

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: P197443

Luminaire Tested: **8WSL-LD2-130-UPL8-UNV-L840-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197443
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-LD2-130-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
OT85W1202772A0DIML

Summary

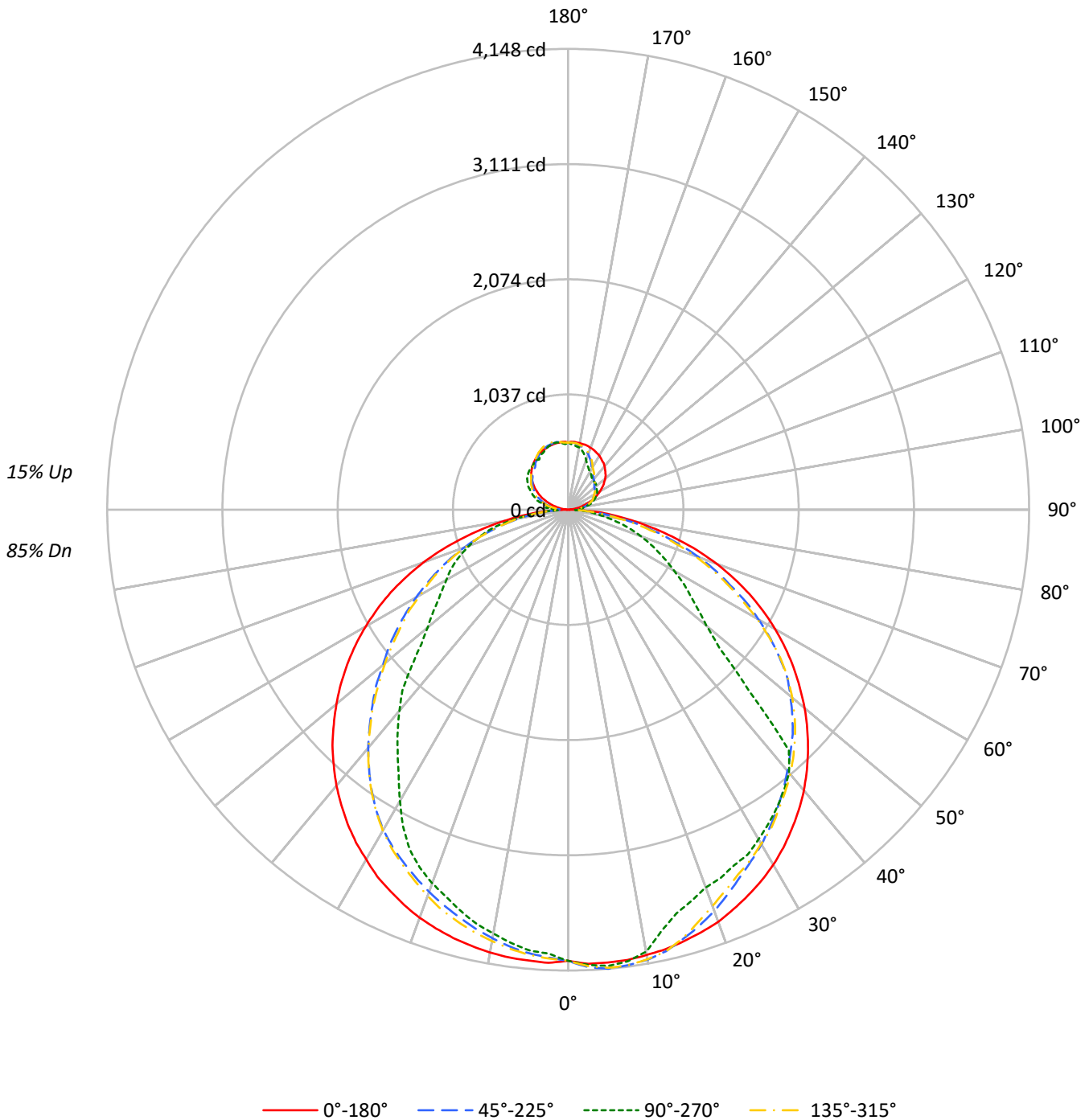
Lumens per Lamp: N/A
Luminaire Lumens: 13469.8 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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	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°	11503	11503	11503	11503
5°	11634	11720	11584	11325
10°	11706	11618	11643	11143
15°	11794	11029	11705	10965
20°	11901	10905	11783	10786
25°	11972	11034	11836	10545
30°	12074	11206	11889	9898
35°	12133	11321	11953	9247
40°	12203	11431	11994	8730
45°	12227	9196	12018	7977
50°	12243	7147	11994	7281
55°	12218	6614	11981	7065
60°	12193	6232	11922	7168
65°	12065	5974	11802	7519
70°	11739	5762	11451	7850
75°	10993	5425	10659	8279
80°	10001	4965	9575	7872
85°	9750	5369	8762	7066



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.0	2.9
10°-20°	1096.3	8.1
20°-30°	1659.5	12.3
30°-40°	2003.9	14.9
40°-50°	2045.9	15.2
50°-60°	1788.7	13.3
60°-70°	1386.4	10.3
70°-80°	833.5	6.2
80°-90°	257.3	1.9
90°-100°	108.5	0.8
100°-110°	207.4	1.5
110°-120°	281.8	2.1
120°-130°	320.3	2.4
130°-140°	324.9	2.4
140°-150°	299.1	2.2
150°-160°	246.7	1.8
160°-170°	165.9	1.2
170°-180°	57.7	0.4
0°-30°	3141.8	23.3
0°-40°	5145.7	38.2
0°-60°	8980.3	66.7
0°-90°	11457.5	85.1
90°-120°	597.7	4.4
90°-150°	1542.0	11.4
90°-180°	2012.0	14.9
0°-180°	13469.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4061	4061	4061	4061	4061	
5°	4091	4122	4074	3983	4091	390
15°	4022	3761	3991	3739	4022	1137
25°	3830	3530	3787	3374	3830	1768
35°	3509	3274	3457	2674	3509	2197
45°	3052	2296	3000	1991	3052	2354
55°	2474	1339	2426	1430	2474	2211
65°	1800	891	1761	1122	1800	1776
75°	1004	496	974	756	1004	1066
85°	300	165	270	217	300	303
90°	4	91	4	104	4	20
95°	26	126	26	200	26	33
105°	139	213	135	270	139	149
115°	270	274	265	365	270	267
125°	387	313	378	448	387	343
135°	474	344	470	496	474	366
145°	535	365	530	526	535	336
155°	578	426	574	556	578	267
165°	604	530	600	604	604	171
175°	613	583	613	600	613	58
