

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: P

Luminaire Tested: **4APN-X-42L940-UNV-NP**

Issue Date: 06/06/2024



Test Information

Test Method: LM-79-08
Report Number: P
Test Lab: INNOVATION CENTER(G2)
Issue Date: 06/06/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-42L940-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

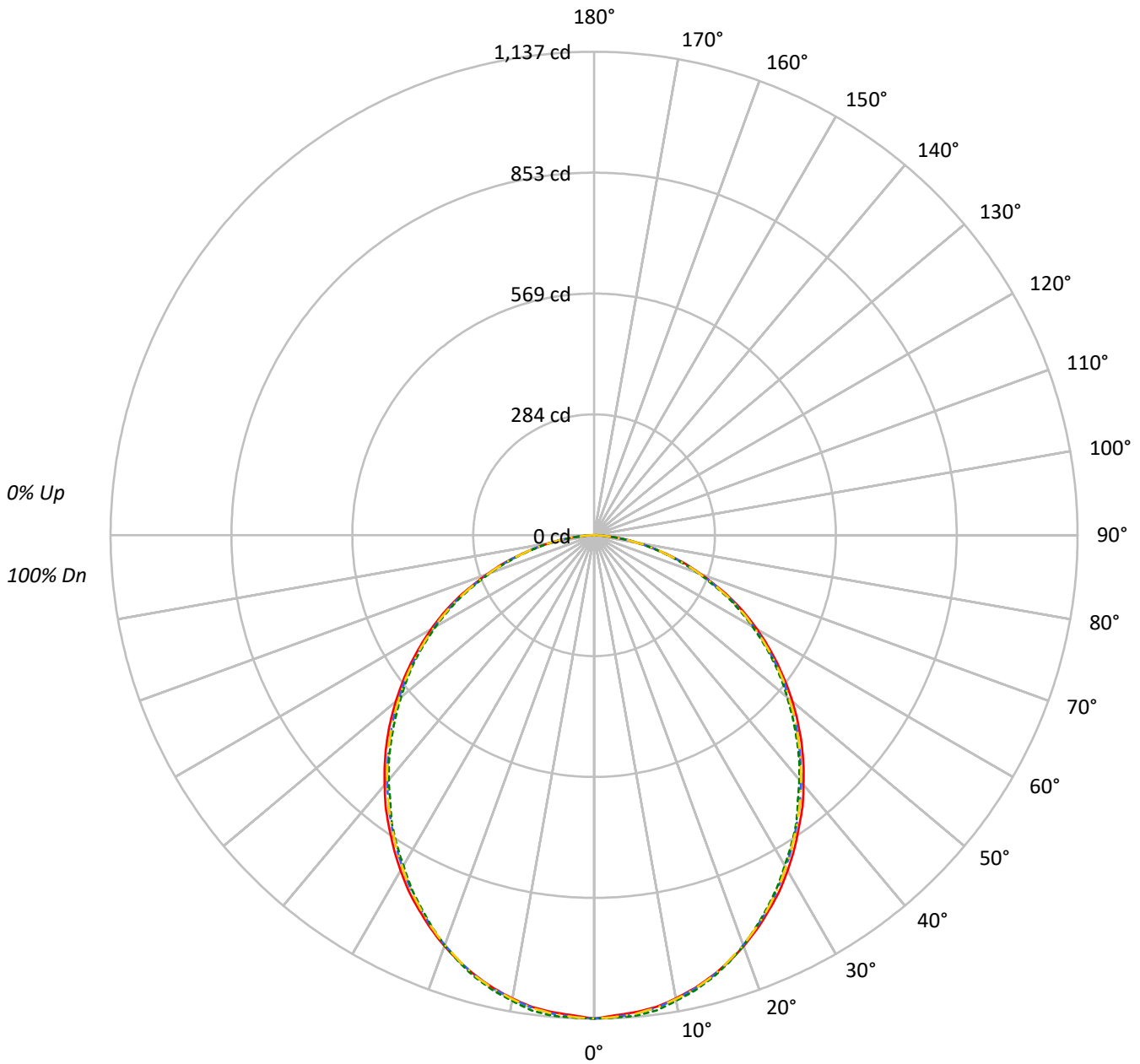
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2957.7 lumens
Efficiency: N/A
Efficacy: 64.0 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): 46.2
Input Voltage (V): 120
Input Current (A_{in}): 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				
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°	10488	10488	10488	10488
5°	10426	10503	10426	10503
10°	10364	10416	10364	10416
15°	10248	10289	10248	10289
20°	10099	10085	10099	10085
25°	9905	9821	9905	9821
30°	9701	9552	9701	9552
35°	9459	9334	9459	9334
40°	9228	9045	9228	9045
45°	9000	8784	9000	8784
50°	8746	8507	8746	8507
55°	8463	8261	8463	8261
60°	8169	7940	8169	7940
65°	7818	7575	7818	7575
70°	7227	7000	7227	7000
75°	6531	6335	6531	6335
80°	5605	5457	5605	5457
85°	4266	4266	4266	4266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	3.6
10°-20°	303.0	10.2
20°-30°	446.6	15.1
30°-40°	521.3	17.6
40°-50°	525.6	17.8
50°-60°	464.5	15.7
60°-70°	347.4	11.7
70°-80°	192.6	6.5
80°-90°	49.4	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°	856.9	29.0
0°-40°	1378.2	46.6
0°-60°	2368.4	80.1
0°-90°	2957.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2957.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1137	1137	1137	1137	1137	
5°	1126	1134	1126	1134	1126	107
15°	1073	1077	1073	1077	1073	302
25°	973	965	973	965	973	448
35°	840	829	840	829	840	526
45°	690	673	690	673	690	532
55°	526	514	526	514	526	471
65°	358	347	358	347	358	353
75°	183	178	183	178	183	195
85°	40	40	40	40	40	49
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°	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8
2.5°	1129.9	1135.4	1141.0	1139.6	1135.4	1132.7	1134.1	1134.1	1135.4	1135.4	1135.4
5°	1125.7	1131.3	1135.4	1134.1	1129.9	1128.5	1128.5	1128.5	1131.3	1134.1	1131.3
7.5°	1118.8	1122.9	1127.1	1125.7	1121.5	1120.1	1120.1	1121.5	1124.3	1127.1	1124.3
