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Nata

LumCAT: NA01D0201545BW

Luminaire:

Report No: 200408-B010

Voltage(V): 3.7400

Test No: 200408-C010

Current(A): 0.2030

LampCAT: NICHIA NF2W757DR

Power (W): 0.7600

Lamp flux(lm): 78.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 67.10

Efficiency(%): 86.02%

Lumens(lm)/Power(W): 88.28

Central intensity(cd): 142.594

Maximum intensity(cd): 150.300

Angle of maximum intensity: C=180.0 γ =14.0

Beam Angle(50%Imax): [C0/180]Total=60.9

[C90/270]Total=15.5

Field angle(10%Imax): [C0/180]Total=85.0

[C90/270]Total=44.9

Maximum s/h(1/2): C0_180=1.00 C90_270=0.24

Maximum s/h(1/4): C0_180=0.90 C90_270=0.30

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.02%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 90.171%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	142.444	0.000	0	.000%	.000%
1.0	140.937	0.136	0.136	.174%	.202%
2.0	136.685	0.398	0.534	.511%	.796%
3.0	130.943	0.640	1.174	.821%	1.750%
4.0	124.913	0.856	2.031	1.098%	3.026%
5.0	118.029	1.045	3.076	1.340%	4.584%
6.0	111.553	1.207	4.282	1.547%	6.382%
7.0	105.356	1.346	5.629	1.726%	8.389%
8.0	99.394	1.465	7.094	1.879%	10.573%
9.0	93.469	1.563	8.657	2.004%	12.902%
10.0	88.015	1.642	10.299	2.106%	15.350%
11.0	82.709	1.706	12.005	2.187%	17.893%
12.0	78.127	1.758	13.763	2.254%	20.513%
13.0	73.484	1.799	15.563	2.307%	23.195%
14.0	69.185	1.826	17.389	2.341%	25.916%
15.0	65.529	1.849	19.238	2.371%	28.673%
16.0	61.856	1.867	21.105	2.393%	31.455%
17.0	58.066	1.868	22.972	2.394%	34.238%
18.0	54.555	1.857	24.829	2.381%	37.005%
19.0	51.366	1.843	26.672	2.363%	39.752%
20.0	48.021	1.819	28.491	2.332%	42.463%
21.0	44.862	1.784	30.275	2.287%	45.121%
22.0	42.002	1.746	32.02	2.238%	47.723%
23.0	39.223	1.704	33.724	2.185%	50.263%
24.0	36.445	1.654	35.379	2.121%	52.729%
25.0	33.848	1.598	36.977	2.049%	55.111%
26.0	31.425	1.541	38.518	1.975%	57.407%
27.0	29.079	1.480	39.998	1.898%	59.614%
28.0	26.824	1.415	41.413	1.815%	61.723%
29.0	24.684	1.348	42.761	1.728%	63.731%
30.0	22.748	1.281	44.042	1.642%	65.640%
31.0	20.869	1.214	45.256	1.556%	67.449%
32.0	19.005	1.142	46.398	1.465%	69.152%
33.0	17.398	1.072	47.47	1.375%	70.750%
34.0	15.893	1.007	48.478	1.292%	72.252%
35.0	14.398	0.941	49.419	1.206%	73.654%
36.0	13.062	0.874	50.293	1.121%	74.957%
37.0	11.888	0.814	51.107	1.043%	76.170%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	10.748	0.756	51.862	.969%	77.296%
39.0	9.656	0.696	52.559	.893%	78.334%
40.0	8.747	0.642	53.2	.823%	79.290%
41.0	7.927	0.594	53.794	.761%	80.175%
42.0	7.125	0.547	54.341	.701%	80.990%
43.0	6.445	0.503	54.844	.644%	81.739%
44.0	5.902	0.466	55.31	.597%	82.434%
45.0	5.416	0.435	55.745	.558%	83.082%
46.0	5.013	0.408	56.153	.523%	83.690%
47.0	4.664	0.385	56.537	.493%	84.264%
48.0	4.390	0.366	56.903	.469%	84.809%
49.0	4.148	0.351	57.254	.450%	85.332%
50.0	3.928	0.337	57.591	.432%	85.834%
51.0	3.745	0.325	57.915	.416%	86.318%
52.0	3.586	0.315	58.23	.403%	86.787%
53.0	3.441	0.306	58.536	.392%	87.242%
54.0	3.302	0.297	58.833	.381%	87.685%
55.0	3.202	0.290	59.123	.372%	88.118%
56.0	3.101	0.285	59.408	.365%	88.542%
57.0	3.012	0.279	59.687	.358%	88.959%
58.0	2.930	0.275	59.962	.352%	89.368%
59.0	2.862	0.271	60.233	.347%	89.772%
60.0	2.805	0.268	60.501	.343%	90.171%
61.0	2.747	0.265	60.766	.340%	90.566%
62.0	2.702	0.263	61.028	.337%	90.957%
63.0	2.646	0.260	61.288	.333%	91.345%
64.0	2.580	0.256	61.545	.329%	91.727%
65.0	2.541	0.253	61.798	.325%	92.105%
66.0	2.508	0.252	62.05	.323%	92.480%
67.0	2.473	0.250	62.301	.321%	92.853%
68.0	2.447	0.249	62.55	.319%	93.225%
69.0	2.412	0.248	62.798	.318%	93.594%
70.0	2.393	0.247	63.044	.316%	93.962%
71.0	2.374	0.246	63.291	.316%	94.329%
72.0	2.339	0.245	63.536	.314%	94.694%
73.0	2.304	0.243	63.779	.311%	95.056%
74.0	2.290	0.242	64.02	.310%	95.416%
75.0	2.262	0.240	64.261	.308%	95.775%

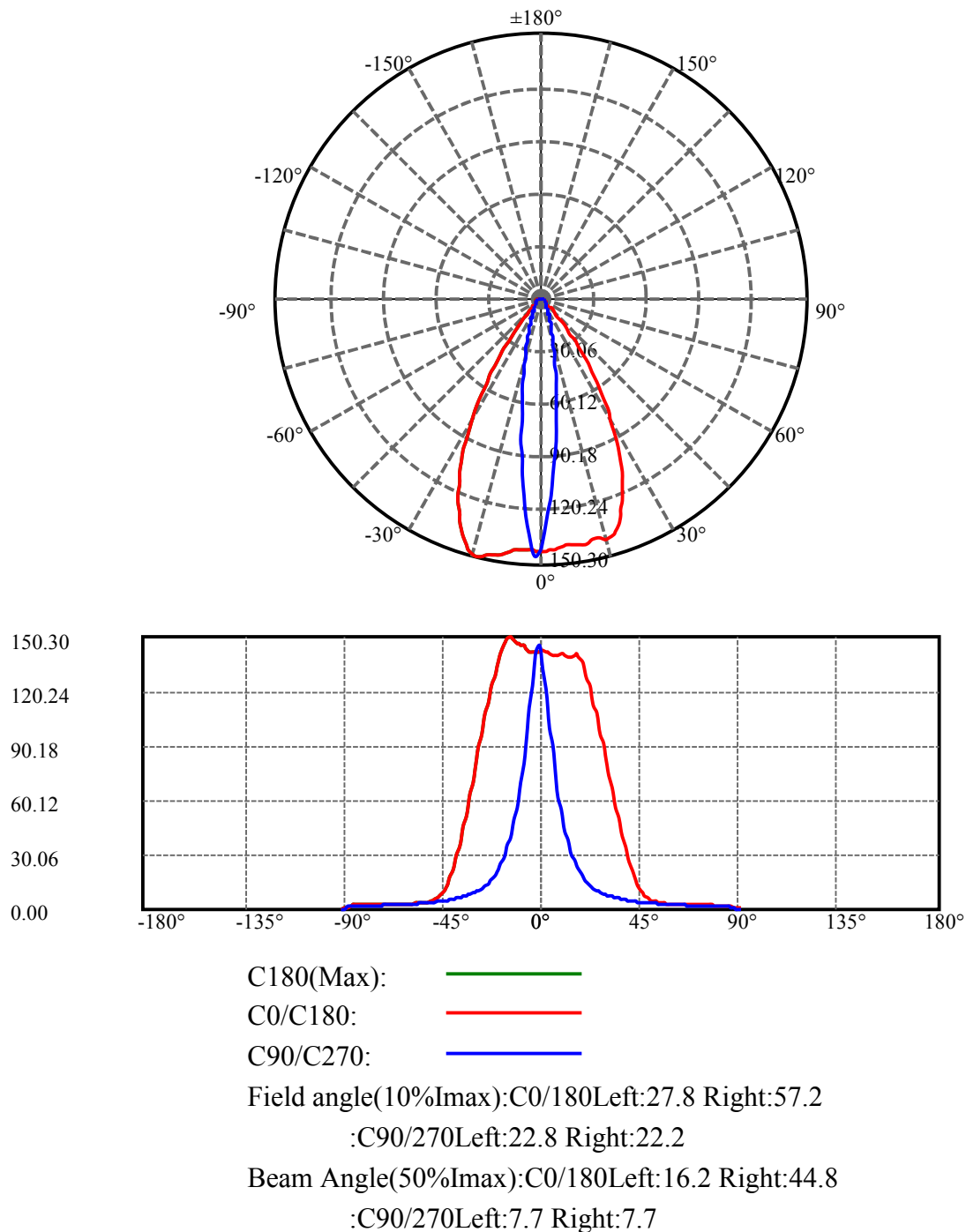
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	2.250	0.239	64.5	.307%	96.132%
77.0	2.229	0.239	64.739	.306%	96.488%
78.0	2.205	0.237	64.976	.304%	96.841%
79.0	2.173	0.235	65.212	.302%	97.192%
80.0	2.154	0.233	65.445	.299%	97.540%
81.0	2.116	0.231	65.676	.296%	97.884%
82.0	2.070	0.227	65.903	.291%	98.222%
83.0	2.025	0.223	66.125	.285%	98.554%
84.0	1.957	0.217	66.342	.278%	98.877%
85.0	1.880	0.209	66.552	.268%	99.189%
86.0	1.582	0.189	66.741	.243%	99.471%
87.0	1.123	0.148	66.889	.190%	99.692%
88.0	0.701	0.100	66.989	.128%	99.841%
89.0	0.462	0.064	67.053	.082%	99.936%
90.0	0.326	0.043	67.096	.055%	100.000%

