

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: P546849

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-81-86-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: P546849
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-LD4-2LO-50-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC 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

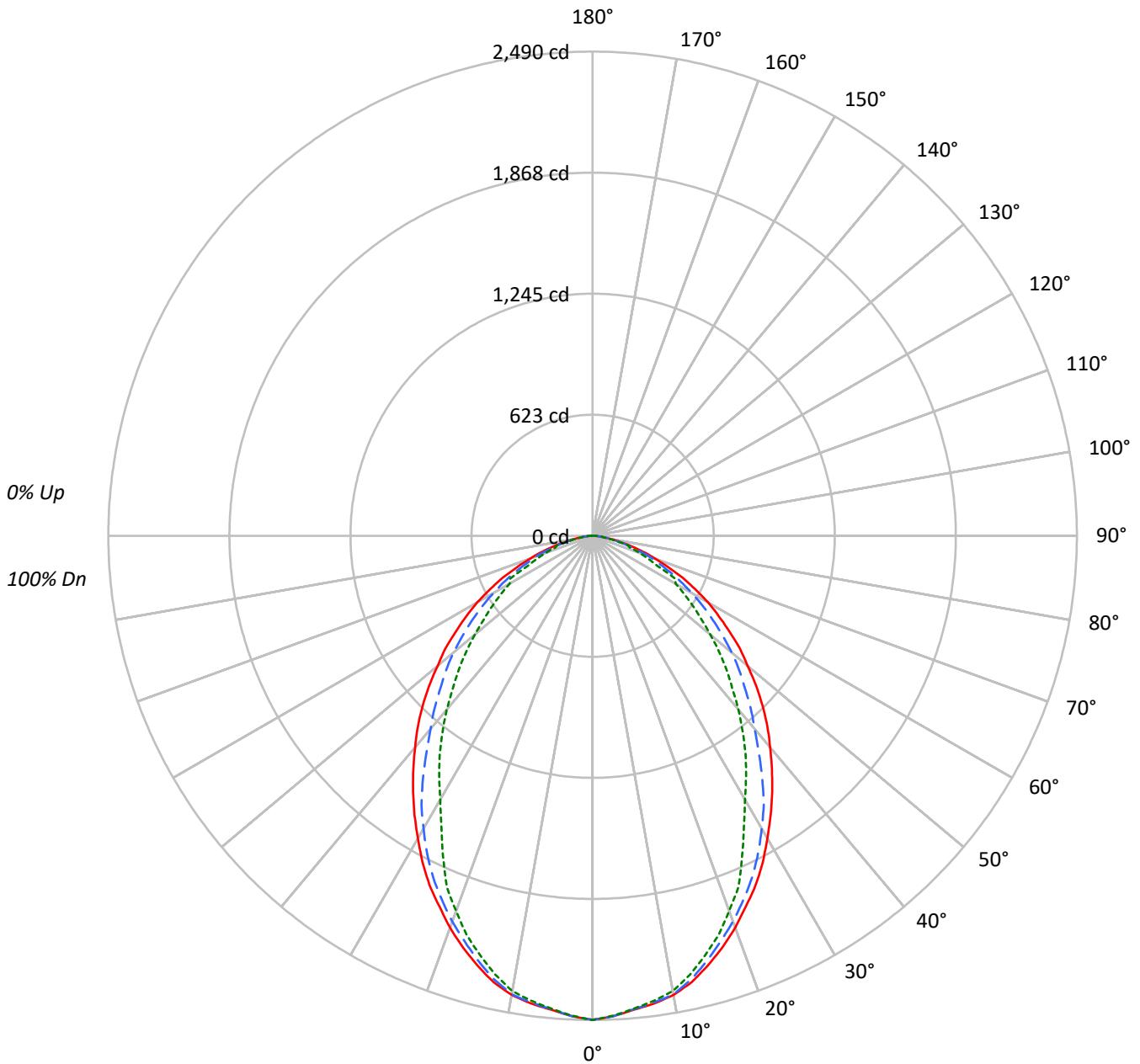
Lumens per Lamp: N/A
Luminaire Lumens: 4888.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3350	3350	3350
5°	3305	3301	3297
10°	3276	3272	3248
15°	3188	3156	3111
20°	3071	3021	2939
25°	2944	2880	2701
30°	2791	2701	2433
35°	2643	2496	2251
40°	2493	2275	2048
45°	2350	2103	1851
50°	2175	1952	1651
55°	2012	1769	1479
60°	1844	1580	1324
65°	1622	1384	1173
70°	1336	1212	996
75°	1063	928	973
80°	714	669	625
85°	445	533	622



