

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: P232086

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232086
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-LD4-40-2HI-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

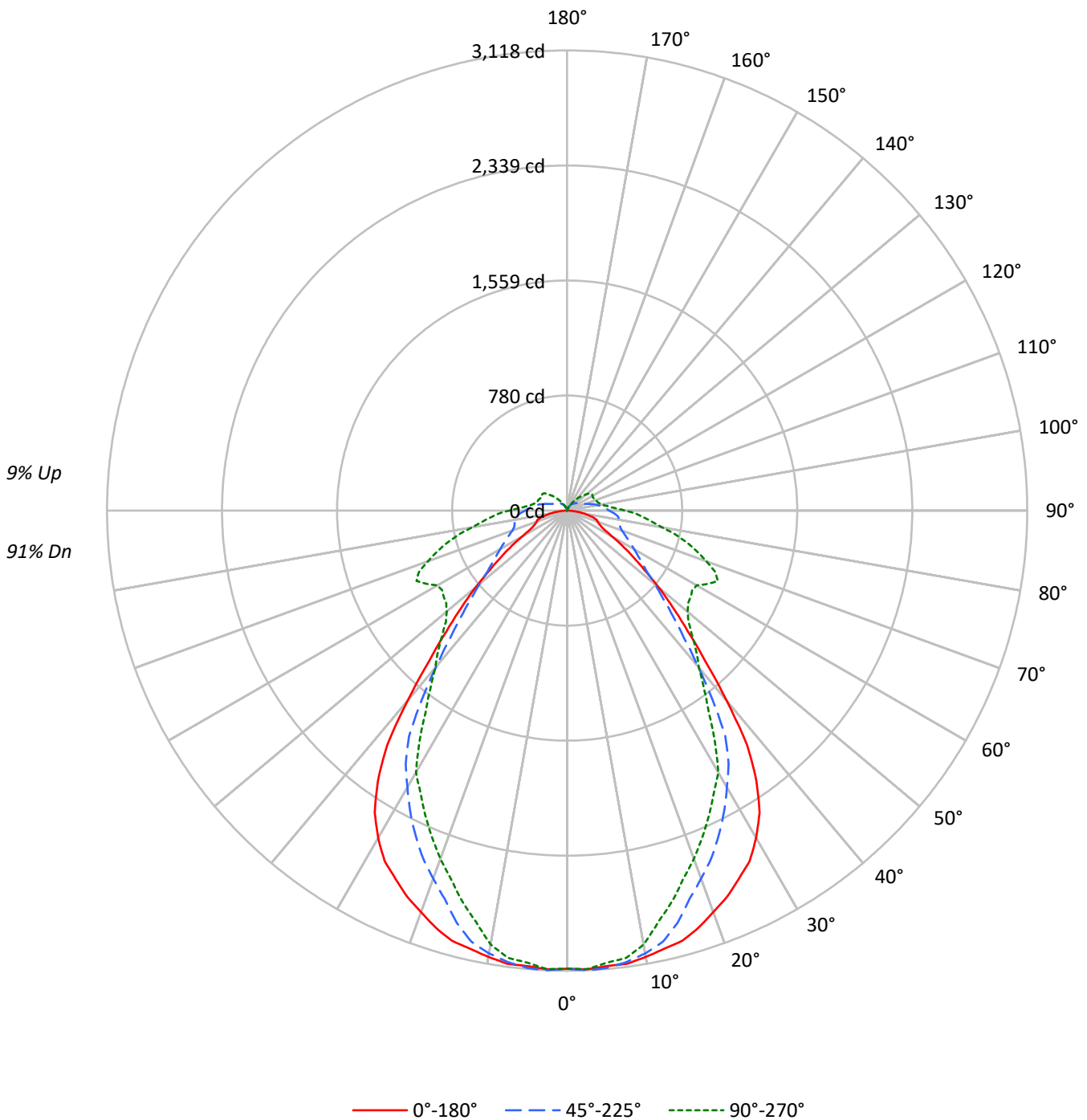
Lumens per Lamp: N/A
Luminaire Lumens: 6999.1 lumens
Efficiency: N/A
Efficacy: 97.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.01 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 2.92' x H: 0.19')
CIE Type: Direct

