

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: P709202

Luminaire Tested: **4APN-24-26L950-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709202
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-24-26L950-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

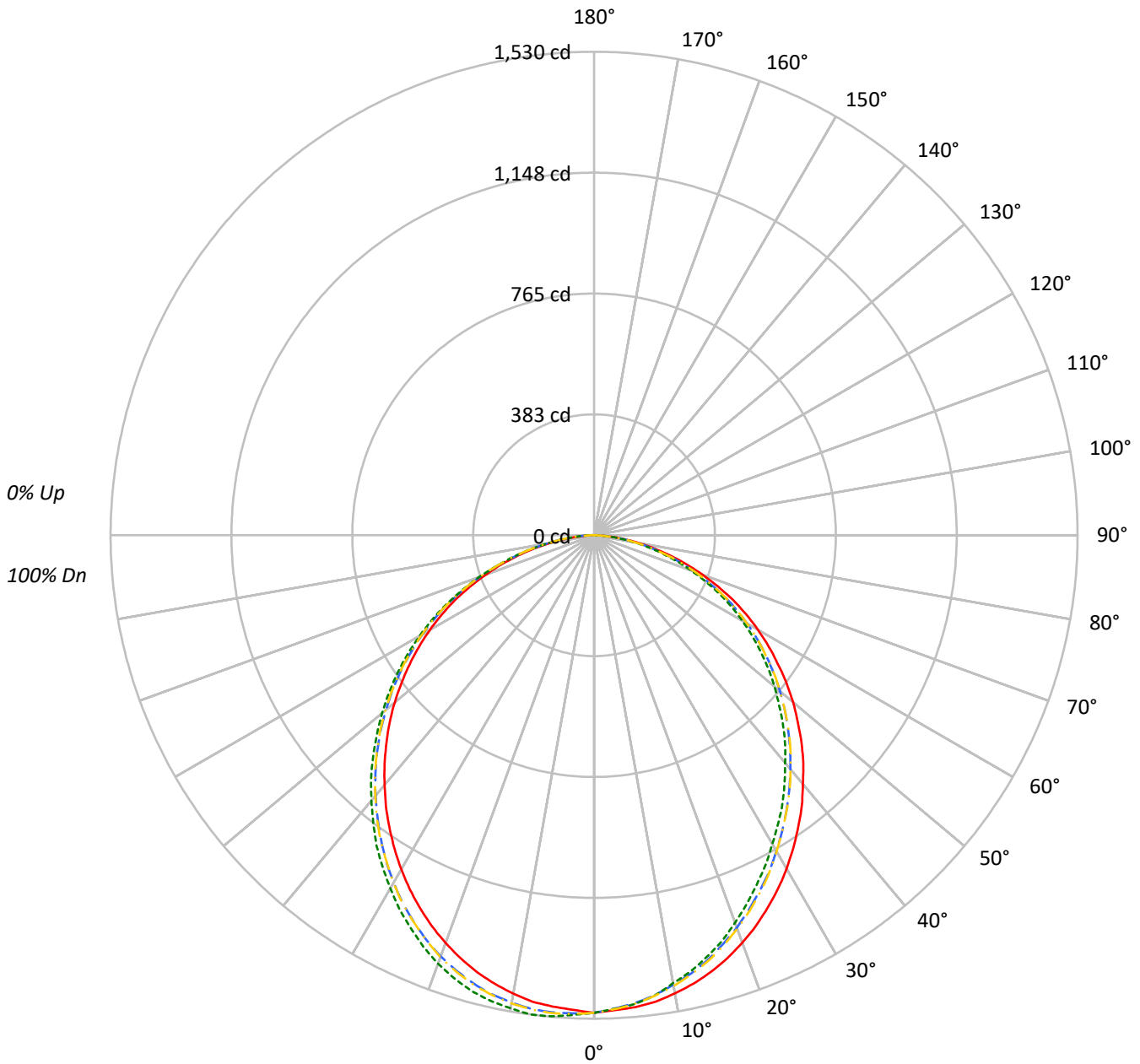
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3995.1 lumens
Efficiency: N/A
Efficacy: 71.3 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	13944	13944	13944	13944
5°	13882	13792	13866	14153
10°	13793	13486	13802	14242
15°	13665	13190	13673	14266
20°	13471	12809	13480	14168
25°	13235	12404	13262	13967
30°	12981	12017	13000	13738
35°	12685	11705	12715	13515
40°	12378	11330	12420	13200
45°	12112	11024	12124	12899
50°	11796	10700	11821	12559
55°	11421	10349	11462	12206
60°	11053	9990	11070	11758
65°	10597	9551	10597	11236
70°	9841	8835	9816	10437
75°	8923	8003	8858	9397
80°	7688	6886	7545	8065
85°	5918	5261	5727	6479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.7	3.6
10°-20°	404.1	10.1
20°-30°	598.3	15.0
30°-40°	702.0	17.6
40°-50°	711.4	17.8
50°-60°	631.4	15.8
60°-70°	474.0	11.9
70°-80°	263.2	6.6
80°-90°	68.0	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°	1145.1	28.7
0°-40°	1847.1	46.2
0°-60°	3189.9	79.8
0°-90°	3995.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3995.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1511	1511	1511	1511	1511	
5°	1499	1489	1497	1528	1499	142
15°	1431	1381	1432	1494	1431	403
25°	1300	1218	1303	1372	1300	599
35°	1126	1039	1129	1200	1126	705
45°	928	845	929	989	928	716
55°	710	643	713	759	710	636
65°	485	438	485	515	485	479
75°	250	224	248	264	250	266
85°	56	50	54	61	56	67
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°	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4
2.5°	1504.3	1507.8	1512.3	1507.8	1500.7	1497.2	1497.2	1496.3	1498.9	1499.8	1498.9
5°	1498.9	1500.7	1501.6	1496.3	1488.3	1483.9	1482.1	1481.2	1484.7	1489.2	1484.7
7.5°	1489.2	1488.3	1487.4	1480.3	1471.4	1465.2	1462.6	1461.7	1465.2	1469.7	1466.1
10°	1472.3	1471.4	1468.8	1459.9	1448.4	1440.4	1437.7	1435.0	1437.7	1439.5	1437.7
12.5°	1453.7	1450.1	1446.6	1436.8	1424.4	1415.5	1411.1	1407.5	1411.1	1413.7	1412.0
15°	1430.6	1425.3	1419.1	1408.4	1396.0	1386.2	1380.9	1377.4	1380.0	1380.9	1380.9
