

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: P546804

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-93-94-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: P546804
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-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

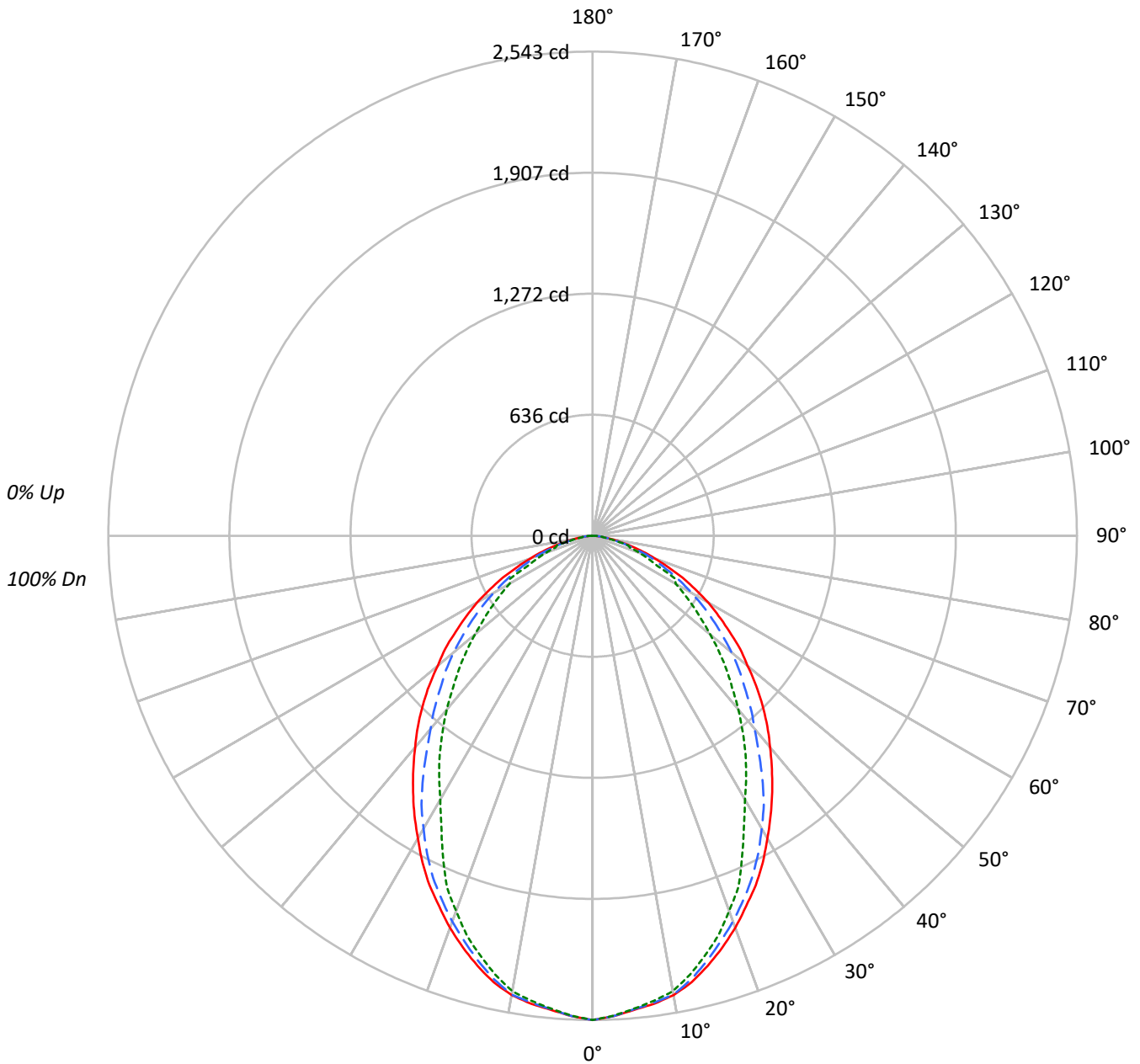
Lumens per Lamp: N/A
Luminaire Lumens: 4993.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	3422	3422	3422
5°	3376	3372	3368
10°	3346	3342	3318
15°	3256	3223	3178
20°	3136	3086	3002
25°	3008	2942	2759
30°	2851	2759	2485
35°	2700	2550	2299
40°	2546	2324	2092
45°	2400	2148	1891
50°	2222	1994	1686
55°	2055	1807	1510
60°	1883	1614	1353
65°	1657	1414	1198
70°	1365	1238	1018
75°	1085	948	993
80°	729	683	638
85°	454	545	636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.8	4.7
10°-20°	649.7	13.0
20°-30°	899.5	18.0
30°-40°	959.2	19.2
40°-50°	875.0	17.5
50°-60°	685.5	13.7
60°-70°	446.8	8.9
70°-80°	198.0	4.0
80°-90°	42.5	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°	1786.0	35.8
0°-40°	2745.2	55.0
0°-60°	4305.8	86.2
0°-90°	4993.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4993.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2543	2543	2543	2543	2543	
5°	2499	2496	2496	2493	2493	237
15°	2338	2338	2314	2290	2282	657
25°	2026	2014	1982	1911	1858	930
35°	1644	1632	1552	1435	1400	1028
45°	1261	1235	1129	1035	994	972
55°	876	850	770	679	644	786
65°	520	491	444	453	376	513
