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Nata

Client: NT

LumCAT: 11-0161-S3

Luminaire: 69-0031-1

Report No: 20260804-B002

Ballast type: DC

Test No: 20260804-C002

Voltage(V): 22.140

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1126.0

Power (W): 10.051

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 989.70, Efficiency(%): 87.90% , Luminous Efficacy(lm/W): 98.47

Central intensity(cd): 608.054, Maximum intensity(cd): 622.697

Angle of maximum intensity: C=22.5 γ =20.0

Beam Angle(50%Imax): [C0/180]Total=79.0

[C90/270]Total=78.5

Field angle(10%Imax): [C0/180]Total=97.7

[C90/270]Total=98.3

Maximum s/h(1/2): C0_180=1.23 C90_270=1.25

Maximum s/h(1/4): C0_180=1.11 C90_270=1.14

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.87%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.904%

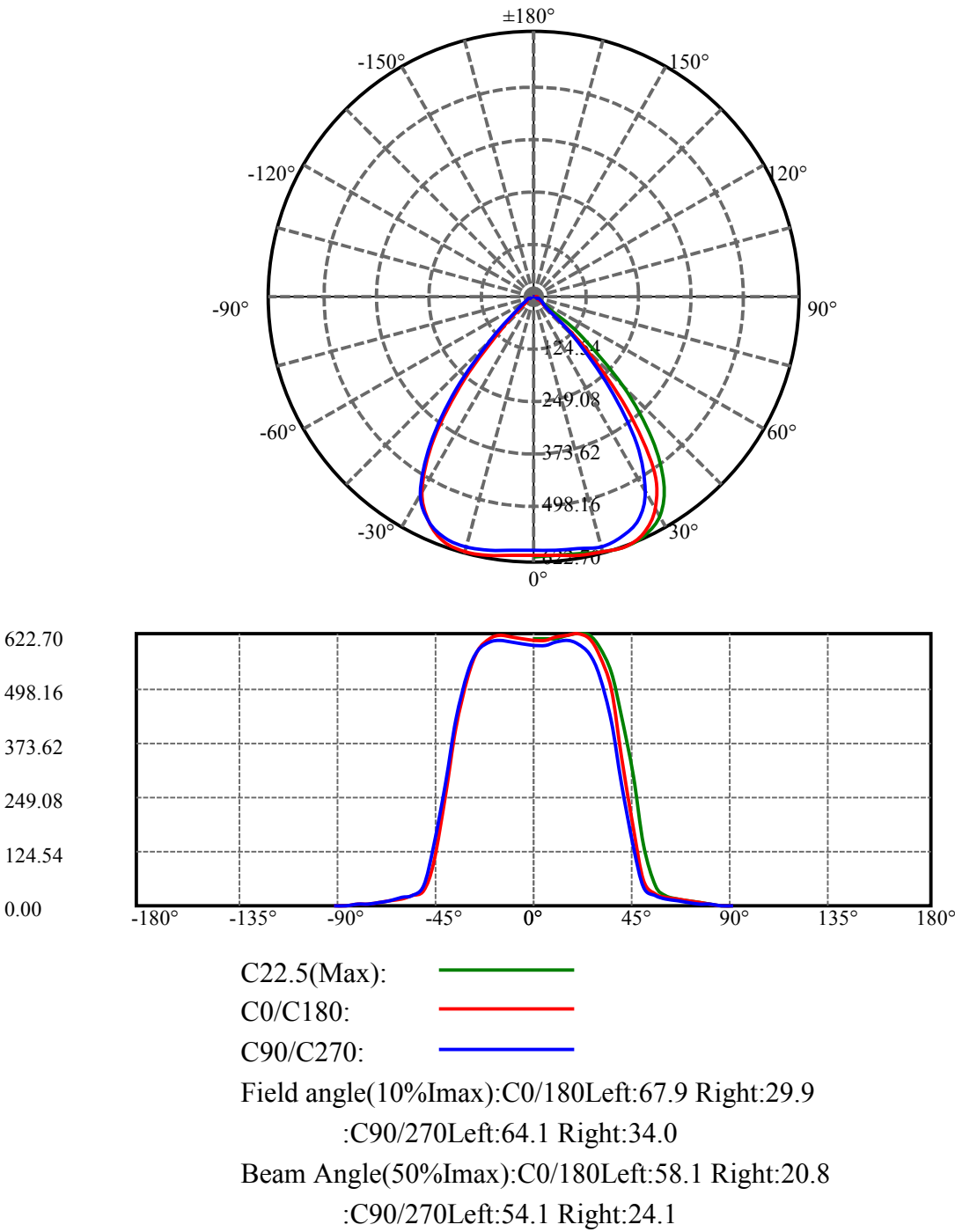
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	605.314	0.000	0	0.00%	0.00%
5.0	607.186	14.495	14.495	1.29%	1.46%
10.0	612.058	43.616	58.111	3.87%	5.87%
15.0	615.661	72.827	130.939	6.47%	13.23%
20.0	611.736	101.155	232.093	8.98%	23.45%
25.0	590.798	126.124	358.217	11.20%	36.19%
30.0	539.993	143.102	501.319	12.71%	50.65%
35.0	450.454	145.850	647.17	12.95%	65.39%
40.0	326.954	129.705	776.874	11.52%	78.50%
45.0	192.307	96.145	873.02	8.54%	88.21%
50.0	86.021	56.240	929.26	4.99%	93.89%
55.0	36.173	26.569	955.829	2.36%	96.58%
60.0	19.282	12.818	968.647	1.14%	97.87%
65.0	13.865	8.058	976.705	0.72%	98.69%
70.0	9.220	5.845	982.551	0.52%	99.28%
75.0	5.237	3.779	986.33	0.34%	99.66%
80.0	2.470	2.062	988.392	0.18%	99.87%
85.0	0.846	0.901	989.293	0.08%	99.96%
90.0	0.635	0.406	989.699	0.04%	100.00%

