

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: P241556

Luminaire Tested: **FVS8M-2-LD4-50-3STD-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241556
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-14)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-2-LD4-50-3STD-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
2FT LENGTH, 3-MODULE LED WITH OPAL LENS
Light Source: (126) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

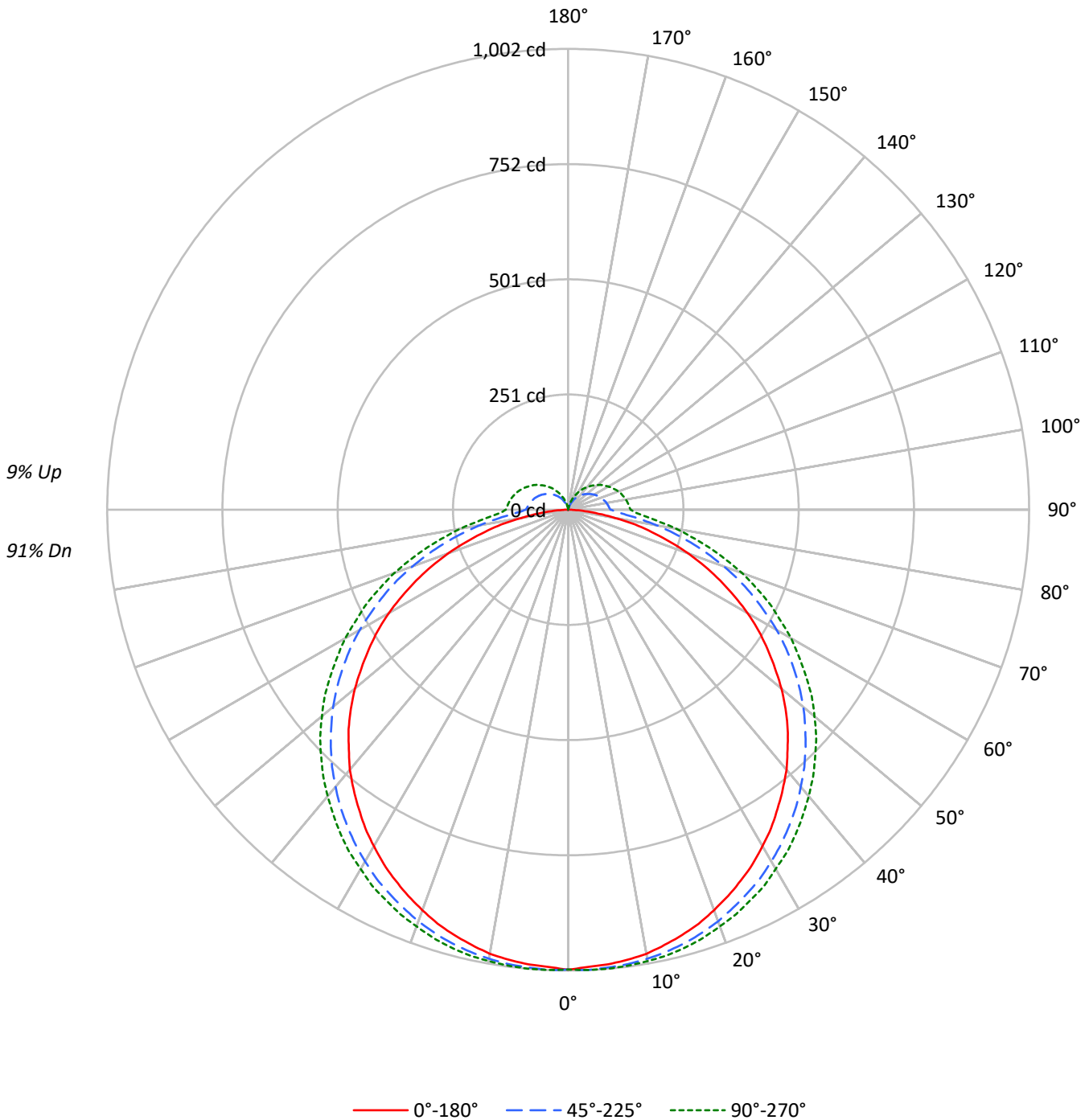
Lumens per Lamp: N/A
Luminaire Lumens: 3582.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.34 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 1.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 50.6
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	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	91
1	105	100	96	91	102	97	93	89	91	88	84	85	83	80	80	78	76	73
2	95	87	79	73	92	84	77	72	79	73	69	74	70	66	70	66	63	60
3	87	76	67	60	83	73	65	59	69	62	57	65	59	55	61	57	53	50
4	79	67	58	51	76	65	56	50	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	43	54	47	41	51	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	59	47	38	32	44	37	32	42	36	31	40	34	30	28
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	35	29	25	34	28	24	22
10	50	37	29	24	48	36	28	23	34	27	23	33	27	22	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8989	8989	8989
5°	8893	8849	8863
10°	8826	8719	8748
15°	8726	8588	8648
20°	8618	8447	8523
25°	8506	8298	8407
30°	8387	8153	8281
35°	8253	7990	8166
40°	8125	7819	8022
45°	7954	7632	7875
50°	7735	7426	7700
55°	7453	7159	7473
60°	7128	6850	7233
65°	6630	6445	6921
70°	5993	5947	6518
75°	5040	5307	5967
80°	3759	4533	5404
85°	1993	3764	4864



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.0	2.7
10°-20°	275.0	7.7
20°-30°	423.1	11.8
30°-40°	521.7	14.6
40°-50°	558.5	15.6
50°-60°	527.6	14.7
60°-70°	430.1	12.0
70°-80°	281.9	7.9
80°-90°	133.9	3.7
90°-100°	85.9	2.4
100°-110°	76.3	2.1
110°-120°	63.1	1.8
120°-130°	48.1	1.3
130°-140°	32.8	0.9
140°-150°	19.0	0.5
150°-160°	8.3	0.2
160°-170°	1.9	0.1
170°-180°	0.0	0.0
0°-30°	793.1	22.1
0°-40°	1314.8	36.7
0°-60°	2400.9	67.0
0°-90°	3246.8	90.6
90°-120°	225.3	6.3
90°-150°	325.1	9.1
90°-180°	335.0	9.4
0°-180°	3582.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	992	995	999	1002	1002	94
15°	957	964	976	983	986	270
