
Nata

Client:

LumCAT: 3-2101-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): 84

Phm Type: C

Voltage(V): 33.9000

Current(A): 0.6500

Power (W): 22.0350

PF: 0.0000

Ballast type: DC

Width(mm): 84

Height(mm): 0

Photometric Results

Lumens(lm): 2703.41, Efficiency(%): 81.26% , Luminous Efficacy(lm/W): 122.69

Central intensity(cd): 6451.372, Maximum intensity(cd): 6451.372

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=34.2

[C90/270]Total=34.2

Field angle(10%Imax): [C0/180]Total=67.8

[C90/270]Total=67.8

Maximum s/h(1/2): C0_180=0.57 C90_270=0.57

Maximum s/h(1/4): C0_180=0.54 C90_270=0.54

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.34%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.379%

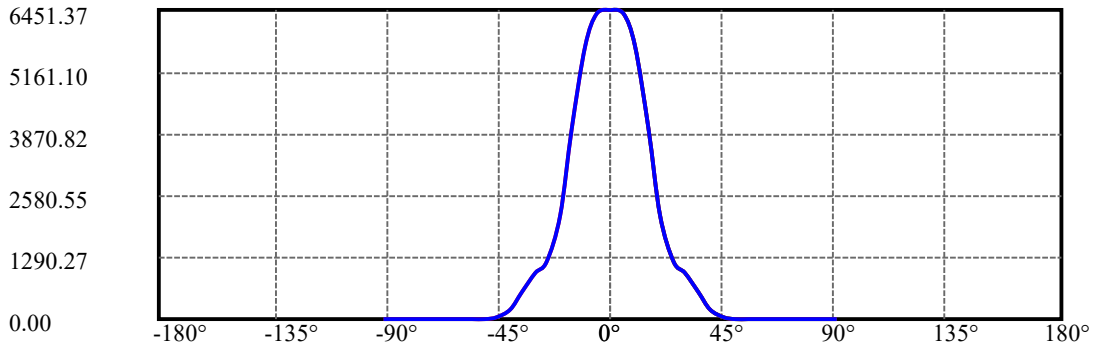
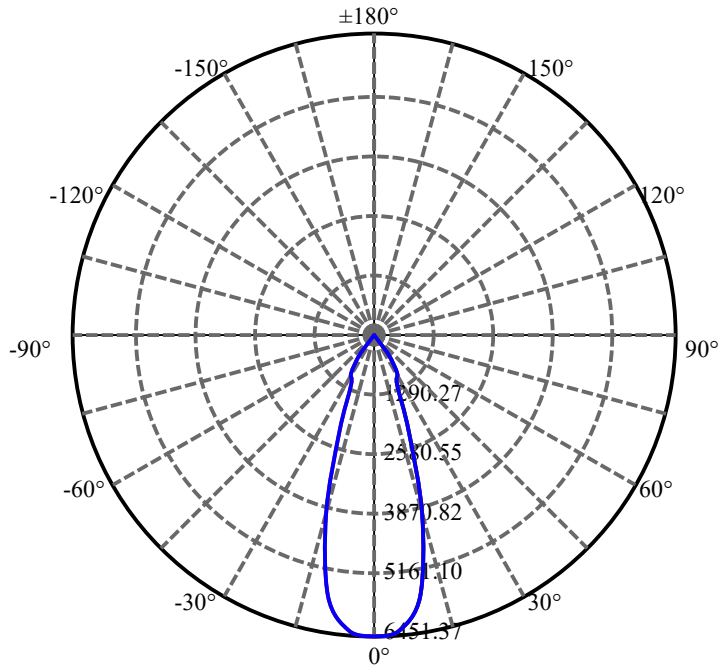
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6451.371	38.580	38.58	1.160%	1.427%
5.0	6352.683	303.489	342.069	9.122%	12.653%
10.0	5676.934	540.348	882.417	16.242%	32.641%
15.0	3956.628	561.320	1443.738	16.872%	53.404%
20.0	2177.687	408.260	1851.997	12.271%	68.506%
25.0	1187.456	275.078	2127.075	8.268%	78.681%
30.0	965.813	264.699	2391.774	7.956%	88.472%
35.0	551.610	173.425	2565.2	5.213%	94.887%
40.0	202.752	71.437	2636.637	2.147%	97.530%
45.0	22.608	8.762	2645.399	.263%	97.854%
50.0	18.568	7.797	2653.196	.234%	98.142%
55.0	16.386	7.358	2660.553	.221%	98.415%
60.0	14.907	7.076	2667.629	.213%	98.676%
65.0	13.737	6.824	2674.453	.205%	98.929%
70.0	12.849	6.618	2681.072	.199%	99.174%
75.0	12.216	6.468	2687.539	.194%	99.413%
80.0	11.858	6.401	2693.94	.192%	99.650%
85.0	11.706	6.392	2700.332	.192%	99.886%
90.0	11.238	3.080	2703.413	.093%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2391.77	71.89%	88.47%
0-40	2636.64	79.25%	97.53%
0-60	2667.63	80.18%	98.68%
0-90	2700.33	81.17%	99.89%
0-120	2700.33	81.17%	99.89%
0-180	2703.41	81.26%	100.00%
60-90	39.78	1.20%	1.47%
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%
0-25.67	2162.73	65.01%	80.00%

