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Nata

LumCAT: CR01D01740AA-N

Luminaire:

Report No: NATA0100

Voltage(V): 3.2300

Test No: GC2019080902

Current(A): 0.1990

LampCAT: CREE XPG2

Power (W): 0.6400

Lamp flux(lm): 70.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 16.8

Width(mm): 16.8

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 64.84

Efficiency(%): 92.59%

Lumens(lm)/Power(W): 101.31

Central intensity(cd): 93.248

Maximum intensity(cd): 93.248

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=41.0

[C90/270]Total=41.0

Field angle(10%Imax): [C0/180]Total=84.3

[C90/270]Total=84.3

Maximum s/h(1/2): C0_180=0.65 C90_270=0.65

Maximum s/h(1/4): C0_180=0.69 C90_270=0.69

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.59%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 93.993%

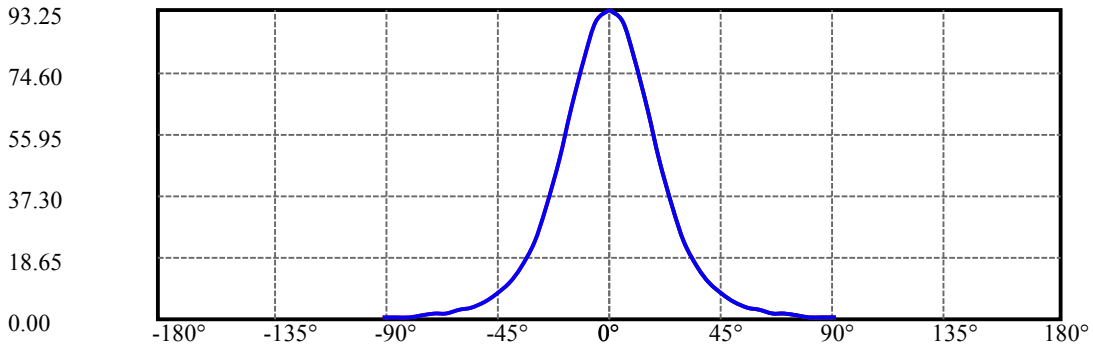
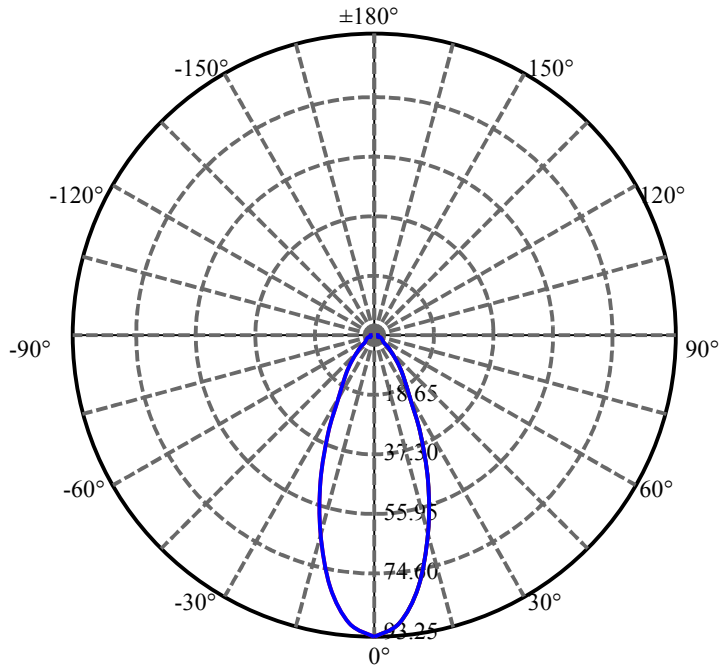
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	93.248	0.000	0	.000%	.000%
5.0	89.543	2.185	2.185	3.120%	3.370%
10.0	78.771	6.021	8.206	8.598%	12.656%
15.0	63.183	8.421	16.627	12.024%	25.643%
20.0	48.052	9.167	25.794	13.090%	39.782%
25.0	33.602	8.564	34.358	12.229%	52.989%
30.0	23.020	7.166	41.524	10.232%	64.041%
35.0	15.546	5.679	47.203	8.110%	72.800%
40.0	10.765	4.390	51.593	6.268%	79.570%
45.0	7.390	3.361	54.954	4.800%	84.754%
50.0	5.259	2.556	57.51	3.650%	88.696%
55.0	3.720	1.952	59.463	2.788%	91.707%
60.0	2.693	1.482	60.945	2.117%	93.993%
65.0	1.976	1.135	62.08	1.621%	95.743%
70.0	1.519	0.885	62.965	1.264%	97.108%
75.0	1.125	0.691	63.656	.987%	98.174%
80.0	0.844	0.527	64.182	.752%	98.986%
85.0	0.619	0.397	64.58	.567%	99.599%
90.0	0.330	0.260	64.84	.371%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	41.52	59.29%	64.04%
0-40	51.59	73.67%	79.57%
0-60	60.94	87.03%	93.99%
0-90	64.58	92.22%	99.60%
0-120	64.58	92.22%	99.60%
0-180	64.84	92.59%	100.00%
60-90	5.12	7.31%	7.89%
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%
0-40.41	51.87	74.07%	80.00%

