

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: P709190

Luminaire Tested: **4APN-24-26L935-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709190  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-24-26L935-UNV  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

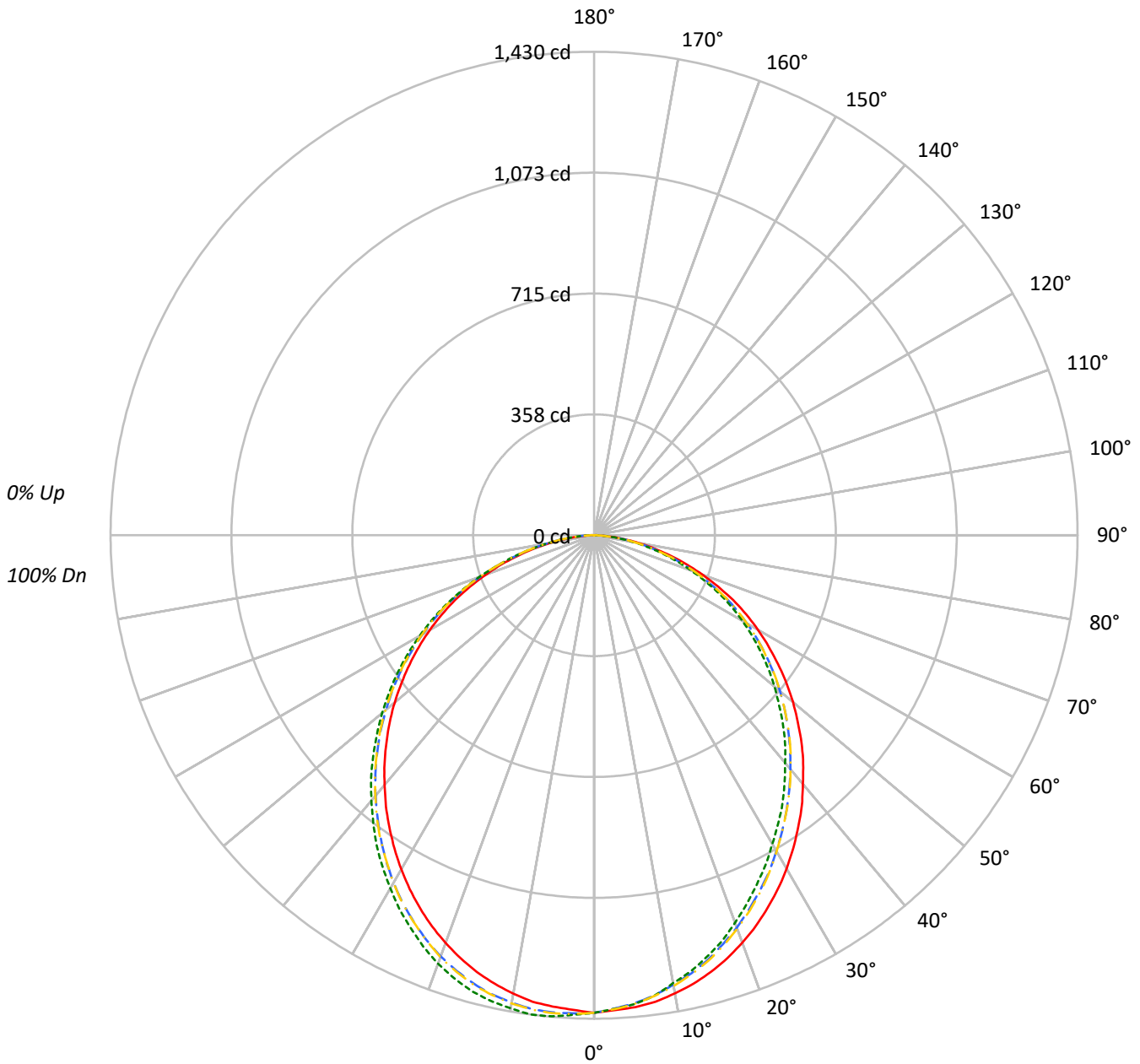
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3734.0 lumens  
Efficiency: N/A  
Efficacy: 66.7 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°	13033	13033	13033	13033
5°	12975	12890	12960	13228
10°	12892	12604	12900	13312
15°	12772	12328	12779	13334
20°	12591	11971	12599	13242
25°	12371	11594	12396	13055
30°	12133	11232	12150	12840
35°	11856	10940	11884	12630
40°	11568	10589	11608	12338
45°	11320	10304	11332	12056
50°	11025	10001	11048	11740
55°	10674	9674	10714	11408
60°	10332	9337	10346	10990
65°	9905	8927	9905	10503
70°	9196	8257	9174	9754
75°	8338	7482	8281	8783
80°	7183	6434	7051	7534
85°	5536	4922	5356	6055



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.4	3.6
10°-20°	377.7	10.1
20°-30°	559.2	15.0
30°-40°	656.1	17.6
40°-50°	664.9	17.8
50°-60°	590.1	15.8
60°-70°	443.0	11.9
70°-80°	246.0	6.6
80°-90°	63.5	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°	1070.3	28.7
0°-40°	1726.4	46.2
0°-60°	2981.4	79.8
0°-90°	3734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3734.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1413	1413	1413	1413	1413	
5°	1401	1392	1399	1428	1401	133
15°	1337	1291	1338	1396	1337	377
25°	1215	1139	1218	1282	1215	560
35°	1053	971	1055	1121	1053	659
45°	868	790	868	924	868	669
55°	664	601	666	709	664	594
65°	454	409	454	481	454	447
75°	234	210	232	246	234	249
85°	52	46	51	57	52	63
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°	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6
2.5°	1405.9	1409.3	1413.4	1409.3	1402.6	1399.3	1399.3	1398.5	1401.0	1401.8	1401.0
5°	1401.0	1402.6	1403.5	1398.5	1391.0	1386.9	1385.2	1384.4	1387.7	1391.8	1387.7
7.5°	1391.8	1391.0	1390.2	1383.6	1375.3	1369.5	1367.0	1366.1	1369.5	1373.6	1370.3
10°	1376.1	1375.3	1372.8	1364.5	1353.7	1346.2	1343.7	1341.2	1343.7	1345.4	1343.7
12.5°	1358.7	1355.4	1352.0	1342.9	1331.3	1323.0	1318.9	1315.5	1318.9	1321.3	1319.7
