

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: P197428

Luminaire Tested: **8WSL-LD2-90-UPL8-UNV-L850-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197428
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-LD2-90-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

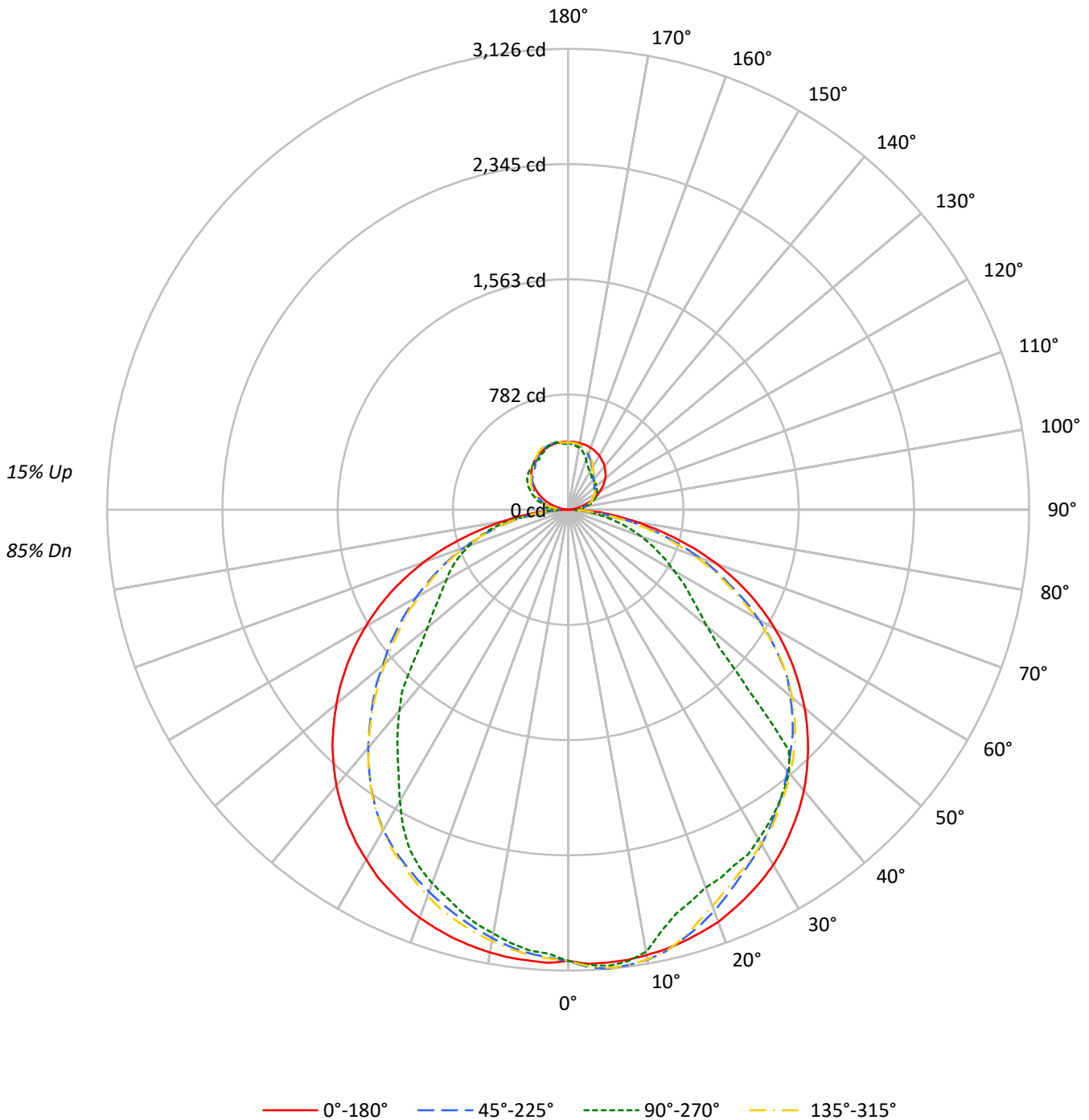
Lumens per Lamp: N/A
Luminaire Lumens: 10151.4 lumens
Efficiency: N/A
Efficacy: 125.9 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 80.6
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	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°	8669	8669	8669	8669
5°	8767	8833	8730	8535
10°	8822	8756	8775	8398
15°	8889	8312	8821	8264
20°	8969	8218	8880	8129
25°	9023	8316	8920	7947
30°	9099	8446	8960	7459
35°	9144	8532	9008	6969
40°	9197	8615	9039	6579
45°	9215	6931	9057	6012
50°	9227	5386	9040	5487
55°	9208	4984	9030	5324
60°	9189	4696	8985	5402
65°	9093	4502	8895	5666
70°	8847	4342	8630	5916
75°	8284	4089	8033	6240
80°	7536	3742	7217	5933
85°	7348	4046	6604	5324



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.9	2.9
10°-20°	826.2	8.1
20°-30°	1250.7	12.3
30°-40°	1510.2	14.9
40°-50°	1541.9	15.2
50°-60°	1348.0	13.3
60°-70°	1044.8	10.3
70°-80°	628.2	6.2
80°-90°	193.9	1.9
90°-100°	81.8	0.8
100°-110°	156.3	1.5
110°-120°	212.4	2.1
120°-130°	241.4	2.4
130°-140°	244.9	2.4
140°-150°	225.4	2.2
150°-160°	185.9	1.8
160°-170°	125.0	1.2
170°-180°	43.5	0.4
0°-30°	2367.8	23.3
0°-40°	3878.0	38.2
0°-60°	6767.9	66.7
0°-90°	8634.8	85.1
90°-120°	450.4	4.4
90°-150°	1162.1	11.4
90°-180°	1517.0	14.9
0°-180°	10151.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3060	3060	3060	3060	3060	
5°	3083	3106	3070	3002	3083	294
15°	3031	2834	3008	2818	3031	857
25°	2887	2661	2854	2543	2887	1332
35°	2644	2467	2605	2015	2644	1656
45°	2300	1730	2261	1501	2300	1774
55°	1864	1009	1828	1078	1864	1667
65°	1357	672	1327	845	1357	1339
75°	757	374	734	570	757	803
85°	226	124	203	164	226	228
90°	3	69	3	79	3	15
95°	20	95	20	151	20	25
105°	105	161	102	203	105	112
115°	203	206	200	275	203	201
125°	292	236	285	338	292	259
135°	357	259	354	374	357	276
145°	403	275	400	396	403	253
155°	436	321	432	419	436	201
165°	456	400	452	456	456	128
175°	462	439	462	452	462	44
