

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: P546848

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-81-85-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: P546848
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-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC 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

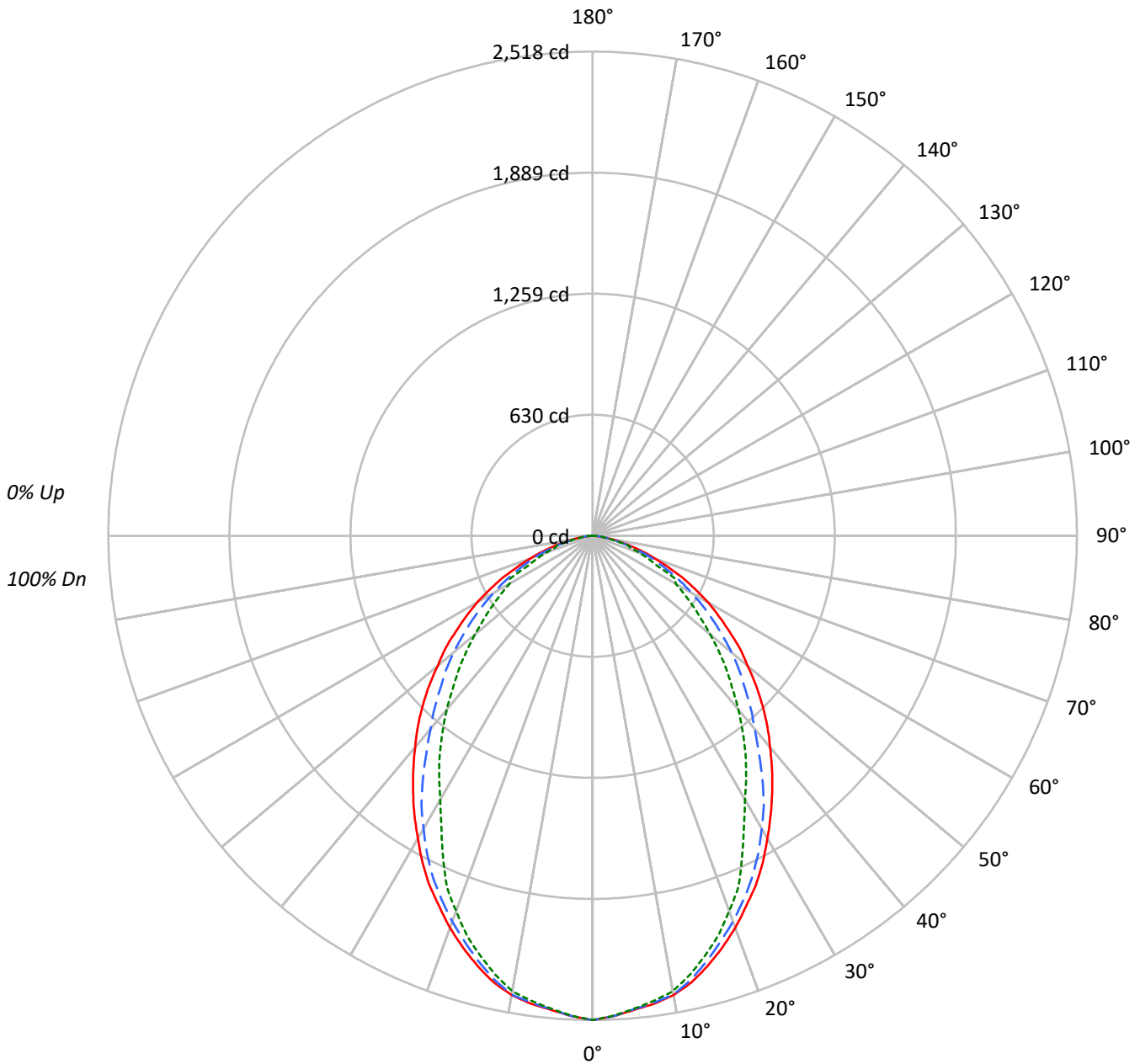
Lumens per Lamp: N/A
Luminaire Lumens: 4944.0 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3388	3388	3388
5°	3342	3338	3335
10°	3313	3309	3286
15°	3224	3192	3147
20°	3106	3056	2972
25°	2978	2913	2732
30°	2822	2732	2461
35°	2673	2525	2276
40°	2521	2301	2071
45°	2377	2127	1873
50°	2200	1975	1670
55°	2035	1789	1496
60°	1865	1598	1340
65°	1641	1400	1187
70°	1352	1225	1008
75°	1075	938	984
80°	722	676	631
85°	449	539	630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.4	4.7
10°-20°	643.4	13.0
20°-30°	890.7	18.0
30°-40°	949.8	19.2
40°-50°	866.4	17.5
50°-60°	678.8	13.7
60°-70°	442.4	8.9
70°-80°	196.0	4.0
80°-90°	42.1	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°	1768.5	35.8
0°-40°	2718.2	55.0
0°-60°	4263.5	86.2
0°-90°	4944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2518	2518	2518	2518	2518	
5°	2475	2472	2472	2469	2469	235
15°	2315	2315	2291	2268	2259	651
25°	2006	1994	1962	1892	1840	921
35°	1628	1616	1537	1421	1386	1017
45°	1249	1223	1118	1025	984	962
55°	868	841	763	672	638	778
65°	515	486	440	448	373	508
