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NATA

LumCAT: 3-1901-M

Luminaire:

Report No: NATA0100

Voltage(V): 17.0000

Test No:

Current(A): 0.6000

LampCAT: XICATO XTM LES 19MM

Power (W): 10.5600

Lamp flux(lm): 1078.0

PF: 0.0000

Number of Lamps: 1

Ballast type:

Length(mm): 79

Width(mm): 79

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 956.46

Efficiency(%): 88.73%

Lumens(lm)/Power(W): 92.13

Central intensity(cd): 2905.739

Maximum intensity(cd): 2905.739

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.6

[C90/270]Total=26.6

Field angle(10%Imax): [C0/180]Total=64.9

[C90/270]Total=64.9

Maximum s/h(1/2): C0_180=0.45 C90_270=0.45

Maximum s/h(1/4): C0_180=0.48 C90_270=0.48

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.25%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.098%

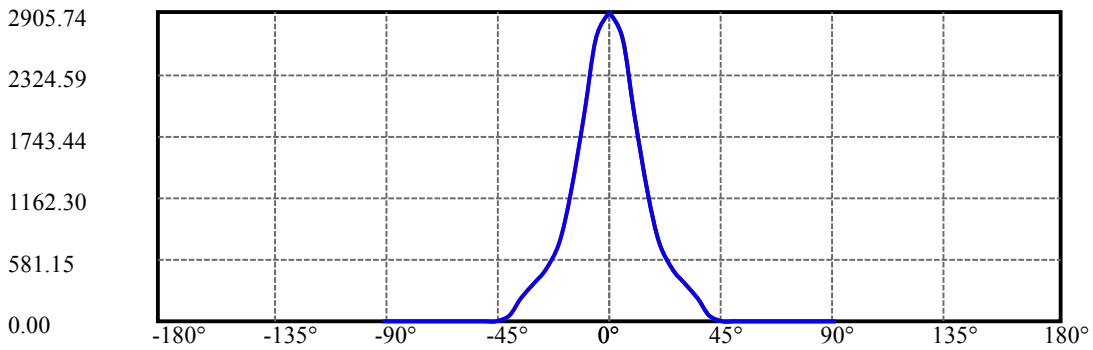
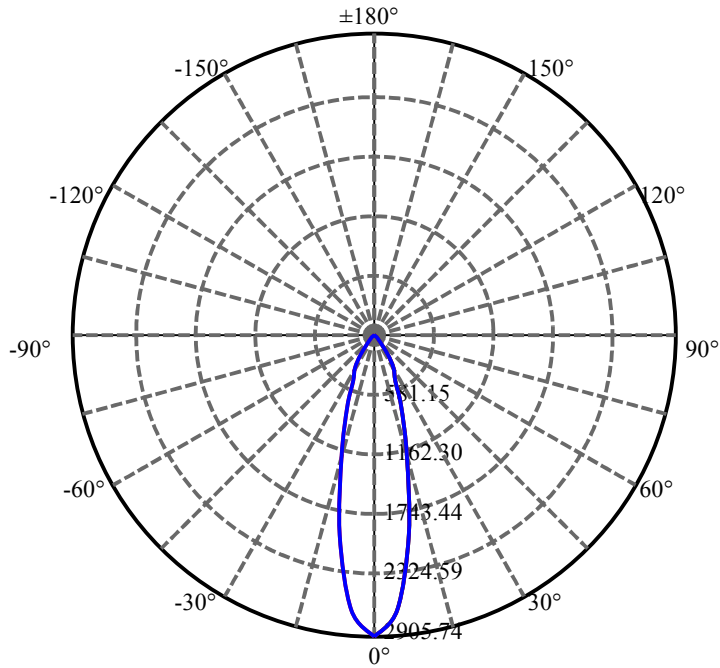
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2905.739	17.377	17.377	1.612%	1.817%
5.0	2648.784	126.541	143.918	11.739%	15.047%
10.0	1945.425	185.171	329.09	17.177%	34.407%
15.0	1201.076	170.395	499.484	15.807%	52.222%
20.0	736.627	138.098	637.583	12.811%	66.661%
25.0	484.806	112.307	749.889	10.418%	78.403%
30.0	362.657	99.393	849.282	9.220%	88.794%
35.0	214.837	67.544	916.827	6.266%	95.856%
40.0	56.171	19.791	936.618	1.836%	97.926%
45.0	5.843	2.265	938.883	.210%	98.162%
50.0	4.583	1.925	940.807	.179%	98.364%
55.0	4.274	1.919	942.726	.178%	98.564%
60.0	4.150	1.970	944.696	.183%	98.770%
65.0	4.109	2.041	946.737	.189%	98.984%
70.0	4.081	2.102	948.839	.195%	99.203%
75.0	4.040	2.139	950.978	.198%	99.427%
80.0	4.012	2.166	953.144	.201%	99.653%
85.0	4.081	2.228	955.372	.207%	99.886%
90.0	3.964	1.086	956.459	.101%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	849.28	78.78%	88.79%
0-40	936.62	86.88%	97.93%
0-60	944.70	87.63%	98.77%
0-90	955.37	88.62%	99.89%
0-120	955.37	88.62%	99.89%
0-180	956.46	88.73%	100.00%
60-90	12.65	1.17%	1.32%
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%
0-25.77	765.17	70.98%	80.00%

