

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: P588902

Luminaire Tested: **FMR-24-2-LD4-1STD-35-UNV-82-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588902  
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-LD4-1STD-35-UNV-82-85-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

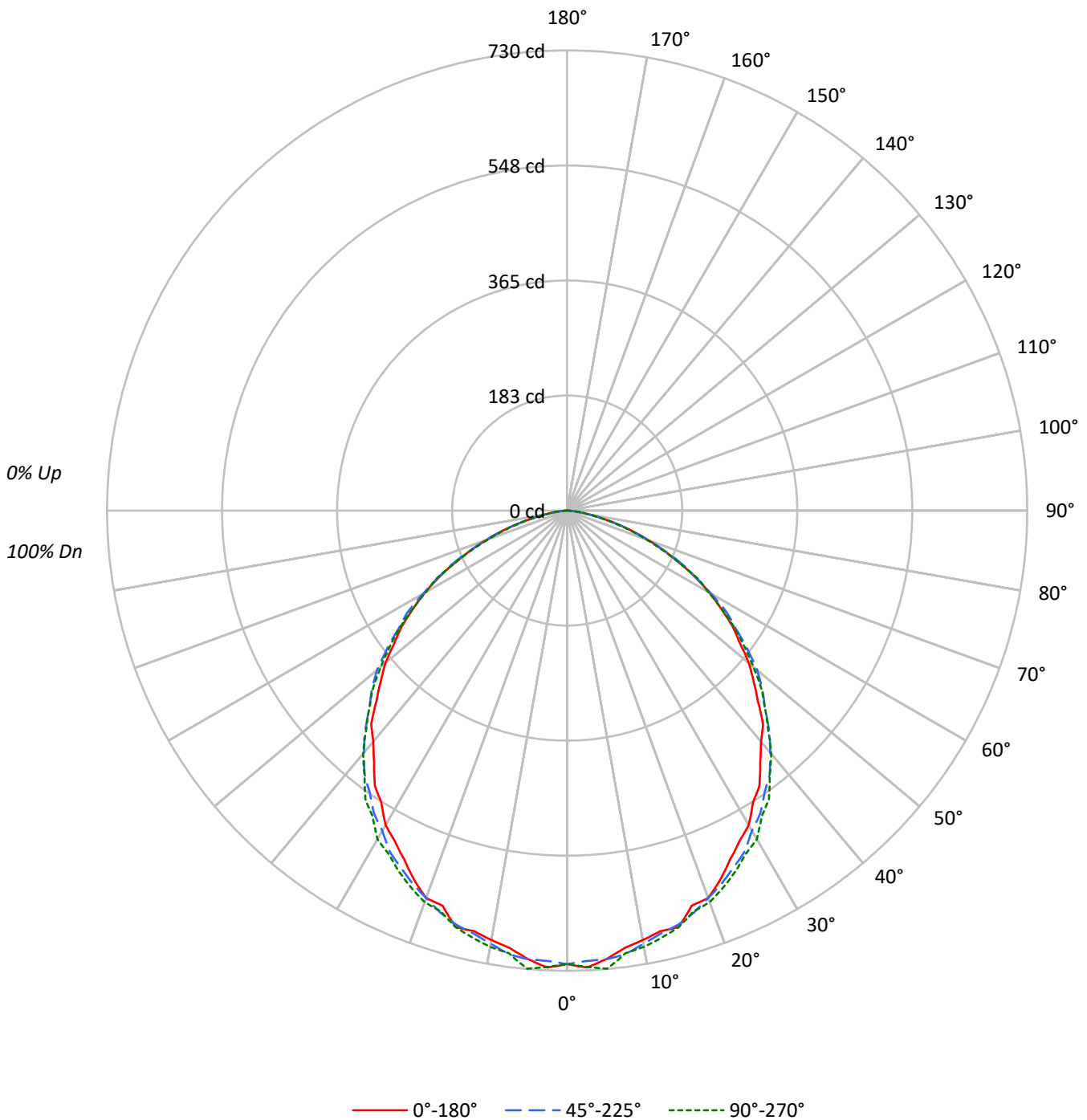
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1813.0 lumens  
Efficiency: N/A  
Efficacy: 109.2 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): 16.6  
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°	1936	1936	1936
5°	1929	1930	1971
10°	1890	1907	1920
15°	1905	1895	1906
20°	1873	1873	1893
25°	1815	1855	1876
30°	1790	1822	1871
35°	1748	1794	1834
40°	1680	1761	1769
45°	1630	1687	1690
50°	1576	1647	1616
55°	1502	1531	1520
60°	1404	1418	1393
65°	1252	1284	1243
70°	1074	1078	1048
75°	850	848	816
80°	570	555	533
85°	309	306	287



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.7	3.7
10°-20°	191.8	10.6
20°-30°	287.3	15.8
30°-40°	340.5	18.8
40°-50°	341.2	18.8
50°-60°	289.6	16.0
60°-70°	195.2	10.8
70°-80°	85.8	4.7
80°-90°	13.9	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°	546.8	30.2
0°-40°	887.3	48.9
0°-60°	1518.0	83.7
0°-90°	1813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1813.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	714	713	714	712	730	67
15°	684	676	680	684	684	191
25°	611	615	625	633	632	283
35°	532	534	546	559	558	330
45°	428	436	443	455	444	331
55°	320	318	326	324	324	285
65°	197	194	202	194	195	196
75°	82	80	82	76	78	88
85°	10	10	10	10	9	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	719.4	719.4	719.4	719.4	719.4
2.5°	725.6	720.1	715.0	720.9	724.6
5°	714.2	712.6	714.5	712.4	729.6
7.5°	699.6	706.0	709.7	707.4	708.4
10°	691.8	689.5	697.8	703.6	702.7
12.5°	683.4	686.8	687.2	693.4	694.0
15°	683.9	676.0	680.2	683.7	684.0
17.5°	657.3	665.9	668.7	676.8	666.8
20°	654.1	647.8	654.1	662.3	661.0
22.5°	634.1	627.1	640.5	647.8	647.4
25°	611.4	614.8	624.8	633.0	631.7
27.5°	591.6	595.5	609.8	621.0	613.7
30°	576.2	574.3	586.3	596.4	602.0
32.5°	548.8	555.9	570.0	579.9	574.6
35°	532.2	533.8	546.1	558.8	558.4
37.5°	503.1	510.5	527.8	531.4	528.1
40°	478.3	485.7	501.4	505.2	503.6
42.5°	460.0	461.3	474.8	479.2	472.2
45°	428.2	436.2	443.4	454.8	444.1
47.5°	401.1	404.8	420.4	423.4	417.8
50°	376.4	377.7	393.4	389.6	385.9
52.5°	345.5	351.0	359.8	359.1	354.7
55°	320.1	317.9	326.3	324.1	324.0
57.5°	289.5	293.2	300.1	296.6	290.9
60°	260.9	261.0	263.5	259.5	258.8
62.5°	229.0	230.2	230.7	225.8	233.8
65°	196.6	194.0	201.6	193.9	195.2
67.5°	166.8	168.1	167.4	162.5	164.4
70°	136.5	138.2	137.0	131.5	133.2
72.5°	108.9	106.8	108.1	101.2	104.4
75°	81.8	80.2	81.6	75.9	78.5
77.5°	55.7	57.0	56.1	53.0	54.8
80°	36.8	35.8	35.8	34.0	34.4
82.5°	21.5	20.4	20.2	19.6	20.4
85°	10.0	9.8	9.9	9.7	9.3
87.5°	3.6	3.7	3.7	3.5	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)