ZONAL LUMEN SUMMARY

0-10	882.42
10-20	969.58
20-30	539.78
30-40	244.86
40-50	16.56
50-60	14.43
60-70	13.44
70-80	12.87
80-90	6.39
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



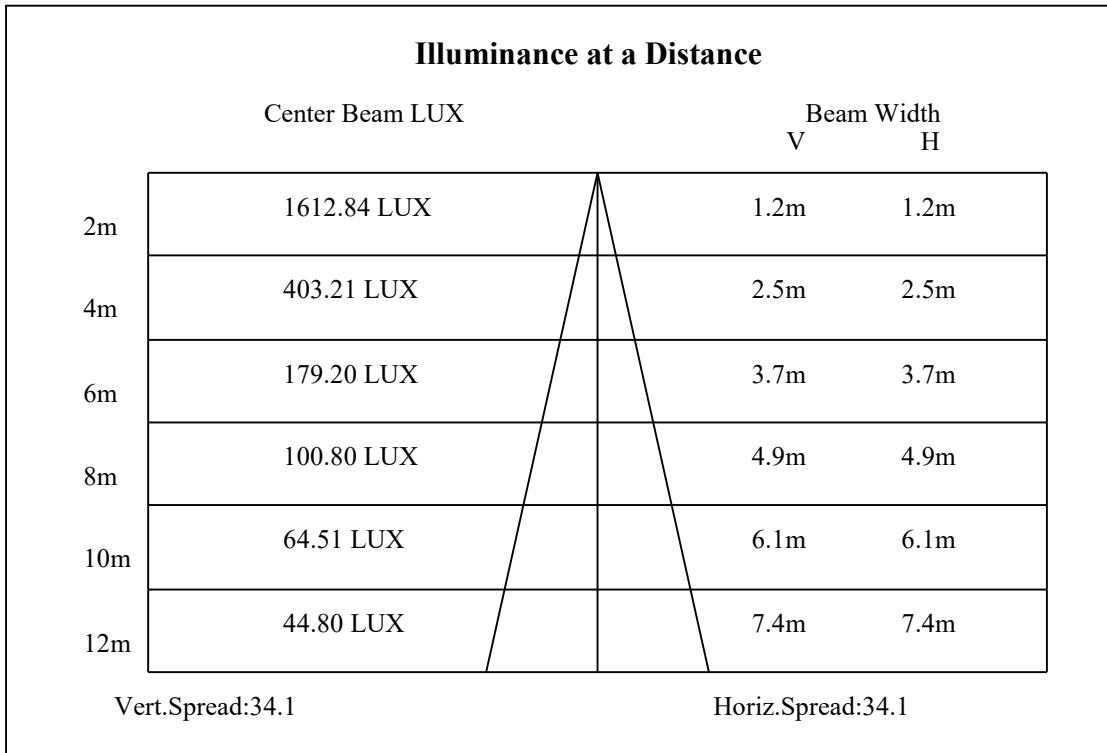
