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Nata

LumCAT: LN01D05060DA-N

Luminaire: 97.70.234.00

Report No: 201228-B009

Test No: 201228-C009

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): 1833.81

Efficiency(%): 88.21%

Lumens(lm)/Power(W): 104.49

Central intensity(cd): 1937.391

Maximum intensity(cd): 1937.391

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=56.7

[C90/270]Total=56.7

Field angle(10%Imax): [C0/180]Total=89.5

[C90/270]Total=89.5

Maximum s/h(1/2): C0_180=0.86 C90_270=0.86

Maximum s/h(1/4): C0_180=0.88 C90_270=0.88

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.21%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.135%

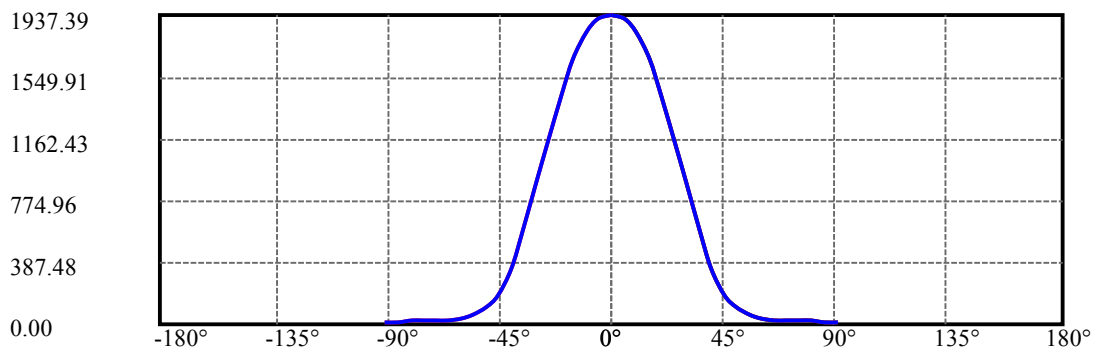
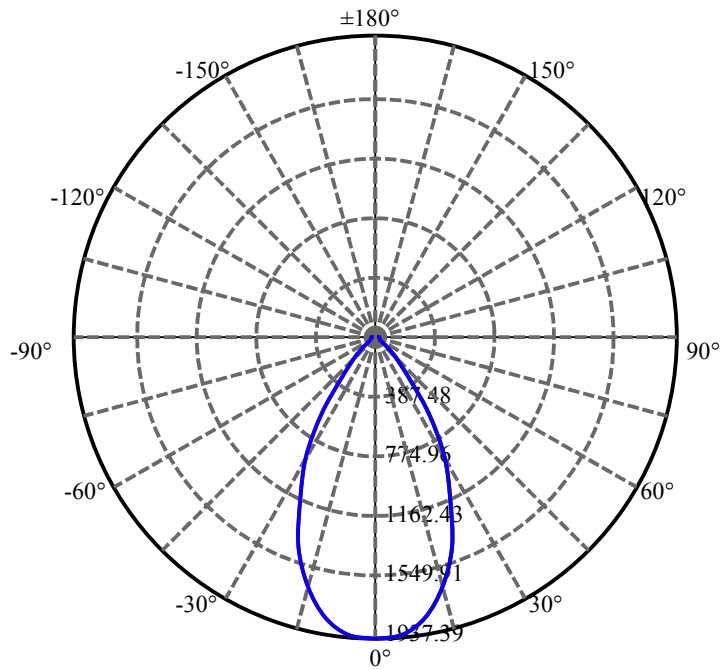
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1937.391	0.000	0	.000%	.000%
5.0	1916.930	46.077	46.077	2.216%	2.513%
10.0	1831.289	134.086	180.163	6.450%	9.825%
15.0	1666.617	207.493	387.656	9.980%	21.139%
20.0	1432.898	255.444	643.1	12.287%	35.069%
25.0	1137.804	269.619	912.719	12.969%	49.772%
30.0	884.616	255.939	1168.658	12.311%	63.728%
35.0	595.174	217.909	1386.568	10.481%	75.611%
40.0	348.989	157.527	1544.094	7.577%	84.201%
45.0	186.188	99.092	1643.186	4.766%	89.605%
50.0	106.214	59.084	1702.27	2.842%	92.827%
55.0	62.416	36.666	1738.936	1.764%	94.826%
60.0	41.365	23.989	1762.925	1.154%	96.135%
65.0	29.194	17.153	1780.078	.825%	97.070%
70.0	25.439	13.833	1793.911	.665%	97.824%
75.0	26.093	13.470	1807.381	.648%	98.559%
80.0	21.734	12.797	1820.178	.616%	99.257%
85.0	10.378	8.726	1828.903	.420%	99.733%
90.0	7.538	4.905	1833.809	.236%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1168.66	56.21%	63.73%
0-40	1544.09	74.27%	84.20%
0-60	1762.92	84.80%	96.13%
0-90	1828.90	87.97%	99.73%
0-120	1828.90	87.97%	99.73%
0-180	1833.81	88.21%	100.00%
60-90	89.97	4.33%	4.91%
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%
0-37.55	1467.05	70.57%	80.00%

