

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P197437

Luminaire Tested: **8WSL-LD2-120-UPL8-UNV-L830-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197437  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28106)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 8WSL-LD2-120-UPL8-UNV-L830-CD2-U  
Description: 8FT. Linear Wavestream System, 8% Uplight, L830  
Light Source: (476) 3000K CCT, 80 CRI LEDS  
EL236N0119D830  
Ballast/Driver: OSRAM  
OT50W

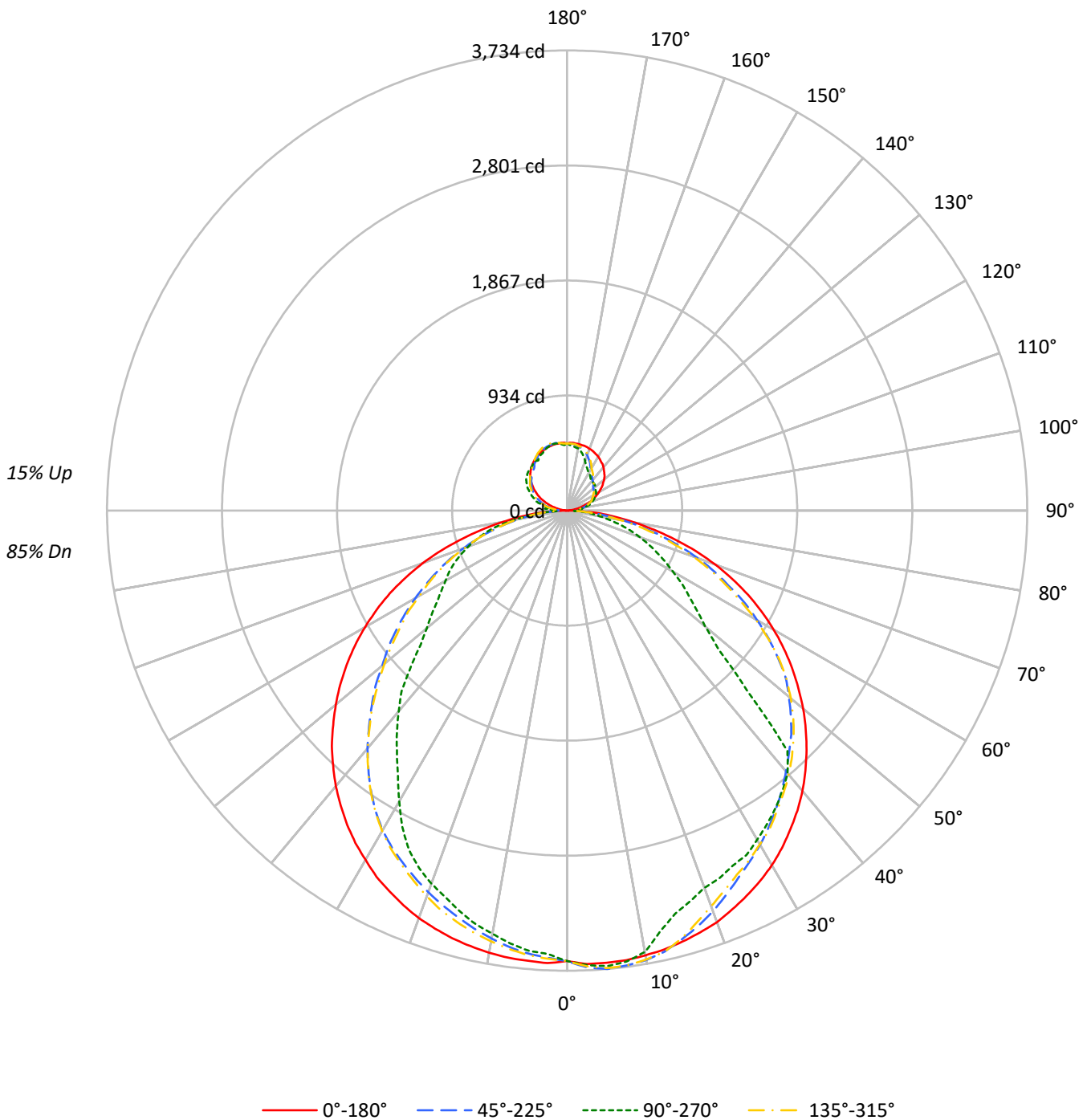
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12125.9 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36  
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 113.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85
1	105	101	96	92	101	97	93	90	90	87	84	83	81	79	78	76	74	71
2	96	88	81	75	92	84	78	73	78	73	69	73	69	65	68	65	62	59
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	60	56	52	50
4	80	68	59	53	76	66	58	52	61	55	49	57	52	47	53	49	45	42
5	73	61	52	45	70	59	51	44	55	48	43	51	45	41	48	43	39	37
6	68	55	46	40	65	53	45	39	50	43	37	47	40	36	44	38	34	32
7	63	49	41	35	60	48	40	34	45	38	33	42	36	32	40	35	31	28
8	58	45	37	31	56	44	36	30	41	34	29	39	33	28	37	31	27	25
9	54	41	33	28	52	40	33	27	38	31	26	36	30	26	34	29	25	23
10	51	38	30	25	49	37	30	25	35	28	24	33	27	23	31	26	22	21

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	10355	10355	10355	10355
5°	10473	10551	10428	10195
10°	10538	10459	10481	10031
15°	10618	9929	10537	9871
20°	10713	9816	10607	9710
25°	10777	9934	10655	9493
30°	10869	10088	10703	8910
35°	10923	10192	10760	8324
40°	10985	10290	10797	7859
45°	11007	8279	10819	7181
50°	11022	6434	10797	6555
55°	10999	5953	10786	6359
60°	10976	5610	10732	6453
65°	10861	5378	10625	6768
70°	10568	5187	10309	7067
75°	9896	4883	9596	7454
80°	9003	4470	8619	7088
85°	8778	4833	7888	6360



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	347.5	2.9
10°-20°	986.9	8.1
20°-30°	1494.0	12.3
30°-40°	1804.0	14.9
40°-50°	1841.7	15.2
50°-60°	1610.2	13.3
60°-70°	1248.1	10.3
70°-80°	750.4	6.2
80°-90°	231.6	1.9
90°-100°	97.7	0.8
100°-110°	186.7	1.5
110°-120°	253.7	2.1
120°-130°	288.4	2.4
130°-140°	292.5	2.4
140°-150°	269.2	2.2
150°-160°	222.1	1.8
160°-170°	149.4	1.2
170°-180°	51.9	0.4
0°-30°	2828.4	23.3
0°-40°	4632.3	38.2
0°-60°	8084.3	66.7
0°-90°	10314.4	85.1
90°-120°	538.1	4.4
90°-150°	1388.2	11.4
90°-180°	1812.0	14.9
