

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: P

Luminaire Tested: **4APN-24-26L850-UNV-NP**

Issue Date: 06/06/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 06/06/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-24-26L850-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light  
w/ Nature Pattern Lens  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

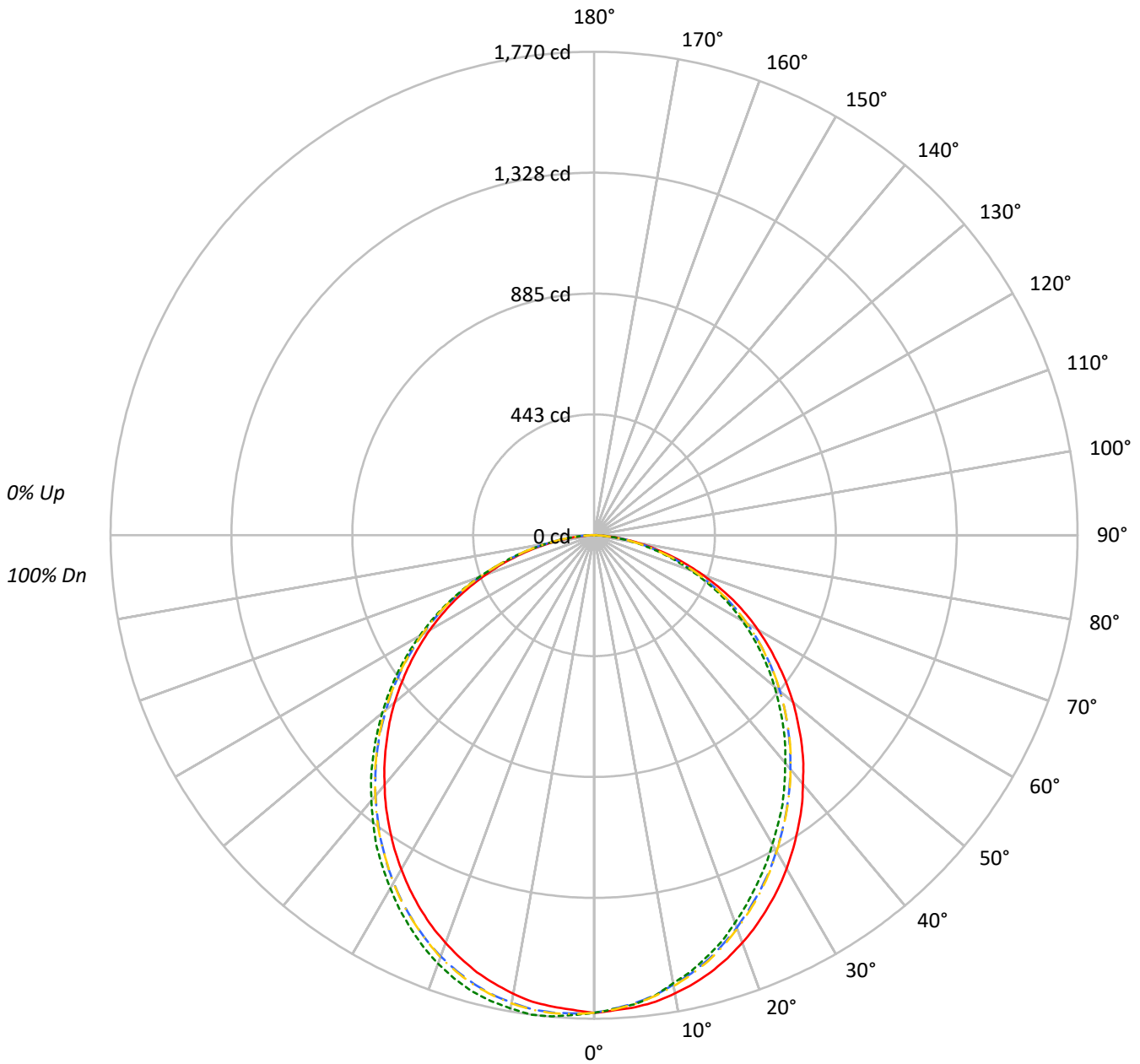
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4622.5 lumens  
Efficiency: N/A  
Efficacy: 82.5 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°	16135	16135	16135	16135
5°	16063	15957	16044	16376
10°	15960	15604	15970	16479
15°	15811	15261	15820	16507
20°	15587	14821	15596	16393
25°	15314	14352	15345	16161
30°	15019	13904	15043	15895
35°	14677	13544	14712	15637
40°	14321	13109	14371	15273
45°	14015	12756	14028	14925
50°	13649	12380	13677	14531
55°	13214	11974	13262	14121
60°	12791	11559	12810	13605
65°	12263	11053	12263	13003
70°	11384	10221	11357	12077
75°	10323	9261	10249	10872
80°	8889	7964	8730	9325
85°	6849	6087	6627	7495



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.1	3.6
10°-20°	467.6	10.1
20°-30°	692.3	15.0
30°-40°	812.2	17.6
40°-50°	823.1	17.8
50°-60°	730.5	15.8
60°-70°	548.5	11.9
70°-80°	304.5	6.6
80°-90°	78.6	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°	1325.0	28.7
0°-40°	2137.2	46.2
0°-60°	3690.9	79.8
0°-90°	4622.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4622.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1749	1749	1749	1749	1749	
5°	1734	1723	1732	1768	1734	165
15°	1655	1598	1656	1728	1655	466
25°	1504	1410	1507	1588	1504	693
35°	1303	1202	1306	1388	1303	816
45°	1074	978	1075	1144	1074	828
55°	822	744	824	878	822	735
65°	562	506	562	596	562	554
75°	290	260	288	305	290	308
85°	65	58	63	71	65	78
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°	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8
2.5°	1740.6	1744.6	1749.8	1744.6	1736.4	1732.3	1732.3	1731.2	1734.4	1735.4	1734.4
5°	1734.4	1736.4	1737.4	1731.2	1722.0	1716.9	1714.8	1713.8	1718.0	1723.0	1718.0
7.5°	1723.0	1722.0	1721.0	1712.8	1702.5	1695.4	1692.2	1691.2	1695.4	1700.4	1696.4
10°	1703.6	1702.5	1699.4	1689.2	1675.8	1666.6	1663.5	1660.4	1663.5	1665.6	1663.5
12.5°	1682.0	1677.9	1673.8	1662.5	1648.1	1637.8	1632.7	1628.6	1632.7	1635.8	1633.7
