

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: P231975

Luminaire Tested: **FVS4M-4-LD4-50-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231975  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-15)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-4-LD4-50-1STD-PA187-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 1-MODULE LED WITH PA187 LENS  
Light Source: (84) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

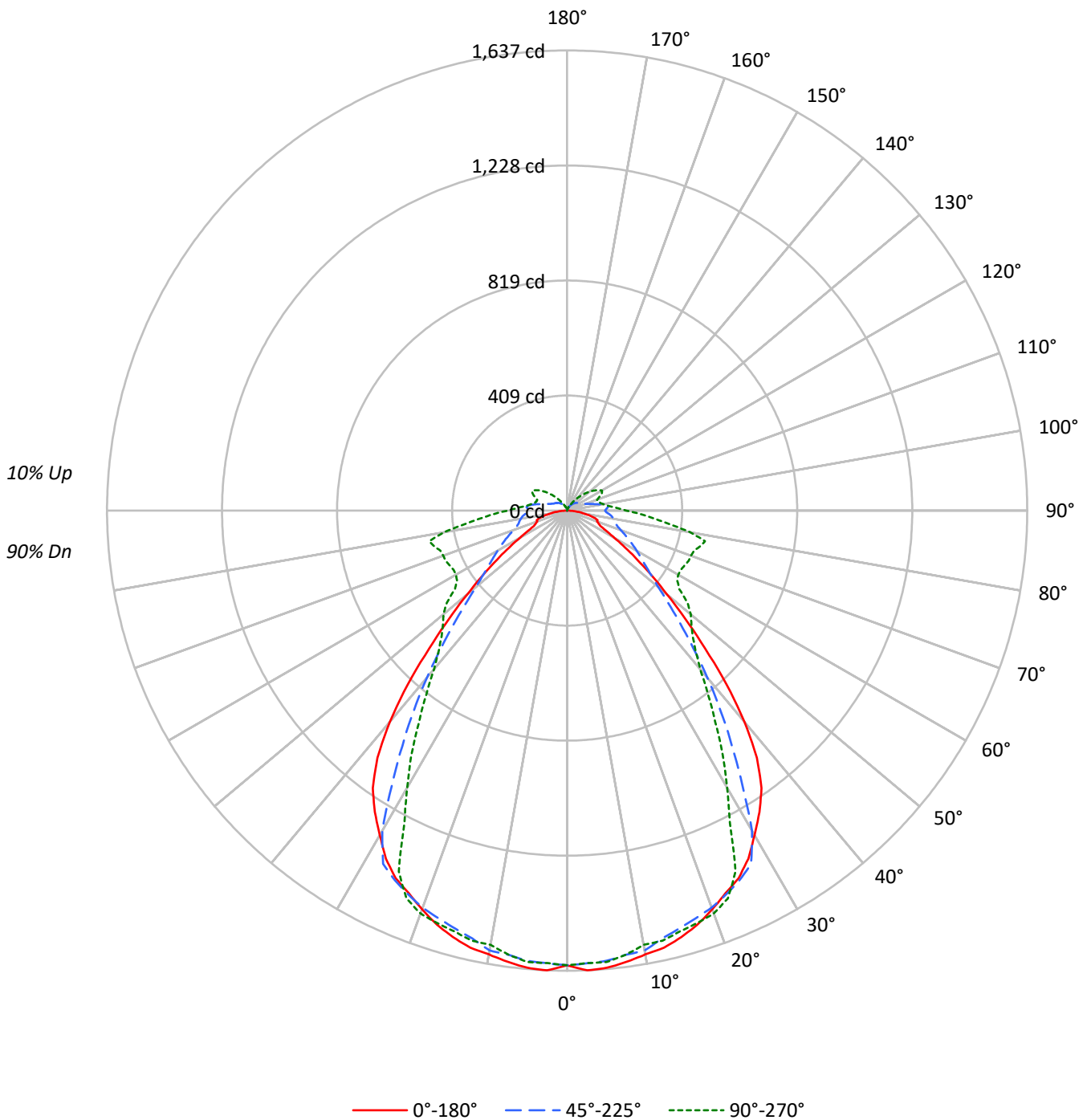
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3818.0 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.09 / 1.12  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Direct  
  
