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NATA

LumCAT: 3-1905-M

Luminaire:

Report No: NATA0100

Voltage(V): 17.6000

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): 939.72

Efficiency(%): 87.17%

Lumens(lm)/Power(W): 89.50

Central intensity(cd): 1045.487

Maximum intensity(cd): 1045.487

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=62.2

[C90/270]Total=62.2

Field angle(10%Imax): [C0/180]Total=80.2

[C90/270]Total=80.2

Maximum s/h(1/2): C0_180=0.96 C90_270=0.96

Maximum s/h(1/4): C0_180=0.92 C90_270=0.92

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.67%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.234%

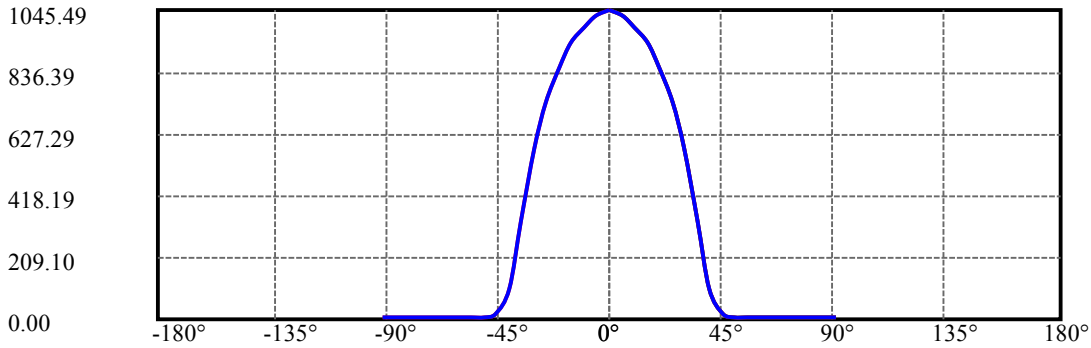
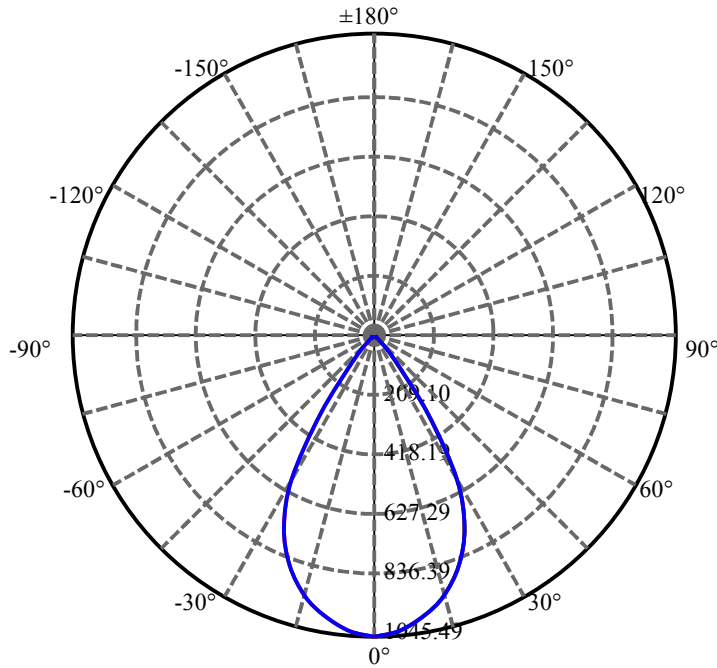
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1045.487	6.252	6.252	.580%	.665%
5.0	1028.343	49.127	55.38	4.557%	5.893%
10.0	989.948	94.226	149.606	8.741%	15.920%
15.0	935.952	132.782	282.388	12.317%	30.050%
20.0	851.606	159.654	442.042	14.810%	47.040%
25.0	736.145	170.530	612.572	15.819%	65.187%
30.0	575.842	157.820	770.392	14.640%	81.981%
35.0	329.258	103.518	873.91	9.603%	92.997%
40.0	106.637	37.572	911.483	3.485%	96.995%
45.0	22.257	8.626	920.109	.800%	97.913%
50.0	9.380	3.939	924.048	.365%	98.332%
55.0	5.279	2.370	926.418	.220%	98.585%
60.0	4.157	1.973	928.391	.183%	98.795%
65.0	3.902	1.939	930.33	.180%	99.001%
70.0	3.902	2.010	932.34	.186%	99.215%
75.0	3.978	2.106	934.446	.195%	99.439%
80.0	3.861	2.084	936.53	.193%	99.661%
85.0	3.937	2.150	938.679	.199%	99.889%
90.0	3.792	1.039	939.719	.096%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	770.39	71.46%	81.98%
0-40	911.48	84.55%	97.00%
0-60	928.39	86.12%	98.79%
0-90	938.68	87.08%	99.89%
0-120	938.68	87.08%	99.89%
0-180	939.72	87.17%	100.00%
60-90	12.26	1.14%	1.30%
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%
0-29.41	751.77	69.74%	80.00%