15°	1655.3	1649.1	1641.9	1629.6	1615.3	1603.9	1597.7	1593.7	1596.7	1597.7	1597.7
17.5°	1623.5	1616.3	1609.1	1593.7	1576.3	1563.9	1556.7	1551.5	1555.7	1557.7	1557.7
20°	1587.5	1579.3	1570.1	1553.7	1535.1	1521.8	1513.6	1507.4	1508.5	1509.5	1509.5
22.5°	1548.5	1538.3	1526.9	1509.5	1490.0	1475.6	1467.4	1460.2	1460.2	1461.2	1461.2
25°	1504.3	1493.0	1481.7	1464.3	1443.8	1428.4	1418.0	1410.9	1410.9	1409.8	1412.0
27.5°	1459.2	1446.8	1435.6	1417.0	1395.4	1380.0	1369.8	1362.6	1361.6	1360.6	1362.6
30°	1409.8	1395.4	1383.2	1363.6	1343.1	1327.7	1317.4	1309.2	1307.2	1305.1	1307.2
32.5°	1357.5	1344.2	1330.8	1310.3	1289.7	1274.3	1264.1	1255.9	1254.8	1253.8	1255.9
35°	1303.1	1288.7	1276.4	1256.9	1236.3	1220.9	1209.7	1202.5	1202.5	1202.5	1202.5
37.5°	1249.7	1235.3	1221.9	1202.5	1181.9	1166.5	1155.2	1148.0	1146.0	1144.9	1146.0
40°	1189.1	1176.7	1164.5	1146.0	1125.4	1110.0	1100.8	1092.6	1090.5	1088.4	1091.6
42.5°	1133.6	1121.3	1108.0	1090.5	1070.0	1054.6	1044.3	1037.2	1036.1	1035.0	1036.1
45°	1074.1	1059.7	1046.4	1030.0	1011.4	997.1	986.8	979.6	978.6	977.6	978.6
47.5°	1011.4	1000.2	988.8	972.4	953.9	939.6	930.3	922.1	920.1	918.0	920.1
50°	950.9	938.5	927.3	911.9	894.4	881.1	872.9	865.7	863.5	862.5	863.5
52.5°	887.2	875.9	865.7	850.3	835.9	822.5	813.3	807.1	806.1	805.1	806.1
55°	821.5	811.2	802.0	789.7	775.3	763.0	754.7	747.6	746.5	744.4	746.5
57.5°	757.8	749.6	740.4	727.0	713.6	702.4	695.2	689.0	688.0	687.0	688.0
60°	693.2	685.0	676.7	665.4	652.0	640.8	634.6	629.4	627.4	626.4	627.4
62.5°	628.4	620.2	614.1	602.8	590.4	581.2	575.1	569.9	567.9	566.8	567.9
65°	561.7	554.5	547.3	537.1	527.8	520.7	514.5	509.3	507.3	506.3	506.3
67.5°	490.9	484.7	479.5	470.3	460.0	452.9	446.7	442.6	440.5	439.5	440.5
70°	422.0	416.9	411.8	404.6	396.4	390.2	386.1	382.0	380.0	378.9	378.9
72.5°	356.4	352.2	347.0	341.0	334.8	328.6	324.5	321.4	319.4	318.4	318.4
75°	289.6	285.5	283.4	278.3	272.1	268.0	263.9	261.8	259.8	259.8	259.8
77.5°	226.9	224.9	222.8	217.7	213.6	209.5	206.4	205.3	203.3	203.3	203.3
80°	167.3	166.3	165.3	162.3	158.1	154.1	151.9	150.9	149.9	149.9	149.9
82.5°	112.9	112.9	111.9	108.9	105.8	104.7	102.7	101.7	101.7	101.7	101.7
85°	64.7	64.7	64.7	63.7	61.6	61.6	59.6	58.5	57.5	57.5	57.5
87.5°	25.6	26.7	27.8	26.7	24.6	24.6	24.6	24.6	24.6	24.6	24.6
