

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: P546913

Luminaire Tested: **FMR-24-4-LD4-2STD-40-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: P546913
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-LD4-2STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

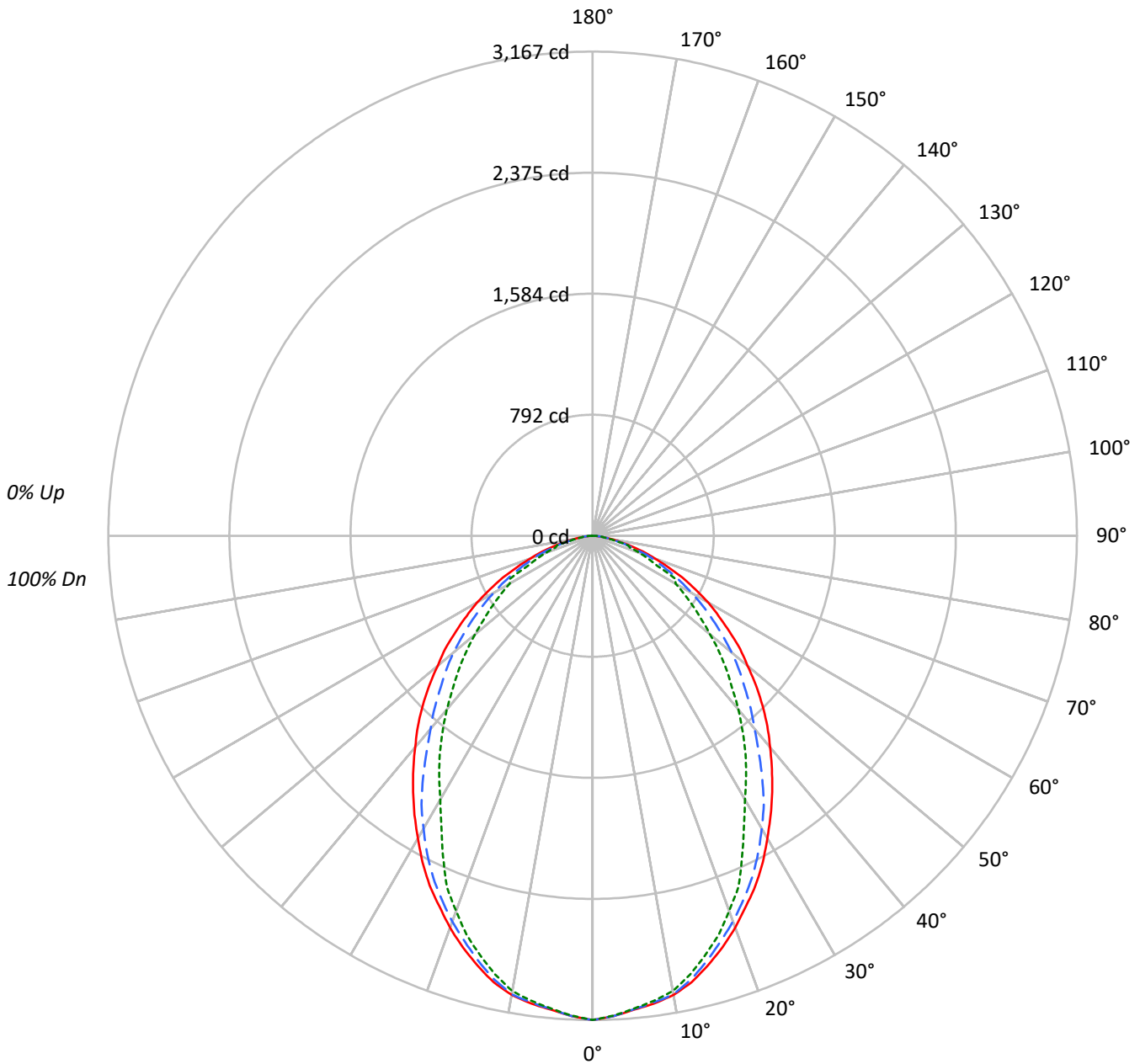
Lumens per Lamp: N/A
Luminaire Lumens: 6217.0 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4261	4261	4261
5°	4203	4198	4193
10°	4167	4162	4132
15°	4054	4014	3957
20°	3905	3842	3738
25°	3745	3663	3435
30°	3549	3436	3094
35°	3362	3175	2862
40°	3170	2894	2604
45°	2989	2675	2355
50°	2767	2483	2100
55°	2559	2250	1881
60°	2345	2010	1685
65°	2063	1760	1492
70°	1699	1541	1268
75°	1351	1180	1237
80°	908	851	794
85°	565	678	792



