

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: P546797

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-82-96-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: P546797
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-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

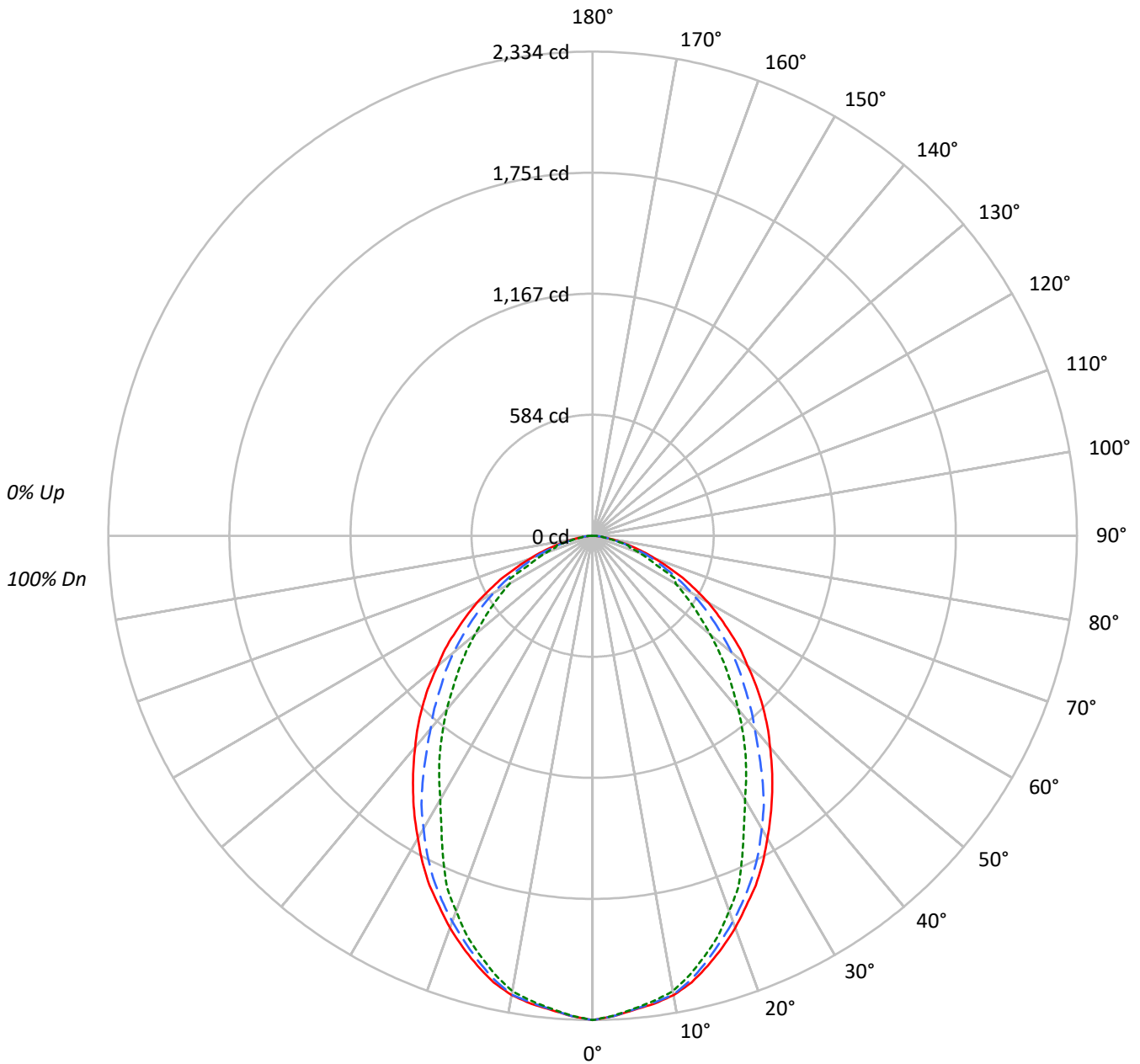
Lumens per Lamp: N/A
Luminaire Lumens: 4583.0 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P546797