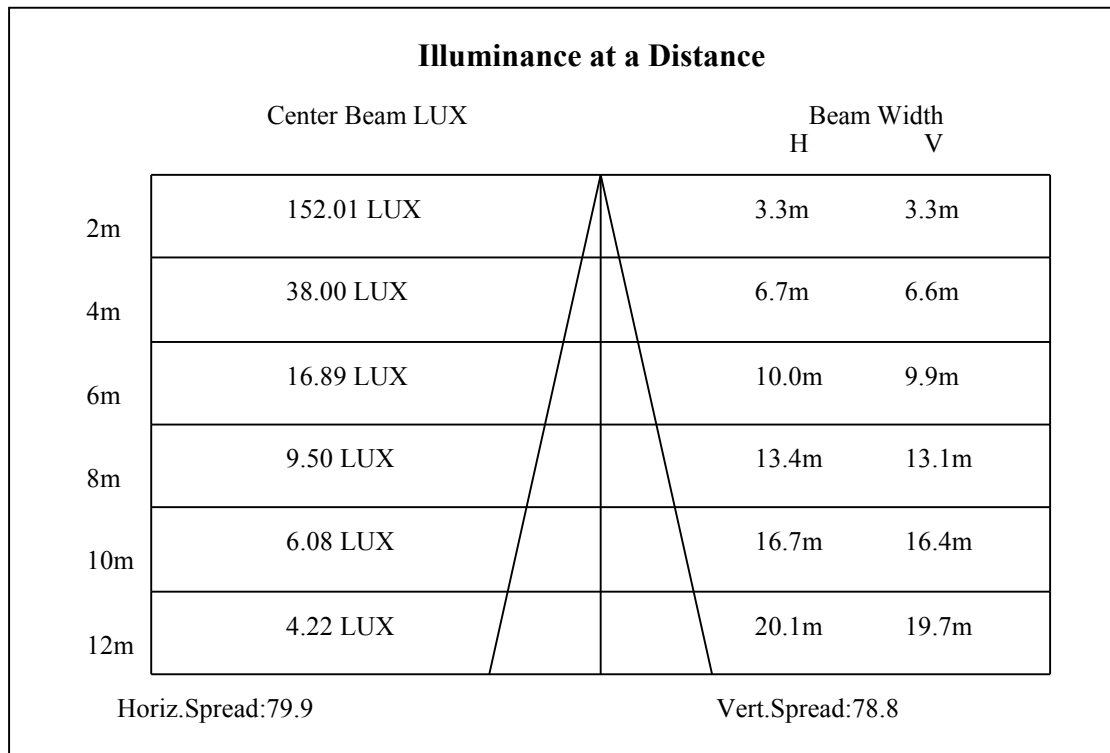
ZONAL LUMEN SUMMARY

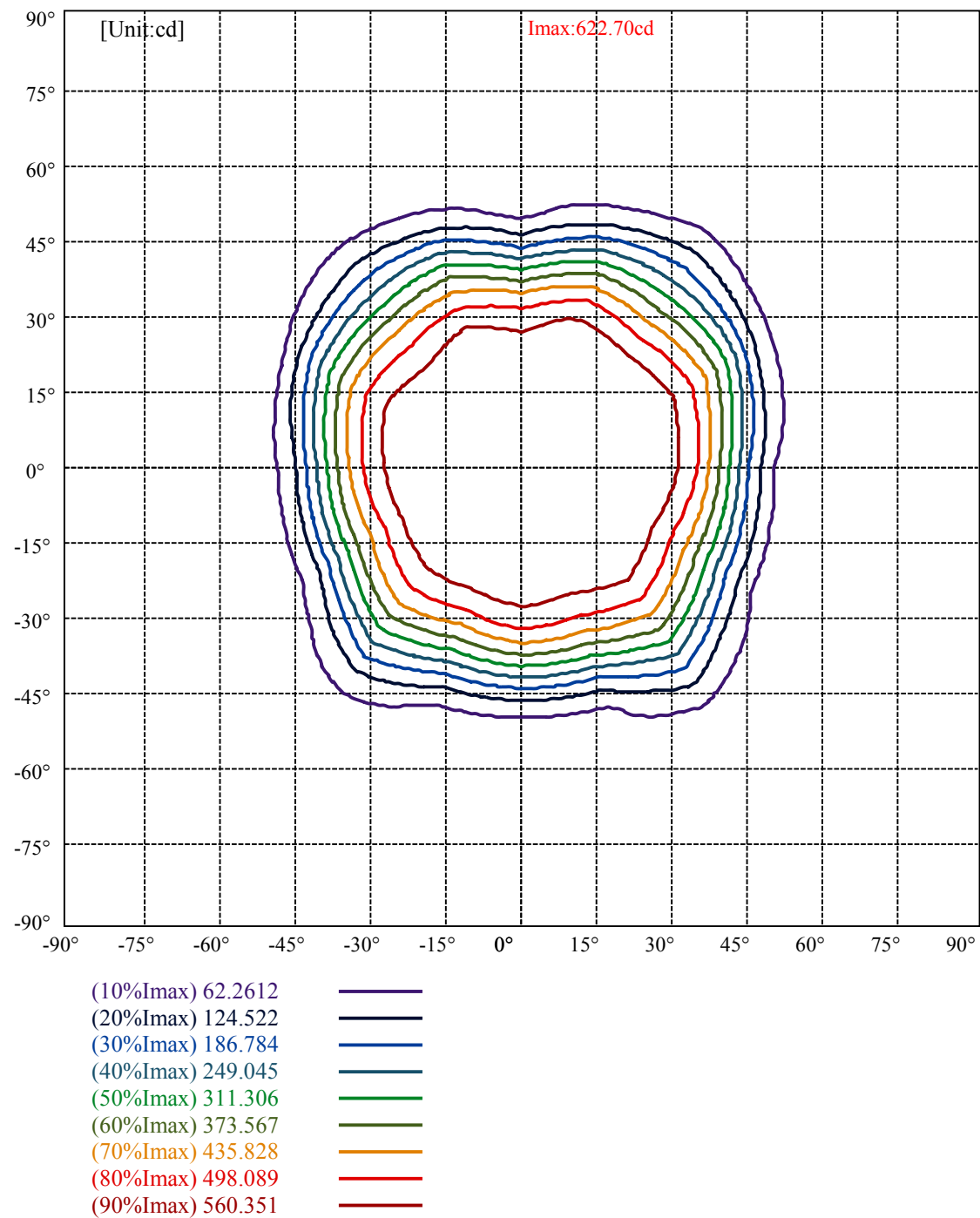
Zone	Lumens	%Lamp	%Fixt
0-30	501.32	44.52%	50.65%
0-40	776.87	68.99%	78.50%
0-60	968.65	86.03%	97.87%
0-90	989.29	87.86%	99.96%
0-120	989.29	87.86%	99.96%
0-180	989.70	87.90%	100.00%
60-90	20.65	1.83%	2.09%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-40.77	791.76	70.32%	80.00%

