

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: P232082

Luminaire Tested: **FVS4M-3-LD4-40-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232082
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-30)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-3-LD4-40-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

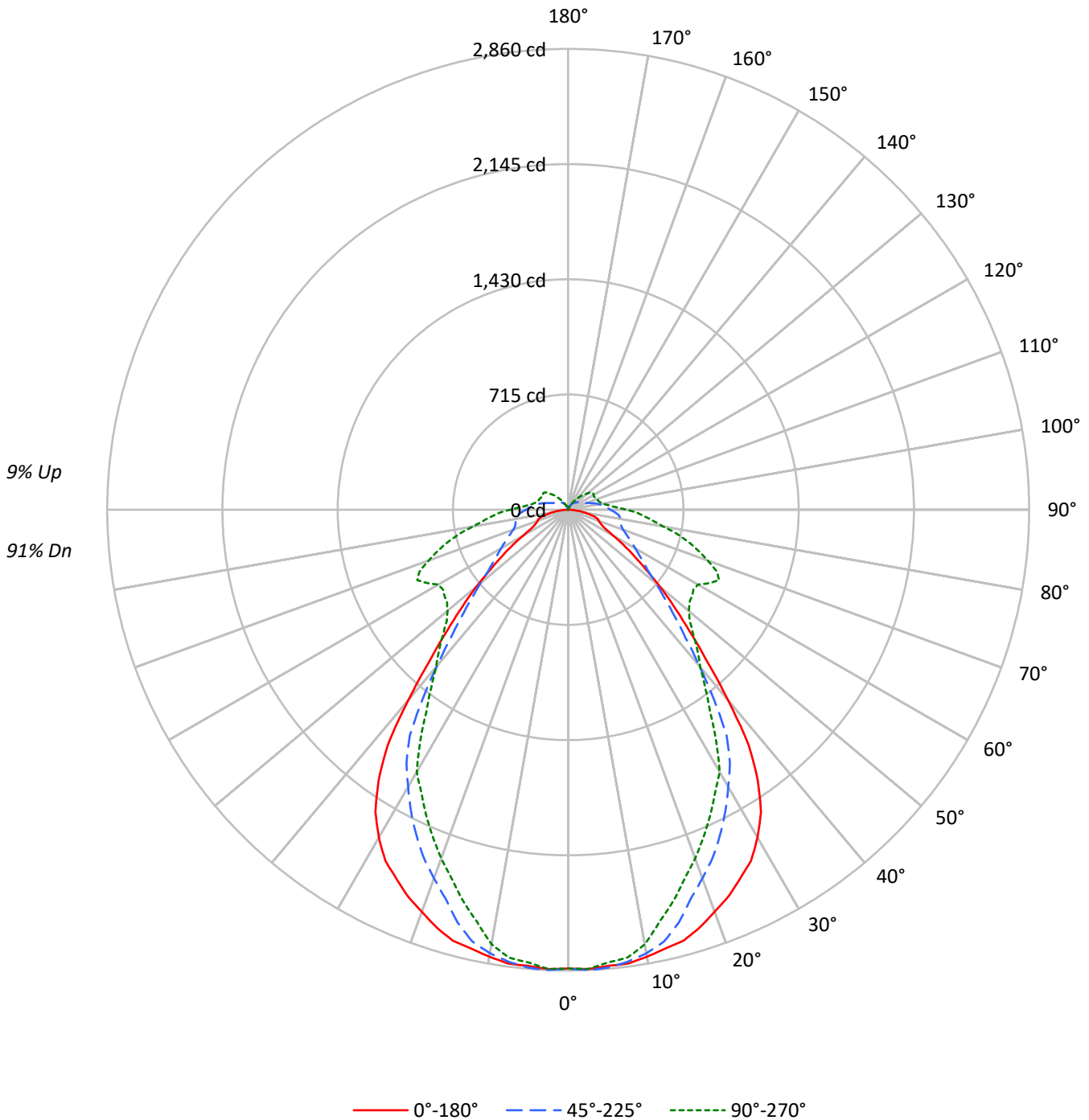
Lumens per Lamp: N/A
Luminaire Lumens: 6420.0 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.01 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 64
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	91
1	106	101	96	92	102	98	94	90	92	88	85	86	84	81	81	79	77	74
2	97	89	82	76	93	86	80	75	81	76	71	76	72	68	72	69	65	63
3	89	79	71	65	86	76	69	63	72	66	61	68	63	59	64	60	57	54
4	82	71	62	56	79	69	61	55	65	58	53	62	56	51	58	54	50	47
5	76	64	55	49	73	62	54	48	59	52	47	56	50	46	53	48	44	42
6	71	58	50	44	68	57	49	43	54	47	42	51	45	41	49	44	40	38
7	66	53	45	39	64	52	44	39	50	43	38	47	41	37	45	40	36	34
8	62	49	41	35	60	48	40	35	46	39	34	44	38	33	42	37	33	31
9	58	45	37	32	56	44	37	32	42	36	31	41	35	31	39	34	30	28
10	55	42	35	30	53	41	34	29	40	33	29	38	32	28	37	31	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33624	33624	33624
5°	33499	32483	31770
10°	33401	30952	29702
15°	33273	28807	26510
20°	32609	26127	23748
25°	31935	23825	21266
30°	30887	21303	19026
35°	28283	18578	15588
40°	22541	13977	13064
45°	16639	10579	11471
50°	12647	8374	10465
55°	9393	7008	10384
60°	6920	6259	10762
65°	5700	5772	12632
70°	5896	5448	11994
75°	6212	5610	10853
80°	5118	6079	9223
85°	3655	6538	8192



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.8	4.2
10°-20°	743.0	11.6
20°-30°	1038.8	16.2
30°-40°	1070.3	16.7
