

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: P545882

Luminaire Tested: **FMR-12-4-LD4-1HI-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: P545882
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-LD4-1HI-50-UNV-80-87-EDD
Description: 1X4 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

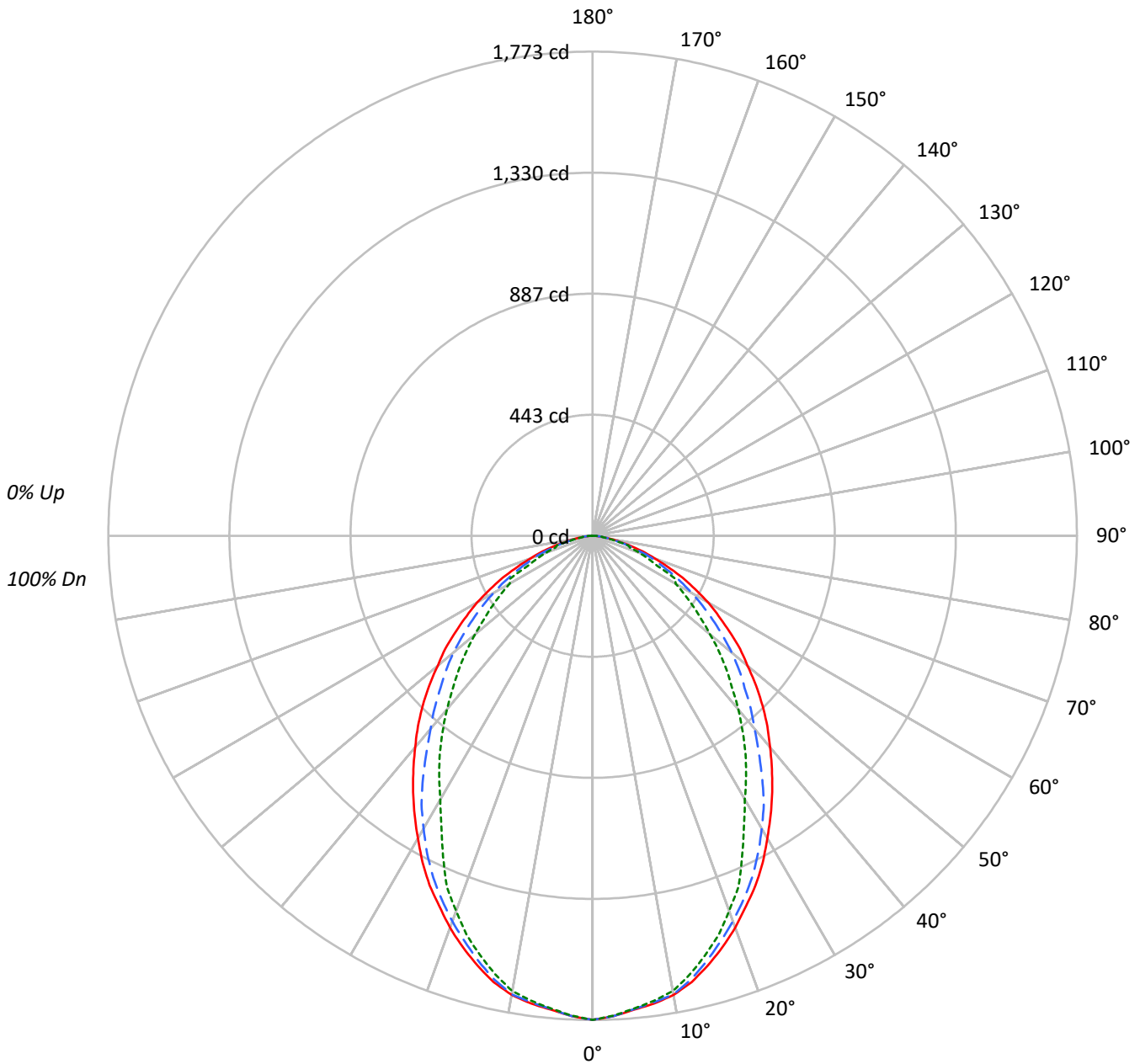
Lumens per Lamp: N/A
Luminaire Lumens: 3480.0 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	4770	4770	4770
5°	4705	4700	4694
10°	4665	4659	4625
15°	4539	4493	4430
20°	4372	4302	4184
25°	4192	4101	3846
30°	3974	3846	3464
35°	3763	3554	3205
40°	3549	3240	2916
45°	3346	2995	2636
50°	3097	2780	2351
55°	2865	2519	2106
60°	2625	2250	1886
65°	2309	1970	1670
70°	1902	1725	1419
75°	1513	1321	1385
80°	1017	953	890
85°	633	760	886



