
NATA

LumCAT: 3-1925-E
Luminaire: LMOP009-3225DH + 92.76.340.00
Report No: 201610023 Voltage(V): 218.0000
Test No: 201600023 Current(A): 0.0730
LampCAT: CITIZEN CLC251 Power (W): 15.9000
Lamp flux(lm): 1738.0 PF: 0.9980
Number of Lamps: 1 Ballast type: AC
Length(mm): 0 Width(mm): 0
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 1572.49
Efficiency(%): 90.48%
Lumens(lm)/Power(W): 98.90
Central intensity(cd): 3057.833
Maximum intensity(cd): 3063.063
Angle of maximum intensity: C=0.0 γ =5.0
Beam Angle(50%Imax): [C0/180]Total=39.1
 [C90/270]Total=39.8
Field angle(10%Imax): [C0/180]Total=69.8
 [C90/270]Total=69.8
Maximum s/h(1/2): C0_180=0.65 C90_270=0.66
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(%): 90.48%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.714%

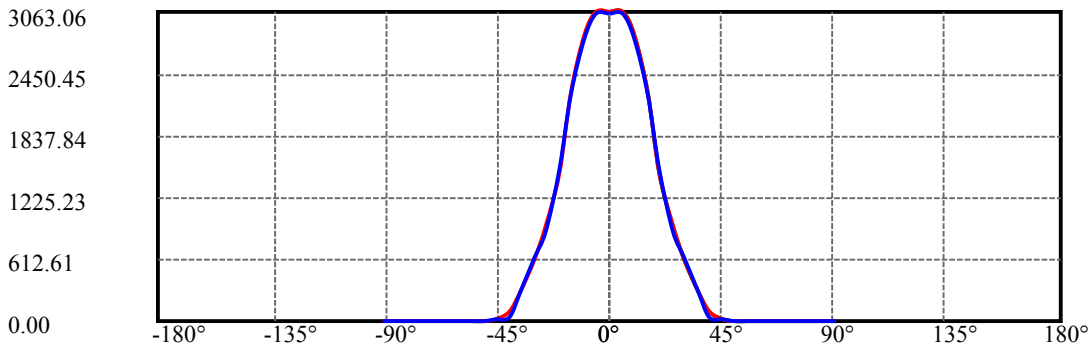
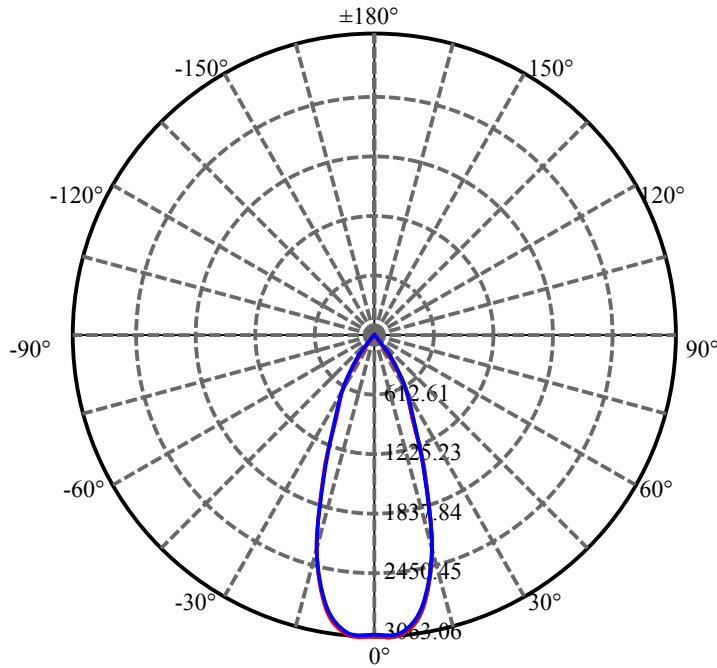
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3058.383	0.000	0	.000%	.000%
5.0	3055.699	73.092	73.092	4.206%	4.648%
10.0	2819.576	210.177	283.269	12.093%	18.014%
15.0	2233.982	299.774	583.043	17.248%	37.078%
20.0	1469.283	305.201	888.244	17.560%	56.486%
25.0	917.074	250.285	1138.529	14.401%	72.403%
30.0	618.208	194.291	1332.82	11.179%	84.758%
35.0	306.148	136.118	1468.938	7.832%	93.415%
40.0	55.985	60.419	1529.357	3.476%	97.257%
45.0	10.192	12.253	1541.611	.705%	98.036%
50.0	8.451	3.767	1545.378	.217%	98.276%
55.0	7.618	3.494	1548.872	.201%	98.498%
60.0	7.082	3.398	1552.27	.196%	98.714%
65.0	6.744	3.361	1555.631	.193%	98.928%
70.0	6.545	3.365	1558.996	.194%	99.142%
75.0	6.380	3.378	1562.374	.194%	99.356%
80.0	6.263	3.383	1565.757	.195%	99.572%
85.0	6.180	3.381	1569.138	.195%	99.787%
90.0	6.077	3.356	1572.494	.193%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1332.82	76.69%	84.76%
0-40	1529.36	88.00%	97.26%
0-60	1552.27	89.31%	98.71%
0-90	1569.14	90.28%	99.79%
0-120	1569.14	90.28%	99.79%
0-180	1572.49	90.48%	100.00%
60-90	20.27	1.17%	1.29%
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%
0-28.07	1258.00	72.38%	80.00%

