

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: P241474

Luminaire Tested: **FVS8M-3-LD4-35-2HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241474
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-25)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-35-2HI-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

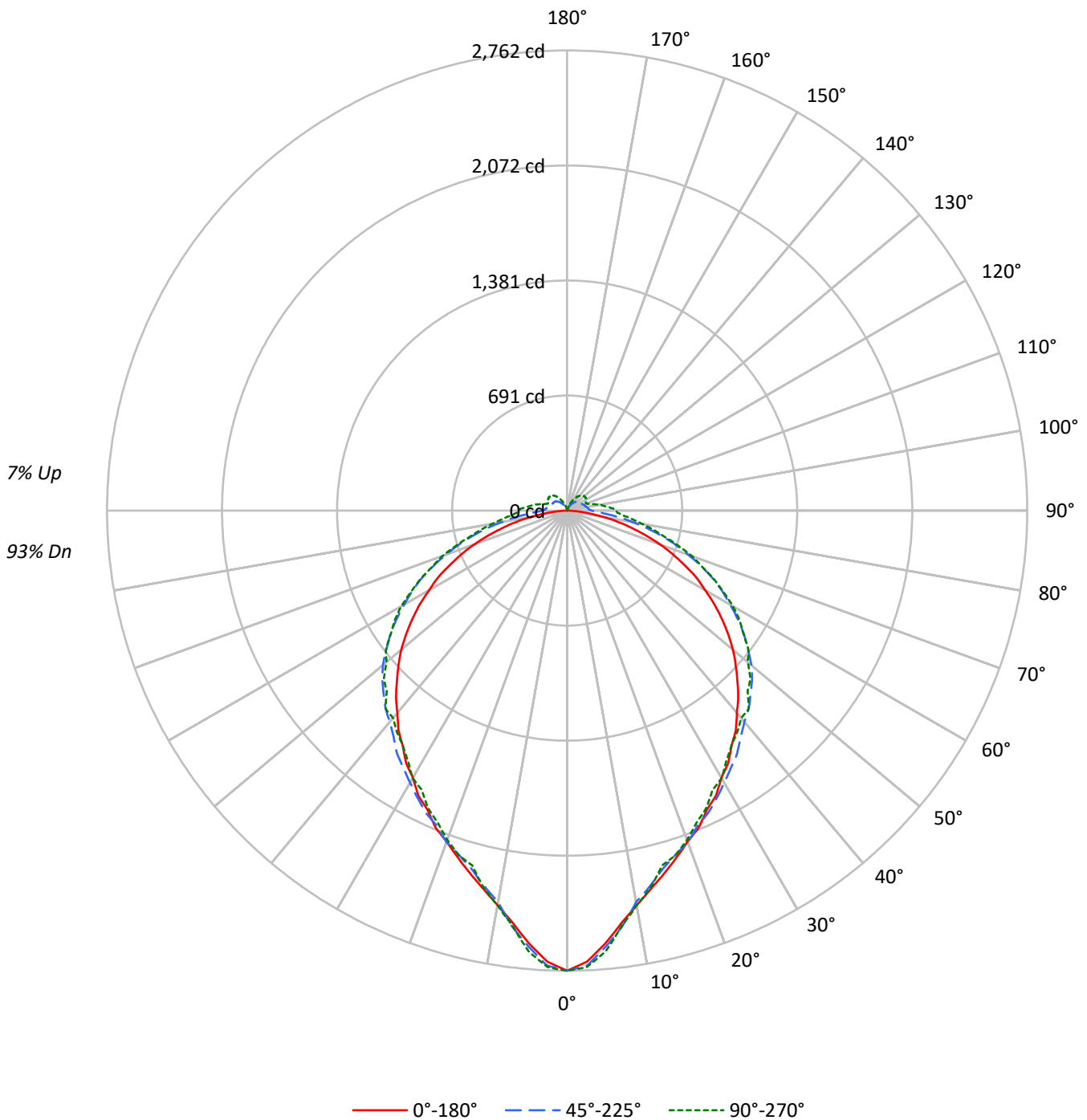
Lumens per Lamp: N/A
Luminaire Lumens: 7425.0 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 69.3
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	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	97	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	79	73	80	75	70	76	72	68	72	68	65	63
3	87	77	68	61	84	74	67	60	71	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	57	51	62	55	50	59	53	48	56	51	47	44
5	73	60	51	44	71	59	50	44	56	48	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	44	38	50	43	37	48	41	36	46	40	36	33
7	63	49	40	34	61	48	40	34	46	38	33	44	37	32	42	36	32	29
8	58	45	36	30	56	44	36	30	42	35	29	40	34	29	38	33	28	26
9	55	41	33	27	53	40	32	27	39	31	26	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	24	36	29	24	34	28	24	33	27	23	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16127	16127	16127
5°	15230	15154	15261
10°	14134	13673	13720
15°	13438	12774	12565
20°	12897	12286	12077
25°	12471	11827	11501
30°	12125	11423	11061
35°	11845	11158	10587
40°	11584	10838	10420
45°	11358	10755	10320
50°	11129	10633	10130
55°	10759	10308	9944
60°	10263	9855	9651
65°	9691	9395	9041
70°	8892	8574	8396
75°	7578	7640	7379
80°	5749	6386	6691
85°	3024	4929	6326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.3	3.3
10°-20°	631.1	8.5
20°-30°	919.0	12.4
30°-40°	1097.8	14.8
40°-50°	1179.8	15.9
50°-60°	1120.3	15.1
60°-70°	905.2	12.2
70°-80°	581.5	7.8
80°-90°	254.5	3.4
90°-100°	135.1	1.8
100°-110°	102.2	1.4
110°-120°	81.6	1.1
120°-130°	72.8	1.0
130°-140°	54.3	0.7
140°-150°	31.5	0.4
150°-160°	12.4	0.2
160°-170°	2.6	0.0
170°-180°	0.1	0.0
0°-30°	1793.4	24.2
0°-40°	2891.1	38.9
0°-60°	5191.3	69.9
