

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: P589697

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589697
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-40-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

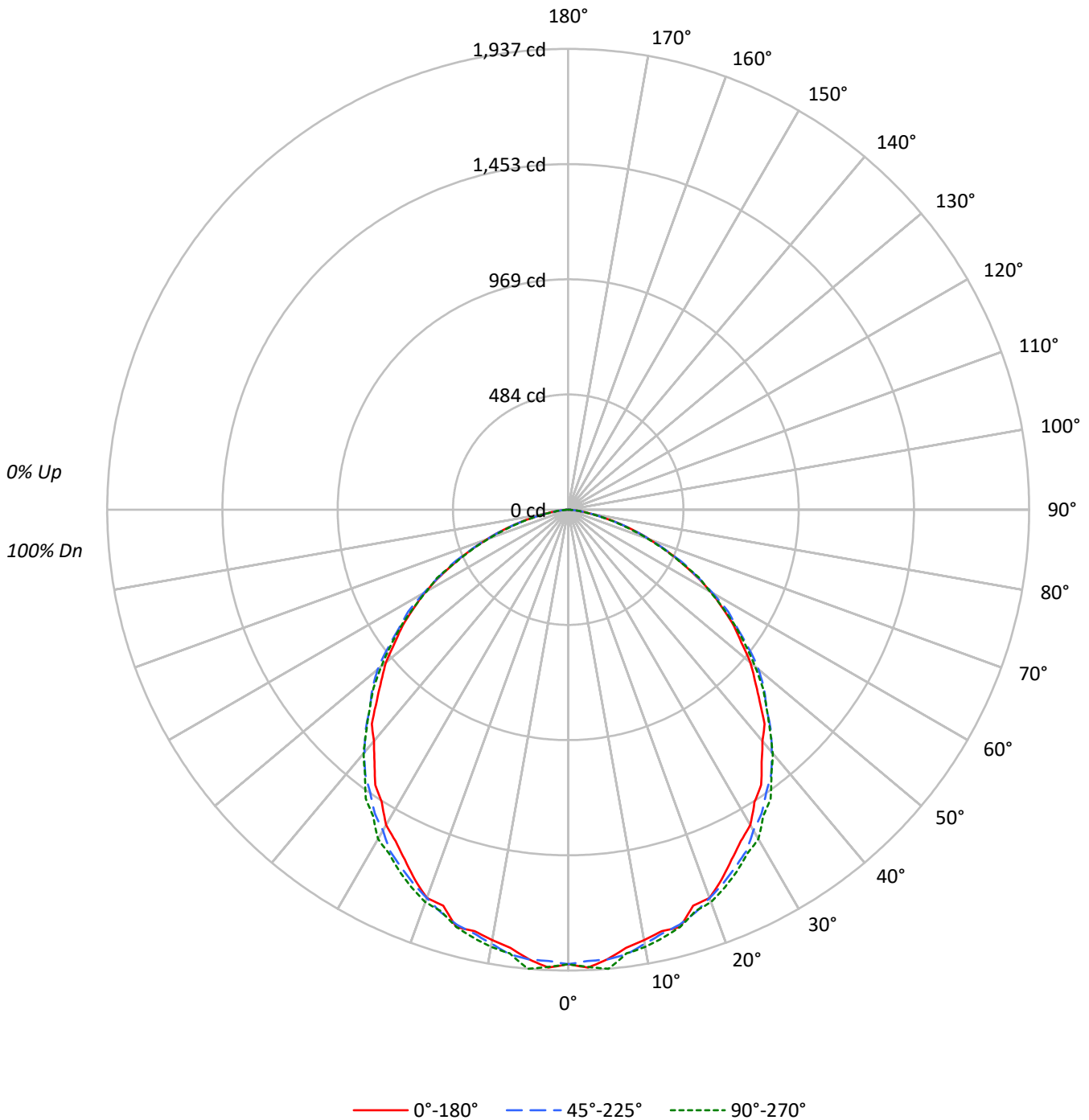
Lumens per Lamp: N/A
Luminaire Lumens: 4814.0 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5140	5140	5140
5°	5123	5125	5233
10°	5019	5063	5099
15°	5059	5031	5059
20°	4973	4973	5026
25°	4820	4926	4980
30°	4754	4838	4966
35°	4642	4764	4871
40°	4462	4677	4697
45°	4327	4481	4487
50°	4185	4374	4290
55°	3987	4065	4036
60°	3729	3766	3698
65°	3324	3409	3301
70°	2852	2862	2783
75°	2259	2254	2167
80°	1514	1471	1413
85°	821	815	763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.7	3.7
10°-20°	509.2	10.6
20°-30°	762.9	15.8
30°-40°	904.2	18.8
40°-50°	905.9	18.8
50°-60°	768.9	16.0
60°-70°	518.4	10.8
70°-80°	227.8	4.7
80°-90°	37.0	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°	1451.8	30.2
0°-40°	2356.0	48.9
0°-60°	4030.8	83.7
0°-90°	4814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1910	1910	1910	1910	1910	
5°	1896	1892	1897	1892	1937	179
15°	1816	1795	1806	1815	1816	506
25°	1624	1632	1659	1681	1677	751
35°	1413	1417	1450	1484	1483	877
45°	1137	1158	1177	1208	1179	879
55°	850	844	866	860	860	756
65°	522	515	535	515	518	519
75°	217	213	217	202	208	233
