

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: P197484

Luminaire Tested: **8WSL-LD2-100-UPL15-UNV-L850-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197484
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8WSL-LD2-100-UPL15-UNV-L850-CD2-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L850
Light Source: (476) 5000K CCT, 80 CRI LEDS
EL236N0119D850
Ballast/Driver: OSRAM
OT50W

Summary

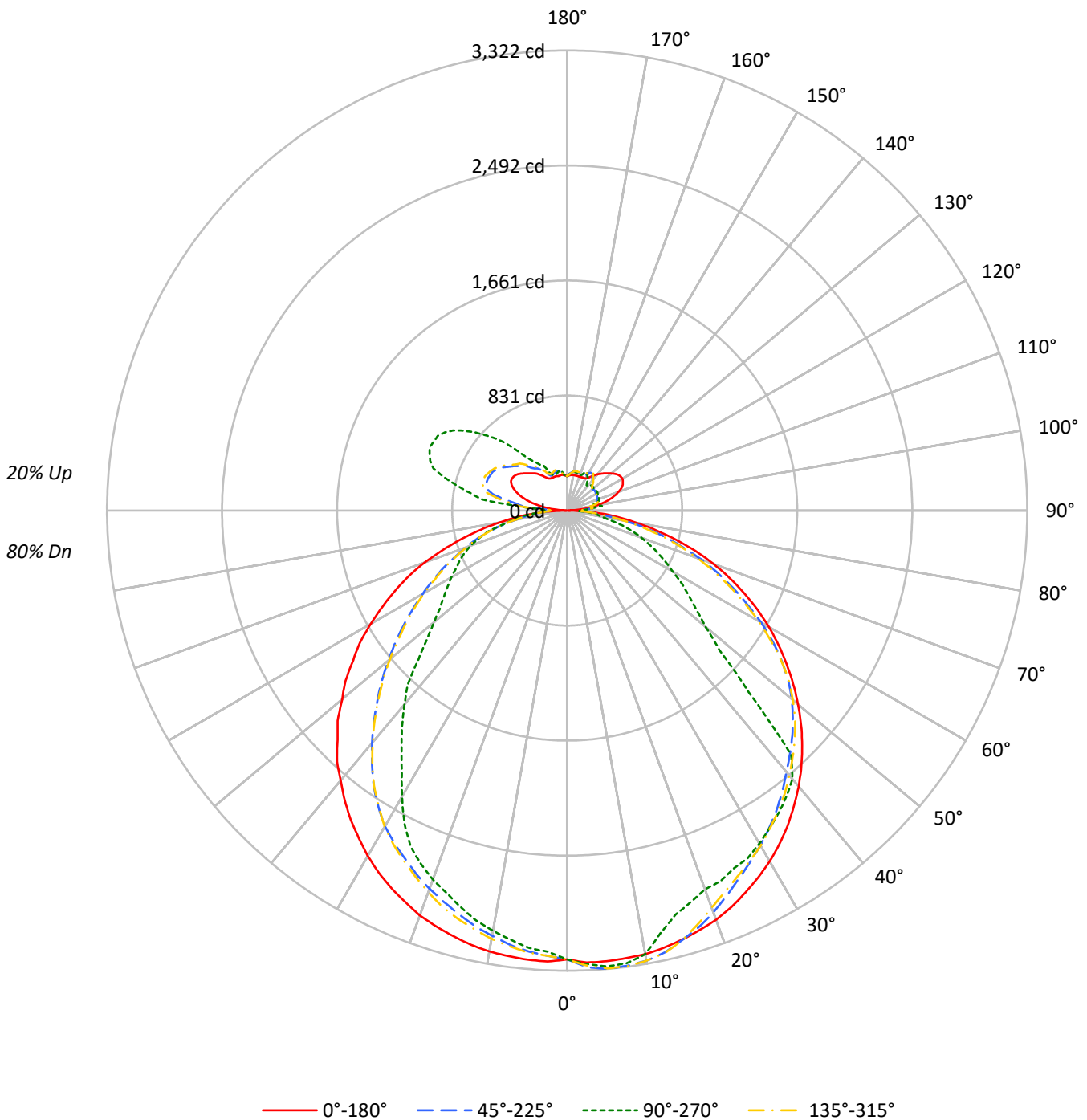
Lumens per Lamp: N/A
Luminaire Lumens: 11466.8 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

