

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: P546504

Luminaire Tested: **FMR-24-4-LD4-1HI-50-UNV-82-85-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: P546504
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-LD4-1HI-50-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

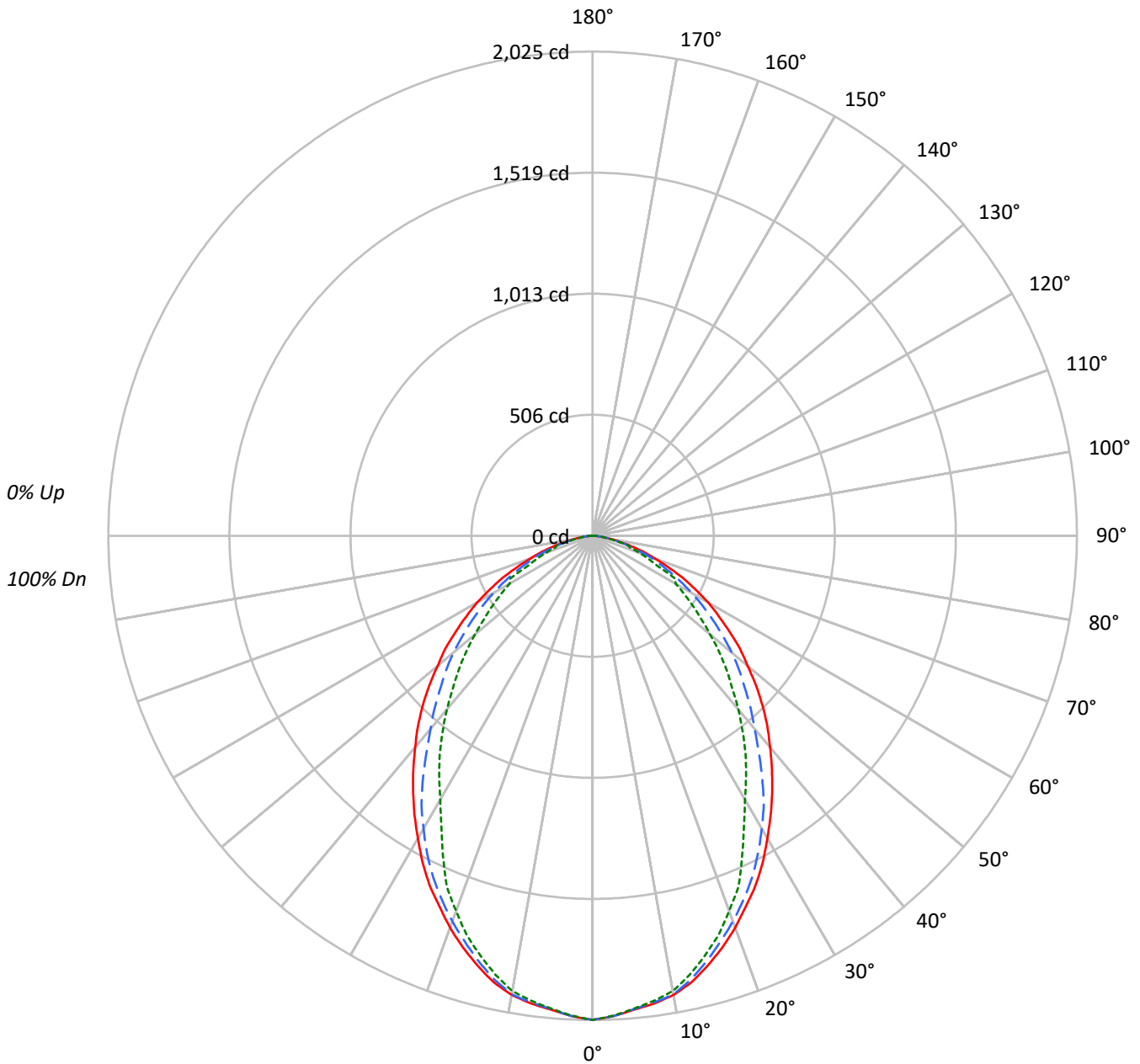
Lumens per Lamp: N/A
Luminaire Lumens: 3975.0 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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: P546504

