

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: P546778

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-80-87-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: P546778
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-24-4-LD4-2LO-35-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

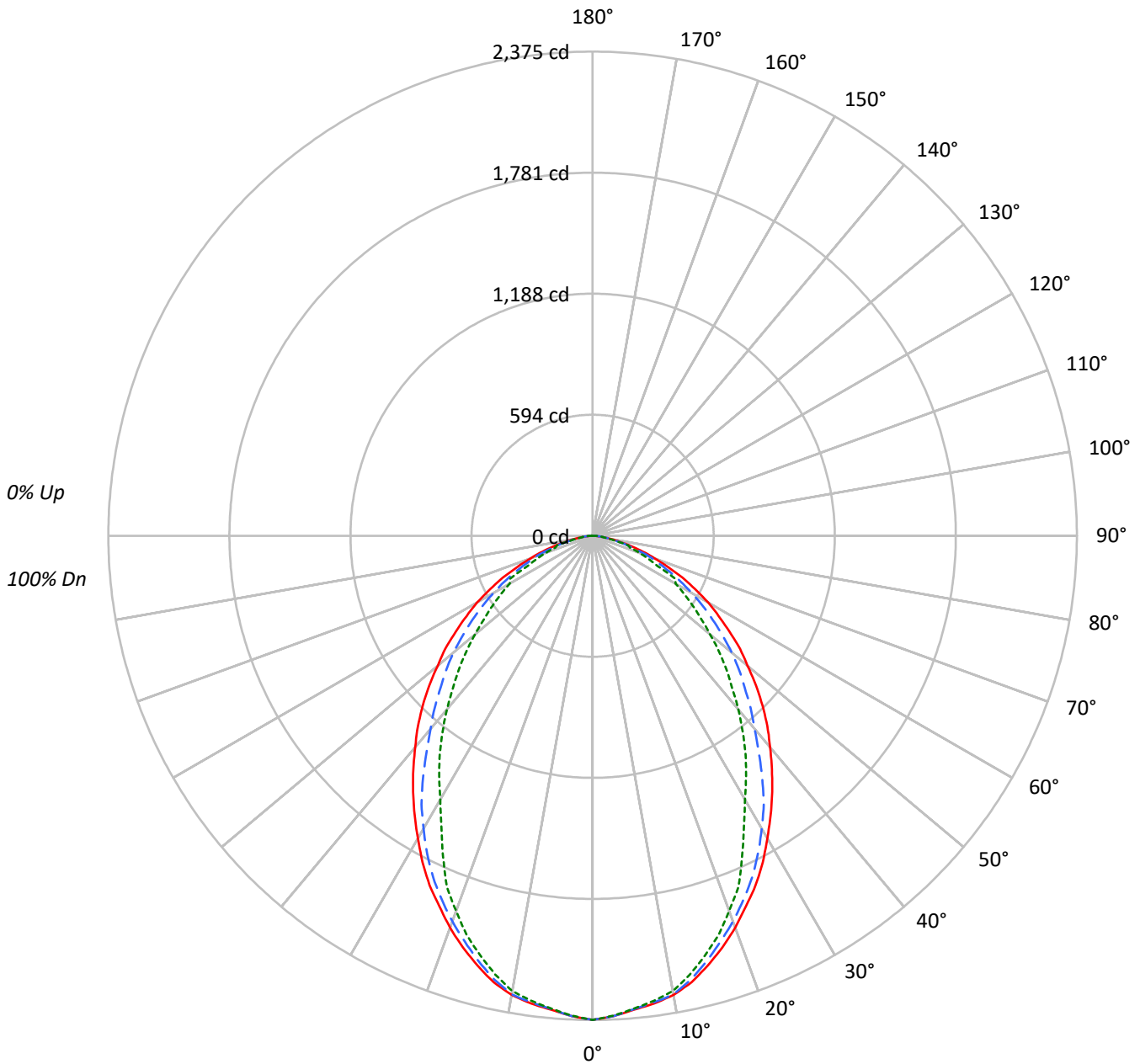
Lumens per Lamp: N/A
Luminaire Lumens: 4662.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3195	3195	3195
5°	3152	3148	3144
10°	3124	3121	3098
15°	3040	3010	2968
20°	2929	2881	2803
25°	2808	2747	2576
30°	2662	2576	2320
35°	2521	2381	2146
40°	2377	2170	1953
45°	2241	2006	1766
50°	2075	1862	1575
55°	1919	1687	1410
60°	1758	1507	1263
65°	1547	1320	1119
70°	1275	1156	950
75°	1013	885	928
80°	681	638	596
85°	425	508	593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.1	4.7
10°-20°	606.7	13.0
20°-30°	839.9	18.0
30°-40°	895.6	19.2
40°-50°	817.0	17.5
50°-60°	640.1	13.7
60°-70°	417.2	8.9
70°-80°	184.8	4.0
80°-90°	39.7	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°	1667.6	35.8
0°-40°	2563.2	55.0
0°-60°	4020.3	86.2
0°-90°	4662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2375	2375	2375	2375	2375	
5°	2334	2331	2331	2328	2328	222
15°	2183	2183	2161	2139	2130	614
25°	1892	1881	1850	1784	1735	868
35°	1535	1524	1450	1340	1307	959
45°	1178	1153	1054	966	928	907
55°	818	793	719	634	601	734
65°	486	458	415	423	351	479
75°	195	181	170	162	178	209