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																		
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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80																												
1	104	99	95	91	99	95	91	88	87	84	81	80	77	75	73	71	70	66																												
2	94	86	80	74	90	83	77	72	76	71	67	70	66	62	64	61	58	55																												
3	86	76	68	62	82	73	66	60	67	61	56	61	57	53	56	53	49	46																												
4	79	67	59	52	75	64	57	51	59	53	48	55	49	45	50	46	42	40																												
5	72	60	51	45	69	58	50	44	53	46	41	49	43	39	45	41	37	34																												
6	67	54	45	39	64	52	44	38	48	41	36	44	39	34	41	36	32	30																												
7	62	49	40	34	59	47	39	33	44	37	32	40	35	30	38	33	29	26																												
8	58	44	36	30	55	43	35	30	40	33	28	37	31	27	34	29	26	24																												
9	54	41	33	27	51	39	32	27	37	30	26	34	28	24	32	27	23	21																												
10	50	37	30	25	48	36	29	24	34	27	23	32	26	22	30	25	21	19																												

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9178	9178	9178	9178
5°	9287	9393	9255	9012
10°	9351	9351	9298	8859
15°	9403	8858	9327	8694
20°	9475	8769	9374	8545
25°	9510	8906	9394	8359
30°	9564	9077	9417	7799
35°	9596	9210	9416	7204
40°	9615	9354	9408	6754
45°	9612	7436	9388	6080
50°	9590	5738	9344	5524
55°	9553	5291	9314	5364
60°	9525	4994	9273	5479
65°	9450	4837	9201	5735
70°	9304	4714	9058	6131
75°	8875	4478	8590	6514
80°	8313	4065	8071	6492
85°	8343	5320	7738	7738



