

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: P546837

Luminaire Tested: **FMR-24-4-LD4-2LO-40-UNV-93-96-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: P546837
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-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

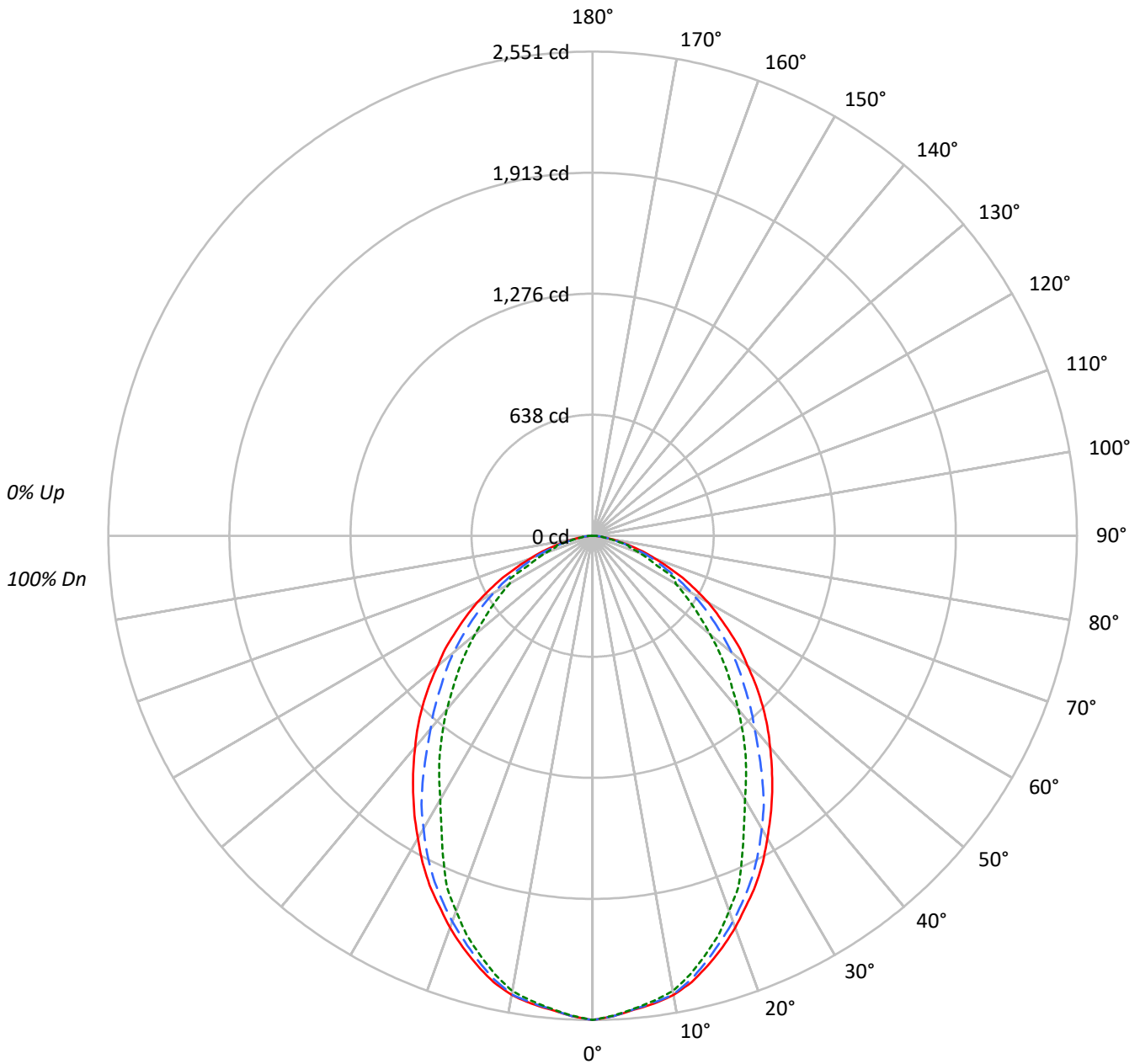
Lumens per Lamp: N/A
Luminaire Lumens: 5008.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{in}): 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: P546837

