

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: P546516

Luminaire Tested: **FMR-24-4-LD4-1HI-50-UNV-93-94-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: P546516
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-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

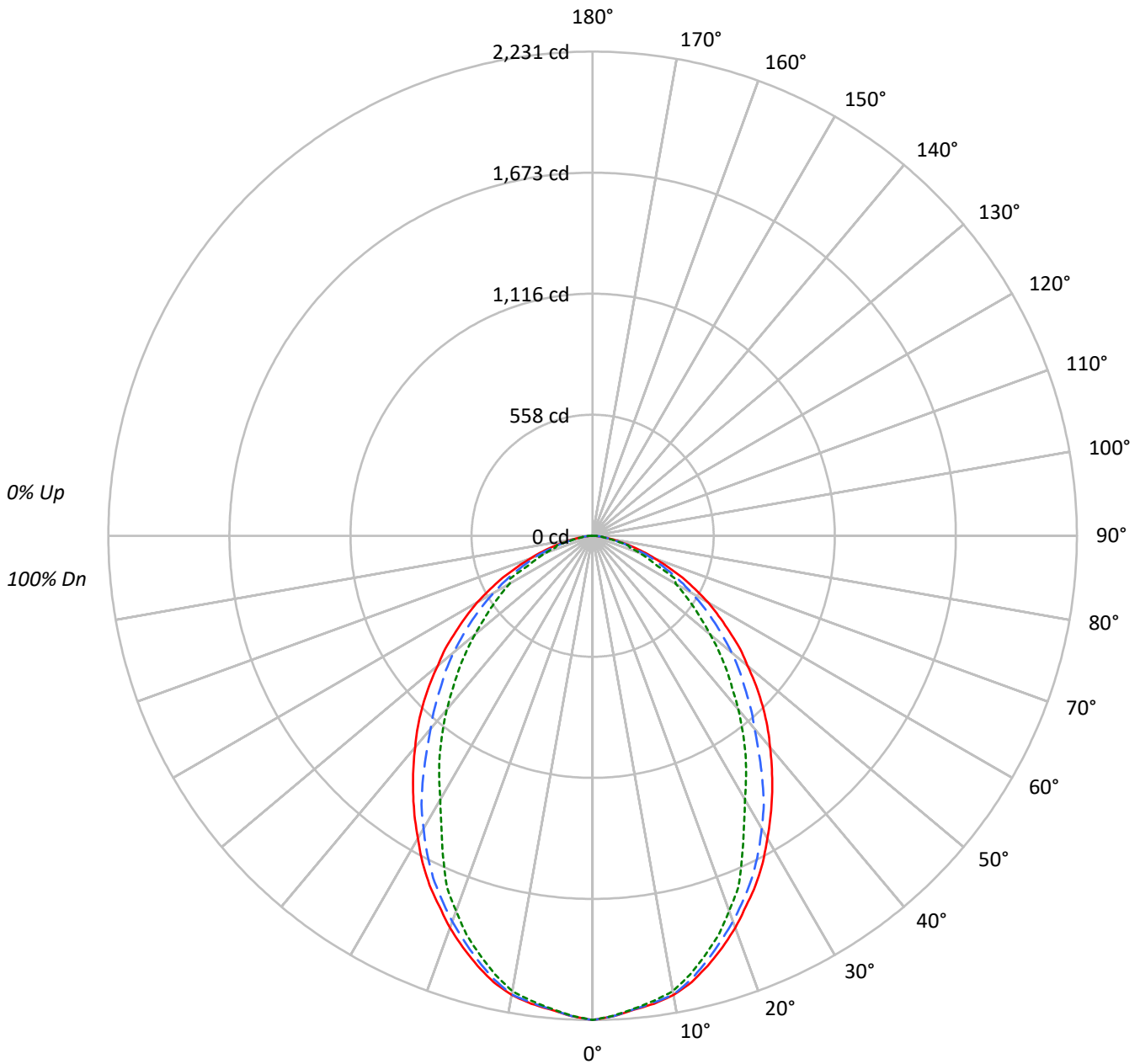
Lumens per Lamp: N/A
Luminaire Lumens: 4380.0 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3002	3002	3002
5°	2961	2958	2954
10°	2936	2932	2911
15°	2856	2828	2788
20°	2751	2707	2633
25°	2638	2581	2420
30°	2501	2420	2180
35°	2368	2237	2017
40°	2233	2039	1835
45°	2105	1885	1659
50°	1949	1749	1479
55°	1803	1585	1325
60°	1652	1416	1187
65°	1453	1240	1051
70°	1197	1086	893
75°	952	831	872
80°	639	600	559
85°	398	479	557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.7	4.7
10°-20°	570.0	13.0
20°-30°	789.1	18.0
30°-40°	841.4	19.2
40°-50°	767.6	17.5
50°-60°	601.4	13.7
60°-70°	391.9	8.9
70°-80°	173.7	4.0
80°-90°	37.3	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°	1566.8	35.8
0°-40°	2408.2	55.0
0°-60°	3777.1	86.2
0°-90°	4380.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4380.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2231	2231	2231	2231	2231	
5°	2192	2190	2190	2187	2187	208
15°	2051	2051	2030	2009	2002	576
25°	1777	1767	1738	1677	1630	816
35°	1442	1432	1362	1259	1228	901
45°	1106	1083	990	908	872	852
55°	769	745	676	596	565	689
65°	456	431	390	397	330	450
75°	183	170	160	152	168	196
