

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: P546946

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-81-87-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: P546946
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-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

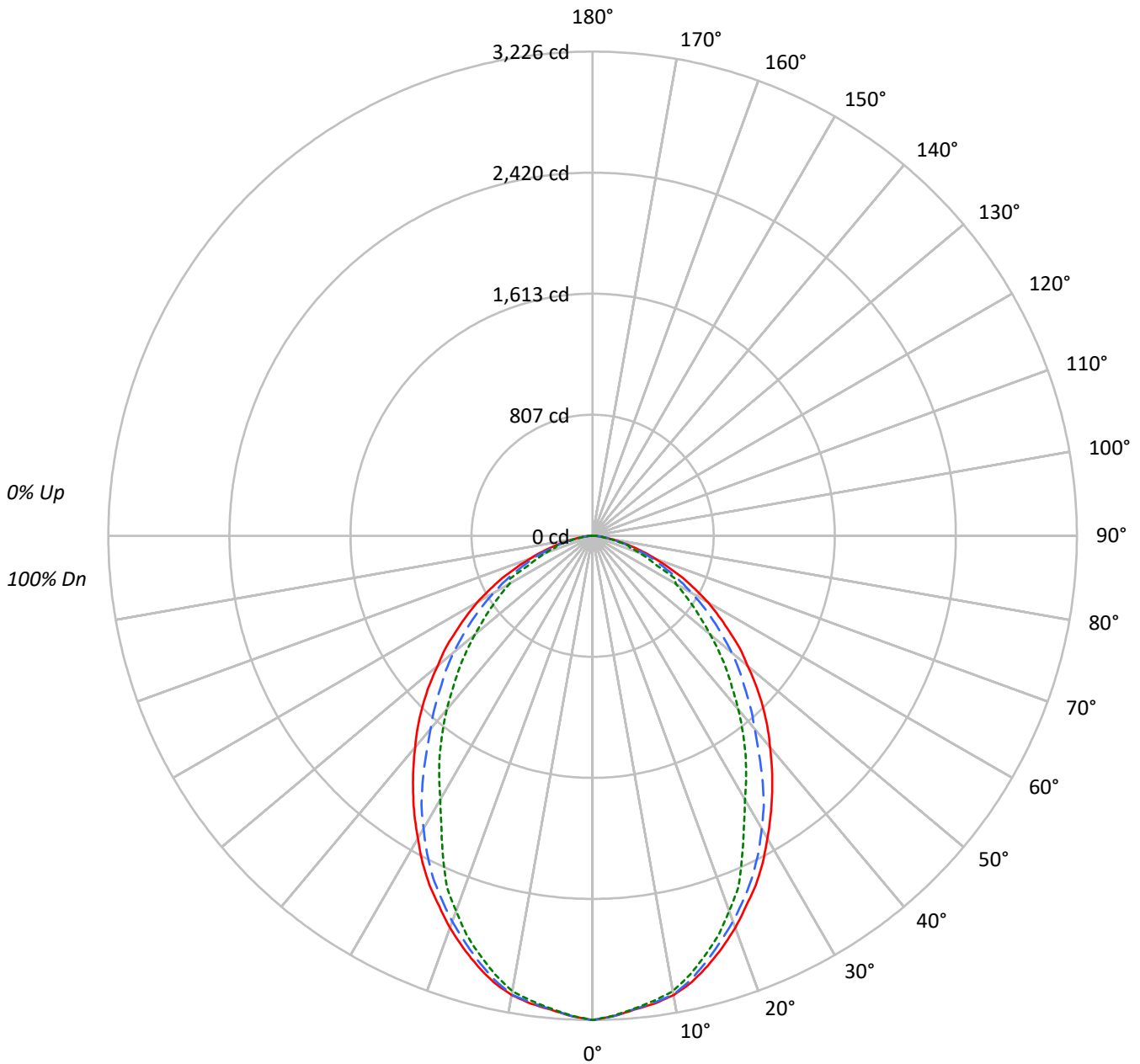
Lumens per Lamp: N/A
Luminaire Lumens: 6334.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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																			
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°	4341	4341	4341
5°	4282	4277	4272
10°	4245	4240	4209
15°	4131	4089	4032
20°	3979	3915	3808
25°	3815	3732	3500
30°	3616	3500	3152
35°	3425	3235	2916
40°	3230	2948	2653
45°	3045	2725	2399
50°	2819	2530	2139
55°	2607	2293	1916
60°	2389	2048	1716
65°	2102	1793	1520
70°	1731	1570	1291
75°	1377	1202	1261
80°	925	867	809
85°	576	692	806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.3	4.7
10°-20°	824.3	13.0
20°-30°	1141.1	18.0
30°-40°	1216.8	19.2
40°-50°	1110.1	17.5
50°-60°	869.6	13.7
60°-70°	566.8	8.9
70°-80°	251.1	4.0
80°-90°	53.9	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°	2265.7	35.8
0°-40°	3482.5	55.0
0°-60°	5462.2	86.2
0°-90°	6334.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6334.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3226	3226	3226	3226	3226	
5°	3170	3167	3167	3163	3163	301
15°	2965	2965	2936	2906	2894	834
25°	2570	2555	2514	2424	2357	1180
35°	2085	2070	1969	1820	1776	1304
45°	1600	1567	1432	1313	1261	1233
55°	1112	1078	977	862	817	997