10°	1106.3	1111.8	1116.0	1113.2	1109.1	1106.3	1106.3	1106.3	1109.1	1111.8	1109.1
12.5°	1091.0	1095.2	1099.3	1097.9	1093.8	1091.0	1091.0	1091.0	1093.8	1096.5	1093.8
15°	1072.9	1077.2	1081.3	1079.9	1075.7	1072.9	1072.9	1072.9	1075.7	1077.2	1075.7
17.5°	1052.2	1056.3	1060.5	1057.7	1052.2	1049.3	1049.3	1049.3	1052.2	1053.6	1052.2
20°	1028.6	1032.7	1035.5	1032.7	1027.2	1024.3	1023.0	1023.0	1025.8	1027.2	1025.8
22.5°	1002.2	1005.0	1007.7	1005.0	999.4	996.6	995.2	993.8	995.2	996.6	995.2
25°	973.0	975.8	978.6	975.8	970.2	966.1	964.7	963.3	964.7	964.7	964.7
27.5°	943.9	945.2	948.0	943.9	938.3	934.2	932.8	931.4	932.8	932.8	932.8
30°	910.6	912.0	914.7	910.6	903.7	899.5	898.0	896.6	896.6	896.6	896.6
32.5°	875.9	878.7	881.4	875.9	868.9	864.7	863.4	862.0	863.4	863.4	863.4
35°	839.8	841.1	843.9	839.8	832.8	828.7	825.9	824.5	827.3	828.7	827.3
37.5°	805.1	806.5	807.9	803.7	796.7	792.6	789.8	788.4	787.0	787.0	787.0
40°	766.2	767.6	770.3	766.2	759.3	755.1	752.4	751.0	751.0	751.0	751.0
42.5°	728.7	730.1	731.5	727.4	720.4	716.2	713.4	712.1	713.4	713.4	713.4
45°	689.8	689.8	691.2	687.1	681.5	677.4	674.6	673.2	673.2	673.2	673.2
47.5°	649.6	651.0	652.4	648.3	642.6	638.5	635.7	633.0	633.0	633.0	633.0
50°	609.3	609.3	610.7	606.6	601.1	596.9	595.5	594.0	592.7	592.7	592.7
52.5°	567.7	569.1	570.5	566.3	562.1	558.0	555.2	553.8	553.8	553.8	553.8
55°	526.1	526.1	527.5	524.7	520.6	516.3	513.6	512.2	513.6	513.6	513.6
57.5°	484.4	485.8	487.2	483.0	478.9	474.7	473.4	472.0	472.0	472.0	472.0
60°	442.7	442.7	444.2	441.4	437.2	433.1	431.7	430.3	430.3	430.3	430.3
62.5°	401.2	401.2	402.5	399.8	395.6	391.4	390.0	388.6	388.6	388.6	388.6
65°	358.1	358.1	358.1	355.3	352.6	351.2	349.8	348.4	347.0	347.0	347.0
67.5°	310.9	310.9	312.3	309.5	306.7	305.4	304.0	302.6	301.2	301.2	301.2
70°	267.9	267.9	269.3	267.9	265.1	263.7	262.3	260.9	259.5	259.5	259.5
72.5°	226.3	226.3	226.3	224.9	223.5	222.1	220.7	219.3	218.0	218.0	218.0
75°	183.2	183.2	184.6	183.2	181.8	180.4	179.1	179.1	177.7	177.7	177.7
77.5°	143.0	144.4	145.8	144.4	143.0	141.6	140.2	140.2	138.8	138.8	138.8
80°	105.5	106.9	108.2	106.9	105.5	104.1	102.7	102.7	102.7	102.7	102.7
82.5°	70.8	72.2	73.6	72.2	70.8	70.8	69.4	69.4	69.4	69.4	69.4
85°	40.3	41.7	43.1	43.1	41.7	41.7	40.3	40.3	40.3	40.3	40.3
