

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-32-34L950-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-32-34L950-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

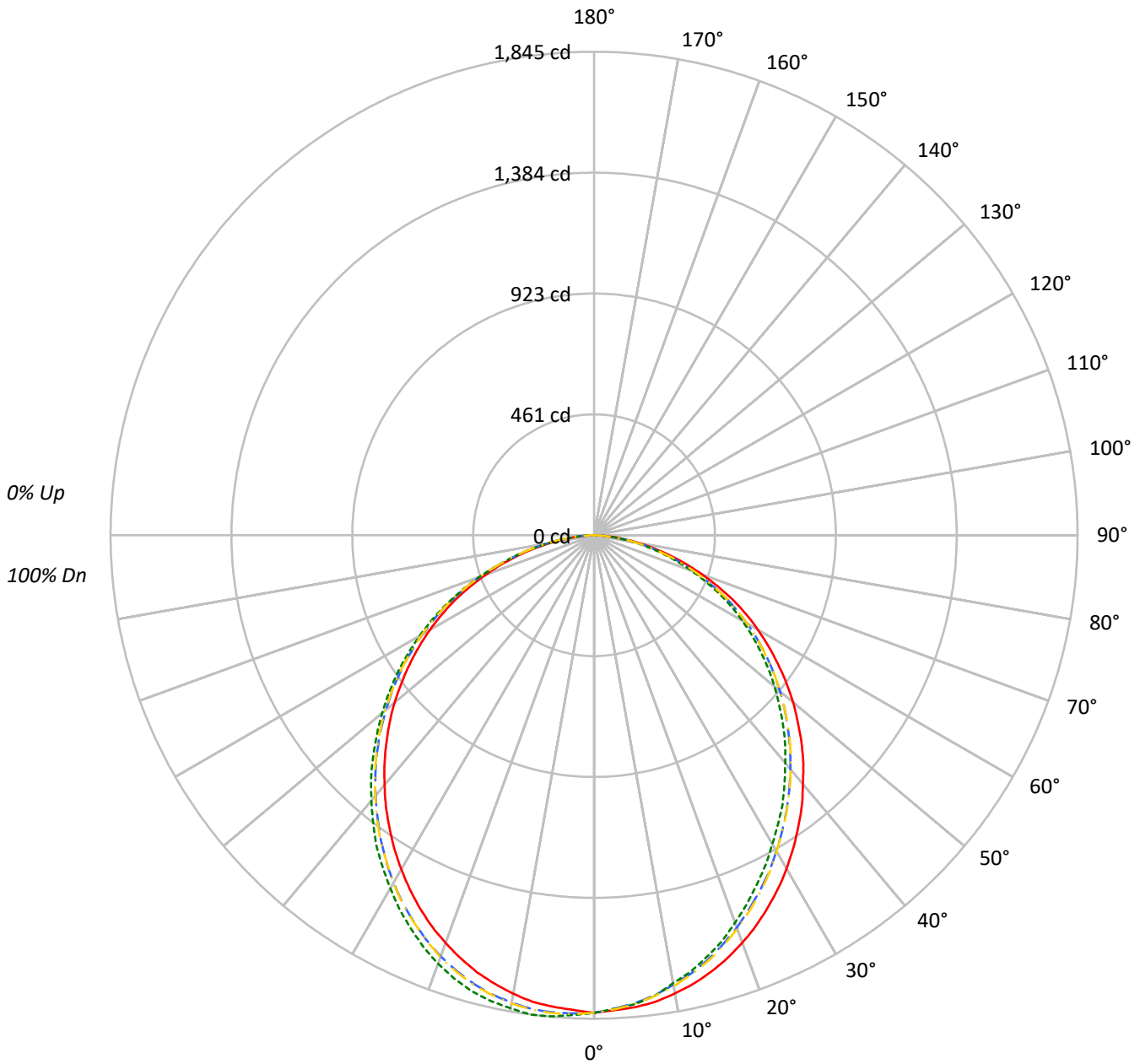
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4818.1 lumens
Efficiency: N/A
Efficacy: 66.0 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): 73
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	100	100	100	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70	70	70	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59	59	59	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51	51	51	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44	44	44	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39	39	39	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34	34	34	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31	31	31	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28	28	28	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	16817	16817	16817	16817
5°	16743	16634	16722	17070
10°	16635	16264	16645	17176
15°	16479	15907	16490	17205
20°	16246	15447	16256	17087
25°	15962	14959	15995	16845
30°	15655	14492	15679	16567
35°	15298	14116	15334	16299
40°	14927	13664	14979	15920
45°	14607	13294	14621	15557
50°	14226	12904	14257	15147
55°	13774	12482	13825	14720
60°	13332	12048	13350	14181
65°	12782	11520	12782	13553
70°	11867	10655	11837	12587
75°	10762	9653	10683	11332
80°	9266	8304	9096	9723
85°	7135	6341	6913	7823



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.1	3.6
10°-20°	487.3	10.1
20°-30°	721.6	15.0
30°-40°	846.6	17.6
40°-50°	858.0	17.8
50°-60°	761.5	15.8
60°-70°	571.7	11.9
70°-80°	317.4	6.6
80°-90°	82.0	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°	1381.0	28.7
0°-40°	2227.6	46.2
0°-60°	3847.0	79.8
0°-90°	4818.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4818.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1823	1823	1823	1823	1823	
5°	1808	1796	1806	1843	1808	172
15°	1725	1665	1726	1801	1725	486
25°	1568	1470	1571	1655	1568	722
35°	1358	1253	1361	1447	1358	850
45°	1120	1019	1121	1192	1120	863
55°	856	776	860	915	856	767
65°	586	528	586	621	586	577
75°	302	271	300	318	302	321
85°	67	60	65	74	67	81
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°	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7
