

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-39-42L950-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-39-42L950-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

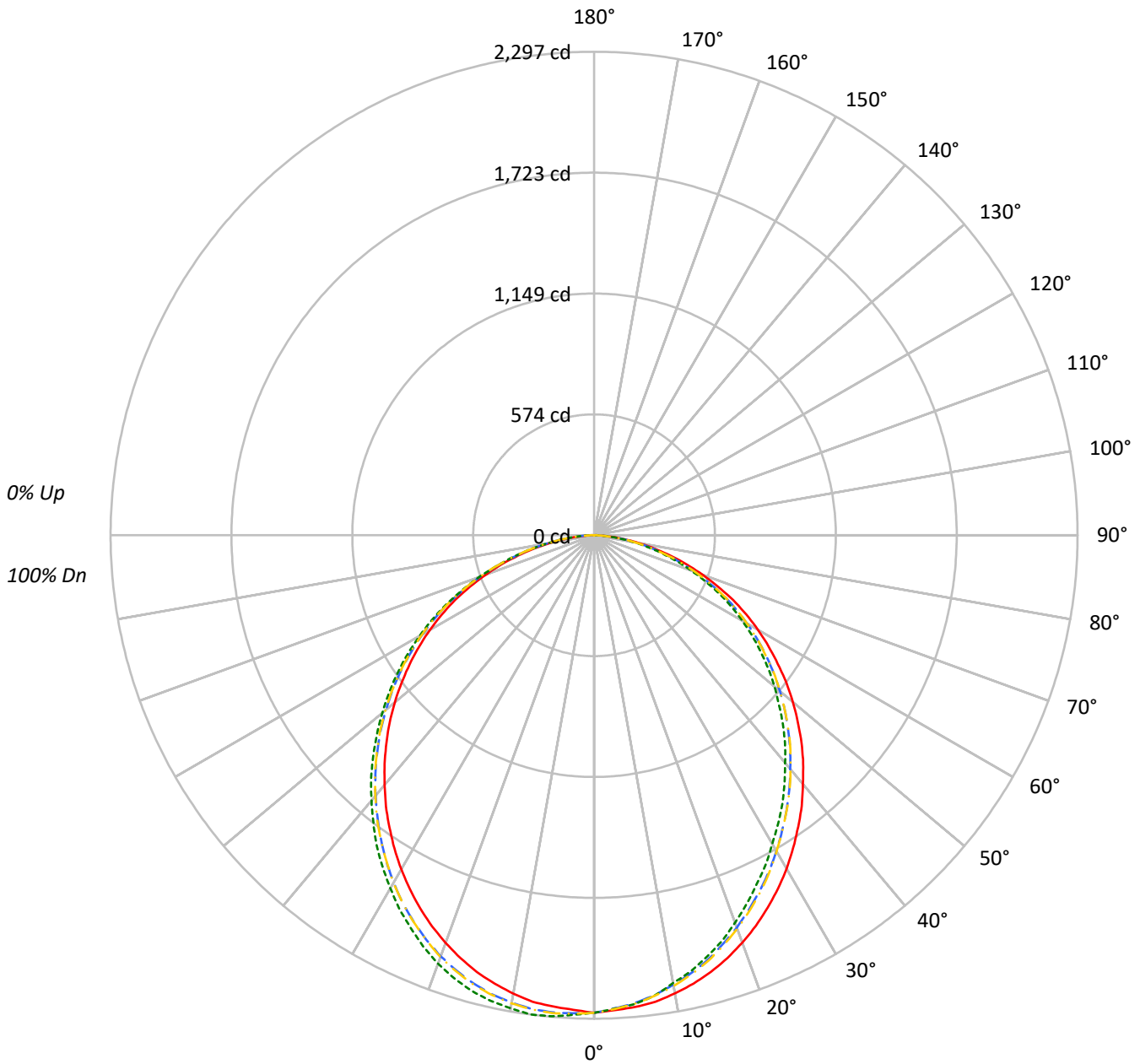
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5997.0 lumens
Efficiency: N/A
Efficacy: 65.2 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°	20931	20931	20931	20931
5°	20838	20703	20814	21246
10°	20704	20244	20718	21379
15°	20511	19799	20525	21415
20°	20222	19227	20235	21267
25°	19867	18620	19909	20967
30°	19486	18039	19514	20621
35°	19040	17569	19085	20286
40°	18580	17007	18643	19815
45°	18181	16547	18199	19364
50°	17706	16061	17744	18853
55°	17142	15535	17207	18321
60°	16592	14996	16616	17650
65°	15908	14336	15908	16867
70°	14769	13261	14734	15670
75°	13393	12017	13296	14102
80°	11535	10334	11328	12103
85°	8882	7897	8596	9728



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.3	3.6
10°-20°	606.6	10.1
20°-30°	898.1	15.0
30°-40°	1053.7	17.6
40°-50°	1067.9	17.8
50°-60°	947.8	15.8
60°-70°	711.6	11.9
70°-80°	395.1	6.6
80°-90°	102.0	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°	1718.9	28.7
0°-40°	2772.6	46.2
0°-60°	4788.3	79.8
0°-90°	5997.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5997.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2269	2269	2269	2269	2269	
5°	2250	2235	2247	2294	2250	214
15°	2147	2073	2149	2242	2147	605
25°	1952	1829	1956	2060	1952	899
35°	1690	1560	1694	1801	1690	1058
45°	1393	1268	1395	1484	1393	1074
55°	1066	966	1070	1139	1066	954
65°	729	657	729	773	729	718
75°	376	337	373	396	376	399
85°	84	75	81	92	84	101
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°	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7
2.5°	2258.1	2263.3	2270.1	2263.3	2252.7	2247.4	2247.4	2246.1	2250.0	2251.3	2250.0
5°	2250.0	2252.7	2254.0	2246.1	2234.1	2227.4	2224.7	2223.4	2228.8	2235.4	2228.8
7.5°	2235.4	2234.1	2232.7	2222.1	2208.7	2199.4	2195.5	2194.1	2199.4	2206.1	2200.7
10°	2210.0	2208.7	2204.8	2191.4	2174.1	2162.1	2158.1	2154.2	2158.1	2160.8	2158.1
12.5°	2182.1	2176.7	2171.4	2156.8	2138.1	2124.8	2118.2	2112.9	2118.2	2122.2	2119.5
15°	2147.4	2139.5	2130.2	2114.1	2095.5	2080.9	2072.8	2067.5	2071.5	2072.8	2072.8
17.5°	2106.1	2096.8	2087.5	2067.5	2044.9	2028.9	2019.5	2012.9	2018.3	2020.9	2020.9
