

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: P546806

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-93-97-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: P546806
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-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

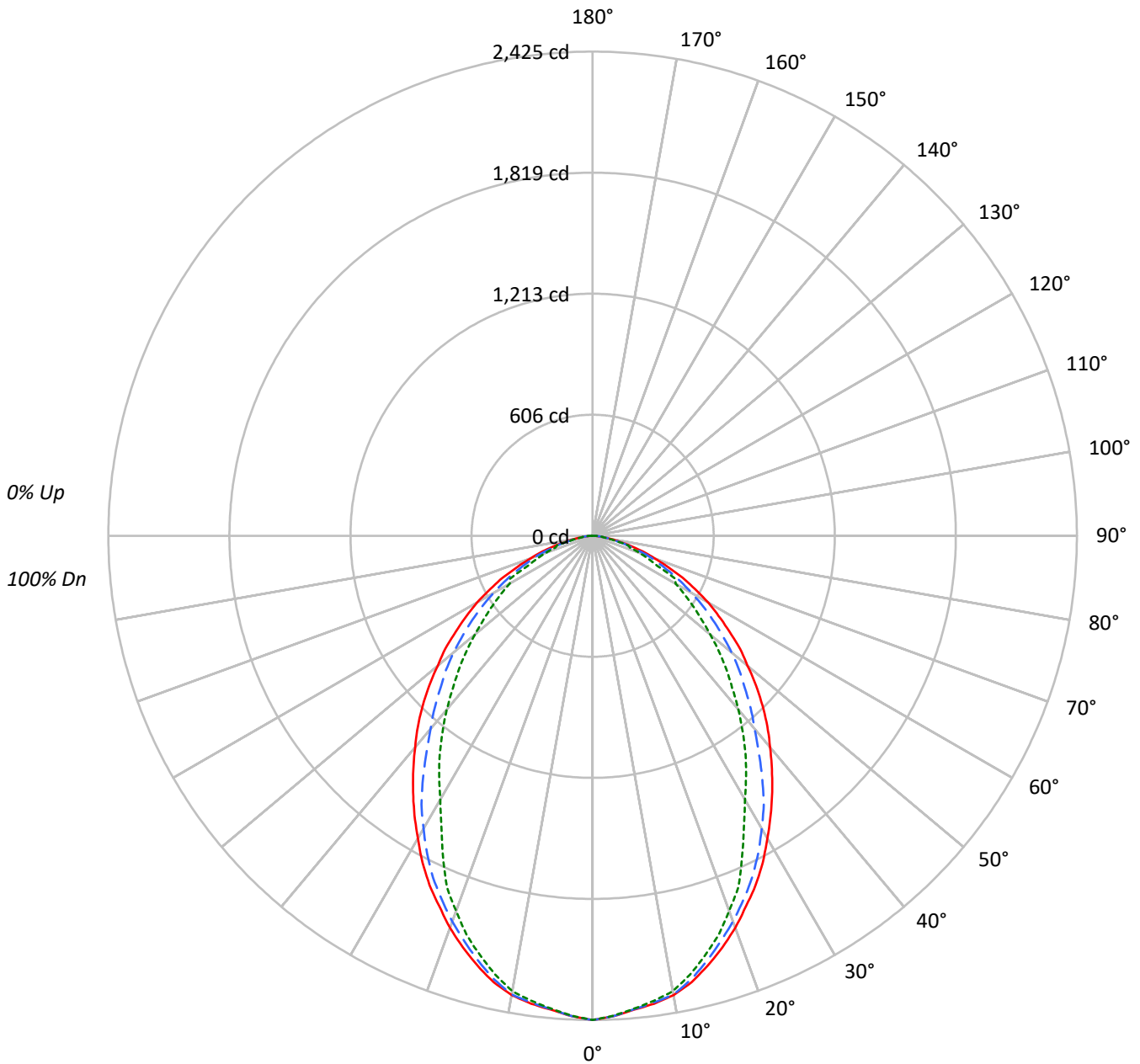
Lumens per Lamp: N/A
Luminaire Lumens: 4761.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P546806

