

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: P546275

Luminaire Tested: **FMR-12-4-LD4-2LO-50-UNV-81-88-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: P546275
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-12-4-LD4-2LO-50-UNV-81-88-EDD
Description: 1X4 FMR TROFFER WITH .156 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

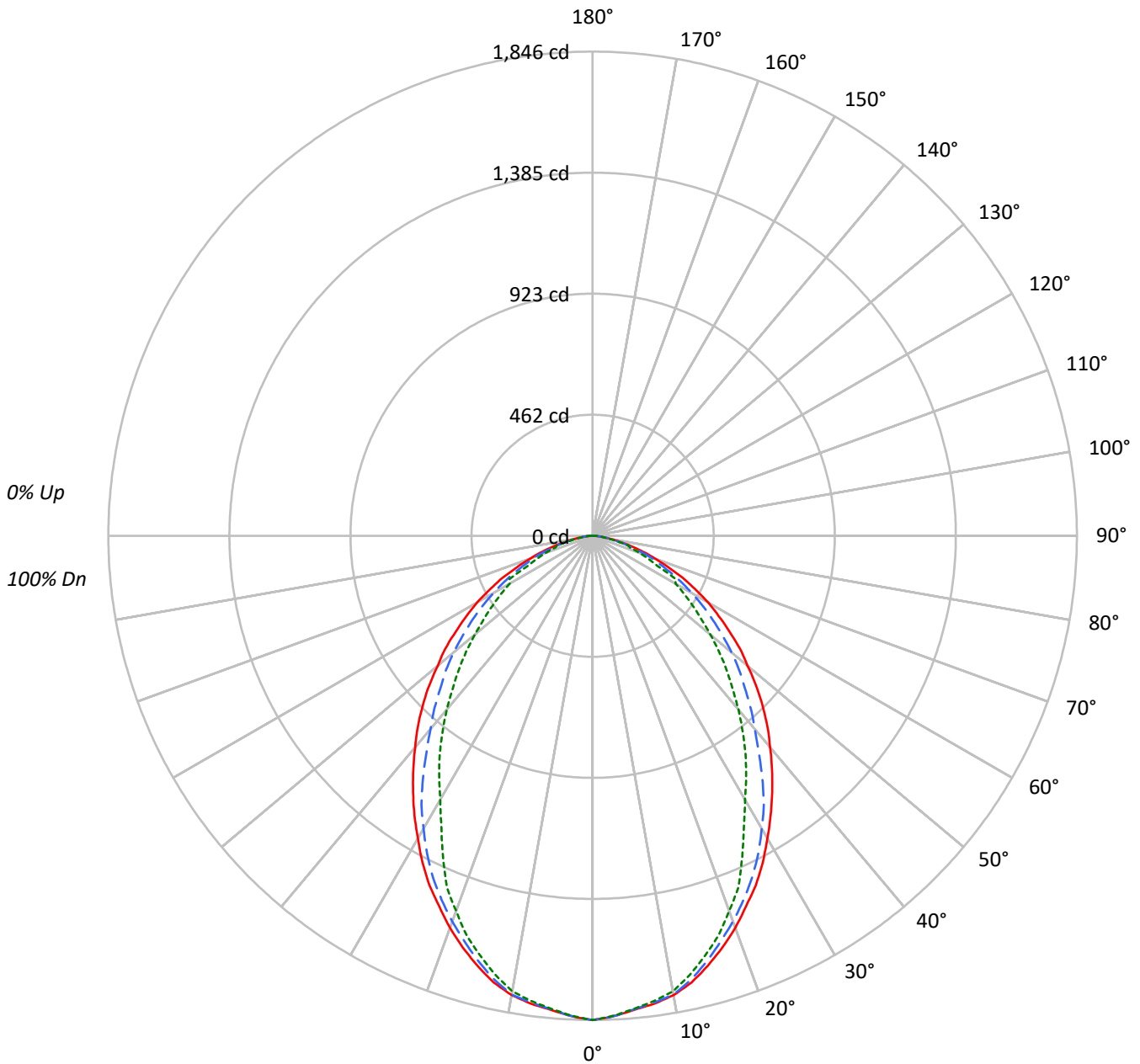
Lumens per Lamp: N/A
Luminaire Lumens: 3625.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	4969	4969	4969
5°	4901	4896	4890
10°	4859	4853	4818
15°	4728	4680	4615
20°	4554	4481	4359
25°	4367	4272	4006
30°	4139	4007	3608
35°	3920	3703	3338
40°	3697	3374	3037
45°	3485	3119	2746
50°	3226	2895	2449
55°	2984	2624	2193
60°	2735	2344	1964
65°	2406	2052	1740
70°	1982	1797	1478
75°	1576	1377	1443
80°	1058	992	927
85°	658	790	923



