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NATA

LumCAT: CR12L050150AY

Luminaire:

Report No: NATA0100

Voltage(V): 18.3000

Test No: GC2018122907

Current(A): 0.4000

LampCAT: CREE XPE2

Power (W): 7.3200

Lamp flux(lm): 883.0

PF: 0.0000

Number of Lamps: 1

Ballast type:

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 838.45

Efficiency(%): 94.95%

Lumens(lm)/Power(W): 114.55

Central intensity(cd): 147.628

Maximum intensity(cd): 201.980

Angle of maximum intensity: C=0.0 γ =60.0

Beam Angle(50%Imax): [C0/180]Total=148.0

[C90/270]Total=148.0

Field angle(10%Imax): [C0/180]Total=162.8

[C90/270]Total=162.8

Maximum s/h(1/2): C0_180=1.72 C90_270=1.72

Maximum s/h(1/4): C0_180=2.02 C90_270=2.02

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.96%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 70.394%

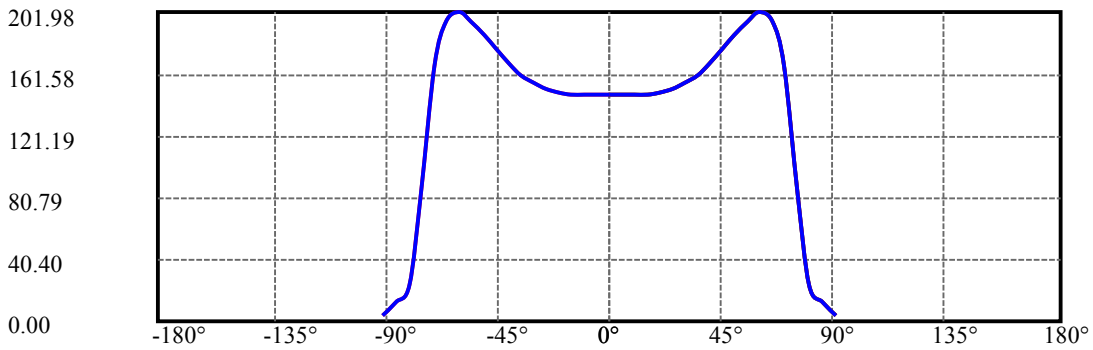
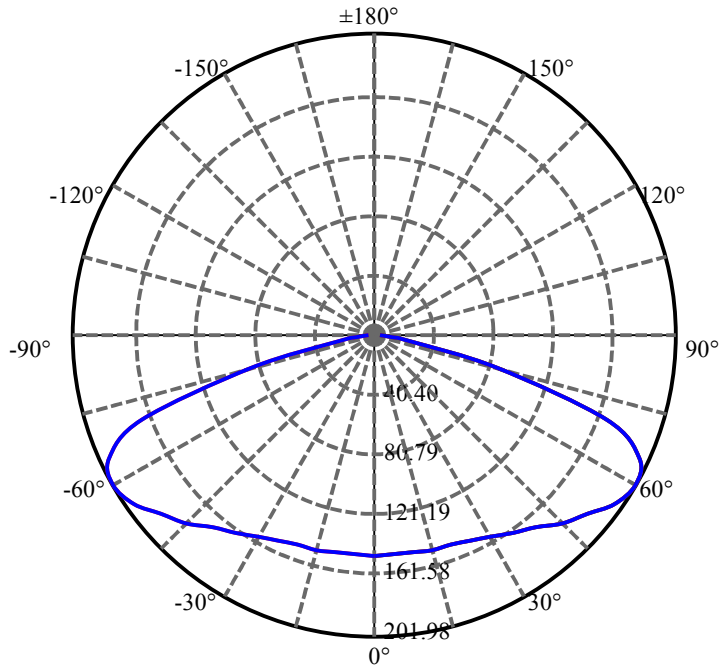
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	147.628	0.883	0.883	.100%	.105%
5.0	147.572	7.050	7.933	.798%	.946%
10.0	148.057	14.093	22.025	1.596%	2.627%
15.0	148.563	21.076	43.102	2.387%	5.141%
20.0	149.484	28.024	71.126	3.174%	8.483%
25.0	151.784	35.161	106.287	3.982%	12.677%
30.0	155.243	42.547	148.835	4.818%	17.751%
35.0	161.135	50.661	199.495	5.737%	23.793%
40.0	168.687	59.434	258.93	6.731%	30.882%
45.0	177.659	68.859	327.789	7.798%	39.095%
50.0	186.891	78.475	406.264	8.887%	48.454%
55.0	196.291	88.136	494.4	9.981%	58.966%
60.0	201.980	95.880	590.28	10.858%	70.401%
65.0	195.877	97.308	687.588	11.020%	82.007%
70.0	166.233	85.623	773.211	9.697%	92.219%
75.0	84.621	44.803	818.014	5.074%	97.563%
80.0	23.344	12.601	830.616	1.427%	99.066%
85.0	12.143	6.631	837.246	.751%	99.857%
90.0	4.388	1.202	838.449	.136%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	148.83	16.86%	17.75%
0-40	258.93	29.32%	30.88%
0-60	590.28	66.85%	70.40%
0-90	837.25	94.82%	99.86%
0-120	837.25	94.82%	99.86%
0-180	838.45	94.95%	100.00%
60-90	342.85	38.83%	40.89%
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%
0-64.14	670.76	75.96%	80.00%

