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Client:

LumCAT: CH1152-22W-1.5M-4000K

Luminaire: 22T8/LED/60-840/BP

Report No:

Test No:

LampCAT: CH1152-22W-1.5M-4000K

Lamp flux(lm): -1.0

Number of Lamps: 1

Length(mm): 1500

Phm Type: C

Voltage(V):

Current(A):

Power (W): 22.3070

PF:

Ballast type:

Width(mm): 20

Height(mm): 20

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### Photometric Results

Lumens(lm): 2796.68

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 125.37

Central intensity(cd): 650.345

Maximum intensity(cd): 664.298

Angle of maximum intensity: C=45.0  $\gamma$ =5.0

Beam Angle(50%Imax): [C0/180]Total=160.8

[C90/270]Total=106.6

Field angle(10%Imax): [C0/180]Total=250.4

[C90/270]Total=159.0

Maximum s/h(1/2): C0\_180=1.36 C90\_270=1.22

Maximum s/h(1/4): C0\_180=1.52 C90\_270=1.34

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 13.98%

Down flux rate of LUM(%): 86.02%

CIE Type : Semidirect lighting

Output flux ratio in  $\pi$  solid angle : 56.868%

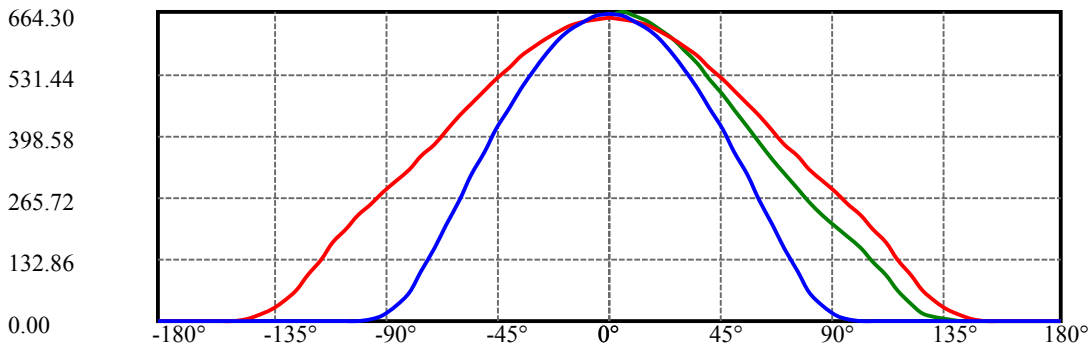
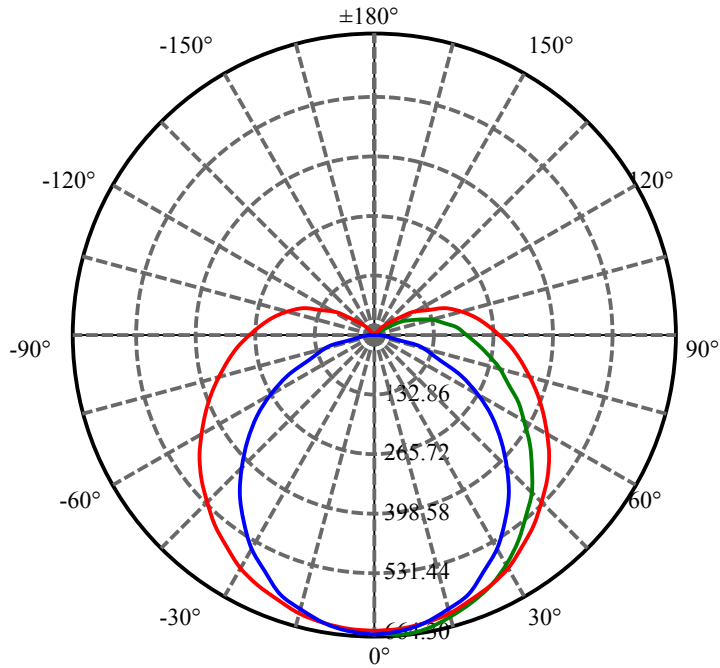
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	656.451	0.000	0	.000%	.000%
5.0	658.283	15.717	15.717	.000%	.562%
10.0	650.363	46.814	62.532	.000%	2.236%
15.0	638.001	76.425	138.957	.000%	4.969%
20.0	620.940	103.754	242.711	.000%	8.679%
25.0	599.289	127.979	370.691	.000%	13.255%
30.0	573.696	148.442	519.133	.000%	18.562%
35.0	544.162	164.612	683.745	.000%	24.448%
40.0	511.778	176.176	859.921	.000%	30.748%
45.0	477.044	183.089	1043.009	.000%	37.295%
50.0	441.181	185.541	1228.55	.000%	43.929%
55.0	403.967	183.763	1412.314	.000%	50.500%
60.0	366.513	178.094	1590.408	.000%	56.868%
65.0	328.688	169.005	1759.413	.000%	62.911%
70.0	292.474	157.282	1916.695	.000%	68.535%
75.0	257.351	143.715	2060.41	.000%	73.673%
80.0	224.652	128.971	2189.381	.000%	78.285%
85.0	197.394	114.680	2304.061	.000%	82.385%
90.0	174.096	101.717	2405.778	.000%	86.023%
95.0	154.481	89.967	2495.745	.000%	89.239%
100.0	135.865	78.894	2574.639	.000%	92.060%
105.0	115.250	67.191	2641.831	.000%	94.463%
110.0	91.212	53.966	2695.796	.000%	96.393%
115.0	66.248	39.870	2735.666	.000%	97.818%
120.0	42.617	26.465	2762.132	.000%	98.765%
125.0	25.352	15.711	2777.843	.000%	99.326%
130.0	14.952	8.764	2786.606	.000%	99.640%
135.0	8.216	4.682	2791.288	.000%	99.807%
140.0	4.275	2.313	2793.6	.000%	99.890%
145.0	1.888	1.028	2794.629	.000%	99.927%
150.0	1.776	0.540	2795.168	.000%	99.946%
155.0	1.832	0.457	2795.625	.000%	99.962%
160.0	1.795	0.380	2796.005	.000%	99.976%
165.0	1.758	0.293	2796.298	.000%	99.986%
170.0	1.851	0.214	2796.512	.000%	99.994%
175.0	1.758	0.129	2796.641	.000%	99.998%
180.0	1.850	0.043	2796.684	.000%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	519.13	N.A.	18.56%
0-40	859.92	N.A.	30.75%
0-60	1590.41	N.A.	56.87%
0-90	2405.78	N.A.	86.02%
0-120	2762.13	N.A.	98.76%
0-180	2796.68	N.A.	100.00%
60-90	993.46	N.A.	35.52%
90-120	458.07	N.A.	16.38%
90-130	482.54	N.A.	17.25%
90-150	491.11	N.A.	17.56%
90-180	492.58	N.A.	17.61%
0-82.09	2237.35	N.A.	80.00%

