

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: P544705

Luminaire Tested: **FMR-12-1-LD4-1HI-40-UNV-81-86-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: P544705  
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-40-UNV-81-86-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

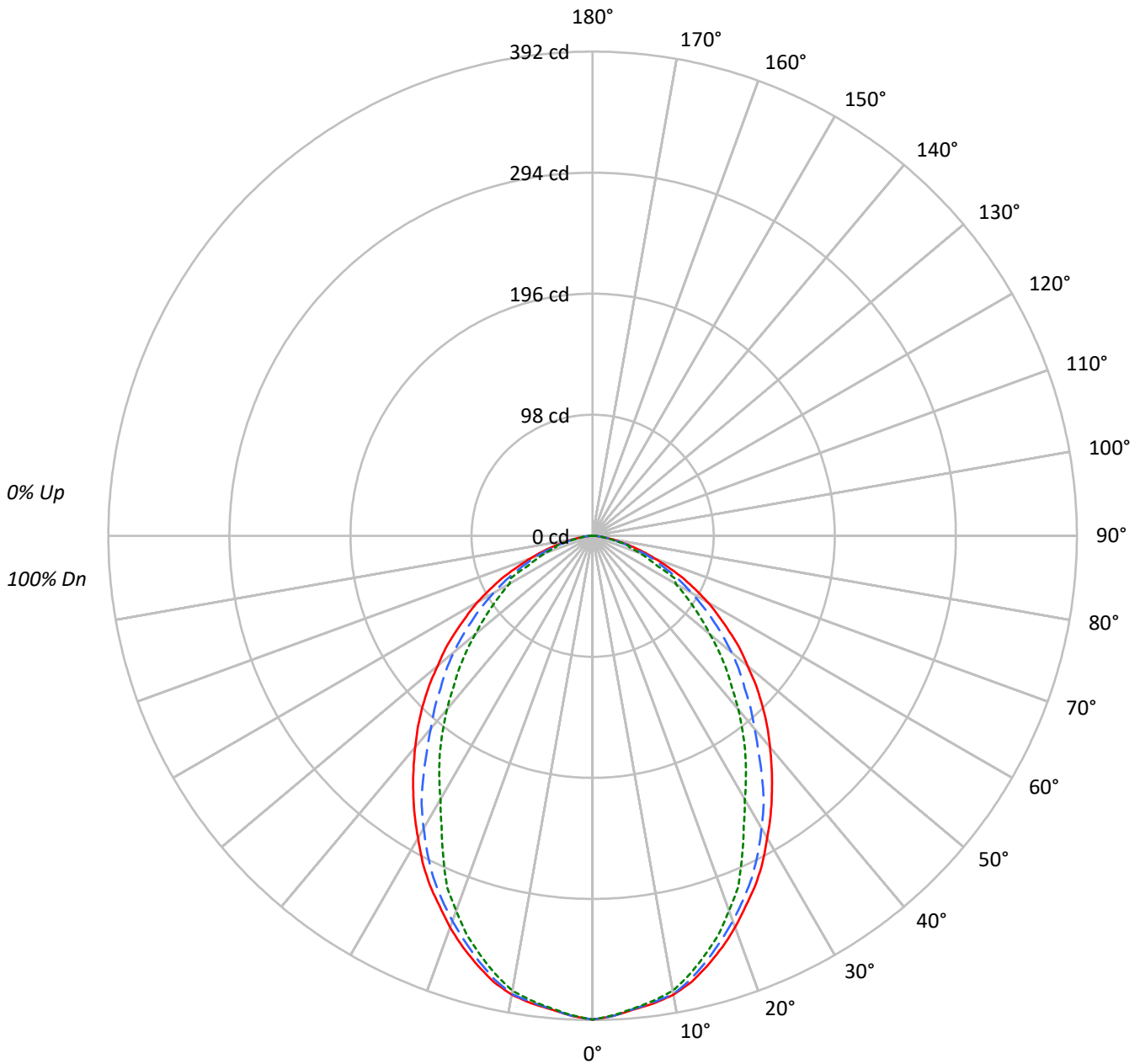
Lumens per Lamp: N/A  
Luminaire Lumens: 769.0 lumens  
Efficiency: N/A  
Efficacy: 71.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	4216	4216	4216
5°	4159	4155	4149
10°	4123	4118	4089
15°	4012	3972	3916
20°	3865	3802	3699
25°	3706	3625	3399
30°	3512	3399	3063
35°	3326	3142	2833
40°	3138	2864	2577
45°	2958	2647	2331
50°	2738	2457	2078
55°	2533	2226	1862
60°	2321	1989	1666
65°	2043	1742	1477
70°	1681	1526	1256
75°	1339	1169	1223
80°	899	843	787
85°	556	667	778



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.5	4.7
10°-20°	100.1	13.0
20°-30°	138.5	18.0
30°-40°	147.7	19.2
40°-50°	134.8	17.5
50°-60°	105.6	13.7
60°-70°	68.8	8.9
70°-80°	30.5	4.0
80°-90°	6.5	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°	275.1	35.8
0°-40°	422.8	55.0
0°-60°	663.1	86.2
0°-90°	769.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	769.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	392	392	392	392	392	
5°	385	384	384	384	384	37
15°	360	360	356	353	351	101
25°	312	310	305	294	286	143
35°	253	251	239	221	216	158
45°	194	190	174	159	153	150
55°	135	131	119	105	99	121
65°	80	76	68	70	58	79
75°	32	30	28	27	29	34
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°	391.7	391.7	391.7	391.7	391.7
2.5°	389.0	389.0	389.0	388.5	388.5
5°	384.9	384.5	384.5	384.0	384.0
7.5°	381.8	381.3	380.8	380.4	379.5
10°	377.2	377.2	376.8	374.5	374.1
12.5°	370.0	369.5	367.7	364.5	363.6
15°	360.0	360.0	356.4	352.8	351.4
17.5°	349.2	348.7	344.2	340.5	338.7
20°	337.4	336.5	331.9	326.1	322.9
22.5°	324.2	324.2	318.8	311.1	307.9
25°	312.0	310.2	305.2	294.4	286.2
27.5°	298.0	295.3	289.8	274.4	264.9
30°	282.6	281.2	273.5	253.6	246.4
32.5°	268.1	265.8	257.7	236.8	231.0
35°	253.1	251.3	239.1	221.0	215.6
37.5°	238.2	235.9	220.5	206.0	199.3
40°	223.3	220.5	203.8	190.7	183.4
42.5°	209.2	205.6	189.3	175.3	167.1
45°	194.3	190.2	173.9	159.4	153.1
47.5°	179.3	175.7	160.8	145.8	138.6
50°	163.5	160.3	146.7	131.8	124.1
52.5°	150.3	145.4	132.2	117.3	110.9
55°	135.0	130.9	118.6	104.6	99.2
57.5°	120.9	116.8	105.5	92.4	87.9
60°	107.8	101.9	92.4	81.1	77.4
62.5°	93.3	88.8	80.6	71.1	75.6
65°	80.2	75.6	68.4	69.7	58.0
67.5°	65.7	63.4	57.1	50.7	48.9
70°	53.4	50.7	48.5	41.7	39.9
72.5°	42.6	39.9	36.7	33.1	31.7
75°	32.2	29.9	28.1	26.7	29.4
77.5°	22.2	21.3	19.9	18.6	18.1
80°	14.5	14.0	13.6	13.1	12.7
82.5°	8.6	8.6	8.6	8.6	8.6
85°	4.5	5.0	5.4	5.9	6.3
87.5°	2.7	2.7	3.2	3.6	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)