

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: P197495

Luminaire Tested: **8WSL-LD2-130-UPL15-UNV-L840-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197495  
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-L840-CD2-U  
Description: 8FT. Linear Wavestream System, 15% Uplight, L840  
Light Source: (476) 4000K CCT, 80 CRI LEDS  
EL236N0119D840  
Ballast/Driver: OSRAM  
OT85W1202772A0DIML

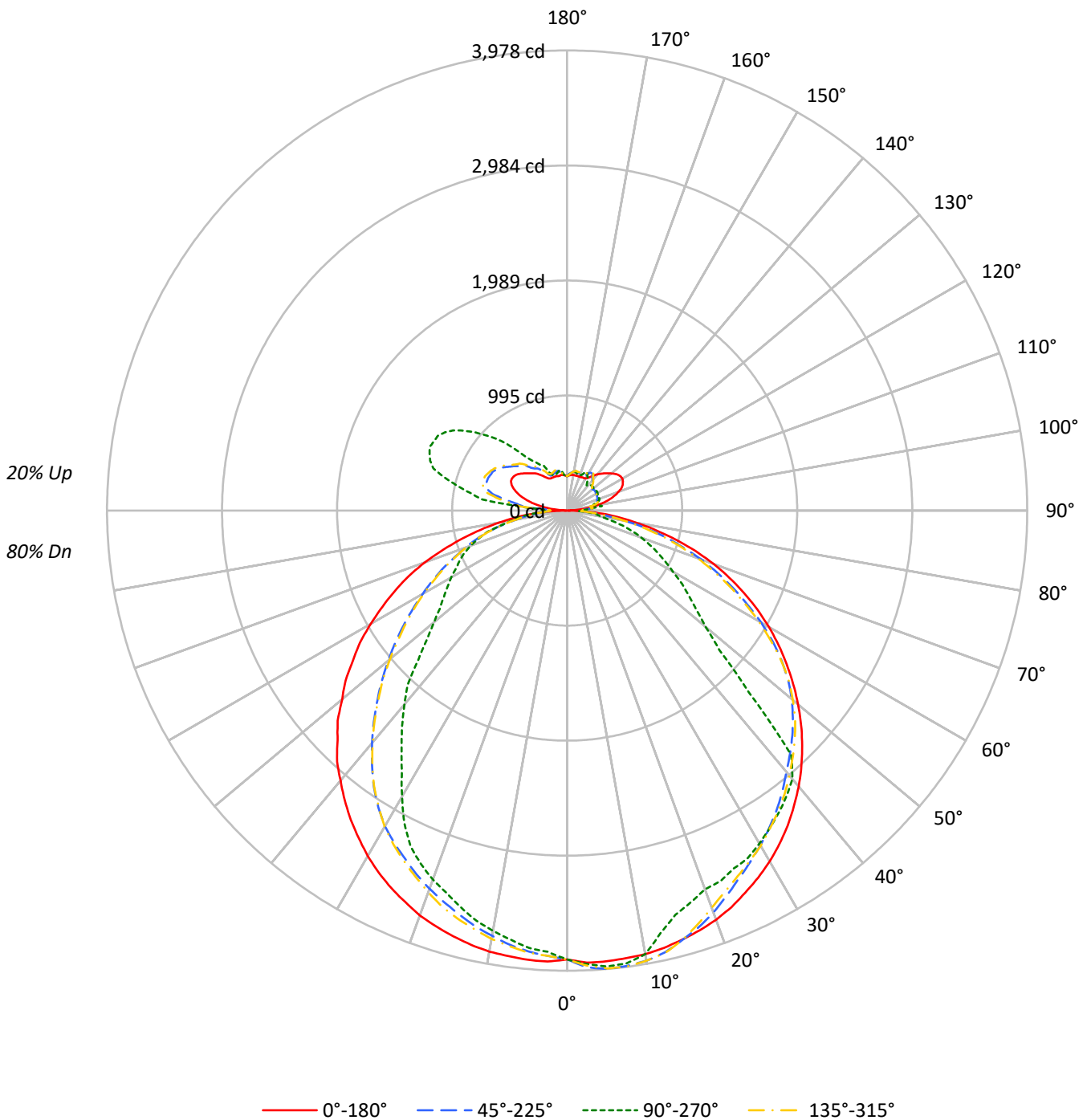
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13732.7 lumens  
Efficiency: N/A  
Efficacy: 110.1 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			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°	10991	10991	10991	10991
5°	11122	11249	11084	10793
10°	11199	11199	11135	10610
15°	11262	10608	11170	10413
20°	11348	10502	11227	10233
25°	11390	10666	11251	10011
30°	11453	10871	11278	9340
35°	11493	11030	11277	8627
40°	11515	11202	11268	8088
45°	11511	8906	11243	7282
50°	11485	6871	11191	6616
55°	11441	6336	11155	6424
60°	11408	5981	11105	6562
65°	11317	5793	11018	6868
70°	11143	5645	10848	7343
75°	10629	5364	10288	7801
80°	9955	4869	9665	7776
85°	9991	6370	9266	9266



