

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: P546297

Luminaire Tested: **FMR-12-4-LD4-2STD-35-UNV-80-86-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: P546297
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-80-86-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

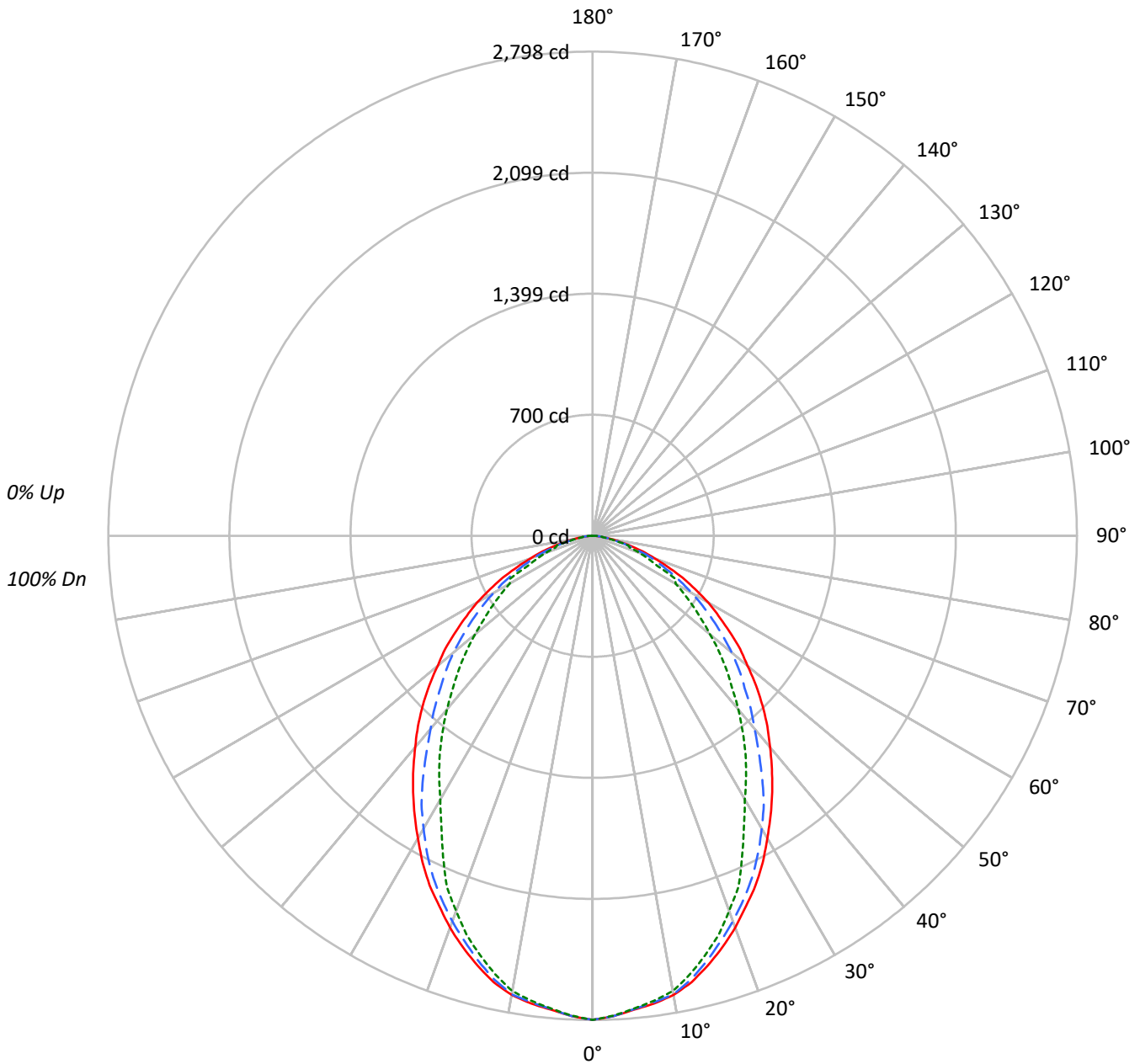
Lumens per Lamp: N/A
Luminaire Lumens: 5492.0 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P546297

