

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: P589401

Luminaire Tested: **FMR-24-2-LD4-3LO-40-UNV-80-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589401  
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-LD4-3LO-40-UNV-80-88-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

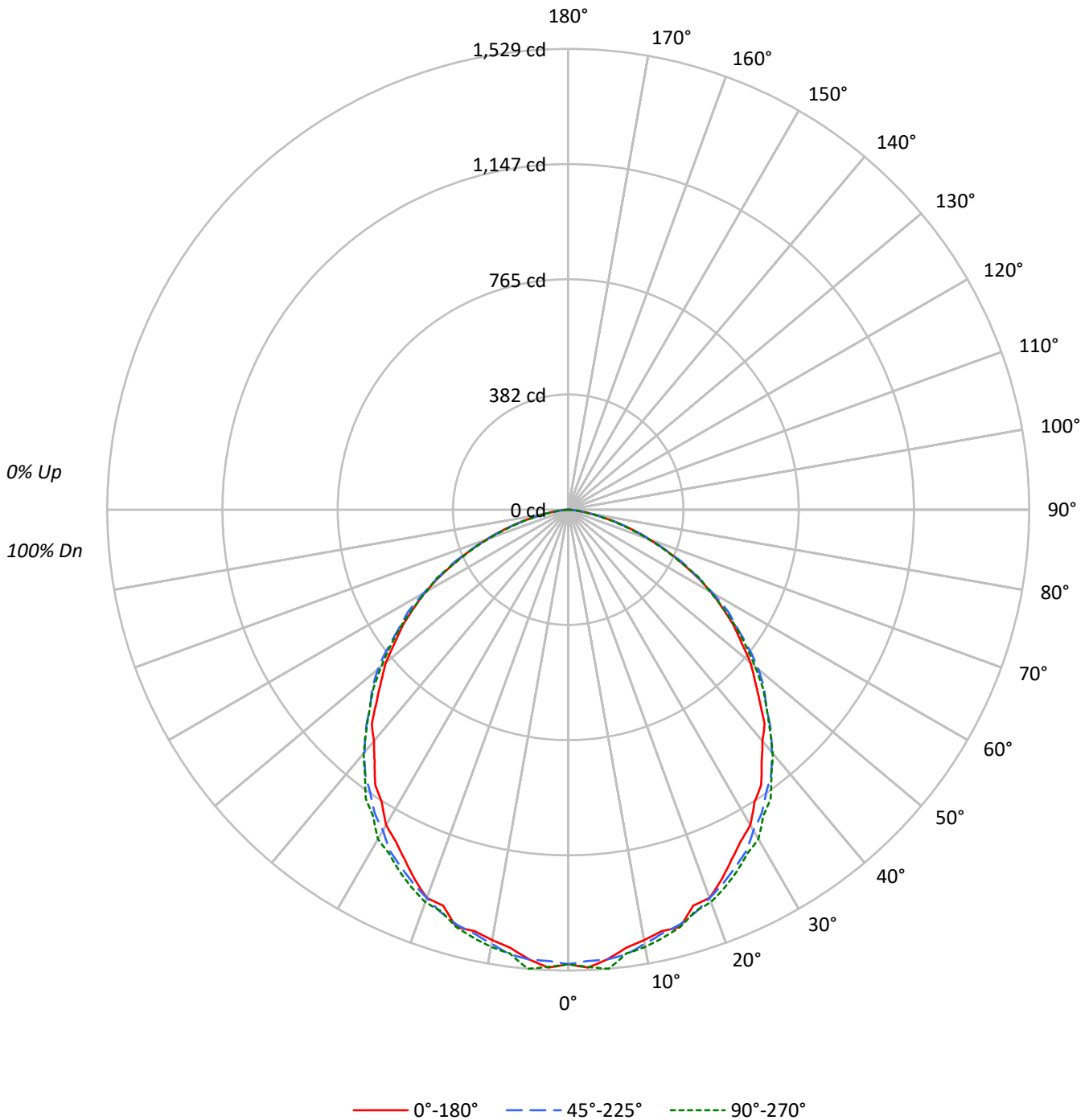
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3800.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 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): 35.1  
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°	4057	4057	4057
5°	4044	4045	4131
10°	3962	3997	4025
15°	3993	3972	3994
20°	3926	3926	3968
25°	3805	3888	3931
30°	3753	3819	3920
35°	3665	3760	3845
40°	3522	3691	3708
45°	3415	3537	3542
50°	3303	3452	3386
55°	3147	3209	3186
60°	2943	2972	2919
65°	2624	2691	2606
70°	2252	2259	2197
75°	1783	1779	1710
80°	1195	1161	1116
85°	648	642	602



