

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: P546915

Luminaire Tested: **FMR-24-4-LD4-2STD-40-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: P546915
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-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

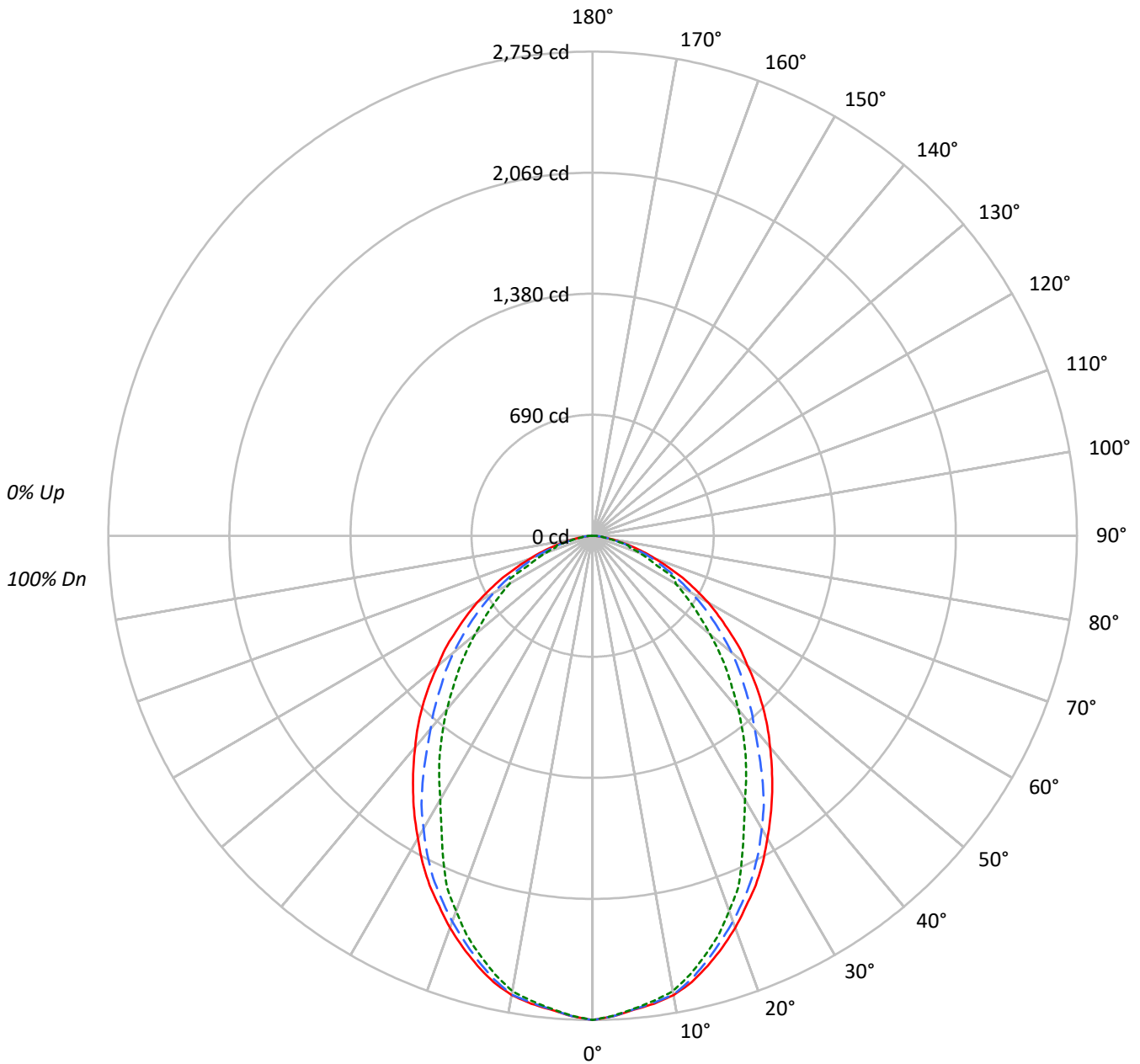
Lumens per Lamp: N/A
Luminaire Lumens: 5417.0 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3713	3713	3713
5°	3662	3658	3654
10°	3631	3626	3600
15°	3533	3497	3448
20°	3403	3348	3257
25°	3263	3192	2993
30°	3093	2994	2696
35°	2929	2767	2494
40°	2762	2521	2269
45°	2604	2331	2052
50°	2411	2164	1830
55°	2230	1961	1639
60°	2043	1751	1468
65°	1798	1534	1300
70°	1481	1343	1104
75°	1177	1028	1078
80°	791	742	692
85°	492	591	690