ZONAL LUMEN SUMMARY

0-10	149.61
10-20	292.44
20-30	328.35
30-40	141.09
40-50	12.57
50-60	4.34
60-70	3.95
70-80	4.19
80-90	2.15
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



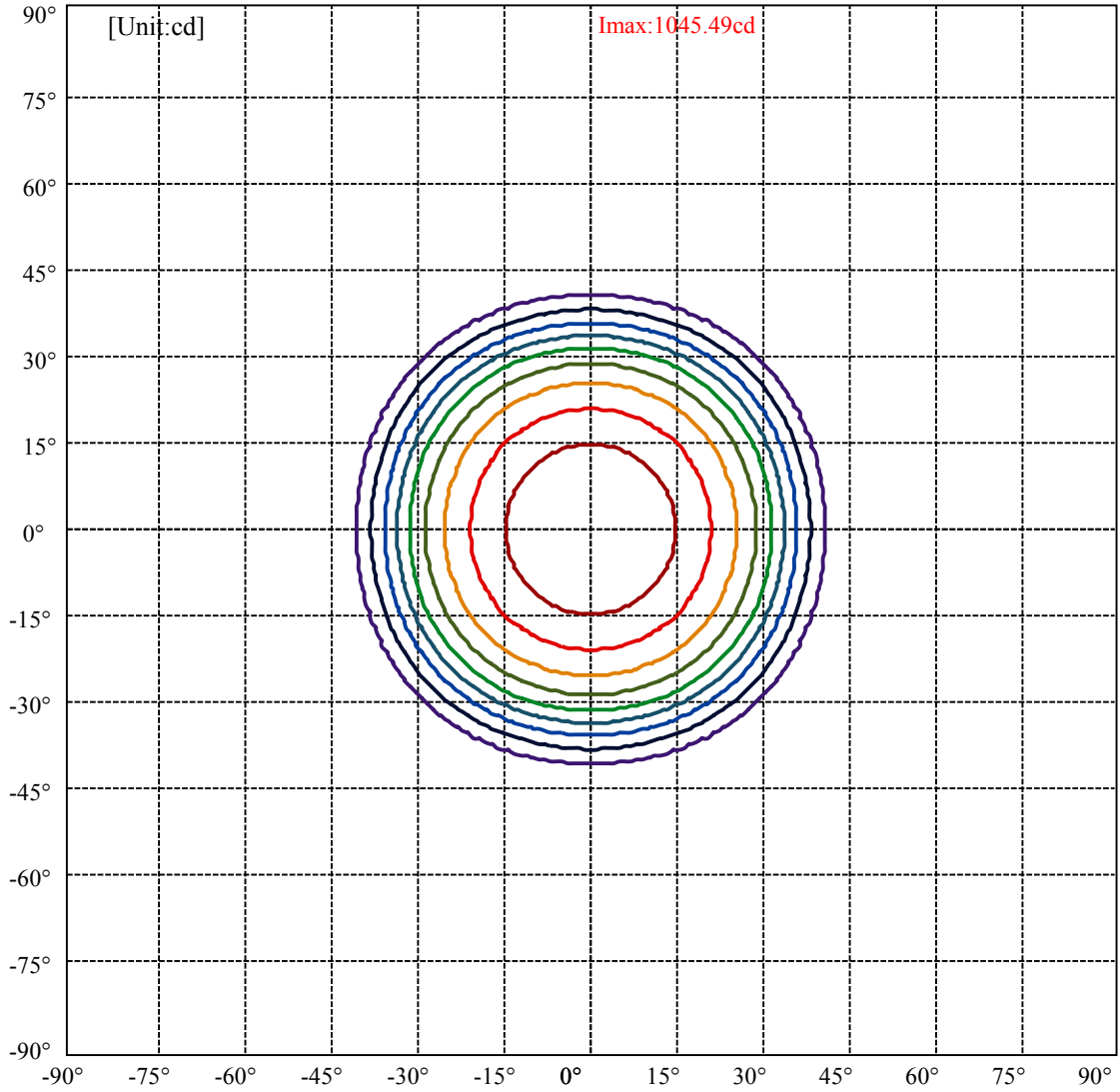
C0(Max): ———

C0/C180: ———

C90/C270: ———

Field angle(10%Imax):C0/180Left:40.1 Right:40.1
