

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: P545258

Luminaire Tested: **FMR-12-2-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: P545258  
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-12-2-LD4-1HI-35-UNV-82-87-EDD  
Description: 1X2 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**

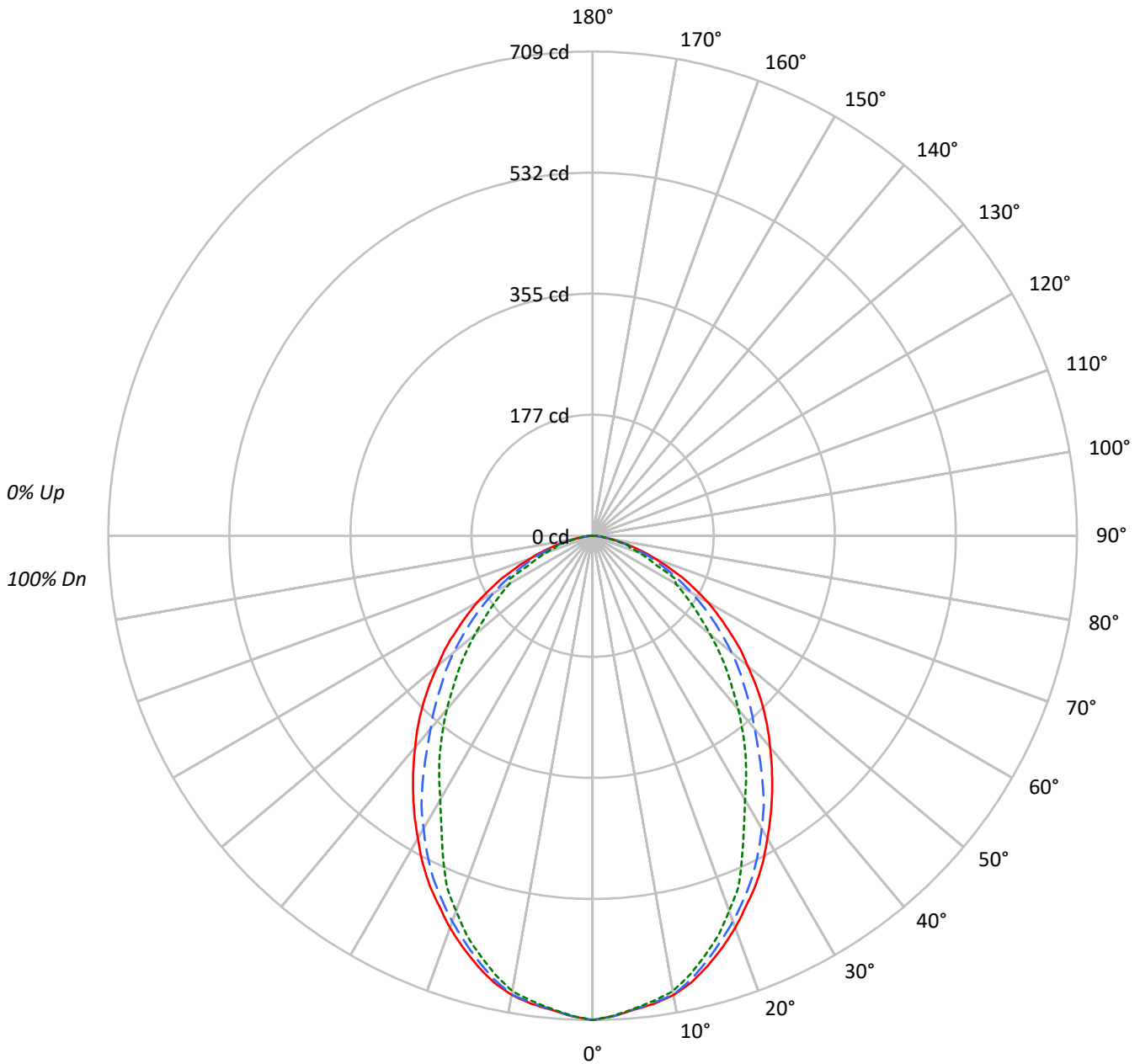
Lumens per Lamp: N/A  
Luminaire Lumens: 1392.0 lumens  
Efficiency: N/A  
Efficacy: 64.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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°	3816	3816	3816
5°	3764	3760	3755
10°	3731	3727	3700
15°	3631	3594	3544
20°	3498	3442	3348
25°	3354	3281	3077
30°	3179	3077	2771
35°	3010	2844	2564
40°	2839	2592	2333
45°	2677	2396	2109
50°	2478	2224	1881
55°	2292	2016	1684
60°	2100	1800	1509
65°	1848	1577	1336
70°	1522	1380	1135
75°	1210	1056	1108
80°	812	762	713
85°	506	605	710



