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PQL 91400

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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): 16.3600

PF:

Ballast type:

Width(mm): 28

Height(mm): 28

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### Photometric Results

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Lumens(lm): 2072.96

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 126.71

Central intensity(cd): 402.528

Maximum intensity(cd): 403.317

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%

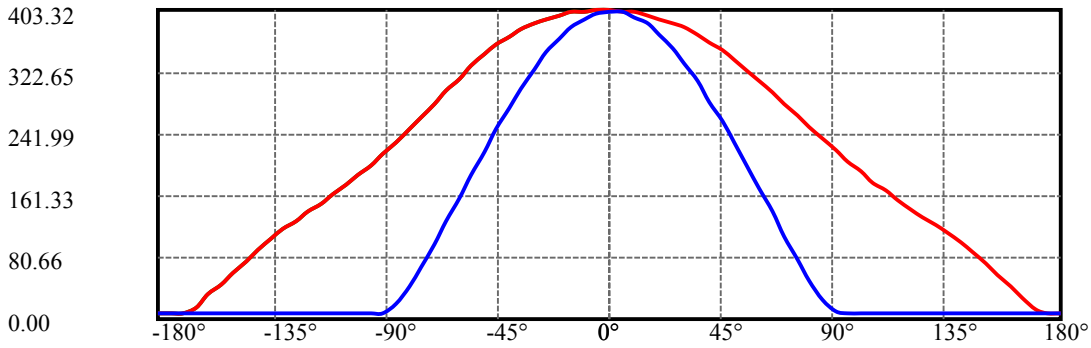
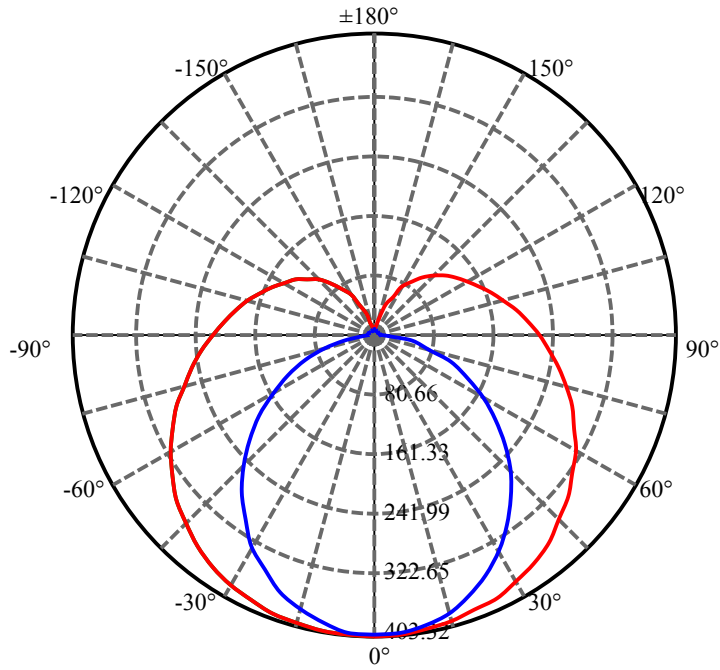
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	402.207	0.000	0	.000%	.000%
5.0	400.777	9.599	9.599	.000%	.463%
10.0	396.929	28.536	38.136	.000%	1.840%
15.0	390.775	46.726	84.862	.000%	4.094%
20.0	381.587	63.654	148.515	.000%	7.164%
25.0	370.587	78.889	227.405	.000%	10.970%
30.0	356.960	92.072	319.476	.000%	15.412%
35.0	341.470	102.849	422.325	.000%	20.373%
40.0	323.773	110.991	533.316	.000%	25.727%
45.0	305.127	116.446	649.762	.000%	31.345%
50.0	285.198	119.284	769.046	.000%	37.099%
55.0	264.517	119.526	888.572	.000%	42.865%
60.0	243.527	117.433	1006.005	.000%	48.530%
65.0	222.389	113.265	1119.27	.000%	53.994%
70.0	201.745	107.394	1226.663	.000%	59.174%
75.0	181.421	100.153	1326.817	.000%	64.006%
80.0	162.602	92.051	1418.868	.000%	68.446%
85.0	145.349	83.678	1502.545	.000%	72.483%
90.0	131.179	75.716	1578.261	.000%	76.136%
95.0	121.202	69.104	1647.365	.000%	79.469%
100.0	112.434	63.485	1710.85	.000%	82.532%
105.0	104.480	58.040	1768.89	.000%	85.332%
110.0	97.142	52.701	1821.59	.000%	87.874%
115.0	89.582	47.280	1868.87	.000%	90.155%
120.0	83.157	41.993	1910.863	.000%	92.180%
125.0	76.424	36.887	1947.75	.000%	93.960%
130.0	68.494	31.510	1979.26	.000%	95.480%
135.0	60.318	26.028	2005.288	.000%	96.735%
140.0	52.819	20.948	2026.236	.000%	97.746%
145.0	45.358	16.380	2042.616	.000%	98.536%
150.0	37.404	12.187	2054.803	.000%	99.124%
155.0	28.833	8.382	2063.186	.000%	99.528%
160.0	20.373	5.161	2068.347	.000%	99.777%
165.0	12.406	2.701	2071.048	.000%	99.908%
170.0	7.954	1.208	2072.256	.000%	99.966%
175.0	7.029	0.536	2072.792	.000%	99.992%
180.0	7.029	0.168	2072.96	.000%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	319.48	N.A.	15.41%
0-40	533.32	N.A.	25.73%
0-60	1006.00	N.A.	48.53%
0-90	1578.26	N.A.	76.14%
0-120	1910.86	N.A.	92.18%
0-180	2072.96	N.A.	100.00%
60-90	689.69	N.A.	33.27%
90-120	408.32	N.A.	19.70%
90-130	476.71	N.A.	23.00%
90-150	552.26	N.A.	26.64%
90-180	570.25	N.A.	27.51%
0-95.87	1658.37	N.A.	80.00%

