

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: P547081

Luminaire Tested: **FMR-24-4-LD4-3LO-35-UNV-82-86-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: P547081
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-35-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

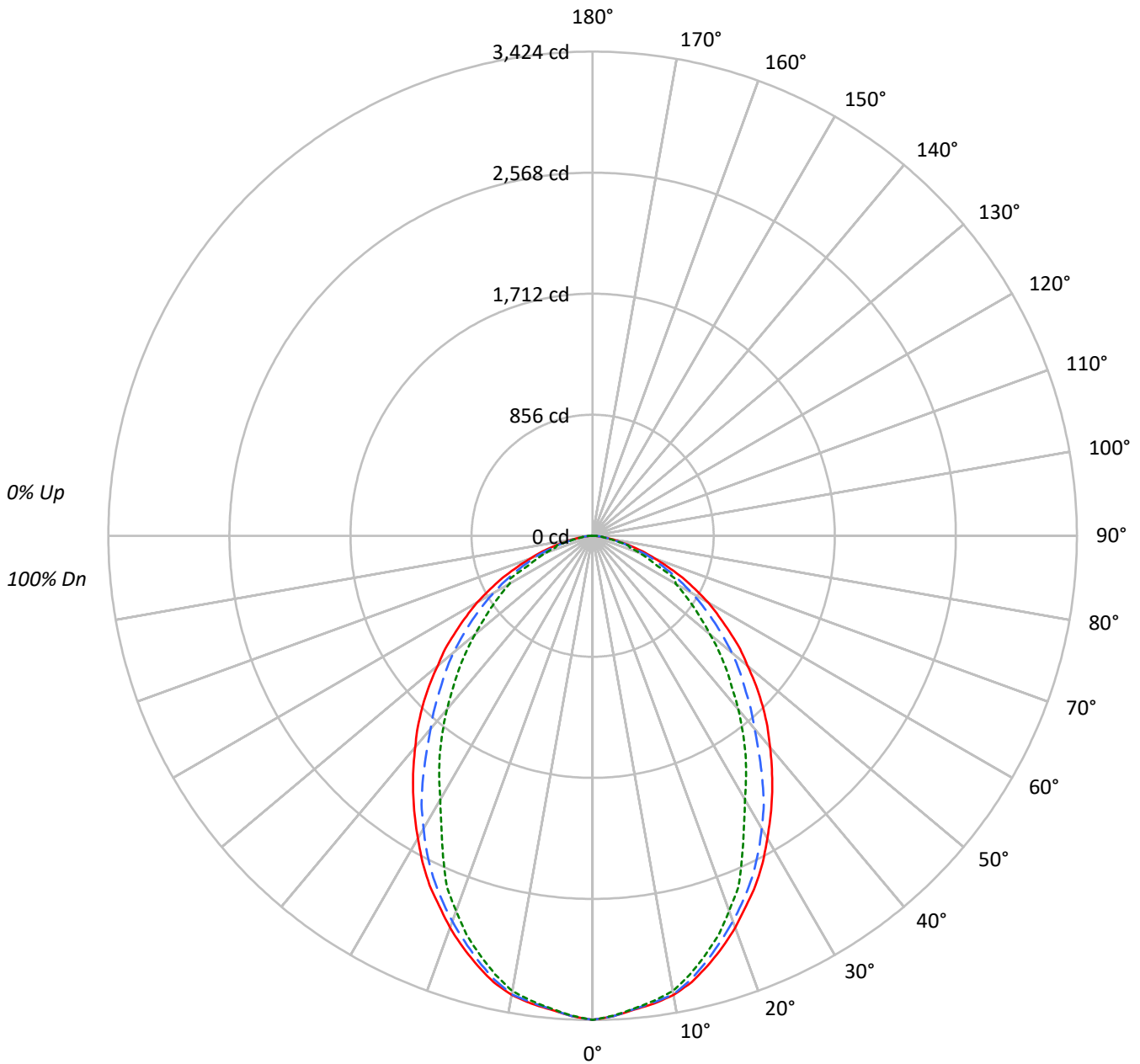
Lumens per Lamp: N/A
Luminaire Lumens: 6721.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	4606	4606	4606
5°	4544	4539	4533
10°	4504	4499	4467
15°	4383	4339	4278
20°	4222	4154	4041
25°	4048	3960	3714
30°	3837	3714	3345
35°	3634	3433	3095
40°	3427	3128	2816
45°	3231	2892	2546
50°	2991	2684	2270
55°	2767	2433	2033
60°	2535	2173	1821
65°	2230	1903	1613
70°	1837	1666	1370
75°	1461	1276	1338
80°	982	920	859
85°	611	733	855



