

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: P231905

Luminaire Tested: **FVS4M-2-LD4-35-1HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P231905
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-2-LD4-35-1HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
2FT LENGTH, 1-MODULE LED WITH PA187 LENS
Light Source: (42) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

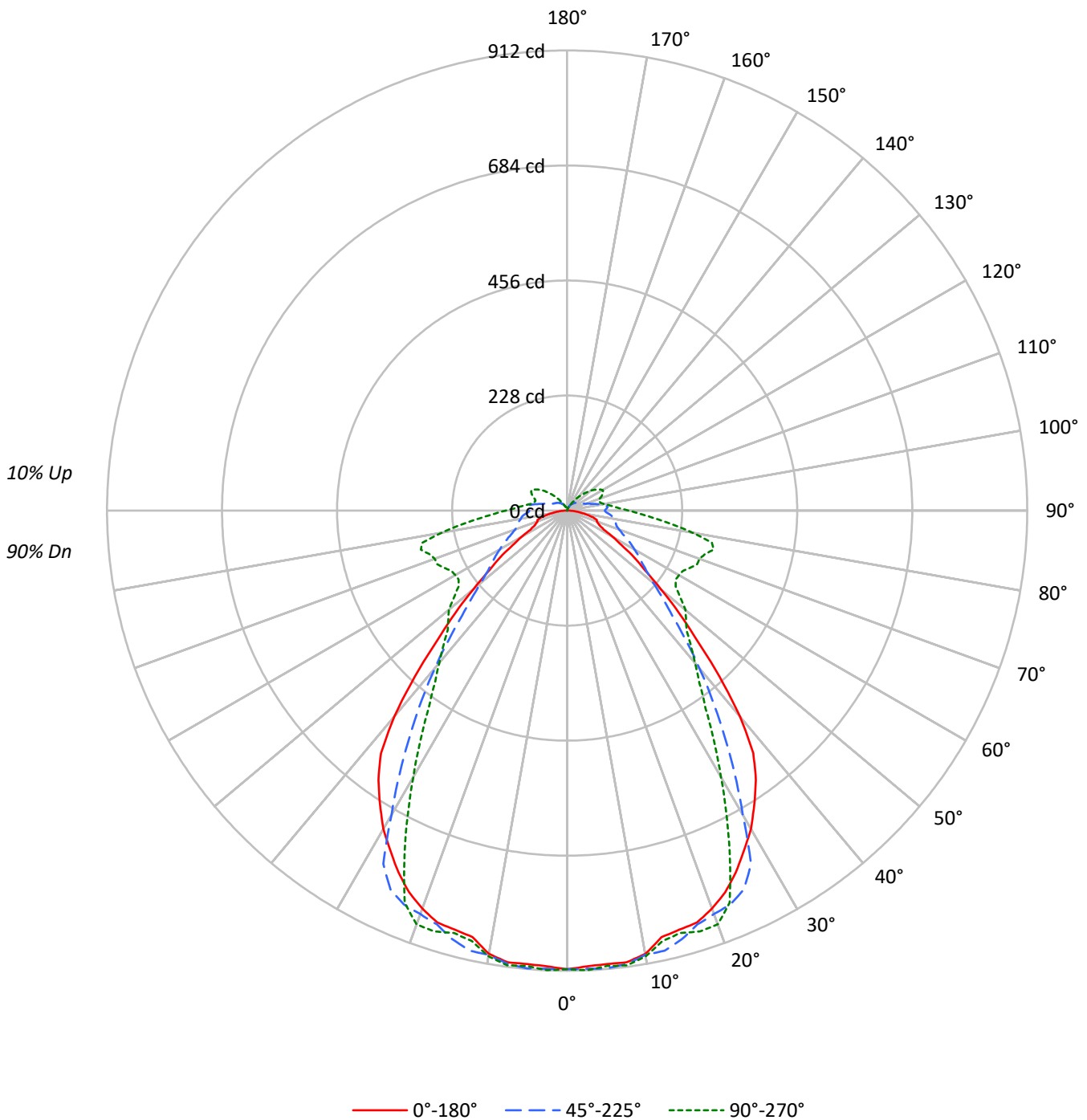
Lumens per Lamp: N/A
Luminaire Lumens: 2105.0 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.07 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 1.92' x H: 0.19')
CIE Type: Semi-Direct

