
Nata

LumCAT: 1547-E	
Luminaire: 92.70.043.00	
Report No: NT2017080408	Voltage(V): 38.7000
Test No: GC2017080408	Current(A): 0.3000
LampCAT: SEOUL SAWx06	Power (W): 11.6100
Lamp flux(lm): 1216.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 21	Width(mm): 21
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1070.42
Efficiency(%): 88.03%
Lumens(lm)/Power(W): 92.20
Central intensity(cd): 1053.248
Maximum intensity(cd): 1053.248
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=60.9
[C90/270]Total=60.9
Field angle(10%Imax): [C0/180]Total=95.8
[C90/270]Total=95.8
Maximum s/h(1/2): C0_180=0.84 C90_270=0.84
Maximum s/h(1/4): C0_180=0.96 C90_270=0.96
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.46%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.792%

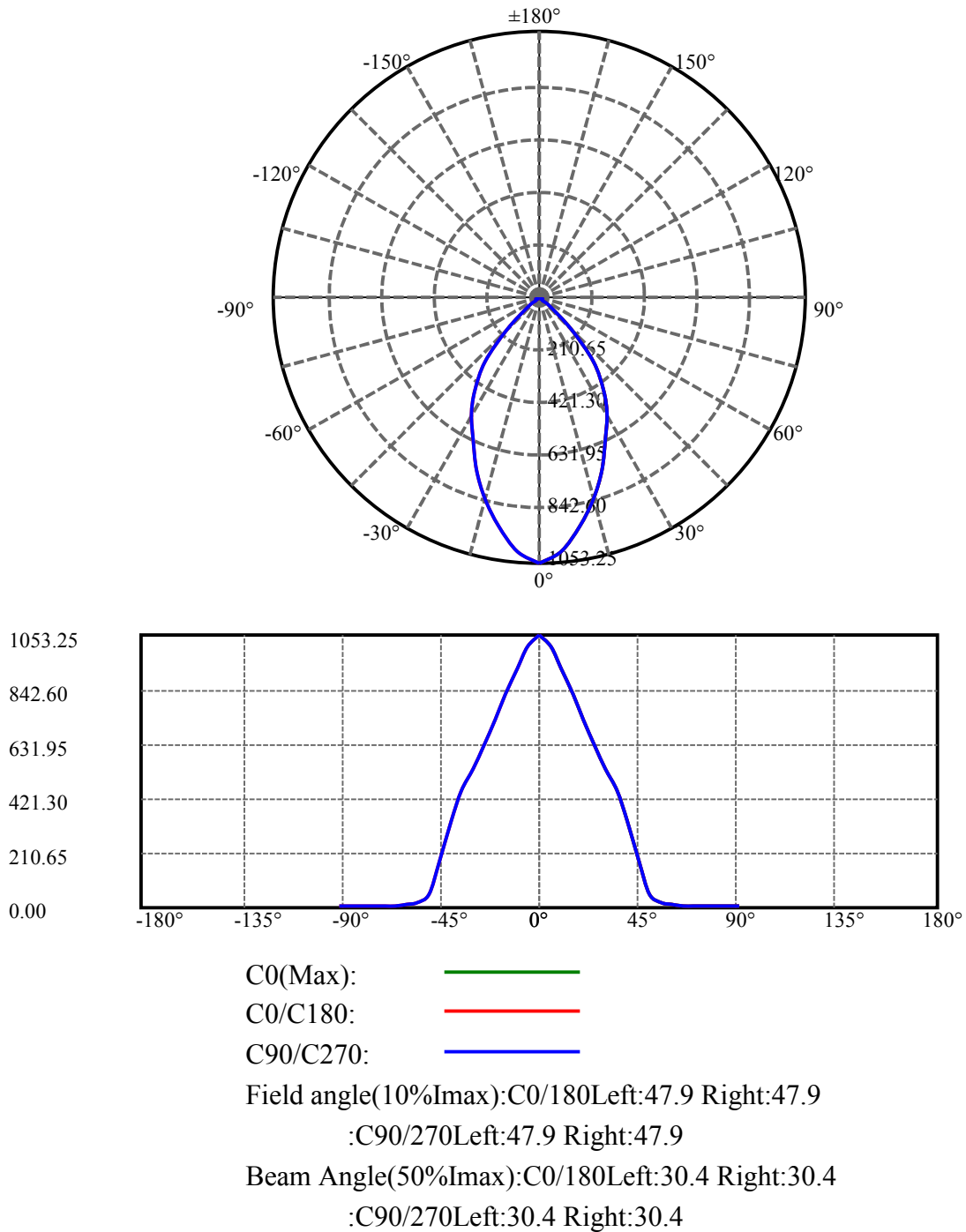
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1053.248	6.299	6.299	.518%	.588%
5.0	1007.016	48.108	54.407	3.956%	5.083%
10.0	920.909	87.655	142.062	7.208%	13.272%
15.0	825.285	117.082	259.144	9.628%	24.210%
20.0	728.403	136.557	395.701	11.230%	36.967%
25.0	623.437	144.421	540.122	11.877%	50.459%
30.0	533.956	146.341	686.462	12.035%	64.130%
35.0	450.061	141.499	827.961	11.636%	77.349%
40.0	334.932	118.009	945.97	9.705%	88.374%
45.0	177.139	68.658	1014.627	5.646%	94.788%
50.0	54.093	22.714	1037.341	1.868%	96.910%
55.0	19.617	8.808	1046.149	.724%	97.733%
60.0	12.216	5.799	1051.948	.477%	98.275%
65.0	8.389	4.168	1056.116	.343%	98.664%
70.0	7.005	3.608	1059.724	.297%	99.001%
75.0	6.073	3.215	1062.939	.264%	99.301%
80.0	6.289	3.395	1066.334	.279%	99.618%
85.0	5.544	3.027	1069.361	.249%	99.901%
90.0	3.854	1.056	1070.418	.087%	100.000%

