

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: P232006

Luminaire Tested: **FVS4M-4-LD4-40-2LO-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232006
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-4-LD4-40-2LO-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

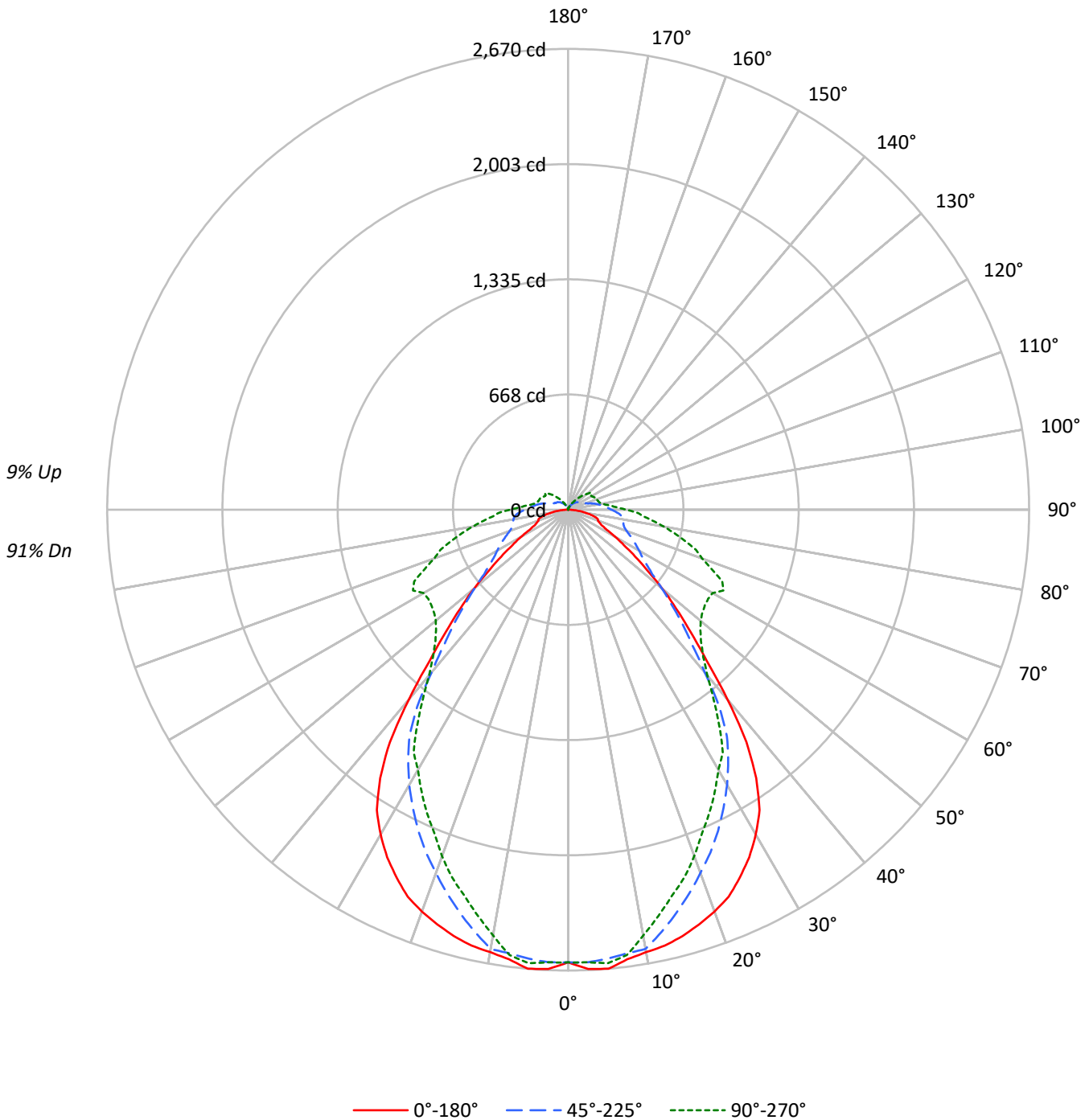
Lumens per Lamp: N/A
Luminaire Lumens: 6080.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.02 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 57.4
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	100	100	100	94	94	94	91
1	106	101	96	92	102	98	94	90	92	89	85	86	84	81	81	79	77	75
2	97	89	82	76	93	86	80	74	81	76	71	76	72	68	72	69	66	63
3	89	79	71	64	86	76	69	63	72	66	61	68	63	59	64	60	57	54
4	82	70	62	55	79	68	61	55	65	58	53	61	56	51	58	54	50	47
5	76	64	55	49	73	62	54	48	59	52	47	56	50	45	53	48	44	42
6	70	58	49	43	68	56	48	43	54	47	42	51	45	40	49	44	39	37
7	66	53	44	39	63	52	44	38	49	42	37	47	41	36	45	40	36	34
8	61	49	40	35	59	48	40	35	45	39	34	44	38	33	42	36	32	30
9	58	45	37	32	56	44	37	31	42	36	31	40	35	30	39	34	30	28
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	36	31	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23827	23827	23827
5°	24241	22900	22850
10°	23801	22049	20898
15°	23742	20260	18772
20°	23530	18550	16946
25°	23039	16952	15167
30°	22163	15260	13551
35°	20346	13452	11910
40°	16329	10534	9889
45°	12264	8229	8739
50°	9498	6448	8244
55°	7025	5302	8243
60°	5278	4806	8604
65°	4167	4494	9248
70°	4286	4230	8267
75°	4747	4285	7594
80°	3979	4672	6672
85°	2883	4972	5802