0°-90°	6932.5	93.4
90°-120°	318.9	4.3
90°-150°	477.4	6.4
90°-180°	493.0	6.6
0°-180°	7425.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2762	2762	2762	2762	2762	
5°	2610	2612	2630	2650	2655	242
15°	2253	2244	2224	2220	2204	635
25°	1982	2003	2003	1982	1973	917
35°	1721	1763	1780	1761	1720	1080
45°	1446	1502	1557	1579	1532	1116
55°	1134	1206	1296	1293	1292	1013
65°	778	853	965	974	971	771
75°	400	480	586	622	603	425
85°	72	138	238	297	338	91
90°	1	63	147	207	292	3
95°	1	56	127	188	243	1
105°	1	49	111	149	148	1
115°	1	45	97	122	124	1
125°	1	38	92	129	135	1
135°	1	28	76	115	127	1
145°	2	16	52	83	98	1
155°	2	6	26	45	52	1
165°	3	2	7	14	18	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°	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8
2.5°	2709.9	2713.8	2713.8	2712.8	2714.8	2713.8	2718.7	2725.5	2728.5	2732.4	2733.4
5°	2609.9	2613.8	2607.9	2602.1	2606.0	2611.9	2616.8	2626.6	2625.6	2624.6	2629.5
7.5°	2496.2	2497.2	2492.3	2489.4	2487.4	2491.3	2495.2	2499.2	2507.0	2515.8	2519.7
10°	2405.1	2408.0	2399.2	2392.3	2389.4	2388.4	2394.3	2401.1	2404.1	2396.2	2385.5
12.5°	2324.7	2322.7	2319.8	2308.0	2313.9	2315.9	2317.8	2315.9	2306.1	2301.2	2306.1
15°	2253.2	2252.2	2249.2	2242.4	2244.3	2244.3	2238.5	2234.5	2234.5	2241.4	2223.8
17.5°	2183.6	2182.6	2181.6	2171.8	2175.7	2176.7	2177.7	2176.7	2181.6	2169.9	2165.0
20°	2114.0	2110.1	2111.1	2113.0	2122.8	2118.9	2117.9	2121.8	2114.0	2112.0	2117.9
22.5°	2061.1	2059.1	2055.2	2054.2	2055.2	2053.2	2056.2	2058.1	2056.2	2062.0	2046.4
25°	1981.7	1980.7	1982.7	1986.6	1995.4	2003.2	2009.1	1995.4	2006.2	2002.3	2003.2
27.5°	1931.7	1931.7	1932.7	1929.7	1935.6	1940.5	1940.5	1949.3	1953.3	1945.4	1944.4
30°	1851.3	1851.3	1857.2	1868.0	1877.8	1889.6	1887.6	1888.6	1889.6	1890.5	1885.6
32.5°	1798.4	1800.4	1803.3	1804.3	1819.0	1817.0	1819.0	1835.7	1836.6	1835.7	1830.8
35°	1721.0	1718.0	1729.8	1737.6	1759.2	1763.1	1766.1	1768.0	1777.8	1772.9	1779.8
37.5°	1662.2	1663.2	1668.1	1679.8	1681.8	1696.5	1707.3	1710.2	1709.2	1714.1	1711.2
40°	1584.8	1581.8	1589.7	1610.2	1627.9	1634.7	1640.6	1650.4	1654.3	1659.2	1655.3
