

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: P547139

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-81-88-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: P547139
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-50-UNV-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 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

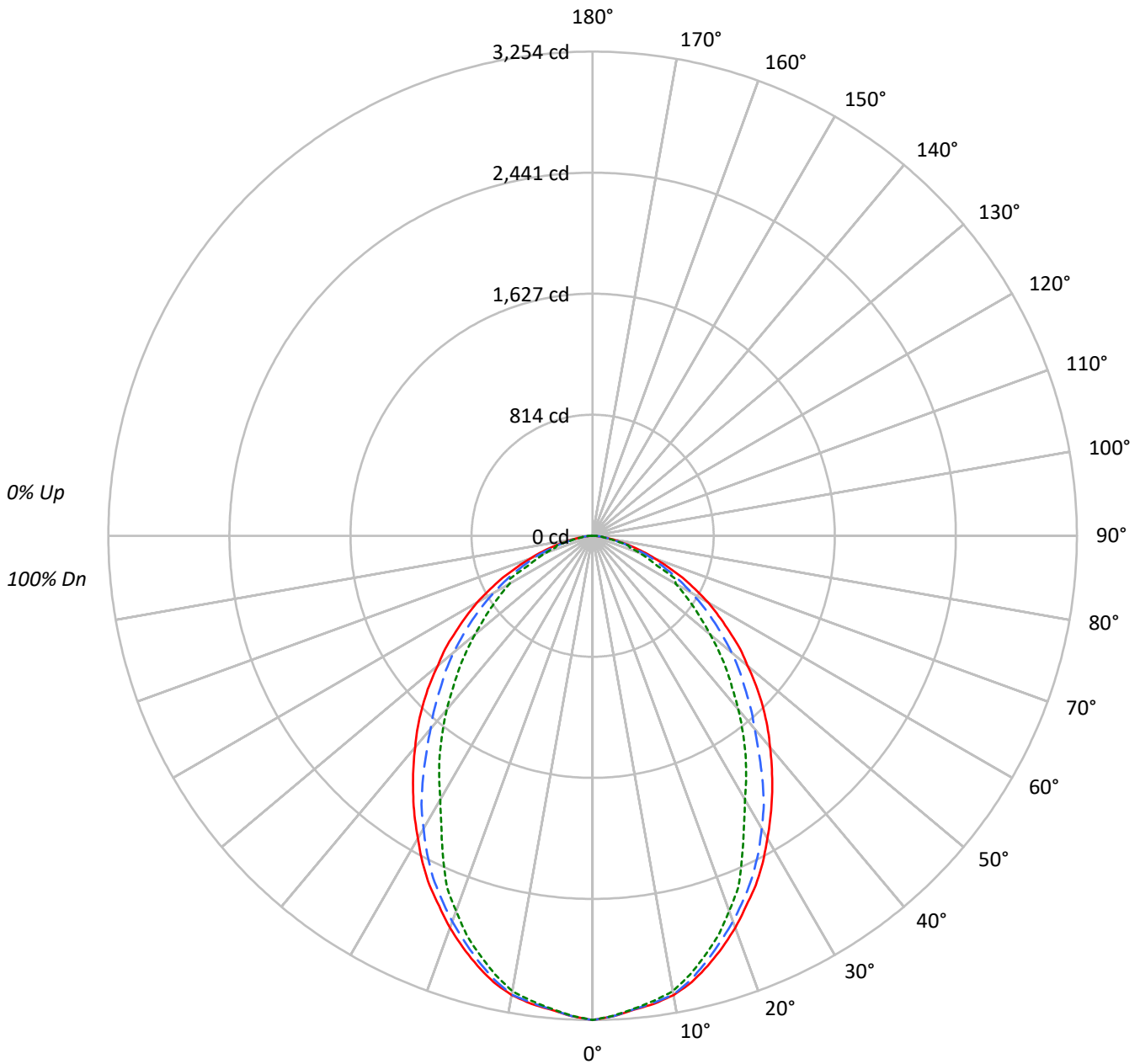
Lumens per Lamp: N/A
Luminaire Lumens: 6389.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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									
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°	4379	4379	4379
5°	4319	4314	4309
10°	4282	4277	4246
15°	4166	4125	4067
20°	4013	3949	3841
25°	3848	3765	3530
30°	3647	3531	3180
35°	3455	3263	2942
40°	3258	2974	2676
45°	3071	2749	2420
50°	2843	2552	2158
55°	2630	2312	1933
60°	2410	2065	1731
65°	2120	1809	1533
70°	1747	1584	1303
75°	1389	1213	1272
80°	933	875	816
85°	580	696	814



