

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: P546423

Luminaire Tested: **FMR-24-4-LD4-1HI-35-UNV-80-84-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: P546423
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-35-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

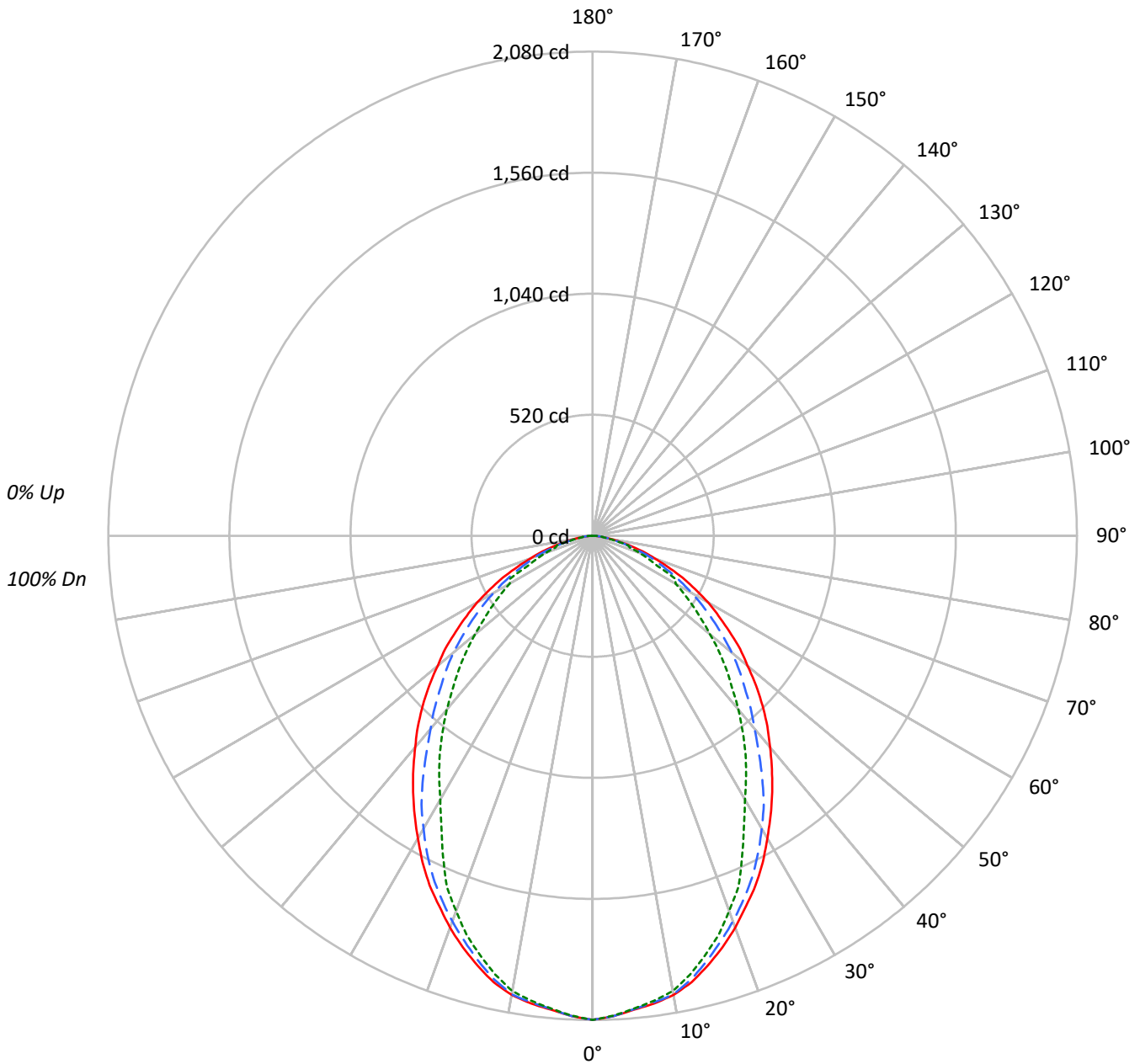
Lumens per Lamp: N/A
Luminaire Lumens: 4083.0 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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°	2798	2798	2798
5°	2760	2757	2754
10°	2736	2733	2714
15°	2663	2636	2599
20°	2565	2523	2455
25°	2459	2406	2256
30°	2331	2256	2032
35°	2208	2085	1880
40°	2082	1900	1710
45°	1963	1757	1546
50°	1817	1631	1379
55°	1681	1478	1235
60°	1540	1320	1107
65°	1355	1156	980
70°	1116	1012	832
75°	887	775	813
80°	596	559	521
85°	371	446	520



