

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: P197431

Luminaire Tested: **8WSL-LD2-100-UPL8-UNV-L840-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197431  
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-LD2-100-UPL8-UNV-L840-CD2-U  
Description: 8FT. Linear Wavestream System, 8% Uplight, L840  
Light Source: (476) 4000K CCT, 80 CRI LEDS  
EL236N0119D840  
Ballast/Driver: OSRAM  
OT50W

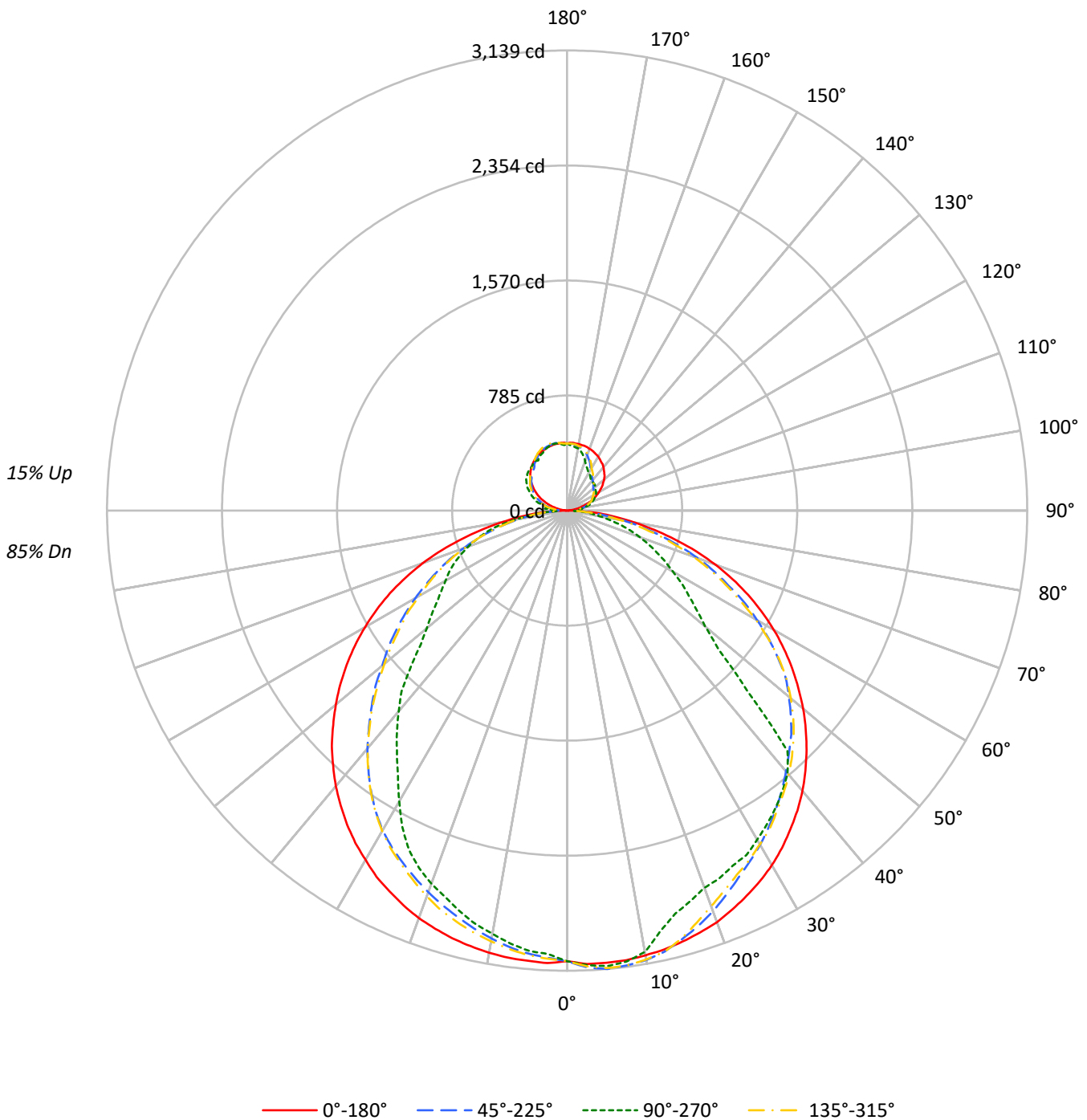
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10193.8 lumens  
Efficiency: N/A  
Efficacy: 112.5 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): 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	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°	8705	8705	8705	8705
5°	8804	8870	8767	8570
10°	8859	8792	8811	8433
15°	8926	8347	8858	8298
20°	9006	8253	8917	8163
25°	9060	8351	8958	7980
30°	9137	8481	8997	7491
35°	9182	8568	9046	6998
40°	9235	8651	9077	6607
45°	9253	6960	9095	6037
50°	9266	5408	9077	5510
55°	9246	5005	9068	5346
60°	9228	4716	9022	5424
65°	9131	4521	8932	5690
70°	8884	4360	8666	5941
75°	8319	4105	8067	6266
80°	7569	3757	7246	5957
85°	7378	4063	6630	5346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	292.1	2.9
10°-20°	829.6	8.1
20°-30°	1255.9	12.3
30°-40°	1516.5	14.9
40°-50°	1548.3	15.2
50°-60°	1353.7	13.3
60°-70°	1049.2	10.3
70°-80°	630.8	6.2
80°-90°	194.7	1.9
90°-100°	82.1	0.8
100°-110°	157.0	1.5
110°-120°	213.2	2.1
120°-130°	242.4	2.4
130°-140°	245.9	2.4
140°-150°	226.3	2.2
150°-160°	186.7	1.8
160°-170°	125.6	1.2
170°-180°	43.6	0.4
0°-30°	2377.7	23.3
0°-40°	3894.2	38.2
0°-60°	6796.2	66.7
0°-90°	8670.9	85.1
90°-120°	452.3	4.4
90°-150°	1167.0	11.4
90°-180°	1523.0	14.9
0°-180°	10193.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3073	3073	3073	3073	3073	
5°	3096	3119	3083	3014	3096	295
15°	3044	2846	3021	2830	3044	860
25°	2899	2672	2866	2553	2899	1338
35°	2655	2478	2616	2024	2655	1662
45°	2310	1737	2270	1507	2310	1782
55°	1872	1014	1836	1083	1872	1673
65°	1362	674	1333	849	1362	1344
75°	760	375	737	572	760	807
85°	227	125	204	164	227	229
90°	3	69	3	79	3	15
95°	20	95	20	151	20	25
105°	105	161	102	204	105	113
115°	204	207	201	276	204	202
125°	293	237	286	339	293	260
135°	359	260	355	375	359	277
145°	405	276	401	398	405	254
