

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: P545498

Luminaire Tested: **FMR-12-2-LD4-1STD-50-UNV-80-87-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: P545498  
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-LD4-1STD-50-UNV-80-87-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

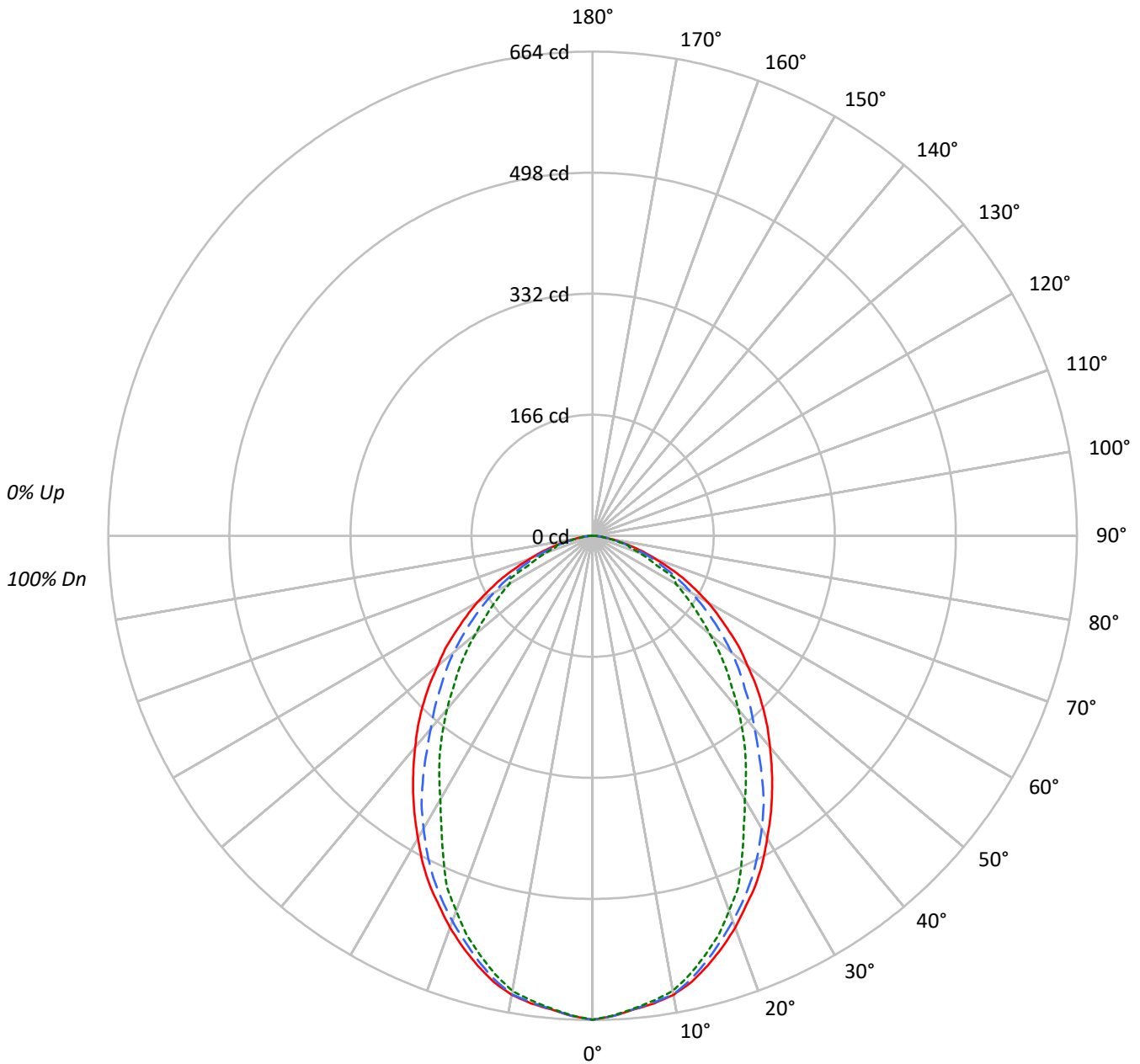
Lumens per Lamp: N/A  
Luminaire Lumens: 1303.0 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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°	3572	3572	3572
5°	3524	3520	3515
10°	3493	3489	3464
15°	3399	3365	3317
20°	3274	3221	3133
25°	3140	3071	2879
30°	2976	2880	2594
35°	2818	2662	2399
40°	2658	2426	2184
45°	2506	2243	1974
50°	2319	2081	1760
55°	2146	1886	1576
60°	1965	1685	1412
65°	1729	1476	1251
70°	1424	1292	1062
75°	1133	990	1038
80°	762	713	666
85°	475	568	661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.8	4.7
10°-20°	169.6	13.0
20°-30°	234.7	18.0
30°-40°	250.3	19.2
40°-50°	228.4	17.5
50°-60°	178.9	13.7
60°-70°	116.6	8.9
70°-80°	51.7	4.0
80°-90°	11.1	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°	466.1	35.8
0°-40°	716.4	55.0
0°-60°	1123.7	86.2
0°-90°	1303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1303.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	652	652	652	651	651	62
15°	610	610	604	598	595	171
25°	529	526	517	499	485	243
35°	429	426	405	374	365	268
45°	329	322	295	270	259	254
55°	229	222	201	177	168	205
65°	136	128	116	118	98	134
75°	54	51	48	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	663.7	663.7	663.7	663.7	663.7
2.5°	659.1	659.1	659.1	658.4	658.4
5°	652.2	651.5	651.5	650.7	650.7
7.5°	646.8	646.1	645.3	644.5	643.0
10°	639.2	639.2	638.4	634.6	633.8
12.5°	626.9	626.1	623.1	617.7	616.2
15°	610.0	610.0	603.9	597.7	595.4
17.5°	591.6	590.8	583.2	577.0	574.0
20°	571.7	570.1	562.4	552.5	547.1
22.5°	549.4	549.4	540.2	527.1	521.8
25°	528.7	525.6	517.2	498.8	484.9
27.5°	504.9	500.3	491.1	465.0	448.9
30°	478.8	476.5	463.5	429.7	417.4
32.5°	454.3	450.4	436.6	401.3	391.3
35°	428.9	425.9	405.1	374.5	365.2
37.5°	403.6	399.8	373.7	349.1	337.6
40°	378.3	373.7	345.3	323.0	310.8
42.5°	354.5	348.4	320.7	297.0	283.1
45°	329.2	322.3	294.7	270.1	259.4
47.5°	303.9	297.7	272.4	247.1	234.8
50°	277.0	271.6	248.6	223.3	210.2
52.5°	254.7	246.3	224.1	198.7	188.0
55°	228.7	221.8	201.0	177.3	168.0
57.5°	204.9	198.0	178.8	156.5	148.9
60°	182.6	172.6	156.5	137.4	131.2
62.5°	158.1	150.4	136.6	120.5	128.1
65°	135.8	128.1	115.9	118.2	98.2
67.5°	111.3	107.4	96.7	85.9	82.9
70°	90.5	85.9	82.1	70.6	67.5
72.5°	72.1	67.5	62.2	56.0	53.7
75°	54.5	50.6	47.6	45.3	49.9
77.5°	37.6	36.1	33.8	31.5	30.7
80°	24.6	23.8	23.0	22.3	21.5
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.4	9.2	10.0	10.7
87.5°	4.6	4.6	5.4	6.1	6.9
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)