

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: P197445

Luminaire Tested: **8WSL-LD2-140-UPL8-UNV-L830-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197445
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-L830-CD2-U
Description: 8FT. Linear Wavestream System, 8% Uplight, L830
Light Source: (476) 3000K CCT, 80 CRI LEDS
EL236N0119D830
Ballast/Driver: OSRAM
OT85W1202772A0DIML

Summary

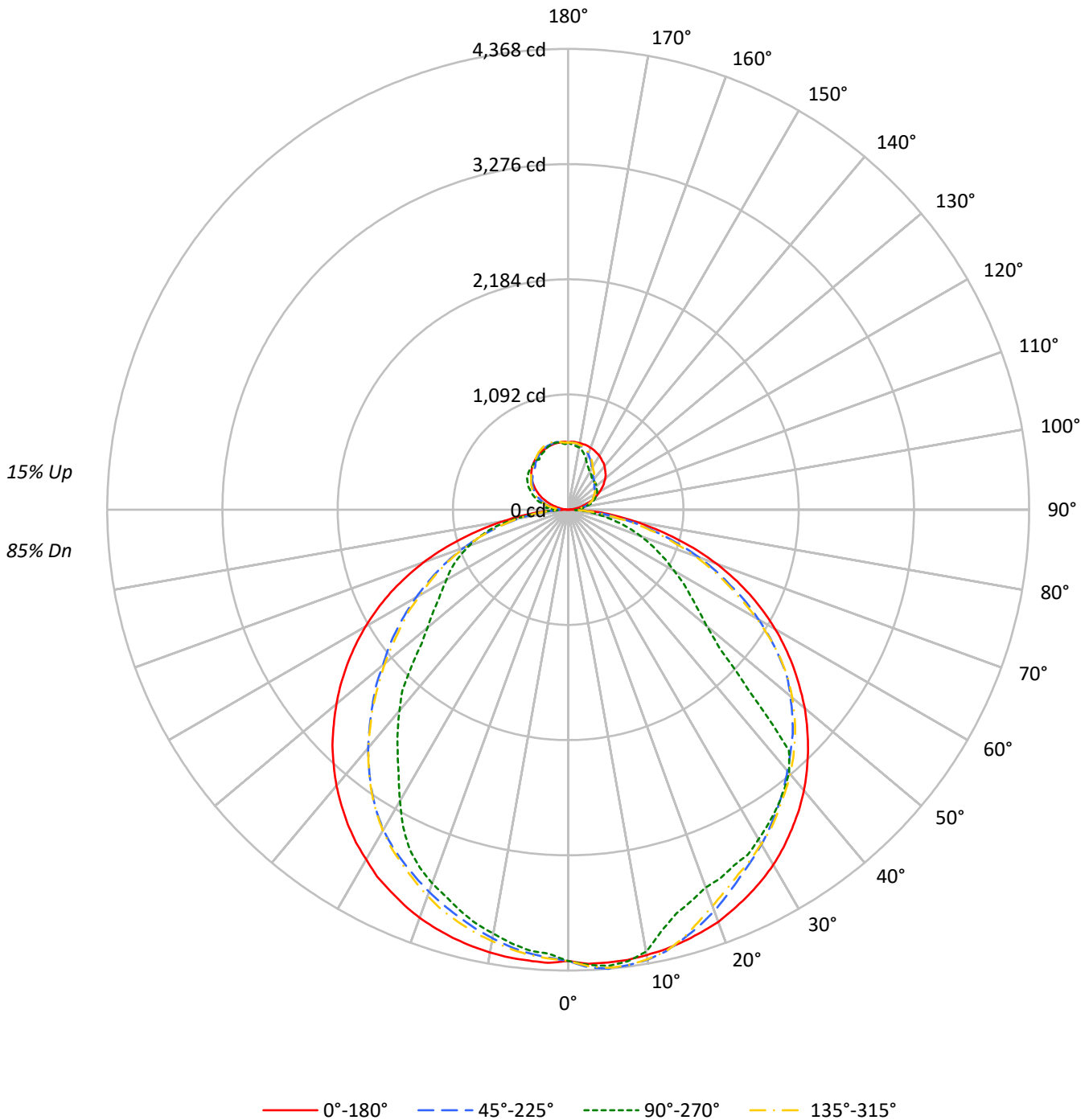
Lumens per Lamp: N/A
Luminaire Lumens: 14185.3 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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





