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Nata

LumCAT: 2-2159-A
Luminaire: 92.70.153.00
Report No: NATA0100 Voltage(V): 33.9000
Test No: GC2019111411 Current(A): 0.4270
LampCAT: PHILIPS SLM92757 TWL152024 Power (W): 14.4700
Lamp flux(lm): 1410.0 PF: 1.0000
Number of Lamps: 1 Ballast type: DC
Length(mm): 0 Width(mm): 0
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 1172.77
Efficiency(%): 83.17%
Lumens(lm)/Power(W): 81.05
Central intensity(cd): 2639.531
Maximum intensity(cd): 2639.531
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=31.3
 [C90/270]Total=31.3
Field angle(10%Imax): [C0/180]Total=71.9
 [C90/270]Total=71.9
Maximum s/h(1/2): C0_180=0.51 C90_270=0.51
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 83.17%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.057%

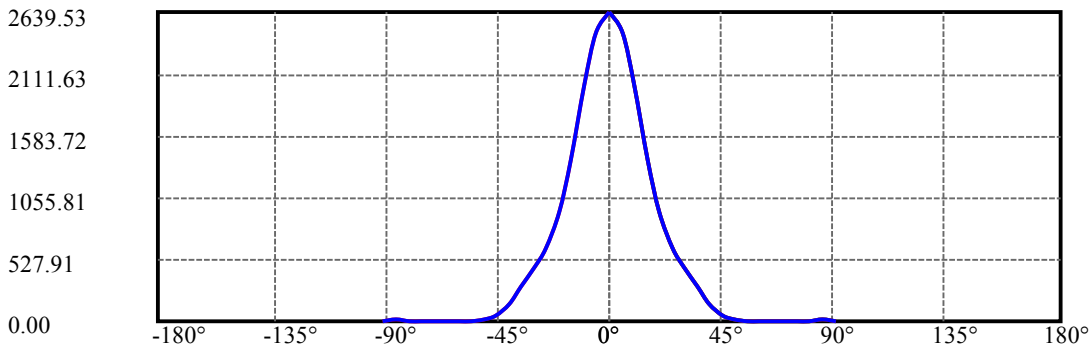
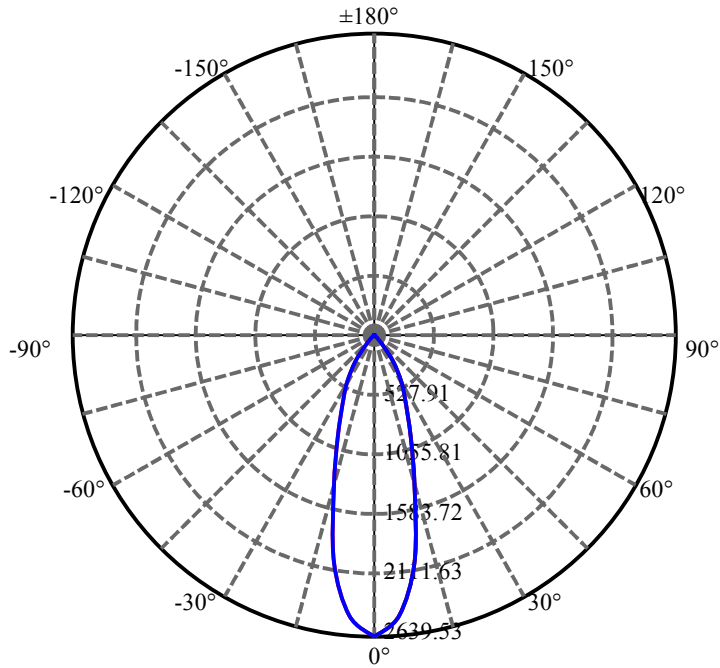
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2639.531	0.000	0	.000%	.000%
5.0	2464.313	61.015	61.015	4.327%	5.203%
10.0	2009.109	160.028	221.043	11.349%	18.848%
15.0	1378.427	200.946	421.99	14.251%	35.982%
20.0	941.070	191.159	613.149	13.557%	52.282%
25.0	617.365	163.451	776.6	11.592%	66.219%
30.0	456.356	135.880	912.48	9.637%	77.805%
35.0	292.802	110.319	1022.799	7.824%	87.212%
40.0	139.795	72.176	1094.975	5.119%	93.366%
45.0	46.800	34.550	1129.524	2.450%	96.312%
50.0	13.725	12.230	1141.754	.867%	97.355%
55.0	7.840	4.689	1146.443	.333%	97.755%
60.0	7.509	3.548	1149.991	.252%	98.057%
65.0	7.362	3.615	1153.606	.256%	98.366%
70.0	7.242	3.698	1157.304	.262%	98.681%
75.0	7.123	3.755	1161.059	.266%	99.001%
80.0	7.066	3.797	1164.856	.269%	99.325%
85.0	8.452	4.217	1169.072	.299%	99.684%
90.0	5.063	3.700	1172.772	.262%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	912.48	64.71%	77.81%
0-40	1094.97	77.66%	93.37%
0-60	1149.99	81.56%	98.06%
0-90	1169.07	82.91%	99.68%
0-120	1169.07	82.91%	99.68%
0-180	1172.77	83.17%	100.00%
60-90	22.63	1.60%	1.93%
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%
0-31.17	938.22	66.54%	80.00%

