

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: P709196

Luminaire Tested: **4APN-24-26L940-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709196  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-24-26L940-UNV  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

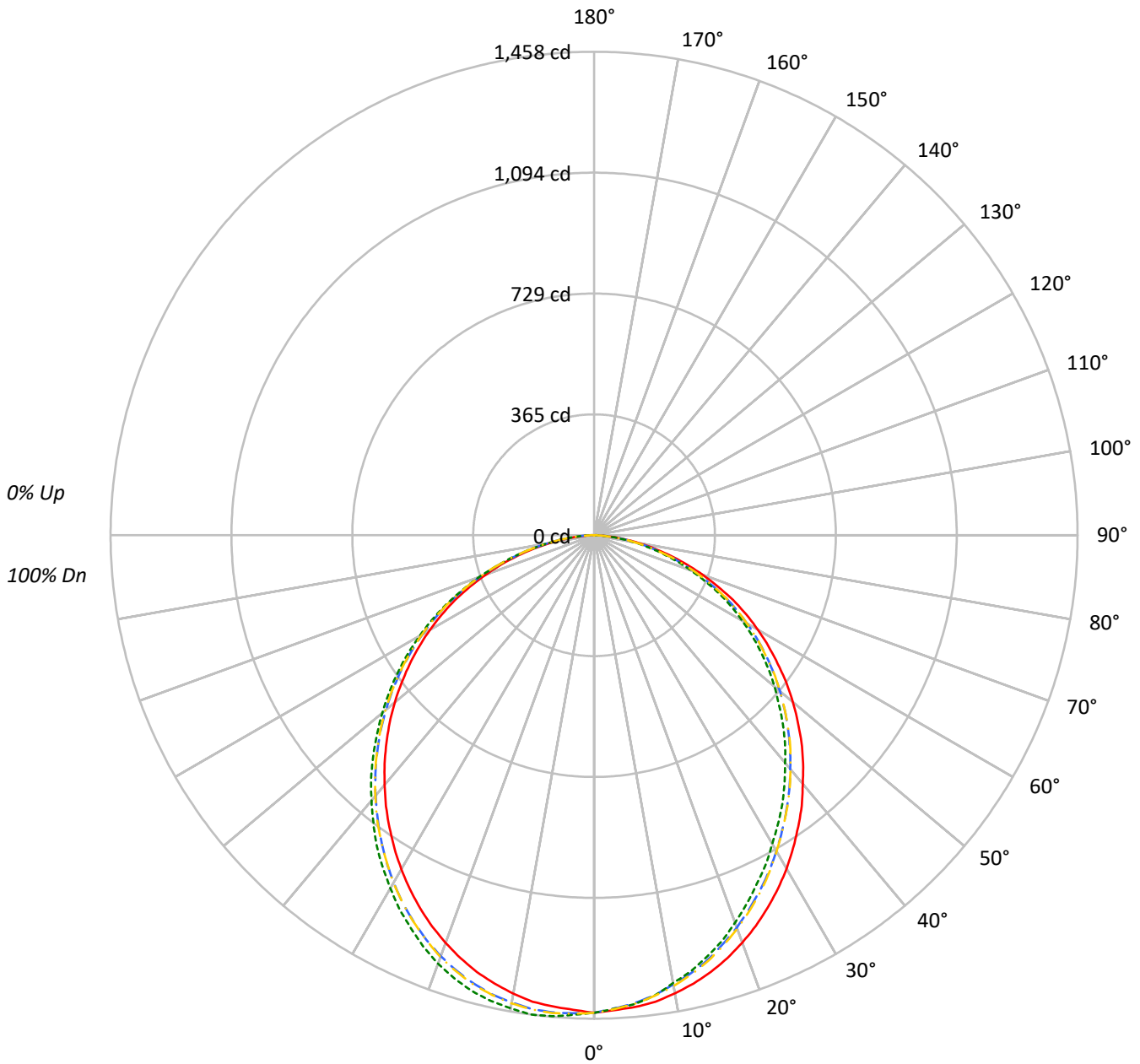
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3806.4 lumens  
Efficiency: N/A  
Efficacy: 68.0 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				
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°	13286	13286	13286	13286
5°	13226	13140	13211	13485
10°	13142	12849	13150	13569
15°	13019	12567	13028	13593
20°	12835	12204	12843	13499
25°	12610	11818	12636	13307
30°	12368	11449	12386	13089
35°	12085	11152	12113	12876
40°	11792	10795	11833	12577
45°	11539	10503	11551	12290
50°	11239	10195	11263	11966
55°	10880	9860	10922	11628
60°	10531	9518	10547	11202
65°	10097	9101	10097	10706
70°	9374	8416	9352	9946
75°	8498	7625	8441	8951
80°	7322	6562	7189	7683
85°	5642	5018	5462	6172



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.0	3.6
10°-20°	385.0	10.1
20°-30°	570.0	15.0
30°-40°	668.8	17.6
40°-50°	677.8	17.8
50°-60°	601.6	15.8
60°-70°	451.6	11.9
70°-80°	250.8	6.6
80°-90°	64.8	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°	1091.0	28.7
0°-40°	1759.8	46.2
0°-60°	3039.2	79.8
0°-90°	3806.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3806.4	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1440	1440	1440	1440	1440	
5°	1428	1419	1426	1456	1428	136
15°	1363	1316	1364	1423	1363	384
25°	1239	1161	1241	1307	1239	571
35°	1073	990	1076	1143	1073	672
45°	884	805	885	942	884	682
55°	676	613	679	723	676	606
65°	462	417	462	490	462	456
75°	238	214	237	251	238	253
85°	53	47	52	58	53	64
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°	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0
2.5°	1433.2	1436.6	1440.8	1436.6	1429.8	1426.4	1426.4	1425.6	1428.1	1429.0	1428.1
5°	1428.1	1429.8	1430.7	1425.6	1418.0	1413.8	1412.1	1411.2	1414.6	1418.8	1414.6
7.5°	1418.8	1418.0	1417.1	1410.4	1401.9	1396.0	1393.5	1392.6	1396.0	1400.2	1396.8
10°	1402.8	1401.9	1399.4	1390.9	1379.9	1372.3	1369.8	1367.3	1369.8	1371.5	1369.8
12.5°	1385.0	1381.6	1378.2	1368.9	1357.1	1348.7	1344.4	1341.0	1344.4	1347.0	1345.3
