

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: P241594

Luminaire Tested: **FVS8M-3-LD4-35-3HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241594
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-LD4-35-3HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 3-MODULE LED WITH OPAL LENS
Light Source: (252) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

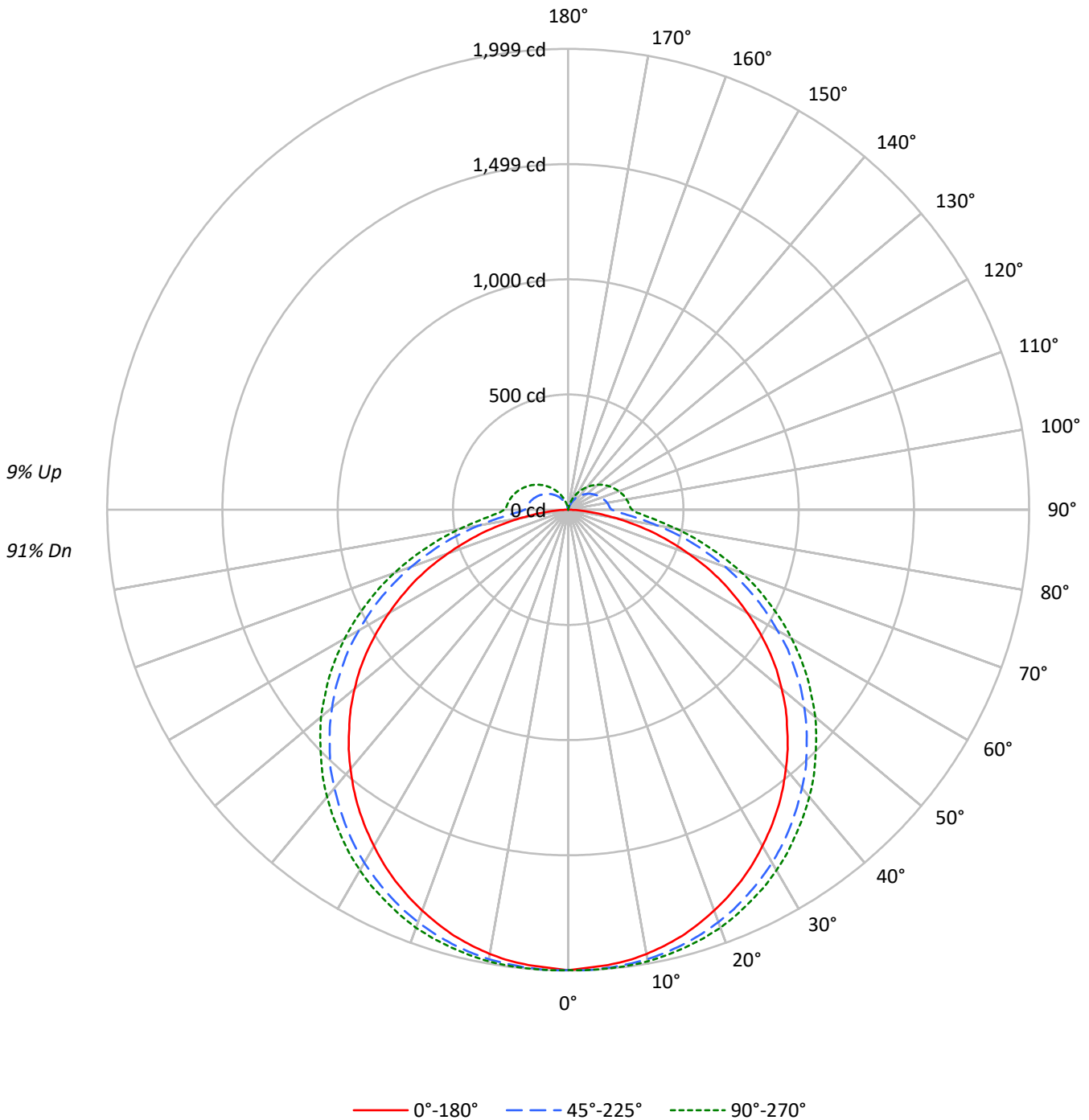
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7179.0 lumens
Efficiency: N/A
Efficacy: 68.4 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°	11663	11663	11663
5°	11570	11493	11481
10°	11501	11346	11344
15°	11409	11196	11207
20°	11288	11046	11080
25°	11175	10878	10917
30°	11033	10710	10774
35°	10900	10525	10593
40°	10730	10324	10425
45°	10548	10098	10214
50°	10347	9846	10017
55°	10070	9535	9740
60°	9642	9136	9396
65°	9140	8669	8959
70°	8305	8051	8457
75°	7223	7256	7764
80°	5441	6214	7008
85°	2944	5293	6436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.7	2.6
10°-20°	549.2	7.6
20°-30°	846.0	11.8
30°-40°	1043.8	14.5
40°-50°	1118.8	15.6
50°-60°	1057.9	14.7
60°-70°	863.2	12.0
70°-80°	566.1	7.9
80°-90°	270.2	3.8
90°-100°	174.1	2.4
100°-110°	154.2	2.1
110°-120°	127.2	1.8
120°-130°	96.5	1.3
130°-140°	65.3	0.9
140°-150°	37.4	0.5
150°-160°	15.9	0.2
160°-170°	3.6	0.0
170°-180°	0.1	0.0
0°-30°	1584.9	22.1
0°-40°	2628.7	36.6
0°-60°	4805.4	66.9
0°-90°	6504.8	90.6
90°-120°	455.5	6.3
90°-150°	654.6	9.1
90°-180°	674.0	9.4
0°-180°	7179.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1997	1997	1997	1997	1997	
5°	1983	1988	1994	1997	1997	188
15°	1913	1927	1949	1963	1966	540
25°	1776	1804	1842	1866	1873	818
35°	1584	1625	1679	1712	1721	990
45°	1343	1399	1462	1505	1516	1037
55°	1061	1123	1198	1250	1265	947
65°	734	806	891	948	962	723
75°	381	462	557	614	634	401
85°	70	158	256	320	344	86
90°	3	88	188	255	276	4
95°	1	81	178	243	265	1
105°	1	72	163	225	247	1
115°	1	61	143	200	220	1
125°	1	48	120	170	187	1
