

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: P546775

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-80-84-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: P546775
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-LD4-2LO-35-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

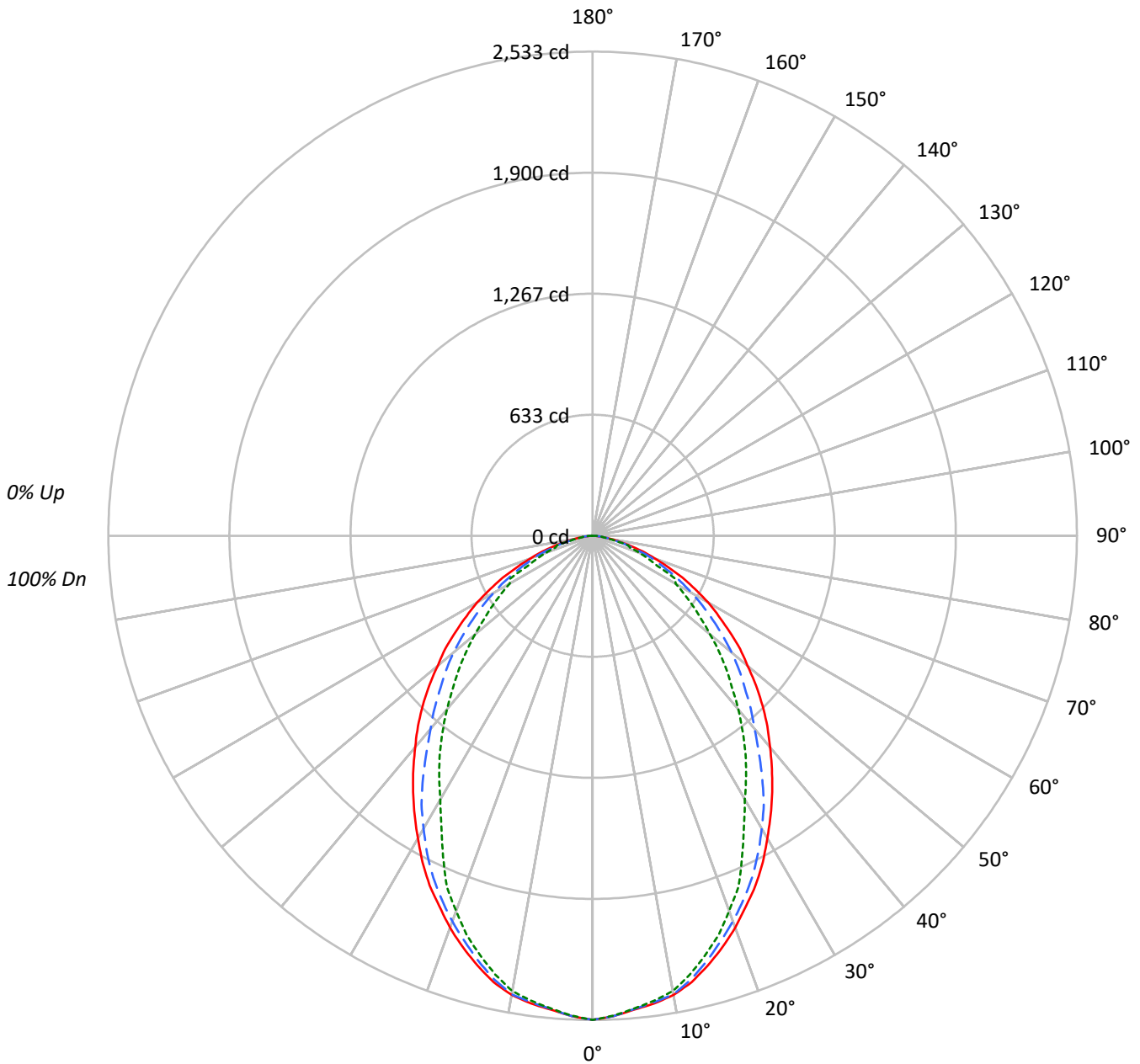
Lumens per Lamp: N/A
Luminaire Lumens: 4972.0 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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			100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3408	3408	3408
5°	3361	3357	3353
10°	3332	3328	3304
15°	3242	3210	3165
20°	3123	3073	2989
25°	2995	2930	2747
30°	2838	2748	2475
35°	2688	2539	2289
40°	2535	2314	2083
45°	2390	2139	1883
50°	2213	1986	1679
55°	2047	1799	1504
60°	1875	1607	1347
65°	1650	1408	1193
70°	1359	1233	1014
75°	1081	944	989
80°	726	680	635
85°	452	542	633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.8	4.7
10°-20°	647.0	13.0
20°-30°	895.8	18.0
30°-40°	955.1	19.2
40°-50°	871.4	17.5
50°-60°	682.6	13.7
60°-70°	444.9	8.9
70°-80°	197.1	4.0
80°-90°	42.3	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°	1778.5	35.8
0°-40°	2733.7	55.0
0°-60°	4287.7	86.2
0°-90°	4972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2533	2533	2533	2533	2533	
5°	2489	2486	2486	2483	2483	236
15°	2328	2328	2304	2281	2272	654
25°	2017	2006	1973	1903	1850	926
35°	1637	1625	1546	1429	1394	1023
45°	1256	1230	1124	1031	990	968
55°	872	846	767	676	641	783
