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NATA

LumCAT: CR01D01236AP-N

Luminaire:

Report No: NATA0100

Voltage(V): 3.2000

Test No: GC2018121704

Current(A): 0.2000

LampCAT: CREE XPE2

Power (W): 0.6400

Lamp flux(lm): 57.7

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 11

Width(mm): 11

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 53.45

Efficiency(%): 92.70%

Lumens(lm)/Power(W): 84.50

Central intensity(cd): 113.794

Maximum intensity(cd): 113.794

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.0

[C90/270]Total=36.0

Field angle(10%Imax): [C0/180]Total=64.6

[C90/270]Total=64.6

Maximum s/h(1/2): C0_180=0.59 C90_270=0.59

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(%): 93.79%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.190%

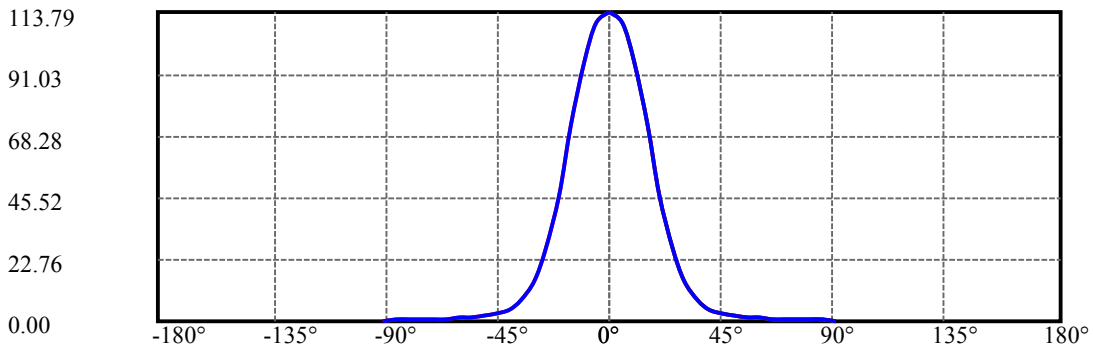
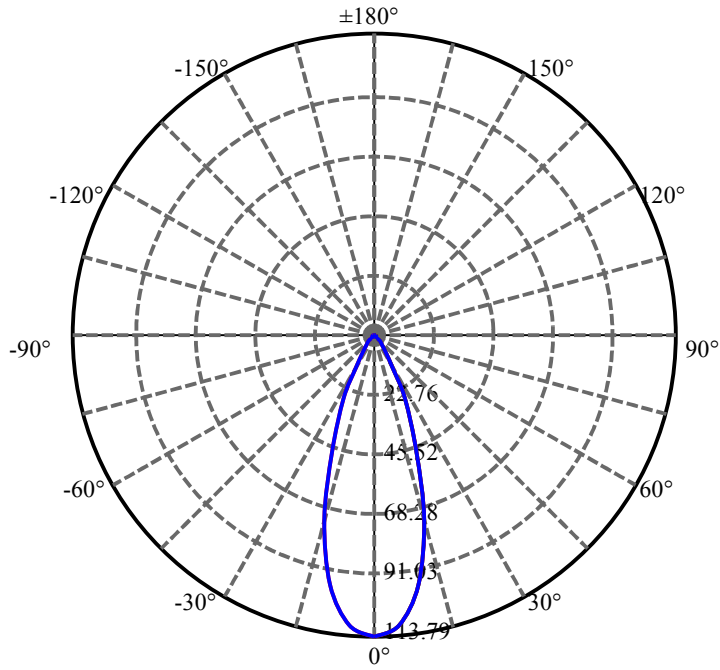
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	113.794	0.681	0.681	1.180%	1.273%
5.0	109.575	5.235	5.915	9.079%	11.067%
10.0	95.625	9.102	15.017	15.785%	28.096%
15.0	71.831	10.191	25.208	17.674%	47.162%
20.0	46.976	8.807	34.014	15.274%	63.639%
25.0	26.719	6.189	40.204	10.734%	75.219%
30.0	14.660	4.018	44.222	6.968%	82.737%
35.0	7.601	2.390	46.612	4.144%	87.208%
40.0	4.437	1.563	48.175	2.711%	90.132%
45.0	2.869	1.112	49.287	1.928%	92.213%
50.0	2.095	0.880	50.166	1.526%	93.859%
55.0	1.582	0.710	50.877	1.232%	95.188%
60.0	1.266	0.601	51.478	1.042%	96.312%
65.0	1.034	0.513	51.991	.891%	97.272%
70.0	0.830	0.427	52.418	.741%	98.072%
75.0	0.703	0.372	52.791	.646%	98.768%
80.0	0.675	0.364	53.155	.632%	99.450%
85.0	0.450	0.246	53.401	.426%	99.910%
90.0	0.176	0.048	53.449	.084%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	44.22	76.69%	82.74%
0-40	48.17	83.55%	90.13%
0-60	51.48	89.28%	96.31%
0-90	53.40	92.61%	99.91%
0-120	53.40	92.61%	99.91%
0-180	53.45	92.70%	100.00%
60-90	2.52	4.38%	4.72%
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%
0-28.18	42.76	74.16%	80.00%

