

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: P241595

Luminaire Tested: **FVS8M-3-LD4-40-3HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241595
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-29)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-40-3HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 3-MODULE LED WITH OPAL LENS
Light Source: (252) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

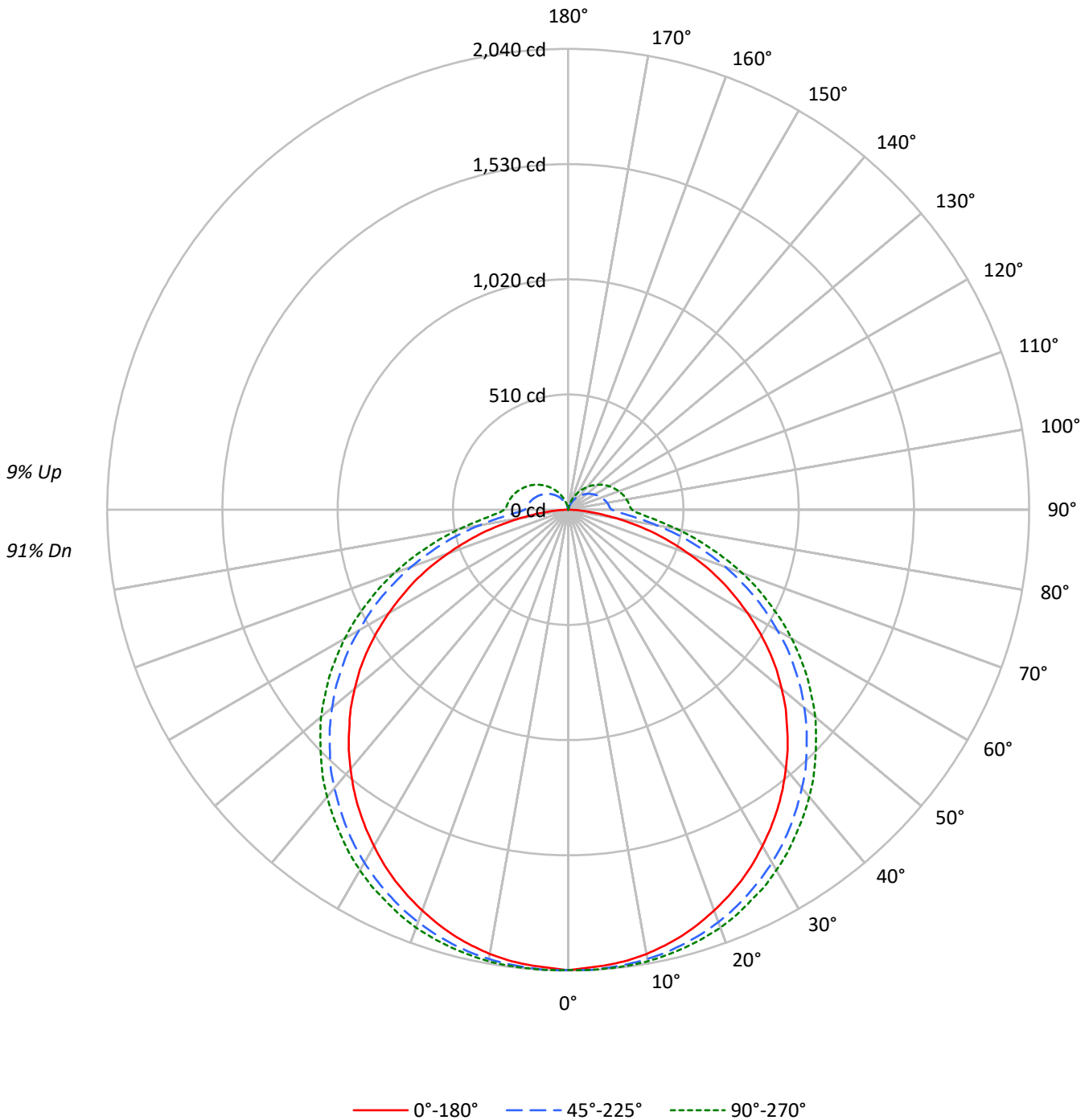
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7325.1 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.34 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 105
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





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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	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	91
1	105	100	95	91	102	97	93	89	91	88	84	85	83	80	80	78	76	73
2	95	87	79	73	92	84	77	72	79	73	68	74	69	66	70	66	63	60
3	87	76	67	60	83	73	65	59	69	62	57	65	59	55	61	56	53	50
4	79	67	57	51	76	65	56	50	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	42	54	47	41	51	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	59	47	38	32	44	37	31	42	36	31	40	34	30	28
8	57	44	35	29	55	43	34	29	40	33	28	38	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	35	29	24	34	28	24	22
10	50	37	29	24	48	36	28	23	34	27	23	33	27	22	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11900	11900	11900
5°	11805	11727	11714
10°	11735	11577	11575
15°	11641	11424	11435
20°	11518	11270	11306
25°	11403	11099	11139
30°	11258	10928	10993
35°	11121	10738	10808
40°	10949	10534	10638
45°	10763	10303	10421
50°	10557	10046	10221
55°	10275	9729	9938
60°	9838	9322	9587
65°	9327	8845	9141
70°	8474	8215	8628
75°	7371	7404	7922
80°	5554	6342	7151
85°	3003	5401	6567



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.6	2.6
10°-20°	560.4	7.6
20°-30°	863.2	11.8
30°-40°	1065.0	14.5
40°-50°	1141.5	15.6
50°-60°	1079.4	14.7
60°-70°	880.7	12.0
70°-80°	577.7	7.9
80°-90°	275.7	3.8
90°-100°	177.6	2.4
100°-110°	157.3	2.1
