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Nata

Client:

LumCAT: 1405-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): 1611.63, Efficiency(%): 84.37% , Luminous Efficacy(lm/W): 114.79

Central intensity(cd): 3440.131, Maximum intensity(cd): 3440.131

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.4

[C90/270]Total=26.4

Field angle(10%Imax): [C0/180]Total=79.2

[C90/270]Total=79.2

Maximum s/h(1/2): C0_180=0.44 C90_270=0.44

Maximum s/h(1/4): C0_180=0.50 C90_270=0.50

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.37%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.187%

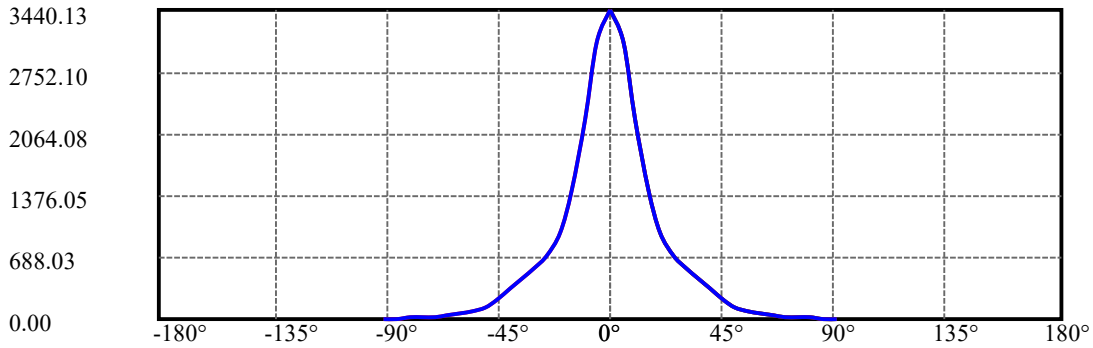
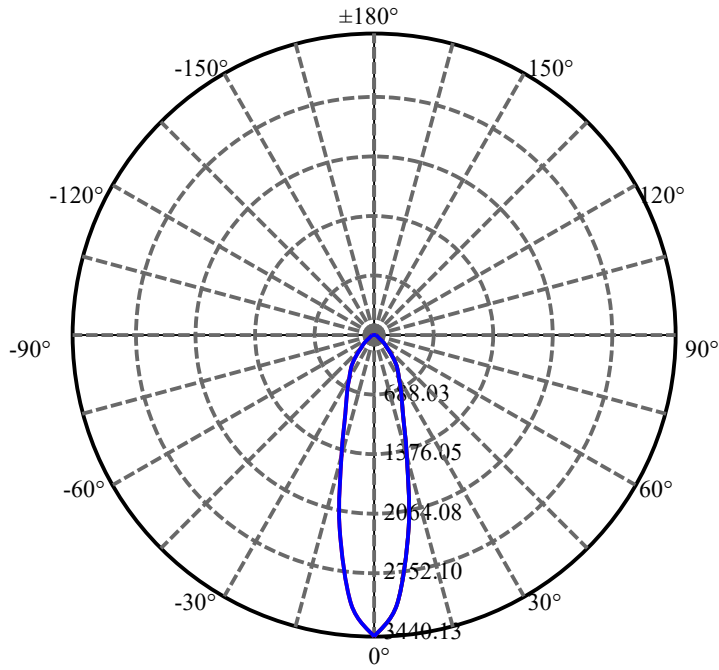
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3440.130	20.573	20.573	1.077%	1.277%
5.0	3072.767	146.796	167.369	7.685%	10.385%
10.0	2227.720	212.041	379.41	11.100%	23.542%
15.0	1428.989	202.728	582.138	10.613%	36.121%
20.0	954.444	178.933	761.072	9.367%	47.224%
25.0	710.345	164.553	925.625	8.614%	57.434%
30.0	575.897	157.835	1083.461	8.263%	67.228%
35.0	455.764	143.292	1226.752	7.501%	76.119%
40.0	335.583	118.238	1344.99	6.190%	83.455%
45.0	217.411	84.267	1429.256	4.411%	88.684%
50.0	137.084	57.561	1486.818	3.013%	92.255%
55.0	84.828	38.089	1524.906	1.994%	94.619%
60.0	57.465	27.279	1552.185	1.428%	96.311%
65.0	40.171	19.956	1572.141	1.045%	97.550%
70.0	29.441	15.165	1587.305	.794%	98.491%
75.0	20.385	10.793	1598.098	.565%	99.160%
80.0	13.434	7.252	1605.35	.380%	99.610%
85.0	8.410	4.592	1609.942	.240%	99.895%
90.0	6.166	1.690	1611.632	.088%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1083.46	56.72%	67.23%
0-40	1344.99	70.41%	83.46%
0-60	1552.18	81.26%	96.31%
0-90	1609.94	84.28%	99.90%
0-120	1609.94	84.28%	99.90%
0-180	1611.63	84.37%	100.00%
60-90	85.04	4.45%	5.28%
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%
0-37.65	1289.31	67.50%	80.00%