ZONAL LUMEN SUMMARY

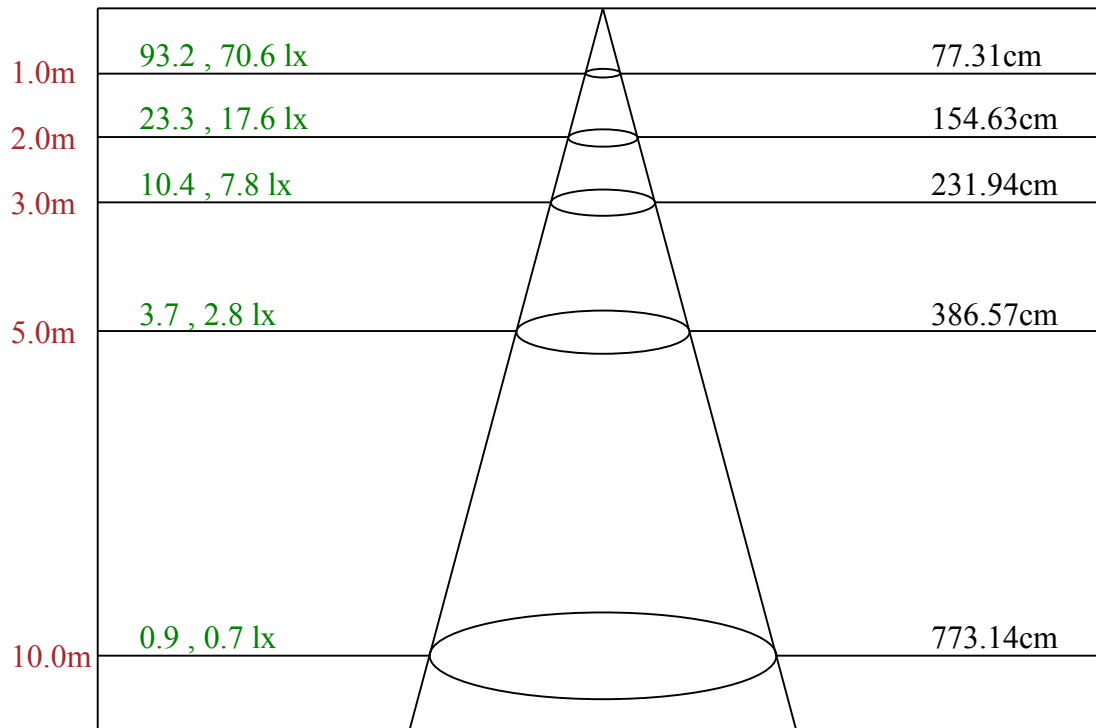
0-10	8.21
10-20	17.59
20-30	15.73
30-40	10.07
40-50	5.92
50-60	3.43
60-70	2.02
70-80	1.22
80-90	0.40
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



