

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: P197483

Luminaire Tested: **8WSL-LD2-100-UPL15-UNV-L840-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197483
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-L840-CD2-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L840
Light Source: (476) 4000K CCT, 80 CRI LEDS
EL236N0119D840
Ballast/Driver: OSRAM
OT50W

Summary

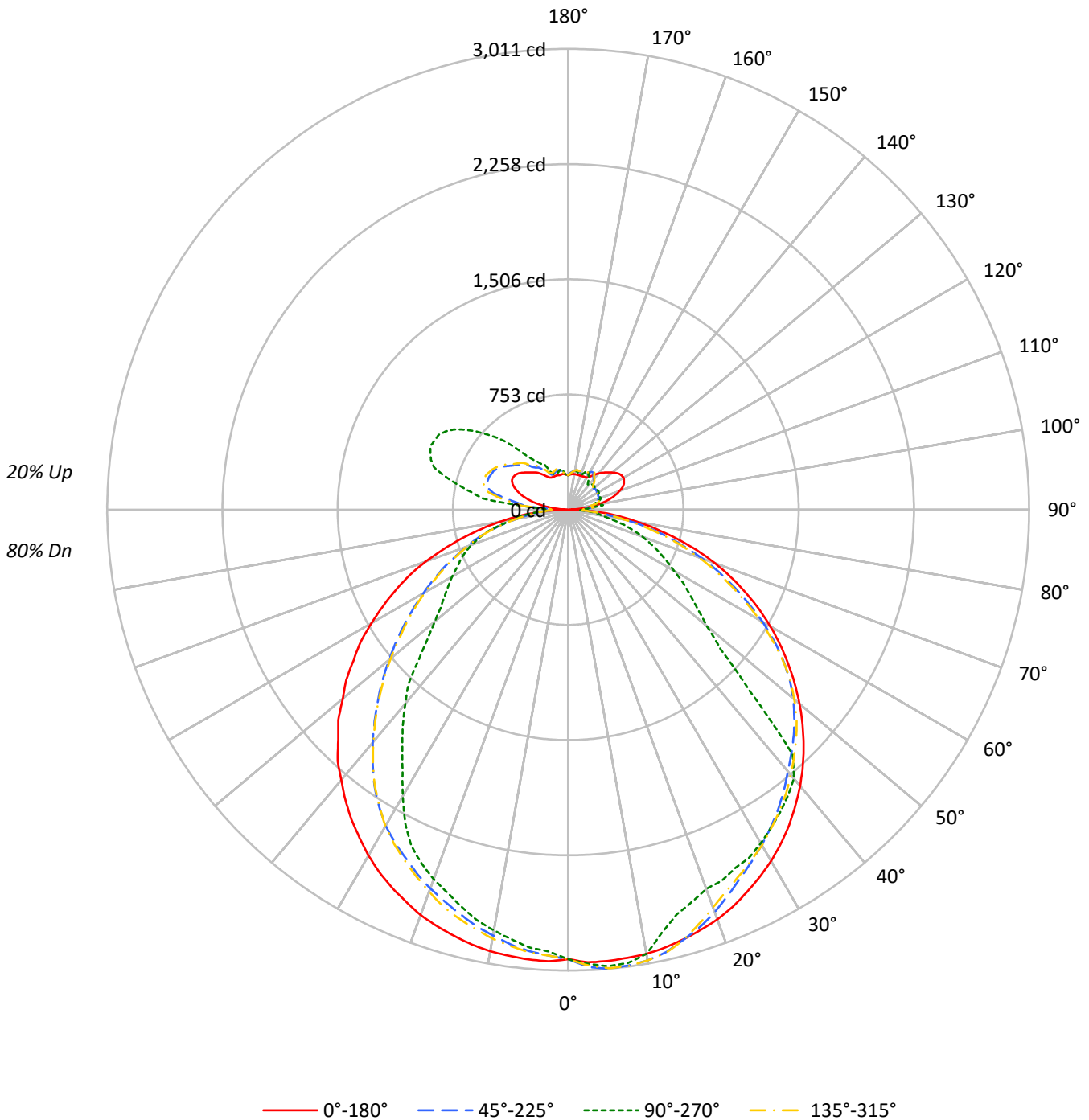
Lumens per Lamp: N/A
Luminaire Lumens: 10392.7 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

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				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	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°	8318	8318	8318	8318
5°	8417	8513	8388	8168
10°	8476	8476	8427	8029
15°	8523	8028	8454	7880
20°	8588	7947	8496	7744
25°	8620	8072	8514	7576
30°	8668	8227	8536	7069
35°	8698	8348	8534	6529
40°	8714	8477	8527	6121
45°	8711	6740	8509	5511
50°	8691	5200	8469	5007
55°	8658	4795	8442	4862
60°	8633	4527	8404	4966
65°	8564	4384	8339	5197
70°	8433	4272	8209	5556
75°	8044	4059	7786	5903
80°	7535	3685	7314	5885
85°	7560	4820	7014	7014



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.5	2.7
10°-20°	793.1	7.6
20°-30°	1198.5	11.5
30°-40°	1442.4	13.9
40°-50°	1466.9	14.1
50°-60°	1276.8	12.3
60°-70°	996.0	9.6
70°-80°	615.7	5.9
80°-90°	216.6	2.1
90°-100°	204.0	2.0
100°-110°	394.9	3.8
110°-120°	432.1	4.2
120°-130°	378.8	3.6
130°-140°	283.8	2.7
140°-150°	194.3	1.9
150°-160°	123.7	1.2
160°-170°	72.3	0.7
170°-180°	23.3	0.2
0°-30°	2271.0	21.9
0°-40°	3713.4	35.7
0°-60°	6457.2	62.1
0°-90°	8285.5	79.7
90°-120°	1030.9	9.9
90°-150°	1887.9	18.2
90°-180°	2107.0	20.3
0°-180°	10392.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2937	2937	2937	2937	2937	
5°	2960	2994	2950	2872	2960	282
15°	2906	2738	2883	2687	2906	822
25°	2758	2583	2724	2424	2758	1273
35°	2515	2414	2468	1888	2515	1574
45°	2175	1682	2124	1376	2175	1677
55°	1753	971	1709	984	1753	1568
65°	1278	654	1244	775	1278	1263
75°	735	371	711	539	735	779
85°	233	148	216	216	233	232
90°	3	94	3	148	3	18
95°	91	155	71	310	91	94
105°	290	192	280	826	290	302
115°	401	219	401	991	401	393
125°	408	229	408	914	408	363
135°	344	229	344	668	344	267
145°	270	229	276	398	270	172
155°	239	276	236	273	239	111