ZONAL LUMEN SUMMARY

0-10	15.02
10-20	19.00
20-30	10.21
30-40	3.95
40-50	1.99
50-60	1.31
60-70	0.94
70-80	0.74
80-90	0.25
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: —————

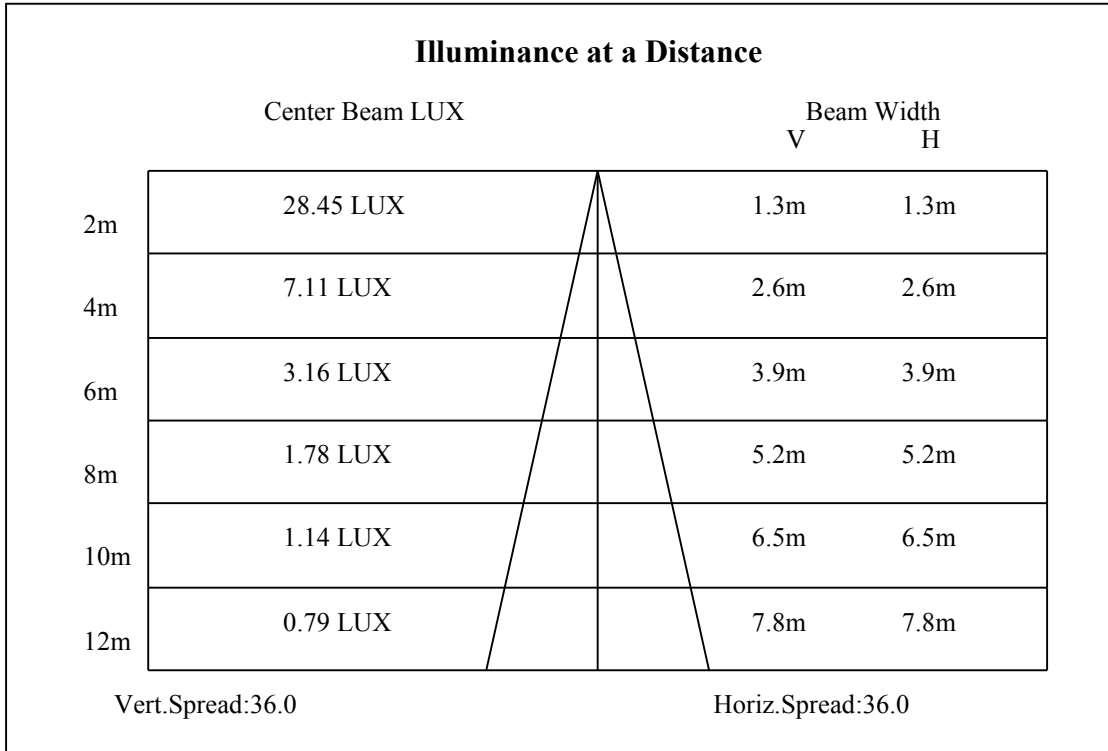
