

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: P588832

Luminaire Tested: **FMR-24-2-LD4-1LO-40-UNV-81-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588832  
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-40-UNV-81-87-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

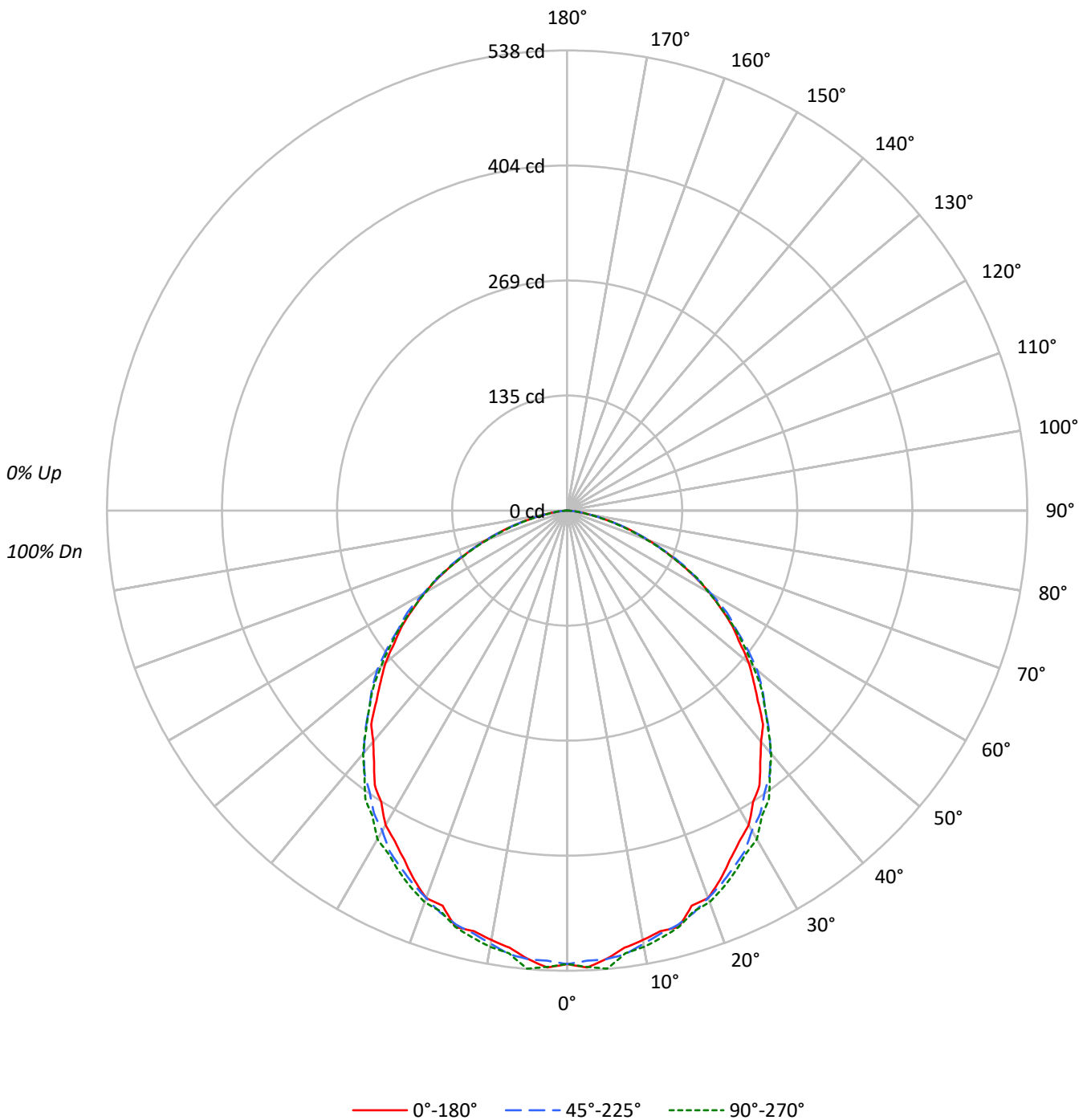
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1336.0 lumens  
Efficiency: N/A  
Efficacy: 114.2 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 (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

