

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: P709184

Luminaire Tested: **4APN-24-26L930-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709184  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-24-26L930-UNV  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

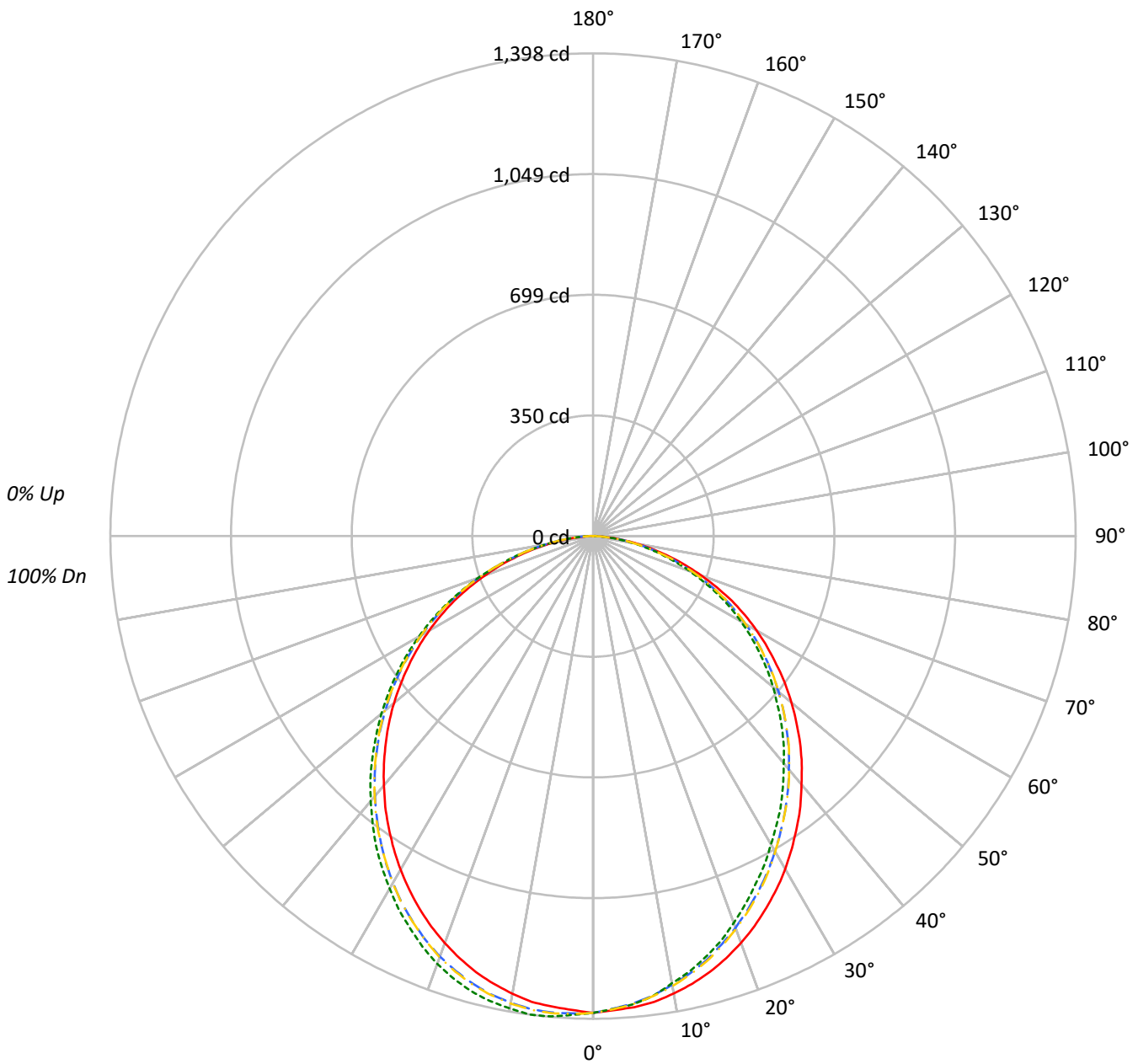
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3650.1 lumens  
Efficiency: N/A  
Efficacy: 65.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.32  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 56  
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	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	72	72	72	72	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	62	62	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	53	53	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	41	41	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	36	36	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	32	32	32	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	29	29	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	27	27	27	25

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

	0°	90°	180°	270°
0°	12740	12740	12740	12740
5°	12684	12601	12669	12932
10°	12603	12321	12610	13013
15°	12485	12051	12493	13034
20°	12308	11702	12316	12944
25°	12093	11333	12117	12762
30°	11861	10979	11878	12551
35°	11590	10694	11617	12347
40°	11308	10352	11348	12061
45°	11066	10072	11076	11786
50°	10777	9776	10801	11476
55°	10435	9457	10473	11152
60°	10099	9127	10114	10743
65°	9682	8726	9682	10267
70°	8991	8071	8967	9536
75°	8153	7311	8092	8584
80°	7024	6291	6891	7369
85°	5409	4806	5240	5918



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.4	3.6
10°-20°	369.2	10.1
20°-30°	546.6	15.0
30°-40°	641.3	17.6
40°-50°	650.0	17.8
50°-60°	576.9	15.8
60°-70°	433.1	11.9
70°-80°	240.5	6.6
80°-90°	62.1	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°	1046.2	28.7
0°-40°	1687.6	46.2
0°-60°	2914.4	79.8
0°-90°	3650.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3650.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1381	1381	1381	1381	1381	
5°	1370	1361	1368	1396	1370	130
15°	1307	1262	1308	1365	1307	368
25°	1188	1113	1190	1254	1188	547
35°	1029	950	1031	1096	1029	644
45°	848	772	849	903	848	654
55°	649	588	651	693	649	581
65°	444	400	444	470	444	437
75°	229	205	227	241	229	243
85°	51	45	50	56	51	62
