
LumCAT: Altona LN3

Luminaire: 24 W 4000 K

Report No:

Voltage(V): 230.0600

Test No: CH/BG6-1912129-01

Current(A): 0.1960

LampCAT: 24W-4000K

Power(W): 24.1200

Lamp flux(lm)

PF: 0.5357

Number of Lamps: 1

Ballast type:

Length(mm): 380

Width(mm): 380

Phm Type: C

Height(mm): 70

Photometric Results

Lumens(lm): 1759.05

Lumens(lm)/Power(W): 72.93

Central intensity(cd): 442.481

Maximum intensity(cd): 442.481

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=121.1

[C90/270]Total=120.9

Field angle(10%Imax): [C0/180]Total=220.7

[C90/270]Total=218.4

Maximum s/h(1/2): C0_180=1.28 C90_270=1.29

Maximum s/h(1/4): C0_180=1.41 C90_270=1.41

Up flux rate of LUM(%): 15.77%

Down flux rate of LUM(%): 84.23%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 58.723%

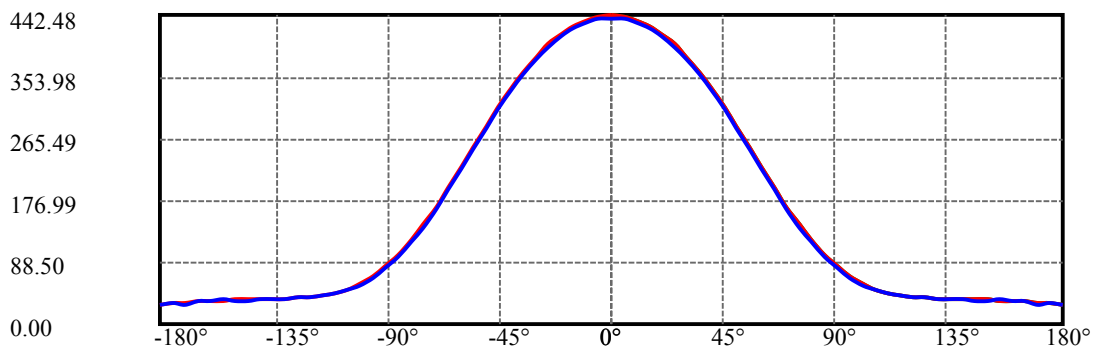
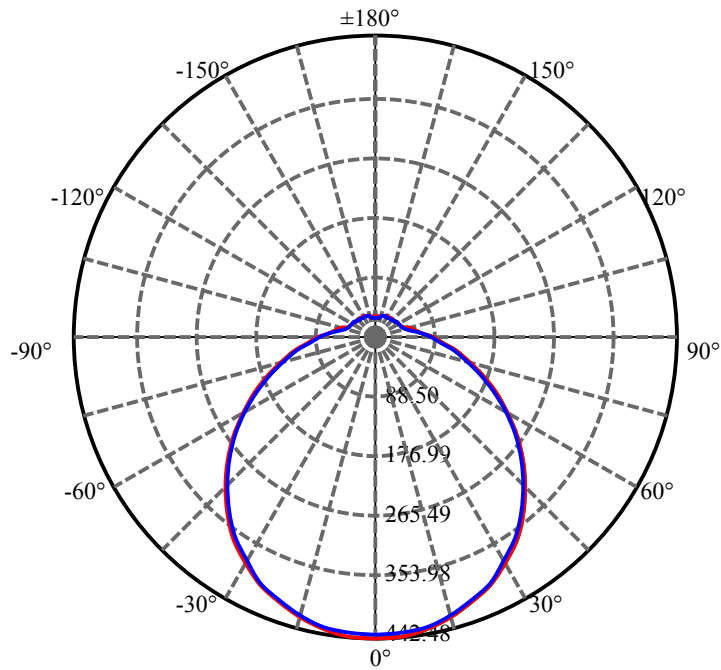
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	439.298	.000	.000	.000%	.000%
5.0	437.372	10.480	10.480	.596%	.596%
10.0	432.229	31.108	41.589	1.768%	2.364%
15.0	423.804	50.779	92.368	2.887%	5.251%
20.0	412.363	68.912	161.280	3.918%	9.169%
25.0	397.422	84.931	246.211	4.828%	13.997%
30.0	379.532	98.324	344.536	5.590%	19.586%
35.0	358.695	108.709	453.245	6.180%	25.766%
40.0	335.177	115.767	569.012	6.581%	32.348%
45.0	309.130	119.299	688.311	6.782%	39.130%
50.0	281.106	119.266	807.576	6.780%	45.910%
55.0	251.693	115.848	923.425	6.586%	52.496%
60.0	222.245	109.549	1032.974	6.228%	58.723%
65.0	193.083	100.967	1133.941	5.740%	64.463%
70.0	165.712	90.849	1224.790	5.165%	69.628%
75.0	140.302	79.987	1304.778	4.547%	74.175%
80.0	117.856	69.076	1373.854	3.927%	78.102%
85.0	97.990	58.651	1432.504	3.334%	81.436%
90.0	81.357	49.107	1481.611	2.792%	84.228%
95.0	67.337	40.714	1522.324	2.315%	86.542%
100.0	56.734	33.713	1556.037	1.917%	88.459%
105.0	48.627	28.192	1584.229	1.603%	90.061%
110.0	43.417	24.059	1608.288	1.368%	91.429%
115.0	40.235	21.181	1629.469	1.204%	92.633%
120.0	38.493	19.139	1648.608	1.088%	93.721%
125.0	37.488	17.563	1666.170	.998%	94.720%
130.0	36.583	16.105	1682.276	.916%	95.635%
135.0	35.695	14.605	1696.881	.830%	96.466%
140.0	34.958	13.082	1709.963	.744%	97.209%
145.0	34.338	11.562	1721.524	.657%	97.866%
150.0	34.238	10.098	1731.623	.574%	98.441%
155.0	34.238	8.666	1740.288	.493%	98.933%
160.0	33.199	7.073	1747.361	.402%	99.335%
165.0	31.692	5.348	1752.709	.304%	99.639%
170.0	28.694	3.582	1756.291	.204%	99.843%
175.0	29.364	2.077	1758.368	.118%	99.961%
180.0	28.007	.686	1759.054	.039%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	344.54	19.59%
0-40	569.01	32.35%
0-60	1032.97	58.72%
0-90	1481.61	84.23%
0-120	1648.61	93.72%
0-180	1759.05	100.00%
60-90	558.19	31.73%
90-120	216.10	12.29%
90-130	249.77	14.20%
90-150	299.12	17.00%
90-180	325.86	18.52%
0-82.85	1407.24	80.00%

