

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: P232009

Luminaire Tested: **FVS4M-4-LD4-35-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232009
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-LD4-35-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

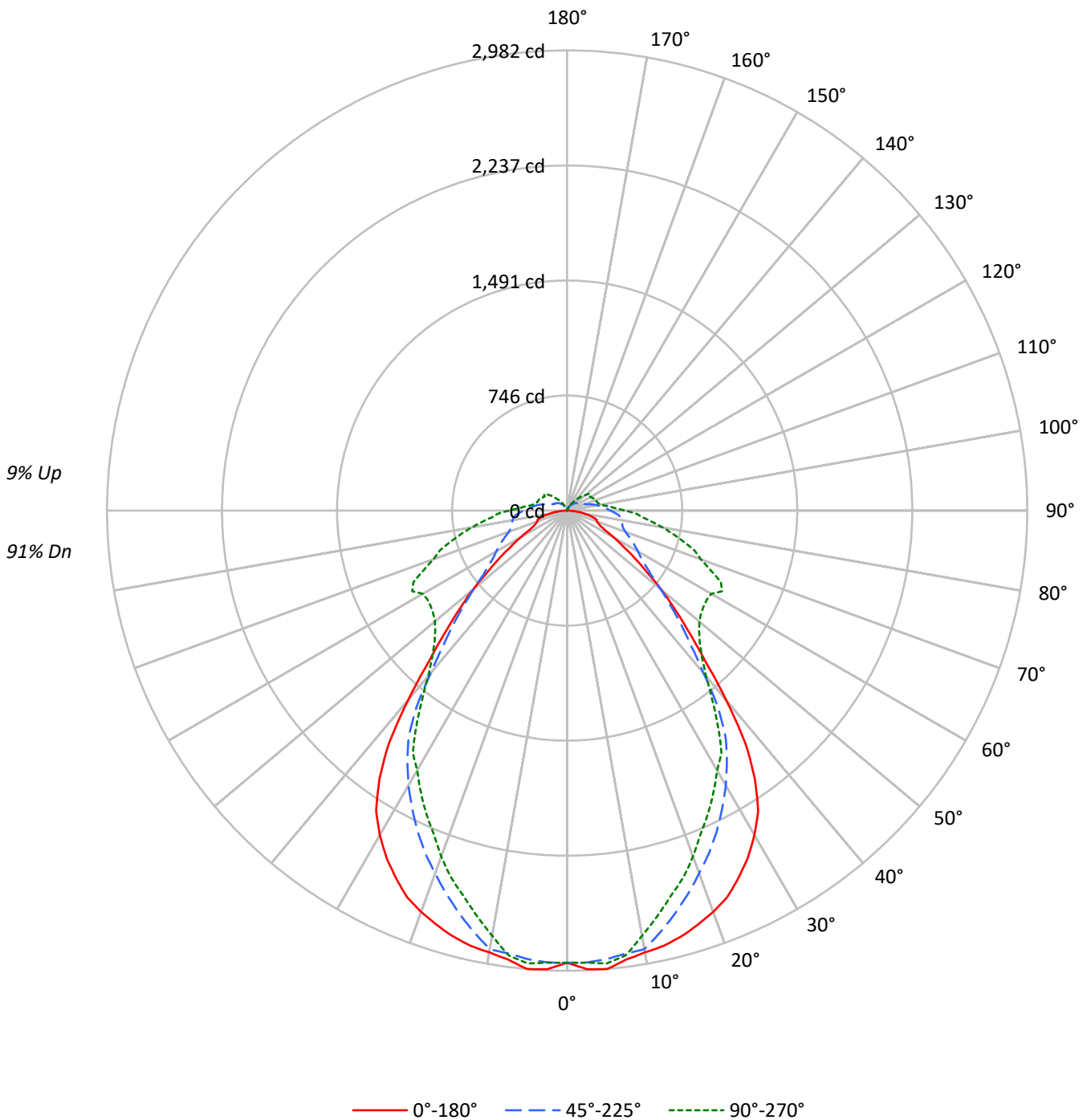
Lumens per Lamp: N/A
Luminaire Lumens: 6791.0 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.02 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 67.5
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	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°	26613	26613	26613
5°	27076	25577	25522
10°	26584	24628	23342
15°	26518	22630	20967
20°	26282	20720	18927
25°	25733	18934	16940
30°	24756	17044	15137
35°	22726	15025	13302
40°	18238	11766	11045
45°	13699	9191	9761
50°	10609	7201	9207
55°	7848	5922	9207
60°	5896	5368	9610
65°	4653	5020	10329
70°	4789	4724	9232
75°	5304	4785	8482
80°	4445	5218	7452
85°	3223	5553	6480



