
Nata

LumCAT: 3-1700-N
Luminaire: 92.70.045.00+92.70.089.00
Report No: NT2017111313
Test No: nata-0100
LampCAT: CREE CXA2520
Lamp flux(lm): 2164.0
Number of Lamps: 1
Length(mm):77
Phm Type: C

Voltage(V): 35.3000
Current(A): 0.7000
Power (W): 24.7100
PF: 0.0000
Ballast type: DC
Width(mm): 77
Height(mm): 0

Photometric Results

Lumens(lm): 1681.57
Efficiency(%): 77.71%
Lumens(lm)/Power(W): 68.05
Central intensity(cd): 3155.420
Maximum intensity(cd): 3155.420
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=38.6
[C90/270]Total=38.6
Field angle(10%Imax): [C0/180]Total=71.1
[C90/270]Total=71.1
Maximum s/h(1/2): C0_180=0.63 C90_270=0.63
Maximum s/h(1/4): C0_180=0.63 C90_270=0.63
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.50%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.844%

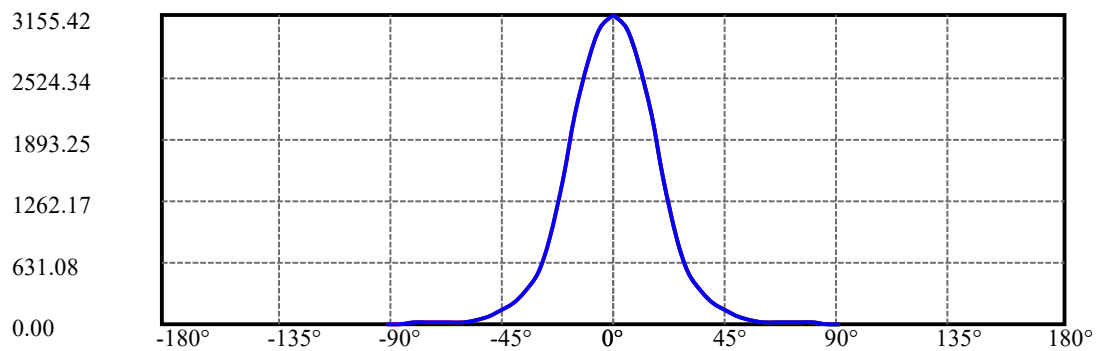
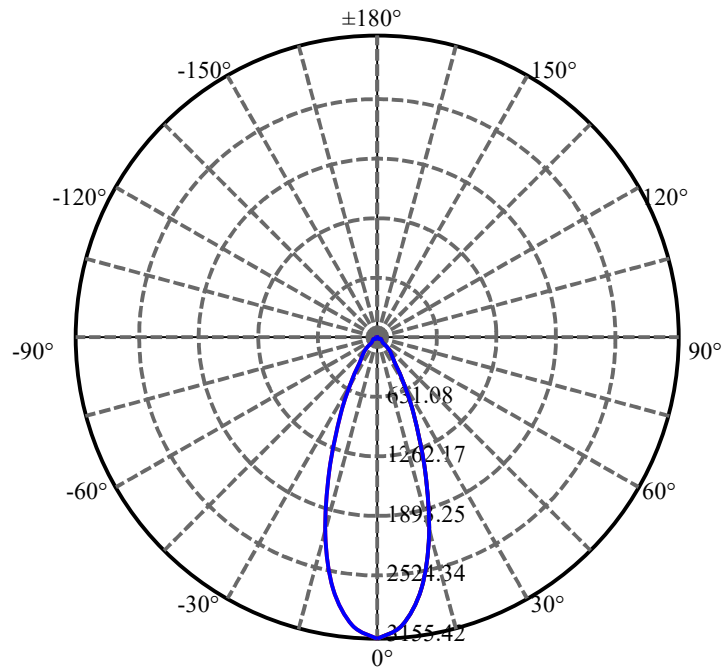
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3155.420	18.870	18.87	.872%	1.122%
5.0	3023.560	144.445	163.316	6.675%	9.712%
10.0	2680.008	255.091	418.407	11.788%	24.882%
15.0	2134.812	302.862	721.269	13.995%	42.893%
20.0	1487.851	278.933	1000.203	12.890%	59.480%
25.0	883.538	204.674	1204.877	9.458%	71.652%
30.0	520.262	142.588	1347.464	6.589%	80.132%
35.0	327.806	103.062	1450.526	4.763%	86.260%
40.0	220.487	77.686	1528.212	3.590%	90.880%
45.0	131.199	50.852	1579.063	2.350%	93.904%
50.0	79.495	33.380	1612.443	1.542%	95.889%
55.0	45.401	20.385	1632.828	.942%	97.102%
60.0	26.104	12.391	1645.22	.573%	97.839%
65.0	18.974	9.426	1654.646	.436%	98.399%
70.0	15.457	7.962	1662.607	.368%	98.873%
75.0	12.642	6.694	1669.301	.309%	99.271%
80.0	10.433	5.632	1674.933	.260%	99.606%
85.0	8.651	4.724	1679.657	.218%	99.886%
90.0	6.965	1.909	1681.565	.088%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1347.46	62.27%	80.13%
0-40	1528.21	70.62%	90.88%
0-60	1645.22	76.03%	97.84%
0-90	1679.66	77.62%	99.89%
0-120	1679.66	77.62%	99.89%
0-180	1681.57	77.71%	100.00%
60-90	46.83	2.16%	2.78%
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%
0-29.92	1345.25	62.17%	80.00%