ZONAL LUMEN SUMMARY

0-10	329.09
10-20	308.49
20-30	211.70
30-40	87.34
40-50	4.19
50-60	3.89
60-70	4.14
70-80	4.30
80-90	2.23
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: —————

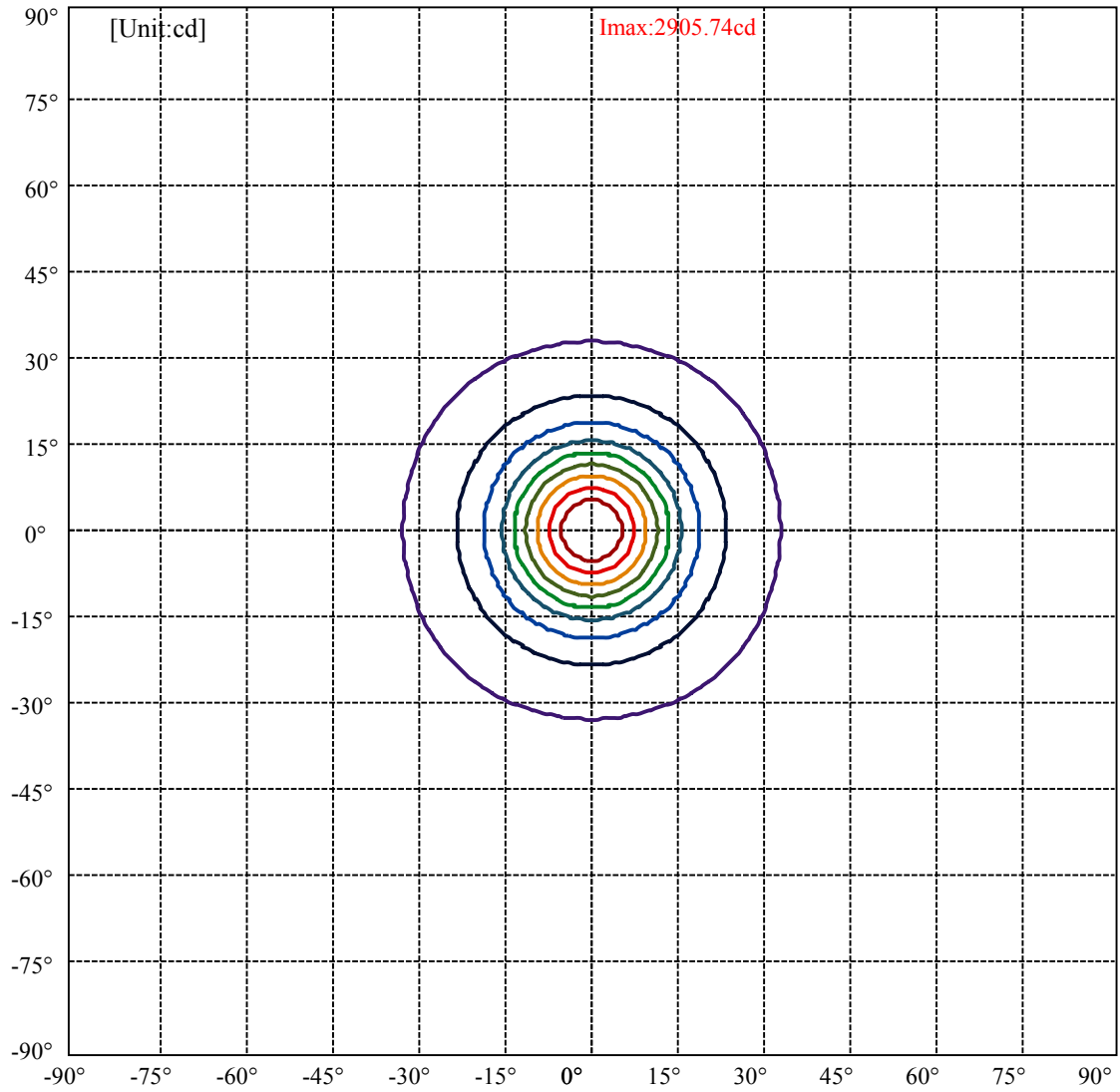
C90/C270: —————

Field angle(10%Imax):C0/180Left:32.4 Right:32.4