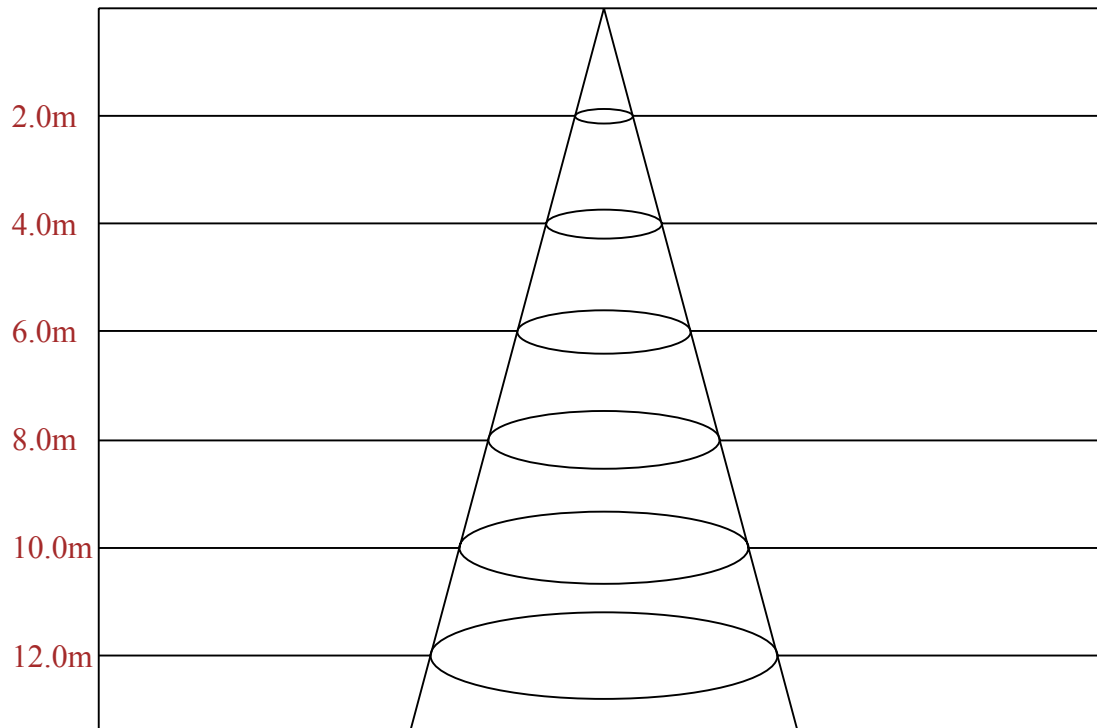
## ZONAL LUMEN SUMMARY

0-10	38.14
10-20	110.38
20-30	170.96
30-40	213.84
40-50	235.73
50-60	236.96
60-70	220.66
70-80	192.20
80-90	159.39
90-100	132.59
100-110	110.74
110-120	89.27
120-130	68.40
130-140	46.98
140-150	28.57
150-160	13.54
160-170	3.91
170-180	0.54

