

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: P197448

Luminaire Tested: **8WSL-LD2-140-UPL8-UNV-L850-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197448
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-LD2-140-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

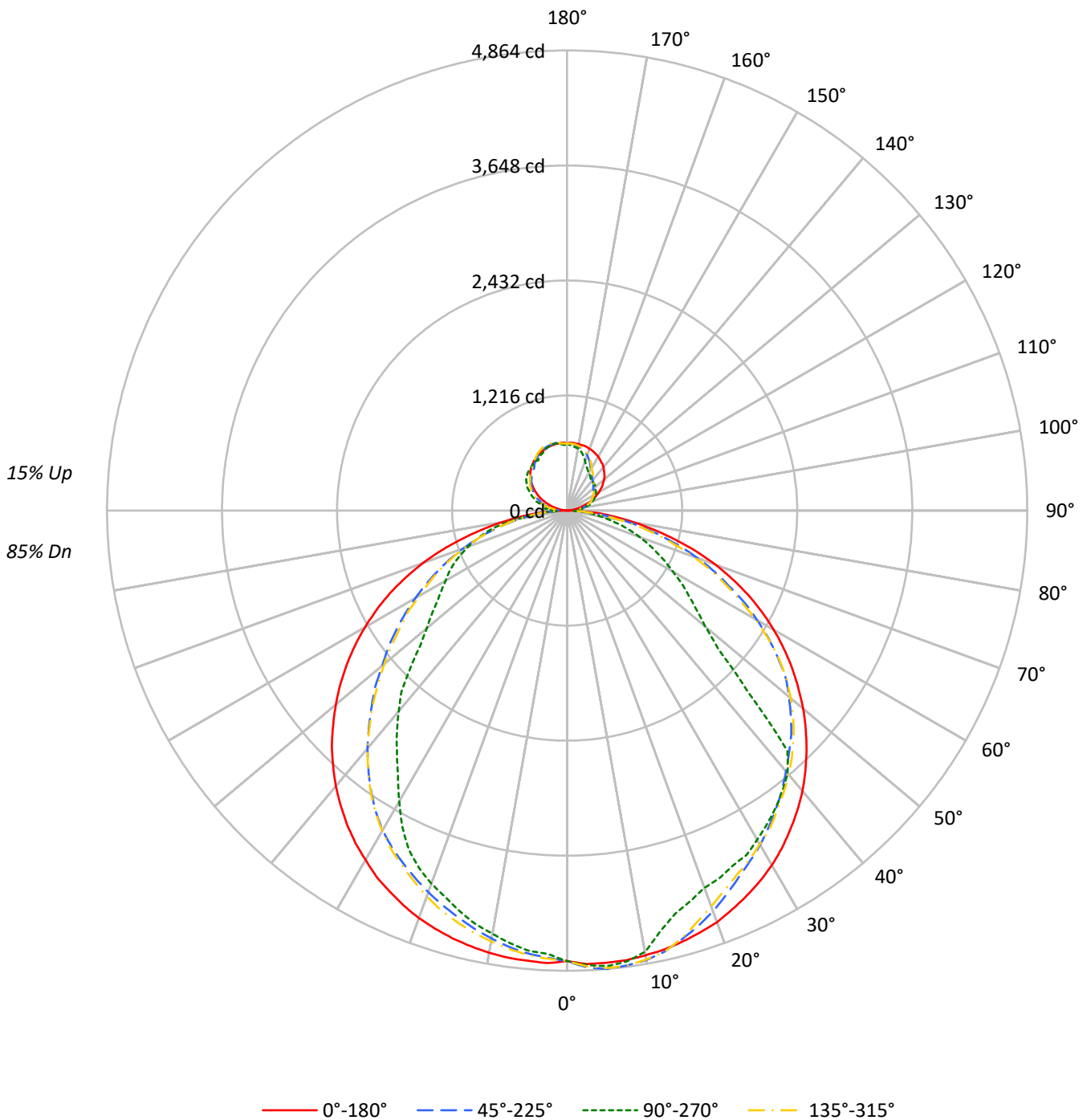
Lumens per Lamp: N/A
Luminaire Lumens: 15795.3 lumens
Efficiency: N/A
Efficacy: 115.6 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 136.6
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

