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Nata

LumCAT: 1-0942-N	
Luminaire: 92.70.259.00	
Report No: 200923-B038	Voltage(V): 230.9000
Test No: 200923-C038	Current(A): 0.0840
LampCAT: CITIZEN CLU700	Power (W): 10.4100
Lamp flux(lm): 836.3	PF: 0.5350
Number of Lamps: 1	Ballast type: AC
Length(feet)(ft.):0.000	Width(feet)(ft.):0.000
Phm Type: C	Height(feet)(ft.):0.000

Photometric Results

Lumens(lm): 648.29
Efficiency(%): 77.52%
Lumens(lm)/Power(W): 62.28
Central intensity(cd): 1775.044
Maximum intensity(cd): 1775.044
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=33.7
[C90/270]Total=33.7
Field angle(10%Imax): [C0/180]Total=59.7
[C90/270]Total=59.7
Maximum s/h(1/2): C0_180=0.55 C90_270=0.55
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.71%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.963%

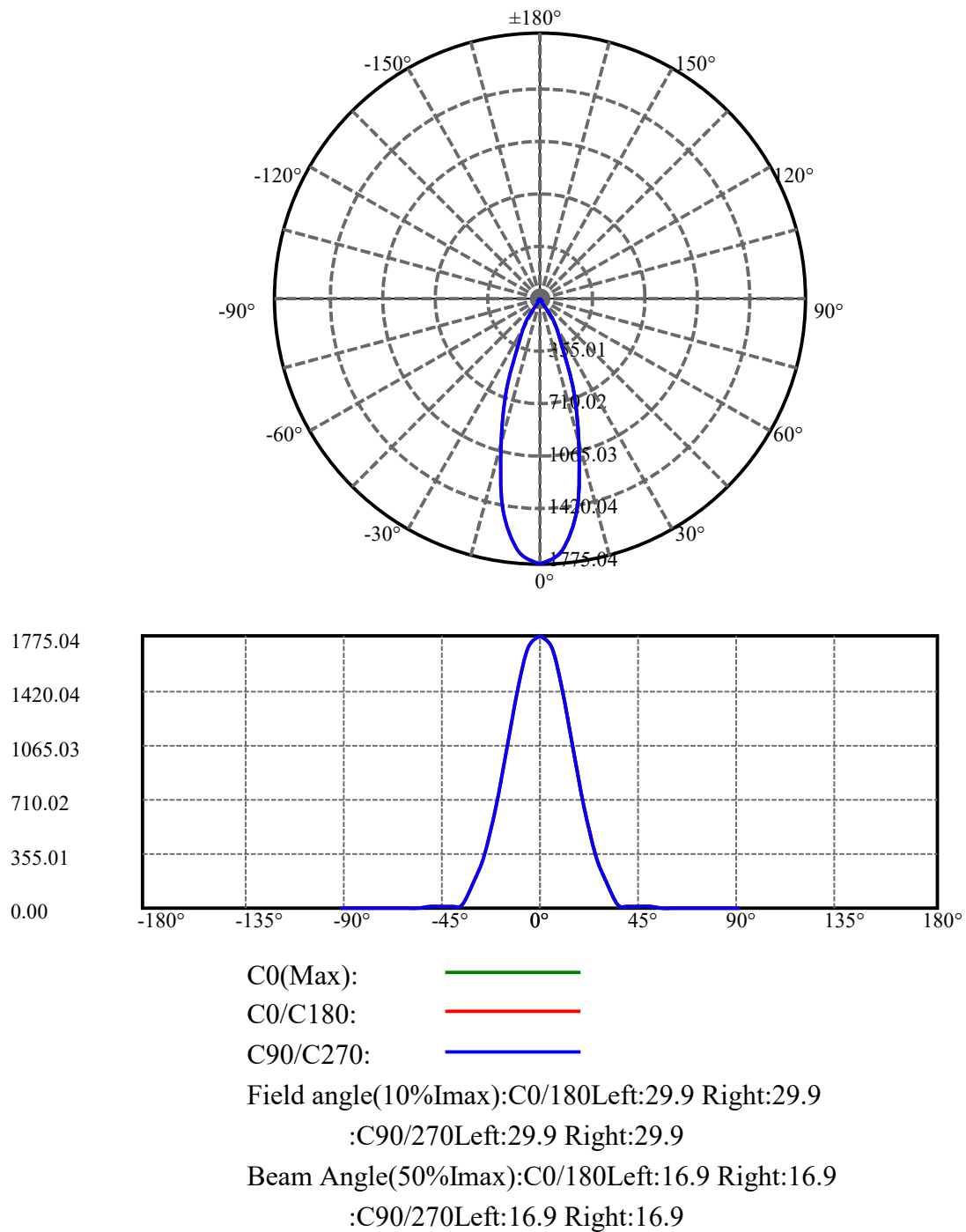
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1775.044	10.615	10.615	1.269%	1.637%
5.0	1694.650	80.959	91.574	9.680%	14.126%
10.0	1429.281	136.043	227.618	16.267%	35.111%
15.0	1019.673	144.659	372.277	17.297%	57.425%
20.0	666.572	124.965	497.242	14.942%	76.701%
25.0	344.394	79.780	577.022	9.539%	89.007%
30.0	172.910	47.389	624.411	5.666%	96.317%
35.0	24.397	7.670	632.081	.917%	97.500%
40.0	11.021	3.883	635.964	.464%	98.099%
45.0	7.674	2.974	638.939	.356%	98.558%
50.0	5.766	2.421	641.36	.289%	98.932%
55.0	4.397	1.974	643.334	.236%	99.236%
60.0	3.248	1.542	644.876	.184%	99.474%
65.0	2.256	1.121	645.997	.134%	99.647%
70.0	1.526	0.786	646.782	.094%	99.768%
75.0	1.079	0.571	647.354	.068%	99.856%
80.0	0.795	0.429	647.783	.051%	99.922%
85.0	0.632	0.345	648.128	.041%	99.976%
90.0	0.574	0.157	648.285	.019%	100.000%

