

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: P241434

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241434
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-10)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-35-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

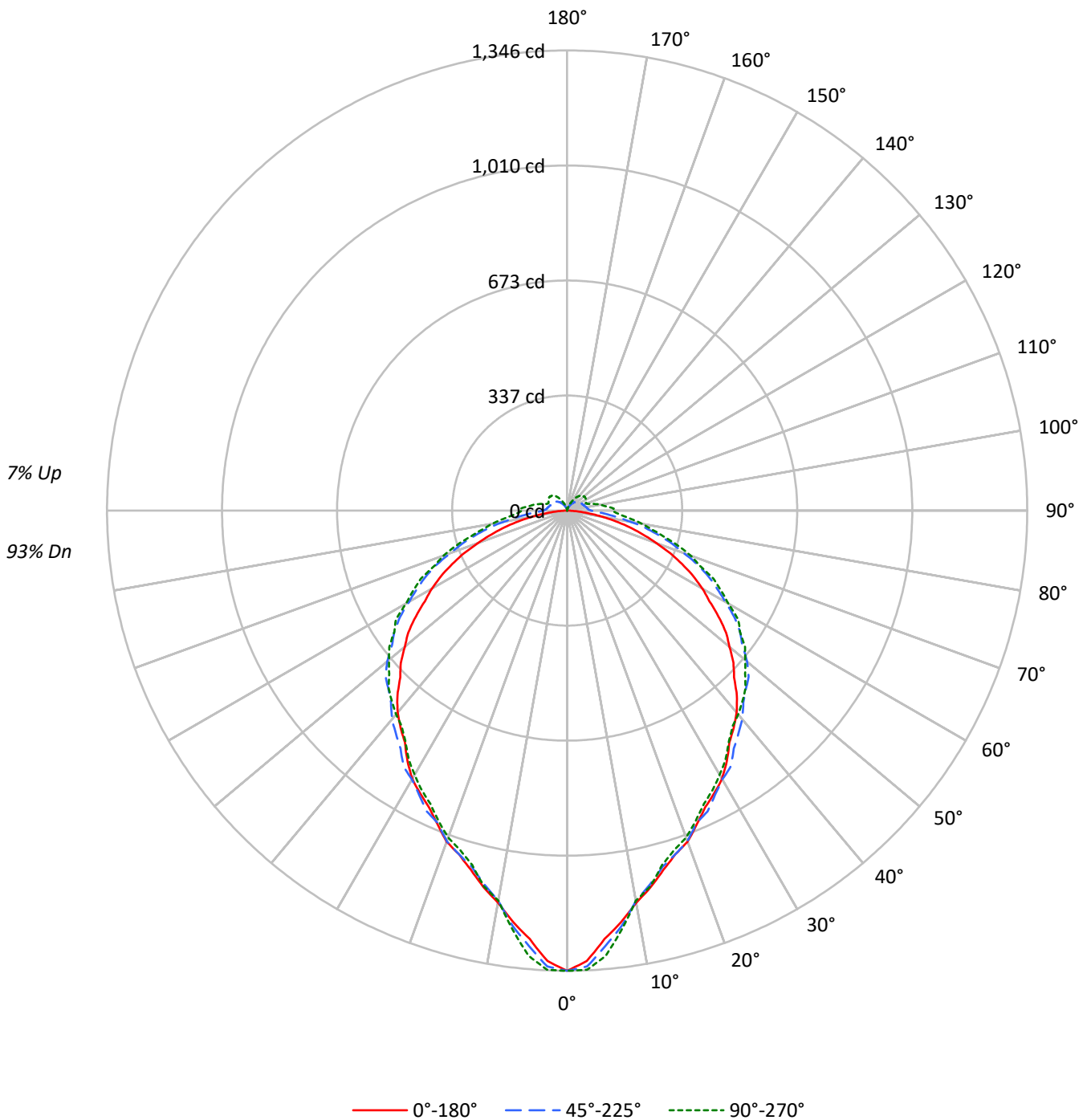
Lumens per Lamp: N/A
Luminaire Lumens: 3561.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.99 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 33.6
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	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					93			
1	106	101	97	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76					76			
2	96	88	81	75	93	85	79	73	81	75	70	76	72	68	72	69	65	63					63			
3	88	77	68	62	84	75	67	61	71	64	59	67	61	57	64	59	55	52					52			
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	57	51	47	45					45			
5	74	60	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	38					38			
6	68	54	45	39	65	53	45	38	51	43	37	48	42	37	46	40	36	34					34			
7	63	49	40	34	61	48	40	34	46	39	33	44	37	32	42	36	32	30					30			
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	28	26					26			
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24					24			
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12099	12099	12099
5°	11271	11324	11555
10°	10484	10192	10167
15°	9911	9491	9416
20°	9584	9128	8996
25°	9153	8754	8491
30°	8997	8381	8195
35°	8606	8105	7810
40°	8490	7921	7680
45°	8135	7732	7649
50°	7922	7645	7491
55°	7611	7398	7314
60°	7226	6999	7033
65°	6748	6646	6762
70°	5984	5991	6236
75°	5085	5332	5507
80°	3734	4396	5028
85°	1874	3374	4599



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.4	3.3
10°-20°	306.2	8.6
20°-30°	444.2	12.5
30°-40°	528.8	14.9
40°-50°	563.8	15.8
50°-60°	533.9	15.0
60°-70°	430.2	12.1
70°-80°	276.4	7.8
80°-90°	120.7	3.4
90°-100°	64.1	1.8
100°-110°	49.6	1.4
110°-120°	39.6	1.1
120°-130°	35.3	1.0
130°-140°	26.5	0.7
140°-150°	15.5	0.4
150°-160°	6.4	0.2
160°-170°	1.5	0.0
170°-180°	0.0	0.0
0°-30°	868.7	24.4
0°-40°	1397.5	39.2
0°-60°	2495.2	70.1
0°-90°	3322.5	93.3
90°-120°	153.2	4.3
90°-150°	230.5	6.5
90°-180°	238.0	6.7
0°-180°	3561.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1346	1346	1346	1346	1346	
5°	1258	1263	1279	1298	1306	118
15°	1088	1092	1079	1071	1073	307
25°	957	962	971	963	946	444
