

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: P546786

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-81-87-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: P546786
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-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

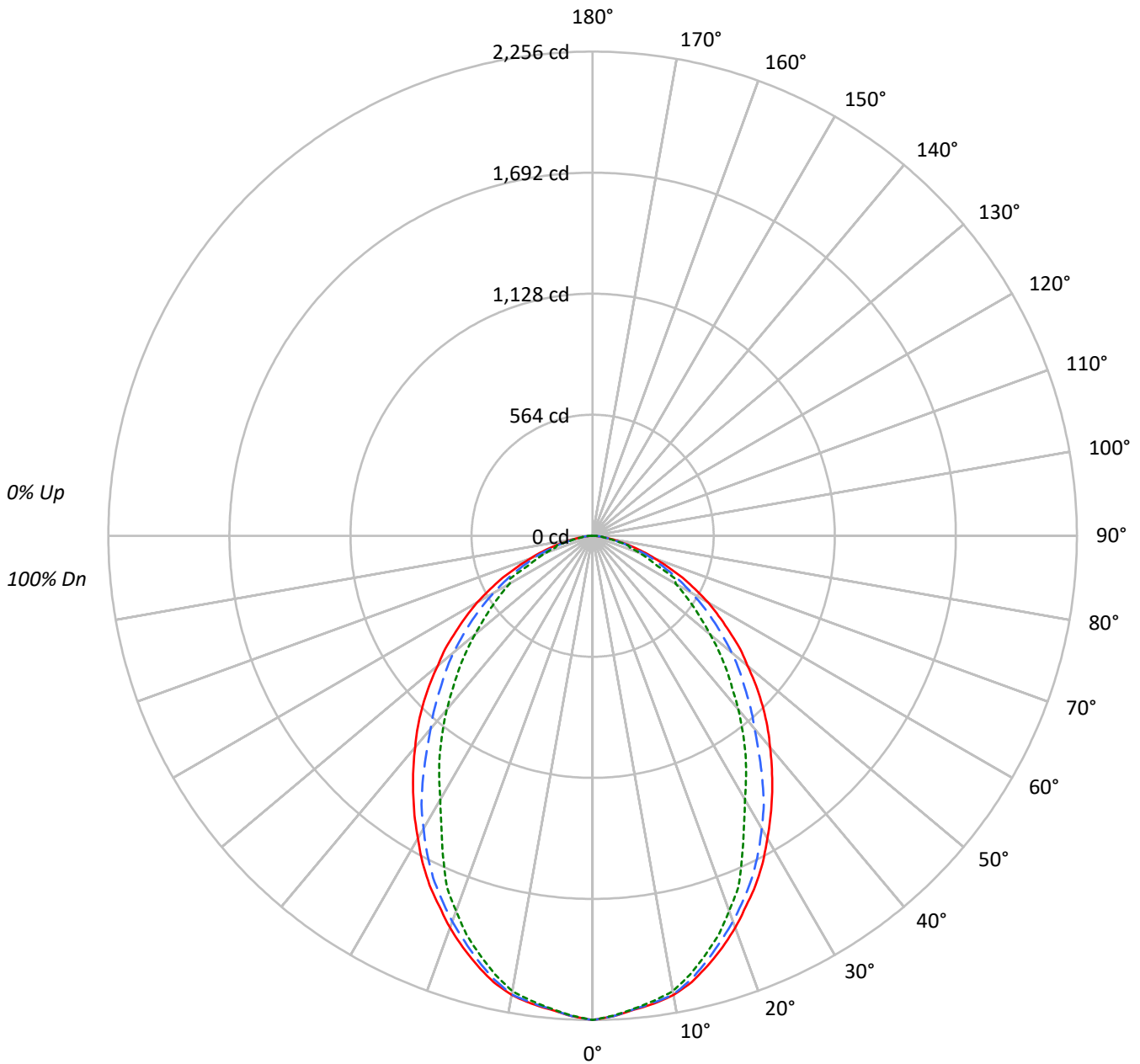
Lumens per Lamp: N/A
Luminaire Lumens: 4429.0 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3036	3036	3036
5°	2994	2991	2987
10°	2968	2965	2943
15°	2888	2859	2819
20°	2782	2737	2663
25°	2668	2610	2447
30°	2529	2447	2204
35°	2395	2262	2039
40°	2258	2062	1855
45°	2129	1906	1678
50°	1971	1769	1496
55°	1823	1603	1340
60°	1670	1432	1200
65°	1470	1254	1063
70°	1211	1098	903
75°	963	841	881
80°	647	606	566
85°	403	483	563



