

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: P544679

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-82-84-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: P544679  
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-82-84-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

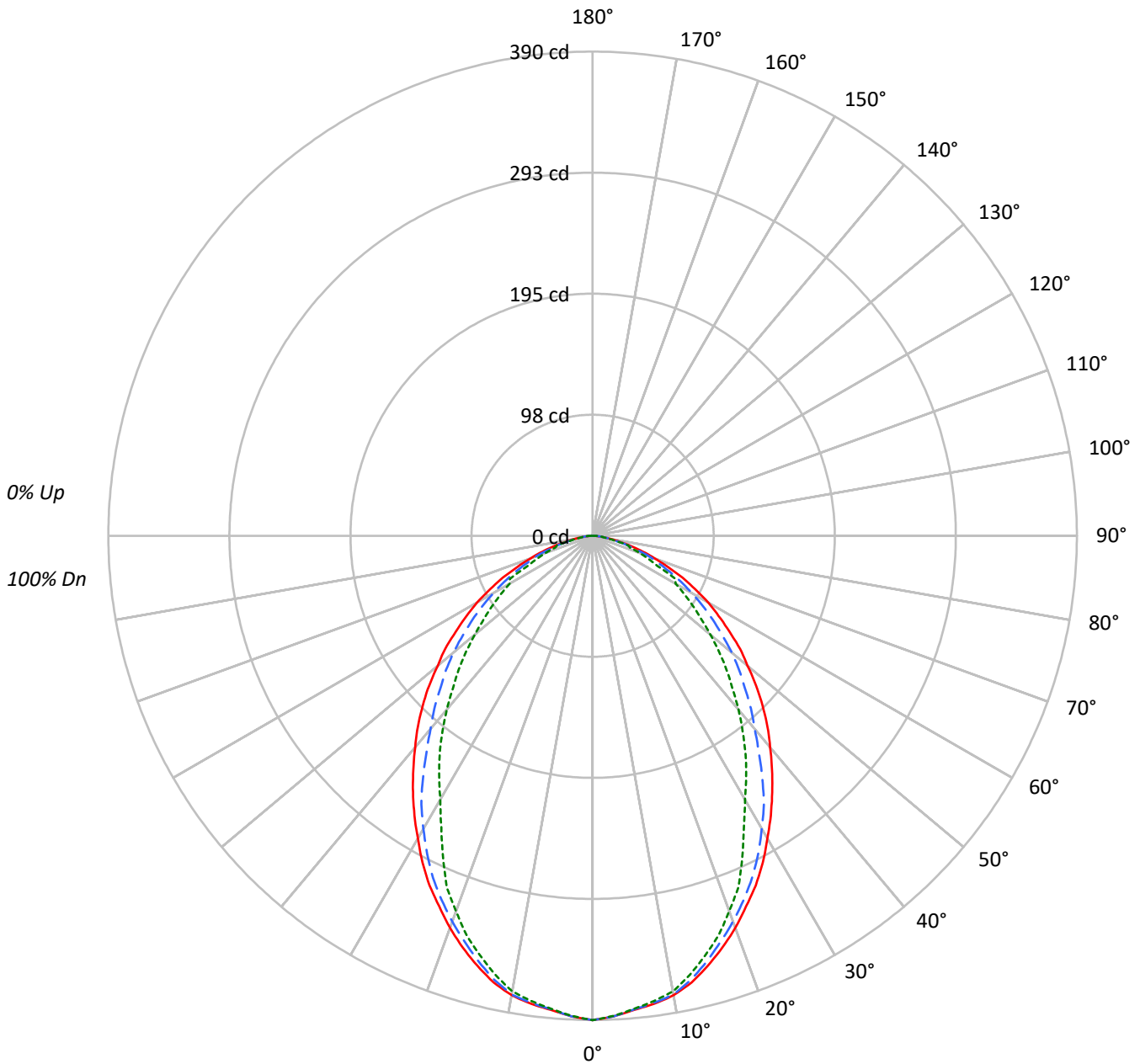
Lumens per Lamp: N/A  
Luminaire Lumens: 766.0 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	4200	4200	4200
5°	4143	4138	4133
10°	4107	4102	4073
15°	3996	3956	3900
20°	3850	3787	3684
25°	3691	3611	3386
30°	3499	3387	3050
35°	3314	3130	2821
40°	3125	2852	2567
45°	2946	2637	2321
50°	2726	2448	2070
55°	2522	2218	1854
60°	2312	1981	1660
65°	2032	1734	1470
70°	1674	1520	1249
75°	1331	1164	1219
80°	893	837	781
85°	556	667	778



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.3	4.7
10°-20°	99.7	13.0
20°-30°	138.0	18.0
30°-40°	147.2	19.2
40°-50°	134.2	17.5
50°-60°	105.2	13.7
60°-70°	68.5	8.9
70°-80°	30.4	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°	274.0	35.8
0°-40°	421.2	55.0
0°-60°	660.6	86.2
0°-90°	766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	766.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	390	390	390	390	390	
5°	383	383	383	382	382	36
15°	359	359	355	351	350	101
25°	311	309	304	293	285	143
35°	252	250	238	220	215	158
45°	194	190	173	159	152	149
55°	134	130	118	104	99	121
65°	80	75	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°	390.2	390.2	390.2	390.2	390.2
2.5°	387.5	387.5	387.5	387.0	387.0
5°	383.4	383.0	383.0	382.5	382.5
7.5°	380.3	379.8	379.4	378.9	378.0
10°	375.8	375.8	375.3	373.0	372.6
12.5°	368.5	368.1	366.3	363.1	362.2
15°	358.6	358.6	355.0	351.4	350.0
17.5°	347.8	347.3	342.8	339.2	337.4
20°	336.1	335.2	330.6	324.8	321.6
22.5°	323.0	323.0	317.6	309.9	306.7
25°	310.8	309.0	304.0	293.2	285.1
27.5°	296.8	294.1	288.7	273.4	263.9
30°	281.5	280.1	272.5	252.6	245.4
32.5°	267.0	264.8	256.7	235.9	230.1
35°	252.2	250.4	238.2	220.1	214.7
37.5°	237.3	235.0	219.7	205.2	198.5
40°	222.4	219.7	203.0	189.9	182.7
42.5°	208.4	204.8	188.6	174.6	166.5
45°	193.5	189.5	173.2	158.8	152.5
47.5°	178.6	175.0	160.1	145.2	138.0
50°	162.8	159.7	146.2	131.3	123.6
52.5°	149.8	144.8	131.7	116.8	110.5
55°	134.4	130.4	118.2	104.2	98.8
57.5°	120.4	116.4	105.1	92.0	87.5
60°	107.4	101.5	92.0	80.7	77.1
62.5°	92.9	88.4	80.3	70.8	75.3
65°	79.8	75.3	68.1	69.5	57.7
67.5°	65.4	63.2	56.8	50.5	48.7
70°	53.2	50.5	48.3	41.5	39.7
72.5°	42.4	39.7	36.5	32.9	31.6
75°	32.0	29.8	28.0	26.6	29.3
77.5°	22.1	21.2	19.8	18.5	18.0
80°	14.4	14.0	13.5	13.1	12.6
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)