

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: P546505

Luminaire Tested: **FMR-24-4-LD4-1HI-50-UNV-82-86-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: P546505
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-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

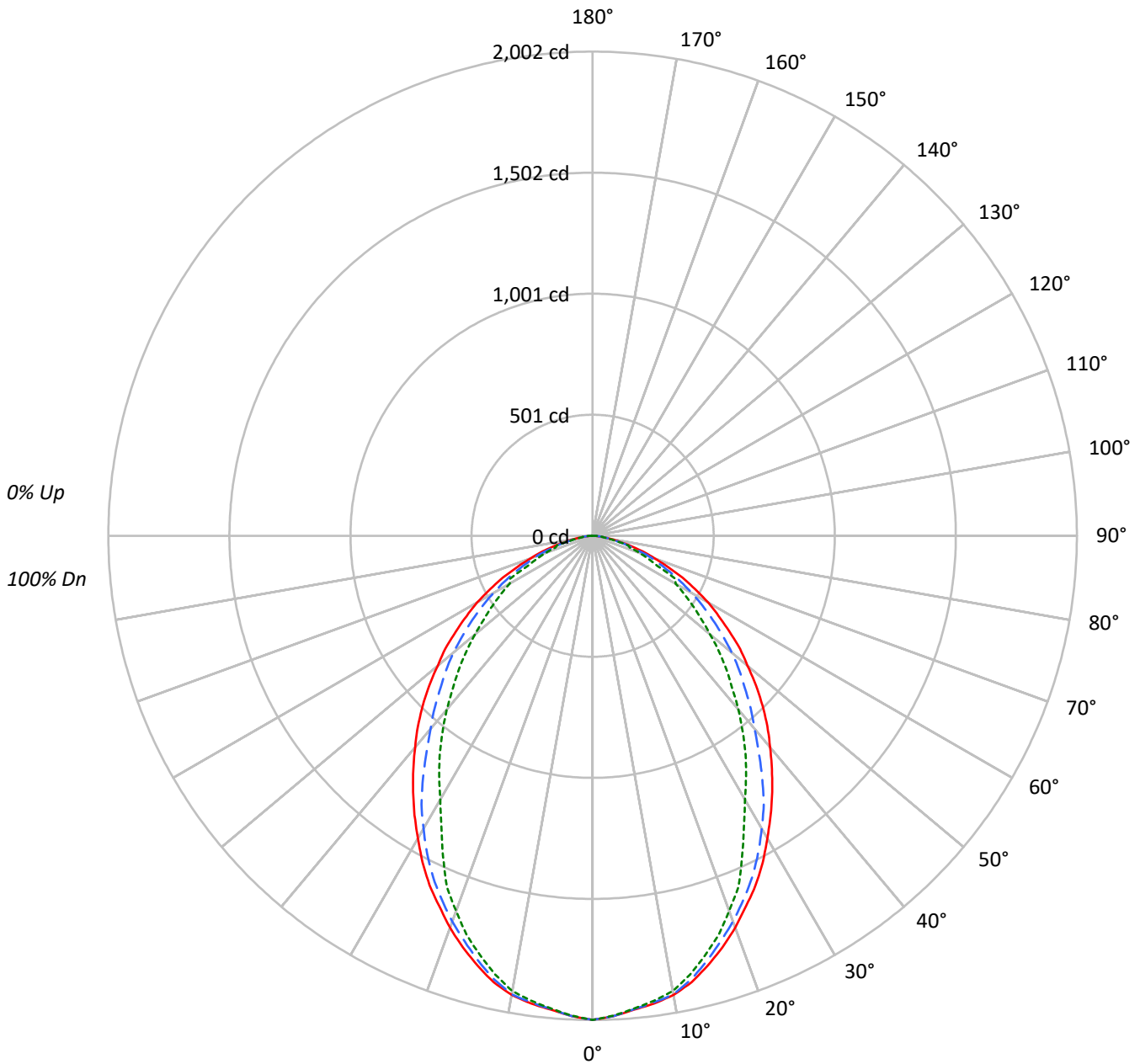
Lumens per Lamp: N/A
Luminaire Lumens: 3930.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	2694	2694	2694
5°	2657	2654	2651
10°	2634	2631	2612
15°	2563	2537	2502
20°	2469	2429	2363
25°	2367	2316	2171
30°	2244	2172	1956
35°	2125	2007	1809
40°	2004	1829	1646
45°	1889	1691	1488
50°	1749	1569	1327
55°	1618	1422	1189
60°	1482	1270	1065
65°	1304	1113	943
70°	1074	974	801
75°	854	746	782
80°	574	538	502
85°	357	429	500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.3	4.7
10°-20°	511.4	13.0
20°-30°	708.0	18.0
30°-40°	755.0	19.2
40°-50°	688.7	17.5
50°-60°	539.6	13.7
60°-70°	351.7	8.9
70°-80°	155.8	4.0
80°-90°	33.5	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°	1405.8	35.8
0°-40°	2160.8	55.0
0°-60°	3389.1	86.2
0°-90°	3930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3930.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	1967	1965	1965	1962	1962	187
15°	1840	1840	1821	1803	1796	517
25°	1595	1585	1560	1504	1463	732
35°	1294	1284	1222	1129	1102	809
45°	993	972	889	815	782	765
55°	690	669	606	535	507	619
65°	410	386	350	356	296	404
75°	164	153	144	136	150	176
