

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: P197424

Luminaire Tested: **8WSL-LD2-80-UPL8-UNV-L850-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197424  
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-LD2-80-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**

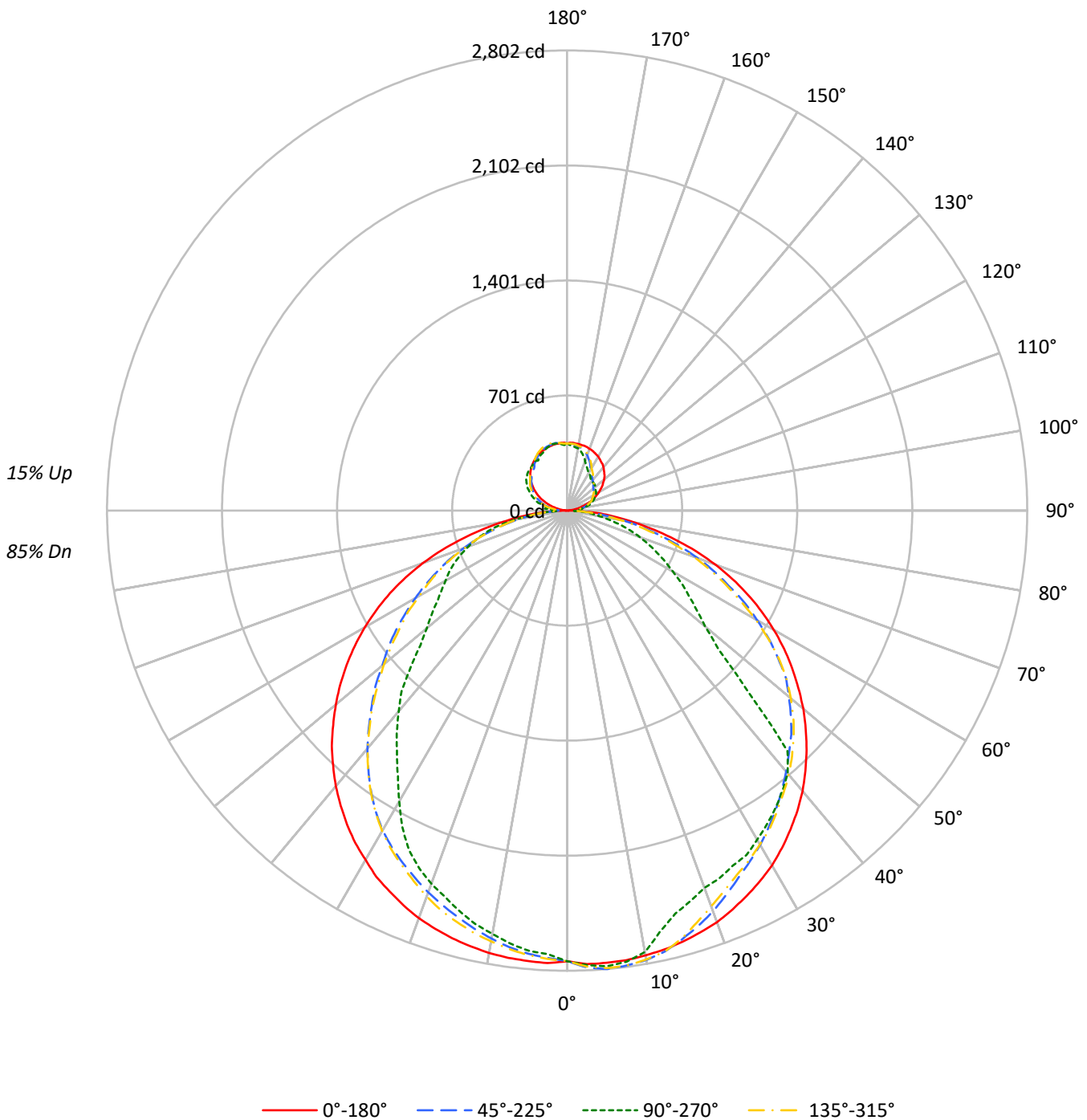
Lumens per Lamp: N/A  
Luminaire Lumens: 9100.6 lumens  
Efficiency: N/A  
Efficacy: 124.5 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36  
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 73.1  
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°	7772	7772	7772	7772
5°	7860	7918	7827	7651
10°	7909	7849	7866	7528
15°	7969	7452	7908	7408
20°	8040	7367	7961	7288
25°	8089	7455	7997	7125
30°	8157	7571	8032	6688
35°	8197	7649	8076	6247
40°	8244	7723	8103	5898
45°	8261	6214	8120	5390
50°	8272	4828	8104	4919
55°	8255	4468	8095	4773
60°	8238	4210	8055	4843
65°	8152	4036	7974	5080
70°	7932	3893	7737	5304
75°	7427	3665	7201	5594
80°	6757	3354	6469	5319
85°	6588	3627	5918	4774



