

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: P588951

Luminaire Tested: **FMR-24-2-LD4-1STD-50-UNV-80-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588951  
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-LD4-1STD-50-UNV-80-86-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

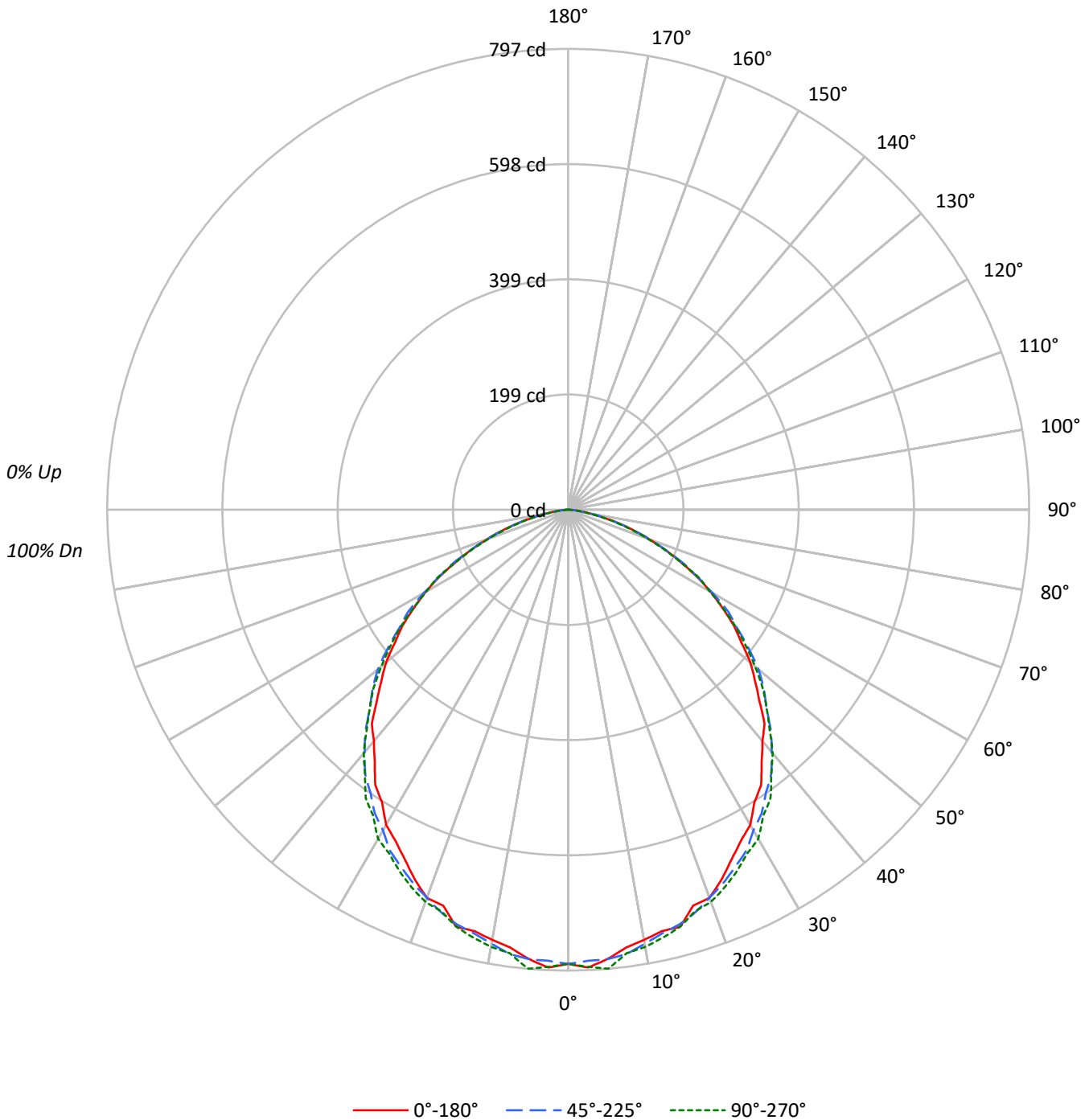
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1980.0 lumens  
Efficiency: N/A  
Efficacy: 119.3 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): 16.6  
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

