

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: P546965

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-93-96-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: P546965
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-50-UNV-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

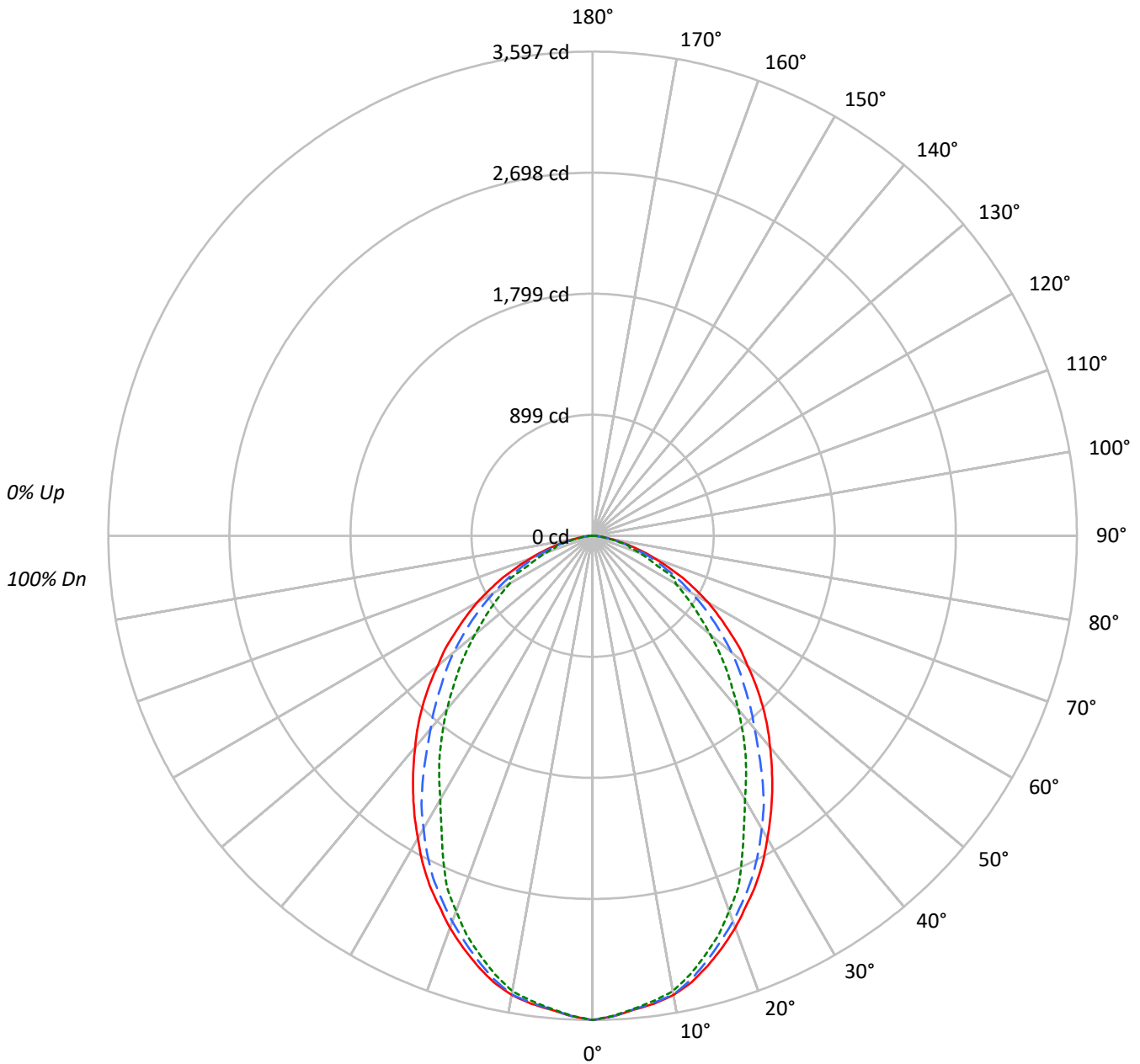
Lumens per Lamp: N/A
Luminaire Lumens: 7062.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	4840	4840	4840
5°	4774	4769	4763
10°	4733	4727	4693
15°	4605	4559	4495
20°	4436	4365	4246
25°	4254	4161	3902
30°	4032	3903	3515
35°	3818	3607	3251
40°	3601	3287	2958
45°	3395	3039	2675
50°	3143	2820	2385
55°	2907	2556	2137
60°	2664	2283	1914
65°	2344	1999	1695
70°	1930	1751	1440
75°	1535	1340	1405
80°	1031	967	902
85°	642	770	898



