

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: P241608

Luminaire Tested: **FVS8M-4-LD4-50-1HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241608
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-34)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-4-LD4-50-1HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

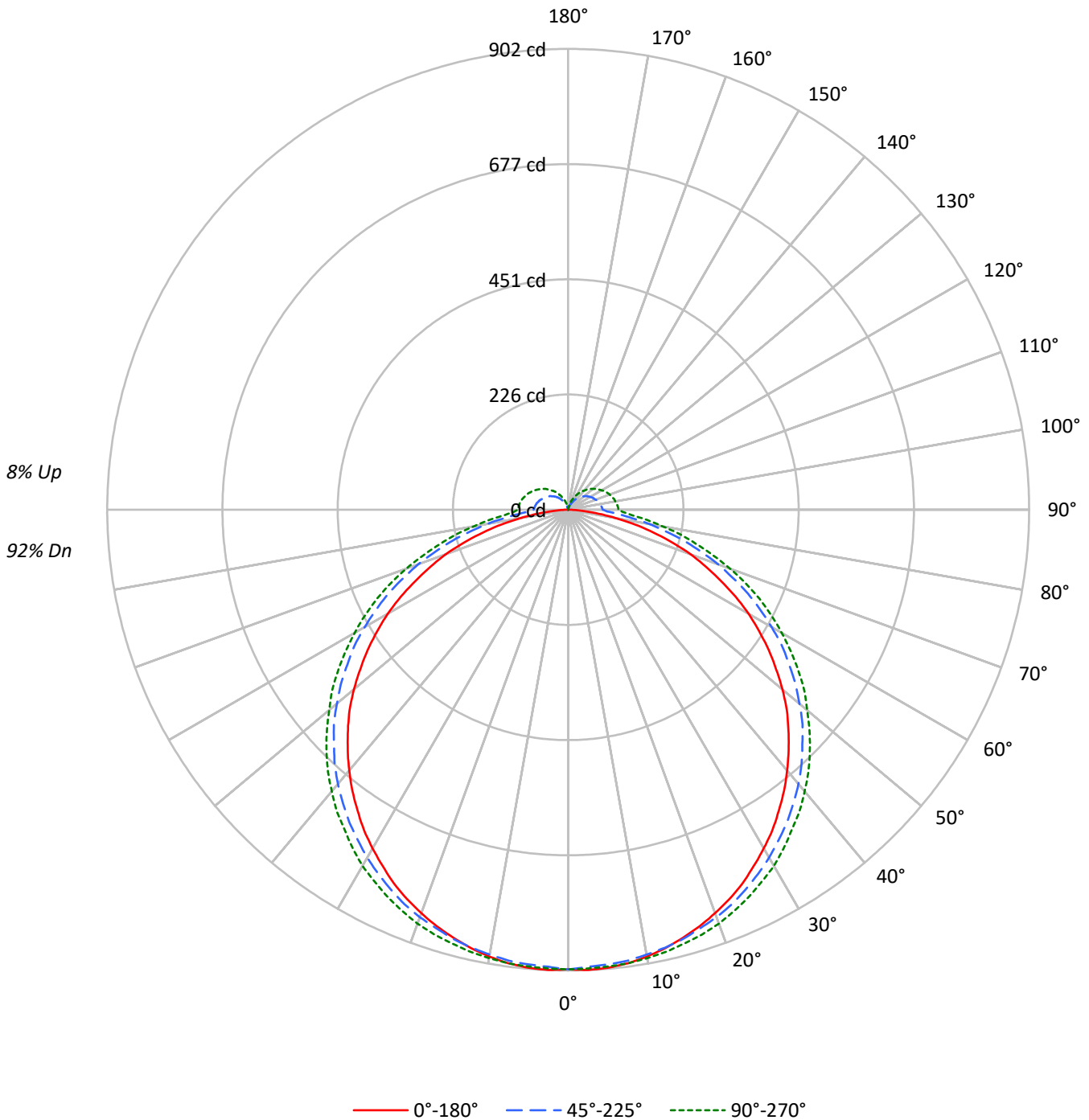
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3114.0 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.32 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 3.73' x H: 0.15')
CIE Type: Direct

Input Watts (W): 44.2
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





TEST NUMBER: P241608

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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	107	107	107	100	100	100	95	95	95	92
1	106	101	96	92	102	98	94	90	92	89	85	87	84	81	82	80	78	75
2	96	87	80	74	92	85	78	72	80	74	70	75	71	67	71	67	64	61
3	87	76	68	61	84	74	66	60	70	63	58	66	60	56	62	58	54	51
4	79	67	58	51	77	65	57	50	62	55	49	58	52	47	55	50	46	43
5	73	60	51	44	70	58	50	43	55	48	42	52	46	41	50	44	40	37
6	67	54	45	38	65	52	44	37	50	42	37	47	41	36	45	39	35	32
7	62	48	40	33	60	47	39	33	45	38	32	43	36	31	41	35	31	28
8	58	44	36	30	56	43	35	29	41	34	29	39	33	28	37	32	27	25
9	54	40	32	27	52	39	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4021	4021	4021
5°	4023	3943	3949
10°	4003	3884	3890
15°	3972	3831	3835
20°	3941	3779	3789
25°	3909	3722	3731
30°	3863	3662	3675
35°	3817	3602	3596
40°	3766	3534	3530
45°	3707	3450	3448
50°	3635	3358	3345
55°	3539	3242	3242
60°	3413	3102	3101
65°	3217	2927	2942
70°	3007	2692	2718
75°	2602	2378	2427
80°	1972	1999	2113
85°	1070	1579	1803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.3	2.7
10°-20°	246.4	7.9
20°-30°	378.9	12.2
30°-40°	466.0	15.0
40°-50°	497.3	16.0
50°-60°	466.9	15.0
60°-70°	376.4	12.1
70°-80°	239.8	7.7
80°-90°	103.9	3.3
90°-100°	63.4	2.0
100°-110°	57.2	1.8
110°-120°	47.7	1.5
120°-130°	36.8	1.2
130°-140°	25.2	0.8
140°-150°	14.6	0.5
150°-160°	6.4	0.2
160°-170°	1.7	0.1
170°-180°	0.0	0.0
0°-30°	710.6	22.8
0°-40°	1176.6	37.8
0°-60°	2140.9	68.8
0°-90°	2860.9	91.9
90°-120°	168.3	5.4
90°-150°	244.9	7.9
90°-180°	253.0	8.1
0°-180°	3114.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	900	900	900	900	900	
5°	900	898	893	898	898	86
