

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: P544763

Luminaire Tested: **FMR-12-1-LD4-1LO-35-UNV-80-88-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: P544763  
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-LD4-1LO-35-UNV-80-88-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

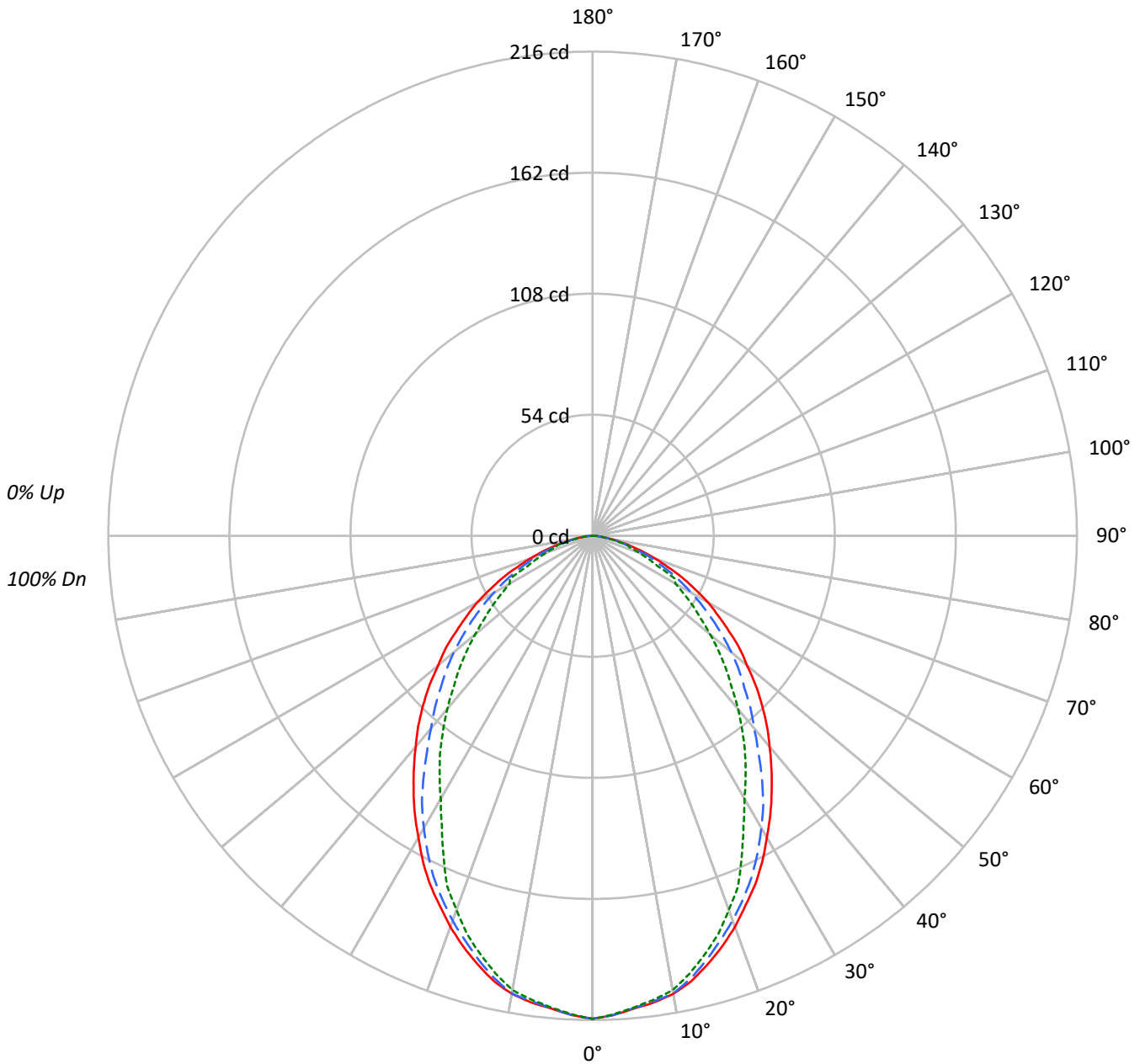
Lumens per Lamp: N/A  
Luminaire Lumens: 423.0 lumens  
Efficiency: N/A  
Efficacy: 72.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 5.8  
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	39	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°	2320	2320	2320
5°	2287	2285	2282
10°	2268	2266	2249
15°	2206	2184	2154
20°	2126	2092	2034
25°	2038	1994	1869
30°	1931	1871	1684
35°	1829	1728	1558
40°	1725	1575	1418
45°	1627	1457	1282
50°	1505	1351	1144
55°	1392	1225	1025
60°	1277	1094	917
65°	1123	958	812
70°	925	840	689
75°	736	640	674
80°	496	465	434
85°	309	371	432