15°	1337.1	1332.1	1326.3	1316.4	1304.8	1295.6	1290.7	1287.3	1289.8	1290.7	1290.7
17.5°	1311.4	1305.6	1299.8	1287.3	1273.2	1263.3	1257.5	1253.3	1256.6	1258.3	1258.3
20°	1282.4	1275.7	1268.3	1255.0	1240.1	1229.3	1222.6	1217.7	1218.5	1219.3	1219.3
22.5°	1250.8	1242.5	1233.4	1219.3	1203.6	1191.9	1185.3	1179.5	1179.5	1180.3	1180.3
25°	1215.2	1206.0	1196.9	1182.8	1166.2	1153.8	1145.5	1139.7	1139.7	1138.9	1140.5
27.5°	1178.7	1168.7	1159.6	1144.7	1127.2	1114.8	1106.5	1100.7	1099.9	1099.0	1100.7
30°	1138.9	1127.2	1117.3	1101.5	1084.9	1072.5	1064.2	1057.6	1055.9	1054.3	1055.9
32.5°	1096.6	1085.8	1075.0	1058.4	1041.8	1029.4	1021.1	1014.4	1013.6	1012.8	1014.4
35°	1052.6	1041.0	1031.0	1015.3	998.7	986.2	977.1	971.3	971.3	971.3	971.3
37.5°	1009.5	997.8	987.1	971.3	954.7	942.3	933.2	927.3	925.7	924.9	925.7
40°	960.5	950.6	940.6	925.7	909.1	896.7	889.2	882.6	880.9	879.2	881.7
42.5°	915.7	905.8	895.0	880.9	864.3	851.9	843.6	837.8	836.9	836.1	836.9
45°	867.6	856.0	845.2	832.0	817.0	805.4	797.1	791.3	790.5	789.7	790.5
47.5°	817.0	807.9	798.8	785.5	770.6	759.0	751.5	744.9	743.2	741.5	743.2
50°	768.1	758.1	749.0	736.6	722.5	711.7	705.0	699.2	697.6	696.8	697.6
52.5°	716.7	707.5	699.2	686.8	675.2	664.4	656.9	652.0	651.1	650.3	651.1
55°	663.6	655.3	647.8	637.9	626.2	616.3	609.7	603.9	603.0	601.4	603.0
57.5°	612.1	605.5	598.0	587.3	576.5	567.4	561.5	556.6	555.7	554.9	555.7
60°	559.9	553.3	546.6	537.5	526.7	517.6	512.6	508.5	506.8	506.0	506.8
62.5°	507.6	501.0	496.0	486.9	476.9	469.5	464.5	460.4	458.7	457.9	458.7
65°	453.7	447.9	442.1	433.8	426.3	420.5	415.6	411.4	409.8	408.9	408.9
67.5°	396.5	391.5	387.4	379.9	371.6	365.8	360.8	357.5	355.8	355.0	355.8
70°	340.9	336.8	332.6	326.8	320.2	315.2	311.9	308.6	306.9	306.1	306.1
72.5°	287.8	284.5	280.4	275.4	270.4	265.4	262.1	259.6	258.0	257.1	257.1
75°	233.9	230.6	228.9	224.8	219.8	216.5	213.2	211.5	209.9	209.9	209.9
77.5°	183.3	181.7	180.0	175.8	172.5	169.2	166.7	165.9	164.2	164.2	164.2
80°	135.2	134.4	133.5	131.1	127.7	124.4	122.8	121.9	121.1	121.1	121.1
82.5°	91.2	91.2	90.4	87.9	85.4	84.6	82.9	82.1	82.1	82.1	82.1
85°	52.3	52.3	52.3	51.4	49.8	49.8	48.1	47.3	46.5	46.5	46.5
87.5°	20.7	21.6	22.4	21.6	19.9	19.9	19.9	19.9	19.9	19.9	19.9
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°	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6
