

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: P197420

Luminaire Tested: **8WSL-LD2-75-UPL8-UNV-L850-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197420  
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-LD2-75-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

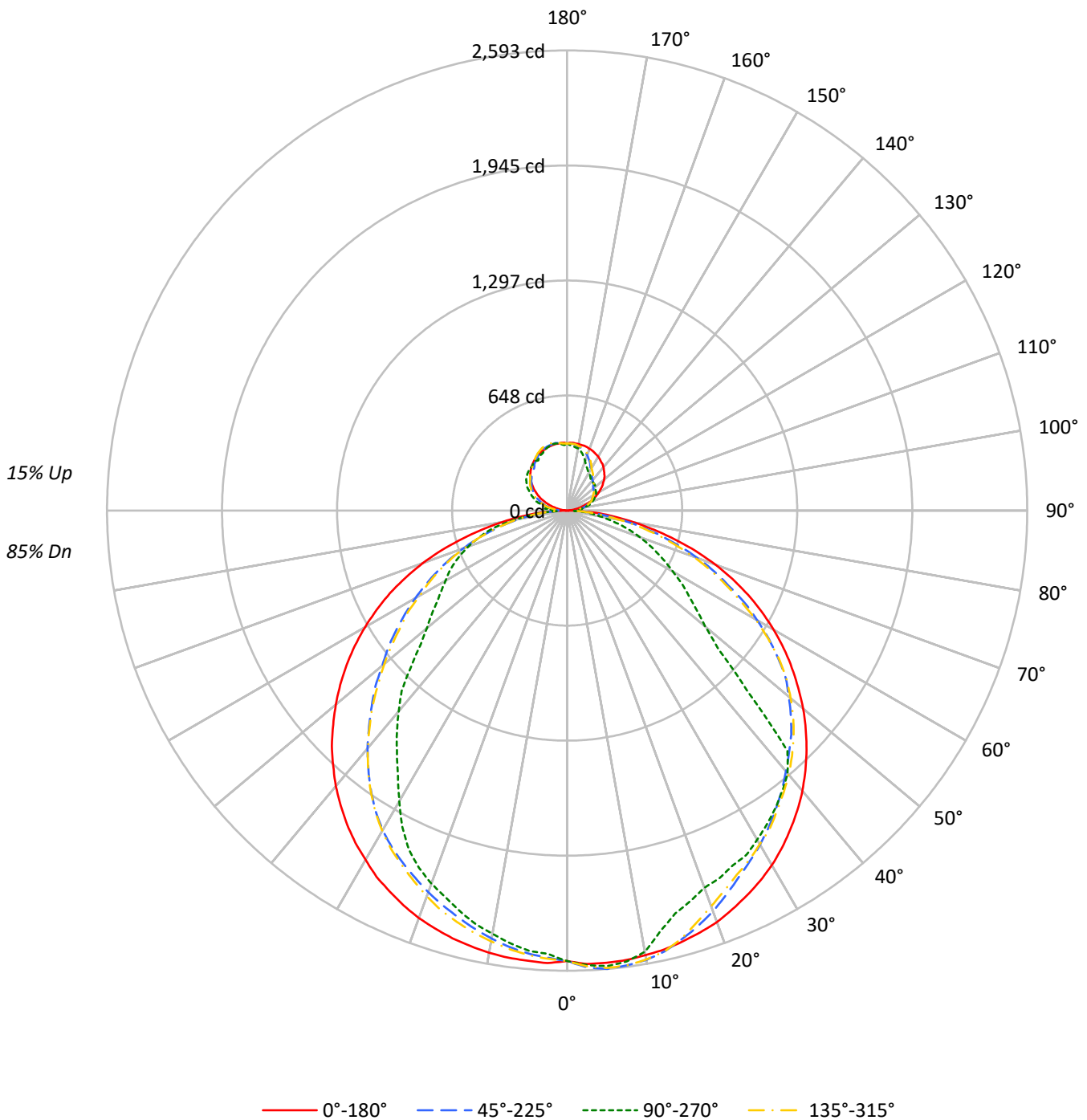
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8419.7 lumens  
Efficiency: N/A  
Efficacy: 125.3 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): 67.2  
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°	7190	7190	7190	7190
5°	7272	7326	7241	7079
10°	7317	7262	7278	6965
15°	7372	6894	7316	6854
20°	7439	6816	7365	6742
25°	7484	6897	7399	6592
30°	7547	7005	7432	6187
35°	7584	7077	7471	5780
40°	7628	7145	7497	5457
45°	7643	5748	7512	4986
50°	7653	4467	7497	4551
55°	7637	4134	7489	4416
60°	7621	3895	7452	4481
65°	7542	3734	7377	4700
70°	7338	3601	7158	4907
75°	6871	3391	6663	5176
80°	6251	3103	5985	4921
85°	6094	3357	5476	4417



