

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: P241598

Luminaire Tested: **FVS8M-4-LD4-35-1LO-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241598
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-LD4-35-1LO-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
4FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

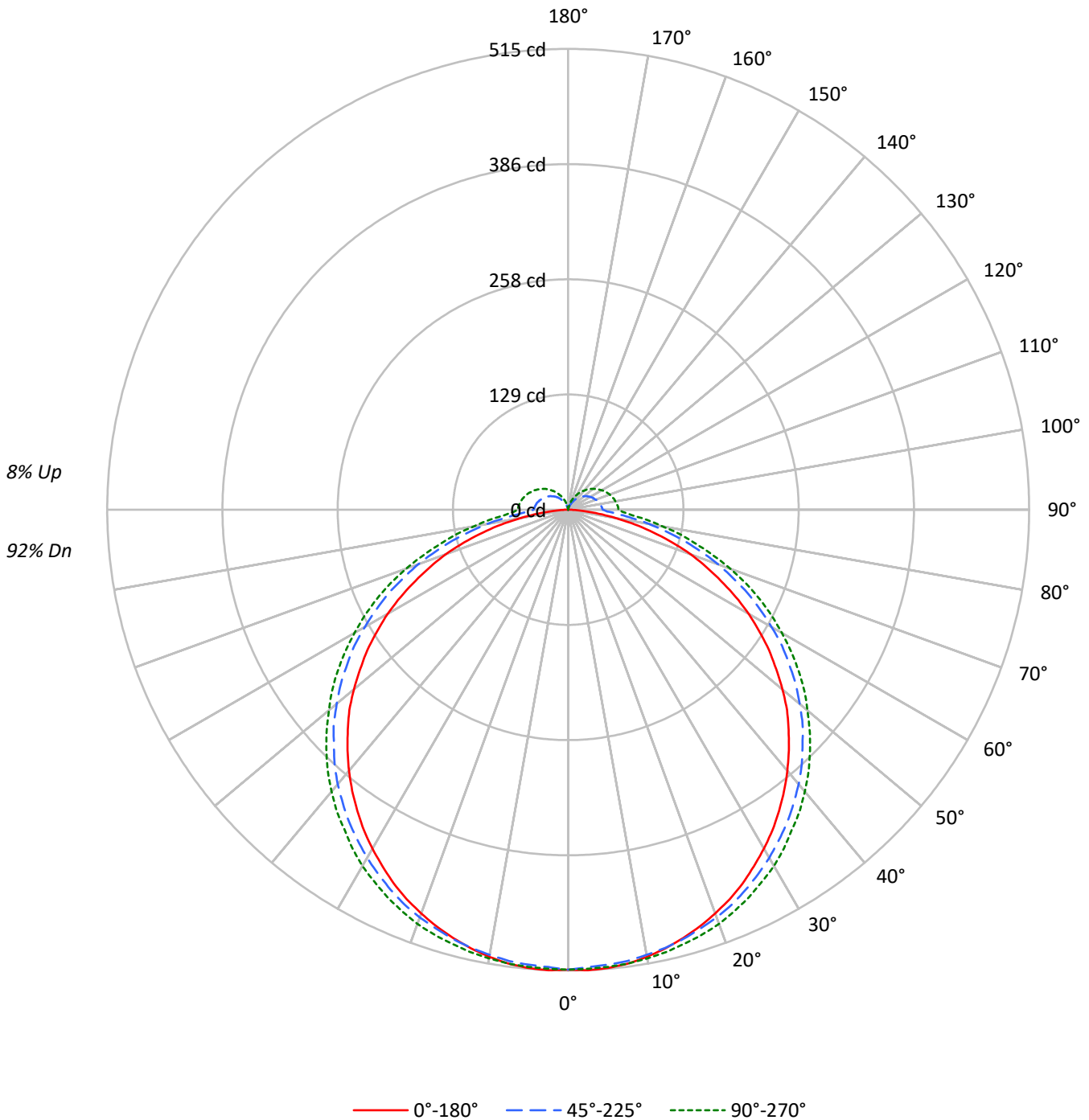
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1779.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 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): 23.6
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





TEST NUMBER: P241598

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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°	2297	2297	2297
5°	2298	2253	2256
10°	2287	2219	2222
15°	2269	2188	2191
20°	2251	2159	2165
25°	2233	2126	2131
30°	2207	2092	2100
35°	2181	2058	2055
40°	2152	2019	2017
45°	2118	1971	1970
50°	2076	1918	1911
55°	2021	1852	1852
60°	1950	1772	1772
65°	1838	1672	1681
70°	1718	1538	1552
75°	1486	1359	1387
80°	1127	1142	1208
85°	610	903	1030



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	2.7
10°-20°	140.8	7.9
20°-30°	216.4	12.2
30°-40°	266.2	15.0
40°-50°	284.1	16.0
50°-60°	266.7	15.0
60°-70°	215.0	12.1
70°-80°	137.0	7.7
80°-90°	59.4	3.3
90°-100°	36.2	2.0
100°-110°	32.7	1.8
110°-120°	27.3	1.5
120°-130°	21.0	1.2
130°-140°	14.4	0.8
140°-150°	8.3	0.5
150°-160°	3.7	0.2
160°-170°	1.0	0.1
170°-180°	0.0	0.0
0°-30°	406.0	22.8
0°-40°	672.2	37.8
0°-60°	1223.1	68.7
0°-90°	1634.4	91.9
90°-120°	96.2	5.4
90°-150°	139.9	7.9
90°-180°	145.0	8.2
0°-180°	1779.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	514	514	514	514	514	
5°	514	513	510	513	513	49
15°	496	496	497	502	502	140
25°	461	464	469	476	478	212
35°	411	417	427	434	436	257
45°	348	358	370	379	382	269
55°	274	286	301	311	314	244
65°	188	204	222	232	236	187
75°	99	115	134	146	148	105
85°	17	35	55	68	72	22
90°	0	18	39	52	56	1
95°	0	17	37	50	55	0
105°	0	15	34	48	52	0
115°	0	14	31	42	46	0
125°	0	11	26	36	40	0
135°	1	8	21	29	32	0
145°	1	5	14	21	24	0
155°	1	2	8	13	15	0
165°	1	1	3	5	6	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°	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0
