

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: P546507

Luminaire Tested: **FMR-24-4-LD4-1HI-50-UNV-82-88-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: P546507
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-50-UNV-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

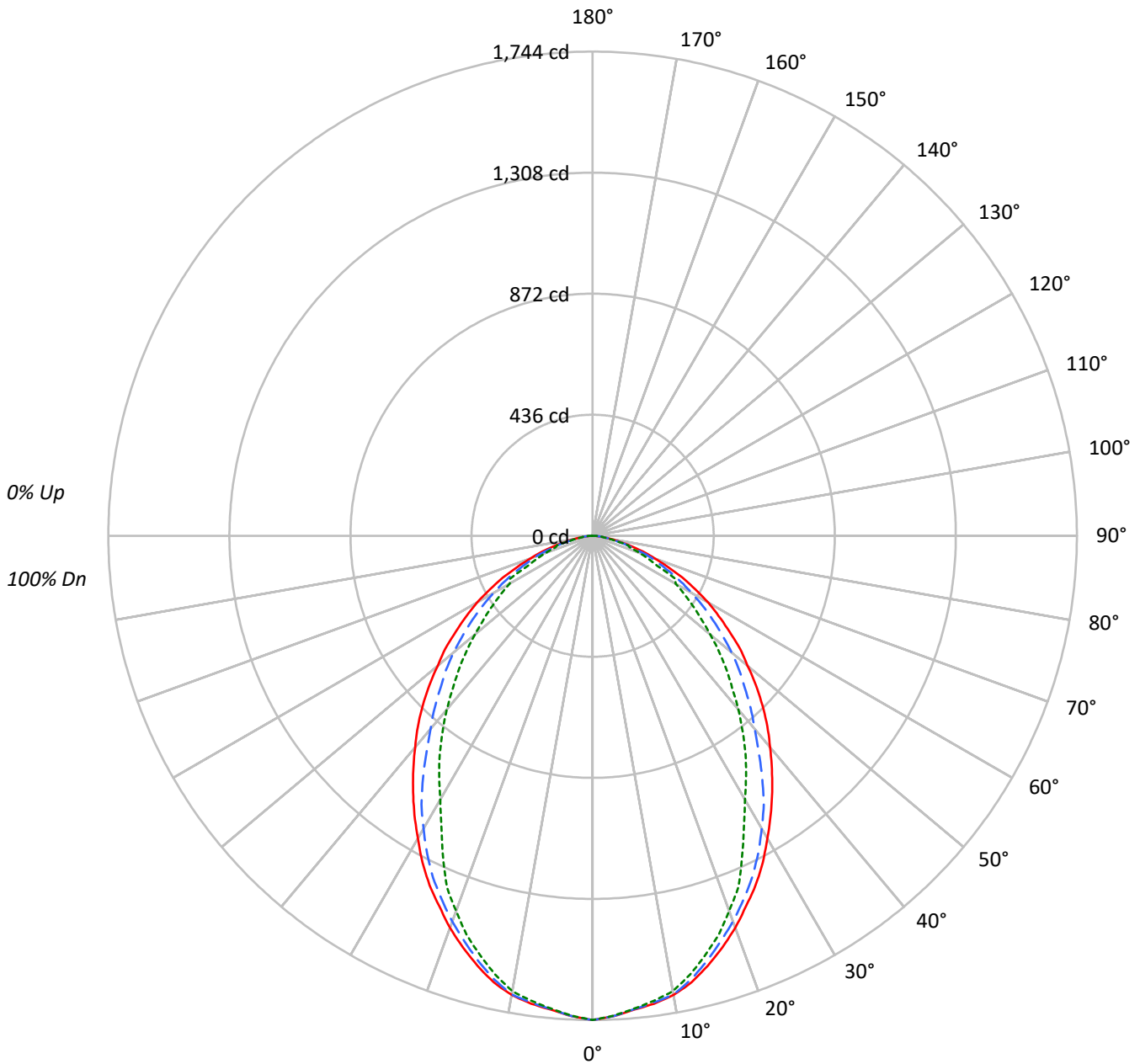
Lumens per Lamp: N/A
Luminaire Lumens: 3424.0 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2347	2347	2347
5°	2315	2312	2309
10°	2295	2292	2275
15°	2233	2210	2180
20°	2151	2116	2059
25°	2063	2018	1892
30°	1955	1892	1704
35°	1851	1749	1577
40°	1746	1594	1434
45°	1646	1473	1297
50°	1524	1367	1156
55°	1410	1239	1036
60°	1291	1107	928
65°	1136	969	822
70°	936	849	698
75°	744	650	682
80°	500	469	438
85°	312	374	435



