

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: P546455

Luminaire Tested: **FMR-24-4-LD4-1HI-40-UNV-80-84-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: P546455
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-40-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

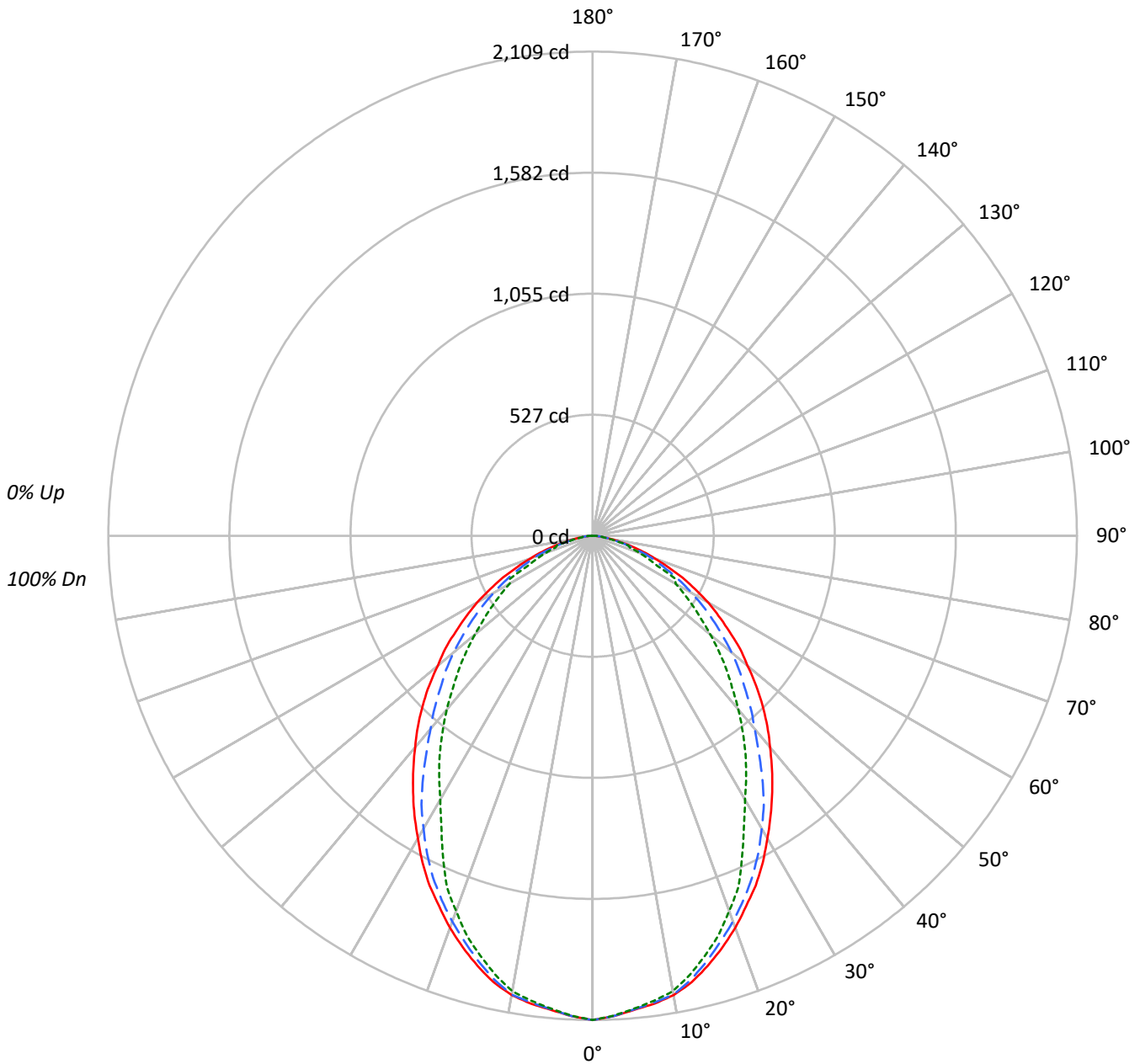
Lumens per Lamp: N/A
Luminaire Lumens: 4141.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	2838	2838	2838
5°	2800	2796	2793
10°	2775	2772	2752
15°	2701	2673	2636
20°	2601	2559	2490
25°	2494	2440	2288
30°	2364	2288	2061
35°	2239	2115	1907
40°	2112	1927	1735
45°	1991	1782	1568
50°	1843	1654	1399
55°	1705	1499	1253
60°	1562	1339	1122
65°	1374	1172	994
70°	1132	1026	844
75°	900	786	824
80°	604	567	529
85°	377	452	526