ZONAL LUMEN SUMMARY

0-10	180.16
10-20	462.94
20-30	525.56
30-40	375.44
40-50	158.18
50-60	60.65
60-70	30.99
70-80	26.27
80-90	8.73
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

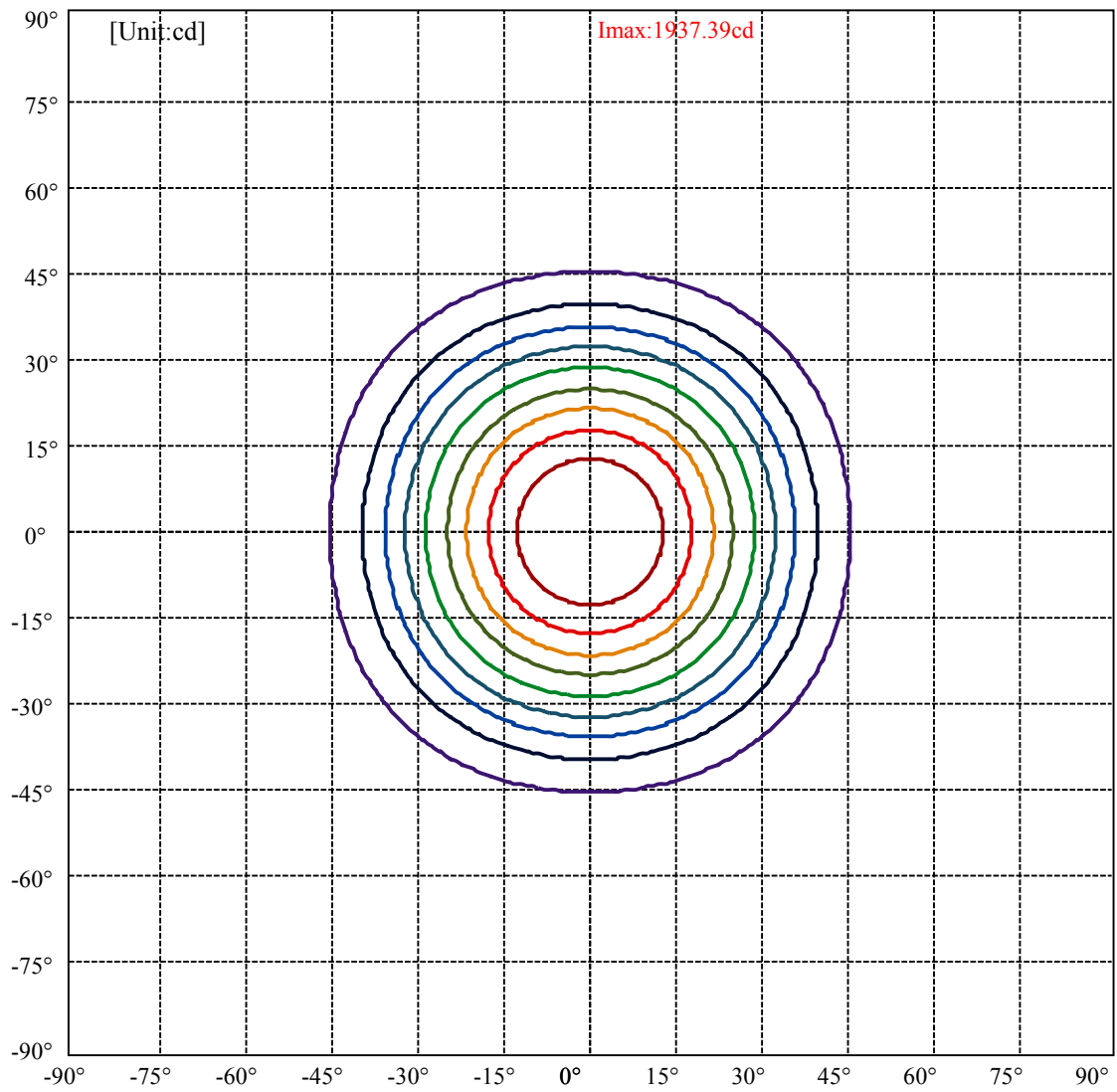


C0(Max): —————
 C0/C180: —————
 C90/C270: —————

Field angle(10%Imax):C0/180Left:44.8 Right:44.8
 :C90/270Left:44.8 Right:44.8

Beam Angle(50%Imax):C0/180Left:28.3 Right:28.3
 :C90/270Left:28.3 Right:28.3

ISO-Intensity(V-H)

