

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: P547032

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-80-85-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: P547032
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-LD4-3HI-50-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

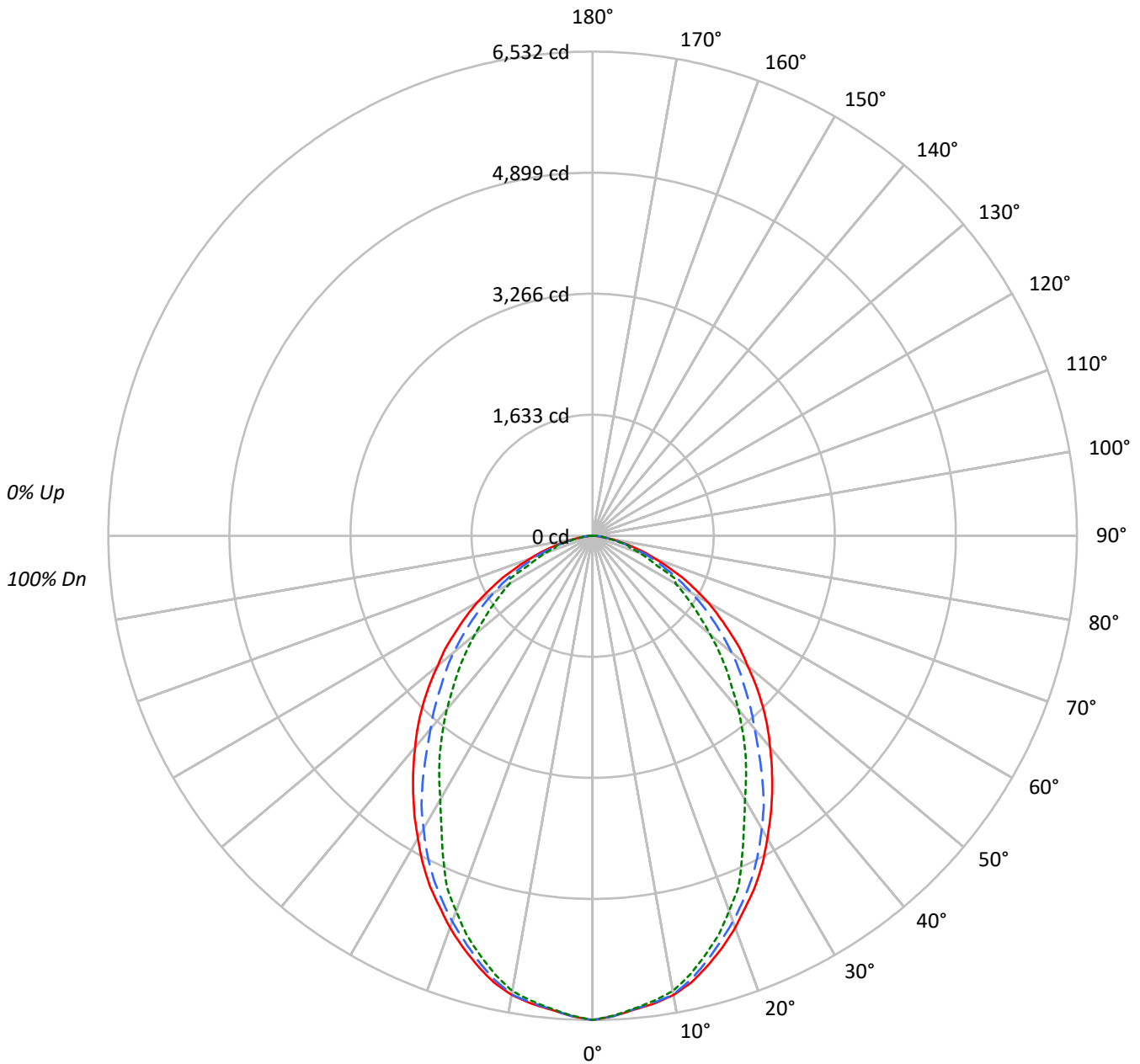
Lumens per Lamp: N/A
Luminaire Lumens: 12823.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	8789	8789	8789
5°	8669	8659	8649
10°	8594	8584	8522
15°	8362	8278	8162
20°	8055	7925	7709
25°	7724	7556	7085
30°	7321	7086	6382
35°	6933	6549	5904
40°	6539	5968	5372
45°	6164	5518	4857
50°	5706	5121	4331
55°	5279	4641	3879
60°	4836	4145	3475
65°	4255	3630	3077
70°	3506	3179	2614
75°	2787	2434	2551
80°	1872	1755	1638
85°	1166	1399	1632



