

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: P546776

Luminaire Tested: **FMR-24-4-LD4-2LO-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: P546776
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-80-85-EDD
Description: 2X4 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

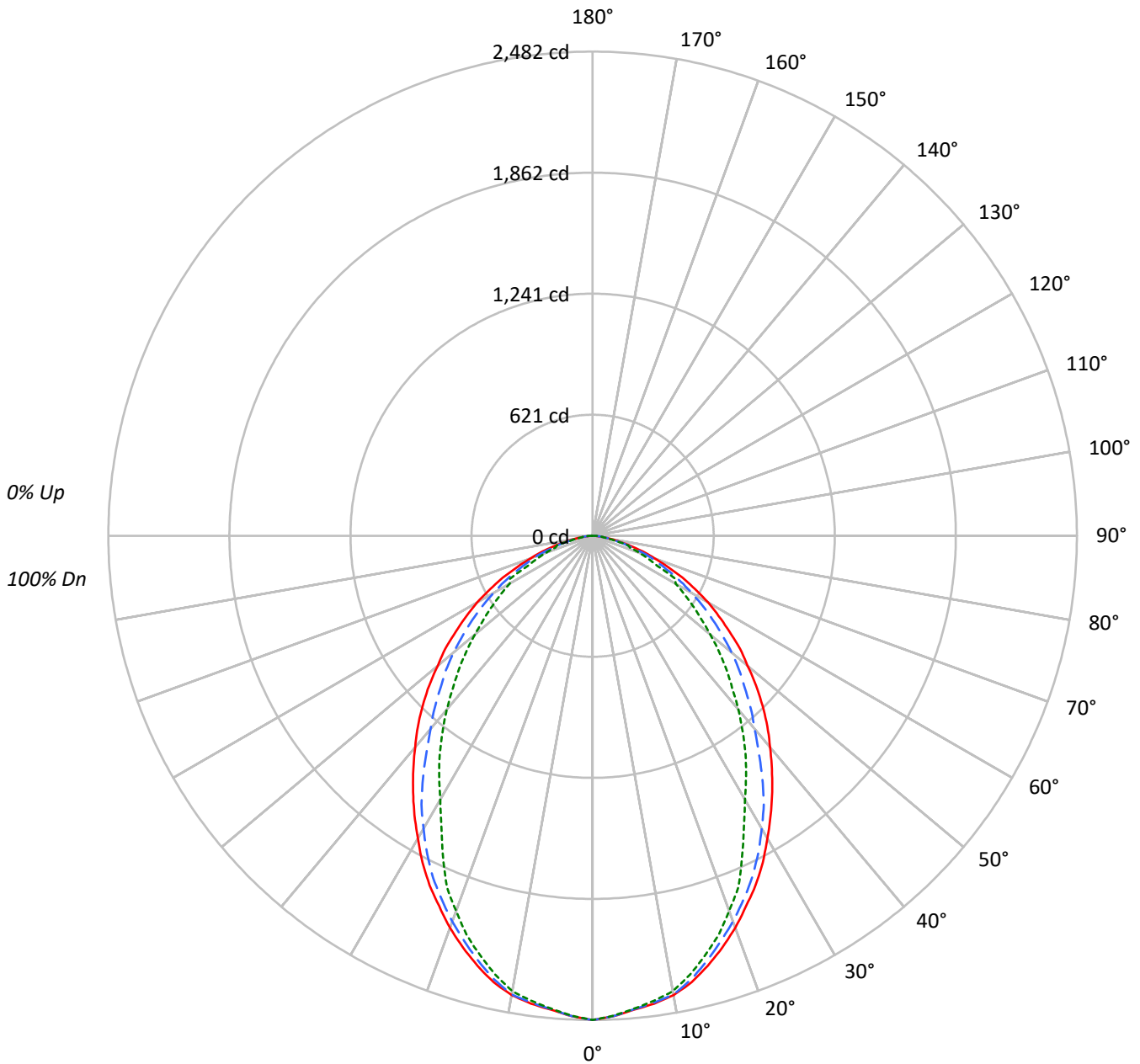
Lumens per Lamp: N/A
Luminaire Lumens: 4873.0 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3340	3340	3340
5°	3294	3291	3287
10°	3266	3262	3238
15°	3178	3146	3102
20°	3061	3012	2930
25°	2935	2871	2692
30°	2782	2693	2425
35°	2635	2489	2244
40°	2485	2268	2041
45°	2343	2097	1846
50°	2168	1946	1646
55°	2006	1764	1474
60°	1838	1575	1320
65°	1617	1379	1169
70°	1332	1208	993
75°	1059	925	970
80°	711	667	623
85°	443	531	621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.1	4.7
10°-20°	634.1	13.0
20°-30°	877.9	18.0
30°-40°	936.1	19.2
40°-50°	854.0	17.5
50°-60°	669.0	13.7
60°-70°	436.1	8.9
70°-80°	193.2	4.0
80°-90°	41.5	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°	1743.1	35.8
0°-40°	2679.2	55.0
0°-60°	4202.3	86.2
0°-90°	4873.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4873.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2482	2482	2482	2482	2482	
5°	2439	2436	2436	2434	2434	232
15°	2281	2281	2258	2236	2227	641
25°	1977	1966	1934	1865	1814	908
35°	1604	1593	1515	1400	1366	1003
45°	1231	1205	1102	1010	970	948
55°	855	829	752	663	628	767
65°	508	479	433	442	367	501
75°	204	189	178	169	186	218
