

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: P544738

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-81-87-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P544738  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-1-LD4-1HI-50-UNV-81-87-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

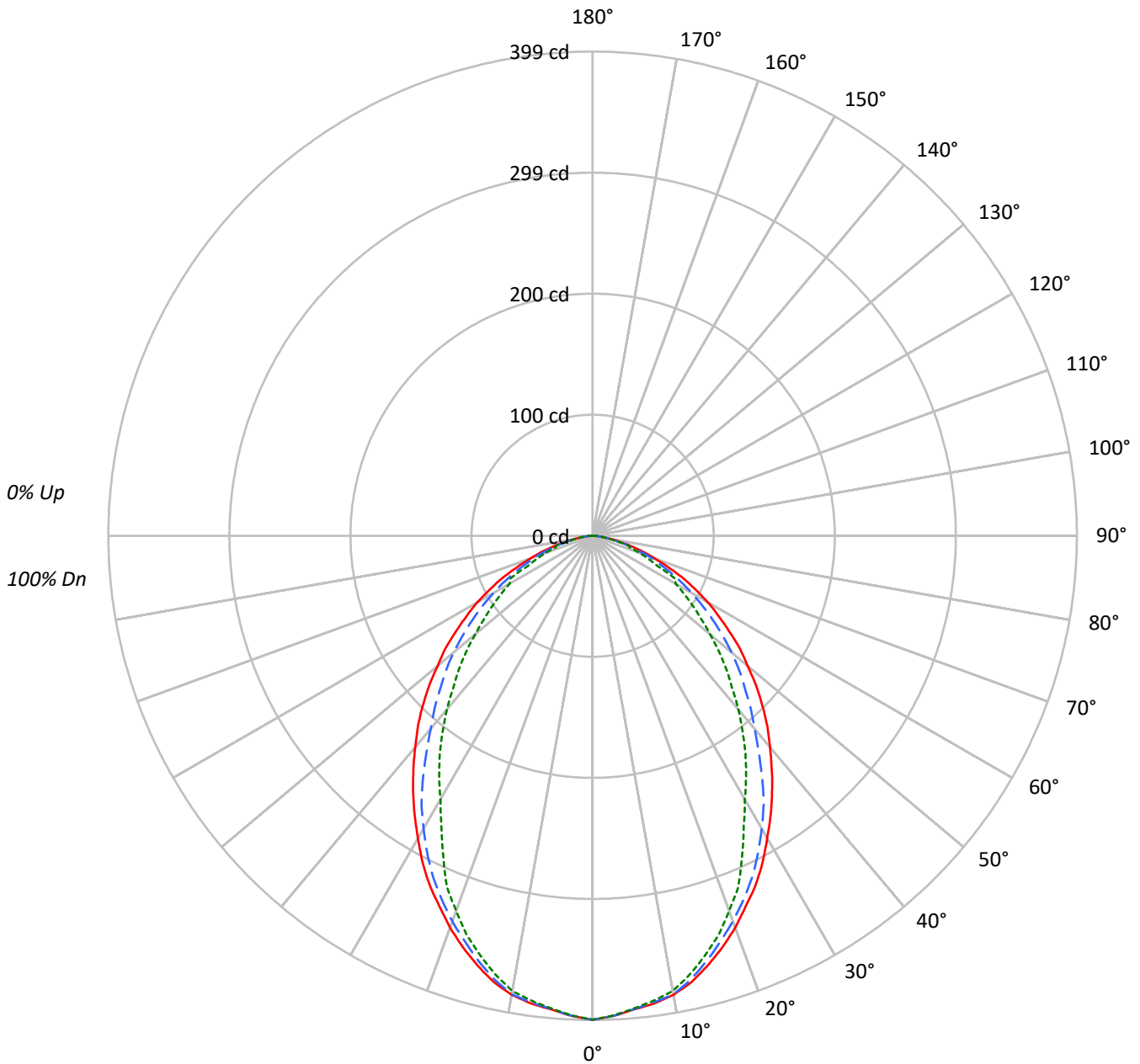
Lumens per Lamp: N/A  
Luminaire Lumens: 783.0 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
Input Voltage (V): NR  
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: P544738

