

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: P589560

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589560  
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-LD4-4HI-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

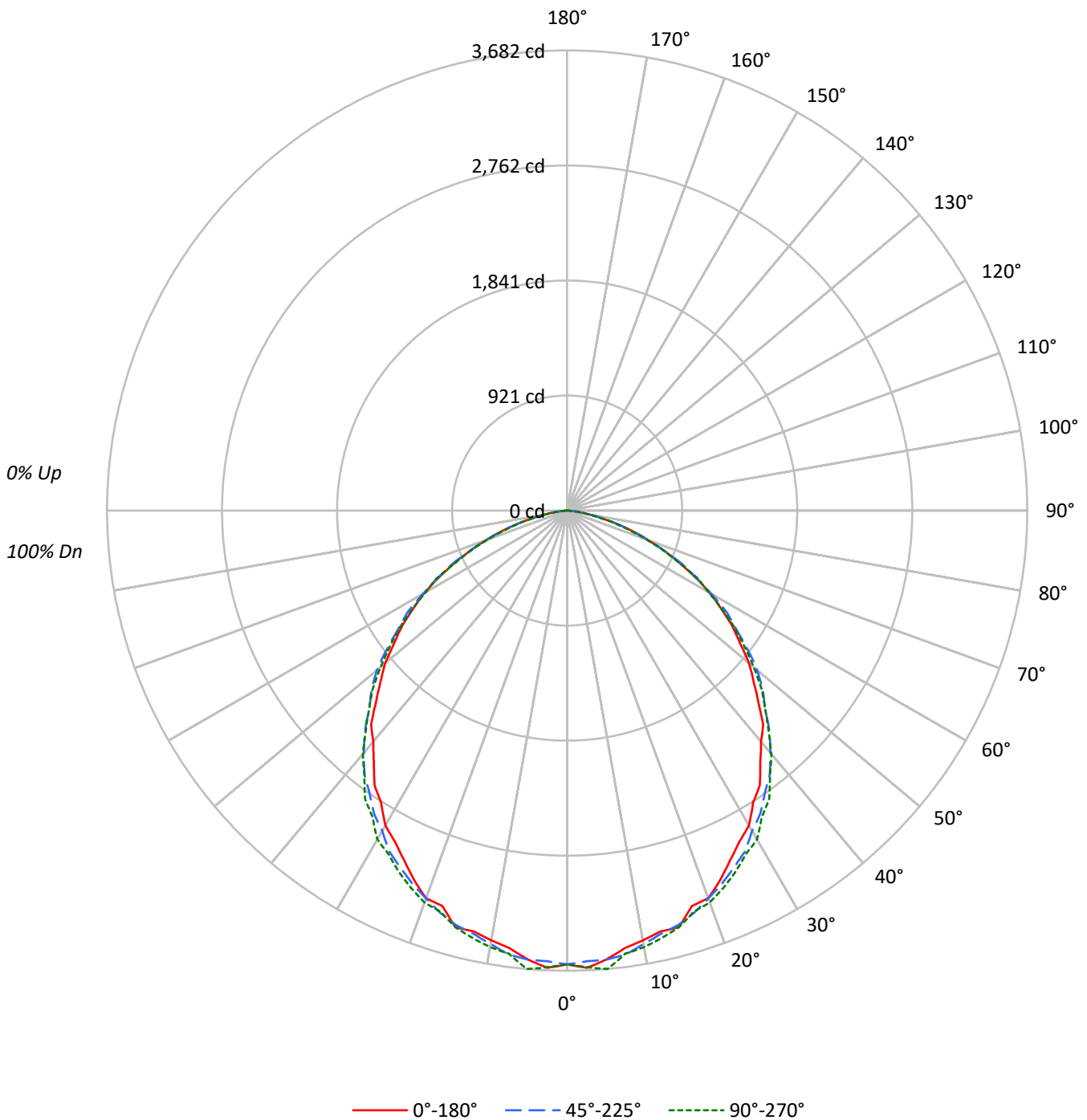
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9151.0 lumens  
Efficiency: N/A  
Efficacy: 105.9 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): 86.4  
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					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°	9771	9771	9771
5°	9738	9742	9947
10°	9541	9624	9692
15°	9616	9564	9618
20°	9454	9454	9555
25°	9163	9364	9467
30°	9038	9196	9441
35°	8824	9056	9259
40°	8481	8890	8929
45°	8225	8517	8530
50°	7955	8314	8155
55°	7579	7727	7672
60°	7087	7158	7029
65°	6320	6481	6274
70°	5422	5441	5290
75°	4294	4285	4118
80°	2876	2797	2689
85°	1562	1550	1448