180°	456	456	456	456	456	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3060.5	3060.5	3060.5	3060.5	3060.5	3060.5	3060.5	3060.5	3060.5	3060.5	3060.5
2.5°	3083.4	3067.1	3106.4	3112.9	3090.0	3096.6	3099.8	3063.8	3076.9	3027.7	3040.8
5°	3083.4	3080.2	3126.0	3119.5	3106.4	3109.7	3119.5	3076.9	3070.3	3011.4	3021.2
7.5°	3080.2	3086.7	3116.2	3109.7	3090.0	3099.8	3116.2	3083.4	3063.8	2995.0	2991.7
10°	3067.1	3076.9	3099.8	3080.2	3044.1	3060.5	3096.6	3076.9	3050.7	2968.8	2952.4
12.5°	3054.0	3060.5	3067.1	2985.1	2926.2	2965.5	3067.1	3060.5	3031.0	2939.3	2909.8
15°	3031.0	3040.8	3014.6	2896.7	2834.4	2873.7	3008.1	3034.3	3008.1	2896.7	2860.6
17.5°	3004.8	3014.6	2958.9	2827.9	2782.0	2801.6	2932.7	3001.5	2978.6	2857.3	2811.5
20°	2975.3	2985.1	2896.7	2755.8	2726.3	2742.7	2860.6	2965.5	2945.8	2811.5	2759.0
22.5°	2932.7	2949.1	2824.6	2706.6	2703.3	2703.3	2791.8	2922.9	2903.2	2755.8	2700.1
25°	2886.8	2903.2	2752.5	2660.7	2660.7	2660.7	2729.6	2867.2	2854.1	2696.8	2641.1
27.5°	2837.7	2854.1	2687.0	2628.0	2637.8	2621.4	2677.1	2804.9	2804.9	2637.8	2578.8
30°	2782.0	2798.4	2621.4	2575.5	2582.1	2575.5	2618.1	2739.4	2739.4	2569.0	2506.7
32.5°	2716.4	2732.8	2549.3	2513.3	2526.4	2519.8	2562.4	2673.8	2677.1	2496.9	2421.5
35°	2644.4	2664.0	2474.0	2454.3	2467.4	2457.6	2487.1	2605.0	2605.0	2418.3	2323.2
37.5°	2569.0	2588.7	2395.3	2388.8	2401.9	2392.0	2415.0	2532.9	2526.4	2336.3	2218.4
40°	2487.1	2510.0	2313.4	2313.4	2329.8	2323.2	2342.9	2457.6	2444.5	2254.4	2110.2
42.5°	2395.3	2424.8	2231.5	2234.8	2215.1	2241.3	2261.0	2378.9	2352.7	2162.7	1992.3
45°	2300.3	2336.3	2152.8	2093.9	1730.1	2070.9	2175.8	2300.3	2261.0	2070.9	1877.6
47.5°	2198.7	2244.6	2061.1	1844.8	1392.6	1815.3	2084.0	2202.0	2156.1	1972.6	1766.2
50°	2093.9	2146.3	1966.1	1631.8	1222.2	1599.1	1982.4	2103.7	2051.3	1871.0	1638.4
52.5°	1979.2	2038.2	1874.3	1445.1	1107.6	1415.6	1877.6	2008.7	1943.1	1762.9	1533.5
55°	1864.5	1926.7	1749.8	1284.5	1009.2	1258.3	1756.4	1887.4	1828.4	1651.5	1418.8
57.5°	1746.5	1808.8	1625.3	1143.6	924.1	1117.4	1618.7	1776.0	1710.5	1536.8	1304.2
60°	1622.0	1684.3	1490.9	1015.8	829.0	996.1	1477.8	1651.5	1586.0	1418.8	1192.7
62.5°	1490.9	1553.2	1363.1	897.8	750.4	881.5	1323.8	1530.3	1458.2	1294.3	1078.1
