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NATA

LumCAT: 3-1917-E	
Luminaire:92.76.323.00	
Report No: NATA0100	Voltage(V): 36.1000
Test No: GC2018111011	Current(A): 0.6000
LampCAT: Philips SLM 1205 G7	Power (W): 21.6600
Lamp flux(lm): 2840.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2551.89
Efficiency(%): 89.86%
Lumens(lm)/Power(W): 120.40
Central intensity(cd): 9770.483
Maximum intensity(cd): 9770.483
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.1
[C90/270]Total=24.1
Field angle(10%Imax): [C0/180]Total=57.6
[C90/270]Total=57.6
Maximum s/h(1/2): C0_180=0.41 C90_270=0.41
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.83%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.569%

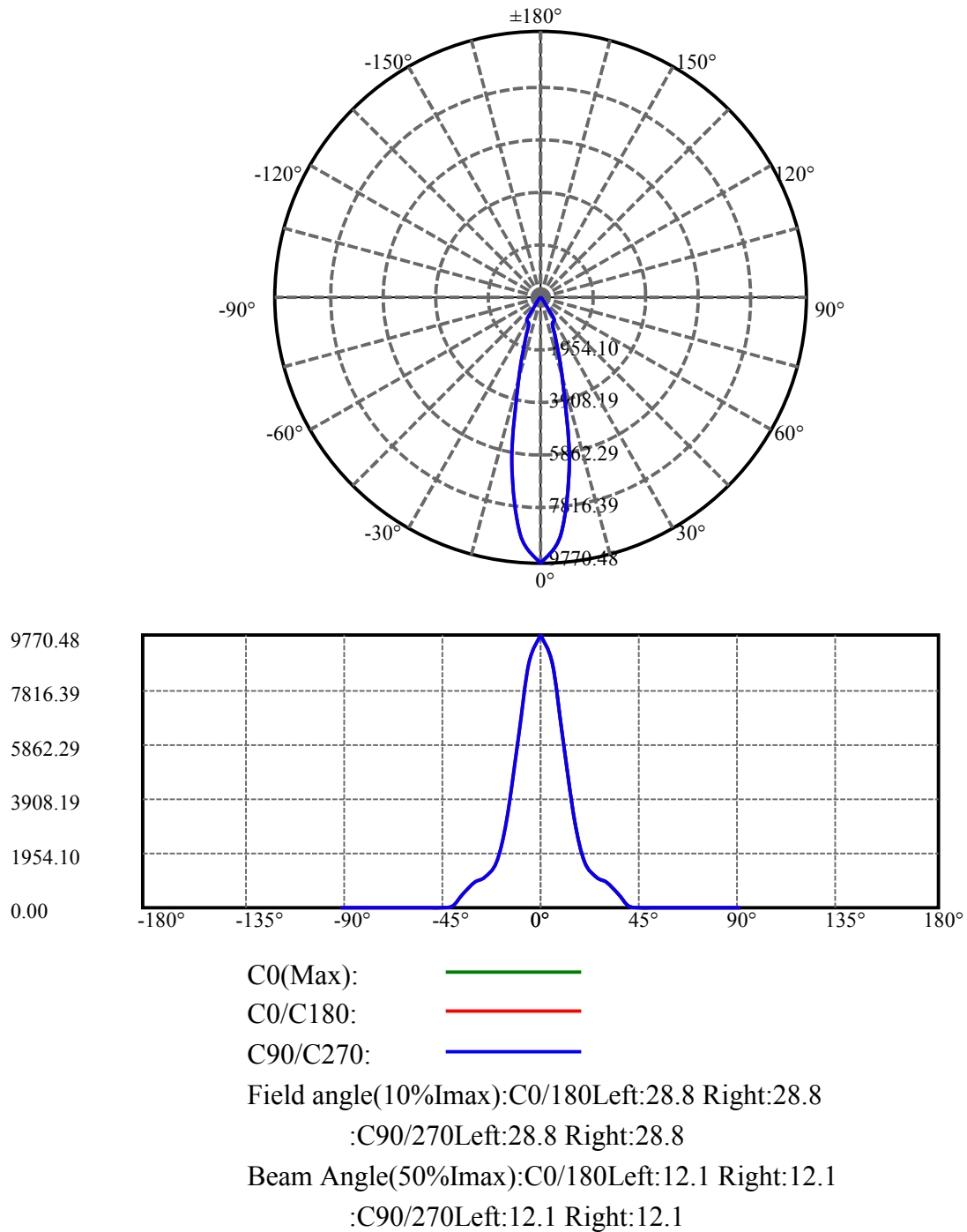
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9770.484	58.429	58.429	2.057%	2.290%
5.0	8761.570	418.569	476.999	14.738%	18.692%
10.0	6102.633	580.867	1057.866	20.453%	41.454%
15.0	3167.086	449.309	1507.175	15.821%	59.061%
20.0	1628.930	305.382	1812.557	10.753%	71.028%
25.0	1103.576	255.646	2068.204	9.002%	81.046%
30.0	936.499	256.665	2324.869	9.038%	91.104%
35.0	483.933	152.148	2477.017	5.357%	97.066%
40.0	53.691	18.917	2495.934	.666%	97.807%
45.0	15.926	6.173	2502.107	.217%	98.049%
50.0	12.832	5.388	2507.495	.190%	98.260%
55.0	12.052	5.411	2512.906	.191%	98.473%
60.0	11.595	5.504	2518.41	.194%	98.688%
65.0	11.348	5.638	2524.048	.199%	98.909%
70.0	12.164	6.265	2530.313	.221%	99.155%
75.0	11.679	6.184	2536.497	.218%	99.397%
80.0	11.904	6.426	2542.923	.226%	99.649%
85.0	11.074	6.047	2548.97	.213%	99.886%
90.0	10.638	2.916	2551.885	.103%	100.000%