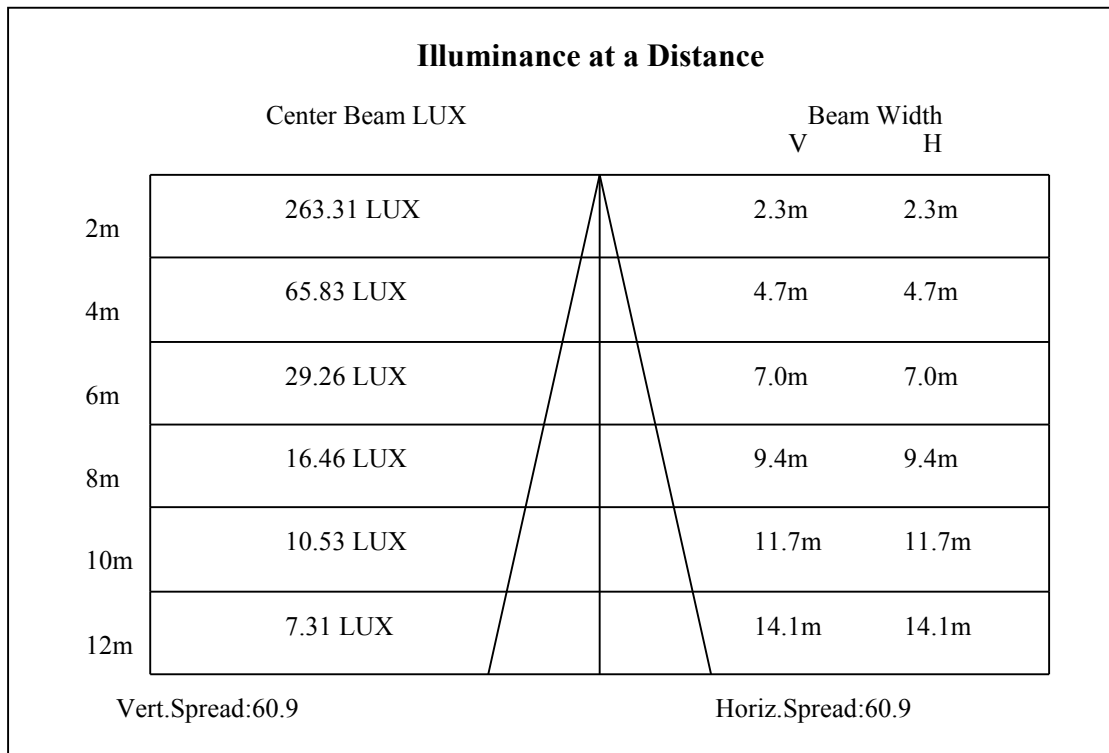
ZONAL LUMEN SUMMARY

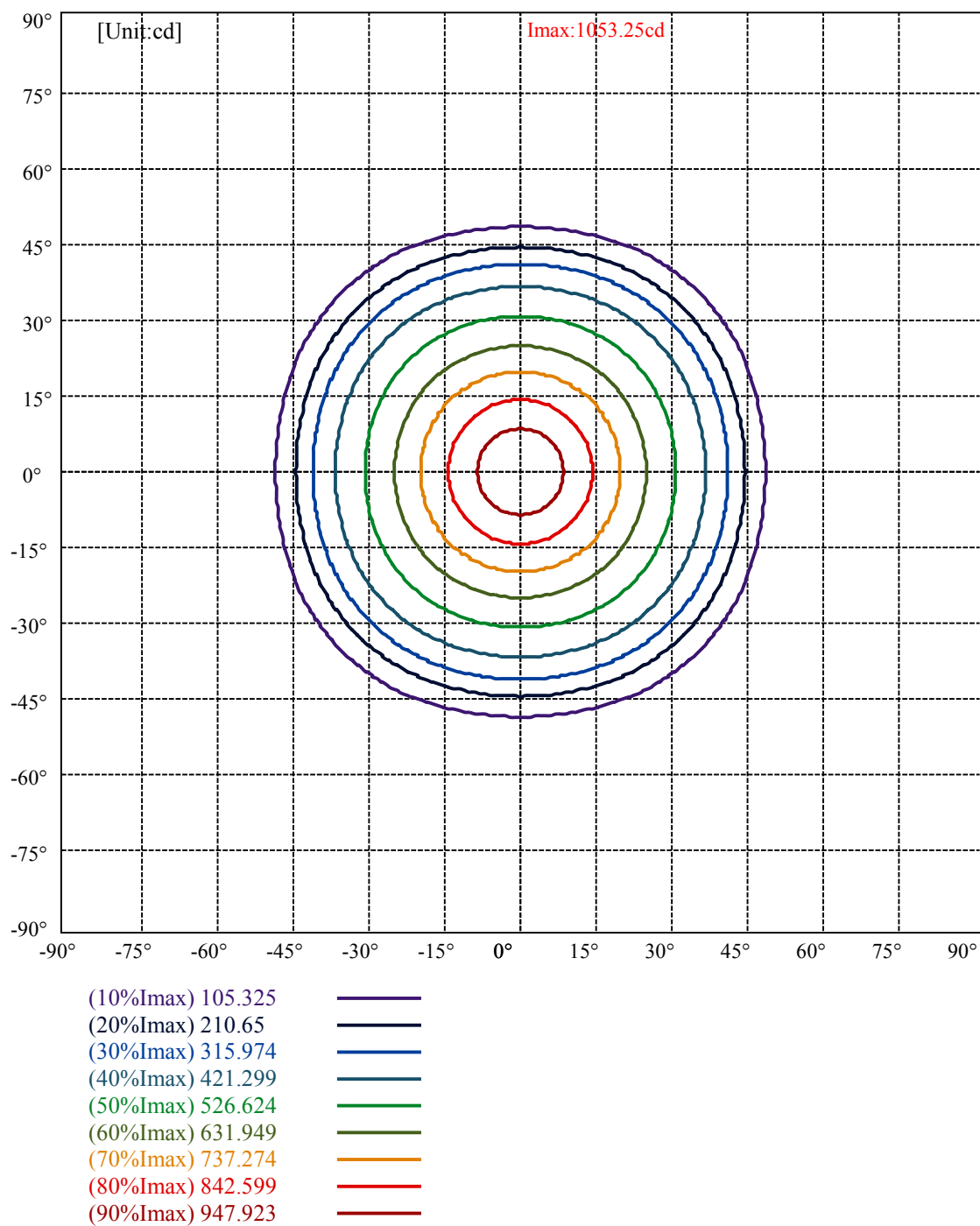
Zone	Lumens	%Lamp	%Fixt
0-30	686.46	56.45%	64.13%
0-40	945.97	77.79%	88.37%
0-60	1051.95	86.51%	98.27%
0-90	1069.36	87.94%	99.90%
0-120	1069.36	87.94%	99.90%
0-180	1070.42	88.03%	100.00%
60-90	23.21	1.91%	2.17%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-36.20	856.33	70.42%	80.00%

