

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: P544938

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-82-87-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: P544938  
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-LD4-1STD-50-UNV-82-87-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

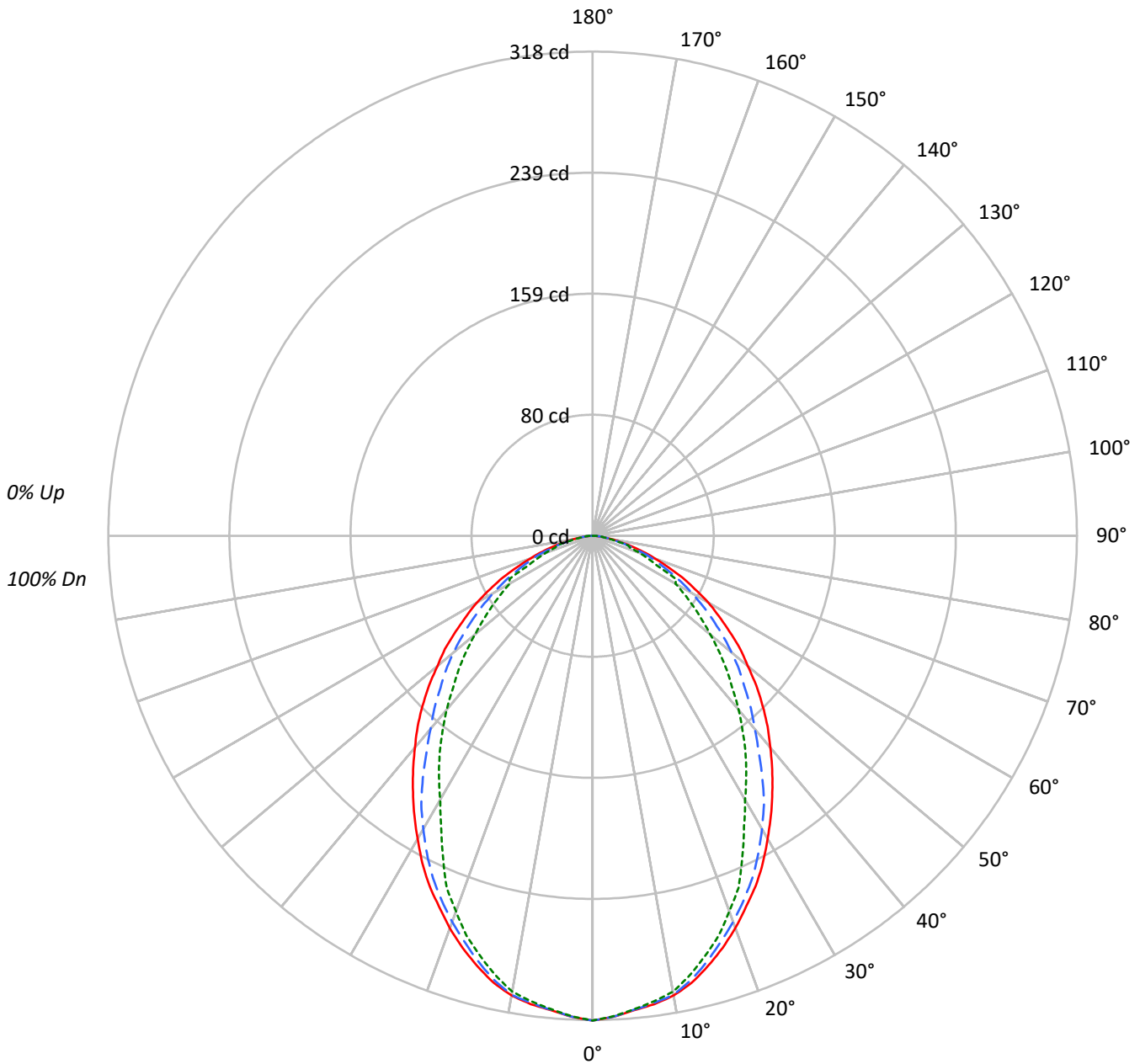
Lumens per Lamp: N/A  
Luminaire Lumens: 625.0 lumens  
Efficiency: N/A  
Efficacy: 75.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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°	3427	3427	3427
5°	3380	3377	3372
10°	3351	3347	3323
15°	3261	3228	3183
20°	3141	3090	3006
25°	3012	2947	2763
30°	2855	2763	2488
35°	2703	2553	2302
40°	2550	2327	2095
45°	2404	2151	1894
50°	2226	1996	1688
55°	2059	1809	1513
60°	1886	1617	1354
65°	1658	1416	1200
70°	1366	1240	1020
75°	1085	948	994
80°	731	682	638
85°	457	543	642



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.6	4.7
10°-20°	81.3	13.0
20°-30°	112.6	18.0
30°-40°	120.1	19.2
40°-50°	109.5	17.5
50°-60°	85.8	13.7
60°-70°	55.9	8.9
70°-80°	24.8	4.0
80°-90°	5.3	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°	223.6	35.8
0°-40°	343.6	55.0
0°-60°	539.0	86.2
0°-90°	625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	625.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	318	318	318	318	318	
5°	313	312	312	312	312	30
15°	293	293	290	287	286	82
25°	254	252	248	239	233	116
35°	206	204	194	180	175	129
45°	158	155	141	130	124	122
55°	110	106	96	85	81	98
65°	65	62	56	57	47	64
75°	26	24	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	318.4	318.4	318.4	318.4	318.4
2.5°	316.2	316.2	316.2	315.8	315.8
5°	312.8	312.5	312.5	312.1	312.1
7.5°	310.3	309.9	309.5	309.2	308.4
10°	306.6	306.6	306.2	304.4	304.0
12.5°	300.7	300.3	298.9	296.3	295.5
15°	292.6	292.6	289.7	286.7	285.6
17.5°	283.8	283.4	279.7	276.8	275.3
20°	274.2	273.5	269.8	265.0	262.4
22.5°	263.5	263.5	259.1	252.9	250.3
25°	253.6	252.1	248.1	239.2	232.6
27.5°	242.2	240.0	235.6	223.0	215.3
30°	229.7	228.6	222.3	206.1	200.2
32.5°	217.9	216.0	209.4	192.5	187.7
35°	205.7	204.3	194.3	179.6	175.2
37.5°	193.6	191.8	179.2	167.5	161.9
40°	181.5	179.2	165.6	155.0	149.1
42.5°	170.0	167.1	153.8	142.4	135.8
45°	157.9	154.6	141.3	129.6	124.4
47.5°	145.7	142.8	130.7	118.5	112.6
50°	132.9	130.3	119.2	107.1	100.8
52.5°	122.2	118.1	107.5	95.3	90.2
55°	109.7	106.4	96.4	85.0	80.6
57.5°	98.3	95.0	85.8	75.1	71.4
60°	87.6	82.8	75.1	65.9	62.9
62.5°	75.8	72.1	65.5	57.8	61.5
65°	65.1	61.5	55.6	56.7	47.1
67.5°	53.4	51.5	46.4	41.2	39.7
70°	43.4	41.2	39.4	33.9	32.4
72.5°	34.6	32.4	29.8	26.9	25.8
75°	26.1	24.3	22.8	21.7	23.9
77.5°	18.0	17.3	16.2	15.1	14.7
80°	11.8	11.4	11.0	10.7	10.3
82.5°	7.0	7.0	7.0	7.0	7.0
85°	3.7	4.0	4.4	4.8	5.2
87.5°	2.2	2.2	2.6	2.9	3.3
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)