

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: P546863

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-93-84-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: P546863
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-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

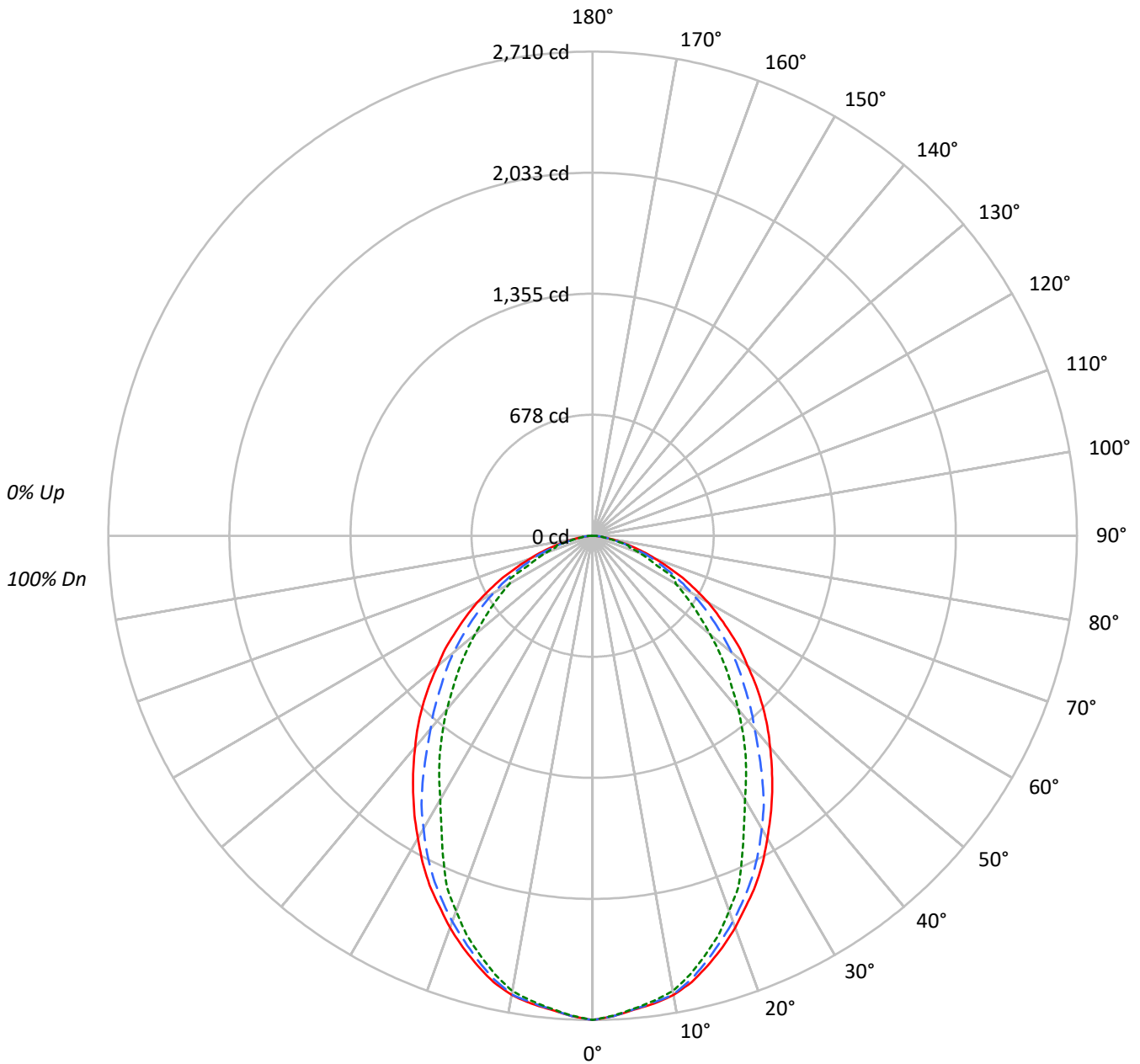
Lumens per Lamp: N/A
Luminaire Lumens: 5320.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3646	3646	3646
5°	3597	3592	3588
10°	3565	3561	3536
15°	3469	3434	3386
20°	3342	3288	3198
25°	3205	3135	2939
30°	3037	2940	2648
35°	2877	2717	2449
40°	2713	2476	2229
45°	2557	2289	2015
50°	2367	2125	1797
55°	2190	1925	1609
60°	2006	1720	1442
65°	1765	1506	1277
70°	1454	1319	1085
75°	1156	1010	1058
80°	777	728	680
85°	483	580	678