:C90/270Left:40.1 Right:40.1

Beam Angle(50%Imax):C0/180Left:31.1 Right:31.1
:C90/270Left:31.1 Right:31.1

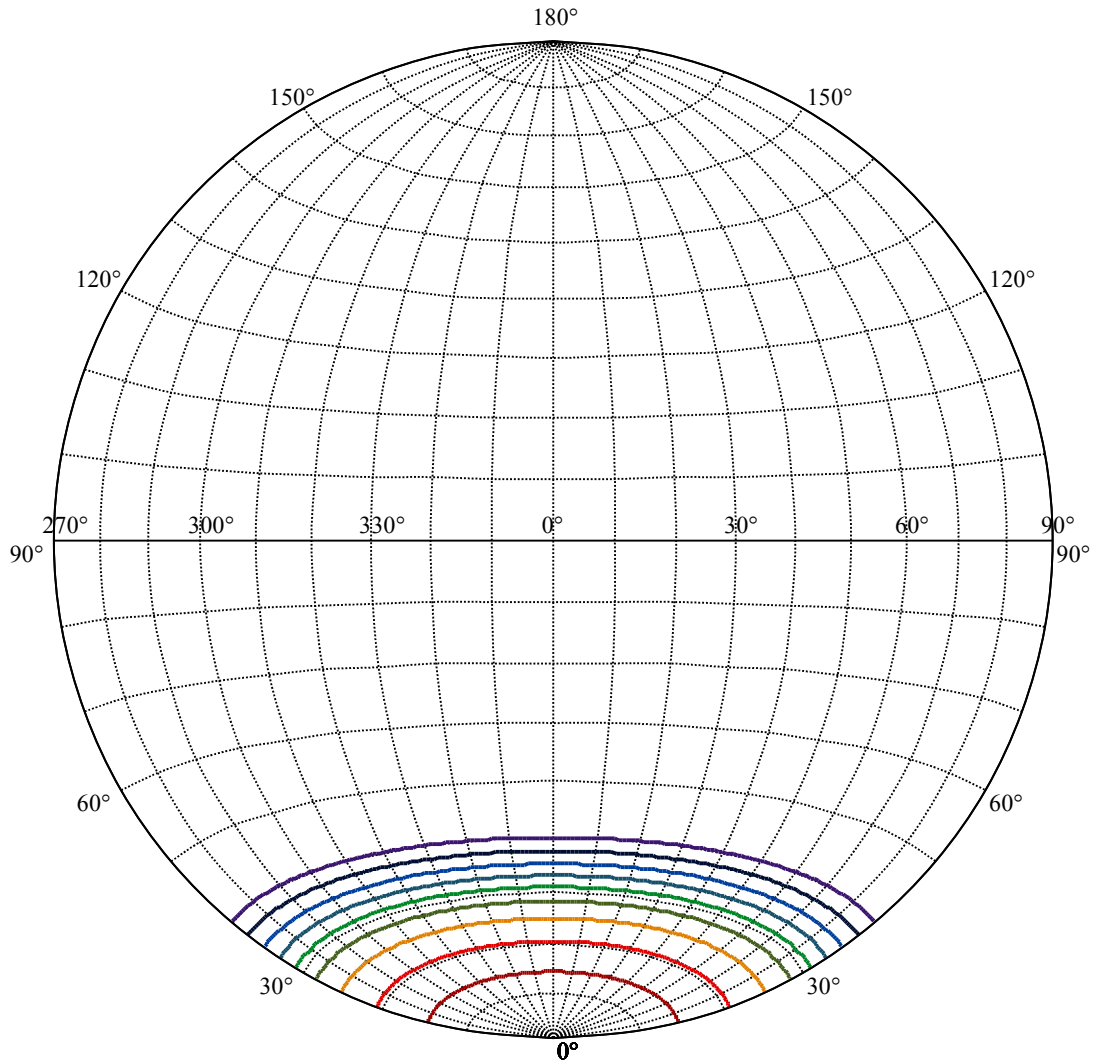


(10%Imax) 104.549	—
(20%Imax) 209.097	—
(30%Imax) 313.646	—
(40%Imax) 418.195	—
(50%Imax) 522.743	—
(60%Imax) 627.292	—
(70%Imax) 731.841	—
(80%Imax) 836.389	—
(90%Imax) 940.938	—