42.5°	1520.1	1518.1	1526.0	1543.6	1558.3	1571.0	1576.9	1587.7	1600.4	1607.3	1613.2
45°	1445.6	1443.6	1455.4	1473.0	1493.6	1501.5	1512.2	1528.9	1544.6	1553.4	1557.3
47.5°	1372.1	1374.0	1377.0	1397.6	1427.0	1435.8	1448.5	1455.4	1485.8	1494.6	1505.4
50°	1299.6	1300.5	1309.4	1322.1	1346.6	1357.4	1375.0	1394.6	1408.3	1426.0	1443.6
52.5°	1217.2	1216.3	1230.0	1248.6	1272.1	1286.8	1297.6	1326.0	1341.7	1355.4	1367.2
55°	1133.9	1139.8	1149.6	1166.3	1189.8	1205.5	1216.3	1239.8	1270.2	1284.9	1295.6
57.5°	1049.6	1054.5	1069.2	1084.9	1106.5	1117.3	1133.9	1159.4	1182.0	1198.6	1215.3
60°	956.5	962.4	977.1	994.8	1026.1	1029.1	1048.7	1073.2	1096.7	1119.2	1130.0
62.5°	877.2	877.2	887.9	910.5	933.0	946.7	965.4	986.9	1013.4	1032.0	1050.6
65°	778.2	784.0	800.7	822.3	838.0	852.7	873.2	897.7	927.1	948.7	965.4
67.5°	687.0	690.0	708.6	725.2	751.7	767.4	777.2	809.5	837.0	855.6	869.3
70°	593.9	599.8	613.5	633.1	656.6	673.3	685.1	716.4	739.0	761.5	772.3
72.5°	494.0	501.8	519.4	539.0	562.6	577.3	589.0	619.4	642.9	662.5	685.1
75°	399.9	404.8	423.4	444.9	470.4	480.2	495.9	519.4	548.8	573.3	586.1
77.5°	310.7	314.6	333.2	350.9	375.4	389.1	402.8	429.3	453.8	476.3	493.0
80°	220.5	225.4	242.1	258.7	285.2	297.9	307.7	338.1	363.6	383.2	400.8
82.5°	141.1	146.0	161.7	182.3	201.9	215.6	226.4	249.9	276.4	295.0	315.6
85°	71.5	75.5	89.2	106.8	131.3	138.2	154.8	175.4	199.0	219.5	238.2
87.5°	21.6	27.4	41.2	57.8	77.4	87.2	100.0	121.5	142.1	161.7	182.3
90°	1.0	5.9	17.6	33.3	52.9	62.7	73.5	93.1	110.7	130.3	147.0
92.5°	1.0	4.9	15.7	31.4	49.0	58.8	67.6	86.2	102.9	118.6	133.3
95°	1.0	3.9	14.7	29.4	47.0	55.9	64.7	82.3	98.0	113.7	127.4
97.5°	1.0	3.9	13.7	28.4	45.1	53.9	62.7	78.4	93.1	108.8	123.5
100°	1.0	3.9	13.7	27.4	44.1	51.9	59.8	75.5	90.2	104.9	118.6
102.5°	1.0	3.9	12.7	27.4	42.1	50.0	57.8	72.5	87.2	101.9	114.7
105°	1.0	2.9	12.7	26.5	41.2	49.0	55.9	70.6	85.3	99.0	110.7
107.5°	1.0	2.9	11.8	25.5	40.2	48.0	54.9	69.6	82.3	96.0	106.8
110°	1.0	2.9	11.8	24.5	39.2	47.0	53.9	68.6	81.3	93.1	102.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	2.9	10.8	23.5	38.2	46.1	52.9	66.6	79.4	90.2	100.0
