

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: P197481

Luminaire Tested: **8WSL-LD2-100-UPL15-UNV-L830-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197481
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-L830-CD2-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L830
Light Source: (476) 3000K CCT, 80 CRI LEDS
EL236N0119D830
Ballast/Driver: OSRAM
OT50W

Summary

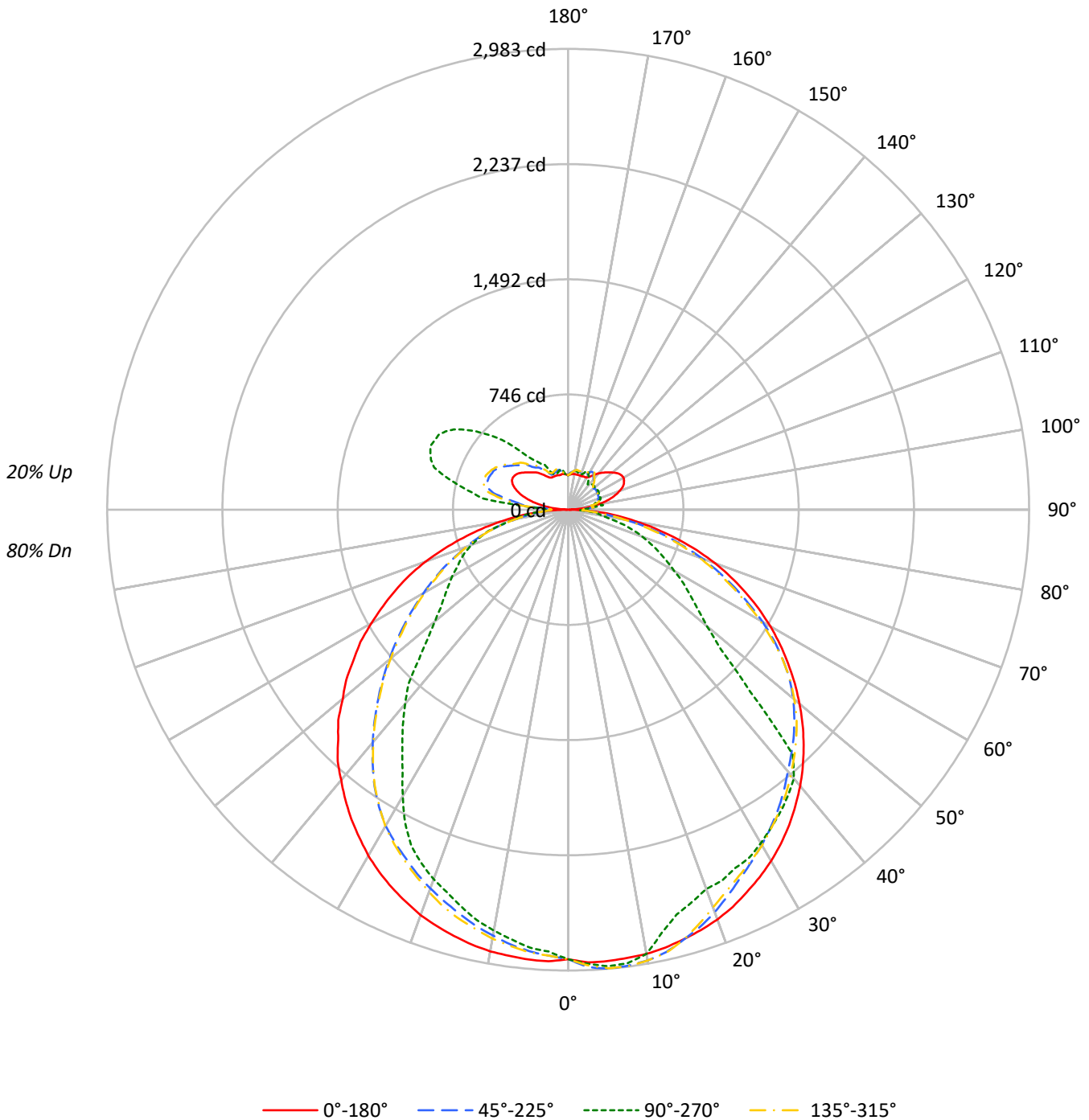
Lumens per Lamp: N/A
Luminaire Lumens: 10298.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

