

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: P709151

Luminaire Tested: **4APN-35L950-X-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709151  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-35L950-X-UNV  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

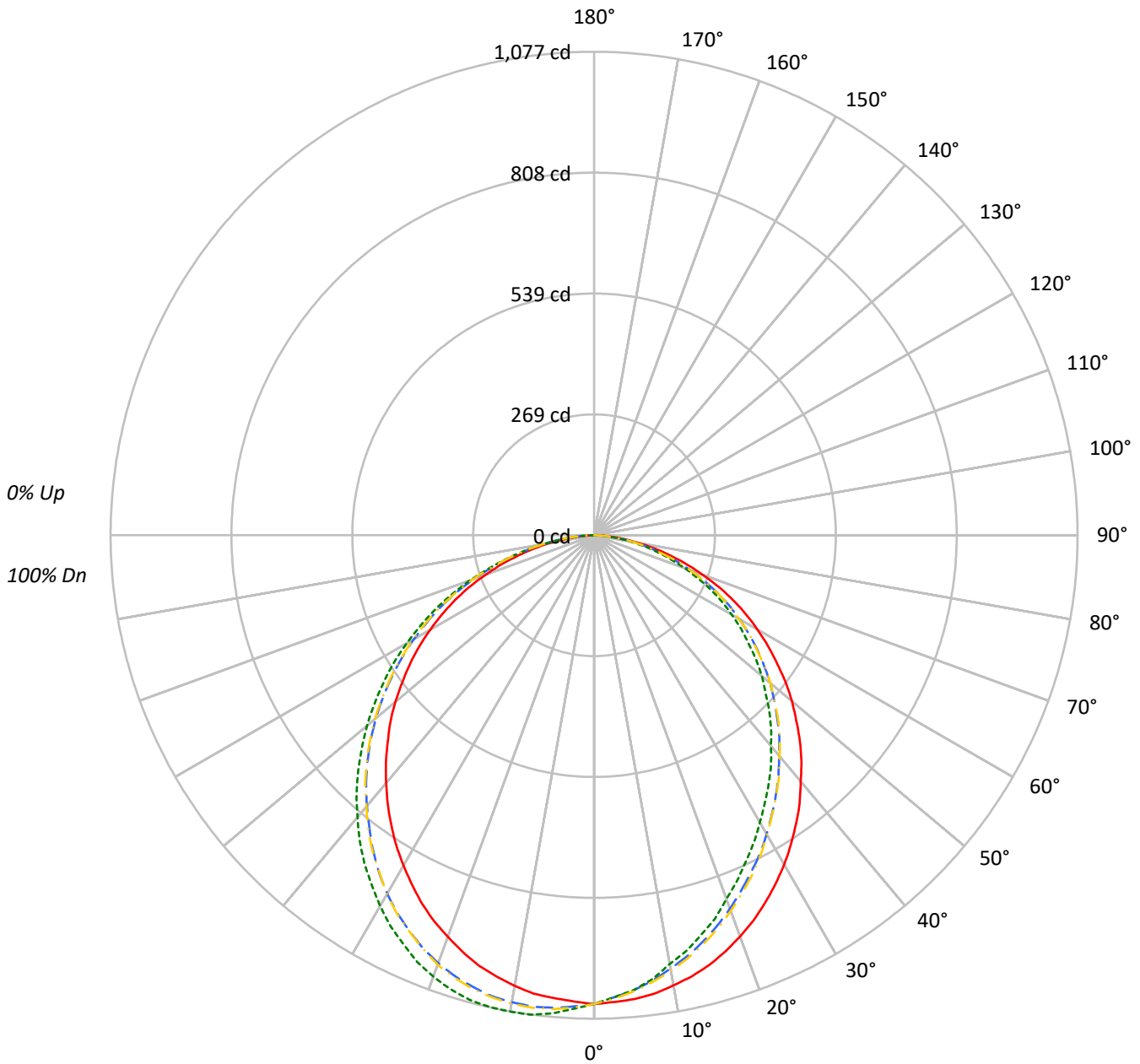
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2800.5 lumens  
Efficiency: N/A  
Efficacy: 69.3 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): 40.4  
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

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### Luminous Intensity Polar Plot



