

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: P546824

Luminaire Tested: **FMR-24-4-LD4-2LO-40-UNV-82-85-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: P546824
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-40-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

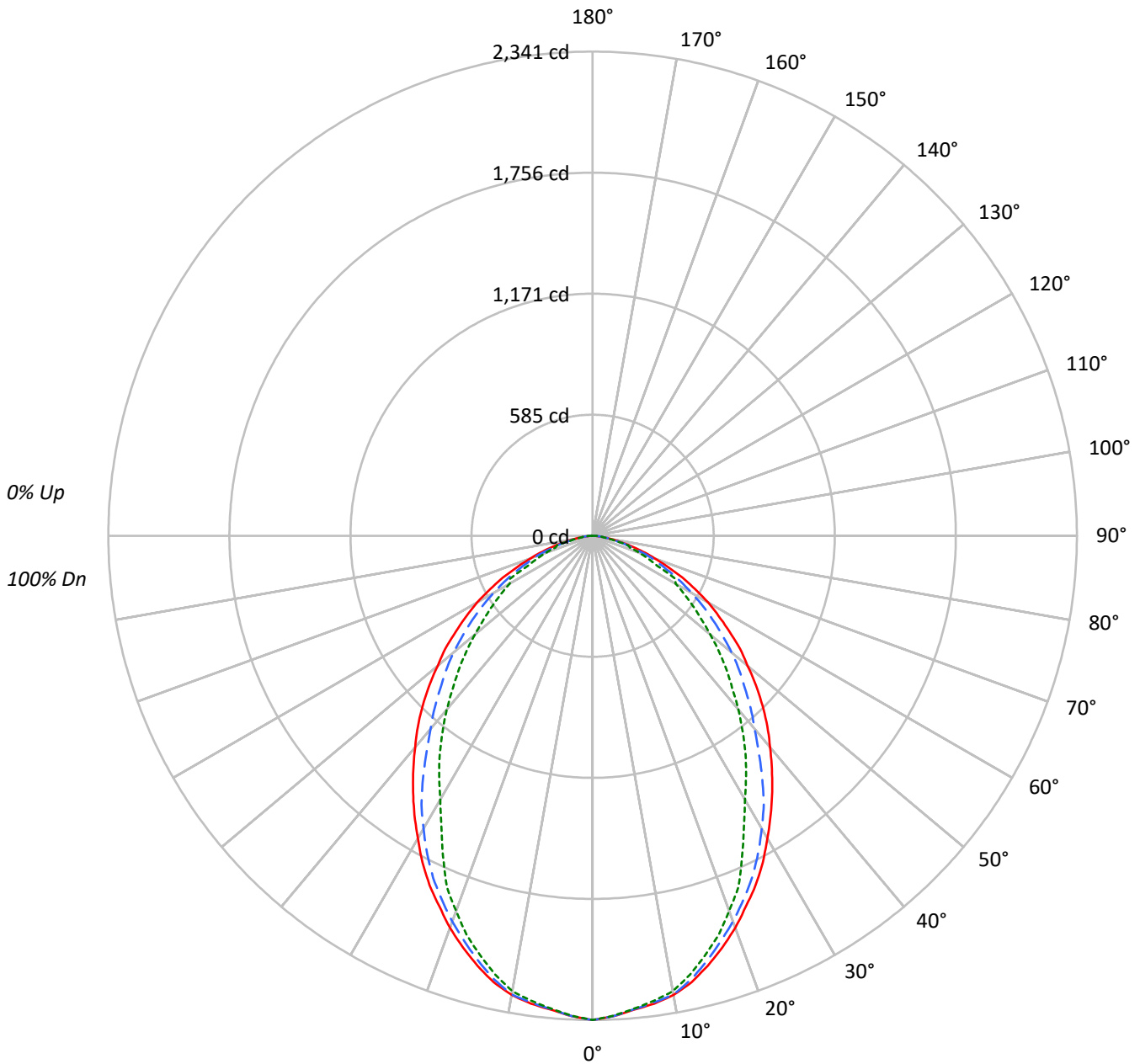
Lumens per Lamp: N/A
Luminaire Lumens: 4596.0 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (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									
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°	3150	3150	3150
5°	3107	3103	3100
10°	3080	3077	3054
15°	2997	2967	2926
20°	2887	2841	2763
25°	2768	2708	2539
30°	2624	2540	2287
35°	2485	2347	2116
40°	2344	2139	1925
45°	2209	1978	1741
50°	2045	1836	1552
55°	1892	1663	1390
60°	1734	1486	1245
65°	1525	1301	1103
70°	1257	1139	937
75°	999	872	914
80°	671	629	587
85°	418	502	585