25°	889	902	921	934	937	410
35°	794	813	838	856	862	497
45°	675	698	730	752	759	520
55°	529	560	597	623	631	473
65°	364	398	443	472	483	360
75°	188	229	276	307	317	200
85°	37	78	126	159	169	44
90°	0	44	92	125	136	2
95°	0	40	88	120	131	0
105°	0	35	80	112	122	0
115°	0	30	71	99	108	0
125°	0	24	60	84	93	0
135°	1	18	47	67	74	0
145°	1	11	33	49	55	0
155°	1	4	19	30	32	0
165°	1	1	5	11	13	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°	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0
2.5°	994.9	994.9	995.8	996.6	996.6	997.5	997.5	998.3	1000.0	1000.9	1001.7
5°	992.4	992.4	993.2	994.1	994.9	994.9	995.8	996.6	997.5	998.3	999.2
7.5°	987.2	987.2	988.1	988.9	989.8	990.7	990.7	991.5	993.2	994.9	996.6
10°	980.4	979.6	980.4	981.3	982.1	983.0	984.7	986.4	988.1	990.7	991.5
12.5°	969.3	970.2	970.2	971.9	973.6	975.3	975.3	977.9	980.4	983.0	984.7
15°	957.4	957.4	958.2	960.8	962.5	964.2	965.1	968.5	971.0	973.6	976.1
17.5°	943.7	943.7	945.4	947.1	949.7	951.4	953.1	955.7	959.1	962.5	965.1
20°	926.7	927.5	929.2	931.8	935.2	936.9	937.8	942.0	946.3	948.8	952.3
22.5°	908.7	908.7	911.3	914.7	918.1	919.8	921.5	925.8	930.1	933.5	936.9
25°	889.1	890.0	892.5	895.9	899.4	901.9	903.6	909.6	913.0	916.4	920.7
27.5°	868.6	868.6	872.0	875.5	879.7	881.4	884.8	889.1	894.2	898.5	903.6
30°	844.7	845.6	849.9	854.1	857.5	861.8	863.5	868.6	873.8	878.0	883.1
32.5°	820.9	820.9	824.3	830.2	833.7	837.1	839.6	845.6	851.6	856.7	861.8
35°	793.5	796.1	799.5	804.6	809.8	813.2	815.7	821.7	828.5	832.8	837.9
37.5°	766.2	767.9	772.2	777.3	782.5	785.9	789.3	796.1	802.1	808.1	814.0
40°	738.1	738.1	742.3	749.2	755.1	757.7	761.1	767.9	773.9	780.7	786.7
42.5°	705.7	707.4	712.5	718.5	725.3	728.7	732.1	738.9	745.8	752.6	759.4
45°	674.9	675.8	680.9	686.9	693.7	698.0	702.2	708.2	716.8	722.7	729.6
47.5°	640.8	642.5	647.6	654.5	661.3	666.4	669.0	676.6	684.3	692.0	698.8
50°	605.0	606.7	612.7	621.2	628.0	630.6	635.7	645.1	651.9	660.4	667.3
52.5°	566.6	570.8	578.5	584.5	592.2	596.4	600.7	608.4	618.6	625.5	633.1
55°	529.0	531.6	538.4	546.1	555.5	559.7	564.0	572.5	582.8	590.5	597.3
57.5°	491.5	494.0	500.9	507.7	517.9	522.2	527.3	536.7	545.2	552.1	561.5
60°	450.5	452.2	459.9	469.3	477.8	483.8	487.2	497.5	506.0	514.5	523.1
62.5°	407.0	412.1	418.1	428.3	436.9	444.6	448.0	456.5	466.7	475.3	482.1
65°	364.3	368.6	375.4	386.5	395.1	398.5	405.3	414.7	424.9	435.2	442.9
