

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: P589433

Luminaire Tested: **FMR-24-2-LD4-3LO-50-UNV-80-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589433  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

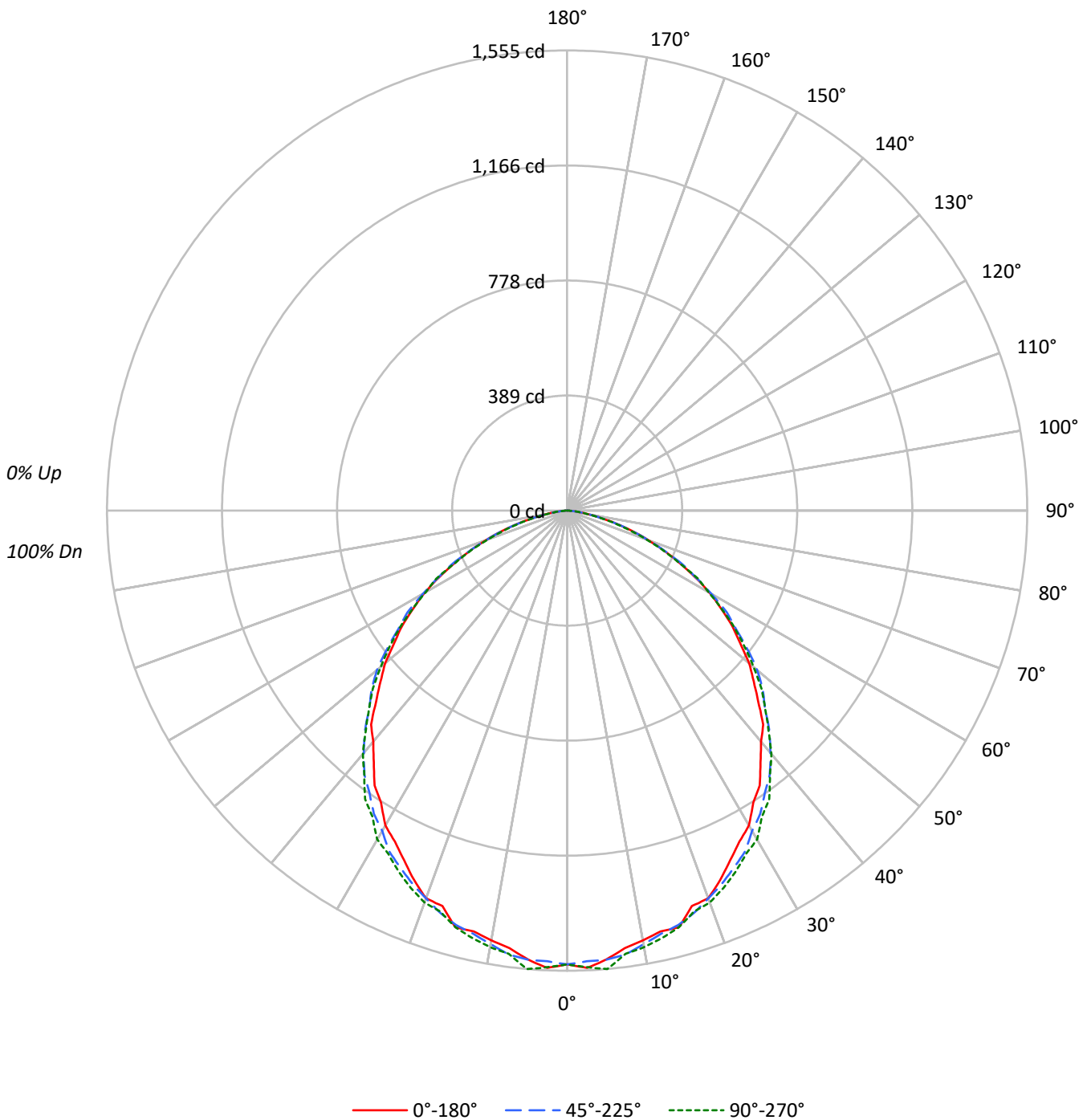
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3865.0 lumens  
Efficiency: N/A  
Efficacy: 110.1 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): 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°	4127	4127	4127
5°	4113	4115	4201
10°	4030	4065	4094
15°	4062	4040	4062
20°	3993	3993	4035
25°	3870	3955	3998
30°	3817	3884	3988
35°	3727	3825	3911
40°	3582	3755	3771
45°	3474	3597	3603
50°	3360	3511	3444
55°	3201	3263	3240
60°	2993	3023	2969
65°	2669	2737	2650
70°	2290	2298	2234
75°	1813	1809	1739
80°	1215	1181	1136
85°	661	655	611