135°	1	35	93	134	149	1
145°	2	21	66	97	108	1
155°	2	9	34	59	65	1
165°	2	2	10	20	24	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°	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3
2.5°	1988.4	1990.4	1991.4	1990.4	1991.4	1993.3	1994.3	1996.3	1997.3	1998.2	1999.2
5°	1982.6	1983.5	1985.5	1985.5	1986.5	1987.5	1989.4	1990.4	1992.4	1993.3	1994.3
7.5°	1972.8	1973.7	1974.7	1975.7	1976.7	1977.7	1978.6	1981.6	1984.5	1986.5	1988.4
10°	1957.1	1958.1	1960.0	1960.0	1962.0	1963.9	1966.9	1970.8	1974.7	1977.7	1979.6
12.5°	1936.5	1938.5	1939.4	1941.4	1944.3	1946.3	1949.2	1954.1	1960.0	1963.0	1966.9
15°	1913.0	1914.9	1914.9	1917.9	1922.8	1926.7	1929.6	1934.5	1941.4	1945.3	1949.2
17.5°	1883.6	1887.5	1887.5	1891.4	1897.3	1901.2	1904.2	1911.0	1918.9	1922.8	1928.7
20°	1850.3	1853.2	1855.2	1860.1	1867.9	1872.8	1875.7	1882.6	1892.4	1898.3	1904.2
22.5°	1815.0	1816.0	1821.8	1826.7	1835.6	1839.5	1845.4	1854.2	1860.1	1868.9	1875.7
25°	1775.8	1776.8	1781.7	1788.5	1797.3	1804.2	1808.1	1817.9	1827.7	1836.5	1842.4
27.5°	1732.7	1732.7	1738.5	1748.3	1758.1	1763.0	1770.9	1781.7	1790.5	1798.3	1807.1
30°	1684.6	1686.6	1692.5	1704.2	1714.0	1719.9	1727.8	1738.5	1750.3	1759.1	1767.9
32.5°	1635.6	1637.6	1646.4	1656.2	1669.0	1673.9	1681.7	1695.4	1706.2	1718.0	1725.8
35°	1583.7	1582.7	1595.5	1605.3	1618.0	1624.9	1633.7	1646.4	1658.2	1670.9	1678.8
37.5°	1527.8	1529.8	1539.6	1551.3	1565.1	1573.9	1582.7	1594.5	1606.2	1620.9	1628.8
40°	1468.0	1470.0	1482.7	1495.5	1511.2	1519.0	1525.9	1539.6	1554.3	1567.0	1576.8
42.5°	1409.2	1411.2	1421.0	1435.7	1451.4	1457.3	1468.0	1482.7	1498.4	1512.1	1524.9
45°	1342.6	1345.5	1358.3	1374.0	1389.6	1399.4	1405.3	1422.0	1436.7	1452.4	1462.2
47.5°	1279.9	1280.9	1294.6	1309.3	1325.9	1337.7	1344.6	1364.2	1375.9	1390.6	1402.4
50°	1208.3	1211.3	1224.0	1239.7	1259.3	1267.1	1275.0	1293.6	1310.3	1323.0	1336.7
52.5°	1138.8	1139.7	1152.5	1171.1	1188.7	1196.6	1204.4	1224.0	1242.6	1258.3	1271.1
