



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: LN01D05036DA-N

Luminaire: 97.70.234.00

Report No: 201228-B008

Test No: 201228-C008

LampCAT: CXM-9-TC40 LES9.8

Lamp flux(lm): 2079.0

Number of Lamps: 1

Length(mm): 92

Phm Type: C

Voltage(V): 35.1000

Current(A): 0.5000

Power (W): 17.5500

PF: 0.0000

Ballast type: DC

Width(mm): 92

Height(mm): 50

Photometric Results

Lumens(lm): 1931.84

Efficiency(%): 92.92%

Lumens(lm)/Power(W): 110.08

Central intensity(cd): 3644.156

Maximum intensity(cd): 3644.156

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=41.8

[C90/270]Total=41.8

Field angle(10%Imax): [C0/180]Total=66.2

[C90/270]Total=66.2

Maximum s/h(1/2): C0_180=0.68 C90_270=0.68

Maximum s/h(1/4): C0_180=0.64 C90_270=0.64

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.92%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.010%

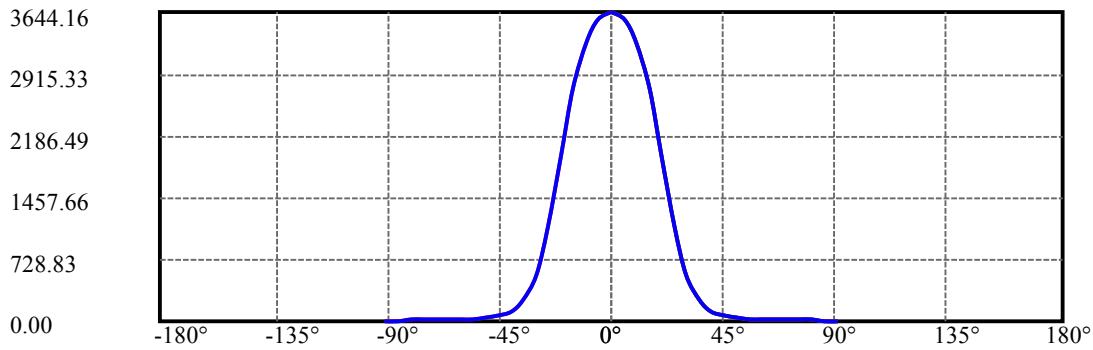
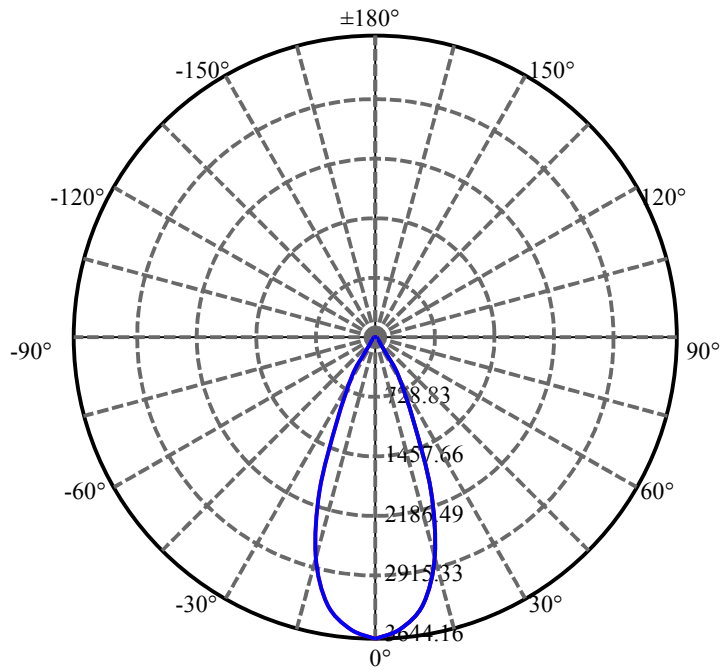
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3644.156	0.000	0	.000%	.000%
5.0	3552.328	86.032	86.032	4.138%	4.453%
10.0	3279.234	244.386	330.418	11.755%	17.104%
15.0	2736.352	356.841	687.259	17.164%	35.575%
20.0	1973.109	388.126	1075.385	18.669%	55.666%
25.0	1115.944	323.985	1399.369	15.584%	72.437%
30.0	542.152	209.833	1609.203	10.093%	83.299%
35.0	254.405	117.298	1726.501	5.642%	89.371%
40.0	118.744	62.257	1788.758	2.995%	92.594%
45.0	66.973	34.387	1823.145	1.654%	94.374%
50.0	43.988	22.421	1845.566	1.078%	95.534%
55.0	30.319	16.157	1861.723	.777%	96.371%
60.0	23.091	12.345	1874.068	.594%	97.010%
65.0	18.773	10.177	1884.246	.490%	97.536%
70.0	19.828	9.774	1894.02	.470%	98.042%
75.0	25.249	11.782	1905.802	.567%	98.652%
80.0	21.206	12.430	1918.232	.598%	99.296%
85.0	10.181	8.529	1926.761	.410%	99.737%
90.0	8.360	5.077	1931.838	.244%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1609.20	77.40%	83.30%
0-40	1788.76	86.04%	92.59%
0-60	1874.07	90.14%	97.01%
0-90	1926.76	92.68%	99.74%
0-120	1926.76	92.68%	99.74%
0-180	1931.84	92.92%	100.00%
60-90	65.04	3.13%	3.37%
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%
0-28.48	1545.47	74.34%	80.00%