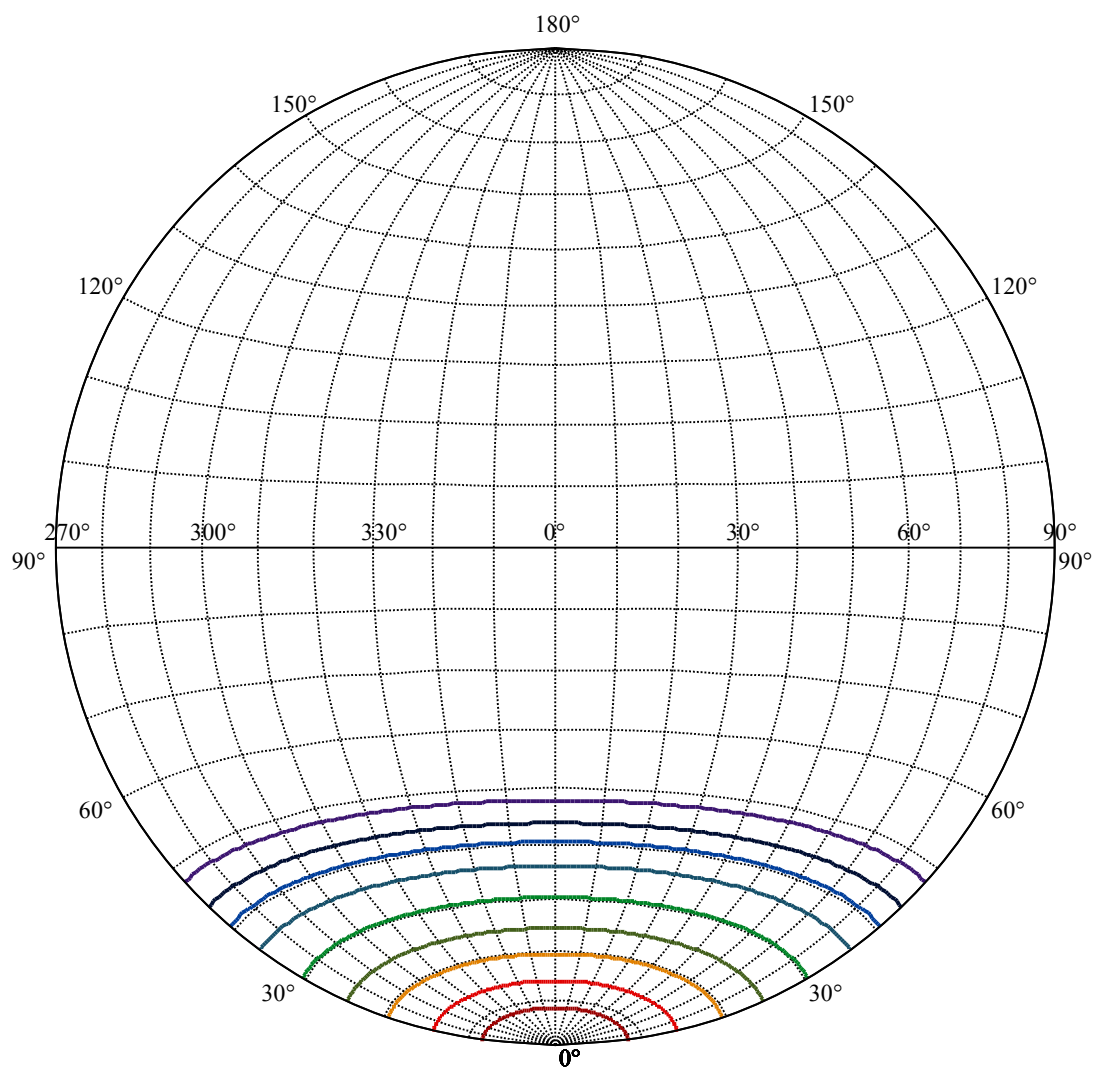
ZONAL LUMEN SUMMARY

0-10	142.06
10-20	253.64
20-30	290.76
30-40	259.51
40-50	91.37
50-60	14.61
60-70	7.78
70-80	6.61
80-90	3.03
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