55°	1061.3	1068.2	1080.0	1094.7	1114.3	1123.1	1131.9	1152.5	1169.1	1185.8	1198.5
57.5°	981.0	987.8	1001.6	1018.2	1037.8	1047.6	1057.4	1076.0	1095.6	1111.3	1129.0
60°	898.7	907.5	922.2	938.8	960.4	967.3	978.0	995.7	1016.3	1034.9	1047.6
62.5°	815.4	824.2	839.9	855.5	878.1	889.8	898.7	919.2	938.8	955.5	971.2
65°	734.0	739.9	752.6	775.2	794.8	805.6	815.4	838.9	853.6	877.1	890.8
67.5°	645.8	650.7	667.4	689.9	710.5	719.3	732.1	754.6	771.3	792.8	806.5
70°	554.7	564.5	579.2	600.7	624.3	633.1	644.8	666.4	689.9	706.6	725.2
72.5°	466.5	475.3	493.9	512.5	535.1	547.8	557.6	581.1	601.7	625.2	638.0
75°	381.2	386.1	404.7	426.3	447.9	461.6	469.4	493.9	514.5	537.0	556.6
77.5°	290.1	300.9	319.5	341.0	367.5	380.2	388.1	413.6	434.1	455.7	474.3
80°	208.7	214.6	234.2	257.7	280.3	294.0	304.8	329.3	348.9	376.3	390.0
82.5°	132.3	144.1	158.8	183.3	208.7	221.5	236.2	256.8	277.3	296.9	317.5
85°	69.6	78.4	95.1	119.6	144.1	157.8	168.6	194.0	215.6	234.2	255.8
87.5°	23.5	31.4	50.0	71.5	98.0	110.7	122.5	146.0	169.5	189.1	209.7
90°	2.9	10.8	28.4	51.0	75.5	88.2	100.0	123.5	147.0	167.6	188.2
92.5°	1.0	7.8	25.5	48.0	71.5	83.3	96.0	119.6	141.1	161.7	181.3
95°	1.0	7.8	23.5	46.1	69.6	81.3	93.1	116.6	138.2	158.8	178.4
97.5°	1.0	6.9	22.5	44.1	66.6	79.4	91.1	113.7	136.2	156.8	175.4
100°	1.0	6.9	21.6	42.1	64.7	76.4	88.2	110.7	132.3	152.9	171.5
102.5°	1.0	5.9	20.6	40.2	62.7	73.5	85.3	106.8	128.4	149.0	167.6
105°	1.0	5.9	19.6	39.2	60.8	71.5	82.3	103.9	124.5	145.0	162.7
107.5°	1.0	4.9	18.6	37.2	57.8	68.6	79.4	100.9	120.5	140.1	158.8
110°	1.0	4.9	17.6	35.3	55.9	65.7	76.4	97.0	116.6	136.2	152.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	3.9	16.7	33.3	52.9	63.7	73.5	94.1	112.7	131.3	148.0
115°	1.0	3.9	14.7	31.4	51.0	60.8	70.6	89.2	108.8	126.4	143.1
117.5°	1.0	2.9	13.7	29.4	48.0	57.8	66.6	85.3	103.9	121.5	137.2
120°	1.0	2.9	12.7	28.4	45.1	53.9	63.7	81.3	99.0	115.6	131.3
122.5°	1.0	2.0	11.8	26.5	43.1	51.0	59.8	77.4	94.1	110.7	125.4
125°	1.0	2.0	10.8	24.5	40.2	48.0	56.8	73.5	89.2	104.9	119.6
