

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: P589688

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589688  
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-LD4-4LO-40-UNV-80-87-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

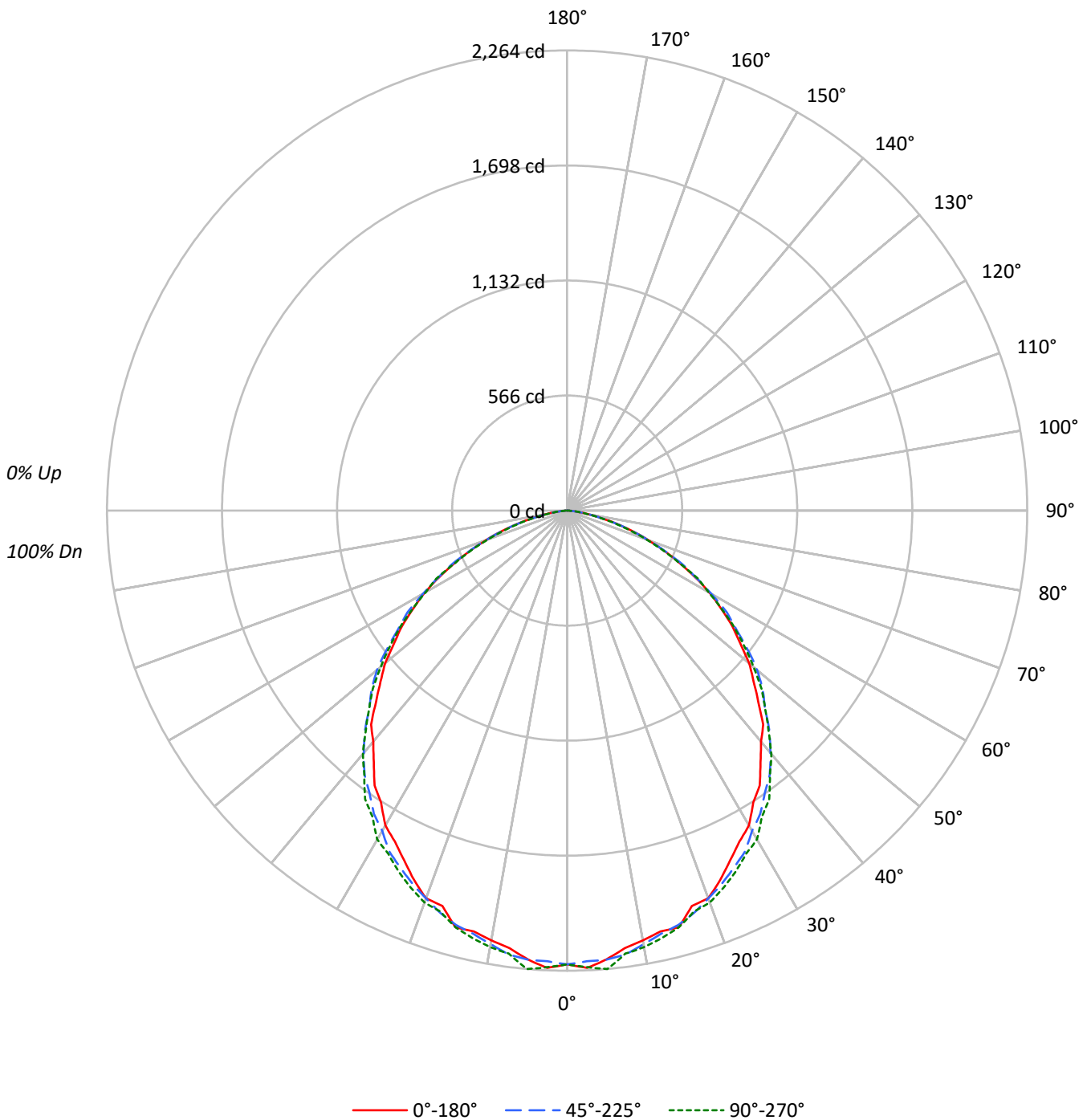
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5627.0 lumens  
Efficiency: N/A  
Efficacy: 120.2 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): 46.8  
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				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°	6008	6008	6008
5°	5988	5991	6117
10°	5867	5918	5960
15°	5913	5881	5914
20°	5813	5813	5875
25°	5635	5758	5821
30°	5557	5655	5805
35°	5426	5568	5693
40°	5215	5466	5491
45°	5057	5237	5245
50°	4891	5112	5014
55°	4661	4751	4717
60°	4358	4401	4322
65°	3886	3985	3858
70°	3334	3345	3253
75°	2641	2635	2533
80°	1770	1720	1654
85°	960	951	889