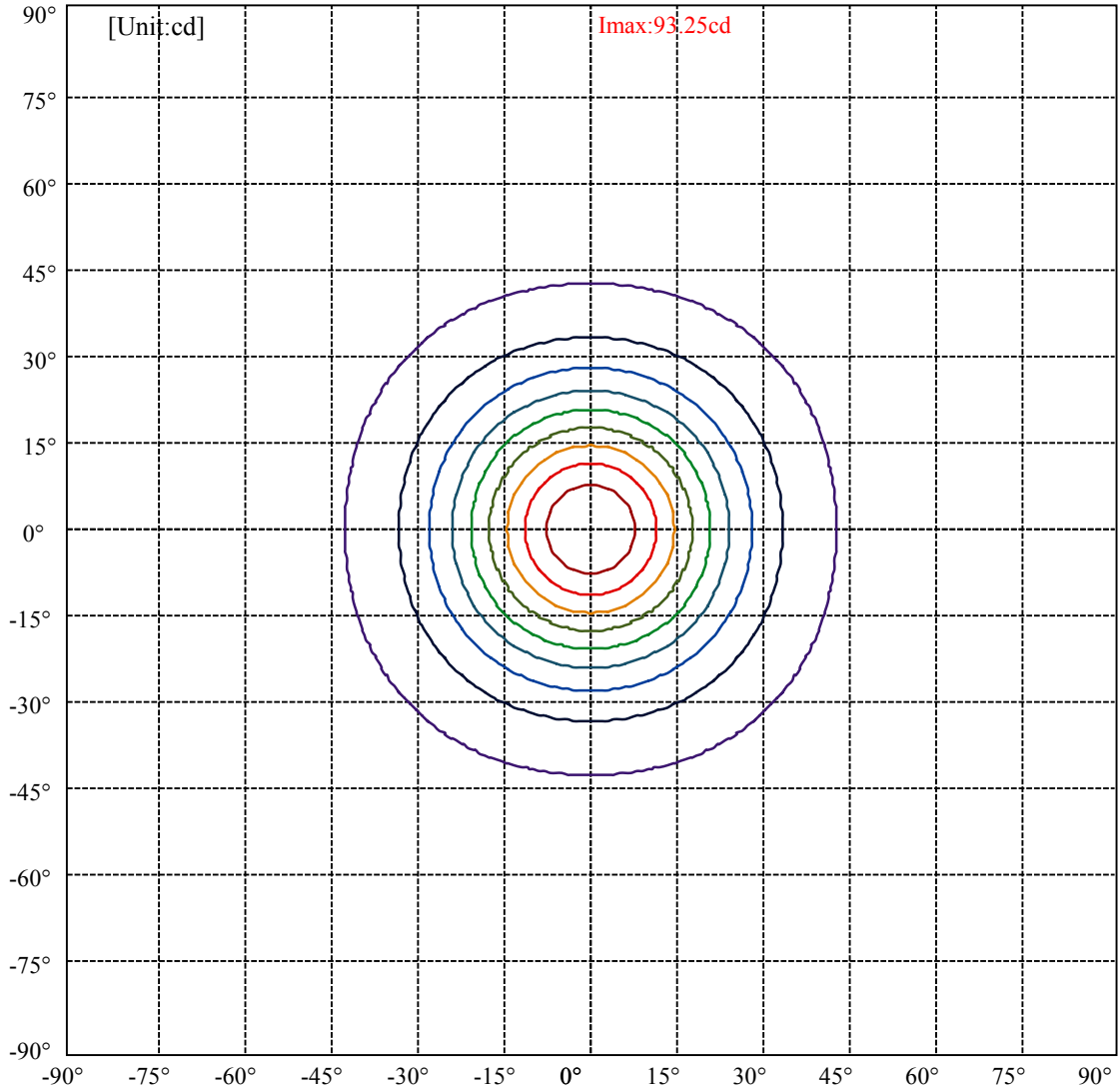
C0(Max): —————
 C0/C180: —————
 C90/C270: —————

