

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: P232014

Luminaire Tested: **FVS4M-4-LD4-40-2HI-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232014
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-LD4-40-2HI-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

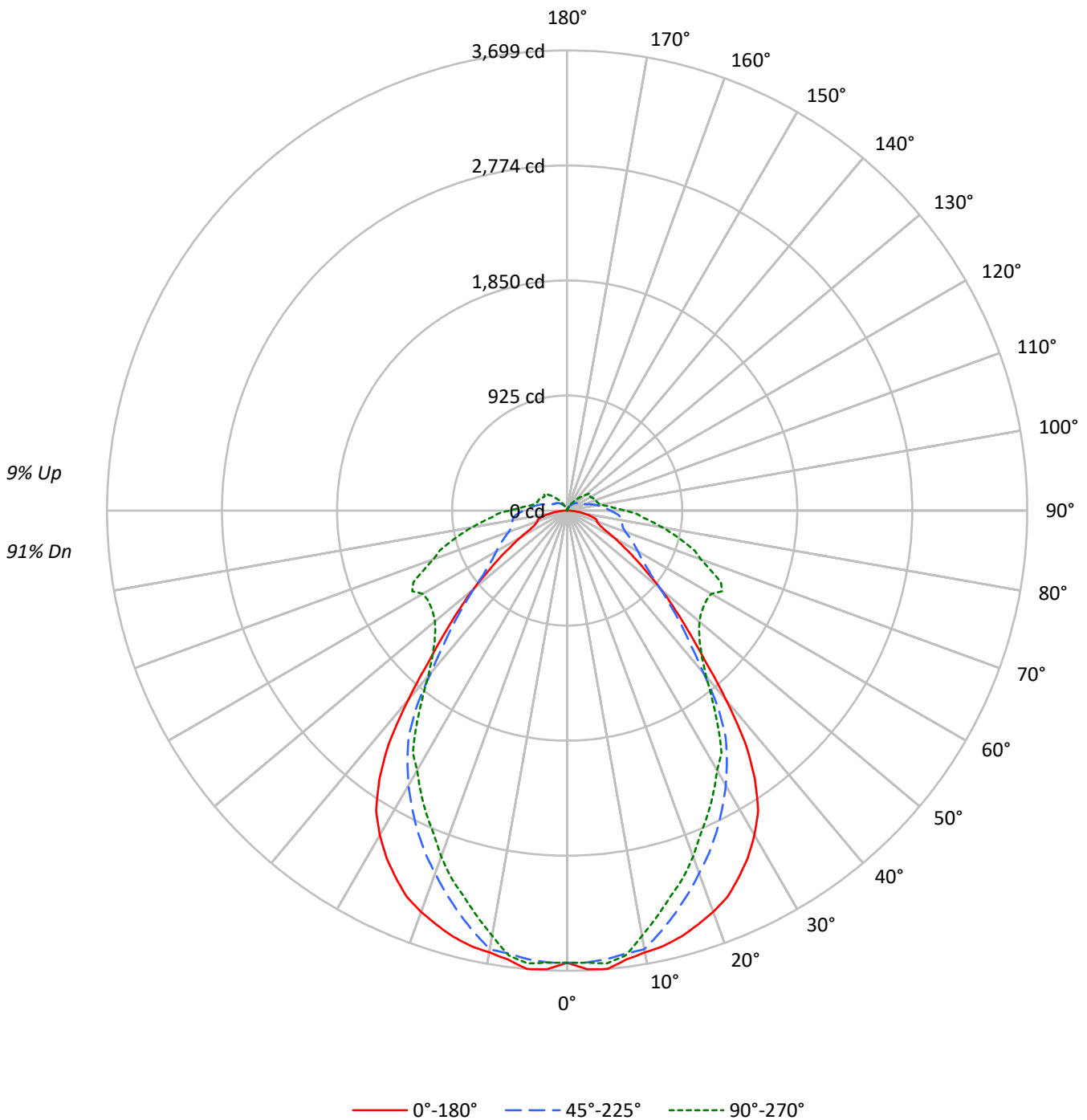
Lumens per Lamp: N/A
Luminaire Lumens: 8423.9 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.02 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

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

TEST NUMBER: P232014

CATALOG NUMBER: FVS4M-4-LD4-40-2HI-PA187-UNV-EDC1

Luminous Intensity Polar Plot





TEST NUMBER: P232014

CATALOG NUMBER: FVS4M-4-LD4-40-2HI-PA187-UNV-EDC1

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°	33013	33013	33013
5°	33587	31728	31660
10°	32977	30550	28955
15°	32895	28071	26009
20°	32602	25702	23479
25°	31921	23488	21013
30°	30709	21143	18776
35°	28190	18638	16501
40°	22624	14595	13701
45°	16992	11401	12108
50°	13159	8933	11421
55°	9734	7346	11421
60°	7313	6659	11921
65°	5772	6227	12812
70°	5939	5860	11453
75°	6578	5936	10521
80°	5516	6473	9244
85°	3995	6889	8038



