

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: P232049

Luminaire Tested: **FVS4M-3-LD4-35-1HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232049
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-LD4-35-1HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

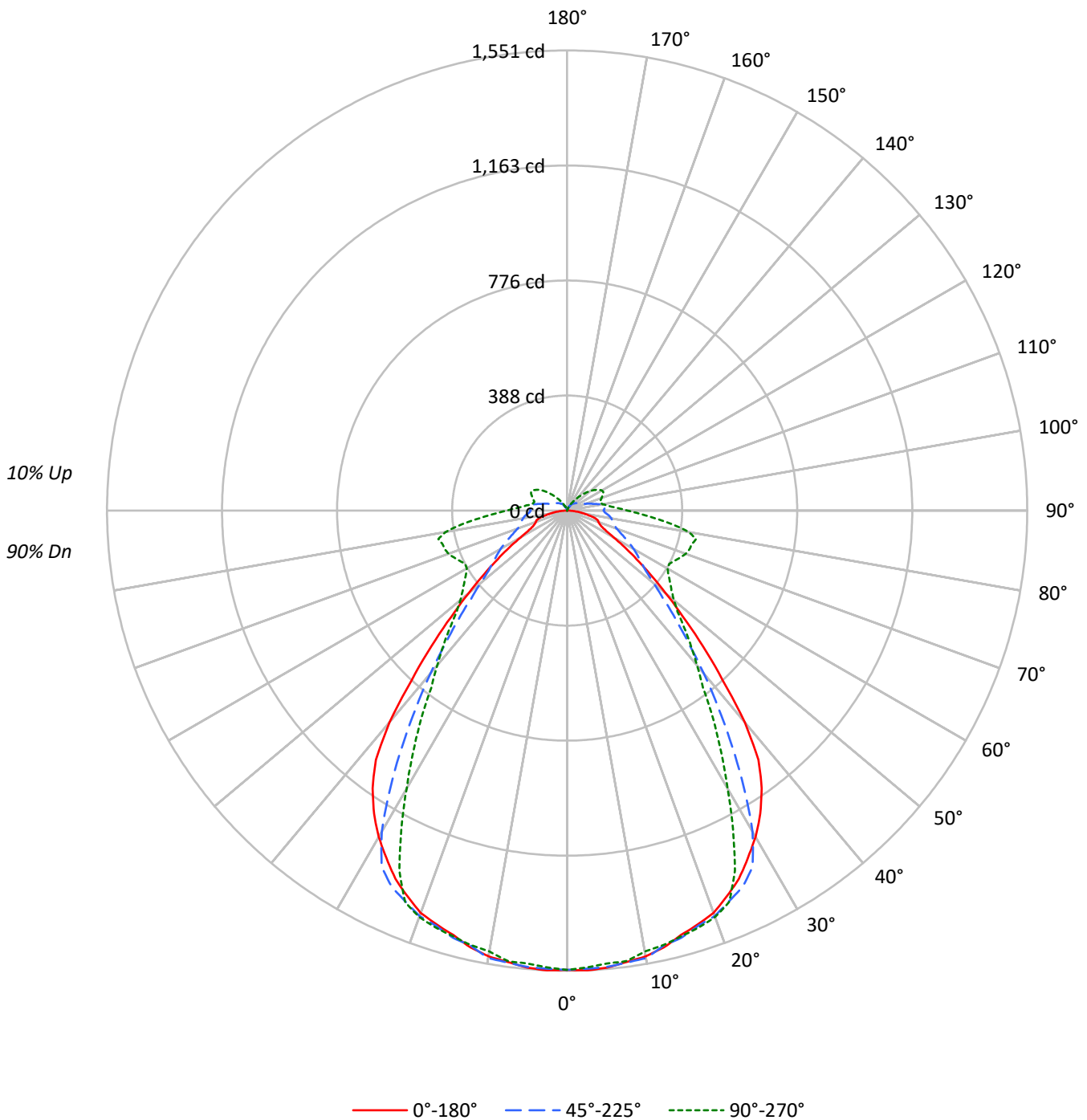
Lumens per Lamp: N/A
Luminaire Lumens: 3564.0 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.1 / 1.11
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Semi-Direct

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°	18282	18282	18282
5°	18227	17583	17261
10°	18090	16961	16363
15°	17806	16184	15645
20°	17723	15605	15038
25°	17328	14955	13626
30°	16695	13410	10963
35°	15771	10509	8709
40°	13624	7914	6977
45°	10155	5883	5824
50°	7396	4481	5031
55°	5380	3745	4697
60°	3855	3383	4519
65°	3131	2962	4888
70°	3281	2676	5547
75°	3536	2682	6132
80°	2836	2803	6437
85°	1914	2879	5123