Input Watts (W): 22.2
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

TEST NUMBER: P231905

CATALOG NUMBER: FVS4M-2-LD4-35-1HI-PA187-UNV-EDC1

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	50	30	10	50	30	10	0		
RCR																										
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	93	93	93	93	93	93	90		
1	106	101	96	92	102	97	93	90	91	88	85	86	83	81	81	78	77	77	77	77	77	77	77	74		
2	97	89	82	76	93	86	80	75	81	76	71	76	72	68	72	68	65	65	65	65	65	65	65	63		
3	89	79	71	65	86	77	69	64	72	66	61	68	63	59	64	60	57	57	57	57	57	57	57	54		
4	82	71	63	56	79	69	61	55	65	59	54	62	56	52	59	54	50	50	50	50	50	50	50	48		
5	76	64	56	50	74	63	55	49	59	53	47	56	51	46	54	49	45	45	45	45	45	45	45	42		
6	71	59	50	44	69	57	49	44	54	47	42	52	46	41	49	44	40	40	40	40	40	40	40	38		
7	66	54	45	40	64	52	45	39	50	43	38	48	42	37	46	40	36	36	36	36	36	36	36	34		
8	62	49	41	36	60	48	41	36	46	39	35	44	38	34	42	37	33	33	33	33	33	33	33	31		
9	58	46	38	33	56	45	37	32	43	36	32	41	35	31	39	34	30	30	30	30	30	30	30	29		
10	55	42	35	30	53	42	35	30	40	34	29	38	33	29	37	32	28	28	28	28	28	28	28	26		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16334	16334	16334
5°	16134	15751	15527
10°	16005	15012	14804
15°	15588	14451	13892
20°	15497	13797	13697
25°	15004	13355	11834
30°	14309	11242	9398
35°	13387	8841	7392
40°	11542	6767	6149
45°	8420	5005	5310
50°	6064	3919	4987
55°	4476	3334	4434
60°	3224	2982	4510
65°	2517	2673	4995
70°	2597	2449	5543
75°	2742	2444	6431
80°	2157	2537	5923
85°	1431	2618	4553



TEST NUMBER: P231905

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	4.1
10°-20°	247.5	11.8
20°-30°	362.8	17.2
30°-40°	348.8	16.6
40°-50°	250.0	11.9
50°-60°	181.1	8.6
60°-70°	158.2	7.5
70°-80°	148.7	7.1
80°-90°	108.9	5.2
90°-100°	65.7	3.1
100°-110°	46.8	2.2
110°-120°	40.1	1.9
120°-130°	29.4	1.4
130°-140°	17.7	0.8
140°-150°	9.1	0.4
150°-160°	3.5	0.2
160°-170°	0.7	0.0
170°-180°	0.0	0.0
0°-30°	696.3	33.1
0°-40°	1045.2	49.7
0°-60°	1476.2	70.1
0°-90°	1891.9	89.9
90°-120°	152.6	7.3
90°-150°	208.9	9.9
90°-180°	213.0	10.1
0°-180°	2105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	909	909	909	909	909	
5°	902	909	911	904	906	86
15°	860	881	879	887	867	244
25°	791	801	828	788	764	363
35°	652	646	542	495	478	403
45°	364	320	294	306	334	287
55°	163	167	181	230	263	146
65°	72	103	129	233	269	75
75°	54	58	100	230	300	54
85°	15	31	84	189	174	16
90°	0	18	74	128	122	1
95°	0	18	80	98	92	0
105°	0	18	51	71	67	0
115°	0	16	32	78	78	0
125°	0	13	26	55	73	0
135°	0	11	22	34	48	0
145°	0	9	17	20	24	0
155°	0	5	9	11	10	0
165°	0	2	3	3	4	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231905