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.9	4.7
10°-20°	471.7	13.0
20°-30°	653.1	18.0
30°-40°	696.4	19.2
40°-50°	635.3	17.5
50°-60°	497.7	13.7
60°-70°	324.4	8.9
70°-80°	143.7	4.0
80°-90°	30.9	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°	1296.7	35.8
0°-40°	1993.1	55.0
0°-60°	3126.0	86.2
0°-90°	3625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3625.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1846	1846	1846	1846	1846	
5°	1814	1812	1812	1810	1810	172
15°	1697	1697	1680	1663	1656	477
25°	1471	1462	1439	1388	1349	675
35°	1193	1185	1127	1042	1016	746
45°	916	897	820	751	722	705
55°	636	617	559	493	468	571
65°	378	356	322	329	273	372
75°	152	141	132	126	139	162
85°	21	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1846.5	1846.5	1846.5	1846.5	1846.5
2.5°	1833.7	1833.7	1833.7	1831.6	1831.6
5°	1814.5	1812.4	1812.4	1810.2	1810.2
7.5°	1799.6	1797.4	1795.3	1793.2	1788.9
10°	1778.2	1778.2	1776.1	1765.4	1763.3
12.5°	1744.1	1741.9	1733.4	1718.4	1714.2
15°	1697.1	1697.1	1680.0	1662.9	1656.5
17.5°	1645.9	1643.7	1622.4	1605.3	1596.8
20°	1590.4	1586.1	1564.7	1537.0	1522.1
22.5°	1528.5	1528.5	1502.8	1466.5	1451.6
25°	1470.8	1462.3	1438.8	1387.6	1349.1
27.5°	1404.6	1391.8	1366.2	1293.6	1248.8
30°	1332.1	1325.7	1289.4	1195.4	1161.3
32.5°	1263.7	1253.1	1214.7	1116.5	1088.7
35°	1193.3	1184.8	1127.1	1041.7	1016.1
37.5°	1122.9	1112.2	1039.6	971.3	939.3
40°	1052.4	1039.6	960.6	898.7	864.6
42.5°	986.2	969.2	892.3	826.1	787.7
45°	915.8	896.6	819.7	751.4	721.5
47.5°	845.3	828.3	757.8	687.4	653.2
50°	770.6	755.7	691.6	621.2	584.9
52.5°	708.7	685.2	623.3	552.9	523.0
55°	636.1	616.9	559.3	493.1	467.5
57.5°	570.0	550.8	497.4	435.5	414.1
60°	508.1	480.3	435.5	382.1	365.0
62.5°	439.8	418.4	380.0	335.1	356.5
65°	377.8	356.5	322.3	328.7	273.2
67.5°	309.5	298.9	269.0	239.1	230.5
70°	251.9	239.1	228.4	196.4	187.9
72.5°	200.7	187.9	172.9	155.8	149.4
75°	151.6	140.9	132.4	125.9	138.8
77.5°	104.6	100.3	93.9	87.5	85.4
80°	68.3	66.2	64.0	61.9	59.8
82.5°	40.6	40.6	40.6	40.6	40.6
85°	21.3	23.5	25.6	27.8	29.9
87.5°	12.8	12.8	14.9	17.1	19.2
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)