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°	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9
2.5°	1374.4	1377.6	1381.7	1377.6	1371.1	1367.9	1367.9	1367.1	1369.5	1370.3	1369.5
5°	1369.5	1371.1	1371.9	1367.1	1359.8	1355.7	1354.1	1353.3	1356.5	1360.6	1356.5
7.5°	1360.6	1359.8	1359.0	1352.5	1344.4	1338.7	1336.3	1335.4	1338.7	1342.7	1339.5
10°	1345.2	1344.4	1341.9	1333.8	1323.3	1316.0	1313.6	1311.1	1313.6	1315.2	1313.6
12.5°	1328.1	1324.9	1321.7	1312.7	1301.4	1293.3	1289.2	1286.0	1289.2	1291.7	1290.0
15°	1307.1	1302.2	1296.5	1286.8	1275.4	1266.5	1261.7	1258.4	1260.8	1261.7	1261.7
17.5°	1281.9	1276.3	1270.6	1258.4	1244.6	1234.9	1229.2	1225.2	1228.4	1230.0	1230.0
20°	1253.6	1247.1	1239.8	1226.8	1212.2	1201.7	1195.2	1190.3	1191.1	1191.9	1191.9
22.5°	1222.7	1214.6	1205.7	1191.9	1176.5	1165.2	1158.7	1153.0	1153.0	1153.8	1153.8
25°	1187.9	1179.0	1170.0	1156.3	1140.0	1127.9	1119.8	1114.1	1114.1	1113.3	1114.9
27.5°	1152.2	1142.5	1133.5	1119.0	1101.9	1089.8	1081.7	1076.0	1075.2	1074.4	1076.0
30°	1113.3	1101.9	1092.2	1076.8	1060.6	1048.4	1040.3	1033.8	1032.2	1030.6	1032.2
32.5°	1071.9	1061.4	1050.8	1034.6	1018.4	1006.2	998.1	991.7	990.8	990.0	991.7
35°	1029.0	1017.6	1007.9	992.5	976.2	964.1	955.2	949.5	949.5	949.5	949.5
37.5°	986.8	975.4	964.9	949.5	933.3	921.1	912.2	906.5	904.9	904.1	904.9
40°	938.9	929.2	919.5	904.9	888.7	876.5	869.2	862.7	861.1	859.5	861.9
42.5°	895.2	885.4	874.9	861.1	844.9	832.7	824.6	818.9	818.1	817.3	818.1
45°	848.1	836.8	826.2	813.3	798.7	787.3	779.2	773.5	772.7	771.9	772.7
47.5°	798.7	789.8	780.8	767.9	753.3	741.9	734.6	728.1	726.5	724.9	726.5
50°	750.8	741.1	732.2	720.0	706.2	695.7	689.2	683.5	681.9	681.1	681.9
52.5°	700.6	691.6	683.5	671.4	660.0	649.5	642.2	637.3	636.5	635.7	636.5
55°	648.7	640.6	633.3	623.5	612.2	602.5	596.0	590.3	589.5	587.9	589.5
57.5°	598.4	591.9	584.6	574.1	563.5	554.6	548.9	544.1	543.3	542.4	543.3
60°	547.3	540.8	534.3	525.4	514.9	506.0	501.1	497.0	495.4	494.6	495.4
62.5°	496.2	489.7	484.9	476.0	466.2	458.9	454.1	450.0	448.4	447.6	448.4
65°	443.5	437.9	432.2	424.1	416.8	411.1	406.2	402.2	400.6	399.7	399.7
67.5°	387.6	382.7	378.7	371.4	363.3	357.6	352.7	349.5	347.8	347.0	347.8
70°	333.3	329.2	325.1	319.5	313.0	308.1	304.9	301.6	300.0	299.2	299.2
72.5°	281.4	278.1	274.1	269.2	264.3	259.5	256.2	253.8	252.2	251.4	251.4
75°	228.7	225.4	223.8	219.7	214.9	211.6	208.4	206.8	205.1	205.1	205.1