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



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

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

	0°	90°	180°	270°
0°	9634	9634	9634	9634
5°	9605	9419	9584	9900
10°	9539	9086	9550	10093
15°	9467	8801	9477	10234
20°	9336	8466	9348	10276
25°	9187	8153	9223	10233
30°	9022	7865	9048	10156
35°	8834	7636	8874	10044
40°	8621	7384	8679	9874
45°	8462	7197	8477	9695
50°	8258	7002	8291	9478
55°	7999	6745	8056	9215
60°	7759	6540	7781	8892
65°	7453	6266	7453	8510
70°	6946	5800	6914	7934
75°	6317	5265	6231	7115
80°	5462	4516	5271	6089
85°	4256	3377	4001	4997



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.7	3.5
10°-20°	280.0	10.0
20°-30°	416.3	14.9
30°-40°	490.7	17.5
40°-50°	499.6	17.8
50°-60°	445.1	15.9
60°-70°	335.3	12.0
70°-80°	186.5	6.7
80°-90°	48.4	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°	795.0	28.4
0°-40°	1285.6	45.9
0°-60°	2230.3	79.6
0°-90°	2800.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2800.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1044	1044	1044	1044	1044	
5°	1037	1017	1035	1069	1037	98
15°	991	921	992	1071	991	279
25°	902	801	906	1005	902	416
35°	784	678	788	892	784	491
45°	648	552	650	743	648	500
55°	497	419	501	573	497	446
65°	341	287	341	390	341	337
75°	177	148	175	200	177	188
85°	40	32	38	47	40	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2
2.5°	1040.7	1040.7	1041.8	1037.1	1031.2	1028.9	1027.7	1026.5	1028.9	1030.0	1028.9
5°	1037.1	1034.8	1032.4	1026.5	1019.4	1014.7	1012.3	1011.1	1013.5	1017.0	1013.5
7.5°	1030.0	1025.3	1020.6	1012.3	1004.0	997.0	993.4	991.1	993.4	997.0	994.6
10°	1018.2	1012.3	1005.2	995.8	984.0	975.7	972.2	968.6	969.8	969.8	969.8
12.5°	1006.4	998.1	989.9	978.1	965.1	955.6	949.7	945.0	947.3	948.5	948.5
15°	991.1	980.4	968.6	955.6	942.6	932.0	924.9	920.2	921.4	921.4	922.5
17.5°	972.2	960.3	948.5	933.2	917.8	906.0	897.7	891.8	894.2	895.4	896.6
20°	950.9	937.9	924.9	908.4	891.8	878.8	870.6	863.5	862.3	862.3	863.5
22.5°	928.4	914.3	898.9	881.2	863.5	849.3	841.0	833.9	832.8	832.8	833.9
25°	902.5	887.1	871.7	854.0	835.1	821.0	810.3	803.2	802.1	800.9	803.2
27.5°	875.3	859.9	844.6	826.9	806.8	792.6	782.0	774.9	772.5	771.3	773.7
30°	846.9	829.2	812.7	793.8	776.1	761.9	751.3	743.0	740.6	738.3	740.6
32.5°	816.2	798.5	780.8	761.9	744.2	730.0	719.4	711.1	708.7	707.6	709.9
35°	784.3	766.6	750.1	731.2	713.5	699.3	688.7	681.6	679.2	678.0	679.2
37.5°	752.4	734.7	718.2	699.3	681.6	667.4	656.8	649.7	648.5	647.3	648.5
40°	715.8	700.5	683.9	666.2	648.5	634.3	626.1	617.8	615.4	613.1	616.6
42.5°	683.9	668.6	652.0	635.5	617.8	603.6	594.2	587.1	584.7	583.5	584.7
45°	648.5	632.0	615.4	600.1	583.5	570.5	561.1	554.0	552.8	551.6	552.8
47.5°	610.7	596.5	582.3	567.0	550.5	537.5	529.2	522.1	519.7	517.4	519.7
50°	575.3	561.1	546.9	532.7	517.4	505.6	497.3	490.2	489.0	487.8	489.0
52.5°	537.5	523.3	510.3	496.1	483.1	471.3	463.0	457.1	456.0	454.8	456.0
55°	497.3	485.5	473.7	461.9	448.9	438.2	431.1	424.1	421.7	419.3	421.7
57.5°	459.5	448.9	437.1	425.2	413.4	404.0	396.9	391.0	389.8	388.6	389.8
