

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: P546841

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-80-86-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: P546841
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-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

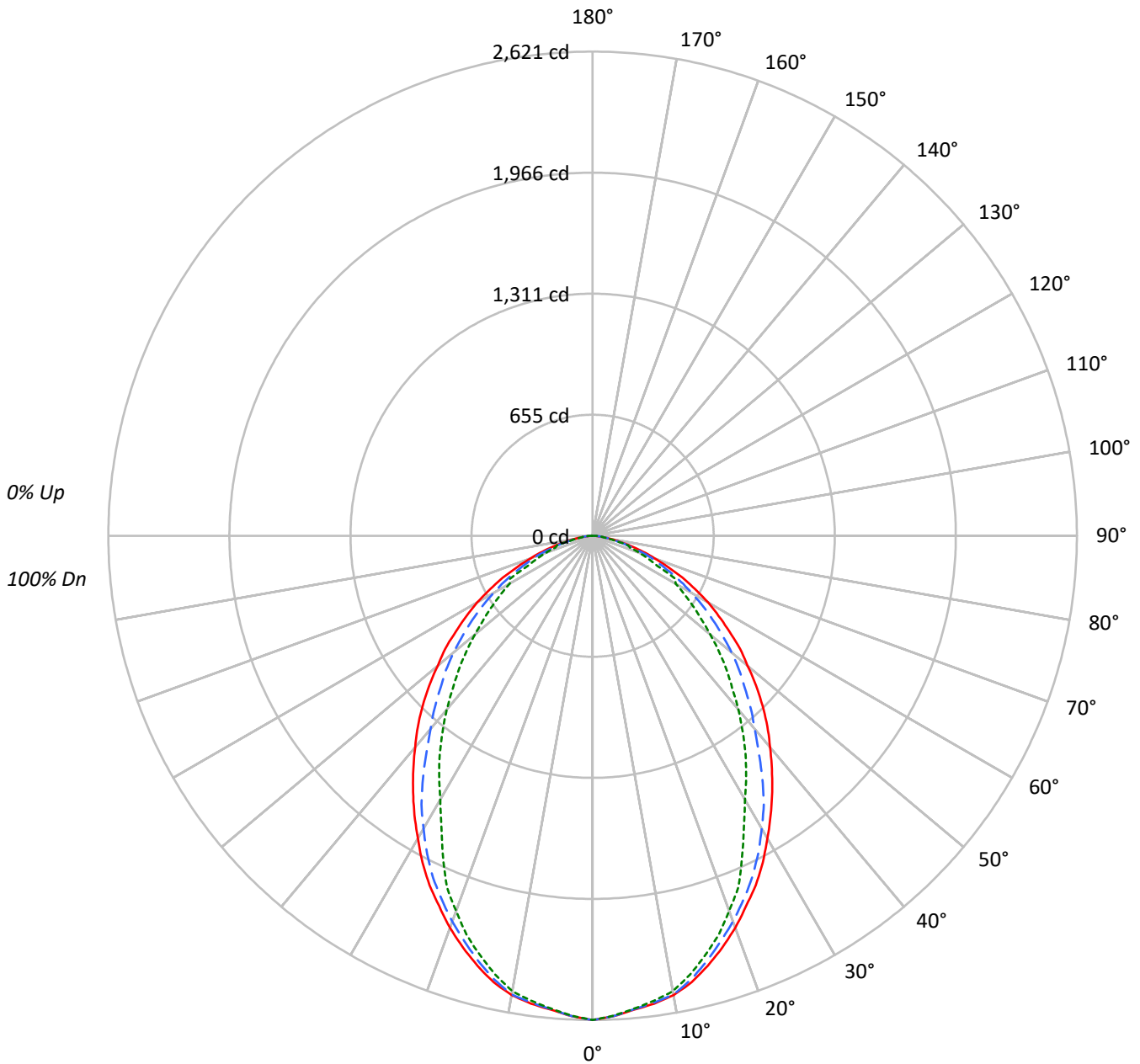
Lumens per Lamp: N/A
Luminaire Lumens: 5146.0 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P546841

