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Nata

Client:

LumCAT: 4-2221-A

Luminaire: BJB 47.319.2011

Report No: nata-0100

Test No: 20170406120

LampCAT: LUXEON CoB 1205

Lamp flux(lm): 1091.7

Number of Lamps: 1

Length(mm): 100

Phm Type: C

Voltage(V)217.5000

Current(A): 0.1030

Power (W): 20.4000

PF: 0.9050

Ballast type:

Width(mm): 100

Height(mm): 0

Photometric Results

Lumens(lm): 1000.00, Efficiency(%): 91.60% , Luminous Efficacy(lm/W): 49.02

Central intensity(cd): 2171.103, Maximum intensity(cd): 2171.103

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=37.4

[C90/270]Total=37.4

Field angle(10%Imax): [C0/180]Total=69.0

[C90/270]Total=69.0

Maximum s/h(1/2): C0_180=0.63 C90_270=0.63

Maximum s/h(1/4): C0_180=0.59 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.70%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.610%

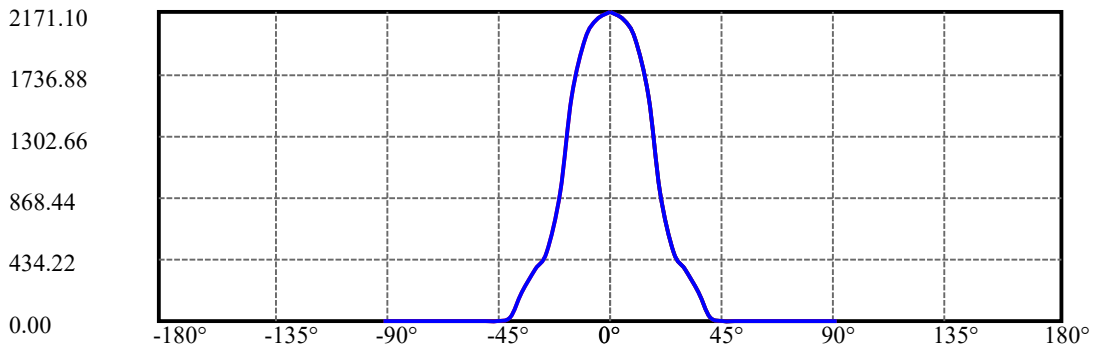
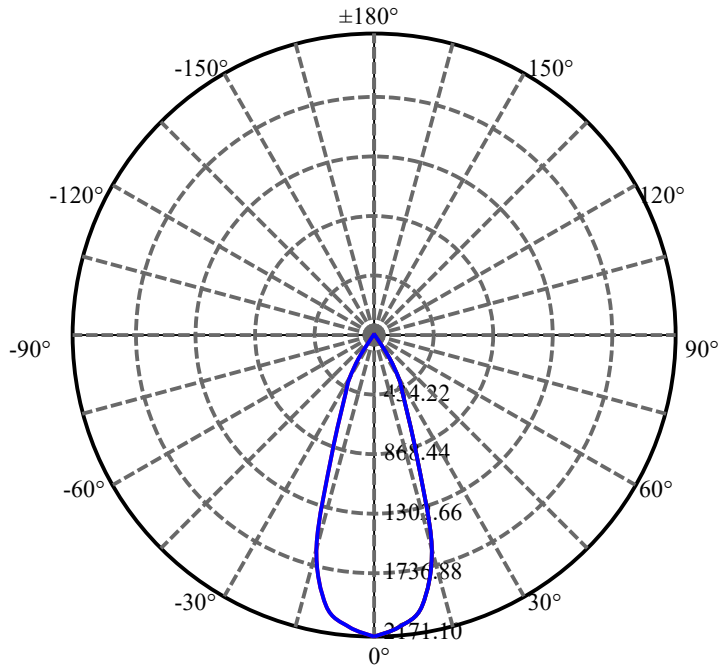
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2171.103	12.984	12.984	1.189%	1.298%
5.0	2112.184	100.906	113.89	9.243%	11.389%
10.0	1985.959	189.030	302.919	17.314%	30.292%
15.0	1578.815	223.984	526.903	20.516%	52.690%
20.0	906.627	169.969	696.872	15.569%	69.687%
25.0	479.400	111.054	807.927	10.172%	80.793%
30.0	359.560	98.544	906.471	9.026%	90.647%
35.0	201.471	63.342	969.813	5.802%	96.981%
40.0	26.557	9.357	979.17	.857%	97.917%
45.0	5.870	2.275	981.445	.208%	98.144%
50.0	5.112	2.147	983.592	.197%	98.359%
55.0	4.719	2.119	985.711	.194%	98.571%
60.0	4.506	2.139	987.85	.196%	98.785%
65.0	4.354	2.163	990.012	.198%	99.001%
70.0	4.255	2.192	992.204	.201%	99.220%
75.0	4.184	2.215	994.419	.203%	99.442%
80.0	4.125	2.227	996.646	.204%	99.665%
85.0	4.097	2.237	998.883	.205%	99.888%
90.0	4.079	1.118	1000.001	.102%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	906.47	83.03%	90.65%
0-40	979.17	89.69%	97.92%
0-60	987.85	90.48%	98.78%
0-90	998.88	91.49%	99.89%
0-120	998.88	91.49%	99.89%
0-180	1000.00	91.60%	100.00%
60-90	13.17	1.21%	1.32%
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%
0-24.64	800.00	73.28%	80.00%

