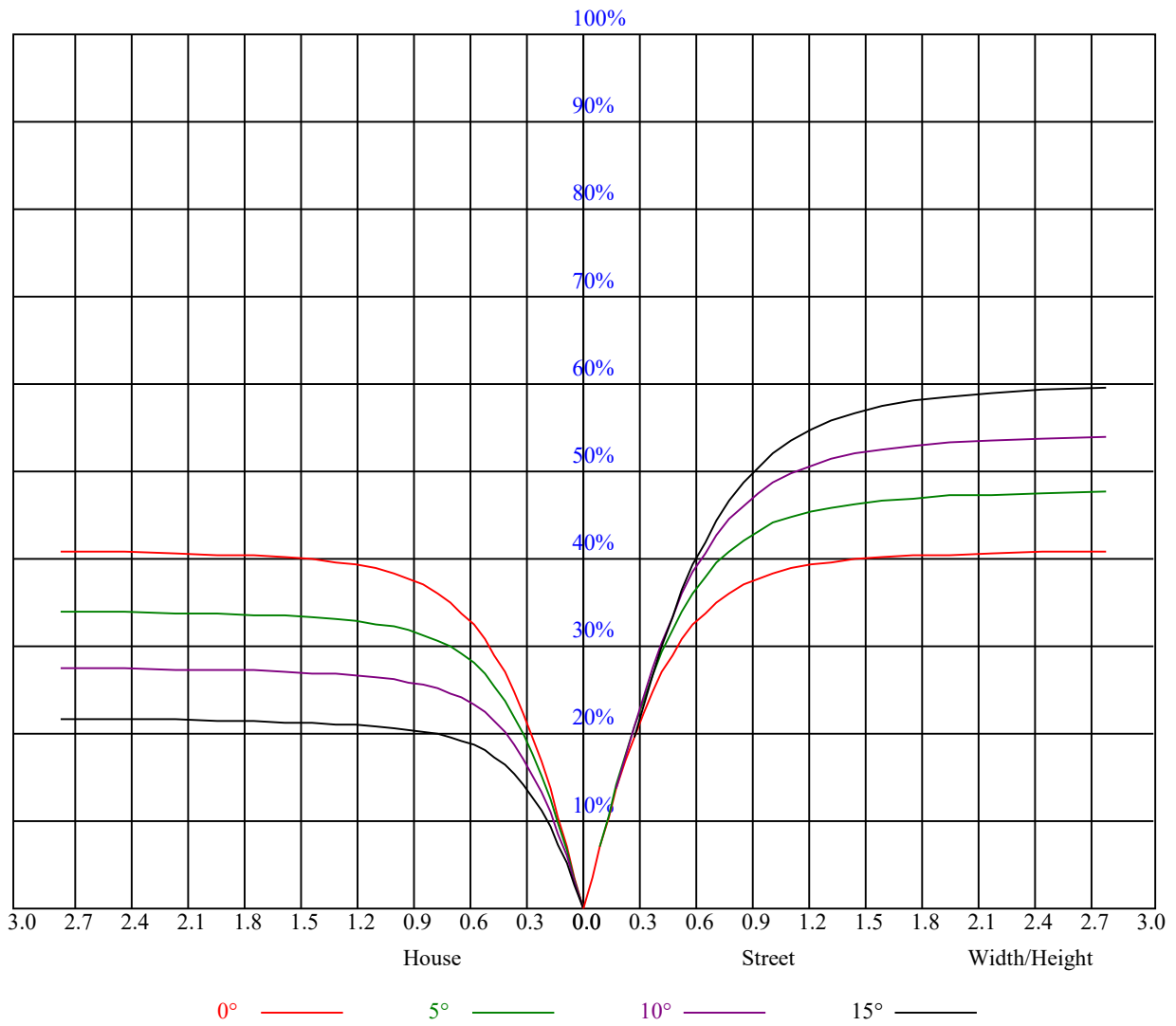
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

