

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: P546390

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-93-97-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: P546390
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-12-4-LD4-2STD-50-UNV-93-97-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

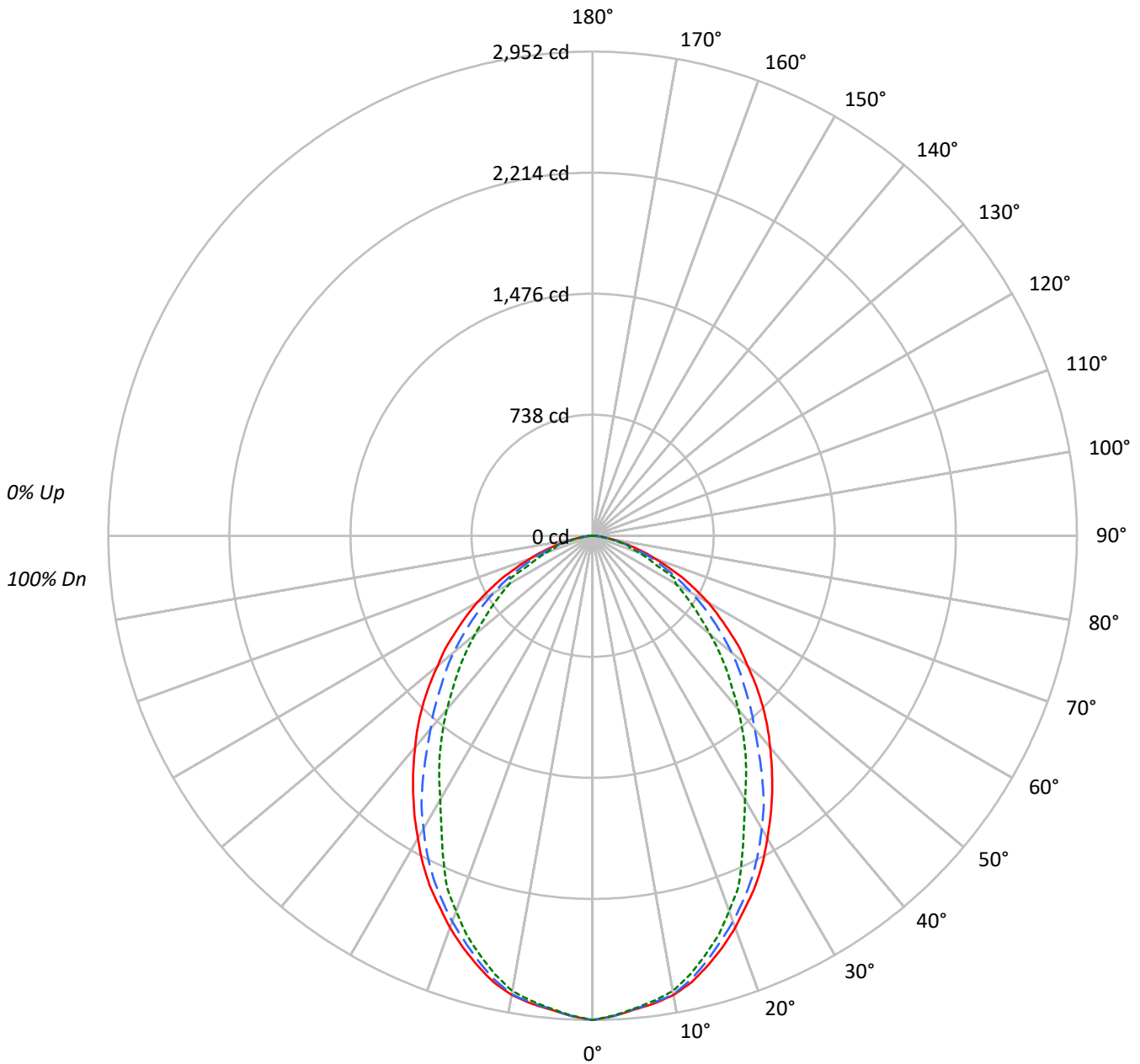
Lumens per Lamp: N/A
Luminaire Lumens: 5795.0 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	7944	7944	7944
5°	7836	7826	7817
10°	7768	7758	7702
15°	7558	7482	7378
20°	7281	7163	6968
25°	6981	6829	6404
30°	6617	6405	5769
35°	6267	5919	5336
40°	5910	5395	4855
45°	5571	4987	4390
50°	5157	4629	3915
55°	4771	4195	3506
60°	4371	3747	3141
65°	3846	3281	2781
70°	3168	2873	2363
75°	2519	2200	2306
80°	1692	1587	1481
85°	1053	1266	1476