ZONAL LUMEN SUMMARY

0-10	302.92
10-20	393.95
20-30	209.60
30-40	72.70
40-50	4.42
50-60	4.26
60-70	4.35
70-80	4.44
80-90	2.24
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: —————

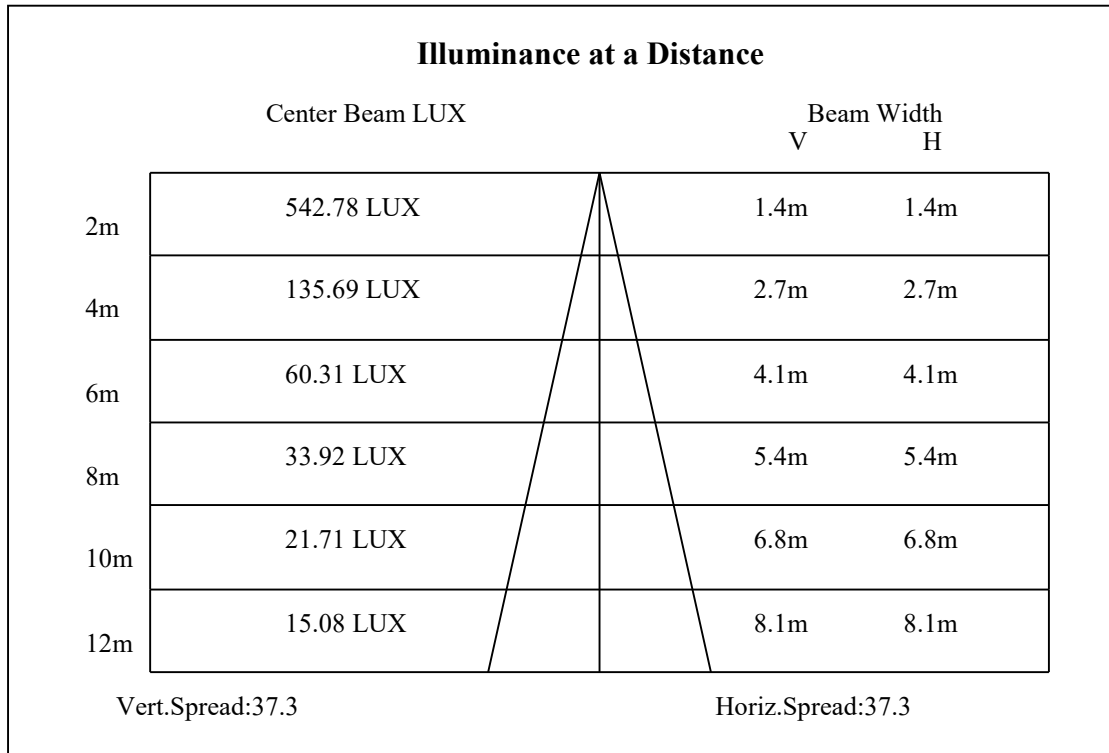
C90/C270: —————

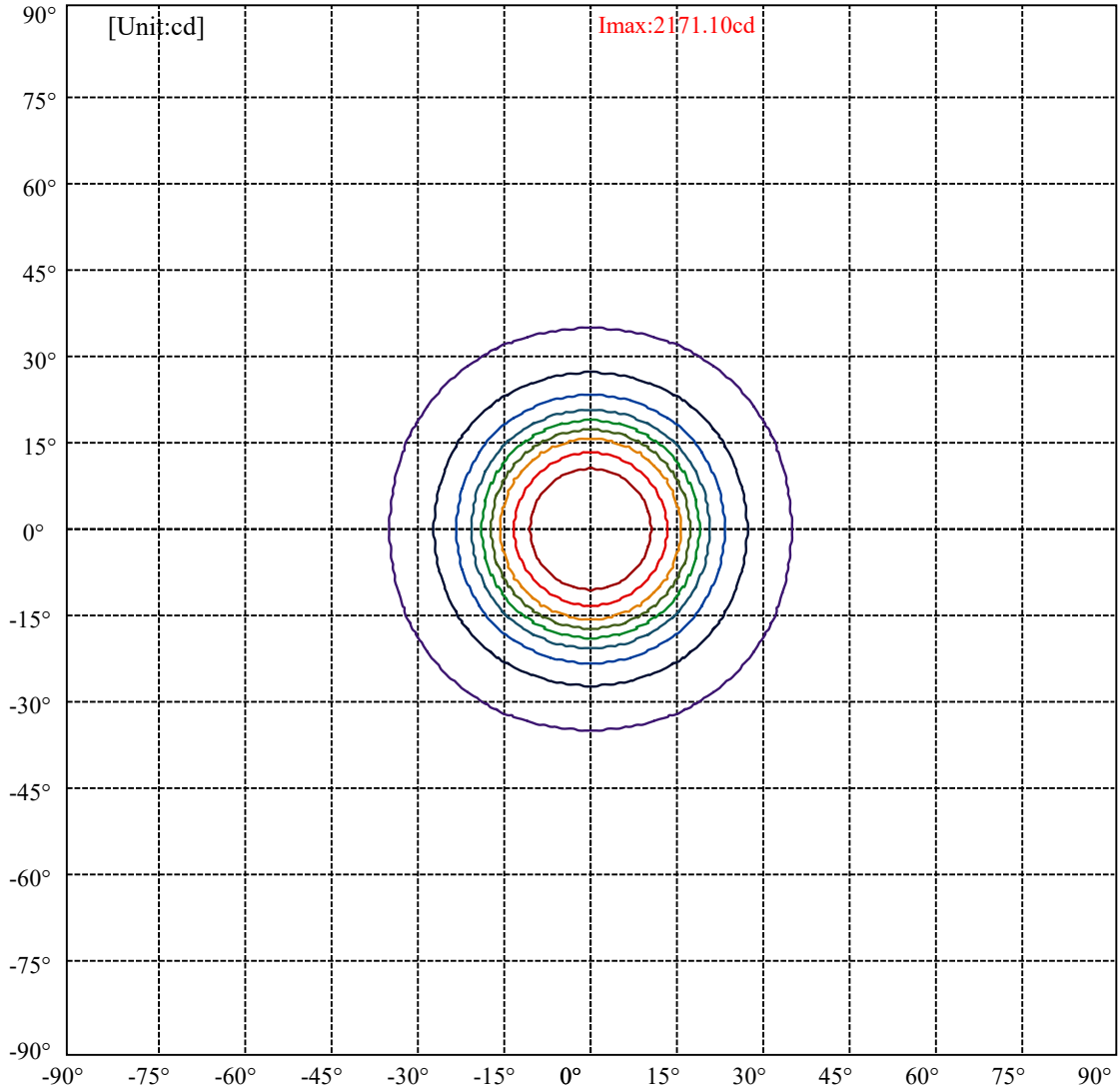
Field angle(10%Imax):C0/180Left:34.5 Right:34.5

