

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: P545884

Luminaire Tested: **FMR-12-4-LD4-1HI-50-UNV-80-94-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: P545884
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-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

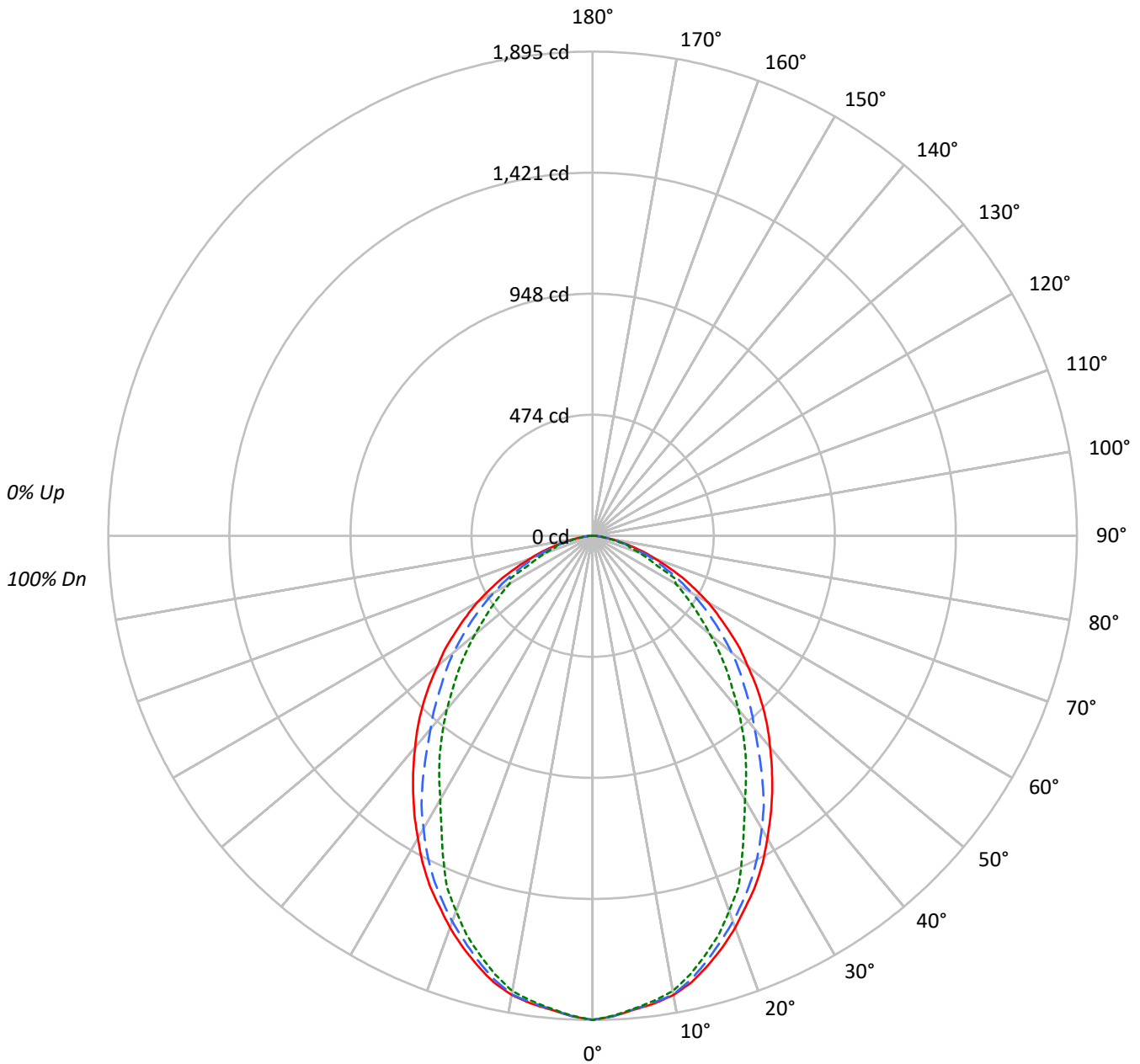
Lumens per Lamp: N/A
Luminaire Lumens: 3720.0 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	5099	5099	5099
5°	5030	5024	5018
10°	4986	4980	4944
15°	4852	4803	4736
20°	4674	4598	4473
25°	4482	4384	4111
30°	4248	4112	3703
35°	4023	3800	3426
40°	3794	3463	3117
45°	3577	3201	2818
50°	3311	2972	2513
55°	3063	2693	2251
60°	2806	2405	2016
65°	2469	2106	1785
70°	2034	1844	1517
75°	1617	1412	1481
80°	1086	1018	950
85°	676	812	948



