

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: P546494

Luminaire Tested: **FMR-24-4-LD4-1HI-50-UNV-80-97-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: P546494
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-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

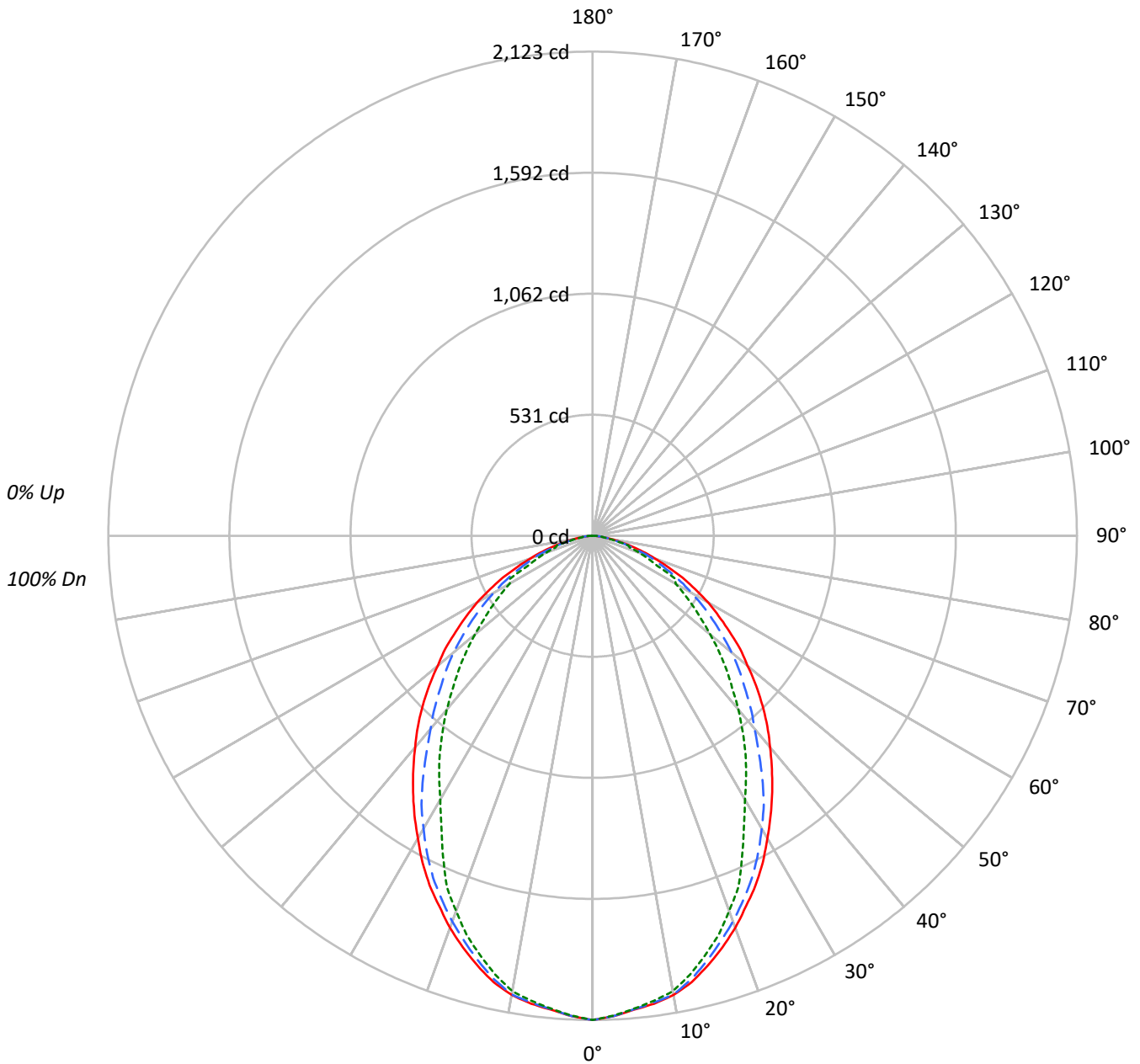
Lumens per Lamp: N/A
Luminaire Lumens: 4168.0 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	2857	2857	2857
5°	2818	2815	2811
10°	2793	2790	2770
15°	2718	2691	2653
20°	2618	2576	2506
25°	2511	2456	2303
30°	2380	2303	2074
35°	2254	2129	1919
40°	2125	1940	1746
45°	2004	1793	1579
50°	1855	1665	1408
55°	1716	1509	1261
60°	1572	1347	1129
65°	1383	1180	1000
70°	1139	1033	850
75°	906	791	829
80°	608	570	532
85°	378	455	531