85°	27	26	26	26	25	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1910.1	1910.1	1910.1	1910.1	1910.1
2.5°	1926.6	1912.0	1898.5	1914.3	1923.9
5°	1896.5	1892.1	1897.2	1891.6	1937.2
7.5°	1857.5	1874.6	1884.4	1878.3	1881.0
10°	1836.8	1830.9	1852.9	1868.1	1865.9
12.5°	1814.6	1823.5	1824.7	1841.3	1842.7
15°	1815.9	1794.9	1806.0	1815.4	1816.1
17.5°	1745.3	1768.0	1775.7	1797.1	1770.5
20°	1736.7	1720.2	1736.7	1758.6	1755.2
22.5°	1683.7	1665.2	1700.7	1720.2	1718.9
25°	1623.5	1632.4	1659.0	1680.7	1677.3
27.5°	1570.7	1581.1	1619.1	1648.9	1629.7
30°	1530.0	1524.9	1556.9	1583.5	1598.3
32.5°	1457.3	1476.0	1513.5	1539.9	1525.8
35°	1413.1	1417.3	1450.1	1483.7	1482.7
37.5°	1335.9	1355.4	1401.5	1410.9	1402.3
40°	1270.1	1289.6	1331.3	1341.4	1337.2
42.5°	1221.5	1225.0	1260.7	1272.3	1253.8
45°	1136.9	1158.1	1177.4	1207.7	1179.1
47.5°	1064.9	1074.8	1116.2	1124.3	1109.3
50°	999.6	1003.0	1044.7	1034.6	1024.7
52.5°	917.4	932.0	955.4	953.4	941.8
55°	849.9	844.2	866.4	860.5	860.2
57.5°	768.7	778.6	796.8	787.5	772.4
60°	692.8	693.0	699.7	689.1	687.1
62.5°	608.2	611.1	612.6	599.5	620.7
65°	522.1	515.2	535.4	514.9	518.4
67.5°	442.9	446.4	444.4	431.6	436.5
70°	362.5	367.0	363.8	349.2	353.7
72.5°	289.0	283.6	287.1	268.8	277.2
75°	217.3	212.8	216.8	201.5	208.4
77.5°	148.0	151.4	149.0	140.8	145.5
80°	97.7	94.9	94.9	90.3	91.2
82.5°	57.0	54.3	53.5	52.0	54.3
85°	26.6	25.9	26.4	25.6	24.7
87.5°	9.6	9.9	9.9	9.4	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)