17.5°	1403.1	1396.9	1390.7	1377.4	1362.3	1351.6	1345.4	1341.0	1344.5	1346.3	1346.3
20°	1372.0	1364.9	1356.9	1342.7	1326.8	1315.2	1308.1	1302.8	1303.7	1304.6	1304.6
22.5°	1338.3	1329.4	1319.7	1304.6	1287.7	1275.3	1268.2	1262.0	1262.0	1262.9	1262.9
25°	1300.1	1290.4	1280.6	1265.5	1247.8	1234.5	1225.6	1219.4	1219.4	1218.5	1220.3
27.5°	1261.1	1250.4	1240.7	1224.7	1206.1	1192.8	1183.9	1177.7	1176.8	1175.9	1177.7
30°	1218.5	1206.1	1195.4	1178.6	1160.8	1147.5	1138.6	1131.5	1129.8	1128.0	1129.8
32.5°	1173.2	1161.7	1150.2	1132.4	1114.7	1101.4	1092.5	1085.4	1084.5	1083.6	1085.4
35°	1126.2	1113.8	1103.1	1086.3	1068.5	1055.2	1045.4	1039.2	1039.2	1039.2	1039.2
37.5°	1080.1	1067.6	1056.1	1039.2	1021.5	1008.2	998.4	992.2	990.4	989.5	990.4
40°	1027.7	1017.0	1006.4	990.4	972.7	959.4	951.4	944.3	942.5	940.7	943.4
42.5°	979.8	969.1	957.6	942.5	924.7	911.4	902.6	896.3	895.5	894.6	895.5
45°	928.3	915.9	904.3	890.1	874.2	861.7	852.9	846.6	845.8	844.9	845.8
47.5°	874.2	864.4	854.6	840.4	824.5	812.0	804.0	796.9	795.2	793.4	795.2
50°	821.8	811.1	801.4	788.1	773.0	761.5	754.4	748.1	746.4	745.5	746.4
52.5°	766.8	757.0	748.1	734.8	722.4	710.9	702.9	697.6	696.7	695.8	696.7
55°	710.0	701.1	693.1	682.5	670.0	659.4	652.3	646.1	645.2	643.4	645.2
57.5°	655.0	647.9	639.9	628.3	616.8	607.0	600.8	595.5	594.6	593.7	594.6
60°	599.0	591.9	584.8	575.1	563.5	553.8	548.5	544.0	542.2	541.4	542.2
62.5°	543.1	536.0	530.7	520.9	510.3	502.3	497.0	492.5	490.8	489.9	490.8
65°	485.4	479.2	473.0	464.1	456.2	449.9	444.6	440.2	438.4	437.5	437.5
67.5°	424.2	418.9	414.4	406.5	397.6	391.4	386.1	382.5	380.7	379.8	380.7
70°	364.8	360.3	355.9	349.7	342.6	337.2	333.7	330.1	328.4	327.5	327.5
72.5°	308.0	304.4	300.0	294.6	289.3	284.0	280.4	277.8	276.0	275.1	275.1
75°	250.3	246.7	244.9	240.5	235.2	231.6	228.1	226.3	224.5	224.5	224.5
77.5°	196.1	194.4	192.6	188.1	184.6	181.0	178.4	177.5	175.7	175.7	175.7
80°	144.7	143.8	142.9	140.2	136.7	133.1	131.3	130.5	129.6	129.6	129.6
82.5°	97.6	97.6	96.7	94.1	91.4	90.5	88.7	87.9	87.9	87.9	87.9
85°	55.9	55.9	55.9	55.0	53.2	53.2	51.5	50.6	49.7	49.7	49.7
87.5°	22.2	23.1	24.0	23.1	21.3	21.3	21.3	21.3	21.3	21.3	21.3
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°	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4