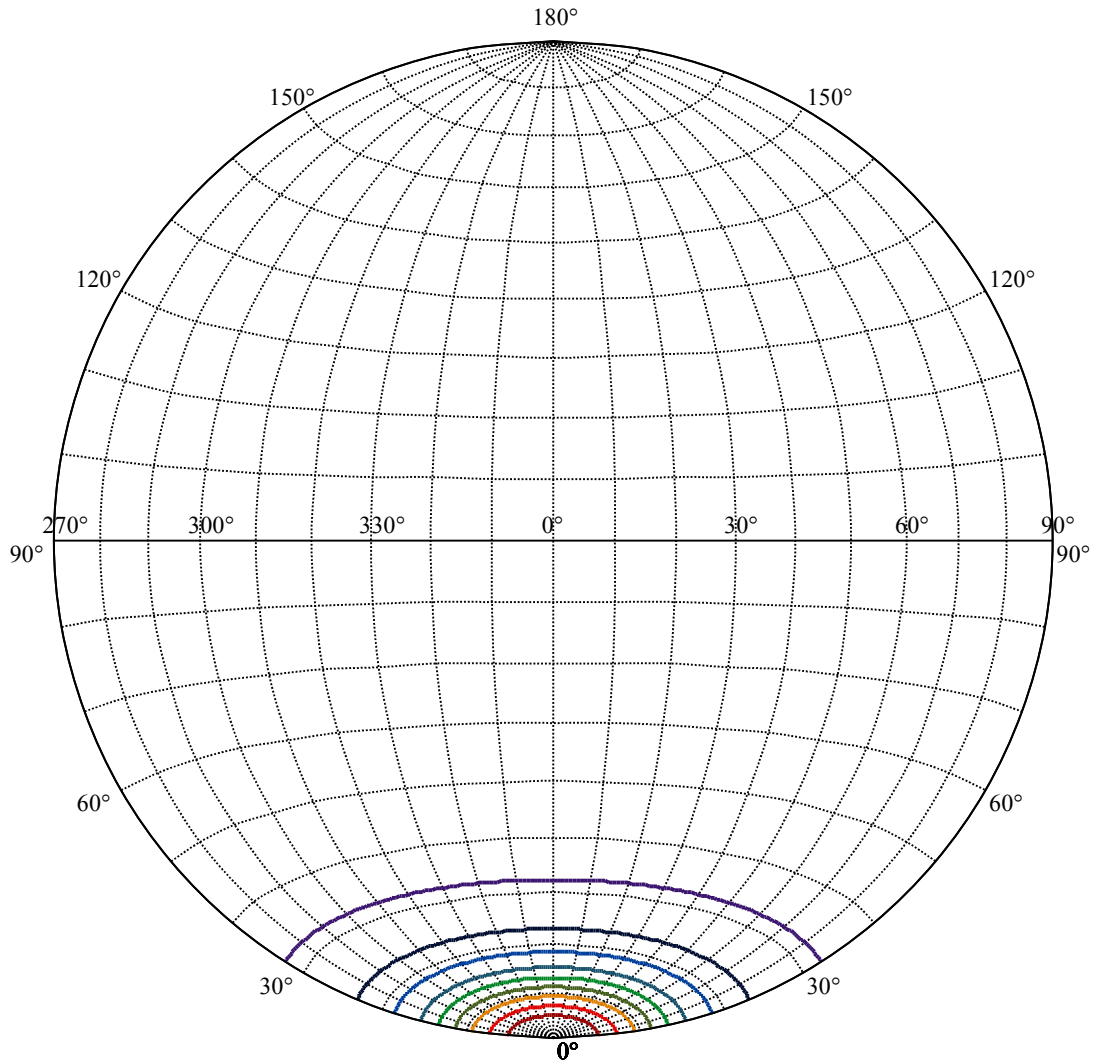
:C90/270Left:32.4 Right:32.4

Beam Angle(50%Imax):C0/180Left:13.3 Right:13.3

:C90/270Left:13.3 Right:13.3



(10%Imax) 290.574	—
(20%Imax) 581.148	—
(30%Imax) 871.722	—
(40%Imax) 1162.3	—
(50%Imax) 1452.87	—
(60%Imax) 1743.44	—
(70%Imax) 2034.02	—
(80%Imax) 2324.59	—
(90%Imax) 2615.17	—



