

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: P545575

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-82-84-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: P545575  
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-LD4-2HI-40-UNV-82-84-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

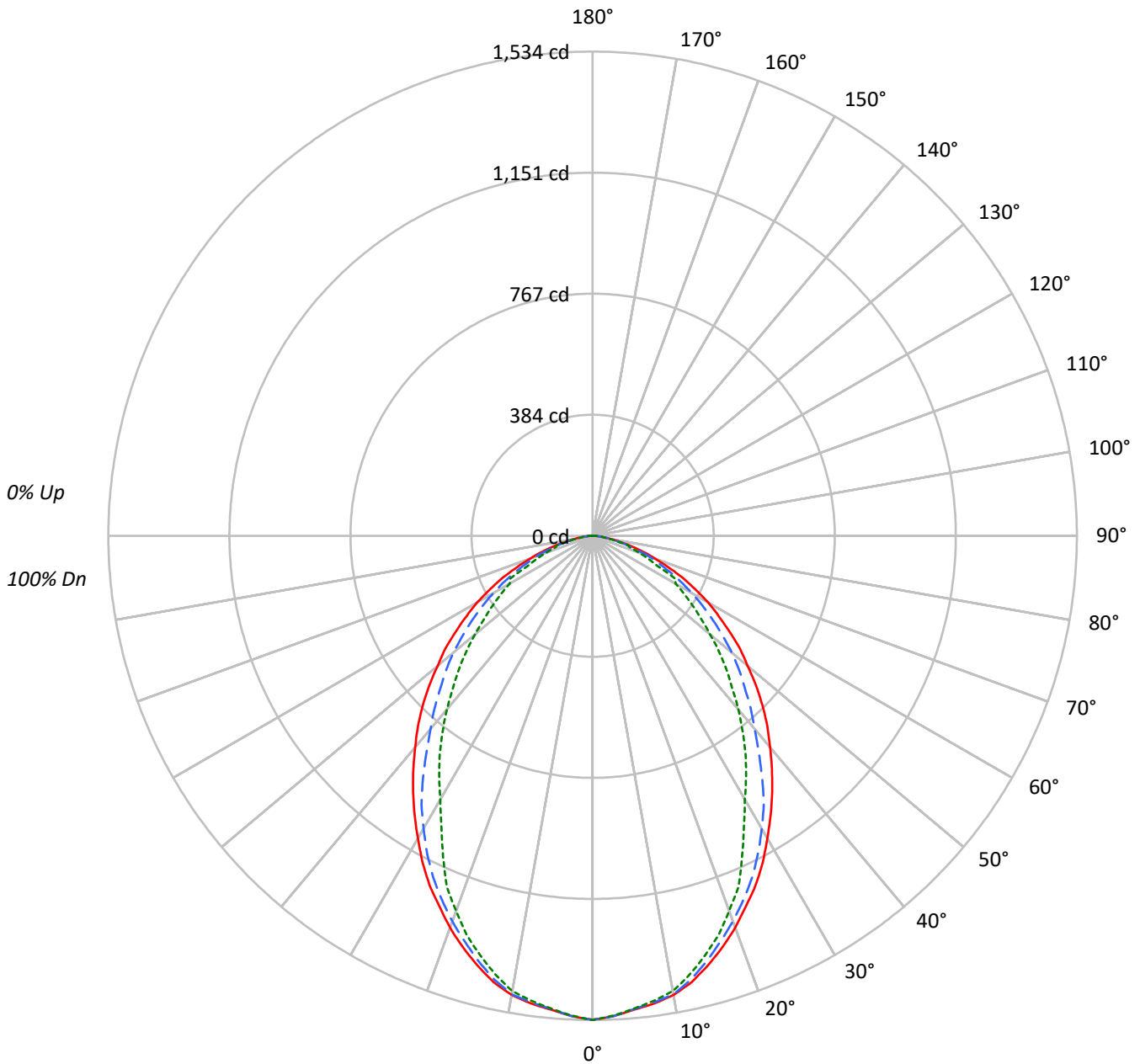
Lumens per Lamp: N/A  
Luminaire Lumens: 3011.0 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	8255	8255	8255
5°	8143	8133	8123
10°	8072	8062	8004
15°	7854	7775	7667
20°	7566	7444	7241
25°	7255	7097	6654
30°	6876	6656	5995
35°	6512	6151	5545
40°	6142	5606	5045
45°	5790	5182	4561
50°	5359	4810	4068
55°	4958	4359	3643
60°	4542	3893	3264
65°	3996	3409	2891
70°	3292	2985	2455
75°	2618	2285	2398
80°	1757	1649	1537
85°	1093	1315	1531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.8	4.7
10°-20°	391.8	13.0
20°-30°	542.5	18.0
30°-40°	578.4	19.2
40°-50°	527.7	17.5
50°-60°	413.4	13.7
60°-70°	269.4	8.9
70°-80°	119.4	4.0
80°-90°	25.6	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°	1077.1	35.8
0°-40°	1655.5	55.0
0°-60°	2596.6	86.2
0°-90°	3011.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3011.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1534	1534	1534	1534	1534	
5°	1507	1505	1505	1504	1504	143
15°	1410	1410	1396	1381	1376	396
25°	1222	1215	1195	1152	1121	561
35°	991	984	936	865	844	620
45°	761	745	681	624	599	586
55°	528	512	465	410	388	474
