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Nata

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LumCAT: 1612-M

Luminaire:

Report No: NT2017010404

Voltage(V): 29.0000

Test No: GC2017010404

Current(A): 0.6000

LampCAT: XICATO XTM LES9

Power (W): 17.4000

Lamp flux(lm): 942.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 46

Width(mm):46

Phm Type: C

Height(mm): 0

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Photometric Results

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Lumens(lm): 843.61

Efficiency(%): 89.56%

Lumens(lm)/Power(W): 48.48

Central intensity(cd): 904.886

Maximum intensity(cd): 905.778

Angle of maximum intensity: C=0.0  $\gamma$ =5.0

Beam Angle(50%Imax): [C0/180]Total=57.7

[C90/270]Total=57.7

Field angle(10%Imax): [C0/180]Total=88.4

[C90/270]Total=88.4

Maximum s/h(1/2): C0\_180=0.84 C90\_270=0.84

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(%): 89.56%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.605%

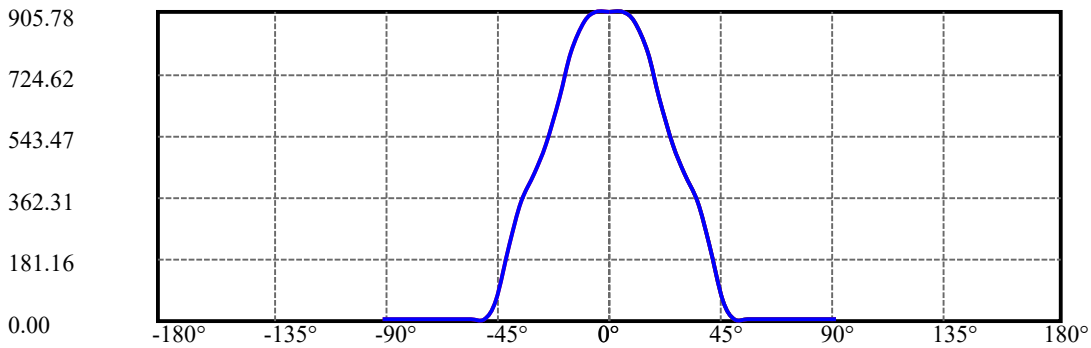
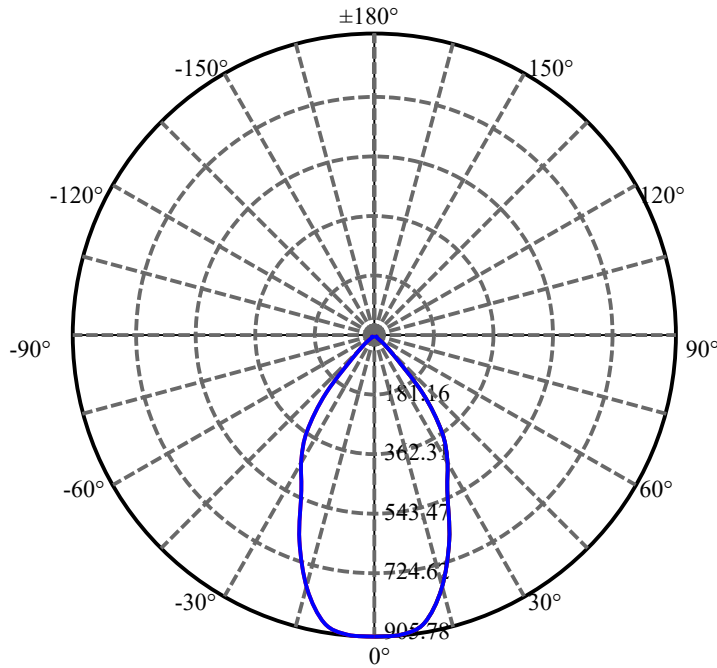
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	904.886	0.000	0	.000%	.000%
5.0	905.778	21.646	21.646	2.298%	2.566%
10.0	876.828	63.769	85.415	6.770%	10.125%
15.0	785.490	98.608	184.023	10.468%	21.814%
20.0	654.817	118.701	302.724	12.601%	35.884%
25.0	518.442	123.053	425.778	13.063%	50.471%
30.0	433.717	120.497	546.274	12.792%	64.754%
35.0	350.258	115.446	661.72	12.255%	78.439%
40.0	227.111	96.330	758.05	10.226%	89.858%
45.0	64.158	53.931	811.981	5.725%	96.250%
50.0	8.135	14.608	826.588	1.551%	97.982%
55.0	5.337	2.929	829.518	.311%	98.329%
60.0	4.718	2.324	831.842	.247%	98.605%
65.0	4.243	2.178	834.02	.231%	98.863%
70.0	3.895	2.061	836.081	.219%	99.107%
75.0	3.634	1.968	838.049	.209%	99.340%
80.0	3.458	1.898	839.946	.201%	99.565%
85.0	3.355	1.851	841.797	.197%	99.785%
90.0	3.276	1.816	843.613	.193%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	546.27	57.99%	64.75%
0-40	758.05	80.47%	89.86%
0-60	831.84	88.31%	98.60%
0-90	841.80	89.36%	99.78%
0-120	841.80	89.36%	99.78%
0-180	843.61	89.56%	100.00%
60-90	12.28	1.30%	1.46%
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%
0-35.68	674.89	71.64%	80.00%