:C90/270Left:34.5 Right:34.5

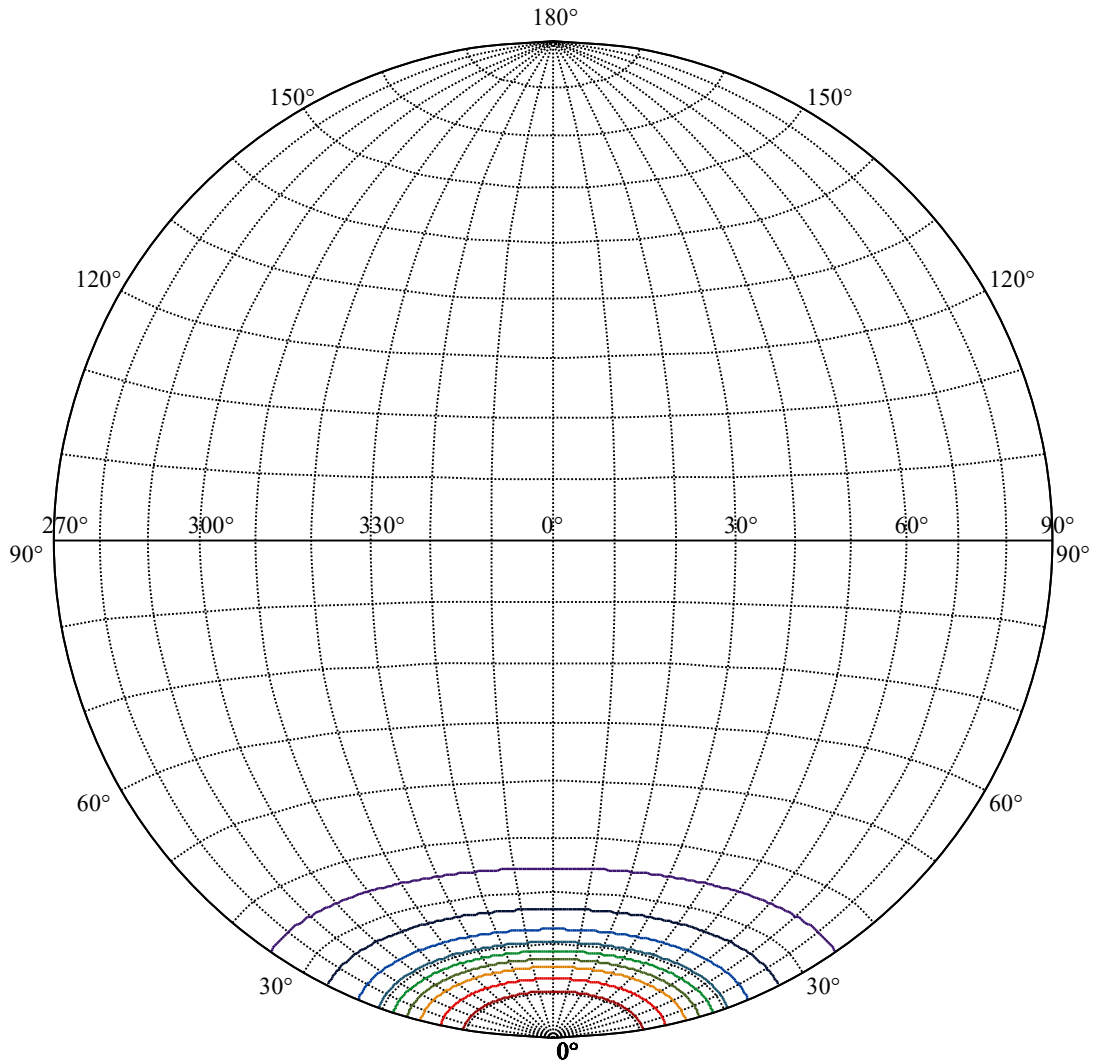
Beam Angle(50%Imax):C0/180Left:18.7 Right:18.7

:C90/270Left:18.7 Right:18.7





(10%Imax) 217.11	—
(20%Imax) 434.221	—
(30%Imax) 651.331	—
(40%Imax) 868.441	—
(50%Imax) 1085.55	—
(60%Imax) 1302.66	—
(70%Imax) 1519.77	—
(80%Imax) 1736.88	—
(90%Imax) 1953.99	—