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.4	4.7
10°-20°	484.1	13.0
20°-30°	670.2	18.0
30°-40°	714.6	19.2
40°-50°	651.9	17.5
50°-60°	510.7	13.7
60°-70°	332.9	8.9
70°-80°	147.5	4.0
80°-90°	31.6	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°	1330.7	35.8
0°-40°	2045.3	55.0
0°-60°	3208.0	86.2
0°-90°	3720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3720.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1895	1895	1895	1895	1895	
5°	1862	1860	1860	1858	1858	177
15°	1742	1742	1724	1706	1700	490
25°	1509	1501	1476	1424	1384	693
35°	1225	1216	1157	1069	1043	766
45°	940	920	841	771	740	724
55°	653	633	574	506	480	586
65°	388	366	331	337	280	382
75°	156	145	136	129	142	167
85°	22	24	26	28	31	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1894.9	1894.9	1894.9	1894.9	1894.9
2.5°	1881.8	1881.8	1881.8	1879.6	1879.6
5°	1862.1	1859.9	1859.9	1857.7	1857.7
7.5°	1846.7	1844.5	1842.3	1840.2	1835.8
10°	1824.8	1824.8	1822.6	1811.7	1809.5
12.5°	1789.8	1787.6	1778.8	1763.5	1759.1
15°	1741.6	1741.6	1724.0	1706.5	1699.9
17.5°	1689.0	1686.8	1664.9	1647.4	1638.6
20°	1632.0	1627.7	1605.8	1577.3	1561.9
22.5°	1568.5	1568.5	1542.2	1505.0	1489.6
25°	1509.4	1500.6	1476.5	1423.9	1384.5
27.5°	1441.5	1428.3	1402.0	1327.5	1281.5
30°	1367.0	1360.4	1323.2	1226.8	1191.7
32.5°	1296.9	1285.9	1246.5	1145.7	1117.2
35°	1224.6	1215.8	1156.7	1069.0	1042.8
37.5°	1152.3	1141.3	1066.8	996.7	963.9
40°	1080.0	1066.8	985.8	922.3	887.2
42.5°	1012.1	994.6	915.7	847.8	808.4
45°	939.8	920.1	841.2	771.1	740.4
47.5°	867.5	850.0	777.7	705.4	670.3
50°	790.8	775.5	709.8	637.5	600.2
52.5°	727.3	703.2	639.7	567.4	536.7
55°	652.8	633.1	574.0	506.0	479.8
57.5°	584.9	565.2	510.4	446.9	425.0
60°	521.4	492.9	446.9	392.1	374.6
62.5°	451.3	429.4	389.9	343.9	365.8
65°	387.7	365.8	330.8	337.4	280.4
67.5°	317.6	306.7	276.0	245.4	236.6
70°	258.5	245.4	234.4	201.5	192.8
72.5°	205.9	192.8	177.4	159.9	153.3
75°	155.5	144.6	135.8	129.2	142.4
77.5°	107.3	103.0	96.4	89.8	87.6
80°	70.1	67.9	65.7	63.5	61.3
82.5°	41.6	41.6	41.6	41.6	41.6
85°	21.9	24.1	26.3	28.5	30.7
87.5°	13.1	13.1	15.3	17.5	19.7
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)