## ZONAL LUMEN SUMMARY

0-10	62.53
10-20	180.18
20-30	276.42
30-40	340.79
40-50	368.63
50-60	361.86
60-70	326.29
70-80	272.69
80-90	216.40
90-100	168.86
100-110	121.16
110-120	66.34
120-130	24.47
130-140	6.99
140-150	1.57
150-160	0.84
160-170	0.51
170-180	0.13



C45(Max): —

C0/C180: —

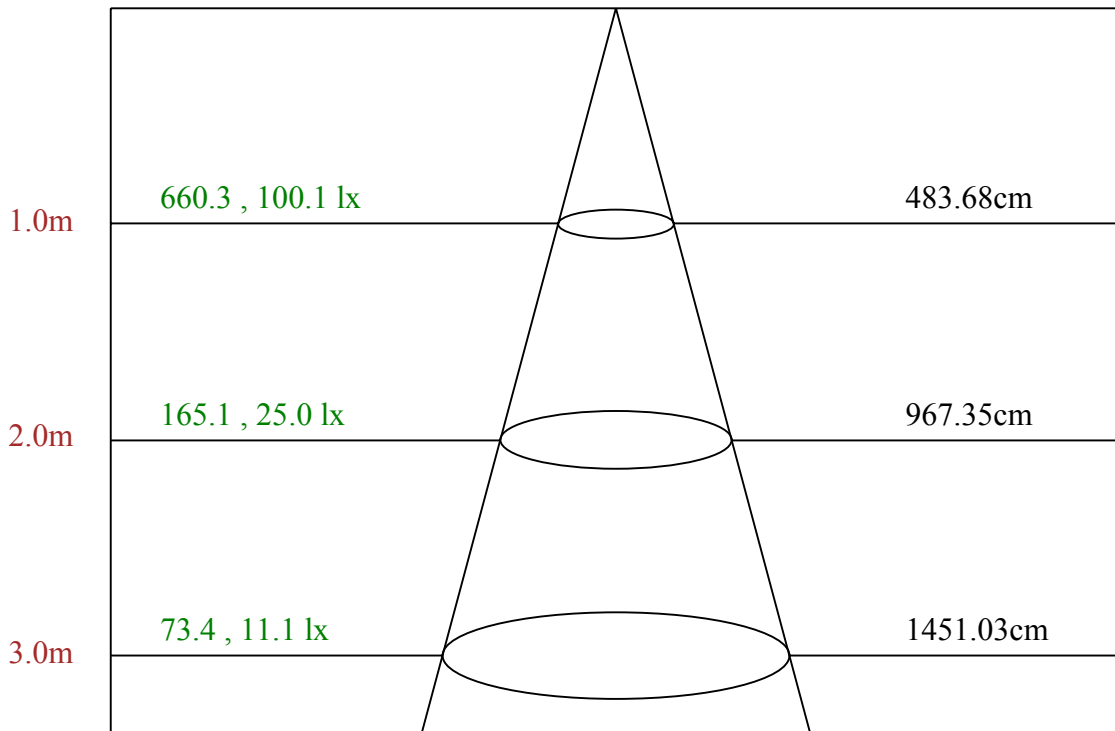
C90/C270: —

Field angle(10%Imax):C0/180Left:125.2 Right:125.2

:C90/270Left:79.5 Right:79.5

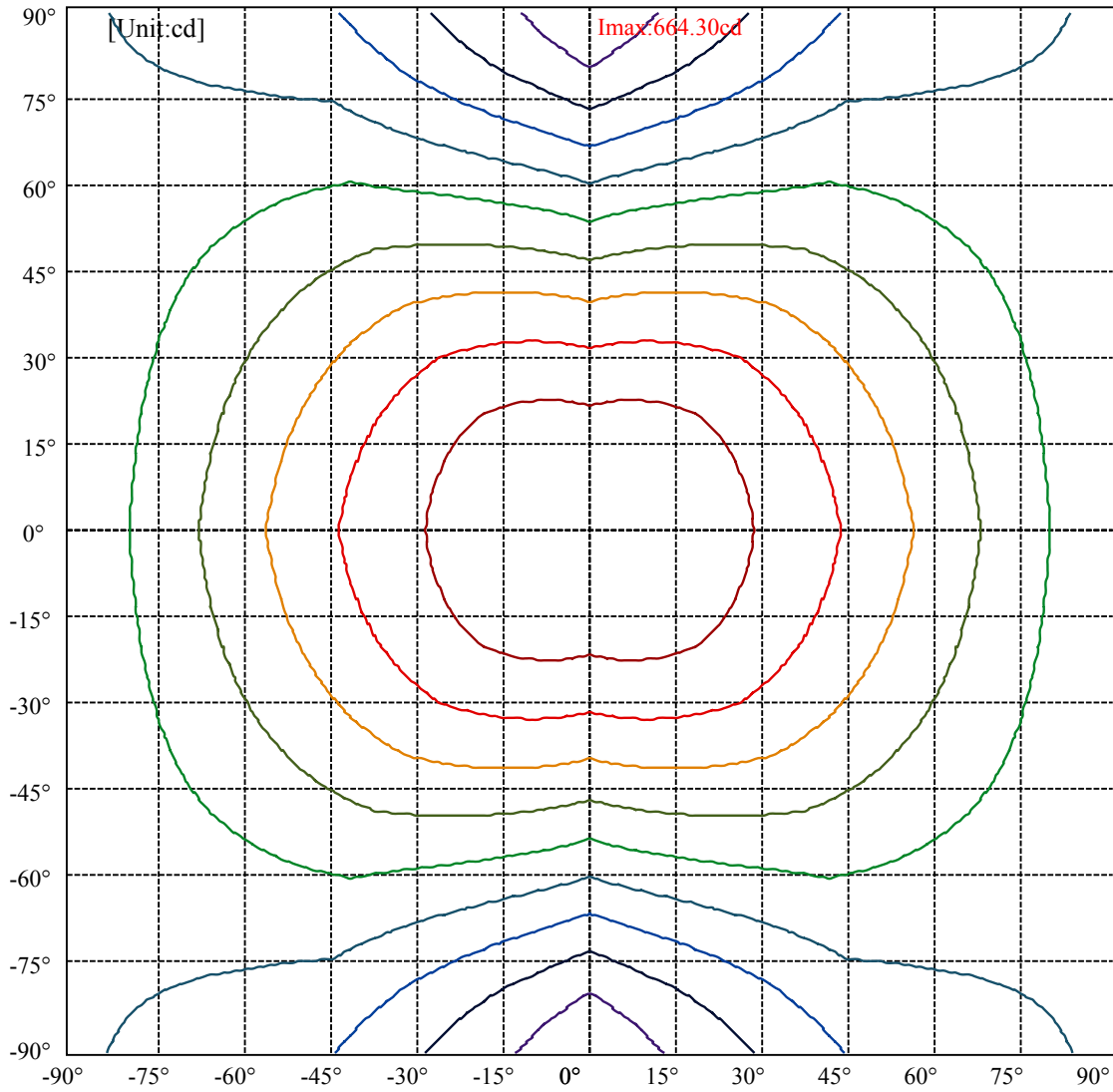
Beam Angle(50%Imax):C0/180Left:80.4 Right:80.4