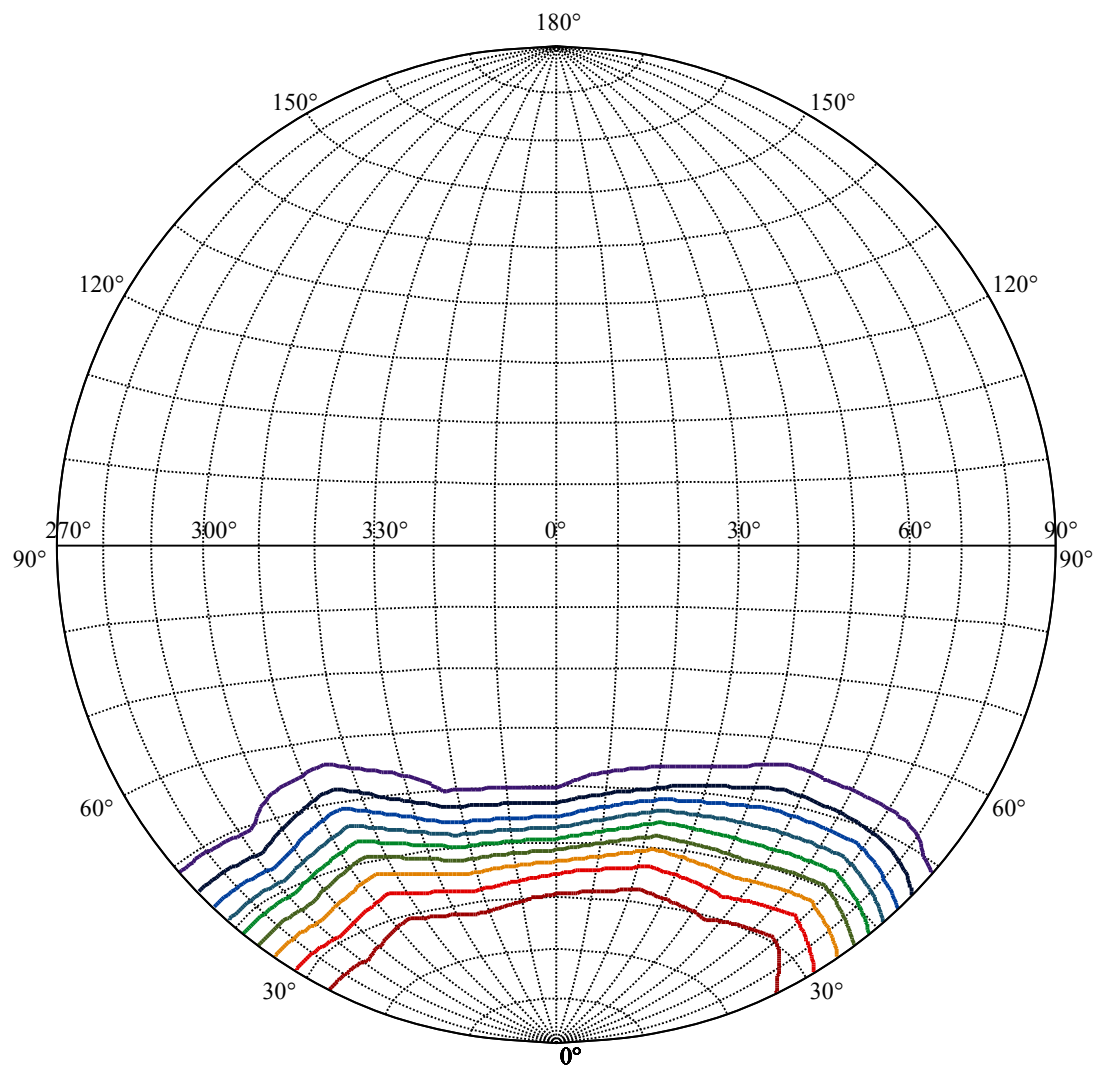
ZONAL LUMEN SUMMARY

0-10	58.11
10-20	173.98
20-30	269.23
30-40	275.55
40-50	152.39
50-60	39.39
60-70	13.90
70-80	5.84
80-90	0.90
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







