

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: P589141

Luminaire Tested: **FMR-24-2-LD4-2LO-50-UNV-80-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589141  
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-80-84-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

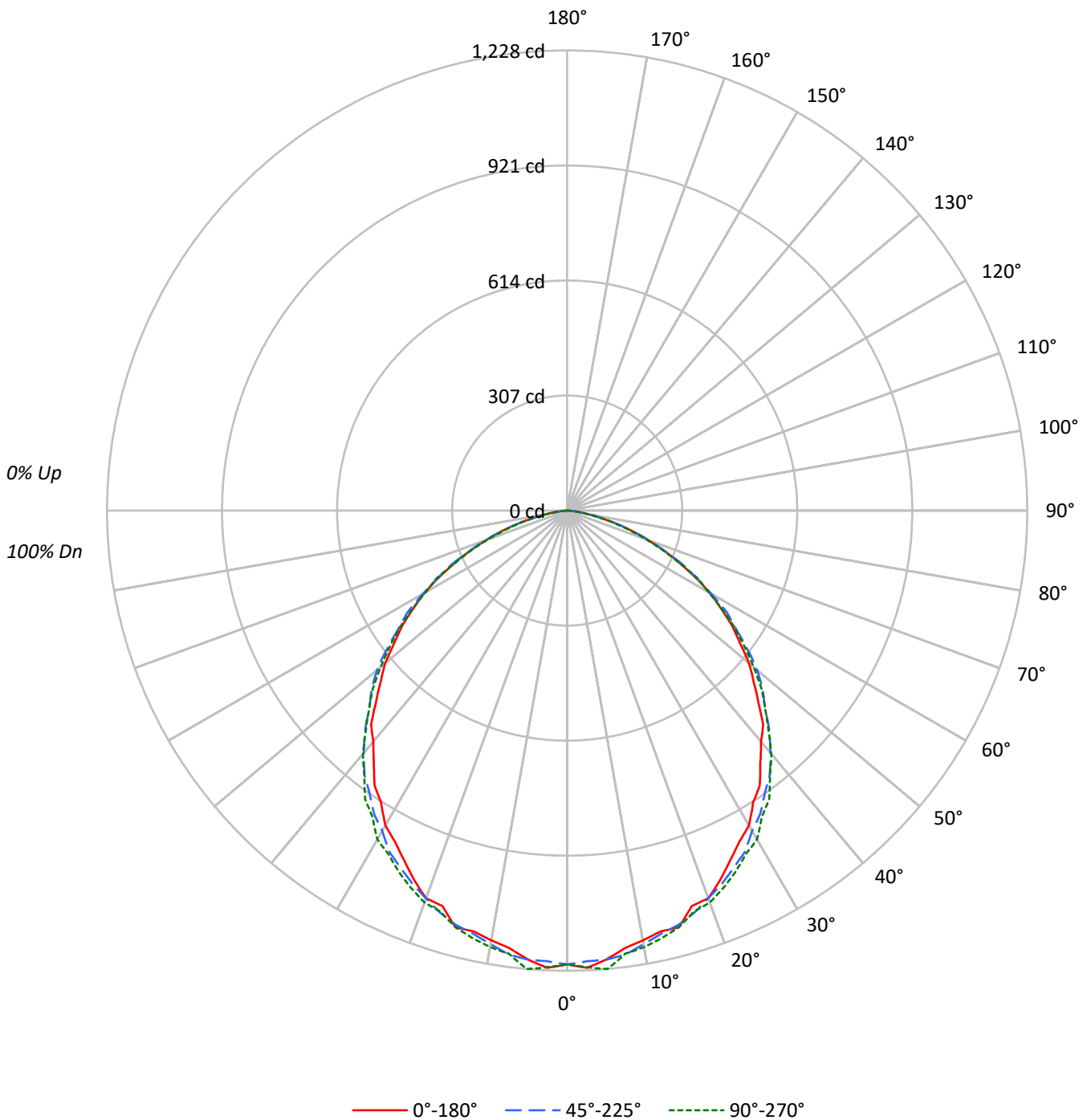
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3052.0 lumens  
Efficiency: N/A  
Efficacy: 130.4 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°	3259	3259	3259
5°	3248	3249	3318
10°	3182	3210	3233
15°	3207	3190	3208
20°	3153	3153	3187
25°	3056	3123	3157
30°	3014	3067	3149
35°	2943	3020	3088
40°	2829	2965	2978
45°	2743	2841	2845
50°	2653	2773	2719
55°	2528	2577	2559
60°	2364	2387	2344
65°	2108	2161	2093
70°	1808	1814	1764
75°	1432	1429	1373
80°	959	933	897
85°	522	516	482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.9	3.7
10°-20°	322.8	10.6
20°-30°	483.7	15.8
30°-40°	573.2	18.8
40°-50°	574.3	18.8
50°-60°	487.5	16.0
60°-70°	328.7	10.8
70°-80°	144.4	4.7
80°-90°	23.5	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°	920.4	30.2
0°-40°	1493.7	48.9
0°-60°	2555.5	83.7
0°-90°	3052.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3052.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1211	1211	1211	1211	1211	
5°	1202	1200	1203	1199	1228	113
15°	1151	1138	1145	1151	1151	321
25°	1029	1035	1052	1066	1063	476
35°	896	899	919	941	940	556
45°	721	734	746	766	748	558
55°	539	535	549	546	545	479
