

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: P544742

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-81-97-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: P544742  
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-81-97-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

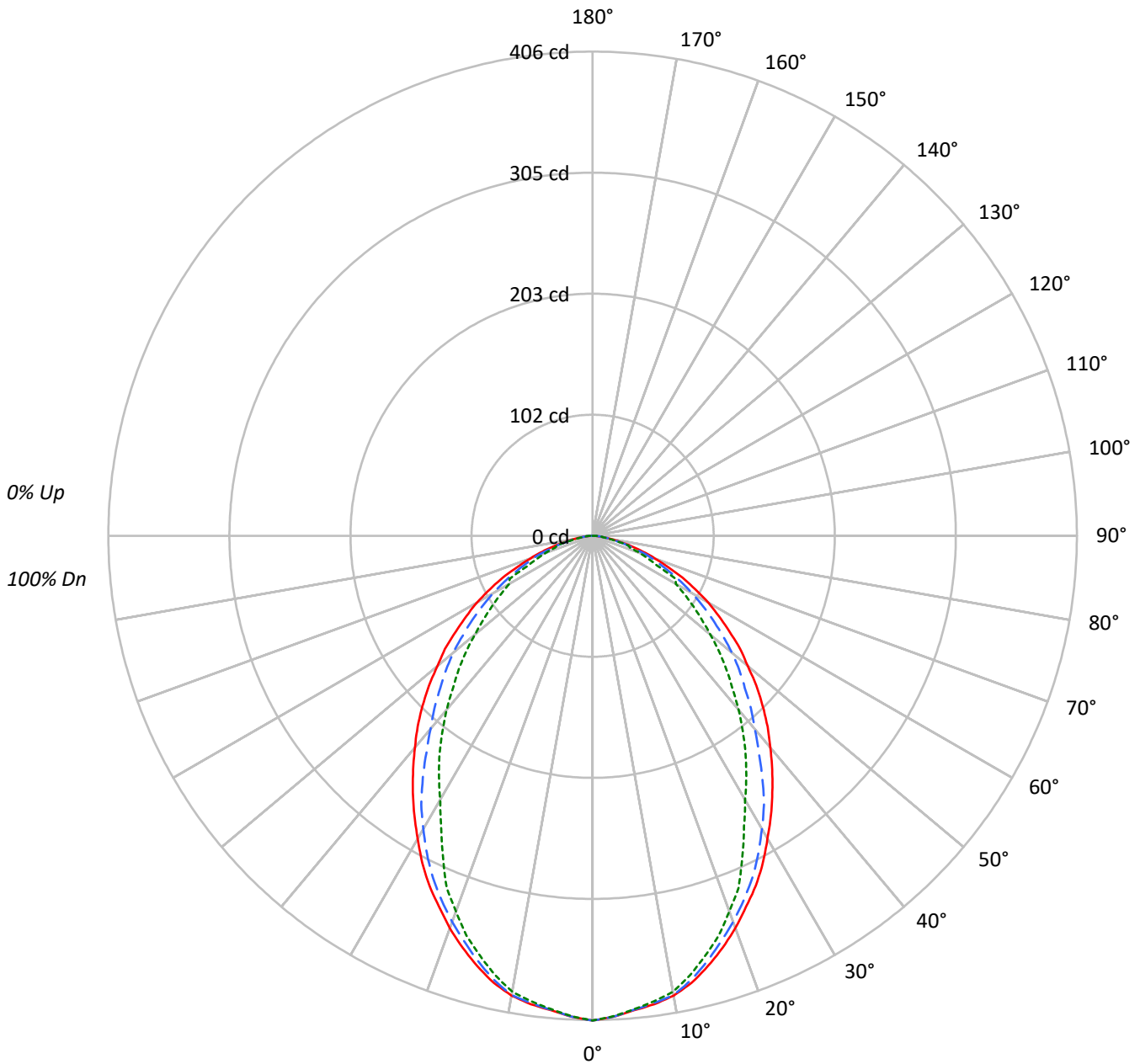
Lumens per Lamp: N/A  
Luminaire Lumens: 798.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	4376	4376	4376
5°	4316	4311	4306
10°	4279	4274	4243
15°	4163	4121	4064
20°	4010	3946	3838
25°	3846	3761	3527
30°	3644	3527	3177
35°	3452	3260	2939
40°	3256	2972	2674
45°	3069	2748	2417
50°	2840	2550	2157
55°	2627	2310	1931
60°	2407	2065	1731
65°	2119	1808	1533
70°	1747	1583	1303
75°	1389	1210	1268
80°	930	874	818
85°	580	692	815



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.8	4.7
10°-20°	103.8	13.0
20°-30°	143.8	18.0
30°-40°	153.3	19.2
40°-50°	139.8	17.5
50°-60°	109.6	13.7
60°-70°	71.4	8.9
70°-80°	31.6	4.0
80°-90°	6.8	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°	285.5	35.8
0°-40°	438.8	55.0
0°-60°	688.2	86.2
0°-90°	798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	798.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	406	406	406	406	406	
5°	399	399	399	398	398	38
15°	374	374	370	366	365	105
25°	324	322	317	306	297	149
35°	263	261	248	229	224	164
45°	202	197	180	165	159	155
55°	140	136	123	109	103	126
65°	83	78	71	72	60	82
75°	33	31	29	28	30	36
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°	406.5	406.5	406.5	406.5	406.5
2.5°	403.7	403.7	403.7	403.2	403.2
5°	399.4	399.0	399.0	398.5	398.5
7.5°	396.2	395.7	395.2	394.7	393.8
10°	391.5	391.5	391.0	388.6	388.2
12.5°	383.9	383.5	381.6	378.3	377.4
15°	373.6	373.6	369.8	366.1	364.7
17.5°	362.3	361.8	357.1	353.4	351.5
20°	350.1	349.2	344.5	338.4	335.1
22.5°	336.5	336.5	330.8	322.8	319.6
25°	323.8	321.9	316.7	305.5	297.0
27.5°	309.2	306.4	300.8	284.8	274.9
30°	293.2	291.8	283.8	263.2	255.6
32.5°	278.2	275.8	267.4	245.8	239.7
35°	262.7	260.8	248.1	229.3	223.7
37.5°	247.2	244.8	228.9	213.8	206.8
40°	231.7	228.9	211.5	197.8	190.3
42.5°	217.1	213.3	196.4	181.9	173.4
45°	201.6	197.4	180.5	165.4	158.8
47.5°	186.1	182.3	166.8	151.3	143.8
50°	169.6	166.4	152.3	136.7	128.8
52.5°	156.0	150.8	137.2	121.7	115.1
55°	140.0	135.8	123.1	108.6	102.9
57.5°	125.5	121.2	109.5	95.9	91.2
60°	111.8	105.7	95.9	84.1	80.4
62.5°	96.8	92.1	83.6	73.8	78.5
65°	83.2	78.5	71.0	72.4	60.2
67.5°	68.1	65.8	59.2	52.6	50.8
70°	55.5	52.6	50.3	43.2	41.4
72.5°	44.2	41.4	38.1	34.3	32.9
75°	33.4	31.0	29.1	27.7	30.5
77.5°	23.0	22.1	20.7	19.3	18.8
80°	15.0	14.6	14.1	13.6	13.2
82.5°	8.9	8.9	8.9	8.9	8.9
85°	4.7	5.2	5.6	6.1	6.6
87.5°	2.8	2.8	3.3	3.8	4.2
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)