2.5°	1814.1	1818.5	1823.8	1818.5	1809.9	1805.6	1805.6	1804.5	1807.8	1808.8	1807.8
5°	1807.8	1809.9	1810.9	1804.5	1794.9	1789.5	1787.4	1786.3	1790.6	1796.0	1790.6
7.5°	1796.0	1794.9	1793.8	1785.3	1774.6	1767.0	1763.9	1762.8	1767.0	1772.5	1768.1
10°	1775.6	1774.6	1771.3	1760.7	1746.7	1737.0	1733.9	1730.7	1733.9	1736.0	1733.9
12.5°	1753.2	1748.8	1744.6	1732.8	1717.8	1707.1	1701.7	1697.5	1701.7	1705.0	1702.8
15°	1725.3	1718.9	1711.4	1698.6	1683.6	1671.8	1665.4	1661.1	1664.3	1665.4	1665.4
17.5°	1692.1	1684.7	1677.1	1661.1	1642.9	1630.1	1622.5	1617.2	1621.5	1623.6	1623.6
20°	1654.7	1646.1	1636.5	1619.4	1600.1	1586.2	1577.6	1571.2	1572.3	1573.3	1573.3
22.5°	1614.0	1603.3	1591.6	1573.3	1553.0	1538.0	1529.4	1521.9	1521.9	1523.1	1523.1
25°	1568.0	1556.2	1544.4	1526.3	1504.8	1488.8	1478.1	1470.6	1470.6	1469.5	1471.7
27.5°	1520.9	1508.0	1496.3	1477.0	1454.5	1438.5	1427.8	1420.2	1419.2	1418.1	1420.2
30°	1469.5	1454.5	1441.7	1421.4	1400.0	1383.9	1373.2	1364.7	1362.5	1360.3	1362.5
32.5°	1414.9	1401.0	1387.1	1365.7	1344.3	1328.2	1317.5	1309.0	1307.9	1306.8	1309.0
35°	1358.2	1343.3	1330.4	1310.1	1288.7	1272.5	1260.8	1253.3	1253.3	1253.3	1253.3
37.5°	1302.5	1287.6	1273.7	1253.3	1231.9	1215.8	1204.0	1196.6	1194.5	1193.3	1194.5
40°	1239.4	1226.5	1213.7	1194.5	1173.1	1157.0	1147.3	1138.8	1136.6	1134.5	1137.7
42.5°	1181.6	1168.7	1154.8	1136.6	1115.3	1099.2	1088.5	1081.0	1079.9	1078.8	1079.9
45°	1119.5	1104.6	1090.6	1073.5	1054.2	1039.3	1028.6	1021.0	1020.0	1018.9	1020.0
47.5°	1054.2	1042.5	1030.7	1013.6	994.3	979.3	969.7	961.1	959.0	956.9	959.0
50°	991.1	978.2	966.4	950.4	932.2	918.3	909.7	902.3	900.1	899.0	900.1
52.5°	924.8	913.0	902.3	886.2	871.2	857.3	847.7	841.2	840.2	839.1	840.2
55°	856.3	845.6	835.9	823.1	808.0	795.2	786.7	779.2	778.1	776.0	778.1
57.5°	789.9	781.3	771.7	757.8	743.9	732.1	724.6	718.1	717.1	716.0	717.1
60°	722.5	713.9	705.3	693.5	679.6	667.9	661.4	656.1	654.0	652.9	654.0
62.5°	655.0	646.4	640.1	628.3	615.4	605.8	599.4	594.0	591.8	590.8	591.8
65°	585.5	578.0	570.4	559.7	550.2	542.6	536.2	530.9	528.8	527.7	527.7
67.5°	511.6	505.2	499.8	490.2	479.5	472.0	465.6	461.3	459.2	458.0	459.2
70°	439.9	434.5	429.2	421.7	413.1	406.7	402.5	398.1	396.0	395.0	395.0
72.5°	371.4	367.1	361.8	355.3	348.9	342.5	338.2	335.0	332.8	331.8	331.8
75°	301.9	297.5	295.4	290.1	283.6	279.4	275.0	272.9	270.8	270.8	270.8
77.5°	236.5	234.4	232.3	226.9	222.7	218.3	215.1	214.1	211.9	211.9	211.9