ZONAL LUMEN SUMMARY

0-10	41.59
10-20	119.69
20-30	183.26
30-40	224.48
40-50	238.56
50-60	225.40
60-70	191.82
70-80	149.06
80-90	107.76
90-100	74.43
100-110	52.25
110-120	40.32
120-130	33.67
130-140	27.69
140-150	21.66
150-160	15.74
160-170	8.93
170-180	2.08



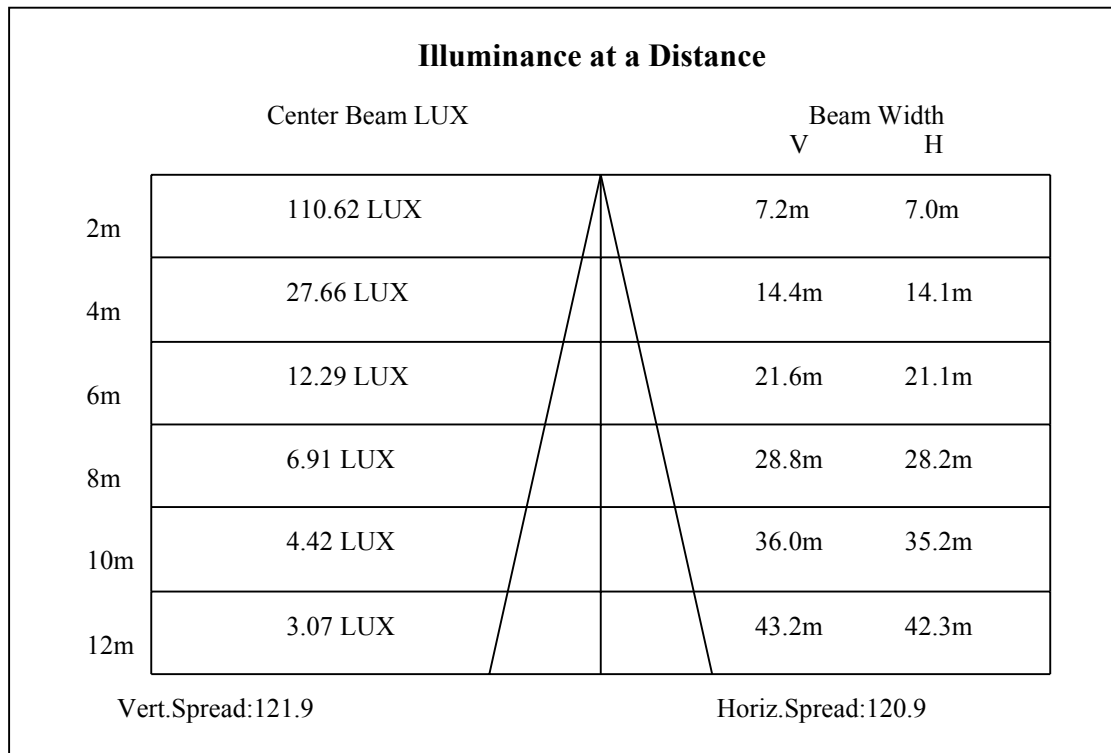
C0(Max): —————

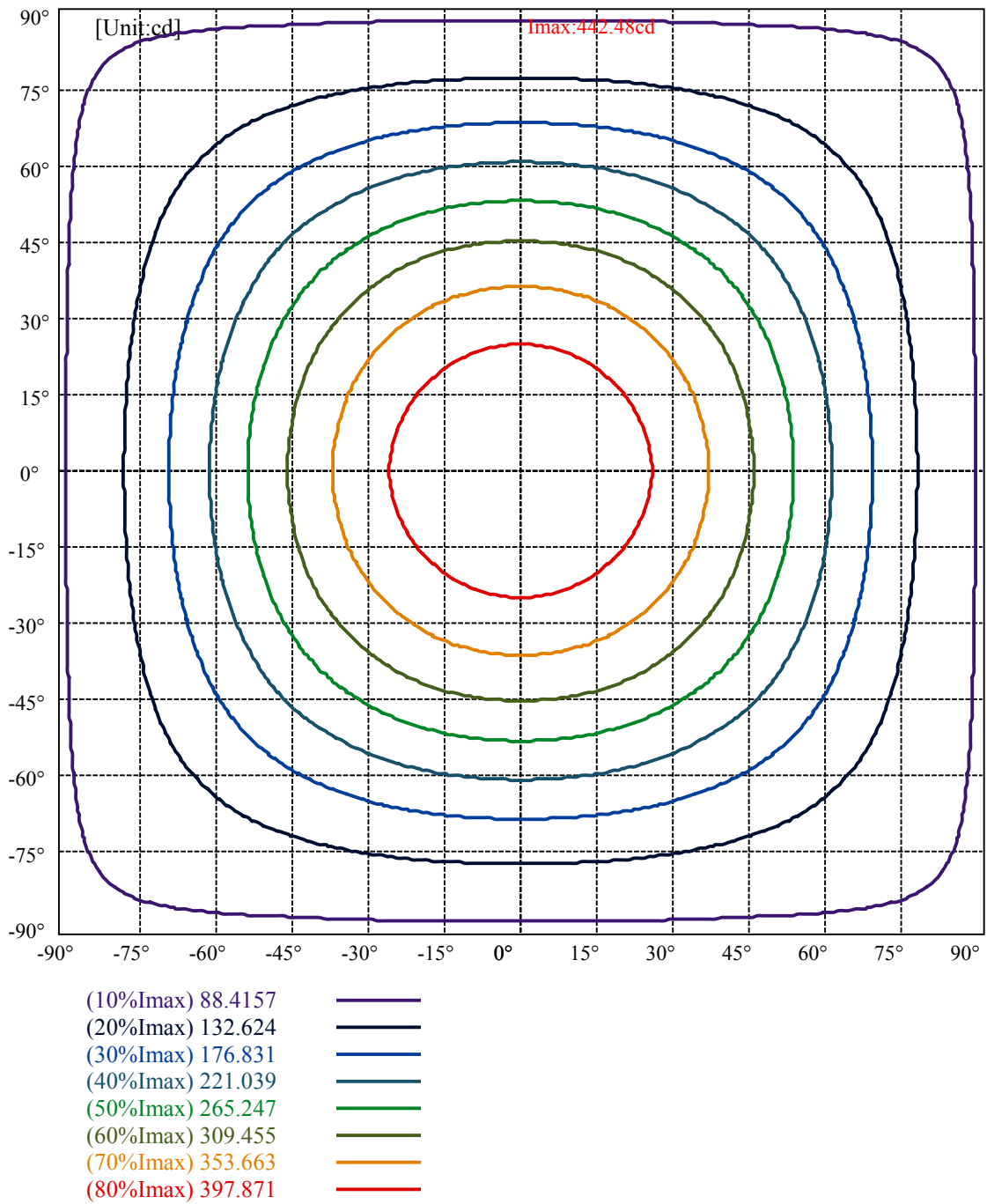
C0/C180: —————

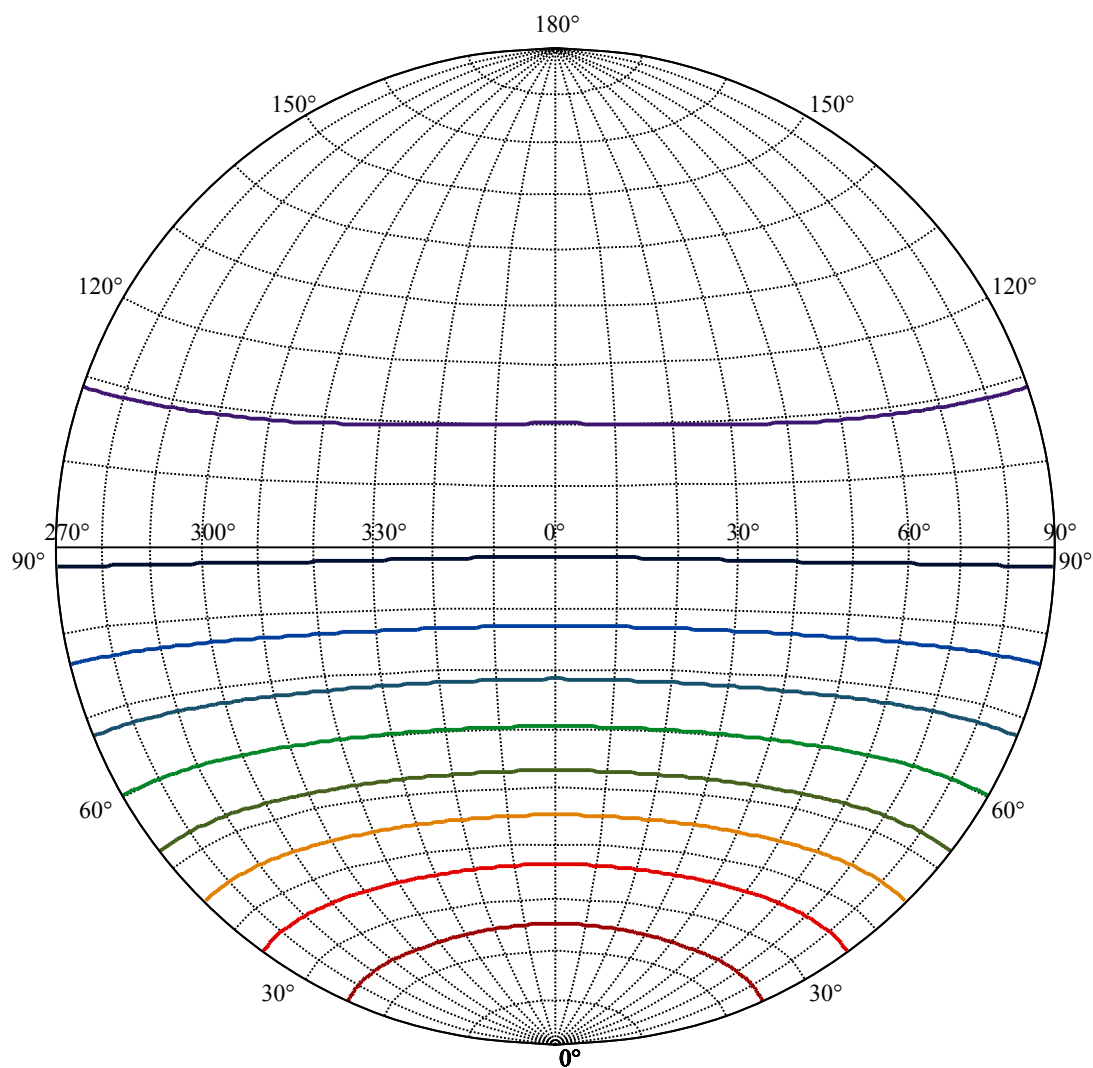
C90/C270: —————