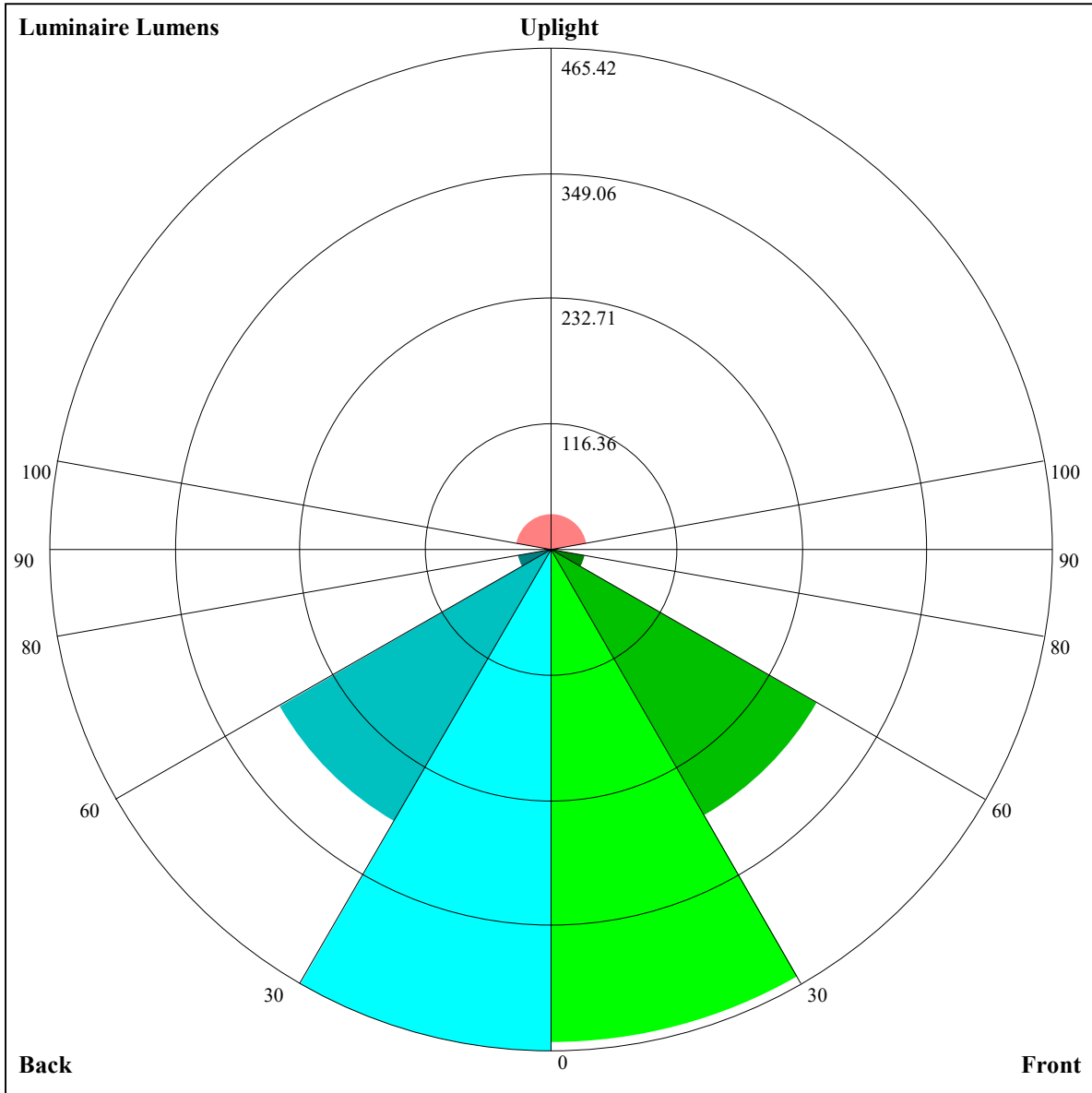
Luminance Limiting Curve





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	0.99	0.99	0.99	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.91	0.88	0.86	0.89	0.87	0.85	0.85	0.84	0.82	0.82	0.81	0.79	0.79	0.78	0.77	0.76
2	0.84	0.80	0.77	0.82	0.79	0.76	0.79	0.77	0.74	0.77	0.75	0.72	0.75	0.73	0.71	0.69
3	0.77	0.73	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.72	0.69	0.66	0.70	0.68	0.65	0.64
4	0.72	0.67	0.63	0.71	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.61	0.66	0.63	0.61	0.59
5	0.67	0.62	0.58	0.67	0.62	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.62	0.59	0.56	0.55
6	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.51
7	0.59	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.48
8	0.56	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.53	0.49	0.47	0.45
9	0.53	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.47	0.44	0.43
10	0.50	0.45	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.49	0.45	0.42	0.48	0.44	0.42	0.40





Luminaire Lumens:

FL=458.19,FM=285.08,FH=32.19,FVH=5.34

BL=465.42,BM=292.5,BH=31.98,BVH=5.44

UL=7.1,UH=33.77

BUG Rating:B1-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	1843.29	1767.86	1584.52	1345.03	1102.23	873.75	683.80	516.98	361.17
45.0	1848.24	1738.13	1531.67	1272.90	1035.06	830.80	650.22	475.14	333.09
90.0	1837.23	1692.98	1462.30	1094.80	963.32	749.54	567.63	423.44	286.73
135.0	1847.69	1754.10	1553.14	1312.54	1041.12	808.78	632.60	462.47	324.28
180.0	1843.29	1775.57	1596.64	1354.94	1095.18	914.16	717.99	536.69	367.89
225.0	1848.24	1816.86	1652.24	1438.07	1093.59	943.45	750.42	560.47	402.19
270.0	1837.23	1836.68	1691.88	1443.58	1195.27	938.16	730.05	561.02	411.27
315.0	1847.69	1777.22	1602.69	1339.52	1092.04	849.30	658.03	488.24	352.97
360.0	1843.29	1767.86	1584.52	1345.03	1102.23	873.75	683.80	516.98	361.17
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	245.88	142.16	88.42	60.01	42.28	30.39	21.20	14.92	9.41
45.0	200.41	123.38	80.11	54.78	37.93	27.69	19.21	12.94	8.59
90.0	174.25	111.05	70.86	49.72	34.74	25.22	16.96	11.23	7.60
135.0	202.83	130.92	81.15	55.33	39.31	28.35	19.21	13.49	8.15
180.0	225.13	136.82	83.74	55.44	38.26	28.35	19.99	13.76	9.52
225.0	258.43	162.58	96.29	61.83	43.11	31.22	22.30	16.02	10.90
270.0	279.69	174.09	105.21	68.05	46.63	34.36	24.17	16.90	11.01
315.0	225.13	140.12	89.25	60.62	42.34	30.45	21.69	14.98	10.02
360.0	245.88	142.16	88.42	60.01	42.28	30.39	21.20	14.92	9.41
C/ γ (°)	90.0								
0.0	5.89								
45.0	6.06								
90.0	6.17								
135.0	6.06								
180.0	6.77								
225.0	7.49								
270.0	7.21								
315.0	6.39								
360.0	5.89								