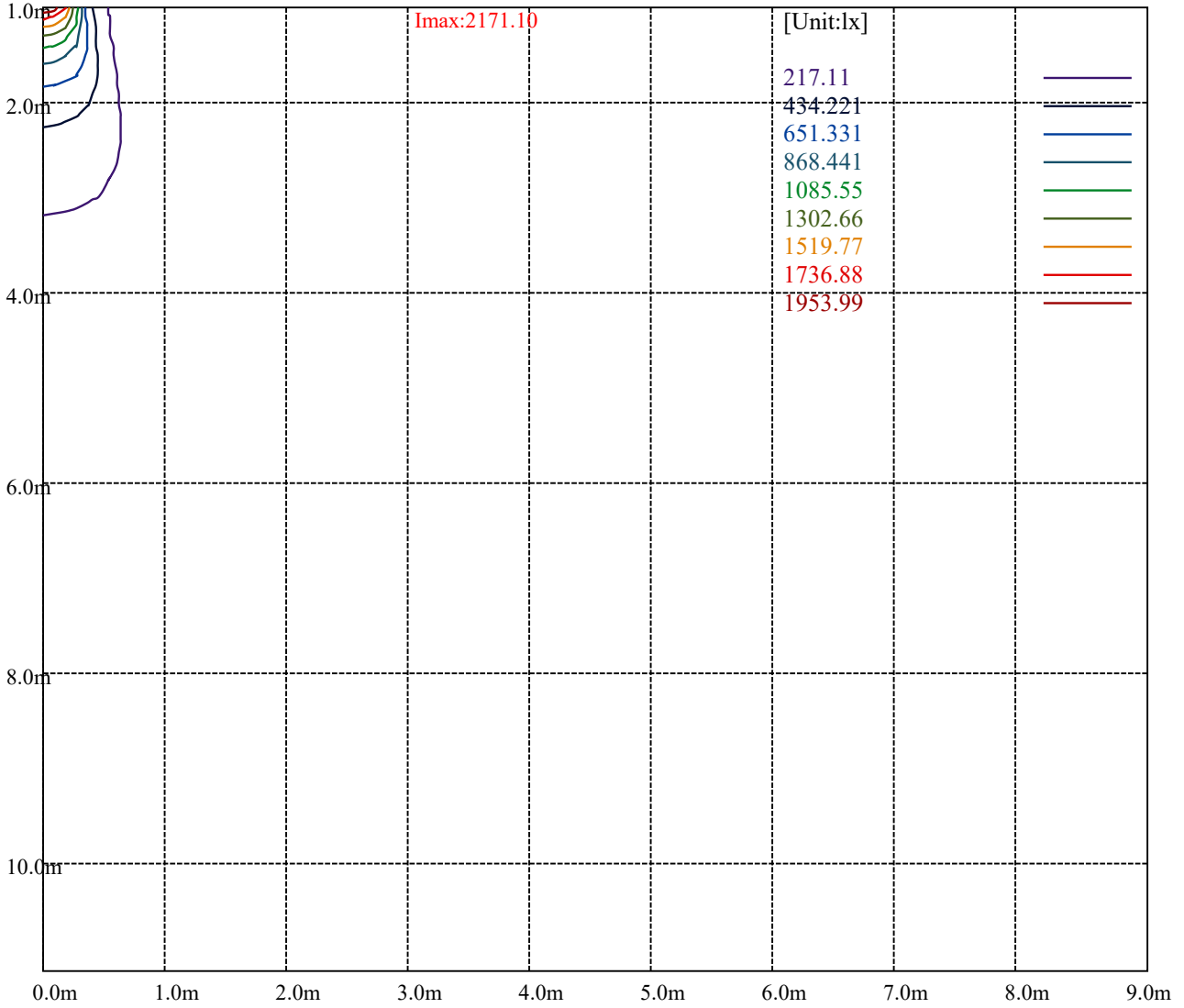
House

[Unit:cd]

Road

Imax:2171.10

(10%Imax) 217.11	—
(20%Imax) 434.221	—
(30%Imax) 651.331	—
(40%Imax) 868.441	—
(50%Imax) 1085.55	—
(60%Imax) 1302.66	—
(70%Imax) 1519.77	—
(80%Imax) 1736.88	—
