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Nata

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LumCAT: 3-2093-M  
Luminaire: 92.70.136.00  
Report No: GC2017082802  
Test No: NT-0010  
LampCAT: CREE CXA3050  
Lamp flux(lm): 3994.0  
Number of Lamps: 1  
Length(mm): 78  
Phm Type: C

Voltage(V): 36.7000  
Current(A): 1.0000  
Power (W): 36.7000  
PF: 0.0000  
Ballast type: DC  
Width(mm): 78  
Height(mm): 0

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Photometric Results

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Lumens(lm): 3570.83  
Efficiency(%): 89.40%  
Lumens(lm)/Power(W): 97.30  
Central intensity(cd): 10340.970  
Maximum intensity(cd): 10340.970  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=28.5  
                                  [C90/270]Total=28.5  
Field angle(10%Imax): [C0/180]Total=63.2  
                                  [C90/270]Total=63.2  
Maximum s/h(1/2): C0\_180=0.48 C90\_270=0.48  
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(%): 89.40%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.737%

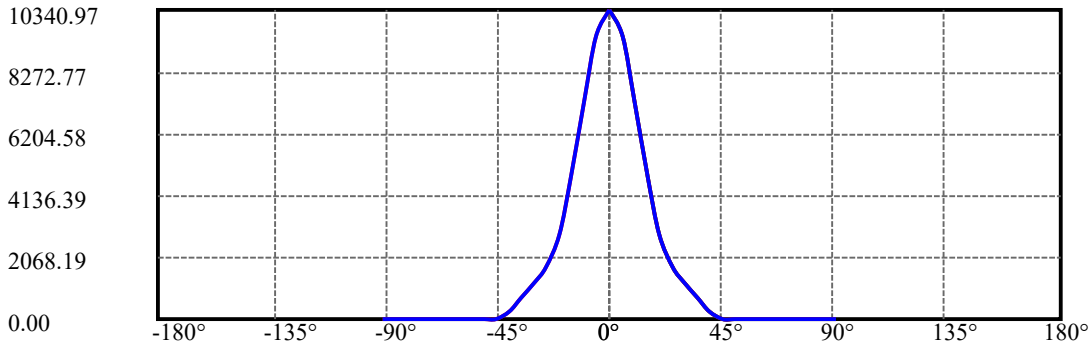
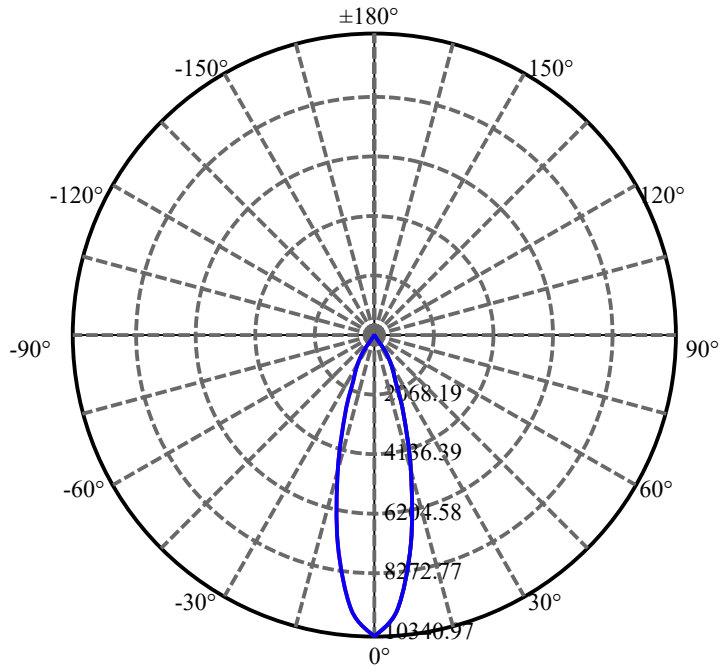
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10340.968	0.000	0	.000%	.000%
5.0	9432.194	236.383	236.383	5.918%	6.620%
10.0	7290.568	598.226	834.608	14.978%	23.373%
15.0	4782.681	716.177	1550.785	17.931%	43.429%
20.0	2810.836	625.812	2176.598	15.669%	60.955%
25.0	1746.527	477.983	2654.581	11.968%	74.341%
30.0	1194.621	372.205	3026.786	9.319%	84.764%
35.0	692.541	277.898	3304.683	6.958%	92.547%
40.0	225.277	153.131	3457.814	3.834%	96.835%
45.0	22.374	45.855	3503.669	1.148%	98.119%
50.0	16.833	7.922	3511.591	.198%	98.341%
55.0	15.615	7.055	3518.647	.177%	98.539%
60.0	14.989	7.074	3525.721	.177%	98.737%
65.0	14.645	7.204	3532.925	.180%	98.938%
70.0	14.445	7.366	3540.291	.184%	99.145%
75.0	14.287	7.510	3547.801	.188%	99.355%
80.0	14.198	7.622	3555.423	.191%	99.568%
85.0	14.156	7.704	3563.127	.193%	99.784%
90.0	13.984	7.705	3570.832	.193%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	3026.79	75.78%	84.76%
0-40	3457.81	86.58%	96.83%
0-60	3525.72	88.28%	98.74%
0-90	3563.13	89.21%	99.78%
0-120	3563.13	89.21%	99.78%
0-180	3570.83	89.40%	100.00%
60-90	44.48	1.11%	1.25%
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%
0-27.71	2856.67	71.52%	80.00%