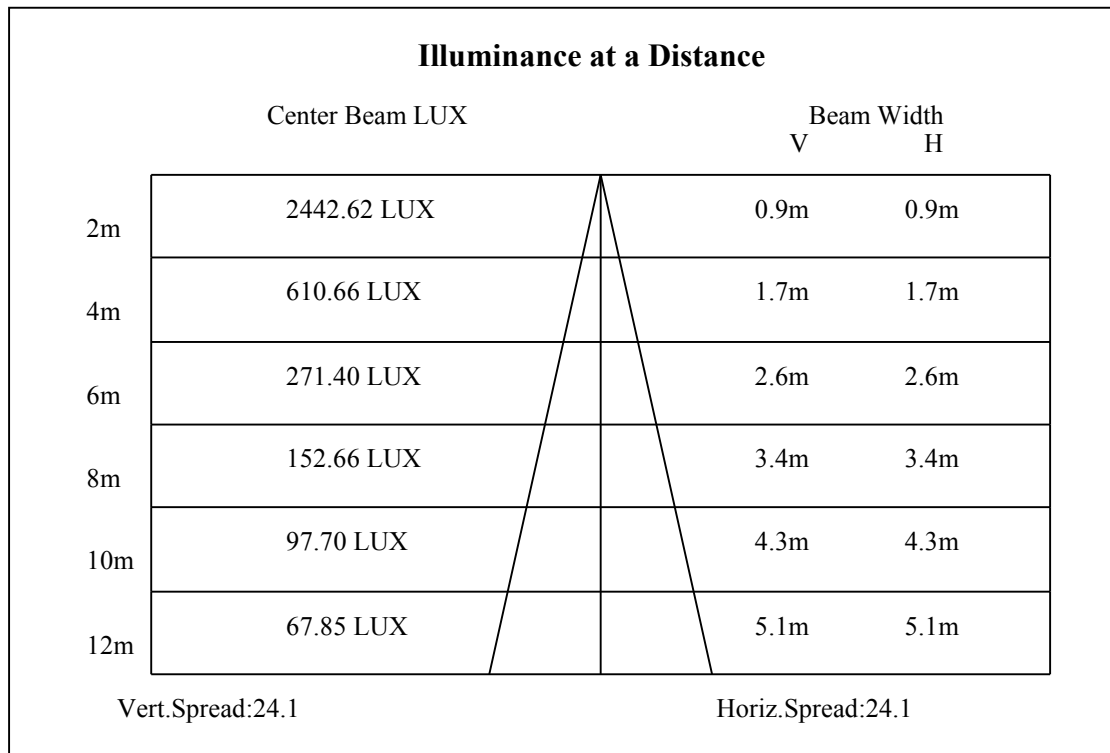
ZONAL LUMEN SUMMARY

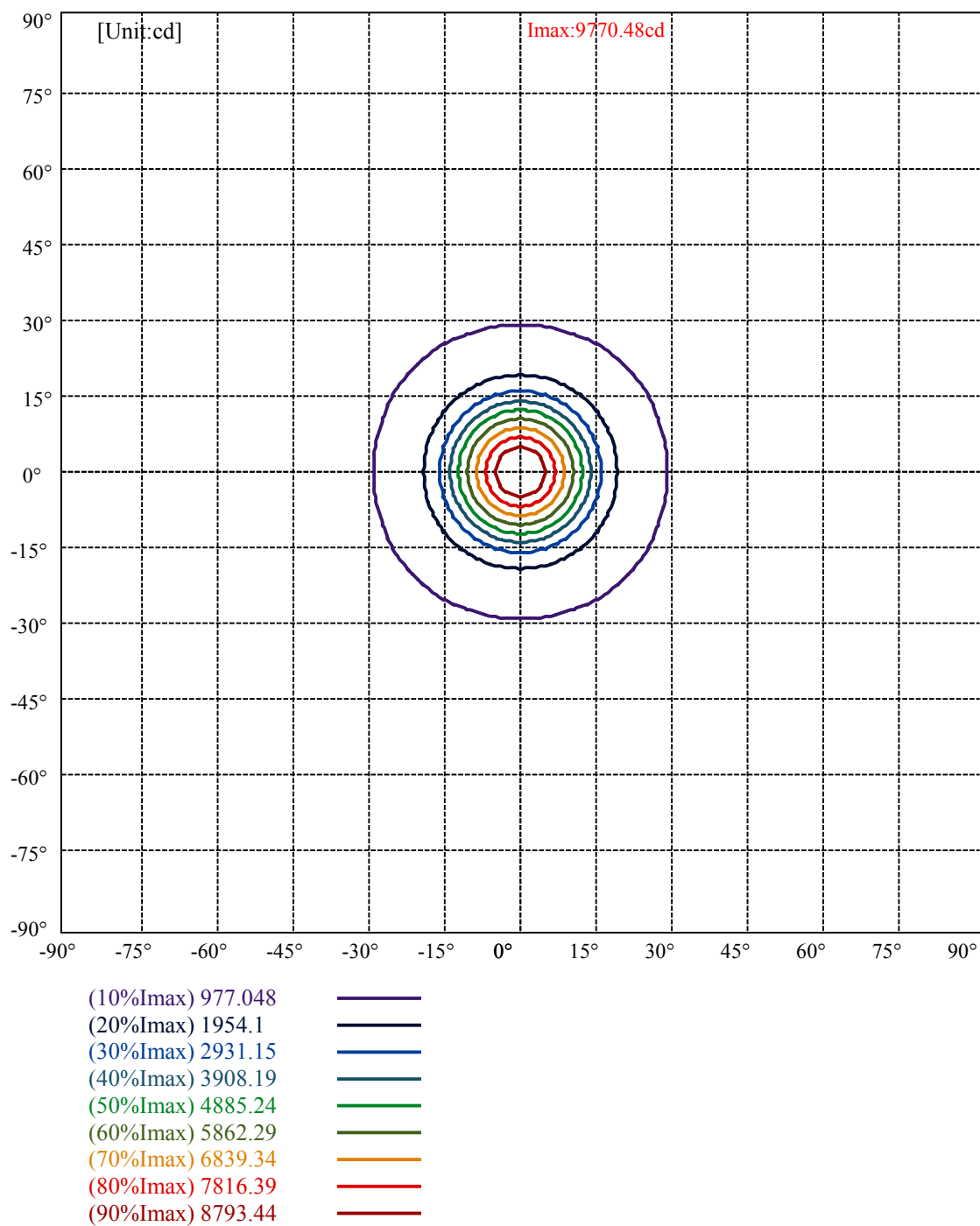
Zone	Lumens	%Lamp	%Fixt
0-30	2324.87	81.86%	91.10%
0-40	2495.93	87.89%	97.81%
0-60	2518.41	88.68%	98.69%
0-90	2548.97	89.75%	99.89%
0-120	2548.97	89.75%	99.89%
0-180	2551.89	89.86%	100.00%
60-90	36.06	1.27%	1.41%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-24.48	2041.51	71.88%	80.00%