Input Watts (W): 33.6  
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

TEST NUMBER: P231975

CATALOG NUMBER: FVS4M-4-LD4-50-1STD-PA187-UNV-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: P231975

CATALOG NUMBER: FVS4M-4-LD4-50-1STD-PA187-UNV-EDC1

**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	90
1	106	101	97	93	102	98	94	90	92	88	85	86	84	81	81	79	77	74
2	97	89	82	77	94	86	80	75	81	76	72	76	72	69	72	69	66	63
3	89	79	71	65	86	77	70	64	73	67	62	69	64	59	65	61	57	55
4	82	71	63	56	79	69	61	56	65	59	54	62	57	52	59	54	50	48
5	76	64	56	50	74	63	55	49	60	53	48	57	51	46	54	49	45	43
6	71	59	50	44	69	57	49	44	54	48	42	52	46	41	49	44	40	38
7	66	54	45	40	64	52	45	39	50	43	38	48	42	37	46	40	36	34
8	62	49	41	36	60	48	41	35	46	39	35	44	38	34	42	37	33	31
9	58	46	38	33	56	45	37	32	43	36	32	41	35	31	39	34	30	29
10	55	42	35	30	53	41	34	30	40	33	29	38	33	29	37	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14694	14694	14694
5°	14823	14094	13968
10°	14662	13560	13086
15°	14577	12892	12559
20°	14334	12451	12103
25°	14137	11978	11100
30°	13595	10906	8859
35°	12920	8583	7177
40°	11161	6638	5802
45°	8485	5009	5067
50°	6163	3862	4732
55°	4497	3247	4158
60°	3233	2888	4066
65°	2550	2611	4332
70°	2652	2384	4701
75°	3019	2315	5311
80°	2427	2431	5276
85°	1711	2514	4044



TEST NUMBER: P231975

CATALOG NUMBER: FVS4M-4-LD4-50-1STD-PA187-UNV-EDC1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	153.5	4.0
10°-20°	439.1	11.5
20°-30°	653.9	17.1
30°-40°	653.7	17.1
40°-50°	475.8	12.5
50°-60°	338.2	8.9
60°-70°	283.1	7.4
70°-80°	258.8	6.8
80°-90°	191.1	5.0
90°-100°	115.6	3.0
100°-110°	81.7	2.1
110°-120°	70.3	1.8
120°-130°	51.2	1.3
130°-140°	30.3	0.8
140°-150°	15.2	0.4
150°-160°	5.5	0.1
160°-170°	1.0	0.0
170°-180°	0.0	0.0
0°-30°	1246.5	32.6
0°-40°	1900.1	49.8
0°-60°	2714.1	71.1
0°-90°	3447.2	90.3
90°-120°	267.6	7.0
90°-150°	364.4	9.5
90°-180°	371.0	9.7
0°-180°	3818.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1618	1618	1618	1618	1618	
5°	1633	1621	1608	1617	1612	155
15°	1570	1561	1540	1554	1550	442
25°	1443	1427	1451	1460	1417	661
35°	1205	1199	1023	943	919	741
45°	693	611	569	588	631	541
55°	304	310	340	437	488	279
65°	131	191	241	410	461	139
75°	102	106	179	397	490	101
85°	26	57	151	328	305	29
90°	1	34	135	225	210	2
95°	0	33	145	167	160	0
105°	0	31	90	120	116	0
115°	0	28	58	136	133	0
125°	1	23	47	94	126	1
135°	1	18	37	58	82	1
145°	1	13	26	36	41	1
155°	1	7	13	16	17	0
165°	1	3	4	3	5	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231975

