

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: P544729

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-80-86-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: P544729  
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-80-86-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

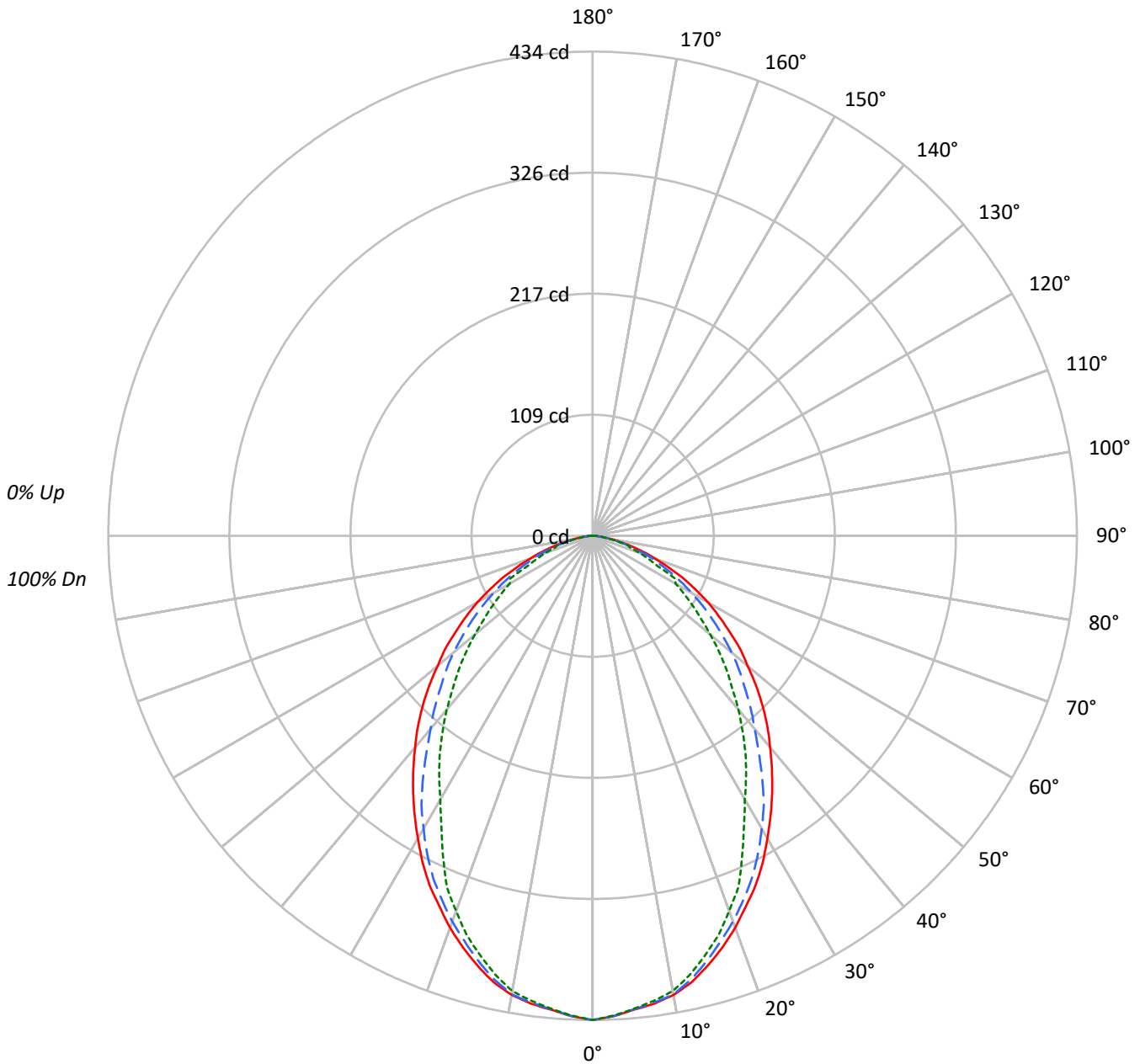
Lumens per Lamp: N/A  
Luminaire Lumens: 852.0 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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									
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°	4672	4672	4672
5°	4608	4603	4598
10°	4568	4562	4529
15°	4445	4401	4338
20°	4282	4213	4097
25°	4106	4017	3766
30°	3892	3766	3392
35°	3686	3481	3138
40°	3476	3173	2855
45°	3276	2933	2582
50°	3033	2723	2303
55°	2806	2468	2062
60°	2570	2204	1847
65°	2262	1931	1635
70°	1863	1690	1391
75°	1481	1293	1356
80°	998	936	868
85°	618	741	865



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.4	4.7
10°-20°	110.9	13.0
20°-30°	153.5	18.0
30°-40°	163.7	19.2
40°-50°	149.3	17.5
50°-60°	117.0	13.7
60°-70°	76.2	8.9
70°-80°	33.8	4.0
80°-90°	7.2	0.8
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°	304.8	35.8
0°-40°	468.4	55.0
0°-60°	734.7	86.2
0°-90°	852.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	852.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	434	434	434	434	434	
5°	426	426	426	426	426	40
15°	399	399	395	391	389	112
25°	346	344	338	326	317	159
35°	280	278	265	245	239	175
45°	215	211	193	177	170	166
55°	150	145	132	116	110	134
65°	89	84	76	77	64	88
75°	36	33	31	30	33	38
85°	5	6	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	434.0	434.0	434.0	434.0	434.0
2.5°	431.0	431.0	431.0	430.5	430.5
5°	426.5	426.0	426.0	425.5	425.5
7.5°	423.0	422.5	422.0	421.5	420.5
10°	417.9	417.9	417.4	414.9	414.4
12.5°	409.9	409.4	407.4	403.9	402.9
15°	398.9	398.9	394.9	390.8	389.3
17.5°	386.8	386.3	381.3	377.3	375.3
20°	373.8	372.8	367.8	361.2	357.7
22.5°	359.2	359.2	353.2	344.7	341.2
25°	345.7	343.7	338.2	326.1	317.1
27.5°	330.1	327.1	321.1	304.0	293.5
30°	313.1	311.6	303.0	281.0	272.9
32.5°	297.0	294.5	285.5	262.4	255.9
35°	280.5	278.5	264.9	244.8	238.8
37.5°	263.9	261.4	244.3	228.3	220.8
40°	247.4	244.3	225.8	211.2	203.2
42.5°	231.8	227.8	209.7	194.2	185.1
45°	215.2	210.7	192.7	176.6	169.6
47.5°	198.7	194.7	178.1	161.6	153.5
50°	181.1	177.6	162.6	146.0	137.5
52.5°	166.6	161.1	146.5	129.9	122.9
55°	149.5	145.0	131.5	115.9	109.9
57.5°	134.0	129.4	116.9	102.4	97.3
60°	119.4	112.9	102.4	89.8	85.8
62.5°	103.4	98.3	89.3	78.8	83.8
65°	88.8	83.8	75.8	77.3	64.2
67.5°	72.8	70.2	63.2	56.2	54.2
70°	59.2	56.2	53.7	46.2	44.2
72.5°	47.2	44.2	40.6	36.6	35.1
75°	35.6	33.1	31.1	29.6	32.6
77.5°	24.6	23.6	22.1	20.6	20.1
80°	16.1	15.6	15.1	14.6	14.0
82.5°	9.5	9.5	9.5	9.5	9.5
85°	5.0	5.5	6.0	6.5	7.0
87.5°	3.0	3.0	3.5	4.0	4.5
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)