:C90/270Left:53.3 Right:53.3

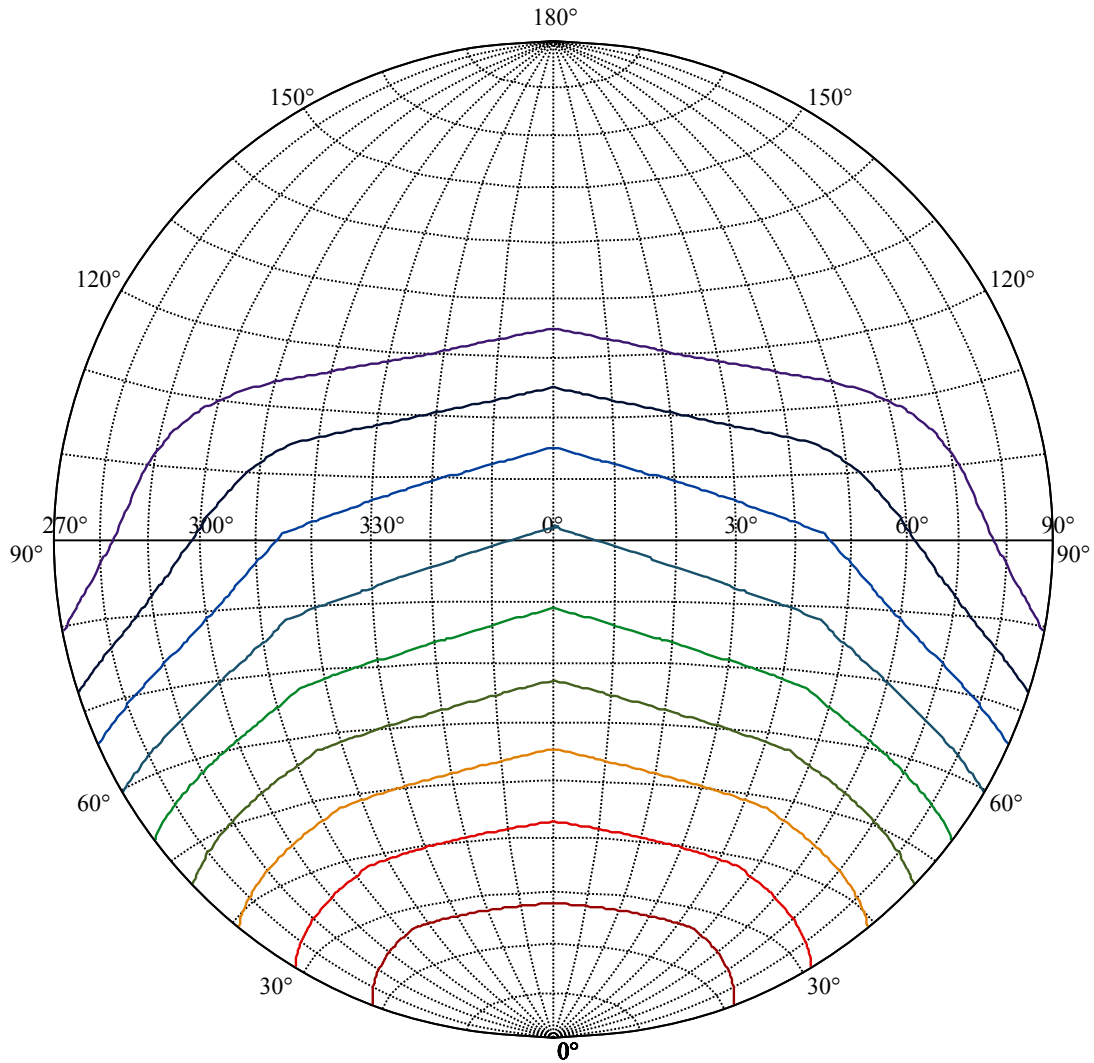


Max , Ave

Beam angle of C45 plane 135.07



(10%Imax) 66.3269	—
(20%Imax) 132.654	—
(30%Imax) 198.981	—
(40%Imax) 265.308	—
(50%Imax) 331.635	—
(60%Imax) 397.962	—
(70%Imax) 464.288	—
(80%Imax) 530.615	—
(90%Imax) 596.942	—



House

[Unit:cd]

