

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: P197432

Luminaire Tested: **8WSL-LD2-100-UPL8-UNV-L850-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197432  
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-LD2-100-UPL8-UNV-L850-CD2-U  
Description: 8FT. Linear Wavestream System, 8% Uplight, L850  
Light Source: (476) 5000K CCT, 80 CRI LEDS  
EL236N0119D850  
Ballast/Driver: OSRAM  
OT50W

**Summary**

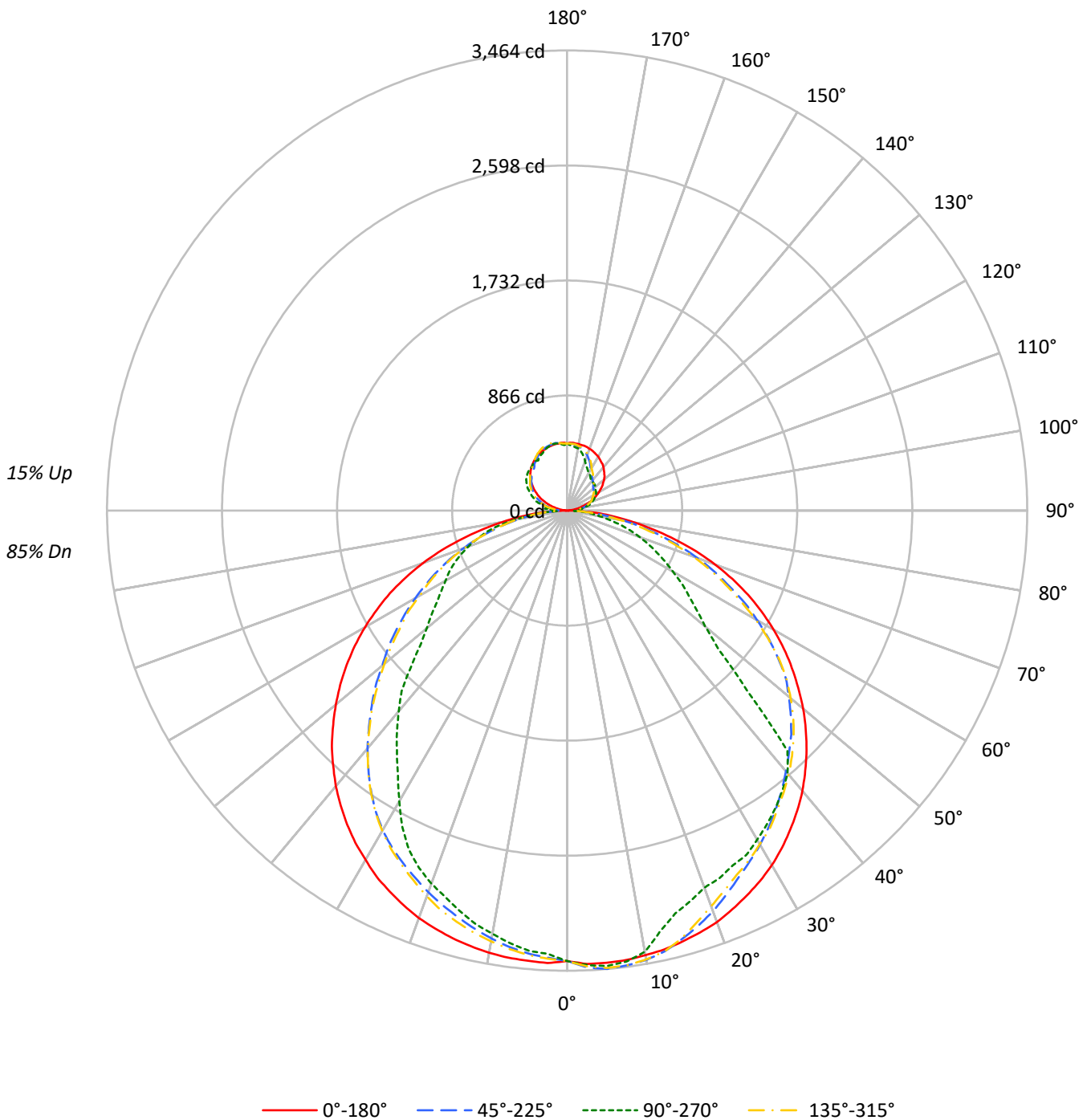
Lumens per Lamp: N/A  
Luminaire Lumens: 11247.3 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36  
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 90.6  
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°	9605	9605	9605	9605
5°	9714	9786	9673	9456
10°	9774	9701	9722	9304
15°	9848	9209	9774	9156
20°	9937	9105	9838	9007
25°	9997	9214	9883	8805
30°	10082	9357	9927	8265
35°	10131	9453	9981	7721
40°	10189	9545	10015	7290
45°	10209	7679	10035	6661
50°	10223	5968	10015	6080
55°	10202	5522	10004	5899
60°	10181	5204	9955	5985
65°	10074	4989	9855	6278
70°	9802	4811	9562	6555
75°	9178	4530	8900	6914
80°	8350	4145	7995	6574
85°	8141	4485	7316	5899