0°-180°	12125.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3656	3656	3656	3656	3656	
5°	3683	3711	3668	3585	3683	351
15°	3621	3386	3593	3366	3621	1024
25°	3448	3178	3409	3037	3448	1591
35°	3159	2947	3112	2407	3159	1978
45°	2748	2067	2701	1793	2748	2119
55°	2227	1206	2184	1288	2227	1991
65°	1620	802	1585	1010	1620	1599
75°	904	446	877	681	904	959
85°	270	149	243	196	270	273
90°	4	82	4	94	4	18
95°	24	114	24	180	24	30
105°	125	192	121	243	125	134
115°	243	247	239	329	243	240
125°	348	282	340	403	348	309
135°	427	309	423	446	427	329
145°	481	329	478	474	481	303
155°	521	384	517	501	521	240
165°	544	478	540	544	544	153
175°	552	524	552	540	552	52
180°	544	544	544	544	544	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3655.8	3655.8	3655.8	3655.8	3655.8	3655.8	3655.8	3655.8	3655.8	3655.8	3655.8
2.5°	3683.2	3663.6	3710.6	3718.4	3691.0	3698.8	3702.8	3659.7	3675.4	3616.6	3632.3
5°	3683.2	3679.3	3734.1	3726.2	3710.6	3714.5	3726.2	3675.4	3667.5	3597.1	3608.8
7.5°	3679.3	3687.1	3722.3	3714.5	3691.0	3702.8	3722.3	3683.2	3659.7	3577.5	3573.6
10°	3663.6	3675.4	3702.8	3679.3	3636.2	3655.8	3698.8	3675.4	3644.0	3546.2	3526.6
12.5°	3648.0	3655.8	3663.6	3565.8	3495.3	3542.3	3663.6	3655.8	3620.6	3511.0	3475.7
15°	3620.6	3632.3	3601.0	3460.1	3385.7	3432.7	3593.2	3624.5	3593.2	3460.1	3417.0
17.5°	3589.2	3601.0	3534.4	3377.9	3323.1	3346.6	3503.1	3585.3	3557.9	3413.1	3358.3
20°	3554.0	3565.8	3460.1	3291.8	3256.5	3276.1	3417.0	3542.3	3518.8	3358.3	3295.7
22.5°	3503.1	3522.7	3374.0	3233.1	3229.1	3229.1	3334.8	3491.4	3467.9	3291.8	3225.2
25°	3448.3	3467.9	3287.9	3178.3	3178.3	3178.3	3260.5	3424.9	3409.2	3221.3	3154.8
27.5°	3389.6	3409.2	3209.6	3139.1	3150.9	3131.3	3197.8	3350.5	3350.5	3150.9	3080.4
30°	3323.1	3342.7	3131.3	3076.5	3084.3	3076.5	3127.4	3272.2	3272.2	3068.7	2994.3
32.5°	3244.8	3264.4	3045.2	3002.1	3017.8	3010.0	3060.8	3193.9	3197.8	2982.6	2892.5
35°	3158.7	3182.2	2955.2	2931.7	2947.3	2935.6	2970.8	3111.7	3111.7	2888.6	2775.1
37.5°	3068.7	3092.2	2861.2	2853.4	2869.0	2857.3	2884.7	3025.6	3017.8	2790.8	2649.9
40°	2970.8	2998.2	2763.4	2763.4	2782.9	2775.1	2798.6	2935.6	2919.9	2692.9	2520.7
42.5°	2861.2	2896.4	2665.5	2669.4	2645.9	2677.3	2700.7	2841.7	2810.3	2583.3	2379.8
45°	2747.7	2790.8	2571.6	2501.1	2066.7	2473.7	2599.0	2747.7	2700.7	2473.7	2242.8
47.5°	2626.4	2681.2	2462.0	2203.6	1663.5	2168.4	2489.4	2630.3	2575.5	2356.3	2109.7
