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Nata

Client:

LumCAT: 1-0919-M

Luminaire: 92.70.127.00

Report No: nt0100

Test No: NATA07

LampCAT: LUMINUS CLM-9-AA40

Lamp flux(lm): 1234.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 220.5000

Current(A): 0.1000

Power (W): 12.1500

PF: 0.5460

Ballast type: AC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 958.75, Efficiency(%): 77.69% , Luminous Efficacy(lm/W): 78.91

Central intensity(cd): 4192.356, Maximum intensity(cd): 4192.356

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.4

[C90/270]Total=26.4

Field angle(10%Imax): [C0/180]Total=46.6

[C90/270]Total=46.6

Maximum s/h(1/2): C0_180=0.45 C90_270=0.45

Maximum s/h(1/4): C0_180=0.45 C90_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 77.69%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.625%

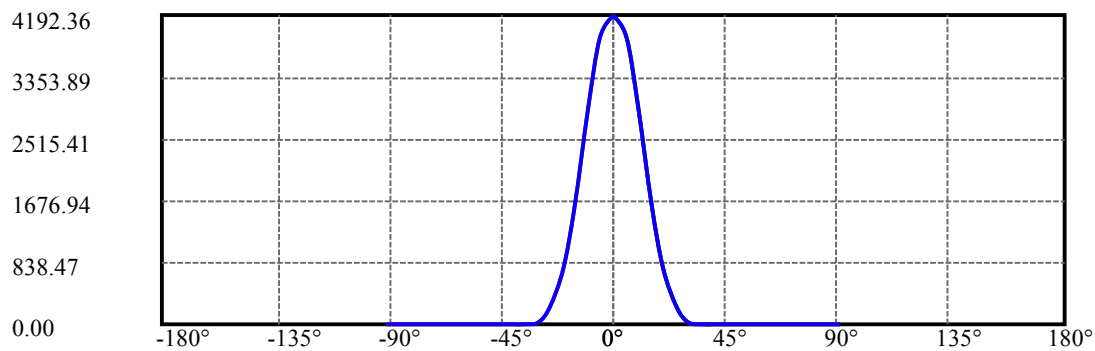
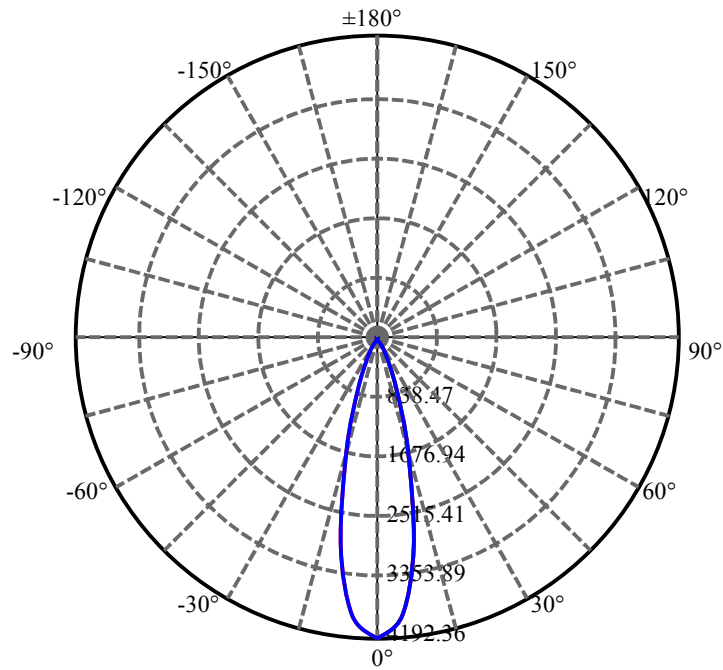
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4192.357	0.000	0	.000%	.000%
5.0	3878.496	96.485	96.485	7.819%	10.064%
10.0	2954.663	244.444	340.928	19.809%	35.560%
15.0	1622.574	271.519	612.447	22.003%	63.880%
20.0	764.454	196.725	809.172	15.942%	84.399%
25.0	236.361	104.967	914.139	8.506%	95.347%
30.0	26.531	33.269	947.408	2.696%	98.817%
35.0	2.900	4.334	951.742	.351%	99.269%
40.0	2.135	0.840	952.582	.068%	99.357%
45.0	1.723	0.714	953.296	.058%	99.431%
50.0	1.491	0.649	953.945	.053%	99.499%
55.0	1.340	0.615	954.561	.050%	99.563%
60.0	1.235	0.595	955.156	.048%	99.625%
65.0	1.177	0.587	955.743	.048%	99.686%
70.0	1.154	0.590	956.333	.048%	99.748%
75.0	1.137	0.599	956.932	.049%	99.810%
80.0	1.108	0.601	957.533	.049%	99.873%
85.0	1.108	0.602	958.135	.049%	99.936%
90.0	1.143	0.616	958.751	.050%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	947.41	76.78%	98.82%
0-40	952.58	77.19%	99.36%
0-60	955.16	77.40%	99.63%
0-90	958.13	77.64%	99.94%
0-120	958.13	77.64%	99.94%
0-180	958.75	77.69%	100.00%
60-90	3.57	0.29%	0.37%
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%
0-18.93	767.00	62.16%	80.00%

