

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: P546911

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-81-84-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: P546911
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-LD4-2STD-40-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

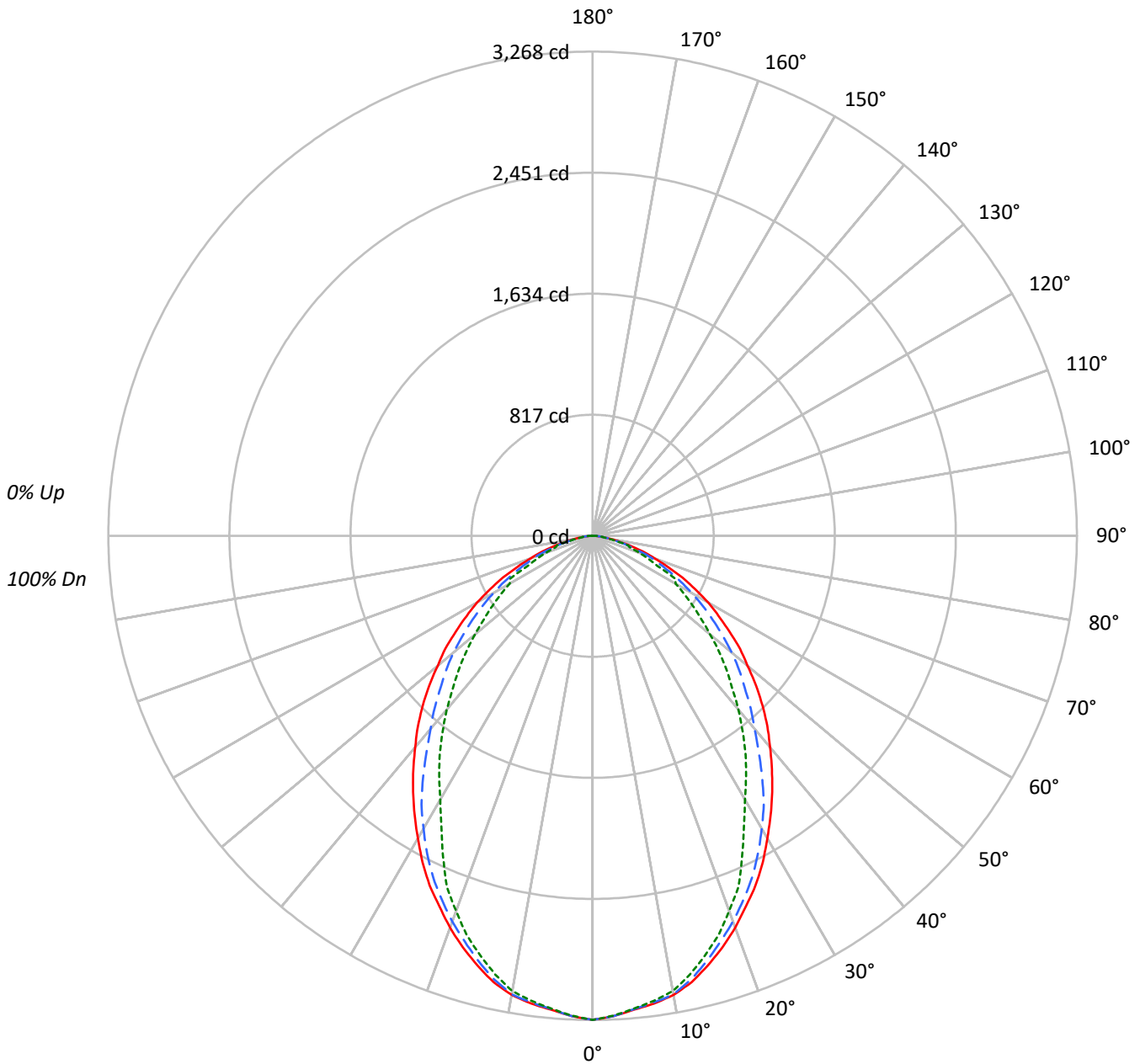
Lumens per Lamp: N/A
Luminaire Lumens: 6415.0 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4397	4397	4397
5°	4337	4332	4327
10°	4299	4294	4263
15°	4183	4141	4083
20°	4030	3965	3857
25°	3864	3780	3544
30°	3662	3545	3193
35°	3469	3276	2954
40°	3271	2986	2687
45°	3084	2760	2430
50°	2855	2562	2167
55°	2641	2322	1941
60°	2419	2074	1738
65°	2129	1816	1539
70°	1754	1590	1308
75°	1394	1218	1277
80°	937	878	820
85°	584	699	817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.2	4.7
10°-20°	834.8	13.0
20°-30°	1155.7	18.0
30°-40°	1232.3	19.2
40°-50°	1124.2	17.5
50°-60°	880.8	13.7
60°-70°	574.0	8.9
70°-80°	254.3	4.0
80°-90°	54.6	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°	2294.7	35.8
0°-40°	3527.0	55.0
0°-60°	5532.0	86.2
0°-90°	6415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3268	3268	3268	3268	3268	
5°	3211	3207	3207	3204	3204	305
15°	3003	3003	2973	2943	2932	844
25°	2603	2588	2546	2456	2388	1195
35°	2112	2097	1995	1844	1798	1320
45°	1621	1587	1451	1330	1277	1248
55°	1126	1092	990	873	827	1010
65°	669	631	570	582	484	659
