

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: P241477

Luminaire Tested: **FVS8M-3-LD4-30-3LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241477
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-30)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-30-3LO-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 3-MODULE LED WITH PA187 LENS
Light Source: (252) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

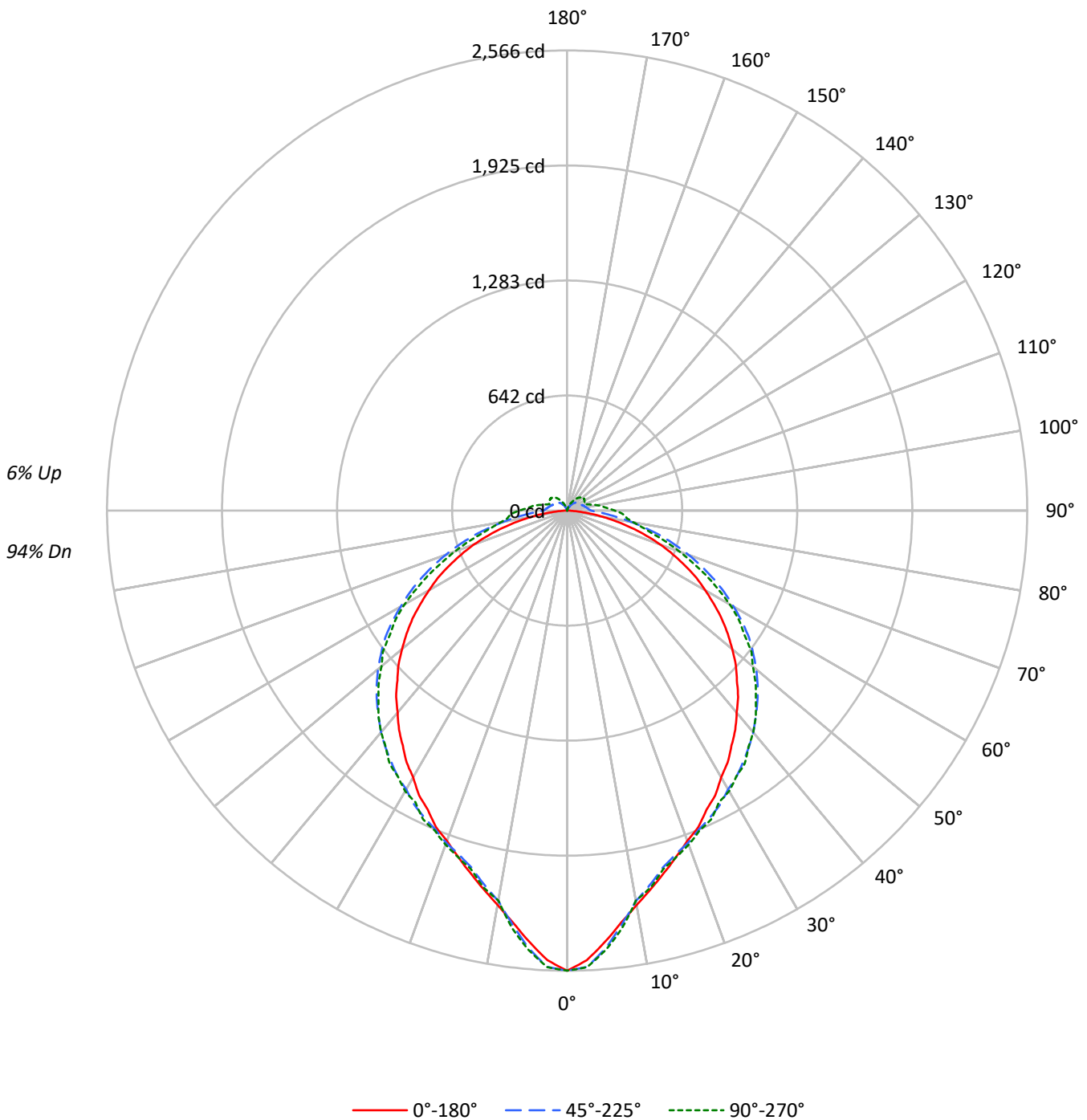
Lumens per Lamp: N/A
Luminaire Lumens: 6935.0 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.04 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 61.6
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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	107	101	97	93	103	99	94	91	93	90	87	88	85	83	84	81	79	77
2	97	88	81	75	93	85	79	73	81	75	71	77	72	68	73	69	66	63
3	88	77	68	62	85	75	67	61	71	64	59	67	62	57	64	59	55	53
4	80	68	59	52	77	66	58	51	63	56	50	60	54	49	57	52	47	45
5	74	61	51	45	71	59	51	44	56	49	43	54	47	42	51	46	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	41	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14981	14981	14981
5°	14088	14121	14145
10°	13121	12667	12596
15°	12468	11836	11802
20°	11957	11437	11385
25°	11579	11145	11079
30°	11248	10879	10781
35°	11001	10724	10620
40°	10751	10574	10345
45°	10516	10366	10021
50°	10287	10144	9674
55°	9990	9854	9286
60°	9535	9360	8803
65°	9006	8774	7965
70°	8285	7987	7019
75°	7026	7047	6010
80°	5353	5762	5513
85°	2694	4490	6043



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.1	3.3
10°-20°	586.9	8.5
20°-30°	867.1	12.5
30°-40°	1057.6	15.3
40°-50°	1125.9	16.2
50°-60°	1058.4	15.3
60°-70°	838.2	12.1
70°-80°	521.3	7.5
80°-90°	229.9	3.3
90°-100°	122.2	1.8
100°-110°	90.0	1.3
110°-120°	70.2	1.0
120°-130°	60.9	0.9
130°-140°	43.9	0.6
140°-150°	24.7	0.4
150°-160°	9.7	0.1
160°-170°	2.0	0.0
170°-180°	0.0	0.0
0°-30°	1680.1	24.2
0°-40°	2737.7	39.5
0°-60°	4922.0	71.0
0°-90°	6511.4	93.9
90°-120°	282.4	4.1
90°-150°	411.9	5.9
90°-180°	424.0	6.1