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°	8242	8242	8242	8242
5°	8340	8435	8312	8093
10°	8398	8398	8350	7956
15°	8445	7955	8376	7808
20°	8510	7875	8419	7674
25°	8541	7998	8436	7507
30°	8589	8152	8458	7004
35°	8618	8271	8456	6469
40°	8635	8400	8450	6065
45°	8632	6678	8431	5460
50°	8613	5153	8391	4961
55°	8579	4751	8365	4818
60°	8554	4486	8327	4921
65°	8487	4344	8262	5150
70°	8356	4233	8135	5506
75°	7971	4022	7715	5850
80°	7466	3651	7248	5832
85°	7491	4778	6949	6949



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.9	2.7
10°-20°	785.9	7.6
20°-30°	1187.6	11.5
30°-40°	1429.3	13.9
40°-50°	1453.5	14.1
50°-60°	1265.2	12.3
60°-70°	986.9	9.6
70°-80°	610.1	5.9
80°-90°	214.7	2.1
90°-100°	202.1	2.0
100°-110°	391.3	3.8
110°-120°	428.2	4.2
120°-130°	375.4	3.6
130°-140°	281.2	2.7
140°-150°	192.5	1.9
150°-160°	122.6	1.2
160°-170°	71.7	0.7
170°-180°	23.1	0.2
0°-30°	2250.3	21.9
0°-40°	3679.6	35.7
0°-60°	6398.3	62.1
0°-90°	8209.9	79.7
90°-120°	1021.6	9.9
90°-150°	1870.7	18.2
90°-180°	2088.0	20.3
0°-180°	10298.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2910	2910	2910	2910	2910	
5°	2933	2967	2923	2846	2933	279
15°	2880	2713	2856	2663	2880	814
25°	2733	2559	2699	2402	2733	1261
35°	2492	2392	2445	1871	2492	1559
45°	2155	1667	2105	1363	2155	1662
55°	1737	962	1694	976	1737	1554
65°	1266	648	1233	768	1266	1251
75°	728	368	705	534	728	771
85°	230	147	214	214	230	230
90°	3	94	3	147	3	17
95°	90	154	70	307	90	94
105°	287	190	277	818	287	299
115°	398	217	398	982	398	389
125°	404	227	404	905	404	359
135°	341	227	341	662	341	265
145°	267	227	274	394	267	170
155°	237	274	234	271	237	109
165°	234	247	230	251	234	66
175°	230	240	230	234	230	22
180°	224	224	224	224	224	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2909.8	2909.8	2909.8	2909.8	2909.8	2909.8	2909.8	2909.8	2909.8	2909.8	2909.8
2.5°	2933.2	2919.8	2963.3	2966.6	2943.2	2953.2	2953.2	2916.5	2926.5	2883.1	2889.8
5°	2933.2	2936.5	2983.3	2980.0	2966.6	2970.0	2980.0	2933.2	2923.2	2863.0	2869.7
7.5°	2926.5	2943.2	2976.6	2973.3	2959.9	2963.3	2980.0	2939.9	2913.2	2843.0	2839.7
10°	2919.8	2936.5	2963.3	2946.6	2919.8	2929.9	2963.3	2936.5	2903.1	2819.6	2799.6
12.5°	2903.1	2919.8	2933.2	2849.7	2802.9	2843.0	2936.5	2919.8	2883.1	2786.2	2759.5
15°	2879.8	2899.8	2883.1	2766.2	2712.7	2749.5	2883.1	2896.5	2856.4	2742.8	2709.4
17.5°	2853.0	2876.4	2833.0	2702.7	2662.6	2679.3	2812.9	2866.4	2826.3	2699.3	2659.3
20°	2823.0	2849.7	2772.8	2635.9	2612.5	2625.9	2739.4	2833.0	2792.9	2652.6	2609.1
22.5°	2782.9	2812.9	2702.7	2589.1	2599.1	2589.1	2672.6	2789.5	2746.1	2602.5	2552.4
25°	2732.8	2766.2	2632.5	2549.0	2559.0	2555.7	2615.8	2732.8	2699.3	2542.3	2488.9
