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NATA

LumCAT: 2-1299-N
Luminaire: 92.70.045.00+92.70.059.00
Report No: NATA0100
Test No: GC2018110807
LampCAT: PHILIPS 1205 G7
Lamp flux(lm): 2969.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 35.8000
Current(A): 0.6000
Power (W): 21.4800
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 2270.10
Efficiency(%): 76.46%
Lumens(lm)/Power(W): 108.30
Central intensity(cd): 9752.484
Maximum intensity(cd): 9752.484
Angle of maximum intensity: $C=0.0$ $\gamma=0.0$
Beam Angle(50%Imax): [C0/180]Total=22.2
[C90/270]Total=22.2
Field angle(10%Imax): [C0/180]Total=45.3
[C90/270]Total=45.3
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
Maximum s/h(1/4): C0_180=0.38 C90_270=0.38
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.35%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.530%

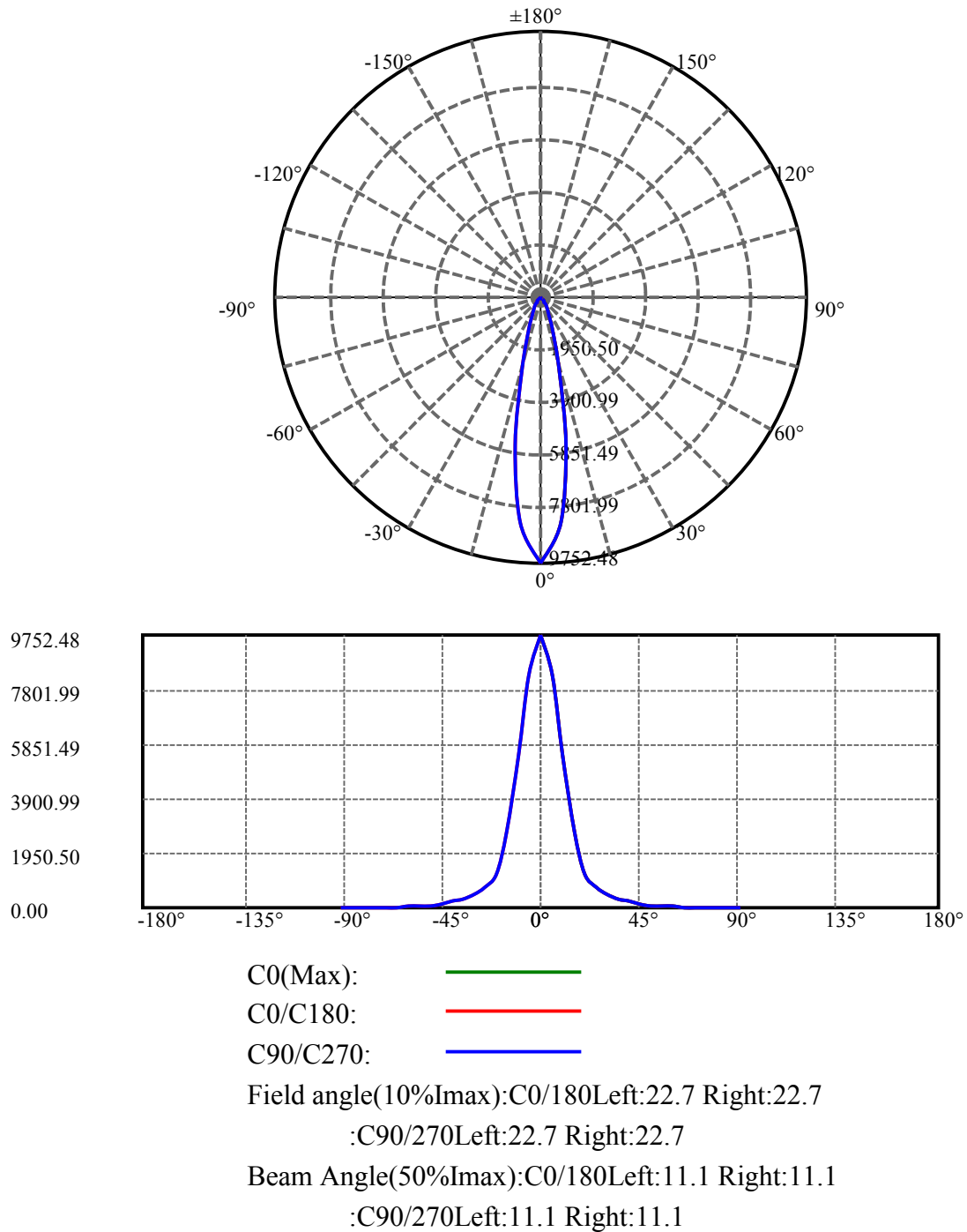
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9752.484	58.322	58.322	1.964%	2.569%
5.0	8323.383	397.636	455.957	13.393%	20.085%
10.0	5470.875	520.735	976.692	17.539%	43.024%
15.0	2744.367	389.339	1366.031	13.113%	60.175%
20.0	1235.152	231.559	1597.59	7.799%	70.375%
25.0	744.785	172.532	1770.121	5.811%	77.976%
30.0	497.672	136.396	1906.518	4.594%	83.984%
35.0	328.809	103.377	2009.895	3.482%	88.538%
40.0	228.213	80.408	2090.303	2.708%	92.080%
45.0	137.222	53.186	2143.489	1.791%	94.423%
50.0	88.685	37.239	2180.727	1.254%	96.063%
55.0	55.055	24.720	2205.447	.833%	97.152%
60.0	35.430	16.819	2222.266	.566%	97.893%
65.0	24.202	12.023	2234.289	.405%	98.423%
70.0	20.306	10.459	2244.749	.352%	98.883%
75.0	17.205	9.110	2253.858	.307%	99.285%
80.0	14.245	7.690	2261.548	.259%	99.623%
85.0	11.074	6.047	2267.595	.204%	99.890%
90.0	9.127	2.501	2270.096	.084%	100.000%