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.0	4.7
10°-20°	576.4	13.0
20°-30°	797.9	18.0
30°-40°	850.8	19.2
40°-50°	776.2	17.5
50°-60°	608.1	13.7
60°-70°	396.3	8.9
70°-80°	175.6	4.0
80°-90°	37.7	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°	1584.3	35.8
0°-40°	2435.1	55.0
0°-60°	3819.4	86.2
0°-90°	4429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4429.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2256	2256	2256	2256	2256	
5°	2217	2214	2214	2212	2212	210
15°	2074	2074	2053	2032	2024	583
25°	1797	1787	1758	1695	1648	825
35°	1458	1448	1377	1273	1242	911
45°	1119	1095	1002	918	882	862
55°	777	754	683	602	571	697
65°	462	436	394	402	334	455
75°	185	172	162	154	170	198
85°	26	29	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°	2256.1	2256.1	2256.1	2256.1	2256.1
2.5°	2240.4	2240.4	2240.4	2237.8	2237.8
5°	2217.0	2214.3	2214.3	2211.7	2211.7
7.5°	2198.7	2196.1	2193.5	2190.9	2185.7
10°	2172.6	2172.6	2170.0	2157.0	2154.4
12.5°	2130.9	2128.3	2117.8	2099.6	2094.4
15°	2073.5	2073.5	2052.6	2031.8	2023.9
17.5°	2010.9	2008.3	1982.2	1961.3	1950.9
20°	1943.1	1937.9	1911.8	1877.9	1859.6
22.5°	1867.5	1867.5	1836.2	1791.8	1773.6
25°	1797.0	1786.6	1757.9	1695.3	1648.4
27.5°	1716.2	1700.5	1669.2	1580.6	1525.8
30°	1627.5	1619.7	1575.3	1460.6	1418.8
32.5°	1544.0	1531.0	1484.1	1364.1	1330.2
35°	1458.0	1447.5	1377.1	1272.8	1241.5
37.5°	1371.9	1358.9	1270.2	1186.7	1147.6
40°	1285.8	1270.2	1173.7	1098.0	1056.3
42.5°	1205.0	1184.1	1090.2	1009.4	962.4
45°	1118.9	1095.4	1001.5	918.1	881.6
47.5°	1032.8	1012.0	925.9	839.8	798.1
50°	941.6	923.3	845.0	759.0	714.6
52.5°	865.9	837.2	761.6	675.5	639.0
55°	777.2	753.8	683.3	602.5	571.2
57.5°	696.4	672.9	607.7	532.1	506.0
60°	620.7	586.8	532.1	466.9	446.0
62.5°	537.3	511.2	464.3	409.5	435.6
65°	461.6	435.6	393.8	401.7	333.8
67.5°	378.2	365.1	328.6	292.1	281.7
70°	307.8	292.1	279.1	240.0	229.5
72.5°	245.2	229.5	211.3	190.4	182.6
75°	185.2	172.1	161.7	153.9	169.5
77.5°	127.8	122.6	114.8	106.9	104.3
80°	83.5	80.9	78.2	75.6	73.0
82.5°	49.6	49.6	49.6	49.6	49.6
85°	26.1	28.7	31.3	33.9	36.5
87.5°	15.6	15.6	18.3	20.9	23.5
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)