



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

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## Nata

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LumCAT: LN01D05036DA-N

Luminaire: 97.70.234.00

Report No: 210106-B014

Test No: 210106-C014

LampCAT: SEOUL SAWX10 LES9.8

Lamp flux(lm): 1759.0

Number of Lamps: 1

Length(mm): 92

Phm Type: C

Voltage(V): 35.4200

Current(A): 0.3810

Power (W): 13.4950

PF: 0.0000

Ballast type: DC

Width(mm): 92

Height(mm): 50

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## Photometric Results

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Lumens(lm): 1635.15

Efficiency(%): 92.96%

Lumens(lm)/Power(W): 121.17

Central intensity(cd): 3053.109

Maximum intensity(cd): 3053.109

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

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

[C90/270]Total=41.8

Field angle(10%Imax): [C0/180]Total=66.4

[C90/270]Total=66.4

Maximum s/h(1/2): C0\_180=0.69 C90\_270=0.69

Maximum s/h(1/4): C0\_180=0.65 C90\_270=0.65

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.96%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.035%

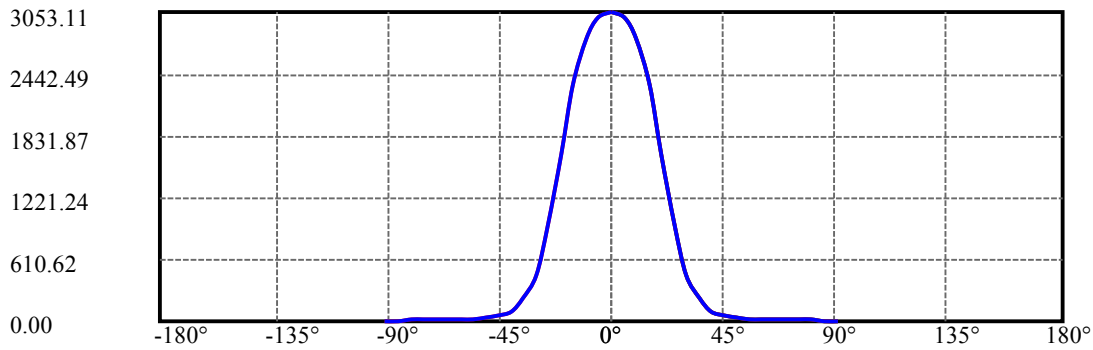
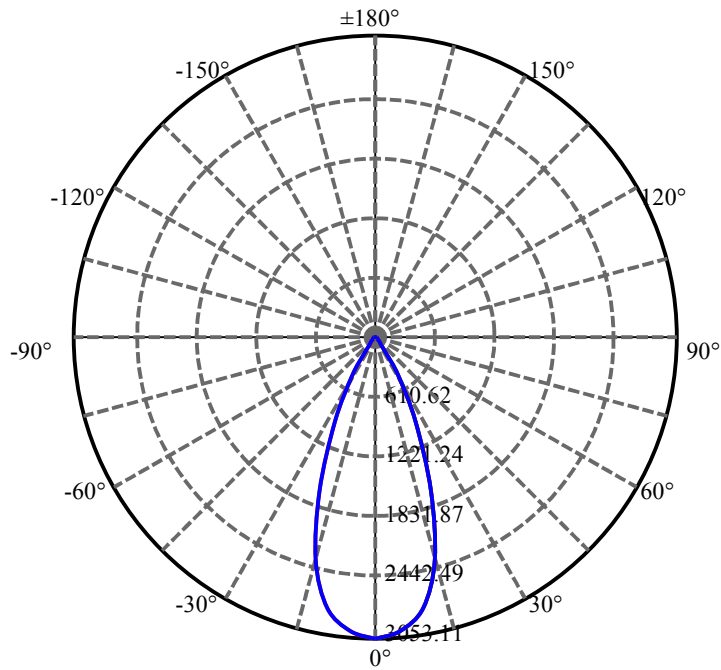
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3053.109	0.000	0	.000%	.000%
5.0	2987.648	72.216	72.216	4.105%	4.416%
10.0	2778.680	206.280	278.495	11.727%	17.032%
15.0	2330.016	303.044	581.54	17.228%	35.565%
20.0	1655.367	328.452	909.991	18.673%	55.652%
25.0	950.745	273.333	1183.324	15.539%	72.368%
30.0	458.550	178.347	1361.672	10.139%	83.275%
35.0	220.050	99.929	1461.6	5.681%	89.386%
40.0	98.810	53.199	1514.8	3.024%	92.640%
45.0	56.770	28.807	1543.607	1.638%	94.401%
50.0	37.104	18.969	1562.575	1.078%	95.562%
55.0	25.643	13.643	1576.219	.776%	96.396%
60.0	19.603	10.459	1586.677	.595%	97.035%
65.0	16.031	8.663	1595.34	.492%	97.565%
70.0	15.342	7.944	1603.284	.452%	98.051%
75.0	20.138	9.274	1612.558	.527%	98.618%
80.0	19.062	10.489	1623.046	.596%	99.260%
85.0	9.014	7.629	1630.675	.434%	99.726%
90.0	7.334	4.476	1635.151	.254%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1361.67	77.41%	83.27%
0-40	1514.80	86.12%	92.64%
0-60	1586.68	90.20%	97.04%
0-90	1630.68	92.70%	99.73%
0-120	1630.68	92.70%	99.73%
0-180	1635.15	92.96%	100.00%
60-90	54.46	3.10%	3.33%
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%
0-28.50	1308.12	74.37%	80.00%

