

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: P544684

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-82-94-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: P544684  
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-82-94-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

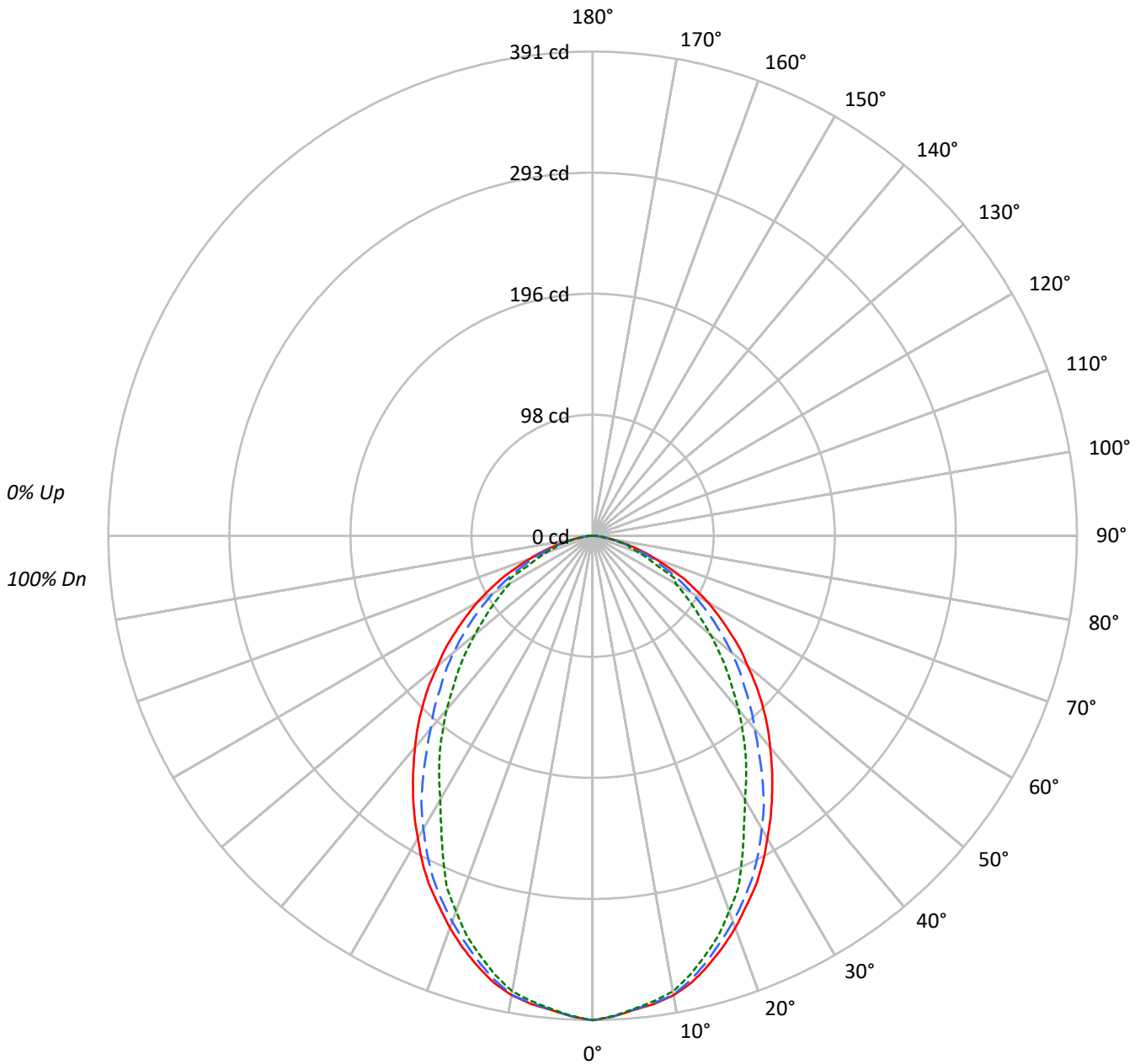
Lumens per Lamp: N/A  
Luminaire Lumens: 768.0 lumens  
Efficiency: N/A  
Efficacy: 71.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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								
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°	4211	4211	4211
5°	4153	4149	4144
10°	4117	4113	4083
15°	4007	3966	3911
20°	3859	3797	3694
25°	3701	3620	3394
30°	3507	3396	3058
35°	3322	3138	2829
40°	3133	2859	2574
45°	2953	2644	2328
50°	2735	2453	2075
55°	2530	2224	1858
60°	2316	1987	1664
65°	2040	1740	1475
70°	1681	1523	1253
75°	1335	1164	1223
80°	899	843	787
85°	556	667	778



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.4	4.7
10°-20°	99.9	13.0
20°-30°	138.4	18.0
30°-40°	147.5	19.2
40°-50°	134.6	17.5
50°-60°	105.5	13.7
60°-70°	68.7	8.9
70°-80°	30.4	4.0
80°-90°	6.5	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°	274.7	35.8
0°-40°	422.3	55.0
0°-60°	662.3	86.2
0°-90°	768.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	768.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	391	391	391	391	391	
5°	384	384	384	384	384	36
15°	360	360	356	352	351	101
25°	312	310	305	294	286	143
35°	253	251	239	221	215	158
45°	194	190	174	159	153	149
55°	135	131	118	104	99	121
65°	80	76	68	70	58	79
75°	32	30	28	27	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°	391.2	391.2	391.2	391.2	391.2
2.5°	388.5	388.5	388.5	388.0	388.0
5°	384.4	384.0	384.0	383.5	383.5
7.5°	381.3	380.8	380.4	379.9	379.0
10°	376.7	376.7	376.3	374.0	373.6
12.5°	369.5	369.0	367.2	364.1	363.2
15°	359.6	359.6	355.9	352.3	351.0
17.5°	348.7	348.2	343.7	340.1	338.3
20°	336.9	336.0	331.5	325.6	322.5
22.5°	323.8	323.8	318.4	310.7	307.5
25°	311.6	309.8	304.8	294.0	285.8
27.5°	297.6	294.9	289.4	274.1	264.6
30°	282.2	280.9	273.2	253.3	246.0
32.5°	267.7	265.5	257.3	236.5	230.7
35°	252.8	251.0	238.8	220.7	215.3
37.5°	237.9	235.6	220.3	205.8	199.0
40°	223.0	220.3	203.5	190.4	183.2
42.5°	208.9	205.3	189.0	175.0	166.9
45°	194.0	190.0	173.7	159.2	152.9
47.5°	179.1	175.5	160.6	145.6	138.4
50°	163.3	160.1	146.5	131.6	123.9
52.5°	150.2	145.2	132.1	117.1	110.8
55°	134.8	130.7	118.5	104.5	99.0
57.5°	120.8	116.7	105.4	92.3	87.7
60°	107.6	101.8	92.3	81.0	77.3
62.5°	93.2	88.6	80.5	71.0	75.5
65°	80.1	75.5	68.3	69.6	57.9
67.5°	65.6	63.3	57.0	50.7	48.8
70°	53.4	50.7	48.4	41.6	39.8
72.5°	42.5	39.8	36.6	33.0	31.7
75°	32.1	29.8	28.0	26.7	29.4
77.5°	22.2	21.3	19.9	18.5	18.1
80°	14.5	14.0	13.6	13.1	12.7
82.5°	8.6	8.6	8.6	8.6	8.6
85°	4.5	5.0	5.4	5.9	6.3
87.5°	2.7	2.7	3.2	3.6	4.1
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)