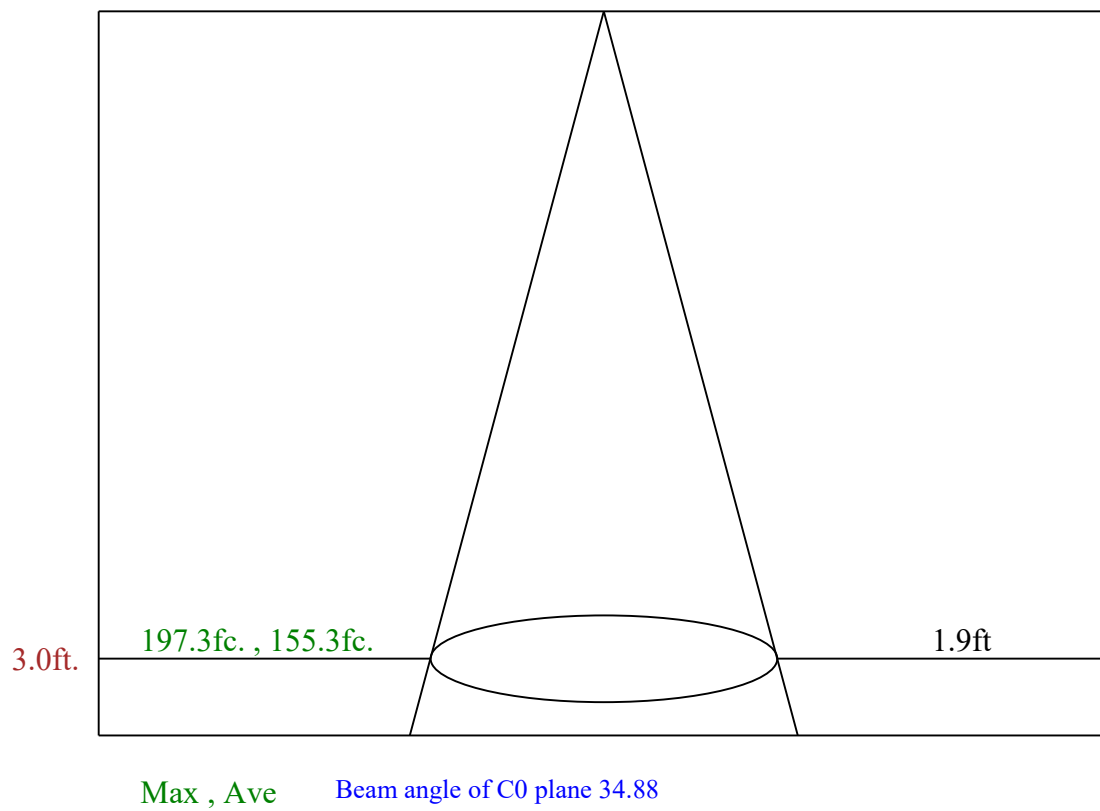
ZONAL LUMEN SUMMARY

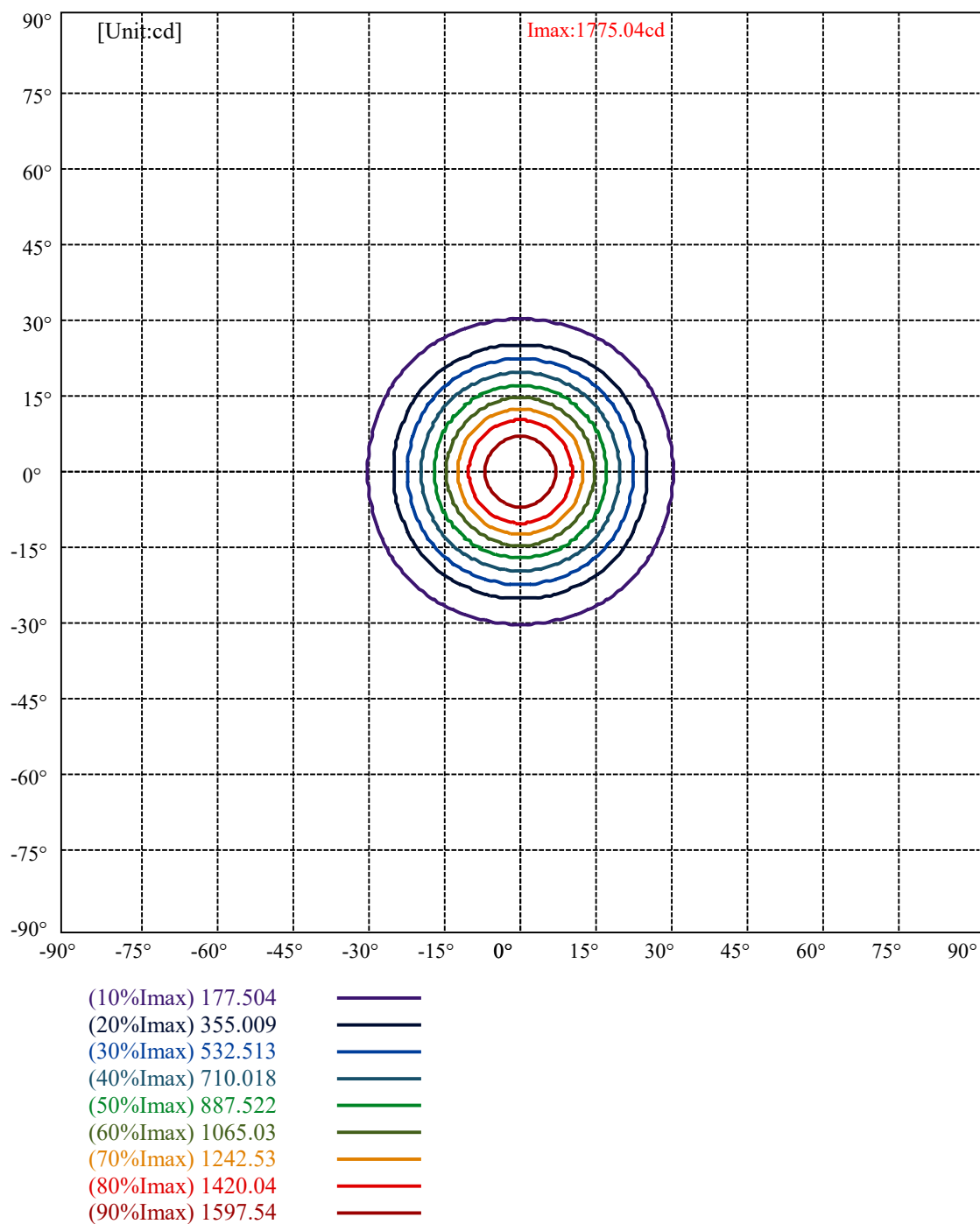
Zone	Lumens	%Lamp	%Fixt
0-30	624.41	74.66%	96.32%
0-40	635.96	76.04%	98.10%
0-60	644.88	77.11%	99.47%
0-90	648.13	77.50%	99.98%
0-120	648.13	77.50%	99.98%
0-180	648.29	77.52%	100.00%
60-90	4.79	0.57%	0.74%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-21.34	518.63	62.01%	80.00%