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	260.8	2.9
10°-20°	740.7	8.1
20°-30°	1121.2	12.3
30°-40°	1353.9	14.9
40°-50°	1382.3	15.2
50°-60°	1208.5	13.3
60°-70°	936.7	10.3
70°-80°	563.2	6.2
80°-90°	173.8	1.9
90°-100°	73.3	0.8
100°-110°	140.1	1.5
110°-120°	190.4	2.1
120°-130°	216.4	2.4
130°-140°	219.5	2.4
140°-150°	202.0	2.2
150°-160°	166.7	1.8
160°-170°	112.1	1.2
170°-180°	39.0	0.4
0°-30°	2122.7	23.3
0°-40°	3476.6	38.2
0°-60°	6067.4	66.7
0°-90°	7741.0	85.1
90°-120°	403.8	4.4
90°-150°	1041.8	11.4
90°-180°	1360.0	14.9
0°-180°	9100.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2744	2744	2744	2744	2744	
5°	2764	2785	2752	2691	2764	263
15°	2717	2541	2697	2526	2717	768
25°	2588	2385	2559	2280	2588	1194
35°	2371	2212	2335	1807	2371	1484
45°	2062	1551	2027	1345	2062	1590
55°	1672	905	1639	966	1672	1494
65°	1216	602	1190	758	1216	1200
75°	679	335	658	511	679	720
85°	203	112	182	147	203	205
90°	3	62	3	70	3	13
95°	18	85	18	135	18	22
105°	94	144	91	182	94	101
115°	182	185	179	247	182	180
125°	261	212	256	303	261	232
135°	320	232	317	335	320	247
145°	361	247	358	355	361	227
155°	391	288	388	376	391	180
165°	408	358	405	408	408	115
175°	414	394	414	405	414	39
180°	408	408	408	408	408	