Field angle(10%Imax):C0/180Left:42.1 Right:42.1
 :C90/270Left:42.1 Right:42.1

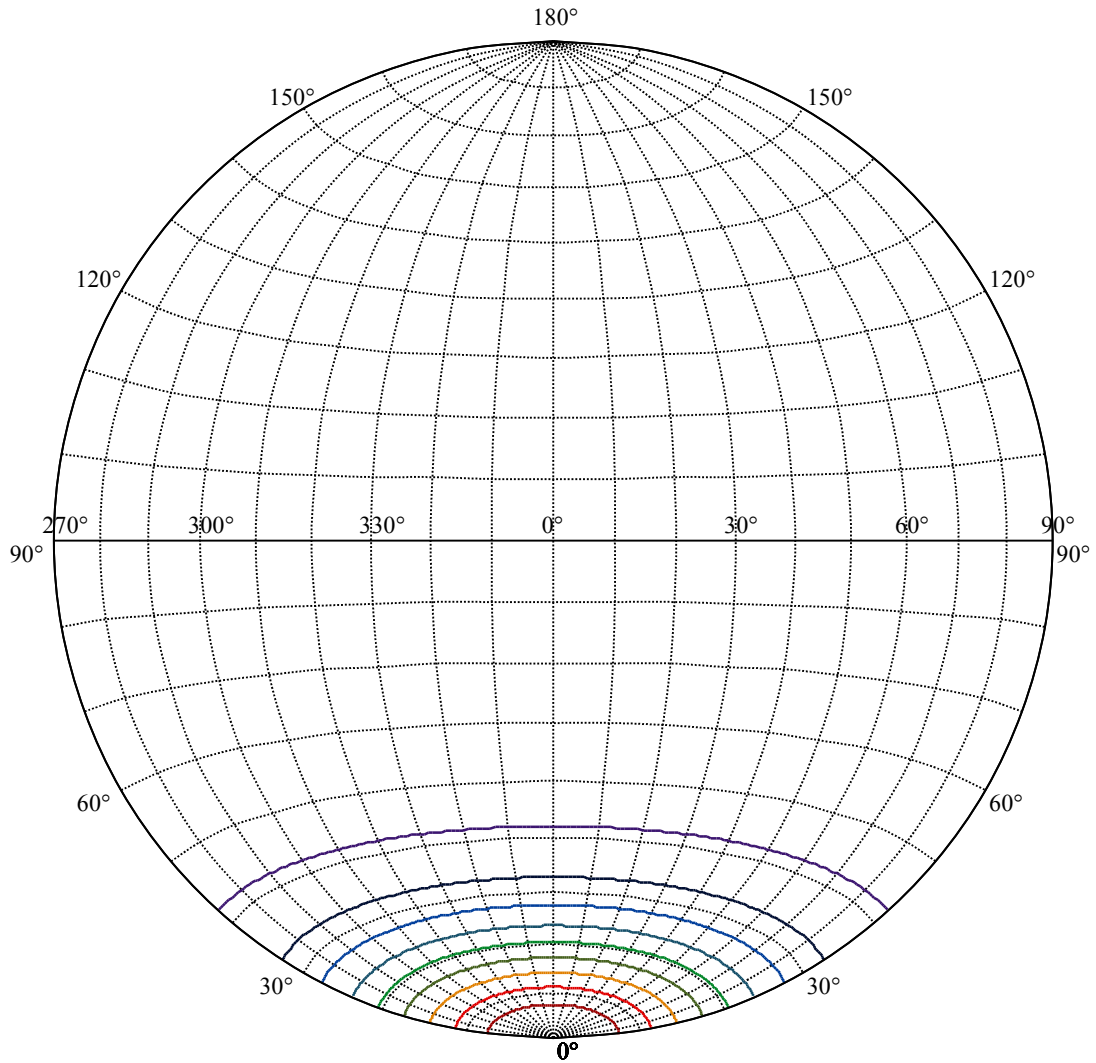
Beam Angle(50%Imax):C0/180Left:20.5 Right:20.5
 :C90/270Left:20.5 Right:20.5



Max , Ave Beam angle of C0 plane 42.27



(10%Imax) 9.32484	—
(20%Imax) 18.6497	—
(30%Imax) 27.9745	—
(40%Imax) 37.2994	—
(50%Imax) 46.6242	—
(60%Imax) 55.9491	—
(70%Imax) 65.2739	—
(80%Imax) 74.5987	—
(90%Imax) 83.9236	—



House

[Unit:cd]