ZONAL LUMEN SUMMARY

0-10	221.04
10-20	392.11
20-30	299.33
30-40	182.49
40-50	46.78
50-60	8.24
60-70	7.31
70-80	7.55
80-90	4.22
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: —————

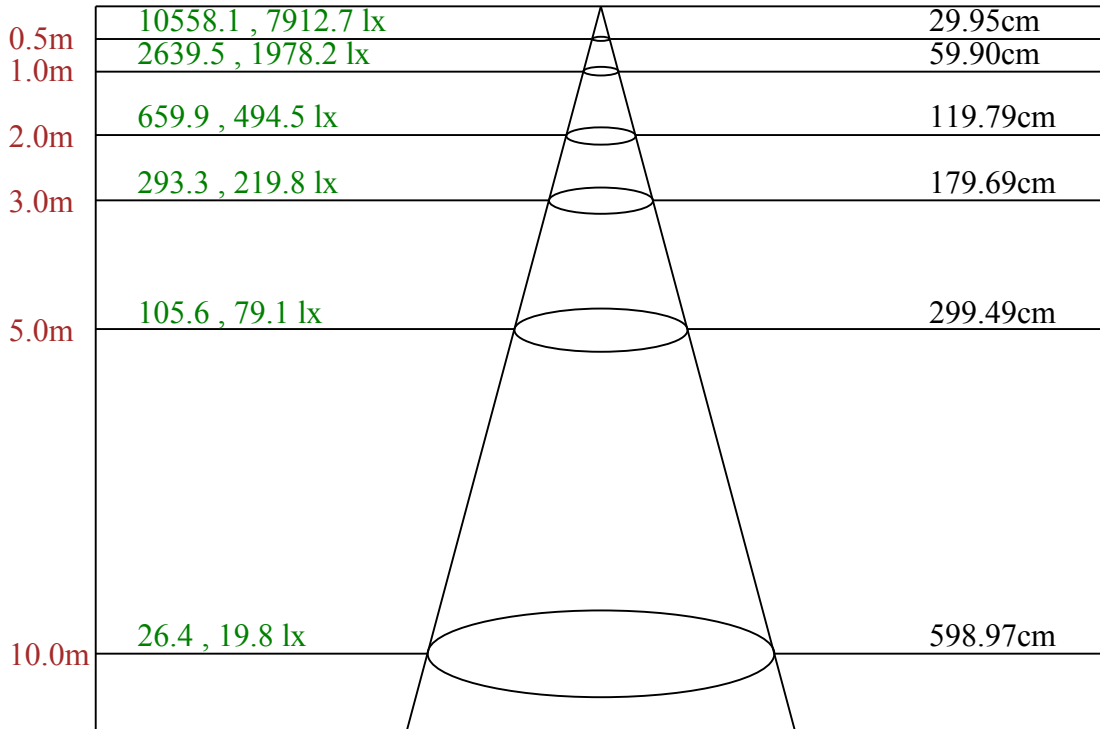
C90/C270: —————

Field angle(10%Imax):C0/180Left:35.9 Right:35.9

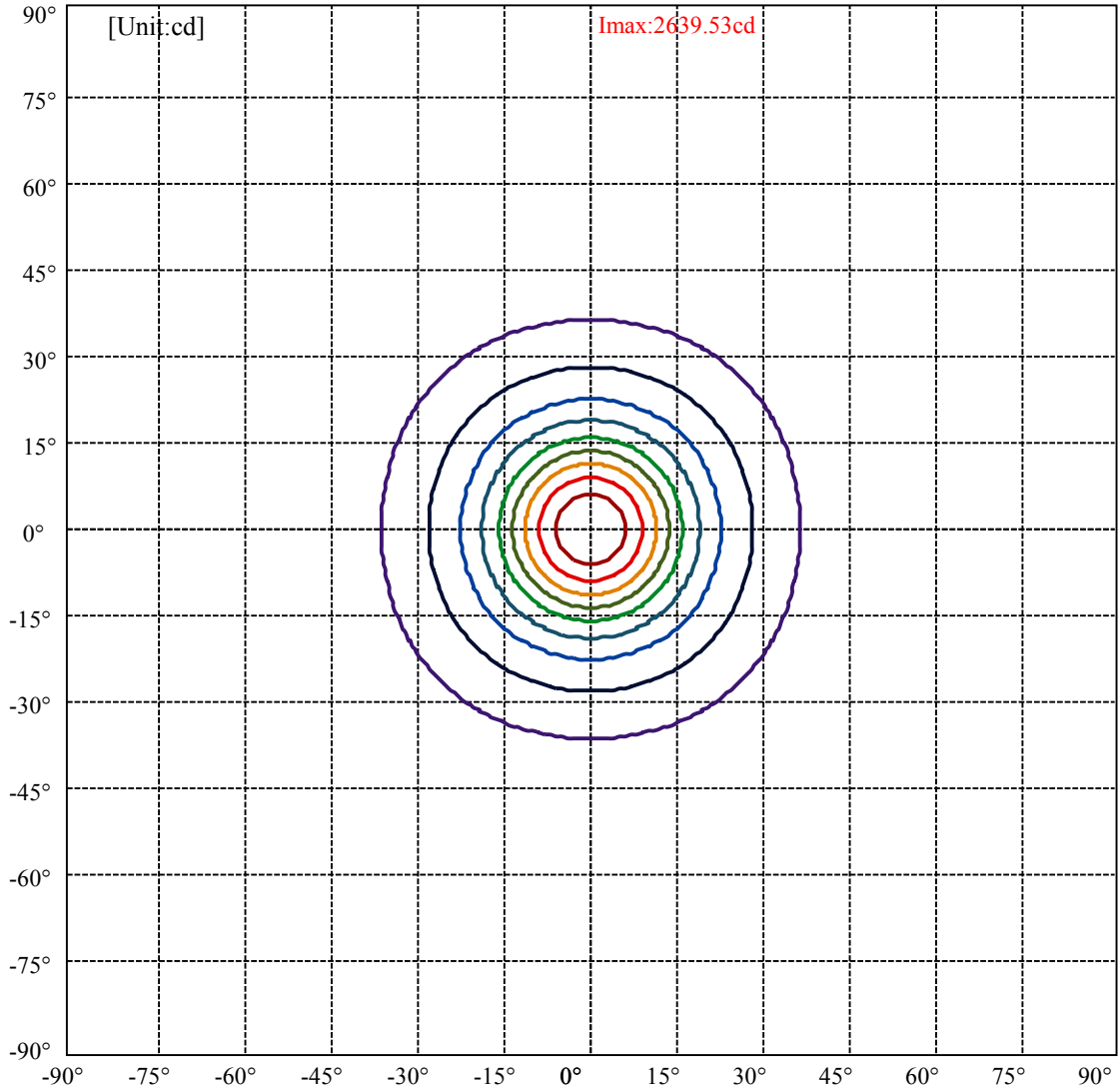
:C90/270Left:35.9 Right:35.9