35°	828	857	850	846	824	522
45°	690	723	739	753	738	537
55°	540	570	617	624	617	483
65°	371	402	457	464	472	366
75°	189	226	277	303	292	200
85°	34	67	113	143	160	43
90°	1	30	70	97	132	2
95°	0	26	60	89	122	0
105°	0	23	53	72	74	0
115°	0	22	47	59	60	0
125°	0	19	44	63	65	0
135°	0	14	36	55	62	0
145°	1	9	26	40	47	1
155°	1	4	14	22	26	0
165°	1	1	4	9	10	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°	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0
2.5°	1318.7	1318.7	1319.5	1319.5	1321.1	1321.9	1324.3	1324.3	1328.3	1331.5	1334.8
5°	1257.7	1255.3	1257.7	1257.7	1261.7	1263.3	1267.3	1272.1	1273.0	1277.8	1278.6
7.5°	1213.6	1212.8	1209.5	1209.5	1207.9	1210.3	1210.3	1213.6	1219.2	1224.0	1224.8
10°	1164.6	1163.8	1163.0	1163.8	1159.8	1161.4	1161.4	1163.0	1166.2	1165.4	1159.0
12.5°	1128.5	1127.7	1124.5	1124.5	1125.3	1125.3	1124.5	1126.1	1120.5	1117.2	1119.7
15°	1087.5	1090.0	1092.4	1088.3	1093.2	1092.4	1092.4	1089.2	1081.9	1077.1	1078.7
17.5°	1053.8	1057.0	1054.6	1053.0	1051.4	1051.4	1053.8	1053.8	1056.2	1051.4	1053.8
20°	1030.6	1025.7	1020.1	1024.9	1028.2	1029.0	1029.8	1029.8	1026.5	1025.7	1029.0
22.5°	992.0	991.2	993.6	999.3	998.5	994.4	992.8	986.4	989.6	992.8	988.8
25°	956.7	966.4	968.8	962.3	959.9	961.5	966.4	969.6	975.2	972.0	971.2
27.5°	931.8	934.2	923.0	930.2	941.5	947.1	943.9	943.1	940.7	932.6	937.5
30°	906.2	898.1	899.7	908.6	909.4	905.4	901.3	903.7	908.6	909.4	907.8
32.5°	869.2	865.2	880.5	873.2	873.2	876.5	882.9	886.9	891.7	890.9	889.3
35°	827.5	837.9	837.9	834.7	850.0	857.2	860.4	853.2	852.4	846.8	850.0
37.5°	800.2	801.0	797.8	814.7	820.3	817.9	815.5	814.7	818.7	821.9	822.7
40°	771.3	764.1	769.7	779.3	774.5	778.5	785.0	794.6	798.6	800.2	797.0
42.5°	735.2	732.8	741.6	737.6	747.2	752.9	759.3	764.9	761.7	763.3	762.5
45°	690.3	700.7	695.9	707.1	723.2	723.2	724.0	722.4	729.6	738.4	739.2
47.5°	659.8	661.4	660.6	674.2	680.6	679.0	689.4	699.9	709.5	714.3	719.9
50°	619.6	615.6	631.7	632.5	642.1	648.5	657.3	667.0	675.8	682.2	687.0
52.5°	585.9	581.9	589.9	589.9	610.8	618.0	618.8	626.0	635.7	638.9	645.3
55°	540.2	545.8	544.2	559.4	569.1	569.9	573.1	585.9	601.2	607.6	617.2
57.5°	493.6	501.6	500.8	518.5	522.5	528.9	536.1	553.8	563.4	572.3	579.5
60°	456.7	458.3	466.3	469.5	479.2	488.8	500.0	511.3	517.7	528.1	534.5
62.5°	416.6	411.7	425.4	426.2	443.8	445.5	451.9	463.9	474.3	487.2	494.4
