

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: P545816

Luminaire Tested: **FMR-12-4-LD4-1HI-35-UNV-80-85-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: P545816
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-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

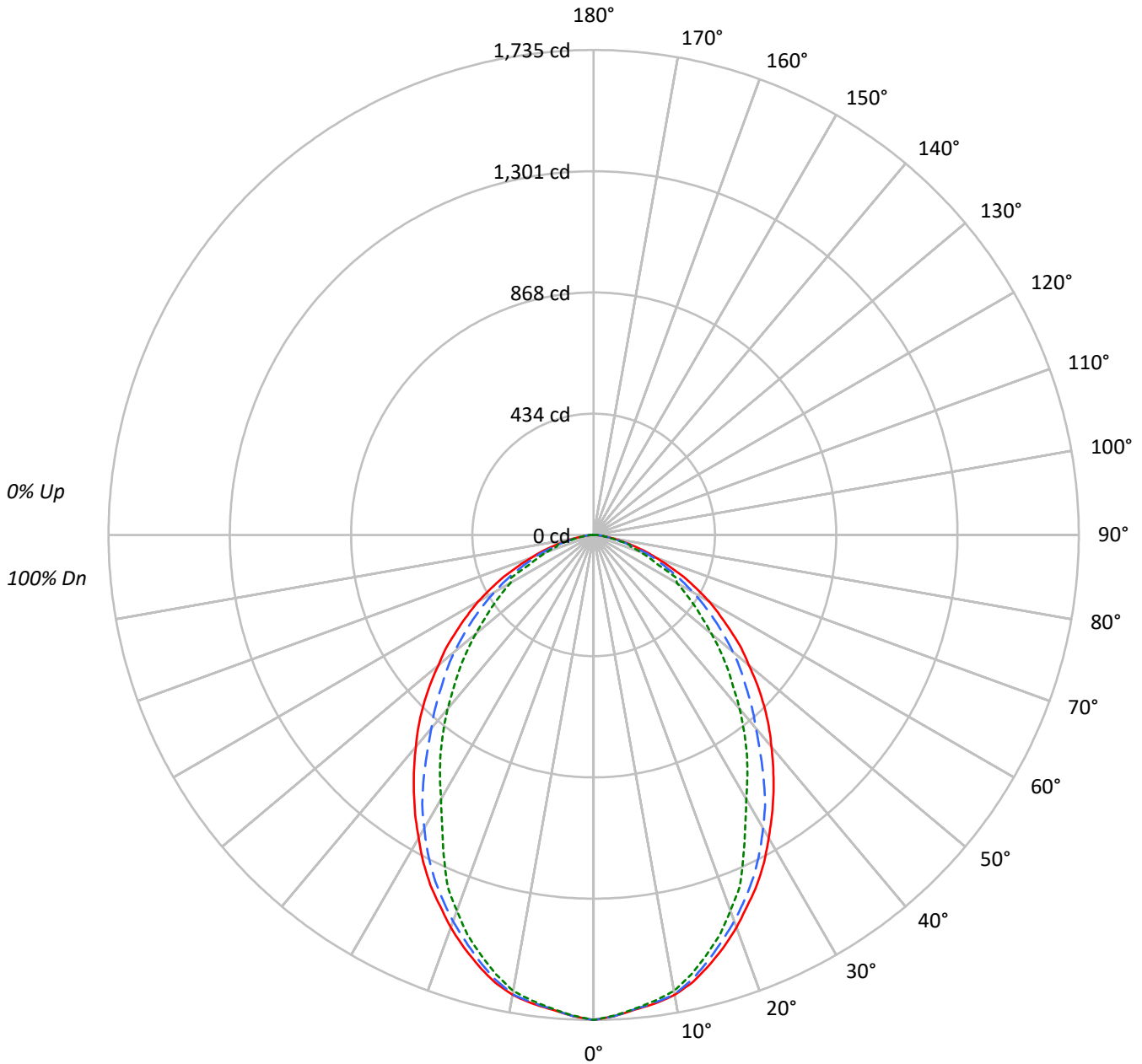
Lumens per Lamp: N/A
Luminaire Lumens: 3406.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	4669	4669	4669
5°	4605	4600	4595
10°	4565	4560	4527
15°	4442	4398	4336
20°	4279	4210	4095
25°	4103	4014	3764
30°	3889	3764	3390
35°	3683	3479	3136
40°	3473	3171	2853
45°	3275	2931	2580
50°	3031	2721	2301
55°	2804	2465	2061
60°	2569	2202	1846
65°	2260	1929	1635
70°	1862	1688	1389
75°	1481	1293	1356
80°	995	933	871
85°	621	744	868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.5	4.7
10°-20°	443.2	13.0
20°-30°	613.6	18.0
30°-40°	654.3	19.2
40°-50°	596.9	17.5
50°-60°	467.6	13.7
60°-70°	304.8	8.9
70°-80°	135.0	4.0
80°-90°	29.0	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°	1218.4	35.8
0°-40°	1872.6	55.0
0°-60°	2937.2	86.2
0°-90°	3406.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3406.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1735	1735	1735	1735	1735	
5°	1705	1703	1703	1701	1701	162
15°	1595	1595	1578	1562	1556	448
25°	1382	1374	1352	1304	1268	634
35°	1121	1113	1059	979	955	701
45°	860	842	770	706	678	663
55°	598	580	526	463	439	536
65°	355	335	303	309	257	350