50°	2501.1	2563.7	2348.5	1949.2	1460.0	1910.1	2368.0	2512.9	2450.2	2235.0	1957.1
52.5°	2364.1	2434.6	2238.9	1726.1	1323.0	1690.9	2242.8	2399.4	2321.1	2105.8	1831.8
55°	2227.1	2301.5	2090.1	1534.3	1205.5	1503.0	2098.0	2254.5	2184.1	1972.7	1694.8
57.5°	2086.2	2160.6	1941.4	1366.0	1103.8	1334.7	1933.6	2121.5	2043.2	1835.7	1557.8
60°	1937.5	2011.9	1780.9	1213.4	990.3	1189.9	1765.3	1972.7	1894.4	1694.8	1424.7
62.5°	1780.9	1855.3	1628.3	1072.5	896.3	1052.9	1581.3	1827.9	1741.8	1546.1	1287.7
65°	1620.4	1675.2	1448.2	939.4	802.4	923.7	1416.9	1647.8	1585.2	1389.5	1158.6
67.5°	1452.1	1506.9	1291.7	822.0	712.4	806.3	1256.4	1487.4	1416.9	1236.9	1029.4
70°	1276.0	1323.0	1127.3	708.5	626.3	696.7	1088.1	1307.3	1244.7	1076.4	892.4
72.5°	1096.0	1139.0	951.1	602.8	536.2	594.9	912.0	1127.3	1064.6	908.1	767.2
75°	904.2	947.2	786.7	497.1	446.2	489.3	751.5	935.5	876.8	747.6	638.0
77.5°	724.1	775.0	622.3	391.4	356.2	383.6	591.0	755.4	696.7	598.9	512.7
80°	551.9	594.9	461.9	297.5	274.0	293.6	430.6	575.4	528.4	461.9	399.2
82.5°	399.2	422.7	317.0	219.2	207.4	215.3	293.6	407.1	383.6	332.7	293.6
85°	270.1	266.2	195.7	152.7	148.7	152.7	176.1	246.6	242.7	223.1	187.9
87.5°	113.5	105.7	90.0	62.6	54.8	58.7	70.5	93.9	90.0	93.9	90.0
90°	3.9	39.1	62.6	78.3	82.2	78.3	62.6	39.1	3.9	43.1	70.5
92.5°	7.8	50.9	74.4	86.1	93.9	86.1	70.5	50.9	7.8	66.5	70.5
95°	23.5	70.5	86.1	105.7	113.5	105.7	86.1	66.5	23.5	58.7	105.7
97.5°	47.0	90.0	101.8	117.4	121.3	113.5	97.9	90.0	43.1	105.7	109.6
100°	70.5	113.5	133.1	133.1	137.0	133.1	129.2	109.6	66.5	117.4	133.1
102.5°	97.9	129.2	152.7	164.4	164.4	164.4	152.7	129.2	90.0	144.8	184.0
105°	125.3	140.9	168.3	184.0	191.8	184.0	168.3	144.8	121.3	168.3	195.7
107.5°	156.6	152.7	184.0	199.6	207.4	199.6	184.0	156.6	148.7	187.9	219.2
110°	187.9	168.3	199.6	215.3	219.2	215.3	199.6	168.3	180.0	211.4	242.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	215.3	180.0	215.3	230.9	234.8	230.9	215.3	184.0	207.4	227.0	266.2
115°	242.7	191.8	223.1	242.7	246.6	242.7	223.1	195.7	238.8	246.6	285.7
117.5°	270.1	207.4	230.9	254.4	258.3	254.4	234.8	211.4	266.2	270.1	305.3
120°	297.5	227.0	242.7	262.2	270.1	266.2	242.7	230.9	289.6	289.6	321.0
122.5°	321.0	242.7	254.4	270.1	277.9	270.1	254.4	250.5	317.0	309.2	340.5
125°	348.4	258.3	262.2	277.9	281.8	277.9	266.2	262.2	340.5	324.9	352.3
127.5°	367.9	277.9	270.1	285.7	289.6	285.7	274.0	281.8	364.0	356.2	364.0