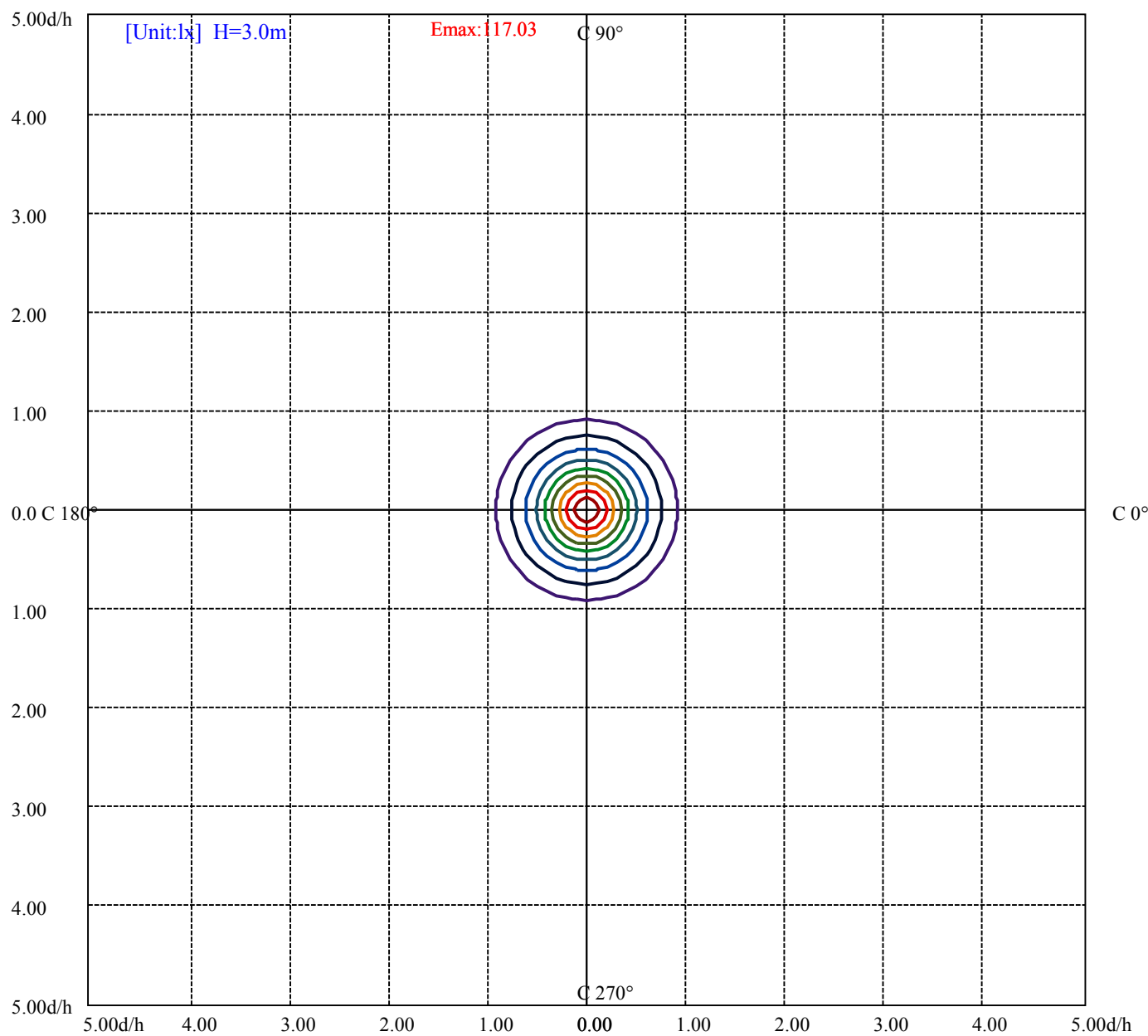
House

[Unit:cd]

