

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: P197485

Luminaire Tested: **8WSL-LD2-110-UPL15-UNV-L830-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197485
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8WSL-LD2-110-UPL15-UNV-L830-CD2-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L830
Light Source: (476) 3000K CCT, 80 CRI LEDS
EL236N0119D830
Ballast/Driver: OSRAM
OT50W

Summary

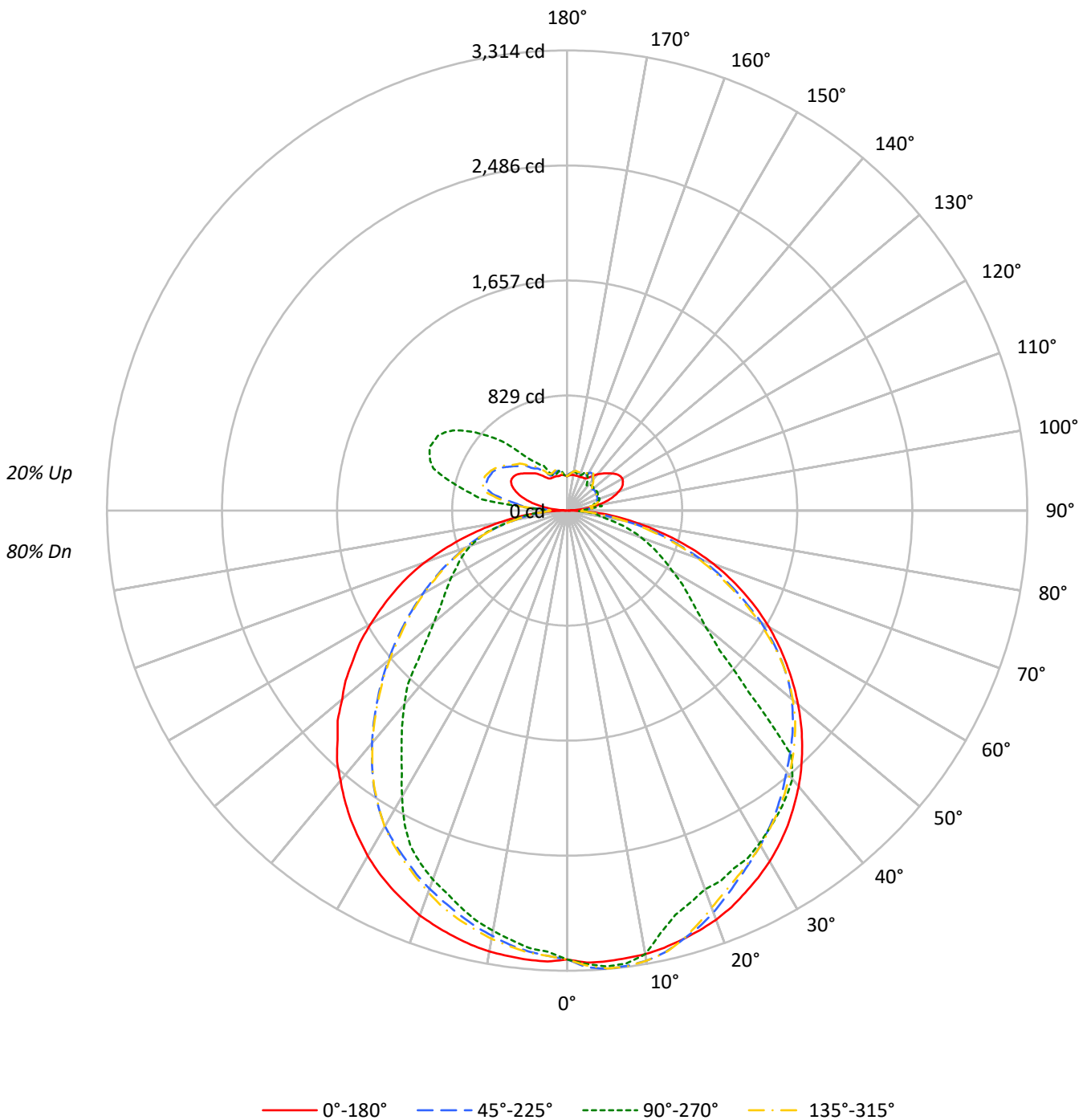
Lumens per Lamp: N/A
Luminaire Lumens: 11439.7 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 98.9
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: P197485

