

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: P546207

Luminaire Tested: **FMR-12-4-LD4-2LO-35-UNV-81-84-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: P546207
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-35-UNV-81-84-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

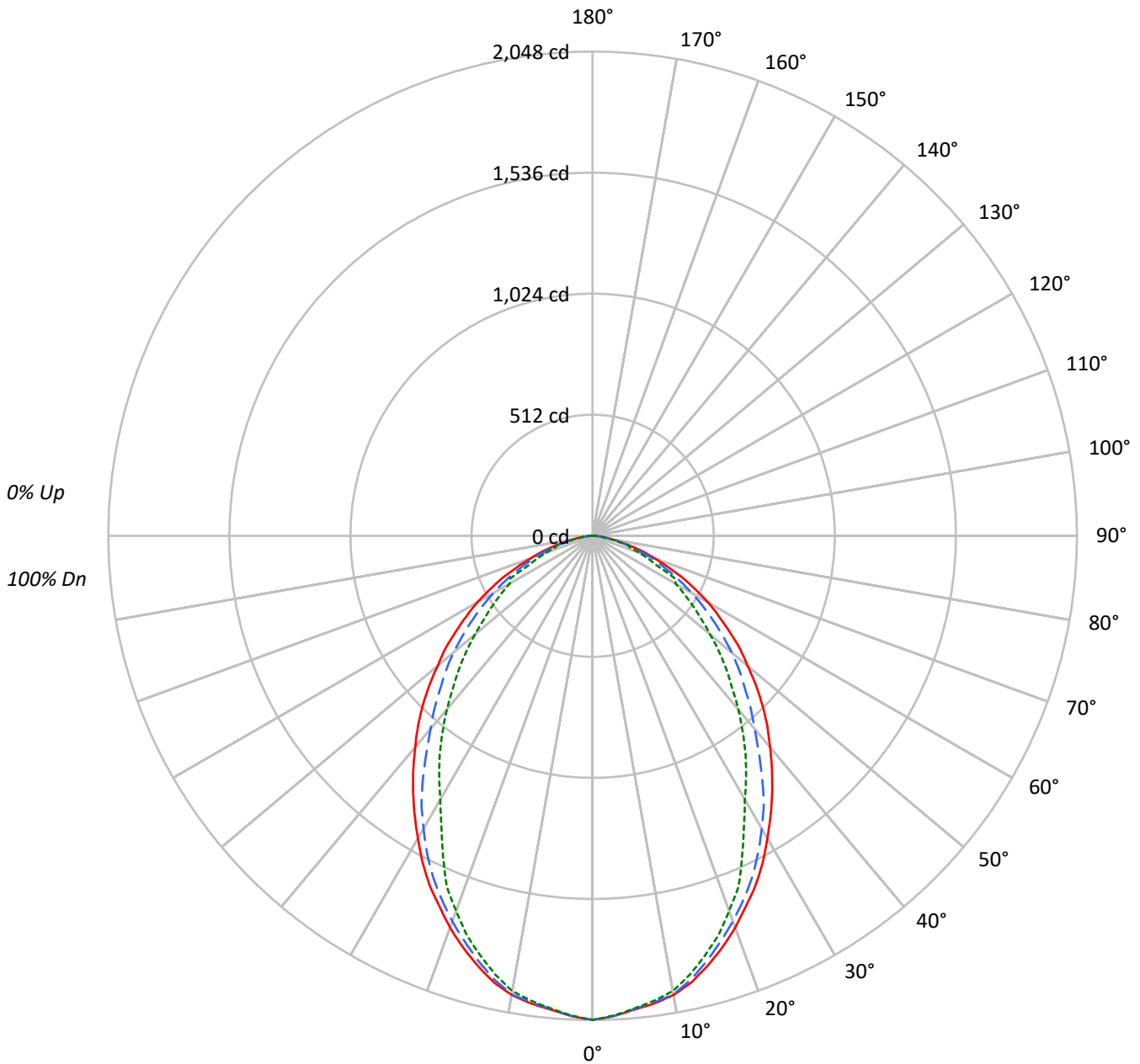
Lumens per Lamp: N/A
Luminaire Lumens: 4020.0 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	5510	5510	5510
5°	5435	5429	5423
10°	5388	5382	5343
15°	5243	5190	5118
20°	5051	4969	4834
25°	4843	4738	4442
30°	4590	4443	4002
35°	4347	4106	3702
40°	4100	3742	3368
45°	3865	3460	3045
50°	3578	3211	2715
55°	3310	2910	2432
60°	3032	2599	2179
65°	2668	2276	1929
70°	2198	1993	1639
75°	1748	1526	1600
80°	1175	1100	1027
85°	732	877	1022



