

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: P545405

Luminaire Tested: **FMR-12-2-LD4-1LO-50-UNV-80-96-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: P545405  
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-LD4-1LO-50-UNV-80-96-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

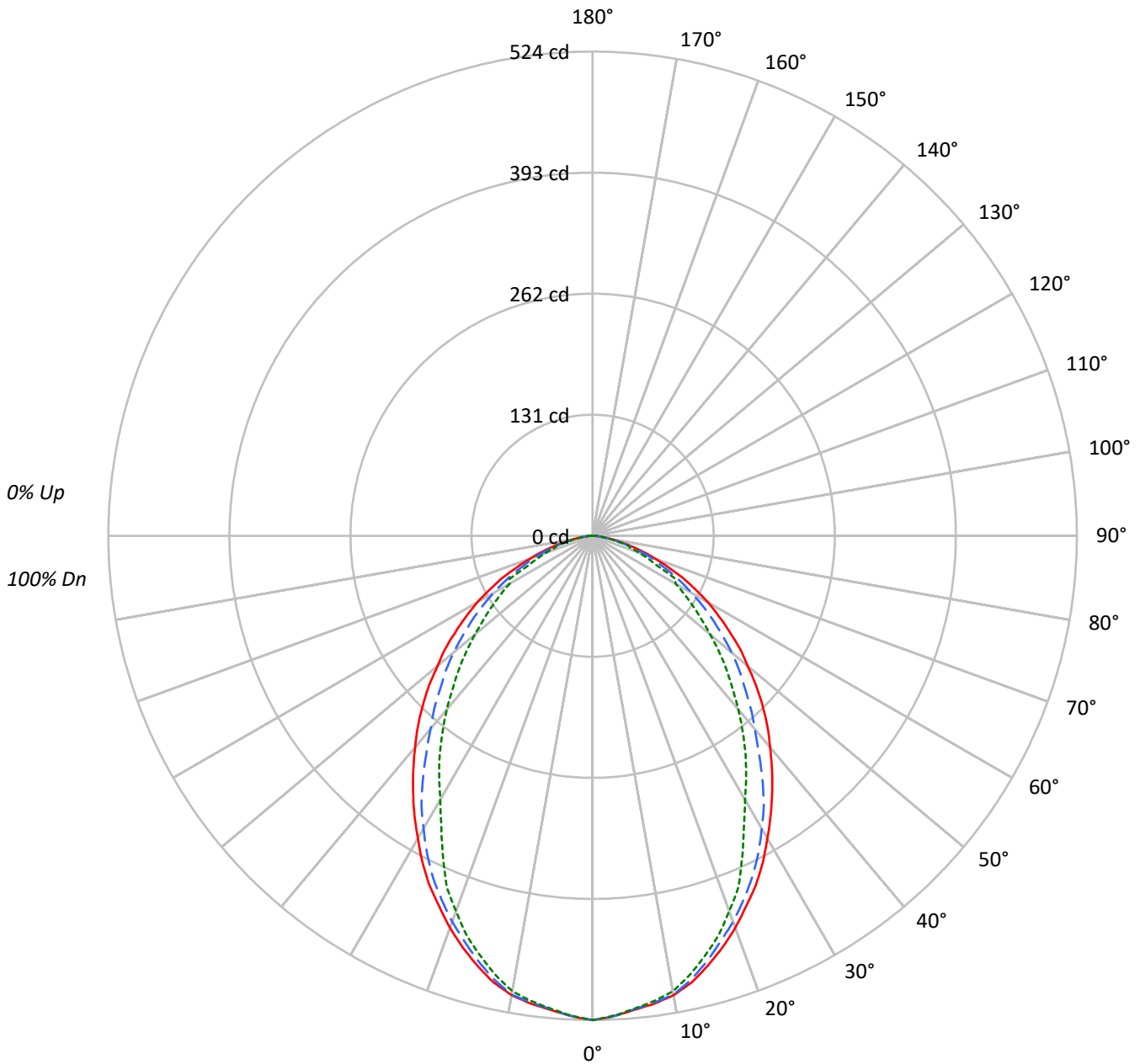
Lumens per Lamp: N/A  
Luminaire Lumens: 1029.0 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
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				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
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°	2821	2821	2821
5°	2783	2780	2776
10°	2759	2755	2735
15°	2684	2657	2620
20°	2585	2544	2475
25°	2479	2425	2274
30°	2350	2275	2048
35°	2225	2102	1895
40°	2099	1916	1724
45°	1979	1771	1559
50°	1832	1644	1390
55°	1695	1490	1245
60°	1552	1330	1115
65°	1366	1165	988
70°	1125	1020	839
75°	894	782	819
80°	601	564	527
85°	377	451	525



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.8	4.7
10°-20°	133.9	13.0
20°-30°	185.4	18.0
30°-40°	197.7	19.2
40°-50°	180.3	17.5
50°-60°	141.3	13.7
60°-70°	92.1	8.9
70°-80°	40.8	4.0
80°-90°	8.8	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°	368.1	35.8
0°-40°	565.7	55.0
0°-60°	887.3	86.2
0°-90°	1029.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1029.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	524	524	524	524	524	
5°	515	514	514	514	514	49
15°	482	482	477	472	470	135
25°	418	415	408	394	383	192
35°	339	336	320	296	288	212
45°	260	254	233	213	205	200
55°	181	175	159	140	133	162
65°	107	101	92	93	78	106
75°	43	40	38	36	39	46
85°	6	7	7	8	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	524.2	524.2	524.2	524.2	524.2
2.5°	520.5	520.5	520.5	519.9	519.9
5°	515.1	514.5	514.5	513.9	513.9
7.5°	510.8	510.2	509.6	509.0	507.8
10°	504.8	504.8	504.2	501.1	500.5
12.5°	495.1	494.5	492.0	487.8	486.6
15°	481.7	481.7	476.9	472.0	470.2
17.5°	467.2	466.6	460.5	455.7	453.3
20°	451.4	450.2	444.2	436.3	432.1
22.5°	433.9	433.9	426.6	416.3	412.1
25°	417.5	415.1	408.4	393.9	383.0
27.5°	398.7	395.1	387.8	367.2	354.5
30°	378.1	376.3	366.0	339.3	329.6
32.5°	358.7	355.7	344.8	316.9	309.0
35°	338.7	336.3	319.9	295.7	288.4
37.5°	318.7	315.7	295.1	275.7	266.6
40°	298.7	295.1	272.7	255.1	245.4
42.5°	280.0	275.1	253.3	234.5	223.6
45°	260.0	254.5	232.7	213.3	204.8
47.5°	240.0	235.1	215.1	195.1	185.4
50°	218.8	214.5	196.3	176.3	166.0
52.5°	201.2	194.5	176.9	156.9	148.5
55°	180.6	175.1	158.8	140.0	132.7
57.5°	161.8	156.3	141.2	123.6	117.6
60°	144.2	136.3	123.6	108.5	103.6
62.5°	124.8	118.8	107.9	95.1	101.2
65°	107.3	101.2	91.5	93.3	77.6
67.5°	87.9	84.8	76.4	67.9	65.4
70°	71.5	67.9	64.8	55.7	53.3
72.5°	57.0	53.3	49.1	44.2	42.4
75°	43.0	40.0	37.6	35.8	39.4
77.5°	29.7	28.5	26.7	24.8	24.2
80°	19.4	18.8	18.2	17.6	17.0
82.5°	11.5	11.5	11.5	11.5	11.5
85°	6.1	6.7	7.3	7.9	8.5
87.5°	3.6	3.6	4.2	4.8	5.5
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)