

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: P546296

Luminaire Tested: **FMR-12-4-LD4-2STD-35-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: P546296
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-35-UNV-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

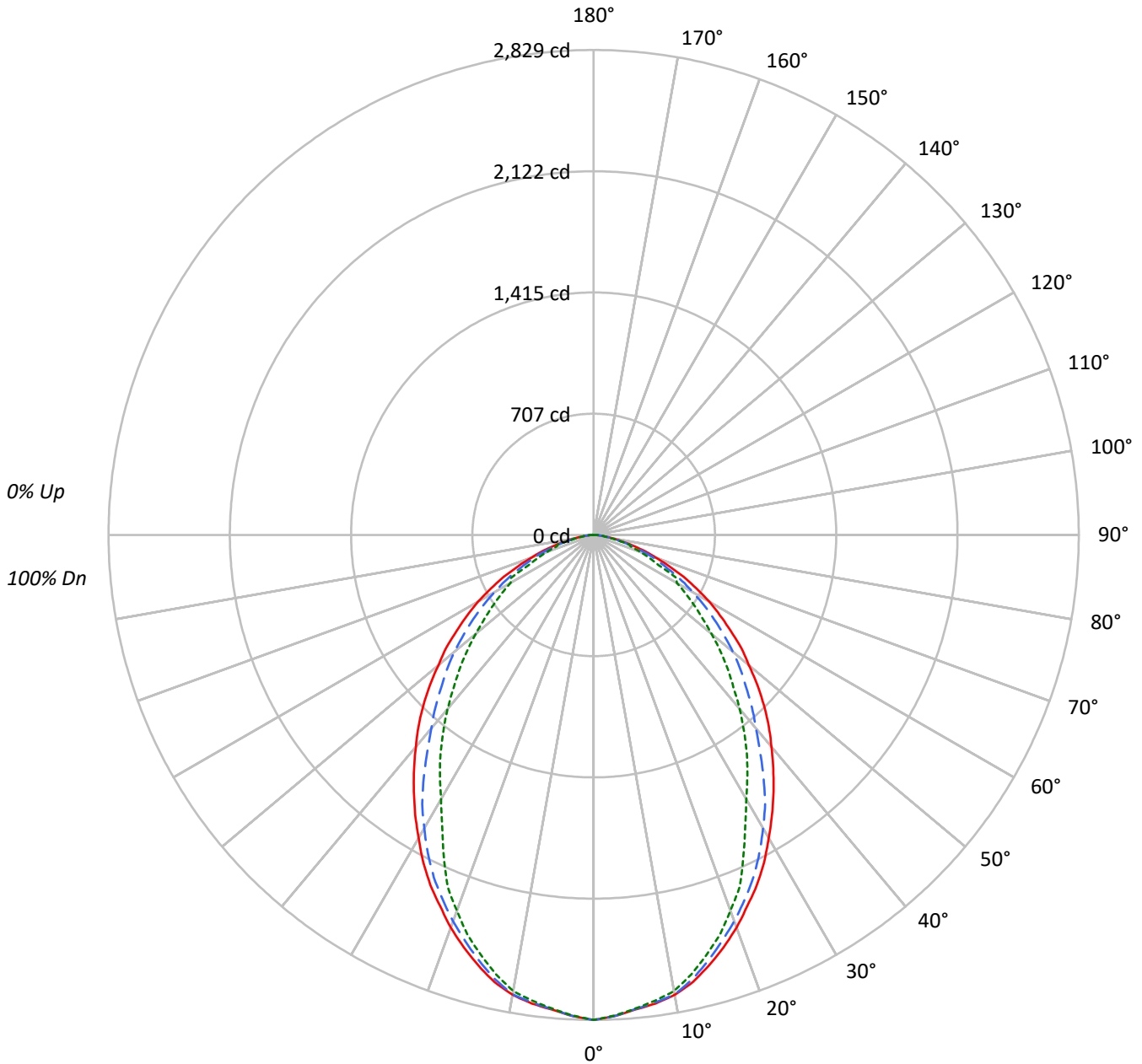
Lumens per Lamp: N/A
Luminaire Lumens: 5554.0 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): NR
Input Current (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°	7613	7613	7613
5°	7510	7501	7492
10°	7445	7436	7382
15°	7244	7171	7071
20°	6978	6865	6678
25°	6691	6545	6138
30°	6342	6138	5528
35°	6006	5673	5114
40°	5664	5170	4653
45°	5340	4779	4207
50°	4943	4436	3752
55°	4573	4020	3361
60°	4189	3591	3010
65°	3686	3145	2665
70°	3036	2754	2264
75°	2414	2109	2210
80°	1623	1520	1420
85°	1010	1210	1414