TEST NUMBER: P197445

CATALOG NUMBER: 8WSL-LD2-140-UPL8-UNV-L830-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°	12114	12114	12114	12114
5°	12251	12343	12199	11926
10°	12327	12235	12261	11735
15°	12421	11615	12327	11548
20°	12533	11484	12408	11359
25°	12608	11621	12465	11105
30°	12715	11802	12521	10424
35°	12778	11923	12588	9738
40°	12851	12038	12631	9194
45°	12877	9685	12656	8401
50°	12894	7526	12632	7668
55°	12867	6965	12618	7440
60°	12841	6563	12555	7549
65°	12706	6292	12430	7918
70°	12363	6067	12059	8267
75°	11576	5713	11226	8719
80°	10531	5228	10084	8292
85°	10267	5655	9227	7439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.5	2.9
10°-20°	1154.5	8.1
20°-30°	1747.7	12.3
30°-40°	2110.3	14.9
40°-50°	2154.5	15.2
50°-60°	1883.7	13.3
60°-70°	1460.0	10.3
70°-80°	877.8	6.2
80°-90°	271.0	1.9
90°-100°	114.3	0.8
100°-110°	218.4	1.5
110°-120°	296.7	2.1
120°-130°	337.3	2.4
130°-140°	342.2	2.4
140°-150°	314.9	2.2
150°-160°	259.8	1.8
160°-170°	174.7	1.2
170°-180°	60.7	0.4
0°-30°	3308.7	23.3
0°-40°	5419.1	38.2
0°-60°	9457.3	66.7
0°-90°	12066.1	85.1
90°-120°	629.4	4.4
90°-150°	1623.9	11.4
90°-180°	2119.0	14.9
0°-180°	14185.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4277	4277	4277	4277	4277	
5°	4309	4341	4290	4194	4309	411
15°	4236	3961	4203	3938	4236	1197
25°	4034	3718	3988	3553	4034	1862
35°	3695	3448	3640	2816	3695	2313
45°	3214	2418	3159	2097	3214	2479
55°	2605	1410	2555	1506	2605	2329
65°	1896	939	1854	1181	1896	1871
75°	1058	522	1026	797	1058	1122
85°	316	174	284	229	316	319
90°	5	96	5	110	5	21
95°	28	133	28	211	28	35
105°	146	224	142	284	146	157
115°	284	288	279	385	284	281
125°	408	330	398	472	408	362
135°	499	362	494	522	499	385
145°	563	385	559	554	563	354
155°	609	449	604	586	609	281
165°	636	559	632	636	636	180
175°	646	614	646	632	646	61
180°	636	636	636	636	636	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4276.7	4276.7	4276.7	4276.7	4276.7	4276.7	4276.7	4276.7	4276.7	4276.7	4276.7
2.5°	4308.7	4285.8	4340.8	4349.9	4317.9	4327.1	4331.6	4281.3	4299.6	4230.9	4249.2
5°	4308.7	4304.2	4368.3	4359.1	4340.8	4345.4	4359.1	4299.6	4290.4	4208.0	4221.7
7.5°	4304.2	4313.3	4354.5	4345.4	4317.9	4331.6	4354.5	4308.7	4281.3	4185.1	4180.5
10°	4285.8	4299.6	4331.6	4304.2	4253.8	4276.7	4327.1	4299.6	4262.9	4148.5	4125.6
12.5°	4267.5	4276.7	4285.8	4171.4	4089.0	4143.9	4285.8	4276.7	4235.5	4107.3	4066.1
15°	4235.5	4249.2	4212.6	4047.7	3960.7	4015.7	4203.4	4240.1	4203.4	4047.7	3997.4
17.5°	4198.8	4212.6	4134.7	3951.6	3887.5	3915.0	4098.1	4194.3	4162.2	3992.8	3928.7
20°	4157.6	4171.4	4047.7	3850.8	3809.6	3832.5	3997.4	4143.9	4116.4	3928.7	3855.4
22.5°	4098.1	4121.0	3947.0	3782.2	3777.6	3777.6	3901.2	4084.4	4056.9	3850.8	3773.0
