

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: P546842

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-80-87-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: P546842
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

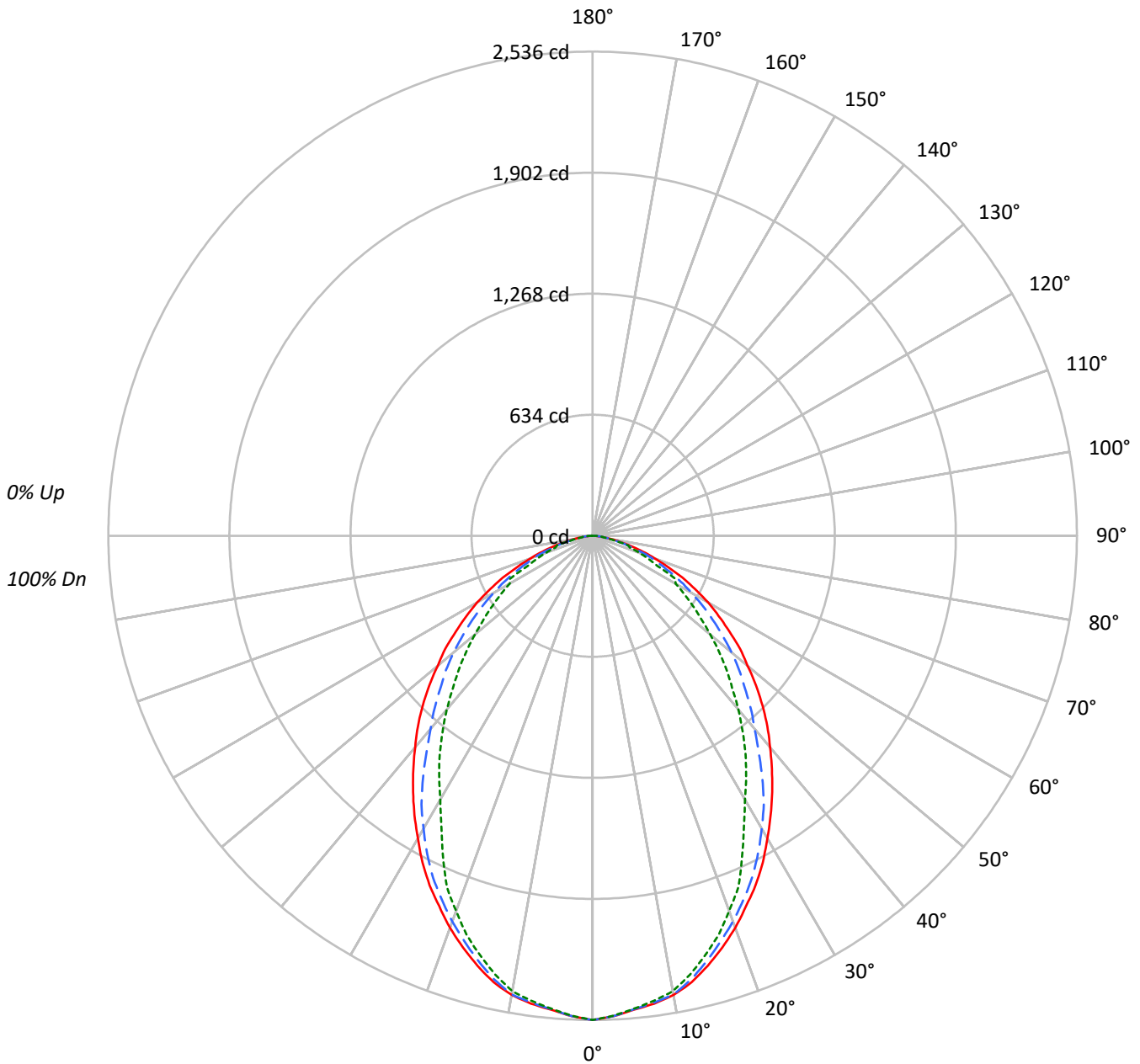
Lumens per Lamp: N/A
Luminaire Lumens: 4979.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3412	3412	3412
5°	3366	3362	3358
10°	3337	3333	3309
15°	3247	3214	3169
20°	3128	3077	2993
25°	2999	2934	2751
30°	2843	2751	2478
35°	2692	2543	2292
40°	2539	2317	2086
45°	2394	2142	1886
50°	2216	1989	1682
55°	2050	1802	1506
60°	1878	1609	1349
65°	1652	1409	1195
70°	1361	1234	1015
75°	1082	945	991
80°	727	682	636
85°	452	543	633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.1	4.7
10°-20°	647.9	13.0
20°-30°	897.0	18.0
30°-40°	956.5	19.2
40°-50°	872.6	17.5
50°-60°	683.6	13.7
60°-70°	445.5	8.9
70°-80°	197.4	4.0
80°-90°	42.4	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°	1781.0	35.8
0°-40°	2737.5	55.0
0°-60°	4293.7	86.2
0°-90°	4979.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4979.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2536	2536	2536	2536	2536	
5°	2492	2489	2489	2486	2486	237
15°	2331	2331	2308	2284	2275	655
25°	2020	2008	1976	1906	1853	927
35°	1639	1627	1548	1431	1396	1025
45°	1258	1232	1126	1032	991	969
55°	874	847	768	677	642	784
65°	519	490	443	452	375	511
75°	208	194	182	173	191	223
