

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: P589290

Luminaire Tested: **FMR-24-2-LD4-3HI-35-UNV-82-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589290  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

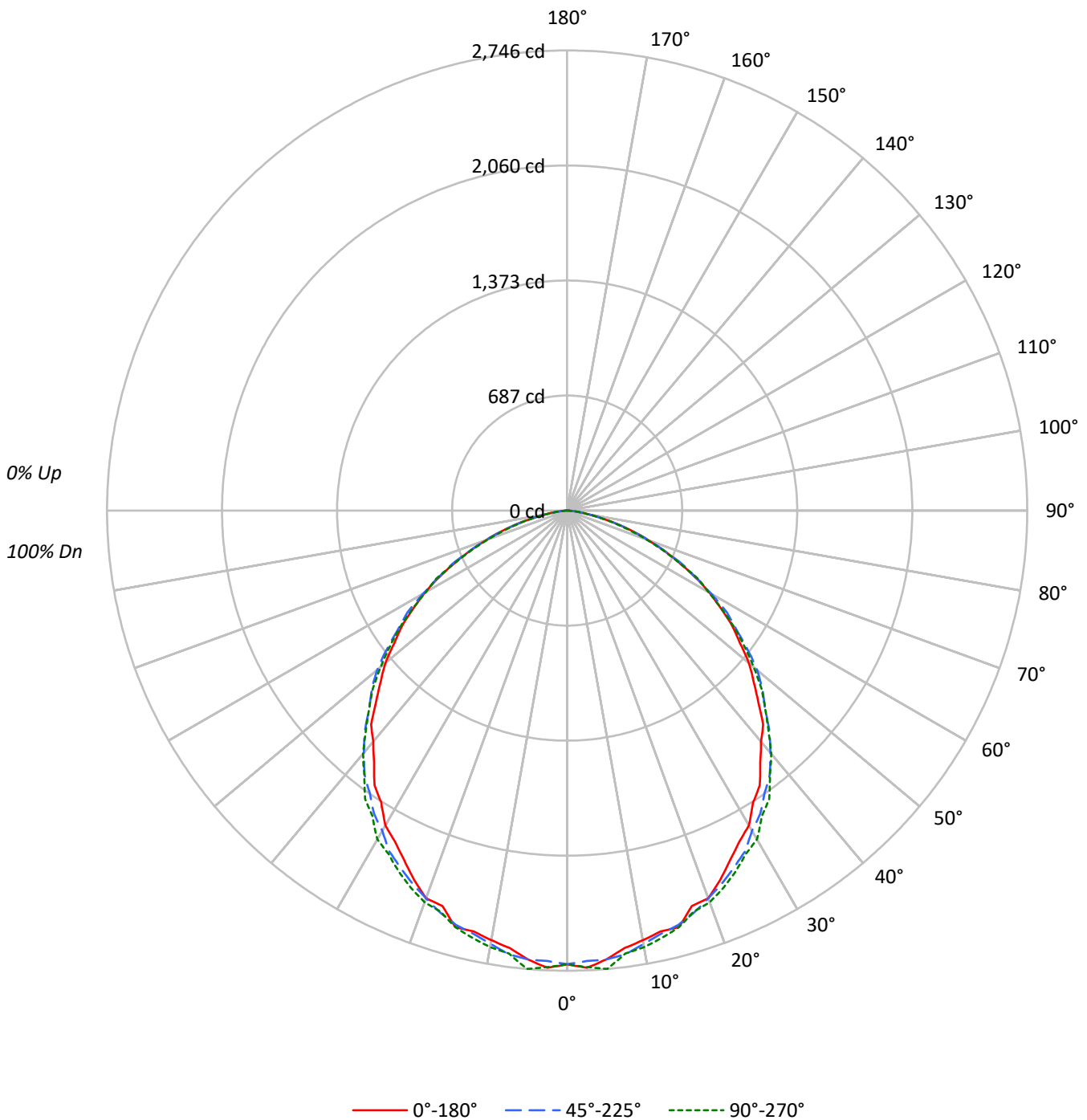
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6823.0 lumens  
Efficiency: N/A  
Efficacy: 105.3 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°	7285	7285	7285
5°	7261	7264	7417
10°	7114	7176	7226
15°	7170	7131	7171
20°	7049	7049	7124
25°	6832	6982	7058
30°	6738	6857	7039
35°	6580	6752	6903
40°	6323	6628	6658
45°	6132	6350	6360
50°	5931	6199	6080
55°	5651	5761	5720
60°	5285	5337	5241
65°	4712	4832	4678
70°	4043	4057	3943
75°	3201	3194	3071
80°	2145	2086	2004
85°	1167	1155	1081