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.4	4.7
10°-20°	538.9	13.0
20°-30°	746.0	18.0
30°-40°	795.5	19.2
40°-50°	725.7	17.5
50°-60°	568.6	13.7
60°-70°	370.5	8.9
70°-80°	164.2	4.0
80°-90°	35.2	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°	1481.3	35.8
0°-40°	2276.8	55.0
0°-60°	3571.0	86.2
0°-90°	4141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4141.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2109	2109	2109	2109	2109	
5°	2073	2070	2070	2068	2068	197
15°	1939	1939	1919	1900	1892	545
25°	1680	1670	1644	1585	1541	771
35°	1363	1353	1288	1190	1161	852
45°	1046	1024	936	858	824	806
55°	727	705	639	563	534	652
65°	432	407	368	376	312	425
75°	173	161	151	144	158	186
85°	24	27	29	32	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2109.4	2109.4	2109.4	2109.4	2109.4
2.5°	2094.7	2094.7	2094.7	2092.3	2092.3
5°	2072.8	2070.4	2070.4	2067.9	2067.9
7.5°	2055.7	2053.3	2050.8	2048.4	2043.5
10°	2031.3	2031.3	2028.9	2016.7	2014.3
12.5°	1992.3	1989.9	1980.1	1963.1	1958.2
15°	1938.7	1938.7	1919.2	1899.7	1892.3
17.5°	1880.1	1877.7	1853.3	1833.8	1824.1
20°	1816.7	1811.9	1787.5	1755.8	1738.7
22.5°	1746.0	1746.0	1716.8	1675.3	1658.2
25°	1680.2	1670.4	1643.6	1585.1	1541.2
27.5°	1604.6	1590.0	1560.7	1477.8	1426.6
30°	1521.7	1514.4	1472.9	1365.6	1326.6
32.5°	1443.6	1431.4	1387.6	1275.4	1243.7
35°	1363.2	1353.4	1287.6	1190.0	1160.8
37.5°	1282.7	1270.5	1187.6	1109.6	1073.0
40°	1202.2	1187.6	1097.4	1026.6	987.6
42.5°	1126.6	1107.1	1019.3	943.7	899.8
45°	1046.2	1024.2	936.4	858.4	824.2
47.5°	965.7	946.2	865.7	785.2	746.2
50°	880.3	863.3	790.1	709.6	668.2
52.5°	809.6	782.8	712.1	631.6	597.5
55°	726.7	704.7	638.9	563.3	534.0
57.5°	651.1	629.2	568.2	497.5	473.1
60°	580.4	548.7	497.5	436.5	417.0
62.5°	502.3	478.0	434.1	382.9	407.2
65°	431.6	407.2	368.2	375.5	312.1
67.5°	353.6	341.4	307.3	273.1	263.4
70°	287.8	273.1	260.9	224.3	214.6
72.5°	229.2	214.6	197.5	178.0	170.7
75°	173.1	160.9	151.2	143.9	158.5
77.5°	119.5	114.6	107.3	100.0	97.5
80°	78.0	75.6	73.2	70.7	68.3
82.5°	46.3	46.3	46.3	46.3	46.3
85°	24.4	26.8	29.3	31.7	34.1
87.5°	14.6	14.6	17.1	19.5	21.9
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)