

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: P546487

Luminaire Tested: **FMR-24-4-LD4-1HI-50-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: P546487
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-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

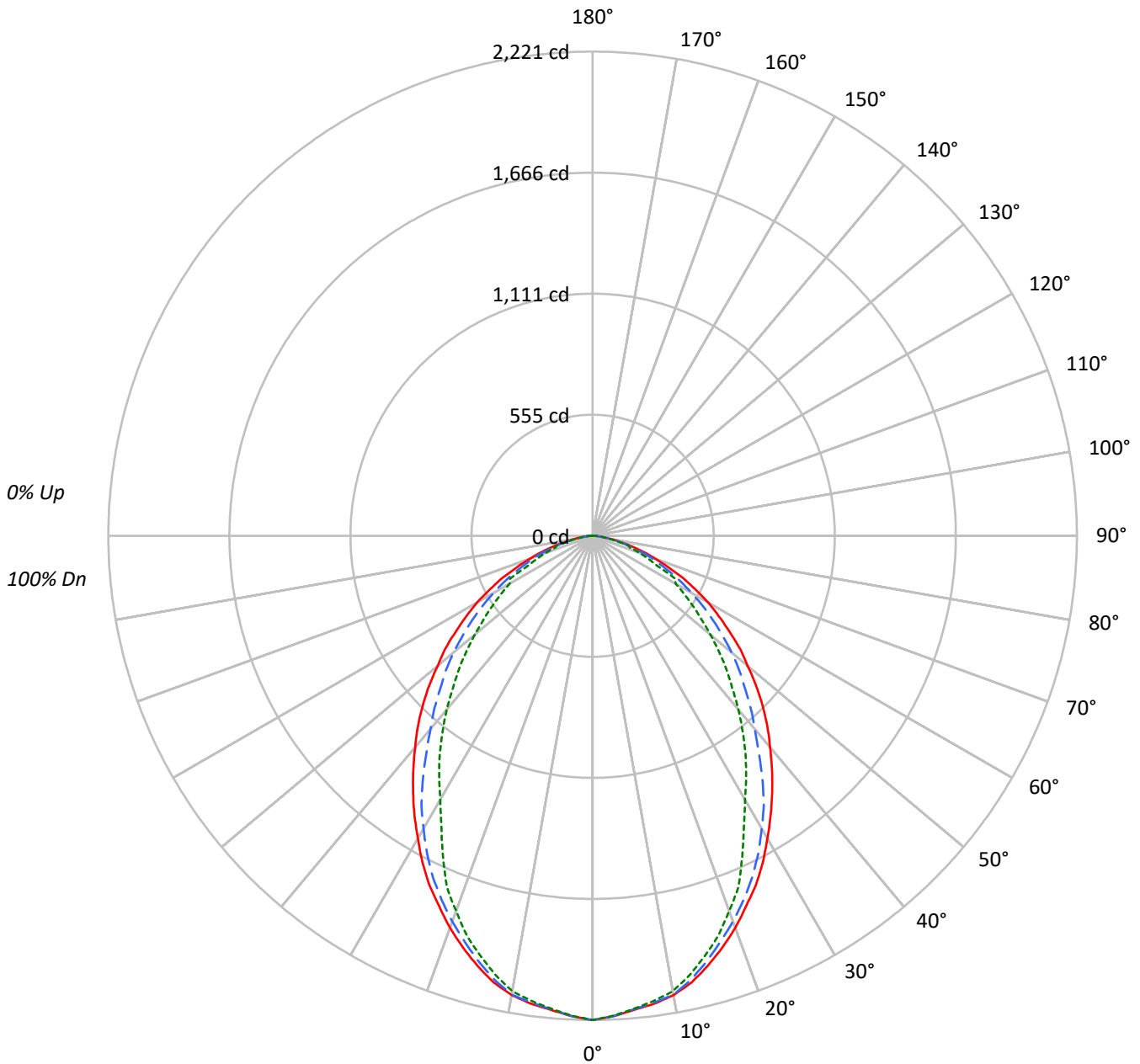
Lumens per Lamp: N/A
Luminaire Lumens: 4361.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	2989	2989	2989
5°	2948	2945	2941
10°	2923	2919	2898
15°	2844	2815	2776
20°	2740	2695	2622
25°	2627	2570	2410
30°	2490	2410	2171
35°	2358	2227	2008
40°	2224	2030	1827
45°	2096	1877	1652
50°	1941	1742	1473
55°	1795	1578	1319
60°	1645	1410	1182
65°	1447	1235	1046
70°	1192	1081	889
75°	948	828	868
80°	637	597	557
85°	397	475	556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.8	4.7
10°-20°	567.5	13.0
20°-30°	785.7	18.0
30°-40°	837.8	19.2
40°-50°	764.3	17.5
50°-60°	598.8	13.7
60°-70°	390.2	8.9
70°-80°	172.9	4.0
80°-90°	37.1	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°	1560.0	35.8
0°-40°	2397.7	55.0
0°-60°	3760.8	86.2
0°-90°	4361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2221	2221	2221	2221	2221	
5°	2183	2180	2180	2178	2178	207
15°	2042	2042	2021	2001	1993	574
25°	1769	1759	1731	1669	1623	812
35°	1436	1425	1356	1253	1222	897
45°	1102	1079	986	904	868	849
55°	765	742	673	593	562	686
65°	455	429	388	396	329	448
75°	182	170	159	152	167	195
