

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: P544680

Luminaire Tested: **FMR-12-1-LD4-1HI-35-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: P544680  
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-35-UNV-82-85-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

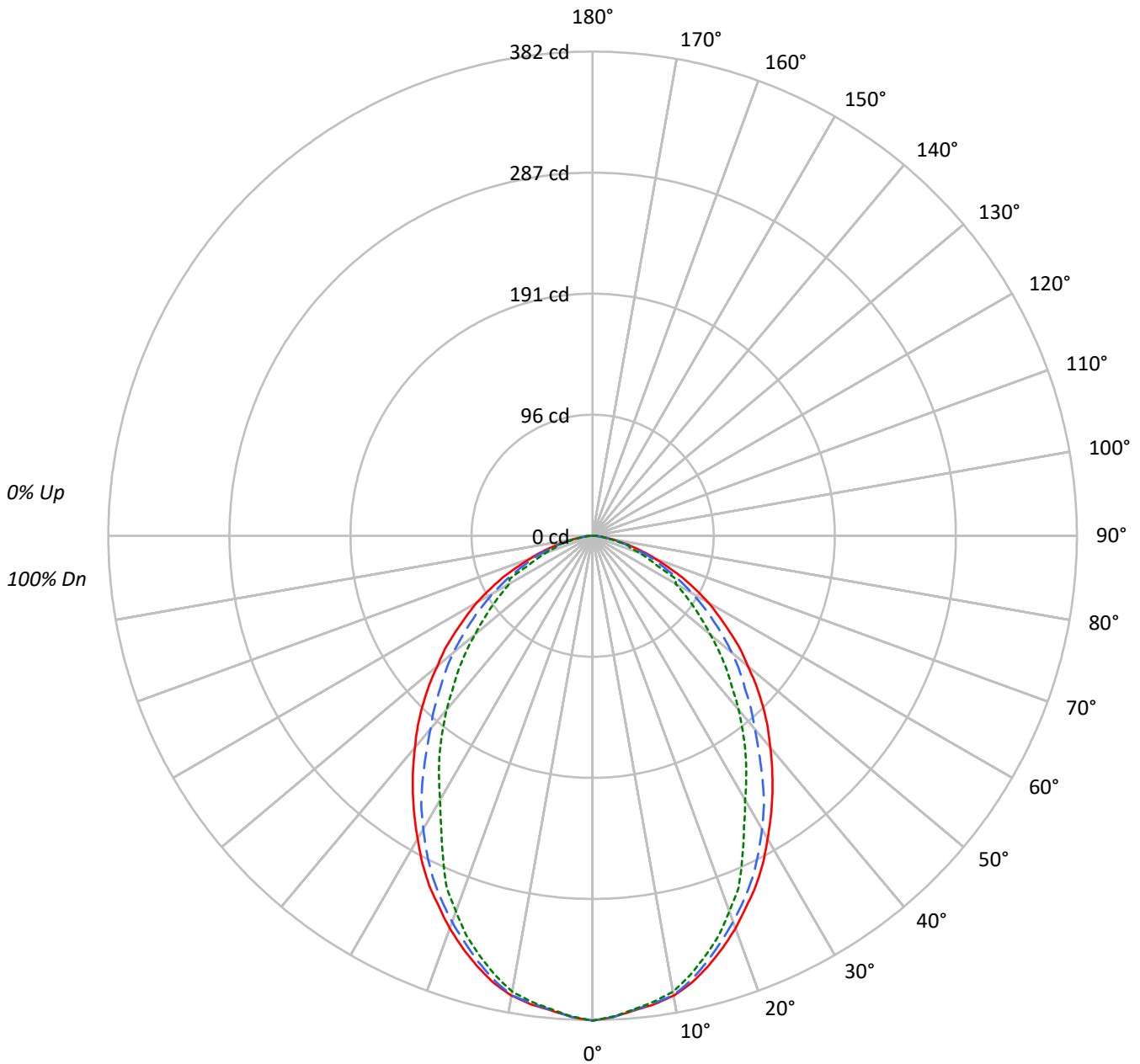
Lumens per Lamp: N/A  
Luminaire Lumens: 751.0 lumens  
Efficiency: N/A  
Efficacy: 69.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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									
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°	4117	4117	4117
5°	4062	4057	4052
10°	4027	4022	3993
15°	3918	3879	3824
20°	3774	3714	3612
25°	3619	3540	3320
30°	3430	3320	2990
35°	3248	3068	2766
40°	3063	2796	2517
45°	2888	2585	2276
50°	2674	2400	2030
55°	2473	2175	1818
60°	2267	1942	1628
65°	1994	1701	1442
70°	1643	1489	1224
75°	1306	1140	1194
80°	880	824	769
85°	543	655	766



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.6	4.7
10°-20°	97.7	13.0
20°-30°	135.3	18.0
30°-40°	144.3	19.2
40°-50°	131.6	17.5
50°-60°	103.1	13.7
60°-70°	67.2	8.9
70°-80°	29.8	4.0
80°-90°	6.4	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°	268.6	35.8
0°-40°	412.9	55.0
0°-60°	647.6	86.2
0°-90°	751.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	751.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	376	376	376	375	375	36
15°	352	352	348	344	343	99
25°	305	303	298	288	280	140
35°	247	246	234	216	210	155
45°	190	186	170	156	150	146
55°	132	128	116	102	97	118
65°	78	74	67	68	57	77
75°	31	29	27	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	382.5	382.5	382.5	382.5	382.5
2.5°	379.9	379.9	379.9	379.5	379.5
5°	375.9	375.5	375.5	375.0	375.0
7.5°	372.8	372.4	371.9	371.5	370.6
10°	368.4	368.4	368.0	365.7	365.3
12.5°	361.3	360.9	359.1	356.0	355.1
15°	351.6	351.6	348.1	344.5	343.2
17.5°	341.0	340.5	336.1	332.6	330.8
20°	329.5	328.6	324.2	318.4	315.3
22.5°	316.7	316.7	311.3	303.8	300.7
25°	304.7	302.9	298.1	287.5	279.5
27.5°	291.0	288.3	283.0	268.0	258.7
30°	276.0	274.6	267.1	247.7	240.6
32.5°	261.8	259.6	251.6	231.3	225.5
35°	247.2	245.5	233.5	215.8	210.5
37.5°	232.6	230.4	215.4	201.2	194.6
40°	218.0	215.4	199.0	186.2	179.1
42.5°	204.3	200.8	184.9	171.2	163.2
45°	189.7	185.7	169.8	155.7	149.5
47.5°	175.1	171.6	157.0	142.4	135.3
50°	159.7	156.6	143.3	128.7	121.2
52.5°	146.8	142.0	129.1	114.5	108.4
55°	131.8	127.8	115.9	102.2	96.9
57.5°	118.1	114.1	103.0	90.2	85.8
60°	105.3	99.5	90.2	79.2	75.6
62.5°	91.1	86.7	78.7	69.4	73.9
65°	78.3	73.9	66.8	68.1	56.6
67.5°	64.1	61.9	55.7	49.5	47.8
70°	52.2	49.5	47.3	40.7	38.9
72.5°	41.6	38.9	35.8	32.3	31.0
75°	31.4	29.2	27.4	26.1	28.7
77.5°	21.7	20.8	19.5	18.1	17.7
80°	14.2	13.7	13.3	12.8	12.4
82.5°	8.4	8.4	8.4	8.4	8.4
85°	4.4	4.9	5.3	5.7	6.2
87.5°	2.7	2.7	3.1	3.5	4.0
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)