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NATA

LumCAT: 2-1537-A	
Luminaire:92.76.323.00	
Report No: NATA0100	Voltage(V): 36.1000
Test No: GC2018111009	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): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2573.17
Efficiency(%): 90.60%
Lumens(lm)/Power(W): 120.29
Central intensity(cd): 5828.484
Maximum intensity(cd): 5828.484
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.4
[C90/270]Total=34.4
Field angle(10%Imax): [C0/180]Total=70.6
[C90/270]Total=70.6
Maximum s/h(1/2): C0_180=0.57 C90_270=0.57
Maximum s/h(1/4): C0_180=0.58 C90_270=0.58
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.75%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.426%

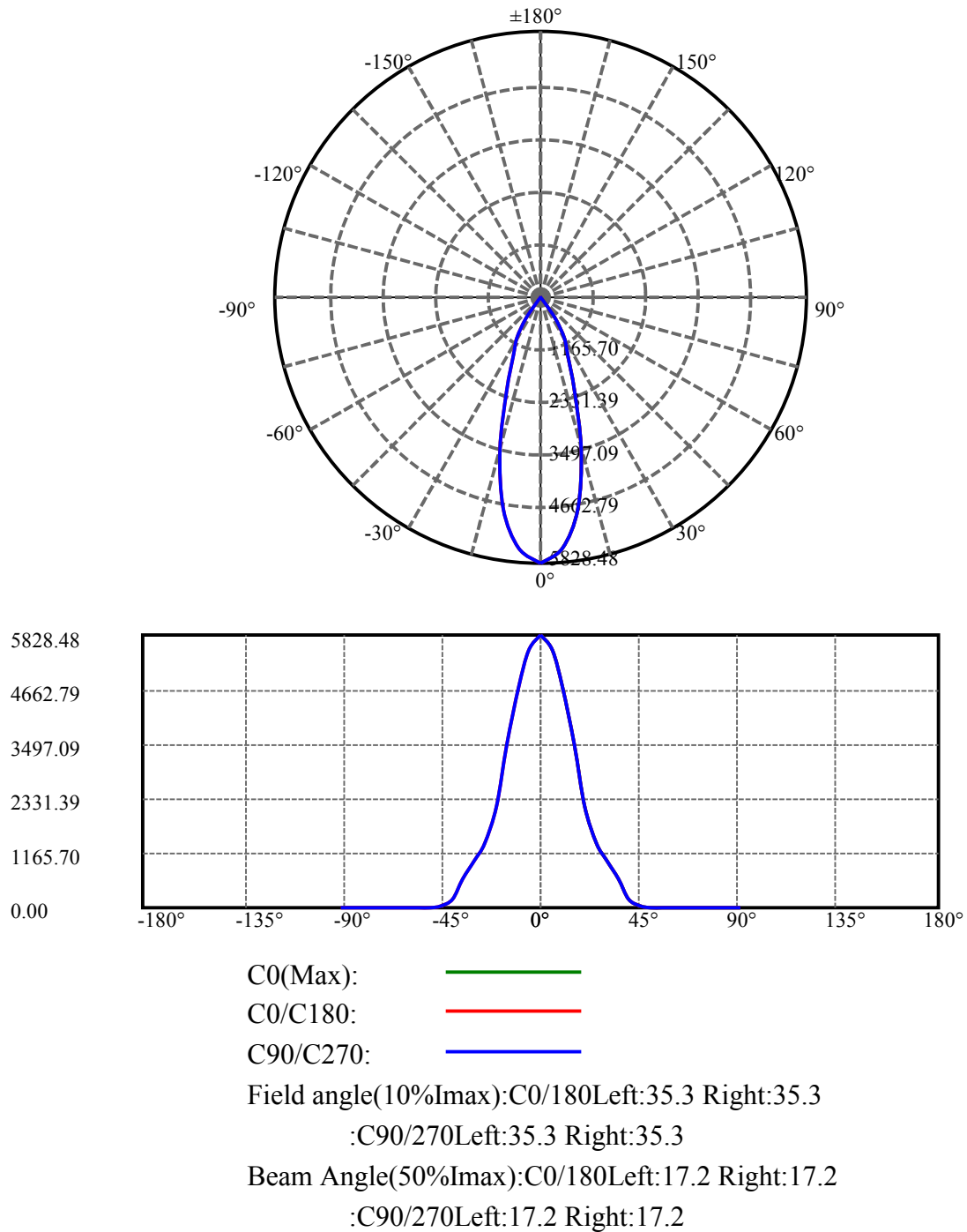
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5828.484	34.856	34.856	1.227%	1.355%
5.0	5511.797	263.317	298.172	9.272%	11.588%
10.0	4701.234	447.478	745.65	15.756%	28.978%
15.0	3475.688	493.090	1238.74	17.362%	48.141%
20.0	2189.883	410.546	1649.287	14.456%	64.096%
25.0	1385.972	321.064	1970.351	11.305%	76.573%
30.0	1014.666	278.088	2248.439	9.792%	87.380%
35.0	609.469	191.616	2440.055	6.747%	94.827%
40.0	198.858	70.065	2510.12	2.467%	97.550%
45.0	26.149	10.135	2520.255	.357%	97.944%
50.0	15.272	6.413	2526.668	.226%	98.193%
55.0	13.106	5.885	2532.553	.207%	98.422%
60.0	12.544	5.955	2538.507	.210%	98.653%
65.0	13.022	6.469	2544.976	.228%	98.904%
70.0	12.312	6.342	2551.318	.223%	99.151%
75.0	12.319	6.522	2557.84	.230%	99.404%
80.0	11.651	6.289	2564.129	.221%	99.649%
85.0	11.201	6.116	2570.245	.215%	99.886%
90.0	10.666	2.923	2573.169	.103%	100.000%