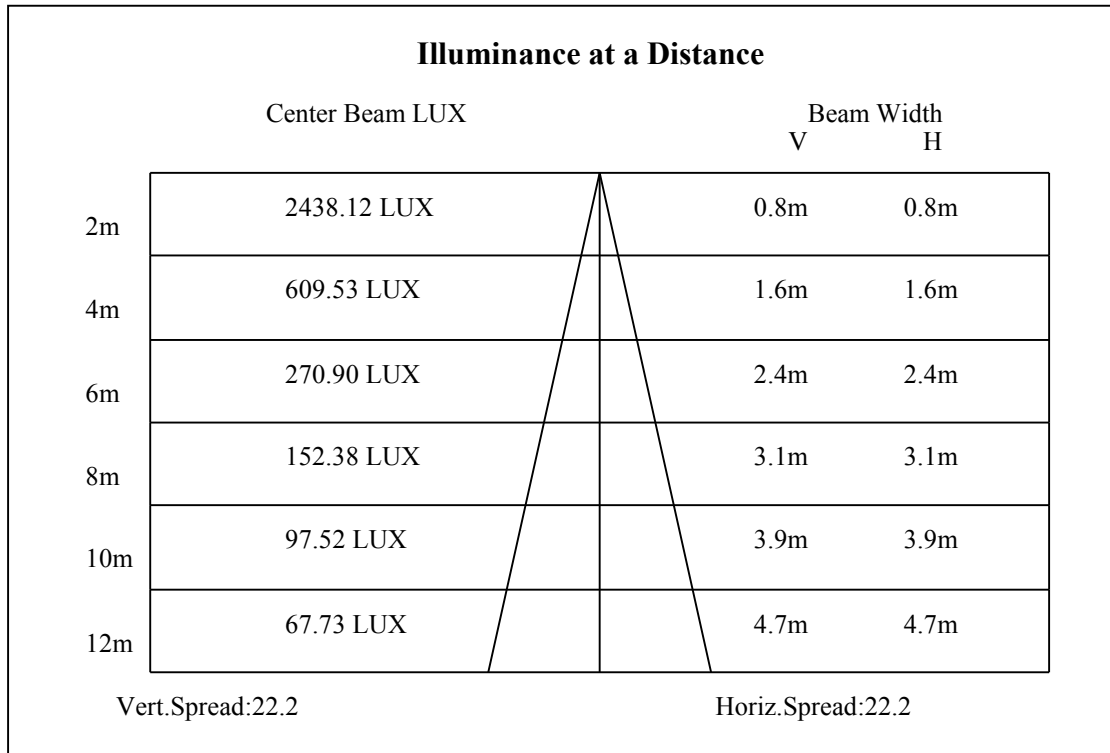
ZONAL LUMEN SUMMARY

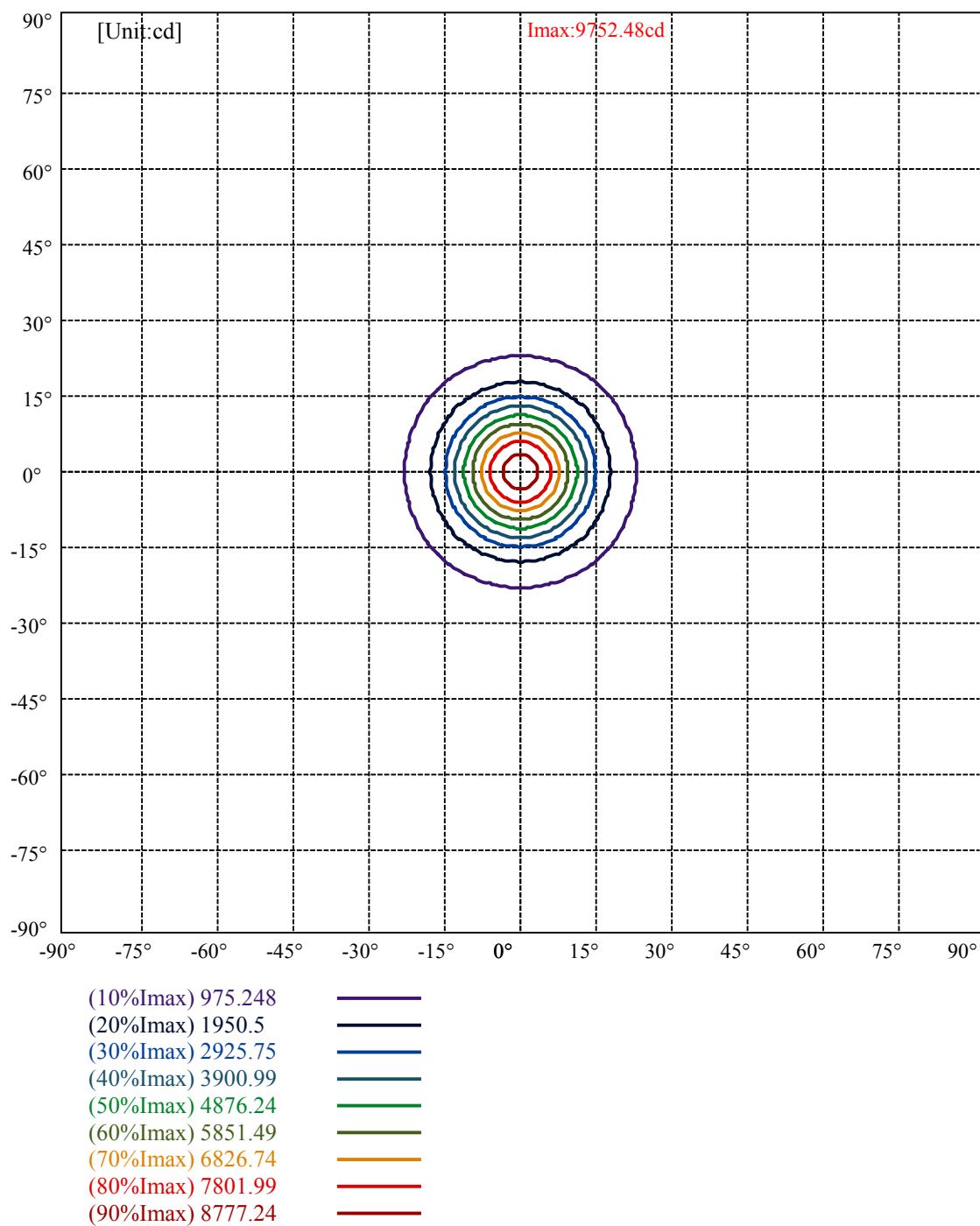
Zone	Lumens	%Lamp	%Fixt
0-30	1906.52	64.21%	83.98%
0-40	2090.30	70.40%	92.08%
0-60	2222.27	74.85%	97.89%
0-90	2267.60	76.38%	99.89%
0-120	2267.60	76.38%	99.89%
0-180	2270.10	76.46%	100.00%
60-90	62.15	2.09%	2.74%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.68	1816.08	61.17%	80.00%

