

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: P545844

Luminaire Tested: **FMR-12-4-LD4-1HI-35-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: P545844
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-LD4-1HI-35-UNV-93-94-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

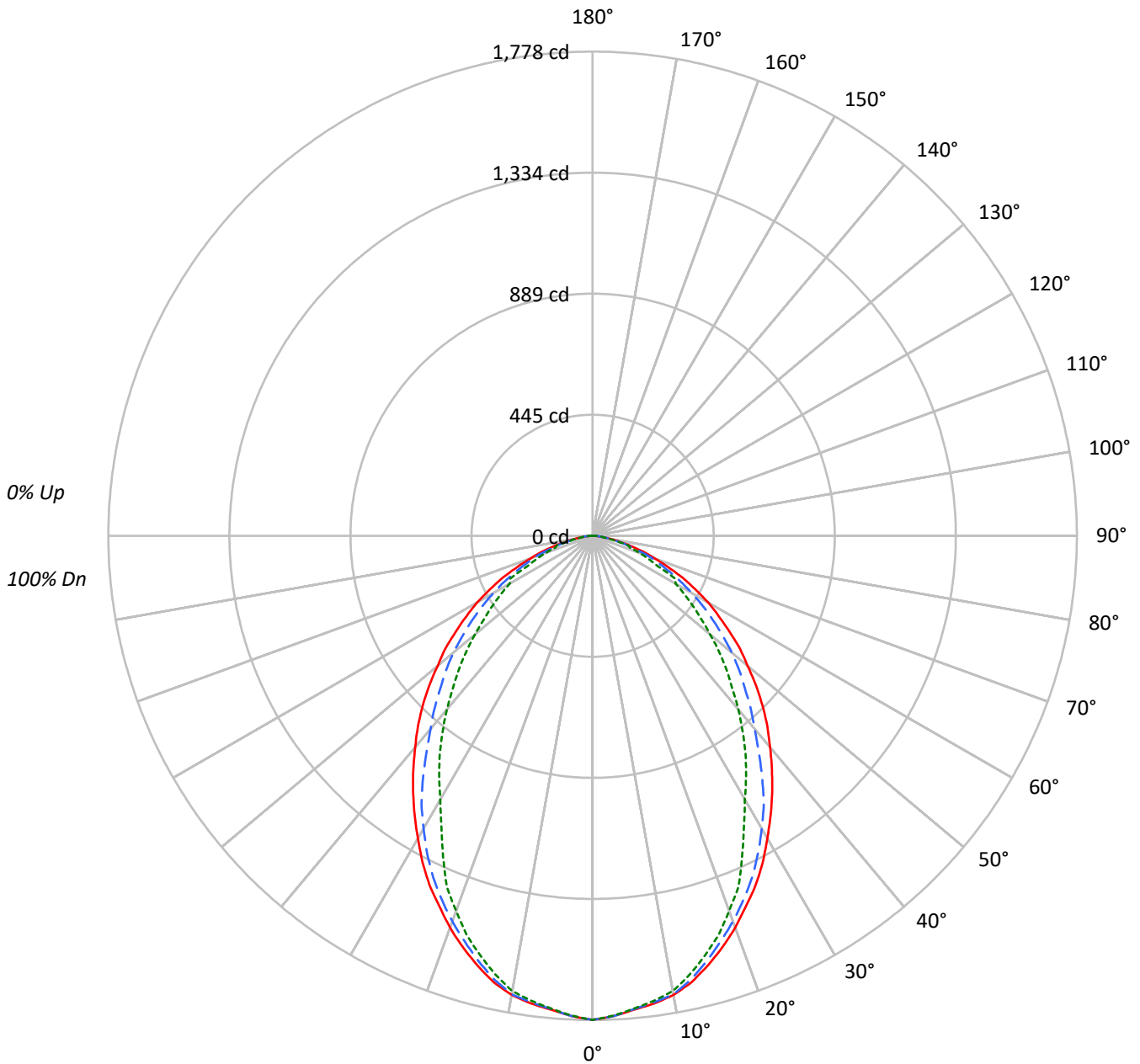
Lumens per Lamp: N/A
Luminaire Lumens: 3490.0 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	4784	4784	4784
5°	4719	4713	4708
10°	4678	4672	4639
15°	4552	4506	4443
20°	4385	4314	4196
25°	4204	4113	3857
30°	3985	3857	3474
35°	3774	3565	3214
40°	3559	3249	2924
45°	3355	3003	2644
50°	3106	2788	2357
55°	2874	2526	2112
60°	2632	2257	1891
65°	2316	1976	1675
70°	1908	1730	1423
75°	1517	1325	1389
80°	1020	956	891
85°	636	763	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.5	4.7
10°-20°	454.2	13.0
20°-30°	628.8	18.0
30°-40°	670.4	19.2
40°-50°	611.6	17.5
50°-60°	479.2	13.7
60°-70°	312.3	8.9
70°-80°	138.4	4.0
80°-90°	29.7	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°	1248.4	35.8
0°-40°	1918.8	55.0
0°-60°	3009.6	86.2
0°-90°	3490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1778	1778	1778	1778	1778	
5°	1747	1745	1745	1743	1743	166
15°	1634	1634	1618	1601	1595	459
25°	1416	1408	1385	1336	1299	650
35°	1149	1141	1085	1003	978	718
45°	882	863	789	723	695	679
55°	612	594	538	475	450	549
65°	364	343	310	316	263	359
75°	146	136	127	121	134	156
