

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: P546840

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-80-85-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: P546840
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-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

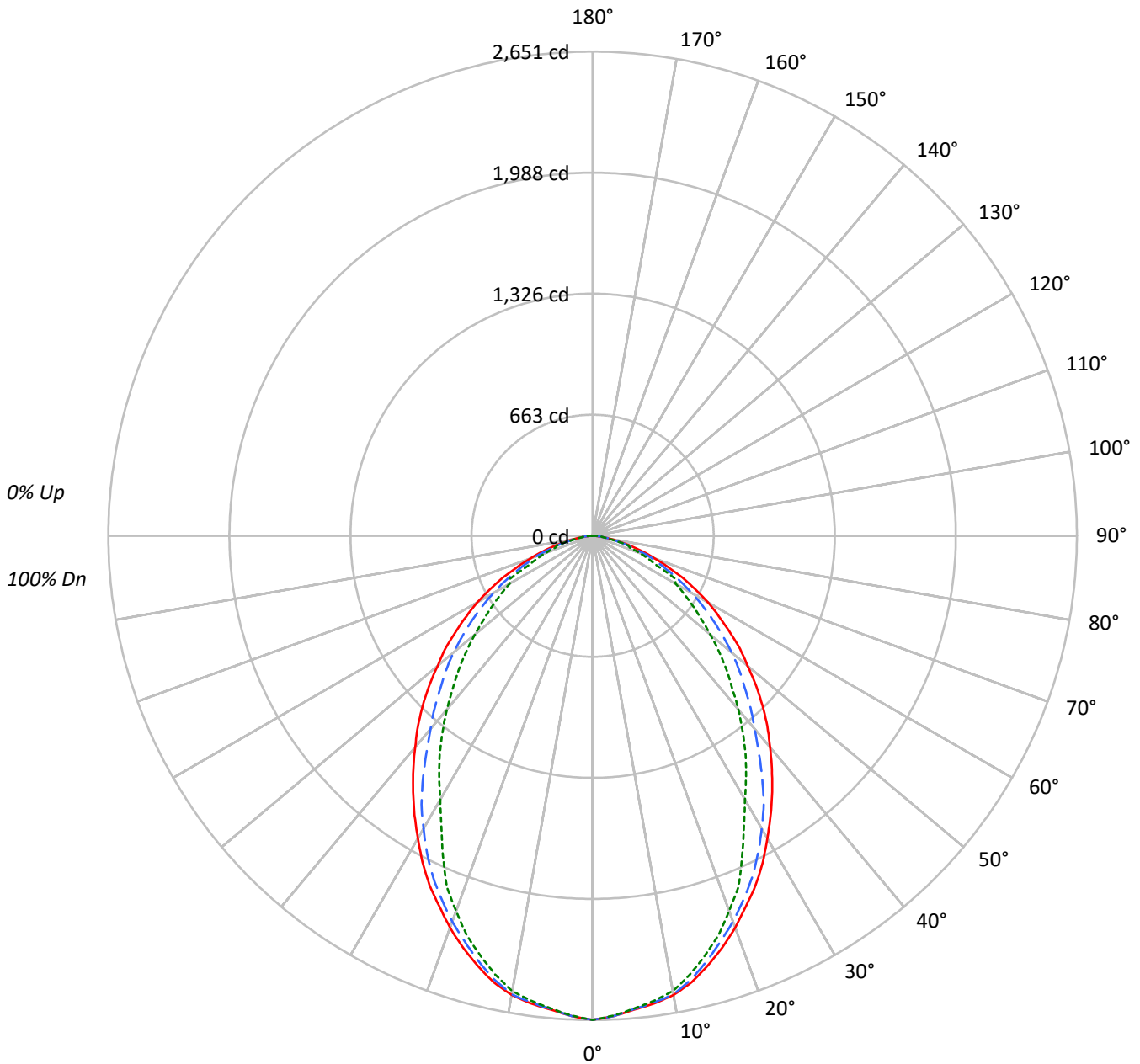
Lumens per Lamp: N/A
Luminaire Lumens: 5204.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3567	3567	3567
5°	3518	3514	3510
10°	3488	3484	3458
15°	3394	3360	3313
20°	3269	3216	3129
25°	3135	3066	2875
30°	2971	2876	2590
35°	2814	2658	2396
40°	2654	2422	2180
45°	2502	2239	1971
50°	2316	2078	1758
55°	2142	1883	1574
60°	1963	1682	1410
65°	1727	1473	1249
70°	1423	1290	1061
75°	1131	988	1036
80°	760	712	665
85°	472	568	662



