

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: P545262

Luminaire Tested: **FMR-12-2-LD4-1HI-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: P545262  
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-LD4-1HI-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**

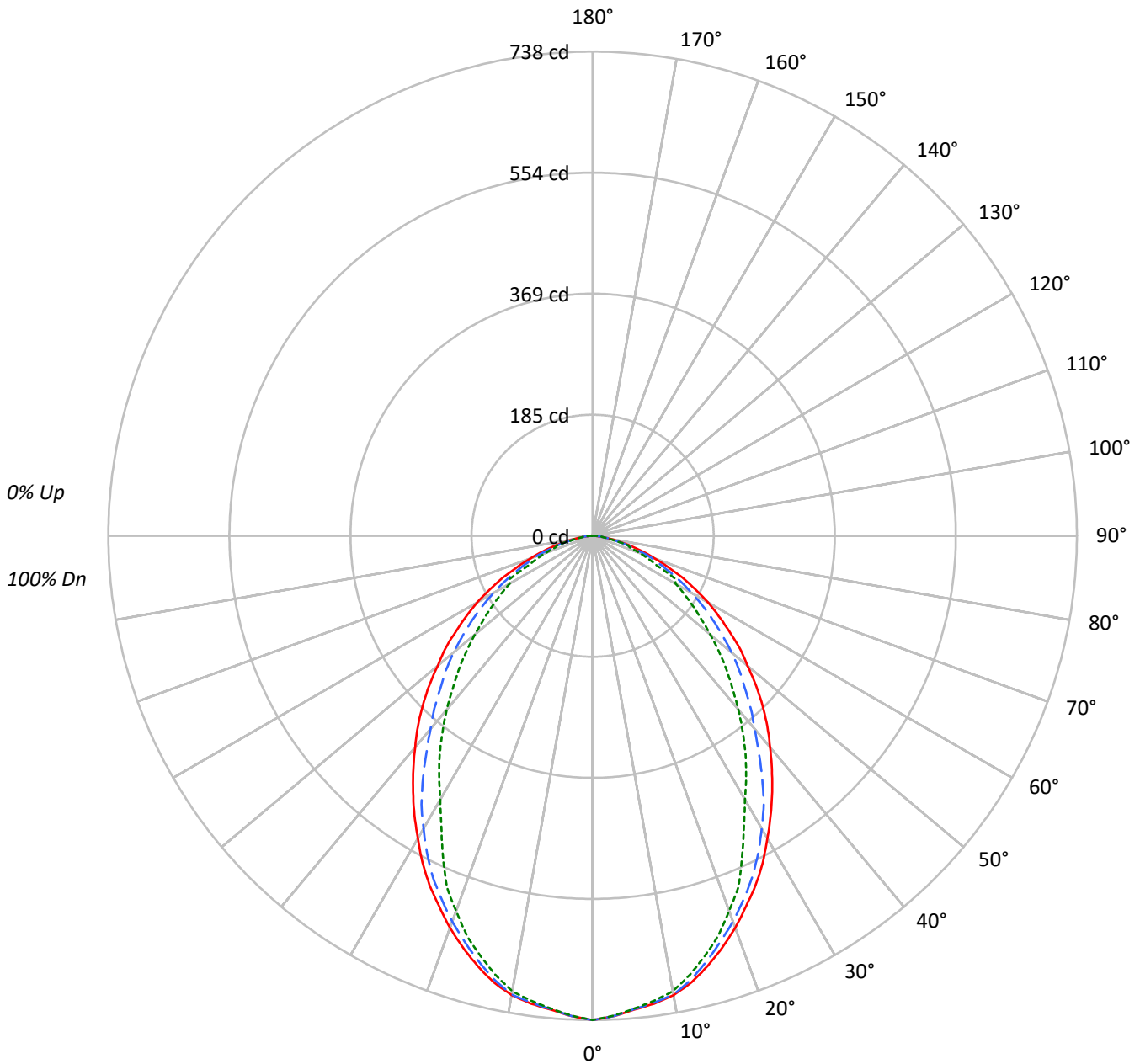
Lumens per Lamp: N/A  
Luminaire Lumens: 1449.0 lumens  
Efficiency: N/A  
Efficacy: 67.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3972	3972	3972
5°	3918	3914	3909
10°	3885	3880	3852
15°	3780	3741	3690
20°	3641	3582	3485
25°	3491	3415	3203
30°	3309	3203	2885
35°	3134	2960	2669
40°	2956	2698	2428
45°	2786	2494	2195
50°	2579	2315	1958
55°	2386	2098	1754
60°	2186	1874	1570
65°	1923	1640	1391
70°	1585	1437	1182
75°	1260	1100	1154
80°	846	793	741
85°	525	630	735



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.7	4.7
10°-20°	188.6	13.0
20°-30°	261.0	18.0
30°-40°	278.4	19.2
40°-50°	254.0	17.5
50°-60°	199.0	13.7
60°-70°	129.7	8.9
70°-80°	57.4	4.0
80°-90°	12.3	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°	518.3	35.8
0°-40°	796.7	55.0
0°-60°	1249.6	86.2
0°-90°	1449.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1449.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	738	738	738	738	738	
5°	725	724	724	724	724	69
15°	678	678	672	665	662	191
25°	588	584	575	555	539	270
35°	477	474	450	416	406	298
45°	366	358	328	300	288	282
55°	254	247	224	197	187	228
65°	151	142	129	131	109	149
75°	61	56	53	50	56	65
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	738.1	738.1	738.1	738.1	738.1
2.5°	733.0	733.0	733.0	732.1	732.1
5°	725.3	724.4	724.4	723.6	723.6
7.5°	719.3	718.5	717.6	716.8	715.1
10°	710.8	710.8	709.9	705.7	704.8
12.5°	697.1	696.3	692.9	686.9	685.2
15°	678.4	678.4	671.5	664.7	662.2
17.5°	657.9	657.0	648.5	641.7	638.3
20°	635.7	634.0	625.5	614.4	608.4
22.5°	611.0	611.0	600.7	586.2	580.2
25°	587.9	584.5	575.1	554.6	539.3
27.5°	561.5	556.3	546.1	517.1	499.2
30°	532.5	529.9	515.4	477.8	464.2
32.5°	505.2	500.9	485.5	446.3	435.2
35°	477.0	473.6	450.5	416.4	406.2
37.5°	448.8	444.6	415.6	388.2	375.5
40°	420.7	415.6	384.0	359.2	345.6
42.5°	394.2	387.4	356.7	330.2	314.9
45°	366.1	358.4	327.7	300.4	288.4
47.5°	337.9	331.1	302.9	274.8	261.1
50°	308.0	302.1	276.5	248.3	233.8
52.5°	283.3	273.9	249.2	221.0	209.1
55°	254.3	246.6	223.6	197.1	186.9
57.5°	227.8	220.2	198.8	174.1	165.5
60°	203.1	192.0	174.1	152.7	145.9
62.5°	175.8	167.2	151.9	134.0	142.5
65°	151.0	142.5	128.8	131.4	109.2
67.5°	123.7	119.5	107.5	95.6	92.2
70°	100.7	95.6	91.3	78.5	75.1
72.5°	80.2	75.1	69.1	62.3	59.7
75°	60.6	56.3	52.9	50.3	55.5
77.5°	41.8	40.1	37.5	35.0	34.1
80°	27.3	26.5	25.6	24.7	23.9
82.5°	16.2	16.2	16.2	16.2	16.2
85°	8.5	9.4	10.2	11.1	11.9
87.5°	5.1	5.1	6.0	6.8	7.7
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)