

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: P197416

Luminaire Tested: **8WSL-LD2-70-UPL8-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197416
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-LD2-70-UPL8-UNV-L850-CD1-U
Description: 8FT. Linear Wavestream System, 8% Uplight, L850
Light Source: (476) 5000K CCT, 80 CRI LEDS
EL236N0119D850
Ballast/Driver: OSRAM
OT85W1202772A0DIML

Summary

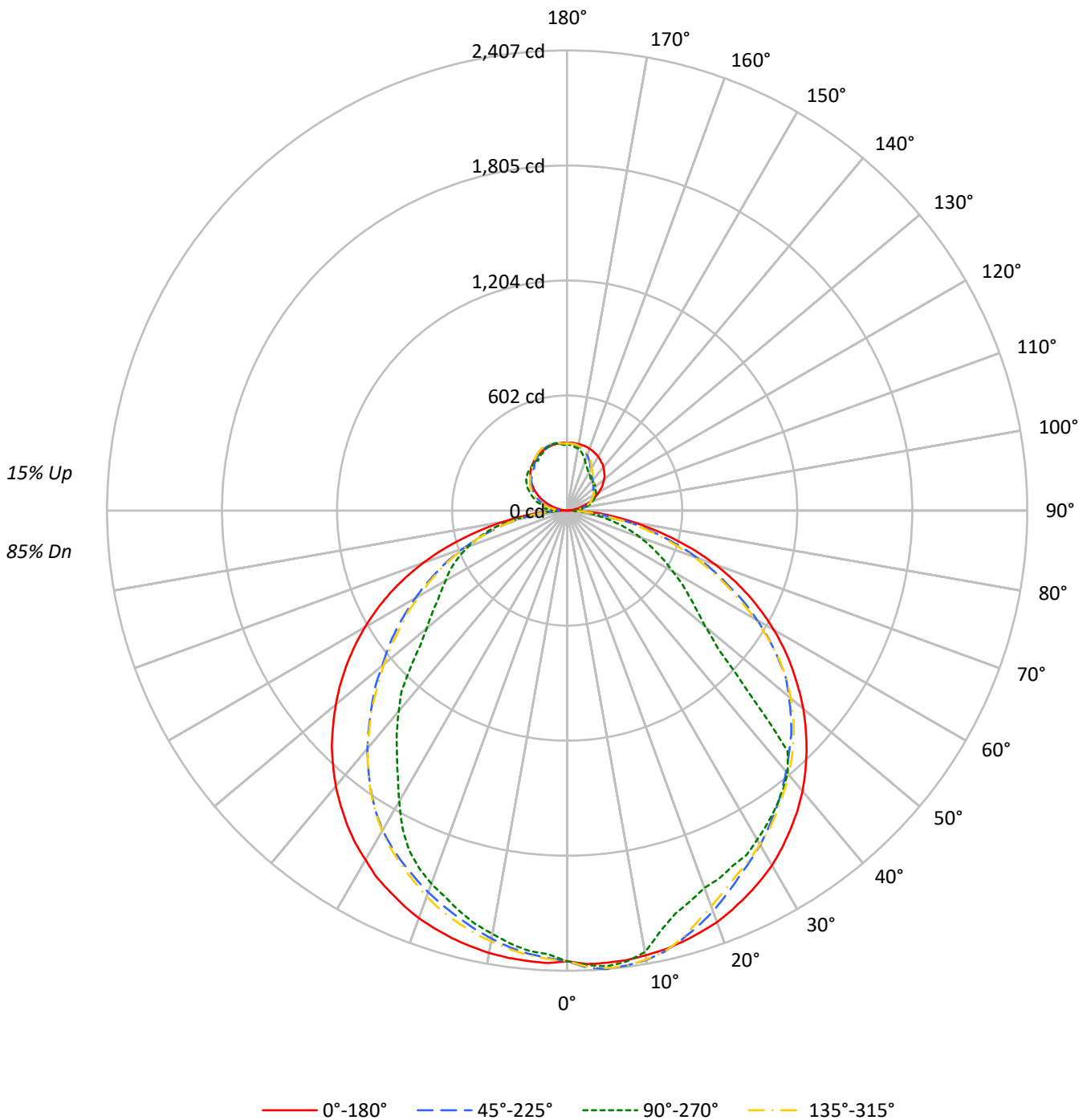
Lumens per Lamp: N/A
Luminaire Lumens: 7817.6 lumens
Efficiency: N/A
Efficacy: 122.9 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 63.6
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			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°	6676	6676	6676	6676
5°	6752	6802	6723	6573
10°	6794	6743	6757	6467
15°	6845	6401	6793	6364
20°	6907	6329	6838	6260
25°	6948	6404	6869	6120
30°	7007	6504	6900	5745
35°	7042	6571	6937	5366
40°	7082	6634	6961	5067
45°	7096	5337	6975	4630
50°	7106	4148	6961	4226
55°	7091	3838	6954	4100
60°	7076	3617	6919	4160
65°	7002	3467	6850	4364
70°	6813	3344	6646	4556
75°	6379	3149	6187	4806
80°	5804	2881	5558	4569
85°	5658	3117	5086	4102



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.0	2.9
10°-20°	636.2	8.1
20°-30°	963.2	12.3
30°-40°	1163.0	14.9
40°-50°	1187.4	15.2
50°-60°	1038.1	13.3
60°-70°	804.6	10.3
70°-80°	483.8	6.2
80°-90°	149.3	1.9
90°-100°	63.0	0.8
100°-110°	120.4	1.5
110°-120°	163.5	2.1
120°-130°	185.9	2.4
130°-140°	188.6	2.4
140°-150°	173.6	2.2
150°-160°	143.2	1.8
160°-170°	96.3	1.2
170°-180°	33.5	0.4
0°-30°	1823.5	23.3
0°-40°	2986.5	38.2
0°-60°	5212.0	66.7
0°-90°	6649.7	85.1
90°-120°	346.9	4.4
90°-150°	894.9	11.4
90°-180°	1168.0	14.9
0°-180°	7817.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2357	2357	2357	2357	2357	
5°	2375	2392	2364	2312	2375	226
15°	2334	2183	2316	2170	2334	660
25°	2223	2049	2198	1958	2223	1026
35°	2036	1900	2006	1552	2036	1275
45°	1772	1332	1741	1156	1772	1366
55°	1436	777	1408	830	1436	1283
65°	1045	517	1022	651	1045	1031
75°	583	288	565	439	583	619
85°	174	96	156	126	174	176
90°	2	53	2	61	2	11
95°	15	73	15	116	15	19
105°	81	124	78	156	81	86
115°	156	159	154	212	156	155
125°	225	182	220	260	225	199
135°	275	199	272	288	275	212
145°	310	212	308	305	310	195