Field angle(10%Imax):C0/180Left:110.4 Right:110.4
:C90/270Left:109.2 Right:109.2

Beam Angle(50%Imax):C0/180Left:60.6 Right:60.6
:C90/270Left:60.4 Right:60.4







House

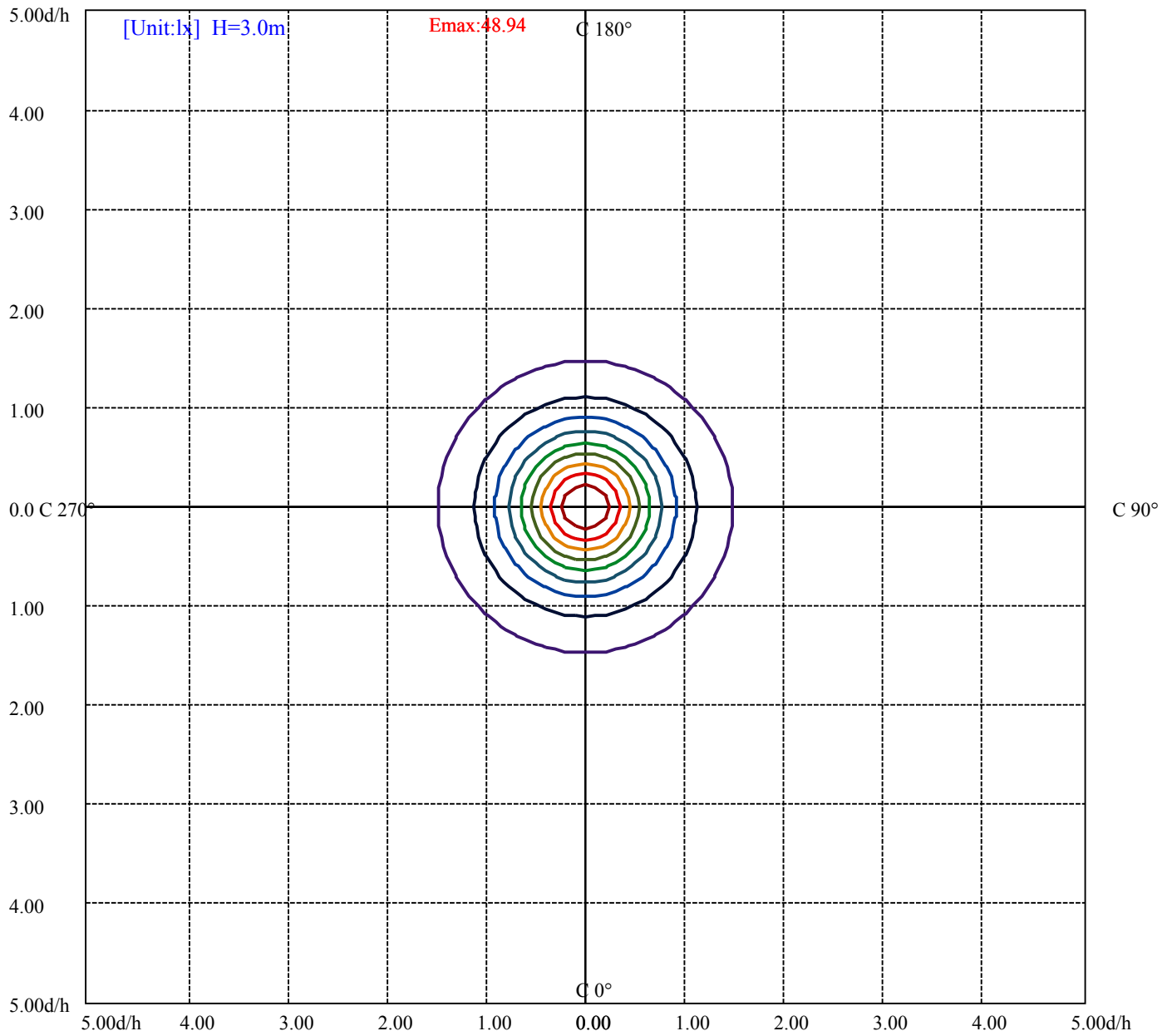
[Unit:cd]