2.5°	1398.5	1400.1	1401.0	1405.1	1410.1	1413.4	1409.3	1405.1	1411.8	1419.2	1419.2
5°	1384.4	1386.0	1388.5	1393.5	1400.1	1404.3	1402.6	1399.3	1409.3	1417.6	1418.4
7.5°	1367.0	1368.6	1371.9	1376.9	1385.2	1391.0	1391.0	1391.8	1401.0	1410.9	1413.4
10°	1341.2	1345.4	1350.4	1357.8	1366.1	1373.6	1376.1	1376.9	1388.5	1399.3	1402.6
12.5°	1317.2	1321.3	1326.3	1334.6	1344.6	1352.9	1355.4	1358.7	1371.1	1383.6	1388.5
15°	1289.8	1294.0	1299.8	1308.1	1318.9	1328.0	1333.0	1337.9	1350.4	1363.6	1369.5
17.5°	1257.5	1261.6	1267.4	1277.4	1289.8	1300.6	1306.4	1312.2	1326.3	1340.4	1346.2
20°	1219.3	1225.1	1233.4	1243.4	1257.5	1269.9	1276.6	1283.2	1298.1	1312.2	1318.9
22.5°	1180.3	1187.0	1196.1	1207.7	1222.6	1235.9	1244.2	1252.5	1267.4	1281.5	1289.0
25°	1141.3	1148.8	1157.9	1170.4	1184.5	1197.8	1207.7	1217.7	1232.6	1247.5	1255.0
27.5°	1101.5	1108.2	1117.3	1129.7	1145.5	1159.6	1169.5	1180.3	1195.3	1211.0	1218.5
30°	1057.6	1065.0	1073.3	1085.8	1103.2	1119.0	1128.9	1140.5	1155.4	1171.2	1178.7
32.5°	1015.3	1021.9	1030.2	1042.6	1060.1	1076.6	1087.4	1099.0	1114.0	1129.7	1136.4
35°	971.3	977.9	987.1	999.5	1016.9	1032.7	1043.5	1055.1	1069.2	1084.1	1091.6
37.5°	928.2	934.8	943.9	956.4	973.0	988.7	999.5	1011.1	1025.2	1039.3	1046.0
40°	883.4	890.0	897.5	909.9	926.5	942.3	952.2	963.8	977.9	992.9	999.5
42.5°	837.8	844.4	853.5	866.0	881.7	895.8	906.6	917.4	930.7	943.9	950.6
45°	792.1	797.9	807.1	818.7	833.6	846.9	857.7	868.5	880.9	893.3	900.0
47.5°	744.9	751.5	759.0	770.6	785.5	799.6	810.4	820.3	832.0	844.4	850.2
50°	699.2	705.0	712.5	723.3	737.4	750.7	759.8	769.7	780.5	792.1	797.1
52.5°	652.0	657.8	665.2	676.0	687.6	700.1	708.4	717.5	728.3	739.1	744.0
55°	603.9	608.0	614.6	624.6	637.0	648.6	656.9	666.1	675.2	684.3	690.1
57.5°	556.6	561.5	568.2	577.3	588.1	598.9	606.3	613.8	622.9	632.1	636.2
60°	508.5	512.6	517.6	525.9	536.7	545.8	553.3	560.7	568.2	576.5	580.6
62.5°	459.5	463.7	468.6	476.9	486.1	494.4	501.0	507.6	514.3	521.7	525.9
65°	410.6	414.7	419.7	425.5	433.0	440.4	447.1	453.7	458.7	463.7	467.8
67.5°	357.5	361.6	366.6	371.6	378.2	385.7	390.7	396.5	401.5	407.3	409.8
70°	307.7	311.1	316.0	320.2	326.0	331.0	335.1	340.1	343.4	348.4	352.5
72.5°	258.8	262.1	266.3	270.4	273.7	277.9	282.8	287.0	291.1	296.1	297.8
