

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: P589702

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-82-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589702
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-82-85-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

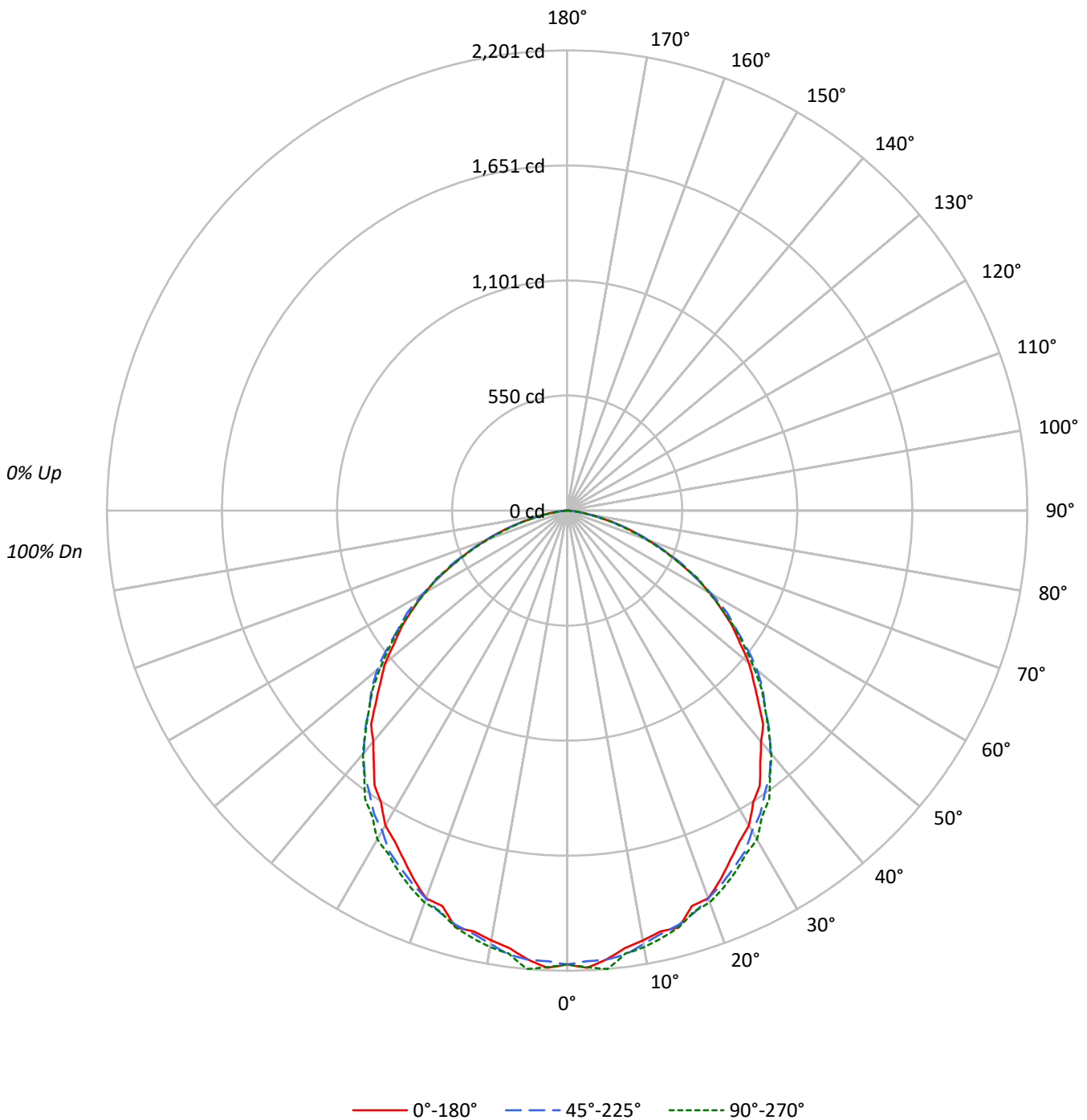
Lumens per Lamp: N/A
Luminaire Lumens: 5470.0 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5841	5841	5841
5°	5821	5823	5946
10°	5703	5753	5793
15°	5748	5717	5749
20°	5651	5651	5711
25°	5477	5597	5659
30°	5402	5497	5643
35°	5275	5413	5534
40°	5070	5314	5337
45°	4916	5091	5099
50°	4755	4969	4874
55°	4531	4618	4586
60°	4237	4279	4202
65°	3777	3874	3750
70°	3241	3252	3161
75°	2567	2561	2462
80°	1720	1672	1607
85°	936	926	865