77.5°	179.2	177.6	176.0	171.9	168.7	165.4	163.0	162.2	160.5	160.5	160.5
80°	132.2	131.4	130.5	128.1	124.9	121.6	120.0	119.2	118.4	118.4	118.4
82.5°	89.2	89.2	88.4	85.9	83.5	82.7	81.1	80.3	80.3	80.3	80.3
85°	51.1	51.1	51.1	50.3	48.7	48.7	47.0	46.2	45.4	45.4	45.4
87.5°	20.3	21.1	21.9	21.1	19.5	19.5	19.5	19.5	19.5	19.5	19.5
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):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9
2.5°	1367.1	1368.7	1369.5	1373.6	1378.4	1381.7	1377.6	1373.6	1380.0	1387.3	1387.3
5°	1353.3	1354.9	1357.3	1362.2	1368.7	1372.7	1371.1	1367.9	1377.6	1385.7	1386.5
7.5°	1336.3	1337.9	1341.1	1346.0	1354.1	1359.8	1359.8	1360.6	1369.5	1379.2	1381.7
10°	1311.1	1315.2	1320.0	1327.3	1335.4	1342.7	1345.2	1346.0	1357.3	1367.9	1371.1
12.5°	1287.6	1291.7	1296.5	1304.6	1314.4	1322.5	1324.9	1328.1	1340.3	1352.5	1357.3
15°	1260.8	1264.9	1270.6	1278.7	1289.2	1298.1	1303.0	1307.9	1320.0	1333.0	1338.7
17.5°	1229.2	1233.3	1239.0	1248.7	1260.8	1271.4	1277.1	1282.7	1296.5	1310.3	1316.0
20°	1191.9	1197.6	1205.7	1215.4	1229.2	1241.4	1247.9	1254.4	1269.0	1282.7	1289.2
22.5°	1153.8	1160.3	1169.2	1180.6	1195.2	1208.1	1216.3	1224.4	1239.0	1252.7	1260.0
25°	1115.7	1123.0	1131.9	1144.1	1157.9	1170.8	1180.6	1190.3	1204.9	1219.5	1226.8
27.5°	1076.8	1083.3	1092.2	1104.4	1119.8	1133.5	1143.3	1153.8	1168.4	1183.8	1191.1
30°	1033.8	1041.1	1049.2	1061.4	1078.4	1093.8	1103.5	1114.9	1129.5	1144.9	1152.2
32.5°	992.5	998.9	1007.1	1019.2	1036.2	1052.5	1063.0	1074.4	1089.0	1104.4	1110.8
35°	949.5	956.0	964.9	977.1	994.1	1009.5	1020.0	1031.4	1045.2	1059.8	1067.1
37.5°	907.3	913.8	922.7	934.9	951.1	966.5	977.1	988.4	1002.2	1016.0	1022.5
40°	863.5	870.0	877.3	889.5	905.7	921.1	930.8	942.2	956.0	970.6	977.1
42.5°	818.9	825.4	834.3	846.5	861.9	875.7	886.2	896.8	909.8	922.7	929.2
45°	774.3	780.0	788.9	800.3	814.9	827.9	838.4	848.9	861.1	873.3	879.8
47.5°	728.1	734.6	741.9	753.3	767.9	781.6	792.2	801.9	813.3	825.4	831.1
50°	683.5	689.2	696.5	707.0	720.8	733.8	742.7	752.5	763.0	774.3	779.2
52.5°	637.3	643.0	650.3	660.8	672.2	684.3	692.5	701.4	711.9	722.5	727.3
55°	590.3	594.3	600.8	610.6	622.7	634.1	642.2	651.1	660.0	668.9	674.6
57.5°	544.1	548.9	555.4	564.3	574.9	585.4	592.7	600.0	608.9	617.9	621.9
60°	497.0	501.1	506.0	514.1	524.6	533.5	540.8	548.1	555.4	563.5	567.6
62.5°	449.2	453.3	458.1	466.2	475.1	483.3	489.7	496.2	502.7	510.0	514.1
