

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: P544728

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-80-85-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: P544728  
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-80-85-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

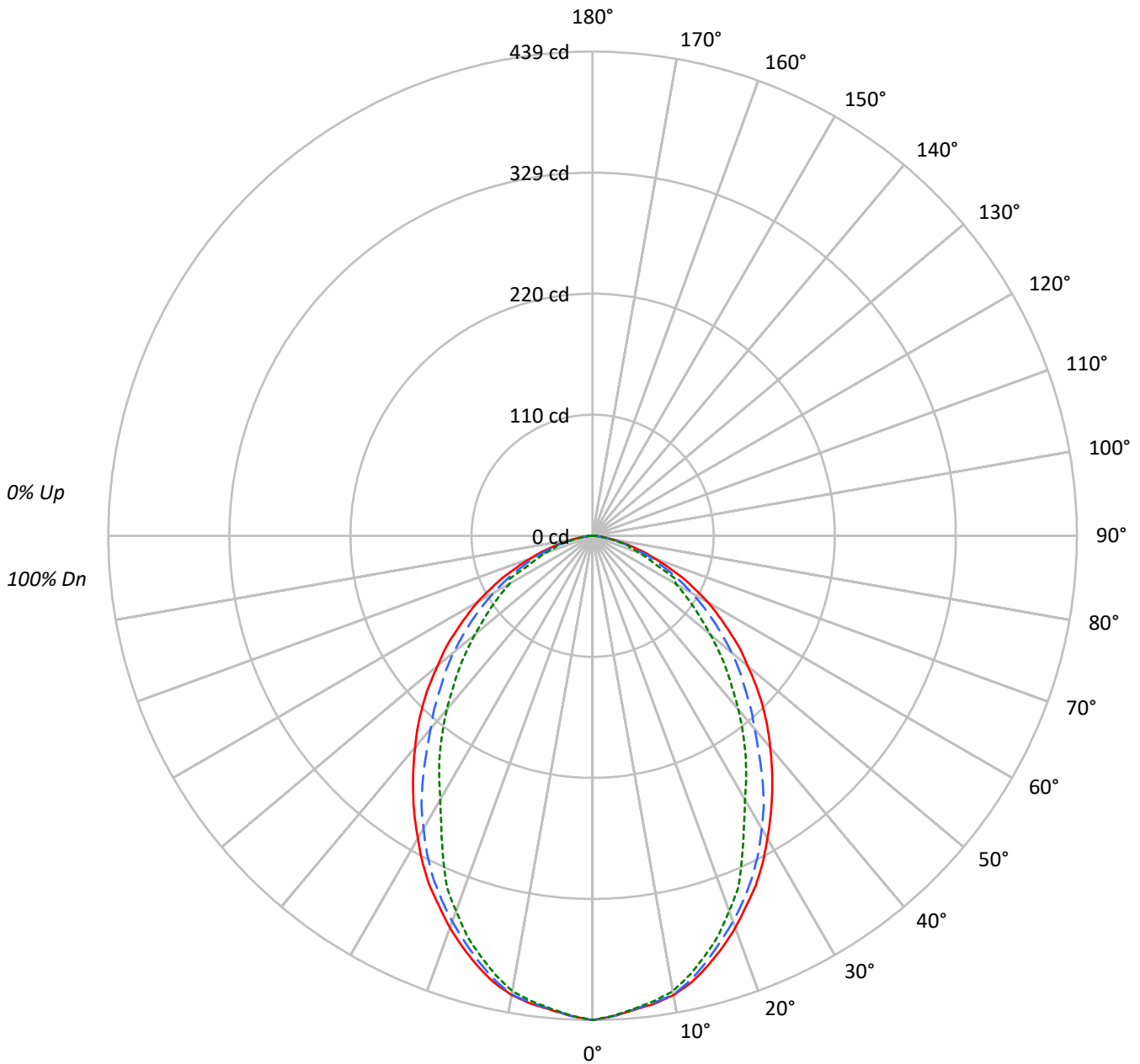
Lumens per Lamp: N/A  
Luminaire Lumens: 862.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	4726	4726	4726
5°	4662	4657	4652
10°	4621	4616	4583
15°	4498	4452	4389
20°	4332	4262	4145
25°	4154	4063	3810
30°	3938	3811	3432
35°	3729	3522	3175
40°	3517	3209	2889
45°	3315	2967	2612
50°	3069	2755	2329
55°	2839	2496	2087
60°	2601	2230	1869
65°	2287	1954	1656
70°	1885	1709	1407
75°	1497	1310	1372
80°	1004	942	880
85°	630	753	877



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.9	4.7
10°-20°	112.2	13.0
20°-30°	155.3	18.0
30°-40°	165.6	19.2
40°-50°	151.1	17.5
50°-60°	118.4	13.7
60°-70°	77.2	9.0
70°-80°	34.2	4.0
80°-90°	7.3	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°	308.3	35.8
0°-40°	473.9	55.0
0°-60°	743.4	86.2
0°-90°	862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	862.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	439	439	439	439	439	
5°	432	431	431	430	430	41
15°	404	404	400	395	394	113
25°	350	348	342	330	321	161
35°	284	282	268	248	242	177
45°	218	213	195	179	172	168
55°	151	147	133	117	111	136
65°	90	85	77	78	65	89
75°	36	34	32	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	439.1	439.1	439.1	439.1	439.1
2.5°	436.0	436.0	436.0	435.5	435.5
5°	431.5	431.0	431.0	430.5	430.5
7.5°	427.9	427.4	426.9	426.4	425.4
10°	422.8	422.8	422.3	419.8	419.3
12.5°	414.7	414.2	412.2	408.6	407.6
15°	403.6	403.6	399.5	395.4	393.9
17.5°	391.4	390.9	385.8	381.7	379.7
20°	378.2	377.2	372.1	365.5	361.9
22.5°	363.5	363.5	357.4	348.7	345.2
25°	349.8	347.7	342.1	330.0	320.8
27.5°	334.0	331.0	324.9	307.6	297.0
30°	316.8	315.2	306.6	284.3	276.1
32.5°	300.5	298.0	288.8	265.5	258.9
35°	283.8	281.7	268.0	247.7	241.6
37.5°	267.0	264.5	247.2	231.0	223.4
40°	250.3	247.2	228.4	213.7	205.6
42.5°	234.5	230.5	212.2	196.4	187.3
45°	217.8	213.2	194.9	178.7	171.6
47.5°	201.0	197.0	180.2	163.5	155.3
50°	183.3	179.7	164.5	147.7	139.1
52.5°	168.5	162.9	148.2	131.5	124.4
55°	151.3	146.7	133.0	117.3	111.2
57.5°	135.5	131.0	118.3	103.6	98.5
60°	120.8	114.2	103.6	90.9	86.8
62.5°	104.6	99.5	90.4	79.7	84.8
65°	89.8	84.8	76.7	78.2	65.0
67.5°	73.6	71.1	64.0	56.9	54.8
70°	59.9	56.9	54.3	46.7	44.7
72.5°	47.7	44.7	41.1	37.1	35.5
75°	36.0	33.5	31.5	29.9	33.0
77.5°	24.9	23.9	22.3	20.8	20.3
80°	16.2	15.7	15.2	14.7	14.2
82.5°	9.6	9.6	9.6	9.6	9.6
85°	5.1	5.6	6.1	6.6	7.1
87.5°	3.0	3.0	3.6	4.1	4.6
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)