115°	1.0	2.0	10.8	22.5	37.2	45.1	51.9	65.7	77.4	88.2	97.0
117.5°	1.0	2.0	9.8	22.5	36.3	43.1	51.0	63.7	75.5	86.2	96.0
120°	1.0	2.0	9.8	21.6	34.3	42.1	49.0	61.7	74.5	85.3	95.1
122.5°	1.0	2.0	8.8	20.6	33.3	40.2	47.0	59.8	72.5	84.3	94.1
125°	1.0	1.0	7.8	18.6	31.4	38.2	45.1	57.8	69.6	81.3	92.1
127.5°	1.0	1.0	6.9	17.6	30.4	36.3	43.1	55.9	67.6	78.4	89.2
130°	1.0	1.0	5.9	15.7	28.4	34.3	40.2	51.9	63.7	74.5	85.3
132.5°	1.0	1.0	5.9	14.7	25.5	31.4	37.2	49.0	59.8	70.6	80.4
135°	1.0	1.0	4.9	12.7	23.5	28.4	34.3	45.1	55.9	65.7	75.5
137.5°	2.0	1.0	3.9	10.8	20.6	25.5	30.4	41.2	51.0	60.8	69.6
140°	2.0	1.0	2.9	8.8	17.6	22.5	27.4	36.3	46.1	54.9	64.7
142.5°	2.0	2.0	2.0	7.8	14.7	18.6	23.5	32.3	41.2	50.0	57.8
145°	2.0	2.0	2.0	5.9	11.8	15.7	19.6	27.4	35.3	44.1	51.9
147.5°	2.0	2.0	2.0	4.9	9.8	12.7	15.7	23.5	30.4	37.2	45.1
150°	2.0	2.0	2.0	3.9	7.8	10.8	12.7	18.6	25.5	32.3	38.2
152.5°	2.0	2.0	2.0	2.9	5.9	7.8	9.8	15.7	20.6	26.5	32.3
155°	2.0	2.0	2.0	2.0	4.9	5.9	7.8	11.8	16.7	20.6	25.5
157.5°	2.0	2.0	2.0	2.0	2.9	3.9	5.9	8.8	12.7	16.7	19.6
160°	2.0	2.0	2.0	2.0	2.0	2.9	3.9	5.9	8.8	11.8	14.7
162.5°	2.9	2.0	2.0	2.0	2.0	2.0	2.9	3.9	5.9	8.8	10.8
165°	2.9	2.0	2.0	2.0	1.0	2.0	2.0	2.9	3.9	4.9	6.9
167.5°	2.9	2.9	2.0	2.0	2.0	1.0	1.0	1.0	2.0	2.9	3.9
170°	2.9	2.9	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8	2761.8
2.5°	2734.4	2740.3	2742.2	2743.2	2747.1	2745.2	2747.1	2743.2	2743.2	2742.2
5°	2628.5	2632.4	2639.3	2649.1	2650.1	2651.1	2653.0	2657.9	2659.9	2655.0
7.5°	2508.0	2512.9	2505.0	2499.2	2504.1	2503.1	2511.9	2506.0	2512.9	2513.9
10°	2378.6	2379.6	2390.4	2398.2	2397.2	2401.1	2397.2	2392.3	2398.2	2406.0
12.5°	2307.1	2292.4	2274.7	2283.5	2291.4	2294.3	2312.9	2315.9	2323.7	2317.8
15°	2216.9	2226.7	2238.5	2220.8	2219.8	2214.0	2208.1	2204.2	2203.2	2204.2
17.5°	2173.8	2157.1	2147.3	2156.1	2170.8	2179.7	2179.7	2181.6	2165.0	2167.9
20°	2098.3	2103.2	2121.8	2111.1	2105.2	2099.3	2095.4	2102.2	2109.1	2103.2
22.5°	2054.2	2062.0	2044.4	2065.0	2068.9	2075.8	2070.9	2043.4	2032.6	2027.7