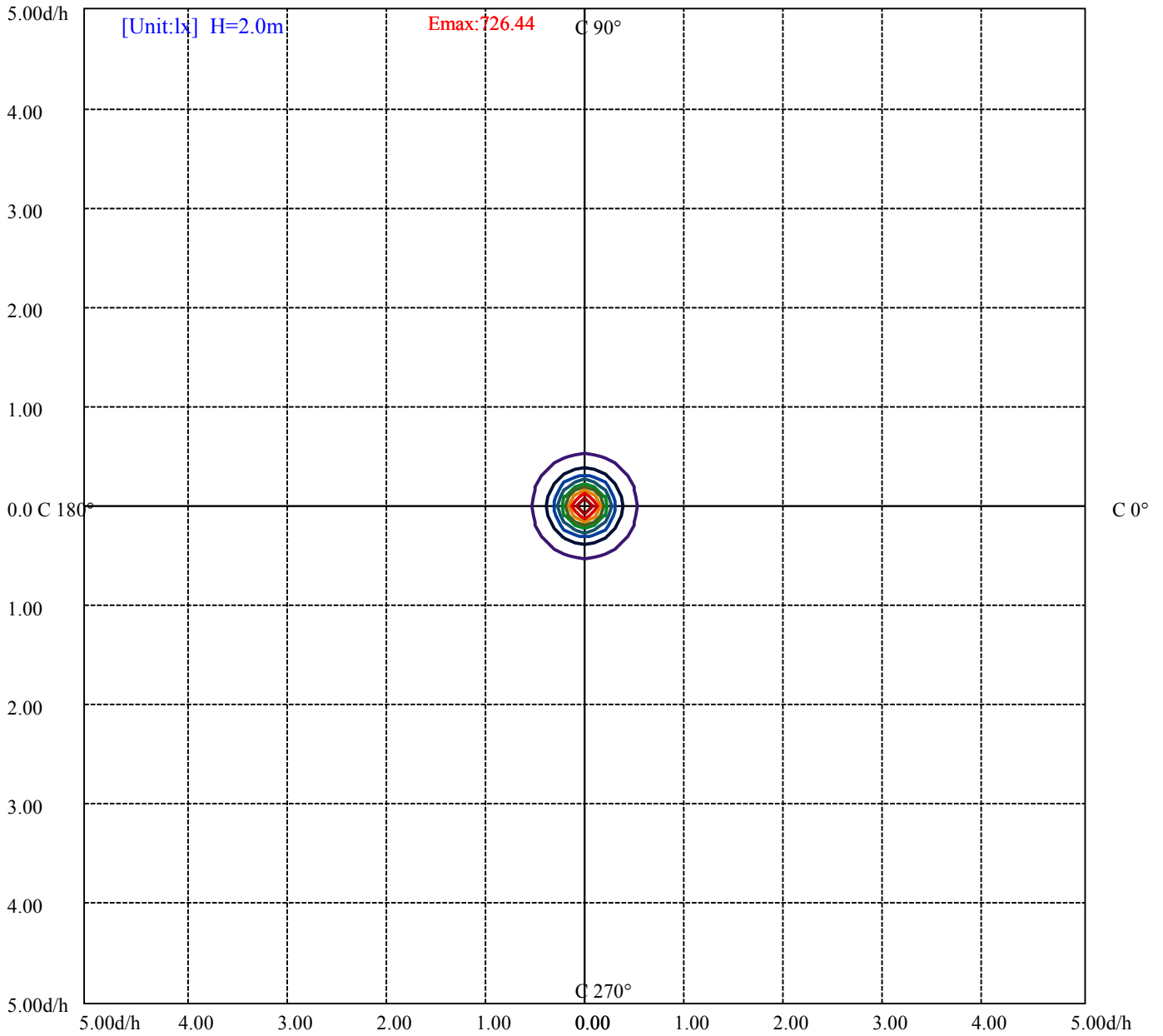
House

[Unit:cd]

