

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: P197452

Luminaire Tested: **8WSL-LD2-150-UPL8-UNV-L850-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197452
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-LD2-150-UPL8-UNV-L850-CD2-U
Description: 8FT. Linear Wavestream System, 8% Uplight, L850
Light Source: (476) 5000K CCT, 80 CRI LEDS
EL236N0119D850
Ballast/Driver: OSRAM
OT85W1202772A0DIML

Summary

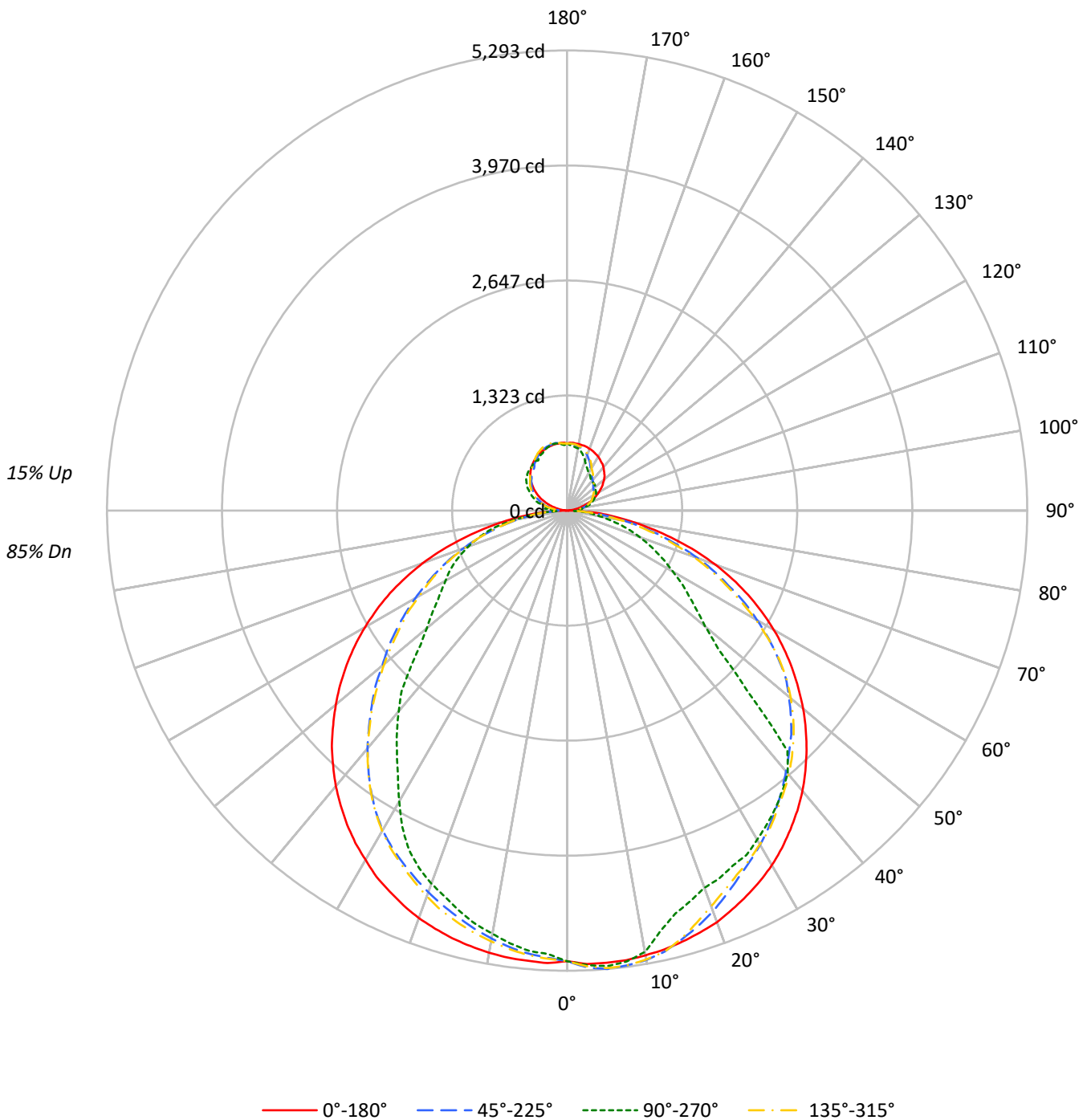
Lumens per Lamp: N/A
Luminaire Lumens: 17188.8 lumens
Efficiency: N/A
Efficacy: 115.6 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 148.7
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	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°	14679	14679	14679	14679
5°	14846	14956	14782	14451
10°	14938	14826	14858	14219
15°	15051	14074	14937	13993
20°	15186	13915	15036	13765
25°	15277	14081	15104	13457
30°	15408	14300	15172	12631
35°	15483	14447	15253	11800
40°	15572	14587	15305	11140
45°	15603	11736	15336	10180
50°	15624	9120	15306	9291
55°	15591	8439	15290	9015
60°	15560	7952	15213	9147
65°	15396	7623	15061	9595
70°	14980	7352	14613	10017
75°	14027	6922	13602	10566
80°	12761	6336	12218	10047
85°	12441	6851	11180	9016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	492.6	2.9
10°-20°	1398.9	8.1
20°-30°	2117.7	12.3
30°-40°	2557.2	14.9
40°-50°	2610.7	15.2
50°-60°	2282.5	13.3
60°-70°	1769.2	10.3
70°-80°	1063.7	6.2
80°-90°	328.3	1.9
90°-100°	138.4	0.8
100°-110°	264.7	1.5
110°-120°	359.6	2.1
120°-130°	408.8	2.4
130°-140°	414.6	2.4
140°-150°	381.6	2.2
150°-160°	314.8	1.8
160°-170°	211.7	1.2
170°-180°	73.6	0.4
0°-30°	4009.3	23.3
0°-40°	6566.5	38.2
0°-60°	11459.8	66.7
0°-90°	14620.9	85.1
90°-120°	762.7	4.4
90°-150°	1967.8	11.4
90°-180°	2568.0	14.9
0°-180°	17188.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5182	5182	5182	5182	5182	
5°	5221	5260	5199	5082	5221	497
15°	5132	4799	5093	4772	5132	1451
25°	4888	4505	4833	4306	4888	2256
35°	4478	4178	4411	3412	4478	2803
45°	3895	2930	3828	2541	3895	3004
55°	3157	1709	3096	1825	3157	2822
65°	2297	1137	2247	1432	2297	2267
75°	1282	632	1243	965	1282	1360
85°	383	211	344	277	383	386
90°	6	116	6	133	6	25
95°	33	161	33	255	33	42
105°	178	272	172	344	178	190
115°	344	350	338	466	344	340
125°	494	400	483	572	494	438
135°	605	438	599	632	605	467
