

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: P544855

Luminaire Tested: **FMR-12-1-LD4-1STD-35-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: P544855  
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-12-1-LD4-1STD-35-UNV-80-84-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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**

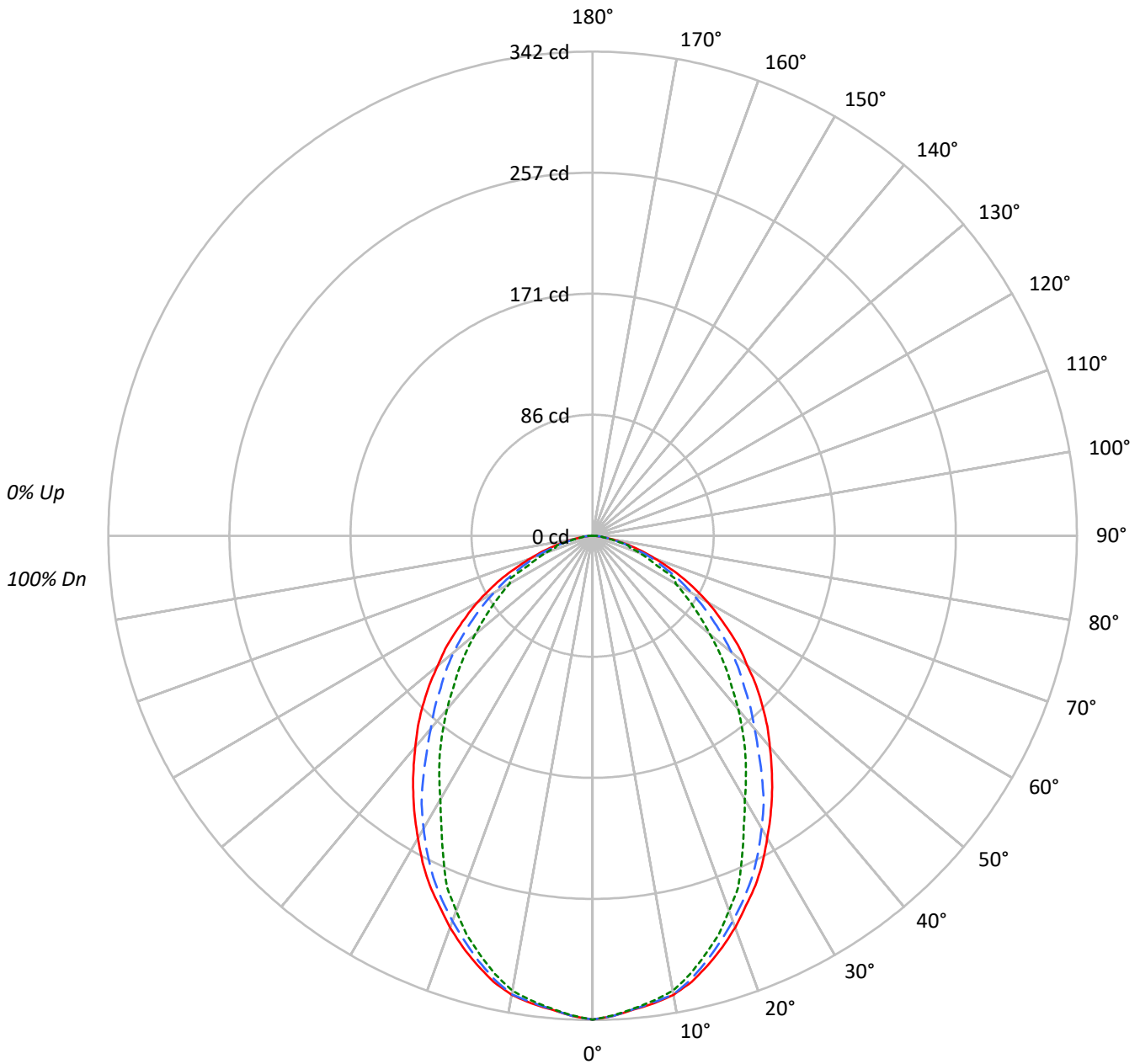
Lumens per Lamp: N/A  
Luminaire Lumens: 671.0 lumens  
Efficiency: N/A  
Efficacy: 80.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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°	3679	3679	3679
5°	3629	3625	3621
10°	3598	3594	3568
15°	3500	3466	3417
20°	3372	3317	3227
25°	3234	3163	2966
30°	3065	2967	2672
35°	2903	2741	2472
40°	2737	2498	2248
45°	2580	2309	2034
50°	2388	2143	1814
55°	2211	1942	1623
60°	2024	1735	1455
65°	1780	1521	1289
70°	1467	1331	1095
75°	1169	1019	1069
80°	781	738	688
85°	494	580	679