155°	438	322	434	421	438	202
165°	457	401	454	457	457	129
175°	464	441	464	454	464	44
180°	457	457	457	457	457	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3
2.5°	3096.3	3079.9	3119.4	3125.9	3102.9	3109.5	3112.8	3076.6	3089.7	3040.4	3053.5
5°	3096.3	3093.0	3139.1	3132.5	3119.4	3122.6	3132.5	3089.7	3083.2	3023.9	3033.8
7.5°	3093.0	3099.6	3129.2	3122.6	3102.9	3112.8	3129.2	3096.3	3076.6	3007.5	3004.2
10°	3079.9	3089.7	3112.8	3093.0	3056.8	3073.3	3109.5	3089.7	3063.4	2981.2	2964.7
12.5°	3066.7	3073.3	3079.9	2997.6	2938.4	2977.9	3079.9	3073.3	3043.7	2951.5	2921.9
15°	3043.7	3053.5	3027.2	2908.8	2846.3	2885.7	3020.6	3047.0	3020.6	2908.8	2872.6
17.5°	3017.4	3027.2	2971.3	2839.7	2793.6	2813.3	2945.0	3014.1	2991.0	2869.3	2823.2
20°	2987.7	2997.6	2908.8	2767.3	2737.7	2754.1	2872.6	2977.9	2958.1	2823.2	2770.6
22.5°	2945.0	2961.4	2836.4	2717.9	2714.6	2714.6	2803.5	2935.1	2915.4	2767.3	2711.3
25°	2898.9	2915.4	2764.0	2671.9	2671.9	2671.9	2741.0	2879.2	2866.0	2708.1	2652.1
27.5°	2849.5	2866.0	2698.2	2639.0	2648.8	2632.4	2688.3	2816.6	2816.6	2648.8	2589.6
30°	2793.6	2810.1	2632.4	2586.3	2592.9	2586.3	2629.1	2750.8	2750.8	2579.7	2517.2
32.5°	2727.8	2744.2	2560.0	2523.8	2536.9	2530.4	2573.1	2685.0	2688.3	2507.3	2431.7
35°	2655.4	2675.1	2484.3	2464.6	2477.7	2467.8	2497.5	2615.9	2615.9	2428.4	2332.9
37.5°	2579.7	2599.5	2405.3	2398.7	2411.9	2402.0	2425.1	2543.5	2536.9	2346.1	2227.6
40°	2497.5	2520.5	2323.1	2323.1	2339.5	2332.9	2352.7	2467.8	2454.7	2263.8	2119.1
42.5°	2405.3	2434.9	2240.8	2244.1	2224.4	2250.7	2270.4	2388.9	2362.6	2171.7	2000.6
45°	2309.9	2346.1	2161.8	2102.6	1737.4	2079.6	2184.9	2309.9	2270.4	2079.6	1885.4
47.5°	2207.9	2254.0	2069.7	1852.5	1398.4	1822.9	2092.7	2211.2	2165.1	1980.9	1773.6
50°	2102.6	2155.3	1974.3	1638.7	1227.3	1605.7	1990.7	2112.5	2059.8	1878.9	1645.2
52.5°	1987.4	2046.7	1882.1	1451.1	1112.2	1421.5	1885.4	2017.1	1951.2	1770.3	1539.9
55°	1872.3	1934.8	1757.1	1289.9	1013.5	1263.5	1763.7	1895.3	1836.1	1658.4	1424.8
57.5°	1753.8	1816.3	1632.1	1148.4	927.9	1122.0	1625.5	1783.4	1717.6	1543.2	1309.6
60°	1628.8	1691.3	1497.2	1020.0	832.5	1000.3	1484.0	1658.4	1592.6	1424.8	1197.7
62.5°	1497.2	1559.7	1368.8	901.6	753.5	885.1	1329.3	1536.6	1464.3	1299.7	1082.6
65°	1362.3	1408.3	1217.5	789.7	674.5	776.5	1191.1	1385.3	1332.6	1168.1	974.0
