

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-35-37L930-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-35-37L930-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

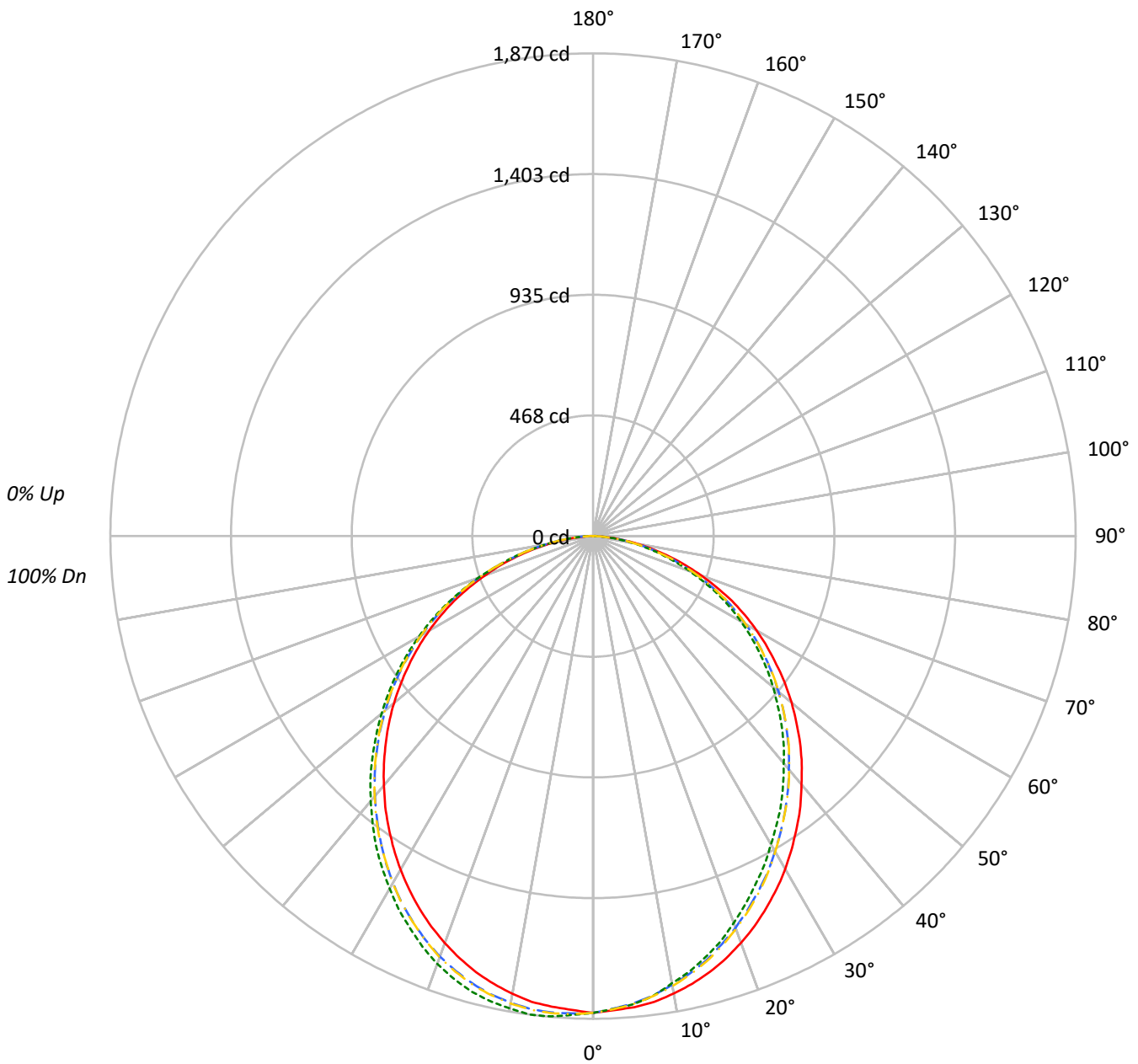
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4882.6 lumens
Efficiency: N/A
Efficacy: 60.3 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): 81
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			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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	84	
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	72	70	
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	62	59	
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	53	51	
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	44	
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	41	39	
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	36	34	
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	32	31	
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	29	28	
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	27	25	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	17042	17042	17042	17042
5°	16966	16856	16947	17298
10°	16858	16482	16868	17406
15°	16700	16120	16711	17437
20°	16463	15654	16474	17316
25°	16176	15160	16209	17070
30°	15865	14687	15888	16790
35°	15503	14305	15540	16516
40°	15127	13847	15180	16133
45°	14803	13472	14817	15766
50°	14415	13077	14447	15350
55°	13957	12650	14009	14916
60°	13511	12208	13529	14369
65°	12952	11675	12952	13734
70°	12026	10796	11996	12757
75°	10901	9782	10826	11482
80°	9394	8416	9218	9856
85°	7230	6436	7008	7929



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.4	3.6
10°-20°	493.9	10.1
20°-30°	731.2	15.0
30°-40°	857.9	17.6
40°-50°	869.4	17.8
50°-60°	771.6	15.8
60°-70°	579.3	11.9
70°-80°	321.7	6.6
80°-90°	83.1	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°	1399.5	28.7
0°-40°	2257.4	46.2
0°-60°	3898.5	79.8
0°-90°	4882.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4882.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1847	1847	1847	1847	1847	
5°	1832	1820	1830	1868	1832	174
15°	1748	1688	1750	1826	1748	493
25°	1589	1489	1592	1677	1589	732
35°	1376	1270	1380	1466	1376	861
45°	1134	1032	1136	1208	1134	874
55°	868	786	871	927	868	777
65°	593	535	593	629	593	585
75°	306	274	304	322	306	325
85°	68	61	66	75	68	82