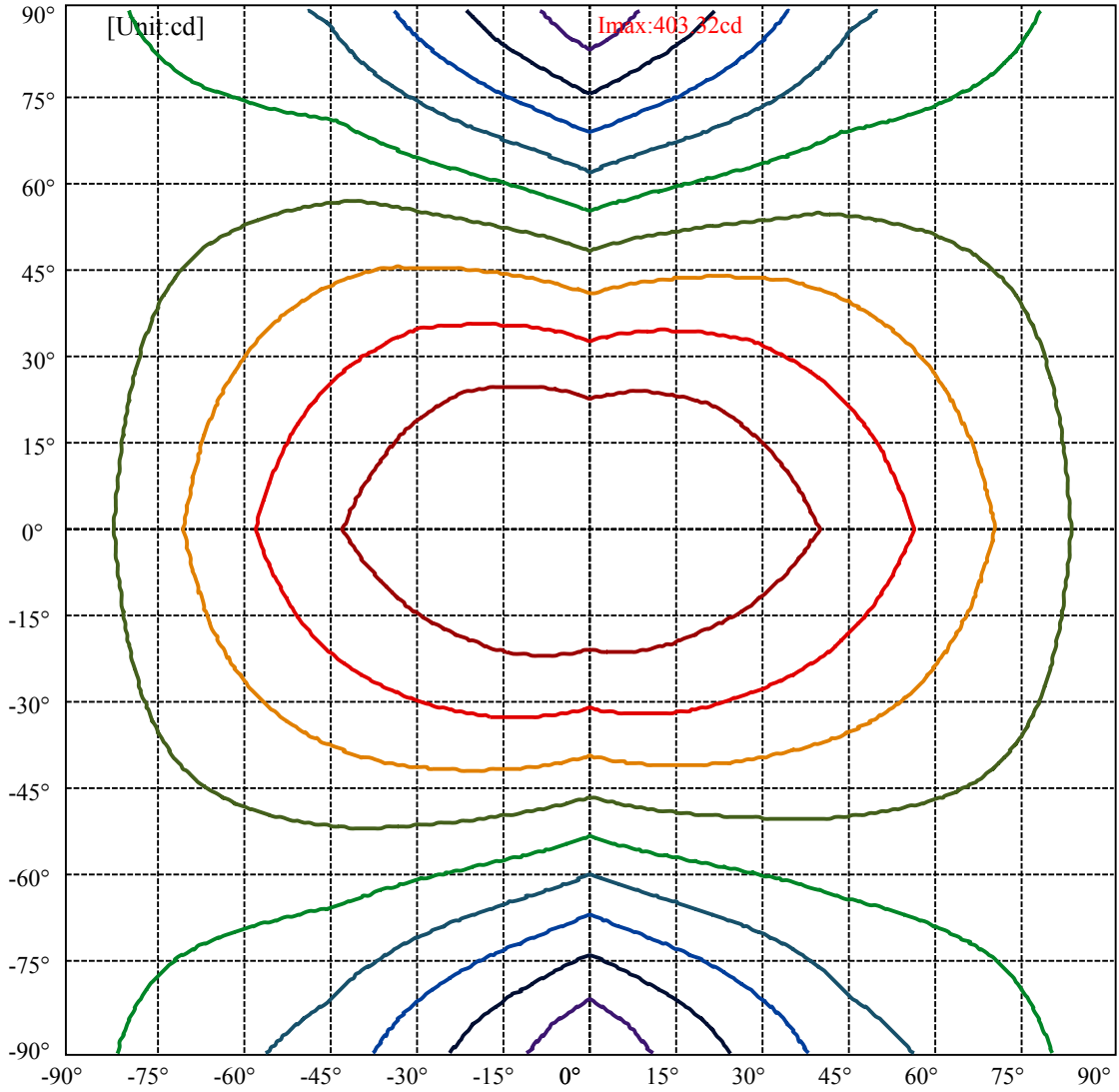











C180(Max): —  
C0/C180: —  
C90/C270: —

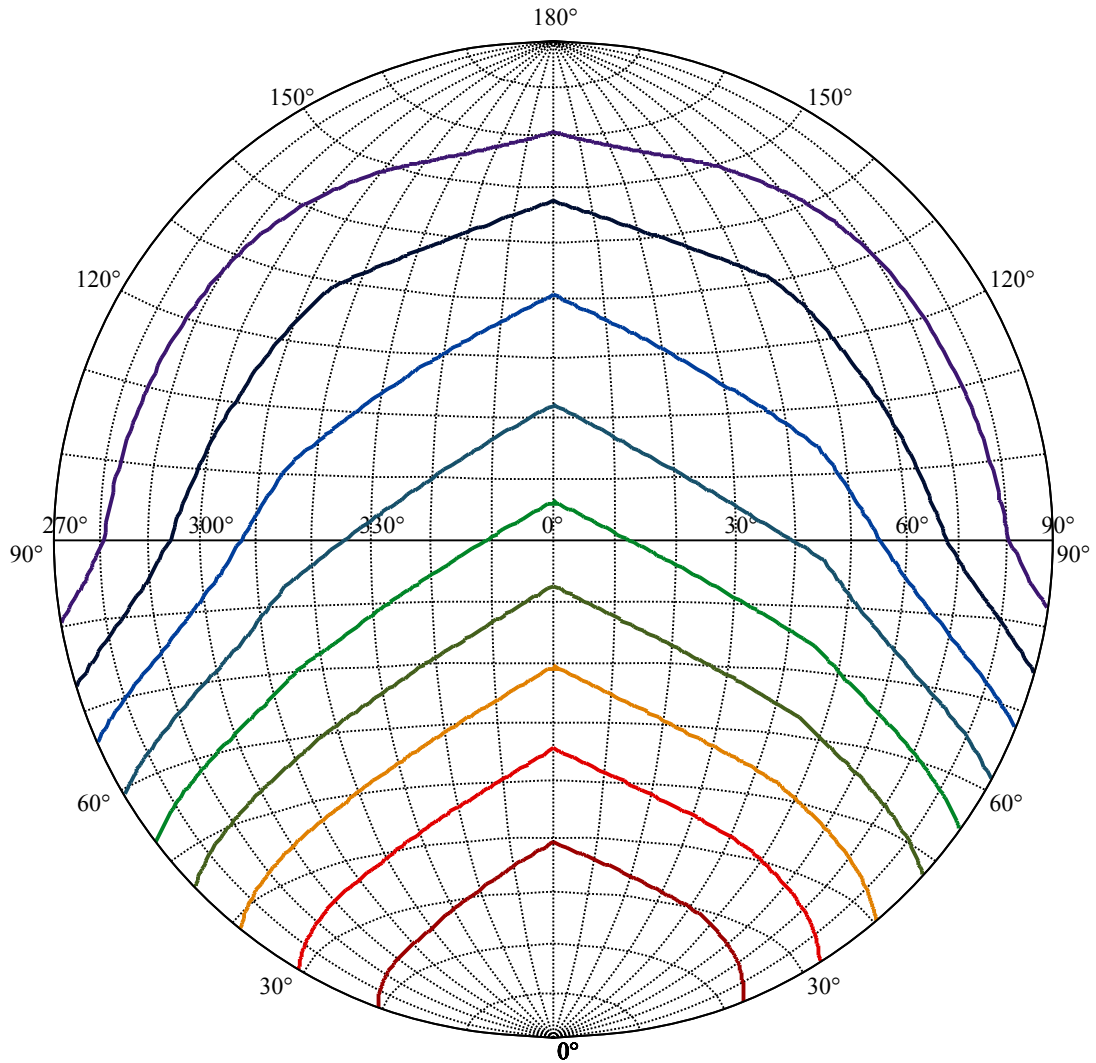
Field angle(10%Imax):C0/180Left:151.9 Right:165.7  
:C90/270Left:80.6 Right:82.2  
Beam Angle(50%Imax):C0/180Left:90.0 Right:101.4  
:C90/270Left:52.9 Right:54.7