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.3	3.7
10°-20°	408.8	10.6
20°-30°	612.5	15.8
30°-40°	725.9	18.8
40°-50°	727.3	18.8
50°-60°	617.3	16.0
60°-70°	416.2	10.8
70°-80°	182.9	4.7
80°-90°	29.7	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°	1165.6	30.2
0°-40°	1891.5	48.9
0°-60°	3236.2	83.7
0°-90°	3865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3865.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1534	1534	1534	1534	1534	
5°	1523	1519	1523	1519	1555	144
15°	1458	1441	1450	1458	1458	406
25°	1304	1311	1332	1349	1347	603
35°	1135	1138	1164	1191	1190	704
45°	913	930	945	970	947	706
55°	682	678	696	691	691	607
65°	419	414	430	413	416	417
75°	174	171	174	162	167	187
85°	21	21	21	21	20	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1546.8	1535.1	1524.2	1536.9	1544.6
5°	1522.6	1519.1	1523.2	1518.7	1555.3
7.5°	1491.4	1505.0	1512.9	1508.0	1510.2
10°	1474.7	1470.0	1487.6	1499.9	1498.1
12.5°	1456.9	1464.0	1465.0	1478.3	1479.5
15°	1457.9	1441.1	1450.0	1457.5	1458.1
17.5°	1401.3	1419.5	1425.6	1442.8	1421.5
20°	1394.3	1381.1	1394.3	1412.0	1409.2
22.5°	1351.8	1336.9	1365.4	1381.1	1380.1
25°	1303.5	1310.6	1332.0	1349.4	1346.6
27.5°	1261.1	1269.4	1299.9	1323.8	1308.4
30°	1228.4	1224.3	1250.0	1271.4	1283.3
32.5°	1170.0	1185.0	1215.1	1236.3	1225.0
35°	1134.6	1137.9	1164.3	1191.2	1190.4
37.5°	1072.6	1088.2	1125.3	1132.8	1125.8
40°	1019.7	1035.4	1068.8	1076.9	1073.6
42.5°	980.7	983.5	1012.2	1021.5	1006.6
45°	912.8	929.8	945.3	969.6	946.7
47.5°	855.0	862.9	896.2	902.7	890.6
50°	802.5	805.3	838.7	830.6	822.7
52.5°	736.6	748.3	767.1	765.5	756.2
55°	682.3	677.8	695.6	690.8	690.6
57.5°	617.2	625.1	639.7	632.2	620.1
60°	556.2	556.4	561.7	553.2	551.6
62.5°	488.3	490.7	491.8	481.3	498.4
65°	419.2	413.6	429.9	413.4	416.2
67.5°	355.6	358.4	356.8	346.5	350.5
70°	291.1	294.6	292.1	280.4	283.9
72.5°	232.1	227.7	230.5	215.8	222.6
75°	174.4	170.9	174.0	161.8	167.3
77.5°	118.8	121.6	119.6	113.1	116.8
80°	78.4	76.2	76.2	72.5	73.3
82.5°	45.7	43.6	43.0	41.8	43.6
85°	21.4	20.8	21.2	20.6	19.8
87.5°	7.7	7.9	7.9	7.5	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)