

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: P709084

Luminaire Tested: **4APN-X-42L930-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709084
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-42L930-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

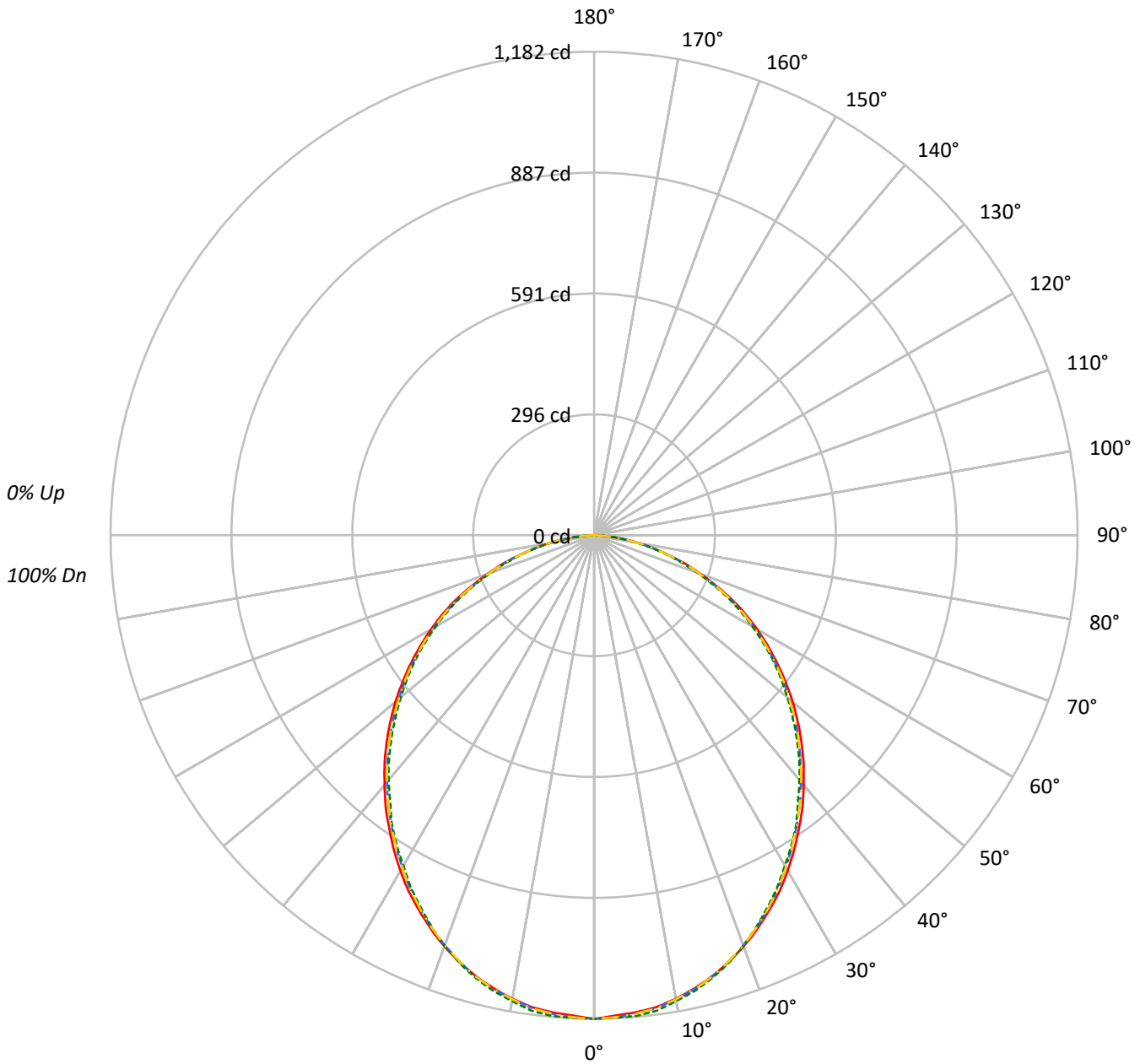
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3076.2 lumens
Efficiency: N/A
Efficacy: 66.6 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 (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: P709084
CATALOG NUMBER: 4APN-X-42L930-UNV