2.5°	515.2	514.6	514.6	514.6	514.6	514.6	514.6	514.6	513.4	512.8	511.6
5°	514.0	513.4	512.8	512.8	512.8	512.8	512.8	512.8	512.2	511.0	510.4
7.5°	511.6	511.0	510.4	510.4	510.4	510.4	511.0	510.4	509.8	508.6	508.6
10°	507.4	506.8	506.3	506.3	506.8	506.8	506.8	506.8	506.3	505.7	505.1
12.5°	502.1	502.1	501.5	501.5	501.5	502.1	502.1	502.7	502.1	501.5	501.5
15°	495.6	495.6	495.0	495.0	495.6	496.2	496.2	497.3	496.7	496.7	496.7
17.5°	488.4	487.8	487.8	487.8	489.0	489.6	489.6	490.2	490.8	490.8	490.8
20°	480.1	480.1	479.5	480.7	481.3	481.9	482.5	483.1	483.7	483.7	484.9
22.5°	471.2	470.6	470.6	471.2	472.4	473.0	474.2	475.4	475.4	475.9	477.7
25°	461.1	460.5	459.9	461.1	462.3	463.5	464.7	465.8	466.4	467.6	468.8
27.5°	449.2	449.2	449.8	450.4	452.2	453.4	454.6	455.7	456.9	458.1	459.3
30°	437.3	437.3	437.3	438.5	440.9	442.7	443.3	445.1	445.6	447.4	449.2
32.5°	424.8	423.7	424.8	426.6	429.0	430.2	431.4	433.2	434.4	436.1	437.9
35°	410.6	410.6	411.2	413.0	415.9	417.1	418.3	421.3	422.5	424.3	426.6
37.5°	396.3	395.7	396.9	399.3	402.3	403.5	405.2	407.0	408.8	411.2	413.6
40°	380.9	380.9	382.1	385.0	387.4	389.2	390.4	393.4	395.1	397.5	400.5
42.5°	364.8	365.4	366.6	369.0	372.6	374.3	376.1	378.5	380.9	383.3	386.2
45°	348.2	347.6	350.0	353.0	356.5	358.3	360.1	363.1	365.4	368.4	370.2
47.5°	331.6	329.8	332.7	335.1	339.3	342.3	342.8	346.4	349.4	352.4	355.3
50°	312.5	312.5	315.5	317.9	322.6	323.8	325.6	329.2	332.2	335.7	337.5
52.5°	292.9	292.9	295.9	300.1	304.2	306.0	307.8	312.0	314.9	317.3	320.3
55°	273.9	274.5	276.9	280.5	285.2	286.4	289.4	292.3	295.9	298.9	301.3
57.5°	253.1	254.3	256.7	260.3	265.6	266.8	269.8	273.9	276.3	279.9	283.4
60°	232.9	233.5	236.5	241.8	245.4	246.6	249.0	253.1	256.7	259.1	262.6
62.5°	210.9	212.7	215.1	219.9	223.4	226.4	227.6	231.7	235.9	238.9	241.8
65°	188.4	190.7	193.1	197.3	202.0	204.4	206.8	210.3	215.1	218.1	221.6
67.5°	166.4	168.2	171.1	175.9	179.4	182.4	183.6	189.0	191.9	196.1	199.1
70°	145.6	146.8	149.1	153.3	157.5	159.8	162.8	166.4	171.1	175.3	178.3
72.5°	121.8	122.4	125.4	129.5	134.9	137.3	139.0	145.0	148.5	152.7	155.1
75°	98.6	99.8	102.8	107.0	112.3	114.7	117.1	122.4	126.6	130.1	133.7