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.0	3.7
10°-20°	595.2	10.6
20°-30°	891.7	15.8
30°-40°	1056.9	18.8
40°-50°	1058.9	18.8
50°-60°	898.8	16.0
60°-70°	606.0	10.8
70°-80°	266.3	4.7
80°-90°	43.3	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°	1697.0	30.2
0°-40°	2753.9	48.9
0°-60°	4711.5	83.7
0°-90°	5627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5627.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2233	2233	2233	2233	2233	
5°	2217	2212	2218	2211	2264	209
15°	2122	2098	2111	2122	2123	591
25°	1898	1908	1939	1965	1960	877
35°	1652	1657	1695	1734	1733	1026
45°	1329	1354	1376	1412	1378	1028
55°	993	987	1013	1006	1006	884
65°	610	602	626	602	606	607
75°	254	249	253	236	244	272
85°	31	30	31	30	29	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2232.7	2232.7	2232.7	2232.7	2232.7
2.5°	2252.0	2235.0	2219.1	2237.6	2248.8
5°	2216.8	2211.6	2217.7	2211.0	2264.4
7.5°	2171.2	2191.1	2202.7	2195.5	2198.6
10°	2147.0	2140.1	2165.8	2183.6	2181.1
12.5°	2121.1	2131.5	2132.9	2152.2	2154.0
15°	2122.5	2098.0	2111.0	2122.0	2122.8
17.5°	2040.1	2066.6	2075.5	2100.6	2069.5
20°	2030.0	2010.7	2030.0	2055.7	2051.6
22.5°	1968.0	1946.4	1987.9	2010.7	2009.2
25°	1897.7	1908.1	1939.2	1964.6	1960.5
27.5°	1836.0	1848.1	1892.5	1927.4	1904.9
30°	1788.4	1782.4	1819.8	1851.0	1868.3
32.5°	1703.4	1725.3	1769.1	1800.0	1783.5
35°	1651.8	1656.7	1695.0	1734.2	1733.1
37.5°	1561.6	1584.3	1638.2	1649.2	1639.1
40°	1484.6	1507.4	1556.1	1567.9	1563.0
42.5°	1427.8	1431.8	1473.6	1487.2	1465.6
45°	1328.9	1353.7	1376.2	1411.7	1378.2
47.5°	1244.8	1256.3	1304.7	1314.2	1296.6
50°	1168.4	1172.4	1221.1	1209.3	1197.8
52.5°	1072.4	1089.4	1116.8	1114.5	1100.9
55°	993.4	986.7	1012.7	1005.8	1005.5
57.5°	898.5	910.1	931.4	920.4	902.9
60°	809.8	810.0	817.8	805.4	803.1
62.5°	710.9	714.3	716.1	700.8	725.6
65°	610.3	602.2	625.8	601.9	605.9
67.5°	517.7	521.8	519.5	504.5	510.2
70°	423.8	428.9	425.2	408.2	413.4
72.5°	337.9	331.5	335.5	314.2	324.0
75°	254.0	248.8	253.4	235.5	243.6
77.5°	173.0	177.0	174.1	164.6	170.1
80°	114.2	111.0	111.0	105.5	106.7
82.5°	66.6	63.4	62.6	60.8	63.4
85°	31.1	30.3	30.8	30.0	28.8
87.5°	11.2	11.5	11.5	11.0	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)