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1777.8	1777.8	1777.8	1777.8	1777.8
2.5°	1765.4	1765.4	1765.4	1763.4	1763.4
5°	1746.9	1744.9	1744.9	1742.8	1742.8
7.5°	1732.5	1730.5	1728.4	1726.4	1722.3
10°	1712.0	1712.0	1709.9	1699.7	1697.6
12.5°	1679.1	1677.1	1668.8	1654.4	1650.3
15°	1633.9	1633.9	1617.5	1601.0	1594.8
17.5°	1584.6	1582.5	1562.0	1545.5	1537.3
20°	1531.1	1527.0	1506.5	1479.8	1465.4
22.5°	1471.5	1471.5	1446.9	1411.9	1397.5
25°	1416.0	1407.8	1385.2	1335.9	1298.9
27.5°	1352.3	1340.0	1315.3	1245.5	1202.3
30°	1282.5	1276.3	1241.3	1150.9	1118.0
32.5°	1216.7	1206.4	1169.4	1074.9	1048.2
35°	1148.9	1140.6	1085.2	1002.9	978.3
37.5°	1081.0	1070.8	1000.9	935.1	904.3
40°	1013.2	1000.9	924.8	865.2	832.4
42.5°	949.5	933.1	859.1	795.4	758.4
45°	881.7	863.2	789.2	723.4	694.7
47.5°	813.9	797.4	729.6	661.8	628.9
50°	741.9	727.5	665.9	598.1	563.1
52.5°	682.3	659.7	600.1	532.3	503.5
55°	612.5	594.0	538.5	474.8	450.1
57.5°	548.7	530.2	478.9	419.3	398.7
60°	489.1	462.4	419.3	367.9	351.4
62.5°	423.4	402.8	365.8	322.7	343.2
65°	363.8	343.2	310.3	316.5	263.1
67.5°	298.0	287.7	259.0	230.2	222.0
70°	242.5	230.2	219.9	189.1	180.9
72.5°	193.2	180.9	166.5	150.0	143.9
75°	145.9	135.6	127.4	121.3	133.6
77.5°	100.7	96.6	90.4	84.3	82.2
80°	65.8	63.7	61.7	59.6	57.5
82.5°	39.0	39.0	39.0	39.0	39.0
85°	20.6	22.6	24.7	26.7	28.8
87.5°	12.3	12.3	14.4	16.4	18.5
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)