Road

**I<sub>max</sub>:664.30**

(10%I<sub>max</sub>) 66.4298

(20%I<sub>max</sub>) 132.86

(30%I<sub>max</sub>) 199.289

(40%I<sub>max</sub>) 265.719

(50%I<sub>max</sub>) 332.149

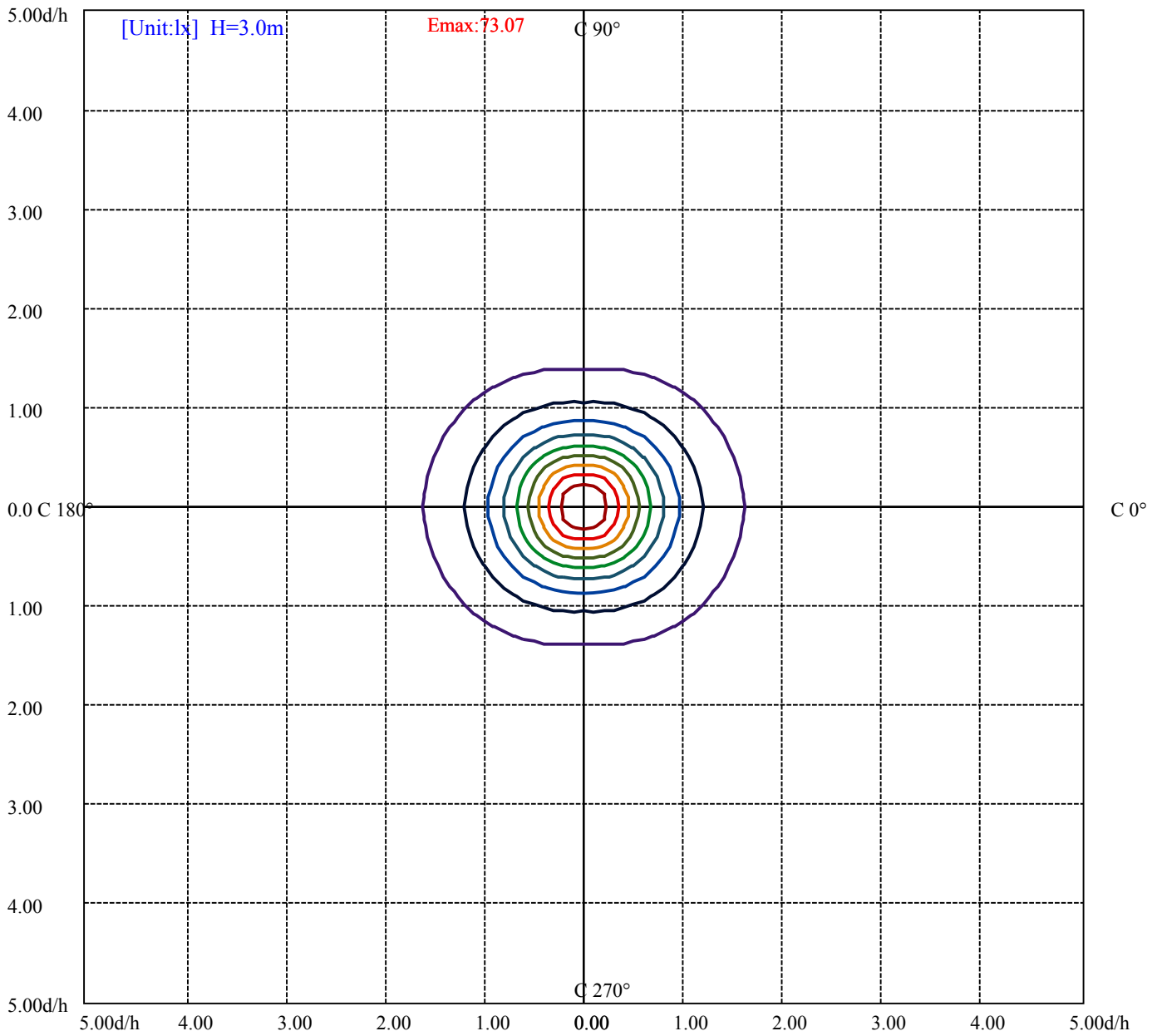
(60%I<sub>max</sub>) 398.579

(70%I<sub>max</sub>) 465.009

(80%I<sub>max</sub>) 531.438

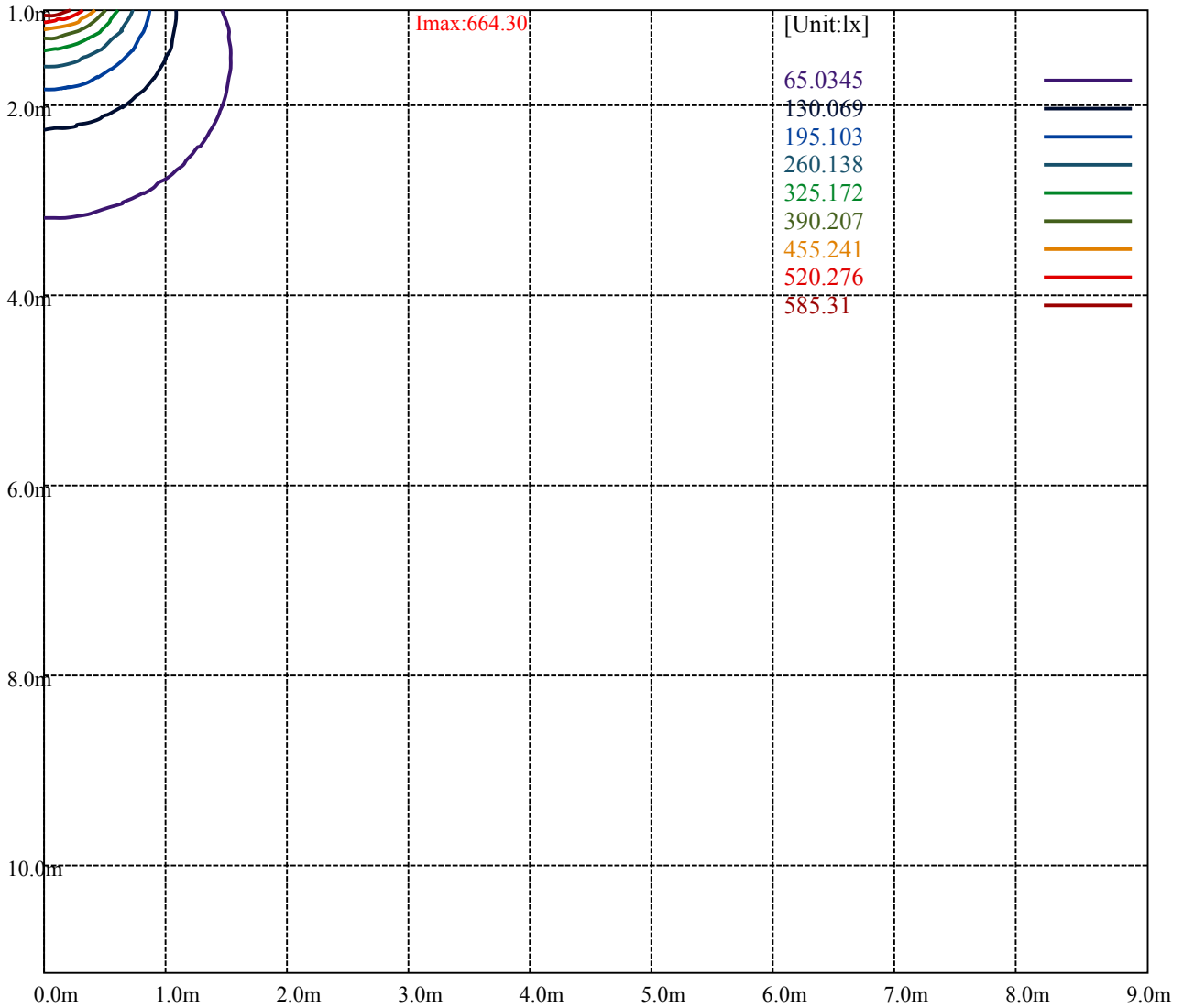
(90%I<sub>max</sub>) 597.868





(10%Emax) 7.306656	—