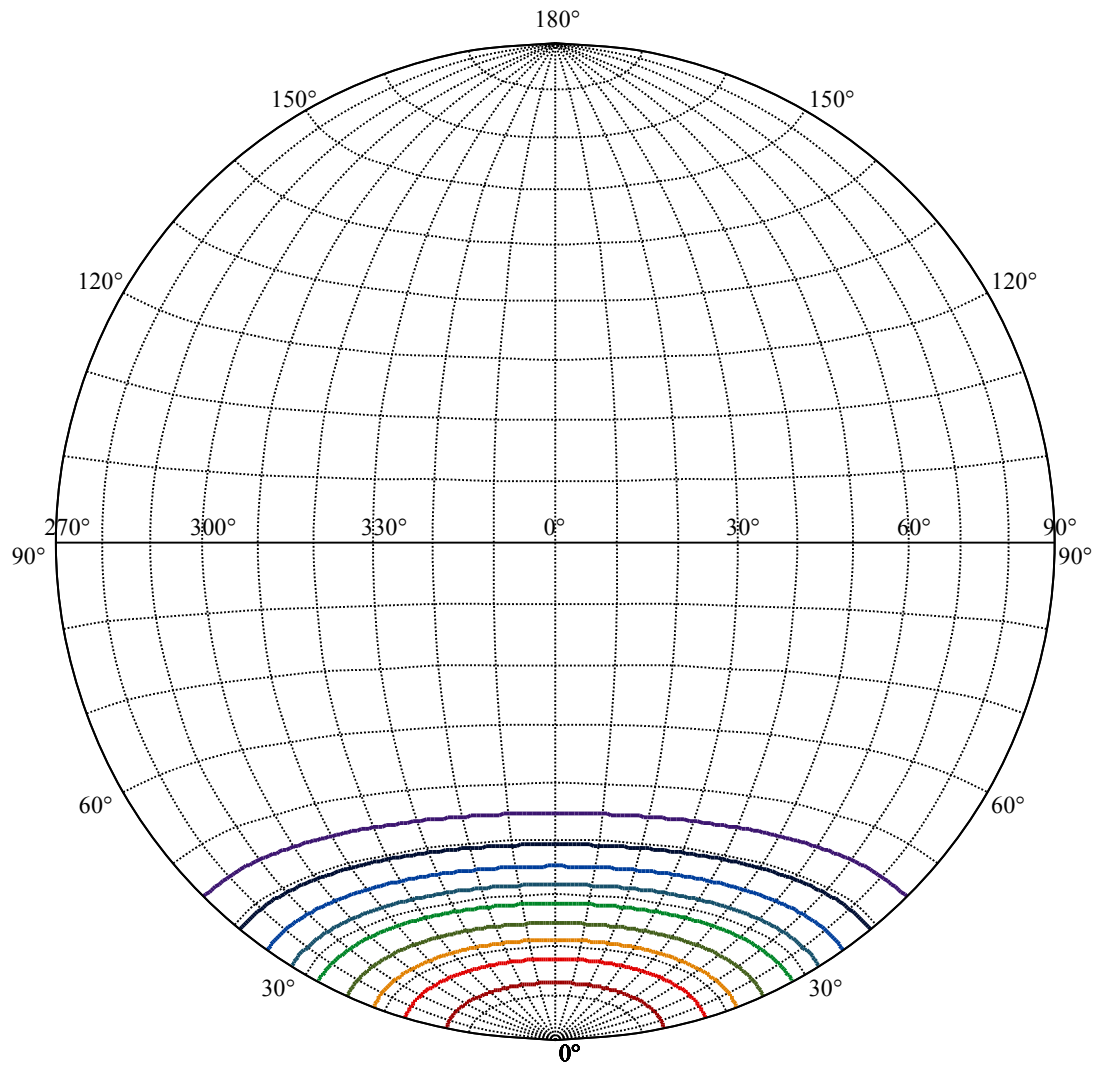


(10%Imax) 193.739	—
(20%Imax) 387.478	—
(30%Imax) 581.217	—
(40%Imax) 774.956	—
(50%Imax) 968.695	—
(60%Imax) 1162.43	—
(70%Imax) 1356.17	—
(80%Imax) 1549.91	—
(90%Imax) 1743.65	—

Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50



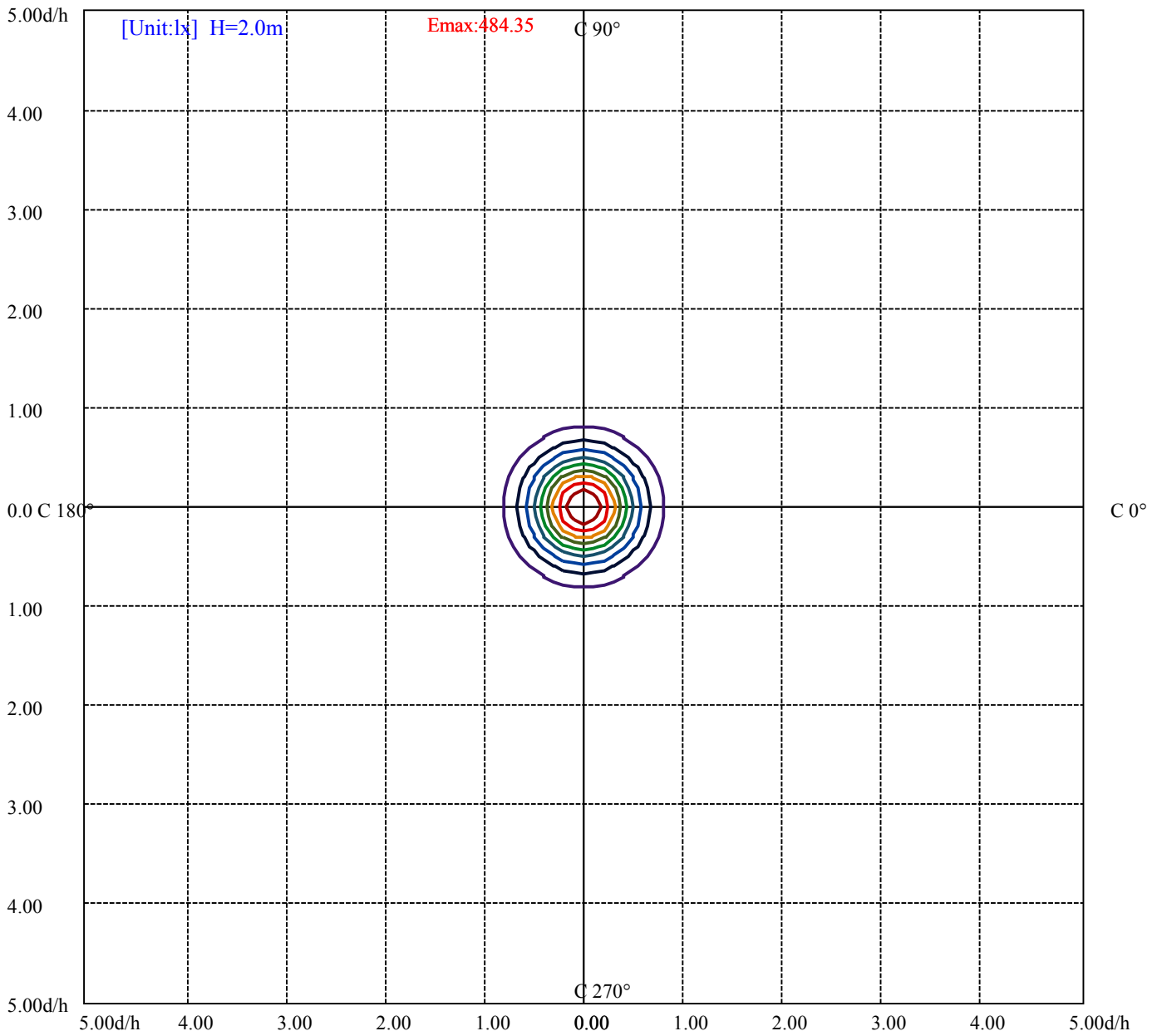
House

[Unit:cd]