60°	420.5	411.1	400.4	389.8	378.0	368.5	362.6	357.9	355.6	354.4	355.6
62.5°	381.5	372.1	363.8	353.2	342.6	335.5	329.6	324.8	322.5	321.3	322.5
65°	341.4	333.1	324.8	315.4	307.1	300.0	294.1	289.4	288.2	287.0	287.0
67.5°	300.0	292.9	285.9	277.6	268.1	261.1	255.1	251.6	250.4	249.2	250.4
70°	257.5	251.6	244.5	237.4	230.3	224.4	220.9	217.3	216.2	215.0	215.0
72.5°	217.3	212.6	206.7	200.8	194.9	189.0	185.5	183.1	181.9	180.7	180.7
75°	177.2	172.5	168.9	164.2	158.3	154.7	151.2	148.8	147.7	147.7	147.7
77.5°	139.4	135.8	132.3	127.6	124.0	120.5	118.1	116.9	115.8	115.8	115.8
80°	102.8	100.4	98.0	95.7	92.1	88.6	87.4	86.2	85.0	85.0	85.0
82.5°	69.7	68.5	66.1	63.8	61.4	60.2	59.1	57.9	57.9	57.9	57.9
85°	40.2	39.0	37.8	36.6	35.4	35.4	34.3	33.1	31.9	31.9	31.9
87.5°	16.5	16.5	16.5	15.4	14.2	14.2	14.2	14.2	14.2	14.2	14.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2
2.5°	1026.5	1028.9	1031.2	1034.8	1038.3	1041.8	1040.7	1039.5	1044.2	1050.1	1051.3
5°	1011.1	1013.5	1017.0	1022.9	1028.9	1033.6	1034.8	1034.8	1044.2	1052.5	1054.8
7.5°	992.2	995.8	1000.5	1006.4	1014.7	1021.8	1025.3	1030.0	1039.5	1050.1	1054.8
10°	968.6	974.5	981.6	989.9	998.1	1006.4	1013.5	1019.4	1031.2	1043.0	1050.1
12.5°	947.3	953.3	960.3	969.8	980.4	991.1	998.1	1006.4	1020.6	1034.8	1043.0
15°	923.7	929.6	937.9	947.3	959.2	971.0	981.6	992.2	1006.4	1021.8	1031.2
17.5°	897.7	903.6	911.9	923.7	936.7	949.7	961.5	973.3	989.9	1006.4	1017.0
20°	865.8	874.1	884.7	896.6	911.9	927.3	939.1	952.1	969.8	987.5	999.3
22.5°	835.1	843.4	855.2	869.4	885.9	902.5	916.6	930.8	949.7	967.4	980.4
25°	805.6	815.0	826.9	841.0	856.4	872.9	889.5	906.0	924.9	943.8	956.8
27.5°	776.1	784.3	796.2	810.3	828.0	844.6	861.1	877.7	897.7	917.8	932.0
30°	743.0	752.4	763.1	777.3	796.2	815.0	831.6	849.3	869.4	889.5	903.6
32.5°	712.3	720.6	731.2	745.4	764.3	783.2	800.9	819.8	838.7	858.8	872.9
35°	681.6	689.8	700.5	714.6	733.5	752.4	770.2	787.9	806.8	825.7	839.9
37.5°	650.9	659.1	669.8	683.9	701.7	720.6	737.1	754.8	773.7	792.6	805.6
40°	619.0	627.2	635.5	649.7	667.4	686.3	702.8	720.6	739.5	758.4	771.3
42.5°	587.1	595.3	606.0	620.1	636.7	653.2	669.8	686.3	704.0	721.7	734.7
45°	555.2	562.3	572.9	585.9	602.4	617.8	634.3	649.7	667.4	683.9	696.9
47.5°	522.1	529.2	537.5	550.5	567.0	583.5	600.1	615.4	630.8	647.3	659.1
50°	490.2	497.3	506.7	518.6	533.9	549.3	563.4	577.6	593.0	608.3	619.0
52.5°	457.1	464.2	472.5	484.3	497.3	511.5	524.5	538.6	552.8	567.0	577.6
55°	424.1	428.8	435.9	446.5	460.7	474.9	487.8	500.8	513.8	525.6	536.3
57.5°	391.0	396.9	405.2	414.6	426.4	438.2	450.0	461.9	473.7	485.5	494.9
60°	357.9	362.6	368.5	376.8	388.6	399.3	411.1	421.7	432.3	443.0	451.2
62.5°	323.7	328.4	334.3	342.6	352.0	361.5	372.1	381.5	391.0	400.4	408.7
65°	288.2	292.9	298.9	305.9	314.2	322.5	331.9	341.4	348.5	355.6	363.8
67.5°	251.6	256.3	262.2	268.1	275.2	283.5	291.8	300.0	307.1	314.2	320.1
70°	216.2	219.7	225.6	230.3	236.2	242.2	249.2	256.3	261.1	267.0	274.0
72.5°	181.9	185.5	190.2	194.9	198.4	203.2	210.3	216.2	222.1	229.2	232.7
75°	148.8	151.2	154.7	158.3	161.8	165.4	170.1	174.8	179.5	183.1	187.8