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°	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8
2.5°	1731.2	1733.4	1734.4	1739.4	1745.6	1749.8	1744.6	1739.4	1747.7	1757.0	1757.0
5°	1713.8	1715.8	1719.0	1725.2	1733.4	1738.4	1736.4	1732.3	1744.6	1754.8	1755.9
7.5°	1692.2	1694.3	1698.4	1704.6	1714.8	1722.0	1722.0	1723.0	1734.4	1746.6	1749.8
10°	1660.4	1665.6	1671.7	1681.0	1691.2	1700.4	1703.6	1704.6	1719.0	1732.3	1736.4
12.5°	1630.6	1635.8	1641.9	1652.2	1664.5	1674.8	1677.9	1682.0	1697.4	1712.8	1719.0
15°	1596.7	1601.9	1609.1	1619.3	1632.7	1644.0	1650.1	1656.3	1671.7	1688.2	1695.4
17.5°	1556.7	1561.9	1569.1	1581.3	1596.7	1610.1	1617.3	1624.5	1641.9	1659.4	1666.6
20°	1509.5	1516.7	1526.9	1539.3	1556.7	1572.1	1580.3	1588.5	1607.0	1624.5	1632.7
22.5°	1461.2	1469.4	1480.7	1495.1	1513.6	1530.0	1540.3	1550.5	1569.1	1586.5	1595.7
25°	1413.0	1422.2	1433.5	1448.9	1466.3	1482.8	1495.1	1507.4	1525.9	1544.4	1553.7
27.5°	1363.6	1371.8	1383.2	1398.6	1418.0	1435.6	1447.8	1461.2	1479.7	1499.2	1508.5
30°	1309.2	1318.5	1328.8	1344.2	1365.7	1385.2	1397.6	1412.0	1430.4	1449.9	1459.2
32.5°	1256.9	1265.1	1275.3	1290.7	1312.3	1332.8	1346.2	1360.6	1379.0	1398.6	1406.8
35°	1202.5	1210.7	1221.9	1237.3	1258.9	1278.4	1291.8	1306.2	1323.6	1342.1	1351.4
37.5°	1149.1	1157.3	1168.5	1183.9	1204.5	1224.0	1237.3	1251.7	1269.2	1286.7	1294.9
40°	1093.6	1101.8	1111.0	1126.5	1147.0	1166.5	1178.9	1193.2	1210.7	1229.1	1237.3
42.5°	1037.2	1045.4	1056.6	1072.0	1091.6	1109.0	1122.4	1135.7	1152.1	1168.5	1176.7
45°	980.6	987.8	999.2	1013.5	1032.0	1048.4	1061.8	1075.1	1090.5	1105.9	1114.1
47.5°	922.1	930.3	939.6	953.9	972.4	989.9	1003.2	1015.6	1030.0	1045.4	1052.6
50°	865.7	872.9	882.1	895.4	912.9	929.3	940.6	952.9	966.3	980.6	986.8
52.5°	807.1	814.3	823.5	836.9	851.3	866.7	876.9	888.3	901.5	914.9	921.1
55°	747.6	752.7	760.9	773.2	788.6	803.0	813.3	824.5	835.9	847.1	854.3
57.5°	689.0	695.2	703.4	714.6	728.0	741.4	750.6	759.9	771.2	782.5	787.6
60°	629.4	634.6	640.8	651.0	664.4	675.6	685.0	694.2	703.4	713.6	718.8
62.5°	568.9	574.0	580.2	590.4	601.7	612.0	620.2	628.4	636.6	645.9	651.0
65°	508.3	513.5	519.5	526.7	536.1	545.3	553.5	561.7	567.9	574.0	579.1
67.5°	442.6	447.7	453.9	460.0	468.3	477.5	483.7	490.9	497.0	504.1	507.3
70°	381.0	385.0	391.2	396.4	403.6	409.7	414.8	421.0	425.1	431.3	436.4