Road

I_{max}:93.25

(10%I_{max}) 9.32484

(20%I_{max}) 18.6497

(30%I_{max}) 27.9745

(40%I_{max}) 37.2994

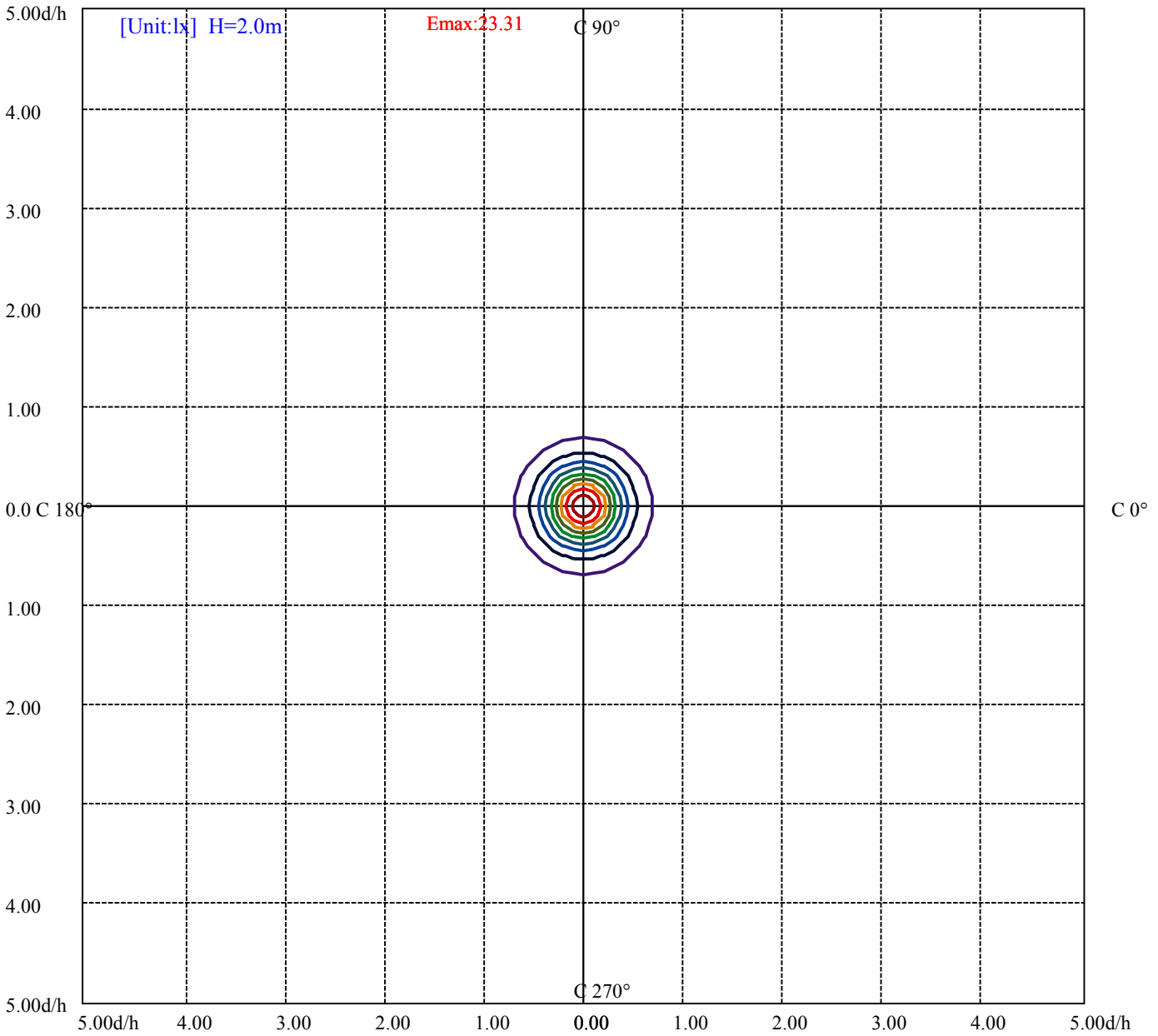
(50%I_{max}) 46.6242

(60%I_{max}) 55.9491

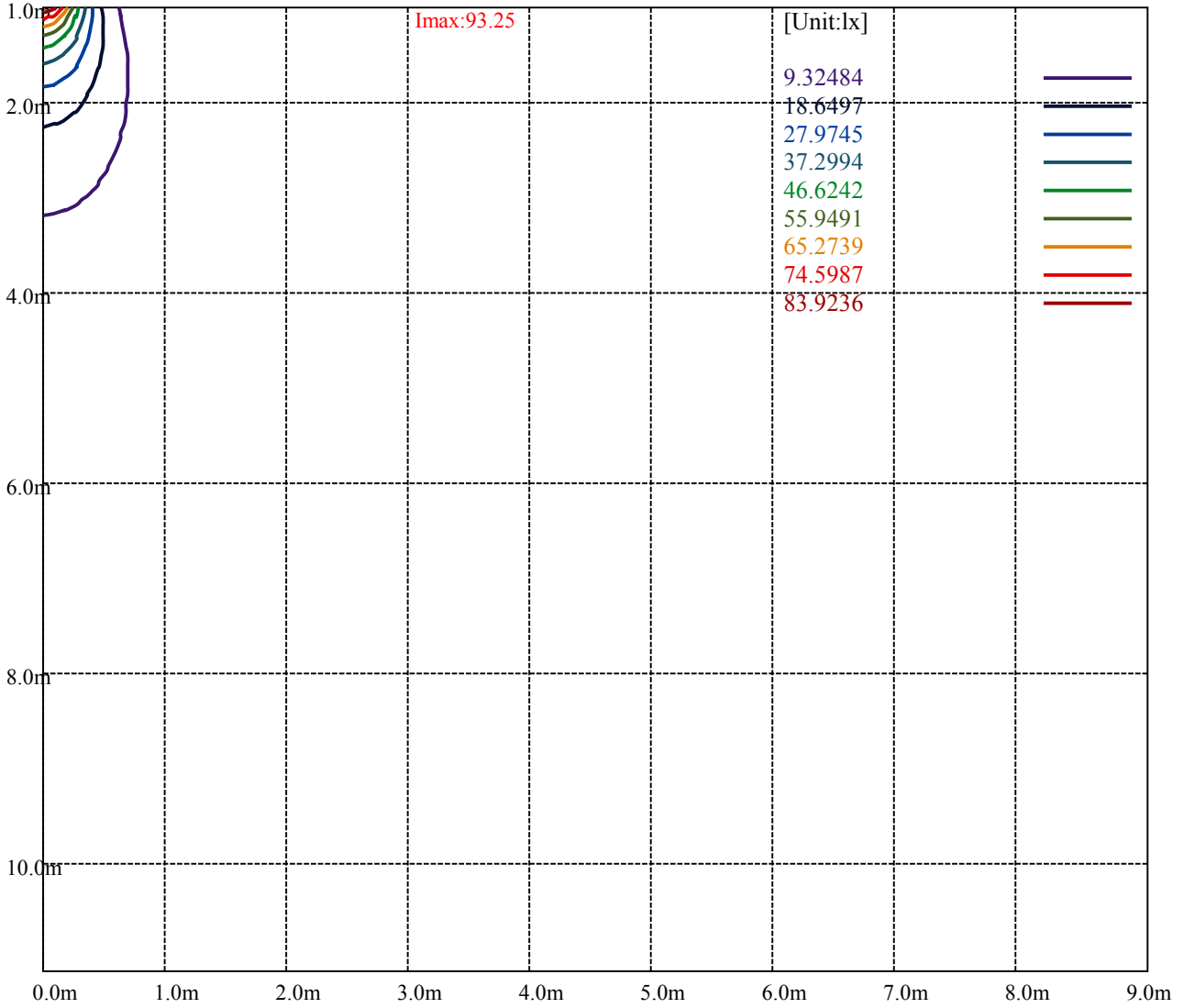
(70%I_{max}) 65.2739

(80%I_{max}) 74.5987

(90%I_{max}) 83.9236



- (10%Emax) 2.331208
- (20%Emax) 4.662425
- (30%Emax) 6.993625
- (40%Emax) 9.324825
- (50%Emax) 11.65605
- (60%Emax) 13.98725
- (70%Emax) 16.31845
- (80%Emax) 18.64968
- (90%Emax) 20.98088



