

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: P546743

Luminaire Tested: **FMR-24-4-LD4-2HI-50-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: P546743
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-LD4-2HI-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

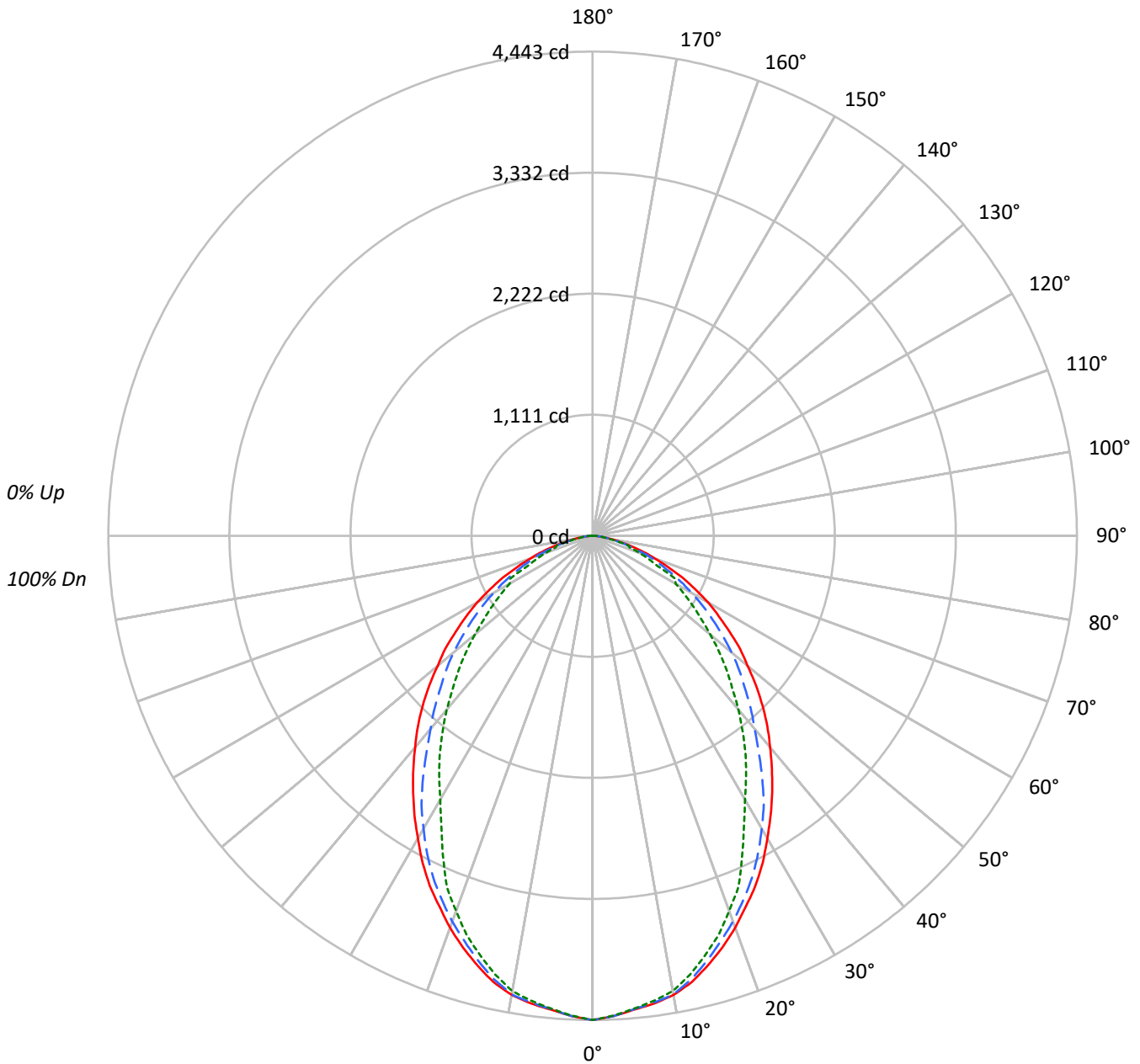
Lumens per Lamp: N/A
Luminaire Lumens: 8722.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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: P546743