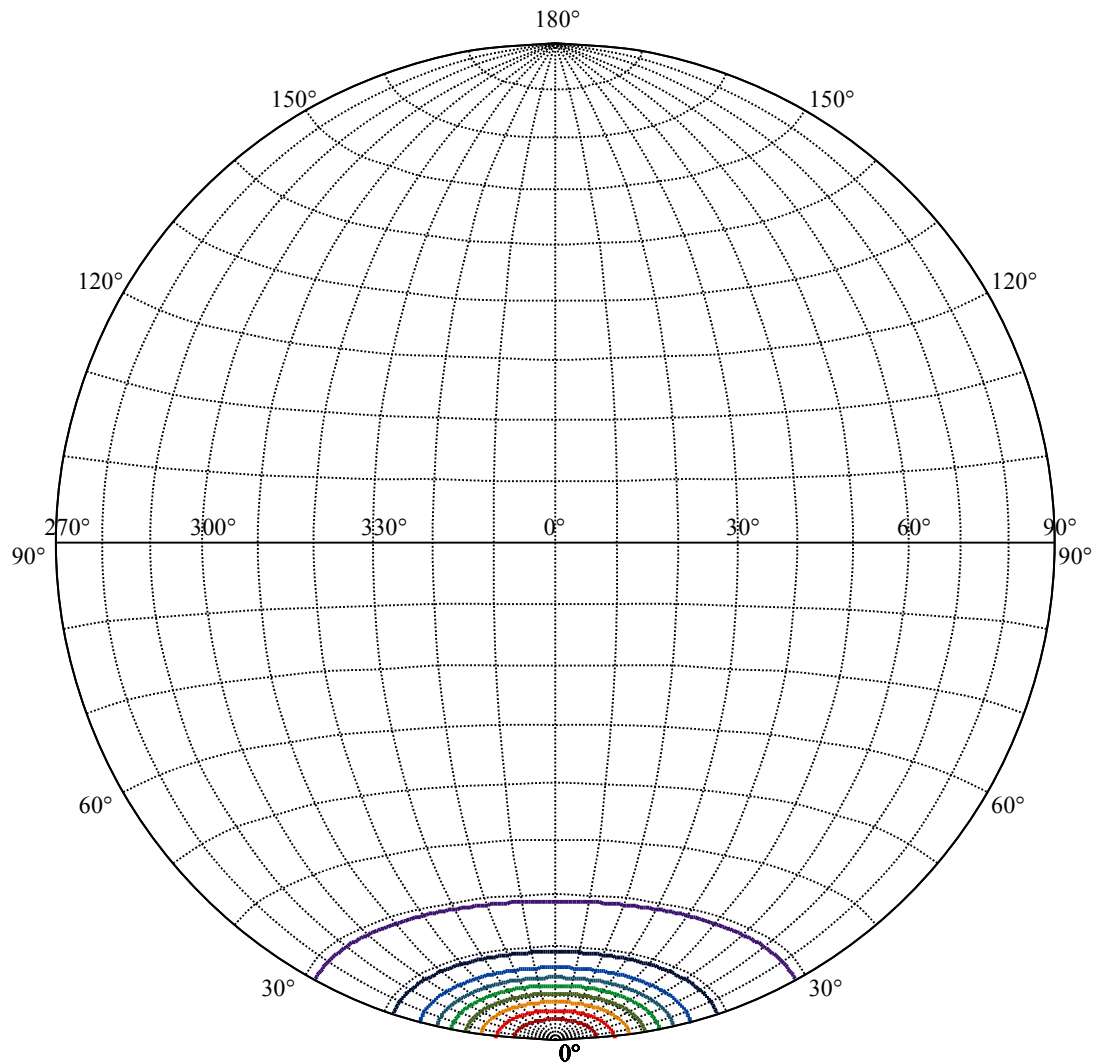
ZONAL LUMEN SUMMARY

0-10	1057.87
10-20	754.69
20-30	512.31
30-40	171.06
40-50	11.56
50-60	10.92
60-70	11.90
70-80	12.61
80-90	6.05
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









House

[Unit:cd]