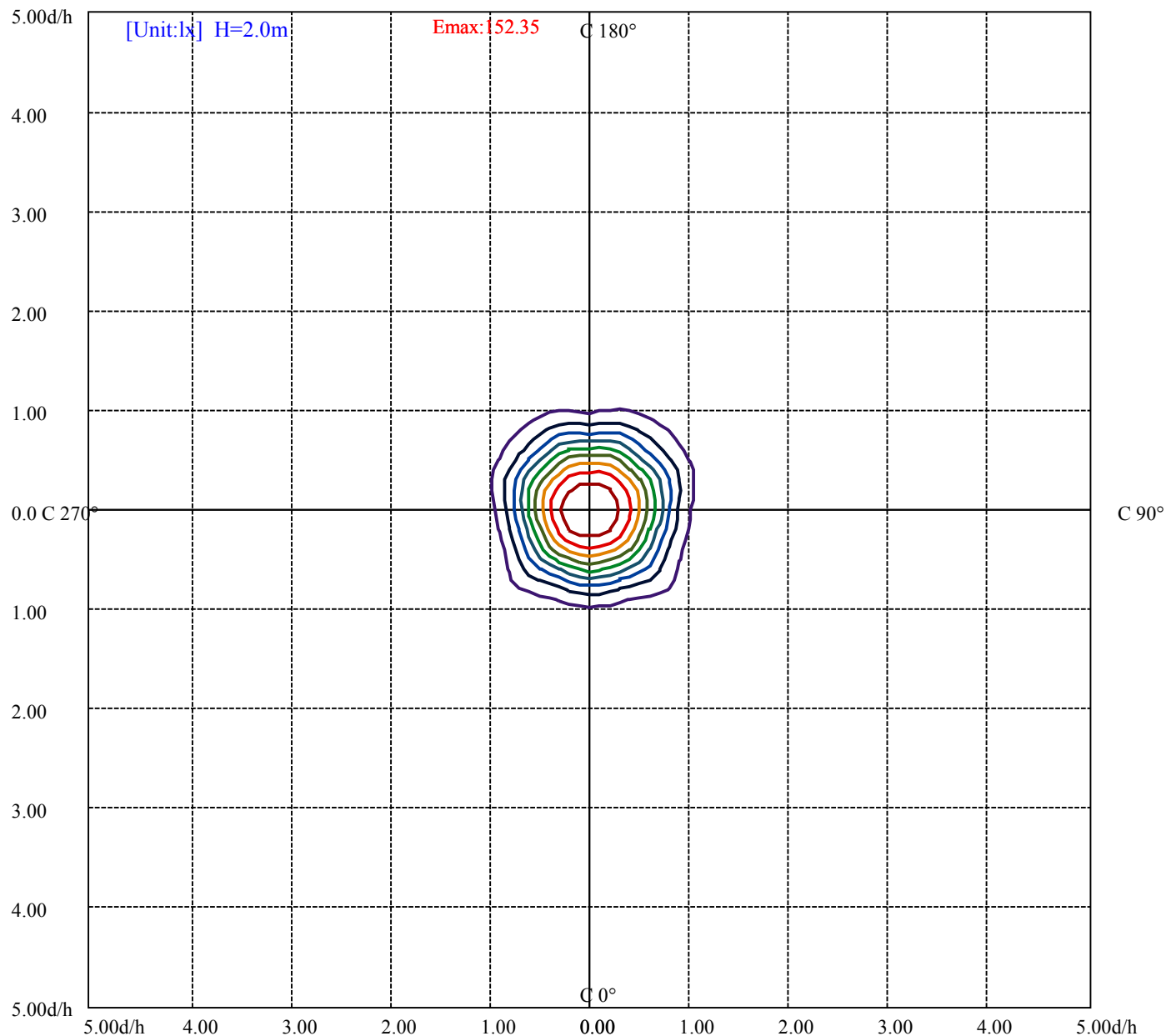


House

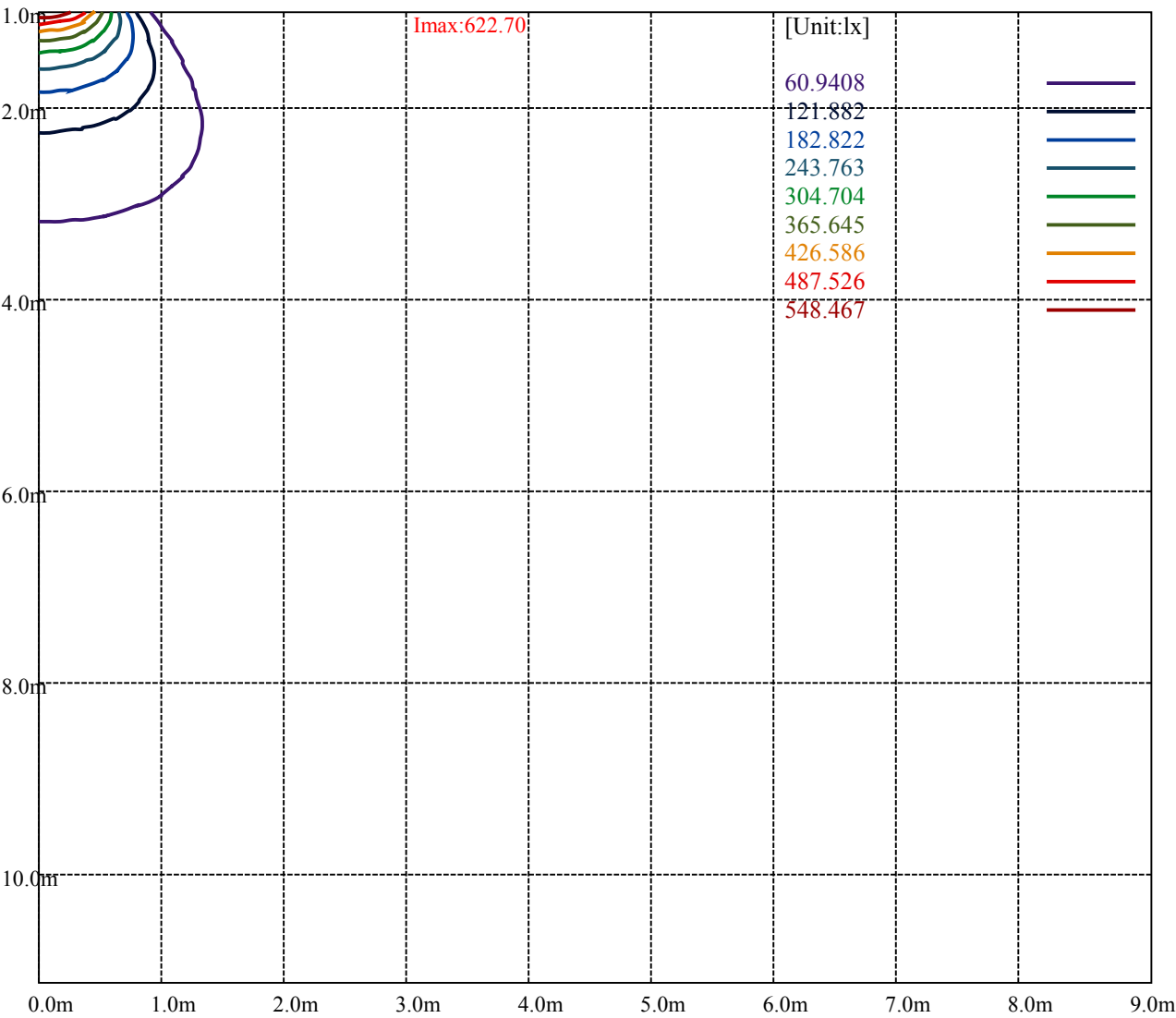
[Unit:cd]

Road

Imax:622.70	
(10%Imax) 62.6336	
(20%Imax) 125.267	
(30%Imax) 187.901	
(40%Imax) 250.534	
(50%Imax) 313.168	
(60%Imax) 375.802	
(70%Imax) 438.435	
(80%Imax) 501.069	
(90%Imax) 563.702	



(10%Emax)	15.23518	
(20%Emax)	30.47025	
(30%Emax)	45.7055	
(40%Emax)	60.94075	
(50%Emax)	76.176	
(60%Emax)	91.411	
(70%Emax)	106.6462	
(80%Emax)	121.8815	
(90%Emax)	137.1165	