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.3	4.7
10°-20°	692.3	13.0
20°-30°	958.4	18.0
30°-40°	1022.0	19.2
40°-50°	932.3	17.5
50°-60°	730.4	13.7
60°-70°	476.1	8.9
70°-80°	210.9	4.0
80°-90°	45.3	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°	1903.0	35.8
0°-40°	2925.0	55.0
0°-60°	4587.8	86.2
0°-90°	5320.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5320.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2710	2710	2710	2710	2710	
5°	2663	2660	2660	2657	2657	253
15°	2491	2491	2466	2440	2431	700
25°	2159	2146	2112	2036	1980	991
35°	1751	1739	1654	1529	1491	1095
45°	1344	1316	1203	1103	1059	1035
55°	934	905	821	724	686	837
65°	554	523	473	482	401	546
75°	222	207	194	185	204	238
85°	31	34	38	41	44	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2709.9	2709.9	2709.9	2709.9	2709.9
2.5°	2691.1	2691.1	2691.1	2688.0	2688.0
5°	2662.9	2659.8	2659.8	2656.7	2656.7
7.5°	2641.0	2637.9	2634.7	2631.6	2625.3
10°	2609.7	2609.7	2606.6	2590.9	2587.8
12.5°	2559.6	2556.4	2543.9	2522.0	2515.7
15°	2490.6	2490.6	2465.6	2440.5	2431.1
17.5°	2415.4	2412.3	2381.0	2355.9	2343.4
20°	2334.0	2327.7	2296.4	2255.7	2233.7
22.5°	2243.1	2243.1	2205.5	2152.3	2130.4
25°	2158.6	2146.0	2111.6	2036.4	1980.0
27.5°	2061.4	2042.6	2005.0	1898.5	1832.7
30°	1954.9	1945.5	1892.3	1754.4	1704.3
32.5°	1854.7	1839.0	1782.6	1638.5	1597.8
35°	1751.3	1738.7	1654.2	1528.8	1491.2
37.5°	1647.9	1632.2	1525.7	1425.5	1378.5
40°	1544.5	1525.7	1409.8	1318.9	1268.8
42.5°	1447.4	1422.3	1309.5	1212.4	1156.0
45°	1344.0	1315.8	1203.0	1102.8	1058.9
47.5°	1240.6	1215.6	1112.2	1008.8	958.7
50°	1131.0	1109.0	1015.1	911.7	858.4
52.5°	1040.1	1005.7	914.8	811.4	767.6
55°	933.6	905.4	820.8	723.7	686.1
57.5°	836.5	808.3	730.0	639.1	607.8
60°	745.6	704.9	639.1	560.8	535.7
62.5°	645.4	614.0	557.7	491.9	523.2
65°	554.5	523.2	473.1	482.5	401.0
67.5°	454.3	438.6	394.7	350.9	338.4
70°	369.7	350.9	335.2	288.2	275.7
72.5°	294.5	275.7	253.8	228.7	219.3
75°	222.4	206.8	194.2	184.8	203.6
77.5°	153.5	147.2	137.8	128.4	125.3
80°	100.3	97.1	94.0	90.9	87.7
82.5°	59.5	59.5	59.5	59.5	59.5
85°	31.3	34.5	37.6	40.7	43.9
87.5°	18.8	18.8	21.9	25.1	28.2
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)