

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: P241465

Luminaire Tested: **FVS8M-3-LD4-30-2LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P241465  
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-LD4-30-2LO-PA187-UNV-EDC1  
Description: FAILSAFE FVS8M LED FIXTURE  
3FT LENGTH, 2-MODULE LED WITH PA187 LENS  
Light Source: (168) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

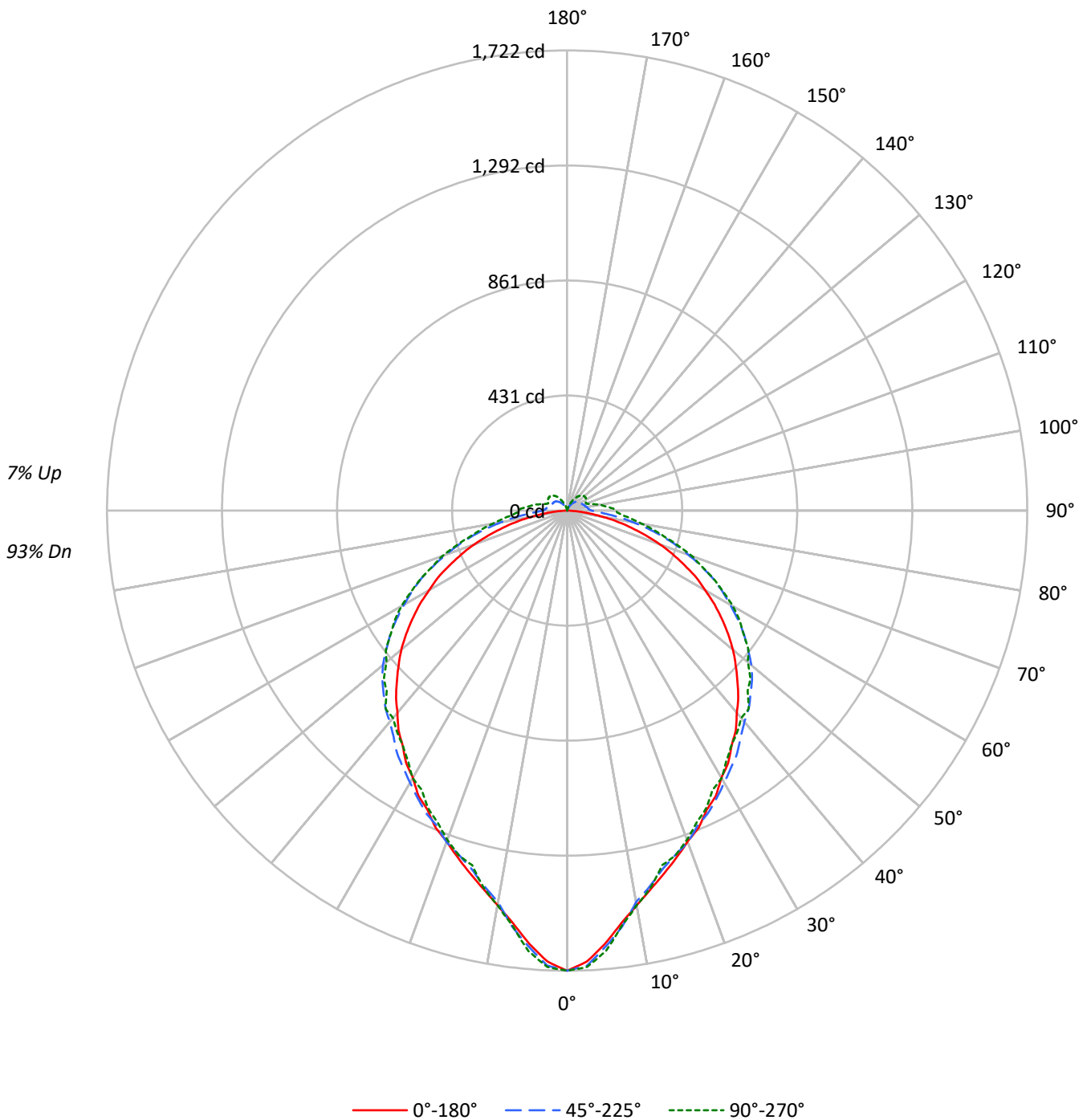
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4629.0 lumens  
Efficiency: N/A  
Efficacy: 113.7 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): 40.7  
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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CATALOG NUMBER: FVS8M-3-LD4-30-2LO-PA187-UNV-EDC1

### 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°	10054	10054	10054
5°	9495	9447	9514
10°	8811	8524	8554
15°	8377	7964	7833
20°	8040	7659	7529
25°	7775	7374	7170
30°	7560	7122	6896
35°	7384	6956	6600
40°	7222	6757	6496
45°	7081	6705	6434
50°	6938	6629	6316
55°	6707	6426	6199
60°	6398	6144	6017
65°	6041	5856	5637
70°	5544	5345	5233
75°	4724	4763	4601
80°	3585	3982	4171
85°	1886	3073	3944



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.7	3.3
10°-20°	393.4	8.5
20°-30°	573.0	12.4
30°-40°	684.4	14.8
40°-50°	735.5	15.9
50°-60°	698.4	15.1
60°-70°	564.4	12.2
70°-80°	362.5	7.8
80°-90°	158.7	3.4
90°-100°	84.2	1.8
100°-110°	63.7	1.4
110°-120°	50.9	1.1
120°-130°	45.4	1.0
130°-140°	33.9	0.7
140°-150°	19.6	0.4
150°-160°	7.7	0.2
160°-170°	1.6	0.0
170°-180°	0.0	0.0
0°-30°	1118.0	24.2
0°-40°	1802.4	38.9
0°-60°	3236.4	69.9
0°-90°	4321.9	93.4
90°-120°	198.8	4.3
90°-150°	297.6	6.4
90°-180°	307.0	6.6
0°-180°	4629.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1722	1722	1722	1722	1722	
5°	1627	1628	1639	1652	1655	151
15°	1405	1399	1386	1384	1374	396
25°	1235	1249	1249	1235	1230	572
35°	1073	1099	1110	1098	1072	673