ZONAL LUMEN SUMMARY

0-10	340.93
10-20	468.24
20-30	138.24
30-40	5.17
40-50	1.36
50-60	1.21
60-70	1.18
70-80	1.20
80-90	0.60
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:

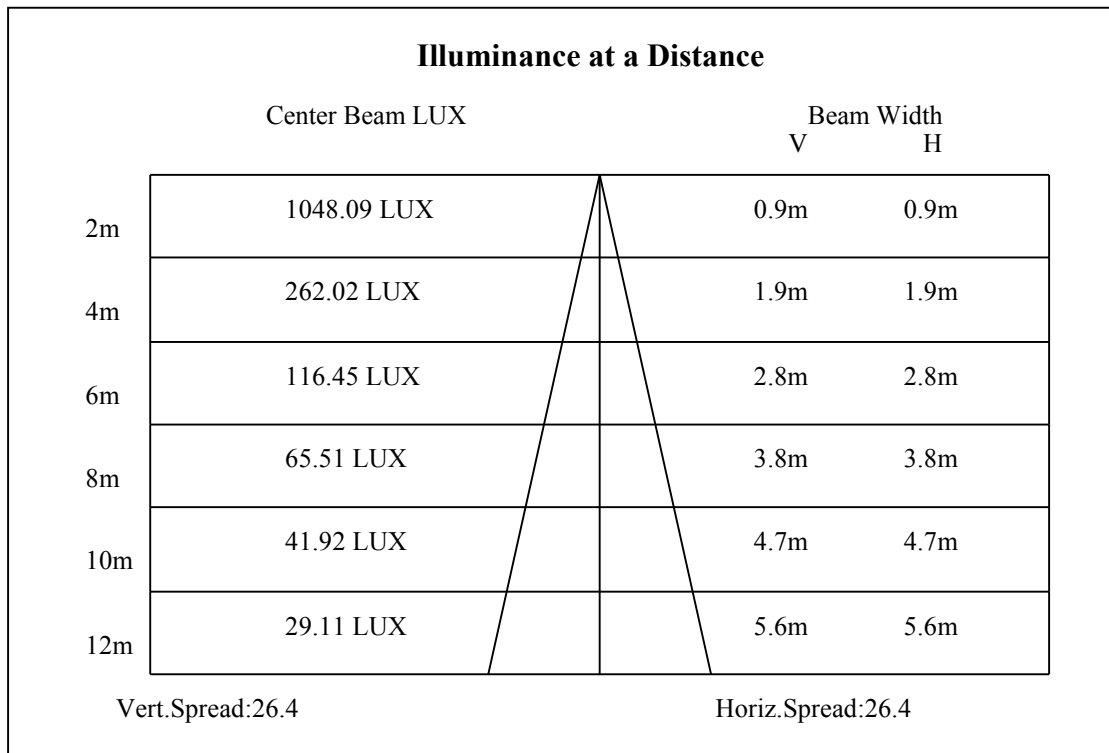
C90/C270:

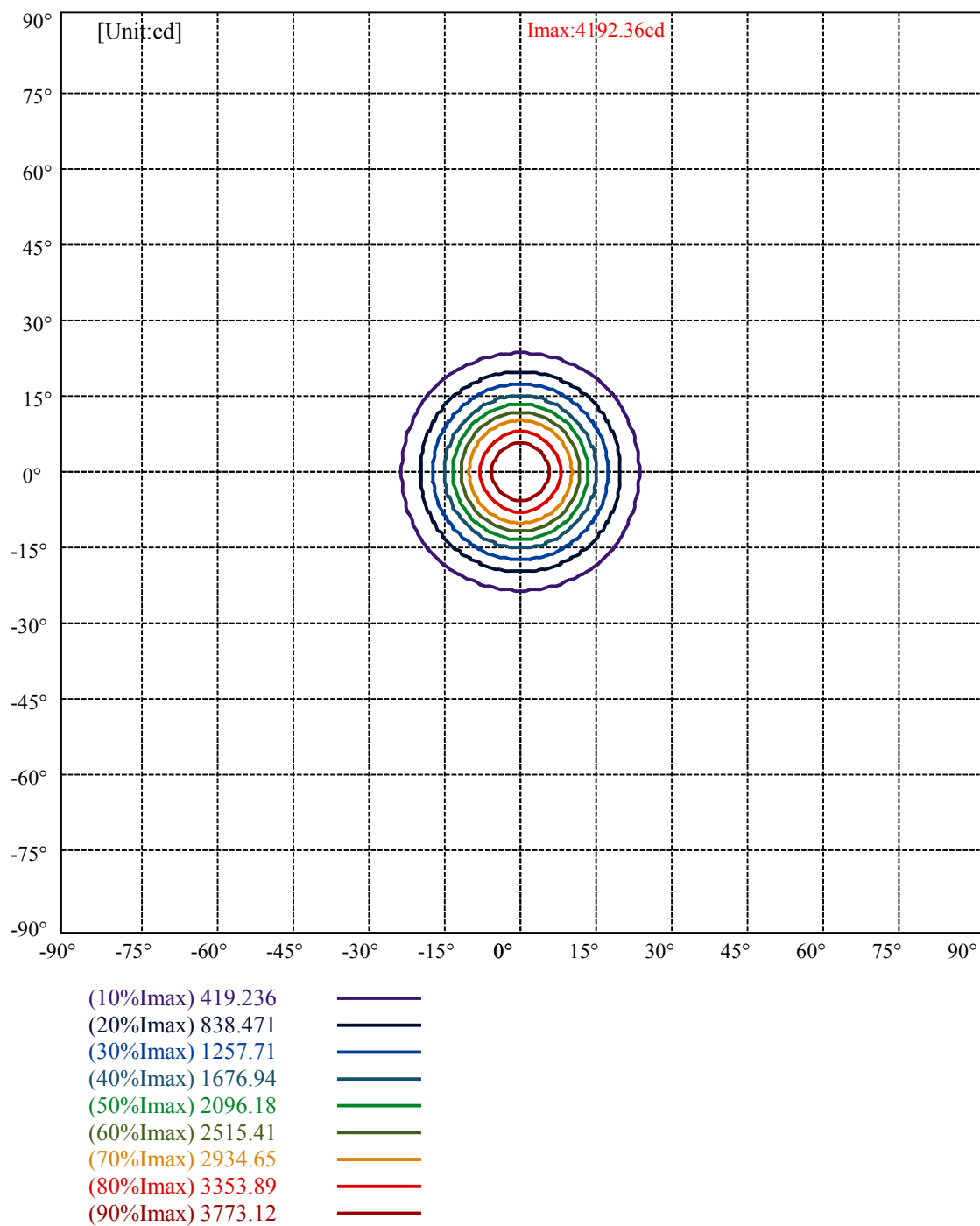
Field angle(10%Imax):C0/180Left:23.3 Right:23.3