Road

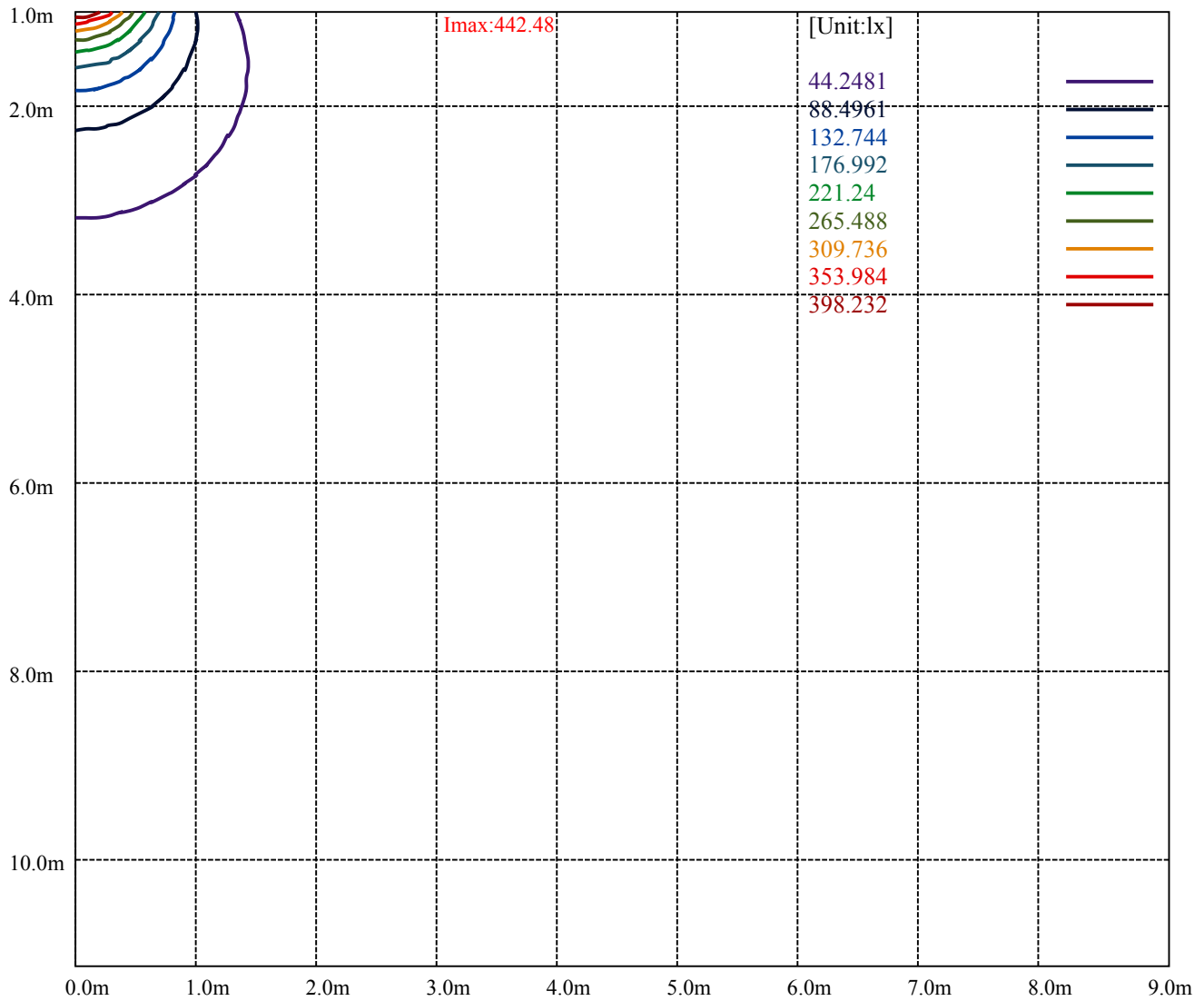
Imax:442.48

- (10%Imax) 44.2481
- (20%Imax) 88.4961
- (30%Imax) 132.744
- (40%Imax) 176.992
- (50%Imax) 221.24
- (60%Imax) 265.488
- (70%Imax) 309.736
- (80%Imax) 353.984
- (90%Imax) 398.232





- (10%Emax) 4.894111 —
- (20%Emax) 9.788222 —
- (30%Emax) 14.68233 —
- (40%Emax) 19.57644 —
- (50%Emax) 24.47056 —
- (60%Emax) 29.36467 —
- (70%Emax) 34.25878 —
- (80%Emax) 39.15289 —
- (90%Emax) 44.047 —



Luminance Table

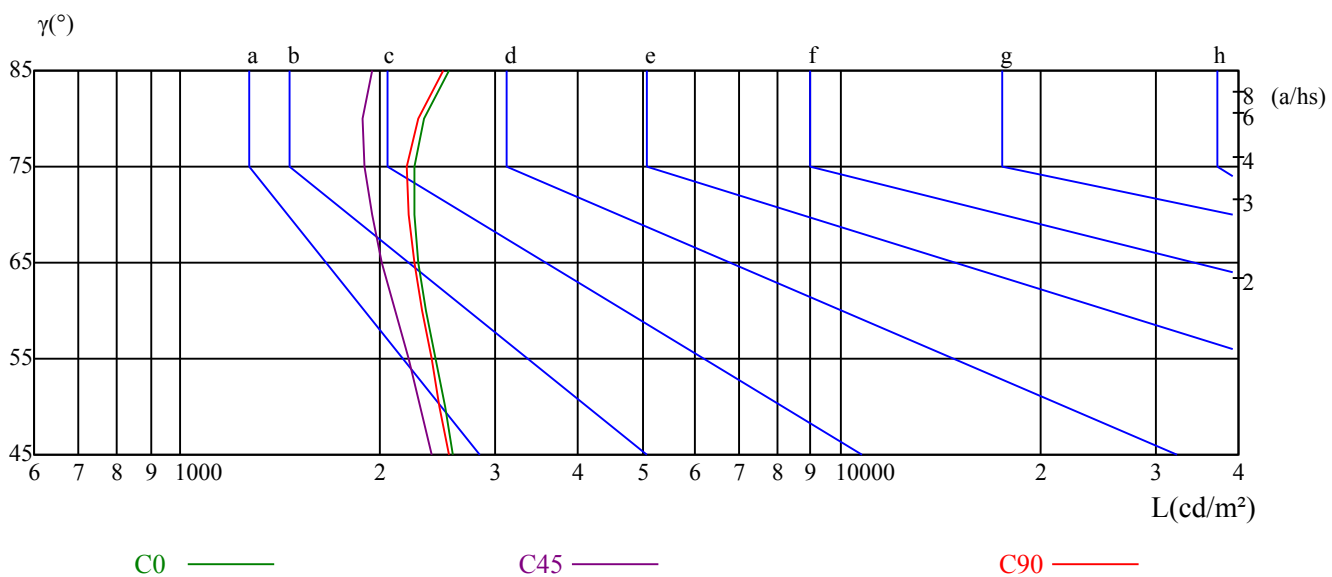
γ	45	50	55	60	65	70	75	80	85
C0	2579	2507	2428	2358	2297	2266	2263	2338	2551
C45	2395	2306	2208	2113	2023	1947	1898	1885	1945
C90	2547	2471	2399	2327	2254	2209	2199	2290	2494

