

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: P588871

Luminaire Tested: **FMR-24-2-LD4-1LO-50-UNV-82-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588871  
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-LD4-1LO-50-UNV-82-86-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

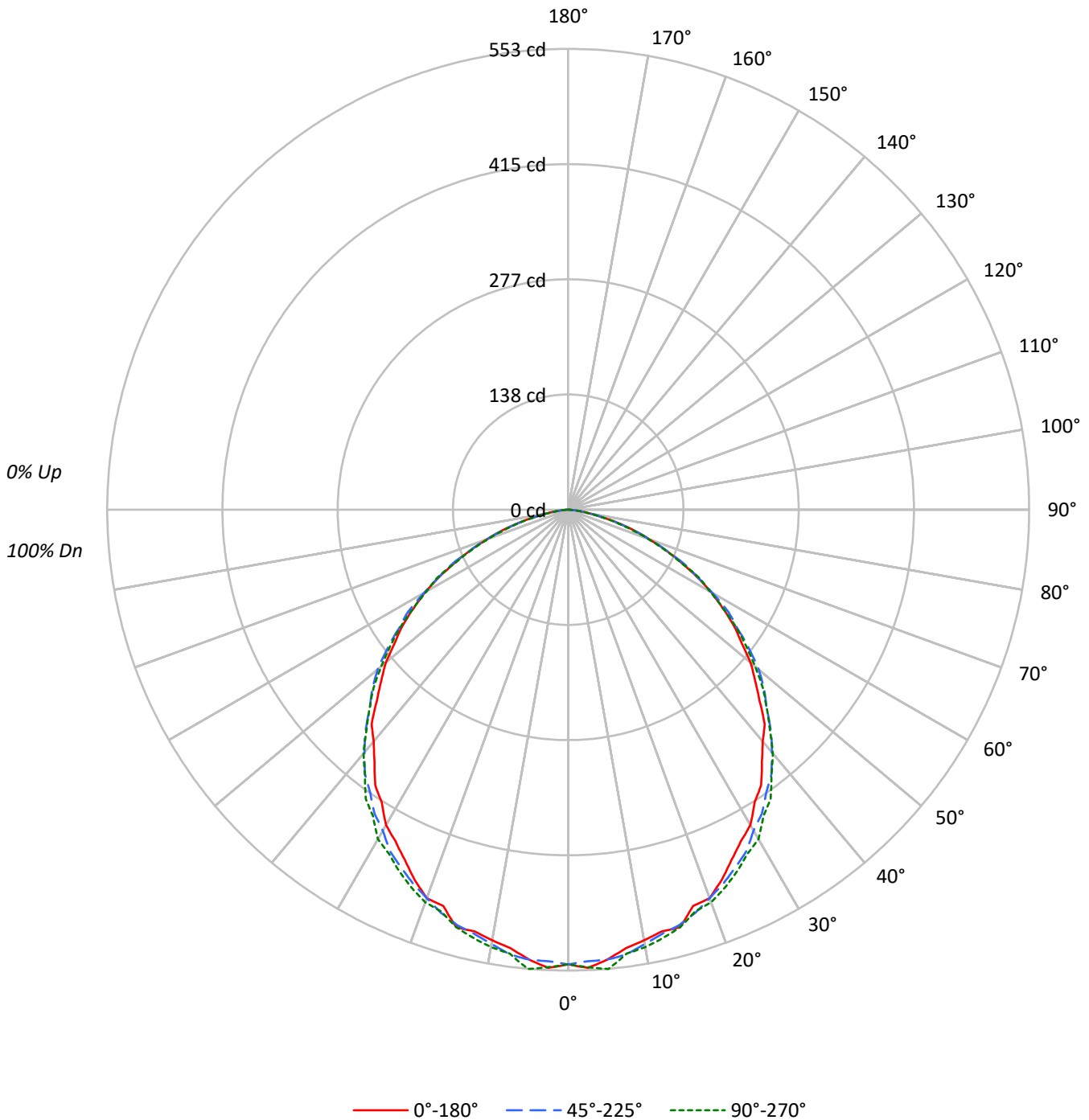
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1375.0 lumens  
Efficiency: N/A  
Efficacy: 117.5 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): 11.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1468	1468	1468
5°	1463	1464	1495
10°	1433	1446	1456
15°	1445	1437	1445
20°	1420	1420	1436
25°	1377	1407	1423
30°	1358	1382	1418
35°	1326	1361	1391
40°	1274	1336	1342
45°	1236	1280	1282
50°	1195	1249	1225
55°	1139	1161	1153
60°	1065	1075	1056
65°	949	974	943
70°	814	817	795
75°	646	644	619
80°	432	420	404
85°	235	232	216



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.3	3.7
10°-20°	145.4	10.6
20°-30°	217.9	15.8
30°-40°	258.3	18.8
40°-50°	258.7	18.8
50°-60°	219.6	16.0
60°-70°	148.1	10.8
70°-80°	65.1	4.7
80°-90°	10.6	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°	414.7	30.2
0°-40°	672.9	48.9
0°-60°	1151.3	83.7
0°-90°	1375.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1375.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	546	546	546	546	546	
5°	542	540	542	540	553	51
15°	519	513	516	518	519	145
25°	464	466	474	480	479	214
35°	404	405	414	424	424	251
45°	325	331	336	345	337	251
55°	243	241	248	246	246	216
65°	149	147	153	147	148	148
75°	62	61	62	58	60	67
85°	8	7	8	7	7	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	545.6	545.6	545.6	545.6	545.6
2.5°	550.3	546.1	542.3	546.8	549.5
5°	541.7	540.4	541.9	540.3	553.3
7.5°	530.6	535.4	538.2	536.5	537.3
10°	524.6	523.0	529.2	533.6	533.0
12.5°	518.3	520.8	521.2	525.9	526.3
15°	518.7	512.7	515.8	518.5	518.7
17.5°	498.5	505.0	507.2	513.3	505.7
20°	496.0	491.3	496.0	502.3	501.3
22.5°	480.9	475.6	485.8	491.3	491.0
25°	463.7	466.2	473.9	480.1	479.1
27.5°	448.6	451.6	462.4	471.0	465.5
30°	437.0	435.5	444.7	452.3	456.5
32.5°	416.2	421.6	432.3	439.8	435.8
35°	403.6	404.8	414.2	423.8	423.5
37.5°	381.6	387.1	400.3	403.0	400.5
40°	362.8	368.3	380.2	383.1	381.9
42.5°	348.9	349.9	360.1	363.4	358.1
45°	324.7	330.8	336.3	344.9	336.8
47.5°	304.2	307.0	318.8	321.1	316.8
50°	285.5	286.5	298.4	295.5	292.7
52.5°	262.0	266.2	272.9	272.3	269.0
55°	242.7	241.1	247.5	245.8	245.7
57.5°	219.6	222.4	227.6	224.9	220.6
60°	197.9	197.9	199.8	196.8	196.2
62.5°	173.7	174.6	175.0	171.2	177.3
65°	149.1	147.2	152.9	147.1	148.1
67.5°	126.5	127.5	126.9	123.3	124.7
70°	103.5	104.8	103.9	99.7	101.0
72.5°	82.6	81.0	82.0	76.8	79.2
75°	62.1	60.8	61.9	57.6	59.5
77.5°	42.3	43.3	42.5	40.2	41.6
80°	27.9	27.1	27.1	25.8	26.1
82.5°	16.3	15.5	15.3	14.9	15.5
85°	7.6	7.4	7.5	7.3	7.0
87.5°	2.7	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)