ZONAL LUMEN SUMMARY

0-10	418.41
10-20	581.80
20-30	347.26
30-40	180.75
40-50	84.23
50-60	32.78
60-70	17.39
70-80	12.33
80-90	4.72
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:

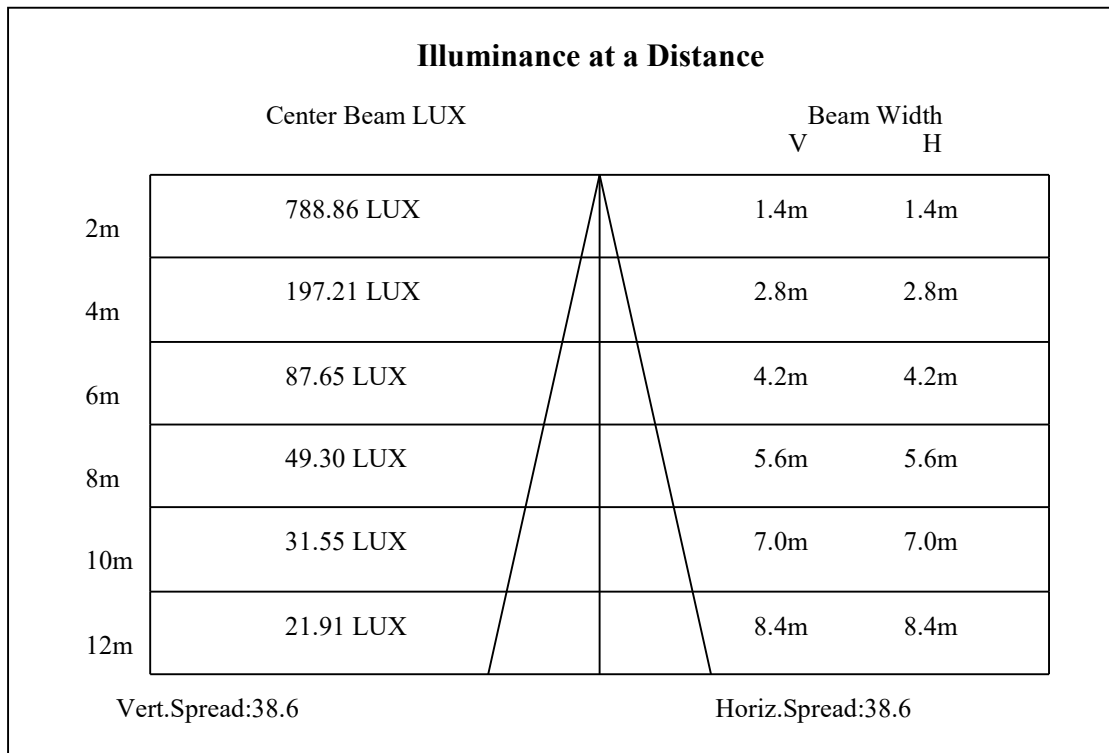
C90/C270:

