

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: P709097

Luminaire Tested: **4APN-X-37L940-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709097
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-37L940-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

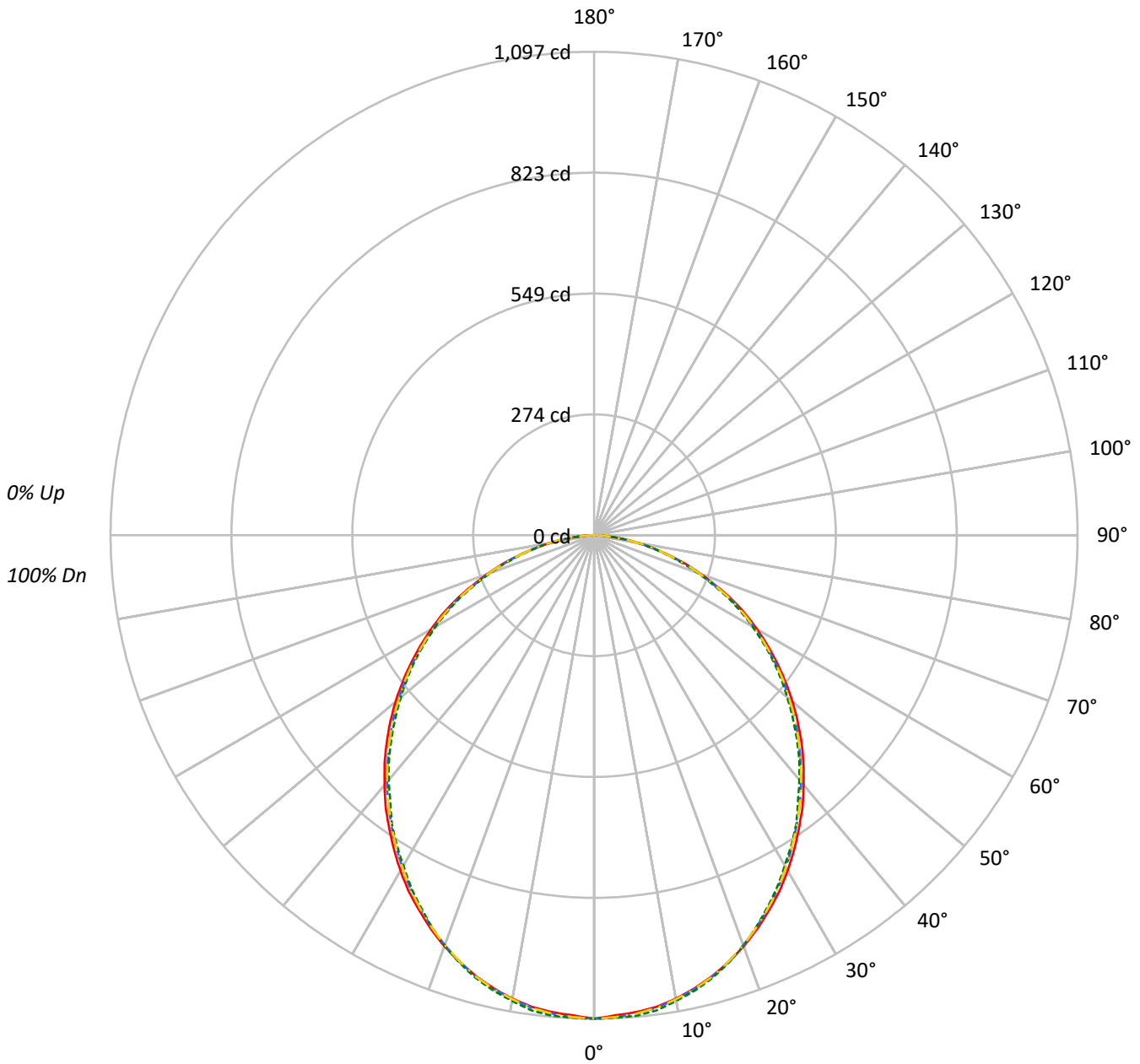
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2854.2 lumens
Efficiency: N/A
Efficacy: 70.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 40.8
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: P709097
CATALOG NUMBER: 4APN-X-37L940-UNV