(20%Emax) 14.61333	—
(30%Emax) 21.92	—
(40%Emax) 29.22667	—
(50%Emax) 36.53333	—
(60%Emax) 43.84	—
(70%Emax) 51.14667	—
(80%Emax) 58.45333	—
(90%Emax) 65.75989	—





Luminance Table

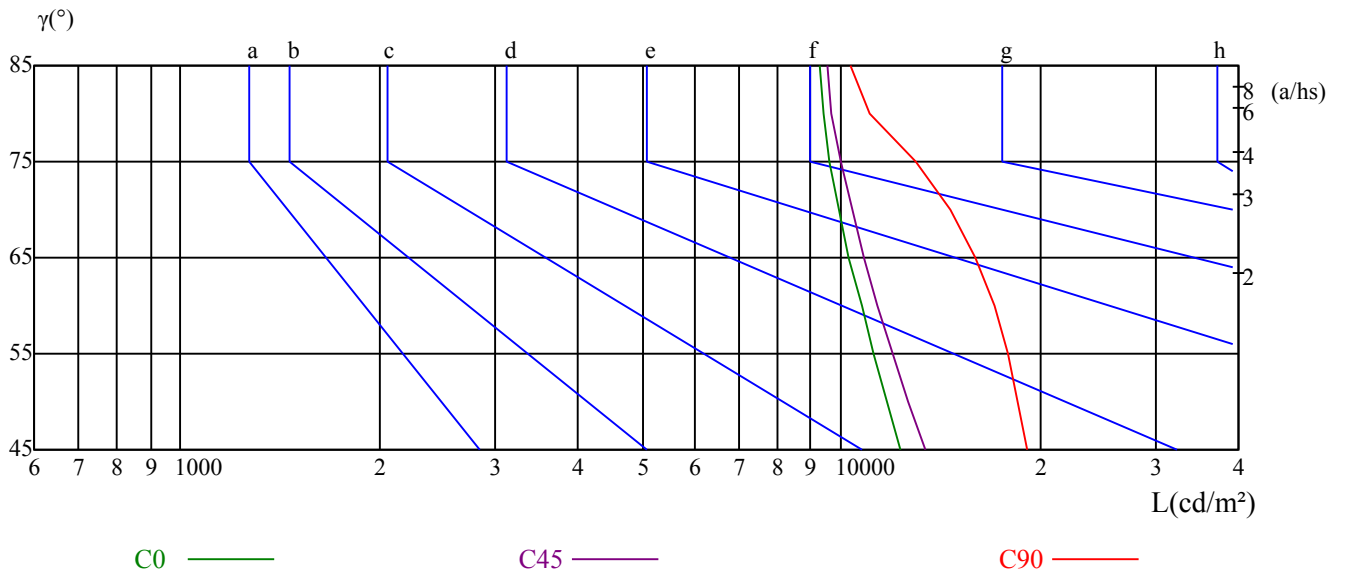
$\gamma$	45	50	55	60	65	70	75	80	85
C0	12281	11722	11196	10727	10295	9926	9630	9410	9263
C45	13396	12679	11993	11379	10829	10390	9984	9660	9517
C90	19146	18518	17848	17036	15932	14600	12995	11057	10342

