

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: P589243

Luminaire Tested: **FMR-24-2-LD4-2STD-50-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589243  
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-LD4-2STD-50-UNV-80-96-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

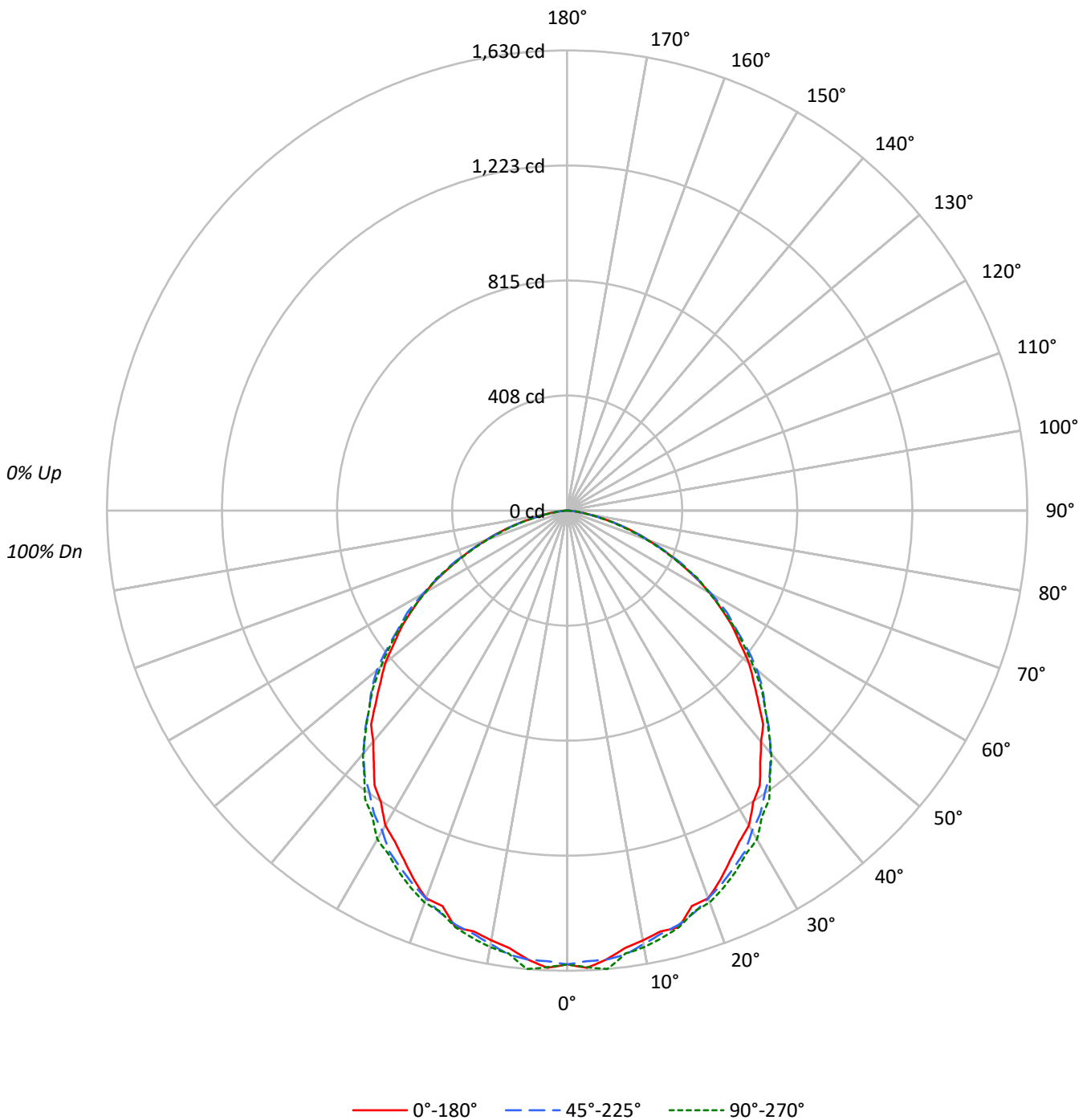
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4051.0 lumens  
Efficiency: N/A  
Efficacy: 121.7 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): 33.3  
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°	4325	4325	4325
5°	4311	4313	4404
10°	4224	4261	4291
15°	4257	4234	4258
20°	4185	4185	4230
25°	4056	4145	4191
30°	4001	4071	4179
35°	3907	4009	4099
40°	3755	3935	3953
45°	3641	3771	3776
50°	3521	3680	3610
55°	3355	3421	3396
60°	3138	3169	3112
65°	2797	2869	2777
70°	2400	2408	2341
75°	1901	1896	1824
80°	1274	1238	1190
85°	692	685	642