75°	211.5	213.2	216.5	219.8	223.1	226.4	228.9	232.3	235.6	238.9	241.4
77.5°	165.1	166.7	170.0	172.5	175.0	177.5	179.2	180.8	184.1	186.6	189.1
80°	121.1	122.8	125.2	127.7	130.2	132.7	132.7	132.7	136.9	140.2	141.0
82.5°	82.1	82.9	84.6	86.3	87.9	89.6	89.6	88.8	91.2	93.7	95.4
85°	47.3	48.1	49.8	49.8	50.6	50.6	50.6	50.6	52.3	54.7	56.4
87.5°	19.1	19.1	19.9	19.9	20.7	20.7	19.9	19.1	20.7	23.2	24.1
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°	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6	1412.6
2.5°	1415.9	1415.1	1417.6	1418.4	1420.0	1420.0	1420.9	1420.9	1419.2	1416.7	1417.6
5°	1416.7	1416.7	1419.2	1421.7	1425.0	1428.3	1425.9	1423.4	1421.7	1419.2	1418.4
7.5°	1412.6	1414.2	1416.7	1420.9	1425.0	1430.0	1426.7	1423.4	1419.2	1415.9	1414.2
10°	1402.6	1404.3	1408.4	1412.6	1416.7	1420.9	1417.6	1414.2	1410.9	1406.8	1405.1
12.5°	1390.2	1392.7	1397.7	1401.8	1405.9	1410.9	1406.8	1402.6	1398.5	1394.3	1391.8
15°	1371.9	1375.3	1381.1	1386.0	1391.8	1396.0	1392.7	1389.4	1384.4	1378.6	1374.4
17.5°	1348.7	1353.7	1359.5	1365.3	1370.3	1374.4	1371.9	1368.6	1362.8	1356.2	1351.2
20°	1323.0	1328.0	1333.0	1338.8	1344.6	1348.7	1345.4	1341.2	1335.4	1330.5	1325.5
22.5°	1293.1	1298.1	1303.9	1308.9	1313.9	1318.0	1313.9	1308.9	1303.9	1298.9	1294.0
25°	1259.1	1264.1	1270.7	1275.7	1279.0	1282.4	1279.0	1274.9	1269.9	1264.9	1260.0
27.5°	1223.5	1228.4	1235.1	1240.1	1243.4	1246.7	1243.4	1239.2	1234.2	1229.3	1224.3
30°	1183.7	1188.6	1195.3	1200.2	1202.7	1205.2	1201.9	1198.6	1194.4	1189.5	1184.5
32.5°	1141.3	1146.3	1151.3	1156.3	1160.4	1163.7	1160.4	1157.1	1152.1	1145.5	1140.5
35°	1096.6	1101.5	1107.3	1112.3	1117.3	1121.4	1116.5	1110.7	1106.5	1102.4	1098.2
37.5°	1049.3	1055.1	1061.7	1067.5	1069.2	1072.5	1069.2	1065.9	1061.7	1057.6	1052.6
40°	1002.8	1007.8	1013.6	1019.4	1021.9	1024.4	1021.1	1017.8	1012.8	1008.6	1003.7
42.5°	954.7	959.7	964.7	969.6	973.0	976.3	973.0	968.0	964.7	961.4	957.2
45°	904.9	909.9	914.1	919.1	921.5	924.0	920.7	916.6	913.2	910.8	906.6
47.5°	854.4	858.5	862.6	866.8	868.5	870.9	867.6	865.1	862.6	860.2	856.8
50°	801.3	805.4	810.4	814.5	815.4	817.9	814.5	812.0	809.6	807.1	804.6
52.5°	749.0	752.3	756.5	760.6	762.3	763.9	760.6	757.3	754.8	753.2	750.7
