

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: P589528

Luminaire Tested: **FMR-24-2-LD4-3STD-50-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589528  
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-80-87-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

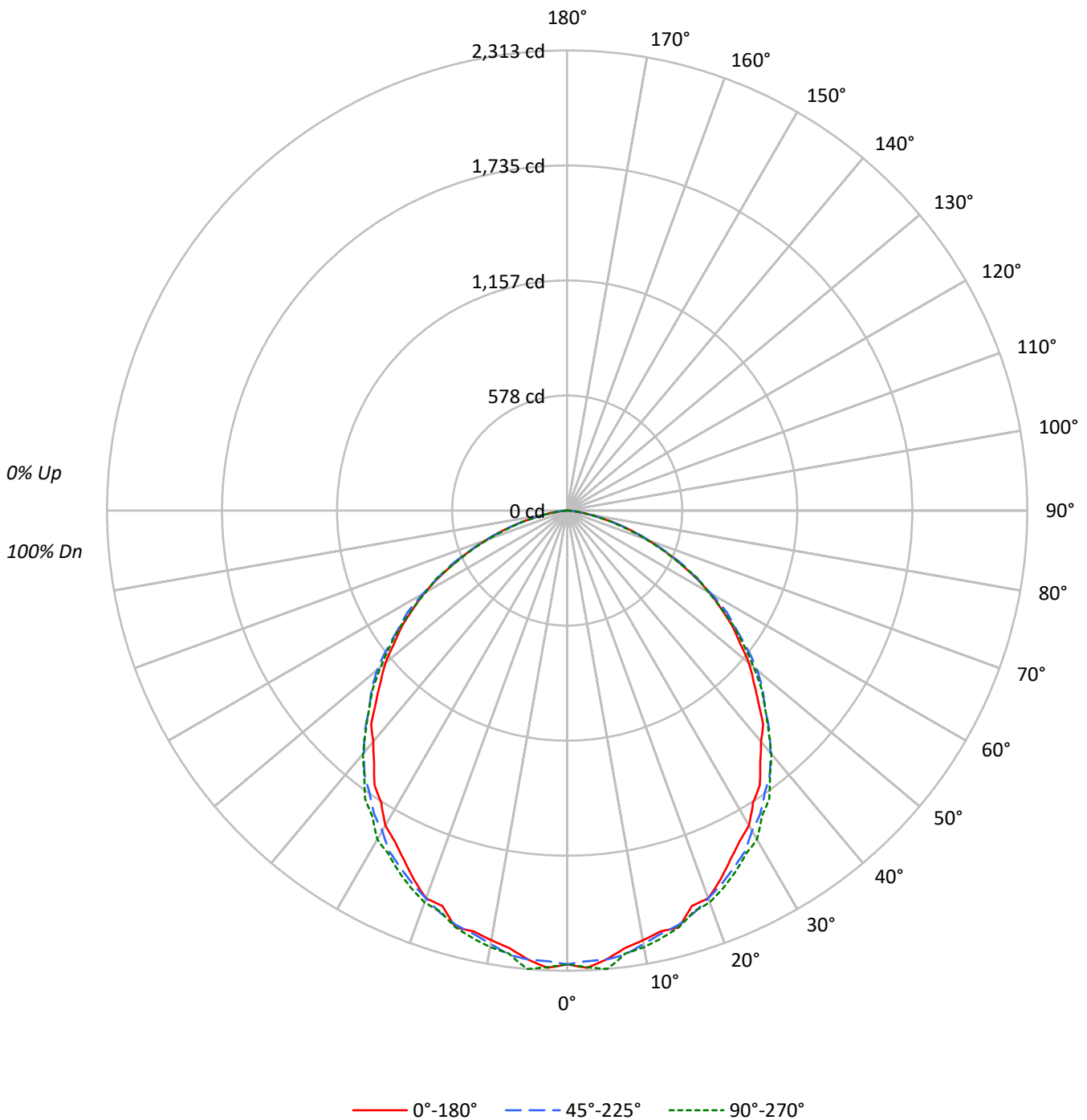
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5748.0 lumens  
Efficiency: N/A  
Efficacy: 115.0 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 (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°	6137	6137	6137
5°	6117	6119	6248
10°	5993	6045	6088
15°	6040	6008	6041
20°	5938	5938	6001
25°	5756	5882	5946
30°	5677	5776	5930
35°	5543	5688	5816
40°	5327	5584	5609
45°	5166	5350	5358
50°	4996	5222	5122
55°	4761	4853	4819
60°	4452	4496	4415
65°	3969	4071	3941
70°	3406	3417	3323
75°	2697	2691	2587
80°	1807	1757	1689
85°	982	973	908