ZONAL LUMEN SUMMARY

0-10	330.42
10-20	744.97
20-30	533.82
30-40	179.56
40-50	56.81
50-60	28.50
60-70	19.95
70-80	24.21
80-90	8.53
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: —————

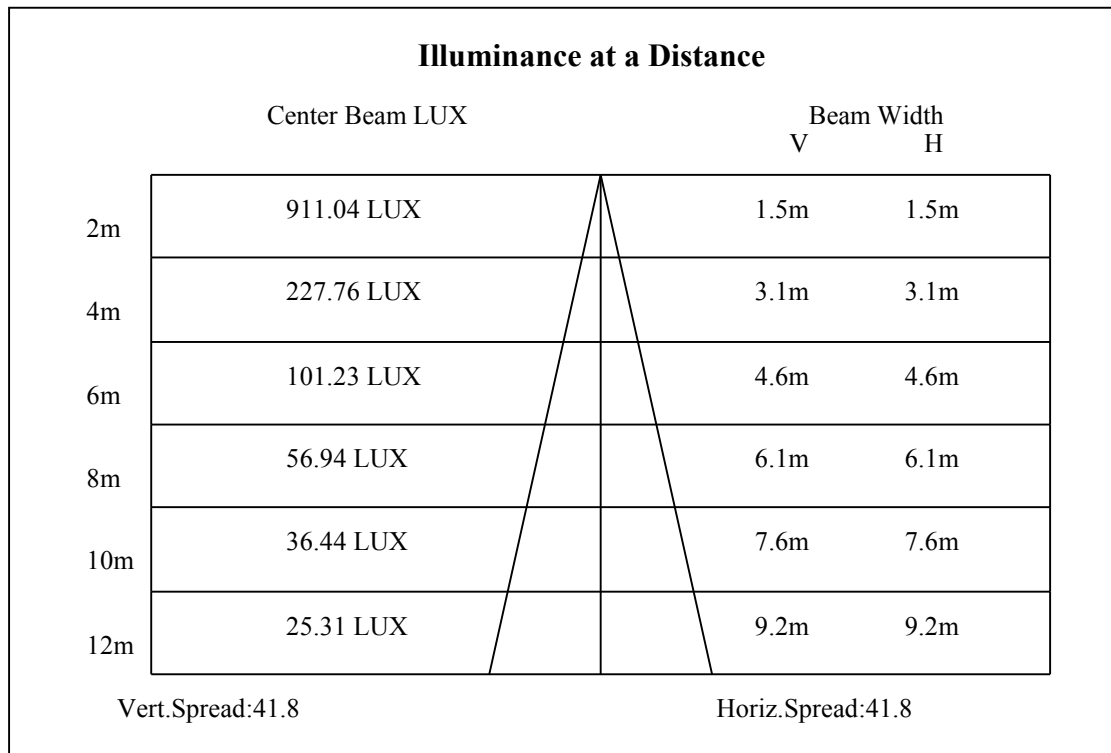
C90/C270: —————

Field angle(10%Imax):C0/180Left:33.1 Right:33.1

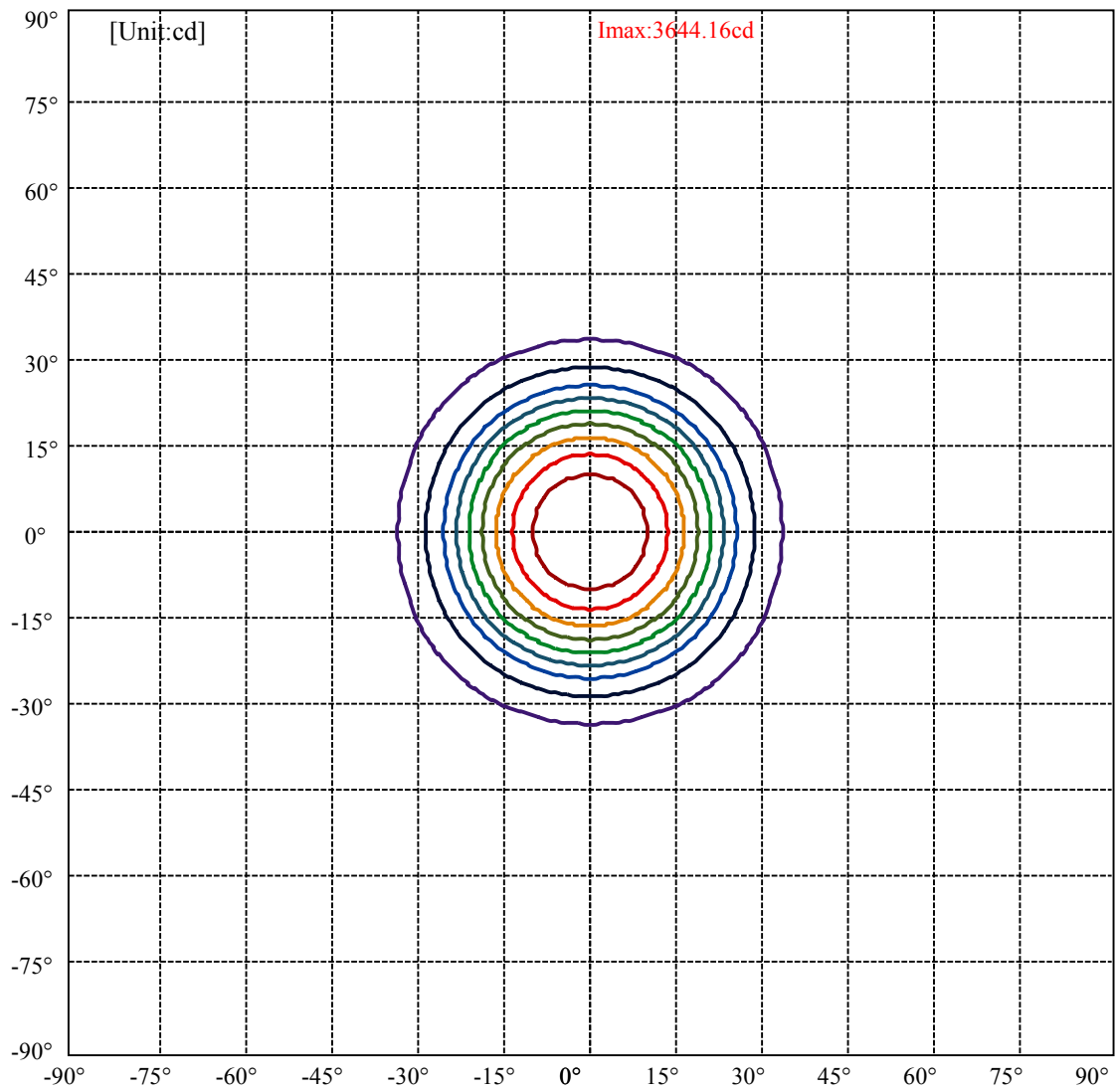
:C90/270Left:33.1 Right:33.1

Beam Angle(50%Imax):C0/180Left:20.9 Right:20.9

:C90/270Left:20.9 Right:20.9



ISO-Intensity(V-H)

