

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: P544785

Luminaire Tested: **FMR-12-1-LD4-1LO-35-UNV-93-86-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: P544785  
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-LD4-1LO-35-UNV-93-86-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

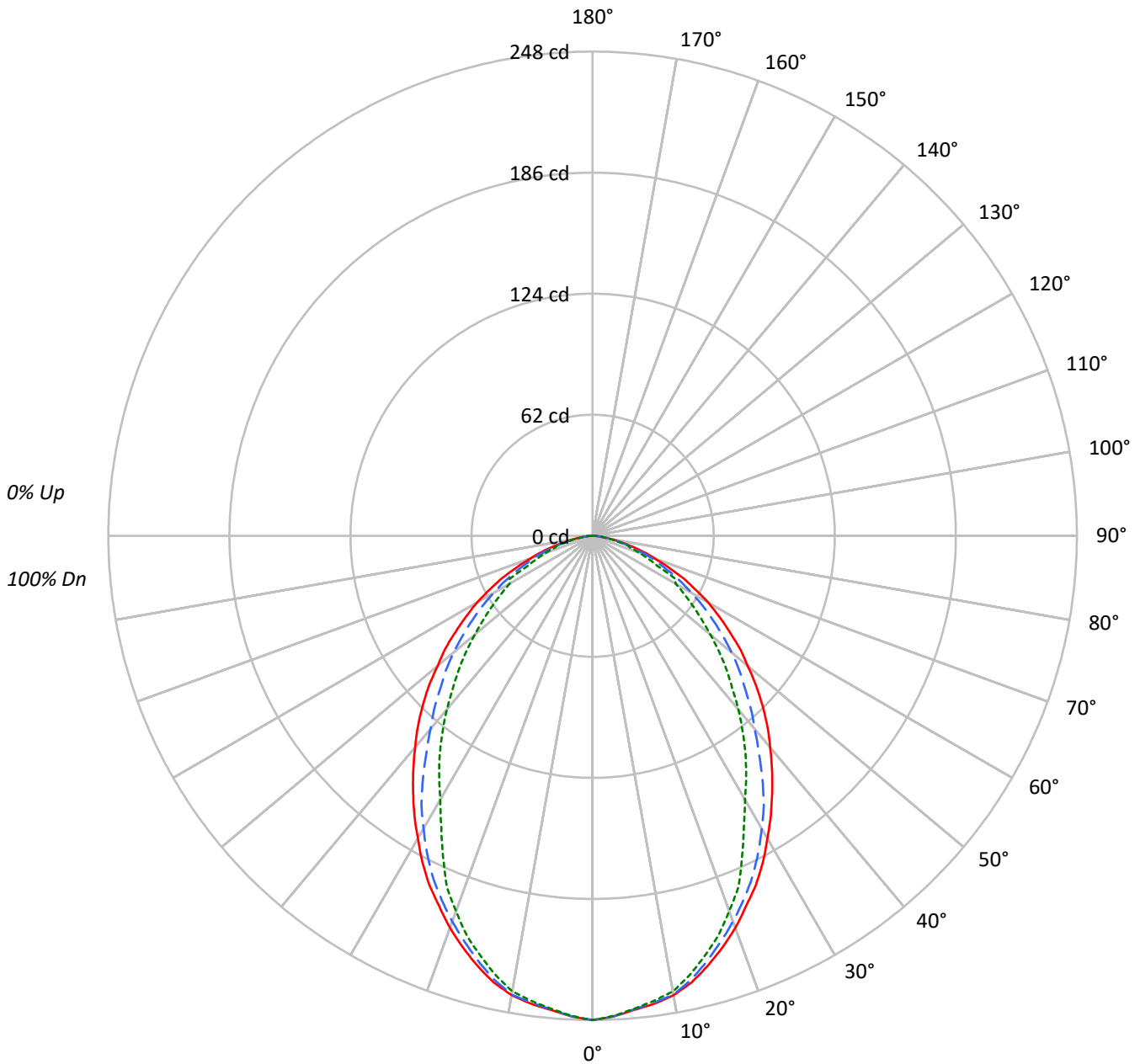
Lumens per Lamp: N/A  
Luminaire Lumens: 487.0 lumens  
Efficiency: N/A  
Efficacy: 84.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
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	35	44	39	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°	2671	2671	2671
5°	2634	2631	2628
10°	2611	2608	2589
15°	2541	2515	2479
20°	2448	2408	2342
25°	2347	2296	2152
30°	2225	2153	1939
35°	2106	1989	1794
40°	1987	1814	1631
45°	1872	1676	1475
50°	1733	1556	1316
55°	1605	1409	1179
60°	1470	1259	1055
65°	1294	1103	935
70°	1064	966	793
75°	848	740	774
80°	570	533	496
85°	358	420	494



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.1	4.7
10°-20°	63.4	13.0
20°-30°	87.7	18.0
30°-40°	93.6	19.2
40°-50°	85.3	17.5
50°-60°	66.9	13.7
60°-70°	43.6	8.9
70°-80°	19.3	4.0
80°-90°	4.1	0.8
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°	174.2	35.8
0°-40°	267.8	55.0
0°-60°	420.0	86.2
0°-90°	487.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	487.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	244	244	244	243	243	23
15°	228	228	226	223	222	64
25°	198	196	193	186	181	91
35°	160	159	151	140	136	100
45°	123	120	110	101	97	95
55°	86	83	75	66	63	77
65°	51	48	43	44	37	50
75°	20	19	18	17	19	22
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	248.1	248.1	248.1	248.1	248.1
2.5°	246.4	246.4	246.4	246.1	246.1
5°	243.8	243.5	243.5	243.2	243.2
7.5°	241.8	241.5	241.2	240.9	240.3
10°	238.9	238.9	238.6	237.2	236.9
12.5°	234.3	234.0	232.9	230.9	230.3
15°	228.0	228.0	225.7	223.4	222.5
17.5°	221.1	220.8	218.0	215.7	214.5
20°	213.7	213.1	210.2	206.5	204.5
22.5°	205.3	205.3	201.9	197.0	195.0
25°	197.6	196.4	193.3	186.4	181.2
27.5°	188.7	187.0	183.5	173.8	167.8
30°	179.0	178.1	173.2	160.6	156.0
32.5°	169.8	168.3	163.2	150.0	146.3
35°	160.3	159.2	151.4	140.0	136.5
37.5°	150.9	149.4	139.7	130.5	126.2
40°	141.4	139.7	129.1	120.7	116.1
42.5°	132.5	130.2	119.9	111.0	105.8
45°	123.0	120.5	110.1	100.9	96.9
47.5°	113.6	111.3	101.8	92.3	87.8
50°	103.5	101.5	92.9	83.5	78.6
52.5°	95.2	92.1	83.7	74.3	70.3
55°	85.5	82.9	75.1	66.2	62.8
57.5°	76.6	74.0	66.8	58.5	55.6
60°	68.3	64.5	58.5	51.3	49.0
62.5°	59.1	56.2	51.0	45.0	47.9
65°	50.8	47.9	43.3	44.2	36.7
67.5°	41.6	40.2	36.1	32.1	31.0
70°	33.8	32.1	30.7	26.4	25.2
72.5°	27.0	25.2	23.2	20.9	20.1
75°	20.4	18.9	17.8	16.9	18.6
77.5°	14.1	13.5	12.6	11.8	11.5
80°	9.2	8.9	8.6	8.3	8.0
82.5°	5.4	5.4	5.4	5.4	5.4
85°	2.9	3.2	3.4	3.7	4.0
87.5°	1.7	1.7	2.0	2.3	2.6
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)