

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: P546810

Luminaire Tested: **FMR-24-4-LD4-2LO-40-UNV-80-87-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: P546810
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-40-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

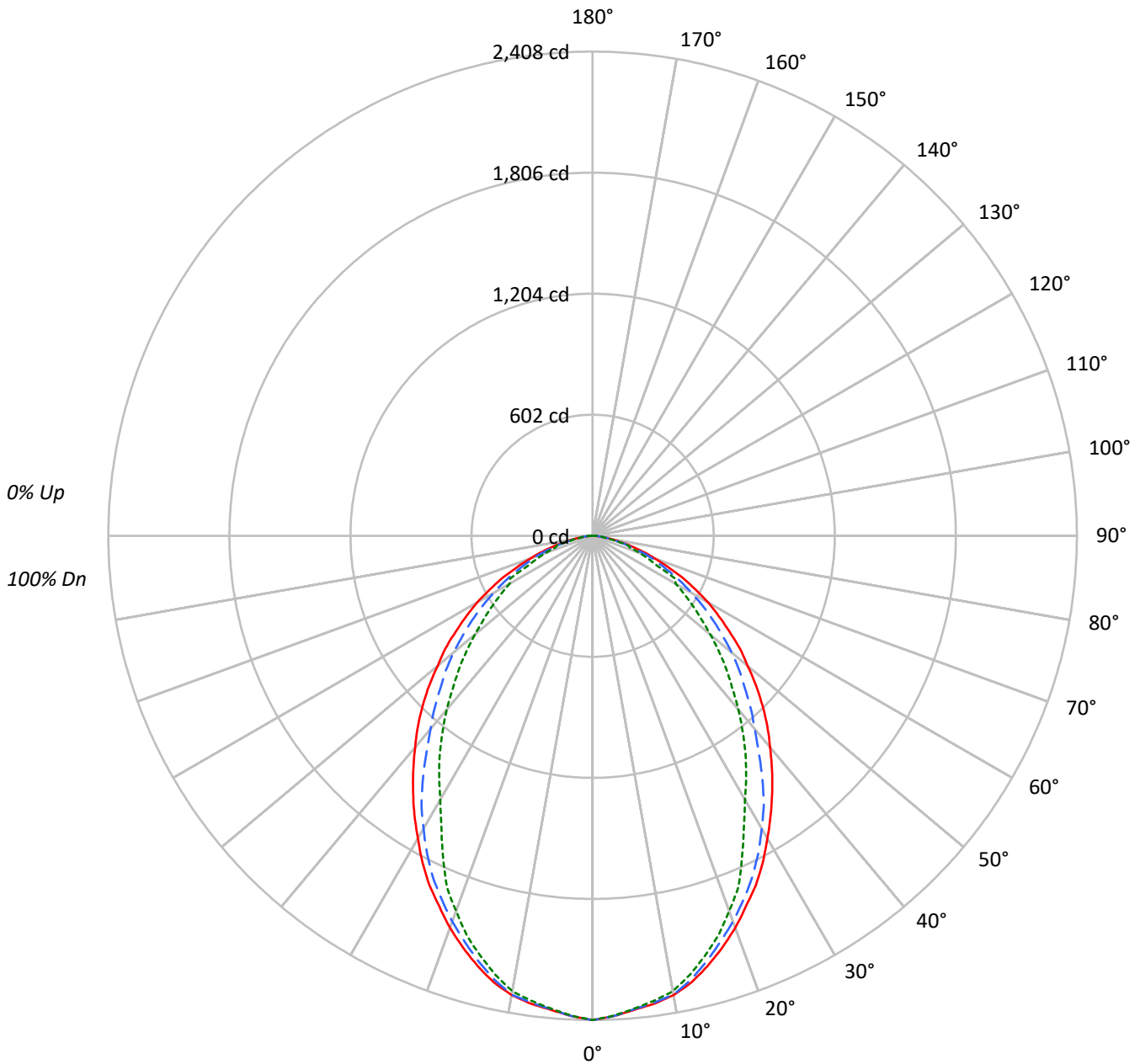
Lumens per Lamp: N/A
Luminaire Lumens: 4728.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P546810