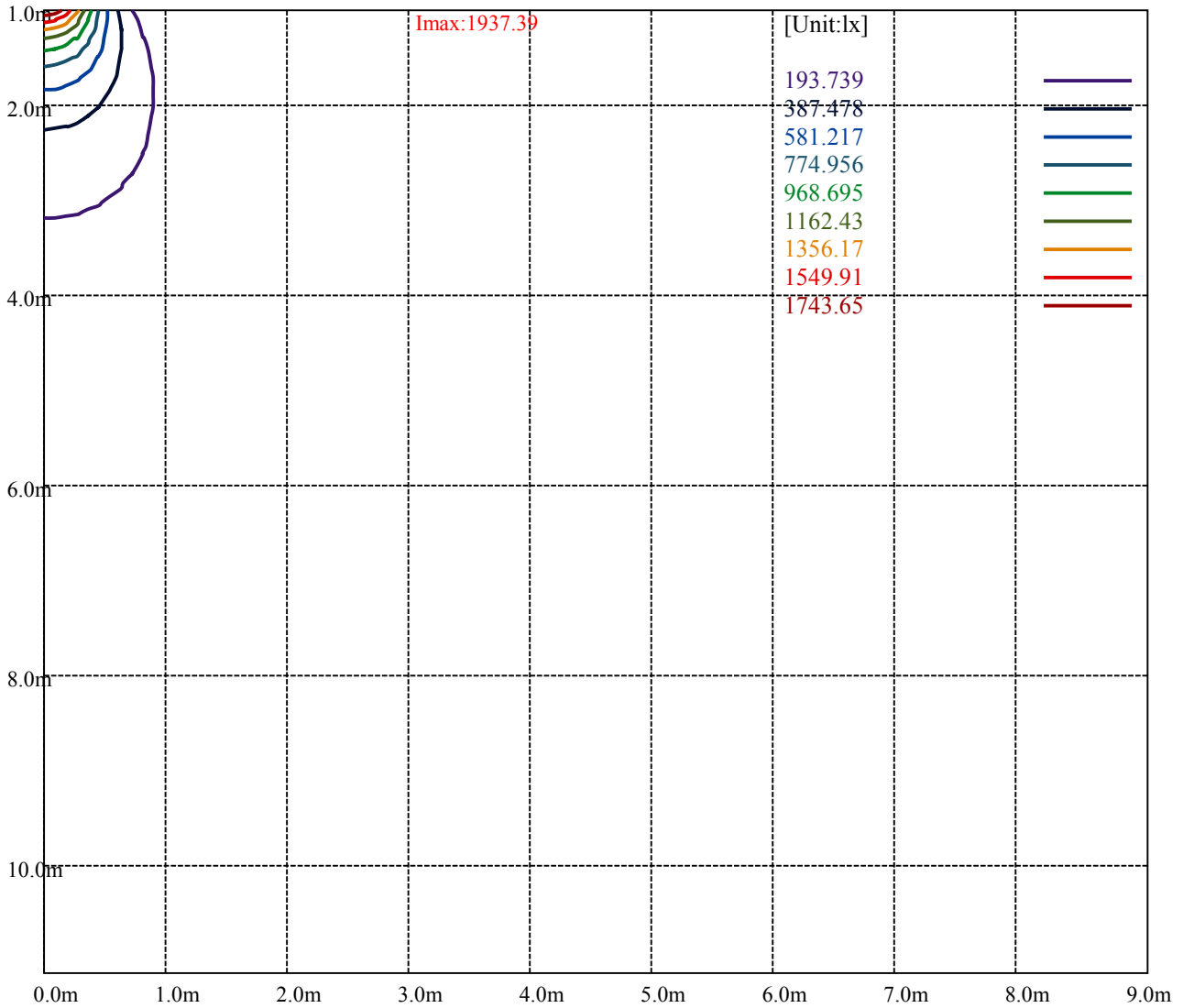
Road

Imax:1937.39

(10%Imax) 193.739	—
(20%Imax) 387.478	—
(30%Imax) 581.217	—
(40%Imax) 774.956	—
(50%Imax) 968.695	—
(60%Imax) 1162.43	—
(70%Imax) 1356.17	—
(80%Imax) 1549.91	—
(90%Imax) 1743.65	—



- (10%Emax) 48.43475
- (20%Emax) 96.8695
- (30%Emax) 145.3042
- (40%Emax) 193.739
- (50%Emax) 242.1738
- (60%Emax) 290.6075
- (70%Emax) 339.0425
- (80%Emax) 387.4775
- (90%Emax) 435.9125