145°	682	466	677	671	682	429
155°	738	544	732	710	738	341
165°	771	677	766	771	771	218
175°	782	744	782	766	782	74
180°	771	771	771	771	771	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	5182.2	5182.2	5182.2	5182.2	5182.2	5182.2	5182.2	5182.2	5182.2	5182.2	5182.2
2.5°	5221.0	5193.3	5259.9	5271.0	5232.1	5243.2	5248.8	5187.7	5209.9	5126.7	5148.9
5°	5221.0	5215.5	5293.2	5282.1	5259.9	5265.4	5282.1	5209.9	5198.8	5099.0	5115.6
7.5°	5215.5	5226.6	5276.5	5265.4	5232.1	5248.8	5276.5	5221.0	5187.7	5071.2	5065.7
10°	5193.3	5209.9	5248.8	5215.5	5154.5	5182.2	5243.2	5209.9	5165.6	5026.8	4999.1
12.5°	5171.1	5182.2	5193.3	5054.6	4954.7	5021.3	5193.3	5182.2	5132.3	4976.9	4927.0
15°	5132.3	5148.9	5104.5	4904.8	4799.4	4865.9	5093.4	5137.8	5093.4	4904.8	4843.7
17.5°	5087.9	5104.5	5010.2	4788.3	4710.6	4743.9	4965.8	5082.3	5043.5	4838.2	4760.5
20°	5037.9	5054.6	4904.8	4666.2	4616.3	4644.0	4843.7	5021.3	4988.0	4760.5	4671.7
22.5°	4965.8	4993.6	4782.7	4583.0	4577.4	4577.4	4727.2	4949.2	4915.9	4666.2	4571.9
25°	4888.1	4915.9	4660.6	4505.3	4505.3	4505.3	4621.8	4854.8	4832.6	4566.3	4472.0
27.5°	4804.9	4832.6	4549.7	4449.8	4466.5	4438.7	4533.0	4749.4	4749.4	4466.5	4366.6
30°	4710.6	4738.3	4438.7	4361.0	4372.1	4361.0	4433.2	4638.5	4638.5	4349.9	4244.5
32.5°	4599.6	4627.4	4316.6	4255.6	4277.8	4266.7	4338.8	4527.5	4533.0	4227.9	4100.3
35°	4477.6	4510.8	4189.0	4155.7	4177.9	4161.3	4211.2	4411.0	4411.0	4094.7	3933.8
37.5°	4349.9	4383.2	4055.9	4044.8	4067.0	4050.3	4089.2	4288.9	4277.8	3956.0	3756.3
40°	4211.2	4250.1	3917.2	3917.2	3944.9	3933.8	3967.1	4161.3	4139.1	3817.3	3573.2
42.5°	4055.9	4105.8	3778.5	3784.0	3750.7	3795.1	3828.4	4028.1	3983.7	3661.9	3373.4
45°	3895.0	3956.0	3645.3	3545.4	2929.6	3506.6	3684.1	3895.0	3828.4	3506.6	3179.2
47.5°	3723.0	3800.6	3489.9	3123.7	2358.1	3073.8	3528.8	3728.5	3650.8	3340.1	2990.6
50°	3545.4	3634.2	3329.0	2763.1	2069.6	2707.6	3356.8	3562.1	3473.3	3168.1	2774.2
52.5°	3351.2	3451.1	3173.7	2446.8	1875.4	2396.9	3179.2	3401.2	3290.2	2985.0	2596.6
55°	3157.0	3262.5	2962.8	2175.0	1708.9	2130.6	2973.9	3195.9	3096.0	2796.4	2402.5
57.5°	2957.3	3062.7	2752.0	1936.4	1564.6	1892.0	2740.9	3007.2	2896.3	2602.2	2208.3
60°	2746.5	2851.9	2524.5	1720.0	1403.7	1686.7	2502.3	2796.4	2685.4	2402.5	2019.6
62.5°	2524.5	2629.9	2308.1	1520.3	1270.6	1492.5	2241.6	2591.1	2469.0	2191.6	1825.4
