

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: P545644

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-82-94-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: P545644  
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-LD4-2LO-35-UNV-82-94-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

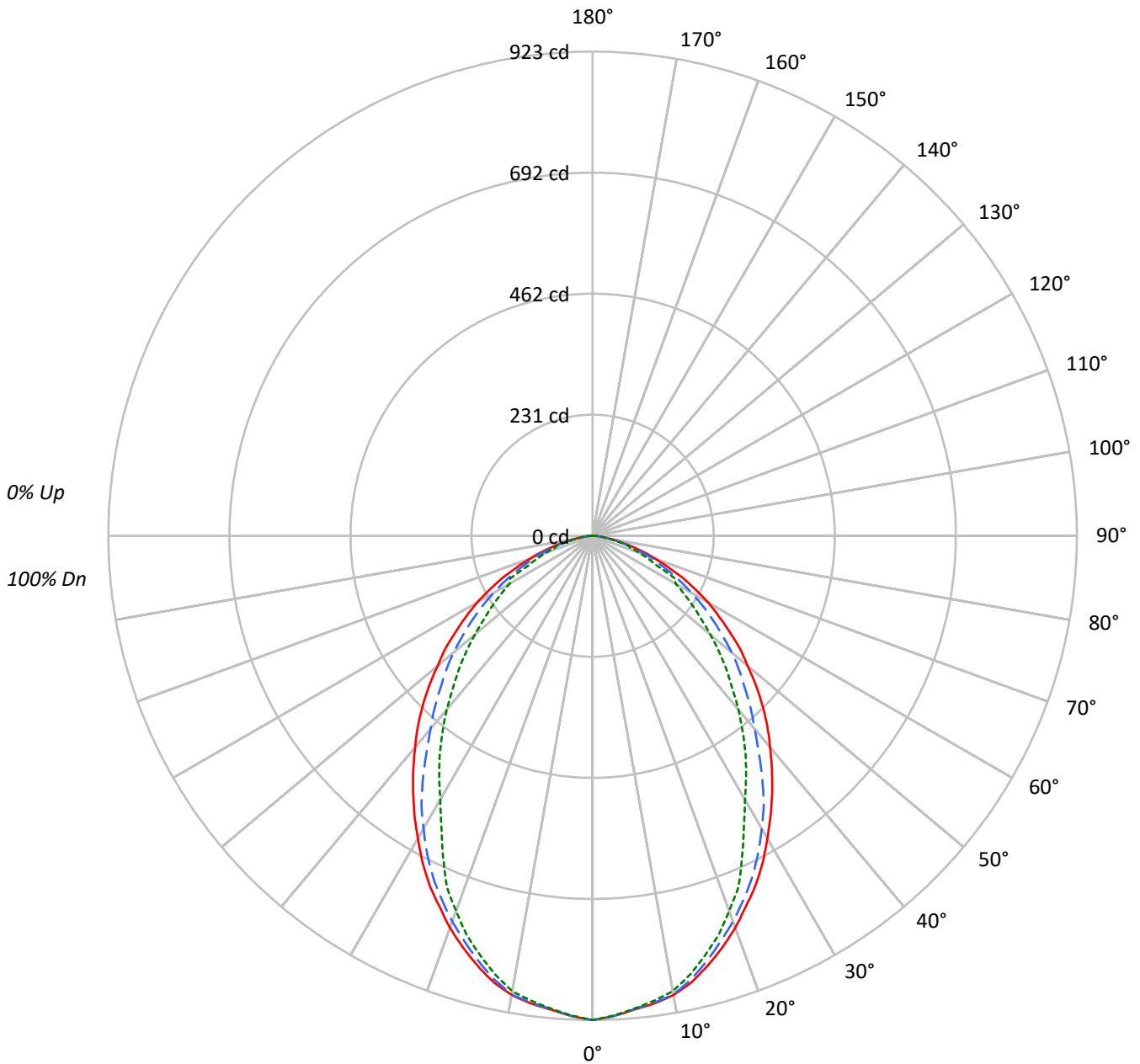
Lumens per Lamp: N/A  
Luminaire Lumens: 1812.0 lumens  
Efficiency: N/A  
Efficacy: 77.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	4968	4968	4968
5°	4900	4894	4889
10°	4858	4852	4817
15°	4727	4679	4613
20°	4553	4480	4357
25°	4366	4271	4005
30°	4138	4005	3608
35°	3919	3702	3337
40°	3696	3374	3036
45°	3484	3119	2745
50°	3225	2894	2448
55°	2984	2624	2193
60°	2734	2343	1964
65°	2406	2052	1740
70°	1981	1797	1478
75°	1576	1377	1443
80°	1057	992	927
85°	661	790	920



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.9	4.7
10°-20°	235.8	13.0
20°-30°	326.4	18.0
30°-40°	348.1	19.2
40°-50°	317.6	17.5
50°-60°	248.8	13.7
60°-70°	162.1	8.9
70°-80°	71.8	4.0
80°-90°	15.4	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°	648.2	35.8
0°-40°	996.3	55.0
0°-60°	1562.6	86.2
0°-90°	1812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1812.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	923	923	923	923	923	
5°	907	906	906	905	905	86
15°	848	848	840	831	828	238
25°	735	731	719	694	674	338
35°	596	592	563	521	508	373
45°	458	448	410	376	361	353
55°	318	308	280	246	234	285
65°	189	178	161	164	137	186
75°	76	70	66	63	69	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	923.0	923.0	923.0	923.0	923.0
2.5°	916.6	916.6	916.6	915.5	915.5
5°	907.0	905.9	905.9	904.9	904.9
7.5°	899.5	898.5	897.4	896.3	894.2
10°	888.9	888.9	887.8	882.5	881.4
12.5°	871.8	870.7	866.5	859.0	856.9
15°	848.3	848.3	839.8	831.2	828.0
17.5°	822.7	821.6	811.0	802.4	798.2
20°	795.0	792.8	782.2	768.3	760.8
22.5°	764.0	764.0	751.2	733.1	725.6
25°	735.2	730.9	719.2	693.6	674.4
27.5°	702.1	695.7	682.9	646.6	624.2
30°	665.8	662.6	644.5	597.6	580.5
32.5°	631.7	626.4	607.2	558.1	544.2
35°	596.5	592.2	563.4	520.7	507.9
37.5°	561.3	555.9	519.7	485.5	469.5
40°	526.1	519.7	480.2	449.2	432.2
42.5°	493.0	484.4	446.0	413.0	393.7
45°	457.8	448.2	409.8	375.6	360.7
47.5°	422.6	414.0	378.8	343.6	326.5
50°	385.2	377.7	345.7	310.5	292.4
52.5°	354.3	342.5	311.6	276.4	261.4
55°	318.0	308.4	279.6	246.5	233.7
57.5°	284.9	275.3	248.6	217.7	207.0
60°	254.0	240.1	217.7	191.0	182.5
62.5°	219.8	209.1	189.9	167.5	178.2
65°	188.9	178.2	161.1	164.3	136.6
67.5°	154.7	149.4	134.4	119.5	115.2
70°	125.9	119.5	114.2	98.2	93.9
72.5°	100.3	93.9	86.4	77.9	74.7
75°	75.8	70.4	66.2	63.0	69.4
77.5°	52.3	50.2	47.0	43.7	42.7
80°	34.1	33.1	32.0	30.9	29.9
82.5°	20.3	20.3	20.3	20.3	20.3
85°	10.7	11.7	12.8	13.9	14.9
87.5°	6.4	6.4	7.5	8.5	9.6
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)