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Nata

Client:

LumCAT: 3-2016-A

Luminaire: 92.70.065.00+92.70.089.00

Report No: nt0100

Test No: NATA07

LampCAT: LUMINUS CXM-14-AC40

Lamp flux(lm): 1357.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 220.4000

Current(A): 0.0690

Power (W): 14.2700

PF: 0.9290

Ballast type: AC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 1250.04, Efficiency(%): 92.12% , Luminous Efficacy(lm/W): 87.60

Central intensity(cd): 8782.574, Maximum intensity(cd): 8782.574

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=16.6

[C90/270]Total=16.6

Field angle(10%Imax): [C0/180]Total=35.2

[C90/270]Total=35.2

Maximum s/h(1/2): C0_180=0.29 C90_270=0.29

Maximum s/h(1/4): C0_180=0.30 C90_270=0.30

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.12%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.686%

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/1/9
Humidity(%): 60.0%

Operator: GC20200102
Distance(m): 6.81

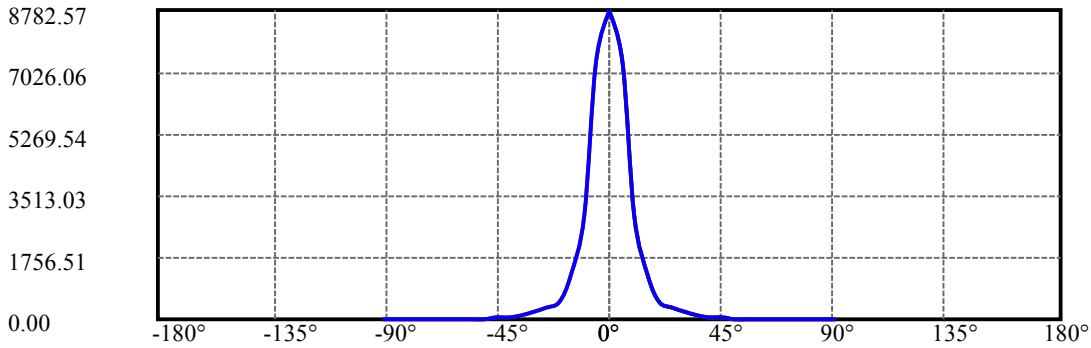
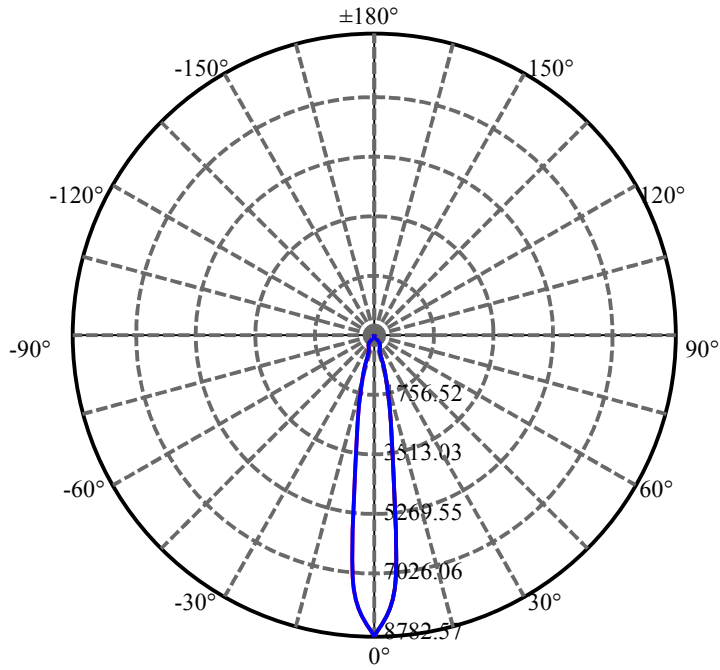
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8782.575	0.000	0	.000%	.000%
5.0	7256.242	191.739	191.739	14.130%	15.339%
10.0	2941.015	364.788	556.527	26.882%	44.521%
15.0	1276.643	250.189	806.716	18.437%	64.535%
20.0	507.664	147.052	953.768	10.837%	76.299%
25.0	333.176	88.189	1041.957	6.499%	83.354%
30.0	216.535	69.566	1111.523	5.126%	88.919%
35.0	131.675	51.276	1162.799	3.779%	93.021%
40.0	81.142	35.507	1198.306	2.617%	95.861%
45.0	48.364	23.979	1222.285	1.767%	97.780%
50.0	23.236	14.468	1236.753	1.066%	98.937%
55.0	8.695	6.943	1243.696	.512%	99.492%
60.0	1.792	2.424	1246.12	.179%	99.686%
65.0	1.288	0.749	1246.869	.055%	99.746%
70.0	1.206	0.632	1247.501	.047%	99.797%
75.0	1.172	0.622	1248.122	.046%	99.847%
80.0	1.172	0.627	1248.749	.046%	99.897%
85.0	1.183	0.640	1249.389	.047%	99.948%
90.0	1.195	0.651	1250.04	.048%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1111.52	81.91%	88.92%
0-40	1198.31	88.31%	95.86%
0-60	1246.12	91.83%	99.69%
0-90	1249.39	92.07%	99.95%
0-120	1249.39	92.07%	99.95%
0-180	1250.04	92.12%	100.00%
60-90	5.69	0.42%	0.46%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.62	1000.03	73.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	556.53
10-20	397.24
20-30	157.76
30-40	86.78
40-50	38.45
50-60	9.37
60-70	1.38
70-80	1.25
80-90	0.64
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