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.8	4.7
10°-20°	677.2	13.0
20°-30°	937.5	18.0
30°-40°	999.7	19.2
40°-50°	912.0	17.5
50°-60°	714.5	13.7
60°-70°	465.7	8.9
70°-80°	206.3	4.0
80°-90°	44.3	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°	1861.5	35.8
0°-40°	2861.2	55.0
0°-60°	4487.7	86.2
0°-90°	5204.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5204.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2651	2651	2651	2651	2651	
5°	2605	2602	2602	2599	2599	247
15°	2436	2436	2412	2387	2378	685
25°	2112	2099	2066	1992	1937	969
35°	1713	1701	1618	1496	1459	1071
45°	1315	1287	1177	1079	1036	1013
55°	913	886	803	708	671	819
65°	542	512	463	472	392	535
75°	218	202	190	181	199	233
85°	31	34	37	40	43	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2650.8	2650.8	2650.8	2650.8	2650.8
2.5°	2632.5	2632.5	2632.5	2629.4	2629.4
5°	2604.9	2601.8	2601.8	2598.8	2598.8
7.5°	2583.4	2580.4	2577.3	2574.2	2568.1
10°	2552.8	2552.8	2549.7	2534.4	2531.3
12.5°	2503.7	2500.7	2488.4	2467.0	2460.8
15°	2436.3	2436.3	2411.8	2387.3	2378.1
17.5°	2362.8	2359.7	2329.1	2304.6	2292.3
20°	2283.1	2277.0	2246.3	2206.5	2185.0
22.5°	2194.2	2194.2	2157.5	2105.4	2083.9
25°	2111.5	2099.2	2065.5	1992.0	1936.8
27.5°	2016.5	1998.1	1961.3	1857.1	1792.8
30°	1912.3	1903.1	1851.0	1716.2	1667.1
32.5°	1814.2	1798.9	1743.7	1602.8	1562.9
35°	1713.1	1700.8	1618.1	1495.5	1458.7
37.5°	1612.0	1596.6	1492.4	1394.4	1348.4
40°	1510.8	1492.4	1379.1	1290.2	1241.1
42.5°	1415.8	1391.3	1281.0	1186.0	1130.8
45°	1314.7	1287.1	1176.8	1078.7	1035.8
47.5°	1213.6	1189.1	1087.9	986.8	937.8
50°	1106.3	1084.9	992.9	891.8	839.7
52.5°	1017.4	983.7	894.9	793.7	750.8
55°	913.2	885.7	802.9	707.9	671.1
57.5°	818.2	790.7	714.0	625.2	594.5
60°	729.4	689.5	625.2	548.6	524.0
62.5°	631.3	600.7	545.5	481.1	511.8
65°	542.4	511.8	462.7	471.9	392.3
67.5°	444.4	429.0	386.1	343.2	331.0
70°	361.6	343.2	327.9	281.9	269.7
72.5°	288.1	269.7	248.2	223.7	214.5
75°	217.6	202.3	190.0	180.8	199.2
77.5°	150.2	144.0	134.8	125.6	122.6
80°	98.1	95.0	91.9	88.9	85.8
82.5°	58.2	58.2	58.2	58.2	58.2
85°	30.6	33.7	36.8	39.8	42.9
87.5°	18.4	18.4	21.5	24.5	27.6
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)