25°	4034.0	4056.9	3846.3	3718.1	3718.1	3718.1	3814.2	4006.5	3988.2	3768.4	3690.6
27.5°	3965.3	3988.2	3754.7	3672.3	3686.0	3663.1	3741.0	3919.5	3919.5	3686.0	3603.6
30°	3887.5	3910.4	3663.1	3599.0	3608.2	3599.0	3658.5	3828.0	3828.0	3589.9	3502.9
32.5°	3795.9	3818.8	3562.4	3512.0	3530.3	3521.2	3580.7	3736.4	3741.0	3489.1	3383.8
35°	3695.2	3722.6	3457.1	3429.6	3447.9	3434.2	3475.4	3640.2	3640.2	3379.2	3246.4
37.5°	3589.9	3617.3	3347.2	3338.0	3356.3	3342.6	3374.6	3539.5	3530.3	3264.7	3099.9
40°	3475.4	3507.4	3232.7	3232.7	3255.6	3246.4	3273.9	3434.2	3415.9	3150.3	2948.8
42.5°	3347.2	3388.4	3118.2	3122.8	3095.3	3132.0	3159.4	3324.3	3287.6	3022.1	2784.0
45°	3214.4	3264.7	3008.3	2925.9	2417.7	2893.9	3040.4	3214.4	3159.4	2893.9	2623.7
47.5°	3072.4	3136.5	2880.1	2577.9	1946.0	2536.7	2912.2	3077.0	3012.9	2756.5	2468.0
50°	2925.9	2999.2	2747.3	2280.3	1707.9	2234.5	2770.2	2939.6	2866.4	2614.5	2289.4
52.5°	2765.7	2848.1	2619.1	2019.3	1547.7	1978.1	2623.7	2806.9	2715.3	2463.4	2142.9
55°	2605.4	2692.4	2445.1	1794.9	1410.3	1758.3	2454.3	2637.4	2555.0	2307.8	1982.7
57.5°	2440.5	2527.5	2271.1	1598.0	1291.2	1561.4	2262.0	2481.8	2390.2	2147.5	1822.4
60°	2266.6	2353.6	2083.4	1419.5	1158.5	1392.0	2065.1	2307.8	2216.2	1982.7	1666.7
62.5°	2083.4	2170.4	1904.8	1254.6	1048.6	1231.7	1849.9	2138.3	2037.6	1808.7	1506.5
65°	1895.7	1959.8	1694.2	1098.9	938.7	1080.6	1657.6	1927.7	1854.5	1625.5	1355.4
67.5°	1698.8	1762.9	1511.0	961.6	833.4	943.3	1469.8	1740.0	1657.6	1446.9	1204.2
70°	1492.7	1547.7	1318.7	828.8	732.6	815.0	1272.9	1529.3	1456.1	1259.2	1044.0
72.5°	1282.1	1332.5	1112.7	705.1	627.3	696.0	1066.9	1318.7	1245.5	1062.3	897.5
75°	1057.7	1108.1	920.4	581.5	522.0	572.4	879.1	1094.4	1025.7	874.6	746.4
77.5°	847.1	906.6	728.0	457.9	416.7	448.7	691.4	883.7	815.0	700.6	599.8
80°	645.6	696.0	540.3	348.0	320.5	343.4	503.7	673.1	618.2	540.3	467.0
82.5°	467.0	494.5	370.9	256.4	242.7	251.8	343.4	476.2	448.7	389.2	343.4
85°	315.9	311.4	228.9	178.6	174.0	178.6	206.1	288.5	283.9	261.0	219.8
87.5°	132.8	123.6	105.3	73.3	64.1	68.7	82.4	109.9	105.3	109.9	105.3
90°	4.6	45.8	73.3	91.6	96.2	91.6	73.3	45.8	4.6	50.4	82.4
92.5°	9.2	59.5	87.0	100.7	109.9	100.7	82.4	59.5	9.2	77.8	82.4
95°	27.5	82.4	100.7	123.6	132.8	123.6	100.7	77.8	27.5	68.7	123.6
97.5°	54.9	105.3	119.1	137.4	141.9	132.8	114.5	105.3	50.4	123.6	128.2
100°	82.4	132.8	155.7	155.7	160.3	155.7	151.1	128.2	77.8	137.4	155.7
102.5°	114.5	151.1	178.6	192.3	192.3	192.3	178.6	151.1	105.3	169.4	215.2
105°	146.5	164.8	196.9	215.2	224.4	215.2	196.9	169.4	141.9	196.9	228.9
107.5°	183.2	178.6	215.2	233.5	242.7	233.5	215.2	183.2	174.0	219.8	256.4
110°	219.8	196.9	233.5	251.8	256.4	251.8	233.5	196.9	210.6	247.3	283.9



