

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: P546376

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-82-85-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: P546376
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-12-4-LD4-2STD-50-UNV-82-85-EDD
Description: 1X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

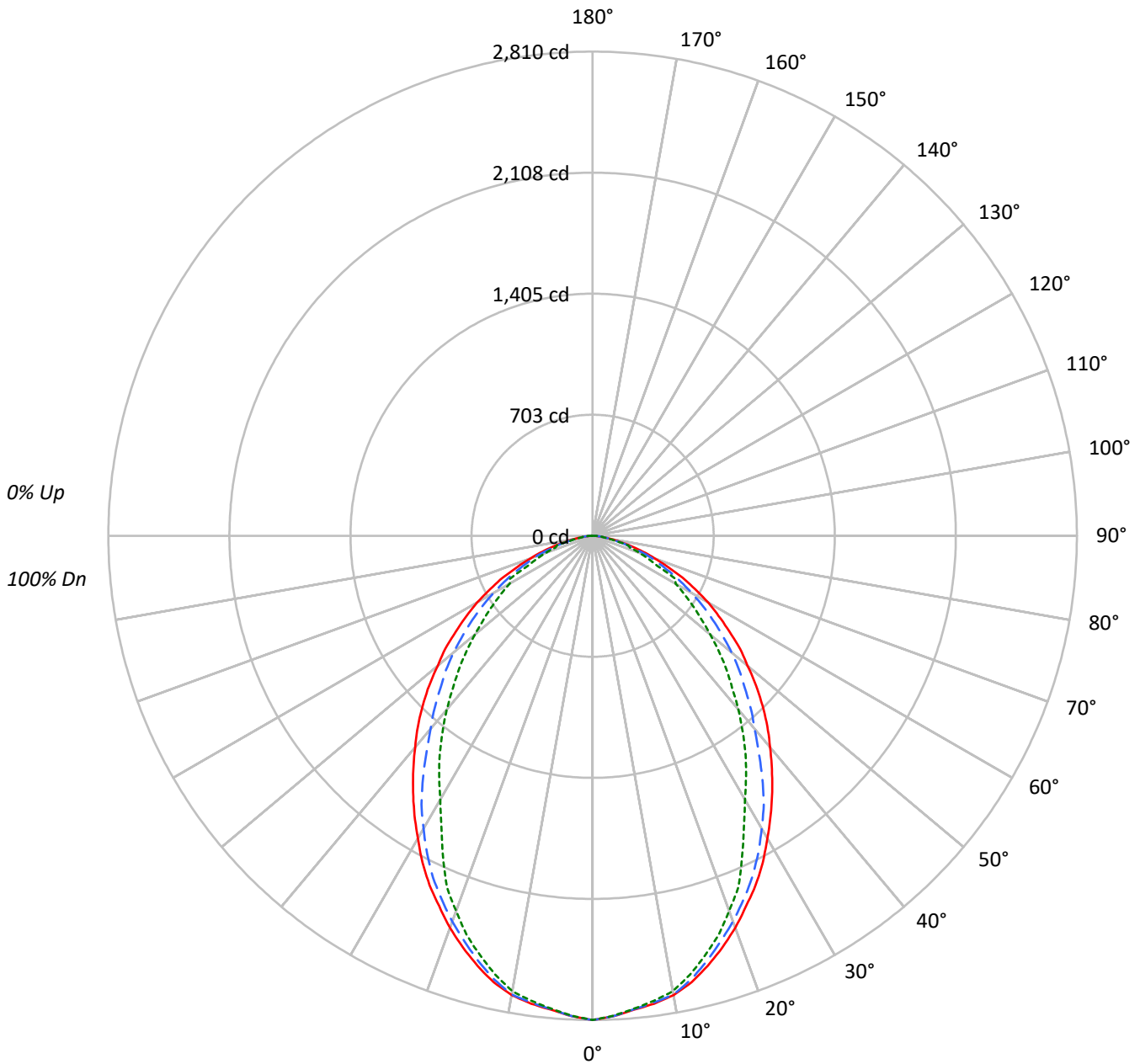
Lumens per Lamp: N/A
Luminaire Lumens: 5517.0 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7562	7562	7562
5°	7460	7451	7442
10°	7395	7386	7333
15°	7196	7123	7024
20°	6931	6820	6634
25°	6646	6502	6097
30°	6299	6097	5492
35°	5966	5635	5080
40°	5626	5136	4622
45°	5304	4748	4179
50°	4910	4407	3727
55°	4542	3993	3338
60°	4161	3567	2990
65°	3662	3124	2648
70°	3017	2735	2249
75°	2399	2094	2196
80°	1612	1511	1410
85°	1003	1204	1405