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.9	4.7
10°-20°	598.1	13.0
20°-30°	828.0	18.0
30°-40°	882.9	19.2
40°-50°	805.5	17.5
50°-60°	631.0	13.7
60°-70°	411.3	8.9
70°-80°	182.2	4.0
80°-90°	39.1	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°	1644.0	35.8
0°-40°	2526.9	55.0
0°-60°	3963.4	86.2
0°-90°	4596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4596.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2341	2341	2341	2341	2341	
5°	2300	2298	2298	2295	2295	218
15°	2152	2152	2130	2108	2100	605
25°	1865	1854	1824	1759	1710	856
35°	1513	1502	1429	1321	1288	946
45°	1161	1137	1039	953	915	894
55°	806	782	709	625	593	723
65°	479	452	409	417	346	472
75°	192	179	168	160	176	206
85°	27	30	32	35	38	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2341.1	2341.1	2341.1	2341.1	2341.1
2.5°	2324.9	2324.9	2324.9	2322.2	2322.2
5°	2300.5	2297.8	2297.8	2295.1	2295.1
7.5°	2281.6	2278.9	2276.2	2273.5	2268.1
10°	2254.5	2254.5	2251.8	2238.3	2235.6
12.5°	2211.2	2208.5	2197.7	2178.7	2173.3
15°	2151.7	2151.7	2130.0	2108.4	2100.3
17.5°	2086.7	2084.0	2057.0	2035.3	2024.5
20°	2016.4	2010.9	1983.9	1948.7	1929.7
22.5°	1937.9	1937.9	1905.4	1859.4	1840.4
25°	1864.8	1854.0	1824.2	1759.2	1710.5
27.5°	1780.9	1764.7	1732.2	1640.2	1583.3
30°	1688.9	1680.7	1634.7	1515.7	1472.3
32.5°	1602.3	1588.7	1540.0	1415.5	1380.3
35°	1512.9	1502.1	1429.0	1320.8	1288.3
37.5°	1423.6	1410.1	1318.1	1231.5	1190.9
40°	1334.3	1318.1	1217.9	1139.4	1096.1
42.5°	1250.4	1228.8	1131.3	1047.4	998.7
45°	1161.1	1136.7	1039.3	952.7	914.8
47.5°	1071.8	1050.1	960.8	871.5	828.2
50°	977.1	958.1	876.9	787.6	741.6
52.5°	898.6	868.8	790.3	701.0	663.1
55°	806.5	782.2	709.1	625.2	592.7
57.5°	722.6	698.3	630.6	552.1	525.1
60°	644.2	609.0	552.1	484.5	462.8
62.5°	557.5	530.5	481.8	424.9	452.0
65°	479.1	452.0	408.7	416.8	346.4
67.5°	392.4	378.9	341.0	303.1	292.3
70°	319.4	303.1	289.6	249.0	238.2
72.5°	254.4	238.2	219.2	197.6	189.5
75°	192.2	178.6	167.8	159.7	175.9
77.5°	132.6	127.2	119.1	111.0	108.3
80°	86.6	83.9	81.2	78.5	75.8
82.5°	51.4	51.4	51.4	51.4	51.4
85°	27.1	29.8	32.5	35.2	37.9
87.5°	16.2	16.2	18.9	21.7	24.4
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)