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	20.1	4.7
10°-20°	55.0	13.0
20°-30°	76.2	18.0
30°-40°	81.3	19.2
40°-50°	74.1	17.5
50°-60°	58.1	13.7
60°-70°	37.9	8.9
70°-80°	16.8	4.0
80°-90°	3.6	0.8
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°	151.3	35.8
0°-40°	232.6	55.0
0°-60°	364.8	86.2
0°-90°	423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	423.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	216	216	216	216	216	
5°	212	212	212	211	211	20
15°	198	198	196	194	193	56
25°	172	171	168	162	157	79
35°	139	138	132	122	119	87
45°	107	105	96	88	84	82
55°	74	72	65	58	55	67
65°	44	42	38	38	32	43
75°	18	16	15	15	16	19
85°	2	3	3	3	4	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	215.5	215.5	215.5	215.5	215.5
2.5°	214.0	214.0	214.0	213.7	213.7
5°	211.7	211.5	211.5	211.2	211.2
7.5°	210.0	209.7	209.5	209.2	208.7
10°	207.5	207.5	207.3	206.0	205.8
12.5°	203.5	203.3	202.3	200.5	200.0
15°	198.0	198.0	196.0	194.0	193.3
17.5°	192.1	191.8	189.3	187.3	186.3
20°	185.6	185.1	182.6	179.4	177.6
22.5°	178.4	178.4	175.4	171.1	169.4
25°	171.6	170.6	167.9	161.9	157.4
27.5°	163.9	162.4	159.4	151.0	145.7
30°	155.4	154.7	150.5	139.5	135.5
32.5°	147.5	146.2	141.7	130.3	127.0
35°	139.2	138.2	131.5	121.6	118.6
37.5°	131.0	129.8	121.3	113.3	109.6
40°	122.8	121.3	112.1	104.9	100.9
42.5°	115.1	113.1	104.1	96.4	91.9
45°	106.9	104.6	95.7	87.7	84.2
47.5°	98.6	96.7	88.4	80.2	76.2
50°	89.9	88.2	80.7	72.5	68.3
52.5°	82.7	80.0	72.7	64.5	61.0
55°	74.2	72.0	65.3	57.5	54.6
57.5°	66.5	64.3	58.0	50.8	48.3
60°	59.3	56.0	50.8	44.6	42.6
62.5°	51.3	48.8	44.3	39.1	41.6
65°	44.1	41.6	37.6	38.4	31.9
67.5°	36.1	34.9	31.4	27.9	26.9
70°	29.4	27.9	26.7	22.9	21.9
72.5°	23.4	21.9	20.2	18.2	17.4
75°	17.7	16.4	15.4	14.7	16.2
77.5°	12.2	11.7	11.0	10.2	10.0
80°	8.0	7.7	7.5	7.2	7.0
82.5°	4.7	4.7	4.7	4.7	4.7
85°	2.5	2.7	3.0	3.2	3.5
87.5°	1.5	1.5	1.7	2.0	2.2
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)