180°	604	604	604	604	604	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4061.0	4061.0	4061.0	4061.0	4061.0	4061.0	4061.0	4061.0	4061.0	4061.0	4061.0
2.5°	4091.4	4069.7	4121.8	4130.5	4100.1	4108.8	4113.1	4065.3	4082.7	4017.5	4034.9
5°	4091.4	4087.0	4147.9	4139.2	4121.8	4126.2	4139.2	4082.7	4074.0	3995.7	4008.8
7.5°	4087.0	4095.7	4134.9	4126.2	4100.1	4113.1	4134.9	4091.4	4065.3	3974.0	3969.7
10°	4069.7	4082.7	4113.1	4087.0	4039.2	4061.0	4108.8	4082.7	4047.9	3939.2	3917.5
12.5°	4052.3	4061.0	4069.7	3961.0	3882.7	3934.9	4069.7	4061.0	4021.8	3900.1	3861.0
15°	4021.8	4034.9	4000.1	3843.6	3761.0	3813.1	3991.4	4026.2	3991.4	3843.6	3795.7
17.5°	3987.0	4000.1	3926.2	3752.3	3691.4	3717.5	3891.4	3982.7	3952.3	3791.4	3730.5
20°	3947.9	3961.0	3843.6	3656.6	3617.5	3639.2	3795.7	3934.9	3908.8	3730.5	3661.0
22.5°	3891.4	3913.1	3747.9	3591.4	3587.0	3587.0	3704.4	3878.3	3852.3	3656.6	3582.7
25°	3830.5	3852.3	3652.3	3530.5	3530.5	3530.5	3621.8	3804.4	3787.0	3578.3	3504.4
27.5°	3765.3	3787.0	3565.3	3487.0	3500.1	3478.3	3552.3	3721.8	3721.8	3500.1	3421.8
30°	3691.4	3713.1	3478.3	3417.5	3426.2	3417.5	3474.0	3634.9	3634.9	3408.8	3326.2
32.5°	3604.4	3626.2	3382.7	3334.9	3352.2	3343.6	3400.1	3547.9	3552.3	3313.1	3213.1
35°	3508.8	3534.9	3282.7	3256.6	3274.0	3260.9	3300.1	3456.6	3456.6	3208.8	3082.7
37.5°	3408.8	3434.9	3178.3	3169.6	3187.0	3174.0	3204.4	3360.9	3352.2	3100.1	2943.5
40°	3300.1	3330.5	3069.6	3069.6	3091.4	3082.7	3108.8	3260.9	3243.6	2991.4	2800.1
42.5°	3178.3	3217.5	2960.9	2965.3	2939.2	2974.0	3000.1	3156.6	3121.8	2869.6	2643.5
45°	3052.2	3100.1	2856.6	2778.3	2295.7	2747.9	2887.0	3052.2	3000.1	2747.9	2491.4
47.5°	2917.5	2978.3	2734.8	2447.9	1847.9	2408.7	2765.3	2921.8	2860.9	2617.4	2343.5
50°	2778.3	2847.9	2608.8	2165.3	1621.8	2121.8	2630.5	2791.4	2721.8	2482.7	2174.0
52.5°	2626.1	2704.4	2487.0	1917.4	1469.6	1878.3	2491.4	2665.3	2578.3	2339.2	2034.8
55°	2474.0	2556.6	2321.8	1704.4	1339.2	1669.6	2330.5	2504.4	2426.1	2191.4	1882.7
57.5°	2317.4	2400.1	2156.6	1517.4	1226.1	1482.6	2147.9	2356.6	2269.6	2039.2	1730.5
60°	2152.2	2234.8	1978.3	1347.9	1100.0	1321.8	1960.9	2191.4	2104.4	1882.7	1582.6
62.5°	1978.3	2060.9	1808.7	1191.3	995.7	1169.6	1756.6	2030.5	1934.8	1717.4	1430.5
65°	1800.0	1860.9	1608.7	1043.5	891.3	1026.1	1573.9	1830.5	1760.9	1543.5	1287.0