(90%Imax) 1953.99	—



Luminance Table

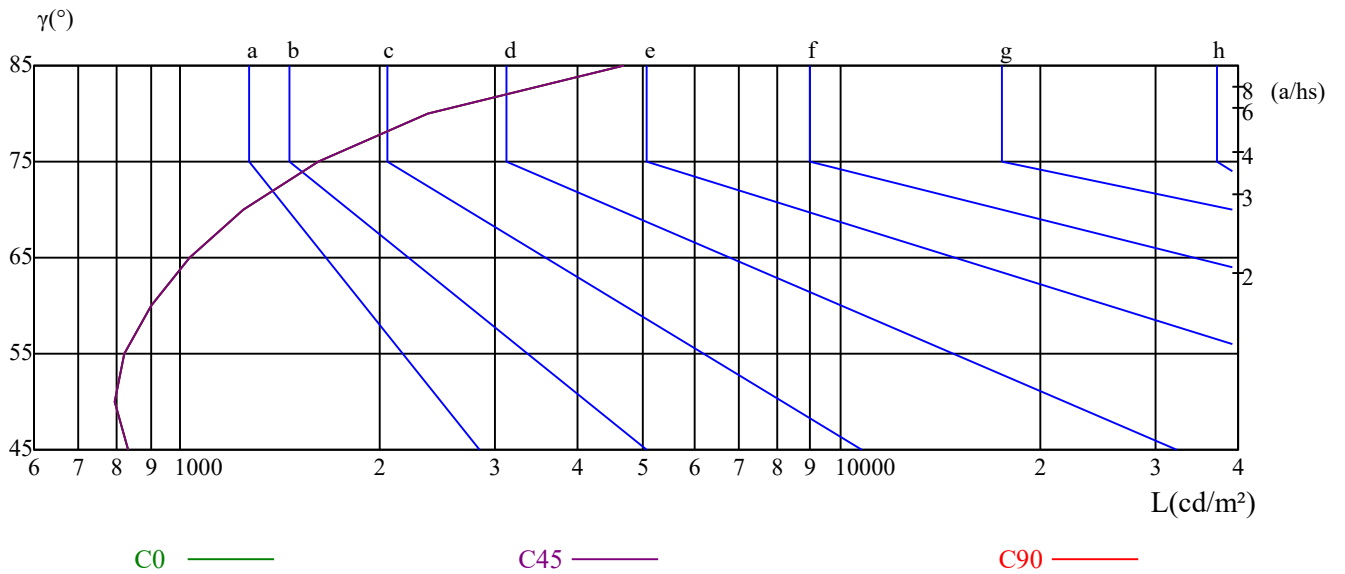
γ	45	50	55	60	65	70	75	80	85
C0	831	796	823	902	1031	1245	1617	2376	4703
C45	831	796	823	902	1031	1245	1617	2376	4703
C90	831	796	823	902	1031	1245	1617	2376	4703