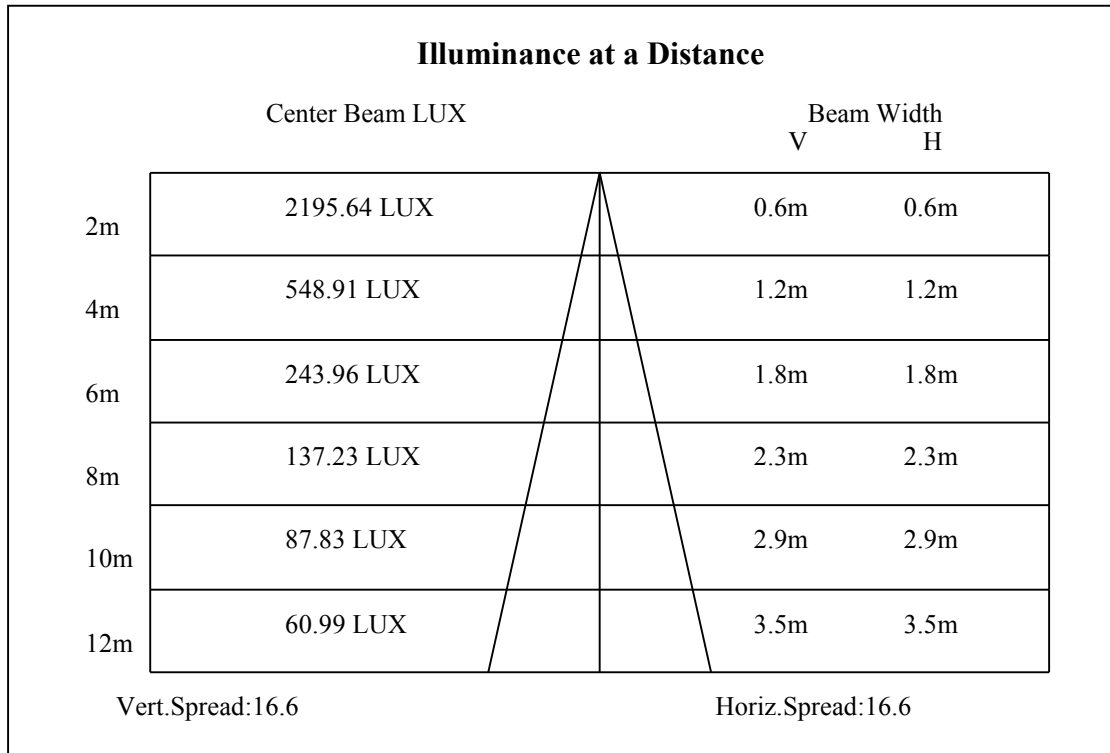
C0(Max): —————

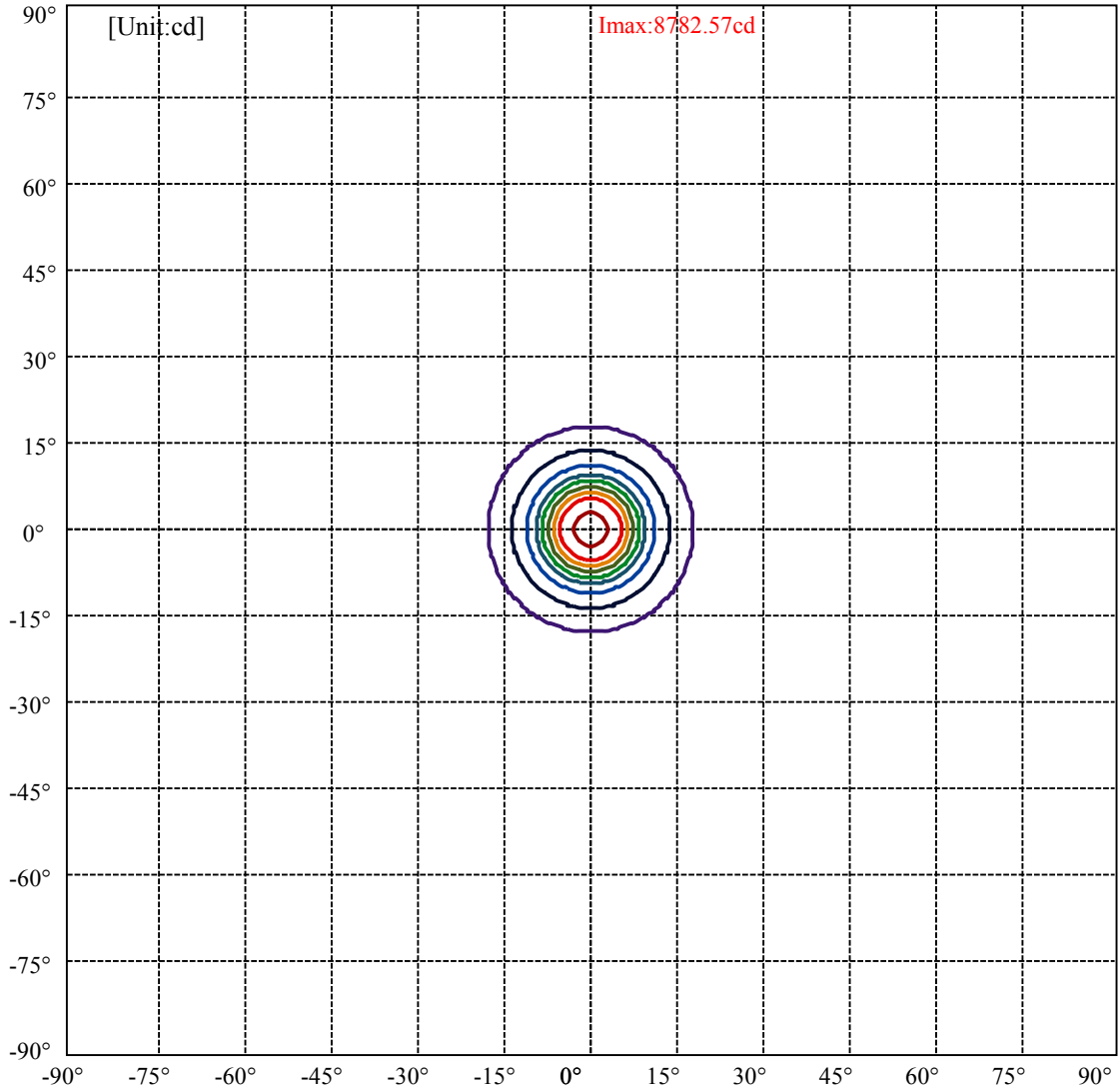
C0/C180: —————

C90/C270: —————