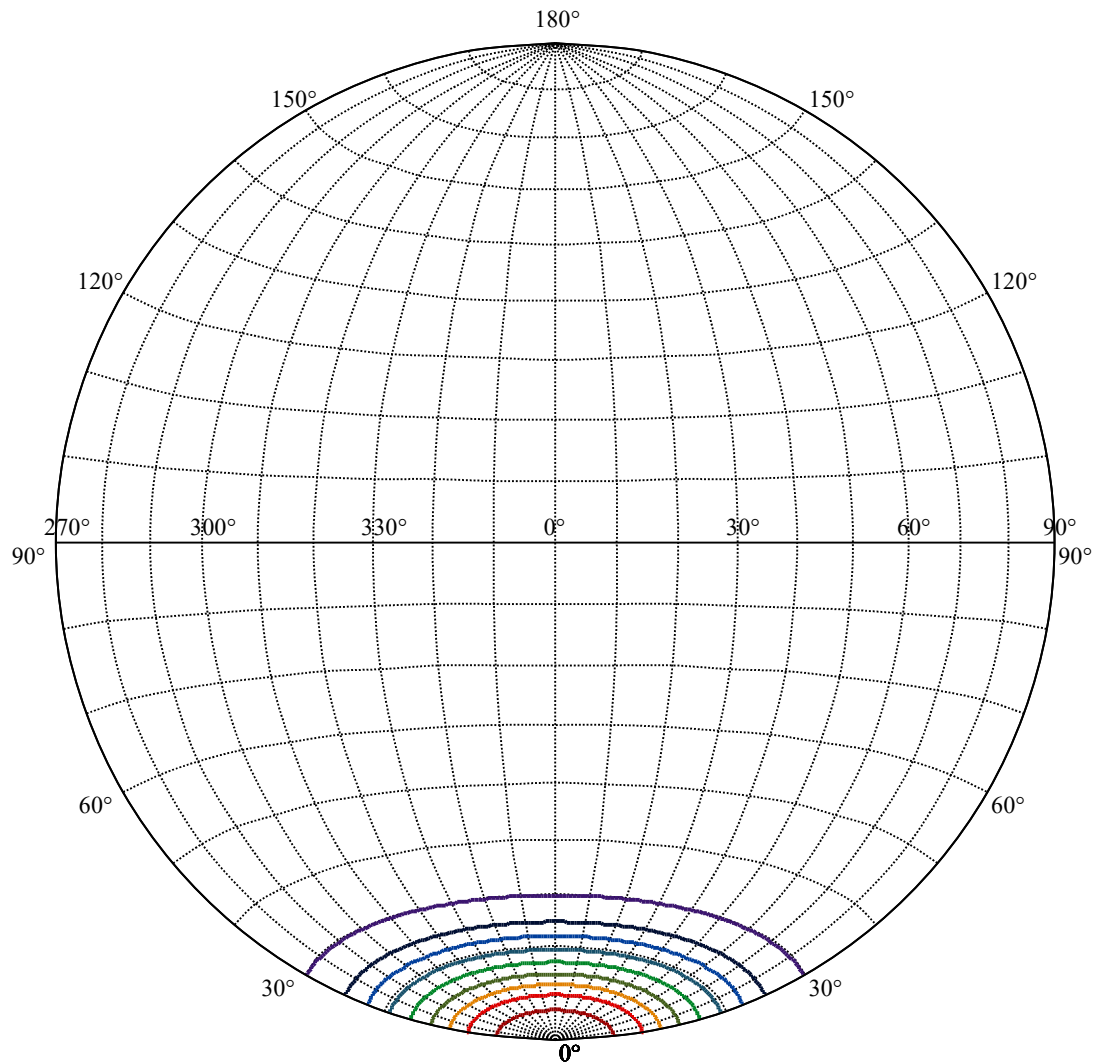
ZONAL LUMEN SUMMARY

0-10	227.62
10-20	269.62
20-30	127.17
30-40	11.55
40-50	5.40
50-60	3.52
60-70	1.91
70-80	1.00
80-90	0.35
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