45°	901	936	971	984	955	696
55°	707	752	808	806	805	631
65°	485	532	602	607	606	481
75°	249	299	365	388	376	265
85°	45	86	148	185	211	57
90°	1	39	92	129	182	2
95°	1	35	79	117	152	0
105°	1	31	69	93	92	1
115°	1	28	60	76	78	1
125°	1	24	57	81	84	1
135°	1	18	47	72	79	1
145°	1	10	32	52	61	1
155°	1	4	16	28	32	1
165°	2	1	4	9	11	0
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°	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8
2.5°	1689.4	1691.9	1691.9	1691.3	1692.5	1691.9	1694.9	1699.2	1701.0	1703.5	1704.1
5°	1627.1	1629.5	1625.9	1622.2	1624.7	1628.3	1631.4	1637.5	1636.9	1636.3	1639.3
7.5°	1556.2	1556.8	1553.8	1551.9	1550.7	1553.2	1555.6	1558.1	1562.9	1568.4	1570.9
10°	1499.4	1501.2	1495.7	1491.5	1489.6	1489.0	1492.7	1497.0	1498.8	1493.9	1487.2
12.5°	1449.3	1448.1	1446.2	1438.9	1442.6	1443.8	1445.0	1443.8	1437.7	1434.6	1437.7
15°	1404.7	1404.1	1402.3	1398.0	1399.2	1399.2	1395.5	1393.1	1393.1	1397.4	1386.4
17.5°	1361.3	1360.7	1360.1	1354.0	1356.4	1357.0	1357.7	1357.0	1360.1	1352.8	1349.7
20°	1317.9	1315.5	1316.1	1317.3	1323.4	1321.0	1320.4	1322.8	1317.9	1316.7	1320.4
22.5°	1284.9	1283.7	1281.3	1280.7	1281.3	1280.1	1281.9	1283.1	1281.9	1285.6	1275.8
25°	1235.4	1234.8	1236.1	1238.5	1244.0	1248.9	1252.6	1244.0	1250.7	1248.3	1248.9
27.5°	1204.3	1204.3	1204.9	1203.1	1206.7	1209.8	1209.8	1215.3	1217.7	1212.8	1212.2
30°	1154.2	1154.2	1157.9	1164.6	1170.7	1178.0	1176.8	1177.4	1178.0	1178.6	1175.6
32.5°	1121.2	1122.4	1124.2	1124.9	1134.0	1132.8	1134.0	1144.4	1145.0	1144.4	1141.4
35°	1072.9	1071.1	1078.4	1083.3	1096.8	1099.2	1101.0	1102.3	1108.4	1105.3	1109.6
37.5°	1036.3	1036.9	1039.9	1047.3	1048.5	1057.6	1064.4	1066.2	1065.6	1068.6	1066.8
40°	988.0	986.2	991.0	1003.9	1014.9	1019.2	1022.8	1028.9	1031.4	1034.4	1032.0
42.5°	947.7	946.4	951.3	962.3	971.5	979.4	983.1	989.8	997.8	1002.0	1005.7
45°	901.2	900.0	907.3	918.3	931.2	936.1	942.8	953.2	962.9	968.4	970.9