20°	2059.6	2048.9	2036.9	2015.6	1991.6	1974.3	1963.6	1955.7	1956.9	1958.3	1958.3
22.5°	2008.9	1995.6	1980.9	1958.3	1933.0	1914.3	1903.7	1894.3	1894.3	1895.7	1895.7
25°	1951.6	1936.9	1922.4	1899.7	1873.0	1853.0	1839.8	1830.4	1830.4	1829.1	1831.7
27.5°	1893.1	1877.0	1862.3	1838.4	1810.4	1790.4	1777.2	1767.8	1766.5	1765.2	1767.8
30°	1829.1	1810.4	1794.4	1769.1	1742.5	1722.5	1709.2	1698.5	1695.8	1693.2	1695.8
32.5°	1761.1	1743.8	1726.5	1699.9	1673.2	1653.2	1639.9	1629.3	1627.9	1626.6	1629.3
35°	1690.5	1671.9	1655.9	1630.6	1603.9	1584.0	1569.3	1559.9	1559.9	1559.9	1559.9
37.5°	1621.2	1602.6	1585.3	1559.9	1533.4	1513.4	1498.7	1489.4	1486.7	1485.3	1486.7
40°	1542.7	1526.6	1510.7	1486.7	1460.1	1440.1	1428.1	1417.4	1414.8	1412.1	1416.1
42.5°	1470.7	1454.7	1437.4	1414.8	1388.2	1368.2	1354.8	1345.5	1344.2	1342.8	1344.2
45°	1393.4	1374.8	1357.5	1336.2	1312.2	1293.6	1280.2	1270.9	1269.6	1268.2	1269.6
47.5°	1312.2	1297.5	1282.9	1261.6	1237.6	1219.0	1207.0	1196.3	1193.6	1190.9	1193.6
50°	1233.6	1217.6	1202.9	1182.9	1160.3	1143.0	1132.3	1123.0	1120.3	1119.0	1120.3
52.5°	1151.0	1136.4	1123.0	1103.1	1084.4	1067.0	1055.0	1047.1	1045.7	1044.4	1045.7
55°	1065.7	1052.5	1040.4	1024.4	1005.8	989.8	979.2	969.9	968.5	965.8	968.5
57.5°	983.1	972.5	960.5	943.2	925.9	911.2	901.9	893.9	892.6	891.2	892.6
60°	899.2	888.5	877.9	863.3	845.9	831.3	823.3	816.6	813.9	812.7	813.9
62.5°	815.3	804.6	796.6	781.9	766.0	754.0	746.0	739.4	736.7	735.4	736.7
65°	728.7	719.3	710.0	696.8	684.8	675.5	667.4	660.8	658.1	656.7	656.7
67.5°	636.8	628.8	622.2	610.2	596.8	587.5	579.5	574.1	571.5	570.2	571.5
70°	547.5	540.8	534.2	524.9	514.2	506.3	500.9	495.6	492.9	491.6	491.6
72.5°	462.3	456.9	450.3	442.3	434.3	426.3	421.0	416.9	414.3	413.0	413.0
75°	375.7	370.4	367.7	361.1	353.0	347.7	342.3	339.7	337.1	337.1	337.1
77.5°	294.4	291.7	289.0	282.4	277.1	271.8	267.7	266.5	263.8	263.8	263.8
80°	217.1	215.8	214.5	210.5	205.1	199.8	197.1	195.8	194.5	194.5	194.5
82.5°	146.5	146.5	145.2	141.3	137.2	135.9	133.2	131.8	131.8	131.8	131.8
85°	83.9	83.9	83.9	82.6	79.9	79.9	77.3	76.0	74.6	74.6	74.6
87.5°	33.3	34.7	36.0	34.7	32.0	32.0	32.0	32.0	32.0	32.0	32.0
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°	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7
