

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: P589045

Luminaire Tested: **FMR-24-2-LD4-2HI-50-UNV-80-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589045  
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-LD4-2HI-50-UNV-80-84-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

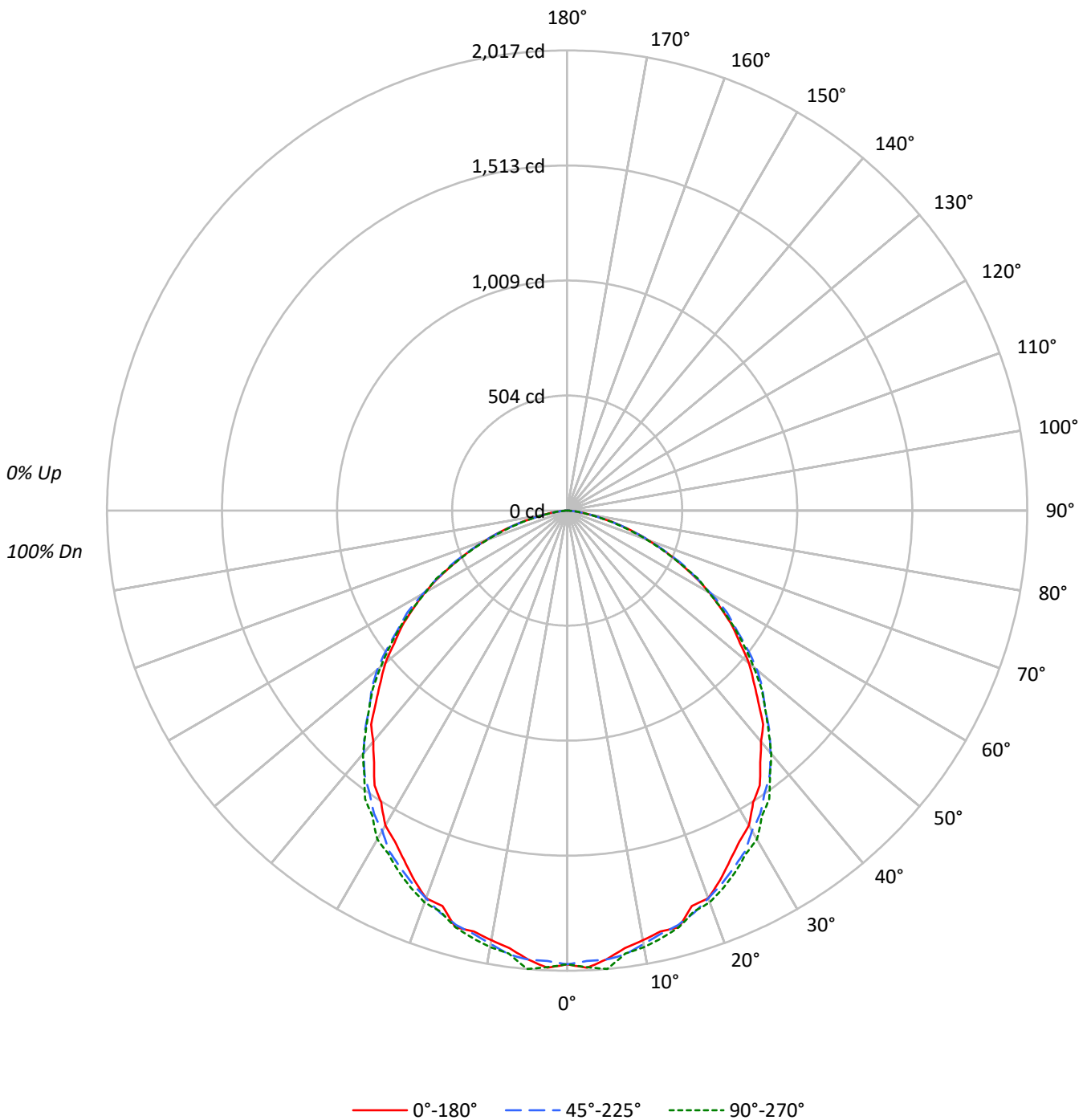
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5012.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 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): 43.2  
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°	5351	5351	5351
5°	5334	5336	5448
10°	5226	5271	5308
15°	5267	5238	5268
20°	5178	5178	5233
25°	5019	5128	5185
30°	4950	5037	5171
35°	4833	4960	5071
40°	4645	4869	4891
45°	4505	4665	4672
50°	4357	4554	4466
55°	4151	4232	4202
60°	3881	3920	3850
65°	3461	3549	3436
70°	2969	2980	2897
75°	2352	2347	2256
80°	1576	1533	1472
85°	855	849	794