TEST NUMBER: P588832

CATALOG NUMBER: FMR-24-2-LD4-1LO-40-UNV-81-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P588832

CATALOG NUMBER: FMR-24-2-LD4-1LO-40-UNV-81-87-EDD

**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				
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°	1426	1426	1426
5°	1422	1422	1452
10°	1393	1405	1415
15°	1404	1396	1404
20°	1380	1380	1395
25°	1338	1367	1382
30°	1319	1343	1378
35°	1288	1322	1352
40°	1238	1298	1304
45°	1201	1243	1245
50°	1161	1214	1191
55°	1107	1128	1120
60°	1035	1045	1026
65°	923	946	916
70°	792	795	772
75°	627	626	601
80°	420	409	392
85°	228	225	210



TEST NUMBER: P588832

CATALOG NUMBER: FMR-24-2-LD4-1LO-40-UNV-81-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.9	3.7
10°-20°	141.3	10.6
20°-30°	211.7	15.8
30°-40°	250.9	18.8
40°-50°	251.4	18.8
50°-60°	213.4	16.0
60°-70°	143.9	10.8
70°-80°	63.2	4.7
80°-90°	10.3	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°	402.9	30.2
0°-40°	653.8	48.9
0°-60°	1118.6	83.7
0°-90°	1336.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1336.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	530	530	530	530	530	
5°	526	525	526	525	538	50
15°	504	498	501	504	504	140
25°	451	453	460	466	466	208
35°	392	393	402	412	412	244
45°	316	321	327	335	327	244
55°	236	234	240	239	239	210
65°	145	143	149	143	144	144
75°	60	59	60	56	58	65
85°	7	7	7	7	7	11
90°	0	0	0	0	0	



TEST NUMBER: P588832

CATALOG NUMBER: FMR-24-2-LD4-1LO-40-UNV-81-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	530.1	530.1	530.1	530.1	530.1
2.5°	534.7	530.6	526.9	531.3	533.9
5°	526.3	525.1	526.5	525.0	537.6
7.5°	515.5	520.2	523.0	521.3	522.0
10°	509.8	508.1	514.2	518.5	517.8
12.5°	503.6	506.1	506.4	511.0	511.4
15°	503.9	498.1	501.2	503.8	504.0
17.5°	484.4	490.7	492.8	498.7	491.4
20°	482.0	477.4	482.0	488.1	487.1
22.5°	467.3	462.1	472.0	477.4	477.0
25°	450.6	453.0	460.4	466.4	465.5
27.5°	435.9	438.8	449.3	457.6	452.3
30°	424.6	423.2	432.1	439.5	443.6
32.5°	404.4	409.6	420.0	427.4	423.5
35°	392.2	393.3	402.4	411.8	411.5
37.5°	370.8	376.2	389.0	391.6	389.2
40°	352.5	357.9	369.5	372.3	371.1
42.5°	339.0	340.0	349.9	353.1	348.0
45°	315.5	321.4	326.7	335.2	327.2
47.5°	295.5	298.3	309.8	312.0	307.9
50°	277.4	278.4	289.9	287.1	284.4
52.5°	254.6	258.6	265.1	264.6	261.4
55°	235.9	234.3	240.4	238.8	238.7
57.5°	213.3	216.1	221.1	218.5	214.4
60°	192.3	192.3	194.2	191.2	190.7
62.5°	168.8	169.6	170.0	166.4	172.3
65°	144.9	143.0	148.6	142.9	143.9
67.5°	122.9	123.9	123.3	119.8	121.1
70°	100.6	101.8	101.0	96.9	98.1
72.5°	80.2	78.7	79.7	74.6	76.9
75°	60.3	59.1	60.2	55.9	57.8
77.5°	41.1	42.0	41.3	39.1	40.4
80°	27.1	26.4	26.4	25.1	25.3
82.5°	15.8	15.1	14.9	14.4	15.1
85°	7.4	7.2	7.3	7.1	6.8
87.5°	2.7	2.7	2.7	2.6	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)