65°	1356.6	1402.5	1212.4	786.4	671.7	773.3	1186.2	1379.5	1327.1	1163.3	969.9
67.5°	1215.7	1261.6	1081.3	688.1	596.4	675.0	1051.8	1245.2	1186.2	1035.5	861.8
70°	1068.2	1107.6	943.7	593.1	524.3	583.3	910.9	1094.4	1042.0	901.1	747.1
72.5°	917.5	953.5	796.3	504.6	448.9	498.1	763.5	943.7	891.3	760.2	642.2
75°	756.9	793.0	658.6	416.2	373.6	409.6	629.1	783.1	734.0	625.9	534.1
77.5°	606.2	648.8	521.0	327.7	298.2	321.1	494.8	632.4	583.3	501.3	429.3
80°	462.0	498.1	386.7	249.0	229.4	245.8	360.4	481.7	442.4	386.7	334.2
82.5°	334.2	353.9	265.4	183.5	173.7	180.2	245.8	340.8	321.1	278.5	245.8
85°	226.1	222.8	163.8	127.8	124.5	127.8	147.5	206.4	203.2	186.8	157.3
87.5°	95.0	88.5	75.4	52.4	45.9	49.2	59.0	78.6	75.4	78.6	75.4
90°	3.3	32.8	52.4	65.5	68.8	65.5	52.4	32.8	3.3	36.0	59.0
92.5°	6.6	42.6	62.3	72.1	78.6	72.1	59.0	42.6	6.6	55.7	59.0
95°	19.7	59.0	72.1	88.5	95.0	88.5	72.1	55.7	19.7	49.2	88.5
97.5°	39.3	75.4	85.2	98.3	101.6	95.0	81.9	75.4	36.0	88.5	91.7
100°	59.0	95.0	111.4	111.4	114.7	111.4	108.1	91.7	55.7	98.3	111.4
102.5°	81.9	108.1	127.8	137.6	137.6	137.6	127.8	108.1	75.4	121.2	154.0
105°	104.9	118.0	140.9	154.0	160.6	154.0	140.9	121.2	101.6	140.9	163.8
107.5°	131.1	127.8	154.0	167.1	173.7	167.1	154.0	131.1	124.5	157.3	183.5
110°	157.3	140.9	167.1	180.2	183.5	180.2	167.1	140.9	150.7	176.9	203.2



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CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	180.2	150.7	180.2	193.3	196.6	193.3	180.2	154.0	173.7	190.1	222.8
115°	203.2	160.6	186.8	203.2	206.4	203.2	186.8	163.8	199.9	206.4	239.2
117.5°	226.1	173.7	193.3	213.0	216.3	213.0	196.6	176.9	222.8	226.1	255.6
120°	249.0	190.1	203.2	219.5	226.1	222.8	203.2	193.3	242.5	242.5	268.7
122.5°	268.7	203.2	213.0	226.1	232.7	226.1	213.0	209.7	265.4	258.9	285.1
125°	291.6	216.3	219.5	232.7	235.9	232.7	222.8	219.5	285.1	272.0	294.9
127.5°	308.0	232.7	226.1	239.2	242.5	239.2	229.4	235.9	304.7	298.2	304.7
130°	327.7	249.0	232.7	245.8	249.0	249.0	232.7	255.6	321.1	317.8	317.8
132.5°	344.1	265.4	239.2	252.3	255.6	255.6	242.5	268.7	337.5	334.2	327.7
135°	357.2	288.4	252.3	252.3	258.9	258.9	255.6	291.6	353.9	350.6	344.1
137.5°	370.3	308.0	262.1	255.6	258.9	258.9	268.7	311.3	367.0	367.0	353.9