67.5°	1613.1	1674.0	1434.8	913.1	791.3	895.7	1395.7	1652.2	1573.9	1373.9	1143.5
70°	1417.4	1469.6	1252.2	787.0	695.7	773.9	1208.7	1452.2	1382.6	1195.7	991.3
72.5°	1217.4	1265.2	1056.5	669.6	595.7	660.9	1013.1	1252.2	1182.6	1008.7	852.2
75°	1004.4	1052.2	873.9	552.2	495.7	543.5	834.8	1039.2	973.9	830.5	708.7
77.5°	804.4	860.9	691.3	434.8	395.7	426.1	656.5	839.1	773.9	665.2	569.6
80°	613.1	660.9	513.1	330.4	304.4	326.1	478.3	639.1	587.0	513.1	443.5
82.5°	443.5	469.6	352.2	243.5	230.4	239.1	326.1	452.2	426.1	369.6	326.1
85°	300.0	295.7	217.4	169.6	165.2	169.6	195.7	273.9	269.6	247.8	208.7
87.5°	126.1	117.4	100.0	69.6	60.9	65.2	78.3	104.4	100.0	104.4	100.0
90°	4.3	43.5	69.6	87.0	91.3	87.0	69.6	43.5	4.3	47.8	78.3
92.5°	8.7	56.5	82.6	95.7	104.4	95.7	78.3	56.5	8.7	73.9	78.3
95°	26.1	78.3	95.7	117.4	126.1	117.4	95.7	73.9	26.1	65.2	117.4
97.5°	52.2	100.0	113.0	130.4	134.8	126.1	108.7	100.0	47.8	117.4	121.7
100°	78.3	126.1	147.8	147.8	152.2	147.8	143.5	121.7	73.9	130.4	147.8
102.5°	108.7	143.5	169.6	182.6	182.6	182.6	169.6	143.5	100.0	160.9	204.4
105°	139.1	156.5	187.0	204.4	213.0	204.4	187.0	160.9	134.8	187.0	217.4
107.5°	173.9	169.6	204.4	221.7	230.4	221.7	204.4	173.9	165.2	208.7	243.5
110°	208.7	187.0	221.7	239.1	243.5	239.1	221.7	187.0	200.0	234.8	269.6



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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°	239.1	200.0	239.1	256.5	260.9	256.5	239.1	204.4	230.4	252.2	295.7
115°	269.6	213.0	247.8	269.6	273.9	269.6	247.8	217.4	265.2	273.9	317.4
117.5°	300.0	230.4	256.5	282.6	287.0	282.6	260.9	234.8	295.7	300.0	339.1
120°	330.4	252.2	269.6	291.3	300.0	295.7	269.6	256.5	321.7	321.7	356.5
122.5°	356.5	269.6	282.6	300.0	308.7	300.0	282.6	278.3	352.2	343.5	378.3
125°	387.0	287.0	291.3	308.7	313.1	308.7	295.7	291.3	378.3	360.9	391.3
127.5°	408.7	308.7	300.0	317.4	321.7	317.4	304.4	313.1	404.4	395.7	404.4
130°	434.8	330.4	308.7	326.1	330.4	330.4	308.7	339.1	426.1	421.7	421.7
132.5°	456.5	352.2	317.4	334.8	339.1	339.1	321.7	356.5	447.8	443.5	434.8
135°	473.9	382.6	334.8	334.8	343.5	343.5	339.1	387.0	469.6	465.2	456.5
137.5°	491.3	408.7	347.8	339.1	343.5	343.5	356.5	413.1	487.0	487.0	469.6
140°	508.7	434.8	356.5	347.8	347.8	356.5	369.6	439.1	504.4	504.4	473.9