Equipment: gms1980
Temperature(°C): 30.0

Date: 2016/11/17
Humidity(%): 80.0%

Operator: NT08
Distance(m): 7.42



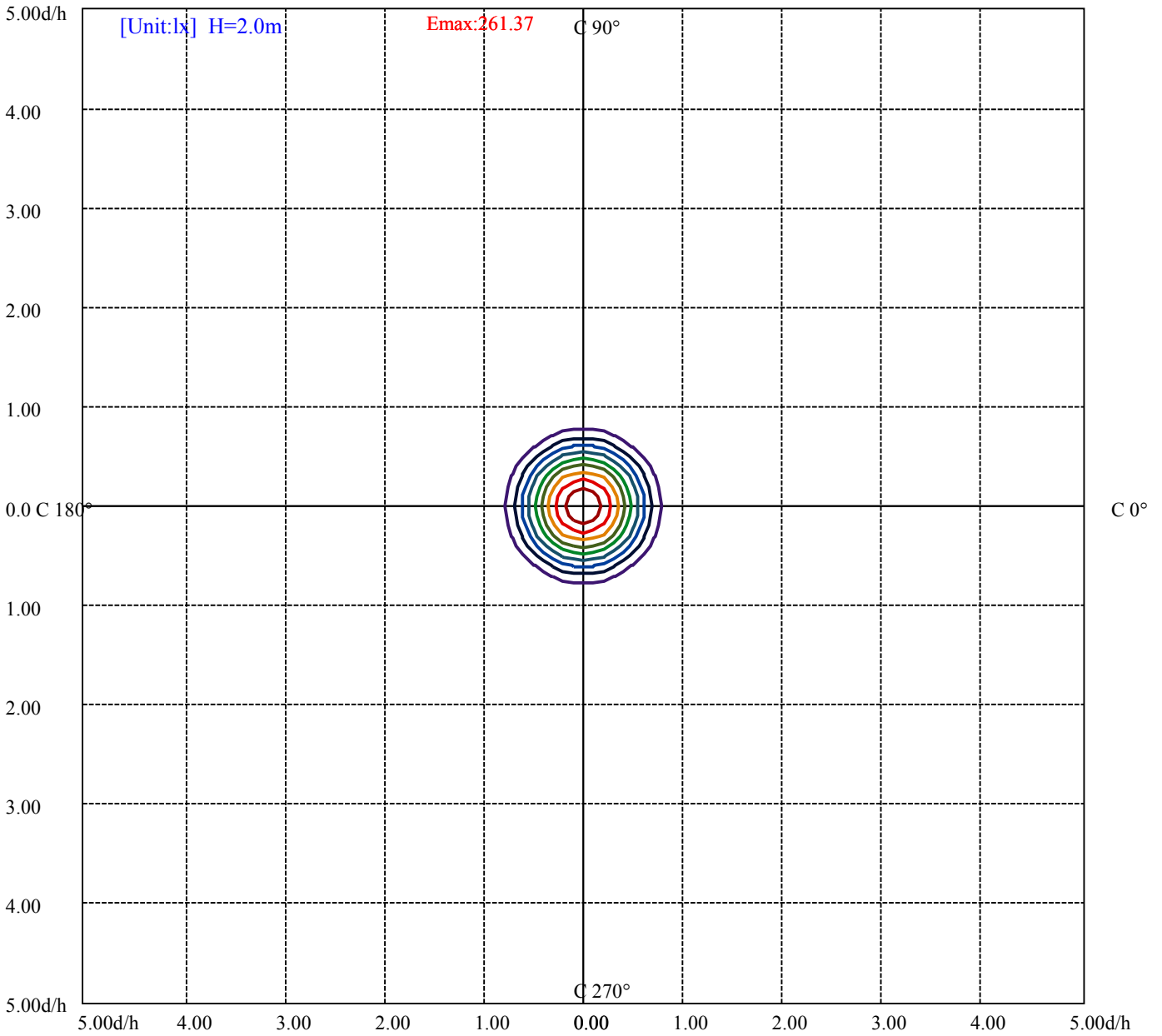
House

[Unit:cd]