ZONAL LUMEN SUMMARY

0-10	22.03
10-20	49.10
20-30	77.71
30-40	110.10
40-50	147.33
50-60	184.02
60-70	182.93
70-80	57.40
80-90	6.63
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



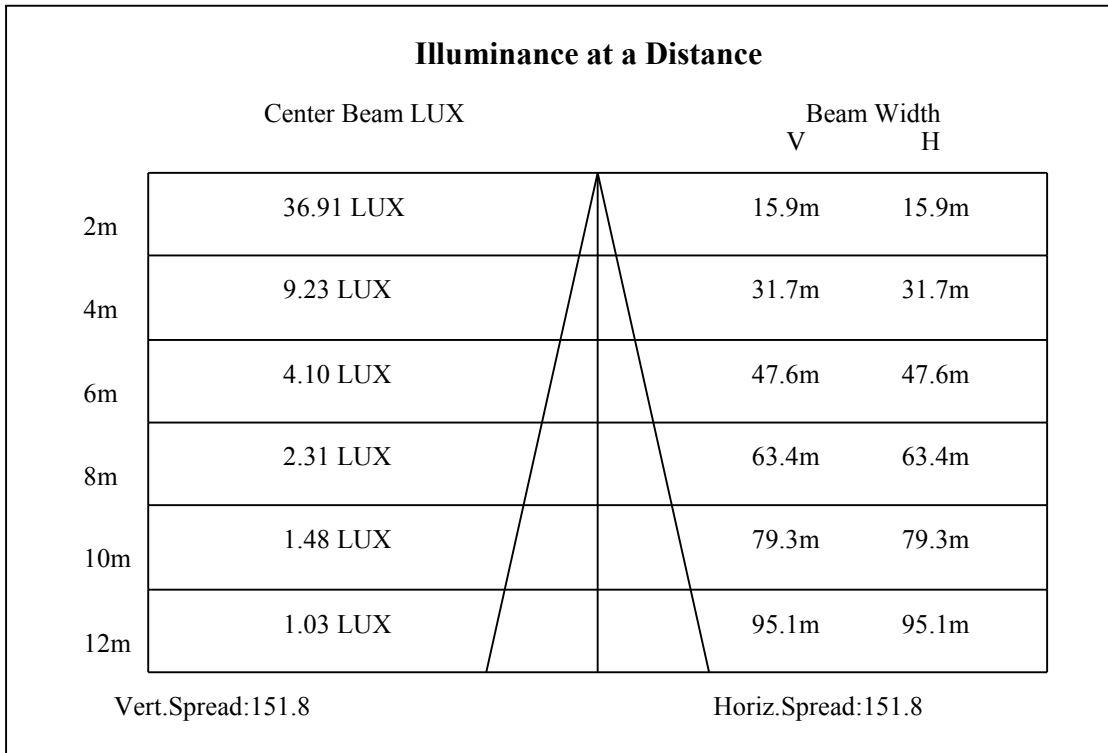
C0(Max): —————

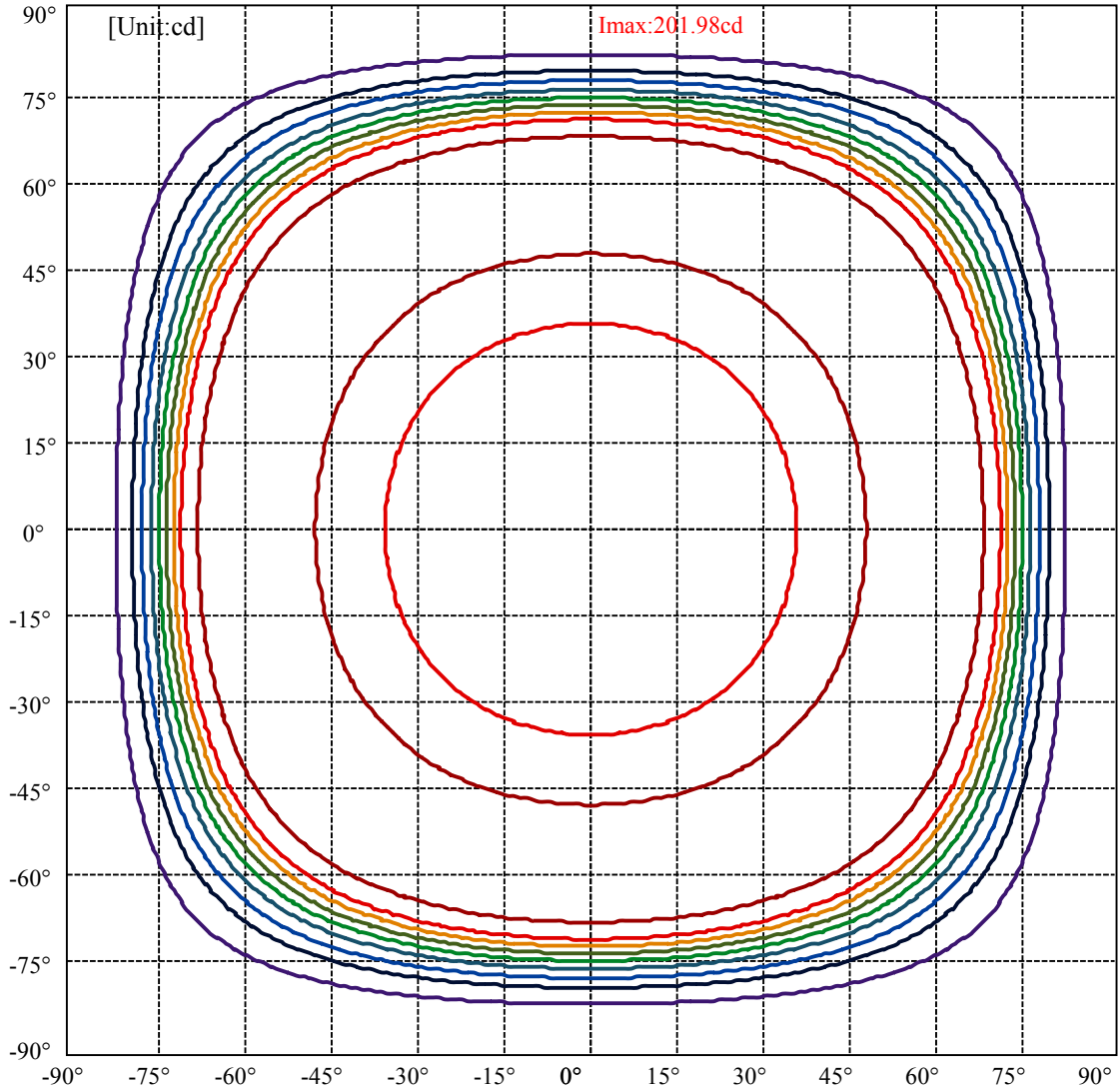
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:141.4 Right:21.4
:C90/270Left:141.4 Right:21.4