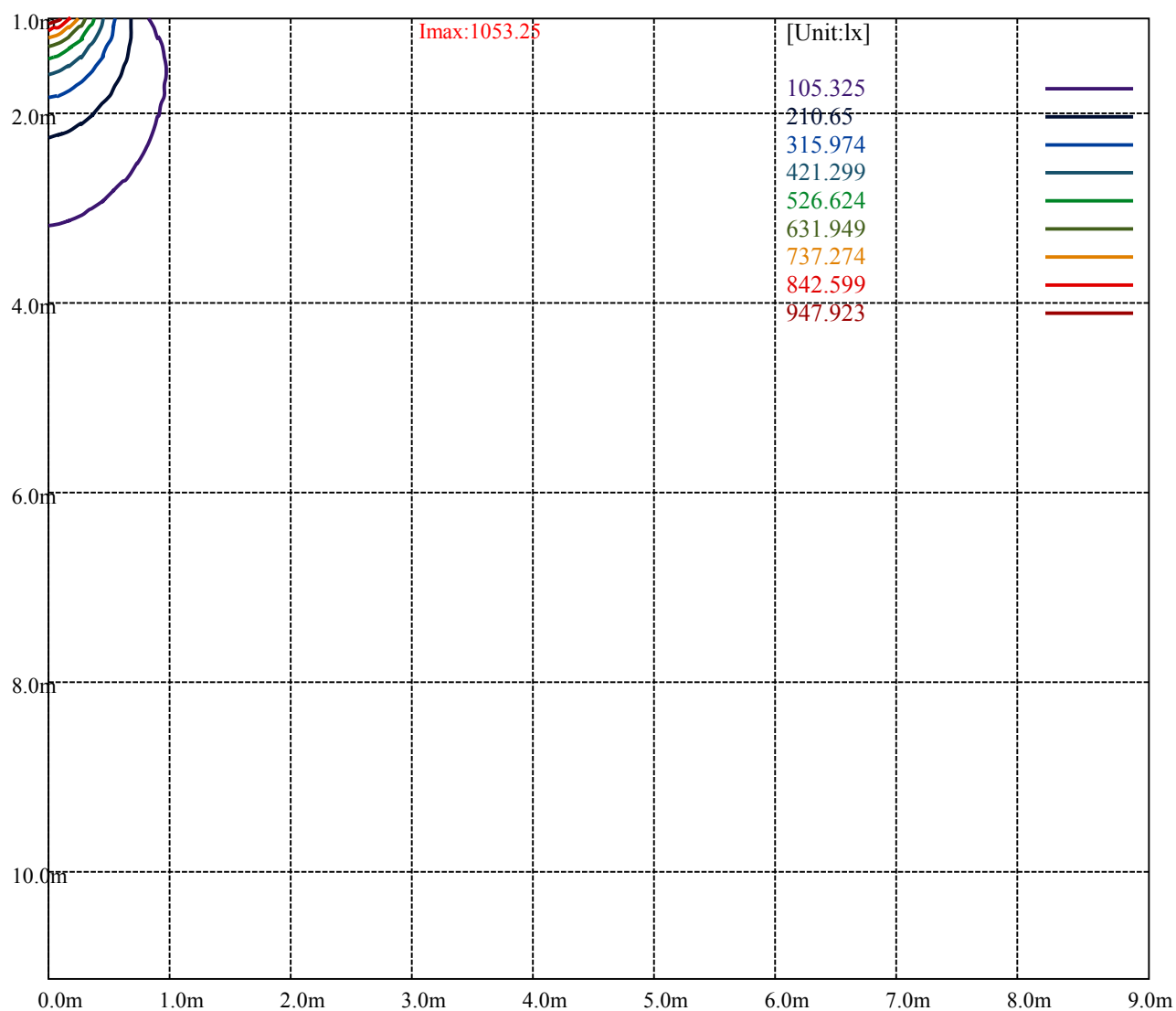
Road

Imax:1053.25

(10%Imax)	105.325	
(20%Imax)	210.65	
(30%Imax)	315.974	
(40%Imax)	421.299	
(50%Imax)	526.624	
(60%Imax)	631.949	
(70%Imax)	737.274	
(80%Imax)	842.599	
(90%Imax)	947.923	



(10%E _{max}) 11.70278	—
(20%E _{max}) 23.40545	—
(30%E _{max}) 35.10822	—
(40%E _{max}) 46.811	—
(50%E _{max}) 58.51366	—
(60%E _{max}) 70.21645	—
(70%E _{max}) 81.91922	—
