

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: P546653

Luminaire Tested: **FMR-24-4-LD4-1STD-50-UNV-80-96-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: P546653
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-LD4-1STD-50-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

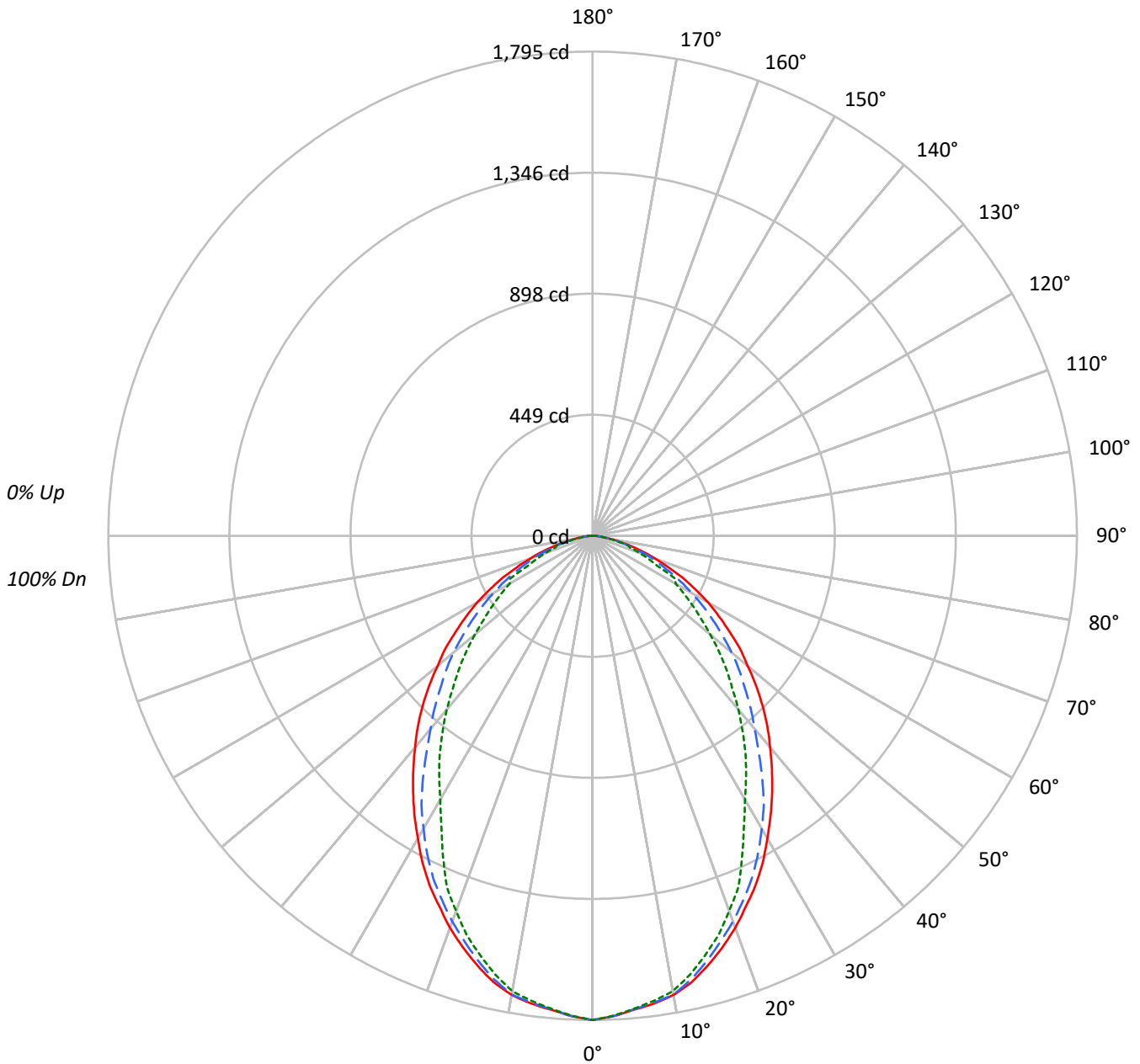
Lumens per Lamp: N/A
Luminaire Lumens: 3524.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: P546653

