

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: P544730

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-80-87-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: P544730  
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-80-87-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

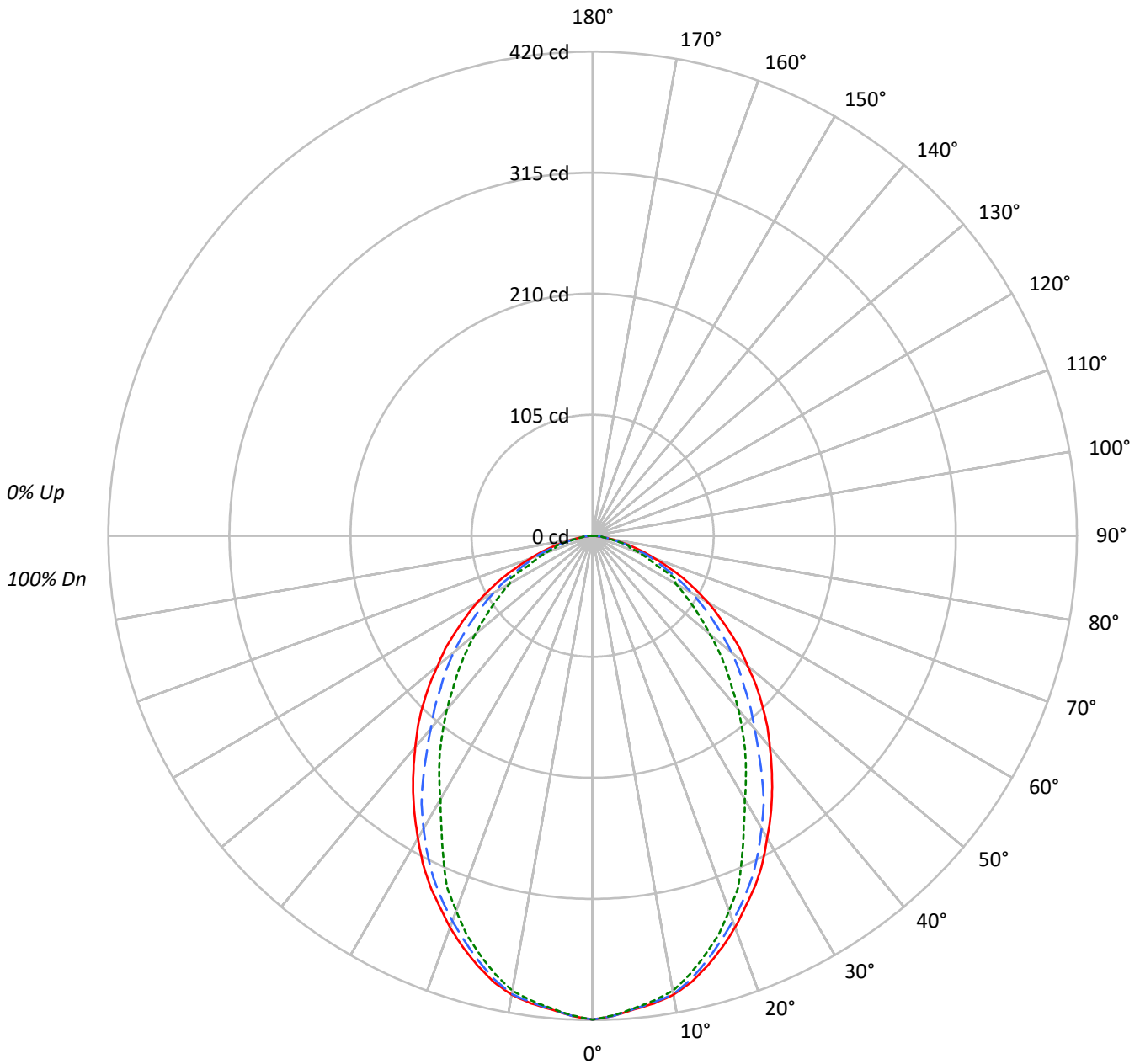
Lumens per Lamp: N/A  
Luminaire Lumens: 824.0 lumens  
Efficiency: N/A  
Efficacy: 76.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	4518	4518	4518
5°	4457	4452	4446
10°	4418	4412	4381
15°	4299	4256	4196
20°	4141	4074	3963
25°	3970	3885	3643
30°	3764	3643	3281
35°	3565	3367	3035
40°	3361	3069	2761
45°	3169	2836	2496
50°	2934	2632	2227
55°	2714	2385	1995
60°	2486	2131	1787
65°	2188	1867	1582
70°	1803	1633	1344
75°	1435	1252	1310
80°	961	905	843
85°	605	716	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.1	4.7
10°-20°	107.2	13.0
20°-30°	148.5	18.0
30°-40°	158.3	19.2
40°-50°	144.4	17.5
50°-60°	113.1	13.7
60°-70°	73.7	8.9
70°-80°	32.7	4.0
80°-90°	7.0	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°	294.8	35.8
0°-40°	453.0	55.0
0°-60°	710.6	86.2
0°-90°	824.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	824.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	412	412	412	412	412	39
15°	386	386	382	378	376	108
25°	334	332	327	315	307	153
35°	271	269	256	237	231	170
45°	208	204	186	171	164	160
55°	145	140	127	112	106	130
65°	86	81	73	75	62	85
75°	34	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°	419.7	419.7	419.7	419.7	419.7
2.5°	416.8	416.8	416.8	416.3	416.3
5°	412.5	412.0	412.0	411.5	411.5
7.5°	409.1	408.6	408.1	407.6	406.6
10°	404.2	404.2	403.7	401.3	400.8
12.5°	396.4	396.0	394.0	390.6	389.6
15°	385.8	385.8	381.9	378.0	376.5
17.5°	374.1	373.6	368.8	364.9	363.0
20°	361.5	360.5	355.7	349.4	346.0
22.5°	347.4	347.4	341.6	333.4	330.0
25°	334.3	332.4	327.1	315.4	306.7
27.5°	319.3	316.4	310.6	294.1	283.9
30°	302.8	301.3	293.1	271.7	264.0
32.5°	287.3	284.8	276.1	253.8	247.5
35°	271.3	269.3	256.2	236.8	231.0
37.5°	255.2	252.8	236.3	220.8	213.5
40°	239.2	236.3	218.4	204.3	196.5
42.5°	224.2	220.3	202.8	187.8	179.1
45°	208.2	203.8	186.3	170.8	164.0
47.5°	192.2	188.3	172.3	156.2	148.5
50°	175.2	171.8	157.2	141.2	133.0
52.5°	161.1	155.8	141.7	125.7	118.9
55°	144.6	140.2	127.1	112.1	106.3
57.5°	129.6	125.2	113.1	99.0	94.1
60°	115.5	109.2	99.0	86.9	83.0
62.5°	100.0	95.1	86.4	76.2	81.0
65°	85.9	81.0	73.3	74.7	62.1
67.5°	70.4	67.9	61.1	54.3	52.4
70°	57.3	54.3	51.9	44.6	42.7
72.5°	45.6	42.7	39.3	35.4	34.0
75°	34.5	32.0	30.1	28.6	31.5
77.5°	23.8	22.8	21.4	19.9	19.4
80°	15.5	15.0	14.6	14.1	13.6
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.9	5.3	5.8	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)