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	369.3	2.7
10°-20°	1048.0	7.6
20°-30°	1583.6	11.5
30°-40°	1906.0	13.9
40°-50°	1938.3	14.1
50°-60°	1687.1	12.3
60°-70°	1316.1	9.6
70°-80°	813.6	5.9
80°-90°	286.3	2.1
90°-100°	269.5	2.0
100°-110°	521.8	3.8
110°-120°	570.9	4.2
120°-130°	500.6	3.6
130°-140°	375.0	2.7
140°-150°	256.8	1.9
150°-160°	163.5	1.2
160°-170°	95.6	0.7
170°-180°	30.8	0.2
0°-30°	3000.9	21.9
0°-40°	4906.8	35.7
0°-60°	8532.3	62.1
0°-90°	10948.2	79.7
90°-120°	1362.3	9.9
90°-150°	2494.6	18.2
90°-180°	2784.0	20.3
0°-180°	13732.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3880	3880	3880	3880	3880	
5°	3912	3956	3898	3796	3912	373
15°	3840	3618	3809	3551	3840	1086
25°	3644	3413	3600	3203	3644	1682
35°	3324	3190	3261	2495	3324	2079
45°	2874	2223	2807	1818	2874	2217
55°	2317	1283	2259	1301	2317	2072
65°	1688	864	1644	1025	1688	1668
75°	971	490	940	713	971	1029
85°	307	196	285	285	307	307
90°	4	125	4	196	4	23
95°	120	205	94	410	120	125
105°	383	254	370	1092	383	399
115°	530	290	530	1310	530	519
125°	539	303	539	1207	539	479
135°	454	303	454	882	454	353
145°	356	303	365	526	356	227
155°	316	365	312	361	316	146
165°	312	330	307	334	312	88
175°	307	321	307	312	307	30
180°	298	298	298	298	298	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3880.3	3880.3	3880.3	3880.3	3880.3	3880.3	3880.3	3880.3	3880.3	3880.3	3880.3
2.5°	3911.5	3893.7	3951.6	3956.1	3924.9	3938.2	3938.2	3889.2	3902.6	3844.7	3853.6
5°	3911.5	3916.0	3978.3	3973.9	3956.1	3960.5	3973.9	3911.5	3898.2	3818.0	3826.9
7.5°	3902.6	3924.9	3969.4	3965.0	3947.2	3951.6	3973.9	3920.4	3884.8	3791.2	3786.8
10°	3893.7	3916.0	3951.6	3929.3	3893.7	3907.1	3951.6	3916.0	3871.4	3760.0	3733.3
12.5°	3871.4	3893.7	3911.5	3800.1	3737.8	3791.2	3916.0	3893.7	3844.7	3715.5	3679.9
15°	3840.2	3867.0	3844.7	3688.8	3617.5	3666.5	3844.7	3862.5	3809.1	3657.6	3613.0
17.5°	3804.6	3835.8	3777.9	3604.1	3550.7	3572.9	3751.1	3822.4	3769.0	3599.7	3546.2
20°	3764.5	3800.1	3697.7	3515.0	3483.8	3501.7	3653.1	3777.9	3724.4	3537.3	3479.4
22.5°	3711.0	3751.1	3604.1	3452.6	3466.0	3452.6	3564.0	3720.0	3662.0	3470.5	3403.6
25°	3644.2	3688.8	3510.6	3399.2	3412.6	3408.1	3488.3	3644.2	3599.7	3390.3	3319.0
27.5°	3577.4	3621.9	3425.9	3363.5	3385.8	3359.1	3417.0	3564.0	3528.4	3305.6	3238.8
30°	3501.7	3550.7	3341.3	3301.2	3323.5	3305.6	3345.7	3483.8	3448.2	3216.5	3149.7
32.5°	3417.0	3466.0	3252.2	3225.4	3256.6	3234.4	3261.1	3394.7	3354.6	3118.5	3038.3
35°	3323.5	3372.5	3158.6	3158.6	3189.8	3163.1	3176.4	3305.6	3261.1	3020.5	2913.6
37.5°	3221.0	3274.4	3056.2	3078.4	3114.1	3087.3	3087.3	3212.1	3158.6	2913.6	2771.0
40°	3114.1	3172.0	2949.2	2998.2	3029.4	2998.2	2989.3	3114.1	3047.2	2806.7	2624.0
42.5°	2998.2	3060.6	2851.2	2909.1	2869.0	2909.1	2886.9	3011.6	2944.8	2690.8	2472.5
45°	2873.5	2953.7	2753.2	2717.6	2223.1	2690.8	2784.4	2904.7	2806.7	2579.5	2321.1
47.5°	2744.3	2828.9	2646.3	2387.9	1786.5	2361.2	2673.0	2788.8	2690.8	2459.2	2169.6
50°	2606.2	2704.2	2534.9	2102.8	1559.3	2076.0	2548.3	2668.6	2539.4	2330.0	2018.1
52.5°	2463.6	2570.6	2410.2	1857.7	1407.8	1831.0	2414.6	2539.4	2414.6	2191.9	1871.1
55°	2316.6	2428.0	2263.2	1630.5	1283.0	1626.1	2258.7	2401.3	2258.7	2053.8	1724.1
57.5°	2169.6	2294.3	2107.2	1465.7	1176.1	1443.4	2085.0	2258.7	2125.1	1911.2	1581.5
60°	2013.7	2129.5	1937.9	1287.5	1055.8	1283.0	1911.2	2111.7	1960.2	1764.2	1443.4
62.5°	1853.3	1982.5	1755.3	1131.6	957.8	1127.1	1724.1	1946.8	1799.8	1612.7	1309.8
65°	1688.5	1813.2	1581.5	1006.8	864.3	997.9	1550.4	1777.6	1643.9	1461.3	1185.0
67.5°	1519.2	1635.0	1407.8	886.6	770.7	877.6	1372.1	1599.4	1483.5	1305.3	1051.4
70°	1345.4	1452.3	1229.6	770.7	681.6	766.3	1198.4	1416.7	1309.8	1144.9	931.1
72.5°	1162.8	1260.8	1042.5	659.3	588.1	654.9	1015.7	1229.6	1118.2	975.7	824.2
75°	971.2	1064.8	868.7	548.0	490.1	543.5	842.0	1029.1	940.0	819.7	699.4
77.5°	788.5	882.1	690.5	423.2	374.2	414.3	659.3	842.0	766.3	663.8	570.2
80°	610.3	686.1	507.9	316.3	298.5	316.3	494.5	646.0	592.5	521.2	445.5
82.5°	450.0	494.5	343.0	258.4	258.4	258.4	334.1	458.9	436.6	387.6	338.6
85°	307.4	307.4	231.7	196.0	196.0	196.0	227.2	271.8	285.1	258.4	258.4
87.5°	129.2	133.7	120.3	106.9	102.5	106.9	115.8	111.4	111.4	124.7	155.9
90°	4.5	57.9	98.0	120.3	124.7	115.8	89.1	53.5	4.5	75.7	138.1
92.5°	31.2	124.7	115.8	151.5	155.9	142.6	120.3	98.0	17.8	138.1	147.0
95°	120.3	147.0	227.2	231.7	204.9	196.0	222.8	138.1	93.6	187.1	374.2
97.5°	191.6	222.8	204.9	267.3	302.9	267.3	213.8	213.8	178.2	289.6	436.6
100°	262.8	236.1	209.4	231.7	267.3	236.1	200.5	236.1	249.5	338.6	534.6
102.5°	329.7	262.8	262.8	227.2	231.7	222.8	253.9	258.4	311.9	383.1	659.3
105°	383.1	271.8	276.2	258.4	253.9	258.4	276.2	276.2	369.8	423.2	717.3
107.5°	432.1	280.7	271.8	285.1	289.6	285.1	271.8	280.7	423.2	450.0	730.6
110°	472.2	285.1	276.2	285.1	298.5	285.1	276.2	289.6	467.8	476.7	739.5



