

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: P589024

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

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589024
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-LD4-2HI-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

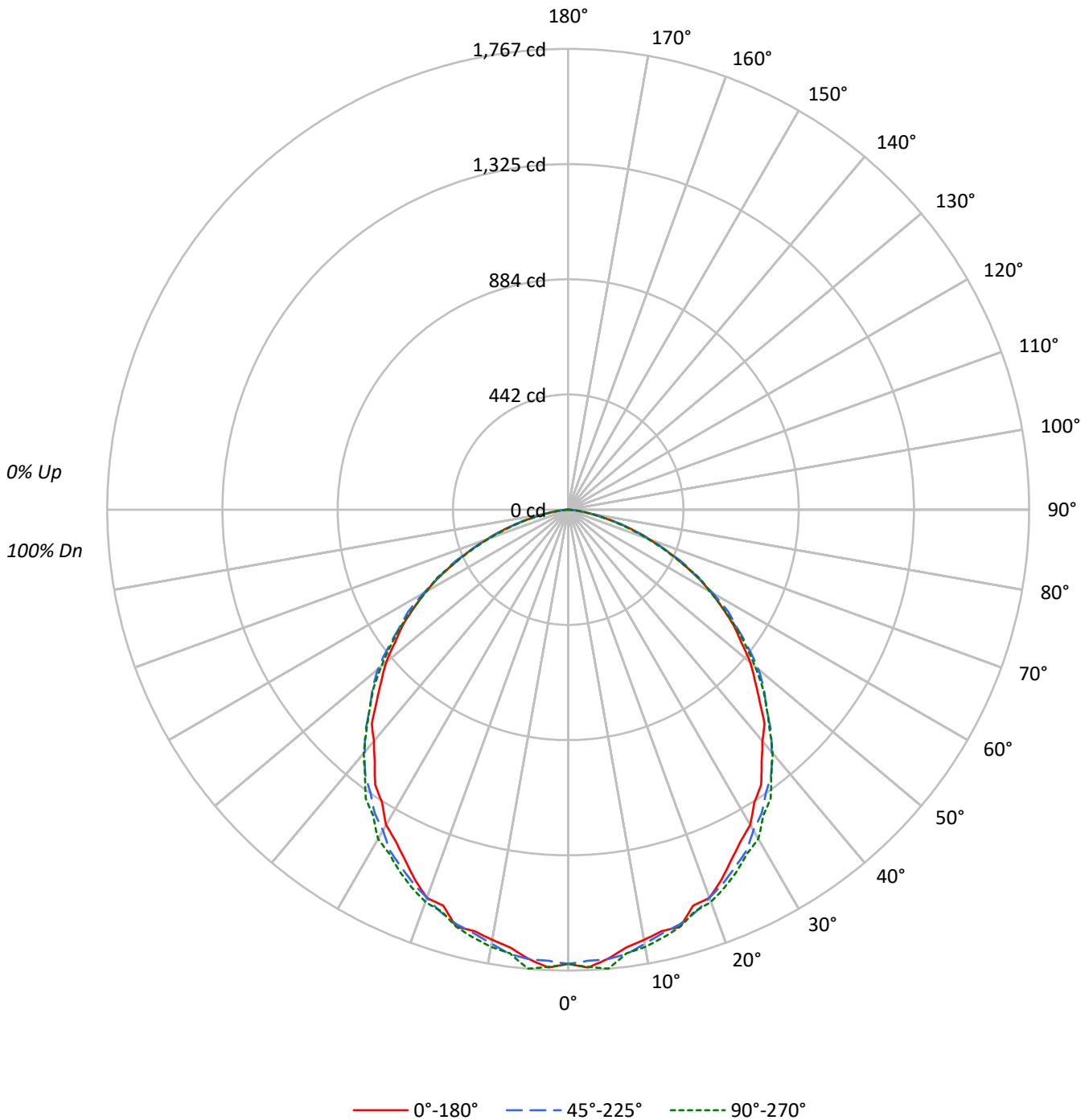
Lumens per Lamp: N/A
Luminaire Lumens: 4390.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	4687	4687	4687
5°	4672	4673	4772
10°	4577	4617	4650
15°	4613	4588	4614
20°	4535	4535	4584
25°	4396	4492	4541
30°	4336	4412	4529
35°	4233	4344	4442
40°	4069	4265	4284
45°	3946	4086	4092
50°	3816	3988	3912
55°	3636	3707	3680
60°	3400	3434	3372
65°	3032	3109	3010
70°	2601	2610	2537
75°	2060	2056	1975
80°	1381	1342	1289
85°	750	744	695