ZONAL LUMEN SUMMARY

0-10	85.42
10-20	217.31
20-30	243.55
30-40	211.78
40-50	68.54
50-60	5.25
60-70	4.24
70-80	3.87
80-90	1.85
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): —————

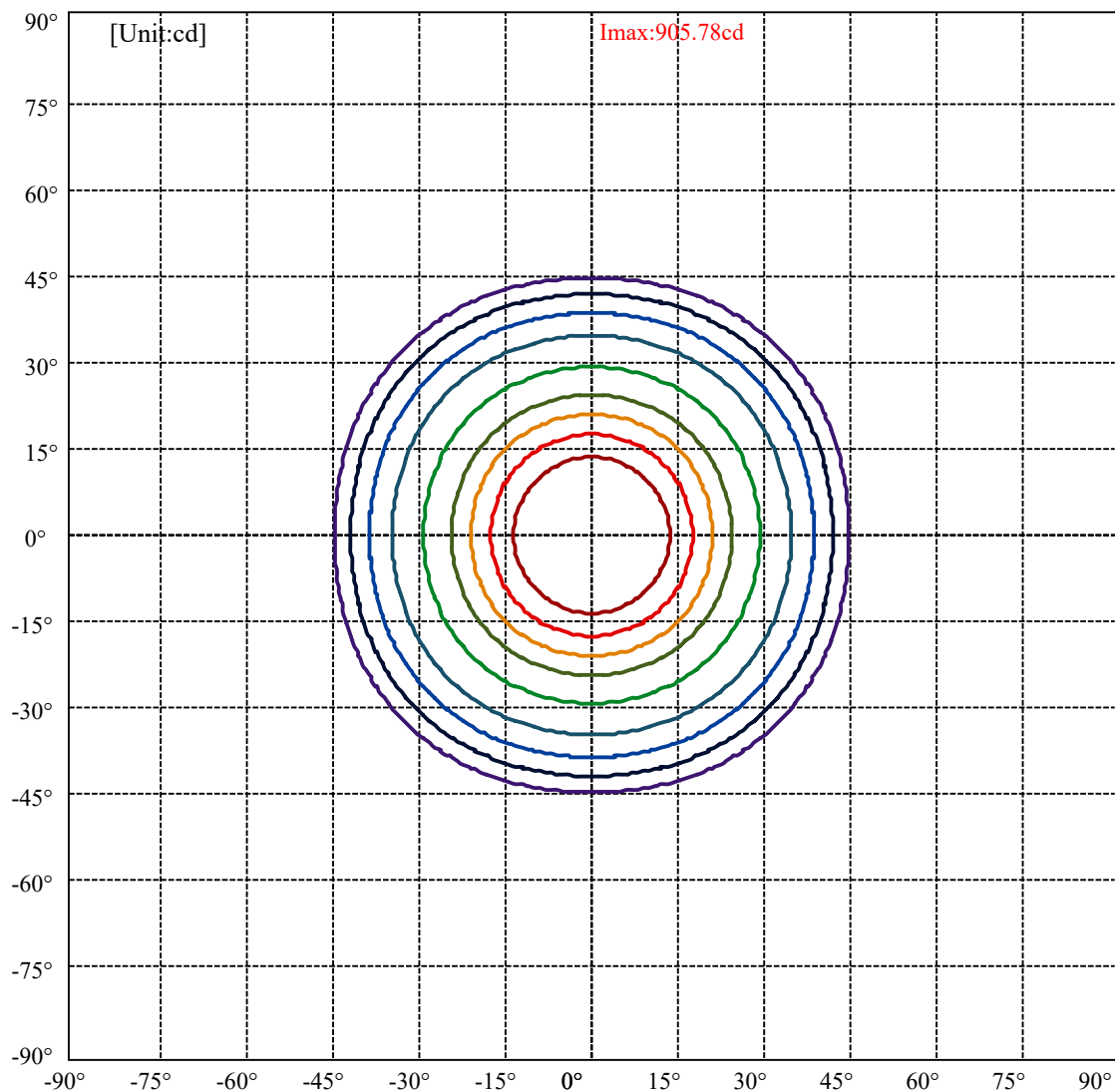
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:49.2 Right:39.2  
:C90/270Left:49.2 Right:39.2

