

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: P589126

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-82-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589126  
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-LD4-2LO-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

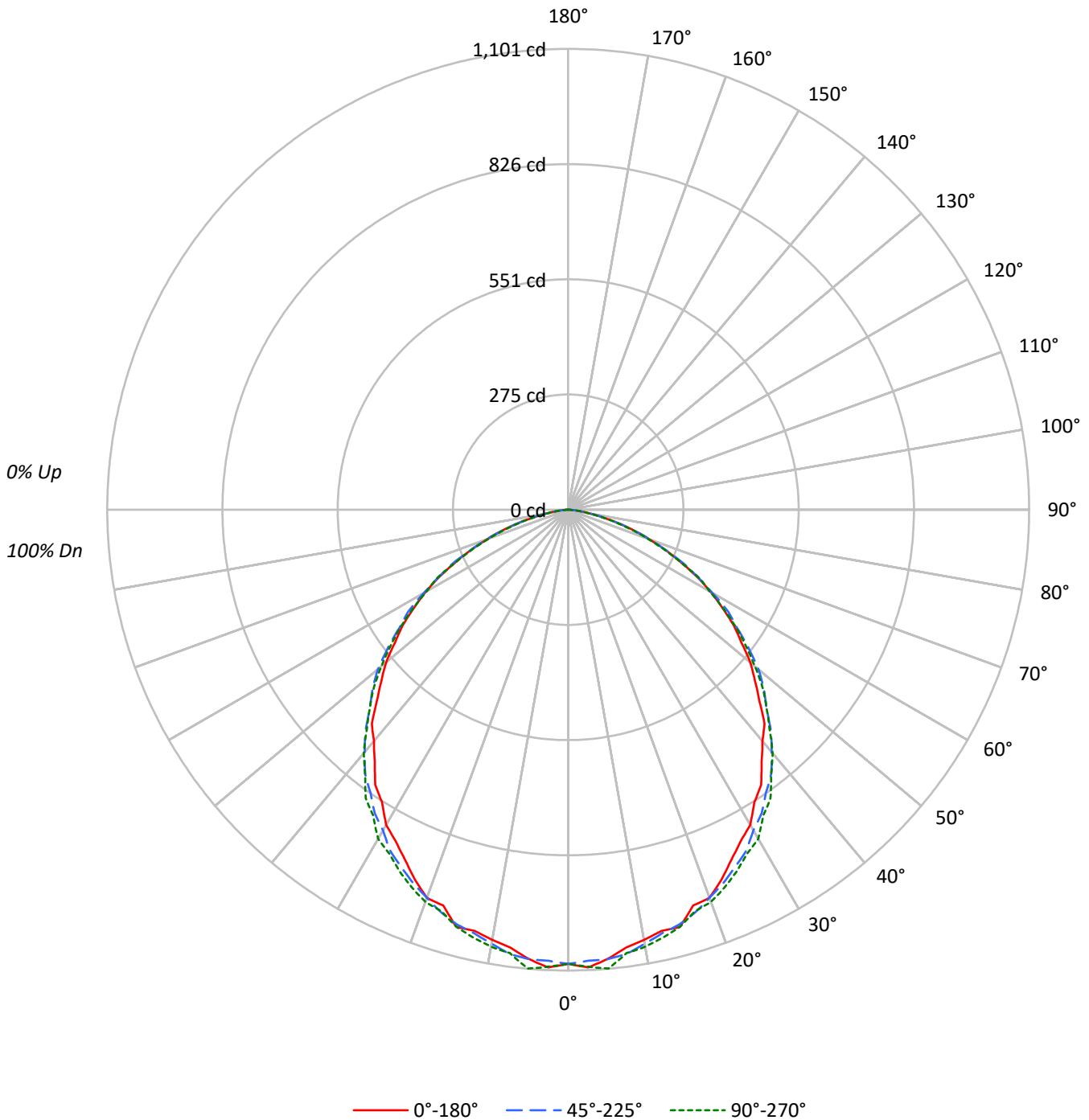
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2735.0 lumens  
Efficiency: N/A  
Efficacy: 116.9 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): 23.4  
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	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°	2920	2920	2920
5°	2911	2912	2973
10°	2852	2876	2897
15°	2874	2859	2874
20°	2826	2826	2856
25°	2739	2798	2829
30°	2701	2748	2822
35°	2638	2707	2767
40°	2535	2657	2669
45°	2458	2546	2549
50°	2377	2485	2437
55°	2265	2309	2293
60°	2118	2139	2101
65°	1889	1937	1875
70°	1621	1626	1581
75°	1283	1281	1231
80°	860	835	803
85°	466	463	432



