

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: P546491

Luminaire Tested: **FMR-24-4-LD4-1HI-50-UNV-80-88-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: P546491
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-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

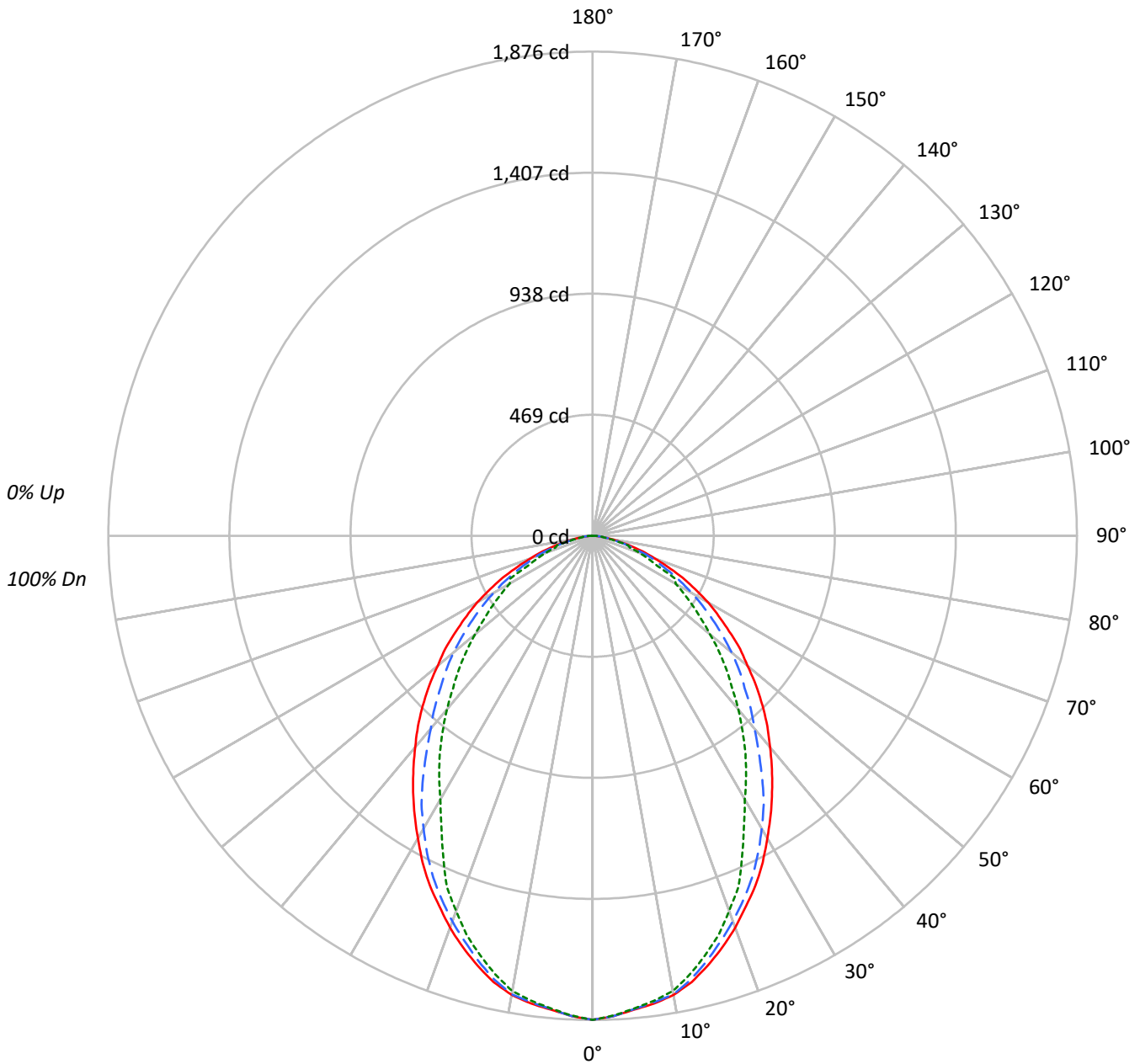
Lumens per Lamp: N/A
Luminaire Lumens: 3682.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2524	2524	2524
5°	2489	2486	2483
10°	2468	2465	2447
15°	2401	2377	2344
20°	2313	2276	2214
25°	2218	2170	2034
30°	2102	2035	1833
35°	1991	1881	1695
40°	1878	1714	1542
45°	1770	1584	1395
50°	1638	1470	1244
55°	1516	1333	1114
60°	1389	1190	998
65°	1222	1042	883
70°	1007	913	751
75°	800	699	732
80°	538	504	470
85°	335	401	469



