

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: P197493

Luminaire Tested: **8WSL-LD2-130-UPL15-UNV-L830-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197493
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-LD2-130-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

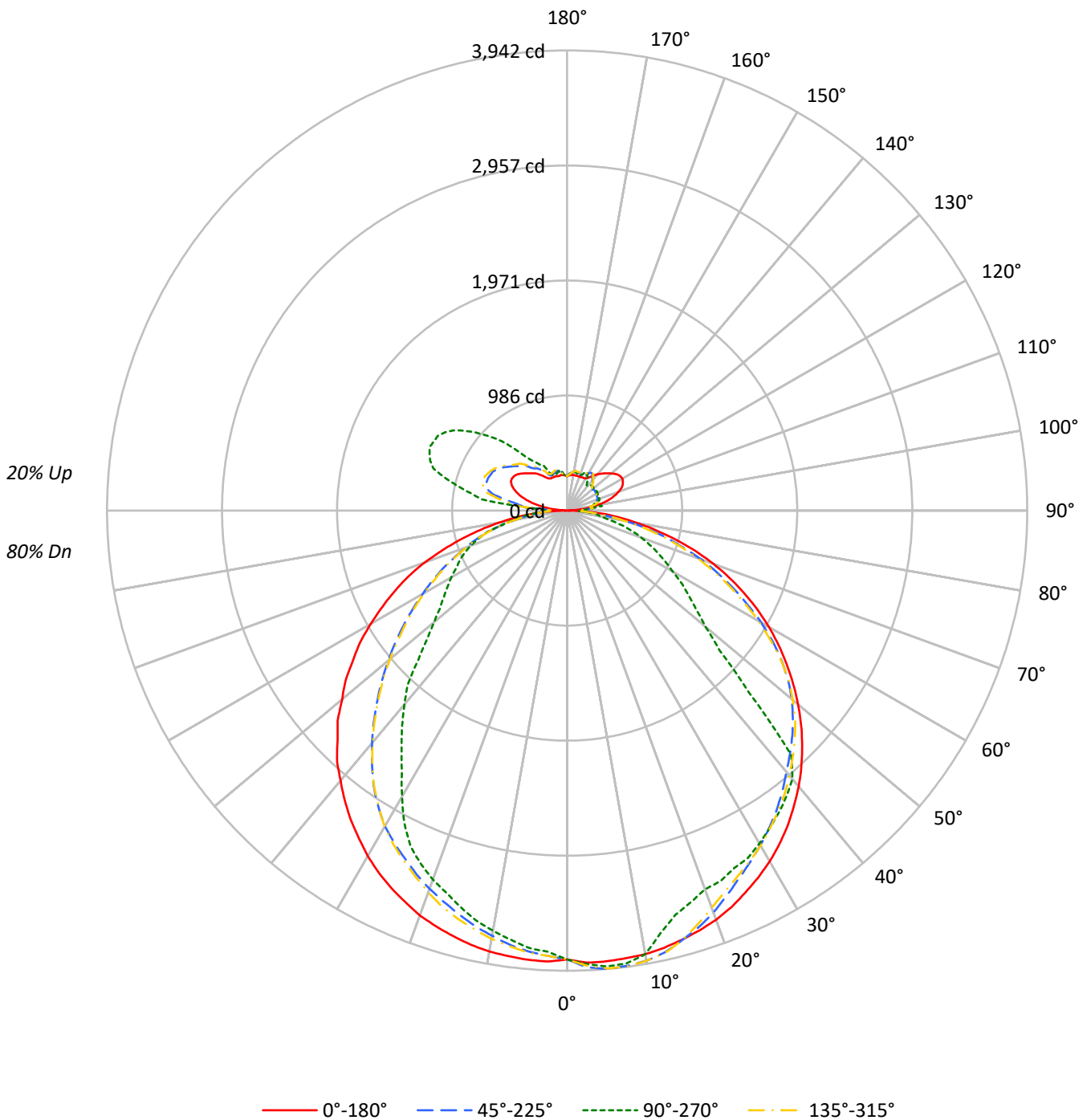
Lumens per Lamp: N/A
Luminaire Lumens: 13607.5 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 124.7
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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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°	10891	10891	10891	10891
5°	11021	11146	10983	10694
10°	11097	11097	11034	10513
15°	11159	10512	11068	10318
20°	11244	10406	11124	10140
25°	11286	10568	11148	9920
30°	11349	10771	11176	9255
35°	11387	10930	11174	8548
40°	11410	11100	11165	8015
45°	11406	8824	11141	7215
50°	11380	6808	11088	6556
55°	11336	6278	11053	6366
60°	11304	5927	11004	6502
65°	11214	5740	10918	6805
70°	11042	5594	10748	7276
75°	10532	5315	10194	7730
80°	9866	4825	9577	7704
85°	9900	6312	9181	9181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.9	2.7
10°-20°	1038.4	7.6
20°-30°	1569.2	11.5
30°-40°	1888.6	13.9
40°-50°	1920.7	14.1
50°-60°	1671.8	12.3
60°-70°	1304.1	9.6
70°-80°	806.2	5.9
80°-90°	283.7	2.1
90°-100°	267.0	2.0
100°-110°	517.0	3.8
110°-120°	565.7	4.2
120°-130°	496.0	3.6
130°-140°	371.6	2.7
140°-150°	254.4	1.9
150°-160°	162.0	1.2
160°-170°	94.7	0.7
170°-180°	30.5	0.2
0°-30°	2973.5	21.9
0°-40°	4862.1	35.7
0°-60°	8454.5	62.1
0°-90°	10848.4	79.7
90°-120°	1349.8	9.9
90°-150°	2471.9	18.2
90°-180°	2759.0	20.3
0°-180°	13607.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3845	3845	3845	3845	3845	
5°	3876	3920	3863	3761	3876	369
15°	3805	3584	3774	3518	3805	1076
25°	3611	3381	3567	3174	3611	1667
35°	3293	3161	3231	2472	3293	2060
45°	2847	2203	2781	1801	2847	2196
55°	2296	1271	2238	1289	2296	2053
65°	1673	856	1629	1015	1673	1653
75°	962	486	931	706	962	1019
85°	305	194	282	282	305	304
90°	4	124	4	194	4	23
95°	119	203	93	406	119	124
105°	380	252	366	1082	380	396
115°	525	287	525	1298	525	514
125°	534	300	534	1196	534	475
135°	450	300	450	874	450	350
145°	353	300	362	521	353	225
155°	313	362	309	358	313	145
165°	309	327	305	331	309	88
175°	305	318	305	309	305	29