0°-180°	6935.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2566	2566	2566	2566	2566	
5°	2414	2431	2450	2464	2461	225
15°	2091	2080	2060	2062	2070	589
25°	1840	1864	1888	1892	1901	850
35°	1598	1663	1711	1726	1725	1002
45°	1338	1419	1501	1499	1488	1035
55°	1053	1140	1239	1229	1206	939
65°	723	808	902	892	856	717
75°	371	453	541	538	491	394
85°	64	136	217	262	323	83
90°	1	62	134	191	265	3
95°	1	52	118	170	209	0
105°	1	44	98	131	130	1
115°	1	38	84	105	107	1
125°	1	32	77	107	115	1
135°	1	23	61	91	103	1
145°	2	12	42	64	74	1
155°	2	5	20	36	41	1
165°	2	1	5	10	13	1
175°	0	0	0	0	0	0
180°	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°	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5
2.5°	2509.8	2514.7	2519.0	2521.4	2523.9	2530.6	2535.5	2536.1	2543.5	2549.0	2547.2
5°	2414.2	2418.4	2427.0	2431.3	2428.3	2431.3	2438.1	2440.5	2442.3	2444.8	2450.3
7.5°	2316.1	2313.6	2321.0	2319.2	2322.2	2320.4	2321.6	2321.0	2327.1	2328.4	2329.0
10°	2232.7	2235.2	2236.4	2231.5	2230.9	2232.7	2229.1	2225.4	2223.5	2214.4	2210.1
12.5°	2160.4	2160.4	2161.0	2151.8	2147.6	2144.5	2148.8	2147.6	2139.6	2131.6	2136.5
15°	2090.6	2092.4	2093.6	2086.9	2081.4	2080.1	2082.0	2069.7	2070.9	2075.2	2060.5
17.5°	2023.7	2031.1	2028.0	2020.1	2020.1	2020.1	2018.2	2015.8	2018.2	2013.9	2009.7
20°	1960.0	1961.8	1961.2	1964.9	1964.9	1964.3	1963.7	1964.9	1969.8	1960.0	1971.7
22.5°	1910.4	1912.2	1915.3	1908.5	1906.7	1904.2	1909.1	1923.2	1918.9	1926.3	1923.2
25°	1839.9	1840.5	1839.9	1846.6	1857.7	1864.4	1869.3	1870.5	1874.2	1885.2	1887.7
27.5°	1789.0	1789.6	1797.6	1800.7	1806.8	1814.1	1815.4	1825.2	1835.0	1839.3	1848.5
30°	1717.3	1725.9	1727.1	1743.0	1759.6	1765.1	1768.8	1779.2	1786.6	1798.2	1795.8
32.5°	1665.8	1670.7	1682.4	1692.2	1703.8	1708.1	1717.9	1733.9	1744.9	1756.5	1758.4
35°	1598.4	1600.9	1612.5	1629.1	1654.2	1663.4	1674.4	1677.5	1694.0	1706.9	1710.6
37.5°	1540.2	1544.5	1559.8	1574.5	1588.6	1601.5	1616.2	1632.1	1645.6	1656.0	1664.0
40°	1470.9	1474.0	1491.8	1510.8	1537.7	1550.6	1555.5	1579.4	1594.1	1603.3	1615.0