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	322.3	2.9
10°-20°	915.4	8.1
20°-30°	1385.7	12.3
30°-40°	1673.3	14.9
40°-50°	1708.3	15.2
50°-60°	1493.5	13.3
60°-70°	1157.6	10.3
70°-80°	696.0	6.2
80°-90°	214.8	1.9
90°-100°	90.6	0.8
100°-110°	173.2	1.5
110°-120°	235.3	2.1
120°-130°	267.5	2.4
130°-140°	271.3	2.4
140°-150°	249.7	2.2
150°-160°	206.0	1.8
160°-170°	138.5	1.2
170°-180°	48.1	0.4
0°-30°	2623.4	23.3
0°-40°	4296.7	38.2
0°-60°	7498.5	66.7
0°-90°	9567.0	85.1
90°-120°	499.1	4.4
90°-150°	1287.6	11.4
90°-180°	1680.0	14.9
0°-180°	11247.3	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3391	3391	3391	3391	3391	
5°	3416	3442	3402	3326	3416	326
15°	3358	3140	3333	3122	3358	949
25°	3198	2948	3162	2817	3198	1476
35°	2930	2734	2886	2233	2930	1834
45°	2549	1917	2505	1663	2549	1966
55°	2066	1118	2026	1194	2066	1846
65°	1503	744	1470	937	1503	1483
75°	839	414	813	632	839	890
85°	250	138	225	182	250	253
90°	4	76	4	87	4	16
95°	22	105	22	167	22	28
105°	116	178	112	225	116	124
115°	225	229	222	305	225	223
125°	323	261	316	374	323	287
135°	396	287	392	414	396	305
145°	447	305	443	439	447	281
155°	483	356	479	465	483	223
165°	505	443	501	505	505	142
175°	512	486	512	501	512	49
180°	505	505	505	505	505	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3390.9	3390.9	3390.9	3390.9	3390.9	3390.9	3390.9	3390.9	3390.9	3390.9	3390.9
2.5°	3416.3	3398.2	3441.7	3449.0	3423.6	3430.8	3434.5	3394.5	3409.0	3354.6	3369.1
5°	3416.3	3412.7	3463.5	3456.2	3441.7	3445.4	3456.2	3409.0	3401.8	3336.4	3347.3
7.5°	3412.7	3419.9	3452.6	3445.4	3423.6	3434.5	3452.6	3416.3	3394.5	3318.3	3314.7
10°	3398.2	3409.0	3434.5	3412.7	3372.7	3390.9	3430.8	3409.0	3380.0	3289.2	3271.1
12.5°	3383.6	3390.9	3398.2	3307.4	3242.0	3285.6	3398.2	3390.9	3358.2	3256.6	3223.9
15°	3358.2	3369.1	3340.1	3209.4	3140.4	3184.0	3332.8	3361.9	3332.8	3209.4	3169.4
17.5°	3329.2	3340.1	3278.4	3133.1	3082.3	3104.1	3249.3	3325.5	3300.1	3165.8	3115.0
20°	3296.5	3307.4	3209.4	3053.3	3020.6	3038.7	3169.4	3285.6	3263.8	3115.0	3056.9
22.5°	3249.3	3267.5	3129.5	2998.8	2995.2	2995.2	3093.2	3238.4	3216.6	3053.3	2991.5
25°	3198.5	3216.6	3049.6	2948.0	2948.0	2948.0	3024.2	3176.7	3162.2	2987.9	2926.2
27.5°	3144.0	3162.2	2977.0	2911.7	2922.6	2904.4	2966.1	3107.7	3107.7	2922.6	2857.2
30°	3082.3	3100.5	2904.4	2853.6	2860.8	2853.6	2900.8	3035.1	3035.1	2846.3	2777.3
32.5°	3009.7	3027.8	2824.5	2784.6	2799.1	2791.9	2839.1	2962.5	2966.1	2766.4	2682.9
35°	2929.8	2951.6	2741.0	2719.3	2733.8	2722.9	2755.6	2886.3	2886.3	2679.3	2574.0
37.5°	2846.3	2868.1	2653.9	2646.6	2661.2	2650.3	2675.7	2806.4	2799.1	2588.6	2457.9
40°	2755.6	2781.0	2563.1	2563.1	2581.3	2574.0	2595.8	2722.9	2708.4	2497.8	2338.0
42.5°	2653.9	2686.6	2472.4	2476.0	2454.2	2483.3	2505.1	2635.8	2606.7	2396.1	2207.4
45°	2548.6	2588.6	2385.2	2319.9	1916.9	2294.5	2410.7	2548.6	2505.1	2294.5	2080.3
47.5°	2436.1	2486.9	2283.6	2044.0	1543.0	2011.3	2309.0	2439.7	2388.9	2185.6	1956.8
50°	2319.9	2378.0	2178.3	1808.0	1354.2	1771.7	2196.5	2330.8	2272.7	2073.0	1815.3
52.5°	2192.8	2258.2	2076.7	1601.1	1227.1	1568.4	2080.3	2225.5	2152.9	1953.2	1699.1
55°	2065.8	2134.7	1938.7	1423.2	1118.2	1394.1	1946.0	2091.2	2025.8	1829.8	1572.0
57.5°	1935.1	2004.0	1800.7	1267.0	1023.8	1238.0	1793.5	1967.7	1895.1	1702.7	1444.9
60°	1797.1	1866.1	1651.9	1125.5	918.5	1103.7	1637.4	1829.8	1757.2	1572.0	1321.5
62.5°	1651.9	1720.9	1510.3	994.8	831.4	976.6	1466.7	1695.4	1615.6	1434.1	1194.4
65°	1503.0	1553.9	1343.3	871.3	744.3	856.8	1314.2	1528.4	1470.4	1288.8	1074.6
67.5°	1346.9	1397.7	1198.1	762.4	660.8	747.9	1165.4	1379.6	1314.2	1147.2	954.8
70°	1183.5	1227.1	1045.6	657.1	580.9	646.2	1009.3	1212.6	1154.5	998.4	827.8
72.5°	1016.5	1056.5	882.2	559.1	497.4	551.8	845.9	1045.6	987.5	842.3	711.6
75°	838.6	878.6	729.7	461.1	413.9	453.8	697.1	867.7	813.2	693.4	591.8
77.5°	671.6	718.8	577.3	363.1	330.4	355.8	548.2	700.7	646.2	555.5	475.6
80°	511.9	551.8	428.4	275.9	254.1	272.3	399.4	533.7	490.1	428.4	370.3
82.5°	370.3	392.1	294.1	203.3	192.4	199.7	272.3	377.6	355.8	308.6	272.3
85°	250.5	246.9	181.5	141.6	138.0	141.6	163.4	228.7	225.1	206.9	174.3
87.5°	105.3	98.0	83.5	58.1	50.8	54.5	65.3	87.1	83.5	87.1	83.5
90°	3.6	36.3	58.1	72.6	76.2	72.6	58.1	36.3	3.6	39.9	65.3
92.5°	7.3	47.2	69.0	79.9	87.1	79.9	65.3	47.2	7.3	61.7	65.3
95°	21.8	65.3	79.9	98.0	105.3	98.0	79.9	61.7	21.8	54.5	98.0
97.5°	43.6	83.5	94.4	108.9	112.5	105.3	90.8	83.5	39.9	98.0	101.7
100°	65.3	105.3	123.4	123.4	127.1	123.4	119.8	101.7	61.7	108.9	123.4
102.5°	90.8	119.8	141.6	152.5	152.5	152.5	141.6	119.8	83.5	134.3	170.6
105°	116.2	130.7	156.1	170.6	177.9	170.6	156.1	134.3	112.5	156.1	181.5
107.5°	145.2	141.6	170.6	185.2	192.4	185.2	170.6	145.2	138.0	174.3	203.3
110°	174.3	156.1	185.2	199.7	203.3	199.7	185.2	156.1	167.0	196.0	225.1