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-80-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546810

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-80-87-EDD

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°	3240	3240	3240
5°	3196	3193	3189
10°	3169	3165	3142
15°	3083	3052	3010
20°	2970	2922	2842
25°	2848	2786	2612
30°	2699	2613	2353
35°	2556	2415	2177
40°	2411	2201	1981
45°	2273	2034	1791
50°	2104	1888	1597
55°	1946	1711	1430
60°	1783	1528	1281
65°	1569	1338	1135
70°	1292	1172	964
75°	1028	897	941
80°	690	647	604
85°	429	516	602



TEST NUMBER: P546810

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-80-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.2	4.7
10°-20°	615.3	13.0
20°-30°	851.8	18.0
30°-40°	908.3	19.2
40°-50°	828.6	17.5
50°-60°	649.1	13.7
60°-70°	423.1	8.9
70°-80°	187.4	4.0
80°-90°	40.2	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°	1691.2	35.8
0°-40°	2599.5	55.0
0°-60°	4077.2	86.2
0°-90°	4728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2408	2408	2408	2408	2408	
5°	2367	2364	2364	2361	2361	225
15°	2214	2214	2191	2169	2161	622
25°	1918	1907	1877	1810	1760	881
35°	1556	1545	1470	1359	1325	973
45°	1194	1169	1069	980	941	920
55°	830	805	730	643	610	744
65°	493	465	420	429	356	486
75°	198	184	173	164	181	212
85°	28	31	33	36	39	39
90°	0	0	0	0	0	



TEST NUMBER: P546810

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-80-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2408.4	2408.4	2408.4	2408.4	2408.4
2.5°	2391.7	2391.7	2391.7	2388.9	2388.9
5°	2366.6	2363.8	2363.8	2361.0	2361.0
7.5°	2347.1	2344.3	2341.6	2338.8	2333.2
10°	2319.3	2319.3	2316.5	2302.6	2299.8
12.5°	2274.7	2272.0	2260.8	2241.3	2235.8
15°	2213.5	2213.5	2191.2	2168.9	2160.6
17.5°	2146.7	2143.9	2116.0	2093.8	2082.6
20°	2074.3	2068.7	2040.9	2004.7	1985.2
22.5°	1993.5	1993.5	1960.1	1912.8	1893.3
25°	1918.4	1907.2	1876.6	1809.8	1759.6
27.5°	1832.0	1815.3	1781.9	1687.3	1628.8
30°	1737.4	1729.0	1681.7	1559.2	1514.6
32.5°	1648.3	1634.4	1584.2	1456.2	1420.0
35°	1556.4	1545.3	1470.1	1358.7	1325.3
37.5°	1464.5	1450.6	1355.9	1266.8	1225.1
40°	1372.6	1355.9	1252.9	1172.2	1127.6
42.5°	1286.3	1264.1	1163.8	1077.5	1027.4
45°	1194.4	1169.4	1069.2	980.1	941.1
47.5°	1102.6	1080.3	988.4	896.5	852.0
50°	1005.1	985.6	902.1	810.2	762.9
52.5°	924.4	893.7	813.0	721.1	682.1
55°	829.7	804.6	729.5	643.2	609.8
57.5°	743.4	718.3	648.7	568.0	540.1
60°	662.7	626.5	568.0	498.4	476.1
62.5°	573.6	545.7	495.6	437.1	465.0
65°	492.8	465.0	420.4	428.8	356.4
67.5°	403.7	389.8	350.8	311.8	300.7
70°	328.5	311.8	297.9	256.2	245.0
72.5°	261.7	245.0	225.5	203.3	194.9
75°	197.7	183.8	172.6	164.3	181.0
77.5°	136.4	130.9	122.5	114.2	111.4
80°	89.1	86.3	83.5	80.7	78.0
82.5°	52.9	52.9	52.9	52.9	52.9
85°	27.8	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)