ZONAL LUMEN SUMMARY

0-10	379.41
10-20	381.66
20-30	322.39
30-40	261.53
40-50	141.83
50-60	65.37
60-70	35.12
70-80	18.04
80-90	4.59
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



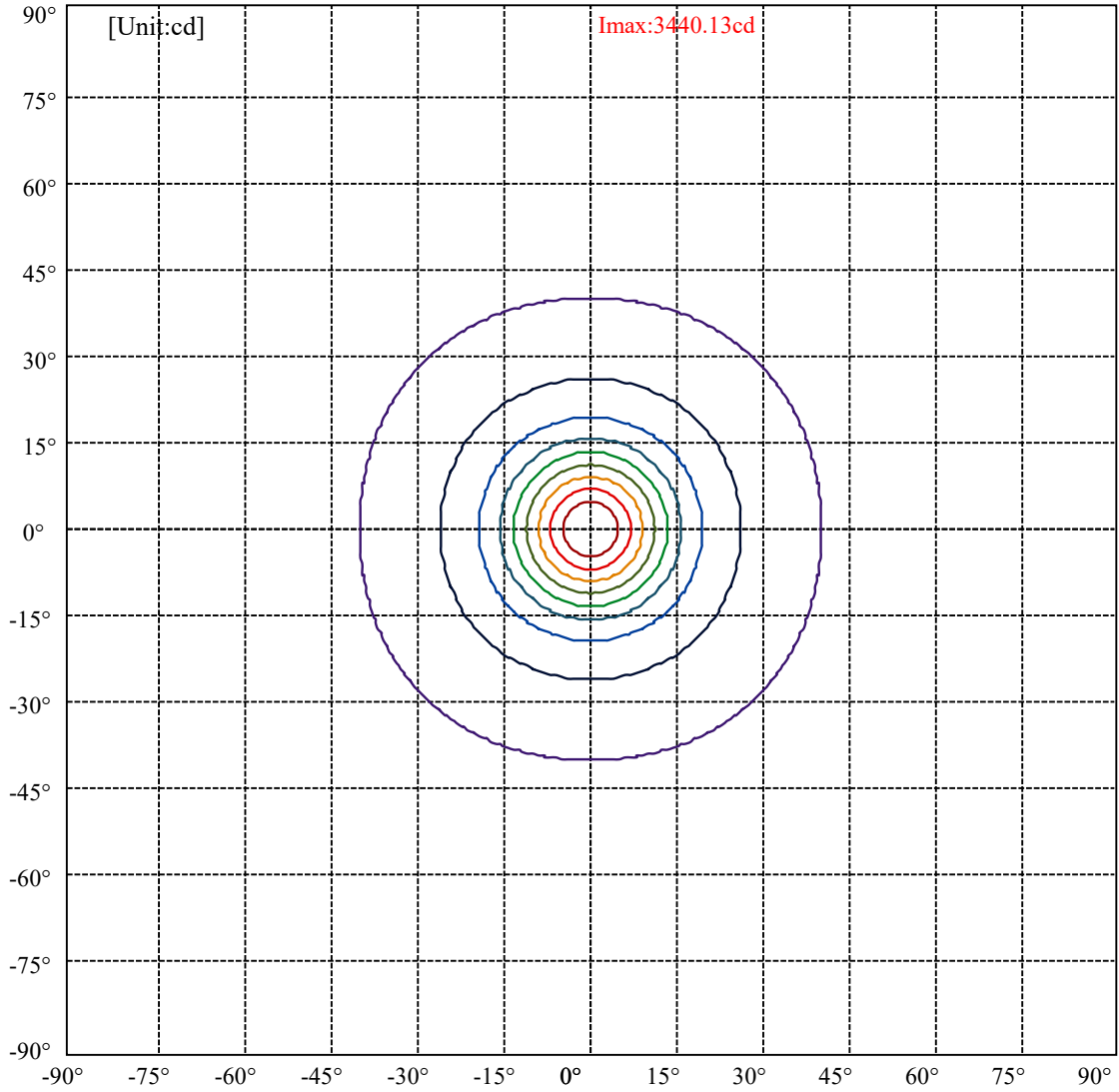
C0(Max): —————

C0/C180: —————

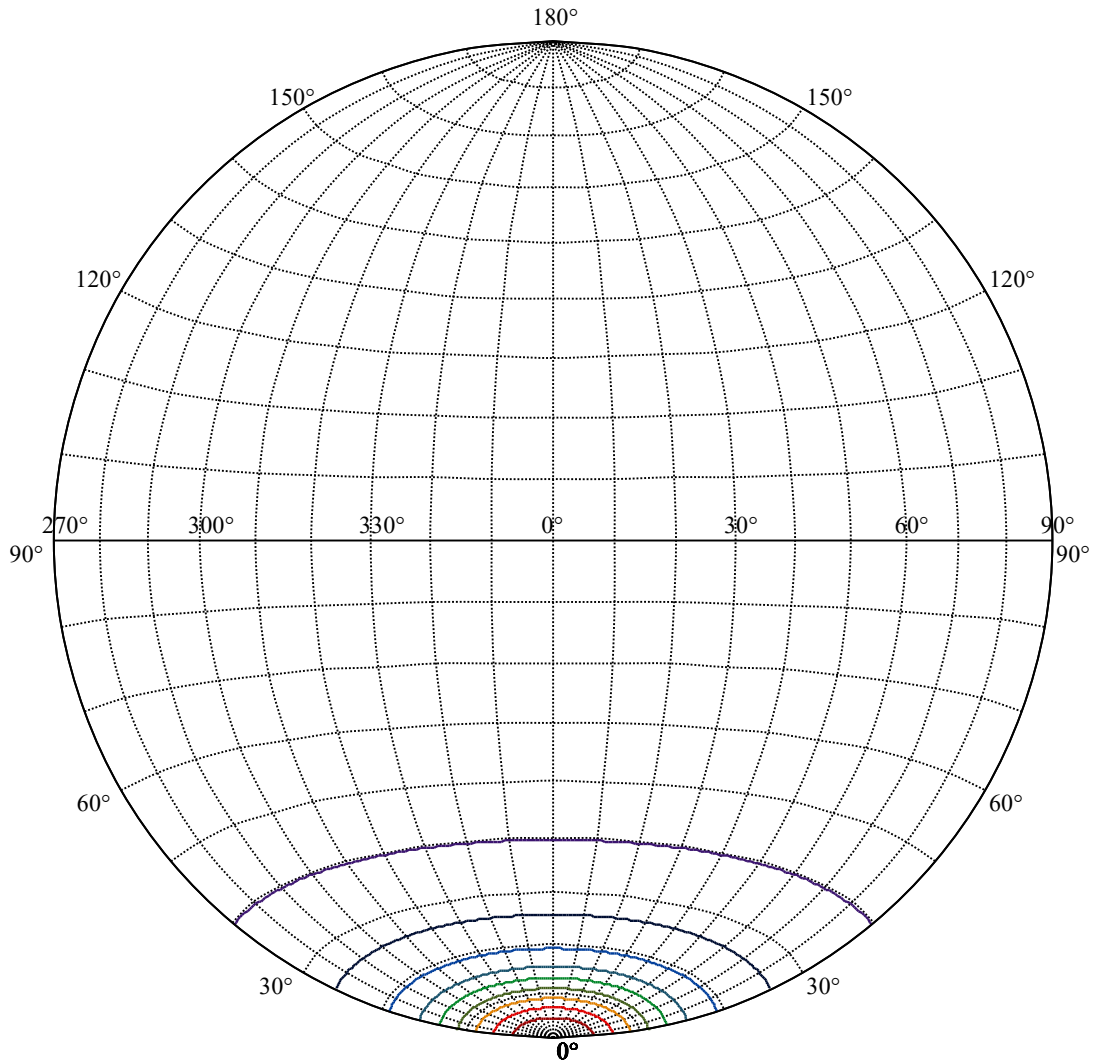
C90/C270: —————

Field angle(10%Imax):C0/180Left:39.6 Right:39.6
:C90/270Left:39.6 Right:39.6

Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2
:C90/270Left:13.2 Right:13.2



(10%Imax) 344.013	—
(20%Imax) 688.026	—
(30%Imax) 1032.04	—
(40%Imax) 1376.05	—
(50%Imax) 1720.07	—
(60%Imax) 2064.08	—
(70%Imax) 2408.09	—
(80%Imax) 2752.1	—
(90%Imax) 3096.12	—