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.4	4.7
10°-20°	445.6	13.0
20°-30°	616.9	18.0
30°-40°	657.8	19.2
40°-50°	600.1	17.5
50°-60°	470.1	13.7
60°-70°	306.4	8.9
70°-80°	135.7	4.0
80°-90°	29.1	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°	1224.8	35.8
0°-40°	1882.6	55.0
0°-60°	2952.7	86.2
0°-90°	3424.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3424.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1744	1744	1744	1744	1744	
5°	1714	1712	1712	1710	1710	163
15°	1603	1603	1587	1571	1565	451
25°	1389	1381	1359	1311	1274	638
35°	1127	1119	1065	984	960	705
45°	865	847	774	710	682	666
55°	601	583	528	466	442	539
65°	357	337	304	310	258	352
75°	143	133	125	119	131	153
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°	1744.1	1744.1	1744.1	1744.1	1744.1
2.5°	1732.0	1732.0	1732.0	1730.0	1730.0
5°	1713.9	1711.9	1711.9	1709.9	1709.9
7.5°	1699.8	1697.8	1695.7	1693.7	1689.7
10°	1679.6	1679.6	1677.6	1667.5	1665.5
12.5°	1647.4	1645.3	1637.3	1623.2	1619.1
15°	1603.0	1603.0	1586.9	1570.7	1564.7
17.5°	1554.6	1552.6	1532.4	1516.3	1508.2
20°	1502.2	1498.1	1478.0	1451.8	1437.7
22.5°	1443.7	1443.7	1419.5	1385.2	1371.1
25°	1389.3	1381.2	1359.0	1310.6	1274.3
27.5°	1326.8	1314.7	1290.5	1221.9	1179.6
30°	1258.2	1252.2	1217.9	1129.2	1096.9
32.5°	1193.7	1183.6	1147.3	1054.5	1028.3
35°	1127.1	1119.1	1064.6	984.0	959.8
37.5°	1060.6	1050.5	982.0	917.4	887.2
40°	994.1	982.0	907.4	848.9	816.6
42.5°	931.6	915.4	842.8	780.3	744.0
45°	865.0	846.9	774.3	709.8	681.5
47.5°	798.5	782.3	715.8	649.3	617.0
50°	727.9	713.8	653.3	586.8	552.5
52.5°	669.4	647.2	588.8	522.2	494.0
55°	600.9	582.7	528.3	465.8	441.6
57.5°	538.4	520.2	469.8	411.3	391.2
60°	479.9	453.7	411.3	360.9	344.8
62.5°	415.4	395.2	358.9	316.6	336.7
65°	356.9	336.7	304.5	310.5	258.1
67.5°	292.4	282.3	254.1	225.8	217.8
70°	237.9	225.8	215.7	185.5	177.4
72.5°	189.5	177.4	163.3	147.2	141.1
75°	143.2	133.1	125.0	119.0	131.1
77.5°	98.8	94.8	88.7	82.7	80.7
80°	64.5	62.5	60.5	58.5	56.5
82.5°	38.3	38.3	38.3	38.3	38.3
85°	20.2	22.2	24.2	26.2	28.2
87.5°	12.1	12.1	14.1	16.1	18.1
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)