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.9	4.7
10°-20°	919.0	13.0
20°-30°	1272.3	18.0
30°-40°	1356.6	19.2
40°-50°	1237.6	17.5
50°-60°	969.6	13.7
60°-70°	631.9	8.9
70°-80°	280.0	4.0
80°-90°	60.1	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°	2526.1	35.8
0°-40°	3882.8	55.0
0°-60°	6090.0	86.2
0°-90°	7062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7062.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3597	3597	3597	3597	3597	
5°	3535	3531	3531	3527	3527	336
15°	3306	3306	3273	3240	3227	929
25°	2865	2849	2803	2703	2628	1315
35°	2325	2308	2196	2030	1980	1453
45°	1784	1747	1597	1464	1406	1374
55°	1239	1202	1090	961	911	1112
65°	736	694	628	640	532	725
75°	295	274	258	245	270	316
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3597.3	3597.3	3597.3	3597.3	3597.3
2.5°	3572.3	3572.3	3572.3	3568.2	3568.2
5°	3534.9	3530.7	3530.7	3526.6	3526.6
7.5°	3505.8	3501.6	3497.5	3493.3	3485.0
10°	3464.2	3464.2	3460.1	3439.3	3435.1
12.5°	3397.7	3393.5	3376.9	3347.8	3339.4
15°	3306.2	3306.2	3272.9	3239.6	3227.2
17.5°	3206.4	3202.2	3160.6	3127.4	3110.7
20°	3098.2	3089.9	3048.3	2994.3	2965.2
22.5°	2977.6	2977.6	2927.7	2857.0	2827.9
25°	2865.4	2848.7	2803.0	2703.2	2628.3
27.5°	2736.4	2711.5	2661.6	2520.2	2432.8
30°	2595.0	2582.6	2511.9	2328.9	2262.3
32.5°	2462.0	2441.2	2366.3	2175.0	2120.9
35°	2324.7	2308.1	2195.8	2029.5	1979.5
37.5°	2187.5	2166.7	2025.3	1892.2	1829.8
40°	2050.2	2025.3	1871.4	1750.8	1684.3
42.5°	1921.3	1888.1	1738.3	1609.4	1534.6
45°	1784.1	1746.7	1596.9	1463.9	1405.6
47.5°	1646.9	1613.6	1476.3	1339.1	1272.6
50°	1501.3	1472.2	1347.4	1210.2	1139.5
52.5°	1380.7	1334.9	1214.3	1077.1	1018.9
55°	1239.3	1201.9	1089.6	960.7	910.8
57.5°	1110.4	1072.9	969.0	848.4	806.8
60°	989.8	935.7	848.4	744.4	711.1
62.5°	856.7	815.1	740.3	652.9	694.5
65°	736.1	694.5	628.0	640.4	532.3
67.5°	603.0	582.2	524.0	465.8	449.1
70°	490.7	465.8	445.0	382.6	366.0
72.5°	390.9	366.0	336.9	303.6	291.1
75°	295.3	274.5	257.8	245.4	270.3
77.5°	203.8	195.5	183.0	170.5	166.3
80°	133.1	128.9	124.8	120.6	116.4
82.5°	79.0	79.0	79.0	79.0	79.0
85°	41.6	45.7	49.9	54.1	58.2
87.5°	25.0	25.0	29.1	33.3	37.4
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)