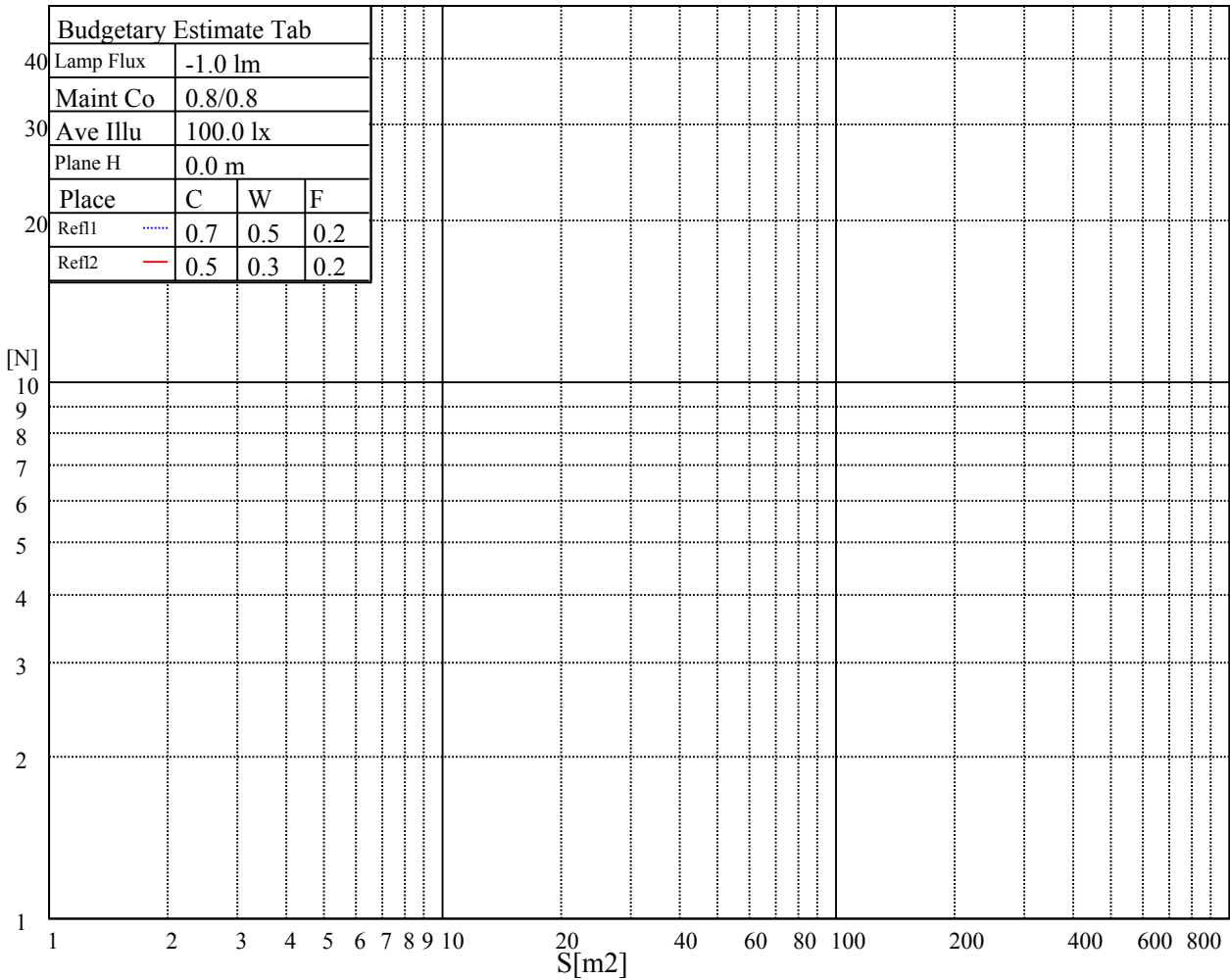
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
32373	16388	27469	45568	13642	36683	115136	11918	87463