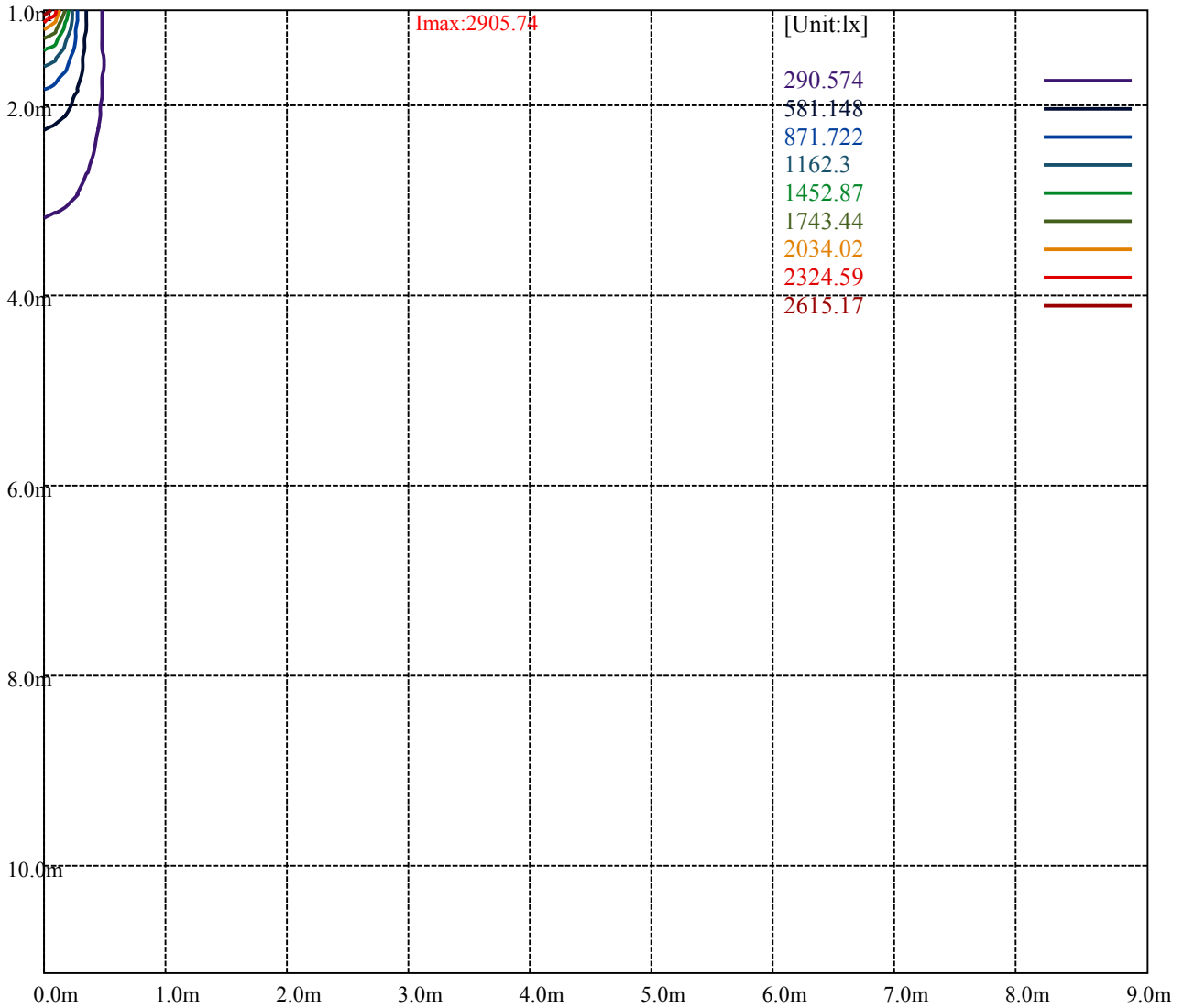
Road

Imax:2905.74

(10%Imax) 290.574	—
(20%Imax) 581.148	—
(30%Imax) 871.722	—
(40%Imax) 1162.3	—
(50%Imax) 1452.87	—
(60%Imax) 1743.44	—
(70%Imax) 2034.02	—
(80%Imax) 2324.59	—
(90%Imax) 2615.17	—



- (10%Emax) 72.64325
- (20%Emax) 145.2865
- (30%Emax) 217.9297
- (40%Emax) 290.5725
- (50%Emax) 363.2175
- (60%Emax) 435.86
- (70%Emax) 508.5025
- (80%Emax) 581.145
- (90%Emax) 653.79