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.5	4.1
10°-20°	420.4	11.8
20°-30°	626.1	17.6
30°-40°	615.9	17.3
40°-50°	431.6	12.1
50°-60°	301.5	8.5
60°-70°	253.4	7.1
70°-80°	231.8	6.5
80°-90°	178.8	5.0
90°-100°	108.8	3.1
100°-110°	80.8	2.3
110°-120°	68.3	1.9
120°-130°	49.7	1.4
130°-140°	29.4	0.8
140°-150°	14.7	0.4
150°-160°	5.4	0.2
160°-170°	0.9	0.0
170°-180°	0.0	0.0
0°-30°	1193.0	33.5
0°-40°	1808.9	50.8
0°-60°	2542.0	71.3
0°-90°	3206.0	90.0
90°-120°	257.9	7.2
90°-150°	351.7	9.9
90°-180°	358.0	10.0
0°-180°	3564.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1548	1548	1548	1548	1548	
5°	1546	1548	1544	1539	1532	147
15°	1482	1485	1490	1489	1485	419
25°	1370	1374	1399	1382	1338	629
35°	1143	1131	969	881	858	705
45°	647	567	518	516	558	505
55°	285	295	304	373	424	261
65°	128	181	213	359	400	134
75°	96	100	162	350	435	96
85°	24	53	135	315	297	27
90°	0	30	123	221	203	1
95°	0	29	128	158	150	0
105°	0	28	88	126	115	0
115°	0	26	55	129	134	0
125°	0	22	44	95	122	0
135°	0	18	34	58	80	0
145°	0	14	26	33	40	0
155°	0	7	13	17	16	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°	1548.1	1548.1	1548.1	1548.1	1548.1
2.5°	1551.1	1545.2	1545.2	1544.2	1541.3
5°	1546.2	1548.1	1544.2	1539.3	1532.5
7.5°	1534.4	1534.4	1536.4	1530.5	1531.5
10°	1525.6	1522.6	1531.5	1508.9	1508.9
12.5°	1507.9	1507.0	1502.1	1507.9	1500.1
15°	1481.5	1485.4	1490.3	1489.3	1485.4
17.5°	1462.8	1463.8	1467.7	1472.6	1473.6
20°	1443.2	1436.4	1454.0	1466.8	1457.9
22.5°	1407.0	1412.8	1425.6	1448.1	1427.5
25°	1369.7	1373.6	1399.1	1382.4	1338.3
27.5°	1319.7	1340.3	1354.0	1260.9	1209.9
30°	1269.7	1290.3	1250.1	1123.6	1082.4
32.5°	1211.8	1237.3	1109.9	1000.1	965.7
35°	1143.2	1131.4	968.7	881.4	857.9
37.5°	1058.9	974.6	836.3	770.6	752.0
40°	931.4	810.8	715.7	678.5	680.4
42.5°	776.5	674.6	604.0	589.3	617.7
45°	647.1	566.7	517.7	515.7	557.9
47.5°	529.4	475.5	439.2	460.8	504.9
50°	433.4	402.0	380.4	415.7	469.6
52.5°	352.0	339.2	334.3	388.3	443.2
55°	285.3	295.1	303.9	372.6	423.6
57.5°	230.4	257.9	281.4	363.7	404.9
60°	181.4	227.5	259.8	358.8	390.2
62.5°	148.0	203.0	234.3	358.8	388.3
65°	127.5	181.4	212.8	358.8	400.0
67.5°	118.6	157.9	193.1	358.8	412.8
70°	111.8	136.3	177.5	353.0	425.5
72.5°	108.8	114.7	166.7	351.0	432.4
75°	96.1	100.0	161.8	350.0	435.3
77.5°	74.5	89.2	156.9	345.1	445.1
80°	56.9	78.4	151.0	350.0	416.7
82.5°	41.2	65.7	144.1	349.0	359.8
85°	24.5	52.9	135.3	314.7	297.1
87.5°	9.8	39.2	126.5	262.8	243.2
90°	0.0	30.4	122.6	220.6	203.0
92.5°	0.0	29.4	125.5	186.3	173.5
95°	0.0	29.4	128.4	157.9	150.0
97.5°	0.0	29.4	127.5	144.1	136.3
100°	0.0	29.4	117.7	131.4	121.6
102.5°	0.0	28.4	102.0	126.5	117.7
105°	0.0	28.4	88.2	126.5	114.7
107.5°	0.0	28.4	76.5	128.4	118.6
110°	0.0	27.5	66.7	130.4	123.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	26.5	59.8	133.3	128.4
115°	0.0	26.5	54.9	129.4	134.3
117.5°	0.0	25.5	51.0	122.6	137.3
120°	0.0	24.5	48.0	114.7	135.3
122.5°	0.0	22.6	46.1	104.9	129.4
125°	0.0	21.6	44.1	95.1	121.6
127.5°	0.0	20.6	41.2	84.3	113.7
130°	0.0	19.6	39.2	74.5	103.9
132.5°	0.0	18.6	36.3	65.7	92.2
135°	0.0	17.6	34.3	57.8	80.4
137.5°	0.0	16.7	32.4	51.0	69.6
140°	0.0	15.7	30.4	44.1	58.8
142.5°	0.0	14.7	28.4	38.2	49.0
145°	0.0	13.7	25.5	33.3	40.2
147.5°	0.0	11.8	22.6	28.4	32.4
150°	0.0	10.8	18.6	23.5	25.5
152.5°	0.0	8.8	15.7	20.6	19.6
155°	0.0	6.9	12.7	16.7	15.7
157.5°	1.0	5.9	9.8	12.7	12.7
160°	1.0	4.9	7.8	8.8	9.8
162.5°	1.0	3.9	4.9	5.9	7.8
165°	1.0	2.9	2.9	2.9	4.9
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)