

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: P588935

Luminaire Tested: **FMR-24-2-LD4-1STD-40-UNV-82-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588935  
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-40-UNV-82-86-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

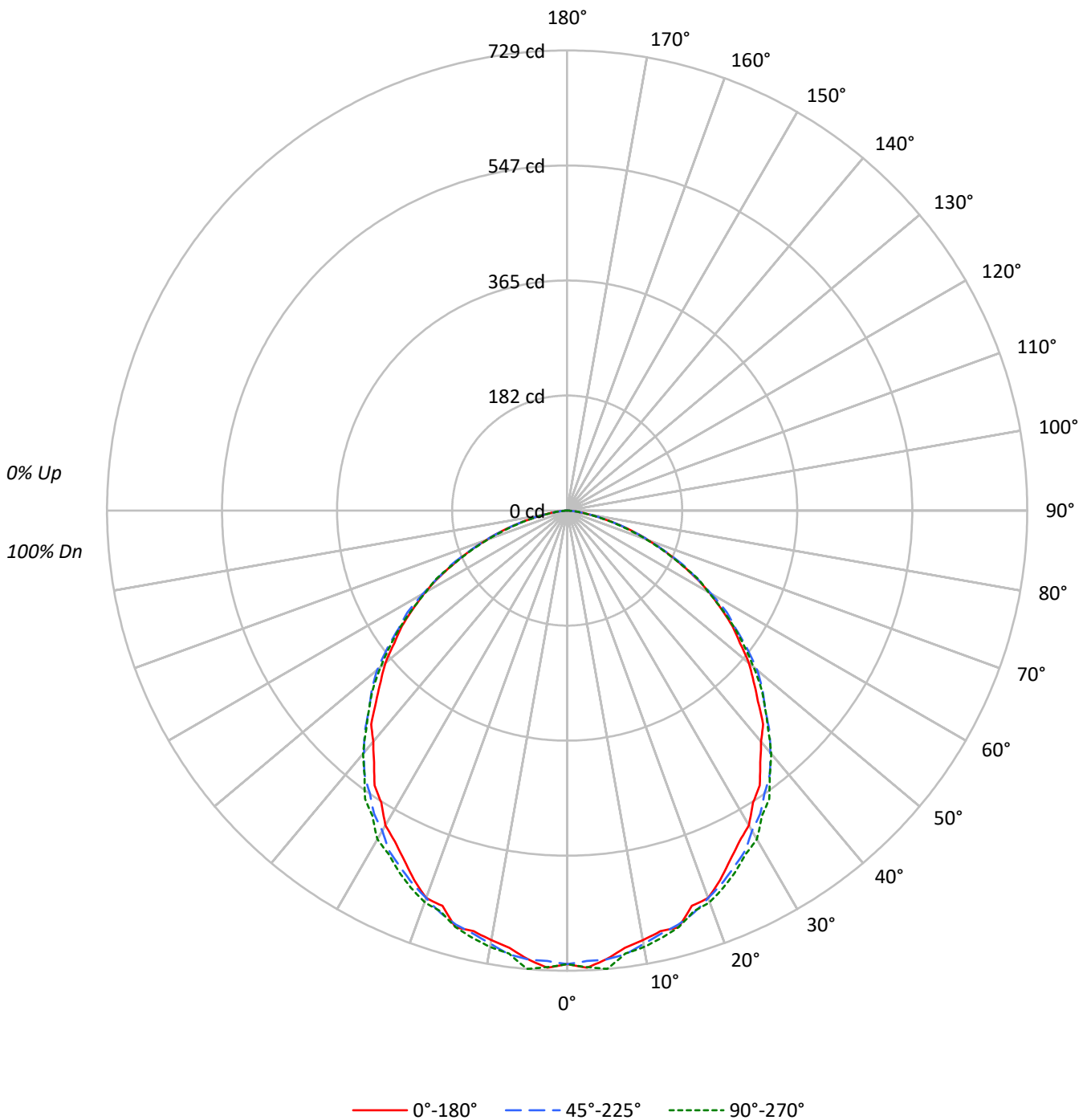
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1811.0 lumens  
Efficiency: N/A  
Efficacy: 109.1 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°	1934	1934	1934
5°	1927	1928	1969
10°	1888	1905	1918
15°	1903	1893	1903
20°	1871	1871	1891
25°	1814	1853	1874
30°	1789	1820	1868
35°	1746	1792	1832
40°	1678	1759	1767
45°	1628	1686	1688
50°	1574	1645	1614
55°	1500	1529	1518
60°	1403	1417	1391
65°	1251	1282	1242
70°	1073	1076	1046
75°	849	848	815
80°	569	553	532
85°	309	306	287



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.6	3.7
10°-20°	191.6	10.6
20°-30°	287.0	15.8
30°-40°	340.2	18.8
40°-50°	340.8	18.8
50°-60°	289.3	16.0
60°-70°	195.0	10.8
70°-80°	85.7	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°	546.2	30.2
0°-40°	886.3	48.9
0°-60°	1516.3	83.7
0°-90°	1811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1811.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	714	712	714	712	729	67
15°	683	675	679	683	683	190
25°	611	614	624	632	631	282
35°	532	533	546	558	558	330
45°	428	436	443	454	444	331
55°	320	318	326	324	324	284
65°	196	194	201	194	195	195
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°	718.6	718.6	718.6	718.6	718.6
2.5°	724.8	719.3	714.2	720.1	723.8
5°	713.5	711.8	713.7	711.6	728.8
7.5°	698.8	705.2	708.9	706.6	707.6
10°	691.0	688.8	697.0	702.8	702.0
12.5°	682.7	686.0	686.5	692.7	693.2
15°	683.1	675.2	679.4	682.9	683.2
17.5°	656.6	665.1	668.0	676.1	666.0
20°	653.3	647.1	653.3	661.6	660.3
22.5°	633.4	626.4	639.8	647.1	646.7
25°	610.8	614.1	624.1	632.3	631.0
27.5°	590.9	594.8	609.1	620.3	613.1
30°	575.6	573.6	585.7	595.7	601.3
32.5°	548.2	555.3	569.4	579.3	574.0
35°	531.6	533.2	545.5	558.1	557.8
37.5°	502.6	509.9	527.3	530.8	527.5
40°	477.8	485.1	500.8	504.6	503.0
42.5°	459.5	460.8	474.3	478.6	471.7
45°	427.7	435.7	442.9	454.3	443.6
47.5°	400.6	404.3	419.9	423.0	417.3
50°	376.0	377.3	393.0	389.2	385.5
52.5°	345.1	350.6	359.4	358.7	354.3
55°	319.7	317.6	325.9	323.7	323.6
57.5°	289.2	292.9	299.8	296.2	290.6
60°	260.6	260.7	263.2	259.2	258.5
62.5°	228.8	229.9	230.5	225.5	233.5
65°	196.4	193.8	201.4	193.7	195.0
67.5°	166.6	167.9	167.2	162.4	164.2
70°	136.4	138.1	136.8	131.4	133.0
72.5°	108.7	106.7	108.0	101.1	104.3
75°	81.7	80.1	81.6	75.8	78.4
77.5°	55.7	57.0	56.0	53.0	54.7
80°	36.7	35.7	35.7	34.0	34.3
82.5°	21.4	20.4	20.1	19.6	20.4
85°	10.0	9.7	9.9	9.6	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)