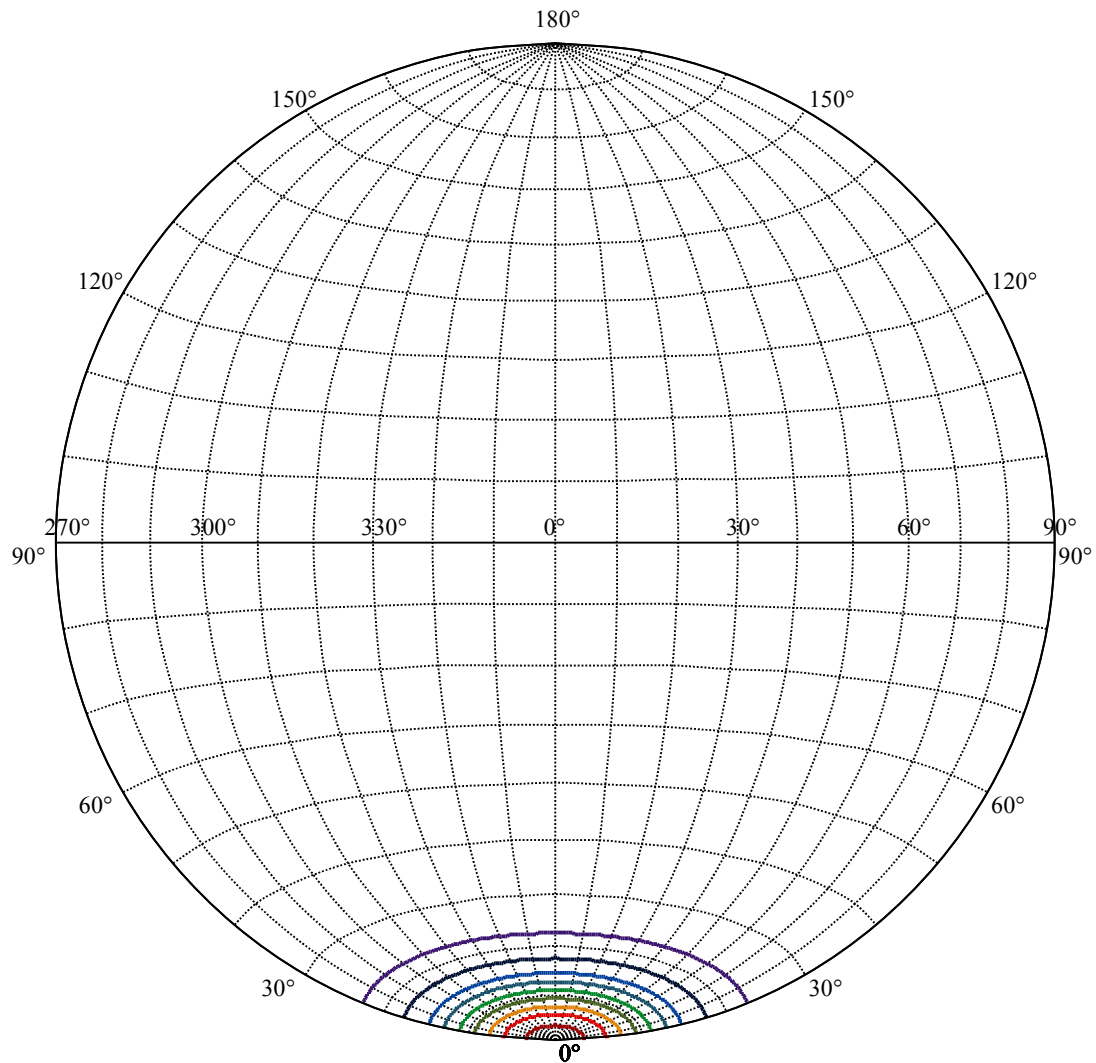
ZONAL LUMEN SUMMARY

0-10	976.69
10-20	620.90
20-30	308.93
30-40	183.78
40-50	90.42
50-60	41.54
60-70	22.48
70-80	16.80
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