72.5°	320.4	324.5	329.6	334.8	338.8	344.0	350.2	355.2	360.4	366.6	368.6
75°	261.8	263.9	268.0	272.1	276.2	280.3	283.4	287.5	291.6	295.8	298.8
77.5°	204.3	206.4	210.5	213.6	216.7	219.7	221.8	223.9	227.9	231.1	234.1
80°	149.9	151.9	155.1	158.1	161.3	164.3	164.3	164.3	169.5	173.5	174.5
82.5°	101.7	102.7	104.7	106.8	108.9	110.9	110.9	109.9	112.9	116.1	118.1
85°	58.5	59.6	61.6	61.6	62.6	62.6	62.6	62.6	64.7	67.8	69.8
87.5°	23.6	23.6	24.6	24.6	25.6	25.6	24.6	23.6	25.6	28.8	29.8
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°	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8	1748.8
2.5°	1752.8	1751.8	1754.8	1755.9	1758.0	1758.0	1759.0	1759.0	1757.0	1753.8	1754.8
5°	1753.8	1753.8	1757.0	1760.0	1764.2	1768.2	1765.2	1762.0	1760.0	1757.0	1755.9
7.5°	1748.8	1750.8	1753.8	1759.0	1764.2	1770.3	1766.2	1762.0	1757.0	1752.8	1750.8
10°	1736.4	1738.4	1743.6	1748.8	1753.8	1759.0	1754.8	1750.8	1746.6	1741.6	1739.4
12.5°	1721.0	1724.0	1730.2	1735.4	1740.6	1746.6	1741.6	1736.4	1731.2	1726.2	1723.0
15°	1698.4	1702.5	1709.7	1715.8	1723.0	1728.2	1724.0	1720.0	1713.8	1706.6	1701.5
17.5°	1669.6	1675.8	1683.0	1690.2	1696.4	1701.5	1698.4	1694.3	1687.1	1678.9	1672.8
20°	1637.8	1644.0	1650.1	1657.3	1664.5	1669.6	1665.6	1660.4	1653.2	1647.1	1640.9
22.5°	1600.9	1607.0	1614.2	1620.4	1626.5	1631.7	1626.5	1620.4	1614.2	1608.1	1601.9
25°	1558.7	1564.9	1573.1	1579.3	1583.4	1587.5	1583.4	1578.3	1572.1	1565.9	1559.7
27.5°	1514.6	1520.7	1529.0	1535.1	1539.3	1543.3	1539.3	1534.1	1527.9	1521.8	1515.7
30°	1465.3	1471.5	1479.7	1485.9	1488.9	1492.0	1487.9	1483.8	1478.7	1472.5	1466.3
32.5°	1413.0	1419.1	1425.2	1431.4	1436.6	1440.7	1436.6	1432.4	1426.3	1418.0	1412.0
35°	1357.5	1363.6	1370.8	1377.0	1383.2	1388.3	1382.2	1375.0	1369.8	1364.7	1359.6
37.5°	1299.0	1306.2	1314.4	1321.6	1323.6	1327.7	1323.6	1319.5	1314.4	1309.2	1303.1
40°	1241.5	1247.7	1254.8	1262.0	1265.1	1268.1	1264.1	1259.9	1253.8	1248.7	1242.5
42.5°	1181.9	1188.1	1194.3	1200.4	1204.5	1208.6	1204.5	1198.3	1194.3	1190.1	1185.0
45°	1120.3	1126.5	1131.6	1137.7	1140.8	1143.9	1139.8	1134.7	1130.6	1127.5	1122.4
47.5°	1057.6	1062.8	1068.0	1073.0	1075.1	1078.2	1074.1	1071.0	1068.0	1064.8	1060.8
50°	992.0	997.1	1003.2	1008.4	1009.4	1012.4	1008.4	1005.3	1002.2	999.2	996.0
52.5°	927.3	931.3	936.5	941.6	943.7	945.7	941.6	937.5	934.4	932.4	929.3