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
3205	3144	3153	3819	3711	3743	7922	7746	7738

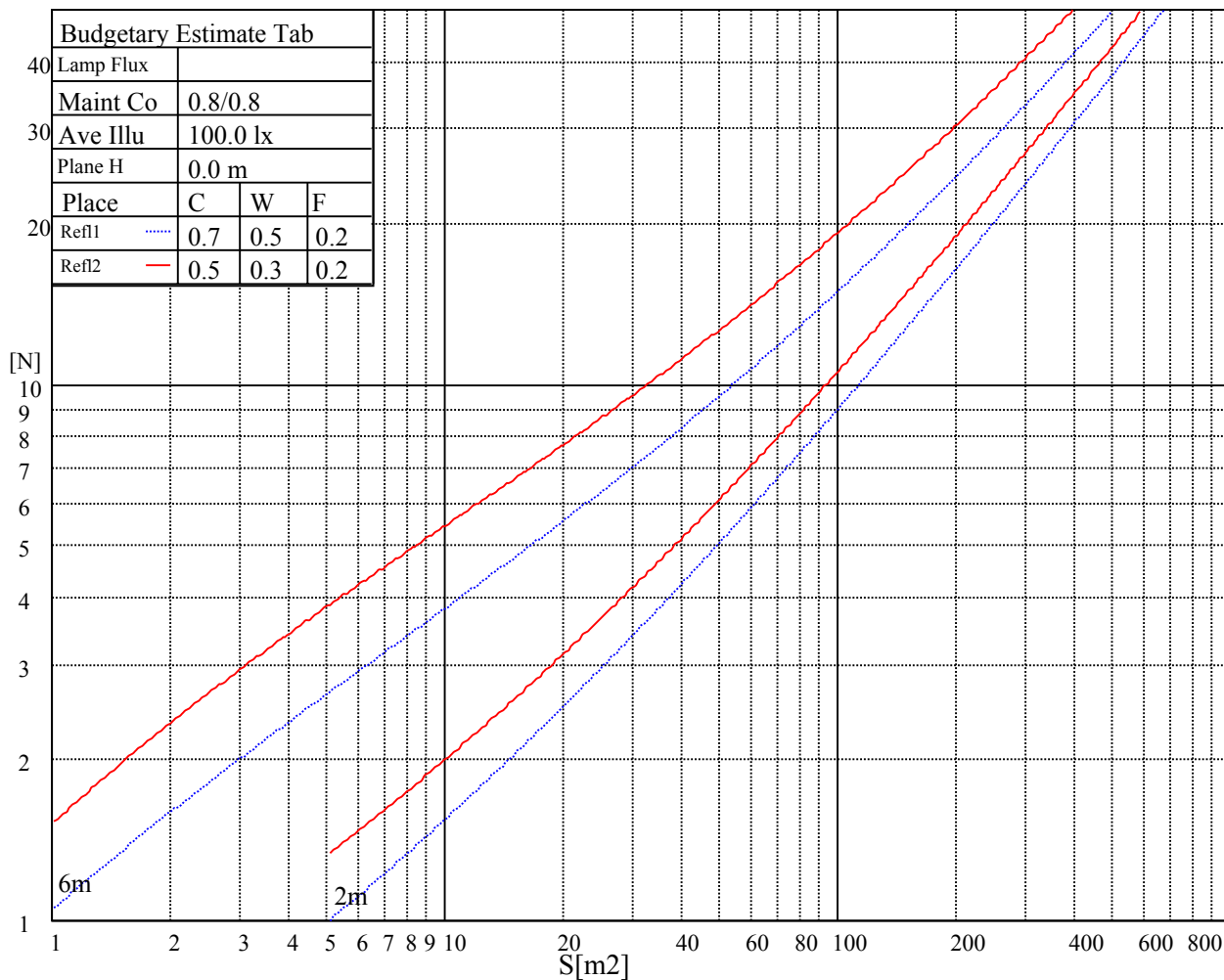
Glare Table

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

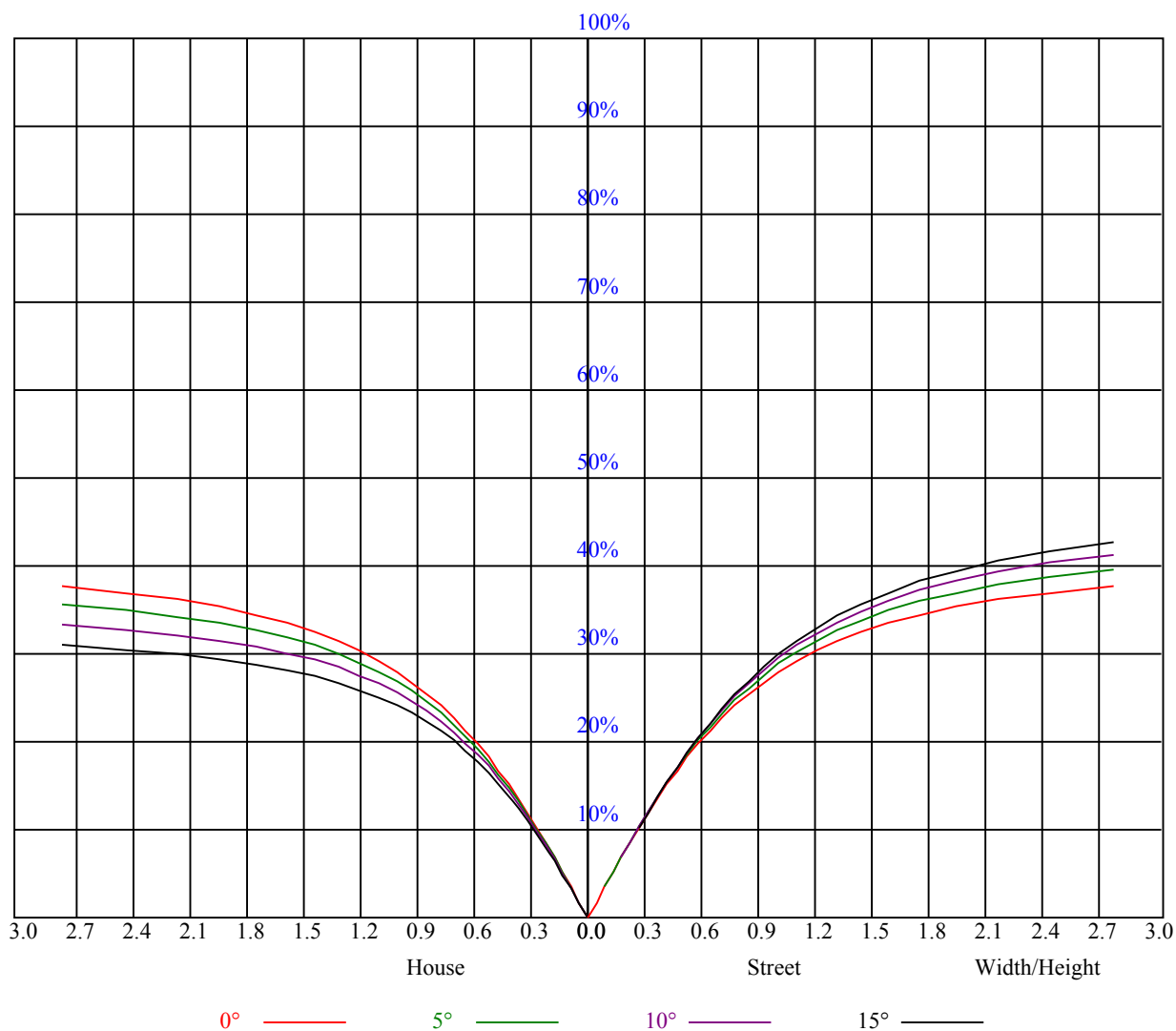
Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	12.04	13.42	12.63	14.02	14.71	12.10	13.47	12.69	14.08	14.76
	3H	13.97	15.22	14.57	15.83	16.55	14.05	15.30	14.65	15.92	16.64
	4H	14.86	16.05	15.48	16.68	17.41	14.97	16.16	15.59	16.78	17.51
	6H	15.75	16.86	16.39	17.50	18.25	15.87	16.97	16.50	17.61	18.36
	8H	16.18	17.24	16.82	17.90	18.62	16.29	17.36	16.94	18.02	18.74
	12H	16.85	17.87	17.50	18.52	19.30	16.97	17.99	17.62	18.64	19.42
4H	2H	12.59	13.79	13.22	14.41	15.14	12.64	13.83	13.26	14.45	15.18
	3H	14.78	15.80	15.41	16.46	17.21	14.85	15.87	15.49	16.53	17.28
	4H	15.84	16.78	16.49	17.45	18.23	15.93	16.86	16.58	17.53	18.31
