

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-39-42L935-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-39-42L935-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

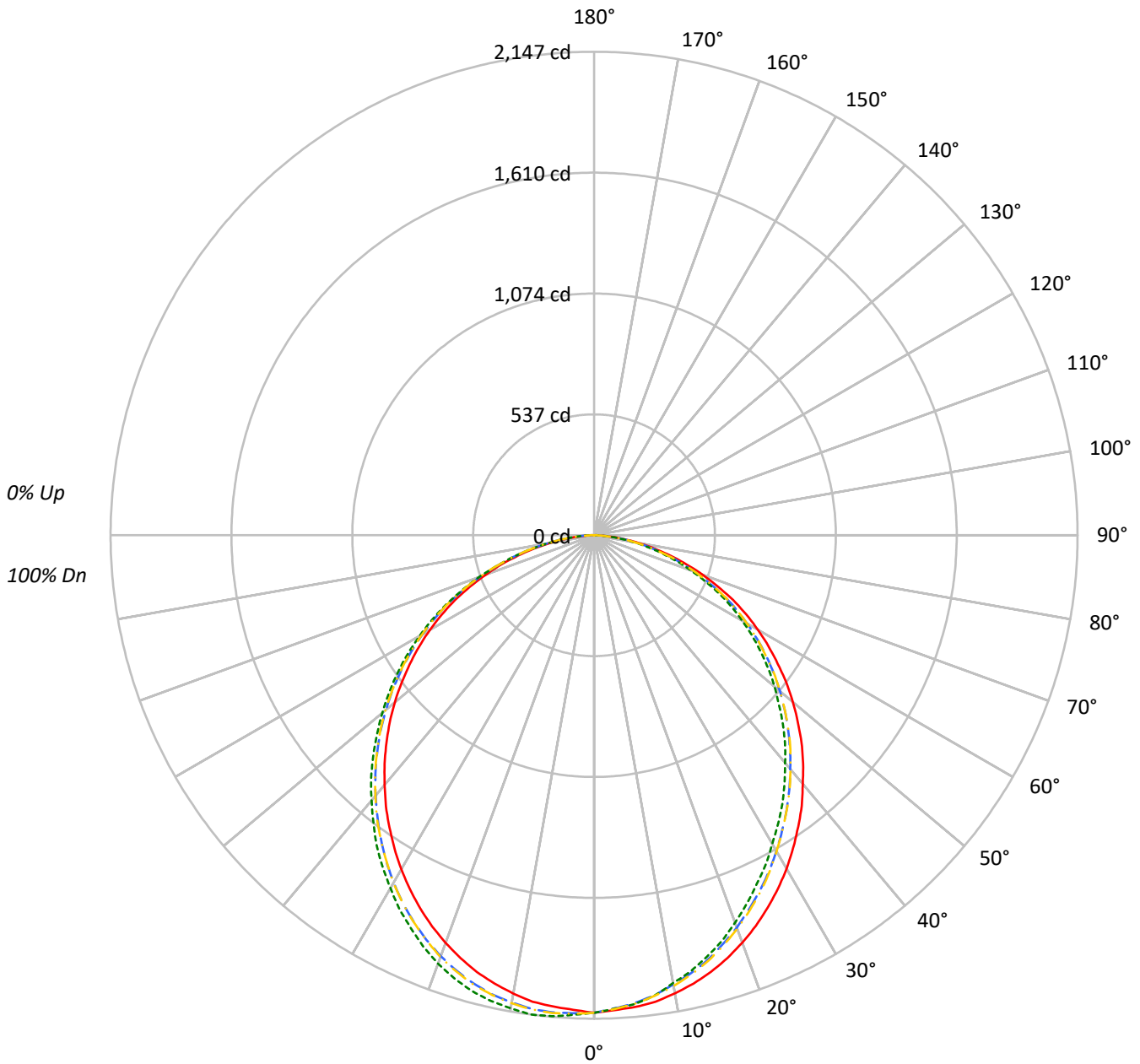
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5605.0 lumens
Efficiency: N/A
Efficacy: 60.9 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): 92
Input Voltage (V): 120
Input Current (A_{in}): 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°	19563	19563	19563	19563
5°	19477	19350	19454	19857
10°	19352	18920	19363	19982
15°	19171	18505	19184	20016
20°	18900	17970	18912	19877
25°	18569	17404	18607	19596
30°	18213	16859	18240	19273
35°	17796	16423	17839	18960
40°	17365	15896	17425	18520
45°	16993	15466	17009	18099
50°	16549	15012	16585	17620
55°	16023	14520	16082	17123
60°	15507	14015	15531	16496
65°	14869	13402	14869	15766
70°	13803	12393	13771	14645
75°	12516	11229	12427	13182
80°	10780	9659	10584	11312
85°	8310	7378	8045	9093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.3	3.6
10°-20°	566.9	10.1
20°-30°	839.4	15.0
30°-40°	984.8	17.6
40°-50°	998.1	17.8
50°-60°	885.8	15.8
60°-70°	665.0	11.9
70°-80°	369.3	6.6
80°-90°	95.4	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°	1606.6	28.7
0°-40°	2591.4	46.2
0°-60°	4475.3	79.8
0°-90°	5605.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5605.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2120	2120	2120	2120	2120	
5°	2103	2089	2100	2144	2103	200
15°	2007	1937	2008	2096	2007	566
25°	1824	1710	1828	1925	1824	840
35°	1580	1458	1584	1683	1580	989
45°	1302	1185	1304	1387	1302	1004
55°	996	903	1000	1064	996	892
65°	681	614	681	722	681	671
75°	351	315	349	370	351	373
85°	78	70	76	86	78	95
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°	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4
2.5°	2110.5	2115.4	2121.6	2115.4	2105.5	2100.5	2100.5	2099.2	2103.0	2104.2	2103.0
5°	2103.0	2105.5	2106.7	2099.2	2088.1	2081.8	2079.3	2078.1	2083.1	2089.3	2083.1
7.5°	2089.3	2088.1	2086.8	2076.8	2064.4	2055.7	2051.9	2050.7	2055.7	2061.9	2056.9
10°	2065.6	2064.4	2060.7	2048.2	2032.0	2020.8	2017.1	2013.4	2017.1	2019.5	2017.1
12.5°	2039.5	2034.5	2029.5	2015.9	1998.4	1986.0	1979.7	1974.7	1979.7	1983.5	1980.9
15°	2007.1	1999.6	1991.0	1975.9	1958.5	1944.9	1937.4	1932.4	1936.1	1937.4	1937.4