80°	174.4	173.4	172.3	169.1	164.9	160.5	158.4	157.3	156.3	156.3	156.3
82.5°	117.7	117.7	116.6	113.4	110.3	109.2	107.0	105.9	105.9	105.9	105.9
85°	67.4	67.4	67.4	66.4	64.3	64.3	62.1	61.0	59.9	59.9	59.9
87.5°	26.7	27.8	28.9	27.8	25.7	25.7	25.7	25.7	25.7	25.7	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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7
2.5°	1804.5	1806.7	1807.8	1813.1	1819.5	1823.8	1818.5	1813.1	1821.7	1831.3	1831.3
5°	1786.3	1788.5	1791.6	1798.1	1806.7	1812.0	1809.9	1805.6	1818.5	1829.2	1830.2
7.5°	1763.9	1766.0	1770.2	1776.7	1787.4	1794.9	1794.9	1796.0	1807.8	1820.6	1823.8
10°	1730.7	1736.0	1742.4	1752.1	1762.8	1772.5	1775.6	1776.7	1791.6	1805.6	1809.9
12.5°	1699.6	1705.0	1711.4	1722.1	1734.9	1745.6	1748.8	1753.2	1769.2	1785.3	1791.6
15°	1664.3	1669.6	1677.1	1687.8	1701.7	1713.5	1720.0	1726.4	1742.4	1759.5	1767.0
17.5°	1622.5	1627.9	1635.4	1648.3	1664.3	1678.2	1685.7	1693.3	1711.4	1729.6	1737.0
20°	1573.3	1580.9	1591.6	1604.4	1622.5	1638.6	1647.2	1655.7	1675.0	1693.3	1701.7
22.5°	1523.1	1531.6	1543.3	1558.4	1577.6	1594.8	1605.5	1616.2	1635.4	1653.6	1663.2
25°	1472.7	1482.4	1494.1	1510.1	1528.4	1545.5	1558.4	1571.2	1590.5	1609.7	1619.4
27.5°	1421.4	1429.9	1441.7	1457.8	1478.1	1496.3	1509.1	1523.1	1542.3	1562.6	1572.3
30°	1364.7	1374.2	1384.9	1401.0	1423.5	1443.9	1456.7	1471.7	1491.0	1511.3	1520.9
32.5°	1310.1	1318.6	1329.3	1345.4	1367.9	1389.3	1403.2	1418.1	1437.4	1457.8	1466.3
35°	1253.3	1261.8	1273.7	1289.7	1312.2	1332.5	1346.4	1361.4	1379.6	1398.9	1408.5
37.5°	1197.7	1206.3	1218.0	1234.0	1255.5	1275.8	1289.7	1304.7	1322.9	1341.0	1349.6
40°	1139.9	1148.4	1158.0	1174.1	1195.6	1215.8	1228.7	1243.7	1261.8	1281.1	1289.7
42.5°	1081.0	1089.5	1101.3	1117.4	1137.7	1155.9	1169.8	1183.8	1200.9	1218.0	1226.5
45°	1022.1	1029.6	1041.4	1056.4	1075.6	1092.8	1106.7	1120.6	1136.6	1152.7	1161.3
47.5°	961.1	969.7	979.3	994.3	1013.6	1031.8	1045.6	1058.5	1073.5	1089.5	1097.1
50°	902.3	909.7	919.4	933.3	951.5	968.7	980.4	993.3	1007.2	1022.1	1028.6
52.5°	841.2	848.7	858.4	872.3	887.2	903.3	914.1	925.8	939.7	953.6	960.1
55°	779.2	784.5	793.1	805.9	822.0	837.0	847.7	859.5	871.2	883.0	890.5
57.5°	718.1	724.6	733.2	744.9	758.8	772.7	782.4	792.0	803.8	815.6	820.9
60°	656.1	661.4	667.9	678.6	692.5	704.2	713.9	723.5	733.2	743.9	749.2
62.5°	592.9	598.3	604.7	615.4	627.2	637.9	646.4	655.0	663.6	673.2	678.6