CATALOG NUMBER: 8WSL-LD2-110-UPL15-UNV-L830-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P197485

CATALOG NUMBER: 8WSL-LD2-110-UPL15-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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80
1	104	99	95	91	99	95	91	88	87	84	81	80	77	75	73	71	70	66
2	94	86	80	74	90	83	77	72	76	71	67	70	66	62	64	61	58	55
3	86	76	68	62	82	73	66	60	67	61	56	61	57	53	56	53	49	46
4	79	67	59	52	75	64	57	51	59	53	48	55	49	45	50	46	42	40
5	72	60	51	45	69	58	50	44	53	46	41	49	43	39	45	41	37	34
6	67	54	45	39	64	52	44	38	48	41	36	44	39	34	41	36	32	30
7	62	49	40	34	59	47	39	33	44	37	32	40	35	30	38	33	29	26
8	58	44	36	30	55	43	35	30	40	33	28	37	31	27	34	29	26	24
9	54	41	33	27	51	39	32	27	37	30	26	34	28	24	32	27	23	21
10	50	37	30	25	48	36	29	24	34	27	23	32	26	22	30	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9156	9156	9156	9156
5°	9265	9371	9233	8991
10°	9330	9330	9276	8838
15°	9381	8837	9305	8674
20°	9453	8748	9352	8524
25°	9488	8885	9372	8340
30°	9541	9055	9395	7781
35°	9573	9189	9394	7186
40°	9592	9332	9386	6738
45°	9589	7419	9366	6066
50°	9567	5724	9322	5512
55°	9530	5278	9292	5352
60°	9503	4983	9251	5466
65°	9427	4826	9178	5721
70°	9282	4703	9036	6116
75°	8854	4467	8571	6499
80°	8293	4055	8052	6478
85°	8323	5307	7719	7719



TEST NUMBER: P197485

CATALOG NUMBER: 8WSL-LD2-110-UPL15-UNV-L830-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	307.6	2.7
10°-20°	873.0	7.6
20°-30°	1319.2	11.5
30°-40°	1587.7	13.9
40°-50°	1614.7	14.1
50°-60°	1405.4	12.3
60°-70°	1096.3	9.6
70°-80°	677.7	5.9
80°-90°	238.5	2.1
90°-100°	224.5	2.0
100°-110°	434.7	3.8
110°-120°	475.6	4.2
120°-130°	417.0	3.6
130°-140°	312.4	2.7
140°-150°	213.9	1.9
150°-160°	136.2	1.2
160°-170°	79.6	0.7
170°-180°	25.7	0.2
0°-30°	2499.8	21.9
0°-40°	4087.5	35.7
0°-60°	7107.6	62.1
0°-90°	9120.1	79.7
90°-120°	1134.8	9.9
90°-150°	2078.1	18.2
90°-180°	2320.0	20.3
0°-180°	11439.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3232	3232	3232	3232	3232	
5°	3258	3296	3247	3162	3258	310
15°	3199	3014	3173	2958	3199	904
25°	3036	2843	2999	2668	3036	1401
35°	2768	2657	2717	2078	2768	1732
45°	2394	1852	2338	1514	2394	1846
55°	1930	1069	1882	1084	1930	1726
65°	1406	720	1369	854	1406	1390
75°	809	408	783	594	809	857
85°	256	163	238	238	256	255
90°	4	104	4	163	4	19
95°	100	171	78	341	100	104
105°	319	212	308	909	319	333
115°	442	241	442	1091	442	432
125°	449	252	449	1006	449	399
135°	378	252	378	735	378	294
145°	297	252	304	438	297	189
155°	264	304	260	301	264	122
165°	260	275	256	278	260	74
175°	256	267	256	260	256	25
180°	249	249	249	249	249	