87.5°	15.3	16.7	18.1	18.1	16.7	16.7	16.7	16.7	16.7	16.7	16.7
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°	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8
2.5°	1134.1	1134.1	1132.7	1135.4	1139.6	1141.0	1135.4	1129.9	1135.4	1141.0	1139.6
5°	1128.5	1128.5	1128.5	1129.9	1134.1	1135.4	1131.3	1125.7	1131.3	1135.4	1134.1
7.5°	1121.5	1120.1	1120.1	1121.5	1125.7	1127.1	1122.9	1118.8	1122.9	1127.1	1125.7
10°	1106.3	1106.3	1106.3	1109.1	1113.2	1116.0	1111.8	1106.3	1111.8	1116.0	1113.2
12.5°	1091.0	1091.0	1091.0	1093.8	1097.9	1099.3	1095.2	1091.0	1095.2	1099.3	1097.9
15°	1072.9	1072.9	1072.9	1075.7	1079.9	1081.3	1077.2	1072.9	1077.2	1081.3	1079.9
17.5°	1049.3	1049.3	1049.3	1052.2	1057.7	1060.5	1056.3	1052.2	1056.3	1060.5	1057.7
20°	1023.0	1023.0	1024.3	1027.2	1032.7	1035.5	1032.7	1028.6	1032.7	1035.5	1032.7
22.5°	993.8	995.2	996.6	999.4	1005.0	1007.7	1005.0	1002.2	1005.0	1007.7	1005.0
25°	963.3	964.7	966.1	970.2	975.8	978.6	975.8	973.0	975.8	978.6	975.8
27.5°	931.4	932.8	934.2	938.3	943.9	948.0	945.2	943.9	945.2	948.0	943.9
30°	896.6	898.0	899.5	903.7	910.6	914.7	912.0	910.6	912.0	914.7	910.6
32.5°	862.0	863.4	864.7	868.9	875.9	881.4	878.7	875.9	878.7	881.4	875.9
35°	824.5	825.9	828.7	832.8	839.8	843.9	841.1	839.8	841.1	843.9	839.8
37.5°	788.4	789.8	792.6	796.7	803.7	807.9	806.5	805.1	806.5	807.9	803.7
40°	751.0	752.4	755.1	759.3	766.2	770.3	767.6	766.2	767.6	770.3	766.2
42.5°	712.1	713.4	716.2	720.4	727.4	731.5	730.1	728.7	730.1	731.5	727.4
45°	673.2	674.6	677.4	681.5	687.1	691.2	689.8	689.8	689.8	691.2	687.1
47.5°	633.0	635.7	638.5	642.6	648.3	652.4	651.0	649.6	651.0	652.4	648.3
50°	594.0	595.5	596.9	601.1	606.6	610.7	609.3	609.3	609.3	610.7	606.6
52.5°	553.8	555.2	558.0	562.1	566.3	570.5	569.1	567.7	569.1	570.5	566.3
55°	512.2	513.6	516.3	520.6	524.7	527.5	526.1	526.1	526.1	527.5	524.7
57.5°	472.0	473.4	474.7	478.9	483.0	487.2	485.8	484.4	485.8	487.2	483.0
60°	430.3	431.7	433.1	437.2	441.4	444.2	442.7	442.7	442.7	444.2	441.4
62.5°	388.6	390.0	391.4	395.6	399.8	402.5	401.2	401.2	401.2	402.5	399.8
65°	348.4	349.8	351.2	352.6	355.3	358.1	358.1	358.1	358.1	358.1	355.3
67.5°	302.6	304.0	305.4	306.7	309.5	312.3	310.9	310.9	310.9	312.3	309.5