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-80-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546841

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-80-86-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°	3527	3527	3527
5°	3479	3475	3471
10°	3449	3445	3420
15°	3356	3322	3276
20°	3233	3181	3094
25°	3100	3032	2843
30°	2938	2844	2561
35°	2782	2628	2369
40°	2624	2395	2156
45°	2474	2214	1949
50°	2290	2055	1738
55°	2118	1863	1557
60°	1941	1664	1394
65°	1708	1457	1235
70°	1407	1276	1049
75°	1119	977	1024
80°	752	704	658
85°	468	562	655



TEST NUMBER: P546841

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.0	4.7
10°-20°	669.7	13.0
20°-30°	927.1	18.0
30°-40°	988.6	19.2
40°-50°	901.9	17.5
50°-60°	706.5	13.7
60°-70°	460.5	8.9
70°-80°	204.0	4.0
80°-90°	43.8	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°	1840.8	35.8
0°-40°	2829.3	55.0
0°-60°	4437.7	86.2
0°-90°	5146.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5146.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2621	2621	2621	2621	2621	
5°	2576	2573	2573	2570	2570	245
15°	2409	2409	2385	2361	2352	677
25°	2088	2076	2042	1970	1915	959
35°	1694	1682	1600	1479	1442	1059
45°	1300	1273	1164	1067	1024	1001
55°	903	876	794	700	664	810
65°	536	506	458	467	388	529
75°	215	200	188	179	197	231
85°	30	33	36	39	42	42
90°	0	0	0	0	0	



TEST NUMBER: P546841

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2621.3	2621.3	2621.3	2621.3	2621.3
2.5°	2603.1	2603.1	2603.1	2600.1	2600.1
5°	2575.8	2572.8	2572.8	2569.8	2569.8
7.5°	2554.6	2551.6	2548.6	2545.5	2539.5
10°	2524.3	2524.3	2521.3	2506.1	2503.1
12.5°	2475.8	2472.8	2460.7	2439.5	2433.4
15°	2409.2	2409.2	2384.9	2360.7	2351.6
17.5°	2336.4	2333.4	2303.1	2278.9	2266.7
20°	2257.7	2251.6	2221.3	2181.9	2160.7
22.5°	2169.8	2169.8	2133.4	2081.9	2060.7
25°	2088.0	2075.8	2042.5	1969.8	1915.2
27.5°	1994.0	1975.8	1939.5	1836.4	1772.8
30°	1891.0	1881.9	1830.4	1697.0	1648.5
32.5°	1794.0	1778.8	1724.3	1584.9	1545.5
35°	1694.0	1681.9	1600.1	1478.8	1442.5
37.5°	1594.0	1578.8	1475.8	1378.8	1333.4
40°	1494.0	1475.8	1363.7	1275.8	1227.3
42.5°	1400.0	1375.8	1266.7	1172.8	1118.2
45°	1300.0	1272.8	1163.7	1066.7	1024.3
47.5°	1200.0	1175.8	1075.8	975.8	927.3
50°	1094.0	1072.8	981.9	881.8	830.3
52.5°	1006.1	972.8	884.9	784.9	742.5
55°	903.1	875.8	794.0	700.0	663.7
57.5°	809.1	781.8	706.1	618.2	587.9
60°	721.2	681.8	618.2	542.4	518.2
62.5°	624.3	594.0	539.4	475.8	506.1
65°	536.4	506.1	457.6	466.7	387.9
67.5°	439.4	424.3	381.8	339.4	327.3
70°	357.6	339.4	324.3	278.8	266.7
72.5°	284.9	266.7	245.5	221.2	212.1
75°	215.2	200.0	187.9	178.8	197.0
77.5°	148.5	142.4	133.3	124.2	121.2
80°	97.0	93.9	90.9	87.9	84.9
82.5°	57.6	57.6	57.6	57.6	57.6
85°	30.3	33.3	36.4	39.4	42.4
87.5°	18.2	18.2	21.2	24.2	27.3
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)