TEST NUMBER: P197485

CATALOG NUMBER: 8WSL-LD2-110-UPL15-UNV-L830-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3232.4	3232.4	3232.4	3232.4	3232.4	3232.4	3232.4	3232.4	3232.4	3232.4	3232.4
2.5°	3258.4	3243.6	3291.8	3295.5	3269.5	3280.7	3280.7	3239.8	3251.0	3202.7	3210.2
5°	3258.4	3262.1	3314.1	3310.4	3295.5	3299.2	3310.4	3258.4	3247.3	3180.5	3187.9
7.5°	3251.0	3269.5	3306.6	3302.9	3288.1	3291.8	3310.4	3265.8	3236.1	3158.2	3154.5
10°	3243.6	3262.1	3291.8	3273.2	3243.6	3254.7	3291.8	3262.1	3225.0	3132.2	3109.9
12.5°	3225.0	3243.6	3258.4	3165.6	3113.7	3158.2	3262.1	3243.6	3202.7	3095.1	3065.4
15°	3199.0	3221.3	3202.7	3072.8	3013.5	3054.3	3202.7	3217.6	3173.0	3046.9	3009.7
17.5°	3169.3	3195.3	3147.1	3002.3	2957.8	2976.3	3124.8	3184.2	3139.6	2998.6	2954.1
20°	3135.9	3165.6	3080.3	2928.1	2902.1	2917.0	3043.1	3147.1	3102.5	2946.7	2898.4
22.5°	3091.4	3124.8	3002.3	2876.1	2887.3	2876.1	2968.9	3098.8	3050.6	2891.0	2835.3
25°	3035.7	3072.8	2924.4	2831.6	2842.7	2839.0	2905.8	3035.7	2998.6	2824.2	2764.8
27.5°	2980.1	3017.2	2853.9	2801.9	2820.5	2798.2	2846.5	2968.9	2939.2	2753.7	2698.0
30°	2917.0	2957.8	2783.4	2750.0	2768.5	2753.7	2787.1	2902.1	2872.4	2679.5	2623.8
32.5°	2846.5	2887.3	2709.1	2686.9	2712.9	2694.3	2716.6	2827.9	2794.5	2597.8	2531.0
35°	2768.5	2809.3	2631.2	2631.2	2657.2	2634.9	2646.1	2753.7	2716.6	2516.2	2427.1
37.5°	2683.2	2727.7	2545.9	2564.4	2594.1	2571.8	2571.8	2675.7	2631.2	2427.1	2308.3
40°	2594.1	2642.3	2456.8	2497.6	2523.6	2497.6	2490.2	2594.1	2538.4	2338.0	2185.9
42.5°	2497.6	2549.6	2375.1	2423.4	2390.0	2423.4	2404.8	2508.7	2453.1	2241.5	2059.7
45°	2393.7	2460.5	2293.5	2263.8	1851.9	2241.5	2319.5	2419.7	2338.0	2148.8	1933.5
47.5°	2286.1	2356.6	2204.4	1989.2	1488.2	1966.9	2226.7	2323.2	2241.5	2048.6	1807.3
50°	2171.0	2252.7	2111.6	1751.7	1298.9	1729.4	2122.8	2223.0	2115.4	1940.9	1681.2
52.5°	2052.3	2141.3	2007.7	1547.6	1172.7	1525.3	2011.4	2115.4	2011.4	1825.9	1558.7
55°	1929.8	2022.6	1885.3	1358.3	1068.8	1354.6	1881.6	2000.3	1881.6	1710.8	1436.2
57.5°	1807.3	1911.2	1755.4	1221.0	979.7	1202.4	1736.8	1881.6	1770.2	1592.1	1317.5
60°	1677.4	1773.9	1614.4	1072.5	879.5	1068.8	1592.1	1759.1	1632.9	1469.6	1202.4
62.5°	1543.8	1651.5	1462.2	942.6	797.9	938.9	1436.2	1621.8	1499.3	1343.4	1091.1
65°	1406.5	1510.4	1317.5	838.7	720.0	831.3	1291.5	1480.8	1369.4	1217.3	987.2
67.5°	1265.5	1362.0	1172.7	738.5	642.0	731.1	1143.0	1332.3	1235.8	1087.4	875.8
70°	1120.8	1209.8	1024.3	642.0	567.8	638.3	998.3	1180.1	1091.1	953.8	775.6
72.5°	968.6	1050.3	868.4	549.3	489.9	545.5	846.1	1024.3	931.5	812.7	686.6
75°	809.0	887.0	723.7	456.5	408.2	452.8	701.4	857.3	783.1	682.9	582.7
77.5°	656.9	734.8	575.2	352.6	311.7	345.1	549.3	701.4	638.3	553.0	475.0
80°	508.4	571.5	423.1	263.5	248.6	263.5	411.9	538.1	493.6	434.2	371.1
82.5°	374.8	411.9	285.8	215.2	215.2	215.2	278.3	382.2	363.7	322.9	282.0
85°	256.1	256.1	193.0	163.3	163.3	163.3	189.3	226.4	237.5	215.2	215.2
87.5°	107.6	111.3	100.2	89.1	85.4	89.1	96.5	92.8	92.8	103.9	129.9
90°	3.7	48.2	81.6	100.2	103.9	96.5	74.2	44.5	3.7	63.1	115.0
92.5°	26.0	103.9	96.5	126.2	129.9	118.8	100.2	81.6	14.8	115.0	122.5
95°	100.2	122.5	189.3	193.0	170.7	163.3	185.6	115.0	77.9	155.9	311.7
97.5°	159.6	185.6	170.7	222.7	252.4	222.7	178.1	178.1	148.4	241.2	363.7
100°	219.0	196.7	174.4	193.0	222.7	196.7	167.0	196.7	207.8	282.0	445.3
102.5°	274.6	219.0	219.0	189.3	193.0	185.6	211.5	215.2	259.8	319.2	549.3
105°	319.2	226.4	230.1	215.2	211.5	215.2	230.1	230.1	308.0	352.6	597.5
107.5°	360.0	233.8	226.4	237.5	241.2	237.5	226.4	233.8	352.6	374.8	608.6
110°	393.4	237.5	230.1	237.5	248.6	237.5	230.1	241.2	389.7	397.1	616.1



