

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: P545609

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-82-86-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: P545609
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-82-86-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

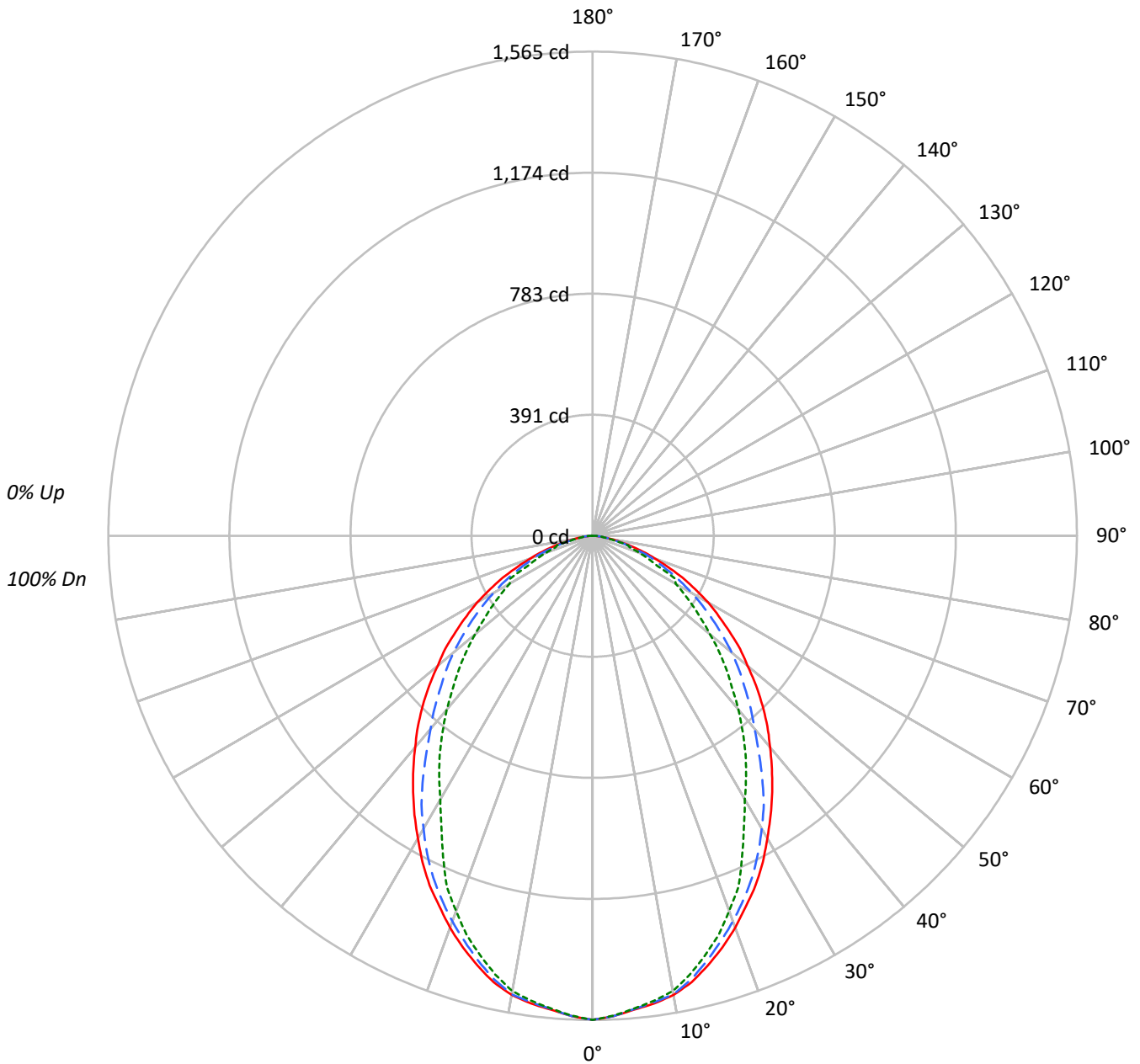
Lumens per Lamp: N/A
Luminaire Lumens: 3072.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P545609

