

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: P545751

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-80-84-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: P545751  
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-LD4-2STD-40-UNV-80-84-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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**

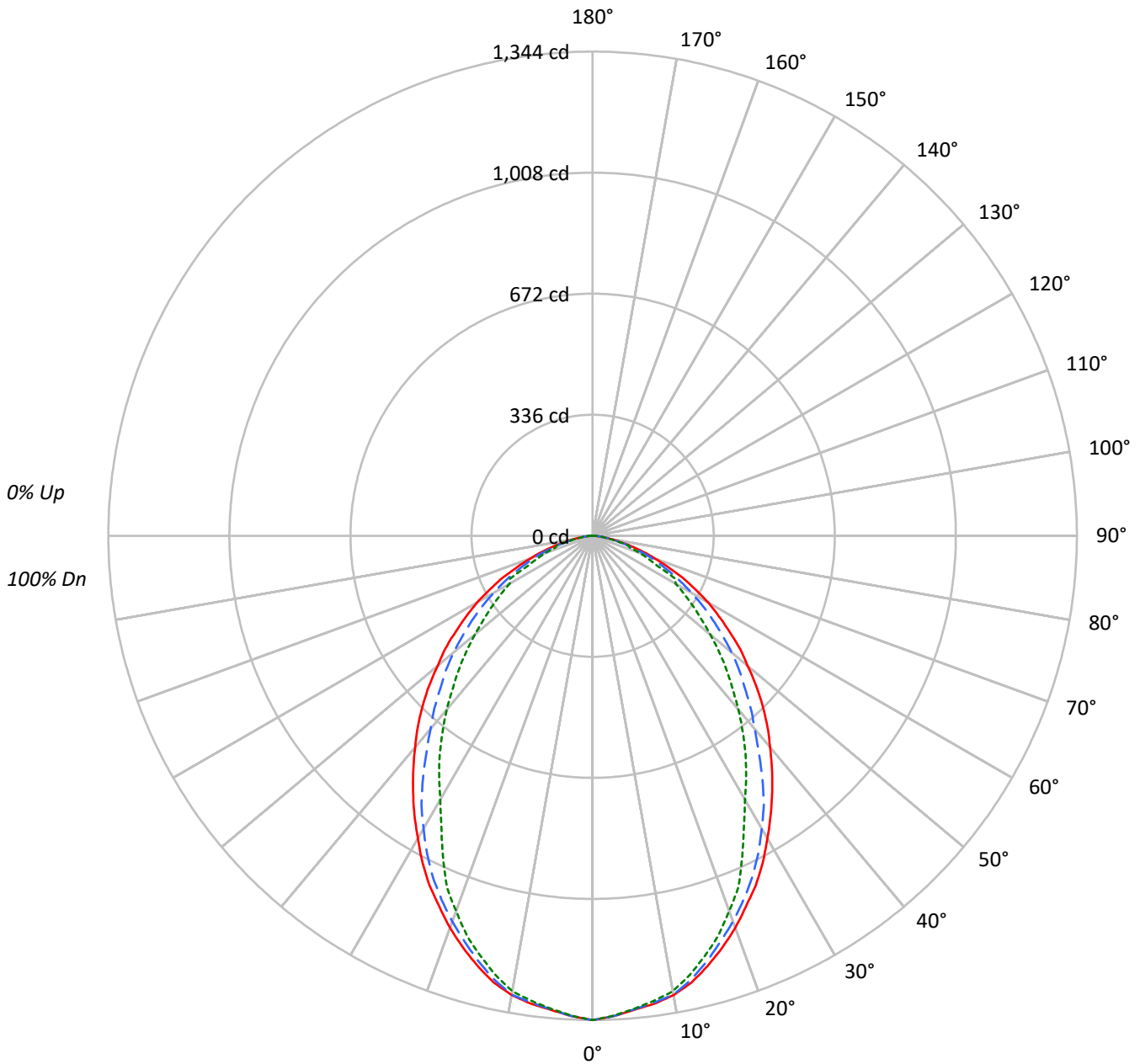
Lumens per Lamp: N/A  
Luminaire Lumens: 2639.0 lumens  
Efficiency: N/A  
Efficacy: 79.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	7235	7235	7235
5°	7137	7128	7120
10°	7074	7066	7015
15°	6884	6815	6720
20°	6631	6524	6346
25°	6359	6220	5833
30°	6026	5834	5254
35°	5707	5391	4860
40°	5383	4913	4422
45°	5074	4542	3998
50°	4697	4216	3565
55°	4345	3821	3193
60°	3982	3412	2860
65°	3503	2989	2533
70°	2886	2617	2153
75°	2294	2005	2100
80°	1540	1444	1348
85°	957	1149	1346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.1	4.7
10°-20°	343.4	13.0
20°-30°	475.4	18.0
30°-40°	507.0	19.2
40°-50°	462.5	17.5
50°-60°	362.3	13.7
60°-70°	236.1	8.9
70°-80°	104.6	4.0
80°-90°	22.4	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°	944.0	35.8
0°-40°	1450.9	55.0
0°-60°	2275.8	86.2
0°-90°	2639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2639.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1344	1344	1344	1344	1344	
5°	1321	1319	1319	1318	1318	125
15°	1236	1236	1223	1211	1206	347
25°	1071	1064	1047	1010	982	492
35°	869	862	820	758	740	543