TEST NUMBER: P197485

CATALOG NUMBER: 8WSL-LD2-110-UPL15-UNV-L830-CD2-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	423.1	241.2	237.5	233.8	244.9	233.8	237.5	248.6	419.4	408.2	616.1
115°	441.6	244.9	237.5	237.5	241.2	237.5	241.2	252.4	441.6	411.9	608.6
117.5°	452.8	252.4	241.2	244.9	248.6	244.9	241.2	259.8	456.5	426.8	604.9
120°	460.2	278.3	241.2	248.6	252.4	248.6	241.2	282.0	460.2	434.2	590.1
122.5°	456.5	289.5	244.9	248.6	256.1	248.6	244.9	293.2	456.5	430.5	571.5
125°	449.0	300.6	244.9	244.9	252.4	248.6	248.6	300.6	449.0	423.1	545.5
127.5°	434.2	326.6	244.9	248.6	248.6	248.6	248.6	322.9	434.2	426.8	519.6
130°	415.6	345.1	237.5	252.4	248.6	256.1	244.9	345.1	415.6	415.6	497.3
132.5°	397.1	352.6	237.5	252.4	252.4	256.1	241.2	352.6	397.1	400.8	475.0
135°	378.5	360.0	252.4	248.6	252.4	252.4	256.1	360.0	378.5	386.0	460.2
137.5°	360.0	363.7	270.9	237.5	248.6	241.2	278.3	363.7	363.7	363.7	437.9
140°	341.4	360.0	285.8	230.1	233.8	237.5	293.2	363.7	348.8	352.6	400.8
142.5°	319.2	348.8	296.9	248.6	230.1	256.1	304.3	360.0	326.6	341.4	382.2
145°	296.9	337.7	319.2	274.6	252.4	285.8	330.3	348.8	304.3	334.0	371.1
147.5°	278.3	319.2	322.9	289.5	278.3	300.6	334.0	334.0	282.0	319.2	345.1
150°	267.2	300.6	311.7	300.6	289.5	315.4	326.6	308.0	267.2	308.0	322.9
152.5°	263.5	285.8	285.8	315.4	311.7	330.3	300.6	293.2	259.8	296.9	293.2
155°	263.5	282.0	274.6	289.5	304.3	304.3	285.8	285.8	259.8	296.9	278.3
157.5°	259.8	285.8	274.6	270.9	278.3	285.8	285.8	289.5	259.8	289.5	278.3
160°	259.8	289.5	278.3	267.2	270.9	282.0	289.5	289.5	259.8	289.5	282.0
162.5°	259.8	282.0	282.0	270.9	270.9	285.8	289.5	285.8	259.8	282.0	289.5
165°	259.8	282.0	285.8	278.3	274.6	293.2	289.5	278.3	256.1	278.3	293.2
167.5°	259.8	274.6	289.5	282.0	282.0	293.2	293.2	274.6	256.1	267.2	293.2
170°	259.8	270.9	285.8	282.0	285.8	296.9	285.8	270.9	259.8	263.5	282.0
172.5°	259.8	263.5	278.3	282.0	282.0	289.5	278.3	263.5	259.8	256.1	270.9
175°	256.1	263.5	270.9	270.9	267.2	278.3	267.2	259.8	256.1	252.4	259.8
177.5°	252.4	256.1	263.5	263.5	256.1	263.5	256.1	252.4	252.4	248.6	256.1
180°	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6



