

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: P546203

Luminaire Tested: **FMR-12-4-LD4-2LO-35-UNV-80-88-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: P546203
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-35-UNV-80-88-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

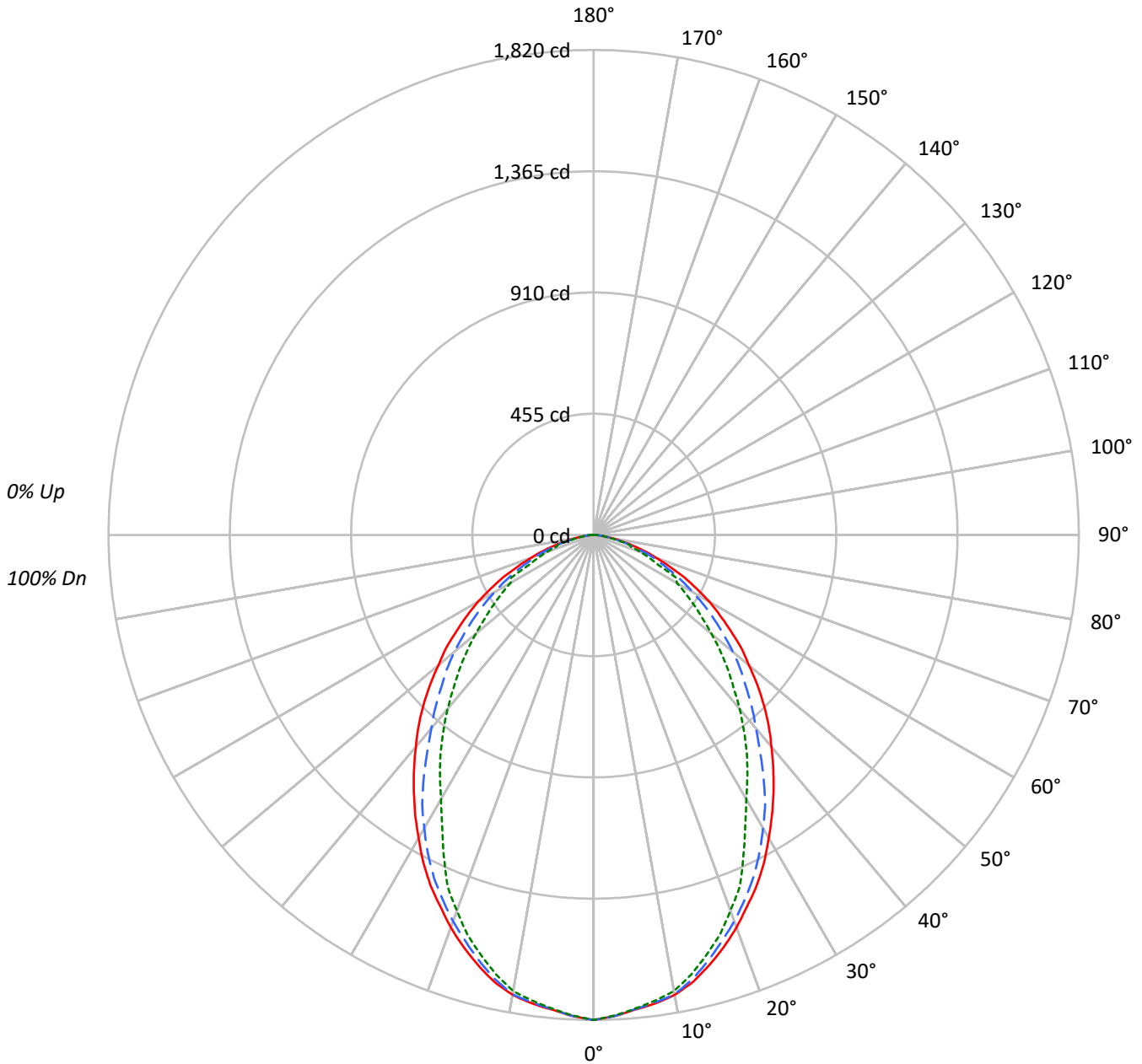
Lumens per Lamp: N/A
Luminaire Lumens: 3573.0 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4898	4898	4898
5°	4831	4826	4820
10°	4789	4783	4749
15°	4660	4613	4549
20°	4489	4417	4296
25°	4304	4211	3948
30°	4080	3949	3557
35°	3864	3650	3290
40°	3644	3326	2994
45°	3435	3075	2707
50°	3180	2854	2413
55°	2942	2586	2162
60°	2695	2310	1936
65°	2371	2023	1715
70°	1954	1771	1457
75°	1553	1357	1422
80°	1043	978	913
85°	648	778	911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.4	4.7
10°-20°	465.0	13.0
20°-30°	643.7	18.0
30°-40°	686.4	19.2
40°-50°	626.2	17.5
50°-60°	490.6	13.7
60°-70°	319.7	8.9
70°-80°	141.7	4.0
80°-90°	30.4	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°	1278.1	35.8
0°-40°	1964.5	55.0
0°-60°	3081.2	86.2
0°-90°	3573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3573.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1820	1820	1820	1820	1820	
5°	1788	1786	1786	1784	1784	170
15°	1673	1673	1656	1639	1633	470
25°	1450	1441	1418	1368	1330	666
35°	1176	1168	1111	1027	1002	735
45°	903	884	808	741	711	695
55°	627	608	551	486	461	562
65°	372	351	318	324	269	367
