

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: P547241

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-82-86-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: P547241
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-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

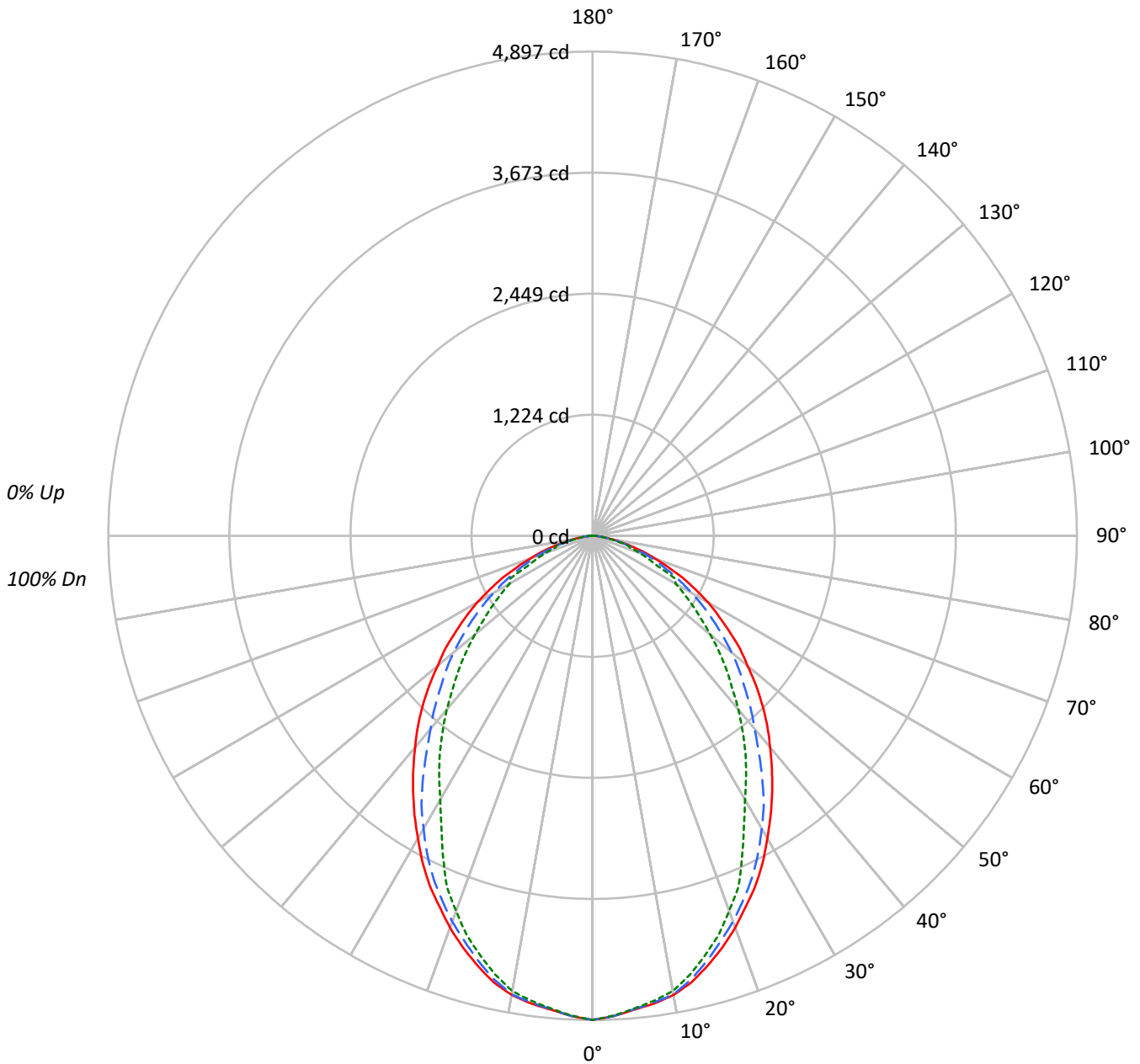
Lumens per Lamp: N/A
Luminaire Lumens: 9613.0 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6588	6588	6588
5°	6499	6491	6484
10°	6443	6435	6389
15°	6269	6206	6119
20°	6039	5941	5779
25°	5790	5664	5311
30°	5488	5312	4785
35°	5198	4910	4426
40°	4902	4474	4027
45°	4621	4136	3641
50°	4278	3839	3247
55°	3957	3479	2908
60°	3626	3108	2605
65°	3190	2721	2307
70°	2628	2383	1960
75°	2089	1825	1913
80°	1404	1316	1228
85°	874	1048	1224