127.5°	1.0	2.0	9.8	22.5	37.2	45.1	52.9	68.6	84.3	99.0	113.7
130°	1.0	2.0	7.8	20.6	34.3	42.1	49.0	64.7	79.4	93.1	106.8
132.5°	1.0	2.0	6.9	18.6	31.4	38.2	46.1	59.8	74.5	87.2	100.0
135°	1.0	1.0	5.9	15.7	28.4	35.3	42.1	55.9	68.6	81.3	93.1
137.5°	1.0	1.0	4.9	13.7	25.5	31.4	38.2	51.0	63.7	75.5	86.2
140°	1.0	1.0	3.9	11.8	21.6	27.4	33.3	46.1	57.8	68.6	79.4
142.5°	2.0	2.0	2.9	9.8	18.6	23.5	29.4	40.2	51.9	62.7	72.5
145°	2.0	2.0	2.0	7.8	15.7	20.6	25.5	35.3	45.1	55.9	65.7
147.5°	2.0	2.0	2.0	6.9	12.7	16.7	21.6	30.4	39.2	49.0	57.8
150°	2.0	2.0	2.0	4.9	10.8	13.7	17.6	24.5	33.3	41.2	49.0
152.5°	2.0	2.0	2.0	3.9	7.8	10.8	13.7	20.6	27.4	34.3	41.2
155°	2.0	2.0	2.0	2.9	5.9	8.8	10.8	16.7	21.6	28.4	34.3
157.5°	2.0	2.0	2.0	2.0	3.9	5.9	7.8	12.7	16.7	21.6	26.5
160°	2.0	2.0	2.0	2.0	2.9	4.9	5.9	8.8	12.7	16.7	20.6
162.5°	2.0	2.0	2.0	2.0	2.0	2.9	3.9	5.9	8.8	11.8	14.7
165°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.9	5.9	6.9	9.8
167.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	3.9	4.9
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°	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3	1997.3
2.5°	1999.2	1999.2	2000.2	2000.2	2000.2	1999.2	2000.2	1999.2	1999.2	1999.2
5°	1994.3	1995.3	1996.3	1997.3	1997.3	1997.3	1997.3	1996.3	1997.3	1997.3
7.5°	1990.4	1990.4	1992.4	1993.3	1994.3	1994.3	1994.3	1994.3	1995.3	1995.3
10°	1981.6	1983.5	1985.5	1987.5	1987.5	1988.4	1989.4	1988.4	1989.4	1989.4
12.5°	1968.8	1970.8	1973.7	1975.7	1977.7	1976.7	1978.6	1978.6	1978.6	1978.6
15°	1952.2	1956.1	1958.1	1961.0	1963.0	1963.9	1963.9	1965.9	1965.9	1965.9
17.5°	1931.6	1936.5	1939.4	1943.4	1944.3	1946.3	1947.3	1947.3	1949.2	1949.2
20°	1909.1	1913.0	1916.9	1920.8	1922.8	1924.7	1926.7	1926.7	1927.7	1929.6
22.5°	1879.7	1886.5	1890.4	1895.3	1898.3	1898.3	1900.2	1903.2	1903.2	1904.2
25°	1848.3	1854.2	1860.1	1865.0	1865.9	1867.9	1870.8	1872.8	1875.7	1872.8
27.5°	1814.0	1820.9	1827.7	1831.6	1832.6	1834.6	1838.5	1840.5	1841.4	1843.4
