

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: P545885

Luminaire Tested: **FMR-12-4-LD4-1HI-50-UNV-80-96-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: P545885
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-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

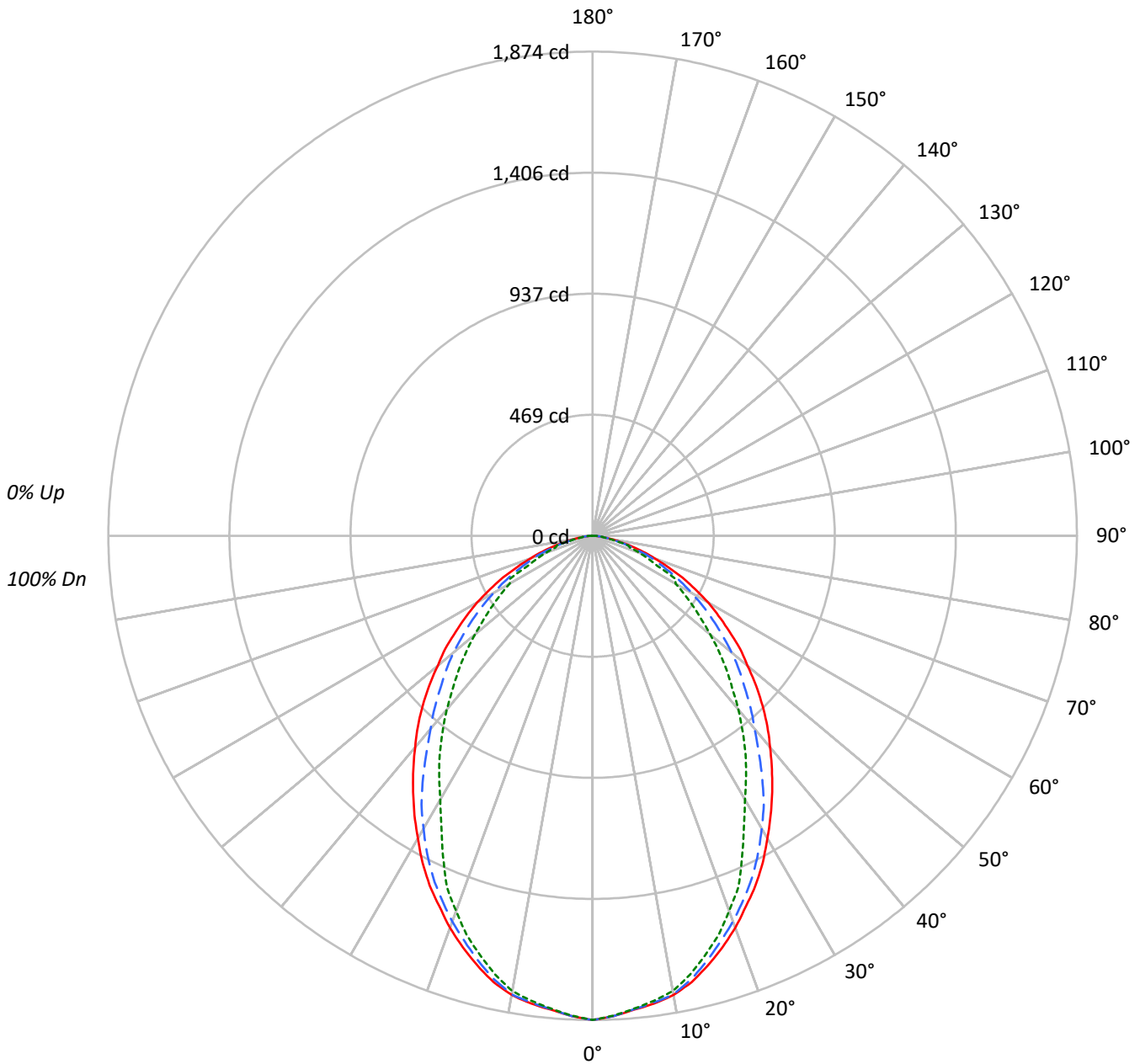
Lumens per Lamp: N/A
Luminaire Lumens: 3679.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	5043	5043	5043
5°	4974	4969	4963
10°	4931	4925	4890
15°	4798	4750	4684
20°	4622	4548	4424
25°	4432	4336	4065
30°	4201	4066	3662
35°	3979	3758	3388
40°	3752	3425	3082
45°	3537	3166	2787
50°	3274	2939	2485
55°	3029	2663	2226
60°	2775	2379	1994
65°	2442	2083	1766
70°	2011	1824	1500
75°	1599	1396	1464
80°	1074	1007	941
85°	670	803	936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.4	4.7
10°-20°	478.8	13.0
20°-30°	662.8	18.0
30°-40°	706.7	19.2
40°-50°	644.7	17.5
50°-60°	505.1	13.7
60°-70°	329.2	8.9
70°-80°	145.9	4.0
80°-90°	31.3	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°	1316.0	35.8
0°-40°	2022.8	55.0
0°-60°	3172.6	86.2
0°-90°	3679.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3679.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1874	1874	1874	1874	1874	
5°	1842	1839	1839	1837	1837	175
15°	1722	1722	1705	1688	1681	484
25°	1493	1484	1460	1408	1369	685
35°	1211	1202	1144	1057	1031	757
45°	929	910	832	763	732	716
55°	646	626	568	500	474	579
65°	384	362	327	334	277	378