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	241.3	2.9
10°-20°	685.2	8.1
20°-30°	1037.3	12.3
30°-40°	1252.6	14.9
40°-50°	1278.8	15.2
50°-60°	1118.1	13.3
60°-70°	866.6	10.3
70°-80°	521.0	6.2
80°-90°	160.8	1.9
90°-100°	67.8	0.8
100°-110°	129.7	1.5
110°-120°	176.1	2.1
120°-130°	200.2	2.4
130°-140°	203.1	2.4
140°-150°	186.9	2.2
150°-160°	154.2	1.8
160°-170°	103.7	1.2
170°-180°	36.0	0.4
0°-30°	1963.9	23.3
0°-40°	3216.5	38.2
0°-60°	5613.4	66.7
0°-90°	7161.8	85.1
90°-120°	373.6	4.4
90°-150°	963.9	11.4
90°-180°	1258.0	14.9
0°-180°	8419.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2538	2538	2538	2538	2538	
5°	2557	2576	2547	2490	2557	244
15°	2514	2351	2495	2337	2514	711
25°	2394	2207	2367	2109	2394	1105
35°	2193	2046	2161	1671	2193	1373
45°	1908	1435	1875	1245	1908	1471
55°	1546	837	1516	894	1546	1382
65°	1125	557	1101	701	1125	1110
75°	628	310	609	473	628	666
85°	188	103	168	136	188	189
90°	3	57	3	65	3	12
95°	16	79	16	125	16	21
105°	87	133	84	168	87	93
115°	168	171	166	228	168	167
125°	242	196	236	280	242	215
135°	296	215	294	310	296	229
145°	334	228	332	329	334	210
155°	362	266	359	348	362	167
165°	378	332	375	378	378	107
175°	383	364	383	375	383	36
180°	378	378	378	378	378	