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.0	4.7
10°-20°	181.1	13.0
20°-30°	250.8	18.0
30°-40°	267.4	19.2
40°-50°	244.0	17.5
50°-60°	191.1	13.7
60°-70°	124.6	8.9
70°-80°	55.2	4.0
80°-90°	11.9	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°	497.9	35.8
0°-40°	765.3	55.0
0°-60°	1200.4	86.2
0°-90°	1392.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1392.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	709	709	709	709	709	
5°	697	696	696	695	695	66
15°	652	652	645	639	636	183
25°	565	562	552	533	518	259
35°	458	455	433	400	390	286
45°	352	344	315	288	277	271
55°	244	237	215	189	180	219
65°	145	137	124	126	105	143
75°	58	54	51	48	53	62
85°	8	9	10	11	12	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	709.1	709.1	709.1	709.1	709.1
2.5°	704.1	704.1	704.1	703.3	703.3
5°	696.8	696.0	696.0	695.1	695.1
7.5°	691.0	690.2	689.4	688.6	686.9
10°	682.8	682.8	682.0	677.9	677.1
12.5°	669.7	668.9	665.6	659.9	658.2
15°	651.7	651.7	645.1	638.6	636.1
17.5°	632.0	631.2	623.0	616.4	613.2
20°	610.7	609.1	600.9	590.2	584.5
22.5°	586.9	586.9	577.1	563.2	557.4
25°	564.8	561.5	552.5	532.8	518.1
27.5°	539.4	534.5	524.6	496.8	479.5
30°	511.5	509.1	495.1	459.0	445.9
32.5°	485.3	481.2	466.4	428.7	418.1
35°	458.2	454.9	432.8	400.0	390.2
37.5°	431.2	427.1	399.2	373.0	360.7
40°	404.1	399.2	368.9	345.1	332.0
42.5°	378.7	372.2	342.6	317.2	302.5
45°	351.7	344.3	314.8	288.5	277.1
47.5°	324.6	318.1	291.0	264.0	250.8
50°	295.9	290.2	265.6	238.5	224.6
52.5°	272.2	263.1	239.4	212.3	200.8
55°	244.3	236.9	214.8	189.4	179.5
57.5°	218.9	211.5	191.0	167.2	159.0
60°	195.1	184.4	167.2	146.7	140.2
62.5°	168.9	160.7	145.9	128.7	136.9
65°	145.1	136.9	123.8	126.2	104.9
67.5°	118.9	114.8	103.3	91.8	88.5
70°	96.7	91.8	87.7	75.4	72.1
72.5°	77.1	72.1	66.4	59.8	57.4
75°	58.2	54.1	50.8	48.4	53.3
77.5°	40.2	38.5	36.1	33.6	32.8
80°	26.2	25.4	24.6	23.8	23.0
82.5°	15.6	15.6	15.6	15.6	15.6
85°	8.2	9.0	9.8	10.7	11.5
87.5°	4.9	4.9	5.7	6.6	7.4
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)