
NATA

LumCAT: 2-1538-A	
Luminaire:92.76.323.00	
Report No: NATA0100	Voltage(V): 36.1000
Test No: GC2018111010	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): 2568.23
Efficiency(%): 90.43%
Lumens(lm)/Power(W): 119.26
Central intensity(cd): 2910.094
Maximum intensity(cd): 2910.094
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=82.6
[C90/270]Total=82.6
Maximum s/h(1/2): C0_180=0.91 C90_270=0.91
Maximum s/h(1/4): C0_180=0.91 C90_270=0.91
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.96%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.127%

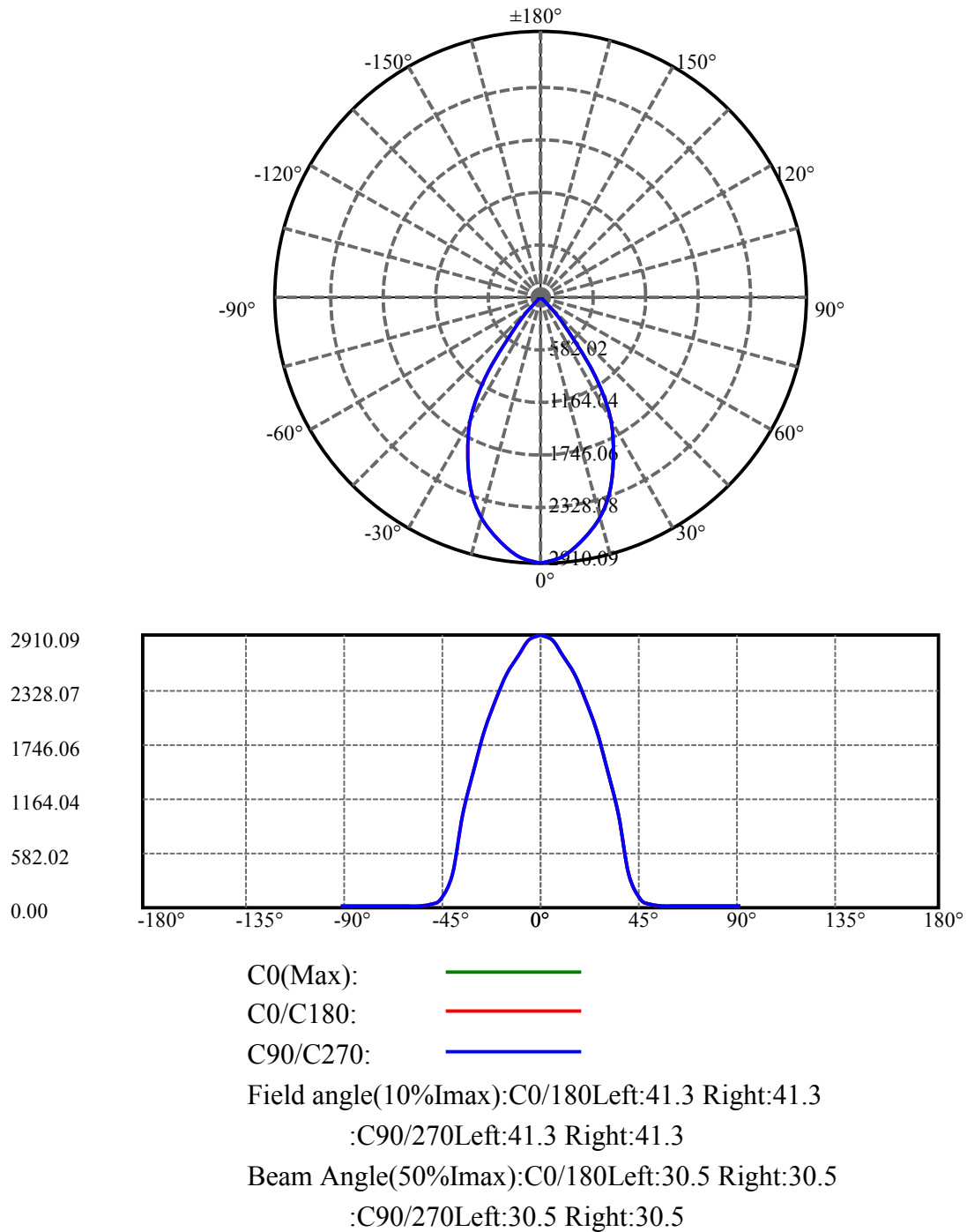
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2910.094	17.403	17.403	.613%	.678%
5.0	2849.695	136.139	153.542	4.794%	5.979%
10.0	2697.188	256.727	410.269	9.040%	15.975%
15.0	2487.234	352.860	763.129	12.425%	29.714%
20.0	2245.570	420.986	1184.115	14.823%	46.106%
25.0	1902.234	440.658	1624.773	15.516%	63.264%
30.0	1502.086	411.675	2036.448	14.496%	79.294%
35.0	996.026	313.149	2349.597	11.026%	91.487%
40.0	364.971	128.592	2478.189	4.528%	96.494%
45.0	82.399	31.937	2510.127	1.125%	97.738%
50.0	28.153	11.821	2521.948	.416%	98.198%
55.0	15.616	7.012	2528.96	.247%	98.471%
60.0	12.298	5.838	2534.798	.206%	98.698%
65.0	11.707	5.816	2540.613	.205%	98.925%
70.0	12.241	6.305	2546.919	.222%	99.170%
75.0	11.580	6.131	2553.05	.216%	99.409%
80.0	11.630	6.278	2559.328	.221%	99.654%
85.0	11.004	6.009	2565.337	.212%	99.888%
90.0	10.540	2.889	2568.225	.102%	100.000%