70°	260.9	262.3	263.7	265.1	267.9	269.3	267.9	267.9	267.9	269.3	267.9
72.5°	219.3	220.7	222.1	223.5	224.9	226.3	226.3	226.3	226.3	226.3	224.9
75°	179.1	179.1	180.4	181.8	183.2	184.6	183.2	183.2	183.2	184.6	183.2
77.5°	140.2	140.2	141.6	143.0	144.4	145.8	144.4	143.0	144.4	145.8	144.4
80°	102.7	102.7	104.1	105.5	106.9	108.2	106.9	105.5	106.9	108.2	106.9
82.5°	69.4	69.4	70.8	70.8	72.2	73.6	72.2	70.8	72.2	73.6	72.2
85°	40.3	40.3	41.7	41.7	43.1	43.1	41.7	40.3	41.7	43.1	43.1
87.5°	16.7	16.7	16.7	16.7	18.1	18.1	16.7	15.3	16.7	18.1	18.1
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°	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8	1136.8
2.5°	1135.4	1132.7	1134.1	1134.1	1135.4	1135.4	1135.4	1134.1	1134.1	1132.7	1135.4
5°	1129.9	1128.5	1128.5	1128.5	1131.3	1134.1	1131.3	1128.5	1128.5	1128.5	1129.9
7.5°	1121.5	1120.1	1120.1	1121.5	1124.3	1127.1	1124.3	1121.5	1120.1	1120.1	1121.5
10°	1109.1	1106.3	1106.3	1106.3	1109.1	1111.8	1109.1	1106.3	1106.3	1106.3	1109.1
12.5°	1093.8	1091.0	1091.0	1091.0	1093.8	1096.5	1093.8	1091.0	1091.0	1091.0	1093.8
15°	1075.7	1072.9	1072.9	1072.9	1075.7	1077.2	1075.7	1072.9	1072.9	1072.9	1075.7
17.5°	1052.2	1049.3	1049.3	1049.3	1052.2	1053.6	1052.2	1049.3	1049.3	1049.3	1052.2
20°	1027.2	1024.3	1023.0	1023.0	1025.8	1027.2	1025.8	1023.0	1023.0	1024.3	1027.2
22.5°	999.4	996.6	995.2	993.8	995.2	996.6	995.2	993.8	995.2	996.6	999.4
25°	970.2	966.1	964.7	963.3	964.7	964.7	964.7	963.3	964.7	966.1	970.2
27.5°	938.3	934.2	932.8	931.4	932.8	932.8	932.8	931.4	932.8	934.2	938.3
30°	903.7	899.5	898.0	896.6	896.6	896.6	896.6	896.6	898.0	899.5	903.7
32.5°	868.9	864.7	863.4	862.0	863.4	863.4	863.4	862.0	863.4	864.7	868.9
35°	832.8	828.7	825.9	824.5	827.3	828.7	827.3	824.5	825.9	828.7	832.8
37.5°	796.7	792.6	789.8	788.4	787.0	787.0	787.0	788.4	789.8	792.6	796.7
40°	759.3	755.1	752.4	751.0	751.0	751.0	751.0	751.0	752.4	755.1	759.3
42.5°	720.4	716.2	713.4	712.1	713.4	713.4	713.4	712.1	713.4	716.2	720.4
45°	681.5	677.4	674.6	673.2	673.2	673.2	673.2	673.2	674.6	677.4	681.5
47.5°	642.6	638.5	635.7	633.0	633.0	633.0	633.0	633.0	635.7	638.5	642.6
50°	601.1	596.9	595.5	594.0	592.7	592.7	592.7	594.0	595.5	596.9	601.1
52.5°	562.1	558.0	555.2	553.8	553.8	553.8	553.8	553.8	555.2	558.0	562.1