75°	207	192	180	172	189	222
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2518.4	2518.4	2518.4	2518.4	2518.4
2.5°	2500.9	2500.9	2500.9	2498.0	2498.0
5°	2474.7	2471.8	2471.8	2468.9	2468.9
7.5°	2454.4	2451.4	2448.5	2445.6	2439.8
10°	2425.2	2425.2	2422.3	2407.8	2404.9
12.5°	2378.7	2375.7	2364.1	2343.7	2337.9
15°	2314.6	2314.6	2291.3	2268.0	2259.3
17.5°	2244.7	2241.8	2212.7	2189.4	2177.8
20°	2169.0	2163.2	2134.1	2096.2	2075.9
22.5°	2084.6	2084.6	2049.7	2000.2	1979.8
25°	2006.0	1994.3	1962.3	1892.4	1840.0
27.5°	1915.7	1898.3	1863.3	1764.3	1703.2
30°	1816.7	1808.0	1758.5	1630.4	1583.8
32.5°	1723.6	1709.0	1656.6	1522.7	1484.8
35°	1627.5	1615.9	1537.2	1420.8	1385.9
37.5°	1531.4	1516.9	1417.9	1324.7	1281.0
40°	1435.3	1417.9	1310.2	1225.7	1179.1
42.5°	1345.1	1321.8	1217.0	1126.7	1074.3
45°	1249.0	1222.8	1118.0	1024.8	984.1
47.5°	1152.9	1129.6	1033.6	937.5	890.9
50°	1051.0	1030.7	943.3	847.2	797.7
52.5°	966.6	934.6	850.1	754.1	713.3
55°	867.6	841.4	762.8	672.5	637.6
57.5°	777.4	751.2	678.4	593.9	564.8
60°	692.9	655.1	593.9	521.2	497.9
62.5°	599.8	570.6	518.2	457.1	486.2
65°	515.3	486.2	439.6	448.4	372.7
67.5°	422.2	407.6	366.8	326.1	314.4
70°	343.6	326.1	311.5	267.9	256.2
72.5°	273.7	256.2	235.8	212.5	203.8
75°	206.7	192.2	180.5	171.8	189.2
77.5°	142.7	136.8	128.1	119.4	116.5
80°	93.2	90.3	87.3	84.4	81.5
82.5°	55.3	55.3	55.3	55.3	55.3
85°	29.1	32.0	34.9	37.8	40.8
87.5°	17.5	17.5	20.4	23.3	26.2
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)