

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: P589673

Luminaire Tested: **FMR-24-2-LD4-4LO-35-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589673
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-LD4-4LO-35-UNV-82-88-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

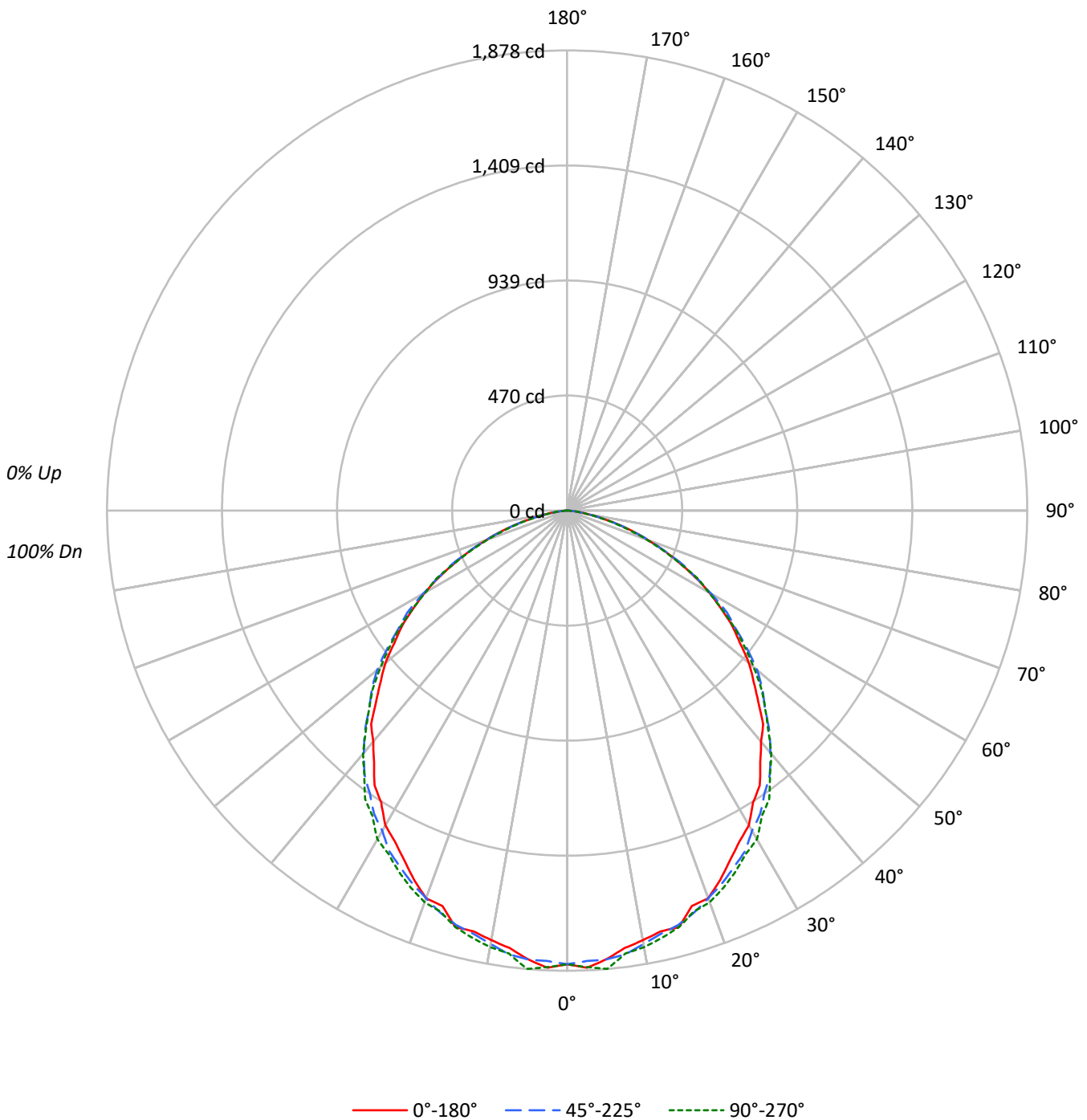
Lumens per Lamp: N/A
Luminaire Lumens: 4666.0 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	4982	4982	4982
5°	4965	4967	5072
10°	4865	4907	4942
15°	4903	4877	4904
20°	4820	4820	4872
25°	4672	4774	4827
30°	4608	4689	4814
35°	4500	4617	4721
40°	4324	4533	4553
45°	4194	4343	4349
50°	4056	4239	4158
55°	3864	3940	3912
60°	3614	3650	3584
65°	3222	3305	3200
70°	2765	2774	2697
75°	2190	2184	2100
80°	1468	1426	1370
85°	797	790	738