15°	1363.0	1358.0	1352.0	1341.9	1330.0	1320.7	1315.7	1312.3	1314.8	1315.7	1315.7
17.5°	1336.8	1330.9	1325.0	1312.3	1297.9	1287.8	1281.9	1277.6	1281.0	1282.7	1282.7
20°	1307.2	1300.5	1292.8	1279.3	1264.1	1253.1	1246.3	1241.3	1242.1	1243.0	1243.0
22.5°	1275.1	1266.6	1257.3	1243.0	1226.9	1215.1	1208.3	1202.4	1202.4	1203.2	1203.2
25°	1238.7	1229.4	1220.1	1205.8	1188.8	1176.2	1167.7	1161.8	1161.8	1160.9	1162.6
27.5°	1201.5	1191.4	1182.1	1166.9	1149.1	1136.4	1128.0	1122.0	1121.2	1120.4	1122.0
30°	1160.9	1149.1	1139.0	1122.9	1106.0	1093.3	1084.8	1078.1	1076.4	1074.7	1076.4
32.5°	1117.8	1106.8	1095.8	1078.9	1062.0	1049.3	1040.9	1034.1	1033.3	1032.4	1034.1
35°	1073.0	1061.2	1051.0	1035.0	1018.0	1005.4	996.1	990.1	990.1	990.1	990.1
37.5°	1029.0	1017.2	1006.2	990.1	973.2	960.5	951.2	945.3	943.6	942.8	943.6
40°	979.1	969.0	958.9	943.6	926.7	914.0	906.4	899.7	898.0	896.3	898.8
42.5°	933.5	923.3	912.3	898.0	881.1	868.4	859.9	854.0	853.2	852.3	853.2
45°	884.4	872.6	861.6	848.1	832.9	821.0	812.6	806.7	805.8	805.0	805.8
47.5°	832.9	823.6	814.3	800.7	785.5	773.7	766.1	759.3	757.6	755.9	757.6
50°	783.0	772.8	763.5	750.8	736.5	725.5	718.7	712.8	711.1	710.3	711.1
52.5°	730.6	721.3	712.8	700.1	688.3	677.3	669.7	664.6	663.8	662.9	663.8
55°	676.4	668.0	660.4	650.2	638.4	628.2	621.5	615.6	614.7	613.0	614.7
57.5°	624.0	617.3	609.6	598.6	587.7	578.4	572.4	567.4	566.5	565.7	566.5
60°	570.7	564.0	557.2	547.9	536.9	527.6	522.5	518.3	516.6	515.8	516.6
62.5°	517.5	510.7	505.6	496.3	486.2	478.6	473.5	469.3	467.6	466.7	467.6
65°	462.5	456.6	450.7	442.2	434.6	428.7	423.6	419.4	417.7	416.9	416.9
67.5°	404.2	399.1	394.9	387.3	378.8	372.9	367.8	364.4	362.7	361.9	362.7
70°	347.5	343.3	339.1	333.1	326.4	321.3	317.9	314.5	312.9	312.0	312.0
72.5°	293.4	290.0	285.8	280.7	275.6	270.6	267.2	264.7	263.0	262.1	262.1
75°	238.4	235.1	233.4	229.1	224.1	220.7	217.3	215.6	213.9	213.9	213.9
77.5°	186.9	185.2	183.5	179.3	175.9	172.5	170.0	169.1	167.4	167.4	167.4
80°	137.8	137.0	136.1	133.6	130.2	126.8	125.1	124.3	123.5	123.5	123.5
82.5°	93.0	93.0	92.2	89.6	87.1	86.2	84.6	83.7	83.7	83.7	83.7
85°	53.3	53.3	53.3	52.4	50.7	50.7	49.0	48.2	47.4	47.4	47.4
87.5°	21.1	22.0	22.8	22.0	20.3	20.3	20.3	20.3	20.3	20.3	20.3
