

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: P197444

Luminaire Tested: **8WSL-LD2-130-UPL8-UNV-L850-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197444  
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-L850-CD2-U  
Description: 8FT. Linear Wavestream System, 8% Uplight, L850  
Light Source: (476) 5000K CCT, 80 CRI LEDS  
EL236N0119D850  
Ballast/Driver: OSRAM  
OT85W1202772A0DIML

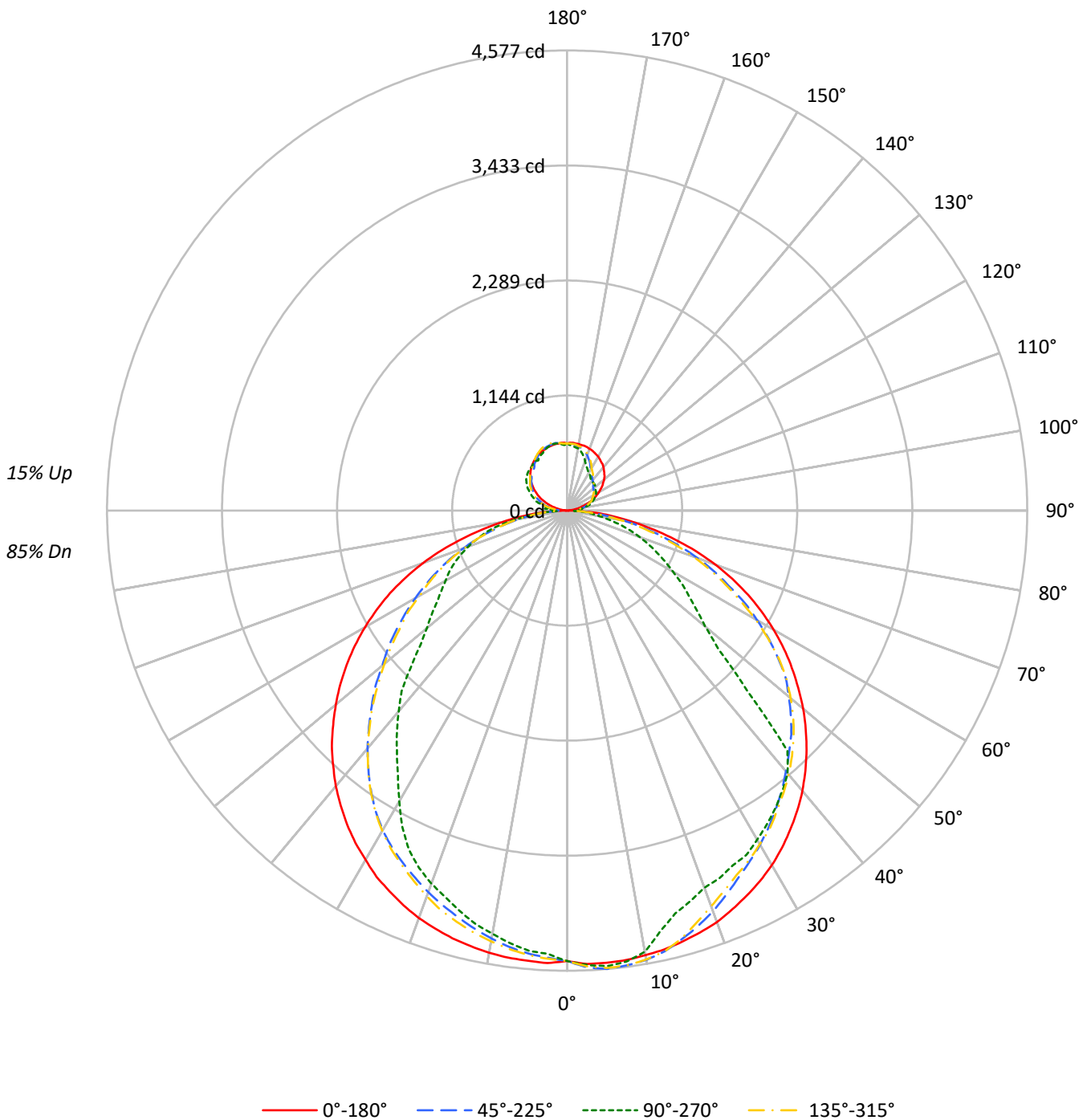
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14861.8 lumens  
Efficiency: N/A  
Efficacy: 119.2 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): 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	0	
RCR																						
0	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85				85
1	105	101	96	92	101	97	93	90	90	87	84	83	81	79	78	76	74	71				71
2	96	88	81	75	92	84	78	73	78	73	69	73	69	65	68	65	62	59				59
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	60	56	52	50				50
4	80	68	59	53	76	66	58	52	61	55	49	57	52	47	53	49	45	42				42
5	73	61	52	45	70	59	51	44	55	48	43	51	45	41	48	43	39	37				37
6	68	55	46	40	65	53	45	39	50	43	37	47	40	36	44	38	34	32				32
7	63	49	41	35	60	48	40	34	45	38	33	42	36	32	40	35	31	28				28
8	58	45	37	31	56	44	36	30	41	34	29	39	33	28	37	31	27	25				25
9	54	41	33	28	52	40	33	27	38	31	26	36	30	26	34	29	25	23				23
10	51	38	30	25	49	37	30	25	35	28	24	33	27	23	31	26	22	21				21

