

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: P197439

Luminaire Tested: **8WSL-LD2-120-UPL8-UNV-L840-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197439
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-LD2-120-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

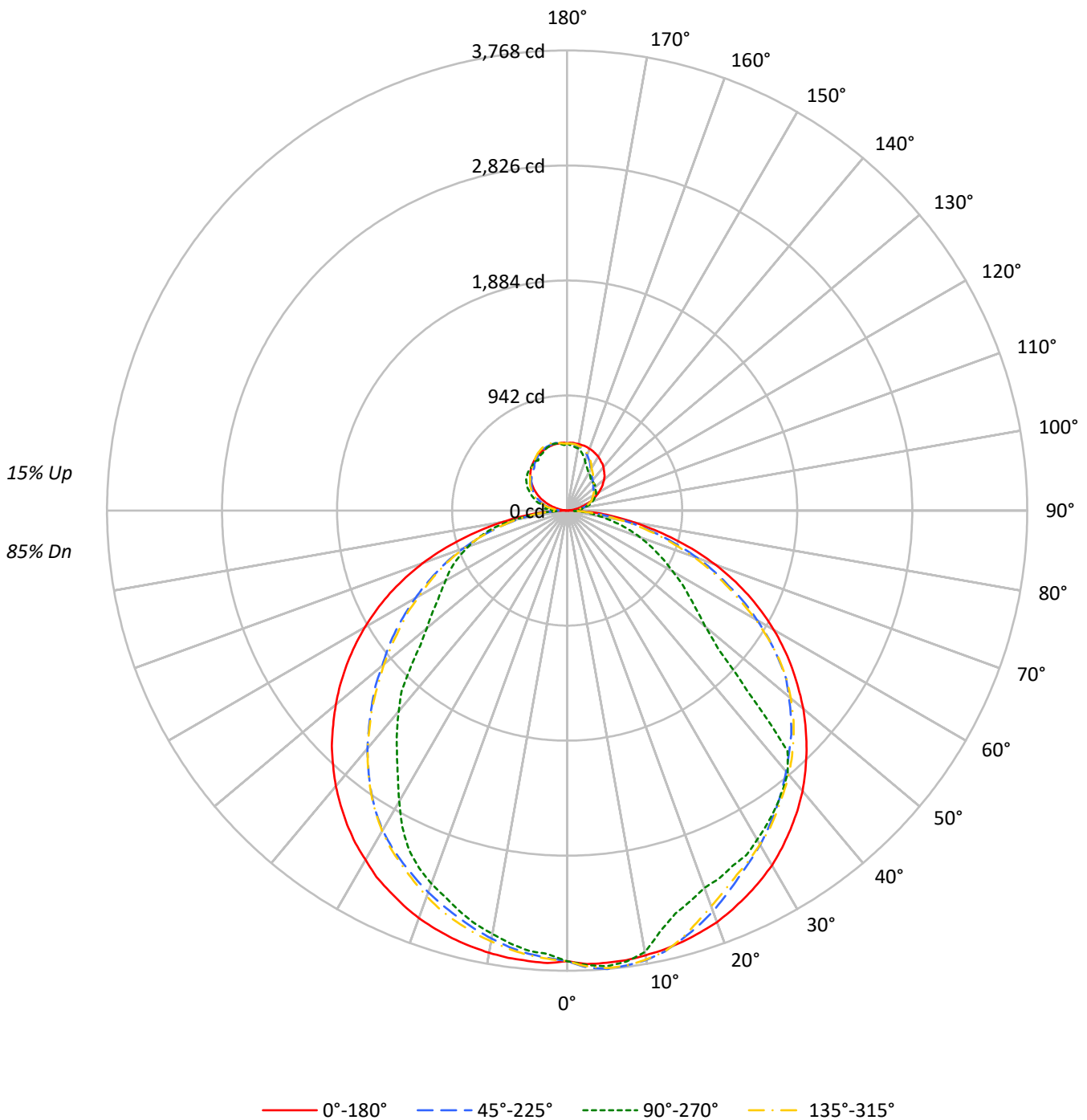
Lumens per Lamp: N/A
Luminaire Lumens: 12237.6 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 113.5
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: P197439

CATALOG NUMBER: 8WSL-LD2-120-UPL8-UNV-L840-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P197439

