

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: P544754

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-93-87-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: P544754  
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-93-87-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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**

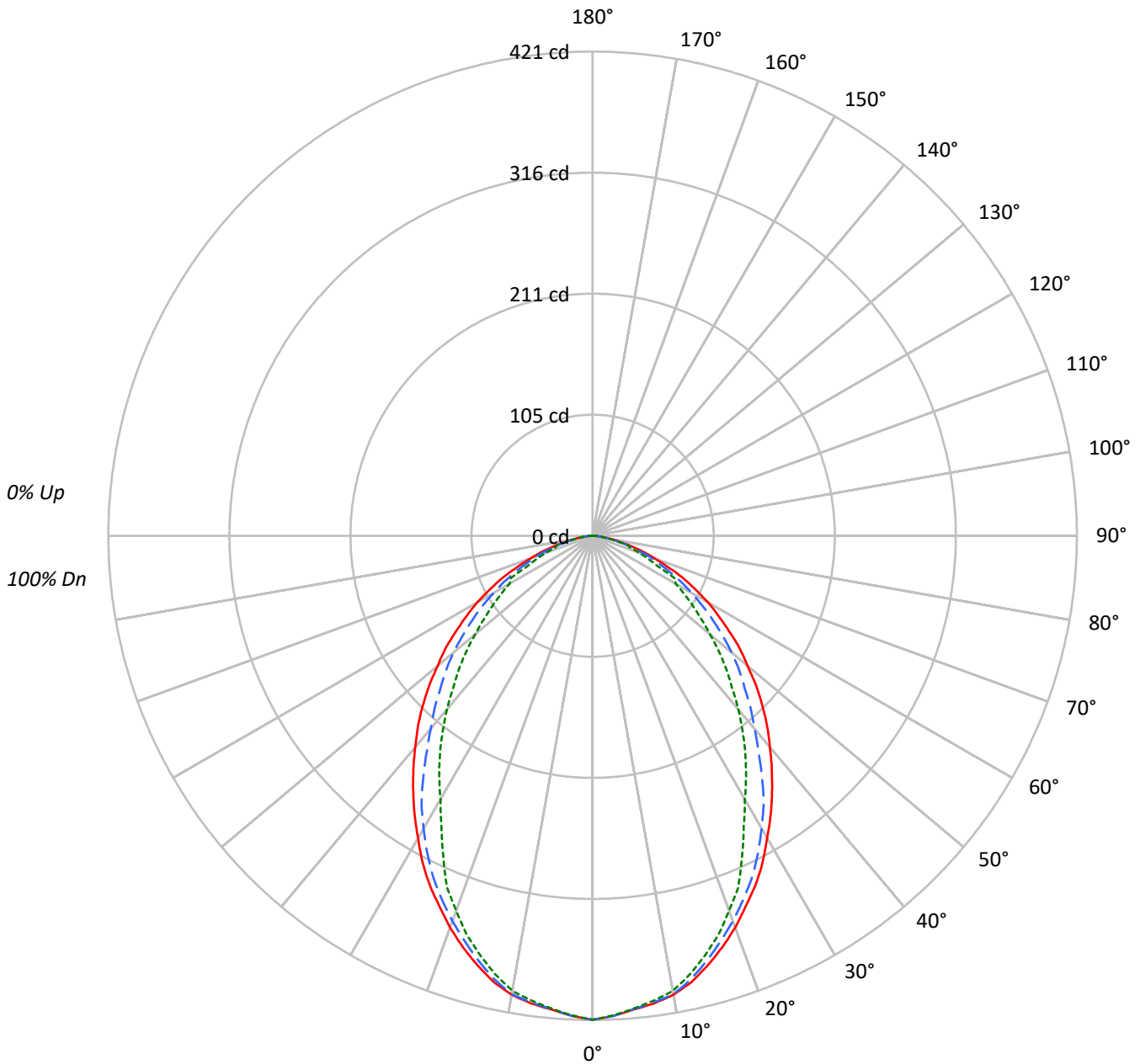
Lumens per Lamp: N/A  
Luminaire Lumens: 826.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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				20				
RC	80				70				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4529	4529	4529
5°	4468	4462	4457
10°	4429	4423	4392
15°	4309	4266	4207
20°	4151	4084	3972
25°	3980	3893	3651
30°	3772	3652	3289
35°	3573	3374	3042
40°	3370	3076	2768
45°	3177	2844	2503
50°	2941	2639	2232
55°	2721	2391	1999
60°	2493	2136	1791
65°	2193	1869	1587
70°	1806	1637	1347
75°	1435	1256	1314
80°	967	905	843
85°	605	716	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.2	4.7
10°-20°	107.5	13.0
20°-30°	148.8	18.0
30°-40°	158.7	19.2
40°-50°	144.8	17.5
50°-60°	113.4	13.7
60°-70°	73.9	8.9
70°-80°	32.7	4.0
80°-90°	7.0	0.8
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°	295.5	35.8
0°-40°	454.1	55.0
0°-60°	712.3	86.2
0°-90°	826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	826.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	421	421	421	421	421	
5°	414	413	413	412	412	39
15°	387	387	383	379	378	109
25°	335	333	328	316	307	154
35°	272	270	257	237	232	170
45°	209	204	187	171	164	161
55°	145	141	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°	420.8	420.8	420.8	420.8	420.8
2.5°	417.8	417.8	417.8	417.3	417.3
5°	413.5	413.0	413.0	412.5	412.5
7.5°	410.1	409.6	409.1	408.6	407.6
10°	405.2	405.2	404.7	402.3	401.8
12.5°	397.4	396.9	395.0	391.6	390.6
15°	386.7	386.7	382.8	378.9	377.5
17.5°	375.0	374.5	369.7	365.8	363.8
20°	362.4	361.4	356.5	350.2	346.8
22.5°	348.3	348.3	342.4	334.2	330.8
25°	335.1	333.2	327.8	316.2	307.4
27.5°	320.1	317.1	311.3	294.8	284.6
30°	303.5	302.1	293.8	272.4	264.6
32.5°	288.0	285.5	276.8	254.4	248.1
35°	271.9	270.0	256.8	237.4	231.5
37.5°	255.9	253.4	236.9	221.3	214.0
40°	239.8	236.9	218.9	204.8	197.0
42.5°	224.7	220.8	203.3	188.2	179.5
45°	208.7	204.3	186.8	171.2	164.4
47.5°	192.6	188.7	172.7	156.6	148.8
50°	175.6	172.2	157.6	141.5	133.3
52.5°	161.5	156.1	142.0	126.0	119.2
55°	145.0	140.6	127.4	112.4	106.5
57.5°	129.9	125.5	113.3	99.2	94.4
60°	115.8	109.4	99.2	87.1	83.2
62.5°	100.2	95.3	86.6	76.4	81.2
65°	86.1	81.2	73.4	74.9	62.3
67.5°	70.5	68.1	61.3	54.5	52.5
70°	57.4	54.5	52.0	44.8	42.8
72.5°	45.7	42.8	39.4	35.5	34.0
75°	34.5	32.1	30.2	28.7	31.6
77.5°	23.8	22.9	21.4	19.9	19.5
80°	15.6	15.1	14.6	14.1	13.6
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.9	5.4	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)