15°	867	868	870	878	879	245
25°	807	811	821	833	836	372
35°	719	730	747	760	763	450
45°	610	627	648	664	669	470
55°	480	501	527	545	550	428
65°	330	358	388	407	413	327
75°	173	201	234	255	259	183
85°	30	61	97	119	126	39
90°	0	31	68	90	98	1
95°	0	30	66	88	97	0
105°	0	27	60	83	90	0
115°	0	24	54	74	81	0
125°	0	20	46	63	70	0
135°	1	15	36	51	56	0
145°	1	9	25	37	42	1
155°	1	4	14	23	26	0
165°	1	1	5	8	11	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°	899.7	899.7	899.7	899.7	899.7	899.7	899.7	899.7	899.7	899.7	899.7
2.5°	901.8	900.7	900.7	900.7	900.7	900.7	900.7	900.7	898.6	897.6	895.5
5°	899.7	898.6	897.6	897.6	897.6	897.6	897.6	897.6	896.6	894.5	893.4
7.5°	895.5	894.5	893.4	893.4	893.4	893.4	894.5	893.4	892.4	890.3	890.3
10°	888.2	887.2	886.2	886.2	887.2	887.2	887.2	887.2	886.2	885.1	884.1
12.5°	878.9	878.9	877.8	877.8	877.8	878.9	878.9	879.9	878.9	877.8	877.8
15°	867.4	867.4	866.4	866.4	867.4	868.5	868.5	870.6	869.5	869.5	869.5
17.5°	855.0	853.9	853.9	853.9	856.0	857.0	857.0	858.1	859.1	859.1	859.1
20°	840.4	840.4	839.4	841.4	842.5	843.5	844.6	845.6	846.6	846.6	848.7
22.5°	824.8	823.8	823.8	824.8	826.9	827.9	830.0	832.1	832.1	833.1	836.2
25°	807.1	806.1	805.0	807.1	809.2	811.3	813.3	815.4	816.5	818.5	820.6
27.5°	786.3	786.3	787.3	788.4	791.5	793.6	795.7	797.7	799.8	801.9	804.0
30°	765.5	765.5	765.5	767.6	771.7	774.9	775.9	779.0	780.1	783.2	786.3
32.5°	743.7	741.6	743.7	746.8	750.9	753.0	755.1	758.2	760.3	763.4	766.5
35°	718.7	718.7	719.7	722.9	728.1	730.1	732.2	737.4	739.5	742.6	746.8
37.5°	693.7	692.7	694.8	698.9	704.1	706.2	709.3	712.5	715.6	719.7	723.9
40°	666.7	666.7	668.8	674.0	678.1	681.3	683.3	688.5	691.7	695.8	701.0
42.5°	638.6	639.7	641.7	645.9	652.1	655.3	658.4	662.5	666.7	670.9	676.1
45°	609.5	608.5	612.6	617.8	624.1	627.2	630.3	635.5	639.7	644.9	648.0
47.5°	580.4	577.2	582.4	586.6	593.9	599.1	600.1	606.4	611.6	616.8	622.0
50°	547.1	547.1	552.3	556.4	564.8	566.8	570.0	576.2	581.4	587.7	590.8
52.5°	512.8	512.8	518.0	525.2	532.5	535.6	538.8	546.0	551.2	555.4	560.6
55°	479.5	480.5	484.7	490.9	499.2	501.3	506.5	511.7	518.0	523.2	527.3
57.5°	443.1	445.2	449.3	455.6	464.9	467.0	472.2	479.5	483.6	489.9	496.1
60°	407.7	408.8	414.0	423.3	429.6	431.6	435.8	443.1	449.3	453.5	459.7
62.5°	369.2	372.4	376.5	384.8	391.1	396.3	398.4	405.6	412.9	418.1	423.3