CATALOG NUMBER: 8WSL-LD2-120-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	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°	10451	10451	10451	10451
5°	10569	10648	10524	10288
10°	10635	10555	10578	10123
15°	10715	10020	10634	9962
20°	10812	9907	10705	9800
25°	10877	10025	10753	9580
30°	10969	10181	10801	8992
35°	11023	10286	10859	8400
40°	11086	10385	10896	7931
45°	11108	8355	10919	7248
50°	11123	6493	10897	6615
55°	11100	6008	10885	6418
60°	11077	5662	10831	6512
65°	10961	5428	10723	6831
70°	10665	5234	10403	7132
75°	9987	4928	9684	7522
80°	9086	4510	8699	7153
85°	8860	4878	7959	6419



TEST NUMBER: P197439

CATALOG NUMBER: 8WSL-LD2-120-UPL8-UNV-L840-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.7	2.9
10°-20°	996.0	8.1
20°-30°	1507.7	12.3
30°-40°	1820.6	14.9
40°-50°	1858.7	15.2
50°-60°	1625.0	13.3
60°-70°	1259.5	10.3
70°-80°	757.3	6.2
80°-90°	233.8	1.9
90°-100°	98.6	0.8
100°-110°	188.5	1.5
110°-120°	256.0	2.1
120°-130°	291.0	2.4
130°-140°	295.2	2.4
140°-150°	271.7	2.2
150°-160°	224.2	1.8
160°-170°	150.7	1.2
170°-180°	52.4	0.4
0°-30°	2854.4	23.3
0°-40°	4675.0	38.2
0°-60°	8158.7	66.7
0°-90°	10409.3	85.1
90°-120°	543.1	4.4
90°-150°	1401.0	11.4
90°-180°	1828.0	14.9
0°-180°	12237.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3689	3689	3689	3689	3689	
5°	3717	3745	3701	3618	3717	354
15°	3654	3417	3626	3397	3654	1033
25°	3480	3208	3441	3065	3480	1606
35°	3188	2974	3140	2429	3188	1996
45°	2773	2086	2726	1809	2773	2139
55°	2248	1217	2204	1300	2248	2009
65°	1635	810	1600	1019	1635	1614
75°	912	450	885	687	912	968
85°	273	150	245	198	273	275
90°	4	83	4	95	4	18
95°	24	115	24	182	24	30
105°	126	194	122	245	126	135
115°	245	249	241	332	245	242
125°	352	284	344	407	352	312
135°	431	312	427	450	431	332
145°	486	332	482	478	486	305
155°	525	387	521	506	525	243
165°	549	482	545	549	549	155
175°	557	529	557	545	557	53
180°	549	549	549	549	549	