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.0	4.7
10°-20°	452.9	13.0
20°-30°	627.0	18.0
30°-40°	668.5	19.2
40°-50°	609.9	17.5
50°-60°	477.8	13.7
60°-70°	311.4	8.9
70°-80°	138.0	4.0
80°-90°	29.6	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°	1244.8	35.8
0°-40°	1913.3	55.0
0°-60°	3001.0	86.2
0°-90°	3480.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3480.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1773	1773	1773	1773	1773	
5°	1742	1740	1740	1738	1738	165
15°	1629	1629	1613	1596	1590	458
25°	1412	1404	1381	1332	1295	648
35°	1146	1137	1082	1000	976	716
45°	879	861	787	721	693	677
55°	611	592	537	473	449	548
65°	363	342	309	316	262	357
75°	146	135	127	121	133	156
85°	20	22	25	27	29	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1772.7	1772.7	1772.7	1772.7	1772.7
2.5°	1760.4	1760.4	1760.4	1758.3	1758.3
5°	1741.9	1739.9	1739.9	1737.8	1737.8
7.5°	1727.6	1725.5	1723.5	1721.4	1717.3
10°	1707.1	1707.1	1705.0	1694.8	1692.7
12.5°	1674.3	1672.2	1664.1	1649.7	1645.6
15°	1629.2	1629.2	1612.8	1596.4	1590.3
17.5°	1580.0	1578.0	1557.5	1541.1	1532.9
20°	1526.7	1522.6	1502.2	1475.5	1461.2
22.5°	1467.3	1467.3	1442.7	1407.9	1393.5
25°	1412.0	1403.8	1381.2	1332.1	1295.2
27.5°	1348.5	1336.2	1311.6	1241.9	1198.9
30°	1278.8	1272.6	1237.8	1147.6	1114.8
32.5°	1213.2	1203.0	1166.1	1071.8	1045.2
35°	1145.6	1137.4	1082.0	1000.1	975.5
37.5°	1077.9	1067.7	998.0	932.4	901.7
40°	1010.3	998.0	922.2	862.8	830.0
42.5°	946.8	930.4	856.6	793.1	756.2
45°	879.2	860.7	786.9	721.4	692.7
47.5°	811.5	795.1	727.5	659.9	627.1
50°	739.8	725.5	664.0	596.4	561.5
52.5°	680.4	657.8	598.4	530.8	502.1
55°	610.7	592.3	536.9	473.4	448.8
57.5°	547.2	528.7	477.5	418.1	397.6
60°	487.7	461.1	418.1	366.8	350.4
62.5°	422.2	401.7	364.8	321.7	342.2
65°	362.7	342.2	309.4	315.6	262.3
67.5°	297.2	286.9	258.2	229.5	221.3
70°	241.8	229.5	219.3	188.5	180.3
72.5°	192.6	180.3	166.0	149.6	143.5
75°	145.5	135.3	127.1	120.9	133.2
77.5°	100.4	96.3	90.2	84.0	82.0
80°	65.6	63.5	61.5	59.4	57.4
82.5°	38.9	38.9	38.9	38.9	38.9
85°	20.5	22.5	24.6	26.6	28.7
87.5°	12.3	12.3	14.3	16.4	18.4
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)