Beam Angle(50%Imax):C0/180Left:15.7 Right:15.7

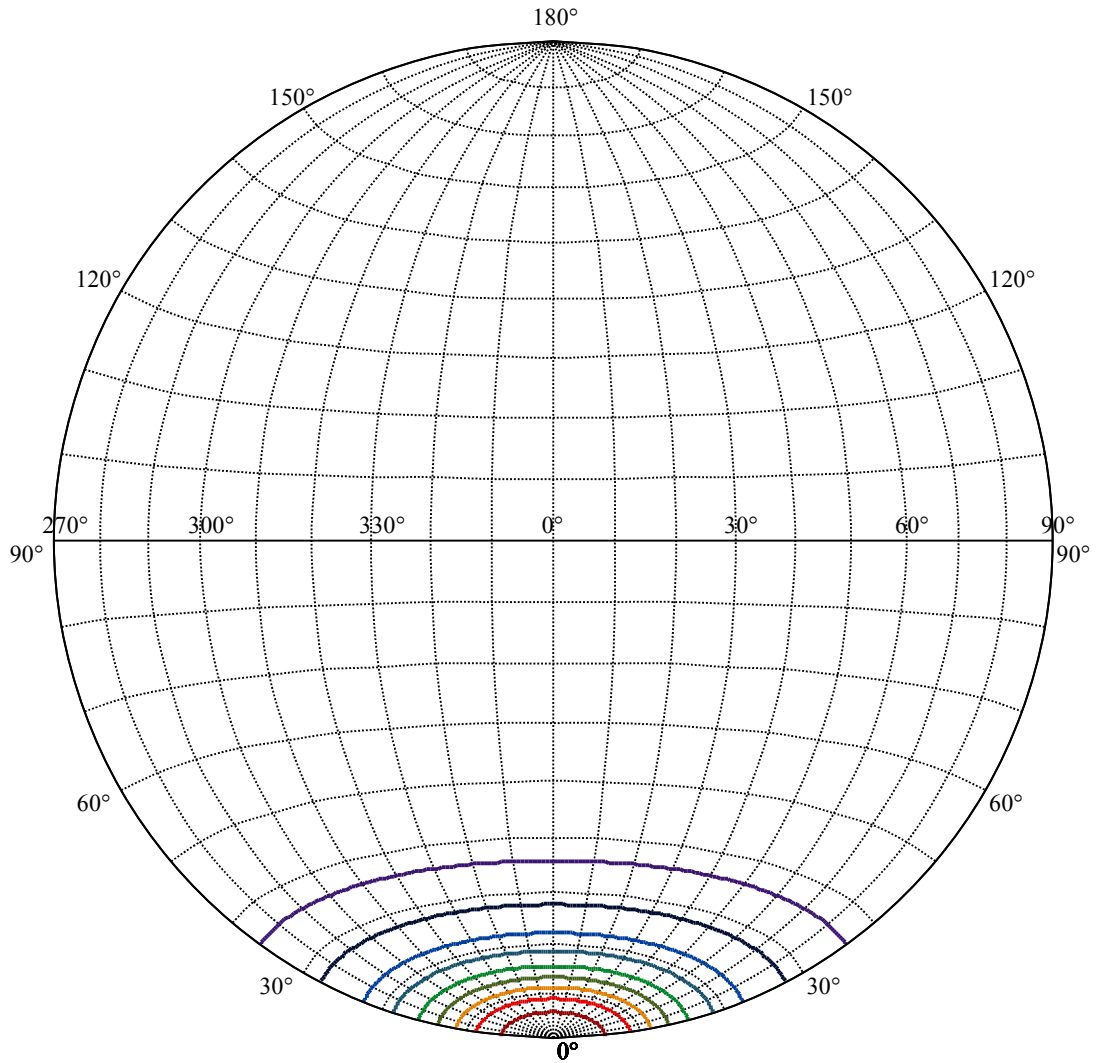
:C90/270Left:15.7 Right:15.7



Max , Ave Beam angle of C0 plane 33.34



(10%Imax) 263.953	—
(20%Imax) 527.906	—
(30%Imax) 791.859	—
(40%Imax) 1055.81	—
(50%Imax) 1319.77	—
(60%Imax) 1583.72	—
(70%Imax) 1847.67	—
(80%Imax) 2111.63	—
(90%Imax) 2375.58	—