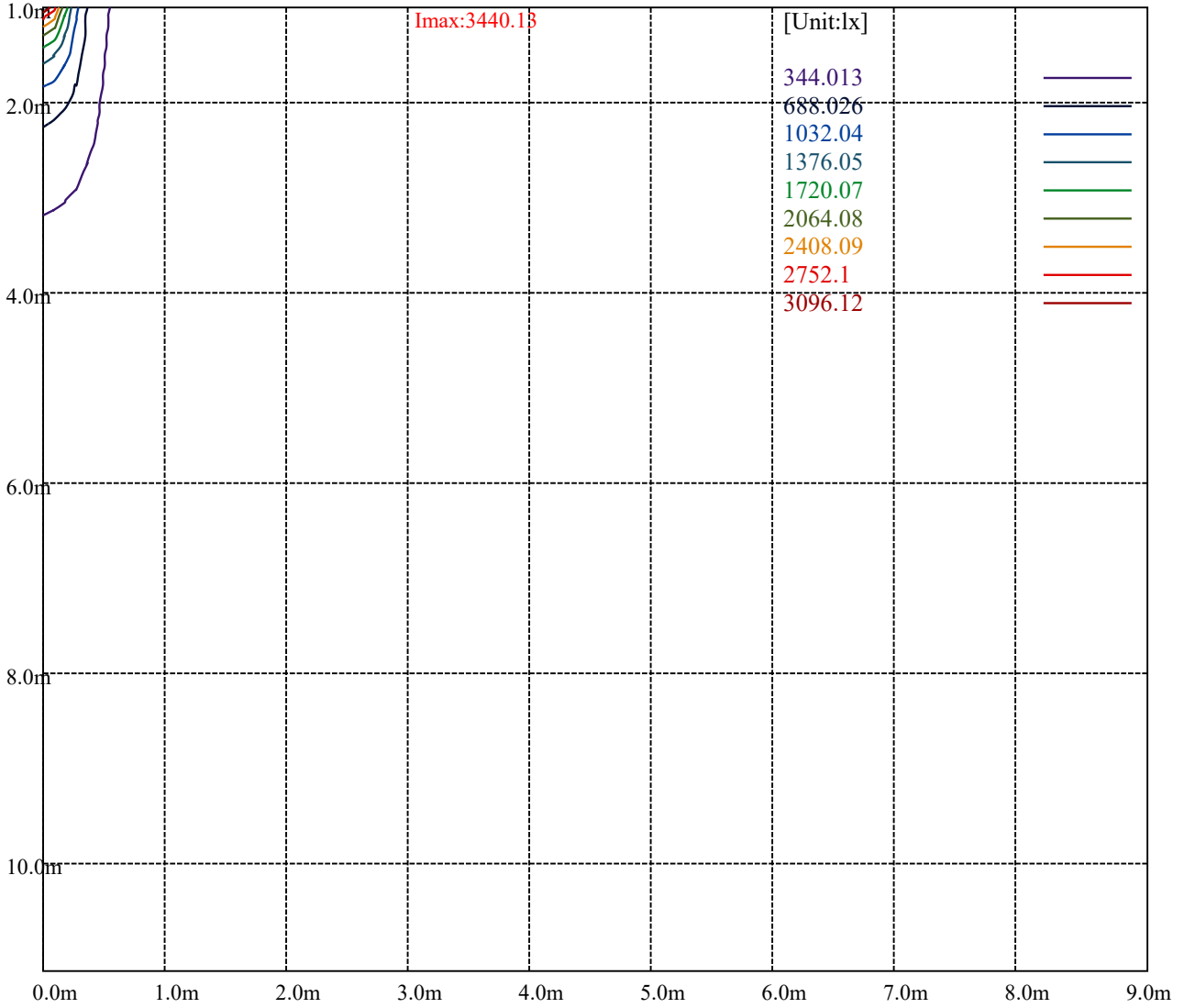
House

[Unit:cd]

Road

Imax:3440.13

(10%Imax) 344.013	—
(20%Imax) 688.026	—
(30%Imax) 1032.04	—
(40%Imax) 1376.05	—
(50%Imax) 1720.07	—
(60%Imax) 2064.08	—
(70%Imax) 2408.09	—
(80%Imax) 2752.1	—
(90%Imax) 3096.12	—