65°	370.8	371.6	378.0	386.9	398.9	402.1	408.5	422.2	435.8	447.9	456.7
67.5°	326.7	329.9	333.9	344.3	351.5	359.6	367.6	378.8	397.3	406.9	412.5
70°	276.9	282.5	287.3	298.6	309.0	315.4	325.9	337.1	349.1	357.2	362.8
72.5°	232.0	236.0	243.2	252.0	268.1	274.5	280.9	290.5	301.0	309.0	321.0
75°	189.4	192.6	201.5	207.9	221.5	226.3	234.4	244.0	257.6	268.1	276.9
77.5°	146.1	148.5	157.3	165.3	177.4	183.0	188.6	199.9	211.1	225.5	234.4
80°	104.3	106.7	115.6	122.8	132.4	137.2	143.7	157.3	170.2	178.2	188.6
82.5°	67.4	69.0	75.4	84.3	93.1	99.5	105.9	117.2	128.4	138.1	146.9
85°	34.5	36.1	43.3	50.6	60.2	66.6	70.6	81.9	93.1	102.7	113.2
87.5°	11.2	13.6	19.3	27.3	36.1	41.7	45.7	56.2	65.8	76.2	85.9
90°	0.8	3.2	8.8	16.1	24.9	29.7	34.5	43.3	52.2	61.0	69.8
92.5°	0.0	2.4	7.2	14.4	22.5	27.3	31.3	40.1	48.2	56.2	63.4
95°	0.0	1.6	7.2	13.6	21.7	26.5	30.5	38.5	46.6	53.8	60.2
97.5°	0.0	1.6	6.4	13.6	20.9	25.7	29.7	36.9	44.1	51.4	58.6
100°	0.0	1.6	6.4	12.8	20.9	24.9	28.1	35.3	42.5	49.8	56.2
102.5°	0.0	1.6	6.4	12.8	20.1	24.1	27.3	34.5	41.7	48.2	54.6
105°	0.0	1.6	6.4	12.8	20.1	23.3	27.3	33.7	40.9	47.4	53.0
107.5°	0.0	1.6	5.6	12.0	19.3	23.3	26.5	33.7	40.1	45.7	51.4
110°	0.0	1.6	5.6	12.0	19.3	22.5	26.5	32.9	39.3	44.9	49.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.6	5.6	12.0	18.5	22.5	25.7	32.1	38.5	43.3	48.2
115°	0.0	1.6	5.6	11.2	18.5	21.7	24.9	31.3	37.7	42.5	47.4
117.5°	0.0	0.8	5.6	11.2	17.7	20.9	24.9	31.3	36.9	41.7	46.6
120°	0.0	0.8	4.8	10.4	16.9	20.9	24.1	30.5	36.1	40.9	45.7
122.5°	0.0	0.8	4.8	10.4	16.9	20.1	23.3	29.7	35.3	40.9	45.7
125°	0.0	0.8	4.8	9.6	16.1	19.3	22.5	28.1	34.5	39.3	44.1
127.5°	0.0	0.8	4.0	9.6	15.2	18.5	21.7	27.3	32.9	37.7	42.5
130°	0.0	0.8	4.0	8.8	14.4	16.9	20.1	25.7	31.3	36.1	40.9
132.5°	0.0	0.8	3.2	8.0	13.6	16.1	18.5	24.1	29.7	34.5	38.5
135°	0.0	0.8	3.2	7.2	12.0	14.4	17.7	22.5	27.3	32.1	36.1
137.5°	0.0	0.0	2.4	6.4	11.2	13.6	16.1	20.9	25.7	29.7	33.7
140°	0.8	0.0	2.4	5.6	9.6	12.0	14.4	18.5	23.3	27.3	31.3
142.5°	0.8	0.0	1.6	4.8	8.8	10.4	12.8	16.9	20.9	24.9	28.1
145°	0.8	0.0	1.6	4.0	7.2	8.8	11.2	14.4	18.5	21.7	25.7
147.5°	0.8	0.0	0.8	3.2	6.4	8.0	9.6	12.8	16.1	19.3	22.5
150°	0.8	0.8	0.8	2.4	4.8	6.4	8.0	11.2	13.6	16.9	20.1
152.5°	0.8	0.8	0.8	1.6	4.0	4.8	6.4	8.8	12.0	14.4	17.7
155°	0.8	0.8	0.8	1.6	3.2	4.0	4.8	7.2	9.6	12.0	14.4
157.5°	0.8	0.8	0.0	0.8	2.4	3.2	4.0	5.6	7.2	9.6	11.2
160°	0.8	0.8	0.0	0.8	1.6	2.4	2.4	4.0	5.6	7.2	8.8
