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PQL 91323

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LumCAT: /

Luminaire: /

Report No:

Test No:

LampCAT: 4' 13WT8/50K/FR/V5/1900Lm

Lamp flux(lm): -1.0

Number of Lamps: 1

Length(mm): 1200

Phm Type: C

Voltage(V):

Current(A):

Power (W): 16.7900

PF:

Ballast type:

Width(mm): 28

Height(mm): 28

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### Photometric Results

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Lumens(lm): 2036.59

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 121.30

Central intensity(cd): 395.465

Maximum intensity(cd): 396.241

Angle of maximum intensity: C=180.0  $\gamma$ =5.0

Beam Angle(50%Imax): [C0/180]Total=191.4

[C90/270]Total=107.6

Field angle(10%Imax): [C0/180]Total=317.6

[C90/270]Total=162.8

Maximum s/h(1/2): C0\_180=1.44 C90\_270=1.23

Maximum s/h(1/4): C0\_180=1.61 C90\_270=1.35

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 23.86%

Down flux rate of LUM(%): 76.14%

CIE Type : Semidirect lighting

Output flux ratio in  $\pi$  solid angle : 48.530%

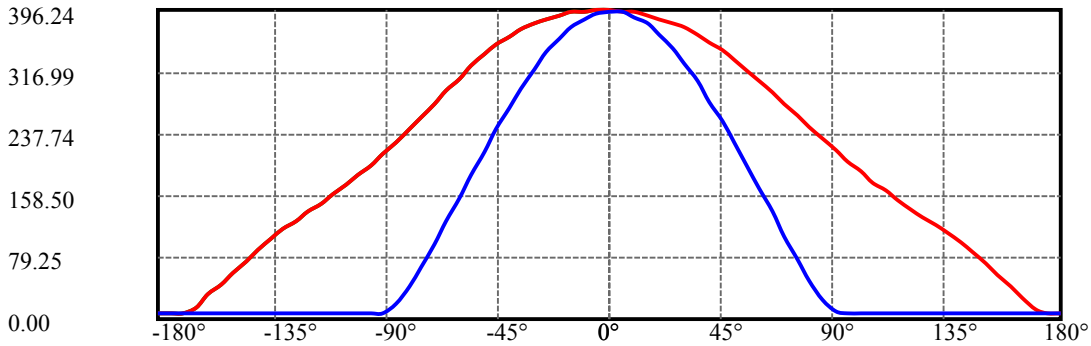
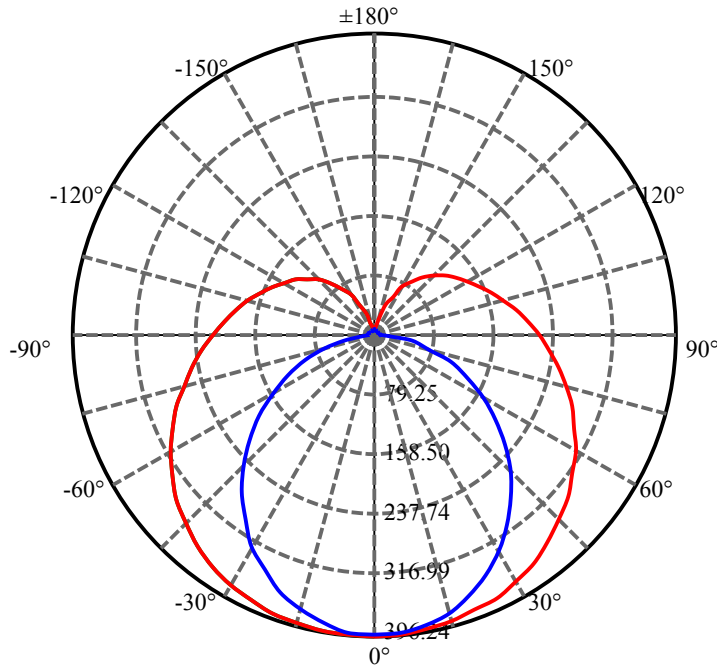
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	395.151	0.000	0	.000%	.000%
5.0	393.745	9.431	9.431	.000%	.463%
10.0	389.965	28.036	37.467	.000%	1.840%
15.0	383.919	45.906	83.373	.000%	4.094%
20.0	374.893	62.537	145.91	.000%	7.164%
25.0	364.085	77.505	223.415	.000%	10.970%
30.0	350.697	90.456	313.871	.000%	15.412%
35.0	335.479	101.044	414.916	.000%	20.373%
40.0	318.093	109.044	523.959	.000%	25.727%
45.0	299.774	114.403	638.362	.000%	31.345%
50.0	280.194	117.191	755.553	.000%	37.099%
55.0	259.876	117.429	872.982	.000%	42.865%
60.0	239.254	115.372	988.355	.000%	48.530%
65.0	218.488	111.278	1099.633	.000%	53.994%
70.0	198.205	105.509	1205.142	.000%	59.174%
75.0	178.238	98.396	1303.538	.000%	64.006%
80.0	159.749	90.436	1393.974	.000%	68.446%
85.0	142.799	82.210	1476.184	.000%	72.483%
90.0	128.878	74.387	1550.571	.000%	76.136%
95.0	119.076	67.892	1618.463	.000%	79.469%
100.0	110.462	62.371	1680.833	.000%	82.532%
105.0	102.646	57.022	1737.855	.000%	85.332%
110.0	95.438	51.776	1789.631	.000%	87.874%
115.0	88.010	46.450	1836.081	.000%	90.155%
120.0	81.698	41.256	1877.338	.000%	92.180%
125.0	75.083	36.239	1913.577	.000%	93.960%
130.0	67.292	30.957	1944.534	.000%	95.480%
135.0	59.259	25.572	1970.106	.000%	96.735%
140.0	51.893	20.581	1990.686	.000%	97.746%
145.0	44.562	16.093	2006.779	.000%	98.536%
150.0	36.748	11.973	2018.752	.000%	99.124%
155.0	28.327	8.235	2026.988	.000%	99.528%
160.0	20.016	5.070	2032.058	.000%	99.777%
165.0	12.189	2.654	2034.712	.000%	99.908%
170.0	7.815	1.187	2035.899	.000%	99.966%
175.0	6.906	0.527	2036.425	.000%	99.992%
180.0	6.906	0.165	2036.59	.000%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	313.87	N.A.	15.41%
0-40	523.96	N.A.	25.73%
0-60	988.35	N.A.	48.53%
0-90	1550.57	N.A.	76.14%
0-120	1877.34	N.A.	92.18%
0-180	2036.59	N.A.	100.00%
60-90	677.59	N.A.	33.27%
90-120	401.15	N.A.	19.70%
90-130	468.35	N.A.	23.00%
90-150	542.57	N.A.	26.64%
90-180	560.24	N.A.	27.51%
0-95.87	1629.27	N.A.	80.00%