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	12692	12692	12692	12692
5°	12836	12931	12781	12495
10°	12915	12819	12846	12294
15°	13013	12169	12915	12098
20°	13130	12031	13000	11901
25°	13209	12175	13059	11635
30°	13322	12364	13118	10921
35°	13387	12491	13188	10202
40°	13464	12612	13233	9632
45°	13491	10147	13260	8801
50°	13508	7885	13234	8034
55°	13480	7297	13220	7794
60°	13453	6876	13154	7909
65°	13312	6591	13022	8296
70°	12952	6357	12634	8661
75°	12129	5985	11761	9135
80°	11034	5478	10564	8686
85°	10758	5925	9666	7797



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	425.9	2.9
10°-20°	1209.6	8.1
20°-30°	1831.0	12.3
30°-40°	2211.0	14.9
40°-50°	2257.3	15.2
50°-60°	1973.5	13.3
60°-70°	1529.6	10.3
70°-80°	919.7	6.2
80°-90°	283.9	1.9
90°-100°	119.7	0.8
100°-110°	228.9	1.5
110°-120°	310.9	2.1
120°-130°	353.4	2.4
130°-140°	358.5	2.4
140°-150°	330.0	2.2
150°-160°	272.2	1.8
160°-170°	183.1	1.2
170°-180°	63.6	0.4
0°-30°	3466.5	23.3
0°-40°	5677.5	38.2
0°-60°	9908.3	66.7
0°-90°	12641.5	85.1
90°-120°	659.5	4.4
90°-150°	1701.4	11.4
90°-180°	2220.0	14.9
0°-180°	14861.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	4481	4481	4481	4481	4481	
5°	4514	4548	4495	4394	4514	430
15°	4438	4150	4404	4126	4438	1255
25°	4226	3895	4178	3723	4226	1950
35°	3871	3612	3814	2950	3871	2424
45°	3368	2533	3310	2197	3368	2597
55°	2730	1478	2677	1578	2730	2440
65°	1986	983	1943	1238	1986	1960
75°	1108	547	1075	835	1108	1176
85°	331	182	297	240	331	334
90°	5	101	5	115	5	22
95°	29	139	29	221	29	37
105°	154	235	149	297	154	164
115°	297	302	293	403	297	294
125°	427	345	417	494	427	379
135°	523	379	518	547	523	404
145°	590	403	585	580	590	371
155°	638	470	633	614	638	295
165°	667	585	662	667	667	188
175°	676	643	676	662	676	64
180°	667	667	667	667	667	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4480.6	4480.6	4480.6	4480.6	4480.6	4480.6	4480.6	4480.6	4480.6	4480.6	4480.6
2.5°	4514.2	4490.2	4547.8	4557.4	4523.8	4533.4	4538.2	4485.4	4504.6	4432.7	4451.9
5°	4514.2	4509.4	4576.6	4567.0	4547.8	4552.6	4567.0	4504.6	4495.0	4408.7	4423.1
7.5°	4509.4	4519.0	4562.2	4552.6	4523.8	4538.2	4562.2	4514.2	4485.4	4384.7	4379.9
10°	4490.2	4504.6	4538.2	4509.4	4456.6	4480.6	4533.4	4504.6	4466.2	4346.3	4322.3
12.5°	4471.0	4480.6	4490.2	4370.3	4283.9	4341.5	4490.2	4480.6	4437.5	4303.1	4260.0
15°	4437.5	4451.9	4413.5	4240.8	4149.6	4207.2	4403.9	4442.3	4403.9	4240.8	4188.0
17.5°	4399.1	4413.5	4331.9	4140.0	4072.9	4101.7	4293.5	4394.3	4360.7	4183.2	4116.0
20°	4355.9	4370.3	4240.8	4034.5	3991.3	4015.3	4188.0	4341.5	4312.7	4116.0	4039.3
22.5°	4293.5	4317.5	4135.2	3962.5	3957.7	3957.7	4087.3	4279.1	4250.4	4034.5	3952.9