ZONAL LUMEN SUMMARY

0-10	278.50
10-20	631.50
20-30	451.68
30-40	153.13
40-50	47.78
50-60	24.10
60-70	16.61
70-80	19.76
80-90	7.63
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: —————

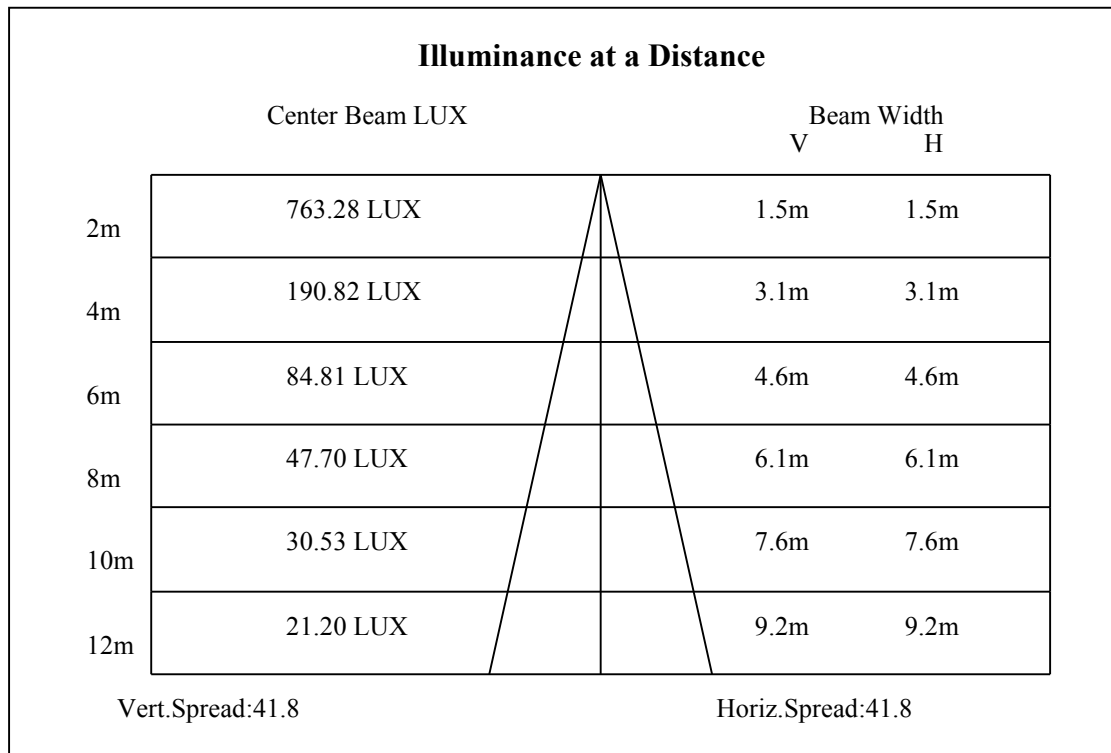
C90/C270: —————

Field angle(10%Imax):C0/180Left:33.2 Right:33.2

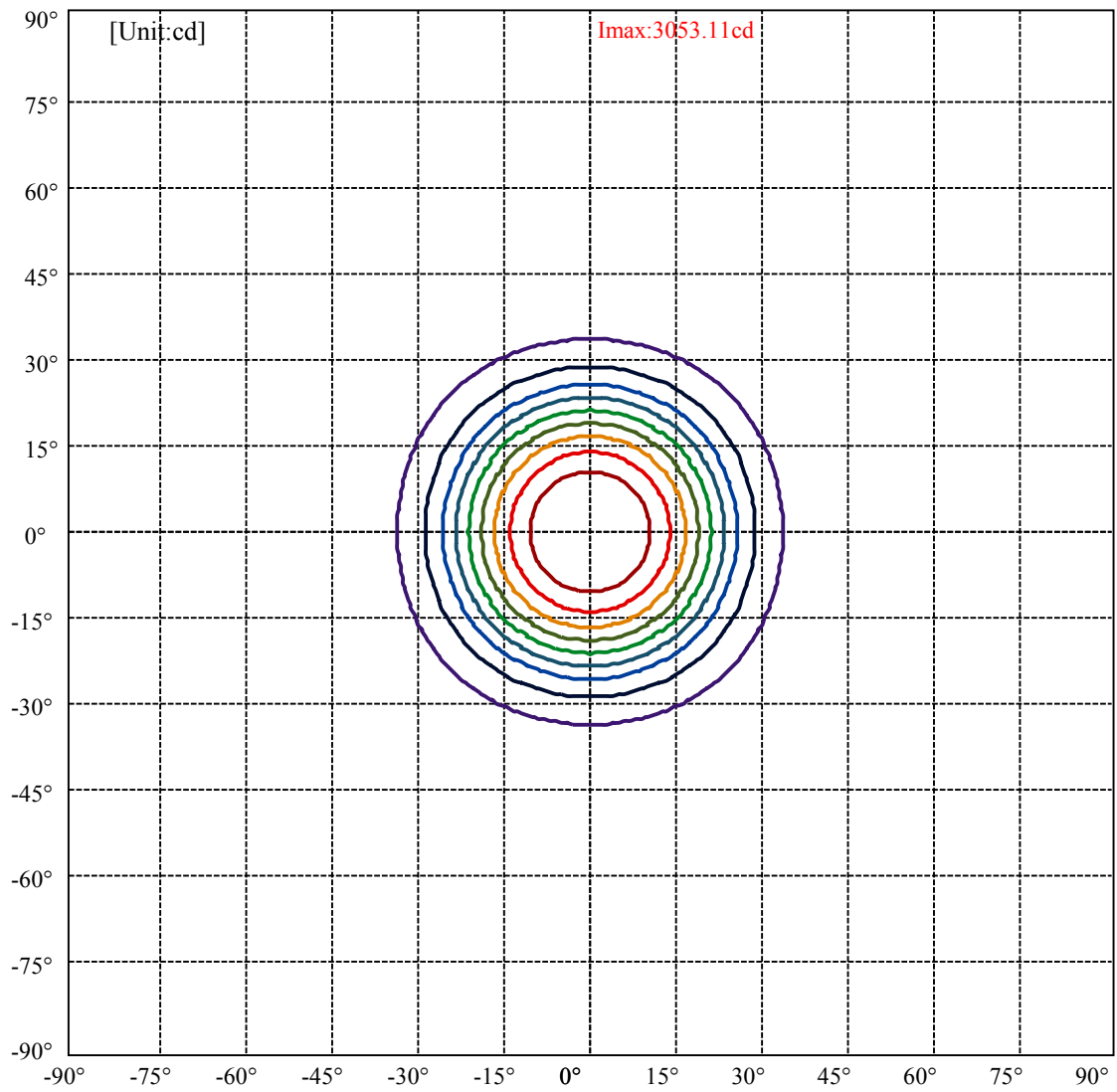