Luminance Table

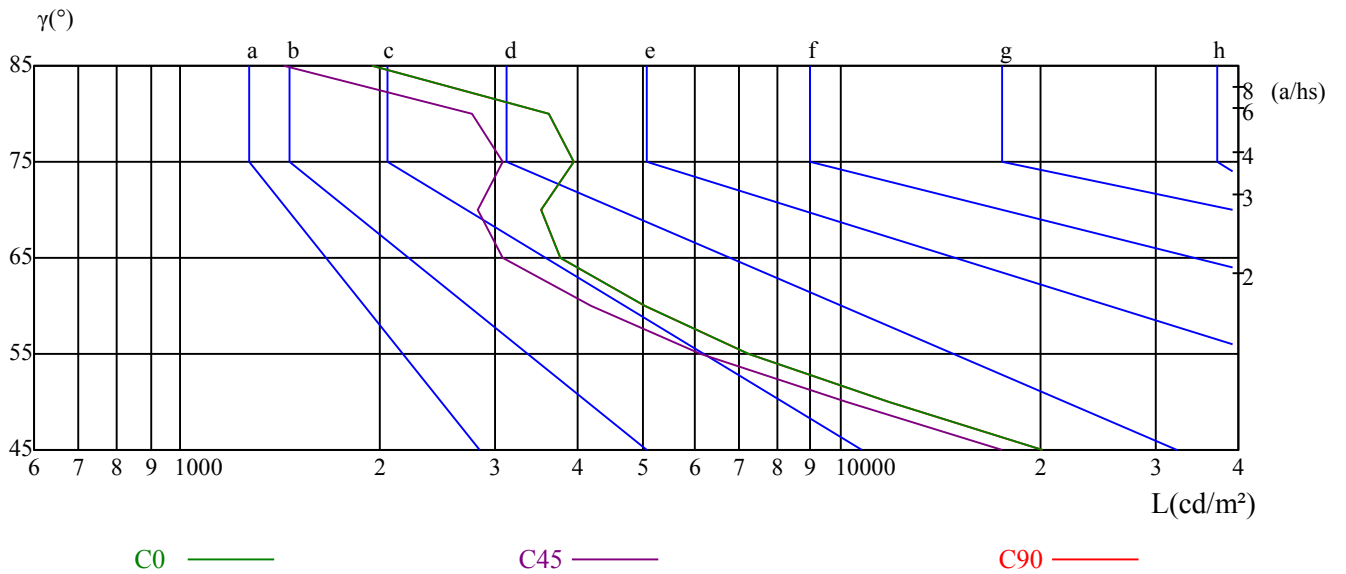
γ	45	50	55	60	65	70	75	80	85
C0	20155	11848	7238	5035	3769	3525	3933	3622	1951
C45	17590	10189	6129	4193	3082	2824	3079	2759	1438
C90	20155	11848	7238	5035	3769	3525	3933	3622	1951