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.2	3.7
10°-20°	428.5	10.6
20°-30°	642.0	15.8
30°-40°	760.9	18.8
40°-50°	762.3	18.8
50°-60°	647.1	16.0
60°-70°	436.2	10.8
70°-80°	191.7	4.7
80°-90°	31.2	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°	1221.7	30.2
0°-40°	1982.6	48.9
0°-60°	3391.9	83.7
0°-90°	4051.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4051.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1607	1607	1607	1607	1607	
5°	1596	1592	1596	1592	1630	150
15°	1528	1510	1520	1528	1528	426
25°	1366	1374	1396	1414	1411	632
35°	1189	1193	1220	1248	1248	738
45°	957	975	991	1016	992	740
55°	715	710	729	724	724	636
65°	439	434	451	433	436	437
75°	183	179	182	170	175	196
85°	22	22	22	22	21	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1607.3	1607.3	1607.3	1607.3	1607.3
2.5°	1621.2	1609.0	1597.6	1610.9	1619.0
5°	1595.9	1592.2	1596.5	1591.8	1630.2
7.5°	1563.1	1577.4	1585.8	1580.6	1582.8
10°	1545.7	1540.7	1559.2	1572.1	1570.2
12.5°	1527.0	1534.5	1535.5	1549.4	1550.7
15°	1528.1	1510.4	1519.8	1527.6	1528.3
17.5°	1468.7	1487.8	1494.2	1512.3	1489.9
20°	1461.4	1447.5	1461.4	1479.9	1477.0
22.5°	1416.8	1401.3	1431.1	1447.5	1446.5
25°	1366.2	1373.7	1396.1	1414.3	1411.4
27.5°	1321.8	1330.5	1362.4	1387.6	1371.4
30°	1287.5	1283.2	1310.1	1332.6	1345.0
32.5°	1226.3	1242.1	1273.6	1295.8	1284.0
35°	1189.2	1192.7	1220.3	1248.5	1247.7
37.5°	1124.2	1140.6	1179.4	1187.3	1180.0
40°	1068.8	1085.2	1120.3	1128.8	1125.2
42.5°	1027.9	1030.8	1060.9	1070.7	1055.1
45°	956.7	974.6	990.8	1016.3	992.2
47.5°	896.1	904.4	939.3	946.1	933.5
50°	841.1	844.0	879.1	870.6	862.3
52.5°	772.0	784.3	804.0	802.3	792.6
55°	715.2	710.4	729.1	724.1	723.9
57.5°	646.9	655.2	670.5	662.6	650.0
60°	583.0	583.2	588.8	579.8	578.2
62.5°	511.8	514.3	515.5	504.5	522.4
65°	439.3	433.5	450.6	433.3	436.2
67.5°	372.7	375.6	374.0	363.2	367.3
70°	305.1	308.8	306.1	293.9	297.6
72.5°	243.2	238.7	241.6	226.2	233.3
75°	182.8	179.1	182.4	169.6	175.4
77.5°	124.5	127.4	125.3	118.5	122.4
80°	82.2	79.9	79.9	76.0	76.8
82.5°	47.9	45.7	45.0	43.8	45.7
85°	22.4	21.8	22.2	21.6	20.8
87.5°	8.1	8.3	8.3	7.9	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)