

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: P546847

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-81-84-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: P546847
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-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

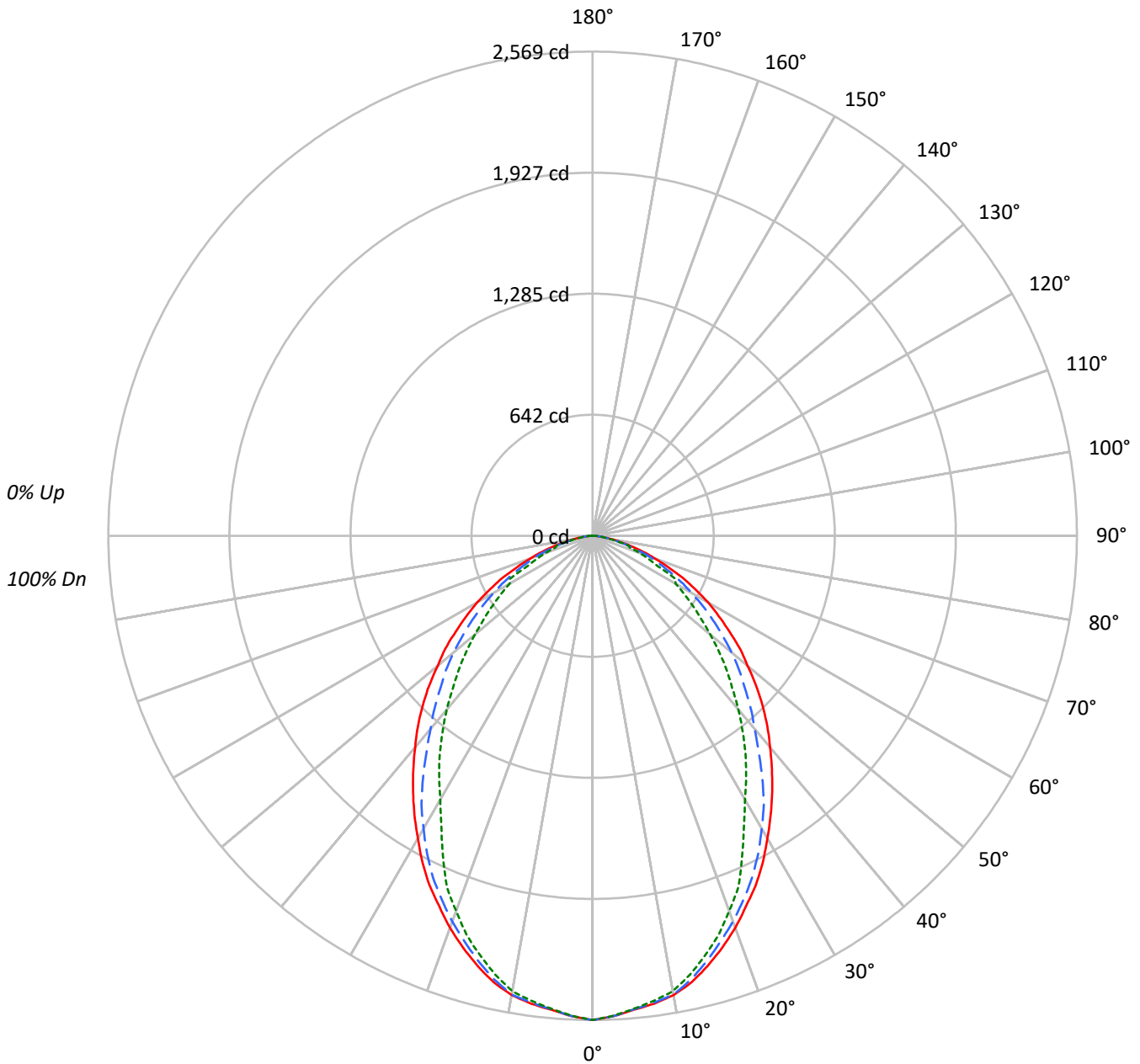
Lumens per Lamp: N/A
Luminaire Lumens: 5044.0 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P546847

