

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: P241561

Luminaire Tested: **FVS8M-3-LD4-30-1LO-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241561
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-30-1LO-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH OPAL LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

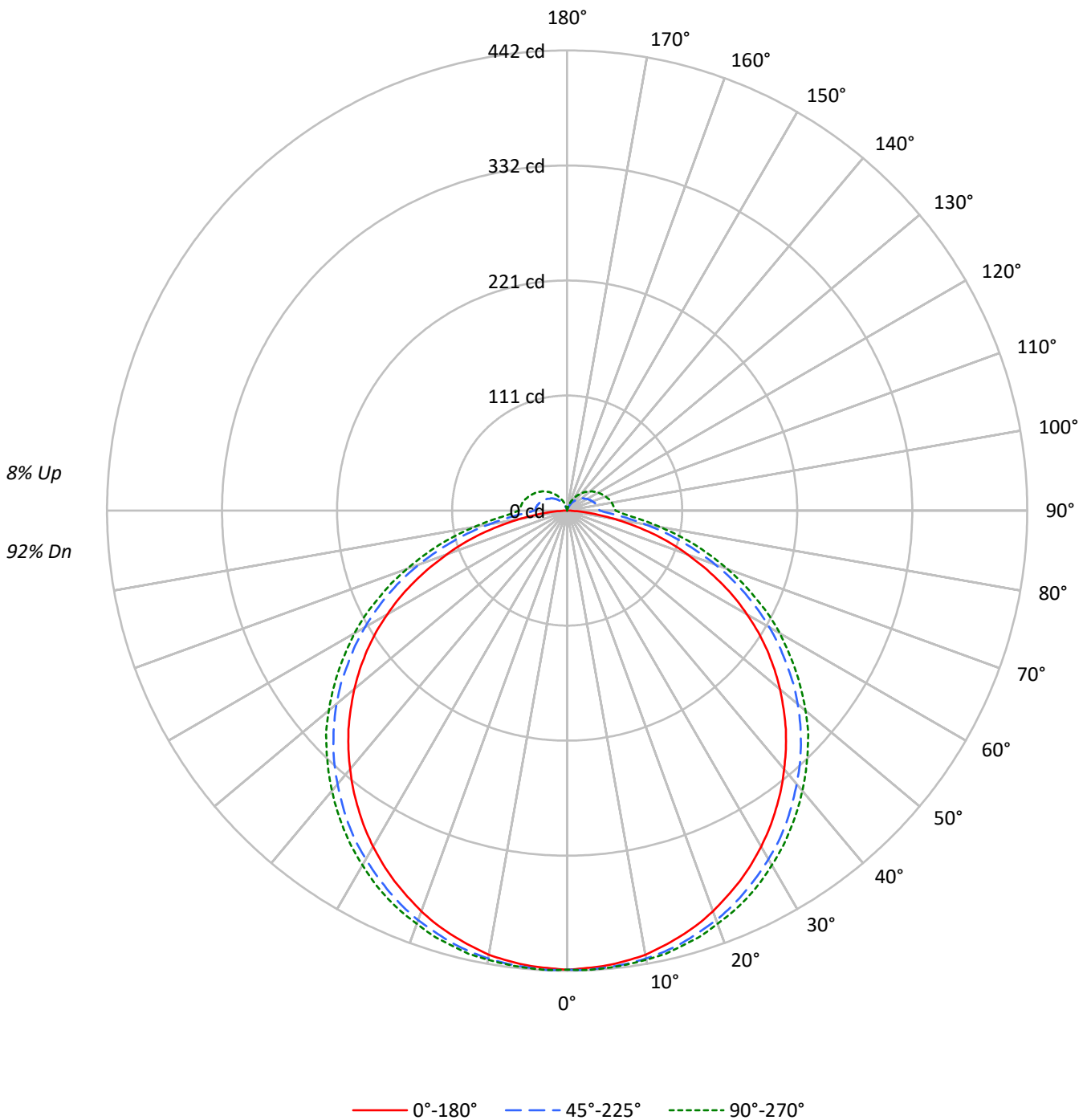
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1511.0 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.43
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 21.2
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: P241561

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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	92
1	106	101	96	92	103	98	94	90	92	89	86		87	84	82		82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70		76	71	67		71	68	65	62
3	87	76	68	61	84	74	66	60	70	63	58		66	61	56		63	58	54	52
4	80	67	58	51	77	65	57	51	62	55	49		59	53	48		56	50	46	44
5	73	60	51	44	70	58	50	43	55	48	42		53	46	41		50	44	40	38
6	67	54	45	38	65	52	44	38	50	42	37		47	41	36		45	39	35	33
7	62	49	40	33	60	47	39	33	45	38	32		43	37	32		41	35	31	29
8	58	44	36	30	56	43	35	29	41	34	29		39	33	28		38	32	28	25
9	54	41	32	27	52	40	32	26	38	31	26		36	30	25		35	29	25	23
10	51	37	29	24	49	37	29	24	35	28	23		34	27	23		32	27	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2575	2575	2575
5°	2560	2538	2535
10°	2546	2504	2498
15°	2522	2468	2463
20°	2499	2429	2425
25°	2471	2386	2391
30°	2441	2342	2346
35°	2407	2298	2302
40°	2370	2246	2253
45°	2334	2193	2201
50°	2285	2130	2140
55°	2227	2045	2063
60°	2143	1958	1981
65°	2019	1837	1865
70°	1839	1680	1722
75°	1594	1474	1556
80°	1199	1214	1339
85°	639	964	1132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.9	2.8
10°-20°	121.0	8.0
20°-30°	185.7	12.3
30°-40°	228.1	15.1
40°-50°	243.1	16.1
50°-60°	227.8	15.1
60°-70°	183.2	12.1
70°-80°	116.3	7.7
80°-90°	50.1	3.3
90°-100°	29.3	1.9
100°-110°	26.0	1.7
110°-120°	21.5	1.4
120°-130°	16.3	1.1
130°-140°	11.0	0.7
140°-150°	6.3	0.4
150°-160°	2.7	0.2
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	348.6	23.1
0°-40°	576.7	38.2
0°-60°	1047.6	69.3
0°-90°	1397.2	92.5
90°-120°	76.9	5.1
90°-150°	110.5	7.3
90°-180°	114.0	7.5
0°-180°	1511.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	441	441	441	441	441	
