

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: P546850

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-81-87-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P546850
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-2LO-50-UNV-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

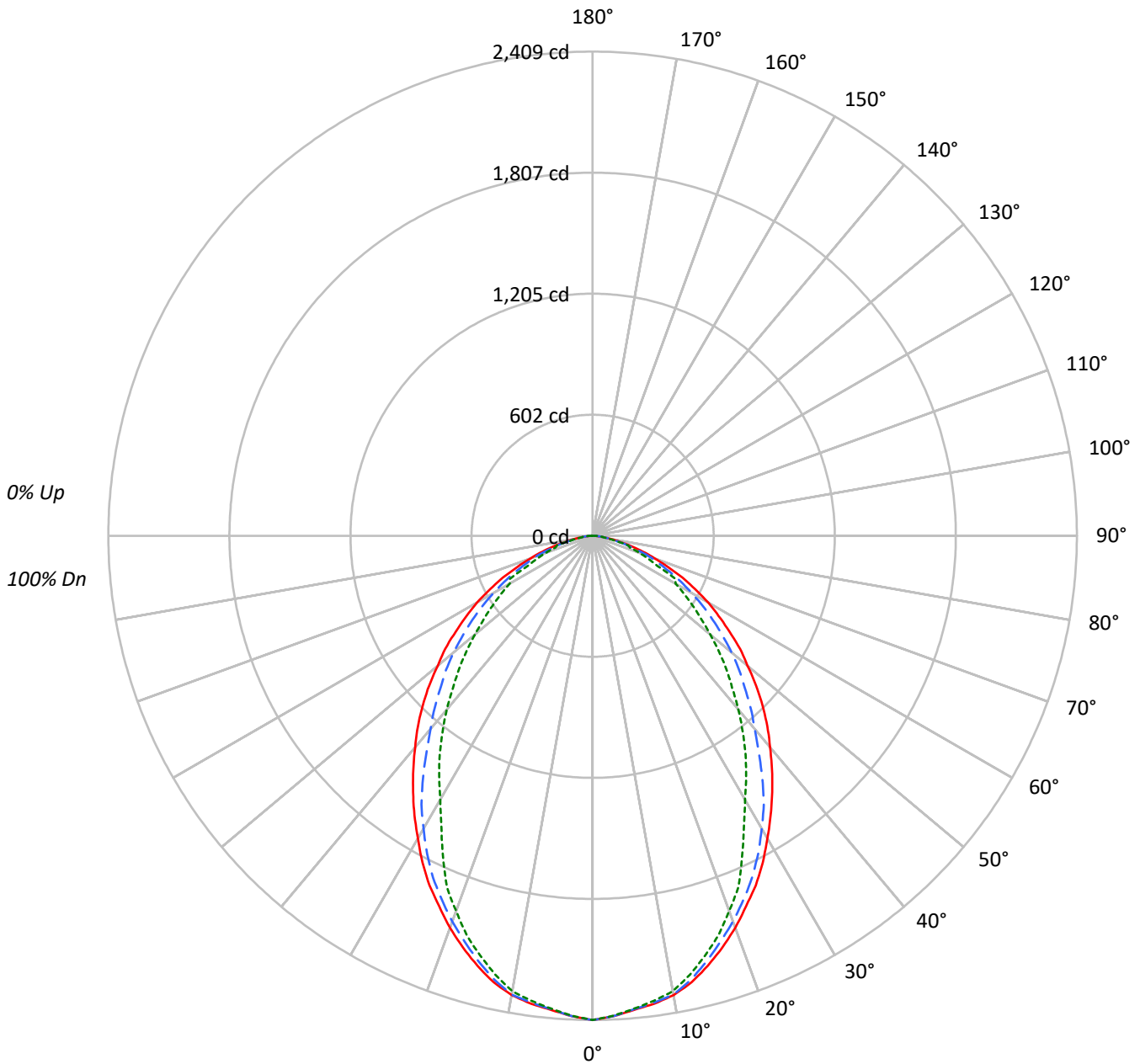
Lumens per Lamp: N/A
Luminaire Lumens: 4730.0 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3242	3242	3242
5°	3198	3194	3190
10°	3170	3166	3143
15°	3085	3053	3011
20°	2971	2923	2844
25°	2849	2787	2613
30°	2700	2614	2354
35°	2558	2416	2178
40°	2412	2201	1981
45°	2274	2035	1791
50°	2105	1889	1598
55°	1947	1712	1431
60°	1784	1529	1282
65°	1570	1339	1135
70°	1293	1172	964
75°	1028	898	941
80°	690	648	604
85°	431	516	602