ZONAL LUMEN SUMMARY

0-10	834.61
10-20	1341.99
20-30	850.19
30-40	431.03
40-50	53.78
50-60	14.13
60-70	14.57
70-80	15.13
80-90	7.70
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: —————

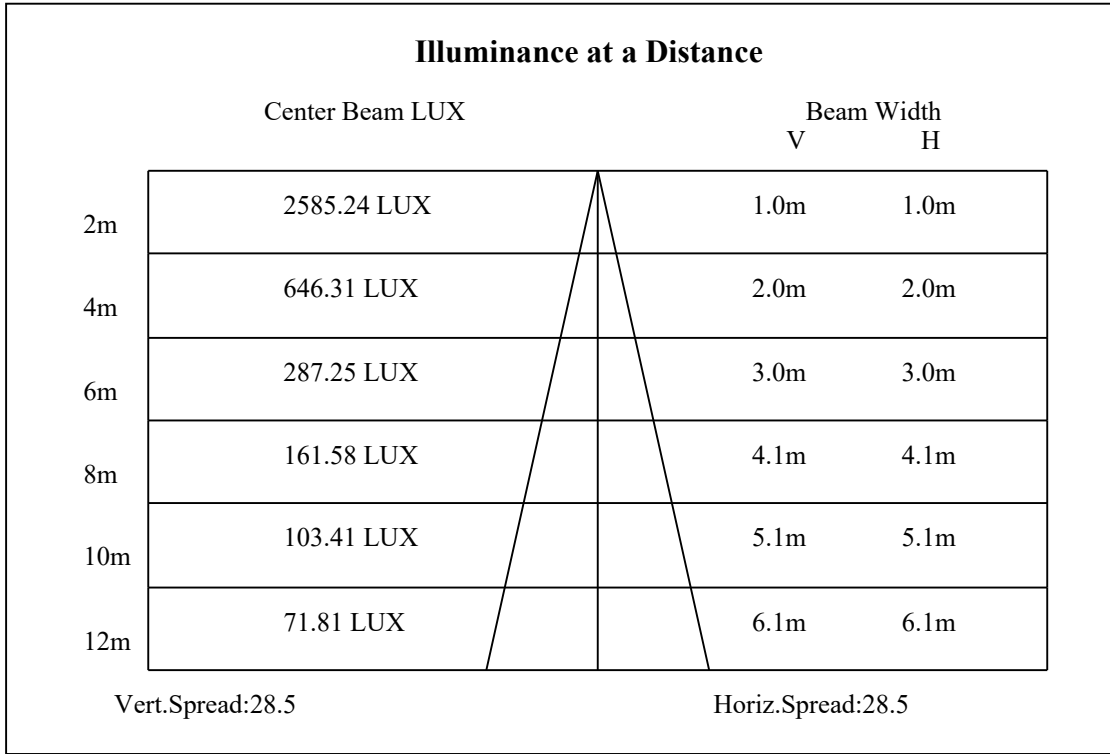
C90/C270: —————

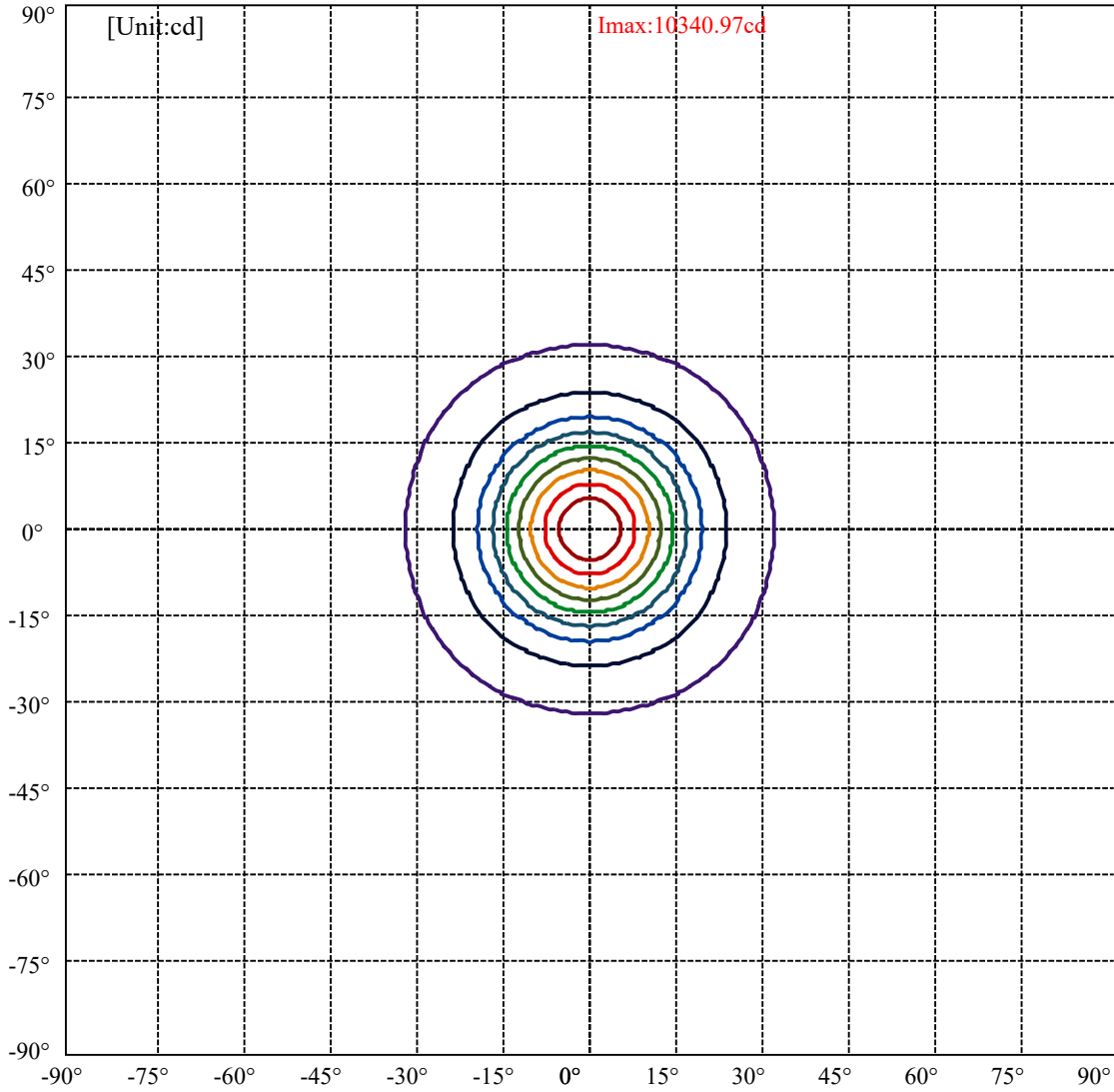
Field angle(10%Imax):C0/180Left:31.6 Right:31.6