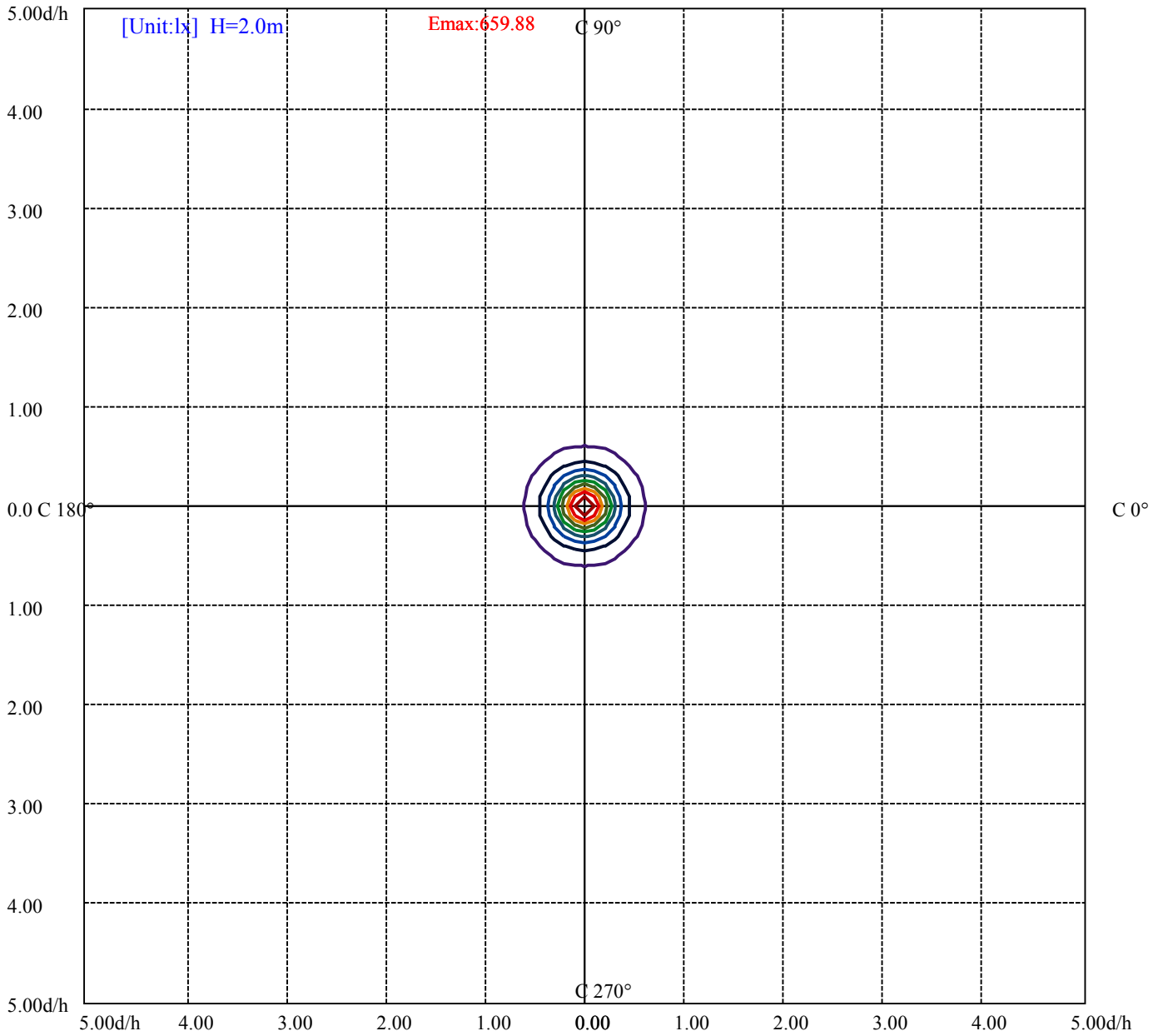
House

[Unit:cd]

