

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: P544741

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-81-96-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: P544741  
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-50-UNV-81-96-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

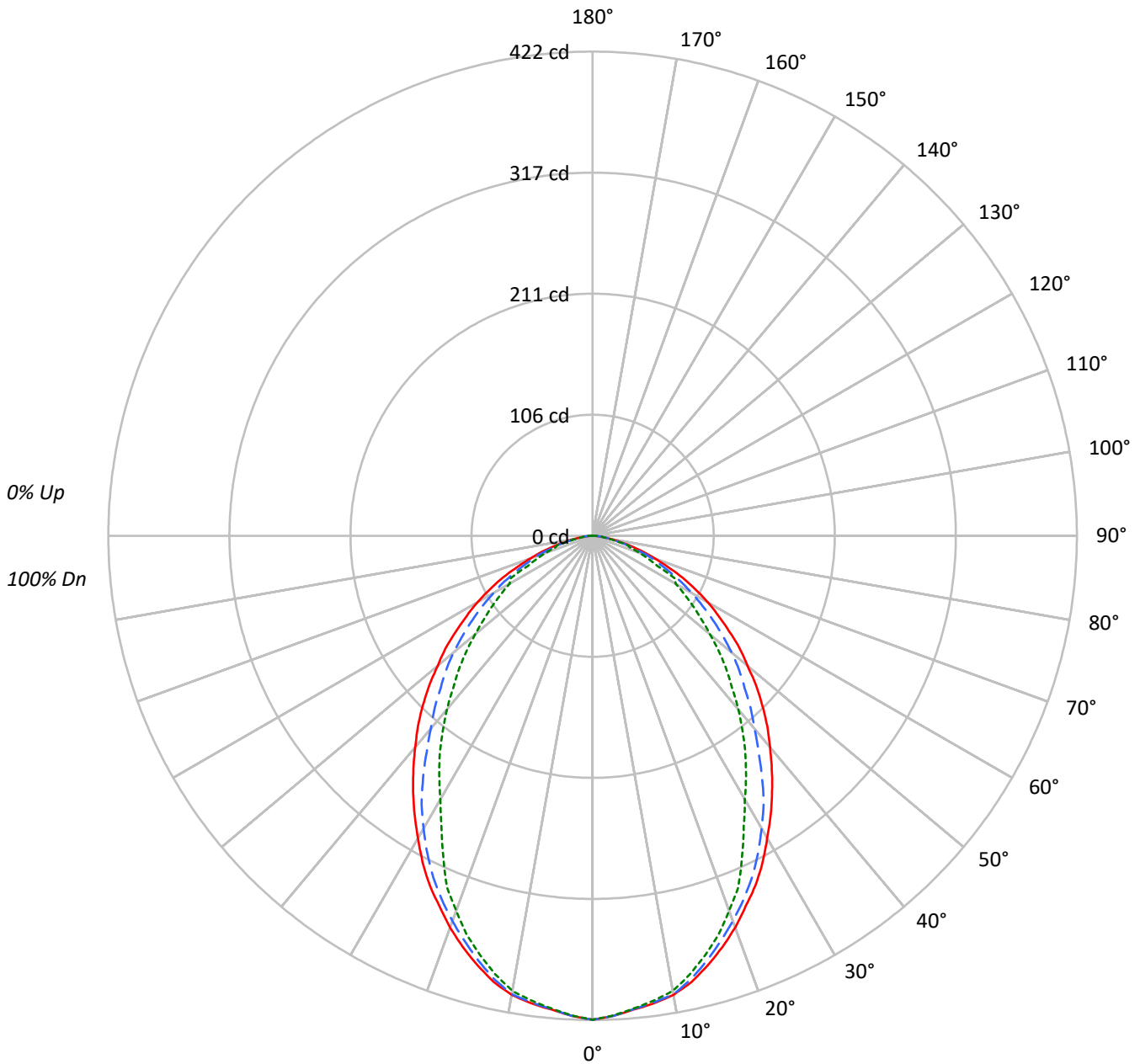
Lumens per Lamp: N/A  
Luminaire Lumens: 828.0 lumens  
Efficiency: N/A  
Efficacy: 76.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4540	4540	4540
5°	4479	4473	4468
10°	4440	4434	4403
15°	4319	4276	4217
20°	4161	4094	3983
25°	3991	3903	3660
30°	3782	3660	3297
35°	3582	3384	3050
40°	3378	3083	2775
45°	3185	2850	2509
50°	2947	2646	2237
55°	2727	2398	2004
60°	2497	2142	1795
65°	2198	1875	1589
70°	1810	1643	1350
75°	1439	1256	1318
80°	967	905	849
85°	605	729	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.3	4.7
10°-20°	107.7	13.0
20°-30°	149.2	18.0
30°-40°	159.1	19.2
40°-50°	145.1	17.5
50°-60°	113.7	13.7
60°-70°	74.1	8.9
70°-80°	32.8	4.0
80°-90°	7.1	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
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0°-30°	296.2	35.8
0°-40°	455.2	55.0
0°-60°	714.0	86.2
0°-90°	828.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	828.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	422	422	422	422	422	
5°	414	414	414	414	414	39
15°	388	388	384	380	378	109
25°	336	334	329	317	308	154
35°	273	271	258	238	232	170
45°	209	205	187	172	165	161
55°	145	141	128	113	107	130
65°	86	81	74	75	62	85
75°	35	32	30	29	32	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	421.8	421.8	421.8	421.8	421.8
2.5°	418.8	418.8	418.8	418.4	418.4
5°	414.5	414.0	414.0	413.5	413.5
7.5°	411.0	410.6	410.1	409.6	408.6
10°	406.2	406.2	405.7	403.2	402.8
12.5°	398.4	397.9	395.9	392.5	391.5
15°	387.6	387.6	383.7	379.8	378.4
17.5°	375.9	375.5	370.6	366.7	364.7
20°	363.3	362.3	357.4	351.1	347.7
22.5°	349.1	349.1	343.3	335.0	331.6
25°	336.0	334.0	328.6	316.9	308.2
27.5°	320.8	317.9	312.1	295.5	285.2
30°	304.3	302.8	294.5	273.1	265.3
32.5°	288.7	286.2	277.4	255.0	248.7
35°	272.6	270.6	257.5	237.9	232.1
37.5°	256.5	254.0	237.5	221.9	214.5
40°	240.4	237.5	219.4	205.3	197.5
42.5°	225.3	221.4	203.8	188.7	179.9
45°	209.2	204.8	187.2	171.6	164.8
47.5°	193.1	189.2	173.1	157.0	149.2
50°	176.0	172.6	158.0	141.9	133.6
52.5°	161.9	156.5	142.4	126.3	119.5
55°	145.3	140.9	127.8	112.6	106.8
57.5°	130.2	125.8	113.6	99.5	94.6
60°	116.0	109.7	99.5	87.3	83.4
62.5°	100.4	95.6	86.8	76.6	81.4
65°	86.3	81.4	73.6	75.1	62.4
67.5°	70.7	68.3	61.4	54.6	52.7
70°	57.5	54.6	52.2	44.9	42.9
72.5°	45.8	42.9	39.5	35.6	34.1
75°	34.6	32.2	30.2	28.8	31.7
77.5°	23.9	22.9	21.5	20.0	19.5
80°	15.6	15.1	14.6	14.1	13.7
82.5°	9.3	9.3	9.3	9.3	9.3
85°	4.9	5.4	5.9	6.3	6.8
87.5°	2.9	2.9	3.4	3.9	4.4
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)