47.5°	855.4	856.6	858.5	871.3	889.6	895.1	903.1	907.3	926.3	931.8	938.5
50°	810.2	810.8	816.3	824.2	839.5	846.2	857.2	869.5	878.0	889.0	900.0
52.5°	758.9	758.3	766.8	778.4	793.1	802.2	809.0	826.7	836.5	845.0	852.4
55°	706.9	710.6	716.7	727.1	741.8	751.5	758.3	772.9	791.9	801.0	807.7
57.5°	654.4	657.4	666.6	676.4	689.8	696.5	706.9	722.8	736.9	747.3	757.6
60°	596.3	600.0	609.2	620.2	639.7	641.6	653.8	669.0	683.7	697.8	704.5
62.5°	546.8	546.8	553.6	567.6	581.7	590.2	601.8	615.3	631.8	643.4	655.0
65°	485.1	488.8	499.2	512.6	522.4	531.6	544.4	559.7	578.0	591.5	601.8
67.5°	428.3	430.1	441.8	452.1	468.6	478.4	484.5	504.7	521.8	533.4	542.0
70°	370.3	373.9	382.5	394.7	409.4	419.8	427.1	446.6	460.7	474.7	481.5
72.5°	307.9	312.8	323.8	336.1	350.7	359.9	367.2	386.2	400.8	413.0	427.1
75°	249.3	252.3	264.0	277.4	293.3	299.4	309.2	323.8	342.2	357.4	365.4
77.5°	193.7	196.1	207.7	218.7	234.0	242.6	251.1	267.6	282.9	296.9	307.3
80°	137.5	140.5	150.9	161.3	177.8	185.7	191.9	210.8	226.7	238.9	249.9
82.5°	88.0	91.0	100.8	113.6	125.9	134.4	141.1	155.8	172.3	183.9	196.7
85°	44.6	47.0	55.6	66.6	81.9	86.2	96.5	109.4	124.0	136.9	148.5
87.5°	13.4	17.1	25.7	36.0	48.3	54.4	62.3	75.8	88.6	100.8	113.6
90°	0.6	3.7	11.0	20.8	33.0	39.1	45.8	58.0	69.0	81.3	91.7
92.5°	0.6	3.1	9.8	19.6	30.6	36.7	42.2	53.8	64.2	73.9	83.1
95°	0.6	2.4	9.2	18.3	29.3	34.8	40.3	51.3	61.1	70.9	79.4
97.5°	0.6	2.4	8.6	17.7	28.1	33.6	39.1	48.9	58.0	67.8	77.0
100°	0.6	2.4	8.6	17.1	27.5	32.4	37.3	47.0	56.2	65.4	73.9
102.5°	0.6	2.4	7.9	17.1	26.3	31.2	36.0	45.2	54.4	63.5	71.5
105°	0.6	1.8	7.9	16.5	25.7	30.6	34.8	44.0	53.2	61.7	69.0
107.5°	0.6	1.8	7.3	15.9	25.1	29.9	34.2	43.4	51.3	59.9	66.6
110°	0.6	1.8	7.3	15.3	24.4	29.3	33.6	42.8	50.7	58.0	64.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	1.8	6.7	14.7	23.8	28.7	33.0	41.5	49.5	56.2	62.3
115°	0.6	1.2	6.7	14.1	23.2	28.1	32.4	40.9	48.3	55.0	60.5
117.5°	0.6	1.2	6.1	14.1	22.6	26.9	31.8	39.7	47.0	53.8	59.9