Road

Imax:9770.48

(10%Imax) 977.048

(20%Imax) 1954.1

(30%Imax) 2931.15

(40%Imax) 3908.19

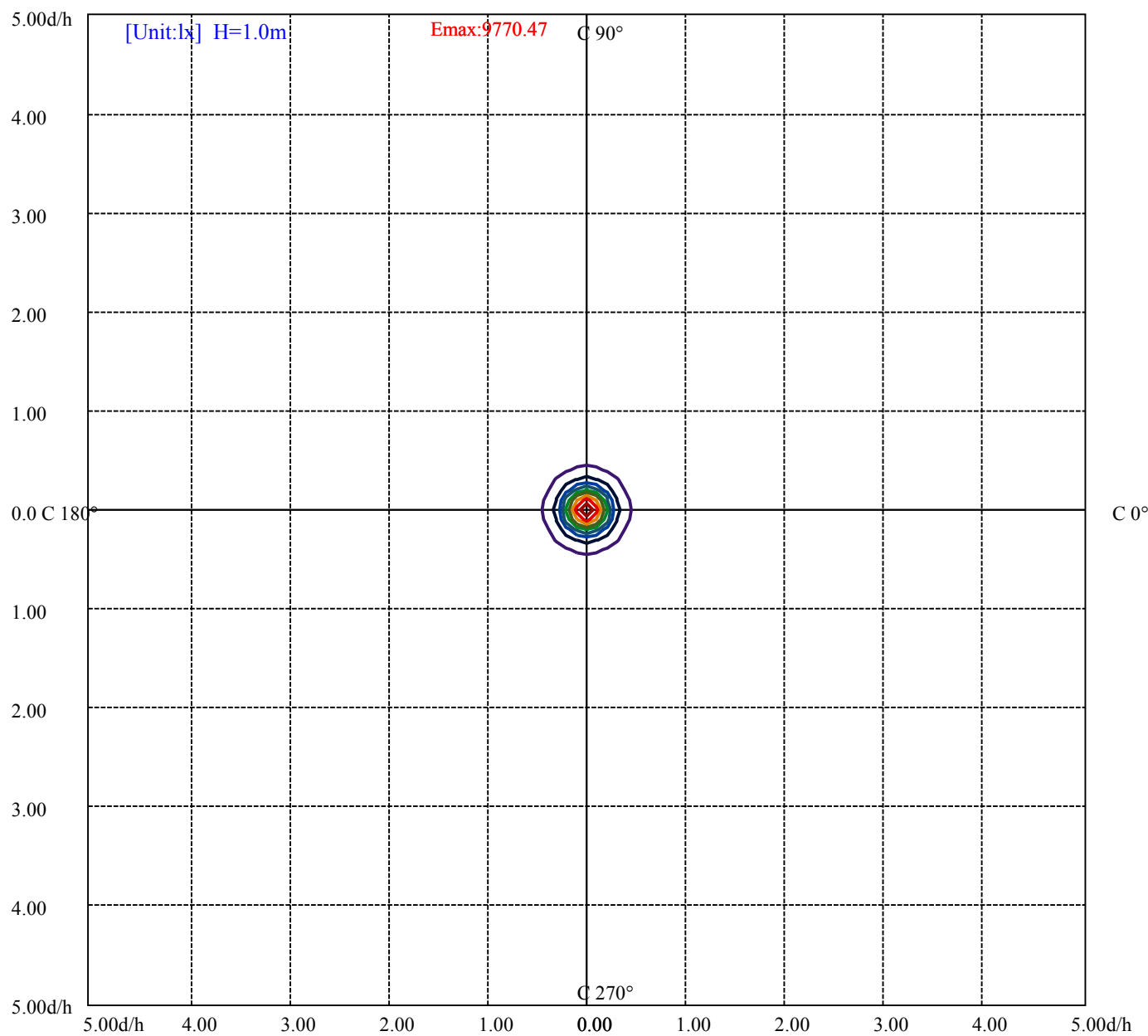
(50%Imax) 4885.24

(60%Imax) 5862.29

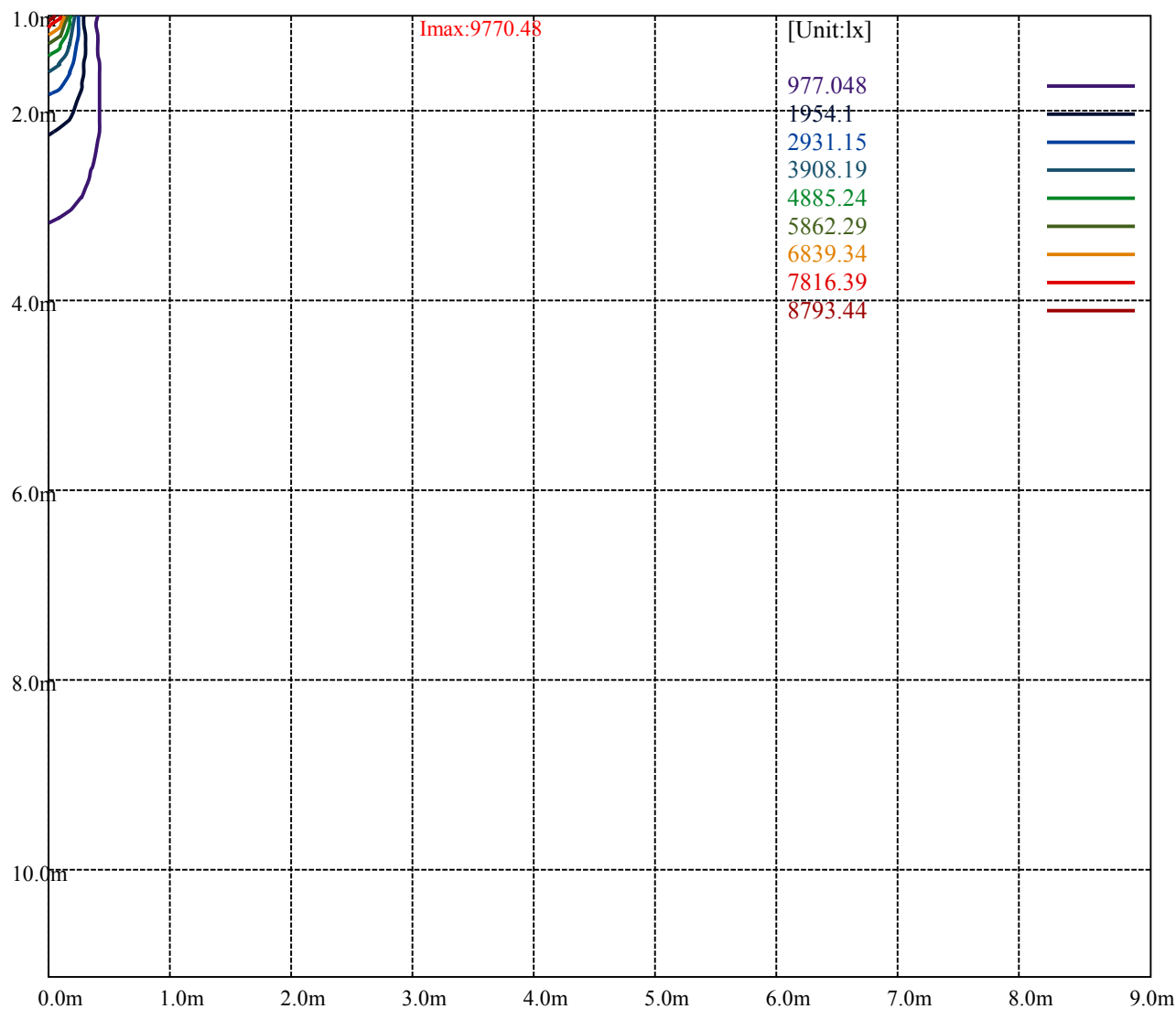
(70%Imax) 6839.34

(80%Imax) 7816.39

(90%Imax) 8793.44



(10%Emax) 977.045	—
(20%Emax) 1954.09	—
(30%Emax) 2931.14	—
(40%Emax) 3908.18	—
(50%Emax) 4885.23	—
(60%Emax) 5862.27	—