165°	236	250	233	253	236	67
175°	233	243	233	236	233	22
180°	226	226	226	226	226	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2936.6	2936.6	2936.6	2936.6	2936.6	2936.6	2936.6	2936.6	2936.6	2936.6	2936.6
2.5°	2960.2	2946.7	2990.5	2993.9	2970.3	2980.4	2980.4	2943.3	2953.5	2909.6	2916.4
5°	2960.2	2963.6	3010.8	3007.4	2993.9	2997.3	3007.4	2960.2	2950.1	2889.4	2896.1
7.5°	2953.5	2970.3	3004.0	3000.7	2987.2	2990.5	3007.4	2966.9	2940.0	2869.2	2865.8
10°	2946.7	2963.6	2990.5	2973.7	2946.7	2956.8	2990.5	2963.6	2929.9	2845.6	2825.3
12.5°	2929.9	2946.7	2960.2	2875.9	2828.7	2869.2	2963.6	2946.7	2909.6	2811.8	2784.9
15°	2906.3	2926.5	2909.6	2791.6	2737.7	2774.8	2909.6	2923.1	2882.7	2768.0	2734.3
17.5°	2879.3	2902.9	2859.1	2727.6	2687.1	2704.0	2838.8	2892.8	2852.3	2724.2	2683.7
20°	2848.9	2875.9	2798.4	2660.1	2636.5	2650.0	2764.6	2859.1	2818.6	2677.0	2633.2
22.5°	2808.5	2838.8	2727.6	2612.9	2623.0	2612.9	2697.2	2815.2	2771.4	2626.4	2575.8
25°	2757.9	2791.6	2656.8	2572.5	2582.6	2579.2	2639.9	2757.9	2724.2	2565.7	2511.8
27.5°	2707.3	2741.0	2592.7	2545.5	2562.4	2542.1	2586.0	2697.2	2670.2	2501.7	2451.1
30°	2650.0	2687.1	2528.6	2498.3	2515.2	2501.7	2532.0	2636.5	2609.6	2434.2	2383.7
32.5°	2586.0	2623.0	2461.2	2441.0	2464.6	2447.7	2468.0	2569.1	2538.8	2360.1	2299.4
35°	2515.2	2552.2	2390.4	2390.4	2414.0	2393.8	2403.9	2501.7	2468.0	2285.9	2205.0
37.5°	2437.6	2478.1	2312.9	2329.7	2356.7	2336.5	2336.5	2430.9	2390.4	2205.0	2097.1
40°	2356.7	2400.5	2231.9	2269.0	2292.6	2269.0	2262.3	2356.7	2306.1	2124.1	1985.8
42.5°	2269.0	2316.2	2157.8	2201.6	2171.3	2201.6	2184.7	2279.1	2228.6	2036.4	1871.2
45°	2174.6	2235.3	2083.6	2056.6	1682.4	2036.4	2107.2	2198.2	2124.1	1952.1	1756.6
47.5°	2076.9	2140.9	2002.7	1807.1	1352.0	1786.9	2022.9	2110.6	2036.4	1861.1	1641.9
50°	1972.3	2046.5	1918.4	1591.4	1180.0	1571.1	1928.5	2019.5	1921.8	1763.3	1527.3
52.5°	1864.5	1945.4	1824.0	1405.9	1065.4	1385.7	1827.4	1921.8	1827.4	1658.8	1416.0
55°	1753.2	1837.5	1712.7	1234.0	971.0	1230.6	1709.4	1817.3	1709.4	1554.3	1304.8
57.5°	1641.9	1736.3	1594.7	1109.2	890.1	1092.4	1577.9	1709.4	1608.2	1446.4	1196.9
60°	1523.9	1611.6	1466.6	974.4	799.1	971.0	1446.4	1598.1	1483.5	1335.1	1092.4
62.5°	1402.6	1500.3	1328.4	856.4	724.9	853.0	1304.8	1473.4	1362.1	1220.5	991.2
