

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: P241460

Luminaire Tested: **FVS8M-3-LD4-50-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241460
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-50-1STD-PA187-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

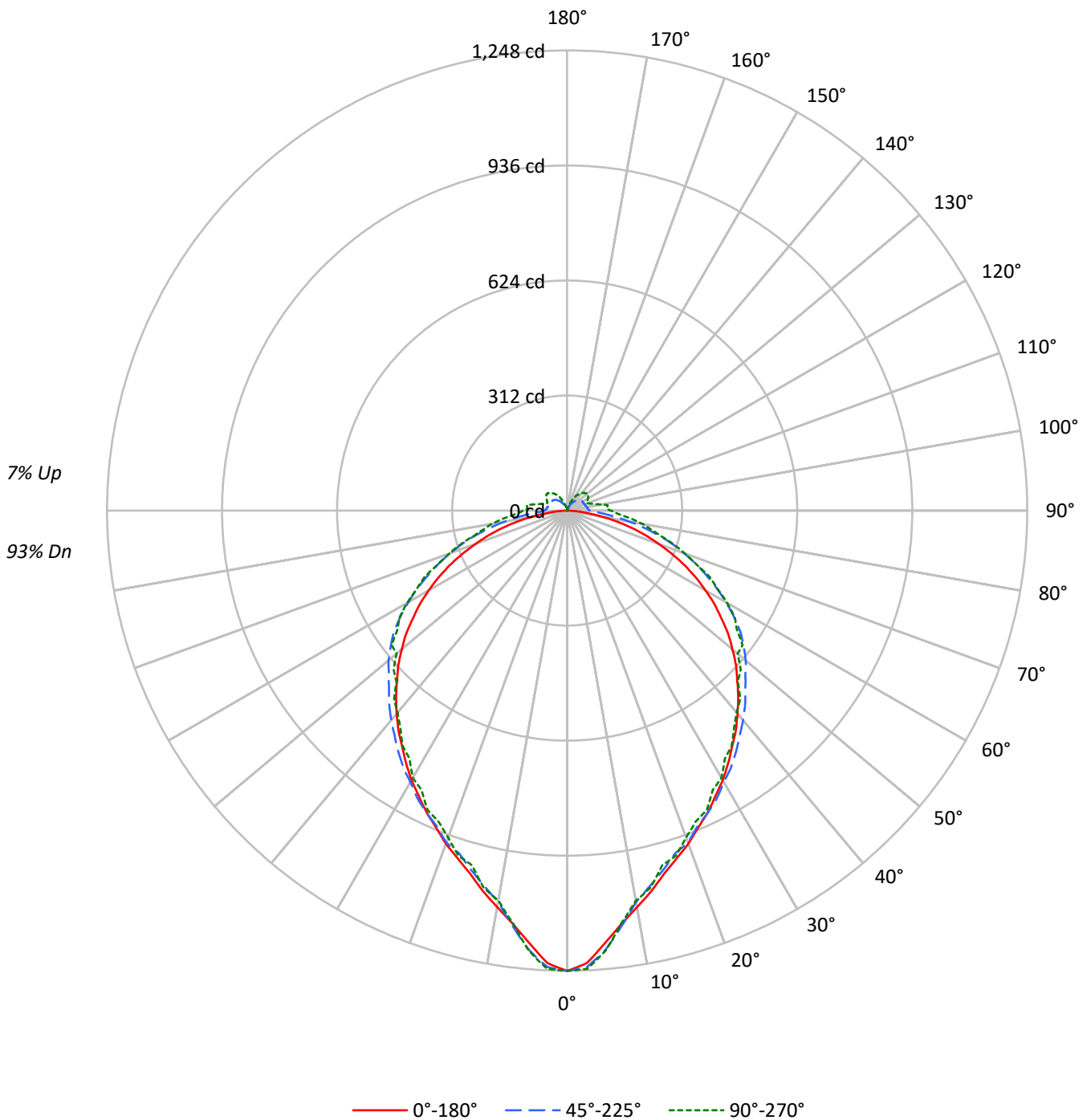
Lumens per Lamp: N/A
Luminaire Lumens: 3321.0 lumens
Efficiency: N/A
Efficacy: 116.5 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.23
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 28.5
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