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.6	4.7
10°-20°	531.3	13.0
20°-30°	735.6	18.0
30°-40°	784.4	19.2
40°-50°	715.6	17.5
50°-60°	560.6	13.7
60°-70°	365.4	8.9
70°-80°	161.9	4.0
80°-90°	34.7	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°	1460.5	35.8
0°-40°	2244.9	55.0
0°-60°	3521.0	86.2
0°-90°	4083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4083.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2080	2080	2080	2080	2080	
5°	2044	2041	2041	2039	2039	194
15°	1912	1912	1892	1873	1866	537
25°	1657	1647	1621	1563	1520	761
35°	1344	1334	1270	1173	1144	840
45°	1032	1010	923	846	813	795
55°	716	695	630	555	527	643
65°	426	402	363	370	308	419
75°	171	159	149	142	156	183
85°	24	26	29	31	34	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2079.8	2079.8	2079.8	2079.8	2079.8
2.5°	2065.4	2065.4	2065.4	2063.0	2063.0
5°	2043.8	2041.4	2041.4	2039.0	2039.0
7.5°	2026.9	2024.5	2022.1	2019.7	2014.9
10°	2002.9	2002.9	2000.5	1988.5	1986.1
12.5°	1964.4	1962.0	1952.4	1935.6	1930.8
15°	1911.5	1911.5	1892.3	1873.0	1865.8
17.5°	1853.8	1851.4	1827.4	1808.1	1798.5
20°	1791.3	1786.5	1762.4	1731.2	1714.4
22.5°	1721.6	1721.6	1692.7	1651.8	1635.0
25°	1656.6	1647.0	1620.6	1562.9	1519.6
27.5°	1582.1	1567.7	1538.8	1457.1	1406.6
30°	1500.4	1493.1	1452.3	1346.5	1308.0
32.5°	1423.4	1411.4	1368.1	1257.5	1226.3
35°	1344.1	1334.5	1269.5	1173.4	1144.5
37.5°	1264.7	1252.7	1171.0	1094.0	1057.9
40°	1185.4	1171.0	1082.0	1012.3	973.8
42.5°	1110.8	1091.6	1005.0	930.5	887.2
45°	1031.5	1009.9	923.3	846.4	812.7
47.5°	952.2	932.9	853.6	774.2	735.8
50°	868.0	851.2	779.0	699.7	658.8
52.5°	798.3	771.8	702.1	622.7	589.1
55°	716.5	694.9	630.0	555.4	526.6
57.5°	642.0	620.3	560.2	490.5	466.5
60°	572.3	541.0	490.5	430.4	411.2
62.5°	495.3	471.3	428.0	377.5	401.5
65°	425.6	401.5	363.1	370.3	307.8
67.5°	348.6	336.6	303.0	269.3	259.7
70°	283.7	269.3	257.3	221.2	211.6
72.5°	226.0	211.6	194.8	175.5	168.3
75°	170.7	158.7	149.1	141.9	156.3
77.5°	117.8	113.0	105.8	98.6	96.2
80°	76.9	74.5	72.1	69.7	67.3
82.5°	45.7	45.7	45.7	45.7	45.7
85°	24.0	26.4	28.9	31.3	33.7
87.5°	14.4	14.4	16.8	19.2	21.6
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)