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PQL 91322

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LumCAT: /

Luminaire: /

Report No:

Test No:

LampCAT: 4' 13WT8/40K/FR/V5/1900Lm

Lamp flux(lm): -1.0

Number of Lamps: 1

Length(mm): 1200

Phm Type: C

Voltage(V):

Current(A):

Power (W): 16.5000

PF:

Ballast type:

Width(mm): 28

Height(mm): 28

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### Photometric Results

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Lumens(lm): 2043.94

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 123.88

Central intensity(cd): 396.893

Maximum intensity(cd): 397.671

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%

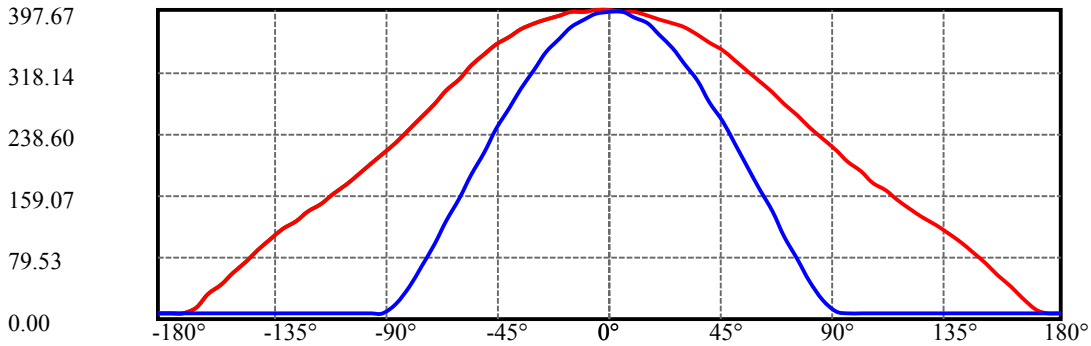
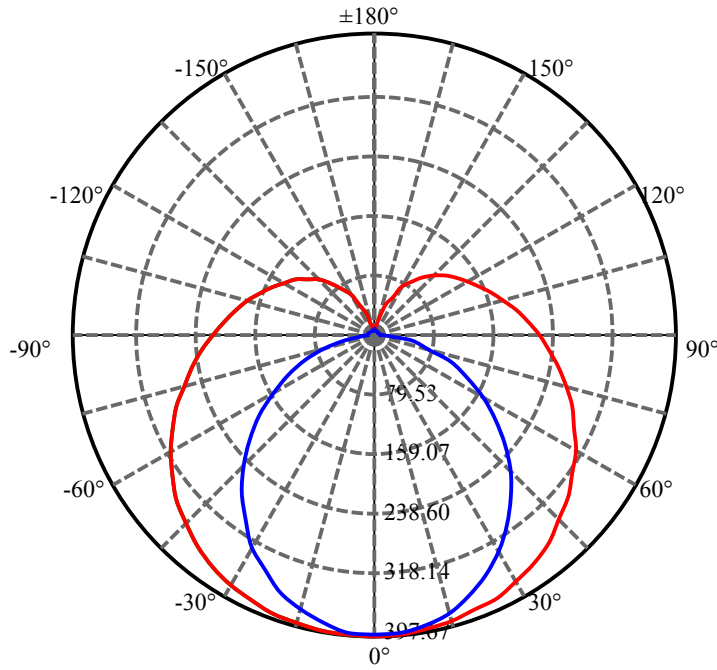
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	396.577	0.000	0	.000%	.000%
5.0	395.167	9.465	9.465	.000%	.463%
10.0	391.373	28.137	37.602	.000%	1.840%
15.0	385.305	46.072	83.674	.000%	4.094%
20.0	376.246	62.763	146.437	.000%	7.164%
25.0	365.400	77.785	224.222	.000%	10.970%
30.0	351.963	90.783	315.004	.000%	15.412%
35.0	336.691	101.409	416.413	.000%	20.373%
40.0	319.241	109.437	525.851	.000%	25.727%
45.0	300.856	114.816	640.667	.000%	31.345%
50.0	281.205	117.614	758.281	.000%	37.099%
55.0	260.814	117.853	876.134	.000%	42.865%
60.0	240.118	115.789	991.923	.000%	48.530%
65.0	219.276	111.680	1103.602	.000%	53.994%
70.0	198.921	105.890	1209.492	.000%	59.174%
75.0	178.882	98.751	1308.244	.000%	64.006%
80.0	160.326	90.762	1399.006	.000%	68.446%
85.0	143.315	82.506	1481.513	.000%	72.483%
90.0	129.343	74.656	1556.168	.000%	76.136%
95.0	119.506	68.137	1624.305	.000%	79.469%
100.0	110.860	62.596	1686.901	.000%	82.532%
105.0	103.017	57.228	1744.129	.000%	85.332%
110.0	95.782	51.963	1796.092	.000%	87.874%
115.0	88.328	46.618	1842.709	.000%	90.155%
120.0	81.993	41.405	1884.115	.000%	92.180%
125.0	75.354	36.370	1920.485	.000%	93.960%
130.0	67.535	31.069	1951.554	.000%	95.480%
135.0	59.473	25.664	1977.218	.000%	96.735%
140.0	52.080	20.655	1997.873	.000%	97.746%
145.0	44.723	16.151	2014.023	.000%	98.536%
150.0	36.880	12.017	2026.04	.000%	99.124%
155.0	28.430	8.265	2034.305	.000%	99.528%
160.0	20.088	5.089	2039.394	.000%	99.777%
165.0	12.233	2.664	2042.057	.000%	99.908%
170.0	7.843	1.191	2043.248	.000%	99.966%
175.0	6.931	0.529	2043.777	.000%	99.992%
180.0	6.931	0.166	2043.943	.000%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	315.00	N.A.	15.41%
0-40	525.85	N.A.	25.73%
0-60	991.92	N.A.	48.53%
0-90	1556.17	N.A.	76.14%
0-120	1884.11	N.A.	92.18%
0-180	2043.94	N.A.	100.00%
60-90	680.03	N.A.	33.27%
90-120	402.60	N.A.	19.70%
90-130	470.04	N.A.	23.00%
90-150	544.53	N.A.	26.64%
90-180	562.26	N.A.	27.51%
0-95.87	1635.15	N.A.	80.00%