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

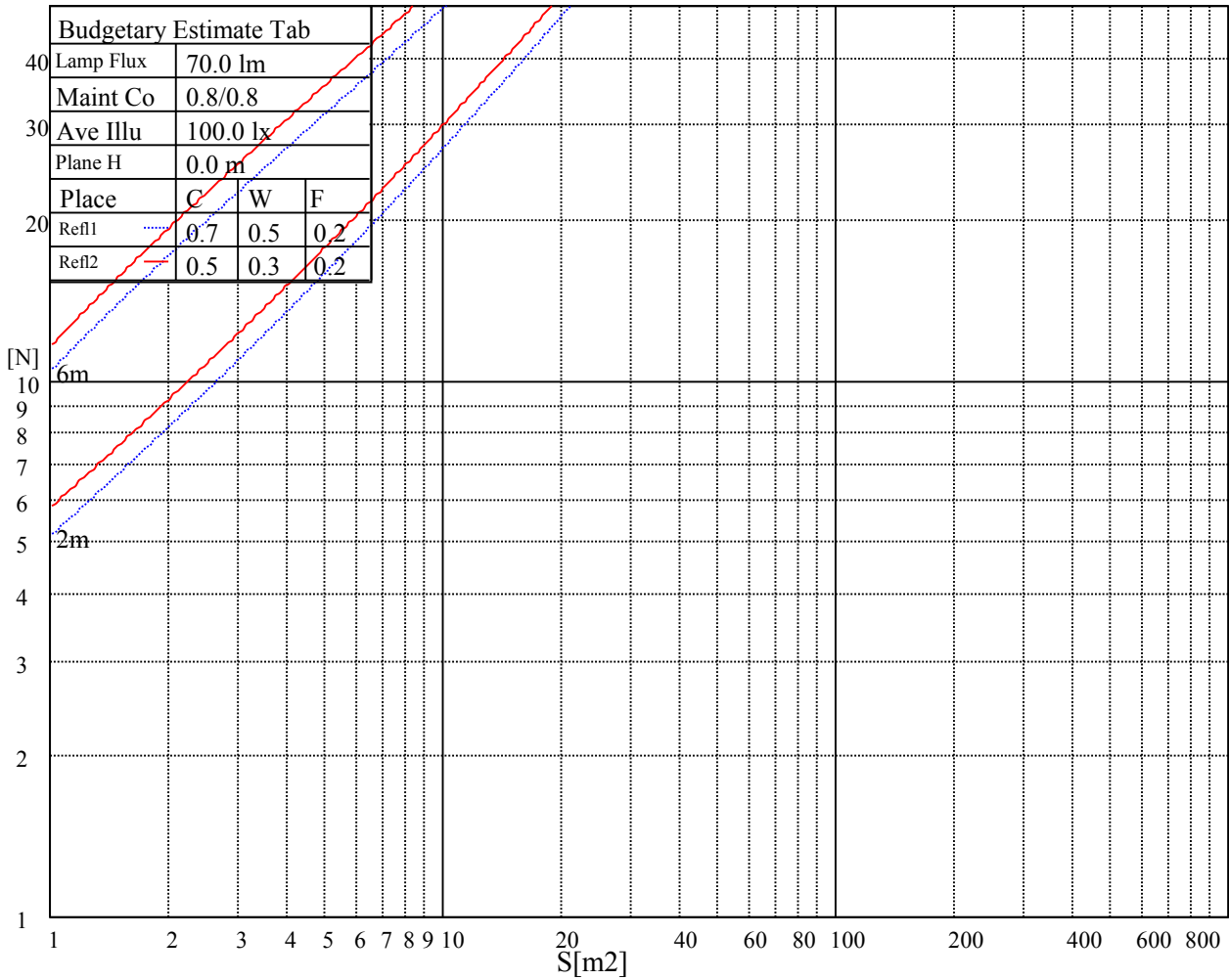
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

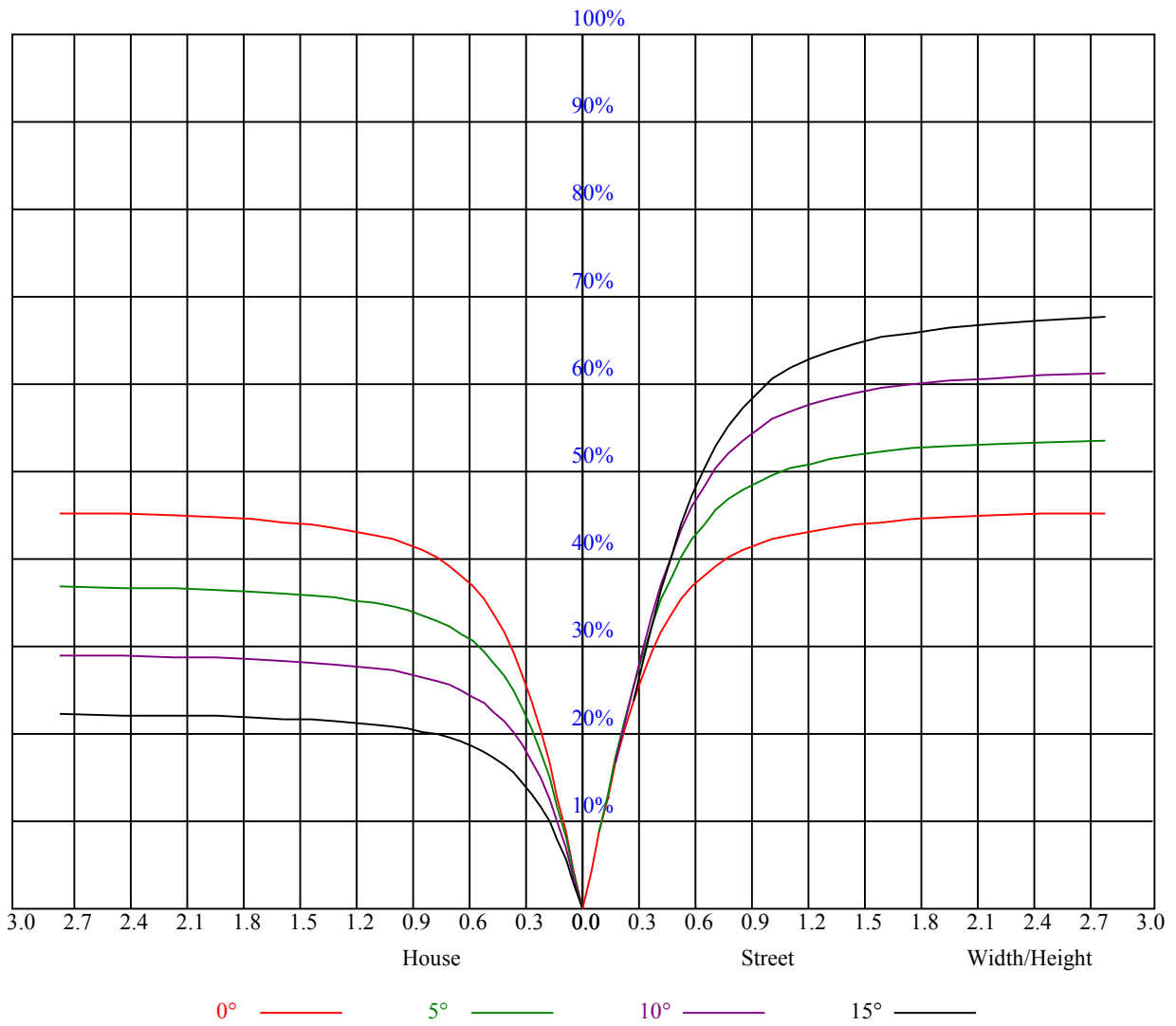
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.98	0.98	0.98	0.94	0.94	0.94	0.93
1	1.01	0.98	0.96	0.99	0.97	0.94	0.95	0.93	0.91	0.92	0.90	0.89	0.88	0.87	0.86	0.84
2	0.93	0.89	0.85	0.91	0.87	0.84	0.88	0.85	0.82	0.85	0.83	0.80	0.83	0.81	0.79	0.77
3	0.86	0.81	0.76	0.84	0.80	0.76	0.82	0.78	0.75	0.80	0.76	0.73	0.78	0.75	0.72	0.71
4	0.80	0.74	0.70	0.79	0.73	0.69	0.77	0.72	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.65
5	0.74	0.68	0.64	0.73	0.68	0.64	0.72	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.61
6	0.70	0.64	0.59	0.69	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.56
7	0.65	0.59	0.55	0.65	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.54	0.61	0.57	0.54	0.53
8	0.62	0.56	0.52	0.61	0.55	0.52	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.50
9	0.58	0.52	0.49	0.58	0.52	0.49	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.47
10	0.55	0.50	0.46	0.55	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.48	0.45	0.44



