

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: P546908

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-80-94-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: P546908
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-LD4-2STD-40-UNV-80-94-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

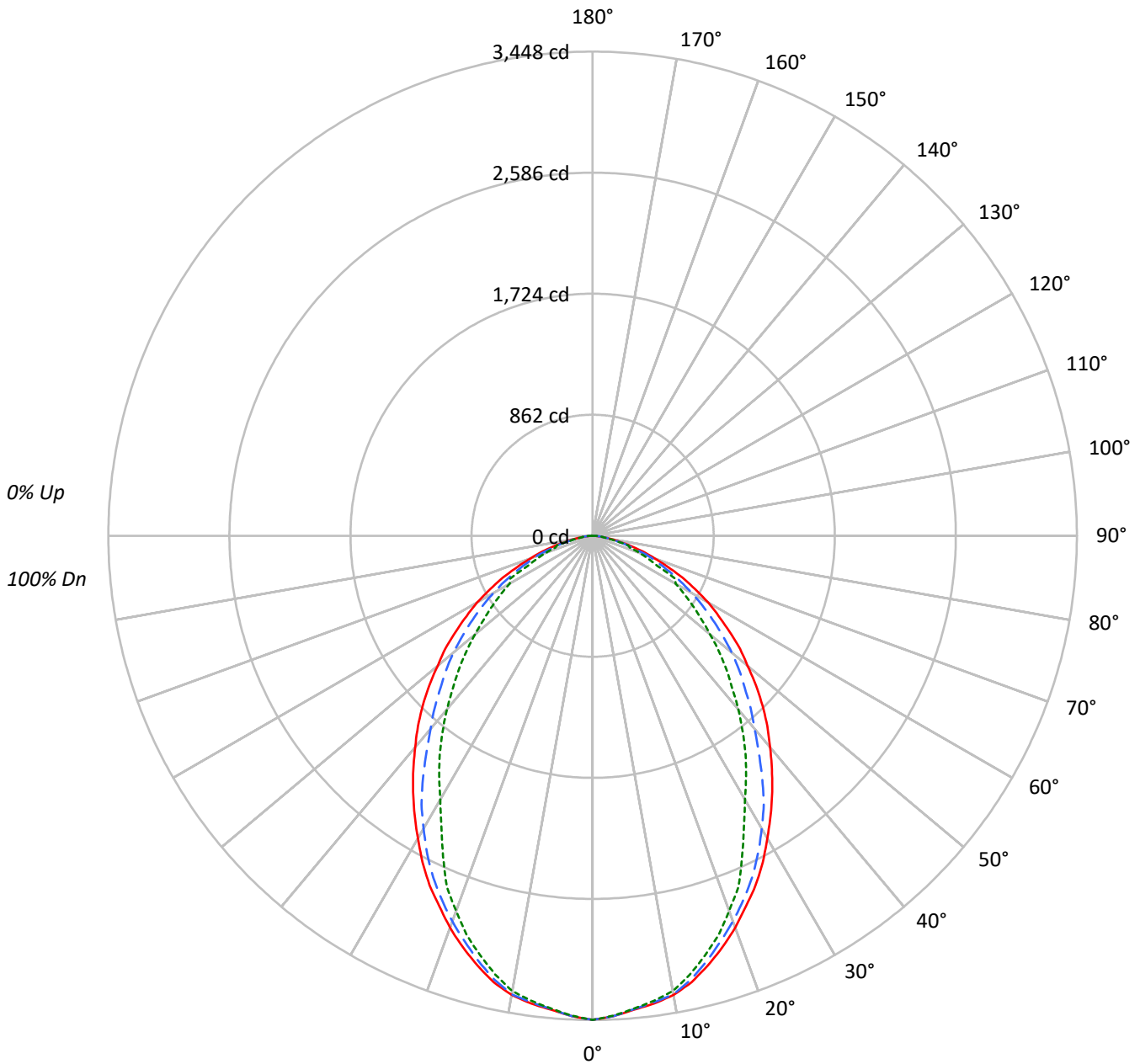
Lumens per Lamp: N/A
Luminaire Lumens: 6768.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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			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°	4639	4639	4639
5°	4576	4570	4565
10°	4536	4530	4498
15°	4414	4369	4308
20°	4252	4183	4069
25°	4077	3988	3740
30°	3864	3740	3369
35°	3659	3457	3116
40°	3451	3150	2835
45°	3253	2912	2563
50°	3012	2703	2286
55°	2786	2449	2047
60°	2553	2188	1834
65°	2246	1916	1624
70°	1850	1678	1380
75°	1471	1285	1347
80°	988	927	865
85°	616	738	861