25°	4226.4	4250.4	4029.7	3895.4	3895.4	3895.4	3996.1	4197.6	4178.4	3948.1	3866.6
27.5°	4154.4	4178.4	3933.7	3847.4	3861.8	3837.8	3919.4	4106.4	4106.4	3861.8	3775.4
30°	4072.9	4096.9	3837.8	3770.6	3780.2	3770.6	3833.0	4010.5	4010.5	3761.0	3669.9
32.5°	3976.9	4000.9	3732.3	3679.5	3698.7	3689.1	3751.5	3914.6	3919.4	3655.5	3545.2
35°	3871.4	3900.2	3621.9	3593.1	3612.3	3597.9	3641.1	3813.8	3813.8	3540.4	3401.3
37.5°	3761.0	3789.8	3506.8	3497.2	3516.4	3502.0	3535.6	3708.3	3698.7	3420.4	3247.7
40°	3641.1	3674.7	3386.9	3386.9	3410.8	3401.3	3430.0	3597.9	3578.8	3300.5	3089.4
42.5°	3506.8	3550.0	3266.9	3271.7	3242.9	3281.3	3310.1	3482.8	3444.4	3166.2	2916.7
45°	3367.7	3420.4	3151.8	3065.4	2532.9	3031.9	3185.4	3367.7	3310.1	3031.9	2748.8
47.5°	3219.0	3286.1	3017.5	2700.9	2038.8	2657.7	3051.1	3223.8	3156.6	2887.9	2585.7
50°	3065.4	3142.2	2878.4	2389.0	1789.4	2341.1	2902.3	3079.8	3003.1	2739.2	2398.6
52.5°	2897.5	2983.9	2744.0	2115.6	1621.5	2072.4	2748.8	2940.7	2844.8	2580.9	2245.1
55°	2729.6	2820.8	2561.7	1880.5	1477.6	1842.1	2571.3	2763.2	2676.9	2417.8	2077.2
57.5°	2556.9	2648.1	2379.4	1674.2	1352.8	1635.9	2369.8	2600.1	2504.2	2249.9	1909.3
60°	2374.6	2465.8	2182.7	1487.1	1213.7	1458.4	2163.6	2417.8	2321.9	2077.2	1746.2
62.5°	2182.7	2273.9	1995.7	1314.4	1098.6	1290.5	1938.1	2240.3	2134.8	1894.9	1578.3
65°	1986.1	2053.2	1775.0	1151.3	983.4	1132.2	1736.6	2019.6	1942.9	1703.0	1420.0
67.5°	1779.8	1846.9	1583.1	1007.4	873.1	988.2	1539.9	1823.0	1736.6	1515.9	1261.7
70°	1563.9	1621.5	1381.6	868.3	767.6	853.9	1333.6	1602.3	1525.5	1319.2	1093.8
72.5°	1343.2	1396.0	1165.7	738.8	657.2	729.2	1117.8	1381.6	1304.9	1113.0	940.3
75°	1108.2	1160.9	964.2	609.3	546.9	599.7	921.1	1146.5	1074.6	916.3	782.0
77.5°	887.5	949.9	762.8	479.7	436.5	470.1	724.4	925.9	853.9	734.0	628.4
80°	676.4	729.2	566.1	364.6	335.8	359.8	527.7	705.2	647.6	566.1	489.3
82.5°	489.3	518.1	388.6	268.6	254.3	263.8	359.8	498.9	470.1	407.8	359.8
85°	331.0	326.2	239.9	187.1	182.3	187.1	215.9	302.2	297.4	273.4	230.3
87.5°	139.1	129.5	110.3	76.8	67.2	72.0	86.4	115.1	110.3	115.1	110.3
90°	4.8	48.0	76.8	95.9	100.7	95.9	76.8	48.0	4.8	52.8	86.4
92.5°	9.6	62.4	91.1	105.5	115.1	105.5	86.4	62.4	9.6	81.6	86.4
95°	28.8	86.4	105.5	129.5	139.1	129.5	105.5	81.6	28.8	72.0	129.5
97.5°	57.6	110.3	124.7	143.9	148.7	139.1	119.9	110.3	52.8	129.5	134.3
100°	86.4	139.1	163.1	163.1	167.9	163.1	158.3	134.3	81.6	143.9	163.1
102.5°	119.9	158.3	187.1	201.5	201.5	201.5	187.1	158.3	110.3	177.5	225.5
105°	153.5	172.7	206.3	225.5	235.1	225.5	206.3	177.5	148.7	206.3	239.9
107.5°	191.9	187.1	225.5	244.7	254.3	244.7	225.5	191.9	182.3	230.3	268.6
110°	230.3	206.3	244.7	263.8	268.6	263.8	244.7	206.3	220.7	259.1	297.4



