

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: P544713

Luminaire Tested: **FMR-12-1-LD4-1HI-40-UNV-82-86-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: P544713  
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-82-86-EDD  
Description: 1X1 FMR TROFFER WITH .187 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**

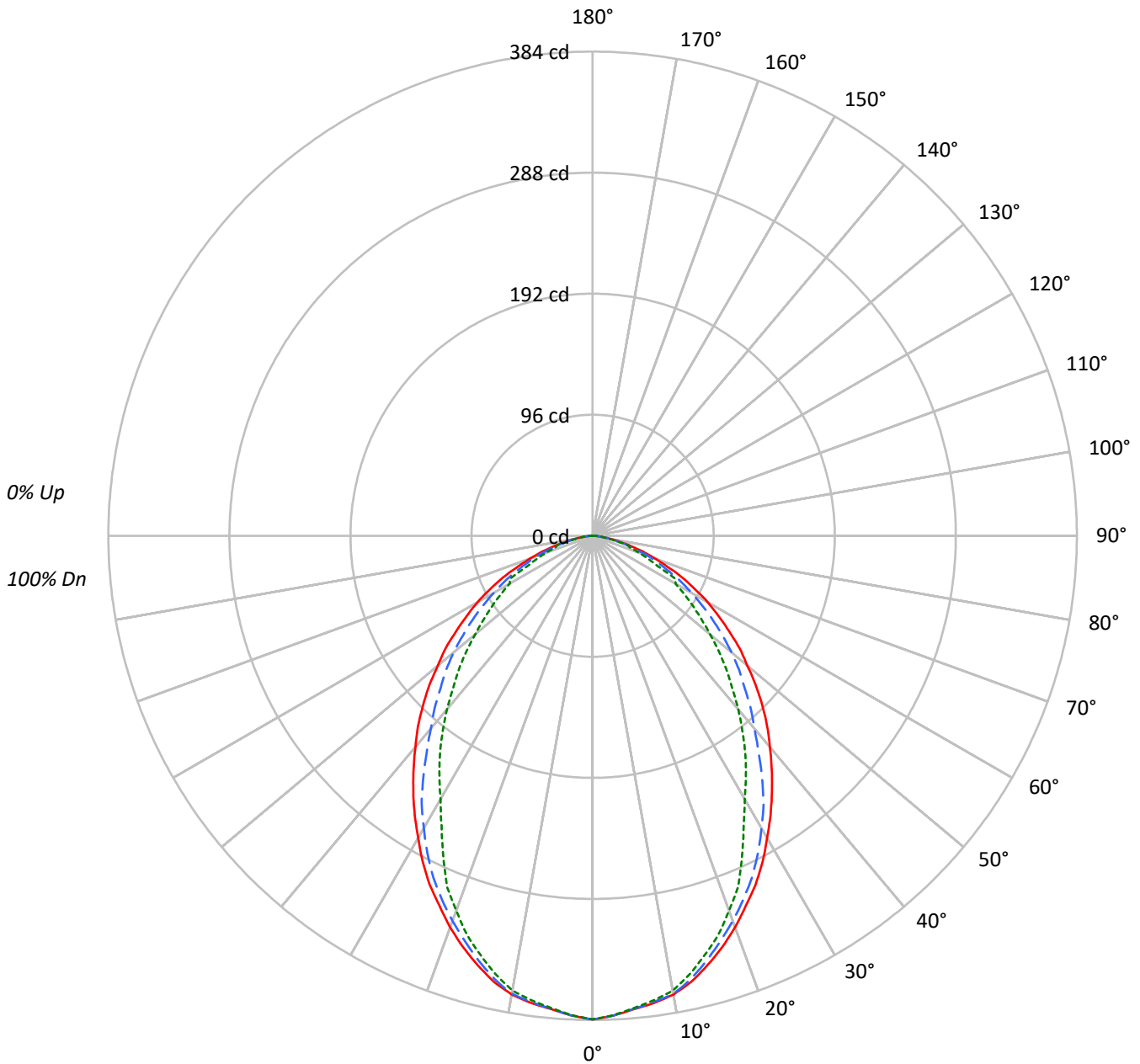
Lumens per Lamp: N/A  
Luminaire Lumens: 753.0 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	4129	4129	4129
5°	4072	4068	4063
10°	4038	4032	4004
15°	3928	3889	3835
20°	3785	3723	3622
25°	3628	3550	3328
30°	3439	3329	2998
35°	3257	3076	2774
40°	3072	2803	2524
45°	2895	2592	2282
50°	2681	2406	2035
55°	2479	2181	1822
60°	2271	1948	1632
65°	1999	1706	1447
70°	1646	1492	1227
75°	1310	1144	1198
80°	880	824	769
85°	543	655	766



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.7	4.7
10°-20°	98.0	13.0
20°-30°	135.7	18.0
30°-40°	144.7	19.2
40°-50°	132.0	17.5
50°-60°	103.4	13.7
60°-70°	67.4	8.9
70°-80°	29.9	4.0
80°-90°	6.4	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°	269.4	35.8
0°-40°	414.0	55.0
0°-60°	649.4	86.2
0°-90°	753.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	753.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	384	384	384	384	384	
5°	377	376	376	376	376	36
15°	352	352	349	345	344	99
25°	306	304	299	288	280	140
35°	248	246	234	216	211	155
45°	190	186	170	156	150	147
55°	132	128	116	102	97	119
65°	78	74	67	68	57	77
75°	32	29	28	26	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°	383.6	383.6	383.6	383.6	383.6
2.5°	380.9	380.9	380.9	380.5	380.5
5°	376.9	376.5	376.5	376.0	376.0
7.5°	373.8	373.4	372.9	372.5	371.6
10°	369.4	369.4	368.9	366.7	366.3
12.5°	362.3	361.8	360.1	357.0	356.1
15°	352.5	352.5	349.0	345.4	344.1
17.5°	341.9	341.4	337.0	333.5	331.7
20°	330.4	329.5	325.0	319.3	316.2
22.5°	317.5	317.5	312.2	304.6	301.5
25°	305.5	303.8	298.9	288.2	280.2
27.5°	291.8	289.1	283.8	268.7	259.4
30°	276.7	275.4	267.8	248.3	241.2
32.5°	262.5	260.3	252.3	231.9	226.2
35°	247.9	246.1	234.1	216.4	211.1
37.5°	233.2	231.0	216.0	201.8	195.1
40°	218.6	216.0	199.5	186.7	179.6
42.5°	204.9	201.3	185.4	171.6	163.6
45°	190.2	186.2	170.3	156.1	149.9
47.5°	175.6	172.1	157.4	142.8	135.7
50°	160.1	157.0	143.7	129.0	121.5
52.5°	147.2	142.3	129.5	114.8	108.6
55°	132.1	128.2	116.2	102.4	97.1
57.5°	118.4	114.4	103.3	90.5	86.0
60°	105.5	99.8	90.5	79.4	75.8
62.5°	91.3	86.9	78.9	69.6	74.1
65°	78.5	74.1	67.0	68.3	56.8
67.5°	64.3	62.1	55.9	49.7	47.9
70°	52.3	49.7	47.4	40.8	39.0
72.5°	41.7	39.0	35.9	32.4	31.0
75°	31.5	29.3	27.5	26.2	28.8
77.5°	21.7	20.8	19.5	18.2	17.7
80°	14.2	13.7	13.3	12.9	12.4
82.5°	8.4	8.4	8.4	8.4	8.4
85°	4.4	4.9	5.3	5.8	6.2
87.5°	2.7	2.7	3.1	3.5	4.0
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)