

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: P589157

Luminaire Tested: **FMR-24-2-LD4-2LO-50-UNV-82-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589157
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-50-UNV-82-84-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

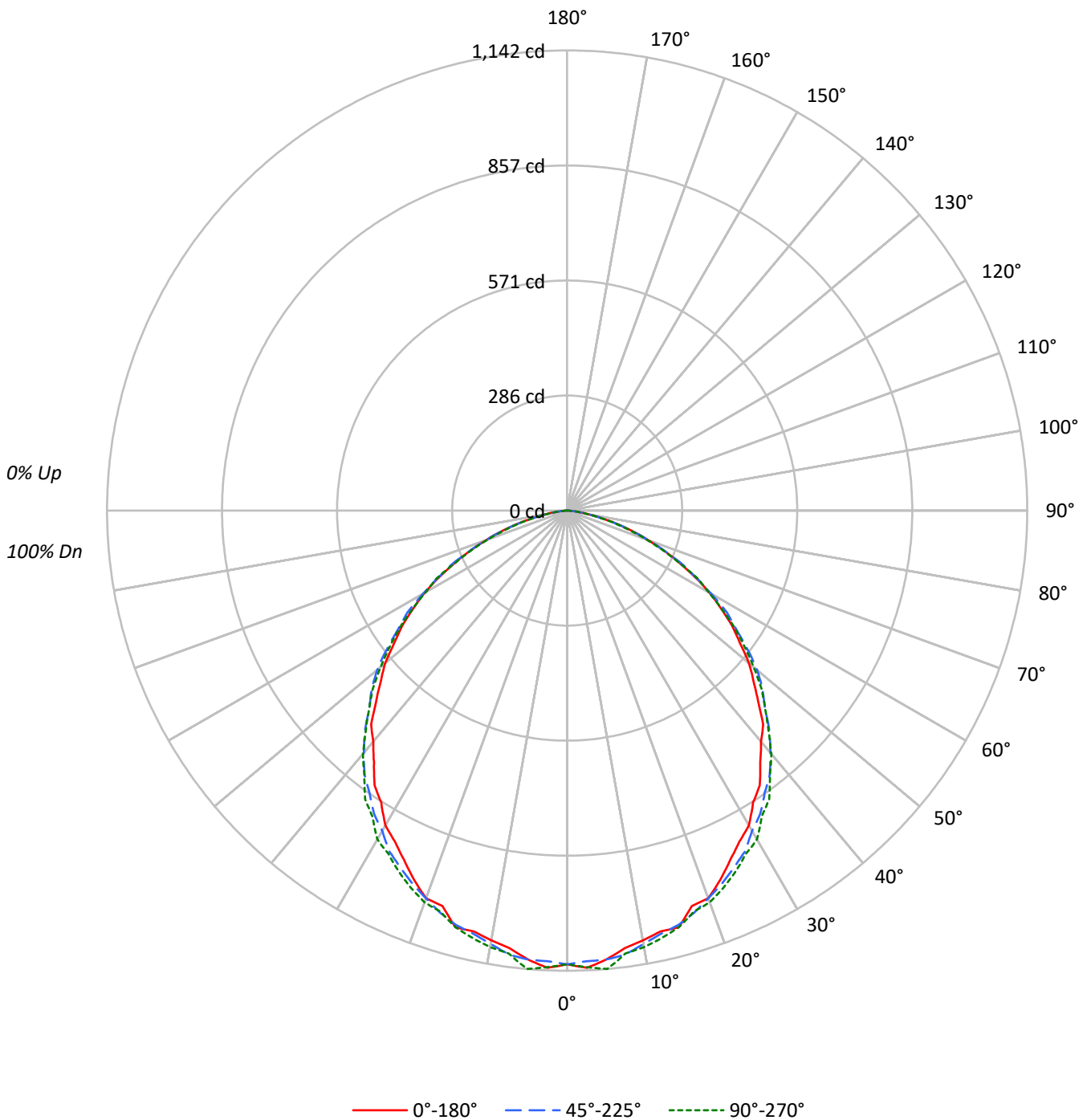
Lumens per Lamp: N/A
Luminaire Lumens: 2838.0 lumens
Efficiency: N/A
Efficacy: 121.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	3030	3030	3030
5°	3020	3021	3085
10°	2959	2985	3006
15°	2982	2966	2983
20°	2932	2932	2963
25°	2842	2904	2936
30°	2803	2852	2928
35°	2737	2808	2871
40°	2630	2757	2769
45°	2551	2641	2645
50°	2467	2578	2529
55°	2350	2396	2379
60°	2198	2220	2180
65°	1960	2010	1946
70°	1681	1688	1640
75°	1332	1329	1278
80°	893	868	834
85°	485	482	448