TEST NUMBER: P197420

CATALOG NUMBER: 8WSL-LD2-75-UPL8-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2538.4	2538.4	2538.4	2538.4	2538.4	2538.4	2538.4	2538.4	2538.4	2538.4	2538.4
2.5°	2557.4	2543.8	2576.5	2581.9	2562.9	2568.3	2571.0	2541.1	2552.0	2511.2	2522.1
5°	2557.4	2554.7	2592.8	2587.3	2576.5	2579.2	2587.3	2552.0	2546.6	2497.6	2505.8
7.5°	2554.7	2560.2	2584.6	2579.2	2562.9	2571.0	2584.6	2557.4	2541.1	2484.1	2481.3
10°	2543.8	2552.0	2571.0	2554.7	2524.8	2538.4	2568.3	2552.0	2530.3	2462.3	2448.7
12.5°	2533.0	2538.4	2543.8	2475.9	2427.0	2459.6	2543.8	2538.4	2514.0	2437.9	2413.4
15°	2514.0	2522.1	2500.4	2402.5	2350.9	2383.5	2494.9	2516.7	2494.9	2402.5	2372.6
17.5°	2492.2	2500.4	2454.2	2345.5	2307.4	2323.7	2432.4	2489.5	2470.5	2369.9	2331.9
20°	2467.8	2475.9	2402.5	2285.7	2261.2	2274.8	2372.6	2459.6	2443.3	2331.9	2288.4
22.5°	2432.4	2446.0	2342.7	2244.9	2242.2	2242.2	2315.6	2424.3	2408.0	2285.7	2239.5
25°	2394.4	2408.0	2282.9	2206.8	2206.8	2206.8	2263.9	2378.1	2367.2	2236.7	2190.5
27.5°	2353.6	2367.2	2228.6	2179.7	2187.8	2174.2	2220.4	2326.4	2326.4	2187.8	2138.9
30°	2307.4	2321.0	2174.2	2136.2	2141.6	2136.2	2171.5	2272.1	2272.1	2130.7	2079.1
32.5°	2253.0	2266.6	2114.4	2084.5	2095.4	2090.0	2125.3	2217.7	2220.4	2071.0	2008.4
35°	2193.3	2209.6	2051.9	2035.6	2046.5	2038.3	2062.8	2160.6	2160.6	2005.7	1926.9
37.5°	2130.7	2147.1	1986.7	1981.3	1992.1	1984.0	2003.0	2100.9	2095.4	1937.8	1839.9
40°	2062.8	2081.8	1918.8	1918.8	1932.3	1926.9	1943.2	2038.3	2027.5	1869.8	1750.3
42.5°	1986.7	2011.2	1850.8	1853.5	1837.2	1859.0	1875.3	1973.1	1951.4	1793.7	1652.4
45°	1907.9	1937.8	1785.6	1736.7	1435.0	1717.6	1804.6	1907.9	1875.3	1717.6	1557.3
47.5°	1823.6	1861.7	1709.5	1530.1	1155.1	1505.7	1728.5	1826.4	1788.3	1636.1	1464.9
50°	1736.7	1780.2	1630.7	1353.5	1013.7	1326.3	1644.3	1744.8	1701.3	1551.9	1358.9
52.5°	1641.5	1690.5	1554.6	1198.5	918.6	1174.1	1557.3	1666.0	1611.6	1462.2	1271.9
55°	1546.4	1598.1	1451.3	1065.4	837.1	1043.6	1456.7	1565.4	1516.5	1369.8	1176.8
57.5°	1448.6	1500.2	1348.0	948.5	766.4	926.8	1342.6	1473.0	1418.7	1274.6	1081.7
60°	1345.3	1396.9	1236.6	842.5	687.6	826.2	1225.7	1369.8	1315.4	1176.8	989.3
62.5°	1236.6	1288.2	1130.6	744.7	622.4	731.1	1098.0	1269.2	1209.4	1073.5	894.2
65°	1125.2	1163.2	1005.6	652.3	557.1	641.4	983.8	1144.2	1100.7	964.8	804.5
67.5°	1008.3	1046.3	896.9	570.7	494.6	559.9	872.4	1032.8	983.8	858.8	714.8
70°	886.0	918.6	782.7	491.9	434.8	483.8	755.5	907.7	864.3	747.4	619.7
72.5°	761.0	790.9	660.4	418.5	372.3	413.1	633.2	782.7	739.2	630.5	532.7
75°	627.8	657.7	546.3	345.2	309.8	339.7	521.8	649.6	608.8	519.1	443.0
77.5°	502.8	538.1	432.1	271.8	247.3	266.3	410.4	524.5	483.8	415.8	356.0
80°	383.2	413.1	320.7	206.6	190.2	203.8	299.0	399.5	366.9	320.7	277.2
82.5°	277.2	293.5	220.1	152.2	144.0	149.5	203.8	282.6	266.3	231.0	203.8
85°	187.5	184.8	135.9	106.0	103.3	106.0	122.3	171.2	168.5	154.9	130.5
87.5°	78.8	73.4	62.5	43.5	38.0	40.8	48.9	65.2	62.5	65.2	62.5
90°	2.7	27.2	43.5	54.4	57.1	54.4	43.5	27.2	2.7	29.9	48.9
92.5°	5.4	35.3	51.6	59.8	65.2	59.8	48.9	35.3	5.4	46.2	48.9
95°	16.3	48.9	59.8	73.4	78.8	73.4	59.8	46.2	16.3	40.8	73.4
97.5°	32.6	62.5	70.7	81.5	84.3	78.8	67.9	62.5	29.9	73.4	76.1
100°	48.9	78.8	92.4	92.4	95.1	92.4	89.7	76.1	46.2	81.5	92.4
102.5°	67.9	89.7	106.0	114.1	114.1	114.1	106.0	89.7	62.5	100.6	127.7
105°	87.0	97.8	116.9	127.7	133.2	127.7	116.9	100.6	84.3	116.9	135.9
107.5°	108.7	106.0	127.7	138.6	144.0	138.6	127.7	108.7	103.3	130.5	152.2
110°	130.5	116.9	138.6	149.5	152.2	149.5	138.6	116.9	125.0	146.8	168.5