Beam Angle(50%Imax):C0/180Left:33.9 Right:23.9  
:C90/270Left:33.9 Right:23.9



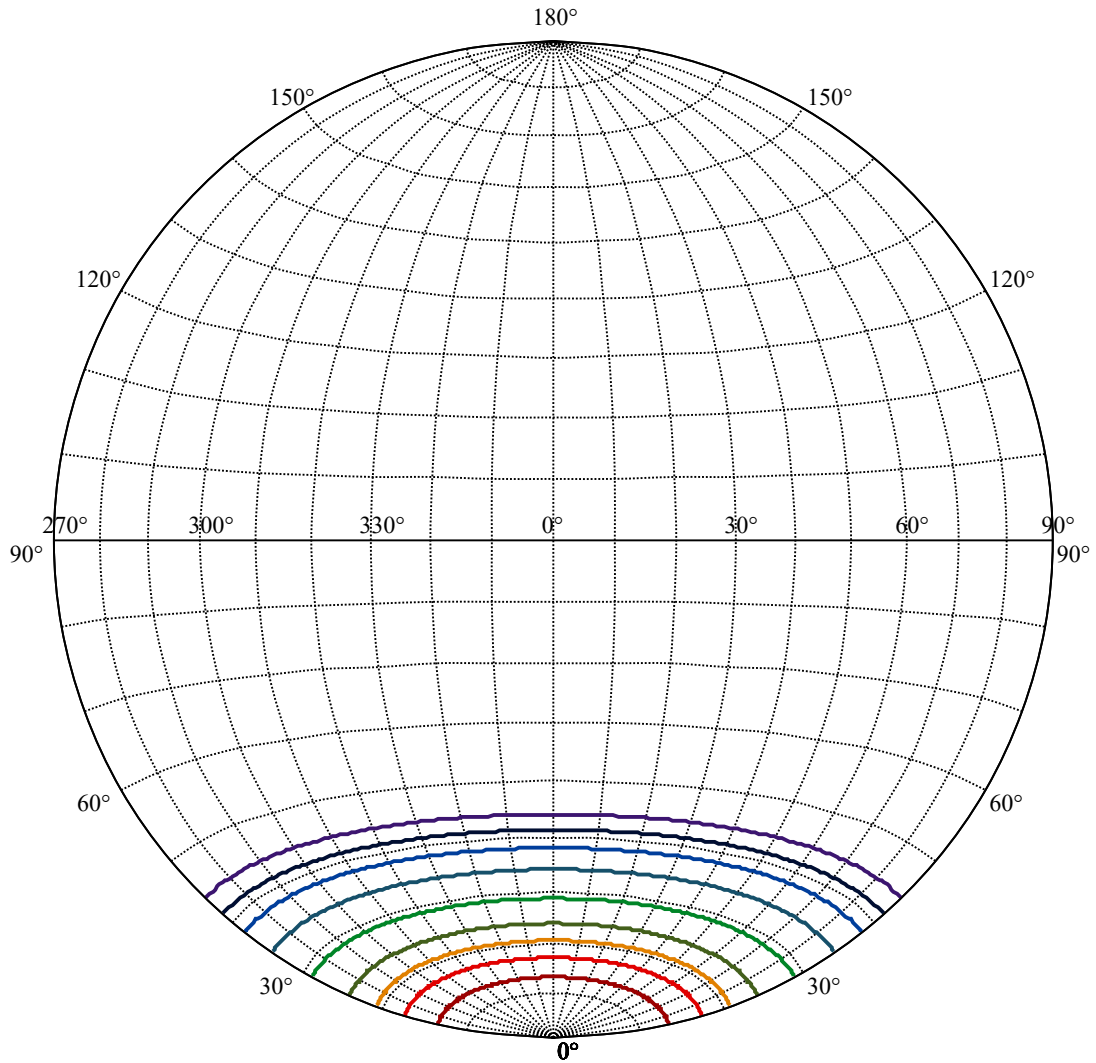


(10%Imax) 90.5777	—
(20%Imax) 181.155	—
(30%Imax) 271.733	—
(40%Imax) 362.311	—
(50%Imax) 452.889	—
(60%Imax) 543.466	—
(70%Imax) 634.044	—
(80%Imax) 724.622	—
(90%Imax) 815.2	—