65°	2297.0	2374.7	2052.9	1331.6	1137.4	1309.4	2008.5	2335.9	2247.1	1969.7	1642.3
67.5°	2058.5	2136.1	1831.0	1165.2	1009.8	1143.0	1781.0	2108.4	2008.5	1753.3	1459.2
70°	1808.8	1875.4	1597.9	1004.3	887.7	987.6	1542.5	1853.2	1764.4	1525.8	1265.0
72.5°	1553.5	1614.6	1348.3	854.5	760.1	843.4	1292.8	1597.9	1509.2	1287.2	1087.5
75°	1281.7	1342.7	1115.2	704.6	632.5	693.5	1065.3	1326.1	1242.8	1059.7	904.4
77.5°	1026.5	1098.6	882.2	554.8	504.9	543.7	837.8	1070.8	987.6	848.9	726.8
80°	782.3	843.4	654.7	421.7	388.4	416.1	610.3	815.6	749.0	654.7	565.9
82.5°	565.9	599.2	449.4	310.7	294.1	305.2	416.1	577.0	543.7	471.6	416.1
85°	382.8	377.3	277.4	216.4	210.8	216.4	249.7	349.5	344.0	316.3	266.3
87.5°	160.9	149.8	127.6	88.8	77.7	83.2	99.9	133.2	127.6	133.2	127.6
90°	5.5	55.5	88.8	111.0	116.5	111.0	88.8	55.5	5.5	61.0	99.9
92.5°	11.1	72.1	105.4	122.1	133.2	122.1	99.9	72.1	11.1	94.3	99.9
95°	33.3	99.9	122.1	149.8	160.9	149.8	122.1	94.3	33.3	83.2	149.8
97.5°	66.6	127.6	144.3	166.5	172.0	160.9	138.7	127.6	61.0	149.8	155.4
100°	99.9	160.9	188.6	188.6	194.2	188.6	183.1	155.4	94.3	166.5	188.6
102.5°	138.7	183.1	216.4	233.0	233.0	233.0	216.4	183.1	127.6	205.3	260.8
105°	177.5	199.7	238.6	260.8	271.9	260.8	238.6	205.3	172.0	238.6	277.4
107.5°	221.9	216.4	260.8	283.0	294.1	283.0	260.8	221.9	210.8	266.3	310.7
110°	266.3	238.6	283.0	305.2	310.7	305.2	283.0	238.6	255.2	299.6	344.0



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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°	305.2	255.2	305.2	327.4	332.9	327.4	305.2	260.8	294.1	321.8	377.3
115°	344.0	271.9	316.3	344.0	349.5	344.0	316.3	277.4	338.5	349.5	405.0
117.5°	382.8	294.1	327.4	360.6	366.2	360.6	332.9	299.6	377.3	382.8	432.8
120°	421.7	321.8	344.0	371.7	382.8	377.3	344.0	327.4	410.6	410.6	455.0
122.5°	455.0	344.0	360.6	382.8	393.9	382.8	360.6	355.1	449.4	438.3	482.7
125°	493.8	366.2	371.7	393.9	399.5	393.9	377.3	371.7	482.7	460.5	499.4
127.5°	521.5	393.9	382.8	405.0	410.6	405.0	388.4	399.5	516.0	504.9	516.0
130°	554.8	421.7	393.9	416.1	421.7	421.7	393.9	432.8	543.7	538.2	538.2
132.5°	582.6	449.4	405.0	427.2	432.8	432.8	410.6	455.0	571.5	565.9	554.8
135°	604.8	488.3	427.2	427.2	438.3	438.3	432.8	493.8	599.2	593.7	582.6
137.5°	627.0	521.5	443.9	432.8	438.3	438.3	455.0	527.1	621.4	621.4	599.2
