

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: P232003

Luminaire Tested: **FVS4M-4-LD4-50-2HI-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P232003  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-4-LD4-50-2HI-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 2-MODULE LED WITH PFS125 LENS  
Light Source: (168) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

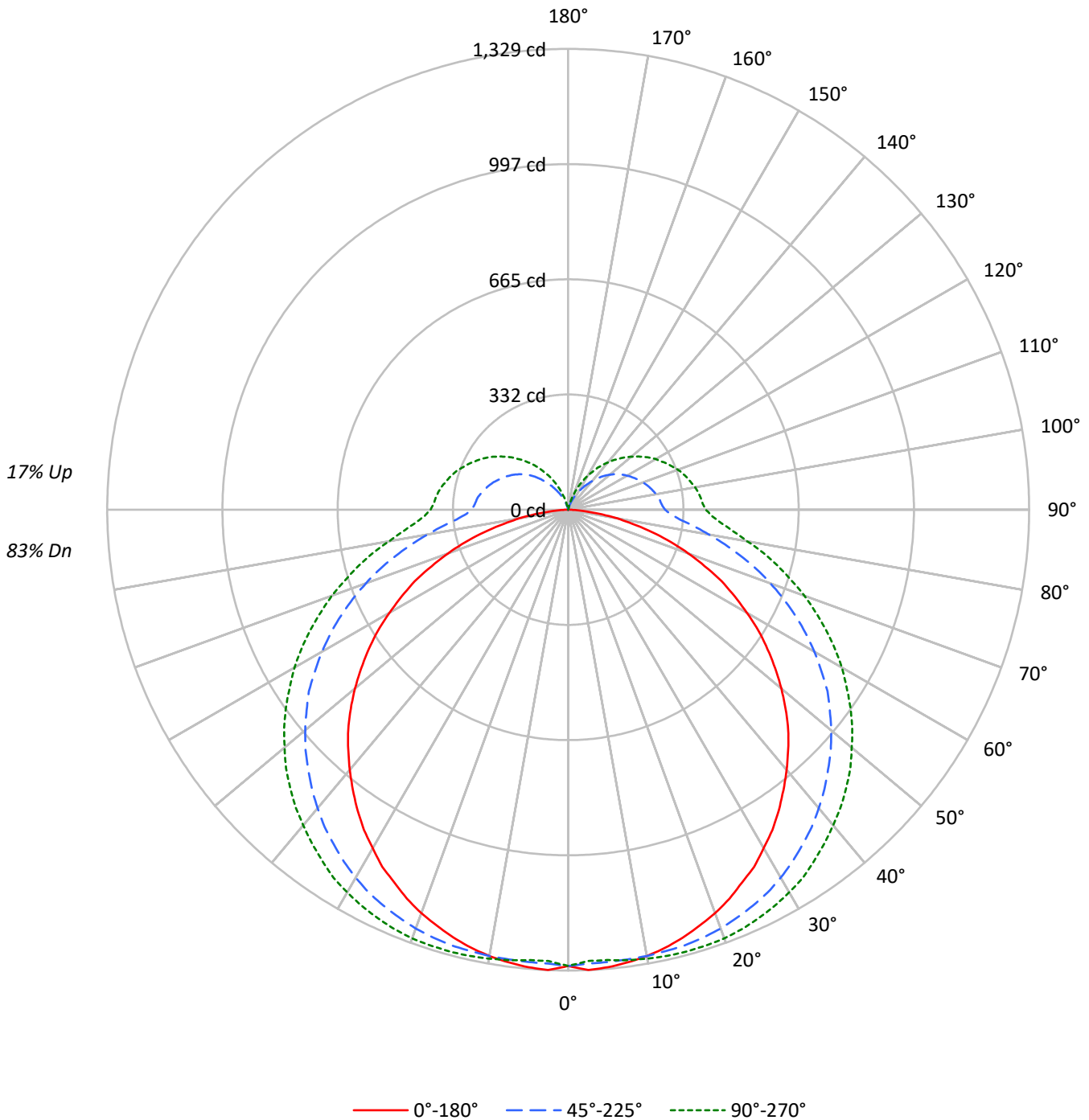
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5897.0 lumens  
Efficiency: N/A  
Efficacy: 66.0 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 89.3  
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	115	115	115	115	110	110	110	110	102	102	102	94	94	94	87	87	87	83
1	103	97	92	88	98	93	89	85	86	82	79	79	76	74	73	71	68	65
2	93	83	76	69	88	80	73	67	74	68	63	68	63	59	63	59	56	52
3	84	72	64	57	80	70	62	55	64	57	52	59	54	49	55	50	46	43
4	76	64	54	47	73	61	53	46	57	49	44	52	46	41	48	43	39	36
5	70	56	47	40	67	54	46	39	50	43	37	47	40	35	43	38	33	31
6	64	51	41	35	61	49	40	34	45	38	32	42	36	31	39	33	29	27
7	59	46	37	30	57	44	36	30	41	34	28	38	32	27	35	30	26	23
8	55	41	33	27	53	40	32	26	37	30	25	35	28	24	32	27	23	21
9	51	38	29	24	49	37	29	23	34	27	22	32	26	21	30	24	20	18
10	48	35	27	21	46	34	26	21	32	25	20	29	24	19	28	22	18	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11952	11952	11952
5°	12025	11477	11295
10°	11952	11153	10966
15°	11858	10891	10687
20°	11759	10645	10439
25°	11620	10403	10177
30°	11495	10158	9928
35°	11346	9889	9653
40°	11158	9621	9372
45°	10982	9329	9103
50°	10708	9041	8794
55°	10385	8727	8470
60°	9961	8295	8119
65°	9492	7827	7705
70°	8615	7285	7270
75°	7461	6654	6780
80°	5834	5965	6230
85°	2977	5382	5871



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.4	2.1
10°-20°	368.1	6.2
20°-30°	578.9	9.8
30°-40°	730.3	12.4
40°-50°	803.7	13.6
50°-60°	789.9	13.4
60°-70°	686.7	11.6
70°-80°	510.5	8.7
80°-90°	325.9	5.5
90°-100°	257.3	4.4
100°-110°	228.0	3.9
110°-120°	187.3	3.2
120°-130°	140.8	2.4
130°-140°	92.7	1.6
140°-150°	50.0	0.8
150°-160°	18.9	0.3
160°-170°	2.6	0.0
170°-180°	0.0	0.0
0°-30°	1072.3	18.2
0°-40°	1802.6	30.6
0°-60°	3396.3	57.6
0°-90°	4919.4	83.4
90°-120°	672.6	11.4
90°-150°	956.1	16.2
90°-180°	978.0	16.6
0°-180°	5897.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1316	1316	1316	1316	1316	