55°	694.3	697.6	701.7	705.0	707.5	709.2	705.9	702.6	700.1	699.2	696.8
57.5°	639.5	642.8	647.0	650.3	652.0	653.6	650.3	647.0	645.3	643.7	642.0
60°	583.9	587.3	590.6	593.1	594.7	595.6	592.2	589.8	588.9	588.1	586.4
62.5°	529.2	530.9	534.2	535.8	537.5	538.3	535.8	534.2	533.3	532.5	531.7
65°	472.0	476.1	478.6	480.3	480.3	481.1	478.6	477.8	476.9	476.1	474.5
67.5°	413.1	416.4	418.1	419.7	419.7	419.7	419.7	419.7	418.9	417.2	415.6
70°	356.7	359.2	360.8	361.6	361.6	361.6	360.0	359.2	360.0	360.0	359.2
72.5°	299.4	301.1	301.9	302.8	301.9	301.9	301.9	303.6	303.6	302.8	301.1
75°	243.9	245.5	246.4	247.2	246.4	246.4	246.4	248.0	247.2	247.2	246.4
77.5°	191.6	192.4	192.4	193.3	192.4	192.4	193.3	194.9	194.1	194.1	194.1
80°	141.8	141.8	141.8	142.7	141.8	141.8	142.7	144.3	143.5	143.5	143.5
82.5°	96.2	97.0	97.0	97.0	97.9	98.7	98.7	98.7	98.7	98.7	97.9
85°	57.2	58.1	57.2	57.2	57.2	57.2	58.1	58.9	58.9	58.9	58.9
87.5°	24.9	25.7	24.9	24.1	23.2	23.2	24.9	26.5	26.5	25.7	25.7
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: P709190

CATALOG NUMBER: 4APN-24-26L935-UNV

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1412.6	1412.6	1412.6	1412.6
2.5°	1420.9	1420.9	1413.4	1405.9
5°	1420.0	1418.4	1410.1	1401.0
7.5°	1415.1	1412.6	1401.8	1391.8
10°	1403.5	1400.1	1388.5	1376.1
12.5°	1389.4	1384.4	1371.1	1358.7
15°	1371.1	1365.3	1351.2	1337.1
17.5°	1347.1	1340.4	1326.3	1311.4
20°	1321.3	1313.9	1298.1	1282.4
22.5°	1289.8	1283.2	1266.6	1250.8
25°	1255.8	1248.3	1231.8	1215.2
27.5°	1219.3	1211.0	1194.4	1178.7
30°	1179.5	1171.2	1154.6	1138.9
32.5°	1137.2	1130.6	1114.0	1096.6
35°	1094.1	1085.8	1069.2	1052.6
37.5°	1048.4	1041.0	1025.2	1009.5
40°	1000.3	992.9	976.3	960.5
42.5°	953.1	946.4	930.7	915.7
45°	902.5	895.8	880.9	867.6
47.5°	851.9	845.2	831.1	817.0
50°	800.4	793.8	780.5	768.1
52.5°	746.5	741.5	729.1	716.7
55°	692.6	686.8	674.4	663.6
57.5°	638.7	634.5	622.9	612.1
60°	583.1	578.1	569.0	559.9
62.5°	529.2	525.1	515.9	507.6
65°	472.0	468.6	461.2	453.7
67.5°	413.1	410.6	403.1	396.5
70°	356.7	352.5	346.7	340.9
72.5°	299.4	297.8	292.8	287.8
75°	244.7	243.0	238.1	233.9
77.5°	193.3	191.6	187.5	183.3
80°	142.7	141.8	138.5	135.2
82.5°	97.9	97.0	94.6	91.2
85°	58.9	57.2	54.7	52.3
87.5°	25.7	24.9	22.4	20.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)