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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°	263.8	220.7	263.8	283.0	287.8	283.0	263.8	225.5	254.3	278.2	326.2
115°	297.4	235.1	273.4	297.4	302.2	297.4	273.4	239.9	292.6	302.2	350.2
117.5°	331.0	254.3	283.0	311.8	316.6	311.8	287.8	259.1	326.2	331.0	374.2
120°	364.6	278.2	297.4	321.4	331.0	326.2	297.4	283.0	355.0	355.0	393.4
122.5°	393.4	297.4	311.8	331.0	340.6	331.0	311.8	307.0	388.6	379.0	417.4
125°	427.0	316.6	321.4	340.6	345.4	340.6	326.2	321.4	417.4	398.2	431.8
127.5°	450.9	340.6	331.0	350.2	355.0	350.2	335.8	345.4	446.1	436.5	446.1
130°	479.7	364.6	340.6	359.8	364.6	364.6	340.6	374.2	470.1	465.3	465.3
132.5°	503.7	388.6	350.2	369.4	374.2	374.2	355.0	393.4	494.1	489.3	479.7
135°	522.9	422.2	369.4	369.4	379.0	379.0	374.2	427.0	518.1	513.3	503.7
137.5°	542.1	450.9	383.8	374.2	379.0	379.0	393.4	455.7	537.3	537.3	518.1
140°	561.3	479.7	393.4	383.8	383.8	393.4	407.8	484.5	556.5	556.5	522.9
142.5°	580.5	503.7	407.8	398.2	388.6	407.8	422.2	513.3	570.9	575.7	537.3
145°	590.1	527.7	427.0	412.6	403.0	427.0	446.1	537.3	585.3	594.9	566.1
147.5°	604.5	551.7	450.9	422.2	422.2	436.5	465.3	556.5	599.7	609.3	580.5
150°	618.8	570.9	470.1	436.5	427.0	450.9	484.5	575.7	614.0	623.6	599.7
152.5°	628.4	590.1	498.9	455.7	446.1	474.9	518.1	590.1	623.6	633.2	618.8
155°	638.0	604.5	532.5	474.9	470.1	494.1	546.9	604.5	633.2	642.8	633.2
157.5°	647.6	618.8	556.5	503.7	484.5	522.9	570.9	623.6	642.8	652.4	647.6
160°	652.4	628.4	585.3	532.5	522.9	556.5	594.9	628.4	647.6	662.0	657.2
162.5°	662.0	638.0	604.5	566.1	556.5	585.3	614.0	642.8	657.2	666.8	666.8
165°	666.8	647.6	623.6	594.9	585.3	614.0	628.4	652.4	662.0	666.8	671.6
167.5°	666.8	657.2	638.0	614.0	609.3	633.2	647.6	662.0	666.8	666.8	676.4
170°	671.6	662.0	647.6	633.2	628.4	647.6	652.4	666.8	671.6	666.8	681.2
172.5°	671.6	666.8	657.2	642.8	633.2	657.2	662.0	666.8	671.6	666.8	676.4
175°	676.4	666.8	666.8	657.2	642.8	666.8	666.8	666.8	676.4	666.8	671.6
177.5°	676.4	666.8	666.8	662.0	652.4	666.8	666.8	666.8	676.4	666.8	671.6
180°	666.8	666.8	666.8	666.8	666.8	666.8	666.8	666.8	666.8	666.8	666.8



