

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: P589710

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-93-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589710  
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-93-85-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

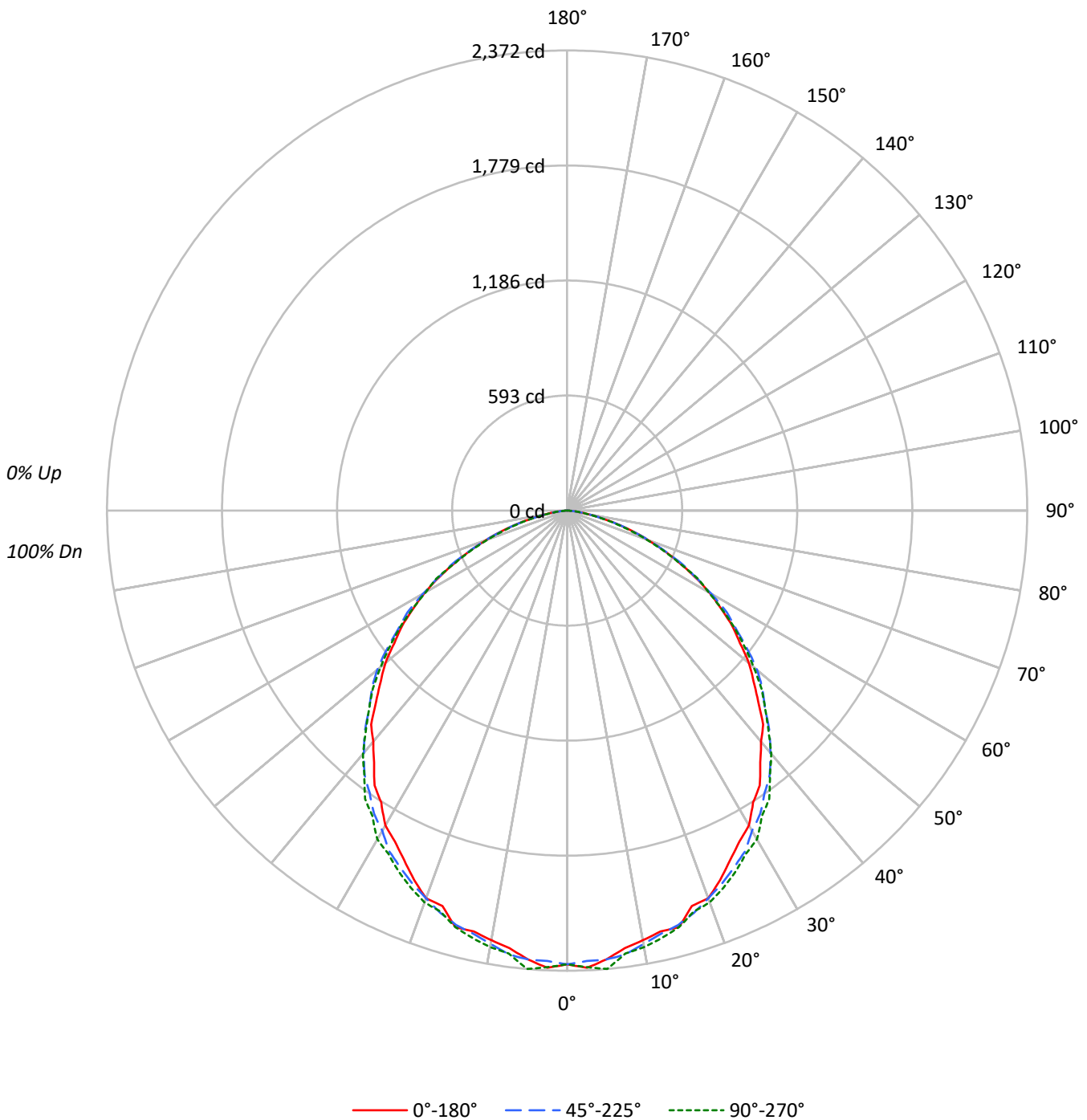
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5894.0 lumens  
Efficiency: N/A  
Efficacy: 125.9 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	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				
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°	6293	6293	6293
5°	6272	6275	6407
10°	6145	6199	6242
15°	6194	6160	6194
20°	6089	6089	6154
25°	5902	6031	6097
30°	5821	5923	6081
35°	5684	5833	5963
40°	5462	5726	5751
45°	5297	5486	5494
50°	5123	5355	5252
55°	4882	4976	4941
60°	4565	4610	4527
65°	4070	4174	4041
70°	3493	3504	3407
75°	2766	2759	2652
80°	1853	1802	1731
85°	1007	997	932



