

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: P547123

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-93-88-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: P547123
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-LD4-3LO-40-UNV-93-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

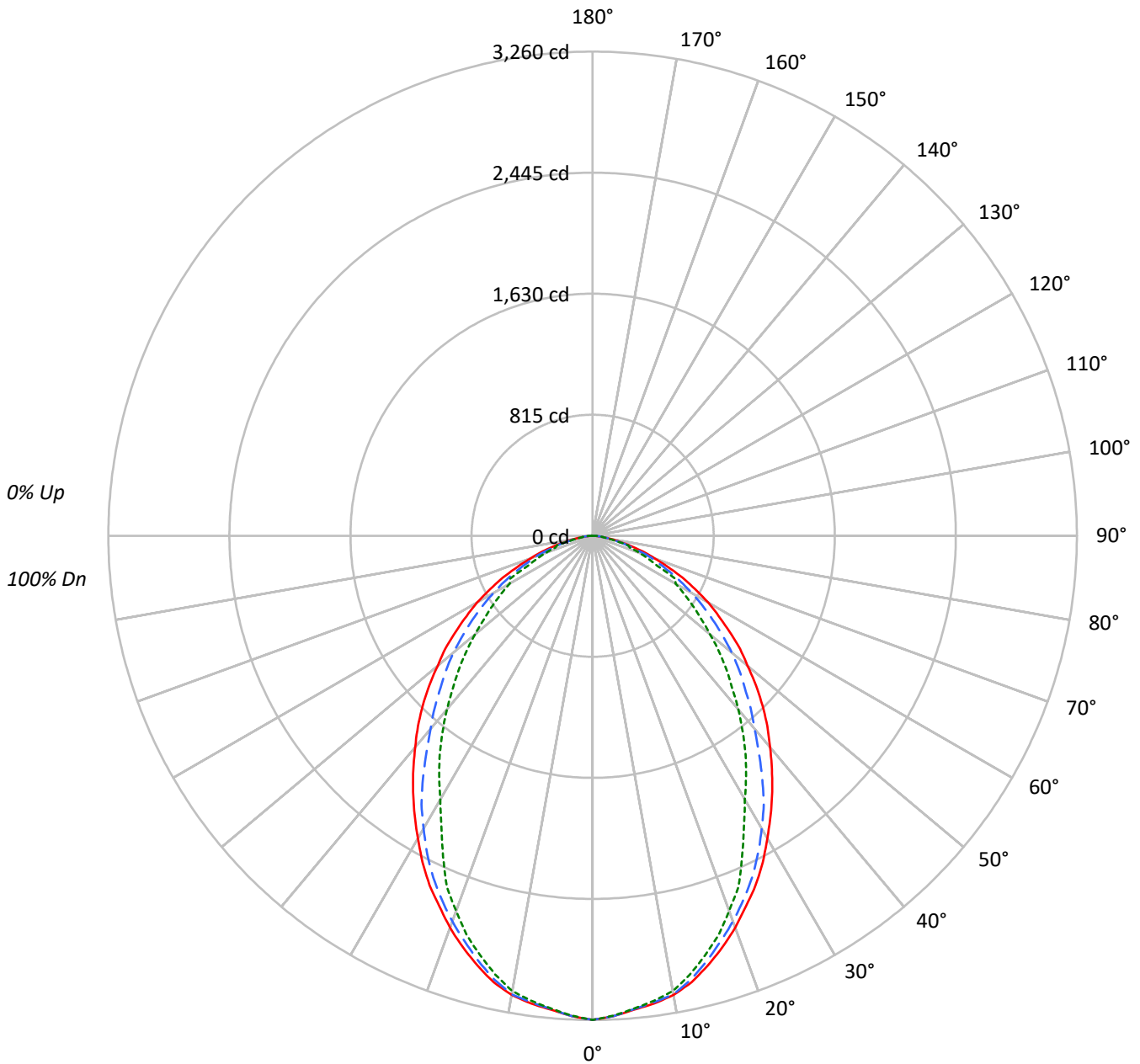
Lumens per Lamp: N/A
Luminaire Lumens: 6399.0 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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				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°	4386	4386	4386
5°	4326	4321	4316
10°	4289	4283	4253
15°	4173	4131	4073
20°	4020	3955	3847
25°	3854	3771	3536
30°	3653	3536	3185
35°	3460	3268	2946
40°	3263	2978	2681
45°	3076	2753	2424
50°	2848	2556	2161
55°	2634	2316	1936
60°	2414	2069	1734
65°	2124	1812	1535
70°	1749	1586	1304
75°	1391	1214	1273
80°	934	876	817
85°	582	698	815