162.5°	0.8	0.8	0.8	0.8	0.8	1.6	1.6	3.2	4.0	5.6	6.4
165°	0.8	0.8	0.8	0.0	0.8	0.8	0.8	1.6	2.4	3.2	4.0
167.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.8	0.8	1.6	1.6	2.4
170°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
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°	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0	1346.0
2.5°	1338.0	1340.4	1342.0	1344.4	1343.6	1344.4	1344.4	1342.8	1344.4	1344.4
5°	1282.6	1288.2	1291.4	1296.2	1297.8	1297.8	1301.8	1305.1	1306.7	1305.9
7.5°	1224.0	1219.2	1220.0	1216.8	1216.8	1218.4	1222.4	1225.6	1230.4	1233.6
10°	1157.4	1159.0	1159.0	1162.2	1160.6	1160.6	1161.4	1163.8	1163.0	1158.2
12.5°	1120.5	1111.6	1113.2	1120.5	1122.9	1120.5	1122.9	1119.7	1125.3	1125.3
15°	1079.5	1085.1	1088.3	1078.7	1070.7	1073.9	1077.9	1074.7	1073.1	1073.1
17.5°	1061.9	1050.6	1044.2	1046.6	1048.2	1046.6	1047.4	1047.4	1045.0	1041.0
20°	1017.7	1019.3	1023.3	1024.9	1024.1	1023.3	1019.3	1018.5	1019.3	1017.7
22.5°	991.2	991.2	992.0	1000.9	1000.9	998.5	993.6	988.8	983.2	982.4
25°	976.8	969.6	975.2	967.2	963.1	956.7	954.3	951.1	940.7	946.3
27.5°	933.4	945.5	938.3	934.2	929.4	926.2	920.6	919.8	921.4	921.4
30°	909.4	902.1	899.7	900.5	902.1	908.6	902.1	892.5	892.5	892.5
32.5°	890.9	882.9	878.1	874.9	875.7	873.2	869.2	861.2	860.4	862.8
35°	846.0	851.6	852.4	850.8	846.0	840.3	839.5	837.9	828.3	824.3
37.5°	818.7	815.5	814.7	817.9	819.5	814.7	802.6	797.0	797.8	794.6
40°	799.4	799.4	792.2	781.7	776.9	777.7	783.4	778.5	776.9	778.5
42.5°	768.1	775.3	773.7	767.3	766.5	768.1	766.5	761.7	758.5	758.5
45°	744.0	742.4	744.0	752.9	752.9	748.0	739.2	742.4	742.4	737.6
47.5°	726.4	720.8	724.0	715.1	718.3	720.8	715.9	711.1	709.5	706.3
50°	691.1	695.9	696.7	691.9	687.0	687.8	682.2	677.4	682.2	679.8
52.5°	649.3	656.5	658.1	660.6	652.5	649.3	651.7	658.1	654.9	655.7
55°	623.6	623.6	622.8	619.6	623.6	628.4	619.6	618.8	614.8	617.2
57.5°	589.9	591.5	587.5	591.5	588.3	588.3	585.1	587.5	589.1	593.9
60°	541.8	548.2	553.8	552.2	545.8	546.6	550.6	547.4	548.2	544.2
62.5°	500.8	500.8	509.7	505.6	510.5	508.1	502.4	503.2	506.5	508.1
65°	461.5	463.1	459.1	464.7	463.9	460.7	462.3	469.5	468.7	471.9
67.5°	415.0	423.0	421.4	419.0	419.0	420.6	427.0	421.4	419.0	418.2
70°	370.0	374.0	381.2	378.0	382.0	382.8	378.0	376.4	378.0	384.5
72.5°	328.3	332.3	336.3	342.7	343.5	340.3	343.5	341.1	341.9	339.5