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	220.0	3.7
10°-20°	623.4	10.6
20°-30°	934.1	15.8
30°-40°	1107.1	18.8
40°-50°	1109.1	18.8
50°-60°	941.4	16.0
60°-70°	634.7	10.8
70°-80°	278.9	4.7
80°-90°	45.3	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°	1777.5	30.2
0°-40°	2884.5	48.9
0°-60°	4935.1	83.7
0°-90°	5894.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5894.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2339	2339	2339	2339	2339	
5°	2322	2316	2323	2316	2372	219
15°	2223	2198	2211	2223	2224	619
25°	1988	1999	2031	2058	2054	919
35°	1730	1735	1776	1816	1815	1074
45°	1392	1418	1442	1479	1444	1077
55°	1040	1034	1061	1054	1053	926
65°	639	631	656	630	635	636
75°	266	261	265	247	255	285
85°	33	32	32	31	30	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2338.6	2338.6	2338.6	2338.6	2338.6
2.5°	2358.8	2341.0	2324.4	2343.7	2355.5
5°	2322.0	2316.5	2322.9	2315.9	2371.8
7.5°	2274.3	2295.1	2307.2	2299.6	2303.0
10°	2248.9	2241.7	2268.5	2287.3	2284.5
12.5°	2221.7	2232.6	2234.1	2254.3	2256.2
15°	2223.2	2197.6	2211.2	2222.6	2223.5
17.5°	2136.9	2164.7	2174.0	2200.3	2167.7
20°	2126.3	2106.1	2126.3	2153.2	2149.0
22.5°	2061.4	2038.8	2082.2	2106.1	2104.6
25°	1987.7	1998.6	2031.2	2057.8	2053.6
27.5°	1923.1	1935.8	1982.3	2018.8	1995.3
30°	1873.3	1866.9	1906.2	1938.8	1956.9
32.5°	1784.2	1807.2	1853.1	1885.4	1868.2
35°	1730.2	1735.3	1775.5	1816.5	1815.3
37.5°	1635.7	1659.5	1716.0	1727.4	1716.9
40°	1555.0	1578.9	1629.9	1642.3	1637.2
42.5°	1495.6	1499.8	1543.6	1557.8	1535.1
45°	1392.0	1417.9	1441.5	1478.6	1443.6
47.5°	1303.8	1315.9	1366.6	1376.6	1358.2
50°	1223.8	1228.0	1279.1	1266.7	1254.6
52.5°	1123.2	1141.1	1169.7	1167.3	1153.1
55°	1040.5	1033.6	1060.7	1053.5	1053.2
57.5°	941.2	953.3	975.6	964.1	945.7
60°	848.2	848.5	856.6	843.6	841.2
62.5°	744.6	748.2	750.0	734.0	760.0
65°	639.2	630.8	655.5	630.5	634.7
67.5°	542.3	546.5	544.1	528.4	534.4
70°	443.9	449.3	445.4	427.6	433.0
72.5°	353.9	347.2	351.5	329.1	339.4
75°	266.0	260.6	265.4	246.7	255.1
77.5°	181.2	185.4	182.4	172.4	178.1
80°	119.6	116.3	116.3	110.5	111.7
82.5°	69.8	66.4	65.5	63.7	66.4
85°	32.6	31.7	32.3	31.4	30.2
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)