Max , Ave      Beam angle of C180 plane 192.10



(10%Imax)	40.3317	
(20%Imax)	80.6634	
(30%Imax)	120.995	
(40%Imax)	161.327	
(50%Imax)	201.658	
(60%Imax)	241.99	
(70%Imax)	282.322	
(80%Imax)	322.654	
(90%Imax)	362.985	



House

[Unit:cd]

Road

**Imax:403.32**

(10%Imax) 40.3317

(20%Imax) 80.6634

(30%Imax) 120.995

(40%Imax) 161.327

(50%Imax) 201.658

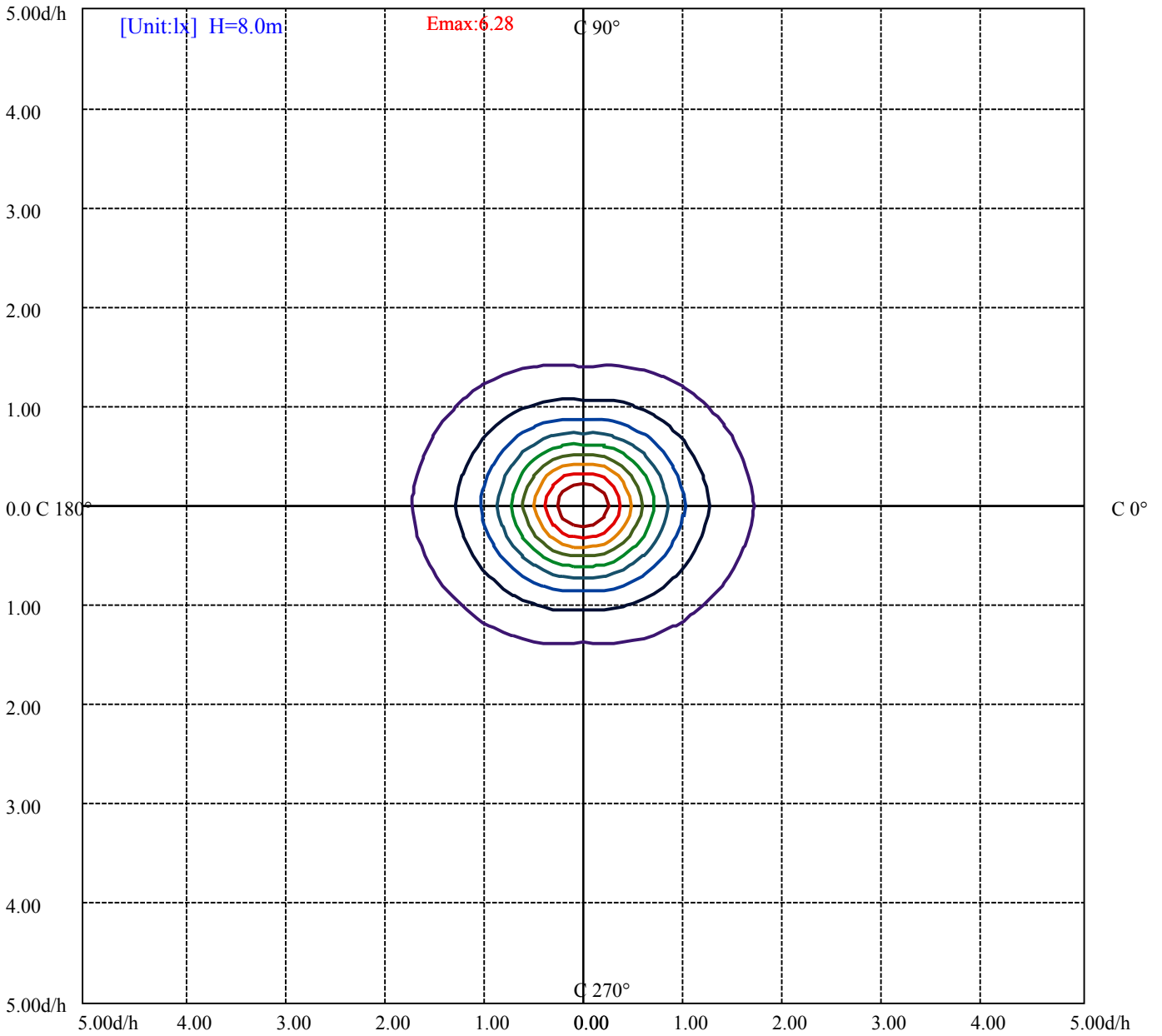
(60%Imax) 241.99

(70%Imax) 282.322

(80%Imax) 322.654

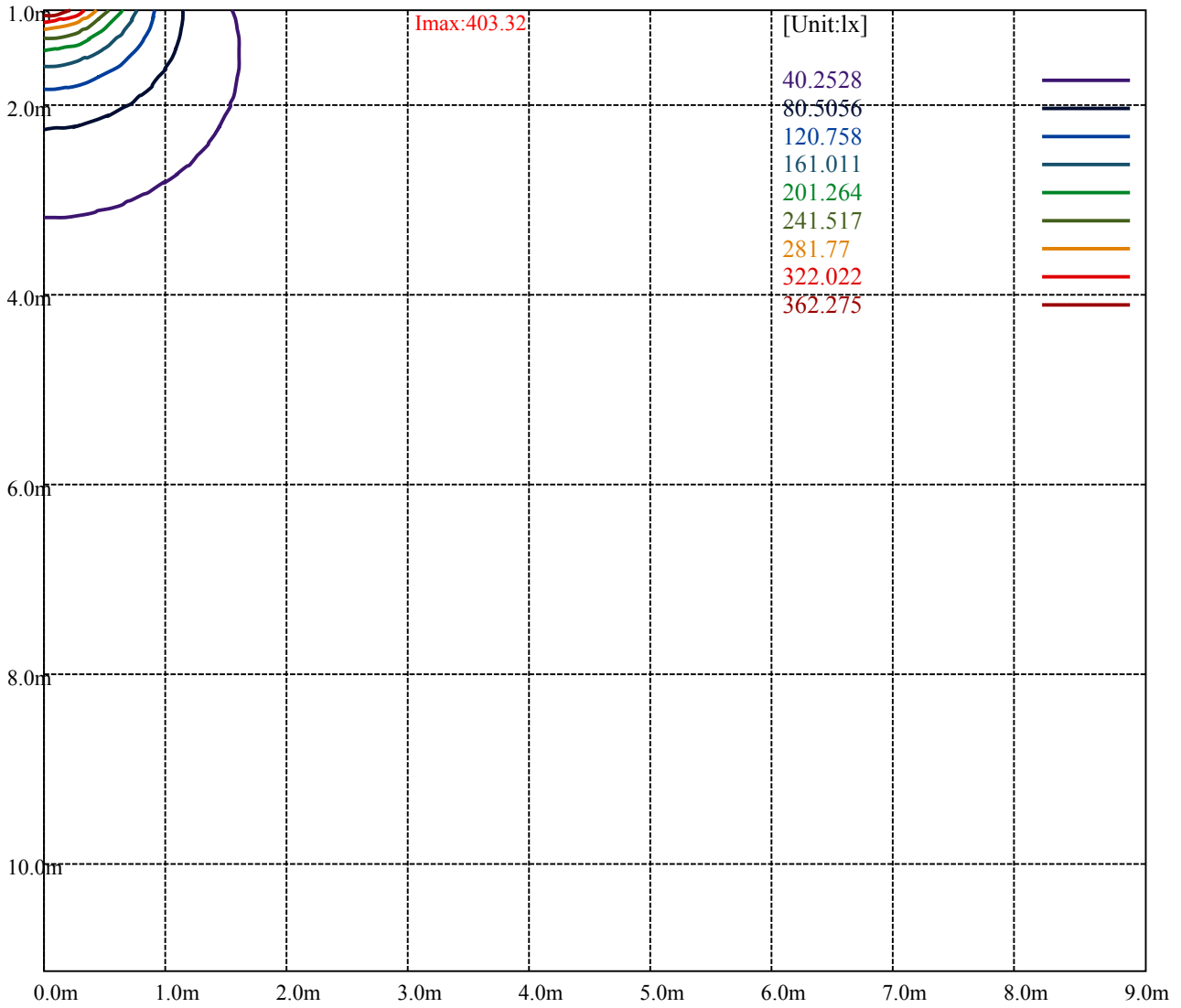
(90%Imax) 362.985





- (10%Emax) 0.6284875
- (20%Emax) 1.256975
- (30%Emax) 1.885469
- (40%Emax) 2.513953
- (50%Emax) 3.142437
- (60%Emax) 3.770922
- (70%Emax) 4.399406
- (80%Emax) 5.027906
- (90%Emax) 5.656391





