

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: P546859

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-82-88-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: P546859
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-50-UNV-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC 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

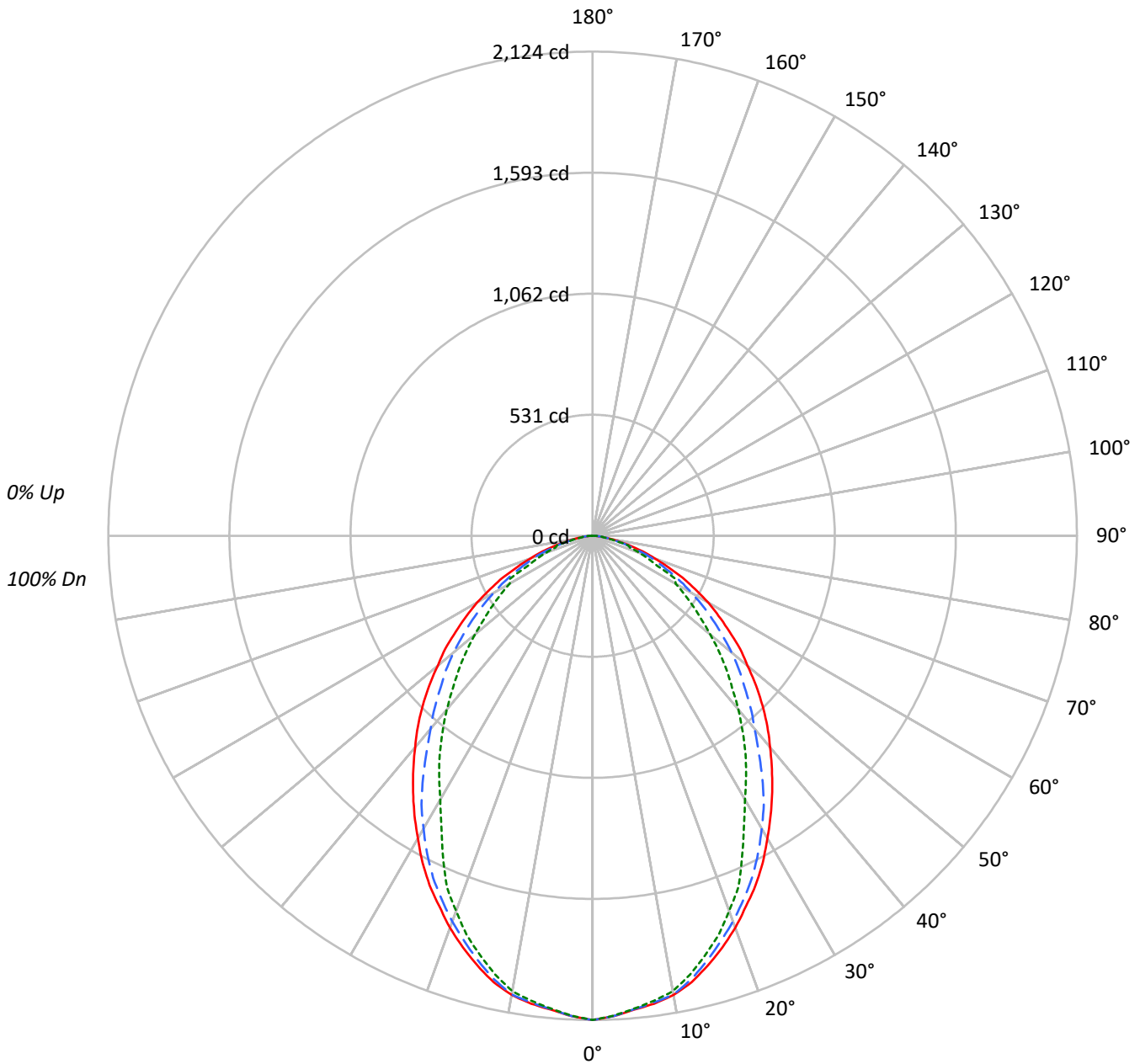
Lumens per Lamp: N/A
Luminaire Lumens: 4170.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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				20				20	
RC	80				70				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°	2858	2858	2858
5°	2819	2816	2813
10°	2795	2791	2771
15°	2719	2692	2654
20°	2620	2577	2507
25°	2512	2457	2304
30°	2381	2304	2076
35°	2255	2130	1920
40°	2126	1941	1747
45°	2005	1794	1579
50°	1856	1665	1408
55°	1717	1509	1262
60°	1573	1348	1130
65°	1384	1181	1001
70°	1140	1034	850
75°	907	792	830
80°	609	571	533
85°	380	455	531