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.8	4.7
10°-20°	809.0	13.0
20°-30°	1120.0	18.0
30°-40°	1194.3	19.2
40°-50°	1089.5	17.5
50°-60°	853.6	13.7
60°-70°	556.3	8.9
70°-80°	246.5	4.0
80°-90°	52.9	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°	2223.9	35.8
0°-40°	3418.2	55.0
0°-60°	5361.3	86.2
0°-90°	6217.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6217.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3167	3167	3167	3167	3167	
5°	3112	3108	3108	3105	3105	295
15°	2911	2911	2881	2852	2841	818
25°	2522	2508	2468	2380	2314	1158
35°	2047	2032	1933	1787	1743	1279
45°	1571	1538	1406	1289	1238	1210
55°	1091	1058	959	846	802	979
65°	648	611	553	564	469	639
75°	260	242	227	216	238	279
85°	37	40	44	48	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3166.9	3166.9	3166.9	3166.9	3166.9
2.5°	3144.9	3144.9	3144.9	3141.2	3141.2
5°	3111.9	3108.3	3108.3	3104.6	3104.6
7.5°	3086.3	3082.7	3079.0	3075.3	3068.0
10°	3049.7	3049.7	3046.0	3027.7	3024.1
12.5°	2991.1	2987.5	2972.8	2947.2	2939.9
15°	2910.6	2910.6	2881.3	2852.0	2841.0
17.5°	2822.7	2819.1	2782.4	2753.2	2738.5
20°	2727.5	2720.2	2683.6	2636.0	2610.4
22.5°	2621.4	2621.4	2577.4	2515.2	2489.6
25°	2522.5	2507.9	2467.6	2379.7	2313.8
27.5°	2409.0	2387.0	2343.1	2218.6	2141.7
30°	2284.5	2273.5	2211.3	2050.2	1991.6
32.5°	2167.4	2149.1	2083.2	1914.8	1867.2
35°	2046.6	2031.9	1933.1	1786.6	1742.7
37.5°	1925.7	1907.4	1783.0	1665.8	1610.9
40°	1804.9	1783.0	1647.5	1541.3	1482.7
42.5°	1691.4	1662.1	1530.3	1416.8	1350.9
45°	1570.6	1537.7	1405.9	1288.7	1237.5
47.5°	1449.8	1420.5	1299.7	1178.9	1120.3
50°	1321.7	1296.0	1186.2	1065.4	1003.1
52.5°	1215.5	1175.2	1069.0	948.2	897.0
55°	1091.0	1058.1	959.2	845.7	801.8
57.5°	977.5	944.6	853.0	746.9	710.3
60°	871.3	823.7	746.9	655.3	626.0
62.5°	754.2	717.6	651.7	574.8	611.4
65°	648.0	611.4	552.8	563.8	468.6
67.5°	530.9	512.6	461.3	410.0	395.4
70°	432.0	410.0	391.7	336.8	322.2
72.5°	344.1	322.2	296.5	267.3	256.3
75°	259.9	241.6	227.0	216.0	238.0
77.5°	179.4	172.1	161.1	150.1	146.4
80°	117.2	113.5	109.8	106.2	102.5
82.5°	69.6	69.6	69.6	69.6	69.6
85°	36.6	40.3	43.9	47.6	51.3
87.5°	22.0	22.0	25.6	29.3	32.9
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)