75°	149	139	130	124	137	160
85°	21	23	25	27	30	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1820.0	1820.0	1820.0	1820.0	1820.0
2.5°	1807.4	1807.4	1807.4	1805.3	1805.3
5°	1788.5	1786.4	1786.4	1784.3	1784.3
7.5°	1773.7	1771.6	1769.5	1767.4	1763.2
10°	1752.7	1752.7	1750.6	1740.1	1738.0
12.5°	1719.0	1716.9	1708.5	1693.8	1689.6
15°	1672.8	1672.8	1655.9	1639.1	1632.8
17.5°	1622.3	1620.1	1599.1	1582.3	1573.9
20°	1567.5	1563.3	1542.3	1514.9	1500.2
22.5°	1506.5	1506.5	1481.3	1445.5	1430.8
25°	1449.7	1441.3	1418.2	1367.7	1329.8
27.5°	1384.5	1371.9	1346.6	1275.1	1230.9
30°	1313.0	1306.6	1270.9	1178.3	1144.6
32.5°	1245.6	1235.1	1197.2	1100.4	1073.1
35°	1176.2	1167.8	1111.0	1026.8	1001.5
37.5°	1106.8	1096.2	1024.7	957.4	925.8
40°	1037.3	1024.7	946.8	885.8	852.2
42.5°	972.1	955.3	879.5	814.3	776.4
45°	902.7	883.7	808.0	740.6	711.2
47.5°	833.2	816.4	747.0	677.5	643.9
50°	759.6	744.8	681.7	612.3	576.5
52.5°	698.6	675.4	614.4	545.0	515.5
55°	627.0	608.1	551.3	486.0	460.8
57.5°	561.8	542.9	490.3	429.2	408.2
60°	500.8	473.4	429.2	376.6	359.8
62.5°	433.4	412.4	374.5	330.3	351.4
65°	372.4	351.4	317.7	324.0	269.3
67.5°	305.1	294.6	265.1	235.7	227.2
70°	248.3	235.7	225.1	193.6	185.2
72.5°	197.8	185.2	170.4	153.6	147.3
75°	149.4	138.9	130.5	124.1	136.8
77.5°	103.1	98.9	92.6	86.3	84.2
80°	67.3	65.2	63.1	61.0	58.9
82.5°	40.0	40.0	40.0	40.0	40.0
85°	21.0	23.1	25.2	27.4	29.5
87.5°	12.6	12.6	14.7	16.8	18.9
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)