

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: P197501

Luminaire Tested: **8WSL-LD2-150-UPL15-UNV-L830-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197501
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-LD2-150-UPL15-UNV-L830-CD2-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L830
Light Source: (476) 3000K CCT, 80 CRI LEDS
EL236N0119D830
Ballast/Driver: OSRAM
OT85W1202772A0DIML

Summary

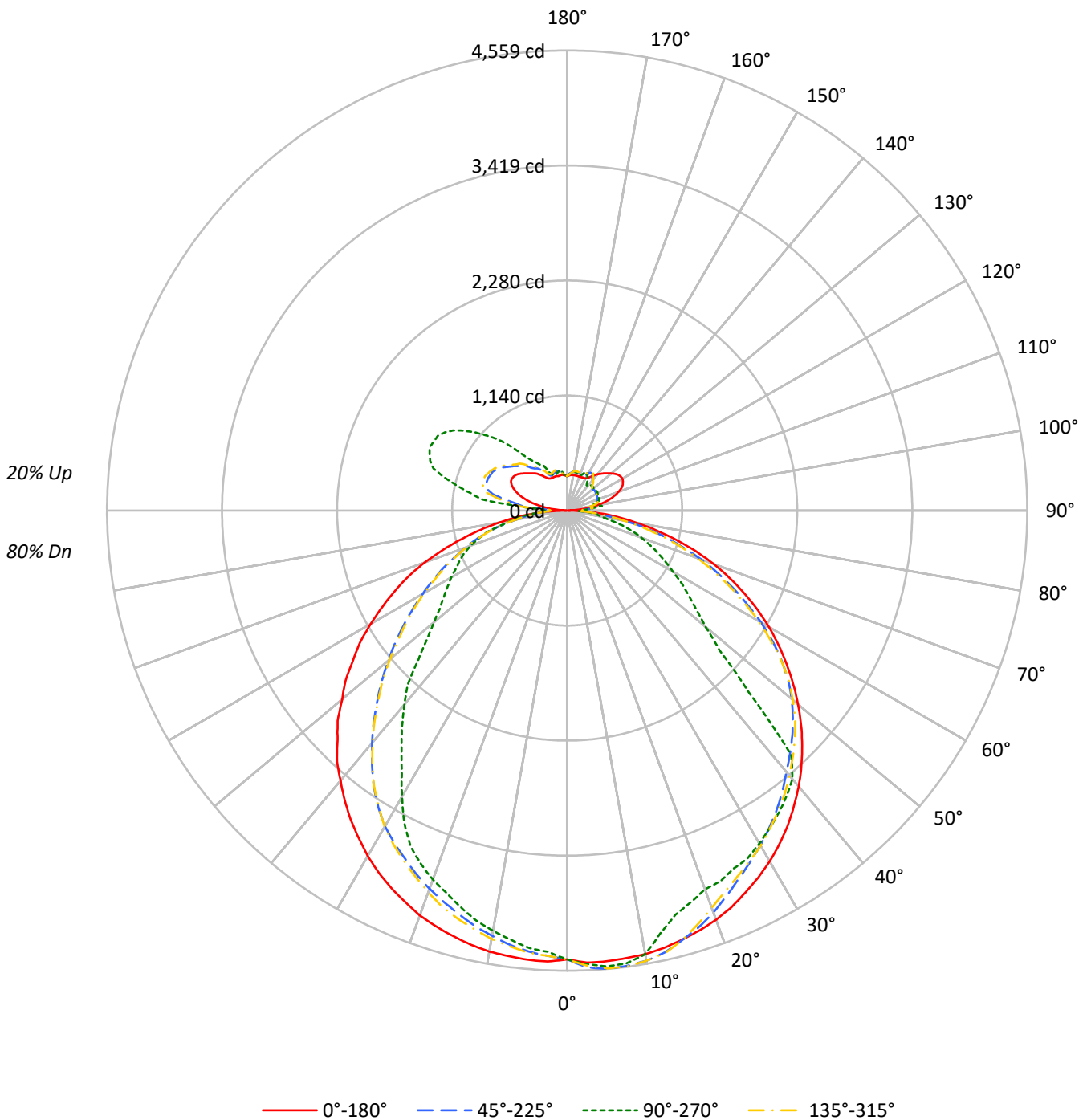
Lumens per Lamp: N/A
Luminaire Lumens: 15738.1 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 148.7
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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CATALOG NUMBER: 8WSL-LD2-150-UPL15-UNV-L830-CD2-U

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°	12597	12597	12597	12597
5°	12746	12892	12703	12369
10°	12835	12835	12762	12159
15°	12906	12158	12801	11933
20°	13005	12035	12866	11728
25°	13053	12223	12893	11473
30°	13126	12458	12925	10704
35°	13171	12641	12923	9887
40°	13196	12838	12913	9270
45°	13192	10206	12885	8345
50°	13162	7875	12825	7582
55°	13111	7262	12783	7362
60°	13074	6855	12727	7521
65°	12969	6639	12628	7871
70°	12770	6470	12431	8415
75°	12181	6146	11790	8940
80°	11410	5580	11076	8911
85°	11450	7300	10621	10621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.2	2.7
10°-20°	1201.0	7.6
20°-30°	1814.9	11.5
30°-40°	2184.3	13.9
40°-50°	2221.4	14.1
50°-60°	1933.5	12.3
60°-70°	1508.3	9.6
70°-80°	932.4	5.9
80°-90°	328.1	2.1
90°-100°	308.9	2.0
100°-110°	598.0	3.8
110°-120°	654.3	4.2
120°-130°	573.7	3.6
130°-140°	429.8	2.7
140°-150°	294.2	1.9
150°-160°	187.4	1.2
160°-170°	109.5	0.7
170°-180°	35.3	0.2
0°-30°	3439.1	21.9
0°-40°	5623.4	35.7
0°-60°	9778.3	62.1
0°-90°	12547.0	79.7
90°-120°	1561.2	9.9
90°-150°	2858.9	18.2
90°-180°	3191.0	20.3
0°-180°	15738.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4447	4447	4447	4447	4447	
5°	4483	4534	4467	4350	4483	427
15°	4401	4146	4365	4069	4401	1244
25°	4176	3911	4125	3671	4176	1928
35°	3809	3656	3737	2859	3809	2383
45°	3293	2548	3216	2083	3293	2540
55°	2655	1470	2588	1491	2655	2374
65°	1935	990	1884	1174	1935	1912
75°	1113	562	1077	817	1113	1179
85°	352	225	327	327	352	351
90°	5	143	5	225	5	27
95°	138	235	107	470	138	143
105°	439	291	424	1251	439	458
115°	608	332	608	1501	608	595
