

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: P197427

Luminaire Tested: **8WSL-LD2-90-UPL8-UNV-L840-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197427
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-LD2-90-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

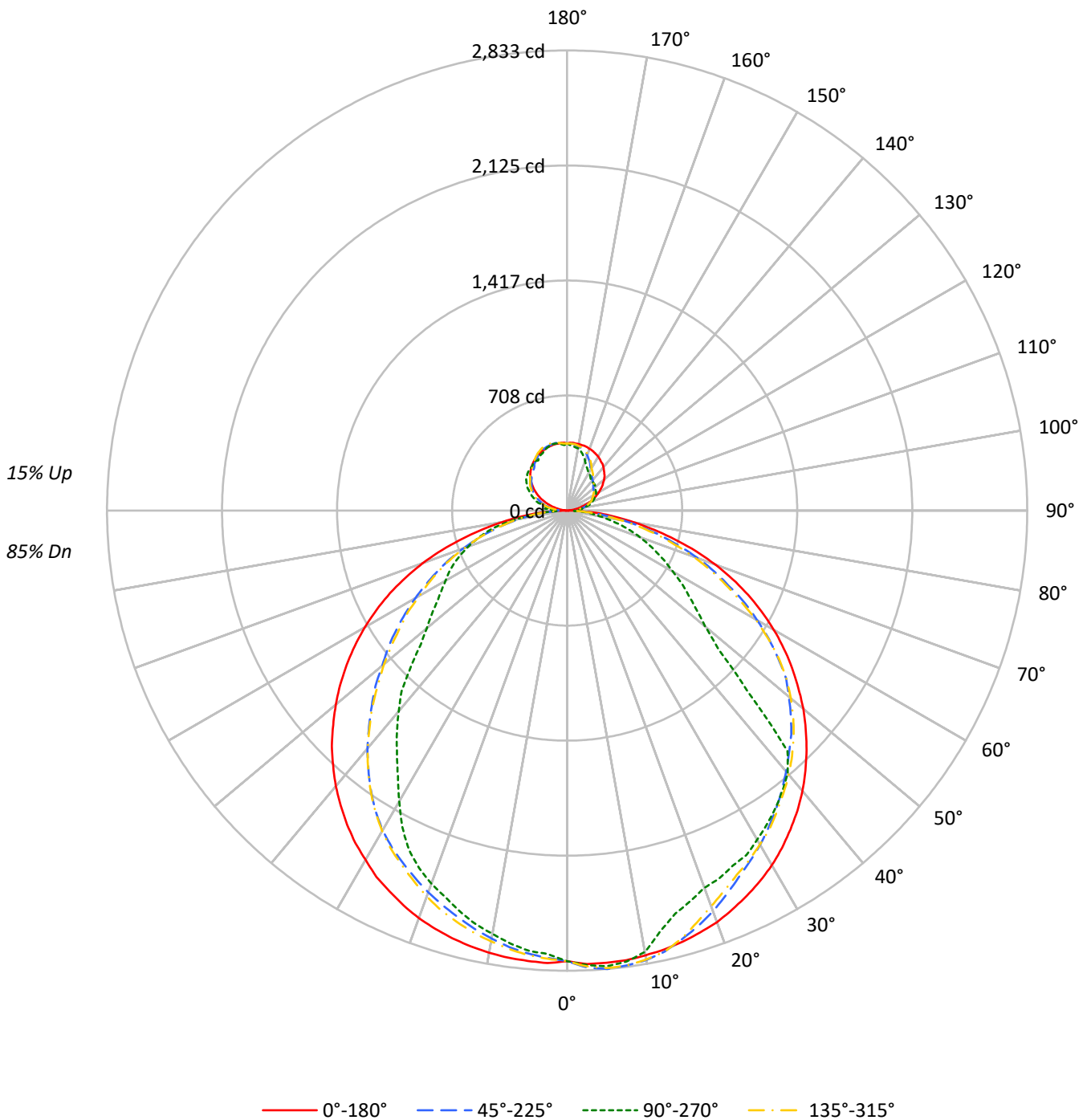
Lumens per Lamp: N/A
Luminaire Lumens: 9200.6 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 80.6
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

TEST NUMBER: P197427

CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L840-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P197427

CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L840-CD2-U

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°	7857	7857	7857	7857
5°	7946	8005	7913	7735
10°	7996	7936	7953	7611
15°	8056	7533	7995	7490
20°	8129	7448	8048	7368
25°	8177	7537	8085	7203
30°	8247	7654	8121	6761
35°	8288	7733	8164	6316
40°	8335	7808	8192	5963
45°	8352	6282	8209	5449
50°	8363	4882	8193	4973
55°	8346	4517	8184	4825
60°	8328	4257	8143	4896
65°	8241	4080	8062	5135
70°	8019	3936	7822	5362
75°	7508	3706	7280	5656
80°	6832	3391	6540	5378
85°	6659	3669	5983	4826



TEST NUMBER: P197427

CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L840-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.7	2.9
10°-20°	748.8	8.1
20°-30°	1133.6	12.3
30°-40°	1368.8	14.9
40°-50°	1397.4	15.2
50°-60°	1221.8	13.3
60°-70°	947.0	10.3
70°-80°	569.3	6.2
80°-90°	175.7	1.9
90°-100°	74.1	0.8
100°-110°	141.7	1.5
110°-120°	192.5	2.1
120°-130°	218.8	2.4
130°-140°	221.9	2.4
140°-150°	204.3	2.2
150°-160°	168.5	1.8
160°-170°	113.3	1.2
170°-180°	39.4	0.4
0°-30°	2146.0	23.3
0°-40°	3514.8	38.2
0°-60°	6134.0	66.7
0°-90°	7826.1	85.1
90°-120°	408.2	4.4
90°-150°	1053.3	11.4
90°-180°	1375.0	14.9
0°-180°	9200.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2774	2774	2774	2774	2774	
5°	2795	2815	2783	2720	2795	266
15°	2747	2569	2726	2554	2747	777
25°	2616	2412	2587	2305	2616	1207
35°	2397	2236	2361	1826	2397	1500
45°	2085	1568	2049	1360	2085	1608
55°	1690	915	1657	977	1690	1510
65°	1230	609	1203	766	1230	1213
75°	686	339	665	517	686	728
85°	205	113	184	148	205	207
90°	3	62	3	71	3	13
95°	18	86	18	137	18	23
105°	95	146	92	184	95	102
115°	184	187	181	250	184	182
125°	264	214	258	306	264	235
135°	324	235	321	339	324	250
145°	365	250	362	359	365	230
155°	395	291	392	380	395	182
165°	413	362	410	413	413	116
175°	419	398	419	410	419	40
180°	413	413	413	413	413	



