

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: P589706

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-82-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589706  
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-82-94-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

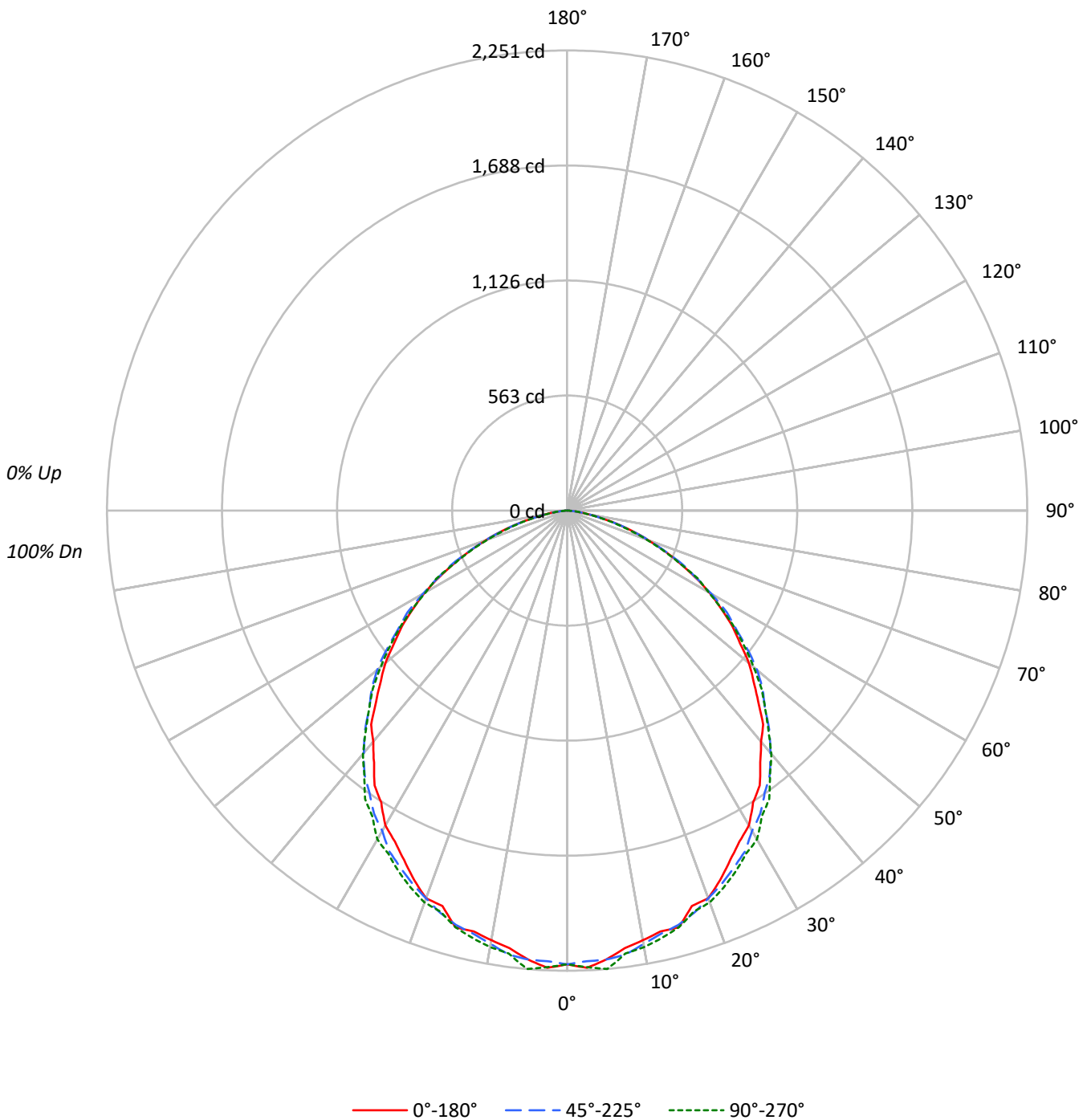
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5594.0 lumens  
Efficiency: N/A  
Efficacy: 119.5 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																		
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	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									100																			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86									86																			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73									73																			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62									62																			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53									53																			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46									46																			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41									41																			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36									36																			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32									32																			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29									29																			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26									26																			