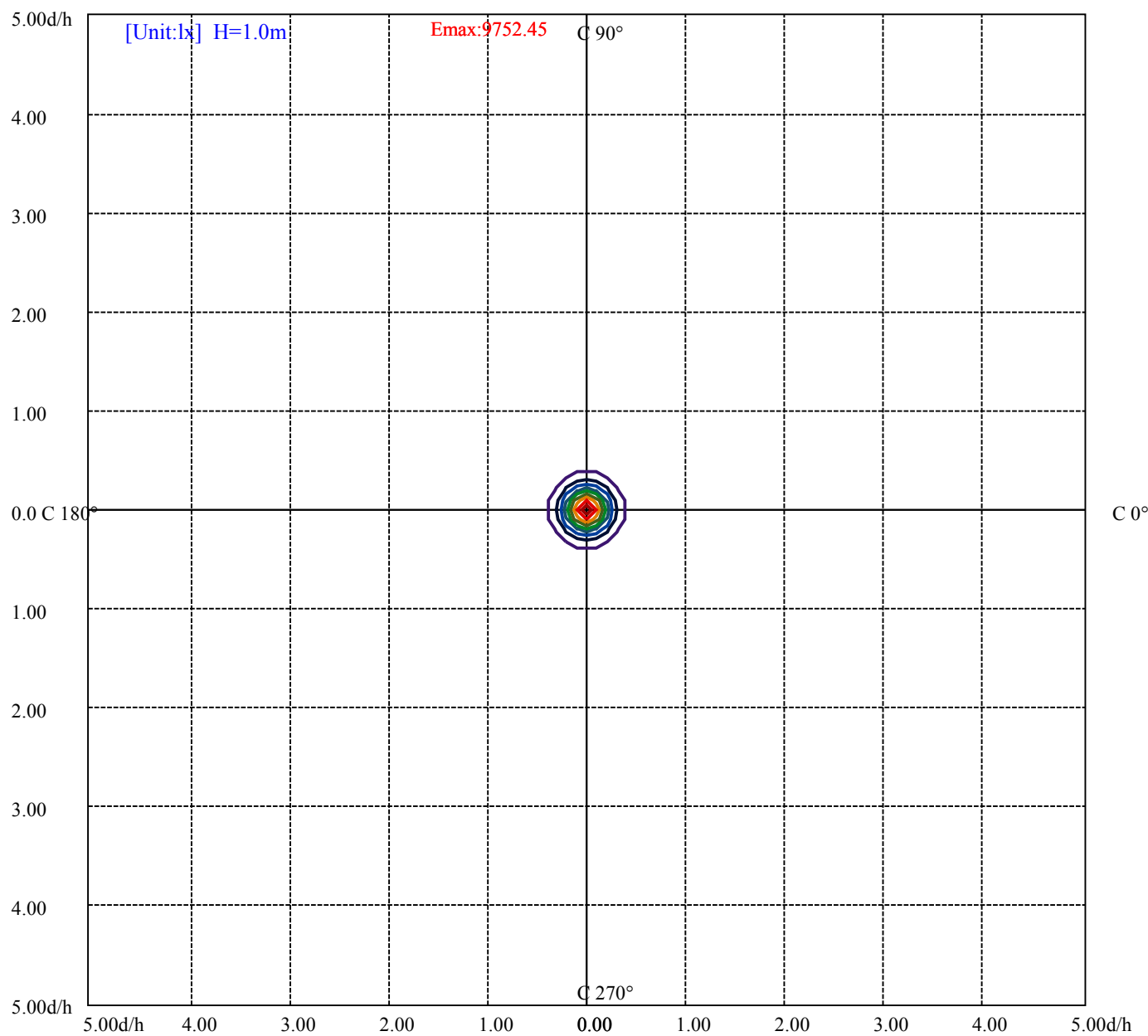
House

[Unit:cd]