142.5°	526.1	456.5	369.6	360.9	352.2	369.6	382.6	465.2	517.4	521.8	487.0
145°	534.8	478.3	387.0	373.9	365.2	387.0	404.4	487.0	530.4	539.1	513.1
147.5°	547.8	500.0	408.7	382.6	382.6	395.7	421.7	504.4	543.5	552.2	526.1
150°	560.9	517.4	426.1	395.7	387.0	408.7	439.1	521.8	556.5	565.2	543.5
152.5°	569.6	534.8	452.2	413.1	404.4	430.4	469.6	534.8	565.2	573.9	560.9
155°	578.3	547.8	482.6	430.4	426.1	447.8	495.7	547.8	573.9	582.6	573.9
157.5°	587.0	560.9	504.4	456.5	439.1	473.9	517.4	565.2	582.6	591.3	587.0
160°	591.3	569.6	530.4	482.6	473.9	504.4	539.1	569.6	587.0	600.0	595.7
162.5°	600.0	578.3	547.8	513.1	504.4	530.4	556.5	582.6	595.7	604.4	604.4
165°	604.4	587.0	565.2	539.1	530.4	556.5	569.6	591.3	600.0	604.4	608.7
167.5°	604.4	595.7	578.3	556.5	552.2	573.9	587.0	600.0	604.4	604.4	613.1
170°	608.7	600.0	587.0	573.9	569.6	587.0	591.3	604.4	608.7	604.4	617.4
172.5°	608.7	604.4	595.7	582.6	573.9	595.7	600.0	604.4	608.7	604.4	613.1
175°	613.1	604.4	604.4	595.7	582.6	604.4	604.4	604.4	613.1	604.4	608.7
177.5°	613.1	604.4	604.4	600.0	591.3	604.4	604.4	604.4	613.1	604.4	608.7
180°	604.4	604.4	604.4	604.4	604.4	604.4	604.4	604.4	604.4	604.4	604.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4061.0	4061.0	4061.0	4061.0	4061.0	4061.0
2.5°	4030.5	4000.1	4008.8	4043.6	4030.5	4091.4
5°	4000.1	3982.7	3982.7	4021.8	4017.5	4091.4
7.5°	3952.3	3934.9	3943.6	3987.0	3995.7	4087.0
10°	3895.7	3874.0	3882.7	3943.6	3965.3	4069.7
12.5°	3834.9	3817.5	3826.2	3895.7	3926.2	4052.3
15°	3765.3	3739.2	3765.3	3839.2	3878.3	4021.8
17.5°	3687.0	3652.3	3682.7	3778.3	3826.2	3987.0
20°	3608.8	3578.3	3595.7	3700.1	3769.6	3947.9
22.5°	3530.5	3487.0	3504.4	3613.1	3700.1	3891.4
25°	3439.2	3374.0	3408.8	3526.2	3626.2	3830.5
27.5°	3317.5	3217.5	3291.4	3439.2	3539.2	3765.3
30°	3156.6	3026.2	3134.9	3334.9	3447.9	3691.4
32.5°	2978.3	2839.2	2960.9	3217.5	3352.2	3604.4
35°	2800.1	2674.0	2782.7	3087.0	3252.2	3508.8
37.5°	2630.5	2521.8	2621.8	2947.9	3147.9	3408.8
40°	2469.6	2360.9	2465.3	2795.7	3034.9	3300.1
42.5°	2308.7	2208.7	2308.7	2634.8	2917.5	3178.3
45°	2147.9	1991.3	2139.2	2478.3	2791.4	3052.2
47.5°	1974.0	1791.3	1960.9	2308.7	2656.6	2917.5
50°	1808.7	1652.2	1800.0	2152.2	2517.4	2778.3
52.5°	1665.3	1539.2	1656.6	1991.3	2374.0	2626.1
55°	1530.5	1430.5	1530.5	1834.8	2221.8	2474.0
