

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: P588703

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-81-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588703  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-24-2-LD4-1HI-35-UNV-81-86-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

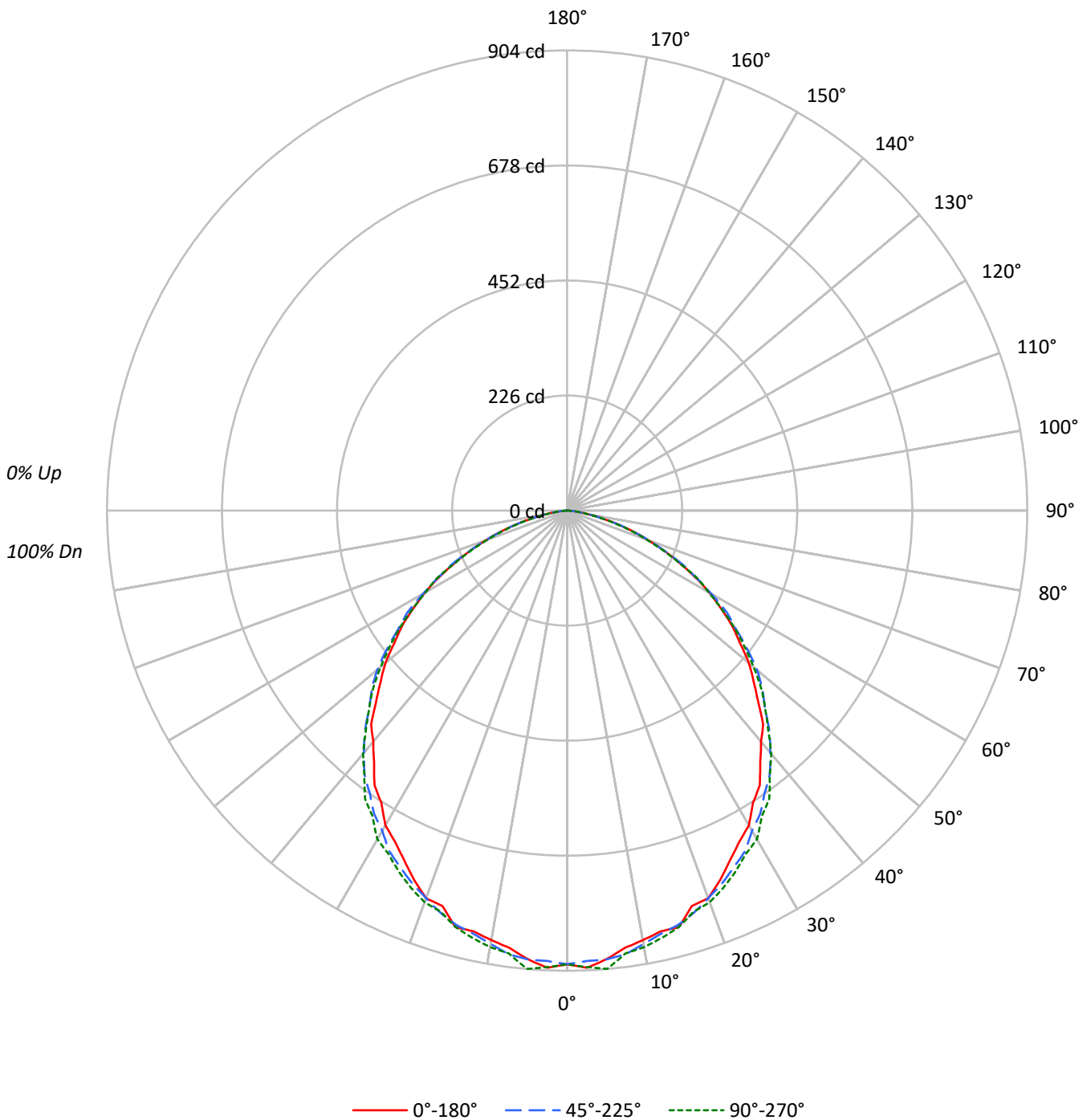
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2246.0 lumens  
Efficiency: N/A  
Efficacy: 104.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
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: P588703