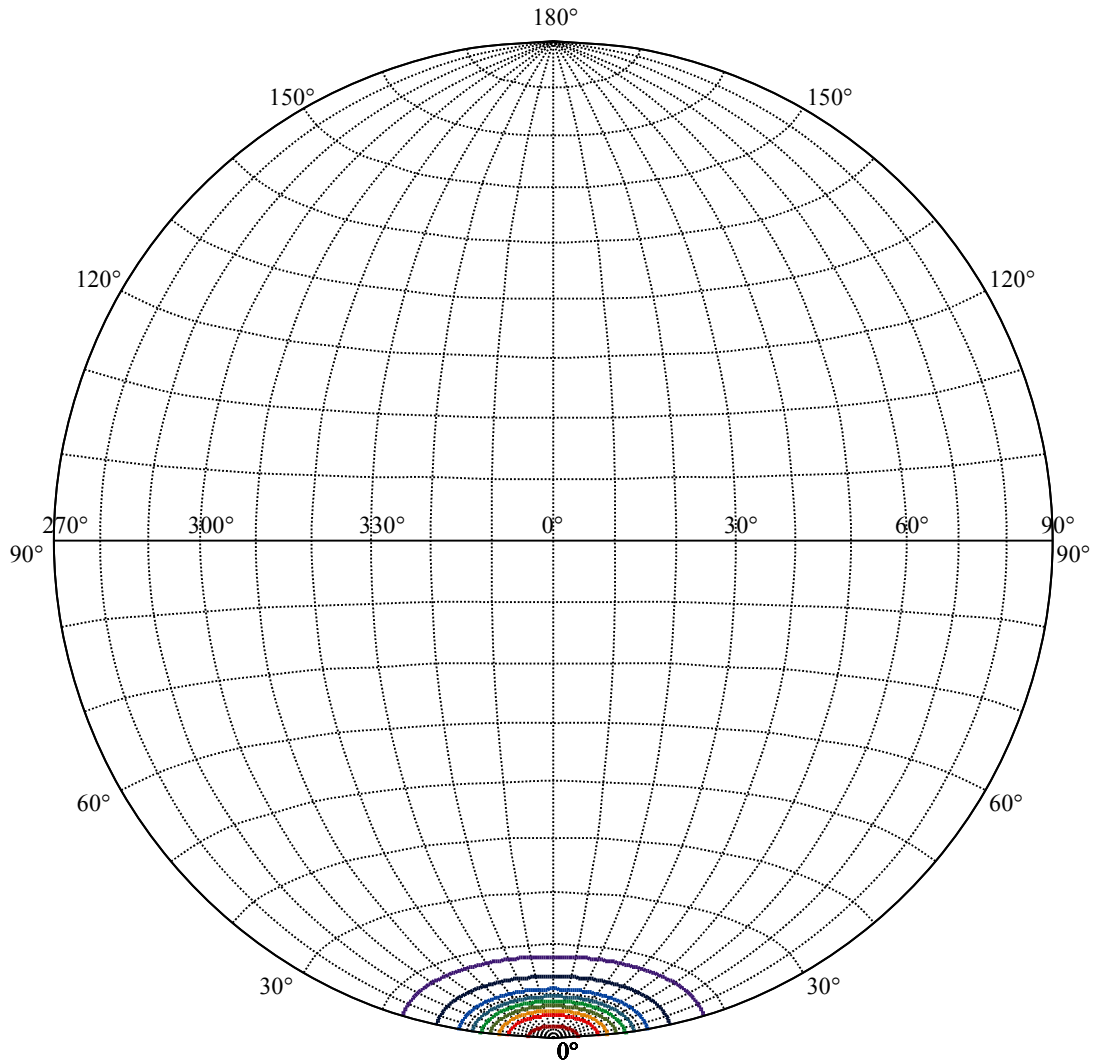
Field angle(10%Imax):C0/180Left:17.6 Right:17.6
:C90/270Left:17.6 Right:17.6