TEST NUMBER: P241460

CATALOG NUMBER: FVS8M-3-LD4-50-1STD-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	95	95	95	93
1	106	101	97	92	103	98	94	90	93	89	86	87	85	82	83	80	78	76
2	96	88	81	75	93	85	79	73	80	75	70	76	72	68	72	68	65	62
3	88	77	68	62	84	75	67	61	71	64	59	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	56	51	47	44
5	74	60	51	45	71	59	50	44	56	49	43	53	47	42	51	45	41	38
6	68	54	45	39	65	53	45	38	51	43	37	48	42	37	46	40	36	33
7	63	49	40	34	61	48	40	34	46	39	33	44	37	32	42	36	32	30
8	59	45	36	31	57	44	36	30	42	35	30	40	34	29	39	33	28	26
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7290	7290	7290
5°	6871	6891	6888
10°	6417	6175	6124
15°	6075	5791	5678
20°	5866	5558	5417
25°	5681	5335	5222
30°	5529	5150	4993
35°	5369	5005	4791
40°	5254	4859	4584
45°	5125	4720	4412
50°	5009	4658	4323
55°	4845	4564	4323
60°	4653	4340	4207
65°	4378	4069	3973
70°	3945	3740	3577
75°	3422	3323	3183
80°	2568	2726	3045
85°	1387	2073	2780



TEST NUMBER: P241460

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.3
10°-20°	285.2	8.6
20°-30°	415.2	12.5
30°-40°	494.5	14.9
40°-50°	519.8	15.7
50°-60°	495.4	14.9
60°-70°	397.3	12.0
70°-80°	253.2	7.6
80°-90°	110.9	3.3
90°-100°	59.1	1.8
100°-110°	48.4	1.5
110°-120°	40.3	1.2
120°-130°	37.3	1.1
130°-140°	28.6	0.9
140°-150°	17.3	0.5
150°-160°	7.0	0.2
160°-170°	1.3	0.0
170°-180°	0.0	0.0
0°-30°	810.4	24.4
0°-40°	1305.0	39.3
0°-60°	2320.2	69.9
0°-90°	3081.6	92.8
90°-120°	147.8	4.5
90°-150°	231.1	7.0
90°-180°	239.0	7.2
0°-180°	3321.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1248	1248	1248	1248	1248	
5°	1178	1185	1196	1193	1198	110
15°	1019	1015	1008	1003	996	288
25°	903	904	904	892	896	416
35°	780	793	798	789	778	489
45°	652	673	683	679	655	504
55°	511	539	574	569	562	457
65°	352	380	418	426	427	347
75°	181	212	255	267	260	191
85°	33	60	100	136	149	40
90°	1	25	60	90	118	2
95°	0	23	57	81	109	0
105°	0	22	52	71	71	0
115°	0	22	48	60	60	0
125°	0	20	48	66	69	0
135°	1	15	41	60	67	1
145°	1	8	28	47	54	1
155°	1	3	14	26	30	0
165°	1	1	3	7	9	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241460