Road

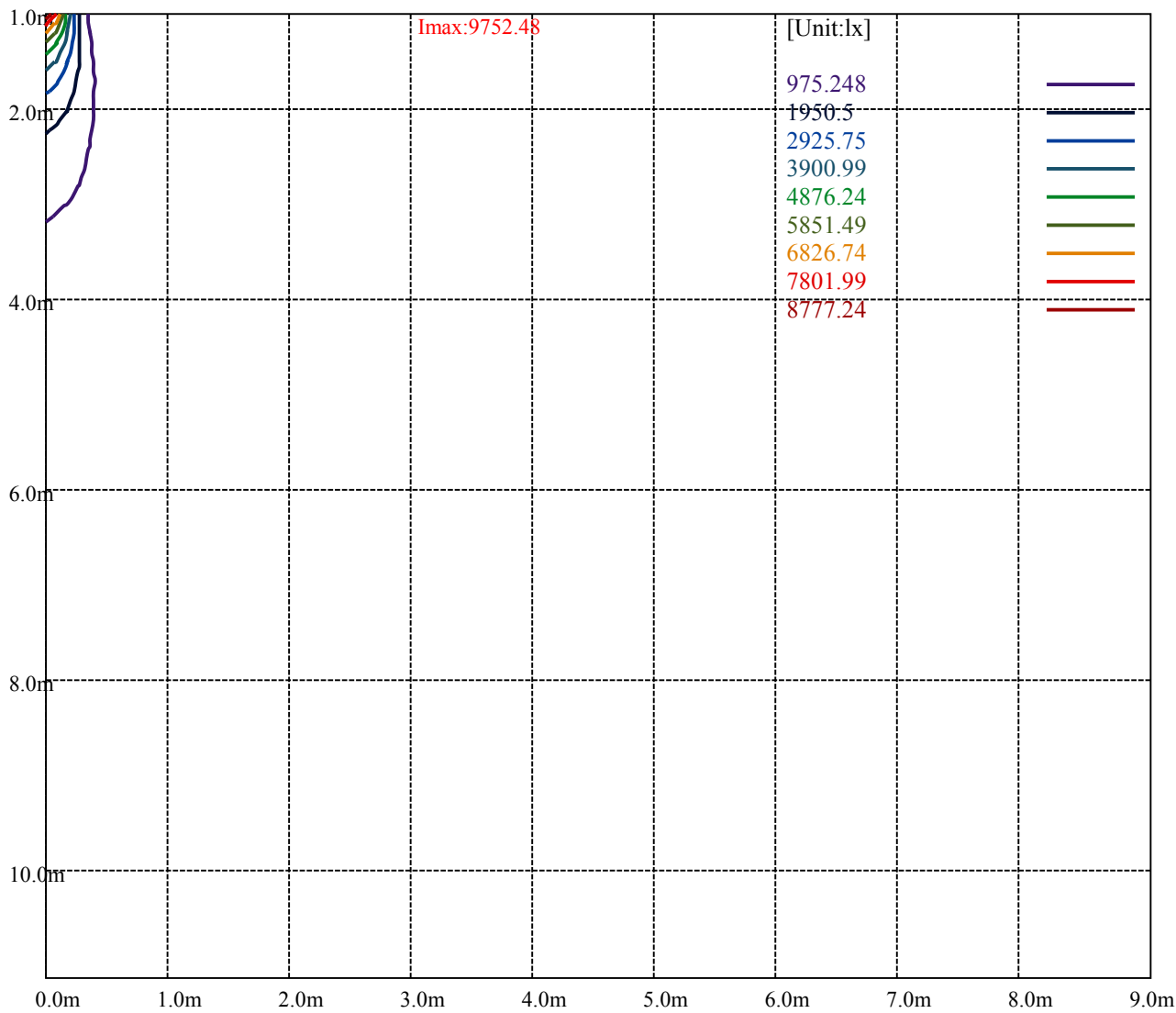
Imax:9752.48

(10%Imax)	975.248	—
(20%Imax)	1950.5	—
(30%Imax)	2925.75	—
(40%Imax)	3900.99	—
(50%Imax)	4876.24	—
(60%Imax)	5851.49	—
(70%Imax)	6826.74	—
(80%Imax)	7801.99	—
(90%Imax)	8777.24	—



(10%Emax) 975.244
(20%Emax) 1950.49
(30%Emax) 2925.73
(40%Emax) 3900.98
(50%Emax) 4876.22
(60%Emax) 5851.46
(70%Emax) 6826.71
(80%Emax) 7801.95
