

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: P547097

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-80-86-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: P547097
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-LD4-3LO-40-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

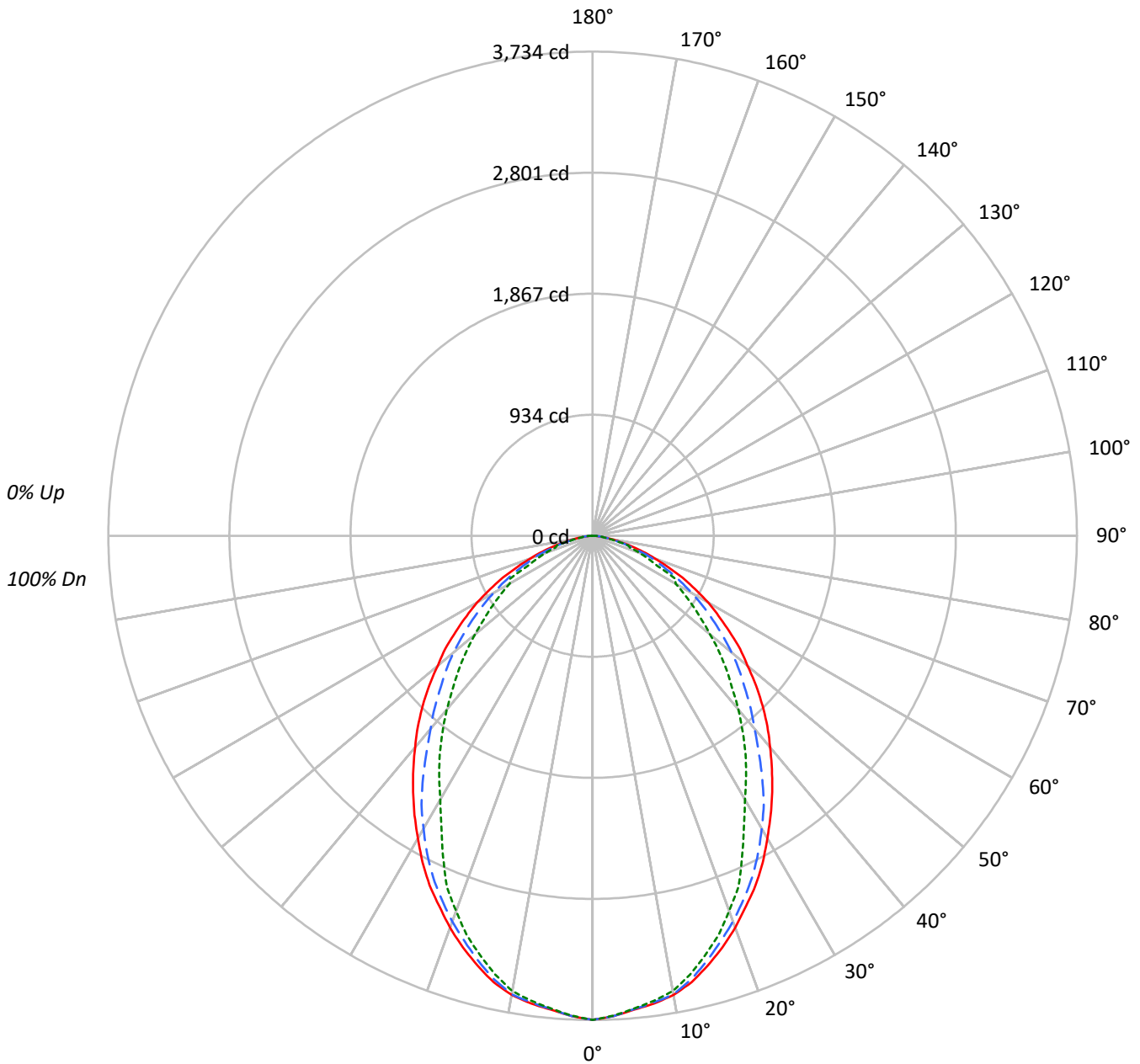
Lumens per Lamp: N/A
Luminaire Lumens: 7330.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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				20				20	
RC	80				70				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°	5024	5024	5024
5°	4956	4950	4944
10°	4913	4907	4871
15°	4780	4732	4666
20°	4605	4530	4407
25°	4415	4319	4050
30°	4185	4051	3648
35°	3963	3744	3375
40°	3738	3412	3071
45°	3524	3154	2776
50°	3262	2928	2476
55°	3017	2653	2217
60°	2764	2370	1986
65°	2432	2075	1759
70°	2004	1817	1495
75°	1593	1391	1459
80°	1070	1003	937
85°	667	800	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.6	4.7
10°-20°	953.9	13.0
20°-30°	1320.6	18.0
30°-40°	1408.1	19.2
40°-50°	1284.6	17.5
50°-60°	1006.4	13.7
60°-70°	655.9	8.9
70°-80°	290.6	4.0
80°-90°	62.4	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°	2622.0	35.8
0°-40°	4030.1	55.0
0°-60°	6321.1	86.2
0°-90°	7330.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3734	3734	3734	3734	3734	
5°	3669	3665	3665	3660	3660	348
15°	3432	3432	3397	3363	3350	965
25°	2974	2957	2909	2806	2728	1365
35°	2413	2396	2279	2106	2055	1509
45°	1852	1813	1658	1519	1459	1426
55°	1286	1248	1131	997	945	1154