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.9	4.7
10°-20°	831.4	13.0
20°-30°	1151.0	18.0
30°-40°	1227.3	19.2
40°-50°	1119.7	17.5
50°-60°	877.2	13.7
60°-70°	571.7	8.9
70°-80°	253.3	4.0
80°-90°	54.4	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°	2285.4	35.8
0°-40°	3512.7	55.0
0°-60°	5509.6	86.2
0°-90°	6389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6389.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3254	3254	3254	3254	3254	
5°	3198	3194	3194	3190	3190	304
15°	2991	2991	2961	2931	2920	841
25°	2592	2577	2536	2446	2378	1190
35°	2103	2088	1986	1836	1791	1315
45°	1614	1580	1445	1324	1272	1243
55°	1121	1087	986	869	824	1006
65°	666	628	568	579	482	656
75°	267	248	233	222	245	286
85°	38	41	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3254.5	3254.5	3254.5	3254.5	3254.5
2.5°	3231.9	3231.9	3231.9	3228.1	3228.1
5°	3198.0	3194.3	3194.3	3190.5	3190.5
7.5°	3171.7	3167.9	3164.2	3160.4	3152.9
10°	3134.1	3134.1	3130.3	3111.5	3107.7
12.5°	3073.9	3070.1	3055.1	3028.7	3021.2
15°	2991.1	2991.1	2961.0	2930.9	2919.6
17.5°	2900.8	2897.0	2859.4	2829.3	2814.3
20°	2803.0	2795.5	2757.8	2708.9	2682.6
22.5°	2693.9	2693.9	2648.7	2584.8	2558.4
25°	2592.3	2577.2	2535.9	2445.6	2377.8
27.5°	2475.7	2453.1	2407.9	2280.0	2201.0
30°	2347.7	2336.4	2272.5	2106.9	2046.7
32.5°	2227.3	2208.5	2140.8	1967.7	1918.8
35°	2103.2	2088.1	1986.5	1836.0	1790.9
37.5°	1979.0	1960.2	1832.3	1711.9	1655.5
40°	1854.9	1832.3	1693.1	1584.0	1523.8
42.5°	1738.2	1708.1	1572.7	1456.0	1388.3
45°	1614.1	1580.2	1444.8	1324.4	1271.7
47.5°	1489.9	1459.8	1335.7	1211.5	1151.3
50°	1358.2	1331.9	1219.0	1094.9	1030.9
52.5°	1249.1	1207.7	1098.6	974.5	921.8
55°	1121.2	1087.3	985.7	869.1	824.0
57.5°	1004.6	970.7	876.6	767.5	729.9
60°	895.4	846.5	767.5	673.5	643.4
62.5°	775.1	737.4	669.7	590.7	628.3
65°	665.9	628.3	568.1	579.4	481.6
67.5°	545.5	526.7	474.1	421.4	406.3
70°	444.0	421.4	402.6	346.1	331.1
72.5°	353.7	331.1	304.8	274.7	263.4
75°	267.1	248.3	233.3	222.0	244.6
77.5°	184.4	176.8	165.5	154.3	150.5
80°	120.4	116.6	112.9	109.1	105.3
82.5°	71.5	71.5	71.5	71.5	71.5
85°	37.6	41.4	45.1	48.9	52.7
87.5°	22.6	22.6	26.3	30.1	33.9
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)