Luminance Table

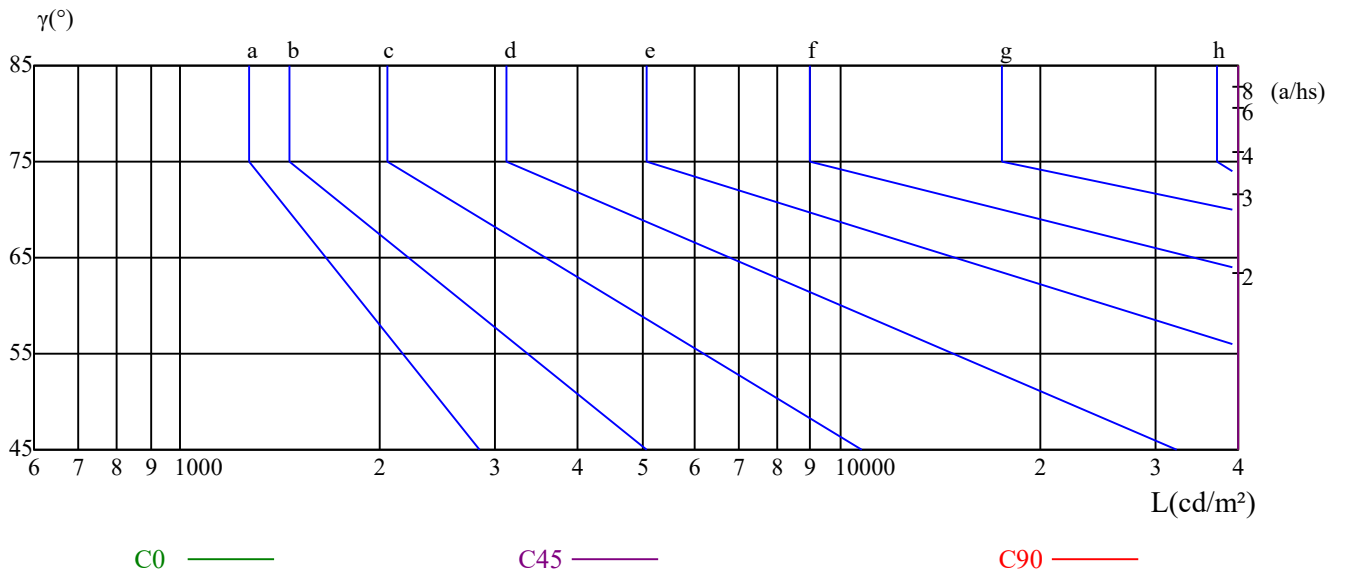
γ	45	50	55	60	65	70	75	80	85
C0	202147	140213	97234	75562	62493	56595	51782	50863	63440
C45	202147	140213	97234	75562	62493	56595	51782	50863	63440
C90	202147	140213	97234	75562	62493	56595	51782	50863	63440

