

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: P546782

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-80-97-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: P546782
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-35-UNV-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

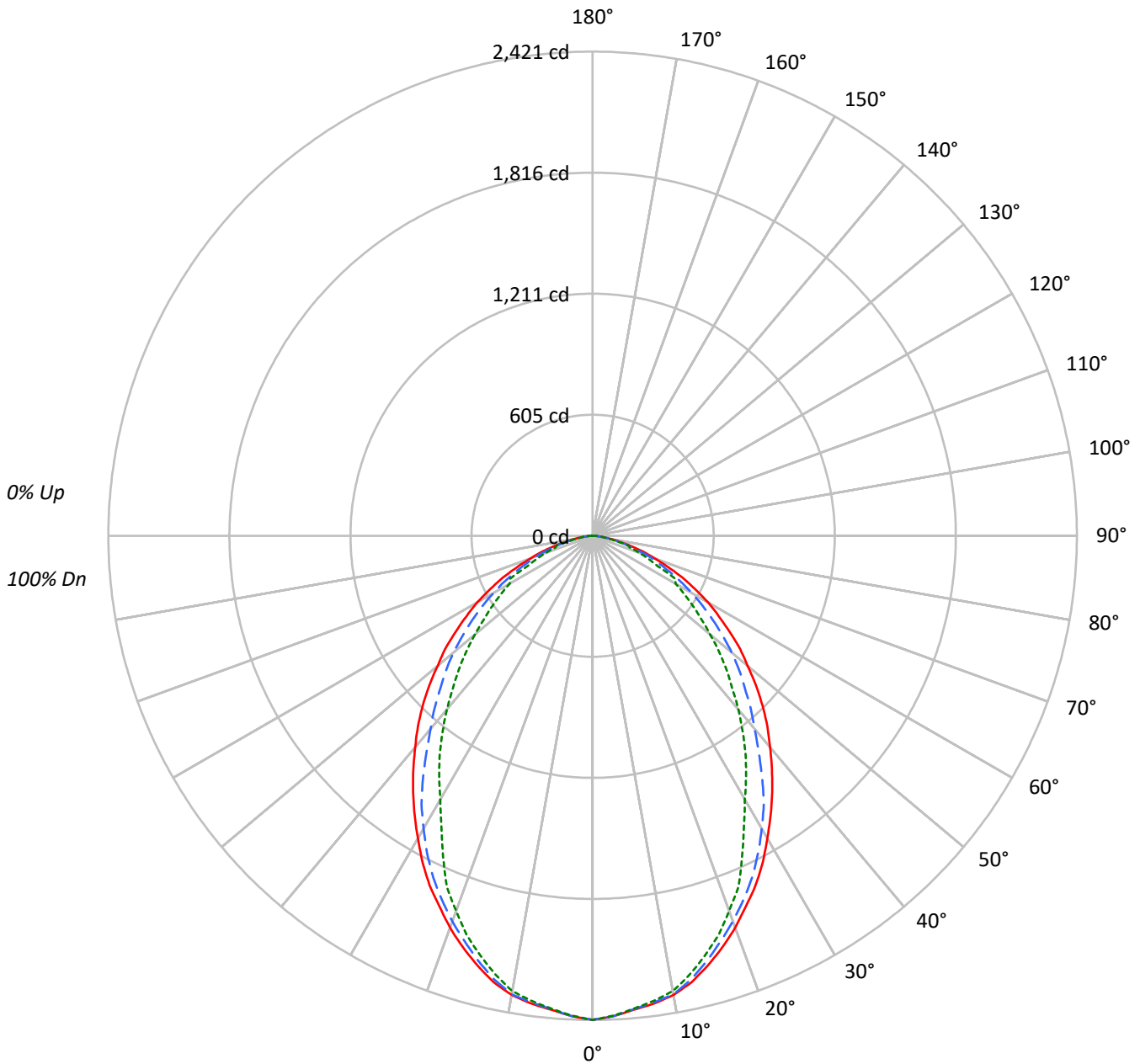
Lumens per Lamp: N/A
Luminaire Lumens: 4752.0 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P546782