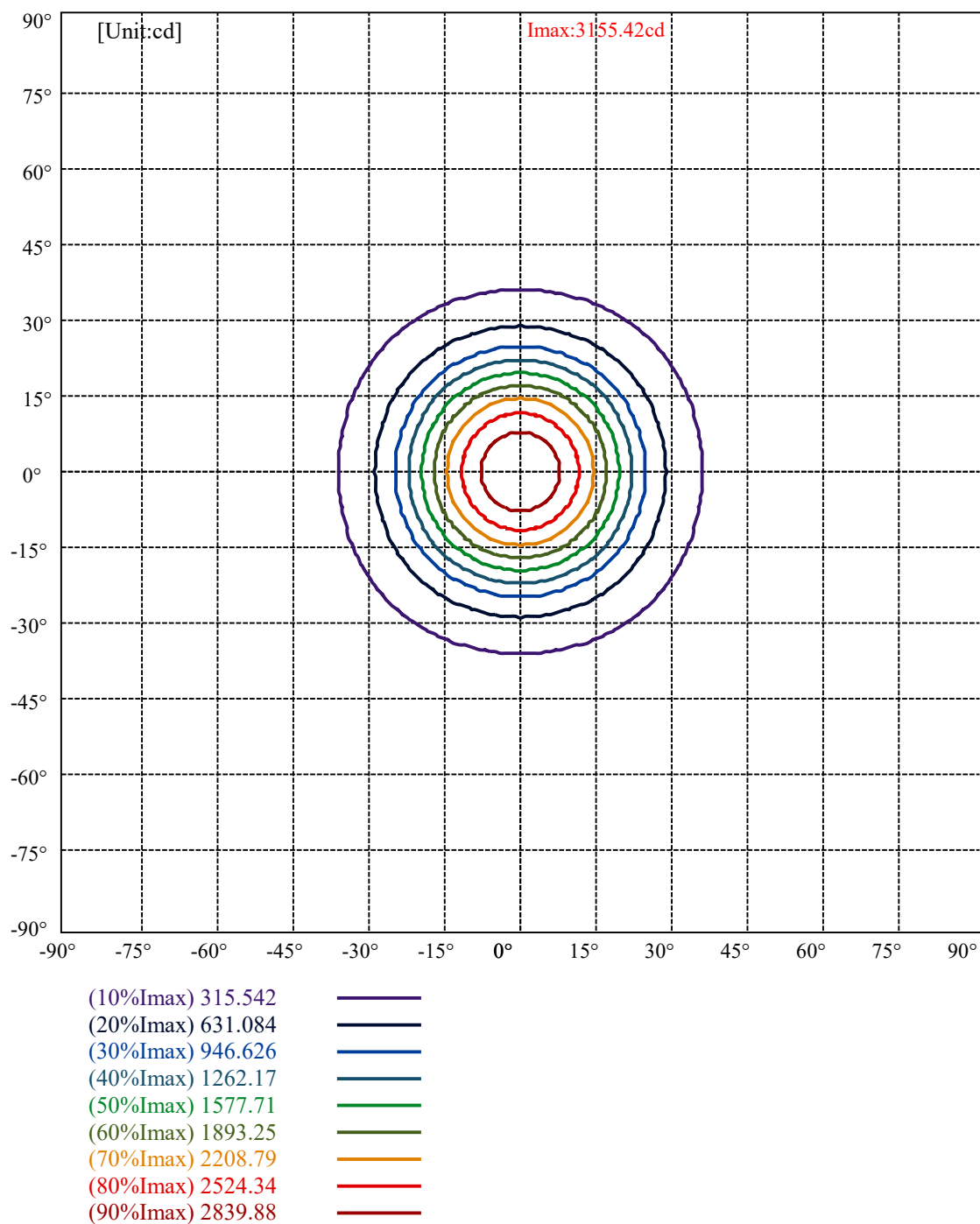
Field angle(10%Imax):C0/180Left:35.6 Right:35.6