:C90/270Left:31.6 Right:31.6

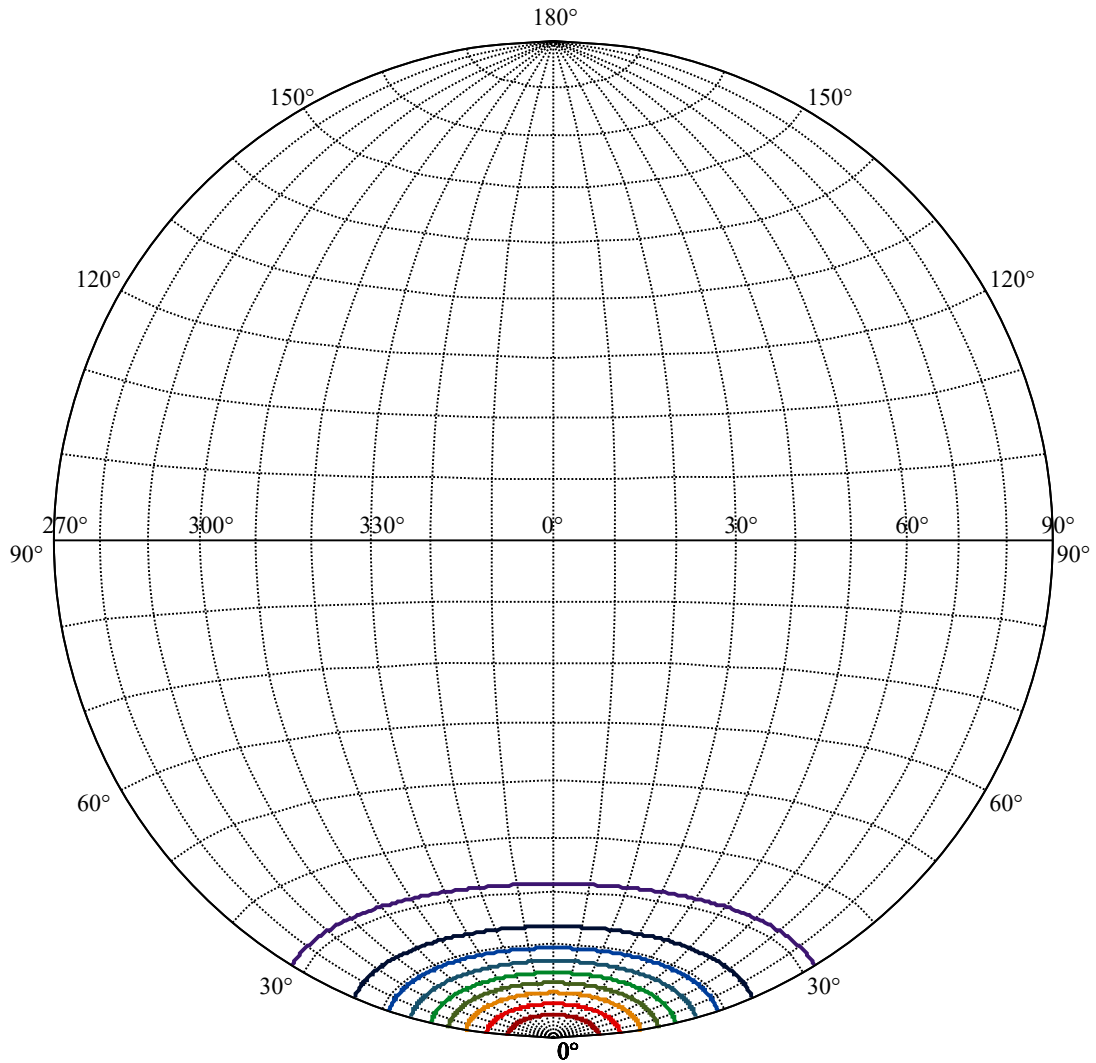
Beam Angle(50%Imax):C0/180Left:14.2 Right:14.2

:C90/270Left:14.2 Right:14.2





(10%Imax) 1034.1	—
(20%Imax) 2068.19	—
(30%Imax) 3102.29	—
(40%Imax) 4136.39	—
(50%Imax) 5170.48	—
(60%Imax) 6204.58	—
(70%Imax) 7238.68	—
(80%Imax) 8272.77	—
(90%Imax) 9306.87	—