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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	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°	13489	13489	13489	13489
5°	13642	13744	13584	13280
10°	13727	13624	13653	13066
15°	13830	12933	13726	12859
20°	13955	12787	13817	12649
25°	14039	12939	13880	12366
30°	14158	13141	13942	11607
35°	14228	13276	14017	10843
40°	14309	13405	14064	10237
45°	14338	10784	14093	9355
50°	14357	8381	14065	8538
55°	14327	7755	14050	8284
60°	14298	7308	13980	8405
65°	14148	7005	13840	8817
70°	13766	6756	13428	9205
75°	12890	6361	12500	9710
80°	11727	5822	11228	9231
85°	11434	6295	10273	8284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	452.7	2.9
10°-20°	1285.5	8.1
20°-30°	1946.1	12.3
30°-40°	2349.9	14.9
40°-50°	2399.1	15.2
50°-60°	2097.5	13.3
60°-70°	1625.7	10.3
70°-80°	977.4	6.2
80°-90°	301.7	1.9
90°-100°	127.2	0.8
100°-110°	243.2	1.5
110°-120°	330.4	2.1
120°-130°	375.6	2.4
130°-140°	381.0	2.4
140°-150°	350.7	2.2
150°-160°	289.3	1.8
160°-170°	194.6	1.2
170°-180°	67.6	0.4
0°-30°	3684.3	23.3
0°-40°	6034.1	38.2
0°-60°	10530.7	66.7
0°-90°	13435.6	85.1
90°-120°	700.9	4.4
90°-150°	1808.2	11.4
90°-180°	2360.0	14.9
0°-180°	15795.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4762	4762	4762	4762	4762	
5°	4798	4834	4777	4670	4798	457
15°	4716	4410	4680	4385	4716	1333
25°	4492	4140	4441	3956	4492	2073
35°	4115	3839	4053	3136	4115	2576
45°	3579	2692	3518	2335	3579	2760
55°	2901	1570	2845	1677	2901	2593
65°	2111	1045	2065	1315	2111	2083
75°	1178	581	1142	887	1178	1250
85°	352	194	316	255	352	355
90°	5	107	5	122	5	23
95°	31	148	31	234	31	39
105°	163	250	158	316	163	175
115°	316	321	311	428	316	313
125°	454	367	444	525	454	403
135°	556	403	551	581	556	429
145°	627	428	622	617	627	394
155°	678	500	673	653	678	313
165°	709	622	704	709	709	200
175°	719	683	719	704	719	68
180°	709	709	709	709	709	



