

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: P545400

Luminaire Tested: **FMR-12-2-LD4-1LO-50-UNV-80-85-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: P545400  
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-LD4-1LO-50-UNV-80-85-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

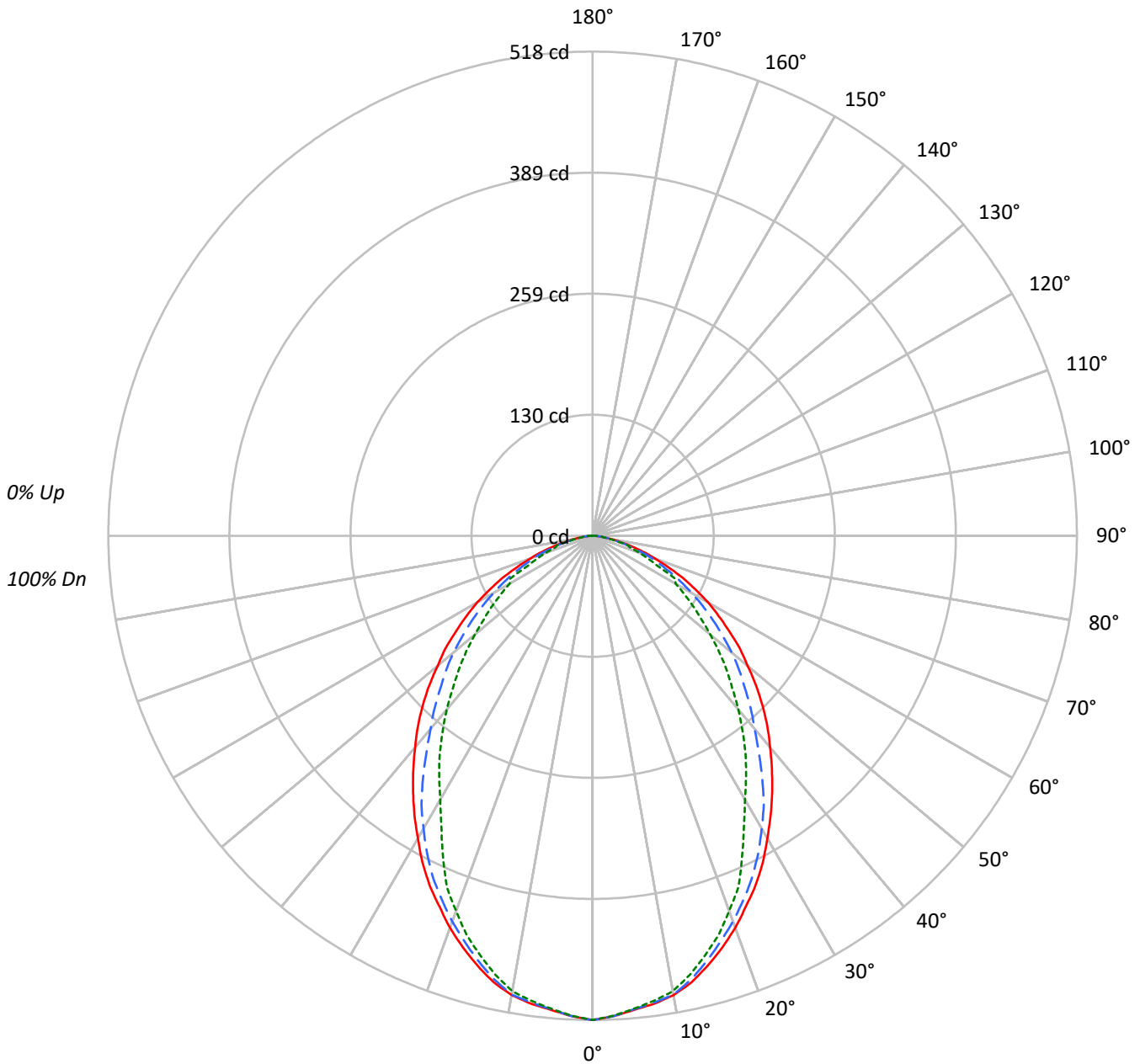
Lumens per Lamp: N/A  
Luminaire Lumens: 1017.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
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: P545400

