

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: P547155

Luminaire Tested: **FMR-24-4-LD4-3LO-50-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: P547155
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

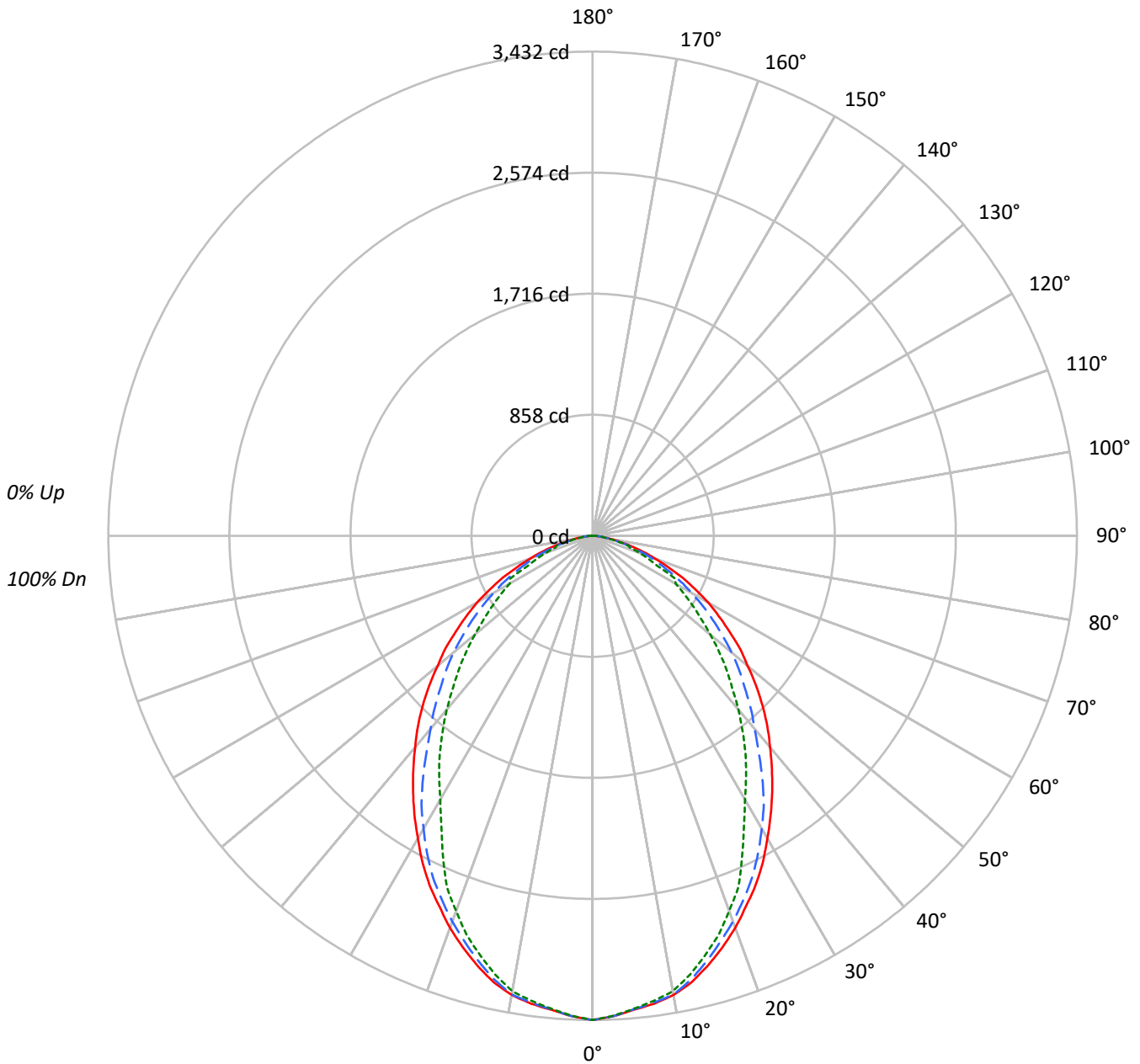
Lumens per Lamp: N/A
Luminaire Lumens: 6738.0 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4618	4618	4618
5°	4555	4550	4545
10°	4516	4510	4478
15°	4394	4350	4289
20°	4233	4165	4051
25°	4059	3970	3723
30°	3847	3723	3354
35°	3643	3441	3102
40°	3436	3136	2823
45°	3239	2899	2552
50°	2998	2691	2276
55°	2774	2439	2038
60°	2541	2178	1826
65°	2236	1908	1617
70°	1842	1670	1374
75°	1464	1279	1341
80°	984	922	861
85°	613	735	858