67.5°	1220.8	1266.8	1085.9	691.0	598.9	677.8	1056.2	1250.4	1191.1	1039.8	865.4
70°	1072.7	1112.2	947.7	595.6	526.5	585.7	914.7	1099.0	1046.4	904.9	750.2
72.5°	921.3	957.5	799.6	506.7	450.8	500.2	766.7	947.7	895.0	763.4	644.9
75°	760.1	796.3	661.4	417.9	375.1	411.3	631.8	786.4	737.1	628.5	536.3
77.5°	608.7	651.5	523.2	329.0	299.4	322.5	496.9	635.1	585.7	503.4	431.1
80°	464.0	500.2	388.3	250.1	230.3	246.8	362.0	483.7	444.2	388.3	335.6
82.5°	335.6	355.4	266.5	184.3	174.4	181.0	246.8	342.2	322.5	279.7	246.8
85°	227.0	223.8	164.5	128.3	125.0	128.3	148.1	207.3	204.0	187.6	157.9
87.5°	95.4	88.8	75.7	52.6	46.1	49.4	59.2	79.0	75.7	79.0	75.7
90°	3.3	32.9	52.6	65.8	69.1	65.8	52.6	32.9	3.3	36.2	59.2
92.5°	6.6	42.8	62.5	72.4	79.0	72.4	59.2	42.8	6.6	55.9	59.2
95°	19.7	59.2	72.4	88.8	95.4	88.8	72.4	55.9	19.7	49.4	88.8
97.5°	39.5	75.7	85.6	98.7	102.0	95.4	82.3	75.7	36.2	88.8	92.1
100°	59.2	95.4	111.9	111.9	115.2	111.9	108.6	92.1	55.9	98.7	111.9
102.5°	82.3	108.6	128.3	138.2	138.2	138.2	128.3	108.6	75.7	121.7	154.7
105°	105.3	118.5	141.5	154.7	161.2	154.7	141.5	121.7	102.0	141.5	164.5
107.5°	131.6	128.3	154.7	167.8	174.4	167.8	154.7	131.6	125.0	157.9	184.3
110°	157.9	141.5	167.8	181.0	184.3	181.0	167.8	141.5	151.4	177.7	204.0



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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°	181.0	151.4	181.0	194.1	197.4	194.1	181.0	154.7	174.4	190.8	223.8
115°	204.0	161.2	187.6	204.0	207.3	204.0	187.6	164.5	200.7	207.3	240.2
117.5°	227.0	174.4	194.1	213.9	217.2	213.9	197.4	177.7	223.8	227.0	256.7
120°	250.1	190.8	204.0	220.5	227.0	223.8	204.0	194.1	243.5	243.5	269.8
122.5°	269.8	204.0	213.9	227.0	233.6	227.0	213.9	210.6	266.5	259.9	286.3
125°	292.9	217.2	220.5	233.6	236.9	233.6	223.8	220.5	286.3	273.1	296.1
127.5°	309.3	233.6	227.0	240.2	243.5	240.2	230.3	236.9	306.0	299.4	306.0
130°	329.0	250.1	233.6	246.8	250.1	250.1	233.6	256.7	322.5	319.2	319.2
132.5°	345.5	266.5	240.2	253.4	256.7	256.7	243.5	269.8	338.9	335.6	329.0
135°	358.7	289.6	253.4	253.4	259.9	259.9	256.7	292.9	355.4	352.1	345.5
137.5°	371.8	309.3	263.2	256.7	259.9	259.9	269.8	312.6	368.5	368.5	355.4
140°	385.0	329.0	269.8	263.2	263.2	269.8	279.7	332.3	381.7	381.7	358.7