Luminance Table

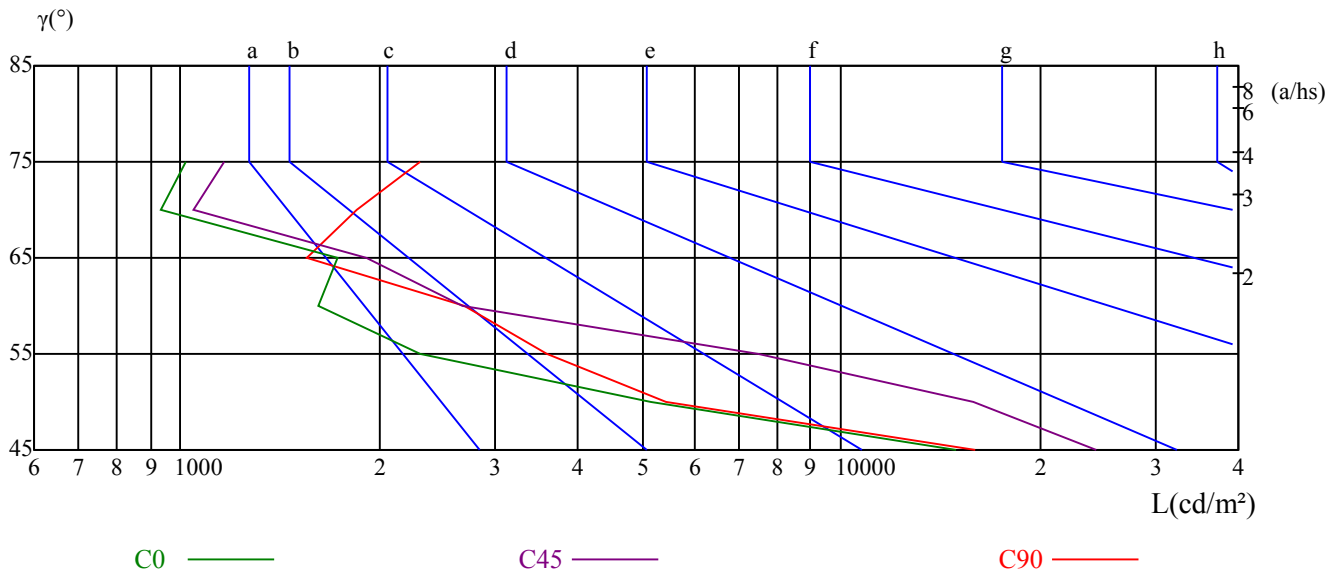
γ	45	50	55	60	65	70	75	80	85
C0	14962	5157	2306	1620	1726	931	1019	0	0
C45	24358	15871	7519	2667	1916	1047	1164	0	0
C90	15960	5417	3587	2690	1551	1847	2305	0	0

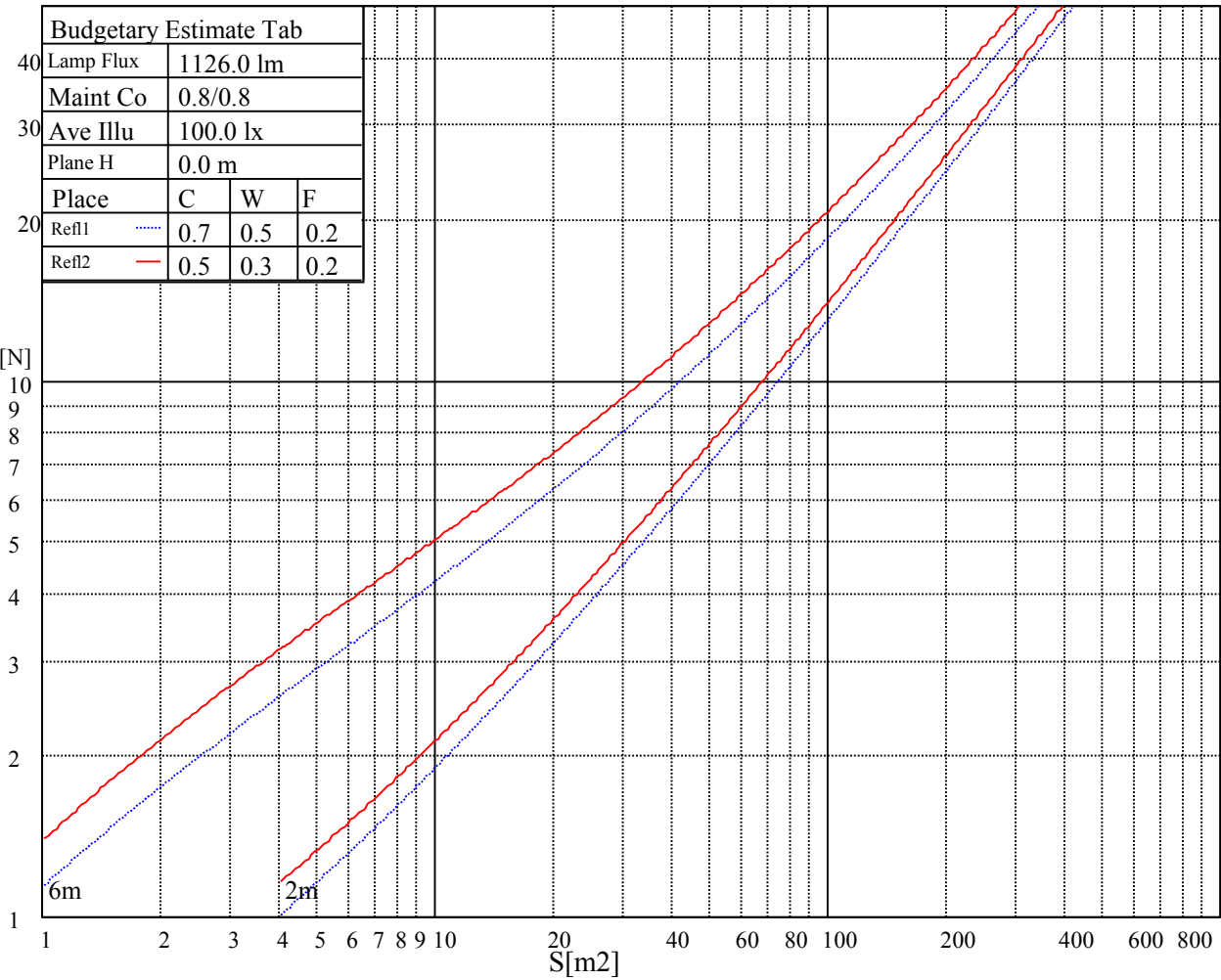
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2682	2682	3576	2920	2920	2920	0	0	0