65°	529.8	535.1	541.6	549.1	558.7	568.3	576.9	585.5	591.8	598.3	603.6
67.5°	461.3	466.6	473.1	479.5	488.0	497.7	504.1	511.6	518.0	525.5	528.8
70°	397.1	401.3	407.8	413.1	420.6	427.1	432.4	438.8	443.1	449.6	454.9
72.5°	333.9	338.2	343.5	348.9	353.2	358.6	364.9	370.4	375.7	382.1	384.2
75°	272.9	275.0	279.4	283.6	287.9	292.2	295.4	299.7	304.0	308.2	311.5
77.5°	213.0	215.1	219.4	222.7	225.8	229.0	231.1	233.4	237.6	240.8	244.1
80°	156.3	158.4	161.6	164.9	168.1	171.2	171.2	171.2	176.6	180.9	181.9
82.5°	105.9	107.0	109.2	111.3	113.4	115.6	115.6	114.5	117.7	121.0	123.1
85°	61.0	62.1	64.3	64.3	65.3	65.3	65.3	65.3	67.4	70.6	72.7
87.5°	24.6	24.6	25.7	25.7	26.7	26.7	25.7	24.6	26.7	30.0	31.1
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°	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7	1822.7
2.5°	1827.0	1825.9	1829.2	1830.2	1832.4	1832.4	1833.4	1833.4	1831.3	1828.0	1829.2
5°	1828.0	1828.0	1831.3	1834.5	1838.7	1843.1	1839.9	1836.6	1834.5	1831.3	1830.2
7.5°	1822.7	1824.8	1828.0	1833.4	1838.7	1845.2	1840.9	1836.6	1831.3	1827.0	1824.8
10°	1809.9	1812.0	1817.4	1822.7	1828.0	1833.4	1829.2	1824.8	1820.6	1815.2	1813.1
12.5°	1793.8	1797.1	1803.4	1808.8	1814.1	1820.6	1815.2	1809.9	1804.5	1799.2	1796.0
15°	1770.2	1774.6	1782.0	1788.5	1796.0	1801.3	1797.1	1792.7	1786.3	1778.8	1773.5
17.5°	1740.3	1746.7	1754.2	1761.7	1768.1	1773.5	1770.2	1766.0	1758.5	1750.0	1743.5
20°	1707.1	1713.5	1720.0	1727.5	1734.9	1740.3	1736.0	1730.7	1723.2	1716.8	1710.3
22.5°	1668.6	1675.0	1682.5	1688.9	1695.4	1700.7	1695.4	1688.9	1682.5	1676.1	1669.6
25°	1624.7	1631.1	1639.7	1646.1	1650.4	1654.7	1650.4	1645.0	1638.6	1632.2	1625.8
27.5°	1578.6	1585.1	1593.7	1600.1	1604.4	1608.6	1604.4	1599.0	1592.6	1586.2	1579.8
30°	1527.3	1533.7	1542.3	1548.7	1551.9	1555.1	1550.9	1546.6	1541.2	1534.8	1528.4
32.5°	1472.7	1479.2	1485.5	1492.0	1497.3	1501.7	1497.3	1493.1	1486.6	1478.1	1471.7
35°	1414.9	1421.4	1428.8	1435.3	1441.7	1447.1	1440.6	1433.2	1427.8	1422.5	1417.1
37.5°	1354.0	1361.4	1370.0	1377.5	1379.6	1383.9	1379.6	1375.3	1370.0	1364.7	1358.2
40°	1294.0	1300.4	1307.9	1315.4	1318.6	1321.8	1317.5	1313.3	1306.8	1301.5	1295.0
42.5°	1231.9	1238.3	1244.8	1251.2	1255.5	1259.7	1255.5	1249.0	1244.8	1240.5	1235.1
45°	1167.7	1174.1	1179.4	1185.9	1189.1	1192.3	1188.0	1182.6	1178.4	1175.2	1169.8
47.5°	1102.4	1107.8	1113.1	1118.5	1120.6	1123.8	1119.5	1116.4	1113.1	1109.9	1105.6