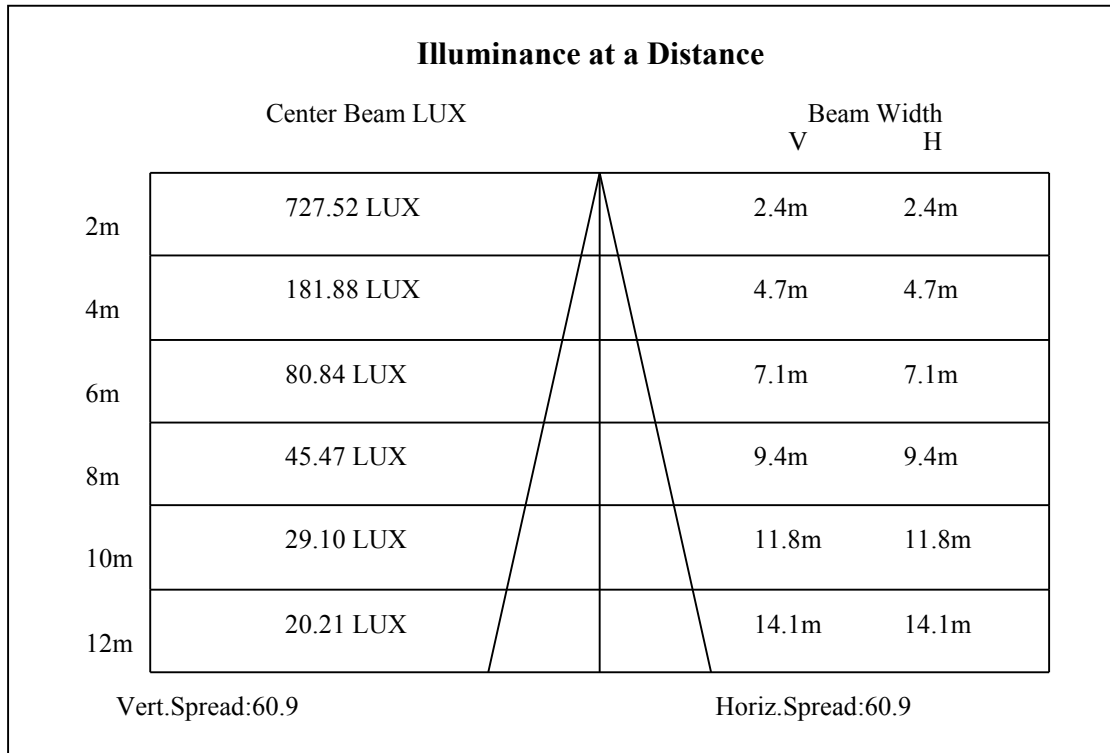
ZONAL LUMEN SUMMARY

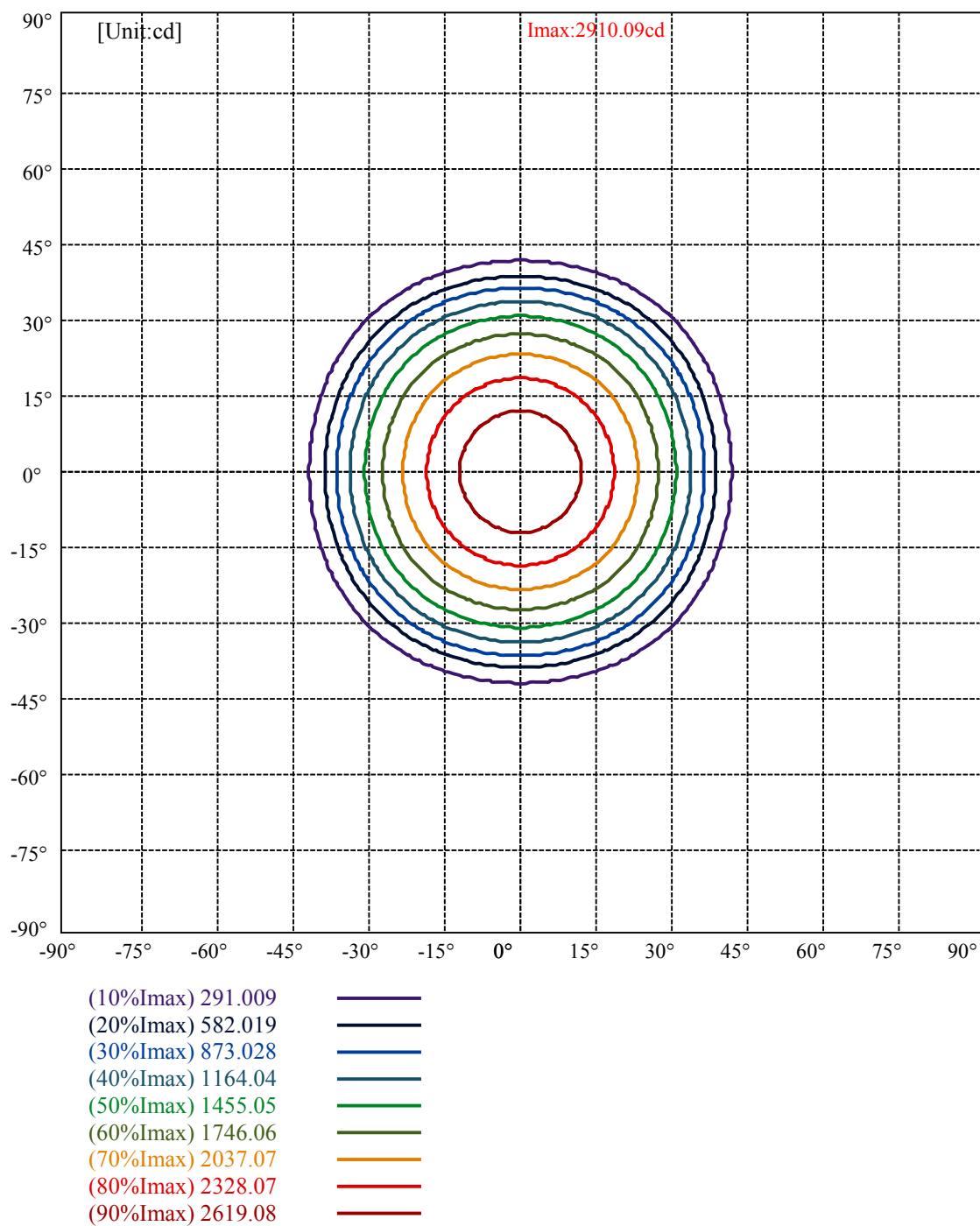
Zone	Lumens	%Lamp	%Fixt
0-30	2036.45	71.71%	79.29%
0-40	2478.19	87.26%	96.49%
0-60	2534.80	89.25%	98.70%
0-90	2565.34	90.33%	99.89%
0-120	2565.34	90.33%	99.89%
0-180	2568.23	90.43%	100.00%
60-90	36.38	1.28%	1.42%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-30.29	2054.58	72.34%	80.00%