(80%E _{max}) 93.62189	—
(90%E _{max}) 105.3247	—



Luminance Table

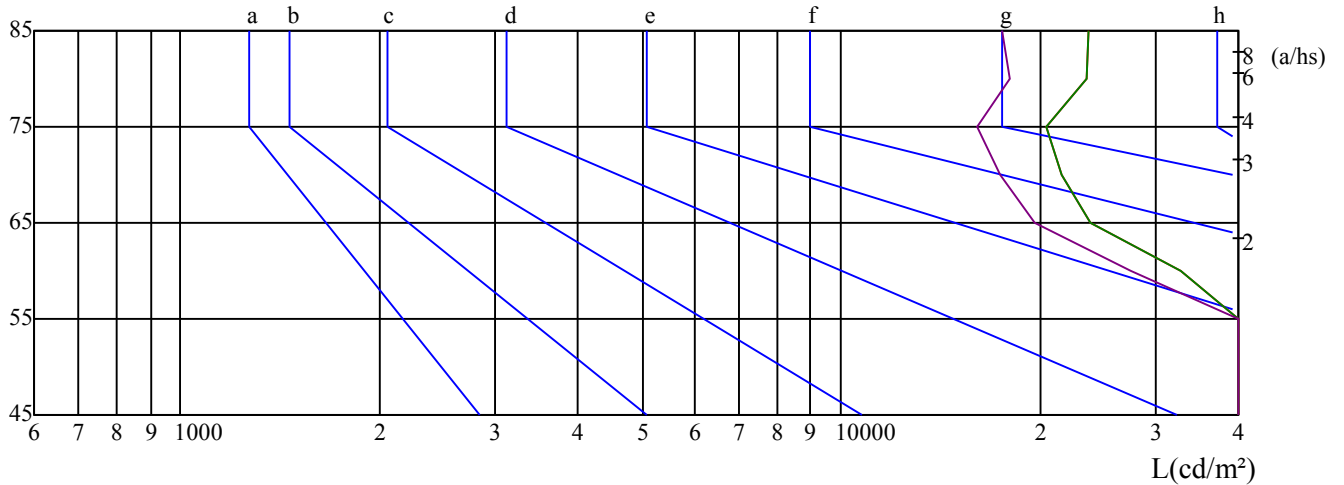
γ	45	50	55	60	65	70	75	80	85
C0	417521	131831	49883	32731	23949	21571	20468	23604	23683
C45	366867	114173	42542	27454	19722	17400	16120	18071	17510
C90	417521	131831	49883	32731	23949	21571	20468	23604	23683

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
49628	49628	49628	58660	58660	58660	159034	159034	159034

