

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: P709102

Luminaire Tested: **4APN-X-42L950-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709102
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-42L950-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

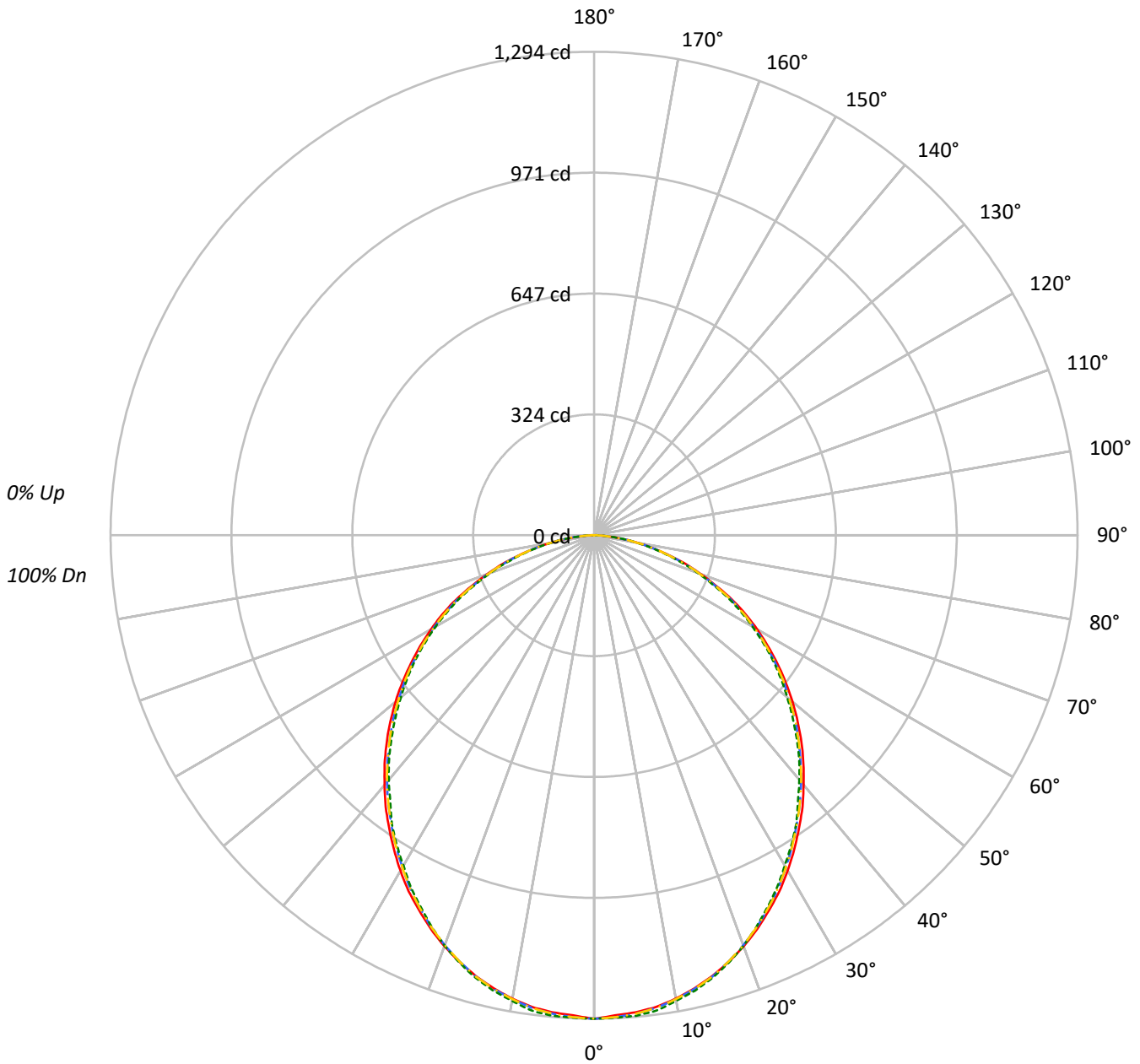
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3366.9 lumens
Efficiency: N/A
Efficacy: 72.9 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

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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	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°	11940	11940	11940	11940
5°	11869	11957	11869	11957
10°	11799	11858	11799	11858
15°	11666	11712	11666	11712
20°	11496	11481	11496	11481
25°	11276	11180	11276	11180
30°	11043	10875	11043	10875
35°	10768	10624	10768	10624
40°	10505	10295	10505	10295
45°	10246	10000	10246	10000
50°	9957	9684	9957	9684
55°	9634	9404	9634	9404
60°	9302	9038	9302	9038
65°	8901	8623	8901	8623
70°	8228	7971	8228	7971
75°	7436	7211	7436	7211
80°	6381	6211	6381	6211
85°	4848	4848	4848	4848



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	3.6
10°-20°	344.9	10.2
20°-30°	508.4	15.1
30°-40°	593.5	17.6
40°-50°	598.3	17.8
50°-60°	528.8	15.7
60°-70°	395.4	11.7
70°-80°	219.2	6.5
80°-90°	56.2	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°	975.4	29.0
0°-40°	1568.9	46.6
0°-60°	2696.1	80.1
0°-90°	3366.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3366.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1294	1294	1294	1294	1294	
5°	1282	1291	1282	1291	1282	122
15°	1221	1226	1221	1226	1221	344
25°	1108	1098	1108	1098	1108	510
35°	956	943	956	943	956	599
45°	785	766	785	766	785	606
55°	599	585	599	585	599	536
65°	408	395	408	395	408	401
75°	209	202	209	202	209	222
85°	46	46	46	46	46	55
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°	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1
2.5°	1286.2	1292.5	1298.9	1297.3	1292.5	1289.4	1291.0	1291.0	1292.5	1292.5	1292.5
5°	1281.5	1287.8	1292.5	1291.0	1286.2	1284.6	1284.6	1284.6	1287.8	1291.0	1287.8
7.5°	1273.6	1278.3	1283.1	1281.5	1276.7	1275.2	1275.2	1276.7	1279.9	1283.1	1279.9
10°	1259.4	1265.7	1270.4	1267.3	1262.5	1259.4	1259.4	1259.4	1262.5	1265.7	1262.5