5°	439	439	440	441	441	42
15°	423	425	430	431	432	119
25°	393	397	404	409	410	181
35°	350	358	367	373	374	219
45°	297	307	318	324	327	229
55°	235	245	257	266	268	210
65°	162	174	189	198	200	160
75°	84	98	113	123	127	89
85°	15	30	47	58	60	19
90°	1	15	32	43	47	1
95°	0	14	30	41	45	0
105°	0	12	28	38	42	0
115°	0	10	24	34	37	0
125°	0	8	20	28	32	0
135°	0	6	16	22	25	0
145°	1	4	11	16	18	0
155°	1	1	5	10	11	0
165°	1	1	2	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P241561

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	441.0	441.0	441.0	441.0	441.0	441.0	441.0	441.0	441.0	441.0	441.0
2.5°	439.8	439.8	439.2	439.8	439.8	440.4	440.4	441.0	441.7	442.3	441.7
5°	438.6	438.0	438.0	438.6	438.6	438.6	439.2	439.8	440.4	440.4	440.4
7.5°	436.2	435.6	435.6	436.2	436.2	436.8	436.8	438.0	438.6	438.6	439.2
10°	433.2	432.6	432.6	432.6	433.2	433.8	433.8	435.0	436.2	436.8	436.8
12.5°	428.3	428.3	427.7	428.9	428.9	429.6	430.8	432.0	432.6	433.2	433.8
15°	422.9	422.9	422.9	423.5	424.1	424.7	425.9	427.1	428.3	428.9	429.6
17.5°	416.8	416.8	416.8	417.5	418.7	419.3	420.5	421.7	422.9	423.5	424.1
20°	409.6	409.0	409.6	410.8	412.0	412.6	413.2	415.6	416.8	418.1	418.7
22.5°	401.1	401.1	401.7	402.9	404.7	405.4	406.0	407.8	409.6	410.8	412.0
25°	392.6	392.6	393.3	394.5	396.3	396.9	398.1	400.5	401.7	402.9	404.1
27.5°	383.0	383.0	383.6	385.4	387.8	388.4	389.0	391.4	393.3	394.5	395.7
30°	372.7	372.7	373.9	375.7	377.5	378.7	379.9	382.4	384.2	385.4	386.6
32.5°	361.8	361.8	363.0	364.8	367.2	368.4	369.7	372.1	373.9	375.7	377.5
35°	349.7	350.3	352.1	353.3	355.7	357.6	358.8	361.2	363.0	364.8	366.6
37.5°	337.6	337.6	338.8	341.2	344.2	344.9	347.3	349.7	351.5	353.9	355.1
40°	324.3	324.9	326.1	329.1	332.1	332.8	334.6	337.6	339.4	341.8	343.0
42.5°	311.0	311.6	313.4	316.4	318.2	320.0	321.9	324.3	326.1	329.1	330.9
45°	297.1	296.5	299.5	302.5	304.3	306.7	307.9	311.0	314.0	315.8	317.6
47.5°	281.9	283.1	285.6	287.4	290.4	292.2	293.4	296.5	298.9	301.3	303.7
50°	266.8	267.4	270.4	272.9	275.3	276.5	278.9	281.9	284.4	286.2	289.2
52.5°	251.1	252.3	254.1	255.9	259.5	261.4	263.2	265.6	269.2	271.6	274.1
55°	234.7	235.3	237.2	240.2	243.8	245.0	246.2	249.9	252.9	254.7	257.1
57.5°	217.8	218.4	220.8	223.2	225.7	228.7	229.9	232.3	236.0	239.0	241.4
60°	199.7	200.3	202.7	205.1	208.1	210.5	212.4	216.0	218.4	221.4	224.5