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.1	3.7
10°-20°	493.6	10.6
20°-30°	739.4	15.8
30°-40°	876.4	18.8
40°-50°	878.0	18.8
50°-60°	745.3	16.0
60°-70°	502.5	10.8
70°-80°	220.8	4.7
80°-90°	35.9	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°	1407.2	30.2
0°-40°	2283.6	48.9
0°-60°	3906.9	83.7
0°-90°	4666.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4666.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1851	1851	1851	1851	1851	
5°	1838	1834	1839	1833	1878	173
15°	1760	1740	1750	1760	1760	490
25°	1574	1582	1608	1629	1626	727
35°	1370	1374	1406	1438	1437	850
45°	1102	1122	1141	1171	1143	852
55°	824	818	840	834	834	733
65°	506	499	519	499	502	503
75°	211	206	210	195	202	226
85°	26	25	26	25	24	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1851.4	1851.4	1851.4	1851.4	1851.4
2.5°	1867.4	1853.3	1840.1	1855.4	1864.7
5°	1838.2	1833.9	1838.9	1833.4	1877.6
7.5°	1800.4	1816.9	1826.5	1820.5	1823.1
10°	1780.4	1774.6	1795.9	1810.7	1808.6
12.5°	1758.8	1767.4	1768.6	1784.7	1786.1
15°	1760.0	1739.7	1750.5	1759.6	1760.3
17.5°	1691.7	1713.7	1721.1	1741.9	1716.1
20°	1683.3	1667.3	1683.3	1704.6	1701.2
22.5°	1631.9	1614.0	1648.4	1667.3	1666.1
25°	1573.6	1582.2	1608.0	1629.0	1625.7
27.5°	1522.4	1532.5	1569.3	1598.2	1579.6
30°	1483.0	1478.0	1509.0	1534.9	1549.2
32.5°	1412.5	1430.6	1467.0	1492.6	1478.9
35°	1369.7	1373.8	1405.5	1438.1	1437.1
37.5°	1294.9	1313.8	1358.5	1367.5	1359.2
40°	1231.0	1249.9	1290.3	1300.1	1296.1
42.5°	1184.0	1187.3	1222.0	1233.2	1215.3
45°	1102.0	1122.5	1141.2	1170.6	1142.8
47.5°	1032.2	1041.7	1081.9	1089.8	1075.2
50°	968.8	972.2	1012.6	1002.8	993.2
52.5°	889.2	903.3	926.0	924.1	912.9
55°	823.7	818.2	839.7	834.0	833.8
57.5°	745.1	754.6	772.3	763.2	748.7
60°	671.5	671.7	678.2	667.9	666.0
62.5°	589.5	592.3	593.8	581.1	601.7
65°	506.0	499.4	519.0	499.1	502.5
67.5°	429.3	432.7	430.7	418.3	423.1
70°	351.4	355.7	352.6	338.5	342.8
72.5°	280.2	274.9	278.2	260.6	268.7
75°	210.6	206.3	210.1	195.3	202.0
77.5°	143.4	146.8	144.4	136.5	141.0
80°	94.7	92.0	92.0	87.5	88.4
82.5°	55.2	52.6	51.9	50.4	52.6
85°	25.8	25.1	25.6	24.9	23.9
87.5°	9.3	9.6	9.6	9.1	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)