77.5°	76.7	76.7	80.2	85.6	90.3	92.7	94.5	100.4	104.0	108.1	111.7
80°	53.5	55.3	59.4	63.6	68.9	71.9	74.3	77.8	82.6	87.3	91.5
82.5°	34.5	35.7	39.2	44.6	49.3	51.7	54.7	58.8	63.6	68.3	71.9
85°	17.2	19.6	22.6	27.3	32.7	35.1	37.4	42.2	46.9	51.1	55.3
87.5°	5.3	7.1	10.7	15.4	20.8	23.2	25.6	30.3	35.1	39.2	43.4
90°	0.0	1.8	5.9	10.1	15.4	17.8	20.2	25.6	30.3	34.5	38.6
92.5°	0.0	1.8	5.3	10.1	14.9	17.8	20.2	25.0	29.7	33.9	38.0
95°	0.0	1.8	5.3	9.5	14.9	17.2	19.6	24.4	29.1	33.3	37.4
97.5°	0.0	1.8	4.8	9.5	14.3	16.6	19.0	24.4	28.5	32.7	36.8
100°	0.0	1.2	4.8	9.5	14.3	16.6	19.0	23.8	27.9	32.1	36.2
102.5°	0.0	1.2	4.8	8.9	13.7	16.0	18.4	23.2	27.3	31.5	35.7
105°	0.0	1.2	4.8	8.9	13.1	15.4	17.8	22.6	26.7	30.9	34.5
107.5°	0.0	1.2	4.2	8.3	13.1	14.9	17.2	22.0	26.1	29.7	33.9
110°	0.0	1.2	4.2	8.3	12.5	14.9	16.6	20.8	25.0	29.1	32.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	1.2	4.2	7.7	11.9	14.3	16.0	20.2	24.4	27.9	31.5
115°	0.0	1.2	3.6	7.1	11.3	13.7	15.4	19.6	23.8	27.3	30.9
117.5°	0.0	0.6	3.6	7.1	10.7	13.1	14.9	19.0	22.6	26.1	29.7
120°	0.0	0.6	3.6	6.5	10.7	12.5	14.3	17.8	22.0	25.6	28.5
122.5°	0.0	0.6	3.0	6.5	9.5	11.9	13.7	17.2	20.8	24.4	27.3
125°	0.0	0.6	3.0	5.9	9.5	11.3	13.1	16.6	19.6	23.2	26.1
127.5°	0.0	0.6	3.0	5.3	8.9	10.7	11.9	15.4	19.0	22.0	25.0
130°	0.0	0.6	2.4	5.3	8.3	9.5	11.3	14.9	17.8	20.8	23.2
132.5°	0.0	0.6	1.8	4.8	7.7	8.9	10.7	13.7	16.6	19.6	22.0
135°	0.6	0.6	1.8	4.2	6.5	8.3	9.5	12.5	15.4	18.4	20.8
137.5°	0.6	0.6	1.8	3.6	5.9	7.1	8.9	11.3	14.3	16.6	19.0
140°	0.6	0.6	1.2	3.0	5.3	6.5	7.7	10.1	12.5	14.9	17.8
142.5°	0.6	0.6	1.2	3.0	4.8	5.9	7.1	8.9	11.3	13.7	16.0
145°	0.6	0.6	1.2	2.4	4.2	5.3	5.9	8.3	10.1	11.9	14.3
147.5°	0.6	0.6	0.6	1.8	3.6	4.2	5.3	7.1	8.9	10.7	12.5
150°	0.6	0.6	0.6	1.8	3.0	3.6	4.8	5.9	7.7	9.5	10.7
152.5°	0.6	0.6	0.6	1.2	2.4	3.0	3.6	5.3	6.5	7.7	9.5
155°	0.6	0.6	0.6	1.2	2.4	2.4	3.0	4.2	5.3	6.5	7.7
157.5°	0.6	0.6	0.6	1.2	1.8	2.4	2.4	3.6	4.8	5.3	6.5
160°	0.6	0.6	0.6	0.6	1.2	1.8	1.8	3.0	3.6	4.2	5.3
162.5°	0.6	0.6	0.6	0.6	1.2	1.2	1.2	2.4	3.0	3.6	4.2
165°	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.8	2.4	3.0
167.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.8	1.8
170°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.2