CATALOG NUMBER: FMR-12-1-LD4-1HI-50-UNV-81-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P544738

CATALOG NUMBER: FMR-12-1-LD4-1HI-50-UNV-81-87-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4293	4293	4293
5°	4234	4230	4225
10°	4198	4193	4163
15°	4085	4044	3987
20°	3935	3872	3766
25°	3773	3691	3461
30°	3576	3462	3117
35°	3388	3200	2884
40°	3194	2916	2623
45°	3011	2696	2373
50°	2788	2502	2115
55°	2578	2267	1895
60°	2362	2026	1696
65°	2078	1773	1503
70°	1712	1552	1278
75°	1360	1189	1248
80°	917	855	800
85°	568	679	803



TEST NUMBER: P544738

CATALOG NUMBER: FMR-12-1-LD4-1HI-50-UNV-81-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.1	4.7
10°-20°	101.9	13.0
20°-30°	141.1	18.0
30°-40°	150.4	19.2
40°-50°	137.2	17.5
50°-60°	107.5	13.7
60°-70°	70.1	8.9
70°-80°	31.0	4.0
80°-90°	6.7	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	280.1	35.8
0°-40°	430.5	55.0
0°-60°	675.2	86.2
0°-90°	783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	783.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	399	399	399	399	399	
5°	392	392	392	391	391	37
15°	367	367	363	359	358	103
25°	318	316	311	300	291	146
35°	258	256	244	225	220	161
45°	198	194	177	162	156	152
55°	137	133	121	106	101	123
65°	82	77	70	71	59	80
75°	33	30	29	27	30	35
85°	5	5	6	6	6	6
90°	0	0	0	0	0	



TEST NUMBER: P544738

CATALOG NUMBER: FMR-12-1-LD4-1HI-50-UNV-81-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	398.8	398.8	398.8	398.8	398.8
2.5°	396.1	396.1	396.1	395.6	395.6
5°	391.9	391.5	391.5	391.0	391.0
7.5°	388.7	388.2	387.8	387.3	386.4
10°	384.1	384.1	383.6	381.3	380.9
12.5°	376.7	376.3	374.4	371.2	370.3
15°	366.6	366.6	362.9	359.2	357.8
17.5°	355.5	355.0	350.4	346.7	344.9
20°	343.5	342.6	338.0	332.0	328.8
22.5°	330.1	330.1	324.6	316.8	313.5
25°	317.7	315.9	310.8	299.7	291.4
27.5°	303.4	300.6	295.1	279.4	269.7
30°	287.7	286.3	278.5	258.2	250.8
32.5°	273.0	270.7	262.4	241.2	235.2
35°	257.8	255.9	243.5	225.0	219.5
37.5°	242.5	240.2	224.6	209.8	202.9
40°	227.3	224.6	207.5	194.1	186.7
42.5°	213.0	209.3	192.7	178.4	170.1
45°	197.8	193.7	177.1	162.3	155.9
47.5°	182.6	178.9	163.7	148.5	141.1
50°	166.5	163.2	149.4	134.2	126.3
52.5°	153.1	148.0	134.6	119.4	113.0
55°	137.4	133.3	120.8	106.5	101.0
57.5°	123.1	119.0	107.4	94.1	89.5
60°	109.7	103.7	94.1	82.5	78.8
62.5°	95.0	90.4	82.1	72.4	77.0
65°	81.6	77.0	69.6	71.0	59.0
67.5°	66.9	64.6	58.1	51.6	49.8
70°	54.4	51.6	49.3	42.4	40.6
72.5°	43.3	40.6	37.3	33.7	32.3
75°	32.7	30.4	28.6	27.2	30.0
77.5°	22.6	21.7	20.3	18.9	18.4
80°	14.8	14.3	13.8	13.4	12.9
82.5°	8.8	8.8	8.8	8.8	8.8
85°	4.6	5.1	5.5	6.0	6.5
87.5°	2.8	2.8	3.2	3.7	4.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)