Luminous Intensity Polar Plot



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



TEST NUMBER: P709097
 CATALOG NUMBER: 4APN-X-37L940-UNV

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	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	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	73	73	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	62	62	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	41	41	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	10121	10121	10121	10121
5°	10061	10136	10061	10136
10°	10002	10051	10002	10051
15°	9890	9928	9890	9928
20°	9746	9732	9746	9732
25°	9559	9477	9559	9477
30°	9361	9218	9361	9218
35°	9128	9007	9128	9007
40°	8905	8728	8905	8728
45°	8686	8476	8686	8476
50°	8440	8210	8440	8210
55°	8167	7972	8167	7972
60°	7885	7661	7885	7661
65°	7545	7311	7545	7311
70°	6973	6757	6973	6757
75°	6302	6114	6302	6114
80°	5409	5265	5409	5265
85°	4107	4107	4107	4107



TEST NUMBER: P709097
 CATALOG NUMBER: 4APN-X-37L940-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.5	3.6
10°-20°	292.4	10.2
20°-30°	431.0	15.1
30°-40°	503.1	17.6
40°-50°	507.2	17.8
50°-60°	448.3	15.7
60°-70°	335.2	11.7
70°-80°	185.8	6.5
80°-90°	47.6	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°	826.9	29.0
0°-40°	1330.0	46.6
0°-60°	2285.5	80.1
0°-90°	2854.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2854.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1097	1097	1097	1097	1097	
5°	1086	1094	1086	1094	1086	103
15°	1035	1039	1035	1039	1035	292
25°	939	931	939	931	939	433
35°	810	800	810	800	810	507
45°	666	650	666	650	666	513
55°	508	496	508	496	508	454
65°	346	335	346	335	346	340
75°	177	172	177	172	177	188
85°	39	39	39	39	39	47
90°	0	0	0	0	0	



TEST NUMBER: P709097

CATALOG NUMBER: 4APN-X-37L940-UNV

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0
2.5°	1090.3	1095.7	1101.1	1099.7	1095.7	1093.0	1094.4	1094.4	1095.7	1095.7	1095.7
5°	1086.3	1091.7	1095.7	1094.4	1090.3	1089.0	1089.0	1089.0	1091.7	1094.4	1091.7
7.5°	1079.6	1083.6	1087.7	1086.3	1082.3	1081.0	1081.0	1082.3	1085.0	1087.7	1085.0
10°	1067.6	1072.9	1076.9	1074.3	1070.2	1067.6	1067.6	1067.6	1070.2	1072.9	1070.2
12.5°	1052.8	1056.8	1060.9	1059.5	1055.5	1052.8	1052.8	1052.8	1055.5	1058.2	1055.5
