

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: P232047

Luminaire Tested: **FVS4M-3-LD4-50-1STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P232047  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-25)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-3-LD4-50-1STD-PA187-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
3FT LENGTH, 1-MODULE LED WITH PA187 LENS  
Light Source: (84) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

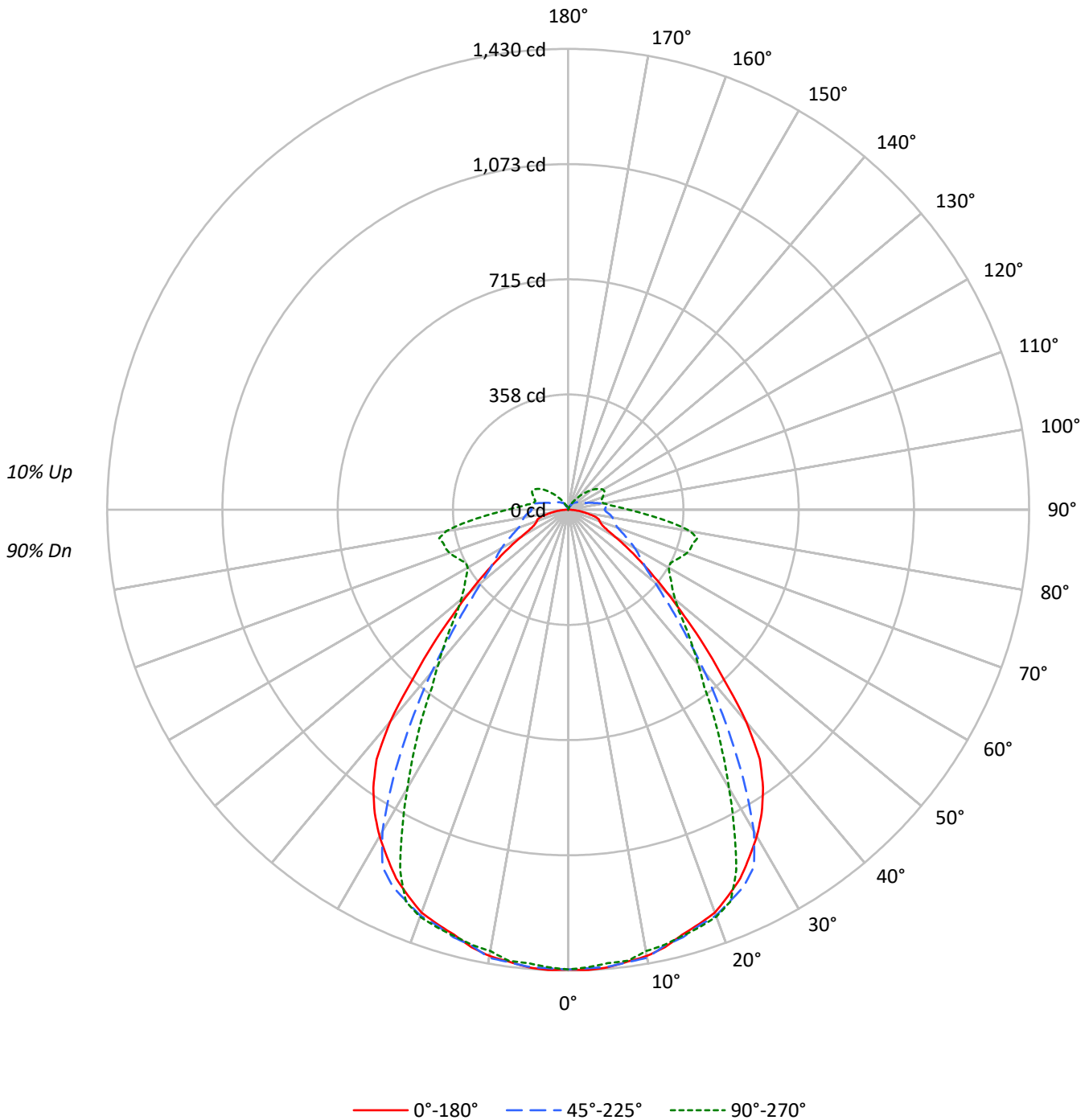
Lumens per Lamp: N/A  
Luminaire Lumens: 3285.0 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.1 / 1.11  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 28.5  
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	90
1	106	101	97	93	102	98	94	90	92	88	86	86	84	81	81	79	77	74
2	97	89	83	77	94	86	80	75	81	76	72	77	73	69	72	69	66	63
3	89	79	72	66	86	77	70	64	73	67	62	69	64	60	65	61	57	55
4	83	71	63	57	80	70	62	56	66	59	54	62	57	52	59	55	51	48
5	77	65	56	50	74	63	55	49	60	53	48	57	51	47	54	49	45	43
6	71	59	51	45	69	58	50	44	55	48	43	52	46	42	50	45	41	39
7	67	54	46	40	64	53	45	40	50	44	39	48	42	38	46	41	37	35
8	62	50	42	36	60	49	41	36	47	40	35	45	39	34	43	38	34	32
9	59	46	38	33	57	45	38	33	43	37	32	42	36	32	40	35	31	29
10	55	43	35	30	53	42	35	30	40	34	30	39	33	29	37	32	28	27