17.5°	1968.5	1959.8	1951.0	1932.4	1911.2	1896.3	1887.6	1881.3	1886.3	1888.8	1888.8
20°	1925.0	1915.0	1903.7	1883.8	1861.4	1845.3	1835.2	1827.8	1829.1	1830.3	1830.3
22.5°	1877.7	1865.2	1851.5	1830.3	1806.7	1789.2	1779.3	1770.5	1770.5	1771.8	1771.8
25°	1824.1	1810.3	1796.7	1775.5	1750.6	1732.0	1719.5	1710.8	1710.8	1709.6	1712.1
27.5°	1769.3	1754.4	1740.6	1718.2	1692.1	1673.4	1661.0	1652.2	1651.0	1649.7	1652.2
30°	1709.6	1692.1	1677.1	1653.5	1628.6	1609.9	1597.5	1587.5	1585.0	1582.5	1585.0
32.5°	1646.0	1629.8	1613.7	1588.8	1563.9	1545.2	1532.7	1522.8	1521.5	1520.3	1522.8
35°	1580.0	1562.6	1547.7	1524.0	1499.1	1480.5	1466.7	1458.1	1458.1	1458.1	1458.1
37.5°	1515.3	1497.9	1481.7	1458.1	1433.2	1414.4	1400.7	1392.0	1389.5	1388.3	1389.5
40°	1441.8	1426.9	1412.0	1389.5	1364.7	1345.9	1334.8	1324.8	1322.3	1319.8	1323.5
42.5°	1374.6	1359.7	1343.4	1322.3	1297.4	1278.7	1266.3	1257.5	1256.3	1255.0	1256.3
45°	1302.4	1285.0	1268.8	1248.8	1226.4	1209.0	1196.6	1187.8	1186.6	1185.3	1186.6
47.5°	1226.4	1212.7	1199.1	1179.1	1156.7	1139.3	1128.1	1118.1	1115.6	1113.1	1115.6
50°	1153.0	1138.0	1124.3	1105.7	1084.5	1068.3	1058.4	1049.6	1047.1	1045.9	1047.1
52.5°	1075.8	1062.1	1049.6	1031.0	1013.6	997.3	986.1	978.6	977.4	976.1	977.4
55°	996.1	983.6	972.4	957.5	940.1	925.1	915.2	906.4	905.2	902.7	905.2
57.5°	918.9	908.9	897.8	881.5	865.4	851.7	842.9	835.4	834.2	832.9	834.2
60°	840.4	830.4	820.5	806.8	790.6	777.0	769.5	763.2	760.7	759.5	760.7
62.5°	762.0	752.1	744.6	730.9	715.9	704.7	697.2	691.0	688.5	687.3	688.5
65°	681.1	672.3	663.7	651.2	640.0	631.3	623.8	617.6	615.1	613.9	613.9
67.5°	595.2	587.7	581.5	570.3	557.8	549.1	541.6	536.6	534.1	532.9	534.1
70°	511.7	505.5	499.3	490.6	480.6	473.2	468.2	463.2	460.7	459.4	459.4
72.5°	432.0	427.1	420.8	413.3	405.9	398.4	393.4	389.7	387.2	385.9	385.9
75°	351.1	346.1	343.6	337.5	330.0	325.0	320.0	317.5	315.0	315.0	315.0
77.5°	275.1	272.6	270.1	264.0	259.0	254.0	250.2	249.0	246.5	246.5	246.5
80°	202.9	201.7	200.4	196.8	191.8	186.8	184.3	183.0	181.8	181.8	181.8
82.5°	136.9	136.9	135.7	131.9	128.3	127.0	124.5	123.3	123.3	123.3	123.3
85°	78.5	78.5	78.5	77.2	74.7	74.7	72.2	71.0	69.7	69.7	69.7
87.5°	31.2	32.4	33.7	32.4	29.9	29.9	29.9	29.9	29.9	29.9	29.9
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°	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4