CATALOG NUMBER: FMR-12-4-LD4-2STD-35-UNV-80-86-EDD

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°	7528	7528	7528
5°	7426	7417	7408
10°	7362	7353	7300
15°	7163	7091	6992
20°	6900	6789	6604
25°	6616	6472	6069
30°	6271	6070	5467
35°	5939	5610	5057
40°	5601	5113	4601
45°	5280	4726	4160
50°	4888	4387	3710
55°	4522	3976	3323
60°	4142	3551	2976
65°	3645	3110	2636
70°	3002	2723	2239
75°	2387	2085	2185
80°	1604	1503	1404
85°	997	1198	1399



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.4	4.7
10°-20°	714.7	13.0
20°-30°	989.4	18.0
30°-40°	1055.0	19.2
40°-50°	962.5	17.5
50°-60°	754.0	13.7
60°-70°	491.4	8.9
70°-80°	217.7	4.0
80°-90°	46.7	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°	1964.5	35.8
0°-40°	3019.6	55.0
0°-60°	4736.1	86.2
0°-90°	5492.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5492.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2798	2798	2798	2798	2798	
5°	2749	2746	2746	2743	2743	261
15°	2571	2571	2545	2519	2510	723
25°	2228	2215	2180	2102	2044	1023
35°	1808	1795	1708	1578	1540	1130
45°	1388	1358	1242	1138	1093	1069
55°	964	935	847	747	708	864
65°	572	540	488	498	414	564
75°	230	214	200	191	210	246
85°	32	36	39	42	45	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2797.6	2797.6	2797.6	2797.6	2797.6
2.5°	2778.1	2778.1	2778.1	2774.9	2774.9
5°	2749.0	2745.8	2745.8	2742.6	2742.6
7.5°	2726.4	2723.2	2719.9	2716.7	2710.2
10°	2694.1	2694.1	2690.8	2674.7	2671.4
12.5°	2642.3	2639.1	2626.1	2603.5	2597.0
15°	2571.2	2571.2	2545.3	2519.4	2509.7
17.5°	2493.5	2490.3	2458.0	2432.1	2419.2
20°	2409.5	2403.0	2370.6	2328.6	2306.0
22.5°	2315.7	2315.7	2276.9	2221.9	2199.2
25°	2228.3	2215.4	2179.8	2102.2	2044.0
27.5°	2128.1	2108.7	2069.9	1959.9	1892.0
30°	2018.1	2008.4	1953.4	1811.1	1759.4
32.5°	1914.6	1898.5	1840.2	1691.5	1649.4
35°	1807.9	1795.0	1707.6	1578.3	1539.5
37.5°	1701.2	1685.0	1575.0	1471.5	1423.0
40°	1594.4	1575.0	1455.4	1361.6	1309.8
42.5°	1494.2	1468.3	1351.9	1251.6	1193.4
45°	1387.5	1358.3	1241.9	1138.4	1093.1
47.5°	1280.7	1254.9	1148.1	1041.4	989.7
50°	1167.5	1144.9	1047.9	941.1	886.2
52.5°	1073.7	1038.2	944.4	837.6	792.4
55°	963.8	934.7	847.4	747.1	708.3
57.5°	863.5	834.4	753.6	659.8	627.4
60°	769.7	727.7	659.8	578.9	553.0
62.5°	666.2	633.9	575.7	507.8	540.1
65°	572.4	540.1	488.4	498.1	414.0
67.5°	469.0	452.8	407.5	362.2	349.3
70°	381.6	362.2	346.1	297.5	284.6
72.5°	304.0	284.6	262.0	236.1	226.4
75°	229.6	213.5	200.5	190.8	210.2
77.5°	158.5	152.0	142.3	132.6	129.4
80°	103.5	100.3	97.0	93.8	90.6
82.5°	61.4	61.4	61.4	61.4	61.4
85°	32.3	35.6	38.8	42.0	45.3
87.5°	19.4	19.4	22.6	25.9	29.1
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)