

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: P544942

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-82-97-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: P544942  
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-LD4-1STD-50-UNV-82-97-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC 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**

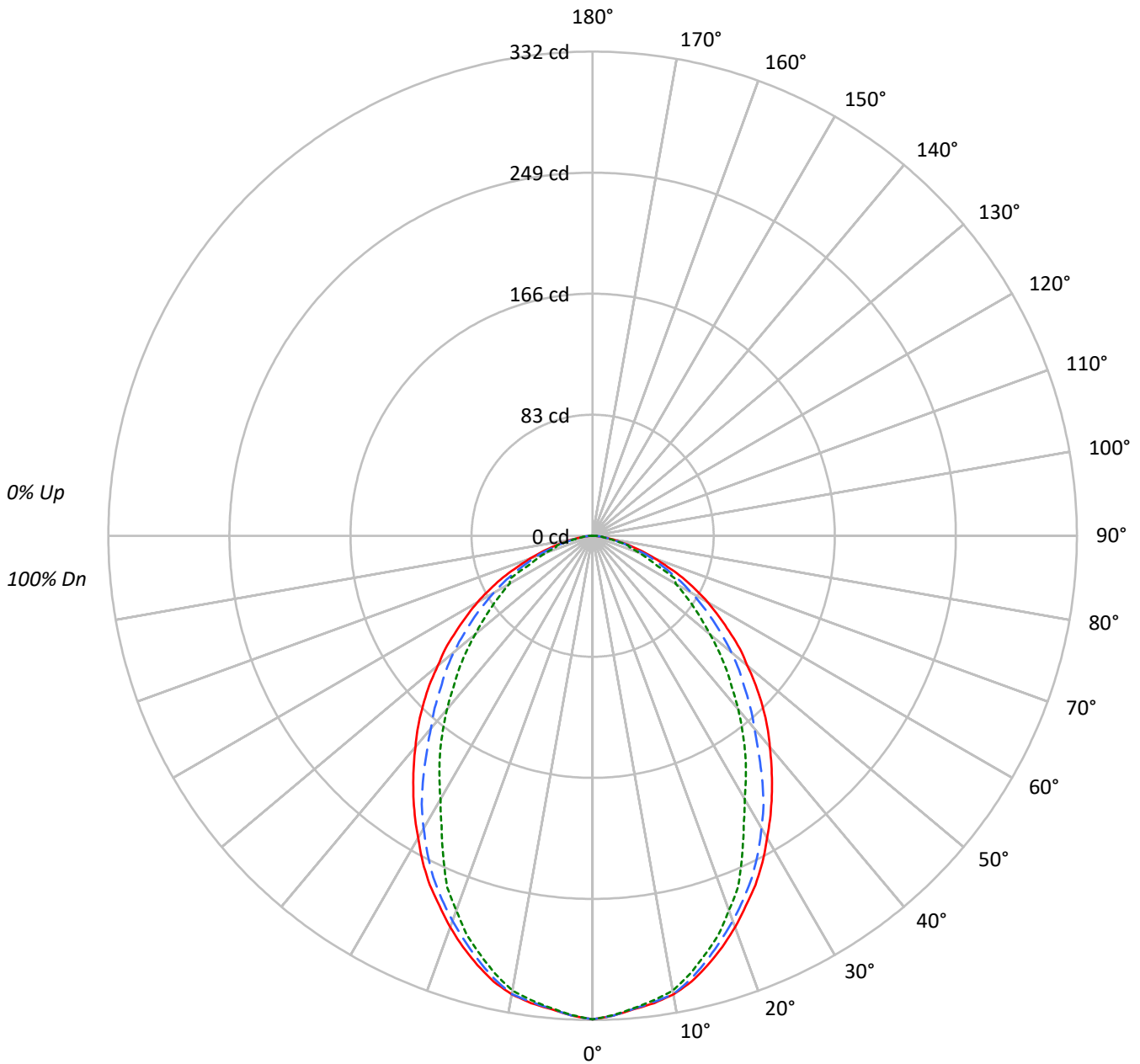
Lumens per Lamp: N/A  
Luminaire Lumens: 651.0 lumens  
Efficiency: N/A  
Efficacy: 78.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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°	3569	3569	3569
5°	3521	3517	3513
10°	3490	3487	3462
15°	3397	3362	3315
20°	3271	3219	3131
25°	3137	3069	2878
30°	2973	2879	2593
35°	2816	2660	2398
40°	2656	2424	2182
45°	2504	2241	1973
50°	2318	2080	1758
55°	2143	1884	1576
60°	1963	1683	1412
65°	1729	1475	1251
70°	1423	1290	1061
75°	1131	990	1036
80°	762	713	663
85°	469	568	667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.9	4.7
10°-20°	84.7	13.0
20°-30°	117.3	18.0
30°-40°	125.1	19.2
40°-50°	114.1	17.5
50°-60°	89.4	13.7
60°-70°	58.2	8.9
70°-80°	25.8	4.0
80°-90°	5.6	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°	232.9	35.8
0°-40°	357.9	55.0
0°-60°	561.4	86.2
0°-90°	651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	651.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	332	332	332	332	332	
5°	326	326	326	325	325	31
15°	305	305	302	299	298	86
25°	264	263	258	249	242	121
35°	214	213	202	187	182	134
45°	164	161	147	135	130	127
55°	114	111	100	89	84	102
65°	68	64	58	59	49	67
75°	27	25	24	23	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	331.6	331.6	331.6	331.6	331.6
2.5°	329.3	329.3	329.3	328.9	328.9
5°	325.9	325.5	325.5	325.1	325.1
7.5°	323.2	322.8	322.4	322.0	321.3
10°	319.3	319.3	319.0	317.0	316.7
12.5°	313.2	312.8	311.3	308.6	307.8
15°	304.8	304.8	301.7	298.6	297.5
17.5°	295.6	295.2	291.4	288.3	286.8
20°	285.6	284.8	281.0	276.0	273.3
22.5°	274.5	274.5	269.9	263.4	260.7
25°	264.1	262.6	258.4	249.2	242.3
27.5°	252.3	250.0	245.4	232.3	224.3
30°	239.2	238.1	231.6	214.7	208.6
32.5°	227.0	225.0	218.1	200.5	195.5
35°	214.3	212.8	202.4	187.1	182.5
37.5°	201.6	199.7	186.7	174.4	168.7
40°	189.0	186.7	172.5	161.4	155.3
42.5°	177.1	174.0	160.2	148.4	141.5
45°	164.5	161.0	147.2	134.9	129.6
47.5°	151.8	148.7	136.1	123.4	117.3
50°	138.4	135.7	124.2	111.6	105.0
52.5°	127.3	123.1	111.9	99.3	93.9
55°	114.2	110.8	100.4	88.6	84.0
57.5°	102.4	98.9	89.3	78.2	74.4
60°	91.2	86.3	78.2	68.6	65.6
62.5°	79.0	75.1	68.2	60.2	64.0
65°	67.9	64.0	57.9	59.0	49.1
67.5°	55.6	53.7	48.3	42.9	41.4
70°	45.2	42.9	41.0	35.3	33.7
72.5°	36.0	33.7	31.1	28.0	26.8
75°	27.2	25.3	23.8	22.6	24.9
77.5°	18.8	18.0	16.9	15.7	15.3
80°	12.3	11.9	11.5	11.1	10.7
82.5°	7.3	7.3	7.3	7.3	7.3
85°	3.8	4.2	4.6	5.0	5.4
87.5°	2.3	2.3	2.7	3.1	3.5
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)