30°	1773.8	1782.6	1789.5	1793.4	1795.4	1798.3	1801.3	1803.2	1806.2	1806.2
32.5°	1732.7	1739.5	1749.3	1754.2	1757.2	1760.1	1762.1	1765.0	1767.0	1767.0
35°	1687.6	1697.4	1701.3	1710.1	1712.1	1714.0	1718.9	1721.9	1721.9	1720.9
37.5°	1642.5	1650.3	1655.2	1663.1	1667.0	1668.0	1671.9	1673.9	1676.8	1675.8
40°	1586.6	1599.4	1607.2	1611.1	1615.1	1620.0	1621.9	1624.9	1627.8	1626.8
42.5°	1534.7	1540.6	1552.3	1560.2	1562.1	1565.1	1570.0	1571.9	1575.9	1574.9
45°	1474.9	1486.7	1494.5	1501.4	1505.3	1509.2	1512.1	1515.1	1520.0	1516.1
47.5°	1415.1	1424.9	1435.7	1444.5	1446.5	1450.4	1454.3	1458.2	1460.2	1458.2
50°	1351.4	1361.2	1372.0	1378.9	1382.8	1385.7	1392.6	1396.5	1397.5	1399.4
52.5°	1284.8	1298.5	1306.3	1315.2	1319.1	1325.0	1327.9	1333.8	1331.8	1330.8
55°	1214.2	1223.0	1236.8	1245.6	1249.5	1251.5	1256.4	1261.3	1261.3	1265.2
57.5°	1138.8	1153.5	1164.2	1174.0	1176.0	1181.9	1186.8	1189.7	1191.7	1192.7
60°	1063.3	1078.0	1088.8	1100.5	1103.5	1107.4	1110.3	1115.2	1119.2	1119.2
62.5°	985.9	997.6	1011.4	1021.2	1025.1	1029.0	1035.9	1039.8	1041.7	1043.7
65°	907.5	922.2	931.0	943.7	947.7	950.6	952.6	963.3	962.4	962.4
67.5°	825.2	835.9	849.7	862.4	865.3	869.3	875.1	882.0	881.0	884.9
70°	741.9	753.6	769.3	778.1	785.0	789.9	790.9	796.7	801.6	802.6
72.5°	654.6	671.3	685.0	694.8	698.7	705.6	711.5	717.4	718.3	718.3
75°	571.3	585.1	600.7	609.6	614.5	619.4	625.2	633.1	633.1	634.1
77.5°	490.0	506.7	517.4	527.2	533.1	536.1	545.9	547.8	550.8	556.6
80°	407.7	422.4	437.1	447.9	452.8	457.7	465.5	470.4	473.3	475.3
82.5°	336.1	350.8	365.5	376.3	381.2	387.1	391.0	400.8	402.8	402.8
85°	271.5	288.1	303.8	313.6	319.5	325.4	332.2	339.1	341.0	344.0
87.5°	229.3	246.0	259.7	272.4	277.3	281.3	289.1	296.0	297.9	298.9
90°	205.8	221.5	237.2	248.9	254.8	258.7	267.5	272.4	275.4	276.4
92.5°	198.9	214.6	229.3	241.1	247.0	250.9	258.7	264.6	267.5	268.5
95°	196.0	211.7	225.4	238.1	243.0	247.9	255.8	260.7	263.6	264.6
97.5°	193.1	208.7	222.5	234.2	240.1	245.0	251.9	257.7	260.7	261.7