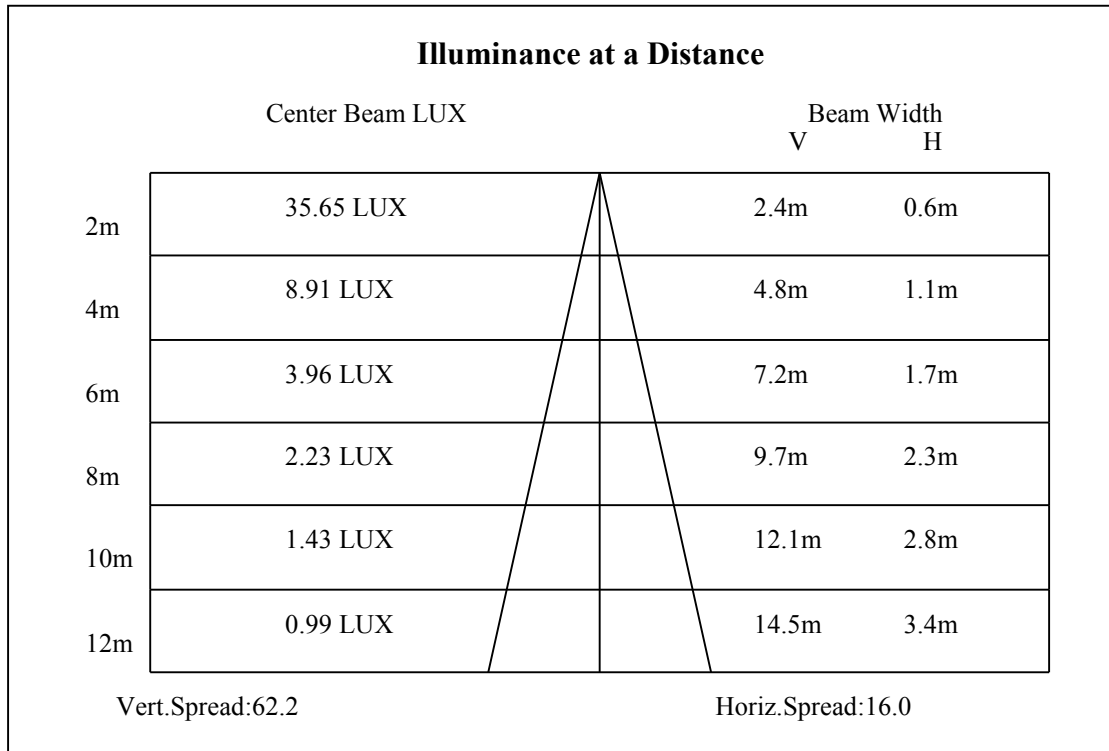
ZONAL LUMEN SUMMARY

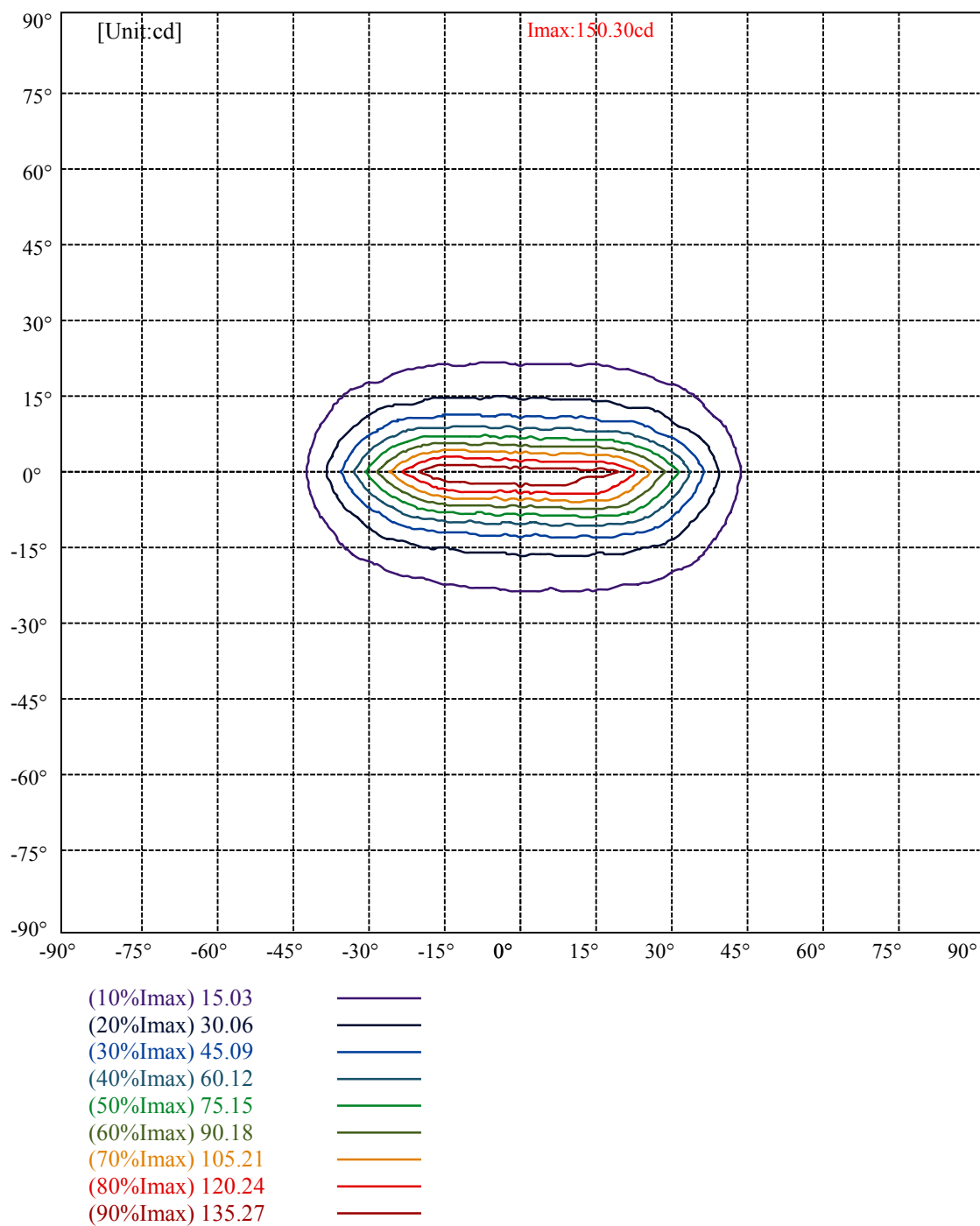
Zone	Lumens	%Lamp	%Fixt
0-30	44.04	56.46%	65.64%
0-40	53.20	68.21%	79.29%
0-60	60.50	77.57%	90.17%
0-90	67.05	85.96%	99.94%
0-120	67.05	85.96%	99.94%
0-180	67.10	86.02%	100.00%
60-90	6.82	8.74%	10.16%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-40.80	53.68	68.82%	80.00%