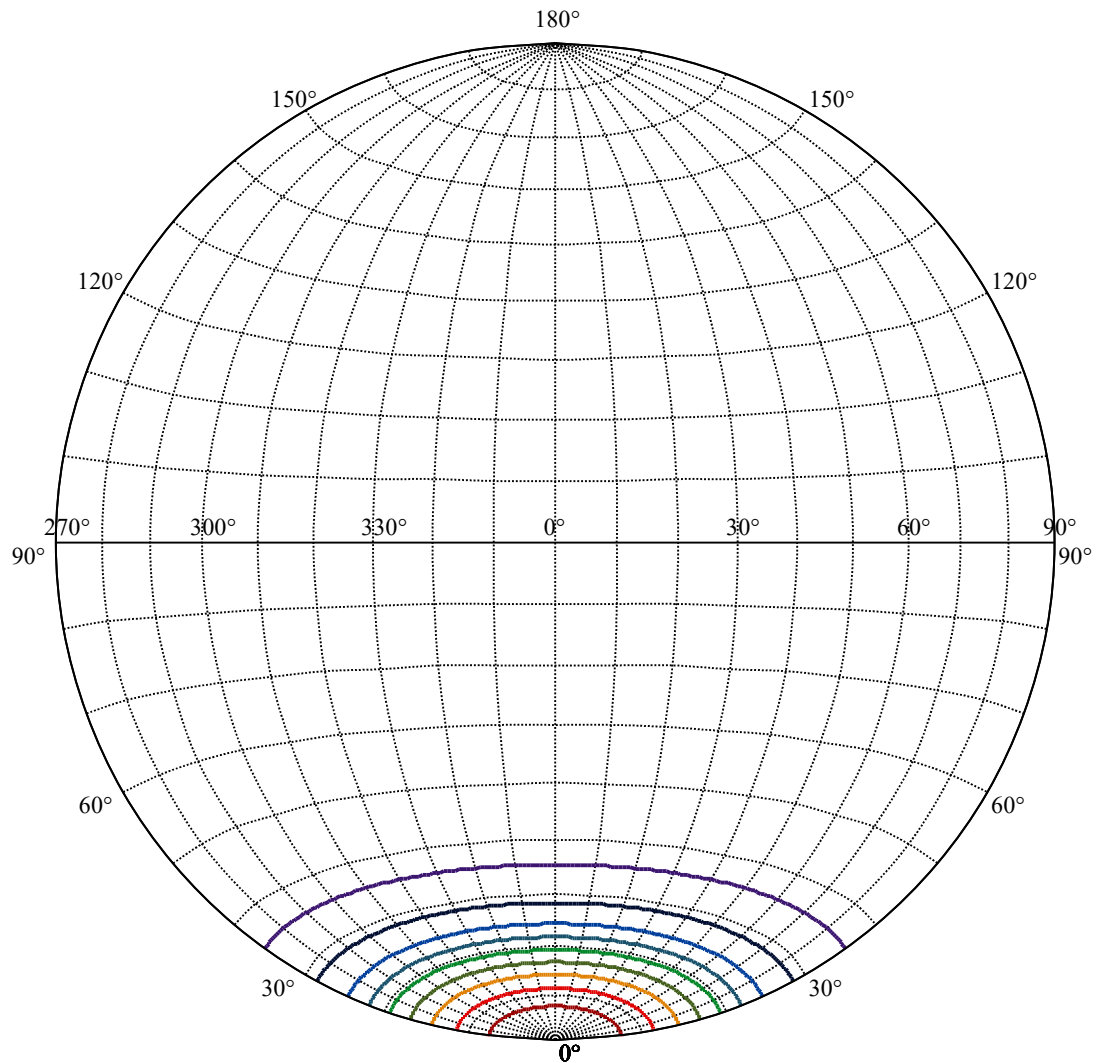
:C90/270Left:35.6 Right:35.6

Beam Angle(50%Imax):C0/180Left:19.3 Right:19.3

