

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: P232012

Luminaire Tested: **FVS4M-4-LD4-30-2HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232012
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-LD4-30-2HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

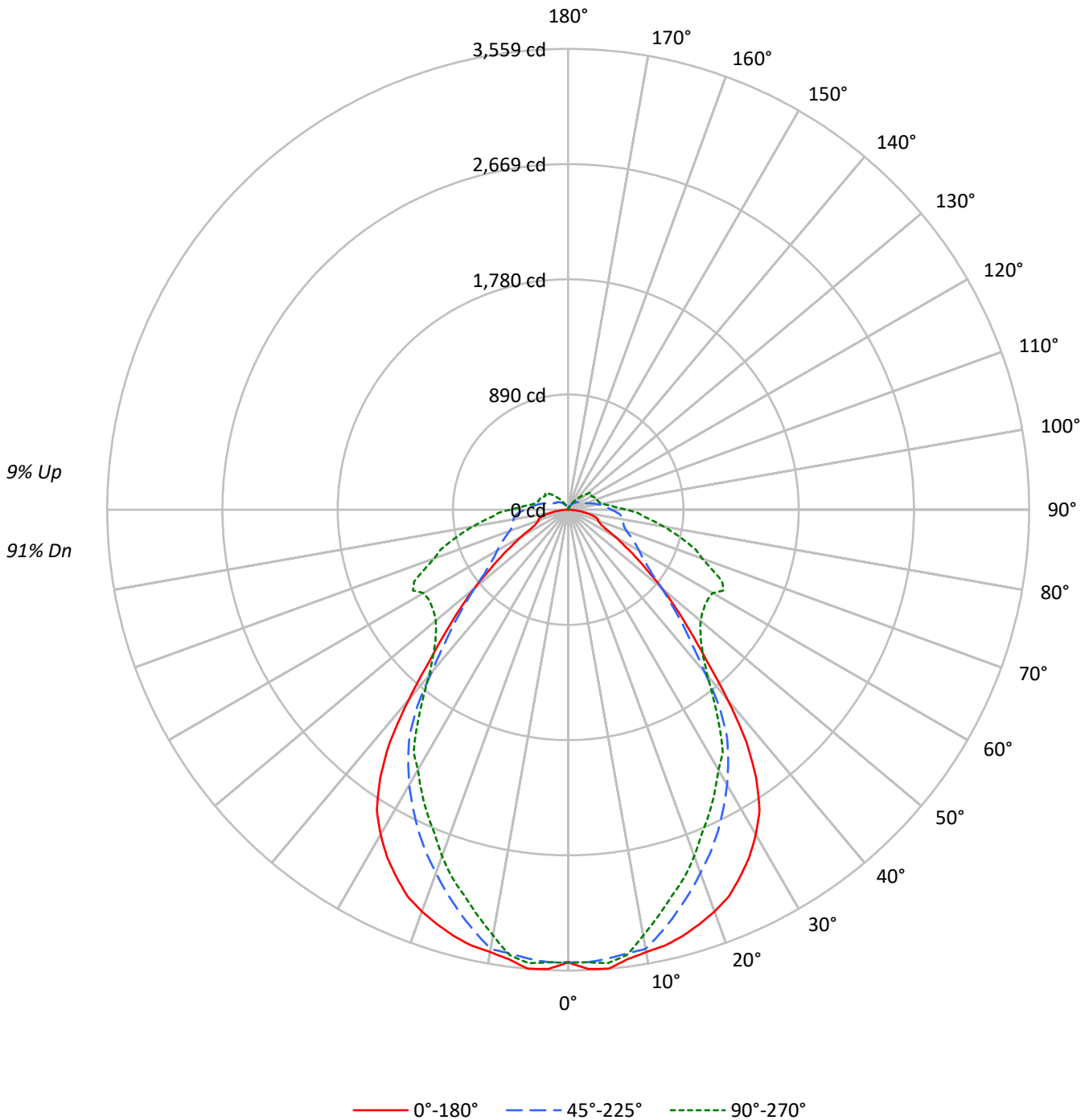
Lumens per Lamp: N/A
Luminaire Lumens: 8104.0 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.02 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 89.3
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°	31759	31759	31759
5°	32311	30522	30457
10°	31724	29390	27855
15°	31645	27005	25020
20°	31364	24726	22587
25°	30708	22595	20215
30°	29542	20340	18063
35°	27119	17930	15874
40°	21766	14041	13180
45°	16346	10968	11648
50°	12660	8594	10988
55°	9364	7067	10987
60°	7035	6406	11468
65°	5552	5991	12325
70°	5715	5638	11017
75°	6329	5711	10122
80°	5307	6228	8894
85°	3842	6627	7733