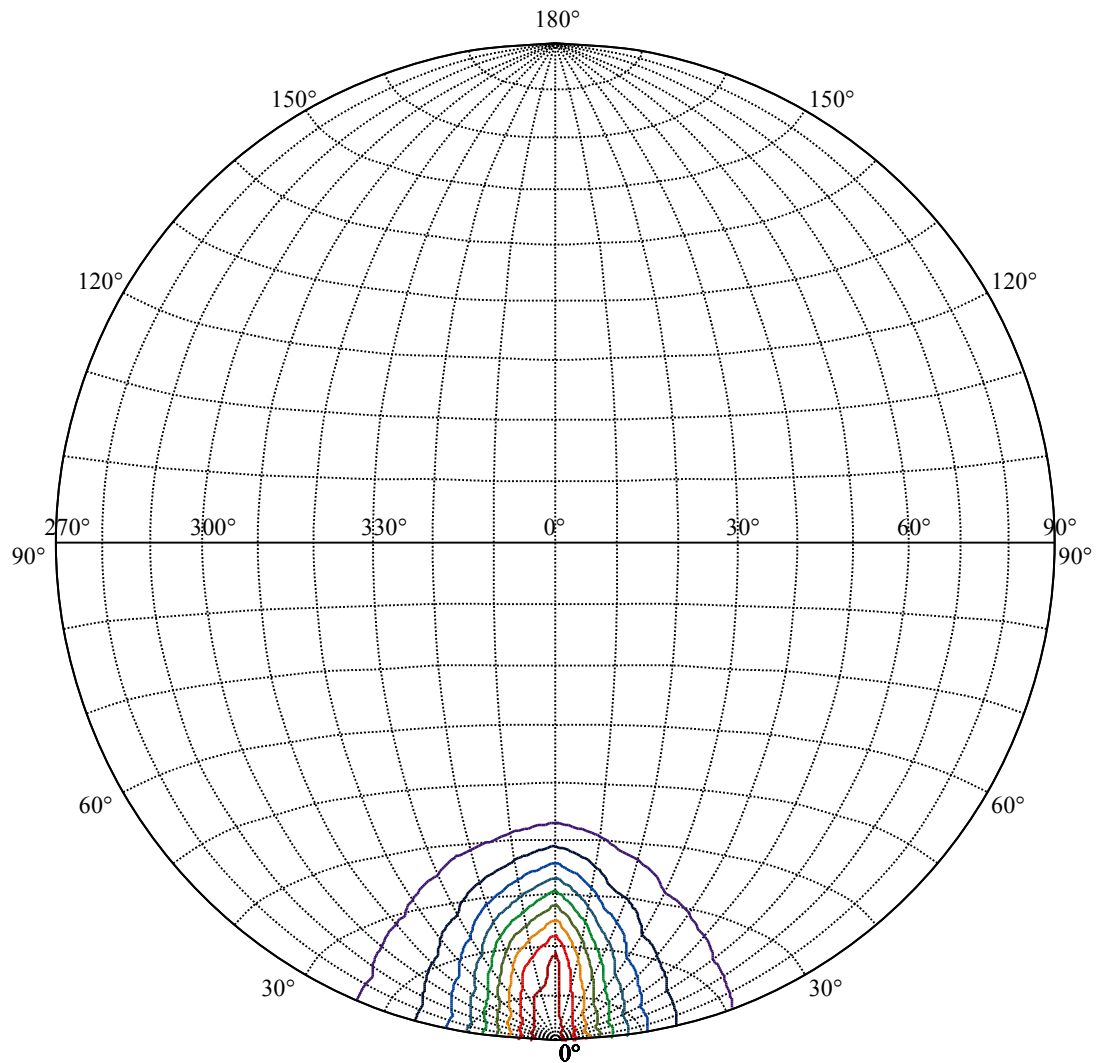
ZONAL LUMEN SUMMARY

0-10	10.30
10-20	18.19
20-30	15.55
30-40	9.16
40-50	4.39
50-60	2.91
60-70	2.54
70-80	2.40
80-90	1.61
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









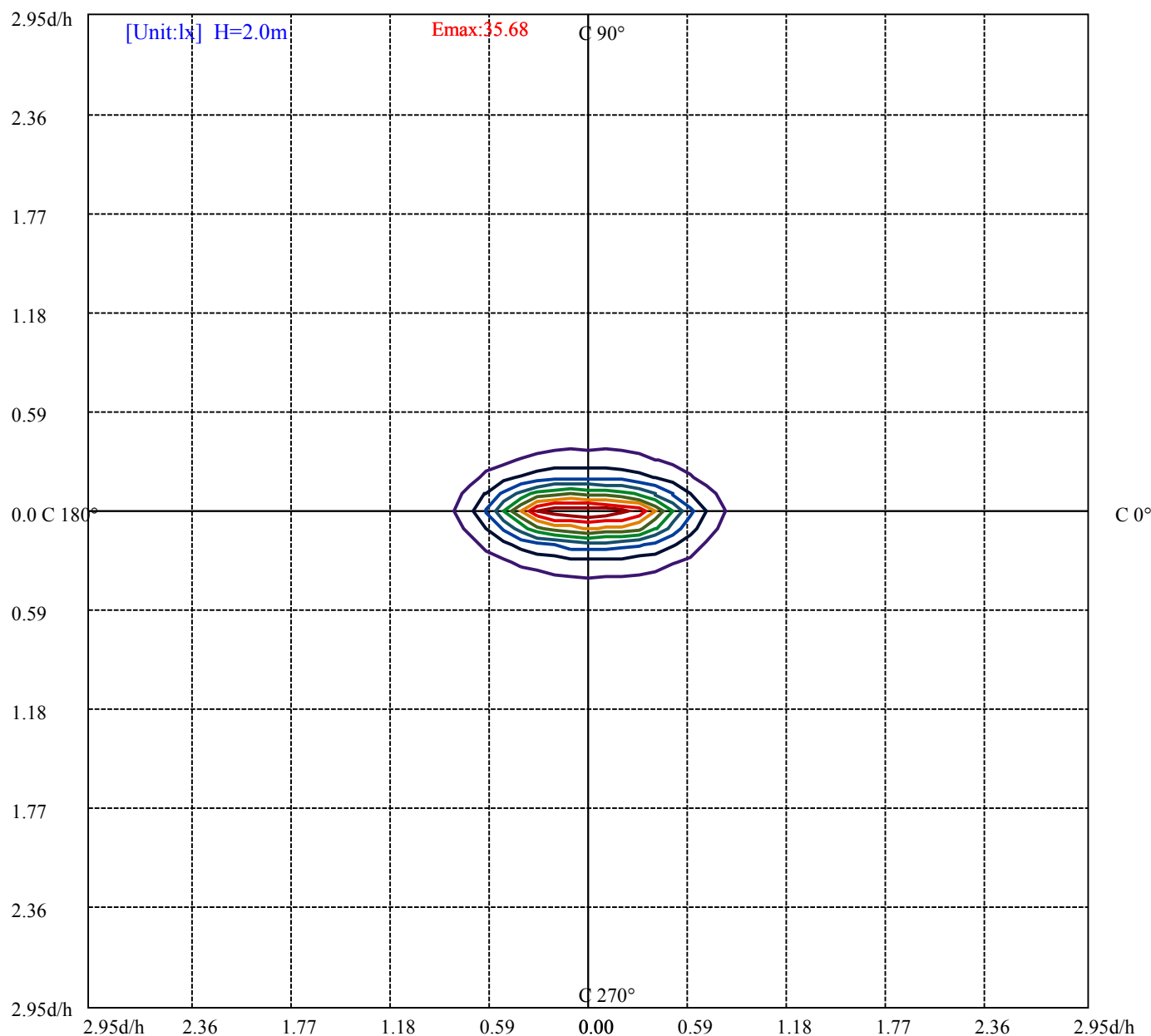
House

[Unit:cd]