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	308.3	2.7
10°-20°	875.0	7.6
20°-30°	1322.3	11.5
30°-40°	1591.5	13.9
40°-50°	1618.5	14.1
50°-60°	1408.8	12.3
60°-70°	1098.9	9.6
70°-80°	679.3	5.9
80°-90°	239.0	2.1
90°-100°	225.0	2.0
100°-110°	435.7	3.8
110°-120°	476.7	4.2
120°-130°	418.0	3.6
130°-140°	313.2	2.7
140°-150°	214.4	1.9
150°-160°	136.5	1.2
160°-170°	79.8	0.7
170°-180°	25.7	0.2
0°-30°	2505.7	21.9
0°-40°	4097.2	35.7
0°-60°	7124.5	62.1
0°-90°	9141.7	79.7
90°-120°	1137.5	9.9
90°-150°	2083.0	18.2
90°-180°	2325.0	20.3
0°-180°	11466.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3240	3240	3240	3240	3240	
5°	3266	3303	3255	3169	3266	311
15°	3207	3021	3181	2965	3207	906
25°	3043	2850	3006	2675	3043	1404
35°	2775	2664	2723	2083	2775	1736
45°	2399	1856	2344	1518	2399	1851
55°	1934	1071	1886	1086	1934	1730
65°	1410	722	1373	856	1410	1393
75°	811	409	785	595	811	859
85°	257	164	238	238	257	256
90°	4	104	4	164	4	19
95°	100	171	78	342	100	104
105°	320	212	309	911	320	333
115°	443	242	443	1094	443	433
125°	450	253	450	1008	450	400
135°	379	253	379	736	379	295
145°	298	253	305	439	298	190
155°	264	305	260	301	264	122
165°	260	275	257	279	260	74
175°	257	268	257	260	257	25
180°	249	249	249	249	249	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3240.1	3240.1	3240.1	3240.1	3240.1	3240.1	3240.1	3240.1	3240.1	3240.1	3240.1
2.5°	3266.1	3251.2	3299.6	3303.3	3277.3	3288.4	3288.4	3247.5	3258.7	3210.3	3217.8
5°	3266.1	3269.8	3321.9	3318.2	3303.3	3307.0	3318.2	3266.1	3255.0	3188.0	3195.4
7.5°	3258.7	3277.3	3314.5	3310.8	3295.9	3299.6	3318.2	3273.6	3243.8	3165.7	3162.0
10°	3251.2	3269.8	3299.6	3281.0	3251.2	3262.4	3299.6	3269.8	3232.6	3139.6	3117.3
12.5°	3232.6	3251.2	3266.1	3173.1	3121.0	3165.7	3269.8	3251.2	3210.3	3102.4	3072.7
15°	3206.6	3228.9	3210.3	3080.1	3020.6	3061.5	3210.3	3225.2	3180.6	3054.1	3016.9
17.5°	3176.8	3202.9	3154.5	3009.4	2964.8	2983.4	3132.2	3191.7	3147.1	3005.7	2961.1
20°	3143.4	3173.1	3087.6	2935.0	2909.0	2923.9	3050.4	3154.5	3109.9	2953.6	2905.3
22.5°	3098.7	3132.2	3009.4	2883.0	2894.1	2883.0	2976.0	3106.2	3057.8	2897.8	2842.0
25°	3042.9	3080.1	2931.3	2838.3	2849.5	2845.8	2912.7	3042.9	3005.7	2830.9	2771.4
27.5°	2987.1	3024.3	2860.6	2808.6	2827.2	2804.8	2853.2	2976.0	2946.2	2760.2	2704.4
30°	2923.9	2964.8	2790.0	2756.5	2775.1	2760.2	2793.7	2909.0	2879.2	2685.8	2630.0
32.5°	2853.2	2894.1	2715.6	2693.2	2719.3	2700.7	2723.0	2834.6	2801.1	2604.0	2537.0
35°	2775.1	2816.0	2637.4	2637.4	2663.5	2641.2	2652.3	2760.2	2723.0	2522.1	2432.8
37.5°	2689.5	2734.2	2551.9	2570.5	2600.2	2577.9	2577.9	2682.1	2637.4	2432.8	2313.8
40°	2600.2	2648.6	2462.6	2503.5	2529.6	2503.5	2496.1	2600.2	2544.4	2343.6	2191.0
42.5°	2503.5	2555.6	2380.8	2429.1	2395.6	2429.1	2410.5	2514.7	2458.9	2246.8	2064.6
45°	2399.4	2466.3	2298.9	2269.2	1856.3	2246.8	2325.0	2425.4	2343.6	2153.8	1938.1
47.5°	2291.5	2362.2	2209.6	1993.9	1491.7	1971.6	2232.0	2328.7	2246.8	2053.4	1811.6
50°	2176.2	2258.0	2116.6	1755.8	1302.0	1733.5	2127.8	2228.2	2120.4	1945.5	1685.1
52.5°	2057.1	2146.4	2012.5	1551.2	1175.5	1528.9	2016.2	2120.4	2016.2	1830.2	1562.4
55°	1934.4	2027.4	1889.7	1361.5	1071.3	1357.8	1886.0	2005.1	1886.0	1714.9	1439.6
57.5°	1811.6	1915.8	1759.5	1223.9	982.1	1205.3	1740.9	1886.0	1774.4	1595.9	1320.6
60°	1681.4	1778.1	1618.2	1075.1	881.6	1071.3	1595.9	1763.3	1636.8	1473.1	1205.3
62.5°	1547.5	1655.4	1465.7	944.9	799.8	941.1	1439.6	1625.6	1502.9	1346.6	1093.7
65°	1409.9	1514.0	1320.6	840.7	721.7	833.3	1294.5	1484.3	1372.7	1220.1	989.5
67.5°	1268.5	1365.2	1175.5	740.3	643.6	732.8	1145.7	1335.5	1238.7	1089.9	877.9
70°	1123.4	1212.7	1026.7	643.6	569.2	639.8	1000.7	1182.9	1093.7	956.0	777.5
72.5°	970.9	1052.7	870.5	550.6	491.0	546.8	848.1	1026.7	933.7	814.7	688.2
75°	810.9	889.1	725.4	457.6	409.2	453.8	703.1	859.3	784.9	684.5	584.0
77.5°	658.4	736.5	576.6	353.4	312.5	346.0	550.6	703.1	639.8	554.3	476.2
80°	509.6	572.9	424.1	264.1	249.2	264.1	412.9	539.4	494.8	435.2	372.0
82.5°	375.7	412.9	286.4	215.8	215.8	215.8	279.0	383.2	364.6	323.6	282.7
85°	256.7	256.7	193.4	163.7	163.7	163.7	189.7	226.9	238.1	215.8	215.8
87.5°	107.9	111.6	100.4	89.3	85.6	89.3	96.7	93.0	93.0	104.2	130.2
90°	3.7	48.4	81.8	100.4	104.2	96.7	74.4	44.6	3.7	63.2	115.3
92.5°	26.0	104.2	96.7	126.5	130.2	119.0	100.4	81.8	14.9	115.3	122.8
95°	100.4	122.8	189.7	193.4	171.1	163.7	186.0	115.3	78.1	156.2	312.5
97.5°	160.0	186.0	171.1	223.2	253.0	223.2	178.6	178.6	148.8	241.8	364.6
100°	219.5	197.2	174.8	193.4	223.2	197.2	167.4	197.2	208.3	282.7	446.4
102.5°	275.3	219.5	219.5	189.7	193.4	186.0	212.0	215.8	260.4	319.9	550.6
105°	319.9	226.9	230.6	215.8	212.0	215.8	230.6	230.6	308.8	353.4	598.9
107.5°	360.8	234.4	226.9	238.1	241.8	238.1	226.9	234.4	353.4	375.7	610.1
110°	394.3	238.1	230.6	238.1	249.2	238.1	230.6	241.8	390.6	398.0	617.5