CATALOG NUMBER: FVS4M-4-LD4-50-1STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1617.5	1617.5	1617.5	1617.5	1617.5
2.5°	1637.0	1627.2	1612.2	1616.6	1611.3
5°	1632.6	1621.0	1607.7	1616.6	1612.2
7.5°	1619.3	1618.4	1594.4	1604.2	1593.6
10°	1603.3	1608.6	1589.1	1588.2	1568.7
12.5°	1592.7	1584.7	1559.0	1575.8	1567.0
15°	1570.5	1560.8	1539.5	1553.7	1550.1
17.5°	1543.9	1535.1	1520.9	1529.7	1538.6
20°	1509.4	1502.3	1503.2	1526.2	1525.3
22.5°	1473.0	1474.8	1478.3	1503.2	1493.4
25°	1442.9	1426.9	1450.9	1459.7	1417.2
27.5°	1395.9	1390.6	1417.2	1321.5	1253.2
30°	1333.0	1341.0	1315.3	1173.5	1137.1
32.5°	1272.7	1284.2	1161.0	1059.1	1030.8
35°	1205.4	1199.2	1022.8	943.0	919.1
37.5°	1108.8	1052.9	896.0	837.5	822.5
40°	980.2	873.0	775.5	738.3	735.6
42.5°	839.3	727.6	663.8	658.5	676.2
45°	693.1	610.7	569.0	588.5	631.0
47.5°	569.9	509.6	487.5	532.7	599.1
50°	461.8	426.3	422.8	494.6	574.3
52.5°	378.4	361.6	375.8	472.4	539.8
55°	304.0	310.2	339.5	436.9	487.5
57.5°	244.6	270.3	311.1	412.1	464.4
60°	193.2	237.5	285.4	403.3	456.4
62.5°	156.9	212.7	262.3	406.8	455.6
65°	131.2	190.6	241.1	410.4	460.9
67.5°	121.4	166.6	220.7	411.2	467.1
70°	113.4	143.6	203.0	411.2	468.8
72.5°	113.4	123.2	187.9	407.7	473.3
75°	101.9	106.4	179.0	397.1	490.1
77.5°	81.5	93.9	173.7	389.1	502.5
80°	59.4	82.4	167.5	402.4	444.0
82.5°	45.2	69.1	160.4	380.2	365.2
85°	25.7	56.7	150.7	327.9	304.9
87.5°	11.5	43.4	140.0	270.3	256.1
90°	0.9	33.7	134.7	225.1	210.1
92.5°	0.0	31.9	140.0	188.8	181.7
95°	0.0	32.8	145.4	166.6	159.5
97.5°	0.0	32.8	138.3	148.9	141.8
100°	0.0	32.8	123.2	135.6	130.3
102.5°	0.0	31.9	105.5	125.0	122.3
105°	0.0	31.0	90.4	119.6	116.1
107.5°	0.0	31.0	78.9	123.2	113.4
110°	0.0	30.1	69.1	131.2	113.4



TEST NUMBER: P231975

CATALOG NUMBER: FVS4M-4-LD4-50-1STD-PA187-UNV-EDC1

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	29.2	62.9	136.5	123.2
115°	0.0	27.5	57.6	136.5	132.9
117.5°	0.0	26.6	54.1	127.6	140.0
120°	0.0	25.7	51.4	117.0	142.7
122.5°	0.9	23.9	49.6	105.5	134.7
125°	0.9	23.0	47.0	93.9	125.9
127.5°	0.9	21.3	45.2	84.2	116.1
130°	0.9	20.4	42.5	74.4	104.6
132.5°	0.9	19.5	39.9	65.6	93.1
135°	0.9	17.7	37.2	58.5	81.5
137.5°	0.9	16.8	34.6	52.3	70.9
140°	0.9	16.0	31.9	46.1	59.4
142.5°	0.9	15.1	28.4	40.8	49.6
145°	0.9	13.3	25.7	35.5	40.8
147.5°	0.9	12.4	22.2	29.2	32.8
150°	0.9	10.6	19.5	24.8	25.7
152.5°	0.9	8.9	16.0	20.4	20.4
155°	0.9	7.1	13.3	16.0	16.8
157.5°	0.9	6.2	10.6	12.4	14.2
160°	0.9	5.3	8.0	8.9	11.5
162.5°	0.9	3.5	6.2	5.3	8.9
165°	0.9	2.7	4.4	2.7	5.3
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)