40°-50°	784.2	12.2
50°-60°	584.4	9.1
60°-70°	548.7	8.5
70°-80°	464.4	7.2
80°-90°	309.7	4.8
90°-100°	194.0	3.0
100°-110°	136.7	2.1
110°-120°	105.1	1.6
120°-130°	82.0	1.3
130°-140°	49.9	0.8
140°-150°	26.2	0.4
150°-160°	10.4	0.2
160°-170°	2.2	0.0
170°-180°	0.0	0.0
0°-30°	2051.7	32.0
0°-40°	3121.9	48.6
0°-60°	4490.5	69.9
0°-90°	5813.4	90.6
90°-120°	435.9	6.8
90°-150°	594.0	9.3
90°-180°	607.0	9.5
0°-180°	6420.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2847	2847	2847	2847	2847	
5°	2842	2857	2853	2838	2821	271
15°	2768	2744	2653	2543	2517	778
25°	2524	2379	2229	2127	2089	1163
35°	2050	1849	1712	1572	1536	1256
45°	1060	992	931	993	1099	837
55°	498	514	569	763	936	454
65°	232	320	415	861	1034	241
75°	169	181	338	762	770	171
85°	47	101	307	465	475	50
90°	1	57	260	365	359	3
95°	0	54	228	286	265	0
105°	0	52	156	206	197	0
115°	0	49	98	182	182	0
125°	0	40	79	156	184	0
135°	1	32	63	94	128	1
145°	1	25	48	57	68	1
155°	1	15	27	30	28	1
165°	2	6	12	8	12	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°	2847.2	2847.2	2847.2	2847.2	2847.2
2.5°	2853.6	2854.5	2860.0	2859.1	2852.7
5°	2841.7	2857.2	2852.7	2838.0	2820.6
7.5°	2840.7	2832.5	2829.7	2816.9	2804.0
10°	2816.9	2816.0	2794.9	2767.4	2738.9
12.5°	2789.4	2794.0	2745.3	2656.4	2618.8
15°	2768.3	2744.4	2652.7	2542.6	2516.9
17.5°	2717.8	2679.3	2530.7	2449.1	2400.5
20°	2655.4	2593.1	2434.4	2349.1	2302.3
22.5°	2598.6	2484.8	2339.9	2247.3	2195.9
25°	2524.3	2379.4	2228.9	2127.1	2088.6
27.5°	2456.4	2256.4	2111.5	2016.1	1974.8
30°	2349.1	2130.8	1985.9	1915.2	1878.5
32.5°	2226.2	1998.7	1867.5	1785.0	1710.7
35°	2050.1	1849.2	1712.5	1572.2	1535.5
37.5°	1837.3	1672.2	1485.0	1412.6	1397.9
40°	1541.0	1427.2	1264.0	1247.5	1274.1
42.5°	1273.1	1181.4	1077.8	1111.7	1187.8
