

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: P589659

Luminaire Tested: **FMR-24-2-LD4-4LO-35-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589659  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

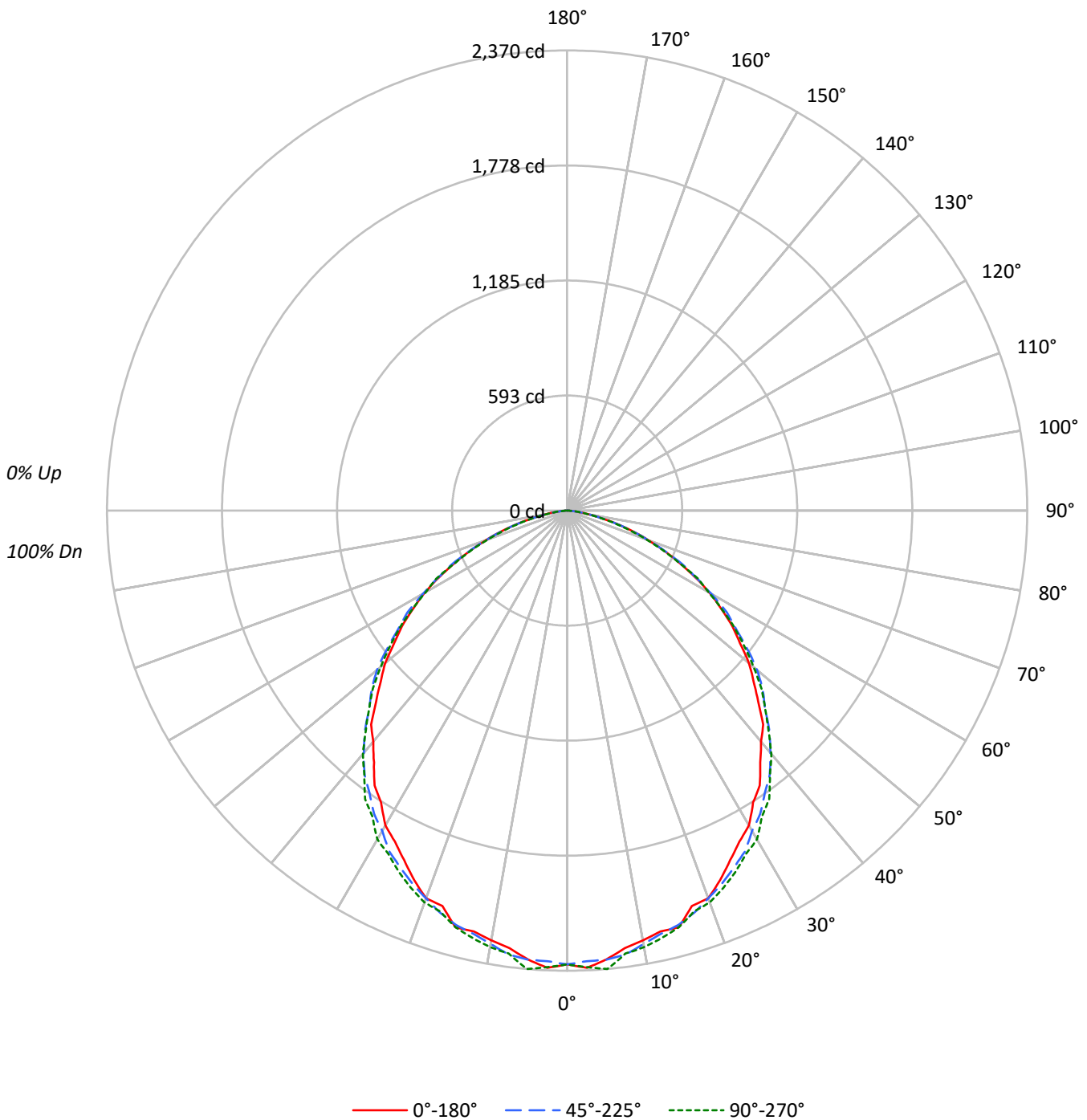
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5890.0 lumens  
Efficiency: N/A  
Efficacy: 125.9 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 (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