CATALOG NUMBER: FMR-24-4-LD4-1HI-50-UNV-82-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546504

CATALOG NUMBER: FMR-24-4-LD4-1HI-50-UNV-82-85-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°	2724	2724	2724
5°	2687	2684	2681
10°	2664	2661	2642
15°	2592	2566	2530
20°	2497	2457	2390
25°	2394	2342	2196
30°	2269	2197	1978
35°	2149	2030	1830
40°	2027	1850	1665
45°	1911	1710	1506
50°	1769	1587	1343
55°	1636	1439	1202
60°	1499	1285	1077
65°	1319	1125	954
70°	1087	985	810
75°	864	754	791
80°	580	544	508
85°	361	434	506



TEST NUMBER: P546504

CATALOG NUMBER: FMR-24-4-LD4-1HI-50-UNV-82-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.5	4.7
10°-20°	517.3	13.0
20°-30°	716.1	18.0
30°-40°	763.6	19.2
40°-50°	696.6	17.5
50°-60°	545.7	13.7
60°-70°	355.7	8.9
70°-80°	157.6	4.0
80°-90°	33.8	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°	1421.9	35.8
0°-40°	2185.5	55.0
0°-60°	3427.9	86.2
0°-90°	3975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3975.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2025	2025	2025	2025	2025	
5°	1990	1987	1987	1985	1985	189
15°	1861	1861	1842	1824	1816	523
25°	1613	1604	1578	1522	1479	740
35°	1308	1299	1236	1142	1114	818
45°	1004	983	899	824	791	774
55°	698	676	613	541	513	626
65°	414	391	354	360	300	408
75°	166	154	145	138	152	178
85°	23	26	28	30	33	32
90°	0	0	0	0	0	



TEST NUMBER: P546504

CATALOG NUMBER: FMR-24-4-LD4-1HI-50-UNV-82-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2024.8	2024.8	2024.8	2024.8	2024.8
2.5°	2010.8	2010.8	2010.8	2008.4	2008.4
5°	1989.7	1987.4	1987.4	1985.0	1985.0
7.5°	1973.3	1971.0	1968.6	1966.3	1961.6
10°	1949.9	1949.9	1947.6	1935.9	1933.5
12.5°	1912.5	1910.1	1900.7	1884.4	1879.7
15°	1861.0	1861.0	1842.2	1823.5	1816.5
17.5°	1804.8	1802.4	1779.0	1760.3	1750.9
20°	1743.9	1739.2	1715.8	1685.4	1669.0
22.5°	1676.0	1676.0	1647.9	1608.1	1591.8
25°	1612.8	1603.5	1577.7	1521.5	1479.4
27.5°	1540.3	1526.2	1498.1	1418.5	1369.4
30°	1460.7	1453.7	1413.9	1310.9	1273.4
32.5°	1385.8	1374.1	1331.9	1224.3	1193.8
35°	1308.5	1299.2	1236.0	1142.3	1114.2
37.5°	1231.3	1219.6	1140.0	1065.1	1030.0
40°	1154.0	1140.0	1053.4	985.5	948.0
42.5°	1081.5	1062.7	978.5	905.9	863.8
45°	1004.2	983.1	898.9	824.0	791.2
47.5°	927.0	908.2	831.0	753.7	716.3
50°	845.0	828.7	758.4	681.2	641.4
52.5°	777.2	751.4	683.5	606.3	573.5
55°	697.6	676.5	613.3	540.7	512.6
57.5°	625.0	603.9	545.4	477.5	454.1
60°	557.1	526.7	477.5	419.0	400.3
62.5°	482.2	458.8	416.7	367.5	390.9
65°	414.3	390.9	353.5	360.5	299.6
67.5°	339.4	327.7	294.9	262.2	252.8
70°	276.2	262.2	250.5	215.4	206.0
72.5°	220.0	206.0	189.6	170.9	163.9
75°	166.2	154.5	145.1	138.1	152.2
77.5°	114.7	110.0	103.0	96.0	93.6
80°	74.9	72.6	70.2	67.9	65.5
82.5°	44.5	44.5	44.5	44.5	44.5
85°	23.4	25.7	28.1	30.4	32.8
87.5°	14.0	14.0	16.4	18.7	21.1
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)