(90%Emax) 8777.2





Luminance Table

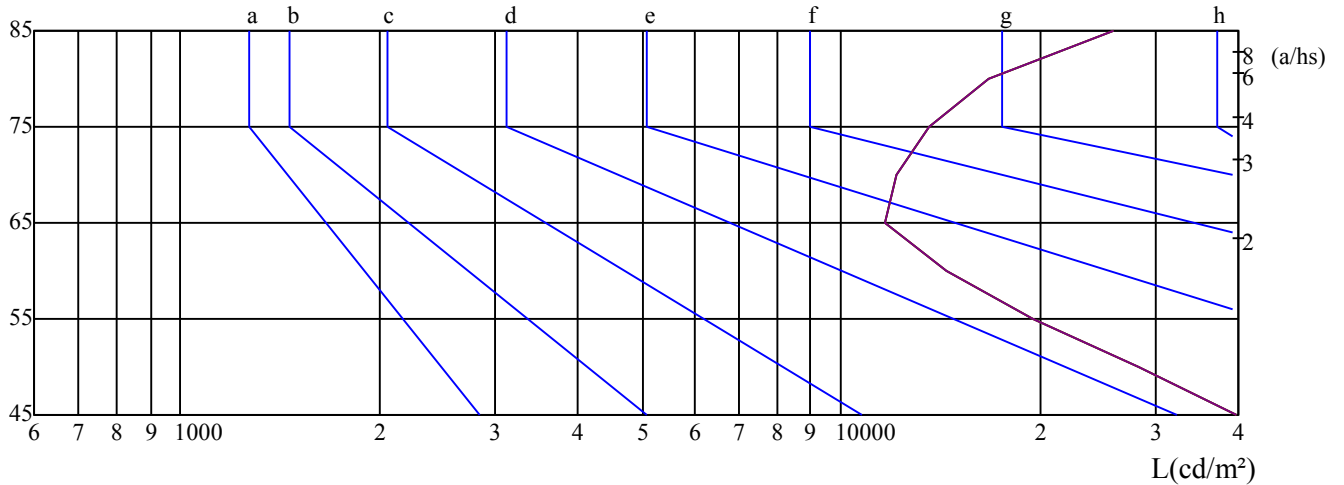
γ	45	50	55	60	65	70	75	80	85
C0	39604	28157	19589	14461	11687	12117	13567	16742	25931
C45	39604	28157	19589	14461	11687	12117	13567	16742	25931
C90	39604	28157	19589	14461	11687	12117	13567	16742	25931

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11687	11687	11687	13567	13567	13567	25931	25931	25931

