

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: P546864

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-93-85-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: P546864
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-LD4-2LO-50-UNV-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

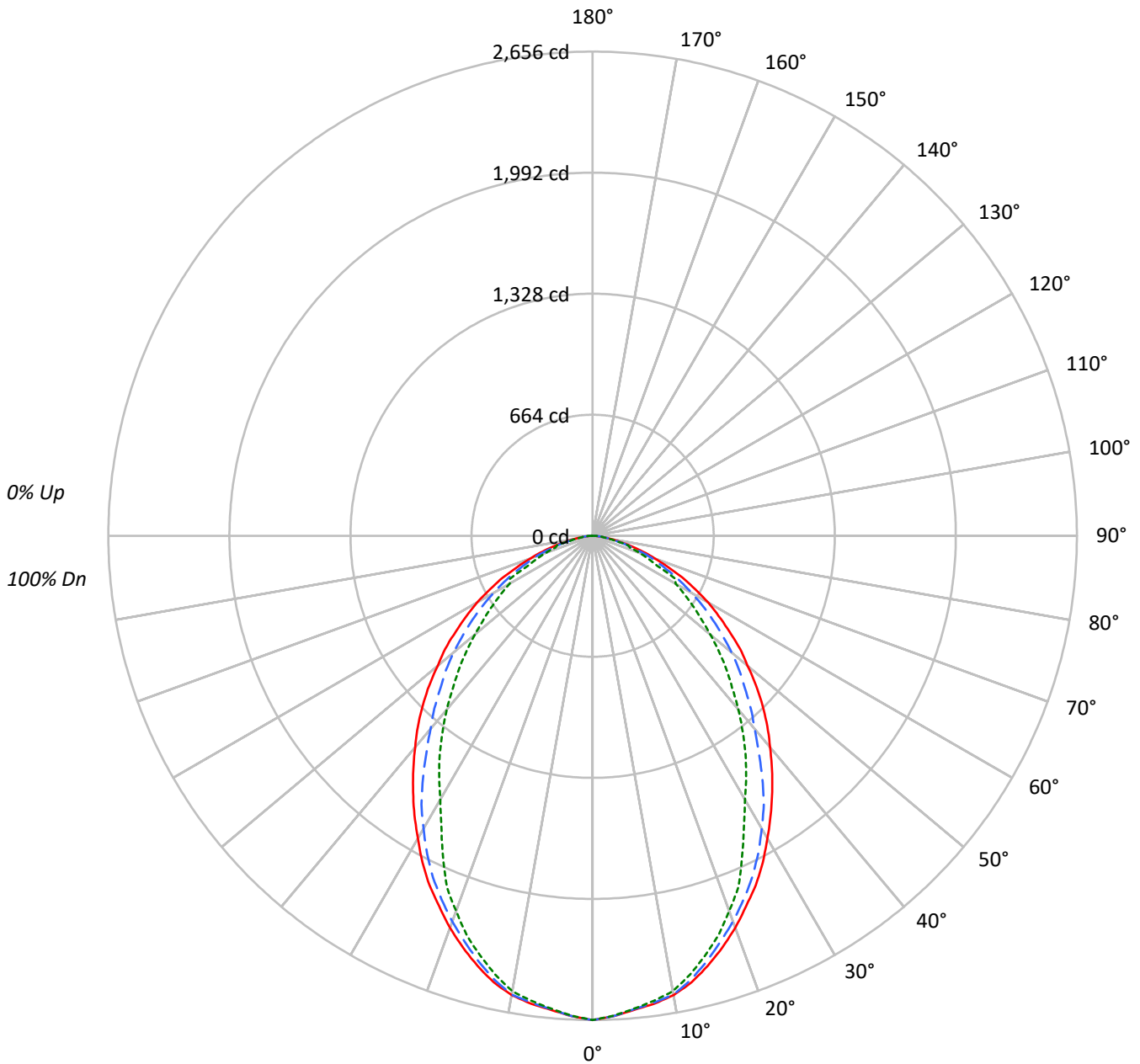
Lumens per Lamp: N/A
Luminaire Lumens: 5215.0 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	3574	3574	3574
5°	3526	3521	3517
10°	3495	3491	3466
15°	3401	3367	3320
20°	3276	3223	3135
25°	3141	3073	2881
30°	2977	2882	2596
35°	2820	2663	2401
40°	2659	2427	2185
45°	2507	2244	1975
50°	2321	2083	1761
55°	2147	1887	1578
60°	1967	1686	1413
65°	1731	1476	1252
70°	1426	1293	1063
75°	1133	990	1038
80°	762	714	666
85°	474	570	664