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.6	4.7
10°-20°	542.4	13.0
20°-30°	750.9	18.0
30°-40°	800.7	19.2
40°-50°	730.5	17.5
50°-60°	572.3	13.7
60°-70°	373.0	8.9
70°-80°	165.2	4.0
80°-90°	35.5	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°	1490.9	35.8
0°-40°	2291.6	55.0
0°-60°	3594.3	86.2
0°-90°	4168.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4168.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2123	2123	2123	2123	2123	
5°	2086	2084	2084	2081	2081	198
15°	1951	1951	1932	1912	1905	549
25°	1691	1681	1654	1595	1551	776
35°	1372	1362	1296	1198	1168	858
45°	1053	1031	942	864	830	811
55°	731	709	643	567	538	656
65°	434	410	371	378	314	428
75°	174	162	152	145	160	187
85°	24	27	30	32	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2123.1	2123.1	2123.1	2123.1	2123.1
2.5°	2108.4	2108.4	2108.4	2105.9	2105.9
5°	2086.3	2083.9	2083.9	2081.4	2081.4
7.5°	2069.1	2066.7	2064.2	2061.8	2056.9
10°	2044.6	2044.6	2042.1	2029.9	2027.4
12.5°	2005.3	2002.9	1993.0	1975.9	1970.9
15°	1951.3	1951.3	1931.7	1912.0	1904.7
17.5°	1892.4	1889.9	1865.4	1845.8	1835.9
20°	1828.6	1823.7	1799.1	1767.2	1750.0
22.5°	1757.4	1757.4	1728.0	1686.2	1669.0
25°	1691.1	1681.3	1654.3	1595.4	1551.2
27.5°	1615.0	1600.3	1570.9	1487.4	1435.9
30°	1531.6	1524.2	1482.5	1374.5	1335.2
32.5°	1453.1	1440.8	1396.6	1283.7	1251.8
35°	1372.1	1362.2	1296.0	1197.8	1168.3
37.5°	1291.1	1278.8	1195.3	1116.8	1080.0
40°	1210.1	1195.3	1104.5	1033.3	994.1
42.5°	1134.0	1114.3	1026.0	949.9	905.7
45°	1053.0	1030.9	942.5	864.0	829.6
47.5°	972.0	952.3	871.3	790.3	751.1
50°	886.1	868.9	795.3	714.3	672.5
52.5°	814.9	787.9	716.7	635.7	601.3
55°	731.4	709.3	643.1	567.0	537.5
57.5°	655.3	633.3	571.9	500.7	476.2
60°	584.2	552.3	500.7	439.4	419.7
62.5°	505.6	481.1	436.9	385.4	409.9
65°	434.4	409.9	370.6	378.0	314.2
67.5°	355.9	343.6	309.3	274.9	265.1
70°	289.6	274.9	262.6	225.8	216.0
72.5°	230.7	216.0	198.8	179.2	171.8
75°	174.3	162.0	152.2	144.8	159.5
77.5°	120.3	115.4	108.0	100.6	98.2
80°	78.5	76.1	73.6	71.2	68.7
82.5°	46.6	46.6	46.6	46.6	46.6
85°	24.5	27.0	29.5	31.9	34.4
87.5°	14.7	14.7	17.2	19.6	22.1
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)