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.9	3.7
10°-20°	300.2	10.6
20°-30°	449.8	15.8
30°-40°	533.1	18.8
40°-50°	534.0	18.8
50°-60°	453.3	16.0
60°-70°	305.6	10.8
70°-80°	134.3	4.7
80°-90°	21.8	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°	855.9	30.2
0°-40°	1388.9	48.9
0°-60°	2376.3	83.7
0°-90°	2838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1118	1115	1118	1115	1142	105
15°	1070	1058	1065	1070	1071	298
25°	957	962	978	991	989	442
35°	833	836	855	875	874	517
45°	670	683	694	712	695	518
55°	501	498	511	507	507	446
65°	308	304	316	304	306	306
75°	128	126	128	119	123	137
85°	16	15	16	15	14	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1126.0	1126.0	1126.0	1126.0	1126.0
2.5°	1135.8	1127.2	1119.2	1128.5	1134.2
5°	1118.1	1115.4	1118.5	1115.1	1142.0
7.5°	1095.1	1105.1	1110.9	1107.3	1108.9
10°	1082.9	1079.4	1092.3	1101.3	1100.0
12.5°	1069.8	1075.0	1075.7	1085.5	1086.4
15°	1070.5	1058.1	1064.7	1070.2	1070.7
17.5°	1028.9	1042.3	1046.8	1059.5	1043.8
20°	1023.8	1014.1	1023.8	1036.8	1034.7
22.5°	992.6	981.7	1002.6	1014.1	1013.4
25°	957.1	962.3	978.0	990.8	988.8
27.5°	926.0	932.1	954.5	972.1	960.7
30°	902.0	898.9	917.8	933.6	942.3
32.5°	859.1	870.2	892.3	907.8	899.5
35°	833.1	835.6	854.9	874.7	874.1
37.5°	787.6	799.1	826.3	831.8	826.7
40°	748.8	760.2	784.8	790.8	788.3
42.5°	720.1	722.2	743.2	750.1	739.2
45°	670.2	682.8	694.1	712.0	695.1
47.5°	627.8	633.6	658.0	662.8	654.0
50°	589.3	591.3	615.9	609.9	604.1
52.5°	540.9	549.4	563.2	562.1	555.2
55°	501.0	497.7	510.8	507.3	507.1
57.5°	453.2	459.0	469.8	464.2	455.4
60°	408.4	408.5	412.5	406.2	405.1
62.5°	358.5	360.3	361.1	353.4	365.9
65°	307.8	303.7	315.6	303.6	305.6
67.5°	261.1	263.2	262.0	254.4	257.3
70°	213.7	216.3	214.5	205.9	208.5
72.5°	170.4	167.2	169.2	158.5	163.4
75°	128.1	125.5	127.8	118.8	122.9
77.5°	87.2	89.3	87.8	83.0	85.8
80°	57.6	56.0	56.0	53.2	53.8
82.5°	33.6	32.0	31.5	30.7	32.0
85°	15.7	15.3	15.6	15.1	14.5
87.5°	5.7	5.8	5.8	5.5	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)