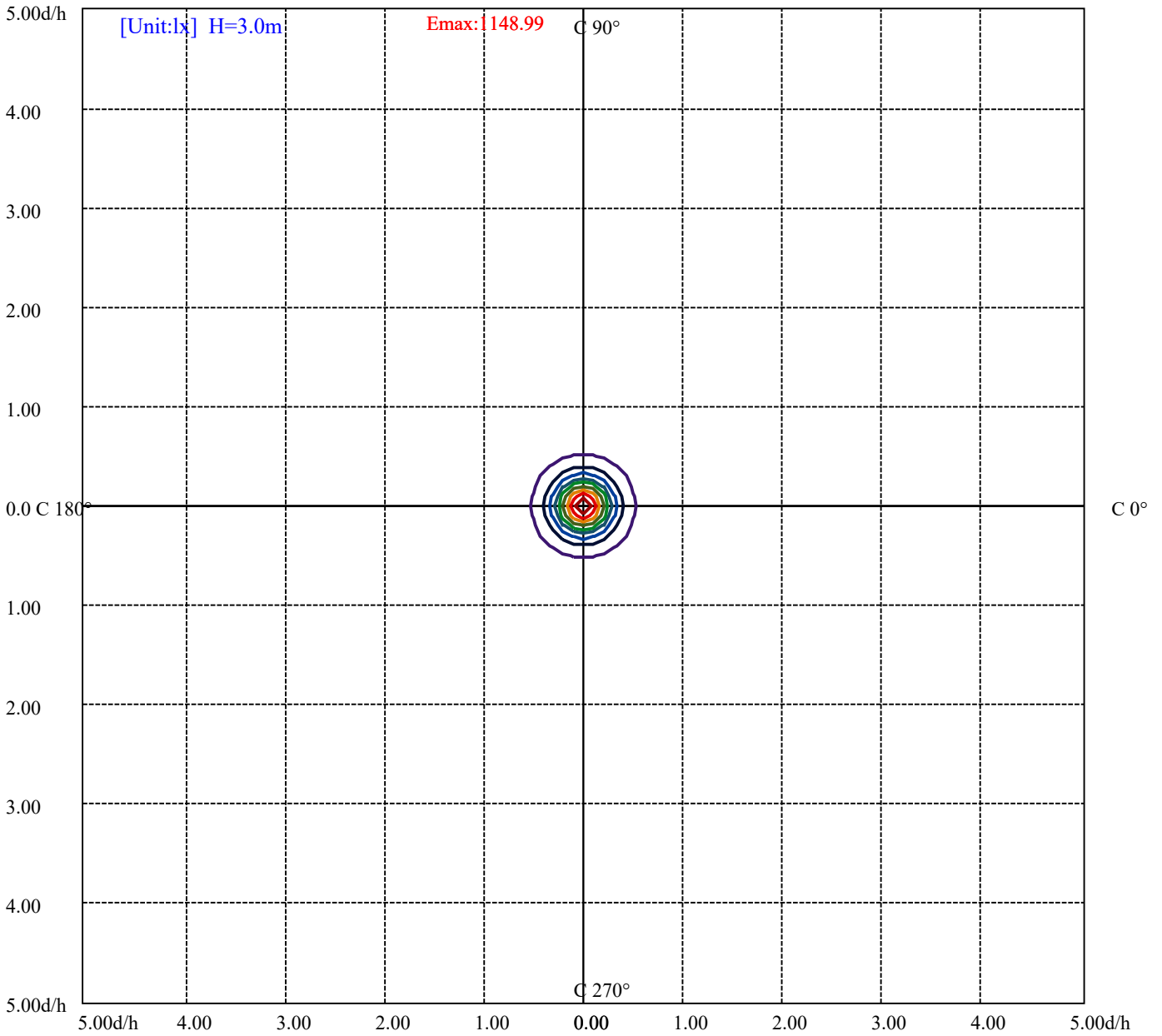
House

[Unit:cd]