ZONAL LUMEN SUMMARY

0-10	283.27
10-20	604.97
20-30	444.58
30-40	196.54
40-50	16.02
50-60	6.89
60-70	6.73
70-80	6.76
80-90	3.38
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: —————

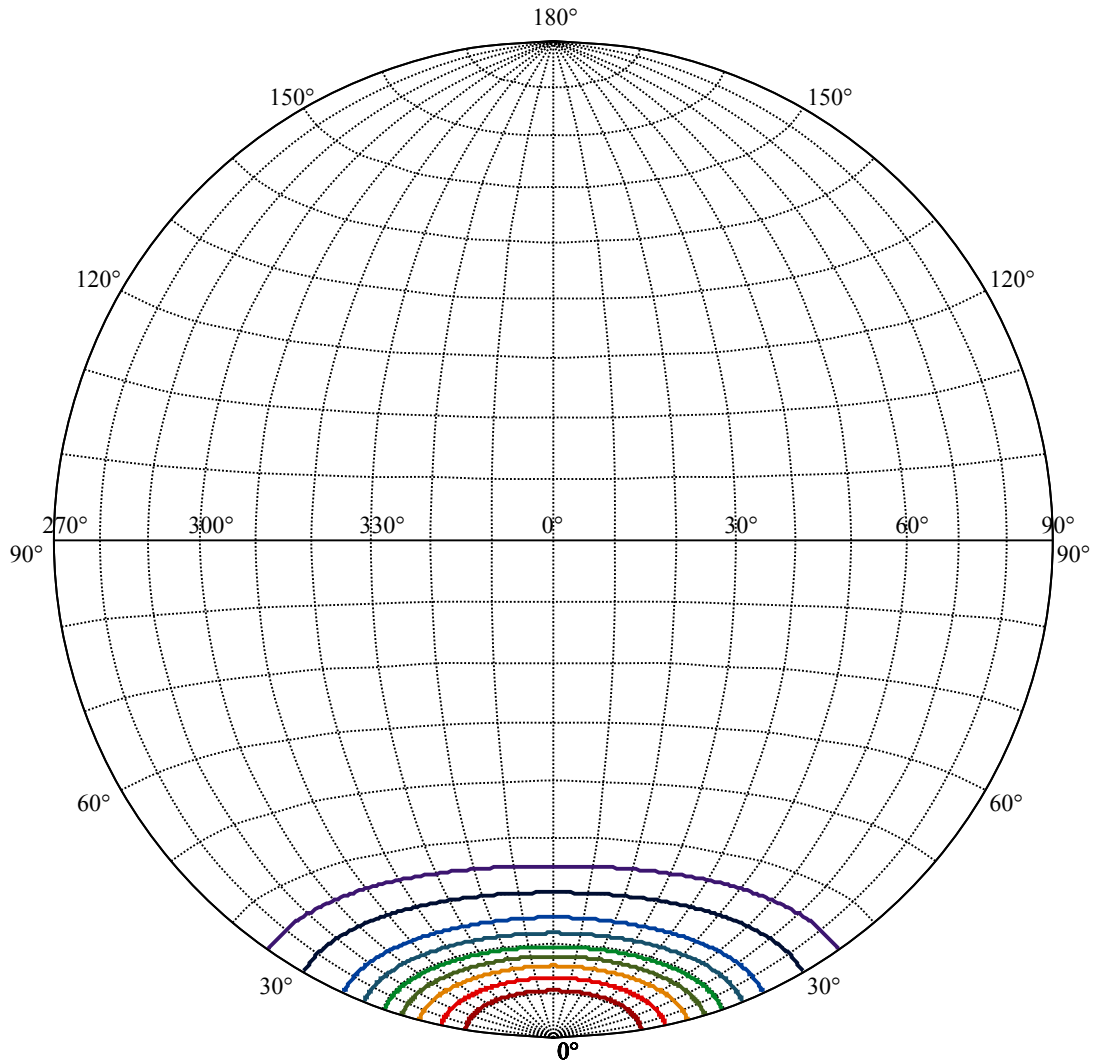