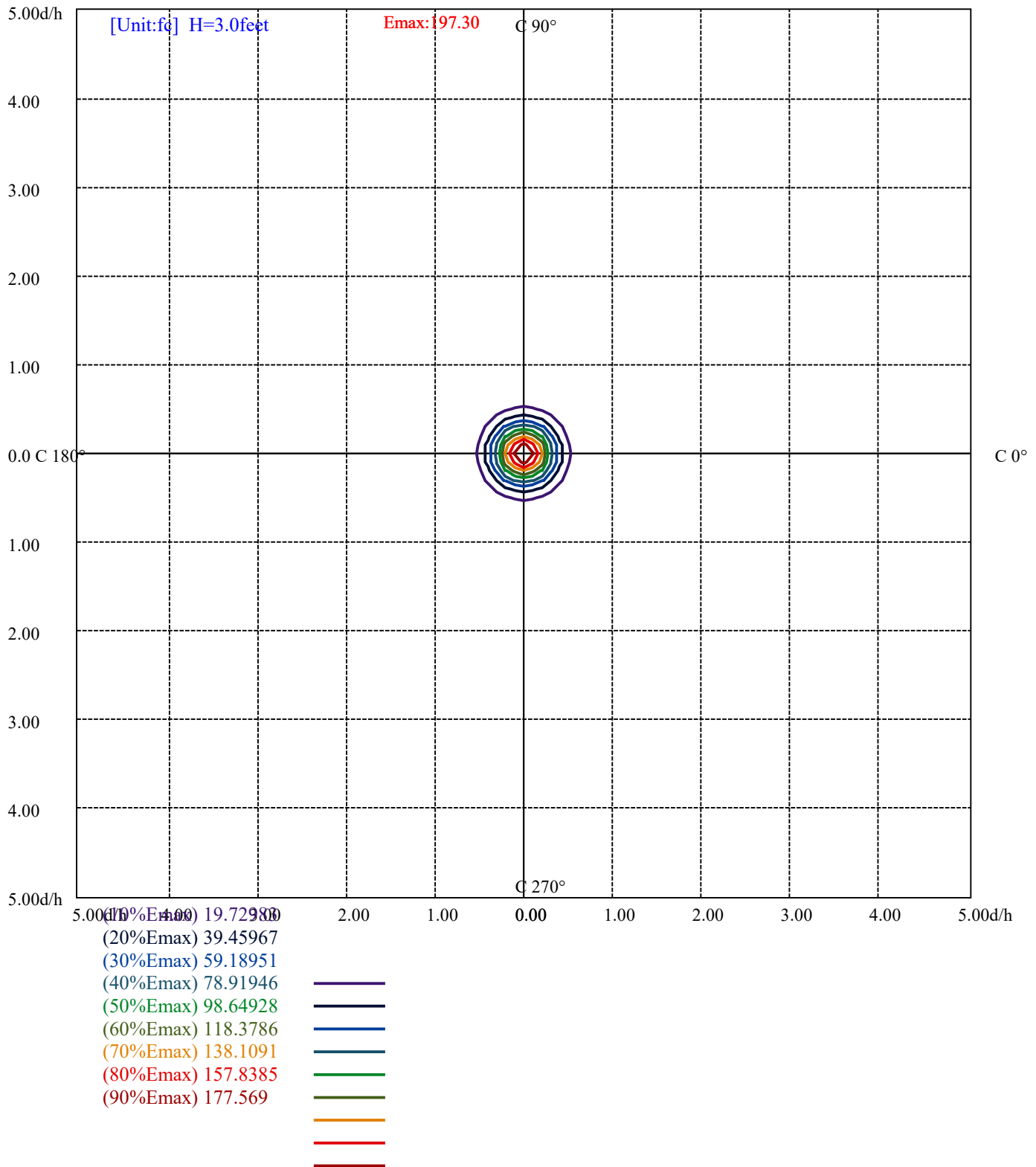
House

