

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: P546856

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-82-85-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: P546856
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-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 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

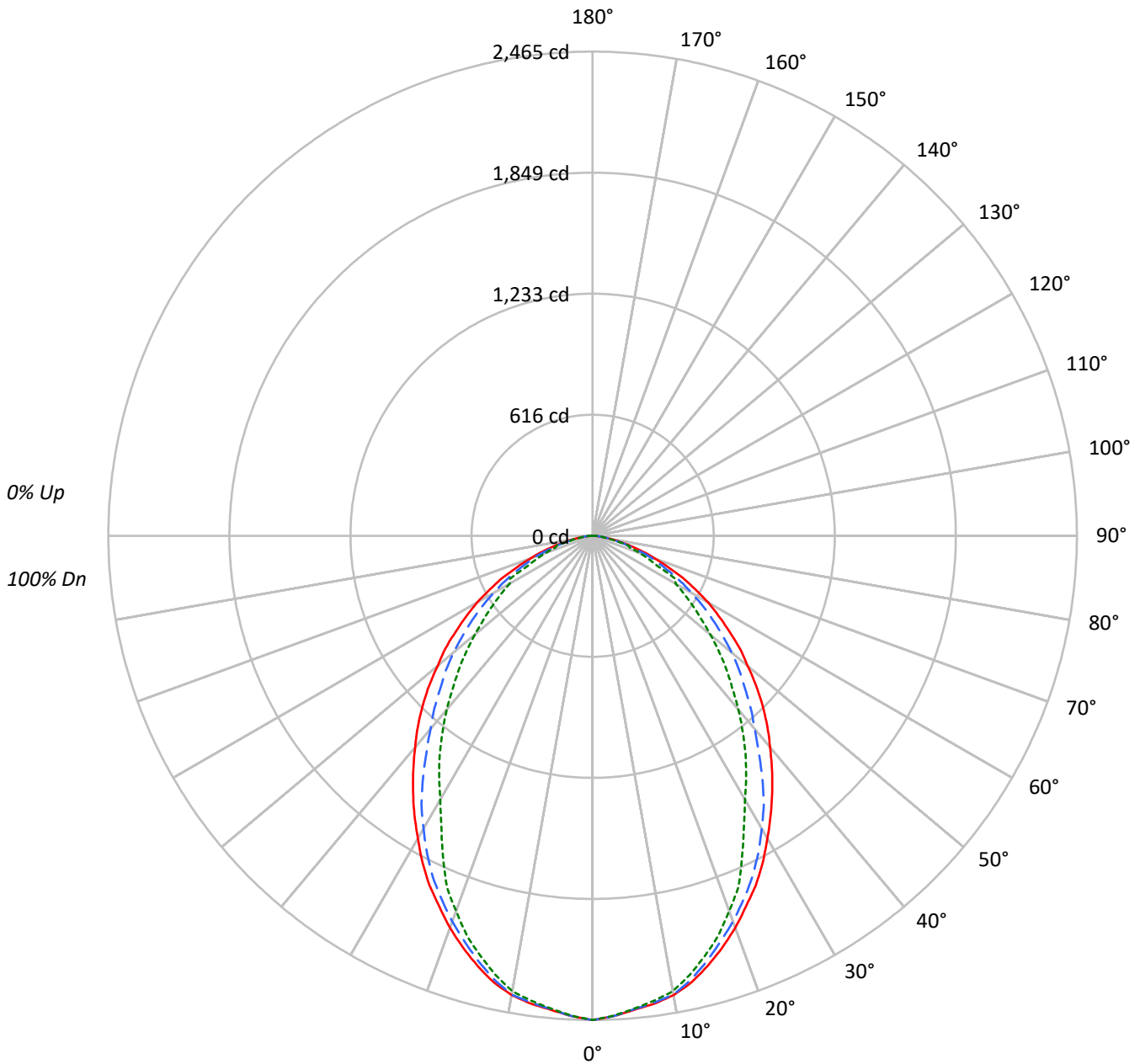
Lumens per Lamp: N/A
Luminaire Lumens: 4840.0 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3317	3317	3317
5°	3272	3268	3264
10°	3244	3240	3217
15°	3156	3125	3081
20°	3040	2991	2910
25°	2915	2852	2674
30°	2763	2675	2409
35°	2617	2472	2228
40°	2468	2253	2027
45°	2327	2083	1833
50°	2154	1933	1635
55°	1993	1752	1464
60°	1825	1565	1312
65°	1606	1370	1161
70°	1323	1200	987
75°	1052	919	963
80°	707	662	618
85°	440	528	616