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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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6289	6289	6289
5°	6268	6270	6403
10°	6141	6195	6238
15°	6189	6156	6190
20°	6085	6085	6150
25°	5898	6027	6093
30°	5817	5919	6077
35°	5680	5829	5959
40°	5459	5722	5747
45°	5294	5482	5490
50°	5120	5351	5249
55°	4878	4973	4938
60°	4562	4607	4525
65°	4067	4171	4039
70°	3490	3502	3404
75°	2764	2757	2651
80°	1852	1801	1729
85°	1007	997	932



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.8	3.7
10°-20°	623.0	10.6
20°-30°	933.4	15.8
30°-40°	1106.3	18.8
40°-50°	1108.3	18.8
50°-60°	940.8	16.0
60°-70°	634.3	10.8
70°-80°	278.7	4.7
80°-90°	45.3	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°	1776.3	30.2
0°-40°	2882.6	48.9
0°-60°	4931.7	83.7
0°-90°	5890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5890.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2337	2337	2337	2337	2337	
5°	2320	2315	2321	2314	2370	219
15°	2222	2196	2210	2221	2222	619
25°	1986	1997	2030	2056	2052	918
35°	1729	1734	1774	1815	1814	1073
45°	1391	1417	1440	1478	1443	1076
55°	1040	1033	1060	1053	1052	925
65°	639	630	655	630	634	635
75°	266	260	265	246	255	285
85°	33	32	32	31	30	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2337.0	2337.0	2337.0	2337.0	2337.0
2.5°	2357.2	2339.4	2322.8	2342.1	2353.9
5°	2320.4	2315.0	2321.3	2314.4	2370.2
7.5°	2272.7	2293.6	2305.6	2298.1	2301.4
10°	2247.4	2240.1	2267.0	2285.7	2283.0
12.5°	2220.2	2231.1	2232.6	2252.8	2254.6
15°	2221.7	2196.1	2209.7	2221.1	2222.0
17.5°	2135.4	2163.2	2172.6	2198.8	2166.2
20°	2124.9	2104.7	2124.9	2151.7	2147.5
22.5°	2060.0	2037.4	2080.8	2104.7	2103.2
25°	1986.4	1997.2	2029.8	2056.4	2052.2
27.5°	1921.8	1934.5	1980.9	2017.5	1993.9
30°	1872.0	1865.7	1904.9	1937.5	1955.6
32.5°	1783.0	1805.9	1851.8	1884.1	1866.9
35°	1729.0	1734.1	1774.3	1815.3	1814.1
37.5°	1634.5	1658.4	1714.8	1726.3	1715.7
40°	1554.0	1577.8	1628.8	1641.2	1636.1
42.5°	1494.5	1498.8	1542.5	1556.7	1534.1
45°	1391.0	1417.0	1440.5	1477.6	1442.6
47.5°	1302.9	1315.0	1365.7	1375.6	1357.2
50°	1223.0	1227.2	1278.2	1265.8	1253.7
52.5°	1122.5	1140.3	1169.0	1166.5	1152.4
55°	1039.8	1032.9	1060.0	1052.8	1052.5
57.5°	940.5	952.6	974.9	963.5	945.1
60°	847.6	847.9	856.0	843.1	840.7
62.5°	744.1	747.7	749.5	733.5	759.5
65°	638.8	630.3	655.1	630.0	634.3
67.5°	541.9	546.2	543.7	528.1	534.1
70°	443.6	449.0	445.1	427.3	432.7
72.5°	353.6	347.0	351.2	328.9	339.2
75°	265.8	260.4	265.2	246.5	255.0
77.5°	181.0	185.3	182.3	172.3	178.0
80°	119.5	116.2	116.2	110.4	111.6
82.5°	69.7	66.4	65.5	63.7	66.4
85°	32.6	31.7	32.3	31.4	30.2
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)