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.8	4.7
10°-20°	636.1	13.0
20°-30°	880.6	18.0
30°-40°	939.0	19.2
40°-50°	856.6	17.5
50°-60°	671.1	13.7
60°-70°	437.4	8.9
70°-80°	193.8	4.0
80°-90°	41.6	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°	1748.5	35.8
0°-40°	2687.5	55.0
0°-60°	4215.2	86.2
0°-90°	4888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2490	2490	2490	2490	2490	
5°	2447	2444	2444	2441	2441	232
15°	2288	2288	2265	2242	2234	643
25°	1983	1972	1940	1871	1819	911
35°	1609	1598	1520	1405	1370	1006
45°	1235	1209	1105	1013	973	951
55°	858	832	754	665	630	769
65°	510	481	435	443	368	502
75°	204	190	178	170	187	219
85°	29	32	34	37	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2489.9	2489.9	2489.9	2489.9	2489.9
2.5°	2472.6	2472.6	2472.6	2469.7	2469.7
5°	2446.7	2443.8	2443.8	2440.9	2440.9
7.5°	2426.6	2423.7	2420.8	2417.9	2412.2
10°	2397.8	2397.8	2394.9	2380.5	2377.6
12.5°	2351.7	2348.8	2337.3	2317.2	2311.4
15°	2288.4	2288.4	2265.4	2242.3	2233.7
17.5°	2219.3	2216.4	2187.6	2164.6	2153.1
20°	2144.5	2138.7	2109.9	2072.5	2052.4
22.5°	2061.0	2061.0	2026.4	1977.5	1957.4
25°	1983.3	1971.8	1940.1	1871.0	1819.2
27.5°	1894.0	1876.8	1842.2	1744.4	1683.9
30°	1796.2	1787.5	1738.6	1611.9	1565.9
32.5°	1704.1	1689.7	1637.9	1505.4	1468.0
35°	1609.1	1597.6	1519.8	1404.7	1370.2
37.5°	1514.1	1499.7	1401.8	1309.7	1266.5
40°	1419.1	1401.8	1295.3	1211.8	1165.8
42.5°	1329.9	1306.8	1203.2	1114.0	1062.2
45°	1234.9	1209.0	1105.3	1013.2	972.9
47.5°	1139.9	1116.8	1021.9	926.9	880.8
50°	1039.1	1019.0	932.6	837.6	788.7
52.5°	955.7	924.0	840.5	745.5	705.2
55°	857.8	831.9	754.2	664.9	630.4
57.5°	768.6	742.6	670.7	587.2	558.4
60°	685.1	647.7	587.2	515.2	492.2
62.5°	593.0	564.2	512.4	451.9	480.7
65°	509.5	480.7	434.6	443.3	368.4
67.5°	417.4	403.0	362.7	322.4	310.9
70°	339.7	322.4	308.0	264.8	253.3
72.5°	270.6	253.3	233.2	210.1	201.5
75°	204.4	190.0	178.5	169.8	187.1
77.5°	141.0	135.3	126.7	118.0	115.1
80°	92.1	89.2	86.4	83.5	80.6
82.5°	54.7	54.7	54.7	54.7	54.7
85°	28.8	31.7	34.5	37.4	40.3
87.5°	17.3	17.3	20.1	23.0	25.9
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)