:C90/270Left:19.3 Right:19.3







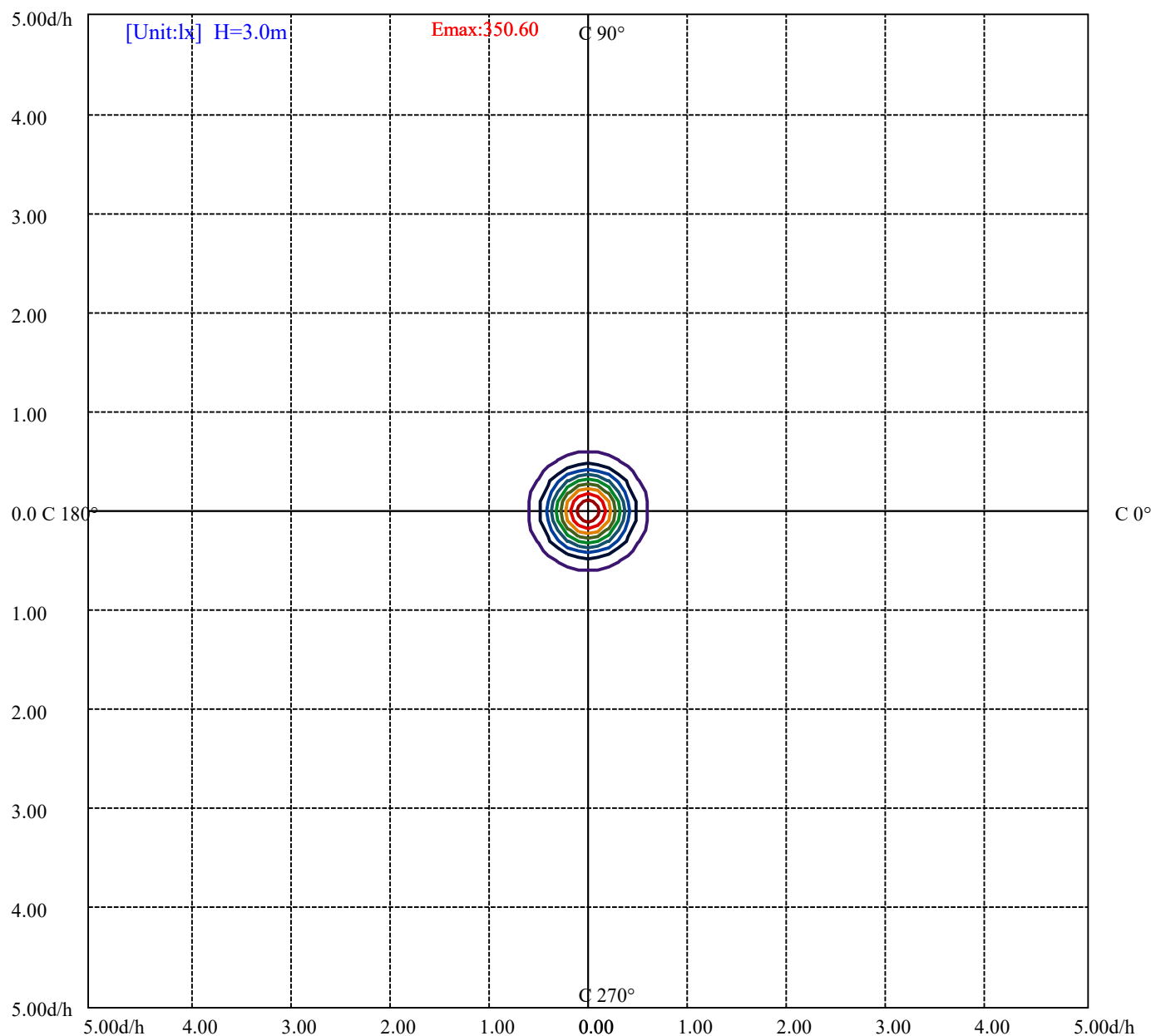
House

[Unit:cd]