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.6	4.7
10°-20°	523.1	13.0
20°-30°	724.2	18.0
30°-40°	772.2	19.2
40°-50°	704.5	17.5
50°-60°	551.9	13.7
60°-70°	359.7	8.9
70°-80°	159.4	4.0
80°-90°	34.2	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°	1438.0	35.8
0°-40°	2210.2	55.0
0°-60°	3466.7	86.2
0°-90°	4020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4020.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2048	2048	2048	2048	2048	
5°	2012	2010	2010	2008	2008	191
15°	1882	1882	1863	1844	1837	529
25°	1631	1622	1596	1539	1496	749
35°	1323	1314	1250	1155	1127	827
45°	1016	994	909	833	800	782
55°	706	684	620	547	518	633
65°	419	395	358	365	303	413
75°	168	156	147	140	154	180
85°	24	26	28	31	33	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2047.7	2047.7	2047.7	2047.7	2047.7
2.5°	2033.5	2033.5	2033.5	2031.2	2031.2
5°	2012.2	2009.9	2009.9	2007.5	2007.5
7.5°	1995.7	1993.3	1990.9	1988.6	1983.8
10°	1972.0	1972.0	1969.6	1957.8	1955.4
12.5°	1934.1	1931.7	1922.3	1905.7	1901.0
15°	1882.0	1882.0	1863.1	1844.1	1837.0
17.5°	1825.2	1822.8	1799.2	1780.2	1770.8
20°	1763.7	1758.9	1735.2	1704.5	1687.9
22.5°	1695.0	1695.0	1666.6	1626.4	1609.8
25°	1631.1	1621.6	1595.6	1538.8	1496.1
27.5°	1557.7	1543.5	1515.1	1434.6	1384.9
30°	1477.2	1470.1	1429.9	1325.7	1287.8
32.5°	1401.5	1389.6	1347.0	1238.1	1207.3
35°	1323.3	1313.9	1249.9	1155.3	1126.8
37.5°	1245.2	1233.4	1152.9	1077.1	1041.6
40°	1167.1	1152.9	1065.3	996.6	958.8
42.5°	1093.7	1074.8	989.5	916.2	873.5
45°	1015.6	994.3	909.1	833.3	800.2
47.5°	937.5	918.5	840.4	762.3	724.4
50°	854.6	838.0	767.0	688.9	648.6
52.5°	786.0	759.9	691.3	613.1	580.0
55°	705.5	684.2	620.2	546.9	518.4
57.5°	632.1	610.8	551.6	482.9	459.3
60°	563.4	532.6	482.9	423.8	404.8
62.5°	487.7	464.0	421.4	371.7	395.3
65°	419.0	395.3	357.5	364.6	303.0
67.5°	343.3	331.4	298.3	265.1	255.7
70°	279.3	265.1	253.3	217.8	208.3
72.5°	222.5	208.3	191.8	172.8	165.7
75°	168.1	156.2	146.8	139.7	153.9
77.5°	116.0	111.3	104.2	97.1	94.7
80°	75.8	73.4	71.0	68.7	66.3
82.5°	45.0	45.0	45.0	45.0	45.0
85°	23.7	26.0	28.4	30.8	33.1
87.5°	14.2	14.2	16.6	18.9	21.3
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)