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-93-97-EDD

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°	3263	3263	3263
5°	3219	3215	3211
10°	3191	3187	3164
15°	3105	3074	3031
20°	2991	2943	2862
25°	2868	2805	2631
30°	2718	2631	2370
35°	2574	2431	2192
40°	2428	2216	1994
45°	2289	2049	1803
50°	2119	1901	1608
55°	1960	1723	1440
60°	1796	1539	1290
65°	1580	1348	1143
70°	1301	1180	971
75°	1035	904	947
80°	695	652	608
85°	432	519	607



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.8	4.7
10°-20°	619.6	13.0
20°-30°	857.7	18.0
30°-40°	914.6	19.2
40°-50°	834.4	17.5
50°-60°	653.7	13.7
60°-70°	426.0	8.9
70°-80°	188.7	4.0
80°-90°	40.5	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°	1703.0	35.8
0°-40°	2617.6	55.0
0°-60°	4105.7	86.2
0°-90°	4761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2425	2425	2425	2425	2425	
5°	2383	2380	2380	2378	2378	226
15°	2229	2229	2206	2184	2176	627
25°	1932	1920	1890	1822	1772	887
35°	1567	1556	1480	1368	1335	980
45°	1203	1178	1077	987	948	927
55°	836	810	735	648	614	749
65°	496	468	423	432	359	489
75°	199	185	174	165	182	213
85°	28	31	34	36	39	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2425.2	2425.2	2425.2	2425.2	2425.2
2.5°	2408.4	2408.4	2408.4	2405.6	2405.6
5°	2383.1	2380.3	2380.3	2377.5	2377.5
7.5°	2363.5	2360.7	2357.9	2355.1	2349.5
10°	2335.5	2335.5	2332.7	2318.6	2315.8
12.5°	2290.6	2287.8	2276.6	2257.0	2251.4
15°	2228.9	2228.9	2206.5	2184.1	2175.7
17.5°	2161.6	2158.8	2130.8	2108.4	2097.2
20°	2088.7	2083.1	2055.1	2018.7	1999.0
22.5°	2007.4	2007.4	1973.8	1926.1	1906.5
25°	1931.7	1920.5	1889.7	1822.4	1771.9
27.5°	1844.8	1828.0	1794.4	1699.0	1640.2
30°	1749.5	1741.1	1693.4	1570.1	1525.2
32.5°	1659.8	1645.8	1595.3	1466.3	1429.9
35°	1567.3	1556.0	1480.3	1368.2	1334.6
37.5°	1474.7	1460.7	1365.4	1275.7	1233.6
40°	1382.2	1365.4	1261.7	1180.4	1135.5
42.5°	1295.3	1272.9	1171.9	1085.0	1034.6
45°	1202.8	1177.5	1076.6	986.9	947.6
47.5°	1110.3	1087.8	995.3	902.8	857.9
50°	1012.1	992.5	908.4	815.9	768.2
52.5°	930.8	900.0	818.7	726.2	686.9
55°	835.5	810.3	734.6	647.7	614.0
57.5°	748.6	723.4	653.3	572.0	543.9
60°	667.3	630.8	572.0	501.9	479.4
62.5°	577.6	549.5	499.1	440.2	468.2
65°	496.3	468.2	423.4	431.8	358.9
67.5°	406.5	392.5	353.3	314.0	302.8
70°	330.8	314.0	300.0	257.9	246.7
72.5°	263.5	246.7	227.1	204.7	196.3
75°	199.1	185.0	173.8	165.4	182.2
77.5°	137.4	131.8	123.4	115.0	112.1
80°	89.7	86.9	84.1	81.3	78.5
82.5°	53.3	53.3	53.3	53.3	53.3
85°	28.0	30.8	33.6	36.4	39.3
87.5°	16.8	16.8	19.6	22.4	25.2
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)