75°	209	194	182	174	191	224
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2543.4	2543.4	2543.4	2543.4	2543.4
2.5°	2525.7	2525.7	2525.7	2522.8	2522.8
5°	2499.3	2496.3	2496.3	2493.4	2493.4
7.5°	2478.7	2475.7	2472.8	2469.9	2464.0
10°	2449.3	2449.3	2446.3	2431.6	2428.7
12.5°	2402.2	2399.3	2387.5	2366.9	2361.1
15°	2337.5	2337.5	2314.0	2290.5	2281.7
17.5°	2267.0	2264.0	2234.6	2211.1	2199.4
20°	2190.5	2184.6	2155.2	2117.0	2096.4
22.5°	2105.3	2105.3	2070.0	2020.0	1999.4
25°	2025.9	2014.1	1981.8	1911.2	1858.3
27.5°	1934.7	1917.1	1881.8	1781.8	1720.1
30°	1834.8	1825.9	1775.9	1646.6	1599.5
32.5°	1740.7	1726.0	1673.0	1537.8	1499.6
35°	1643.6	1631.9	1552.5	1434.9	1399.6
37.5°	1546.6	1531.9	1431.9	1337.8	1293.7
40°	1449.6	1431.9	1323.1	1237.9	1190.8
42.5°	1358.4	1334.9	1229.0	1137.9	1085.0
45°	1261.4	1234.9	1129.1	1035.0	993.8
47.5°	1164.4	1140.8	1043.8	946.8	899.7
50°	1061.5	1040.9	952.7	855.6	805.6
52.5°	976.2	943.8	858.6	761.5	720.4
55°	876.2	849.7	770.4	679.2	643.9
57.5°	785.1	758.6	685.1	599.8	570.4
60°	699.8	661.6	599.8	526.3	502.8
62.5°	605.7	576.3	523.4	461.6	491.0
65°	520.4	491.0	444.0	452.8	376.4
67.5°	426.3	411.6	370.5	329.3	317.6
70°	347.0	329.3	314.6	270.5	258.7
72.5°	276.4	258.7	238.2	214.6	205.8
75°	208.8	194.1	182.3	173.5	191.1
77.5°	144.1	138.2	129.4	120.6	117.6
80°	94.1	91.1	88.2	85.3	82.3
82.5°	55.9	55.9	55.9	55.9	55.9
85°	29.4	32.3	35.3	38.2	41.2
87.5°	17.6	17.6	20.6	23.5	26.5
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)