C90/C270: —————

Field angle(10%Imax):C0/180Left:39.9 Right:29.9

:C90/270Left:34.9 Right:34.9

Beam Angle(50%Imax):C0/180Left:24.6 Right:14.6

:C90/270Left:19.9 Right:19.9



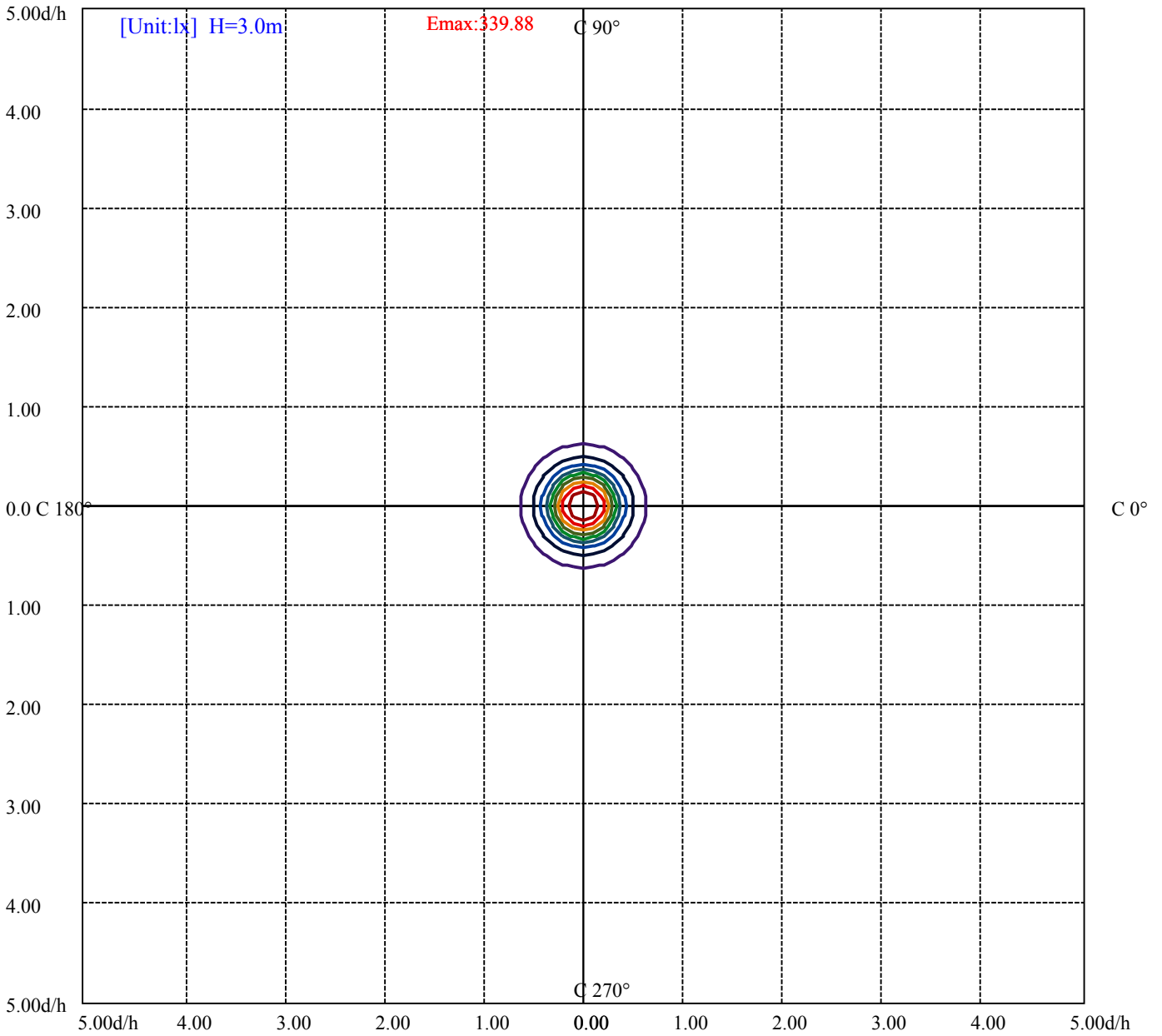
House

[Unit:cd]