75°	268	249	234	223	246	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°	3267.7	3267.7	3267.7	3267.7	3267.7
2.5°	3245.0	3245.0	3245.0	3241.3	3241.3
5°	3211.0	3207.3	3207.3	3203.5	3203.5
7.5°	3184.6	3180.8	3177.1	3173.3	3165.7
10°	3146.8	3146.8	3143.1	3124.2	3120.4
12.5°	3086.4	3082.6	3067.5	3041.1	3033.5
15°	3003.3	3003.3	2973.1	2942.8	2931.5
17.5°	2912.6	2908.8	2871.1	2840.8	2825.7
20°	2814.4	2806.8	2769.1	2719.9	2693.5
22.5°	2704.8	2704.8	2659.5	2595.3	2568.8
25°	2602.8	2587.7	2546.2	2455.5	2387.5
27.5°	2485.7	2463.1	2417.7	2289.3	2210.0
30°	2357.3	2346.0	2281.7	2115.5	2055.1
32.5°	2236.4	2217.5	2149.5	1975.7	1926.6
35°	2111.7	2096.6	1994.6	1843.5	1798.2
37.5°	1987.1	1968.2	1839.7	1718.9	1662.2
40°	1862.4	1839.7	1700.0	1590.4	1530.0
42.5°	1745.3	1715.1	1579.1	1462.0	1394.0
45°	1620.6	1586.6	1450.6	1329.8	1276.9
47.5°	1496.0	1465.7	1341.1	1216.4	1156.0
50°	1363.8	1337.3	1224.0	1099.3	1035.1
52.5°	1254.2	1212.6	1103.1	978.4	925.5
55°	1125.8	1091.8	989.8	872.6	827.3
57.5°	1008.6	974.6	880.2	770.7	732.9
60°	899.1	850.0	770.7	676.2	646.0
62.5°	778.2	740.4	672.4	593.1	630.9
65°	668.7	630.9	570.4	581.8	483.5
67.5°	547.8	528.9	476.0	423.1	408.0
70°	445.8	423.1	404.2	347.5	332.4
72.5°	355.1	332.4	306.0	275.8	264.4
75°	268.2	249.3	234.2	222.9	245.6
77.5°	185.1	177.6	166.2	154.9	151.1
80°	120.9	117.1	113.3	109.6	105.8
82.5°	71.8	71.8	71.8	71.8	71.8
85°	37.8	41.6	45.3	49.1	52.9
87.5°	22.7	22.7	26.4	30.2	34.0
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)