TEST NUMBER: P197485

CATALOG NUMBER: 8WSL-LD2-110-UPL15-UNV-L830-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3232.4	3232.4	3232.4	3232.4	3232.4	3232.4
2.5°	3206.4	3180.5	3187.9	3210.2	3206.4	3258.4
5°	3173.0	3161.9	3161.9	3195.3	3191.6	3258.4
7.5°	3135.9	3117.4	3128.5	3165.6	3176.8	3251.0
10°	3087.7	3072.8	3076.5	3132.2	3150.8	3243.6
12.5°	3039.4	3024.6	3035.7	3087.7	3113.7	3225.0
15°	2983.8	2957.8	2987.5	3043.1	3076.5	3199.0
17.5°	2917.0	2887.3	2917.0	2991.2	3032.0	3169.3
20°	2857.6	2827.9	2846.5	2924.4	2980.1	3135.9
22.5°	2790.8	2753.7	2768.5	2853.9	2924.4	3091.4
25°	2716.6	2668.3	2690.6	2783.4	2861.3	3035.7
27.5°	2620.1	2538.4	2594.1	2709.1	2783.4	2980.1
30°	2486.5	2378.9	2467.9	2627.5	2712.9	2917.0
32.5°	2330.6	2215.6	2312.1	2527.3	2631.2	2846.5
35°	2178.4	2078.2	2167.3	2423.4	2549.6	2768.5
37.5°	2044.8	1952.1	2033.7	2304.6	2460.5	2683.2
40°	1907.5	1822.2	1903.8	2178.4	2371.4	2594.1
42.5°	1781.4	1699.7	1777.6	2052.3	2274.9	2497.6
45°	1647.8	1514.2	1640.3	1922.4	2171.0	2393.7
47.5°	1506.7	1365.7	1495.6	1796.2	2067.1	2286.1
50°	1376.8	1250.7	1369.4	1666.3	1955.8	2171.0
52.5°	1261.8	1154.2	1258.1	1536.4	1840.7	2052.3
55°	1154.2	1083.7	1157.9	1417.7	1733.1	1929.8
57.5°	1068.8	1020.6	1072.5	1302.6	1614.4	1807.3
60°	994.6	964.9	998.3	1187.6	1488.2	1677.4
62.5°	912.9	901.8	912.9	1076.2	1365.7	1543.8
65°	842.4	853.6	842.4	976.0	1235.8	1406.5
67.5°	775.6	801.6	779.3	868.4	1105.9	1265.5
70°	701.4	738.5	705.1	771.9	972.3	1120.8
72.5°	623.5	668.0	623.5	679.1	831.3	968.6
75°	541.8	593.8	545.5	578.9	697.7	809.0
77.5°	452.8	486.2	460.2	471.3	567.8	656.9
80°	360.0	397.1	363.7	371.1	449.0	508.4
82.5°	300.6	326.6	304.3	282.0	334.0	374.8
85°	222.7	237.5	230.1	219.0	230.1	256.1
87.5°	137.3	144.7	137.3	137.3	118.8	107.6
90°	152.2	163.3	152.2	118.8	66.8	3.7
92.5°	155.9	170.7	155.9	129.9	126.2	26.0
95°	348.8	341.4	371.1	337.7	193.0	100.2
97.5°	541.8	619.8	560.4	404.5	259.8	159.6
100°	623.5	697.7	649.5	504.7	296.9	219.0
102.5°	720.0	801.6	749.7	590.1	334.0	274.6
105°	838.7	909.2	864.7	623.5	367.4	319.2
107.5°	901.8	1009.4	920.4	638.3	389.7	360.0
110°	935.2	1050.3	964.9	642.0	408.2	393.4