42.5°	1411.5	1414.5	1430.5	1449.5	1469.1	1487.5	1499.1	1521.8	1537.1	1548.1	1556.7
45°	1338.5	1345.3	1360.0	1385.7	1412.7	1419.4	1432.3	1454.4	1475.2	1494.2	1501.0
47.5°	1276.6	1279.1	1296.9	1314.6	1341.6	1356.3	1371.6	1390.6	1415.8	1428.6	1440.3
50°	1201.3	1209.2	1223.9	1247.2	1271.7	1285.2	1303.0	1327.5	1347.7	1365.5	1377.2
52.5°	1128.9	1133.2	1150.4	1174.9	1202.5	1218.4	1231.3	1256.4	1284.0	1299.9	1307.3
55°	1052.9	1057.8	1076.8	1100.7	1127.1	1140.0	1155.9	1183.5	1211.1	1225.8	1238.6
57.5°	970.2	980.6	997.8	1023.5	1046.8	1059.7	1076.8	1108.1	1132.0	1147.9	1157.7
60°	888.7	896.0	914.4	937.1	970.2	984.9	998.4	1026.0	1046.2	1064.0	1073.2
62.5°	813.9	817.6	834.1	855.6	883.2	896.7	912.0	942.0	962.8	978.2	989.2
65°	723.2	733.0	748.3	768.6	794.9	807.8	823.1	853.1	875.8	894.2	901.6
67.5°	638.6	641.1	660.7	684.0	710.3	722.6	735.5	764.3	786.3	801.0	810.2
70°	553.4	554.7	575.5	592.7	621.5	634.9	646.0	671.1	696.9	709.1	719.5
72.5°	460.3	465.8	487.2	505.6	528.9	541.2	557.7	582.2	603.1	618.4	626.4
75°	370.8	375.7	391.0	415.5	439.4	452.9	468.9	492.1	509.3	528.3	540.6
77.5°	284.4	297.9	305.8	327.3	354.2	370.2	381.2	402.7	419.8	435.1	445.0
80°	205.3	208.4	224.9	244.5	270.3	280.7	293.0	316.2	333.4	350.6	361.6
82.5°	128.7	134.8	151.4	169.8	191.8	202.3	213.9	236.0	255.0	268.4	283.2
85°	63.7	69.9	85.2	102.4	126.3	136.1	147.1	167.3	185.1	199.8	217.0
87.5°	21.5	26.4	39.8	57.0	77.2	86.4	96.2	114.6	130.5	148.3	162.4
90°	1.2	6.1	18.4	34.9	53.3	62.5	71.7	86.4	103.0	118.3	133.6
92.5°	0.6	4.9	15.9	31.3	48.4	56.4	63.7	79.1	95.0	109.1	123.2
95°	0.6	4.3	14.7	28.8	44.1	52.1	60.1	75.4	90.7	104.8	117.7
97.5°	0.6	3.7	13.5	27.0	41.7	49.6	57.0	72.3	86.4	99.9	112.2
100°	0.6	3.7	12.9	25.7	39.8	47.2	54.5	69.3	82.7	95.0	106.6
102.5°	0.6	3.7	12.3	24.5	38.6	45.4	52.7	66.2	79.1	90.7	102.4
105°	0.6	3.1	11.6	23.9	37.4	44.1	50.3	63.7	75.4	87.0	98.1
107.5°	0.6	3.1	11.0	22.7	35.5	42.3	49.0	61.3	72.9	84.0	93.8
110°	0.6	2.5	10.4	22.1	34.3	41.1	47.2	59.4	70.5	80.9	89.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	2.5	9.8	20.8	33.1	39.8	46.0	57.6	68.6	77.8	86.4