155°	336	247	333	323	336	155
165°	351	308	348	351	351	99
175°	356	338	356	348	356	34
180°	351	351	351	351	351	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2356.9	2356.9	2356.9	2356.9	2356.9	2356.9	2356.9	2356.9	2356.9	2356.9	2356.9
2.5°	2374.6	2362.0	2392.2	2397.3	2379.6	2384.7	2387.2	2359.4	2369.5	2331.7	2341.8
5°	2374.6	2372.0	2407.4	2402.3	2392.2	2394.8	2402.3	2369.5	2364.5	2319.1	2326.6
7.5°	2372.0	2377.1	2399.8	2394.8	2379.6	2387.2	2399.8	2374.6	2359.4	2306.4	2303.9
10°	2362.0	2369.5	2387.2	2372.0	2344.3	2356.9	2384.7	2369.5	2349.3	2286.2	2273.6
12.5°	2351.9	2356.9	2362.0	2298.9	2253.4	2283.7	2362.0	2356.9	2334.2	2263.5	2240.8
15°	2334.2	2341.8	2321.6	2230.7	2182.8	2213.1	2316.5	2336.7	2316.5	2230.7	2203.0
17.5°	2314.0	2321.6	2278.7	2177.7	2142.4	2157.6	2258.5	2311.5	2293.8	2200.5	2165.1
20°	2291.3	2298.9	2230.7	2122.2	2099.5	2112.1	2203.0	2283.7	2268.6	2165.1	2124.7
22.5°	2258.5	2271.1	2175.2	2084.4	2081.8	2081.8	2150.0	2250.9	2235.8	2122.2	2079.3
25°	2223.2	2235.8	2119.7	2049.0	2049.0	2049.0	2102.0	2208.0	2197.9	2076.8	2033.9
27.5°	2185.3	2197.9	2069.2	2023.8	2031.4	2018.8	2061.7	2160.1	2160.1	2031.4	1986.0
30°	2142.4	2155.0	2018.8	1983.4	1988.5	1983.4	2016.2	2109.6	2109.6	1978.4	1930.4
32.5°	2091.9	2104.6	1963.2	1935.5	1945.6	1940.5	1973.3	2059.1	2061.7	1922.9	1864.8
35°	2036.4	2051.6	1905.2	1890.1	1900.2	1892.6	1915.3	2006.1	2006.1	1862.3	1789.1
37.5°	1978.4	1993.5	1844.6	1839.6	1849.7	1842.1	1859.8	1950.6	1945.6	1799.2	1708.4
40°	1915.3	1933.0	1781.6	1781.6	1794.2	1789.1	1804.3	1892.6	1882.5	1736.1	1625.1
42.5°	1844.6	1867.4	1718.5	1721.0	1705.9	1726.0	1741.2	1832.0	1811.8	1665.5	1534.3
45°	1771.5	1799.2	1657.9	1612.5	1332.4	1594.8	1675.6	1771.5	1741.2	1594.8	1445.9
47.5°	1693.2	1728.6	1587.3	1420.7	1072.5	1398.0	1604.9	1695.8	1660.4	1519.1	1360.1
50°	1612.5	1652.9	1514.1	1256.7	941.2	1231.4	1526.7	1620.1	1579.7	1440.9	1261.7
52.5°	1524.2	1569.6	1443.4	1112.8	852.9	1090.1	1445.9	1546.9	1496.4	1357.6	1181.0
55°	1435.8	1483.8	1347.5	989.2	777.2	969.0	1352.6	1453.5	1408.1	1271.8	1092.7
57.5°	1345.0	1392.9	1251.6	880.7	711.6	860.5	1246.6	1367.7	1317.2	1183.5	1004.3
60°	1249.1	1297.1	1148.2	782.3	638.4	767.1	1138.1	1271.8	1221.4	1092.7	918.5
62.5°	1148.2	1196.1	1049.8	691.4	577.9	678.8	1019.5	1178.5	1122.9	996.8	830.2