180°	296	296	296	296	296	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3844.9	3844.9	3844.9	3844.9	3844.9	3844.9	3844.9	3844.9	3844.9	3844.9	3844.9
2.5°	3875.9	3858.2	3915.6	3920.0	3889.1	3902.3	3902.3	3853.8	3867.0	3809.6	3818.5
5°	3875.9	3880.3	3942.1	3937.7	3920.0	3924.4	3937.7	3875.9	3862.6	3783.1	3792.0
7.5°	3867.0	3889.1	3933.2	3928.8	3911.2	3915.6	3937.7	3884.7	3849.4	3756.7	3752.2
10°	3858.2	3880.3	3915.6	3893.5	3858.2	3871.4	3915.6	3880.3	3836.1	3725.8	3699.3
12.5°	3836.1	3858.2	3875.9	3765.5	3703.7	3756.7	3880.3	3858.2	3809.6	3681.6	3646.3
15°	3805.2	3831.7	3809.6	3655.1	3584.5	3633.1	3809.6	3827.3	3774.3	3624.2	3580.1
17.5°	3769.9	3800.8	3743.4	3571.3	3518.3	3540.4	3716.9	3787.6	3734.6	3566.8	3513.9
20°	3730.2	3765.5	3664.0	3483.0	3452.1	3469.7	3619.8	3743.4	3690.4	3505.0	3447.7
22.5°	3677.2	3716.9	3571.3	3421.2	3434.4	3421.2	3531.5	3686.0	3628.6	3438.8	3372.6
25°	3611.0	3655.1	3478.6	3368.2	3381.4	3377.0	3456.5	3611.0	3566.8	3359.4	3288.7
27.5°	3544.8	3588.9	3394.7	3332.9	3355.0	3328.5	3385.9	3531.5	3496.2	3275.5	3209.3
30°	3469.7	3518.3	3310.8	3271.1	3293.1	3275.5	3315.2	3452.1	3416.8	3187.2	3121.0
32.5°	3385.9	3434.4	3222.5	3196.0	3226.9	3204.9	3231.3	3363.8	3324.0	3090.1	3010.6
35°	3293.1	3341.7	3129.8	3129.8	3160.7	3134.2	3147.5	3275.5	3231.3	2993.0	2887.0
37.5°	3191.6	3244.6	3028.3	3050.4	3085.7	3059.2	3059.2	3182.8	3129.8	2887.0	2745.8
40°	3085.7	3143.1	2922.3	2970.9	3001.8	2970.9	2962.1	3085.7	3019.5	2781.1	2600.1
42.5°	2970.9	3032.7	2825.2	2882.6	2842.9	2882.6	2860.5	2984.1	2917.9	2666.3	2450.0
45°	2847.3	2926.8	2728.1	2692.8	2202.8	2666.3	2759.0	2878.2	2781.1	2555.9	2299.9
47.5°	2719.3	2803.1	2622.2	2366.1	1770.2	2339.6	2648.6	2763.4	2666.3	2436.8	2149.8
50°	2582.4	2679.5	2511.8	2083.6	1545.0	2057.1	2525.0	2644.2	2516.2	2308.7	1999.7
52.5°	2441.2	2547.1	2388.2	1840.8	1395.0	1814.3	2392.6	2516.2	2392.6	2171.9	1854.1
55°	2295.5	2405.9	2242.5	1615.7	1271.3	1611.3	2238.1	2379.4	2238.1	2035.0	1708.4
57.5°	2149.8	2273.4	2088.0	1452.3	1165.4	1430.3	2065.9	2238.1	2105.7	1893.8	1567.1
60°	1995.3	2110.1	1920.3	1275.8	1046.2	1271.3	1893.8	2092.4	1942.3	1748.1	1430.3
62.5°	1836.4	1964.4	1739.3	1121.3	949.1	1116.8	1708.4	1929.1	1783.4	1598.0	1297.8
65°	1673.1	1796.7	1567.1	997.7	856.4	988.8	1536.2	1761.3	1628.9	1447.9	1174.2