Beam Angle(50%Imax):C0/180Left:134.0 Right:14.0
:C90/270Left:134.0 Right:14.0



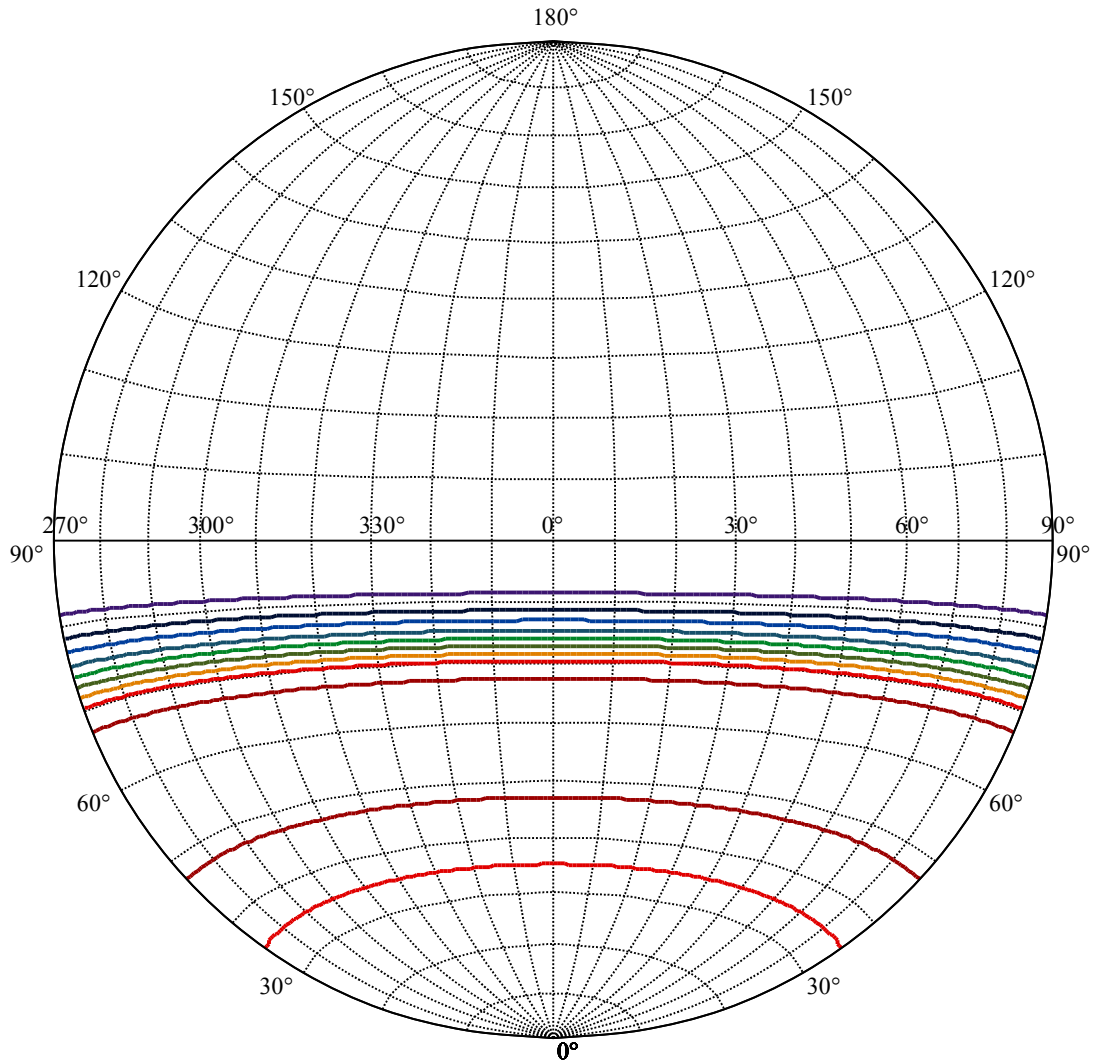


(10%Imax) 20.198	—
(20%Imax) 40.3959	—
(30%Imax) 60.5939	—
(40%Imax) 80.7919	—
(50%Imax) 100.99	—
(60%Imax) 121.188	—
(70%Imax) 141.386	—
(80%Imax) 161.584	—
(90%Imax) 181.782	—

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/12/29
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50