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.1	3.7
10°-20°	289.3	10.6
20°-30°	433.4	15.8
30°-40°	513.7	18.8
40°-50°	514.7	18.8
50°-60°	436.9	16.0
60°-70°	294.5	10.8
70°-80°	129.4	4.7
80°-90°	21.0	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°	824.8	30.2
0°-40°	1338.5	48.9
0°-60°	2290.0	83.7
0°-90°	2735.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2735.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1085	1085	1085	1085	1085	
5°	1078	1075	1078	1075	1101	102
15°	1032	1020	1026	1031	1032	287
25°	922	927	942	955	953	426
35°	803	805	824	843	842	498
45°	646	658	669	686	670	500
55°	483	480	492	489	489	429
65°	297	293	304	293	294	295
75°	123	121	123	114	118	132
85°	15	15	15	15	14	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1085.2	1085.2	1085.2	1085.2	1085.2
2.5°	1094.6	1086.3	1078.6	1087.6	1093.0
5°	1077.5	1075.0	1077.9	1074.7	1100.6
7.5°	1055.3	1065.0	1070.6	1067.1	1068.6
10°	1043.6	1040.2	1052.7	1061.4	1060.1
12.5°	1031.0	1036.0	1036.7	1046.1	1046.9
15°	1031.7	1019.7	1026.1	1031.4	1031.8
17.5°	991.6	1004.5	1008.8	1021.0	1005.9
20°	986.7	977.3	986.7	999.1	997.2
22.5°	956.6	946.0	966.2	977.3	976.6
25°	922.4	927.4	942.5	954.9	952.9
27.5°	892.4	898.3	919.8	936.8	925.9
30°	869.3	866.3	884.5	899.7	908.1
32.5°	827.9	838.6	859.9	874.9	866.9
35°	802.9	805.2	823.9	842.9	842.4
37.5°	759.0	770.1	796.3	801.6	796.7
40°	721.6	732.7	756.3	762.1	759.7
42.5°	694.0	695.9	716.3	722.8	712.3
45°	645.9	658.0	668.9	686.1	669.9
47.5°	605.0	610.6	634.2	638.8	630.2
50°	567.9	569.8	593.5	587.8	582.2
52.5°	521.2	529.5	542.8	541.7	535.1
55°	482.8	479.6	492.2	488.9	488.7
57.5°	436.7	442.3	452.7	447.4	438.8
60°	393.6	393.7	397.5	391.5	390.4
62.5°	345.5	347.2	348.0	340.6	352.7
65°	296.6	292.7	304.2	292.6	294.5
67.5°	251.6	253.6	252.5	245.2	248.0
70°	206.0	208.5	206.7	198.4	200.9
72.5°	164.2	161.1	163.1	152.7	157.5
75°	123.4	120.9	123.2	114.5	118.4
77.5°	84.1	86.0	84.6	80.0	82.7
80°	55.5	53.9	53.9	51.3	51.8
82.5°	32.4	30.8	30.4	29.6	30.8
85°	15.1	14.7	15.0	14.6	14.0
87.5°	5.5	5.6	5.6	5.3	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)