

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: P544830

Luminaire Tested: **FMR-12-1-LD4-1LO-50-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: P544830  
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-LD4-1LO-50-UNV-80-97-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

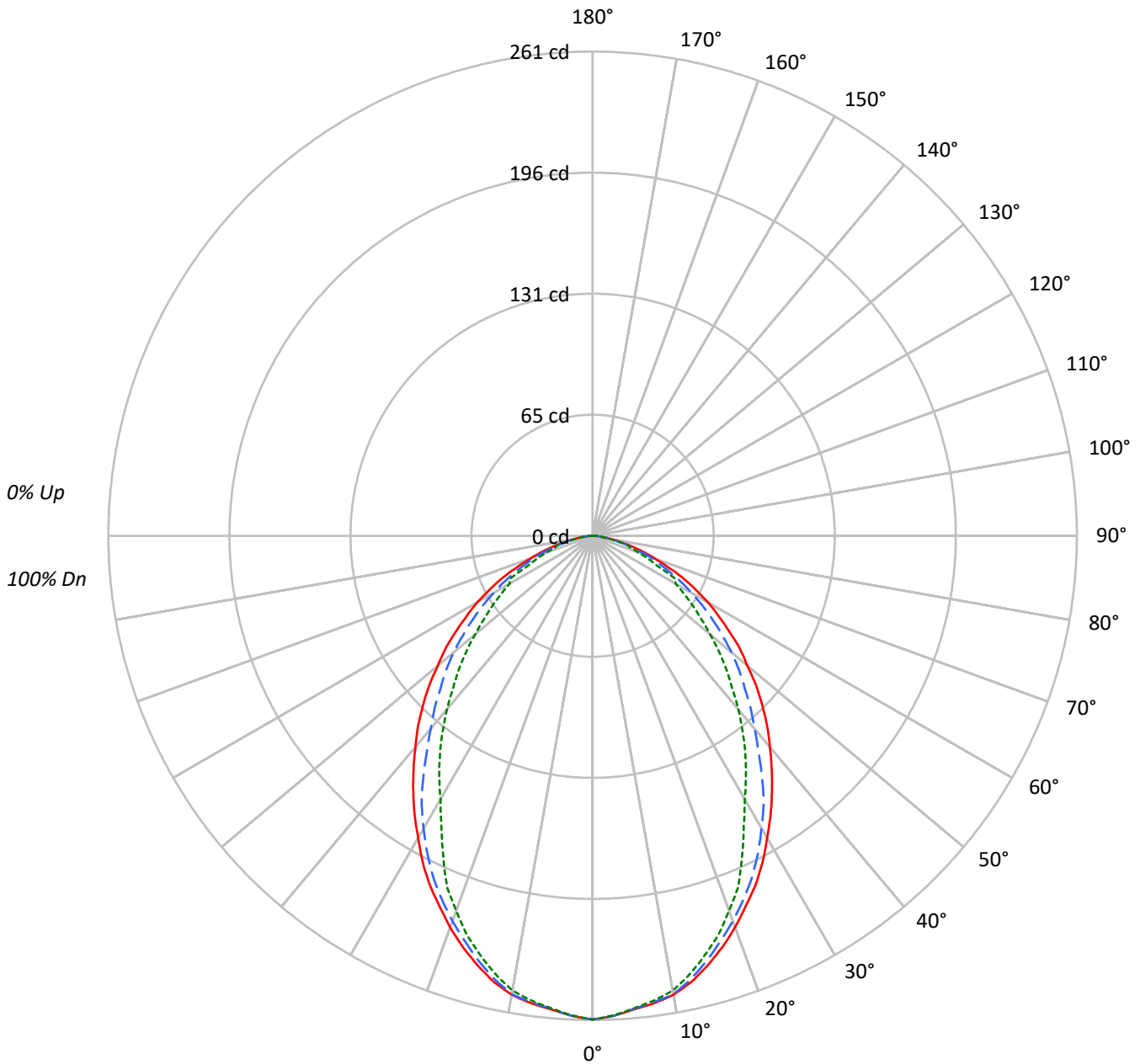
Lumens per Lamp: N/A  
Luminaire Lumens: 512.0 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
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																			
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	39	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°	2807	2807	2807
5°	2769	2766	2763
10°	2746	2742	2722
15°	2671	2644	2608
20°	2573	2531	2463
25°	2467	2413	2264
30°	2338	2263	2038
35°	2214	2092	1886
40°	2088	1907	1716
45°	1968	1763	1551
50°	1822	1636	1383
55°	1685	1483	1239
60°	1546	1324	1111
65°	1360	1159	983
70°	1120	1017	834
75°	890	778	815
80°	595	558	521
85°	371	445	519



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.3	4.7
10°-20°	66.6	13.0
20°-30°	92.2	18.0
30°-40°	98.4	19.2
40°-50°	89.7	17.5
50°-60°	70.3	13.7
60°-70°	45.8	8.9
70°-80°	20.3	4.0
80°-90°	4.3	0.8
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°	183.1	35.8
0°-40°	281.5	55.0
0°-60°	441.5	86.2
0°-90°	512.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	512.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	261	261	261	261	261	
5°	256	256	256	256	256	24
15°	240	240	237	235	234	67
25°	208	206	203	196	191	95
35°	168	167	159	147	144	105
45°	129	127	116	106	102	100
55°	90	87	79	70	66	81
65°	53	50	46	46	39	53
75°	21	20	19	18	20	23
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	260.8	260.8	260.8	260.8	260.8
2.5°	259.0	259.0	259.0	258.7	258.7
5°	256.3	256.0	256.0	255.7	255.7
7.5°	254.2	253.9	253.6	253.3	252.7
10°	251.2	251.2	250.9	249.3	249.0
12.5°	246.3	246.0	244.8	242.7	242.1
15°	239.7	239.7	237.3	234.9	234.0
17.5°	232.5	232.2	229.1	226.7	225.5
20°	224.6	224.0	221.0	217.1	215.0
22.5°	215.9	215.9	212.3	207.1	205.0
25°	207.7	206.5	203.2	196.0	190.6
27.5°	198.4	196.6	193.0	182.7	176.4
30°	188.1	187.2	182.1	168.8	164.0
32.5°	178.5	177.0	171.6	157.7	153.8
35°	168.5	167.3	159.2	147.1	143.5
37.5°	158.6	157.1	146.8	137.2	132.7
40°	148.6	146.8	135.7	126.9	122.1
42.5°	139.3	136.9	126.0	116.7	111.3
45°	129.3	126.6	115.8	106.1	101.9
47.5°	119.4	117.0	107.0	97.1	92.3
50°	108.8	106.7	97.7	87.7	82.6
52.5°	100.1	96.8	88.0	78.1	73.9
55°	89.8	87.1	79.0	69.6	66.0
57.5°	80.5	77.8	70.3	61.5	58.5
60°	71.8	67.8	61.5	54.0	51.6
62.5°	62.1	59.1	53.7	47.3	50.4
65°	53.4	50.4	45.5	46.4	38.6
67.5°	43.7	42.2	38.0	33.8	32.6
70°	35.6	33.8	32.3	27.7	26.5
72.5°	28.3	26.5	24.4	22.0	21.1
75°	21.4	19.9	18.7	17.8	19.6
77.5°	14.8	14.2	13.3	12.4	12.1
80°	9.6	9.3	9.0	8.7	8.4
82.5°	5.7	5.7	5.7	5.7	5.7
85°	3.0	3.3	3.6	3.9	4.2
87.5°	1.8	1.8	2.1	2.4	2.7
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)