C0(Max): —————

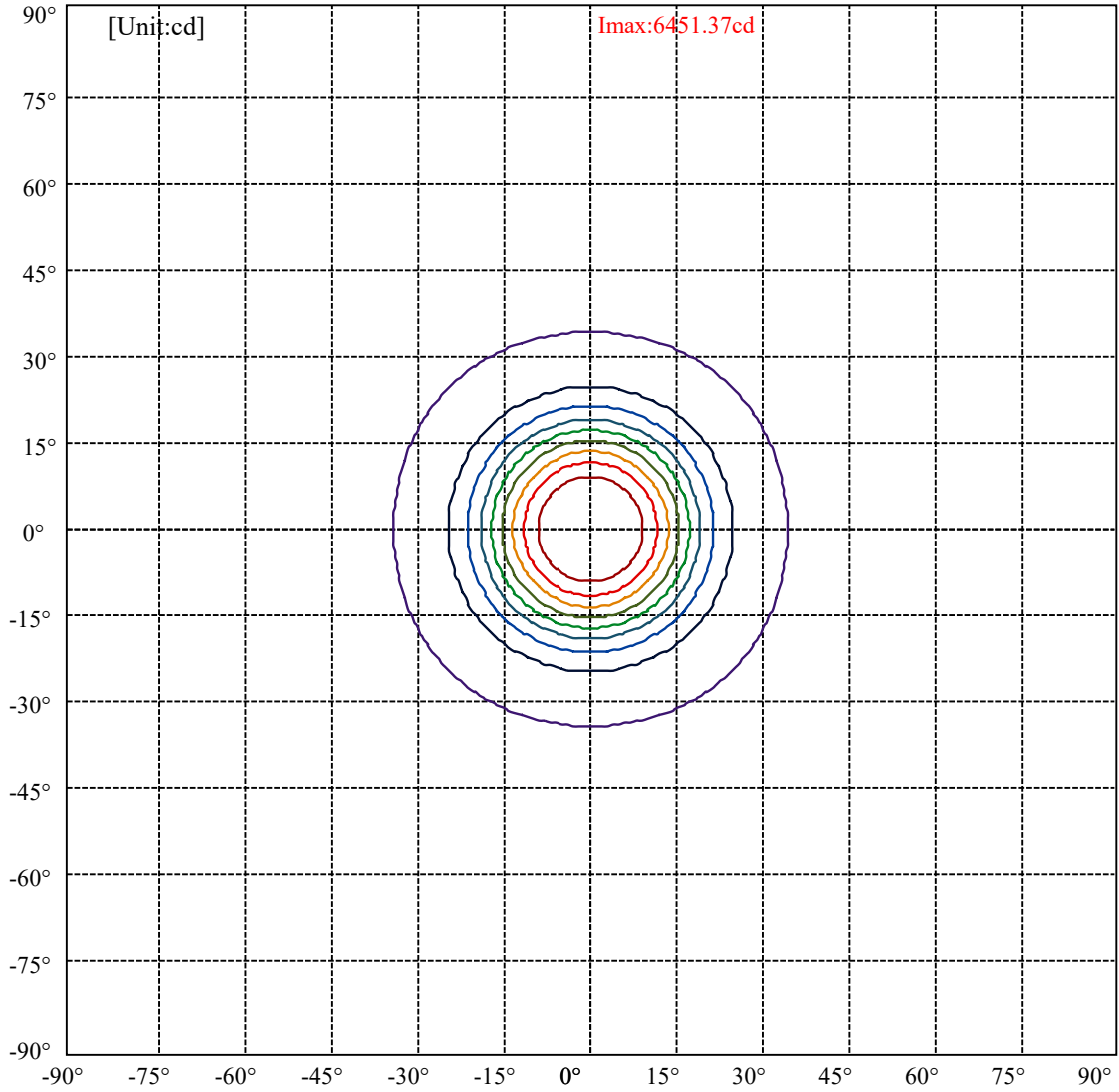
C0/C180: —————

C90/C270: —————

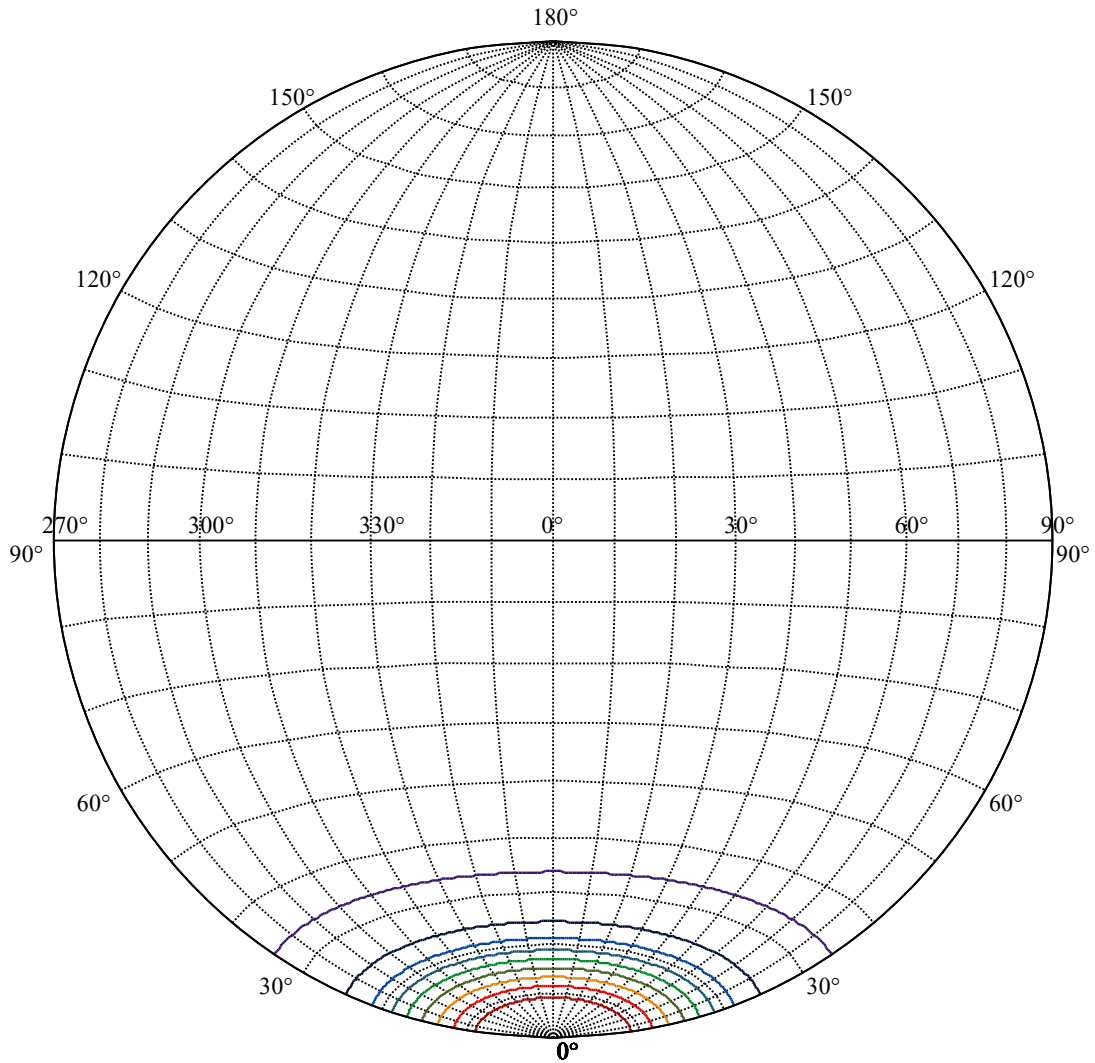
Field angle(10%Imax):C0/180Left:33.9 Right:33.9
:C90/270Left:33.9 Right:33.9