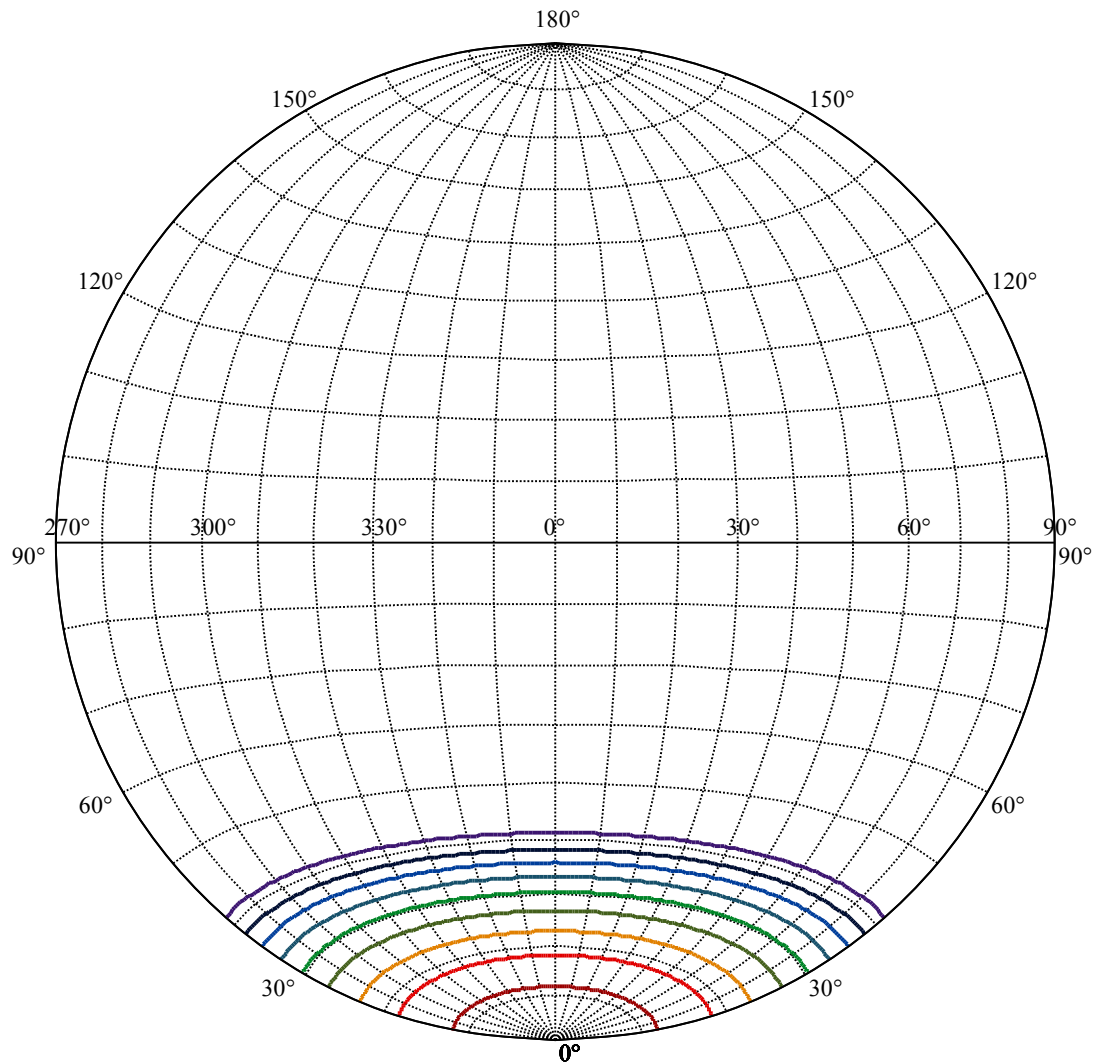
ZONAL LUMEN SUMMARY

0-10	410.27
10-20	773.85
20-30	852.33
30-40	441.74
40-50	43.76
50-60	12.85
60-70	12.12
70-80	12.41
80-90	6.01
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:2910.09