110°-120°	129.8	1.8
120°-130°	98.4	1.3
130°-140°	66.7	0.9
140°-150°	38.1	0.5
150°-160°	16.2	0.2
160°-170°	3.6	0.0
170°-180°	0.1	0.0
0°-30°	1617.1	22.1
0°-40°	2682.1	36.6
0°-60°	4903.1	66.9
0°-90°	6637.2	90.6
90°-120°	464.8	6.3
90°-150°	668.0	9.1
90°-180°	688.0	9.4
0°-180°	7325.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2038	2038	2038	2038	2038	
5°	2023	2028	2035	2038	2038	192
15°	1952	1966	1989	2003	2006	551
25°	1812	1841	1880	1904	1911	835
35°	1616	1658	1713	1747	1756	1011
45°	1370	1428	1492	1536	1547	1058
55°	1083	1146	1223	1275	1291	966
65°	749	822	909	967	982	738
75°	389	471	568	627	647	409
85°	71	161	261	326	351	88
90°	3	90	192	260	282	4
95°	1	83	182	248	270	1
105°	1	73	166	230	252	1
115°	1	62	146	204	224	1
125°	1	49	122	173	191	1
135°	1	36	95	137	152	1
145°	2	21	67	99	110	1
155°	2	9	35	60	66	1
165°	2	2	10	20	25	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9
2.5°	2028.9	2030.9	2031.9	2030.9	2031.9	2033.9	2034.9	2036.9	2037.9	2038.9	2039.9
5°	2022.9	2023.9	2025.9	2025.9	2026.9	2027.9	2029.9	2030.9	2032.9	2033.9	2034.9
7.5°	2012.9	2013.9	2014.9	2015.9	2016.9	2017.9	2018.9	2021.9	2024.9	2026.9	2028.9
10°	1996.9	1997.9	1999.9	1999.9	2001.9	2003.9	2006.9	2010.9	2014.9	2017.9	2019.9
12.5°	1975.9	1977.9	1978.9	1980.9	1983.9	1985.9	1988.9	1993.9	1999.9	2002.9	2006.9
15°	1951.9	1953.9	1953.9	1956.9	1961.9	1965.9	1968.9	1973.9	1980.9	1984.9	1988.9
17.5°	1921.9	1925.9	1925.9	1929.9	1935.9	1939.9	1942.9	1949.9	1957.9	1961.9	1967.9
20°	1887.9	1890.9	1892.9	1897.9	1905.9	1910.9	1913.9	1920.9	1930.9	1936.9	1942.9
22.5°	1851.9	1852.9	1858.9	1863.9	1872.9	1876.9	1882.9	1891.9	1897.9	1906.9	1913.9
25°	1811.9	1812.9	1817.9	1824.9	1833.9	1840.9	1844.9	1854.9	1864.9	1873.9	1879.9
27.5°	1767.9	1767.9	1773.9	1783.9	1793.9	1798.9	1806.9	1817.9	1826.9	1834.9	1843.9
30°	1718.9	1720.9	1726.9	1738.9	1748.9	1754.9	1762.9	1773.9	1785.9	1794.9	1803.9
32.5°	1668.9	1670.9	1679.9	1689.9	1702.9	1707.9	1715.9	1729.9	1740.9	1752.9	1760.9
35°	1615.9	1614.9	1627.9	1637.9	1650.9	1657.9	1666.9	1679.9	1691.9	1704.9	1712.9
37.5°	1558.9	1560.9	1570.9	1582.9	1596.9	1605.9	1614.9	1626.9	1638.9	1653.9	1661.9