## ZONAL LUMEN SUMMARY

0-10	37.47
10-20	108.44
20-30	167.96
30-40	210.09
40-50	231.59
50-60	232.80
60-70	216.79
70-80	188.83
80-90	156.60
90-100	130.26
100-110	108.80
110-120	87.71
120-130	67.20
130-140	46.15
140-150	28.07
150-160	13.31
160-170	3.84
170-180	0.53



C180(Max): ———

C0/C180: ———

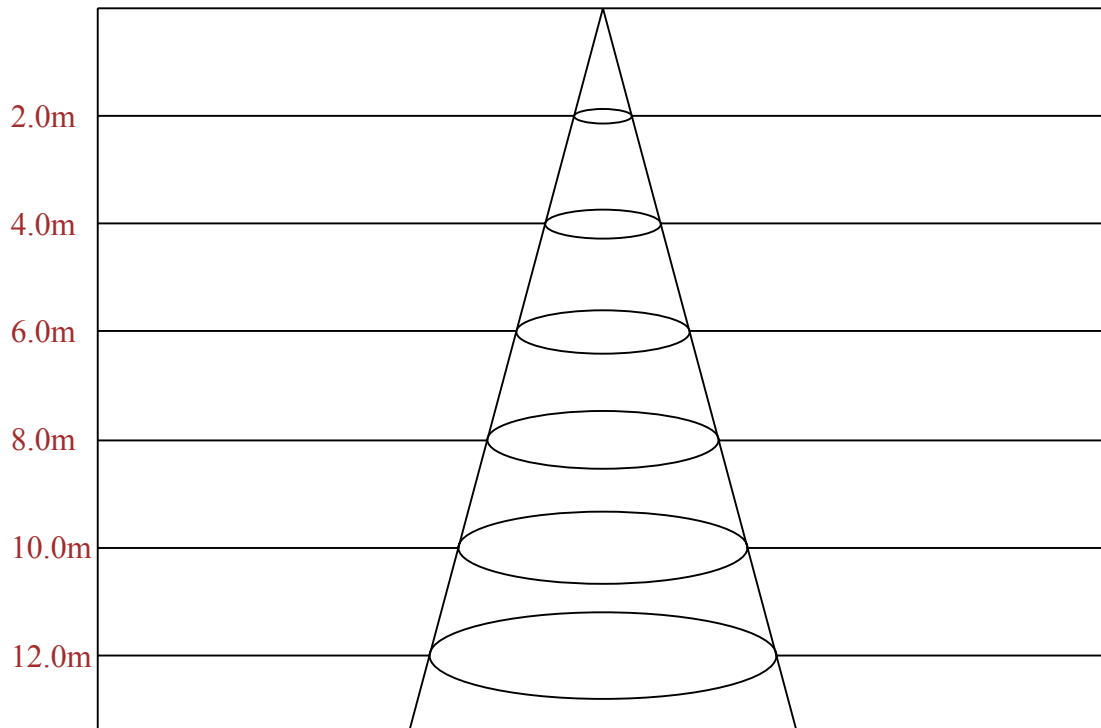
C90/C270: ———

Field angle(10%Imax):C0/180Left:151.9 Right:165.7

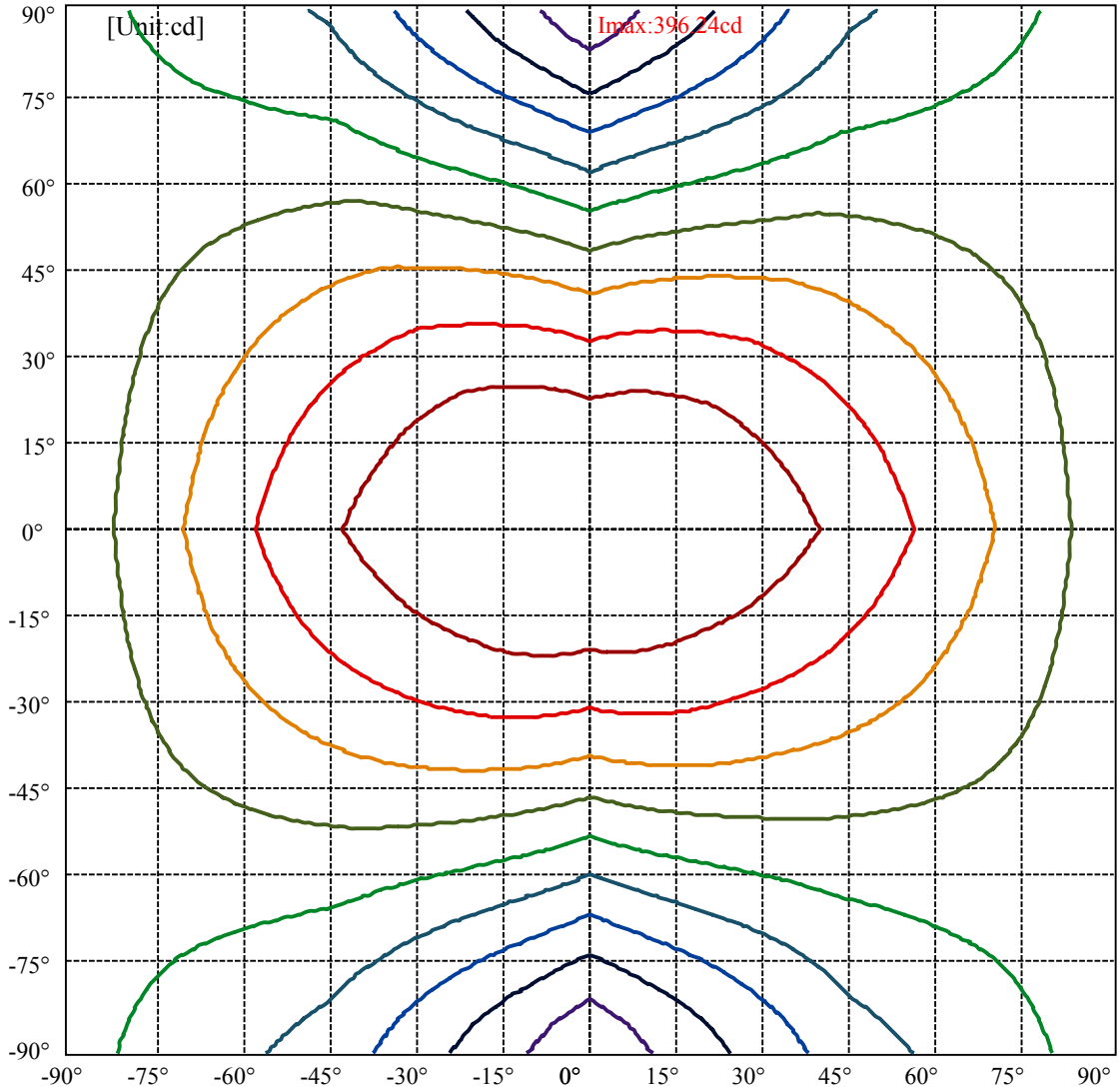
:C90/270Left:80.6 Right:82.2

Beam Angle(50%Imax):C0/180Left:90.0 Right:101.4

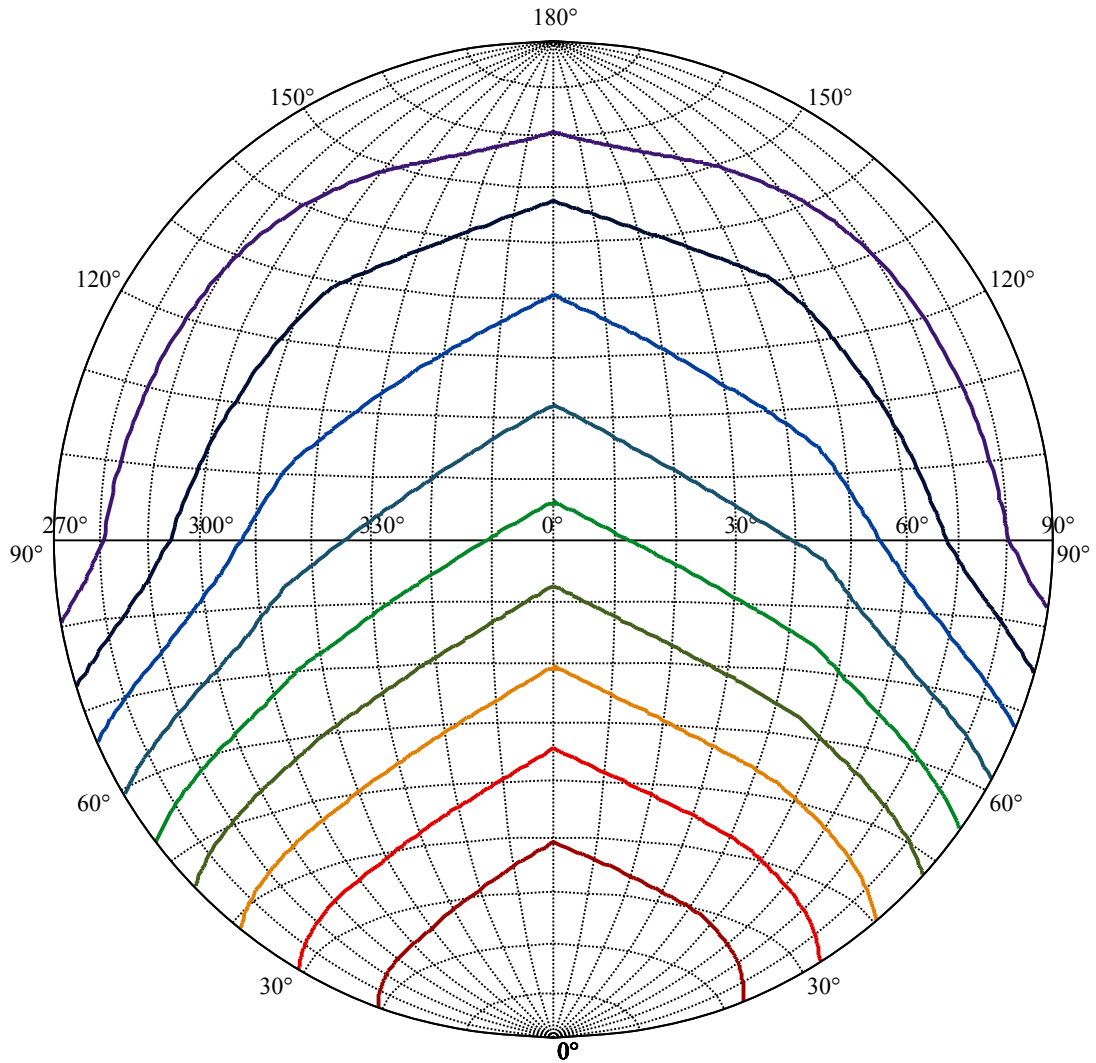
:C90/270Left:52.9 Right:54.7