120°	0.6	1.2	6.1	13.4	21.4	26.3	30.6	38.5	46.4	53.2	59.3
122.5°	0.6	1.2	5.5	12.8	20.8	25.1	29.3	37.3	45.2	52.5	58.7
125°	0.6	0.6	4.9	11.6	19.6	23.8	28.1	36.0	43.4	50.7	57.4
127.5°	0.6	0.6	4.3	11.0	18.9	22.6	26.9	34.8	42.2	48.9	55.6
130°	0.6	0.6	3.7	9.8	17.7	21.4	25.1	32.4	39.7	46.4	53.2
132.5°	0.6	0.6	3.7	9.2	15.9	19.6	23.2	30.6	37.3	44.0	50.1
135°	0.6	0.6	3.1	7.9	14.7	17.7	21.4	28.1	34.8	40.9	47.0
137.5°	1.2	0.6	2.4	6.7	12.8	15.9	18.9	25.7	31.8	37.9	43.4
140°	1.2	0.6	1.8	5.5	11.0	14.1	17.1	22.6	28.7	34.2	40.3
142.5°	1.2	1.2	1.2	4.9	9.2	11.6	14.7	20.2	25.7	31.2	36.0
145°	1.2	1.2	1.2	3.7	7.3	9.8	12.2	17.1	22.0	27.5	32.4
147.5°	1.2	1.2	1.2	3.1	6.1	7.9	9.8	14.7	18.9	23.2	28.1
150°	1.2	1.2	1.2	2.4	4.9	6.7	7.9	11.6	15.9	20.2	23.8
152.5°	1.2	1.2	1.2	1.8	3.7	4.9	6.1	9.8	12.8	16.5	20.2
155°	1.2	1.2	1.2	1.2	3.1	3.7	4.9	7.3	10.4	12.8	15.9
157.5°	1.2	1.2	1.2	1.2	1.8	2.4	3.7	5.5	7.9	10.4	12.2
160°	1.2	1.2	1.2	1.2	1.2	1.8	2.4	3.7	5.5	7.3	9.2
162.5°	1.8	1.2	1.2	1.2	1.2	1.2	1.8	2.4	3.7	5.5	6.7
165°	1.8	1.2	1.2	1.2	0.6	1.2	1.2	1.8	2.4	3.1	4.3
167.5°	1.8	1.8	1.2	1.2	1.2	0.6	0.6	0.6	1.2	1.8	2.4
170°	1.8	1.8	1.2	1.2	1.2	0.6	0.6	0.6	0.6	0.6	0.6
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°	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8	1721.8
2.5°	1704.7	1708.4	1709.6	1710.2	1712.6	1711.4	1712.6	1710.2	1710.2	1709.6
5°	1638.7	1641.2	1645.4	1651.5	1652.2	1652.8	1654.0	1657.0	1658.3	1655.2
7.5°	1563.6	1566.6	1561.7	1558.1	1561.1	1560.5	1566.0	1562.3	1566.6	1567.2
10°	1482.9	1483.5	1490.2	1495.1	1494.5	1497.0	1494.5	1491.5	1495.1	1500.0
12.5°	1438.3	1429.1	1418.1	1423.6	1428.5	1430.4	1442.0	1443.8	1448.7	1445.0
15°	1382.1	1388.2	1395.5	1384.5	1383.9	1380.3	1376.6	1374.1	1373.5	1374.1
17.5°	1355.2	1344.8	1338.7	1344.2	1353.4	1358.9	1358.9	1360.1	1349.7	1351.5
20°	1308.2	1311.2	1322.8	1316.1	1312.4	1308.8	1306.3	1310.6	1314.9	1311.2
22.5°	1280.7	1285.6	1274.6	1287.4	1289.8	1294.1	1291.1	1273.9	1267.2	1264.2