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.4	4.7
10°-20°	722.8	13.0
20°-30°	1000.6	18.0
30°-40°	1066.9	19.2
40°-50°	973.4	17.5
50°-60°	762.5	13.7
60°-70°	497.0	8.9
70°-80°	220.2	4.0
80°-90°	47.3	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°	1986.7	35.8
0°-40°	3053.6	55.0
0°-60°	4789.5	86.2
0°-90°	5554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5554.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2829	2829	2829	2829	2829	
5°	2780	2777	2777	2774	2774	264
15°	2600	2600	2574	2548	2538	731
25°	2254	2240	2204	2126	2067	1035
35°	1828	1815	1727	1596	1557	1143
45°	1403	1374	1256	1151	1106	1081
55°	975	945	857	756	716	874
65°	579	546	494	504	419	571
75°	232	216	203	193	213	249
85°	33	36	39	42	46	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2829.1	2829.1	2829.1	2829.1	2829.1
2.5°	2809.5	2809.5	2809.5	2806.2	2806.2
5°	2780.1	2776.8	2776.8	2773.5	2773.5
7.5°	2757.2	2753.9	2750.6	2747.4	2740.8
10°	2724.5	2724.5	2721.2	2704.8	2701.6
12.5°	2672.1	2668.9	2655.8	2632.9	2626.4
15°	2600.2	2600.2	2574.0	2547.9	2538.0
17.5°	2521.7	2518.4	2485.7	2459.5	2446.5
20°	2436.7	2430.1	2397.4	2354.9	2332.0
22.5°	2341.8	2341.8	2302.6	2247.0	2224.1
25°	2253.5	2240.4	2204.4	2125.9	2067.1
27.5°	2152.1	2132.5	2093.2	1982.0	1913.3
30°	2040.9	2031.1	1975.5	1831.6	1779.2
32.5°	1936.2	1919.9	1861.0	1710.6	1668.0
35°	1828.3	1815.2	1726.9	1596.1	1556.8
37.5°	1720.4	1704.0	1592.8	1488.2	1439.1
40°	1612.4	1592.8	1471.8	1377.0	1324.6
42.5°	1511.1	1484.9	1367.1	1265.8	1206.9
45°	1403.1	1373.7	1255.9	1151.3	1105.5
47.5°	1295.2	1269.0	1161.1	1053.2	1000.8
50°	1180.7	1157.8	1059.7	951.8	896.2
52.5°	1085.9	1049.9	955.0	847.1	801.3
55°	974.7	945.2	856.9	755.5	716.3
57.5°	873.3	843.8	762.1	667.2	634.5
60°	778.4	735.9	667.2	585.5	559.3
62.5°	673.8	641.1	582.2	513.5	546.2
65°	578.9	546.2	493.9	503.7	418.6
67.5°	474.2	457.9	412.1	366.3	353.2
70°	385.9	366.3	350.0	300.9	287.8
72.5°	307.4	287.8	264.9	238.8	228.9
75°	232.2	215.9	202.8	193.0	212.6
77.5°	160.3	153.7	143.9	134.1	130.8
80°	104.7	101.4	98.1	94.8	91.6
82.5°	62.1	62.1	62.1	62.1	62.1
85°	32.7	36.0	39.2	42.5	45.8
87.5°	19.6	19.6	22.9	26.2	29.4
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)