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.5	4.1
10°-20°	686.0	11.3
20°-30°	961.1	15.8
30°-40°	1013.1	16.7
40°-50°	769.4	12.7
50°-60°	581.2	9.6
60°-70°	538.7	8.9
70°-80°	434.5	7.1
80°-90°	291.6	4.8
90°-100°	180.2	3.0
100°-110°	126.7	2.1
110°-120°	95.7	1.6
120°-130°	73.5	1.2
130°-140°	45.1	0.7
140°-150°	23.1	0.4
150°-160°	8.7	0.1
160°-170°	1.8	0.0
170°-180°	0.0	0.0
0°-30°	1896.6	31.2
0°-40°	2909.7	47.9
0°-60°	4260.4	70.1
0°-90°	5525.2	90.9
90°-120°	402.6	6.6
90°-150°	544.4	9.0
90°-180°	555.0	9.1
0°-180°	6080.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2623	2623	2623	2623	2623	
5°	2670	2647	2612	2634	2637	252
15°	2558	2549	2419	2359	2317	721
25°	2352	2197	2053	1972	1936	1081
35°	1898	1730	1603	1526	1525	1163
45°	1002	968	935	984	1088	788
55°	475	492	554	783	966	433
65°	214	302	415	868	984	225
75°	160	175	331	695	701	162
85°	43	98	298	430	437	48
90°	2	58	250	343	335	4
95°	1	53	209	261	250	1
105°	1	50	141	195	182	1
115°	1	45	89	162	168	1
125°	1	38	75	135	163	1
135°	2	28	58	86	115	1
145°	2	21	41	52	59	1
155°	3	12	22	24	24	1
165°	3	5	9	5	9	1
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°	2622.9	2622.9	2622.9	2622.9	2622.9
2.5°	2663.3	2651.7	2624.3	2630.8	2625.0
5°	2669.8	2646.7	2612.1	2634.4	2637.3
7.5°	2627.2	2634.4	2592.6	2609.2	2602.7
10°	2602.7	2617.8	2583.9	2550.0	2505.2
12.5°	2586.8	2584.6	2503.8	2454.0	2411.4
15°	2557.9	2549.3	2419.3	2359.4	2316.9
17.5°	2519.7	2487.9	2331.3	2257.7	2235.3
20°	2477.8	2390.5	2239.6	2163.1	2135.7
22.5°	2427.3	2299.5	2150.8	2071.5	2026.0
25°	2351.5	2197.0	2053.4	1971.9	1936.5
27.5°	2269.9	2090.2	1947.3	1869.4	1839.8
30°	2173.2	1978.3	1840.5	1779.1	1739.4
32.5°	2062.8	1862.1	1724.3	1665.1	1666.5
35°	1898.2	1730.1	1603.0	1526.5	1525.1
37.5°	1696.1	1559.0	1437.0	1385.8	1382.2
40°	1434.1	1375.7	1230.6	1252.3	1253.7
42.5°	1185.1	1151.2	1065.3	1096.4	1158.4
45°	1001.8	967.9	934.7	984.5	1088.4
47.5°	848.8	800.4	809.1	900.0	1037.9
50°	711.7	678.5	705.9	840.1	1000.4
52.5°	575.2	572.4	614.2	801.9	979.4
55°	474.9	491.5	554.3	783.1	966.4
57.5°	383.3	423.7	507.4	786.0	961.4
60°	315.4	373.2	474.9	812.0	965.7
62.5°	251.2	334.9	442.4	836.5	1013.4
65°	214.4	301.7	415.0	868.3	983.8
67.5°	195.6	269.2	384.7	920.2	899.3
70°	183.3	234.6	360.2	878.4	824.3
72.5°	181.2	202.1	341.4	793.2	775.9
75°	160.2	175.4	331.3	695.1	700.8
77.5°	132.1	156.6	326.2	614.2	629.4
80°	97.4	137.9	321.9	545.7	561.5
82.5°	73.6	116.9	314.0	487.2	494.4
85°	43.3	98.2	298.1	430.2	437.4
87.5°	20.9	73.6	275.7	372.4	401.3
90°	2.2	57.7	250.5	342.8	334.9
92.5°	2.2	53.4	229.5	296.6	285.1
95°	1.4	52.7	208.6	260.6	250.5
97.5°	1.4	52.7	193.4	232.4	220.1
100°	1.4	52.0	177.6	213.6	199.9
102.5°	1.4	51.2	160.2	201.4	187.7
105°	1.4	49.8	140.7	194.9	181.9
107.5°	1.4	49.1	120.5	188.4	178.3
110°	1.4	47.6	106.8	177.6	176.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.4	46.2	95.3	168.9	175.4
115°	1.4	44.7	88.8	161.7	168.2
117.5°	1.4	43.3	84.4	160.2	161.7
120°	1.4	41.1	81.6	163.1	156.6
122.5°	1.4	39.0	78.0	152.3	155.2
125°	1.4	37.5	75.1	135.0	163.1
127.5°	1.4	34.6	71.5	120.5	160.2
130°	1.4	32.5	67.1	108.3	142.9
132.5°	1.4	30.3	63.5	96.0	128.5
135°	2.2	28.1	58.5	85.9	114.8
137.5°	2.2	26.7	54.1	76.5	99.6
140°	2.2	24.5	50.5	67.8	85.9
142.5°	2.2	23.1	46.2	59.9	72.2
145°	2.2	20.9	41.1	52.0	59.2
147.5°	2.2	19.5	36.8	44.0	46.9
150°	2.2	16.6	31.8	37.5	36.8
152.5°	2.2	14.4	26.7	29.6	30.3
155°	2.9	12.3	21.7	23.8	24.5
157.5°	2.2	10.1	18.0	18.8	20.9
160°	2.9	8.7	15.2	13.7	18.0
162.5°	2.9	6.5	13.0	9.4	14.4
165°	2.9	5.1	9.4	5.1	8.7
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)