

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: P546265

Luminaire Tested: **FMR-12-4-LD4-2LO-50-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: P546265
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-LD4-2LO-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

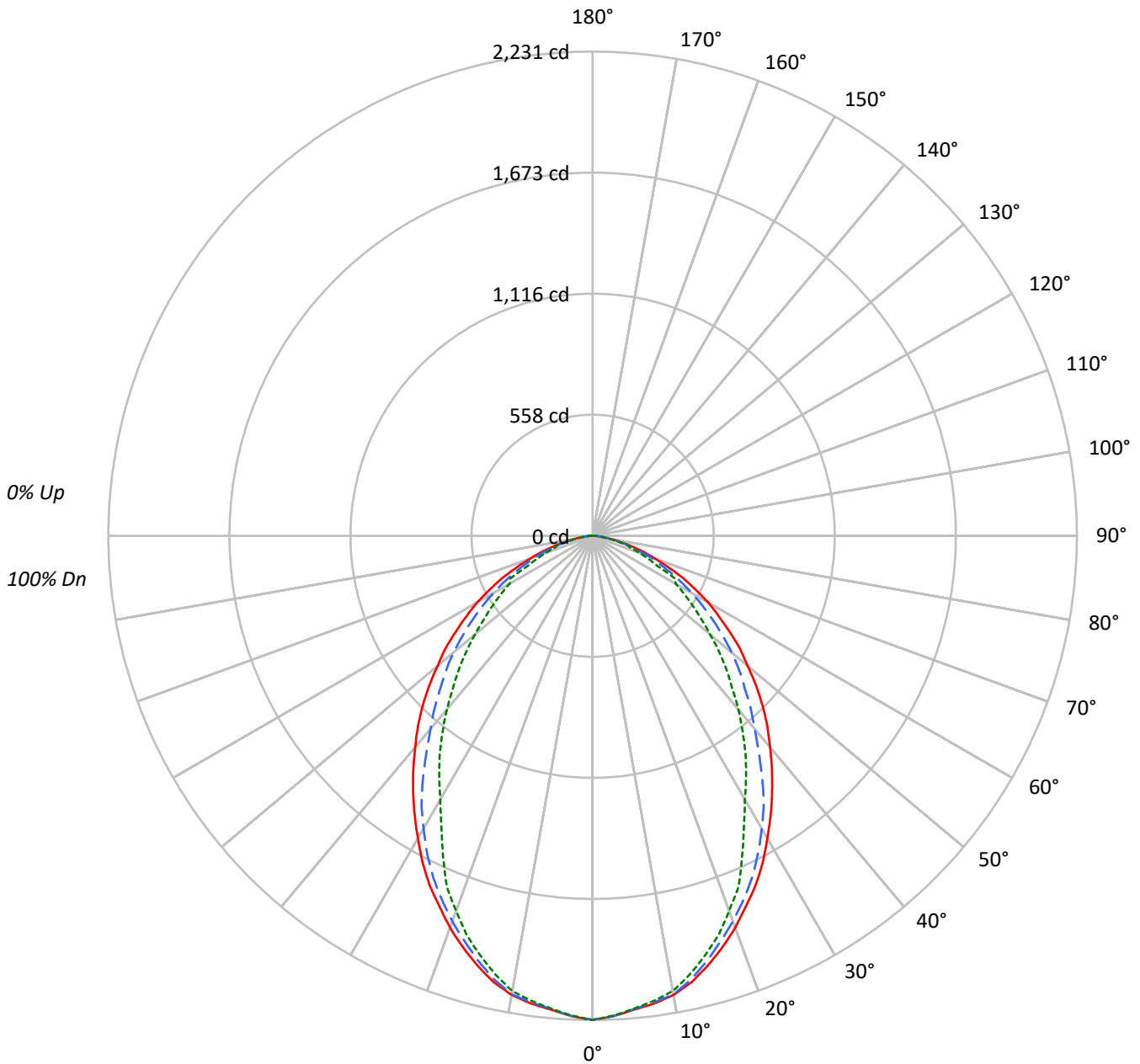
Lumens per Lamp: N/A
Luminaire Lumens: 4379.0 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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: P546265