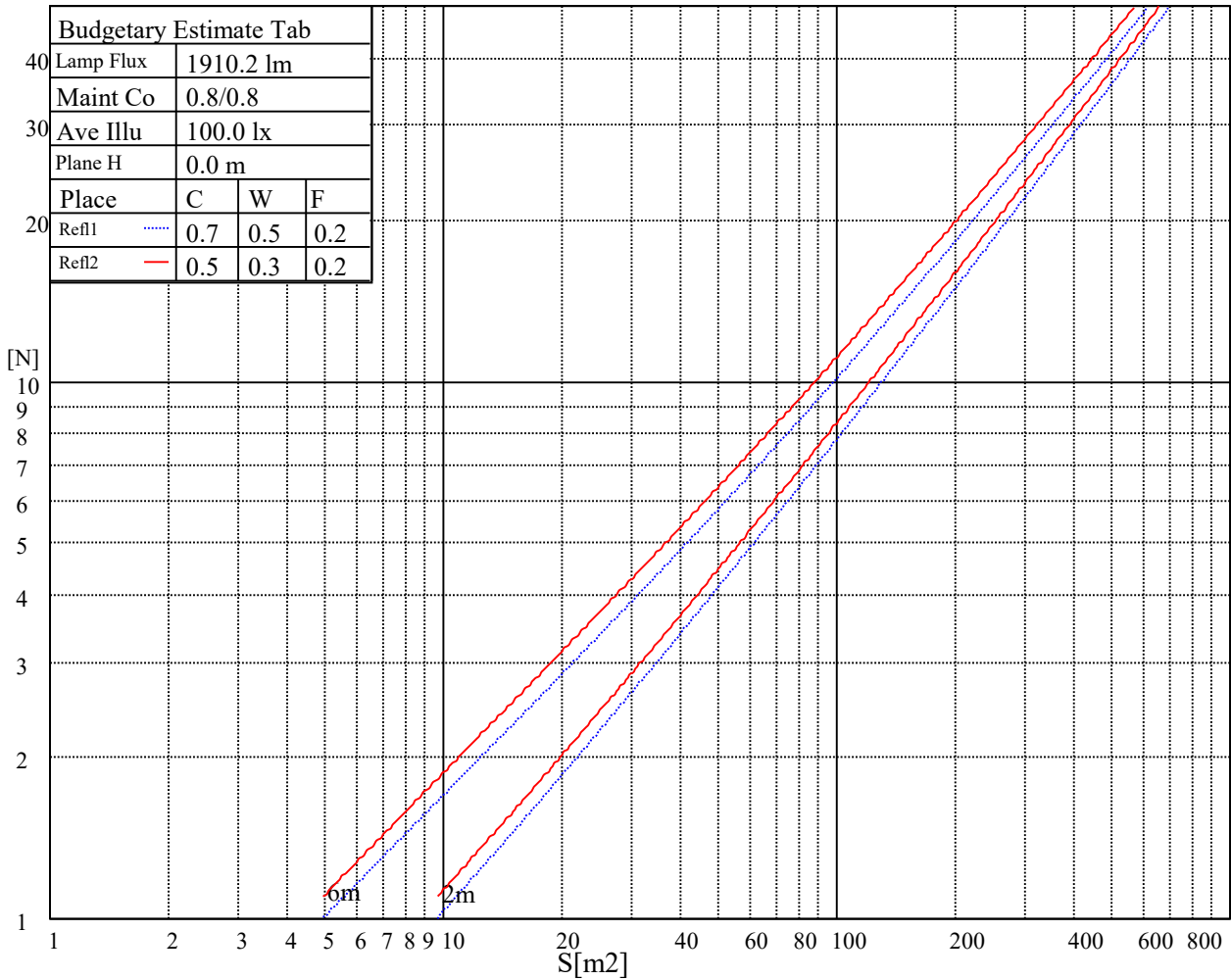
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
62493	62493	62493	51782	51782	51782	