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

	0°	45°	90°
0°	5973	5973	5973
5°	5953	5955	6081
10°	5832	5883	5925
15°	5879	5847	5879
20°	5779	5779	5841
25°	5602	5724	5787
30°	5524	5622	5771
35°	5394	5536	5660
40°	5185	5434	5458
45°	5028	5206	5214
50°	4863	5082	4985
55°	4633	4723	4690
60°	4332	4376	4297
65°	3863	3962	3836
70°	3315	3326	3234
75°	2625	2619	2518
80°	1759	1709	1643
85°	957	948	886



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	208.8	3.7
10°-20°	591.7	10.6
20°-30°	886.5	15.8
30°-40°	1050.7	18.8
40°-50°	1052.6	18.8
50°-60°	893.5	16.0
60°-70°	602.4	10.8
70°-80°	264.7	4.7
80°-90°	43.0	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°	1687.0	30.2
0°-40°	2737.7	48.9
0°-60°	4683.9	83.7
0°-90°	5594.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5594.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2220	2220	2220	2220	2220	
5°	2204	2199	2205	2198	2251	208
15°	2110	2086	2099	2110	2110	588
25°	1887	1897	1928	1953	1949	872
35°	1642	1647	1685	1724	1723	1020
45°	1321	1346	1368	1403	1370	1022
55°	988	981	1007	1000	1000	878
65°	607	599	622	598	602	603
75°	252	247	252	234	242	271
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°	2219.6	2219.6	2219.6	2219.6	2219.6
2.5°	2238.8	2221.9	2206.1	2224.4	2235.6
5°	2203.8	2198.6	2204.7	2198.1	2251.1
7.5°	2158.5	2178.3	2189.8	2182.6	2185.7
10°	2134.4	2127.6	2153.1	2170.8	2168.3
12.5°	2108.7	2119.0	2120.4	2139.6	2141.3
15°	2110.1	2085.7	2098.6	2109.5	2110.4
17.5°	2028.1	2054.5	2063.4	2088.3	2057.4
20°	2018.1	1998.9	2018.1	2043.6	2039.6
22.5°	1956.5	1935.0	1976.3	1998.9	1997.5
25°	1886.6	1896.9	1927.8	1953.0	1949.0
27.5°	1825.2	1837.3	1881.4	1916.1	1893.7
30°	1777.9	1771.9	1809.2	1840.1	1857.3
32.5°	1693.4	1715.2	1758.7	1789.4	1773.1
35°	1642.1	1647.0	1685.1	1724.1	1722.9
37.5°	1552.4	1575.0	1628.6	1639.5	1629.5
40°	1475.9	1498.5	1547.0	1558.7	1553.8
42.5°	1419.4	1423.4	1465.0	1478.5	1457.0
45°	1321.1	1345.8	1368.1	1403.4	1370.1
47.5°	1237.5	1248.9	1297.1	1306.5	1289.0
50°	1161.5	1165.5	1214.0	1202.2	1190.7
52.5°	1066.1	1083.0	1110.2	1107.9	1094.4
55°	987.6	981.0	1006.8	999.9	999.6
57.5°	893.3	904.7	925.9	915.0	897.6
60°	805.0	805.3	813.0	800.7	798.4
62.5°	706.7	710.1	711.9	696.7	721.3
65°	606.7	598.7	622.2	598.4	602.4
67.5°	514.7	518.7	516.4	501.5	507.2
70°	421.3	426.4	422.7	405.8	411.0
72.5°	335.9	329.6	333.6	312.4	322.1
75°	252.5	247.3	251.9	234.1	242.2
77.5°	171.9	176.0	173.1	163.6	169.1
80°	113.5	110.3	110.3	104.9	106.0
82.5°	66.2	63.0	62.2	60.5	63.0
85°	31.0	30.1	30.7	29.8	28.7
87.5°	11.2	11.5	11.5	10.9	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)