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	341.5	3.7
10°-20°	968.0	10.6
20°-30°	1450.2	15.8
30°-40°	1718.8	18.8
40°-50°	1722.0	18.8
50°-60°	1461.7	16.0
60°-70°	985.5	10.8
70°-80°	433.0	4.7
80°-90°	70.4	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°	2759.7	30.2
0°-40°	4478.5	48.9
0°-60°	7662.2	83.7
0°-90°	9151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9151.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3631	3631	3631	3631	3631	
5°	3605	3597	3606	3596	3682	340
15°	3452	3412	3433	3451	3452	962
25°	3086	3103	3154	3195	3188	1427
35°	2686	2694	2757	2820	2818	1668
45°	2161	2202	2238	2296	2241	1672
55°	1616	1605	1647	1636	1635	1437
65°	992	979	1018	979	985	987
75°	413	405	412	383	396	443
85°	51	49	50	49	47	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3630.9	3630.9	3630.9	3630.9	3630.9
2.5°	3662.3	3634.6	3608.9	3638.9	3657.1
5°	3605.1	3596.7	3606.5	3595.7	3682.5
7.5°	3531.0	3563.4	3582.1	3570.4	3575.6
10°	3491.7	3480.4	3522.1	3551.2	3547.0
12.5°	3449.5	3466.3	3468.7	3500.1	3502.9
15°	3451.8	3412.0	3433.1	3450.9	3452.3
17.5°	3317.7	3360.9	3375.4	3416.2	3365.5
20°	3301.3	3269.9	3301.3	3343.0	3336.5
22.5°	3200.5	3165.4	3232.9	3269.9	3267.6
25°	3086.1	3103.0	3153.6	3194.9	3188.3
27.5°	2985.8	3005.5	3077.7	3134.4	3097.9
30°	2908.5	2898.6	2959.6	3010.2	3038.3
32.5°	2770.2	2805.8	2877.0	2927.2	2900.5
35°	2686.2	2694.2	2756.6	2820.3	2818.4
37.5°	2539.5	2576.5	2664.2	2682.0	2665.6
40°	2414.3	2451.4	2530.6	2549.8	2541.9
42.5°	2322.0	2328.5	2396.5	2418.6	2383.4
45°	2161.2	2201.5	2238.1	2295.7	2241.4
47.5°	2024.3	2043.0	2121.8	2137.3	2108.7
50°	1900.1	1906.6	1985.9	1966.6	1947.9
52.5°	1744.0	1771.6	1816.1	1812.4	1790.4
55°	1615.5	1604.7	1646.9	1635.7	1635.2
57.5°	1461.3	1480.0	1514.7	1496.9	1468.3
60°	1316.9	1317.3	1330.0	1309.8	1306.1
62.5°	1156.1	1161.7	1164.5	1139.7	1180.0
65°	992.5	979.3	1017.8	978.9	985.4
67.5°	842.0	848.5	844.8	820.4	829.8
70°	689.1	697.6	691.5	663.8	672.3
72.5°	549.4	539.1	545.7	511.0	526.9
75°	413.0	404.6	412.1	383.0	396.1
77.5°	281.3	287.8	283.2	267.7	276.6
80°	185.6	180.5	180.5	171.6	173.5
82.5°	108.3	103.1	101.7	98.9	103.1
85°	50.6	49.2	50.2	48.8	46.9
87.5°	18.3	18.8	18.8	17.8	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)