:C90/270Left:33.2 Right:33.2

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

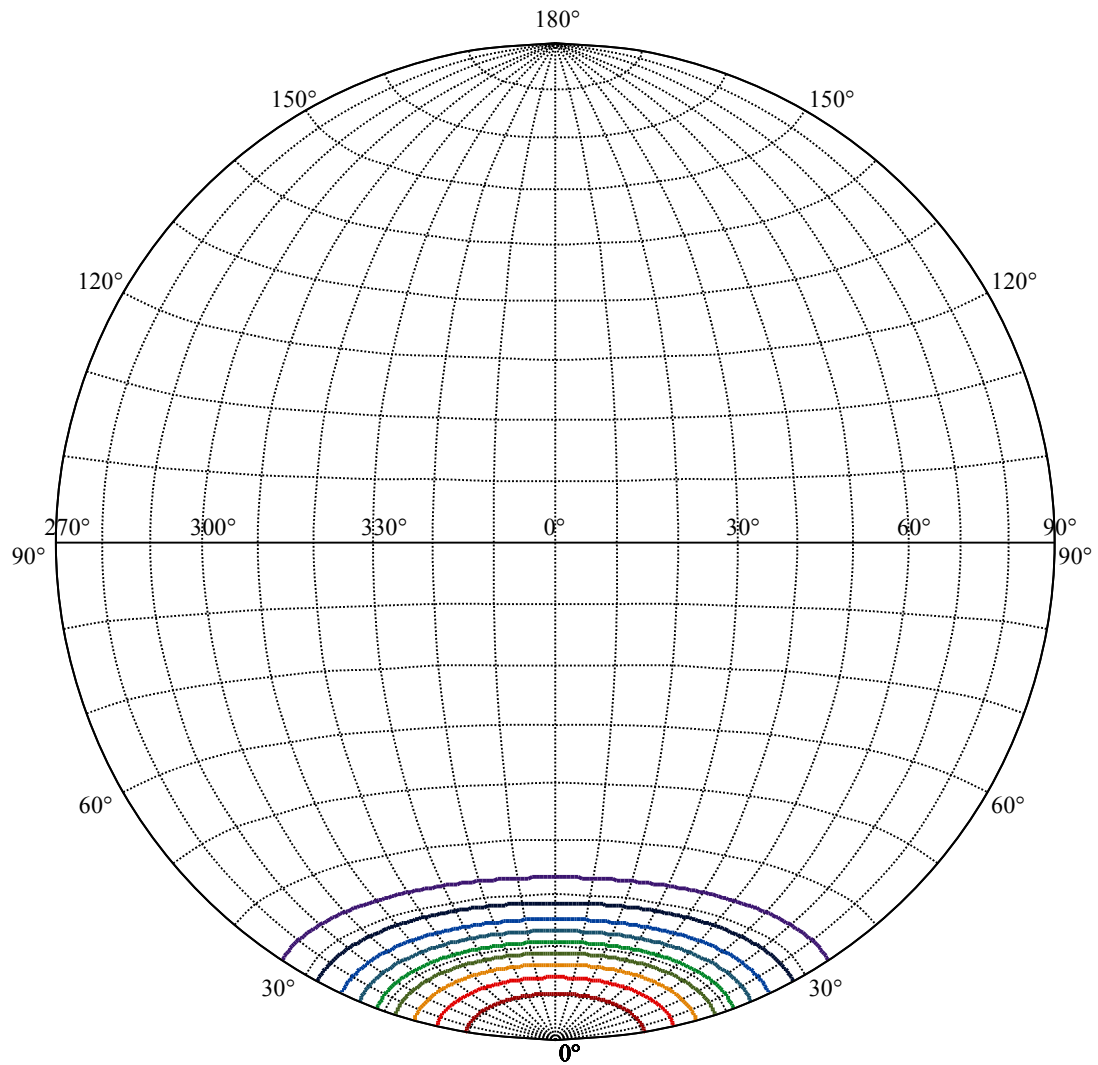
:C90/270Left:20.9 Right:20.9



ISO-Intensity(V-H)



(10%Imax) 305.311	—
(20%Imax) 610.622	—
(30%Imax) 915.933	—
(40%Imax) 1221.24	—
(50%Imax) 1526.55	—
(60%Imax) 1831.87	—
(70%Imax) 2137.18	—
(80%Imax) 2442.49	—
(90%Imax) 2747.8	—