CATALOG NUMBER: FMR-24-4-LD4-1STD-50-UNV-80-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546653

CATALOG NUMBER: FMR-24-4-LD4-1STD-50-UNV-80-96-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°	2415	2415	2415
5°	2382	2380	2377
10°	2362	2359	2342
15°	2298	2275	2243
20°	2214	2178	2119
25°	2123	2076	1947
30°	2012	1947	1754
35°	1906	1800	1623
40°	1797	1640	1476
45°	1694	1516	1335
50°	1568	1407	1190
55°	1451	1275	1066
60°	1329	1139	955
65°	1169	998	846
70°	963	874	718
75°	766	669	701
80°	514	483	450
85°	321	384	449



TEST NUMBER: P546653

CATALOG NUMBER: FMR-24-4-LD4-1STD-50-UNV-80-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.1	4.7
10°-20°	458.6	13.0
20°-30°	634.9	18.0
30°-40°	677.0	19.2
40°-50°	617.6	17.5
50°-60°	483.8	13.7
60°-70°	315.3	8.9
70°-80°	139.7	4.0
80°-90°	30.0	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°	1260.6	35.8
0°-40°	1937.5	55.0
0°-60°	3039.0	86.2
0°-90°	3524.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3524.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1795	1795	1795	1795	1795	
5°	1764	1762	1762	1760	1760	167
15°	1650	1650	1633	1617	1610	464
25°	1430	1422	1399	1349	1312	656
35°	1160	1152	1096	1013	988	725
45°	890	872	797	730	701	686
55°	618	600	544	479	454	555
65°	367	347	313	320	266	362
75°	147	137	129	122	135	158
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



TEST NUMBER: P546653

CATALOG NUMBER: FMR-24-4-LD4-1STD-50-UNV-80-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1795.1	1795.1	1795.1	1795.1	1795.1
2.5°	1782.6	1782.6	1782.6	1780.6	1780.6
5°	1763.9	1761.9	1761.9	1759.8	1759.8
7.5°	1749.4	1747.3	1745.3	1743.2	1739.0
10°	1728.7	1728.7	1726.6	1716.2	1714.1
12.5°	1695.5	1693.4	1685.1	1670.6	1666.4
15°	1649.8	1649.8	1633.2	1616.6	1610.4
17.5°	1600.0	1597.9	1577.2	1560.6	1552.3
20°	1546.1	1541.9	1521.1	1494.2	1479.6
22.5°	1485.9	1485.9	1461.0	1425.7	1411.2
25°	1429.8	1421.5	1398.7	1348.9	1311.5
27.5°	1365.5	1353.1	1328.2	1257.6	1214.0
30°	1294.9	1288.7	1253.4	1162.1	1128.9
32.5°	1228.5	1218.2	1180.8	1085.3	1058.4
35°	1160.1	1151.8	1095.7	1012.7	987.8
37.5°	1091.6	1081.2	1010.6	944.2	913.1
40°	1023.1	1010.6	933.9	873.7	840.5
42.5°	958.8	942.2	867.4	803.1	765.8
45°	890.3	871.6	796.9	730.5	701.4
47.5°	821.8	805.2	736.7	668.2	635.0
50°	749.2	734.6	672.4	603.9	568.6
52.5°	689.0	666.2	606.0	537.5	508.4
55°	618.4	599.7	543.7	479.4	454.5
57.5°	554.1	535.4	483.5	423.3	402.6
60°	493.9	466.9	423.3	371.5	354.9
62.5°	427.5	406.7	369.4	325.8	346.6
65°	367.3	346.6	313.4	319.6	265.6
67.5°	300.9	290.5	261.5	232.4	224.1
70°	244.9	232.4	222.1	190.9	182.6
72.5°	195.1	182.6	168.1	151.5	145.3
75°	147.3	137.0	128.7	122.4	134.9
77.5°	101.7	97.5	91.3	85.1	83.0
80°	66.4	64.3	62.3	60.2	58.1
82.5°	39.4	39.4	39.4	39.4	39.4
85°	20.8	22.8	24.9	27.0	29.1
87.5°	12.5	12.5	14.5	16.6	18.7
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)