

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: P589720

Luminaire Tested: **FMR-24-2-LD4-4LO-50-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589720  
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-LD4-4LO-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: -

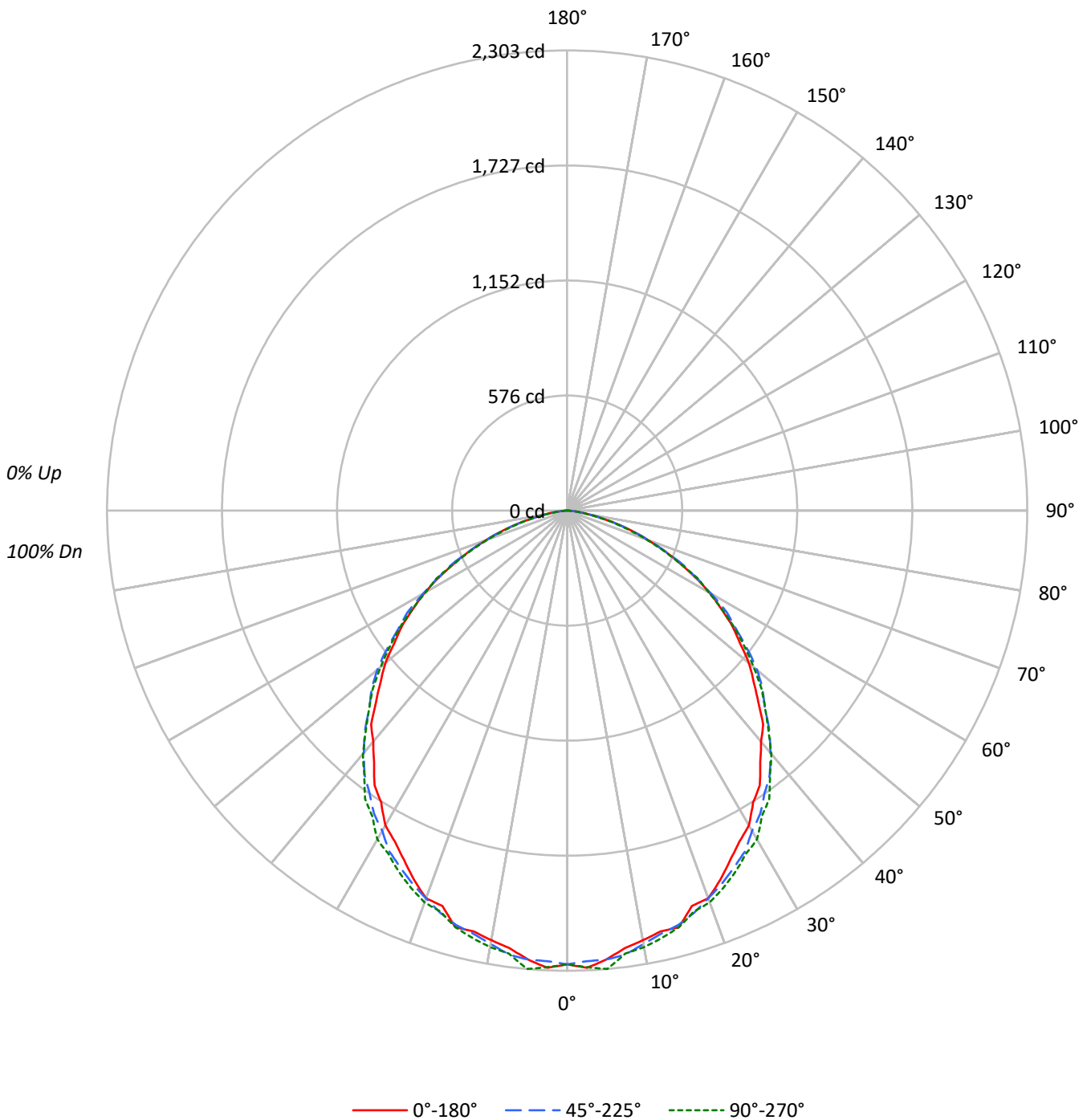
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5723.0 lumens  
Efficiency: N/A  
Efficacy: 122.3 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): 46.8  
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°	6110	6110	6110
5°	6090	6093	6221
10°	5967	6019	6061
15°	6014	5981	6015
20°	5912	5912	5975
25°	5731	5856	5921
30°	5652	5751	5904
35°	5519	5663	5790
40°	5304	5559	5584
45°	5144	5327	5334
50°	4975	5199	5100
55°	4740	4832	4798
60°	4433	4477	4396
65°	3952	4053	3924
70°	3391	3403	3308
75°	2686	2679	2575
80°	1799	1750	1681
85°	979	969	905