TEST NUMBER: P197420

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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°	149.5	125.0	149.5	160.3	163.1	160.3	149.5	127.7	144.0	157.6	184.8
115°	168.5	133.2	154.9	168.5	171.2	168.5	154.9	135.9	165.8	171.2	198.4
117.5°	187.5	144.0	160.3	176.7	179.4	176.7	163.1	146.8	184.8	187.5	212.0
120°	206.6	157.6	168.5	182.1	187.5	184.8	168.5	160.3	201.1	201.1	222.9
122.5°	222.9	168.5	176.7	187.5	193.0	187.5	176.7	173.9	220.1	214.7	236.4
125°	241.9	179.4	182.1	193.0	195.7	193.0	184.8	182.1	236.4	225.6	244.6
127.5°	255.5	193.0	187.5	198.4	201.1	198.4	190.2	195.7	252.8	247.3	252.8
130°	271.8	206.6	193.0	203.8	206.6	206.6	193.0	212.0	266.3	263.6	263.6
132.5°	285.4	220.1	198.4	209.3	212.0	212.0	201.1	222.9	279.9	277.2	271.8
135°	296.2	239.2	209.3	209.3	214.7	214.7	212.0	241.9	293.5	290.8	285.4
137.5°	307.1	255.5	217.4	212.0	214.7	214.7	222.9	258.2	304.4	304.4	293.5
140°	318.0	271.8	222.9	217.4	217.4	222.9	231.0	274.5	315.3	315.3	296.2
142.5°	328.9	285.4	231.0	225.6	220.1	231.0	239.2	290.8	323.4	326.1	304.4
145°	334.3	299.0	241.9	233.7	228.3	241.9	252.8	304.4	331.6	337.0	320.7
147.5°	342.4	312.5	255.5	239.2	239.2	247.3	263.6	315.3	339.7	345.2	328.9
150°	350.6	323.4	266.3	247.3	241.9	255.5	274.5	326.1	347.9	353.3	339.7
152.5°	356.0	334.3	282.6	258.2	252.8	269.1	293.5	334.3	353.3	358.7	350.6
155°	361.5	342.4	301.7	269.1	266.3	279.9	309.8	342.4	358.7	364.2	358.7
157.5°	366.9	350.6	315.3	285.4	274.5	296.2	323.4	353.3	364.2	369.6	366.9
160°	369.6	356.0	331.6	301.7	296.2	315.3	337.0	356.0	366.9	375.1	372.3
162.5°	375.1	361.5	342.4	320.7	315.3	331.6	347.9	364.2	372.3	377.8	377.8
165°	377.8	366.9	353.3	337.0	331.6	347.9	356.0	369.6	375.1	377.8	380.5
167.5°	377.8	372.3	361.5	347.9	345.2	358.7	366.9	375.1	377.8	377.8	383.2
170°	380.5	375.1	366.9	358.7	356.0	366.9	369.6	377.8	380.5	377.8	385.9
172.5°	380.5	377.8	372.3	364.2	358.7	372.3	375.1	377.8	380.5	377.8	383.2
175°	383.2	377.8	377.8	372.3	364.2	377.8	377.8	377.8	383.2	377.8	380.5
177.5°	383.2	377.8	377.8	375.1	369.6	377.8	377.8	377.8	383.2	377.8	380.5
180°	377.8	377.8	377.8	377.8	377.8	377.8	377.8	377.8	377.8	377.8	377.8