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°	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1
2.5°	1838.5	1842.8	1848.2	1842.8	1834.1	1829.8	1829.8	1828.7	1831.9	1833.0	1831.9
5°	1831.9	1834.1	1835.1	1828.7	1818.9	1813.5	1811.4	1810.3	1814.6	1820.0	1814.6
7.5°	1820.0	1818.9	1817.8	1809.1	1798.3	1790.7	1787.5	1786.4	1790.7	1796.1	1791.8
10°	1799.4	1798.3	1795.0	1784.3	1770.1	1760.4	1757.1	1753.8	1757.1	1759.3	1757.1
12.5°	1776.6	1772.3	1767.9	1756.0	1740.8	1729.9	1724.6	1720.2	1724.6	1727.8	1725.6
15°	1748.4	1741.9	1734.3	1721.3	1706.2	1694.2	1687.7	1683.4	1686.6	1687.7	1687.7
17.5°	1714.8	1707.2	1699.6	1683.4	1664.9	1651.9	1644.3	1638.9	1643.2	1645.4	1645.4
20°	1676.8	1668.2	1658.4	1641.1	1621.5	1607.4	1598.7	1592.2	1593.3	1594.4	1594.4
22.5°	1635.6	1624.7	1612.9	1594.4	1573.8	1558.6	1550.0	1542.3	1542.3	1543.4	1543.4
25°	1589.0	1577.1	1565.1	1546.7	1525.0	1508.8	1497.9	1490.3	1490.3	1489.2	1491.3
27.5°	1541.2	1528.2	1516.3	1496.8	1474.0	1457.8	1446.9	1439.3	1438.2	1437.1	1439.3
30°	1489.2	1474.0	1461.0	1440.3	1418.7	1402.5	1391.6	1382.9	1380.7	1378.6	1380.7
32.5°	1433.9	1419.8	1405.7	1384.0	1362.3	1346.0	1335.1	1326.5	1325.4	1324.4	1326.5
35°	1376.4	1361.2	1348.1	1327.6	1305.9	1289.6	1277.7	1270.1	1270.1	1270.1	1270.1
37.5°	1320.0	1304.8	1290.7	1270.1	1248.4	1232.2	1220.2	1212.6	1210.4	1209.4	1210.4
40°	1256.0	1242.9	1229.9	1210.4	1188.7	1172.5	1162.7	1154.1	1151.9	1149.7	1153.0
42.5°	1197.4	1184.4	1170.3	1151.9	1130.2	1113.9	1103.1	1095.4	1094.4	1093.3	1094.4
45°	1134.5	1119.3	1105.2	1087.9	1068.3	1053.2	1042.3	1034.8	1033.7	1032.5	1033.7
47.5°	1068.3	1056.4	1044.5	1027.1	1007.7	992.4	982.7	974.0	971.8	969.7	971.8
50°	1004.3	991.3	979.4	963.1	944.7	930.6	921.9	914.3	912.1	911.1	912.1
52.5°	937.1	925.2	914.3	898.0	882.9	868.8	859.0	852.5	851.5	850.4	851.5
55°	867.7	856.8	847.1	834.0	818.9	805.9	797.2	789.6	788.5	786.4	788.5
57.5°	800.5	791.8	782.0	767.9	753.8	741.8	734.3	727.8	726.7	725.6	726.7
60°	732.2	723.4	714.7	702.8	688.7	676.8	670.3	664.9	662.7	661.6	662.7
62.5°	663.7	655.1	648.6	636.6	623.6	613.9	607.4	602.0	599.8	598.7	599.8
65°	593.3	585.7	578.1	567.2	557.5	549.9	543.4	538.0	535.8	534.8	534.8
67.5°	518.4	512.0	506.5	496.8	485.9	478.3	471.8	467.5	465.3	464.2	465.3
70°	445.8	440.3	434.9	427.3	418.7	412.1	407.8	403.5	401.3	400.2	400.2
72.5°	376.4	372.0	366.6	360.1	353.6	347.0	342.7	339.5	337.4	336.3	336.3
75°	305.8	301.5	299.4	293.9	287.4	283.1	278.7	276.6	274.4	274.4	274.4