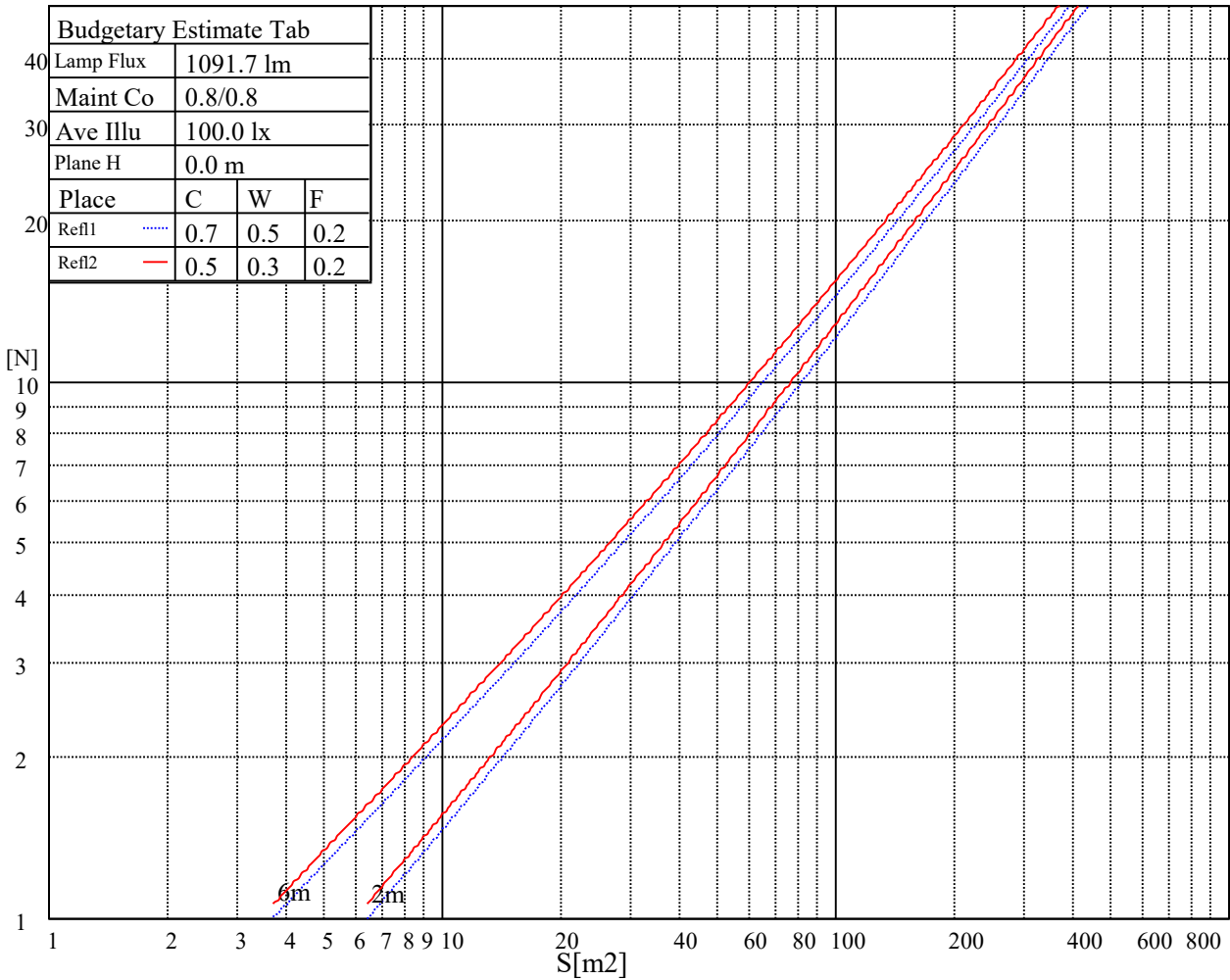
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1031	1031	1031	1617	1617	1617	4703	4703	4703

