

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: P544919

Luminaire Tested: **FMR-12-1-LD4-1STD-50-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: P544919  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

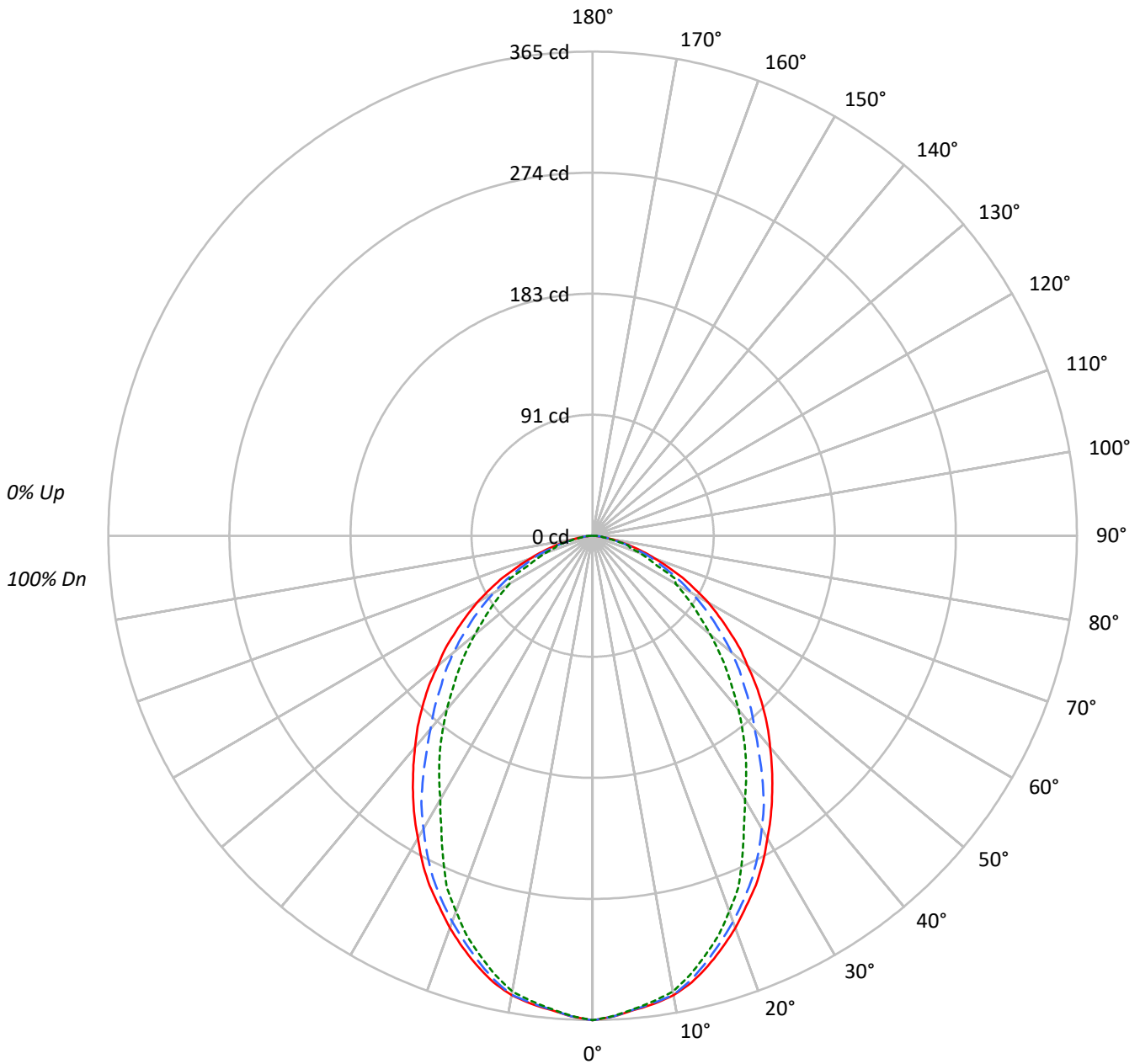
Lumens per Lamp: N/A  
Luminaire Lumens: 717.0 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
Input Voltage (V): NR  
Input Current (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