27.5°	2682.6	2716.1	2569.1	2522.3	2539.0	2518.9	2562.4	2672.6	2645.9	2478.9	2428.7
30°	2625.9	2662.6	2505.6	2475.5	2492.2	2478.9	2508.9	2612.5	2585.8	2412.0	2361.9
32.5°	2562.4	2599.1	2438.8	2418.7	2442.1	2425.4	2445.4	2545.7	2515.6	2338.5	2278.4
35°	2492.2	2529.0	2368.6	2368.6	2392.0	2372.0	2382.0	2478.9	2445.4	2265.0	2184.9
37.5°	2415.4	2455.5	2291.8	2308.5	2335.2	2315.2	2315.2	2408.7	2368.6	2184.9	2078.0
40°	2335.2	2378.6	2211.6	2248.3	2271.7	2248.3	2241.7	2335.2	2285.1	2104.7	1967.7
42.5°	2248.3	2295.1	2138.1	2181.5	2151.5	2181.5	2164.8	2258.4	2208.3	2017.8	1854.1
45°	2154.8	2214.9	2064.6	2037.9	1667.0	2017.8	2088.0	2178.2	2104.7	1934.3	1740.5
47.5°	2057.9	2121.4	1984.4	1790.7	1339.7	1770.6	2004.5	2091.3	2017.8	1844.1	1627.0
50°	1954.4	2027.9	1900.9	1576.8	1169.3	1556.8	1910.9	2001.1	1904.2	1747.2	1513.4
52.5°	1847.5	1927.6	1807.4	1393.1	1055.7	1373.1	1810.7	1904.2	1810.7	1643.7	1403.1
55°	1737.2	1820.7	1697.1	1222.7	962.1	1219.4	1693.8	1800.7	1693.8	1540.1	1292.9
57.5°	1627.0	1720.5	1580.2	1099.1	882.0	1082.4	1563.5	1693.8	1593.6	1433.2	1186.0
60°	1510.0	1596.9	1453.2	965.5	791.8	962.1	1433.2	1583.5	1469.9	1322.9	1082.4
62.5°	1389.8	1486.6	1316.3	848.6	718.3	845.2	1292.9	1459.9	1349.7	1209.4	982.2
65°	1266.2	1359.7	1186.0	755.0	648.1	748.3	1162.6	1333.0	1232.7	1095.8	888.6
67.5°	1139.2	1226.1	1055.7	664.8	578.0	658.1	1029.0	1199.3	1112.5	978.8	788.4
70°	1008.9	1089.1	922.1	578.0	511.1	574.6	898.7	1062.4	982.2	858.6	698.2
72.5°	871.9	945.4	781.7	494.4	441.0	491.1	761.7	922.1	838.5	731.6	618.0
75°	728.3	798.4	651.5	410.9	367.5	407.6	631.4	771.7	704.9	614.7	524.5
77.5°	591.3	661.5	517.8	317.4	280.6	310.7	494.4	631.4	574.6	497.8	427.6
80°	457.7	514.5	380.8	237.2	223.8	237.2	370.8	484.4	444.3	390.9	334.1
82.5°	337.4	370.8	257.2	193.8	193.8	193.8	250.6	344.1	327.4	290.6	253.9
85°	230.5	230.5	173.7	147.0	147.0	147.0	170.4	203.8	213.8	193.8	193.8
87.5°	96.9	100.2	90.2	80.2	76.8	80.2	86.9	83.5	83.5	93.5	116.9
90°	3.3	43.4	73.5	90.2	93.5	86.9	66.8	40.1	3.3	56.8	103.6
92.5°	23.4	93.5	86.9	113.6	116.9	106.9	90.2	73.5	13.4	103.6	110.2
95°	90.2	110.2	170.4	173.7	153.7	147.0	167.0	103.6	70.2	140.3	280.6
97.5°	143.7	167.0	153.7	200.4	227.2	200.4	160.4	160.4	133.6	217.2	327.4
100°	197.1	177.1	157.0	173.7	200.4	177.1	150.3	177.1	187.1	253.9	400.9
102.5°	247.2	197.1	197.1	170.4	173.7	167.0	190.4	193.8	233.9	287.3	494.4
105°	287.3	203.8	207.1	193.8	190.4	193.8	207.1	207.1	277.3	317.4	537.9
107.5°	324.1	210.5	203.8	213.8	217.2	213.8	203.8	210.5	317.4	337.4	547.9
110°	354.1	213.8	207.1	213.8	223.8	213.8	207.1	217.2	350.8	357.5	554.6



