

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: P546202

Luminaire Tested: **FMR-12-4-LD4-2LO-35-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: P546202
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-LD4-2LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

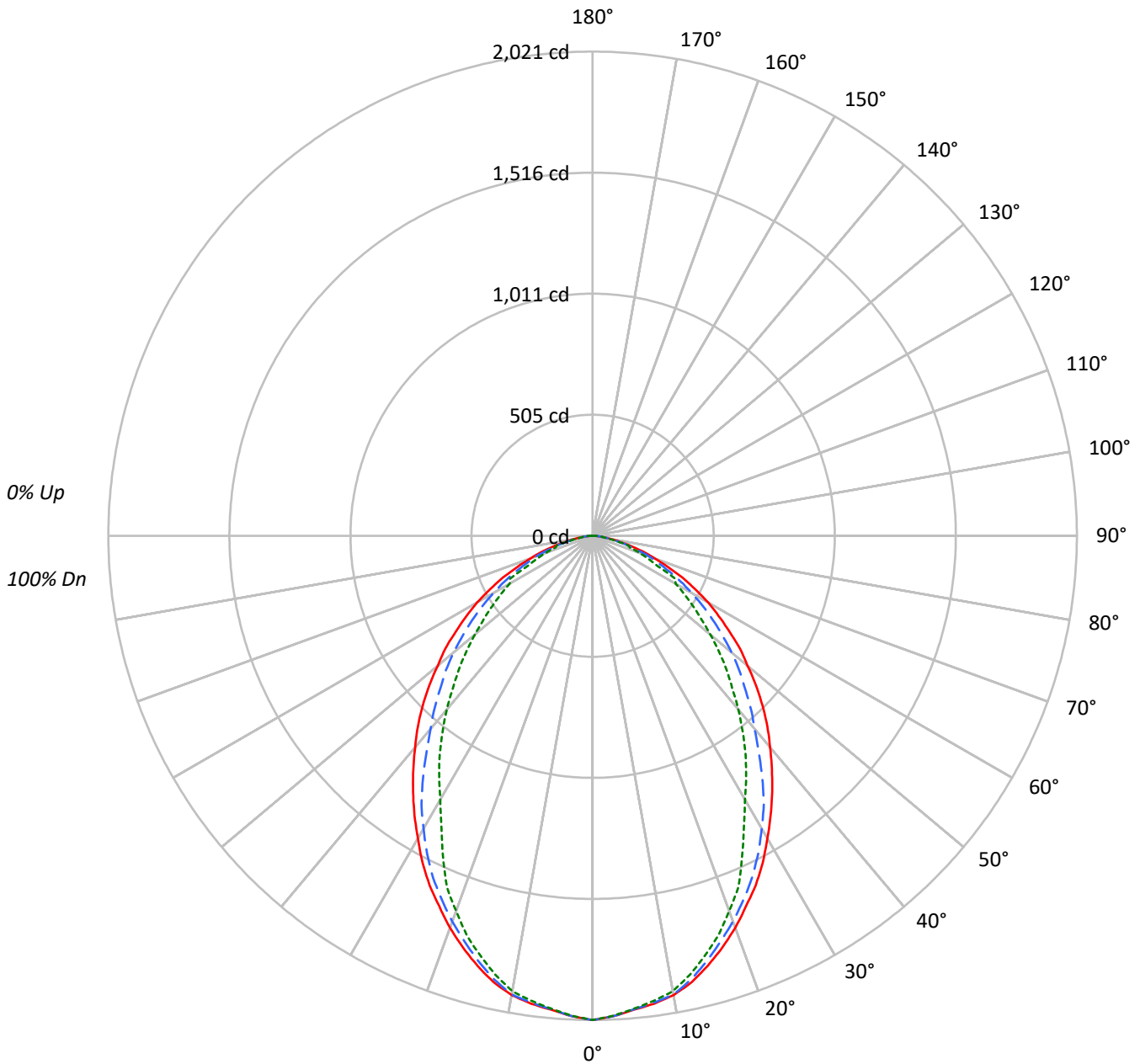
Lumens per Lamp: N/A
Luminaire Lumens: 3968.0 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5439	5439	5439
5°	5365	5359	5353
10°	5319	5312	5274
15°	5175	5123	5052
20°	4985	4905	4771
25°	4780	4676	4385
30°	4531	4386	3950
35°	4291	4053	3654
40°	4047	3694	3325
45°	3815	3415	3006
50°	3531	3170	2681
55°	3267	2872	2401
60°	2993	2566	2151
65°	2634	2246	1904
70°	2169	1967	1618
75°	1725	1507	1579
80°	1159	1086	1013
85°	722	865	1010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.2	4.7
10°-20°	516.4	13.0
20°-30°	714.9	18.0
30°-40°	762.3	19.2
40°-50°	695.4	17.5
50°-60°	544.8	13.7
60°-70°	355.1	8.9
70°-80°	157.3	4.0
80°-90°	33.8	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°	1419.4	35.8
0°-40°	2181.7	55.0
0°-60°	3421.8	86.2
0°-90°	3968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3968.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2021	2021	2021	2021	2021	
5°	1986	1984	1984	1982	1982	189
15°	1858	1858	1839	1820	1813	522
25°	1610	1601	1575	1519	1477	739
35°	1306	1297	1234	1140	1112	817
45°	1002	981	897	822	790	772
55°	696	675	612	540	512	625
65°	414	390	353	360	299	408
75°	166	154	145	138	152	178