Equipment: gms1980  
Temperature(°C): 25.0

Date: 2017/1/5  
Humidity(%): 60.0%

Operator: NT03  
Distance(m): 7.42












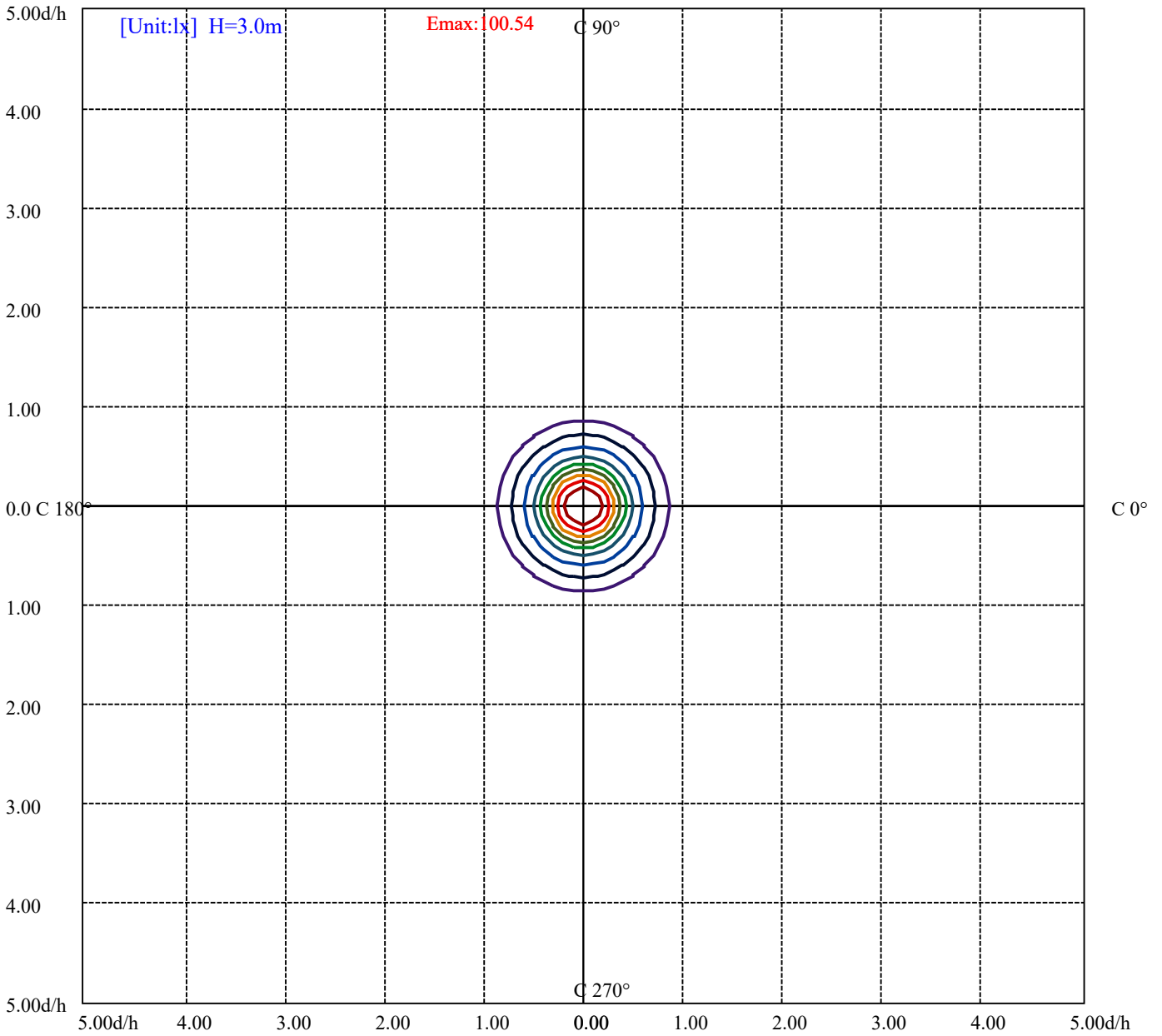
House

[Unit:cd]