(70%Emax) 6839.32	—
(80%Emax) 7816.36	—
(90%Emax) 8793.41	—



Luminance Table

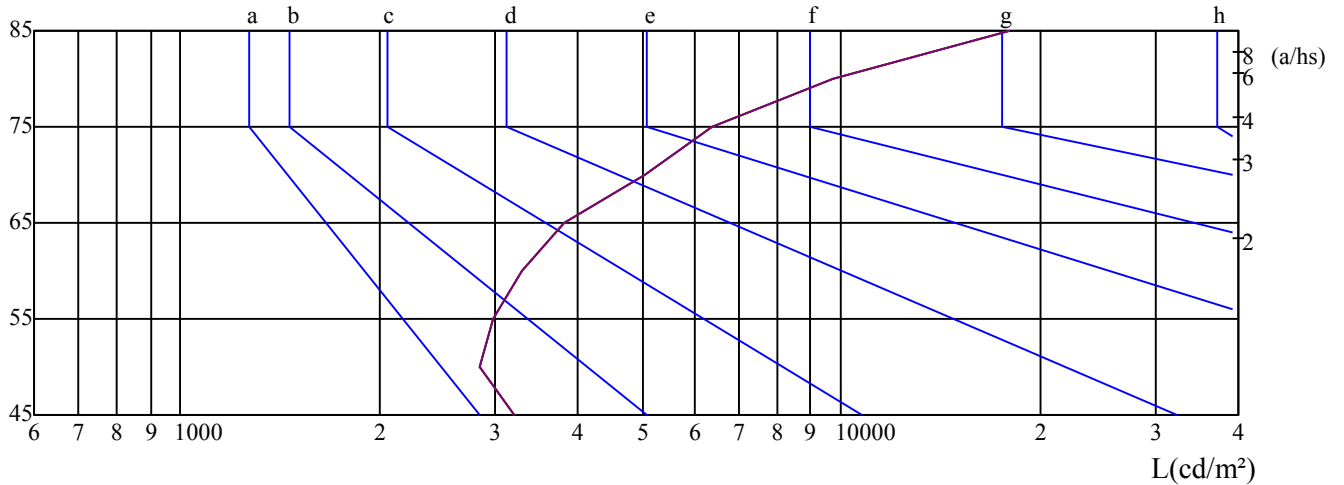
γ	45	50	55	60	65	70	75	80	85
C0	3192	2829	2978	3286	3806	5040	6395	9715	18008
C45	3192	2829	2978	3286	3806	5040	6395	9715	18008
C90	3192	2829	2978	3286	3806	5040	6395	9715	18008

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3806	3806	3806	6395	6395	6395	18008	18008	18008

