

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: P546452

Luminaire Tested: **FMR-24-4-LD4-1HI-35-UNV-93-94-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: P546452
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-24-4-LD4-1HI-35-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

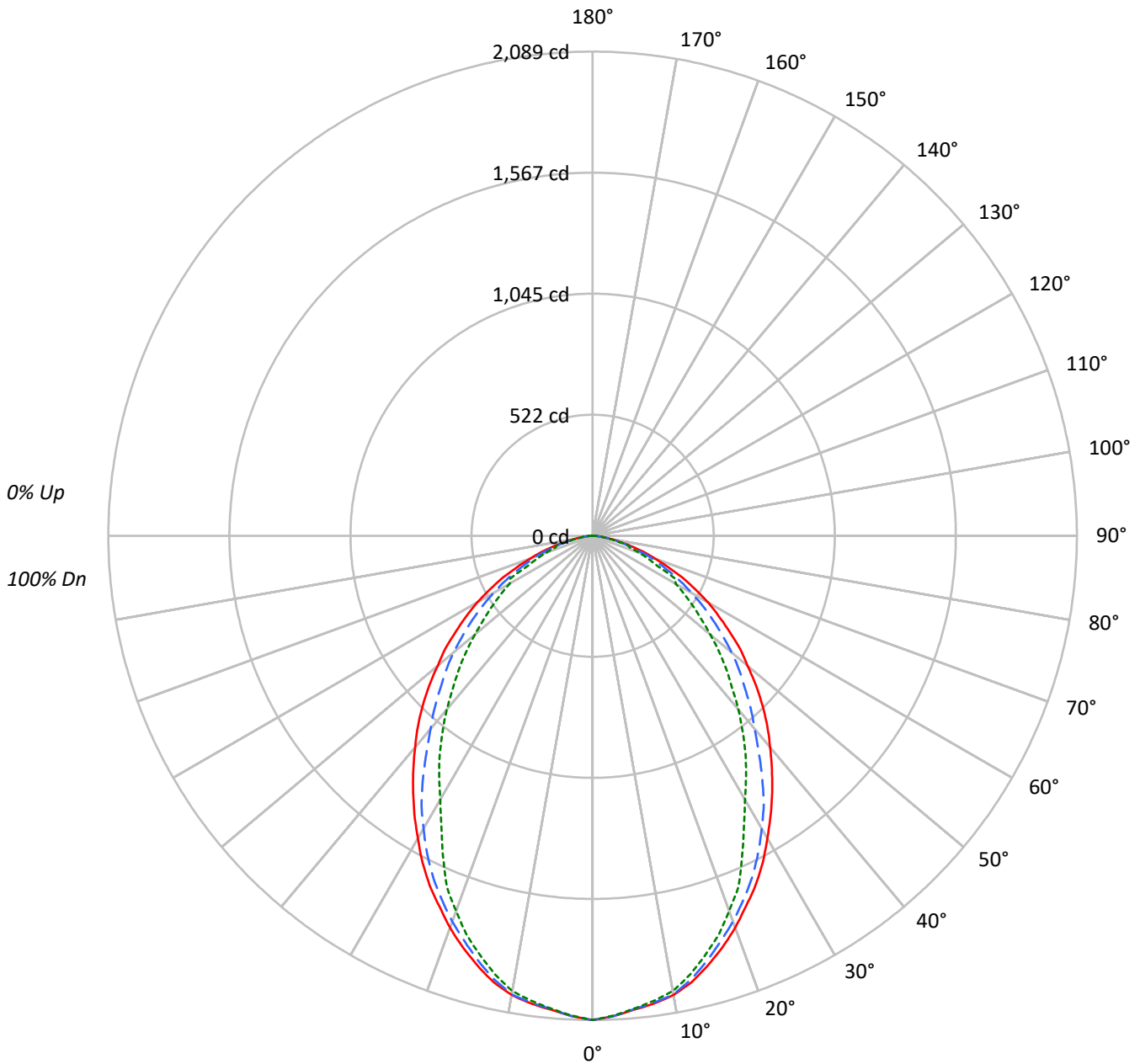
Lumens per Lamp: N/A
Luminaire Lumens: 4101.0 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	2811	2811	2811
5°	2773	2769	2766
10°	2748	2745	2725
15°	2674	2647	2611
20°	2576	2535	2465
25°	2470	2416	2266
30°	2341	2266	2041
35°	2217	2094	1888
40°	2091	1909	1718
45°	1971	1765	1553
50°	1825	1638	1385
55°	1688	1484	1241
60°	1547	1326	1111
65°	1361	1161	984
70°	1121	1017	836
75°	892	778	816
80°	599	562	524
85°	374	448	522