Beam Angle(50%Imax):C0/180Left:8.3 Right:8.3
:C90/270Left:8.3 Right:8.3





(10%Imax) 878.257	—
(20%Imax) 1756.51	—
(30%Imax) 2634.77	—
(40%Imax) 3513.03	—
(50%Imax) 4391.29	—
(60%Imax) 5269.54	—
(70%Imax) 6147.8	—
(80%Imax) 7026.06	—
(90%Imax) 7904.32	—



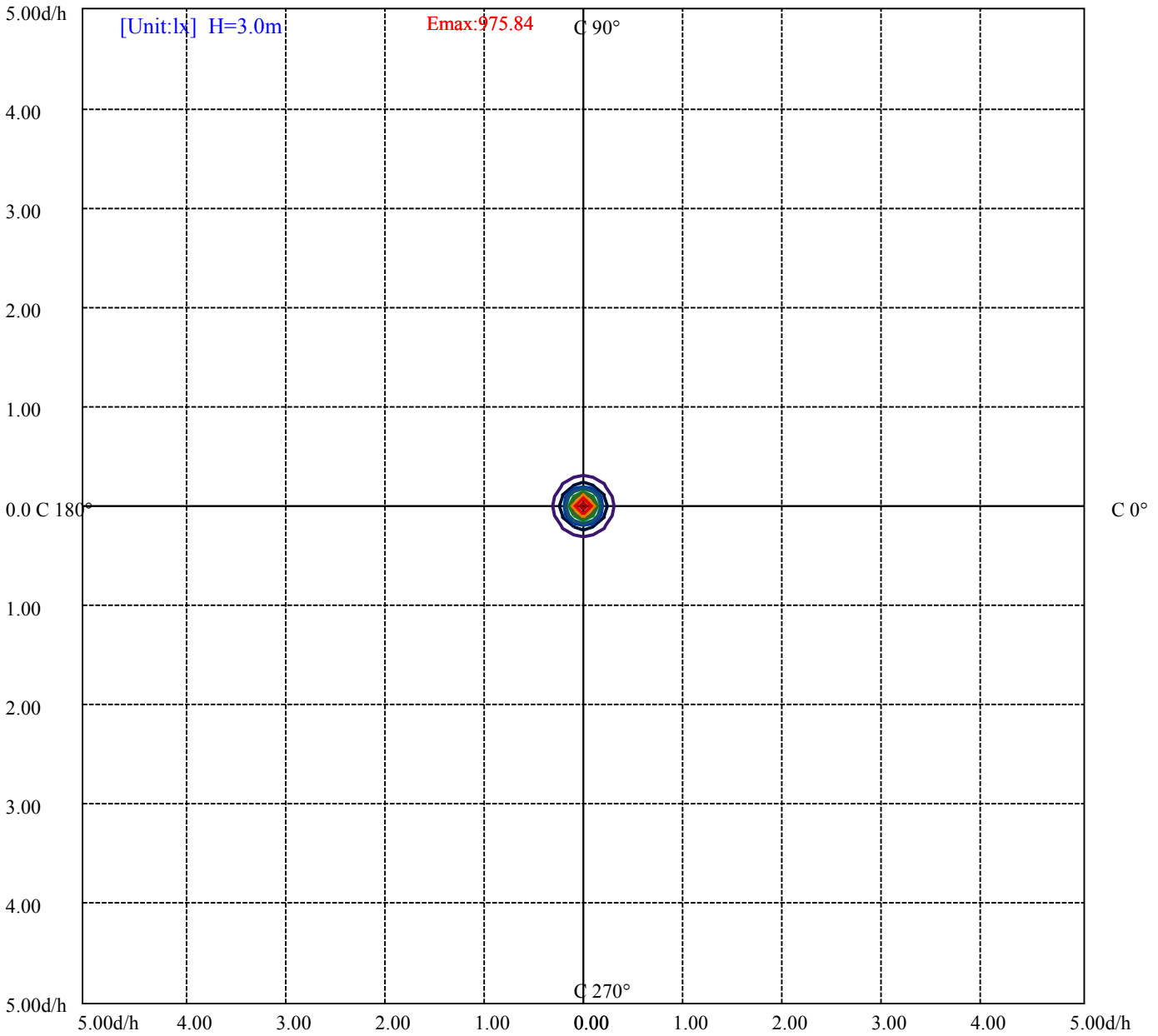
House

[Unit:cd]

