

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: P546427

Luminaire Tested: **FMR-24-4-LD4-1HI-35-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: P546427
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

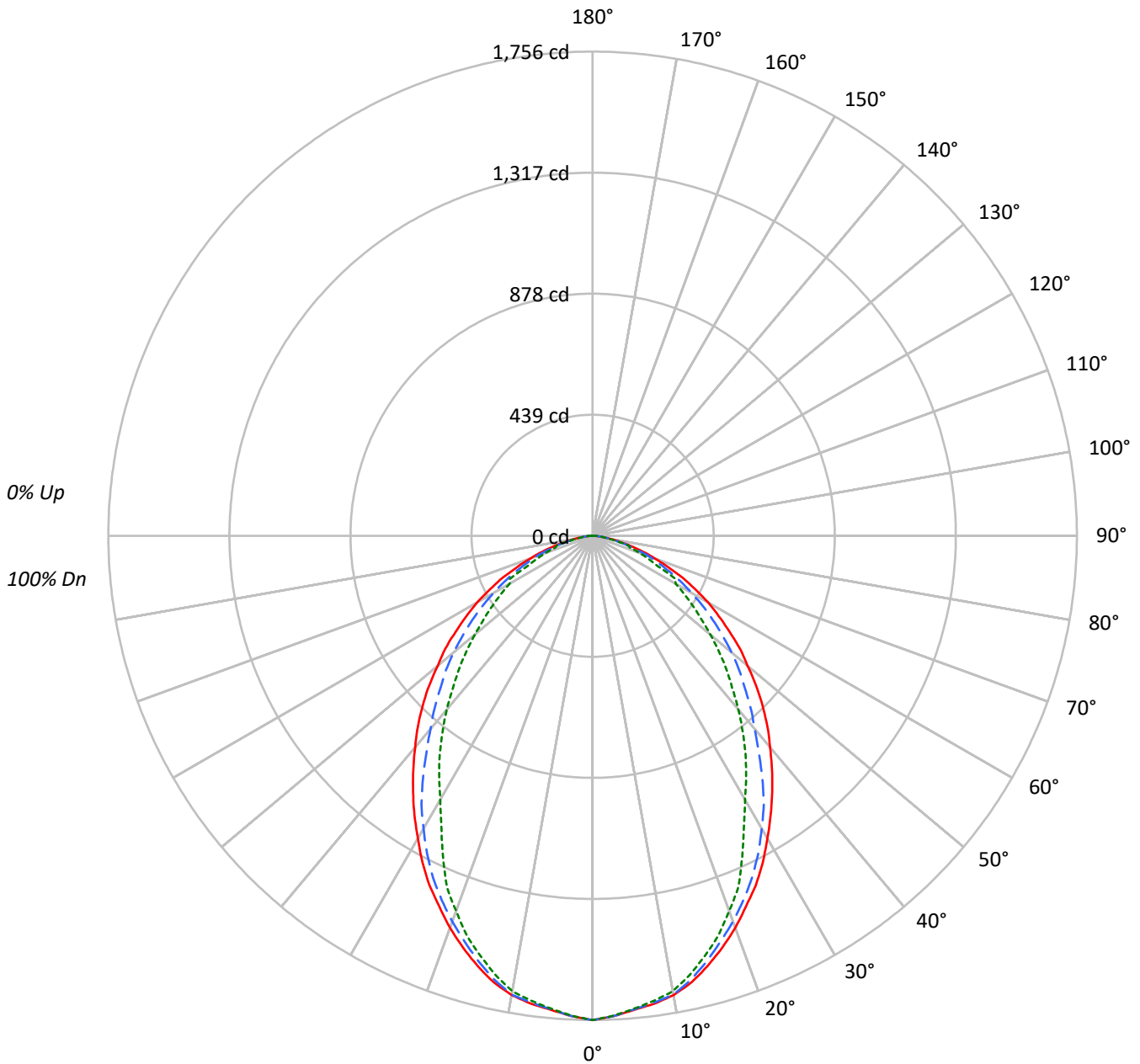
Lumens per Lamp: N/A
Luminaire Lumens: 3448.0 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2363	2363	2363
5°	2331	2328	2326
10°	2311	2308	2291
15°	2249	2226	2195
20°	2166	2131	2073
25°	2077	2032	1905
30°	1968	1905	1716
35°	1864	1761	1588
40°	1758	1605	1444
45°	1658	1484	1306
50°	1534	1377	1165
55°	1419	1248	1043
60°	1301	1115	934
65°	1144	976	827
70°	943	855	703
75°	750	655	686
80°	504	472	441
85°	313	377	438



