

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: P545530

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-80-87-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: P545530  
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-80-87-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

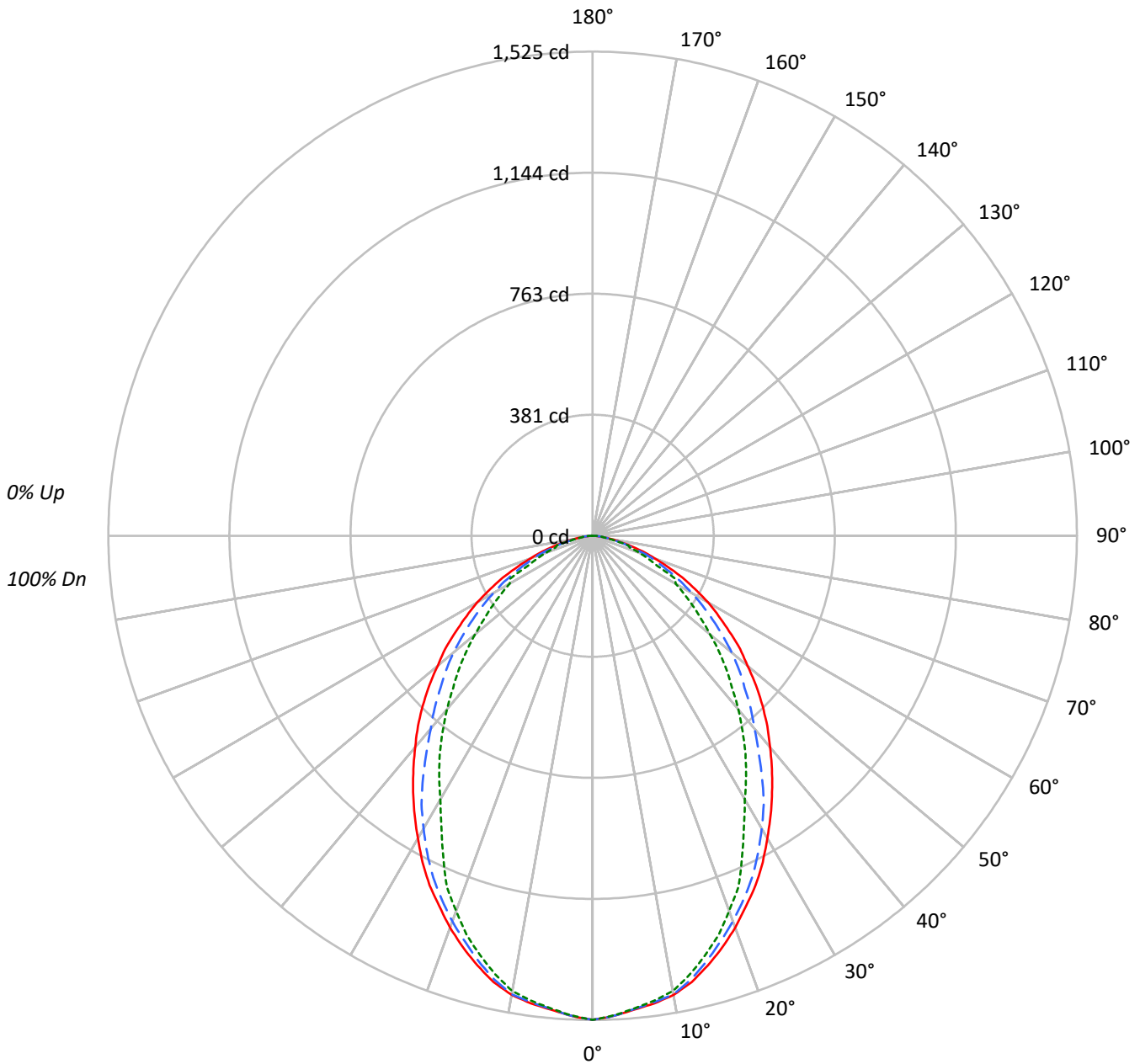
Lumens per Lamp: N/A  
Luminaire Lumens: 2993.0 lumens  
Efficiency: N/A  
Efficacy: 69.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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°	8205	8205	8205
5°	8094	8084	8075
10°	8024	8014	7956
15°	7807	7729	7621
20°	7521	7399	7198
25°	7212	7054	6615
30°	6835	6616	5959
35°	6474	6114	5512
40°	6105	5572	5015
45°	5755	5151	4534
50°	5328	4782	4043
55°	4928	4333	3622
60°	4515	3871	3244
65°	3973	3389	2873
70°	3273	2968	2441
75°	2601	2273	2383
80°	1748	1640	1531
85°	1087	1309	1525