140°	649.2	554.8	455.0	443.9	443.9	455.0	471.6	560.4	643.6	643.6	604.8
142.5°	671.4	582.6	471.6	460.5	449.4	471.6	488.3	593.7	660.3	665.8	621.4
145°	682.5	610.3	493.8	477.2	466.1	493.8	516.0	621.4	676.9	688.0	654.7
147.5°	699.1	638.1	521.5	488.3	488.3	504.9	538.2	643.6	693.5	704.6	671.4
150°	715.7	660.3	543.7	504.9	493.8	521.5	560.4	665.8	710.2	721.3	693.5
152.5°	726.8	682.5	577.0	527.1	516.0	549.3	599.2	682.5	721.3	732.4	715.7
155°	737.9	699.1	615.9	549.3	543.7	571.5	632.5	699.1	732.4	743.5	732.4
157.5°	749.0	715.7	643.6	582.6	560.4	604.8	660.3	721.3	743.5	754.6	749.0
160°	754.6	726.8	676.9	615.9	604.8	643.6	688.0	726.8	749.0	765.7	760.1
162.5°	765.7	737.9	699.1	654.7	643.6	676.9	710.2	743.5	760.1	771.2	771.2
165°	771.2	749.0	721.3	688.0	676.9	710.2	726.8	754.6	765.7	771.2	776.8
167.5°	771.2	760.1	737.9	710.2	704.6	732.4	749.0	765.7	771.2	771.2	782.3
170°	776.8	765.7	749.0	732.4	726.8	749.0	754.6	771.2	776.8	771.2	787.9
172.5°	776.8	771.2	760.1	743.5	732.4	760.1	765.7	771.2	776.8	771.2	782.3
175°	782.3	771.2	771.2	760.1	743.5	771.2	771.2	771.2	782.3	771.2	776.8
177.5°	782.3	771.2	771.2	765.7	754.6	771.2	771.2	771.2	782.3	771.2	776.8
180°	771.2	771.2	771.2	771.2	771.2	771.2	771.2	771.2	771.2	771.2	771.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	5182.2	5182.2	5182.2	5182.2	5182.2	5182.2
2.5°	5143.4	5104.5	5115.6	5160.0	5143.4	5221.0
5°	5104.5	5082.3	5082.3	5132.3	5126.7	5221.0
7.5°	5043.5	5021.3	5032.4	5087.9	5099.0	5215.5
10°	4971.4	4943.6	4954.7	5032.4	5060.1	5193.3
12.5°	4893.7	4871.5	4882.6	4971.4	5010.2	5171.1
15°	4804.9	4771.6	4804.9	4899.2	4949.2	5132.3
17.5°	4705.0	4660.6	4699.5	4821.6	4882.6	5087.9
20°	4605.2	4566.3	4588.5	4721.7	4810.5	5037.9
22.5°	4505.3	4449.8	4472.0	4610.7	4721.7	4965.8
25°	4388.8	4305.6	4349.9	4499.7	4627.4	4888.1
27.5°	4233.4	4105.8	4200.1	4388.8	4516.4	4804.9
30°	4028.1	3861.7	4000.4	4255.6	4399.9	4710.6
32.5°	3800.6	3623.1	3778.5	4105.8	4277.8	4599.6
35°	3573.2	3412.3	3551.0	3939.4	4150.2	4477.6
37.5°	3356.8	3218.1	3345.7	3761.8	4017.0	4349.9
40°	3151.5	3012.8	3145.9	3567.6	3872.8	4211.2
42.5°	2946.2	2818.6	2946.2	3362.3	3723.0	4055.9
45°	2740.9	2541.2	2729.8	3162.6	3562.1	3895.0
47.5°	2519.0	2285.9	2502.3	2946.2	3390.1	3723.0
50°	2308.1	2108.4	2297.0	2746.5	3212.5	3545.4
52.5°	2125.0	1964.1	2113.9	2541.2	3029.4	3351.2