125°	618	347	618	1384	618	549
135°	521	347	521	1011	521	404
145°	408	347	419	602	408	260
155°	362	419	357	414	362	167
165°	357	378	352	383	357	101
175°	352	368	352	357	352	34
180°	342	342	342	342	342	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4447.0	4447.0	4447.0	4447.0	4447.0	4447.0	4447.0	4447.0	4447.0	4447.0	4447.0
2.5°	4482.7	4462.3	4528.7	4533.8	4498.0	4513.4	4513.4	4457.2	4472.5	4406.1	4416.3
5°	4482.7	4487.8	4559.3	4554.2	4533.8	4538.9	4554.2	4482.7	4467.4	4375.5	4385.7
7.5°	4472.5	4498.0	4549.1	4544.0	4523.6	4528.7	4554.2	4492.9	4452.1	4344.9	4339.8
10°	4462.3	4487.8	4528.7	4503.1	4462.3	4477.6	4528.7	4487.8	4436.8	4309.1	4278.5
12.5°	4436.8	4462.3	4482.7	4355.1	4283.6	4344.9	4487.8	4462.3	4406.1	4258.1	4217.2
15°	4401.0	4431.7	4406.1	4227.4	4145.8	4201.9	4406.1	4426.6	4365.3	4191.7	4140.6
17.5°	4360.2	4395.9	4329.6	4130.4	4069.2	4094.7	4298.9	4380.6	4319.3	4125.3	4064.1
20°	4314.2	4355.1	4237.7	4028.3	3992.6	4013.0	4186.6	4329.6	4268.3	4053.8	3987.5
22.5°	4253.0	4298.9	4130.4	3956.8	3972.2	3956.8	4084.5	4263.2	4196.8	3977.3	3900.7
25°	4176.4	4227.4	4023.2	3895.6	3910.9	3905.8	3997.7	4176.4	4125.3	3885.4	3803.7
27.5°	4099.8	4150.9	3926.2	3854.7	3880.3	3849.6	3916.0	4084.5	4043.6	3788.4	3711.8
30°	4013.0	4069.2	3829.2	3783.3	3808.8	3788.4	3834.3	3992.6	3951.7	3686.2	3609.7
32.5°	3916.0	3972.2	3727.1	3696.5	3732.2	3706.7	3737.3	3890.5	3844.5	3573.9	3482.0
35°	3808.8	3864.9	3619.9	3619.9	3655.6	3625.0	3640.3	3788.4	3737.3	3461.6	3339.1
37.5°	3691.4	3752.6	3502.4	3528.0	3568.8	3538.2	3538.2	3681.1	3619.9	3339.1	3175.7
40°	3568.8	3635.2	3379.9	3436.1	3471.8	3436.1	3425.9	3568.8	3492.2	3216.5	3007.2
42.5°	3436.1	3507.5	3267.6	3334.0	3288.0	3334.0	3308.4	3451.4	3374.8	3083.8	2833.6
45°	3293.1	3385.0	3155.3	3114.4	2547.7	3083.8	3191.0	3328.9	3216.5	2956.1	2660.0
47.5°	3145.1	3242.1	3032.7	2736.6	2047.3	2706.0	3063.4	3196.1	3083.8	2818.3	2486.4
50°	2986.8	3099.1	2905.1	2409.8	1787.0	2379.2	2920.4	3058.3	2910.2	2670.2	2312.8
52.5°	2823.4	2945.9	2762.1	2129.0	1613.4	2098.4	2767.2	2910.2	2767.2	2512.0	2144.4
55°	2654.9	2782.6	2593.6	1868.7	1470.4	1863.5	2588.5	2751.9	2588.5	2353.7	1975.9
57.5°	2486.4	2629.4	2415.0	1679.7	1347.9	1654.2	2389.4	2588.5	2435.4	2190.3	1812.5
60°	2307.7	2440.5	2220.9	1475.5	1210.0	1470.4	2190.3	2420.1	2246.5	2021.8	1654.2