45°	667	653	597	547	525	514
55°	463	449	407	359	340	415
65°	275	260	235	239	199	271
75°	110	103	96	92	101	118
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1344.3	1344.3	1344.3	1344.3	1344.3
2.5°	1334.9	1334.9	1334.9	1333.4	1333.4
5°	1321.0	1319.4	1319.4	1317.9	1317.9
7.5°	1310.1	1308.5	1307.0	1305.4	1302.3
10°	1294.5	1294.5	1293.0	1285.2	1283.7
12.5°	1269.7	1268.1	1261.9	1251.0	1247.9
15°	1235.5	1235.5	1223.1	1210.6	1206.0
17.5°	1198.2	1196.6	1181.1	1168.7	1162.4
20°	1157.8	1154.7	1139.1	1118.9	1108.1
22.5°	1112.7	1112.7	1094.1	1067.6	1056.8
25°	1070.8	1064.5	1047.4	1010.1	982.2
27.5°	1022.6	1013.3	994.6	941.8	909.1
30°	969.7	965.1	938.7	870.3	845.4
32.5°	920.0	912.2	884.3	812.8	792.6
35°	868.7	862.5	820.5	758.4	739.7
37.5°	817.4	809.7	756.8	707.1	683.8
40°	766.2	756.8	699.3	654.3	629.4
42.5°	718.0	705.5	649.6	601.4	573.5
45°	666.7	652.7	596.8	547.0	525.3
47.5°	615.4	603.0	551.7	500.4	475.5
50°	561.0	550.1	503.5	452.2	425.8
52.5°	516.0	498.9	453.8	402.5	380.7
55°	463.1	449.1	407.2	359.0	340.3
57.5°	414.9	401.0	362.1	317.0	301.5
60°	369.9	349.7	317.0	278.2	265.7
62.5°	320.1	304.6	276.6	244.0	259.5
65°	275.1	259.5	234.7	239.3	198.9
67.5°	225.3	217.6	195.8	174.1	167.8
70°	183.4	174.1	166.3	143.0	136.8
72.5°	146.1	136.8	125.9	113.4	108.8
75°	110.3	102.6	96.4	91.7	101.0
77.5°	76.1	73.0	68.4	63.7	62.2
80°	49.7	48.2	46.6	45.1	43.5
82.5°	29.5	29.5	29.5	29.5	29.5
85°	15.5	17.1	18.6	20.2	21.8
87.5°	9.3	9.3	10.9	12.4	14.0
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)