77.5°	239.7	237.5	235.4	229.9	225.6	221.3	218.1	216.9	214.7	214.7	214.7
80°	176.8	175.7	174.6	171.4	167.1	162.7	160.5	159.4	158.4	158.4	158.4
82.5°	119.3	119.3	118.2	115.0	111.7	110.6	108.4	107.4	107.4	107.4	107.4
85°	68.3	68.3	68.3	67.2	65.1	65.1	62.9	61.9	60.8	60.8	60.8
87.5°	27.1	28.2	29.3	28.2	26.0	26.0	26.0	26.0	26.0	26.0	26.0
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°	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1
2.5°	1828.7	1830.8	1831.9	1837.4	1843.9	1848.2	1842.8	1837.4	1846.0	1855.8	1855.8
5°	1810.3	1812.4	1815.7	1822.1	1830.8	1836.3	1834.1	1829.8	1842.8	1853.6	1854.7
7.5°	1787.5	1789.6	1793.9	1800.5	1811.4	1818.9	1818.9	1820.0	1831.9	1844.9	1848.2
10°	1753.8	1759.3	1765.8	1775.5	1786.4	1796.1	1799.4	1800.5	1815.7	1829.8	1834.1
12.5°	1722.4	1727.8	1734.3	1745.2	1758.2	1769.0	1772.3	1776.6	1792.9	1809.1	1815.7
15°	1686.6	1692.1	1699.6	1710.5	1724.6	1736.5	1743.0	1749.5	1765.8	1783.1	1790.7
17.5°	1644.3	1649.7	1657.3	1670.3	1686.6	1700.7	1708.3	1715.8	1734.3	1752.7	1760.4
20°	1594.4	1602.0	1612.9	1625.9	1644.3	1660.5	1669.3	1677.9	1697.4	1715.8	1724.6
22.5°	1543.4	1552.1	1564.0	1579.2	1598.7	1616.1	1627.0	1637.7	1657.3	1675.7	1685.5
25°	1492.4	1502.2	1514.1	1530.4	1548.9	1566.2	1579.2	1592.2	1611.7	1631.3	1641.1
27.5°	1440.3	1449.1	1461.0	1477.2	1497.9	1516.3	1529.3	1543.4	1563.0	1583.5	1593.3
30°	1382.9	1392.7	1403.5	1419.8	1442.6	1463.1	1476.2	1491.3	1510.9	1531.5	1541.2
32.5°	1327.6	1336.3	1347.1	1363.4	1386.1	1407.8	1421.9	1437.1	1456.7	1477.2	1485.9
35°	1270.1	1278.8	1290.7	1306.9	1329.7	1350.4	1364.5	1379.7	1398.1	1417.6	1427.3
37.5°	1213.7	1222.4	1234.3	1250.6	1272.3	1292.9	1306.9	1322.1	1340.6	1359.0	1367.7
40°	1155.2	1163.8	1173.5	1189.8	1211.5	1232.2	1245.2	1260.4	1278.8	1298.3	1306.9
42.5°	1095.4	1104.2	1116.1	1132.3	1153.0	1171.4	1185.5	1199.6	1216.9	1234.3	1242.9
45°	1035.8	1043.4	1055.3	1070.5	1090.1	1107.4	1121.5	1135.6	1151.9	1168.2	1176.8
47.5°	974.0	982.7	992.4	1007.7	1027.1	1045.5	1059.7	1072.7	1087.9	1104.2	1111.7
50°	914.3	921.9	931.7	945.8	964.2	981.6	993.5	1006.5	1020.7	1035.8	1042.3
52.5°	852.5	860.1	869.9	884.0	899.1	915.5	926.2	938.2	952.3	966.4	972.9
55°	789.6	795.0	803.7	816.7	833.0	848.1	859.0	870.9	882.9	894.8	902.5
57.5°	727.8	734.3	742.9	754.9	769.0	783.1	792.8	802.6	814.6	826.5	831.9
60°	664.9	670.3	676.8	687.6	701.7	713.7	723.4	733.2	742.9	753.8	759.3
62.5°	600.9	606.3	612.9	623.6	635.6	646.4	655.1	663.7	672.5	682.2	687.6
