

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: P546843

Luminaire Tested: **FMR-24-4-LD4-2LO-50-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: P546843
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-50-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

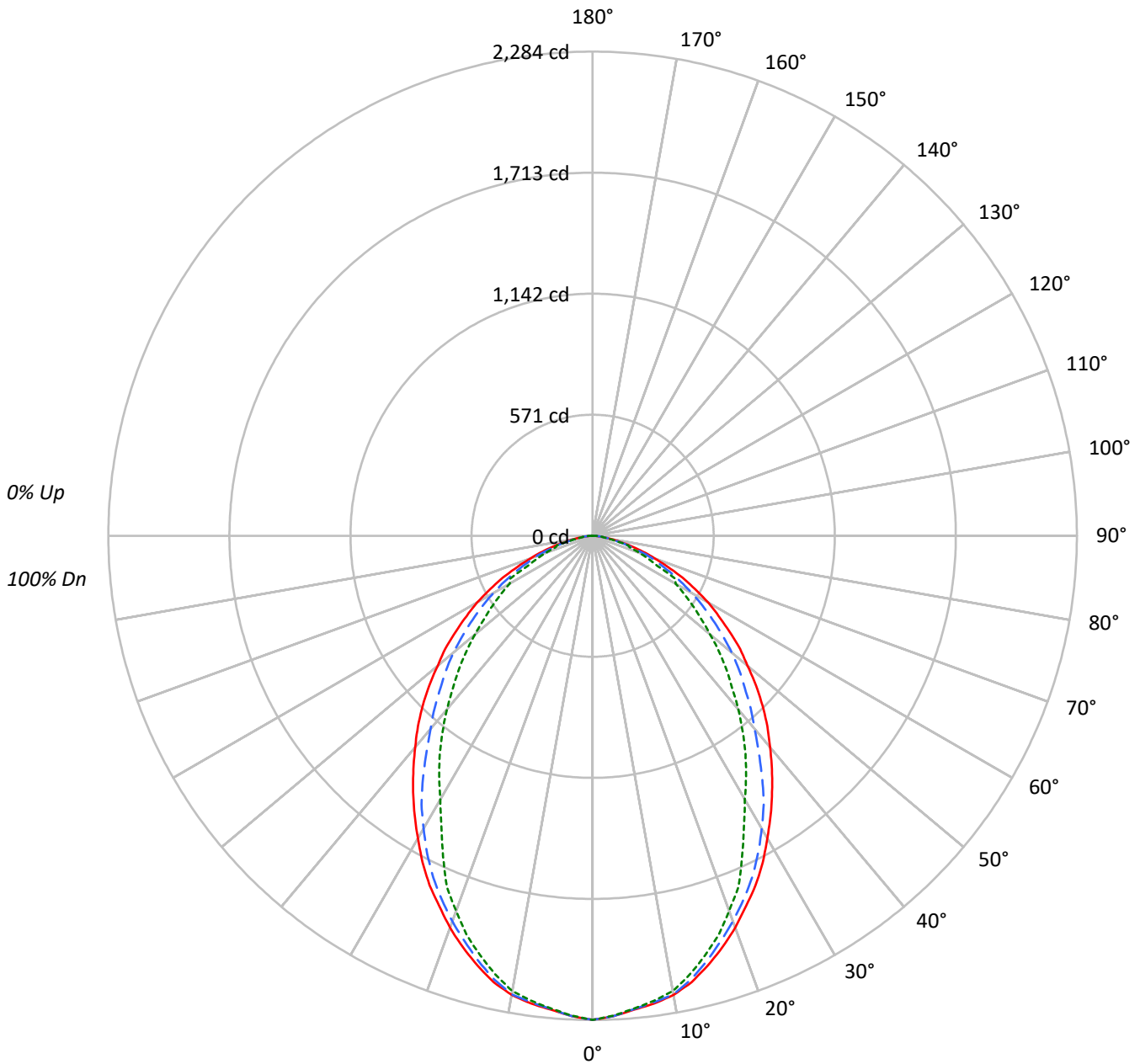
Lumens per Lamp: N/A
Luminaire Lumens: 4483.0 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3073	3073	3073
5°	3031	3027	3024
10°	3005	3001	2979
15°	2924	2894	2854
20°	2816	2771	2695
25°	2700	2642	2477
30°	2559	2477	2231
35°	2424	2290	2064
40°	2286	2087	1878
45°	2155	1929	1698
50°	1995	1791	1514
55°	1845	1623	1356
60°	1691	1449	1215
65°	1488	1269	1076
70°	1225	1111	914
75°	974	851	892
80°	655	614	573
85°	408	489	571