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-82-86-EDD

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°	8422	8422	8422
5°	8307	8298	8288
10°	8235	8225	8166
15°	8013	7933	7822
20°	7719	7594	7388
25°	7402	7241	6789
30°	7016	6791	6116
35°	6644	6276	5658
40°	6266	5720	5148
45°	5907	5288	4654
50°	5468	4907	4150
55°	5058	4448	3718
60°	4635	3972	3329
65°	4078	3479	2949
70°	3360	3046	2505
75°	2670	2333	2445
80°	1795	1683	1571
85°	1118	1340	1562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.7	4.7
10°-20°	399.8	13.0
20°-30°	553.4	18.0
30°-40°	590.1	19.2
40°-50°	538.4	17.5
50°-60°	421.8	13.7
60°-70°	274.9	8.9
70°-80°	121.8	4.0
80°-90°	26.2	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°	1098.9	35.8
0°-40°	1689.0	55.0
0°-60°	2649.2	86.2
0°-90°	3072.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3072.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1538	1536	1536	1534	1534	146
15°	1438	1438	1424	1409	1404	404
25°	1246	1239	1219	1176	1143	572
35°	1011	1004	955	883	861	632
45°	776	760	695	637	612	598
55°	539	523	474	418	396	484
65°	320	302	273	279	232	316
75°	128	119	112	107	118	138
85°	18	20	22	24	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1564.8	1564.8	1564.8	1564.8	1564.8
2.5°	1554.0	1554.0	1554.0	1552.2	1552.2
5°	1537.7	1535.9	1535.9	1534.1	1534.1
7.5°	1525.0	1523.2	1521.4	1519.6	1516.0
10°	1506.9	1506.9	1505.1	1496.1	1494.3
12.5°	1478.0	1476.2	1469.0	1456.3	1452.7
15°	1438.2	1438.2	1423.7	1409.3	1403.8
17.5°	1394.8	1393.0	1374.9	1360.4	1353.2
20°	1347.7	1344.1	1326.0	1302.5	1289.9
22.5°	1295.3	1295.3	1273.6	1242.8	1230.2
25°	1246.4	1239.2	1219.3	1175.9	1143.3
27.5°	1190.4	1179.5	1157.8	1096.3	1058.3
30°	1128.9	1123.4	1092.7	1013.1	984.1
32.5°	1071.0	1061.9	1029.4	946.1	922.6
35°	1011.3	1004.0	955.2	882.8	861.1
37.5°	951.6	942.5	881.0	823.1	796.0
40°	891.9	881.0	814.1	761.6	732.7
42.5°	835.8	821.3	756.2	700.1	667.5
45°	776.1	759.8	694.7	636.8	611.5
47.5°	716.4	701.9	642.2	582.5	553.6
50°	653.1	640.4	586.1	526.4	495.7
52.5°	600.6	580.7	528.2	468.5	443.2
55°	539.1	522.8	474.0	417.9	396.2
57.5°	483.0	466.7	421.5	369.0	351.0
60°	430.6	407.0	369.0	323.8	309.3
62.5°	372.7	354.6	322.0	284.0	302.1
65°	320.2	302.1	273.2	278.6	231.6
67.5°	262.3	253.3	227.9	202.6	195.4
70°	213.5	202.6	193.6	166.4	159.2
72.5°	170.1	159.2	146.5	132.1	126.6
75°	128.4	119.4	112.2	106.7	117.6
77.5°	88.6	85.0	79.6	74.2	72.4
80°	57.9	56.1	54.3	52.5	50.7
82.5°	34.4	34.4	34.4	34.4	34.4
85°	18.1	19.9	21.7	23.5	25.3
87.5°	10.9	10.9	12.7	14.5	16.3
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)