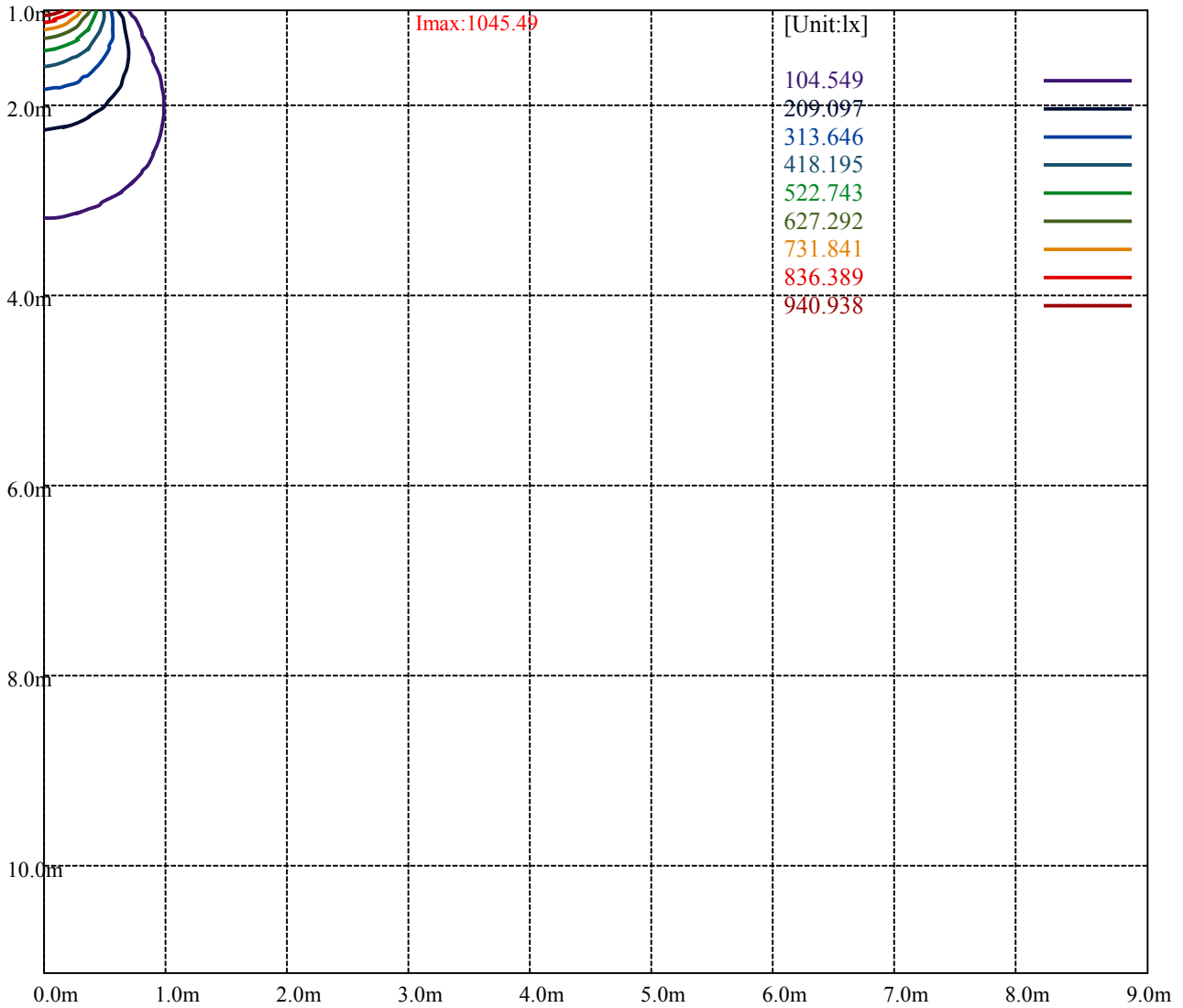
Road

Imax:1045.49

(10%Imax)	104.549	—
(20%Imax)	209.097	—
(30%Imax)	313.646	—
(40%Imax)	418.195	—
(50%Imax)	522.743	—
(60%Imax)	627.292	—
(70%Imax)	731.841	—
(80%Imax)	836.389	—
(90%Imax)	940.938	—



(10%Emax) 26.13725	—
(20%Emax) 52.27425	—
(30%Emax) 78.4115	—
(40%Emax) 104.5485	—
(50%Emax) 130.6857	—
(60%Emax) 156.823	—
(70%Emax) 182.96	—
(80%Emax) 209.0972	—
(90%Emax) 235.2345	—