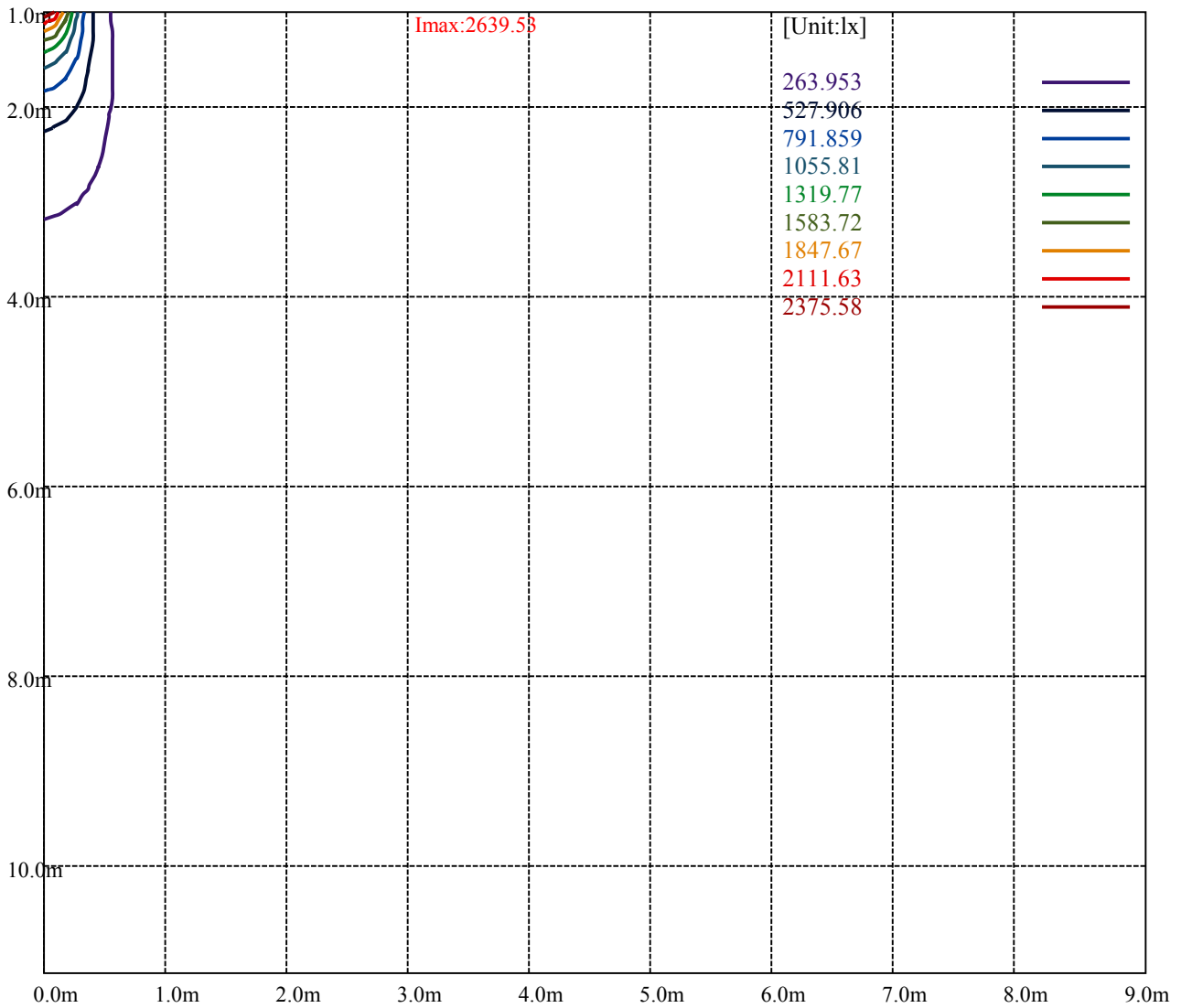
Road

Imax:2639.53

(10%Imax)	263.953	—
(20%Imax)	527.906	—
(30%Imax)	791.859	—
(40%Imax)	1055.81	—
(50%Imax)	1319.77	—
(60%Imax)	1583.72	—
(70%Imax)	1847.67	—
(80%Imax)	2111.63	—
(90%Imax)	2375.58	—



(10%Emax) 65.98825	—
(20%Emax) 131.9763	—
(30%Emax) 197.9645	—
(40%Emax) 263.9525	—
(50%Emax) 329.94	—
(60%Emax) 395.93	—
(70%Emax) 461.9175	—
(80%Emax) 527.905	—
(90%Emax) 593.8925	—



