

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: P241466

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241466
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-LD4-35-2LO-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

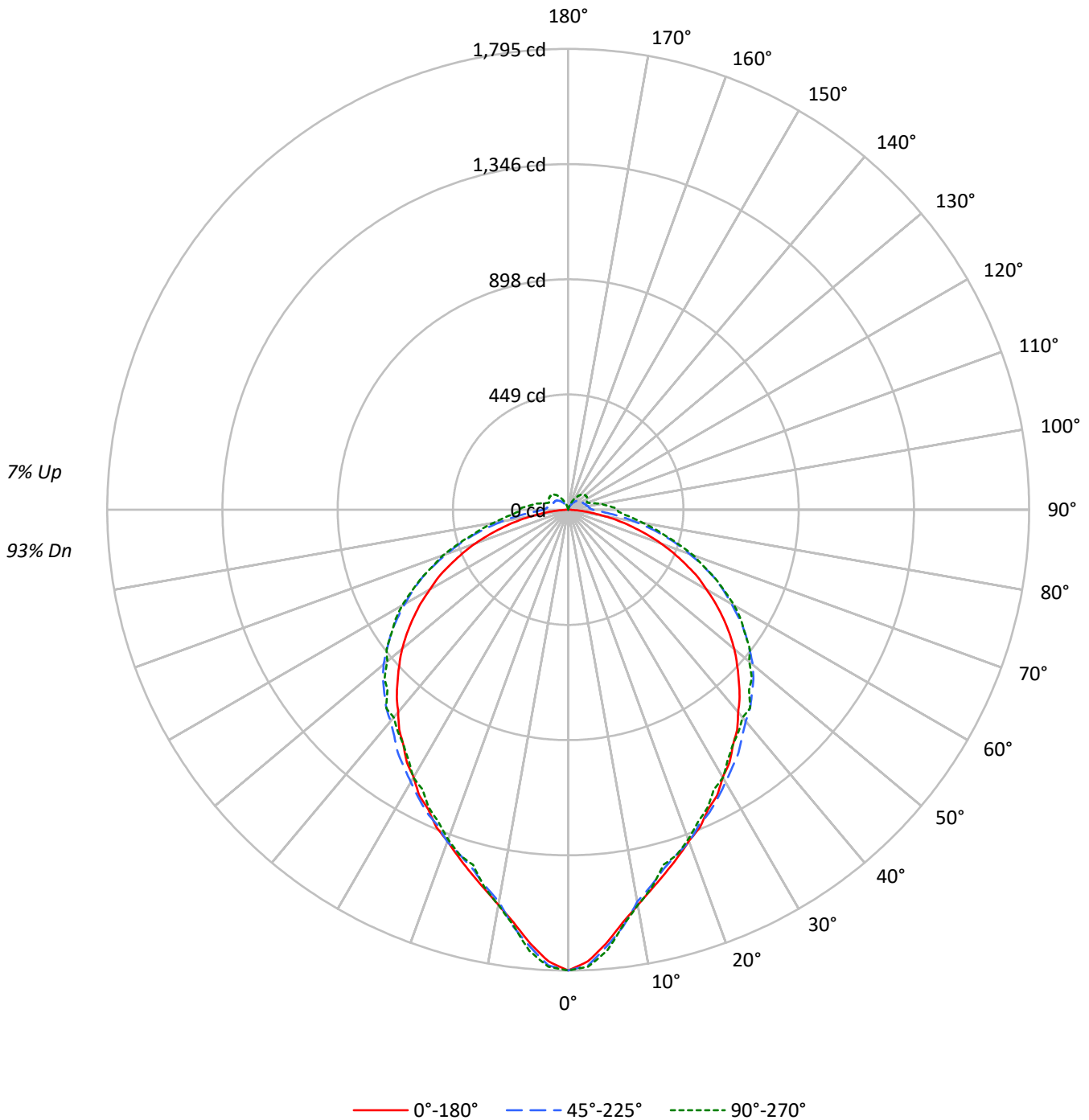
Lumens per Lamp: N/A
Luminaire Lumens: 4825.0 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

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-LD4-35-2LO-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°	10480	10480	10480
5°	9897	9847	9917
10°	9184	8885	8916
15°	8732	8301	8165
20°	8381	7984	7848
25°	8104	7686	7473
30°	7880	7423	7188
35°	7697	7251	6880
40°	7527	7043	6771
45°	7381	6989	6706
50°	7232	6910	6583
55°	6992	6698	6462
60°	6669	6404	6272
65°	6297	6104	5875
70°	5778	5572	5456
75°	4923	4965	4796
80°	3736	4151	4348
85°	1967	3203	4111