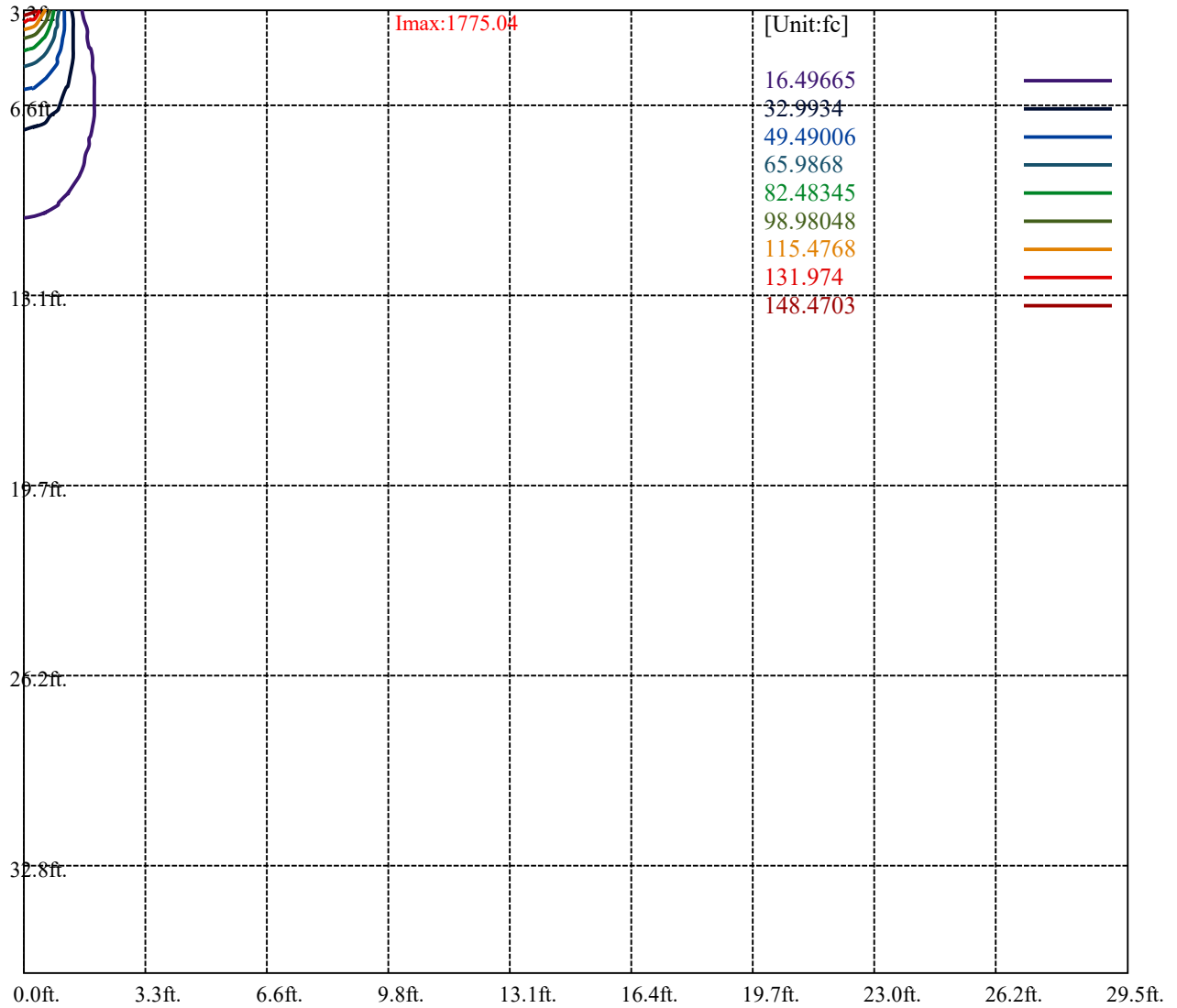
[Unit:cd]