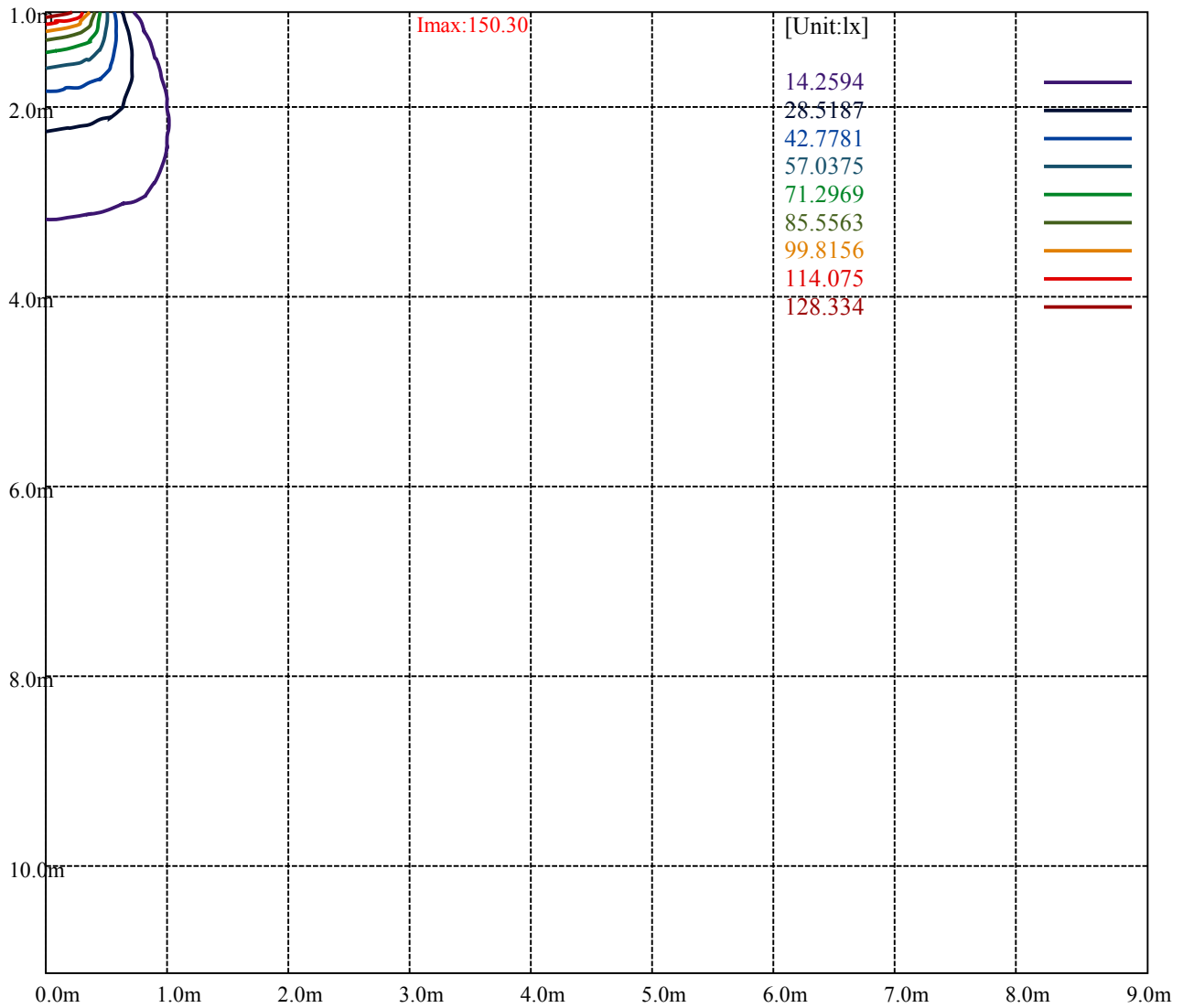
Road

Imax:150.30

(10%Imax)	15.03	—
(20%Imax)	30.06	—
(30%Imax)	45.09	—
(40%Imax)	60.12	—
(50%Imax)	75.15	—
(60%Imax)	90.18	—
(70%Imax)	105.21	—
(80%Imax)	120.24	—
(90%Imax)	135.27	—



(10%Emax) 3.567625	—
(20%Emax) 7.13525	—
(30%Emax) 10.70288	—
(40%Emax) 14.2705	—
(50%Emax) 17.83815	—
(60%Emax) 21.40578	—
(70%Emax) 24.9734	—
(80%Emax) 28.541	—
(90%Emax) 32.10875	—



Luminance Table

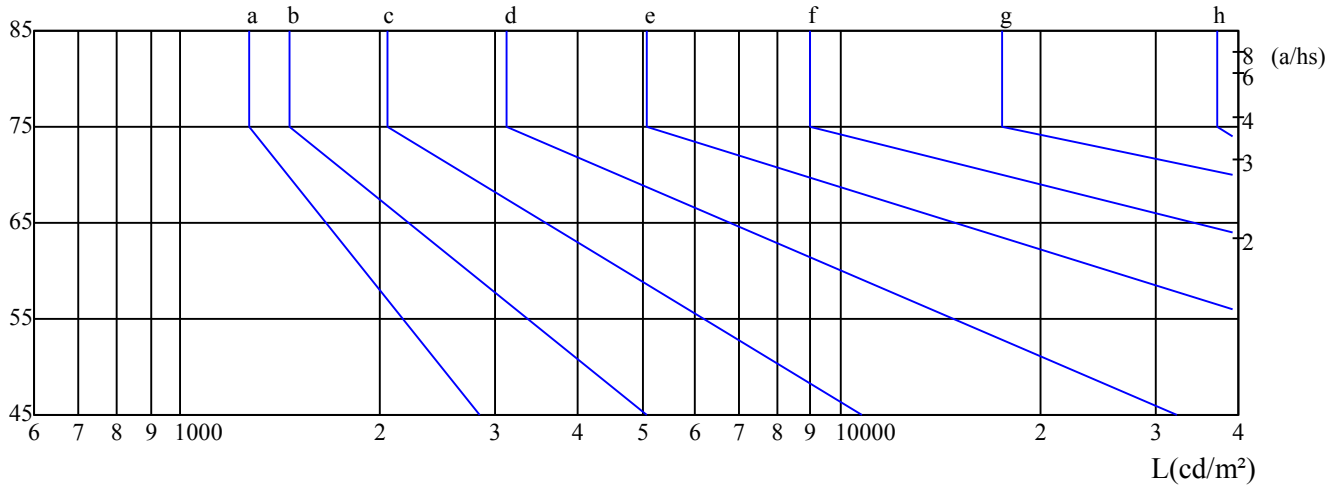
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