40°	1497.9	1499.9	1512.9	1525.9	1541.9	1549.9	1556.9	1570.9	1585.9	1598.9	1608.9
42.5°	1437.9	1439.9	1449.9	1464.9	1480.9	1486.9	1497.9	1512.9	1528.9	1542.9	1555.9
45°	1369.9	1372.9	1385.9	1401.9	1417.9	1427.9	1433.9	1450.9	1465.9	1481.9	1491.9
47.5°	1305.9	1306.9	1320.9	1335.9	1352.9	1364.9	1371.9	1391.9	1403.9	1418.9	1430.9
50°	1232.9	1235.9	1248.9	1264.9	1284.9	1292.9	1300.9	1319.9	1336.9	1349.9	1363.9
52.5°	1161.9	1162.9	1175.9	1194.9	1212.9	1220.9	1228.9	1248.9	1267.9	1283.9	1296.9
55°	1082.9	1089.9	1101.9	1116.9	1136.9	1145.9	1154.9	1175.9	1192.9	1209.9	1222.9
57.5°	1000.9	1007.9	1021.9	1038.9	1058.9	1068.9	1078.9	1097.9	1117.9	1133.9	1151.9
60°	916.9	925.9	940.9	957.9	979.9	986.9	997.9	1015.9	1036.9	1055.9	1068.9
62.5°	831.9	840.9	856.9	872.9	895.9	907.9	916.9	937.9	957.9	974.9	990.9
65°	749.0	755.0	768.0	790.9	810.9	821.9	831.9	855.9	870.9	894.9	908.9
67.5°	659.0	664.0	681.0	704.0	725.0	734.0	747.0	770.0	787.0	808.9	822.9
70°	566.0	576.0	591.0	613.0	637.0	646.0	658.0	680.0	704.0	721.0	740.0
72.5°	476.0	485.0	504.0	523.0	546.0	559.0	569.0	593.0	614.0	638.0	651.0
75°	389.0	394.0	413.0	435.0	457.0	471.0	479.0	504.0	525.0	548.0	568.0
77.5°	296.0	307.0	326.0	348.0	375.0	388.0	396.0	422.0	443.0	465.0	484.0
80°	213.0	219.0	239.0	263.0	286.0	300.0	311.0	336.0	356.0	384.0	398.0
82.5°	135.0	147.0	162.0	187.0	213.0	226.0	241.0	262.0	283.0	303.0	324.0
85°	71.0	80.0	97.0	122.0	147.0	161.0	172.0	198.0	220.0	239.0	261.0
87.5°	24.0	32.0	51.0	73.0	100.0	113.0	125.0	149.0	173.0	193.0	214.0
90°	3.0	11.0	29.0	52.0	77.0	90.0	102.0	126.0	150.0	171.0	192.0
92.5°	1.0	8.0	26.0	49.0	73.0	85.0	98.0	122.0	144.0	165.0	185.0
95°	1.0	8.0	24.0	47.0	71.0	83.0	95.0	119.0	141.0	162.0	182.0
97.5°	1.0	7.0	23.0	45.0	68.0	81.0	93.0	116.0	139.0	160.0	179.0
100°	1.0	7.0	22.0	43.0	66.0	78.0	90.0	113.0	135.0	156.0	175.0
102.5°	1.0	6.0	21.0	41.0	64.0	75.0	87.0	109.0	131.0	152.0	171.0
105°	1.0	6.0	20.0	40.0	62.0	73.0	84.0	106.0	127.0	148.0	166.0
107.5°	1.0	5.0	19.0	38.0	59.0	70.0	81.0	103.0	123.0	143.0	162.0