Luminance Table

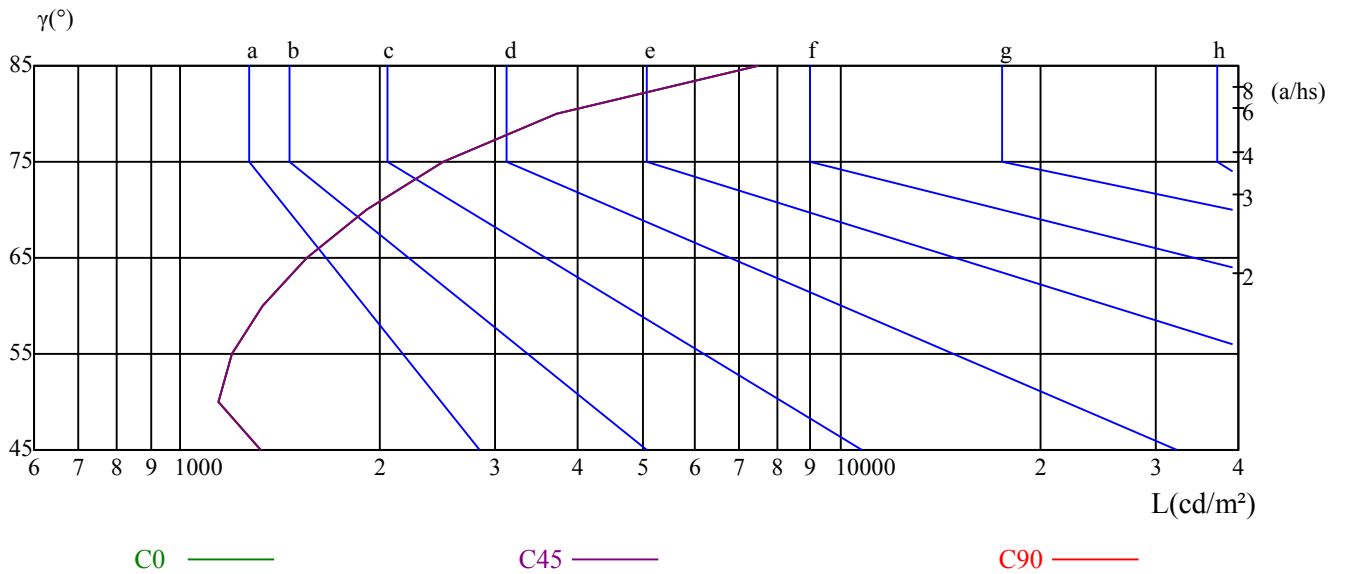
γ	45	50	55	60	65	70	75	80	85
C0	1324	1143	1194	1330	1558	1912	2501	3702	7503
C45	1324	1143	1194	1330	1558	1912	2501	3702	7503
C90	1324	1143	1194	1330	1558	1912	2501	3702	7503

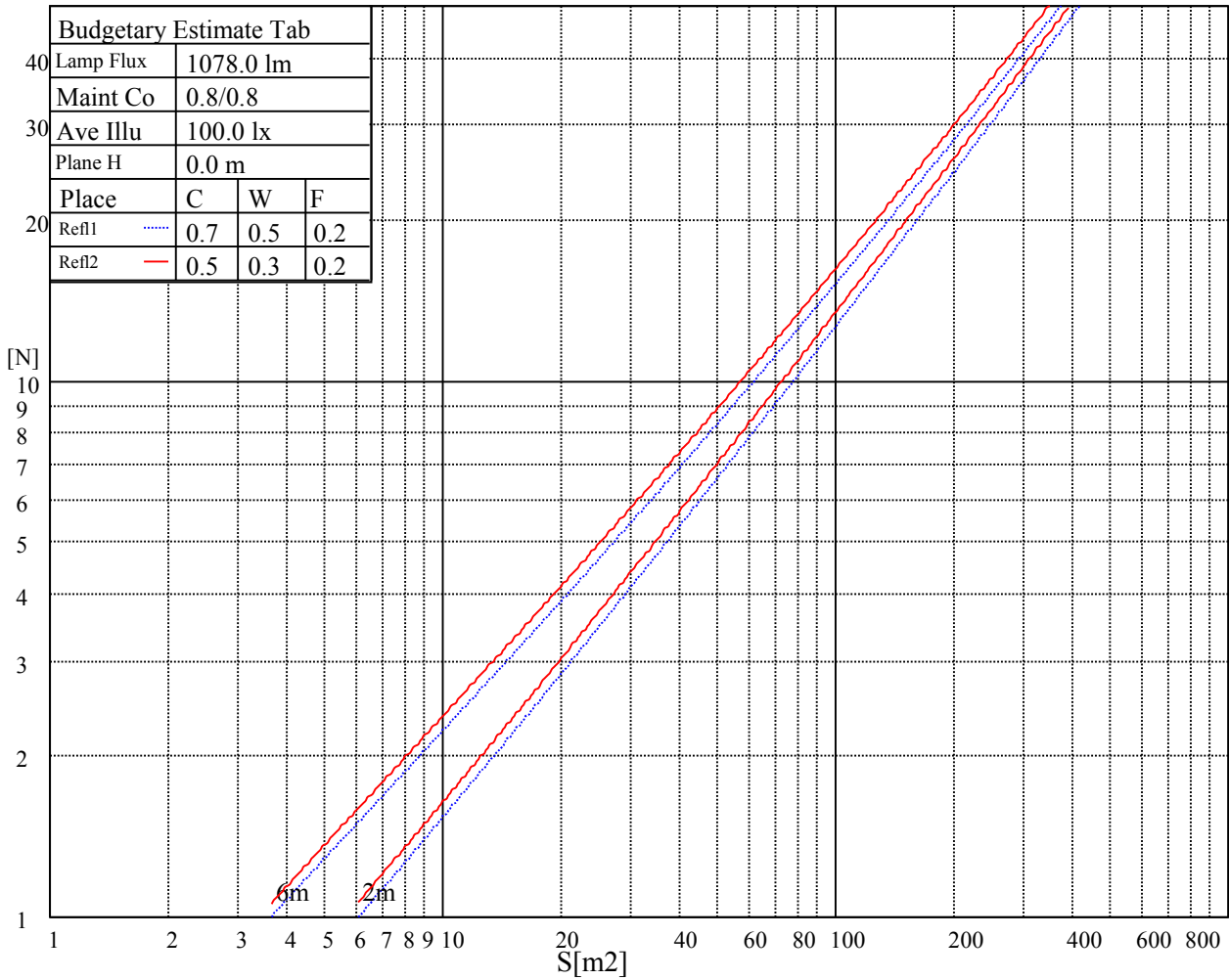
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1558	1558	1558	2501	2501	2501	7503	7503	7503