Beam Angle(50%Imax):C0/180Left:17.1 Right:17.1
:C90/270Left:17.1 Right:17.1





(10%Imax) 645.137	—
(20%Imax) 1290.27	—
(30%Imax) 1935.41	—
(40%Imax) 2580.55	—
(50%Imax) 3225.69	—
(60%Imax) 3870.82	—
(70%Imax) 4515.96	—
(80%Imax) 5161.1	—
(90%Imax) 5806.23	—



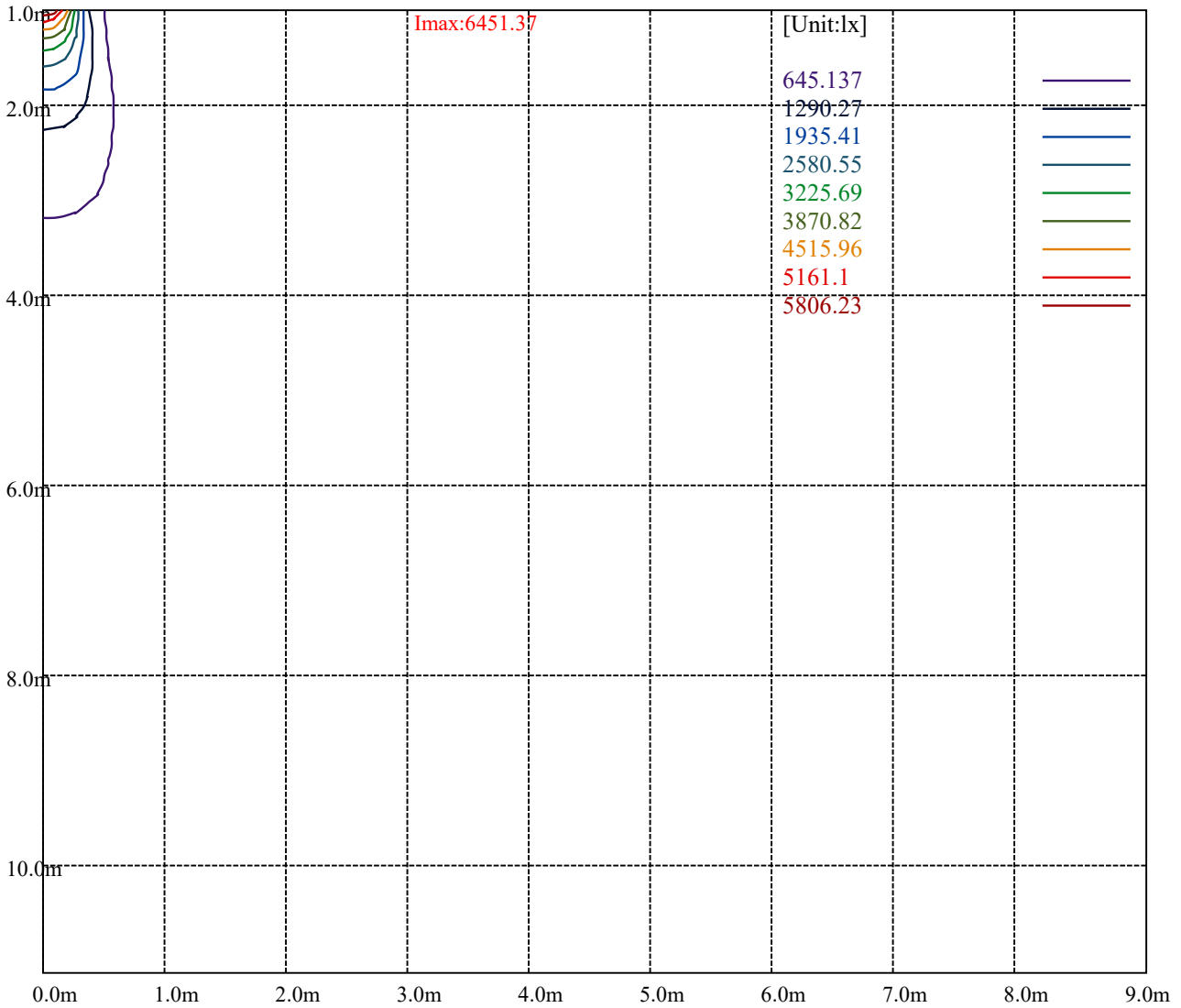
House

[Unit:cd]

Road

I_{max}:6451.37

(10%I _{max}) 645.137	—
(20%I _{max}) 1290.27	—