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.5	4.7
10°-20°	448.7	13.0
20°-30°	621.2	18.0
30°-40°	662.4	19.2
40°-50°	604.3	17.5
50°-60°	473.4	13.7
60°-70°	308.5	8.9
70°-80°	136.7	4.0
80°-90°	29.4	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°	1233.4	35.8
0°-40°	1895.7	55.0
0°-60°	2973.4	86.2
0°-90°	3448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3448.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1756	1756	1756	1756	1756	
5°	1726	1724	1724	1722	1722	164
15°	1614	1614	1598	1582	1576	454
25°	1399	1391	1368	1320	1283	642
35°	1135	1127	1072	991	966	710
45°	871	853	780	715	686	671
55°	605	587	532	469	445	543
65°	359	339	307	313	260	354
75°	144	134	126	120	132	155
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1756.4	1756.4	1756.4	1756.4	1756.4
2.5°	1744.2	1744.2	1744.2	1742.2	1742.2
5°	1725.9	1723.9	1723.9	1721.8	1721.8
7.5°	1711.7	1709.7	1707.6	1705.6	1701.5
10°	1691.4	1691.4	1689.4	1679.2	1677.2
12.5°	1658.9	1656.9	1648.7	1634.5	1630.5
15°	1614.2	1614.2	1598.0	1581.7	1575.7
17.5°	1565.5	1563.5	1543.2	1526.9	1518.8
20°	1512.7	1508.6	1488.3	1461.9	1447.7
22.5°	1453.8	1453.8	1429.5	1394.9	1380.7
25°	1399.0	1390.9	1368.5	1319.8	1283.3
27.5°	1336.1	1323.9	1299.5	1230.5	1187.8
30°	1267.0	1260.9	1226.4	1137.1	1104.6
32.5°	1202.0	1191.9	1155.3	1061.9	1035.5
35°	1135.0	1126.9	1072.1	990.9	966.5
37.5°	1068.0	1057.9	988.8	923.9	893.4
40°	1001.0	988.8	913.7	854.8	822.3
42.5°	938.1	921.8	848.7	785.8	749.2
45°	871.1	852.8	779.7	714.7	686.3
47.5°	804.1	787.8	720.8	653.8	621.3
50°	733.0	718.8	657.9	590.9	556.4
52.5°	674.1	651.8	592.9	525.9	497.5
55°	605.1	586.8	532.0	469.0	444.7
57.5°	542.1	523.9	473.1	414.2	393.9
60°	483.3	456.9	414.2	363.5	347.2
62.5°	418.3	398.0	361.4	318.8	339.1
65°	359.4	339.1	306.6	312.7	259.9
67.5°	294.4	284.3	255.8	227.4	219.3
70°	239.6	227.4	217.3	186.8	178.7
72.5°	190.9	178.7	164.5	148.2	142.1
75°	144.2	134.0	125.9	119.8	132.0
77.5°	99.5	95.4	89.3	83.2	81.2
80°	65.0	62.9	60.9	58.9	56.9
82.5°	38.6	38.6	38.6	38.6	38.6
85°	20.3	22.3	24.4	26.4	28.4
87.5°	12.2	12.2	14.2	16.2	18.3
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)