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-82-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546797

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-82-96-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°	3141	3141	3141
5°	3098	3095	3091
10°	3072	3068	3046
15°	2989	2959	2917
20°	2879	2833	2755
25°	2761	2700	2532
30°	2616	2533	2281
35°	2478	2341	2110
40°	2337	2133	1920
45°	2203	1972	1736
50°	2039	1830	1548
55°	1887	1659	1387
60°	1728	1482	1242
65°	1521	1297	1100
70°	1253	1136	934
75°	996	870	912
80°	669	628	586
85°	417	500	584



TEST NUMBER: P546797

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.3	4.7
10°-20°	596.4	13.0
20°-30°	825.7	18.0
30°-40°	880.4	19.2
40°-50°	803.2	17.5
50°-60°	629.2	13.7
60°-70°	410.1	8.9
70°-80°	181.7	4.0
80°-90°	39.0	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°	1639.4	35.8
0°-40°	2519.8	55.0
0°-60°	3952.2	86.2
0°-90°	4583.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4583.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2334	2334	2334	2334	2334	
5°	2294	2291	2291	2289	2289	218
15°	2146	2146	2124	2102	2094	603
25°	1860	1849	1819	1754	1706	854
35°	1509	1498	1425	1317	1285	943
45°	1158	1134	1036	950	912	892
55°	804	780	707	623	591	721
65°	478	451	408	416	346	471
75°	192	178	167	159	175	205
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



TEST NUMBER: P546797

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2334.5	2334.5	2334.5	2334.5	2334.5
2.5°	2318.3	2318.3	2318.3	2315.6	2315.6
5°	2294.0	2291.3	2291.3	2288.6	2288.6
7.5°	2275.1	2272.4	2269.7	2267.0	2261.6
10°	2248.2	2248.2	2245.5	2232.0	2229.3
12.5°	2205.0	2202.3	2191.5	2172.6	2167.2
15°	2145.6	2145.6	2124.0	2102.4	2094.3
17.5°	2080.8	2078.1	2051.1	2029.5	2018.8
20°	2010.7	2005.3	1978.3	1943.2	1924.3
22.5°	1932.4	1932.4	1900.0	1854.1	1835.2
25°	1859.5	1848.7	1819.0	1754.3	1705.7
27.5°	1775.9	1759.7	1727.3	1635.5	1578.8
30°	1684.1	1676.0	1630.1	1511.4	1468.2
32.5°	1597.7	1584.2	1535.7	1411.5	1376.4
35°	1508.7	1497.9	1425.0	1317.0	1284.7
37.5°	1419.6	1406.1	1314.3	1228.0	1187.5
40°	1330.5	1314.3	1214.5	1136.2	1093.0
42.5°	1246.9	1225.3	1128.1	1044.5	995.9
45°	1157.8	1133.5	1036.4	950.0	912.2
47.5°	1068.8	1047.2	958.1	869.0	825.9
50°	974.3	955.4	874.4	785.4	739.5
52.5°	896.0	866.3	788.1	699.0	661.2
55°	804.3	780.0	707.1	623.4	591.1
57.5°	720.6	696.3	628.8	550.6	523.6
60°	642.3	607.2	550.6	483.1	461.5
62.5°	556.0	529.0	480.4	423.7	450.7
65°	477.7	450.7	407.5	415.6	345.5
67.5°	391.3	377.8	340.1	302.3	291.5
70°	318.5	302.3	288.8	248.3	237.5
72.5°	253.7	237.5	218.6	197.0	188.9
75°	191.6	178.1	167.3	159.2	175.4
77.5°	132.2	126.8	118.8	110.7	108.0
80°	86.4	83.7	81.0	78.3	75.6
82.5°	51.3	51.3	51.3	51.3	51.3
85°	27.0	29.7	32.4	35.1	37.8
87.5°	16.2	16.2	18.9	21.6	24.3
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)