Luminance Table

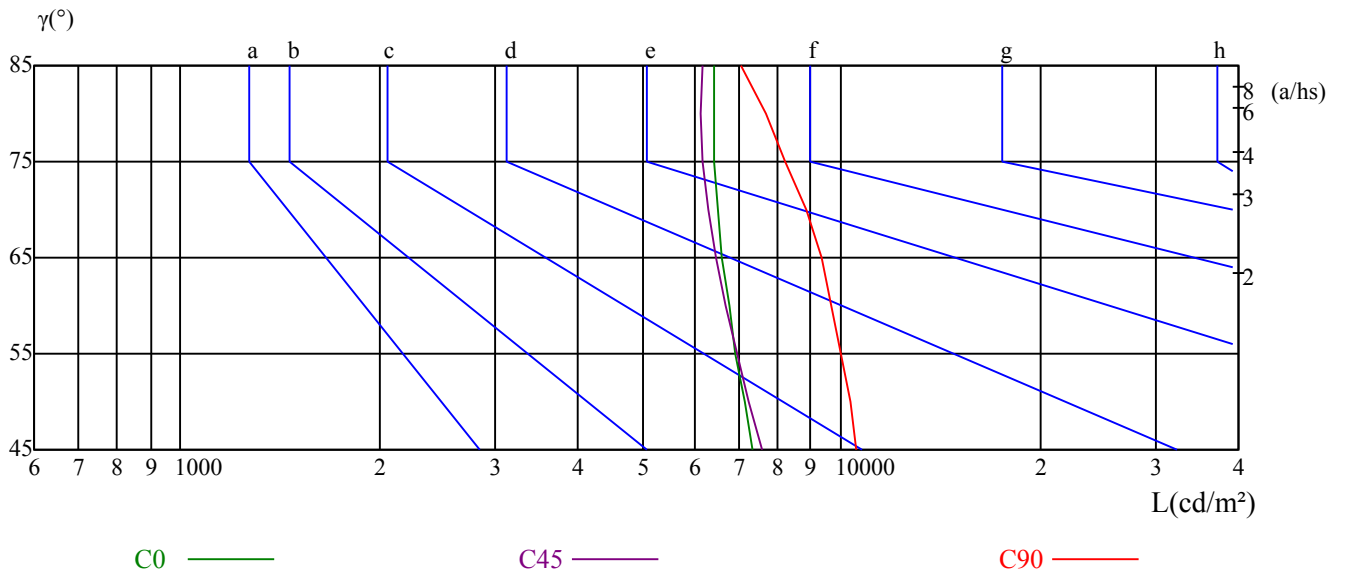
$\gamma$	45	50	55	60	65	70	75	80	85
C0	7367	7132	6930	6760	6611	6522	6437	6415	6445
C45	7587	7253	6961	6680	6466	6289	6159	6116	6170
C90	10583	10342	9988	9686	9349	8859	8255	7720	7075