Max , Ave      Beam angle of C180 plane 192.10



(10%Imax)	39.6241	—
(20%Imax)	79.2482	—
(30%Imax)	118.872	—
(40%Imax)	158.496	—
(50%Imax)	198.12	—
(60%Imax)	237.745	—
(70%Imax)	277.369	—
(80%Imax)	316.993	—
(90%Imax)	356.617	—



House

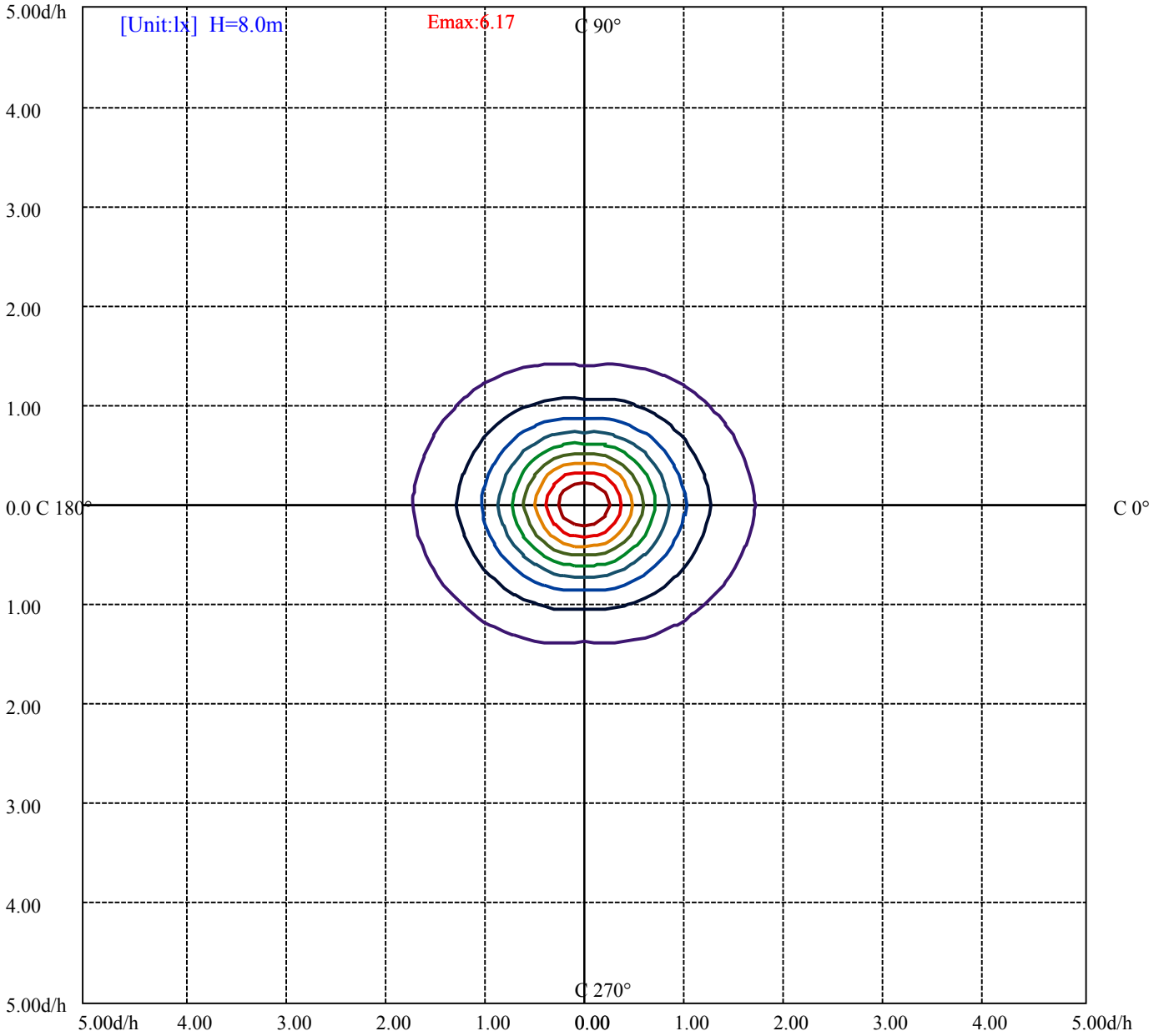
[Unit:cd]

