

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: FAIL-SAFE

Report Number: P709132

Luminaire Tested: **4APN-39L930-X-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709132  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-39L930-X-UNV  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

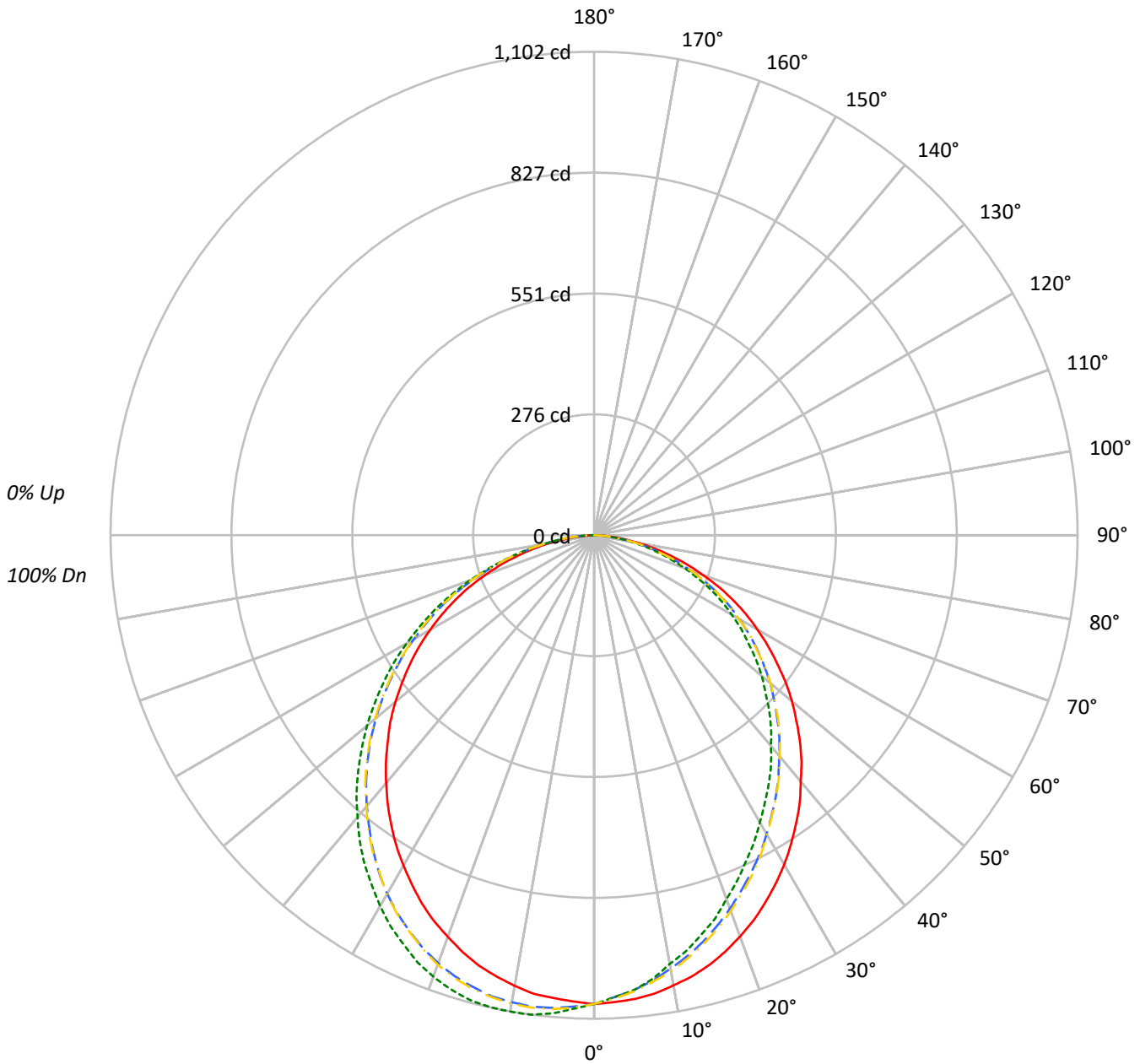
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2865.7 lumens  
Efficiency: N/A  
Efficacy: 62.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 45.8  
Input Voltage (V): 120  
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: P709132  
CATALOG NUMBER: 4APN-39L930-X-UNV

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - · - 90°-270°    - · - 135°-315°