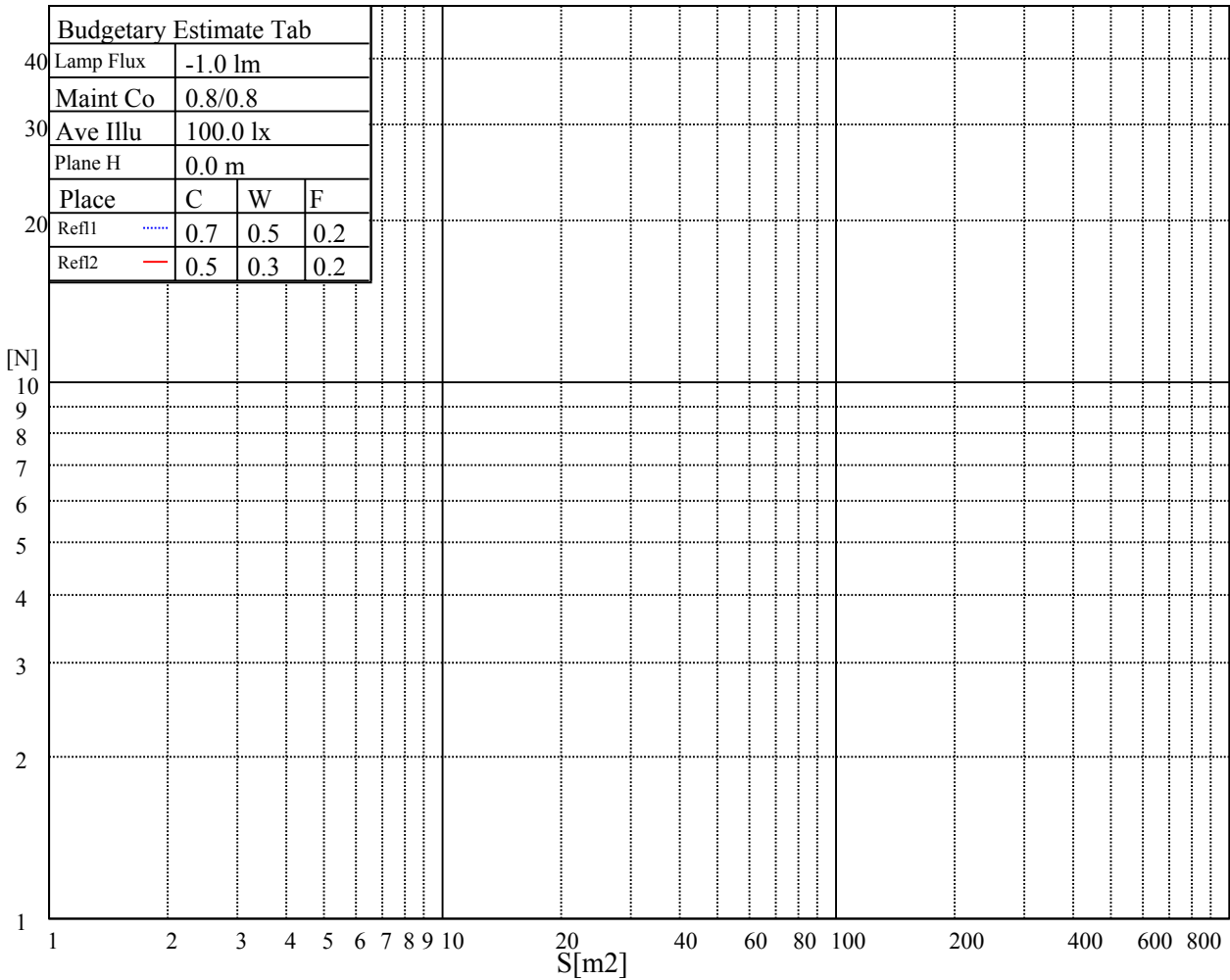
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
20896	9393	16178	30416	8429	22301	79525	7985	55513