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°	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0	514.0
2.5°	511.6	512.8	513.4	514.0	514.0	514.0	514.0	514.0	514.0	513.4
5°	510.4	511.6	512.2	512.8	512.8	512.8	512.8	512.8	512.8	512.8
7.5°	508.6	509.8	510.4	511.0	511.0	511.6	511.6	511.6	511.6	511.6
10°	505.7	506.8	508.0	508.6	508.6	509.2	509.2	509.2	509.2	509.2
12.5°	502.7	503.9	504.5	505.7	505.7	505.7	506.3	506.3	506.3	506.3
15°	497.9	499.7	500.3	501.5	501.5	501.5	502.1	502.1	502.7	502.1
17.5°	492.6	493.8	495.6	495.6	496.7	496.7	496.7	497.3	497.3	497.9
20°	486.1	487.8	489.0	490.2	490.2	491.4	491.4	492.0	492.0	492.6
22.5°	478.9	480.7	482.5	483.7	483.7	484.3	484.9	485.5	485.5	485.5
25°	470.6	472.4	474.2	475.4	475.9	476.5	477.1	477.1	477.7	477.7
27.5°	461.1	463.5	465.3	466.4	467.0	467.0	468.2	468.8	468.8	468.8
30°	451.6	453.4	455.2	456.9	456.9	457.5	458.7	459.3	458.7	459.9
32.5°	440.9	442.7	444.5	445.6	446.2	446.8	447.4	448.6	448.6	448.6
35°	428.4	430.8	432.6	434.4	434.4	434.9	436.1	436.7	436.7	436.1
37.5°	415.9	418.3	420.1	421.9	422.5	422.5	423.7	423.7	424.3	424.8
40°	402.9	405.2	407.0	407.6	408.8	409.4	410.6	411.2	410.6	411.2
42.5°	389.2	390.4	392.2	394.5	394.5	395.7	396.3	396.9	397.5	397.5
45°	373.2	374.9	377.3	379.1	379.1	380.3	380.9	381.5	382.7	382.1
47.5°	357.7	359.5	361.3	363.1	363.1	364.2	366.0	366.0	366.0	366.0
50°	340.5	342.8	344.0	346.4	347.0	347.6	348.2	349.4	349.4	348.8
52.5°	322.6	325.6	328.0	329.2	329.8	330.4	331.0	332.2	332.2	332.7
55°	304.2	307.2	309.0	311.4	311.4	312.0	313.7	314.3	313.7	314.3
57.5°	285.2	287.6	290.0	291.7	292.9	292.9	294.1	295.3	295.3	295.3
60°	265.6	267.4	270.4	272.1	273.9	273.3	275.7	275.7	275.7	275.7
62.5°	244.2	247.8	249.6	252.5	253.1	253.7	254.9	255.5	255.5	256.1
65°	224.0	227.0	229.4	231.1	232.3	232.3	234.1	234.7	235.3	235.9
67.5°	202.6	205.6	208.0	210.9	211.5	211.5	212.1	214.5	213.9	214.5
70°	180.6	183.6	186.0	188.4	189.0	189.5	190.7	192.5	192.5	192.5
72.5°	158.6	162.2	164.6	166.4	166.4	167.6	169.9	169.3	171.1	169.9
75°	137.3	139.6	143.2	144.4	145.6	146.8	148.0	148.5	149.1	148.0
77.5°	115.9	118.8	121.2	123.0	124.2	125.4	126.6	127.8	127.2	128.9