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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°	251.8	210.6	251.8	270.2	274.7	270.2	251.8	215.2	242.7	265.6	311.4
115°	283.9	224.4	261.0	283.9	288.5	283.9	261.0	228.9	279.3	288.5	334.3
117.5°	315.9	242.7	270.2	297.6	302.2	297.6	274.7	247.3	311.4	315.9	357.2
120°	348.0	265.6	283.9	306.8	315.9	311.4	283.9	270.2	338.8	338.8	375.5
122.5°	375.5	283.9	297.6	315.9	325.1	315.9	297.6	293.0	370.9	361.7	398.4
125°	407.5	302.2	306.8	325.1	329.7	325.1	311.4	306.8	398.4	380.0	412.1
127.5°	430.4	325.1	315.9	334.3	338.8	334.3	320.5	329.7	425.8	416.7	425.8
130°	457.9	348.0	325.1	343.4	348.0	348.0	325.1	357.2	448.7	444.2	444.2
132.5°	480.8	370.9	334.3	352.6	357.2	357.2	338.8	375.5	471.6	467.0	457.9
135°	499.1	402.9	352.6	352.6	361.7	361.7	357.2	407.5	494.5	489.9	480.8
137.5°	517.4	430.4	366.3	357.2	361.7	361.7	375.5	435.0	512.8	512.8	494.5
140°	535.7	457.9	375.5	366.3	366.3	375.5	389.2	462.5	531.2	531.2	499.1
142.5°	554.0	480.8	389.2	380.0	370.9	389.2	402.9	489.9	544.9	549.5	512.8
145°	563.2	503.7	407.5	393.8	384.6	407.5	425.8	512.8	558.6	567.8	540.3
147.5°	576.9	526.6	430.4	402.9	402.9	416.7	444.2	531.2	572.4	581.5	554.0
150°	590.7	544.9	448.7	416.7	407.5	430.4	462.5	549.5	586.1	595.3	572.4
152.5°	599.8	563.2	476.2	435.0	425.8	453.3	494.5	563.2	595.3	604.4	590.7
155°	609.0	576.9	508.3	453.3	448.7	471.6	522.0	576.9	604.4	613.6	604.4
157.5°	618.2	590.7	531.2	480.8	462.5	499.1	544.9	595.3	613.6	622.7	618.2
160°	622.7	599.8	558.6	508.3	499.1	531.2	567.8	599.8	618.2	631.9	627.3
162.5°	631.9	609.0	576.9	540.3	531.2	558.6	586.1	613.6	627.3	636.5	636.5
165°	636.5	618.2	595.3	567.8	558.6	586.1	599.8	622.7	631.9	636.5	641.0
167.5°	636.5	627.3	609.0	586.1	581.5	604.4	618.2	631.9	636.5	636.5	645.6
170°	641.0	631.9	618.2	604.4	599.8	618.2	622.7	636.5	641.0	636.5	650.2
172.5°	641.0	636.5	627.3	613.6	604.4	627.3	631.9	636.5	641.0	636.5	645.6
175°	645.6	636.5	636.5	627.3	613.6	636.5	636.5	636.5	645.6	636.5	641.0
177.5°	645.6	636.5	636.5	631.9	622.7	636.5	636.5	636.5	645.6	636.5	641.0
180°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4276.7	4276.7	4276.7	4276.7	4276.7	4276.7
2.5°	4244.6	4212.6	4221.7	4258.4	4244.6	4308.7
5°	4212.6	4194.3	4194.3	4235.5	4230.9	4308.7
7.5°	4162.2	4143.9	4153.1	4198.8	4208.0	4304.2
10°	4102.7	4079.8	4089.0	4153.1	4175.9	4285.8
12.5°	4038.6	4020.3	4029.4	4102.7	4134.7	4267.5
15°	3965.3	3937.8	3965.3	4043.2	4084.4	4235.5
17.5°	3882.9	3846.3	3878.3	3979.1	4029.4	4198.8
20°	3800.5	3768.4	3786.7	3896.6	3969.9	4157.6
22.5°	3718.1	3672.3	3690.6	3805.1	3896.6	4098.1
25°	3621.9	3553.2	3589.9	3713.5	3818.8	4034.0
27.5°	3493.7	3388.4	3466.2	3621.9	3727.2	3965.3
30°	3324.3	3186.9	3301.4	3512.0	3631.1	3887.5
32.5°	3136.5	2990.0	3118.2	3388.4	3530.3	3795.9
35°	2948.8	2816.0	2930.5	3251.0	3425.0	3695.2
37.5°	2770.2	2655.8	2761.1	3104.5	3315.1	3589.9
40°	2600.8	2486.3	2596.2	2944.2	3196.1	3475.4
42.5°	2431.4	2326.1	2431.4	2774.8	3072.4	3347.2
45°	2262.0	2097.1	2252.8	2610.0	2939.6	3214.4
47.5°	2078.8	1886.5	2065.1	2431.4	2797.7	3072.4
50°	1904.8	1740.0	1895.7	2266.6	2651.2	2925.9
52.5°	1753.7	1620.9	1744.6	2097.1	2500.1	2765.7
55°	1611.8	1506.5	1611.8	1932.3	2339.8	2605.4
57.5°	1483.6	1414.9	1488.1	1790.3	2175.0	2440.5
60°	1373.7	1332.5	1378.2	1616.3	2010.1	2266.6
62.5°	1268.4	1263.8	1272.9	1479.0	1836.1	2083.4
65°	1158.5	1181.4	1158.5	1332.5	1662.1	1895.7
67.5°	1048.6	1094.4	1057.7	1185.9	1474.4	1698.8
70°	947.8	998.2	947.8	1034.8	1286.7	1492.7
72.5°	833.4	897.5	833.4	892.9	1089.8	1282.1
75°	723.5	796.7	728.0	746.4	902.0	1057.7
77.5°	604.4	673.1	618.2	604.4	728.0	847.1
80°	480.8	508.3	480.8	476.2	563.2	645.6
82.5°	334.3	357.2	334.3	348.0	412.1	467.0
85°	219.8	228.9	219.8	224.4	274.7	315.9
87.5°	91.6	91.6	91.6	114.5	123.6	132.8
90°	100.7	109.9	100.7	82.4	50.4	4.6
92.5°	105.3	114.5	105.3	91.6	59.5	9.2
95°	187.7	210.6	178.6	114.5	96.2	27.5
97.5°	151.1	164.8	155.7	132.8	119.1	54.9
100°	178.6	192.3	178.6	187.7	146.5	82.4
102.5°	210.6	219.8	215.2	219.8	178.6	114.5
105°	274.7	283.9	274.7	238.1	206.1	146.5
107.5°	293.0	315.9	297.6	265.6	233.5	183.2
110°	315.9	334.3	320.5	293.0	256.4	219.8