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.9	4.7
10°-20°	704.9	13.0
20°-30°	975.9	18.0
30°-40°	1040.6	19.2
40°-50°	949.3	17.5
50°-60°	743.7	13.7
60°-70°	484.7	8.9
70°-80°	214.8	4.0
80°-90°	46.1	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°	1937.7	35.8
0°-40°	2978.3	55.0
0°-60°	4671.4	86.2
0°-90°	5417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5417.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2759	2759	2759	2759	2759	
5°	2712	2708	2708	2705	2705	257
15°	2536	2536	2510	2485	2475	713
25°	2198	2185	2150	2074	2016	1009
35°	1783	1770	1684	1557	1518	1115
45°	1368	1340	1225	1123	1078	1054
55°	951	922	836	737	699	853
65°	565	533	482	491	408	556
75°	226	210	198	188	207	243
85°	32	35	38	42	45	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2759.3	2759.3	2759.3	2759.3	2759.3
2.5°	2740.2	2740.2	2740.2	2737.0	2737.0
5°	2711.5	2708.3	2708.3	2705.1	2705.1
7.5°	2689.2	2686.0	2682.8	2679.6	2673.2
10°	2657.3	2657.3	2654.1	2638.1	2634.9
12.5°	2606.2	2603.0	2590.3	2567.9	2561.6
15°	2536.0	2536.0	2510.5	2485.0	2475.4
17.5°	2459.5	2456.3	2424.4	2398.9	2386.1
20°	2376.5	2370.2	2338.3	2296.8	2274.5
22.5°	2284.0	2284.0	2245.8	2191.5	2169.2
25°	2197.9	2185.1	2150.1	2073.5	2016.1
27.5°	2099.0	2079.9	2041.6	1933.1	1866.1
30°	1990.6	1981.0	1926.8	1786.4	1735.4
32.5°	1888.5	1872.5	1815.1	1668.4	1626.9
35°	1783.2	1770.4	1684.3	1556.7	1518.4
37.5°	1677.9	1662.0	1553.5	1451.4	1403.6
40°	1572.7	1553.5	1435.5	1343.0	1291.9
42.5°	1473.8	1448.3	1333.4	1234.5	1177.1
45°	1368.5	1339.8	1225.0	1122.9	1078.2
47.5°	1263.2	1237.7	1132.4	1027.2	976.1
50°	1151.6	1129.3	1033.6	928.3	874.1
52.5°	1059.1	1024.0	931.5	826.2	781.5
55°	950.6	921.9	835.8	736.9	698.6
57.5°	851.7	823.0	743.3	650.8	618.9
60°	759.2	717.7	650.8	571.0	545.5
62.5°	657.1	625.2	567.8	500.8	532.7
65°	564.6	532.7	481.7	491.3	408.3
67.5°	462.5	446.6	401.9	357.3	344.5
70°	376.4	357.3	341.3	293.5	280.7
72.5°	299.9	280.7	258.4	232.9	223.3
75°	226.5	210.5	197.8	188.2	207.3
77.5°	156.3	149.9	140.4	130.8	127.6
80°	102.1	98.9	95.7	92.5	89.3
82.5°	60.6	60.6	60.6	60.6	60.6
85°	31.9	35.1	38.3	41.5	44.7
87.5°	19.1	19.1	22.3	25.5	28.7
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)