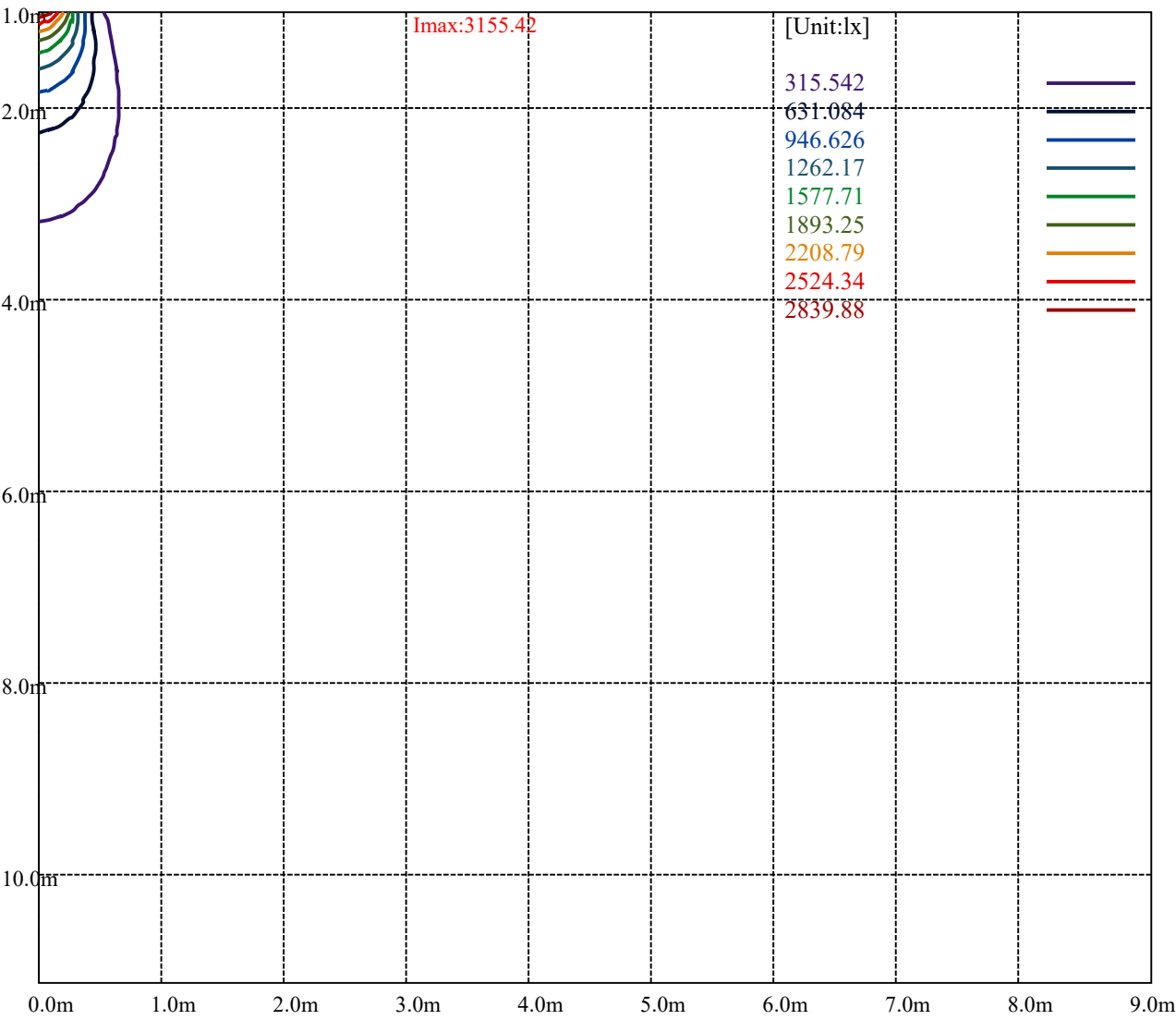
Road

Imax:3155.42

(10%Imax)	315.542	—
(20%Imax)	631.084	—
(30%Imax)	946.626	—
(40%Imax)	1262.17	—
(50%Imax)	1577.71	—
(60%Imax)	1893.25	—
(70%Imax)	2208.79	—
(80%Imax)	2524.34	—
(90%Imax)	2839.88	—



(10%Emax) 35.06022	—
(20%Emax) 70.12033	—
(30%Emax) 105.1806	—
(40%Emax) 140.2411	—
(50%Emax) 175.3011	—
(60%Emax) 210.3611	—
(70%Emax) 245.4211	—
(80%Emax) 280.4811	—
(90%Emax) 315.5411	—



Luminance Table

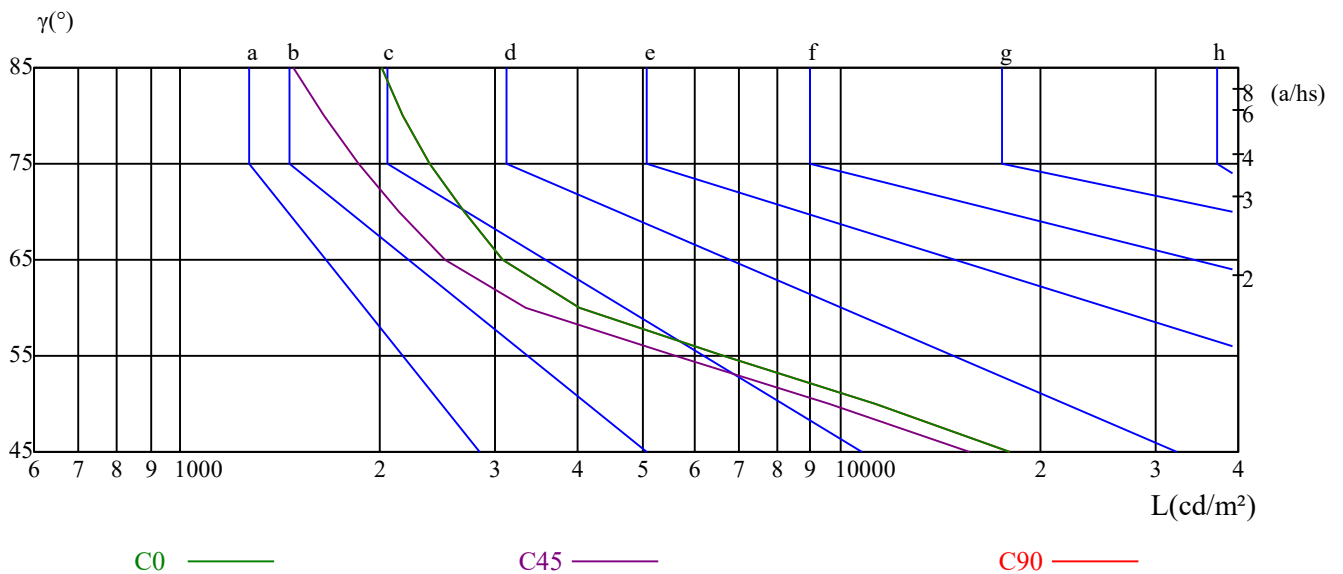
γ	45	50	55	60	65	70	75	80	85
C0	18037	11241	6662	4011	3085	2690	2387	2170	2019
C45	15684	9631	5619	3328	2514	2148	1862	1649	1486
C90	18037	11241	6662	4011	3085	2690	2387	2170	2019

