

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: P546868

Luminaire Tested: **FMR-24-4-LD4-2LO-50-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: P546868
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-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

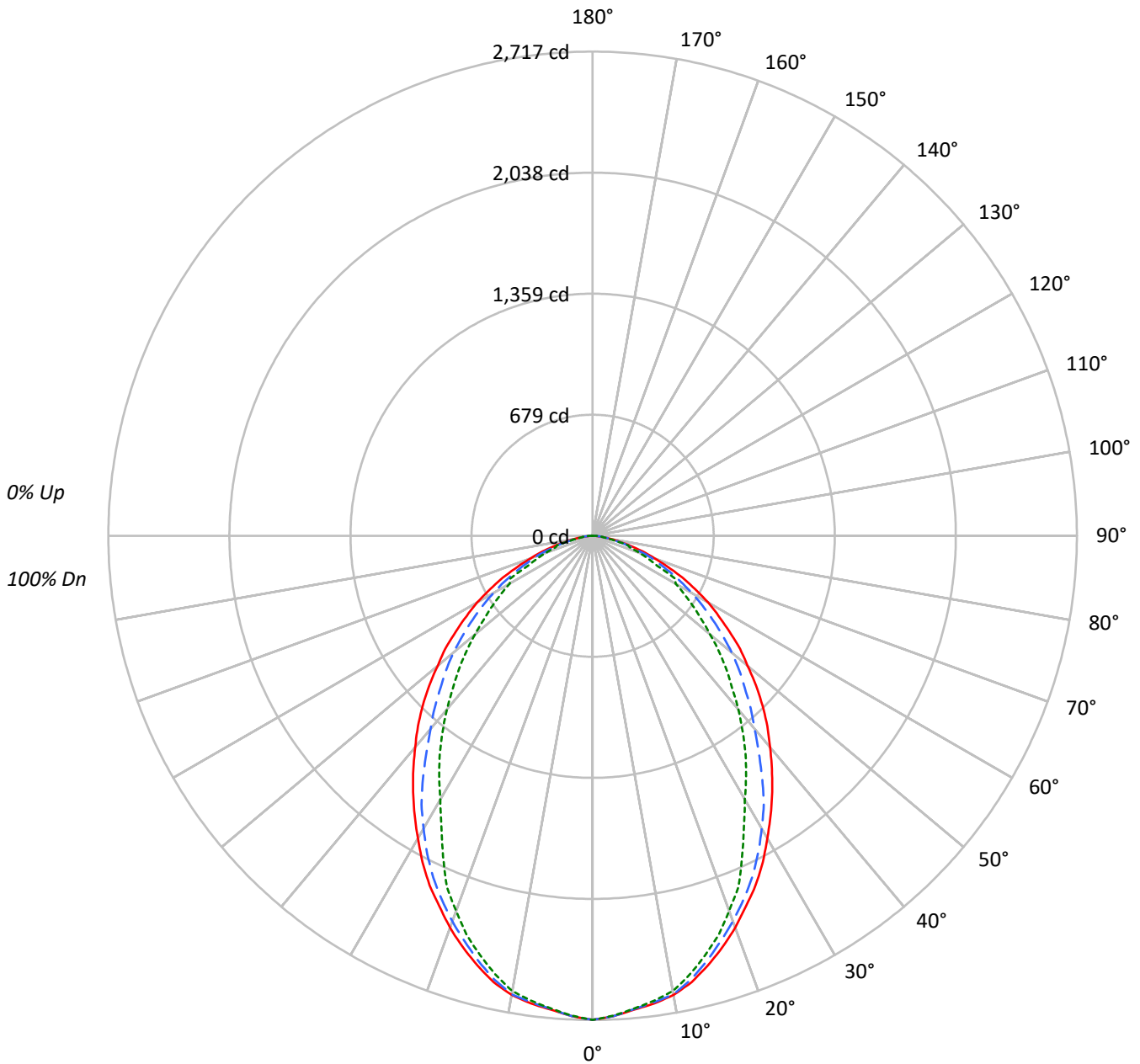
Lumens per Lamp: N/A
Luminaire Lumens: 5333.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	3655	3655	3655
5°	3606	3601	3597
10°	3574	3570	3544
15°	3478	3443	3395
20°	3350	3296	3206
25°	3212	3142	2947
30°	3045	2947	2654
35°	2884	2724	2455
40°	2719	2482	2234
45°	2564	2295	2020
50°	2373	2130	1801
55°	2195	1930	1613
60°	2011	1724	1445
65°	1770	1510	1280
70°	1458	1322	1087
75°	1159	1012	1061
80°	779	730	681
85°	485	582	679



