

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: P546612

Luminaire Tested: **FMR-24-4-LD4-1STD-35-UNV-93-94-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: P546612
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-LD4-1STD-35-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

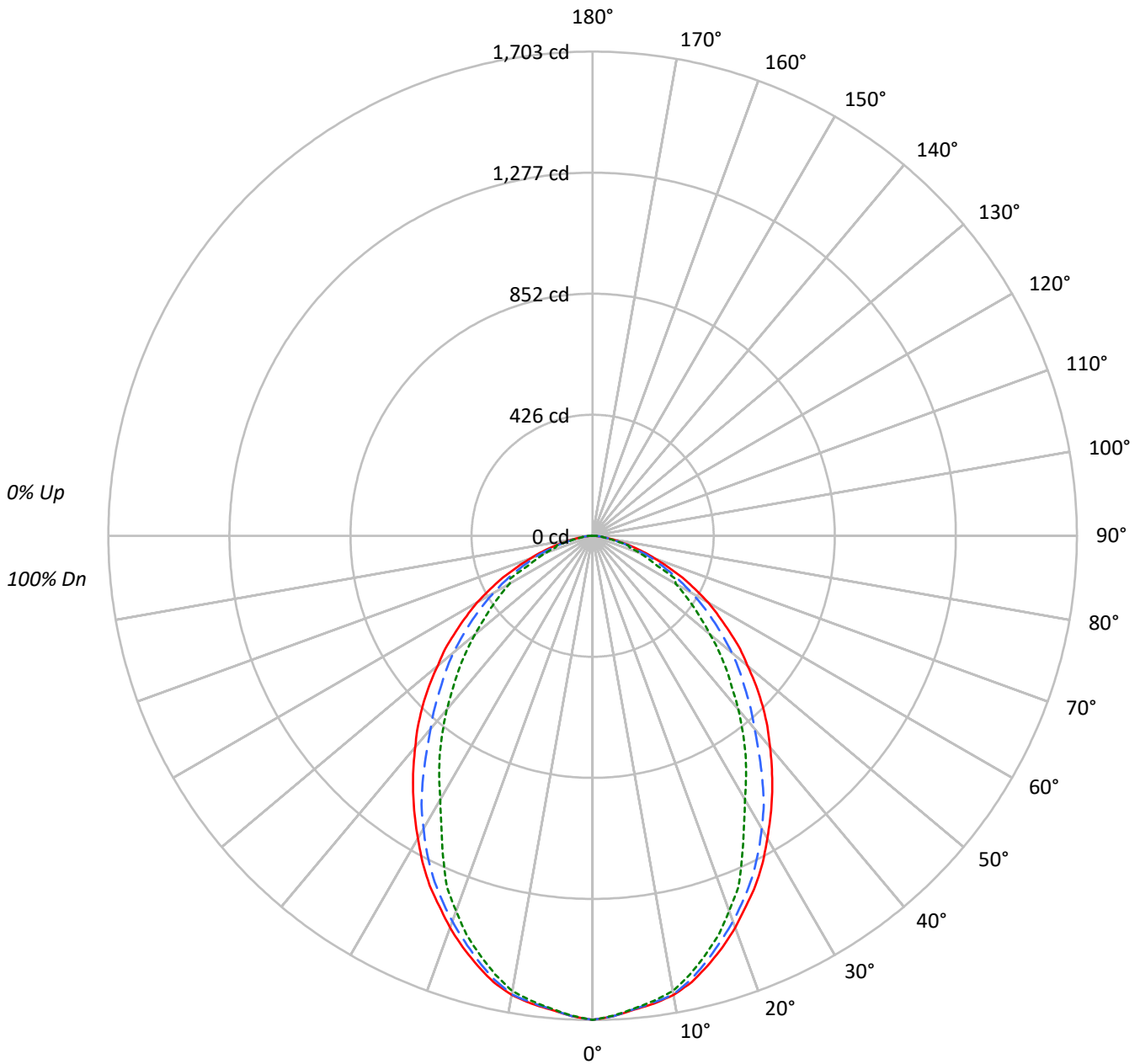
Lumens per Lamp: N/A
Luminaire Lumens: 3343.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	2291	2291	2291
5°	2260	2257	2255
10°	2241	2238	2222
15°	2180	2158	2128
20°	2100	2066	2010
25°	2014	1970	1847
30°	1908	1847	1664
35°	1808	1707	1539
40°	1705	1556	1400
45°	1607	1439	1266
50°	1488	1335	1129
55°	1376	1210	1011
60°	1261	1081	906
65°	1110	947	802
70°	914	828	681
75°	727	635	665
80°	488	458	427
85°	304	364	426



