

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: P232051

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232051
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-LD4-50-1HI-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

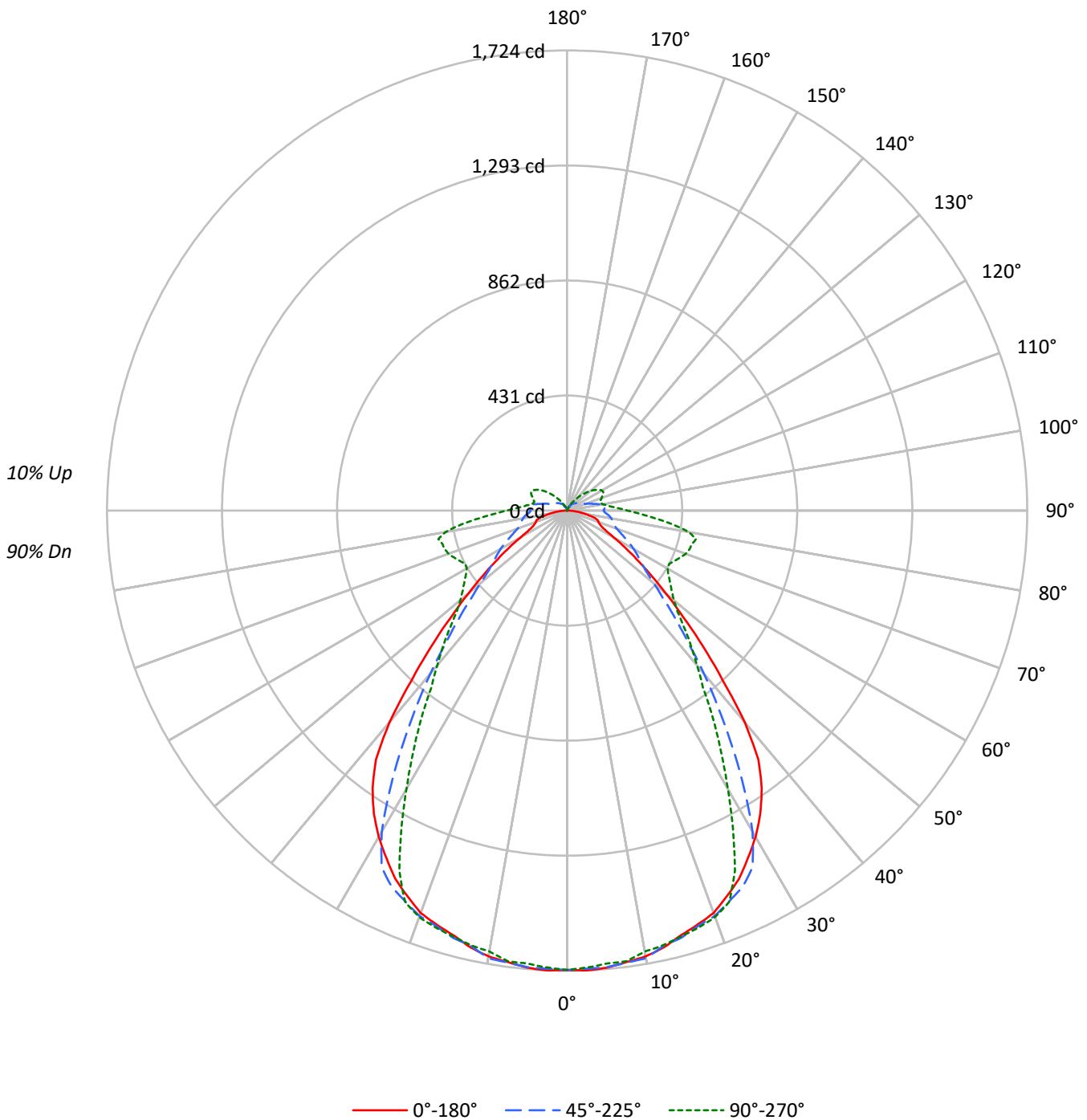
Lumens per Lamp: N/A
Luminaire Lumens: 3962.0 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.1 / 1.11
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 36.3
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°	20324	20324	20324
5°	20262	19548	19188
10°	20110	18854	18190
15°	19794	17991	17393
20°	19702	17348	16717
25°	19264	16626	15148
30°	18559	14908	12187
35°	17533	11683	9682
40°	15145	8799	7756
45°	11289	6540	6474
50°	8222	4981	5593
55°	5982	4164	5221
60°	4285	3761	5024
65°	3480	3292	5434
70°	3648	2974	6167
75°	3930	2980	6816
80°	3150	3117	7155
85°	2125	3200	5696