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4480.6	4480.6	4480.6	4480.6	4480.6	4480.6
2.5°	4447.1	4413.5	4423.1	4461.4	4447.1	4514.2
5°	4413.5	4394.3	4394.3	4437.5	4432.7	4514.2
7.5°	4360.7	4341.5	4351.1	4399.1	4408.7	4509.4
10°	4298.3	4274.4	4283.9	4351.1	4375.1	4490.2
12.5°	4231.2	4212.0	4221.6	4298.3	4331.9	4471.0
15°	4154.4	4125.6	4154.4	4236.0	4279.1	4437.5
17.5°	4068.1	4029.7	4063.3	4168.8	4221.6	4399.1
20°	3981.7	3948.1	3967.3	4082.5	4159.2	4355.9
22.5°	3895.4	3847.4	3866.6	3986.5	4082.5	4293.5
25°	3794.6	3722.7	3761.0	3890.6	4000.9	4226.4
27.5°	3660.3	3550.0	3631.5	3794.6	3905.0	4154.4
30°	3482.8	3338.9	3458.8	3679.5	3804.2	4072.9
32.5°	3286.1	3132.6	3266.9	3550.0	3698.7	3976.9
35°	3089.4	2950.3	3070.2	3406.0	3588.3	3871.4
37.5°	2902.3	2782.4	2892.7	3252.5	3473.2	3761.0
40°	2724.8	2604.9	2720.0	3084.6	3348.5	3641.1
42.5°	2547.3	2437.0	2547.3	2907.1	3219.0	3506.8
45°	2369.8	2197.1	2360.2	2734.4	3079.8	3367.7
47.5°	2178.0	1976.5	2163.6	2547.3	2931.1	3219.0
50°	1995.7	1823.0	1986.1	2374.6	2777.6	3065.4
52.5°	1837.3	1698.2	1827.8	2197.1	2619.3	2897.5
55°	1688.6	1578.3	1688.6	2024.4	2451.4	2729.6
57.5°	1554.3	1482.4	1559.1	1875.7	2278.7	2556.9
60°	1439.2	1396.0	1444.0	1693.4	2106.0	2374.6
62.5°	1328.8	1324.0	1333.6	1549.5	1923.7	2182.7
65°	1213.7	1237.7	1213.7	1396.0	1741.4	1986.1
67.5°	1098.6	1146.5	1108.2	1242.5	1544.7	1779.8
70°	993.0	1045.8	993.0	1084.2	1348.0	1563.9
72.5°	873.1	940.3	873.1	935.5	1141.7	1343.2
75°	758.0	834.7	762.8	782.0	945.1	1108.2
77.5°	633.2	705.2	647.6	633.2	762.8	887.5
80°	503.7	532.5	503.7	498.9	590.1	676.4
82.5°	350.2	374.2	350.2	364.6	431.8	489.3
85°	230.3	239.9	230.3	235.1	287.8	331.0
87.5°	95.9	95.9	95.9	119.9	129.5	139.1
90°	105.5	115.1	105.5	86.4	52.8	4.8
92.5°	110.3	119.9	110.3	95.9	62.4	9.6
95°	196.7	220.7	187.1	119.9	100.7	28.8
97.5°	158.3	172.7	163.1	139.1	124.7	57.6
100°	187.1	201.5	187.1	196.7	153.5	86.4
102.5°	220.7	230.3	225.5	230.3	187.1	119.9
105°	287.8	297.4	287.8	249.5	215.9	153.5
107.5°	307.0	331.0	311.8	278.2	244.7	191.9
110°	331.0	350.2	335.8	307.0	268.6	230.3