Road

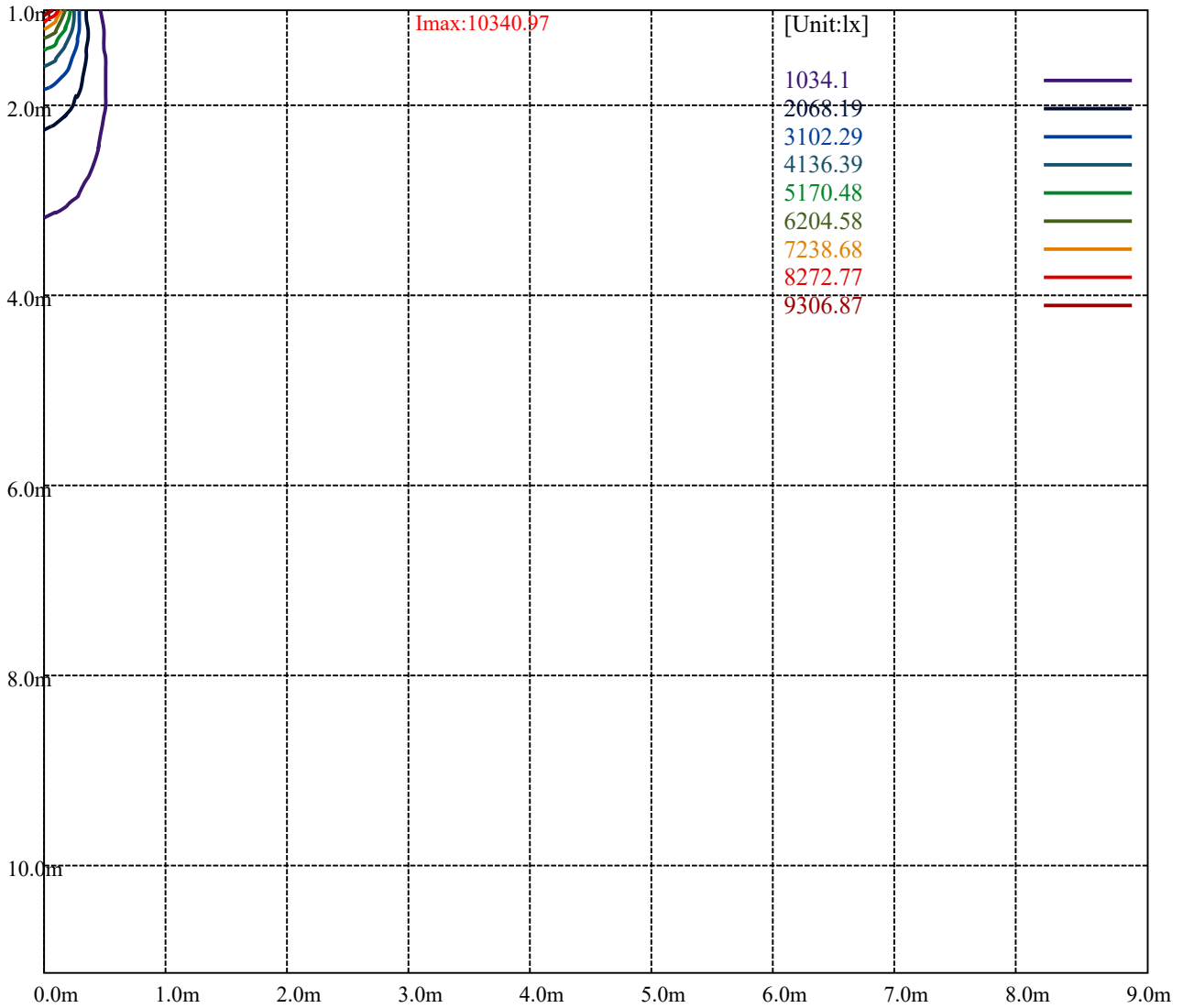
Imax:10340.97

(10%Imax)	1034.1	—
(20%Imax)	2068.19	—
(30%Imax)	3102.29	—
(40%Imax)	4136.39	—
(50%Imax)	5170.48	—
(60%Imax)	6204.58	—
(70%Imax)	7238.68	—
(80%Imax)	8272.77	—
(90%Imax)	9306.87	—



- (10%Emax) 114.8989
- (20%Emax) 229.7989
- (30%Emax) 344.6978
- (40%Emax) 459.5978
- (50%Emax) 574.4967
