

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: P231979

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231979
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-LD4-50-1HI-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

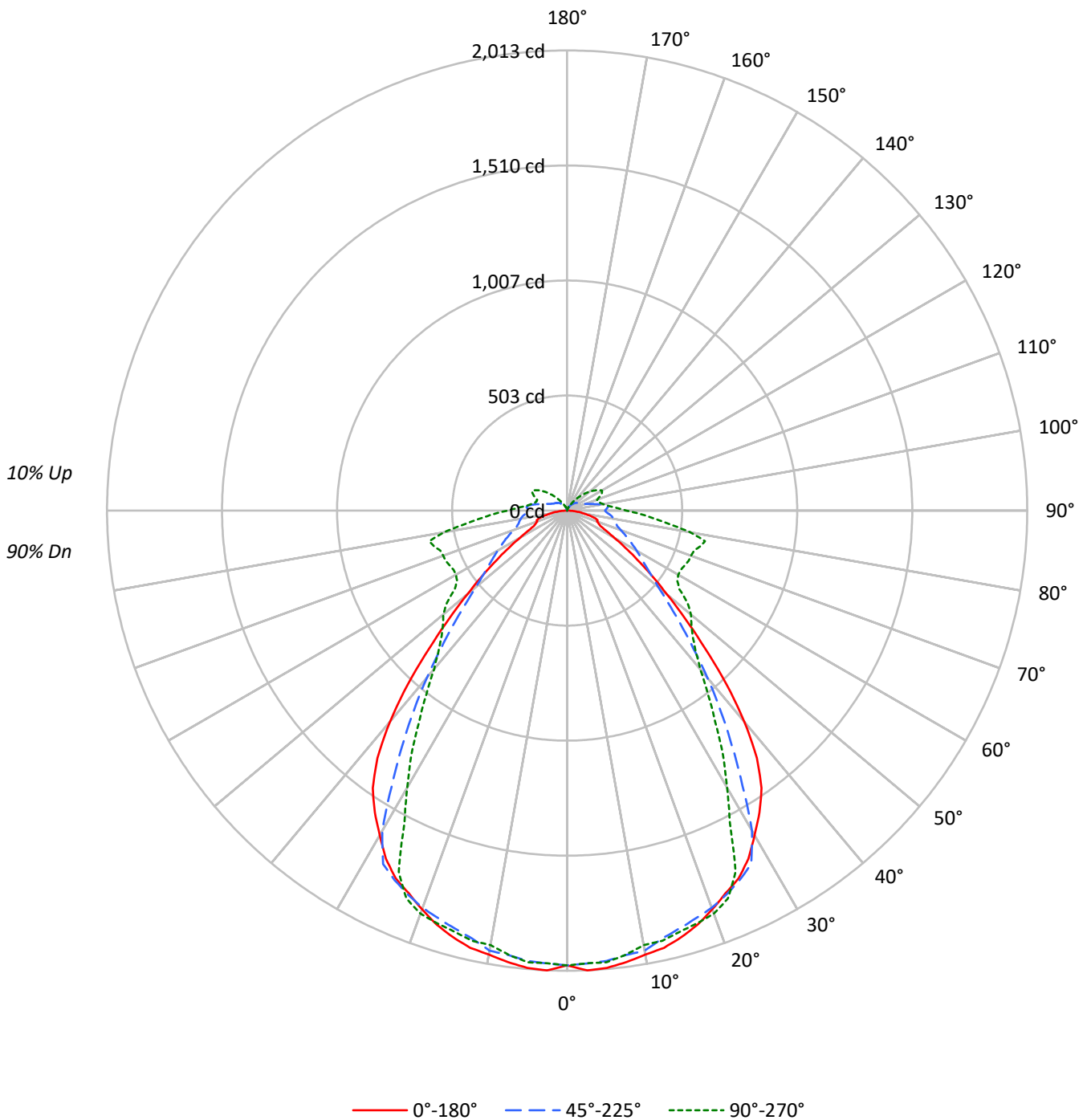
Lumens per Lamp: N/A
Luminaire Lumens: 4696.0 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.09 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 44.5
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	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°	18073	18073	18073
5°	18232	17336	17180
10°	18033	16679	16096
15°	17930	15857	15448
20°	17630	15313	14886
25°	17388	14732	13652
30°	16720	13413	10896
35°	15890	10557	8827
40°	13728	8165	7137
45°	10436	6162	6232
50°	7579	4750	5821
55°	5531	3993	5114
60°	3976	3552	5002
65°	3135	3211	5329
70°	3262	2931	5783
75°	3716	2848	6532
80°	2983	2990	6489
85°	2104	3091	4974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.8	4.0
10°-20°	540.1	11.5
20°-30°	804.3	17.1
30°-40°	804.0	17.1
40°-50°	585.2	12.5
50°-60°	416.0	8.9
60°-70°	348.2	7.4
70°-80°	318.3	6.8
80°-90°	235.1	5.0
90°-100°	142.2	3.0
100°-110°	100.5	2.1
110°-120°	86.5	1.8
120°-130°	63.0	1.3
130°-140°	37.3	0.8
140°-150°	18.6	0.4
150°-160°	6.8	0.1
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	1533.1	32.6
0°-40°	2337.1	49.8
0°-60°	3338.3	71.1
0°-90°	4239.9	90.3
90°-120°	329.1	7.0
90°-150°	448.1	9.5
90°-180°	456.0	9.7
0°-180°	4696.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1990	1990	1990	1990	1990	
5°	2008	1994	1978	1988	1983	190
15°	1932	1920	1894	1911	1907	544
25°	1775	1755	1784	1795	1743	813
35°	1482	1475	1258	1160	1130	911
45°	852	751	700	724	776	665
55°	374	382	418	537	600	343
65°	161	234	296	505	567	171
75°	125	131	220	488	603	124
85°	32	70	185	403	375	36
90°	1	41	166	277	258	2
95°	0	40	179	205	196	0
105°	0	38	111	147	143	0
115°	0	34	71	168	164	0
125°	1	28	58	116	155	1
135°	1	22	46	72	100	1
145°	1	16	32	44	50	1
155°	1	9	16	20	21	1
165°	1	3	6	3	6	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°	1989.5	1989.5	1989.5	1989.5	1989.5
2.5°	2013.4	2001.4	1982.9	1988.4	1981.8
5°	2008.0	1993.8	1977.5	1988.4	1982.9
7.5°	1991.6	1990.5	1961.1	1973.1	1960.0
