

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: P545516

Luminaire Tested: **FMR-12-2-LD4-1STD-50-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: P545516  
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-50-UNV-82-94-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

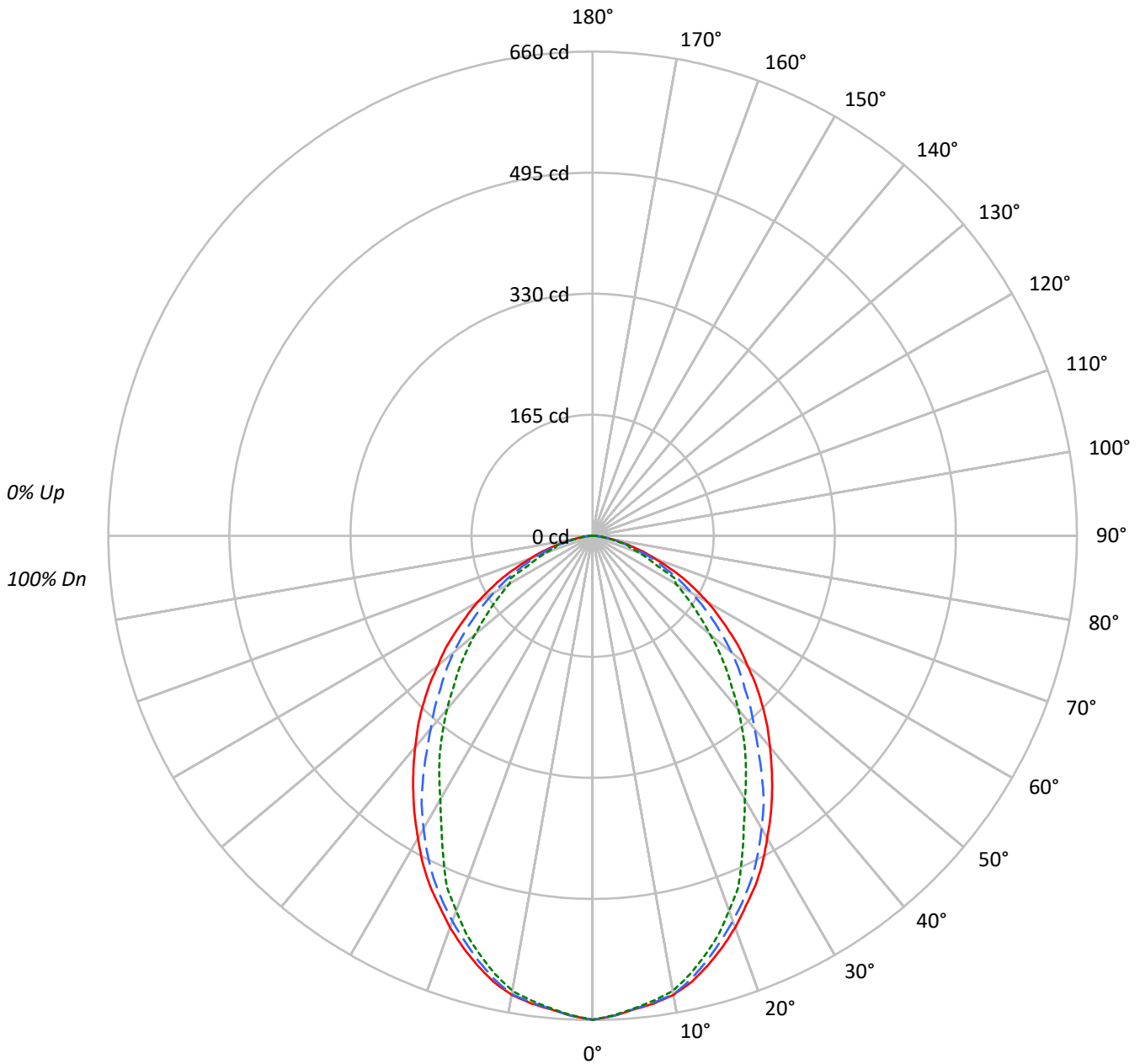
Lumens per Lamp: N/A  
Luminaire Lumens: 1295.0 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (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°	3550	3550	3550
5°	3502	3498	3494
10°	3472	3468	3442
15°	3378	3344	3297
20°	3254	3202	3114
25°	3120	3052	2862
30°	2958	2862	2578
35°	2801	2646	2385
40°	2642	2411	2170
45°	2490	2229	1962
50°	2305	2069	1750
55°	2133	1875	1567
60°	1954	1675	1404
65°	1719	1467	1243
70°	1416	1284	1056
75°	1125	984	1031
80°	756	710	663
85°	469	568	661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.4	4.7
10°-20°	168.5	13.0
20°-30°	233.3	18.0
30°-40°	248.8	19.2
40°-50°	227.0	17.5
50°-60°	177.8	13.7
60°-70°	115.9	8.9
70°-80°	51.3	4.0
80°-90°	11.0	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°	463.2	35.8
0°-40°	712.0	55.0
0°-60°	1116.8	86.2
0°-90°	1295.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1295.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	648	648	648	647	647	62
15°	606	606	600	594	592	170
25°	525	522	514	496	482	241
35°	426	423	403	372	363	267
45°	327	320	293	268	258	252
55°	227	220	200	176	167	204
65°	135	127	115	117	98	133
75°	54	50	47	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	659.7	659.7	659.7	659.7	659.7
2.5°	655.1	655.1	655.1	654.3	654.3
5°	648.2	647.5	647.5	646.7	646.7
7.5°	642.9	642.1	641.4	640.6	639.1
10°	635.3	635.3	634.5	630.7	629.9
12.5°	623.1	622.3	619.2	613.9	612.4
15°	606.3	606.3	600.2	594.1	591.8
17.5°	588.0	587.2	579.6	573.5	570.4
20°	568.1	566.6	559.0	549.1	543.7
22.5°	546.0	546.0	536.9	523.9	518.6
25°	525.4	522.4	514.0	495.7	482.0
27.5°	501.8	497.2	488.1	462.1	446.1
30°	475.9	473.6	460.6	427.1	414.9
32.5°	451.5	447.7	433.9	398.8	388.9
35°	426.3	423.2	402.7	372.2	363.0
37.5°	401.1	397.3	371.4	347.0	335.5
40°	376.0	371.4	343.2	321.1	308.9
42.5°	352.3	346.2	318.8	295.1	281.4
45°	327.2	320.3	292.8	268.4	257.8
47.5°	302.0	295.9	270.7	245.6	233.4
50°	275.3	270.0	247.1	221.9	209.0
52.5°	253.2	244.8	222.7	197.5	186.8
55°	227.3	220.4	199.8	176.2	167.0
57.5°	203.6	196.8	177.7	155.6	147.9
60°	181.5	171.6	155.6	136.5	130.4
62.5°	157.1	149.5	135.7	119.7	127.4
65°	135.0	127.4	115.2	117.4	97.6
67.5°	110.6	106.8	96.1	85.4	82.4
70°	90.0	85.4	81.6	70.2	67.1
72.5°	71.7	67.1	61.8	55.7	53.4
75°	54.1	50.3	47.3	45.0	49.6
77.5°	37.4	35.8	33.6	31.3	30.5
80°	24.4	23.6	22.9	22.1	21.4
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.2	9.9	10.7
87.5°	4.6	4.6	5.3	6.1	6.9
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)