Input Watts (W): 71.7
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	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°	36656	36656	36656
5°	36519	35412	34634
10°	36413	33743	32380
15°	36272	31404	28901
20°	35550	28483	25889
25°	34815	25973	23183
30°	33672	23225	20742
35°	30834	20254	16994
40°	24574	15238	14243
45°	18140	11534	12505
50°	13789	9129	11409
55°	10240	7640	11321
60°	7545	6824	11733
65°	6213	6292	13772
70°	6427	5939	13076
75°	6771	6116	11832
80°	5582	6627	10056
85°	3983	7127	8932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.2	4.2
10°-20°	810.0	11.6
20°-30°	1132.5	16.2
30°-40°	1166.8	16.7
40°-50°	855.0	12.2
50°-60°	637.1	9.1
60°-70°	598.2	8.5
70°-80°	506.3	7.2
80°-90°	337.7	4.8
90°-100°	211.5	3.0
100°-110°	149.1	2.1
110°-120°	114.6	1.6
120°-130°	89.3	1.3
130°-140°	54.4	0.8
140°-150°	28.6	0.4
150°-160°	11.4	0.2
160°-170°	2.4	0.0
170°-180°	0.0	0.0
0°-30°	2236.7	32.0
0°-40°	3403.5	48.6
0°-60°	4895.5	69.9
0°-90°	6337.7	90.6
90°-120°	475.2	6.8
90°-150°	647.6	9.3
90°-180°	661.0	9.4
0°-180°	6999.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3104	3104	3104	3104	3104	
5°	3098	3115	3110	3094	3075	295
15°	3018	2992	2892	2772	2744	848
25°	2752	2594	2430	2319	2277	1267
35°	2235	2016	1867	1714	1674	1369
45°	1156	1082	1015	1083	1198	912
55°	543	560	620	832	1021	495
65°	253	349	452	939	1127	262
75°	184	197	369	831	840	187
85°	51	110	335	507	518	55
90°	1	62	284	398	391	3
95°	0	59	248	312	289	0
105°	0	57	170	225	215	0
115°	0	53	107	198	198	0
125°	0	44	86	170	201	0
135°	1	35	69	103	140	1
145°	1	27	52	62	74	1
155°	1	16	29	33	31	1
165°	2	7	13	9	13	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°	3103.9	3103.9	3103.9	3103.9	3103.9
2.5°	3110.9	3111.9	3117.9	3116.9	3109.9
5°	3097.9	3114.9	3109.9	3093.9	3074.9
7.5°	3096.9	3087.9	3084.9	3070.9	3056.9
10°	3070.9	3069.9	3046.9	3016.9	2985.9
12.5°	3040.9	3045.9	2992.9	2895.9	2854.9
15°	3017.9	2991.9	2891.9	2771.9	2743.9
17.5°	2962.9	2920.9	2758.9	2669.9	2616.9
20°	2894.9	2826.9	2653.9	2560.9	2509.9
22.5°	2832.9	2708.9	2550.9	2449.9	2393.9
25°	2751.9	2593.9	2429.9	2318.9	2276.9
27.5°	2677.9	2459.9	2301.9	2198.0	2153.0
30°	2560.9	2322.9	2165.0	2088.0	2048.0
32.5°	2426.9	2179.0	2036.0	1946.0	1865.0
35°	2235.0	2016.0	1867.0	1714.0	1674.0
37.5°	2003.0	1823.0	1619.0	1540.0	1524.0
40°	1680.0	1556.0	1378.0	1360.0	1389.0
42.5°	1388.0	1288.0	1175.0	1212.0	1295.0
45°	1156.0	1082.0	1015.0	1083.0	1198.0
47.5°	970.0	920.0	880.0	975.0	1114.0
50°	808.0	766.0	775.0	905.0	1065.0
52.5°	658.0	651.0	681.0	855.0	1033.0
55°	543.0	560.0	620.0	832.0	1021.0
57.5°	442.0	492.0	569.0	838.0	1005.0
60°	355.0	437.0	524.0	864.0	1013.0
62.5°	288.0	388.0	486.0	901.0	1075.0
65°	253.0	349.0	452.0	939.0	1127.0
67.5°	233.0	306.0	421.0	976.0	1087.0
70°	219.0	266.0	394.0	1015.0	1003.0
72.5°	212.0	228.0	377.0	941.0	923.0
75°	184.0	197.0	369.0	831.0	840.0
77.5°	147.0	179.0	364.0	737.0	752.0
80°	112.0	158.0	357.0	651.0	651.0
82.5°	83.0	136.0	351.0	579.0	581.0
85°	51.0	110.0	335.0	507.0	518.0
87.5°	22.0	83.0	309.0	442.0	464.0
90°	1.0	62.0	284.0	398.0	391.0
92.5°	0.0	60.0	267.0	356.0	334.0
95°	0.0	59.0	248.0	312.0	289.0
97.5°	0.0	59.0	229.0	279.0	259.0
100°	0.0	58.0	212.0	252.0	239.0
102.5°	0.0	57.0	193.0	236.0	225.0
105°	0.0	57.0	170.0	225.0	215.0
107.5°	0.0	56.0	149.0	215.0	211.0
110°	0.0	56.0	131.0	205.0	208.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	54.0	116.0	199.0	205.0
115°	0.0	53.0	107.0	198.0	198.0
117.5°	0.0	51.0	100.0	200.0	196.0
120°	0.0	49.0	94.0	200.0	198.0
122.5°	0.0	47.0	90.0	190.0	202.0
125°	0.0	44.0	86.0	170.0	201.0
127.5°	0.0	42.0	82.0	151.0	192.0
130°	0.0	39.0	78.0	134.0	173.0
132.5°	1.0	37.0	73.0	118.0	156.0
135°	1.0	35.0	69.0	103.0	140.0
137.5°	1.0	33.0	65.0	92.0	122.0
140°	1.0	32.0	62.0	82.0	105.0
142.5°	1.0	30.0	58.0	72.0	88.0
145°	1.0	27.0	52.0	62.0	74.0
147.5°	1.0	25.0	47.0	54.0	60.0
150°	1.0	22.0	41.0	47.0	48.0
152.5°	1.0	19.0	35.0	40.0	38.0
155°	1.0	16.0	29.0	33.0	31.0
157.5°	2.0	14.0	24.0	26.0	25.0
160°	2.0	12.0	20.0	20.0	21.0
162.5°	2.0	10.0	16.0	14.0	18.0
165°	2.0	7.0	13.0	9.0	13.0
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)