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-81-84-EDD

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°	3457	3457	3457
5°	3410	3406	3402
10°	3381	3376	3352
15°	3289	3256	3211
20°	3169	3118	3032
25°	3038	2972	2787
30°	2880	2787	2511
35°	2727	2576	2322
40°	2572	2348	2113
45°	2425	2170	1910
50°	2245	2015	1704
55°	2076	1825	1526
60°	1902	1630	1367
65°	1674	1428	1210
70°	1379	1250	1028
75°	1096	958	1004
80°	737	690	645
85°	459	550	642



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.2	4.7
10°-20°	656.4	13.0
20°-30°	908.7	18.0
30°-40°	969.0	19.2
40°-50°	884.0	17.5
50°-60°	692.5	13.7
60°-70°	451.3	8.9
70°-80°	200.0	4.0
80°-90°	42.9	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°	1804.3	35.8
0°-40°	2773.2	55.0
0°-60°	4349.7	86.2
0°-90°	5044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5044.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2569	2569	2569	2569	2569	
5°	2525	2522	2522	2519	2519	240
15°	2361	2361	2338	2314	2305	664
25°	2047	2035	2002	1931	1877	940
35°	1660	1648	1568	1450	1414	1038
45°	1274	1248	1141	1046	1004	982
55°	885	858	778	686	650	794
65°	526	496	448	457	380	518
75°	211	196	184	175	193	226
85°	30	33	36	39	42	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2569.3	2569.3	2569.3	2569.3	2569.3
2.5°	2551.5	2551.5	2551.5	2548.6	2548.6
5°	2524.8	2521.8	2521.8	2518.9	2518.9
7.5°	2504.0	2501.0	2498.1	2495.1	2489.1
10°	2474.3	2474.3	2471.3	2456.5	2453.5
12.5°	2426.8	2423.8	2411.9	2391.1	2385.2
15°	2361.4	2361.4	2337.7	2313.9	2305.0
17.5°	2290.1	2287.2	2257.5	2233.7	2221.8
20°	2212.9	2207.0	2177.3	2138.6	2117.9
22.5°	2126.8	2126.8	2091.1	2040.6	2019.8
25°	2046.6	2034.7	2002.0	1930.7	1877.3
27.5°	1954.5	1936.7	1901.0	1800.0	1737.7
30°	1853.5	1844.6	1794.1	1663.4	1615.9
32.5°	1758.4	1743.6	1690.1	1553.5	1514.9
35°	1660.4	1648.5	1568.3	1449.5	1413.9
37.5°	1562.4	1547.5	1446.6	1351.5	1307.0
40°	1464.4	1446.6	1336.7	1250.5	1203.0
42.5°	1372.3	1348.5	1241.6	1149.5	1096.1
45°	1274.3	1247.5	1140.6	1045.6	1004.0
47.5°	1176.3	1152.5	1054.5	956.5	908.9
50°	1072.3	1051.5	962.4	864.4	813.9
52.5°	986.2	953.5	867.3	769.3	727.7
55°	885.2	858.4	778.2	686.1	650.5
57.5°	793.1	766.3	692.1	605.9	576.2
60°	706.9	668.3	605.9	531.7	507.9
62.5°	611.9	582.2	528.7	466.3	496.0
65°	525.8	496.0	448.5	457.4	380.2
67.5°	430.7	415.8	374.3	332.7	320.8
70°	350.5	332.7	317.8	273.3	261.4
72.5°	279.2	261.4	240.6	216.8	207.9
75°	210.9	196.0	184.2	175.3	193.1
77.5°	145.5	139.6	130.7	121.8	118.8
80°	95.1	92.1	89.1	86.1	83.2
82.5°	56.4	56.4	56.4	56.4	56.4
85°	29.7	32.7	35.6	38.6	41.6
87.5°	17.8	17.8	20.8	23.8	26.7
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)