85°	26	28	31	33	36	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2221.4	2221.4	2221.4	2221.4	2221.4
2.5°	2206.0	2206.0	2206.0	2203.5	2203.5
5°	2182.9	2180.3	2180.3	2177.8	2177.8
7.5°	2164.9	2162.4	2159.8	2157.2	2152.1
10°	2139.3	2139.3	2136.7	2123.8	2121.3
12.5°	2098.2	2095.6	2085.3	2067.3	2062.2
15°	2041.7	2041.7	2021.1	2000.6	1992.9
17.5°	1980.0	1977.5	1951.8	1931.2	1921.0
20°	1913.3	1908.1	1882.4	1849.1	1831.1
22.5°	1838.8	1838.8	1808.0	1764.3	1746.3
25°	1769.4	1759.2	1730.9	1669.3	1623.1
27.5°	1689.8	1674.4	1643.6	1556.3	1502.4
30°	1602.5	1594.8	1551.2	1438.2	1397.1
32.5°	1520.3	1507.5	1461.3	1343.1	1309.7
35°	1435.6	1425.3	1356.0	1253.2	1222.4
37.5°	1350.8	1338.0	1250.7	1168.5	1130.0
40°	1266.1	1250.7	1155.7	1081.2	1040.1
42.5°	1186.5	1165.9	1073.5	993.9	947.6
45°	1101.7	1078.6	986.2	904.0	868.0
47.5°	1017.0	996.4	911.7	826.9	785.8
50°	927.1	909.1	832.1	747.3	703.7
52.5°	852.6	824.4	749.9	665.1	629.2
55°	765.3	742.2	672.9	593.2	562.4
57.5°	685.7	662.6	598.4	523.9	498.2
60°	611.2	577.8	523.9	459.7	439.2
62.5°	529.0	503.4	457.1	403.2	428.9
65°	454.6	428.9	387.8	395.5	328.7
67.5°	372.4	359.5	323.6	287.6	277.4
70°	303.0	287.6	274.8	236.3	226.0
72.5°	241.4	226.0	208.0	187.5	179.8
75°	182.3	169.5	159.2	151.5	166.9
77.5°	125.8	120.7	113.0	105.3	102.7
80°	82.2	79.6	77.0	74.5	71.9
82.5°	48.8	48.8	48.8	48.8	48.8
85°	25.7	28.2	30.8	33.4	36.0
87.5°	15.4	15.4	18.0	20.5	23.1
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)