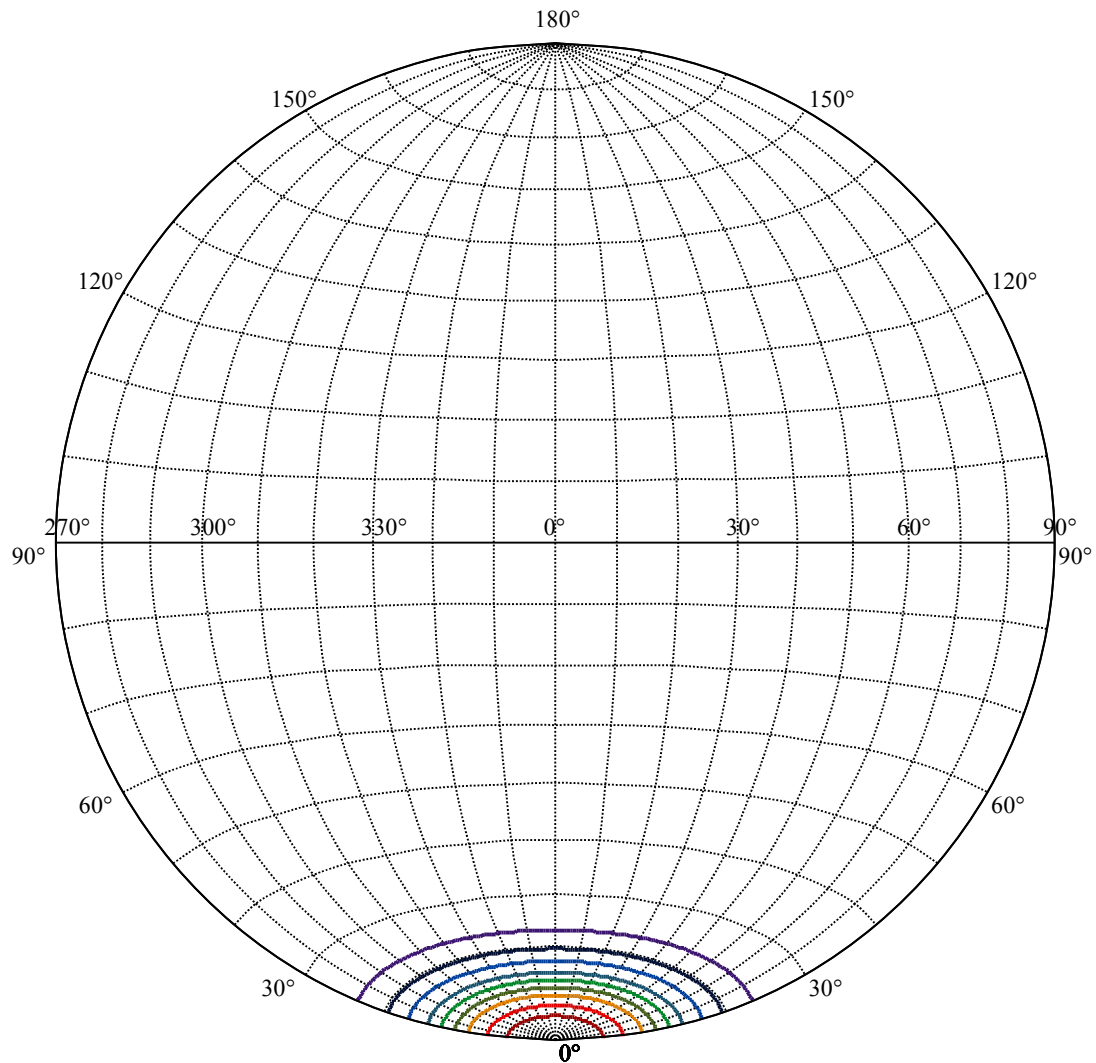
:C90/270Left:23.3 Right:23.3

Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2

