

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: P545551

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-93-84-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: P545551  
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-35-UNV-93-84-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

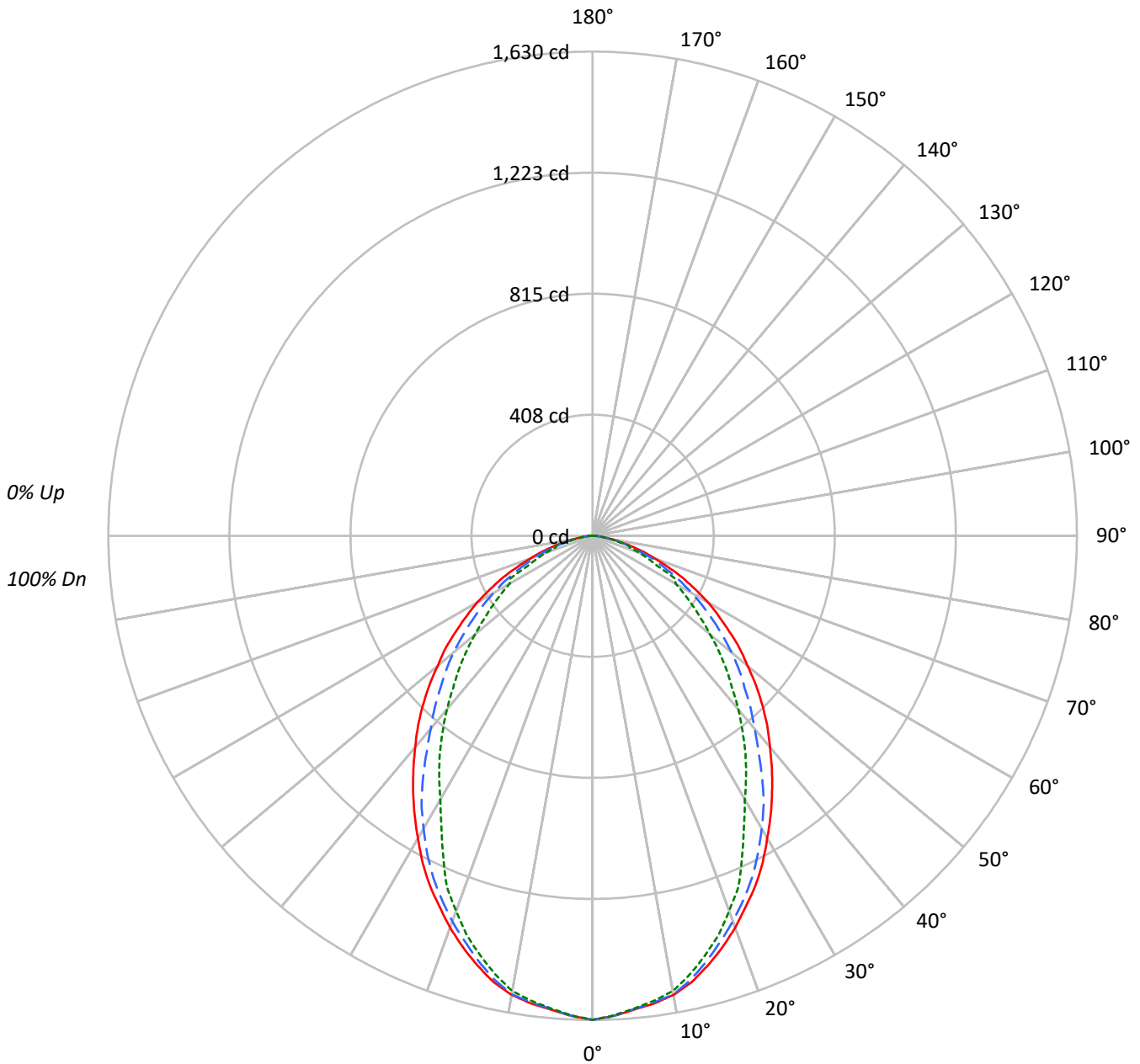
Lumens per Lamp: N/A  
Luminaire Lumens: 3199.0 lumens  
Efficiency: N/A  
Efficacy: 74.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	8770	8770	8770
5°	8651	8641	8631
10°	8576	8566	8504
15°	8345	8261	8145
20°	8038	7909	7693
25°	7708	7540	7070
30°	7305	7071	6369
35°	6919	6535	5891
40°	6525	5956	5361
45°	6151	5506	4846
50°	5694	5111	4322
55°	5268	4632	3871
60°	4827	4137	3467
65°	4246	3623	3070
70°	3498	3172	2609
75°	2782	2429	2547
80°	1869	1751	1633
85°	1161	1396	1630