57.5°	1408.7	1343.5	1413.1	1700.0	2065.3	2317.4
60°	1304.4	1265.2	1308.7	1534.8	1908.7	2152.2
62.5°	1204.4	1200.0	1208.7	1404.4	1743.5	1978.3
65°	1100.0	1121.8	1100.0	1265.2	1578.3	1800.0
67.5°	995.7	1039.2	1004.4	1126.1	1400.0	1613.1
70°	900.0	947.8	900.0	982.6	1221.8	1417.4
72.5°	791.3	852.2	791.3	847.8	1034.8	1217.4
75°	687.0	756.5	691.3	708.7	856.5	1004.4
77.5°	573.9	639.1	587.0	573.9	691.3	804.4
80°	456.5	482.6	456.5	452.2	534.8	613.1
82.5°	317.4	339.1	317.4	330.4	391.3	443.5
85°	208.7	217.4	208.7	213.0	260.9	300.0
87.5°	87.0	87.0	87.0	108.7	117.4	126.1
90°	95.7	104.4	95.7	78.3	47.8	4.3
92.5°	100.0	108.7	100.0	87.0	56.5	8.7
95°	178.3	200.0	169.6	108.7	91.3	26.1
97.5°	143.5	156.5	147.8	126.1	113.0	52.2
100°	169.6	182.6	169.6	178.3	139.1	78.3
102.5°	200.0	208.7	204.4	208.7	169.6	108.7
105°	260.9	269.6	260.9	226.1	195.7	139.1
107.5°	278.3	300.0	282.6	252.2	221.7	173.9
110°	300.0	317.4	304.4	278.3	243.5	208.7



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CATALOG NUMBER: 8WSL-LD2-130-UPL8-UNV-L840-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	321.7	343.5	330.4	308.7	260.9	239.1
115°	347.8	365.2	356.5	330.4	287.0	269.6
117.5°	373.9	387.0	378.3	347.8	313.1	300.0
120°	395.7	413.1	404.4	369.6	334.8	330.4
122.5°	413.1	430.4	421.7	391.3	356.5	356.5
125°	430.4	447.8	439.1	408.7	373.9	387.0
127.5°	443.5	465.2	456.5	421.7	413.1	408.7
130°	460.9	473.9	469.6	434.8	434.8	434.8
132.5°	469.6	487.0	478.3	452.2	460.9	456.5
135°	473.9	495.7	487.0	473.9	482.6	473.9
137.5°	482.6	500.0	495.7	487.0	504.4	491.3
140°	495.7	504.4	508.7	495.7	521.8	508.7
142.5°	508.7	513.1	521.8	508.7	539.1	526.1
145°	517.4	526.1	534.8	534.8	552.2	534.8
147.5°	517.4	530.4	530.4	543.5	569.6	547.8
150°	530.4	521.8	547.8	560.9	578.3	560.9
152.5°	547.8	543.5	565.2	578.3	587.0	569.6
155°	552.2	556.5	569.6	591.3	595.7	578.3
157.5°	569.6	565.2	587.0	604.4	604.4	587.0
160°	582.6	582.6	604.4	613.1	608.7	591.3
162.5°	595.7	595.7	617.4	617.4	613.1	600.0
165°	604.4	604.4	626.1	621.8	613.1	604.4
167.5°	608.7	613.1	630.4	626.1	613.1	604.4
170°	613.1	613.1	630.4	621.8	613.1	608.7
172.5°	613.1	608.7	626.1	617.4	608.7	608.7
175°	608.7	600.0	617.4	608.7	608.7	613.1
177.5°	604.4	591.3	604.4	604.4	608.7	613.1
180°	604.4	604.4	604.4	604.4	604.4	604.4

(END OF REPORT)