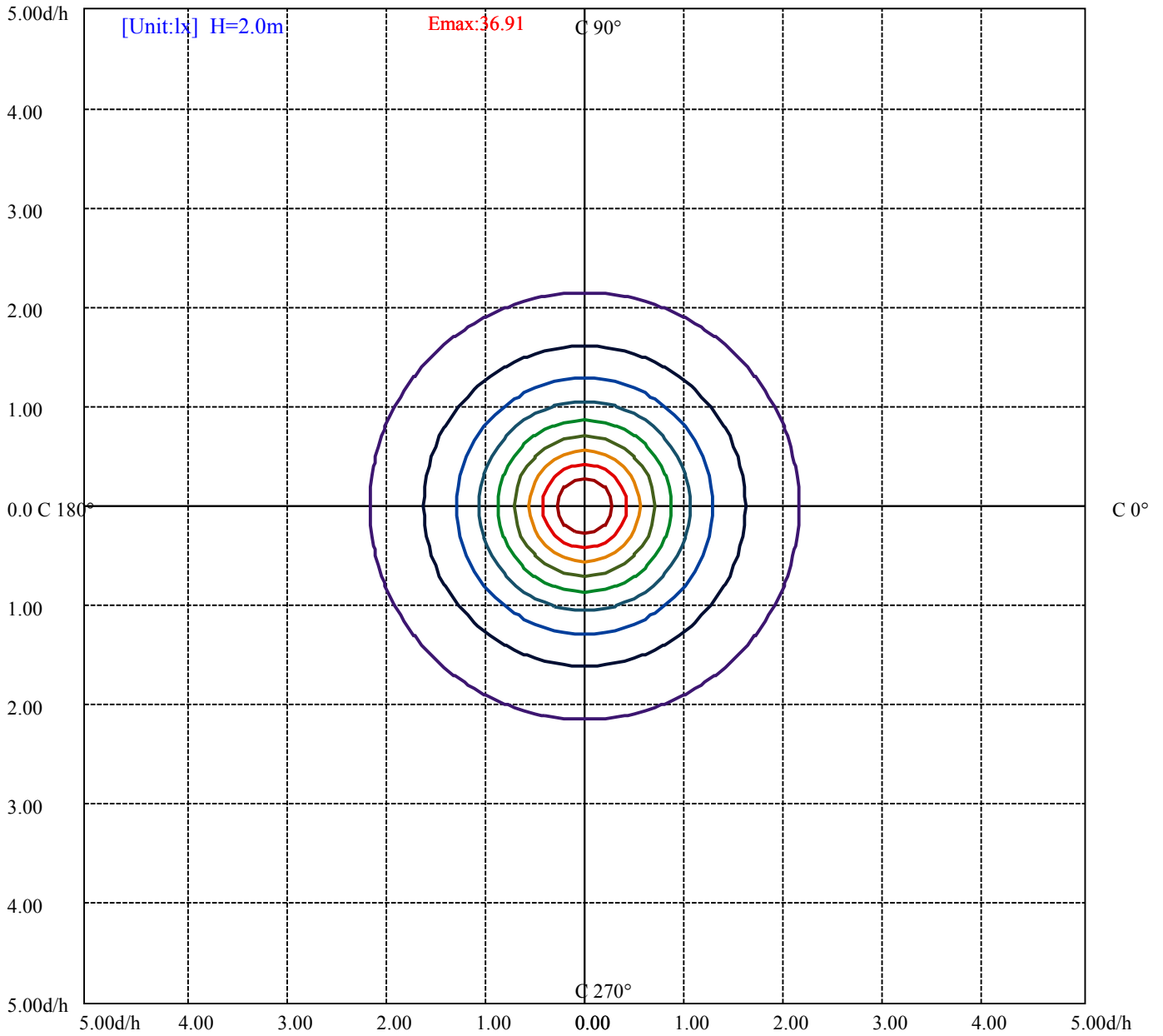
House

[Unit:cd]

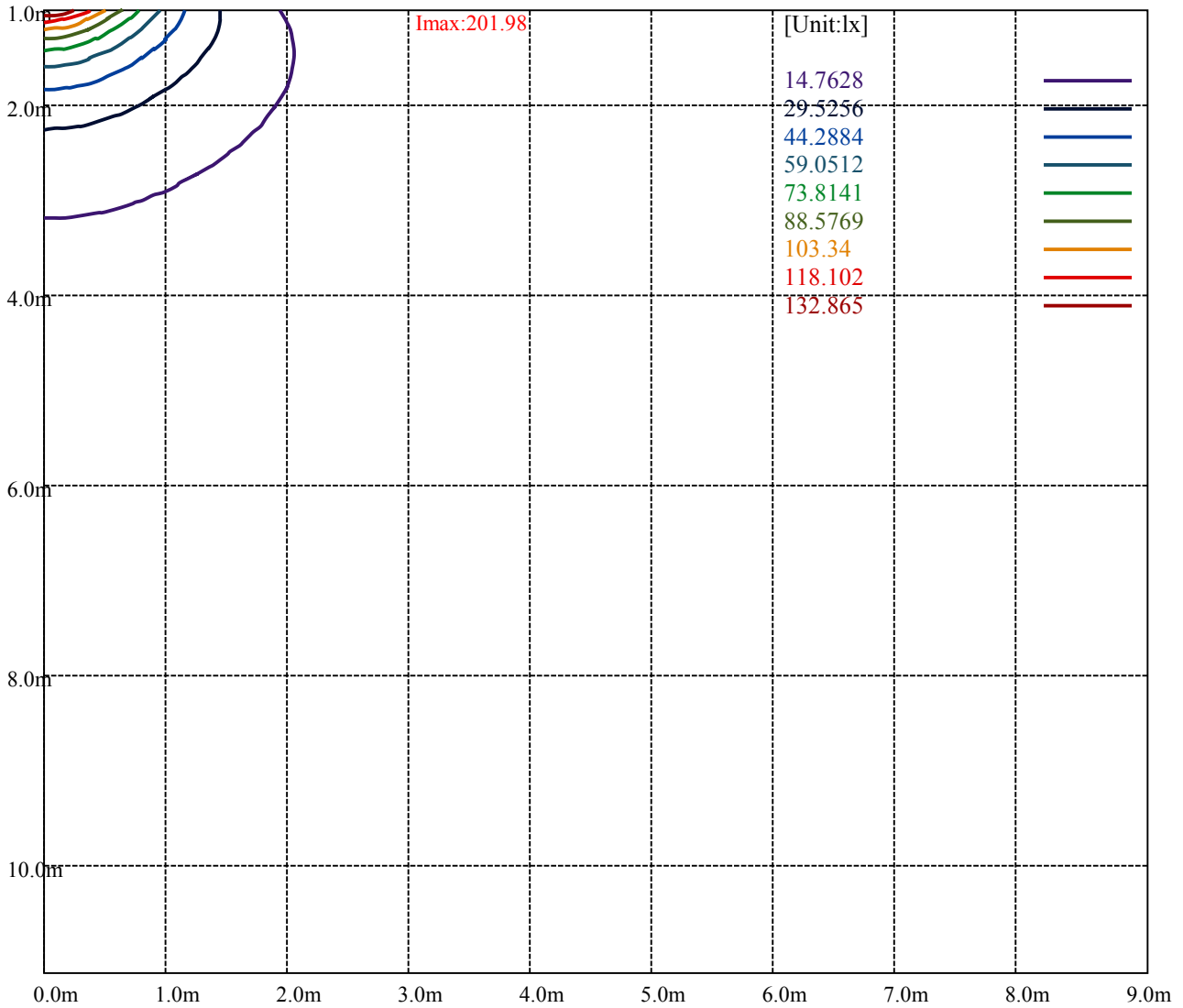
Road

I_{max}:201.98

(10%I _{max}) 20.198	
(20%I _{max}) 40.3959	
(30%I _{max}) 60.5939	
(40%I _{max}) 80.7919	
(50%I _{max}) 100.99	
(60%I _{max}) 121.188	
(70%I _{max}) 141.386	
(80%I _{max}) 161.584	
(90%I _{max}) 181.782	