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

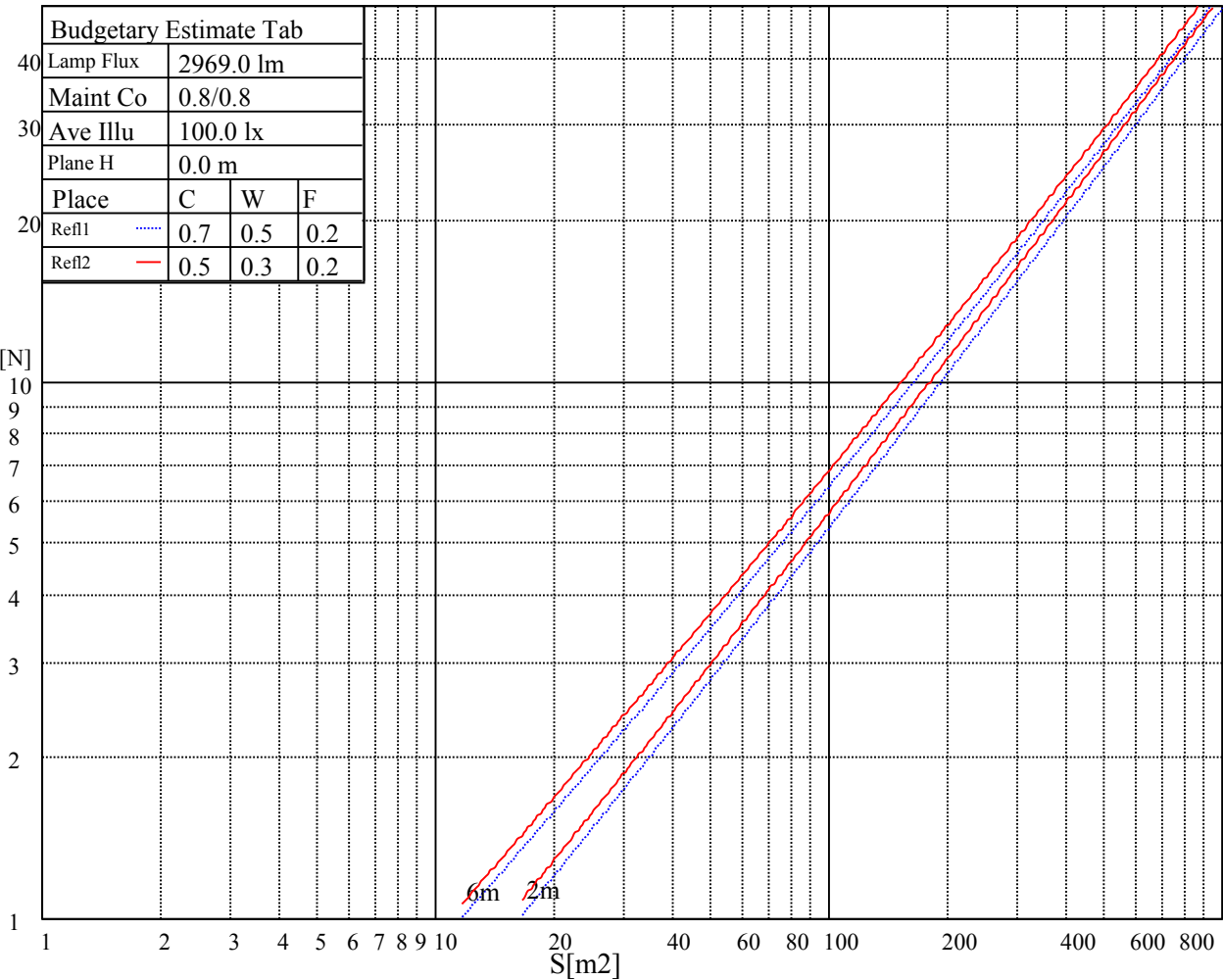
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