45°	1060.3	992.5	931.0	993.4	1098.9
47.5°	889.7	843.9	807.2	894.3	1021.8
50°	741.1	702.6	710.9	830.1	976.9
52.5°	603.6	597.1	624.6	784.3	947.5
55°	498.1	513.7	568.7	763.2	936.5
57.5°	405.4	451.3	521.9	768.7	921.8
60°	325.6	400.8	480.6	792.5	929.2
62.5°	264.2	355.9	445.8	826.4	986.0
65°	232.1	320.1	414.6	861.3	1033.7
67.5°	213.7	280.7	386.2	895.2	997.1
70°	200.9	244.0	361.4	931.0	920.0
72.5°	194.5	209.1	345.8	863.1	846.6
75°	168.8	180.7	338.5	762.2	770.5
77.5°	134.8	164.2	333.9	676.0	689.8
80°	102.7	144.9	327.5	597.1	597.1
82.5°	76.1	124.7	322.0	531.1	532.9
85°	46.8	100.9	307.3	465.0	475.1
87.5°	20.2	76.1	283.4	405.4	425.6
90°	0.9	56.9	260.5	365.1	358.6
92.5°	0.0	55.0	244.9	326.5	306.4
95°	0.0	54.1	227.5	286.2	265.1
97.5°	0.0	54.1	210.1	255.9	237.6
100°	0.0	53.2	194.5	231.1	219.2
102.5°	0.0	52.3	177.0	216.5	206.4
105°	0.0	52.3	155.9	206.4	197.2
107.5°	0.0	51.4	136.7	197.2	193.5
110°	0.0	51.4	120.2	188.0	190.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	49.5	106.4	182.5	188.0
115°	0.0	48.6	98.1	181.6	181.6
117.5°	0.0	46.8	91.7	183.5	179.8
120°	0.0	44.9	86.2	183.5	181.6
122.5°	0.0	43.1	82.6	174.3	185.3
125°	0.0	40.4	78.9	155.9	184.4
127.5°	0.0	38.5	75.2	138.5	176.1
130°	0.0	35.8	71.5	122.9	158.7
132.5°	0.9	33.9	67.0	108.2	143.1
135°	0.9	32.1	63.3	94.5	128.4
137.5°	0.9	30.3	59.6	84.4	111.9
140°	0.9	29.4	56.9	75.2	96.3
142.5°	0.9	27.5	53.2	66.0	80.7
145°	0.9	24.8	47.7	56.9	67.9
147.5°	0.9	22.9	43.1	49.5	55.0
150°	0.9	20.2	37.6	43.1	44.0
152.5°	0.9	17.4	32.1	36.7	34.9
155°	0.9	14.7	26.6	30.3	28.4
157.5°	1.8	12.8	22.0	23.8	22.9
160°	1.8	11.0	18.3	18.3	19.3
162.5°	1.8	9.2	14.7	12.8	16.5
165°	1.8	6.4	11.9	8.3	11.9
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)