10°	1972.0	1978.5	1954.6	1953.5	1929.5
12.5°	1958.9	1949.1	1917.5	1938.2	1927.3
15°	1931.7	1919.7	1893.5	1911.0	1906.6
17.5°	1899.0	1888.1	1870.6	1881.5	1892.4
20°	1856.5	1847.7	1848.8	1877.2	1876.1
22.5°	1811.8	1813.9	1818.3	1848.8	1836.8
25°	1774.7	1755.1	1784.5	1795.4	1743.1
27.5°	1716.9	1710.4	1743.1	1625.4	1541.4
30°	1639.5	1649.3	1617.7	1443.3	1398.6
32.5°	1565.4	1579.6	1428.0	1302.7	1267.8
35°	1482.5	1474.9	1258.0	1159.9	1130.4
37.5°	1363.7	1295.1	1102.1	1030.2	1011.6
40°	1205.7	1073.8	953.8	908.1	904.8
42.5°	1032.3	895.0	816.5	810.0	831.8
45°	852.5	751.1	699.9	723.8	776.2
47.5°	700.9	626.8	599.6	655.2	736.9
50°	567.9	524.3	520.0	608.3	706.4
52.5°	465.5	444.8	462.2	581.0	663.9
55°	373.9	381.5	417.5	537.4	599.6
57.5°	300.9	332.5	382.6	506.9	571.2
60°	237.6	292.1	351.0	496.0	561.4
62.5°	192.9	261.6	322.7	500.4	560.3
65°	161.3	234.4	296.5	504.7	566.9
67.5°	149.3	204.9	271.4	505.8	574.5
70°	139.5	176.6	249.6	505.8	576.7
72.5°	139.5	151.5	231.1	501.5	582.1
75°	125.4	130.8	220.2	488.4	602.8
77.5°	100.3	115.6	213.7	478.6	618.1
80°	73.0	101.4	206.0	494.9	546.1
82.5°	55.6	85.0	197.3	467.7	449.1
85°	31.6	69.8	185.3	403.3	375.0
87.5°	14.2	53.4	172.2	332.5	315.0
90°	1.1	41.4	165.7	276.9	258.4
92.5°	0.0	39.2	172.2	232.2	223.5
95°	0.0	40.3	178.8	204.9	196.2
97.5°	0.0	40.3	170.1	183.1	174.4
100°	0.0	40.3	151.5	166.8	160.2
102.5°	0.0	39.2	129.7	153.7	150.4
105°	0.0	38.2	111.2	147.2	142.8
107.5°	0.0	38.2	97.0	151.5	139.5
110°	0.0	37.1	85.0	161.3	139.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	36.0	77.4	167.9	151.5
115°	0.0	33.8	70.9	167.9	163.5
117.5°	0.0	32.7	66.5	157.0	172.2
120°	0.0	31.6	63.2	143.9	175.5
122.5°	1.1	29.4	61.0	129.7	165.7
125°	1.1	28.3	57.8	115.6	154.8
127.5°	1.1	26.2	55.6	103.6	142.8
130°	1.1	25.1	52.3	91.6	128.6
132.5°	1.1	24.0	49.1	80.7	114.5
135°	1.1	21.8	45.8	71.9	100.3
137.5°	1.1	20.7	42.5	64.3	87.2
140°	1.1	19.6	39.2	56.7	73.0
142.5°	1.1	18.5	34.9	50.1	61.0
145°	1.1	16.4	31.6	43.6	50.1
147.5°	1.1	15.3	27.3	36.0	40.3
150°	1.1	13.1	24.0	30.5	31.6
152.5°	1.1	10.9	19.6	25.1	25.1
155°	1.1	8.7	16.4	19.6	20.7
157.5°	1.1	7.6	13.1	15.3	17.4
160°	1.1	6.5	9.8	10.9	14.2
162.5°	1.1	4.4	7.6	6.5	10.9
165°	1.1	3.3	5.5	3.3	6.5
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)