Luminous Intensity Polar Plot



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



TEST NUMBER: P709084
 CATALOG NUMBER: 4APN-X-42L930-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	100	100	100	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70	70	70	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60	60	60	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51	51	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	44	44	44	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39	39	39	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34	34	34	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31	31	31	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28	28	28	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	10909	10909	10909	10909
5°	10843	10924	10843	10924
10°	10779	10834	10779	10834
15°	10660	10701	10660	10701
20°	10504	10489	10504	10489
25°	10302	10215	10302	10215
30°	10089	9935	10089	9935
35°	9837	9708	9837	9708
40°	9598	9406	9598	9406
45°	9362	9136	9362	9136
50°	9097	8847	9097	8847
55°	8802	8593	8802	8593
60°	8497	8257	8497	8257
65°	8132	7879	8132	7879
70°	7515	7283	7515	7283
75°	6794	6588	6794	6588
80°	5829	5674	5829	5674
85°	4435	4435	4435	4435



TEST NUMBER: P709084
 CATALOG NUMBER: 4APN-X-42L930-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	3.6
10°-20°	315.1	10.2
20°-30°	464.5	15.1
30°-40°	542.2	17.6
40°-50°	546.7	17.8
50°-60°	483.1	15.7
60°-70°	361.3	11.7
70°-80°	200.3	6.5
80°-90°	51.4	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°	891.2	29.0
0°-40°	1433.4	46.6
0°-60°	2463.2	80.1
0°-90°	3076.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3076.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1182	1182	1182	1182	1182	
5°	1171	1180	1171	1180	1171	111
15°	1116	1120	1116	1120	1116	315
25°	1012	1003	1012	1003	1012	466
35°	873	862	873	862	873	547
45°	718	700	718	700	718	553
55°	547	534	547	534	547	489
65°	372	361	372	361	372	367
75°	191	185	191	185	191	203
85°	42	42	42	42	42	51
90°	0	0	0	0	0	



TEST NUMBER: P709084

CATALOG NUMBER: 4APN-X-42L930-UNV

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4
2.5°	1175.2	1180.9	1186.7	1185.3	1180.9	1178.0	1179.5	1179.5	1180.9	1180.9	1180.9
5°	1170.8	1176.6	1180.9	1179.5	1175.2	1173.7	1173.7	1173.7	1176.6	1179.5	1176.6
7.5°	1163.6	1167.9	1172.3	1170.8	1166.5	1165.0	1165.0	1166.5	1169.4	1172.3	1169.4