C90/C270: —————

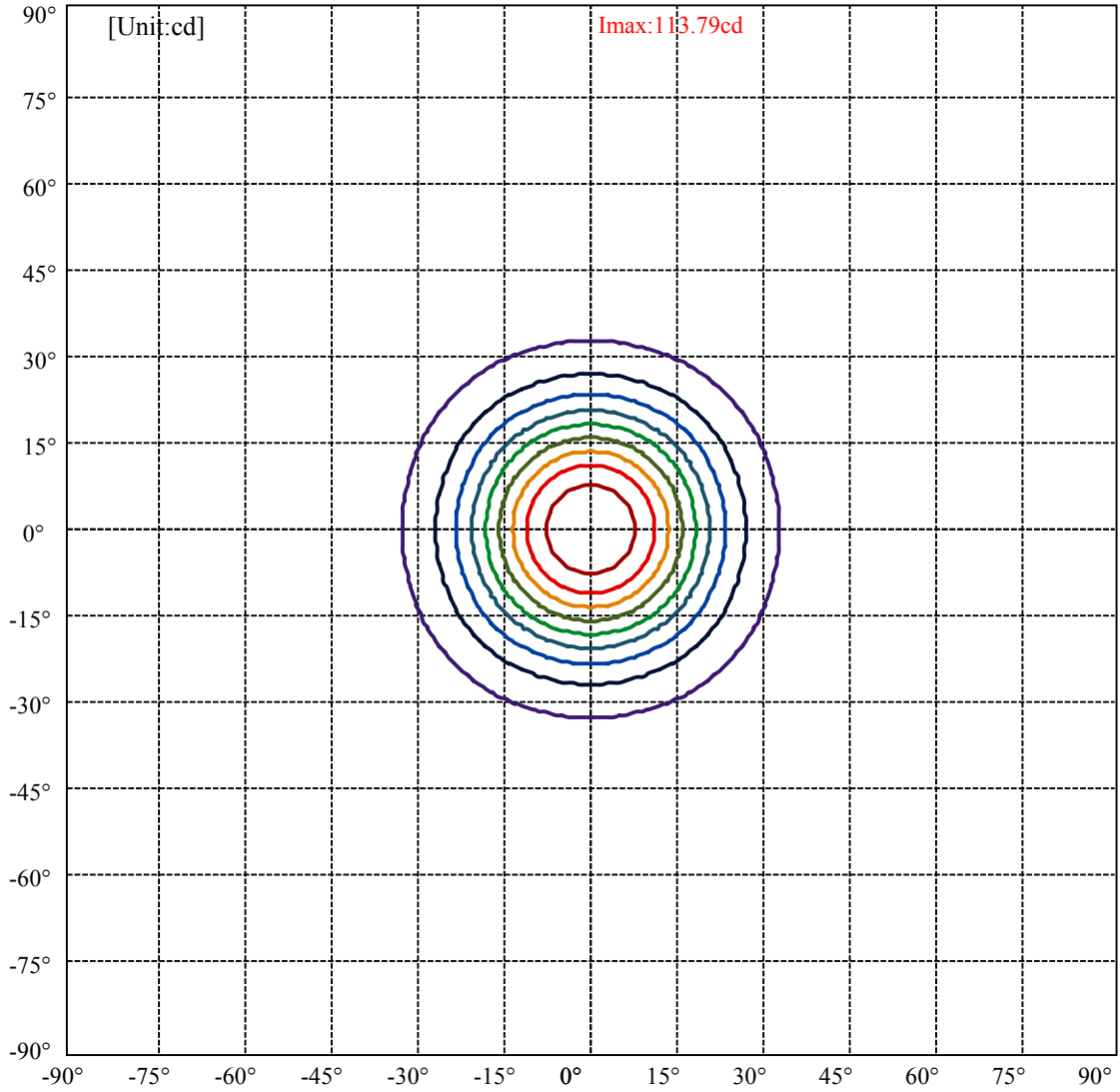
Field angle(10%Imax):C0/180Left:32.3 Right:32.3

:C90/270Left:32.3 Right:32.3

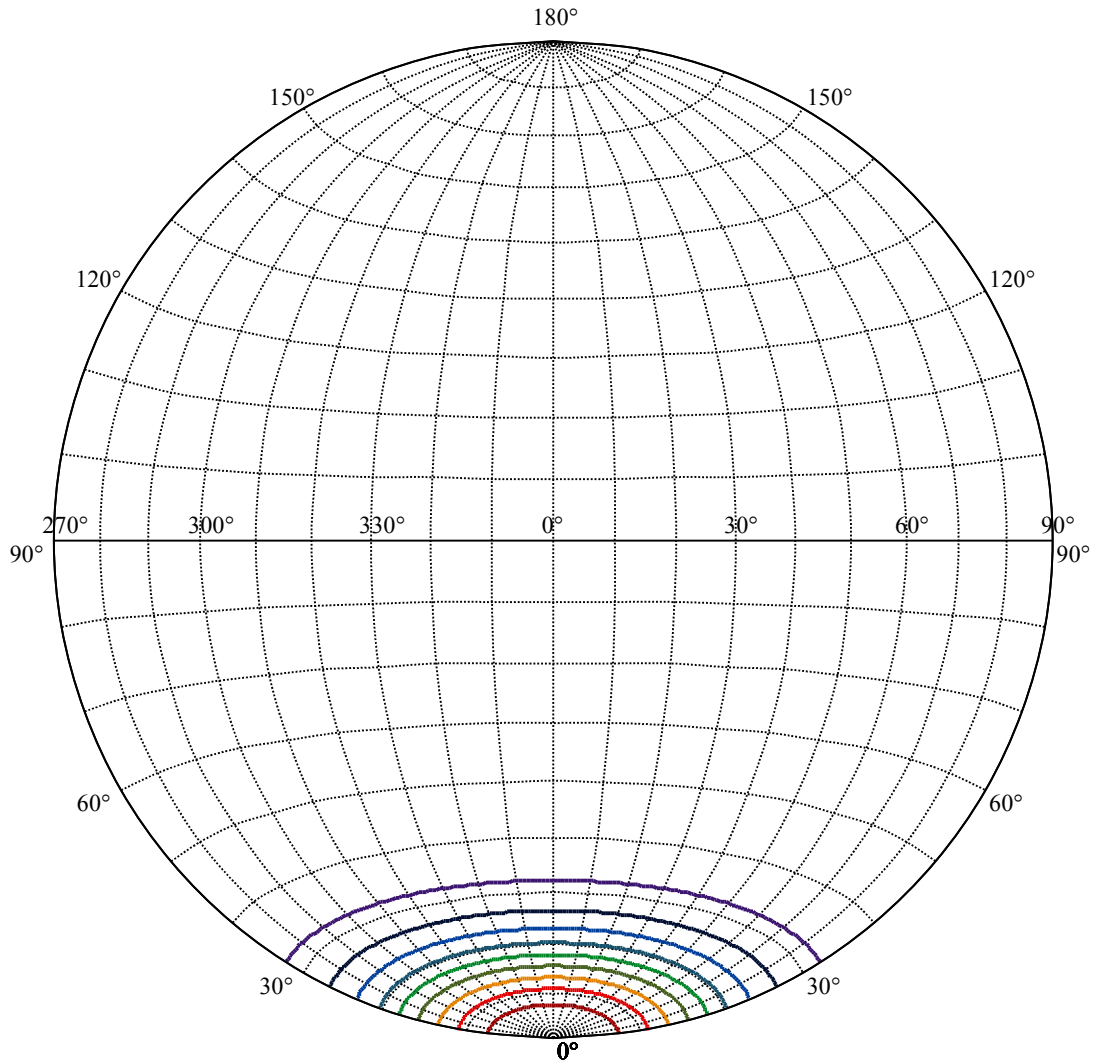
Beam Angle(50%Imax):C0/180Left:18.0 Right:18.0