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.7	3.7
10°-20°	721.7	10.6
20°-30°	1081.3	15.8
30°-40°	1281.5	18.8
40°-50°	1283.9	18.8
50°-60°	1089.8	16.0
60°-70°	734.8	10.8
70°-80°	322.9	4.7
80°-90°	52.5	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°	2057.7	30.2
0°-40°	3339.2	48.9
0°-60°	5712.9	83.7
0°-90°	6823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6823.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2707	2707	2707	2707	2707	
5°	2688	2682	2689	2681	2746	253
15°	2574	2544	2560	2573	2574	717
25°	2301	2314	2351	2382	2377	1064
35°	2003	2009	2055	2103	2101	1244
45°	1611	1641	1669	1712	1671	1247
55°	1204	1196	1228	1220	1219	1071
65°	740	730	759	730	735	736
75°	308	302	307	286	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°	2707.2	2707.2	2707.2	2707.2	2707.2
2.5°	2730.6	2710.0	2690.8	2713.1	2726.8
5°	2688.0	2681.7	2689.0	2681.0	2745.6
7.5°	2632.7	2656.9	2670.8	2662.1	2665.9
10°	2603.4	2595.0	2626.1	2647.8	2644.6
12.5°	2571.9	2584.5	2586.3	2609.7	2611.8
15°	2573.7	2544.0	2559.7	2573.0	2574.0
17.5°	2473.7	2505.9	2516.7	2547.1	2509.4
20°	2461.5	2438.0	2461.5	2492.6	2487.7
22.5°	2386.3	2360.1	2410.4	2438.0	2436.3
25°	2301.0	2313.6	2351.4	2382.1	2377.2
27.5°	2226.2	2240.9	2294.7	2337.0	2309.8
30°	2168.6	2161.2	2206.7	2244.4	2265.4
32.5°	2065.4	2092.0	2145.1	2182.5	2162.6
35°	2002.9	2008.8	2055.3	2102.8	2101.4
37.5°	1893.5	1921.1	1986.4	1999.7	1987.5
40°	1800.1	1827.7	1886.8	1901.2	1895.2
42.5°	1731.3	1736.2	1786.9	1803.3	1777.1
45°	1611.4	1641.4	1668.7	1711.7	1671.2
47.5°	1509.3	1523.3	1582.0	1593.6	1572.2
50°	1416.7	1421.6	1480.7	1466.3	1452.3
52.5°	1300.3	1320.9	1354.1	1351.3	1334.9
55°	1204.5	1196.5	1227.9	1219.5	1219.2
57.5°	1089.5	1103.5	1129.4	1116.1	1094.8
60°	981.9	982.2	991.6	976.6	973.8
62.5°	862.0	866.2	868.3	849.7	879.8
65°	740.0	730.2	758.9	729.8	734.7
67.5°	627.8	632.7	629.9	611.7	618.7
70°	513.8	520.1	515.6	494.9	501.2
72.5°	409.7	402.0	406.9	381.0	392.9
75°	307.9	301.7	307.2	285.6	295.4
77.5°	209.7	214.6	211.1	199.6	206.2
80°	138.4	134.6	134.6	127.9	129.3
82.5°	80.7	76.9	75.9	73.8	76.9
85°	37.8	36.7	37.4	36.4	35.0
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)