110°	1.0	5.0	18.0	36.0	57.0	67.0	78.0	99.0	119.0	139.0	156.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	4.0	17.0	34.0	54.0	65.0	75.0	96.0	115.0	134.0	151.0
115°	1.0	4.0	15.0	32.0	52.0	62.0	72.0	91.0	111.0	129.0	146.0
117.5°	1.0	3.0	14.0	30.0	49.0	59.0	68.0	87.0	106.0	124.0	140.0
120°	1.0	3.0	13.0	29.0	46.0	55.0	65.0	83.0	101.0	118.0	134.0
122.5°	1.0	2.0	12.0	27.0	44.0	52.0	61.0	79.0	96.0	113.0	128.0
125°	1.0	2.0	11.0	25.0	41.0	49.0	58.0	75.0	91.0	107.0	122.0
127.5°	1.0	2.0	10.0	23.0	38.0	46.0	54.0	70.0	86.0	101.0	116.0
130°	1.0	2.0	8.0	21.0	35.0	43.0	50.0	66.0	81.0	95.0	109.0
132.5°	1.0	2.0	7.0	19.0	32.0	39.0	47.0	61.0	76.0	89.0	102.0
135°	1.0	1.0	6.0	16.0	29.0	36.0	43.0	57.0	70.0	83.0	95.0
137.5°	1.0	1.0	5.0	14.0	26.0	32.0	39.0	52.0	65.0	77.0	88.0
140°	1.0	1.0	4.0	12.0	22.0	28.0	34.0	47.0	59.0	70.0	81.0
142.5°	2.0	2.0	3.0	10.0	19.0	24.0	30.0	41.0	53.0	64.0	74.0
145°	2.0	2.0	2.0	8.0	16.0	21.0	26.0	36.0	46.0	57.0	67.0
147.5°	2.0	2.0	2.0	7.0	13.0	17.0	22.0	31.0	40.0	50.0	59.0
150°	2.0	2.0	2.0	5.0	11.0	14.0	18.0	25.0	34.0	42.0	50.0
152.5°	2.0	2.0	2.0	4.0	8.0	11.0	14.0	21.0	28.0	35.0	42.0
155°	2.0	2.0	2.0	3.0	6.0	9.0	11.0	17.0	22.0	29.0	35.0
157.5°	2.0	2.0	2.0	2.0	4.0	6.0	8.0	13.0	17.0	22.0	27.0
160°	2.0	2.0	2.0	2.0	3.0	5.0	6.0	9.0	13.0	17.0	21.0
162.5°	2.0	2.0	2.0	2.0	2.0	3.0	4.0	6.0	9.0	12.0	15.0
165°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	6.0	7.0	10.0
167.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	4.0	5.0
170°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9	2037.9
2.5°	2039.9	2039.9	2040.9	2040.9	2040.9	2039.9	2040.9	2039.9	2039.9	2039.9
5°	2034.9	2035.9	2036.9	2037.9	2037.9	2037.9	2037.9	2036.9	2037.9	2037.9
7.5°	2030.9	2030.9	2032.9	2033.9	2034.9	2034.9	2034.9	2034.9	2035.9	2035.9
10°	2021.9	2023.9	2025.9	2027.9	2027.9	2028.9	2029.9	2028.9	2029.9	2029.9
12.5°	2008.9	2010.9	2013.9	2015.9	2017.9	2016.9	2018.9	2018.9	2018.9	2018.9
15°	1991.9	1995.9	1997.9	2000.9	2002.9	2003.9	2003.9	2005.9	2005.9	2005.9
17.5°	1970.9	1975.9	1978.9	1982.9	1983.9	1985.9	1986.9	1986.9	1988.9	1988.9
20°	1947.9	1951.9	1955.9	1959.9	1961.9	1963.9	1965.9	1965.9	1966.9	1968.9