65°	764	721	652	665	552	753
75°	306	285	268	255	281	328
85°	43	48	52	56	60	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3733.8	3733.8	3733.8	3733.8	3733.8
2.5°	3707.9	3707.9	3707.9	3703.6	3703.6
5°	3669.1	3664.7	3664.7	3660.4	3660.4
7.5°	3638.8	3634.5	3630.2	3625.9	3617.3
10°	3595.7	3595.7	3591.4	3569.8	3565.5
12.5°	3526.6	3522.3	3505.0	3474.8	3466.2
15°	3431.6	3431.6	3397.1	3362.6	3349.6
17.5°	3328.0	3323.7	3280.6	3246.0	3228.8
20°	3215.8	3207.2	3164.0	3107.9	3077.7
22.5°	3090.6	3090.6	3038.8	2965.5	2935.2
25°	2974.1	2956.8	2909.3	2805.7	2728.1
27.5°	2840.3	2814.4	2762.6	2615.8	2525.2
30°	2693.5	2680.6	2607.2	2417.3	2348.2
32.5°	2555.4	2533.8	2456.1	2257.5	2201.4
35°	2412.9	2395.7	2279.1	2106.5	2054.7
37.5°	2270.5	2248.9	2102.2	1964.0	1899.3
40°	2128.1	2102.2	1942.4	1817.3	1748.2
42.5°	1994.2	1959.7	1804.3	1670.5	1592.8
45°	1851.8	1812.9	1657.6	1519.4	1459.0
47.5°	1709.3	1674.8	1532.4	1389.9	1320.9
50°	1558.3	1528.1	1398.6	1256.1	1182.7
52.5°	1433.1	1385.6	1260.4	1118.0	1057.6
55°	1286.3	1247.5	1130.9	997.1	945.3
57.5°	1152.5	1113.7	1005.8	880.6	837.4
60°	1027.3	971.2	880.6	772.7	738.1
62.5°	889.2	846.0	768.3	677.7	720.9
65°	764.0	720.9	651.8	664.7	552.5
67.5°	625.9	604.3	543.9	483.5	466.2
70°	509.4	483.5	461.9	397.1	379.9
72.5°	405.8	379.9	349.6	315.1	302.2
75°	306.5	284.9	267.6	254.7	280.6
77.5°	211.5	202.9	189.9	177.0	172.7
80°	138.1	133.8	129.5	125.2	120.9
82.5°	82.0	82.0	82.0	82.0	82.0
85°	43.2	47.5	51.8	56.1	60.4
87.5°	25.9	25.9	30.2	34.5	38.8
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)