Road

**Imax:396.24**

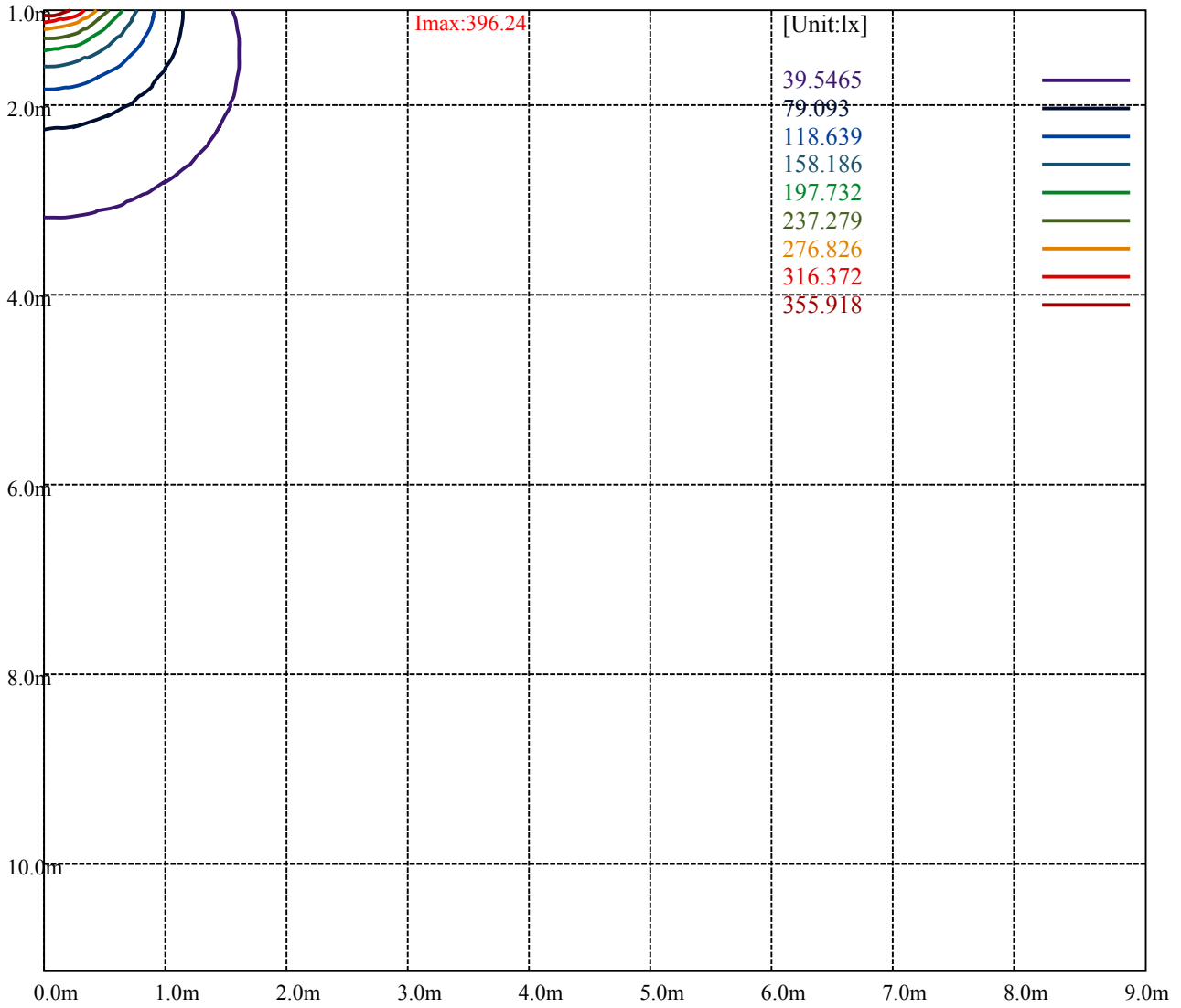
- (10%Imax) 39.6241
- (20%Imax) 79.2482
- (30%Imax) 118.872
- (40%Imax) 158.496
- (50%Imax) 198.12
- (60%Imax) 237.745
- (70%Imax) 277.369
- (80%Imax) 316.993
- (90%Imax) 356.617