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CATALOG NUMBER: 8WSL-LD2-80-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°	2743.7	2743.7	2743.7	2743.7	2743.7	2743.7	2743.7	2743.7	2743.7	2743.7	2743.7
2.5°	2764.3	2749.6	2784.8	2790.7	2770.2	2776.0	2779.0	2746.7	2758.4	2714.3	2726.1
5°	2764.3	2761.3	2802.5	2796.6	2784.8	2787.8	2796.6	2758.4	2752.5	2699.7	2708.5
7.5°	2761.3	2767.2	2793.7	2787.8	2770.2	2779.0	2793.7	2764.3	2746.7	2685.0	2682.0
10°	2749.6	2758.4	2779.0	2761.3	2729.0	2743.7	2776.0	2758.4	2734.9	2661.5	2646.8
12.5°	2737.8	2743.7	2749.6	2676.2	2623.3	2658.5	2749.6	2743.7	2717.3	2635.0	2608.6
15°	2717.3	2726.1	2702.6	2596.8	2541.0	2576.3	2696.7	2720.2	2696.7	2596.8	2564.5
17.5°	2693.8	2702.6	2652.7	2535.1	2494.0	2511.6	2629.2	2690.8	2670.3	2561.6	2520.5
20°	2667.3	2676.2	2596.8	2470.5	2444.1	2458.8	2564.5	2658.5	2640.9	2520.5	2473.5
22.5°	2629.2	2643.8	2532.2	2426.5	2423.5	2423.5	2502.8	2620.3	2602.7	2470.5	2420.6
25°	2588.0	2602.7	2467.6	2385.3	2385.3	2385.3	2447.0	2570.4	2558.6	2417.6	2367.7
27.5°	2544.0	2558.6	2408.8	2356.0	2364.8	2350.1	2400.0	2514.6	2514.6	2364.8	2311.9
30°	2494.0	2508.7	2350.1	2309.0	2314.8	2309.0	2347.1	2455.8	2455.8	2303.1	2247.3
32.5°	2435.3	2450.0	2285.5	2253.1	2264.9	2259.0	2297.2	2397.1	2400.0	2238.4	2170.9
35°	2370.6	2388.3	2217.9	2200.3	2212.0	2203.2	2229.6	2335.4	2335.4	2167.9	2082.8
37.5°	2303.1	2320.7	2147.4	2141.5	2153.3	2144.4	2165.0	2270.8	2264.9	2094.5	1988.8
40°	2229.6	2250.2	2073.9	2073.9	2088.6	2082.8	2100.4	2203.2	2191.4	2021.1	1891.8
42.5°	2147.4	2173.8	2000.5	2003.4	1985.8	2009.3	2026.9	2132.7	2109.2	1938.8	1786.1
45°	2062.2	2094.5	1930.0	1877.1	1551.1	1856.6	1950.6	2062.2	2026.9	1856.6	1683.2
47.5°	1971.1	2012.3	1847.7	1653.9	1248.5	1627.4	1868.3	1974.1	1932.9	1768.4	1583.4
50°	1877.1	1924.1	1762.6	1462.9	1095.7	1433.5	1777.2	1885.9	1838.9	1677.4	1468.8
52.5°	1774.3	1827.2	1680.3	1295.5	992.9	1269.0	1683.2	1800.7	1742.0	1580.4	1374.8
55°	1671.5	1727.3	1568.7	1151.5	904.8	1128.0	1574.6	1692.1	1639.2	1480.5	1272.0
57.5°	1565.7	1621.6	1457.0	1025.2	828.4	1001.7	1451.2	1592.2	1533.4	1377.7	1169.2
60°	1454.1	1509.9	1336.6	910.7	743.2	893.0	1324.9	1480.5	1421.8	1272.0	1069.3
62.5°	1336.6	1392.4	1222.0	804.9	672.7	790.2	1186.8	1371.9	1307.2	1160.4	966.5
65°	1216.2	1257.3	1086.9	705.0	602.2	693.3	1063.4	1236.7	1189.7	1042.8	869.5
67.5°	1089.8	1131.0	969.4	616.9	534.6	605.1	943.0	1116.3	1063.4	928.3	772.6
70°	957.7	992.9	846.0	531.7	470.0	522.9	816.7	981.2	934.2	807.8	669.8
72.5°	822.5	854.8	713.8	452.4	402.5	446.5	684.5	846.0	799.0	681.5	575.8
75°	678.6	710.9	590.5	373.1	334.9	367.2	564.0	702.1	658.0	561.1	478.8
77.5°	543.5	581.6	467.1	293.8	267.3	287.9	443.6	567.0	522.9	449.5	384.8
80°	414.2	446.5	346.6	223.3	205.6	220.3	323.1	431.8	396.6	346.6	299.6
82.5°	299.6	317.3	237.9	164.5	155.7	161.6	220.3	305.5	287.9	249.7	220.3
85°	202.7	199.8	146.9	114.6	111.6	114.6	132.2	185.1	182.1	167.4	141.0
87.5°	85.2	79.3	67.6	47.0	41.1	44.1	52.9	70.5	67.6	70.5	67.6
90°	2.9	29.4	47.0	58.8	61.7	58.8	47.0	29.4	2.9	32.3	52.9
92.5°	5.9	38.2	55.8	64.6	70.5	64.6	52.9	38.2	5.9	49.9	52.9
95°	17.6	52.9	64.6	79.3	85.2	79.3	64.6	49.9	17.6	44.1	79.3
97.5°	35.3	67.6	76.4	88.1	91.1	85.2	73.4	67.6	32.3	79.3	82.3
100°	52.9	85.2	99.9	99.9	102.8	99.9	96.9	82.3	49.9	88.1	99.9
102.5°	73.4	96.9	114.6	123.4	123.4	123.4	114.6	96.9	67.6	108.7	138.1
105°	94.0	105.8	126.3	138.1	143.9	138.1	126.3	108.7	91.1	126.3	146.9
107.5°	117.5	114.6	138.1	149.8	155.7	149.8	138.1	117.5	111.6	141.0	164.5
110°	141.0	126.3	149.8	161.6	164.5	161.6	149.8	126.3	135.1	158.6	182.1