TEST NUMBER: P709132  
 CATALOG NUMBER: 4APN-39L930-X-UNV

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	72	72	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	61	61	61	59
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	53	53	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	41	41	41	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	36	36	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	32	32	32	30
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	29	29	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	27	27	27	25

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

	0°	90°	180°	270°
0°	9858	9858	9858	9858
5°	9829	9638	9807	10131
10°	9761	9297	9772	10328
15°	9686	9005	9698	10471
20°	9553	8664	9565	10514
25°	9401	8343	9438	10471
30°	9233	8049	9259	10391
35°	9040	7814	9080	10279
40°	8822	7555	8880	10104
45°	8659	7365	8674	9920
50°	8450	7165	8484	9699
55°	8186	6902	8244	9429
60°	7940	6691	7962	9101
65°	7626	6412	7626	8708
70°	7108	5935	7076	8120
75°	6463	5386	6377	7283
80°	5589	4622	5393	6227
85°	4351	3451	4097	5113



TEST NUMBER: P709132  
 CATALOG NUMBER: 4APN-39L930-X-UNV

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.0	3.5
10°-20°	286.5	10.0
20°-30°	426.0	14.9
30°-40°	502.1	17.5
40°-50°	511.2	17.8
50°-60°	455.4	15.9
60°-70°	343.1	12.0
70°-80°	190.8	6.7
80°-90°	49.6	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	813.5	28.4
0°-40°	1315.6	45.9
0°-60°	2282.2	79.6
0°-90°	2865.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2865.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1068	1068	1068	1068	1068	
5°	1061	1041	1059	1094	1061	101
15°	1014	943	1015	1096	1014	286
25°	924	820	927	1029	924	425
35°	803	694	806	913	803	502
45°	664	564	665	760	664	511
55°	509	429	512	586	509	456
65°	349	294	349	399	349	345
75°	181	151	179	204	181	193
85°	41	33	39	48	41	49
90°	0	0	0	0	0	



TEST NUMBER: P709132

CATALOG NUMBER: 4APN-39L930-X-UNV

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5
2.5°	1064.9	1064.9	1066.1	1061.3	1055.2	1052.8	1051.6	1050.4	1052.8	1054.0	1052.8
5°	1061.3	1058.9	1056.4	1050.4	1043.1	1038.3	1035.9	1034.7	1037.1	1040.7	1037.1
7.5°	1054.0	1049.2	1044.3	1035.9	1027.4	1020.2	1016.5	1014.1	1016.5	1020.2	1017.8
10°	1041.9	1035.9	1028.6	1019.0	1006.9	998.4	994.8	991.2	992.4	992.4	992.4
12.5°	1029.8	1021.4	1012.9	1000.8	987.5	977.9	971.8	967.0	969.4	970.6	970.6
15°	1014.1	1003.3	991.2	977.9	964.6	953.7	946.4	941.6	942.8	942.8	944.0
17.5°	994.8	982.7	970.6	954.9	939.2	927.1	918.6	912.6	915.0	916.2	917.4
20°	973.0	959.7	946.4	929.5	912.6	899.3	890.8	883.6	882.4	882.4	883.6
22.5°	950.1	935.6	919.8	901.7	883.6	869.1	860.6	853.4	852.2	852.2	853.4
25°	923.5	907.8	892.0	873.9	854.6	840.1	829.2	821.9	820.7	819.5	821.9
27.5°	895.7	880.0	864.2	846.1	825.6	811.1	800.2	792.9	790.5	789.3	791.7
30°	866.7	848.5	831.6	812.3	794.1	779.6	768.8	760.3	757.9	755.5	757.9
32.5°	835.2	817.1	799.0	779.6	761.5	747.0	736.1	727.7	725.2	724.0	726.5
35°	802.6	784.5	767.5	748.2	730.1	715.6	704.7	697.4	695.0	693.8	695.0
37.5°	770.0	751.8	734.9	715.6	697.4	682.9	672.1	664.8	663.6	662.4	663.6
40°	732.5	716.8	699.9	681.7	663.6	649.1	640.6	632.2	629.8	627.3	631.0
42.5°	699.9	684.1	667.2	650.3	632.2	617.7	608.0	600.7	598.3	597.1	598.3
45°	663.6	646.7	629.8	614.0	597.1	583.8	574.1	566.9	565.7	564.5	565.7
47.5°	624.9	610.4	595.9	580.2	563.3	550.0	541.5	534.3	531.8	529.4	531.8
50°	588.7	574.1	559.6	545.1	529.4	517.3	508.9	501.6	500.4	499.2	500.4
52.5°	550.0	535.5	522.2	507.7	494.4	482.3	473.8	467.8	466.6	465.4	466.6
55°	508.9	496.8	484.7	472.6	459.3	448.4	441.2	433.9	431.5	429.1	431.5
57.5°	470.2	459.3	447.2	435.1	423.1	413.4	406.1	400.1	398.9	397.7	398.9
60°	430.3	420.6	409.8	398.9	386.8	377.1	371.1	366.2	363.8	362.6	363.8
62.5°	390.4	380.8	372.3	361.4	350.5	343.3	337.2	332.4	330.0	328.8	330.0
65°	349.3	340.9	332.4	322.7	314.3	307.0	301.0	296.1	294.9	293.7	293.7
67.5°	307.0	299.8	292.5	284.1	274.4	267.1	261.1	257.5	256.3	255.0	256.3
70°	263.5	257.5	250.2	243.0	235.7	229.7	226.0	222.4	221.2	220.0	220.0
72.5°	222.4	217.6	211.5	205.5	199.4	193.4	189.8	187.4	186.1	184.9	184.9
75°	181.3	176.5	172.8	168.0	162.0	158.3	154.7	152.3	151.1	151.1	151.1
77.5°	142.6	139.0	135.4	130.5	126.9	123.3	120.9	119.7	118.5	118.5	118.5
80°	105.2	102.7	100.3	97.9	94.3	90.7	89.4	88.2	87.0	87.0	87.0
82.5°	71.3	70.1	67.7	65.3	62.9	61.6	60.4	59.2	59.2	59.2	59.2
85°	41.1	39.9	38.7	37.5	36.3	36.3	35.1	33.8	32.6	32.6	32.6
87.5°	16.9	16.9	16.9	15.7	14.5	14.5	14.5	14.5	14.5	14.5	14.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P709132