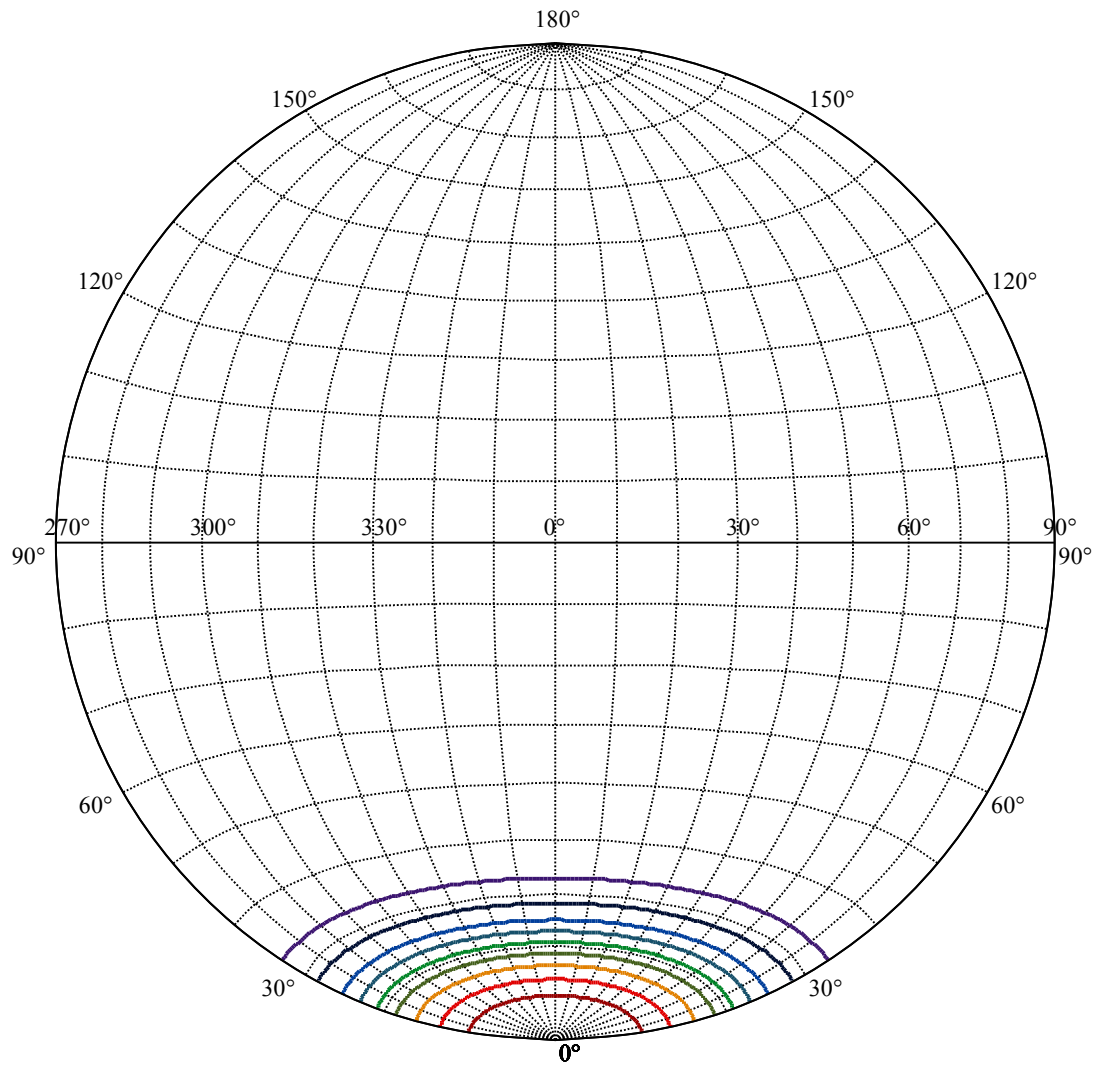


(10%Imax) 364.416	—
(20%Imax) 728.831	—
(30%Imax) 1093.25	—
(40%Imax) 1457.66	—
(50%Imax) 1822.08	—
(60%Imax) 2186.49	—
(70%Imax) 2550.91	—
(80%Imax) 2915.33	—
(90%Imax) 3279.74	—

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/12/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50