- (60%Emax) 689.3956
- (70%Emax) 804.2956
- (80%Emax) 919.1945
- (90%Emax) 1034.094





Luminance Table

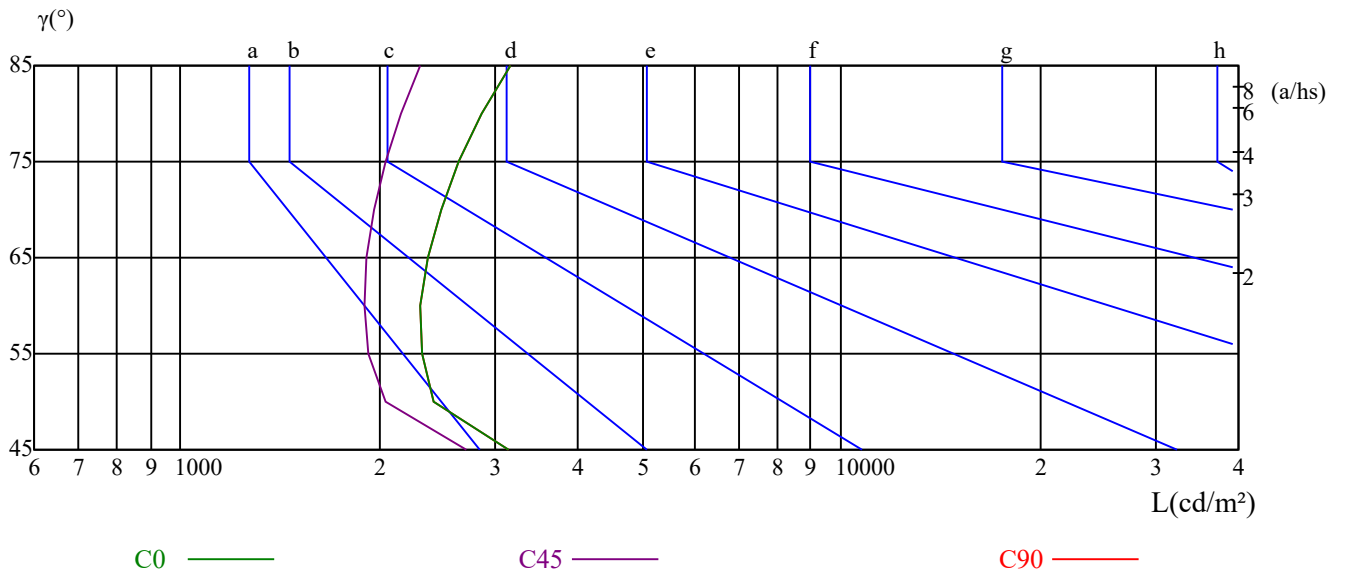
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3145	2419	2314	2311	2371	2482	2637	2854	3151
C45	2702	2048	1928	1894	1909	1961	2038	2152	2308
C90	3145	2419	2314	2311	2371	2482	2637	2854	3151