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.7	4.7
10°-20°	416.3	13.0
20°-30°	576.3	18.0
30°-40°	614.5	19.2
40°-50°	560.6	17.5
50°-60°	439.2	13.7
60°-70°	286.3	8.9
70°-80°	126.8	4.0
80°-90°	27.2	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°	1144.3	35.8
0°-40°	1758.8	55.0
0°-60°	2758.7	86.2
0°-90°	3199.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3199.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1630	1630	1630	1630	1630	
5°	1601	1599	1599	1598	1598	152
15°	1498	1498	1483	1468	1462	421
25°	1298	1290	1270	1224	1191	596
35°	1053	1046	995	919	897	658
45°	808	791	723	663	637	623
55°	561	544	494	435	413	504
65°	333	315	284	290	241	329
75°	134	124	117	111	122	143
85°	19	21	23	24	26	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1629.5	1629.5	1629.5	1629.5	1629.5
2.5°	1618.2	1618.2	1618.2	1616.3	1616.3
5°	1601.3	1599.4	1599.4	1597.5	1597.5
7.5°	1588.1	1586.2	1584.3	1582.4	1578.7
10°	1569.2	1569.2	1567.4	1557.9	1556.1
12.5°	1539.1	1537.2	1529.7	1516.5	1512.7
15°	1497.7	1497.7	1482.6	1467.5	1461.9
17.5°	1452.4	1450.6	1431.7	1416.7	1409.1
20°	1403.5	1399.7	1380.9	1356.4	1343.2
22.5°	1348.8	1348.8	1326.2	1294.2	1281.0
25°	1298.0	1290.4	1269.7	1224.5	1190.6
27.5°	1239.6	1228.3	1205.7	1141.6	1102.1
30°	1175.5	1169.9	1137.8	1055.0	1024.8
32.5°	1115.2	1105.8	1071.9	985.3	960.8
35°	1053.1	1045.5	994.7	919.3	896.7
37.5°	990.9	981.5	917.4	857.2	828.9
40°	928.7	917.4	847.7	793.1	763.0
42.5°	870.3	855.3	787.4	729.0	695.1
45°	808.2	791.2	723.4	663.1	636.7
47.5°	746.0	730.9	668.8	606.6	576.5
50°	680.1	666.9	610.4	548.2	516.2
52.5°	625.4	604.7	550.1	487.9	461.5
55°	561.4	544.4	493.6	435.2	412.6
57.5°	503.0	486.0	438.9	384.3	365.5
60°	448.4	423.9	384.3	337.2	322.1
62.5°	388.1	369.2	335.3	295.8	314.6
65°	333.4	314.6	284.5	290.1	241.1
67.5°	273.2	263.7	237.4	211.0	203.5
70°	222.3	211.0	201.6	173.3	165.8
72.5°	177.1	165.8	152.6	137.5	131.9
75°	133.8	124.3	116.8	111.1	122.5
77.5°	92.3	88.5	82.9	77.2	75.4
80°	60.3	58.4	56.5	54.6	52.7
82.5°	35.8	35.8	35.8	35.8	35.8
85°	18.8	20.7	22.6	24.5	26.4
87.5°	11.3	11.3	13.2	15.1	17.0
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)