

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: P546955

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-82-88-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: P546955
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-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

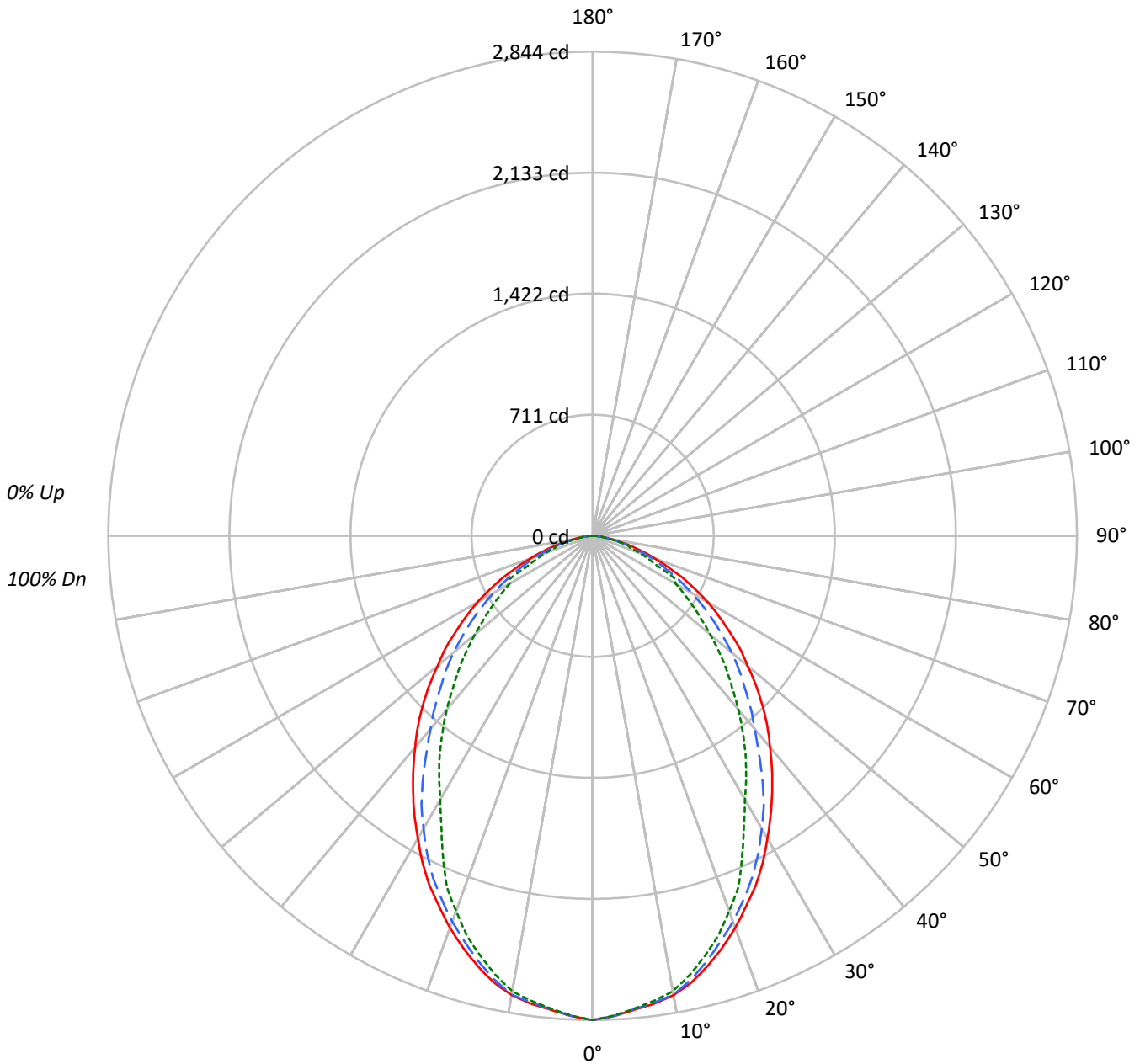
Lumens per Lamp: N/A
Luminaire Lumens: 5584.0 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3827	3827	3827
5°	3775	3771	3766
10°	3742	3738	3711
15°	3641	3605	3555
20°	3508	3451	3357
25°	3364	3290	3085
30°	3188	3086	2779
35°	3019	2852	2571
40°	2847	2599	2339
45°	2684	2403	2115
50°	2485	2230	1886
55°	2299	2021	1689
60°	2106	1805	1513
65°	1853	1581	1340
70°	1526	1384	1138
75°	1214	1060	1111
80°	815	765	714
85°	508	610	710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.8	4.7
10°-20°	726.7	13.0
20°-30°	1006.0	18.0
30°-40°	1072.7	19.2
40°-50°	978.6	17.5
50°-60°	766.7	13.7
60°-70°	499.7	8.9
70°-80°	221.4	4.0
80°-90°	47.5	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°	1997.4	35.8
0°-40°	3070.1	55.0
0°-60°	4815.4	86.2
0°-90°	5584.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5584.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2844	2844	2844	2844	2844	
5°	2795	2792	2792	2788	2788	265
15°	2614	2614	2588	2562	2552	735
25°	2266	2252	2216	2137	2078	1040
35°	1838	1825	1736	1605	1565	1149
45°	1411	1381	1263	1158	1112	1087
55°	980	950	862	760	720	879
65°	582	549	496	506	421	574
75°	234	217	204	194	214	250