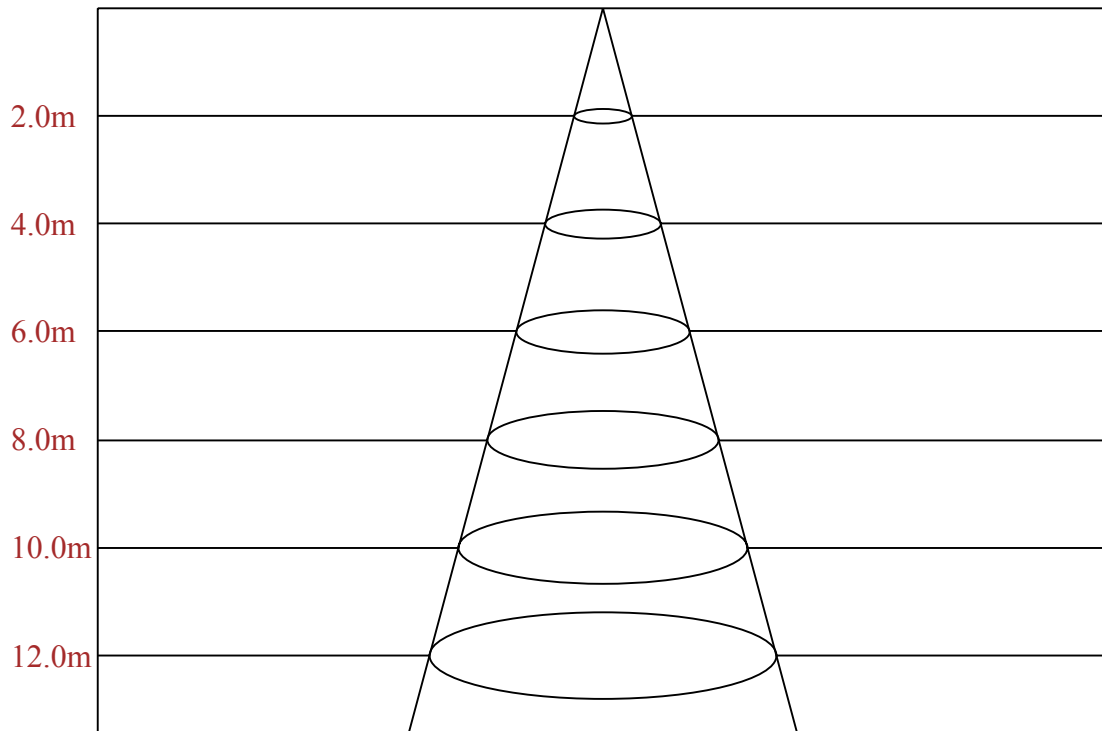
## ZONAL LUMEN SUMMARY

0-10	37.60
10-20	108.83
20-30	168.57
30-40	210.85
40-50	232.43
50-60	233.64
60-70	217.57
70-80	189.51
80-90	157.16
90-100	130.73
100-110	109.19
110-120	88.02
120-130	67.44
130-140	46.32
140-150	28.17
150-160	13.35
160-170	3.85
170-180	0.53