:C90/270Left:13.2 Right:13.2







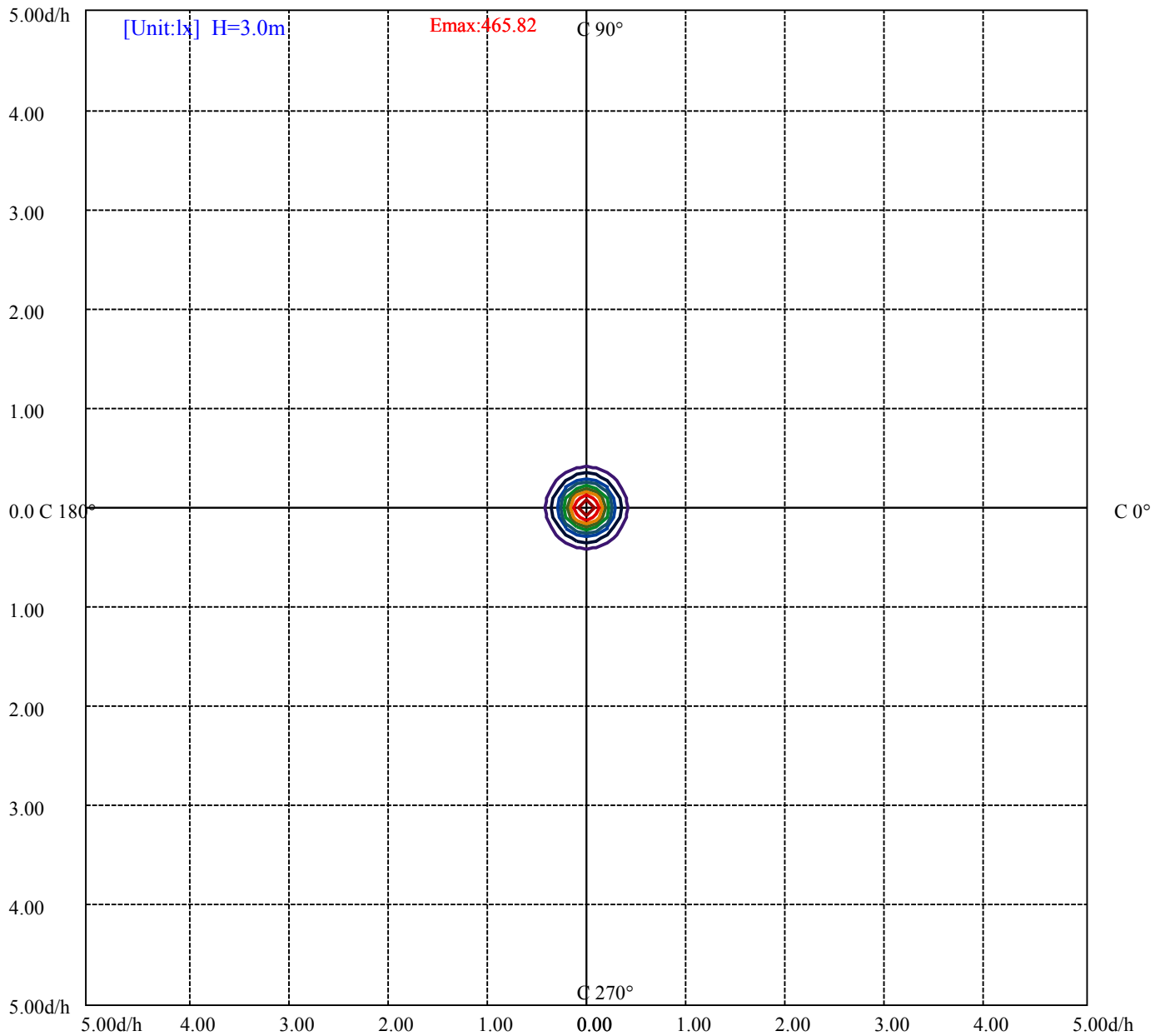
House

[Unit:cd]