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.9	4.7
10°-20°	694.0	13.0
20°-30°	960.8	18.0
30°-40°	1024.5	19.2
40°-50°	934.6	17.5
50°-60°	732.2	13.7
60°-70°	477.2	8.9
70°-80°	211.4	4.0
80°-90°	45.4	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°	1907.7	35.8
0°-40°	2932.1	55.0
0°-60°	4599.0	86.2
0°-90°	5333.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5333.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2717	2717	2717	2717	2717	
5°	2670	2666	2666	2663	2663	253
15°	2497	2497	2472	2446	2437	702
25°	2164	2151	2117	2041	1985	993
35°	1756	1743	1658	1533	1495	1098
45°	1347	1319	1206	1106	1062	1038
55°	936	908	823	726	688	839
65°	556	524	474	484	402	548
75°	223	207	195	185	204	239
85°	31	34	38	41	44	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2716.6	2716.6	2716.6	2716.6	2716.6
2.5°	2697.7	2697.7	2697.7	2694.6	2694.6
5°	2669.5	2666.3	2666.3	2663.2	2663.2
7.5°	2647.5	2644.3	2641.2	2638.0	2631.8
10°	2616.1	2616.1	2612.9	2597.2	2594.1
12.5°	2565.8	2562.7	2550.1	2528.1	2521.8
15°	2496.7	2496.7	2471.6	2446.5	2437.1
17.5°	2421.3	2418.2	2386.8	2361.7	2349.1
20°	2339.7	2333.4	2302.0	2261.2	2239.2
22.5°	2248.6	2248.6	2210.9	2157.5	2135.6
25°	2163.8	2151.3	2116.7	2041.3	1984.8
27.5°	2066.5	2047.6	2009.9	1903.2	1837.2
30°	1959.7	1950.3	1896.9	1758.7	1708.4
32.5°	1859.2	1843.5	1787.0	1642.5	1601.7
35°	1755.6	1743.0	1658.2	1532.6	1494.9
37.5°	1651.9	1636.2	1529.4	1428.9	1381.8
40°	1548.3	1529.4	1413.2	1322.2	1271.9
42.5°	1450.9	1425.8	1312.7	1215.4	1158.9
45°	1347.3	1319.0	1206.0	1105.5	1061.5
47.5°	1243.7	1218.5	1114.9	1011.3	961.0
50°	1133.7	1111.7	1017.5	913.9	860.5
52.5°	1042.7	1008.1	917.0	813.4	769.4
55°	935.9	907.6	822.8	725.5	687.8
57.5°	838.5	810.3	731.7	640.7	609.3
60°	747.4	706.6	640.7	562.2	537.0
62.5°	646.9	615.5	559.0	493.1	524.5
65°	555.9	524.5	474.2	483.6	402.0
67.5°	455.4	439.7	395.7	351.7	339.2
70°	370.6	351.7	336.0	288.9	276.4
72.5°	295.2	276.4	254.4	229.3	219.8
75°	223.0	207.3	194.7	185.3	204.1
77.5°	153.9	147.6	138.2	128.8	125.6
80°	100.5	97.4	94.2	91.1	87.9
82.5°	59.7	59.7	59.7	59.7	59.7
85°	31.4	34.5	37.7	40.8	44.0
87.5°	18.8	18.8	22.0	25.1	28.3
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)