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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°	199.7	167.0	199.7	214.2	217.8	214.2	199.7	170.6	192.4	210.6	246.9
115°	225.1	177.9	206.9	225.1	228.7	225.1	206.9	181.5	221.5	228.7	265.0
117.5°	250.5	192.4	214.2	236.0	239.6	236.0	217.8	196.0	246.9	250.5	283.2
120°	275.9	210.6	225.1	243.2	250.5	246.9	225.1	214.2	268.7	268.7	297.7
122.5°	297.7	225.1	236.0	250.5	257.8	250.5	236.0	232.4	294.1	286.8	315.9
125°	323.1	239.6	243.2	257.8	261.4	257.8	246.9	243.2	315.9	301.3	326.7
127.5°	341.3	257.8	250.5	265.0	268.7	265.0	254.1	261.4	337.6	330.4	337.6
130°	363.1	275.9	257.8	272.3	275.9	275.9	257.8	283.2	355.8	352.2	352.2
132.5°	381.2	294.1	265.0	279.5	283.2	283.2	268.7	297.7	373.9	370.3	363.1
135°	395.7	319.5	279.5	279.5	286.8	286.8	283.2	323.1	392.1	388.5	381.2
137.5°	410.2	341.3	290.4	283.2	286.8	286.8	297.7	344.9	406.6	406.6	392.1
140°	424.8	363.1	297.7	290.4	290.4	297.7	308.6	366.7	421.1	421.1	395.7
142.5°	439.3	381.2	308.6	301.3	294.1	308.6	319.5	388.5	432.0	435.7	406.6
145°	446.6	399.4	323.1	312.2	305.0	323.1	337.6	406.6	442.9	450.2	428.4
147.5°	457.4	417.5	341.3	319.5	319.5	330.4	352.2	421.1	453.8	461.1	439.3
150°	468.3	432.0	355.8	330.4	323.1	341.3	366.7	435.7	464.7	472.0	453.8
152.5°	475.6	446.6	377.6	344.9	337.6	359.4	392.1	446.6	472.0	479.2	468.3
155°	482.9	457.4	403.0	359.4	355.8	373.9	413.9	457.4	479.2	486.5	479.2
157.5°	490.1	468.3	421.1	381.2	366.7	395.7	432.0	472.0	486.5	493.7	490.1
160°	493.7	475.6	442.9	403.0	395.7	421.1	450.2	475.6	490.1	501.0	497.4
162.5°	501.0	482.9	457.4	428.4	421.1	442.9	464.7	486.5	497.4	504.6	504.6
165°	504.6	490.1	472.0	450.2	442.9	464.7	475.6	493.7	501.0	504.6	508.3
167.5°	504.6	497.4	482.9	464.7	461.1	479.2	490.1	501.0	504.6	504.6	511.9
170°	508.3	501.0	490.1	479.2	475.6	490.1	493.7	504.6	508.3	504.6	515.5
172.5°	508.3	504.6	497.4	486.5	479.2	497.4	501.0	504.6	508.3	504.6	511.9
175°	511.9	504.6	504.6	497.4	486.5	504.6	504.6	504.6	511.9	504.6	508.3
177.5°	511.9	504.6	504.6	501.0	493.7	504.6	504.6	504.6	511.9	504.6	508.3
180°	504.6	504.6	504.6	504.6	504.6	504.6	504.6	504.6	504.6	504.6	504.6