TEST NUMBER: P197427

CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L840-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2773.8	2773.8	2773.8	2773.8	2773.8	2773.8	2773.8	2773.8	2773.8	2773.8	2773.8
2.5°	2794.6	2779.8	2815.4	2821.4	2800.6	2806.5	2809.5	2776.8	2788.7	2744.2	2756.0
5°	2794.6	2791.7	2833.2	2827.3	2815.4	2818.4	2827.3	2788.7	2782.8	2729.3	2738.2
7.5°	2791.7	2797.6	2824.3	2818.4	2800.6	2809.5	2824.3	2794.6	2776.8	2714.5	2711.5
10°	2779.8	2788.7	2809.5	2791.7	2759.0	2773.8	2806.5	2788.7	2764.9	2690.7	2675.8
12.5°	2767.9	2773.8	2779.8	2705.5	2652.1	2687.7	2779.8	2773.8	2747.1	2664.0	2637.2
15°	2747.1	2756.0	2732.3	2625.4	2568.9	2604.6	2726.3	2750.1	2726.3	2625.4	2592.7
17.5°	2723.4	2732.3	2681.8	2563.0	2521.4	2539.2	2658.0	2720.4	2699.6	2589.7	2548.1
20°	2696.6	2705.5	2625.4	2497.7	2470.9	2485.8	2592.7	2687.7	2669.9	2548.1	2500.6
22.5°	2658.0	2672.9	2560.0	2453.1	2450.1	2450.1	2530.3	2649.1	2631.3	2497.7	2447.2
25°	2616.4	2631.3	2494.7	2411.5	2411.5	2411.5	2473.9	2598.6	2586.7	2444.2	2393.7
27.5°	2571.9	2586.7	2435.3	2381.8	2390.7	2375.9	2426.4	2542.2	2542.2	2390.7	2337.3
30°	2521.4	2536.3	2375.9	2334.3	2340.2	2334.3	2372.9	2482.8	2482.8	2328.4	2271.9
32.5°	2462.0	2476.9	2310.6	2277.9	2289.8	2283.8	2322.4	2423.4	2426.4	2263.0	2194.7
35°	2396.7	2414.5	2242.2	2224.4	2236.3	2227.4	2254.1	2361.0	2361.0	2191.8	2105.6
37.5°	2328.4	2346.2	2171.0	2165.0	2176.9	2168.0	2188.8	2295.7	2289.8	2117.5	2010.6
40°	2254.1	2274.9	2096.7	2096.7	2111.6	2105.6	2123.5	2227.4	2215.5	2043.3	1912.6
42.5°	2171.0	2197.7	2022.5	2025.4	2007.6	2031.4	2049.2	2156.1	2132.4	1960.1	1805.7
45°	2084.8	2117.5	1951.2	1897.7	1568.1	1877.0	1972.0	2084.8	2049.2	1877.0	1701.7
47.5°	1992.8	2034.4	1868.0	1672.0	1262.2	1645.3	1888.8	1995.7	1954.2	1787.9	1600.8
50°	1897.7	1945.3	1781.9	1479.0	1107.8	1449.3	1796.8	1906.7	1859.1	1695.8	1484.9
52.5°	1793.8	1847.3	1698.8	1309.7	1003.8	1283.0	1701.7	1820.5	1761.1	1597.8	1389.9
55°	1689.9	1746.3	1585.9	1164.2	914.7	1140.4	1591.8	1710.6	1657.2	1496.8	1285.9
57.5°	1582.9	1639.4	1473.1	1036.5	837.5	1012.7	1467.1	1609.7	1550.3	1392.9	1182.0
60°	1470.1	1526.5	1351.3	920.7	751.4	902.8	1339.4	1496.8	1437.4	1285.9	1081.0
62.5°	1351.3	1407.7	1235.5	813.7	680.1	798.9	1199.8	1386.9	1321.6	1173.1	977.1
65°	1229.5	1271.1	1098.8	712.8	608.8	700.9	1075.1	1250.3	1202.8	1054.3	879.1
67.5°	1101.8	1143.4	980.1	623.7	540.5	611.8	953.3	1128.5	1075.1	938.5	781.1
70°	968.2	1003.8	855.3	537.5	475.2	528.6	825.6	991.9	944.4	816.7	677.1
72.5°	831.6	864.2	721.7	457.4	406.9	451.4	692.0	855.3	807.8	689.0	582.1
75°	686.0	718.7	596.9	377.2	338.6	371.2	570.2	709.8	665.2	567.2	484.1
77.5°	549.4	588.0	472.2	297.0	270.3	291.0	448.4	573.2	528.6	454.4	389.1
80°	418.8	451.4	350.4	225.7	207.9	222.7	326.7	436.6	400.9	350.4	302.9
82.5°	302.9	320.7	240.6	166.3	157.4	163.3	222.7	308.9	291.0	252.4	222.7
85°	204.9	202.0	148.5	115.8	112.9	115.8	133.6	187.1	184.1	169.3	142.6
87.5°	86.1	80.2	68.3	47.5	41.6	44.5	53.5	71.3	68.3	71.3	68.3
90°	3.0	29.7	47.5	59.4	62.4	59.4	47.5	29.7	3.0	32.7	53.5
92.5°	5.9	38.6	56.4	65.3	71.3	65.3	53.5	38.6	5.9	50.5	53.5
95°	17.8	53.5	65.3	80.2	86.1	80.2	65.3	50.5	17.8	44.5	80.2
97.5°	35.6	68.3	77.2	89.1	92.1	86.1	74.2	68.3	32.7	80.2	83.2
100°	53.5	86.1	101.0	101.0	103.9	101.0	98.0	83.2	50.5	89.1	101.0
102.5°	74.2	98.0	115.8	124.7	124.7	124.7	115.8	98.0	68.3	109.9	139.6
105°	95.0	106.9	127.7	139.6	145.5	139.6	127.7	109.9	92.1	127.7	148.5
107.5°	118.8	115.8	139.6	151.5	157.4	151.5	139.6	118.8	112.9	142.6	166.3
110°	142.6	127.7	151.5	163.3	166.3	163.3	151.5	127.7	136.6	160.4	184.1



