

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: P545556

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-93-94-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: P545556  
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-93-94-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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**

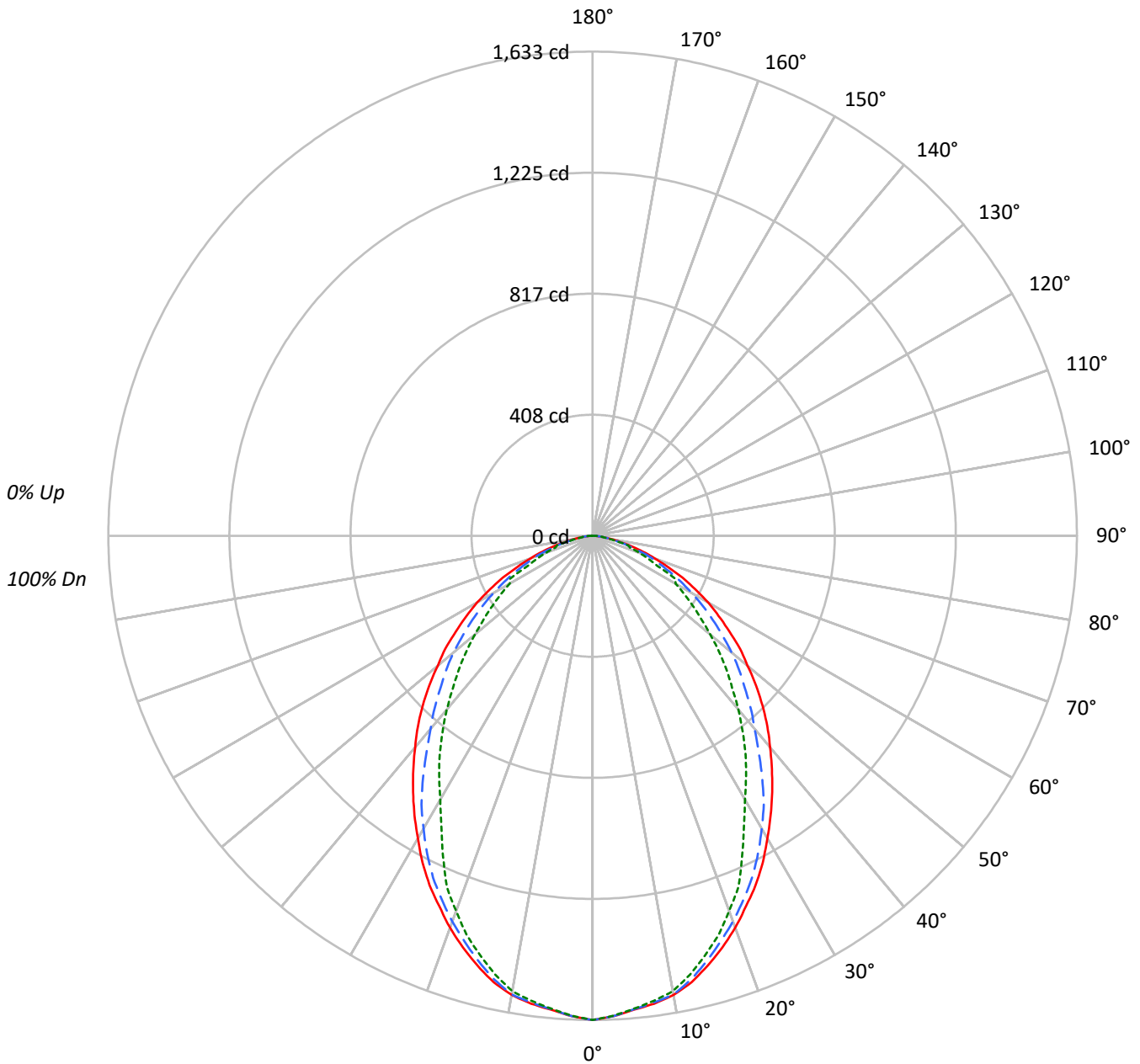
Lumens per Lamp: N/A  
Luminaire Lumens: 3206.0 lumens  
Efficiency: N/A  
Efficacy: 74.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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°	8789	8789	8789
5°	8670	8660	8649
10°	8595	8584	8523
15°	8363	8279	8163
20°	8056	7926	7710
25°	7725	7557	7086
30°	7321	7086	6383
35°	6934	6549	5905
40°	6539	5969	5372
45°	6164	5518	4857
50°	5707	5122	4331
55°	5279	4641	3880
60°	4836	4145	3475
65°	4256	3631	3078
70°	3506	3179	2614
75°	2786	2435	2551
80°	1872	1754	1640
85°	1167	1402	1630