65°	329.7	333.9	338.0	345.3	353.6	357.8	362.0	368.2	376.5	381.7	388.0
67.5°	291.2	294.3	299.5	307.9	314.1	319.3	321.4	330.7	335.9	343.2	348.4
70°	254.8	256.9	261.1	268.3	275.6	279.8	285.0	291.2	299.5	306.8	312.0
72.5°	213.2	214.3	219.5	226.7	236.1	240.3	243.4	253.8	260.0	267.3	271.5
75°	172.7	174.7	179.9	187.2	196.6	200.7	204.9	214.3	221.5	227.8	234.0
77.5°	134.2	134.2	140.4	149.8	158.1	162.3	165.4	175.8	182.0	189.3	195.5
80°	93.6	96.7	104.0	111.3	120.7	125.9	130.0	136.3	144.6	152.9	160.2
82.5°	60.3	62.4	68.6	78.0	86.3	90.5	95.7	103.0	111.3	119.6	125.9
85°	30.2	34.3	39.5	47.8	57.2	61.4	65.5	73.8	82.2	89.4	96.7
87.5°	9.4	12.5	18.7	27.0	36.4	40.6	44.7	53.0	61.4	68.6	75.9
90°	0.0	3.1	10.4	17.7	27.0	31.2	35.4	44.7	53.0	60.3	67.6
92.5°	0.0	3.1	9.4	17.7	26.0	31.2	35.4	43.7	52.0	59.3	66.6
95°	0.0	3.1	9.4	16.6	26.0	30.2	34.3	42.6	51.0	58.2	65.5
97.5°	0.0	3.1	8.3	16.6	25.0	29.1	33.3	42.6	49.9	57.2	64.5
100°	0.0	2.1	8.3	16.6	25.0	29.1	33.3	41.6	48.9	56.2	63.4
102.5°	0.0	2.1	8.3	15.6	23.9	28.1	32.2	40.6	47.8	55.1	62.4
105°	0.0	2.1	8.3	15.6	22.9	27.0	31.2	39.5	46.8	54.1	60.3
107.5°	0.0	2.1	7.3	14.6	22.9	26.0	30.2	38.5	45.8	52.0	59.3
110°	0.0	2.1	7.3	14.6	21.8	26.0	29.1	36.4	43.7	51.0	57.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	2.1	7.3	13.5	20.8	25.0	28.1	35.4	42.6	48.9	55.1
115°	0.0	2.1	6.2	12.5	19.8	23.9	27.0	34.3	41.6	47.8	54.1
117.5°	0.0	1.0	6.2	12.5	18.7	22.9	26.0	33.3	39.5	45.8	52.0
120°	0.0	1.0	6.2	11.4	18.7	21.8	25.0	31.2	38.5	44.7	49.9
122.5°	0.0	1.0	5.2	11.4	16.6	20.8	23.9	30.2	36.4	42.6	47.8
125°	0.0	1.0	5.2	10.4	16.6	19.8	22.9	29.1	34.3	40.6	45.8
127.5°	0.0	1.0	5.2	9.4	15.6	18.7	20.8	27.0	33.3	38.5	43.7
130°	0.0	1.0	4.2	9.4	14.6	16.6	19.8	26.0	31.2	36.4	40.6
132.5°	0.0	1.0	3.1	8.3	13.5	15.6	18.7	23.9	29.1	34.3	38.5
135°	1.0	1.0	3.1	7.3	11.4	14.6	16.6	21.8	27.0	32.2	36.4
137.5°	1.0	1.0	3.1	6.2	10.4	12.5	15.6	19.8	25.0	29.1	33.3
140°	1.0	1.0	2.1	5.2	9.4	11.4	13.5	17.7	21.8	26.0	31.2
142.5°	1.0	1.0	2.1	5.2	8.3	10.4	12.5	15.6	19.8	23.9	28.1
145°	1.0	1.0	2.1	4.2	7.3	9.4	10.4	14.6	17.7	20.8	25.0
147.5°	1.0	1.0	1.0	3.1	6.2	7.3	9.4	12.5	15.6	18.7	21.8
150°	1.0	1.0	1.0	3.1	5.2	6.2	8.3	10.4	13.5	16.6	18.7
152.5°	1.0	1.0	1.0	2.1	4.2	5.2	6.2	9.4	11.4	13.5	16.6
155°	1.0	1.0	1.0	2.1	4.2	4.2	5.2	7.3	9.4	11.4	13.5
157.5°	1.0	1.0	1.0	2.1	3.1	4.2	4.2	6.2	8.3	9.4	11.4
