

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: P589323

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589323  
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-LD4-3HI-40-UNV-82-96-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

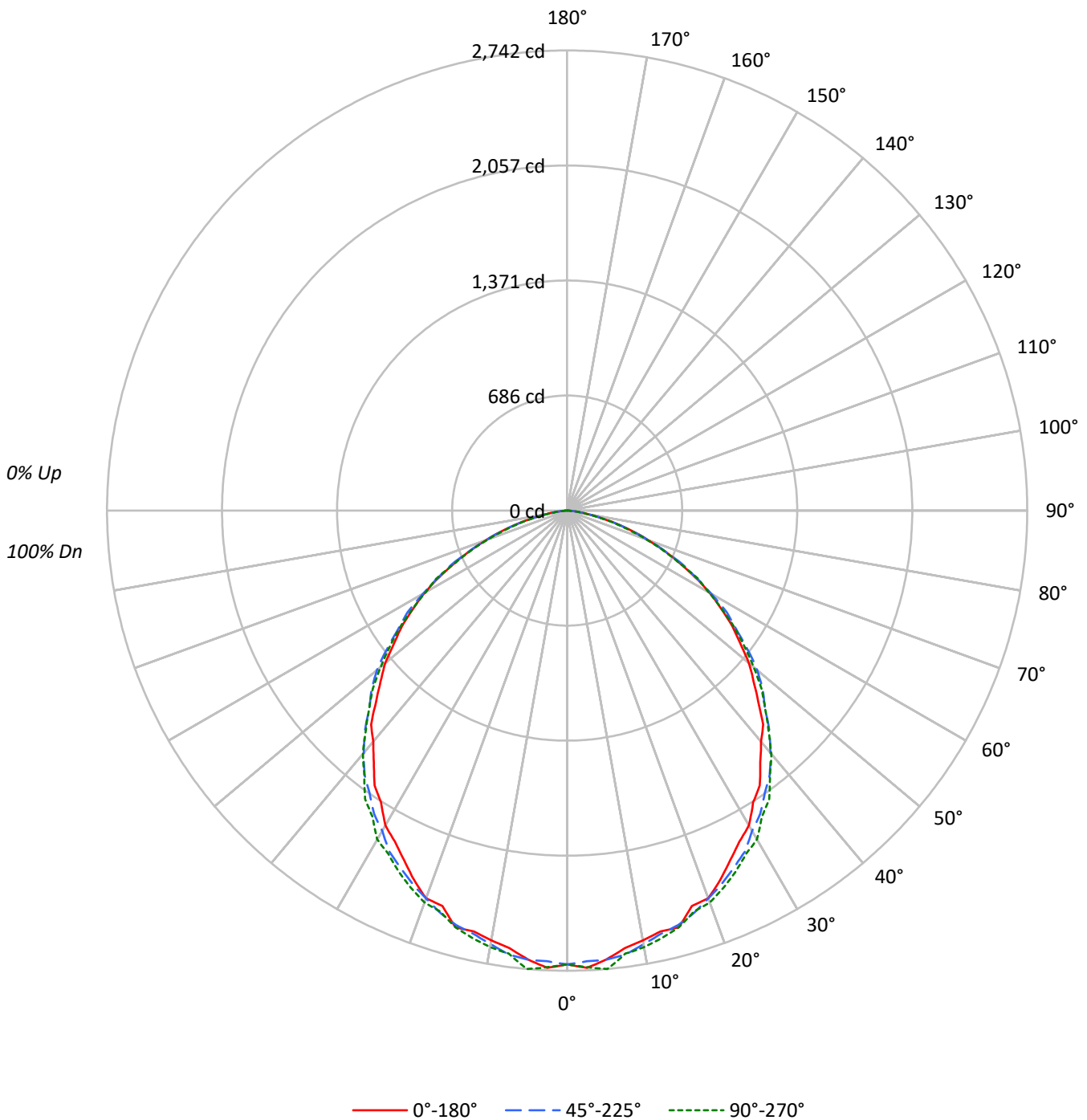
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6815.0 lumens  
Efficiency: N/A  
Efficacy: 105.2 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): 64.8  
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°	7276	7276	7276
5°	7252	7255	7408
10°	7105	7167	7218
15°	7162	7123	7163
20°	7041	7041	7116
25°	6824	6973	7050
30°	6730	6849	7031
35°	6572	6744	6895
40°	6316	6620	6650
45°	6125	6343	6352
50°	5924	6191	6073
55°	5644	5754	5713
60°	5278	5331	5235
65°	4706	4826	4673
70°	4038	4052	3939
75°	3198	3191	3067
80°	2143	2083	2002
85°	1164	1155	1078