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	214.5	3.7
10°-20°	608.0	10.6
20°-30°	910.9	15.8
30°-40°	1079.6	18.8
40°-50°	1081.6	18.8
50°-60°	918.1	16.0
60°-70°	619.0	10.8
70°-80°	272.0	4.7
80°-90°	44.2	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°	1733.5	30.2
0°-40°	2813.1	48.9
0°-60°	4812.8	83.7
0°-90°	5748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5748.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2281	2281	2281	2281	2281	
5°	2264	2259	2265	2259	2313	213
15°	2168	2143	2156	2168	2168	604
25°	1938	1949	1981	2007	2003	896
35°	1687	1692	1732	1772	1770	1048
45°	1358	1383	1406	1442	1408	1050
55°	1015	1008	1034	1027	1027	903
65°	623	615	639	615	619	620
75°	259	254	259	241	249	278
85°	32	31	32	31	29	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2280.7	2280.7	2280.7	2280.7	2280.7
2.5°	2300.4	2283.0	2266.8	2285.7	2297.2
5°	2264.5	2259.2	2265.3	2258.6	2313.1
7.5°	2217.9	2238.3	2250.0	2242.7	2245.9
10°	2193.2	2186.1	2212.3	2230.6	2228.0
12.5°	2166.7	2177.3	2178.8	2198.5	2200.3
15°	2168.2	2143.1	2156.4	2167.6	2168.5
17.5°	2084.0	2111.0	2120.2	2145.8	2114.0
20°	2073.6	2053.9	2073.6	2099.9	2095.7
22.5°	2010.3	1988.3	2030.7	2053.9	2052.4
25°	1938.5	1949.1	1980.9	2006.8	2002.7
27.5°	1875.5	1887.8	1933.2	1968.8	1945.9
30°	1826.9	1820.7	1859.0	1890.8	1908.5
32.5°	1740.0	1762.4	1807.2	1838.7	1821.9
35°	1687.3	1692.3	1731.5	1771.5	1770.3
37.5°	1595.1	1618.4	1673.5	1684.7	1674.3
40°	1516.5	1539.8	1589.5	1601.6	1596.6
42.5°	1458.5	1462.6	1505.3	1519.2	1497.1
45°	1357.5	1382.8	1405.8	1442.0	1407.9
47.5°	1271.5	1283.3	1332.8	1342.5	1324.5
50°	1193.5	1197.6	1247.4	1235.3	1223.5
52.5°	1095.4	1112.8	1140.8	1138.4	1124.6
55°	1014.7	1008.0	1034.5	1027.4	1027.1
57.5°	917.9	929.6	951.4	940.2	922.3
60°	827.2	827.5	835.4	822.7	820.4
62.5°	726.2	729.7	731.5	715.9	741.2
65°	623.4	615.1	639.3	614.9	619.0
67.5°	528.9	533.0	530.6	515.3	521.2
70°	432.9	438.2	434.3	417.0	422.3
72.5°	345.1	338.6	342.8	321.0	331.0
75°	259.4	254.1	258.8	240.6	248.8
77.5°	176.7	180.8	177.9	168.1	173.7
80°	116.6	113.4	113.4	107.8	109.0
82.5°	68.0	64.8	63.9	62.1	64.8
85°	31.8	30.9	31.5	30.6	29.4
87.5°	11.5	11.8	11.8	11.2	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)