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.6	4.7
10°-20°	479.1	13.0
20°-30°	663.3	18.0
30°-40°	707.3	19.2
40°-50°	645.3	17.5
50°-60°	505.5	13.7
60°-70°	329.5	8.9
70°-80°	146.0	4.0
80°-90°	31.3	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°	1317.1	35.8
0°-40°	2024.4	55.0
0°-60°	3175.2	86.2
0°-90°	3682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3682.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1876	1876	1876	1876	1876	
5°	1843	1841	1841	1839	1839	175
15°	1724	1724	1706	1689	1683	485
25°	1494	1485	1461	1409	1370	686
35°	1212	1203	1145	1058	1032	758
45°	930	911	833	763	733	717
55°	646	627	568	501	475	580
65°	384	362	327	334	278	378
75°	154	143	134	128	141	165
85°	22	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1875.6	1875.6	1875.6	1875.6	1875.6
2.5°	1862.6	1862.6	1862.6	1860.4	1860.4
5°	1843.0	1840.9	1840.9	1838.7	1838.7
7.5°	1827.9	1825.7	1823.5	1821.4	1817.0
10°	1806.2	1806.2	1804.0	1793.2	1791.0
12.5°	1771.5	1769.3	1760.6	1745.5	1741.1
15°	1723.8	1723.8	1706.4	1689.1	1682.6
17.5°	1671.7	1669.6	1647.9	1630.5	1621.9
20°	1615.4	1611.0	1589.3	1561.2	1546.0
22.5°	1552.5	1552.5	1526.5	1489.6	1474.4
25°	1493.9	1485.3	1461.4	1409.4	1370.4
27.5°	1426.7	1413.7	1387.7	1314.0	1268.4
30°	1353.0	1346.5	1309.6	1214.2	1179.5
32.5°	1283.6	1272.8	1233.8	1134.0	1105.8
35°	1212.1	1203.4	1144.9	1058.1	1032.1
37.5°	1140.5	1129.7	1056.0	986.6	954.0
40°	1069.0	1056.0	975.7	912.8	878.2
42.5°	1001.7	984.4	906.3	839.1	800.1
45°	930.2	910.7	832.6	763.2	732.9
47.5°	858.6	841.3	769.7	698.2	663.5
50°	782.7	767.6	702.5	631.0	594.1
52.5°	719.9	696.0	633.1	561.6	531.2
55°	646.1	626.6	568.1	500.9	474.9
57.5°	578.9	559.4	505.2	442.3	420.6
60°	516.1	487.9	442.3	388.1	370.8
62.5°	446.7	425.0	386.0	340.4	362.1
65°	383.8	362.1	327.4	333.9	277.5
67.5°	314.4	303.6	273.2	242.8	234.2
70°	255.9	242.8	232.0	199.5	190.8
72.5°	203.8	190.8	175.6	158.3	151.8
75°	153.9	143.1	134.4	127.9	140.9
77.5°	106.2	101.9	95.4	88.9	86.7
80°	69.4	67.2	65.0	62.9	60.7
82.5°	41.2	41.2	41.2	41.2	41.2
85°	21.7	23.9	26.0	28.2	30.4
87.5°	13.0	13.0	15.2	17.3	19.5
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)