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3390.9	3390.9	3390.9	3390.9	3390.9	3390.9
2.5°	3365.5	3340.1	3347.3	3376.4	3365.5	3416.3
5°	3340.1	3325.5	3325.5	3358.2	3354.6	3416.3
7.5°	3300.1	3285.6	3292.9	3329.2	3336.4	3412.7
10°	3252.9	3234.8	3242.0	3292.9	3311.0	3398.2
12.5°	3202.1	3187.6	3194.8	3252.9	3278.4	3383.6
15°	3144.0	3122.2	3144.0	3205.7	3238.4	3358.2
17.5°	3078.7	3049.6	3075.0	3154.9	3194.8	3329.2
20°	3013.3	2987.9	3002.4	3089.6	3147.7	3296.5
22.5°	2948.0	2911.7	2926.2	3017.0	3089.6	3249.3
25°	2871.7	2817.3	2846.3	2944.3	3027.8	3198.5
27.5°	2770.1	2686.6	2748.3	2871.7	2955.2	3144.0
30°	2635.8	2526.8	2617.6	2784.6	2879.0	3082.3
32.5°	2486.9	2370.7	2472.4	2686.6	2799.1	3009.7
35°	2338.0	2232.8	2323.5	2577.7	2715.6	2929.8
37.5°	2196.5	2105.7	2189.2	2461.5	2628.5	2846.3
40°	2062.1	1971.4	2058.5	2334.4	2534.1	2755.6
42.5°	1927.8	1844.3	1927.8	2200.1	2436.1	2653.9
45°	1793.5	1662.8	1786.2	2069.4	2330.8	2548.6
47.5°	1648.3	1495.8	1637.4	1927.8	2218.2	2436.1
50°	1510.3	1379.6	1503.0	1797.1	2102.1	2319.9
52.5°	1390.5	1285.2	1383.2	1662.8	1982.3	2192.8
55°	1277.9	1194.4	1277.9	1532.1	1855.2	2065.8
57.5°	1176.3	1121.8	1179.9	1419.5	1724.5	1935.1
60°	1089.2	1056.5	1092.8	1281.6	1593.8	1797.1
62.5°	1005.7	1002.0	1009.3	1172.7	1455.8	1651.9
65°	918.5	936.7	918.5	1056.5	1317.9	1503.0
67.5°	831.4	867.7	838.6	940.3	1169.0	1346.9
70°	751.5	791.5	751.5	820.5	1020.2	1183.5
72.5°	660.8	711.6	660.8	707.9	864.1	1016.5
75°	573.6	631.7	577.3	591.8	715.2	838.6
77.5°	479.2	533.7	490.1	479.2	577.3	671.6
80°	381.2	403.0	381.2	377.6	446.6	511.9
82.5°	265.0	283.2	265.0	275.9	326.7	370.3
85°	174.3	181.5	174.3	177.9	217.8	250.5
87.5°	72.6	72.6	72.6	90.8	98.0	105.3
90°	79.9	87.1	79.9	65.3	39.9	3.6
92.5°	83.5	90.8	83.5	72.6	47.2	7.3
95°	148.9	167.0	141.6	90.8	76.2	21.8
97.5°	119.8	130.7	123.4	105.3	94.4	43.6
100°	141.6	152.5	141.6	148.9	116.2	65.3
102.5°	167.0	174.3	170.6	174.3	141.6	90.8
105°	217.8	225.1	217.8	188.8	163.4	116.2
107.5°	232.4	250.5	236.0	210.6	185.2	145.2
110°	250.5	265.0	254.1	232.4	203.3	174.3





