

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: P546576

Luminaire Tested: **FMR-24-4-LD4-1LO-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: P546576
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-LD4-1LO-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

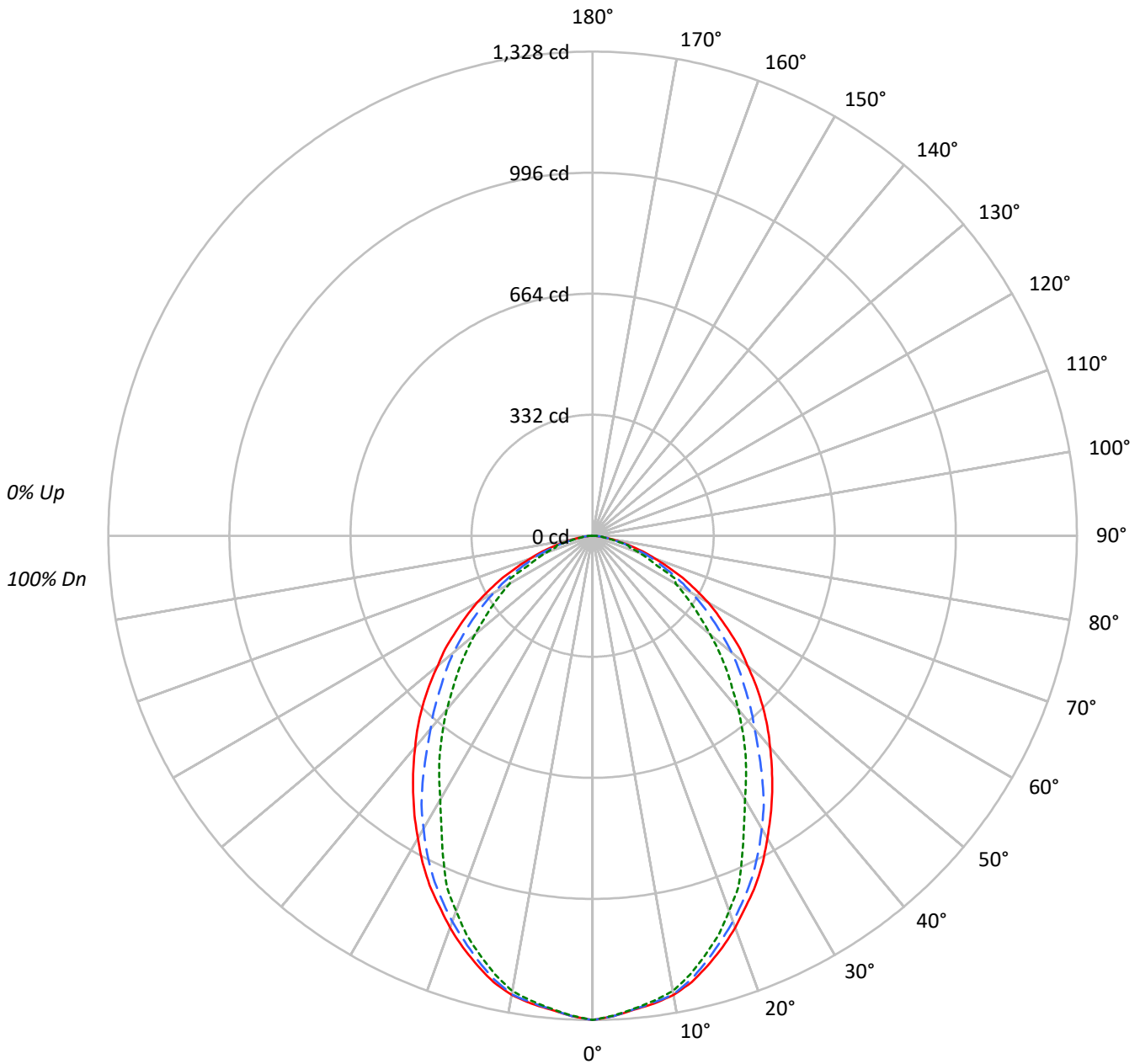
Lumens per Lamp: N/A
Luminaire Lumens: 2607.0 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	1787	1787	1787
5°	1762	1760	1758
10°	1747	1745	1733
15°	1700	1683	1659
20°	1638	1611	1567
25°	1570	1536	1440
30°	1488	1441	1298
35°	1410	1331	1200
40°	1329	1214	1092
45°	1253	1122	987
50°	1160	1041	881
55°	1073	943	789
60°	983	843	706
65°	865	738	626
70°	713	646	531
75°	567	495	519
80°	380	357	333
85°	238	284	332



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.6	4.7
10°-20°	339.3	13.0
20°-30°	469.7	18.0
30°-40°	500.8	19.2
40°-50°	456.9	17.5
50°-60°	357.9	13.7
60°-70°	233.3	8.9
70°-80°	103.4	4.0
80°-90°	22.2	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°	932.5	35.8
0°-40°	1433.4	55.0
0°-60°	2248.2	86.2
0°-90°	2607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2607.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1305	1303	1303	1302	1302	124
15°	1220	1220	1208	1196	1191	343
25°	1058	1052	1035	998	970	486
35°	858	852	811	749	731	537
45°	659	645	590	540	519	507
55°	458	444	402	355	336	410
65°	272	256	232	236	196	268
75°	109	101	95	91	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1328.0	1328.0	1328.0	1328.0	1328.0
2.5°	1318.8	1318.8	1318.8	1317.2	1317.2
5°	1304.9	1303.4	1303.4	1301.9	1301.9
7.5°	1294.2	1292.7	1291.1	1289.6	1286.5
10°	1278.8	1278.8	1277.3	1269.6	1268.1
12.5°	1254.3	1252.7	1246.6	1235.9	1232.8
15°	1220.5	1220.5	1208.2	1195.9	1191.3
17.5°	1183.7	1182.1	1166.8	1154.5	1148.3
20°	1143.7	1140.7	1125.3	1105.4	1094.6
22.5°	1099.2	1099.2	1080.8	1054.7	1044.0
25°	1057.8	1051.6	1034.7	997.9	970.3
27.5°	1010.2	1001.0	982.5	930.3	898.1
30°	958.0	953.4	927.3	859.7	835.2
32.5°	908.9	901.2	873.5	802.9	783.0
35°	858.2	852.1	810.6	749.2	730.8
37.5°	807.5	799.9	747.7	698.5	675.5
40°	756.9	747.7	690.9	646.3	621.8
42.5°	709.3	697.0	641.7	594.1	566.5
45°	658.6	644.8	589.5	540.4	518.9
47.5°	607.9	595.7	545.0	494.3	469.8
50°	554.2	543.5	497.4	446.8	420.7
52.5°	509.7	492.8	448.3	397.6	376.1
55°	457.5	443.7	402.2	354.6	336.2
57.5°	409.9	396.1	357.7	313.2	297.8
60°	365.4	345.4	313.2	274.8	262.5
62.5°	316.3	300.9	273.3	241.0	256.4
65°	271.7	256.4	231.8	236.4	196.5
67.5°	222.6	214.9	193.4	171.9	165.8
70°	181.2	171.9	164.3	141.2	135.1
72.5°	144.3	135.1	124.4	112.1	107.5
75°	109.0	101.3	95.2	90.6	99.8
77.5°	75.2	72.2	67.5	62.9	61.4
80°	49.1	47.6	46.1	44.5	43.0
82.5°	29.2	29.2	29.2	29.2	29.2
85°	15.4	16.9	18.4	20.0	21.5
87.5°	9.2	9.2	10.7	12.3	13.8
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)