- (10%Emax) 3.6907
- (20%Emax) 7.3814
- (30%Emax) 11.0721
- (40%Emax) 14.7628
- (50%Emax) 18.45353
- (60%Emax) 22.14422
- (70%Emax) 25.835
- (80%Emax) 29.5255
- (90%Emax) 33.21625



Luminance Table

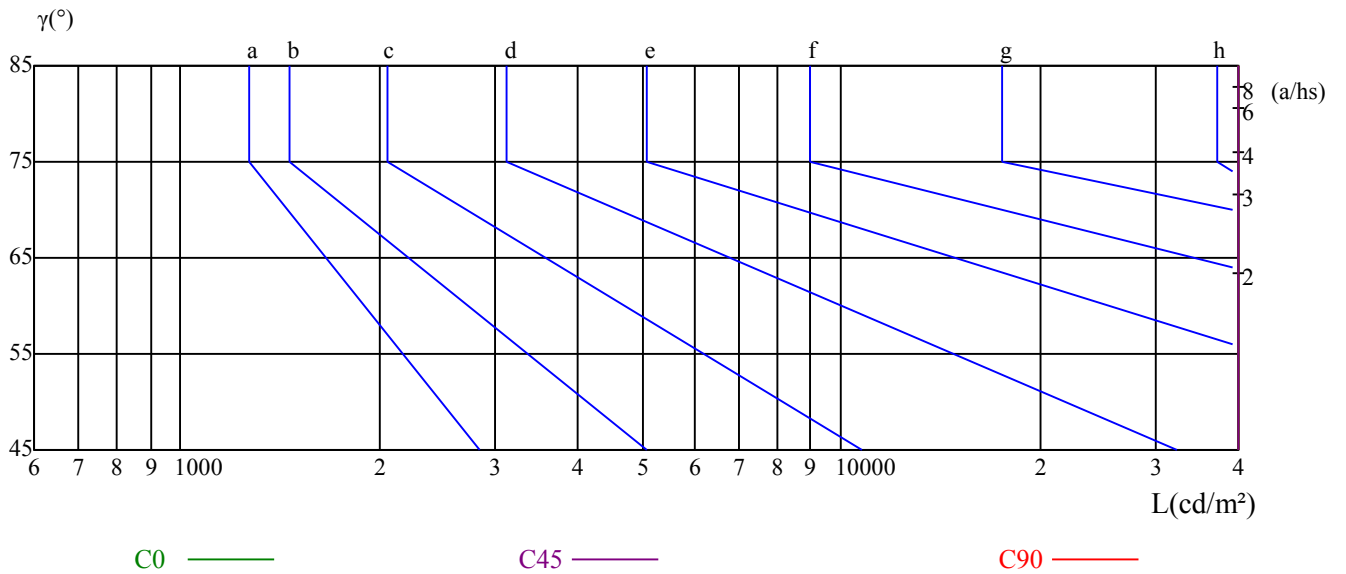
γ	45	50	55	60	65	70	75	80	85
C0	100499	116300	136889	161584	185393	194413	130780	53773	55730
C45	100499	116300	136889	161584	185393	194413	130780	53773	55730
C90	100499	116300	136889	161584	185393	194413	130780	53773	55730