62.5°	181.5	181.5	184.5	186.3	190.6	193.0	193.6	197.2	200.9	203.3	206.9
65°	162.1	163.4	165.2	168.8	172.4	173.6	175.5	179.1	182.1	185.7	188.8
67.5°	142.2	143.4	146.4	148.8	153.1	155.5	156.7	159.7	164.6	167.6	170.6
70°	122.8	125.8	127.1	130.1	133.7	136.1	137.9	141.6	144.6	148.2	151.3
72.5°	104.7	105.3	107.1	111.3	115.0	116.8	119.2	121.6	125.8	129.5	131.9
75°	84.1	85.3	87.7	92.0	95.6	98.0	99.2	103.5	106.5	109.5	113.1
77.5°	64.1	65.9	69.6	72.6	76.8	78.7	81.1	84.7	88.3	91.4	94.4
80°	46.0	47.8	50.8	54.5	58.7	60.5	62.9	67.2	70.2	73.8	76.2
82.5°	29.6	30.9	34.5	38.1	41.7	44.2	46.0	50.2	53.8	56.9	59.9
85°	15.1	16.9	20.0	23.6	27.2	29.6	31.5	35.7	39.9	43.6	46.6
87.5°	5.4	6.7	9.7	13.9	17.5	19.4	21.8	25.4	29.6	33.3	36.3
90°	0.6	1.8	4.8	8.5	12.7	15.1	16.9	21.2	24.8	28.4	31.5
92.5°	0.0	1.2	4.2	7.9	12.1	13.9	16.3	20.0	23.6	27.2	30.3
95°	0.0	1.2	4.2	7.9	11.5	13.9	15.7	19.4	23.6	26.6	30.3
97.5°	0.0	1.2	3.6	7.3	11.5	13.3	15.1	19.4	23.0	26.6	29.6
100°	0.0	1.2	3.6	7.3	10.9	12.7	15.1	18.8	22.4	26.0	29.0
102.5°	0.0	1.2	3.6	6.7	10.9	12.7	14.5	18.2	21.8	25.4	28.4
105°	0.0	1.2	3.6	6.7	10.3	12.1	13.9	17.5	21.2	24.2	27.8
107.5°	0.0	0.6	3.0	6.1	9.7	11.5	13.3	16.9	20.6	23.6	26.6
110°	0.0	0.6	3.0	6.1	9.7	11.5	12.7	16.3	20.0	23.0	26.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.6	3.0	5.4	9.1	10.9	12.7	15.7	19.4	22.4	24.8
115°	0.0	0.6	2.4	5.4	8.5	10.3	12.1	15.1	18.2	21.2	24.2
117.5°	0.0	0.6	2.4	4.8	7.9	9.7	11.5	14.5	17.5	20.6	23.0
120°	0.0	0.6	2.4	4.8	7.9	9.1	10.9	13.9	16.9	19.4	22.4
122.5°	0.0	0.6	1.8	4.2	7.3	8.5	10.3	13.3	15.7	18.8	21.2
125°	0.0	0.6	1.8	4.2	6.7	7.9	9.7	12.1	15.1	17.5	20.0
127.5°	0.0	0.6	1.8	3.6	6.1	7.9	9.1	11.5	14.5	16.9	19.4
130°	0.0	0.0	1.2	3.6	6.1	7.3	8.5	10.9	13.3	15.7	18.2
132.5°	0.0	0.0	1.2	3.0	5.4	6.7	7.9	10.3	12.7	14.5	16.9
135°	0.0	0.6	1.2	2.4	4.8	6.1	7.3	9.1	11.5	13.9	15.7
137.5°	0.0	0.6	0.6	2.4	4.2	5.4	6.7	8.5	10.9	12.7	14.5
140°	0.6	0.6	0.6	1.8	3.6	4.8	5.4	7.9	9.7	11.5	13.3
142.5°	0.6	0.6	0.6	1.8	3.0	4.2	4.8	6.7	8.5	10.3	12.1
145°	0.6	0.6	0.6	1.2	2.4	3.6	4.2	6.1	7.9	9.1	10.9
147.5°	0.6	0.6	0.6	1.2	2.4	3.0	3.6	4.8	6.7	7.9	9.7
150°	0.6	0.6	0.6	0.6	1.8	2.4	3.0	4.2	5.4	6.7	8.5
152.5°	0.6	0.6	0.6	0.6	1.2	1.8	2.4	3.6	4.8	6.1	6.7
155°	0.6	0.6	0.6	0.6	1.2	1.2	1.8	3.0	3.6	4.8	5.4
157.5°	0.6	0.6	0.6	0.6	0.6	1.2	1.2	2.4	3.0	3.6	4.2