TEST NUMBER: P197424

CATALOG NUMBER: 8WSL-LD2-80-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°	161.6	135.1	161.6	173.3	176.3	173.3	161.6	138.1	155.7	170.4	199.8
115°	182.1	143.9	167.4	182.1	185.1	182.1	167.4	146.9	179.2	185.1	214.4
117.5°	202.7	155.7	173.3	190.9	193.9	190.9	176.3	158.6	199.8	202.7	229.1
120°	223.3	170.4	182.1	196.8	202.7	199.8	182.1	173.3	217.4	217.4	240.9
122.5°	240.9	182.1	190.9	202.7	208.6	202.7	190.9	188.0	237.9	232.1	255.6
125°	261.4	193.9	196.8	208.6	211.5	208.6	199.8	196.8	255.6	243.8	264.4
127.5°	276.1	208.6	202.7	214.4	217.4	214.4	205.6	211.5	273.2	267.3	273.2
130°	293.8	223.3	208.6	220.3	223.3	223.3	208.6	229.1	287.9	284.9	284.9
132.5°	308.4	237.9	214.4	226.2	229.1	229.1	217.4	240.9	302.6	299.6	293.8
135°	320.2	258.5	226.2	226.2	232.1	232.1	229.1	261.4	317.3	314.3	308.4
137.5°	331.9	276.1	235.0	229.1	232.1	232.1	240.9	279.1	329.0	329.0	317.3
140°	343.7	293.8	240.9	235.0	235.0	240.9	249.7	296.7	340.8	340.8	320.2
142.5°	355.4	308.4	249.7	243.8	237.9	249.7	258.5	314.3	349.6	352.5	329.0
145°	361.3	323.1	261.4	252.6	246.8	261.4	273.2	329.0	358.4	364.3	346.6
147.5°	370.1	337.8	276.1	258.5	258.5	267.3	284.9	340.8	367.2	373.1	355.4
150°	379.0	349.6	287.9	267.3	261.4	276.1	296.7	352.5	376.0	381.9	367.2
152.5°	384.8	361.3	305.5	279.1	273.2	290.8	317.3	361.3	381.9	387.8	379.0
155°	390.7	370.1	326.1	290.8	287.9	302.6	334.9	370.1	387.8	393.6	387.8
157.5°	396.6	379.0	340.8	308.4	296.7	320.2	349.6	381.9	393.6	399.5	396.6
160°	399.5	384.8	358.4	326.1	320.2	340.8	364.3	384.8	396.6	405.4	402.5
162.5°	405.4	390.7	370.1	346.6	340.8	358.4	376.0	393.6	402.5	408.3	408.3
165°	408.3	396.6	381.9	364.3	358.4	376.0	384.8	399.5	405.4	408.3	411.3
167.5°	408.3	402.5	390.7	376.0	373.1	387.8	396.6	405.4	408.3	408.3	414.2
170°	411.3	405.4	396.6	387.8	384.8	396.6	399.5	408.3	411.3	408.3	417.1
172.5°	411.3	408.3	402.5	393.6	387.8	402.5	405.4	408.3	411.3	408.3	414.2
175°	414.2	408.3	408.3	402.5	393.6	408.3	408.3	408.3	414.2	408.3	411.3
177.5°	414.2	408.3	408.3	405.4	399.5	408.3	408.3	408.3	414.2	408.3	411.3
180°	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2743.7	2743.7	2743.7	2743.7	2743.7	2743.7
2.5°	2723.2	2702.6	2708.5	2732.0	2723.2	2764.3
5°	2702.6	2690.8	2690.8	2717.3	2714.3	2764.3
7.5°	2670.3	2658.5	2664.4	2693.8	2699.7	2761.3
10°	2632.1	2617.4	2623.3	2664.4	2679.1	2749.6
12.5°	2591.0	2579.2	2585.1	2632.1	2652.7	2737.8
15°	2544.0	2526.3	2544.0	2593.9	2620.3	2717.3
17.5°	2491.1	2467.6	2488.1	2552.8	2585.1	2693.8
20°	2438.2	2417.6	2429.4	2499.9	2546.9	2667.3
22.5°	2385.3	2356.0	2367.7	2441.1	2499.9	2629.2
25°	2323.6	2279.6	2303.1	2382.4	2450.0	2588.0
27.5°	2241.4	2173.8	2223.8	2323.6	2391.2	2544.0
30°	2132.7	2044.6	2118.0	2253.1	2329.5	2494.0
32.5°	2012.3	1918.3	2000.5	2173.8	2264.9	2435.3
35°	1891.8	1806.6	1880.1	2085.7	2197.3	2370.6
37.5°	1777.2	1703.8	1771.4	1991.7	2126.8	2303.1
40°	1668.6	1595.1	1665.6	1888.9	2050.4	2229.6
42.5°	1559.9	1492.3	1559.9	1780.2	1971.1	2147.4
45°	1451.2	1345.4	1445.3	1674.4	1885.9	2062.2
47.5°	1333.7	1210.3	1324.9	1559.9	1794.9	1971.1
50°	1222.0	1116.3	1216.2	1454.1	1700.9	1877.1
52.5°	1125.1	1039.9	1119.2	1345.4	1603.9	1774.3
55°	1034.0	966.5	1034.0	1239.7	1501.1	1671.5
57.5°	951.8	907.7	954.7	1148.6	1395.4	1565.7
60°	881.3	854.8	884.2	1037.0	1289.6	1454.1
62.5°	813.7	810.8	816.7	948.8	1178.0	1336.6
65°	743.2	757.9	743.2	854.8	1066.3	1216.2
67.5°	672.7	702.1	678.6	760.8	945.9	1089.8
70°	608.1	640.4	608.1	663.9	825.5	957.7
72.5°	534.6	575.8	534.6	572.8	699.1	822.5
75°	464.1	511.1	467.1	478.8	578.7	678.6
77.5°	387.8	431.8	396.6	387.8	467.1	543.5
80°	308.4	326.1	308.4	305.5	361.3	414.2
82.5°	214.4	229.1	214.4	223.3	264.4	299.6
85°	141.0	146.9	141.0	143.9	176.3	202.7
87.5°	58.8	58.8	58.8	73.4	79.3	85.2
90°	64.6	70.5	64.6	52.9	32.3	2.9
92.5°	67.6	73.4	67.6	58.8	38.2	5.9
95°	120.4	135.1	114.6	73.4	61.7	17.6
97.5°	96.9	105.8	99.9	85.2	76.4	35.3
100°	114.6	123.4	114.6	120.4	94.0	52.9
102.5°	135.1	141.0	138.1	141.0	114.6	73.4
105°	176.3	182.1	176.3	152.8	132.2	94.0
107.5°	188.0	202.7	190.9	170.4	149.8	117.5
110°	202.7	214.4	205.6	188.0	164.5	141.0