Road

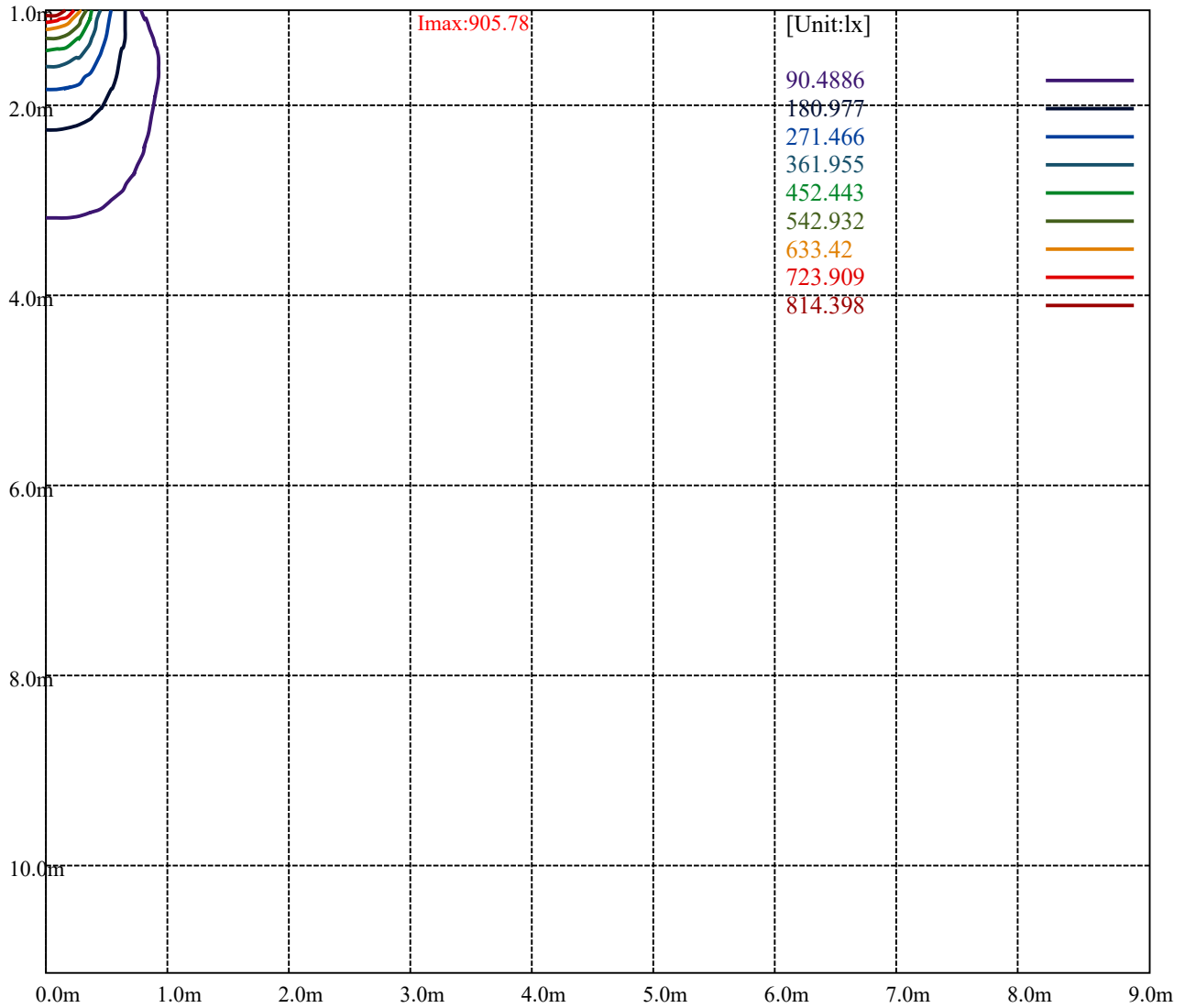
**Imax:905.78**

(10%Imax) 90.5777	
(20%Imax) 181.155	
(30%Imax) 271.733	
(40%Imax) 362.311	
(50%Imax) 452.889	
(60%Imax) 543.466	
(70%Imax) 634.044	
(80%Imax) 724.622	
(90%Imax) 815.2	



- (10%Emax) 10.05429
- (20%Emax) 20.10856
- (30%Emax) 30.16289
- (40%Emax) 40.21722
- (50%Emax) 50.27144