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°	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0
2.5°	1425.6	1427.3	1428.1	1432.4	1437.4	1440.8	1436.6	1432.4	1439.1	1446.7	1446.7
5°	1411.2	1412.9	1415.4	1420.5	1427.3	1431.5	1429.8	1426.4	1436.6	1445.0	1445.9
7.5°	1393.5	1395.2	1398.5	1403.6	1412.1	1418.0	1418.0	1418.8	1428.1	1438.3	1440.8
10°	1367.3	1371.5	1376.6	1384.2	1392.6	1400.2	1402.8	1403.6	1415.4	1426.4	1429.8
12.5°	1342.7	1347.0	1352.0	1360.5	1370.6	1379.1	1381.6	1385.0	1397.7	1410.4	1415.4
15°	1314.8	1319.1	1325.0	1333.4	1344.4	1353.7	1358.8	1363.9	1376.6	1390.1	1396.0
17.5°	1281.9	1286.1	1292.0	1302.1	1314.8	1325.8	1331.7	1337.7	1352.0	1366.4	1372.3
20°	1243.0	1248.9	1257.3	1267.5	1281.9	1294.5	1301.3	1308.1	1323.3	1337.7	1344.4
22.5°	1203.2	1210.0	1219.3	1231.1	1246.3	1259.9	1268.3	1276.8	1292.0	1306.4	1314.0
25°	1163.5	1171.1	1180.4	1193.1	1207.4	1221.0	1231.1	1241.3	1256.5	1271.7	1279.3
27.5°	1122.9	1129.7	1139.0	1151.6	1167.7	1182.1	1192.2	1203.2	1218.4	1234.5	1242.1
30°	1078.1	1085.7	1094.1	1106.8	1124.6	1140.6	1150.8	1162.6	1177.9	1193.9	1201.5
32.5°	1035.0	1041.7	1050.2	1062.9	1080.6	1097.5	1108.5	1120.4	1135.6	1151.6	1158.4
35°	990.1	996.9	1006.2	1018.9	1036.6	1052.7	1063.7	1075.5	1089.9	1105.1	1112.7
37.5°	946.2	952.9	962.2	974.9	991.8	1007.9	1018.9	1030.7	1045.1	1059.5	1066.2
40°	900.5	907.3	914.9	927.6	944.5	960.5	970.7	982.5	996.9	1012.1	1018.9
42.5°	854.0	860.8	870.1	882.8	898.8	913.2	924.2	935.2	948.7	962.2	969.0
45°	807.5	813.4	822.7	834.6	849.8	863.3	874.3	885.3	898.0	910.7	917.4
47.5°	759.3	766.1	773.7	785.5	800.7	815.1	826.1	836.2	848.1	860.8	866.7
50°	712.8	718.7	726.3	737.3	751.7	765.2	774.5	784.7	795.7	807.5	812.6
52.5°	664.6	670.5	678.1	689.1	701.0	713.6	722.1	731.4	742.4	753.4	758.5
55°	615.6	619.8	626.6	636.7	649.4	661.2	669.7	679.0	688.3	697.6	703.5
57.5°	567.4	572.4	579.2	588.5	599.5	610.5	618.1	625.7	635.0	644.3	648.5
60°	518.3	522.5	527.6	536.1	547.1	556.4	564.0	571.6	579.2	587.7	591.9
62.5°	468.4	472.7	477.7	486.2	495.5	503.9	510.7	517.5	524.2	531.9	536.1
65°	418.5	422.8	427.8	433.8	441.4	449.0	455.8	462.5	467.6	472.7	476.9
67.5°	364.4	368.7	373.7	378.8	385.6	393.2	398.3	404.2	409.2	415.2	417.7
70°	313.7	317.1	322.2	326.4	332.3	337.4	341.6	346.7	350.1	355.1	359.4
