

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: P588863

Luminaire Tested: **FMR-24-2-LD4-1LO-50-UNV-81-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588863  
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-81-86-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

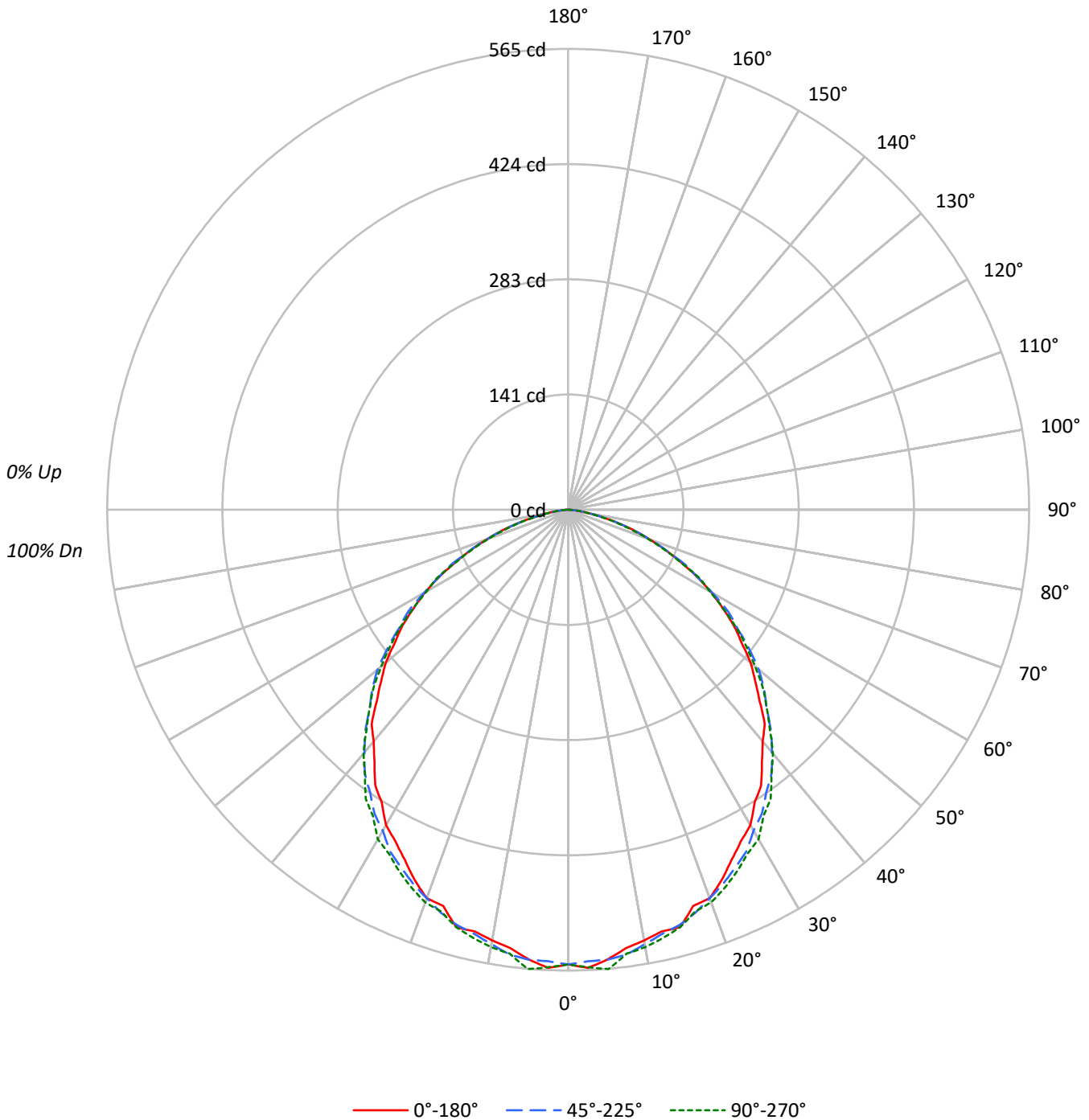
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1405.0 lumens  
Efficiency: N/A  
Efficacy: 120.1 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

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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°	1500	1500	1500
5°	1495	1496	1527
10°	1465	1478	1488
15°	1477	1468	1477
20°	1452	1452	1467
25°	1407	1438	1453
30°	1388	1412	1450
35°	1355	1390	1421
40°	1302	1365	1371
45°	1263	1308	1310
50°	1221	1276	1252
55°	1164	1187	1178
60°	1088	1099	1079
65°	970	995	963
70°	832	836	812
75°	659	658	632
80°	442	429	412
85°	241	238	222



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.4	3.7
10°-20°	148.6	10.6
20°-30°	222.7	15.8
30°-40°	263.9	18.8
40°-50°	264.4	18.8
50°-60°	224.4	16.0
60°-70°	151.3	10.8
70°-80°	66.5	4.7
80°-90°	10.8	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°	423.7	30.2
0°-40°	687.6	48.9
0°-60°	1176.4	83.7
0°-90°	1405.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1405.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	554	552	554	552	565	52
15°	530	524	527	530	530	148
25°	474	476	484	490	490	219
35°	412	414	423	433	433	256
45°	332	338	344	352	344	257
55°	248	246	253	251	251	221
65°	152	150	156	150	151	152
75°	63	62	63	59	61	68
85°	8	8	8	8	7	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	557.5	557.5	557.5	557.5	557.5
2.5°	562.3	558.0	554.1	558.7	561.5
5°	553.5	552.2	553.7	552.1	565.4
7.5°	542.1	547.1	550.0	548.2	549.0
10°	536.1	534.4	540.8	545.2	544.6
12.5°	529.6	532.2	532.6	537.4	537.8
15°	530.0	523.9	527.1	529.8	530.0
17.5°	509.4	516.0	518.2	524.5	516.7
20°	506.9	502.0	506.9	513.3	512.3
22.5°	491.4	486.0	496.4	502.0	501.7
25°	473.8	476.4	484.2	490.5	489.5
27.5°	458.4	461.5	472.5	481.2	475.6
30°	446.6	445.0	454.4	462.2	466.5
32.5°	425.3	430.8	441.7	449.4	445.3
35°	412.4	413.7	423.2	433.0	432.7
37.5°	389.9	395.6	409.1	411.8	409.3
40°	370.7	376.4	388.5	391.5	390.3
42.5°	356.5	357.5	368.0	371.3	365.9
45°	331.8	338.0	343.6	352.5	344.1
47.5°	310.8	313.7	325.8	328.1	323.8
50°	291.7	292.7	304.9	301.9	299.1
52.5°	267.8	272.0	278.8	278.3	274.9
55°	248.0	246.4	252.9	251.1	251.1
57.5°	224.4	227.2	232.6	229.8	225.4
60°	202.2	202.3	204.2	201.1	200.5
62.5°	177.5	178.4	178.8	175.0	181.2
65°	152.4	150.4	156.3	150.3	151.3
67.5°	129.3	130.3	129.7	126.0	127.4
70°	105.8	107.1	106.2	101.9	103.2
72.5°	84.4	82.8	83.8	78.5	80.9
75°	63.4	62.1	63.3	58.8	60.8
77.5°	43.2	44.2	43.5	41.1	42.5
80°	28.5	27.7	27.7	26.3	26.6
82.5°	16.6	15.8	15.6	15.2	15.8
85°	7.8	7.6	7.7	7.5	7.2
87.5°	2.8	2.9	2.9	2.7	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)