

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: P546459

Luminaire Tested: **FMR-24-4-LD4-1HI-40-UNV-80-88-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: P546459
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-LD4-1HI-40-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

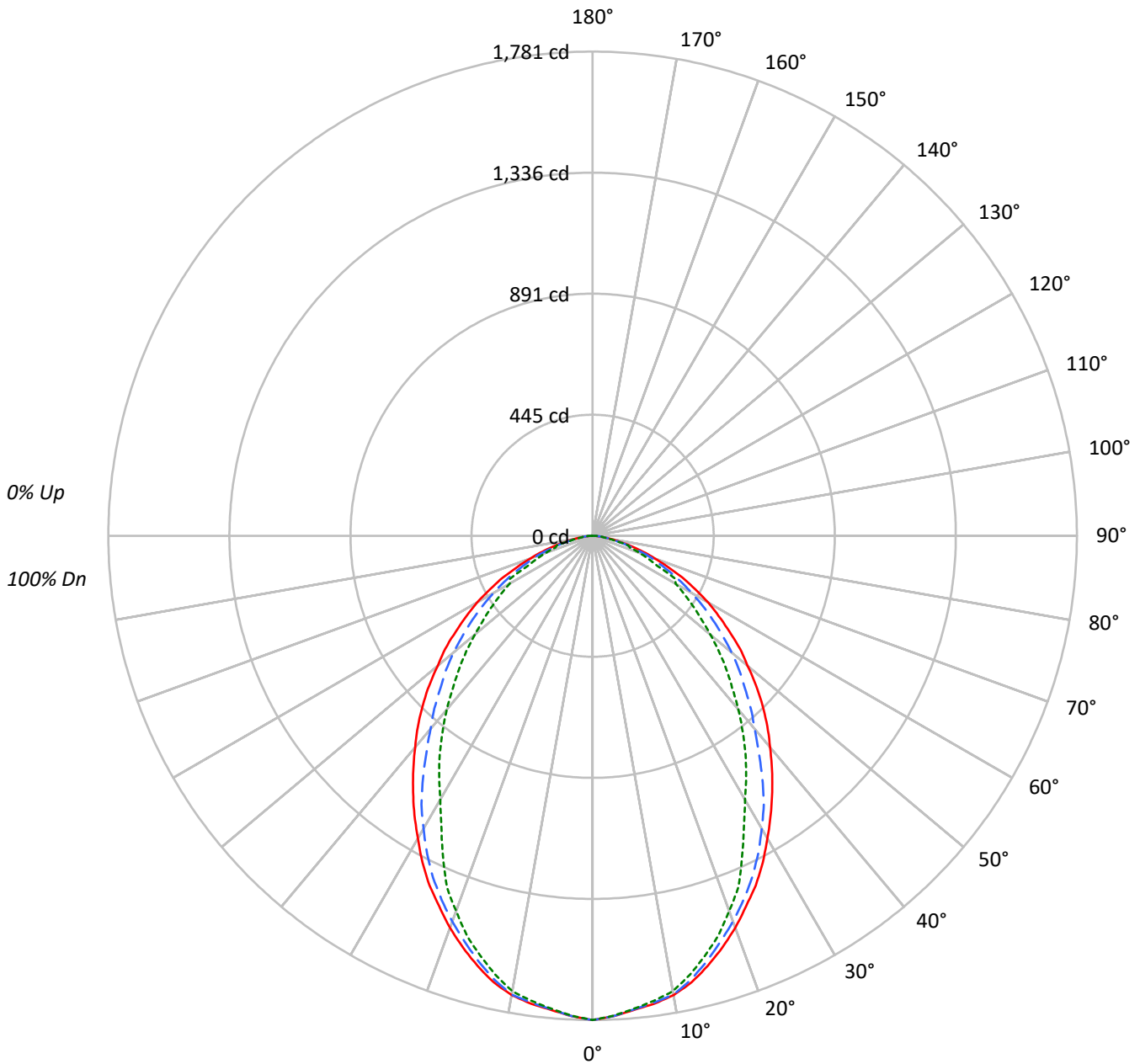
Lumens per Lamp: N/A
Luminaire Lumens: 3497.0 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	2397	2397	2397
5°	2364	2361	2359
10°	2344	2341	2324
15°	2281	2258	2226
20°	2197	2161	2102
25°	2106	2061	1932
30°	1996	1932	1741
35°	1891	1786	1610
40°	1783	1628	1465
45°	1681	1505	1325
50°	1556	1397	1181
55°	1440	1266	1058
60°	1319	1130	947
65°	1160	990	839
70°	956	867	713
75°	760	664	696
80°	511	479	447
85°	318	381	445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.8	4.7
10°-20°	455.1	13.0
20°-30°	630.0	18.0
30°-40°	671.8	19.2
40°-50°	612.9	17.5
50°-60°	480.1	13.7
60°-70°	312.9	8.9
70°-80°	138.6	4.0
80°-90°	29.8	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°	1250.9	35.8
0°-40°	1922.7	55.0
0°-60°	3015.7	86.2
0°-90°	3497.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3497.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1781	1781	1781	1781	1781	
5°	1750	1748	1748	1746	1746	166
15°	1637	1637	1621	1604	1598	460
25°	1419	1411	1388	1339	1302	651
35°	1151	1143	1087	1005	980	720
45°	884	865	791	725	696	681
55°	614	595	540	476	451	550
65°	364	344	311	317	264	359