2.5°	2099.2	2101.7	2103.0	2109.2	2116.6	2121.6	2115.4	2109.2	2119.1	2130.4	2130.4
5°	2078.1	2080.6	2084.3	2091.7	2101.7	2108.0	2105.5	2100.5	2115.4	2127.9	2129.2
7.5°	2051.9	2054.4	2059.4	2066.8	2079.3	2088.1	2088.1	2089.3	2103.0	2117.9	2121.6
10°	2013.4	2019.5	2027.0	2038.3	2050.7	2061.9	2065.6	2066.8	2084.3	2100.5	2105.5
12.5°	1977.2	1983.5	1991.0	2003.4	2018.4	2030.8	2034.5	2039.5	2058.2	2076.8	2084.3
15°	1936.1	1942.4	1951.0	1963.5	1979.7	1993.5	2000.9	2008.4	2027.0	2046.9	2055.7
17.5°	1887.6	1893.8	1902.5	1917.5	1936.1	1952.3	1961.0	1969.8	1991.0	2012.1	2020.8
20°	1830.3	1839.0	1851.5	1866.4	1887.6	1906.2	1916.2	1926.2	1948.6	1969.8	1979.7
22.5°	1771.8	1781.8	1795.4	1812.8	1835.2	1855.2	1867.7	1880.1	1902.5	1923.7	1934.9
25°	1713.3	1724.5	1738.2	1756.9	1778.0	1797.9	1812.8	1827.8	1850.3	1872.7	1883.8
27.5°	1653.5	1663.5	1677.1	1695.8	1719.5	1740.6	1755.6	1771.8	1794.2	1817.8	1829.1
30°	1587.5	1598.7	1611.2	1629.8	1656.0	1679.6	1694.5	1712.1	1734.5	1758.1	1769.3
32.5°	1524.0	1533.9	1546.4	1565.1	1591.3	1616.2	1632.3	1649.7	1672.1	1695.8	1705.8
35°	1458.1	1468.0	1481.7	1500.4	1526.5	1550.2	1566.4	1583.8	1604.9	1627.3	1638.6
37.5°	1393.2	1403.2	1416.9	1435.6	1460.5	1484.1	1500.4	1517.8	1538.9	1560.1	1570.1
40°	1326.0	1336.0	1347.2	1365.9	1390.7	1414.4	1429.4	1446.8	1468.0	1490.4	1500.4
42.5°	1257.5	1267.5	1281.2	1299.9	1323.5	1344.7	1360.9	1377.1	1397.0	1416.9	1426.9
45°	1189.1	1197.8	1211.5	1228.9	1251.3	1271.3	1287.5	1303.6	1322.3	1341.0	1350.9
47.5°	1118.1	1128.1	1139.3	1156.7	1179.1	1200.3	1216.5	1231.4	1248.8	1267.5	1276.2
50°	1049.6	1058.4	1069.5	1085.7	1106.9	1126.8	1140.5	1155.5	1171.7	1189.1	1196.6
52.5°	978.6	987.4	998.6	1014.8	1032.2	1050.9	1063.3	1077.0	1093.2	1109.4	1116.8
55°	906.4	912.7	922.6	937.6	956.2	973.6	986.1	999.8	1013.6	1027.2	1036.0
57.5°	835.4	842.9	852.9	866.6	882.8	899.0	910.2	921.4	935.1	948.7	955.0
60°	763.2	769.5	777.0	789.4	805.6	819.3	830.4	841.7	852.9	865.4	871.6
62.5°	689.7	696.0	703.5	715.9	729.7	742.1	752.1	762.0	772.0	783.1	789.4
65°	616.4	622.5	630.0	638.8	649.9	661.2	671.1	681.1	688.5	696.0	702.2
67.5°	536.6	542.9	550.3	557.8	567.8	579.0	586.5	595.2	602.6	611.4	615.1
70°	461.9	466.9	474.4	480.6	489.3	496.8	503.0	510.5	515.5	523.0	529.1
