

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: P545454

Luminaire Tested: **FMR-12-2-LD4-1STD-35-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: P545454  
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-35-UNV-82-97-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

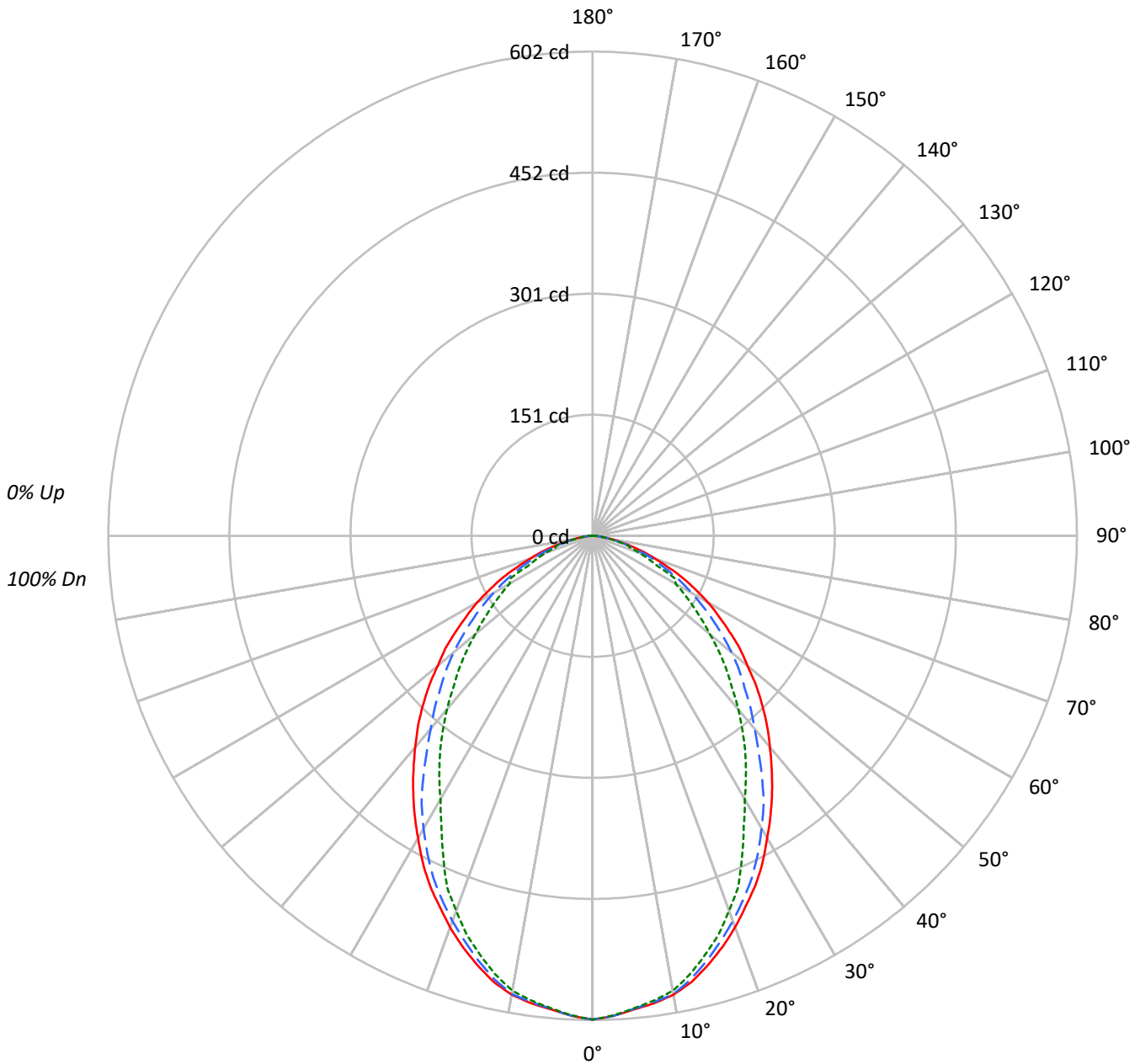
Lumens per Lamp: N/A  
Luminaire Lumens: 1181.0 lumens  
Efficiency: N/A  
Efficacy: 71.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	3238	3238	3238
5°	3194	3190	3186
10°	3166	3162	3140
15°	3081	3049	3007
20°	2967	2920	2840
25°	2846	2783	2610
30°	2697	2611	2351
35°	2554	2413	2175
40°	2409	2199	1979
45°	2271	2033	1789
50°	2102	1886	1596
55°	1945	1710	1429
60°	1781	1527	1280
65°	1568	1337	1133
70°	1292	1171	963
75°	1027	896	940
80°	691	648	604
85°	432	513	599



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.0	4.7
10°-20°	153.7	13.0
20°-30°	212.8	18.0
30°-40°	226.9	19.2
40°-50°	207.0	17.5
50°-60°	162.1	13.7
60°-70°	105.7	8.9
70°-80°	46.8	4.0
80°-90°	10.1	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°	422.5	35.8
0°-40°	649.3	55.0
0°-60°	1018.4	86.2
0°-90°	1181.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1181.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	591	590	590	590	590	56
15°	553	553	547	542	540	155
25°	479	476	469	452	440	220
35°	389	386	367	339	331	243
45°	298	292	267	245	235	230
55°	207	201	182	161	152	186
65°	123	116	105	107	89	121
75°	49	46	43	41	45	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	601.6	601.6	601.6	601.6	601.6
2.5°	597.4	597.4	597.4	596.7	596.7
5°	591.2	590.5	590.5	589.8	589.8
7.5°	586.3	585.6	584.9	584.2	582.8
10°	579.3	579.3	578.6	575.2	574.5
12.5°	568.2	567.5	564.7	559.9	558.5
15°	552.9	552.9	547.3	541.8	539.7
17.5°	536.2	535.5	528.6	523.0	520.2
20°	518.1	516.7	509.8	500.7	495.9
22.5°	498.0	498.0	489.6	477.8	472.9
25°	479.2	476.4	468.7	452.1	439.5
27.5°	457.6	453.4	445.1	421.5	406.9
30°	434.0	431.9	420.1	389.5	378.3
32.5°	411.7	408.2	395.7	363.7	354.7
35°	388.8	386.0	367.2	339.4	331.0
37.5°	365.8	362.3	338.7	316.4	306.0
40°	342.9	338.7	313.0	292.8	281.7
42.5°	321.3	315.7	290.7	269.1	256.6
45°	298.4	292.1	267.1	244.8	235.1
47.5°	275.4	269.8	246.9	223.9	212.8
50°	251.1	246.2	225.3	202.4	190.6
52.5°	230.9	223.2	203.1	180.1	170.4
55°	207.3	201.0	182.2	160.7	152.3
57.5°	185.7	179.4	162.0	141.9	134.9
60°	165.5	156.5	141.9	124.5	118.9
62.5°	143.3	136.3	123.8	109.2	116.1
65°	123.1	116.1	105.0	107.1	89.0
67.5°	100.8	97.4	87.6	77.9	75.1
70°	82.1	77.9	74.4	64.0	61.2
72.5°	65.4	61.2	56.3	50.8	48.7
75°	49.4	45.9	43.1	41.0	45.2
77.5°	34.1	32.7	30.6	28.5	27.8
80°	22.3	21.6	20.9	20.2	19.5
82.5°	13.2	13.2	13.2	13.2	13.2
85°	7.0	7.7	8.3	9.0	9.7
87.5°	4.2	4.2	4.9	5.6	6.3
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)