

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: P544848

Luminaire Tested: **FMR-12-1-LD4-1LO-50-UNV-93-85-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: P544848  
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-50-UNV-93-85-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

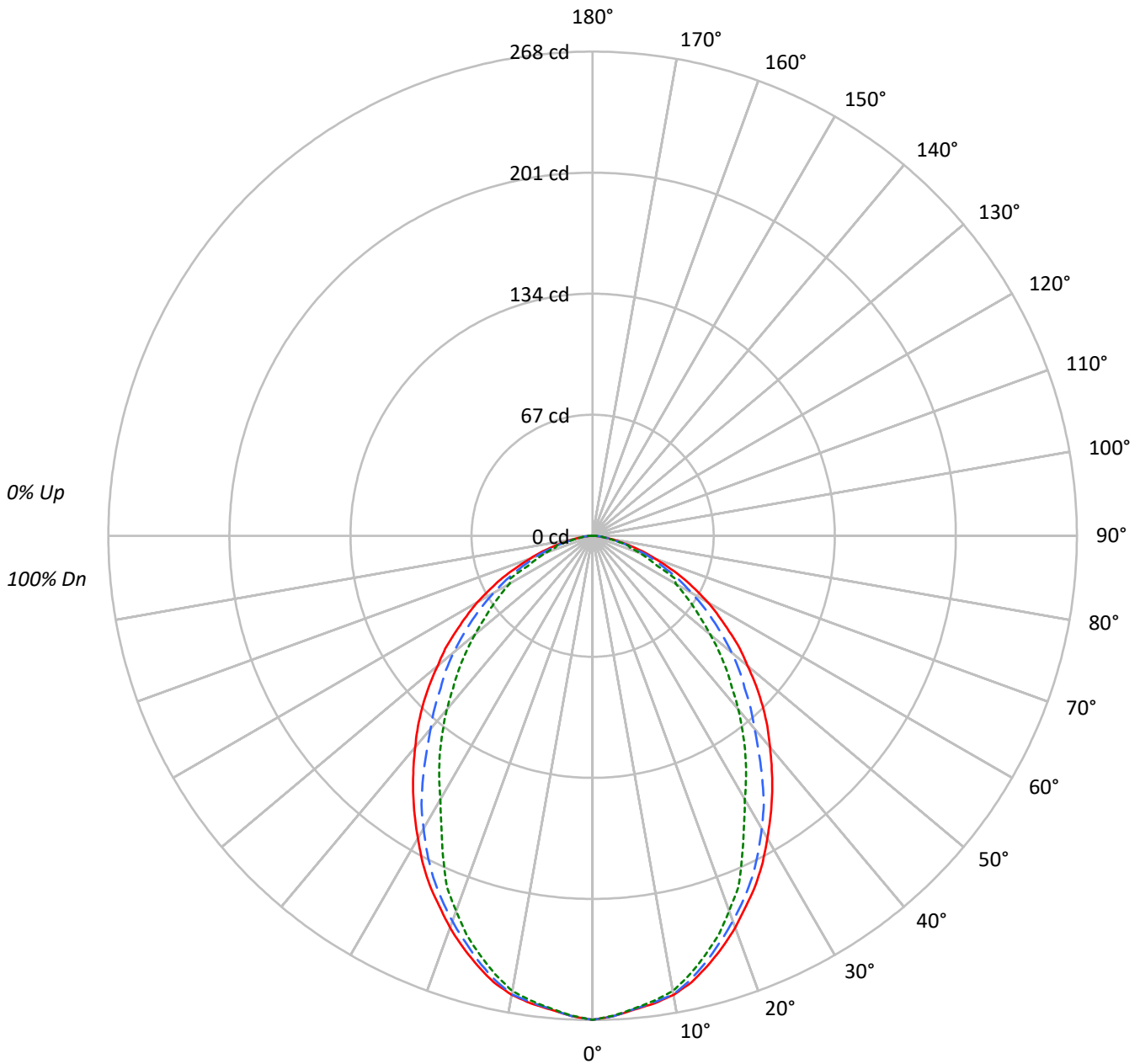
Lumens per Lamp: N/A  
Luminaire Lumens: 526.0 lumens  
Efficiency: N/A  
Efficacy: 90.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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°	2884	2884	2884
5°	2845	2842	2838
10°	2820	2817	2797
15°	2745	2717	2679
20°	2644	2600	2530
25°	2534	2480	2325
30°	2403	2325	2094
35°	2276	2150	1937
40°	2146	1959	1763
45°	2023	1810	1594
50°	1872	1681	1422
55°	1732	1524	1272
60°	1587	1361	1141
65°	1396	1192	1009
70°	1152	1042	859
75°	915	799	836
80°	614	576	539
85°	383	457	531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.9	4.7
10°-20°	68.5	13.0
20°-30°	94.8	18.0
30°-40°	101.1	19.2
40°-50°	92.2	17.5
50°-60°	72.2	13.7
60°-70°	47.1	8.9
70°-80°	20.9	4.0
80°-90°	4.5	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°	188.2	35.8
0°-40°	289.2	55.0
0°-60°	453.6	86.2
0°-90°	526.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	526.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	268	268	268	268	268	
5°	263	263	263	263	263	25
15°	246	246	244	241	240	69
25°	213	212	209	201	196	98
35°	173	172	164	151	147	108
45°	133	130	119	109	105	102
55°	92	90	81	72	68	83
65°	55	52	47	48	40	54
75°	22	20	19	18	20	24
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	267.9	267.9	267.9	267.9	267.9
2.5°	266.1	266.1	266.1	265.8	265.8
5°	263.3	263.0	263.0	262.7	262.7
7.5°	261.1	260.8	260.5	260.2	259.6
10°	258.0	258.0	257.7	256.2	255.9
12.5°	253.1	252.8	251.5	249.4	248.7
15°	246.3	246.3	243.8	241.3	240.4
17.5°	238.8	238.5	235.4	232.9	231.7
20°	230.8	230.1	227.0	223.0	220.9
22.5°	221.8	221.8	218.1	212.8	210.6
25°	213.4	212.2	208.8	201.3	195.8
27.5°	203.8	202.0	198.2	187.7	181.2
30°	193.3	192.4	187.1	173.5	168.5
32.5°	183.4	181.8	176.3	162.0	158.0
35°	173.2	171.9	163.6	151.2	147.4
37.5°	162.9	161.4	150.9	140.9	136.3
40°	152.7	150.9	139.4	130.4	125.5
42.5°	143.1	140.6	129.5	119.9	114.3
45°	132.9	130.1	118.9	109.0	104.7
47.5°	122.7	120.2	110.0	99.7	94.8
50°	111.8	109.7	100.4	90.1	84.9
52.5°	102.8	99.4	90.4	80.2	75.9
55°	92.3	89.5	81.2	71.6	67.8
57.5°	82.7	79.9	72.2	63.2	60.1
60°	73.7	69.7	63.2	55.4	53.0
62.5°	63.8	60.7	55.1	48.6	51.7
65°	54.8	51.7	46.8	47.7	39.6
67.5°	44.9	43.4	39.0	34.7	33.5
70°	36.6	34.7	33.1	28.5	27.3
72.5°	29.1	27.3	25.1	22.6	21.7
75°	22.0	20.4	19.2	18.3	20.1
77.5°	15.2	14.6	13.6	12.7	12.4
80°	9.9	9.6	9.3	9.0	8.7
82.5°	5.9	5.9	5.9	5.9	5.9
85°	3.1	3.4	3.7	4.0	4.3
87.5°	1.9	1.9	2.2	2.5	2.8
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)