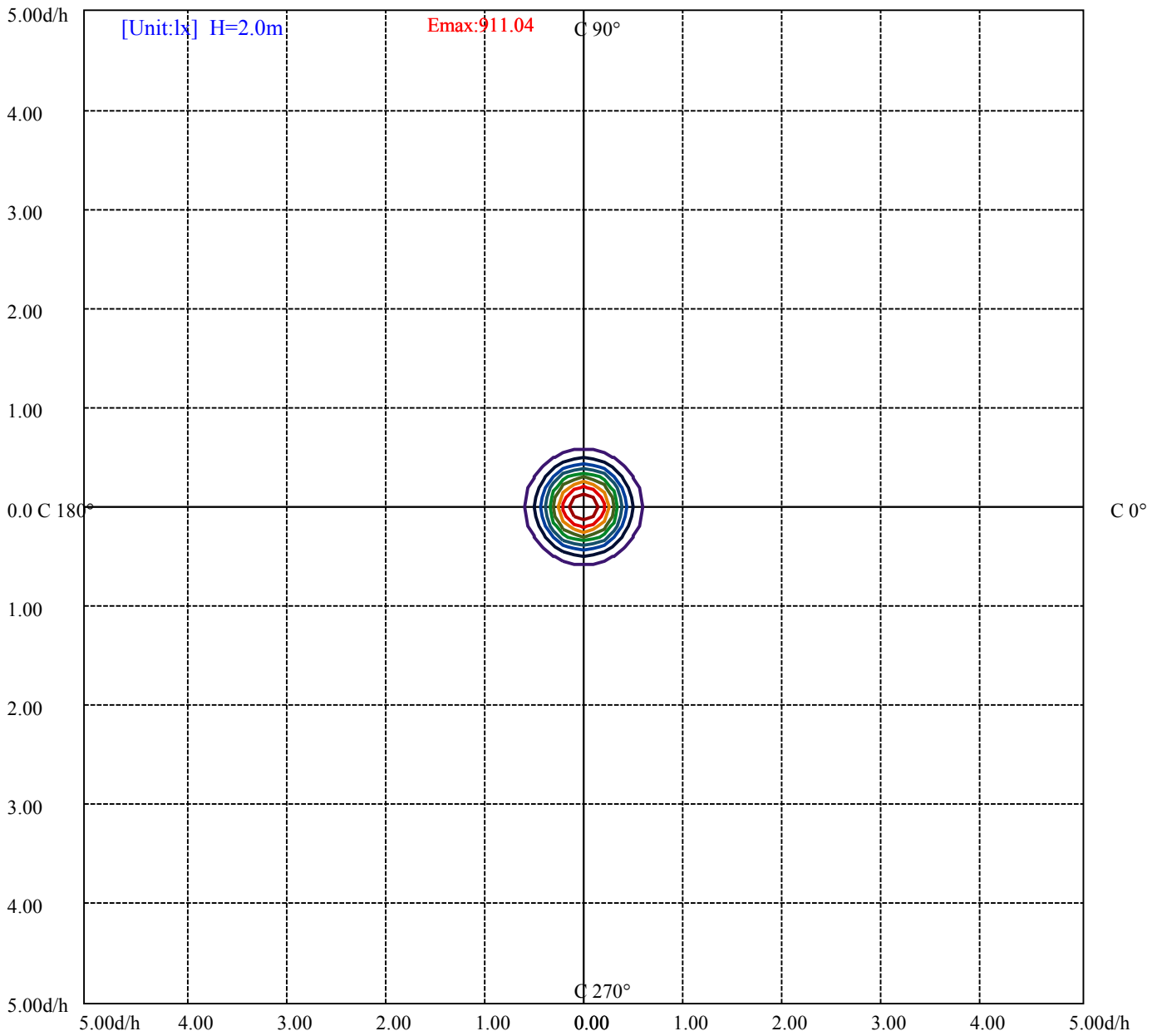
House

[Unit:cd]