5°	1324	1320	1309	1311	1304	126
15°	1278	1285	1300	1321	1319	361
25°	1186	1218	1260	1297	1299	547
35°	1058	1112	1178	1228	1236	662
45°	897	971	1060	1121	1134	691
55°	702	801	912	977	993	627
65°	488	598	723	801	820	479
75°	252	377	514	599	626	266
85°	45	180	323	413	443	57
90°	0	133	279	370	397	2
95°	0	125	267	356	384	0
105°	0	110	244	330	355	0
115°	0	92	214	293	315	0
125°	0	72	178	246	266	0
135°	0	48	134	192	208	1
145°	1	26	84	135	147	1
155°	1	9	39	68	81	1
165°	1	0	6	11	18	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°	25°	30°	35°	40°	45°	50°
0°	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7
2.5°	1328.8	1326.6	1323.4	1322.3	1323.4	1323.4	1323.4	1321.2	1315.7	1310.3	1310.3
5°	1324.4	1323.4	1319.0	1317.9	1319.0	1320.1	1320.1	1317.9	1313.5	1309.2	1309.2
7.5°	1316.8	1315.7	1312.5	1311.4	1313.5	1314.6	1315.7	1313.5	1311.4	1308.1	1309.2
10°	1307.0	1304.8	1302.6	1301.5	1303.7	1307.0	1309.2	1309.2	1308.1	1307.0	1310.3
12.5°	1293.9	1292.8	1289.6	1290.6	1293.9	1299.4	1302.6	1304.8	1304.8	1303.7	1309.2
15°	1277.6	1277.6	1275.4	1276.5	1280.8	1288.5	1293.9	1297.2	1298.3	1300.5	1305.9
17.5°	1257.9	1259.0	1256.9	1259.0	1267.8	1276.5	1284.1	1287.4	1290.6	1293.9	1301.5
20°	1238.3	1238.3	1236.1	1241.6	1250.3	1261.2	1268.8	1275.4	1279.7	1285.2	1292.8
22.5°	1214.3	1214.3	1214.3	1220.9	1231.8	1242.7	1254.7	1262.3	1267.8	1273.2	1283.0
25°	1186.0	1189.3	1188.2	1198.0	1211.1	1225.2	1236.1	1243.8	1252.5	1260.1	1271.0
27.5°	1160.9	1158.7	1160.9	1171.8	1187.1	1200.2	1215.4	1224.2	1234.0	1244.9	1255.8
30°	1127.1	1126.0	1131.5	1144.6	1159.8	1177.3	1191.5	1202.4	1214.3	1225.2	1238.3
32.5°	1095.5	1092.3	1099.9	1116.2	1131.5	1152.2	1165.3	1177.3	1189.3	1203.4	1216.5
35°	1058.5	1057.4	1066.1	1082.4	1102.1	1121.7	1139.1	1153.3	1165.3	1178.4	1194.7
37.5°	1019.2	1023.6	1031.2	1047.6	1069.4	1090.1	1107.5	1121.7	1135.9	1153.3	1169.7
40°	980.0	982.2	990.9	1011.6	1034.5	1056.3	1074.8	1087.9	1107.5	1123.9	1140.2
42.5°	938.6	937.5	954.9	975.6	997.4	1021.4	1039.9	1057.4	1075.9	1093.3	1110.8
45°	897.1	893.9	911.3	934.2	958.2	983.2	1005.0	1024.7	1042.1	1059.6	1077.0
47.5°	850.3	851.3	869.9	892.8	918.9	944.0	974.5	986.5	1005.0	1026.9	1044.3
50°	802.3	802.3	824.1	849.2	874.2	903.7	925.5	947.3	970.2	989.8	1008.3
52.5°	752.2	756.5	776.1	804.5	833.9	859.0	881.9	908.0	929.8	950.5	969.1
