

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: P546947

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-81-88-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: P546947
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-50-UNV-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

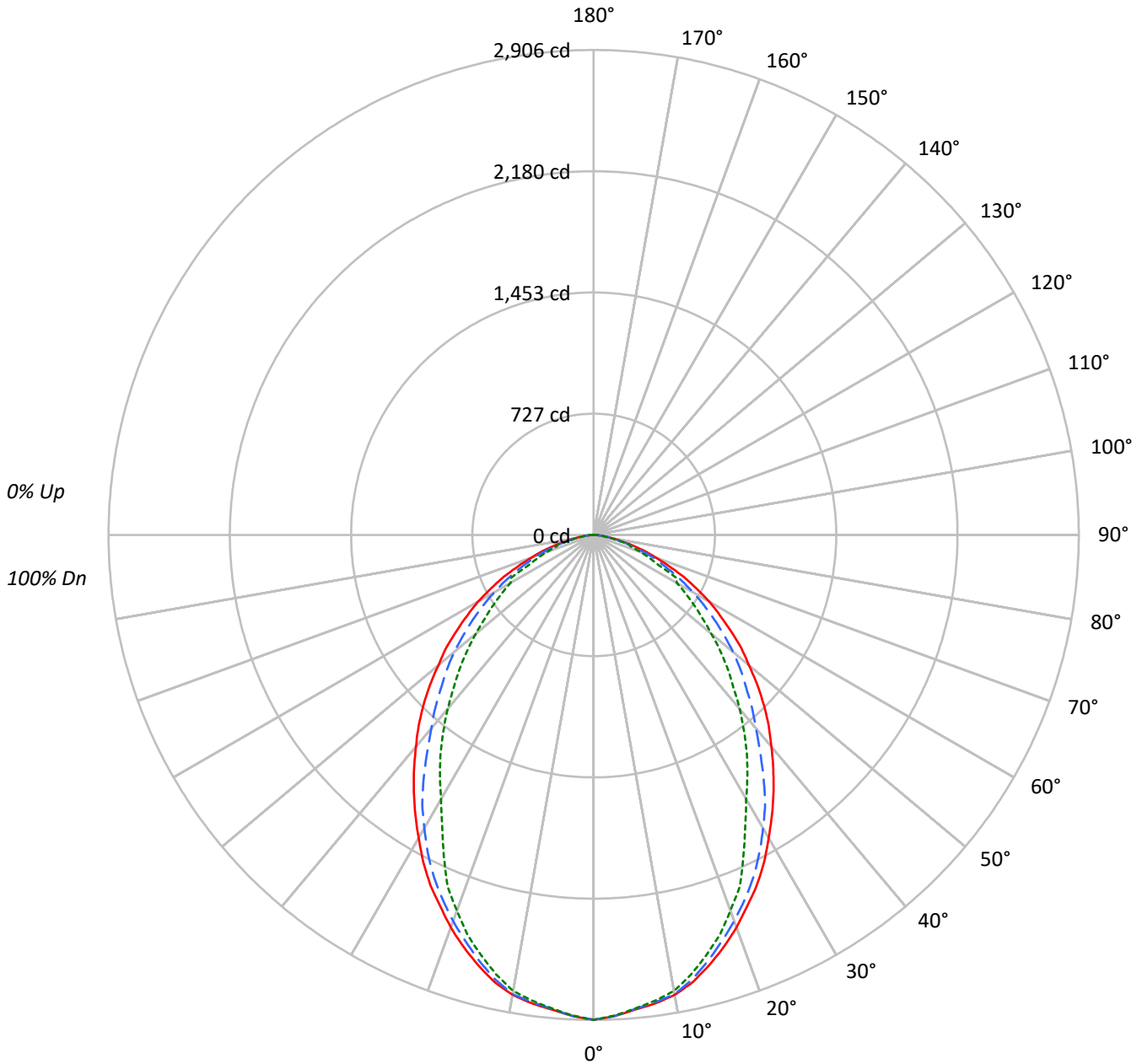
Lumens per Lamp: N/A
Luminaire Lumens: 5704.0 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3909	3909	3909
5°	3856	3852	3847
10°	3823	3818	3791
15°	3720	3682	3631
20°	3583	3525	3429
25°	3436	3361	3152
30°	3256	3152	2839
35°	3084	2913	2626
40°	2909	2655	2389
45°	2742	2454	2160
50°	2538	2278	1927
55°	2348	2065	1726
60°	2151	1844	1546
65°	1893	1615	1369
70°	1559	1414	1163
75°	1240	1083	1135
80°	833	781	729
85°	519	622	726