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.1	3.3
10°-20°	410.1	8.5
20°-30°	597.2	12.4
30°-40°	713.4	14.8
40°-50°	766.7	15.9
50°-60°	728.0	15.1
60°-70°	588.3	12.2
70°-80°	377.9	7.8
80°-90°	165.4	3.4
90°-100°	87.8	1.8
100°-110°	66.4	1.4
110°-120°	53.0	1.1
120°-130°	47.3	1.0
130°-140°	35.3	0.7
140°-150°	20.4	0.4
150°-160°	8.1	0.2
160°-170°	1.7	0.0
170°-180°	0.0	0.0
0°-30°	1165.4	24.2
0°-40°	1878.8	38.9
0°-60°	3373.4	69.9
0°-90°	4504.9	93.4
90°-120°	207.2	4.3
90°-150°	310.2	6.4
90°-180°	320.0	6.6
0°-180°	4825.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1795	1795	1795	1795	1795	
5°	1696	1697	1709	1722	1725	158
15°	1464	1458	1445	1442	1432	413
25°	1288	1302	1302	1288	1282	596
35°	1118	1146	1157	1144	1118	702
45°	939	976	1012	1026	995	725
55°	737	783	842	840	839	658
65°	506	554	627	633	631	501
75°	260	312	381	404	392	276
85°	46	90	155	193	220	59
90°	1	41	96	134	190	2
95°	1	36	83	122	158	0
105°	1	32	72	97	96	1
115°	1	29	63	79	81	1
125°	1	25	60	84	88	1
135°	1	18	49	74	83	1
145°	1	10	34	54	64	1
155°	1	4	17	29	34	1
165°	2	1	4	9	12	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P241466

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7
2.5°	1761.0	1763.5	1763.5	1762.9	1764.1	1763.5	1766.7	1771.1	1773.1	1775.6	1776.2
5°	1696.0	1698.5	1694.7	1690.9	1693.4	1697.3	1700.5	1706.8	1706.2	1705.6	1708.7
7.5°	1622.1	1622.8	1619.6	1617.7	1616.4	1618.9	1621.5	1624.0	1629.1	1634.9	1637.4
10°	1562.9	1564.8	1559.1	1554.6	1552.7	1552.1	1555.9	1560.3	1562.3	1557.2	1550.2
12.5°	1510.7	1509.4	1507.5	1499.8	1503.7	1504.9	1506.2	1504.9	1498.6	1495.4	1498.6
15°	1464.2	1463.5	1461.6	1457.2	1458.4	1458.4	1454.6	1452.1	1452.1	1456.5	1445.1
17.5°	1419.0	1418.3	1417.7	1411.3	1413.9	1414.5	1415.1	1414.5	1417.7	1410.0	1406.9
20°	1373.7	1371.2	1371.8	1373.1	1379.5	1376.9	1376.3	1378.8	1373.7	1372.5	1376.3
22.5°	1339.3	1338.1	1335.5	1334.9	1335.5	1334.3	1336.2	1337.4	1336.2	1340.0	1329.8
25°	1287.8	1287.1	1288.4	1290.9	1296.7	1301.8	1305.6	1296.7	1303.7	1301.1	1301.8
27.5°	1255.3	1255.3	1255.9	1254.0	1257.8	1261.0	1261.0	1266.7	1269.3	1264.2	1263.6
30°	1203.1	1203.1	1206.9	1213.9	1220.3	1227.9	1226.6	1227.3	1227.9	1228.5	1225.3
32.5°	1168.7	1169.9	1171.8	1172.5	1182.0	1180.8	1182.0	1192.9	1193.5	1192.9	1189.7
35°	1118.4	1116.4	1124.1	1129.2	1143.2	1145.7	1147.6	1148.9	1155.3	1152.1	1156.6
37.5°	1080.1	1080.8	1084.0	1091.6	1092.9	1102.4	1109.4	1111.3	1110.7	1113.9	1112.0
40°	1029.8	1027.9	1033.0	1046.4	1057.8	1062.3	1066.1	1072.5	1075.0	1078.2	1075.7
42.5°	987.8	986.5	991.6	1003.1	1012.6	1020.9	1024.7	1031.7	1040.0	1044.5	1048.3
45°	939.4	938.1	945.8	957.2	970.6	975.7	982.7	993.5	1003.7	1009.4	1012.0
47.5°	891.6	892.9	894.8	908.2	927.3	933.0	941.3	945.8	965.5	971.2	978.2
50°	844.5	845.1	850.9	859.1	875.1	882.1	893.5	906.3	915.2	926.7	938.1
52.5°	791.0	790.4	799.3	811.4	826.7	836.2	843.2	861.7	871.9	880.8	888.4
55°	736.9	740.7	747.1	757.9	773.2	783.4	790.4	805.6	825.4	834.9	841.9
57.5°	682.1	685.3	694.8	705.0	719.0	726.0	736.9	753.4	768.1	778.9	789.7
60°	621.6	625.4	635.0	646.4	666.8	668.7	681.5	697.4	712.7	727.3	734.3
62.5°	570.0	570.0	577.0	591.7	606.3	615.2	627.3	641.3	658.5	670.6	682.7
65°	505.7	509.5	520.3	534.3	544.5	554.1	567.5	583.4	602.5	616.5	627.3
67.5°	446.4	448.4	460.5	471.3	488.5	498.7	505.0	526.1	543.9	556.0	564.9
70°	385.9	389.8	398.7	411.4	426.7	437.5	445.2	465.6	480.2	494.9	501.9
72.5°	321.0	326.1	337.5	350.3	365.6	375.1	382.8	402.5	417.8	430.5	445.2
75°	259.8	263.0	275.1	289.1	305.7	312.1	322.3	337.5	356.6	372.6	380.9
77.5°	201.9	204.4	216.5	228.0	243.9	252.8	261.8	279.0	294.9	309.5	320.3
80°	143.3	146.5	157.3	168.1	185.3	193.6	200.0	219.7	236.3	249.0	260.5
82.5°	91.7	94.9	105.1	118.5	131.2	140.1	147.1	162.4	179.6	191.7	205.1
85°	46.5	49.0	58.0	69.4	85.3	89.8	100.6	114.0	129.3	142.7	154.8
87.5°	14.0	17.8	26.7	37.6	50.3	56.7	65.0	79.0	92.3	105.1	118.5
90°	0.6	3.8	11.5	21.7	34.4	40.8	47.8	60.5	72.0	84.7	95.5
92.5°	0.6	3.2	10.2	20.4	31.8	38.2	43.9	56.0	66.9	77.1	86.6
95°	0.6	2.5	9.6	19.1	30.6	36.3	42.0	53.5	63.7	73.9	82.8
97.5°	0.6	2.5	8.9	18.5	29.3	35.0	40.8	50.9	60.5	70.7	80.2
100°	0.6	2.5	8.9	17.8	28.7	33.8	38.8	49.0	58.6	68.1	77.1
102.5°	0.6	2.5	8.3	17.8	27.4	32.5	37.6	47.1	56.7	66.2	74.5
105°	0.6	1.9	8.3	17.2	26.7	31.8	36.3	45.9	55.4	64.3	72.0
107.5°	0.6	1.9	7.6	16.6	26.1	31.2	35.7	45.2	53.5	62.4	69.4
110°	0.6	1.9	7.6	15.9	25.5	30.6	35.0	44.6	52.9	60.5	66.9