(30%I _{max}) 1935.41	—
(40%I _{max}) 2580.55	—
(50%I _{max}) 3225.69	—
(60%I _{max}) 3870.82	—
(70%I _{max}) 4515.96	—
(80%I _{max}) 5161.1	—
(90%I _{max}) 5806.23	—



Luminance Table

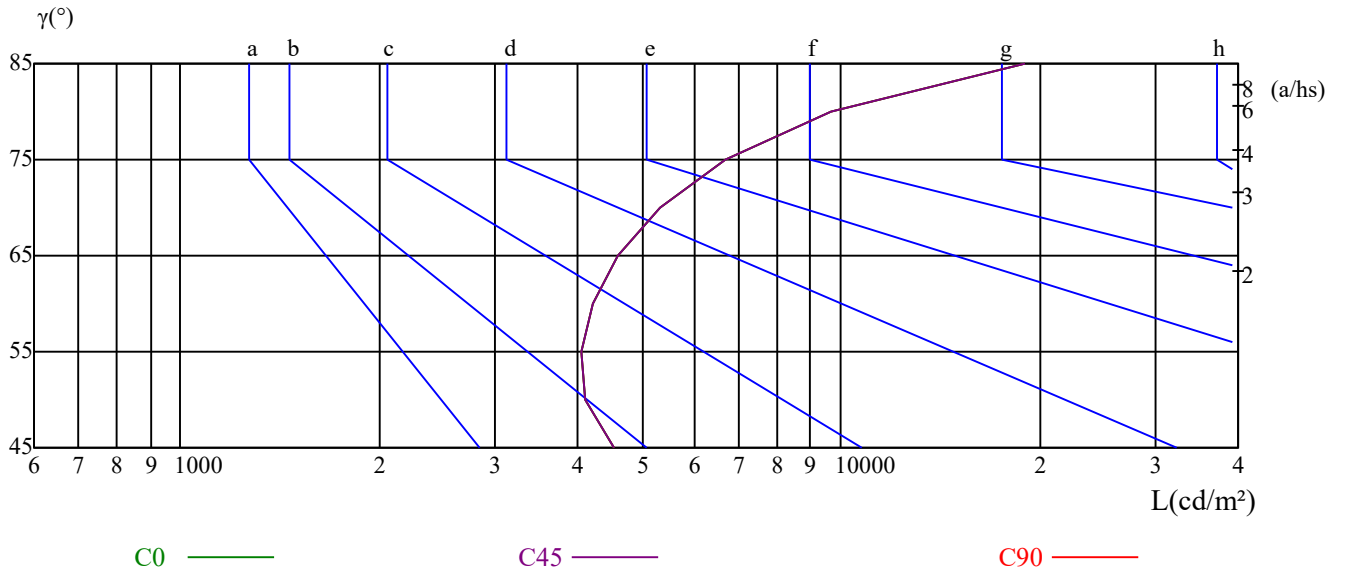
γ	45	50	55	60	65	70	75	80	85
C0	4531	4094	4049	4225	4607	5324	6689	9678	19036
C45	4531	4094	4049	4225	4607	5324	6689	9678	19036
C90	4531	4094	4049	4225	4607	5324	6689	9678	19036