TEST NUMBER: P197420

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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2538.4	2538.4	2538.4	2538.4	2538.4	2538.4
2.5°	2519.4	2500.4	2505.8	2527.5	2519.4	2557.4
5°	2500.4	2489.5	2489.5	2514.0	2511.2	2557.4
7.5°	2470.5	2459.6	2465.0	2492.2	2497.6	2554.7
10°	2435.1	2421.5	2427.0	2465.0	2478.6	2543.8
12.5°	2397.1	2386.2	2391.7	2435.1	2454.2	2533.0
15°	2353.6	2337.3	2353.6	2399.8	2424.3	2514.0
17.5°	2304.7	2282.9	2302.0	2361.8	2391.7	2492.2
20°	2255.8	2236.7	2247.6	2312.8	2356.3	2467.8
22.5°	2206.8	2179.7	2190.5	2258.5	2312.8	2432.4
25°	2149.8	2109.0	2130.7	2204.1	2266.6	2394.4
27.5°	2073.7	2011.2	2057.4	2149.8	2212.3	2353.6
30°	1973.1	1891.6	1959.5	2084.5	2155.2	2307.4
32.5°	1861.7	1774.7	1850.8	2011.2	2095.4	2253.0
35°	1750.3	1671.4	1739.4	1929.6	2032.9	2193.3
37.5°	1644.3	1576.3	1638.8	1842.7	1967.7	2130.7
40°	1543.7	1475.8	1541.0	1747.5	1897.0	2062.8
42.5°	1443.1	1380.6	1443.1	1647.0	1823.6	1986.7
45°	1342.6	1244.7	1337.2	1549.1	1744.8	1907.9
47.5°	1233.9	1119.7	1225.7	1443.1	1660.6	1823.6
50°	1130.6	1032.8	1125.2	1345.3	1573.6	1736.7
52.5°	1040.9	962.1	1035.5	1244.7	1483.9	1641.5
55°	956.7	894.2	956.7	1146.9	1388.8	1546.4
57.5°	880.6	839.8	883.3	1062.7	1290.9	1448.6
60°	815.3	790.9	818.1	959.4	1193.1	1345.3
62.5°	752.8	750.1	755.5	877.8	1089.8	1236.6
65°	687.6	701.2	687.6	790.9	986.6	1125.2
67.5°	622.4	649.6	627.8	703.9	875.1	1008.3
70°	562.6	592.5	562.6	614.2	763.7	886.0
72.5°	494.6	532.7	494.6	530.0	646.8	761.0
75°	429.4	472.9	432.1	443.0	535.4	627.8
77.5°	358.7	399.5	366.9	358.7	432.1	502.8
80°	285.4	301.7	285.4	282.6	334.3	383.2
82.5°	198.4	212.0	198.4	206.6	244.6	277.2
85°	130.5	135.9	130.5	133.2	163.1	187.5
87.5°	54.4	54.4	54.4	67.9	73.4	78.8
90°	59.8	65.2	59.8	48.9	29.9	2.7
92.5°	62.5	67.9	62.5	54.4	35.3	5.4
95°	111.4	125.0	106.0	67.9	57.1	16.3
97.5°	89.7	97.8	92.4	78.8	70.7	32.6
100°	106.0	114.1	106.0	111.4	87.0	48.9
102.5°	125.0	130.5	127.7	130.5	106.0	67.9
105°	163.1	168.5	163.1	141.3	122.3	87.0
107.5°	173.9	187.5	176.7	157.6	138.6	108.7
110°	187.5	198.4	190.2	173.9	152.2	130.5





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	201.1	214.7	206.6	193.0	163.1	149.5
115°	217.4	228.3	222.9	206.6	179.4	168.5
117.5°	233.7	241.9	236.4	217.4	195.7	187.5
120°	247.3	258.2	252.8	231.0	209.3	206.6
122.5°	258.2	269.1	263.6	244.6	222.9	222.9
125°	269.1	279.9	274.5	255.5	233.7	241.9
127.5°	277.2	290.8	285.4	263.6	258.2	255.5
130°	288.1	296.2	293.5	271.8	271.8	271.8
132.5°	293.5	304.4	299.0	282.6	288.1	285.4
135°	296.2	309.8	304.4	296.2	301.7	296.2
137.5°	301.7	312.5	309.8	304.4	315.3	307.1
140°	309.8	315.3	318.0	309.8	326.1	318.0
142.5°	318.0	320.7	326.1	318.0	337.0	328.9
145°	323.4	328.9	334.3	334.3	345.2	334.3
147.5°	323.4	331.6	331.6	339.7	356.0	342.4
150°	331.6	326.1	342.4	350.6	361.5	350.6
152.5°	342.4	339.7	353.3	361.5	366.9	356.0
155°	345.2	347.9	356.0	369.6	372.3	361.5
157.5°	356.0	353.3	366.9	377.8	377.8	366.9
160°	364.2	364.2	377.8	383.2	380.5	369.6
162.5°	372.3	372.3	385.9	385.9	383.2	375.1
165°	377.8	377.8	391.4	388.6	383.2	377.8
167.5°	380.5	383.2	394.1	391.4	383.2	377.8
170°	383.2	383.2	394.1	388.6	383.2	380.5
172.5°	383.2	380.5	391.4	385.9	380.5	380.5
175°	380.5	375.1	385.9	380.5	380.5	383.2
177.5°	377.8	369.6	377.8	377.8	380.5	383.2
180°	377.8	377.8	377.8	377.8	377.8	377.8

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