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.7	4.7
10°-20°	542.7	13.0
20°-30°	751.3	18.0
30°-40°	801.1	19.2
40°-50°	730.8	17.5
50°-60°	572.5	13.7
60°-70°	373.1	8.9
70°-80°	165.3	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°	1491.6	35.8
0°-40°	2292.7	55.0
0°-60°	3596.1	86.2
0°-90°	4170.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4170.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2124	2124	2124	2124	2124	
5°	2087	2085	2085	2082	2082	198
15°	1952	1952	1933	1913	1906	549
25°	1692	1682	1655	1596	1552	777
35°	1373	1363	1297	1198	1169	858
45°	1054	1031	943	864	830	811
55°	732	710	643	567	538	656
65°	435	410	371	378	314	428
75°	174	162	152	145	160	187
85°	25	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°	2124.1	2124.1	2124.1	2124.1	2124.1
2.5°	2109.4	2109.4	2109.4	2107.0	2107.0
5°	2087.3	2084.9	2084.9	2082.4	2082.4
7.5°	2070.1	2067.7	2065.2	2062.8	2057.8
10°	2045.6	2045.6	2043.1	2030.8	2028.4
12.5°	2006.3	2003.8	1994.0	1976.8	1971.9
15°	1952.2	1952.2	1932.6	1913.0	1905.6
17.5°	1893.3	1890.9	1866.3	1846.7	1836.8
20°	1829.5	1824.6	1800.0	1768.1	1750.9
22.5°	1758.2	1758.2	1728.8	1687.0	1669.8
25°	1691.9	1682.1	1655.1	1596.2	1552.0
27.5°	1615.8	1601.1	1571.6	1488.1	1436.6
30°	1532.3	1525.0	1483.2	1375.2	1335.9
32.5°	1453.7	1441.5	1397.3	1284.3	1252.4
35°	1372.7	1362.9	1296.6	1198.4	1168.9
37.5°	1291.7	1279.4	1195.9	1117.3	1080.5
40°	1210.6	1195.9	1105.0	1033.8	994.5
42.5°	1134.5	1114.9	1026.5	950.3	906.1
45°	1053.5	1031.4	943.0	864.4	830.0
47.5°	972.4	952.8	871.8	790.7	751.4
50°	886.5	869.3	795.6	714.6	672.8
52.5°	815.3	788.3	717.1	636.0	601.6
55°	731.8	709.7	643.4	567.3	537.8
57.5°	655.7	633.6	572.2	501.0	476.4
60°	584.4	552.5	501.0	439.6	419.9
62.5°	505.9	481.3	437.1	385.5	410.1
65°	434.7	410.1	370.8	378.2	314.3
67.5°	356.1	343.8	309.4	275.0	265.2
70°	289.8	275.0	262.8	225.9	216.1
72.5°	230.8	216.1	198.9	179.3	171.9
75°	174.4	162.1	152.3	144.9	159.6
77.5°	120.3	115.4	108.0	100.7	98.2
80°	78.6	76.1	73.7	71.2	68.8
82.5°	46.7	46.7	46.7	46.7	46.7
85°	24.6	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)