(10%Imax) 291.009

(20%Imax) 582.019

(30%Imax) 873.028

(40%Imax) 1164.04

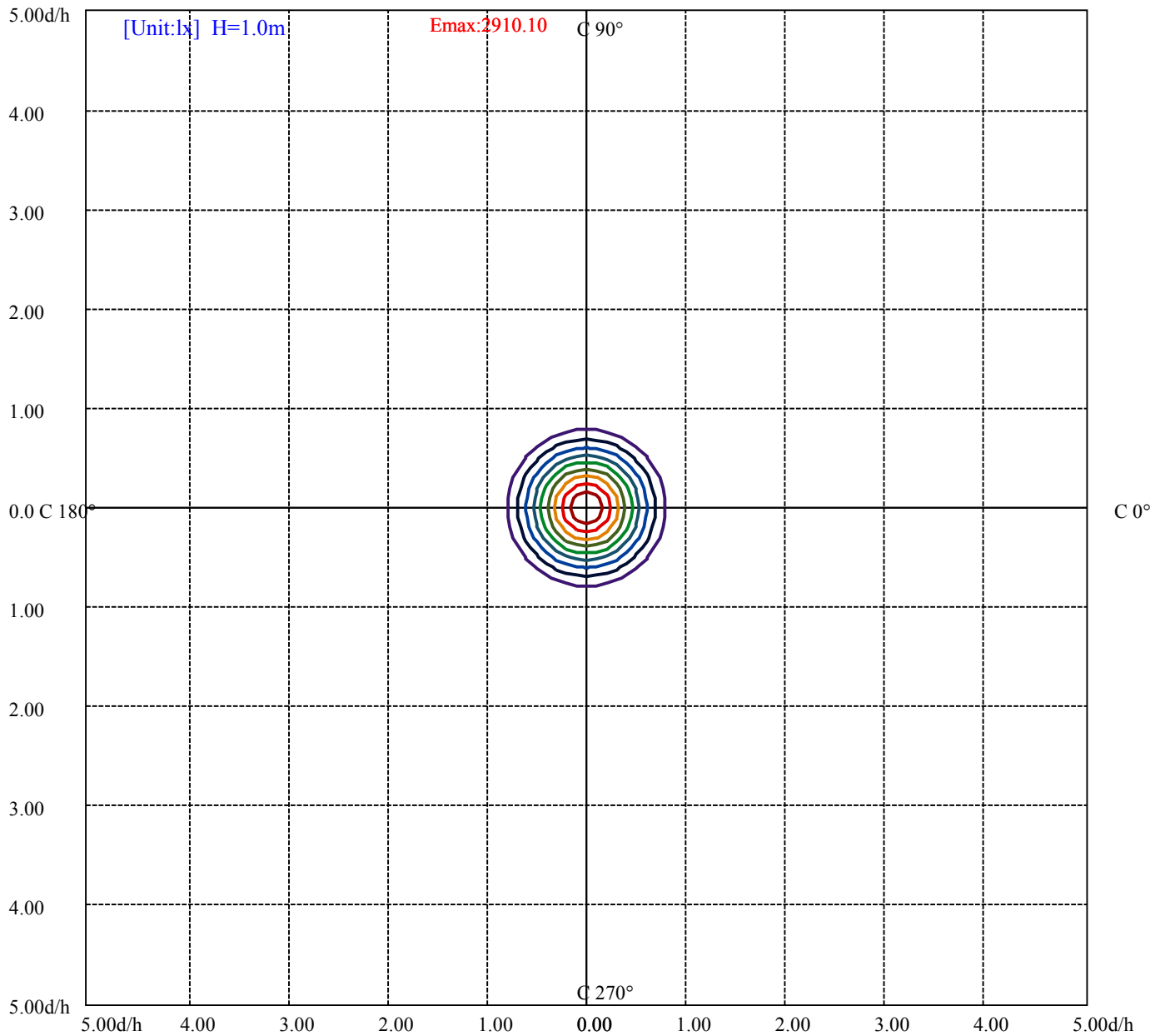
(50%Imax) 1455.05

(60%Imax) 1746.06

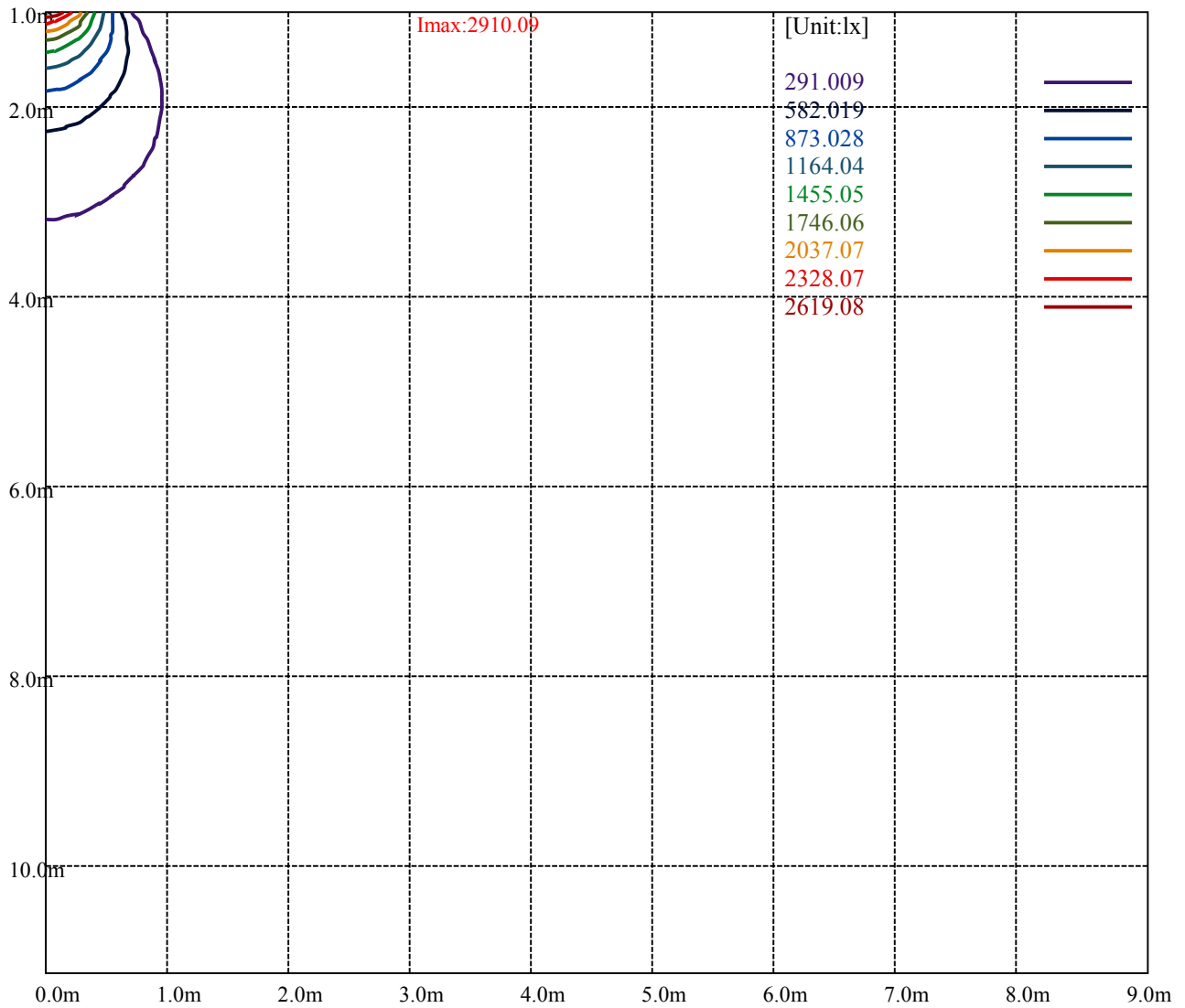
(70%Imax) 2037.07

(80%Imax) 2328.07

(90%Imax) 2619.08



(10%Emax) 291.009	—
(20%Emax) 582.018	—
(30%Emax) 873.028	—
(40%Emax) 1164.04	—