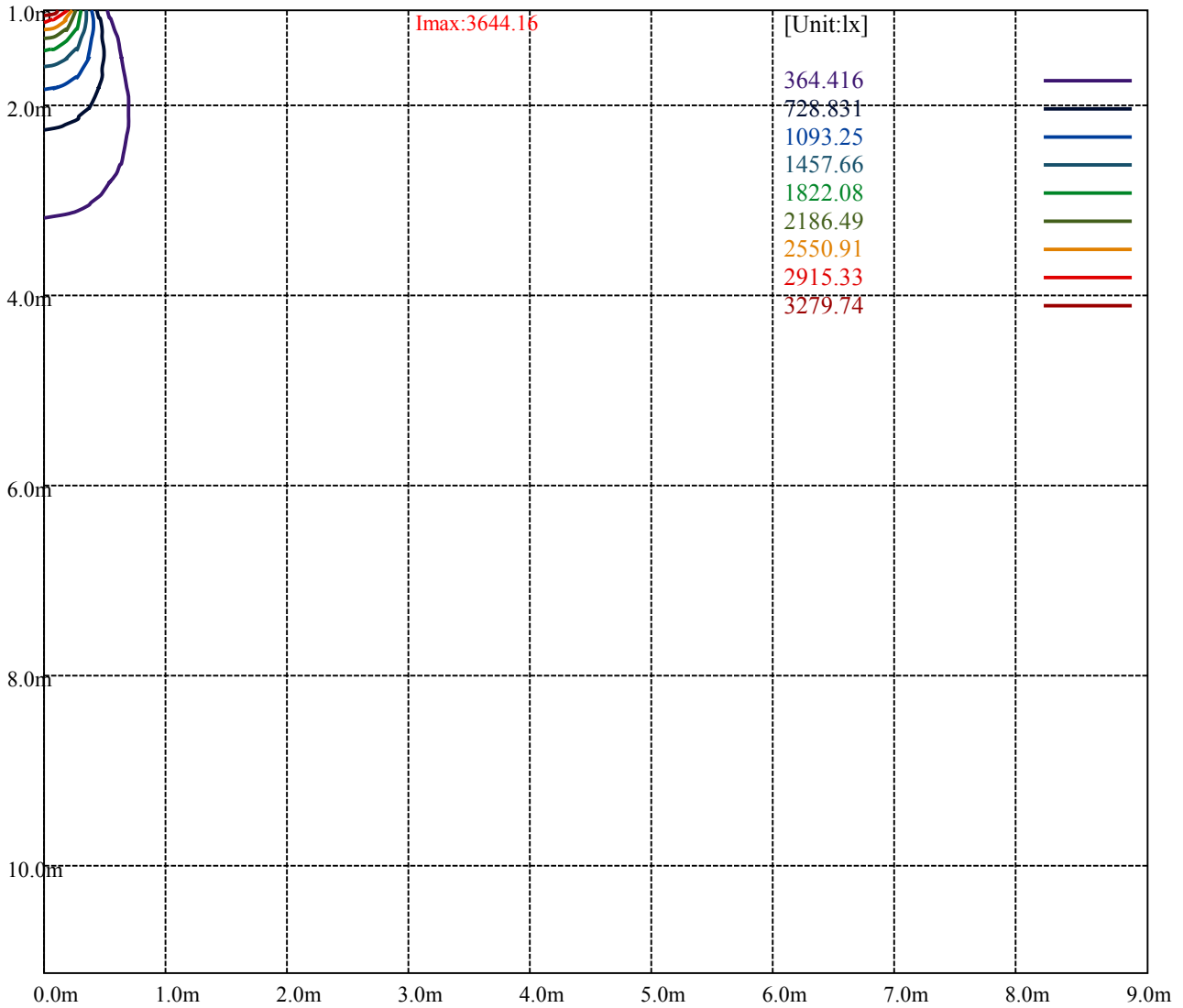
Road

Imax:3644.16

(10%Imax)	364.416	—
(20%Imax)	728.831	—
(30%Imax)	1093.25	—
(40%Imax)	1457.66	—
(50%Imax)	1822.08	—
(60%Imax)	2186.49	—
(70%Imax)	2550.91	—
(80%Imax)	2915.33	—
(90%Imax)	3279.74	—



- (10%Emax) 91.10375
- (20%Emax) 182.2077
- (30%Emax) 273.3125
- (40%Emax) 364.415
