

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: P589531

Luminaire Tested: **FMR-24-2-LD4-3STD-50-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589531  
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-LD4-3STD-50-UNV-80-96-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

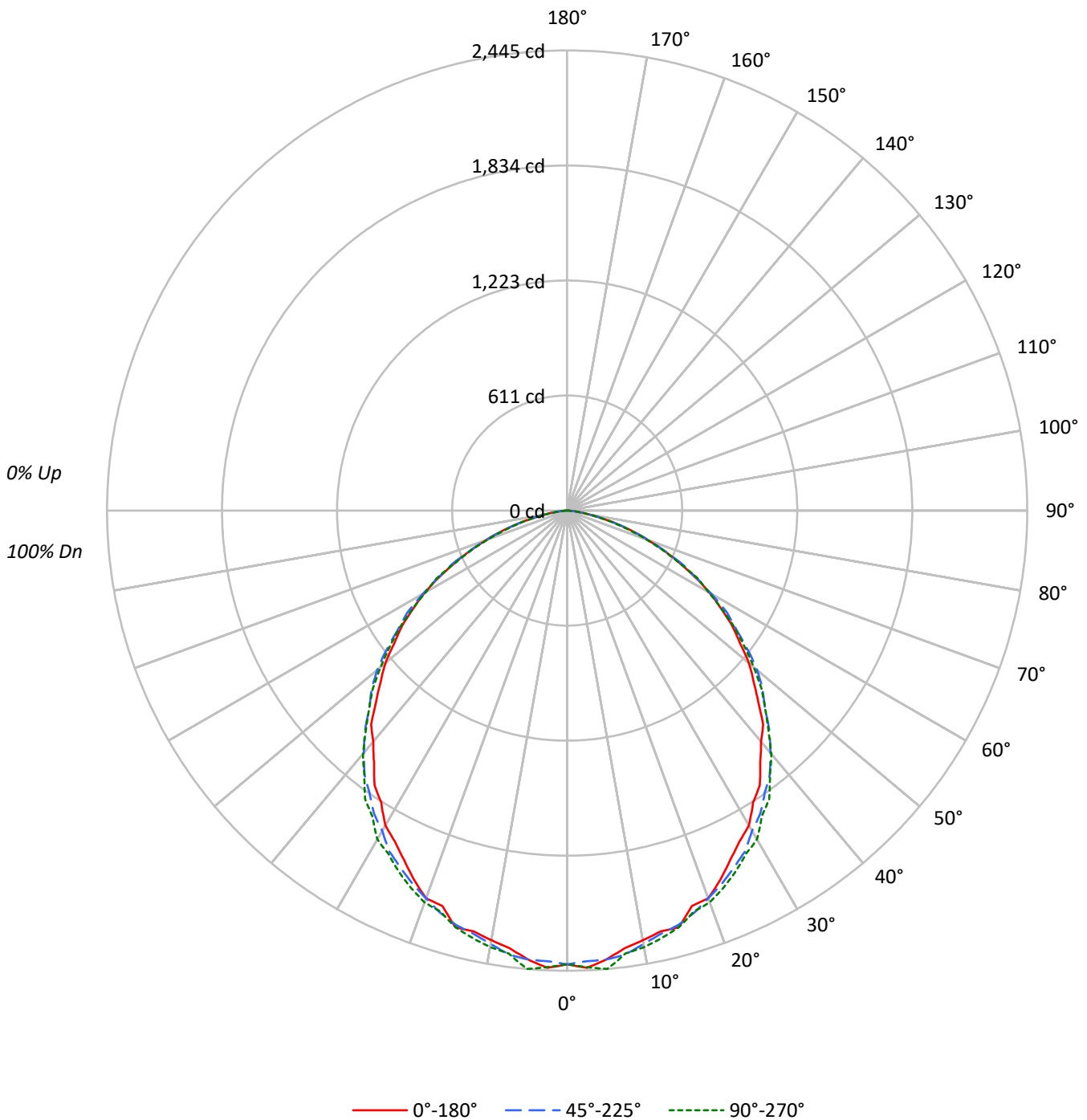
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6076.0 lumens  
Efficiency: N/A  
Efficacy: 121.5 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): 50  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P589531

CATALOG NUMBER: FMR-24-2-LD4-3STD-50-UNV-80-96-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P589531