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-80-97-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546782

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-80-97-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°	3257	3257	3257
5°	3213	3209	3205
10°	3185	3181	3158
15°	3099	3068	3025
20°	2985	2937	2857
25°	2862	2800	2626
30°	2713	2626	2365
35°	2569	2427	2188
40°	2423	2212	1991
45°	2284	2045	1800
50°	2115	1898	1605
55°	1956	1720	1437
60°	1792	1536	1288
65°	1577	1345	1140
70°	1299	1178	969
75°	1033	902	946
80°	693	651	607
85°	432	519	605



TEST NUMBER: P546782

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-80-97-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.3	4.7
10°-20°	618.4	13.0
20°-30°	856.1	18.0
30°-40°	912.9	19.2
40°-50°	832.8	17.5
50°-60°	652.4	13.7
60°-70°	425.2	8.9
70°-80°	188.4	4.0
80°-90°	40.5	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°	1699.8	35.8
0°-40°	2612.7	55.0
0°-60°	4097.9	86.2
0°-90°	4752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4752.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2421	2421	2421	2421	2421	
5°	2379	2376	2376	2373	2373	226
15°	2225	2225	2202	2180	2172	625
25°	1928	1917	1886	1819	1769	885
35°	1564	1553	1478	1366	1332	978
45°	1200	1175	1075	985	946	925
55°	834	809	733	646	613	748
65°	495	467	423	431	358	488
75°	199	185	174	165	182	213
85°	28	31	34	36	39	39
90°	0	0	0	0	0	



TEST NUMBER: P546782

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-80-97-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2420.6	2420.6	2420.6	2420.6	2420.6
2.5°	2403.8	2403.8	2403.8	2401.0	2401.0
5°	2378.6	2375.8	2375.8	2373.0	2373.0
7.5°	2359.0	2356.2	2353.4	2350.6	2345.0
10°	2331.1	2331.1	2328.3	2314.3	2311.5
12.5°	2286.3	2283.5	2272.3	2252.7	2247.1
15°	2224.7	2224.7	2202.3	2179.9	2171.5
17.5°	2157.6	2154.8	2126.8	2104.4	2093.2
20°	2084.8	2079.2	2051.2	2014.8	1995.3
22.5°	2003.6	2003.6	1970.1	1922.5	1902.9
25°	1928.1	1916.9	1886.1	1819.0	1768.6
27.5°	1841.3	1824.5	1791.0	1695.8	1637.1
30°	1746.2	1737.8	1690.2	1567.1	1522.3
32.5°	1656.6	1642.7	1592.3	1463.6	1427.2
35°	1564.3	1553.1	1477.5	1365.6	1332.0
37.5°	1472.0	1458.0	1362.8	1273.3	1231.3
40°	1379.6	1362.8	1259.3	1178.1	1133.3
42.5°	1292.9	1270.5	1169.7	1083.0	1032.6
45°	1200.5	1175.3	1074.6	985.0	945.9
47.5°	1108.2	1085.8	993.4	901.1	856.3
50°	1010.2	990.6	906.7	814.3	766.8
52.5°	929.1	898.3	817.1	724.8	685.6
55°	833.9	808.7	733.2	646.4	612.8
57.5°	747.2	722.0	652.0	570.9	542.9
60°	666.0	629.6	570.9	500.9	478.5
62.5°	576.5	548.5	498.1	439.3	467.3
65°	495.3	467.3	422.6	431.0	358.2
67.5°	405.8	391.8	352.6	313.4	302.2
70°	330.2	313.4	299.4	257.5	246.3
72.5°	263.0	246.3	226.7	204.3	195.9
75°	198.7	184.7	173.5	165.1	181.9
77.5°	137.1	131.5	123.1	114.7	111.9
80°	89.5	86.8	84.0	81.2	78.4
82.5°	53.2	53.2	53.2	53.2	53.2
85°	28.0	30.8	33.6	36.4	39.2
87.5°	16.8	16.8	19.6	22.4	25.2
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)