TEST NUMBER: P197427

CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L840-CD2-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	163.3	136.6	163.3	175.2	178.2	175.2	163.3	139.6	157.4	172.3	202.0
115°	184.1	145.5	169.3	184.1	187.1	184.1	169.3	148.5	181.2	187.1	216.8
117.5°	204.9	157.4	175.2	193.0	196.0	193.0	178.2	160.4	202.0	204.9	231.6
120°	225.7	172.3	184.1	199.0	204.9	202.0	184.1	175.2	219.8	219.8	243.5
122.5°	243.5	184.1	193.0	204.9	210.9	204.9	193.0	190.1	240.6	234.6	258.4
125°	264.3	196.0	199.0	210.9	213.8	210.9	202.0	199.0	258.4	246.5	267.3
127.5°	279.2	210.9	204.9	216.8	219.8	216.8	207.9	213.8	276.2	270.3	276.2
130°	297.0	225.7	210.9	222.7	225.7	225.7	210.9	231.6	291.0	288.1	288.1
132.5°	311.8	240.6	216.8	228.7	231.6	231.6	219.8	243.5	305.9	302.9	297.0
135°	323.7	261.3	228.7	228.7	234.6	234.6	231.6	264.3	320.7	317.8	311.8
137.5°	335.6	279.2	237.6	231.6	234.6	234.6	243.5	282.1	332.6	332.6	320.7
140°	347.5	297.0	243.5	237.6	237.6	243.5	252.4	300.0	344.5	344.5	323.7
142.5°	359.4	311.8	252.4	246.5	240.6	252.4	261.3	317.8	353.4	356.4	332.6
145°	365.3	326.7	264.3	255.4	249.5	264.3	276.2	332.6	362.3	368.3	350.4
147.5°	374.2	341.5	279.2	261.3	261.3	270.3	288.1	344.5	371.2	377.2	359.4
150°	383.1	353.4	291.0	270.3	264.3	279.2	300.0	356.4	380.1	386.1	371.2
152.5°	389.1	365.3	308.9	282.1	276.2	294.0	320.7	365.3	386.1	392.0	383.1
155°	395.0	374.2	329.7	294.0	291.0	305.9	338.6	374.2	392.0	398.0	392.0
157.5°	400.9	383.1	344.5	311.8	300.0	323.7	353.4	386.1	398.0	403.9	400.9
160°	403.9	389.1	362.3	329.7	323.7	344.5	368.3	389.1	400.9	409.8	406.9
162.5°	409.8	395.0	374.2	350.4	344.5	362.3	380.1	398.0	406.9	412.8	412.8
165°	412.8	400.9	386.1	368.3	362.3	380.1	389.1	403.9	409.8	412.8	415.8
167.5°	412.8	406.9	395.0	380.1	377.2	392.0	400.9	409.8	412.8	412.8	418.8
170°	415.8	409.8	400.9	392.0	389.1	400.9	403.9	412.8	415.8	412.8	421.7
172.5°	415.8	412.8	406.9	398.0	392.0	406.9	409.8	412.8	415.8	412.8	418.8
175°	418.8	412.8	412.8	406.9	398.0	412.8	412.8	412.8	418.8	412.8	415.8
177.5°	418.8	412.8	412.8	409.8	403.9	412.8	412.8	412.8	418.8	412.8	415.8
180°	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8	412.8



