

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: P544682

Luminaire Tested: **FMR-12-1-LD4-1HI-35-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: P544682  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

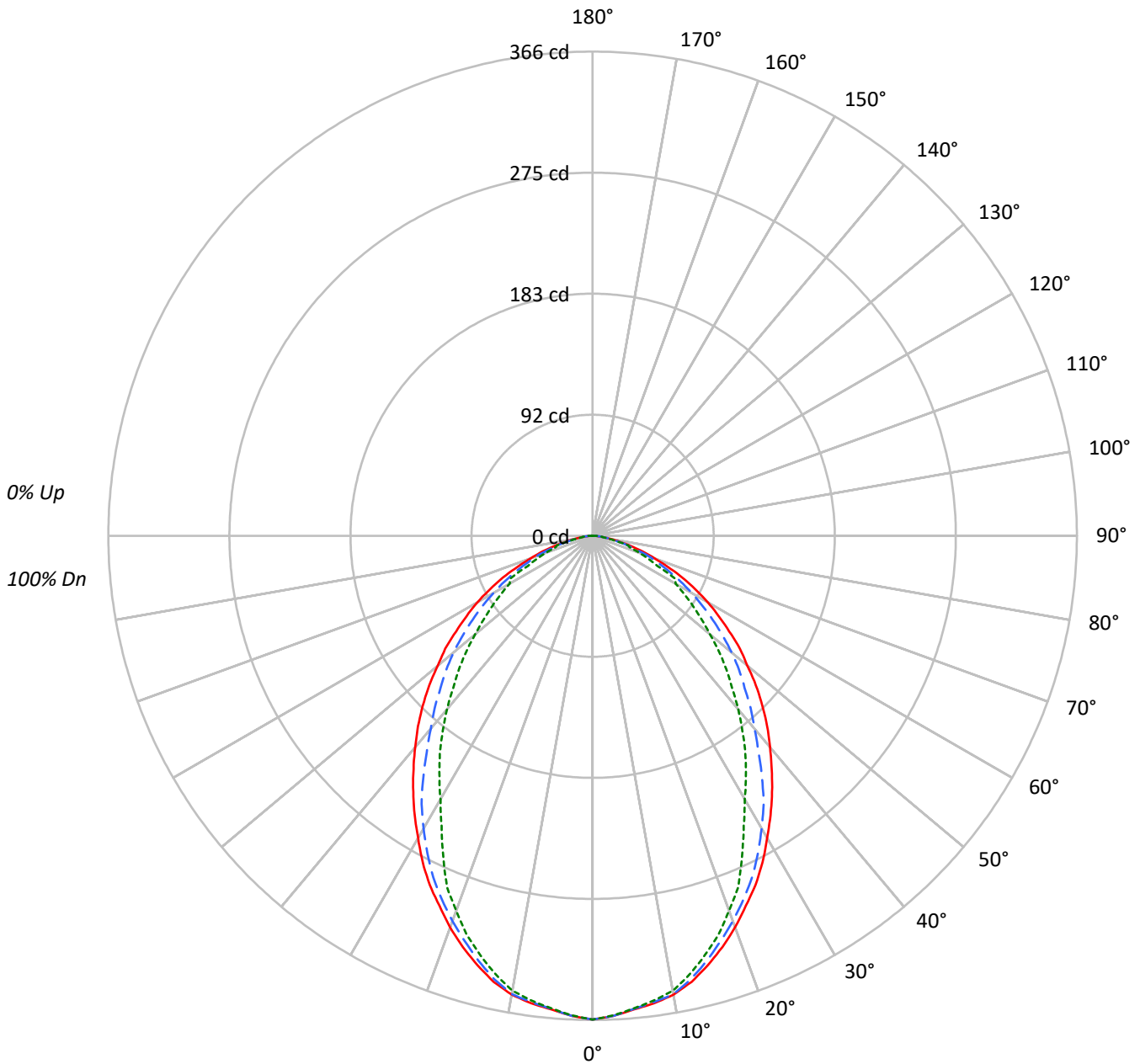
Lumens per Lamp: N/A  
Luminaire Lumens: 718.0 lumens  
Efficiency: N/A  
Efficacy: 66.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	3936	3936	3936
5°	3883	3879	3875
10°	3850	3845	3817
15°	3745	3709	3656
20°	3608	3550	3454
25°	3460	3385	3173
30°	3279	3174	2859
35°	3106	2933	2645
40°	2930	2674	2406
45°	2761	2472	2175
50°	2555	2294	1941
55°	2365	2079	1738
60°	2166	1858	1556
65°	1905	1625	1378
70°	1570	1423	1171
75°	1248	1090	1144
80°	837	787	731
85°	519	630	729



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.0	4.7
10°-20°	93.4	13.0
20°-30°	129.4	18.0
30°-40°	137.9	19.2
40°-50°	125.8	17.5
50°-60°	98.6	13.7
60°-70°	64.3	8.9
70°-80°	28.5	4.0
80°-90°	6.1	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°	256.8	35.8
0°-40°	394.8	55.0
0°-60°	619.2	86.2
0°-90°	718.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	718.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	366	366	366	366	366	
5°	359	359	359	359	359	34
15°	336	336	333	329	328	94
25°	291	290	285	275	267	134
35°	236	235	223	206	201	148
45°	181	178	162	149	143	140
55°	126	122	111	98	93	113
65°	75	71	64	65	54	74
75°	30	28	26	25	28	32
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°	365.7	365.7	365.7	365.7	365.7
2.5°	363.2	363.2	363.2	362.8	362.8
5°	359.4	359.0	359.0	358.6	358.6
7.5°	356.4	356.0	355.6	355.2	354.3
10°	352.2	352.2	351.8	349.7	349.2
12.5°	345.4	345.0	343.3	340.4	339.5
15°	336.1	336.1	332.8	329.4	328.1
17.5°	326.0	325.6	321.3	318.0	316.3
20°	315.0	314.2	309.9	304.4	301.5
22.5°	302.7	302.7	297.7	290.5	287.5
25°	291.3	289.6	285.0	274.8	267.2
27.5°	278.2	275.7	270.6	256.2	247.3
30°	263.8	262.6	255.4	236.8	230.0
32.5°	250.3	248.2	240.6	221.1	215.6
35°	236.4	234.7	223.2	206.3	201.3
37.5°	222.4	220.3	205.9	192.4	186.0
40°	208.5	205.9	190.3	178.0	171.2
42.5°	195.3	192.0	176.7	163.6	156.0
45°	181.4	177.6	162.4	148.8	142.9
47.5°	167.4	164.1	150.1	136.1	129.4
50°	152.6	149.7	137.0	123.0	115.9
52.5°	140.4	135.7	123.5	109.5	103.6
55°	126.0	122.2	110.8	97.7	92.6
57.5°	112.9	109.1	98.5	86.3	82.0
60°	100.6	95.1	86.3	75.7	72.3
62.5°	87.1	82.9	75.3	66.4	70.6
65°	74.8	70.6	63.8	65.1	54.1
67.5°	61.3	59.2	53.3	47.4	45.7
70°	49.9	47.4	45.2	38.9	37.2
72.5°	39.7	37.2	34.2	30.9	29.6
75°	30.0	27.9	26.2	24.9	27.5
77.5°	20.7	19.9	18.6	17.3	16.9
80°	13.5	13.1	12.7	12.3	11.8
82.5°	8.0	8.0	8.0	8.0	8.0
85°	4.2	4.7	5.1	5.5	5.9
87.5°	2.5	2.5	3.0	3.4	3.8
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)