63440	63440	63440

Glare Table

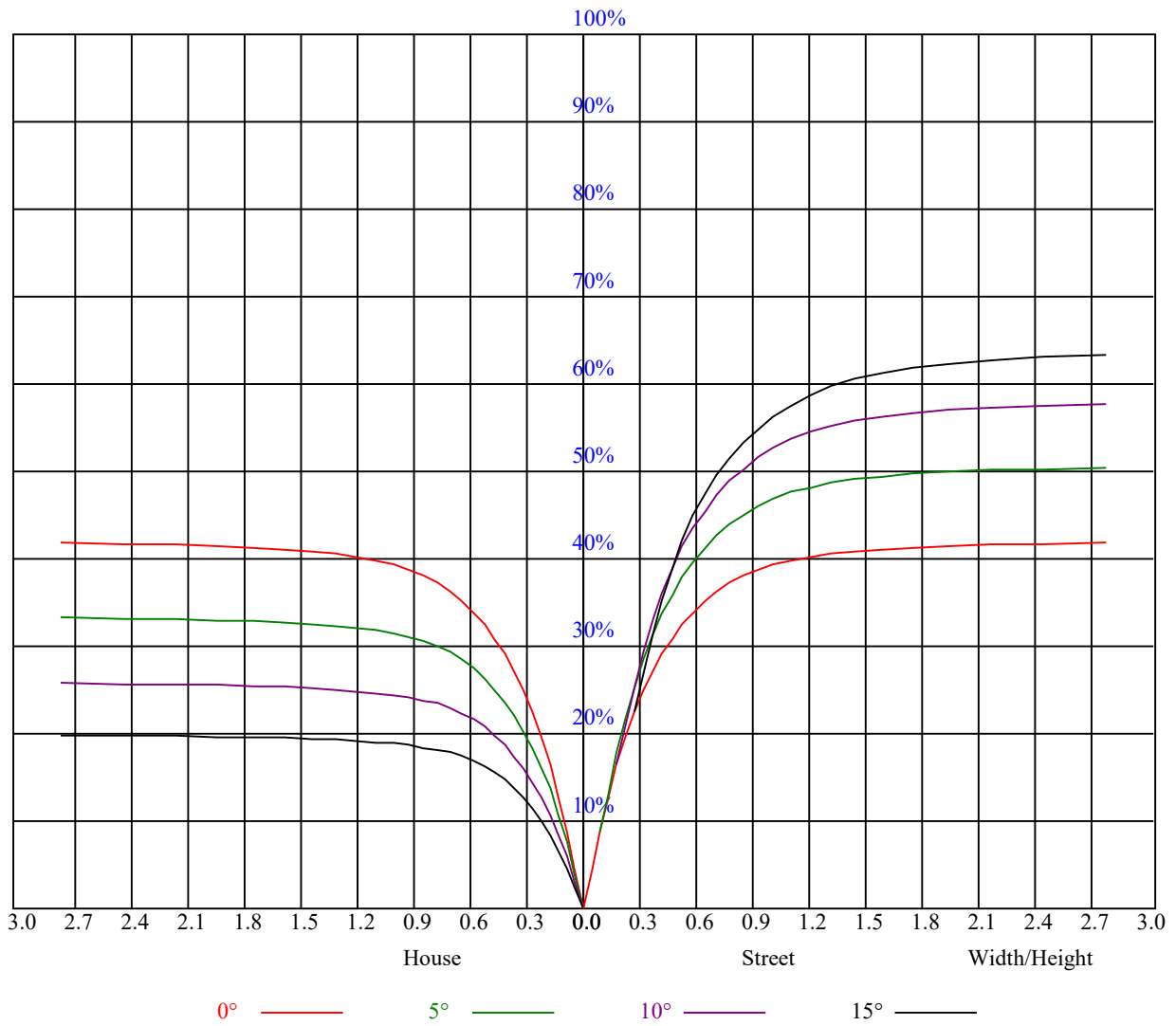
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