Luminance Table

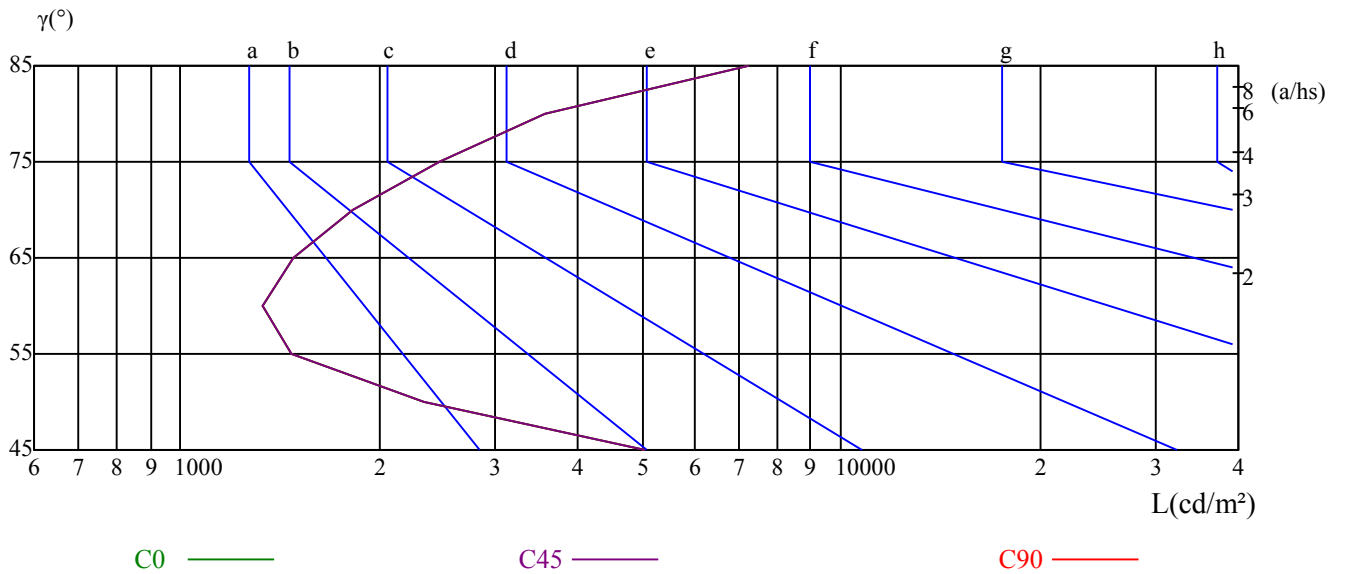
γ	45	50	55	60	65	70	75	80	85
C0	5043	2338	1475	1332	1479	1828	2463	3563	7237
C45	5043	2338	1475	1332	1479	1828	2463	3563	7237
C90	5043	2338	1475	1332	1479	1828	2463	3563	7237

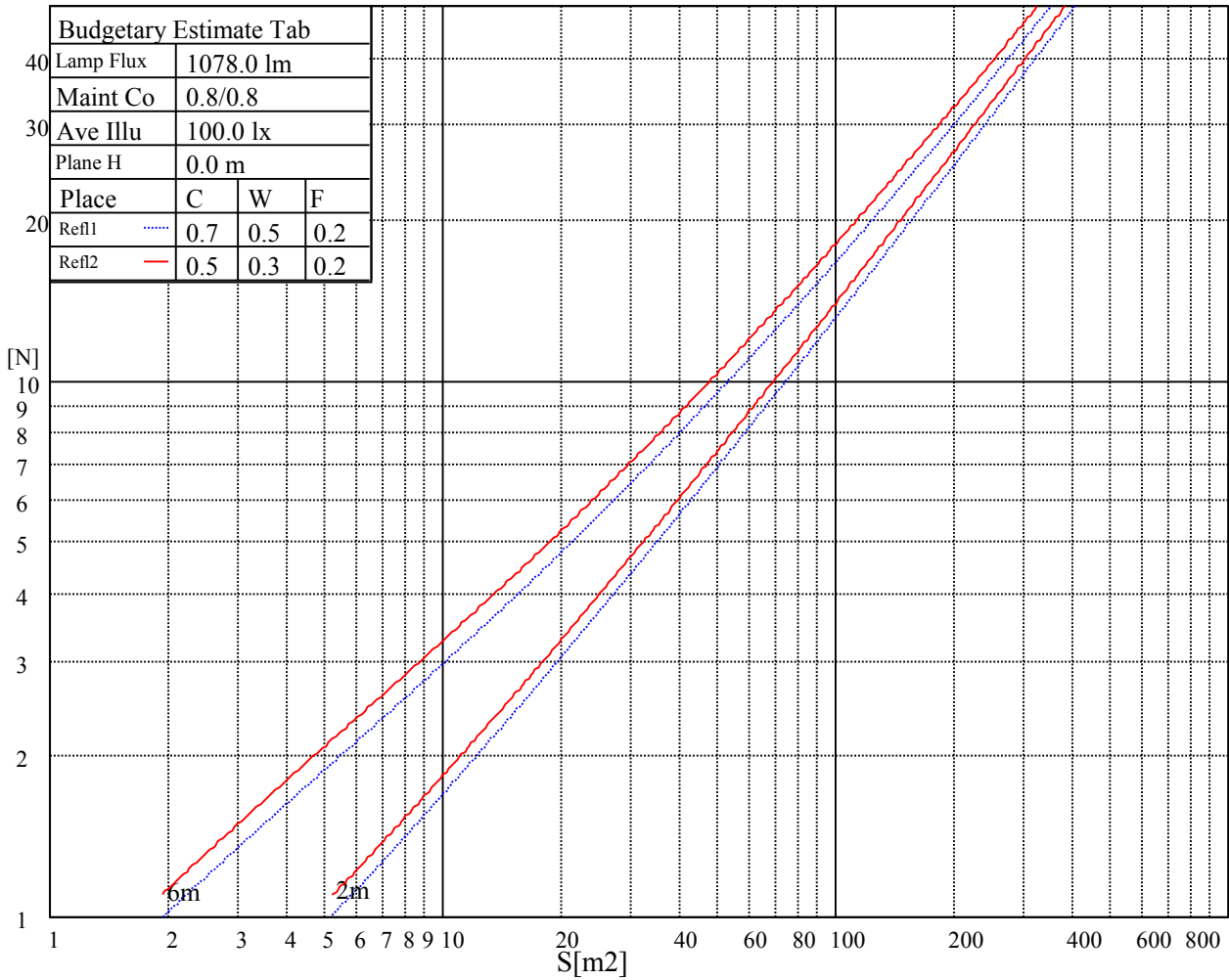
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1479	1479	1479	2463	2463	2463	7237	7237	7237