140°	383.4	327.7	268.7	262.1	262.1	268.7	278.5	331.0	380.1	380.1	357.2
142.5°	396.5	344.1	278.5	272.0	265.4	278.5	288.4	350.6	389.9	393.2	367.0
145°	403.0	360.4	291.6	281.8	275.2	291.6	304.7	367.0	399.8	406.3	386.7
147.5°	412.9	376.8	308.0	288.4	288.4	298.2	317.8	380.1	409.6	416.2	396.5
150°	422.7	389.9	321.1	298.2	291.6	308.0	331.0	393.2	419.4	426.0	409.6
152.5°	429.3	403.0	340.8	311.3	304.7	324.4	353.9	403.0	426.0	432.5	422.7
155°	435.8	412.9	363.7	324.4	321.1	337.5	373.6	412.9	432.5	439.1	432.5
157.5°	442.4	422.7	380.1	344.1	331.0	357.2	389.9	426.0	439.1	445.6	442.4
160°	445.6	429.3	399.8	363.7	357.2	380.1	406.3	429.3	442.4	452.2	448.9
162.5°	452.2	435.8	412.9	386.7	380.1	399.8	419.4	439.1	448.9	455.5	455.5
165°	455.5	442.4	426.0	406.3	399.8	419.4	429.3	445.6	452.2	455.5	458.7
167.5°	455.5	448.9	435.8	419.4	416.2	432.5	442.4	452.2	455.5	455.5	462.0
170°	458.7	452.2	442.4	432.5	429.3	442.4	445.6	455.5	458.7	455.5	465.3
172.5°	458.7	455.5	448.9	439.1	432.5	448.9	452.2	455.5	458.7	455.5	462.0
175°	462.0	455.5	455.5	448.9	439.1	455.5	455.5	455.5	462.0	455.5	458.7
177.5°	462.0	455.5	455.5	452.2	445.6	455.5	455.5	455.5	462.0	455.5	458.7
180°	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3060.5	3060.5	3060.5	3060.5	3060.5	3060.5
2.5°	3037.6	3014.6	3021.2	3047.4	3037.6	3083.4
5°	3014.6	3001.5	3001.5	3031.0	3027.7	3083.4
7.5°	2978.6	2965.5	2972.0	3004.8	3011.4	3080.2
10°	2936.0	2919.6	2926.2	2972.0	2988.4	3067.1
12.5°	2890.1	2877.0	2883.6	2936.0	2958.9	3054.0
15°	2837.7	2818.0	2837.7	2893.4	2922.9	3031.0
17.5°	2778.7	2752.5	2775.4	2847.5	2883.6	3004.8
20°	2719.7	2696.8	2709.9	2788.5	2841.0	2975.3
22.5°	2660.7	2628.0	2641.1	2723.0	2788.5	2932.7
25°	2591.9	2542.8	2569.0	2657.5	2732.8	2886.8
27.5°	2500.2	2424.8	2480.5	2591.9	2667.3	2837.7
30°	2378.9	2280.6	2362.6	2513.3	2598.5	2782.0
32.5°	2244.6	2139.7	2231.5	2424.8	2526.4	2716.4
35°	2110.2	2015.2	2097.1	2326.5	2451.0	2644.4
37.5°	1982.4	1900.5	1975.9	2221.7	2372.4	2569.0
40°	1861.2	1779.3	1857.9	2107.0	2287.2	2487.1
42.5°	1740.0	1664.6	1740.0	1985.7	2198.7	2395.3
45°	1618.7	1500.8	1612.2	1867.8	2103.7	2300.3
47.5°	1487.7	1350.0	1477.8	1740.0	2002.1	2198.7
50°	1363.1	1245.2	1356.6	1622.0	1897.3	2093.9
52.5°	1255.0	1160.0	1248.5	1500.8	1789.1	1979.2