10°	1150.6	1156.4	1160.7	1157.8	1153.5	1150.6	1150.6	1150.6	1153.5	1156.4	1153.5
12.5°	1134.7	1139.1	1143.4	1141.9	1137.6	1134.7	1134.7	1134.7	1137.6	1140.5	1137.6
15°	1116.0	1120.3	1124.6	1123.2	1118.8	1116.0	1116.0	1116.0	1118.8	1120.3	1118.8
17.5°	1094.3	1098.6	1103.0	1100.1	1094.3	1091.4	1091.4	1091.4	1094.3	1095.7	1094.3
20°	1069.8	1074.1	1077.0	1074.1	1068.3	1065.4	1064.0	1064.0	1066.9	1068.3	1066.9
22.5°	1042.3	1045.2	1048.1	1045.2	1039.4	1036.6	1035.1	1033.7	1035.1	1036.6	1035.1
25°	1012.0	1014.9	1017.8	1014.9	1009.1	1004.8	1003.4	1001.9	1003.4	1003.4	1003.4
27.5°	981.7	983.1	986.0	981.7	975.9	971.6	970.1	968.7	970.1	970.1	970.1
30°	947.0	948.5	951.4	947.0	939.8	935.5	934.1	932.6	932.6	932.6	932.6
32.5°	911.0	913.8	916.7	911.0	903.7	899.4	898.0	896.5	898.0	898.0	898.0
35°	873.4	874.9	877.8	873.4	866.2	861.9	859.0	857.5	860.4	861.9	860.4
37.5°	837.3	838.8	840.2	835.9	828.7	824.3	821.5	820.0	818.6	818.6	818.6
40°	796.9	798.4	801.2	796.9	789.7	785.4	782.5	781.0	781.0	781.0	781.0
42.5°	757.9	759.4	760.8	756.5	749.3	744.9	742.0	740.6	742.0	742.0	742.0
45°	717.5	717.5	718.9	714.6	708.8	704.5	701.6	700.2	700.2	700.2	700.2
47.5°	675.6	677.1	678.5	674.2	668.4	664.1	661.2	658.3	658.3	658.3	658.3
50°	633.8	633.8	635.2	630.9	625.1	620.8	619.3	617.9	616.4	616.4	616.4
52.5°	590.5	591.9	593.3	589.0	584.7	580.4	577.5	576.0	576.0	576.0	576.0
55°	547.2	547.2	548.6	545.7	541.4	537.0	534.2	532.7	534.2	534.2	534.2
57.5°	503.8	505.3	506.7	502.4	498.1	493.7	492.3	490.8	490.8	490.8	490.8
60°	460.5	460.5	462.0	459.1	454.8	450.4	449.0	447.5	447.5	447.5	447.5
62.5°	417.2	417.2	418.7	415.8	411.4	407.1	405.7	404.2	404.2	404.2	404.2
65°	372.5	372.5	372.5	369.6	366.7	365.2	363.8	362.4	360.9	360.9	360.9
67.5°	323.4	323.4	324.8	321.9	319.1	317.6	316.2	314.7	313.3	313.3	313.3
70°	278.6	278.6	280.1	278.6	275.7	274.3	272.9	271.4	270.0	270.0	270.0
72.5°	235.3	235.3	235.3	233.9	232.4	231.0	229.5	228.1	226.7	226.7	226.7
75°	190.6	190.6	192.0	190.6	189.1	187.7	186.2	186.2	184.8	184.8	184.8
77.5°	148.7	150.1	151.6	150.1	148.7	147.3	145.8	145.8	144.4	144.4	144.4
80°	109.7	111.2	112.6	111.2	109.7	108.3	106.8	106.8	106.8	106.8	106.8
82.5°	73.6	75.1	76.5	75.1	73.6	73.6	72.2	72.2	72.2	72.2	72.2
85°	41.9	43.3	44.8	44.8	43.3	43.3	41.9	41.9	41.9	41.9	41.9
87.5°	15.9	17.3	18.8	18.8	17.3	17.3	17.3	17.3	17.3	17.3	17.3
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: P709084