Glare Table

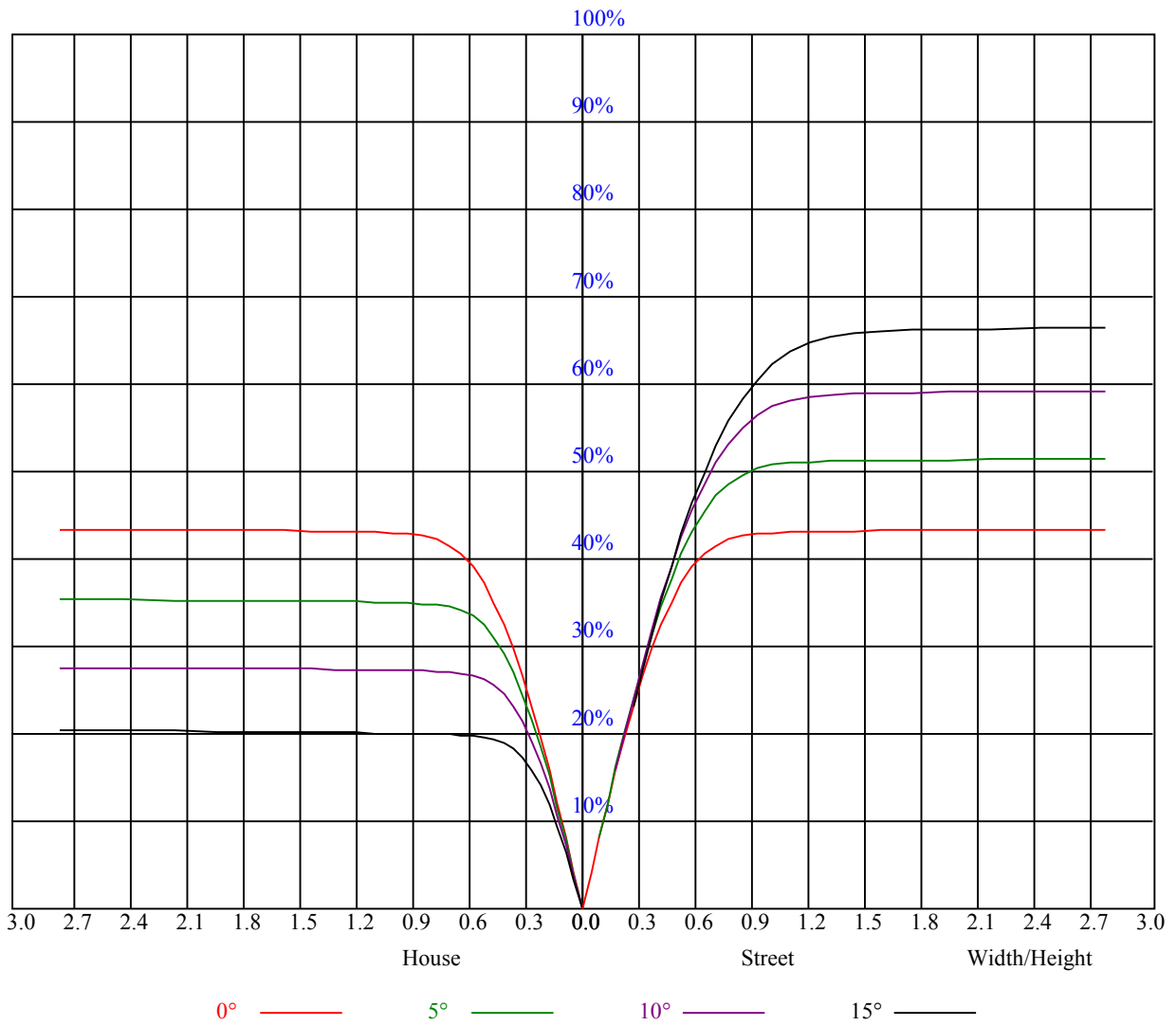
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.97	0.94	0.92	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.81
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.84	0.81	0.84	0.82	0.80	0.81	0.80	0.78	0.77
3	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.78	0.76	0.80	0.77	0.75	0.78	0.75	0.73	0.72
4	0.80	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.69	0.68
5	0.76	0.71	0.67	0.75	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.65	0.64
6	0.72	0.67	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.62	0.61
7	0.68	0.63	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.57
8	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.54
9	0.61	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.59	0.55	0.53	0.52
10	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.53	0.51	0.57	0.53	0.50	0.56	0.53	0.50	0.49