85°	33	36	40	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2844.4	2844.4	2844.4	2844.4	2844.4
2.5°	2824.7	2824.7	2824.7	2821.4	2821.4
5°	2795.1	2791.8	2791.8	2788.5	2788.5
7.5°	2772.1	2768.8	2765.5	2762.2	2755.6
10°	2739.2	2739.2	2735.9	2719.5	2716.2
12.5°	2686.6	2683.3	2670.1	2647.1	2640.5
15°	2614.2	2614.2	2587.9	2561.6	2551.8
17.5°	2535.3	2532.0	2499.1	2472.8	2459.7
20°	2449.8	2443.2	2410.4	2367.6	2344.6
22.5°	2354.5	2354.5	2315.0	2259.1	2236.1
25°	2265.7	2252.5	2216.3	2137.4	2078.2
27.5°	2163.7	2144.0	2104.5	1992.7	1923.7
30°	2051.9	2042.1	1986.2	1841.5	1788.9
32.5°	1946.7	1930.3	1871.1	1719.8	1677.1
35°	1838.2	1825.0	1736.2	1604.7	1565.3
37.5°	1729.7	1713.2	1601.4	1496.2	1446.9
40°	1621.2	1601.4	1479.8	1384.4	1331.8
42.5°	1519.2	1492.9	1374.5	1272.6	1213.4
45°	1410.7	1381.1	1262.7	1157.5	1111.5
47.5°	1302.2	1275.9	1167.4	1058.8	1006.2
50°	1187.1	1164.1	1065.4	956.9	901.0
52.5°	1091.7	1055.6	960.2	851.7	805.6
55°	979.9	950.3	861.5	759.6	720.1
57.5°	878.0	848.4	766.2	670.8	637.9
60°	782.6	739.9	670.8	588.6	562.3
62.5°	677.4	644.5	585.3	516.3	549.2
65°	582.0	549.2	496.5	506.4	420.9
67.5°	476.8	460.4	414.3	368.3	355.1
70°	388.0	368.3	351.9	302.5	289.4
72.5°	309.1	289.4	266.4	240.0	230.2
75°	233.5	217.0	203.9	194.0	213.7
77.5°	161.1	154.6	144.7	134.8	131.5
80°	105.2	101.9	98.7	95.4	92.1
82.5°	62.5	62.5	62.5	62.5	62.5
85°	32.9	36.2	39.5	42.7	46.0
87.5°	19.7	19.7	23.0	26.3	29.6
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)