

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: P546430

Luminaire Tested: **FMR-24-4-LD4-1HI-35-UNV-80-97-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: P546430
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-LD4-1HI-35-UNV-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

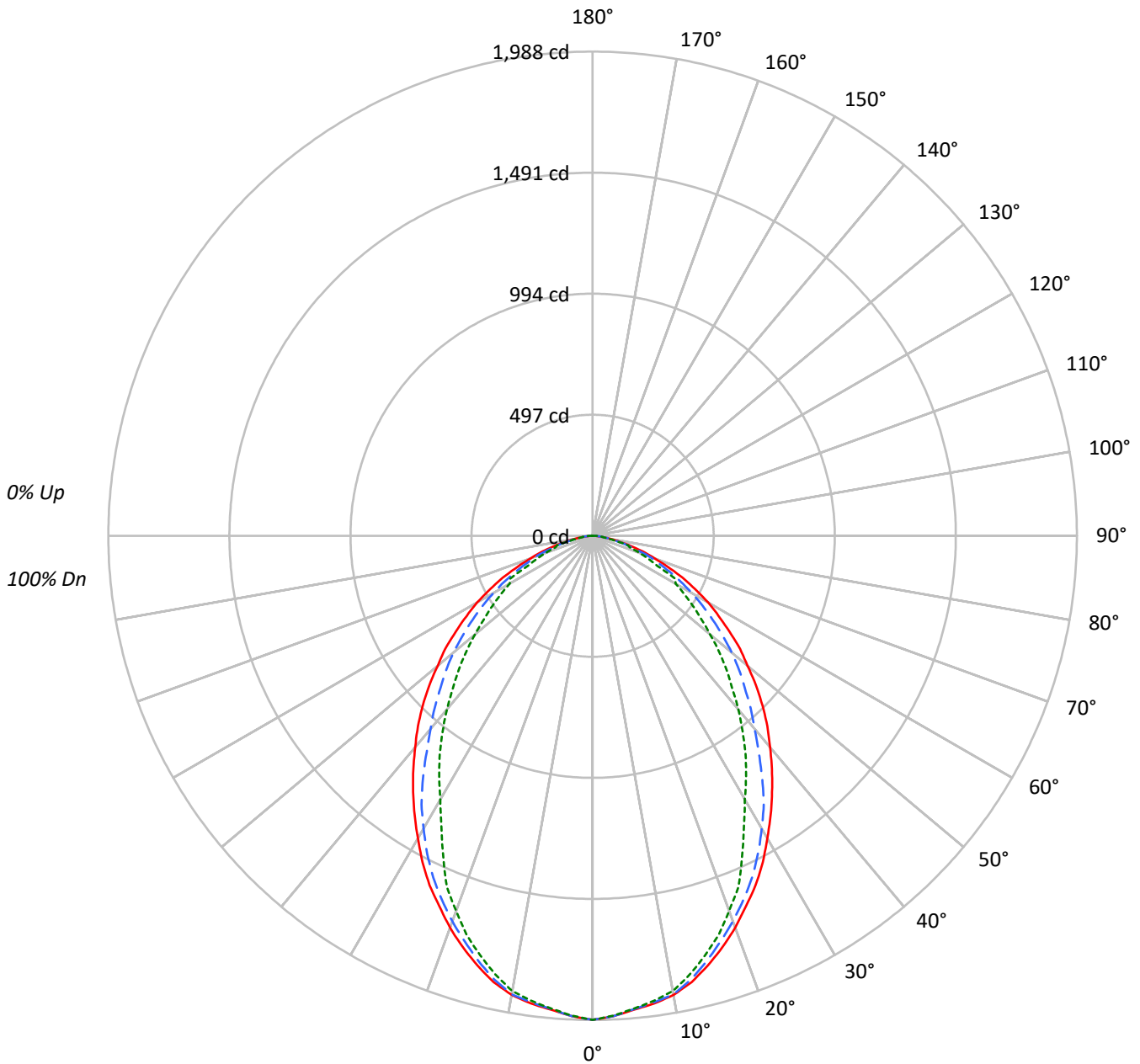
Lumens per Lamp: N/A
Luminaire Lumens: 3902.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	2674	2674	2674
5°	2638	2635	2632
10°	2615	2612	2593
15°	2545	2519	2484
20°	2451	2412	2346
25°	2350	2299	2156
30°	2228	2156	1942
35°	2110	1993	1797
40°	1990	1816	1635
45°	1876	1679	1478
50°	1736	1558	1318
55°	1606	1412	1180
60°	1472	1262	1057
65°	1295	1105	936
70°	1066	967	795
75°	848	741	777
80°	570	534	498
85°	355	426	497