Glare Table

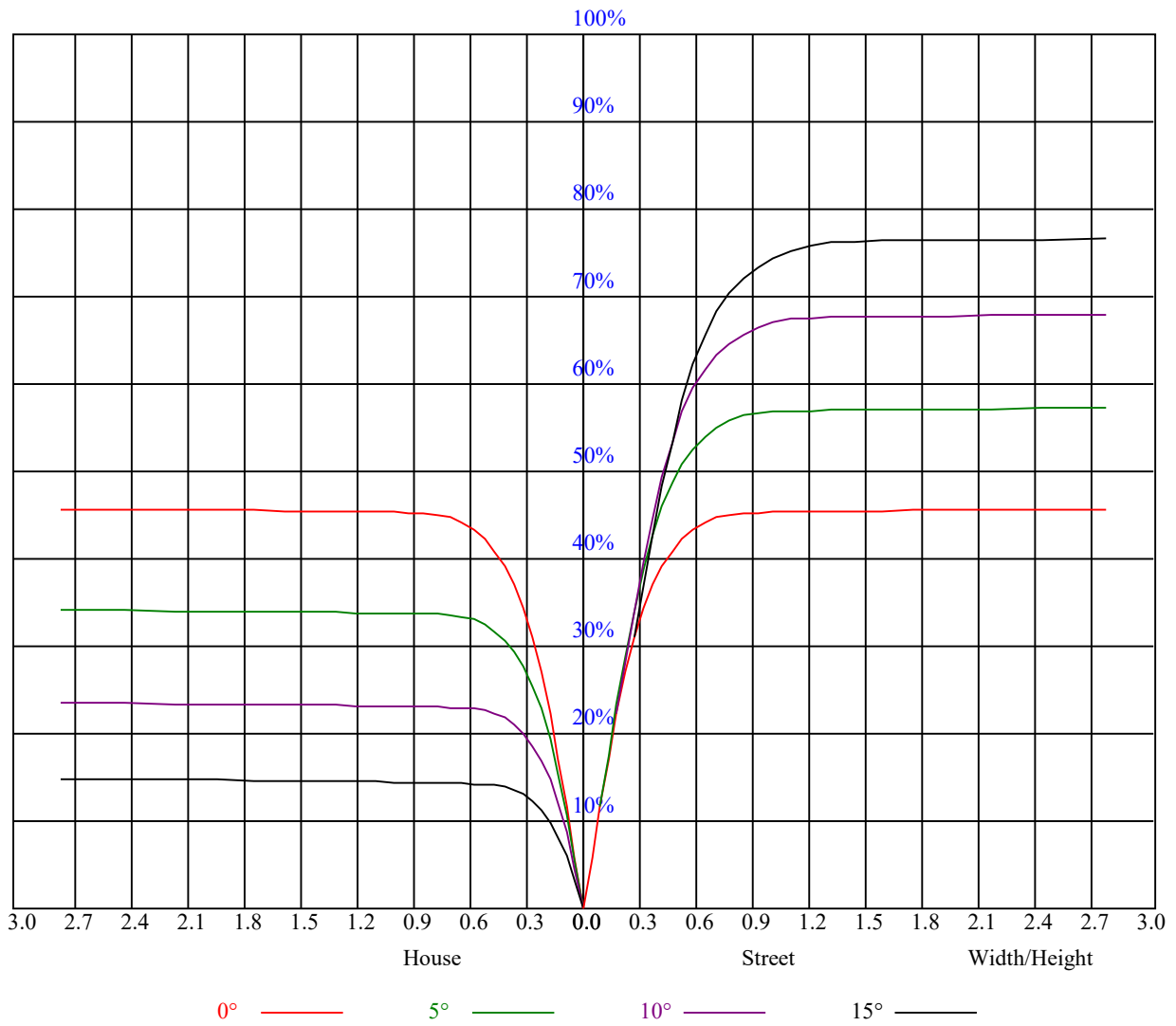
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

