

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: P546264

Luminaire Tested: **FMR-12-4-LD4-2LO-50-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: P546264
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-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

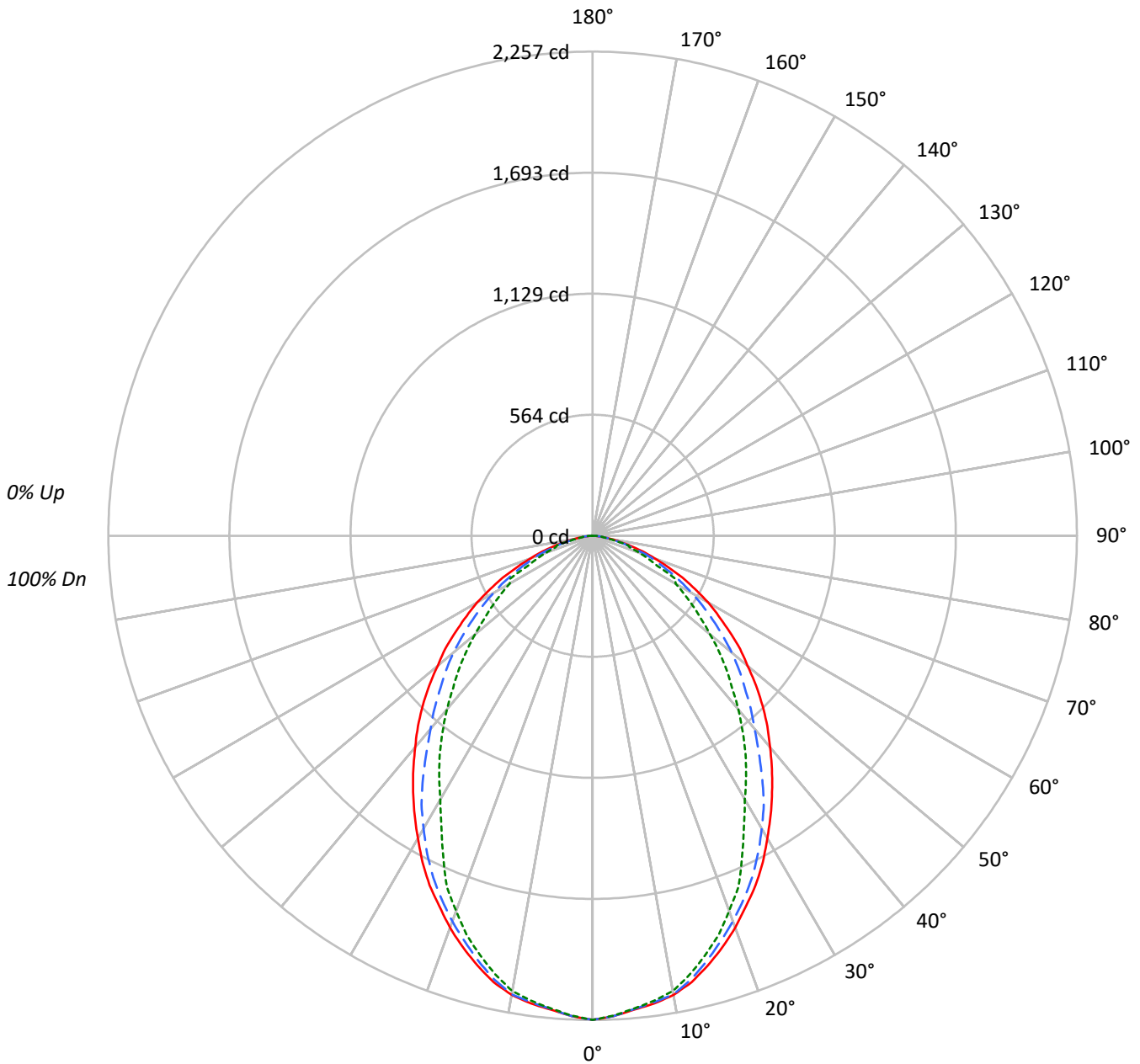
Lumens per Lamp: N/A
Luminaire Lumens: 4430.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	6072	6072	6072
5°	5990	5983	5976
10°	5938	5931	5888
15°	5778	5720	5640
20°	5566	5476	5327
25°	5337	5221	4895
30°	5058	4896	4410
35°	4791	4525	4079
40°	4518	4124	3712
45°	4259	3812	3356
50°	3943	3538	2992
55°	3647	3207	2680
60°	3342	2864	2401
65°	2940	2508	2126
70°	2422	2196	1806
75°	1926	1681	1763
80°	1294	1213	1131
85°	806	966	1127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.1	4.7
10°-20°	576.5	13.0
20°-30°	798.1	18.0
30°-40°	851.0	19.2
40°-50°	776.4	17.5
50°-60°	608.2	13.7
60°-70°	396.4	8.9
70°-80°	175.6	4.0
80°-90°	37.7	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°	1584.6	35.8
0°-40°	2435.7	55.0
0°-60°	3820.3	86.2
0°-90°	4430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2257	2257	2257	2257	2257	
5°	2218	2215	2215	2212	2212	210
15°	2074	2074	2053	2032	2024	583
25°	1797	1787	1758	1696	1649	825
35°	1458	1448	1377	1273	1242	912
45°	1119	1096	1002	918	882	862
55°	777	754	684	603	571	697
65°	462	436	394	402	334	455
75°	185	172	162	154	170	198