85°	23	26	28	30	33	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2021.2	2021.2	2021.2	2021.2	2021.2
2.5°	2007.2	2007.2	2007.2	2004.9	2004.9
5°	1986.2	1983.9	1983.9	1981.5	1981.5
7.5°	1969.8	1967.5	1965.2	1962.8	1958.2
10°	1946.5	1946.5	1944.1	1932.5	1930.1
12.5°	1909.1	1906.7	1897.4	1881.0	1876.4
15°	1857.7	1857.7	1839.0	1820.3	1813.3
17.5°	1801.6	1799.3	1775.9	1757.2	1747.9
20°	1740.8	1736.2	1712.8	1682.4	1666.1
22.5°	1673.1	1673.1	1645.0	1605.3	1589.0
25°	1610.0	1600.6	1574.9	1518.9	1476.8
27.5°	1537.5	1523.5	1495.5	1416.0	1367.0
30°	1458.1	1451.1	1411.4	1308.6	1271.2
32.5°	1383.3	1371.6	1329.6	1222.1	1191.7
35°	1306.2	1296.9	1233.8	1140.3	1112.3
37.5°	1229.1	1217.4	1138.0	1063.2	1028.1
40°	1152.0	1138.0	1051.5	983.8	946.4
42.5°	1079.6	1060.9	976.7	904.3	862.2
45°	1002.4	981.4	897.3	822.5	789.8
47.5°	925.3	906.6	829.5	752.4	715.0
50°	843.5	827.2	757.1	680.0	640.3
52.5°	775.8	750.1	682.3	605.2	572.5
55°	696.3	675.3	612.2	539.8	511.7
57.5°	623.9	602.9	544.5	476.7	453.3
60°	556.1	525.8	476.7	418.3	399.6
62.5°	481.4	458.0	415.9	366.9	390.2
65°	413.6	390.2	352.8	359.9	299.1
67.5°	338.8	327.1	294.4	261.7	252.4
70°	275.7	261.7	250.0	215.0	205.6
72.5°	219.6	205.6	189.3	170.6	163.6
75°	165.9	154.2	144.9	137.9	151.9
77.5°	114.5	109.8	102.8	95.8	93.5
80°	74.8	72.4	70.1	67.8	65.4
82.5°	44.4	44.4	44.4	44.4	44.4
85°	23.4	25.7	28.0	30.4	32.7
87.5°	14.0	14.0	16.4	18.7	21.0
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)