TEST NUMBER: P197448

CATALOG NUMBER: 8WSL-LD2-140-UPL8-UNV-L850-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4762.1	4762.1	4762.1	4762.1	4762.1	4762.1	4762.1	4762.1	4762.1	4762.1	4762.1
2.5°	4797.8	4772.3	4833.5	4843.7	4808.0	4818.2	4823.3	4767.2	4787.6	4711.1	4731.5
5°	4797.8	4792.7	4864.0	4853.9	4833.5	4838.6	4853.9	4787.6	4777.4	4685.6	4700.9
7.5°	4792.7	4802.9	4848.8	4838.6	4808.0	4823.3	4848.8	4797.8	4767.2	4660.1	4655.0
10°	4772.3	4787.6	4823.3	4792.7	4736.6	4762.1	4818.2	4787.6	4746.8	4619.3	4593.8
12.5°	4751.9	4762.1	4772.3	4644.8	4553.0	4614.2	4772.3	4762.1	4716.2	4573.4	4527.5
15°	4716.2	4731.5	4690.7	4507.1	4410.3	4471.5	4680.5	4721.3	4680.5	4507.1	4451.1
17.5°	4675.4	4690.7	4604.0	4400.1	4328.7	4359.3	4563.2	4670.3	4634.6	4446.0	4374.6
20°	4629.5	4644.8	4507.1	4287.9	4242.0	4267.5	4451.1	4614.2	4583.6	4374.6	4293.0
22.5°	4563.2	4588.7	4395.0	4211.4	4206.3	4206.3	4344.0	4547.9	4517.3	4287.9	4201.2
25°	4491.9	4517.3	4282.8	4140.0	4140.0	4140.0	4247.1	4461.3	4440.9	4196.1	4109.5
27.5°	4415.4	4440.9	4180.8	4089.1	4104.4	4078.9	4165.5	4364.4	4364.4	4104.4	4012.6
30°	4328.7	4354.2	4078.9	4007.5	4017.7	4007.5	4073.8	4262.4	4262.4	3997.3	3900.4
32.5°	4226.7	4252.2	3966.7	3910.6	3931.0	3920.8	3987.1	4160.4	4165.5	3885.1	3767.9
35°	4114.6	4145.1	3849.4	3818.8	3839.2	3823.9	3869.8	4053.4	4053.4	3762.8	3614.9
37.5°	3997.3	4027.9	3727.1	3716.9	3737.3	3722.0	3757.7	3941.2	3931.0	3635.3	3451.7
40°	3869.8	3905.5	3599.6	3599.6	3625.1	3614.9	3645.5	3823.9	3803.5	3507.8	3283.5
42.5°	3727.1	3773.0	3472.1	3477.2	3446.6	3487.4	3518.0	3701.6	3660.8	3365.1	3099.9
45°	3579.2	3635.3	3349.8	3258.0	2692.1	3222.3	3385.5	3579.2	3518.0	3222.3	2921.5
47.5°	3421.1	3492.5	3207.0	2870.5	2166.9	2824.6	3242.7	3426.2	3354.9	3069.3	2748.1
50°	3258.0	3339.6	3059.1	2539.1	1901.8	2488.1	3084.6	3273.3	3191.7	2911.3	2549.3
52.5°	3079.5	3171.3	2916.4	2248.5	1723.3	2202.6	2921.5	3125.4	3023.5	2743.0	2386.1
55°	2901.1	2998.0	2722.6	1998.6	1570.4	1957.9	2732.8	2936.8	2845.0	2569.7	2207.7
57.5°	2717.5	2814.4	2528.9	1779.4	1437.8	1738.6	2518.7	2763.4	2661.5	2391.2	2029.2
60°	2523.8	2620.7	2319.9	1580.6	1289.9	1550.0	2299.5	2569.7	2467.7	2207.7	1855.9
62.5°	2319.9	2416.7	2121.0	1397.0	1167.6	1371.5	2059.8	2381.0	2268.9	2013.9	1677.4
65°	2110.8	2182.2	1886.5	1223.7	1045.2	1203.3	1845.7	2146.5	2064.9	1810.0	1509.2
67.5°	1891.6	1963.0	1682.5	1070.7	927.9	1050.3	1636.6	1937.5	1845.7	1611.2	1340.9
70°	1662.1	1723.3	1468.4	922.8	815.8	907.5	1417.4	1702.9	1621.3	1402.1	1162.5
72.5°	1427.6	1483.7	1239.0	785.2	698.5	775.0	1188.0	1468.4	1386.8	1182.9	999.3
75°	1177.8	1233.9	1024.8	647.5	581.2	637.3	978.9	1218.6	1142.1	973.8	831.1
77.5°	943.2	1009.5	810.7	509.9	464.0	499.7	769.9	984.0	907.5	780.1	667.9
80°	718.9	775.0	601.6	387.5	356.9	382.4	560.8	749.5	688.3	601.6	520.1
82.5°	520.1	550.6	413.0	285.5	270.2	280.4	382.4	530.3	499.7	433.4	382.4
85°	351.8	346.7	254.9	198.8	193.7	198.8	229.4	321.2	316.1	290.6	244.7
87.5°	147.9	137.7	117.3	81.6	71.4	76.5	91.8	122.4	117.3	122.4	117.3
90°	5.1	51.0	81.6	102.0	107.1	102.0	81.6	51.0	5.1	56.1	91.8
92.5°	10.2	66.3	96.9	112.2	122.4	112.2	91.8	66.3	10.2	86.7	91.8
95°	30.6	91.8	112.2	137.7	147.9	137.7	112.2	86.7	30.6	76.5	137.7
97.5°	61.2	117.3	132.6	153.0	158.1	147.9	127.5	117.3	56.1	137.7	142.8
100°	91.8	147.9	173.4	173.4	178.5	173.4	168.3	142.8	86.7	153.0	173.4
102.5°	127.5	168.3	198.8	214.1	214.1	214.1	198.8	168.3	117.3	188.6	239.6
105°	163.2	183.5	219.2	239.6	249.8	239.6	219.2	188.6	158.1	219.2	254.9
107.5°	203.9	198.8	239.6	260.0	270.2	260.0	239.6	203.9	193.7	244.7	285.5
110°	244.7	219.2	260.0	280.4	285.5	280.4	260.0	219.2	234.5	275.3	316.1