15°	1035.4	1039.4	1043.5	1042.1	1038.1	1035.4	1035.4	1035.4	1038.1	1039.4	1038.1
17.5°	1015.3	1019.3	1023.4	1020.7	1015.3	1012.6	1012.6	1012.6	1015.3	1016.7	1015.3
20°	992.6	996.6	999.2	996.6	991.2	988.5	987.2	987.2	989.9	991.2	989.9
22.5°	967.1	969.8	972.5	969.8	964.4	961.7	960.4	959.1	960.4	961.7	960.4
25°	939.0	941.7	944.3	941.7	936.3	932.3	930.9	929.6	930.9	930.9	930.9
27.5°	910.8	912.2	914.9	910.8	905.5	901.5	900.1	898.8	900.1	900.1	900.1
30°	878.7	880.0	882.7	878.7	872.0	868.0	866.6	865.3	865.3	865.3	865.3
32.5°	845.2	847.9	850.6	845.2	838.5	834.5	833.2	831.8	833.2	833.2	833.2
35°	810.4	811.7	814.4	810.4	803.7	799.7	797.0	795.6	798.3	799.7	798.3
37.5°	776.9	778.2	779.6	775.6	768.9	764.8	762.2	760.8	759.5	759.5	759.5
40°	739.4	740.7	743.4	739.4	732.7	728.7	726.0	724.7	724.7	724.7	724.7
42.5°	703.2	704.6	705.9	701.9	695.2	691.2	688.5	687.2	688.5	688.5	688.5
45°	665.7	665.7	667.1	663.0	657.7	653.7	651.0	649.6	649.6	649.6	649.6
47.5°	626.9	628.2	629.6	625.5	620.2	616.2	613.5	610.8	610.8	610.8	610.8
50°	588.0	588.0	589.4	585.4	580.0	576.0	574.6	573.3	572.0	572.0	572.0
52.5°	547.8	549.2	550.5	546.5	542.5	538.5	535.8	534.5	534.5	534.5	534.5
55°	507.7	507.7	509.0	506.3	502.3	498.3	495.6	494.3	495.6	495.6	495.6
57.5°	467.5	468.8	470.2	466.1	462.1	458.1	456.8	455.4	455.4	455.4	455.4
60°	427.3	427.3	428.6	426.0	421.9	417.9	416.6	415.2	415.2	415.2	415.2
62.5°	387.1	387.1	388.4	385.8	381.8	377.7	376.4	375.1	375.1	375.1	375.1
65°	345.6	345.6	345.6	342.9	340.2	338.9	337.5	336.2	334.9	334.9	334.9
67.5°	300.0	300.0	301.4	298.7	296.0	294.7	293.3	292.0	290.7	290.7	290.7
70°	258.5	258.5	259.9	258.5	255.8	254.5	253.2	251.8	250.5	250.5	250.5
72.5°	218.3	218.3	218.3	217.0	215.7	214.3	213.0	211.6	210.3	210.3	210.3
75°	176.8	176.8	178.2	176.8	175.5	174.1	172.8	172.8	171.5	171.5	171.5
77.5°	138.0	139.3	140.6	139.3	138.0	136.6	135.3	135.3	133.9	133.9	133.9
80°	101.8	103.1	104.5	103.1	101.8	100.5	99.1	99.1	99.1	99.1	99.1
82.5°	68.3	69.7	71.0	69.7	68.3	68.3	67.0	67.0	67.0	67.0	67.0
85°	38.8	40.2	41.5	41.5	40.2	40.2	38.8	38.8	38.8	38.8	38.8
87.5°	14.7	16.1	17.4	17.4	16.1	16.1	16.1	16.1	16.1	16.1	16.1
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: P709097