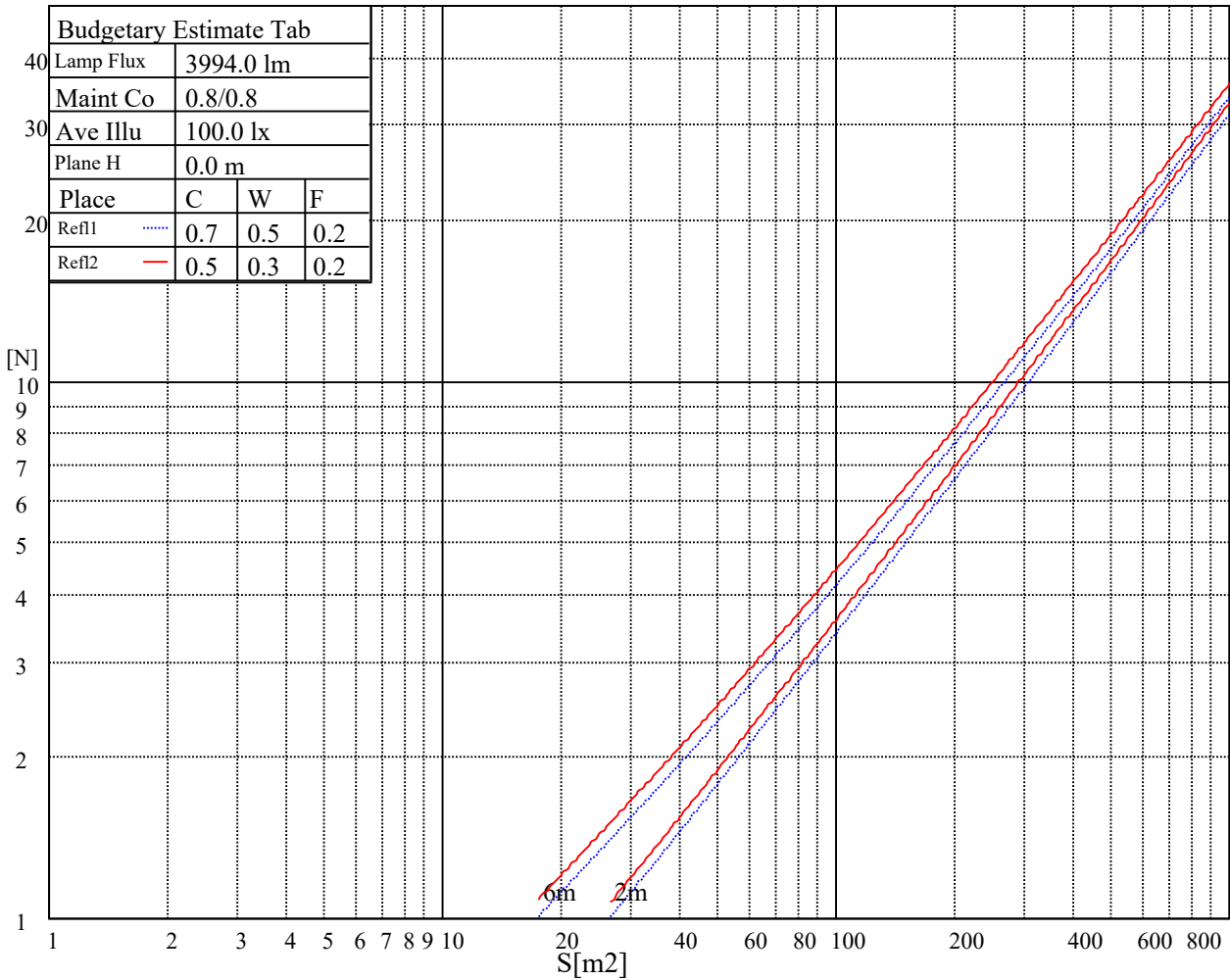
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5696	5696	5696	9073	9073	9073	26697	26697	26697