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.0	4.7
10°-20°	417.2	13.0
20°-30°	577.6	18.0
30°-40°	615.9	19.2
40°-50°	561.8	17.5
50°-60°	440.2	13.7
60°-70°	286.9	8.9
70°-80°	127.1	4.0
80°-90°	27.3	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°	1146.8	35.8
0°-40°	1762.7	55.0
0°-60°	2764.7	86.2
0°-90°	3206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3206.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1633	1633	1633	1633	1633	
5°	1605	1603	1603	1601	1601	152
15°	1501	1501	1486	1471	1465	422
25°	1301	1293	1272	1227	1193	597
35°	1055	1048	997	921	899	660
45°	810	793	725	665	638	624
55°	563	546	495	436	414	505
65°	334	315	285	291	242	329
75°	134	125	117	111	123	144
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°	1633.1	1633.1	1633.1	1633.1	1633.1
2.5°	1621.8	1621.8	1621.8	1619.9	1619.9
5°	1604.8	1602.9	1602.9	1601.0	1601.0
7.5°	1591.6	1589.7	1587.8	1585.9	1582.1
10°	1572.7	1572.7	1570.8	1561.4	1559.5
12.5°	1542.5	1540.6	1533.0	1519.8	1516.0
15°	1500.9	1500.9	1485.8	1470.7	1465.1
17.5°	1455.6	1453.7	1434.9	1419.8	1412.2
20°	1406.5	1402.8	1383.9	1359.3	1346.1
22.5°	1351.8	1351.8	1329.1	1297.0	1283.8
25°	1300.8	1293.3	1272.5	1227.2	1193.2
27.5°	1242.3	1231.0	1208.3	1144.1	1104.5
30°	1178.1	1172.4	1140.3	1057.3	1027.1
32.5°	1117.7	1108.2	1074.3	987.4	962.9
35°	1055.4	1047.8	996.8	921.3	898.7
37.5°	993.1	983.6	919.4	859.0	830.7
40°	930.8	919.4	849.6	794.8	764.6
42.5°	872.2	857.1	789.2	730.6	696.7
45°	809.9	792.9	725.0	664.6	638.1
47.5°	747.6	732.5	670.2	607.9	577.7
50°	681.6	668.3	611.7	549.4	517.3
52.5°	626.8	606.0	551.3	489.0	462.6
55°	562.6	545.6	494.6	436.1	413.5
57.5°	504.1	487.1	439.9	385.1	366.3
60°	449.3	424.8	385.1	337.9	322.8
62.5°	388.9	370.0	336.1	296.4	315.3
65°	334.2	315.3	285.1	290.7	241.7
67.5°	273.8	264.3	237.9	211.5	203.9
70°	222.8	211.5	202.0	173.7	166.1
72.5°	177.5	166.1	152.9	137.8	132.2
75°	134.0	124.6	117.1	111.4	122.7
77.5°	92.5	88.7	83.1	77.4	75.5
80°	60.4	58.5	56.6	54.8	52.9
82.5°	35.9	35.9	35.9	35.9	35.9
85°	18.9	20.8	22.7	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)