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.4	3.7
10°-20°	720.9	10.6
20°-30°	1080.0	15.8
30°-40°	1280.0	18.8
40°-50°	1282.4	18.8
50°-60°	1088.5	16.0
60°-70°	733.9	10.8
70°-80°	322.5	4.7
80°-90°	52.4	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°	2055.2	30.2
0°-40°	3335.3	48.9
0°-60°	5706.2	83.7
0°-90°	6815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6815.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2704	2704	2704	2704	2704	
5°	2685	2678	2686	2678	2742	253
15°	2571	2541	2557	2570	2571	716
25°	2298	2311	2349	2379	2374	1063
35°	2000	2006	2053	2100	2099	1242
45°	1610	1640	1667	1710	1669	1245
55°	1203	1195	1226	1218	1218	1070
65°	739	729	758	729	734	735
75°	308	301	307	285	295	330
85°	38	37	37	36	35	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2704.0	2704.0	2704.0	2704.0	2704.0
2.5°	2727.4	2706.8	2687.6	2710.0	2723.6
5°	2684.8	2678.5	2685.9	2677.8	2742.4
7.5°	2629.7	2653.7	2667.7	2659.0	2662.8
10°	2600.3	2591.9	2623.0	2644.7	2641.5
12.5°	2568.9	2581.5	2583.2	2606.6	2608.7
15°	2570.7	2541.0	2556.7	2570.0	2571.0
17.5°	2470.8	2502.9	2513.7	2544.1	2506.4
20°	2458.6	2435.2	2458.6	2489.7	2484.8
22.5°	2383.5	2357.3	2407.6	2435.2	2433.4
25°	2298.3	2310.9	2348.6	2379.3	2374.4
27.5°	2223.6	2238.3	2292.0	2334.3	2307.1
30°	2166.0	2158.7	2204.1	2241.8	2262.7
32.5°	2063.0	2089.5	2142.6	2180.0	2160.1
35°	2000.5	2006.5	2052.9	2100.4	2099.0
37.5°	1891.2	1918.8	1984.1	1997.4	1985.2
40°	1798.0	1825.6	1884.6	1898.9	1893.0
42.5°	1729.2	1734.1	1784.8	1801.2	1775.0
45°	1609.5	1639.5	1666.8	1709.7	1669.2
47.5°	1507.5	1521.5	1580.2	1591.7	1570.4
50°	1415.0	1419.9	1478.9	1464.6	1450.6
52.5°	1298.8	1319.4	1352.5	1349.7	1333.3
55°	1203.1	1195.1	1226.5	1218.1	1217.8
57.5°	1088.2	1102.2	1128.0	1114.8	1093.5
60°	980.7	981.1	990.5	975.5	972.7
62.5°	861.0	865.1	867.2	848.7	878.8
65°	739.1	729.3	758.0	729.0	733.9
67.5°	627.0	631.9	629.1	611.0	618.0
70°	513.2	519.5	515.0	494.4	500.7
72.5°	409.2	401.5	406.4	380.6	392.4
75°	307.6	301.3	306.9	285.2	295.0
77.5°	209.5	214.4	210.9	199.4	206.0
80°	138.3	134.4	134.4	127.8	129.2
82.5°	80.6	76.8	75.8	73.7	76.8
85°	37.7	36.7	37.4	36.3	34.9
87.5°	13.6	14.0	14.0	13.3	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)