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.3	4.7
10°-20°	615.5	13.0
20°-30°	852.2	18.0
30°-40°	908.6	19.2
40°-50°	828.9	17.5
50°-60°	649.4	13.7
60°-70°	423.3	8.9
70°-80°	187.5	4.0
80°-90°	40.3	0.9
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°	1692.0	35.8
0°-40°	2600.6	55.0
0°-60°	4079.0	86.2
0°-90°	4730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4730.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2409	2409	2409	2409	2409	
5°	2368	2365	2365	2362	2362	225
15°	2214	2214	2192	2170	2162	623
25°	1919	1908	1877	1810	1760	881
35°	1557	1546	1471	1359	1326	973
45°	1195	1170	1070	980	942	920
55°	830	805	730	643	610	745
65°	493	465	421	429	356	486
75°	198	184	173	164	181	212
85°	28	31	33	36	39	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2409.4	2409.4	2409.4	2409.4	2409.4
2.5°	2392.7	2392.7	2392.7	2389.9	2389.9
5°	2367.6	2364.8	2364.8	2362.0	2362.0
7.5°	2348.1	2345.3	2342.5	2339.8	2334.2
10°	2320.3	2320.3	2317.5	2303.6	2300.8
12.5°	2275.7	2272.9	2261.8	2242.3	2236.7
15°	2214.4	2214.4	2192.1	2169.9	2161.5
17.5°	2147.6	2144.8	2116.9	2094.6	2083.5
20°	2075.1	2069.6	2041.7	2005.5	1986.0
22.5°	1994.4	1994.4	1960.9	1913.6	1894.1
25°	1919.2	1908.0	1877.4	1810.5	1760.4
27.5°	1832.8	1816.1	1782.7	1688.0	1629.5
30°	1738.1	1729.8	1682.4	1559.8	1515.3
32.5°	1649.0	1635.0	1584.9	1456.8	1420.6
35°	1557.1	1545.9	1470.7	1359.3	1325.9
37.5°	1465.1	1451.2	1356.5	1267.4	1225.6
40°	1373.2	1356.5	1253.4	1172.7	1128.1
42.5°	1286.9	1264.6	1164.3	1078.0	1027.8
45°	1195.0	1169.9	1069.6	980.5	941.5
47.5°	1103.0	1080.7	988.8	896.9	852.3
50°	1005.5	986.0	902.5	810.6	763.2
52.5°	924.8	894.1	813.3	721.4	682.4
55°	830.1	805.0	729.8	643.4	610.0
57.5°	743.7	718.6	649.0	568.2	540.4
60°	662.9	626.7	568.2	498.6	476.3
62.5°	573.8	545.9	495.8	437.3	465.2
65°	493.0	465.2	420.6	429.0	356.5
67.5°	403.9	390.0	351.0	312.0	300.8
70°	328.7	312.0	298.0	256.3	245.1
72.5°	261.8	245.1	225.6	203.3	195.0
75°	197.8	183.8	172.7	164.3	181.1
77.5°	136.5	130.9	122.6	114.2	111.4
80°	89.1	86.3	83.6	80.8	78.0
82.5°	52.9	52.9	52.9	52.9	52.9
85°	27.9	30.6	33.4	36.2	39.0
87.5°	16.7	16.7	19.5	22.3	25.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)