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.8	4.7
10°-20°	754.1	13.0
20°-30°	1044.0	18.0
30°-40°	1113.2	19.2
40°-50°	1015.6	17.5
50°-60°	795.6	13.7
60°-70°	518.6	8.9
70°-80°	229.7	4.0
80°-90°	49.3	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°	2072.9	35.8
0°-40°	3186.2	55.0
0°-60°	4997.4	86.2
0°-90°	5795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2952	2952	2952	2952	2952	
5°	2901	2897	2897	2894	2894	275
15°	2713	2713	2686	2658	2648	763
25°	2351	2338	2300	2218	2157	1079
35°	1908	1894	1802	1665	1624	1193
45°	1464	1433	1310	1201	1154	1128
55°	1017	986	894	788	747	912
65°	604	570	515	526	437	595
75°	242	225	212	201	222	260
85°	34	38	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2951.9	2951.9	2951.9	2951.9	2951.9
2.5°	2931.4	2931.4	2931.4	2928.0	2928.0
5°	2900.7	2897.3	2897.3	2893.9	2893.9
7.5°	2876.8	2873.4	2870.0	2866.6	2859.8
10°	2842.7	2842.7	2839.3	2822.2	2818.8
12.5°	2788.1	2784.7	2771.0	2747.1	2740.3
15°	2713.0	2713.0	2685.7	2658.4	2648.2
17.5°	2631.1	2627.7	2593.6	2566.3	2552.6
20°	2542.4	2535.6	2501.4	2457.1	2433.2
22.5°	2443.4	2443.4	2402.5	2344.5	2320.6
25°	2351.3	2337.6	2300.1	2218.2	2156.8
27.5°	2245.5	2225.0	2184.1	2068.0	1996.4
30°	2129.5	2119.2	2061.2	1911.1	1856.5
32.5°	2020.3	2003.2	1941.8	1784.8	1740.4
35°	1907.6	1894.0	1801.9	1665.3	1624.4
37.5°	1795.0	1778.0	1661.9	1552.7	1501.5
40°	1682.4	1661.9	1535.7	1436.7	1382.1
42.5°	1576.6	1549.3	1426.5	1320.7	1259.2
45°	1464.0	1433.3	1310.4	1201.2	1153.5
47.5°	1351.4	1324.1	1211.5	1098.9	1044.3
50°	1231.9	1208.1	1105.7	993.1	935.1
52.5°	1133.0	1095.4	996.5	883.9	836.1
55°	1017.0	986.2	894.1	788.3	747.4
57.5°	911.2	880.4	795.1	696.2	662.0
60°	812.2	767.8	696.2	610.9	583.6
62.5°	703.0	668.9	607.4	535.8	569.9
65°	604.0	569.9	515.3	525.5	436.8
67.5°	494.8	477.8	430.0	382.2	368.6
70°	402.7	382.2	365.1	314.0	300.3
72.5°	320.8	300.3	276.4	249.1	238.9
75°	242.3	225.2	211.6	201.3	221.8
77.5°	167.2	160.4	150.2	139.9	136.5
80°	109.2	105.8	102.4	99.0	95.6
82.5°	64.8	64.8	64.8	64.8	64.8
85°	34.1	37.5	41.0	44.4	47.8
87.5°	20.5	20.5	23.9	27.3	30.7
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)