Glare Table

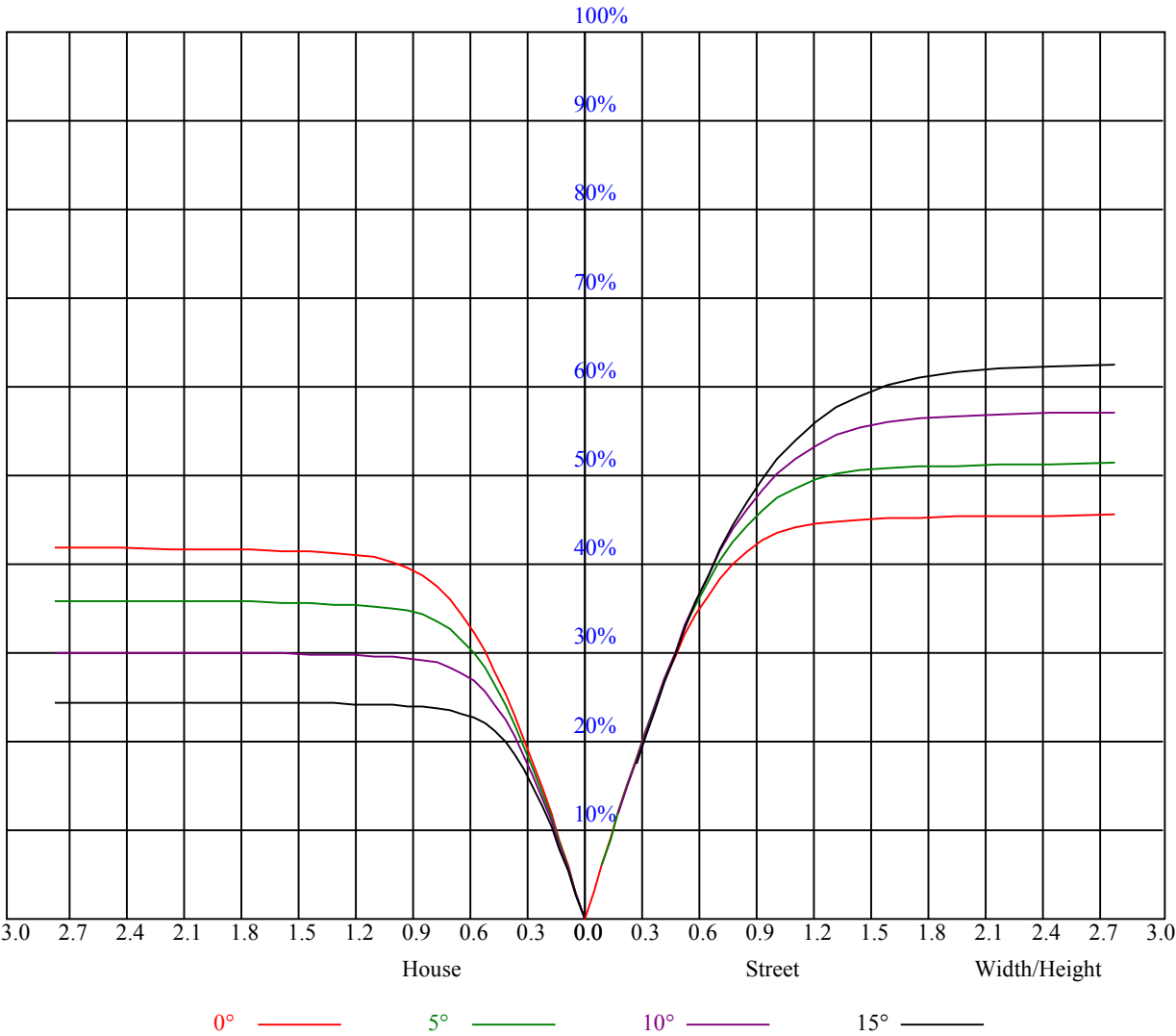
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.93	0.93	0.93	0.90	0.90	0.90	0.88
1	0.96	0.94	0.91	0.94	0.92	0.90	0.91	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.80
2	0.88	0.84	0.80	0.86	0.83	0.79	0.83	0.80	0.78	0.81	0.78	0.76	0.78	0.76	0.74	0.73
3	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.66
4	0.74	0.68	0.64	0.73	0.67	0.63	0.71	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.61	0.60
5	0.68	0.62	0.57	0.67	0.61	0.57	0.65	0.60	0.57	0.64	0.59	0.56	0.62	0.59	0.56	0.54
6	0.63	0.56	0.52	0.62	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.51	0.58	0.54	0.51	0.49
7	0.58	0.52	0.47	0.57	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.46	0.45
8	0.54	0.48	0.43	0.53	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.41
9	0.50	0.44	0.40	0.49	0.44	0.40	0.49	0.43	0.40	0.48	0.43	0.40	0.47	0.43	0.39	0.38
10	0.47	0.41	0.37	0.46	0.41	0.37	0.45	0.40	0.37	0.45	0.40	0.36	0.44	0.40	0.36	0.35