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.8	3.7
10°-20°	464.4	10.6
20°-30°	695.7	15.8
30°-40°	824.6	18.8
40°-50°	826.1	18.8
50°-60°	701.2	16.0
60°-70°	472.8	10.8
70°-80°	207.7	4.7
80°-90°	33.8	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°	1323.9	30.2
0°-40°	2148.5	48.9
0°-60°	3675.8	83.7
0°-90°	4390.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4390.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1742	1742	1742	1742	1742	
5°	1730	1725	1730	1725	1767	163
15°	1656	1637	1647	1656	1656	461
25°	1480	1489	1513	1533	1530	684
35°	1289	1292	1322	1353	1352	800
45°	1037	1056	1074	1101	1075	802
55°	775	770	790	785	784	689
65°	476	470	488	470	473	473
75°	198	194	198	184	190	212
85°	24	24	24	23	22	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1741.8	1741.8	1741.8	1741.8	1741.8
2.5°	1756.9	1743.6	1731.3	1745.7	1754.4
5°	1729.5	1725.4	1730.1	1725.0	1766.6
7.5°	1693.9	1709.5	1718.5	1712.8	1715.3
10°	1675.0	1669.6	1689.7	1703.6	1701.6
12.5°	1654.8	1662.9	1664.0	1679.1	1680.4
15°	1655.9	1636.8	1646.9	1655.5	1656.2
17.5°	1591.6	1612.3	1619.3	1638.8	1614.5
20°	1583.7	1568.7	1583.7	1603.8	1600.6
22.5°	1535.4	1518.5	1550.9	1568.7	1567.5
25°	1480.5	1488.6	1512.9	1532.7	1529.5
27.5°	1432.4	1441.8	1476.5	1503.7	1486.1
30°	1395.3	1390.5	1419.8	1444.1	1457.6
32.5°	1328.9	1346.0	1380.2	1404.3	1391.4
35°	1288.7	1292.5	1322.4	1353.0	1352.1
37.5°	1218.3	1236.0	1278.1	1286.6	1278.8
40°	1158.2	1176.0	1214.0	1223.2	1219.4
42.5°	1113.9	1117.1	1149.7	1160.3	1143.4
45°	1036.8	1056.1	1073.7	1101.3	1075.2
47.5°	971.1	980.1	1017.9	1025.3	1011.6
50°	911.5	914.7	952.7	943.5	934.5
52.5°	836.6	849.9	871.3	869.5	858.9
55°	775.0	769.8	790.1	784.7	784.4
57.5°	701.0	710.0	726.6	718.1	704.4
60°	631.7	632.0	638.0	628.4	626.6
62.5°	554.6	557.3	558.6	546.7	566.1
65°	476.1	469.8	488.3	469.6	472.7
67.5°	403.9	407.1	405.3	393.6	398.1
70°	330.6	334.6	331.7	318.5	322.5
72.5°	263.6	258.6	261.8	245.1	252.8
75°	198.1	194.1	197.7	183.7	190.0
77.5°	134.9	138.1	135.8	128.4	132.7
80°	89.1	86.6	86.6	82.3	83.2
82.5°	52.0	49.5	48.8	47.5	49.5
85°	24.3	23.6	24.1	23.4	22.5
87.5°	8.8	9.0	9.0	8.5	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)