TEST NUMBER: P241466

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	1.9	7.0	15.3	24.8	29.9	34.4	43.3	51.6	58.6	65.0
115°	0.6	1.3	7.0	14.6	24.2	29.3	33.8	42.7	50.3	57.3	63.1
117.5°	0.6	1.3	6.4	14.6	23.6	28.0	33.1	41.4	49.0	56.0	62.4
120°	0.6	1.3	6.4	14.0	22.3	27.4	31.8	40.1	48.4	55.4	61.8
122.5°	0.6	1.3	5.7	13.4	21.7	26.1	30.6	38.8	47.1	54.8	61.1
125°	0.6	0.6	5.1	12.1	20.4	24.8	29.3	37.6	45.2	52.9	59.9
127.5°	0.6	0.6	4.5	11.5	19.7	23.6	28.0	36.3	43.9	50.9	58.0
130°	0.6	0.6	3.8	10.2	18.5	22.3	26.1	33.8	41.4	48.4	55.4
132.5°	0.6	0.6	3.8	9.6	16.6	20.4	24.2	31.8	38.8	45.9	52.2
135°	0.6	0.6	3.2	8.3	15.3	18.5	22.3	29.3	36.3	42.7	49.0
137.5°	1.3	0.6	2.5	7.0	13.4	16.6	19.7	26.7	33.1	39.5	45.2
140°	1.3	0.6	1.9	5.7	11.5	14.6	17.8	23.6	29.9	35.7	42.0
142.5°	1.3	1.3	1.3	5.1	9.6	12.1	15.3	21.0	26.7	32.5	37.6
145°	1.3	1.3	1.3	3.8	7.6	10.2	12.7	17.8	22.9	28.7	33.8
147.5°	1.3	1.3	1.3	3.2	6.4	8.3	10.2	15.3	19.7	24.2	29.3
150°	1.3	1.3	1.3	2.5	5.1	7.0	8.3	12.1	16.6	21.0	24.8
152.5°	1.3	1.3	1.3	1.9	3.8	5.1	6.4	10.2	13.4	17.2	21.0
155°	1.3	1.3	1.3	1.3	3.2	3.8	5.1	7.6	10.8	13.4	16.6
157.5°	1.3	1.3	1.3	1.3	1.9	2.5	3.8	5.7	8.3	10.8	12.7
160°	1.3	1.3	1.3	1.3	1.3	1.9	2.5	3.8	5.7	7.6	9.6
162.5°	1.9	1.3	1.3	1.3	1.3	1.3	1.9	2.5	3.8	5.7	7.0
165°	1.9	1.3	1.3	1.3	0.6	1.3	1.3	1.9	2.5	3.2	4.5
167.5°	1.9	1.9	1.3	1.3	1.3	0.6	0.6	0.6	1.3	1.9	2.5
170°	1.9	1.9	1.3	1.3	1.3	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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CATALOG NUMBER: FVS8M-3-LD4-35-2LO-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7	1794.7
2.5°	1776.9	1780.7	1782.0	1782.6	1785.2	1783.9	1785.2	1782.6	1782.6	1782.0
5°	1708.1	1710.6	1715.1	1721.5	1722.1	1722.7	1724.0	1727.2	1728.5	1725.3
7.5°	1629.8	1632.9	1627.9	1624.0	1627.2	1626.6	1632.3	1628.5	1632.9	1633.6
10°	1545.7	1546.3	1553.3	1558.4	1557.8	1560.3	1557.8	1554.6	1558.4	1563.5
12.5°	1499.2	1489.6	1478.2	1483.9	1489.0	1490.9	1503.0	1504.9	1510.0	1506.2
15°	1440.6	1447.0	1454.6	1443.2	1442.5	1438.7	1434.9	1432.3	1431.7	1432.3
17.5°	1412.6	1401.8	1395.4	1401.1	1410.7	1416.4	1416.4	1417.7	1406.9	1408.8
20°	1363.5	1366.7	1378.8	1371.8	1368.0	1364.2	1361.6	1366.1	1370.6	1366.7
22.5°	1334.9	1340.0	1328.5	1341.9	1344.4	1348.9	1345.7	1327.9	1320.9	1317.7
25°	1299.9	1294.8	1313.2	1294.1	1287.8	1277.6	1276.3	1278.8	1282.7	1282.0