62.5°	2123.9	2272.0	2011.6	1296.8	1097.7	1291.7	1975.9	2231.1	2062.7	1848.2	1501.0
65°	1935.0	2078.0	1812.5	1153.9	990.5	1143.7	1776.8	2037.1	1884.0	1674.6	1358.1
67.5°	1741.0	1873.8	1613.4	1016.0	883.3	1005.8	1572.5	1832.9	1700.2	1495.9	1204.9
70°	1541.9	1664.4	1409.1	883.3	781.2	878.2	1373.4	1623.6	1501.0	1312.1	1067.1
72.5°	1332.6	1444.9	1194.7	755.6	673.9	750.5	1164.1	1409.1	1281.5	1118.1	944.5
75°	1113.0	1220.2	995.6	628.0	561.6	622.9	965.0	1179.4	1077.3	939.4	801.6
77.5°	903.7	1010.9	791.4	485.0	428.9	474.8	755.6	965.0	878.2	760.7	653.5
80°	699.5	786.3	582.0	362.5	342.1	362.5	566.7	740.3	679.0	597.4	510.6
82.5°	515.7	566.7	393.1	296.1	296.1	296.1	382.9	525.9	500.3	444.2	388.0
85°	352.3	352.3	265.5	224.6	224.6	224.6	260.4	311.4	326.8	296.1	296.1
87.5°	148.1	153.2	137.9	122.5	117.4	122.5	132.7	127.6	127.6	143.0	178.7
90°	5.1	66.4	112.3	137.9	143.0	132.7	102.1	61.3	5.1	86.8	158.3
92.5°	35.7	143.0	132.7	173.6	178.7	163.4	137.9	112.3	20.4	158.3	168.5
95°	137.9	168.5	260.4	265.5	234.9	224.6	255.3	158.3	107.2	214.4	428.9
97.5°	219.5	255.3	234.9	306.3	347.2	306.3	245.1	245.1	204.2	331.9	500.3
100°	301.2	270.6	240.0	265.5	306.3	270.6	229.8	270.6	285.9	388.0	612.7
102.5°	377.8	301.2	301.2	260.4	265.5	255.3	291.0	296.1	357.4	439.1	755.6
105°	439.1	311.4	316.5	296.1	291.0	296.1	316.5	316.5	423.8	485.0	822.0
107.5°	495.2	321.7	311.4	326.8	331.9	326.8	311.4	321.7	485.0	515.7	837.3
110°	541.2	326.8	316.5	326.8	342.1	326.8	316.5	331.9	536.1	546.3	847.5



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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°	582.0	331.9	326.8	321.7	337.0	321.7	326.8	342.1	576.9	561.6	847.5
115°	607.6	337.0	326.8	326.8	331.9	326.8	331.9	347.2	607.6	566.7	837.3
117.5°	622.9	347.2	331.9	337.0	342.1	337.0	331.9	357.4	628.0	587.1	832.2
120°	633.1	382.9	331.9	342.1	347.2	342.1	331.9	388.0	633.1	597.4	811.8
122.5°	628.0	398.2	337.0	342.1	352.3	342.1	337.0	403.3	628.0	592.3	786.3
125°	617.8	413.6	337.0	337.0	347.2	342.1	342.1	413.6	617.8	582.0	750.5
127.5°	597.4	449.3	337.0	342.1	342.1	342.1	342.1	444.2	597.4	587.1	714.8
130°	571.8	474.8	326.8	347.2	342.1	352.3	337.0	474.8	571.8	571.8	684.2
132.5°	546.3	485.0	326.8	347.2	347.2	352.3	331.9	485.0	546.3	551.4	653.5
135°	520.8	495.2	347.2	342.1	347.2	347.2	352.3	495.2	520.8	531.0	633.1
