

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: P547226

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-80-87-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: P547226
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-LD4-3STD-50-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

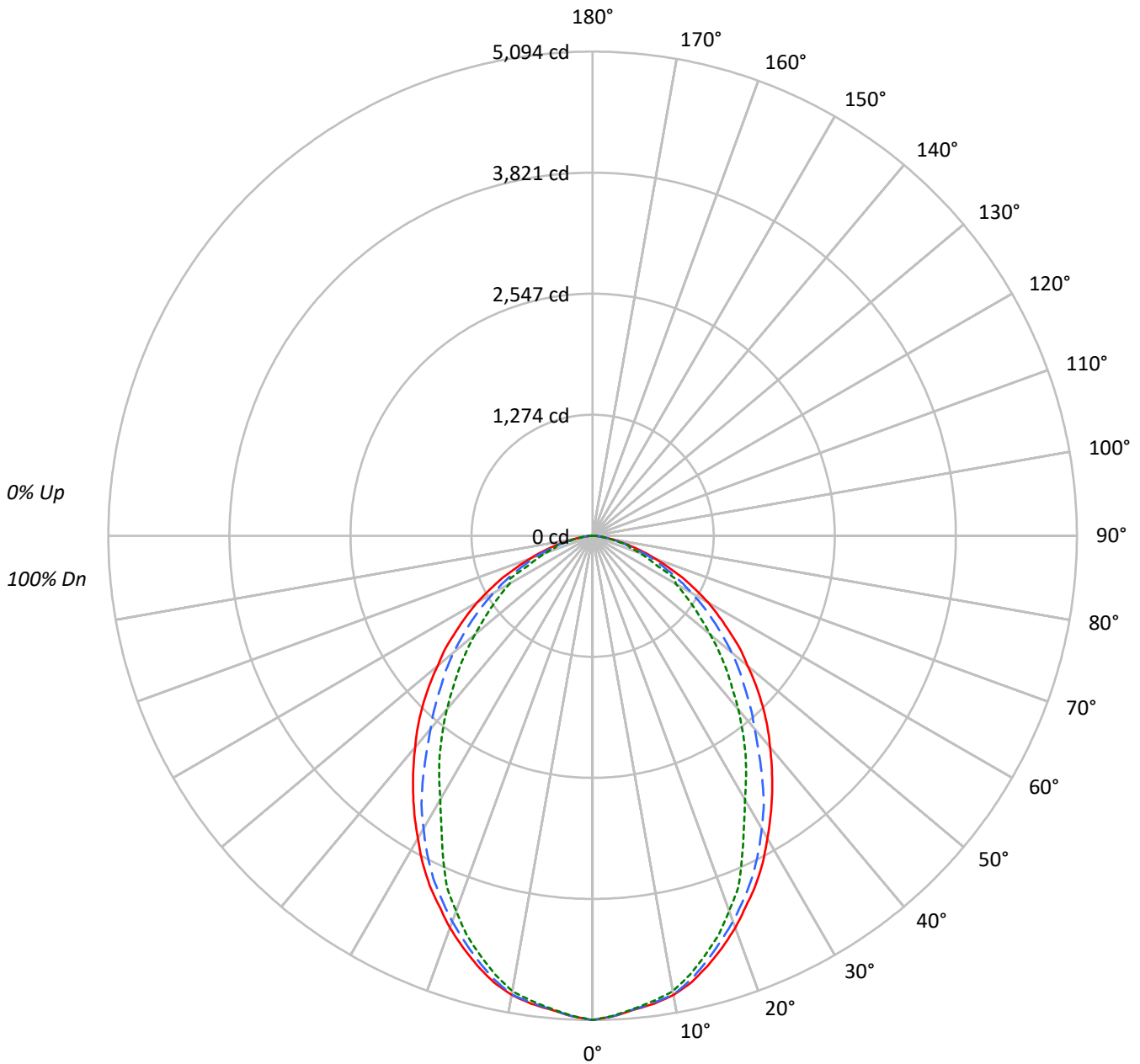
Lumens per Lamp: N/A
Luminaire Lumens: 10001.0 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6854	6854	6854
5°	6761	6753	6745
10°	6703	6695	6646
15°	6522	6456	6366
20°	6282	6181	6013
25°	6024	5893	5526
30°	5710	5527	4978
35°	5408	5108	4605
40°	5100	4655	4189
45°	4808	4303	3788
50°	4450	3994	3378
55°	4117	3620	3026
60°	3772	3233	2710
65°	3319	2831	2400
70°	2734	2479	2039
75°	2174	1898	1990
80°	1461	1369	1278
85°	909	1091	1274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	474.2	4.7
10°-20°	1301.5	13.0
20°-30°	1801.8	18.0
30°-40°	1921.2	19.2
40°-50°	1752.7	17.5
50°-60°	1373.1	13.7
60°-70°	894.9	8.9
70°-80°	396.5	4.0
80°-90°	85.1	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°	3577.4	35.8
0°-40°	5498.7	55.0
0°-60°	8624.5	86.2
0°-90°	10001.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10001.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5094	5094	5094	5094	5094	
5°	5006	5000	5000	4994	4994	475
15°	4682	4682	4635	4588	4570	1316
25°	4058	4034	3970	3828	3722	1863
35°	3292	3269	3110	2874	2803	2058
45°	2527	2474	2262	2073	1991	1946
55°	1755	1702	1543	1360	1290	1574
65°	1042	984	889	907	754	1027
75°	418	389	365	348	383	448