Glare Table

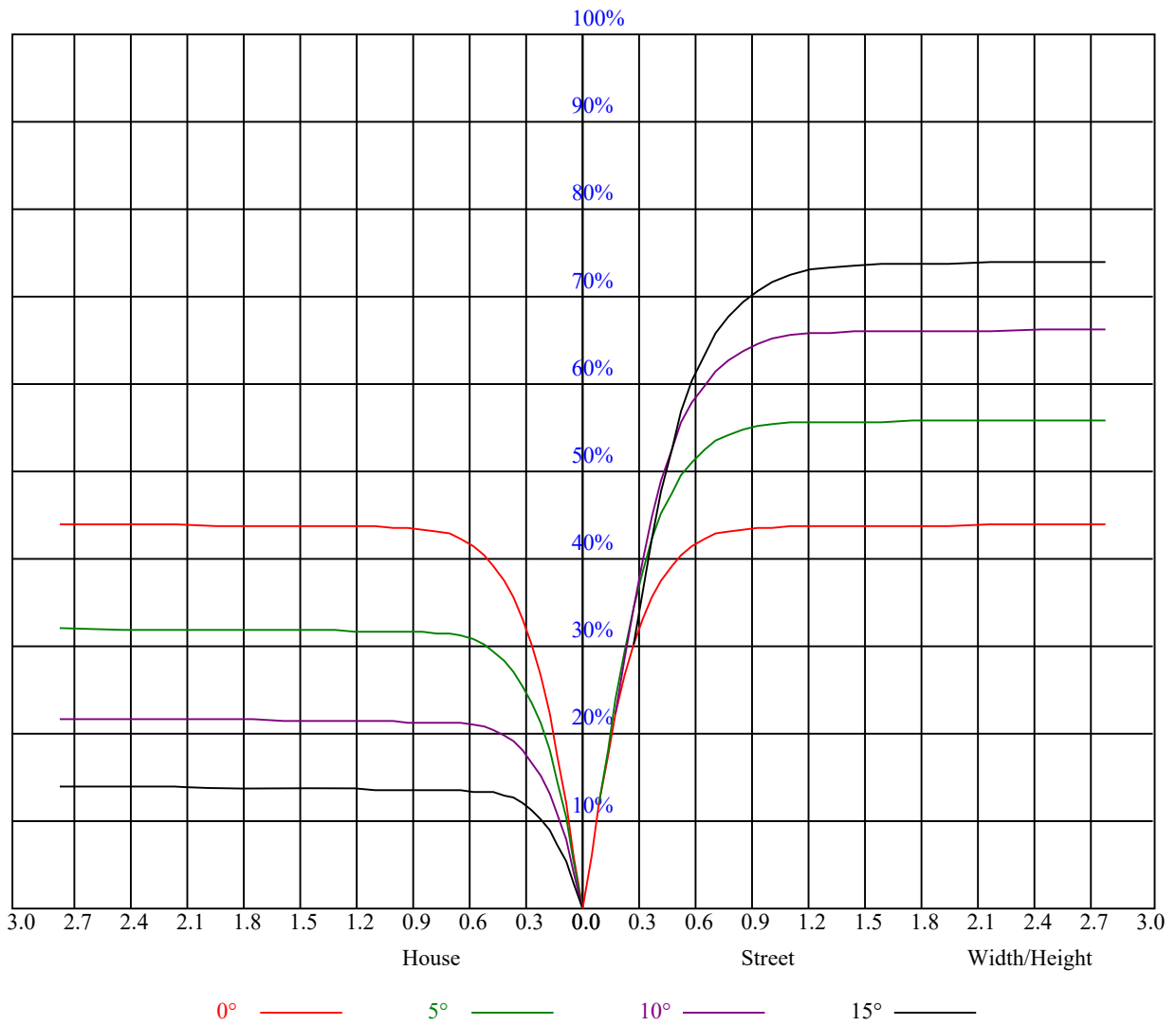
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.84	0.85	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.82	0.86	0.83	0.80	0.83	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.70
6	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.67
7	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.64
8	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61
9	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.57	0.56



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	10346.20	9820.41	7730.47	5174.75	3058.38	1881.83	1347.23	790.06	304.46
45.0	10329.68	9679.47	7501.99	5045.92	2958.73	1791.54	1270.70	731.70	299.51
90.0	10326.38	9213.14	7000.42	4451.86	2601.41	1677.57	1085.71	622.63	139.13
135.0	10361.61	9533.57	7571.36	4856.53	2844.76	1733.18	1280.06	705.27	282.99
180.0	10346.20	9047.97	6769.18	4360.47	2537.55	1615.35	1075.53	611.29	148.65
225.0	10329.68	9212.59	7025.20	4475.53	2721.44	1696.84	1088.02	659.47	172.11
270.0	10326.38	9671.76	7505.84	5232.56	3026.45	1836.13	1323.56	753.72	278.03
315.0	10361.61	9278.66	7220.10	4663.83	2737.95	1739.78	1086.15	666.18	177.34
360.0	10346.20	9820.41	7730.47	5174.75	3058.38	1881.83	1347.23	790.06	304.46

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	29.01	17.29	15.91	15.09	14.70	14.48	14.31	14.26	14.20
45.0	22.41	16.96	15.69	15.03	14.70	14.53	14.37	14.31	14.31
90.0	19.49	16.46	15.53	14.98	14.65	14.48	14.31	14.15	14.15
135.0	22.74	16.85	15.69	15.09	14.70	14.48	14.26	14.20	14.15
180.0	18.99	16.35	15.36	14.87	14.53	14.37	14.26	14.15	14.09
225.0	20.48	16.63	15.42	14.87	14.59	14.42	14.26	14.15	14.15
270.0	23.67	17.12	15.75	15.03	14.65	14.42	14.26	14.20	14.15
315.0	22.19	17.01	15.58	14.98	14.65	14.37	14.26	14.15	14.04
360.0	29.01	17.29	15.91	15.09	14.70	14.48	14.31	14.26	14.20

C/γ(°)	90.0
0.0	13.98
45.0	14.04
90.0	13.98
135.0	13.93
180.0	13.98
225.0	14.04
270.0	13.98
315.0	13.93
360.0	13.98