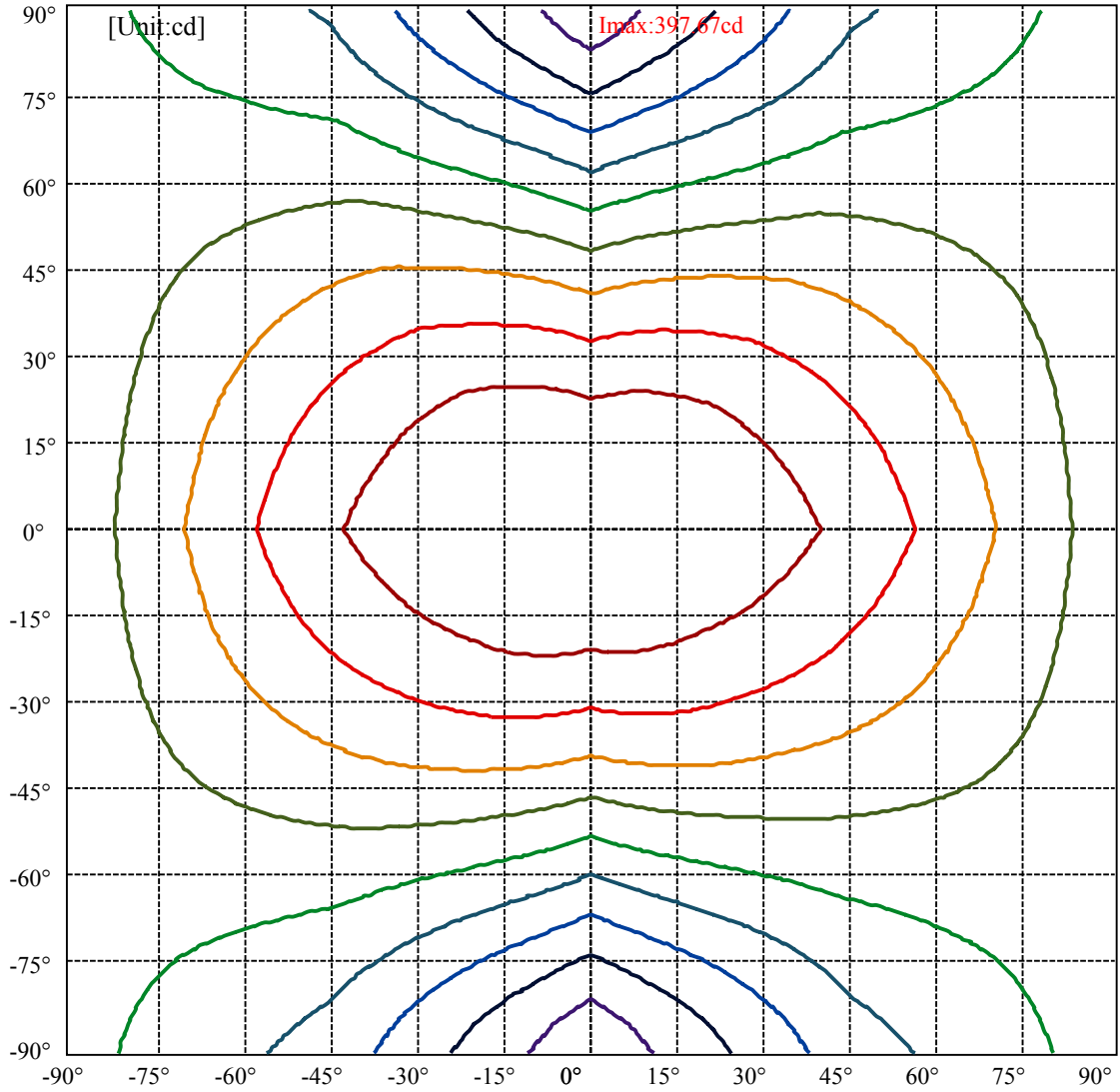


C180(Max): ——  
C0/C180: ——  
C90/C270: ——

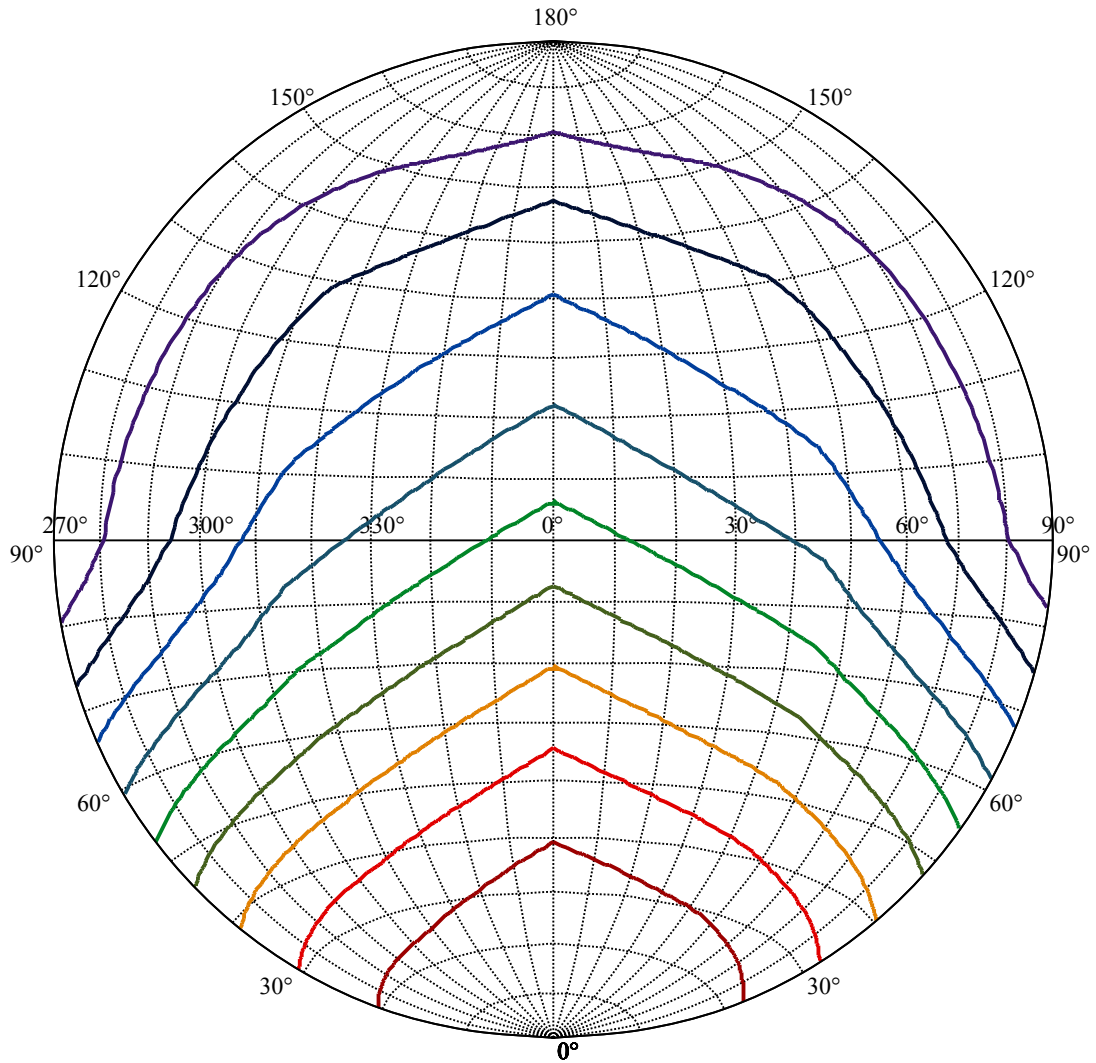
Field angle(10%Imax):C0/180Left:151.9 Right:165.7  
:C90/270Left:80.6 Right:82.2  
Beam Angle(50%Imax):C0/180Left:90.0 Right:101.4  
:C90/270Left:52.9 Right:54.7



Max , Ave      Beam angle of C180 plane 192.10



(10%Imax) 39.7671	—
(20%Imax) 79.5342	—
(30%Imax) 119.301	—
(40%Imax) 159.068	—
(50%Imax) 198.835	—
(60%Imax) 238.603	—
(70%Imax) 278.37	—
(80%Imax) 318.137	—
(90%Imax) 357.904	—



House

[Unit:cd]

