

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: P545565

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-80-96-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: P545565  
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-80-96-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

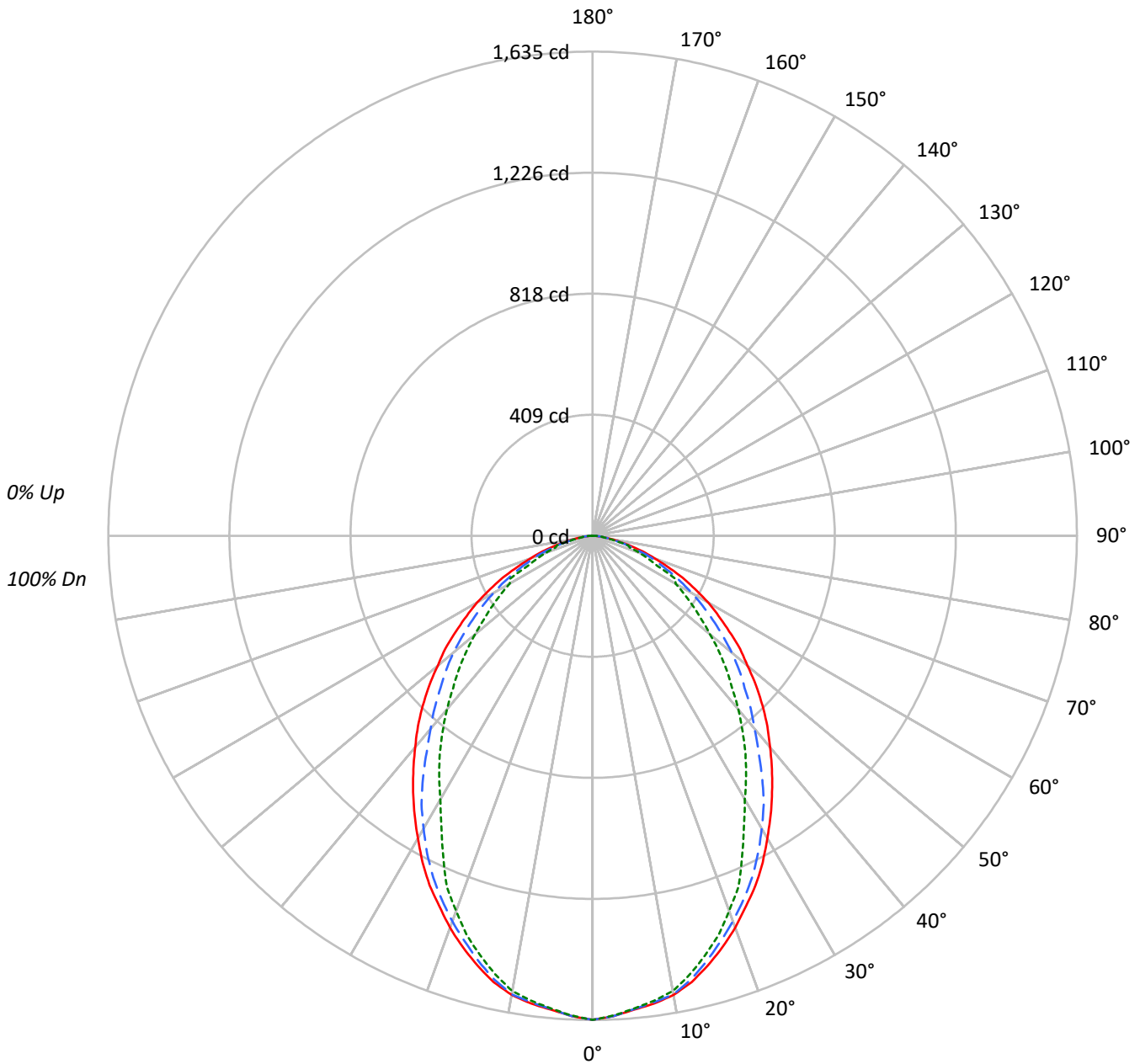
Lumens per Lamp: N/A  
Luminaire Lumens: 3209.0 lumens  
Efficiency: N/A  
Efficacy: 74.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	8797	8797	8797
5°	8678	8668	8658
10°	8603	8593	8530
15°	8371	8286	8171
20°	8064	7934	7717
25°	7732	7564	7092
30°	7328	7093	6389
35°	6941	6556	5910
40°	6545	5975	5377
45°	6170	5523	4861
50°	5712	5127	4335
55°	5284	4646	3884
60°	4842	4149	3478
65°	4260	3635	3081
70°	3509	3182	2617
75°	2791	2437	2554
80°	1875	1757	1640
85°	1167	1402	1636