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.9	4.7
10°-20°	880.7	13.0
20°-30°	1219.3	18.0
30°-40°	1300.1	19.2
40°-50°	1186.1	17.5
50°-60°	929.2	13.7
60°-70°	605.6	8.9
70°-80°	268.3	4.0
80°-90°	57.6	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°	2421.0	35.8
0°-40°	3721.1	55.0
0°-60°	5836.5	86.2
0°-90°	6768.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6768.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3448	3448	3448	3448	3448	
5°	3388	3384	3384	3380	3380	322
15°	3168	3168	3137	3105	3093	891
25°	2746	2730	2686	2591	2519	1261
35°	2228	2212	2104	1945	1897	1393
45°	1710	1674	1530	1403	1347	1317
55°	1188	1152	1044	921	873	1065
65°	705	666	602	614	510	695
75°	283	263	247	235	259	303
85°	40	44	48	52	56	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3447.5	3447.5	3447.5	3447.5	3447.5
2.5°	3423.6	3423.6	3423.6	3419.6	3419.6
5°	3387.7	3383.8	3383.8	3379.8	3379.8
7.5°	3359.8	3355.9	3351.9	3347.9	3339.9
10°	3320.0	3320.0	3316.0	3296.1	3292.1
12.5°	3256.2	3252.2	3236.3	3208.4	3200.4
15°	3168.5	3168.5	3136.7	3104.8	3092.8
17.5°	3072.9	3068.9	3029.0	2997.2	2981.2
20°	2969.3	2961.3	2921.4	2869.6	2841.7
22.5°	2853.7	2853.7	2805.9	2738.1	2710.2
25°	2746.1	2730.1	2686.3	2590.6	2518.9
27.5°	2622.5	2598.6	2550.8	2415.3	2331.6
30°	2487.0	2475.0	2407.3	2231.9	2168.2
32.5°	2359.5	2339.5	2267.8	2084.5	2032.6
35°	2227.9	2212.0	2104.4	1945.0	1897.1
37.5°	2096.4	2076.5	1941.0	1813.4	1753.7
40°	1964.9	1941.0	1793.5	1677.9	1614.2
42.5°	1841.3	1809.5	1666.0	1542.4	1470.7
45°	1709.8	1673.9	1530.5	1402.9	1347.1
47.5°	1578.3	1546.4	1414.9	1283.4	1219.6
50°	1438.8	1410.9	1291.3	1159.8	1092.0
52.5°	1323.2	1279.4	1163.8	1032.3	976.5
55°	1187.7	1151.8	1044.2	920.7	872.8
57.5°	1064.2	1028.3	928.6	813.1	773.2
60°	948.6	896.8	813.1	713.4	681.5
62.5°	821.0	781.2	709.4	625.7	665.6
65°	705.4	665.6	601.8	613.8	510.2
67.5°	577.9	558.0	502.2	446.4	430.4
70°	470.3	446.4	426.5	366.7	350.7
72.5°	374.6	350.7	322.8	290.9	279.0
75°	283.0	263.0	247.1	235.1	259.1
77.5°	195.3	187.3	175.4	163.4	159.4
80°	127.5	123.6	119.6	115.6	111.6
82.5°	75.7	75.7	75.7	75.7	75.7
85°	39.9	43.8	47.8	51.8	55.8
87.5°	23.9	23.9	27.9	31.9	35.9
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)