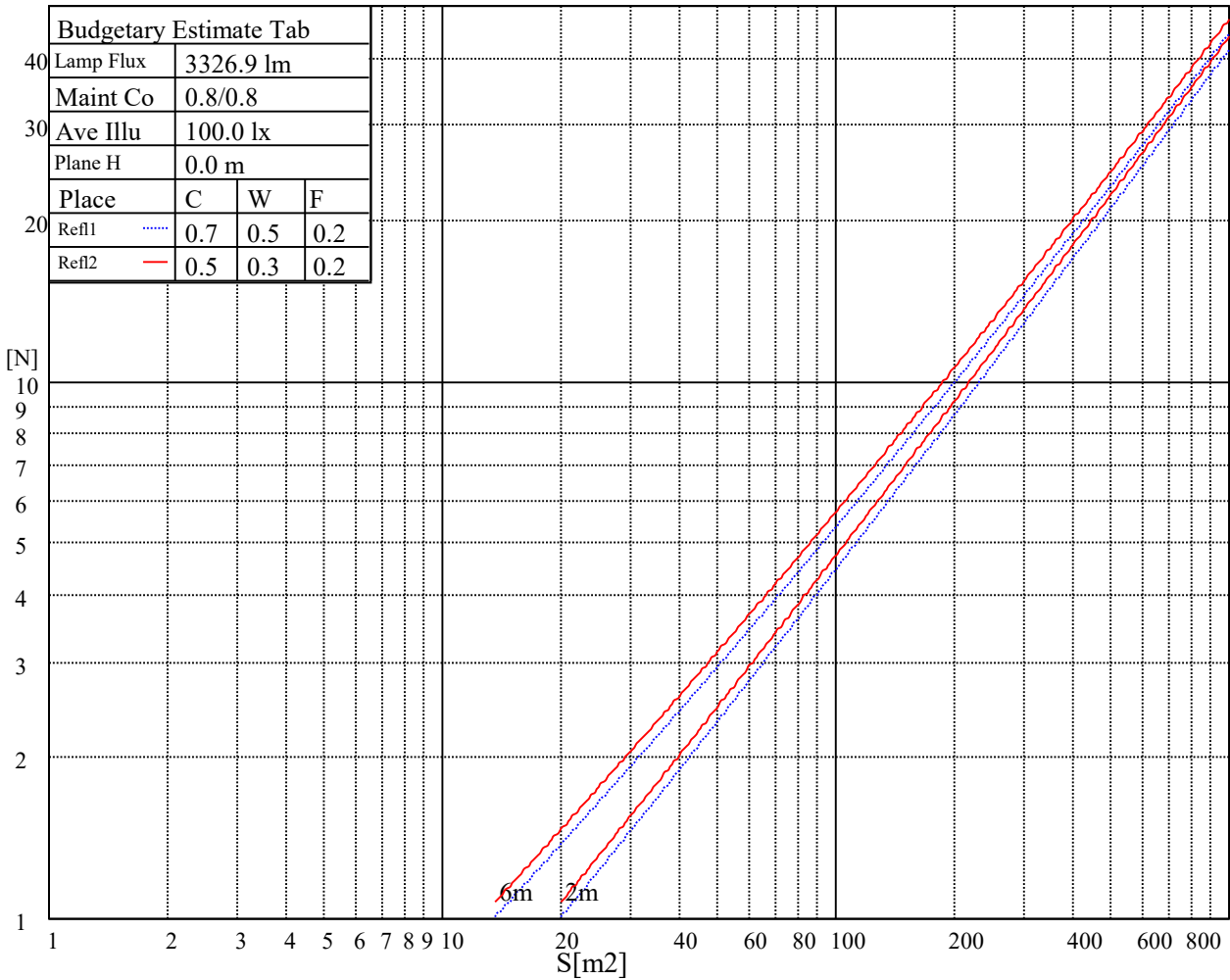
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4607	4607	4607	6689	6689	6689	19036	19036	19036