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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°	280.4	234.5	280.4	300.8	305.9	300.8	280.4	239.6	270.2	295.7	346.7
115°	316.1	249.8	290.6	316.1	321.2	316.1	290.6	254.9	311.0	321.2	372.2
117.5°	351.8	270.2	300.8	331.4	336.5	331.4	305.9	275.3	346.7	351.8	397.7
120°	387.5	295.7	316.1	341.6	351.8	346.7	316.1	300.8	377.3	377.3	418.1
122.5°	418.1	316.1	331.4	351.8	362.0	351.8	331.4	326.3	413.0	402.8	443.6
125°	453.8	336.5	341.6	362.0	367.1	362.0	346.7	341.6	443.6	423.2	458.9
127.5°	479.3	362.0	351.8	372.2	377.3	372.2	356.9	367.1	474.2	464.0	474.2
130°	509.9	387.5	362.0	382.4	387.5	387.5	362.0	397.7	499.7	494.6	494.6
132.5°	535.4	413.0	372.2	392.6	397.7	397.7	377.3	418.1	525.2	520.1	509.9
135°	555.7	448.7	392.6	392.6	402.8	402.8	397.7	453.8	550.6	545.5	535.4
137.5°	576.1	479.3	407.9	397.7	402.8	402.8	418.1	484.4	571.0	571.0	550.6
140°	596.5	509.9	418.1	407.9	407.9	418.1	433.4	515.0	591.4	591.4	555.7
142.5°	616.9	535.4	433.4	423.2	413.0	433.4	448.7	545.5	606.7	611.8	571.0
145°	627.1	560.8	453.8	438.5	428.3	453.8	474.2	571.0	622.0	632.2	601.6
147.5°	642.4	586.3	479.3	448.7	448.7	464.0	494.6	591.4	637.3	647.5	616.9
150°	657.7	606.7	499.7	464.0	453.8	479.3	515.0	611.8	652.6	662.8	637.3
152.5°	667.9	627.1	530.3	484.4	474.2	504.8	550.6	627.1	662.8	673.0	657.7
155°	678.1	642.4	565.9	504.8	499.7	525.2	581.2	642.4	673.0	683.2	673.0
157.5°	688.3	657.7	591.4	535.4	515.0	555.7	606.7	662.8	683.2	693.4	688.3
160°	693.4	667.9	622.0	565.9	555.7	591.4	632.2	667.9	688.3	703.6	698.5
162.5°	703.6	678.1	642.4	601.6	591.4	622.0	652.6	683.2	698.5	708.7	708.7
165°	708.7	688.3	662.8	632.2	622.0	652.6	667.9	693.4	703.6	708.7	713.8
167.5°	708.7	698.5	678.1	652.6	647.5	673.0	688.3	703.6	708.7	708.7	718.9
170°	713.8	703.6	688.3	673.0	667.9	688.3	693.4	708.7	713.8	708.7	724.0
172.5°	713.8	708.7	698.5	683.2	673.0	698.5	703.6	708.7	713.8	708.7	718.9
175°	718.9	708.7	708.7	698.5	683.2	708.7	708.7	708.7	718.9	708.7	713.8
177.5°	718.9	708.7	708.7	703.6	693.4	708.7	708.7	708.7	718.9	708.7	713.8
180°	708.7	708.7	708.7	708.7	708.7	708.7	708.7	708.7	708.7	708.7	708.7