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	455.8	4.7
10°-20°	1251.0	13.0
20°-30°	1731.9	18.0
30°-40°	1846.7	19.2
40°-50°	1684.7	17.5
50°-60°	1319.8	13.7
60°-70°	860.2	8.9
70°-80°	381.1	4.0
80°-90°	81.8	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°	3438.6	35.8
0°-40°	5285.3	55.0
0°-60°	8289.9	86.2
0°-90°	9613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9613.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4897	4897	4897	4897	4897	
5°	4812	4806	4806	4800	4800	457
15°	4500	4500	4455	4410	4393	1265
25°	3900	3878	3816	3680	3578	1791
35°	3164	3142	2989	2763	2695	1978
45°	2429	2378	2174	1993	1913	1871
55°	1687	1636	1483	1308	1240	1513
65°	1002	945	855	872	725	987
75°	402	374	351	334	368	431
85°	57	62	68	74	79	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4896.7	4896.7	4896.7	4896.7	4896.7
2.5°	4862.8	4862.8	4862.8	4857.1	4857.1
5°	4811.8	4806.2	4806.2	4800.5	4800.5
7.5°	4772.2	4766.5	4760.9	4755.2	4743.9
10°	4715.6	4715.6	4709.9	4681.6	4676.0
12.5°	4625.0	4619.3	4596.7	4557.1	4545.8
15°	4500.5	4500.5	4455.2	4409.9	4392.9
17.5°	4364.6	4358.9	4302.3	4257.0	4234.4
20°	4217.4	4206.1	4149.5	4075.9	4036.3
22.5°	4053.3	4053.3	3985.3	3889.1	3849.5
25°	3900.4	3877.8	3815.5	3679.6	3577.7
27.5°	3724.9	3690.9	3623.0	3430.5	3311.7
30°	3532.4	3515.5	3419.2	3170.1	3079.6
32.5°	3351.3	3323.0	3221.1	2960.7	2887.1
35°	3164.5	3141.8	2989.0	2762.6	2694.6
37.5°	2977.7	2949.4	2756.9	2575.7	2490.8
40°	2790.9	2756.9	2547.4	2383.3	2292.7
42.5°	2615.4	2570.1	2366.3	2190.8	2088.9
45°	2428.6	2377.6	2173.8	1992.7	1913.4
47.5°	2241.7	2196.5	2009.6	1822.8	1732.3
50°	2043.6	2004.0	1834.2	1647.3	1551.1
52.5°	1879.4	1817.2	1653.0	1466.2	1386.9
55°	1687.0	1636.0	1483.2	1307.7	1239.8
57.5°	1511.5	1460.5	1319.0	1154.8	1098.2
60°	1347.3	1273.7	1154.8	1013.3	968.0
62.5°	1166.2	1109.5	1007.7	888.8	945.4
65°	1002.0	945.4	854.8	871.8	724.6
67.5°	820.8	792.5	713.3	634.0	611.4
70°	668.0	634.0	605.7	520.8	498.2
72.5°	532.1	498.2	458.5	413.3	396.3
75°	401.9	373.6	351.0	334.0	368.0
77.5°	277.4	266.1	249.1	232.1	226.4
80°	181.2	175.5	169.8	164.2	158.5
82.5°	107.6	107.6	107.6	107.6	107.6
85°	56.6	62.3	67.9	73.6	79.3
87.5°	34.0	34.0	39.6	45.3	50.9
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)