

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: P588713

Luminaire Tested: **FMR-24-2-LD4-1HI-35-UNV-82-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588713  
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-LD4-1HI-35-UNV-82-88-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

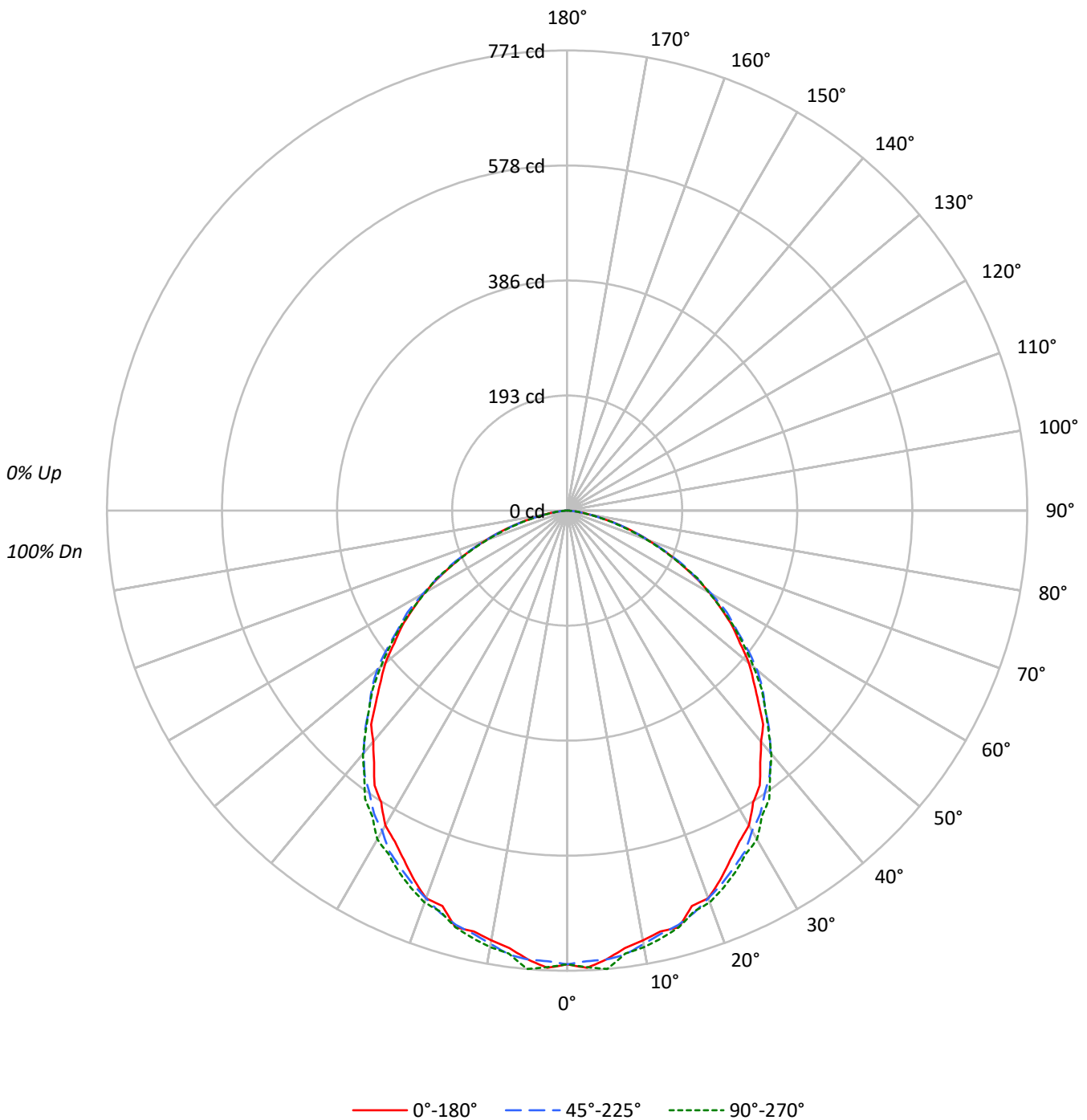
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1916.0 lumens  
Efficiency: N/A  
Efficacy: 88.7 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): 21.6  
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°	2046	2046	2046
5°	2039	2040	2083
10°	1998	2015	2029
15°	2013	2003	2014
20°	1979	1979	2001
25°	1919	1961	1982
30°	1892	1926	1977
35°	1848	1896	1939
40°	1776	1861	1870
45°	1722	1783	1786
50°	1665	1741	1707
55°	1587	1618	1606
60°	1484	1499	1472
65°	1323	1357	1314
70°	1135	1139	1108
75°	899	897	862
80°	603	586	563
85°	327	324	303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.5	3.7
10°-20°	202.7	10.6
20°-30°	303.6	15.8
30°-40°	359.9	18.8
40°-50°	360.5	18.8
50°-60°	306.0	16.0
60°-70°	206.3	10.8
70°-80°	90.7	4.7
80°-90°	14.7	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°	577.8	30.2
0°-40°	937.7	48.9
0°-60°	1604.3	83.7
0°-90°	1916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1916.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	760	760	760	760	760	
5°	755	753	755	753	771	71
15°	723	714	719	722	723	201
25°	646	650	660	669	668	299
35°	562	564	577	590	590	349
45°	452	461	469	481	469	350
55°	338	336	345	342	342	301
65°	208	205	213	205	206	207
75°	86	85	86	80	83	93
85°	11	10	10	10	10	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	760.2	760.2	760.2	760.2	760.2
2.5°	766.8	761.0	755.6	761.9	765.7
5°	754.8	753.1	755.1	752.9	771.0
7.5°	739.3	746.1	750.0	747.6	748.6
10°	731.1	728.7	737.4	743.5	742.7
12.5°	722.2	725.8	726.3	732.8	733.4
15°	722.7	714.4	718.8	722.5	722.8
17.5°	694.7	703.7	706.7	715.3	704.7
20°	691.2	684.6	691.2	700.0	698.6
22.5°	670.1	662.8	676.9	684.6	684.1
25°	646.2	649.7	660.3	668.9	667.6
27.5°	625.2	629.3	644.4	656.3	648.6
30°	609.0	606.9	619.7	630.3	636.2
32.5°	580.0	587.5	602.4	612.9	607.3
35°	562.4	564.1	577.2	590.5	590.1
37.5°	531.7	539.5	557.8	561.6	558.1
40°	505.5	513.3	529.8	533.9	532.2
42.5°	486.2	487.5	501.8	506.4	499.0
45°	452.5	460.9	468.6	480.7	469.3
47.5°	423.8	427.8	444.3	447.5	441.5
50°	397.8	399.2	415.8	411.8	407.8
52.5°	365.1	370.9	380.3	379.5	374.9
55°	338.2	336.0	344.8	342.5	342.4
57.5°	306.0	309.9	317.1	313.4	307.4
60°	275.7	275.8	278.5	274.2	273.5
62.5°	242.1	243.2	243.8	238.6	247.1
65°	207.8	205.0	213.1	205.0	206.3
67.5°	176.3	177.7	176.9	171.8	173.7
70°	144.3	146.1	144.8	139.0	140.8
72.5°	115.0	112.9	114.3	107.0	110.3
75°	86.5	84.7	86.3	80.2	82.9
77.5°	58.9	60.3	59.3	56.0	57.9
80°	38.9	37.8	37.8	35.9	36.3
82.5°	22.7	21.6	21.3	20.7	21.6
85°	10.6	10.3	10.5	10.2	9.8
87.5°	3.8	3.9	3.9	3.7	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)