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CATALOG NUMBER: 8WSL-LD2-140-UPL8-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4762.1	4762.1	4762.1	4762.1	4762.1	4762.1
2.5°	4726.4	4690.7	4700.9	4741.7	4726.4	4797.8
5°	4690.7	4670.3	4670.3	4716.2	4711.1	4797.8
7.5°	4634.6	4614.2	4624.4	4675.4	4685.6	4792.7
10°	4568.3	4542.8	4553.0	4624.4	4649.9	4772.3
12.5°	4496.9	4476.6	4486.8	4568.3	4604.0	4751.9
15°	4415.4	4384.8	4415.4	4502.0	4547.9	4716.2
17.5°	4323.6	4282.8	4318.5	4430.7	4486.8	4675.4
20°	4231.8	4196.1	4216.5	4338.9	4420.5	4629.5
22.5°	4140.0	4089.1	4109.5	4236.9	4338.9	4563.2
25°	4033.0	3956.5	3997.3	4134.9	4252.2	4491.9
27.5°	3890.2	3773.0	3859.6	4033.0	4150.2	4415.4
30°	3701.6	3548.6	3676.1	3910.6	4043.2	4328.7
32.5°	3492.5	3329.4	3472.1	3773.0	3931.0	4226.7
35°	3283.5	3135.6	3263.1	3620.0	3813.7	4114.6
37.5°	3084.6	2957.2	3074.4	3456.8	3691.4	3997.3
40°	2896.0	2768.5	2890.9	3278.4	3558.8	3869.8
42.5°	2707.3	2590.1	2707.3	3089.7	3421.1	3727.1
45°	2518.7	2335.2	2508.5	2906.2	3273.3	3579.2
47.5°	2314.8	2100.6	2299.5	2707.3	3115.2	3421.1
50°	2121.0	1937.5	2110.8	2523.8	2952.1	3258.0
52.5°	1952.8	1804.9	1942.6	2335.2	2783.8	3079.5
55°	1794.7	1677.4	1794.7	2151.6	2605.4	2901.1
57.5°	1651.9	1575.5	1657.0	1993.5	2421.8	2717.5
60°	1529.6	1483.7	1534.7	1799.8	2238.3	2523.8
62.5°	1412.3	1407.2	1417.4	1646.8	2044.5	2319.9
65°	1289.9	1315.4	1289.9	1483.7	1850.8	2110.8
67.5°	1167.6	1218.6	1177.8	1320.5	1641.7	1891.6
70°	1055.4	1111.5	1055.4	1152.3	1432.7	1662.1
72.5°	927.9	999.3	927.9	994.2	1213.5	1427.6
75°	805.6	887.2	810.7	831.1	1004.4	1177.8
77.5°	673.0	749.5	688.3	673.0	810.7	943.2
80°	535.4	565.9	535.4	530.3	627.1	718.9
82.5°	372.2	397.7	372.2	387.5	458.9	520.1
85°	244.7	254.9	244.7	249.8	305.9	351.8
87.5°	102.0	102.0	102.0	127.5	137.7	147.9
90°	112.2	122.4	112.2	91.8	56.1	5.1
92.5°	117.3	127.5	117.3	102.0	66.3	10.2
95°	209.0	234.5	198.8	127.5	107.1	30.6
97.5°	168.3	183.5	173.4	147.9	132.6	61.2
100°	198.8	214.1	198.8	209.0	163.2	91.8
102.5°	234.5	244.7	239.6	244.7	198.8	127.5
105°	305.9	316.1	305.9	265.1	229.4	163.2
107.5°	326.3	351.8	331.4	295.7	260.0	203.9
110°	351.8	372.2	356.9	326.3	285.5	244.7



TEST NUMBER: P197448

CATALOG NUMBER: 8WSL-LD2-140-UPL8-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	377.3	402.8	387.5	362.0	305.9	280.4
115°	407.9	428.3	418.1	387.5	336.5	316.1
117.5°	438.5	453.8	443.6	407.9	367.1	351.8
120°	464.0	484.4	474.2	433.4	392.6	387.5
122.5°	484.4	504.8	494.6	458.9	418.1	418.1
125°	504.8	525.2	515.0	479.3	438.5	453.8
127.5°	520.1	545.5	535.4	494.6	484.4	479.3
130°	540.4	555.7	550.6	509.9	509.9	509.9
132.5°	550.6	571.0	560.8	530.3	540.4	535.4
135°	555.7	581.2	571.0	555.7	565.9	555.7
137.5°	565.9	586.3	581.2	571.0	591.4	576.1
140°	581.2	591.4	596.5	581.2	611.8	596.5
142.5°	596.5	601.6	611.8	596.5	632.2	616.9
145°	606.7	616.9	627.1	627.1	647.5	627.1
147.5°	606.7	622.0	622.0	637.3	667.9	642.4
150°	622.0	611.8	642.4	657.7	678.1	657.7
152.5°	642.4	637.3	662.8	678.1	688.3	667.9
155°	647.5	652.6	667.9	693.4	698.5	678.1
157.5°	667.9	662.8	688.3	708.7	708.7	688.3
160°	683.2	683.2	708.7	718.9	713.8	693.4
162.5°	698.5	698.5	724.0	724.0	718.9	703.6
165°	708.7	708.7	734.2	729.1	718.9	708.7
167.5°	713.8	718.9	739.3	734.2	718.9	708.7
170°	718.9	718.9	739.3	729.1	718.9	713.8
172.5°	718.9	713.8	734.2	724.0	713.8	713.8
175°	713.8	703.6	724.0	713.8	713.8	718.9
177.5°	708.7	693.4	708.7	708.7	713.8	718.9
180°	708.7	708.7	708.7	708.7	708.7	708.7

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