65°	401.4	405.4	410.3	416.0	423.3	430.6	437.0	443.5	448.4	453.3	457.3
67.5°	349.5	353.5	358.4	363.3	369.7	377.0	381.9	387.6	392.4	398.1	400.6
70°	300.8	304.1	308.9	313.0	318.7	323.5	327.6	332.4	335.7	340.6	344.6
72.5°	253.0	256.2	260.3	264.3	267.6	271.6	276.5	280.5	284.6	289.5	291.1
75°	206.8	208.4	211.6	214.9	218.1	221.4	223.8	227.0	230.3	233.5	236.0
77.5°	161.4	163.0	166.2	168.7	171.1	173.5	175.1	176.8	180.0	182.4	184.9
80°	118.4	120.0	122.4	124.9	127.3	129.7	129.7	129.7	133.8	137.0	137.8
82.5°	80.3	81.1	82.7	84.3	85.9	87.6	87.6	86.8	89.2	91.6	93.2
85°	46.2	47.0	48.7	48.7	49.5	49.5	49.5	49.5	51.1	53.5	55.1
87.5°	18.6	18.6	19.5	19.5	20.3	20.3	19.5	18.6	20.3	22.7	23.5
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°	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9	1380.9
2.5°	1384.1	1383.3	1385.7	1386.5	1388.2	1388.2	1389.0	1389.0	1387.3	1384.9	1385.7
5°	1384.9	1384.9	1387.3	1389.8	1393.0	1396.3	1393.8	1391.4	1389.8	1387.3	1386.5
7.5°	1380.9	1382.5	1384.9	1389.0	1393.0	1397.9	1394.6	1391.4	1387.3	1384.1	1382.5
10°	1371.1	1372.7	1376.8	1380.9	1384.9	1389.0	1385.7	1382.5	1379.2	1375.2	1373.6
12.5°	1359.0	1361.4	1366.3	1370.3	1374.4	1379.2	1375.2	1371.1	1367.1	1363.0	1360.6
15°	1341.1	1344.4	1350.0	1354.9	1360.6	1364.6	1361.4	1358.1	1353.3	1347.6	1343.6
17.5°	1318.4	1323.3	1329.0	1334.6	1339.5	1343.6	1341.1	1337.9	1332.2	1325.7	1320.9
20°	1293.3	1298.1	1303.0	1308.7	1314.4	1318.4	1315.2	1311.1	1305.4	1300.6	1295.7
22.5°	1264.1	1269.0	1274.6	1279.5	1284.4	1288.4	1284.4	1279.5	1274.6	1269.8	1264.9
25°	1230.8	1235.7	1242.2	1247.1	1250.3	1253.6	1250.3	1246.3	1241.4	1236.5	1231.7
27.5°	1196.0	1200.8	1207.3	1212.2	1215.4	1218.7	1215.4	1211.4	1206.5	1201.7	1196.8
30°	1157.1	1161.9	1168.4	1173.3	1175.7	1178.1	1174.9	1171.7	1167.6	1162.7	1157.9
32.5°	1115.7	1120.6	1125.4	1130.3	1134.4	1137.6	1134.4	1131.1	1126.3	1119.8	1114.9
35°	1071.9	1076.8	1082.5	1087.3	1092.2	1096.2	1091.4	1085.7	1081.7	1077.6	1073.5
37.5°	1025.7	1031.4	1037.9	1043.5	1045.2	1048.4	1045.2	1041.9	1037.9	1033.8	1029.0
40°	980.3	985.2	990.8	996.5	998.9	1001.4	998.1	994.9	990.0	986.0	981.1
42.5°	933.3	938.1	943.0	947.9	951.1	954.4	951.1	946.2	943.0	939.8	935.7
45°	884.6	889.5	893.5	898.4	900.8	903.3	900.0	896.0	892.7	890.3	886.2
47.5°	835.2	839.2	843.3	847.3	848.9	851.4	848.1	845.7	843.3	840.8	837.6
50°	783.3	787.3	792.2	796.2	797.1	799.5	796.2	793.8	791.4	788.9	786.5