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.2	3.7
10°-20°	578.6	10.6
20°-30°	866.9	15.8
30°-40°	1027.4	18.8
40°-50°	1029.3	18.8
50°-60°	873.7	16.0
60°-70°	589.1	10.8
70°-80°	258.8	4.7
80°-90°	42.0	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°	1649.6	30.2
0°-40°	2677.0	48.9
0°-60°	4580.1	83.7
0°-90°	5470.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5470.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2170	2170	2170	2170	2170	
5°	2155	2150	2156	2149	2201	203
15°	2063	2040	2052	2063	2064	575
25°	1845	1855	1885	1910	1906	853
35°	1606	1610	1648	1686	1685	997
45°	1292	1316	1338	1372	1340	999
55°	966	959	984	978	977	859
65°	593	585	608	585	589	590
75°	247	242	246	229	237	265
85°	30	29	30	29	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2170.4	2170.4	2170.4	2170.4	2170.4
2.5°	2189.1	2172.6	2157.2	2175.1	2186.1
5°	2154.9	2149.9	2155.8	2149.3	2201.2
7.5°	2110.7	2130.0	2141.2	2134.2	2137.3
10°	2087.1	2080.4	2105.3	2122.7	2120.2
12.5°	2061.9	2072.0	2073.4	2092.2	2093.9
15°	2063.3	2039.5	2052.1	2062.8	2063.6
17.5°	1983.2	2008.9	2017.6	2042.0	2011.7
20°	1973.4	1954.6	1973.4	1998.3	1994.4
22.5°	1913.1	1892.1	1932.4	1954.6	1953.2
25°	1844.7	1854.8	1885.1	1909.7	1905.8
27.5°	1784.8	1796.5	1839.7	1873.6	1851.7
30°	1738.5	1732.6	1769.1	1799.3	1816.2
32.5°	1655.9	1677.2	1719.8	1749.7	1733.8
35°	1605.7	1610.5	1647.7	1685.8	1684.7
37.5°	1518.0	1540.1	1592.5	1603.2	1593.4
40°	1443.2	1465.3	1512.7	1524.2	1519.4
42.5°	1388.0	1391.9	1432.5	1445.7	1424.7
45°	1291.8	1315.9	1337.8	1372.3	1339.8
47.5°	1210.0	1221.2	1268.3	1277.6	1260.5
50°	1135.8	1139.7	1187.0	1175.6	1164.3
52.5°	1042.4	1059.0	1085.6	1083.4	1070.2
55°	965.7	959.2	984.4	977.7	977.4
57.5°	873.5	884.7	905.4	894.8	877.7
60°	787.2	787.4	795.0	783.0	780.7
62.5°	691.0	694.4	696.1	681.2	705.3
65°	593.2	585.4	608.4	585.1	589.0
67.5°	503.3	507.2	505.0	490.4	496.0
70°	411.9	417.0	413.3	396.8	401.8
72.5°	328.4	322.3	326.2	305.4	315.0
75°	246.9	241.8	246.3	228.9	236.8
77.5°	168.1	172.1	169.3	160.0	165.3
80°	111.0	107.9	107.9	102.6	103.7
82.5°	64.7	61.6	60.8	59.1	61.6
85°	30.3	29.4	30.0	29.1	28.0
87.5°	10.9	11.2	11.2	10.6	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)