- (50%Emax) 455.52
- (60%Emax) 546.6225
- (70%Emax) 637.7275
- (80%Emax) 728.83
- (90%Emax) 819.935



Luminance Table

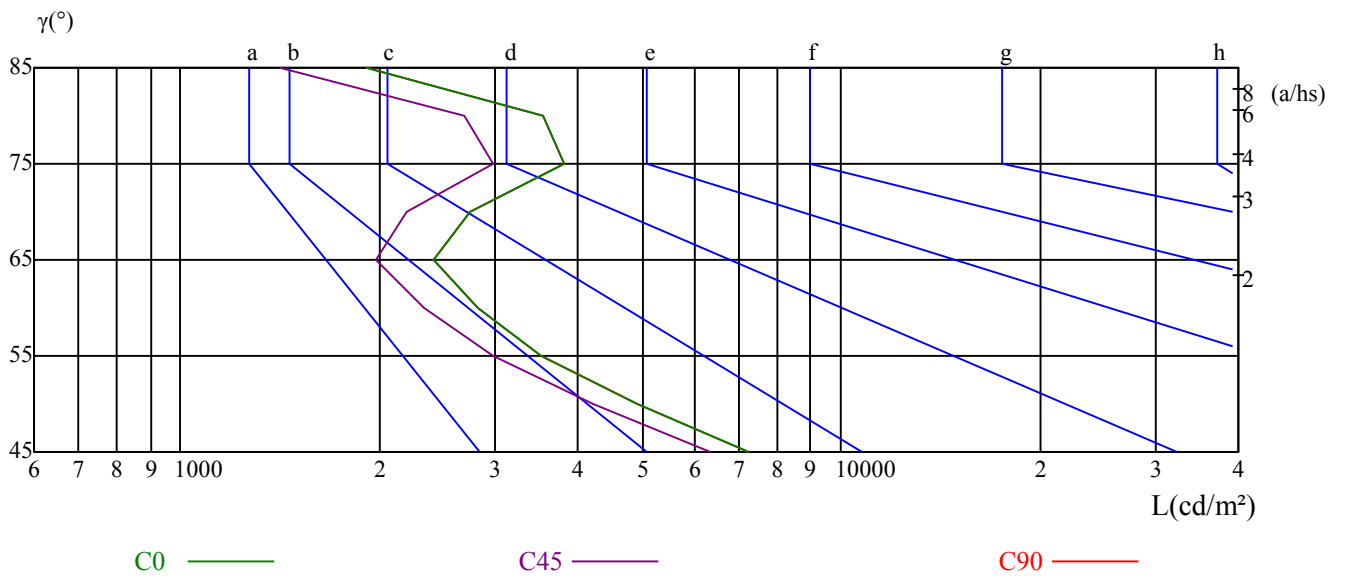
γ	45	50	55	60	65	70	75	80	85
C0	7250	4907	3516	2811	2424	2747	3806	3534	1914
C45	6327	4220	2977	2340	1982	2201	2979	2692	1410
C90	7250	4907	3516	2811	2424	2747	3806	3534	1914