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	332.6	4.1
10°-20°	914.4	11.3
20°-30°	1281.0	15.8
30°-40°	1350.3	16.7
40°-50°	1025.6	12.7
50°-60°	774.7	9.6
60°-70°	718.0	8.9
70°-80°	579.2	7.1
80°-90°	388.7	4.8
90°-100°	240.2	3.0
100°-110°	168.9	2.1
110°-120°	127.6	1.6
120°-130°	97.9	1.2
130°-140°	60.2	0.7
140°-150°	30.8	0.4
150°-160°	11.6	0.1
160°-170°	2.3	0.0
170°-180°	0.0	0.0
0°-30°	2528.0	31.2
0°-40°	3878.3	47.9
0°-60°	5678.6	70.1
0°-90°	7364.5	90.9
90°-120°	536.7	6.6
90°-150°	725.6	9.0
90°-180°	740.0	9.1
0°-180°	8104.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3496	3496	3496	3496	3496	
5°	3559	3528	3482	3511	3515	335
15°	3409	3398	3225	3145	3088	961
25°	3134	2928	2737	2628	2581	1440
35°	2530	2306	2137	2035	2033	1550
45°	1335	1290	1246	1312	1451	1050
55°	633	655	739	1044	1288	578
65°	286	402	553	1157	1311	300
75°	214	234	442	926	934	216
85°	58	131	397	573	583	64
90°	3	77	334	457	446	5
95°	2	70	278	347	334	2
105°	2	66	188	260	242	2
115°	2	60	118	216	224	2
125°	2	50	100	180	217	2
135°	3	38	78	114	153	2
145°	3	28	55	69	79	2
155°	4	16	29	32	33	1
165°	4	7	12	7	12	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°	3496.0	3496.0	3496.0	3496.0	3496.0
2.5°	3549.9	3534.5	3497.9	3506.6	3498.9
5°	3558.6	3527.8	3481.6	3511.4	3515.3
7.5°	3501.8	3511.4	3455.6	3477.7	3469.1
10°	3469.1	3489.3	3444.1	3398.9	3339.2
12.5°	3447.9	3445.0	3337.3	3270.9	3214.1
15°	3409.4	3397.9	3224.7	3144.9	3088.1
17.5°	3358.5	3316.1	3107.4	3009.2	2979.4
20°	3302.7	3186.2	2985.2	2883.2	2846.7
22.5°	3235.3	3065.0	2866.9	2761.0	2700.4
25°	3134.3	2928.4	2737.0	2628.3	2581.1
27.5°	3025.6	2786.0	2595.6	2491.7	2452.2
30°	2896.7	2636.9	2453.2	2371.4	2318.5
32.5°	2749.5	2482.0	2298.3	2219.4	2221.3
35°	2530.1	2306.0	2136.7	2034.7	2032.8
37.5°	2260.8	2078.0	1915.4	1847.1	1842.3
40°	1911.6	1833.6	1640.3	1669.1	1671.0
42.5°	1579.7	1534.4	1420.0	1461.3	1544.1
45°	1335.3	1290.1	1245.8	1312.2	1450.7
47.5°	1131.3	1066.9	1078.4	1199.7	1383.4
50°	948.6	904.3	940.9	1119.8	1333.4
52.5°	766.7	762.9	818.7	1068.8	1305.5
55°	633.0	655.1	738.8	1043.8	1288.2
57.5°	510.8	564.7	676.3	1047.7	1281.4
60°	420.4	497.4	633.0	1082.3	1287.2
62.5°	334.8	446.4	589.7	1115.0	1350.7
65°	285.7	402.1	553.2	1157.3	1311.2
67.5°	260.7	358.8	512.8	1226.6	1198.7
70°	244.4	312.7	480.1	1170.8	1098.6
72.5°	241.5	269.4	455.0	1057.3	1034.2
75°	213.6	233.8	441.6	926.4	934.1
77.5°	176.1	208.8	434.8	818.7	838.9
80°	129.9	183.7	429.1	727.3	748.5
82.5°	98.1	155.8	418.5	649.4	659.0
85°	57.7	130.8	397.3	573.4	583.0
87.5°	27.9	98.1	367.5	496.4	534.9
90°	2.9	77.0	333.8	457.0	446.4
92.5°	2.9	71.2	305.9	395.4	380.0
95°	1.9	70.2	278.0	347.3	333.8
97.5°	1.9	70.2	257.8	309.8	293.4
100°	1.9	69.3	236.7	284.8	266.5
102.5°	1.9	68.3	213.6	268.4	250.1
105°	1.9	66.4	187.6	259.7	242.4
107.5°	1.9	65.4	160.7	251.1	237.6
110°	1.9	63.5	142.4	236.7	234.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	61.6	127.0	225.1	233.8
115°	1.9	59.6	118.3	215.5	224.2
117.5°	1.9	57.7	112.6	213.6	215.5
120°	1.9	54.8	108.7	217.4	208.8
122.5°	1.9	51.9	103.9	203.0	206.8
125°	1.9	50.0	100.1	179.9	217.4
127.5°	1.9	46.2	95.2	160.7	213.6
130°	1.9	43.3	89.5	144.3	190.5
132.5°	1.9	40.4	84.7	128.0	171.2
135°	2.9	37.5	77.9	114.5	153.0
137.5°	2.9	35.6	72.2	102.0	132.8
140°	2.9	32.7	67.3	90.4	114.5
142.5°	2.9	30.8	61.6	79.8	96.2
145°	2.9	27.9	54.8	69.3	78.9
147.5°	2.9	26.0	49.1	58.7	62.5
150°	2.9	22.1	42.3	50.0	49.1
152.5°	2.9	19.2	35.6	39.4	40.4
155°	3.8	16.4	28.9	31.7	32.7
157.5°	2.9	13.5	24.1	25.0	27.9
160°	3.8	11.5	20.2	18.3	24.1
162.5°	3.8	8.7	17.3	12.5	19.2
165°	3.8	6.7	12.5	6.7	11.5
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)