67.5°	320.8	326.8	331.1	343.0	355.0	358.4	365.2	372.9	384.8	394.2	402.7
70°	277.3	280.7	288.4	299.5	308.9	314.9	320.0	331.1	341.3	352.4	360.1
72.5°	232.1	237.2	245.7	255.1	267.9	272.2	278.2	287.6	300.4	309.7	317.4
75°	187.7	192.0	199.7	212.5	223.6	228.7	234.7	245.7	256.8	267.1	275.6
77.5°	148.5	150.2	158.7	169.8	180.9	186.9	192.8	203.9	215.0	227.0	234.7
80°	105.0	110.1	117.8	128.8	140.8	146.8	152.7	163.0	174.1	184.3	194.5
82.5°	66.6	71.7	80.2	91.3	104.1	108.4	115.2	128.0	137.4	146.8	157.9
85°	36.7	40.1	47.8	59.7	71.7	77.6	83.6	95.6	105.8	116.0	126.3
87.5°	12.8	17.1	25.6	36.7	48.6	54.6	60.6	72.5	82.8	93.9	104.1
90°	0.0	6.0	14.5	25.6	37.5	43.5	49.5	60.6	72.5	82.8	92.2
92.5°	0.0	4.3	12.8	23.0	35.0	41.0	46.9	58.9	70.0	80.2	89.6
95°	0.0	3.4	11.9	22.2	34.1	40.1	46.1	57.2	68.3	78.5	87.9
97.5°	0.0	3.4	11.1	21.3	33.3	38.4	44.4	56.3	66.6	76.8	86.2
100°	0.0	3.4	11.1	20.5	32.4	37.5	43.5	54.6	64.8	75.1	84.5
102.5°	0.0	3.4	10.2	20.5	30.7	36.7	41.8	52.9	63.1	73.4	82.8
105°	0.0	2.6	9.4	19.6	29.9	35.0	41.0	51.2	61.4	71.7	80.2
107.5°	0.0	2.6	9.4	18.8	29.0	34.1	39.3	49.5	59.7	69.1	78.5
110°	0.0	2.6	8.5	17.9	27.3	32.4	38.4	48.6	58.0	67.4	75.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.6	8.5	17.1	26.5	31.6	36.7	46.1	56.3	64.8	73.4
115°	0.0	1.7	7.7	16.2	24.7	29.9	35.0	44.4	53.8	62.3	70.8
117.5°	0.0	1.7	6.8	15.4	23.9	28.2	33.3	42.7	52.0	60.6	68.3
120°	0.0	1.7	6.8	14.5	23.0	27.3	31.6	41.0	49.5	58.0	65.7
122.5°	0.0	0.9	6.0	13.7	21.3	25.6	29.9	38.4	46.9	55.5	62.3
125°	0.0	0.9	6.0	11.9	20.5	23.9	28.2	36.7	44.4	52.0	59.7
127.5°	0.0	0.9	5.1	11.1	18.8	23.0	26.5	35.0	42.7	49.5	56.3
130°	0.0	0.9	4.3	10.2	17.1	21.3	24.7	32.4	40.1	46.9	52.9
132.5°	0.0	0.9	4.3	9.4	16.2	19.6	23.0	29.9	37.5	43.5	50.3
135°	0.9	0.9	3.4	8.5	14.5	17.9	21.3	28.2	35.0	41.0	46.9
137.5°	0.0	0.9	2.6	7.7	13.7	16.2	19.6	25.6	32.4	37.5	43.5
140°	0.0	0.9	2.6	6.8	11.9	14.5	17.9	23.9	29.0	35.0	40.1
142.5°	0.9	0.9	1.7	6.0	10.2	12.8	15.4	21.3	26.5	31.6	36.7
145°	0.9	0.9	0.9	4.3	8.5	11.1	13.7	18.8	23.9	29.0	33.3
147.5°	0.9	0.9	0.9	3.4	7.7	9.4	11.9	16.2	21.3	25.6	29.9
150°	0.9	0.9	0.9	2.6	6.0	7.7	9.4	13.7	17.9	22.2	26.5
152.5°	0.9	0.9	0.9	1.7	4.3	6.0	7.7	11.1	15.4	18.8	22.2
155°	0.9	0.9	0.9	1.7	3.4	4.3	6.0	9.4	11.9	15.4	18.8
157.5°	0.9	0.9	0.9	0.9	2.6	3.4	4.3	6.8	9.4	11.9	14.5
160°	0.9	0.9	0.9	0.9	1.7	2.6	2.6	5.1	6.8	9.4	11.1