- (60%Emax) 60.32578
- (70%Emax) 70.38
- (80%Emax) 80.43433
- (90%Emax) 90.48867





Luminance Table

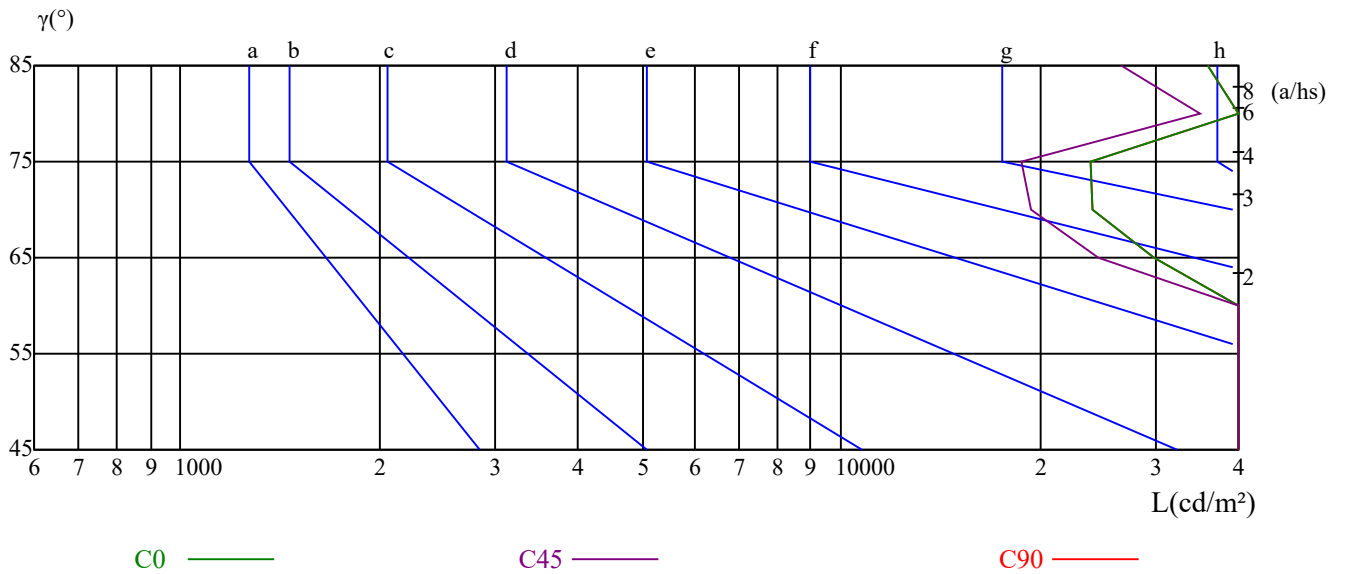
$\gamma$	45	50	55	60	65	70	75	80	85
C0	551710	227466	88835	49433	29827	24056	23820	45824	35926
C45	484776	196998	75762	41462	24562	19404	18761	35082	26562
C90	551710	227466	88835	49433	29827	24056	23820	45824	35926