12.5°	1242.0	1246.7	1251.5	1249.9	1245.1	1242.0	1242.0	1242.0	1245.1	1248.3	1245.1
15°	1221.4	1226.2	1230.9	1229.3	1224.6	1221.4	1221.4	1221.4	1224.6	1226.2	1224.6
17.5°	1197.7	1202.5	1207.2	1204.1	1197.7	1194.6	1194.6	1194.6	1197.7	1199.3	1197.7
20°	1170.9	1175.6	1178.8	1175.6	1169.3	1166.1	1164.6	1164.6	1167.7	1169.3	1167.7
22.5°	1140.8	1144.0	1147.2	1144.0	1137.7	1134.5	1132.9	1131.4	1132.9	1134.5	1132.9
25°	1107.7	1110.8	1114.0	1110.8	1104.5	1099.8	1098.2	1096.6	1098.2	1098.2	1098.2
27.5°	1074.5	1076.1	1079.2	1074.5	1068.2	1063.4	1061.8	1060.3	1061.8	1061.8	1061.8
30°	1036.6	1038.1	1041.3	1036.6	1028.7	1023.9	1022.3	1020.8	1020.8	1020.8	1020.8
32.5°	997.1	1000.2	1003.4	997.1	989.2	984.4	982.8	981.3	982.8	982.8	982.8
35°	956.0	957.6	960.7	956.0	948.1	943.3	940.2	938.6	941.8	943.3	941.8
37.5°	916.5	918.1	919.6	914.9	907.0	902.3	899.1	897.5	895.9	895.9	895.9
40°	872.2	873.8	877.0	872.2	864.3	859.6	856.4	854.8	854.8	854.8	854.8
42.5°	829.6	831.1	832.7	828.0	820.1	815.3	812.2	810.6	812.2	812.2	812.2
45°	785.3	785.3	786.9	782.2	775.8	771.1	767.9	766.4	766.4	766.4	766.4
47.5°	739.5	741.1	742.7	737.9	731.6	726.9	723.7	720.5	720.5	720.5	720.5
50°	693.7	693.7	695.3	690.5	684.2	679.5	677.9	676.3	674.7	674.7	674.7
52.5°	646.3	647.9	649.4	644.7	639.9	635.2	632.0	630.5	630.5	630.5	630.5
55°	598.9	598.9	600.4	597.3	592.5	587.8	584.6	583.1	584.6	584.6	584.6
57.5°	551.5	553.0	554.6	549.9	545.1	540.4	538.8	537.2	537.2	537.2	537.2
60°	504.1	504.1	505.6	502.5	497.7	493.0	491.4	489.8	489.8	489.8	489.8
62.5°	456.7	456.7	458.2	455.1	450.3	445.6	444.0	442.4	442.4	442.4	442.4
65°	407.7	407.7	407.7	404.5	401.4	399.8	398.2	396.6	395.0	395.0	395.0
67.5°	353.9	353.9	355.5	352.4	349.2	347.6	346.0	344.5	342.9	342.9	342.9
70°	305.0	305.0	306.5	305.0	301.8	300.2	298.6	297.1	295.5	295.5	295.5
72.5°	257.6	257.6	257.6	256.0	254.4	252.8	251.2	249.7	248.1	248.1	248.1
75°	208.6	208.6	210.2	208.6	207.0	205.4	203.8	203.8	202.3	202.3	202.3
77.5°	162.8	164.3	165.9	164.3	162.8	161.2	159.6	159.6	158.0	158.0	158.0
80°	120.1	121.7	123.2	121.7	120.1	118.5	116.9	116.9	116.9	116.9	116.9
82.5°	80.6	82.2	83.7	82.2	80.6	80.6	79.0	79.0	79.0	79.0	79.0
85°	45.8	47.4	49.0	49.0	47.4	47.4	45.8	45.8	45.8	45.8	45.8