Road

Imax:1775.04

(10%Imax)	177.504	—
(20%Imax)	355.009	—
(30%Imax)	532.513	—
(40%Imax)	710.018	—
(50%Imax)	887.522	—
(60%Imax)	1065.03	—
(70%Imax)	1242.53	—
(80%Imax)	1420.04	—
(90%Imax)	1597.54	—





Luminance Table

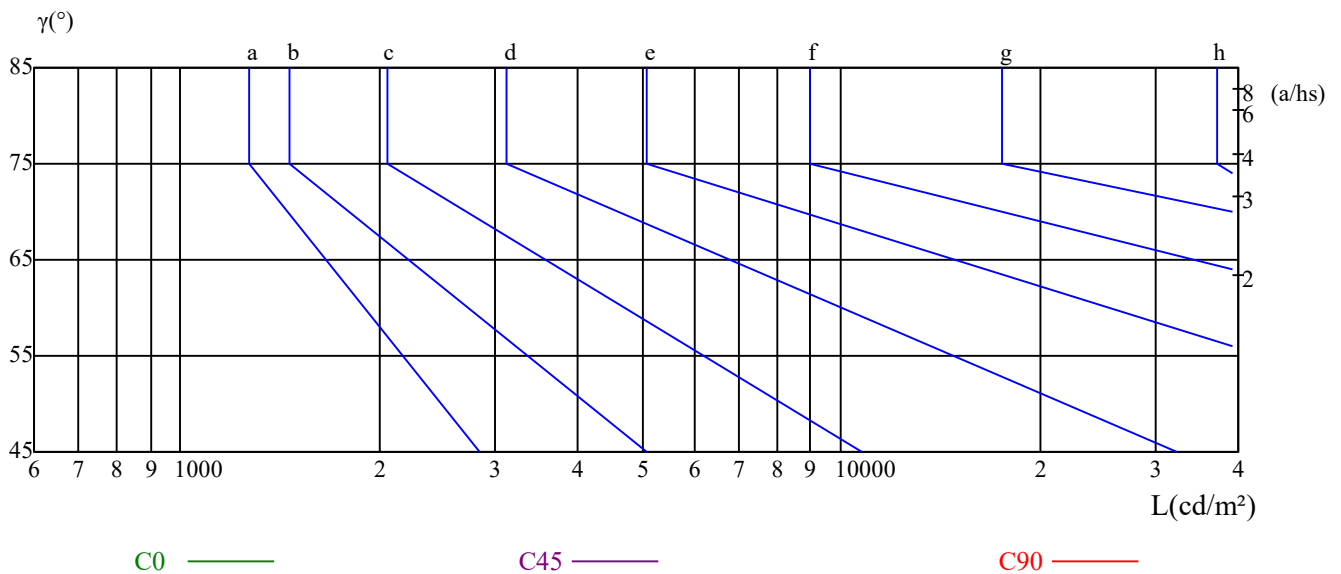
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