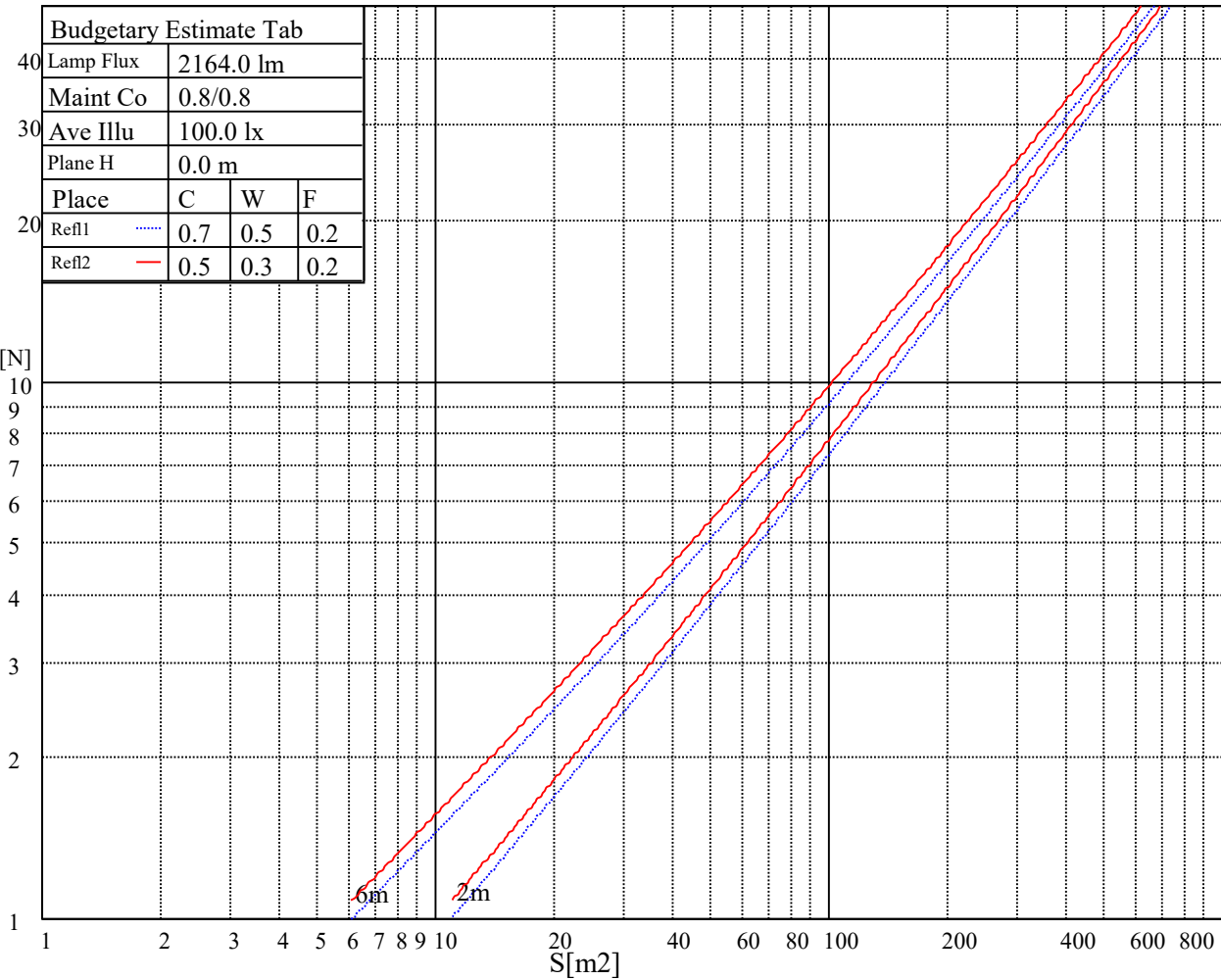
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6843	6843	6843	7445	7445	7445	15128	15128	15128