85°	28	30	33	36	38	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2374.8	2374.8	2374.8	2374.8	2374.8
2.5°	2358.3	2358.3	2358.3	2355.5	2355.5
5°	2333.6	2330.8	2330.8	2328.1	2328.1
7.5°	2314.4	2311.6	2308.9	2306.1	2300.6
10°	2286.9	2286.9	2284.2	2270.4	2267.7
12.5°	2243.0	2240.2	2229.3	2210.0	2204.5
15°	2182.6	2182.6	2160.6	2138.7	2130.4
17.5°	2116.7	2113.9	2086.5	2064.5	2053.6
20°	2045.3	2039.8	2012.4	1976.7	1957.5
22.5°	1965.7	1965.7	1932.8	1886.1	1866.9
25°	1891.6	1880.6	1850.4	1784.5	1735.1
27.5°	1806.5	1790.0	1757.0	1663.7	1606.1
30°	1713.1	1704.9	1658.2	1537.4	1493.5
32.5°	1625.3	1611.5	1562.1	1435.8	1400.1
35°	1534.7	1523.7	1449.6	1339.7	1306.8
37.5°	1444.1	1430.3	1337.0	1249.2	1208.0
40°	1353.5	1337.0	1235.4	1155.8	1111.9
42.5°	1268.4	1246.4	1147.6	1062.5	1013.0
45°	1177.8	1153.1	1054.2	966.4	927.9
47.5°	1087.2	1065.2	974.6	884.0	840.1
50°	991.1	971.9	889.5	798.9	752.2
52.5°	911.5	881.3	801.7	711.1	672.6
55°	818.1	793.4	719.3	634.2	601.2
57.5°	733.0	708.3	639.7	560.1	532.6
60°	653.4	617.7	560.1	491.4	469.5
62.5°	565.5	538.1	488.7	431.0	458.5
65°	485.9	458.5	414.6	422.8	351.4
67.5°	398.1	384.4	345.9	307.5	296.5
70°	324.0	307.5	293.8	252.6	241.6
72.5°	258.1	241.6	222.4	200.4	192.2
75°	194.9	181.2	170.2	162.0	178.5
77.5°	134.5	129.0	120.8	112.6	109.8
80°	87.9	85.1	82.4	79.6	76.9
82.5°	52.2	52.2	52.2	52.2	52.2
85°	27.5	30.2	32.9	35.7	38.4
87.5°	16.5	16.5	19.2	22.0	24.7
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)