55°	1153.4	1078.1	1153.4	1382.8	1674.4	1864.5
57.5°	1061.7	1012.5	1065.0	1281.2	1556.5	1746.5
60°	983.0	953.5	986.3	1156.7	1438.5	1622.0
62.5°	907.7	904.4	910.9	1058.4	1314.0	1490.9
65°	829.0	845.4	829.0	953.5	1189.5	1356.6
67.5°	750.4	783.1	756.9	848.7	1055.1	1215.7
70°	678.3	714.3	678.3	740.6	920.8	1068.2
72.5°	596.4	642.2	596.4	639.0	779.9	917.5
75°	517.7	570.2	521.0	534.1	645.5	756.9
77.5°	432.5	481.7	442.4	432.5	521.0	606.2
80°	344.1	363.7	344.1	340.8	403.0	462.0
82.5°	239.2	255.6	239.2	249.0	294.9	334.2
85°	157.3	163.8	157.3	160.6	196.6	226.1
87.5°	65.5	65.5	65.5	81.9	88.5	95.0
90°	72.1	78.6	72.1	59.0	36.0	3.3
92.5°	75.4	81.9	75.4	65.5	42.6	6.6
95°	134.3	150.7	127.8	81.9	68.8	19.7
97.5°	108.1	118.0	111.4	95.0	85.2	39.3
100°	127.8	137.6	127.8	134.3	104.9	59.0
102.5°	150.7	157.3	154.0	157.3	127.8	81.9
105°	196.6	203.2	196.6	170.4	147.5	104.9
107.5°	209.7	226.1	213.0	190.1	167.1	131.1
110°	226.1	239.2	229.4	209.7	183.5	157.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	242.5	258.9	249.0	232.7	196.6	180.2
115°	262.1	275.2	268.7	249.0	216.3	203.2
117.5°	281.8	291.6	285.1	262.1	235.9	226.1
120°	298.2	311.3	304.7	278.5	252.3	249.0
122.5°	311.3	324.4	317.8	294.9	268.7	268.7
125°	324.4	337.5	331.0	308.0	281.8	291.6
127.5°	334.2	350.6	344.1	317.8	311.3	308.0
130°	347.3	357.2	353.9	327.7	327.7	327.7
132.5°	353.9	367.0	360.4	340.8	347.3	344.1
135°	357.2	373.6	367.0	357.2	363.7	357.2
137.5°	363.7	376.8	373.6	367.0	380.1	370.3
140°	373.6	380.1	383.4	373.6	393.2	383.4
142.5°	383.4	386.7	393.2	383.4	406.3	396.5
145°	389.9	396.5	403.0	403.0	416.2	403.0
147.5°	389.9	399.8	399.8	409.6	429.3	412.9
150°	399.8	393.2	412.9	422.7	435.8	422.7
152.5°	412.9	409.6	426.0	435.8	442.4	429.3
155°	416.2	419.4	429.3	445.6	448.9	435.8
157.5°	429.3	426.0	442.4	455.5	455.5	442.4
160°	439.1	439.1	455.5	462.0	458.7	445.6
162.5°	448.9	448.9	465.3	465.3	462.0	452.2
165°	455.5	455.5	471.9	468.6	462.0	455.5
167.5°	458.7	462.0	475.1	471.9	462.0	455.5
170°	462.0	462.0	475.1	468.6	462.0	458.7
172.5°	462.0	458.7	471.9	465.3	458.7	458.7
175°	458.7	452.2	465.3	458.7	458.7	462.0
177.5°	455.5	445.6	455.5	455.5	458.7	462.0
180°	455.5	455.5	455.5	455.5	455.5	455.5

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