CATALOG NUMBER: FVS8M-3-LD4-50-1STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4
2.5°	1228.5	1225.0	1225.0	1228.5	1231.1	1231.1	1233.7	1237.1	1239.7	1238.9	1238.9
5°	1177.5	1176.7	1175.8	1181.8	1183.6	1185.3	1187.0	1194.8	1195.7	1198.3	1195.7
7.5°	1130.0	1126.6	1126.6	1130.9	1132.6	1134.3	1136.1	1139.5	1135.2	1132.6	1136.1
10°	1092.0	1086.8	1086.0	1088.5	1087.7	1086.8	1087.7	1084.2	1086.0	1082.5	1077.3
12.5°	1056.6	1053.1	1048.8	1048.8	1047.9	1047.9	1046.2	1046.2	1041.0	1035.8	1041.9
15°	1018.6	1017.7	1012.5	1015.1	1015.1	1015.1	1016.0	1015.1	1011.7	1014.2	1008.2
17.5°	988.3	985.7	984.9	990.1	988.3	986.6	987.5	984.0	986.6	980.6	974.5
20°	961.5	958.1	958.1	959.0	957.2	955.5	956.4	959.0	955.5	951.2	958.1
22.5°	929.6	925.3	926.1	930.4	930.4	933.0	934.8	930.4	927.9	930.4	925.3
25°	902.8	900.2	902.8	902.8	901.1	903.7	906.3	908.0	905.4	904.5	903.7
27.5°	871.7	868.2	870.8	873.4	879.5	880.3	879.5	879.5	878.6	882.1	879.5
30°	844.1	841.5	844.9	849.2	849.2	850.1	851.0	854.4	851.8	857.0	850.1
32.5°	813.0	810.4	813.8	815.5	823.3	823.3	825.9	829.4	828.5	830.2	826.8
35°	780.1	778.4	782.7	790.5	793.1	793.1	798.3	798.3	801.7	801.7	798.3
37.5°	751.6	750.7	753.3	762.0	765.4	768.0	771.5	772.3	776.7	773.2	768.9
40°	718.8	717.1	721.4	729.2	733.5	736.1	738.7	744.7	744.7	743.8	742.1
42.5°	686.8	686.8	690.3	696.3	704.1	707.6	708.4	715.3	717.9	713.6	714.5
45°	652.3	652.3	655.7	664.4	670.4	673.0	676.5	680.8	684.2	688.5	683.4
47.5°	621.2	621.2	623.8	629.8	640.2	640.2	644.5	650.5	654.0	657.4	655.7
50°	584.9	587.5	590.9	596.1	601.3	607.3	613.4	620.3	623.8	627.2	632.4
52.5°	551.2	549.5	553.8	559.8	567.6	574.5	578.0	588.3	595.2	601.3	603.0
55°	510.6	515.8	517.5	525.3	529.6	539.1	543.4	551.2	561.5	568.5	573.6
57.5°	474.3	475.2	478.6	486.4	495.9	499.3	504.5	514.0	522.7	531.3	536.5
60°	433.7	436.3	441.5	446.6	456.2	460.5	464.8	477.7	483.8	491.6	497.6
62.5°	393.1	395.7	401.7	408.6	413.8	419.0	423.3	436.3	447.5	451.8	457.9
65°	351.6	355.1	358.5	363.7	372.4	380.1	382.7	395.7	405.2	413.0	418.1
67.5°	308.4	311.0	317.9	324.0	331.7	337.8	342.1	354.2	364.6	374.9	377.5
70°	263.5	268.7	273.0	282.5	290.3	295.5	300.6	312.7	322.2	329.2	336.9
72.5°	222.9	225.5	231.5	240.2	248.8	254.0	257.4	271.3	279.9	291.1	297.2
75°	180.6	184.0	189.2	196.1	206.5	211.7	218.6	228.9	239.3	248.8	254.9
77.5°	139.1	142.5	146.9	155.5	164.1	169.3	177.1	187.5	198.7	205.6	212.5
80°	98.5	101.9	106.3	115.8	125.3	128.7	135.6	144.3	156.4	164.1	171.1
82.5°	62.2	64.8	70.0	78.6	88.1	91.6	97.6	107.1	117.5	126.1	133.9
85°	32.8	33.7	40.6	46.7	55.3	59.6	63.9	73.4	83.8	91.6	100.2
87.5°	9.5	12.1	17.3	25.1	32.0	36.3	40.6	49.2	58.7	65.7	74.3
90°	0.9	2.6	6.9	13.8	20.7	25.1	28.5	37.1	44.9	52.7	60.5
92.5°	0.0	1.7	6.9	13.0	19.9	24.2	27.6	35.4	43.2	50.1	57.9
95°	0.0	1.7	6.0	12.1	19.9	23.3	27.6	35.4	42.3	50.1	57.0
97.5°	0.0	1.7	6.0	12.1	19.9	23.3	26.8	34.6	42.3	48.4	55.3
100°	0.0	1.7	6.0	12.1	19.0	23.3	26.8	33.7	41.5	47.5	53.6
102.5°	0.0	1.7	6.0	12.1	19.0	22.5	26.8	33.7	39.7	46.7	52.7
105°	0.0	1.7	6.0	12.1	19.0	22.5	25.9	32.8	38.9	45.8	51.8
107.5°	0.0	1.7	6.0	12.1	19.0	22.5	25.9	32.8	38.9	44.9	51.0
110°	0.0	0.9	5.2	12.1	19.0	22.5	25.9	32.0	38.9	44.9	50.1