162.5°	0.9	0.9	0.9	0.9	0.9	0.9	1.7	3.4	4.3	6.0	7.7
165°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	2.6	4.3	5.1
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7	2.6
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0
2.5°	1001.7	1002.6	1002.6	1002.6	1002.6	1002.6	1002.6	1002.6	1002.6	1001.7
5°	1000.0	1000.9	1000.9	1001.7	1001.7	1001.7	1001.7	1001.7	1001.7	1001.7
7.5°	997.5	998.3	999.2	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0
10°	993.2	994.1	995.8	995.8	996.6	996.6	996.6	996.6	997.5	996.6
12.5°	986.4	988.1	989.8	990.7	990.7	991.5	991.5	991.5	992.4	992.4
15°	977.9	979.6	981.3	982.1	983.0	983.8	983.8	984.7	984.7	985.5
17.5°	967.6	970.2	971.9	972.7	973.6	974.4	974.4	975.3	976.1	976.1
20°	955.7	957.4	959.9	960.8	961.6	962.5	964.2	964.2	965.1	964.2
22.5°	940.3	943.7	946.3	948.0	948.8	948.8	950.5	952.3	952.3	952.3
25°	924.1	927.5	930.9	932.6	933.5	933.5	936.0	936.0	936.9	936.9
27.5°	906.2	910.4	913.0	915.6	916.4	917.3	918.1	919.8	920.7	922.4
30°	886.6	890.0	893.4	896.8	897.6	898.5	900.2	901.1	902.8	901.9
32.5°	866.1	869.5	873.8	877.2	878.0	878.0	880.6	880.6	882.3	884.0
35°	843.0	847.3	850.7	854.1	855.8	855.8	859.2	860.1	861.8	861.8
37.5°	818.3	824.3	826.8	831.1	832.8	833.7	836.2	836.2	837.9	837.9
40°	792.7	797.0	802.1	804.6	806.3	808.9	809.8	813.2	813.2	813.2
42.5°	765.4	768.8	775.6	778.2	780.7	780.7	783.3	785.0	786.7	787.6
45°	736.4	740.6	745.8	750.0	751.7	753.4	755.1	756.9	759.4	759.4
47.5°	704.8	711.6	715.0	720.2	721.9	723.6	726.1	727.8	729.6	731.3
50°	672.4	679.2	685.2	688.6	689.4	692.0	694.6	696.3	698.0	698.8
52.5°	639.1	645.1	650.2	655.3	657.0	661.3	661.3	663.8	665.6	667.3
55°	605.0	610.1	616.9	620.3	622.9	623.7	628.9	630.6	630.6	630.6
57.5°	567.4	575.1	579.4	586.2	587.1	588.8	591.3	594.7	594.7	594.7
60°	529.9	536.7	542.7	546.9	550.4	550.4	554.6	558.0	558.9	559.7
62.5°	491.5	497.5	504.3	508.6	512.0	513.7	516.2	519.6	521.4	519.6
65°	450.5	457.4	464.2	469.3	471.9	473.6	477.0	479.5	482.1	483.0
67.5°	410.4	416.4	424.1	430.1	431.8	435.2	437.7	439.4	441.1	441.1
70°	368.6	376.3	383.1	388.2	389.1	392.5	396.8	399.3	398.5	401.9
72.5°	326.8	334.5	340.5	347.3	348.1	350.7	354.1	356.7	357.5	358.4
75°	284.1	293.5	298.6	304.6	307.2	308.9	313.2	316.6	316.6	316.6
77.5°	243.2	250.9	256.8	262.0	265.4	267.9	272.2	274.8	274.8	275.6
