

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: P545438

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-80-97-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: P545438  
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-12-2-LD4-1STD-35-UNV-80-97-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

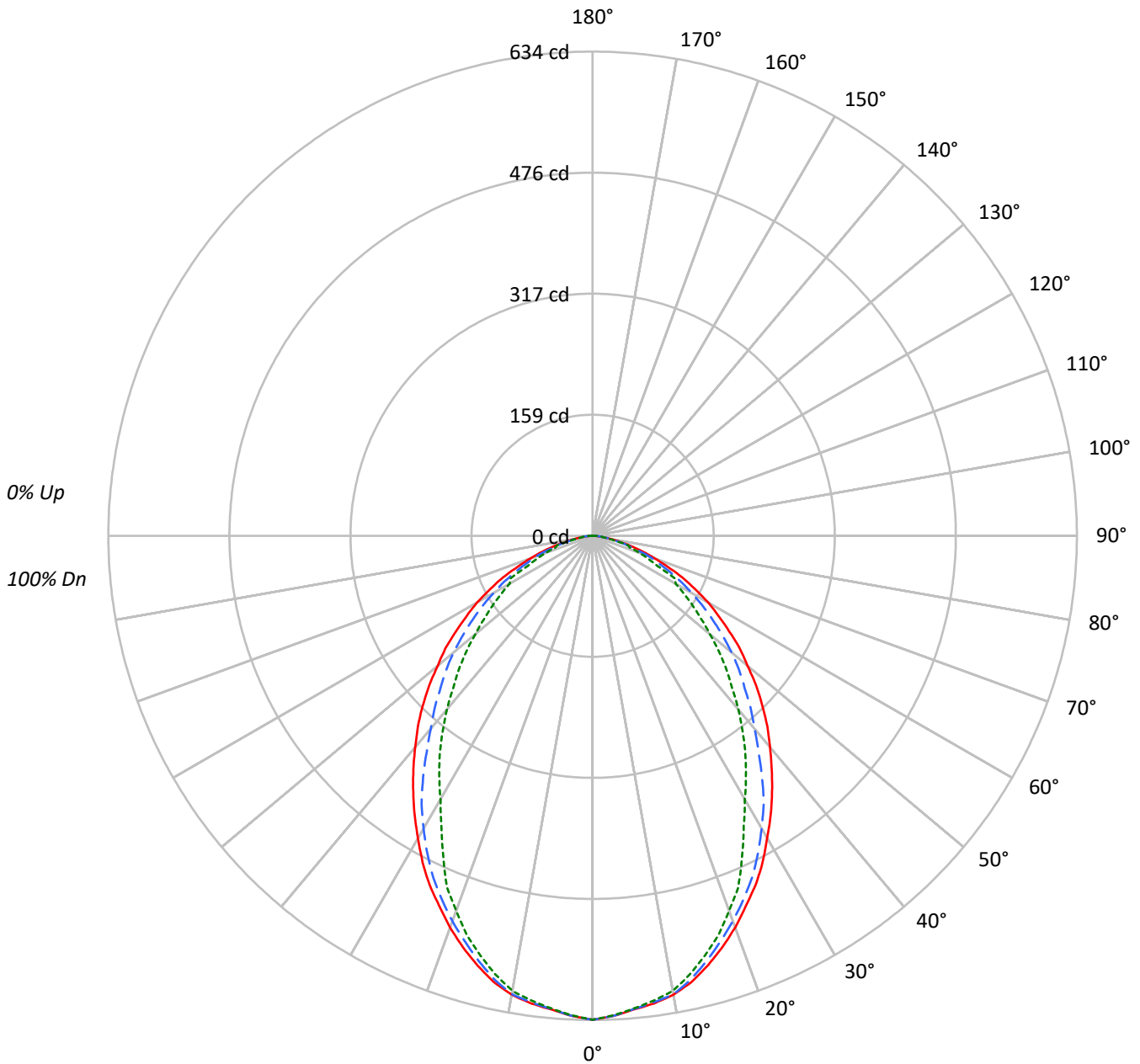
Lumens per Lamp: N/A  
Luminaire Lumens: 1244.0 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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			100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30																

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

	0°	45°	90°
0°	3411	3411	3411
5°	3364	3360	3356
10°	3335	3331	3307
15°	3245	3212	3168
20°	3126	3076	2991
25°	2997	2932	2749
30°	2841	2750	2476
35°	2690	2541	2291
40°	2538	2316	2085
45°	2392	2141	1885
50°	2215	1988	1680
55°	2048	1801	1505
60°	1877	1608	1349
65°	1652	1408	1195
70°	1360	1234	1015
75°	1081	944	990
80°	725	682	635
85°	451	543	636



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.0	4.7
10°-20°	161.9	13.0
20°-30°	224.1	18.0
30°-40°	239.0	19.2
40°-50°	218.0	17.5
50°-60°	170.8	13.7
60°-70°	111.3	8.9
70°-80°	49.3	4.0
80°-90°	10.6	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°	445.0	35.8
0°-40°	684.0	55.0
0°-60°	1072.8	86.2
0°-90°	1244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1244.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	623	622	622	621	621	59
15°	582	582	576	571	568	164
25°	505	502	494	476	463	232
35°	410	407	387	358	349	256
45°	314	308	281	258	248	242
55°	218	212	192	169	160	196
65°	130	122	111	113	94	128
75°	52	48	45	43	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	633.7	633.7	633.7	633.7	633.7
2.5°	629.3	629.3	629.3	628.5	628.5
5°	622.7	622.0	622.0	621.2	621.2
7.5°	617.6	616.8	616.1	615.4	613.9
10°	610.2	610.2	609.5	605.8	605.1
12.5°	598.5	597.8	594.9	589.7	588.3
15°	582.4	582.4	576.5	570.7	568.5
17.5°	564.8	564.1	556.8	550.9	548.0
20°	545.8	544.3	537.0	527.5	522.3
22.5°	524.5	524.5	515.7	503.3	498.2
25°	504.7	501.8	493.8	476.2	463.0
27.5°	482.0	477.6	468.8	443.9	428.6
30°	457.1	454.9	442.5	410.2	398.5
32.5°	433.7	430.0	416.8	383.1	373.6
35°	409.5	406.6	386.8	357.5	348.7
37.5°	385.3	381.7	356.8	333.3	322.3
40°	361.2	356.8	329.7	308.4	296.7
42.5°	338.4	332.6	306.2	283.5	270.3
45°	314.3	307.7	281.3	257.9	247.6
47.5°	290.1	284.2	260.1	235.9	224.2
50°	264.5	259.3	237.4	213.2	200.7
52.5°	243.2	235.2	213.9	189.7	179.5
55°	218.3	211.7	191.9	169.2	160.4
57.5°	195.6	189.0	170.7	149.4	142.1
60°	174.4	164.8	149.4	131.1	125.3
62.5°	150.9	143.6	130.4	115.0	122.3
65°	129.7	122.3	110.6	112.8	93.8
67.5°	106.2	102.6	92.3	82.0	79.1
70°	86.4	82.0	78.4	67.4	64.5
72.5°	68.9	64.5	59.3	53.5	51.3
75°	52.0	48.3	45.4	43.2	47.6
77.5°	35.9	34.4	32.2	30.0	29.3
80°	23.4	22.7	22.0	21.2	20.5
82.5°	13.9	13.9	13.9	13.9	13.9
85°	7.3	8.1	8.8	9.5	10.3
87.5°	4.4	4.4	5.1	5.9	6.6
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)