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

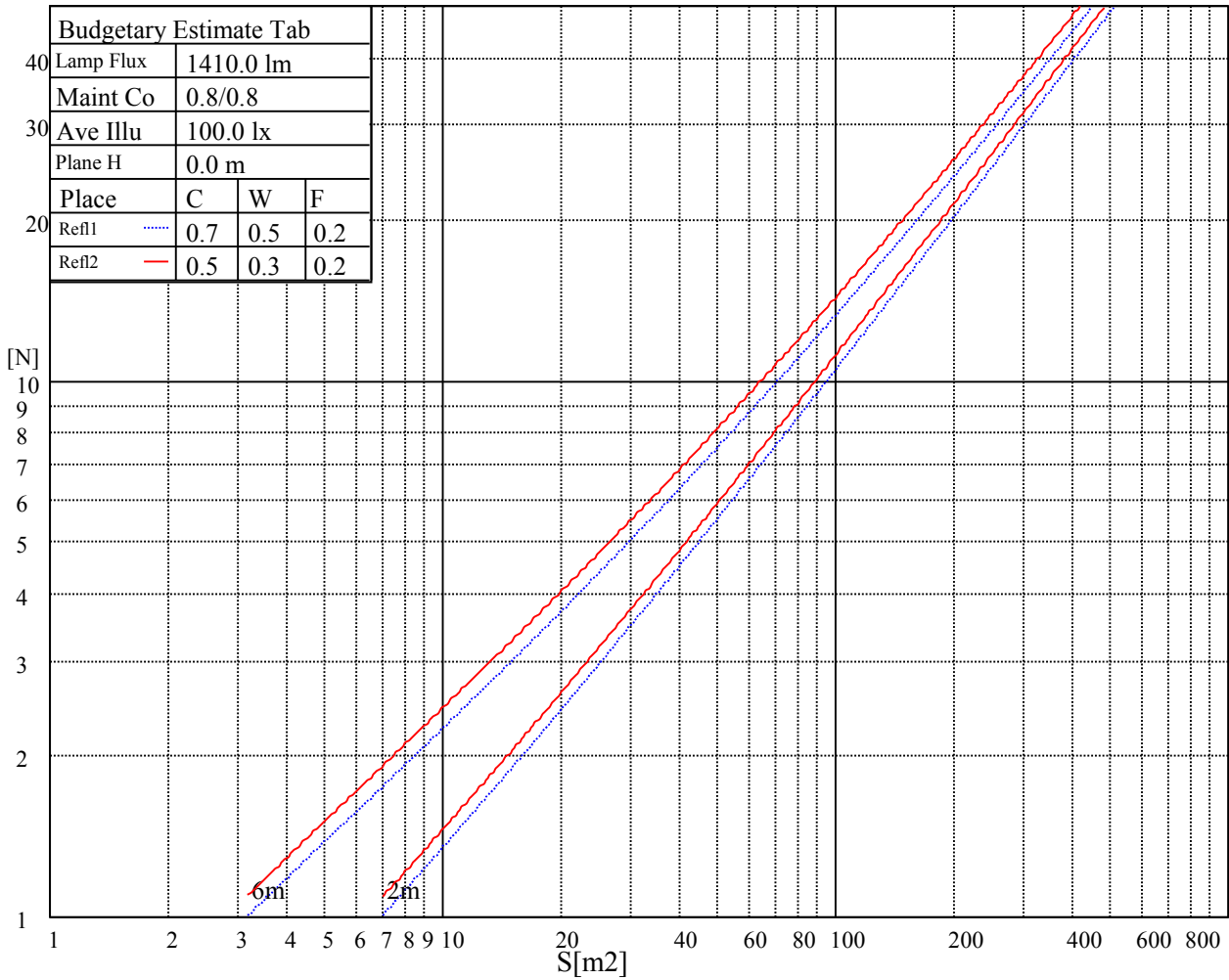
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

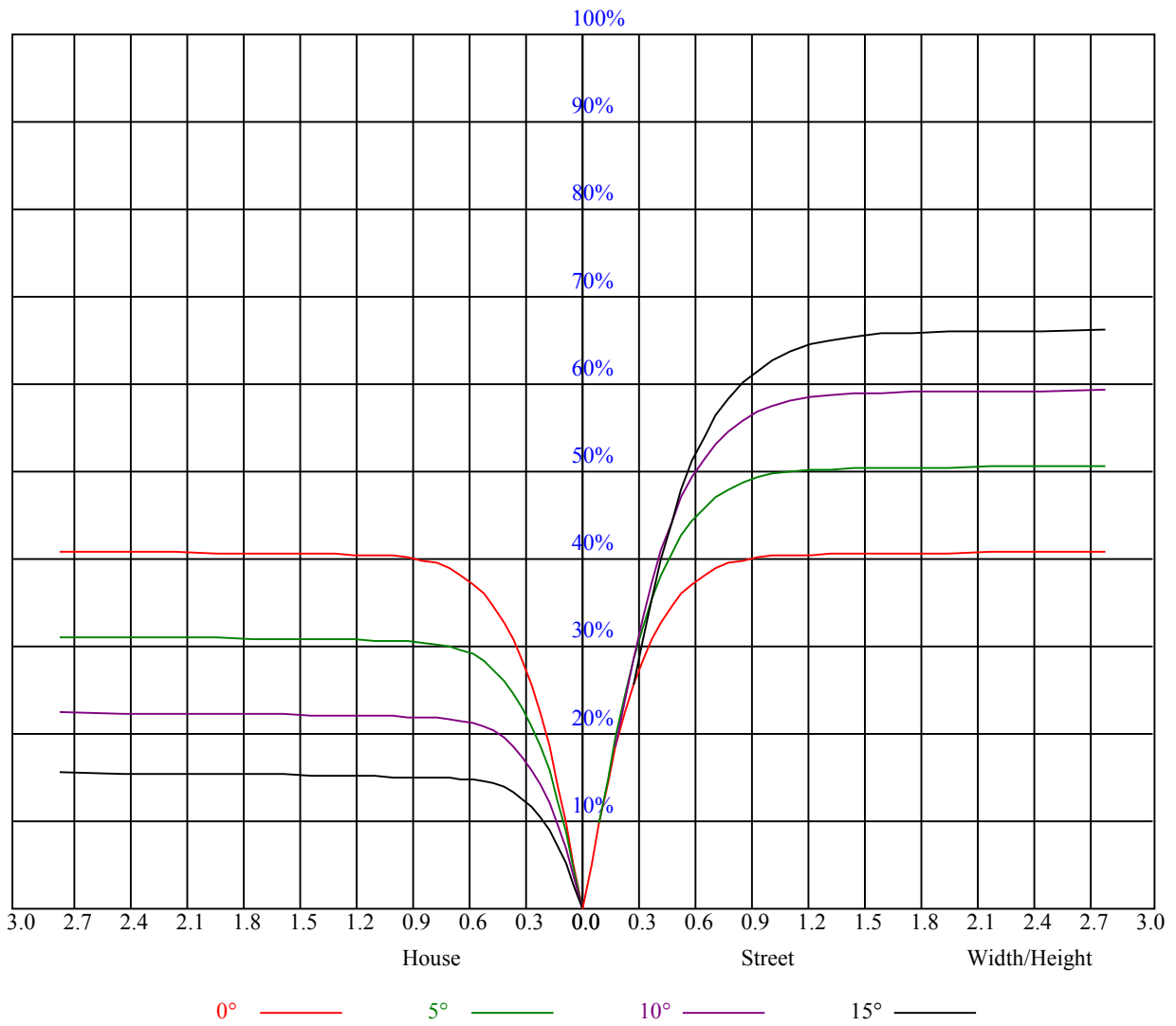
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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 RHOFC=20 CU															
0	0.99	0.99	0.99	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.92	0.90	0.88	0.90	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.86	0.83	0.81	0.85	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.76	0.78	0.76	0.75	0.73
3	0.81	0.77	0.74	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.73	0.71	0.74	0.72	0.70	0.69
4	0.77	0.72	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.72	0.69	0.67	0.71	0.68	0.66	0.65
5	0.72	0.68	0.65	0.72	0.68	0.64	0.70	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
6	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.58
7	0.65	0.61	0.58	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.55
8	0.62	0.58	0.55	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.59	0.56	0.54	0.53
9	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.58	0.54	0.52	0.57	0.54	0.51	0.50
10	0.57	0.52	0.50	0.56	0.52	0.49	0.56	0.52	0.49	0.55	0.52	0.49	0.55	0.51	0.49	0.48