Intensity data(cd)

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	608.05	607.88	614.49	620.33	622.61	611.86	573.77	493.28	341.18
22.5	611.78	610.17	612.46	618.55	622.70	617.87	592.06	534.16	432.85
45.0	607.80	607.88	613.98	618.97	619.73	604.50	560.06	480.33	379.61
67.5	603.14	602.72	606.53	612.62	615.84	606.53	576.82	499.71	387.57
90.0	595.36	597.39	601.88	606.45	600.69	577.41	525.11	421.85	279.06
112.5	604.58	605.26	608.98	612.62	611.78	597.64	557.27	469.92	365.48
135.0	603.14	606.70	610.25	612.88	605.09	578.26	526.21	445.46	330.94
157.5	608.65	610.68	615.16	618.63	616.26	597.98	552.70	472.55	348.89
180.0	608.05	609.75	615.84	618.21	610.85	583.08	522.57	406.53	253.58
202.5	611.78	616.69	621.00	618.80	604.92	567.60	481.77	376.06	236.40
225.0	607.80	610.09	615.33	618.21	610.68	579.19	523.75	442.67	337.21
247.5	603.14	606.87	612.29	613.81	603.40	570.64	495.91	386.89	257.56
270.0	595.36	597.64	602.30	606.19	603.31	582.83	533.15	423.62	283.04
292.5	604.58	609.83	615.59	616.18	606.19	577.24	518.42	418.71	286.76
315.0	603.14	603.82	608.98	615.93	615.33	601.37	561.59	490.66	395.18
337.5	608.65	611.61	617.87	622.19	618.38	598.74	538.73	444.87	315.96
360.0	608.05	607.88	614.49	620.33	622.61	611.86	573.77	493.28	341.18
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	176.31	58.66	25.39	19.30	14.90	10.50	6.52	3.39	0.76
22.5	298.27	137.96	45.54	22.43	17.18	12.78	8.13	4.23	1.35
45.0	270.51	167.16	77.45	23.87	15.24	9.99	5.33	2.62	1.10
67.5	251.21	121.63	39.02	21.50	15.74	10.92	7.11	3.55	1.35
90.0	136.61	42.91	23.02	17.27	12.53	8.13	4.74	2.29	1.02
112.5	235.89	100.21	31.82	20.06	15.24	10.33	6.26	2.88	1.10
135.0	220.49	122.64	45.71	18.79	13.37	8.21	4.49	2.03	0.85
157.5	206.35	71.44	28.69	19.98	14.98	10.41	6.09	2.88	0.85
180.0	102.16	33.43	21.41	16.93	12.53	8.29	4.66	2.20	0.68
202.5	89.89	30.47	20.40	15.91	11.43	7.03	3.13	1.44	0.59
225.0	226.33	119.85	50.45	19.47	13.03	8.21	4.40	1.95	0.68
247.5	127.81	44.27	21.58	15.91	11.51	7.19	3.47	1.44	0.59
270.0	139.91	45.96	23.02	17.86	13.03	8.63	5.16	2.20	0.76
292.5	141.35	49.68	23.28	17.01	12.10	7.79	4.15	1.78	0.59
315.0	283.46	169.70	77.70	24.04	15.24	9.99	5.67	2.71	0.68
337.5	170.38	60.35	24.29	18.20	13.80	9.14	4.49	1.95	0.59
360.0	176.31	58.66	25.39	19.30	14.90	10.50	6.52	3.39	0.76
C/ γ (°)	90.0								
0.0	0.68								
22.5	0.68								
45.0	0.59								
67.5	0.68								
90.0	0.59								
112.5	0.68								
135.0	0.68								
157.5	0.68								
180.0	0.59								
202.5	0.59								
225.0	0.68								
247.5	0.59								
270.0	0.59								
292.5	0.59								
315.0	0.68								
337.5	0.59								
360.0	0.68								