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

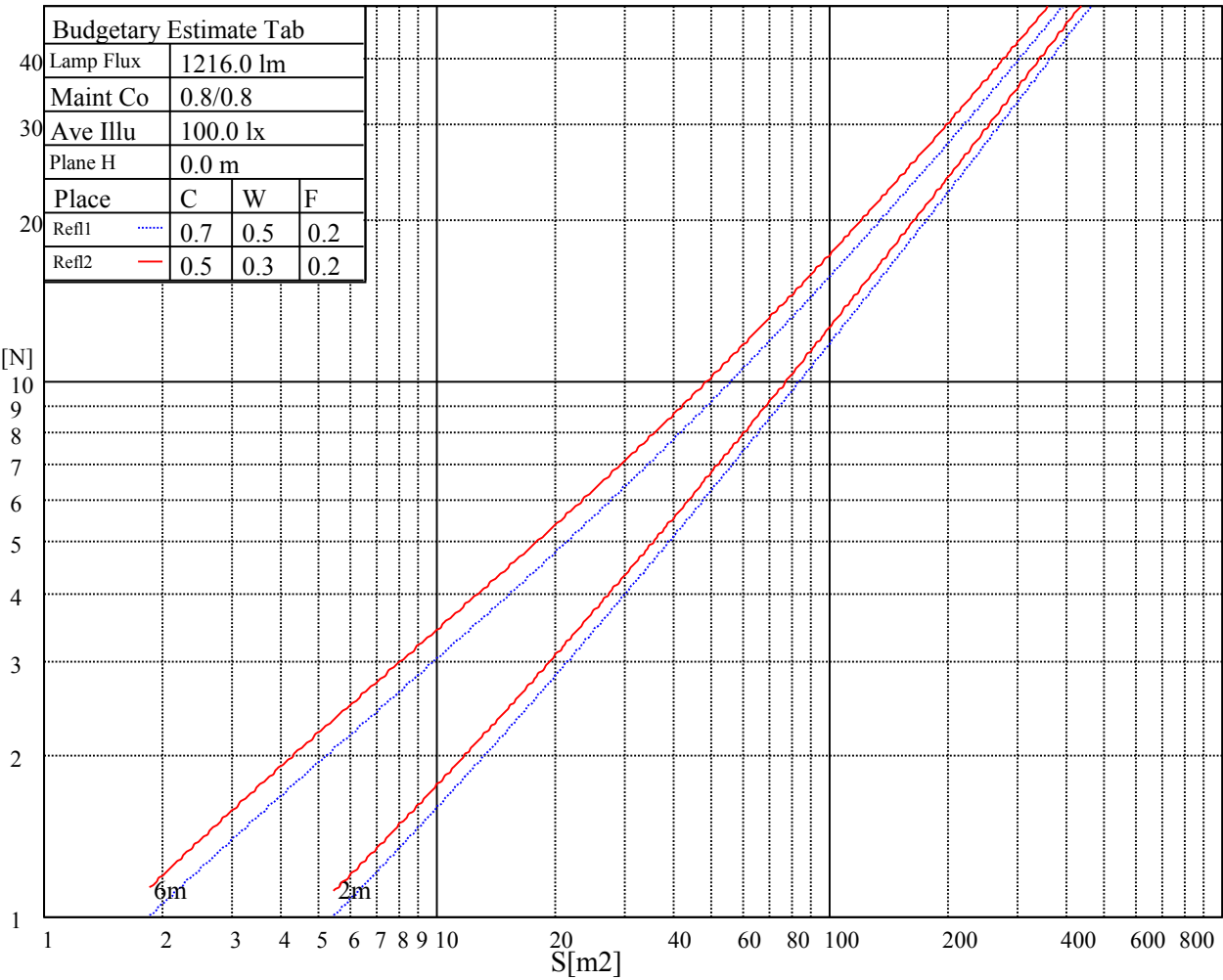
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