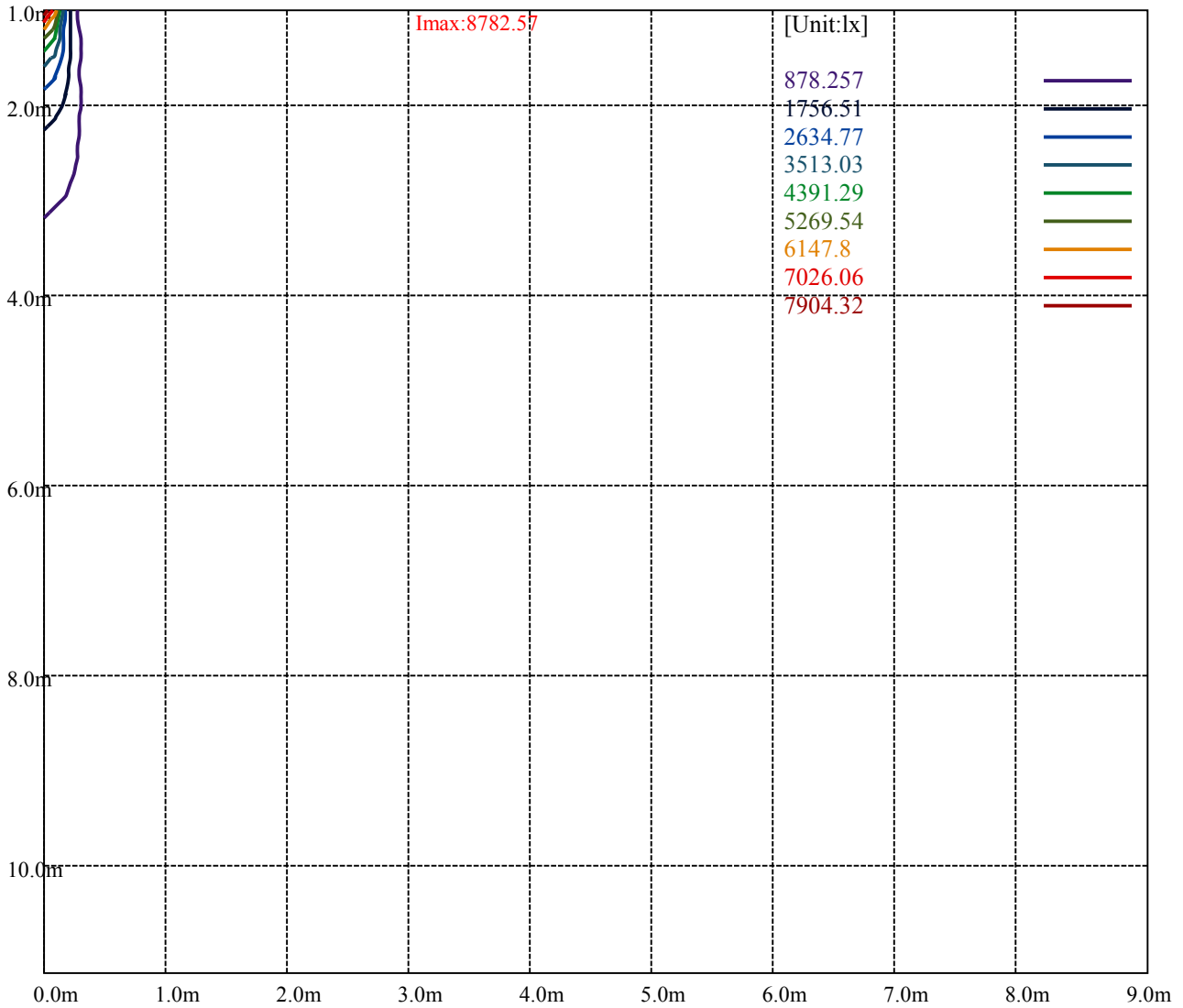
Road

Imax:8782.57

(10%Imax) 878.257	—
(20%Imax) 1756.51	—
(30%Imax) 2634.77	—
(40%Imax) 3513.03	—
(50%Imax) 4391.29	—
(60%Imax) 5269.54	—
(70%Imax) 6147.8	—
(80%Imax) 7026.06	—
(90%Imax) 7904.32	—



- (10%Emax) 97.58366
- (20%Emax) 195.1678
- (30%Emax) 292.7511
- (40%Emax) 390.3344
- (50%Emax) 487.9178
- (60%Emax) 585.5022
- (70%Emax) 683.0856
- (80%Emax) 780.6689
- (90%Emax) 878.2533



Luminance Table

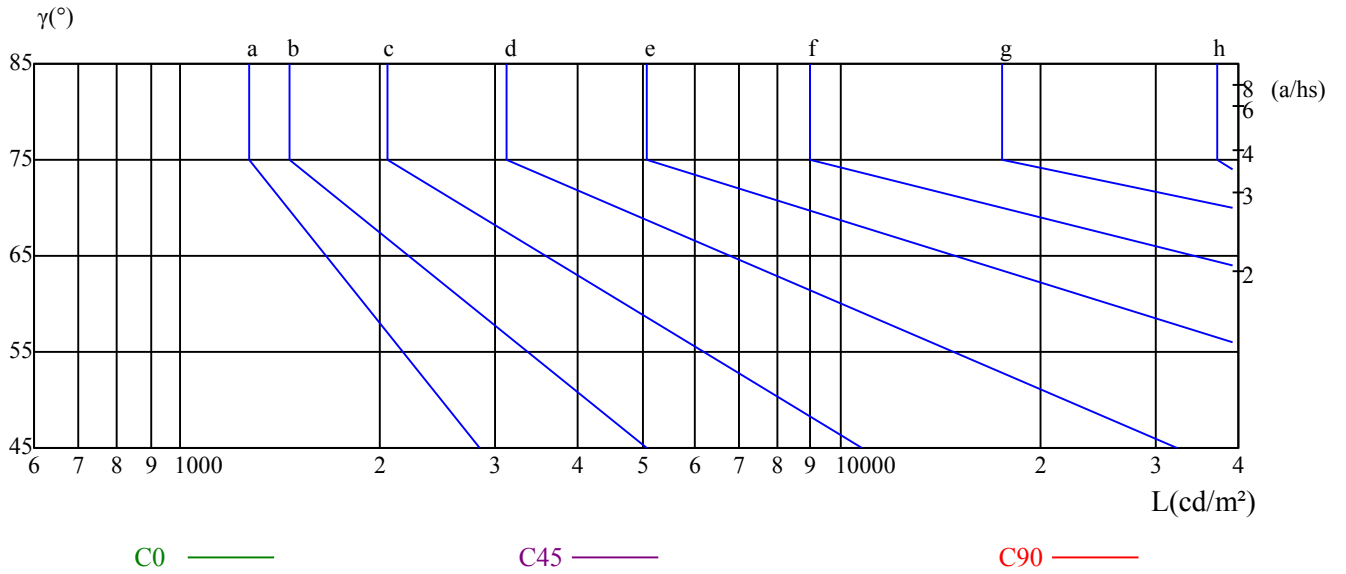
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