80°	201.4	211.6	216.7	222.7	227.0	228.7	232.1	235.5	236.4	238.1
82.5°	165.5	174.9	180.9	186.9	190.3	193.7	195.4	198.8	199.7	199.7
85°	134.8	142.5	149.3	155.3	158.7	161.3	164.7	166.4	168.9	168.9
87.5°	112.6	119.5	127.1	133.1	135.7	138.2	141.6	144.2	146.8	145.9
90°	101.5	109.2	116.0	122.0	125.4	128.0	130.6	134.0	135.7	135.7
92.5°	98.1	105.8	113.5	119.5	122.0	123.7	128.0	130.6	132.3	133.1
95°	96.4	105.0	111.8	117.8	120.3	122.9	126.3	128.8	130.6	131.4
97.5°	95.6	103.2	110.1	116.0	118.6	121.2	124.6	127.1	128.8	129.7
100°	93.0	100.7	108.4	114.3	116.0	118.6	122.9	125.4	127.1	127.1
102.5°	91.3	99.0	105.8	111.8	114.3	116.0	120.3	122.9	124.6	124.6
105°	88.7	96.4	103.2	109.2	111.8	113.5	117.8	120.3	121.2	122.0
107.5°	86.2	93.9	100.7	105.8	108.4	110.9	114.3	116.9	118.6	119.5
110°	83.6	91.3	97.3	103.2	105.8	107.5	111.8	113.5	115.2	116.0



TEST NUMBER: P241556

CATALOG NUMBER: FVS8M-2-LD4-50-3STD-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	81.1	87.9	94.7	99.8	102.4	104.1	107.5	110.9	111.8	112.6
115°	78.5	85.3	91.3	96.4	99.0	100.7	104.1	106.7	108.4	108.4
117.5°	75.1	81.9	87.9	93.0	95.6	97.3	100.7	103.2	104.1	105.0
120°	72.5	79.4	84.5	89.6	92.2	93.9	96.4	99.0	100.7	100.7
122.5°	69.1	75.9	81.1	86.2	87.9	89.6	93.0	95.6	96.4	96.4
125°	65.7	72.5	77.6	81.9	84.5	86.2	88.7	91.3	92.2	93.0
127.5°	63.1	68.3	74.2	78.5	80.2	81.9	84.5	87.0	87.9	88.7
130°	59.7	64.8	70.0	74.2	75.9	77.6	80.2	81.9	83.6	83.6
132.5°	55.5	61.4	65.7	70.0	71.7	72.5	75.9	77.6	78.5	78.5
135°	52.0	57.2	61.4	65.7	67.4	68.3	70.8	72.5	74.2	74.2
137.5°	48.6	52.9	57.2	61.4	62.3	64.0	66.6	68.3	69.1	69.1
140°	45.2	49.5	52.9	56.3	58.0	58.9	61.4	63.1	64.0	64.0
142.5°	41.0	45.2	48.6	52.0	53.8	54.6	56.3	58.0	58.9	59.7
145°	37.5	41.0	44.4	47.8	48.6	49.5	52.0	52.9	53.8	54.6
147.5°	33.3	36.7	40.1	42.7	43.5	45.2	46.9	47.8	48.6	48.6
150°	29.9	32.4	35.8	38.4	39.3	40.1	41.8	42.7	43.5	43.5
152.5°	25.6	29.0	31.6	33.3	34.1	35.0	36.7	37.5	38.4	38.4
155°	22.2	24.7	26.5	29.0	29.9	30.7	31.6	32.4	32.4	32.4
157.5°	17.9	20.5	22.2	23.9	24.7	25.6	26.5	27.3	27.3	28.2
160°	13.7	16.2	17.9	19.6	19.6	20.5	21.3	22.2	22.2	22.2
162.5°	10.2	11.9	13.7	14.5	15.4	15.4	17.1	17.1	17.1	17.1
165°	6.0	7.7	8.5	10.2	11.1	11.1	11.9	11.9	11.9	12.8
167.5°	3.4	4.3	5.1	6.0	6.8	6.8	7.7	7.7	7.7	7.7
170°	0.9	1.7	1.7	2.6	2.6	2.6	3.4	3.4	3.4	3.4
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)