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

	0°	45°	90°
0°	16851	16851	16851
5°	16800	16207	15910
10°	16674	15633	15082
15°	16412	14916	14420
20°	16335	14384	13861
25°	15972	13785	12560
30°	15388	12360	10105
35°	14537	9687	8027
40°	12557	7295	6431
45°	9359	5423	5367
50°	6816	4130	4637
55°	4960	3452	4329
60°	3553	3119	4166
65°	2886	2730	4506
70°	3023	2466	5113
75°	3260	2471	5651
80°	2612	2584	5933
85°	1765	2653	4721



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.0	4.1
10°-20°	387.5	11.8
20°-30°	577.1	17.6
30°-40°	567.7	17.3
40°-50°	397.8	12.1
50°-60°	277.9	8.5
60°-70°	233.6	7.1
70°-80°	213.6	6.5
80°-90°	164.8	5.0
90°-100°	100.3	3.1
100°-110°	74.5	2.3
110°-120°	63.0	1.9
120°-130°	45.8	1.4
130°-140°	27.1	0.8
140°-150°	13.5	0.4
150°-160°	4.9	0.2
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	1099.6	33.5
0°-40°	1667.3	50.8
0°-60°	2343.0	71.3
0°-90°	2955.1	90.0
90°-120°	237.7	7.2
90°-150°	324.2	9.9
90°-180°	330.0	10.0
0°-180°	3285.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1427	1427	1427	1427	1427	
5°	1425	1427	1423	1419	1412	135
15°	1366	1369	1374	1373	1369	387
25°	1262	1266	1290	1274	1234	579
35°	1054	1043	893	812	791	650
45°	596	522	477	475	514	465
55°	263	272	280	343	390	241
65°	118	167	196	331	369	123
75°	89	92	149	323	401	88
85°	23	49	125	290	274	25
90°	0	28	113	203	187	1
95°	0	27	118	146	138	0
105°	0	26	81	117	106	0
115°	0	24	51	119	124	0
125°	0	20	41	88	112	0
135°	0	16	32	53	74	0
145°	0	13	24	31	37	0
155°	0	6	12	15	14	0
165°	1	3	3	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1426.9	1426.9	1426.9	1426.9	1426.9
2.5°	1429.7	1424.2	1424.2	1423.3	1420.6
5°	1425.1	1426.9	1423.3	1418.8	1412.5
7.5°	1414.3	1414.3	1416.1	1410.7	1411.6
10°	1406.2	1403.4	1411.6	1390.8	1390.8
12.5°	1389.9	1389.0	1384.5	1389.9	1382.7
15°	1365.5	1369.1	1373.6	1372.7	1369.1
17.5°	1348.3	1349.2	1352.8	1357.4	1358.3
20°	1330.2	1323.9	1340.2	1351.9	1343.8
22.5°	1296.8	1302.2	1314.0	1334.8	1315.8