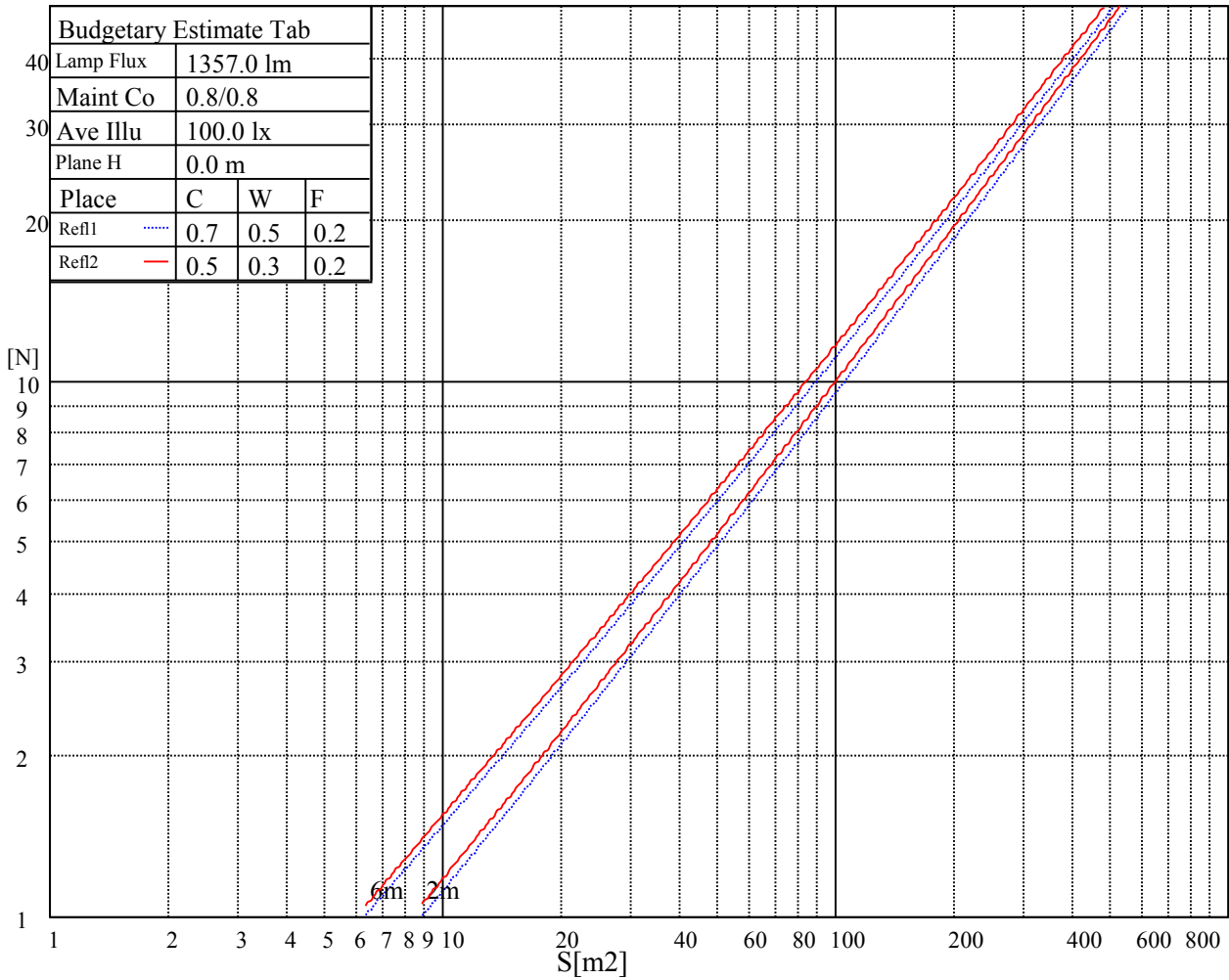
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

