

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: P546330

Luminaire Tested: **FMR-12-4-LD4-2STD-40-UNV-80-87-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: P546330
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-40-UNV-80-87-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

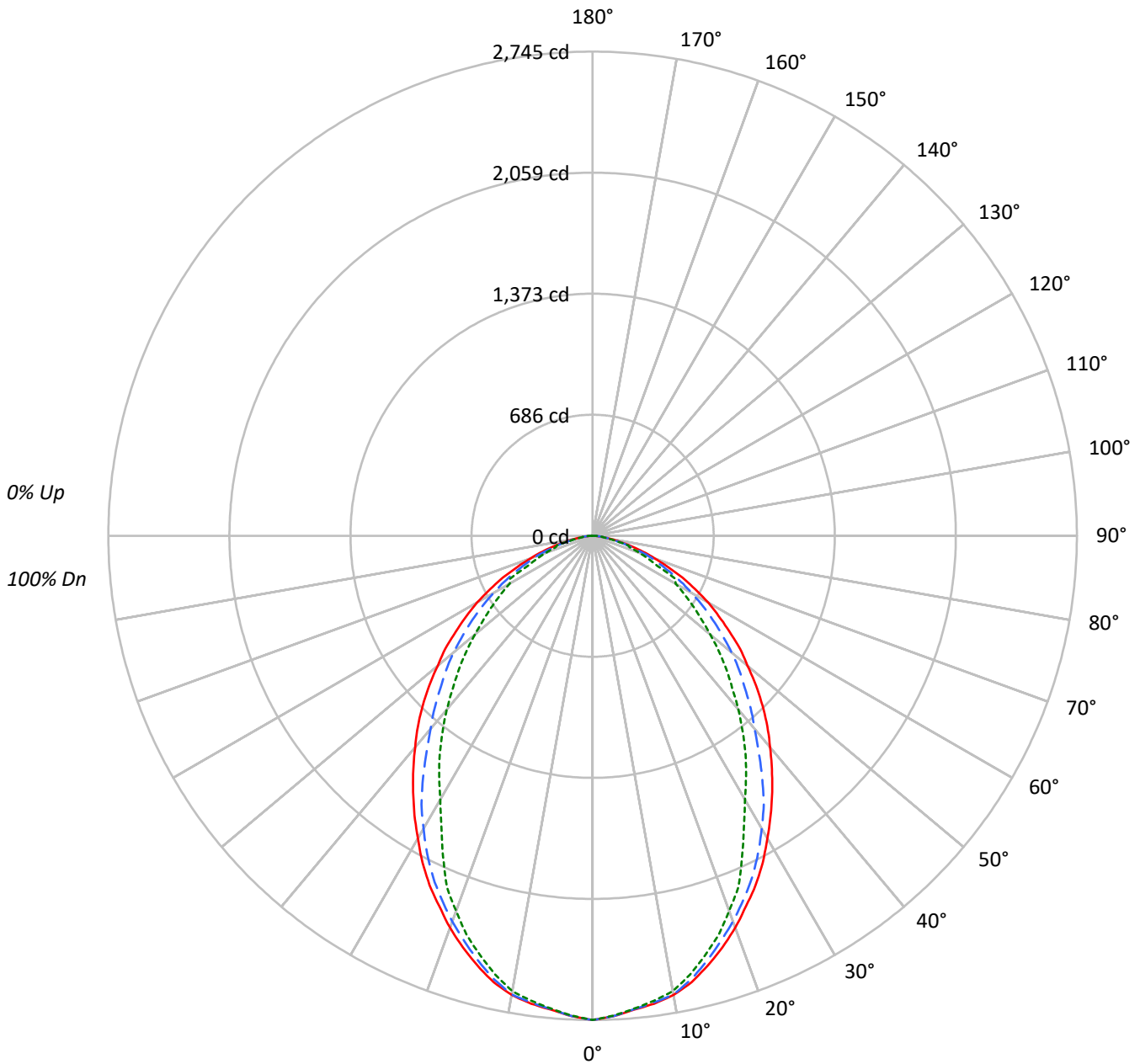
Lumens per Lamp: N/A
Luminaire Lumens: 5389.0 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7387	7387	7387
5°	7287	7278	7269
10°	7223	7215	7163
15°	7029	6958	6861
20°	6771	6661	6480
25°	6492	6351	5955
30°	6153	5956	5364
35°	5828	5504	4962
40°	5496	5017	4515
45°	5181	4638	4082
50°	4796	4304	3640
55°	4437	3901	3261
60°	4065	3484	2921
65°	3577	3051	2586
70°	2947	2672	2198
75°	2342	2046	2145
80°	1574	1475	1378
85°	979	1176	1371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.5	4.7
10°-20°	701.3	13.0
20°-30°	970.9	18.0
30°-40°	1035.2	19.2
40°-50°	944.4	17.5
50°-60°	739.9	13.7
60°-70°	482.2	8.9
70°-80°	213.7	4.0
80°-90°	45.9	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°	1927.7	35.8
0°-40°	2962.9	55.0
0°-60°	4647.2	86.2
0°-90°	5389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5389.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2745	2745	2745	2745	2745	
5°	2698	2694	2694	2691	2691	256
15°	2523	2523	2498	2472	2463	709
25°	2186	2174	2139	2063	2006	1004
35°	1774	1761	1676	1549	1511	1109
45°	1361	1333	1219	1117	1073	1049
55°	946	917	832	733	695	848
65°	562	530	479	489	406	554
75°	225	210	197	187	206	241