NATA 3-1905-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	1045.52	1028.56	989.75	936.67	851.50	736.10	581.29	327.64	107.42
22.5	1049.43	1027.96	991.07	936.45	851.72	735.66	574.46	327.26	112.54
45.0	1045.63	1028.40	990.08	936.23	851.06	736.93	578.64	329.40	104.55
67.5	1046.35	1028.45	989.53	936.62	851.23	735.06	573.52	328.96	105.82
90.0	1045.25	1028.56	988.48	932.33	853.32	737.76	572.20	335.18	99.87
112.5	1044.09	1028.45	989.53	936.62	851.23	735.06	573.52	328.96	105.82
135.0	1044.81	1028.40	990.08	936.23	851.06	736.93	578.64	329.40	104.55
157.5	1042.82	1027.96	991.07	936.45	851.72	735.66	574.46	327.26	112.54
180.0	1045.52	1028.56	989.75	936.67	851.50	736.10	581.29	327.64	107.42
202.5	1049.43	1027.96	991.07	936.45	851.72	735.66	574.46	327.26	112.54
225.0	1045.63	1028.40	990.08	936.23	851.06	736.93	578.64	329.40	104.55
247.5	1046.35	1028.45	989.53	936.62	851.23	735.06	573.52	328.96	105.82
270.0	1045.25	1028.56	988.48	932.33	853.32	737.76	572.20	335.18	99.87
292.5	1044.09	1028.45	989.53	936.62	851.23	735.06	573.52	328.96	105.82
315.0	1044.81	1028.40	990.08	936.23	851.06	736.93	578.64	329.40	104.55
337.5	1042.82	1027.96	991.07	936.45	851.72	735.66	574.46	327.26	112.54
360.0	1045.52	1028.56	989.75	936.67	851.50	736.10	581.29	327.64	107.42
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	21.97	9.41	5.40	4.18	3.85	3.91	4.07	3.85	3.91
22.5	23.45	9.69	5.34	4.24	3.91	3.91	4.07	3.85	3.96
45.0	22.24	9.36	5.23	4.13	3.91	3.91	3.96	3.85	3.96
67.5	21.80	9.25	5.29	4.13	3.91	3.91	3.91	3.85	3.91
90.0	21.09	9.03	5.12	4.07	3.91	3.85	3.85	3.91	3.91
112.5	21.80	9.25	5.29	4.13	3.91	3.91	3.91	3.85	3.91
135.0	22.24	9.36	5.23	4.13	3.91	3.91	3.96	3.85	3.96
157.5	23.45	9.69	5.34	4.24	3.91	3.91	4.07	3.85	3.96
180.0	21.97	9.41	5.40	4.18	3.85	3.91	4.07	3.85	3.91
202.5	23.45	9.69	5.34	4.24	3.91	3.91	4.07	3.85	3.96
225.0	22.24	9.36	5.23	4.13	3.91	3.91	3.96	3.85	3.96
247.5	21.80	9.25	5.29	4.13	3.91	3.91	3.91	3.85	3.91
270.0	21.09	9.03	5.12	4.07	3.91	3.85	3.85	3.91	3.91
292.5	21.80	9.25	5.29	4.13	3.91	3.91	3.91	3.85	3.91
315.0	22.24	9.36	5.23	4.13	3.91	3.91	3.96	3.85	3.96
337.5	23.45	9.69	5.34	4.24	3.91	3.91	4.07	3.85	3.96
360.0	21.97	9.41	5.40	4.18	3.85	3.91	4.07	3.85	3.91
C/γ(°)	90.0								
0.0	3.74								
22.5	3.80								
45.0	3.80								
67.5	3.80								
90.0	3.80								
112.5	3.80								
135.0	3.80								
157.5	3.80								
180.0	3.74								
202.5	3.80								
225.0	3.80								
247.5	3.80								
270.0	3.80								
292.5	3.80								
315.0	3.80								
337.5	3.80								
360.0	3.74								