Glare Table

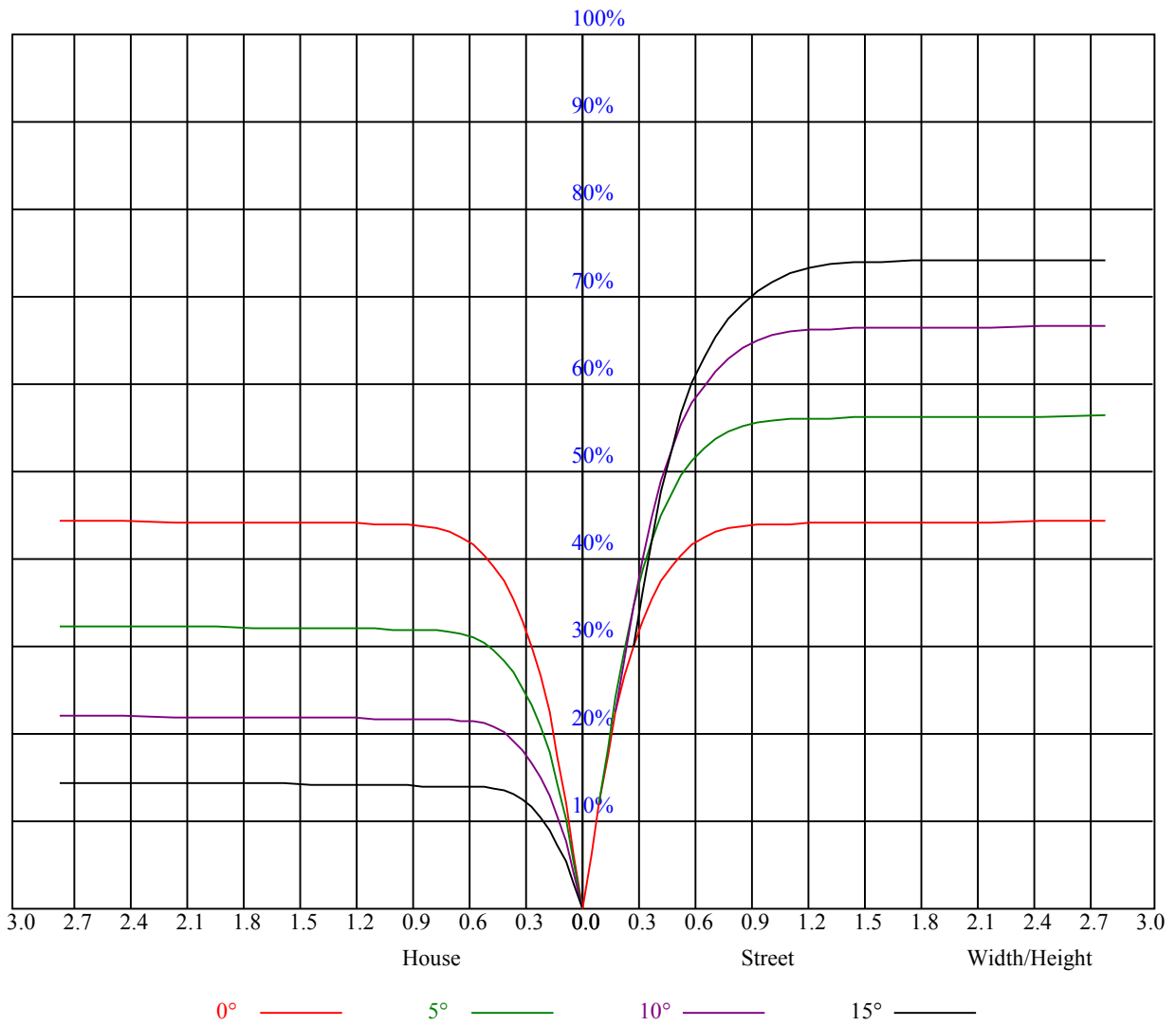
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.99	0.97	0.94	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.83
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.81	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.78	0.76
4	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.75	0.73
5	0.81	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.71
6	0.78	0.74	0.71	0.78	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.66
8	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.70	0.67	0.64	0.63
9	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.68	0.65	0.62	0.61
10	0.68	0.64	0.61	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.60	0.59