75°	146	136	128	122	134	157
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1781.3	1781.3	1781.3	1781.3	1781.3
2.5°	1769.0	1769.0	1769.0	1766.9	1766.9
5°	1750.4	1748.4	1748.4	1746.3	1746.3
7.5°	1736.0	1734.0	1731.9	1729.8	1725.7
10°	1715.4	1715.4	1713.4	1703.1	1701.0
12.5°	1682.5	1680.4	1672.2	1657.8	1653.6
15°	1637.2	1637.2	1620.7	1604.2	1598.0
17.5°	1587.7	1585.7	1565.1	1548.6	1540.4
20°	1534.2	1530.1	1509.5	1482.7	1468.3
22.5°	1474.5	1474.5	1449.8	1414.8	1400.3
25°	1418.9	1410.6	1388.0	1338.6	1301.5
27.5°	1355.0	1342.7	1318.0	1248.0	1204.7
30°	1285.0	1278.8	1243.8	1153.2	1120.3
32.5°	1219.1	1208.8	1171.8	1077.0	1050.3
35°	1151.2	1142.9	1087.3	1005.0	980.2
37.5°	1083.2	1072.9	1002.9	937.0	906.1
40°	1015.3	1002.9	926.7	867.0	834.0
42.5°	951.4	934.9	860.8	797.0	759.9
45°	883.5	864.9	790.8	724.9	696.1
47.5°	815.5	799.0	731.1	663.1	630.2
50°	743.4	729.0	667.2	599.3	564.3
52.5°	683.7	661.0	601.3	533.4	504.5
55°	613.7	595.1	539.5	475.7	451.0
57.5°	549.8	531.3	479.8	420.1	399.5
60°	490.1	463.4	420.1	368.6	352.1
62.5°	424.2	403.6	366.6	323.3	343.9
65°	364.5	343.9	311.0	317.1	263.6
67.5°	298.6	288.3	259.5	230.6	222.4
70°	243.0	230.6	220.3	189.5	181.2
72.5°	193.6	181.2	166.8	150.3	144.2
75°	146.2	135.9	127.7	121.5	133.9
77.5°	100.9	96.8	90.6	84.4	82.4
80°	65.9	63.8	61.8	59.7	57.7
82.5°	39.1	39.1	39.1	39.1	39.1
85°	20.6	22.7	24.7	26.8	28.8
87.5°	12.4	12.4	14.4	16.5	18.5
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)