Glare Table

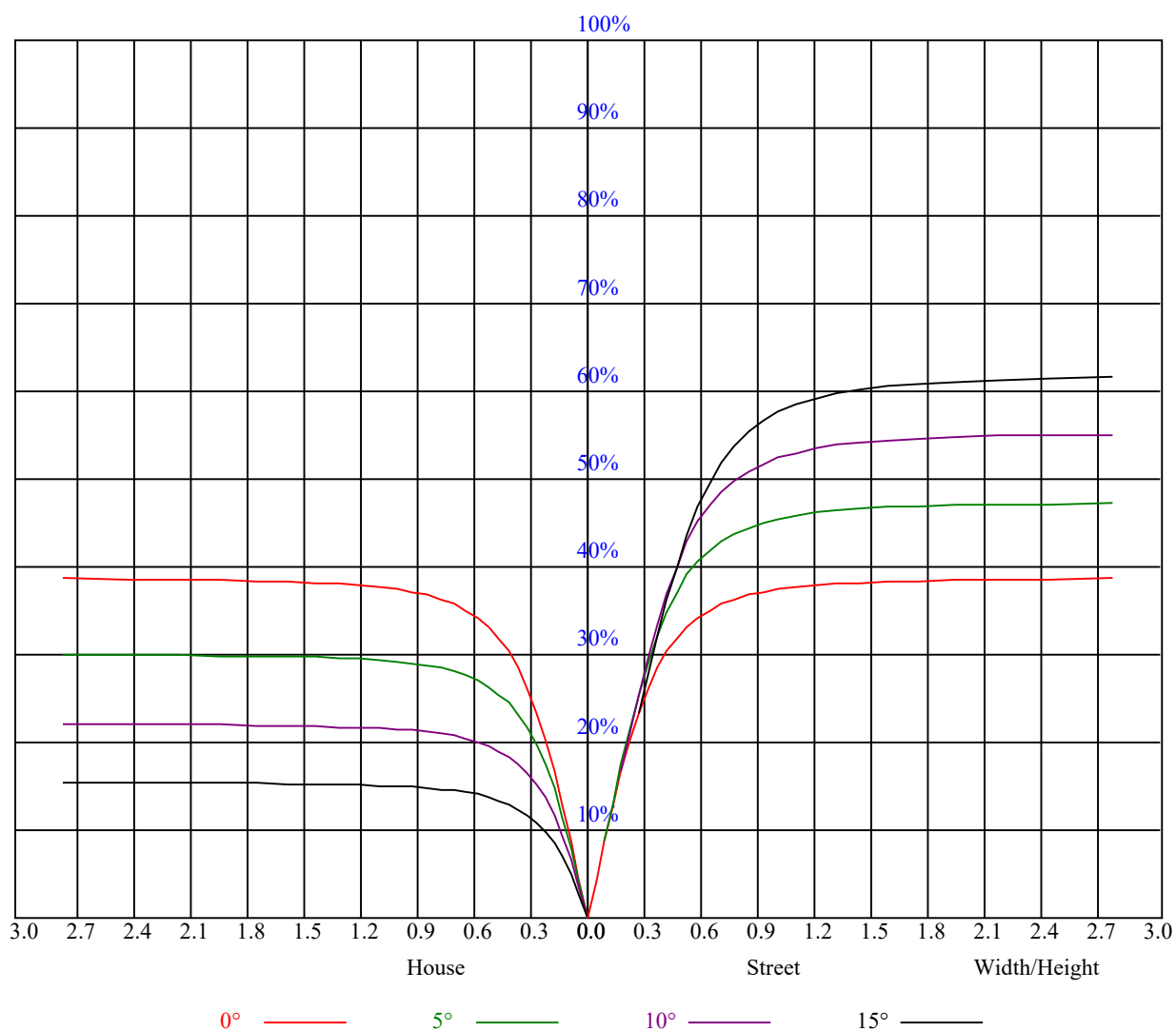
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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



Nata 3-1700-N

Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	3154.73	3080.41	2748.42	2222.08	1642.33	983.31	561.58	357.32	250.51		
45.0	3154.73	2999.47	2635.55	2092.14	1449.64	811.53	494.41	313.82	202.61		
90.0	3144.27	2909.73	2508.92	1909.36	1077.62	708.41	434.62	281.94	178.11		
135.0	3166.29	2989.56	2621.24	2046.45	1396.23	802.72	476.24	302.26	199.63		
180.0	3158.04	2967.54	2583.80	2013.41	1404.49	790.78	466.88	304.13	196.39		
225.0	3154.73	3058.38	2736.30	2196.20	1561.40	932.71	531.02	326.26	225.90		
270.0	3144.27	3113.44	2874.49	2368.53	1761.80	1087.36	636.45	390.35	282.44		
315.0	3166.29	3069.94	2731.35	2230.33	1609.30	951.48	560.91	346.36	228.32		
360.0	3154.73	3080.41	2748.42	2222.08	1642.33	983.31	561.58	357.32	250.51		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	140.45	87.54	49.94	27.97	19.71	15.91	12.99	10.68	8.81		
45.0	124.04	74.49	41.40	23.45	17.89	14.76	12.22	10.30	8.59		
90.0	107.69	63.48	35.13	21.47	16.68	13.98	11.78	10.02	8.42		
135.0	118.59	70.91	41.07	23.29	17.56	14.59	12.11	10.08	8.48		
180.0	117.55	72.67	40.74	23.95	18.11	14.92	12.11	9.91	8.37		
225.0	137.37	82.42	48.78	28.35	20.10	16.19	12.94	10.52	8.64		
270.0	160.32	97.56	56.16	33.31	21.64	17.18	13.93	11.23	9.03		
315.0	143.59	86.88	49.99	27.03	20.10	16.13	13.05	10.74	8.86		
360.0	140.45	87.54	49.94	27.97	19.71	15.91	12.99	10.68	8.81		
C/γ(°)	90.0										
0.0	6.99										
45.0	6.77										
90.0	6.83										
135.0	6.88										
180.0	6.88										
225.0	6.99										
270.0	7.21										
315.0	7.16										
360.0	6.99										