Glare Table

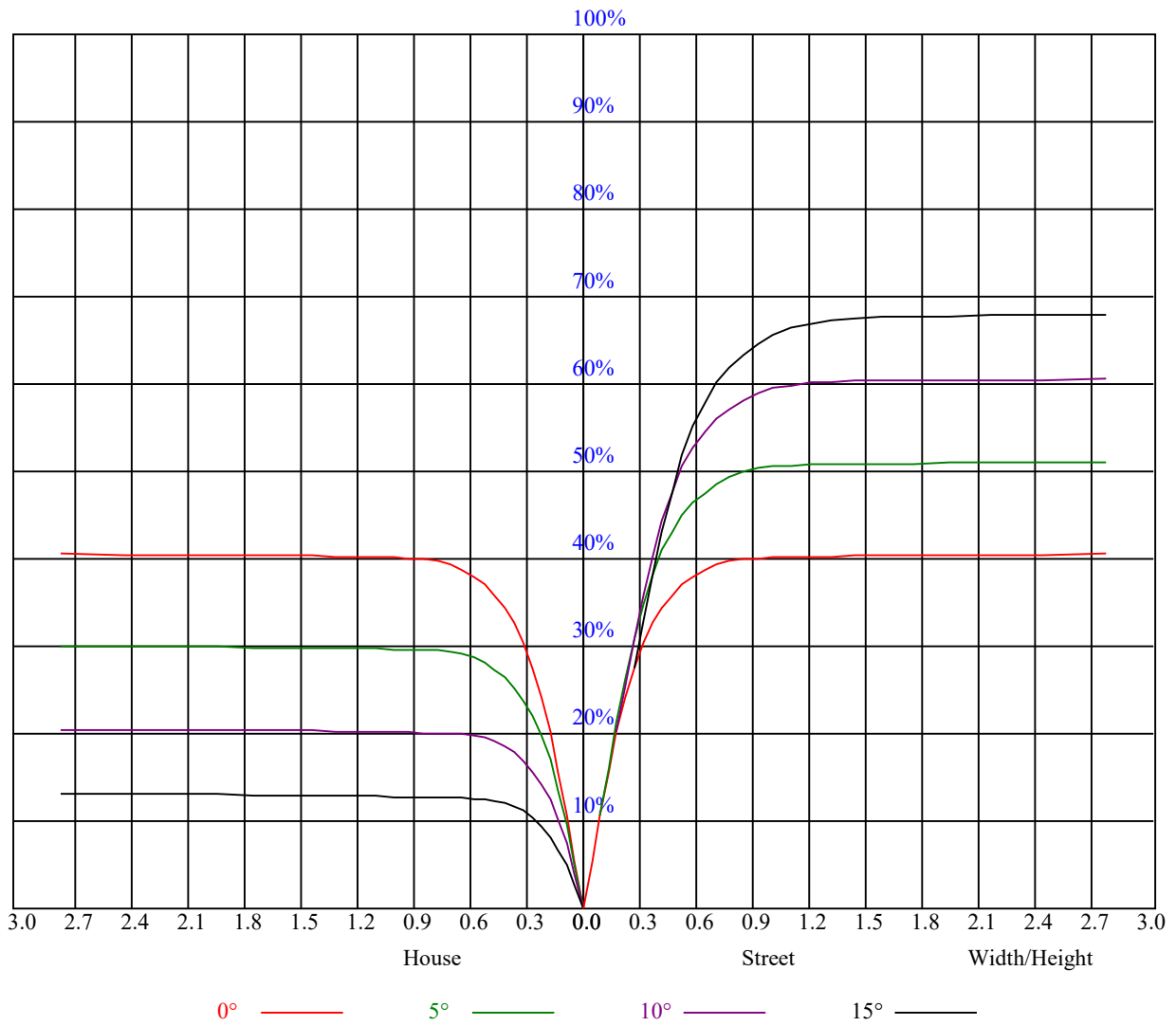
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