(50%Emax) 1455.05	—
(60%Emax) 1746.06	—
(70%Emax) 2037.06	—
(80%Emax) 2328.07	—
(90%Emax) 2619.08	—



Luminance Table

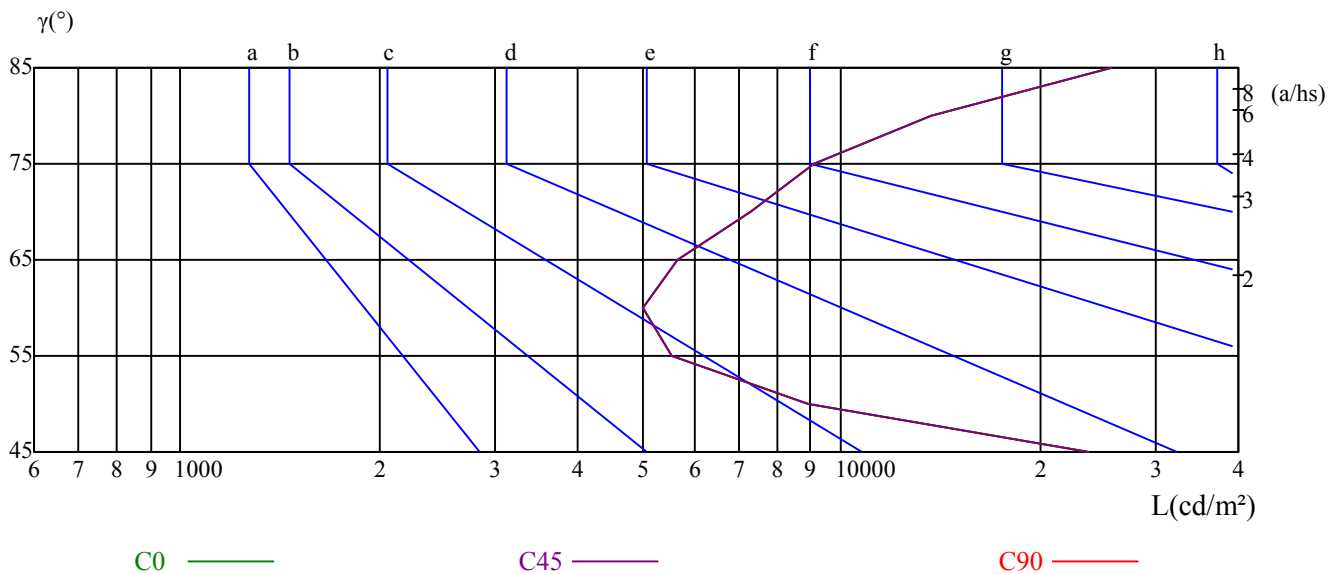
γ	45	50	55	60	65	70	75	80	85
C0	23782	8938	5556	5019	5653	7304	9131	13668	25766
C45	23782	8938	5556	5019	5653	7304	9131	13668	25766
C90	23782	8938	5556	5019	5653	7304	9131	13668	25766