- (10%Emax) 0.617461
- (20%Emax) 1.234922
- (30%Emax) 1.852375
- (40%Emax) 2.469844
- (50%Emax) 3.087297
- (60%Emax) 3.704766
- (70%Emax) 4.322219
- (80%Emax) 4.939688
- (90%Emax) 5.557141





Luminance Table

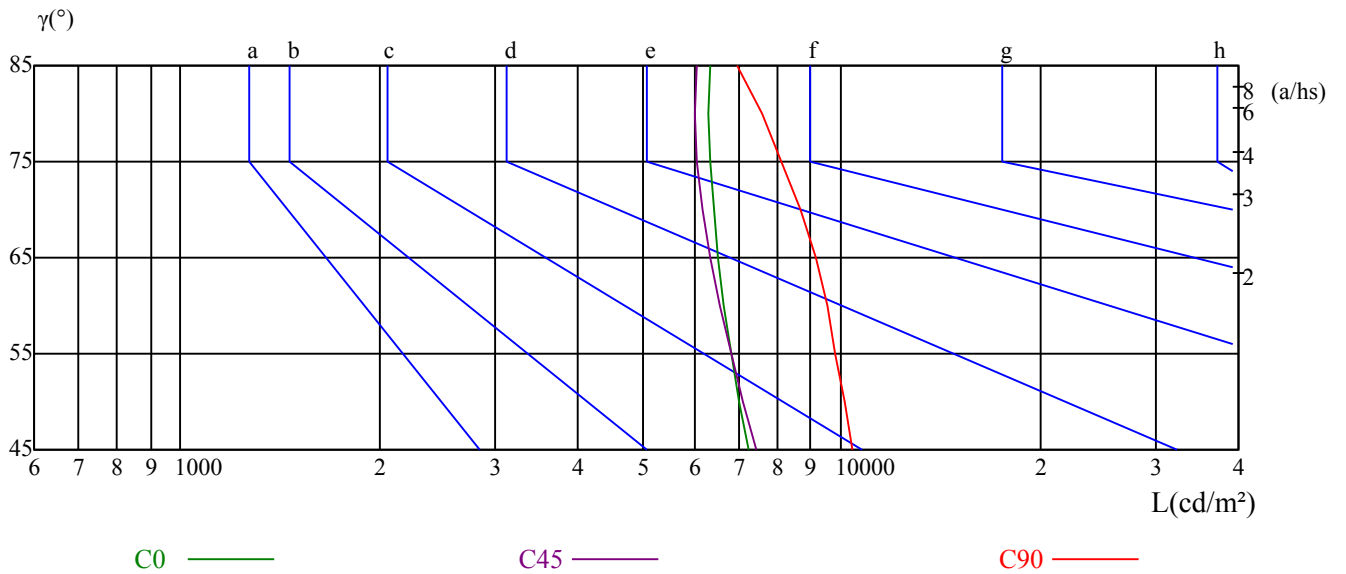
$\gamma$	45	50	55	60	65	70	75	80	85
C0	7237	7007	6808	6642	6495	6408	6324	6303	6332
C45	7453	7126	6839	6562	6353	6179	6051	6009	6062
C90	10397	10161	9812	9516	9185	8703	8110	7585	6951

