

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: P544736

Luminaire Tested: **FMR-12-1-LD4-1HI-50-UNV-81-85-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: P544736  
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-LD4-1HI-50-UNV-81-85-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

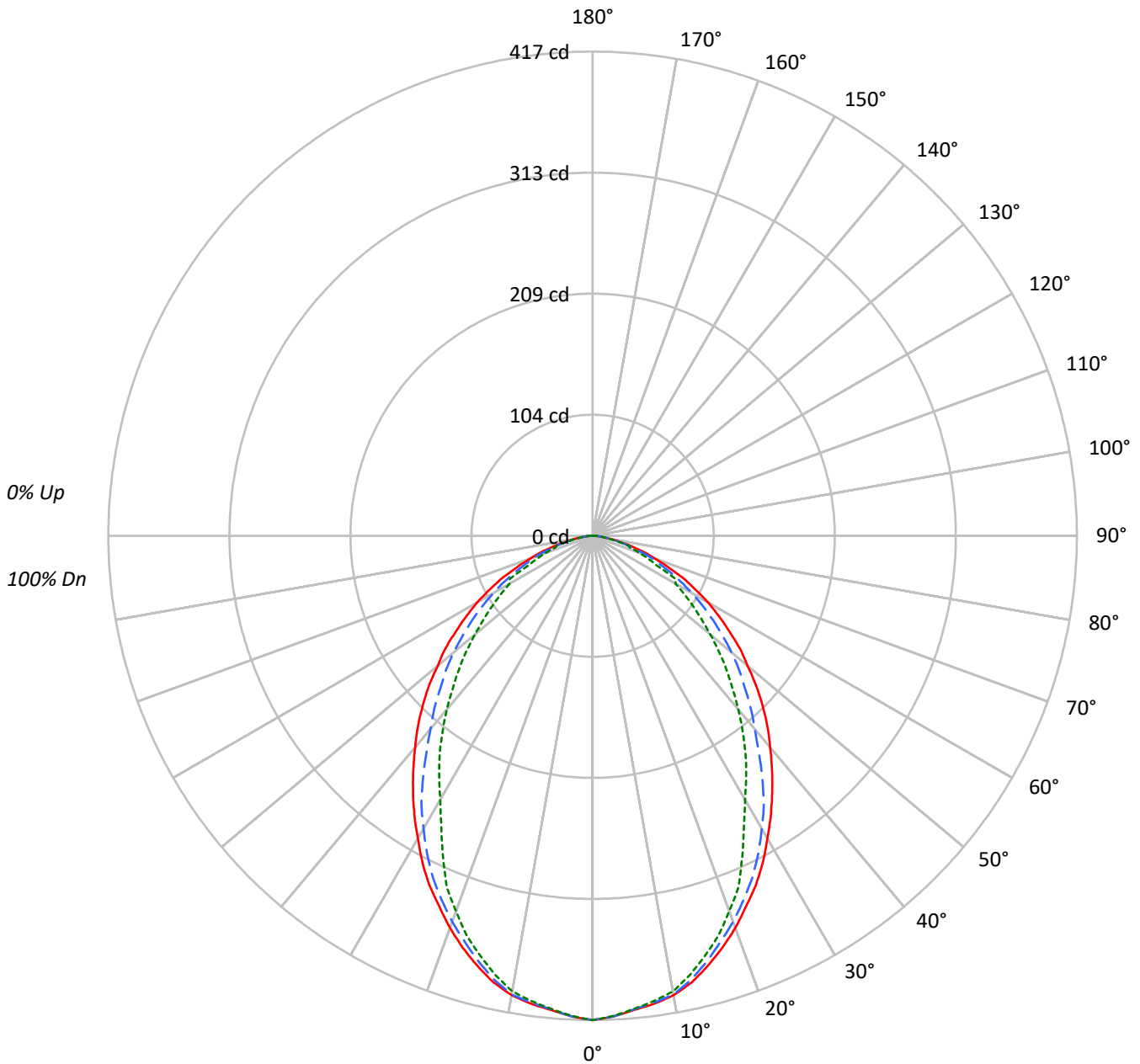
Lumens per Lamp: N/A  
Luminaire Lumens: 819.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
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°	4491	4491	4491
5°	4430	4425	4419
10°	4392	4386	4354
15°	4272	4230	4171
20°	4116	4049	3939
25°	3947	3861	3620
30°	3741	3621	3261
35°	3543	3347	3017
40°	3341	3049	2744
45°	3150	2819	2481
50°	2915	2617	2212
55°	2697	2372	1982
60°	2471	2118	1776
65°	2175	1854	1571
70°	1791	1624	1334
75°	1422	1243	1302
80°	955	899	837
85°	593	716	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.8	4.7
10°-20°	106.6	13.0
20°-30°	147.6	18.0
30°-40°	157.3	19.2
40°-50°	143.5	17.5
50°-60°	112.4	13.7
60°-70°	73.3	8.9
70°-80°	32.5	4.0
80°-90°	7.0	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°	293.0	35.8
0°-40°	450.3	55.0
0°-60°	706.3	86.2
0°-90°	819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	819.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	417	417	417	417	417	
5°	410	410	410	409	409	39
15°	383	383	380	376	374	108
25°	332	330	325	314	305	153
35°	270	268	255	235	230	169
45°	207	203	185	170	163	159
55°	144	139	126	111	106	129
65°	85	80	73	74	62	84
75°	34	32	30	28	31	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	417.2	417.2	417.2	417.2	417.2
2.5°	414.3	414.3	414.3	413.8	413.8
5°	410.0	409.5	409.5	409.0	409.0
7.5°	406.6	406.1	405.6	405.1	404.2
10°	401.8	401.8	401.3	398.9	398.4
12.5°	394.0	393.6	391.6	388.2	387.3
15°	383.4	383.4	379.6	375.7	374.3
17.5°	371.9	371.4	366.5	362.7	360.8
20°	359.3	358.3	353.5	347.3	343.9
22.5°	345.3	345.3	339.5	331.3	328.0
25°	332.3	330.4	325.1	313.5	304.8
27.5°	317.4	314.5	308.7	292.3	282.1
30°	301.0	299.5	291.3	270.1	262.4
32.5°	285.5	283.1	274.4	252.2	246.0
35°	269.6	267.7	254.7	235.4	229.6
37.5°	253.7	251.3	234.9	219.4	212.2
40°	237.8	234.9	217.0	203.0	195.3
42.5°	222.8	219.0	201.6	186.6	178.0
45°	206.9	202.6	185.2	169.8	163.0
47.5°	191.0	187.1	171.2	155.3	147.6
50°	174.1	170.7	156.3	140.3	132.1
52.5°	160.1	154.8	140.8	124.9	118.2
55°	143.7	139.4	126.4	111.4	105.6
57.5°	128.8	124.4	112.4	98.4	93.6
60°	114.8	108.5	98.4	86.3	82.5
62.5°	99.4	94.5	85.8	75.7	80.5
65°	85.4	80.5	72.8	74.3	61.7
67.5°	69.9	67.5	60.8	54.0	52.1
70°	56.9	54.0	51.6	44.4	42.4
72.5°	45.3	42.4	39.1	35.2	33.8
75°	34.2	31.8	29.9	28.5	31.3
77.5°	23.6	22.7	21.2	19.8	19.3
80°	15.4	15.0	14.5	14.0	13.5
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.8	5.3	5.8	6.3	6.8
87.5°	2.9	2.9	3.4	3.9	4.3
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)