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	270.5	4.7
10°-20°	742.3	13.0
20°-30°	1027.6	18.0
30°-40°	1095.7	19.2
40°-50°	999.6	17.5
50°-60°	783.1	13.7
60°-70°	510.4	8.9
70°-80°	226.1	4.0
80°-90°	48.5	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°	2040.4	35.8
0°-40°	3136.1	55.0
0°-60°	4918.9	86.2
0°-90°	5704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5704.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2906	2906	2906	2906	2906	
5°	2855	2852	2852	2848	2848	271
15°	2670	2670	2644	2617	2607	751
25°	2314	2301	2264	2183	2123	1063
35°	1878	1864	1774	1639	1599	1174
45°	1441	1411	1290	1182	1135	1110
55°	1001	971	880	776	736	898
65°	594	561	507	517	430	586
75°	238	222	208	198	218	256
85°	34	37	40	44	47	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2905.5	2905.5	2905.5	2905.5	2905.5
2.5°	2885.4	2885.4	2885.4	2882.0	2882.0
5°	2855.2	2851.8	2851.8	2848.4	2848.4
7.5°	2831.6	2828.3	2824.9	2821.6	2814.8
10°	2798.1	2798.1	2794.7	2777.9	2774.5
12.5°	2744.3	2741.0	2727.5	2704.0	2697.3
15°	2670.4	2670.4	2643.5	2616.7	2606.6
17.5°	2589.8	2586.4	2552.8	2526.0	2512.5
20°	2502.5	2495.7	2462.2	2418.5	2395.0
22.5°	2405.0	2405.0	2364.7	2307.6	2284.1
25°	2314.4	2300.9	2264.0	2183.4	2122.9
27.5°	2210.2	2190.1	2149.8	2035.6	1965.0
30°	2096.0	2085.9	2028.8	1881.0	1827.3
32.5°	1988.5	1971.7	1911.3	1756.8	1713.1
35°	1877.7	1864.2	1773.6	1639.2	1598.9
37.5°	1766.8	1750.0	1635.8	1528.3	1478.0
40°	1656.0	1635.8	1511.6	1414.1	1360.4
42.5°	1551.9	1525.0	1404.1	1299.9	1239.5
45°	1441.0	1410.8	1289.9	1182.4	1135.3
47.5°	1330.2	1303.3	1192.4	1081.6	1027.9
50°	1212.6	1189.1	1088.3	977.5	920.4
52.5°	1115.2	1078.2	980.8	870.0	823.0
55°	1001.0	970.8	880.1	775.9	735.6
57.5°	896.9	866.6	782.6	685.2	651.6
60°	799.4	755.8	685.2	601.3	574.4
62.5°	692.0	658.4	597.9	527.4	561.0
65°	594.5	561.0	507.2	517.3	430.0
67.5°	487.1	470.3	423.2	376.2	362.8
70°	396.4	376.2	359.4	309.0	295.6
72.5°	315.7	295.6	272.1	245.2	235.1
75°	238.5	221.7	208.3	198.2	218.3
77.5°	164.6	157.9	147.8	137.7	134.4
80°	107.5	104.1	100.8	97.4	94.1
82.5°	63.8	63.8	63.8	63.8	63.8
85°	33.6	36.9	40.3	43.7	47.0
87.5°	20.2	20.2	23.5	26.9	30.2
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)