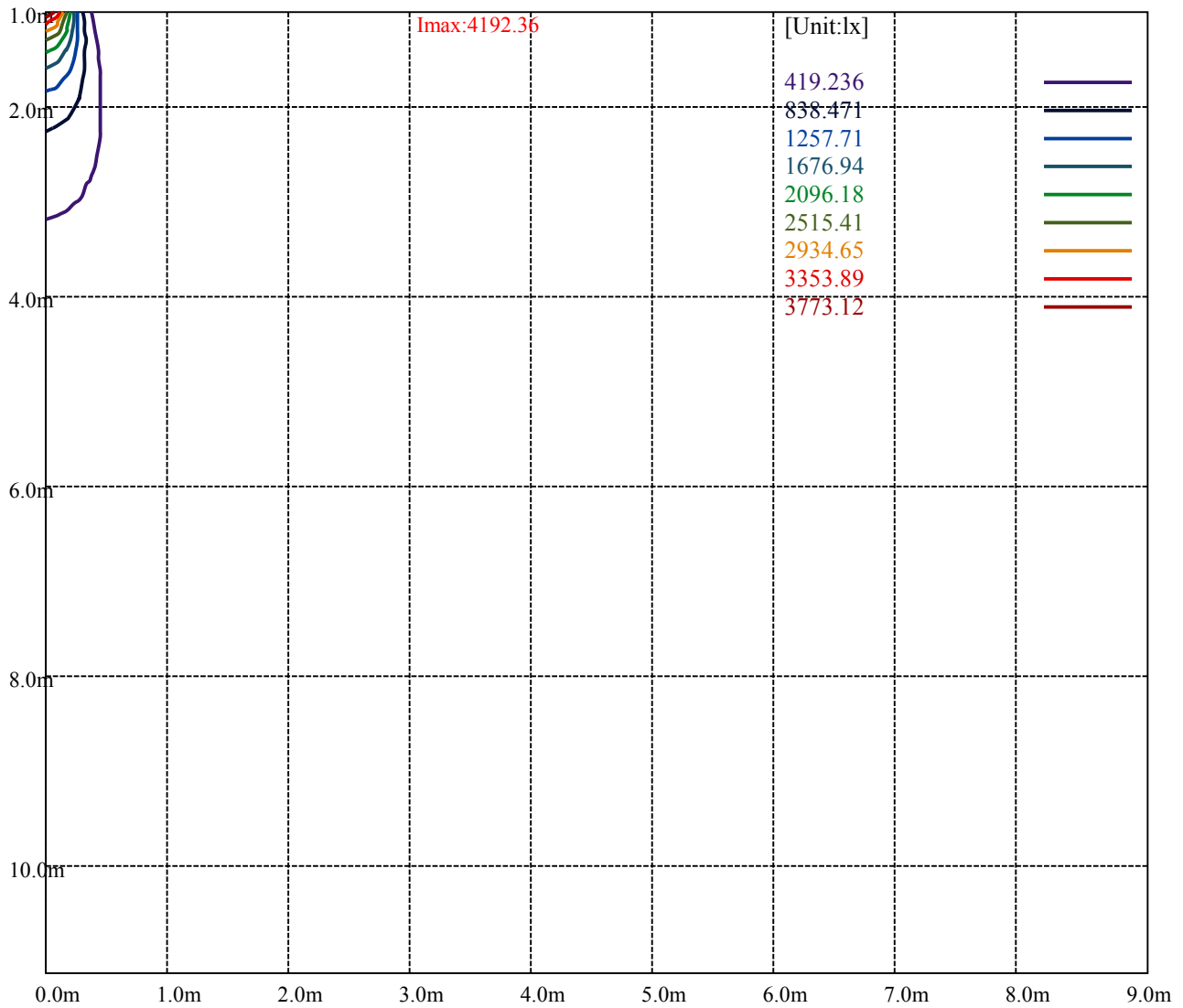
Road

Imax:4192.36	
(10%Imax) 419.236	
(20%Imax) 838.471	
(30%Imax) 1257.71	
(40%Imax) 1676.94	
(50%Imax) 2096.18	
(60%Imax) 2515.41	
(70%Imax) 2934.65	
(80%Imax) 3353.89	
(90%Imax) 3773.12	





(10%Emax)	46.58167	—
(20%Emax)	93.16322	—
(30%Emax)	139.7444	—
(40%Emax)	186.3267	—
(50%Emax)	232.9078	—
(60%Emax)	279.49	—
(70%Emax)	326.0711	—
(80%Emax)	372.6533	—
(90%Emax)	419.2345	—



Luminance Table

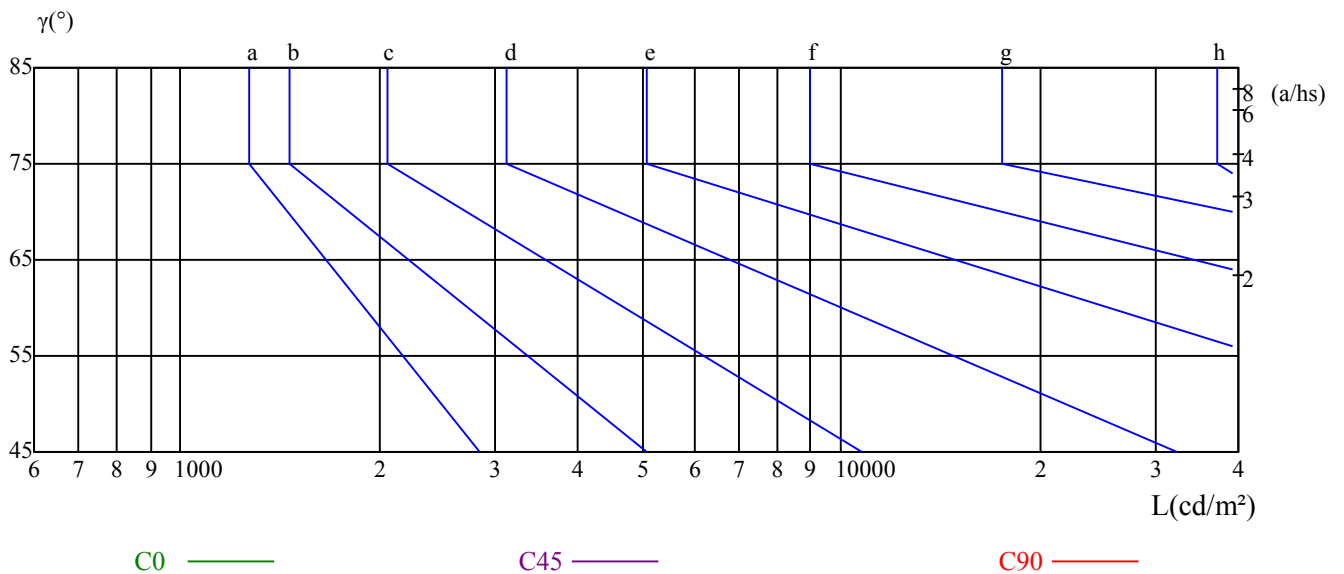
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