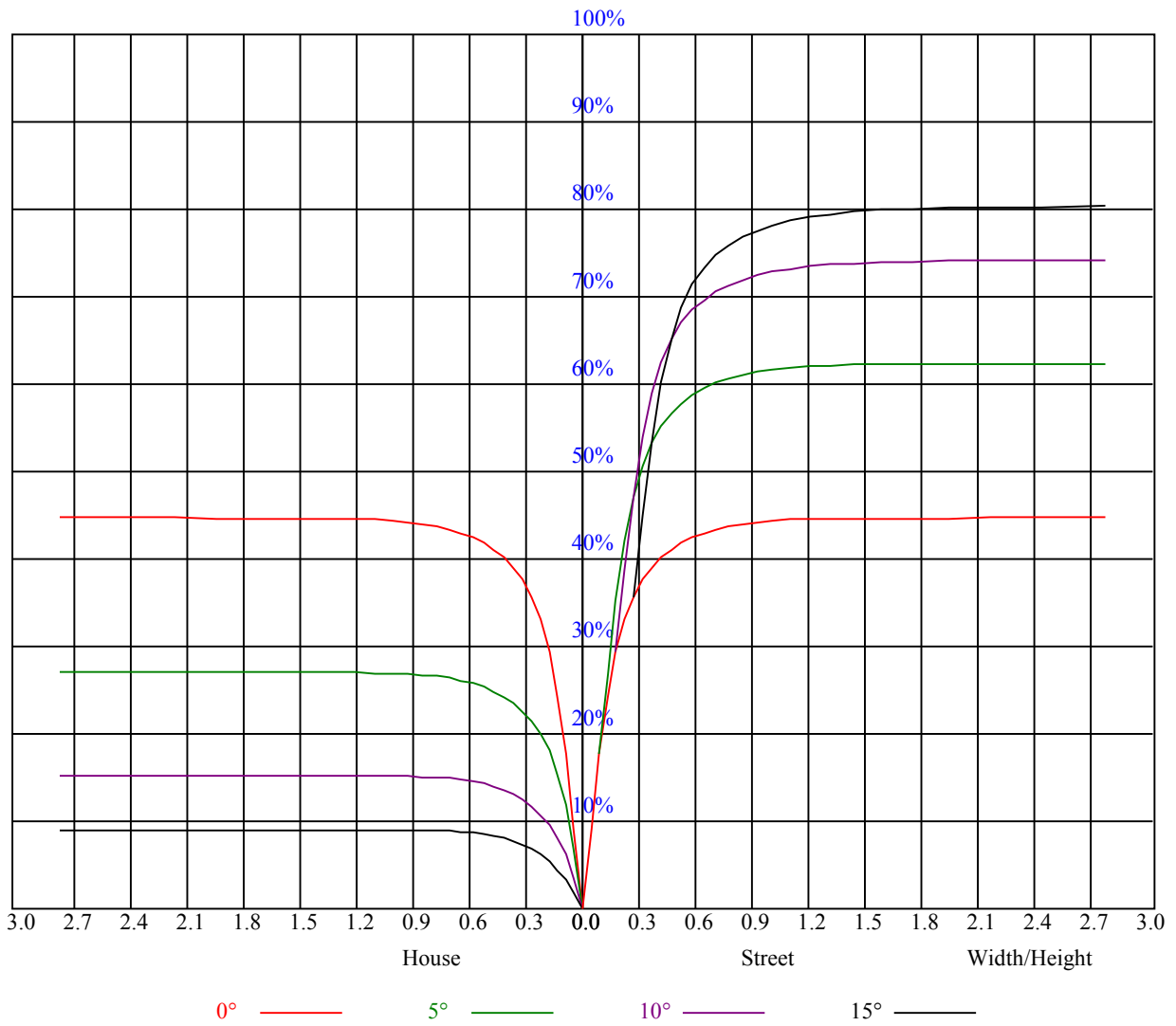
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