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.3	4.7
10°-20°	678.6	13.0
20°-30°	939.5	18.0
30°-40°	1001.8	19.2
40°-50°	913.9	17.5
50°-60°	716.0	13.7
60°-70°	466.7	8.9
70°-80°	206.8	4.0
80°-90°	44.4	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°	1865.5	35.8
0°-40°	2867.3	55.0
0°-60°	4497.2	86.2
0°-90°	5215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5215.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2656	2656	2656	2656	2656	
5°	2610	2607	2607	2604	2604	248
15°	2442	2442	2417	2392	2383	686
25°	2116	2104	2070	1996	1941	971
35°	1717	1704	1622	1499	1462	1073
45°	1318	1290	1179	1081	1038	1015
55°	915	888	805	709	673	821
65°	544	513	464	473	393	536
75°	218	203	190	181	200	234
85°	31	34	37	40	43	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2656.5	2656.5	2656.5	2656.5	2656.5
2.5°	2638.0	2638.0	2638.0	2635.0	2635.0
5°	2610.4	2607.3	2607.3	2604.2	2604.2
7.5°	2588.9	2585.8	2582.7	2579.7	2573.5
10°	2558.2	2558.2	2555.1	2539.8	2536.7
12.5°	2509.0	2506.0	2493.7	2472.2	2466.0
15°	2441.5	2441.5	2416.9	2392.3	2383.1
17.5°	2367.8	2364.7	2334.0	2309.4	2297.1
20°	2287.9	2281.8	2251.1	2211.2	2189.7
22.5°	2198.9	2198.9	2162.0	2109.8	2088.3
25°	2115.9	2103.7	2069.9	1996.2	1940.9
27.5°	2020.7	2002.3	1965.5	1861.1	1796.6
30°	1916.3	1907.1	1854.9	1719.8	1670.6
32.5°	1818.1	1802.7	1747.4	1606.2	1566.2
35°	1716.7	1704.4	1621.5	1498.7	1461.8
37.5°	1615.4	1600.0	1495.6	1397.3	1351.3
40°	1514.0	1495.6	1382.0	1292.9	1243.8
42.5°	1418.8	1394.3	1283.7	1188.5	1133.2
45°	1317.5	1289.8	1179.3	1081.0	1038.0
47.5°	1216.1	1191.6	1090.2	988.9	939.7
50°	1108.6	1087.1	995.0	893.7	841.5
52.5°	1019.6	985.8	896.7	795.4	752.4
55°	915.2	887.5	804.6	709.4	672.6
57.5°	820.0	792.3	715.6	626.5	595.8
60°	730.9	691.0	626.5	549.7	525.1
62.5°	632.6	601.9	546.6	482.2	512.9
65°	543.6	512.9	463.7	472.9	393.1
67.5°	445.3	429.9	387.0	344.0	331.7
70°	362.4	344.0	328.6	282.5	270.3
72.5°	288.7	270.3	248.8	224.2	215.0
75°	218.0	202.7	190.4	181.2	199.6
77.5°	150.5	144.3	135.1	125.9	122.8
80°	98.3	95.2	92.1	89.1	86.0
82.5°	58.3	58.3	58.3	58.3	58.3
85°	30.7	33.8	36.9	39.9	43.0
87.5°	18.4	18.4	21.5	24.6	27.6
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)