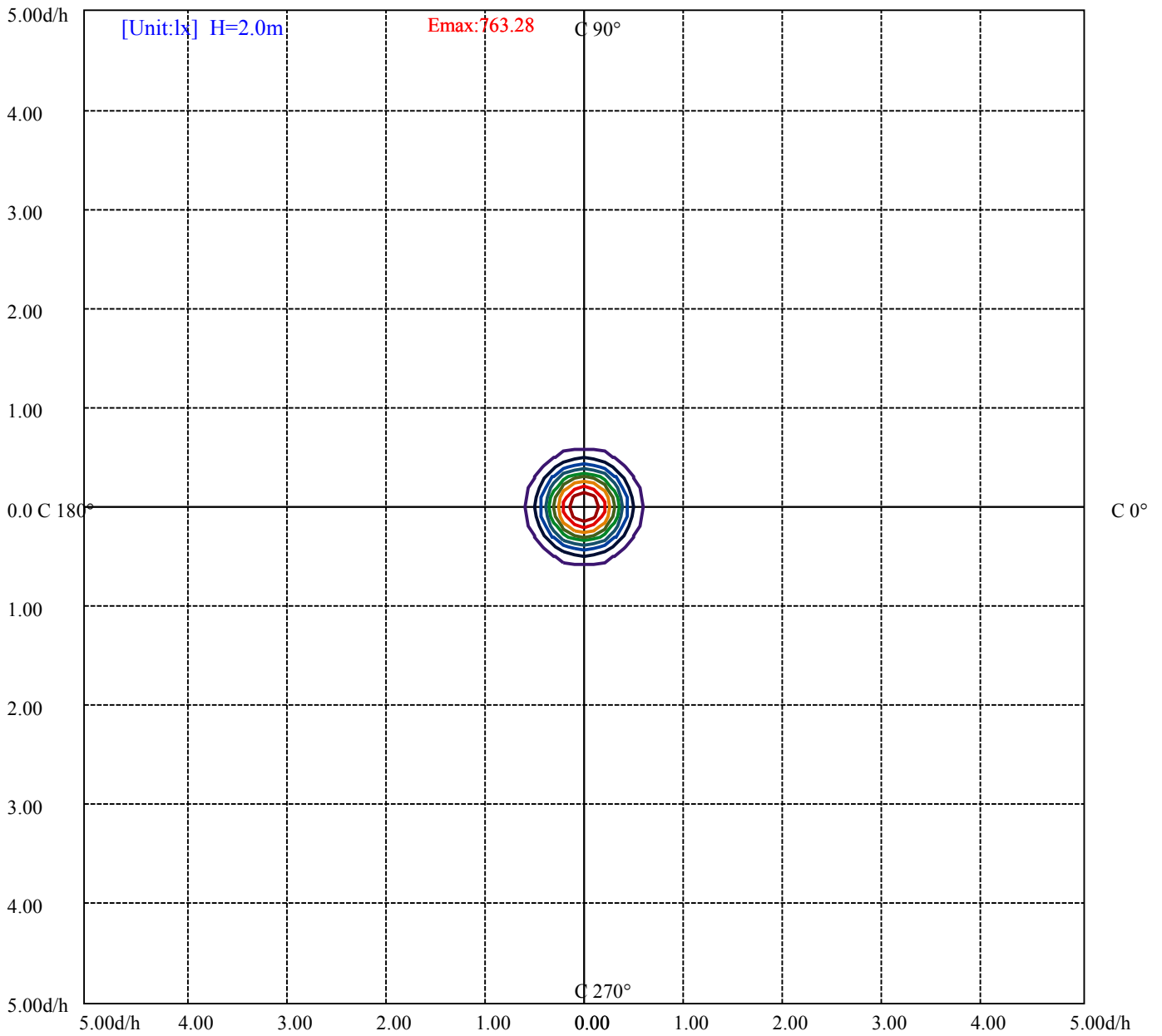
House

[Unit:cd]