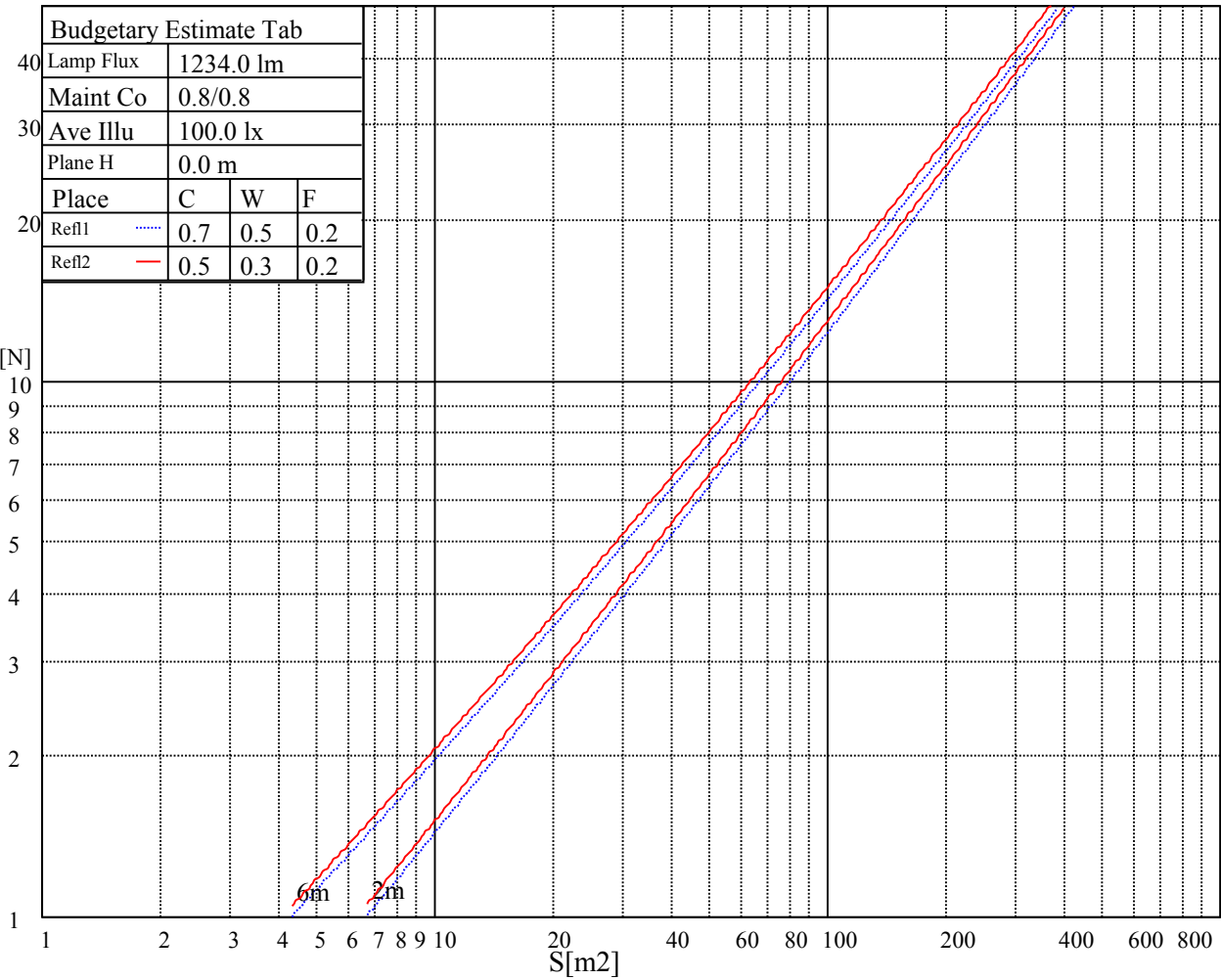
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