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	608.0	4.7
10°-20°	1668.7	13.0
20°-30°	2310.2	18.0
30°-40°	2463.3	19.2
40°-50°	2247.3	17.5
50°-60°	1760.6	13.7
60°-70°	1147.5	8.9
70°-80°	508.4	4.0
80°-90°	109.2	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°	4586.9	35.8
0°-40°	7050.2	55.0
0°-60°	11058.0	86.2
0°-90°	12823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12823.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6532	6532	6532	6532	6532	
5°	6419	6411	6411	6404	6404	609
15°	6003	6003	5943	5882	5860	1688
25°	5203	5173	5090	4908	4772	2389
35°	4221	4191	3987	3685	3594	2639
45°	3240	3172	2900	2658	2552	2495
55°	2250	2182	1978	1744	1654	2018
65°	1337	1261	1140	1163	967	1317
75°	536	498	468	446	491	575
85°	76	83	91	98	106	105
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6531.9	6531.9	6531.9	6531.9	6531.9
2.5°	6486.6	6486.6	6486.6	6479.0	6479.0
5°	6418.6	6411.0	6411.0	6403.5	6403.5
7.5°	6365.7	6358.2	6350.6	6343.1	6328.0
10°	6290.2	6290.2	6282.7	6244.9	6237.4
12.5°	6169.4	6161.9	6131.6	6078.8	6063.7
15°	6003.3	6003.3	5942.9	5882.5	5859.8
17.5°	5822.0	5814.5	5739.0	5678.6	5648.4
20°	5625.7	5610.6	5535.1	5436.9	5384.1
22.5°	5406.7	5406.7	5316.1	5187.7	5134.9
25°	5202.8	5172.6	5089.6	4908.3	4772.4
27.5°	4968.7	4923.4	4832.8	4576.1	4417.5
30°	4712.0	4689.4	4561.0	4228.7	4107.9
32.5°	4470.4	4432.6	4296.7	3949.3	3851.2
35°	4221.2	4191.0	3987.1	3685.0	3594.4
37.5°	3972.0	3934.2	3677.5	3435.8	3322.6
40°	3722.8	3677.5	3398.1	3179.1	3058.3
42.5°	3488.7	3428.3	3156.4	2922.3	2786.4
45°	3239.5	3171.5	2899.7	2658.1	2552.3
47.5°	2990.3	2929.9	2680.7	2431.5	2310.7
50°	2726.0	2673.2	2446.6	2197.4	2069.1
52.5°	2507.0	2424.0	2205.0	1955.8	1850.1
55°	2250.3	2182.3	1978.4	1744.3	1653.7
57.5°	2016.2	1948.2	1759.5	1540.5	1465.0
60°	1797.2	1699.0	1540.5	1351.7	1291.3
62.5°	1555.6	1480.1	1344.1	1185.6	1261.1
65°	1336.6	1261.1	1140.2	1162.9	966.6
67.5°	1094.9	1057.2	951.5	845.7	815.5
70°	891.1	845.7	808.0	694.7	664.5
72.5°	709.8	664.5	611.7	551.2	528.6
75°	536.1	498.4	468.2	445.5	490.8
77.5°	370.0	354.9	332.3	309.6	302.1
80°	241.6	234.1	226.5	219.0	211.4
82.5°	143.5	143.5	143.5	143.5	143.5
85°	75.5	83.1	90.6	98.2	105.7
87.5°	45.3	45.3	52.9	60.4	68.0
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)