22.5°	1917.9	1924.9	1928.9	1933.9	1936.9	1936.9	1938.9	1941.9	1941.9	1942.9
25°	1885.9	1891.9	1897.9	1902.9	1903.9	1905.9	1908.9	1910.9	1913.9	1910.9
27.5°	1850.9	1857.9	1864.9	1868.9	1869.9	1871.9	1875.9	1877.9	1878.9	1880.9
30°	1809.9	1818.9	1825.9	1829.9	1831.9	1834.9	1837.9	1839.9	1842.9	1842.9
32.5°	1767.9	1774.9	1784.9	1789.9	1792.9	1795.9	1797.9	1800.9	1802.9	1802.9
35°	1721.9	1731.9	1735.9	1744.9	1746.9	1748.9	1753.9	1756.9	1756.9	1755.9
37.5°	1675.9	1683.9	1688.9	1696.9	1700.9	1701.9	1705.9	1707.9	1710.9	1709.9
40°	1618.9	1631.9	1639.9	1643.9	1647.9	1652.9	1654.9	1657.9	1660.9	1659.9
42.5°	1565.9	1571.9	1583.9	1591.9	1593.9	1596.9	1601.9	1603.9	1607.9	1606.9
45°	1504.9	1516.9	1524.9	1531.9	1535.9	1539.9	1542.9	1545.9	1550.9	1546.9
47.5°	1443.9	1453.9	1464.9	1473.9	1475.9	1479.9	1483.9	1487.9	1489.9	1487.9
50°	1378.9	1388.9	1399.9	1406.9	1410.9	1413.9	1420.9	1424.9	1425.9	1427.9
52.5°	1310.9	1324.9	1332.9	1341.9	1345.9	1351.9	1354.9	1360.9	1358.9	1357.9
55°	1238.9	1247.9	1261.9	1270.9	1274.9	1276.9	1281.9	1286.9	1286.9	1290.9
57.5°	1161.9	1176.9	1187.9	1197.9	1199.9	1205.9	1210.9	1213.9	1215.9	1216.9
60°	1084.9	1099.9	1110.9	1122.9	1125.9	1129.9	1132.9	1137.9	1141.9	1141.9
62.5°	1005.9	1017.9	1031.9	1041.9	1045.9	1049.9	1056.9	1060.9	1062.9	1064.9
65°	925.9	940.9	949.9	962.9	966.9	969.9	971.9	982.9	981.9	981.9
67.5°	841.9	852.9	866.9	879.9	882.9	886.9	892.9	899.9	898.9	902.9
70°	757.0	769.0	785.0	793.9	800.9	805.9	806.9	812.9	817.9	818.9
72.5°	668.0	685.0	699.0	709.0	713.0	720.0	726.0	732.0	733.0	733.0
75°	583.0	597.0	613.0	622.0	627.0	632.0	638.0	646.0	646.0	647.0
77.5°	500.0	517.0	528.0	538.0	544.0	547.0	557.0	559.0	562.0	568.0
80°	416.0	431.0	446.0	457.0	462.0	467.0	475.0	480.0	483.0	485.0
82.5°	343.0	358.0	373.0	384.0	389.0	395.0	399.0	409.0	411.0	411.0
85°	277.0	294.0	310.0	320.0	326.0	332.0	339.0	346.0	348.0	351.0
87.5°	234.0	251.0	265.0	278.0	283.0	287.0	295.0	302.0	304.0	305.0
90°	210.0	226.0	242.0	254.0	260.0	264.0	273.0	278.0	281.0	282.0
92.5°	203.0	219.0	234.0	246.0	252.0	256.0	264.0	270.0	273.0	274.0