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.8	3.7
10°-20°	402.0	10.6
20°-30°	602.2	15.8
30°-40°	713.7	18.8
40°-50°	715.1	18.8
50°-60°	607.0	16.0
60°-70°	409.2	10.8
70°-80°	179.8	4.7
80°-90°	29.2	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°	1146.0	30.2
0°-40°	1859.7	48.9
0°-60°	3181.7	83.7
0°-90°	3800.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3800.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1508	1508	1508	1508	1508	
5°	1497	1494	1498	1493	1529	141
15°	1433	1417	1426	1433	1434	399
25°	1282	1288	1310	1327	1324	592
35°	1116	1119	1145	1171	1170	693
45°	897	914	929	953	931	694
55°	671	666	684	679	679	597
65°	412	407	423	406	409	410
75°	172	168	171	159	164	184
85°	21	20	21	20	20	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1507.7	1507.7	1507.7	1507.7	1507.7
2.5°	1520.8	1509.3	1498.6	1511.1	1518.6
5°	1497.0	1493.5	1497.6	1493.1	1529.2
7.5°	1466.3	1479.7	1487.5	1482.6	1484.8
10°	1449.9	1445.3	1462.6	1474.6	1472.9
12.5°	1432.4	1439.4	1440.4	1453.4	1454.6
15°	1433.4	1416.8	1425.6	1433.0	1433.6
17.5°	1377.7	1395.6	1401.6	1418.6	1397.6
20°	1370.9	1357.8	1370.9	1388.2	1385.5
22.5°	1329.0	1314.4	1342.5	1357.8	1356.9
25°	1281.5	1288.5	1309.6	1326.7	1324.0
27.5°	1239.9	1248.0	1278.0	1301.6	1286.4
30°	1207.8	1203.7	1229.0	1250.0	1261.7
32.5°	1150.3	1165.1	1194.7	1215.5	1204.4
35°	1115.5	1118.8	1144.7	1171.2	1170.4
37.5°	1054.5	1069.9	1106.3	1113.7	1106.9
40°	1002.6	1017.9	1050.8	1058.8	1055.5
42.5°	964.2	966.9	995.2	1004.3	989.7
45°	897.4	914.2	929.4	953.3	930.7
47.5°	840.6	848.4	881.1	887.5	875.6
50°	789.0	791.7	824.6	816.7	808.9
52.5°	724.2	735.7	754.2	752.6	743.5
55°	670.8	666.4	683.9	679.2	679.0
57.5°	606.8	614.6	629.0	621.6	609.7
60°	546.8	547.0	552.3	543.9	542.4
62.5°	480.1	482.4	483.6	473.3	490.0
65°	412.1	406.7	422.6	406.5	409.2
67.5°	349.6	352.4	350.8	340.7	344.6
70°	286.2	289.7	287.1	275.7	279.2
72.5°	228.2	223.9	226.6	212.2	218.8
75°	171.5	168.0	171.1	159.0	164.5
77.5°	116.8	119.5	117.6	111.2	114.9
80°	77.1	74.9	74.9	71.3	72.0
82.5°	45.0	42.8	42.2	41.1	42.8
85°	21.0	20.4	20.8	20.2	19.5
87.5°	7.6	7.8	7.8	7.4	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)