CATALOG NUMBER: FVS4M-2-LD4-35-1HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	908.9	908.9	908.9	908.9	908.9
2.5°	904.0	906.9	908.9	909.8	911.8
5°	902.0	908.9	910.8	904.0	905.9
7.5°	903.0	902.0	905.9	903.0	908.9
10°	892.2	886.3	894.2	881.4	897.1
12.5°	865.7	888.3	893.2	884.3	873.6
15°	859.8	881.4	879.4	887.3	866.7
17.5°	855.9	859.8	859.8	878.5	874.5
20°	839.2	839.2	851.0	869.6	872.6
22.5°	818.7	817.7	845.1	848.1	841.2
25°	791.2	801.0	828.5	788.3	763.8
27.5°	758.9	776.5	789.2	708.9	685.3
30°	728.5	747.1	696.1	642.2	609.8
32.5°	690.2	713.8	617.7	560.8	541.2
35°	652.0	646.1	542.2	495.1	478.5
37.5°	605.9	546.1	472.6	438.3	430.4
40°	532.4	456.9	407.9	386.3	394.1
42.5°	447.1	378.4	347.1	346.1	362.8
45°	363.7	319.6	294.1	305.9	334.3
47.5°	301.0	268.6	255.9	276.5	319.6
50°	242.2	225.5	222.6	261.8	305.9
52.5°	194.1	192.2	199.0	251.0	282.4
55°	162.8	166.7	181.4	230.4	262.8
57.5°	127.5	146.1	168.6	224.5	254.9
60°	104.9	130.4	153.9	227.5	255.9
62.5°	82.4	115.7	142.2	230.4	258.8
65°	71.6	102.9	129.4	233.3	268.6
67.5°	66.7	90.2	117.7	234.3	278.4
70°	62.7	77.5	109.8	234.3	279.4
72.5°	61.8	66.7	102.9	233.3	286.3
75°	53.9	57.8	100.0	230.4	300.0
77.5°	43.1	52.0	98.0	230.4	294.1
80°	32.4	45.1	93.1	243.1	252.0
82.5°	23.5	38.2	90.2	220.6	210.8
85°	14.7	31.4	84.3	189.2	173.5
87.5°	5.9	23.5	77.5	154.9	143.1
90°	0.0	17.6	74.5	127.5	121.6
92.5°	0.0	17.6	77.5	109.8	103.9
95°	0.0	17.6	80.4	98.0	92.2
97.5°	0.0	17.6	77.5	86.3	83.3
100°	0.0	17.6	69.6	77.5	74.5
102.5°	0.0	17.6	59.8	72.6	68.6
105°	0.0	17.6	51.0	70.6	66.7
107.5°	0.0	16.7	45.1	72.6	65.7
110°	0.0	16.7	39.2	75.5	68.6



TEST NUMBER: P231905

CATALOG NUMBER: FVS4M-2-LD4-35-1HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	15.7	35.3	77.5	73.5
115°	0.0	15.7	32.4	77.5	77.5
117.5°	0.0	14.7	30.4	72.6	80.4
120°	0.0	14.7	28.4	67.6	81.4
122.5°	0.0	13.7	27.5	61.8	77.5
125°	0.0	12.7	26.5	54.9	72.6
127.5°	0.0	12.7	25.5	49.0	67.6
130°	0.0	11.8	23.5	43.1	61.8
132.5°	0.0	11.8	22.5	38.2	53.9
135°	0.0	10.8	21.6	34.3	48.0
137.5°	0.0	10.8	19.6	30.4	41.2
140°	0.0	10.8	19.6	26.5	35.3
142.5°	0.0	9.8	17.6	23.5	29.4
145°	0.0	8.8	16.7	19.6	23.5
147.5°	0.0	7.8	14.7	17.6	18.6
150°	0.0	6.9	12.7	14.7	14.7
152.5°	0.0	5.9	10.8	12.7	11.8
155°	0.0	4.9	8.8	10.8	9.8
157.5°	0.0	3.9	6.9	8.8	7.8
160°	0.0	2.9	5.9	6.9	6.9
162.5°	0.0	2.0	3.9	4.9	5.9
165°	0.0	2.0	2.9	2.9	3.9
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)