CATALOG NUMBER: 4APN-39L930-X-UNV

**CANDELA DISTRIBUTION (continued):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5
2.5°	1050.4	1052.8	1055.2	1058.9	1062.5	1066.1	1064.9	1063.7	1068.5	1074.6	1075.8
5°	1034.7	1037.1	1040.7	1046.8	1052.8	1057.6	1058.9	1058.9	1068.5	1077.0	1079.4
7.5°	1015.3	1019.0	1023.8	1029.8	1038.3	1045.6	1049.2	1054.0	1063.7	1074.6	1079.4
10°	991.2	997.2	1004.5	1012.9	1021.4	1029.8	1037.1	1043.1	1055.2	1067.3	1074.6
12.5°	969.4	975.4	982.7	992.4	1003.3	1014.1	1021.4	1029.8	1044.3	1058.9	1067.3
15°	945.2	951.3	959.7	969.4	981.5	993.6	1004.5	1015.3	1029.8	1045.6	1055.2
17.5°	918.6	924.7	933.1	945.2	958.5	971.8	983.9	996.0	1012.9	1029.8	1040.7
20°	886.0	894.5	905.3	917.4	933.1	948.9	960.9	974.2	992.4	1010.5	1022.6
22.5°	854.6	863.0	875.1	889.6	906.6	923.5	938.0	952.5	971.8	990.0	1003.3
25°	824.4	834.0	846.1	860.6	876.3	893.3	910.2	927.1	946.4	965.8	979.1
27.5°	794.1	802.6	814.7	829.2	847.3	864.2	881.2	898.1	918.6	939.2	953.7
30°	760.3	770.0	780.8	795.3	814.7	834.0	850.9	869.1	889.6	910.2	924.7
32.5°	728.9	737.3	748.2	762.7	782.1	801.4	819.5	838.9	858.2	878.8	893.3
35°	697.4	705.9	716.8	731.3	750.6	770.0	788.1	806.2	825.6	844.9	859.4
37.5°	666.0	674.5	685.4	699.9	718.0	737.3	754.3	772.4	791.7	811.1	824.4
40°	633.4	641.8	650.3	664.8	682.9	702.3	719.2	737.3	756.7	776.0	789.3
42.5°	600.7	609.2	620.1	634.6	651.5	668.4	685.4	702.3	720.4	738.5	751.8
45°	568.1	575.4	586.2	599.5	616.5	632.2	649.1	664.8	682.9	699.9	713.2
47.5°	534.3	541.5	550.0	563.3	580.2	597.1	614.0	629.8	645.5	662.4	674.5
50°	501.6	508.9	518.5	530.6	546.3	562.1	576.6	591.1	606.8	622.5	633.4
52.5°	467.8	475.0	483.5	495.6	508.9	523.4	536.7	551.2	565.7	580.2	591.1
55°	433.9	438.8	446.0	456.9	471.4	485.9	499.2	512.5	525.8	537.9	548.8
57.5°	400.1	406.1	414.6	424.3	436.4	448.4	460.5	472.6	484.7	496.8	506.5
60°	366.2	371.1	377.1	385.6	397.7	408.6	420.6	431.5	442.4	453.3	461.7
62.5°	331.2	336.0	342.1	350.5	360.2	369.9	380.8	390.4	400.1	409.8	418.2
65°	294.9	299.8	305.8	313.1	321.5	330.0	339.7	349.3	356.6	363.8	372.3
67.5°	257.5	262.3	268.3	274.4	281.6	290.1	298.6	307.0	314.3	321.5	327.6
70°	221.2	224.8	230.9	235.7	241.7	247.8	255.0	262.3	267.1	273.2	280.4
72.5°	186.1	189.8	194.6	199.4	203.1	207.9	215.2	221.2	227.2	234.5	238.1
75°	152.3	154.7	158.3	162.0	165.6	169.2	174.1	178.9	183.7	187.4	192.2
77.5°	118.5	120.9	124.5	126.9	129.3	131.8	135.4	139.0	142.6	145.0	149.9
80°	87.0	89.4	91.9	94.3	96.7	99.1	100.3	101.5	106.4	110.0	112.4
82.5°	59.2	60.4	61.6	64.1	65.3	66.5	67.7	67.7	70.1	72.5	76.2
85°	33.8	35.1	36.3	36.3	36.3	36.3	37.5	38.7	39.9	42.3	44.7
87.5°	13.3	13.3	14.5	14.5	14.5	14.5	14.5	14.5	15.7	18.1	19.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P709132