Road

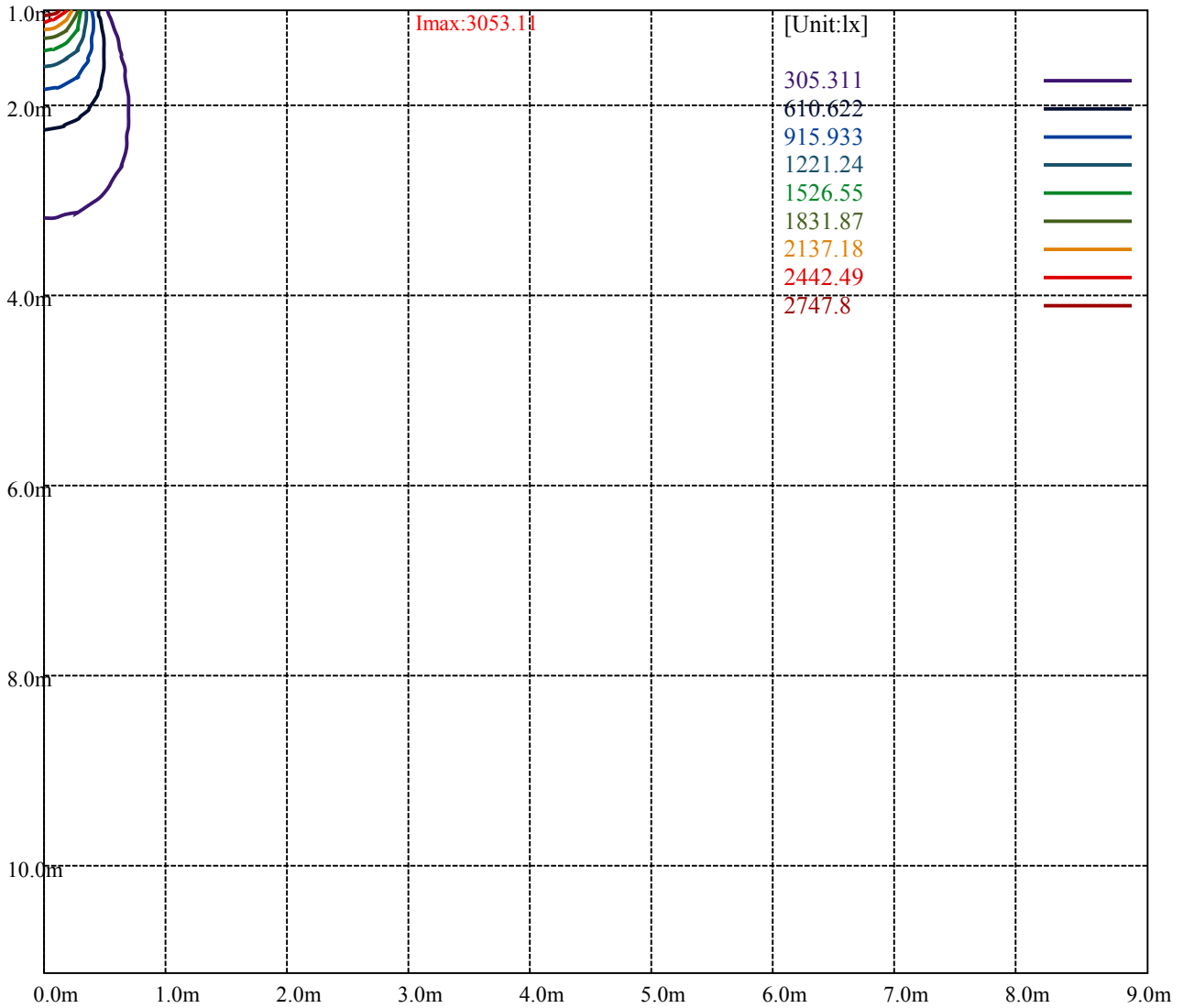
**Imax:3053.11**

(10%Imax) 305.311	—
(20%Imax) 610.622	—
(30%Imax) 915.933	—
(40%Imax) 1221.24	—
(50%Imax) 1526.55	—
(60%Imax) 1831.87	—
(70%Imax) 2137.18	—
(80%Imax) 2442.49	—
(90%Imax) 2747.8	—



(10%Emax) 76.32775	—
(20%Emax) 152.6552	—
(30%Emax) 228.983	—
(40%Emax) 305.31	—