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.6	4.7
10°-20°	583.4	13.0
20°-30°	807.7	18.0
30°-40°	861.2	19.2
40°-50°	785.7	17.5
50°-60°	615.5	13.7
60°-70°	401.2	8.9
70°-80°	177.7	4.0
80°-90°	38.2	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°	1603.6	35.8
0°-40°	2464.8	55.0
0°-60°	3866.0	86.2
0°-90°	4483.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4483.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2284	2284	2284	2284	2284	
5°	2244	2241	2241	2239	2239	213
15°	2099	2099	2078	2056	2049	590
25°	1819	1808	1779	1716	1668	835
35°	1476	1465	1394	1288	1257	923
45°	1133	1109	1014	929	892	872
55°	787	763	692	610	578	706
65°	467	441	399	407	338	460
75°	187	174	164	156	172	201
85°	26	29	32	34	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2283.6	2283.6	2283.6	2283.6	2283.6
2.5°	2267.7	2267.7	2267.7	2265.1	2265.1
5°	2244.0	2241.3	2241.3	2238.7	2238.7
7.5°	2225.5	2222.9	2220.2	2217.6	2212.3
10°	2199.1	2199.1	2196.5	2183.3	2180.6
12.5°	2156.9	2154.2	2143.7	2125.2	2119.9
15°	2098.8	2098.8	2077.7	2056.5	2048.6
17.5°	2035.4	2032.8	2006.4	1985.3	1974.7
20°	1966.8	1961.5	1935.1	1900.8	1882.3
22.5°	1890.2	1890.2	1858.5	1813.7	1795.2
25°	1818.9	1808.4	1779.3	1716.0	1668.5
27.5°	1737.1	1721.3	1689.6	1599.8	1544.4
30°	1647.3	1639.4	1594.5	1478.4	1436.1
32.5°	1562.9	1549.7	1502.1	1380.7	1346.4
35°	1475.7	1465.2	1393.9	1288.3	1256.6
37.5°	1388.6	1375.4	1285.7	1201.2	1161.6
40°	1301.5	1285.7	1188.0	1111.4	1069.2
42.5°	1219.7	1198.5	1103.5	1021.7	974.2
45°	1132.6	1108.8	1013.8	929.3	892.3
47.5°	1045.4	1024.3	937.2	850.1	807.8
50°	953.0	934.6	855.4	768.2	723.4
52.5°	876.5	847.4	770.9	683.8	646.8
55°	786.7	763.0	691.7	609.8	578.2
57.5°	704.9	681.1	615.1	538.6	512.2
60°	628.3	594.0	538.6	472.6	451.4
62.5°	543.8	517.4	469.9	414.5	440.9
65°	467.3	440.9	398.6	406.6	337.9
67.5°	382.8	369.6	332.6	295.7	285.1
70°	311.5	295.7	282.5	242.9	232.3
72.5°	248.2	232.3	213.8	192.7	184.8
75°	187.4	174.2	163.7	155.8	171.6
77.5°	129.4	124.1	116.2	108.2	105.6
80°	84.5	81.8	79.2	76.6	73.9
82.5°	50.2	50.2	50.2	50.2	50.2
85°	26.4	29.0	31.7	34.3	37.0
87.5°	15.8	15.8	18.5	21.1	23.8
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)