CATALOG NUMBER: 4APN-X-42L930-UNV

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4
2.5°	1179.5	1179.5	1178.0	1180.9	1185.3	1186.7	1180.9	1175.2	1180.9	1186.7	1185.3
5°	1173.7	1173.7	1173.7	1175.2	1179.5	1180.9	1176.6	1170.8	1176.6	1180.9	1179.5
7.5°	1166.5	1165.0	1165.0	1166.5	1170.8	1172.3	1167.9	1163.6	1167.9	1172.3	1170.8
10°	1150.6	1150.6	1150.6	1153.5	1157.8	1160.7	1156.4	1150.6	1156.4	1160.7	1157.8
12.5°	1134.7	1134.7	1134.7	1137.6	1141.9	1143.4	1139.1	1134.7	1139.1	1143.4	1141.9
15°	1116.0	1116.0	1116.0	1118.8	1123.2	1124.6	1120.3	1116.0	1120.3	1124.6	1123.2
17.5°	1091.4	1091.4	1091.4	1094.3	1100.1	1103.0	1098.6	1094.3	1098.6	1103.0	1100.1
20°	1064.0	1064.0	1065.4	1068.3	1074.1	1077.0	1074.1	1069.8	1074.1	1077.0	1074.1
22.5°	1033.7	1035.1	1036.6	1039.4	1045.2	1048.1	1045.2	1042.3	1045.2	1048.1	1045.2
25°	1001.9	1003.4	1004.8	1009.1	1014.9	1017.8	1014.9	1012.0	1014.9	1017.8	1014.9
27.5°	968.7	970.1	971.6	975.9	981.7	986.0	983.1	981.7	983.1	986.0	981.7
30°	932.6	934.1	935.5	939.8	947.0	951.4	948.5	947.0	948.5	951.4	947.0
32.5°	896.5	898.0	899.4	903.7	911.0	916.7	913.8	911.0	913.8	916.7	911.0
35°	857.5	859.0	861.9	866.2	873.4	877.8	874.9	873.4	874.9	877.8	873.4
37.5°	820.0	821.5	824.3	828.7	835.9	840.2	838.8	837.3	838.8	840.2	835.9
40°	781.0	782.5	785.4	789.7	796.9	801.2	798.4	796.9	798.4	801.2	796.9
42.5°	740.6	742.0	744.9	749.3	756.5	760.8	759.4	757.9	759.4	760.8	756.5
45°	700.2	701.6	704.5	708.8	714.6	718.9	717.5	717.5	717.5	718.9	714.6
47.5°	658.3	661.2	664.1	668.4	674.2	678.5	677.1	675.6	677.1	678.5	674.2
50°	617.9	619.3	620.8	625.1	630.9	635.2	633.8	633.8	633.8	635.2	630.9
52.5°	576.0	577.5	580.4	584.7	589.0	593.3	591.9	590.5	591.9	593.3	589.0
55°	532.7	534.2	537.0	541.4	545.7	548.6	547.2	547.2	547.2	548.6	545.7
57.5°	490.8	492.3	493.7	498.1	502.4	506.7	505.3	503.8	505.3	506.7	502.4
60°	447.5	449.0	450.4	454.8	459.1	462.0	460.5	460.5	460.5	462.0	459.1
62.5°	404.2	405.7	407.1	411.4	415.8	418.7	417.2	417.2	417.2	418.7	415.8
65°	362.4	363.8	365.2	366.7	369.6	372.5	372.5	372.5	372.5	372.5	369.6
67.5°	314.7	316.2	317.6	319.1	321.9	324.8	323.4	323.4	323.4	324.8	321.9
70°	271.4	272.9	274.3	275.7	278.6	280.1	278.6	278.6	278.6	280.1	278.6
72.5°	228.1	229.5	231.0	232.4	233.9	235.3	235.3	235.3	235.3	235.3	233.9
75°	186.2	186.2	187.7	189.1	190.6	192.0	190.6	190.6	190.6	192.0	190.6
77.5°	145.8	145.8	147.3	148.7	150.1	151.6	150.1	148.7	150.1	151.6	150.1
80°	106.8	106.8	108.3	109.7	111.2	112.6	111.2	109.7	111.2	112.6	111.2
82.5°	72.2	72.2	73.6	73.6	75.1	76.5	75.1	73.6	75.1	76.5	75.1
85°	41.9	41.9	43.3	43.3	44.8	44.8	43.3	41.9	43.3	44.8	44.8
87.5°	17.3	17.3	17.3	17.3	18.8	18.8	17.3	15.9	17.3	18.8	18.8
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: P709084