85°	26	29	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°	2256.6	2256.6	2256.6	2256.6	2256.6
2.5°	2240.9	2240.9	2240.9	2238.3	2238.3
5°	2217.5	2214.8	2214.8	2212.2	2212.2
7.5°	2199.2	2196.6	2194.0	2191.4	2186.1
10°	2173.1	2173.1	2170.5	2157.4	2154.8
12.5°	2131.4	2128.8	2118.3	2100.1	2094.8
15°	2074.0	2074.0	2053.1	2032.2	2024.4
17.5°	2011.4	2008.8	1982.7	1961.8	1951.4
20°	1943.5	1938.3	1912.2	1878.3	1860.1
22.5°	1867.9	1867.9	1836.6	1792.2	1774.0
25°	1797.4	1787.0	1758.3	1695.7	1648.7
27.5°	1716.6	1700.9	1669.6	1580.9	1526.1
30°	1627.9	1620.0	1575.7	1460.9	1419.2
32.5°	1544.4	1531.3	1484.4	1364.4	1330.5
35°	1458.3	1447.9	1377.4	1273.1	1241.8
37.5°	1372.2	1359.2	1270.5	1187.0	1147.9
40°	1286.1	1270.5	1173.9	1098.3	1056.6
42.5°	1205.3	1184.4	1090.5	1009.6	962.6
45°	1119.2	1095.7	1001.8	918.3	881.8
47.5°	1033.1	1012.2	926.1	840.0	798.3
50°	941.8	923.5	845.2	759.2	714.8
52.5°	866.1	837.4	761.8	675.7	639.1
55°	777.4	753.9	683.5	602.6	571.3
57.5°	696.5	673.1	607.8	532.2	506.1
60°	620.9	587.0	532.2	467.0	446.1
62.5°	537.4	511.3	464.4	409.6	435.7
65°	461.8	435.7	393.9	401.8	333.9
67.5°	378.3	365.2	328.7	292.2	281.7
70°	307.8	292.2	279.1	240.0	229.6
72.5°	245.2	229.6	211.3	190.4	182.6
75°	185.2	172.2	161.7	153.9	169.6
77.5°	127.8	122.6	114.8	107.0	104.4
80°	83.5	80.9	78.3	75.7	73.0
82.5°	49.6	49.6	49.6	49.6	49.6
85°	26.1	28.7	31.3	33.9	36.5
87.5°	15.7	15.7	18.3	20.9	23.5
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)