85°	59	65	71	77	82	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5094.4	5094.4	5094.4	5094.4	5094.4
2.5°	5059.0	5059.0	5059.0	5053.1	5053.1
5°	5006.0	5000.1	5000.1	4994.3	4994.3
7.5°	4964.8	4958.9	4953.0	4947.1	4935.4
10°	4905.9	4905.9	4900.0	4870.6	4864.7
12.5°	4811.7	4805.8	4782.2	4741.0	4729.2
15°	4682.1	4682.1	4635.0	4587.9	4570.2
17.5°	4540.8	4534.9	4476.0	4428.9	4405.3
20°	4387.6	4375.9	4317.0	4240.4	4199.2
22.5°	4216.8	4216.8	4146.2	4046.1	4004.8
25°	4057.8	4034.3	3969.5	3828.1	3722.1
27.5°	3875.3	3839.9	3769.2	3569.0	3445.3
30°	3675.0	3657.3	3557.2	3298.1	3203.9
32.5°	3486.6	3457.1	3351.1	3080.2	3003.6
35°	3292.2	3268.6	3109.6	2874.1	2803.4
37.5°	3097.9	3068.4	2868.2	2679.7	2591.4
40°	2903.5	2868.2	2650.3	2479.5	2385.2
42.5°	2720.9	2673.8	2461.8	2279.2	2173.2
45°	2526.6	2473.6	2261.5	2073.1	1990.6
47.5°	2332.2	2285.1	2090.8	1896.4	1802.2
50°	2126.1	2084.9	1908.2	1713.8	1613.7
52.5°	1955.3	1890.5	1719.7	1525.4	1442.9
55°	1755.1	1702.1	1543.0	1360.5	1289.8
57.5°	1572.5	1519.5	1372.2	1201.4	1142.6
60°	1401.7	1325.1	1201.4	1054.2	1007.1
62.5°	1213.2	1154.3	1048.3	924.6	983.5
65°	1042.4	983.5	889.3	907.0	753.8
67.5°	854.0	824.5	742.1	659.6	636.1
70°	695.0	659.6	630.2	541.8	518.3
72.5°	553.6	518.3	477.0	429.9	412.3
75°	418.2	388.7	365.1	347.5	382.8
77.5°	288.6	276.8	259.1	241.5	235.6
80°	188.5	182.6	176.7	170.8	164.9
82.5°	111.9	111.9	111.9	111.9	111.9
85°	58.9	64.8	70.7	76.6	82.5
87.5°	35.3	35.3	41.2	47.1	53.0
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)