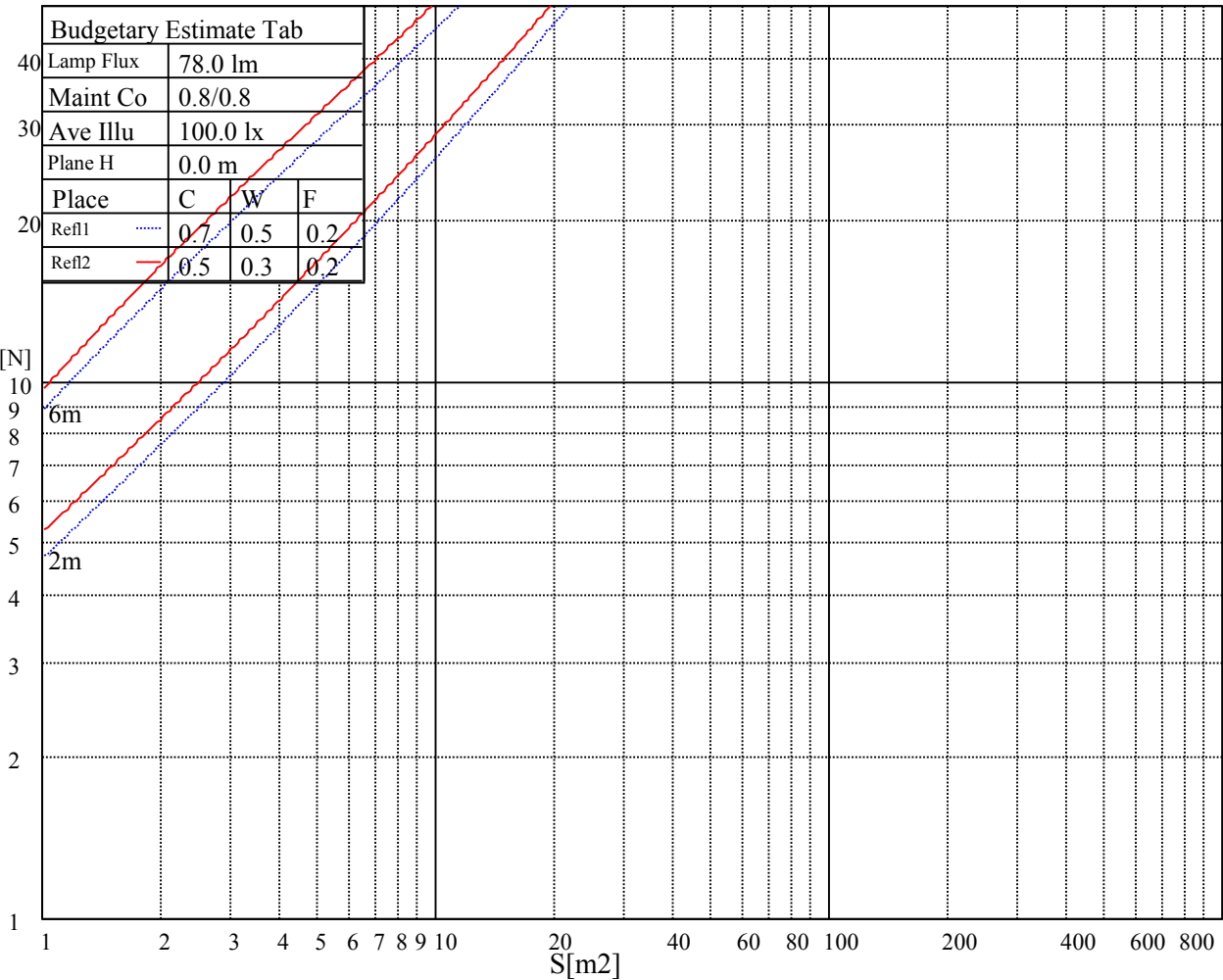
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

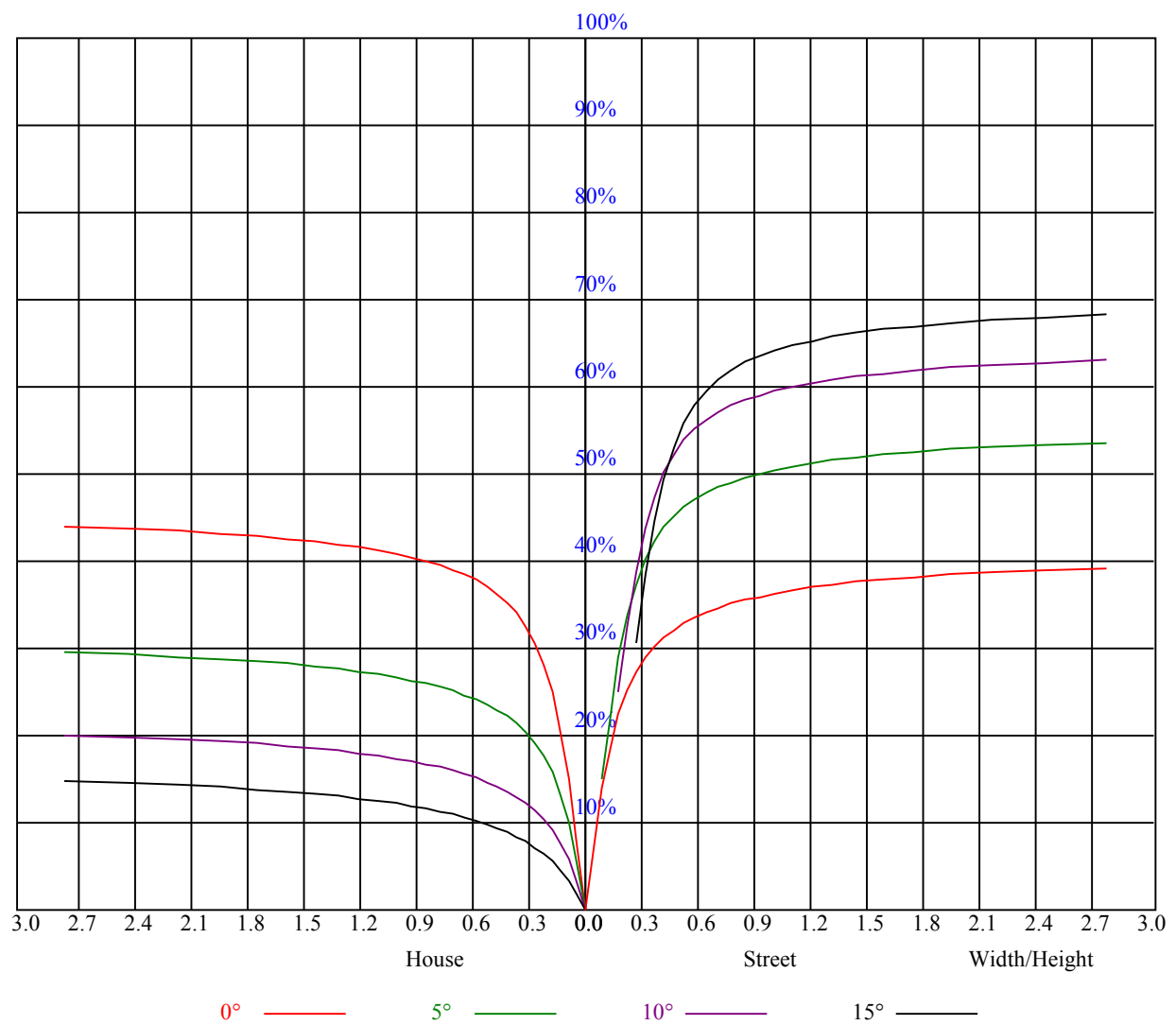
C0 ———

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	1.02	1.02	1.02	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.93	0.90	0.88	0.91	0.89	0.86	0.87	0.85	0.84	0.84	0.83	0.81	0.81	0.80	0.79	0.77
2	0.85	0.81	0.78	0.84	0.80	0.77	0.81	0.78	0.75	0.78	0.76	0.73	0.76	0.74	0.72	0.70
3	0.79	0.74	0.70	0.78	0.73	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.65
4	0.74	0.68	0.64	0.72	0.68	0.64	0.71	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.61	0.60
5	0.69	0.63	0.59	0.68	0.63	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.56
6	0.65	0.59	0.55	0.64	0.59	0.55	0.63	0.58	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.52
7	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.51	0.58	0.54	0.51	0.57	0.54	0.51	0.49
8	0.58	0.52	0.49	0.57	0.52	0.49	0.56	0.52	0.48	0.55	0.51	0.48	0.55	0.51	0.48	0.47
9	0.55	0.50	0.46	0.54	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.48	0.45	0.44
10	0.52	0.47	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.43	0.50	0.46	0.43	0.42



Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	142.59	142.43	142.03	141.58	140.85	140.18	140.01	140.12	140.46
15.0	142.65	140.96	138.43	135.90	132.64	129.71	126.56	123.47	120.99
30.0	141.19	137.36	132.41	125.78	120.32	114.86	108.90	102.99	98.04
45.0	142.71	138.49	130.05	122.57	115.88	106.03	98.78	91.63	84.09
60.0	140.46	133.31	123.30	112.95	104.12	94.39	86.06	77.12	68.91
75.0	143.89	137.76	128.42	115.59	105.81	94.89	84.54	75.60	67.50
90.0	141.75	132.47	121.05	110.98	99.84	90.11	80.83	69.81	61.99
105.0	144.06	137.64	127.29	117.39	106.88	97.48	87.24	77.40	69.19
120.0	141.47	134.83	125.27	115.54	107.27	97.93	88.71	80.89	72.34
135.0	143.66	139.56	131.74	124.71	117.73	110.14	102.54	95.79	88.48
150.0	141.98	138.60	132.53	128.42	123.64	118.18	112.89	108.28	102.94
165.0	142.93	141.36	139.28	137.25	134.94	132.98	130.95	128.81	126.90
180.0	142.59	142.31	141.98	141.75	141.86	142.14	142.88	144.00	145.24
195.0	142.65	143.33	143.49	143.04	142.59	141.86	140.91	139.84	138.54
210.0	141.19	143.38	143.49	141.92	138.66	134.10	129.66	124.20	119.31
225.0	142.71	143.78	141.36	136.07	129.54	120.49	114.24	106.43	97.76
240.0	140.46	144.00	142.14	136.41	128.14	116.78	107.94	99.45	91.13
255.0	143.89	144.06	139.50	129.83	118.58	108.45	98.55	85.67	77.79
270.0	141.75	145.24	142.31	133.48	123.19	111.32	99.73	89.83	80.44
285.0	144.06	144.45	139.73	128.93	118.91	108.96	96.75	87.41	78.47
300.0	141.47	144.51	142.88	137.03	129.94	118.63	108.79	101.25	90.73
315.0	143.66	145.07	143.21	138.32	132.19	124.37	116.21	109.46	101.81
330.0	141.98	143.89	144.62	143.49	141.36	136.46	132.19	128.42	122.74
345.0	142.93	143.72	143.94	143.72	143.04	142.26	141.41	140.68	139.67
360.0	142.59	142.43	142.03	141.58	140.85	140.18	140.01	140.12	140.46
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	140.74	140.68	140.01	139.22	138.94	139.50	140.34	140.51	139.56
15.0	118.24	115.26	112.44	109.74	105.36	102.09	99.28	95.06	90.90
30.0	92.42	87.08	82.41	77.12	72.45	67.22	62.10	57.77	53.78
45.0	77.01	71.04	64.80	59.57	53.89	48.60	44.66	40.78	37.13
60.0	62.27	55.63	49.56	44.72	40.50	36.00	32.91	30.15	27.34
75.0	58.73	52.54	47.03	41.51	36.73	33.02	29.53	26.55	24.30
90.0	55.18	48.54	42.75	38.31	33.92	30.15	27.28	24.47	22.28
105.0	60.98	53.72	48.04	43.03	37.63	33.86	30.66	27.51	24.75
120.0	65.25	57.99	51.64	46.74	41.79	37.52	34.09	31.11	27.73
135.0	81.34	75.09	68.06	62.38	56.64	51.30	47.08	43.37	38.98
150.0	98.04	92.48	86.91	82.24	77.06	71.89	67.33	62.94	57.54
165.0	124.93	121.84	119.31	116.89	113.96	111.38	108.28	104.34	100.35
180.0	146.03	146.36	146.87	148.11	149.46	150.30	149.68	147.88	145.18
195.0	136.52	133.65	130.78	127.91	124.03	120.54	116.16	111.83	106.54
210.0	113.63	107.72	102.38	96.81	89.78	84.26	78.75	72.00	66.66
225.0	91.69	83.81	75.32	69.58	63.39	55.80	51.53	46.97	42.30
240.0	80.89	73.07	64.91	58.56	52.14	46.24	41.63	37.07	33.19
255.0	69.41	61.09	54.11	48.54	42.86	37.97	34.20	30.60	27.68
270.0	69.58	62.10	55.69	49.28	43.48	38.93	35.04	30.94	27.96
285.0	68.18	61.03	54.96	48.04	43.09	38.87	34.37	31.56	28.29
300.0	81.68	74.93	65.98	59.79	54.23	47.93	43.54	39.60	35.33
315.0	94.95	87.41	80.16	73.97	67.11	60.92	56.14	51.58	46.35
330.0	117.39	113.40	107.27	102.38	97.31	90.73	85.50	80.38	73.91
345.0	138.21	135.90	133.65	130.61	127.86	125.44	122.63	119.59	115.59
360.0	140.74	140.68	140.01	139.22	138.94	139.50	140.34	140.51	139.56

Intensity data(cd)

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	137.59	135.11	130.61	126.68	123.08	117.06	112.44	108.23	102.04
15.0	87.53	82.86	78.30	74.59	69.30	65.14	61.09	55.74	51.81
30.0	48.83	45.34	42.02	38.14	35.27	32.63	29.93	27.56	25.48
45.0	33.98	31.39	28.18	25.88	23.91	21.94	20.14	18.68	17.04
60.0	24.75	22.67	20.53	18.68	17.27	15.69	14.51	13.33	12.26
75.0	21.66	19.74	17.83	16.03	14.74	13.61	12.43	11.59	10.86
90.0	19.91	17.89	16.26	14.74	13.39	12.43	11.53	10.58	9.96
105.0	22.33	20.14	18.06	16.48	14.91	13.67	12.54	11.48	10.74
120.0	25.26	23.12	20.93	18.96	17.38	15.75	14.34	13.16	11.98
135.0	35.66	32.85	29.48	27.11	24.98	22.89	20.70	19.13	17.66
150.0	53.55	49.67	45.51	41.68	38.59	35.61	32.12	29.59	26.89
165.0	96.13	91.74	87.41	82.29	77.06	72.45	67.56	62.44	57.94
180.0	141.02	137.53	133.76	128.70	124.31	119.64	114.08	108.11	102.43
195.0	101.08	96.24	91.41	85.67	79.88	74.64	69.53	63.17	58.33
210.0	61.71	56.59	51.75	47.59	43.31	39.83	36.23	32.74	29.87
225.0	38.19	34.88	31.44	28.35	25.99	23.79	21.60	19.58	17.83
240.0	30.09	27.39	24.41	22.39	20.48	18.56	16.82	15.47	14.01
255.0	24.75	22.33	20.36	18.39	16.65	15.30	14.12	12.83	11.93
270.0	25.37	22.73	20.48	18.68	16.93	15.58	14.23	13.05	12.15
285.0	25.09	23.18	21.15	18.68	17.38	15.98	14.34	13.44	12.49
300.0	32.34	29.59	26.55	24.36	22.33	20.25	18.39	16.82	15.30
315.0	42.58	39.09	35.55	32.29	29.64	27.00	24.58	22.73	20.76
330.0	68.79	64.01	58.50	54.34	50.34	46.07	42.13	38.81	35.33
345.0	111.15	106.71	102.04	96.02	90.96	85.84	79.31	74.14	69.13
360.0	137.59	135.11	130.61	126.68	123.08	117.06	112.44	108.23	102.04
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	96.24	91.69	84.94	79.43	74.03	67.16	61.65	56.42	50.01
15.0	47.87	43.20	39.66	36.34	32.34	29.59	26.94	24.19	21.77
30.0	23.34	21.60	19.69	18.00	16.59	15.08	13.67	12.66	11.76
45.0	15.58	14.40	13.16	12.15	11.14	10.29	9.62	8.94	8.27
60.0	11.42	10.52	9.73	9.17	8.61	7.99	7.59	7.20	6.75
75.0	10.01	9.45	8.94	8.38	7.88	7.48	7.09	6.69	6.36
90.0	9.39	8.78	8.27	7.88	7.43	7.03	6.69	6.36	6.08
105.0	10.07	9.28	8.66	8.16	7.59	7.26	6.81	6.41	6.13
120.0	11.08	10.18	9.45	8.78	8.27	7.65	7.20	6.81	6.36
135.0	16.03	14.74	13.33	12.21	11.14	10.24	9.34	8.66	7.76
150.0	24.64	22.39	20.19	18.45	16.88	15.13	13.95	12.83	11.48
165.0	53.66	48.66	44.66	40.78	36.79	32.91	29.87	26.61	23.63
180.0	95.96	89.94	83.03	76.11	69.86	63.11	56.64	51.02	45.68
195.0	53.10	48.04	43.82	39.88	35.83	31.95	28.80	25.54	22.56
210.0	27.00	24.36	22.22	20.31	18.17	16.59	15.19	13.61	12.49
225.0	16.43	14.96	13.61	12.54	11.53	10.46	9.68	8.94	8.33
240.0	12.71	11.76	10.80	10.13	9.45	8.78	8.27	7.76	7.37
255.0	11.14	10.35	9.73	9.28	8.66	8.16	7.71	7.31	6.98
270.0	11.31	10.58	10.01	9.39	8.89	8.49	8.04	7.54	7.20
285.0	11.64	10.86	10.24	9.56	9.06	8.55	8.10	7.65	7.20
300.0	14.12	12.94	11.93	11.14	10.41	9.68	9.11	8.61	8.04
315.0	19.13	17.49	15.98	14.68	13.56	12.38	11.42	10.58	9.62
330.0	32.40	29.42	26.66	24.47	22.16	20.08	18.39	16.88	15.19
345.0	63.62	58.22	53.72	48.77	44.61	40.11	35.78	32.23	28.58
360.0	96.24	91.69	84.94	79.43	74.03	67.16	61.65	56.42	50.01

