

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: P545620

Luminaire Tested: **FMR-12-2-LD4-2HI-50-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: P545620
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-12-2-LD4-2HI-50-UNV-93-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

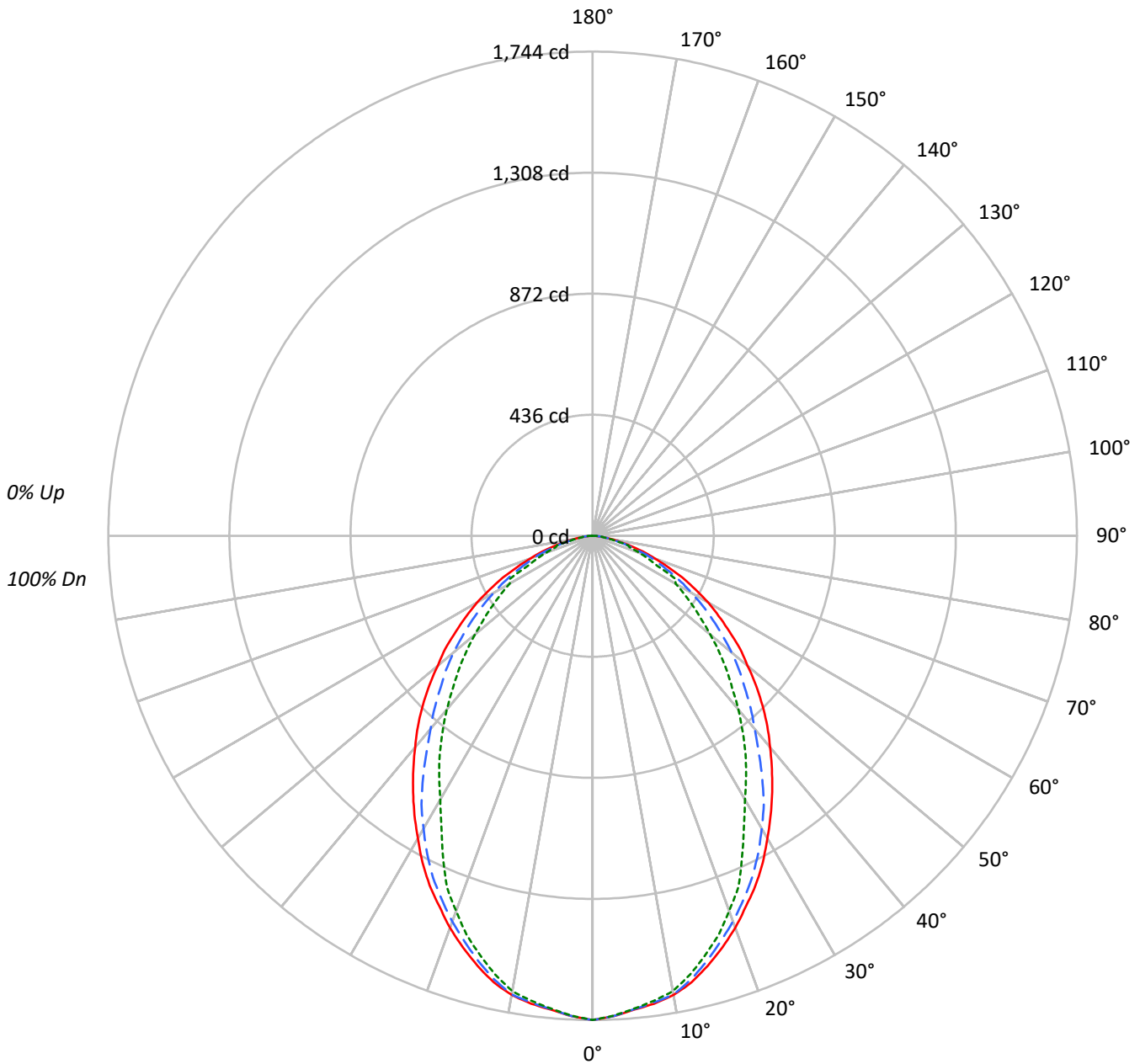
Lumens per Lamp: N/A
Luminaire Lumens: 3424.0 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P545620

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-93-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545620

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-93-94-EDD

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°	9387	9387	9387
5°	9259	9249	9238
10°	9179	9168	9102
15°	8932	8842	8718
20°	8604	8465	8234
25°	8250	8070	7567
30°	7819	7569	6817
35°	7405	6995	6306
40°	6984	6375	5737
45°	6584	5893	5187
50°	6095	5470	4626
55°	5638	4957	4144
60°	5166	4427	3711
65°	4545	3878	3287
70°	3744	3394	2792
75°	2978	2599	2726
80°	1999	1875	1751
85°	1247	1494	1741



TEST NUMBER: P545620

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-93-94-EDD

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	



TEST NUMBER: P545620

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-93-94-EDD

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)