160°	1.0	1.0	1.0	1.0	2.1	3.1	3.1	5.2	6.2	7.3	9.4
162.5°	1.0	1.0	1.0	1.0	2.1	2.1	2.1	4.2	5.2	6.2	7.3
165°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	4.2	5.2
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	3.1
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1
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°	899.7	899.7	899.7	899.7	899.7	899.7	899.7	899.7	899.7	899.7
2.5°	895.5	897.6	898.6	899.7	899.7	899.7	899.7	899.7	899.7	898.6
5°	893.4	895.5	896.6	897.6	897.6	897.6	897.6	897.6	897.6	897.6
7.5°	890.3	892.4	893.4	894.5	894.5	895.5	895.5	895.5	895.5	895.5
10°	885.1	887.2	889.3	890.3	890.3	891.4	891.4	891.4	891.4	891.4
12.5°	879.9	882.0	883.0	885.1	885.1	885.1	886.2	886.2	886.2	886.2
15°	871.6	874.7	875.8	877.8	877.8	877.8	878.9	878.9	879.9	878.9
17.5°	862.2	864.3	867.4	867.4	869.5	869.5	869.5	870.6	870.6	871.6
20°	850.8	853.9	856.0	858.1	858.1	860.2	860.2	861.2	861.2	862.2
22.5°	838.3	841.4	844.6	846.6	846.6	847.7	848.7	849.8	849.8	849.8
25°	823.8	826.9	830.0	832.1	833.1	834.2	835.2	835.2	836.2	836.2
27.5°	807.1	811.3	814.4	816.5	817.5	817.5	819.6	820.6	820.6	820.6
30°	790.5	793.6	796.7	799.8	799.8	800.9	802.9	804.0	802.9	805.0
32.5°	771.7	774.9	778.0	780.1	781.1	782.1	783.2	785.3	785.3	785.3
35°	749.9	754.1	757.2	760.3	760.3	761.3	763.4	764.5	764.5	763.4
37.5°	728.1	732.2	735.3	738.5	739.5	739.5	741.6	741.6	742.6	743.7
40°	705.2	709.3	712.5	713.5	715.6	716.6	718.7	719.7	718.7	719.7
42.5°	681.3	683.3	686.5	690.6	690.6	692.7	693.7	694.8	695.8	695.8
45°	653.2	656.3	660.5	663.6	663.6	665.7	666.7	667.7	669.8	668.8
47.5°	626.1	629.3	632.4	635.5	635.5	637.6	640.7	640.7	640.7	640.7
50°	596.0	600.1	602.2	606.4	607.4	608.5	609.5	611.6	611.6	610.5
52.5°	564.8	570.0	574.1	576.2	577.2	578.3	579.3	581.4	581.4	582.4
55°	532.5	537.7	540.8	545.0	545.0	546.0	549.2	550.2	549.2	550.2
57.5°	499.2	503.4	507.6	510.7	512.8	512.8	514.8	516.9	516.9	516.9
60°	464.9	468.0	473.2	476.4	479.5	478.4	482.6	482.6	482.6	482.6
62.5°	427.5	433.7	436.8	442.0	443.1	444.1	446.2	447.2	447.2	448.3
65°	392.1	397.3	401.5	404.6	406.7	406.7	409.8	410.8	411.9	412.9
67.5°	354.7	359.9	364.0	369.2	370.3	370.3	371.3	375.5	374.4	375.5
70°	316.2	321.4	325.5	329.7	330.7	331.8	333.9	337.0	337.0	337.0
72.5°	277.7	283.9	288.1	291.2	291.2	293.3	297.5	296.4	299.5	297.5
75°	240.3	244.4	250.7	252.7	254.8	256.9	259.0	260.0	261.1	259.0