CATALOG NUMBER: 4APN-X-42L930-UNV

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4	1182.4
2.5°	1180.9	1178.0	1179.5	1179.5	1180.9	1180.9	1180.9	1179.5	1179.5	1178.0	1180.9
5°	1175.2	1173.7	1173.7	1173.7	1176.6	1179.5	1176.6	1173.7	1173.7	1173.7	1175.2
7.5°	1166.5	1165.0	1165.0	1166.5	1169.4	1172.3	1169.4	1166.5	1165.0	1165.0	1166.5
10°	1153.5	1150.6	1150.6	1150.6	1153.5	1156.4	1153.5	1150.6	1150.6	1150.6	1153.5
12.5°	1137.6	1134.7	1134.7	1134.7	1137.6	1140.5	1137.6	1134.7	1134.7	1134.7	1137.6
15°	1118.8	1116.0	1116.0	1116.0	1118.8	1120.3	1118.8	1116.0	1116.0	1116.0	1118.8
17.5°	1094.3	1091.4	1091.4	1091.4	1094.3	1095.7	1094.3	1091.4	1091.4	1091.4	1094.3
20°	1068.3	1065.4	1064.0	1064.0	1066.9	1068.3	1066.9	1064.0	1064.0	1065.4	1068.3
22.5°	1039.4	1036.6	1035.1	1033.7	1035.1	1036.6	1035.1	1033.7	1035.1	1036.6	1039.4
25°	1009.1	1004.8	1003.4	1001.9	1003.4	1003.4	1003.4	1001.9	1003.4	1004.8	1009.1
27.5°	975.9	971.6	970.1	968.7	970.1	970.1	970.1	968.7	970.1	971.6	975.9
30°	939.8	935.5	934.1	932.6	932.6	932.6	932.6	932.6	934.1	935.5	939.8
32.5°	903.7	899.4	898.0	896.5	898.0	898.0	898.0	896.5	898.0	899.4	903.7
35°	866.2	861.9	859.0	857.5	860.4	861.9	860.4	857.5	859.0	861.9	866.2
37.5°	828.7	824.3	821.5	820.0	818.6	818.6	818.6	820.0	821.5	824.3	828.7
40°	789.7	785.4	782.5	781.0	781.0	781.0	781.0	781.0	782.5	785.4	789.7
42.5°	749.3	744.9	742.0	740.6	742.0	742.0	742.0	740.6	742.0	744.9	749.3
45°	708.8	704.5	701.6	700.2	700.2	700.2	700.2	701.6	704.5	708.8	
47.5°	668.4	664.1	661.2	658.3	658.3	658.3	658.3	661.2	664.1	668.4	
50°	625.1	620.8	619.3	617.9	616.4	616.4	616.4	617.9	619.3	620.8	625.1
52.5°	584.7	580.4	577.5	576.0	576.0	576.0	576.0	577.5	580.4	584.7	
55°	541.4	537.0	534.2	532.7	534.2	534.2	534.2	532.7	534.2	537.0	541.4
57.5°	498.1	493.7	492.3	490.8	490.8	490.8	490.8	492.3	493.7	498.1	
60°	454.8	450.4	449.0	447.5	447.5	447.5	447.5	449.0	450.4	454.8	
62.5°	411.4	407.1	405.7	404.2	404.2	404.2	404.2	405.7	407.1	411.4	
65°	366.7	365.2	363.8	362.4	360.9	360.9	360.9	362.4	363.8	365.2	366.7
67.5°	319.1	317.6	316.2	314.7	313.3	313.3	313.3	314.7	316.2	317.6	319.1
70°	275.7	274.3	272.9	271.4	270.0	270.0	270.0	271.4	272.9	274.3	275.7
72.5°	232.4	231.0	229.5	228.1	226.7	226.7	226.7	228.1	229.5	231.0	232.4
75°	189.1	187.7	186.2	186.2	184.8	184.8	184.8	186.2	186.2	187.7	189.1
77.5°	148.7	147.3	145.8	145.8	144.4	144.4	144.4	145.8	145.8	147.3	148.7
80°	109.7	108.3	106.8	106.8	106.8	106.8	106.8	106.8	106.8	108.3	109.7
82.5°	73.6	73.6	72.2	72.2	72.2	72.2	72.2	72.2	72.2	73.6	73.6
85°	43.3	43.3	41.9	41.9	41.9	41.9	41.9	41.9	41.9	43.3	43.3
87.5°	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3
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: P709084

CATALOG NUMBER: 4APN-X-42L930-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1182.4	1182.4	1182.4	1182.4
2.5°	<i>1185.3</i>	<i>1186.7</i>	<i>1180.9</i>	<i>1175.2</i>
5°	1179.5	1180.9	1176.6	1170.8
7.5°	1170.8	1172.3	1167.9	1163.6
10°	1157.8	1160.7	1156.4	1150.6
12.5°	1141.9	1143.4	1139.1	1134.7
15°	1123.2	1124.6	1120.3	1116.0
17.5°	1100.1	1103.0	1098.6	1094.3
20°	1074.1	1077.0	1074.1	1069.8
22.5°	1045.2	1048.1	1045.2	1042.3
25°	1014.9	1017.8	1014.9	1012.0
27.5°	981.7	986.0	983.1	981.7
30°	947.0	951.4	948.5	947.0
32.5°	911.0	916.7	913.8	911.0
35°	873.4	877.8	874.9	873.4
37.5°	835.9	840.2	838.8	837.3
40°	796.9	801.2	798.4	796.9
42.5°	756.5	760.8	759.4	757.9
45°	714.6	718.9	717.5	717.5
47.5°	674.2	678.5	677.1	675.6
50°	630.9	635.2	633.8	633.8
52.5°	589.0	593.3	591.9	590.5
55°	545.7	548.6	547.2	547.2
57.5°	502.4	506.7	505.3	503.8
60°	459.1	462.0	460.5	460.5
62.5°	415.8	418.7	417.2	417.2
65°	369.6	372.5	372.5	372.5
67.5°	321.9	324.8	323.4	323.4
70°	278.6	280.1	278.6	278.6
72.5°	233.9	235.3	235.3	235.3
75°	190.6	192.0	190.6	190.6
77.5°	150.1	151.6	150.1	148.7
80°	111.2	112.6	111.2	109.7
82.5°	75.1	76.5	75.1	73.6
85°	44.8	44.8	43.3	41.9
87.5°	18.8	18.8	17.3	15.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)