100°	189.1	204.8	218.5	230.3	235.2	240.1	247.9	252.8	255.8	256.8
102.5°	185.2	199.9	213.6	225.4	230.3	235.2	242.1	247.9	250.9	251.9
105°	180.3	195.0	208.7	219.5	225.4	229.3	237.2	242.1	246.0	247.0
107.5°	175.4	190.1	202.9	214.6	219.5	223.4	231.3	237.2	240.1	240.1
110°	169.5	184.2	197.0	208.7	213.6	217.6	224.4	230.3	233.2	234.2



TEST NUMBER: P241594

CATALOG NUMBER: FVS8M-3-LD4-35-3HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	164.6	178.4	191.1	201.9	206.8	210.7	217.6	223.4	225.4	226.4
115°	157.8	172.5	184.2	195.0	199.9	203.8	210.7	215.6	218.5	219.5
117.5°	151.9	165.6	177.4	188.2	192.1	196.0	202.9	207.8	210.7	211.7
120°	146.0	158.8	170.5	180.3	185.2	189.1	195.0	199.9	202.9	203.8
122.5°	139.2	151.9	163.7	172.5	177.4	180.3	187.2	192.1	195.0	196.0
125°	133.3	145.0	155.8	164.6	169.5	172.5	178.4	183.3	186.2	187.2
127.5°	126.4	138.2	148.0	156.8	160.7	164.6	169.5	174.4	176.4	177.4
130°	119.6	130.3	140.1	148.0	151.9	154.8	160.7	164.6	167.6	168.6
132.5°	111.7	122.5	131.3	139.2	143.1	146.0	151.9	155.8	157.8	158.8
135°	104.9	114.7	123.5	130.3	134.3	137.2	142.1	146.0	148.0	149.0
137.5°	97.0	106.8	114.7	121.5	125.4	127.4	132.3	136.2	138.2	139.2
140°	89.2	98.0	105.8	112.7	115.6	118.6	122.5	125.4	127.4	128.4
142.5°	82.3	90.2	97.0	102.9	105.8	108.8	112.7	115.6	117.6	118.6
145°	74.5	81.3	88.2	94.1	97.0	99.0	102.9	105.8	106.8	107.8
147.5°	66.6	73.5	79.4	85.3	87.2	89.2	93.1	95.1	97.0	97.0
150°	57.8	64.7	70.6	75.5	77.4	79.4	82.3	84.3	86.2	87.2
152.5°	49.0	55.9	61.7	65.7	67.6	69.6	72.5	74.5	75.5	76.4
155°	40.2	46.1	52.9	56.8	58.8	59.8	61.7	63.7	64.7	64.7
157.5°	31.4	37.2	42.1	47.0	48.0	50.0	51.9	53.9	53.9	54.9
160°	24.5	28.4	32.3	37.2	38.2	40.2	42.1	43.1	44.1	44.1
162.5°	17.6	20.6	23.5	27.4	28.4	30.4	32.3	33.3	33.3	34.3
165°	11.8	13.7	15.7	18.6	19.6	20.6	22.5	23.5	23.5	24.5
167.5°	6.9	7.8	9.8	10.8	11.8	11.8	13.7	14.7	14.7	14.7
170°	2.9	2.9	3.9	4.9	4.9	4.9	5.9	6.9	6.9	6.9
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)