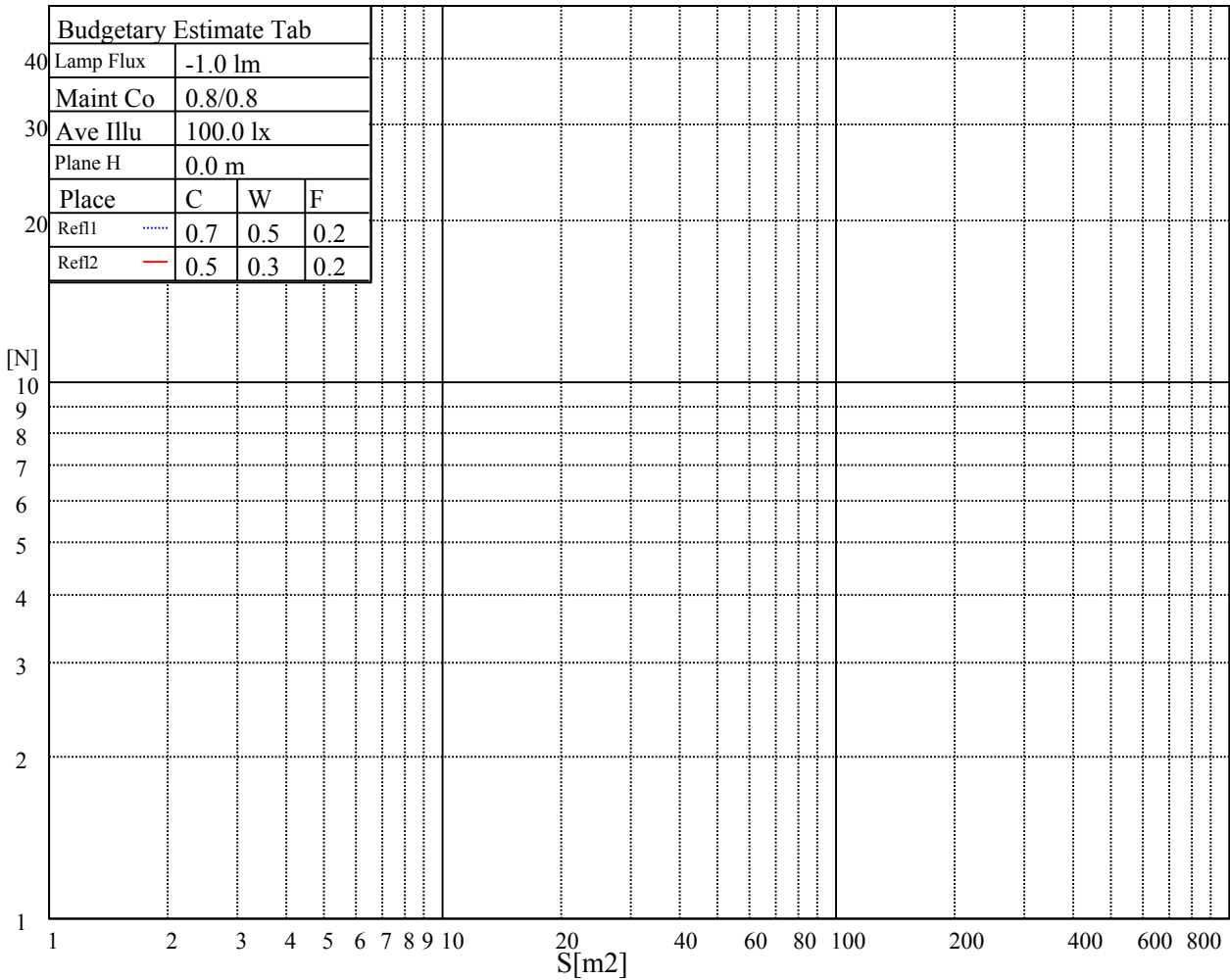
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
20529	9229	15894	29882	8281	21910	78130	7844	54539

Glare Table

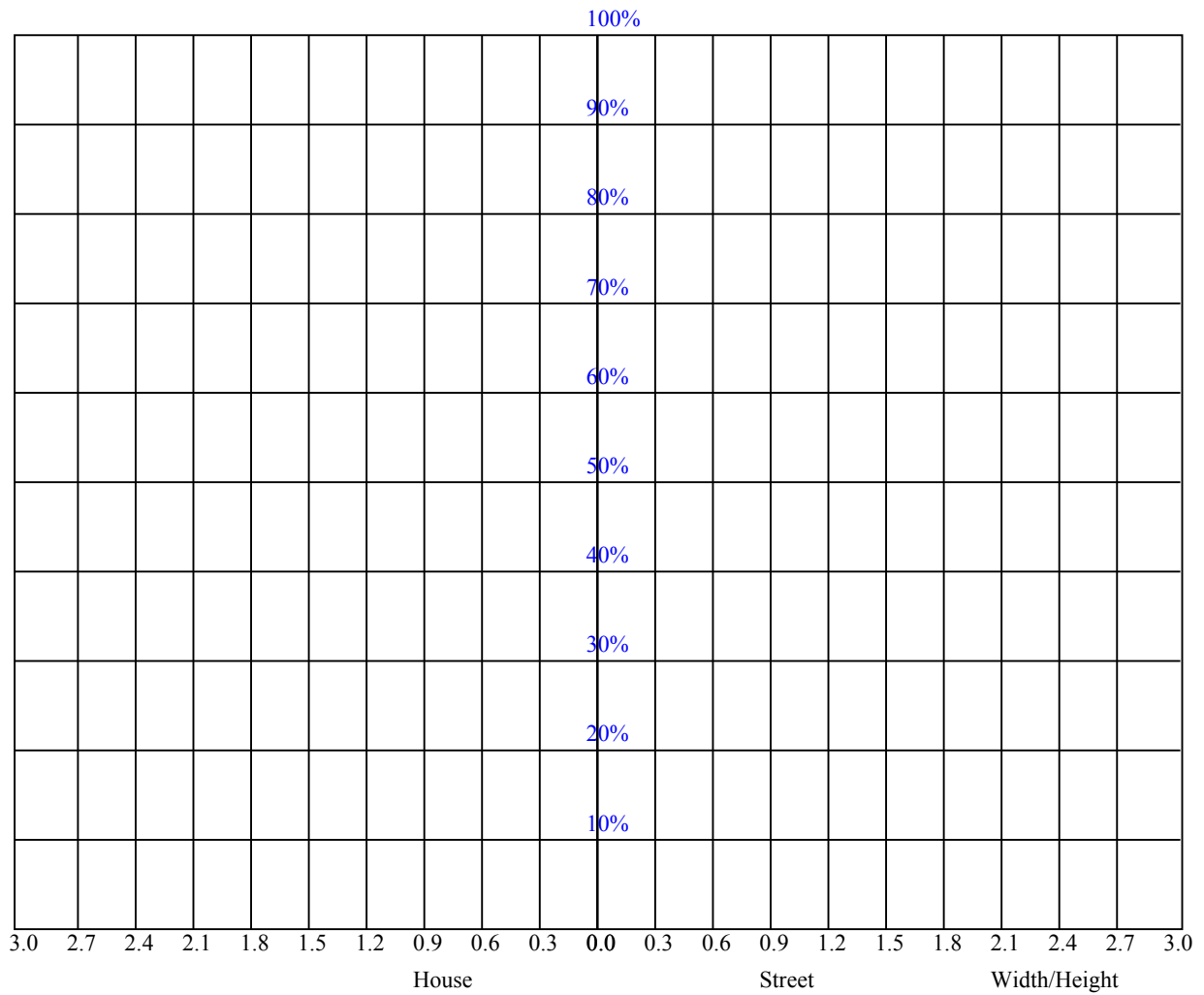
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