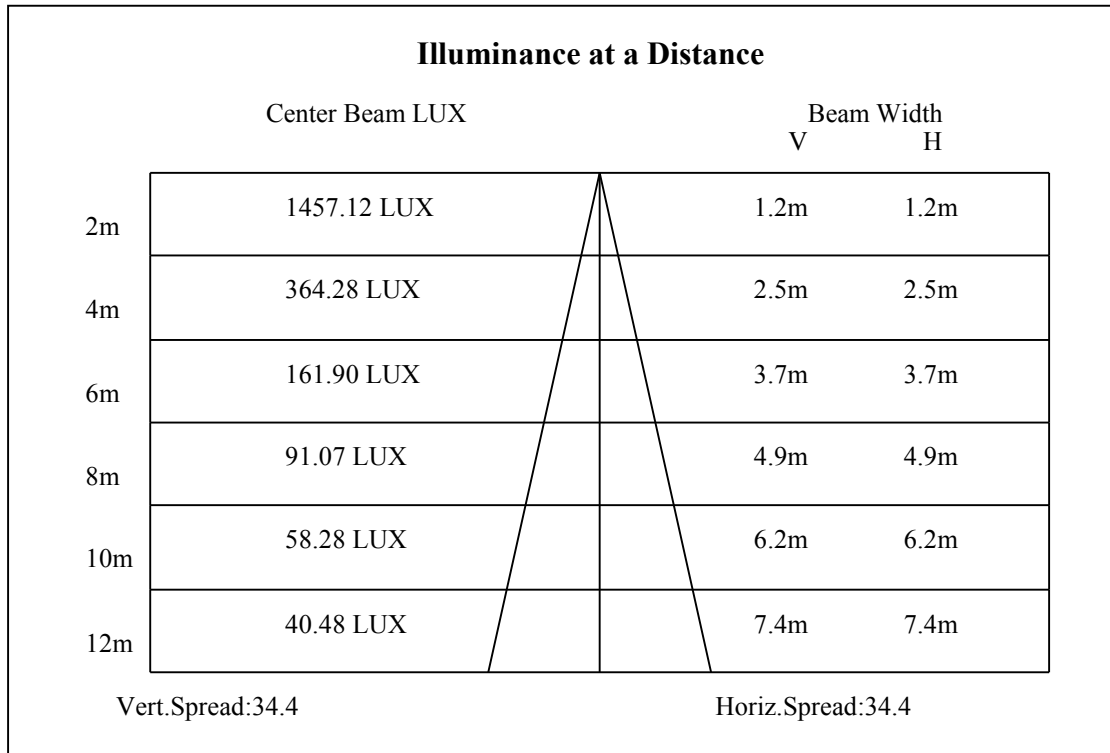
ZONAL LUMEN SUMMARY

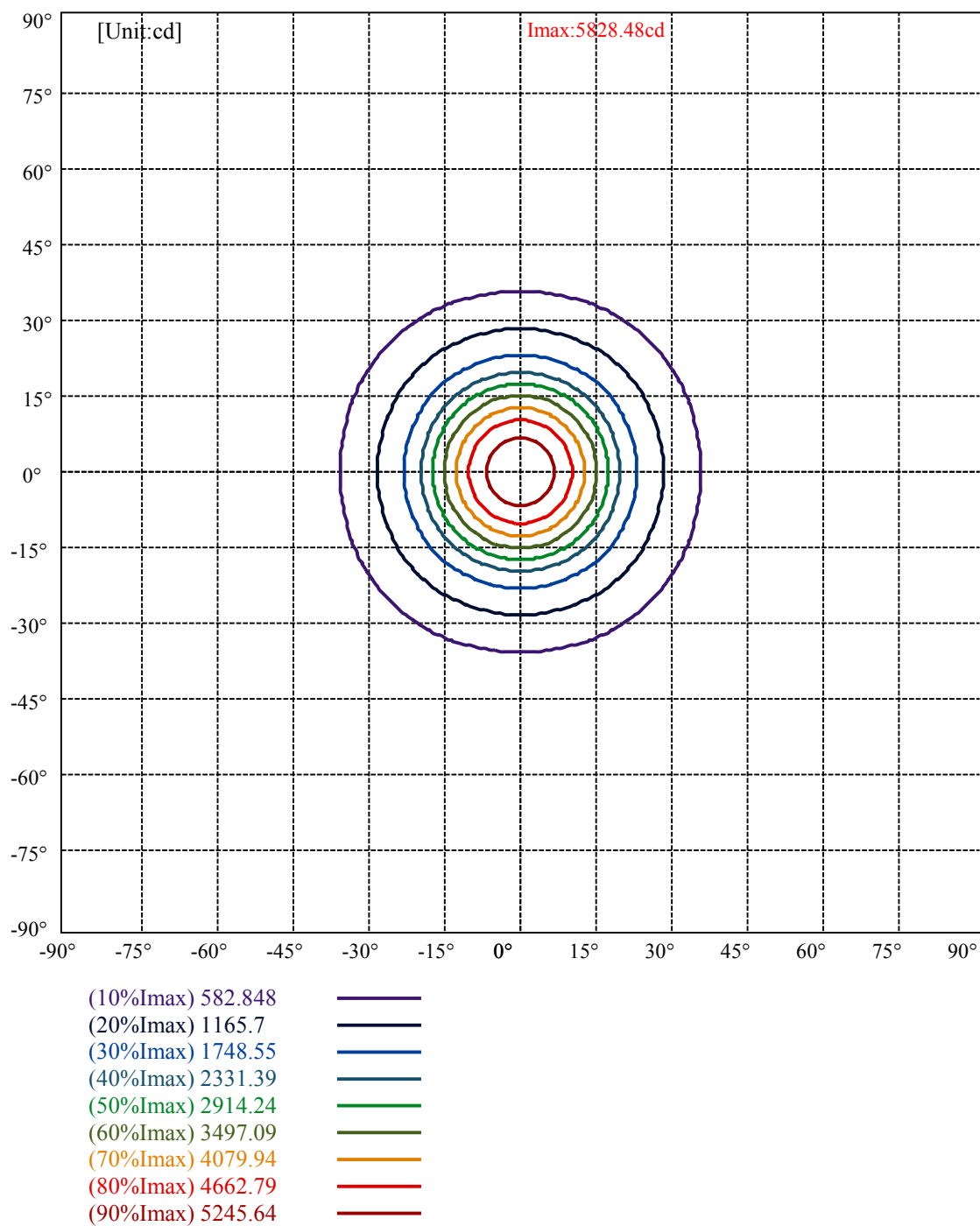
Zone	Lumens	%Lamp	%Fixt
0-30	2248.44	79.17%	87.38%
0-40	2510.12	88.38%	97.55%
0-60	2538.51	89.38%	98.65%
0-90	2570.25	90.50%	99.89%
0-120	2570.25	90.50%	99.89%
0-180	2573.17	90.60%	100.00%
60-90	37.69	1.33%	1.46%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-26.59	2058.54	72.48%	80.00%

