

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: P545320

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-82-85-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: P545320  
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-50-UNV-82-85-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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**

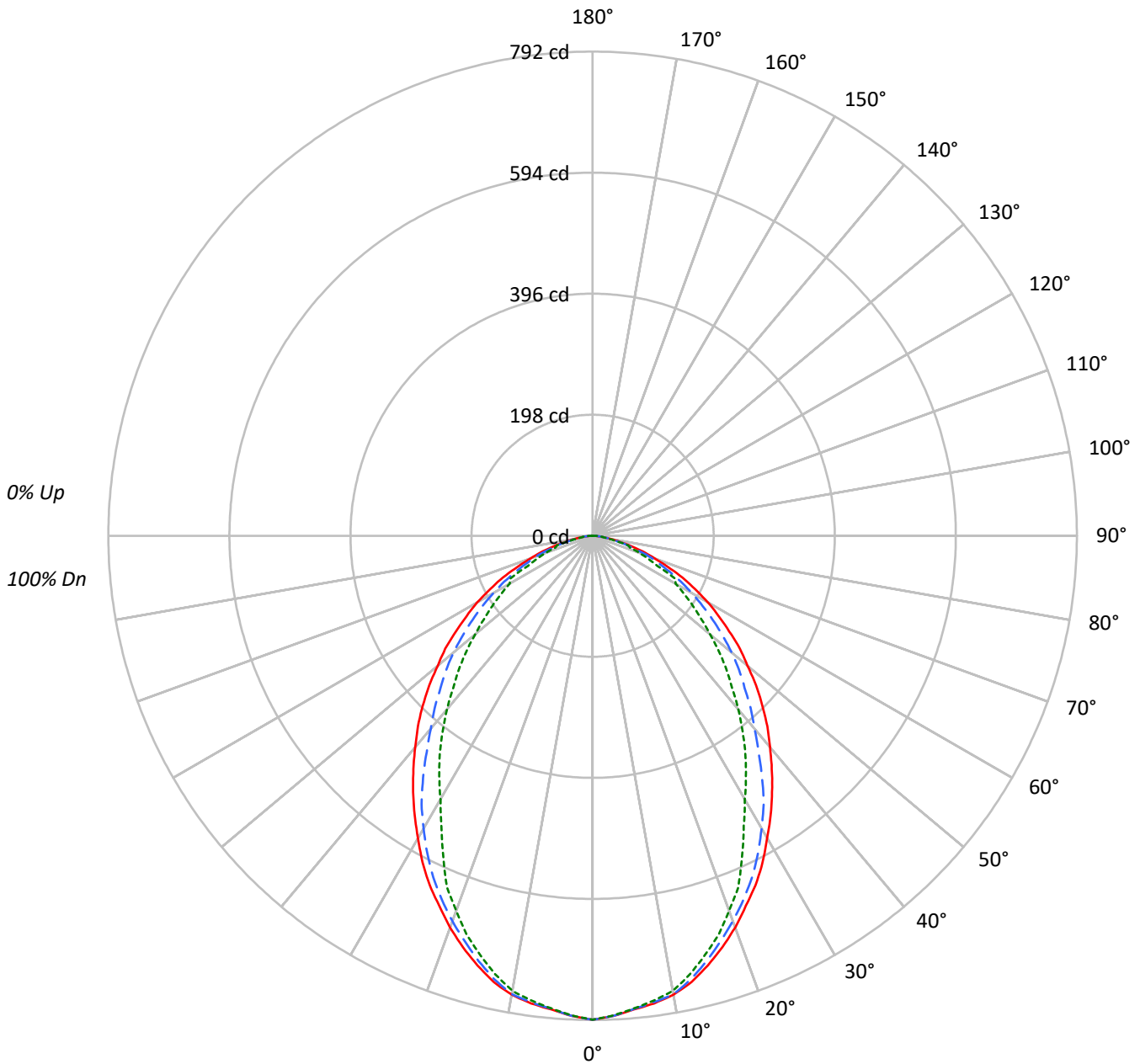
Lumens per Lamp: N/A  
Luminaire Lumens: 1554.0 lumens  
Efficiency: N/A  
Efficacy: 71.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	4260	4260	4260
5°	4203	4197	4192
10°	4166	4161	4131
15°	4053	4013	3957
20°	3905	3842	3737
25°	3744	3663	3435
30°	3549	3435	3094
35°	3361	3175	2862
40°	3170	2893	2604
45°	2988	2675	2354
50°	2766	2483	2099
55°	2559	2250	1880
60°	2344	2010	1685
65°	2063	1760	1491
70°	1699	1541	1267
75°	1352	1179	1237
80°	908	852	793
85°	568	679	790



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.7	4.7
10°-20°	202.2	13.0
20°-30°	280.0	18.0
30°-40°	298.5	19.2
40°-50°	272.4	17.5
50°-60°	213.4	13.7
60°-70°	139.1	8.9
70°-80°	61.6	4.0
80°-90°	13.2	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°	555.9	35.8
0°-40°	854.4	55.0
0°-60°	1340.1	86.2
0°-90°	1554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1554.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	778	777	777	776	776	74
15°	728	728	720	713	710	205
25°	630	627	617	595	578	289
35°	512	508	483	447	436	320
45°	393	384	351	322	309	302
55°	273	264	240	211	200	245
65°	162	153	138	141	117	160
75°	65	60	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	791.6	791.6	791.6	791.6	791.6
2.5°	786.1	786.1	786.1	785.2	785.2
5°	777.9	776.9	776.9	776.0	776.0
7.5°	771.5	770.5	769.6	768.7	766.9
10°	762.3	762.3	761.4	756.8	755.9
12.5°	747.7	746.7	743.1	736.7	734.8
15°	727.5	727.5	720.2	712.9	710.1
17.5°	705.6	704.6	695.5	688.2	684.5
20°	681.8	679.9	670.8	658.9	652.5
22.5°	655.2	655.2	644.3	628.7	622.3
25°	630.5	626.9	616.8	594.8	578.4
27.5°	602.2	596.7	585.7	554.6	535.4
30°	571.0	568.3	552.7	512.5	497.8
32.5°	541.8	537.2	520.7	478.6	466.7
35°	511.6	507.9	483.2	446.6	435.6
37.5°	481.4	476.8	445.7	416.4	402.7
40°	451.2	445.7	411.8	385.3	370.6
42.5°	422.8	415.5	382.5	354.2	337.7
45°	392.6	384.4	351.4	322.1	309.3
47.5°	362.4	355.1	324.9	294.7	280.0
50°	330.4	324.0	296.5	266.3	250.7
52.5°	303.8	293.8	267.2	237.0	224.2
55°	272.7	264.5	239.8	211.4	200.4
57.5°	244.3	236.1	213.2	186.7	177.5
60°	217.8	205.9	186.7	163.8	156.5
62.5°	188.5	179.4	162.9	143.7	152.8
65°	162.0	152.8	138.2	140.9	117.1
67.5°	132.7	128.1	115.3	102.5	98.8
70°	108.0	102.5	97.9	84.2	80.5
72.5°	86.0	80.5	74.1	66.8	64.1
75°	65.0	60.4	56.7	54.0	59.5
77.5°	44.8	43.0	40.3	37.5	36.6
80°	29.3	28.4	27.5	26.5	25.6
82.5°	17.4	17.4	17.4	17.4	17.4
85°	9.2	10.1	11.0	11.9	12.8
87.5°	5.5	5.5	6.4	7.3	8.2
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)