25°	2000.3	1992.5	2020.9	1991.5	1981.7	1966.0	1964.0	1968.0	1973.8	1972.9
27.5°	1936.6	1954.2	1918.0	1926.8	1941.5	1943.5	1939.5	1918.0	1906.2	1889.6
30°	1897.4	1865.1	1882.7	1880.7	1860.2	1855.3	1844.5	1850.4	1855.3	1854.3
32.5°	1822.9	1830.8	1811.2	1797.4	1810.2	1820.0	1819.0	1796.5	1782.7	1778.8
35°	1767.0	1760.2	1752.3	1772.0	1761.2	1741.6	1718.0	1719.0	1720.0	1720.0
37.5°	1712.2	1694.5	1716.1	1679.8	1676.9	1684.7	1696.5	1689.6	1678.8	1676.9
40°	1648.5	1668.1	1636.7	1658.3	1661.2	1657.3	1632.8	1624.9	1625.9	1625.9
42.5°	1615.1	1608.3	1624.9	1621.0	1610.2	1609.3	1621.0	1621.0	1616.1	1613.2
45°	1570.1	1566.1	1570.1	1569.1	1578.9	1579.9	1557.3	1539.7	1533.8	1531.8
47.5°	1504.4	1526.9	1511.3	1519.1	1506.4	1491.7	1490.7	1494.6	1493.6	1491.7
50°	1447.5	1446.6	1465.2	1432.8	1435.8	1443.6	1441.7	1427.0	1422.1	1415.2
52.5°	1384.8	1390.7	1375.0	1380.9	1379.9	1369.1	1357.4	1362.3	1368.2	1372.1
55°	1303.5	1312.3	1309.4	1304.5	1292.7	1296.6	1310.3	1303.5	1293.7	1291.7
57.5°	1234.9	1225.1	1234.9	1229.0	1236.8	1231.9	1215.3	1217.2	1221.2	1227.0
60°	1145.7	1158.4	1140.8	1154.5	1142.8	1131.0	1140.8	1154.5	1150.6	1149.6
62.5°	1053.6	1059.4	1065.3	1053.6	1051.6	1059.4	1060.4	1048.7	1052.6	1056.5
65°	968.3	962.4	973.2	973.2	974.2	970.3	960.5	966.3	971.2	971.2
67.5°	875.2	884.0	879.1	884.0	877.2	879.1	883.0	875.2	877.2	872.3
70°	783.1	790.9	796.8	793.8	797.8	800.7	793.8	792.9	793.8	796.8
72.5°	692.9	699.8	712.5	715.4	722.3	718.4	707.6	702.7	697.8	697.8
75°	598.8	611.6	618.4	629.2	622.3	617.4	622.3	610.6	605.7	602.7
77.5°	507.7	522.4	535.1	529.2	532.2	537.1	532.2	529.2	526.3	528.3
80°	415.5	434.2	441.0	444.9	449.8	449.8	451.8	452.8	453.8	453.8
82.5°	335.2	347.9	358.7	367.5	370.5	370.5	377.3	383.2	389.1	393.0
85°	261.7	272.5	283.2	291.1	297.0	301.9	312.6	321.5	331.3	338.1
87.5°	199.9	210.7	222.5	234.2	240.1	247.0	258.7	271.5	288.1	301.9
90°	159.7	173.5	187.2	200.9	206.8	213.7	228.4	245.0	272.5	292.1
92.5°	147.0	160.7	173.5	187.2	194.1	200.9	216.6	240.1	266.6	277.4