115°	0.6	1.8	9.2	19.6	31.9	38.0	44.1	55.8	66.2	75.4	84.0
117.5°	0.6	1.8	8.6	19.0	30.6	36.8	42.3	53.9	64.4	74.2	82.1
120°	0.6	1.8	8.0	17.8	29.4	34.9	41.1	52.1	63.1	72.3	80.9
122.5°	0.6	1.2	7.4	16.5	27.6	33.1	39.2	50.3	60.7	70.5	79.7
125°	0.6	1.2	6.7	15.9	26.4	31.9	37.4	47.8	58.8	68.0	77.2
127.5°	1.2	1.2	6.1	14.7	24.5	30.0	34.9	46.0	55.8	65.0	74.2
130°	1.2	1.2	5.5	12.9	22.7	28.2	33.1	42.9	52.7	61.3	70.5
132.5°	1.2	1.2	4.9	11.6	20.8	25.7	30.6	39.8	49.0	57.6	66.2
135°	1.2	1.2	3.7	10.4	18.4	23.3	27.6	36.8	45.4	53.3	61.3
137.5°	1.2	1.2	3.1	8.6	15.9	20.2	24.5	33.1	41.7	49.0	57.0
140°	1.2	1.2	2.5	7.4	14.1	17.8	21.5	29.4	37.4	44.7	52.1
142.5°	1.8	1.2	2.5	6.1	11.6	15.3	18.4	25.1	32.5	39.8	46.6
145°	1.8	1.2	1.8	4.9	9.8	12.3	15.3	21.5	28.2	34.9	41.7
147.5°	1.8	1.8	1.8	3.7	8.0	10.4	12.9	18.4	23.9	30.0	35.5
150°	1.8	1.8	1.2	3.1	6.1	8.0	10.4	14.7	19.6	25.1	30.0
152.5°	1.8	1.8	1.2	2.5	4.9	6.1	8.0	12.3	15.9	20.2	25.1
155°	1.8	1.8	1.8	1.8	3.7	4.9	6.1	9.2	12.9	15.9	20.2
157.5°	1.8	1.8	1.8	1.8	2.5	3.7	4.3	6.7	9.2	12.3	15.3
160°	2.5	1.8	1.8	1.2	1.8	2.5	3.1	4.9	6.7	9.2	11.0
162.5°	2.5	2.5	1.8	1.8	1.2	1.8	2.5	3.1	4.3	6.1	7.4
165°	2.5	2.5	1.8	1.8	1.2	1.2	1.8	1.8	3.1	3.7	4.9
167.5°	2.5	2.5	1.8	1.8	1.2	1.2	1.2	1.2	1.8	1.8	2.5
170°	2.5	2.5	1.8	1.8	1.2	1.2	1.2	1.2	0.6	0.6	1.2
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°	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5	2565.5
2.5°	2550.8	2546.5	2549.0	2549.6	2551.4	2553.9	2547.8	2547.2	2549.0	2549.0
5°	2450.9	2456.4	2455.8	2460.7	2463.8	2461.3	2462.0	2463.8	2466.3	2460.7
7.5°	2324.1	2327.7	2334.5	2329.6	2335.7	2332.6	2341.8	2336.3	2346.7	2348.6
10°	2210.1	2210.7	2218.6	2221.7	2229.1	2218.0	2215.0	2212.5	2205.8	2208.8
12.5°	2126.7	2115.1	2105.9	2111.4	2120.6	2127.3	2139.6	2147.6	2151.2	2152.5
15°	2055.0	2066.7	2072.2	2071.6	2061.7	2058.7	2056.8	2059.3	2066.0	2070.3
17.5°	2023.1	2014.6	2006.6	2025.0	2036.0	2042.7	2043.4	2039.1	2036.6	2025.6
20°	1961.2	1978.4	1994.9	1980.8	1971.0	1968.0	1964.9	1975.3	1982.1	1982.7