	6H	16.72	17.59	17.44	18.29	19.08	16.82	17.69	17.54	18.39	19.18
	8H	17.31	18.09	17.99	18.78	19.58	17.41	18.19	18.09	18.88	19.69
	12H	18.02	18.72	18.71	19.44	20.25	18.13	18.83	18.83	19.55	20.36
8H	4H	16.24	17.01	16.91	17.71	18.51	16.31	17.09	16.99	17.79	18.59
	6H	17.38	19.25	18.09	18.78	19.58	17.47	19.34	18.18	18.86	19.67
	8H	18.06	18.66	18.78	19.39	20.21	18.15	18.75	18.87	19.48	20.30
	12H	18.98	19.51	19.70	21.23	21.11	19.07	19.60	19.79	21.32	21.21
12H	4H	16.31	17.02	17.01	17.74	18.54	16.38	17.09	17.08	17.81	18.62
	6H	18.47	18.13	18.26	18.84	19.70	18.55	18.21	18.34	18.92	19.78
	8H	18.29	18.82	19.01	19.55	20.42	18.37	18.90	19.09	19.63	20.51
Variation with the observer position at spacings:											
S = 1.0H	0.2/-0.8					0.2/-0.8					
S = 1.5H	0.4/-0.7					0.4/-0.7					
S = 2.0H	0.3/-0.6					0.4/-0.6					
Standard tables:	BKBF					BKBF					
Uncorrected UGR	4.8					4.9					



