

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: P544817

Luminaire Tested: **FMR-12-1-LD4-1LO-40-UNV-93-86-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: P544817  
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-40-UNV-93-86-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

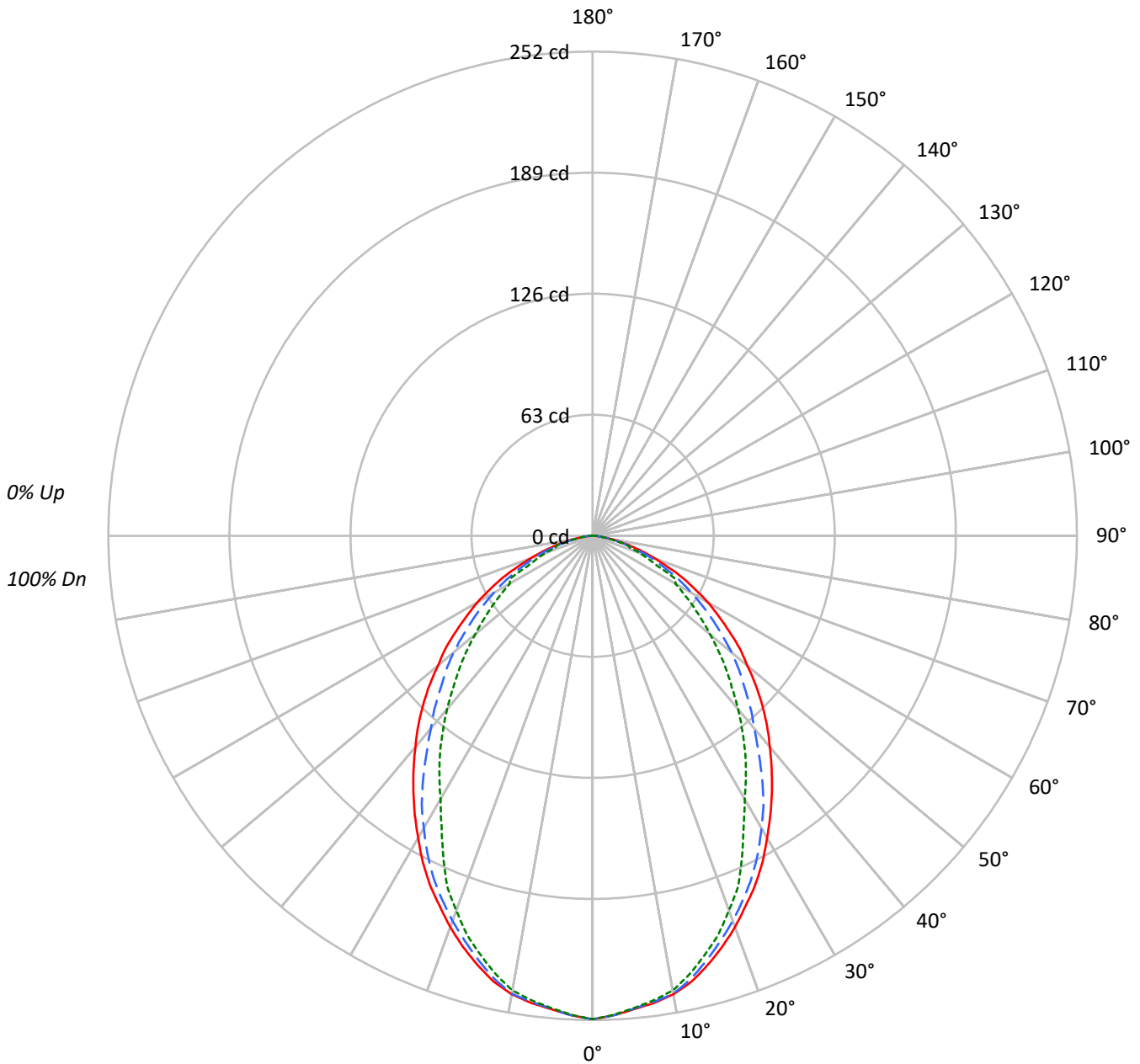
Lumens per Lamp: N/A  
Luminaire Lumens: 494.0 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
Input Voltage (V): NR  
Input Current (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°	2708	2708	2708
5°	2672	2669	2666
10°	2648	2645	2626
15°	2578	2551	2515
20°	2482	2442	2376
25°	2380	2329	2184
30°	2256	2184	1968
35°	2137	2018	1820
40°	2015	1839	1655
45°	1900	1700	1496
50°	1758	1579	1335
55°	1627	1430	1195
60°	1490	1277	1070
65°	1312	1118	947
70°	1079	979	806
75°	861	749	786
80°	576	539	502
85°	358	432	506



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.4	4.7
10°-20°	64.3	13.0
20°-30°	89.0	18.0
30°-40°	94.9	19.2
40°-50°	86.6	17.5
50°-60°	67.8	13.7
60°-70°	44.2	8.9
70°-80°	19.6	4.0
80°-90°	4.2	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°	176.7	35.8
0°-40°	271.6	55.0
0°-60°	426.0	86.2
0°-90°	494.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	494.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	252	252	252	252	252	
5°	247	247	247	247	247	23
15°	231	231	229	227	226	65
25°	200	199	196	189	184	92
35°	163	162	154	142	138	102
45°	125	122	112	102	98	96
55°	87	84	76	67	64	78
65°	52	49	44	45	37	51
75°	21	19	18	17	19	22
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°	251.6	251.6	251.6	251.6	251.6
2.5°	249.9	249.9	249.9	249.6	249.6
5°	247.3	247.0	247.0	246.7	246.7
7.5°	245.2	244.9	244.7	244.4	243.8
10°	242.3	242.3	242.0	240.6	240.3
12.5°	237.7	237.4	236.2	234.2	233.6
15°	231.3	231.3	228.9	226.6	225.7
17.5°	224.3	224.0	221.1	218.8	217.6
20°	216.7	216.1	213.2	209.5	207.4
22.5°	208.3	208.3	204.8	199.9	197.8
25°	200.4	199.3	196.1	189.1	183.9
27.5°	191.4	189.7	186.2	176.3	170.2
30°	181.5	180.7	175.7	162.9	158.3
32.5°	172.2	170.8	165.5	152.1	148.4
35°	162.6	161.5	153.6	142.0	138.5
37.5°	153.0	151.6	141.7	132.4	128.0
40°	143.4	141.7	130.9	122.5	117.8
42.5°	134.4	132.1	121.6	112.6	107.3
45°	124.8	122.2	111.7	102.4	98.3
47.5°	115.2	112.9	103.3	93.7	89.0
50°	105.0	103.0	94.3	84.7	79.7
52.5°	96.6	93.4	84.9	75.3	71.3
55°	86.7	84.1	76.2	67.2	63.7
57.5°	77.7	75.1	67.8	59.3	56.4
60°	69.2	65.5	59.3	52.1	49.7
62.5°	59.9	57.0	51.8	45.7	48.6
65°	51.5	48.6	43.9	44.8	37.2
67.5°	42.2	40.7	36.7	32.6	31.4
70°	34.3	32.6	31.1	26.8	25.6
72.5°	27.3	25.6	23.6	21.2	20.4
75°	20.7	19.2	18.0	17.2	18.9
77.5°	14.3	13.7	12.8	11.9	11.6
80°	9.3	9.0	8.7	8.4	8.1
82.5°	5.5	5.5	5.5	5.5	5.5
85°	2.9	3.2	3.5	3.8	4.1
87.5°	1.7	1.7	2.0	2.3	2.6
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)