160°	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.2	2.4	3.0	3.6
162.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.8	2.4
165°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.8
167.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2
170°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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°	441.0	441.0	441.0	441.0	441.0	441.0	441.0	441.0	441.0	441.0
2.5°	441.7	441.7	442.3	442.3	441.7	442.3	442.3	441.7	441.7	441.7
5°	440.4	440.4	441.0	441.0	441.0	441.0	441.0	441.0	440.4	441.0
7.5°	439.2	439.2	439.2	439.8	439.8	439.8	439.8	439.8	439.8	439.8
10°	436.8	437.4	437.4	438.0	438.0	438.0	438.6	438.0	438.0	438.0
12.5°	433.8	434.4	435.0	435.6	435.0	435.6	435.6	435.6	435.6	436.2
15°	430.2	430.8	430.8	431.4	431.4	432.0	432.0	432.0	432.0	432.0
17.5°	425.3	425.9	426.5	427.1	427.7	427.1	427.7	427.7	428.3	428.3
20°	419.3	420.5	421.1	421.7	422.3	421.7	422.3	422.3	422.9	422.3
22.5°	412.6	413.8	414.4	415.6	415.6	416.2	416.2	416.8	416.2	416.8
25°	405.4	406.6	407.2	408.4	409.0	409.0	409.6	409.6	409.6	410.2
27.5°	396.9	398.1	398.7	399.9	399.9	400.5	401.1	401.1	401.7	402.3
30°	388.4	389.0	390.8	391.4	392.0	392.0	392.6	393.3	393.3	393.3
32.5°	378.7	379.3	381.2	381.8	382.4	383.0	383.6	383.6	383.6	384.2
35°	367.8	369.7	370.3	372.1	372.7	373.3	373.3	373.9	373.3	373.9
37.5°	357.0	358.8	359.4	360.6	361.2	361.8	362.4	362.4	363.0	363.0
40°	344.9	346.7	347.9	349.1	349.7	350.3	350.3	350.9	352.1	351.5
42.5°	332.8	333.4	335.8	337.0	337.0	338.2	338.8	338.8	339.4	339.4
45°	319.4	321.3	322.5	323.7	324.3	324.9	325.5	326.1	326.1	326.7
47.5°	305.5	307.9	309.2	311.0	311.0	311.6	312.8	312.8	312.8	314.0
50°	291.0	292.8	295.2	295.8	296.5	297.1	297.7	298.3	298.9	298.9
52.5°	275.9	278.3	279.5	281.3	281.9	281.9	283.1	283.7	283.7	283.7
55°	260.2	262.6	263.8	265.0	266.2	266.8	266.8	268.0	268.6	268.0
57.5°	243.2	245.0	246.8	249.3	249.9	250.5	250.5	251.1	252.9	251.7
60°	225.7	228.1	229.9	232.3	232.9	232.9	233.5	234.7	235.3	236.0
62.5°	208.7	211.8	213.0	214.8	214.8	216.6	217.2	217.8	218.4	219.0
65°	190.6	193.0	194.8	196.6	197.8	197.8	199.7	200.9	200.9	200.3
67.5°	172.4	174.8	177.3	178.5	179.7	179.7	180.9	182.1	182.1	182.7
70°	154.3	156.1	158.5	160.3	161.5	161.5	162.7	164.0	164.0	163.4
72.5°	134.9	136.7	139.8	141.0	142.2	142.8	144.0	144.6	145.2	145.2