NATA 3-1901-M

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	2914.69	2638.30	1945.97	1218.12	732.14	482.51	361.23	207.67	53.85
22.5	2926.80	2644.80	1955.88	1235.25	743.37	485.60	361.45	212.79	59.08
45.0	2891.01	2640.12	1944.32	1190.26	746.95	488.24	362.33	209.38	59.19
67.5	2918.54	2665.72	1941.18	1163.62	724.38	481.52	364.47	223.03	51.53
90.0	2896.52	2650.69	1934.68	1212.23	731.48	485.21	363.54	220.61	55.94
112.5	2902.57	2665.72	1941.18	1163.62	724.38	481.52	364.47	223.03	51.53
135.0	2906.98	2640.12	1944.32	1190.26	746.95	488.24	362.33	209.38	59.19
157.5	2888.81	2644.80	1955.88	1235.25	743.37	485.60	361.45	212.79	59.08
180.0	2914.69	2638.30	1945.97	1218.12	732.14	482.51	361.23	207.67	53.85
202.5	2926.80	2644.80	1955.88	1235.25	743.37	485.60	361.45	212.79	59.08
225.0	2891.01	2640.12	1944.32	1190.26	746.95	488.24	362.33	209.38	59.19
247.5	2918.54	2665.72	1941.18	1163.62	724.38	481.52	364.47	223.03	51.53
270.0	2896.52	2650.69	1934.68	1212.23	731.48	485.21	363.54	220.61	55.94
292.5	2902.57	2665.72	1941.18	1163.62	724.38	481.52	364.47	223.03	51.53
315.0	2906.98	2640.12	1944.32	1190.26	746.95	488.24	362.33	209.38	59.19
337.5	2888.81	2644.80	1955.88	1235.25	743.37	485.60	361.45	212.79	59.08
360.0	2914.69	2638.30	1945.97	1218.12	732.14	482.51	361.23	207.67	53.85
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.00	4.51	4.18	4.13	4.07	4.07	3.96	3.96	4.02
22.5	5.95	4.57	4.24	4.13	4.07	4.07	4.02	4.02	4.02
45.0	6.11	4.62	4.29	4.13	4.13	4.07	4.02	4.02	4.07
67.5	5.51	4.57	4.29	4.18	4.13	4.07	4.07	4.02	4.13
90.0	5.62	4.62	4.35	4.18	4.13	4.13	4.13	4.02	4.18
112.5	5.51	4.57	4.29	4.18	4.13	4.07	4.07	4.02	4.13
135.0	6.11	4.62	4.29	4.13	4.13	4.07	4.02	4.02	4.07
157.5	5.95	4.57	4.24	4.13	4.07	4.07	4.02	4.02	4.02
180.0	6.00	4.51	4.18	4.13	4.07	4.07	3.96	3.96	4.02
202.5	5.95	4.57	4.24	4.13	4.07	4.07	4.02	4.02	4.02
225.0	6.11	4.62	4.29	4.13	4.13	4.07	4.02	4.02	4.07
247.5	5.51	4.57	4.29	4.18	4.13	4.07	4.07	4.02	4.13
270.0	5.62	4.62	4.35	4.18	4.13	4.13	4.13	4.02	4.18
292.5	5.51	4.57	4.29	4.18	4.13	4.07	4.07	4.02	4.13
315.0	6.11	4.62	4.29	4.13	4.13	4.07	4.02	4.02	4.07
337.5	5.95	4.57	4.24	4.13	4.07	4.07	4.02	4.02	4.02
360.0	6.00	4.51	4.18	4.13	4.07	4.07	3.96	3.96	4.02
C/γ(°)	90.0								
0.0	3.91								
22.5	3.96								
45.0	3.96								
67.5	3.96								
90.0	4.02								
112.5	3.96								
135.0	3.96								
157.5	3.96								
180.0	3.91								
202.5	3.96								
225.0	3.96								
247.5	3.96								
270.0	4.02								
292.5	3.96								
315.0	3.96								
337.5	3.96								
360.0	3.91								