TEST NUMBER: P544919

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-80-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P544919

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-80-84-EDD

**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°	3931	3931	3931
5°	3878	3874	3869
10°	3844	3840	3812
15°	3741	3703	3652
20°	3604	3545	3449
25°	3455	3380	3170
30°	3275	3169	2855
35°	3101	2929	2641
40°	2925	2670	2403
45°	2757	2468	2172
50°	2552	2291	1937
55°	2361	2076	1736
60°	2164	1854	1554
65°	1903	1625	1375
70°	1567	1423	1171
75°	1248	1090	1140
80°	837	787	731
85°	519	630	729



TEST NUMBER: P544919

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-80-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.0	4.7
10°-20°	93.3	13.0
20°-30°	129.2	18.0
30°-40°	137.7	19.2
40°-50°	125.7	17.5
50°-60°	98.4	13.7
60°-70°	64.2	8.9
70°-80°	28.4	4.0
80°-90°	6.1	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°	256.5	35.8
0°-40°	394.2	55.0
0°-60°	618.3	86.2
0°-90°	717.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	717.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	365	365	365	365	365	
5°	359	358	358	358	358	34
15°	336	336	332	329	328	94
25°	291	289	285	274	267	134
35°	236	234	223	206	201	148
45°	181	177	162	149	143	140
55°	126	122	111	98	92	113
65°	75	70	64	65	54	74
75°	30	28	26	25	27	32
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



TEST NUMBER: P544919

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-80-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	365.2	365.2	365.2	365.2	365.2
2.5°	362.7	362.7	362.7	362.3	362.3
5°	358.9	358.5	358.5	358.1	358.1
7.5°	355.9	355.5	355.1	354.7	353.8
10°	351.7	351.7	351.3	349.2	348.8
12.5°	345.0	344.5	342.9	339.9	339.1
15°	335.7	335.7	332.3	328.9	327.7
17.5°	325.5	325.1	320.9	317.5	315.8
20°	314.6	313.7	309.5	304.0	301.1
22.5°	302.3	302.3	297.3	290.1	287.1
25°	290.9	289.2	284.6	274.5	266.9
27.5°	277.8	275.3	270.2	255.9	247.0
30°	263.5	262.2	255.0	236.4	229.7
32.5°	250.0	247.8	240.2	220.8	215.3
35°	236.0	234.3	222.9	206.0	201.0
37.5°	222.1	220.0	205.6	192.1	185.8
40°	208.2	205.6	190.0	177.8	171.0
42.5°	195.1	191.7	176.5	163.4	155.8
45°	181.1	177.3	162.1	148.6	142.7
47.5°	167.2	163.8	149.9	136.0	129.2
50°	152.4	149.5	136.8	122.9	115.7
52.5°	140.2	135.5	123.3	109.4	103.4
55°	125.8	122.0	110.6	97.5	92.5
57.5°	112.7	108.9	98.4	86.1	81.9
60°	100.5	95.0	86.1	75.6	72.2
62.5°	87.0	82.8	75.2	66.3	70.5
65°	74.7	70.5	63.8	65.0	54.0
67.5°	61.2	59.1	53.2	47.3	45.6
70°	49.8	47.3	45.2	38.8	37.2
72.5°	39.7	37.2	34.2	30.8	29.6
75°	30.0	27.9	26.2	24.9	27.4
77.5°	20.7	19.8	18.6	17.3	16.9
80°	13.5	13.1	12.7	12.2	11.8
82.5°	8.0	8.0	8.0	8.0	8.0
85°	4.2	4.6	5.1	5.5	5.9
87.5°	2.5	2.5	3.0	3.4	3.8
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)