:C90/270Left:18.0 Right:18.0





(10%I _{max}) 11.3794	—
(20%I _{max}) 22.7587	—
(30%I _{max}) 34.1381	—
(40%I _{max}) 45.5175	—
(50%I _{max}) 56.8969	—
(60%I _{max}) 68.2762	—
(70%I _{max}) 79.6556	—
(80%I _{max}) 91.035	—
(90%I _{max}) 102.414	—



House

[Unit:cd]

Road

Imax:113.79

(10%Imax) 11.3794

(20%Imax) 22.7587

(30%Imax) 34.1381

(40%Imax) 45.5175

(50%Imax) 56.8969

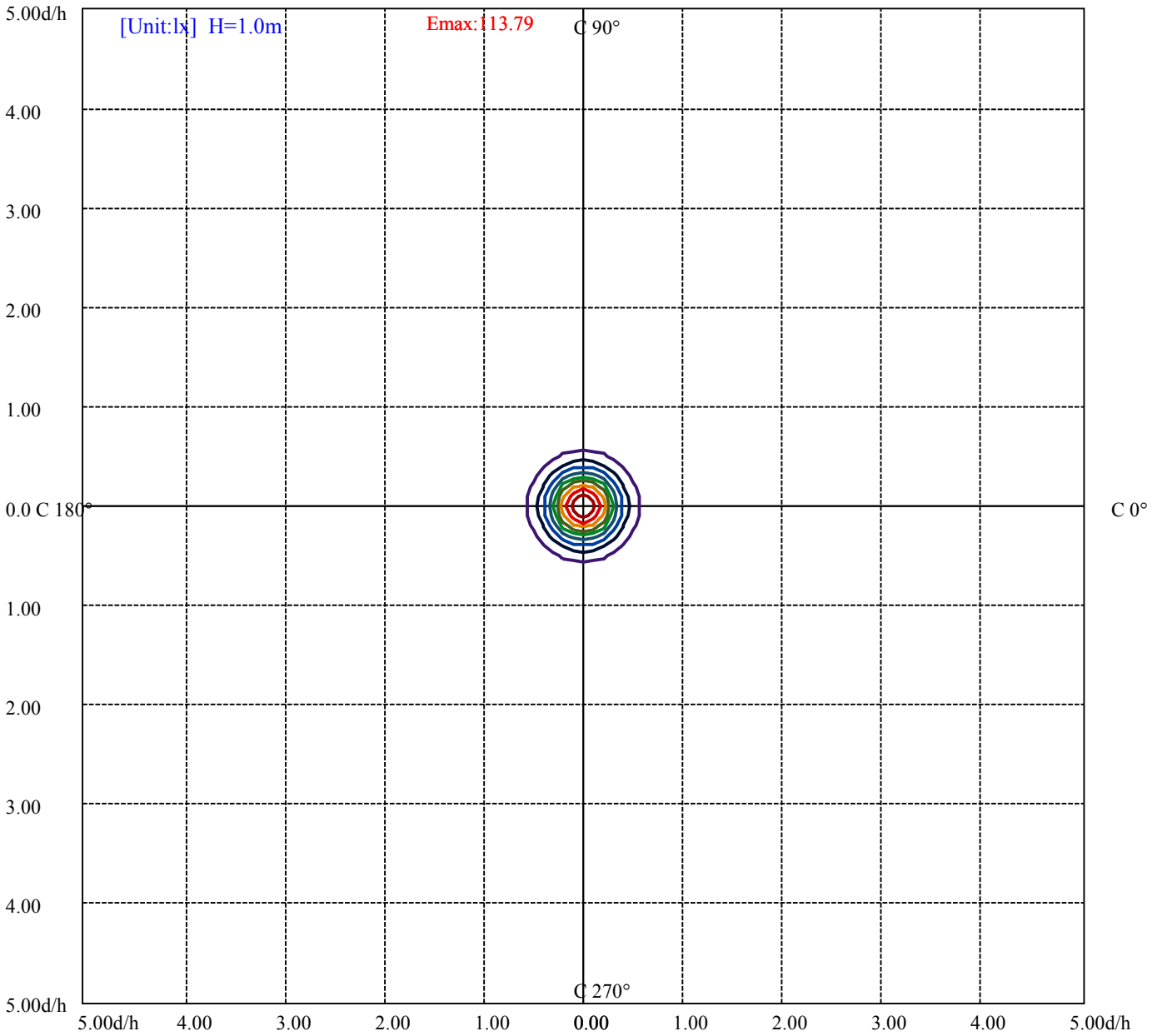
(60%Imax) 68.2762

(70%Imax) 79.6556

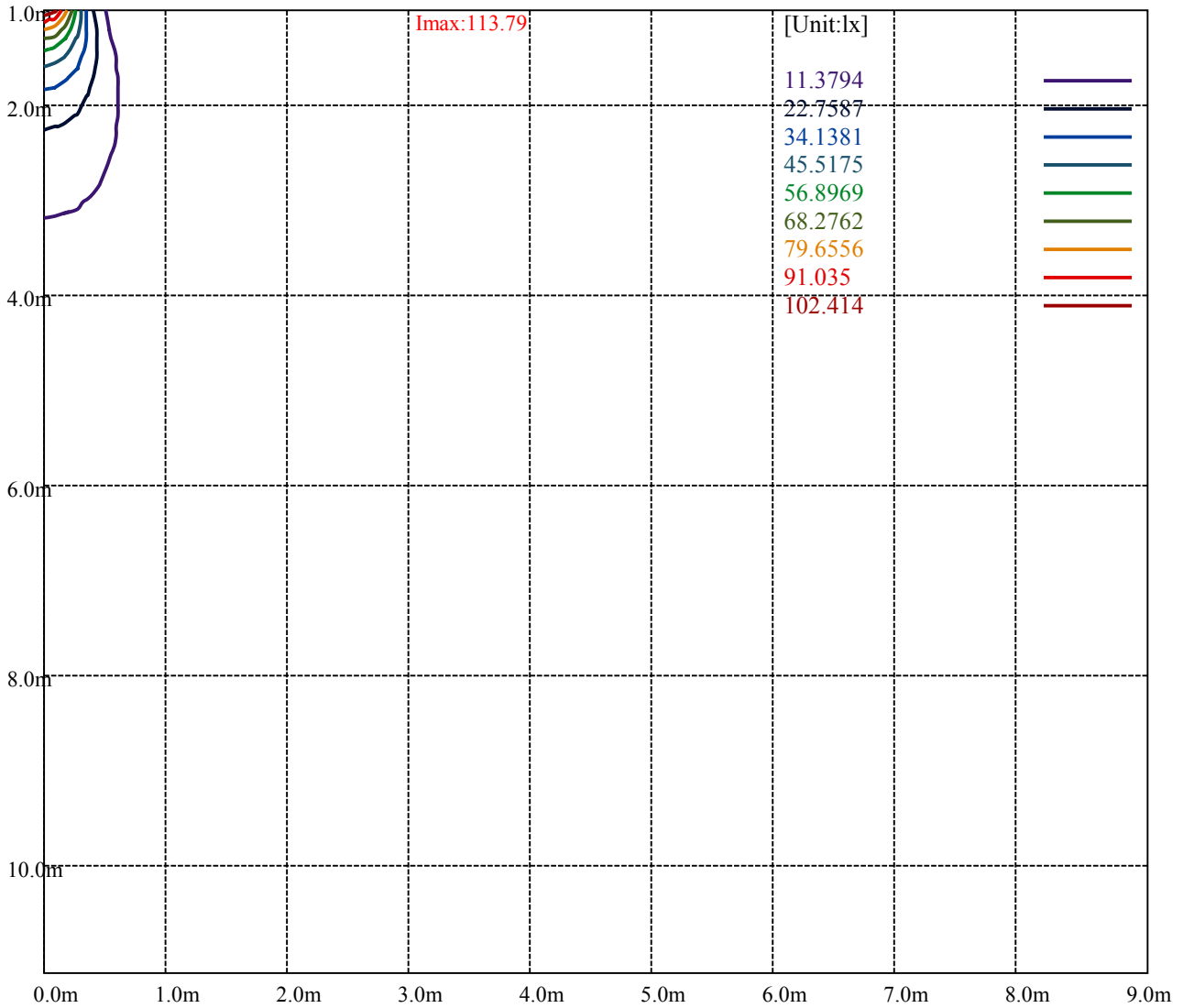
(80%Imax) 91.035

(90%Imax) 102.414





- (10%E_{max}) 11.3794
- (20%E_{max}) 22.7587
- (30%E_{max}) 34.1381
- (40%E_{max}) 45.5174
- (50%E_{max}) 56.8968
- (60%E_{max}) 68.2762