Glare Table

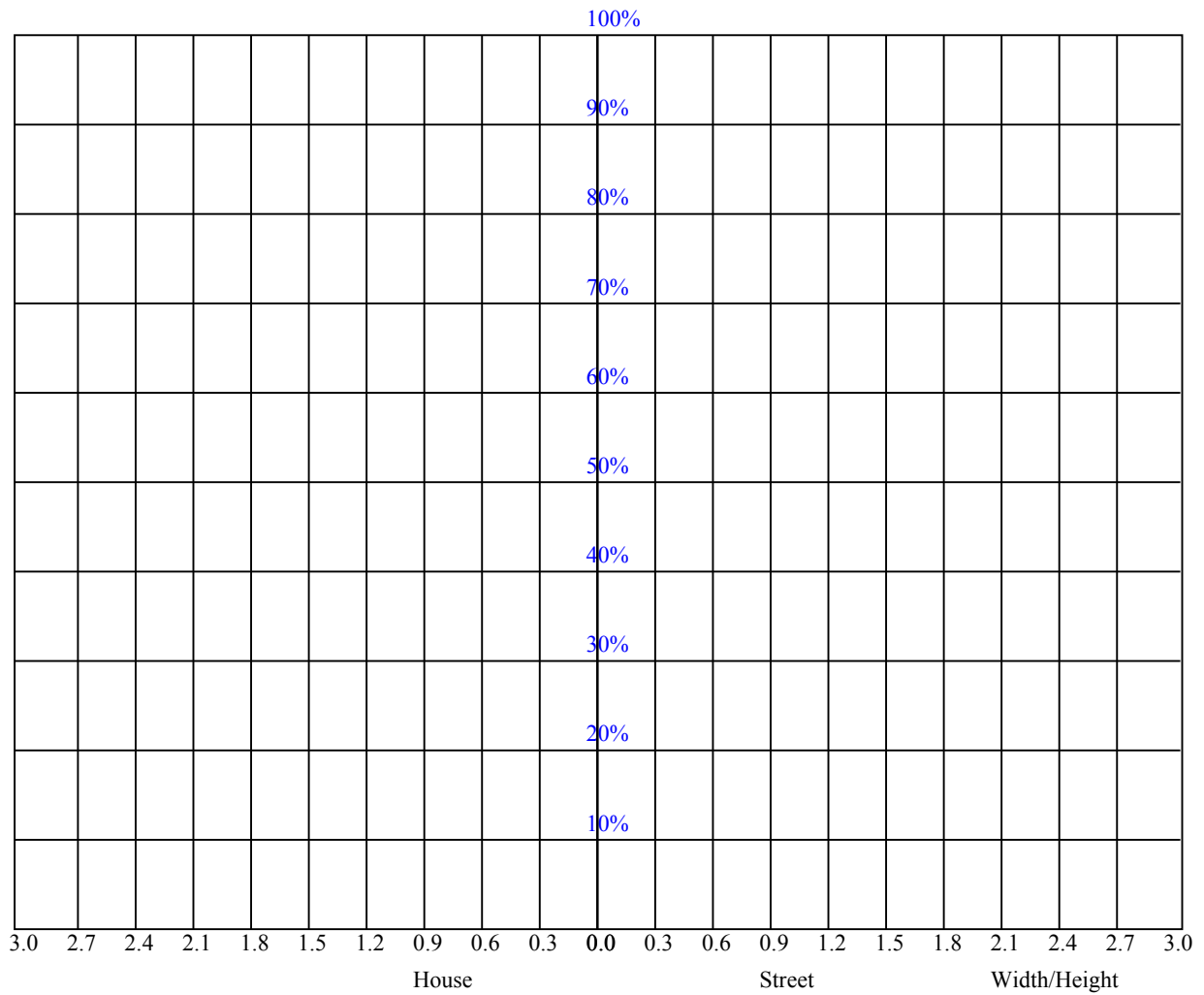
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	402.53	401.34	399.67	396.31	391.77	386.94	380.03	371.85	361.68
45.0	402.23	400.85	397.89	392.47	384.08	373.82	360.79	345.40	328.53
90.0	401.64	399.86	394.44	384.97	370.66	354.09	332.97	310.28	284.14
135.0	402.43	402.82	400.56	396.41	388.72	379.34	367.31	353.10	336.33
180.0	402.53	403.32	401.34	399.86	396.61	391.97	386.05	378.06	368.00
225.0	402.23	399.86	395.62	388.91	379.84	368.49	353.69	338.60	320.94
270.0	401.64	398.58	391.68	380.63	365.14	347.18	326.26	301.80	276.24
315.0	402.43	399.57	394.24	386.64	375.89	362.87	348.56	332.68	314.33
360.0	402.53	401.34	399.67	396.31	391.77	386.94	380.03	371.85	361.68
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	350.04	337.61	324.29	310.28	295.19	280.88	264.90	249.71	234.61
45.0	310.68	291.73	272.79	252.86	234.31	215.96	198.21	182.12	167.52
90.0	257.30	229.58	198.90	169.30	139.41	108.33	78.04	51.01	26.24
135.0	319.36	300.32	280.98	261.55	241.02	221.98	203.83	185.77	169.89
180.0	357.24	344.52	329.72	314.33	298.25	280.98	264.11	247.04	231.16
225.0	302.69	283.55	263.72	244.08	224.15	205.90	188.73	172.36	157.16
270.0	247.63	217.84	188.44	157.36	127.37	98.07	68.57	42.62	20.52
315.0	296.08	276.44	257.30	238.46	219.42	201.86	184.99	170.19	155.68
360.0	350.04	337.61	324.29	310.28	295.19	280.88	264.90	249.71	234.61
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	219.91	205.41	191.89	178.57	166.63	154.50	143.75	133.19	122.44
45.0	153.02	140.19	129.54	119.48	111.39	103.30	96.39	89.78	82.08
90.0	9.96	7.70	7.40	7.30	7.30	7.10	7.10	7.00	7.00
135.0	154.99	142.37	130.53	120.07	111.48	103.49	95.40	85.73	71.03
180.0	215.77	201.66	187.65	174.92	162.29	150.95	139.60	127.96	116.61
225.0	144.54	133.19	123.03	114.44	104.78	90.67	83.07	73.99	62.55
270.0	7.70	7.10	6.91	6.81	6.71	6.71	6.61	6.61	6.71
315.0	143.55	132.01	122.53	114.25	106.55	99.94	93.33	87.12	79.52
360.0	219.91	205.41	191.89	178.57	166.63	154.50	143.75	133.19	122.44
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	112.37	101.32	88.20	72.81	57.91	42.52	27.72	12.43	6.61
45.0	73.11	63.54	53.08	43.12	32.66	21.90	11.74	7.40	7.00
90.0	7.00	7.00	7.00	7.10	7.20	7.40	7.40	7.50	7.40
135.0	56.73	45.38	39.07	32.85	24.57	16.08	9.57	7.30	7.20
180.0	104.18	91.26	76.36	61.17	45.78	31.37	16.18	7.20	6.51
225.0	51.60	46.07	40.75	33.64	24.47	15.88	8.98	7.40	7.20
270.0	6.71	6.81	6.91	7.00	7.10	7.20	7.30	7.40	7.40
315.0	70.84	61.17	51.50	41.54	30.98	20.62	10.36	7.00	6.91
360.0	112.37	101.32	88.20	72.81	57.91	42.52	27.72	12.43	6.61
C/γ(°)	180.0								
0.0	6.61								
45.0	7.00								
90.0	7.50								
135.0	7.00								
180.0	6.61								
225.0	7.00								
270.0	7.50								
315.0	7.00								
360.0	6.61								