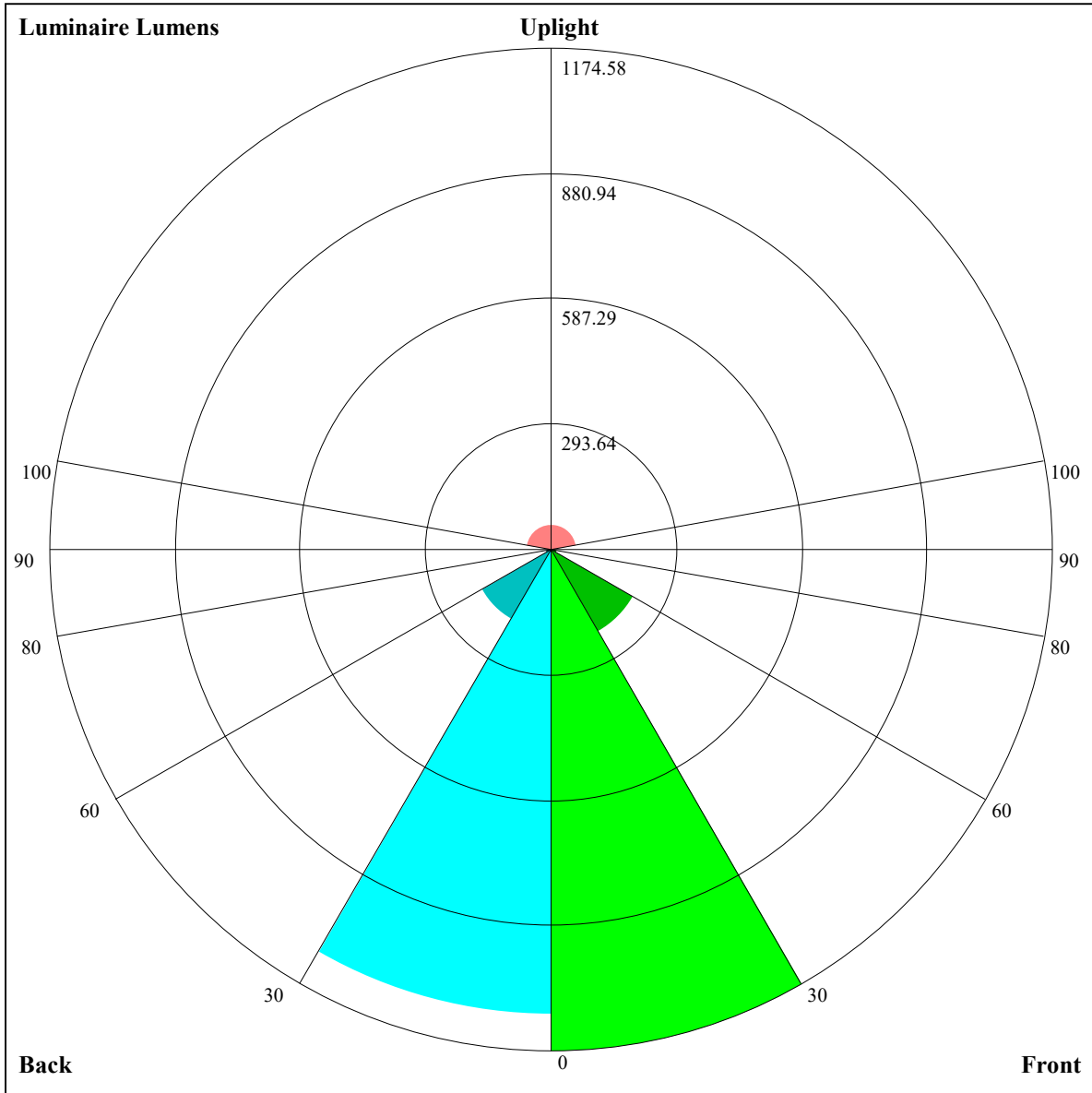
Luminance Limiting Curve





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	0.98	0.98	0.98	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.84	0.84	0.84	0.82
1	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.84	0.83	0.83	0.81	0.80	0.80	0.79	0.78	0.76
2	0.86	0.83	0.80	0.85	0.82	0.79	0.82	0.80	0.78	0.79	0.78	0.76	0.77	0.76	0.74	0.73
3	0.82	0.78	0.75	0.81	0.77	0.75	0.78	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
4	0.78	0.74	0.71	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.67
5	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.71	0.68	0.66	0.70	0.68	0.66	0.65
6	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.62
7	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
8	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.64	0.61	0.59	0.58
9	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	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	0.55	0.60	0.57	0.55	0.55





Luminaire Lumens:

FL=1174.58,FM=220.48,FH=13.24,FVH=6.32

BL=1088.15,BM=190.53,BH=13.44,BVH=6.35

UL=12.26,UH=58.35

BUG Rating:B3-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	6449.31	6472.43	6073.27	4599.41	2625.64	1361.54	1040.57	689.86	300.06
45.0	6449.31	6403.61	5901.50	4301.01	2398.81	1305.94	1015.79	618.83	305.01
90.0	6453.16	6284.69	5470.40	3752.09	2010.66	1086.92	942.13	502.72	114.02
135.0	6453.71	6305.61	5551.89	3887.53	2120.22	1204.63	955.23	541.20	281.34
180.0	6449.31	6190.54	5255.13	3324.31	1753.55	1090.50	864.22	414.63	74.16
225.0	6449.31	6300.10	5494.63	3599.04	1911.56	1085.88	923.85	472.88	87.65
270.0	6453.16	6440.50	5874.52	4181.53	2358.07	1271.25	1010.84	595.71	296.75
315.0	6453.71	6423.98	5794.14	4008.11	2243.00	1092.98	973.89	577.05	163.02
360.0	6449.31	6472.43	6073.27	4599.41	2625.64	1361.54	1040.57	689.86	300.06
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	29.73	18.50	16.24	14.70	13.49	12.77	12.22	11.89	11.73
45.0	22.57	18.72	16.52	15.03	13.82	12.83	12.17	11.78	11.51
90.0	21.97	19.16	16.85	15.31	13.98	12.99	12.17	11.78	11.51
135.0	23.07	19.99	17.40	15.64	14.37	13.21	12.39	11.89	11.56
180.0	21.64	18.83	16.68	15.25	13.98	12.99	12.39	12.06	12.06
225.0	21.03	18.11	16.02	14.70	13.65	12.77	12.17	11.84	11.73
270.0	20.92	17.84	15.91	14.53	13.43	12.72	12.17	11.84	11.73
315.0	19.93	17.40	15.47	14.09	13.16	12.50	12.06	11.78	11.84
360.0	29.73	18.50	16.24	14.70	13.49	12.77	12.22	11.89	11.73
C/γ(°)	90.0								
0.0	11.29								
45.0	11.23								
90.0	11.23								
135.0	11.23								
180.0	11.23								
225.0	11.23								
270.0	11.23								
315.0	11.23								
360.0	11.29								