75°	116.2	118.6	120.4	122.2	122.8	124.0	125.2	125.8	126.4	127.1
77.5°	96.8	100.4	102.2	104.7	104.7	105.9	108.3	107.7	108.3	108.3
80°	79.3	82.3	84.1	86.5	87.1	87.7	88.9	90.1	90.8	90.8
82.5°	63.5	65.9	68.4	69.6	71.4	71.4	72.6	73.8	74.4	75.0
85°	49.6	52.0	54.5	56.9	57.5	58.1	59.9	60.5	60.5	60.5
87.5°	39.9	42.4	44.8	46.6	47.8	48.4	49.6	50.2	51.4	51.4
90°	34.5	37.5	39.9	41.7	43.0	43.6	44.8	46.0	46.0	46.6
92.5°	33.9	36.3	38.7	40.5	41.1	42.4	43.6	44.2	44.8	45.4
95°	33.3	35.7	38.1	39.9	41.1	41.7	43.0	44.2	44.2	44.8
97.5°	32.7	35.1	37.5	39.3	40.5	41.1	42.4	43.6	44.2	44.2
100°	32.1	34.5	36.9	38.7	39.9	40.5	41.7	42.4	43.0	43.6
102.5°	31.5	33.9	36.3	38.1	38.7	39.3	41.1	41.7	42.4	42.4
105°	30.3	32.7	35.1	36.9	38.1	38.7	39.9	41.1	41.1	41.7
107.5°	29.6	32.1	34.5	36.3	36.9	37.5	38.7	39.9	40.5	40.5
110°	28.4	30.9	33.3	35.1	36.3	36.9	38.1	38.7	39.3	39.3



TEST NUMBER: P241561

CATALOG NUMBER: FVS8M-3-LD4-30-1LO-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	27.8	30.3	32.1	33.9	35.1	35.7	36.9	37.5	38.1	38.1
115°	26.6	29.0	30.9	32.7	33.9	34.5	35.7	36.3	36.9	36.9
117.5°	25.4	27.8	30.3	31.5	32.7	33.3	34.5	35.1	35.7	35.7
120°	24.8	26.6	29.0	30.3	31.5	32.1	32.7	33.9	34.5	34.5
122.5°	23.6	26.0	27.8	29.0	29.6	30.3	31.5	32.1	32.7	33.3
125°	22.4	24.8	26.0	27.8	28.4	29.0	30.3	30.9	31.5	31.5
127.5°	21.2	23.0	24.8	26.6	27.2	27.8	29.0	29.6	29.6	30.3
130°	20.0	21.8	23.6	24.8	25.4	26.0	27.2	27.8	28.4	28.4
132.5°	18.8	20.6	22.4	23.6	24.2	24.8	25.4	26.0	26.6	26.6
135°	17.5	19.4	20.6	21.8	22.4	23.0	24.2	24.8	24.8	25.4
137.5°	16.3	18.2	19.4	20.6	21.2	21.8	22.4	23.0	23.6	23.6
140°	15.1	16.3	18.2	18.8	19.4	20.0	20.6	21.2	21.8	21.8
142.5°	13.9	15.1	16.3	17.5	18.2	18.2	18.8	19.4	20.0	20.0
145°	12.7	13.9	15.1	15.7	16.3	16.9	17.5	18.2	18.2	18.2
147.5°	10.9	12.1	13.3	14.5	14.5	15.1	15.7	16.3	16.3	16.3
150°	9.7	10.9	12.1	12.7	13.3	13.3	13.9	14.5	14.5	14.5
152.5°	7.9	9.1	10.3	10.9	11.5	11.5	12.1	12.7	12.7	12.7
155°	6.7	7.9	8.5	9.7	9.7	10.3	10.3	10.9	10.9	10.9
157.5°	5.4	6.1	7.3	7.9	8.5	8.5	8.5	9.1	9.1	9.1
160°	4.2	4.8	5.4	6.1	6.7	6.7	7.3	7.3	7.3	7.3
162.5°	3.0	3.6	4.2	4.2	4.8	4.8	5.4	5.4	5.4	5.4
165°	1.8	2.4	2.4	3.0	3.0	3.6	3.6	3.6	4.2	4.2
167.5°	1.2	1.2	1.8	1.8	1.8	1.8	2.4	2.4	2.4	2.4
170°	0.6	0.6	0.6	0.6	0.6	1.2	1.2	1.2	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
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)