130°	391.4	297.5	277.9	293.6	297.5	297.5	277.9	305.3	383.6	379.7	379.7
132.5°	411.0	317.0	285.7	301.4	305.3	305.3	289.6	321.0	403.2	399.2	391.4
135°	426.6	344.4	301.4	301.4	309.2	309.2	305.3	348.4	422.7	418.8	411.0
137.5°	442.3	367.9	313.1	305.3	309.2	309.2	321.0	371.8	438.4	438.4	422.7
140°	458.0	391.4	321.0	313.1	313.1	321.0	332.7	395.3	454.0	454.0	426.6
142.5°	473.6	411.0	332.7	324.9	317.0	332.7	344.4	418.8	465.8	469.7	438.4
145°	481.4	430.6	348.4	336.6	328.8	348.4	364.0	438.4	477.5	485.4	461.9
147.5°	493.2	450.1	367.9	344.4	344.4	356.2	379.7	454.0	489.3	497.1	473.6
150°	504.9	465.8	383.6	356.2	348.4	367.9	395.3	469.7	501.0	508.8	489.3
152.5°	512.7	481.4	407.1	371.8	364.0	387.5	422.7	481.4	508.8	516.7	504.9
155°	520.6	493.2	434.5	387.5	383.6	403.2	446.2	493.2	516.7	524.5	516.7
157.5°	528.4	504.9	454.0	411.0	395.3	426.6	465.8	508.8	524.5	532.3	528.4
160°	532.3	512.7	477.5	434.5	426.6	454.0	485.4	512.7	528.4	540.1	536.2
162.5°	540.1	520.6	493.2	461.9	454.0	477.5	501.0	524.5	536.2	544.1	544.1
165°	544.1	528.4	508.8	485.4	477.5	501.0	512.7	532.3	540.1	544.1	548.0
167.5°	544.1	536.2	520.6	501.0	497.1	516.7	528.4	540.1	544.1	544.1	551.9
170°	548.0	540.1	528.4	516.7	512.7	528.4	532.3	544.1	548.0	544.1	555.8
172.5°	548.0	544.1	536.2	524.5	516.7	536.2	540.1	544.1	548.0	544.1	551.9
175°	551.9	544.1	544.1	536.2	524.5	544.1	544.1	544.1	551.9	544.1	548.0
177.5°	551.9	544.1	544.1	540.1	532.3	544.1	544.1	544.1	551.9	544.1	548.0
180°	544.1	544.1	544.1	544.1	544.1	544.1	544.1	544.1	544.1	544.1	544.1



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3655.8	3655.8	3655.8	3655.8	3655.8	3655.8
2.5°	3628.4	3601.0	3608.8	3640.1	3628.4	3683.2
5°	3601.0	3585.3	3585.3	3620.6	3616.6	3683.2
7.5°	3557.9	3542.3	3550.1	3589.2	3597.1	3679.3
10°	3507.1	3487.5	3495.3	3550.1	3569.7	3663.6
12.5°	3452.3	3436.6	3444.4	3507.1	3534.4	3648.0
15°	3389.6	3366.1	3389.6	3456.2	3491.4	3620.6
17.5°	3319.2	3287.9	3315.3	3401.4	3444.4	3589.2
20°	3248.7	3221.3	3237.0	3330.9	3393.5	3554.0
22.5°	3178.3	3139.1	3154.8	3252.6	3330.9	3503.1
25°	3096.1	3037.4	3068.7	3174.4	3264.4	3448.3
27.5°	2986.5	2896.4	2963.0	3096.1	3186.1	3389.6
30°	2841.7	2724.2	2822.1	3002.1	3103.9	3323.1
32.5°	2681.2	2555.9	2665.5	2896.4	3017.8	3244.8
35°	2520.7	2407.2	2505.0	2779.0	2927.8	3158.7
37.5°	2368.0	2270.2	2360.2	2653.8	2833.8	3068.7
40°	2223.2	2125.4	2219.3	2516.8	2732.1	2970.8
42.5°	2078.4	1988.4	2078.4	2372.0	2626.4	2861.2