25°	1262.5	1266.1	1289.6	1274.2	1233.6
27.5°	1216.4	1235.4	1248.0	1162.2	1115.2
30°	1170.3	1189.3	1152.2	1035.6	997.7
32.5°	1117.0	1140.5	1023.0	921.8	890.1
35°	1053.7	1042.9	892.9	812.4	790.7
37.5°	976.0	898.3	770.9	710.3	693.1
40°	858.5	747.4	659.7	625.4	627.2
42.5°	715.7	621.7	556.7	543.1	569.3
45°	596.4	522.3	477.2	475.3	514.2
47.5°	488.0	438.3	404.9	424.7	465.4
50°	399.4	370.5	350.6	383.2	432.9
52.5°	324.4	312.7	308.2	357.9	408.5
55°	263.0	272.0	280.1	343.4	390.4
57.5°	212.4	237.7	259.4	335.3	373.2
60°	167.2	209.7	239.5	330.8	359.7
62.5°	136.5	187.1	216.0	330.8	357.9
65°	117.5	167.2	196.1	330.8	368.7
67.5°	109.3	145.5	178.0	330.8	380.5
70°	103.0	125.6	163.6	325.3	392.2
72.5°	100.3	105.7	153.6	323.5	398.5
75°	88.6	92.2	149.1	322.6	401.2
77.5°	68.7	82.2	144.6	318.1	410.3
80°	52.4	72.3	139.2	322.6	384.1
82.5°	38.0	60.5	132.8	321.7	331.7
85°	22.6	48.8	124.7	290.1	273.8
87.5°	9.0	36.1	116.6	242.2	224.1
90°	0.0	28.0	113.0	203.3	187.1
92.5°	0.0	27.1	115.7	171.7	160.0
95°	0.0	27.1	118.4	145.5	138.3
97.5°	0.0	27.1	117.5	132.8	125.6
100°	0.0	27.1	108.4	121.1	112.1
102.5°	0.0	26.2	94.0	116.6	108.4
105°	0.0	26.2	81.3	116.6	105.7
107.5°	0.0	26.2	70.5	118.4	109.3
110°	0.0	25.3	61.5	120.2	113.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	24.4	55.1	122.9	118.4
115°	0.0	24.4	50.6	119.3	123.8
117.5°	0.0	23.5	47.0	113.0	126.5
120°	0.0	22.6	44.3	105.7	124.7
122.5°	0.0	20.8	42.5	96.7	119.3
125°	0.0	19.9	40.7	87.7	112.1
127.5°	0.0	19.0	38.0	77.7	104.8
130°	0.0	18.1	36.1	68.7	95.8
132.5°	0.0	17.2	33.4	60.5	84.9
135°	0.0	16.3	31.6	53.3	74.1
137.5°	0.0	15.4	29.8	47.0	64.2
140°	0.0	14.5	28.0	40.7	54.2
142.5°	0.0	13.6	26.2	35.2	45.2
145°	0.0	12.7	23.5	30.7	37.1
147.5°	0.0	10.8	20.8	26.2	29.8
150°	0.0	9.9	17.2	21.7	23.5
152.5°	0.0	8.1	14.5	19.0	18.1
155°	0.0	6.3	11.7	15.4	14.5
157.5°	0.9	5.4	9.0	11.7	11.7
160°	0.9	4.5	7.2	8.1	9.0
162.5°	0.9	3.6	4.5	5.4	7.2
165°	0.9	2.7	2.7	2.7	4.5
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)