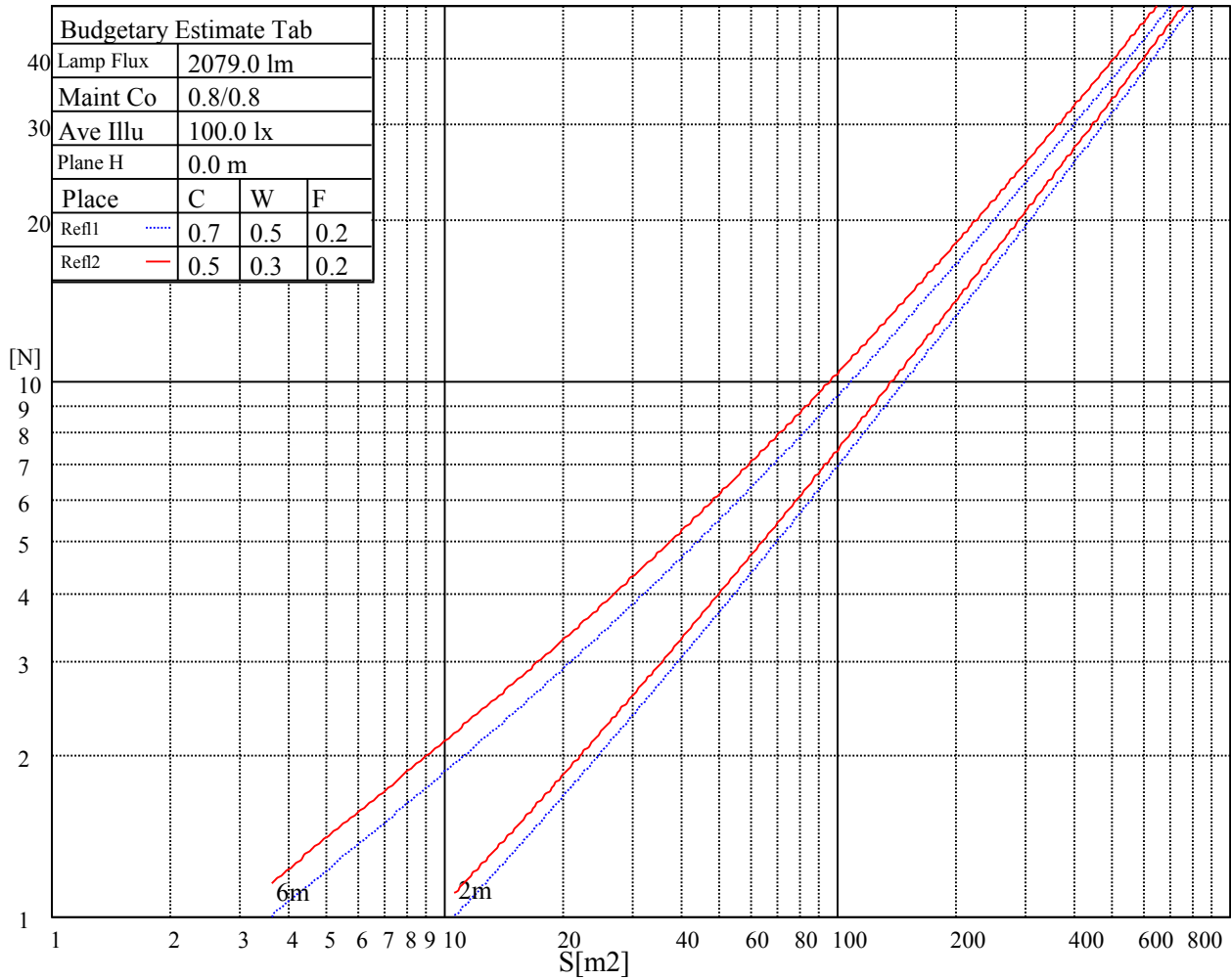
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8161	8161	8161	11911	11911	11911	14068	14068	14068