65°	660	623	563	574	477	651
75°	265	246	231	220	242	284
85°	37	41	45	48	52	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3226.5	3226.5	3226.5	3226.5	3226.5
2.5°	3204.1	3204.1	3204.1	3200.3	3200.3
5°	3170.5	3166.8	3166.8	3163.0	3163.0
7.5°	3144.4	3140.7	3136.9	3133.2	3125.7
10°	3107.1	3107.1	3103.4	3084.7	3081.0
12.5°	3047.4	3043.7	3028.8	3002.7	2995.2
15°	2965.4	2965.4	2935.5	2905.7	2894.5
17.5°	2875.8	2872.1	2834.8	2805.0	2790.0
20°	2778.9	2771.4	2734.1	2685.6	2659.5
22.5°	2670.7	2670.7	2625.9	2562.5	2536.4
25°	2570.0	2555.1	2514.0	2424.5	2357.4
27.5°	2454.3	2432.0	2387.2	2260.4	2182.1
30°	2327.5	2316.3	2252.9	2088.8	2029.1
32.5°	2208.2	2189.5	2122.4	1950.8	1902.3
35°	2085.1	2070.2	1969.4	1820.2	1775.5
37.5°	1962.0	1943.3	1816.5	1697.2	1641.2
40°	1838.9	1816.5	1678.5	1570.3	1510.7
42.5°	1723.3	1693.4	1559.1	1443.5	1376.4
45°	1600.2	1566.6	1432.3	1313.0	1260.7
47.5°	1477.1	1447.2	1324.2	1201.1	1141.4
50°	1346.5	1320.4	1208.5	1085.4	1022.0
52.5°	1238.4	1197.3	1089.2	966.1	913.9
55°	1111.5	1078.0	977.3	861.6	816.9
57.5°	995.9	962.3	869.1	760.9	723.6
60°	887.7	839.3	760.9	667.7	637.8
62.5°	768.4	731.1	663.9	585.6	622.9
65°	660.2	622.9	563.2	574.4	477.4
67.5°	540.9	522.2	470.0	417.8	402.8
70°	440.1	417.8	399.1	343.2	328.2
72.5°	350.6	328.2	302.1	272.3	261.1
75°	264.8	246.2	231.3	220.1	242.5
77.5°	182.8	175.3	164.1	152.9	149.2
80°	119.4	115.6	111.9	108.2	104.4
82.5°	70.9	70.9	70.9	70.9	70.9
85°	37.3	41.0	44.8	48.5	52.2
87.5°	22.4	22.4	26.1	29.8	33.6
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)