TEST NUMBER: P197439

CATALOG NUMBER: 8WSL-LD2-120-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°	3689.4	3689.4	3689.4	3689.4	3689.4	3689.4	3689.4	3689.4	3689.4	3689.4	3689.4
2.5°	3717.1	3697.3	3744.7	3752.6	3725.0	3732.9	3736.8	3693.4	3709.2	3649.9	3665.7
5°	3717.1	3713.1	3768.4	3760.5	3744.7	3748.7	3760.5	3709.2	3701.3	3630.2	3642.0
7.5°	3713.1	3721.0	3756.6	3748.7	3725.0	3736.8	3756.6	3717.1	3693.4	3610.4	3606.5
10°	3697.3	3709.2	3736.8	3713.1	3669.7	3689.4	3732.9	3709.2	3677.6	3578.8	3559.1
12.5°	3681.5	3689.4	3697.3	3598.6	3527.5	3574.9	3697.3	3689.4	3653.9	3543.3	3507.7
15°	3653.9	3665.7	3634.1	3491.9	3416.9	3464.3	3626.2	3657.8	3626.2	3491.9	3448.5
17.5°	3622.3	3634.1	3567.0	3409.0	3353.7	3377.4	3535.4	3618.3	3590.7	3444.5	3389.2
20°	3586.7	3598.6	3491.9	3322.1	3286.5	3306.3	3448.5	3574.9	3551.2	3389.2	3326.0
22.5°	3535.4	3555.1	3405.0	3262.8	3258.9	3258.9	3365.5	3523.5	3499.8	3322.1	3254.9
25°	3480.1	3499.8	3318.1	3207.5	3207.5	3207.5	3290.5	3456.4	3440.6	3251.0	3183.8
27.5°	3420.8	3440.6	3239.1	3168.0	3179.9	3160.1	3227.3	3381.3	3381.3	3179.9	3108.8
30°	3353.7	3373.4	3160.1	3104.8	3112.7	3104.8	3156.2	3302.3	3302.3	3096.9	3021.9
32.5°	3274.7	3294.4	3073.2	3029.8	3045.6	3037.7	3089.0	3223.3	3227.3	3010.0	2919.2
35°	3187.8	3211.5	2982.4	2958.7	2974.5	2962.6	2998.2	3140.4	3140.4	2915.2	2800.6
37.5°	3096.9	3120.6	2887.6	2879.7	2895.5	2883.6	2911.3	3053.5	3045.6	2816.4	2674.2
40°	2998.2	3025.8	2788.8	2788.8	2808.5	2800.6	2824.3	2962.6	2946.8	2717.7	2543.9
42.5°	2887.6	2923.1	2690.0	2694.0	2670.3	2701.9	2725.6	2867.8	2836.2	2607.1	2401.7
45°	2773.0	2816.4	2595.2	2524.1	2085.7	2496.5	2622.9	2773.0	2725.6	2496.5	2263.4
47.5°	2650.5	2705.8	2484.6	2223.9	1678.8	2188.4	2512.3	2654.5	2599.2	2378.0	2129.1
50°	2524.1	2587.3	2370.1	1967.2	1473.4	1927.7	2389.8	2536.0	2472.8	2255.5	1975.1
52.5°	2385.9	2457.0	2259.5	1742.0	1335.1	1706.5	2263.4	2421.4	2342.4	2125.2	1848.7
55°	2247.6	2322.7	2109.4	1548.5	1216.6	1516.9	2117.3	2275.3	2204.2	1990.9	1710.4
57.5°	2105.4	2180.5	1959.3	1378.6	1113.9	1347.0	1951.4	2141.0	2062.0	1852.6	1572.2
60°	1955.3	2030.4	1797.3	1224.5	999.4	1200.8	1781.5	1990.9	1911.9	1710.4	1437.9
62.5°	1797.3	1872.4	1643.3	1082.3	904.6	1062.6	1595.9	1844.7	1757.8	1560.3	1299.6
65°	1635.4	1690.7	1461.6	948.0	809.8	932.2	1430.0	1663.0	1599.8	1402.3	1169.2
67.5°	1465.5	1520.8	1303.5	829.5	718.9	813.7	1268.0	1501.1	1430.0	1248.2	1038.9
70°	1287.7	1335.1	1137.6	715.0	632.0	703.1	1098.1	1319.3	1256.1	1086.3	900.6
72.5°	1106.0	1149.5	959.9	608.3	541.2	600.4	920.4	1137.6	1074.4	916.4	774.2
75°	912.5	955.9	794.0	501.7	450.3	493.8	758.4	944.1	884.8	754.5	643.9
77.5°	730.8	782.1	628.1	395.0	359.5	387.1	596.5	762.4	703.1	604.4	517.5
80°	557.0	600.4	466.1	300.2	276.5	296.3	434.5	580.7	533.3	466.1	402.9
82.5°	402.9	426.6	320.0	221.2	209.4	217.3	296.3	410.8	387.1	335.8	296.3
85°	272.6	268.6	197.5	154.1	150.1	154.1	177.8	248.9	244.9	225.2	189.6
87.5°	114.6	106.7	90.9	63.2	55.3	59.3	71.1	94.8	90.9	94.8	90.9
90°	4.0	39.5	63.2	79.0	83.0	79.0	63.2	39.5	4.0	43.5	71.1
92.5°	7.9	51.4	75.1	86.9	94.8	86.9	71.1	51.4	7.9	67.2	71.1
95°	23.7	71.1	86.9	106.7	114.6	106.7	86.9	67.2	23.7	59.3	106.7
97.5°	47.4	90.9	102.7	118.5	122.5	114.6	98.8	90.9	43.5	106.7	110.6
100°	71.1	114.6	134.3	134.3	138.3	134.3	130.4	110.6	67.2	118.5	134.3
102.5°	98.8	130.4	154.1	165.9	165.9	165.9	154.1	130.4	90.9	146.2	185.7
105°	126.4	142.2	169.9	185.7	193.6	185.7	169.9	146.2	122.5	169.9	197.5
107.5°	158.0	154.1	185.7	201.5	209.4	201.5	185.7	158.0	150.1	189.6	221.2
110°	189.6	169.9	201.5	217.3	221.2	217.3	201.5	169.9	181.7	213.3	244.9