85°	29	32	34	37	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2482.2	2482.2	2482.2	2482.2	2482.2
2.5°	2465.0	2465.0	2465.0	2462.2	2462.2
5°	2439.2	2436.3	2436.3	2433.5	2433.5
7.5°	2419.1	2416.2	2413.4	2410.5	2404.8
10°	2390.4	2390.4	2387.5	2373.2	2370.3
12.5°	2344.5	2341.6	2330.2	2310.1	2304.3
15°	2281.4	2281.4	2258.4	2235.5	2226.8
17.5°	2212.5	2209.6	2180.9	2158.0	2146.5
20°	2137.9	2132.1	2103.4	2066.1	2046.1
22.5°	2054.7	2054.7	2020.2	1971.4	1951.4
25°	1977.2	1965.7	1934.1	1865.3	1813.6
27.5°	1888.2	1871.0	1836.6	1739.0	1678.7
30°	1790.7	1782.0	1733.3	1607.0	1561.1
32.5°	1698.8	1684.5	1632.8	1500.8	1463.5
35°	1604.1	1592.7	1515.2	1400.4	1366.0
37.5°	1509.4	1495.1	1397.5	1305.7	1262.6
40°	1414.7	1397.5	1291.3	1208.1	1162.2
42.5°	1325.8	1302.8	1199.5	1110.6	1058.9
45°	1231.1	1205.3	1101.9	1010.1	969.9
47.5°	1136.4	1113.4	1018.7	924.0	878.1
50°	1035.9	1015.9	929.8	835.1	786.3
52.5°	952.7	921.2	837.9	743.2	703.1
55°	855.2	829.3	751.8	662.9	628.5
57.5°	766.2	740.4	668.6	585.4	556.7
60°	683.0	645.7	585.4	513.7	490.7
62.5°	591.1	562.5	510.8	450.5	479.2
65°	507.9	479.2	433.3	441.9	367.3
67.5°	416.1	401.8	361.6	321.4	309.9
70°	338.6	321.4	307.1	264.0	252.5
72.5°	269.7	252.5	232.4	209.5	200.9
75°	203.7	189.4	177.9	169.3	186.5
77.5°	140.6	134.9	126.3	117.7	114.8
80°	91.8	89.0	86.1	83.2	80.4
82.5°	54.5	54.5	54.5	54.5	54.5
85°	28.7	31.6	34.4	37.3	40.2
87.5°	17.2	17.2	20.1	23.0	25.8
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)