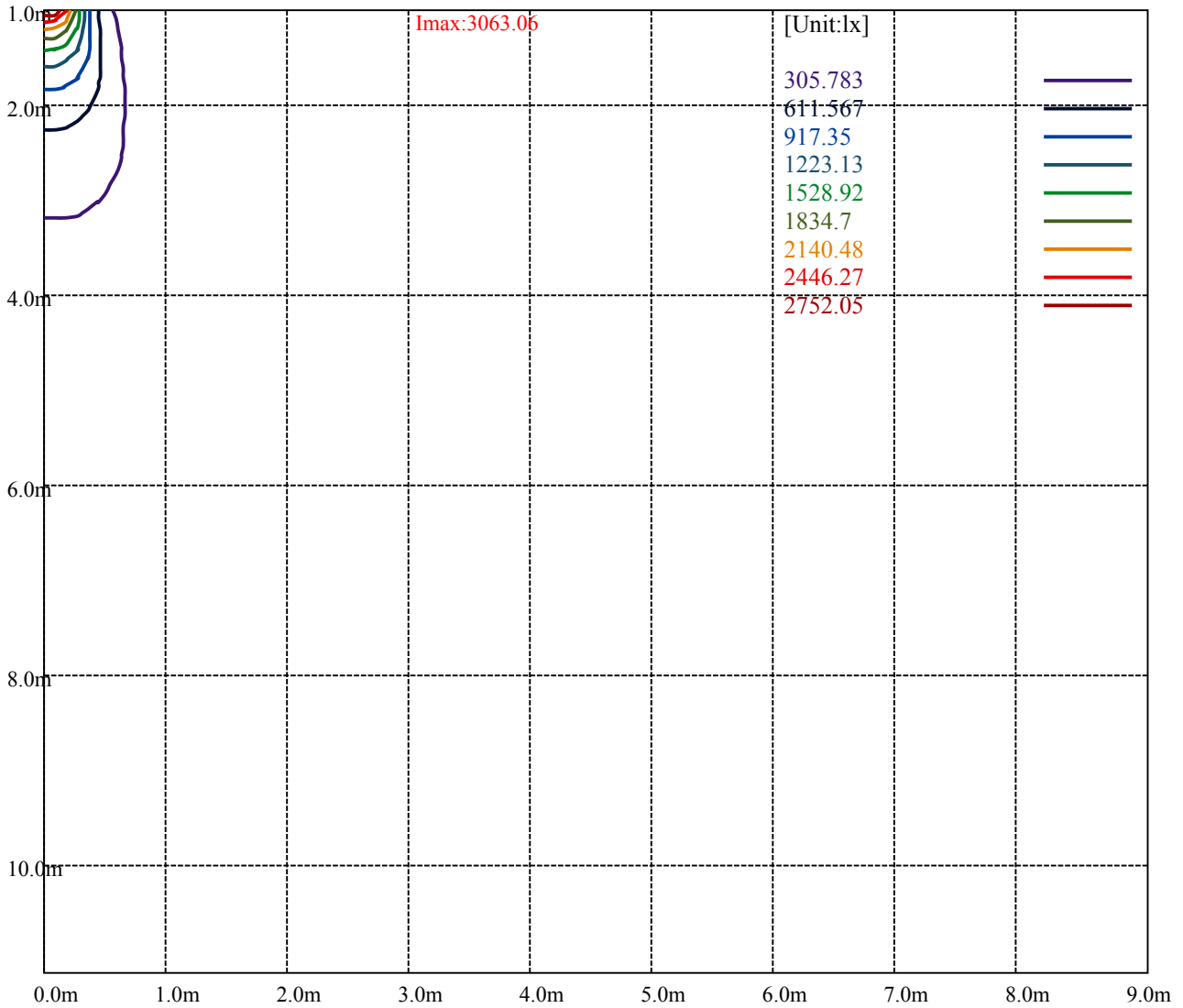
Road

Imax:3063.06

(10%Imax)	307.93	—
(20%Imax)	615.861	—
(30%Imax)	923.791	—
(40%Imax)	1231.72	—
(50%Imax)	1539.65	—
(60%Imax)	1847.58	—
(70%Imax)	2155.51	—
(80%Imax)	2463.44	—
(90%Imax)	2771.37	—



(10%Emax) 33.98811	—
(20%Emax) 67.97623	—
(30%Emax) 101.9644	—
(40%Emax) 135.9522	—
(50%Emax) 169.9411	—
(60%Emax) 203.9289	—
(70%Emax) 237.9167	—
(80%Emax) 271.9055	—
(90%Emax) 305.8933	—