TEST NUMBER: P197445

CATALOG NUMBER: 8WSL-LD2-140-UPL8-UNV-L830-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	338.8	361.7	348.0	325.1	274.7	251.8
115°	366.3	384.6	375.5	348.0	302.2	283.9
117.5°	393.8	407.5	398.4	366.3	329.7	315.9
120°	416.7	435.0	425.8	389.2	352.6	348.0
122.5°	435.0	453.3	444.2	412.1	375.5	375.5
125°	453.3	471.6	462.5	430.4	393.8	407.5
127.5°	467.0	489.9	480.8	444.2	435.0	430.4
130°	485.4	499.1	494.5	457.9	457.9	457.9
132.5°	494.5	512.8	503.7	476.2	485.4	480.8
135°	499.1	522.0	512.8	499.1	508.3	499.1
137.5°	508.3	526.6	522.0	512.8	531.2	517.4
140°	522.0	531.2	535.7	522.0	549.5	535.7
142.5°	535.7	540.3	549.5	535.7	567.8	554.0
145°	544.9	554.0	563.2	563.2	581.5	563.2
147.5°	544.9	558.6	558.6	572.4	599.8	576.9
150°	558.6	549.5	576.9	590.7	609.0	590.7
152.5°	576.9	572.4	595.3	609.0	618.2	599.8
155°	581.5	586.1	599.8	622.7	627.3	609.0
157.5°	599.8	595.3	618.2	636.5	636.5	618.2
160°	613.6	613.6	636.5	645.6	641.0	622.7
162.5°	627.3	627.3	650.2	650.2	645.6	631.9
165°	636.5	636.5	659.4	654.8	645.6	636.5
167.5°	641.0	645.6	663.9	659.4	645.6	636.5
170°	645.6	645.6	663.9	654.8	645.6	641.0
172.5°	645.6	641.0	659.4	650.2	641.0	641.0
175°	641.0	631.9	650.2	641.0	641.0	645.6
177.5°	636.5	622.7	636.5	636.5	641.0	645.6
180°	636.5	636.5	636.5	636.5	636.5	636.5

(END OF REPORT)