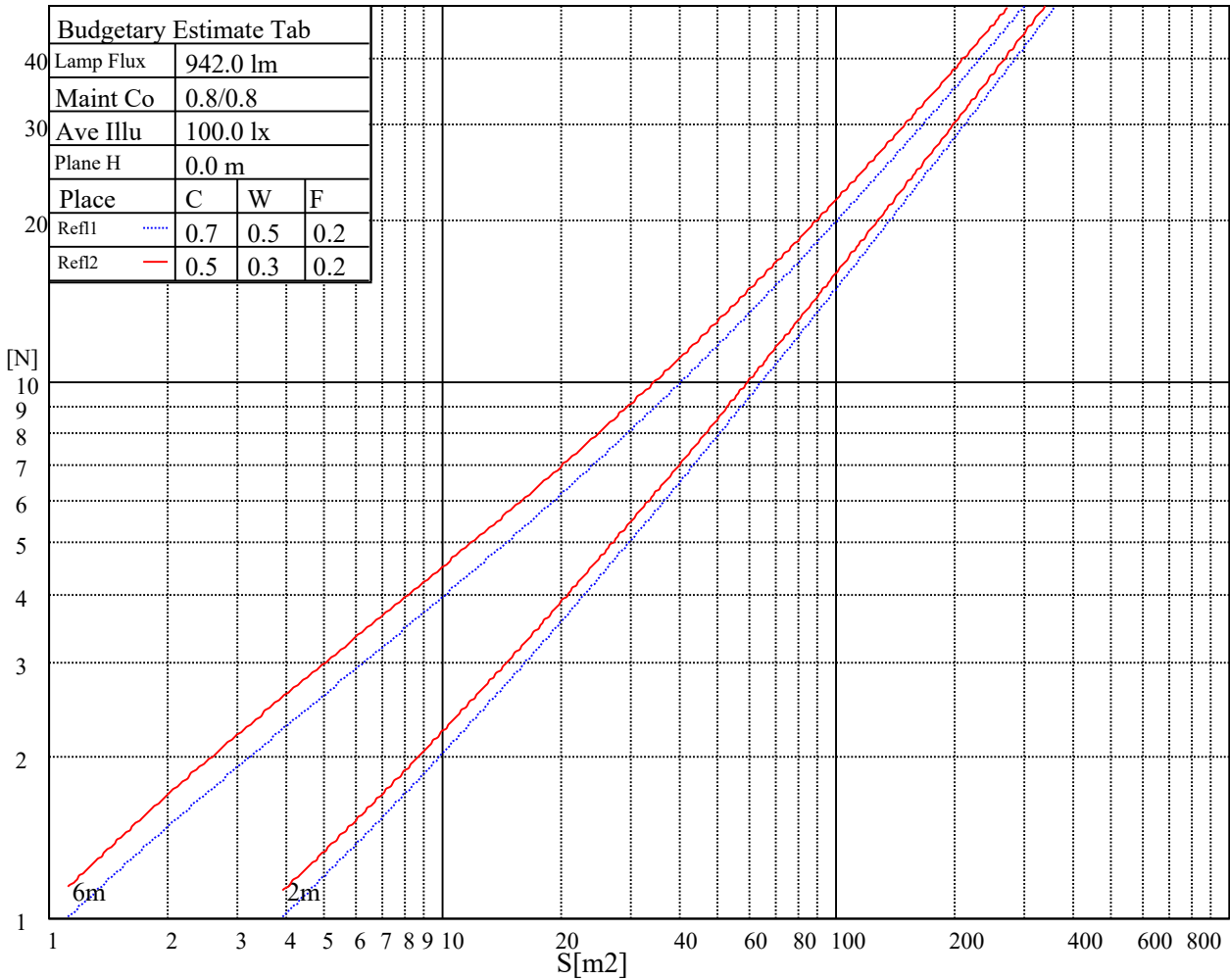
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
61809	61809	61809	68269	68269	68269	241245	241245	241245

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	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.96	0.94	0.97	0.95	0.93	0.93	0.91	0.90	0.90	0.88	0.87	0.87	0.86	0.85	0.83
2	0.92	0.88	0.85	0.90	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.77
3	0.85	0.80	0.77	0.84	0.80	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.71
4	0.79	0.74	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.67	0.66
5	0.74	0.68	0.65	0.73	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.62	0.61
6	0.69	0.64	0.60	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.57
7	0.65	0.59	0.55	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.54	0.53
8	0.61	0.55	0.52	0.60	0.55	0.51	0.59	0.55	0.51	0.58	0.54	0.51	0.58	0.54	0.51	0.49
9	0.57	0.52	0.48	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.48	0.46
10	0.54	0.49	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.52	0.48	0.45	0.44