2.5°	2246.1	2248.7	2250.0	2256.7	2264.7	2270.1	2263.3	2256.7	2267.4	2279.4	2279.4
5°	2223.4	2226.1	2230.0	2238.1	2248.7	2255.4	2252.7	2247.4	2263.3	2276.7	2278.0
7.5°	2195.5	2198.0	2203.4	2211.4	2224.7	2234.1	2234.1	2235.4	2250.0	2266.0	2270.1
10°	2154.2	2160.8	2168.8	2180.8	2194.1	2206.1	2210.0	2211.4	2230.0	2247.4	2252.7
12.5°	2115.5	2122.2	2130.2	2143.5	2159.4	2172.8	2176.7	2182.1	2202.1	2222.1	2230.0
15°	2071.5	2078.2	2087.5	2100.9	2118.2	2132.8	2140.8	2148.8	2168.8	2190.1	2199.4
17.5°	2019.5	2026.3	2035.6	2051.5	2071.5	2088.9	2098.2	2107.5	2130.2	2152.8	2162.1
20°	1958.3	1967.6	1980.9	1997.0	2019.5	2039.6	2050.3	2060.9	2084.8	2107.5	2118.2
22.5°	1895.7	1906.3	1921.0	1939.6	1963.6	1985.0	1998.3	2011.6	2035.6	2058.2	2070.2
25°	1833.0	1845.1	1859.7	1879.7	1902.4	1923.7	1939.6	1955.7	1979.6	2003.6	2015.6
27.5°	1769.1	1779.8	1794.4	1814.4	1839.8	1862.3	1878.4	1895.7	1919.7	1945.0	1956.9
30°	1698.5	1710.5	1723.9	1743.8	1771.8	1797.1	1813.1	1831.7	1855.7	1881.1	1893.1
32.5°	1630.6	1641.3	1654.5	1674.5	1702.5	1729.1	1746.5	1765.2	1789.1	1814.4	1825.1
35°	1559.9	1570.6	1585.3	1605.3	1633.2	1658.6	1675.9	1694.5	1717.1	1741.2	1753.2
37.5°	1490.7	1501.4	1516.0	1536.0	1562.6	1588.0	1605.3	1623.9	1646.6	1669.2	1679.9
40°	1418.8	1429.5	1441.5	1461.4	1488.0	1513.4	1529.3	1547.9	1570.6	1594.6	1605.3
42.5°	1345.5	1356.2	1370.8	1390.7	1416.1	1438.8	1456.0	1473.4	1494.7	1516.0	1526.6
45°	1272.3	1281.6	1296.2	1314.9	1338.8	1360.1	1377.5	1394.8	1414.8	1434.7	1445.4
47.5°	1196.3	1207.0	1219.0	1237.6	1261.6	1284.3	1301.5	1317.5	1336.2	1356.2	1365.5
50°	1123.0	1132.3	1144.3	1161.6	1184.3	1205.6	1220.3	1236.2	1253.6	1272.3	1280.2
52.5°	1047.1	1056.4	1068.4	1085.7	1104.4	1124.4	1137.7	1152.3	1169.6	1187.0	1195.0
55°	969.9	976.5	987.2	1003.1	1023.1	1041.8	1055.0	1069.7	1084.4	1099.0	1108.3
57.5°	893.9	901.9	912.5	927.2	944.5	961.8	973.8	985.8	1000.5	1015.1	1021.8
60°	816.6	823.3	831.3	844.6	861.9	876.5	888.5	900.5	912.5	925.9	932.5
62.5°	738.1	744.7	752.7	766.0	780.7	793.9	804.6	815.3	825.9	837.9	844.6
65°	659.4	666.1	674.1	683.4	695.4	707.4	718.1	728.7	736.7	744.7	751.3
67.5°	574.1	580.9	588.8	596.8	607.5	619.5	627.4	636.8	644.8	654.1	658.1
70°	494.2	499.5	507.6	514.2	523.5	531.5	538.2	546.2	551.5	559.5	566.2
72.5°	415.6	421.0	427.6	434.3	439.6	446.2	454.3	460.9	467.6	475.6	478.2