Intensity data(cd)

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	44.94	40.11	34.31	29.98	26.04	21.94	18.28	15.47	12.71
15.0	19.74	17.66	15.98	14.23	12.60	11.25	9.90	8.66	7.76
30.0	10.63	9.84	9.11	8.44	7.71	7.20	6.64	6.13	5.74
45.0	7.76	7.26	6.69	6.30	5.96	5.63	5.40	5.18	4.89
60.0	6.36	6.08	5.79	5.57	5.29	5.06	4.89	4.67	4.50
75.0	6.08	5.79	5.51	5.23	5.01	4.78	4.56	4.39	4.28
90.0	5.79	5.51	5.29	5.06	4.84	4.67	4.50	4.28	4.16
105.0	5.79	5.51	5.29	5.06	4.78	4.61	4.44	4.28	4.16
120.0	6.08	5.74	5.46	5.18	4.95	4.73	4.50	4.33	4.16
135.0	7.20	6.81	6.36	5.91	5.63	5.34	5.01	4.84	4.56
150.0	10.52	9.68	8.89	8.04	7.37	6.81	6.19	5.63	5.18
165.0	21.26	18.90	16.71	14.63	12.71	11.14	9.79	8.33	7.37
180.0	39.32	34.59	30.09	24.98	21.21	17.83	14.46	11.70	9.84
195.0	20.14	17.72	15.81	13.78	12.04	10.63	9.39	8.04	7.14
210.0	11.42	10.29	9.39	8.61	7.93	7.26	6.64	6.08	5.68
225.0	7.65	7.14	6.64	6.19	5.91	5.63	5.29	5.01	4.84
240.0	6.98	6.64	6.24	5.91	5.68	5.46	5.12	4.95	4.73
255.0	6.58	6.24	5.96	5.68	5.34	5.12	4.95	4.73	4.56
270.0	6.86	6.53	6.19	5.91	5.63	5.40	5.12	4.89	4.73
285.0	6.81	6.47	6.19	5.85	5.57	5.34	5.06	4.89	4.73
300.0	7.59	7.26	6.86	6.53	6.19	5.91	5.57	5.34	5.12
315.0	8.89	8.27	7.71	7.09	6.75	6.36	6.02	5.68	5.40
330.0	13.89	12.77	11.53	10.52	9.68	8.83	8.04	7.37	6.75
345.0	25.20	22.50	19.97	17.10	15.13	13.33	11.25	9.84	8.66
360.0	44.94	40.11	34.31	29.98	26.04	21.94	18.28	15.47	12.71
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	10.46	8.89	7.48	6.47	5.68	5.01	4.56	4.22	3.88
15.0	6.92	6.19	5.63	5.18	4.78	4.39	4.11	3.83	3.60
30.0	5.29	4.89	4.61	4.28	4.11	3.83	3.66	3.49	3.38
45.0	4.73	4.56	4.33	4.16	3.99	3.83	3.66	3.49	3.26
60.0	4.33	4.16	3.99	3.83	3.71	3.60	3.49	3.38	3.21
75.0	4.11	3.99	3.88	3.83	3.71	3.60	3.49	3.38	3.32
90.0	3.99	3.94	3.83	3.71	3.60	3.49	3.43	3.32	3.26
105.0	4.05	3.94	3.88	3.83	3.66	3.54	3.43	3.32	3.21
120.0	3.99	3.88	3.71	3.66	3.54	3.43	3.38	3.21	3.15
135.0	4.39	4.16	3.99	3.83	3.66	3.49	3.32	3.21	3.09
150.0	4.78	4.44	4.16	3.94	3.71	3.60	3.43	3.32	3.15
165.0	6.58	5.79	5.29	4.89	4.50	4.22	3.94	3.71	3.60
180.0	8.16	7.09	6.13	5.40	4.95	4.50	4.16	3.99	3.83
195.0	6.41	5.63	5.12	4.78	4.44	4.11	3.88	3.66	3.54
210.0	5.23	4.89	4.56	4.28	3.99	3.77	3.60	3.49	3.32
225.0	4.61	4.44	4.22	4.05	3.94	3.71	3.60	3.43	3.32
240.0	4.50	4.39	4.22	4.05	3.88	3.77	3.66	3.54	3.43
255.0	4.44	4.28	4.11	3.99	3.88	3.83	3.71	3.60	3.49
270.0	4.56	4.39	4.28	4.16	3.94	3.88	3.83	3.66	3.60
285.0	4.56	4.39	4.22	4.11	3.99	3.88	3.77	3.66	3.54
300.0	4.89	4.67	4.44	4.33	4.16	3.99	3.83	3.71	3.54
315.0	5.18	4.89	4.67	4.44	4.28	4.05	3.83	3.71	3.54
330.0	6.24	5.68	5.18	4.84	4.50	4.22	3.99	3.83	3.60
345.0	7.59	6.75	6.02	5.34	4.95	4.56	4.16	3.94	3.71
360.0	10.46	8.89	7.48	6.47	5.68	5.01	4.56	4.22	3.88

Intensity data(cd)