CATALOG NUMBER: 4APN-39L930-X-UNV

**CANDELA DISTRIBUTION (continued):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5	1068.5
2.5°	1074.6	1075.8	1078.2	1079.4	1080.6	1080.6	1081.8	1083.0	1080.6	1078.2	1077.0
5°	1080.6	1081.8	1085.4	1089.1	1091.5	1093.9	1092.7	1091.5	1089.1	1085.4	1083.0
7.5°	1081.8	1085.4	1089.1	1093.9	1097.5	1102.4	1099.9	1097.5	1092.7	1087.9	1084.2
10°	1078.2	1083.0	1089.1	1095.1	1098.7	1102.4	1099.9	1097.5	1092.7	1086.7	1081.8
12.5°	1073.4	1079.4	1086.7	1092.7	1096.3	1101.2	1097.5	1093.9	1087.9	1081.8	1075.8
15°	1062.5	1069.7	1078.2	1085.4	1091.5	1096.3	1092.7	1090.3	1083.0	1074.6	1066.1
17.5°	1049.2	1058.9	1067.3	1075.8	1080.6	1085.4	1083.0	1080.6	1072.1	1062.5	1052.8
20°	1033.5	1043.1	1051.6	1060.1	1066.1	1070.9	1067.3	1063.7	1055.2	1046.8	1037.1
22.5°	1014.1	1023.8	1033.5	1041.9	1048.0	1052.8	1048.0	1041.9	1033.5	1025.0	1015.3
25°	990.0	1000.8	1011.7	1020.2	1023.8	1028.6	1023.8	1019.0	1010.5	1002.0	991.2
27.5°	965.8	976.7	987.5	996.0	999.6	1004.5	999.6	994.8	986.3	977.9	967.0
30°	938.0	948.9	959.7	968.2	971.8	975.4	970.6	965.8	958.5	950.1	939.2
32.5°	906.6	917.4	925.9	934.4	939.2	944.0	939.2	935.6	927.1	916.2	905.3
35°	872.7	883.6	894.5	902.9	907.8	912.6	906.6	900.5	893.3	884.8	875.1
37.5°	835.2	847.3	859.4	869.1	872.7	877.5	872.7	866.7	859.4	850.9	840.1
40°	800.2	811.1	821.9	831.6	835.2	838.9	834.0	829.2	820.7	812.3	801.4
42.5°	763.9	774.8	784.5	792.9	796.6	801.4	796.6	790.5	784.5	777.2	767.5
45°	725.2	736.1	744.6	753.0	756.7	760.3	755.5	749.4	743.4	737.3	727.7
47.5°	685.4	695.0	703.5	711.9	714.4	718.0	713.2	709.5	703.5	697.4	689.0
50°	644.3	653.9	662.4	669.6	672.1	675.7	670.8	666.0	661.2	656.3	649.1
52.5°	602.0	610.4	618.9	626.1	628.5	631.0	626.1	621.3	616.5	611.6	604.4
55°	558.4	566.9	575.4	581.4	583.8	586.2	581.4	577.8	572.9	569.3	562.1
57.5°	514.9	523.4	530.6	536.7	539.1	541.5	536.7	531.8	528.2	524.6	518.5
60°	470.2	478.7	484.7	489.5	492.0	493.2	488.3	484.7	482.3	479.9	473.8
62.5°	426.7	432.7	438.8	442.4	444.8	446.0	442.4	440.0	437.6	435.1	430.3