25°	1247.1	1242.2	1259.9	1241.6	1235.4	1225.7	1224.5	1226.9	1230.6	1230.0
27.5°	1207.3	1218.3	1195.7	1201.2	1210.4	1211.6	1209.2	1195.7	1188.4	1178.0
30°	1182.9	1162.7	1173.7	1172.5	1159.7	1156.6	1149.9	1153.6	1156.6	1156.0
32.5°	1136.5	1141.4	1129.1	1120.6	1128.5	1134.6	1134.0	1120.0	1111.4	1109.0
35°	1101.6	1097.4	1092.5	1104.7	1098.0	1085.8	1071.1	1071.7	1072.3	1072.3
37.5°	1067.4	1056.4	1069.9	1047.3	1045.4	1050.3	1057.6	1053.4	1046.6	1045.4
40°	1027.7	1039.9	1020.4	1033.8	1035.7	1033.2	1017.9	1013.0	1013.7	1013.7
42.5°	1006.9	1002.7	1013.0	1010.6	1003.9	1003.3	1010.6	1010.6	1007.5	1005.7
45°	978.8	976.4	978.8	978.2	984.3	984.9	970.9	959.9	956.2	955.0
47.5°	937.9	951.9	942.2	947.1	939.1	929.9	929.3	931.8	931.2	929.9
50°	902.5	901.8	913.5	893.3	895.1	900.0	898.8	889.6	886.6	882.3
52.5°	863.3	867.0	857.2	860.9	860.3	853.6	846.2	849.3	853.0	855.4
55°	812.6	818.1	816.3	813.2	805.9	808.4	816.9	812.6	806.5	805.3
57.5°	769.9	763.8	769.9	766.2	771.1	768.0	757.6	758.9	761.3	765.0
60°	714.3	722.2	711.2	719.8	712.4	705.1	711.2	719.8	717.3	716.7
62.5°	656.8	660.5	664.2	656.8	655.6	660.5	661.1	653.8	656.2	658.7
65°	603.7	600.0	606.7	606.7	607.3	604.9	598.8	602.4	605.5	605.5
67.5°	545.6	551.1	548.1	551.1	546.8	548.1	550.5	545.6	546.8	543.8
70°	488.2	493.1	496.7	494.9	497.4	499.2	494.9	494.3	494.9	496.7
72.5°	432.0	436.3	444.2	446.0	450.3	447.9	441.1	438.1	435.0	435.0
75°	373.3	381.3	385.5	392.3	388.0	384.9	388.0	380.7	377.6	375.8
77.5°	316.5	325.7	333.6	329.9	331.8	334.8	331.8	329.9	328.1	329.3
80°	259.1	270.7	275.0	277.4	280.5	280.5	281.7	282.3	282.9	282.9
82.5°	209.0	216.9	223.6	229.1	231.0	231.0	235.2	238.9	242.6	245.0
85°	163.1	169.9	176.6	181.5	185.1	188.2	194.9	200.4	206.5	210.8
87.5°	124.6	131.4	138.7	146.0	149.7	154.0	161.3	169.2	179.6	188.2
90°	99.6	108.1	116.7	125.3	128.9	133.2	142.4	152.8	169.9	182.1
92.5°	91.7	100.2	108.1	116.7	121.0	125.3	135.0	149.7	166.2	172.9