72.5°	388.4	393.4	399.7	405.9	410.8	417.1	424.6	430.9	437.0	444.5	447.0
75°	317.5	320.0	325.0	330.0	335.0	339.9	343.6	348.6	353.6	358.6	362.3
77.5°	247.7	250.2	255.2	259.0	262.7	266.5	268.9	271.4	276.4	280.1	283.9
80°	181.8	184.3	188.0	191.8	195.5	199.2	199.2	199.2	205.4	210.4	211.7
82.5°	123.3	124.5	127.0	129.4	131.9	134.4	134.4	133.2	136.9	140.7	143.2
85°	71.0	72.2	74.7	74.7	76.0	76.0	76.0	76.0	78.5	82.2	84.6
87.5°	28.7	28.7	29.9	29.9	31.2	31.2	29.9	28.7	31.2	34.9	36.1
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°	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4	2120.4
2.5°	2125.4	2124.1	2127.9	2129.2	2131.7	2131.7	2132.9	2132.9	2130.4	2126.7	2127.9
5°	2126.7	2126.7	2130.4	2134.2	2139.1	2144.1	2140.3	2136.6	2134.2	2130.4	2129.2
7.5°	2120.4	2122.9	2126.7	2132.9	2139.1	2146.6	2141.6	2136.6	2130.4	2125.4	2122.9
10°	2105.5	2108.0	2114.1	2120.4	2126.7	2132.9	2127.9	2122.9	2117.9	2111.7	2109.2
12.5°	2086.8	2090.5	2098.0	2104.2	2110.5	2117.9	2111.7	2105.5	2099.2	2093.0	2089.3
15°	2059.4	2064.4	2073.1	2080.6	2089.3	2095.5	2090.5	2085.6	2078.1	2069.3	2063.2
17.5°	2024.5	2032.0	2040.8	2049.4	2056.9	2063.2	2059.4	2054.4	2045.7	2035.8	2028.3
20°	1986.0	1993.5	2000.9	2009.6	2018.4	2024.5	2019.5	2013.4	2004.6	1997.1	1989.7
22.5°	1941.1	1948.6	1957.3	1964.8	1972.3	1978.4	1972.3	1964.8	1957.3	1949.8	1942.4
25°	1890.1	1897.6	1907.5	1915.0	1920.0	1925.0	1920.0	1913.7	1906.2	1898.8	1891.3
27.5°	1836.5	1844.0	1854.0	1861.4	1866.4	1871.4	1866.4	1860.2	1852.8	1845.3	1837.7
30°	1776.8	1784.3	1794.2	1801.7	1805.4	1809.1	1804.2	1799.2	1792.9	1785.5	1778.0
32.5°	1713.3	1720.7	1728.2	1735.7	1741.9	1746.9	1741.9	1737.0	1729.5	1719.5	1712.1
35°	1646.0	1653.5	1662.2	1669.6	1677.1	1683.4	1675.9	1667.2	1661.0	1654.7	1648.5
37.5°	1575.1	1583.8	1593.8	1602.4	1604.9	1609.9	1604.9	1599.9	1593.8	1587.5	1580.0
40°	1505.3	1512.8	1521.5	1530.2	1533.9	1537.7	1532.7	1527.8	1520.3	1514.0	1506.5
42.5°	1433.2	1440.6	1448.1	1455.6	1460.5	1465.5	1460.5	1453.1	1448.1	1443.1	1436.8
45°	1358.4	1365.9	1372.1	1379.6	1383.3	1387.1	1382.1	1375.8	1370.8	1367.1	1360.9
47.5°	1282.5	1288.7	1294.9	1301.1	1303.6	1307.4	1302.4	1298.6	1294.9	1291.2	1286.2
50°	1202.7	1209.0	1216.5	1222.7	1224.0	1227.6	1222.7	1219.0	1215.2	1211.5	1207.7
52.5°	1124.3	1129.3	1135.5	1141.8	1144.3	1146.8	1141.8	1136.8	1133.0	1130.6	1126.8