65°	536.9	542.3	548.9	556.4	566.2	576.0	584.6	593.3	599.8	606.3	611.7
67.5°	467.5	472.9	479.4	485.9	494.6	504.3	510.9	518.4	525.0	532.5	535.8
70°	402.4	406.7	413.2	418.7	426.2	432.8	438.2	444.7	449.0	455.6	461.0
72.5°	338.4	342.7	348.1	353.6	357.9	363.4	369.8	375.3	380.7	387.2	389.4
75°	276.6	278.7	283.1	287.4	291.7	296.1	299.4	303.7	308.0	312.4	315.6
77.5°	215.8	218.1	222.4	225.6	228.8	232.1	234.3	236.5	240.8	244.1	247.3
80°	158.4	160.5	163.7	167.1	170.3	173.5	173.5	173.5	179.0	183.3	184.4
82.5°	107.4	108.4	110.6	112.8	115.0	117.1	117.1	116.1	119.3	122.5	124.7
85°	61.9	62.9	65.1	65.1	66.2	66.2	66.2	66.2	68.3	71.5	73.8
87.5°	25.0	25.0	26.0	26.0	27.1	27.1	26.0	25.0	27.1	30.3	31.4
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°	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1	1847.1
2.5°	1851.5	1850.4	1853.6	1854.7	1856.9	1856.9	1857.9	1857.9	1855.8	1852.6	1853.6
5°	1852.6	1852.6	1855.8	1859.0	1863.4	1867.7	1864.5	1861.2	1859.0	1855.8	1854.7
7.5°	1847.1	1849.3	1852.6	1857.9	1863.4	1869.9	1865.6	1861.2	1855.8	1851.5	1849.3
10°	1834.1	1836.3	1841.7	1847.1	1852.6	1857.9	1853.6	1849.3	1844.9	1839.6	1837.4
12.5°	1817.8	1821.1	1827.6	1833.0	1838.5	1844.9	1839.6	1834.1	1828.7	1823.3	1820.0
15°	1793.9	1798.3	1805.9	1812.4	1820.0	1825.5	1821.1	1816.7	1810.3	1802.7	1797.3
17.5°	1763.6	1770.1	1777.7	1785.3	1791.8	1797.3	1793.9	1789.6	1782.0	1773.4	1766.8
20°	1729.9	1736.5	1743.0	1750.6	1758.2	1763.6	1759.3	1753.8	1746.3	1739.7	1733.3
22.5°	1690.9	1697.4	1705.1	1711.5	1718.1	1723.5	1718.1	1711.5	1705.1	1698.5	1692.1
25°	1646.5	1653.0	1661.6	1668.2	1672.5	1676.8	1672.5	1667.1	1660.5	1654.1	1647.5
27.5°	1599.9	1606.3	1615.0	1621.5	1625.9	1630.2	1625.9	1620.4	1614.0	1607.4	1600.9
30°	1547.8	1554.3	1563.0	1569.4	1572.7	1576.0	1571.6	1567.3	1561.9	1555.3	1548.9
32.5°	1492.4	1499.0	1505.4	1512.0	1517.4	1521.8	1517.4	1513.1	1506.5	1497.9	1491.3
35°	1433.9	1440.3	1448.0	1454.5	1461.0	1466.4	1459.9	1452.3	1446.9	1441.5	1436.0
37.5°	1372.0	1379.7	1388.3	1395.9	1398.1	1402.5	1398.1	1393.8	1388.3	1382.9	1376.4
40°	1311.4	1317.8	1325.4	1333.0	1336.3	1339.5	1335.1	1330.8	1324.4	1318.9	1312.4
42.5°	1248.4	1254.9	1261.4	1267.9	1272.3	1276.6	1272.3	1265.7	1261.4	1257.1	1251.6
45°	1183.3	1189.8	1195.3	1201.7	1205.1	1208.3	1203.9	1198.5	1194.2	1190.9	1185.5
47.5°	1117.2	1122.6	1128.0	1133.4	1135.6	1138.9	1134.5	1131.3	1128.0	1124.7	1120.4