(50%Emax) 381.6375	—
(60%Emax) 457.965	—
(70%Emax) 534.295	—
(80%Emax) 610.6225	—
(90%Emax) 686.95	—





Luminance Table

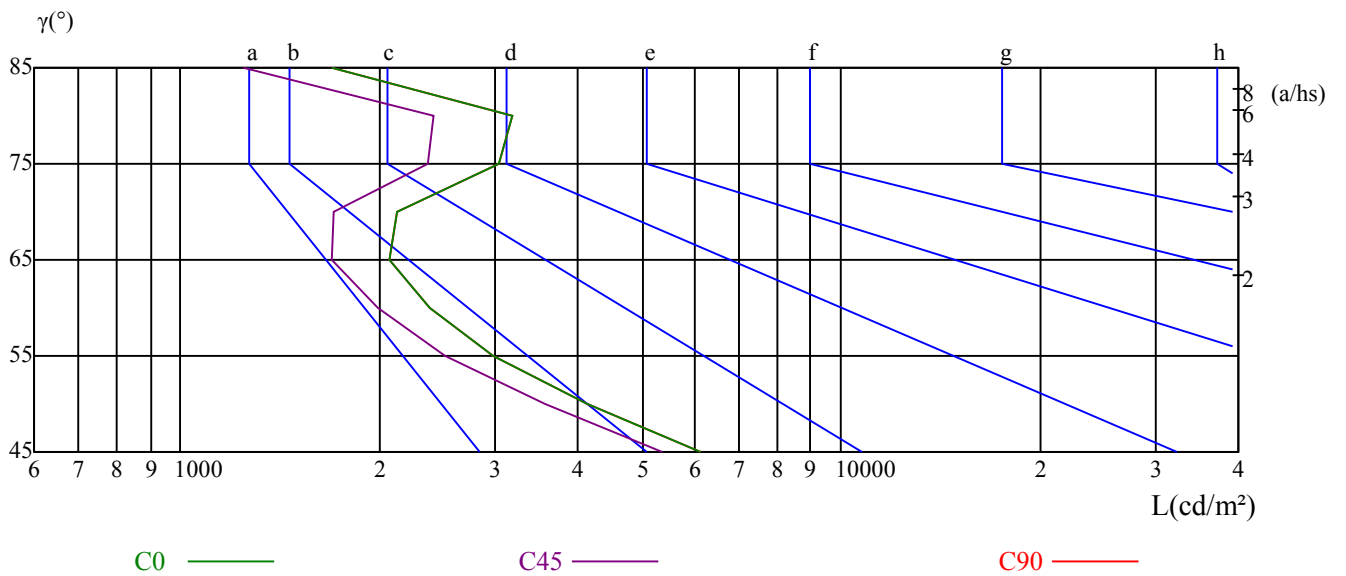
$\gamma$	45	50	55	60	65	70	75	80	85
C0	6146	4139	2974	2386	2070	2126	3036	3177	1694
C45	5363	3559	2518	1987	1692	1703	2376	2420	1249
C90	6146	4139	2974	2386	2070	2126	3036	3177	1694