137.5°	495.2	500.3	372.7	326.8	342.1	331.9	382.9	500.3	500.3	500.3	602.5
140°	469.7	495.2	393.1	316.5	321.7	326.8	403.3	500.3	479.9	485.0	551.4
142.5°	439.1	479.9	408.4	342.1	316.5	352.3	418.7	495.2	449.3	469.7	525.9
145°	408.4	464.6	439.1	377.8	347.2	393.1	454.4	479.9	418.7	459.5	510.6
147.5°	382.9	439.1	444.2	398.2	382.9	413.6	459.5	459.5	388.0	439.1	474.8
150°	367.6	413.6	428.9	413.6	398.2	434.0	449.3	423.8	367.6	423.8	444.2
152.5°	362.5	393.1	393.1	434.0	428.9	454.4	413.6	403.3	357.4	408.4	403.3
155°	362.5	388.0	377.8	398.2	418.7	418.7	393.1	393.1	357.4	408.4	382.9
157.5°	357.4	393.1	377.8	372.7	382.9	393.1	393.1	398.2	357.4	398.2	382.9
160°	357.4	398.2	382.9	367.6	372.7	388.0	398.2	398.2	357.4	398.2	388.0
162.5°	357.4	388.0	388.0	372.7	372.7	393.1	398.2	393.1	357.4	388.0	398.2
165°	357.4	388.0	393.1	382.9	377.8	403.3	398.2	382.9	352.3	382.9	403.3
167.5°	357.4	377.8	398.2	388.0	388.0	403.3	403.3	377.8	352.3	367.6	403.3
170°	357.4	372.7	393.1	388.0	393.1	408.4	393.1	372.7	357.4	362.5	388.0
172.5°	357.4	362.5	382.9	388.0	388.0	398.2	382.9	362.5	357.4	352.3	372.7
175°	352.3	362.5	372.7	372.7	367.6	382.9	367.6	357.4	352.3	347.2	357.4
177.5°	347.2	352.3	362.5	362.5	352.3	362.5	352.3	347.2	347.2	342.1	352.3
180°	342.1	342.1	342.1	342.1	342.1	342.1	342.1	342.1	342.1	342.1	342.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4447.0	4447.0	4447.0	4447.0	4447.0	4447.0
2.5°	4411.2	4375.5	4385.7	4416.3	4411.2	4482.7
5°	4365.3	4350.0	4350.0	4395.9	4390.8	4482.7
7.5°	4314.2	4288.7	4304.0	4355.1	4370.4	4472.5
10°	4247.9	4227.4	4232.5	4309.1	4334.7	4462.3
12.5°	4181.5	4161.1	4176.4	4247.9	4283.6	4436.8
15°	4104.9	4069.2	4110.0	4186.6	4232.5	4401.0
17.5°	4013.0	3972.2	4013.0	4115.1	4171.3	4360.2
20°	3931.3	3890.5	3916.0	4023.2	4099.8	4314.2
22.5°	3839.4	3788.4	3808.8	3926.2	4023.2	4253.0
25°	3737.3	3670.9	3701.6	3829.2	3936.4	4176.4
27.5°	3604.6	3492.2	3568.8	3727.1	3829.2	4099.8
30°	3420.8	3272.7	3395.2	3614.8	3732.2	4013.0
32.5°	3206.3	3048.0	3180.8	3476.9	3619.9	3916.0
35°	2997.0	2859.1	2981.7	3334.0	3507.5	3808.8
37.5°	2813.2	2685.5	2797.9	3170.6	3385.0	3691.4
40°	2624.3	2506.9	2619.2	2997.0	3262.5	3568.8
42.5°	2450.7	2338.4	2445.6	2823.4	3129.7	3436.1
45°	2266.9	2083.1	2256.7	2644.7	2986.8	3293.1
47.5°	2072.9	1878.9	2057.6	2471.1	2843.8	3145.1
50°	1894.2	1720.6	1884.0	2292.4	2690.7	2986.8