87.5°	17.4	19.0	20.5	20.5	19.0	19.0	19.0	19.0	19.0	19.0	19.0
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°	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1
2.5°	1291.0	1291.0	1289.4	1292.5	1297.3	1298.9	1292.5	1286.2	1292.5	1298.9	1297.3
5°	1284.6	1284.6	1284.6	1286.2	1291.0	1292.5	1287.8	1281.5	1287.8	1292.5	1291.0
7.5°	1276.7	1275.2	1275.2	1276.7	1281.5	1283.1	1278.3	1273.6	1278.3	1283.1	1281.5
10°	1259.4	1259.4	1259.4	1262.5	1267.3	1270.4	1265.7	1259.4	1265.7	1270.4	1267.3
12.5°	1242.0	1242.0	1242.0	1245.1	1249.9	1251.5	1246.7	1242.0	1246.7	1251.5	1249.9
15°	1221.4	1221.4	1221.4	1224.6	1229.3	1230.9	1226.2	1221.4	1226.2	1230.9	1229.3
17.5°	1194.6	1194.6	1194.6	1197.7	1204.1	1207.2	1202.5	1197.7	1202.5	1207.2	1204.1
20°	1164.6	1164.6	1166.1	1169.3	1175.6	1178.8	1175.6	1170.9	1175.6	1178.8	1175.6
22.5°	1131.4	1132.9	1134.5	1137.7	1144.0	1147.2	1144.0	1140.8	1144.0	1147.2	1144.0
25°	1096.6	1098.2	1099.8	1104.5	1110.8	1114.0	1110.8	1107.7	1110.8	1114.0	1110.8
27.5°	1060.3	1061.8	1063.4	1068.2	1074.5	1079.2	1076.1	1074.5	1076.1	1079.2	1074.5
30°	1020.8	1022.3	1023.9	1028.7	1036.6	1041.3	1038.1	1036.6	1038.1	1041.3	1036.6
32.5°	981.3	982.8	984.4	989.2	997.1	1003.4	1000.2	997.1	1000.2	1003.4	997.1
35°	938.6	940.2	943.3	948.1	956.0	960.7	957.6	956.0	957.6	960.7	956.0
37.5°	897.5	899.1	902.3	907.0	914.9	919.6	918.1	916.5	918.1	919.6	914.9
40°	854.8	856.4	859.6	864.3	872.2	877.0	873.8	872.2	873.8	877.0	872.2
42.5°	810.6	812.2	815.3	820.1	828.0	832.7	831.1	829.6	831.1	832.7	828.0
45°	766.4	767.9	771.1	775.8	782.2	786.9	785.3	785.3	785.3	786.9	782.2
47.5°	720.5	723.7	726.9	731.6	737.9	742.7	741.1	739.5	741.1	742.7	737.9
50°	676.3	677.9	679.5	684.2	690.5	695.3	693.7	693.7	693.7	695.3	690.5
52.5°	630.5	632.0	635.2	639.9	644.7	649.4	647.9	646.3	647.9	649.4	644.7
55°	583.1	584.6	587.8	592.5	597.3	600.4	598.9	598.9	598.9	600.4	597.3
57.5°	537.2	538.8	540.4	545.1	549.9	554.6	553.0	551.5	553.0	554.6	549.9
60°	489.8	491.4	493.0	497.7	502.5	505.6	504.1	504.1	504.1	505.6	502.5
62.5°	442.4	444.0	445.6	450.3	455.1	458.2	456.7	456.7	456.7	458.2	455.1
65°	396.6	398.2	399.8	401.4	404.5	407.7	407.7	407.7	407.7	407.7	404.5
67.5°	344.5	346.0	347.6	349.2	352.4	355.5	353.9	353.9	353.9	355.5	352.4
70°	297.1	298.6	300.2	301.8	305.0	306.5	305.0	305.0	305.0	306.5	305.0