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 _C =20 CU															
0	1.15	1.15	1.15	1.11	1.11	1.11	1.02	1.02	1.02	0.95	0.95	0.95	0.88	0.88	0.88	0.84
1	0.97	0.92	0.88	0.93	0.89	0.85	0.86	0.83	0.79	0.80	0.77	0.74	0.73	0.71	0.69	0.66
2	0.84	0.76	0.70	0.80	0.74	0.68	0.74	0.69	0.64	0.69	0.64	0.60	0.63	0.60	0.56	0.53
3	0.73	0.64	0.57	0.70	0.62	0.56	0.65	0.58	0.53	0.60	0.54	0.50	0.55	0.51	0.47	0.44
4	0.64	0.55	0.48	0.62	0.53	0.47	0.57	0.50	0.44	0.53	0.47	0.42	0.49	0.44	0.40	0.37
5	0.57	0.48	0.41	0.55	0.46	0.40	0.51	0.44	0.38	0.47	0.41	0.36	0.44	0.39	0.34	0.32
6	0.51	0.42	0.35	0.49	0.41	0.35	0.46	0.39	0.33	0.43	0.36	0.32	0.40	0.34	0.30	0.28
7	0.46	0.37	0.31	0.45	0.36	0.30	0.42	0.34	0.29	0.39	0.33	0.28	0.36	0.31	0.27	0.24
8	0.42	0.34	0.28	0.41	0.33	0.27	0.38	0.31	0.26	0.36	0.29	0.25	0.33	0.28	0.24	0.22
9	0.39	0.30	0.25	0.37	0.30	0.24	0.35	0.28	0.23	0.33	0.27	0.22	0.31	0.25	0.21	0.19
10	0.35	0.28	0.22	0.34	0.27	0.22	0.32	0.26	0.21	0.30	0.24	0.20	0.29	0.23	0.19	0.18



Intensity data(cd)

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C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	442.48	440.47	435.04	426.87	414.94	400.00	381.98	361.27	338.29
45.0	440.47	436.62	431.56	423.05	411.59	396.42	378.76	357.79	334.14
90.0	437.92	435.78	430.76	422.25	411.32	396.85	378.63	357.92	334.14
135.0	436.32	436.62	431.56	423.05	411.59	396.42	378.76	357.79	334.14
180.0	442.48	440.47	435.04	426.87	414.94	400.00	381.98	361.27	338.29
225.0	440.47	436.62	431.56	423.05	411.59	396.42	378.76	357.79	334.14
270.0	437.92	435.78	430.76	422.25	411.32	396.85	378.63	357.92	334.14
315.0	436.32	436.62	431.56	423.05	411.59	396.42	378.76	357.79	334.14
360.0	442.48	440.47	435.04	426.87	414.94	400.00	381.98	361.27	338.29

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	311.89	283.82	254.00	224.52	195.58	168.58	142.71	119.87	99.70
45.0	308.31	280.44	250.89	221.44	192.43	164.99	139.90	117.09	97.39
90.0	308.01	279.73	250.99	221.58	191.89	164.29	138.69	117.39	97.49
135.0	308.31	280.44	250.89	221.44	192.43	164.99	139.90	117.09	97.39
180.0	311.89	283.82	254.00	224.52	195.58	168.58	142.71	119.87	99.70
225.0	308.31	280.44	250.89	221.44	192.43	164.99	139.90	117.09	97.39
270.0	308.01	279.73	250.99	221.58	191.89	164.29	138.69	117.39	97.49
315.0	308.31	280.44	250.89	221.44	192.43	164.99	139.90	117.09	97.39
360.0	311.89	283.82	254.00	224.52	195.58	168.58	142.71	119.87	99.70

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	83.55	69.15	58.49	50.05	44.49	41.14	39.06	38.06	37.05
45.0	80.67	66.80	56.18	48.17	43.12	39.93	38.26	37.25	36.42
90.0	80.54	66.60	56.08	48.11	42.95	39.93	38.39	37.39	36.45
135.0	80.67	66.80	56.18	48.17	43.12	39.93	38.26	37.25	36.42
180.0	83.55	69.15	58.49	50.05	44.49	41.14	39.06	38.06	37.05
225.0	80.67	66.80	56.18	48.17	43.12	39.93	38.26	37.25	36.42
270.0	80.54	66.60	56.08	48.11	42.95	39.93	38.39	37.39	36.45
315.0	80.67	66.80	56.18	48.17	43.12	39.93	38.26	37.25	36.42
360.0	83.55	69.15	58.49	50.05	44.49	41.14	39.06	38.06	37.05

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	36.32	35.51	34.84	34.97	34.30	33.37	31.89	28.88	30.08
45.0	35.48	34.81	34.24	34.07	34.10	33.07	31.56	28.61	29.05
90.0	35.51	34.71	34.04	33.84	34.44	33.30	31.76	28.68	29.28
135.0	35.48	34.81	34.24	34.07	34.10	33.07	31.56	28.61	29.05
180.0	36.32	35.51	34.84	34.97	34.30	33.37	31.89	28.88	30.08
225.0	35.48	34.81	34.24	34.07	34.10	33.07	31.56	28.61	29.05
270.0	35.51	34.71	34.04	33.84	34.44	33.30	31.76	28.68	29.28
315.0	35.48	34.81	34.24	34.07	34.10	33.07	31.56	28.61	29.05
360.0	36.32	35.51	34.84	34.97	34.30	33.37	31.89	28.88	30.08

C/γ(°)	180.0
0.0	27.74
45.0	28.07
90.0	28.14
135.0	28.07
180.0	27.74
225.0	28.07
270.0	28.14
315.0	28.07
360.0	27.74