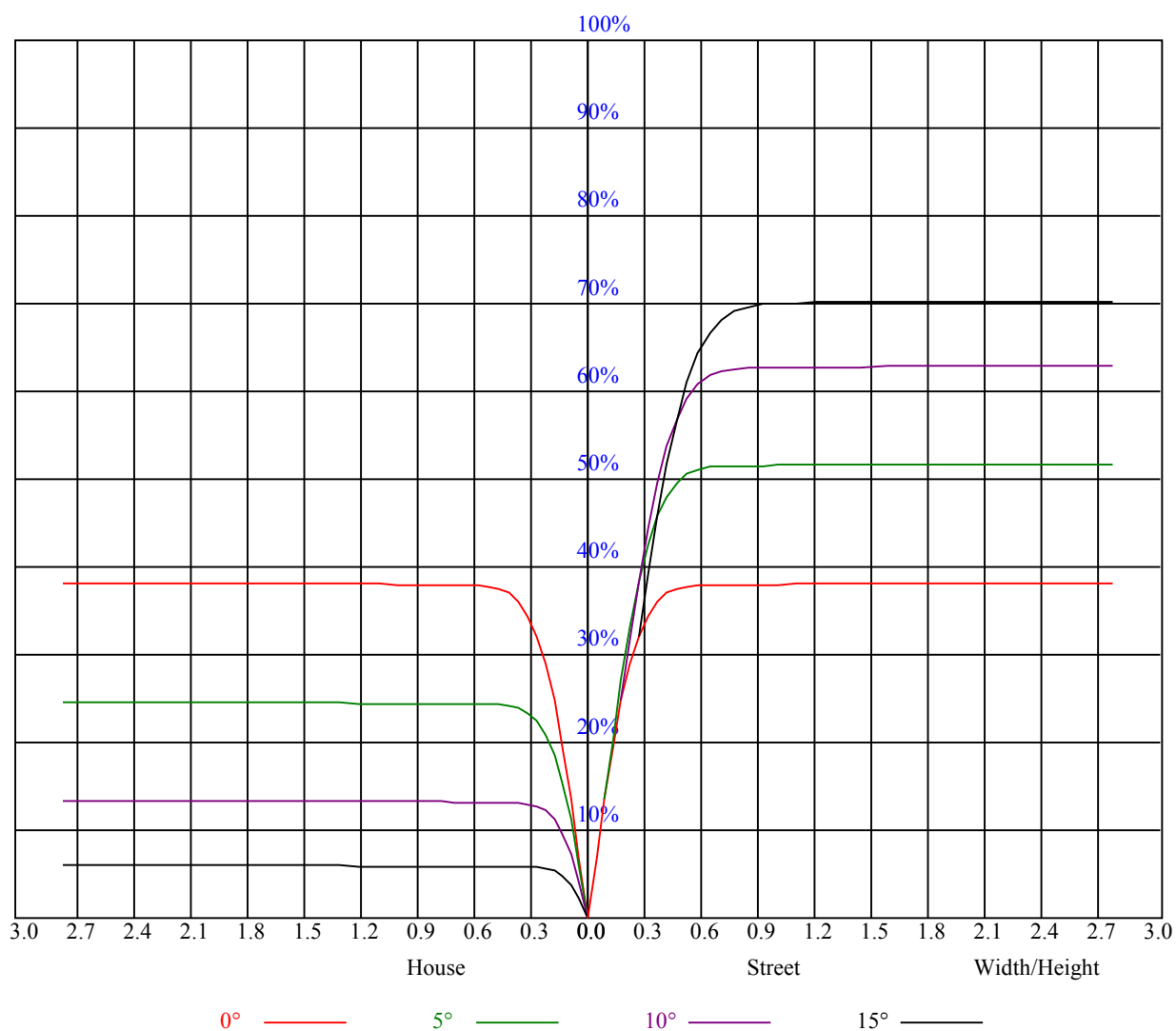
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