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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°	507.9	289.6	285.1	280.7	294.0	280.7	285.1	298.5	503.4	490.1	739.5
115°	530.1	294.0	285.1	285.1	289.6	285.1	289.6	302.9	530.1	494.5	730.6
117.5°	543.5	302.9	289.6	294.0	298.5	294.0	289.6	311.9	548.0	512.3	726.2
120°	552.4	334.1	289.6	298.5	302.9	298.5	289.6	338.6	552.4	521.2	708.4
122.5°	548.0	347.5	294.0	298.5	307.4	298.5	294.0	351.9	548.0	516.8	686.1
125°	539.1	360.9	294.0	294.0	302.9	298.5	298.5	360.9	539.1	507.9	654.9
127.5°	521.2	392.0	294.0	298.5	298.5	298.5	298.5	387.6	521.2	512.3	623.7
130°	499.0	414.3	285.1	302.9	298.5	307.4	294.0	414.3	499.0	499.0	597.0
132.5°	476.7	423.2	285.1	302.9	302.9	307.4	289.6	423.2	476.7	481.1	570.2
135°	454.4	432.1	302.9	298.5	302.9	302.9	307.4	432.1	454.4	463.3	552.4
137.5°	432.1	436.6	325.2	285.1	298.5	289.6	334.1	436.6	436.6	436.6	525.7
140°	409.9	432.1	343.0	276.2	280.7	285.1	351.9	436.6	418.8	423.2	481.1
142.5°	383.1	418.8	356.4	298.5	276.2	307.4	365.3	432.1	392.0	409.9	458.9
145°	356.4	405.4	383.1	329.7	302.9	343.0	396.5	418.8	365.3	401.0	445.5
147.5°	334.1	383.1	387.6	347.5	334.1	360.9	401.0	401.0	338.6	383.1	414.3
150°	320.8	360.9	374.2	360.9	347.5	378.7	392.0	369.8	320.8	369.8	387.6
152.5°	316.3	343.0	343.0	378.7	374.2	396.5	360.9	351.9	311.9	356.4	351.9
155°	316.3	338.6	329.7	347.5	365.3	365.3	343.0	343.0	311.9	356.4	334.1
157.5°	311.9	343.0	329.7	325.2	334.1	343.0	343.0	347.5	311.9	347.5	334.1
160°	311.9	347.5	334.1	320.8	325.2	338.6	347.5	347.5	311.9	347.5	338.6
162.5°	311.9	338.6	338.6	325.2	325.2	343.0	347.5	343.0	311.9	338.6	347.5
165°	311.9	338.6	343.0	334.1	329.7	351.9	347.5	334.1	307.4	334.1	351.9
167.5°	311.9	329.7	347.5	338.6	338.6	351.9	351.9	329.7	307.4	320.8	351.9
170°	311.9	325.2	343.0	338.6	343.0	356.4	343.0	325.2	311.9	316.3	338.6
172.5°	311.9	316.3	334.1	338.6	338.6	347.5	334.1	316.3	311.9	307.4	325.2
175°	307.4	316.3	325.2	325.2	320.8	334.1	320.8	311.9	307.4	302.9	311.9
177.5°	302.9	307.4	316.3	316.3	307.4	316.3	307.4	302.9	302.9	298.5	307.4
180°	298.5	298.5	298.5	298.5	298.5	298.5	298.5	298.5	298.5	298.5	298.5