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	395.47	394.30	392.66	389.36	384.90	380.15	373.37	365.32	355.34
45.0	395.18	393.82	390.91	385.58	377.34	367.26	354.47	339.35	322.77
90.0	394.59	392.85	387.52	378.21	364.16	347.87	327.13	304.84	279.15
135.0	395.37	395.76	393.53	389.46	381.90	372.69	360.86	346.91	330.43
180.0	395.47	396.24	394.30	392.85	389.65	385.10	379.28	371.43	361.54
225.0	395.18	392.85	388.68	382.09	373.17	362.03	347.49	332.66	315.31
270.0	394.59	391.59	384.80	373.95	358.73	341.09	320.54	296.50	271.40
315.0	395.37	392.56	387.32	379.86	369.30	356.50	342.45	326.84	308.81
360.0	395.47	394.30	392.66	389.36	384.90	380.15	373.37	365.32	355.34
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	343.90	331.69	318.60	304.84	290.01	275.95	260.25	245.32	230.49
45.0	305.23	286.62	268.01	248.43	230.20	212.18	194.73	178.93	164.58
90.0	252.79	225.55	195.41	166.33	136.96	106.43	76.67	50.11	25.78
135.0	313.76	295.05	276.05	256.96	236.80	218.09	200.25	182.52	166.91
180.0	350.98	338.47	323.93	308.81	293.01	276.05	259.48	242.71	227.10
225.0	297.38	278.57	259.09	239.80	220.22	202.29	185.42	169.33	154.41
270.0	243.29	214.02	185.13	154.60	125.13	96.35	67.37	41.87	20.16
315.0	290.88	271.59	252.79	234.28	215.57	198.31	181.74	167.20	152.95
360.0	343.90	331.69	318.60	304.84	290.01	275.95	260.25	245.32	230.49
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	216.05	201.80	188.53	175.44	163.71	151.79	141.22	130.85	120.29
45.0	150.34	137.73	127.27	117.38	109.43	101.48	94.70	88.20	80.64
90.0	9.79	7.56	7.27	7.17	7.17	6.98	6.98	6.88	6.88
135.0	152.27	139.87	128.24	117.96	109.53	101.68	93.73	84.23	69.79
180.0	211.98	198.12	184.36	171.85	159.45	148.30	137.15	125.72	114.57
225.0	142.00	130.85	120.87	112.44	102.94	89.08	81.61	72.70	61.45
270.0	7.56	6.98	6.79	6.69	6.59	6.59	6.49	6.49	6.59
315.0	141.03	129.69	120.38	112.24	104.68	98.19	91.69	85.59	78.12
360.0	216.05	201.80	188.53	175.44	163.71	151.79	141.22	130.85	120.29
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	110.40	99.55	86.65	71.53	56.90	41.78	27.24	12.21	6.49
45.0	71.82	62.42	52.15	42.36	32.08	21.52	11.53	7.27	6.88
90.0	6.88	6.88	6.88	6.98	7.08	7.27	7.27	7.37	7.27
135.0	55.73	44.59	38.38	32.28	24.14	15.80	9.40	7.17	7.08
180.0	102.36	89.66	75.02	60.10	44.98	30.82	15.90	7.08	6.40
225.0	50.69	45.27	40.03	33.05	24.04	15.61	8.82	7.27	7.08
270.0	6.59	6.69	6.79	6.88	6.98	7.08	7.17	7.27	7.27
315.0	69.60	60.10	50.60	40.81	30.44	20.26	10.18	6.88	6.79
360.0	110.40	99.55	86.65	71.53	56.90	41.78	27.24	12.21	6.49
C/γ(°)	180.0								
0.0	6.49								
45.0	6.88								
90.0	7.37								
135.0	6.88								
180.0	6.49								
225.0	6.88								
270.0	7.37								
315.0	6.88								
360.0	6.49								