

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: P546493

Luminaire Tested: **FMR-24-4-LD4-1HI-50-UNV-80-96-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: P546493
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-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

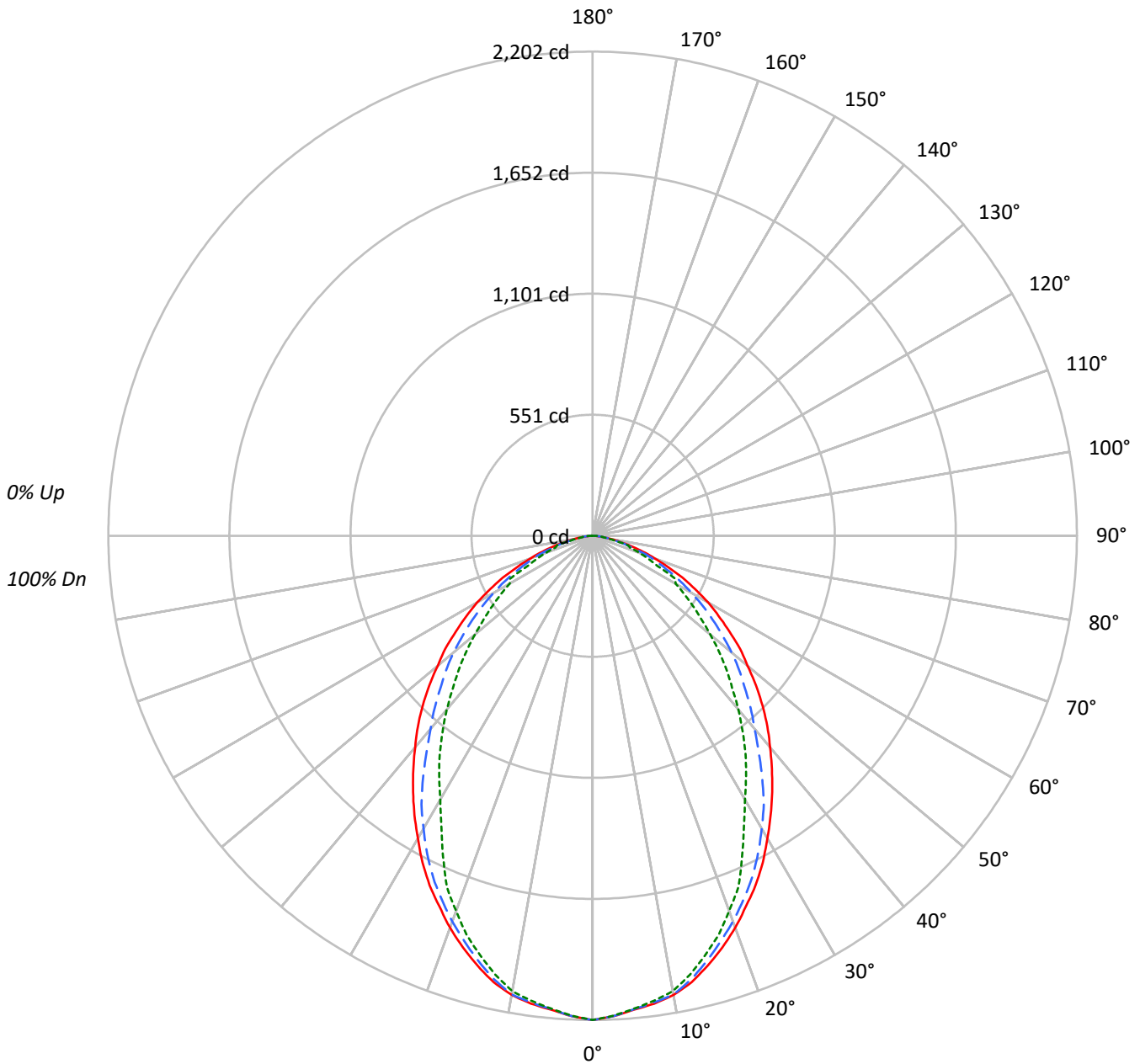
Lumens per Lamp: N/A
Luminaire Lumens: 4323.0 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2963	2963	2963
5°	2923	2919	2916
10°	2897	2894	2873
15°	2819	2791	2752
20°	2716	2672	2599
25°	2604	2547	2389
30°	2468	2389	2152
35°	2337	2208	1990
40°	2204	2012	1811
45°	2078	1860	1637
50°	1924	1726	1460
55°	1780	1565	1308
60°	1630	1397	1171
65°	1435	1224	1038
70°	1182	1072	881
75°	939	820	860
80°	631	592	552
85°	394	471	550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.0	4.7
10°-20°	562.6	13.0
20°-30°	778.8	18.0
30°-40°	830.5	19.2
40°-50°	757.6	17.5
50°-60°	593.5	13.7
60°-70°	386.8	8.9
70°-80°	171.4	4.0
80°-90°	36.8	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°	1546.4	35.8
0°-40°	2376.8	55.0
0°-60°	3728.0	86.2
0°-90°	4323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4323.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2202	2202	2202	2202	2202	
5°	2164	2161	2161	2159	2159	205
15°	2024	2024	2004	1983	1976	569
25°	1754	1744	1716	1655	1609	805
35°	1423	1413	1344	1242	1212	890
45°	1092	1069	978	896	860	841
55°	759	736	667	588	558	680
65°	451	425	384	392	326	444
75°	181	168	158	150	166	194