45°	1933.6	1792.7	1925.7	2231.0	2512.9	2747.7
47.5°	1777.0	1612.6	1765.3	2078.4	2391.5	2626.4
50°	1628.3	1487.4	1620.4	1937.5	2266.3	2501.1
52.5°	1499.1	1385.6	1491.3	1792.7	2137.1	2364.1
55°	1377.8	1287.7	1377.8	1651.8	2000.1	2227.1
57.5°	1268.2	1209.5	1272.1	1530.4	1859.2	2086.2
60°	1174.2	1139.0	1178.1	1381.7	1718.3	1937.5
62.5°	1084.2	1080.3	1088.1	1264.3	1569.6	1780.9
65°	990.3	1009.8	990.3	1139.0	1420.8	1620.4
67.5°	896.3	935.5	904.2	1013.8	1260.3	1452.1
70°	810.2	853.3	810.2	884.6	1099.9	1276.0
72.5°	712.4	767.2	712.4	763.3	931.6	1096.0
75°	618.4	681.1	622.3	638.0	771.1	904.2
77.5°	516.7	575.4	528.4	516.7	622.3	724.1
80°	411.0	434.5	411.0	407.1	481.4	551.9
82.5°	285.7	305.3	285.7	297.5	352.3	399.2
85°	187.9	195.7	187.9	191.8	234.8	270.1
87.5°	78.3	78.3	78.3	97.9	105.7	113.5
90°	86.1	93.9	86.1	70.5	43.1	3.9
92.5°	90.0	97.9	90.0	78.3	50.9	7.8
95°	160.5	180.0	152.7	97.9	82.2	23.5
97.5°	129.2	140.9	133.1	113.5	101.8	47.0
100°	152.7	164.4	152.7	160.5	125.3	70.5
102.5°	180.0	187.9	184.0	187.9	152.7	97.9
105°	234.8	242.7	234.8	203.5	176.1	125.3
107.5°	250.5	270.1	254.4	227.0	199.6	156.6
110°	270.1	285.7	274.0	250.5	219.2	187.9





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	289.6	309.2	297.5	277.9	234.8	215.3
115°	313.1	328.8	321.0	297.5	258.3	242.7
117.5°	336.6	348.4	340.5	313.1	281.8	270.1
120°	356.2	371.8	364.0	332.7	301.4	297.5
122.5°	371.8	387.5	379.7	352.3	321.0	321.0
125°	387.5	403.2	395.3	367.9	336.6	348.4
127.5°	399.2	418.8	411.0	379.7	371.8	367.9
130°	414.9	426.6	422.7	391.4	391.4	391.4
132.5°	422.7	438.4	430.6	407.1	414.9	411.0
135°	426.6	446.2	438.4	426.6	434.5	426.6
137.5°	434.5	450.1	446.2	438.4	454.0	442.3
140°	446.2	454.0	458.0	446.2	469.7	458.0
142.5°	458.0	461.9	469.7	458.0	485.4	473.6
145°	465.8	473.6	481.4	481.4	497.1	481.4
147.5°	465.8	477.5	477.5	489.3	512.7	493.2
150°	477.5	469.7	493.2	504.9	520.6	504.9
152.5°	493.2	489.3	508.8	520.6	528.4	512.7
155°	497.1	501.0	512.7	532.3	536.2	520.6
157.5°	512.7	508.8	528.4	544.1	544.1	528.4
160°	524.5	524.5	544.1	551.9	548.0	532.3
162.5°	536.2	536.2	555.8	555.8	551.9	540.1
165°	544.1	544.1	563.6	559.7	551.9	544.1
167.5°	548.0	551.9	567.5	563.6	551.9	544.1
170°	551.9	551.9	567.5	559.7	551.9	548.0
172.5°	551.9	548.0	563.6	555.8	548.0	548.0
175°	548.0	540.1	555.8	548.0	548.0	551.9
177.5°	544.1	532.3	544.1	544.1	548.0	551.9
180°	544.1	544.1	544.1	544.1	544.1	544.1

(END OF REPORT)