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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°	380.8	217.2	213.8	210.5	220.5	210.5	213.8	223.8	377.5	367.5	554.6
115°	397.6	220.5	213.8	213.8	217.2	213.8	217.2	227.2	397.6	370.8	547.9
117.5°	407.6	227.2	217.2	220.5	223.8	220.5	217.2	233.9	410.9	384.2	544.5
120°	414.3	250.6	217.2	223.8	227.2	223.8	217.2	253.9	414.3	390.9	531.2
122.5°	410.9	260.6	220.5	223.8	230.5	223.8	220.5	263.9	410.9	387.5	514.5
125°	404.2	270.6	220.5	220.5	227.2	223.8	223.8	270.6	404.2	380.8	491.1
127.5°	390.9	294.0	220.5	223.8	223.8	223.8	223.8	290.6	390.9	384.2	467.7
130°	374.2	310.7	213.8	227.2	223.8	230.5	220.5	310.7	374.2	374.2	447.7
132.5°	357.5	317.4	213.8	227.2	227.2	230.5	217.2	317.4	357.5	360.8	427.6
135°	340.8	324.1	227.2	223.8	227.2	227.2	230.5	324.1	340.8	347.4	414.3
137.5°	324.1	327.4	243.9	213.8	223.8	217.2	250.6	327.4	327.4	327.4	394.2
140°	307.4	324.1	257.2	207.1	210.5	213.8	263.9	327.4	314.0	317.4	360.8
142.5°	287.3	314.0	267.3	223.8	207.1	230.5	273.9	324.1	294.0	307.4	344.1
145°	267.3	304.0	287.3	247.2	227.2	257.2	297.3	314.0	273.9	300.7	334.1
147.5°	250.6	287.3	290.6	260.6	250.6	270.6	300.7	300.7	253.9	287.3	310.7
150°	240.5	270.6	280.6	270.6	260.6	284.0	294.0	277.3	240.5	277.3	290.6
152.5°	237.2	257.2	257.2	284.0	280.6	297.3	270.6	263.9	233.9	267.3	263.9
155°	237.2	253.9	247.2	260.6	273.9	273.9	257.2	257.2	233.9	267.3	250.6
157.5°	233.9	257.2	247.2	243.9	250.6	257.2	257.2	260.6	233.9	260.6	250.6
160°	233.9	260.6	250.6	240.5	243.9	253.9	260.6	260.6	233.9	260.6	253.9
162.5°	233.9	253.9	253.9	243.9	243.9	257.2	260.6	257.2	233.9	253.9	260.6
165°	233.9	253.9	257.2	250.6	247.2	263.9	260.6	250.6	230.5	250.6	263.9
167.5°	233.9	247.2	260.6	253.9	253.9	263.9	263.9	247.2	230.5	240.5	263.9
170°	233.9	243.9	257.2	253.9	257.2	267.3	257.2	243.9	233.9	237.2	253.9
172.5°	233.9	237.2	250.6	253.9	253.9	260.6	250.6	237.2	233.9	230.5	243.9
175°	230.5	237.2	243.9	243.9	240.5	250.6	240.5	233.9	230.5	227.2	233.9
177.5°	227.2	230.5	237.2	237.2	230.5	237.2	230.5	227.2	227.2	223.8	230.5
180°	223.8	223.8	223.8	223.8	223.8	223.8	223.8	223.8	223.8	223.8	223.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2909.8	2909.8	2909.8	2909.8	2909.8	2909.8
2.5°	2886.4	2863.0	2869.7	2889.8	2886.4	2933.2
5°	2856.4	2846.3	2846.3	2876.4	2873.1	2933.2
7.5°	2823.0	2806.3	2816.3	2849.7	2859.7	2926.5
10°	2779.5	2766.2	2769.5	2819.6	2836.3	2919.8
12.5°	2736.1	2722.7	2732.8	2779.5	2802.9	2903.1
15°	2686.0	2662.6	2689.3	2739.4	2769.5	2879.8
17.5°	2625.9	2599.1	2625.9	2692.7	2729.4	2853.0
20°	2572.4	2545.7	2562.4	2632.5	2682.6	2823.0
22.5°	2512.3	2478.9	2492.2	2569.1	2632.5	2782.9
25°	2445.4	2402.0	2422.1	2505.6	2575.7	2732.8
27.5°	2358.6	2285.1	2335.2	2438.8	2505.6	2682.6
30°	2238.3	2141.4	2221.6	2365.3	2442.1	2625.9
32.5°	2098.0	1994.4	2081.3	2275.1	2368.6	2562.4
35°	1961.0	1870.8	1951.0	2181.5	2295.1	2492.2
37.5°	1840.8	1757.2	1830.7	2074.6	2214.9	2415.4
40°	1717.2	1640.3	1713.8	1961.0	2134.8	2335.2
42.5°	1603.6	1530.1	1600.2	1847.5	2047.9	2248.3
45°	1483.3	1363.0	1476.6	1730.5	1954.4	2154.8
47.5°	1356.4	1229.4	1346.3	1616.9	1860.8	2057.9
50°	1239.4	1125.8	1232.7	1500.0	1760.6	1954.4
52.5°	1135.9	1039.0	1132.5	1383.1	1657.0	1847.5
55°	1039.0	975.5	1042.3	1276.2	1560.1	1737.2
57.5°	962.1	918.7	965.5	1172.6	1453.2	1627.0
60°	895.3	868.6	898.7	1069.0	1339.7	1510.0
62.5°	821.8	811.8	821.8	968.8	1229.4	1389.8
65°	758.4	768.4	758.4	878.6	1112.5	1266.2
67.5°	698.2	721.6	701.6	781.7	995.6	1139.2
70°	631.4	664.8	634.7	694.9	875.3	1008.9
72.5°	561.3	601.3	561.3	611.4	748.3	871.9
75°	487.8	534.5	491.1	521.2	628.1	728.3
77.5°	407.6	437.6	414.3	424.3	511.1	591.3
80°	324.1	357.5	327.4	334.1	404.2	457.7
82.5°	270.6	294.0	273.9	253.9	300.7	337.4
85°	200.4	213.8	207.1	197.1	207.1	230.5
87.5°	123.6	130.3	123.6	123.6	106.9	96.9
90°	137.0	147.0	137.0	106.9	60.1	3.3
92.5°	140.3	153.7	140.3	116.9	113.6	23.4
95°	314.0	307.4	334.1	304.0	173.7	90.2
97.5°	487.8	557.9	504.5	364.1	233.9	143.7
100°	561.3	628.1	584.6	454.3	267.3	197.1
102.5°	648.1	721.6	674.8	531.2	300.7	247.2
105°	755.0	818.5	778.4	561.3	330.7	287.3
107.5°	811.8	908.7	828.5	574.6	350.8	324.1
110°	841.9	945.4	868.6	578.0	367.5	354.1