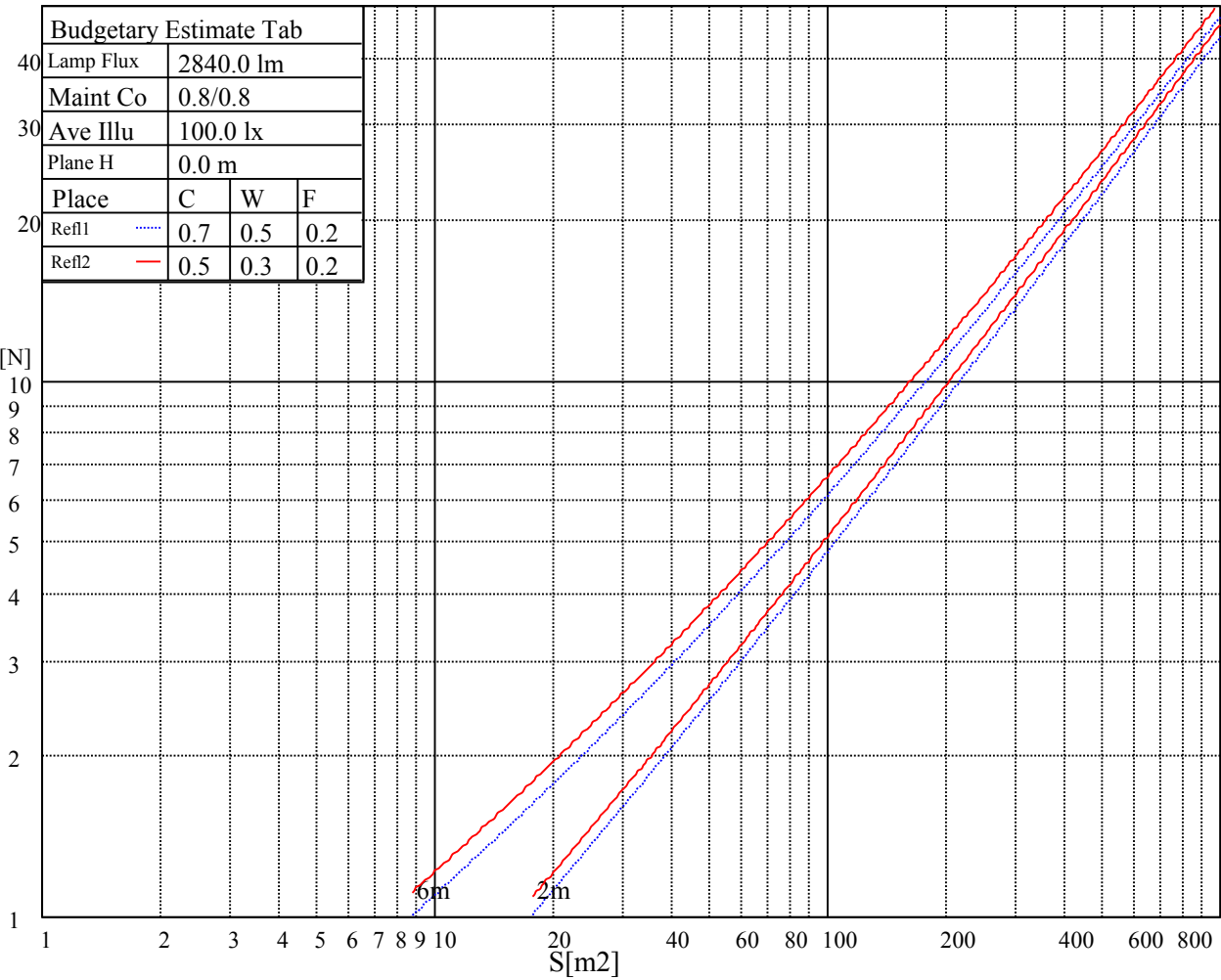
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5653	5653	5653	9131	9131	9131	25766	25766	25766