65°	1044.7	1080.0	933.7	605.6	517.3	595.5	913.5	1062.4	1022.0	895.8	746.9
67.5°	936.2	971.5	832.7	529.9	459.3	519.8	810.0	958.9	913.5	797.4	663.7
70°	822.6	852.9	726.8	456.7	403.8	449.2	701.5	842.8	802.5	693.9	575.3
72.5°	706.6	734.3	613.2	388.6	345.7	383.6	588.0	726.8	686.4	585.4	494.6
75°	582.9	610.7	507.2	320.5	287.7	315.4	484.5	603.1	565.3	482.0	411.3
77.5°	466.8	499.6	401.2	252.3	229.6	247.3	381.0	487.0	449.2	386.1	330.6
80°	355.8	383.6	297.8	191.8	176.6	189.3	277.6	370.9	340.7	297.8	257.4
82.5°	257.4	272.5	204.4	141.3	133.7	138.8	189.3	262.4	247.3	214.5	189.3
85°	174.1	171.6	126.2	98.4	95.9	98.4	113.6	159.0	156.5	143.8	121.1
87.5°	73.2	68.1	58.0	40.4	35.3	37.9	45.4	60.6	58.0	60.6	58.0
90°	2.5	25.2	40.4	50.5	53.0	50.5	40.4	25.2	2.5	27.8	45.4
92.5°	5.0	32.8	47.9	55.5	60.6	55.5	45.4	32.8	5.0	42.9	45.4
95°	15.1	45.4	55.5	68.1	73.2	68.1	55.5	42.9	15.1	37.9	68.1
97.5°	30.3	58.0	65.6	75.7	78.2	73.2	63.1	58.0	27.8	68.1	70.7
100°	45.4	73.2	85.8	85.8	88.3	85.8	83.3	70.7	42.9	75.7	85.8
102.5°	63.1	83.3	98.4	106.0	106.0	106.0	98.4	83.3	58.0	93.4	118.6
105°	80.8	90.8	108.5	118.6	123.6	118.6	108.5	93.4	78.2	108.5	126.2
107.5°	100.9	98.4	118.6	128.7	133.7	128.7	118.6	100.9	95.9	121.1	141.3
110°	121.1	108.5	128.7	138.8	141.3	138.8	128.7	108.5	116.1	136.3	156.5



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CATALOG NUMBER: 8WSL-LD2-70-UPL8-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	138.8	116.1	138.8	148.9	151.4	148.9	138.8	118.6	133.7	146.4	171.6
115°	156.5	123.6	143.8	156.5	159.0	156.5	143.8	126.2	153.9	159.0	184.2
117.5°	174.1	133.7	148.9	164.0	166.5	164.0	151.4	136.3	171.6	174.1	196.8
120°	191.8	146.4	156.5	169.1	174.1	171.6	156.5	148.9	186.7	186.7	206.9
122.5°	206.9	156.5	164.0	174.1	179.2	174.1	164.0	161.5	204.4	199.4	219.5
125°	224.6	166.5	169.1	179.2	181.7	179.2	171.6	169.1	219.5	209.4	227.1
127.5°	237.2	179.2	174.1	184.2	186.7	184.2	176.6	181.7	234.7	229.6	234.7
130°	252.3	191.8	179.2	189.3	191.8	191.8	179.2	196.8	247.3	244.8	244.8
132.5°	265.0	204.4	184.2	194.3	196.8	196.8	186.7	206.9	259.9	257.4	252.3
135°	275.1	222.1	194.3	194.3	199.4	199.4	196.8	224.6	272.5	270.0	265.0
137.5°	285.2	237.2	201.9	196.8	199.4	199.4	206.9	239.7	282.6	282.6	272.5