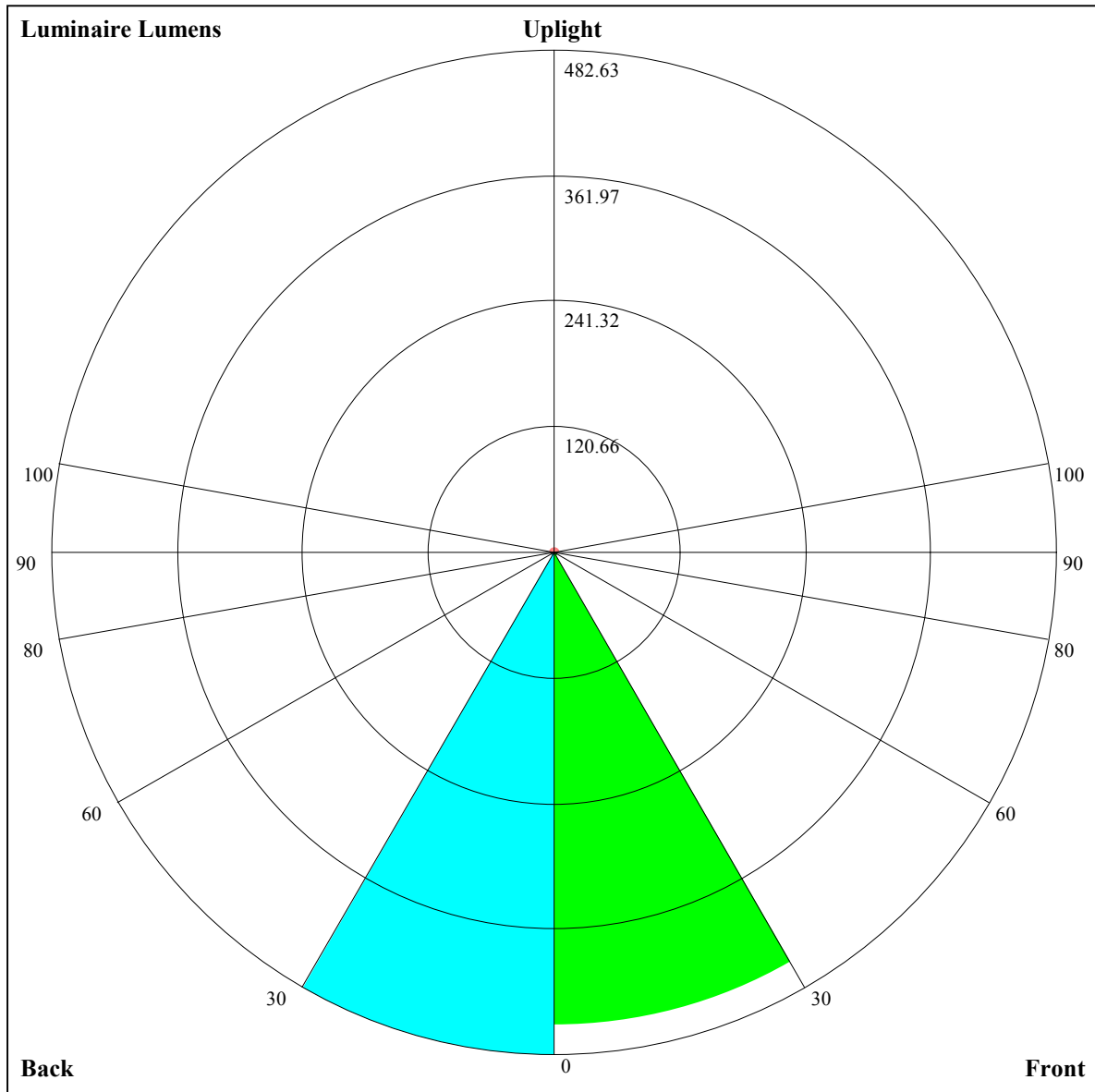
Luminance Limiting Curve





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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.79	0.79	0.79	0.78
1	0.88	0.86	0.85	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.75
2	0.84	0.82	0.80	0.83	0.81	0.79	0.80	0.79	0.77	0.78	0.77	0.76	0.76	0.75	0.74	0.73
3	0.80	0.78	0.76	0.79	0.77	0.75	0.78	0.76	0.74	0.76	0.74	0.73	0.74	0.73	0.72	0.71
4	0.78	0.75	0.72	0.77	0.74	0.72	0.75	0.73	0.71	0.74	0.72	0.70	0.72	0.71	0.70	0.69
5	0.75	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.68	0.67
6	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.68	0.66	0.69	0.67	0.66	0.65
7	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
8	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.62
9	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.63	0.61	0.64	0.62	0.61	0.60
10	0.65	0.62	0.60	0.64	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.59





Luminaire Lumens:

FL=454.41,FM=3.53,FH=1.19,FVH=0.61

BL=482.63,BM=3.53,BH=1.18,BVH=0.6

UL=1.25,UH=5.93

BUG Rating:B1-U1-G0

Nata 1-0919-M

Intensity data(cd)										Appendix Page: 15 Total:15	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	4186.56	3748.04	2548.05	884.45	570.99	79.40	3.90	2.64	2.04		
45.0	4144.79	4222.29	3669.16	2494.23	1293.31	435.31	92.90	3.53	2.51		
90.0	4268.23	4083.08	3289.12	1935.53	907.42	261.99	7.42	3.11	2.27		
135.0	4169.85	4201.87	3513.71	2452.93	1092.85	420.46	90.21	3.48	2.41		
180.0	4186.56	3954.08	3245.50	2016.74	945.75	325.33	7.05	2.97	2.13		
225.0	4144.79	3500.25	2230.19	795.54	352.94	18.93	3.25	2.32	1.76		
270.0	4268.23	3775.89	2851.07	1561.98	574.98	327.65	4.08	2.69	2.04		
315.0	4169.85	3542.48	2290.52	839.20	377.40	21.81	3.43	2.46	1.90		
360.0	4186.56	3748.04	2548.05	884.45	570.99	79.40	3.90	2.64	2.04		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	1.72	1.48	1.30	1.21	1.21	1.16	1.16	1.16	1.11		
45.0	1.90	1.62	1.39	1.25	1.21	1.16	1.16	1.16	1.11		
90.0	1.86	1.58	1.39	1.25	1.16	1.16	1.11	1.07	1.11		
135.0	1.90	1.58	1.39	1.30	1.21	1.16	1.16	1.11	1.11		
180.0	1.72	1.48	1.35	1.25	1.16	1.16	1.16	1.11	1.11		
225.0	1.48	1.35	1.25	1.16	1.11	1.11	1.11	1.07	1.07		
270.0	1.67	1.44	1.35	1.25	1.21	1.16	1.11	1.11	1.11		
315.0	1.53	1.39	1.30	1.21	1.16	1.16	1.11	1.07	1.11		
360.0	1.72	1.48	1.30	1.21	1.21	1.16	1.16	1.16	1.11		
C/ γ (°)	90.0										
0.0	1.21										
45.0	1.16										
90.0	1.11										
135.0	1.11										
180.0	1.11										
225.0	1.16										
270.0	1.11										
315.0	1.16										
360.0	1.21										