CATALOG NUMBER: 4APN-X-37L940-UNV

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0
2.5°	1094.4	1094.4	1093.0	1095.7	1099.7	1101.1	1095.7	1090.3	1095.7	1101.1	1099.7
5°	1089.0	1089.0	1089.0	1090.3	1094.4	1095.7	1091.7	1086.3	1091.7	1095.7	1094.4
7.5°	1082.3	1081.0	1081.0	1082.3	1086.3	1087.7	1083.6	1079.6	1083.6	1087.7	1086.3
10°	1067.6	1067.6	1067.6	1070.2	1074.3	1076.9	1072.9	1067.6	1072.9	1076.9	1074.3
12.5°	1052.8	1052.8	1052.8	1055.5	1059.5	1060.9	1056.8	1052.8	1056.8	1060.9	1059.5
15°	1035.4	1035.4	1035.4	1038.1	1042.1	1043.5	1039.4	1035.4	1039.4	1043.5	1042.1
17.5°	1012.6	1012.6	1012.6	1015.3	1020.7	1023.4	1019.3	1015.3	1019.3	1023.4	1020.7
20°	987.2	987.2	988.5	991.2	996.6	999.2	996.6	992.6	996.6	999.2	996.6
22.5°	959.1	960.4	961.7	964.4	969.8	972.5	969.8	967.1	969.8	972.5	969.8
25°	929.6	930.9	932.3	936.3	941.7	944.3	941.7	939.0	941.7	944.3	941.7
27.5°	898.8	900.1	901.5	905.5	910.8	914.9	912.2	910.8	912.2	914.9	910.8
30°	865.3	866.6	868.0	872.0	878.7	882.7	880.0	878.7	880.0	882.7	878.7
32.5°	831.8	833.2	834.5	838.5	845.2	850.6	847.9	845.2	847.9	850.6	845.2
35°	795.6	797.0	799.7	803.7	810.4	814.4	811.7	810.4	811.7	814.4	810.4
37.5°	760.8	762.2	764.8	768.9	775.6	779.6	778.2	776.9	778.2	779.6	775.6
40°	724.7	726.0	728.7	732.7	739.4	743.4	740.7	739.4	740.7	743.4	739.4
42.5°	687.2	688.5	691.2	695.2	701.9	705.9	704.6	703.2	704.6	705.9	701.9
45°	649.6	651.0	653.7	657.7	663.0	667.1	665.7	665.7	665.7	667.1	663.0
47.5°	610.8	613.5	616.2	620.2	625.5	629.6	628.2	626.9	628.2	629.6	625.5
50°	573.3	574.6	576.0	580.0	585.4	589.4	588.0	588.0	588.0	589.4	585.4
52.5°	534.5	535.8	538.5	542.5	546.5	550.5	549.2	547.8	549.2	550.5	546.5
55°	494.3	495.6	498.3	502.3	506.3	509.0	507.7	507.7	507.7	509.0	506.3
57.5°	455.4	456.8	458.1	462.1	466.1	470.2	468.8	467.5	468.8	470.2	466.1
60°	415.2	416.6	417.9	421.9	426.0	428.6	427.3	427.3	427.3	428.6	426.0
62.5°	375.1	376.4	377.7	381.8	385.8	388.4	387.1	387.1	387.1	388.4	385.8
65°	336.2	337.5	338.9	340.2	342.9	345.6	345.6	345.6	345.6	345.6	342.9
67.5°	292.0	293.3	294.7	296.0	298.7	301.4	300.0	300.0	300.0	301.4	298.7
70°	251.8	253.2	254.5	255.8	258.5	259.9	258.5	258.5	258.5	259.9	258.5
72.5°	211.6	213.0	214.3	215.7	217.0	218.3	218.3	218.3	218.3	218.3	217.0
75°	172.8	172.8	174.1	175.5	176.8	178.2	176.8	176.8	176.8	178.2	176.8
77.5°	135.3	135.3	136.6	138.0	139.3	140.6	139.3	138.0	139.3	140.6	139.3
80°	99.1	99.1	100.5	101.8	103.1	104.5	103.1	101.8	103.1	104.5	103.1
82.5°	67.0	67.0	68.3	68.3	69.7	71.0	69.7	68.3	69.7	71.0	69.7
85°	38.8	38.8	40.2	40.2	41.5	41.5	40.2	38.8	40.2	41.5	41.5
87.5°	16.1	16.1	16.1	16.1	17.4	17.4	16.1	14.7	16.1	17.4	17.4
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: P709097