85°	32	35	38	41	44	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2745.1	2745.1	2745.1	2745.1	2745.1
2.5°	2726.0	2726.0	2726.0	2722.9	2722.9
5°	2697.5	2694.3	2694.3	2691.1	2691.1
7.5°	2675.3	2672.1	2668.9	2665.7	2659.4
10°	2643.5	2643.5	2640.4	2624.5	2621.3
12.5°	2592.8	2589.6	2576.9	2554.7	2548.3
15°	2522.9	2522.9	2497.6	2472.2	2462.6
17.5°	2446.8	2443.6	2411.9	2386.5	2373.8
20°	2364.3	2357.9	2326.2	2284.9	2262.7
22.5°	2272.2	2272.2	2234.1	2180.2	2158.0
25°	2186.5	2173.9	2138.9	2062.8	2005.7
27.5°	2088.2	2069.1	2031.0	1923.1	1856.5
30°	1980.3	1970.7	1916.8	1777.2	1726.4
32.5°	1878.7	1862.8	1805.7	1659.7	1618.5
35°	1774.0	1761.3	1675.6	1548.7	1510.6
37.5°	1669.3	1653.4	1545.5	1443.9	1396.3
40°	1564.5	1545.5	1428.1	1336.0	1285.3
42.5°	1466.2	1440.8	1326.5	1228.1	1171.0
45°	1361.4	1332.9	1218.6	1117.1	1072.6
47.5°	1256.7	1231.3	1126.6	1021.9	971.1
50°	1145.6	1123.4	1028.2	923.5	869.5
52.5°	1053.6	1018.7	926.7	821.9	777.5
55°	945.7	917.1	831.5	733.1	695.0
57.5°	847.3	818.8	739.4	647.4	615.7
60°	755.3	714.0	647.4	568.1	542.7
62.5°	653.7	622.0	564.9	498.2	530.0
65°	561.7	530.0	479.2	488.7	406.2
67.5°	460.2	444.3	399.9	355.4	342.7
70°	374.5	355.4	339.6	292.0	279.3
72.5°	298.3	279.3	257.1	231.7	222.1
75°	225.3	209.5	196.8	187.2	206.3
77.5°	155.5	149.2	139.6	130.1	126.9
80°	101.6	98.4	95.2	92.0	88.9
82.5°	60.3	60.3	60.3	60.3	60.3
85°	31.7	34.9	38.1	41.3	44.4
87.5°	19.0	19.0	22.2	25.4	28.6
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)