55°	1042.1	1047.1	1053.4	1058.4	1062.1	1064.5	1059.6	1054.6	1050.9	1049.6	1045.9
57.5°	960.0	965.0	971.1	976.1	978.6	981.1	976.1	971.1	968.7	966.2	963.7
60°	876.5	881.5	886.5	890.3	892.8	894.0	889.0	885.3	884.0	882.8	880.3
62.5°	794.4	796.9	801.9	804.4	806.8	808.0	804.4	801.9	800.6	799.4	798.1
65°	708.5	714.7	718.4	720.9	720.9	722.2	718.4	717.2	715.9	714.7	712.2
67.5°	620.0	625.0	627.5	630.0	630.0	630.0	630.0	630.0	628.8	626.3	623.8
70°	535.4	539.1	541.6	542.9	542.9	542.9	540.4	539.1	540.4	540.4	539.1
72.5°	449.5	452.0	453.3	454.5	453.3	453.3	453.3	455.7	455.7	454.5	452.0
75°	366.0	368.5	369.8	371.0	369.8	369.8	369.8	372.3	371.0	371.0	369.8
77.5°	287.7	288.9	288.9	290.2	288.9	288.9	290.2	292.6	291.4	291.4	291.4
80°	212.9	212.9	212.9	214.2	212.9	212.9	214.2	216.7	215.4	215.4	215.4
82.5°	144.5	145.7	145.7	145.7	147.0	148.2	148.2	148.2	148.2	148.2	147.0
85°	85.9	87.1	85.9	85.9	85.9	85.9	87.1	88.4	88.4	88.4	88.4
87.5°	37.3	38.6	37.3	36.1	34.9	34.9	37.3	39.8	39.8	38.6	38.6
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-39-42L935-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	2120.4	2120.4	2120.4	2120.4
2.5°	2132.9	2132.9	2121.6	2110.5
5°	2131.7	2129.2	2116.6	2103.0
7.5°	2124.1	2120.4	2104.2	2089.3
10°	2106.7	2101.7	2084.3	2065.6
12.5°	2085.6	2078.1	2058.2	2039.5
15°	2058.2	2049.4	2028.3	2007.1
17.5°	2022.0	2012.1	1991.0	1968.5
20°	1983.5	1972.3	1948.6	1925.0
22.5°	1936.1	1926.2	1901.3	1877.7
25°	1885.1	1873.9	1849.0	1824.1
27.5°	1830.3	1817.8	1792.9	1769.3
30°	1770.5	1758.1	1733.2	1709.6
32.5°	1707.1	1697.0	1672.1	1646.0
35°	1642.3	1629.8	1604.9	1580.0
37.5°	1573.9	1562.6	1538.9	1515.3
40°	1501.6	1490.4	1465.5	1441.8
42.5°	1430.7	1420.7	1397.0	1374.6
45°	1354.7	1344.7	1322.3	1302.4
47.5°	1278.7	1268.8	1247.6	1226.4
50°	1201.6	1191.6	1171.7	1153.0
52.5°	1120.6	1113.1	1094.4	1075.8
55°	1039.6	1031.0	1012.3	996.1
57.5°	958.7	952.5	935.1	918.9
60°	875.3	867.9	854.1	840.4
62.5°	794.4	788.1	774.5	762.0
65°	708.5	703.5	692.2	681.1
67.5°	620.0	616.4	605.1	595.2
70°	535.4	529.1	520.5	511.7
72.5°	449.5	447.0	439.5	432.0
75°	367.3	364.8	357.4	351.1
77.5°	290.2	287.7	281.4	275.1
80°	214.2	212.9	207.9	202.9
82.5°	147.0	145.7	142.0	136.9
85°	88.4	85.9	82.2	78.5
87.5°	38.6	37.3	33.7	31.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)