67.5°	1505.3	1620.1	1395.0	878.5	763.7	869.6	1359.6	1584.8	1470.0	1293.4	1041.8
70°	1333.2	1439.1	1218.4	763.7	675.4	759.3	1187.5	1403.8	1297.8	1134.5	922.6
72.5°	1152.2	1249.3	1033.0	653.3	582.7	648.9	1006.5	1218.4	1108.0	966.8	816.7
75°	962.3	1055.0	860.8	543.0	485.6	538.6	834.3	1019.7	931.4	812.3	693.1
77.5°	781.4	874.1	684.2	419.4	370.8	410.5	653.3	834.3	759.3	657.7	565.0
80°	604.8	679.8	503.2	313.4	295.8	313.4	490.0	640.1	587.1	516.5	441.4
82.5°	445.9	490.0	339.9	256.0	256.0	256.0	331.1	454.7	432.6	384.1	335.5
85°	304.6	304.6	229.5	194.2	194.2	194.2	225.1	269.3	282.5	256.0	256.0
87.5°	128.0	132.4	119.2	105.9	101.5	105.9	114.8	110.4	110.4	123.6	154.5
90°	4.4	57.4	97.1	119.2	123.6	114.8	88.3	53.0	4.4	75.0	136.8
92.5°	30.9	123.6	114.8	150.1	154.5	141.3	119.2	97.1	17.7	136.8	145.7
95°	119.2	145.7	225.1	229.5	203.1	194.2	220.7	136.8	92.7	185.4	370.8
97.5°	189.8	220.7	203.1	264.9	300.2	264.9	211.9	211.9	176.6	286.9	432.6
100°	260.5	234.0	207.5	229.5	264.9	234.0	198.6	234.0	247.2	335.5	529.7
102.5°	326.7	260.5	260.5	225.1	229.5	220.7	251.6	256.0	309.0	379.6	653.3
105°	379.6	269.3	273.7	256.0	251.6	256.0	273.7	273.7	366.4	419.4	710.7
107.5°	428.2	278.1	269.3	282.5	286.9	282.5	269.3	278.1	419.4	445.9	724.0
110°	467.9	282.5	273.7	282.5	295.8	282.5	273.7	286.9	463.5	472.3	732.8



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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°	503.2	286.9	282.5	278.1	291.4	278.1	282.5	295.8	498.8	485.6	732.8
115°	525.3	291.4	282.5	282.5	286.9	282.5	286.9	300.2	525.3	490.0	724.0
117.5°	538.6	300.2	286.9	291.4	295.8	291.4	286.9	309.0	543.0	507.7	719.5
120°	547.4	331.1	286.9	295.8	300.2	295.8	286.9	335.5	547.4	516.5	701.9
122.5°	543.0	344.3	291.4	295.8	304.6	295.8	291.4	348.7	543.0	512.1	679.8
125°	534.1	357.6	291.4	291.4	300.2	295.8	295.8	357.6	534.1	503.2	648.9
127.5°	516.5	388.5	291.4	295.8	295.8	295.8	295.8	384.1	516.5	507.7	618.0
130°	494.4	410.5	282.5	300.2	295.8	304.6	291.4	410.5	494.4	494.4	591.5
132.5°	472.3	419.4	282.5	300.2	300.2	304.6	286.9	419.4	472.3	476.8	565.0
135°	450.3	428.2	300.2	295.8	300.2	300.2	304.6	428.2	450.3	459.1	547.4
137.5°	428.2	432.6	322.3	282.5	295.8	286.9	331.1	432.6	432.6	432.6	520.9
140°	406.1	428.2	339.9	273.7	278.1	282.5	348.7	432.6	415.0	419.4	476.8