Glare Table

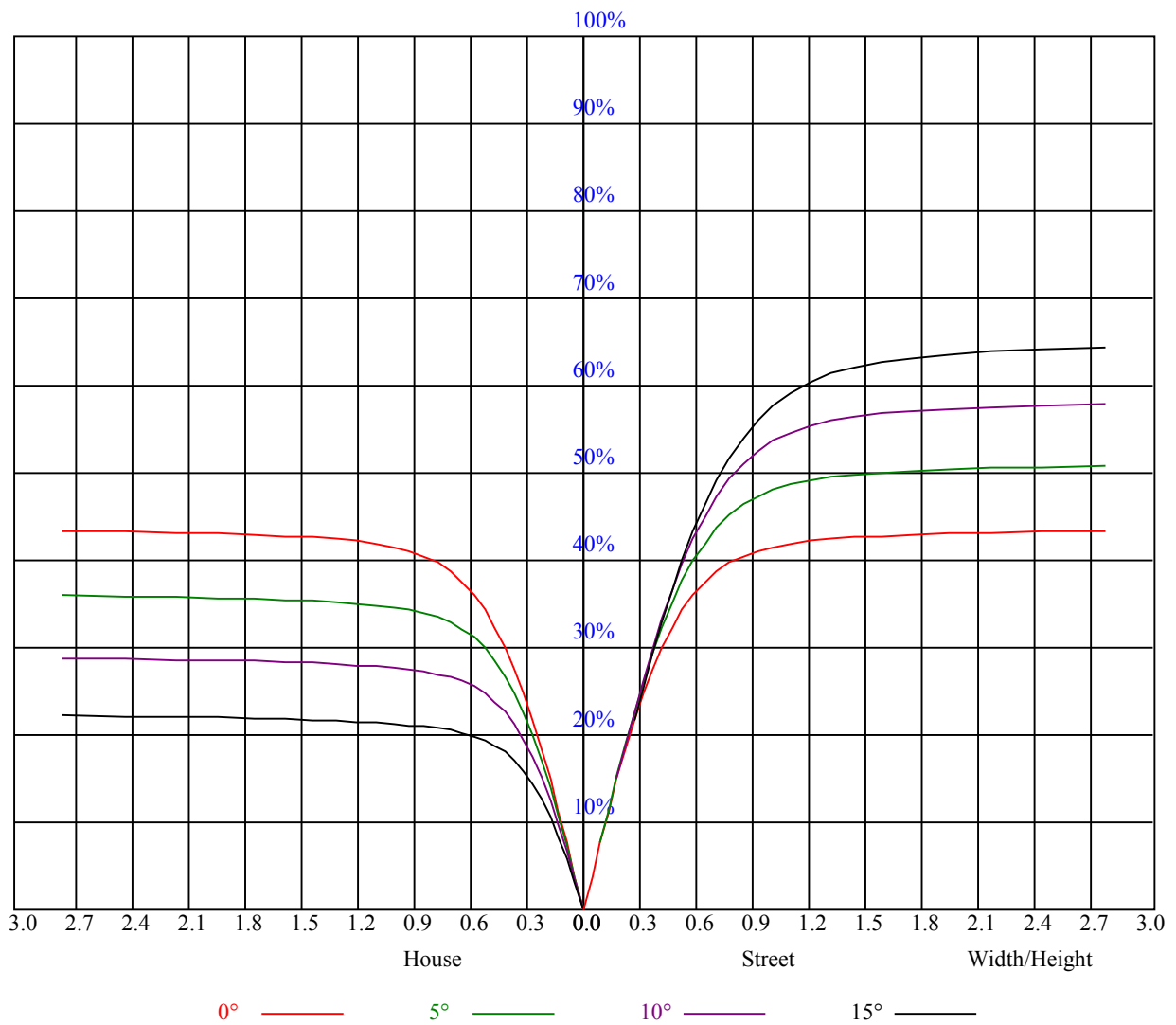
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.94	0.92	0.95	0.92	0.90	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.84	0.82	0.81
2	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.79	0.82	0.79	0.77	0.79	0.77	0.76	0.74
3	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.68
4	0.76	0.71	0.67	0.75	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.64	0.63
5	0.71	0.66	0.61	0.70	0.65	0.61	0.69	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.59	0.58
6	0.66	0.61	0.57	0.66	0.60	0.56	0.64	0.60	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.54
7	0.62	0.57	0.53	0.62	0.56	0.52	0.60	0.56	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.50
8	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.48	0.55	0.51	0.48	0.47
9	0.55	0.49	0.46	0.55	0.49	0.46	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.44
10	0.52	0.46	0.43	0.52	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.49	0.45	0.42	0.41



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	1937.81	1903.50	1802.81	1628.44	1381.50	1115.44	870.75	585.00	332.44
45.0	1941.19	1914.75	1828.69	1641.94	1387.69	1116.00	849.94	551.81	335.81
90.0	1937.81	1927.69	1848.38	1680.19	1434.94	1119.21	824.34	534.94	301.73
135.0	1932.75	1934.44	1863.00	1733.06	1522.69	1233.56	947.81	640.13	366.75
180.0	1937.81	1920.94	1841.06	1672.88	1436.06	1110.26	900.23	604.63	359.10
225.0	1941.19	1932.75	1854.00	1700.44	1456.88	1121.91	916.14	628.54	372.04
270.0	1937.81	1917.00	1844.44	1693.13	1481.63	1195.88	928.13	663.75	401.06
315.0	1932.75	1884.38	1767.94	1582.88	1361.81	1090.18	839.59	552.60	322.99
360.0	1937.81	1903.50	1802.81	1628.44	1381.50	1115.44	870.75	585.00	332.44
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	180.00	102.21	60.08	40.56	28.58	21.99	16.88	13.11	9.96
45.0	172.01	98.94	59.85	39.94	28.24	21.66	16.82	12.88	9.62
90.0	162.28	95.96	56.98	38.36	27.90	26.83	30.43	21.99	9.45
135.0	192.21	112.05	64.74	42.47	30.26	30.77	40.50	39.54	11.48
180.0	192.15	109.13	63.23	42.36	29.59	22.61	17.66	13.56	10.46
225.0	206.38	115.54	66.99	44.33	30.77	23.29	17.66	13.95	10.86
270.0	212.23	122.34	69.47	44.44	30.60	24.30	28.91	26.61	11.42
315.0	172.24	93.54	57.99	38.48	27.62	32.06	39.88	32.23	9.79
360.0	180.00	102.21	60.08	40.56	28.58	21.99	16.88	13.11	9.96
C/ γ (°)	90.0								
0.0	7.54								
45.0	7.76								
90.0	7.37								
135.0	7.31								
180.0	7.48								
225.0	7.99								
270.0	7.54								
315.0	7.31								
360.0	7.54								