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2536.2	2536.2	2536.2	2536.2	2536.2
2.5°	2518.6	2518.6	2518.6	2515.7	2515.7
5°	2492.3	2489.3	2489.3	2486.4	2486.4
7.5°	2471.7	2468.8	2465.9	2462.9	2457.1
10°	2442.4	2442.4	2439.5	2424.8	2421.9
12.5°	2395.5	2392.6	2380.8	2360.3	2354.4
15°	2331.0	2331.0	2307.5	2284.1	2275.3
17.5°	2260.6	2257.7	2228.4	2204.9	2193.2
20°	2184.4	2178.5	2149.2	2111.1	2090.6
22.5°	2099.4	2099.4	2064.2	2014.3	1993.8
25°	2020.2	2008.5	1976.2	1905.8	1853.1
27.5°	1929.3	1911.7	1876.5	1776.8	1715.3
30°	1829.6	1820.8	1771.0	1642.0	1595.0
32.5°	1735.8	1721.1	1668.3	1533.5	1495.4
35°	1639.0	1627.3	1548.1	1430.8	1395.7
37.5°	1542.3	1527.6	1427.9	1334.1	1290.1
40°	1445.5	1427.9	1319.4	1234.4	1187.5
42.5°	1354.6	1331.2	1225.6	1134.7	1081.9
45°	1257.9	1231.5	1125.9	1032.1	991.0
47.5°	1161.1	1137.6	1040.9	944.1	897.2
50°	1058.5	1038.0	950.0	853.2	803.4
52.5°	973.4	941.2	856.2	759.4	718.4
55°	873.8	847.4	768.2	677.3	642.1
57.5°	782.9	756.5	683.2	598.1	568.8
60°	697.8	659.7	598.1	524.8	501.4
62.5°	604.0	574.7	521.9	460.3	489.7
65°	519.0	489.7	442.7	451.5	375.3
67.5°	425.1	410.5	369.4	328.4	316.7
70°	346.0	328.4	313.7	269.7	258.0
72.5°	275.6	258.0	237.5	214.0	205.2
75°	208.2	193.5	181.8	173.0	190.6
77.5°	143.7	137.8	129.0	120.2	117.3
80°	93.8	90.9	88.0	85.0	82.1
82.5°	55.7	55.7	55.7	55.7	55.7
85°	29.3	32.3	35.2	38.1	41.0
87.5°	17.6	17.6	20.5	23.5	26.4
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)