95°	200.0	216.0	230.0	243.0	248.0	253.0	261.0	266.0	269.0	270.0
97.5°	197.0	213.0	227.0	239.0	245.0	250.0	257.0	263.0	266.0	267.0
100°	193.0	209.0	223.0	235.0	240.0	245.0	253.0	258.0	261.0	262.0
102.5°	189.0	204.0	218.0	230.0	235.0	240.0	247.0	253.0	256.0	257.0
105°	184.0	199.0	213.0	224.0	230.0	234.0	242.0	247.0	251.0	252.0
107.5°	179.0	194.0	207.0	219.0	224.0	228.0	236.0	242.0	245.0	245.0
110°	173.0	188.0	201.0	213.0	218.0	222.0	229.0	235.0	238.0	239.0



TEST NUMBER: P241595

CATALOG NUMBER: FVS8M-3-LD4-40-3HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	168.0	182.0	195.0	206.0	211.0	215.0	222.0	228.0	230.0	231.0
115°	161.0	176.0	188.0	199.0	204.0	208.0	215.0	220.0	223.0	224.0
117.5°	155.0	169.0	181.0	192.0	196.0	200.0	207.0	212.0	215.0	216.0
120°	149.0	162.0	174.0	184.0	189.0	193.0	199.0	204.0	207.0	208.0
122.5°	142.0	155.0	167.0	176.0	181.0	184.0	191.0	196.0	199.0	200.0
125°	136.0	148.0	159.0	168.0	173.0	176.0	182.0	187.0	190.0	191.0
127.5°	129.0	141.0	151.0	160.0	164.0	168.0	173.0	178.0	180.0	181.0
130°	122.0	133.0	143.0	151.0	155.0	158.0	164.0	168.0	171.0	172.0
132.5°	114.0	125.0	134.0	142.0	146.0	149.0	155.0	159.0	161.0	162.0
135°	107.0	117.0	126.0	133.0	137.0	140.0	145.0	149.0	151.0	152.0
137.5°	99.0	109.0	117.0	124.0	128.0	130.0	135.0	139.0	141.0	142.0
140°	91.0	100.0	108.0	115.0	118.0	121.0	125.0	128.0	130.0	131.0
142.5°	84.0	92.0	99.0	105.0	108.0	111.0	115.0	118.0	120.0	121.0
145°	76.0	83.0	90.0	96.0	99.0	101.0	105.0	108.0	109.0	110.0
147.5°	68.0	75.0	81.0	87.0	89.0	91.0	95.0	97.0	99.0	99.0
150°	59.0	66.0	72.0	77.0	79.0	81.0	84.0	86.0	88.0	89.0
152.5°	50.0	57.0	63.0	67.0	69.0	71.0	74.0	76.0	77.0	78.0
155°	41.0	47.0	54.0	58.0	60.0	61.0	63.0	65.0	66.0	66.0
157.5°	32.0	38.0	43.0	48.0	49.0	51.0	53.0	55.0	55.0	56.0
160°	25.0	29.0	33.0	38.0	39.0	41.0	43.0	44.0	45.0	45.0
162.5°	18.0	21.0	24.0	28.0	29.0	31.0	33.0	34.0	34.0	35.0
165°	12.0	14.0	16.0	19.0	20.0	21.0	23.0	24.0	24.0	25.0
167.5°	7.0	8.0	10.0	11.0	12.0	12.0	14.0	15.0	15.0	15.0
170°	3.0	3.0	4.0	5.0	5.0	5.0	6.0	7.0	7.0	7.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)