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.5	4.7
10°-20°	629.8	13.0
20°-30°	872.0	18.0
30°-40°	929.8	19.2
40°-50°	848.2	17.5
50°-60°	664.5	13.7
60°-70°	433.1	8.9
70°-80°	191.9	4.0
80°-90°	41.2	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°	1731.3	35.8
0°-40°	2661.1	55.0
0°-60°	4173.8	86.2
0°-90°	4840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4840.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2465	2465	2465	2465	2465	
5°	2423	2420	2420	2417	2417	230
15°	2266	2266	2243	2220	2212	637
25°	1964	1952	1921	1853	1801	902
35°	1593	1582	1505	1391	1357	996
45°	1223	1197	1094	1003	963	942
55°	849	824	747	658	624	762
65°	504	476	430	439	365	497
75°	202	188	177	168	185	217
85°	28	31	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°	2465.4	2465.4	2465.4	2465.4	2465.4
2.5°	2448.3	2448.3	2448.3	2445.5	2445.5
5°	2422.7	2419.8	2419.8	2417.0	2417.0
7.5°	2402.7	2399.9	2397.0	2394.2	2388.5
10°	2374.2	2374.2	2371.4	2357.1	2354.3
12.5°	2328.6	2325.8	2314.4	2294.4	2288.7
15°	2265.9	2265.9	2243.1	2220.3	2211.8
17.5°	2197.5	2194.7	2166.2	2143.4	2132.0
20°	2123.4	2117.7	2089.2	2052.2	2032.2
22.5°	2040.8	2040.8	2006.5	1958.1	1938.1
25°	1963.8	1952.4	1921.0	1852.6	1801.3
27.5°	1875.4	1858.3	1824.1	1727.2	1667.4
30°	1778.5	1770.0	1721.5	1596.1	1550.5
32.5°	1687.3	1673.1	1621.8	1490.7	1453.6
35°	1593.3	1581.9	1504.9	1390.9	1356.7
37.5°	1499.2	1485.0	1388.1	1296.8	1254.1
40°	1405.2	1388.1	1282.6	1199.9	1154.3
42.5°	1316.8	1294.0	1191.4	1103.0	1051.7
45°	1222.7	1197.1	1094.5	1003.3	963.4
47.5°	1128.7	1105.9	1011.8	917.8	872.2
50°	1028.9	1009.0	923.5	829.4	781.0
52.5°	946.3	914.9	832.3	738.2	698.3
55°	849.4	823.7	746.8	658.4	624.2
57.5°	761.0	735.4	664.1	581.4	552.9
60°	678.3	641.3	581.4	510.2	487.4
62.5°	587.1	558.6	507.3	447.5	476.0
65°	504.5	476.0	430.4	438.9	364.8
67.5°	413.3	399.0	359.1	319.2	307.8
70°	336.3	319.2	305.0	262.2	250.8
72.5°	267.9	250.8	230.9	208.1	199.5
75°	202.4	188.1	176.7	168.2	185.3
77.5°	139.7	134.0	125.4	116.9	114.0
80°	91.2	88.4	85.5	82.7	79.8
82.5°	54.2	54.2	54.2	54.2	54.2
85°	28.5	31.4	34.2	37.1	39.9
87.5°	17.1	17.1	20.0	22.8	25.7
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)