

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: P546460

Luminaire Tested: **FMR-24-4-LD4-1HI-40-UNV-80-94-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: P546460
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-40-UNV-80-94-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

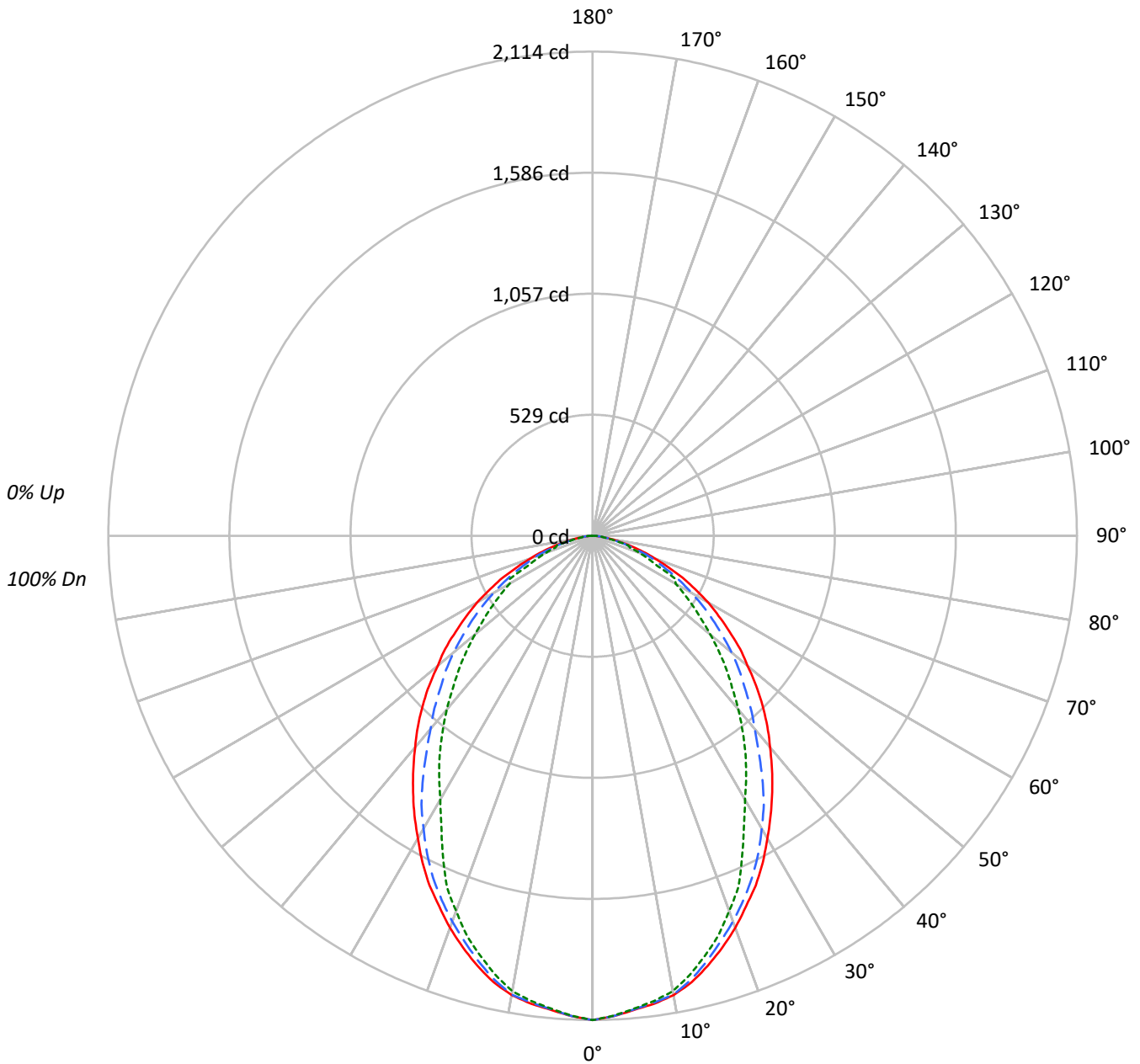
Lumens per Lamp: N/A
Luminaire Lumens: 4151.0 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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: P546460