27.5°	1258.5	1269.9	1246.4	1252.1	1261.6	1262.9	1260.4	1246.4	1238.7	1227.9
30°	1233.0	1212.0	1223.4	1222.2	1208.8	1205.6	1198.6	1202.4	1205.6	1205.0
32.5°	1184.6	1189.7	1176.9	1168.0	1176.3	1182.7	1182.0	1167.4	1158.5	1155.9
35°	1148.3	1143.8	1138.7	1151.5	1144.5	1131.7	1116.4	1117.1	1117.7	1117.7
37.5°	1112.6	1101.2	1115.2	1091.6	1089.7	1094.8	1102.4	1098.0	1091.0	1089.7
40°	1071.2	1084.0	1063.6	1077.6	1079.5	1077.0	1061.0	1055.9	1056.6	1056.6
42.5°	1049.6	1045.1	1055.9	1053.4	1046.4	1045.7	1053.4	1053.4	1050.2	1048.3
45°	1020.3	1017.7	1020.3	1019.6	1026.0	1026.6	1012.0	1000.5	996.7	995.4
47.5°	977.6	992.3	982.1	987.2	978.9	969.3	968.7	971.2	970.6	969.3
50°	940.7	940.0	952.1	931.1	933.0	938.1	936.8	927.3	924.1	919.6
52.5°	899.9	903.7	893.5	897.4	896.7	889.7	882.1	885.3	889.1	891.6
55°	847.0	852.8	850.9	847.7	840.0	842.6	851.5	847.0	840.7	839.4
57.5°	802.5	796.1	802.5	798.6	803.7	800.6	789.7	791.0	793.5	797.4
60°	744.5	752.8	741.3	750.2	742.6	735.0	741.3	750.2	747.7	747.1
62.5°	684.6	688.5	692.3	684.6	683.4	688.5	689.1	681.5	684.0	686.6
65°	629.2	625.4	632.4	632.4	633.1	630.5	624.1	628.0	631.1	631.1
67.5°	568.7	574.5	571.3	574.5	570.0	571.3	573.8	568.7	570.0	566.8
70°	508.9	514.0	517.8	515.9	518.4	520.3	515.9	515.2	515.9	517.8
72.5°	450.3	454.7	463.0	464.9	469.4	466.8	459.8	456.6	453.5	453.5
75°	389.1	397.4	401.9	408.9	404.4	401.2	404.4	396.8	393.6	391.7
77.5°	329.9	339.5	347.7	343.9	345.8	349.0	345.8	343.9	342.0	343.3
80°	270.0	282.1	286.6	289.1	292.3	292.3	293.6	294.2	294.9	294.9
82.5°	217.8	226.1	233.1	238.8	240.7	240.7	245.2	249.0	252.8	255.4
85°	170.0	177.1	184.1	189.2	193.0	196.2	203.2	208.9	215.3	219.7
87.5°	129.9	136.9	144.6	152.2	156.0	160.5	168.1	176.4	187.2	196.2
90°	103.8	112.7	121.6	130.6	134.4	138.8	148.4	159.2	177.1	189.8
92.5°	95.5	104.4	112.7	121.6	126.1	130.6	140.7	156.0	173.2	180.2
95°	91.7	100.6	108.9	117.2	122.3	127.4	138.2	148.4	155.4	157.9
97.5°	88.5	96.8	104.4	113.4	117.8	122.3	130.6	135.7	140.1	142.0
100°	85.3	93.6	101.3	108.9	112.1	114.6	120.4	126.1	131.2	132.5
102.5°	82.8	89.8	96.2	101.9	104.4	107.0	112.1	114.6	113.4	112.7
105°	79.0	85.3	90.4	94.9	96.8	98.1	100.0	99.4	97.4	96.2
107.5°	75.8	80.2	84.7	87.3	88.5	88.5	87.9	87.3	86.0	86.0
110°	72.6	76.4	79.6	81.5	82.2	82.2	82.2	80.9	80.9	80.2