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.9	4.1
10°-20°	467.3	11.8
20°-30°	696.1	17.6
30°-40°	684.6	17.3
40°-50°	479.8	12.1
50°-60°	335.2	8.5
60°-70°	281.7	7.1
70°-80°	257.7	6.5
80°-90°	198.8	5.0
90°-100°	121.0	3.1
100°-110°	89.9	2.3
110°-120°	75.9	1.9
120°-130°	55.2	1.4
130°-140°	32.7	0.8
140°-150°	16.3	0.4
150°-160°	6.0	0.2
160°-170°	1.0	0.0
170°-180°	0.0	0.0
0°-30°	1326.3	33.5
0°-40°	2010.9	50.8
0°-60°	2825.9	71.3
0°-90°	3564.1	90.0
90°-120°	286.7	7.2
90°-150°	390.9	9.9
90°-180°	398.0	10.0
0°-180°	3962.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1721	1721	1721	1721	1721	
5°	1719	1721	1717	1711	1704	163
15°	1647	1651	1657	1656	1651	466
25°	1523	1527	1555	1537	1488	699
35°	1271	1258	1077	980	954	784
45°	719	630	576	573	620	561
55°	317	328	338	414	471	291
65°	142	202	236	399	445	149
75°	107	111	180	389	484	107
85°	27	59	150	350	330	30
90°	0	34	136	245	226	1
95°	0	33	143	176	167	0
105°	0	32	98	141	128	0
115°	0	29	61	144	149	0
125°	0	24	49	106	135	0
135°	0	20	38	64	89	0
145°	0	15	28	37	45	0
155°	0	8	14	18	17	0
165°	1	3	3	3	5	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°	1721.0	1721.0	1721.0	1721.0	1721.0
2.5°	1724.3	1717.8	1717.8	1716.7	1713.4
5°	1718.8	1721.0	1716.7	1711.2	1703.6
7.5°	1705.8	1705.8	1707.9	1701.4	1702.5
10°	1696.0	1692.7	1702.5	1677.4	1677.4
12.5°	1676.3	1675.2	1669.8	1676.3	1667.6
15°	1646.9	1651.3	1656.7	1655.6	1651.3
17.5°	1626.2	1627.3	1631.6	1637.1	1638.2
20°	1604.4	1596.8	1616.4	1630.6	1620.7
22.5°	1564.1	1570.6	1584.8	1609.8	1587.0
25°	1522.7	1527.0	1555.4	1536.8	1487.8
27.5°	1467.1	1490.0	1505.2	1401.7	1345.0
30°	1411.5	1434.4	1389.7	1249.1	1203.3
32.5°	1347.2	1375.5	1233.8	1111.7	1073.6
35°	1270.9	1257.8	1076.9	979.9	953.7
37.5°	1177.1	1083.4	929.7	856.7	836.0
40°	1035.4	901.4	795.7	754.2	756.4
42.5°	863.2	749.9	671.4	655.1	686.7
45°	719.4	630.0	575.5	573.3	620.2
47.5°	588.6	528.6	488.3	512.3	561.3
50°	481.8	446.9	422.9	462.1	522.1
52.5°	391.3	377.1	371.7	431.6	492.7
55°	317.2	328.1	337.9	414.2	470.9
57.5°	256.1	286.7	312.8	404.4	450.1
60°	201.6	252.9	288.8	398.9	433.8
62.5°	164.6	225.6	260.5	398.9	431.6
65°	141.7	201.6	236.5	398.9	444.7
67.5°	131.9	175.5	214.7	398.9	458.9
70°	124.3	151.5	197.3	392.4	473.0
72.5°	121.0	127.5	185.3	390.2	480.7
75°	106.8	111.2	179.8	389.1	483.9
77.5°	82.8	99.2	174.4	383.7	494.8
80°	63.2	87.2	167.9	389.1	463.2
82.5°	45.8	73.0	160.2	388.0	400.0
85°	27.2	58.9	150.4	349.9	330.3
87.5°	10.9	43.6	140.6	292.1	270.3
90°	0.0	33.8	136.2	245.2	225.6
92.5°	0.0	32.7	139.5	207.1	192.9
95°	0.0	32.7	142.8	175.5	166.8
97.5°	0.0	32.7	141.7	160.2	151.5
100°	0.0	32.7	130.8	146.1	135.2
102.5°	0.0	31.6	113.4	140.6	130.8
105°	0.0	31.6	98.1	140.6	127.5
107.5°	0.0	31.6	85.0	142.8	131.9
110°	0.0	30.5	74.1	145.0	137.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	29.4	66.5	148.2	142.8
115°	0.0	29.4	61.0	143.9	149.3
117.5°	0.0	28.3	56.7	136.2	152.6
120°	0.0	27.2	53.4	127.5	150.4
122.5°	0.0	25.1	51.2	116.6	143.9
125°	0.0	24.0	49.0	105.7	135.2
127.5°	0.0	22.9	45.8	93.7	126.4
130°	0.0	21.8	43.6	82.8	115.5
132.5°	0.0	20.7	40.3	73.0	102.5
135°	0.0	19.6	38.1	64.3	89.4
137.5°	0.0	18.5	36.0	56.7	77.4
140°	0.0	17.4	33.8	49.0	65.4
142.5°	0.0	16.3	31.6	42.5	54.5
145°	0.0	15.3	28.3	37.1	44.7
147.5°	0.0	13.1	25.1	31.6	36.0
150°	0.0	12.0	20.7	26.2	28.3
152.5°	0.0	9.8	17.4	22.9	21.8
155°	0.0	7.6	14.2	18.5	17.4
157.5°	1.1	6.5	10.9	14.2	14.2
160°	1.1	5.4	8.7	9.8	10.9
162.5°	1.1	4.4	5.4	6.5	8.7
165°	1.1	3.3	3.3	3.3	5.4
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)