95°	141.1	154.8	167.6	180.3	188.2	196.0	212.7	228.4	239.1	243.1
97.5°	136.2	149.0	160.7	174.5	181.3	188.2	200.9	208.8	215.6	218.6
100°	131.3	144.1	155.8	167.6	172.5	176.4	185.2	194.1	201.9	203.9
102.5°	127.4	138.2	148.0	156.8	160.7	164.7	172.5	176.4	174.5	173.5
105°	121.5	131.3	139.2	146.0	149.0	150.9	153.9	152.9	149.9	148.0
107.5°	116.6	123.5	130.3	134.3	136.2	136.2	135.2	134.3	132.3	132.3
110°	111.7	117.6	122.5	125.4	126.4	126.4	126.4	124.5	124.5	123.5



TEST NUMBER: P241474

CATALOG NUMBER: FVS8M-3-LD4-35-2HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	107.8	113.7	117.6	120.5	121.5	121.5	122.5	122.5	121.5	121.5
115°	104.9	110.7	115.6	119.6	121.5	122.5	124.5	125.4	124.5	124.5
117.5°	103.9	110.7	116.6	122.5	124.5	126.4	129.4	129.4	128.4	128.4
120°	103.9	111.7	118.6	124.5	127.4	130.3	133.3	133.3	132.3	132.3
122.5°	103.9	111.7	118.6	125.4	129.4	131.3	135.2	135.2	134.3	134.3
125°	101.9	110.7	118.6	125.4	129.4	132.3	135.2	136.2	135.2	135.2
127.5°	99.0	107.8	116.6	123.5	127.4	130.3	134.3	135.2	135.2	135.2
130°	95.1	104.9	112.7	120.5	124.5	127.4	131.3	133.3	134.3	134.3
132.5°	91.1	99.0	107.8	115.6	119.6	122.5	127.4	129.4	131.3	131.3
135°	85.3	94.1	102.9	110.7	114.7	117.6	122.5	125.4	126.4	127.4
137.5°	79.4	88.2	96.0	103.9	107.8	110.7	116.6	119.6	121.5	122.5
140°	72.5	81.3	89.2	97.0	100.9	103.9	108.8	112.7	114.7	115.6
142.5°	65.7	73.5	81.3	89.2	92.1	95.1	100.9	104.9	106.8	107.8
145°	58.8	65.7	73.5	80.4	83.3	85.3	91.1	94.1	97.0	98.0
147.5°	51.9	58.8	64.7	70.6	73.5	75.5	80.4	83.3	85.3	86.2
150°	45.1	51.0	56.8	61.7	63.7	65.7	68.6	71.5	73.5	74.5
152.5°	38.2	43.1	48.0	51.9	53.9	54.9	58.8	60.8	61.7	62.7
155°	30.4	35.3	40.2	43.1	45.1	46.1	49.0	50.0	51.0	51.9
157.5°	23.5	27.4	31.4	35.3	36.3	38.2	39.2	41.2	41.2	41.2
160°	17.6	20.6	24.5	27.4	28.4	30.4	31.4	32.3	33.3	33.3
162.5°	12.7	14.7	17.6	19.6	20.6	22.5	23.5	24.5	25.5	25.5
165°	8.8	9.8	11.8	13.7	13.7	14.7	16.7	16.7	17.6	17.6
167.5°	4.9	5.9	6.9	7.8	7.8	8.8	9.8	10.8	10.8	10.8
170°	2.0	2.0	2.9	2.9	2.9	3.9	3.9	4.9	4.9	4.9
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)