TEST NUMBER: P241460

CATALOG NUMBER: FVS8M-3-LD4-50-1STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.9	5.2	11.2	18.1	22.5	25.9	32.0	38.9	44.1	49.2
115°	0.0	0.9	5.2	11.2	18.1	21.6	25.1	32.0	38.0	43.2	48.4
117.5°	0.0	0.9	5.2	11.2	18.1	21.6	25.1	32.0	38.0	43.2	48.4
120°	0.0	0.9	4.3	10.4	17.3	20.7	24.2	31.1	38.0	43.2	48.4
122.5°	0.0	0.9	4.3	10.4	16.4	19.9	23.3	30.2	37.1	43.2	48.4
125°	0.0	0.9	3.5	9.5	16.4	19.9	23.3	29.4	36.3	42.3	48.4
127.5°	0.9	0.9	3.5	8.6	15.6	19.0	22.5	28.5	34.6	40.6	46.7
130°	0.9	0.9	3.5	7.8	13.8	17.3	20.7	27.6	33.7	39.7	44.9
132.5°	0.9	0.9	2.6	6.9	13.0	16.4	19.0	25.9	31.1	37.1	43.2
135°	0.9	0.9	1.7	6.0	12.1	14.7	17.3	24.2	29.4	34.6	40.6
137.5°	0.9	0.9	1.7	5.2	10.4	13.0	15.6	21.6	27.6	32.0	38.0
140°	0.9	0.9	1.7	4.3	8.6	11.2	13.8	19.0	25.1	30.2	34.6
142.5°	0.9	0.9	0.9	3.5	7.8	9.5	12.1	16.4	21.6	26.8	32.0
145°	0.9	0.9	0.9	2.6	6.0	7.8	10.4	14.7	19.0	24.2	28.5
147.5°	0.9	0.9	0.9	2.6	5.2	6.9	8.6	12.1	16.4	20.7	25.1
150°	0.9	0.9	0.9	1.7	3.5	5.2	6.9	10.4	13.8	17.3	21.6
152.5°	0.9	0.9	0.9	0.9	2.6	4.3	5.2	7.8	11.2	14.7	17.3
155°	0.9	0.9	0.9	0.9	1.7	2.6	4.3	6.0	8.6	11.2	13.8
157.5°	0.9	0.9	0.9	0.9	1.7	1.7	2.6	4.3	6.0	8.6	10.4
160°	0.9	0.9	0.9	0.9	0.9	1.7	1.7	3.5	4.3	6.0	7.8
162.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	2.6	4.3	5.2
165°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	2.6	2.6
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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