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.5	4.7
10°-20°	876.8	13.0
20°-30°	1213.9	18.0
30°-40°	1294.4	19.2
40°-50°	1180.9	17.5
50°-60°	925.1	13.7
60°-70°	602.9	8.9
70°-80°	267.1	4.0
80°-90°	57.4	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°	2410.2	35.8
0°-40°	3704.6	55.0
0°-60°	5810.6	86.2
0°-90°	6738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3432	3432	3432	3432	3432	
5°	3373	3369	3369	3365	3365	320
15°	3154	3154	3123	3091	3079	887
25°	2734	2718	2674	2579	2508	1255
35°	2218	2202	2095	1936	1889	1387
45°	1702	1666	1524	1397	1341	1311
55°	1182	1147	1040	917	869	1061
65°	702	663	599	611	508	692
75°	282	262	246	234	258	302
85°	40	44	48	52	56	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3432.2	3432.2	3432.2	3432.2	3432.2
2.5°	3408.4	3408.4	3408.4	3404.5	3404.5
5°	3372.7	3368.8	3368.8	3364.8	3364.8
7.5°	3345.0	3341.0	3337.0	3333.0	3325.1
10°	3305.3	3305.3	3301.3	3281.5	3277.5
12.5°	3241.8	3237.8	3221.9	3194.2	3186.2
15°	3154.5	3154.5	3122.7	3091.0	3079.1
17.5°	3059.3	3055.3	3015.6	2983.9	2968.0
20°	2956.1	2948.2	2908.5	2856.9	2829.1
22.5°	2841.0	2841.0	2793.4	2726.0	2698.2
25°	2733.9	2718.0	2674.4	2579.1	2507.7
27.5°	2610.9	2587.1	2539.5	2404.6	2321.2
30°	2476.0	2464.1	2396.6	2222.0	2158.5
32.5°	2349.0	2329.2	2257.7	2075.2	2023.6
35°	2218.1	2202.2	2095.1	1936.3	1888.7
37.5°	2087.1	2067.3	1932.4	1805.4	1745.9
40°	1956.2	1932.4	1785.6	1670.5	1607.0
42.5°	1833.2	1801.4	1658.6	1535.6	1464.2
45°	1702.2	1666.5	1523.7	1396.7	1341.2
47.5°	1571.3	1539.6	1408.6	1277.7	1214.2
50°	1432.4	1404.6	1285.6	1154.7	1087.2
52.5°	1317.3	1273.7	1158.6	1027.7	972.1
55°	1182.4	1146.7	1039.6	916.6	869.0
57.5°	1059.4	1023.7	924.5	809.5	769.8
60°	944.4	892.8	809.5	710.3	678.5
62.5°	817.4	777.7	706.3	623.0	662.6
65°	702.3	662.6	599.2	611.1	507.9
67.5°	575.3	555.5	500.0	444.4	428.5
70°	468.2	444.4	424.6	365.0	349.2
72.5°	373.0	349.2	321.4	289.7	277.8
75°	281.7	261.9	246.0	234.1	257.9
77.5°	194.4	186.5	174.6	162.7	158.7
80°	127.0	123.0	119.0	115.1	111.1
82.5°	75.4	75.4	75.4	75.4	75.4
85°	39.7	43.6	47.6	51.6	55.6
87.5°	23.8	23.8	27.8	31.7	35.7
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)