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	93.38	91.01	82.29	67.28	52.31	37.18	25.65	17.55	12.04
45.0	92.87	92.59	83.70	68.29	52.31	36.96	25.82	17.21	12.09
90.0	92.81	90.17	80.10	62.04	47.53	33.08	22.67	15.58	10.80
135.0	93.94	90.23	78.69	64.29	48.49	33.58	23.01	15.47	10.69
180.0	93.38	88.31	74.81	58.16	43.82	30.43	20.59	13.61	9.62
225.0	92.87	86.23	74.87	59.85	44.49	30.66	20.76	13.95	9.68
270.0	92.81	88.93	78.47	63.90	48.21	33.81	23.01	15.58	10.63
315.0	93.94	88.88	77.23	61.65	47.25	33.13	22.67	15.41	10.58
360.0	93.38	91.01	82.29	67.28	52.31	37.18	25.65	17.55	12.04
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	8.27	5.91	4.11	2.93	2.14	1.58	1.13	0.79	0.56
45.0	8.27	5.85	4.16	2.98	2.14	1.63	1.24	0.90	0.62
90.0	7.37	5.29	3.71	2.64	1.91	1.52	1.13	0.96	0.73
135.0	7.31	5.29	3.71	2.70	1.97	1.52	1.13	0.79	0.56
180.0	6.69	4.78	3.38	2.48	1.80	1.41	1.01	0.68	0.45
225.0	6.69	4.84	3.43	2.53	1.91	1.46	1.07	0.79	0.56
270.0	7.26	5.01	3.60	2.64	1.97	1.58	1.18	1.01	0.84
315.0	7.26	5.12	3.66	2.64	1.97	1.46	1.13	0.84	0.62
360.0	8.27	5.91	4.11	2.93	2.14	1.58	1.13	0.79	0.56
C/γ(°)	90.0								
0.0	0.34								
45.0	0.39								
90.0	0.34								
135.0	0.28								
180.0	0.23								
225.0	0.28								
270.0	0.39								
315.0	0.39								
360.0	0.34								