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	217.4	232.1	223.3	208.6	176.3	161.6
115°	235.0	246.8	240.9	223.3	193.9	182.1
117.5°	252.6	261.4	255.6	235.0	211.5	202.7
120°	267.3	279.1	273.2	249.7	226.2	223.3
122.5°	279.1	290.8	284.9	264.4	240.9	240.9
125°	290.8	302.6	296.7	276.1	252.6	261.4
127.5°	299.6	314.3	308.4	284.9	279.1	276.1
130°	311.4	320.2	317.3	293.8	293.8	293.8
132.5°	317.3	329.0	323.1	305.5	311.4	308.4
135°	320.2	334.9	329.0	320.2	326.1	320.2
137.5°	326.1	337.8	334.9	329.0	340.8	331.9
140°	334.9	340.8	343.7	334.9	352.5	343.7
142.5°	343.7	346.6	352.5	343.7	364.3	355.4
145°	349.6	355.4	361.3	361.3	373.1	361.3
147.5°	349.6	358.4	358.4	367.2	384.8	370.1
150°	358.4	352.5	370.1	379.0	390.7	379.0
152.5°	370.1	367.2	381.9	390.7	396.6	384.8
155°	373.1	376.0	384.8	399.5	402.5	390.7
157.5°	384.8	381.9	396.6	408.3	408.3	396.6
160°	393.6	393.6	408.3	414.2	411.3	399.5
162.5°	402.5	402.5	417.1	417.1	414.2	405.4
165°	408.3	408.3	423.0	420.1	414.2	408.3
167.5°	411.3	414.2	426.0	423.0	414.2	408.3
170°	414.2	414.2	426.0	420.1	414.2	411.3
172.5°	414.2	411.3	423.0	417.1	411.3	411.3
175°	411.3	405.4	417.1	411.3	411.3	414.2
177.5°	408.3	399.5	408.3	408.3	411.3	414.2
180°	408.3	408.3	408.3	408.3	408.3	408.3

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