- (70%E_{max}) 79.6555
- (80%E_{max}) 91.0349
- (90%E_{max}) 102.414



Luminance Table

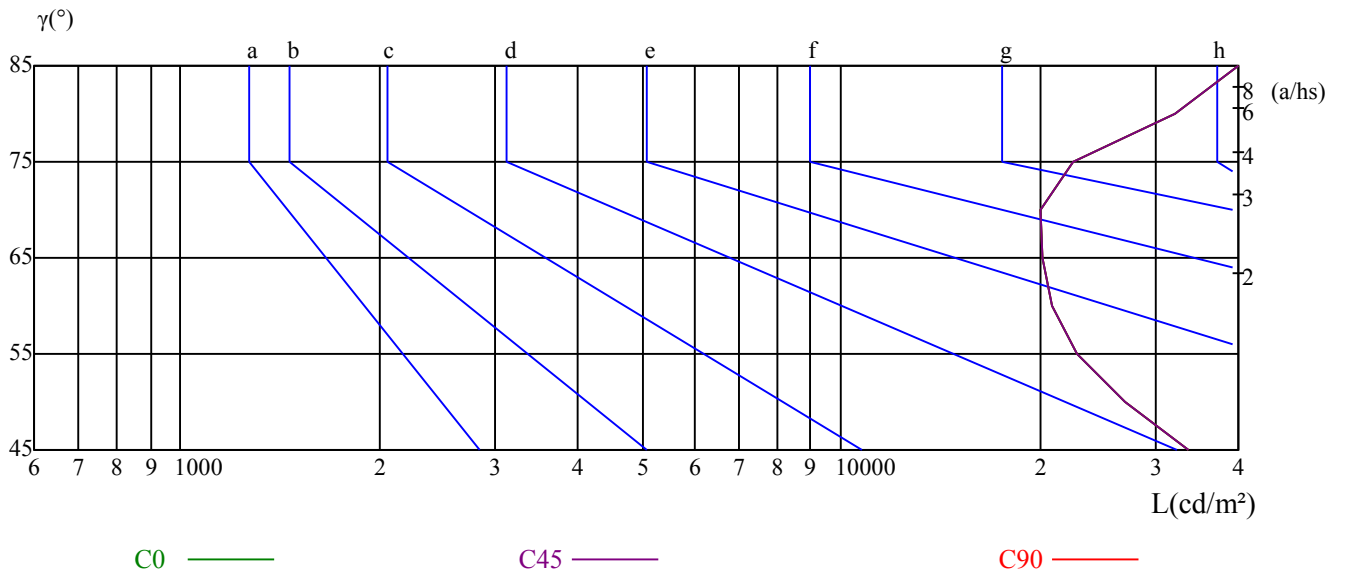
γ	45	50	55	60	65	70	75	80	85
C0	33529	26940	22795	20919	20212	20048	22452	32125	42671
C45	33529	26940	22795	20919	20212	20048	22452	32125	42671
C90	33529	26940	22795	20919	20212	20048	22452	32125	42671