75°	339.7	342.3	347.7	353.0	358.4	363.7	367.7	373.0	378.3	383.6	387.7
77.5°	265.1	267.7	273.1	277.1	281.1	285.1	287.8	290.4	295.8	299.7	303.7
80°	194.5	197.1	201.2	205.1	209.1	213.2	213.2	213.2	219.8	225.2	226.4
82.5°	131.8	133.2	135.9	138.6	141.3	143.8	143.8	142.5	146.5	150.6	153.2
85°	76.0	77.3	79.9	79.9	81.2	81.2	81.2	81.2	83.9	88.0	90.6
87.5°	30.6	30.6	32.0	32.0	33.3	33.3	32.0	30.6	33.3	37.3	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



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CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7	2268.7
2.5°	2274.0	2272.7	2276.7	2278.0	2280.7	2280.7	2282.0	2282.0	2279.4	2275.3	2276.7
5°	2275.3	2275.3	2279.4	2283.3	2288.7	2294.0	2290.0	2286.0	2283.3	2279.4	2278.0
7.5°	2268.7	2271.3	2275.3	2282.0	2288.7	2296.7	2291.4	2286.0	2279.4	2274.0	2271.3
10°	2252.7	2255.4	2262.0	2268.7	2275.3	2282.0	2276.7	2271.3	2266.0	2259.4	2256.7
12.5°	2232.7	2236.7	2244.7	2251.3	2258.1	2266.0	2259.4	2252.7	2246.1	2239.4	2235.4
15°	2203.4	2208.7	2218.1	2226.1	2235.4	2242.0	2236.7	2231.4	2223.4	2214.1	2207.5
17.5°	2166.1	2174.1	2183.4	2192.8	2200.7	2207.5	2203.4	2198.0	2188.7	2178.1	2170.1
20°	2124.8	2132.8	2140.8	2150.1	2159.4	2166.1	2160.8	2154.2	2144.8	2136.8	2128.8
22.5°	2076.9	2084.8	2094.1	2102.2	2110.2	2116.8	2110.2	2102.2	2094.1	2086.2	2078.2
25°	2022.2	2030.2	2040.8	2048.9	2054.2	2059.6	2054.2	2047.6	2039.6	2031.5	2023.6
27.5°	1965.0	1973.0	1983.6	1991.6	1997.0	2002.2	1997.0	1990.2	1982.3	1974.3	1966.3
30°	1901.0	1909.0	1919.7	1927.6	1931.7	1935.6	1930.3	1925.0	1918.3	1910.4	1902.4
32.5°	1833.0	1841.0	1849.1	1857.1	1863.7	1869.9	1863.7	1858.4	1850.4	1839.8	1831.7
35°	1761.1	1769.1	1778.4	1786.5	1794.4	1801.1	1793.1	1783.8	1777.2	1770.4	1763.8
37.5°	1685.2	1694.5	1705.1	1714.6	1717.1	1722.5	1717.1	1711.9	1705.1	1698.5	1690.5
40°	1610.6	1618.6	1627.9	1637.3	1641.3	1645.2	1639.9	1634.6	1626.6	1620.0	1611.9
42.5°	1533.4	1541.3	1549.3	1557.4	1562.6	1568.0	1562.6	1554.7	1549.3	1544.0	1537.3
45°	1453.4	1461.4	1468.1	1476.0	1480.1	1484.1	1478.7	1472.1	1466.7	1462.8	1456.0
47.5°	1372.1	1378.8	1385.5	1392.1	1394.8	1398.8	1393.4	1389.5	1385.5	1381.4	1376.2
50°	1286.8	1293.6	1301.5	1308.2	1309.5	1313.5	1308.2	1304.2	1300.2	1296.2	1292.2
52.5°	1202.9	1208.3	1214.9	1221.7	1224.2	1226.9	1221.7	1216.3	1212.2	1209.6	1205.6