Road

**Imax:397.67**

(10%Imax) 39.7671

(20%Imax) 79.5342

(30%Imax) 119.301

(40%Imax) 159.068

(50%Imax) 198.835

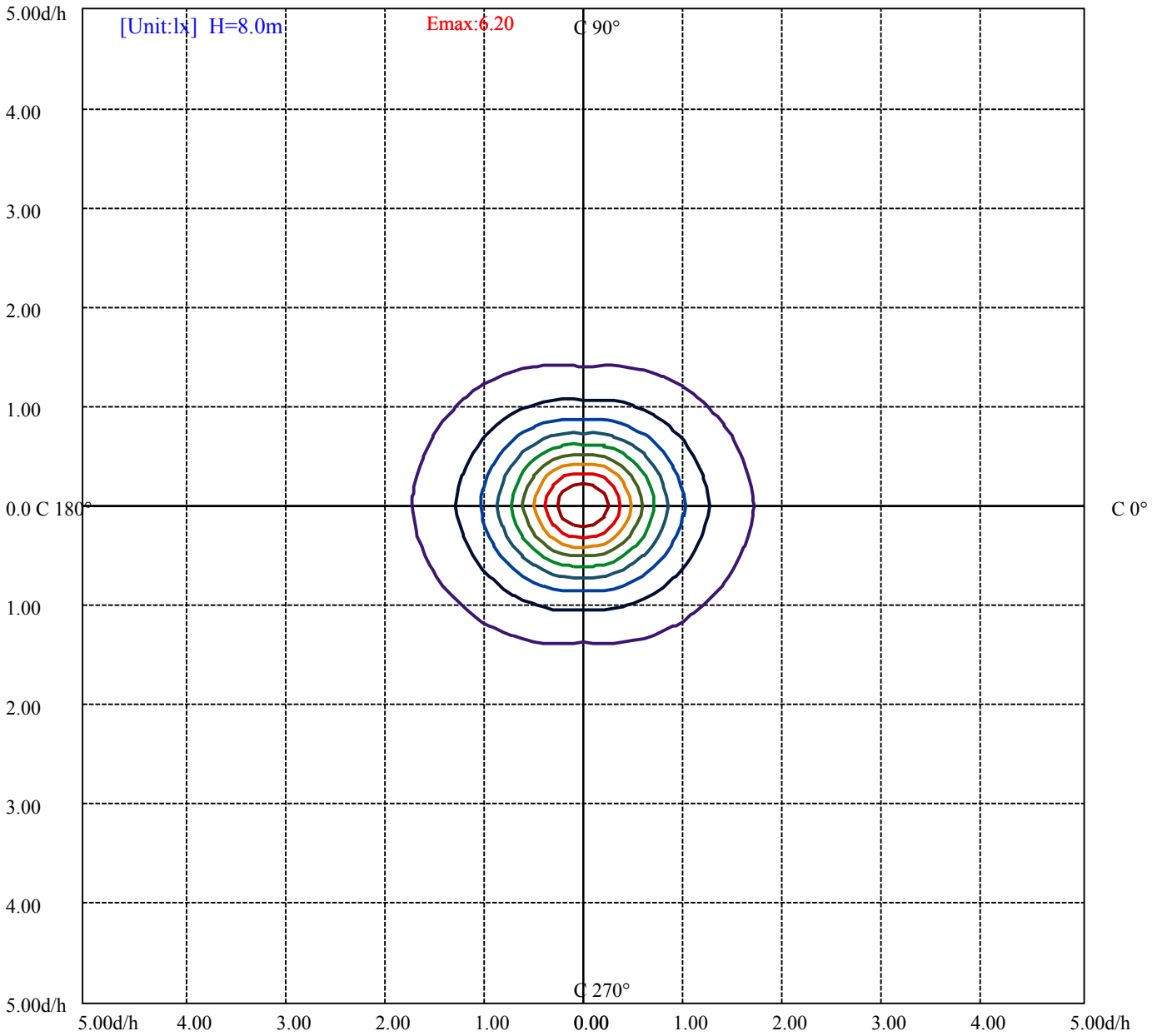
(60%Imax) 238.603

(70%Imax) 278.37

(80%Imax) 318.137

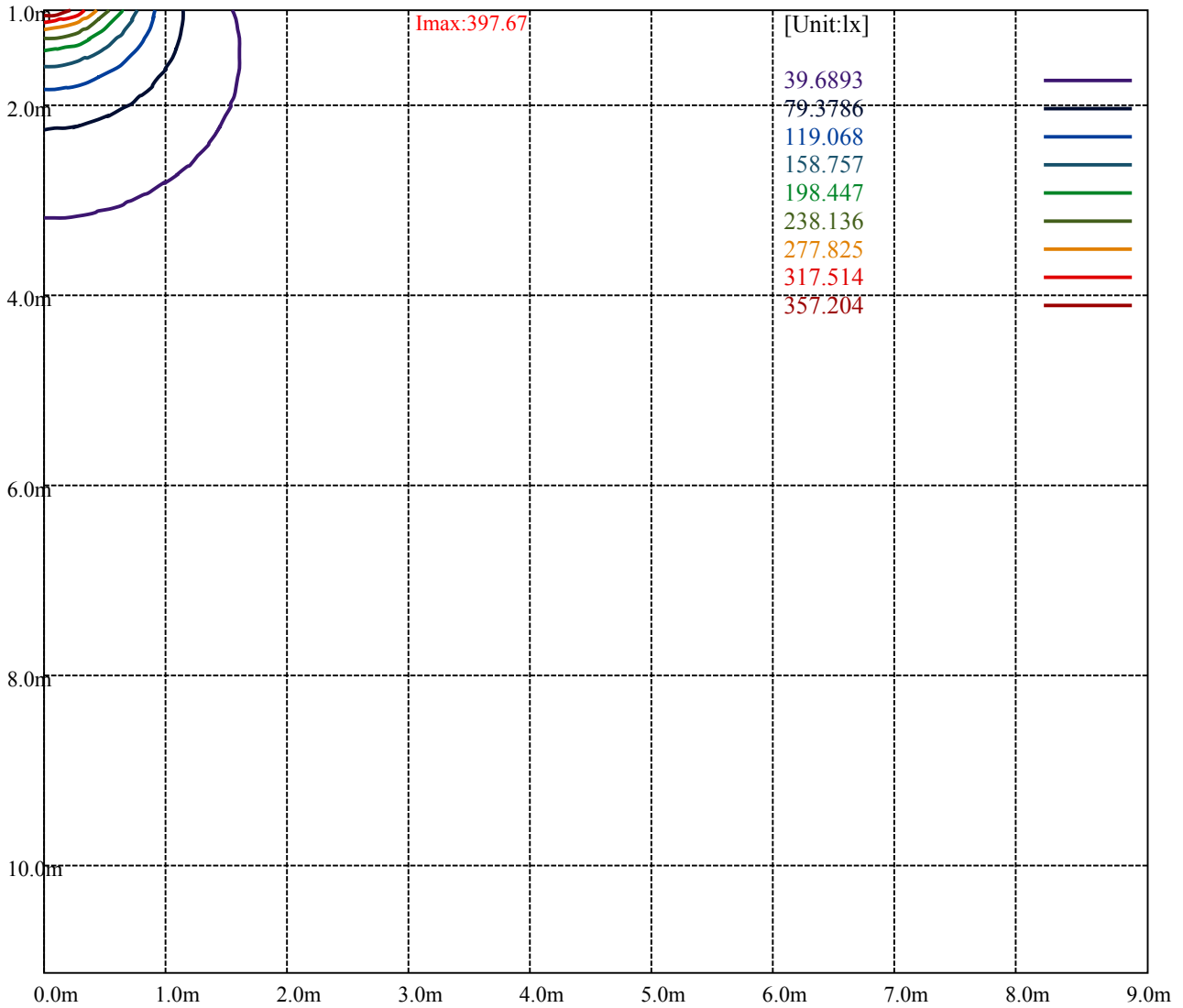
(90%Imax) 357.904





- (10%Emax) 0.619689 ———
- (20%Emax) 1.239378 ———
- (30%Emax) 1.859063 ———
- (40%Emax) 2.47875 ———