TEST NUMBER: P197439

CATALOG NUMBER: 8WSL-LD2-120-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°	217.3	181.7	217.3	233.1	237.0	233.1	217.3	185.7	209.4	229.1	268.6
115°	244.9	193.6	225.2	244.9	248.9	244.9	225.2	197.5	241.0	248.9	288.4
117.5°	272.6	209.4	233.1	256.8	260.7	256.8	237.0	213.3	268.6	272.6	308.1
120°	300.2	229.1	244.9	264.7	272.6	268.6	244.9	233.1	292.3	292.3	323.9
122.5°	323.9	244.9	256.8	272.6	280.5	272.6	256.8	252.8	320.0	312.1	343.7
125°	351.6	260.7	264.7	280.5	284.4	280.5	268.6	264.7	343.7	327.9	355.5
127.5°	371.3	280.5	272.6	288.4	292.3	288.4	276.5	284.4	367.4	359.5	367.4
130°	395.0	300.2	280.5	296.3	300.2	300.2	280.5	308.1	387.1	383.2	383.2
132.5°	414.8	320.0	288.4	304.2	308.1	308.1	292.3	323.9	406.9	402.9	395.0
135°	430.6	347.6	304.2	304.2	312.1	312.1	308.1	351.6	426.6	422.7	414.8
137.5°	446.4	371.3	316.0	308.1	312.1	312.1	323.9	375.3	442.4	442.4	426.6
140°	462.2	395.0	323.9	316.0	316.0	323.9	335.8	399.0	458.2	458.2	430.6
142.5°	478.0	414.8	335.8	327.9	320.0	335.8	347.6	422.7	470.1	474.0	442.4
145°	485.9	434.5	351.6	339.7	331.8	351.6	367.4	442.4	481.9	489.8	466.1
147.5°	497.7	454.3	371.3	347.6	347.6	359.5	383.2	458.2	493.8	501.7	478.0
150°	509.6	470.1	387.1	359.5	351.6	371.3	399.0	474.0	505.6	513.5	493.8
152.5°	517.5	485.9	410.8	375.3	367.4	391.1	426.6	485.9	513.5	521.4	509.6
155°	525.4	497.7	438.5	391.1	387.1	406.9	450.3	497.7	521.4	529.3	521.4
157.5°	533.3	509.6	458.2	414.8	399.0	430.6	470.1	513.5	529.3	537.2	533.3
160°	537.2	517.5	481.9	438.5	430.6	458.2	489.8	517.5	533.3	545.1	541.2
162.5°	545.1	525.4	497.7	466.1	458.2	481.9	505.6	529.3	541.2	549.1	549.1
165°	549.1	533.3	513.5	489.8	481.9	505.6	517.5	537.2	545.1	549.1	553.0
167.5°	549.1	541.2	525.4	505.6	501.7	521.4	533.3	545.1	549.1	549.1	557.0
170°	553.0	545.1	533.3	521.4	517.5	533.3	537.2	549.1	553.0	549.1	560.9
172.5°	553.0	549.1	541.2	529.3	521.4	541.2	545.1	549.1	553.0	549.1	557.0
175°	557.0	549.1	549.1	541.2	529.3	549.1	549.1	549.1	557.0	549.1	553.0
177.5°	557.0	549.1	549.1	545.1	537.2	549.1	549.1	549.1	557.0	549.1	553.0
180°	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1