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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°	424.1	241.8	238.1	234.4	245.5	234.4	238.1	249.2	420.4	409.2	617.5
115°	442.7	245.5	238.1	238.1	241.8	238.1	241.8	253.0	442.7	412.9	610.1
117.5°	453.8	253.0	241.8	245.5	249.2	245.5	241.8	260.4	457.6	427.8	606.4
120°	461.3	279.0	241.8	249.2	253.0	249.2	241.8	282.7	461.3	435.2	591.5
122.5°	457.6	290.2	245.5	249.2	256.7	249.2	245.5	293.9	457.6	431.5	572.9
125°	450.1	301.3	245.5	245.5	253.0	249.2	249.2	301.3	450.1	424.1	546.8
127.5°	435.2	327.4	245.5	249.2	249.2	249.2	249.2	323.6	435.2	427.8	520.8
130°	416.6	346.0	238.1	253.0	249.2	256.7	245.5	346.0	416.6	416.6	498.5
132.5°	398.0	353.4	238.1	253.0	253.0	256.7	241.8	353.4	398.0	401.8	476.2
135°	379.4	360.8	253.0	249.2	253.0	253.0	256.7	360.8	379.4	386.9	461.3
137.5°	360.8	364.6	271.6	238.1	249.2	241.8	279.0	364.6	364.6	364.6	439.0
140°	342.2	360.8	286.4	230.6	234.4	238.1	293.9	364.6	349.7	353.4	401.8
142.5°	319.9	349.7	297.6	249.2	230.6	256.7	305.0	360.8	327.4	342.2	383.2
145°	297.6	338.5	319.9	275.3	253.0	286.4	331.1	349.7	305.0	334.8	372.0
147.5°	279.0	319.9	323.6	290.2	279.0	301.3	334.8	334.8	282.7	319.9	346.0
150°	267.8	301.3	312.5	301.3	290.2	316.2	327.4	308.8	267.8	308.8	323.6
152.5°	264.1	286.4	286.4	316.2	312.5	331.1	301.3	293.9	260.4	297.6	293.9
155°	264.1	282.7	275.3	290.2	305.0	305.0	286.4	286.4	260.4	297.6	279.0
157.5°	260.4	286.4	275.3	271.6	279.0	286.4	286.4	290.2	260.4	290.2	279.0
160°	260.4	290.2	279.0	267.8	271.6	282.7	290.2	290.2	260.4	290.2	282.7
162.5°	260.4	282.7	282.7	271.6	271.6	286.4	290.2	286.4	260.4	282.7	290.2
165°	260.4	282.7	286.4	279.0	275.3	293.9	290.2	279.0	256.7	279.0	293.9
167.5°	260.4	275.3	290.2	282.7	282.7	293.9	293.9	275.3	256.7	267.8	293.9
170°	260.4	271.6	286.4	282.7	286.4	297.6	286.4	271.6	260.4	264.1	282.7
172.5°	260.4	264.1	279.0	282.7	282.7	290.2	279.0	264.1	260.4	256.7	271.6
175°	256.7	264.1	271.6	271.6	267.8	279.0	267.8	260.4	256.7	253.0	260.4
177.5°	253.0	256.7	264.1	264.1	256.7	264.1	256.7	253.0	253.0	249.2	256.7
180°	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2	249.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3240.1	3240.1	3240.1	3240.1	3240.1	3240.1
2.5°	3214.0	3188.0	3195.4	3217.8	3214.0	3266.1
5°	3180.6	3169.4	3169.4	3202.9	3199.2	3266.1
7.5°	3143.4	3124.8	3135.9	3173.1	3184.3	3258.7
10°	3095.0	3080.1	3083.8	3139.6	3158.2	3251.2
12.5°	3046.6	3031.8	3042.9	3095.0	3121.0	3232.6
15°	2990.8	2964.8	2994.6	3050.4	3083.8	3206.6
17.5°	2923.9	2894.1	2923.9	2998.3	3039.2	3176.8
20°	2864.4	2834.6	2853.2	2931.3	2987.1	3143.4
22.5°	2797.4	2760.2	2775.1	2860.6	2931.3	3098.7
25°	2723.0	2674.6	2697.0	2790.0	2868.1	3042.9
27.5°	2626.3	2544.4	2600.2	2715.6	2790.0	2987.1