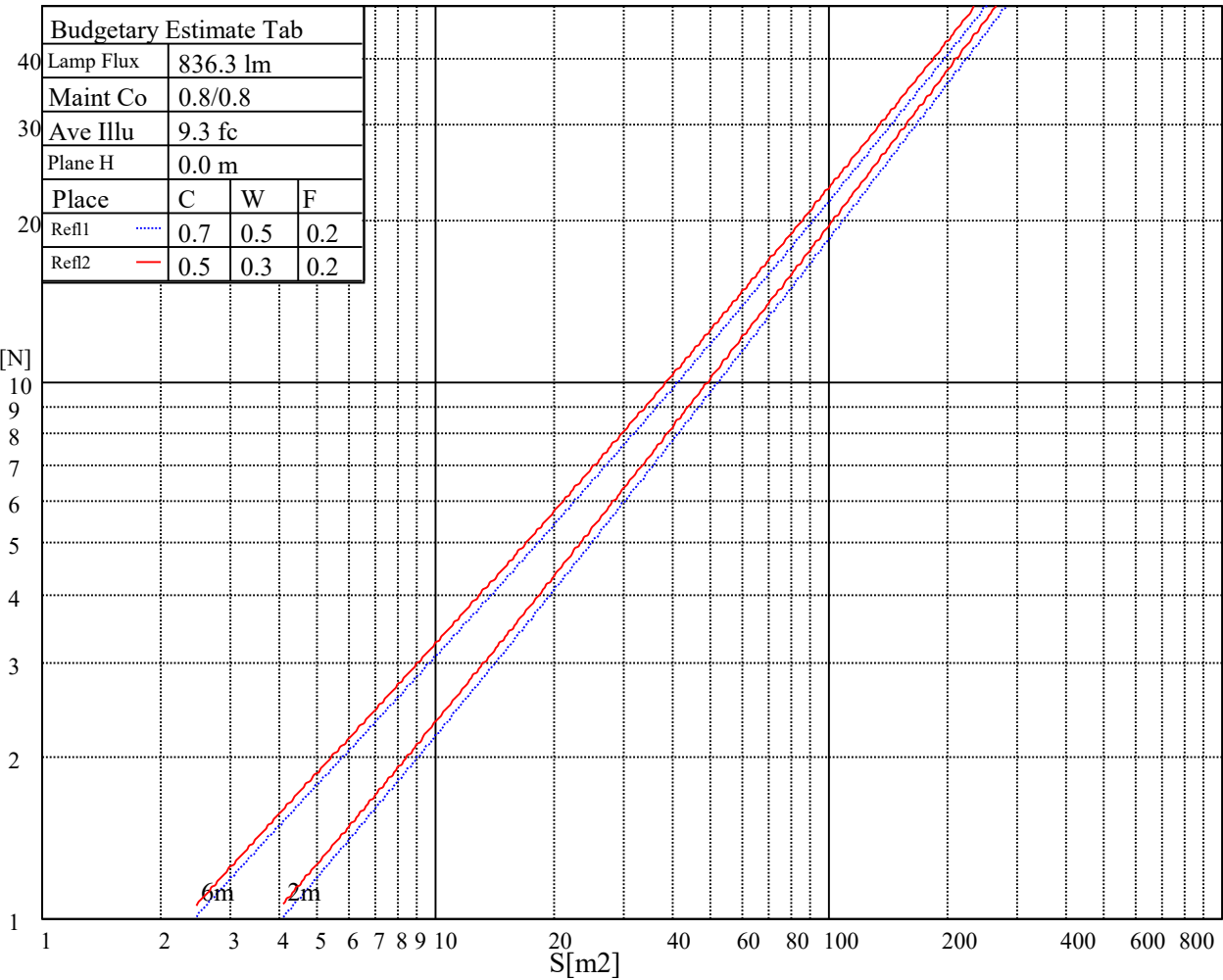
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