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-93-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546837

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-93-96-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°	3432	3432	3432
5°	3386	3382	3378
10°	3356	3352	3328
15°	3266	3233	3188
20°	3146	3095	3011
25°	3017	2951	2767
30°	2859	2767	2493
35°	2708	2558	2306
40°	2554	2331	2098
45°	2407	2155	1897
50°	2228	2000	1692
55°	2061	1813	1515
60°	1889	1619	1357
65°	1662	1418	1202
70°	1369	1242	1021
75°	1089	950	997
80°	731	686	640
85°	455	546	638



TEST NUMBER: P546837

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-93-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.5	4.7
10°-20°	651.7	13.0
20°-30°	902.2	18.0
30°-40°	962.0	19.2
40°-50°	877.7	17.5
50°-60°	687.6	13.7
60°-70°	448.1	8.9
70°-80°	198.5	4.0
80°-90°	42.6	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°	1791.4	35.8
0°-40°	2753.4	55.0
0°-60°	4318.7	86.2
0°-90°	5008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2551	2551	2551	2551	2551	
5°	2507	2504	2504	2501	2501	238
15°	2345	2345	2321	2297	2288	659
25°	2032	2020	1988	1917	1864	933
35°	1649	1637	1557	1439	1404	1031
45°	1265	1239	1132	1038	997	975
55°	879	852	773	681	646	788
65°	522	492	445	454	378	514
75°	209	195	183	174	192	224
85°	30	32	35	38	41	41
90°	0	0	0	0	0	



TEST NUMBER: P546837

CATALOG NUMBER: FMR-24-4-LD4-2LO-40-UNV-93-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2551.0	2551.0	2551.0	2551.0	2551.0
2.5°	2533.3	2533.3	2533.3	2530.4	2530.4
5°	2506.8	2503.8	2503.8	2500.9	2500.9
7.5°	2486.1	2483.2	2480.2	2477.3	2471.4
10°	2456.6	2456.6	2453.7	2438.9	2436.0
12.5°	2409.4	2406.5	2394.7	2374.1	2368.2
15°	2344.6	2344.6	2321.0	2297.4	2288.5
17.5°	2273.8	2270.8	2241.3	2217.8	2206.0
20°	2197.1	2191.2	2161.7	2123.4	2102.7
22.5°	2111.6	2111.6	2076.2	2026.1	2005.4
25°	2032.0	2020.2	1987.7	1916.9	1863.9
27.5°	1940.5	1922.8	1887.5	1787.2	1725.2
30°	1840.3	1831.4	1781.3	1651.5	1604.3
32.5°	1745.9	1731.1	1678.1	1542.4	1504.1
35°	1648.6	1636.8	1557.1	1439.2	1403.8
37.5°	1551.2	1536.5	1436.2	1341.9	1297.6
40°	1453.9	1436.2	1327.1	1241.6	1194.4
42.5°	1362.5	1338.9	1232.7	1141.3	1088.2
45°	1265.2	1238.6	1132.5	1038.1	996.8
47.5°	1167.9	1144.3	1046.9	949.6	902.4
50°	1064.6	1044.0	955.5	858.2	808.1
52.5°	979.1	946.7	861.1	763.8	722.5
55°	878.8	852.3	772.7	681.3	645.9
57.5°	787.4	760.9	687.2	601.6	572.1
60°	701.9	663.6	601.6	527.9	504.3
62.5°	607.5	578.0	524.9	463.0	492.5
65°	522.0	492.5	445.3	454.2	377.5
67.5°	427.6	412.9	371.6	330.3	318.5
70°	348.0	330.3	315.6	271.3	259.5
72.5°	277.2	259.5	238.9	215.3	206.4
75°	209.4	194.6	182.8	174.0	191.7
77.5°	144.5	138.6	129.8	120.9	118.0
80°	94.4	91.4	88.5	85.5	82.6
82.5°	56.0	56.0	56.0	56.0	56.0
85°	29.5	32.4	35.4	38.3	41.3
87.5°	17.7	17.7	20.6	23.6	26.5
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)