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3880.3	3880.3	3880.3	3880.3	3880.3	3880.3
2.5°	3849.1	3818.0	3826.9	3853.6	3849.1	3911.5
5°	3809.1	3795.7	3795.7	3835.8	3831.3	3911.5
7.5°	3764.5	3742.2	3755.6	3800.1	3813.5	3902.6
10°	3706.6	3688.8	3693.2	3760.0	3782.3	3893.7
12.5°	3648.7	3630.9	3644.2	3706.6	3737.8	3871.4
15°	3581.8	3550.7	3586.3	3653.1	3693.2	3840.2
17.5°	3501.7	3466.0	3501.7	3590.8	3639.8	3804.6
20°	3430.4	3394.7	3417.0	3510.6	3577.4	3764.5
22.5°	3350.2	3305.6	3323.5	3425.9	3510.6	3711.0
25°	3261.1	3203.2	3229.9	3341.3	3434.8	3644.2
27.5°	3145.3	3047.2	3114.1	3252.2	3341.3	3577.4
30°	2984.9	2855.7	2962.6	3154.2	3256.6	3501.7
32.5°	2797.8	2659.7	2775.5	3033.9	3158.6	3417.0
35°	2615.1	2494.8	2601.7	2909.1	3060.6	3323.5
37.5°	2454.7	2343.3	2441.4	2766.6	2953.7	3221.0
40°	2289.9	2187.4	2285.4	2615.1	2846.8	3114.1
42.5°	2138.4	2040.4	2134.0	2463.6	2730.9	2998.2
45°	1978.0	1817.7	1969.1	2307.7	2606.2	2873.5
47.5°	1808.7	1639.5	1795.4	2156.2	2481.5	2744.3
50°	1652.8	1501.3	1643.9	2000.3	2347.8	2606.2
52.5°	1514.7	1385.5	1510.3	1844.4	2209.7	2463.6
55°	1385.5	1300.9	1390.0	1701.8	2080.5	2316.6
57.5°	1283.0	1225.1	1287.5	1563.7	1937.9	2169.6
60°	1193.9	1158.3	1198.4	1425.6	1786.5	2013.7
62.5°	1095.9	1082.6	1095.9	1292.0	1639.5	1853.3
65°	1011.3	1024.7	1011.3	1171.7	1483.5	1688.5
67.5°	931.1	962.3	935.6	1042.5	1327.6	1519.2
70°	842.0	886.6	846.5	926.6	1167.2	1345.4
72.5°	748.4	801.9	748.4	815.3	997.9	1162.8
75°	650.4	712.8	654.9	695.0	837.5	971.2
77.5°	543.5	583.6	552.4	565.8	681.6	788.5
80°	432.1	476.7	436.6	445.5	539.1	610.3
82.5°	360.9	392.0	365.3	338.6	401.0	450.0
85°	267.3	285.1	276.2	262.8	276.2	307.4
87.5°	164.8	173.7	164.8	164.8	142.6	129.2
90°	182.7	196.0	182.7	142.6	80.2	4.5
92.5°	187.1	204.9	187.1	155.9	151.5	31.2
95°	418.8	409.9	445.5	405.4	231.7	120.3
97.5°	650.4	744.0	672.7	485.6	311.9	191.6
100°	748.4	837.5	779.6	605.9	356.4	262.8
102.5°	864.3	962.3	899.9	708.4	401.0	329.7
105°	1006.8	1091.5	1038.0	748.4	441.0	383.1
107.5°	1082.6	1211.8	1104.8	766.3	467.8	432.1
110°	1122.7	1260.8	1158.3	770.7	490.1	472.2