95°	88.0	96.5	104.5	112.4	117.3	122.2	132.6	142.4	149.1	151.5
97.5°	84.9	92.9	100.2	108.8	113.0	117.3	125.3	130.1	134.4	136.3
100°	81.9	89.8	97.1	104.5	107.5	110.0	115.5	121.0	125.9	127.1
102.5°	79.4	86.2	92.3	97.8	100.2	102.6	107.5	110.0	108.8	108.1
105°	75.8	81.9	86.8	91.0	92.9	94.1	95.9	95.3	93.5	92.3
107.5°	72.7	77.0	81.3	83.7	84.9	84.9	84.3	83.7	82.5	82.5
110°	69.7	73.3	76.4	78.2	78.8	78.8	78.8	77.6	77.6	77.0





TEST NUMBER: P241465

CATALOG NUMBER: FVS8M-3-LD4-30-2LO-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	67.2	70.9	73.3	75.2	75.8	75.8	76.4	76.4	75.8	75.8
115°	65.4	69.0	72.1	74.5	75.8	76.4	77.6	78.2	77.6	77.6
117.5°	64.8	69.0	72.7	76.4	77.6	78.8	80.7	80.7	80.0	80.0
120°	64.8	69.7	73.9	77.6	79.4	81.3	83.1	83.1	82.5	82.5
122.5°	64.8	69.7	73.9	78.2	80.7	81.9	84.3	84.3	83.7	83.7
125°	63.5	69.0	73.9	78.2	80.7	82.5	84.3	84.9	84.3	84.3
127.5°	61.7	67.2	72.7	77.0	79.4	81.3	83.7	84.3	84.3	84.3
130°	59.3	65.4	70.3	75.2	77.6	79.4	81.9	83.1	83.7	83.7
132.5°	56.8	61.7	67.2	72.1	74.5	76.4	79.4	80.7	81.9	81.9
135°	53.2	58.7	64.2	69.0	71.5	73.3	76.4	78.2	78.8	79.4
137.5°	49.5	55.0	59.9	64.8	67.2	69.0	72.7	74.5	75.8	76.4
140°	45.2	50.7	55.6	60.5	62.9	64.8	67.8	70.3	71.5	72.1
142.5°	40.9	45.8	50.7	55.6	57.4	59.3	62.9	65.4	66.6	67.2
145°	36.7	40.9	45.8	50.1	51.9	53.2	56.8	58.7	60.5	61.1
147.5°	32.4	36.7	40.3	44.0	45.8	47.0	50.1	51.9	53.2	53.8
150°	28.1	31.8	35.4	38.5	39.7	40.9	42.8	44.6	45.8	46.4
152.5°	23.8	26.9	29.9	32.4	33.6	34.2	36.7	37.9	38.5	39.1
155°	18.9	22.0	25.1	26.9	28.1	28.7	30.6	31.2	31.8	32.4
157.5°	14.7	17.1	19.6	22.0	22.6	23.8	24.4	25.7	25.7	25.7
160°	11.0	12.8	15.3	17.1	17.7	18.9	19.6	20.2	20.8	20.8
162.5°	7.9	9.2	11.0	12.2	12.8	14.1	14.7	15.3	15.9	15.9
165°	5.5	6.1	7.3	8.6	8.6	9.2	10.4	10.4	11.0	11.0
167.5°	3.1	3.7	4.3	4.9	4.9	5.5	6.1	6.7	6.7	6.7
170°	1.2	1.2	1.8	1.8	1.8	2.4	2.4	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)