75°	142	132	124	118	130	153
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1735.0	1735.0	1735.0	1735.0	1735.0
2.5°	1722.9	1722.9	1722.9	1720.9	1720.9
5°	1704.9	1702.9	1702.9	1700.9	1700.9
7.5°	1690.8	1688.8	1686.8	1684.8	1680.8
10°	1670.8	1670.8	1668.8	1658.8	1656.7
12.5°	1638.7	1636.7	1628.7	1614.6	1610.6
15°	1594.6	1594.6	1578.5	1562.5	1556.5
17.5°	1546.4	1544.4	1524.4	1508.3	1500.3
20°	1494.3	1490.3	1470.2	1444.1	1430.1
22.5°	1436.1	1436.1	1412.0	1377.9	1363.9
25°	1382.0	1373.9	1351.9	1303.7	1267.6
27.5°	1319.8	1307.7	1283.7	1215.5	1173.4
30°	1251.6	1245.6	1211.5	1123.2	1091.1
32.5°	1187.4	1177.4	1141.3	1049.0	1022.9
35°	1121.2	1113.2	1059.0	978.8	954.7
37.5°	1055.0	1045.0	976.8	912.6	882.5
40°	988.8	976.8	902.6	844.4	812.3
42.5°	926.7	910.6	838.4	776.2	740.1
45°	860.5	842.4	770.2	706.0	677.9
47.5°	794.3	778.2	712.0	645.9	613.8
50°	724.1	710.0	649.9	583.7	549.6
52.5°	665.9	643.8	585.7	519.5	491.4
55°	597.7	579.7	525.5	463.3	439.3
57.5°	535.5	517.5	467.3	409.2	389.1
60°	477.4	451.3	409.2	359.0	343.0
62.5°	413.2	393.1	357.0	314.9	335.0
65°	355.0	335.0	302.9	308.9	256.7
67.5°	290.8	280.8	252.7	224.6	216.6
70°	236.7	224.6	214.6	184.5	176.5
72.5°	188.5	176.5	162.5	146.4	140.4
75°	142.4	132.4	124.4	118.3	130.4
77.5°	98.3	94.3	88.3	82.2	80.2
80°	64.2	62.2	60.2	58.2	56.2
82.5°	38.1	38.1	38.1	38.1	38.1
85°	20.1	22.1	24.1	26.1	28.1
87.5°	12.0	12.0	14.0	16.0	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)