Glare Table

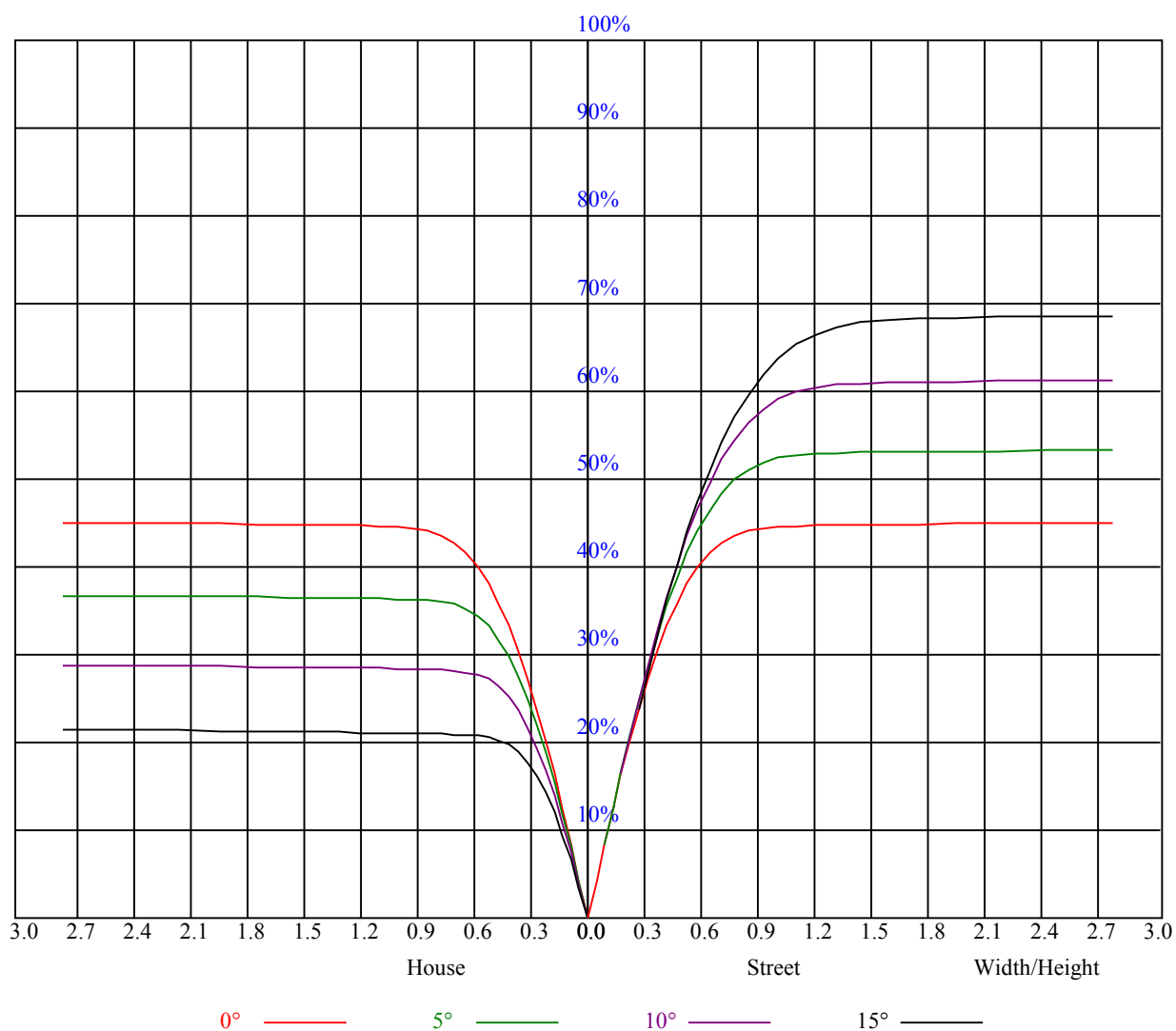
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.00	0.98	0.96	0.98	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.81	0.79
3	0.88	0.84	0.80	0.87	0.83	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.74
4	0.83	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.78	0.73	0.69	0.77	0.73	0.69	0.76	0.72	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.69	0.66	0.64	0.62
7	0.70	0.65	0.61	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.59
8	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.56
9	0.63	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53
10	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.58	0.54	0.51	0.50



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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	2914.31	2849.63	2707.31	2489.06	2247.75	1908.00	1496.81	1000.13	381.38		
45.0	2911.50	2835.00	2675.25	2454.75	2205.00	1828.69	1425.94	870.19	284.63		
90.0	2907.00	2830.50	2671.88	2469.94	2234.25	1863.00	1450.13	931.05	294.81		
135.0	2907.56	2870.44	2750.63	2555.44	2320.31	2001.94	1629.56	1152.00	485.44		
180.0	2914.31	2851.31	2697.75	2499.75	2238.75	1900.69	1501.88	988.26	354.32		
225.0	2911.50	2868.75	2721.38	2525.63	2293.31	1962.00	1552.50	1102.73	441.28		
270.0	2907.00	2860.31	2707.31	2495.81	2272.50	1951.88	1543.50	1098.00	428.63		
315.0	2907.56	2831.63	2646.00	2407.50	2152.69	1801.69	1416.38	825.86	249.30		
360.0	2914.31	2849.63	2707.31	2489.06	2247.75	1908.00	1496.81	1000.13	381.38		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	77.12	24.86	14.85	12.26	11.53	11.36	11.19	11.08	10.91		
45.0	59.23	20.87	14.18	11.81	11.42	11.14	10.97	10.80	10.74		
90.0	71.94	24.81	14.85	11.98	11.36	11.19	10.91	10.97	10.80		
135.0	110.08	37.18	17.27	12.83	11.70	11.25	10.97	10.80	10.69		
180.0	92.19	29.42	16.03	12.26	11.48	11.14	10.91	10.74	10.69		
225.0	92.81	32.12	16.48	12.43	11.53	11.36	11.03	10.86	10.80		
270.0	90.84	33.53	16.43	12.54	12.21	16.43	11.19	10.91	10.80		
315.0	64.97	22.44	14.85	12.26	12.43	14.06	15.47	16.88	12.60		
360.0	77.12	24.86	14.85	12.26	11.53	11.36	11.19	11.08	10.91		
C/ γ (°)	90.0										
0.0	10.52										
45.0	10.58										
90.0	10.52										
135.0	10.52										
180.0	10.52										
225.0	10.63										
270.0	10.52										
315.0	10.52										
360.0	10.52										