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.1	3.7
10°-20°	530.2	10.6
20°-30°	794.3	15.8
30°-40°	941.4	18.8
40°-50°	943.1	18.8
50°-60°	800.5	16.0
60°-70°	539.7	10.8
70°-80°	237.2	4.7
80°-90°	38.6	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°	1511.5	30.2
0°-40°	2452.9	48.9
0°-60°	4196.6	83.7
0°-90°	5012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5012.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1989	1989	1989	1989	1989	
5°	1974	1970	1975	1969	2017	186
15°	1891	1869	1880	1890	1891	527
25°	1690	1700	1727	1750	1746	781
35°	1471	1476	1510	1545	1544	913
45°	1184	1206	1226	1257	1228	916
55°	885	879	902	896	896	787
65°	544	536	557	536	540	541
75°	226	222	226	210	217	242
85°	28	27	28	27	26	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1988.6	1988.6	1988.6	1988.6	1988.6
2.5°	2005.8	1990.7	1976.6	1993.0	2003.0
5°	1974.5	1969.9	1975.3	1969.4	2016.9
7.5°	1933.9	1951.7	1961.9	1955.5	1958.3
10°	1912.4	1906.2	1929.1	1945.0	1942.7
12.5°	1889.3	1898.5	1899.8	1917.0	1918.5
15°	1890.6	1868.7	1880.3	1890.0	1890.8
17.5°	1817.1	1840.7	1848.7	1871.0	1843.3
20°	1808.1	1790.9	1808.1	1831.0	1827.4
22.5°	1752.9	1733.7	1770.6	1790.9	1789.6
25°	1690.3	1699.5	1727.2	1749.8	1746.3
27.5°	1635.3	1646.1	1685.7	1716.7	1696.7
30°	1593.0	1587.6	1620.9	1648.7	1664.1
32.5°	1517.2	1536.7	1575.8	1603.2	1588.6
35°	1471.3	1475.6	1509.8	1544.7	1543.7
37.5°	1390.9	1411.2	1459.2	1468.9	1460.0
40°	1322.3	1342.6	1386.0	1396.5	1392.2
42.5°	1271.8	1275.3	1312.6	1324.6	1305.4
45°	1183.7	1205.8	1225.8	1257.4	1227.6
47.5°	1108.7	1119.0	1162.1	1170.6	1154.9
50°	1040.7	1044.3	1087.7	1077.1	1066.9
52.5°	955.2	970.3	994.7	992.6	980.6
55°	884.8	878.9	902.0	895.8	895.6
57.5°	800.3	810.6	829.6	819.8	804.2
60°	721.2	721.5	728.4	717.4	715.3
62.5°	633.2	636.3	637.8	624.2	646.3
65°	543.6	536.4	557.4	536.1	539.7
67.5°	461.1	464.7	462.7	449.3	454.5
70°	377.4	382.1	378.7	363.6	368.2
72.5°	300.9	295.3	298.9	279.9	288.6
75°	226.2	221.6	225.7	209.8	217.0
77.5°	154.1	157.7	155.1	146.6	151.5
80°	101.7	98.9	98.9	94.0	95.0
82.5°	59.3	56.5	55.7	54.2	56.5
85°	27.7	27.0	27.5	26.7	25.7
87.5°	10.0	10.3	10.3	9.8	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)