TEST NUMBER: P241466

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	70.1	73.9	76.4	78.3	79.0	79.0	79.6	79.6	79.0	79.0
115°	68.1	72.0	75.2	77.7	79.0	79.6	80.9	81.5	80.9	80.9
117.5°	67.5	72.0	75.8	79.6	80.9	82.2	84.1	84.1	83.4	83.4
120°	67.5	72.6	77.1	80.9	82.8	84.7	86.6	86.6	86.0	86.0
122.5°	67.5	72.6	77.1	81.5	84.1	85.3	87.9	87.9	87.3	87.3
125°	66.2	72.0	77.1	81.5	84.1	86.0	87.9	88.5	87.9	87.9
127.5°	64.3	70.1	75.8	80.2	82.8	84.7	87.3	87.9	87.9	87.9
130°	61.8	68.1	73.2	78.3	80.9	82.8	85.3	86.6	87.3	87.3
132.5°	59.2	64.3	70.1	75.2	77.7	79.6	82.8	84.1	85.3	85.3
135°	55.4	61.1	66.9	72.0	74.5	76.4	79.6	81.5	82.2	82.8
137.5°	51.6	57.3	62.4	67.5	70.1	72.0	75.8	77.7	79.0	79.6
140°	47.1	52.9	58.0	63.1	65.6	67.5	70.7	73.2	74.5	75.2
142.5°	42.7	47.8	52.9	58.0	59.9	61.8	65.6	68.1	69.4	70.1
145°	38.2	42.7	47.8	52.2	54.1	55.4	59.2	61.1	63.1	63.7
147.5°	33.8	38.2	42.0	45.9	47.8	49.0	52.2	54.1	55.4	56.0
150°	29.3	33.1	36.9	40.1	41.4	42.7	44.6	46.5	47.8	48.4
152.5°	24.8	28.0	31.2	33.8	35.0	35.7	38.2	39.5	40.1	40.8
155°	19.7	22.9	26.1	28.0	29.3	29.9	31.8	32.5	33.1	33.8
157.5°	15.3	17.8	20.4	22.9	23.6	24.8	25.5	26.7	26.7	26.7
160°	11.5	13.4	15.9	17.8	18.5	19.7	20.4	21.0	21.7	21.7
162.5°	8.3	9.6	11.5	12.7	13.4	14.6	15.3	15.9	16.6	16.6
165°	5.7	6.4	7.6	8.9	8.9	9.6	10.8	10.8	11.5	11.5
167.5°	3.2	3.8	4.5	5.1	5.1	5.7	6.4	7.0	7.0	7.0
170°	1.3	1.3	1.9	1.9	1.9	2.5	2.5	3.2	3.2	3.2
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)