77.5°	115.8	118.1	121.7	124.0	126.4	128.8	132.3	135.8	139.4	141.7	146.5
80°	85.0	87.4	89.8	92.1	94.5	96.9	98.0	99.2	103.9	107.5	109.9
82.5°	57.9	59.1	60.2	62.6	63.8	65.0	66.1	66.1	68.5	70.9	74.4
85°	33.1	34.3	35.4	35.4	35.4	35.4	36.6	37.8	39.0	41.3	43.7
87.5°	13.0	13.0	14.2	14.2	14.2	14.2	14.2	14.2	15.4	17.7	18.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2	1044.2
2.5°	1050.1	1051.3	1053.7	1054.8	1056.0	1056.0	1057.2	1058.4	1056.0	1053.7	1052.5
5°	1056.0	1057.2	1060.7	1064.3	1066.7	1069.0	1067.8	1066.7	1064.3	1060.7	1058.4
7.5°	1057.2	1060.7	1064.3	1069.0	1072.6	1077.3	1074.9	1072.6	1067.8	1063.1	1059.6
10°	1053.7	1058.4	1064.3	1070.2	1073.7	1077.3	1074.9	1072.6	1067.8	1061.9	1057.2
12.5°	1048.9	1054.8	1061.9	1067.8	1071.4	1076.1	1072.6	1069.0	1063.1	1057.2	1051.3
15°	1038.3	1045.4	1053.7	1060.7	1066.7	1071.4	1067.8	1065.5	1058.4	1050.1	1041.8
17.5°	1025.3	1034.8	1043.0	1051.3	1056.0	1060.7	1058.4	1056.0	1047.8	1038.3	1028.9
20°	1010.0	1019.4	1027.7	1035.9	1041.8	1046.6	1043.0	1039.5	1031.2	1022.9	1013.5
22.5°	991.1	1000.5	1010.0	1018.2	1024.1	1028.9	1024.1	1018.2	1010.0	1001.7	992.2
25°	967.4	978.1	988.7	997.0	1000.5	1005.2	1000.5	995.8	987.5	979.2	968.6
27.5°	943.8	954.4	965.1	973.3	976.9	981.6	976.9	972.2	963.9	955.6	945.0
30°	916.6	927.3	937.9	946.2	949.7	953.3	948.5	943.8	936.7	928.4	917.8
32.5°	885.9	896.6	904.8	913.1	917.8	922.5	917.8	914.3	906.0	895.4	884.7
35°	852.8	863.5	874.1	882.4	887.1	891.8	885.9	880.0	872.9	864.7	855.2
37.5°	816.2	828.0	839.9	849.3	852.8	857.6	852.8	846.9	839.9	831.6	821.0
40°	782.0	792.6	803.2	812.7	816.2	819.8	815.0	810.3	802.1	793.8	783.2
42.5°	746.5	757.2	766.6	774.9	778.4	783.2	778.4	772.5	766.6	759.5	750.1
45°	708.7	719.4	727.6	735.9	739.5	743.0	738.3	732.4	726.5	720.6	711.1
47.5°	669.8	679.2	687.5	695.7	698.1	701.7	696.9	693.4	687.5	681.6	673.3
50°	629.6	639.0	647.3	654.4	656.8	660.3	655.6	650.9	646.1	641.4	634.3
52.5°	588.3	596.5	604.8	611.9	614.2	616.6	611.9	607.2	602.4	597.7	590.6
55°	545.7	554.0	562.3	568.2	570.5	572.9	568.2	564.6	559.9	556.4	549.3
57.5°	503.2	511.5	518.6	524.5	526.8	529.2	524.5	519.7	516.2	512.7	506.7
60°	459.5	467.8	473.7	478.4	480.8	481.9	477.2	473.7	471.3	468.9	463.0
62.5°	417.0	422.9	428.8	432.3	434.7	435.9	432.3	430.0	427.6	425.2	420.5
65°	372.1	379.2	383.9	387.4	388.6	389.8	386.3	383.9	381.5	379.2	375.6
67.5°	327.2	333.1	336.7	340.2	341.4	341.4	341.4	340.2	337.8	334.3	330.7
70°	282.3	287.0	290.6	292.9	294.1	294.1	291.8	289.4	289.4	288.2	285.9
72.5°	236.2	239.8	242.2	244.5	244.5	244.5	244.5	245.7	244.5	242.2	238.6
75°	192.5	196.1	198.4	199.6	199.6	199.6	199.6	200.8	199.6	198.4	196.1
77.5°	151.2	153.6	154.7	155.9	155.9	155.9	157.1	158.3	157.1	155.9	154.7
80°	112.2	113.4	114.6	115.8	114.6	114.6	115.8	118.1	116.9	115.8	114.6
82.5°	76.8	78.0	79.1	79.1	80.3	81.5	81.5	81.5	81.5	80.3	79.1
85°	46.1	47.2	47.2	47.2	47.2	47.2	48.4	49.6	49.6	48.4	48.4
87.5°	21.3	22.4	21.3	20.1	18.9	18.9	21.3	23.6	23.6	22.4	22.4
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: P709151  
 CATALOG NUMBER: 4APN-35L950-X-UNV