85°	26	28	31	34	36	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2231.1	2231.1	2231.1	2231.1	2231.1
2.5°	2215.6	2215.6	2215.6	2213.1	2213.1
5°	2192.4	2189.8	2189.8	2187.3	2187.3
7.5°	2174.4	2171.8	2169.2	2166.6	2161.5
10°	2148.6	2148.6	2146.0	2133.1	2130.5
12.5°	2107.3	2104.7	2094.4	2076.4	2071.2
15°	2050.6	2050.6	2029.9	2009.3	2001.6
17.5°	1988.7	1986.1	1960.3	1939.7	1929.3
20°	1921.6	1916.4	1890.6	1857.1	1839.1
22.5°	1846.8	1846.8	1815.8	1772.0	1753.9
25°	1777.2	1766.8	1738.5	1676.6	1630.1
27.5°	1697.2	1681.7	1650.8	1563.1	1508.9
30°	1609.5	1601.8	1557.9	1444.4	1403.2
32.5°	1527.0	1514.1	1467.6	1349.0	1315.5
35°	1441.8	1431.5	1361.9	1258.7	1227.8
37.5°	1356.7	1343.8	1256.1	1173.6	1134.9
40°	1271.6	1256.1	1160.7	1085.9	1044.6
42.5°	1191.6	1171.0	1078.2	998.2	951.8
45°	1106.5	1083.3	990.5	907.9	871.8
47.5°	1021.4	1000.8	915.7	830.5	789.3
50°	931.1	913.1	835.7	750.6	706.7
52.5°	856.3	828.0	753.2	668.0	631.9
55°	768.6	745.4	675.8	595.8	564.9
57.5°	688.7	665.5	601.0	526.2	500.4
60°	613.9	580.3	526.2	461.7	441.1
62.5°	531.3	505.5	459.1	405.0	430.7
65°	456.5	430.7	389.5	397.2	330.2
67.5°	374.0	361.1	325.0	288.9	278.6
70°	304.4	288.9	276.0	237.3	227.0
72.5°	242.5	227.0	208.9	188.3	180.6
75°	183.1	170.2	159.9	152.2	167.7
77.5°	126.4	121.2	113.5	105.8	103.2
80°	82.5	80.0	77.4	74.8	72.2
82.5°	49.0	49.0	49.0	49.0	49.0
85°	25.8	28.4	31.0	33.5	36.1
87.5°	15.5	15.5	18.1	20.6	23.2
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)