2.5°	1496.3	1498.1	1498.9	1503.4	1508.7	1512.3	1507.8	1503.4	1510.5	1518.5	1518.5
5°	1481.2	1483.0	1485.6	1491.0	1498.1	1502.5	1500.7	1497.2	1507.8	1516.7	1517.6
7.5°	1462.6	1464.3	1467.9	1473.2	1482.1	1488.3	1488.3	1489.2	1498.9	1509.6	1512.3
10°	1435.0	1439.5	1444.8	1452.8	1461.7	1469.7	1472.3	1473.2	1485.6	1497.2	1500.7
12.5°	1409.3	1413.7	1419.1	1427.9	1438.6	1447.5	1450.1	1453.7	1467.0	1480.3	1485.6
15°	1380.0	1384.5	1390.7	1399.5	1411.1	1420.8	1426.2	1431.5	1444.8	1459.0	1465.2
17.5°	1345.4	1349.8	1356.1	1366.7	1380.0	1391.6	1397.8	1404.0	1419.1	1434.2	1440.4
20°	1304.6	1310.8	1319.7	1330.3	1345.4	1358.7	1365.8	1372.9	1388.9	1404.0	1411.1
22.5°	1262.9	1270.0	1279.7	1292.2	1308.1	1322.3	1331.2	1340.1	1356.1	1371.1	1379.1
25°	1221.2	1229.1	1238.9	1252.2	1267.3	1281.5	1292.2	1302.8	1318.8	1334.8	1342.7
27.5°	1178.6	1185.7	1195.4	1208.7	1225.6	1240.7	1251.3	1262.9	1278.8	1295.7	1303.7
30°	1131.5	1139.5	1148.4	1161.7	1180.3	1197.2	1207.8	1220.3	1236.2	1253.1	1261.1
32.5°	1086.3	1093.4	1102.2	1115.6	1134.2	1151.9	1163.5	1175.9	1191.9	1208.7	1215.8
35°	1039.2	1046.3	1056.1	1069.4	1088.0	1104.9	1116.4	1128.9	1144.0	1159.9	1167.9
37.5°	993.1	1000.2	1009.9	1023.3	1041.0	1057.9	1069.4	1081.8	1096.9	1112.0	1119.1
40°	945.2	952.3	960.2	973.6	991.3	1008.2	1018.8	1031.2	1046.3	1062.3	1069.4
42.5°	896.3	903.4	913.2	926.5	943.4	958.5	970.0	981.5	995.7	1009.9	1017.0
45°	847.5	853.7	863.5	875.9	891.9	906.1	917.6	929.2	942.5	955.8	962.9
47.5°	796.9	804.0	812.0	824.5	840.4	855.5	867.1	877.7	890.1	903.4	909.7
50°	748.1	754.4	762.3	773.9	789.0	803.2	812.9	823.6	835.1	847.5	852.9
52.5°	697.6	703.8	711.8	723.3	735.7	749.0	757.9	767.7	779.2	790.7	796.1
55°	646.1	650.5	657.6	668.3	681.6	694.0	702.9	712.6	722.4	732.2	738.4
57.5°	595.5	600.8	607.9	617.7	629.2	640.8	648.7	656.7	666.5	676.3	680.7
60°	544.0	548.5	553.8	562.7	574.2	584.0	591.9	599.9	607.9	616.8	621.2
62.5°	491.7	496.1	501.4	510.3	520.1	528.9	536.0	543.1	550.2	558.2	562.7
65°	439.3	443.7	449.1	455.3	463.3	471.2	478.3	485.4	490.8	496.1	500.5
67.5°	382.5	386.9	392.3	397.6	404.7	412.7	418.0	424.2	429.5	435.7	438.4
70°	329.3	332.8	338.1	342.6	348.8	354.1	358.5	363.9	367.4	372.7	377.2
72.5°	276.9	280.4	284.9	289.3	292.9	297.3	302.6	307.1	311.5	316.8	318.6