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	904.30	909.04	883.60	791.55	660.07	518.63	435.39	352.09	228.48	
22.5	909.81	910.85	883.49	793.75	653.13	519.90	433.79	347.02	222.15	
45.0	905.84	903.37	869.01	773.21	641.30	504.65	420.25	332.82	208.55	
67.5	905.68	903.20	878.59	791.38	663.48	528.98	438.91	351.15	246.43	
90.0	902.21	898.96	867.19	774.86	644.71	506.52	431.20	347.19	220.39	
112.5	904.41	902.21	879.86	798.26	669.93	531.40	443.53	365.68	254.20	
135.0	901.55	900.17	870.94	781.86	641.63	511.09	427.18	351.20	236.47	
157.5	905.29	904.74	881.95	812.47	678.24	530.19	440.34	366.90	262.45	
180.0	904.30	904.14	873.03	778.06	654.40	510.59	425.53	346.19	232.12	
202.5	909.81	911.24	884.10	790.55	663.26	519.07	434.84	354.18	220.56	
225.0	905.84	910.03	884.70	803.38	680.44	542.58	444.31	371.03	252.21	
247.5	905.68	907.60	870.77	776.35	649.56	511.53	433.68	344.16	211.03	
270.0	902.21	906.06	879.31	788.96	664.81	533.11	443.75	355.94	238.67	
292.5	904.41	904.74	870.06	764.90	633.53	510.15	427.02	337.55	188.02	
315.0	901.55	907.22	879.64	786.81	655.01	517.36	437.86	352.91	217.03	
337.5	905.29	908.87	873.03	761.49	623.57	499.31	421.90	328.14	195.01	
360.0	904.30	909.04	883.60	791.55	660.07	518.63	435.39	352.09	228.48	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	60.34	8.20	5.23	4.62	4.24	3.85	3.63	3.47	3.36	
22.5	80.88	8.15	5.23	4.68	4.24	3.91	3.69	3.47	3.36	
45.0	50.43	7.82	5.23	4.57	4.18	3.85	3.58	3.47	3.36	
67.5	78.73	8.70	5.45	4.79	4.29	3.96	3.69	3.47	3.36	
90.0	61.94	8.15	5.40	4.73	4.29	3.91	3.63	3.47	3.36	
112.5	86.44	8.97	5.62	4.96	4.40	4.02	3.69	3.47	3.36	
135.0	62.93	8.97	5.51	4.84	4.29	3.91	3.63	3.47	3.30	
157.5	83.03	9.36	5.62	4.96	4.40	4.02	3.69	3.52	3.41	
180.0	60.78	8.59	5.40	4.73	4.24	3.91	3.63	3.47	3.36	
202.5	67.33	8.37	5.40	4.73	4.24	3.91	3.63	3.41	3.36	
225.0	88.70	8.20	5.45	4.79	4.24	3.91	3.63	3.47	3.36	
247.5	48.84	7.49	5.18	4.62	4.13	3.85	3.58	3.47	3.36	
270.0	68.60	7.43	5.29	4.68	4.18	3.85	3.63	3.47	3.36	
292.5	37.55	6.72	5.12	4.57	4.13	3.80	3.58	3.41	3.36	
315.0	55.77	7.76	5.23	4.68	4.24	3.85	3.63	3.41	3.36	
337.5	34.25	7.27	5.07	4.51	4.13	3.80	3.58	3.41	3.30	
360.0	60.34	8.20	5.23	4.62	4.24	3.85	3.63	3.47	3.36	
C/γ(°)	90.0									
0.0	3.25									
22.5	3.30									
45.0	3.30									
67.5	3.25									
90.0	3.25									
112.5	3.30									
135.0	3.25									
157.5	3.30									
180.0	3.25									
202.5	3.30									
225.0	3.25									
247.5	3.25									
270.0	3.30									
292.5	3.30									
315.0	3.30									
337.5	3.25									
360.0	3.25									