Glare Table

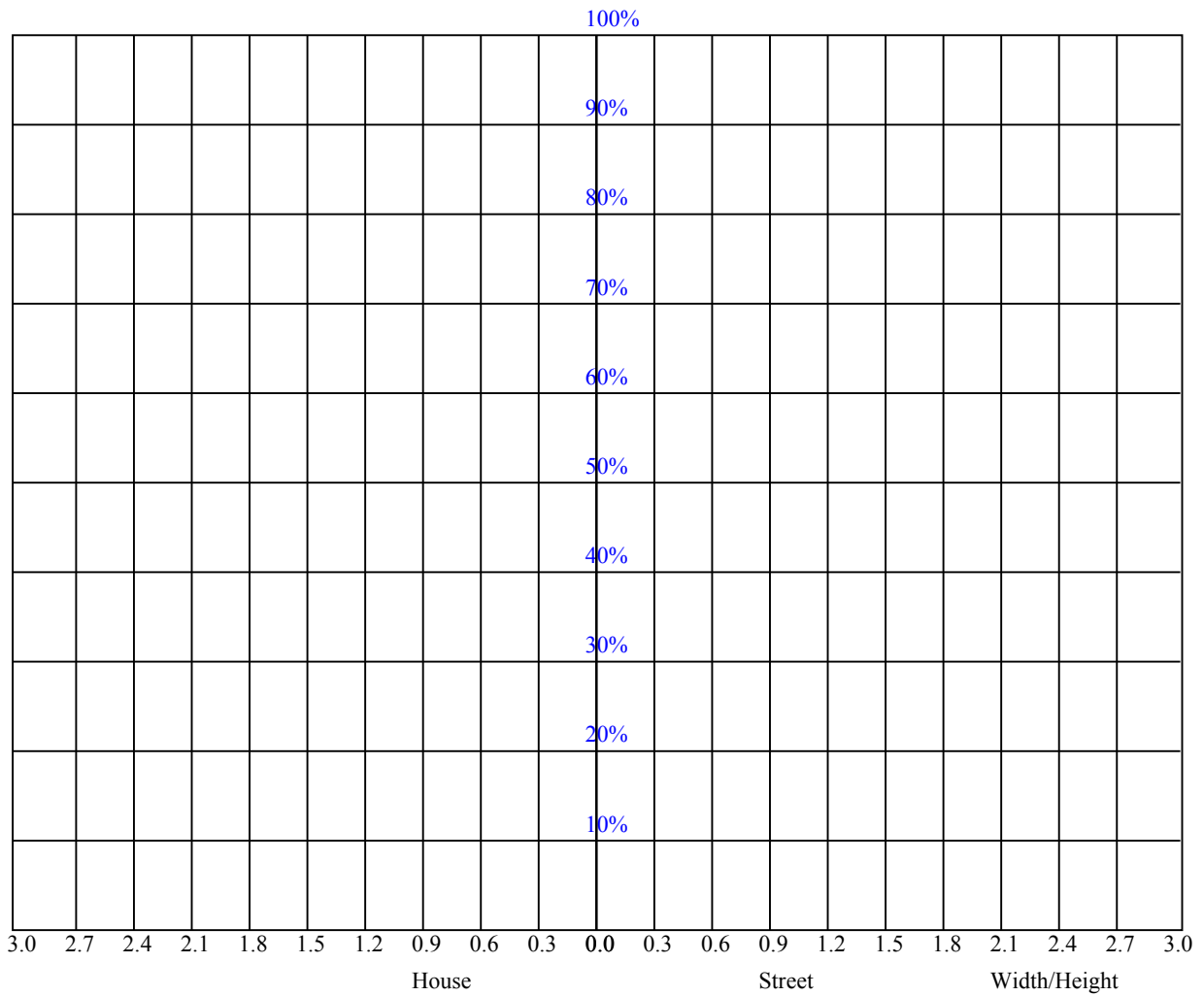
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