55°	702.0	706.4	731.4	756.5	788.1	814.3	839.4	863.3	886.2	912.4	928.7
57.5°	650.8	657.3	680.2	707.5	736.9	767.4	795.8	818.6	843.7	865.5	886.2
60°	595.2	605.0	626.8	654.0	687.8	718.4	745.6	770.7	795.8	819.7	839.4
62.5°	540.7	549.4	573.4	601.7	635.5	669.3	693.3	723.8	748.9	771.8	793.6
65°	488.4	494.9	521.1	549.4	583.2	613.7	644.2	672.6	697.6	722.7	745.6
67.5°	426.2	438.2	463.3	494.9	528.7	560.3	589.7	620.3	647.5	671.5	694.4
70°	368.4	379.3	404.4	438.2	474.2	509.1	539.6	567.9	596.3	620.3	643.1
72.5°	310.7	322.7	347.7	378.3	415.3	448.0	481.8	513.4	543.9	569.0	591.9
75°	251.8	262.7	291.1	324.8	361.9	391.3	429.5	458.9	488.4	514.5	540.7
77.5°	189.7	206.0	232.2	268.2	303.0	340.1	375.0	406.6	434.9	463.3	490.5
80°	142.8	151.5	176.6	215.8	249.6	287.8	320.5	354.3	385.9	411.0	436.0
82.5°	87.2	100.3	131.9	162.4	203.8	236.5	273.6	306.3	336.8	365.2	389.2
85°	44.7	58.9	86.1	123.2	161.3	199.5	231.1	264.9	295.4	322.7	347.7
87.5°	13.1	26.2	56.7	91.6	129.7	167.9	202.8	235.5	266.0	294.3	319.4
90°	0.0	13.1	42.5	77.4	114.5	151.5	186.4	220.2	250.7	279.1	304.1
92.5°	0.0	12.0	39.2	73.0	110.1	146.1	181.0	213.7	243.1	271.4	296.5
95°	0.0	10.9	37.1	70.9	106.8	142.8	177.7	210.4	239.8	267.1	292.1
97.5°	0.0	9.8	34.9	67.6	103.6	138.4	173.3	206.0	235.5	263.8	288.9
100°	0.0	8.7	33.8	65.4	100.3	134.1	169.0	200.6	230.0	257.3	282.3
102.5°	0.0	7.6	31.6	62.1	95.9	130.8	163.5	195.1	224.6	250.7	275.8
105°	0.0	7.6	29.4	60.0	92.7	126.4	158.1	189.7	218.0	244.2	269.2
107.5°	0.0	6.5	28.3	56.7	89.4	121.0	152.6	183.1	211.5	237.6	261.6
110°	0.0	5.5	26.2	54.5	85.0	116.6	148.3	177.7	204.9	230.0	254.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	4.4	24.0	51.2	80.7	111.2	141.7	170.1	197.3	221.3	244.2
115°	0.0	3.3	22.9	48.0	77.4	106.8	135.2	163.5	189.7	213.7	235.5
117.5°	0.0	2.2	20.7	44.7	73.0	101.4	129.7	157.0	182.0	204.9	226.7
120°	0.0	2.2	18.5	42.5	68.7	95.9	123.2	149.3	174.4	196.2	216.9
122.5°	0.0	1.1	16.4	39.2	64.3	90.5	116.6	141.7	164.6	187.5	207.1
125°	0.0	1.1	14.2	36.0	60.0	85.0	110.1	134.1	157.0	177.7	197.3
127.5°	0.0	1.1	12.0	31.6	54.5	78.5	102.5	125.4	148.3	167.9	186.4
130°	0.0	1.1	9.8	28.3	49.1	71.9	94.8	116.6	138.4	157.0	175.5
132.5°	0.0	1.1	7.6	24.0	43.6	64.3	85.0	106.8	126.4	146.1	163.5
135°	0.0	0.0	5.5	20.7	38.2	57.8	76.3	95.9	115.5	134.1	151.5
137.5°	1.1	1.1	4.4	17.4	33.8	50.1	68.7	86.1	103.6	121.0	138.4