77.5°	202.8	208.0	212.2	215.3	217.4	219.5	221.5	223.6	222.6	225.7
80°	166.4	169.5	173.7	178.9	181.0	183.1	186.2	187.2	186.2	187.2
82.5°	132.1	137.3	141.5	146.7	147.7	149.8	151.9	155.0	155.0	156.0
85°	103.0	108.2	114.4	117.5	118.6	120.7	123.8	124.8	126.9	125.9
87.5°	82.2	88.4	93.6	96.7	98.8	100.9	103.0	105.0	106.1	107.1
90°	73.8	79.0	84.2	88.4	90.5	91.5	94.6	96.7	97.8	97.8
92.5°	72.8	78.0	83.2	87.4	89.4	91.5	93.6	95.7	96.7	97.8
95°	71.8	77.0	82.2	86.3	88.4	90.5	92.6	94.6	95.7	96.7
97.5°	70.7	77.0	81.1	85.3	87.4	89.4	91.5	93.6	94.6	95.7
100°	69.7	74.9	80.1	84.2	86.3	87.4	90.5	92.6	93.6	93.6
102.5°	68.6	73.8	79.0	83.2	84.2	86.3	88.4	90.5	91.5	92.6
105°	66.6	71.8	77.0	81.1	83.2	84.2	87.4	89.4	90.5	90.5
107.5°	65.5	70.7	74.9	79.0	81.1	83.2	85.3	87.4	88.4	88.4
110°	63.4	68.6	72.8	77.0	79.0	80.1	83.2	85.3	86.3	86.3



TEST NUMBER: P241608

CATALOG NUMBER: FVS8M-4-LD4-50-1HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	61.4	66.6	70.7	74.9	77.0	78.0	81.1	82.2	83.2	84.2
115°	59.3	64.5	68.6	72.8	73.8	75.9	78.0	80.1	81.1	81.1
117.5°	57.2	62.4	66.6	69.7	71.8	72.8	75.9	77.0	78.0	79.0
120°	55.1	60.3	64.5	67.6	69.7	70.7	72.8	74.9	75.9	75.9
122.5°	53.0	57.2	61.4	64.5	66.6	67.6	69.7	71.8	72.8	72.8
125°	51.0	55.1	58.2	62.4	63.4	64.5	67.6	68.6	69.7	69.7
127.5°	47.8	52.0	56.2	59.3	60.3	62.4	63.4	65.5	66.6	66.6
130°	45.8	49.9	53.0	56.2	57.2	59.3	60.3	62.4	63.4	63.4
132.5°	42.6	46.8	49.9	53.0	54.1	55.1	57.2	59.3	59.3	60.3
135°	40.6	43.7	46.8	49.9	51.0	52.0	54.1	55.1	56.2	56.2
137.5°	37.4	40.6	43.7	46.8	47.8	48.9	51.0	52.0	53.0	53.0
140°	34.3	38.5	40.6	43.7	44.7	45.8	46.8	47.8	48.9	48.9
142.5°	32.2	35.4	37.4	39.5	40.6	41.6	43.7	44.7	44.7	45.8
145°	28.1	32.2	34.3	36.4	37.4	38.5	39.5	40.6	41.6	41.6
147.5°	25.0	28.1	31.2	33.3	34.3	34.3	36.4	36.4	37.4	37.4
150°	21.8	25.0	28.1	30.2	30.2	31.2	32.2	33.3	33.3	33.3
152.5°	18.7	20.8	23.9	26.0	27.0	27.0	28.1	29.1	30.2	30.2
155°	15.6	17.7	19.8	21.8	22.9	23.9	25.0	26.0	26.0	26.0
157.5°	13.5	14.6	16.6	18.7	19.8	20.8	20.8	21.8	21.8	21.8
160°	10.4	11.4	13.5	14.6	15.6	16.6	17.7	17.7	18.7	18.7
162.5°	8.3	9.4	10.4	11.4	12.5	12.5	13.5	14.6	14.6	14.6
165°	6.2	6.2	7.3	8.3	8.3	9.4	10.4	11.4	11.4	11.4
167.5°	4.2	4.2	5.2	5.2	6.2	6.2	6.2	7.3	7.3	7.3
170°	2.1	2.1	3.1	3.1	3.1	3.1	4.2	4.2	4.2	4.2
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)