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1044.2	1044.2	1044.2	1044.2
2.5°	1053.7	1052.5	1046.6	1040.7
5°	1057.2	1053.7	1045.4	1037.1
7.5°	1057.2	1052.5	1040.7	1030.0
10°	1051.3	1044.2	1031.2	1018.2
12.5°	1044.2	1035.9	1020.6	1006.4
15°	1033.6	1024.1	1007.6	991.1
17.5°	1018.2	1006.4	989.9	972.2
20°	1002.9	989.9	969.8	950.9
22.5°	981.6	969.8	948.5	928.4
25°	958.0	945.0	923.7	902.5
27.5°	933.2	917.8	896.6	875.3
30°	904.8	889.5	868.2	846.9
32.5°	874.1	859.9	838.7	816.2
35°	843.4	828.0	806.8	784.3
37.5°	809.1	795.0	773.7	752.4
40°	772.5	758.4	737.1	715.8
42.5°	738.3	725.3	704.0	683.9
45°	700.5	687.5	667.4	648.5
47.5°	661.5	648.5	629.6	610.7
50°	623.7	610.7	593.0	575.3
52.5°	581.2	570.5	554.0	537.5
55°	539.8	529.2	512.7	497.3
57.5°	498.5	489.0	473.7	459.5
60°	454.8	445.3	433.5	420.5
62.5°	413.4	405.2	393.4	381.5
65°	369.7	362.6	352.0	341.4
67.5°	324.8	318.9	309.5	300.0
70°	280.0	272.9	265.8	257.5
72.5°	235.1	231.5	224.4	217.3
75°	192.5	189.0	183.1	177.2
77.5°	152.4	148.8	144.1	139.4
80°	112.2	109.9	106.3	102.8
82.5°	78.0	75.6	73.2	69.7
85°	47.2	44.9	42.5	40.2
87.5°	21.3	20.1	17.7	16.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)