140°	295.2	252.3	206.9	201.9	201.9	206.9	214.5	254.9	292.7	292.7	275.1
142.5°	305.3	265.0	214.5	209.4	204.4	214.5	222.1	270.0	300.3	302.8	282.6
145°	310.4	277.6	224.6	217.0	212.0	224.6	234.7	282.6	307.9	312.9	297.8
147.5°	318.0	290.2	237.2	222.1	222.1	229.6	244.8	292.7	315.4	320.5	305.3
150°	325.5	300.3	247.3	229.6	224.6	237.2	254.9	302.8	323.0	328.0	315.4
152.5°	330.6	310.4	262.4	239.7	234.7	249.8	272.5	310.4	328.0	333.1	325.5
155°	335.6	318.0	280.1	249.8	247.3	259.9	287.7	318.0	333.1	338.1	333.1
157.5°	340.7	325.5	292.7	265.0	254.9	275.1	300.3	328.0	338.1	343.2	340.7
160°	343.2	330.6	307.9	280.1	275.1	292.7	312.9	330.6	340.7	348.2	345.7
162.5°	348.2	335.6	318.0	297.8	292.7	307.9	323.0	338.1	345.7	350.8	350.8
165°	350.8	340.7	328.0	312.9	307.9	323.0	330.6	343.2	348.2	350.8	353.3
167.5°	350.8	345.7	335.6	323.0	320.5	333.1	340.7	348.2	350.8	350.8	355.8
170°	353.3	348.2	340.7	333.1	330.6	340.7	343.2	350.8	353.3	350.8	358.3
172.5°	353.3	350.8	345.7	338.1	333.1	345.7	348.2	350.8	353.3	350.8	355.8
175°	355.8	350.8	350.8	345.7	338.1	350.8	350.8	350.8	355.8	350.8	353.3
177.5°	355.8	350.8	350.8	348.2	343.2	350.8	350.8	350.8	355.8	350.8	353.3
180°	350.8	350.8	350.8	350.8	350.8	350.8	350.8	350.8	350.8	350.8	350.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2356.9	2356.9	2356.9	2356.9	2356.9	2356.9
2.5°	2339.2	2321.6	2326.6	2346.8	2339.2	2374.6
5°	2321.6	2311.5	2311.5	2334.2	2331.7	2374.6
7.5°	2293.8	2283.7	2288.8	2314.0	2319.1	2372.0
10°	2261.0	2248.4	2253.4	2288.8	2301.4	2362.0
12.5°	2225.7	2215.6	2220.6	2261.0	2278.7	2351.9
15°	2185.3	2170.2	2185.3	2228.2	2250.9	2334.2
17.5°	2139.9	2119.7	2137.4	2192.9	2220.6	2314.0
20°	2094.5	2076.8	2086.9	2147.5	2187.8	2291.3
22.5°	2049.0	2023.8	2033.9	2097.0	2147.5	2258.5
25°	1996.1	1958.2	1978.4	2046.5	2104.6	2223.2
27.5°	1925.4	1867.4	1910.3	1996.1	2054.1	2185.3
30°	1832.0	1756.3	1819.4	1935.5	2001.1	2142.4
32.5°	1728.6	1647.8	1718.5	1867.4	1945.6	2091.9
35°	1625.1	1551.9	1615.0	1791.7	1887.5	2036.4
37.5°	1526.7	1463.6	1521.6	1710.9	1827.0	1978.4
40°	1433.3	1370.2	1430.8	1622.6	1761.4	1915.3
42.5°	1340.0	1281.9	1340.0	1529.2	1693.2	1844.6
45°	1246.6	1155.7	1241.5	1438.4	1620.1	1771.5
47.5°	1145.6	1039.7	1138.1	1340.0	1541.8	1693.2