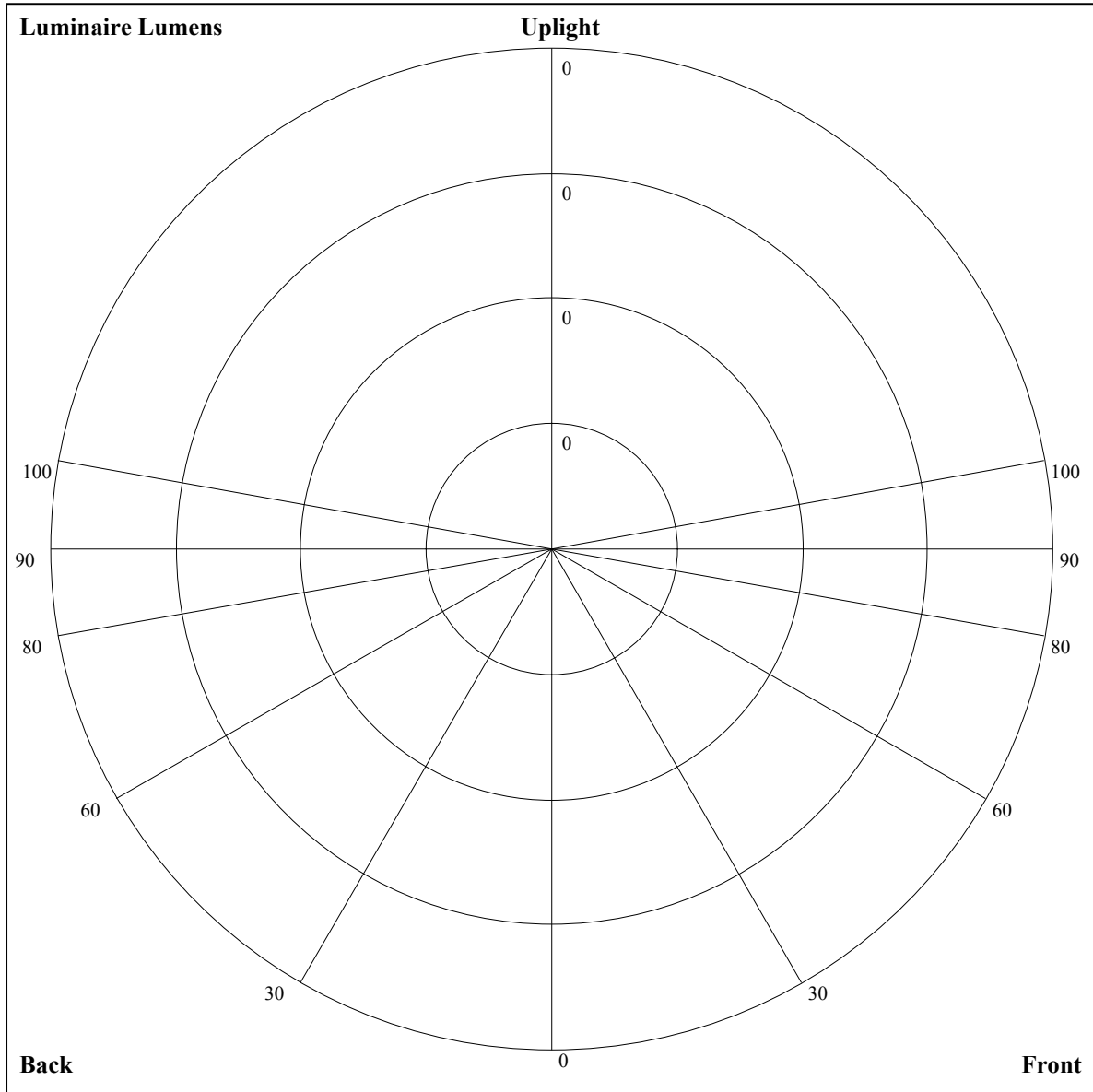
Luminance Limiting Curve





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





Luminaire Lumens:

FL=0,FM=0,FH=0,FVH=0

BL=0,BM=0,BH=0,BVH=0

UL=0,UH=0

BUG Rating:B0-U0-G0

## Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	650.34	648.35	643.39	634.65	622.66	608.30	590.68	569.66	546.42
45.0	657.60	664.30	656.34	644.53	627.69	606.71	581.62	553.01	521.59
90.0	660.26	656.19	645.39	628.29	605.71	575.44	540.87	500.97	457.52
135.0	657.60	664.30	656.34	644.53	627.69	606.71	581.62	553.01	521.59
180.0	650.34	648.35	643.39	634.65	622.66	608.30	590.68	569.66	546.42
225.0	657.60	664.30	656.34	644.53	627.69	606.71	581.62	553.01	521.59
270.0	660.26	656.19	645.39	628.29	605.71	575.44	540.87	500.97	457.52
315.0	657.60	664.30	656.34	644.53	627.69	606.71	581.62	553.01	521.59
360.0	650.34	648.35	643.39	634.65	622.66	608.30	590.68	569.66	546.42
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	521.03	495.42	467.81	439.61	410.45	381.65	353.82	327.02	301.04
45.0	487.80	453.27	417.55	382.50	348.27	316.48	284.83	254.82	228.69
90.0	411.55	362.77	312.96	261.44	207.77	155.29	105.92	61.96	31.16
135.0	487.80	453.27	417.55	382.50	348.27	316.48	284.83	254.82	228.69
180.0	521.03	495.42	467.81	439.61	410.45	381.65	353.82	327.02	301.04
225.0	487.80	453.27	417.55	382.50	348.27	316.48	284.83	254.82	228.69
270.0	411.55	362.77	312.96	261.44	207.77	155.29	105.92	61.96	31.16
315.0	487.80	453.27	417.55	382.50	348.27	316.48	284.83	254.82	228.69
360.0	521.03	495.42	467.81	439.61	410.45	381.65	353.82	327.02	301.04
C/ $\gamma$ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	276.84	252.49	227.91	199.78	167.80	132.72	97.78	65.88	41.38
45.0	204.19	180.91	156.89	129.83	97.74	65.40	35.49	16.99	8.33
90.0	11.18	3.63	1.78	1.55	1.55	1.48	1.70	1.55	1.78
135.0	204.19	180.91	156.89	129.83	97.74	65.40	35.49	16.99	8.33
180.0	276.84	252.49	227.91	199.78	167.80	132.72	97.78	65.88	41.38
225.0	204.19	180.91	156.89	129.83	97.74	65.40	35.49	16.99	8.33
270.0	11.18	3.63	1.78	1.55	1.55	1.48	1.70	1.55	1.78
315.0	204.19	180.91	156.89	129.83	97.74	65.40	35.49	16.99	8.33
360.0	276.84	252.49	227.91	199.78	167.80	132.72	97.78	65.88	41.38
C/ $\gamma$ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	25.61	11.69	2.44	1.78	1.70	1.85	1.78	1.92	1.78
45.0	2.81	1.81	1.81	1.78	1.85	1.78	1.74	1.74	1.78
90.0	1.63	1.78	1.48	1.78	1.92	1.78	1.78	2.00	1.70
135.0	2.81	1.81	1.81	1.78	1.85	1.78	1.74	1.74	1.78
180.0	25.61	11.69	2.44	1.78	1.70	1.85	1.78	1.92	1.78
225.0	2.81	1.81	1.81	1.78	1.85	1.78	1.74	1.74	1.78
270.0	1.63	1.78	1.48	1.78	1.92	1.78	1.78	2.00	1.70
315.0	2.81	1.81	1.81	1.78	1.85	1.78	1.74	1.74	1.78
360.0	25.61	11.69	2.44	1.78	1.70	1.85	1.78	1.92	1.78
C/ $\gamma$ (°)	180.0								
0.0	1.48								
45.0	2.00								
90.0	1.92								
135.0	2.00								
180.0	1.48								
225.0	2.00								
270.0	1.92								
315.0	2.00								
360.0	1.48								