TEST NUMBER: P232014

CATALOG NUMBER: FVS4M-4-LD4-40-2HI-PA187-UNV-EDC1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.8	4.1
10°-20°	950.5	11.3
20°-30°	1331.6	15.8
30°-40°	1403.6	16.7
40°-50°	1066.1	12.7
50°-60°	805.3	9.6
60°-70°	746.4	8.9
70°-80°	602.0	7.1
80°-90°	404.0	4.8
90°-100°	249.7	3.0
100°-110°	175.6	2.1
110°-120°	132.6	1.6
120°-130°	101.8	1.2
130°-140°	62.5	0.7
140°-150°	32.0	0.4
150°-160°	12.0	0.1
160°-170°	2.4	0.0
170°-180°	0.0	0.0
0°-30°	2627.8	31.2
0°-40°	4031.5	47.9
0°-60°	5902.8	70.1
0°-90°	7655.2	90.9
90°-120°	557.9	6.6
90°-150°	754.2	9.0
90°-180°	769.0	9.1
0°-180°	8423.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3634	3634	3634	3634	3634	
5°	3699	3667	3619	3650	3654	349
15°	3544	3532	3352	3269	3210	999
25°	3258	3044	2845	2732	2683	1497
35°	2630	2397	2221	2115	2113	1611
45°	1388	1341	1295	1364	1508	1092
55°	658	681	768	1085	1339	600
65°	297	418	575	1203	1363	312
75°	222	243	459	963	971	224
85°	60	136	413	596	606	66
90°	3	80	347	475	464	5
95°	2	73	289	361	347	2
105°	2	69	195	270	252	2
115°	2	62	123	224	233	2
125°	2	52	104	187	226	2
135°	3	39	81	119	159	2
145°	3	29	57	72	82	2
155°	4	17	30	33	34	2
165°	4	7	13	7	12	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P232014

CATALOG NUMBER: FVS4M-4-LD4-40-2HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3634.1	3634.1	3634.1	3634.1	3634.1
2.5°	3690.1	3674.1	3636.1	3645.1	3637.1
5°	3699.1	3667.1	3619.1	3650.1	3654.1
7.5°	3640.1	3650.1	3592.1	3615.1	3606.1
10°	3606.1	3627.1	3580.1	3533.1	3471.1
12.5°	3584.1	3581.1	3469.1	3400.1	3341.1
15°	3544.1	3532.1	3352.1	3269.1	3210.1
17.5°	3491.1	3447.1	3230.1	3128.1	3097.1
20°	3433.1	3312.1	3103.1	2997.1	2959.1
22.5°	3363.1	3186.1	2980.1	2870.1	2807.1
25°	3258.1	3044.1	2845.1	2732.1	2683.0
27.5°	3145.1	2896.1	2698.1	2590.0	2549.0
30°	3011.1	2741.1	2550.0	2465.0	2410.0
32.5°	2858.1	2580.0	2389.0	2307.0	2309.0
35°	2630.0	2397.0	2221.0	2115.0	2113.0
37.5°	2350.0	2160.0	1991.0	1920.0	1915.0
40°	1987.0	1906.0	1705.0	1735.0	1737.0
42.5°	1642.0	1595.0	1476.0	1519.0	1605.0
45°	1388.0	1341.0	1295.0	1364.0	1508.0
47.5°	1176.0	1109.0	1121.0	1247.0	1438.0
50°	986.0	940.0	978.0	1164.0	1386.0
52.5°	797.0	793.0	851.0	1111.0	1357.0
55°	658.0	681.0	768.0	1085.0	1339.0
57.5°	531.0	587.0	703.0	1089.0	1332.0
60°	437.0	517.0	658.0	1125.0	1338.0
62.5°	348.0	464.0	613.0	1159.0	1404.0
65°	297.0	418.0	575.0	1203.0	1363.0
67.5°	271.0	373.0	533.0	1275.0	1246.0
70°	254.0	325.0	499.0	1217.0	1142.0
72.5°	251.0	280.0	473.0	1099.0	1075.0
75°	222.0	243.0	459.0	963.0	971.0
77.5°	183.0	217.0	452.0	851.0	872.0
80°	135.0	191.0	446.0	756.0	778.0
82.5°	102.0	162.0	435.0	675.0	685.0
85°	60.0	136.0	413.0	596.0	606.0
87.5°	29.0	102.0	382.0	516.0	556.0
90°	3.0	80.0	347.0	475.0	464.0
92.5°	3.0	74.0	318.0	411.0	395.0
95°	2.0	73.0	289.0	361.0	347.0
97.5°	2.0	73.0	268.0	322.0	305.0
100°	2.0	72.0	246.0	296.0	277.0
102.5°	2.0	71.0	222.0	279.0	260.0
105°	2.0	69.0	195.0	270.0	252.0
107.5°	2.0	68.0	167.0	261.0	247.0
110°	2.0	66.0	148.0	246.0	244.0



TEST NUMBER: P232014

CATALOG NUMBER: FVS4M-4-LD4-40-2HI-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.0	64.0	132.0	234.0	243.0
115°	2.0	62.0	123.0	224.0	233.0
117.5°	2.0	60.0	117.0	222.0	224.0
120°	2.0	57.0	113.0	226.0	217.0
122.5°	2.0	54.0	108.0	211.0	215.0
125°	2.0	52.0	104.0	187.0	226.0
127.5°	2.0	48.0	99.0	167.0	222.0
130°	2.0	45.0	93.0	150.0	198.0
132.5°	2.0	42.0	88.0	133.0	178.0
135°	3.0	39.0	81.0	119.0	159.0
137.5°	3.0	37.0	75.0	106.0	138.0
140°	3.0	34.0	70.0	94.0	119.0
142.5°	3.0	32.0	64.0	83.0	100.0
145°	3.0	29.0	57.0	72.0	82.0
147.5°	3.0	27.0	51.0	61.0	65.0
150°	3.0	23.0	44.0	52.0	51.0
152.5°	3.0	20.0	37.0	41.0	42.0
155°	4.0	17.0	30.0	33.0	34.0
157.5°	3.0	14.0	25.0	26.0	29.0
160°	4.0	12.0	21.0	19.0	25.0
162.5°	4.0	9.0	18.0	13.0	20.0
165°	4.0	7.0	13.0	7.0	12.0
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)