CATALOG NUMBER: FMR-12-4-LD4-2LO-50-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°	6002	6002	6002
5°	5921	5914	5907
10°	5870	5863	5820
15°	5711	5654	5575
20°	5502	5413	5265
25°	5275	5161	4839
30°	5000	4840	4359
35°	4735	4473	4032
40°	4466	4076	3669
45°	4210	3768	3317
50°	3897	3498	2958
55°	3605	3170	2649
60°	3303	2831	2373
65°	2906	2479	2102
70°	2394	2171	1785
75°	1904	1663	1743
80°	1278	1199	1119
85°	797	954	1115



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.6	4.7
10°-20°	569.8	13.0
20°-30°	788.9	18.0
30°-40°	841.2	19.2
40°-50°	767.4	17.5
50°-60°	601.2	13.7
60°-70°	391.8	8.9
70°-80°	173.6	4.0
80°-90°	37.3	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°	1566.4	35.8
0°-40°	2407.6	55.0
0°-60°	3776.3	86.2
0°-90°	4379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4379.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2231	2231	2231	2231	2231	
5°	2192	2189	2189	2187	2187	208
15°	2050	2050	2030	2009	2001	576
25°	1777	1766	1738	1676	1630	816
35°	1442	1431	1362	1258	1228	901
45°	1106	1083	990	908	872	852
55°	768	745	676	596	565	689
65°	456	431	389	397	330	450
75°	183	170	160	152	168	196
85°	26	28	31	34	36	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2230.6	2230.6	2230.6	2230.6	2230.6
2.5°	2215.1	2215.1	2215.1	2212.6	2212.6
5°	2191.9	2189.3	2189.3	2186.8	2186.8
7.5°	2173.9	2171.3	2168.7	2166.1	2161.0
10°	2148.1	2148.1	2145.5	2132.6	2130.0
12.5°	2106.8	2104.2	2093.9	2075.9	2070.7
15°	2050.1	2050.1	2029.5	2008.8	2001.1
17.5°	1988.2	1985.6	1959.8	1939.2	1928.9
20°	1921.2	1916.0	1890.2	1856.7	1838.6
22.5°	1846.4	1846.4	1815.4	1771.6	1753.5
25°	1776.7	1766.4	1738.1	1676.2	1629.8
27.5°	1696.8	1681.3	1650.4	1562.7	1508.6
30°	1609.1	1601.4	1557.6	1444.1	1402.8
32.5°	1526.6	1513.7	1467.3	1348.7	1315.2
35°	1441.5	1431.2	1361.6	1258.4	1227.5
37.5°	1356.4	1343.5	1255.8	1173.3	1134.6
40°	1271.3	1255.8	1160.4	1085.6	1044.4
42.5°	1191.4	1170.7	1077.9	998.0	951.6
45°	1106.3	1083.1	990.2	907.7	871.6
47.5°	1021.2	1000.5	915.5	830.4	789.1
50°	930.9	912.9	835.5	750.4	706.6
52.5°	856.1	827.8	753.0	667.9	631.8
55°	768.5	745.3	675.6	595.7	564.7
57.5°	688.5	665.3	600.8	526.1	500.3
60°	613.7	580.2	526.1	461.6	441.0
62.5°	531.2	505.4	459.0	404.9	430.6
65°	456.4	430.6	389.4	397.1	330.1
67.5°	373.9	361.0	324.9	288.8	278.5
70°	304.3	288.8	275.9	237.2	226.9
72.5°	242.4	226.9	208.9	188.2	180.5
75°	183.1	170.2	159.9	152.1	167.6
77.5°	126.4	121.2	113.5	105.7	103.1
80°	82.5	79.9	77.4	74.8	72.2
82.5°	49.0	49.0	49.0	49.0	49.0
85°	25.8	28.4	30.9	33.5	36.1
87.5°	15.5	15.5	18.1	20.6	23.2
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)