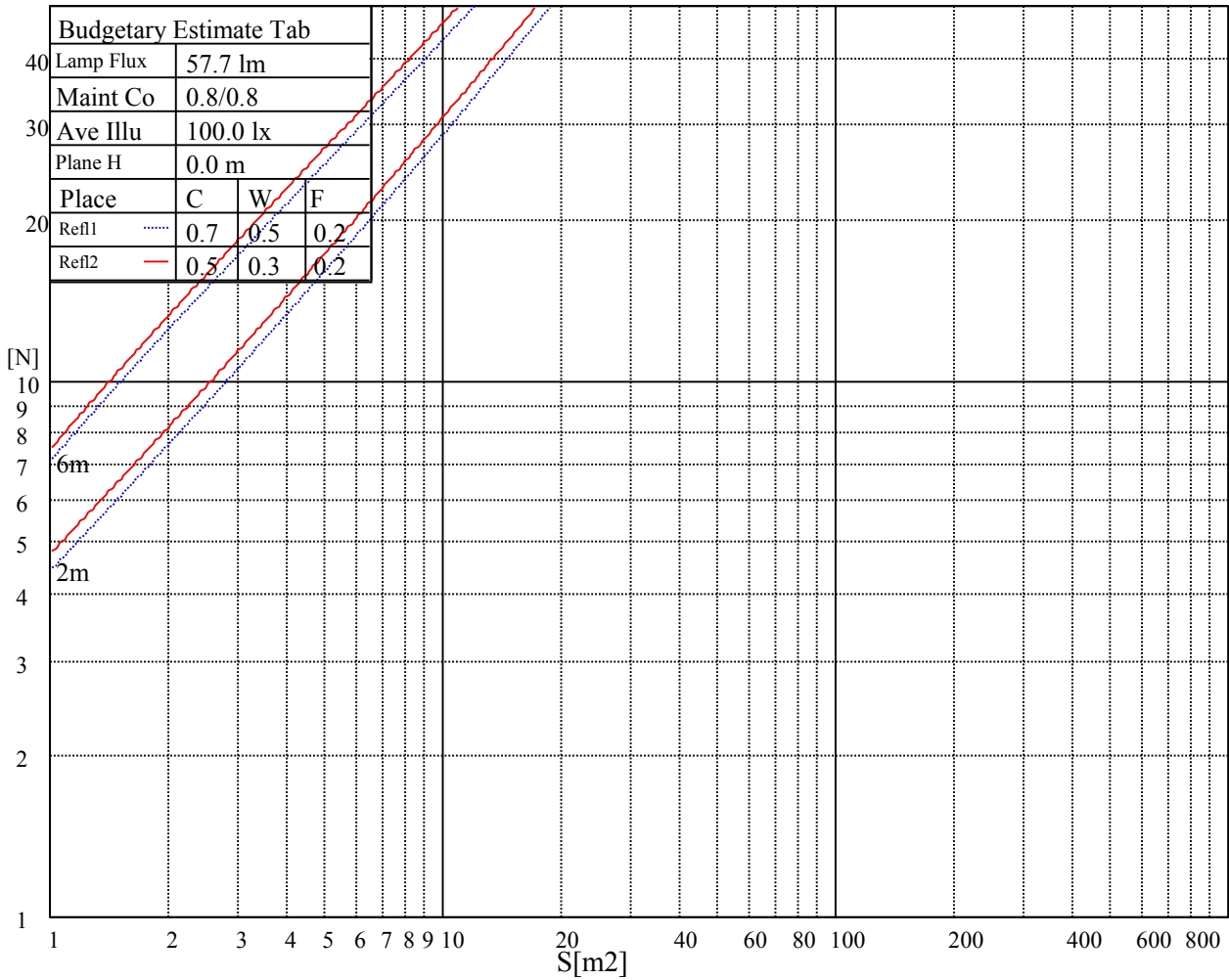
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
20212	20212	20212	22452	22452	22452	42671	42671	42671