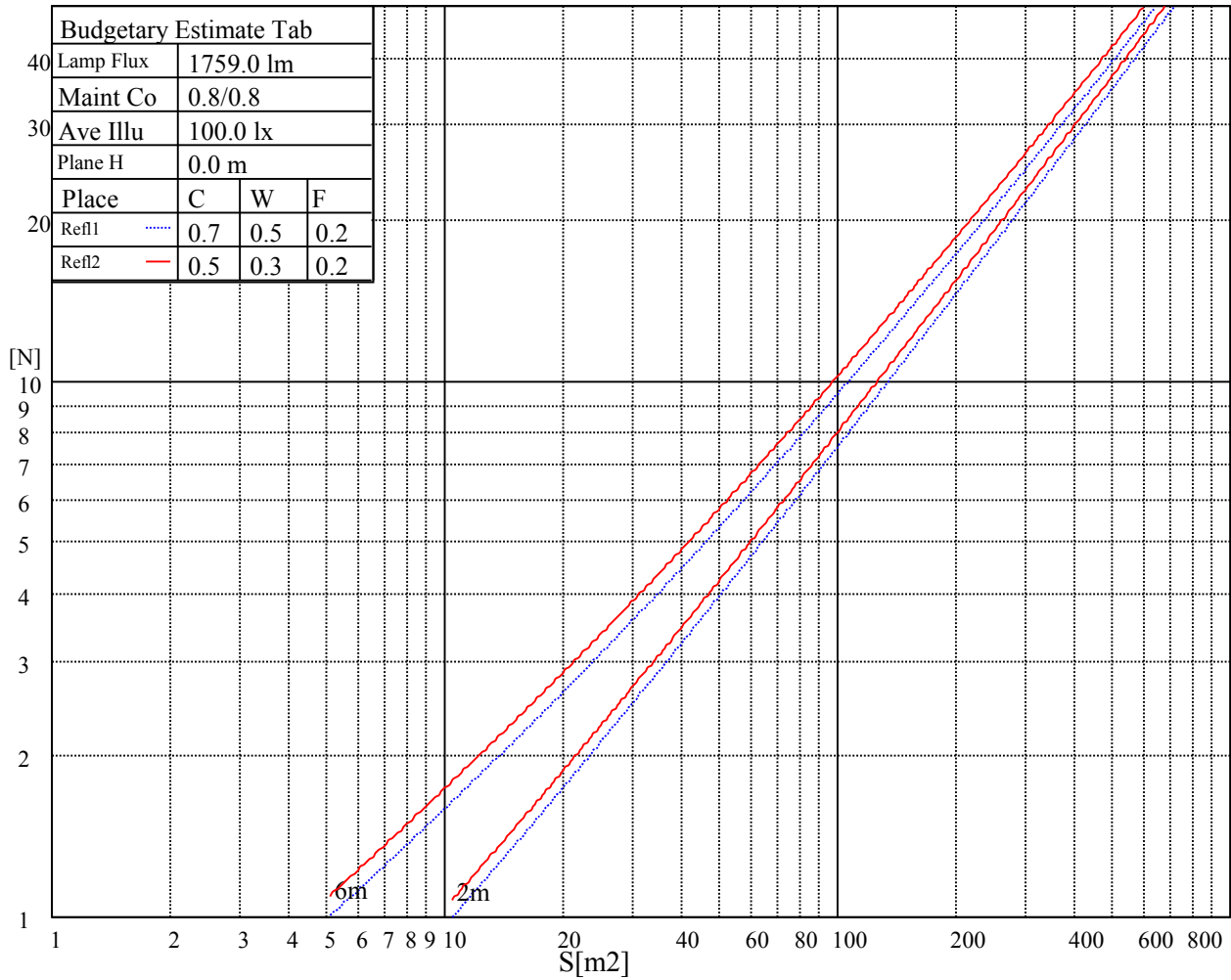
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4482	4482	4482	9192	9192	9192	12219	12219	12219