72.5°	263.8	267.2	271.4	275.6	279.0	283.3	288.3	292.6	296.8	301.9	303.6
75°	215.6	217.3	220.7	224.1	227.5	230.8	233.4	236.8	240.1	243.5	246.1
77.5°	168.3	170.0	173.3	175.9	178.4	180.9	182.6	184.3	187.7	190.2	192.8
80°	123.5	125.1	127.7	130.2	132.8	135.3	135.3	135.3	139.5	142.9	143.7
82.5°	83.7	84.6	86.2	87.9	89.6	91.3	91.3	90.5	93.0	95.5	97.2
85°	48.2	49.0	50.7	50.7	51.6	51.6	51.6	51.6	53.3	55.8	57.5
87.5°	19.4	19.4	20.3	20.3	21.1	21.1	20.3	19.4	21.1	23.7	24.5
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°	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0	1440.0
2.5°	1443.4	1442.5	1445.0	1445.9	1447.6	1447.6	1448.4	1448.4	1446.7	1444.2	1445.0
5°	1444.2	1444.2	1446.7	1449.3	1452.7	1456.0	1453.5	1451.0	1449.3	1446.7	1445.9
7.5°	1440.0	1441.7	1444.2	1448.4	1452.7	1457.7	1454.3	1451.0	1446.7	1443.4	1441.7
10°	1429.8	1431.5	1435.7	1440.0	1444.2	1448.4	1445.0	1441.7	1438.3	1434.1	1432.4
12.5°	1417.1	1419.7	1424.8	1429.0	1433.2	1438.3	1434.1	1429.8	1425.6	1421.4	1418.8
15°	1398.5	1401.9	1407.8	1412.9	1418.8	1423.1	1419.7	1416.3	1411.2	1405.3	1401.1
17.5°	1374.9	1379.9	1385.9	1391.8	1396.8	1401.1	1398.5	1395.2	1389.2	1382.5	1377.4
20°	1348.7	1353.7	1358.8	1364.7	1370.6	1374.9	1371.5	1367.3	1361.3	1356.3	1351.2
22.5°	1318.2	1323.3	1329.2	1334.3	1339.4	1343.6	1339.4	1334.3	1329.2	1324.1	1319.1
25°	1283.5	1288.6	1295.4	1300.5	1303.8	1307.2	1303.8	1299.6	1294.5	1289.5	1284.4
27.5°	1247.2	1252.3	1259.0	1264.1	1267.5	1270.9	1267.5	1263.3	1258.2	1253.1	1248.0
30°	1206.6	1211.7	1218.4	1223.5	1226.0	1228.6	1225.2	1221.8	1217.6	1212.5	1207.4
32.5°	1163.5	1168.5	1173.6	1178.7	1182.9	1186.3	1182.9	1179.5	1174.5	1167.7	1162.6
35°	1117.8	1122.9	1128.8	1133.9	1139.0	1143.2	1138.1	1132.2	1128.0	1123.7	1119.5
37.5°	1069.6	1075.5	1082.3	1088.2	1089.9	1093.3	1089.9	1086.5	1082.3	1078.1	1073.0
40°	1022.3	1027.3	1033.3	1039.2	1041.7	1044.3	1040.9	1037.5	1032.4	1028.2	1023.1
42.5°	973.2	978.3	983.4	988.4	991.8	995.2	991.8	986.8	983.4	980.0	975.8
45°	922.5	927.6	931.8	936.9	939.4	941.9	938.6	934.3	930.9	928.4	924.2
47.5°	870.9	875.1	879.4	883.6	885.3	887.8	884.4	881.9	879.4	876.8	873.5
50°	816.8	821.0	826.1	830.3	831.2	833.7	830.3	827.8	825.3	822.7	820.2
52.5°	763.5	766.9	771.1	775.4	777.1	778.8	775.4	772.0	769.4	767.8	765.2