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	2639.81	2521.13	2133.56	1543.50	1013.63	665.44	485.44	322.31	164.70
45.0	2626.31	2562.19	2175.19	1590.19	1078.88	691.31	497.81	342.00	176.34
90.0	2653.31	2508.75	2062.69	1473.75	984.32	639.51	470.14	306.11	155.42
135.0	2638.69	2503.13	2111.06	1515.94	995.06	640.69	481.50	321.19	158.29
180.0	2639.81	2397.38	1847.25	1261.13	848.64	566.78	428.01	257.51	113.68
225.0	2626.31	2370.38	1855.13	1121.34	839.31	561.04	412.59	243.68	105.53
270.0	2653.31	2446.31	1962.00	1402.31	912.38	597.94	441.56	289.69	124.99
315.0	2638.69	2405.25	1926.00	1119.26	856.35	576.23	433.80	259.93	119.42
360.0	2639.81	2521.13	2133.56	1543.50	1013.63	665.44	485.44	322.31	164.70
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	56.64	16.59	8.10	7.65	7.43	7.26	7.09	6.98	6.75
45.0	59.46	18.96	7.99	7.54	7.37	7.20	7.09	6.98	7.71
90.0	50.23	12.94	7.71	7.43	7.31	7.31	7.26	7.20	8.66
135.0	56.76	16.14	7.82	7.48	7.31	7.20	7.09	6.98	7.54
180.0	38.36	10.86	7.71	7.43	7.20	7.03	6.86	6.75	6.53
225.0	33.75	10.35	7.71	7.43	7.31	7.20	7.09	7.09	9.56
270.0	40.84	12.71	7.82	7.54	7.48	7.37	7.26	7.43	9.00
315.0	38.36	11.25	7.88	7.59	7.48	7.37	7.26	7.14	11.87
360.0	56.64	16.59	8.10	7.65	7.43	7.26	7.09	6.98	6.75
C/γ(°)	90.0								
0.0	5.06								
45.0	5.12								
90.0	5.06								
135.0	5.06								
180.0	5.01								
225.0	5.06								
270.0	5.06								
315.0	5.06								
360.0	5.06								