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.2	4.7
10°-20°	417.6	13.0
20°-30°	578.1	18.0
30°-40°	616.5	19.2
40°-50°	562.4	17.5
50°-60°	440.6	13.7
60°-70°	287.2	8.9
70°-80°	127.2	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°	1147.9	35.8
0°-40°	1764.3	55.0
0°-60°	2767.3	86.2
0°-90°	3209.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3209.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1635	1635	1635	1635	1635	
5°	1606	1604	1604	1602	1602	152
15°	1502	1502	1487	1472	1466	422
25°	1302	1294	1274	1228	1194	598
35°	1056	1049	998	922	900	660
45°	811	794	726	665	639	624
55°	563	546	495	436	414	505
65°	334	316	285	291	242	330
75°	134	125	117	112	123	144
85°	19	21	23	25	26	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1634.6	1634.6	1634.6	1634.6	1634.6
2.5°	1623.3	1623.3	1623.3	1621.4	1621.4
5°	1606.3	1604.4	1604.4	1602.5	1602.5
7.5°	1593.0	1591.2	1589.3	1587.4	1583.6
10°	1574.2	1574.2	1572.3	1562.8	1560.9
12.5°	1543.9	1542.0	1534.5	1521.2	1517.5
15°	1502.3	1502.3	1487.2	1472.1	1466.4
17.5°	1457.0	1455.1	1436.2	1421.1	1413.5
20°	1407.9	1404.1	1385.2	1360.6	1347.4
22.5°	1353.1	1353.1	1330.4	1298.2	1285.0
25°	1302.0	1294.5	1273.7	1228.3	1194.3
27.5°	1243.4	1232.1	1209.4	1145.2	1105.5
30°	1179.2	1173.5	1141.4	1058.3	1028.0
32.5°	1118.7	1109.3	1075.3	988.3	963.8
35°	1056.4	1048.8	997.8	922.2	899.5
37.5°	994.0	984.6	920.3	859.8	831.5
40°	931.6	920.3	850.4	795.6	765.3
42.5°	873.1	857.9	789.9	731.3	697.3
45°	810.7	793.7	725.7	665.2	638.7
47.5°	748.3	733.2	670.9	608.5	578.3
50°	682.2	669.0	612.3	549.9	517.8
52.5°	627.4	606.6	551.8	489.4	463.0
55°	563.1	546.1	495.1	436.5	413.9
57.5°	504.6	487.6	440.3	385.5	366.6
60°	449.8	425.2	385.5	338.3	323.1
62.5°	389.3	370.4	336.4	296.7	315.6
65°	334.5	315.6	285.4	291.0	241.9
67.5°	274.0	264.6	238.1	211.7	204.1
70°	223.0	211.7	202.2	173.9	166.3
72.5°	177.6	166.3	153.1	138.0	132.3
75°	134.2	124.7	117.2	111.5	122.8
77.5°	92.6	88.8	83.1	77.5	75.6
80°	60.5	58.6	56.7	54.8	52.9
82.5°	35.9	35.9	35.9	35.9	35.9
85°	18.9	20.8	22.7	24.6	26.5
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)