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.4	4.7
10°-20°	832.7	13.0
20°-30°	1152.8	18.0
30°-40°	1229.3	19.2
40°-50°	1121.4	17.5
50°-60°	878.6	13.7
60°-70°	572.6	8.9
70°-80°	253.7	4.0
80°-90°	54.5	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°	2289.0	35.8
0°-40°	3518.2	55.0
0°-60°	5518.2	86.2
0°-90°	6399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6399.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3260	3260	3260	3260	3260	
5°	3203	3199	3199	3196	3196	304
15°	2996	2996	2966	2936	2924	842
25°	2596	2581	2540	2449	2382	1192
35°	2106	2091	1990	1839	1794	1317
45°	1617	1583	1447	1326	1274	1245
55°	1123	1089	987	870	825	1007
65°	667	629	569	580	482	657
75°	268	249	234	222	245	287
85°	38	42	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3259.6	3259.6	3259.6	3259.6	3259.6
2.5°	3237.0	3237.0	3237.0	3233.2	3233.2
5°	3203.0	3199.3	3199.3	3195.5	3195.5
7.5°	3176.7	3172.9	3169.1	3165.4	3157.8
10°	3139.0	3139.0	3135.2	3116.4	3112.6
12.5°	3078.7	3074.9	3059.8	3033.5	3025.9
15°	2995.8	2995.8	2965.6	2935.5	2924.2
17.5°	2905.3	2901.6	2863.9	2833.7	2818.7
20°	2807.4	2799.8	2762.2	2713.2	2686.8
22.5°	2698.1	2698.1	2652.9	2588.8	2562.4
25°	2596.3	2581.3	2539.8	2449.4	2381.6
27.5°	2479.5	2456.9	2411.7	2283.6	2204.4
30°	2351.4	2340.1	2276.0	2110.2	2049.9
32.5°	2230.8	2212.0	2144.2	1970.8	1921.8
35°	2106.5	2091.4	1989.7	1838.9	1793.7
37.5°	1982.1	1963.3	1835.2	1714.6	1658.0
40°	1857.8	1835.2	1695.7	1586.4	1526.2
42.5°	1740.9	1710.8	1575.1	1458.3	1390.5
45°	1616.6	1582.7	1447.0	1326.4	1273.7
47.5°	1492.2	1462.1	1337.7	1213.4	1153.1
50°	1360.4	1334.0	1220.9	1096.6	1032.5
52.5°	1251.1	1209.6	1100.3	976.0	923.2
55°	1122.9	1089.0	987.3	870.5	825.3
57.5°	1006.1	972.2	878.0	768.7	731.0
60°	896.9	847.9	768.7	674.5	644.4
62.5°	776.3	738.6	670.8	591.6	629.3
65°	667.0	629.3	569.0	580.3	482.3
67.5°	546.4	527.6	474.8	422.0	407.0
70°	444.7	422.0	403.2	346.7	331.6
72.5°	354.2	331.6	305.2	275.1	263.8
75°	267.5	248.7	233.6	222.3	244.9
77.5°	184.6	177.1	165.8	154.5	150.7
80°	120.6	116.8	113.0	109.3	105.5
82.5°	71.6	71.6	71.6	71.6	71.6
85°	37.7	41.5	45.2	49.0	52.8
87.5°	22.6	22.6	26.4	30.1	33.9
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)