65°	1277.8	1372.2	1196.9	762.0	654.1	755.2	1173.3	1345.2	1244.1	1105.9	896.8
67.5°	1149.7	1237.3	1065.4	670.9	583.3	664.2	1038.4	1210.4	1122.7	987.9	795.7
70°	1018.2	1099.1	930.5	583.3	515.8	579.9	906.9	1072.1	991.2	866.5	704.6
72.5°	880.0	954.1	788.9	499.0	445.0	495.6	768.7	930.5	846.3	738.4	623.7
75°	735.0	805.8	657.4	414.7	370.9	411.3	637.2	778.8	711.4	620.4	529.3
77.5°	596.8	667.6	522.6	320.3	283.2	313.6	499.0	637.2	579.9	502.4	431.6
80°	461.9	519.2	384.4	239.4	225.9	239.4	374.2	488.9	448.4	394.5	337.2
82.5°	340.5	374.2	259.6	195.5	195.5	195.5	252.9	347.3	330.4	293.3	256.2
85°	232.6	232.6	175.3	148.3	148.3	148.3	171.9	205.7	215.8	195.5	195.5
87.5°	97.8	101.1	91.0	80.9	77.5	80.9	87.7	84.3	84.3	94.4	118.0
90°	3.4	43.8	74.2	91.0	94.4	87.7	67.4	40.5	3.4	57.3	104.5
92.5°	23.6	94.4	87.7	114.6	118.0	107.9	91.0	74.2	13.5	104.5	111.3
95°	91.0	111.3	171.9	175.3	155.1	148.3	168.6	104.5	70.8	141.6	283.2
97.5°	145.0	168.6	155.1	202.3	229.3	202.3	161.8	161.8	134.9	219.1	330.4
100°	198.9	178.7	158.5	175.3	202.3	178.7	151.7	178.7	188.8	256.2	404.6
102.5°	249.5	198.9	198.9	171.9	175.3	168.6	192.2	195.5	236.0	290.0	499.0
105°	290.0	205.7	209.0	195.5	192.2	195.5	209.0	209.0	279.8	320.3	542.8
107.5°	327.0	212.4	205.7	215.8	219.1	215.8	205.7	212.4	320.3	340.5	552.9
110°	357.4	215.8	209.0	215.8	225.9	215.8	209.0	219.1	354.0	360.8	559.7



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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°	384.4	219.1	215.8	212.4	222.5	212.4	215.8	225.9	381.0	370.9	559.7
115°	401.2	222.5	215.8	215.8	219.1	215.8	219.1	229.3	401.2	374.2	552.9
117.5°	411.3	229.3	219.1	222.5	225.9	222.5	219.1	236.0	414.7	387.7	549.6
120°	418.1	252.9	219.1	225.9	229.3	225.9	219.1	256.2	418.1	394.5	536.1
122.5°	414.7	263.0	222.5	225.9	232.6	225.9	222.5	266.4	414.7	391.1	519.2
125°	408.0	273.1	222.5	222.5	229.3	225.9	225.9	273.1	408.0	384.4	495.6
127.5°	394.5	296.7	222.5	225.9	225.9	225.9	225.9	293.3	394.5	387.7	472.0
130°	377.6	313.6	215.8	229.3	225.9	232.6	222.5	313.6	377.6	377.6	451.8
132.5°	360.8	320.3	215.8	229.3	229.3	232.6	219.1	320.3	360.8	364.1	431.6
135°	343.9	327.0	229.3	225.9	229.3	229.3	232.6	327.0	343.9	350.6	418.1
137.5°	327.0	330.4	246.1	215.8	225.9	219.1	252.9	330.4	330.4	330.4	397.8