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	268.7	286.8	275.9	257.8	217.8	199.7
115°	290.4	305.0	297.7	275.9	239.6	225.1
117.5°	312.2	323.1	315.9	290.4	261.4	250.5
120°	330.4	344.9	337.6	308.6	279.5	275.9
122.5°	344.9	359.4	352.2	326.7	297.7	297.7
125°	359.4	373.9	366.7	341.3	312.2	323.1
127.5°	370.3	388.5	381.2	352.2	344.9	341.3
130°	384.8	395.7	392.1	363.1	363.1	363.1
132.5°	392.1	406.6	399.4	377.6	384.8	381.2
135°	395.7	413.9	406.6	395.7	403.0	395.7
137.5°	403.0	417.5	413.9	406.6	421.1	410.2
140°	413.9	421.1	424.8	413.9	435.7	424.8
142.5°	424.8	428.4	435.7	424.8	450.2	439.3
145°	432.0	439.3	446.6	446.6	461.1	446.6
147.5°	432.0	442.9	442.9	453.8	475.6	457.4
150°	442.9	435.7	457.4	468.3	482.9	468.3
152.5°	457.4	453.8	472.0	482.9	490.1	475.6
155°	461.1	464.7	475.6	493.7	497.4	482.9
157.5°	475.6	472.0	490.1	504.6	504.6	490.1
160°	486.5	486.5	504.6	511.9	508.3	493.7
162.5°	497.4	497.4	515.5	515.5	511.9	501.0
165°	504.6	504.6	522.8	519.2	511.9	504.6
167.5°	508.3	511.9	526.4	522.8	511.9	504.6
170°	511.9	511.9	526.4	519.2	511.9	508.3
172.5°	511.9	508.3	522.8	515.5	508.3	508.3
175°	508.3	501.0	515.5	508.3	508.3	511.9
177.5°	504.6	493.7	504.6	504.6	508.3	511.9
180°	504.6	504.6	504.6	504.6	504.6	504.6

(END OF REPORT)