

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: P546807

Luminaire Tested: **FMR-24-4-LD4-2LO-40-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: P546807
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-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

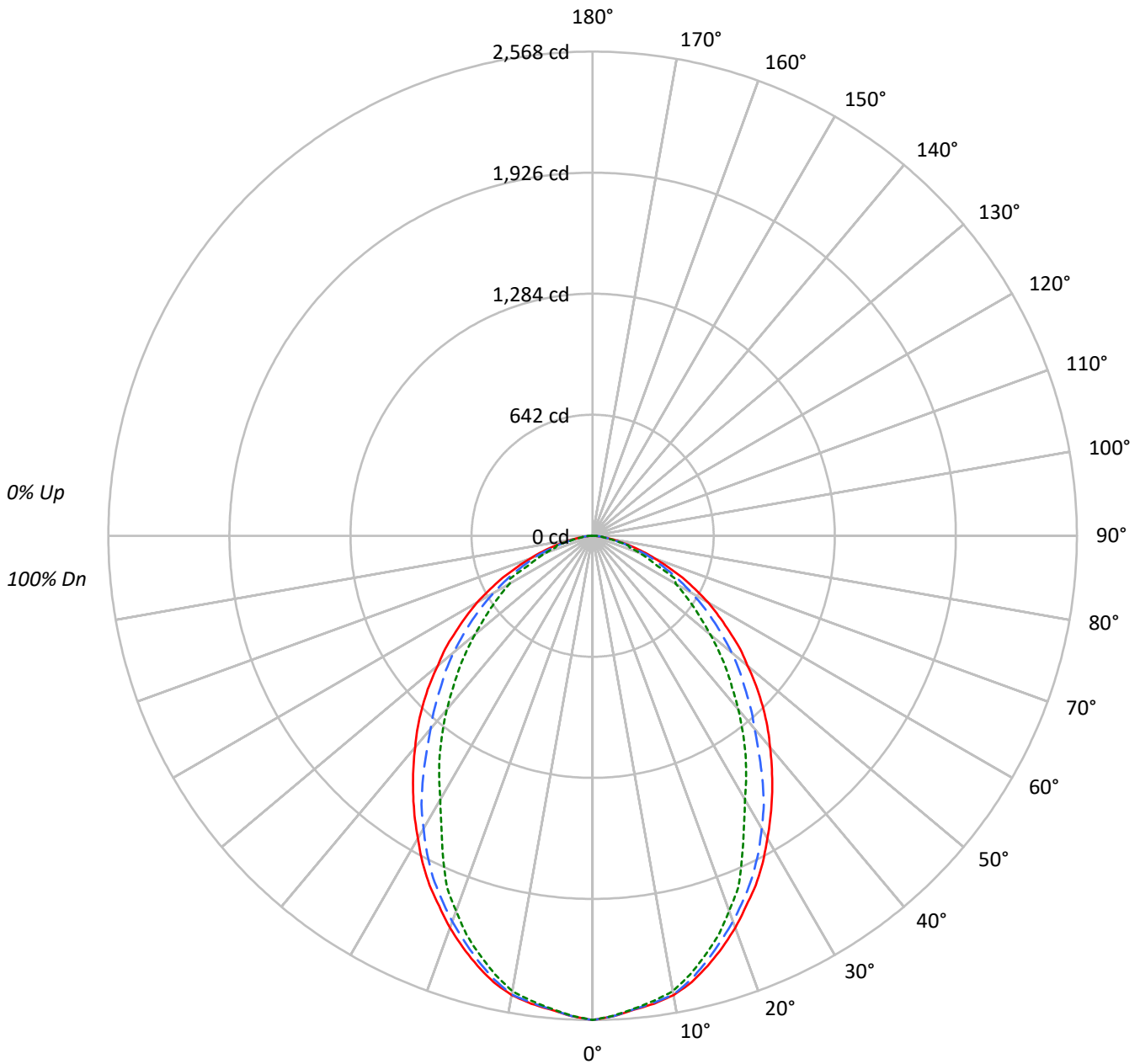
Lumens per Lamp: N/A
Luminaire Lumens: 5042.0 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3456	3456	3456
5°	3409	3405	3401
10°	3379	3375	3351
15°	3288	3255	3210
20°	3167	3116	3031
25°	3037	2971	2786
30°	2879	2786	2509
35°	2726	2575	2321
40°	2571	2347	2112
45°	2424	2170	1910
50°	2244	2014	1703
55°	2076	1825	1525
60°	1902	1630	1366
65°	1673	1427	1210
70°	1378	1250	1028
75°	1096	957	1003
80°	736	690	644
85°	459	550	642



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.1	4.7
10°-20°	656.1	13.0
20°-30°	908.4	18.0
30°-40°	968.6	19.2
40°-50°	883.6	17.5
50°-60°	692.2	13.7
60°-70°	451.2	8.9
70°-80°	199.9	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°	1803.6	35.8
0°-40°	2772.2	55.0
0°-60°	4348.0	86.2
0°-90°	5042.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5042.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2568	2568	2568	2568	2568	
5°	2524	2521	2521	2518	2518	240
15°	2360	2360	2337	2313	2304	664
25°	2046	2034	2001	1930	1876	939
35°	1660	1648	1568	1449	1413	1038
45°	1274	1247	1140	1045	1004	981
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°	2568.3	2568.3	2568.3	2568.3	2568.3
2.5°	2550.5	2550.5	2550.5	2547.5	2547.5
5°	2523.8	2520.8	2520.8	2517.9	2517.9
7.5°	2503.0	2500.0	2497.1	2494.1	2488.2
10°	2473.3	2473.3	2470.3	2455.5	2452.5
12.5°	2425.8	2422.8	2411.0	2390.2	2384.2
15°	2360.5	2360.5	2336.7	2313.0	2304.1
17.5°	2289.2	2286.3	2256.6	2232.8	2220.9
20°	2212.0	2206.1	2176.4	2137.8	2117.0
22.5°	2125.9	2125.9	2090.3	2039.8	2019.0
25°	2045.8	2033.9	2001.2	1930.0	1876.5
27.5°	1953.7	1935.9	1900.3	1799.3	1737.0
30°	1852.8	1843.9	1793.4	1662.7	1615.2
32.5°	1757.7	1742.9	1689.5	1552.9	1514.3
35°	1659.8	1647.9	1567.7	1449.0	1413.3
37.5°	1561.8	1546.9	1446.0	1351.0	1306.4
40°	1463.8	1446.0	1336.1	1250.0	1202.5
42.5°	1371.8	1348.0	1241.1	1149.1	1095.6
45°	1273.8	1247.0	1140.2	1045.1	1003.6
47.5°	1175.8	1152.0	1054.1	956.1	908.6
50°	1071.9	1051.1	962.0	864.0	813.6
52.5°	985.8	953.1	867.0	769.0	727.4
55°	884.8	858.1	777.9	685.9	650.2
57.5°	792.8	766.0	691.8	605.7	576.0
60°	706.7	668.1	605.7	531.5	507.7
62.5°	611.6	582.0	528.5	466.2	495.9
65°	525.5	495.9	448.3	457.3	380.1
67.5°	430.5	415.7	374.1	332.5	320.7
70°	350.4	332.5	317.7	273.2	261.3
72.5°	279.1	261.3	240.5	216.7	207.8
75°	210.8	196.0	184.1	175.2	193.0
77.5°	145.5	139.6	130.6	121.7	118.8
80°	95.0	92.0	89.1	86.1	83.1
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)