Glare Table

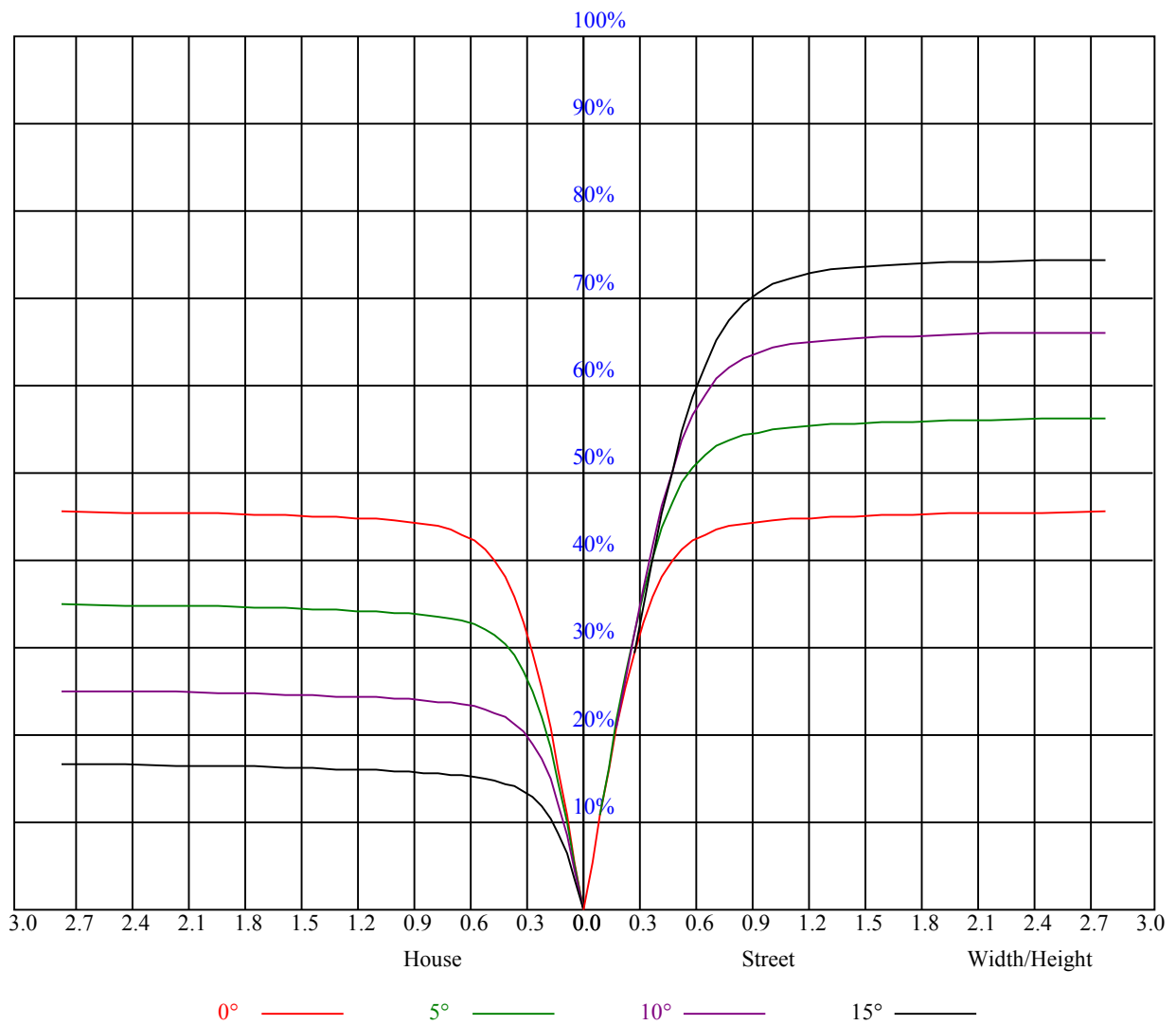
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.79	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	0.69	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	0.59	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/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3048.75	3042.56	2881.69	2494.69	1891.13	1170.00	569.81	284.63	120.99
45.0	3051.56	3039.75	2863.13	2477.25	1774.69	1009.13	497.25	293.06	108.00
90.0	3054.94	2985.19	2781.56	2278.69	1575.00	866.48	396.79	169.48	86.91
135.0	3057.19	2961.00	2747.81	2256.75	1599.19	897.75	421.88	172.24	88.54
180.0	3048.75	2909.81	2614.50	2071.69	1279.13	752.23	348.98	155.93	79.43
225.0	3051.56	2958.19	2714.06	2210.63	1577.81	865.52	408.32	182.64	96.24
270.0	3054.94	3004.88	2840.63	2458.69	1806.19	1066.50	538.31	293.63	109.86
315.0	3057.19	2999.81	2786.06	2391.75	1739.81	978.36	487.07	208.80	100.52
360.0	3048.75	3042.56	2881.69	2494.69	1891.13	1170.00	569.81	284.63	120.99
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	66.32	42.58	28.74	21.49	17.04	14.57	12.49	10.63	9.11
45.0	60.92	40.89	27.73	20.76	16.71	14.18	11.93	10.35	8.66
90.0	50.12	33.02	22.73	18.28	15.53	19.63	33.36	30.15	8.16
135.0	51.53	34.20	24.69	18.68	15.53	14.29	22.22	18.90	8.04
180.0	50.79	34.14	24.02	18.90	15.47	13.44	11.36	9.79	8.04
225.0	55.24	36.34	25.71	19.63	15.92	13.56	11.36	9.68	8.38
270.0	61.43	38.53	26.04	19.80	16.09	17.83	33.36	38.98	11.87
315.0	57.83	37.13	25.48	19.29	15.98	15.24	25.03	24.02	9.84
360.0	66.32	42.58	28.74	21.49	17.04	14.57	12.49	10.63	9.11
C/ $\gamma$ (°)	90.0								
0.0	7.48								
45.0	7.43								
90.0	7.26								
135.0	7.20								
180.0	7.31								
225.0	7.43								
270.0	7.26								
315.0	7.31								
360.0	7.48								