55°	1953.0	1825.4	1953.0	2341.4	2835.2	3157.0
57.5°	1797.7	1714.5	1803.2	2169.4	2635.5	2957.3
60°	1664.5	1614.6	1670.1	1958.6	2435.7	2746.5
62.5°	1536.9	1531.4	1542.5	1792.1	2224.9	2524.5
65°	1403.7	1431.5	1403.7	1614.6	2014.1	2297.0
67.5°	1270.6	1326.1	1281.7	1437.0	1786.6	2058.5
70°	1148.5	1209.5	1148.5	1253.9	1559.1	1808.8
72.5°	1009.8	1087.5	1009.8	1081.9	1320.5	1553.5
75°	876.6	965.4	882.2	904.4	1093.0	1281.7
77.5°	732.4	815.6	749.0	732.4	882.2	1026.5
80°	582.6	615.9	582.6	577.0	682.5	782.3
82.5°	405.0	432.8	405.0	421.7	499.4	565.9
85°	266.3	277.4	266.3	271.9	332.9	382.8
87.5°	111.0	111.0	111.0	138.7	149.8	160.9
90°	122.1	133.2	122.1	99.9	61.0	5.5
92.5°	127.6	138.7	127.6	111.0	72.1	11.1
95°	227.5	255.2	216.4	138.7	116.5	33.3
97.5°	183.1	199.7	188.6	160.9	144.3	66.6
100°	216.4	233.0	216.4	227.5	177.5	99.9
102.5°	255.2	266.3	260.8	266.3	216.4	138.7
105°	332.9	344.0	332.9	288.5	249.7	177.5
107.5°	355.1	382.8	360.6	321.8	283.0	221.9
110°	382.8	405.0	388.4	355.1	310.7	266.3



TEST NUMBER: P197452

CATALOG NUMBER: 8WSL-LD2-150-UPL8-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	410.6	438.3	421.7	393.9	332.9	305.2
115°	443.9	466.1	455.0	421.7	366.2	344.0
117.5°	477.2	493.8	482.7	443.9	399.5	382.8
120°	504.9	527.1	516.0	471.6	427.2	421.7
122.5°	527.1	549.3	538.2	499.4	455.0	455.0
125°	549.3	571.5	560.4	521.5	477.2	493.8
127.5°	565.9	593.7	582.6	538.2	527.1	521.5
130°	588.1	604.8	599.2	554.8	554.8	554.8
132.5°	599.2	621.4	610.3	577.0	588.1	582.6
135°	604.8	632.5	621.4	604.8	615.9	604.8
137.5°	615.9	638.1	632.5	621.4	643.6	627.0
140°	632.5	643.6	649.2	632.5	665.8	649.2
142.5°	649.2	654.7	665.8	649.2	688.0	671.4
145°	660.3	671.4	682.5	682.5	704.6	682.5
147.5°	660.3	676.9	676.9	693.5	726.8	699.1
150°	676.9	665.8	699.1	715.7	737.9	715.7
152.5°	699.1	693.5	721.3	737.9	749.0	726.8
155°	704.6	710.2	726.8	754.6	760.1	737.9
157.5°	726.8	721.3	749.0	771.2	771.2	749.0
160°	743.5	743.5	771.2	782.3	776.8	754.6
162.5°	760.1	760.1	787.9	787.9	782.3	765.7
165°	771.2	771.2	799.0	793.4	782.3	771.2
167.5°	776.8	782.3	804.5	799.0	782.3	771.2
170°	782.3	782.3	804.5	793.4	782.3	776.8
172.5°	782.3	776.8	799.0	787.9	776.8	776.8
175°	776.8	765.7	787.9	776.8	776.8	782.3
177.5°	771.2	754.6	771.2	771.2	776.8	782.3
180°	771.2	771.2	771.2	771.2	771.2	771.2

(END OF REPORT)