75°	154	143	134	128	141	165
85°	22	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1874.0	1874.0	1874.0	1874.0	1874.0
2.5°	1861.0	1861.0	1861.0	1858.9	1858.9
5°	1841.5	1839.4	1839.4	1837.2	1837.2
7.5°	1826.4	1824.2	1822.0	1819.9	1815.5
10°	1804.7	1804.7	1802.5	1791.7	1789.5
12.5°	1770.0	1767.9	1759.2	1744.0	1739.7
15°	1722.4	1722.4	1705.0	1687.7	1681.2
17.5°	1670.4	1668.2	1646.5	1629.2	1620.6
20°	1614.1	1609.7	1588.1	1559.9	1544.7
22.5°	1551.2	1551.2	1525.2	1488.4	1473.2
25°	1492.7	1484.1	1460.2	1408.2	1369.2
27.5°	1425.6	1412.6	1386.6	1312.9	1267.4
30°	1351.9	1345.4	1308.6	1213.2	1178.6
32.5°	1282.6	1271.7	1232.7	1133.1	1104.9
35°	1211.1	1202.4	1143.9	1057.3	1031.3
37.5°	1139.6	1128.8	1055.1	985.8	953.3
40°	1068.1	1055.1	974.9	912.1	877.4
42.5°	1000.9	983.6	905.6	838.4	799.4
45°	929.4	909.9	831.9	762.6	732.3
47.5°	857.9	840.6	769.1	697.6	663.0
50°	782.1	766.9	702.0	630.5	593.6
52.5°	719.3	695.5	632.6	561.1	530.8
55°	645.6	626.1	567.6	500.5	474.5
57.5°	578.5	559.0	504.8	442.0	420.3
60°	515.6	487.5	442.0	387.8	370.5
62.5°	446.3	424.6	385.6	340.1	361.8
65°	383.5	361.8	327.1	333.6	277.3
67.5°	314.1	303.3	273.0	242.6	234.0
70°	255.6	242.6	231.8	199.3	190.7
72.5°	203.7	190.7	175.5	158.2	151.7
75°	153.8	143.0	134.3	127.8	140.8
77.5°	106.2	101.8	95.3	88.8	86.7
80°	69.3	67.2	65.0	62.8	60.7
82.5°	41.2	41.2	41.2	41.2	41.2
85°	21.7	23.8	26.0	28.2	30.3
87.5°	13.0	13.0	15.2	17.3	19.5
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)