52.5°	732.2	735.4	739.5	743.5	745.2	746.8	743.5	740.3	737.9	736.2	733.8
55°	678.7	681.9	686.0	689.2	691.6	693.3	690.0	686.8	684.3	683.5	681.1
57.5°	625.2	628.4	632.5	635.7	637.3	638.9	635.7	632.5	630.8	629.2	627.6
60°	570.8	574.1	577.3	579.7	581.4	582.2	578.9	576.5	575.7	574.9	573.3
62.5°	517.3	518.9	522.2	523.8	525.4	526.2	523.8	522.2	521.4	520.6	519.7
65°	461.4	465.4	467.9	469.5	469.5	470.3	467.9	467.0	466.2	465.4	463.8
67.5°	403.8	407.0	408.7	410.3	410.3	410.3	410.3	410.3	409.5	407.9	406.2
70°	348.7	351.1	352.7	353.5	353.5	353.5	351.9	351.1	351.9	351.9	351.1
72.5°	292.7	294.3	295.1	296.0	295.1	295.1	295.1	296.8	296.8	296.0	294.3
75°	238.4	240.0	240.8	241.6	240.8	240.8	240.8	242.4	241.6	241.6	240.8
77.5°	187.3	188.1	188.1	188.9	188.1	188.1	188.9	190.5	189.7	189.7	189.7
80°	138.7	138.7	138.7	139.5	138.7	138.7	139.5	141.1	140.3	140.3	140.3
82.5°	94.1	94.9	94.9	94.9	95.7	96.5	96.5	96.5	96.5	96.5	95.7
85°	55.9	56.8	55.9	55.9	55.9	55.9	56.8	57.6	57.6	57.6	57.6
87.5°	24.3	25.1	24.3	23.5	22.7	22.7	24.3	25.9	25.9	25.1	25.1
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: P709184  
 CATALOG NUMBER: 4APN-24-26L930-UNV

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1380.9	1380.9	1380.9	1380.9
2.5°	1389.0	1389.0	1381.7	1374.4
5°	1388.2	1386.5	1378.4	1369.5
7.5°	1383.3	1380.9	1370.3	1360.6
10°	1371.9	1368.7	1357.3	1345.2
12.5°	1358.1	1353.3	1340.3	1328.1
15°	1340.3	1334.6	1320.9	1307.1
17.5°	1316.8	1310.3	1296.5	1281.9
20°	1291.7	1284.4	1269.0	1253.6
22.5°	1260.8	1254.4	1238.1	1222.7
25°	1227.6	1220.3	1204.1	1187.9
27.5°	1191.9	1183.8	1167.6	1152.2
30°	1153.0	1144.9	1128.7	1113.3
32.5°	1111.7	1105.2	1089.0	1071.9
35°	1069.5	1061.4	1045.2	1029.0
37.5°	1024.9	1017.6	1002.2	986.8
40°	977.9	970.6	954.4	938.9
42.5°	931.7	925.2	909.8	895.2
45°	882.2	875.7	861.1	848.1
47.5°	832.7	826.2	812.5	798.7
50°	782.5	776.0	763.0	750.8
52.5°	729.8	724.9	712.7	700.6
55°	677.0	671.4	659.2	648.7
57.5°	624.3	620.3	608.9	598.4
60°	570.0	565.2	556.2	547.3
62.5°	517.3	513.3	504.3	496.2
65°	461.4	458.1	450.8	443.5
67.5°	403.8	401.4	394.1	387.6
70°	348.7	344.6	338.9	333.3
72.5°	292.7	291.1	286.2	281.4
75°	239.2	237.6	232.7	228.7
77.5°	188.9	187.3	183.2	179.2
80°	139.5	138.7	135.4	132.2
82.5°	95.7	94.9	92.4	89.2
85°	57.6	55.9	53.5	51.1
87.5°	25.1	24.3	21.9	20.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)