CATALOG NUMBER: FMR-24-2-LD4-1HI-35-UNV-81-86-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P588703

CATALOG NUMBER: FMR-24-2-LD4-1HI-35-UNV-81-86-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2398	2398	2398
5°	2390	2391	2441
10°	2342	2362	2379
15°	2360	2347	2360
20°	2320	2320	2345
25°	2249	2298	2323
30°	2218	2257	2317
35°	2166	2223	2273
40°	2082	2182	2192
45°	2019	2090	2093
50°	1952	2040	2002
55°	1860	1896	1883
60°	1739	1757	1725
65°	1551	1591	1540
70°	1330	1335	1298
75°	1054	1051	1011
80°	707	687	660
85°	383	380	355



TEST NUMBER: P588703

CATALOG NUMBER: FMR-24-2-LD4-1HI-35-UNV-81-86-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.8	3.7
10°-20°	237.6	10.6
20°-30°	355.9	15.8
30°-40°	421.9	18.8
40°-50°	422.6	18.8
50°-60°	358.8	16.0
60°-70°	241.9	10.8
70°-80°	106.3	4.7
80°-90°	17.3	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°	677.3	30.2
0°-40°	1099.2	48.9
0°-60°	1880.6	83.7
0°-90°	2246.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2246.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	885	883	885	882	904	83
15°	847	837	843	847	847	236
25°	758	762	774	784	782	350
35°	659	661	677	692	692	409
45°	530	540	549	564	550	410
55°	396	394	404	402	401	353
65°	244	240	250	240	242	242
75°	101	99	101	94	97	109
85°	12	12	12	12	12	18
90°	0	0	0	0	0	



TEST NUMBER: P588703

CATALOG NUMBER: FMR-24-2-LD4-1HI-35-UNV-81-86-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	891.2	891.2	891.2	891.2	891.2
2.5°	898.9	892.1	885.7	893.1	897.6
5°	884.8	882.8	885.2	882.5	903.8
7.5°	866.6	874.6	879.2	876.3	877.6
10°	857.0	854.2	864.5	871.6	870.6
12.5°	846.6	850.8	851.3	859.1	859.7
15°	847.2	837.4	842.6	847.0	847.3
17.5°	814.3	824.9	828.4	838.5	826.0
20°	810.3	802.6	810.3	820.5	818.9
22.5°	785.5	776.9	793.5	802.6	802.0
25°	757.5	761.6	774.0	784.1	782.5
27.5°	732.8	737.7	755.4	769.3	760.3
30°	713.8	711.4	726.4	738.8	745.7
32.5°	679.9	688.6	706.1	718.4	711.9
35°	659.3	661.3	676.6	692.2	691.8
37.5°	623.3	632.4	653.9	658.3	654.2
40°	592.6	601.7	621.1	625.8	623.9
42.5°	569.9	571.5	588.2	593.6	585.0
45°	530.4	540.3	549.3	563.5	550.1
47.5°	496.8	501.4	520.8	524.6	517.5
50°	466.3	468.0	487.4	482.7	478.1
52.5°	428.0	434.8	445.8	444.8	439.4
55°	396.5	393.9	404.2	401.5	401.3
57.5°	358.6	363.3	371.8	367.4	360.4
60°	323.2	323.3	326.4	321.5	320.6
62.5°	283.7	285.1	285.8	279.7	289.6
65°	243.6	240.4	249.8	240.2	241.9
67.5°	206.7	208.3	207.3	201.4	203.7
70°	169.1	171.2	169.7	162.9	165.0
72.5°	134.9	132.3	133.9	125.4	129.3
75°	101.4	99.3	101.1	94.0	97.2
77.5°	69.0	70.6	69.5	65.7	67.9
80°	45.6	44.3	44.3	42.1	42.6
82.5°	26.6	25.3	25.0	24.3	25.3
85°	12.4	12.1	12.3	12.0	11.5
87.5°	4.5	4.6	4.6	4.4	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)