- (50%Emax) 3.098438 ———
- (60%Emax) 3.718141 ———
- (70%Emax) 4.337828 ———
- (80%Emax) 4.957516 ———
- (90%Emax) 5.577203 ———





Luminance Table

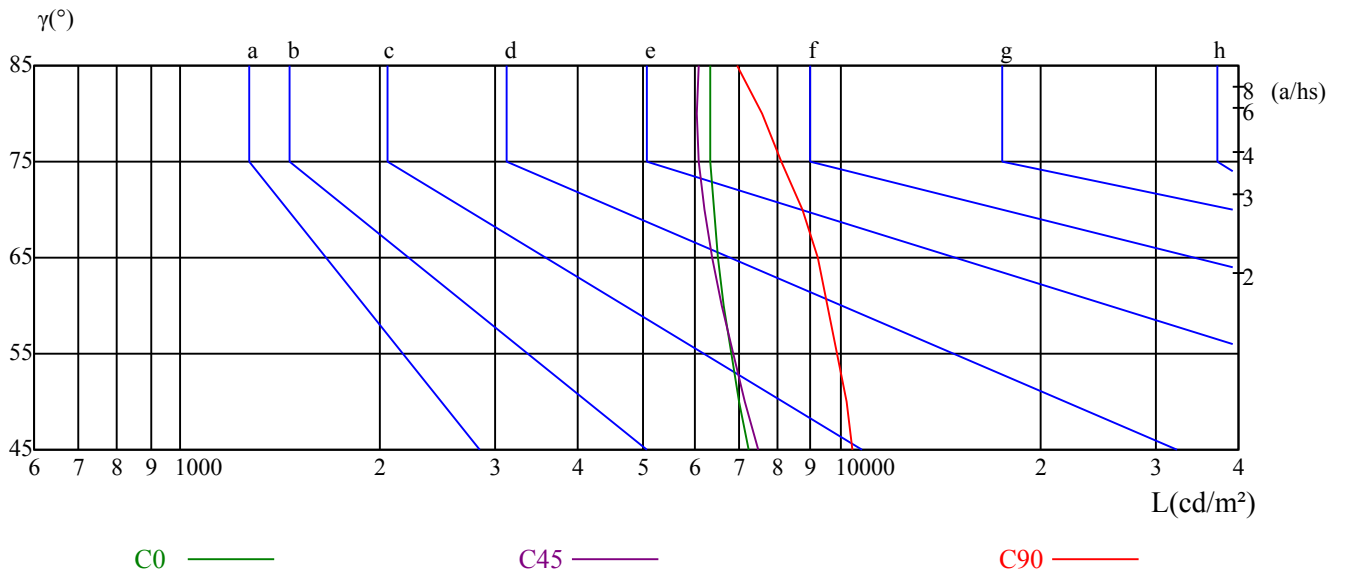
$\gamma$	45	50	55	60	65	70	75	80	85
C0	7263	7032	6833	6666	6518	6431	6347	6325	6355
C45	7480	7151	6864	6586	6376	6201	6073	6030	6084
C90	10435	10197	9848	9550	9219	8735	8139	7612	6976