142.5°	379.6	415.0	353.2	295.8	273.7	304.6	362.0	428.2	388.5	406.1	454.7
145°	353.2	401.7	379.6	326.7	300.2	339.9	392.9	415.0	362.0	397.3	441.4
147.5°	331.1	379.6	384.1	344.3	331.1	357.6	397.3	397.3	335.5	379.6	410.5
150°	317.8	357.6	370.8	357.6	344.3	375.2	388.5	366.4	317.8	366.4	384.1
152.5°	313.4	339.9	339.9	375.2	370.8	392.9	357.6	348.7	309.0	353.2	348.7
155°	313.4	335.5	326.7	344.3	362.0	362.0	339.9	339.9	309.0	353.2	331.1
157.5°	309.0	339.9	326.7	322.3	331.1	339.9	339.9	344.3	309.0	344.3	331.1
160°	309.0	344.3	331.1	317.8	322.3	335.5	344.3	344.3	309.0	344.3	335.5
162.5°	309.0	335.5	335.5	322.3	322.3	339.9	344.3	339.9	309.0	335.5	344.3
165°	309.0	335.5	339.9	331.1	326.7	348.7	344.3	331.1	304.6	331.1	348.7
167.5°	309.0	326.7	344.3	335.5	335.5	348.7	348.7	326.7	304.6	317.8	348.7
170°	309.0	322.3	339.9	335.5	339.9	353.2	339.9	322.3	309.0	313.4	335.5
172.5°	309.0	313.4	331.1	335.5	335.5	344.3	331.1	313.4	309.0	304.6	322.3
175°	304.6	313.4	322.3	322.3	317.8	331.1	317.8	309.0	304.6	300.2	309.0
177.5°	300.2	304.6	313.4	313.4	304.6	313.4	304.6	300.2	300.2	295.8	304.6
180°	295.8	295.8	295.8	295.8	295.8	295.8	295.8	295.8	295.8	295.8	295.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3844.9	3844.9	3844.9	3844.9	3844.9	3844.9
2.5°	3814.0	3783.1	3792.0	3818.5	3814.0	3875.9
5°	3774.3	3761.1	3761.1	3800.8	3796.4	3875.9
7.5°	3730.2	3708.1	3721.3	3765.5	3778.7	3867.0
10°	3672.8	3655.1	3659.5	3725.8	3747.8	3858.2
12.5°	3615.4	3597.7	3611.0	3672.8	3703.7	3836.1
15°	3549.2	3518.3	3553.6	3619.8	3659.5	3805.2
17.5°	3469.7	3434.4	3469.7	3558.0	3606.6	3769.9
20°	3399.1	3363.8	3385.9	3478.6	3544.8	3730.2
22.5°	3319.6	3275.5	3293.1	3394.7	3478.6	3677.2
25°	3231.3	3174.0	3200.4	3310.8	3403.5	3611.0
27.5°	3116.6	3019.5	3085.7	3222.5	3310.8	3544.8
30°	2957.7	2829.6	2935.6	3125.4	3226.9	3469.7
32.5°	2772.2	2635.4	2750.2	3006.2	3129.8	3385.9
35°	2591.3	2472.1	2578.0	2882.6	3032.7	3293.1
37.5°	2432.3	2322.0	2419.1	2741.3	2926.8	3191.6
40°	2269.0	2167.5	2264.6	2591.3	2820.8	3085.7
42.5°	2118.9	2021.8	2114.5	2441.2	2706.0	2970.9
45°	1960.0	1801.1	1951.2	2286.7	2582.4	2847.3
47.5°	1792.2	1624.5	1779.0	2136.6	2458.8	2719.3
50°	1637.7	1487.7	1628.9	1982.1	2326.4	2582.4
52.5°	1500.9	1372.9	1496.5	1827.6	2189.5	2441.2