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### Luminous Intensity Polar Plot





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**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°	2114	2114	2114
5°	2107	2108	2152
10°	2064	2082	2097
15°	2081	2069	2081
20°	2046	2046	2067
25°	1983	2026	2048
30°	1955	1990	2043
35°	1909	1959	2003
40°	1835	1923	1932
45°	1780	1843	1846
50°	1721	1799	1765
55°	1640	1672	1660
60°	1533	1549	1521
65°	1367	1402	1358
70°	1173	1177	1145
75°	930	927	891
80°	623	606	581
85°	340	337	312



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.9	3.7
10°-20°	209.4	10.6
20°-30°	313.8	15.8
30°-40°	371.9	18.8
40°-50°	372.6	18.8
50°-60°	316.3	16.0
60°-70°	213.2	10.8
70°-80°	93.7	4.7
80°-90°	15.2	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°	597.1	30.2
0°-40°	969.0	48.9
0°-60°	1657.8	83.7
0°-90°	1980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1980.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	786	786	786	786	786	
5°	780	778	780	778	797	74
15°	747	738	743	747	747	208
25°	668	671	682	691	690	309
35°	581	583	596	610	610	361
45°	468	476	484	497	485	362
55°	350	347	356	354	354	311
65°	215	212	220	212	213	214
75°	89	88	89	83	86	96
85°	11	11	11	10	10	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	785.6	785.6	785.6	785.6	785.6
2.5°	792.4	786.4	780.8	787.3	791.3
5°	780.0	778.2	780.3	778.0	796.8
7.5°	764.0	771.0	775.1	772.5	773.6
10°	755.5	753.1	762.1	768.4	767.5
12.5°	746.4	750.0	750.5	757.3	757.9
15°	746.9	738.2	742.8	746.7	747.0
17.5°	717.9	727.2	730.3	739.2	728.2
20°	714.3	707.5	714.3	723.3	721.9
22.5°	692.5	684.9	699.5	707.5	707.0
25°	667.7	671.4	682.4	691.3	689.9
27.5°	646.0	650.3	665.9	678.2	670.3
30°	629.3	627.2	640.4	651.3	657.4
32.5°	599.4	607.1	622.5	633.4	627.6
35°	581.2	582.9	596.4	610.2	609.8
37.5°	549.5	557.5	576.5	580.3	576.8
40°	522.4	530.4	547.5	551.7	550.0
42.5°	502.4	503.8	518.5	523.3	515.7
45°	467.6	476.3	484.3	496.7	485.0
47.5°	438.0	442.1	459.1	462.4	456.3
50°	411.1	412.5	429.7	425.5	421.5
52.5°	377.3	383.3	393.0	392.1	387.4
55°	349.5	347.2	356.3	353.9	353.8
57.5°	316.2	320.2	327.7	323.9	317.7
60°	284.9	285.0	287.8	283.4	282.6
62.5°	250.1	251.4	252.0	246.6	255.3
65°	214.7	211.9	220.2	211.8	213.2
67.5°	182.2	183.6	182.8	177.5	179.5
70°	149.1	150.9	149.6	143.6	145.5
72.5°	118.9	116.7	118.1	110.6	114.0
75°	89.4	87.5	89.2	82.9	85.7
77.5°	60.9	62.3	61.3	57.9	59.8
80°	40.2	39.1	39.1	37.1	37.5
82.5°	23.4	22.3	22.0	21.4	22.3
85°	11.0	10.7	10.9	10.5	10.1
87.5°	4.0	4.1	4.1	3.9	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)