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.6	4.7
10°-20°	717.9	13.0
20°-30°	993.9	18.0
30°-40°	1059.8	19.2
40°-50°	966.9	17.5
50°-60°	757.5	13.7
60°-70°	493.7	8.9
70°-80°	218.7	4.0
80°-90°	46.9	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°	1973.5	35.8
0°-40°	3033.3	55.0
0°-60°	4757.6	86.2
0°-90°	5517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2810	2810	2810	2810	2810	
5°	2762	2758	2758	2755	2755	262
15°	2583	2583	2557	2531	2521	726
25°	2238	2226	2190	2112	2053	1028
35°	1816	1803	1715	1586	1546	1135
45°	1394	1364	1248	1144	1098	1074
55°	968	939	851	750	712	868
65°	575	543	491	500	416	567
75°	231	214	201	192	211	247
85°	32	36	39	42	46	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2810.3	2810.3	2810.3	2810.3	2810.3
2.5°	2790.8	2790.8	2790.8	2787.5	2787.5
5°	2761.6	2758.3	2758.3	2755.1	2755.1
7.5°	2738.8	2735.6	2732.3	2729.1	2722.6
10°	2706.3	2706.3	2703.1	2686.8	2683.6
12.5°	2654.3	2651.1	2638.1	2615.4	2608.9
15°	2582.9	2582.9	2556.9	2530.9	2521.1
17.5°	2504.9	2501.6	2469.2	2443.2	2430.2
20°	2420.4	2413.9	2381.4	2339.2	2316.5
22.5°	2326.2	2326.2	2287.2	2232.0	2209.2
25°	2238.5	2225.5	2189.7	2111.8	2053.3
27.5°	2137.8	2118.3	2079.3	1968.8	1900.6
30°	2027.3	2017.6	1962.3	1819.4	1767.4
32.5°	1923.3	1907.1	1848.6	1699.2	1656.9
35°	1816.1	1803.1	1715.4	1585.5	1546.5
37.5°	1708.9	1692.7	1582.2	1478.2	1429.5
40°	1601.7	1582.2	1462.0	1367.8	1315.8
42.5°	1501.0	1475.0	1358.0	1257.3	1198.8
45°	1393.8	1364.5	1247.6	1143.6	1098.1
47.5°	1286.6	1260.6	1153.4	1046.1	994.2
50°	1172.8	1150.1	1052.6	945.4	890.2
52.5°	1078.6	1042.9	948.7	841.5	796.0
55°	968.2	938.9	851.2	750.5	711.5
57.5°	867.5	838.2	757.0	662.8	630.3
60°	773.2	731.0	662.8	581.6	555.6
62.5°	669.3	636.8	578.3	510.1	542.6
65°	575.1	542.6	490.6	500.3	415.9
67.5°	471.1	454.8	409.4	363.9	350.9
70°	383.4	363.9	347.6	298.9	285.9
72.5°	305.4	285.9	263.2	237.2	227.4
75°	230.7	214.4	201.4	191.7	211.2
77.5°	159.2	152.7	143.0	133.2	130.0
80°	104.0	100.7	97.5	94.2	91.0
82.5°	61.7	61.7	61.7	61.7	61.7
85°	32.5	35.7	39.0	42.2	45.5
87.5°	19.5	19.5	22.7	26.0	29.2
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)