CATALOG NUMBER: FMR-12-2-LD4-1LO-50-UNV-80-85-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P545400

CATALOG NUMBER: FMR-12-2-LD4-1LO-50-UNV-80-85-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°	2788	2788	2788
5°	2750	2747	2744
10°	2726	2723	2704
15°	2653	2626	2589
20°	2556	2514	2446
25°	2450	2397	2248
30°	2322	2248	2025
35°	2200	2077	1873
40°	2075	1893	1704
45°	1955	1751	1541
50°	1810	1624	1374
55°	1675	1472	1231
60°	1534	1315	1102
65°	1350	1151	977
70°	1113	1009	829
75°	884	771	809
80°	595	558	521
85°	371	445	519



TEST NUMBER: P545400

CATALOG NUMBER: FMR-12-2-LD4-1LO-50-UNV-80-85-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.2	4.7
10°-20°	132.3	13.0
20°-30°	183.2	18.0
30°-40°	195.4	19.2
40°-50°	178.2	17.5
50°-60°	139.6	13.7
60°-70°	91.0	8.9
70°-80°	40.3	4.0
80°-90°	8.7	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°	363.8	35.8
0°-40°	559.2	55.0
0°-60°	877.0	86.2
0°-90°	1017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1017.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	518	518	518	518	518	
5°	509	508	508	508	508	48
15°	476	476	471	466	465	134
25°	413	410	404	389	378	189
35°	335	332	316	292	285	209
45°	257	252	230	211	202	198
55°	178	173	157	138	131	160
65°	106	100	90	92	77	104
75°	42	40	37	35	39	46
85°	6	7	7	8	8	8
90°	0	0	0	0	0	



TEST NUMBER: P545400

CATALOG NUMBER: FMR-12-2-LD4-1LO-50-UNV-80-85-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	518.0	518.0	518.0	518.0	518.0
2.5°	514.5	514.5	514.5	513.9	513.9
5°	509.1	508.5	508.5	507.9	507.9
7.5°	504.9	504.3	503.7	503.1	501.9
10°	498.9	498.9	498.3	495.3	494.7
12.5°	489.3	488.7	486.3	482.1	480.9
15°	476.1	476.1	471.3	466.5	464.7
17.5°	461.7	461.2	455.2	450.4	448.0
20°	446.2	445.0	439.0	431.2	427.0
22.5°	428.8	428.8	421.6	411.4	407.3
25°	412.6	410.2	403.7	389.3	378.5
27.5°	394.1	390.5	383.3	362.9	350.4
30°	373.7	371.9	361.7	335.4	325.8
32.5°	354.5	351.6	340.8	313.2	305.4
35°	334.8	332.4	316.2	292.3	285.1
37.5°	315.0	312.0	291.7	272.5	263.5
40°	295.3	291.7	269.5	252.1	242.6
42.5°	276.7	271.9	250.3	231.8	221.0
45°	256.9	251.5	230.0	210.8	202.4
47.5°	237.2	232.4	212.6	192.8	183.3
50°	216.2	212.0	194.0	174.3	164.1
52.5°	198.8	192.2	174.9	155.1	146.7
55°	178.5	173.1	156.9	138.3	131.2
57.5°	159.9	154.5	139.5	122.2	116.2
60°	142.5	134.8	122.2	107.2	102.4
62.5°	123.4	117.4	106.6	94.0	100.0
65°	106.0	100.0	90.4	92.2	76.7
67.5°	86.8	83.8	75.5	67.1	64.7
70°	70.7	67.1	64.1	55.1	52.7
72.5°	56.3	52.7	48.5	43.7	41.9
75°	42.5	39.5	37.1	35.3	38.9
77.5°	29.3	28.1	26.4	24.6	24.0
80°	19.2	18.6	18.0	17.4	16.8
82.5°	11.4	11.4	11.4	11.4	11.4
85°	6.0	6.6	7.2	7.8	8.4
87.5°	3.6	3.6	4.2	4.8	5.4
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)