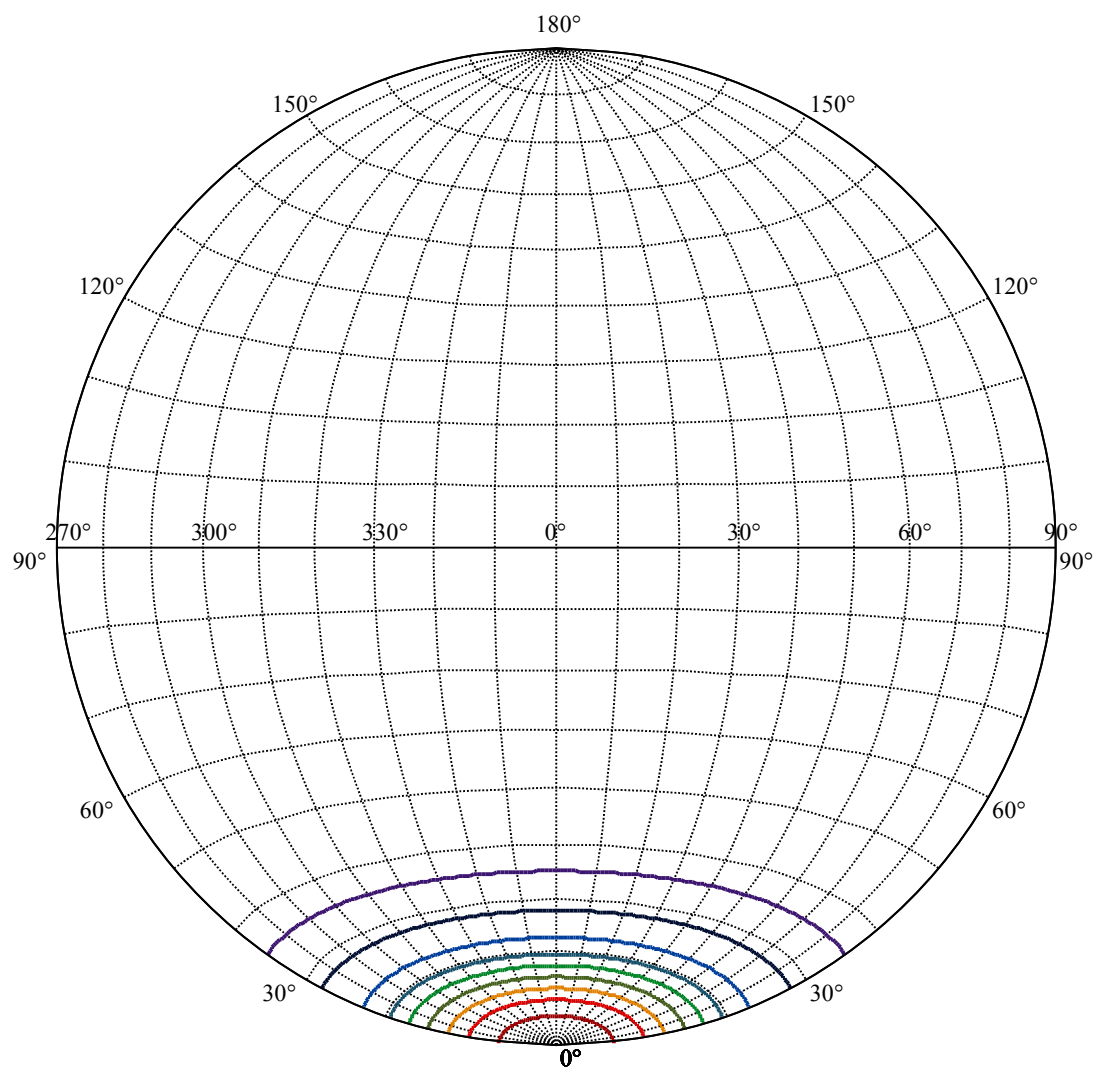
ZONAL LUMEN SUMMARY

0-10	745.65
10-20	903.64
20-30	599.15
30-40	261.68
40-50	16.55
50-60	11.84
60-70	12.81
70-80	12.81
80-90	6.12
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:5828.48