TEST NUMBER: P197444

CATALOG NUMBER: 8WSL-LD2-130-UPL8-UNV-L850-CD2-U

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	355.0	379.0	364.6	340.6	287.8	263.8
115°	383.8	403.0	393.4	364.6	316.6	297.4
117.5°	412.6	427.0	417.4	383.8	345.4	331.0
120°	436.5	455.7	446.1	407.8	369.4	364.6
122.5°	455.7	474.9	465.3	431.8	393.4	393.4
125°	474.9	494.1	484.5	450.9	412.6	427.0
127.5°	489.3	513.3	503.7	465.3	455.7	450.9
130°	508.5	522.9	518.1	479.7	479.7	479.7
132.5°	518.1	537.3	527.7	498.9	508.5	503.7
135°	522.9	546.9	537.3	522.9	532.5	522.9
137.5°	532.5	551.7	546.9	537.3	556.5	542.1
140°	546.9	556.5	561.3	546.9	575.7	561.3
142.5°	561.3	566.1	575.7	561.3	594.9	580.5
145°	570.9	580.5	590.1	590.1	609.3	590.1
147.5°	570.9	585.3	585.3	599.7	628.4	604.5
150°	585.3	575.7	604.5	618.8	638.0	618.8
152.5°	604.5	599.7	623.6	638.0	647.6	628.4
155°	609.3	614.0	628.4	652.4	657.2	638.0
157.5°	628.4	623.6	647.6	666.8	666.8	647.6
160°	642.8	642.8	666.8	676.4	671.6	652.4
162.5°	657.2	657.2	681.2	681.2	676.4	662.0
165°	666.8	666.8	690.8	686.0	676.4	666.8
167.5°	671.6	676.4	695.6	690.8	676.4	666.8
170°	676.4	676.4	695.6	686.0	676.4	671.6
172.5°	676.4	671.6	690.8	681.2	671.6	671.6
175°	671.6	662.0	681.2	671.6	671.6	676.4
177.5°	666.8	652.4	666.8	666.8	671.6	676.4
180°	666.8	666.8	666.8	666.8	666.8	666.8

(END OF REPORT)