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

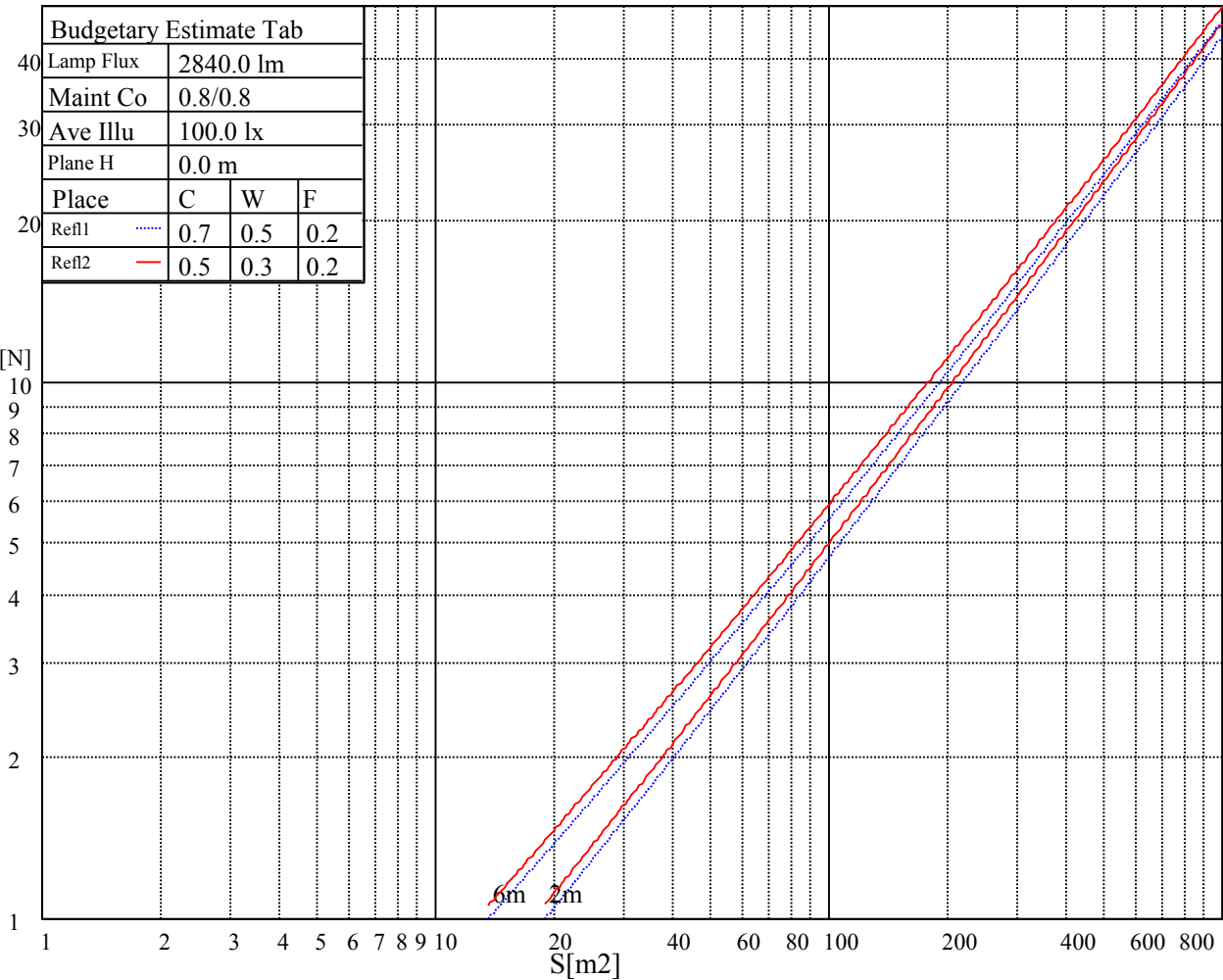
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