52.5°	1735.9	1587.8	1730.8	2113.7	2532.4	2823.4
55°	1587.8	1490.8	1592.9	1950.3	2384.3	2654.9
57.5°	1470.4	1404.0	1475.5	1792.1	2220.9	2486.4
60°	1368.3	1327.5	1373.4	1633.8	2047.3	2307.7
62.5°	1256.0	1240.7	1256.0	1480.6	1878.9	2123.9
65°	1159.0	1174.3	1159.0	1342.8	1700.2	1935.0
67.5°	1067.1	1102.8	1072.2	1194.7	1521.5	1741.0
70°	965.0	1016.0	970.1	1062.0	1337.7	1541.9
72.5°	857.7	919.0	857.7	934.3	1143.7	1332.6
75°	745.4	816.9	750.5	796.5	959.9	1113.0
77.5°	622.9	668.8	633.1	648.4	781.2	903.7
80°	495.2	546.3	500.3	510.6	617.8	699.5
82.5°	413.6	449.3	418.7	388.0	459.5	515.7
85°	306.3	326.8	316.5	301.2	316.5	352.3
87.5°	188.9	199.1	188.9	188.9	163.4	148.1
90°	209.3	224.6	209.3	163.4	91.9	5.1
92.5°	214.4	234.9	214.4	178.7	173.6	35.7
95°	479.9	469.7	510.6	464.6	265.5	137.9
97.5°	745.4	852.6	770.9	556.5	357.4	219.5
100°	857.7	959.9	893.5	694.4	408.4	301.2
102.5°	990.5	1102.8	1031.3	811.8	459.5	377.8
105°	1153.9	1250.9	1189.6	857.7	505.5	439.1
107.5°	1240.7	1388.7	1266.2	878.2	536.1	495.2
110°	1286.6	1444.9	1327.5	883.3	561.6	541.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1322.4	1475.5	1353.0	883.3	571.8	582.0
115°	1322.4	1501.0	1353.0	868.0	587.1	607.6
117.5°	1322.4	1485.7	1353.0	852.6	607.6	622.9
120°	1276.4	1480.6	1317.2	832.2	612.7	633.1
122.5°	1240.7	1439.8	1266.2	806.7	612.7	628.0
125°	1174.3	1383.6	1204.9	776.1	602.5	617.8
127.5°	1102.8	1301.9	1128.3	740.3	607.6	597.4
130°	1036.4	1210.0	1051.8	704.6	587.1	571.8
132.5°	949.6	1107.9	965.0	679.0	566.7	546.3
135°	868.0	1010.9	888.4	658.6	541.2	520.8
137.5°	781.2	908.8	801.6	617.8	515.7	495.2
140°	679.0	781.2	699.5	571.8	500.3	469.7
142.5°	612.7	668.8	633.1	551.4	479.9	439.1
145°	571.8	602.5	587.1	531.0	469.7	408.4
147.5°	531.0	561.6	546.3	490.1	444.2	382.9
150°	515.7	515.7	536.1	454.4	428.9	367.6
152.5°	459.5	500.3	479.9	413.6	418.7	362.5
155°	393.1	413.6	413.6	398.2	418.7	362.5
157.5°	367.6	382.9	388.0	398.2	408.4	357.4
160°	367.6	372.7	388.0	403.3	403.3	357.4
162.5°	377.8	372.7	398.2	413.6	393.1	357.4
165°	388.0	382.9	408.4	418.7	382.9	357.4
167.5°	398.2	398.2	418.7	413.6	372.7	357.4
170°	398.2	408.4	418.7	398.2	367.6	357.4
172.5°	382.9	388.0	398.2	372.7	352.3	357.4
175°	362.5	357.4	372.7	357.4	352.3	352.3
177.5°	352.3	337.0	352.3	347.2	342.1	347.2
180°	342.1	342.1	342.1	342.1	342.1	342.1

(END OF REPORT)