C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.66	3.54	3.38	3.26	3.15	3.04	2.98	2.93	2.87
15.0	3.38	3.26	3.15	3.04	2.98	2.93	2.93	2.93	2.87
30.0	3.15	3.04	2.98	2.87	2.76	2.70	2.64	2.59	2.53
45.0	3.15	3.04	2.93	2.87	2.76	2.64	2.53	2.48	2.42
60.0	3.15	3.04	2.93	2.81	2.76	2.64	2.59	2.48	2.42
75.0	3.21	3.15	3.04	2.93	2.81	2.76	2.64	2.64	2.53
90.0	3.15	3.09	2.98	2.93	2.87	2.76	2.70	2.59	2.59
105.0	3.15	3.04	2.93	2.87	2.76	2.70	2.64	2.59	2.53
120.0	3.04	2.98	2.87	2.81	2.70	2.64	2.59	2.48	2.48
135.0	3.04	2.93	2.87	2.76	2.76	2.70	2.64	2.59	2.53
150.0	3.04	2.93	2.87	2.81	2.76	2.76	2.76	2.76	2.70
165.0	3.43	3.32	3.21	3.15	3.09	3.04	3.04	2.98	2.93
180.0	3.66	3.54	3.49	3.38	3.21	3.15	3.09	3.04	3.04
195.0	3.38	3.32	3.21	3.15	3.09	3.04	2.98	2.98	2.93
210.0	3.21	3.15	2.98	2.87	2.81	2.81	2.76	2.76	2.76
225.0	3.15	3.04	2.98	2.93	2.81	2.76	2.70	2.59	2.59
240.0	3.32	3.21	3.15	3.04	2.98	2.93	2.76	2.76	2.70
255.0	3.38	3.26	3.21	3.09	3.04	2.93	2.87	2.81	2.76
270.0	3.49	3.38	3.26	3.21	3.09	3.04	2.98	2.93	2.87
285.0	3.43	3.32	3.21	3.15	3.04	2.93	2.93	2.81	2.76
300.0	3.43	3.38	3.26	3.09	3.04	2.93	2.81	2.70	2.70
315.0	3.32	3.21	3.09	3.04	2.93	2.87	2.81	2.70	2.59
330.0	3.43	3.32	3.21	3.09	3.04	2.98	2.98	2.93	2.76
345.0	3.54	3.38	3.26	3.15	3.09	3.04	2.98	2.93	3.04
360.0	3.66	3.54	3.38	3.26	3.15	3.04	2.98	2.93	2.87
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	2.87	2.81	2.81	2.76	2.76	2.76	2.76	2.76	2.76
15.0	2.81	2.76	2.70	2.64	2.64	2.59	2.59	2.59	2.59
30.0	2.48	2.42	2.36	2.36	2.31	2.31	2.25	2.25	2.25
45.0	2.36	2.31	2.25	2.19	2.14	2.08	2.03	2.03	1.97
60.0	2.36	2.25	2.19	2.19	2.14	2.03	2.03	1.97	1.91
75.0	2.48	2.36	2.31	2.31	2.19	2.14	2.08	2.03	1.97
90.0	2.48	2.42	2.36	2.31	2.25	2.19	2.14	2.03	2.03
105.0	2.53	2.42	2.36	2.36	2.31	2.25	2.19	2.19	2.14
120.0	2.42	2.36	2.31	2.31	2.31	2.31	2.25	2.25	2.19
135.0	2.48	2.48	2.42	2.36	2.36	2.36	2.31	2.31	2.31
150.0	2.70	2.64	2.59	2.59	2.59	2.59	2.59	2.53	2.59
165.0	2.93	2.81	2.81	2.81	2.76	2.81	2.76	2.70	2.76
180.0	2.98	2.93	2.93	2.87	2.81	2.81	2.81	2.81	2.76
195.0	2.87	2.81	2.81	2.81	2.76	2.76	2.76	2.70	2.70
210.0	2.76	2.64	2.64	2.59	2.53	2.53	2.53	2.53	2.53
225.0	2.53	2.48	2.48	2.42	2.36	2.36	2.36	2.31	2.31
240.0	2.59	2.53	2.48	2.48	2.42	2.42	2.42	2.42	2.36
255.0	2.64	2.64	2.59	2.53	2.53	2.48	2.42	2.42	2.36
270.0	2.76	2.70	2.64	2.59	2.53	2.48	2.42	2.42	2.36
285.0	2.70	2.64	2.59	2.48	2.48	2.42	2.36	2.36	2.31
300.0	2.59	2.53	2.48	2.48	2.48	2.42	2.36	2.31	2.31
315.0	2.59	2.53	2.48	2.48	2.42	2.42	2.36	2.36	2.36
330.0	2.70	2.64	2.64	2.59	2.59	2.59	2.53	2.59	2.59
345.0	2.93	2.81	2.76	2.70	2.70	2.64	2.59	2.59	2.59
360.0	2.87	2.81	2.81	2.76	2.76	2.76	2.76	2.76	2.76

Intensity data(cd)										Appendix Page: 20 Total:21	
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0		
0.0	2.70	2.59	2.48	2.42	2.42	2.36	2.31	2.31	2.25		
15.0	2.48	2.36	2.36	2.36	2.31	2.36	2.36	2.31	2.25		
30.0	2.14	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08		
45.0	1.91	1.91	1.86	1.86	1.74	1.74	1.69	1.69	1.63		
60.0	1.91	1.86	1.80	1.80	1.74	1.74	1.69	1.63	1.63		
75.0	1.91	1.86	1.86	1.80	1.80	1.74	1.74	1.69	1.69		
90.0	1.97	1.91	1.91	1.86	1.80	1.80	1.74	1.69	1.63		
105.0	2.08	2.03	2.03	2.03	2.03	2.03	1.97	1.97	1.91		
120.0	2.19	2.14	2.14	2.14	2.14	2.08	2.08	2.03	2.03		
135.0	2.36	2.31	2.36	2.31	2.31	2.31	2.31	2.25	2.25		
150.0	2.53	2.53	2.48	2.48	2.53	2.48	2.42	2.42	2.42		
165.0	2.70	2.70	2.70	2.64	2.64	2.59	2.59	2.53	2.53		
180.0	2.70	2.70	2.70	2.64	2.64	2.64	2.64	2.59	2.59		
195.0	2.70	2.70	2.70	2.64	2.70	2.64	2.59	2.53	2.48		
210.0	2.48	2.48	2.48	2.48	2.48	2.48	2.42	2.42	2.42		
225.0	2.25	2.25	2.25	2.25	2.25	2.19	2.19	2.14	2.14		
240.0	2.36	2.31	2.31	2.25	2.25	2.19	2.19	2.19	2.14		
255.0	2.36	2.31	2.31	2.25	2.25	2.19	2.19	2.14	2.14		
270.0	2.31	2.25	2.19	2.19	2.14	2.14	2.08	2.08	2.03		
285.0	2.25	2.25	2.25	2.19	2.14	2.14	2.14	2.14	2.14		
300.0	2.31	2.25	2.25	2.19	2.19	2.19	2.19	2.14	2.14		
315.0	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.31	2.36		
330.0	2.59	2.59	2.53	2.53	2.53	2.53	2.53	2.48	2.48		
345.0	2.59	2.59	2.59	2.53	2.53	2.48	2.42	2.42	2.36		
360.0	2.70	2.59	2.48	2.42	2.42	2.36	2.31	2.31	2.25		
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0		
0.0	2.19	2.08	2.03	1.91	1.80	1.58	1.29	1.13	0.96		
15.0	2.25	2.19	2.08	1.91	1.69	1.46	1.07	0.90	0.68		
30.0	2.03	1.91	1.80	1.69	1.52	1.18	0.90	0.68	0.39		
45.0	1.58	1.52	1.52	1.41	1.35	1.18	0.90	0.56	0.34		
60.0	1.63	1.52	1.52	1.46	1.35	1.13	0.62	0.39	0.23		
75.0	1.63	1.58	1.52	1.46	1.41	1.24	0.68	0.45	0.28		
90.0	1.63	1.58	1.52	1.46	1.41	0.84	0.51	0.34	0.28		
105.0	1.91	1.86	1.86	1.74	1.69	1.18	0.62	0.39	0.28		
120.0	2.03	1.97	1.91	1.86	1.69	0.84	0.51	0.34	0.23		
135.0	2.19	2.19	2.14	2.08	2.03	1.29	0.68	0.45	0.28		
150.0	2.36	2.31	2.31	2.19	2.03	1.13	0.68	0.45	0.28		
165.0	2.48	2.48	2.36	2.36	2.31	1.86	1.01	0.73	0.39		
180.0	2.53	2.53	2.53	2.48	2.42	1.86	1.13	0.96	0.62		
195.0	2.48	2.48	2.36	2.36	2.25	1.97	1.07	0.79	0.51		
210.0	2.36	2.36	2.31	2.25	2.25	2.08	1.46	0.79	0.56		
225.0	2.08	2.08	2.03	1.97	1.97	1.86	1.24	0.68	0.45		
240.0	2.14	2.08	2.08	2.08	2.03	1.97	1.63	0.79	0.51		
255.0	2.08	1.97	1.91	1.80	1.69	1.52	1.01	0.56	0.34		
270.0	2.03	1.97	1.97	1.91	1.86	1.86	1.63	0.90	0.45		
285.0	2.08	2.03	2.03	1.97	1.97	1.91	1.46	0.73	0.45		
300.0	2.14	2.14	2.08	2.08	2.03	1.97	1.74	0.96	0.56		
315.0	2.31	2.31	2.31	2.25	2.25	2.19	1.69	0.79	0.56		
330.0	2.42	2.36	2.25	2.19	2.14	2.03	1.91	1.07	0.68		
345.0	2.25	2.19	2.19	2.08	2.03	1.86	1.52	1.01	0.79		
360.0	2.19	2.08	2.03	1.91	1.80	1.58	1.29	1.13	0.96		

Intensity data(cd)

C/ γ (°)	90.0
0.0	0.62
15.0	0.45
30.0	0.34
45.0	0.28
60.0	0.23
75.0	0.23
90.0	0.23
105.0	0.28
120.0	0.23
135.0	0.28
150.0	0.28
165.0	0.28
180.0	0.23
195.0	0.23
210.0	0.34
225.0	0.28
240.0	0.34
255.0	0.23
270.0	0.34
285.0	0.34
300.0	0.39
315.0	0.34
330.0	0.56
345.0	0.51
360.0	0.62