55°	859.5	863.5	868.7	872.9	875.9	877.9	873.9	869.7	866.7	865.7	862.5
57.5°	791.7	795.8	800.9	805.1	807.1	809.1	805.1	800.9	798.9	796.8	794.8
60°	722.9	727.0	731.1	734.2	736.2	737.3	733.2	730.1	729.0	728.0	726.0
62.5°	655.2	657.2	661.3	663.4	665.4	666.4	663.4	661.3	660.2	659.2	658.2
65°	584.3	589.4	592.5	594.5	594.5	595.6	592.5	591.5	590.4	589.4	587.3
67.5°	511.3	515.5	517.5	519.5	519.5	519.5	519.5	519.5	518.5	516.5	514.5
70°	441.5	444.6	446.7	447.7	447.7	447.7	445.7	444.6	445.7	445.7	444.6
72.5°	370.7	372.8	373.8	374.8	373.8	373.8	373.8	375.8	375.8	374.8	372.8
75°	301.9	304.0	305.0	306.0	305.0	305.0	305.0	307.0	306.0	306.0	305.0
77.5°	237.2	238.2	238.2	239.3	238.2	238.2	239.3	241.3	240.3	240.3	240.3
80°	175.5	175.5	175.5	176.7	175.5	175.5	176.7	178.7	177.7	177.7	177.7
82.5°	119.1	120.1	120.1	120.1	121.2	122.2	122.2	122.2	122.2	122.2	121.2
85°	70.8	71.9	70.8	70.8	70.8	70.8	71.9	72.9	72.9	72.9	72.9
87.5°	30.8	31.8	30.8	29.8	28.8	28.8	30.8	32.8	32.8	31.8	31.8
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: P  
 CATALOG NUMBER: 4APN-24-26L850-UNV-NP

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1748.8	1748.8	1748.8	1748.8
2.5°	1759.0	1759.0	1749.8	1740.6
5°	1758.0	1755.9	1745.6	1734.4
7.5°	1751.8	1748.8	1735.4	1723.0
10°	1737.4	1733.4	1719.0	1703.6
12.5°	1720.0	1713.8	1697.4	1682.0
15°	1697.4	1690.2	1672.8	1655.3
17.5°	1667.6	1659.4	1641.9	1623.5
20°	1635.8	1626.5	1607.0	1587.5
22.5°	1596.7	1588.5	1568.0	1548.5
25°	1554.7	1545.4	1524.9	1504.3
27.5°	1509.5	1499.2	1478.7	1459.2
30°	1460.2	1449.9	1429.4	1409.8
32.5°	1407.8	1399.6	1379.0	1357.5
35°	1354.4	1344.2	1323.6	1303.1
37.5°	1297.9	1288.7	1269.2	1249.7
40°	1238.3	1229.1	1208.6	1189.1
42.5°	1179.9	1171.7	1152.1	1133.6
45°	1117.2	1109.0	1090.5	1074.1
47.5°	1054.6	1046.4	1028.9	1011.4
50°	990.9	982.7	966.3	950.9
52.5°	924.1	918.0	902.6	887.2
55°	857.5	850.3	834.9	821.5
57.5°	790.7	785.5	771.2	757.8
60°	721.8	715.7	704.4	693.2
62.5°	655.2	650.0	638.7	628.4
65°	584.3	580.2	570.9	561.7
67.5°	511.3	508.3	499.1	490.9
70°	441.5	436.4	429.2	422.0
72.5°	370.7	368.6	362.4	356.4
75°	302.9	300.8	294.7	289.6
77.5°	239.3	237.2	232.1	226.9
80°	176.7	175.5	171.5	167.3
82.5°	121.2	120.1	117.1	112.9
85°	72.9	70.8	67.8	64.7
87.5°	31.8	30.8	27.8	25.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)