55°	707.7	711.1	715.3	718.7	721.3	722.9	719.6	716.2	713.6	712.8	710.3
57.5°	651.9	655.3	659.5	662.9	664.6	666.3	662.9	659.5	657.8	656.1	654.5
60°	595.3	598.6	602.0	604.6	606.3	607.1	603.7	601.2	600.3	599.5	597.8
62.5°	539.5	541.2	544.5	546.2	547.9	548.8	546.2	544.5	543.7	542.8	542.0
65°	481.1	485.3	487.9	489.6	489.6	490.4	487.9	487.0	486.2	485.3	483.7
67.5°	421.1	424.5	426.2	427.8	427.8	427.8	427.8	427.8	427.0	425.3	423.6
70°	363.6	366.1	367.8	368.7	368.7	368.7	367.0	366.1	367.0	367.0	366.1
72.5°	305.2	306.9	307.8	308.6	307.8	307.8	307.8	309.5	309.5	308.6	306.9
75°	248.6	250.3	251.1	252.0	251.1	251.1	251.1	252.8	252.0	252.0	251.1
77.5°	195.3	196.2	196.2	197.0	196.2	196.2	197.0	198.7	197.9	197.9	197.9
80°	144.6	144.6	144.6	145.4	144.6	144.6	145.4	147.1	146.3	146.3	146.3
82.5°	98.1	98.9	98.9	98.9	99.8	100.6	100.6	100.6	100.6	100.6	99.8
85°	58.3	59.2	58.3	58.3	58.3	58.3	59.2	60.0	60.0	60.0	60.0
87.5°	25.4	26.2	25.4	24.5	23.7	23.7	25.4	27.1	27.1	26.2	26.2
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: P709196

CATALOG NUMBER: 4APN-24-26L940-UNV

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1440.0	1440.0	1440.0	1440.0
2.5°	1448.4	1448.4	1440.8	1433.2
5°	1447.6	1445.9	1437.4	1428.1
7.5°	1442.5	1440.0	1429.0	1418.8
10°	1430.7	1427.3	1415.4	1402.8
12.5°	1416.3	1411.2	1397.7	1385.0
15°	1397.7	1391.8	1377.4	1363.0
17.5°	1373.2	1366.4	1352.0	1336.8
20°	1347.0	1339.4	1323.3	1307.2
22.5°	1314.8	1308.1	1291.2	1275.1
25°	1280.2	1272.6	1255.6	1238.7
27.5°	1243.0	1234.5	1217.6	1201.5
30°	1202.4	1193.9	1177.0	1160.9
32.5°	1159.2	1152.5	1135.6	1117.8
35°	1115.3	1106.8	1089.9	1073.0
37.5°	1068.8	1061.2	1045.1	1029.0
40°	1019.7	1012.1	995.2	979.1
42.5°	971.5	964.8	948.7	933.5
45°	920.0	913.2	898.0	884.4
47.5°	868.4	861.6	847.2	832.9
50°	816.0	809.2	795.7	783.0
52.5°	761.0	755.9	743.2	730.6
55°	706.0	700.1	687.4	676.4
57.5°	651.1	646.8	635.0	624.0
60°	594.4	589.3	580.0	570.7
62.5°	539.5	535.2	525.9	517.5
65°	481.1	477.7	470.1	462.5
67.5°	421.1	418.5	410.9	404.2
70°	363.6	359.4	353.4	347.5
72.5°	305.2	303.6	298.5	293.4
75°	249.4	247.7	242.7	238.4
77.5°	197.0	195.3	191.1	186.9
80°	145.4	144.6	141.2	137.8
82.5°	99.8	98.9	96.4	93.0
85°	60.0	58.3	55.8	53.3
87.5°	26.2	25.4	22.8	21.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)