50°	1049.8	958.9	1044.7	1249.1	1461.1	1612.5
52.5°	966.5	893.3	961.4	1155.7	1377.8	1524.2
55°	888.3	830.2	888.3	1064.9	1289.5	1435.8
57.5°	817.6	779.7	820.1	986.7	1198.6	1345.0
60°	757.0	734.3	759.6	890.8	1107.8	1249.1
62.5°	699.0	696.5	701.5	815.1	1011.9	1148.2
65°	638.4	651.1	638.4	734.3	916.0	1044.7
67.5°	577.9	603.1	582.9	653.6	812.6	936.2
70°	522.4	550.1	522.4	570.3	709.1	822.6
72.5°	459.3	494.6	459.3	492.1	600.6	706.6
75°	398.7	439.1	401.2	411.3	497.1	582.9
77.5°	333.1	370.9	340.7	333.1	401.2	466.8
80°	265.0	280.1	265.0	262.4	310.4	355.8
82.5°	184.2	196.8	184.2	191.8	227.1	257.4
85°	121.1	126.2	121.1	123.6	151.4	174.1
87.5°	50.5	50.5	50.5	63.1	68.1	73.2
90°	55.5	60.6	55.5	45.4	27.8	2.5
92.5°	58.0	63.1	58.0	50.5	32.8	5.0
95°	103.5	116.1	98.4	63.1	53.0	15.1
97.5°	83.3	90.8	85.8	73.2	65.6	30.3
100°	98.4	106.0	98.4	103.5	80.8	45.4
102.5°	116.1	121.1	118.6	121.1	98.4	63.1
105°	151.4	156.5	151.4	131.2	113.6	80.8
107.5°	161.5	174.1	164.0	146.4	128.7	100.9
110°	174.1	184.2	176.6	161.5	141.3	121.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	186.7	199.4	191.8	179.2	151.4	138.8
115°	201.9	212.0	206.9	191.8	166.5	156.5
117.5°	217.0	224.6	219.5	201.9	181.7	174.1
120°	229.6	239.7	234.7	214.5	194.3	191.8
122.5°	239.7	249.8	244.8	227.1	206.9	206.9
125°	249.8	259.9	254.9	237.2	217.0	224.6
127.5°	257.4	270.0	265.0	244.8	239.7	237.2
130°	267.5	275.1	272.5	252.3	252.3	252.3
132.5°	272.5	282.6	277.6	262.4	267.5	265.0
135°	275.1	287.7	282.6	275.1	280.1	275.1
137.5°	280.1	290.2	287.7	282.6	292.7	285.2
140°	287.7	292.7	295.2	287.7	302.8	295.2
142.5°	295.2	297.8	302.8	295.2	312.9	305.3
145°	300.3	305.3	310.4	310.4	320.5	310.4
147.5°	300.3	307.9	307.9	315.4	330.6	318.0
150°	307.9	302.8	318.0	325.5	335.6	325.5
152.5°	318.0	315.4	328.0	335.6	340.7	330.6
155°	320.5	323.0	330.6	343.2	345.7	335.6
157.5°	330.6	328.0	340.7	350.8	350.8	340.7
160°	338.1	338.1	350.8	355.8	353.3	343.2
162.5°	345.7	345.7	358.3	358.3	355.8	348.2
165°	350.8	350.8	363.4	360.9	355.8	350.8
167.5°	353.3	355.8	365.9	363.4	355.8	350.8
170°	355.8	355.8	365.9	360.9	355.8	353.3
172.5°	355.8	353.3	363.4	358.3	353.3	353.3
175°	353.3	348.2	358.3	353.3	353.3	355.8
177.5°	350.8	343.2	350.8	350.8	353.3	355.8
180°	350.8	350.8	350.8	350.8	350.8	350.8

(END OF REPORT)