72.5°	249.7	251.2	252.8	254.4	256.0	257.6	257.6	257.6	257.6	257.6	256.0
75°	203.8	203.8	205.4	207.0	208.6	210.2	208.6	208.6	208.6	210.2	208.6
77.5°	159.6	159.6	161.2	162.8	164.3	165.9	164.3	162.8	164.3	165.9	164.3
80°	116.9	116.9	118.5	120.1	121.7	123.2	121.7	120.1	121.7	123.2	121.7
82.5°	79.0	79.0	80.6	80.6	82.2	83.7	82.2	80.6	82.2	83.7	82.2
85°	45.8	45.8	47.4	47.4	49.0	49.0	47.4	45.8	47.4	49.0	49.0
87.5°	19.0	19.0	19.0	19.0	20.5	20.5	19.0	17.4	19.0	20.5	20.5
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°	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1	1294.1
2.5°	1292.5	1289.4	1291.0	1291.0	1292.5	1292.5	1292.5	1291.0	1291.0	1289.4	1292.5
5°	1286.2	1284.6	1284.6	1284.6	1287.8	1291.0	1287.8	1284.6	1284.6	1284.6	1286.2
7.5°	1276.7	1275.2	1275.2	1276.7	1279.9	1283.1	1279.9	1276.7	1275.2	1275.2	1276.7
10°	1262.5	1259.4	1259.4	1259.4	1262.5	1265.7	1262.5	1259.4	1259.4	1259.4	1262.5
12.5°	1245.1	1242.0	1242.0	1242.0	1245.1	1248.3	1245.1	1242.0	1242.0	1242.0	1245.1
15°	1224.6	1221.4	1221.4	1221.4	1224.6	1226.2	1224.6	1221.4	1221.4	1221.4	1224.6
17.5°	1197.7	1194.6	1194.6	1194.6	1197.7	1199.3	1197.7	1194.6	1194.6	1194.6	1197.7
20°	1169.3	1166.1	1164.6	1164.6	1167.7	1169.3	1167.7	1164.6	1164.6	1166.1	1169.3
22.5°	1137.7	1134.5	1132.9	1131.4	1132.9	1134.5	1132.9	1131.4	1132.9	1134.5	1137.7
25°	1104.5	1099.8	1098.2	1096.6	1098.2	1098.2	1098.2	1096.6	1098.2	1099.8	1104.5
27.5°	1068.2	1063.4	1061.8	1060.3	1061.8	1061.8	1061.8	1060.3	1061.8	1063.4	1068.2
30°	1028.7	1023.9	1022.3	1020.8	1020.8	1020.8	1020.8	1020.8	1022.3	1023.9	1028.7
32.5°	989.2	984.4	982.8	981.3	982.8	982.8	982.8	981.3	982.8	984.4	989.2
35°	948.1	943.3	940.2	938.6	941.8	943.3	941.8	938.6	940.2	943.3	948.1
37.5°	907.0	902.3	899.1	897.5	895.9	895.9	895.9	897.5	899.1	902.3	907.0
40°	864.3	859.6	856.4	854.8	854.8	854.8	854.8	854.8	856.4	859.6	864.3
42.5°	820.1	815.3	812.2	810.6	812.2	812.2	812.2	810.6	812.2	815.3	820.1
45°	775.8	771.1	767.9	766.4	766.4	766.4	766.4	766.4	767.9	771.1	775.8
47.5°	731.6	726.9	723.7	720.5	720.5	720.5	720.5	720.5	723.7	726.9	731.6
50°	684.2	679.5	677.9	676.3	674.7	674.7	674.7	676.3	677.9	679.5	684.2
52.5°	639.9	635.2	632.0	630.5	630.5	630.5	630.5	630.5	632.0	635.2	639.9