(10%Imax) 582.848

(20%Imax) 1165.7

(30%Imax) 1748.55

(40%Imax) 2331.39

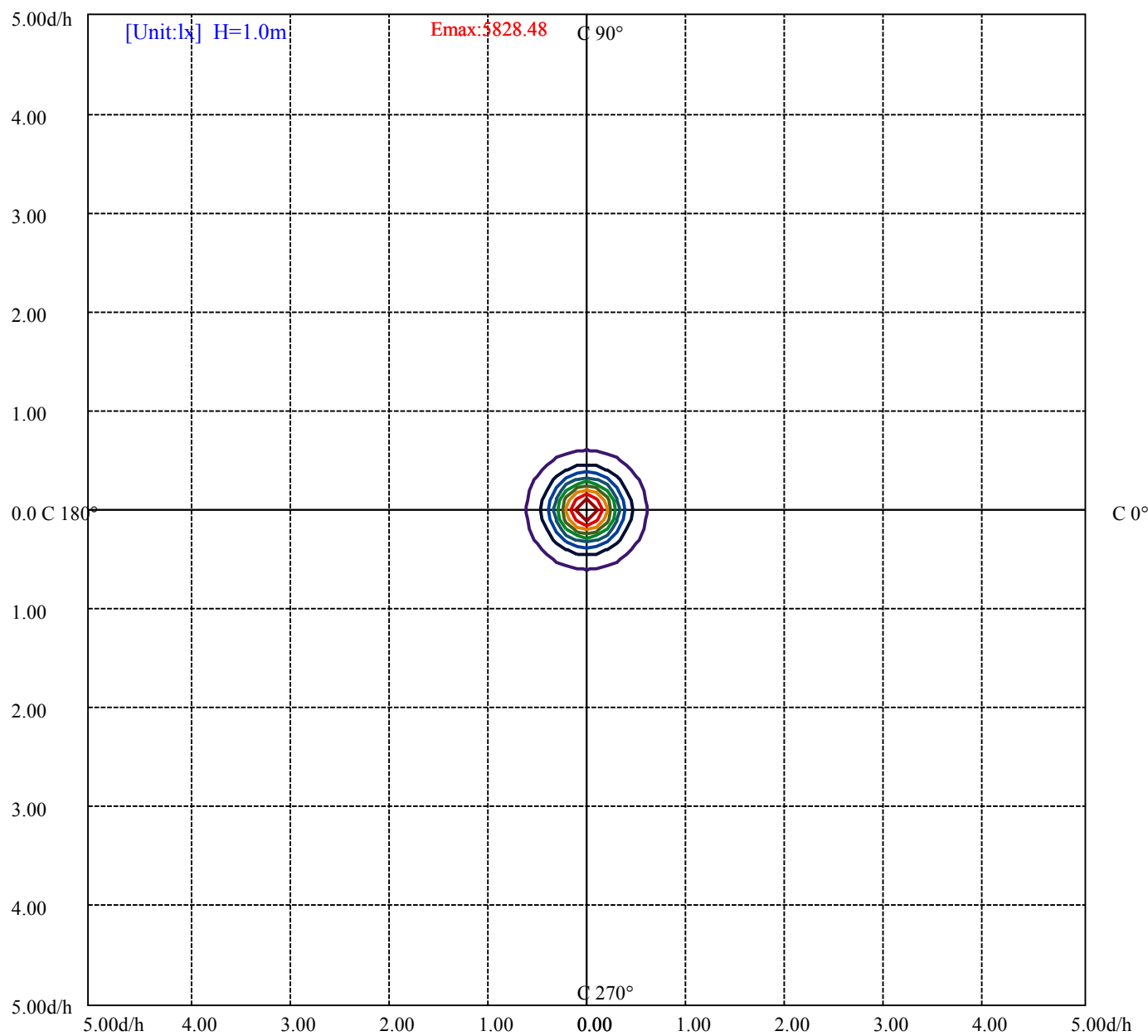
(50%Imax) 2914.24

(60%Imax) 3497.09

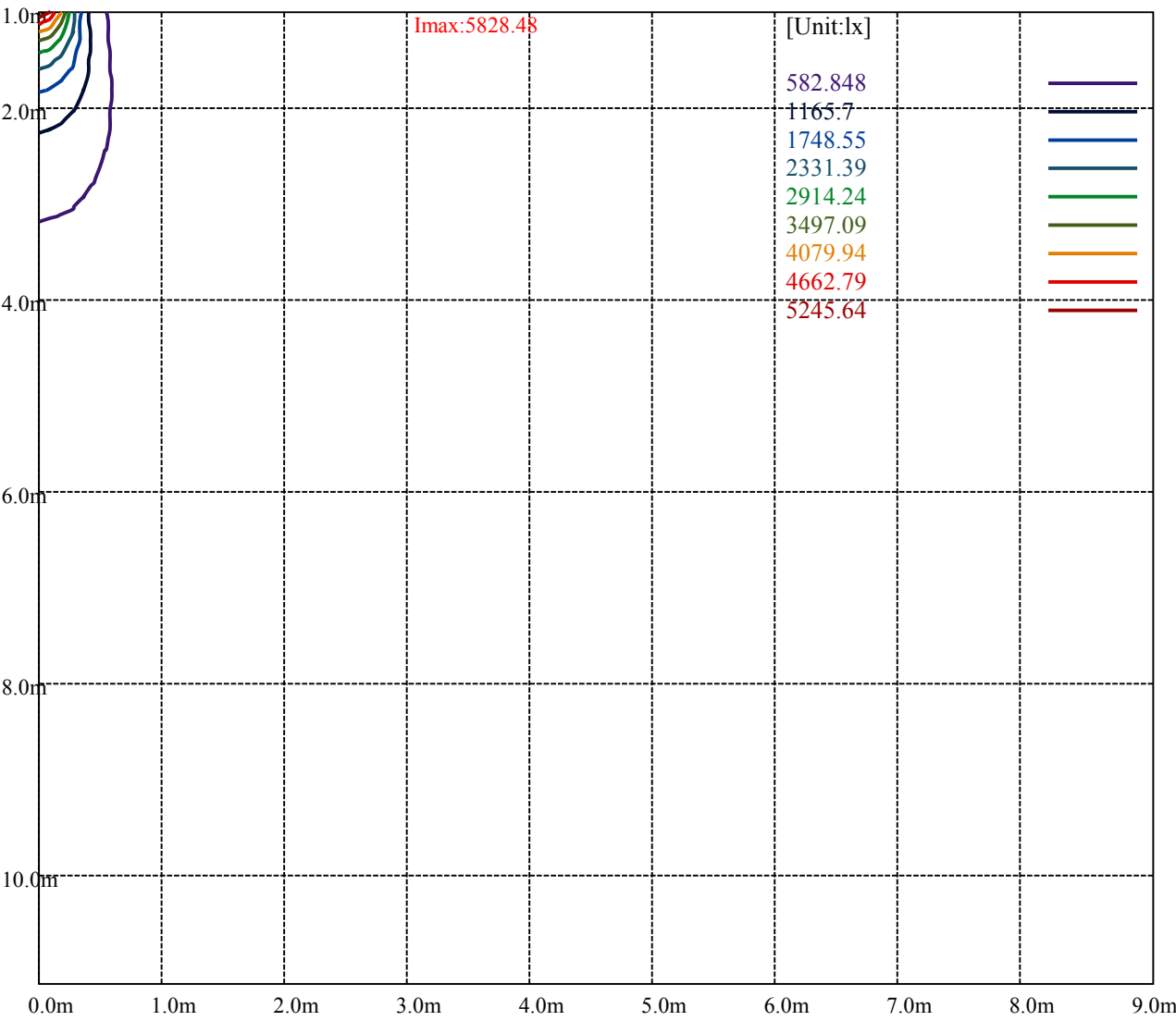
(70%Imax) 4079.94

(80%Imax) 4662.79

(90%Imax) 5245.64



(10%Emax)	582.847	
(20%Emax)	1165.69	
(30%Emax)	1748.54	
(40%Emax)	2331.39	
