

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: P545350

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-81-97-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: P545350  
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-LD4-1LO-35-UNV-81-97-EDD  
Description: 1X2 FMR TROFFER WITH .156 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**

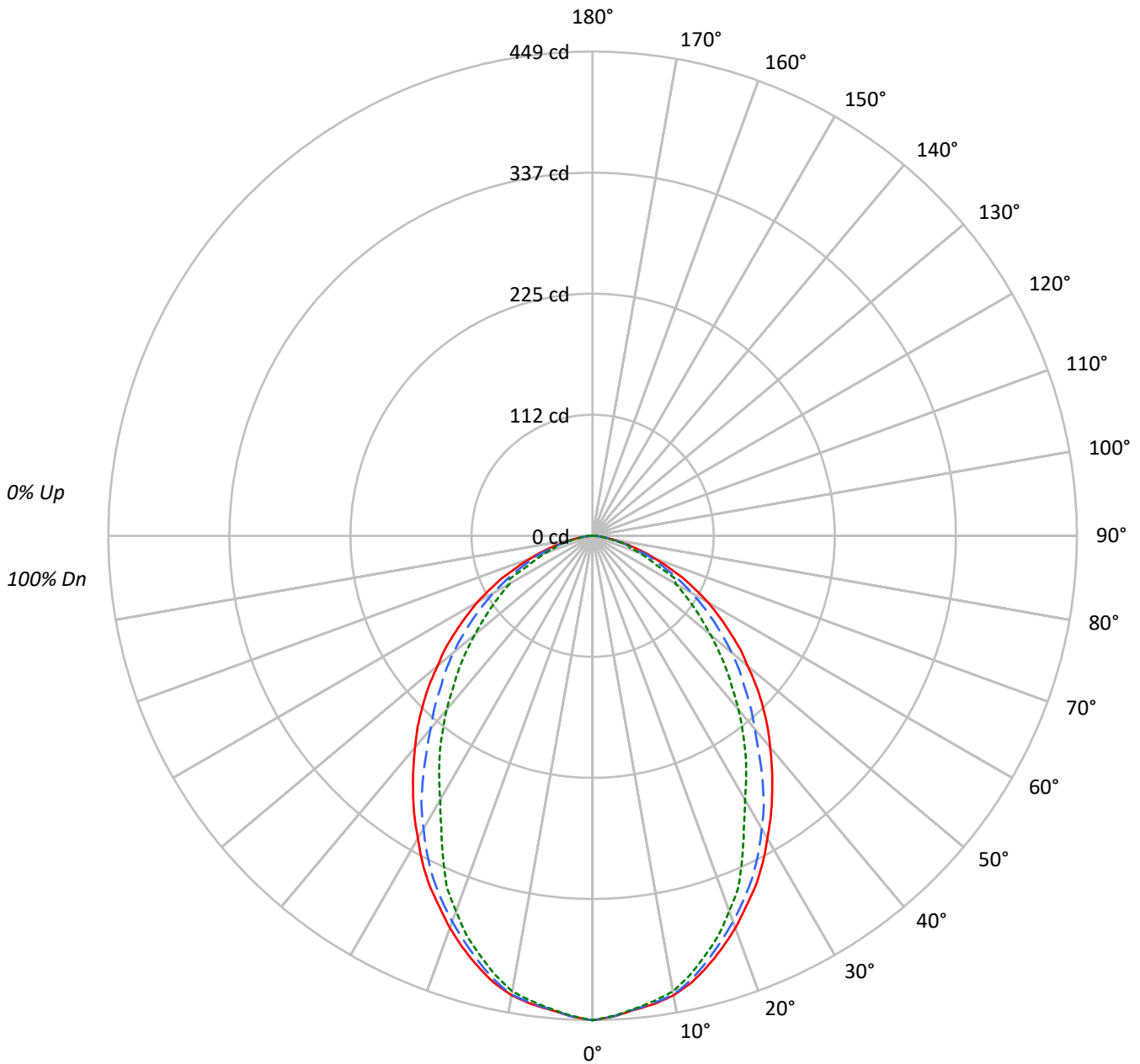
Lumens per Lamp: N/A  
Luminaire Lumens: 882.0 lumens  
Efficiency: N/A  
Efficacy: 75.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
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°	2418	2418	2418
5°	2385	2383	2379
10°	2365	2361	2344
15°	2301	2278	2246
20°	2216	2180	2121
25°	2125	2079	1950
30°	2014	1950	1756
35°	1907	1802	1624
40°	1799	1642	1478
45°	1696	1518	1337
50°	1570	1409	1191
55°	1453	1277	1067
60°	1330	1141	956
65°	1170	998	847
70°	965	875	719
75°	767	670	703
80°	514	483	449
85°	321	383	451



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.8	4.7
10°-20°	114.8	13.0
20°-30°	158.9	18.0
30°-40°	169.4	19.2
40°-50°	154.6	17.5
50°-60°	121.1	13.7
60°-70°	78.9	8.9
70°-80°	35.0	4.0
80°-90°	7.5	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°	315.5	35.8
0°-40°	484.9	55.0
0°-60°	760.6	86.2
0°-90°	882.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	882.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	449	449	449	449	449	
5°	442	441	441	440	440	42
15°	413	413	409	405	403	116
25°	358	356	350	338	328	164
35°	290	288	274	254	247	182
45°	223	218	199	183	176	172
55°	155	150	136	120	114	139
65°	92	87	78	80	66	91
75°	37	34	32	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	449.3	449.3	449.3	449.3	449.3
2.5°	446.2	446.2	446.2	445.6	445.6
5°	441.5	441.0	441.0	440.4	440.4
7.5°	437.9	437.3	436.8	436.3	435.3
10°	432.7	432.7	432.1	429.5	429.0
12.5°	424.3	423.8	421.8	418.1	417.1
15°	412.9	412.9	408.8	404.6	403.1
17.5°	400.5	399.9	394.7	390.6	388.5
20°	387.0	385.9	380.7	374.0	370.3
22.5°	371.9	371.9	365.7	356.8	353.2
25°	357.9	355.8	350.1	337.6	328.3
27.5°	341.8	338.6	332.4	314.8	303.8
30°	324.1	322.5	313.7	290.9	282.6
32.5°	307.5	304.9	295.5	271.6	264.9
35°	290.3	288.3	274.2	253.5	247.2
37.5°	273.2	270.6	252.9	236.3	228.5
40°	256.1	252.9	233.7	218.7	210.4
42.5°	240.0	235.8	217.1	201.0	191.7
45°	222.8	218.1	199.4	182.8	175.6
47.5°	205.7	201.5	184.4	167.2	158.9
50°	187.5	183.9	168.3	151.1	142.3
52.5°	172.4	166.7	151.7	134.5	127.3
55°	154.8	150.1	136.1	120.0	113.7
57.5°	138.7	134.0	121.0	106.0	100.8
60°	123.6	116.9	106.0	93.0	88.8
62.5°	107.0	101.8	92.5	81.5	86.7
65°	91.9	86.7	78.4	80.0	66.5
67.5°	75.3	72.7	65.4	58.2	56.1
70°	61.3	58.2	55.6	47.8	45.7
72.5°	48.8	45.7	42.1	37.9	36.4
75°	36.9	34.3	32.2	30.6	33.8
77.5°	25.5	24.4	22.9	21.3	20.8
80°	16.6	16.1	15.6	15.1	14.5
82.5°	9.9	9.9	9.9	9.9	9.9
85°	5.2	5.7	6.2	6.8	7.3
87.5°	3.1	3.1	3.6	4.2	4.7
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)