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.9	4.7
10°-20°	389.5	13.0
20°-30°	539.2	18.0
30°-40°	575.0	19.2
40°-50°	524.5	17.5
50°-60°	410.9	13.7
60°-70°	267.8	8.9
70°-80°	118.7	4.0
80°-90°	25.5	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°	1070.6	35.8
0°-40°	1645.6	55.0
0°-60°	2581.0	86.2
0°-90°	2993.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2993.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1525	1525	1525	1525	1525	
5°	1498	1496	1496	1495	1495	142
15°	1401	1401	1387	1373	1368	394
25°	1214	1207	1188	1146	1114	558
35°	985	978	931	860	839	616
45°	756	740	677	620	596	582
55°	525	509	462	407	386	471
65°	312	294	266	271	226	307
75°	125	116	109	104	115	134
85°	18	19	21	23	25	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1524.6	1524.6	1524.6	1524.6	1524.6
2.5°	1514.0	1514.0	1514.0	1512.3	1512.3
5°	1498.2	1496.4	1496.4	1494.6	1494.6
7.5°	1485.8	1484.1	1482.3	1480.5	1477.0
10°	1468.2	1468.2	1466.4	1457.6	1455.9
12.5°	1440.0	1438.2	1431.2	1418.8	1415.3
15°	1401.2	1401.2	1387.1	1373.0	1367.7
17.5°	1358.9	1357.2	1339.5	1325.4	1318.4
20°	1313.1	1309.6	1291.9	1269.0	1256.7
22.5°	1262.0	1262.0	1240.8	1210.9	1198.5
25°	1214.4	1207.3	1187.9	1145.6	1113.9
27.5°	1159.7	1149.2	1128.0	1068.1	1031.1
30°	1099.8	1094.5	1064.6	987.0	958.8
32.5°	1043.4	1034.6	1002.9	921.8	898.9
35°	985.3	978.2	930.6	860.1	839.0
37.5°	927.1	918.3	858.4	802.0	775.5
40°	868.9	858.4	793.1	742.0	713.8
42.5°	814.3	800.2	736.7	682.1	650.4
45°	756.1	740.3	676.8	620.4	595.7
47.5°	698.0	683.9	625.7	567.5	539.3
50°	636.3	623.9	571.1	512.9	482.9
52.5°	585.2	565.8	514.7	456.5	431.8
55°	525.2	509.4	461.8	407.1	386.0
57.5°	470.6	454.7	410.7	359.6	341.9
60°	419.5	396.6	359.6	315.5	301.4
62.5°	363.1	345.5	313.7	276.7	294.3
65°	312.0	294.3	266.1	271.4	225.6
67.5°	255.6	246.8	222.1	197.4	190.4
70°	208.0	197.4	188.6	162.2	155.1
72.5°	165.7	155.1	142.8	128.7	123.4
75°	125.1	116.3	109.3	104.0	114.6
77.5°	86.4	82.8	77.6	72.3	70.5
80°	56.4	54.6	52.9	51.1	49.4
82.5°	33.5	33.5	33.5	33.5	33.5
85°	17.6	19.4	21.2	22.9	24.7
87.5°	10.6	10.6	12.3	14.1	15.9
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)