65°	314	296	268	273	227	309
75°	126	117	110	105	115	135
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1533.8	1533.8	1533.8	1533.8	1533.8
2.5°	1523.1	1523.1	1523.1	1521.4	1521.4
5°	1507.2	1505.4	1505.4	1503.6	1503.6
7.5°	1494.8	1493.0	1491.2	1489.4	1485.9
10°	1477.0	1477.0	1475.2	1466.4	1464.6
12.5°	1448.7	1446.9	1439.8	1427.4	1423.8
15°	1409.6	1409.6	1395.5	1381.3	1376.0
17.5°	1367.1	1365.3	1347.6	1333.4	1326.3
20°	1321.0	1317.4	1299.7	1276.7	1264.2
22.5°	1269.6	1269.6	1248.3	1218.1	1205.7
25°	1221.7	1214.6	1195.1	1152.5	1120.6
27.5°	1166.7	1156.1	1134.8	1074.5	1037.3
30°	1106.4	1101.1	1071.0	993.0	964.6
32.5°	1049.7	1040.8	1008.9	927.4	904.3
35°	991.2	984.1	936.2	865.3	844.0
37.5°	932.7	923.8	863.5	806.8	780.2
40°	874.2	863.5	797.9	746.5	718.1
42.5°	819.2	805.0	741.2	686.2	654.3
45°	760.7	744.7	680.9	624.1	599.3
47.5°	702.2	688.0	629.5	570.9	542.6
50°	640.1	627.7	574.5	516.0	485.8
52.5°	588.7	569.2	517.8	459.2	434.4
55°	528.4	512.4	464.6	409.6	388.3
57.5°	473.4	457.5	413.1	361.7	344.0
60°	422.0	399.0	361.7	317.4	303.2
62.5°	365.3	347.5	315.6	278.4	296.1
65°	313.8	296.1	267.7	273.1	227.0
67.5°	257.1	248.2	223.4	198.6	191.5
70°	209.2	198.6	189.7	163.1	156.0
72.5°	166.7	156.0	143.6	129.4	124.1
75°	125.9	117.0	109.9	104.6	115.3
77.5°	86.9	83.3	78.0	72.7	70.9
80°	56.7	55.0	53.2	51.4	49.6
82.5°	33.7	33.7	33.7	33.7	33.7
85°	17.7	19.5	21.3	23.1	24.8
87.5°	10.6	10.6	12.4	14.2	16.0
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)