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	318.7	4.7
10°-20°	874.6	13.0
20°-30°	1210.9	18.0
30°-40°	1291.1	19.2
40°-50°	1177.9	17.5
50°-60°	922.8	13.7
60°-70°	601.4	8.9
70°-80°	266.4	4.0
80°-90°	57.2	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°	2404.2	35.8
0°-40°	3695.3	55.0
0°-60°	5795.9	86.2
0°-90°	6721.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6721.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3424	3424	3424	3424	3424	
5°	3364	3360	3360	3356	3356	319
15°	3146	3146	3115	3083	3071	885
25°	2727	2711	2668	2573	2501	1252
35°	2212	2197	2090	1932	1884	1383
45°	1698	1662	1520	1393	1338	1308
55°	1180	1144	1037	914	867	1058
65°	700	661	598	610	507	690
75°	281	261	245	234	257	301
85°	40	44	48	52	55	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3423.6	3423.6	3423.6	3423.6	3423.6
2.5°	3399.8	3399.8	3399.8	3395.9	3395.9
5°	3364.2	3360.3	3360.3	3356.3	3356.3
7.5°	3336.5	3332.6	3328.6	3324.6	3316.7
10°	3296.9	3296.9	3293.0	3273.2	3269.2
12.5°	3233.6	3229.7	3213.8	3186.1	3178.2
15°	3146.5	3146.5	3114.9	3083.2	3071.3
17.5°	3051.5	3047.6	3008.0	2976.3	2960.5
20°	2948.6	2940.7	2901.1	2849.7	2822.0
22.5°	2833.9	2833.9	2786.4	2719.1	2691.4
25°	2727.0	2711.2	2667.6	2572.6	2501.4
27.5°	2604.3	2580.6	2533.1	2398.5	2315.4
30°	2469.7	2457.9	2390.6	2216.4	2153.1
32.5°	2343.1	2323.3	2252.0	2070.0	2018.5
35°	2212.5	2196.6	2089.8	1931.5	1884.0
37.5°	2081.9	2062.1	1927.5	1800.8	1741.5
40°	1951.2	1927.5	1781.1	1666.3	1603.0
42.5°	1828.6	1796.9	1654.4	1531.7	1460.5
45°	1697.9	1662.3	1519.8	1393.2	1337.8
47.5°	1567.3	1535.7	1405.1	1274.4	1211.1
50°	1428.8	1401.1	1282.4	1151.8	1084.5
52.5°	1314.0	1270.5	1155.7	1025.1	969.7
55°	1179.5	1143.8	1037.0	914.3	866.8
57.5°	1056.8	1021.1	922.2	807.4	767.8
60°	942.0	890.5	807.4	708.5	676.8
62.5°	815.3	775.7	704.5	621.4	661.0
65°	700.5	661.0	597.6	609.5	506.6
67.5°	573.9	554.1	498.7	443.3	427.5
70°	467.0	443.3	423.5	364.1	348.3
72.5°	372.0	348.3	320.6	288.9	277.1
75°	281.0	261.2	245.4	233.5	257.3
77.5°	193.9	186.0	174.1	162.3	158.3
80°	126.7	122.7	118.7	114.8	110.8
82.5°	75.2	75.2	75.2	75.2	75.2
85°	39.6	43.5	47.5	51.5	55.4
87.5°	23.7	23.7	27.7	31.7	35.6
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)