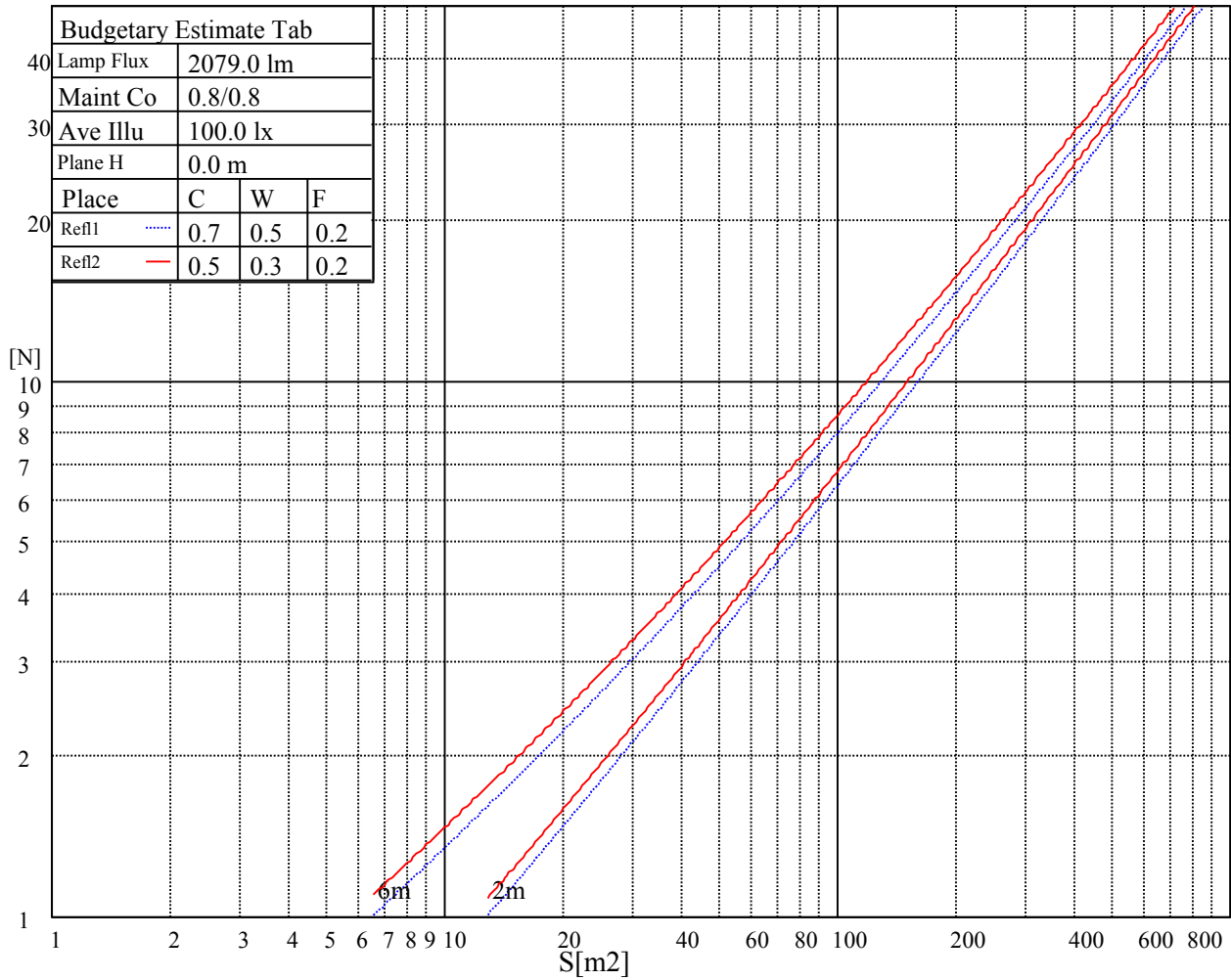
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5248	5248	5248	11526	11526	11526	13802	13802	13802

