

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: P588895

Luminaire Tested: **FMR-24-2-LD4-1STD-35-UNV-81-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588895  
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-81-86-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

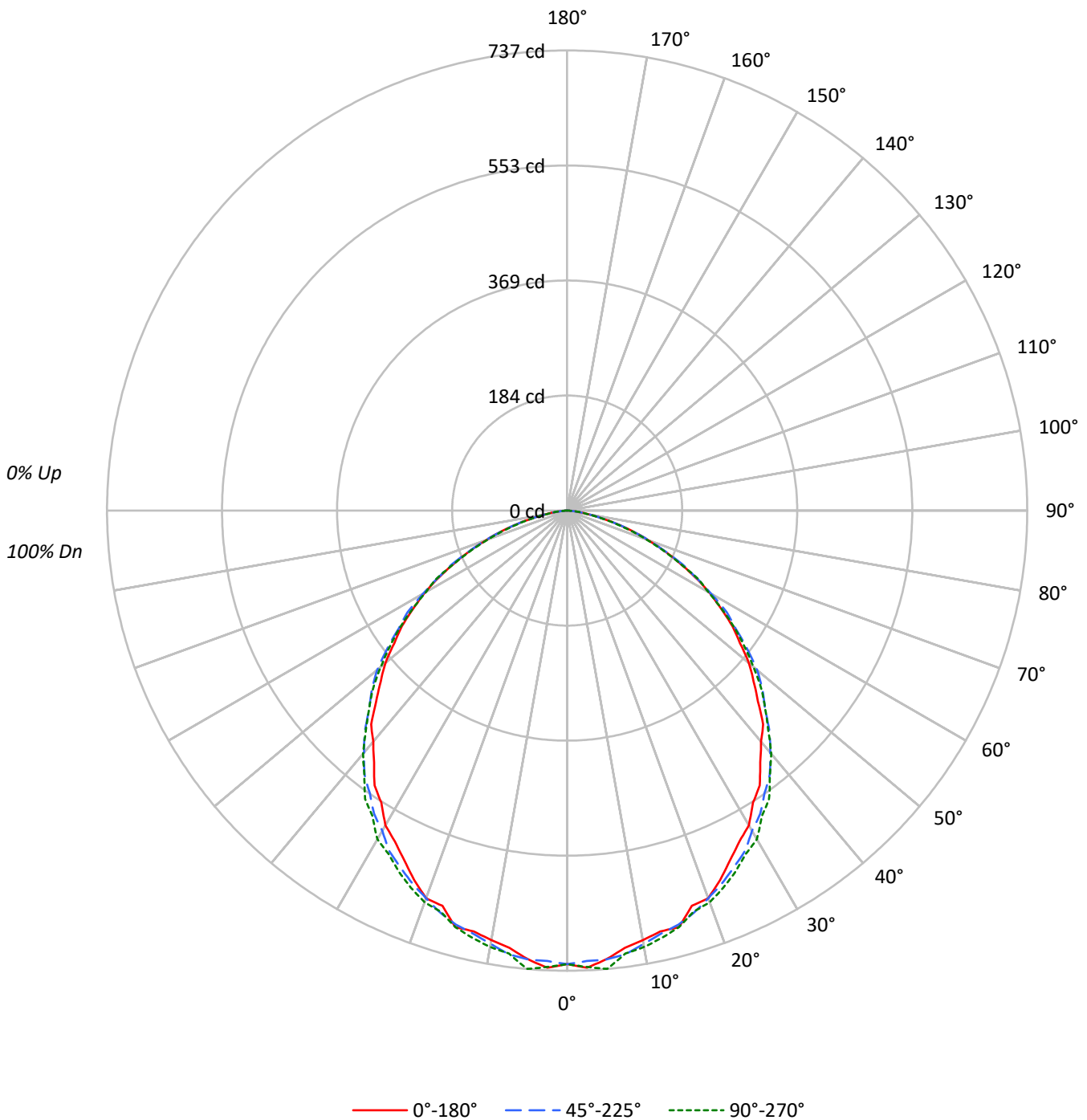
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1831.0 lumens  
Efficiency: N/A  
Efficacy: 110.3 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): 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°	1955	1955	1955
5°	1948	1949	1990
10°	1909	1926	1939
15°	1924	1914	1925
20°	1892	1892	1912
25°	1833	1874	1894
30°	1808	1840	1889
35°	1766	1812	1852
40°	1697	1779	1787
45°	1646	1704	1707
50°	1592	1663	1631
55°	1516	1546	1535
60°	1418	1432	1406
65°	1265	1296	1256
70°	1085	1089	1058
75°	859	858	824
80°	575	559	538
85°	312	309	290



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.3	3.7
10°-20°	193.7	10.6
20°-30°	290.2	15.8
30°-40°	343.9	18.8
40°-50°	344.5	18.8
50°-60°	292.5	16.0
60°-70°	197.2	10.8
70°-80°	86.6	4.7
80°-90°	14.1	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°	552.2	30.2
0°-40°	896.1	48.9
0°-60°	1533.1	83.7
0°-90°	1831.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1831.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	721	720	722	720	737	68
15°	691	683	687	690	691	192
25°	618	621	631	639	638	285
35°	538	539	552	564	564	334
45°	432	440	448	459	448	334
55°	323	321	330	327	327	288
65°	199	196	204	196	197	198
75°	83	81	82	77	79	89
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°	726.5	726.5	726.5	726.5	726.5
2.5°	732.8	727.2	722.1	728.1	731.7
5°	721.3	719.6	721.6	719.5	736.8
7.5°	706.5	713.0	716.7	714.4	715.4
10°	698.6	696.4	704.7	710.5	709.7
12.5°	690.2	693.6	694.0	700.3	700.9
15°	690.7	682.7	686.9	690.5	690.8
17.5°	663.8	672.5	675.4	683.5	673.4
20°	660.6	654.3	660.6	668.9	667.6
22.5°	640.4	633.3	646.9	654.3	653.8
25°	617.5	620.9	631.0	639.3	637.9
27.5°	597.4	601.4	615.8	627.2	619.8
30°	581.9	580.0	592.2	602.3	607.9
32.5°	554.3	561.4	575.7	585.7	580.4
35°	537.5	539.1	551.6	564.3	563.9
37.5°	508.1	515.5	533.1	536.6	533.4
40°	483.1	490.5	506.3	510.2	508.6
42.5°	464.6	465.9	479.5	483.9	476.9
45°	432.4	440.5	447.8	459.3	448.5
47.5°	405.0	408.8	424.5	427.6	421.9
50°	380.2	381.5	397.3	393.5	389.7
52.5°	348.9	354.5	363.4	362.6	358.2
55°	323.2	321.1	329.5	327.3	327.2
57.5°	292.4	296.1	303.1	299.5	293.8
60°	263.5	263.6	266.1	262.1	261.3
62.5°	231.3	232.4	233.0	228.0	236.1
65°	198.6	196.0	203.6	195.9	197.2
67.5°	168.5	169.8	169.0	164.2	166.0
70°	137.9	139.6	138.4	132.8	134.5
72.5°	109.9	107.9	109.2	102.2	105.4
75°	82.6	81.0	82.5	76.6	79.3
77.5°	56.3	57.6	56.7	53.6	55.3
80°	37.1	36.1	36.1	34.3	34.7
82.5°	21.7	20.6	20.4	19.8	20.6
85°	10.1	9.8	10.0	9.8	9.4
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)