

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: P545496

Luminaire Tested: **FMR-12-2-LD4-1STD-50-UNV-80-85-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: P545496  
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-80-85-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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**

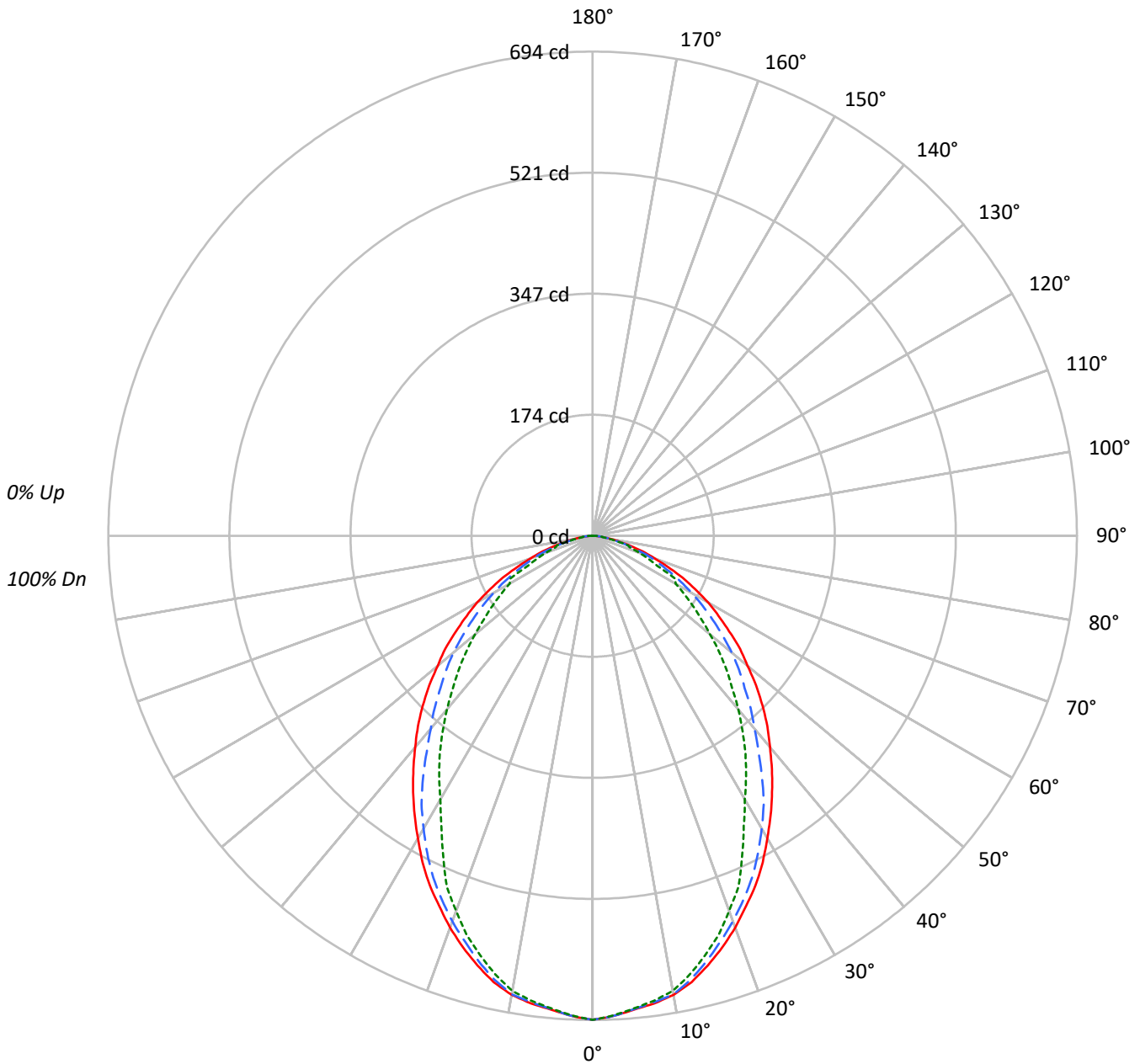
Lumens per Lamp: N/A  
Luminaire Lumens: 1362.0 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	3734	3734	3734
5°	3683	3679	3674
10°	3651	3647	3621
15°	3553	3517	3468
20°	3422	3367	3275
25°	3282	3210	3010
30°	3110	3010	2711
35°	2946	2782	2508
40°	2778	2536	2282
45°	2619	2344	2063
50°	2424	2176	1840
55°	2243	1971	1649
60°	2055	1761	1477
65°	1808	1542	1308
70°	1489	1350	1111
75°	1183	1033	1083
80°	797	747	697
85°	494	593	692



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.6	4.7
10°-20°	177.2	13.0
20°-30°	245.4	18.0
30°-40°	261.6	19.2
40°-50°	238.7	17.5
50°-60°	187.0	13.7
60°-70°	121.9	8.9
70°-80°	54.0	4.0
80°-90°	11.6	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°	487.2	35.8
0°-40°	748.8	55.0
0°-60°	1174.5	86.2
0°-90°	1362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1362.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	682	681	681	680	680	65
15°	638	638	631	625	622	179
25°	553	549	541	521	507	254
35°	448	445	424	391	382	280
45°	344	337	308	282	271	265
55°	239	232	210	185	176	214
65°	142	134	121	124	103	140
75°	57	53	50	47	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	693.8	693.8	693.8	693.8	693.8
2.5°	689.0	689.0	689.0	688.2	688.2
5°	681.8	681.0	681.0	680.1	680.1
7.5°	676.1	675.3	674.5	673.7	672.1
10°	668.1	668.1	667.3	663.3	662.5
12.5°	655.3	654.5	651.3	645.7	644.1
15°	637.6	637.6	631.2	624.8	622.4
17.5°	618.4	617.6	609.6	603.2	599.9
20°	597.5	595.9	587.9	577.5	571.9
22.5°	574.3	574.3	564.7	551.0	545.4
25°	552.6	549.4	540.6	521.3	506.9
27.5°	527.8	522.9	513.3	486.1	469.2
30°	500.5	498.1	484.4	449.2	436.3
32.5°	474.8	470.8	456.4	419.5	409.1
35°	448.4	445.1	423.5	391.4	381.8
37.5°	421.9	417.9	390.6	364.9	352.9
40°	395.4	390.6	360.9	337.7	324.8
42.5°	370.6	364.1	335.3	310.4	296.0
45°	344.1	336.9	308.0	282.3	271.1
47.5°	317.6	311.2	284.7	258.3	245.4
50°	289.5	283.9	259.9	233.4	219.8
52.5°	266.3	257.5	234.2	207.7	196.5
55°	239.0	231.8	210.1	185.3	175.7
57.5°	214.2	206.9	186.9	163.6	155.6
60°	190.9	180.5	163.6	143.6	137.2
62.5°	165.2	157.2	142.8	125.9	133.9
65°	142.0	133.9	121.1	123.5	102.7
67.5°	116.3	112.3	101.1	89.8	86.6
70°	94.6	89.8	85.8	73.8	70.6
72.5°	75.4	70.6	65.0	58.6	56.1
75°	56.9	52.9	49.7	47.3	52.1
77.5°	39.3	37.7	35.3	32.9	32.1
80°	25.7	24.9	24.1	23.3	22.5
82.5°	15.2	15.2	15.2	15.2	15.2
85°	8.0	8.8	9.6	10.4	11.2
87.5°	4.8	4.8	5.6	6.4	7.2
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)