22.5°	1935.5	1947.1	1924.5	1945.9	1956.9	1960.0	1952.7	1943.5	1936.7	1931.2
25°	1892.6	1887.7	1911.6	1898.1	1892.0	1885.8	1895.0	1899.3	1898.1	1900.6
27.5°	1839.9	1858.3	1841.1	1854.0	1866.9	1871.8	1857.0	1844.8	1835.6	1833.1
30°	1809.9	1796.4	1827.0	1819.0	1808.0	1802.5	1800.7	1804.9	1806.2	1807.4
32.5°	1761.4	1775.5	1762.0	1757.8	1770.0	1774.9	1777.4	1766.3	1763.3	1757.1
35°	1716.1	1719.1	1716.7	1735.1	1726.5	1722.2	1719.8	1724.0	1726.5	1725.3
37.5°	1681.1	1665.2	1689.7	1673.2	1679.9	1683.0	1686.0	1674.4	1670.7	1661.5
40°	1616.8	1629.7	1617.4	1630.9	1630.9	1622.9	1610.1	1607.6	1610.1	1614.3
42.5°	1564.1	1565.3	1582.5	1561.6	1556.7	1556.1	1564.1	1562.2	1553.1	1557.3
45°	1510.2	1515.7	1498.5	1494.8	1499.1	1495.4	1483.8	1482.0	1486.9	1487.5
47.5°	1444.6	1451.9	1434.2	1432.9	1427.4	1421.9	1428.6	1432.9	1427.4	1426.2
50°	1383.3	1369.2	1374.1	1364.9	1367.3	1371.6	1357.5	1349.0	1349.0	1351.4
52.5°	1310.3	1314.6	1304.8	1315.9	1306.7	1298.7	1299.3	1296.3	1295.6	1295.6
55°	1238.0	1242.9	1249.7	1230.7	1229.4	1228.2	1223.9	1214.1	1207.4	1206.2
57.5°	1164.5	1165.1	1166.9	1160.8	1163.3	1157.7	1139.4	1141.8	1140.0	1136.3
60°	1079.9	1087.3	1076.2	1071.9	1068.9	1067.0	1065.2	1055.4	1048.6	1048.6
62.5°	992.3	986.7	989.2	980.0	983.7	984.3	966.5	959.2	951.2	948.7
65°	904.6	897.3	895.4	896.7	891.7	877.7	871.5	867.2	858.0	855.6
67.5°	812.1	813.3	809.6	800.4	793.1	789.4	777.8	766.7	758.8	756.3
70°	719.5	718.3	720.1	709.1	712.2	704.8	690.1	677.2	673.6	666.2
72.5°	629.4	631.3	630.7	630.0	623.9	615.3	605.5	595.7	590.2	577.3
75°	544.2	551.6	546.1	541.2	537.5	532.6	527.1	508.1	497.7	490.9
77.5°	454.8	463.3	466.4	459.7	457.8	457.8	447.4	434.5	430.2	428.4
80°	367.7	377.5	384.9	385.5	384.9	381.8	379.4	377.5	375.7	373.9
82.5°	294.2	305.8	310.7	313.2	317.5	316.9	323.0	327.9	333.4	336.5
85°	227.4	237.8	248.2	256.8	261.7	267.8	275.2	287.4	306.4	323.0
87.5°	176.5	188.8	202.9	214.5	218.8	224.3	237.8	258.0	283.2	299.7
90°	147.7	161.2	174.7	186.3	191.2	198.6	213.9	232.3	254.3	265.4
92.5°	136.1	148.9	161.2	172.8	179.6	186.3	199.2	212.1	225.5	232.9