142.5°	398.1	345.5	279.7	273.1	266.5	279.7	289.6	352.1	391.6	394.9	368.5
145°	404.7	362.0	292.9	283.0	276.4	292.9	306.0	368.5	401.4	408.0	388.3
147.5°	414.6	378.4	309.3	289.6	289.6	299.4	319.2	381.7	411.3	417.9	398.1
150°	424.5	391.6	322.5	299.4	292.9	309.3	332.3	394.9	421.2	427.8	411.3
152.5°	431.1	404.7	342.2	312.6	306.0	325.8	355.4	404.7	427.8	434.3	424.5
155°	437.6	414.6	365.2	325.8	322.5	338.9	375.1	414.6	434.3	440.9	434.3
157.5°	444.2	424.5	381.7	345.5	332.3	358.7	391.6	427.8	440.9	447.5	444.2
160°	447.5	431.1	401.4	365.2	358.7	381.7	408.0	431.1	444.2	454.1	450.8
162.5°	454.1	437.6	414.6	388.3	381.7	401.4	421.2	440.9	450.8	457.4	457.4
165°	457.4	444.2	427.8	408.0	401.4	421.2	431.1	447.5	454.1	457.4	460.7
167.5°	457.4	450.8	437.6	421.2	417.9	434.3	444.2	454.1	457.4	457.4	464.0
170°	460.7	454.1	444.2	434.3	431.1	444.2	447.5	457.4	460.7	457.4	467.2
172.5°	460.7	457.4	450.8	440.9	434.3	450.8	454.1	457.4	460.7	457.4	464.0
175°	464.0	457.4	457.4	450.8	440.9	457.4	457.4	457.4	464.0	457.4	460.7
177.5°	464.0	457.4	457.4	454.1	447.5	457.4	457.4	457.4	464.0	457.4	460.7
180°	457.4	457.4	457.4	457.4	457.4	457.4	457.4	457.4	457.4	457.4	457.4



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3
2.5°	3050.3	3027.2	3033.8	3060.1	3050.3	3096.3
5°	3027.2	3014.1	3014.1	3043.7	3040.4	3096.3
7.5°	2991.0	2977.9	2984.4	3017.4	3023.9	3093.0
10°	2948.3	2931.8	2938.4	2984.4	3000.9	3079.9
12.5°	2902.2	2889.0	2895.6	2948.3	2971.3	3066.7
15°	2849.5	2829.8	2849.5	2905.5	2935.1	3043.7
17.5°	2790.3	2764.0	2787.0	2859.4	2895.6	3017.4
20°	2731.1	2708.1	2721.2	2800.2	2852.8	2987.7
22.5°	2671.9	2639.0	2652.1	2734.4	2800.2	2945.0
25°	2602.8	2553.4	2579.7	2668.6	2744.2	2898.9
27.5°	2510.6	2434.9	2490.9	2602.8	2678.4	2849.5
30°	2388.9	2290.2	2372.4	2523.8	2609.3	2793.6
32.5°	2254.0	2148.7	2240.8	2434.9	2536.9	2727.8
35°	2119.1	2023.6	2105.9	2336.2	2461.3	2655.4
37.5°	1990.7	1908.5	1984.1	2230.9	2382.3	2579.7
40°	1869.0	1786.7	1865.7	2115.8	2296.7	2497.5
42.5°	1747.2	1671.6	1747.2	1994.0	2207.9	2405.3
45°	1625.5	1507.0	1618.9	1875.6	2112.5	2309.9
47.5°	1493.9	1355.7	1484.0	1747.2	2010.5	2207.9
50°	1368.8	1250.4	1362.3	1628.8	1905.2	2102.6
52.5°	1260.2	1164.8	1253.7	1507.0	1796.6	1987.4
55°	1158.2	1082.6	1158.2	1388.6	1681.4	1872.3
57.5°	1066.1	1016.8	1069.4	1286.6	1563.0	1753.8