(50%Emax)	2914.24	
(60%Emax)	3497.08	
(70%Emax)	4079.93	
(80%Emax)	4662.78	
(90%Emax)	5245.63	



Luminance Table

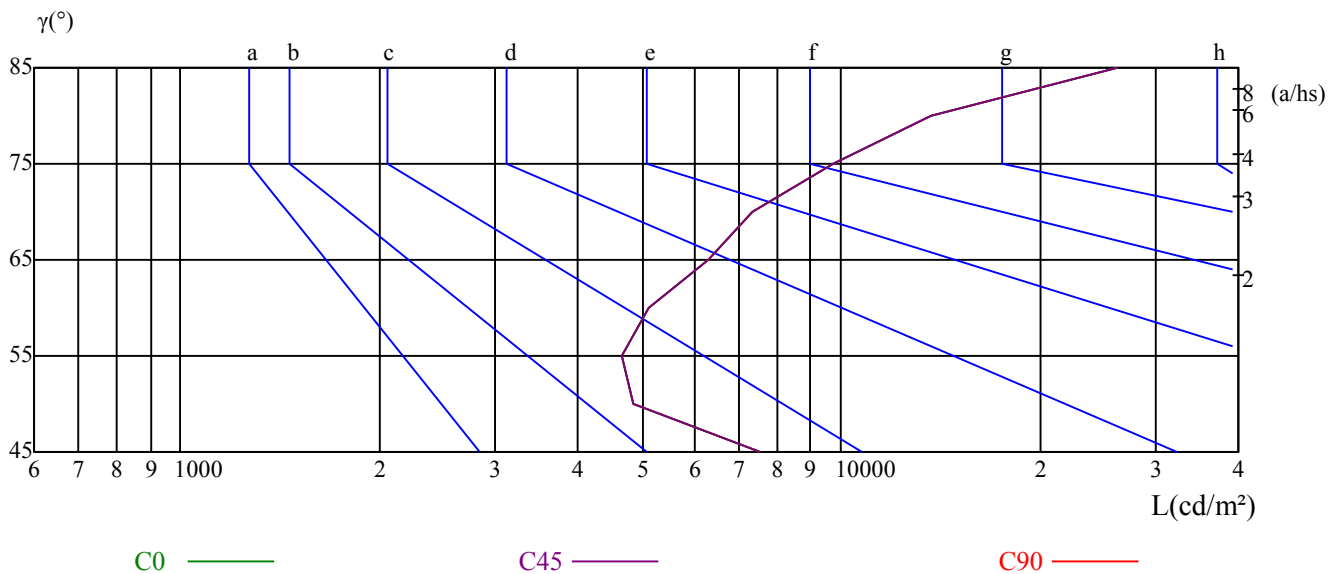
γ	45	50	55	60	65	70	75	80	85
C0	7547	4849	4663	5120	6288	7346	9713	13693	26227
C45	7547	4849	4663	5120	6288	7346	9713	13693	26227
C90	7547	4849	4663	5120	6288	7346	9713	13693	26227