55°	592.5	587.8	584.6	583.1	584.6	584.6	584.6	583.1	584.6	587.8	592.5
57.5°	545.1	540.4	538.8	537.2	537.2	537.2	537.2	537.2	538.8	540.4	545.1
60°	497.7	493.0	491.4	489.8	489.8	489.8	489.8	489.8	491.4	493.0	497.7
62.5°	450.3	445.6	444.0	442.4	442.4	442.4	442.4	442.4	444.0	445.6	450.3
65°	401.4	399.8	398.2	396.6	395.0	395.0	395.0	396.6	398.2	399.8	401.4
67.5°	349.2	347.6	346.0	344.5	342.9	342.9	342.9	344.5	346.0	347.6	349.2
70°	301.8	300.2	298.6	297.1	295.5	295.5	295.5	297.1	298.6	300.2	301.8
72.5°	254.4	252.8	251.2	249.7	248.1	248.1	248.1	249.7	251.2	252.8	254.4
75°	207.0	205.4	203.8	203.8	202.3	202.3	202.3	203.8	203.8	205.4	207.0
77.5°	162.8	161.2	159.6	159.6	158.0	158.0	158.0	159.6	159.6	161.2	162.8
80°	120.1	118.5	116.9	116.9	116.9	116.9	116.9	116.9	116.9	118.5	120.1
82.5°	80.6	80.6	79.0	79.0	79.0	79.0	79.0	79.0	79.0	80.6	80.6
85°	47.4	47.4	45.8	45.8	45.8	45.8	45.8	45.8	45.8	47.4	47.4
87.5°	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
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: P709102
 CATALOG NUMBER: 4APN-X-42L950-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1294.1	1294.1	1294.1	1294.1
2.5°	1297.3	1298.9	1292.5	1286.2
5°	1291.0	1292.5	1287.8	1281.5
7.5°	1281.5	1283.1	1278.3	1273.6
10°	1267.3	1270.4	1265.7	1259.4
12.5°	1249.9	1251.5	1246.7	1242.0
15°	1229.3	1230.9	1226.2	1221.4
17.5°	1204.1	1207.2	1202.5	1197.7
20°	1175.6	1178.8	1175.6	1170.9
22.5°	1144.0	1147.2	1144.0	1140.8
25°	1110.8	1114.0	1110.8	1107.7
27.5°	1074.5	1079.2	1076.1	1074.5
30°	1036.6	1041.3	1038.1	1036.6
32.5°	997.1	1003.4	1000.2	997.1
35°	956.0	960.7	957.6	956.0
37.5°	914.9	919.6	918.1	916.5
40°	872.2	877.0	873.8	872.2
42.5°	828.0	832.7	831.1	829.6
45°	782.2	786.9	785.3	785.3
47.5°	737.9	742.7	741.1	739.5
50°	690.5	695.3	693.7	693.7
52.5°	644.7	649.4	647.9	646.3
55°	597.3	600.4	598.9	598.9
57.5°	549.9	554.6	553.0	551.5
60°	502.5	505.6	504.1	504.1
62.5°	455.1	458.2	456.7	456.7
65°	404.5	407.7	407.7	407.7
67.5°	352.4	355.5	353.9	353.9
70°	305.0	306.5	305.0	305.0
72.5°	256.0	257.6	257.6	257.6
75°	208.6	210.2	208.6	208.6
77.5°	164.3	165.9	164.3	162.8
80°	121.7	123.2	121.7	120.1
82.5°	82.2	83.7	82.2	80.6
85°	49.0	49.0	47.4	45.8
87.5°	20.5	20.5	19.0	17.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)