CATALOG NUMBER: 4APN-X-37L940-UNV

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0	1097.0
2.5°	1095.7	1093.0	1094.4	1094.4	1095.7	1095.7	1095.7	1094.4	1094.4	1093.0	1095.7
5°	1090.3	1089.0	1089.0	1089.0	1091.7	1094.4	1091.7	1089.0	1089.0	1089.0	1090.3
7.5°	1082.3	1081.0	1081.0	1082.3	1085.0	1087.7	1085.0	1082.3	1081.0	1081.0	1082.3
10°	1070.2	1067.6	1067.6	1067.6	1070.2	1072.9	1070.2	1067.6	1067.6	1067.6	1070.2
12.5°	1055.5	1052.8	1052.8	1052.8	1055.5	1058.2	1055.5	1052.8	1052.8	1052.8	1055.5
15°	1038.1	1035.4	1035.4	1035.4	1038.1	1039.4	1038.1	1035.4	1035.4	1035.4	1038.1
17.5°	1015.3	1012.6	1012.6	1012.6	1015.3	1016.7	1015.3	1012.6	1012.6	1012.6	1015.3
20°	991.2	988.5	987.2	987.2	989.9	991.2	989.9	987.2	987.2	988.5	991.2
22.5°	964.4	961.7	960.4	959.1	960.4	961.7	960.4	959.1	960.4	961.7	964.4
25°	936.3	932.3	930.9	929.6	930.9	930.9	930.9	929.6	930.9	932.3	936.3
27.5°	905.5	901.5	900.1	898.8	900.1	900.1	900.1	898.8	900.1	901.5	905.5
30°	872.0	868.0	866.6	865.3	865.3	865.3	865.3	865.3	866.6	868.0	872.0
32.5°	838.5	834.5	833.2	831.8	833.2	833.2	833.2	831.8	833.2	834.5	838.5
35°	803.7	799.7	797.0	795.6	798.3	799.7	798.3	795.6	797.0	799.7	803.7
37.5°	768.9	764.8	762.2	760.8	759.5	759.5	759.5	760.8	762.2	764.8	768.9
40°	732.7	728.7	726.0	724.7	724.7	724.7	724.7	724.7	726.0	728.7	732.7
42.5°	695.2	691.2	688.5	687.2	688.5	688.5	688.5	687.2	688.5	691.2	695.2
45°	657.7	653.7	651.0	649.6	649.6	649.6	649.6	649.6	651.0	653.7	657.7
47.5°	620.2	616.2	613.5	610.8	610.8	610.8	610.8	610.8	613.5	616.2	620.2
50°	580.0	576.0	574.6	573.3	572.0	572.0	572.0	573.3	574.6	576.0	580.0
52.5°	542.5	538.5	535.8	534.5	534.5	534.5	534.5	534.5	535.8	538.5	542.5
55°	502.3	498.3	495.6	494.3	495.6	495.6	495.6	494.3	495.6	498.3	502.3
57.5°	462.1	458.1	456.8	455.4	455.4	455.4	455.4	455.4	456.8	458.1	462.1
60°	421.9	417.9	416.6	415.2	415.2	415.2	415.2	415.2	416.6	417.9	421.9
62.5°	381.8	377.7	376.4	375.1	375.1	375.1	375.1	375.1	376.4	377.7	381.8
65°	340.2	338.9	337.5	336.2	334.9	334.9	334.9	336.2	337.5	338.9	340.2
67.5°	296.0	294.7	293.3	292.0	290.7	290.7	290.7	292.0	293.3	294.7	296.0
70°	255.8	254.5	253.2	251.8	250.5	250.5	250.5	251.8	253.2	254.5	255.8
72.5°	215.7	214.3	213.0	211.6	210.3	210.3	210.3	211.6	213.0	214.3	215.7
75°	175.5	174.1	172.8	172.8	171.5	171.5	171.5	172.8	172.8	174.1	175.5
77.5°	138.0	136.6	135.3	135.3	133.9	133.9	133.9	135.3	135.3	136.6	138.0
80°	101.8	100.5	99.1	99.1	99.1	99.1	99.1	99.1	99.1	100.5	101.8
82.5°	68.3	68.3	67.0	67.0	67.0	67.0	67.0	67.0	67.0	68.3	68.3
85°	40.2	40.2	38.8	38.8	38.8	38.8	38.8	38.8	38.8	40.2	40.2
87.5°	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1
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: P709097
 CATALOG NUMBER: 4APN-X-37L940-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1097.0	1097.0	1097.0	1097.0
2.5°	1099.7	1101.1	1095.7	1090.3
5°	1094.4	1095.7	1091.7	1086.3
7.5°	1086.3	1087.7	1083.6	1079.6
10°	1074.3	1076.9	1072.9	1067.6
12.5°	1059.5	1060.9	1056.8	1052.8
15°	1042.1	1043.5	1039.4	1035.4
17.5°	1020.7	1023.4	1019.3	1015.3
20°	996.6	999.2	996.6	992.6
22.5°	969.8	972.5	969.8	967.1
25°	941.7	944.3	941.7	939.0
27.5°	910.8	914.9	912.2	910.8
30°	878.7	882.7	880.0	878.7
32.5°	845.2	850.6	847.9	845.2
35°	810.4	814.4	811.7	810.4
37.5°	775.6	779.6	778.2	776.9
40°	739.4	743.4	740.7	739.4
42.5°	701.9	705.9	704.6	703.2
45°	663.0	667.1	665.7	665.7
47.5°	625.5	629.6	628.2	626.9
50°	585.4	589.4	588.0	588.0
52.5°	546.5	550.5	549.2	547.8
55°	506.3	509.0	507.7	507.7
57.5°	466.1	470.2	468.8	467.5
60°	426.0	428.6	427.3	427.3
62.5°	385.8	388.4	387.1	387.1
65°	342.9	345.6	345.6	345.6
67.5°	298.7	301.4	300.0	300.0
70°	258.5	259.9	258.5	258.5
72.5°	217.0	218.3	218.3	218.3
75°	176.8	178.2	176.8	176.8
77.5°	139.3	140.6	139.3	138.0
80°	103.1	104.5	103.1	101.8
82.5°	69.7	71.0	69.7	68.3
85°	41.5	41.5	40.2	38.8
87.5°	17.4	17.4	16.1	14.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)