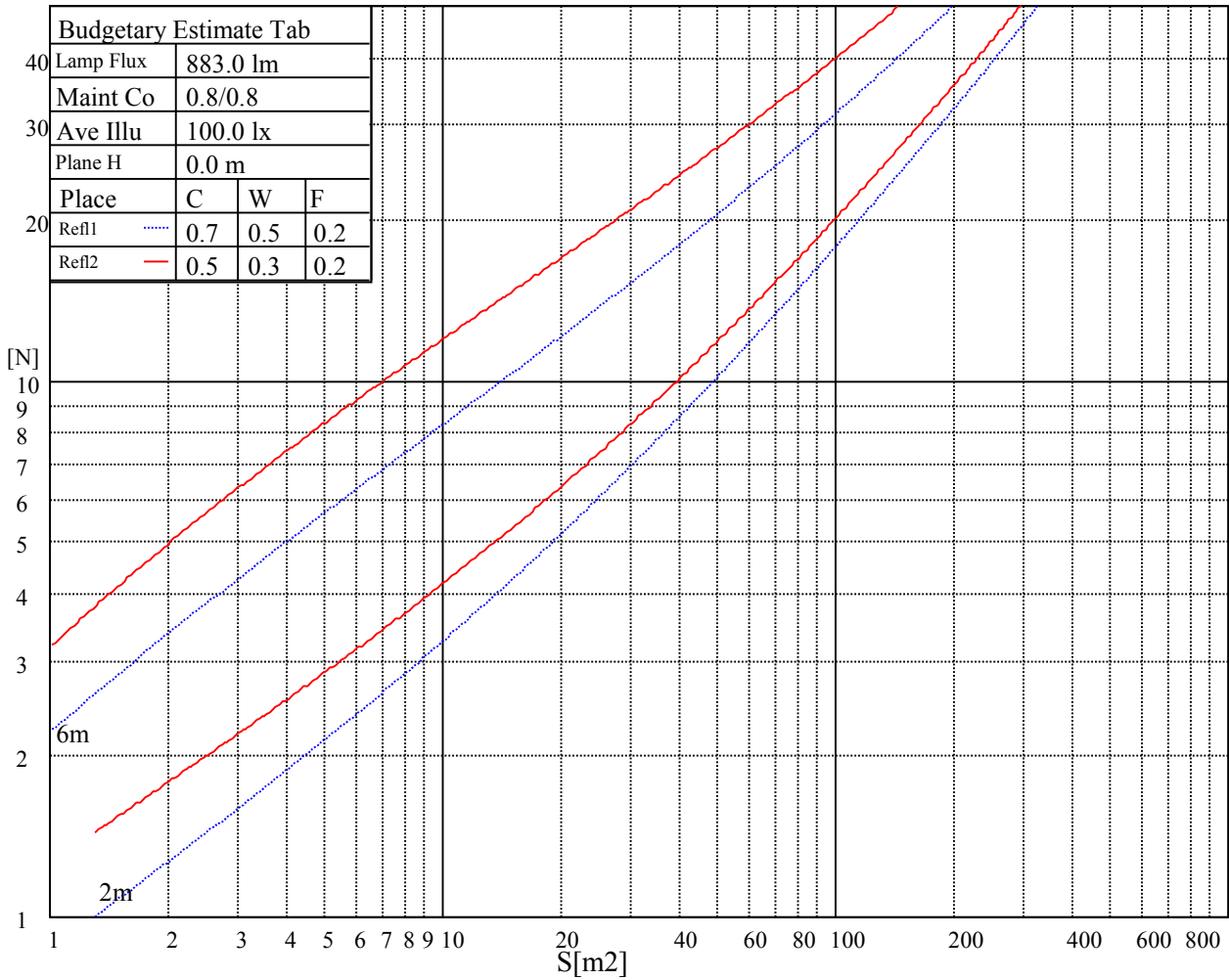
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
185393	185393	185393	130780	130780	130780	55730	55730	55730