60°	987.1	957.5	990.4	1161.5	1444.5	1628.8
62.5°	911.5	908.2	914.7	1062.8	1319.5	1497.2
65°	832.5	848.9	832.5	957.5	1194.4	1362.3
67.5°	753.5	786.4	760.1	852.2	1059.5	1220.8
70°	681.1	717.3	681.1	743.6	924.6	1072.7
72.5°	598.9	644.9	598.9	641.6	783.1	921.3
75°	519.9	572.5	523.2	536.3	648.2	760.1
77.5°	434.3	483.7	444.2	434.3	523.2	608.7
80°	345.5	365.2	345.5	342.2	404.7	464.0
82.5°	240.2	256.7	240.2	250.1	296.1	335.6
85°	157.9	164.5	157.9	161.2	197.4	227.0
87.5°	65.8	65.8	65.8	82.3	88.8	95.4
90°	72.4	79.0	72.4	59.2	36.2	3.3
92.5°	75.7	82.3	75.7	65.8	42.8	6.6
95°	134.9	151.4	128.3	82.3	69.1	19.7
97.5°	108.6	118.5	111.9	95.4	85.6	39.5
100°	128.3	138.2	128.3	134.9	105.3	59.2
102.5°	151.4	157.9	154.7	157.9	128.3	82.3
105°	197.4	204.0	197.4	171.1	148.1	105.3
107.5°	210.6	227.0	213.9	190.8	167.8	131.6
110°	227.0	240.2	230.3	210.6	184.3	157.9





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CATALOG NUMBER: 8WSL-LD2-100-UPL8-UNV-L840-CD2-U

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	243.5	259.9	250.1	233.6	197.4	181.0
115°	263.2	276.4	269.8	250.1	217.2	204.0
117.5°	283.0	292.9	286.3	263.2	236.9	227.0
120°	299.4	312.6	306.0	279.7	253.4	250.1
122.5°	312.6	325.8	319.2	296.1	269.8	269.8
125°	325.8	338.9	332.3	309.3	283.0	292.9
127.5°	335.6	352.1	345.5	319.2	312.6	309.3
130°	348.8	358.7	355.4	329.0	329.0	329.0
132.5°	355.4	368.5	362.0	342.2	348.8	345.5
135°	358.7	375.1	368.5	358.7	365.2	358.7
137.5°	365.2	378.4	375.1	368.5	381.7	371.8
140°	375.1	381.7	385.0	375.1	394.9	385.0
142.5°	385.0	388.3	394.9	385.0	408.0	398.1
145°	391.6	398.1	404.7	404.7	417.9	404.7
147.5°	391.6	401.4	401.4	411.3	431.1	414.6
150°	401.4	394.9	414.6	424.5	437.6	424.5
152.5°	414.6	411.3	427.8	437.6	444.2	431.1
155°	417.9	421.2	431.1	447.5	450.8	437.6
157.5°	431.1	427.8	444.2	457.4	457.4	444.2
160°	440.9	440.9	457.4	464.0	460.7	447.5
162.5°	450.8	450.8	467.2	467.2	464.0	454.1
165°	457.4	457.4	473.8	470.5	464.0	457.4
167.5°	460.7	464.0	477.1	473.8	464.0	457.4
170°	464.0	464.0	477.1	470.5	464.0	460.7
172.5°	464.0	460.7	473.8	467.2	460.7	460.7
175°	460.7	454.1	467.2	460.7	460.7	464.0
177.5°	457.4	447.5	457.4	457.4	460.7	464.0
180°	457.4	457.4	457.4	457.4	457.4	457.4

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