140°	310.2	327.0	259.6	209.0	212.4	215.8	266.4	330.4	316.9	320.3	364.1
142.5°	290.0	316.9	269.7	225.9	209.0	232.6	276.5	327.0	296.7	310.2	347.3
145°	269.7	306.8	290.0	249.5	229.3	259.6	300.1	316.9	276.5	303.4	337.2
147.5°	252.9	290.0	293.3	263.0	252.9	273.1	303.4	303.4	256.2	290.0	313.6
150°	242.7	273.1	283.2	273.1	263.0	286.6	296.7	279.8	242.7	279.8	293.3
152.5°	239.4	259.6	259.6	286.6	283.2	300.1	273.1	266.4	236.0	269.7	266.4
155°	239.4	256.2	249.5	263.0	276.5	276.5	259.6	259.6	236.0	269.7	252.9
157.5°	236.0	259.6	249.5	246.1	252.9	259.6	259.6	263.0	236.0	263.0	252.9
160°	236.0	263.0	252.9	242.7	246.1	256.2	263.0	263.0	236.0	263.0	256.2
162.5°	236.0	256.2	256.2	246.1	246.1	259.6	263.0	259.6	236.0	256.2	263.0
165°	236.0	256.2	259.6	252.9	249.5	266.4	263.0	252.9	232.6	252.9	266.4
167.5°	236.0	249.5	263.0	256.2	256.2	266.4	266.4	249.5	232.6	242.7	266.4
170°	236.0	246.1	259.6	256.2	259.6	269.7	259.6	246.1	236.0	239.4	256.2
172.5°	236.0	239.4	252.9	256.2	256.2	263.0	252.9	239.4	236.0	232.6	246.1
175°	232.6	239.4	246.1	246.1	242.7	252.9	242.7	236.0	232.6	229.3	236.0
177.5°	229.3	232.6	239.4	239.4	232.6	239.4	232.6	229.3	229.3	225.9	232.6
180°	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2936.6	2936.6	2936.6	2936.6	2936.6	2936.6
2.5°	2913.0	2889.4	2896.1	2916.4	2913.0	2960.2
5°	2882.7	2872.5	2872.5	2902.9	2899.5	2960.2
7.5°	2848.9	2832.1	2842.2	2875.9	2886.0	2953.5
10°	2805.1	2791.6	2795.0	2845.6	2862.4	2946.7
12.5°	2761.3	2747.8	2757.9	2805.1	2828.7	2929.9
15°	2710.7	2687.1	2714.1	2764.6	2795.0	2906.3
17.5°	2650.0	2623.0	2650.0	2717.4	2754.5	2879.3
20°	2596.1	2569.1	2586.0	2656.8	2707.3	2848.9
22.5°	2535.4	2501.7	2515.2	2592.7	2656.8	2808.5
25°	2468.0	2424.1	2444.4	2528.6	2599.4	2757.9
27.5°	2380.3	2306.1	2356.7	2461.2	2528.6	2707.3
30°	2258.9	2161.1	2242.1	2387.0	2464.6	2650.0
32.5°	2117.3	2012.8	2100.5	2296.0	2390.4	2586.0
35°	1979.1	1888.1	1969.0	2201.6	2316.2	2515.2
37.5°	1857.7	1773.4	1847.6	2093.7	2235.3	2437.6
40°	1733.0	1655.4	1729.6	1979.1	2154.4	2356.7
42.5°	1618.3	1544.2	1615.0	1864.5	2066.7	2269.0
45°	1497.0	1375.6	1490.2	1746.4	1972.3	2174.6
47.5°	1368.8	1240.7	1358.7	1631.8	1877.9	2076.9
50°	1250.8	1136.2	1244.1	1513.8	1776.8	1972.3
52.5°	1146.3	1048.5	1142.9	1395.8	1672.3	1864.5