Glare Table

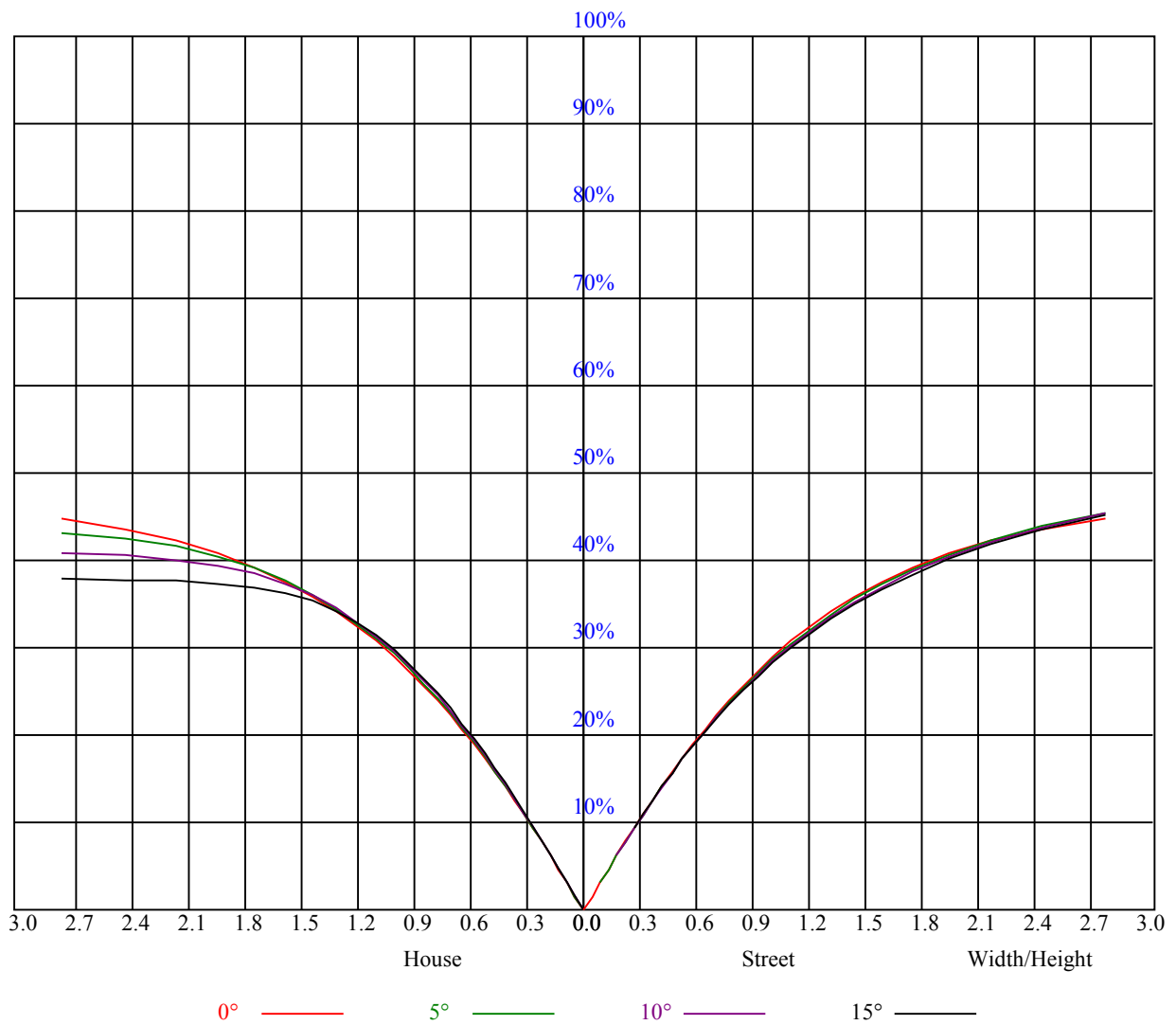
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.13	1.13	1.13	1.10	1.10	1.10	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.95
1	0.97	0.93	0.89	0.95	0.91	0.88	0.91	0.88	0.85	0.87	0.85	0.82	0.84	0.82	0.80	0.78
2	0.83	0.76	0.70	0.81	0.75	0.69	0.78	0.72	0.67	0.74	0.70	0.66	0.72	0.68	0.64	0.62
3	0.71	0.62	0.56	0.70	0.62	0.55	0.67	0.60	0.54	0.64	0.58	0.53	0.61	0.56	0.52	0.50
4	0.62	0.52	0.45	0.60	0.52	0.45	0.58	0.50	0.44	0.55	0.49	0.44	0.53	0.48	0.43	0.41
5	0.54	0.45	0.38	0.53	0.44	0.37	0.51	0.43	0.37	0.49	0.42	0.36	0.47	0.41	0.36	0.34
6	0.48	0.38	0.32	0.47	0.38	0.32	0.45	0.37	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.28
7	0.43	0.34	0.27	0.42	0.33	0.27	0.40	0.33	0.27	0.39	0.32	0.27	0.38	0.31	0.26	0.24
8	0.39	0.30	0.24	0.38	0.30	0.24	0.37	0.29	0.24	0.35	0.28	0.23	0.34	0.28	0.23	0.21
9	0.35	0.27	0.21	0.35	0.26	0.21	0.33	0.26	0.21	0.32	0.26	0.21	0.31	0.25	0.21	0.19
10	0.32	0.24	0.19	0.32	0.24	0.19	0.31	0.24	0.19	0.30	0.23	0.19	0.29	0.23	0.18	0.17



NATA CR12L050150AY

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	147.38	145.13	144.23	144.00	144.79	146.76	148.95	153.17	159.86
45.0	147.77	146.59	146.03	146.25	147.32	149.57	153.34	159.02	165.26
90.0	147.43	148.28	149.91	150.75	151.76	154.07	158.06	164.81	173.36
135.0	147.94	149.96	151.88	153.51	154.91	157.84	161.83	169.26	178.26
180.0	147.38	149.18	151.65	153.34	155.81	159.47	165.09	172.52	181.24
225.0	147.77	148.67	149.85	150.36	150.92	152.94	155.98	162.23	170.38
270.0	147.43	146.59	145.86	145.69	145.52	146.76	149.23	154.13	160.43
315.0	147.94	146.19	145.07	144.62	144.84	146.87	149.46	153.96	160.71
360.0	147.38	145.13	144.23	144.00	144.79	146.76	148.95	153.17	159.86

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	167.63	176.12	186.19	195.19	195.08	176.18	119.98	29.76	13.22
45.0	173.64	183.26	193.05	200.87	198.39	171.62	78.98	19.52	11.70
90.0	183.88	193.78	202.61	205.03	194.12	156.43	74.19	17.21	10.58
135.0	189.73	200.53	210.26	213.13	201.60	160.99	55.63	17.04	11.87
180.0	190.97	200.25	209.03	213.41	199.24	156.71	78.86	17.44	10.24
225.0	179.55	189.00	198.06	202.56	197.61	166.67	60.92	18.51	12.26
270.0	168.08	176.68	186.19	192.60	191.14	176.01	119.98	41.23	13.89
315.0	167.79	175.50	184.95	193.05	189.84	165.26	88.43	26.04	13.39
360.0	167.63	176.12	186.19	195.19	195.08	176.18	119.98	29.76	13.22

C/γ(°)	90.0
0.0	4.39
45.0	4.39
90.0	4.39
135.0	4.39
180.0	4.28
225.0	4.39
270.0	4.44
315.0	4.44
360.0	4.39