95°	129.9	141.6	153.2	164.3	169.8	175.9	184.5	195.5	204.7	209.0
97.5°	123.8	134.8	145.3	155.7	160.6	165.5	175.3	185.1	194.3	193.7
100°	118.3	128.7	137.9	147.1	151.4	155.7	163.6	167.9	170.4	171.0
102.5°	113.4	122.0	130.5	137.9	141.0	145.3	150.8	151.4	151.4	148.3
105°	107.3	115.8	123.2	128.1	131.2	133.0	134.2	133.6	131.2	129.9
107.5°	102.4	109.1	115.2	118.9	120.1	120.1	118.3	117.1	114.6	115.2
110°	97.4	103.6	107.9	109.7	110.3	110.3	109.1	107.3	106.0	106.0



TEST NUMBER: P241477

CATALOG NUMBER: FVS8M-3-LD4-30-3LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	93.8	99.3	103.0	104.8	105.4	105.4	105.4	104.8	104.2	103.6
115°	90.7	96.8	100.5	103.6	104.8	105.4	106.6	107.3	106.6	106.6
117.5°	90.1	95.6	101.1	104.8	106.6	107.9	109.7	110.9	110.3	109.7
120°	88.9	95.6	101.1	106.0	107.9	109.7	112.2	113.4	112.8	112.2
122.5°	88.3	95.0	101.1	106.6	108.5	110.3	113.4	114.6	114.0	114.0
125°	85.8	93.2	99.9	105.4	107.3	109.1	112.8	114.0	114.6	114.6
127.5°	82.7	90.1	96.8	102.4	104.8	107.3	110.3	112.2	113.4	113.4
130°	78.4	86.4	93.2	98.7	101.1	103.6	106.6	109.7	110.9	111.5
132.5°	74.2	81.5	88.3	94.4	96.8	99.3	103.0	105.4	107.3	107.9
135°	69.3	76.0	82.7	88.3	90.7	93.8	97.4	100.5	102.4	103.0
137.5°	63.7	70.5	76.6	82.1	84.6	87.0	91.9	95.0	96.8	97.4
140°	58.2	65.0	70.5	76.0	78.4	80.9	85.2	88.3	90.1	90.7
142.5°	53.3	58.8	64.4	69.3	71.7	74.2	77.8	80.9	82.1	83.4
145°	47.2	52.7	57.6	62.5	64.4	66.2	69.9	72.3	73.5	74.2
147.5°	41.7	46.6	51.5	55.2	57.0	58.8	61.9	63.7	65.6	65.6
150°	35.5	40.5	44.7	48.4	50.3	51.5	53.9	55.8	56.4	57.0
152.5°	29.4	33.7	38.0	41.1	42.3	44.1	46.0	47.8	48.4	49.0
155°	23.3	27.6	31.3	34.3	35.5	36.8	38.0	39.8	40.5	41.1
157.5°	18.4	21.5	24.5	27.6	28.2	29.4	30.6	31.9	32.5	32.5
160°	13.5	15.9	18.4	20.8	22.1	22.7	24.5	24.5	25.7	25.7
162.5°	9.2	11.0	12.9	14.7	15.3	16.5	17.8	18.4	19.0	19.0
165°	6.1	6.7	8.6	9.8	9.8	10.4	12.3	12.3	12.3	12.9
167.5°	3.1	3.7	4.3	5.5	5.5	6.1	6.7	7.4	7.4	7.4
170°	1.2	1.2	1.8	1.8	1.8	2.5	2.5	3.1	3.1	3.1
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)