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.5	4.7
10°-20°	435.0	13.0
20°-30°	602.3	18.0
30°-40°	642.2	19.2
40°-50°	585.9	17.5
50°-60°	459.0	13.7
60°-70°	299.1	8.9
70°-80°	132.5	4.0
80°-90°	28.5	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°	1195.8	35.8
0°-40°	1838.0	55.0
0°-60°	2882.9	86.2
0°-90°	3343.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3343.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1703	1703	1703	1703	1703	
5°	1673	1671	1671	1669	1669	159
15°	1565	1565	1549	1534	1528	440
25°	1356	1348	1327	1280	1244	623
35°	1100	1093	1039	961	937	688
45°	844	827	756	693	665	651
55°	587	569	516	455	431	526
65°	348	329	297	303	252	343
75°	140	130	122	116	128	150
85°	20	22	24	26	28	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1702.9	1702.9	1702.9	1702.9	1702.9
2.5°	1691.1	1691.1	1691.1	1689.1	1689.1
5°	1673.3	1671.4	1671.4	1669.4	1669.4
7.5°	1659.6	1657.6	1655.6	1653.7	1649.7
10°	1639.9	1639.9	1637.9	1628.1	1626.1
12.5°	1608.4	1606.4	1598.5	1584.8	1580.8
15°	1565.1	1565.1	1549.3	1533.6	1527.7
17.5°	1517.8	1515.9	1496.2	1480.4	1472.5
20°	1466.6	1462.7	1443.0	1417.4	1403.6
22.5°	1409.6	1409.6	1385.9	1352.5	1338.7
25°	1356.4	1348.5	1326.9	1279.6	1244.2
27.5°	1295.4	1283.6	1259.9	1193.0	1151.7
30°	1228.4	1222.5	1189.1	1102.4	1070.9
32.5°	1165.4	1155.6	1120.2	1029.6	1004.0
35°	1100.5	1092.6	1039.4	960.7	937.1
37.5°	1035.5	1025.7	958.7	895.7	866.2
40°	970.5	958.7	885.9	828.8	797.3
42.5°	909.5	893.8	822.9	761.9	726.4
45°	844.5	826.8	756.0	693.0	665.4
47.5°	779.6	763.8	698.9	633.9	602.4
50°	710.7	696.9	637.8	572.9	539.4
52.5°	653.6	631.9	574.8	509.9	482.3
55°	586.7	568.9	515.8	454.8	431.1
57.5°	525.6	507.9	458.7	401.6	381.9
60°	468.5	442.9	401.6	352.4	336.6
62.5°	405.5	385.9	350.4	309.1	328.8
65°	348.5	328.8	297.3	303.2	252.0
67.5°	285.5	275.6	248.0	220.5	212.6
70°	232.3	220.5	210.6	181.1	173.2
72.5°	185.1	173.2	159.5	143.7	137.8
75°	139.8	129.9	122.1	116.2	128.0
77.5°	96.5	92.5	86.6	80.7	78.7
80°	63.0	61.0	59.1	57.1	55.1
82.5°	37.4	37.4	37.4	37.4	37.4
85°	19.7	21.7	23.6	25.6	27.6
87.5°	11.8	11.8	13.8	15.7	17.7
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)