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	213.6	3.7
10°-20°	605.4	10.6
20°-30°	907.0	15.8
30°-40°	1074.9	18.8
40°-50°	1076.9	18.8
50°-60°	914.1	16.0
60°-70°	616.3	10.8
70°-80°	270.8	4.7
80°-90°	44.0	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°	1725.9	30.2
0°-40°	2800.8	48.9
0°-60°	4791.9	83.7
0°-90°	5723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5723.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2271	2271	2271	2271	2271	
5°	2255	2249	2256	2249	2303	213
15°	2159	2134	2147	2158	2159	601
25°	1930	1941	1972	1998	1994	892
35°	1680	1685	1724	1764	1763	1043
45°	1352	1377	1400	1436	1402	1046
55°	1010	1004	1030	1023	1023	899
65°	621	612	636	612	616	617
75°	258	253	258	240	248	277
85°	32	31	31	30	29	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2270.7	2270.7	2270.7	2270.7	2270.7
2.5°	2290.4	2273.1	2257.0	2275.7	2287.2
5°	2254.6	2249.3	2255.5	2248.8	2303.0
7.5°	2208.3	2228.5	2240.3	2232.9	2236.1
10°	2183.7	2176.6	2202.7	2220.9	2218.3
12.5°	2157.3	2167.8	2169.3	2188.9	2190.7
15°	2158.7	2133.8	2147.0	2158.2	2159.0
17.5°	2074.9	2101.9	2111.0	2136.5	2104.8
20°	2064.6	2045.0	2064.6	2090.7	2086.6
22.5°	2001.6	1979.6	2021.8	2045.0	2043.5
25°	1930.1	1940.6	1972.3	1998.1	1994.0
27.5°	1867.3	1879.6	1924.8	1960.3	1937.4
30°	1818.9	1812.8	1850.9	1882.6	1900.2
32.5°	1732.4	1754.7	1799.3	1830.7	1814.0
35°	1680.0	1685.0	1723.9	1763.8	1762.6
37.5°	1588.2	1611.4	1666.2	1677.3	1667.1
40°	1509.9	1533.1	1582.6	1594.7	1589.7
42.5°	1452.2	1456.3	1498.8	1512.6	1490.6
45°	1351.6	1376.8	1399.7	1435.7	1401.7
47.5°	1266.0	1277.7	1327.0	1336.6	1318.8
50°	1188.3	1192.4	1241.9	1229.9	1218.2
52.5°	1090.7	1108.0	1135.8	1133.5	1119.7
55°	1010.3	1003.6	1030.0	1022.9	1022.6
57.5°	913.9	925.6	947.3	936.1	918.3
60°	823.6	823.9	831.8	819.2	816.8
62.5°	723.0	726.5	728.3	712.7	738.0
65°	620.7	612.5	636.5	612.2	616.3
67.5°	526.6	530.7	528.3	513.1	518.9
70°	431.0	436.3	432.5	415.2	420.4
72.5°	343.6	337.2	341.3	319.6	329.5
75°	258.3	253.0	257.7	239.5	247.7
77.5°	175.9	180.0	177.1	167.4	173.0
80°	116.1	112.9	112.9	107.3	108.5
82.5°	67.7	64.5	63.6	61.9	64.5
85°	31.7	30.8	31.4	30.5	29.3
87.5°	11.4	11.7	11.7	11.1	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)