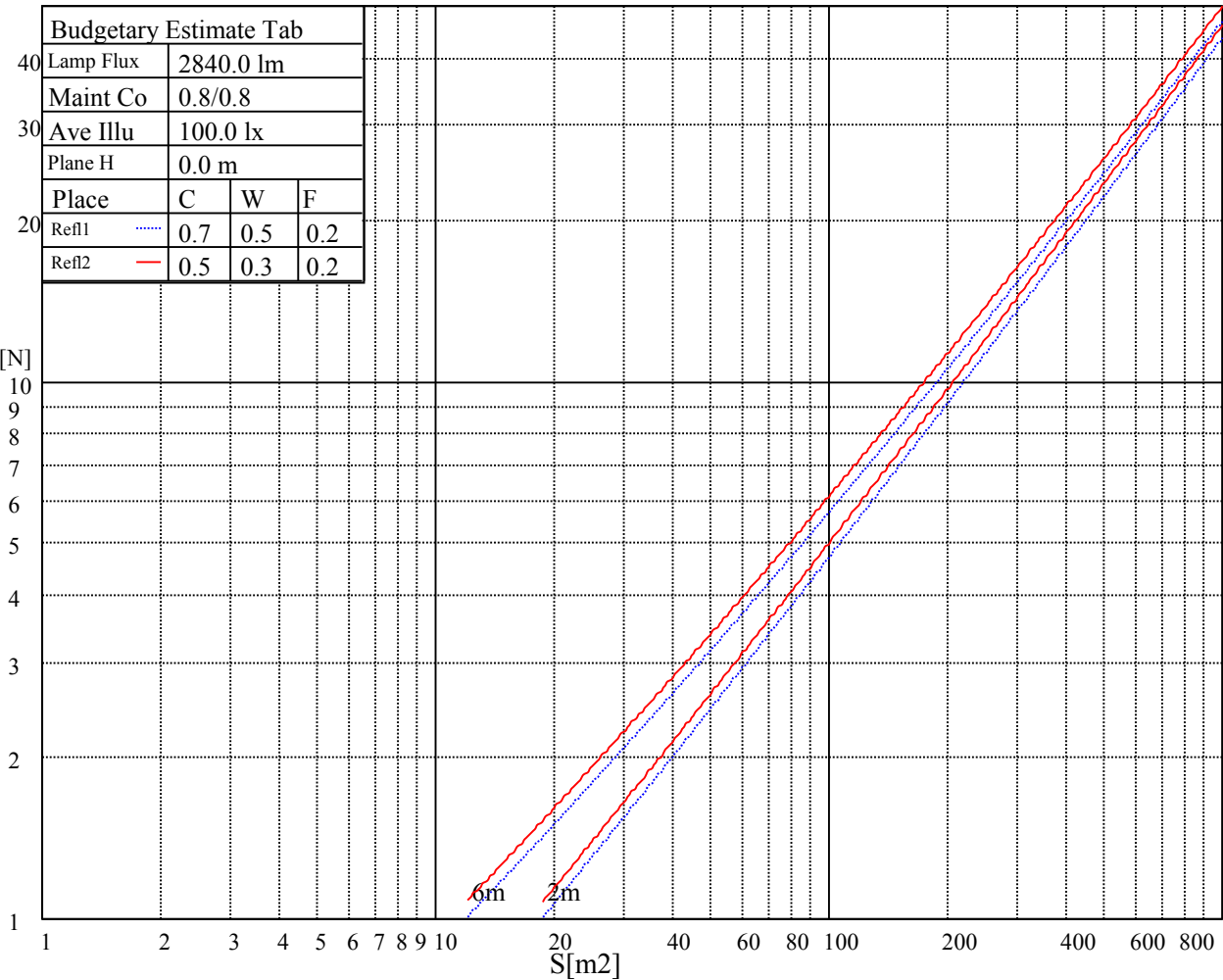
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6288	6288	6288	9713	9713	9713	26227	26227	26227