50°	1033.9	1039.3	1045.6	1051.0	1052.1	1055.3	1051.0	1047.9	1044.6	1041.4	1038.2
52.5°	966.4	970.8	976.1	981.5	983.6	985.7	981.5	977.1	974.0	971.8	968.7
55°	895.8	900.1	905.5	909.7	913.0	915.1	910.8	906.5	903.3	902.3	899.0
57.5°	825.2	829.5	834.9	839.1	841.2	843.4	839.1	834.9	832.7	830.5	828.4
60°	753.5	757.8	762.0	765.3	767.4	768.5	764.2	761.0	759.9	758.8	756.7
62.5°	682.8	685.0	689.3	691.4	693.5	694.6	691.4	689.3	688.2	687.2	686.1
65°	609.0	614.3	617.6	619.7	619.7	620.8	617.6	616.4	615.4	614.3	612.2
67.5°	533.0	537.2	539.5	541.6	541.6	541.6	541.6	541.6	540.5	538.4	536.2
70°	460.3	463.4	465.6	466.6	466.6	466.6	464.5	463.4	464.5	464.5	463.4
72.5°	386.4	388.5	389.5	390.7	389.5	389.5	389.5	391.8	391.8	390.7	388.5
75°	314.7	316.8	317.9	318.9	317.9	317.9	317.9	320.0	318.9	318.9	317.9
77.5°	247.3	248.3	248.3	249.4	248.3	248.3	249.4	251.5	250.4	250.4	250.4
80°	183.0	183.0	183.0	184.1	183.0	183.0	184.1	186.2	185.1	185.1	185.1
82.5°	124.2	125.2	125.2	125.2	126.3	127.3	127.3	127.3	127.3	127.3	126.3
85°	73.9	75.0	73.9	73.9	73.9	73.9	75.0	76.0	76.0	76.0	76.0
87.5°	32.1	33.2	32.1	31.1	30.0	30.0	32.1	34.2	34.2	33.2	33.2
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-32-34L950-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1822.7	1822.7	1822.7	1822.7
2.5°	1833.4	1833.4	1823.8	1814.1
5°	1832.4	1830.2	1819.5	1807.8
7.5°	1825.9	1822.7	1808.8	1796.0
10°	1810.9	1806.7	1791.6	1775.6
12.5°	1792.7	1786.3	1769.2	1753.2
15°	1769.2	1761.7	1743.5	1725.3
17.5°	1738.2	1729.6	1711.4	1692.1
20°	1705.0	1695.4	1675.0	1654.7
22.5°	1664.3	1655.7	1634.3	1614.0
25°	1620.4	1610.8	1589.3	1568.0
27.5°	1573.3	1562.6	1541.2	1520.9
30°	1521.9	1511.3	1489.9	1469.5
32.5°	1467.4	1458.8	1437.4	1414.9
35°	1411.7	1401.0	1379.6	1358.2
37.5°	1352.9	1343.3	1322.9	1302.5
40°	1290.8	1281.1	1259.7	1239.4
42.5°	1229.8	1221.2	1200.9	1181.6
45°	1164.5	1155.9	1136.6	1119.5
47.5°	1099.2	1090.6	1072.5	1054.2
50°	1032.8	1024.2	1007.2	991.1
52.5°	963.3	956.9	940.8	924.8
55°	893.7	886.2	870.2	856.3
57.5°	824.1	818.7	803.8	789.9
60°	752.4	746.0	734.2	722.5
62.5°	682.8	677.5	665.7	655.0
65°	609.0	604.7	595.1	585.5
67.5°	533.0	529.8	520.2	511.6
70°	460.3	454.9	447.4	439.9
72.5°	386.4	384.2	377.8	371.4
75°	315.7	313.6	307.2	301.9
77.5°	249.4	247.3	241.9	236.5
80°	184.1	183.0	178.8	174.4
82.5°	126.3	125.2	122.0	117.7
85°	76.0	73.9	70.6	67.4
87.5°	33.2	32.1	28.9	26.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)