

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: P546811

Luminaire Tested: **FMR-24-4-LD4-2LO-40-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: P546811
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

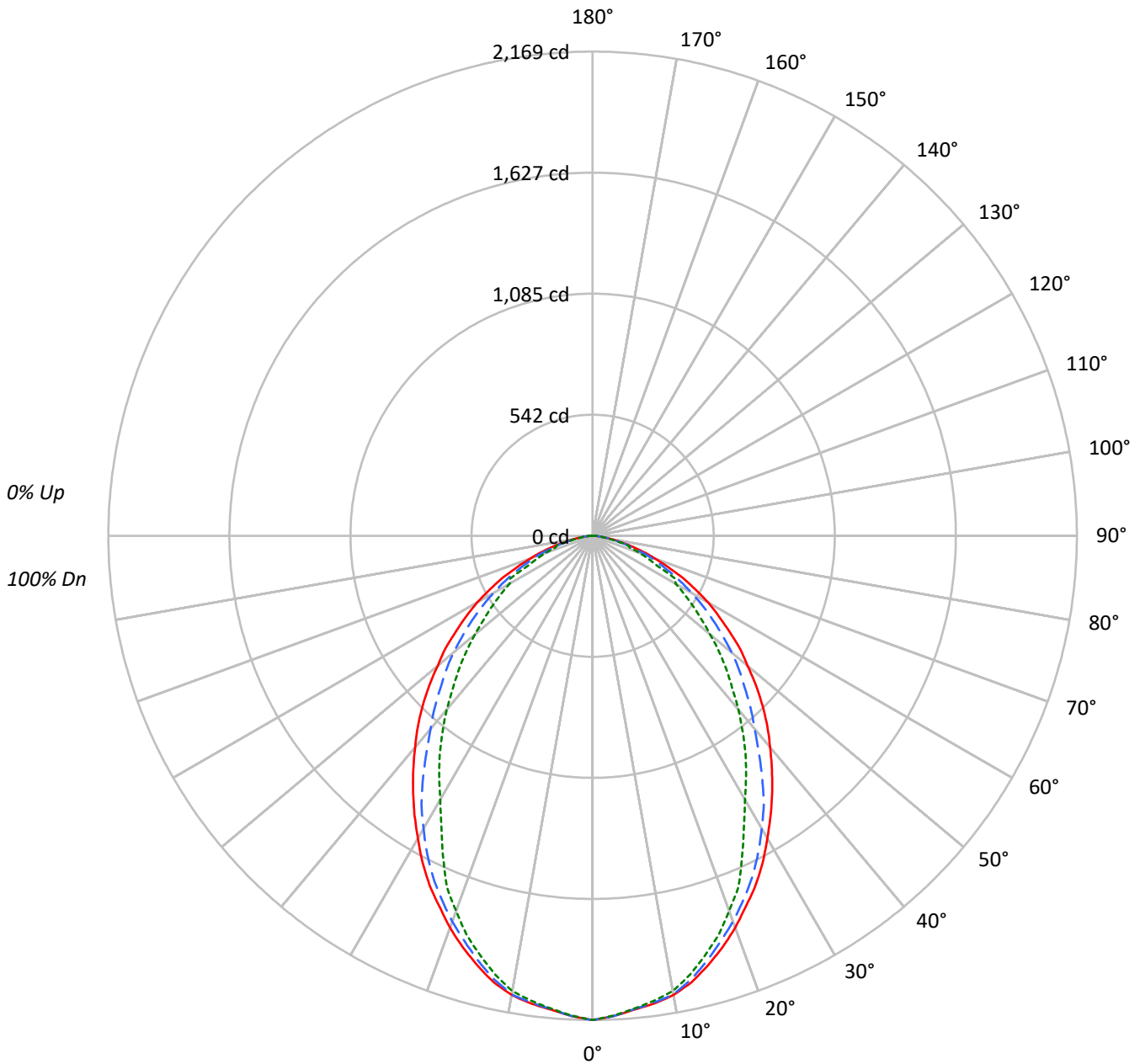
Lumens per Lamp: N/A
Luminaire Lumens: 4258.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2918	2918	2918
5°	2879	2875	2872
10°	2854	2850	2830
15°	2777	2749	2710
20°	2675	2632	2560
25°	2565	2509	2353
30°	2431	2353	2119
35°	2302	2175	1961
40°	2171	1982	1784
45°	2047	1832	1613
50°	1895	1701	1438
55°	1753	1541	1288
60°	1606	1376	1154
65°	1413	1205	1022
70°	1164	1055	868
75°	925	808	847
80°	621	583	544
85°	387	465	542