TEST NUMBER: P197439

CATALOG NUMBER: 8WSL-LD2-120-UPL8-UNV-L840-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3689.4	3689.4	3689.4	3689.4	3689.4	3689.4
2.5°	3661.8	3634.1	3642.0	3673.6	3661.8	3717.1
5°	3634.1	3618.3	3618.3	3653.9	3649.9	3717.1
7.5°	3590.7	3574.9	3582.8	3622.3	3630.2	3713.1
10°	3539.3	3519.6	3527.5	3582.8	3602.5	3697.3
12.5°	3484.0	3468.2	3476.1	3539.3	3567.0	3681.5
15°	3420.8	3397.1	3420.8	3488.0	3523.5	3653.9
17.5°	3349.7	3318.1	3345.8	3432.7	3476.1	3622.3
20°	3278.6	3251.0	3266.8	3361.6	3424.8	3586.7
22.5°	3207.5	3168.0	3183.8	3282.6	3361.6	3535.4
25°	3124.6	3065.3	3096.9	3203.6	3294.4	3480.1
27.5°	3014.0	2923.1	2990.3	3124.6	3215.4	3420.8
30°	2867.8	2749.3	2848.0	3029.8	3132.5	3353.7
32.5°	2705.8	2579.4	2690.0	2923.1	3045.6	3274.7
35°	2543.9	2429.3	2528.1	2804.6	2954.7	3187.8
37.5°	2389.8	2291.1	2381.9	2678.2	2859.9	3096.9
40°	2243.7	2144.9	2239.7	2539.9	2757.2	2998.2
42.5°	2097.5	2006.7	2097.5	2393.8	2650.5	2887.6
45°	1951.4	1809.2	1943.5	2251.6	2536.0	2773.0
47.5°	1793.4	1627.5	1781.5	2097.5	2413.5	2650.5
50°	1643.3	1501.1	1635.4	1955.3	2287.1	2524.1
52.5°	1512.9	1398.3	1505.0	1809.2	2156.8	2385.9
55°	1390.4	1299.6	1390.4	1667.0	2018.5	2247.6
57.5°	1279.8	1220.6	1283.8	1544.5	1876.3	2105.4
60°	1185.0	1149.5	1189.0	1394.4	1734.1	1955.3
62.5°	1094.2	1090.2	1098.1	1275.9	1584.0	1797.3
65°	999.4	1019.1	999.4	1149.5	1433.9	1635.4
67.5°	904.6	944.1	912.5	1023.1	1271.9	1465.5
70°	817.7	861.1	817.7	892.7	1110.0	1287.7
72.5°	718.9	774.2	718.9	770.3	940.1	1106.0
75°	624.1	687.3	628.1	643.9	778.2	912.5
77.5°	521.4	580.7	533.3	521.4	628.1	730.8
80°	414.8	438.5	414.8	410.8	485.9	557.0
82.5°	288.4	308.1	288.4	300.2	355.5	402.9
85°	189.6	197.5	189.6	193.6	237.0	272.6
87.5°	79.0	79.0	79.0	98.8	106.7	114.6
90°	86.9	94.8	86.9	71.1	43.5	4.0
92.5°	90.9	98.8	90.9	79.0	51.4	7.9
95°	162.0	181.7	154.1	98.8	83.0	23.7
97.5°	130.4	142.2	134.3	114.6	102.7	47.4
100°	154.1	165.9	154.1	162.0	126.4	71.1
102.5°	181.7	189.6	185.7	189.6	154.1	98.8
105°	237.0	244.9	237.0	205.4	177.8	126.4
107.5°	252.8	272.6	256.8	229.1	201.5	158.0
110°	272.6	288.4	276.5	252.8	221.2	189.6



TEST NUMBER: P197439

CATALOG NUMBER: 8WSL-LD2-120-UPL8-UNV-L840-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	292.3	312.1	300.2	280.5	237.0	217.3
115°	316.0	331.8	323.9	300.2	260.7	244.9
117.5°	339.7	351.6	343.7	316.0	284.4	272.6
120°	359.5	375.3	367.4	335.8	304.2	300.2
122.5°	375.3	391.1	383.2	355.5	323.9	323.9
125°	391.1	406.9	399.0	371.3	339.7	351.6
127.5°	402.9	422.7	414.8	383.2	375.3	371.3
130°	418.7	430.6	426.6	395.0	395.0	395.0
132.5°	426.6	442.4	434.5	410.8	418.7	414.8
135°	430.6	450.3	442.4	430.6	438.5	430.6
137.5°	438.5	454.3	450.3	442.4	458.2	446.4
140°	450.3	458.2	462.2	450.3	474.0	462.2
142.5°	462.2	466.1	474.0	462.2	489.8	478.0
145°	470.1	478.0	485.9	485.9	501.7	485.9
147.5°	470.1	481.9	481.9	493.8	517.5	497.7
150°	481.9	474.0	497.7	509.6	525.4	509.6
152.5°	497.7	493.8	513.5	525.4	533.3	517.5
155°	501.7	505.6	517.5	537.2	541.2	525.4
157.5°	517.5	513.5	533.3	549.1	549.1	533.3
160°	529.3	529.3	549.1	557.0	553.0	537.2
162.5°	541.2	541.2	560.9	560.9	557.0	545.1
165°	549.1	549.1	568.8	564.9	557.0	549.1
167.5°	553.0	557.0	572.8	568.8	557.0	549.1
170°	557.0	557.0	572.8	564.9	557.0	553.0
172.5°	557.0	553.0	568.8	560.9	553.0	553.0
175°	553.0	545.1	560.9	553.0	553.0	557.0
177.5°	549.1	537.2	549.1	549.1	553.0	557.0
180°	549.1	549.1	549.1	549.1	549.1	549.1

(END OF REPORT)