75°	226.3	228.1	231.6	235.2	238.7	242.3	244.9	248.5	252.0	255.6	258.3
77.5°	176.6	178.4	181.9	184.6	187.3	189.9	191.7	193.5	197.0	199.7	202.3
80°	129.6	131.3	134.0	136.7	139.3	142.0	142.0	142.0	146.4	150.0	150.9
82.5°	87.9	88.7	90.5	92.3	94.1	95.8	95.8	95.0	97.6	100.3	102.1
85°	50.6	51.5	53.2	53.2	54.1	54.1	54.1	54.1	55.9	58.6	60.3
87.5°	20.4	20.4	21.3	21.3	22.2	22.2	21.3	20.4	22.2	24.8	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



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CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4
2.5°	1514.9	1514.0	1516.7	1517.6	1519.4	1519.4	1520.2	1520.2	1518.5	1515.8	1516.7
5°	1515.8	1515.8	1518.5	1521.1	1524.7	1528.2	1525.6	1522.9	1521.1	1518.5	1517.6
7.5°	1511.4	1513.1	1515.8	1520.2	1524.7	1530.0	1526.5	1522.9	1518.5	1514.9	1513.1
10°	1500.7	1502.5	1506.9	1511.4	1515.8	1520.2	1516.7	1513.1	1509.6	1505.2	1503.4
12.5°	1487.4	1490.1	1495.4	1499.8	1504.3	1509.6	1505.2	1500.7	1496.3	1491.8	1489.2
15°	1467.9	1471.4	1477.6	1483.0	1489.2	1493.6	1490.1	1486.5	1481.2	1475.0	1470.5
17.5°	1443.0	1448.4	1454.6	1460.8	1466.1	1470.5	1467.9	1464.3	1458.1	1451.0	1445.7
20°	1415.5	1420.8	1426.2	1432.4	1438.6	1443.0	1439.5	1435.0	1428.8	1423.5	1418.2
22.5°	1383.6	1388.9	1395.1	1400.4	1405.8	1410.2	1405.8	1400.4	1395.1	1389.8	1384.5
25°	1347.2	1352.5	1359.6	1364.9	1368.5	1372.0	1368.5	1364.0	1358.7	1353.4	1348.1
27.5°	1309.0	1314.3	1321.4	1326.8	1330.3	1333.9	1330.3	1325.9	1320.6	1315.2	1309.9
30°	1266.4	1271.7	1278.8	1284.2	1286.8	1289.5	1285.9	1282.4	1278.0	1272.6	1267.3
32.5°	1221.2	1226.5	1231.8	1237.1	1241.6	1245.1	1241.6	1238.0	1232.7	1225.6	1220.3
35°	1173.2	1178.6	1184.8	1190.1	1195.4	1199.9	1194.5	1188.3	1183.9	1179.5	1175.0
37.5°	1122.7	1128.9	1136.0	1142.2	1144.0	1147.5	1144.0	1140.4	1136.0	1131.5	1126.2
40°	1073.0	1078.3	1084.5	1090.7	1093.4	1096.0	1092.5	1088.9	1083.6	1079.2	1073.8
42.5°	1021.5	1026.8	1032.1	1037.5	1041.0	1044.6	1041.0	1035.7	1032.1	1028.6	1024.1
45°	968.2	973.6	978.0	983.3	986.0	988.6	985.1	980.7	977.1	974.4	970.0
47.5°	914.1	918.5	923.0	927.4	929.2	931.8	928.3	925.6	923.0	920.3	916.8
50°	857.3	861.7	867.1	871.5	872.4	875.0	871.5	868.8	866.2	863.5	860.8
52.5°	801.4	804.9	809.4	813.8	815.6	817.4	813.8	810.3	807.6	805.8	803.2