TEST NUMBER: P197485

CATALOG NUMBER: 8WSL-LD2-110-UPL15-UNV-L830-CD2-U

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	961.2	1072.5	983.5	642.0	415.6	423.1
115°	961.2	1091.1	983.5	630.9	426.8	441.6
117.5°	961.2	1079.9	983.5	619.8	441.6	452.8
120°	927.8	1076.2	957.5	604.9	445.3	460.2
122.5°	901.8	1046.5	920.4	586.4	445.3	456.5
125°	853.6	1005.7	875.8	564.1	437.9	449.0
127.5°	801.6	946.3	820.2	538.1	441.6	434.2
130°	753.4	879.5	764.5	512.1	426.8	415.6
132.5°	690.3	805.3	701.4	493.6	411.9	397.1
135°	630.9	734.8	645.7	478.7	393.4	378.5
137.5°	567.8	660.6	582.7	449.0	374.8	360.0
140°	493.6	567.8	508.4	415.6	363.7	341.4
142.5°	445.3	486.2	460.2	400.8	348.8	319.2
145°	415.6	437.9	426.8	386.0	341.4	296.9
147.5°	386.0	408.2	397.1	356.3	322.9	278.3
150°	374.8	374.8	389.7	330.3	311.7	267.2
152.5°	334.0	363.7	348.8	300.6	304.3	263.5
155°	285.8	300.6	300.6	289.5	304.3	263.5
157.5°	267.2	278.3	282.0	289.5	296.9	259.8
160°	267.2	270.9	282.0	293.2	293.2	259.8
162.5°	274.6	270.9	289.5	300.6	285.8	259.8
165°	282.0	278.3	296.9	304.3	278.3	259.8
167.5°	289.5	289.5	304.3	300.6	270.9	259.8
170°	289.5	296.9	304.3	289.5	267.2	259.8
172.5°	278.3	282.0	289.5	270.9	256.1	259.8
175°	263.5	259.8	270.9	259.8	256.1	256.1
177.5°	256.1	244.9	256.1	252.4	248.6	252.4
180°	248.6	248.6	248.6	248.6	248.6	248.6

(END OF REPORT)