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.5	4.7
10°-20°	533.7	13.0
20°-30°	738.8	18.0
30°-40°	787.8	19.2
40°-50°	718.7	17.5
50°-60°	563.1	13.7
60°-70°	367.0	8.9
70°-80°	162.6	4.0
80°-90°	34.9	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°	1467.0	35.8
0°-40°	2254.8	55.0
0°-60°	3536.5	86.2
0°-90°	4101.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4101.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2089	2089	2089	2089	2089	
5°	2053	2050	2050	2048	2048	195
15°	1920	1920	1901	1881	1874	540
25°	1664	1654	1628	1570	1526	764
35°	1350	1340	1275	1178	1150	844
45°	1036	1014	927	850	816	798
55°	720	698	633	558	529	646
65°	428	403	365	372	309	421
75°	172	159	150	142	157	184
85°	24	27	29	31	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2089.0	2089.0	2089.0	2089.0	2089.0
2.5°	2074.5	2074.5	2074.5	2072.1	2072.1
5°	2052.8	2050.4	2050.4	2047.9	2047.9
7.5°	2035.9	2033.4	2031.0	2028.6	2023.8
10°	2011.7	2011.7	2009.3	1997.2	1994.8
12.5°	1973.1	1970.7	1961.0	1944.1	1939.3
15°	1919.9	1919.9	1900.6	1881.3	1874.1
17.5°	1862.0	1859.6	1835.4	1816.1	1806.4
20°	1799.2	1794.4	1770.2	1738.8	1721.9
22.5°	1729.2	1729.2	1700.2	1659.1	1642.2
25°	1664.0	1654.3	1627.7	1569.8	1526.3
27.5°	1589.1	1574.6	1545.6	1463.5	1412.8
30°	1507.0	1499.7	1458.7	1352.4	1313.8
32.5°	1429.7	1417.6	1374.1	1263.1	1231.7
35°	1350.0	1340.3	1275.1	1178.5	1149.6
37.5°	1270.3	1258.2	1176.1	1098.8	1062.6
40°	1190.6	1176.1	1086.8	1016.7	978.1
42.5°	1115.7	1096.4	1009.5	934.6	891.1
45°	1036.0	1014.3	927.4	850.1	816.3
47.5°	956.3	937.0	857.3	777.6	739.0
50°	871.8	854.9	782.5	702.8	661.7
52.5°	801.8	775.2	705.2	625.5	591.7
55°	719.7	697.9	632.7	557.9	528.9
57.5°	644.8	623.1	562.7	492.7	468.5
60°	574.8	543.4	492.7	432.3	413.0
62.5°	497.5	473.3	429.9	379.2	403.3
65°	427.5	403.3	364.7	371.9	309.1
67.5°	350.2	338.1	304.3	270.5	260.8
70°	285.0	270.5	258.4	222.2	212.5
72.5°	227.0	212.5	195.6	176.3	169.1
75°	171.5	159.4	149.7	142.5	157.0
77.5°	118.3	113.5	106.3	99.0	96.6
80°	77.3	74.9	72.5	70.0	67.6
82.5°	45.9	45.9	45.9	45.9	45.9
85°	24.2	26.6	29.0	31.4	33.8
87.5°	14.5	14.5	16.9	19.3	21.7
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)