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.7	4.1
10°-20°	766.2	11.3
20°-30°	1073.5	15.8
30°-40°	1131.5	16.7
40°-50°	859.4	12.7
50°-60°	649.2	9.6
60°-70°	601.7	8.9
70°-80°	485.3	7.1
80°-90°	325.7	4.8
90°-100°	201.3	3.0
100°-110°	141.5	2.1
110°-120°	106.9	1.6
120°-130°	82.1	1.2
130°-140°	50.4	0.7
140°-150°	25.8	0.4
150°-160°	9.7	0.1
160°-170°	2.0	0.0
170°-180°	0.0	0.0
0°-30°	2118.4	31.2
0°-40°	3249.9	47.9
0°-60°	4758.6	70.1
0°-90°	6171.3	90.9
90°-120°	449.7	6.6
90°-150°	608.0	9.0
90°-180°	620.0	9.1
0°-180°	6791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2930	2930	2930	2930	2930	
5°	2982	2956	2918	2942	2946	281
15°	2857	2847	2702	2635	2588	806
25°	2626	2454	2294	2202	2163	1207
35°	2120	1932	1790	1705	1703	1299
45°	1119	1081	1044	1100	1216	880
55°	530	549	619	875	1080	484
65°	239	337	464	970	1099	251
75°	179	196	370	776	783	181
85°	48	110	333	480	488	53
90°	2	64	280	383	374	4
95°	2	59	233	291	280	1
105°	2	56	157	218	203	2
115°	2	50	99	181	188	2
125°	2	42	84	151	182	1
135°	2	31	65	96	128	2
145°	2	23	46	58	66	2
155°	3	14	24	27	27	1
165°	3	6	10	6	10	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°	2929.6	2929.6	2929.6	2929.6	2929.6
2.5°	2974.7	2961.8	2931.2	2938.5	2932.0
5°	2982.0	2956.2	2917.5	2942.5	2945.7
7.5°	2934.4	2942.5	2895.7	2914.3	2907.0
10°	2907.0	2924.0	2886.1	2848.2	2798.2
12.5°	2889.3	2886.9	2796.6	2741.0	2693.4
15°	2857.0	2847.4	2702.3	2635.4	2587.8
17.5°	2814.3	2778.8	2603.9	2521.7	2496.7
20°	2767.6	2670.0	2501.5	2416.1	2385.4
22.5°	2711.1	2568.4	2402.4	2313.7	2262.9
25°	2626.5	2454.0	2293.5	2202.4	2162.9
27.5°	2535.4	2334.7	2175.0	2088.0	2054.9
30°	2427.4	2209.7	2055.7	1987.2	1942.9
32.5°	2304.0	2079.9	1925.9	1859.8	1861.4
35°	2120.2	1932.4	1790.5	1705.0	1703.4
37.5°	1894.5	1741.3	1605.1	1547.8	1543.8
40°	1601.8	1536.5	1374.5	1398.7	1400.3
42.5°	1323.7	1285.8	1189.9	1224.6	1293.9
45°	1119.0	1081.1	1044.0	1099.6	1215.7
47.5°	948.0	894.0	903.7	1005.3	1159.3
50°	794.9	757.8	788.4	938.4	1117.3
52.5°	642.5	639.3	686.0	895.6	1094.0
55°	530.5	549.0	619.1	874.7	1079.5
57.5°	428.1	473.2	566.7	877.9	1073.8
60°	352.3	416.8	530.5	906.9	1078.6
62.5°	280.5	374.1	494.2	934.3	1131.9
65°	239.4	337.0	463.5	969.8	1098.8
67.5°	218.5	300.7	429.7	1027.9	1004.5
70°	204.8	262.0	402.3	981.1	920.6
72.5°	202.3	225.7	381.3	886.0	866.6
75°	179.0	195.9	370.0	776.3	782.8
77.5°	147.5	174.9	364.4	686.0	703.0
80°	108.8	154.0	359.5	609.5	627.2
82.5°	82.2	130.6	350.7	544.2	552.2
85°	48.4	109.6	332.9	480.5	488.5
87.5°	23.4	82.2	308.0	416.0	448.2
90°	2.4	64.5	279.7	382.9	374.1
92.5°	2.4	59.7	256.4	331.3	318.4
95°	1.6	58.8	233.0	291.0	279.7
97.5°	1.6	58.8	216.1	259.6	245.9
100°	1.6	58.0	198.3	238.6	223.3
102.5°	1.6	57.2	179.0	224.9	209.6
105°	1.6	55.6	157.2	217.7	203.2
107.5°	1.6	54.8	134.6	210.4	199.1
110°	1.6	53.2	119.3	198.3	196.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	51.6	106.4	188.6	195.9
115°	1.6	50.0	99.2	180.6	187.8
117.5°	1.6	48.4	94.3	179.0	180.6
120°	1.6	46.0	91.1	182.2	174.9
122.5°	1.6	43.5	87.1	170.1	173.3
125°	1.6	41.9	83.8	150.8	182.2
127.5°	1.6	38.7	79.8	134.6	179.0
130°	1.6	36.3	75.0	120.9	159.6
132.5°	1.6	33.9	70.9	107.2	143.5
135°	2.4	31.4	65.3	95.9	128.2
137.5°	2.4	29.8	60.5	85.5	111.3
140°	2.4	27.4	56.4	75.8	95.9
142.5°	2.4	25.8	51.6	66.9	80.6
145°	2.4	23.4	46.0	58.0	66.1
147.5°	2.4	21.8	41.1	49.2	52.4
150°	2.4	18.5	35.5	41.9	41.1
152.5°	2.4	16.1	29.8	33.1	33.9
155°	3.2	13.7	24.2	26.6	27.4
157.5°	2.4	11.3	20.2	21.0	23.4
160°	3.2	9.7	16.9	15.3	20.2
162.5°	3.2	7.3	14.5	10.5	16.1
165°	3.2	5.6	10.5	5.6	9.7
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)