

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: P547387

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-80-88-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: P547387
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-LD4-4LO-40-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

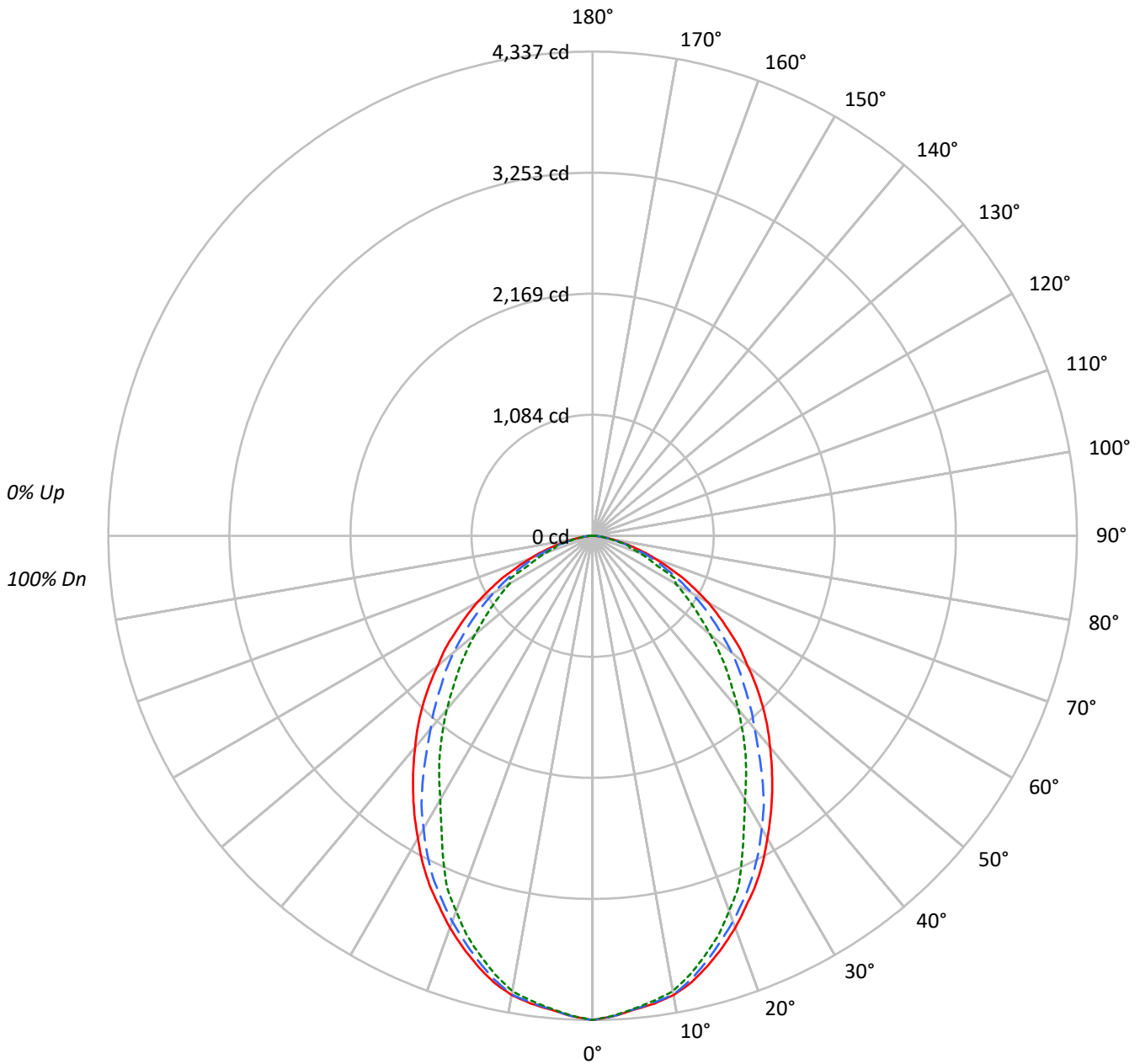
Lumens per Lamp: N/A
Luminaire Lumens: 8515.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	5836	5836	5836
5°	5757	5750	5743
10°	5707	5700	5659
15°	5553	5497	5420
20°	5349	5263	5119
25°	5129	5017	4705
30°	4861	4706	4238
35°	4604	4349	3920
40°	4342	3963	3567
45°	4093	3664	3225
50°	3789	3401	2876
55°	3505	3082	2576
60°	3211	2753	2308
65°	2826	2411	2043
70°	2328	2111	1736
75°	1851	1616	1694
80°	1244	1165	1088
85°	773	929	1084