55°	742.8	746.4	750.8	754.4	757.0	758.8	755.2	751.7	749.0	748.1	745.5
57.5°	684.2	687.8	692.2	695.8	697.6	699.3	695.8	692.2	690.5	688.7	686.9
60°	624.8	628.3	631.9	634.5	636.3	637.2	633.7	631.0	630.1	629.2	627.4
62.5°	566.2	568.0	571.5	573.3	575.1	576.0	573.3	571.5	570.6	569.8	568.9
65°	505.0	509.4	512.1	513.8	513.8	514.7	512.1	511.2	510.3	509.4	507.6
67.5°	442.0	445.5	447.3	449.1	449.1	449.1	449.1	449.1	448.2	446.4	444.6
70°	381.6	384.3	386.1	386.9	386.9	386.9	385.2	384.3	385.2	385.2	384.3
72.5°	320.4	322.2	323.0	323.9	323.0	323.0	323.0	324.8	324.8	323.9	322.2
75°	260.9	262.7	263.6	264.5	263.6	263.6	263.6	265.4	264.5	264.5	263.6
77.5°	205.0	205.9	205.9	206.8	205.9	205.9	206.8	208.6	207.7	207.7	207.7
80°	151.8	151.8	151.8	152.6	151.8	151.8	152.6	154.4	153.5	153.5	153.5
82.5°	102.9	103.8	103.8	103.8	104.7	105.6	105.6	105.6	105.6	105.6	104.7
85°	61.2	62.1	61.2	61.2	61.2	61.2	62.1	63.0	63.0	63.0	63.0
87.5°	26.6	27.5	26.6	25.7	24.8	24.8	26.6	28.4	28.4	27.5	27.5
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: P709202
 CATALOG NUMBER: 4APN-24-26L950-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1511.4	1511.4	1511.4	1511.4
2.5°	1520.2	1520.2	1512.3	1504.3
5°	1519.4	1517.6	1508.7	1498.9
7.5°	1514.0	1511.4	1499.8	1489.2
10°	1501.6	1498.1	1485.6	1472.3
12.5°	1486.5	1481.2	1467.0	1453.7
15°	1467.0	1460.8	1445.7	1430.6
17.5°	1441.3	1434.2	1419.1	1403.1
20°	1413.7	1405.8	1388.9	1372.0
22.5°	1380.0	1372.9	1355.2	1338.3
25°	1343.6	1335.6	1317.9	1300.1
27.5°	1304.6	1295.7	1278.0	1261.1
30°	1262.0	1253.1	1235.4	1218.5
32.5°	1216.7	1209.6	1191.9	1173.2
35°	1170.6	1161.7	1144.0	1126.2
37.5°	1121.8	1113.8	1096.9	1080.1
40°	1070.3	1062.3	1044.6	1027.7
42.5°	1019.7	1012.6	995.7	979.8
45°	965.6	958.5	942.5	928.3
47.5°	911.4	904.3	889.2	874.2
50°	856.4	849.3	835.1	821.8
52.5°	798.7	793.4	780.1	766.8
55°	741.0	734.8	721.5	710.0
57.5°	683.4	678.9	666.5	655.0
60°	623.9	618.6	608.8	599.0
62.5°	566.2	561.8	552.0	543.1
65°	505.0	501.4	493.4	485.4
67.5°	442.0	439.3	431.3	424.2
70°	381.6	377.2	371.0	364.8
72.5°	320.4	318.6	313.3	308.0
75°	261.8	260.0	254.7	250.3
77.5°	206.8	205.0	200.6	196.1
80°	152.6	151.8	148.2	144.7
82.5°	104.7	103.8	101.2	97.6
85°	63.0	61.2	58.6	55.9
87.5°	27.5	26.6	24.0	22.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)