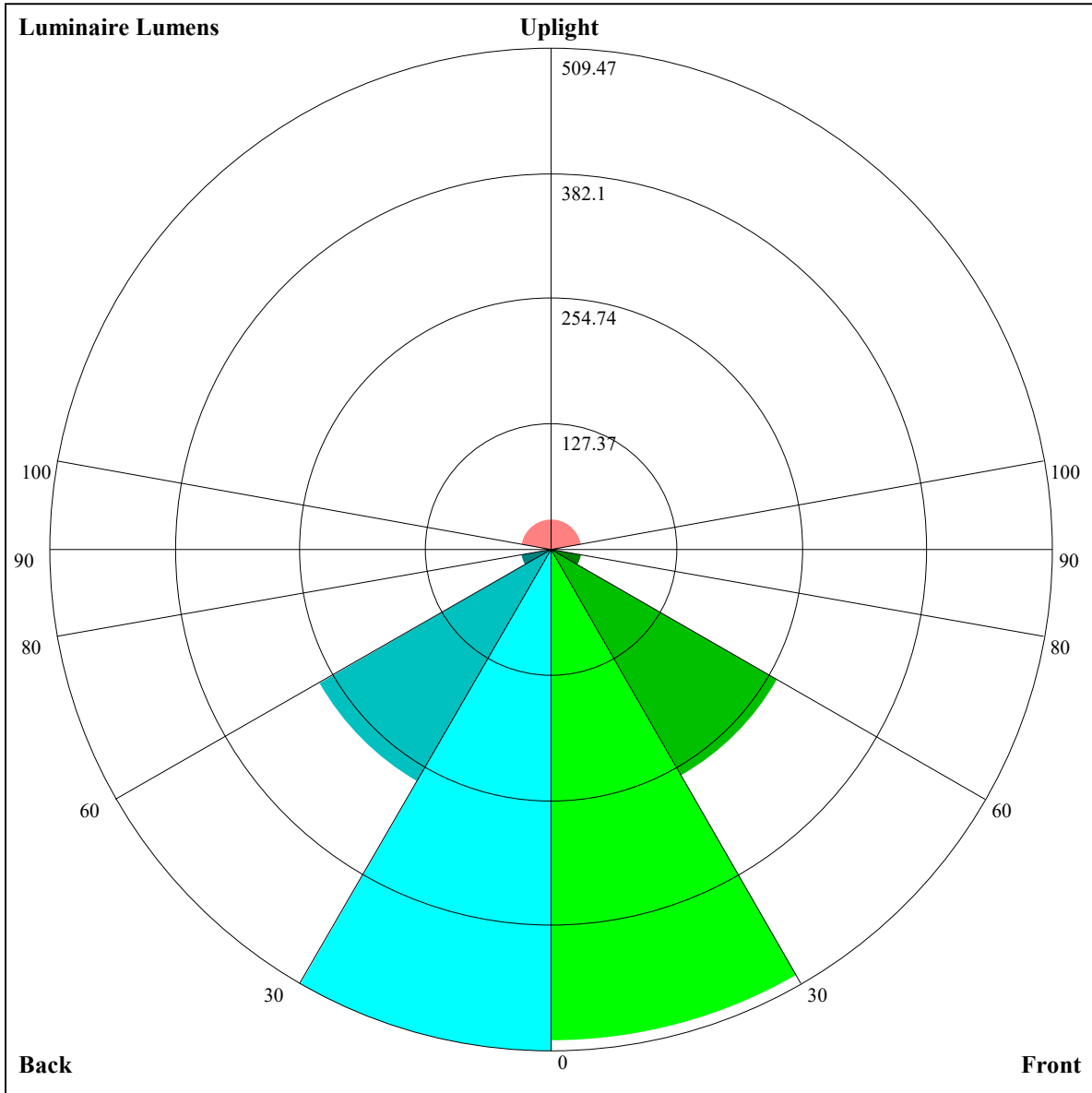
Luminance Limiting Curve





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	1.02	1.02	1.02	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.93	0.90	0.88	0.91	0.89	0.86	0.87	0.85	0.84	0.84	0.83	0.81	0.81	0.80	0.79	0.77
2	0.86	0.82	0.79	0.85	0.81	0.78	0.82	0.79	0.76	0.79	0.77	0.75	0.77	0.75	0.73	0.72
3	0.80	0.76	0.72	0.79	0.75	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.70	0.68	0.67
4	0.75	0.70	0.66	0.74	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.64	0.69	0.66	0.63	0.62
5	0.70	0.65	0.61	0.70	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.65	0.62	0.60	0.58
6	0.66	0.61	0.58	0.66	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.55
7	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.59	0.56	0.53	0.52
8	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.54	0.51	0.57	0.53	0.50	0.49
9	0.57	0.52	0.49	0.57	0.52	0.49	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.51	0.48	0.47
10	0.54	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.52	0.48	0.46	0.45





Luminaire Lumens:

FL=499.59,FM=265.33,FH=31.75,FVH=5.13

BL=509.47,BM=273.34,BH=31.88,BVH=4.92

UL=6.73,UH=32.02

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	3452.04	3050.68	2218.77	1418.25	975.60	716.83	573.69	448.71	329.24
45.0	3459.19	2819.99	1901.10	1233.26	856.68	662.33	542.31	423.93	298.41
90.0	3369.45	2607.47	1664.91	1055.43	761.21	609.42	498.54	376.48	262.89
135.0	3469.65	2873.94	2012.31	1241.52	847.87	658.47	542.31	421.18	298.41
180.0	3452.04	3083.71	2161.51	1378.06	921.92	696.96	578.37	464.68	346.64
225.0	3479.56	3405.24	2664.73	1721.06	1080.59	788.08	624.61	507.40	389.08
270.0	3369.45	3519.21	2839.26	1900.00	1209.04	831.35	659.58	535.15	416.23
315.0	3469.65	3221.90	2359.17	1484.32	982.65	719.31	587.78	468.59	343.77
360.0	3452.04	3050.68	2218.77	1418.25	975.60	716.83	573.69	448.71	329.24
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	208.06	128.01	82.20	56.32	39.64	29.29	20.54	13.82	8.37
45.0	183.01	115.51	72.67	50.21	35.46	26.32	18.33	12.00	7.49
90.0	159.50	97.67	64.09	45.37	32.65	24.28	16.63	10.85	7.10
135.0	184.99	113.36	72.23	51.59	36.94	27.25	19.27	12.55	7.76
180.0	220.01	143.53	86.60	57.37	40.14	29.01	20.15	13.93	8.97
225.0	261.52	167.48	99.98	64.97	43.55	32.37	20.59	11.18	6.94
270.0	286.29	183.01	109.45	71.13	49.39	35.57	25.11	17.89	10.90
315.0	235.92	148.10	91.39	62.76	43.60	31.44	22.46	15.25	9.74
360.0	208.06	128.01	82.20	56.32	39.64	29.29	20.54	13.82	8.37
C/ γ (°)	90.0								
0.0	5.84								
45.0	6.17								
90.0	6.11								
135.0	5.89								
180.0	5.95								
225.0	6.11								
270.0	6.88								
315.0	6.39								
360.0	5.84								