TEST NUMBER: P241460

CATALOG NUMBER: FVS8M-3-LD4-50-1STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4
2.5°	1240.6	1239.7	1240.6	1243.2	1243.2	1244.0	1244.9	1245.8	1244.9	1244.0
5°	1196.5	1192.2	1191.3	1194.8	1193.1	1193.9	1196.5	1199.1	1198.3	1198.3
7.5°	1136.9	1134.3	1135.2	1127.4	1126.6	1123.1	1124.0	1124.0	1125.7	1128.3
10°	1070.4	1073.0	1079.9	1086.0	1087.7	1085.1	1080.8	1075.6	1073.0	1073.9
12.5°	1042.8	1035.0	1024.6	1020.3	1024.6	1030.7	1039.3	1045.3	1047.1	1047.1
15°	997.0	1000.4	1007.3	1011.7	1003.0	999.6	997.8	995.2	996.1	996.1
17.5°	983.1	978.0	969.3	978.8	984.9	991.8	991.8	984.9	978.8	981.4
20°	948.6	953.8	966.7	954.6	944.3	939.1	939.1	939.9	946.0	943.4
22.5°	931.3	932.2	916.6	923.5	934.8	938.2	932.2	921.8	910.6	912.3
25°	900.2	895.0	908.8	898.5	891.6	887.2	889.8	894.2	897.6	895.9
27.5°	873.4	882.1	863.9	874.3	880.3	883.8	878.6	862.2	859.6	854.4
30°	852.7	839.7	855.3	851.8	839.7	834.5	827.6	833.7	833.7	837.1
32.5°	820.7	825.0	817.3	808.6	814.7	819.9	815.5	808.6	799.1	796.5
35°	799.1	793.1	787.0	796.5	788.8	780.1	773.2	775.8	779.3	778.4
37.5°	773.2	762.8	767.2	752.5	755.9	761.1	765.4	753.3	748.2	743.0
40°	736.1	744.7	729.2	742.1	737.8	728.3	714.5	711.9	716.2	715.3
42.5°	712.7	706.7	715.3	697.2	692.9	694.6	702.4	705.0	698.0	694.6
45°	686.0	686.8	674.7	674.7	679.0	678.2	664.4	654.9	655.7	654.9
47.5°	653.1	656.6	649.7	652.3	639.3	637.6	638.4	641.9	640.2	638.4
50°	635.0	626.3	635.8	622.0	627.2	630.7	622.9	609.1	605.6	603.9
52.5°	609.1	614.2	603.0	615.1	610.8	599.6	592.7	597.8	598.7	599.6
55°	571.1	580.6	584.0	572.8	569.3	572.8	575.4	566.7	563.3	561.5
57.5°	542.5	540.0	539.1	540.0	542.5	540.8	533.0	533.0	538.2	539.1
60°	501.1	508.0	498.5	502.8	496.8	496.8	505.4	504.5	502.8	501.1
62.5°	459.6	461.3	467.4	457.9	461.3	466.5	461.3	457.0	459.6	459.6
65°	421.6	421.6	419.9	425.9	425.9	419.0	416.4	422.5	425.9	426.8
67.5°	383.6	386.2	384.4	385.3	379.3	379.3	383.6	378.4	376.7	378.4
70°	339.5	343.0	349.9	341.2	345.6	346.4	337.8	335.2	337.8	339.5
72.5°	299.8	301.5	305.0	307.6	307.6	305.0	302.4	302.4	301.5	301.5
75°	258.3	264.4	264.4	268.7	267.0	265.2	267.8	264.4	260.0	260.0
77.5°	218.6	227.2	228.1	228.9	229.8	233.3	232.4	229.8	229.8	230.7
80°	178.8	185.7	190.9	192.7	194.4	197.8	198.7	203.9	205.6	206.5
82.5°	140.8	149.5	154.6	161.6	164.1	167.6	172.8	177.1	180.6	178.0
85°	108.9	115.8	123.5	133.0	135.6	140.0	143.4	144.3	146.0	148.6
87.5°	82.1	91.6	101.1	108.9	110.6	111.4	114.0	119.2	125.3	129.6
90°	69.1	77.8	85.5	89.0	89.8	91.6	96.8	103.7	111.4	118.4
92.5°	65.7	72.6	76.9	80.3	82.9	85.5	89.8	95.0	102.8	108.0
95°	63.1	69.1	73.4	77.8	81.2	83.8	88.1	95.0	103.7	108.9
97.5°	61.3	67.4	72.6	77.8	81.2	83.8	91.6	101.1	109.7	110.6
100°	60.5	65.7	70.8	76.9	80.3	83.8	91.6	95.9	95.0	95.0
102.5°	58.7	63.9	70.0	75.2	77.8	79.5	82.9	82.9	81.2	80.3
105°	57.9	62.2	67.4	70.8	70.8	72.6	73.4	72.6	71.7	70.8
107.5°	56.2	60.5	63.9	64.8	65.7	66.5	66.5	65.7	63.9	63.1
110°	54.4	57.9	60.5	61.3	61.3	62.2	61.3	60.5	58.7	57.9