Luminance Table

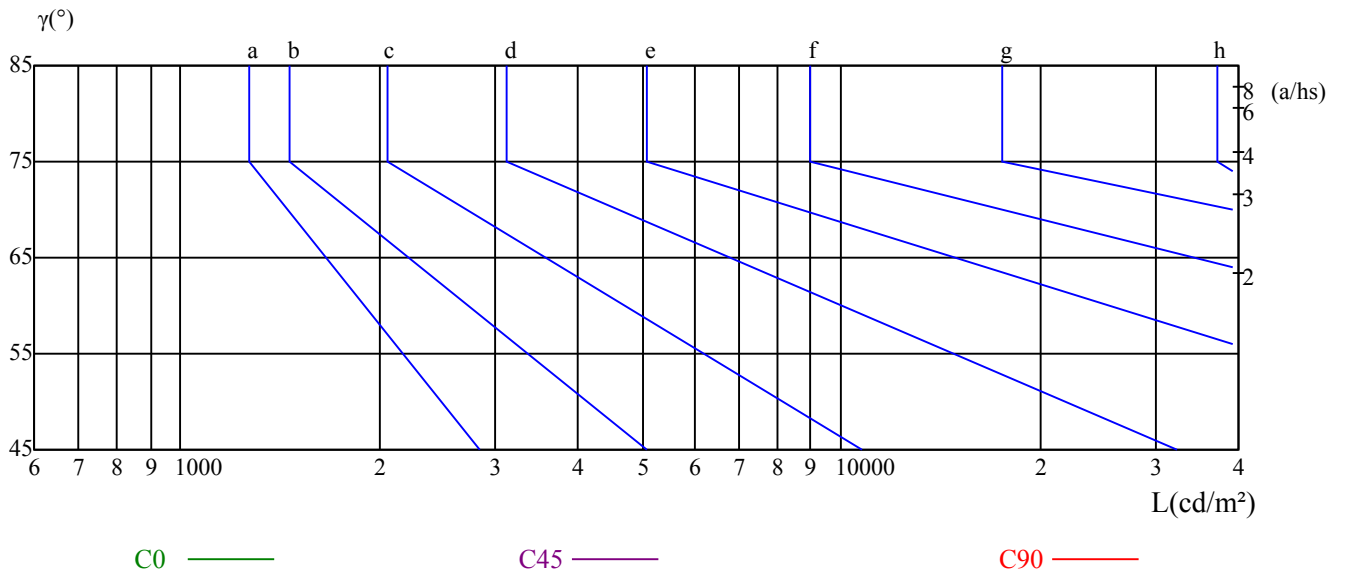
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