55°	520.6	516.3	513.6	512.2	513.6	513.6	513.6	512.2	513.6	516.3	520.6
57.5°	478.9	474.7	473.4	472.0	472.0	472.0	472.0	472.0	473.4	474.7	478.9
60°	437.2	433.1	431.7	430.3	430.3	430.3	430.3	430.3	431.7	433.1	437.2
62.5°	395.6	391.4	390.0	388.6	388.6	388.6	388.6	388.6	390.0	391.4	395.6
65°	352.6	351.2	349.8	348.4	347.0	347.0	347.0	348.4	349.8	351.2	352.6
67.5°	306.7	305.4	304.0	302.6	301.2	301.2	301.2	302.6	304.0	305.4	306.7
70°	265.1	263.7	262.3	260.9	259.5	259.5	259.5	260.9	262.3	263.7	265.1
72.5°	223.5	222.1	220.7	219.3	218.0	218.0	218.0	219.3	220.7	222.1	223.5
75°	181.8	180.4	179.1	179.1	177.7	177.7	177.7	179.1	179.1	180.4	181.8
77.5°	143.0	141.6	140.2	140.2	138.8	138.8	138.8	140.2	140.2	141.6	143.0
80°	105.5	104.1	102.7	102.7	102.7	102.7	102.7	102.7	102.7	104.1	105.5
82.5°	70.8	70.8	69.4	69.4	69.4	69.4	69.4	69.4	69.4	70.8	70.8
85°	41.7	41.7	40.3	40.3	40.3	40.3	40.3	40.3	40.3	41.7	41.7
87.5°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
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: P
 CATALOG NUMBER: 4APN-X-42L940-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1136.8	1136.8	1136.8	1136.8
2.5°	1139.6	1141.0	1135.4	1129.9
5°	1134.1	1135.4	1131.3	1125.7
7.5°	1125.7	1127.1	1122.9	1118.8
10°	1113.2	1116.0	1111.8	1106.3
12.5°	1097.9	1099.3	1095.2	1091.0
15°	1079.9	1081.3	1077.2	1072.9
17.5°	1057.7	1060.5	1056.3	1052.2
20°	1032.7	1035.5	1032.7	1028.6
22.5°	1005.0	1007.7	1005.0	1002.2
25°	975.8	978.6	975.8	973.0
27.5°	943.9	948.0	945.2	943.9
30°	910.6	914.7	912.0	910.6
32.5°	875.9	881.4	878.7	875.9
35°	839.8	843.9	841.1	839.8
37.5°	803.7	807.9	806.5	805.1
40°	766.2	770.3	767.6	766.2
42.5°	727.4	731.5	730.1	728.7
45°	687.1	691.2	689.8	689.8
47.5°	648.3	652.4	651.0	649.6
50°	606.6	610.7	609.3	609.3
52.5°	566.3	570.5	569.1	567.7
55°	524.7	527.5	526.1	526.1
57.5°	483.0	487.2	485.8	484.4
60°	441.4	444.2	442.7	442.7
62.5°	399.8	402.5	401.2	401.2
65°	355.3	358.1	358.1	358.1
67.5°	309.5	312.3	310.9	310.9
70°	267.9	269.3	267.9	267.9
72.5°	224.9	226.3	226.3	226.3
75°	183.2	184.6	183.2	183.2
77.5°	144.4	145.8	144.4	143.0
80°	106.9	108.2	106.9	105.5
82.5°	72.2	73.6	72.2	70.8
85°	43.1	43.1	41.7	40.3
87.5°	18.1	18.1	16.7	15.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)