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CATALOG NUMBER: 8WSL-LD2-130-UPL15-UNV-L840-CD2-U

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1153.9	1287.5	1180.6	770.7	499.0	507.9
115°	1153.9	1309.8	1180.6	757.4	512.3	530.1
117.5°	1153.9	1296.4	1180.6	744.0	530.1	543.5
120°	1113.8	1292.0	1149.4	726.2	534.6	552.4
122.5°	1082.6	1256.3	1104.8	703.9	534.6	548.0
125°	1024.7	1207.3	1051.4	677.2	525.7	539.1
127.5°	962.3	1136.0	984.6	646.0	530.1	521.2
130°	904.4	1055.8	917.7	614.8	512.3	499.0
132.5°	828.6	966.7	842.0	592.5	494.5	476.7
135°	757.4	882.1	775.2	574.7	472.2	454.4
137.5°	681.6	793.0	699.4	539.1	450.0	432.1
140°	592.5	681.6	610.3	499.0	436.6	409.9
142.5°	534.6	583.6	552.4	481.1	418.8	383.1
145°	499.0	525.7	512.3	463.3	409.9	356.4
147.5°	463.3	490.1	476.7	427.7	387.6	334.1
150°	450.0	450.0	467.8	396.5	374.2	320.8
152.5°	401.0	436.6	418.8	360.9	365.3	316.3
155°	343.0	360.9	360.9	347.5	365.3	316.3
157.5°	320.8	334.1	338.6	347.5	356.4	311.9
160°	320.8	325.2	338.6	351.9	351.9	311.9
162.5°	329.7	325.2	347.5	360.9	343.0	311.9
165°	338.6	334.1	356.4	365.3	334.1	311.9
167.5°	347.5	347.5	365.3	360.9	325.2	311.9
170°	347.5	356.4	365.3	347.5	320.8	311.9
172.5°	334.1	338.6	347.5	325.2	307.4	311.9
175°	316.3	311.9	325.2	311.9	307.4	307.4
177.5°	307.4	294.0	307.4	302.9	298.5	302.9
180°	298.5	298.5	298.5	298.5	298.5	298.5

(END OF REPORT)