Glare Table

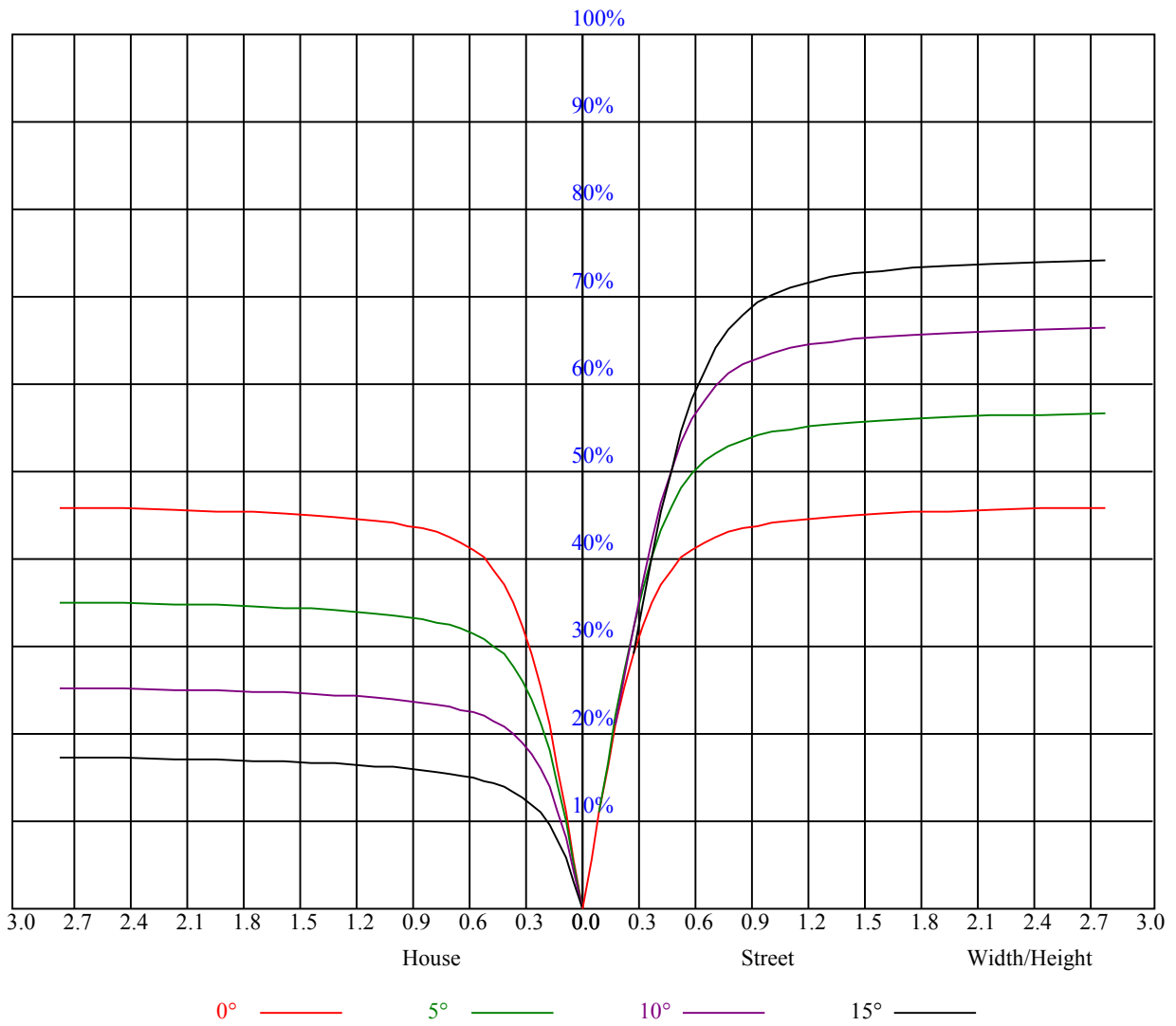
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.03	1.00	0.98	1.01	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.86
2	0.96	0.92	0.89	0.95	0.91	0.88	0.92	0.89	0.86	0.89	0.87	0.84	0.86	0.84	0.83	0.81
3	0.91	0.86	0.83	0.90	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.80	0.78	0.77
4	0.86	0.81	0.78	0.85	0.81	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.73
5	0.82	0.77	0.73	0.81	0.77	0.73	0.80	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.71	0.70
6	0.78	0.73	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.67
7	0.75	0.70	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.65	0.64
8	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.62
9	0.69	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
10	0.67	0.62	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.65	0.61	0.59	0.58



NATA NA01D01260AP

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	113.74	104.46	88.88	66.99	43.48	25.48	14.06	7.48	4.39
45.0	114.41	103.61	90.84	70.20	47.36	27.90	15.75	8.10	4.44
90.0	114.08	106.54	91.63	68.06	44.72	25.93	14.68	7.71	4.50
135.0	112.95	112.89	101.81	78.53	52.99	31.33	17.21	8.78	5.18
180.0	113.74	115.26	101.98	78.75	51.24	28.58	15.24	8.16	4.84
225.0	114.41	113.79	99.56	72.17	45.79	23.46	12.94	6.64	3.88
270.0	114.08	113.57	100.18	74.25	47.93	27.62	14.46	7.26	4.39
315.0	112.95	106.48	90.11	65.70	42.30	23.46	12.94	6.69	3.88
360.0	113.74	104.46	88.88	66.99	43.48	25.48	14.06	7.48	4.39
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	2.81	1.97	1.58	1.24	1.01	0.79	0.73	0.56	0.45
45.0	2.87	2.08	1.63	1.29	1.01	0.84	0.68	0.51	0.39
90.0	2.98	2.25	1.63	1.29	1.07	0.84	0.73	0.56	0.45
135.0	3.21	2.25	1.69	1.35	1.07	0.84	0.73	0.84	0.62
180.0	3.09	2.31	1.69	1.29	1.07	0.84	0.73	0.56	0.45
225.0	2.59	1.97	1.46	1.18	1.01	0.79	0.56	0.45	0.34
270.0	2.87	2.08	1.58	1.29	1.07	0.84	0.68	0.56	0.39
315.0	2.53	1.86	1.41	1.18	0.96	0.84	0.79	1.35	0.51
360.0	2.81	1.97	1.58	1.24	1.01	0.79	0.73	0.56	0.45
C/γ(°)	90.0								
0.0	0.23								
45.0	0.17								
90.0	0.17								
135.0	0.17								
180.0	0.17								
225.0	0.17								
270.0	0.17								
315.0	0.17								
360.0	0.23								