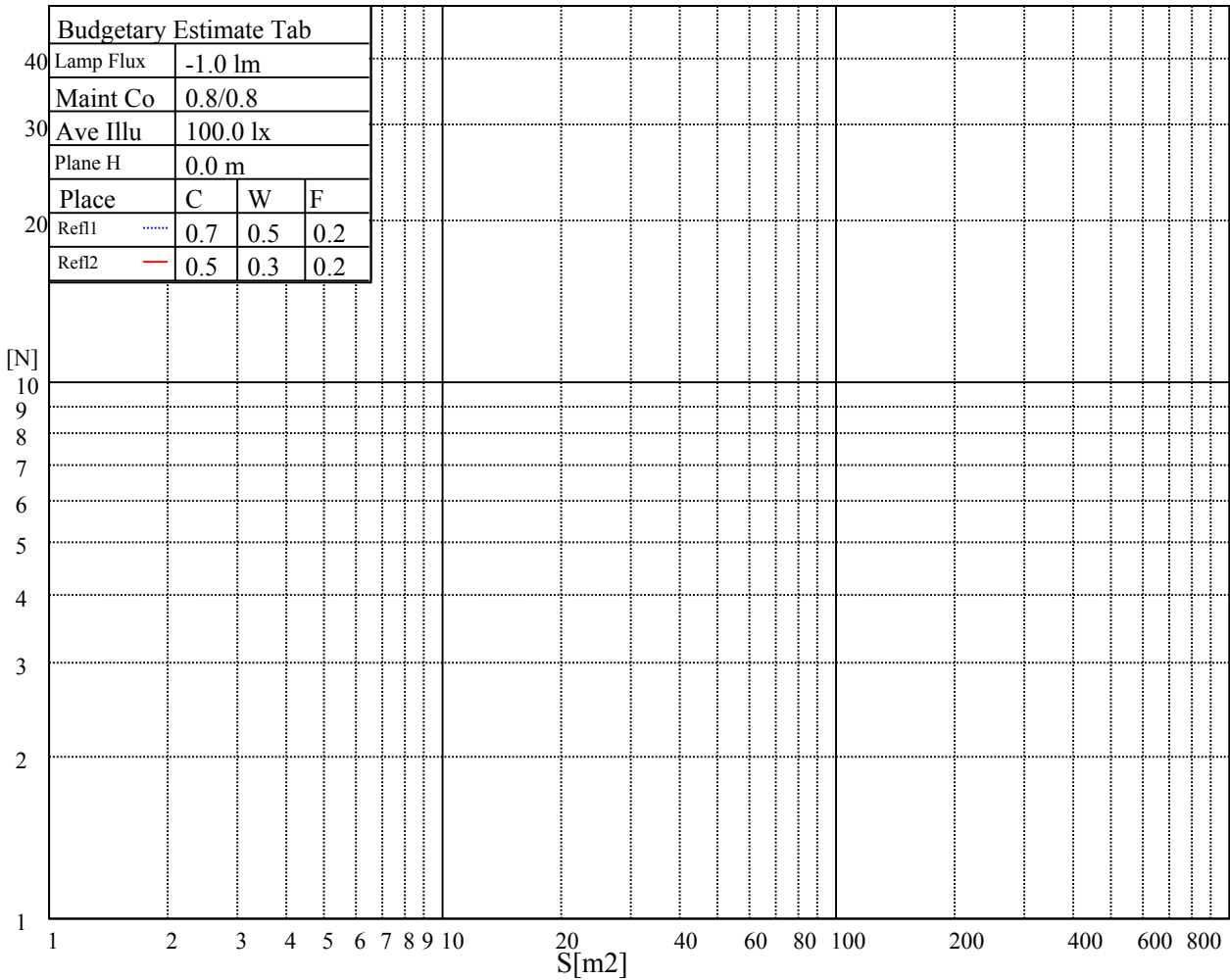
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
20603	9262	15952	29990	8311	21989	78412	7873	54736