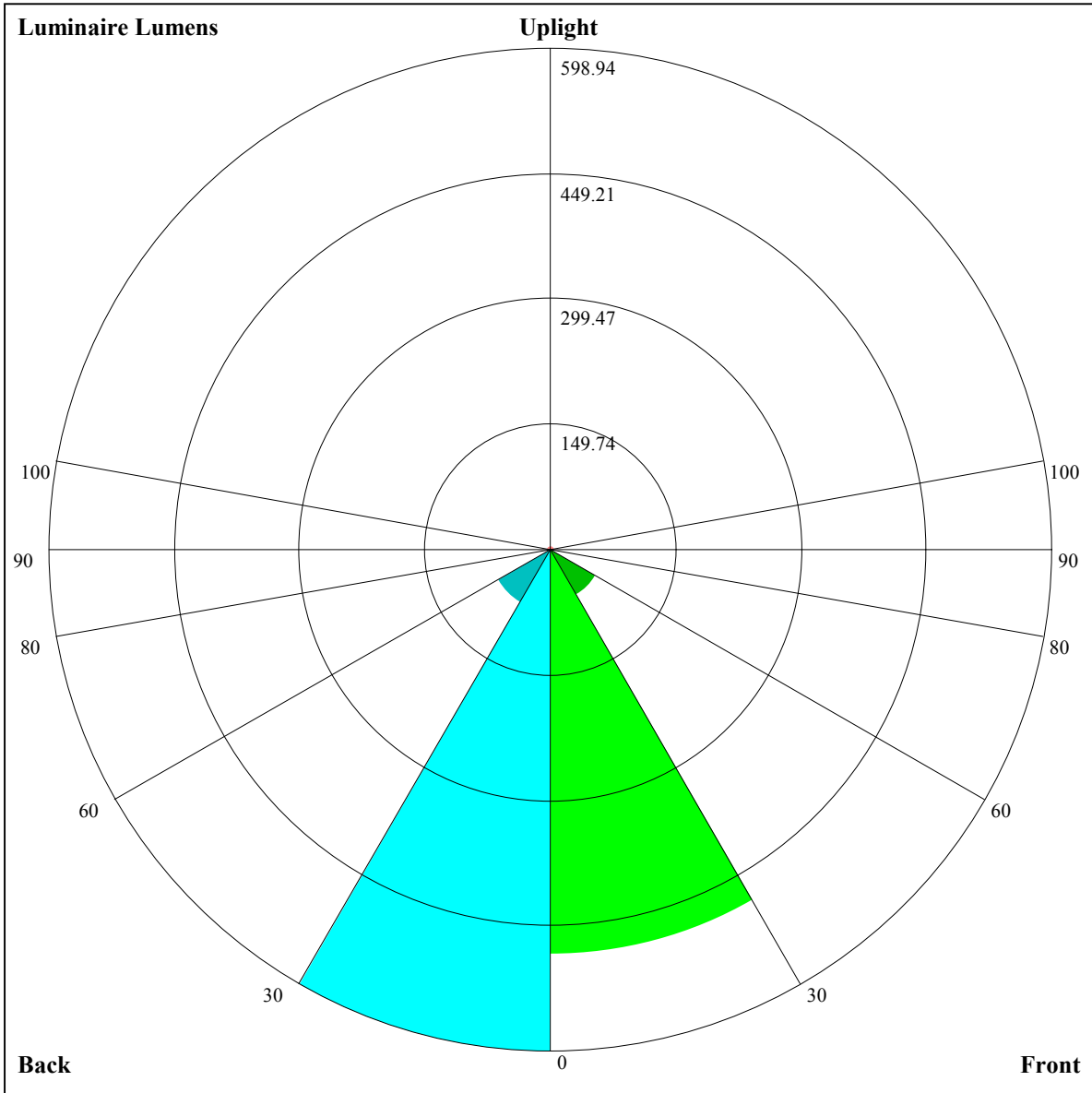
Luminance Limiting Curve





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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.04	1.02	1.01	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.99	0.96	0.94	0.98	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.89	0.90	0.88	0.87	0.86
3	0.95	0.91	0.89	0.94	0.91	0.88	0.91	0.89	0.87	0.89	0.87	0.85	0.87	0.86	0.84	0.83
4	0.91	0.87	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.80
5	0.88	0.84	0.81	0.87	0.83	0.81	0.85	0.82	0.80	0.84	0.82	0.79	0.83	0.81	0.79	0.78
6	0.85	0.81	0.78	0.84	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.77	0.76
7	0.82	0.78	0.76	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.73
8	0.80	0.76	0.73	0.79	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.72
9	0.78	0.74	0.71	0.77	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.71	0.75	0.73	0.71	0.70
10	0.76	0.72	0.70	0.75	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.74	0.71	0.69	0.68





Luminaire Lumens:

FL=484.47,FM=61.6,FH=1.32,FVH=0.65

BL=598.94,BM=73.56,BH=1.34,BVH=0.65

UL=1.3,UH=6.2

BUG Rating:B2-U1-G0

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	8843.60	5645.01	890.48	634.29	385.15	248.35	161.34	94.20	57.49
45.0	8886.75	7712.84	3114.27	885.42	521.62	345.29	236.70	143.29	84.78
90.0	8583.27	5786.54	1256.65	729.51	469.14	303.25	206.22	116.61	77.63
135.0	8816.68	8446.01	3884.56	1452.47	571.27	368.49	253.41	149.56	93.87
180.0	8843.60	8278.96	4469.25	2738.40	603.29	389.37	252.02	162.69	100.65
225.0	8886.75	7030.15	2563.83	804.45	524.17	331.27	215.03	138.28	80.51
270.0	8583.27	8942.53	4645.58	2283.65	585.19	418.60	243.66	156.66	96.84
315.0	8816.68	6207.89	2703.51	684.96	401.48	260.79	163.90	92.11	57.35
360.0	8843.60	5645.01	890.48	634.29	385.15	248.35	161.34	94.20	57.49
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	32.81	14.11	4.59	1.35	1.25	1.16	1.16	1.16	1.21
45.0	52.48	26.40	10.26	1.81	1.30	1.25	1.16	1.21	1.16
90.0	42.04	16.71	5.06	1.39	1.30	1.21	1.21	1.21	1.21
135.0	59.30	26.73	11.23	1.67	1.30	1.21	1.16	1.21	1.21
180.0	57.86	30.02	12.81	2.37	1.30	1.21	1.16	1.11	1.21
225.0	47.98	23.02	7.66	1.39	1.25	1.21	1.16	1.11	1.16
270.0	60.97	30.90	12.58	3.02	1.35	1.25	1.16	1.21	1.16
315.0	33.46	18.00	5.38	1.35	1.25	1.16	1.21	1.16	1.16
360.0	32.81	14.11	4.59	1.35	1.25	1.16	1.16	1.16	1.21
C/ γ (°)	90.0								
0.0	1.16								
45.0	1.16								
90.0	1.25								
135.0	1.21								
180.0	1.21								
225.0	1.21								
270.0	1.21								
315.0	1.16								
360.0	1.16								