TEST NUMBER: P241460

CATALOG NUMBER: FVS8M-3-LD4-50-1STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	53.6	56.2	58.7	59.6	59.6	60.5	60.5	59.6	58.7	57.9
115°	52.7	56.2	58.7	59.6	60.5	61.3	62.2	61.3	60.5	59.6
117.5°	52.7	56.2	59.6	61.3	62.2	63.1	63.9	64.8	63.1	62.2
120°	53.6	57.0	60.5	63.1	63.9	64.8	66.5	66.5	65.7	65.7
122.5°	53.6	57.9	61.3	63.9	65.7	66.5	67.4	68.2	67.4	67.4
125°	53.6	57.9	61.3	63.9	65.7	66.5	68.2	70.0	69.1	69.1
127.5°	52.7	57.0	60.5	63.9	64.8	65.7	68.2	70.0	70.0	70.8
130°	51.0	55.3	59.6	62.2	63.9	64.8	67.4	69.1	70.0	70.8
132.5°	48.4	53.6	57.0	60.5	61.3	63.1	65.7	67.4	69.1	70.0
135°	45.8	50.1	54.4	57.9	59.6	61.3	63.1	65.7	67.4	67.4
137.5°	42.3	47.5	51.8	55.3	56.2	57.9	60.5	63.1	63.9	64.8
140°	39.7	44.1	48.4	51.8	53.6	55.3	57.9	59.6	61.3	61.3
142.5°	36.3	41.5	44.9	48.4	50.1	51.8	54.4	56.2	57.9	57.9
145°	33.7	38.0	41.5	44.9	46.7	47.5	50.1	51.8	53.6	53.6
147.5°	30.2	33.7	38.0	40.6	42.3	43.2	45.8	47.5	48.4	49.2
150°	25.9	29.4	32.8	35.4	37.1	38.0	40.6	42.3	43.2	44.1
152.5°	20.7	24.2	27.6	30.2	31.1	32.8	34.6	35.4	37.1	37.1
155°	17.3	19.9	22.5	25.1	25.9	26.8	28.5	29.4	30.2	30.2
157.5°	13.0	14.7	17.3	19.9	20.7	20.7	22.5	23.3	24.2	24.2
160°	9.5	11.2	13.0	14.7	15.6	16.4	17.3	18.1	18.1	18.1
162.5°	6.0	7.8	8.6	10.4	10.4	11.2	12.1	13.0	13.0	13.0
165°	3.5	4.3	5.2	6.0	6.9	6.9	7.8	7.8	8.6	8.6
167.5°	1.7	2.6	2.6	3.5	3.5	3.5	4.3	4.3	5.2	4.3
170°	0.9	0.9	0.9	0.9	0.9	1.7	1.7	1.7	1.7	1.7
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)