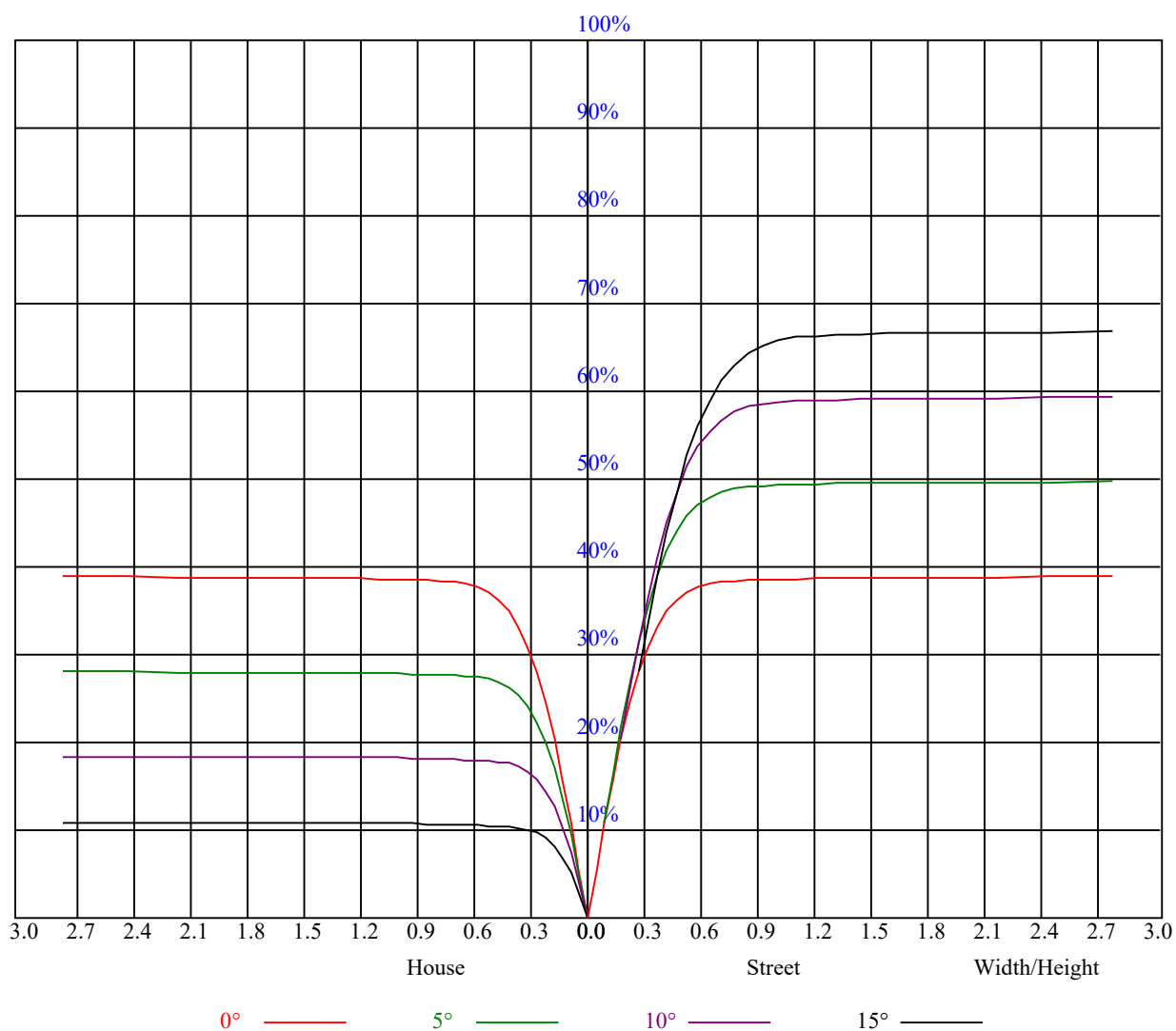
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	0.94	0.94	0.94	0.92	0.92	0.92	0.87	0.87	0.87	0.84	0.84	0.84	0.80	0.80	0.80	0.79
1	0.87	0.85	0.83	0.85	0.84	0.82	0.82	0.81	0.79	0.79	0.78	0.77	0.77	0.76	0.75	0.73
2	0.83	0.80	0.78	0.81	0.79	0.77	0.79	0.77	0.75	0.77	0.75	0.74	0.75	0.73	0.72	0.71
3	0.79	0.76	0.73	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.72	0.71	0.73	0.71	0.69	0.68
4	0.76	0.72	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.66
5	0.73	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.64
6	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.67	0.65	0.63	0.62
7	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.60
8	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.58
9	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.62	0.59	0.57	0.57
10	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.58	0.56	0.55



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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	1773.30	1649.41	1343.14	874.84	560.88	289.56	97.17	15.22	10.21
45.0	1764.95	1760.77	1596.51	1262.40	841.06	478.65	267.98	43.99	12.20
90.0	1789.54	1705.09	1464.72	870.02	704.73	362.32	134.38	20.19	10.44
135.0	1772.38	1766.81	1575.16	1205.33	808.11	429.46	267.05	35.68	13.13
180.0	1773.30	1737.11	1504.16	1170.99	777.02	408.12	267.52	30.12	12.39
225.0	1764.95	1603.00	1272.61	887.05	484.31	228.63	52.06	13.92	9.10
270.0	1789.54	1699.06	1428.06	1021.11	630.85	334.80	233.64	19.81	10.53
315.0	1772.38	1635.95	1249.87	865.65	525.61	223.62	63.48	16.24	10.16
360.0	1773.30	1649.41	1343.14	874.84	560.88	289.56	97.17	15.22	10.21
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	7.05	5.57	4.27	3.02	2.04	1.44	1.02	0.70	0.51
45.0	8.58	6.31	4.87	3.85	2.78	1.86	1.35	1.02	1.07
90.0	7.56	5.89	4.36	3.29	2.27	1.53	1.11	0.88	0.70
135.0	8.45	6.36	4.78	3.57	2.51	1.72	1.16	0.79	0.56
180.0	8.26	6.08	4.73	3.43	2.37	1.53	1.02	0.74	0.51
225.0	6.87	5.06	3.94	2.83	1.90	1.35	1.02	0.84	0.74
270.0	7.52	5.48	4.22	3.16	2.13	1.44	1.07	0.79	0.56
315.0	7.10	5.38	3.99	2.83	2.04	1.35	0.88	0.60	0.42
360.0	7.05	5.57	4.27	3.02	2.04	1.44	1.02	0.70	0.51
C/ γ (°)	90.0								
0.0	0.28								
45.0	2.09								
90.0	0.51								
135.0	0.28								
180.0	0.19								
225.0	0.56								
270.0	0.42								
315.0	0.28								
360.0	0.28								