

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: P544731

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-80-88-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: P544731  
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-80-88-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

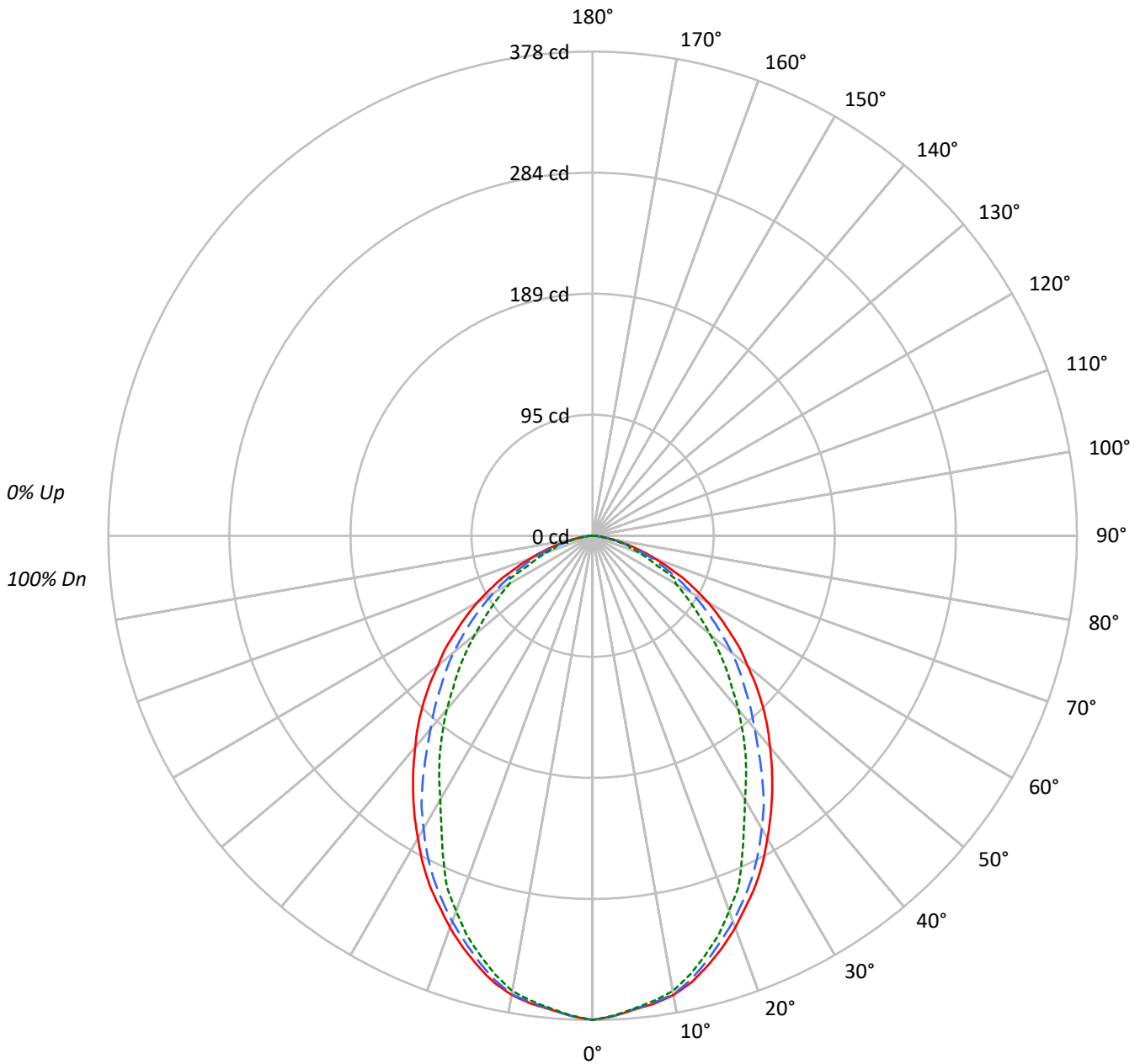
Lumens per Lamp: N/A  
Luminaire Lumens: 742.0 lumens  
Efficiency: N/A  
Efficacy: 68.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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

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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°	4069	4069	4069
5°	4013	4009	4003
10°	3979	3973	3945
15°	3871	3832	3779
20°	3729	3669	3568
25°	3576	3498	3280
30°	3389	3280	2954
35°	3210	3031	2733
40°	3027	2762	2487
45°	2854	2554	2248
50°	2641	2371	2004
55°	2443	2149	1796
60°	2239	1918	1608
65°	1969	1681	1424
70°	1624	1473	1212
75°	1289	1127	1181
80°	868	812	756
85°	543	642	753



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.2	4.7
10°-20°	96.6	13.0
20°-30°	133.7	18.0
30°-40°	142.5	19.2
40°-50°	130.0	17.5
50°-60°	101.9	13.7
60°-70°	66.4	8.9
70°-80°	29.4	4.0
80°-90°	6.3	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°	265.4	35.8
0°-40°	408.0	55.0
0°-60°	639.9	86.2
0°-90°	742.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	742.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	378	378	378	378	378	
5°	371	371	371	370	370	35
15°	347	347	344	340	339	98
25°	301	299	294	284	276	138
35°	244	242	231	213	208	153
45°	188	184	168	154	148	144
55°	130	126	114	101	96	117
65°	77	73	66	67	56	76
75°	31	29	27	26	28	33
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	378.0	378.0	378.0	378.0	378.0
2.5°	375.3	375.3	375.3	374.9	374.9
5°	371.4	371.0	371.0	370.5	370.5
7.5°	368.4	367.9	367.5	367.0	366.2
10°	364.0	364.0	363.5	361.4	360.9
12.5°	357.0	356.6	354.8	351.7	350.9
15°	347.4	347.4	343.9	340.4	339.1
17.5°	336.9	336.5	332.1	328.6	326.8
20°	325.5	324.7	320.3	314.6	311.5
22.5°	312.9	312.9	307.6	300.2	297.1
25°	301.1	299.3	294.5	284.0	276.2
27.5°	287.5	284.9	279.7	264.8	255.6
30°	272.7	271.3	263.9	244.7	237.7
32.5°	258.7	256.5	248.6	228.5	222.8
35°	244.3	242.5	230.7	213.2	208.0
37.5°	229.8	227.7	212.8	198.8	192.3
40°	215.4	212.8	196.6	184.0	177.0
42.5°	201.9	198.4	182.6	169.1	161.2
45°	187.5	183.5	167.8	153.8	147.7
47.5°	173.0	169.5	155.1	140.7	133.7
50°	157.7	154.7	141.6	127.2	119.7
52.5°	145.1	140.3	127.6	113.2	107.1
55°	130.2	126.3	114.5	100.9	95.7
57.5°	116.7	112.7	101.8	89.1	84.8
60°	104.0	98.3	89.1	78.2	74.7
62.5°	90.0	85.6	77.8	68.6	73.0
65°	77.3	73.0	66.0	67.3	55.9
67.5°	63.4	61.2	55.1	48.9	47.2
70°	51.6	48.9	46.8	40.2	38.5
72.5°	41.1	38.5	35.4	31.9	30.6
75°	31.0	28.8	27.1	25.8	28.4
77.5°	21.4	20.5	19.2	17.9	17.5
80°	14.0	13.5	13.1	12.7	12.2
82.5°	8.3	8.3	8.3	8.3	8.3
85°	4.4	4.8	5.2	5.7	6.1
87.5°	2.6	2.6	3.1	3.5	3.9
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)