Glare Table

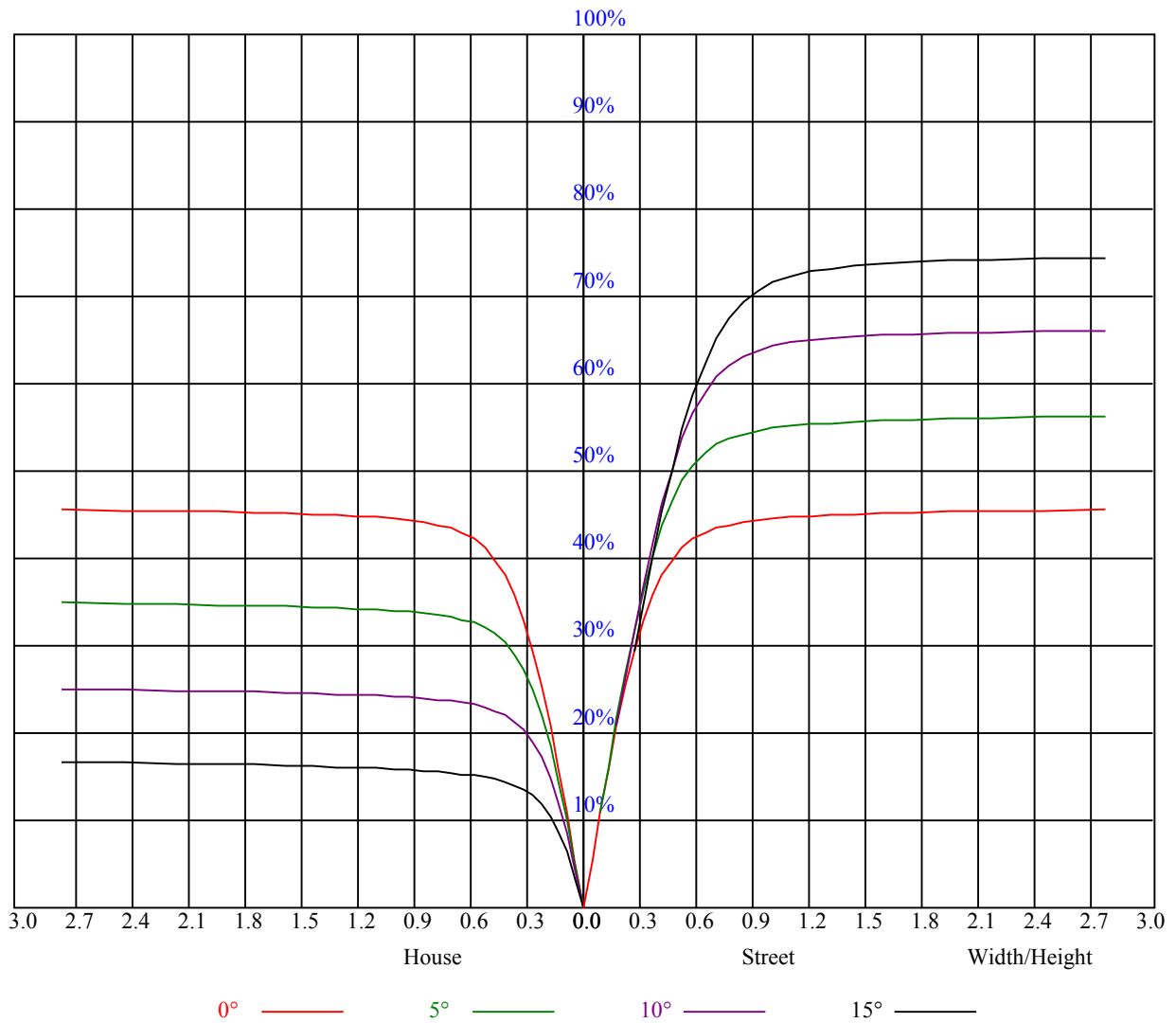
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.03	1.01	0.99	1.01	0.99	0.97	0.97	0.96	0.94	0.94	0.92	0.91	0.91	0.90	0.89	0.87
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.82
3	0.91	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.80	0.78	0.77
4	0.86	0.81	0.77	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.70	0.69
6	0.77	0.72	0.68	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.66
7	0.73	0.68	0.65	0.73	0.68	0.65	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.63
8	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.60
9	0.67	0.62	0.59	0.67	0.62	0.59	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.57
10	0.64	0.59	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.55



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	3638.81	3608.44	3373.31	2971.69	2248.88	1387.13	686.81	317.81	149.51
45.0	3646.69	3585.38	3350.81	2892.38	2153.81	1306.69	681.75	299.25	143.44
90.0	3641.63	3515.06	3247.31	2680.31	1908.56	1061.89	524.36	228.21	111.99
135.0	3649.50	3534.75	3220.88	2657.81	1976.06	1061.44	505.69	293.63	109.74
180.0	3638.81	3466.13	3094.31	2444.06	1660.50	841.11	383.23	179.10	95.12
225.0	3646.69	3530.81	3225.94	2563.31	1711.69	904.73	415.13	185.34	101.48
270.0	3641.63	3604.50	3396.38	2860.88	2067.19	1245.94	565.88	289.13	122.46
315.0	3649.50	3573.56	3324.94	2820.38	2058.19	1118.64	574.37	242.78	116.21
360.0	3638.81	3608.44	3373.31	2971.69	2248.88	1387.13	686.81	317.81	149.51
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	81.17	53.33	35.66	26.10	20.70	17.49	14.79	12.60	10.52
45.0	79.99	51.30	34.43	25.93	20.31	17.10	14.29	12.15	10.24
90.0	64.52	41.85	28.69	22.22	18.17	23.34	35.72	27.56	9.62
135.0	61.93	40.44	28.46	21.83	18.00	24.30	38.76	29.19	9.45
180.0	57.38	38.76	27.73	21.60	17.78	15.30	12.77	10.97	9.06
225.0	60.75	40.33	28.69	21.99	17.94	15.24	12.94	11.03	9.51
270.0	66.32	42.69	29.25	22.61	18.62	21.77	33.19	31.16	11.08
315.0	63.73	43.20	29.64	22.44	18.68	24.08	39.54	34.99	11.98
360.0	81.17	53.33	35.66	26.10	20.70	17.49	14.79	12.60	10.52
C/γ(°)	90.0								
0.0	8.61								
45.0	8.55								
90.0	8.21								
135.0	8.21								
180.0	8.38								
225.0	8.44								
270.0	8.21								
315.0	8.27								
360.0	8.61								