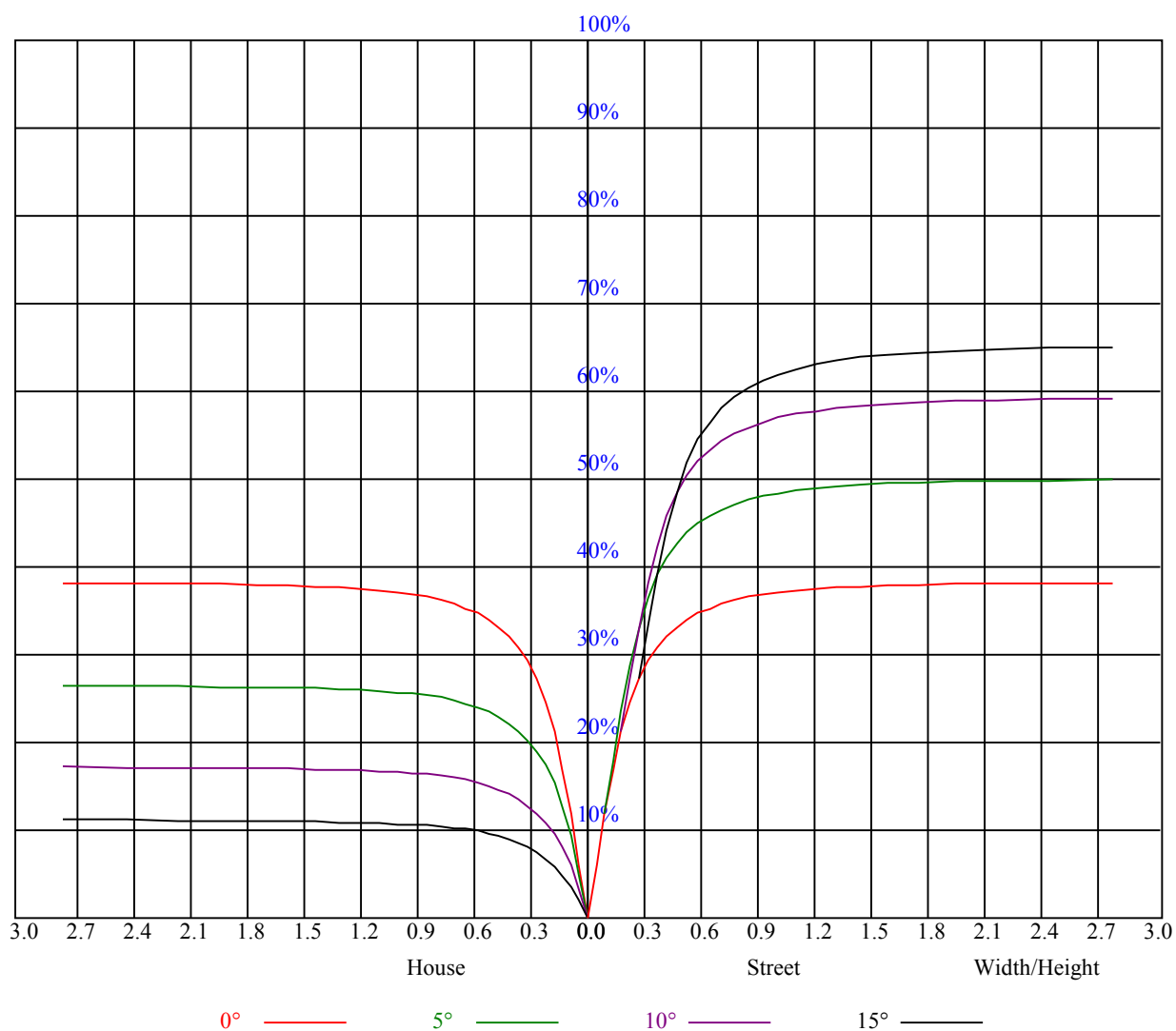
C0 ———

C45 ———

C90 ———



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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.79	0.77	0.77	0.76	0.75	0.75	0.73	0.72	0.71
2	0.81	0.77	0.75	0.79	0.76	0.74	0.77	0.74	0.72	0.74	0.72	0.71	0.72	0.71	0.69	0.68
3	0.76	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.65
4	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.67	0.65	0.69	0.66	0.64	0.68	0.65	0.64	0.62
5	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
6	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.58
7	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.56
8	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.60	0.58	0.56	0.55
9	0.61	0.57	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.53
10	0.59	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.52



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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	9623.81	9137.81	6822.00	3598.88	1648.13	869.63	585.56	386.44	295.31
45.0	9839.25	8277.19	5495.63	2677.50	1234.69	755.44	504.00	330.19	221.68
90.0	9715.50	7551.56	4568.06	2116.69	1072.24	671.68	444.66	296.66	192.26
135.0	9831.38	7916.63	4957.31	2447.44	1158.75	700.88	468.00	303.19	196.31
180.0	9623.81	7358.63	4366.13	1990.69	984.32	630.96	418.28	274.89	181.63
225.0	9839.25	8354.81	5286.94	2646.56	1097.61	697.22	484.14	320.34	215.83
270.0	9715.50	9115.88	6311.81	3450.38	1572.75	832.50	550.69	372.94	287.44
315.0	9831.38	8874.56	5959.13	3026.81	1112.74	799.99	526.05	345.83	235.24
360.0	9623.81	9137.81	6822.00	3598.88	1648.13	869.63	585.56	386.44	295.31
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	161.55	104.23	63.96	41.63	26.38	21.21	18.23	15.19	11.81
45.0	138.54	88.09	55.18	34.93	23.74	20.08	17.16	14.12	10.74
90.0	121.84	79.71	48.99	31.28	23.18	19.69	16.59	13.50	10.29
135.0	125.16	82.80	51.47	33.08	23.51	19.97	16.76	13.89	10.58
180.0	114.98	73.63	45.68	30.09	22.39	19.13	16.20	13.16	10.24
225.0	135.56	86.01	53.21	34.82	23.85	20.03	16.82	14.18	11.31
270.0	153.51	100.80	62.04	39.60	25.65	21.43	18.17	15.24	12.04
315.0	146.64	94.22	59.91	38.03	24.92	20.93	17.72	14.68	11.59
360.0	161.55	104.23	63.96	41.63	26.38	21.21	18.23	15.19	11.81
C/ γ (°)	90.0								
0.0	9.34								
45.0	9.06								
90.0	9.06								
135.0	9.06								
180.0	9.11								
225.0	9.06								
270.0	9.11								
315.0	9.23								
360.0	9.34								