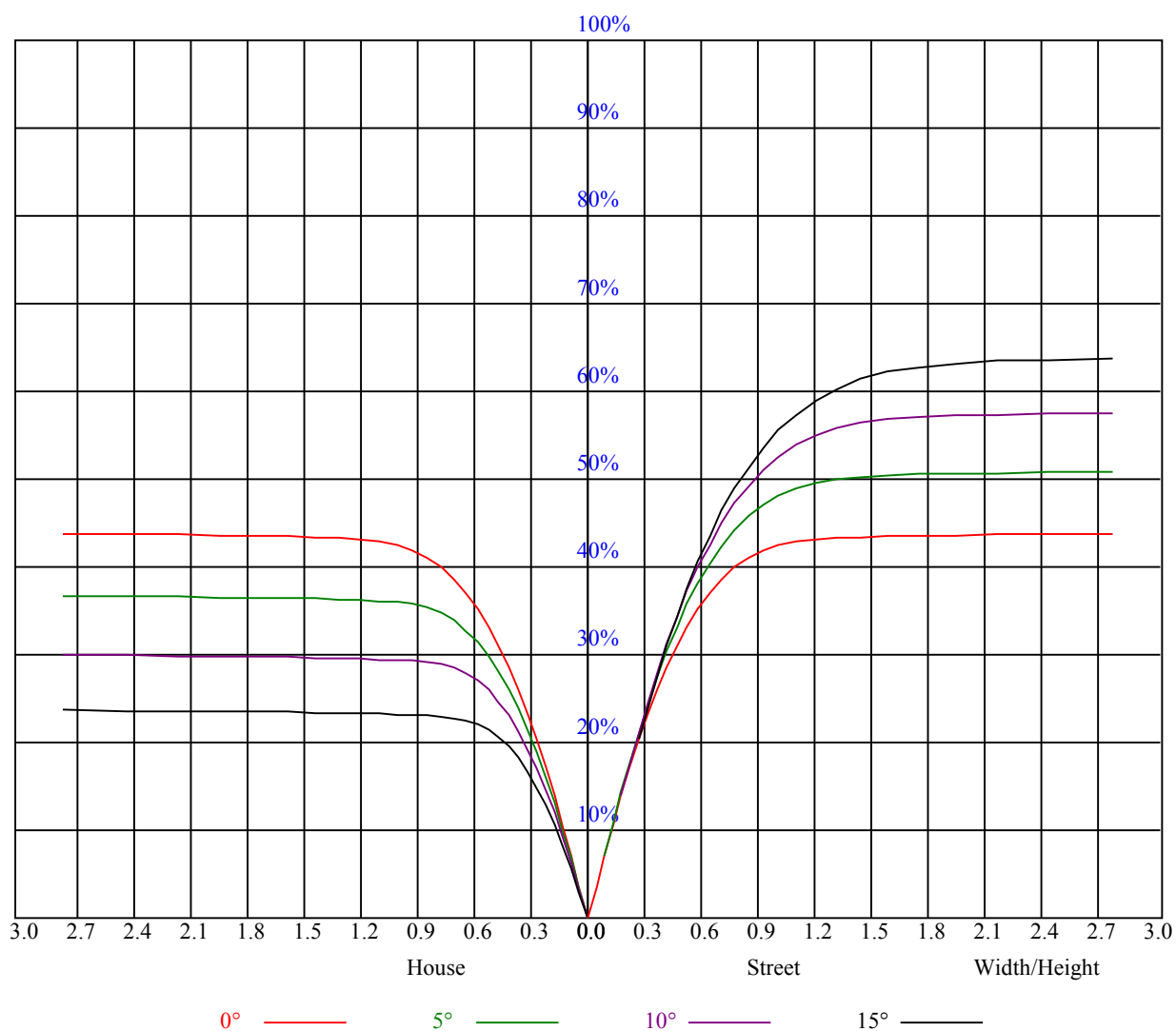
C0 ———

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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.94	0.92	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.81
2	0.90	0.86	0.83	0.88	0.85	0.82	0.85	0.82	0.80	0.83	0.80	0.78	0.80	0.78	0.77	0.75
3	0.83	0.79	0.75	0.82	0.78	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.69
4	0.78	0.72	0.69	0.77	0.72	0.68	0.75	0.71	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.64
5	0.73	0.67	0.63	0.72	0.67	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.67	0.64	0.61	0.60
6	0.68	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.60	0.57	0.63	0.60	0.57	0.56
7	0.64	0.58	0.54	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.52
8	0.60	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.50	0.57	0.53	0.50	0.57	0.53	0.50	0.49
9	0.57	0.51	0.47	0.56	0.51	0.47	0.55	0.51	0.47	0.54	0.50	0.47	0.54	0.50	0.47	0.46
10	0.53	0.48	0.45	0.53	0.48	0.45	0.52	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.43



Nata 1547-E

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	1053.60	1011.47	922.54	814.29	717.68	625.13	534.14	444.43	341.37		
45.0	1053.71	982.42	896.66	792.26	695.14	597.81	518.78	443.43	322.11		
90.0	1047.36	978.69	885.47	790.75	691.58	585.68	503.59	428.96	306.92		
135.0	1058.33	1004.12	928.77	836.89	738.89	627.53	532.70	445.88	331.91		
180.0	1053.60	1002.84	917.31	838.00	748.74	626.36	530.58	451.61	328.85		
225.0	1053.71	1023.32	934.39	847.96	749.85	650.68	559.13	480.38	366.86		
270.0	1047.36	1037.07	955.48	852.53	760.42	649.18	553.57	472.04	380.27		
315.0	1058.33	1016.20	926.65	829.60	724.92	625.13	539.15	433.75	301.19		
360.0	1053.60	1011.47	922.54	814.29	717.68	625.13	534.14	444.43	341.37		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	191.00	59.94	23.10	14.80	8.63	7.23	6.23	6.34	5.51		
45.0	154.66	38.57	16.47	10.02	8.13	6.96	6.18	8.46	6.68		
90.0	137.35	32.17	14.97	9.41	7.62	6.62	5.90	7.68	5.90		
135.0	184.99	52.15	18.20	10.91	8.07	6.85	5.95	5.18	4.34		
180.0	181.98	52.09	16.92	10.07	7.62	6.57	5.73	6.34	5.79		
225.0	209.14	64.61	18.75	12.47	8.40	6.96	6.12	5.57	6.12		
270.0	215.82	81.36	19.81	14.69	8.40	6.96	6.01	5.34	5.23		
315.0	142.19	51.87	28.72	15.36	10.24	7.90	6.46	5.40	4.79		
360.0	191.00	59.94	23.10	14.80	8.63	7.23	6.23	6.34	5.51		
C/γ(°)	90.0										
0.0	3.84										
45.0	3.78										
90.0	3.84										
135.0	3.78										
180.0	3.73										
225.0	4.01										
270.0	4.01										
315.0	3.84										
360.0	3.84										