55°	1048.5	984.5	1051.9	1287.9	1574.5	1753.2
57.5°	971.0	927.2	974.4	1183.4	1466.6	1641.9
60°	903.6	876.6	906.9	1078.9	1352.0	1523.9
62.5°	829.4	819.3	829.4	977.7	1240.7	1402.6
65°	765.3	775.4	765.3	886.7	1122.7	1277.8
67.5°	704.6	728.2	708.0	788.9	1004.7	1149.7
70°	637.2	670.9	640.6	701.3	883.3	1018.2
72.5°	566.4	606.9	566.4	617.0	755.2	880.0
75°	492.2	539.4	495.6	526.0	633.8	735.0
77.5°	411.3	441.7	418.1	428.2	515.8	596.8
80°	327.0	360.8	330.4	337.2	408.0	461.9
82.5°	273.1	296.7	276.5	256.2	303.4	340.5
85°	202.3	215.8	209.0	198.9	209.0	232.6
87.5°	124.7	131.5	124.7	124.7	107.9	97.8
90°	138.2	148.3	138.2	107.9	60.7	3.4
92.5°	141.6	155.1	141.6	118.0	114.6	23.6
95°	316.9	310.2	337.2	306.8	175.3	91.0
97.5°	492.2	563.0	509.1	367.5	236.0	145.0
100°	566.4	633.8	590.0	458.5	269.7	198.9
102.5°	654.1	728.2	681.0	536.1	303.4	249.5
105°	762.0	826.0	785.6	566.4	333.8	290.0
107.5°	819.3	917.1	836.1	579.9	354.0	327.0
110°	849.6	954.1	876.6	583.3	370.9	357.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	873.2	974.4	893.5	583.3	377.6	384.4
115°	873.2	991.2	893.5	573.2	387.7	401.2
117.5°	873.2	981.1	893.5	563.0	401.2	411.3
120°	842.9	977.7	869.9	549.6	404.6	418.1
122.5°	819.3	950.8	836.1	532.7	404.6	414.7
125°	775.4	913.7	795.7	512.5	397.8	408.0
127.5°	728.2	859.7	745.1	488.9	401.2	394.5
130°	684.4	799.1	694.5	465.3	387.7	377.6
132.5°	627.1	731.6	637.2	448.4	374.2	360.8
135°	573.2	667.6	586.6	434.9	357.4	343.9
137.5°	515.8	600.1	529.3	408.0	340.5	327.0
140°	448.4	515.8	461.9	377.6	330.4	310.2
142.5°	404.6	441.7	418.1	364.1	316.9	290.0
145°	377.6	397.8	387.7	350.6	310.2	269.7
147.5°	350.6	370.9	360.8	323.7	293.3	252.9
150°	340.5	340.5	354.0	300.1	283.2	242.7
152.5°	303.4	330.4	316.9	273.1	276.5	239.4
155°	259.6	273.1	273.1	263.0	276.5	239.4
157.5°	242.7	252.9	256.2	263.0	269.7	236.0
160°	242.7	246.1	256.2	266.4	266.4	236.0
162.5°	249.5	246.1	263.0	273.1	259.6	236.0
165°	256.2	252.9	269.7	276.5	252.9	236.0
167.5°	263.0	263.0	276.5	273.1	246.1	236.0
170°	263.0	269.7	276.5	263.0	242.7	236.0
172.5°	252.9	256.2	263.0	246.1	232.6	236.0
175°	239.4	236.0	246.1	236.0	232.6	232.6
177.5°	232.6	222.5	232.6	229.3	225.9	229.3
180°	225.9	225.9	225.9	225.9	225.9	225.9

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