65°	380.8	388.0	392.8	396.5	397.7	398.9	395.3	392.8	390.4	388.0	384.4
67.5°	334.8	340.9	344.5	348.1	349.3	349.3	349.3	348.1	345.7	342.1	338.4
70°	288.9	293.7	297.3	299.8	301.0	301.0	298.6	296.1	296.1	294.9	292.5
72.5°	241.7	245.4	247.8	250.2	250.2	250.2	250.2	251.4	250.2	247.8	244.2
75°	197.0	200.7	203.1	204.3	204.3	204.3	204.3	205.5	204.3	203.1	200.7
77.5°	154.7	157.1	158.3	159.6	159.6	159.6	160.8	162.0	160.8	159.6	158.3
80°	114.8	116.0	117.2	118.5	117.2	117.2	118.5	120.9	119.7	118.5	117.2
82.5°	78.6	79.8	81.0	81.0	82.2	83.4	83.4	83.4	83.4	82.2	81.0
85°	47.1	48.3	48.3	48.3	48.3	48.3	49.6	50.8	50.8	49.6	49.6
87.5°	21.8	23.0	21.8	20.5	19.3	19.3	21.8	24.2	24.2	23.0	23.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





TEST NUMBER: P709132  
 CATALOG NUMBER: 4APN-39L930-X-UNV

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1068.5	1068.5	1068.5	1068.5
2.5°	1078.2	1077.0	1070.9	1064.9
5°	1081.8	1078.2	1069.7	1061.3
7.5°	1081.8	1077.0	1064.9	1054.0
10°	1075.8	1068.5	1055.2	1041.9
12.5°	1068.5	1060.1	1044.3	1029.8
15°	1057.6	1048.0	1031.1	1014.1
17.5°	1041.9	1029.8	1012.9	994.8
20°	1026.2	1012.9	992.4	973.0
22.5°	1004.5	992.4	970.6	950.1
25°	980.3	967.0	945.2	923.5
27.5°	954.9	939.2	917.4	895.7
30°	925.9	910.2	888.4	866.7
32.5°	894.5	880.0	858.2	835.2
35°	863.0	847.3	825.6	802.6
37.5°	828.0	813.5	791.7	770.0
40°	790.5	776.0	754.3	732.5
42.5°	755.5	742.2	720.4	699.9
45°	716.8	703.5	682.9	663.6
47.5°	676.9	663.6	644.3	624.9
50°	638.2	624.9	606.8	588.7
52.5°	594.7	583.8	566.9	550.0
55°	552.4	541.5	524.6	508.9
57.5°	510.1	500.4	484.7	470.2
60°	465.4	455.7	443.6	430.3
62.5°	423.1	414.6	402.5	390.4
65°	378.3	371.1	360.2	349.3
67.5°	332.4	326.4	316.7	307.0
70°	286.5	279.2	272.0	263.5
72.5°	240.5	236.9	229.7	222.4
75°	197.0	193.4	187.4	181.3
77.5°	155.9	152.3	147.5	142.6
80°	114.8	112.4	108.8	105.2
82.5°	79.8	77.4	74.9	71.3
85°	48.3	45.9	43.5	41.1
87.5°	21.8	20.5	18.1	16.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)