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CATALOG NUMBER: 8WSL-LD2-100-UPL15-UNV-L830-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	865.3	965.5	885.3	578.0	374.2	380.8
115°	865.3	982.2	885.3	567.9	384.2	397.6
117.5°	865.3	972.2	885.3	557.9	397.6	407.6
120°	835.2	968.8	861.9	544.5	400.9	414.3
122.5°	811.8	942.1	828.5	527.8	400.9	410.9
125°	768.4	905.4	788.4	507.8	394.2	404.2
127.5°	721.6	851.9	738.3	484.4	397.6	390.9
130°	678.2	791.8	688.2	461.0	384.2	374.2
132.5°	621.4	724.9	631.4	444.3	370.8	357.5
135°	567.9	661.5	581.3	431.0	354.1	340.8
137.5°	511.1	594.7	524.5	404.2	337.4	324.1
140°	444.3	511.1	457.7	374.2	327.4	307.4
142.5°	400.9	437.6	414.3	360.8	314.0	287.3
145°	374.2	394.2	384.2	347.4	307.4	267.3
147.5°	347.4	367.5	357.5	320.7	290.6	250.6
150°	337.4	337.4	350.8	297.3	280.6	240.5
152.5°	300.7	327.4	314.0	270.6	273.9	237.2
155°	257.2	270.6	270.6	260.6	273.9	237.2
157.5°	240.5	250.6	253.9	260.6	267.3	233.9
160°	240.5	243.9	253.9	263.9	263.9	233.9
162.5°	247.2	243.9	260.6	270.6	257.2	233.9
165°	253.9	250.6	267.3	273.9	250.6	233.9
167.5°	260.6	260.6	273.9	270.6	243.9	233.9
170°	260.6	267.3	273.9	260.6	240.5	233.9
172.5°	250.6	253.9	260.6	243.9	230.5	233.9
175°	237.2	233.9	243.9	233.9	230.5	230.5
177.5°	230.5	220.5	230.5	227.2	223.8	227.2
180°	223.8	223.8	223.8	223.8	223.8	223.8

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