

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: P546945

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-81-86-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: P546945
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-50-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

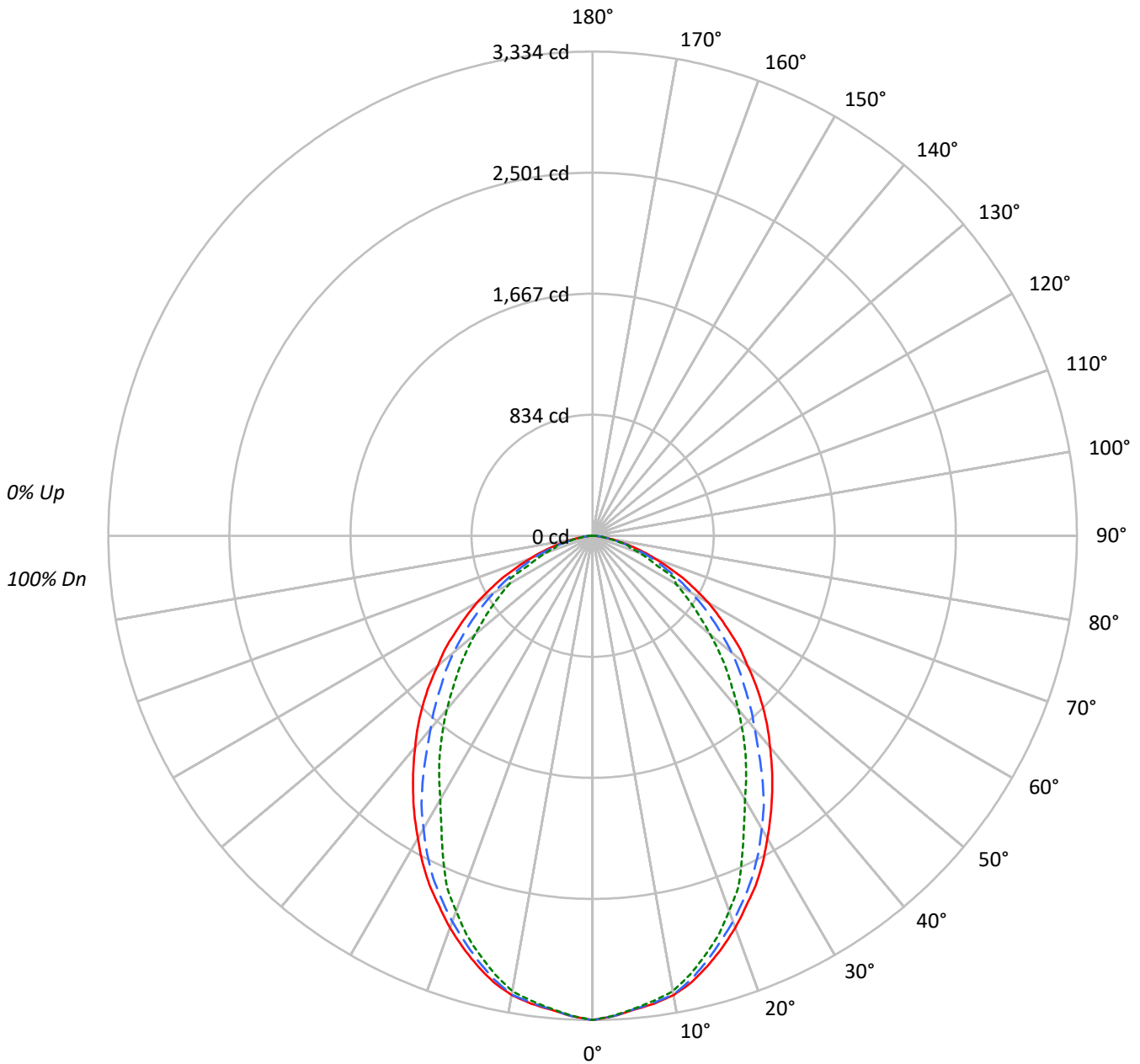
Lumens per Lamp: N/A
Luminaire Lumens: 6546.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4486	4486	4486
5°	4425	4420	4415
10°	4387	4382	4350
15°	4269	4226	4167
20°	4112	4046	3935
25°	3943	3857	3617
30°	3737	3617	3258
35°	3540	3343	3014
40°	3338	3047	2742
45°	3147	2817	2479
50°	2913	2614	2211
55°	2695	2369	1980
60°	2469	2116	1774
65°	2172	1853	1571
70°	1790	1623	1334
75°	1423	1242	1303
80°	956	896	836
85°	594	715	834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.4	4.7
10°-20°	851.8	13.0
20°-30°	1179.3	18.0
30°-40°	1257.5	19.2
40°-50°	1147.2	17.5
50°-60°	898.7	13.7
60°-70°	585.8	8.9
70°-80°	259.5	4.0
80°-90°	55.7	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°	2341.6	35.8
0°-40°	3599.1	55.0
0°-60°	5645.0	86.2
0°-90°	6546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6546.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3334	3334	3334	3334	3334	
5°	3277	3273	3273	3269	3269	311
15°	3065	3065	3034	3003	2991	862
25°	2656	2641	2598	2506	2436	1219
35°	2155	2139	2035	1881	1835	1347
45°	1654	1619	1480	1357	1303	1274
55°	1149	1114	1010	890	844	1030
65°	682	644	582	594	493	672
75°	274	254	239	227	251	293