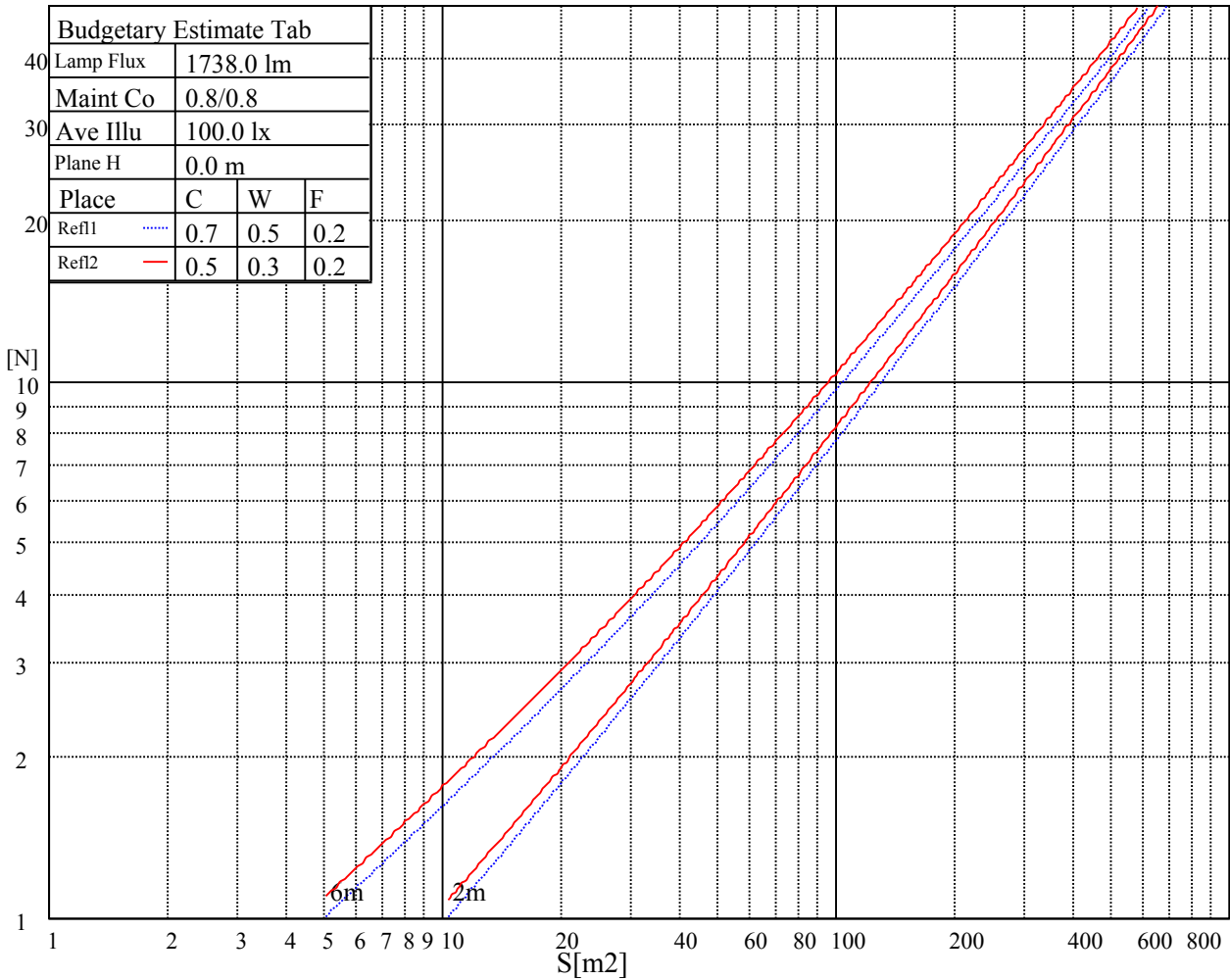
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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 RHOF=20 CU															
0	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.95	0.91	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.89	0.85	0.82	0.88	0.85	0.82	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.80	0.77	0.84	0.80	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
5	0.80	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.72	0.70	0.69
6	0.76	0.72	0.68	0.76	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.60
9	0.67	0.62	0.59	0.66	0.62	0.59	0.65	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	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	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	3057.83	3158.59	3121.15	2604.17	1843.29	1114.34	721.24	449.26	185.87
45.0	3058.93	3016.54	2855.78	2374.03	1718.86	1037.81	679.40	387.05	71.24
90.0	3037.46	2894.31	2578.29	2039.84	1422.66	886.96	583.76	219.34	20.15
135.0	3079.30	2922.94	2652.62	2086.64	1427.61	878.70	600.67	281.89	20.37