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.8	4.7
10°-20°	1108.1	13.0
20°-30°	1534.1	18.0
30°-40°	1635.7	19.2
40°-50°	1492.3	17.5
50°-60°	1169.1	13.7
60°-70°	762.0	8.9
70°-80°	337.6	4.0
80°-90°	72.5	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°	3045.9	35.8
0°-40°	4681.6	55.0
0°-60°	7343.0	86.2
0°-90°	8515.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8515.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4337	4337	4337	4337	4337	
5°	4262	4257	4257	4252	4252	405
15°	3986	3986	3946	3906	3891	1121
25°	3455	3435	3380	3259	3169	1586
35°	2803	2783	2648	2447	2387	1752
45°	2151	2106	1926	1765	1695	1657
55°	1494	1449	1314	1158	1098	1340
65°	888	837	757	772	642	875
75°	356	331	311	296	326	382
85°	50	55	60	65	70	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4337.4	4337.4	4337.4	4337.4	4337.4
2.5°	4307.3	4307.3	4307.3	4302.3	4302.3
5°	4262.2	4257.2	4257.2	4252.2	4252.2
7.5°	4227.1	4222.1	4217.1	4212.1	4202.0
10°	4177.0	4177.0	4172.0	4146.9	4141.9
12.5°	4096.7	4091.7	4071.7	4036.6	4026.5
15°	3986.4	3986.4	3946.3	3906.2	3891.1
17.5°	3866.1	3861.1	3810.9	3770.8	3750.7
20°	3735.7	3725.7	3675.5	3610.3	3575.2
22.5°	3590.3	3590.3	3530.1	3444.9	3409.8
25°	3454.9	3434.8	3379.7	3259.3	3169.1
27.5°	3299.5	3269.4	3209.2	3038.7	2933.4
30°	3129.0	3113.9	3028.7	2808.0	2727.8
32.5°	2968.5	2943.4	2853.2	2622.5	2557.3
35°	2803.0	2783.0	2647.6	2447.0	2386.8
37.5°	2637.6	2612.5	2442.0	2281.5	2206.3
40°	2472.1	2442.0	2256.5	2111.0	2030.8
42.5°	2316.6	2276.5	2096.0	1940.6	1850.3
45°	2151.2	2106.0	1925.5	1765.1	1694.9
47.5°	1985.7	1945.6	1780.1	1614.6	1534.4
50°	1810.2	1775.1	1624.7	1459.2	1373.9
52.5°	1664.8	1609.6	1464.2	1298.7	1228.5
55°	1494.3	1449.2	1313.8	1158.3	1098.1
57.5°	1338.8	1293.7	1168.3	1022.9	972.8
60°	1193.4	1128.2	1022.9	897.6	857.5
62.5°	1033.0	982.8	892.6	787.3	837.4
65°	887.5	837.4	757.2	772.2	641.8
67.5°	727.1	702.0	631.8	561.6	541.6
70°	591.7	561.6	536.5	461.3	441.3
72.5°	471.4	441.3	406.2	366.0	351.0
75°	356.0	330.9	310.9	295.8	325.9
77.5°	245.7	235.7	220.6	205.6	200.6
80°	160.5	155.4	150.4	145.4	140.4
82.5°	95.3	95.3	95.3	95.3	95.3
85°	50.1	55.2	60.2	65.2	70.2
87.5°	30.1	30.1	35.1	40.1	45.1
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)