Glare Table

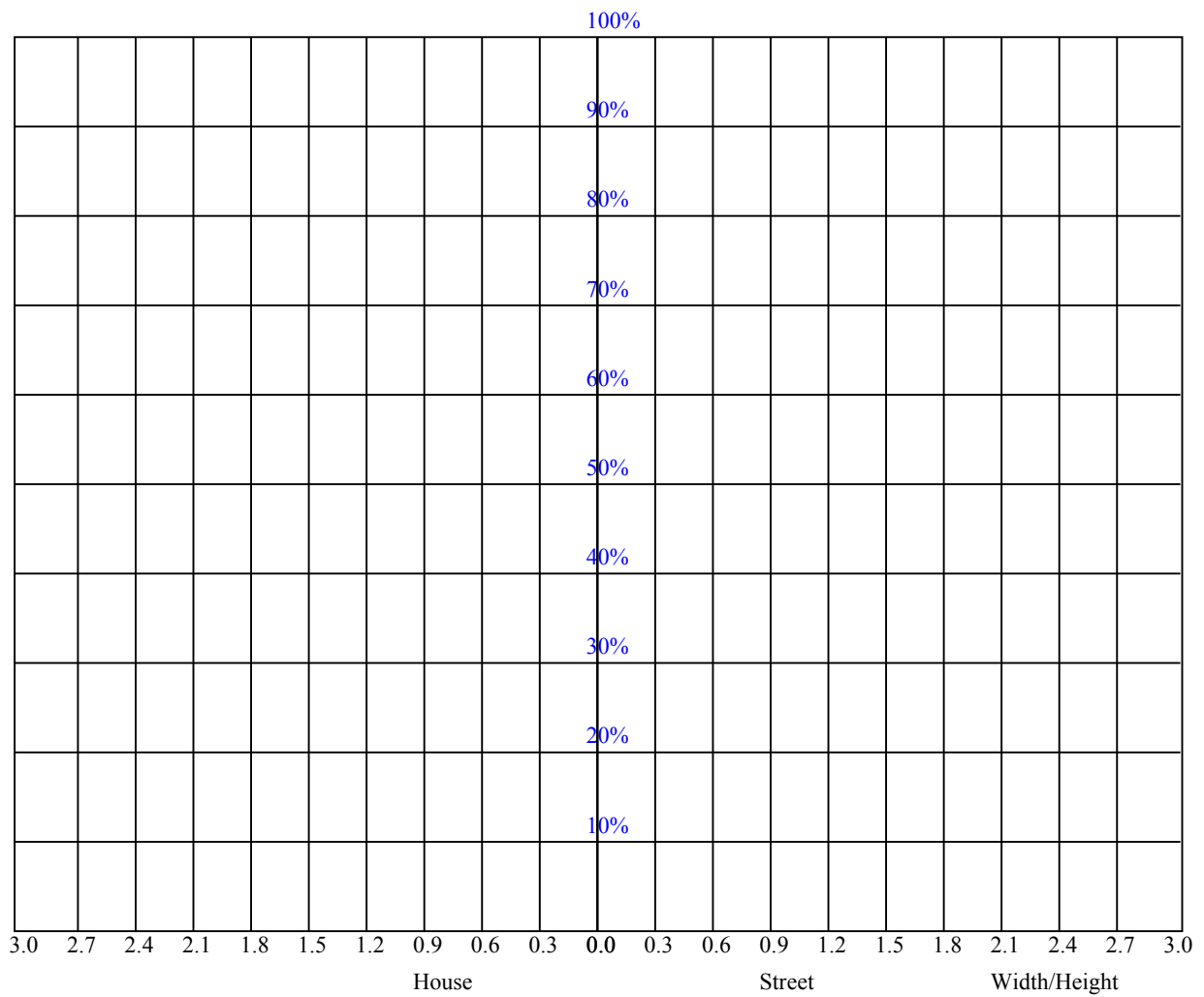
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.00	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	396.89	395.73	394.07	390.77	386.29	381.52	374.71	366.64	356.62
45.0	396.60	395.24	392.32	386.97	378.70	368.59	355.74	340.57	323.94
90.0	396.02	394.27	388.92	379.58	365.47	349.13	328.31	305.94	280.16
135.0	396.80	397.19	394.95	390.86	383.28	374.03	362.17	348.16	331.62
180.0	396.89	397.67	395.73	394.27	391.06	386.49	380.65	372.77	362.85
225.0	396.60	394.27	390.08	383.47	374.52	363.33	348.74	333.86	316.45
270.0	396.02	393.00	386.19	375.30	360.03	342.32	321.70	297.57	272.38
315.0	396.80	393.98	388.72	381.23	370.63	357.79	343.68	328.02	309.93
360.0	396.89	395.73	394.07	390.77	386.29	381.52	374.71	366.64	356.62
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	345.14	332.88	319.75	305.94	291.06	276.95	261.19	246.21	231.33
45.0	306.33	287.65	268.97	249.32	231.04	212.94	195.43	179.57	165.18
90.0	253.70	226.37	196.11	166.93	137.45	106.81	76.95	50.29	25.88
135.0	314.89	296.11	277.05	257.88	237.65	218.88	200.98	183.17	167.51
180.0	352.24	339.69	325.10	309.93	294.07	277.05	260.41	243.58	227.92
225.0	298.45	279.58	260.02	240.67	221.02	203.02	186.09	169.94	154.96
270.0	244.17	214.79	185.80	155.16	125.59	96.69	67.61	42.02	20.23
315.0	291.93	272.57	253.70	235.12	216.35	199.03	182.40	167.80	153.50
360.0	345.14	332.88	319.75	305.94	291.06	276.95	261.19	246.21	231.33
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	216.83	202.53	189.21	176.07	164.30	152.34	141.73	131.33	120.72
45.0	150.88	138.23	127.73	117.80	109.83	101.85	95.04	88.52	80.94
90.0	9.83	7.59	7.30	7.20	7.20	7.00	7.00	6.91	6.91
135.0	152.82	140.37	128.70	118.39	109.92	102.04	94.07	84.53	70.04
180.0	212.75	198.84	185.02	172.47	160.02	148.84	137.65	126.17	114.98
225.0	142.51	131.33	121.31	112.84	103.31	94.40	81.91	72.96	61.67
270.0	7.59	7.00	6.81	6.71	6.62	6.62	6.52	6.52	6.62
315.0	141.54	130.16	120.82	112.65	105.06	98.54	92.02	85.90	78.41
360.0	216.83	202.53	189.21	176.07	164.30	152.34	141.73	131.33	120.72
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	110.80	99.90	86.97	71.79	57.10	41.93	27.34	12.26	6.52
45.0	72.08	62.65	52.34	42.51	32.20	21.60	11.58	7.30	6.91
90.0	6.91	6.91	6.91	7.00	7.10	7.30	7.30	7.39	7.30
135.0	55.94	44.75	38.52	32.39	24.22	15.86	9.44	7.20	7.10
180.0	102.73	89.98	75.29	60.31	45.14	30.94	15.95	7.10	6.42
225.0	50.88	45.43	40.18	33.17	24.13	15.66	8.85	7.30	7.10
270.0	6.62	6.71	6.81	6.91	7.00	7.10	7.20	7.30	7.30
315.0	69.85	60.31	50.78	40.95	30.55	20.33	10.21	6.91	6.81
360.0	110.80	99.90	86.97	71.79	57.10	41.93	27.34	12.26	6.52
C/γ(°)	180.0								
0.0	6.52								
45.0	6.91								
90.0	7.39								
135.0	6.91								
180.0	6.52								
225.0	6.91								
270.0	7.39								
315.0	6.91								
360.0	6.52								