180.0	3057.83	2967.54	2540.85	1929.18	1079.71	773.21	507.68	153.88	15.64
225.0	3058.93	3058.93	2697.21	1960.56	1093.09	795.29	553.70	215.16	18.50
270.0	3037.46	3180.06	3002.78	2449.46	1585.07	918.34	654.07	376.04	53.35
315.0	3079.30	3246.68	3107.93	2427.99	1583.97	931.94	645.15	366.57	62.76
360.0	3057.83	3158.59	3121.15	2604.17	1843.29	1114.34	721.24	449.26	185.87
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.27	9.03	8.09	7.43	6.99	6.77	6.55	6.39	6.28
45.0	10.96	8.64	7.76	7.27	6.88	6.72	6.50	6.39	6.22
90.0	9.14	8.04	7.38	6.88	6.55	6.44	6.28	6.11	6.11
135.0	9.25	8.15	7.43	6.94	6.61	6.39	6.28	6.17	6.11
180.0	9.08	8.04	7.32	6.88	6.66	6.44	6.33	6.28	6.22
225.0	9.41	8.31	7.49	6.99	6.77	6.61	6.50	6.39	6.28
270.0	10.13	8.70	7.76	7.10	6.77	6.50	6.28	6.17	6.11
315.0	10.30	8.70	7.71	7.16	6.72	6.50	6.33	6.22	6.11
360.0	13.27	9.03	8.09	7.43	6.99	6.77	6.55	6.39	6.28
C/ γ (°)	90.0								
0.0	6.17								
45.0	6.11								
90.0	6.00								
135.0	6.06								
180.0	6.17								
225.0	6.06								
270.0	6.00								
315.0	6.06								
360.0	6.17								