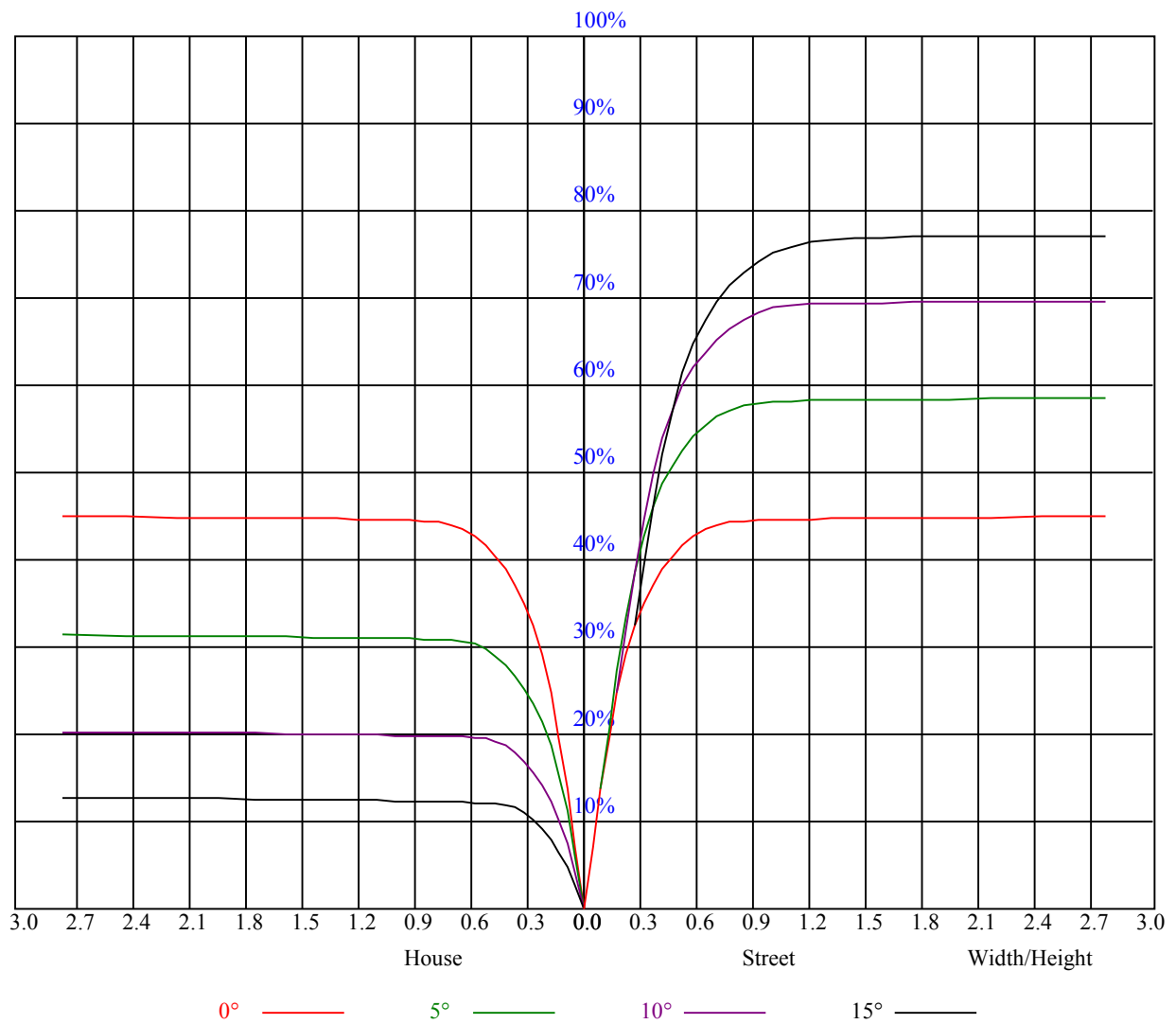
C0 ———

C45 ———

C90 ———



RHOC	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	1.09	1.09	1.09	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	1.01	0.98	0.96	0.99	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.84
2	0.95	0.92	0.89	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.81
3	0.91	0.87	0.84	0.90	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.77	0.81	0.79	0.77	0.75
5	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.73
6	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.75	0.72	0.70	0.69
8	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.67
9	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.65
10	0.71	0.67	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63



NATA 3-1917-A

Intensity data(cd)										Appendix Page: 14 Total:14
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	
0.0	9789.75	8835.75	6233.63	3186.56	1691.44	1120.50	948.38	509.63	40.50	
45.0	9749.81	8621.44	5821.31	2849.63	1483.88	1075.50	917.44	399.38	37.46	
90.0	9779.63	8460.00	5894.44	2908.69	1492.31	1079.89	918.11	415.74	35.27	
135.0	9762.75	9239.63	6952.50	3700.69	1823.06	1150.31	956.81	605.81	153.73	
180.0	9789.75	8825.06	5920.88	3107.81	1597.50	1091.48	917.66	468.00	39.26	
225.0	9749.81	8854.88	6273.56	3386.81	1766.25	1120.61	953.78	559.74	48.32	
270.0	9779.63	8926.88	6402.94	3491.44	1730.81	1137.38	958.50	558.56	44.10	
315.0	9762.75	8328.94	5321.81	2705.06	1446.19	1052.94	921.32	354.60	30.88	
360.0	9789.75	8835.75	6233.63	3186.56	1691.44	1120.50	948.38	509.63	40.50	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	16.76	13.05	12.15	11.64	11.31	11.14	11.08	10.97	10.97	
45.0	14.46	12.77	12.04	11.59	11.31	11.08	10.97	10.91	11.03	
90.0	14.34	12.60	11.93	11.48	11.19	11.03	10.91	11.19	10.97	
135.0	19.63	12.94	12.09	11.59	11.25	11.03	10.86	10.74	10.74	
180.0	14.74	12.88	12.04	11.48	11.14	10.91	10.74	10.63	10.63	
225.0	15.69	12.88	12.09	11.64	11.36	11.14	11.03	10.97	10.91	
270.0	17.94	12.88	12.09	11.76	11.48	16.14	11.25	11.08	11.14	
315.0	13.84	12.66	11.98	11.59	11.76	14.85	16.59	18.73	12.21	
360.0	16.76	13.05	12.15	11.64	11.31	11.14	11.08	10.97	10.97	
C/γ(°)	90.0									
0.0	10.52									
45.0	10.74									
90.0	10.69									
135.0	10.58									
180.0	10.52									
225.0	10.74									
270.0	10.69									
315.0	10.63									
360.0	10.52									