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.9	4.7
10°-20°	554.1	13.0
20°-30°	767.1	18.0
30°-40°	818.0	19.2
40°-50°	746.2	17.5
50°-60°	584.6	13.7
60°-70°	381.0	8.9
70°-80°	168.8	4.0
80°-90°	36.2	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°	1523.1	35.8
0°-40°	2341.1	55.0
0°-60°	3671.9	86.2
0°-90°	4258.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4258.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2169	2169	2169	2169	2169	
5°	2131	2129	2129	2126	2126	202
15°	1993	1993	1973	1953	1946	560
25°	1728	1718	1690	1630	1585	793
35°	1402	1392	1324	1224	1194	876
45°	1076	1053	963	883	848	829
55°	747	725	657	579	549	670
65°	444	419	379	386	321	437
75°	178	166	156	148	163	191
85°	25	28	30	33	35	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2169.0	2169.0	2169.0	2169.0	2169.0
2.5°	2153.9	2153.9	2153.9	2151.4	2151.4
5°	2131.4	2128.8	2128.8	2126.3	2126.3
7.5°	2113.8	2111.3	2108.8	2106.3	2101.3
10°	2088.7	2088.7	2086.2	2073.7	2071.2
12.5°	2048.6	2046.1	2036.1	2018.5	2013.5
15°	1993.4	1993.4	1973.4	1953.3	1945.8
17.5°	1933.3	1930.8	1905.7	1885.6	1875.6
20°	1868.1	1863.1	1838.0	1805.4	1787.8
22.5°	1795.4	1795.4	1765.3	1722.6	1705.1
25°	1727.7	1717.6	1690.0	1629.9	1584.7
27.5°	1649.9	1634.9	1604.8	1519.5	1466.9
30°	1564.7	1557.1	1514.5	1404.2	1364.1
32.5°	1484.4	1471.9	1426.8	1311.4	1278.8
35°	1401.7	1391.7	1323.9	1223.6	1193.6
37.5°	1318.9	1306.4	1221.1	1140.9	1103.3
40°	1236.2	1221.1	1128.4	1055.6	1015.5
42.5°	1158.5	1138.4	1048.1	970.4	925.3
45°	1075.7	1053.1	962.9	882.6	847.5
47.5°	993.0	972.9	890.2	807.4	767.3
50°	905.2	887.6	812.4	729.7	687.0
52.5°	832.5	804.9	732.2	649.4	614.3
55°	747.2	724.7	657.0	579.2	549.1
57.5°	669.5	646.9	584.2	511.5	486.5
60°	596.8	564.2	511.5	448.8	428.8
62.5°	516.5	491.5	446.3	393.7	418.7
65°	443.8	418.7	378.6	386.2	321.0
67.5°	363.6	351.0	315.9	280.8	270.8
70°	295.9	280.8	268.3	230.7	220.7
72.5°	235.7	220.7	203.1	183.0	175.5
75°	178.0	165.5	155.5	147.9	163.0
77.5°	122.9	117.9	110.3	102.8	100.3
80°	80.2	77.7	75.2	72.7	70.2
82.5°	47.6	47.6	47.6	47.6	47.6
85°	25.1	27.6	30.1	32.6	35.1
87.5°	15.0	15.0	17.6	20.1	22.6
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)