TEST NUMBER: P197427

CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L840-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2773.8	2773.8	2773.8	2773.8	2773.8	2773.8
2.5°	2753.1	2732.3	2738.2	2762.0	2753.1	2794.6
5°	2732.3	2720.4	2720.4	2747.1	2744.2	2794.6
7.5°	2699.6	2687.7	2693.7	2723.4	2729.3	2791.7
10°	2661.0	2646.1	2652.1	2693.7	2708.5	2779.8
12.5°	2619.4	2607.5	2613.5	2661.0	2681.8	2767.9
15°	2571.9	2554.1	2571.9	2622.4	2649.1	2747.1
17.5°	2518.4	2494.7	2515.5	2580.8	2613.5	2723.4
20°	2465.0	2444.2	2456.1	2527.4	2574.9	2696.6
22.5°	2411.5	2381.8	2393.7	2468.0	2527.4	2658.0
25°	2349.2	2304.6	2328.4	2408.6	2476.9	2616.4
27.5°	2266.0	2197.7	2248.2	2349.2	2417.5	2571.9
30°	2156.1	2067.0	2141.3	2277.9	2355.1	2521.4
32.5°	2034.4	1939.3	2022.5	2197.7	2289.8	2462.0
35°	1912.6	1826.5	1900.7	2108.6	2221.5	2396.7
37.5°	1796.8	1722.5	1790.8	2013.6	2150.2	2328.4
40°	1686.9	1612.6	1683.9	1909.6	2073.0	2254.1
42.5°	1577.0	1508.7	1577.0	1799.7	1992.8	2171.0
45°	1467.1	1360.2	1461.2	1692.8	1906.7	2084.8
47.5°	1348.3	1223.6	1339.4	1577.0	1814.6	1992.8
50°	1235.5	1128.5	1229.5	1470.1	1719.5	1897.7
52.5°	1137.5	1051.3	1131.5	1360.2	1621.5	1793.8
55°	1045.4	977.1	1045.4	1253.3	1517.6	1689.9
57.5°	962.2	917.7	965.2	1161.2	1410.7	1582.9
60°	891.0	864.2	893.9	1048.4	1303.8	1470.1
62.5°	822.7	819.7	825.6	959.3	1190.9	1351.3
65°	751.4	766.2	751.4	864.2	1078.1	1229.5
67.5°	680.1	709.8	686.0	769.2	956.3	1101.8
70°	614.8	647.4	614.8	671.2	834.5	968.2
72.5°	540.5	582.1	540.5	579.1	706.8	831.6
75°	469.2	516.8	472.2	484.1	585.1	686.0
77.5°	392.0	436.6	400.9	392.0	472.2	549.4
80°	311.8	329.7	311.8	308.9	365.3	418.8
82.5°	216.8	231.6	216.8	225.7	267.3	302.9
85°	142.6	148.5	142.6	145.5	178.2	204.9
87.5°	59.4	59.4	59.4	74.2	80.2	86.1
90°	65.3	71.3	65.3	53.5	32.7	3.0
92.5°	68.3	74.2	68.3	59.4	38.6	5.9
95°	121.8	136.6	115.8	74.2	62.4	17.8
97.5°	98.0	106.9	101.0	86.1	77.2	35.6
100°	115.8	124.7	115.8	121.8	95.0	53.5
102.5°	136.6	142.6	139.6	142.6	115.8	74.2
105°	178.2	184.1	178.2	154.4	133.6	95.0
107.5°	190.1	204.9	193.0	172.3	151.5	118.8
110°	204.9	216.8	207.9	190.1	166.3	142.6



TEST NUMBER: P197427

CATALOG NUMBER: 8WSL-LD2-90-UPL8-UNV-L840-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	219.8	234.6	225.7	210.9	178.2	163.3
115°	237.6	249.5	243.5	225.7	196.0	184.1
117.5°	255.4	264.3	258.4	237.6	213.8	204.9
120°	270.3	282.1	276.2	252.4	228.7	225.7
122.5°	282.1	294.0	288.1	267.3	243.5	243.5
125°	294.0	305.9	300.0	279.2	255.4	264.3
127.5°	302.9	317.8	311.8	288.1	282.1	279.2
130°	314.8	323.7	320.7	297.0	297.0	297.0
132.5°	320.7	332.6	326.7	308.9	314.8	311.8
135°	323.7	338.6	332.6	323.7	329.7	323.7
137.5°	329.7	341.5	338.6	332.6	344.5	335.6
140°	338.6	344.5	347.5	338.6	356.4	347.5
142.5°	347.5	350.4	356.4	347.5	368.3	359.4
145°	353.4	359.4	365.3	365.3	377.2	365.3
147.5°	353.4	362.3	362.3	371.2	389.1	374.2
150°	362.3	356.4	374.2	383.1	395.0	383.1
152.5°	374.2	371.2	386.1	395.0	400.9	389.1
155°	377.2	380.1	389.1	403.9	406.9	395.0
157.5°	389.1	386.1	400.9	412.8	412.8	400.9
160°	398.0	398.0	412.8	418.8	415.8	403.9
162.5°	406.9	406.9	421.7	421.7	418.8	409.8
165°	412.8	412.8	427.7	424.7	418.8	412.8
167.5°	415.8	418.8	430.6	427.7	418.8	412.8
170°	418.8	418.8	430.6	424.7	418.8	415.8
172.5°	418.8	415.8	427.7	421.7	415.8	415.8
175°	415.8	409.8	421.7	415.8	415.8	418.8
177.5°	412.8	403.9	412.8	412.8	415.8	418.8
180°	412.8	412.8	412.8	412.8	412.8	412.8

(END OF REPORT)