85°	26	28	30	33	36	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2202.1	2202.1	2202.1	2202.1	2202.1
2.5°	2186.8	2186.8	2186.8	2184.3	2184.3
5°	2163.9	2161.3	2161.3	2158.8	2158.8
7.5°	2146.1	2143.5	2141.0	2138.4	2133.3
10°	2120.6	2120.6	2118.1	2105.3	2102.8
12.5°	2079.9	2077.3	2067.2	2049.3	2044.2
15°	2023.9	2023.9	2003.5	1983.1	1975.5
17.5°	1962.8	1960.2	1934.8	1914.4	1904.2
20°	1896.6	1891.5	1866.0	1832.9	1815.1
22.5°	1822.8	1822.8	1792.2	1748.9	1731.1
25°	1754.0	1743.8	1715.8	1654.7	1608.9
27.5°	1675.1	1659.8	1629.3	1542.7	1489.3
30°	1588.6	1580.9	1537.6	1425.6	1384.9
32.5°	1507.1	1494.4	1448.5	1331.4	1298.3
35°	1423.1	1412.9	1344.2	1242.3	1211.8
37.5°	1339.1	1326.3	1239.8	1158.3	1120.1
40°	1255.1	1239.8	1145.6	1071.8	1031.0
42.5°	1176.1	1155.8	1064.1	985.2	939.4
45°	1092.1	1069.2	977.6	896.1	860.5
47.5°	1008.1	987.8	903.7	819.7	779.0
50°	919.0	901.2	824.8	740.8	697.5
52.5°	845.2	817.2	743.4	659.4	623.7
55°	758.6	735.7	667.0	588.1	557.5
57.5°	679.7	656.8	593.2	519.3	493.9
60°	605.9	572.8	519.3	455.7	435.3
62.5°	524.4	499.0	453.1	399.7	425.1
65°	450.6	425.1	384.4	392.0	325.9
67.5°	369.1	356.4	320.8	285.1	274.9
70°	300.4	285.1	272.4	234.2	224.0
72.5°	239.3	224.0	206.2	185.8	178.2
75°	180.7	168.0	157.8	150.2	165.5
77.5°	124.7	119.7	112.0	104.4	101.8
80°	81.5	78.9	76.4	73.8	71.3
82.5°	48.4	48.4	48.4	48.4	48.4
85°	25.5	28.0	30.5	33.1	35.6
87.5°	15.3	15.3	17.8	20.4	22.9
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)