30°	2492.4	2384.5	2473.8	2633.7	2719.3	2923.9
32.5°	2336.1	2220.8	2317.5	2533.3	2637.4	2853.2
35°	2183.6	2083.2	2172.4	2429.1	2555.6	2775.1
37.5°	2049.7	1956.7	2038.5	2310.1	2466.3	2689.5
40°	1912.1	1826.5	1908.3	2183.6	2377.0	2600.2
42.5°	1785.6	1703.7	1781.9	2057.1	2280.3	2503.5
45°	1651.7	1517.7	1644.2	1926.9	2176.2	2399.4
47.5°	1510.3	1368.9	1499.1	1800.5	2072.0	2291.5
50°	1380.1	1253.6	1372.7	1670.3	1960.4	2176.2
52.5°	1264.8	1156.9	1261.1	1540.1	1845.1	2057.1
55°	1156.9	1086.2	1160.6	1421.0	1737.2	1934.4
57.5°	1071.3	1023.0	1075.1	1305.7	1618.2	1811.6
60°	996.9	967.2	1000.7	1190.4	1491.7	1681.4
62.5°	915.1	903.9	915.1	1078.8	1368.9	1547.5
65°	844.4	855.6	844.4	978.3	1238.7	1409.9
67.5°	777.5	803.5	781.2	870.5	1108.5	1268.5
70°	703.1	740.3	706.8	773.7	974.6	1123.4
72.5°	625.0	669.6	625.0	680.8	833.3	970.9
75°	543.1	595.2	546.8	580.3	699.3	810.9
77.5°	453.8	487.3	461.3	472.4	569.2	658.4
80°	360.8	398.0	364.6	372.0	450.1	509.6
82.5°	301.3	327.4	305.0	282.7	334.8	375.7
85°	223.2	238.1	230.6	219.5	230.6	256.7
87.5°	137.6	145.1	137.6	137.6	119.0	107.9
90°	152.5	163.7	152.5	119.0	67.0	3.7
92.5°	156.2	171.1	156.2	130.2	126.5	26.0
95°	349.7	342.2	372.0	338.5	193.4	100.4
97.5°	543.1	621.2	561.7	405.5	260.4	160.0
100°	625.0	699.3	651.0	505.9	297.6	219.5
102.5°	721.7	803.5	751.4	591.5	334.8	275.3
105°	840.7	911.4	866.7	625.0	368.3	319.9
107.5°	903.9	1011.8	922.5	639.8	390.6	360.8
110°	937.4	1052.7	967.2	643.6	409.2	394.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	963.5	1075.1	985.8	643.6	416.6	424.1
115°	963.5	1093.7	985.8	632.4	427.8	442.7
117.5°	963.5	1082.5	985.8	621.2	442.7	453.8
120°	930.0	1078.8	959.7	606.4	446.4	461.3
122.5°	903.9	1049.0	922.5	587.8	446.4	457.6
125°	855.6	1008.1	877.9	565.4	439.0	450.1
127.5°	803.5	948.6	822.1	539.4	442.7	435.2
130°	755.1	881.6	766.3	513.4	427.8	416.6
132.5°	691.9	807.2	703.1	494.8	412.9	398.0
135°	632.4	736.5	647.3	479.9	394.3	379.4
137.5°	569.2	662.2	584.0	450.1	375.7	360.8
140°	494.8	569.2	509.6	416.6	364.6	342.2
142.5°	446.4	487.3	461.3	401.8	349.7	319.9
145°	416.6	439.0	427.8	386.9	342.2	297.6
147.5°	386.9	409.2	398.0	357.1	323.6	279.0
150°	375.7	375.7	390.6	331.1	312.5	267.8
152.5°	334.8	364.6	349.7	301.3	305.0	264.1
155°	286.4	301.3	301.3	290.2	305.0	264.1
157.5°	267.8	279.0	282.7	290.2	297.6	260.4
160°	267.8	271.6	282.7	293.9	293.9	260.4
162.5°	275.3	271.6	290.2	301.3	286.4	260.4
165°	282.7	279.0	297.6	305.0	279.0	260.4
167.5°	290.2	290.2	305.0	301.3	271.6	260.4
170°	290.2	297.6	305.0	290.2	267.8	260.4
172.5°	279.0	282.7	290.2	271.6	256.7	260.4
175°	264.1	260.4	271.6	260.4	256.7	256.7
177.5°	256.7	245.5	256.7	253.0	249.2	253.0
180°	249.2	249.2	249.2	249.2	249.2	249.2

(END OF REPORT)