85°	23	26	28	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2001.9	2001.9	2001.9	2001.9	2001.9
2.5°	1988.0	1988.0	1988.0	1985.7	1985.7
5°	1967.2	1964.9	1964.9	1962.5	1962.5
7.5°	1951.0	1948.7	1946.3	1944.0	1939.4
10°	1927.8	1927.8	1925.5	1913.9	1911.6
12.5°	1890.8	1888.5	1879.2	1863.0	1858.4
15°	1839.9	1839.9	1821.4	1802.9	1795.9
17.5°	1784.3	1782.0	1758.9	1740.4	1731.1
20°	1724.2	1719.5	1696.4	1666.3	1650.1
22.5°	1657.1	1657.1	1629.3	1589.9	1573.7
25°	1594.6	1585.3	1559.9	1504.3	1462.7
27.5°	1522.8	1508.9	1481.2	1402.5	1353.9
30°	1444.1	1437.2	1397.9	1296.0	1259.0
32.5°	1370.1	1358.5	1316.8	1210.4	1180.3
35°	1293.7	1284.4	1222.0	1129.4	1101.6
37.5°	1217.3	1205.8	1127.1	1053.0	1018.3
40°	1141.0	1127.1	1041.4	974.3	937.3
42.5°	1069.2	1050.7	967.4	895.6	854.0
45°	992.8	972.0	888.7	814.6	782.2
47.5°	916.5	898.0	821.6	745.2	708.2
50°	835.5	819.3	749.8	673.5	634.1
52.5°	768.4	742.9	675.8	599.4	567.0
55°	689.7	668.8	606.4	534.6	506.8
57.5°	617.9	597.1	539.2	472.1	449.0
60°	550.8	520.7	472.1	414.3	395.7
62.5°	476.8	453.6	411.9	363.3	386.5
65°	409.6	386.5	349.5	356.4	296.2
67.5°	335.6	324.0	291.6	259.2	249.9
70°	273.1	259.2	247.6	212.9	203.7
72.5°	217.5	203.7	187.5	168.9	162.0
75°	164.3	152.7	143.5	136.5	150.4
77.5°	113.4	108.8	101.8	94.9	92.6
80°	74.1	71.7	69.4	67.1	64.8
82.5°	44.0	44.0	44.0	44.0	44.0
85°	23.1	25.5	27.8	30.1	32.4
87.5°	13.9	13.9	16.2	18.5	20.8
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)