55°	1372.9	1289.0	1377.3	1686.3	2061.5	2295.5
57.5°	1271.3	1214.0	1275.8	1549.5	1920.3	2149.8
60°	1183.1	1147.7	1187.5	1412.6	1770.2	1995.3
62.5°	1085.9	1072.7	1085.9	1280.2	1624.5	1836.4
65°	1002.1	1015.3	1002.1	1161.0	1470.0	1673.1
67.5°	922.6	953.5	927.0	1033.0	1315.5	1505.3
70°	834.3	878.5	838.7	918.2	1156.6	1333.2
72.5°	741.6	794.6	741.6	807.8	988.8	1152.2
75°	644.5	706.3	648.9	688.6	829.9	962.3
77.5°	538.6	578.3	547.4	560.6	675.4	781.4
80°	428.2	472.3	432.6	441.4	534.1	604.8
82.5°	357.6	388.5	362.0	335.5	397.3	445.9
85°	264.9	282.5	273.7	260.5	273.7	304.6
87.5°	163.3	172.2	163.3	163.3	141.3	128.0
90°	181.0	194.2	181.0	141.3	79.5	4.4
92.5°	185.4	203.1	185.4	154.5	150.1	30.9
95°	415.0	406.1	441.4	401.7	229.5	119.2
97.5°	644.5	737.2	666.6	481.2	309.0	189.8
100°	741.6	829.9	772.5	600.4	353.2	260.5
102.5°	856.4	953.5	891.7	701.9	397.3	326.7
105°	997.7	1081.5	1028.6	741.6	437.0	379.6
107.5°	1072.7	1200.7	1094.8	759.3	463.5	428.2
110°	1112.4	1249.3	1147.7	763.7	485.6	467.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1143.3	1275.8	1169.8	763.7	494.4	503.2
115°	1143.3	1297.8	1169.8	750.4	507.7	525.3
117.5°	1143.3	1284.6	1169.8	737.2	525.3	538.6
120°	1103.6	1280.2	1138.9	719.5	529.7	547.4
122.5°	1072.7	1244.9	1094.8	697.5	529.7	543.0
125°	1015.3	1196.3	1041.8	671.0	520.9	534.1
127.5°	953.5	1125.7	975.6	640.1	525.3	516.5
130°	896.1	1046.2	909.4	609.2	507.7	494.4
132.5°	821.1	957.9	834.3	587.1	490.0	472.3
135°	750.4	874.1	768.1	569.5	467.9	450.3
137.5°	675.4	785.8	693.1	534.1	445.9	428.2
140°	587.1	675.4	604.8	494.4	432.6	406.1
142.5°	529.7	578.3	547.4	476.8	415.0	379.6
145°	494.4	520.9	507.7	459.1	406.1	353.2
147.5°	459.1	485.6	472.3	423.8	384.1	331.1
150°	445.9	445.9	463.5	392.9	370.8	317.8
152.5°	397.3	432.6	415.0	357.6	362.0	313.4
155°	339.9	357.6	357.6	344.3	362.0	313.4
157.5°	317.8	331.1	335.5	344.3	353.2	309.0
160°	317.8	322.3	335.5	348.7	348.7	309.0
162.5°	326.7	322.3	344.3	357.6	339.9	309.0
165°	335.5	331.1	353.2	362.0	331.1	309.0
167.5°	344.3	344.3	362.0	357.6	322.3	309.0
170°	344.3	353.2	362.0	344.3	317.8	309.0
172.5°	331.1	335.5	344.3	322.3	304.6	309.0
175°	313.4	309.0	322.3	309.0	304.6	304.6
177.5°	304.6	291.4	304.6	300.2	295.8	300.2
180°	295.8	295.8	295.8	295.8	295.8	295.8

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