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.0	4.7
10°-20°	507.8	13.0
20°-30°	703.0	18.0
30°-40°	749.6	19.2
40°-50°	683.8	17.5
50°-60°	535.7	13.7
60°-70°	349.2	8.9
70°-80°	154.7	4.0
80°-90°	33.2	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°	1395.8	35.8
0°-40°	2145.4	55.0
0°-60°	3364.9	86.2
0°-90°	3902.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3902.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1988	1988	1988	1988	1988	
5°	1953	1951	1951	1949	1949	185
15°	1827	1827	1808	1790	1783	514
25°	1583	1574	1549	1494	1452	727
35°	1284	1275	1213	1121	1094	803
45°	986	965	882	809	777	759
55°	685	664	602	531	503	614
65°	407	384	347	354	294	401
75°	163	152	142	136	149	175
85°	23	25	28	30	32	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1987.6	1987.6	1987.6	1987.6	1987.6
2.5°	1973.8	1973.8	1973.8	1971.5	1971.5
5°	1953.2	1950.9	1950.9	1948.6	1948.6
7.5°	1937.1	1934.8	1932.5	1930.2	1925.6
10°	1914.1	1914.1	1911.8	1900.3	1898.0
12.5°	1877.3	1875.0	1865.8	1849.8	1845.2
15°	1826.8	1826.8	1808.4	1790.0	1783.1
17.5°	1771.6	1769.3	1746.4	1728.0	1718.8
20°	1711.9	1707.3	1684.3	1654.4	1638.4
22.5°	1645.2	1645.2	1617.7	1578.6	1562.5
25°	1583.2	1574.0	1548.7	1493.6	1452.2
27.5°	1512.0	1498.2	1470.6	1392.5	1344.2
30°	1433.8	1427.0	1387.9	1286.8	1250.0
32.5°	1360.3	1348.8	1307.5	1201.8	1171.9
35°	1284.5	1275.3	1213.3	1121.3	1093.8
37.5°	1208.7	1197.2	1119.0	1045.5	1011.0
40°	1132.8	1119.0	1034.0	967.4	930.6
42.5°	1061.6	1043.2	960.5	889.3	847.9
45°	985.8	965.1	882.4	808.8	776.7
47.5°	909.9	891.6	815.7	739.9	703.1
50°	829.5	813.4	744.5	668.7	629.6
52.5°	762.9	737.6	671.0	595.1	563.0
55°	684.8	664.1	602.0	530.8	503.2
57.5°	613.5	592.8	535.4	468.8	445.8
60°	546.9	517.0	468.8	411.3	392.9
62.5°	473.4	450.4	409.0	360.8	383.7
65°	406.7	383.7	347.0	353.9	294.1
67.5°	333.2	321.7	289.5	257.4	248.2
70°	271.1	257.4	245.9	211.4	202.2
72.5°	216.0	202.2	186.1	167.7	160.8
75°	163.1	151.7	142.5	135.6	149.4
77.5°	112.6	108.0	101.1	94.2	91.9
80°	73.5	71.2	68.9	66.6	64.3
82.5°	43.7	43.7	43.7	43.7	43.7
85°	23.0	25.3	27.6	29.9	32.2
87.5°	13.8	13.8	16.1	18.4	20.7
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)