65°	518	489	442	451	375	511
75°	208	193	182	173	190	223
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2532.7	2532.7	2532.7	2532.7	2532.7
2.5°	2515.1	2515.1	2515.1	2512.2	2512.2
5°	2488.8	2485.8	2485.8	2482.9	2482.9
7.5°	2468.3	2465.3	2462.4	2459.5	2453.6
10°	2439.0	2439.0	2436.0	2421.4	2418.5
12.5°	2392.1	2389.2	2377.5	2357.0	2351.1
15°	2327.7	2327.7	2304.3	2280.9	2272.1
17.5°	2257.4	2254.5	2225.2	2201.8	2190.1
20°	2181.3	2175.5	2146.2	2108.1	2087.6
22.5°	2096.4	2096.4	2061.3	2011.5	1991.0
25°	2017.4	2005.6	1973.4	1903.2	1850.5
27.5°	1926.6	1909.0	1873.9	1774.3	1712.8
30°	1827.0	1818.3	1768.5	1639.6	1592.8
32.5°	1733.3	1718.7	1666.0	1531.3	1493.3
35°	1636.7	1625.0	1546.0	1428.8	1393.7
37.5°	1540.1	1525.5	1425.9	1332.2	1288.3
40°	1443.5	1425.9	1317.6	1232.7	1185.8
42.5°	1352.7	1329.3	1223.9	1133.1	1080.4
45°	1256.1	1229.7	1124.3	1030.6	989.6
47.5°	1159.5	1136.0	1039.4	942.8	896.0
50°	1057.0	1036.5	948.7	852.0	802.3
52.5°	972.1	939.9	855.0	758.3	717.3
55°	872.5	846.2	767.1	676.4	641.2
57.5°	781.8	755.4	682.2	597.3	568.0
60°	696.9	658.8	597.3	524.1	500.7
62.5°	603.2	573.9	521.2	459.7	489.0
65°	518.2	489.0	442.1	450.9	374.8
67.5°	424.6	409.9	368.9	327.9	316.2
70°	345.5	327.9	313.3	269.4	257.7
72.5°	275.2	257.7	237.2	213.7	205.0
75°	207.9	193.2	181.5	172.7	190.3
77.5°	143.5	137.6	128.8	120.0	117.1
80°	93.7	90.8	87.8	84.9	82.0
82.5°	55.6	55.6	55.6	55.6	55.6
85°	29.3	32.2	35.1	38.1	41.0
87.5°	17.6	17.6	20.5	23.4	26.4
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)