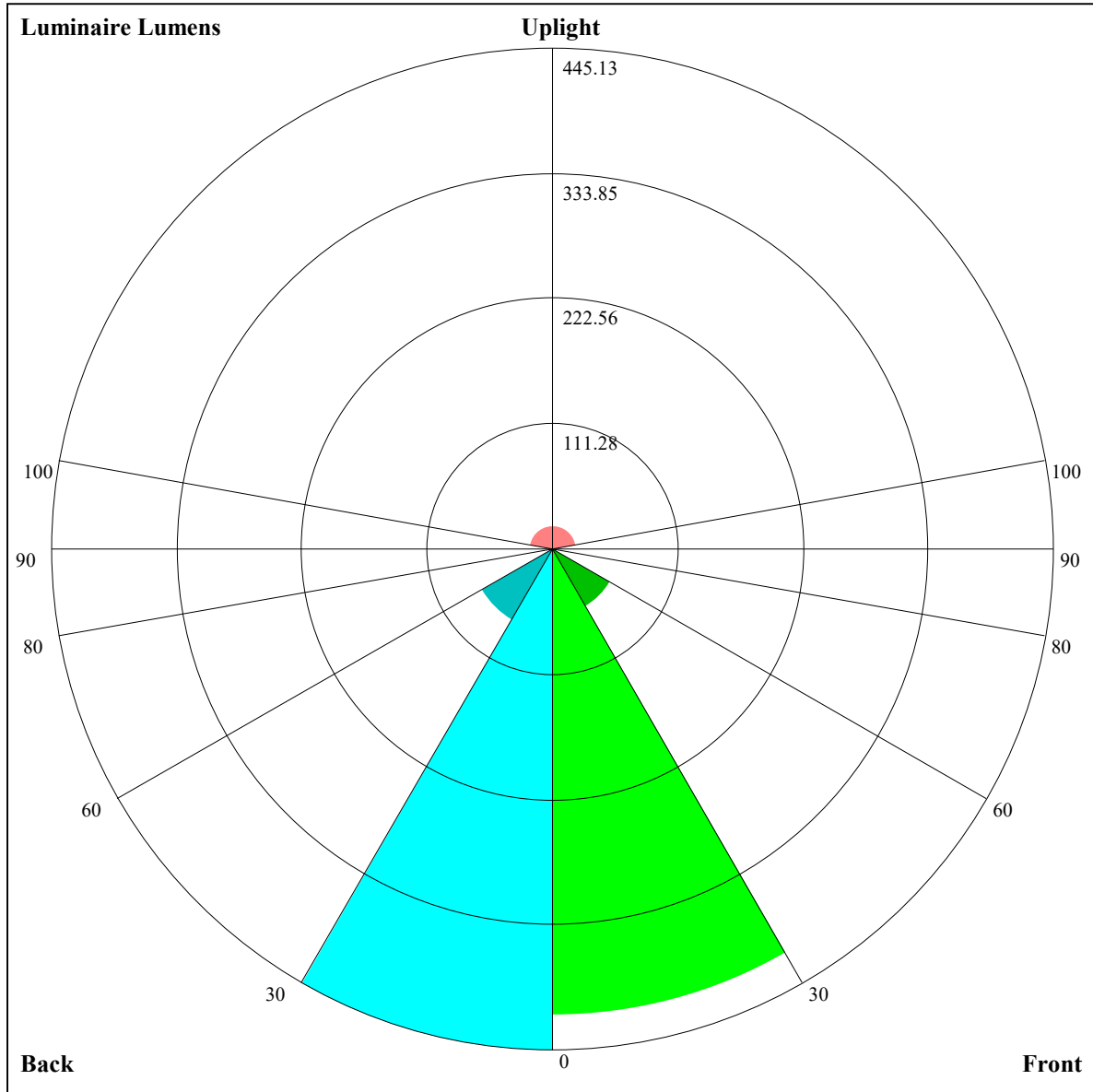
Luminance Limiting Curve





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	1.10	1.10	1.10	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	1.00	0.98	1.00	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.88	0.85	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.84	0.82	0.84	0.82	0.81	0.79
4	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.81	0.78	0.82	0.79	0.77	0.76
5	0.84	0.80	0.77	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.77	0.74	0.73
6	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
8	0.75	0.71	0.68	0.75	0.70	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.66
9	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64
10	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.62





Luminaire Lumens:

FL=413.93,FM=58.43,FH=4.37,FVH=2.24

BL=445.13,BM=72.5,BH=4.4,BVH=2.24

UL=4.45,UH=21.18

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	2174.82	2103.27	1967.36	1574.73	834.03	455.51	360.94	190.62	10.92
45.0	2182.00	2114.16	1991.13	1533.64	809.52	445.51	354.78	180.97	10.99
90.0	2179.77	2151.30	2077.77	1741.09	1074.91	521.36	378.77	267.12	19.98
135.0	2147.83	2142.63	2075.55	1809.67	1190.27	565.43	393.13	310.19	130.71
180.0	2174.82	2105.75	1998.80	1615.08	927.11	492.08	358.67	217.38	11.39
225.0	2182.00	2109.71	2002.27	1616.32	940.23	498.83	358.22	216.86	11.34
270.0	2179.77	2095.60	1910.42	1430.90	779.57	435.56	336.34	135.32	8.99
315.0	2147.83	2075.05	1864.38	1309.10	697.38	420.93	335.64	93.30	8.14
360.0	2174.82	2103.27	1967.36	1574.73	834.03	455.51	360.94	190.62	10.92
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	5.87	5.15	4.73	4.51	4.36	4.26	4.18	4.11	4.09
45.0	5.74	5.03	4.63	4.46	4.31	4.23	4.16	4.11	4.09
90.0	6.29	5.25	4.80	4.56	4.38	4.28	4.23	4.16	4.13
135.0	6.73	5.40	4.90	4.63	4.43	4.31	4.23	4.13	4.11
180.0	5.79	5.17	4.78	4.51	4.36	4.26	4.16	4.11	4.06
225.0	5.67	5.08	4.68	4.51	4.36	4.26	4.18	4.13	4.09
270.0	5.40	4.93	4.63	4.46	4.33	4.23	4.16	4.13	4.11
315.0	5.47	4.90	4.61	4.43	4.31	4.21	4.16	4.11	4.11
360.0	5.87	5.15	4.73	4.51	4.36	4.26	4.18	4.11	4.09
C/ γ (°)	90.0								
0.0	4.06								
45.0	4.06								
90.0	4.11								
135.0	4.09								
180.0	4.06								
225.0	4.06								
270.0	4.11								
315.0	4.09								
360.0	4.06								