CATALOG NUMBER: FMR-24-2-LD4-3STD-50-UNV-80-96-EDD

**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°	6487	6487	6487
5°	6466	6468	6605
10°	6335	6390	6435
15°	6385	6350	6386
20°	6277	6277	6344
25°	6084	6217	6286
30°	6000	6106	6269
35°	5859	6013	6148
40°	5631	5902	5929
45°	5461	5655	5664
50°	5282	5520	5414
55°	5032	5130	5094
60°	4706	4753	4667
65°	4196	4303	4166
70°	3600	3612	3512
75°	2851	2845	2734
80°	1911	1857	1785
85°	1037	1028	960



TEST NUMBER: P589531

CATALOG NUMBER: FMR-24-2-LD4-3STD-50-UNV-80-96-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.8	3.7
10°-20°	642.7	10.6
20°-30°	962.9	15.8
30°-40°	1141.2	18.8
40°-50°	1143.3	18.8
50°-60°	970.5	16.0
60°-70°	654.3	10.8
70°-80°	287.5	4.7
80°-90°	46.7	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°	1832.4	30.2
0°-40°	2973.6	48.9
0°-60°	5087.5	83.7
0°-90°	6076.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6076.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2411	2411	2411	2411	2411	
5°	2394	2388	2395	2388	2445	226
15°	2292	2265	2279	2291	2292	639
25°	2049	2060	2094	2121	2117	947
35°	1784	1789	1830	1873	1871	1107
45°	1435	1462	1486	1524	1488	1110
55°	1073	1066	1094	1086	1086	954
65°	659	650	676	650	654	655
75°	274	269	274	254	263	294
85°	34	33	33	32	31	49
90°	0	0	0	0	0	



TEST NUMBER: P589531

CATALOG NUMBER: FMR-24-2-LD4-3STD-50-UNV-80-96-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2410.8	2410.8	2410.8	2410.8	2410.8
2.5°	2431.7	2413.3	2396.2	2416.1	2428.2
5°	2393.7	2388.1	2394.6	2387.5	2445.0
7.5°	2344.5	2366.0	2378.4	2370.6	2374.1
10°	2318.4	2310.9	2338.6	2357.9	2355.1
12.5°	2290.3	2301.5	2303.1	2324.0	2325.8
15°	2291.9	2265.4	2279.4	2291.3	2292.2
17.5°	2202.9	2231.5	2241.2	2268.2	2234.6
20°	2192.0	2171.1	2192.0	2219.7	2215.3
22.5°	2125.1	2101.7	2146.5	2171.1	2169.6
25°	2049.1	2060.3	2093.9	2121.3	2117.0
27.5°	1982.5	1995.6	2043.5	2081.2	2056.9
30°	1931.1	1924.6	1965.1	1998.7	2017.4
32.5°	1839.3	1863.0	1910.3	1943.6	1925.8
35°	1783.6	1788.9	1830.3	1872.6	1871.4
37.5°	1686.2	1710.8	1769.0	1780.8	1769.9
40°	1603.1	1627.6	1680.2	1693.0	1687.7
42.5°	1541.7	1546.1	1591.2	1605.9	1582.5
45°	1435.0	1461.7	1486.0	1524.3	1488.2
47.5°	1344.1	1356.5	1408.8	1419.1	1400.1
50°	1261.6	1265.9	1318.5	1305.8	1293.3
52.5°	1157.9	1176.3	1205.9	1203.4	1188.7
55°	1072.6	1065.5	1093.5	1086.0	1085.7
57.5°	970.2	982.7	1005.7	993.9	974.9
60°	874.4	874.7	883.1	869.7	867.2
62.5°	767.6	771.3	773.2	756.7	783.5
65°	659.0	650.2	675.8	649.9	654.3
67.5°	559.0	563.4	560.9	544.7	551.0
70°	457.6	463.2	459.1	440.8	446.4
72.5°	364.8	358.0	362.3	339.3	349.9
75°	274.2	268.6	273.6	254.3	263.0
77.5°	186.8	191.1	188.0	177.7	183.7
80°	123.3	119.8	119.8	113.9	115.2
82.5°	71.9	68.5	67.5	65.7	68.5
85°	33.6	32.7	33.3	32.4	31.1
87.5°	12.1	12.5	12.5	11.8	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)