CATALOG NUMBER: FMR-24-4-LD4-2HI-50-UNV-80-84-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°	5978	5978	5978
5°	5897	5890	5883
10°	5845	5839	5796
15°	5688	5631	5552
20°	5479	5391	5244
25°	5254	5139	4819
30°	4979	4820	4341
35°	4716	4454	4016
40°	4448	4060	3654
45°	4193	3753	3303
50°	3881	3484	2946
55°	3590	3157	2639
60°	3289	2820	2363
65°	2894	2469	2093
70°	2384	2162	1778
75°	1896	1655	1736
80°	1274	1194	1114
85°	794	951	1110



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	413.6	4.7
10°-20°	1135.0	13.0
20°-30°	1571.3	18.0
30°-40°	1675.5	19.2
40°-50°	1528.6	17.5
50°-60°	1197.5	13.7
60°-70°	780.5	8.9
70°-80°	345.8	4.0
80°-90°	74.2	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°	3119.9	35.8
0°-40°	4795.4	55.0
0°-60°	7521.5	86.2
0°-90°	8722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4443	4443	4443	4443	4443	
5°	4366	4361	4361	4356	4356	414
15°	4083	4083	4042	4001	3986	1148
25°	3539	3518	3462	3339	3246	1625
35°	2871	2851	2712	2506	2445	1795
45°	2204	2157	1972	1808	1736	1697
55°	1531	1484	1346	1186	1125	1373
65°	909	858	776	791	657	896
75°	365	339	318	303	334	391
85°	51	56	62	67	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4442.9	4442.9	4442.9	4442.9	4442.9
2.5°	4412.1	4412.1	4412.1	4406.9	4406.9
5°	4365.8	4360.7	4360.7	4355.6	4355.6
7.5°	4329.9	4324.7	4319.6	4314.5	4304.2
10°	4278.5	4278.5	4273.4	4247.7	4242.6
12.5°	4196.3	4191.2	4170.6	4134.7	4124.4
15°	4083.3	4083.3	4042.2	4001.2	3985.7
17.5°	3960.1	3954.9	3903.6	3862.5	3841.9
20°	3826.5	3816.2	3764.9	3698.1	3662.2
22.5°	3677.6	3677.6	3615.9	3528.6	3492.7
25°	3538.9	3518.3	3461.8	3338.6	3246.1
27.5°	3379.7	3348.8	3287.2	3112.6	3004.7
30°	3205.0	3189.6	3102.3	2876.3	2794.1
32.5°	3040.7	3015.0	2922.5	2686.3	2619.5
35°	2871.2	2850.6	2711.9	2506.5	2444.9
37.5°	2701.7	2676.0	2501.4	2337.0	2260.0
40°	2532.2	2501.4	2311.3	2162.4	2080.2
42.5°	2373.0	2331.9	2147.0	1987.7	1895.3
45°	2203.5	2157.2	1972.3	1808.0	1736.1
47.5°	2034.0	1992.9	1823.4	1653.9	1571.7
50°	1854.2	1818.2	1664.2	1494.7	1407.3
52.5°	1705.2	1648.7	1499.8	1330.3	1258.4
55°	1530.6	1484.4	1345.7	1186.5	1124.8
57.5°	1371.4	1325.2	1196.8	1047.8	996.4
60°	1222.4	1155.7	1047.8	919.4	878.3
62.5°	1058.1	1006.7	914.3	806.4	857.8
65°	909.1	857.8	775.6	791.0	657.4
67.5°	744.8	719.1	647.2	575.3	554.7
70°	606.1	575.3	549.6	472.5	452.0
72.5°	482.8	452.0	416.0	374.9	359.5
75°	364.7	339.0	318.4	303.0	333.9
77.5°	251.7	241.4	226.0	210.6	205.5
80°	164.4	159.2	154.1	149.0	143.8
82.5°	97.6	97.6	97.6	97.6	97.6
85°	51.4	56.5	61.6	66.8	71.9
87.5°	30.8	30.8	36.0	41.1	46.2
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)