140°	1.1	1.1	3.3	14.2	28.3	44.7	60.0	76.3	92.7	107.9	123.2
142.5°	1.1	1.1	2.2	10.9	24.0	38.2	52.3	67.6	81.8	94.8	109.0
145°	1.1	1.1	2.2	7.6	19.6	31.6	45.8	57.8	70.9	83.9	94.8
147.5°	1.1	1.1	1.1	5.5	15.3	26.2	38.2	49.1	61.0	71.9	81.8
150°	1.1	1.1	1.1	4.4	12.0	21.8	31.6	40.3	51.2	60.0	69.8
152.5°	1.1	1.1	1.1	3.3	8.7	17.4	25.1	33.8	41.4	50.1	56.7
155°	1.1	1.1	1.1	2.2	5.5	12.0	19.6	26.2	32.7	39.2	45.8
157.5°	1.1	1.1	1.1	1.1	3.3	7.6	14.2	19.6	25.1	29.4	36.0
160°	1.1	1.1	1.1	1.1	2.2	4.4	8.7	13.1	17.4	21.8	25.1
162.5°	1.1	1.1	1.1	0.0	1.1	2.2	4.4	7.6	10.9	14.2	16.4
165°	1.1	1.1	1.1	0.0	0.0	0.0	1.1	2.2	4.4	6.5	7.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7	1315.7
2.5°	1311.4	1312.5	1311.4	1310.3	1308.1	1305.9	1303.7	1302.6
5°	1311.4	1312.5	1311.4	1311.4	1309.2	1307.0	1304.8	1303.7
7.5°	1313.5	1314.6	1314.6	1314.6	1314.6	1313.5	1311.4	1310.3
10°	1314.6	1317.9	1319.0	1319.0	1319.0	1317.9	1316.8	1314.6
12.5°	1314.6	1319.0	1320.1	1321.2	1322.3	1321.2	1319.0	1317.9
15°	1312.5	1317.9	1320.1	1321.2	1322.3	1322.3	1320.1	1319.0
17.5°	1309.2	1314.6	1317.9	1319.0	1321.2	1320.1	1319.0	1317.9
20°	1301.5	1308.1	1312.5	1315.7	1316.8	1317.9	1316.8	1315.7
22.5°	1292.8	1299.4	1304.8	1308.1	1310.3	1311.4	1310.3	1309.2
25°	1280.8	1288.5	1295.0	1298.3	1300.5	1302.6	1301.5	1299.4
27.5°	1266.7	1274.3	1280.8	1285.2	1289.6	1289.6	1289.6	1288.5
30°	1248.1	1257.9	1264.5	1269.9	1273.2	1275.4	1275.4	1274.3
32.5°	1229.6	1239.4	1246.0	1252.5	1255.8	1256.9	1257.9	1259.0
35°	1206.7	1216.5	1225.2	1230.7	1235.1	1237.2	1237.2	1236.1
37.5°	1181.6	1193.6	1202.4	1207.8	1214.3	1214.3	1214.3	1213.3
40°	1153.3	1164.2	1175.1	1181.6	1188.2	1189.3	1188.2	1188.2
42.5°	1126.0	1136.9	1146.8	1154.4	1158.7	1160.9	1162.0	1163.1
45°	1093.3	1106.4	1116.2	1125.0	1129.3	1132.6	1133.7	1133.7
47.5°	1058.5	1072.6	1083.5	1091.2	1097.7	1102.1	1099.9	1103.2
50°	1024.7	1036.7	1049.7	1056.3	1062.8	1068.3	1067.2	1067.2
52.5°	986.5	998.5	1011.6	1021.4	1026.9	1031.2	1032.3	1032.3
55°	945.1	959.3	972.3	981.1	987.6	990.9	993.1	993.1
57.5°	903.7	917.8	929.8	941.8	948.4	953.8	953.8	951.6
60°	859.0	874.2	887.3	897.1	908.0	909.1	910.2	911.3
62.5°	813.2	828.5	842.6	854.6	860.1	865.5	868.8	866.6
65°	765.2	778.3	796.8	804.5	812.1	815.4	820.8	819.7
67.5°	717.3	733.6	745.6	758.7	767.4	768.5	775.0	771.8
70°	662.8	679.1	696.6	705.3	715.1	718.4	721.6	724.9