65°	331	327	339	326	329	329
75°	138	135	137	128	132	148
85°	17	16	17	16	16	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1211.0	1211.0	1211.0	1211.0	1211.0
2.5°	1221.4	1212.2	1203.6	1213.6	1219.7
5°	1202.4	1199.5	1202.8	1199.2	1228.2
7.5°	1177.7	1188.4	1194.7	1190.8	1192.5
10°	1164.5	1160.8	1174.7	1184.4	1183.0
12.5°	1150.4	1156.1	1156.9	1167.3	1168.3
15°	1151.2	1137.9	1145.0	1150.9	1151.4
17.5°	1106.5	1120.9	1125.7	1139.3	1122.5
20°	1101.0	1090.6	1101.0	1115.0	1112.8
22.5°	1067.4	1055.7	1078.2	1090.6	1089.8
25°	1029.3	1034.9	1051.8	1065.5	1063.4
27.5°	995.8	1002.4	1026.5	1045.4	1033.2
30°	970.0	966.7	987.1	1003.9	1013.3
32.5°	923.9	935.8	959.5	976.3	967.4
35°	895.9	898.6	919.4	940.6	940.0
37.5°	847.0	859.3	888.6	894.5	889.0
40°	805.2	817.6	844.0	850.4	847.7
42.5°	774.4	776.6	799.3	806.6	794.9
45°	720.8	734.2	746.4	765.7	747.5
47.5°	675.1	681.4	707.7	712.8	703.3
50°	633.7	635.9	662.3	655.9	649.6
52.5°	581.6	590.9	605.7	604.5	597.1
55°	538.8	535.2	549.3	545.5	545.4
57.5°	487.4	493.6	505.2	499.2	489.7
60°	439.2	439.4	443.6	436.9	435.6
62.5°	385.6	387.4	388.4	380.1	393.5
65°	331.0	326.6	339.4	326.5	328.7
67.5°	280.8	283.0	281.7	273.6	276.7
70°	229.8	232.7	230.6	221.4	224.2
72.5°	183.2	179.8	182.0	170.4	175.7
75°	137.7	134.9	137.4	127.7	132.1
77.5°	93.8	96.0	94.4	89.3	92.2
80°	61.9	60.2	60.2	57.2	57.9
82.5°	36.1	34.4	33.9	33.0	34.4
85°	16.9	16.4	16.7	16.3	15.6
87.5°	6.1	6.3	6.3	5.9	5.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)