50°	1047.8	1053.2	1059.7	1065.1	1066.2	1069.4	1065.1	1061.9	1058.6	1055.3	1052.1
52.5°	979.4	983.8	989.2	994.6	996.8	999.0	994.6	990.2	987.0	984.9	981.6
55°	907.8	912.1	917.6	921.9	925.2	927.3	923.0	918.7	915.5	914.3	911.1
57.5°	836.3	840.6	846.0	850.4	852.5	854.7	850.4	846.0	843.8	841.7	839.5
60°	763.6	767.9	772.3	775.5	777.7	778.7	774.4	771.2	770.1	769.0	766.8
62.5°	692.0	694.2	698.5	700.6	702.8	703.9	700.6	698.5	697.4	696.3	695.3
65°	617.2	622.5	625.9	628.0	628.0	629.1	625.9	624.7	623.6	622.5	620.4
67.5°	540.1	544.4	546.7	548.9	548.9	548.9	548.9	548.9	547.8	545.5	543.4
70°	466.3	469.7	471.8	472.9	472.9	472.9	470.8	469.7	470.8	470.8	469.7
72.5°	391.6	393.7	394.8	395.9	394.8	394.8	394.8	397.0	397.0	395.9	393.7
75°	318.9	321.0	322.1	323.3	322.1	322.1	322.1	324.3	323.3	323.3	322.1
77.5°	250.5	251.6	251.6	252.7	251.6	251.6	252.7	254.9	253.8	253.8	253.8
80°	185.5	185.5	185.5	186.5	185.5	185.5	186.5	188.7	187.6	187.6	187.6
82.5°	125.9	126.9	126.9	126.9	128.0	129.1	129.1	129.1	129.1	129.1	128.0
85°	74.9	75.9	74.9	74.9	74.9	74.9	75.9	77.0	77.0	77.0	77.0
87.5°	32.5	33.7	32.5	31.4	30.3	30.3	32.5	34.7	34.7	33.7	33.7
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-35-37L930-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1847.1	1847.1	1847.1	1847.1
2.5°	1857.9	1857.9	1848.2	1838.5
5°	1856.9	1854.7	1843.9	1831.9
7.5°	1850.4	1847.1	1833.0	1820.0
10°	1835.1	1830.8	1815.7	1799.4
12.5°	1816.7	1810.3	1792.9	1776.6
15°	1792.9	1785.3	1766.8	1748.4
17.5°	1761.5	1752.7	1734.3	1714.8
20°	1727.8	1718.1	1697.4	1676.8
22.5°	1686.6	1677.9	1656.2	1635.6
25°	1642.1	1632.4	1610.6	1589.0
27.5°	1594.4	1583.5	1561.9	1541.2
30°	1542.3	1531.5	1509.8	1489.2
32.5°	1487.0	1478.3	1456.7	1433.9
35°	1430.7	1419.8	1398.1	1376.4
37.5°	1371.0	1361.2	1340.6	1320.0
40°	1308.0	1298.3	1276.6	1256.0
42.5°	1246.3	1237.6	1216.9	1197.4
45°	1180.1	1171.4	1151.9	1134.5
47.5°	1113.9	1105.2	1086.8	1068.3
50°	1046.7	1038.0	1020.7	1004.3
52.5°	976.1	969.7	953.3	937.1
55°	905.7	898.0	881.8	867.7
57.5°	835.1	829.7	814.6	800.5
60°	762.5	755.9	744.1	732.2
62.5°	692.0	686.6	674.6	663.7
65°	617.2	612.9	603.1	593.3
67.5°	540.1	536.9	527.1	518.4
70°	466.3	461.0	453.3	445.8
72.5°	391.6	389.4	382.9	376.4
75°	319.9	317.8	311.3	305.8
77.5°	252.7	250.5	245.2	239.7
80°	186.5	185.5	181.2	176.8
82.5°	128.0	126.9	123.6	119.3
85°	77.0	74.9	71.5	68.3
87.5°	33.7	32.5	29.3	27.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)