72.5°	612.6	630.1	644.2	657.3	662.8	668.2	672.6	673.7
75°	560.3	581.0	591.9	606.1	613.7	618.1	624.6	625.7
77.5°	508.0	526.5	542.9	552.7	562.5	567.9	572.3	576.6
80°	456.7	473.1	491.6	505.8	515.6	520.0	525.4	524.3
82.5°	411.0	429.5	445.8	457.8	468.7	475.3	480.7	480.7
85°	372.8	393.5	406.6	419.7	429.5	436.0	441.5	442.6
87.5°	344.5	363.0	380.4	391.3	402.2	408.8	413.1	414.2
90°	327.0	346.6	363.0	376.1	385.9	392.4	396.8	396.8
92.5°	319.4	337.9	355.4	367.4	377.2	383.7	387.0	388.1
95°	315.0	333.6	349.9	363.0	372.8	379.3	382.6	383.7
97.5°	310.7	329.2	344.5	358.6	367.4	373.9	377.2	378.3
100°	304.1	322.7	339.0	351.0	361.9	367.4	370.6	371.7
102.5°	297.6	315.0	331.4	343.4	353.2	358.6	363.0	363.0
105°	290.0	309.6	323.8	335.7	345.6	352.1	354.3	355.4
107.5°	282.3	300.9	316.1	328.1	336.8	342.3	346.6	346.6
110°	274.7	292.1	306.3	318.3	327.0	332.5	335.7	336.8





TEST NUMBER: P232003

CATALOG NUMBER: FVS4M-4-LD4-50-2HI-PFS125-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	264.9	282.3	296.5	308.5	316.1	321.6	324.8	324.8
115°	255.1	272.5	286.7	298.7	306.3	311.8	313.9	315.0
117.5°	245.3	261.6	275.8	286.7	294.3	299.8	302.0	302.0
120°	235.5	251.8	264.9	275.8	283.4	287.8	291.1	292.1
122.5°	224.6	239.8	252.9	263.8	271.4	275.8	278.0	279.1
125°	213.7	228.9	240.9	250.7	258.3	262.7	266.0	266.0
127.5°	202.8	216.9	228.9	237.6	244.2	248.5	250.7	251.8
130°	190.8	202.8	214.7	223.5	231.1	234.4	237.6	237.6
132.5°	178.8	190.8	201.7	211.5	215.8	220.2	223.5	223.5
135°	166.8	177.7	188.6	196.2	201.7	206.0	208.2	208.2
137.5°	153.7	165.7	175.5	182.0	187.5	190.8	192.9	194.0
140°	139.5	152.6	160.2	166.8	172.2	175.5	177.7	177.7
142.5°	123.2	136.3	146.1	153.7	157.0	159.2	162.4	162.4
145°	107.9	119.9	131.9	138.4	142.8	145.0	146.1	147.2
147.5°	92.7	103.6	114.5	122.1	126.4	127.5	128.6	128.6
150°	78.5	87.2	97.0	106.8	110.1	112.3	113.4	114.5
152.5°	65.4	71.9	80.7	88.3	94.8	95.9	97.0	97.0
155°	52.3	58.9	64.3	70.9	78.5	79.6	80.7	80.7
157.5°	40.3	44.7	49.1	53.4	60.0	64.3	64.3	65.4
160°	28.3	32.7	34.9	38.2	42.5	48.0	48.0	48.0
162.5°	18.5	20.7	22.9	24.0	26.2	30.5	32.7	32.7
165°	9.8	9.8	10.9	12.0	13.1	14.2	17.4	18.5
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	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
177.5°	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

(END OF REPORT)