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.8	4.7
10°-20°	87.3	13.0
20°-30°	120.9	18.0
30°-40°	128.9	19.2
40°-50°	117.6	17.5
50°-60°	92.1	13.7
60°-70°	60.0	8.9
70°-80°	26.6	4.0
80°-90°	5.7	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°	240.0	35.8
0°-40°	368.9	55.0
0°-60°	578.6	86.2
0°-90°	671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	671.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	342	342	342	342	342	
5°	336	336	336	335	335	32
15°	314	314	311	308	307	88
25°	272	271	266	257	250	125
35°	221	219	209	193	188	138
45°	170	166	152	139	134	131
55°	118	114	104	91	86	106
65°	70	66	60	61	51	69
75°	28	26	24	23	26	30
85°	4	4	5	5	6	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	341.8	341.8	341.8	341.8	341.8
2.5°	339.4	339.4	339.4	339.0	339.0
5°	335.9	335.5	335.5	335.1	335.1
7.5°	333.1	332.7	332.3	331.9	331.1
10°	329.2	329.2	328.8	326.8	326.4
12.5°	322.8	322.4	320.9	318.1	317.3
15°	314.1	314.1	311.0	307.8	306.6
17.5°	304.7	304.3	300.3	297.1	295.6
20°	294.4	293.6	289.6	284.5	281.7
22.5°	282.9	282.9	278.2	271.5	268.7
25°	272.3	270.7	266.3	256.8	249.7
27.5°	260.0	257.6	252.9	239.5	231.2
30°	246.6	245.4	238.7	221.3	215.0
32.5°	233.9	231.9	224.8	206.7	201.5
35°	220.9	219.3	208.6	192.8	188.1
37.5°	207.8	205.9	192.4	179.8	173.9
40°	194.8	192.4	177.8	166.4	160.0
42.5°	182.6	179.4	165.2	152.9	145.8
45°	169.5	166.0	151.7	139.1	133.6
47.5°	156.5	153.3	140.3	127.2	120.9
50°	142.6	139.9	128.0	115.0	108.3
52.5°	131.2	126.8	115.4	102.3	96.8
55°	117.8	114.2	103.5	91.3	86.5
57.5°	105.5	101.9	92.1	80.6	76.7
60°	94.0	88.9	80.6	70.7	67.6
62.5°	81.4	77.4	70.3	62.0	66.0
65°	69.9	66.0	59.7	60.9	50.6
67.5°	57.3	55.3	49.8	44.3	42.7
70°	46.6	44.3	42.3	36.4	34.8
72.5°	37.1	34.8	32.0	28.8	27.7
75°	28.1	26.1	24.5	23.3	25.7
77.5°	19.4	18.6	17.4	16.2	15.8
80°	12.6	12.2	11.9	11.5	11.1
82.5°	7.5	7.5	7.5	7.5	7.5
85°	4.0	4.3	4.7	5.1	5.5
87.5°	2.4	2.4	2.8	3.2	3.6
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)