85°	38	42	46	50	54	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3334.4	3334.4	3334.4	3334.4	3334.4
2.5°	3311.3	3311.3	3311.3	3307.5	3307.5
5°	3276.6	3272.8	3272.8	3268.9	3268.9
7.5°	3249.6	3245.8	3241.9	3238.1	3230.4
10°	3211.1	3211.1	3207.2	3188.0	3184.1
12.5°	3149.4	3145.6	3130.1	3103.2	3095.4
15°	3064.6	3064.6	3033.8	3002.9	2991.4
17.5°	2972.1	2968.2	2929.7	2898.8	2883.4
20°	2871.9	2864.2	2825.6	2775.5	2748.5
22.5°	2760.1	2760.1	2713.8	2648.3	2621.3
25°	2656.0	2640.6	2598.2	2505.7	2436.3
27.5°	2536.5	2513.4	2467.1	2336.0	2255.1
30°	2405.4	2393.9	2328.3	2158.7	2097.0
32.5°	2282.1	2262.8	2193.4	2016.1	1966.0
35°	2154.9	2139.4	2035.4	1881.2	1834.9
37.5°	2027.7	2008.4	1877.3	1754.0	1696.1
40°	1900.4	1877.3	1734.7	1622.9	1561.2
42.5°	1780.9	1750.1	1611.3	1491.8	1422.4
45°	1653.7	1619.0	1480.3	1356.9	1302.9
47.5°	1526.5	1495.7	1368.5	1241.3	1179.6
50°	1391.6	1364.6	1249.0	1121.8	1056.2
52.5°	1279.8	1237.4	1125.6	998.4	944.4
55°	1148.7	1114.1	1010.0	890.5	844.2
57.5°	1029.2	994.6	898.2	786.4	747.8
60°	917.5	867.3	786.4	690.0	659.2
62.5°	794.1	755.6	686.2	605.2	643.8
65°	682.3	643.8	582.1	593.6	493.4
67.5°	559.0	539.7	485.7	431.7	416.3
70°	454.9	431.7	412.5	354.6	339.2
72.5°	362.4	339.2	312.2	281.4	269.8
75°	273.7	254.4	239.0	227.4	250.6
77.5°	188.9	181.2	169.6	158.0	154.2
80°	123.4	119.5	115.6	111.8	107.9
82.5°	73.2	73.2	73.2	73.2	73.2
85°	38.5	42.4	46.3	50.1	54.0
87.5°	23.1	23.1	27.0	30.8	34.7
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)