55°	1115.1	1120.3	1127.1	1132.3	1136.4	1139.0	1133.7	1128.3	1124.4	1123.0	1119.0
57.5°	1027.1	1032.5	1039.1	1044.4	1047.1	1049.8	1044.4	1039.1	1036.4	1033.7	1031.1
60°	937.9	943.2	948.6	952.5	955.2	956.5	951.1	947.2	945.9	944.5	941.8
62.5°	849.9	852.6	857.9	860.6	863.3	864.6	860.6	857.9	856.6	855.2	854.0
65°	758.0	764.7	768.7	771.3	771.3	772.6	768.7	767.3	766.0	764.7	762.0
67.5°	663.4	668.7	671.4	674.1	674.1	674.1	674.1	674.1	672.8	670.1	667.4
70°	572.8	576.8	579.5	580.9	580.9	580.9	578.2	576.8	578.2	578.2	576.8
72.5°	480.9	483.6	484.9	486.3	484.9	484.9	484.9	487.6	487.6	486.3	483.6
75°	391.7	394.3	395.6	397.0	395.6	395.6	395.6	398.3	397.0	397.0	395.6
77.5°	307.8	309.1	309.1	310.4	309.1	309.1	310.4	313.0	311.7	311.7	311.7
80°	227.8	227.8	227.8	229.1	227.8	227.8	229.1	231.8	230.5	230.5	230.5
82.5°	154.5	155.9	155.9	155.9	157.2	158.5	158.5	158.5	158.5	158.5	157.2
85°	91.9	93.2	91.9	91.9	91.9	91.9	93.2	94.6	94.6	94.6	94.6
87.5°	39.9	41.3	39.9	38.6	37.3	37.3	39.9	42.6	42.6	41.3	41.3
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-39-42L950-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	2268.7	2268.7	2268.7	2268.7
2.5°	2282.0	2282.0	2270.1	2258.1
5°	2280.7	2278.0	2264.7	2250.0
7.5°	2272.7	2268.7	2251.3	2235.4
10°	2254.0	2248.7	2230.0	2210.0
12.5°	2231.4	2223.4	2202.1	2182.1
15°	2202.1	2192.8	2170.1	2147.4
17.5°	2163.5	2152.8	2130.2	2106.1
20°	2122.2	2110.2	2084.8	2059.6
22.5°	2071.5	2060.9	2034.2	2008.9
25°	2016.9	2004.9	1978.2	1951.6
27.5°	1958.3	1945.0	1918.3	1893.1
30°	1894.3	1881.1	1854.4	1829.1
32.5°	1826.4	1815.8	1789.1	1761.1
35°	1757.1	1743.8	1717.1	1690.5
37.5°	1683.8	1671.9	1646.6	1621.2
40°	1606.6	1594.6	1568.0	1542.7
42.5°	1530.7	1520.0	1494.7	1470.7
45°	1449.4	1438.8	1414.8	1393.4
47.5°	1368.2	1357.5	1334.9	1312.2
50°	1285.5	1274.8	1253.6	1233.6
52.5°	1199.0	1190.9	1170.9	1151.0
55°	1112.4	1103.1	1083.1	1065.7
57.5°	1025.8	1019.1	1000.5	983.1
60°	936.5	928.5	913.9	899.2
62.5°	849.9	843.3	828.6	815.3
65°	758.0	752.7	740.7	728.7
67.5°	663.4	659.4	647.4	636.8
70°	572.8	566.2	556.9	547.5
72.5°	480.9	478.2	470.2	462.3
75°	393.0	390.3	382.4	375.7
77.5°	310.4	307.8	301.0	294.4
80°	229.1	227.8	222.5	217.1
82.5°	157.2	155.9	151.9	146.5
85°	94.6	91.9	88.0	83.9
87.5°	41.3	39.9	36.0	33.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)