Glare Table

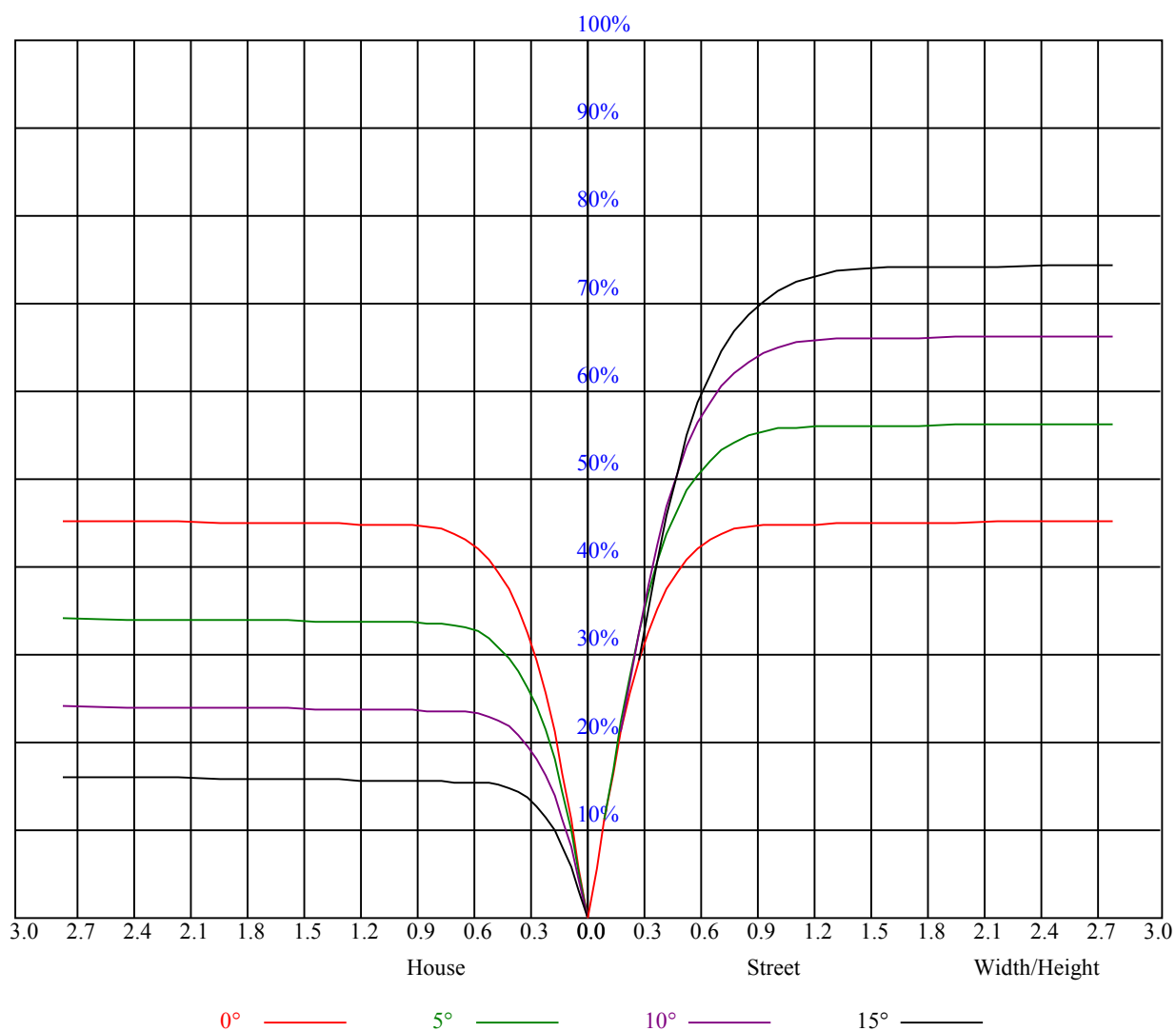
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	0.99	0.96	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
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	0.83	0.81
3	0.91	0.86	0.83	0.89	0.86	0.83	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.77
4	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.79	0.76	0.80	0.77	0.75	0.74
5	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
6	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.72	0.69	0.68
7	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.65
8	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.70	0.66	0.64	0.63
9	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59



NATA 2-1537-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	5776.88	5880.94	5253.75	4305.94	2847.94	1701.00	1173.94	874.13	381.94		
45.0	5878.69	5571.00	4773.94	3515.63	2165.63	1355.06	1029.38	613.69	334.69		
90.0	5807.25	5216.63	4139.44	2885.63	1717.31	1113.75	901.86	401.79	41.29		
135.0	5851.13	5239.13	4295.81	2912.63	1793.81	1259.44	927.56	462.94	43.37		
180.0	5776.88	5121.00	4120.88	2714.06	1644.19	1115.78	838.29	325.91	32.79		
225.0	5878.69	5475.94	4731.75	3421.13	2116.13	1398.94	1011.77	589.67	136.13		
270.0	5807.25	5766.19	5152.50	4022.44	2622.94	1606.50	1146.94	807.75	325.69		
315.0	5851.13	5823.56	5141.81	4028.06	2611.13	1537.31	1087.59	799.88	294.98		
360.0	5776.88	5880.94	5253.75	4305.94	2847.94	1701.00	1173.94	874.13	381.94		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	39.04	20.93	13.39	12.60	12.09	11.81	11.53	11.31	11.03		
45.0	27.90	14.06	13.05	12.43	12.04	11.87	11.31	11.08	10.86		
90.0	18.62	13.84	13.16	12.88	18.79	13.11	11.36	11.14	11.03		
135.0	21.21	13.95	13.22	12.99	13.44	15.08	18.90	14.96	12.43		
180.0	15.81	13.39	12.71	12.32	12.09	11.87	11.59	11.31	11.19		
225.0	22.28	13.67	12.66	12.09	11.76	11.48	11.19	11.03	10.86		
270.0	32.46	15.08	13.33	12.49	11.93	11.64	11.36	11.31	11.25		
315.0	31.89	17.27	13.33	12.54	12.04	11.64	11.31	11.08	10.97		
360.0	39.04	20.93	13.39	12.60	12.09	11.81	11.53	11.31	11.03		
C/ γ (°)	90.0										
0.0	10.80										
45.0	10.63										
90.0	10.58										
135.0	10.69										
180.0	10.74										
225.0	10.58										
270.0	10.63										
315.0	10.69										
360.0	10.80										