CATALOG NUMBER: FMR-24-4-LD4-1HI-40-UNV-80-94-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2845	2845	2845
5°	2806	2803	2800
10°	2782	2779	2759
15°	2707	2680	2642
20°	2608	2566	2496
25°	2500	2446	2294
30°	2370	2294	2066
35°	2245	2120	1911
40°	2117	1932	1739
45°	1995	1786	1572
50°	1847	1658	1402
55°	1709	1502	1256
60°	1566	1342	1125
65°	1378	1175	996
70°	1135	1029	846
75°	902	788	826
80°	606	568	530
85°	377	452	528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.8	4.7
10°-20°	540.2	13.0
20°-30°	747.8	18.0
30°-40°	797.4	19.2
40°-50°	727.5	17.5
50°-60°	569.9	13.7
60°-70°	371.4	8.9
70°-80°	164.6	4.0
80°-90°	35.3	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°	1484.8	35.8
0°-40°	2282.3	55.0
0°-60°	3579.7	86.2
0°-90°	4151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2114	2114	2114	2114	2114	
5°	2078	2075	2075	2073	2073	197
15°	1943	1943	1924	1904	1897	546
25°	1684	1674	1648	1589	1545	773
35°	1366	1357	1291	1193	1164	854
45°	1049	1027	939	860	826	808
55°	728	706	640	565	535	653
65°	433	408	369	376	313	426
75°	174	161	152	144	159	186
85°	24	27	29	32	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2114.5	2114.5	2114.5	2114.5	2114.5
2.5°	2099.8	2099.8	2099.8	2097.4	2097.4
5°	2077.8	2075.4	2075.4	2072.9	2072.9
7.5°	2060.7	2058.2	2055.8	2053.4	2048.5
10°	2036.2	2036.2	2033.8	2021.6	2019.1
12.5°	1997.1	1994.7	1984.9	1967.8	1962.9
15°	1943.4	1943.4	1923.8	1904.2	1896.9
17.5°	1884.7	1882.2	1857.8	1838.2	1828.5
20°	1821.1	1816.2	1791.8	1760.0	1742.9
22.5°	1750.2	1750.2	1720.9	1679.3	1662.2
25°	1684.2	1674.5	1647.6	1588.9	1544.9
27.5°	1608.5	1593.8	1564.5	1481.3	1430.0
30°	1525.3	1518.0	1476.5	1368.9	1329.8
32.5°	1447.1	1434.9	1390.9	1278.5	1246.7
35°	1366.5	1356.7	1290.7	1192.9	1163.6
37.5°	1285.8	1273.6	1190.5	1112.2	1075.6
40°	1205.1	1190.5	1100.0	1029.1	990.0
42.5°	1129.3	1109.8	1021.8	946.0	902.0
45°	1048.7	1026.7	938.7	860.5	826.2
47.5°	968.0	948.5	867.8	787.1	748.0
50°	882.5	865.3	792.0	711.3	669.8
52.5°	811.6	784.7	713.8	633.1	598.9
55°	728.5	706.5	640.5	564.7	535.3
57.5°	652.7	630.7	569.6	498.7	474.2
60°	581.8	550.0	498.7	437.6	418.0
62.5°	503.6	479.1	435.1	383.8	408.2
65°	432.7	408.2	369.1	376.4	312.9
67.5°	354.4	342.2	308.0	273.8	264.0
70°	288.4	273.8	261.6	224.9	215.1
72.5°	229.8	215.1	198.0	178.4	171.1
75°	173.6	161.3	151.6	144.2	158.9
77.5°	119.8	114.9	107.6	100.2	97.8
80°	78.2	75.8	73.3	70.9	68.4
82.5°	46.4	46.4	46.4	46.4	46.4
85°	24.4	26.9	29.3	31.8	34.2
87.5°	14.7	14.7	17.1	19.6	22.0
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)