75°	284.1	289.7	293.8	303.4	302.6	299.4	300.2	296.2	293.0	292.2
77.5°	240.0	248.0	256.8	256.0	256.0	259.2	256.8	254.4	255.2	252.8
80°	198.2	207.1	214.3	215.1	216.7	221.5	218.3	219.9	219.1	221.5
82.5°	157.3	166.1	172.6	176.6	179.0	179.8	182.2	184.6	187.8	189.4
85°	122.8	130.8	135.6	140.5	142.9	144.5	149.3	153.3	157.3	159.7
87.5°	93.9	99.5	105.9	112.4	114.8	118.0	122.8	128.4	135.6	142.1
90°	75.4	81.9	88.3	94.7	97.1	100.3	105.9	113.2	123.6	132.4
92.5°	69.0	75.4	81.1	87.5	90.7	94.7	101.9	111.6	126.0	136.4
95°	66.6	73.0	79.5	85.9	89.1	92.3	101.1	110.8	119.6	122.0
97.5°	64.2	70.6	76.2	82.7	85.9	89.9	97.1	101.9	105.1	107.6
100°	62.6	68.2	73.8	80.3	82.7	85.1	89.9	93.9	97.1	99.5
102.5°	60.2	65.8	71.4	75.4	77.9	79.5	83.5	87.5	87.5	87.5
105°	58.6	63.4	67.4	70.6	72.2	73.8	76.2	75.4	74.6	73.8
107.5°	56.2	60.2	63.4	66.6	66.6	67.4	67.4	65.8	65.0	64.2
110°	53.8	57.8	60.2	61.0	61.8	61.8	61.8	61.0	60.2	60.2



TEST NUMBER: P241434

CATALOG NUMBER: FVS8M-2-LD4-35-2STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	52.2	55.4	57.8	58.6	59.4	59.4	59.4	59.4	58.6	58.6
115°	50.6	53.8	56.2	57.8	58.6	59.4	60.2	60.2	60.2	60.2
117.5°	50.6	53.8	57.0	58.6	60.2	61.0	62.6	62.6	61.8	62.6
120°	49.8	53.8	57.0	60.2	61.8	62.6	64.2	64.2	63.4	63.4
122.5°	49.8	53.8	57.8	61.0	62.6	63.4	65.0	65.8	65.0	64.2
125°	49.0	53.0	57.0	61.0	62.6	64.2	65.8	65.8	65.0	65.0
127.5°	47.4	52.2	56.2	60.2	61.8	63.4	65.0	65.8	65.0	65.0
130°	45.7	50.6	54.6	58.6	60.2	61.8	63.4	64.2	64.2	64.2
132.5°	43.3	48.2	52.2	56.2	57.8	59.4	61.8	62.6	63.4	63.4
135°	40.9	45.7	49.8	53.8	55.4	57.0	59.4	61.0	61.0	61.8
137.5°	38.5	42.5	46.6	50.6	52.2	53.8	57.0	57.8	58.6	59.4
140°	35.3	39.3	42.5	46.6	49.0	50.6	53.0	54.6	56.2	56.2
142.5°	32.1	35.3	39.3	42.5	44.1	45.7	49.0	50.6	52.2	52.2
145°	28.9	32.1	35.3	38.5	40.1	41.7	44.1	45.7	46.6	47.4
147.5°	25.7	28.9	31.3	34.5	35.3	36.9	38.5	40.1	40.9	41.7
150°	22.5	25.7	27.3	29.7	30.5	32.1	33.7	34.5	35.3	36.1
152.5°	19.3	21.7	24.1	25.7	26.5	27.3	28.9	29.7	30.5	30.5
155°	16.9	18.5	20.1	21.7	22.5	23.3	24.1	24.9	25.7	25.7
157.5°	13.6	15.2	16.9	18.5	18.5	19.3	20.1	20.9	21.7	21.7
160°	10.4	12.0	13.6	14.4	15.2	15.2	16.1	16.9	16.9	17.7
162.5°	8.0	8.8	10.4	11.2	12.0	12.0	12.8	13.6	13.6	13.6
165°	5.6	6.4	7.2	8.0	8.8	8.8	9.6	9.6	9.6	9.6
167.5°	3.2	4.0	4.0	4.8	5.6	5.6	6.4	6.4	6.4	6.4
170°	1.6	1.6	2.4	2.4	2.4	2.4	3.2	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)