80°	95.1	96.9	99.2	102.2	103.4	104.6	106.4	107.0	106.4	107.0
82.5°	75.5	78.4	80.8	83.8	84.4	85.6	86.8	88.5	88.5	89.1
85°	58.8	61.8	65.4	67.1	67.7	68.9	70.7	71.3	72.5	71.9
87.5°	46.9	50.5	53.5	55.3	56.4	57.6	58.8	60.0	60.6	61.2
90°	42.2	45.2	48.1	50.5	51.7	52.3	54.1	55.3	55.9	55.9
92.5°	41.6	44.6	47.5	49.9	51.1	52.3	53.5	54.7	55.3	55.9
95°	41.0	44.0	46.9	49.3	50.5	51.7	52.9	54.1	54.7	55.3
97.5°	40.4	44.0	46.3	48.7	49.9	51.1	52.3	53.5	54.1	54.7
100°	39.8	42.8	45.8	48.1	49.3	49.9	51.7	52.9	53.5	53.5
102.5°	39.2	42.2	45.2	47.5	48.1	49.3	50.5	51.7	52.3	52.9
105°	38.0	41.0	44.0	46.3	47.5	48.1	49.9	51.1	51.7	51.7
107.5°	37.4	40.4	42.8	45.2	46.3	47.5	48.7	49.9	50.5	50.5
110°	36.2	39.2	41.6	44.0	45.2	45.8	47.5	48.7	49.3	49.3



TEST NUMBER: P241598

CATALOG NUMBER: FVS8M-4-LD4-35-1LO-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	35.1	38.0	40.4	42.8	44.0	44.6	46.3	46.9	47.5	48.1
115°	33.9	36.8	39.2	41.6	42.2	43.4	44.6	45.8	46.3	46.3
117.5°	32.7	35.7	38.0	39.8	41.0	41.6	43.4	44.0	44.6	45.2
120°	31.5	34.5	36.8	38.6	39.8	40.4	41.6	42.8	43.4	43.4
122.5°	30.3	32.7	35.1	36.8	38.0	38.6	39.8	41.0	41.6	41.6
125°	29.1	31.5	33.3	35.7	36.2	36.8	38.6	39.2	39.8	39.8
127.5°	27.3	29.7	32.1	33.9	34.5	35.7	36.2	37.4	38.0	38.0
130°	26.1	28.5	30.3	32.1	32.7	33.9	34.5	35.7	36.2	36.2
132.5°	24.4	26.7	28.5	30.3	30.9	31.5	32.7	33.9	33.9	34.5
135°	23.2	25.0	26.7	28.5	29.1	29.7	30.9	31.5	32.1	32.1
137.5°	21.4	23.2	25.0	26.7	27.3	27.9	29.1	29.7	30.3	30.3
140°	19.6	22.0	23.2	25.0	25.6	26.1	26.7	27.3	27.9	27.9
142.5°	18.4	20.2	21.4	22.6	23.2	23.8	25.0	25.6	25.6	26.1
145°	16.0	18.4	19.6	20.8	21.4	22.0	22.6	23.2	23.8	23.8
147.5°	14.3	16.0	17.8	19.0	19.6	19.6	20.8	20.8	21.4	21.4
150°	12.5	14.3	16.0	17.2	17.2	17.8	18.4	19.0	19.0	19.0
152.5°	10.7	11.9	13.7	14.9	15.4	15.4	16.0	16.6	17.2	17.2
155°	8.9	10.1	11.3	12.5	13.1	13.7	14.3	14.9	14.9	14.9
157.5°	7.7	8.3	9.5	10.7	11.3	11.9	11.9	12.5	12.5	12.5
160°	5.9	6.5	7.7	8.3	8.9	9.5	10.1	10.1	10.7	10.7
162.5°	4.8	5.3	5.9	6.5	7.1	7.1	7.7	8.3	8.3	8.3
165°	3.6	3.6	4.2	4.8	4.8	5.3	5.9	6.5	6.5	6.5
167.5°	2.4	2.4	3.0	3.0	3.6	3.6	3.6	4.2	4.2	4.2
170°	1.2	1.2	1.8	1.8	1.8	1.8	2.4	2.4	2.4	2.4
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)