

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: P546953

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-82-86-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: P546953
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-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

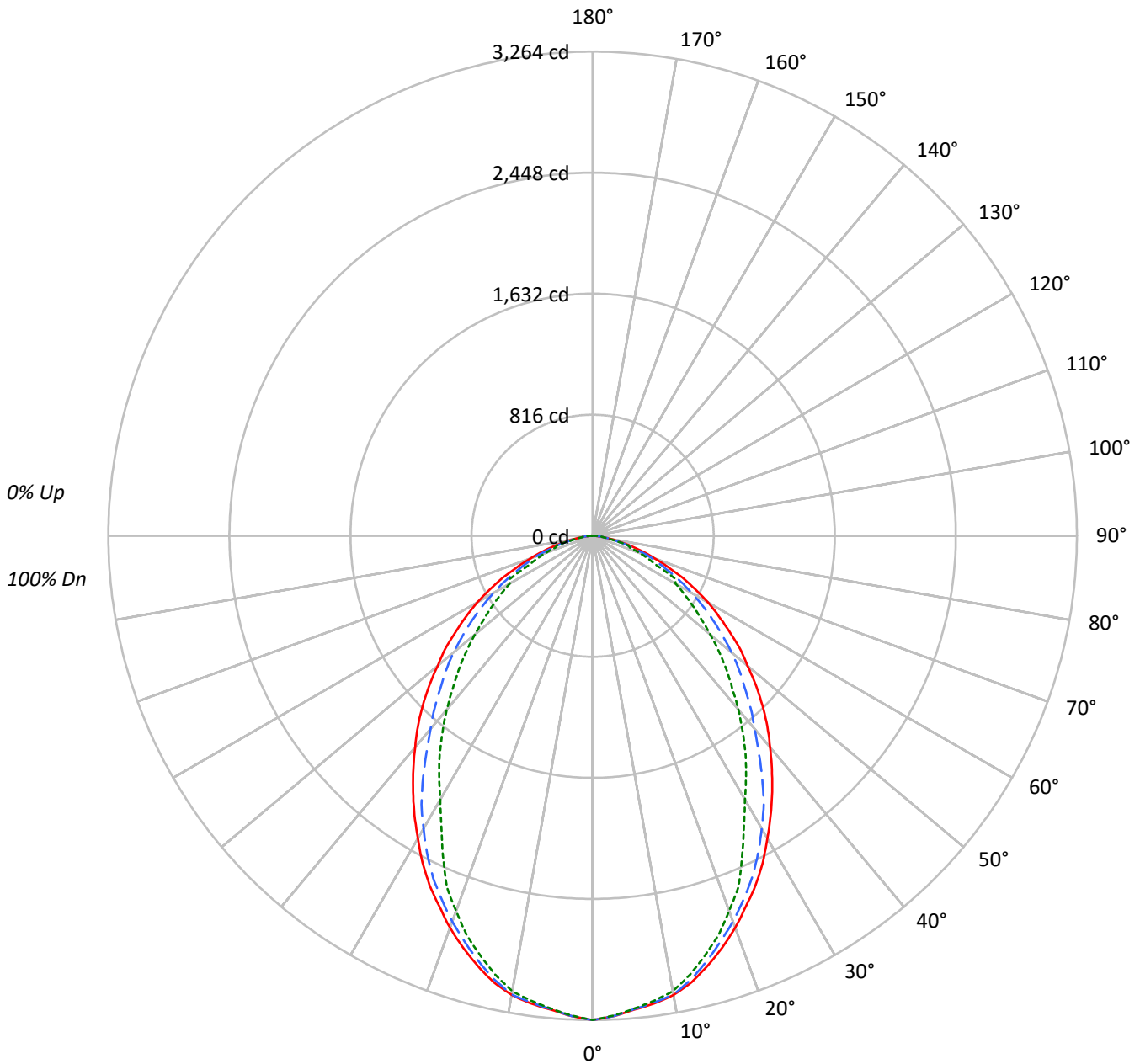
Lumens per Lamp: N/A
Luminaire Lumens: 6408.0 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P546953

CATALOG NUMBER: FMR-24-4-LD4-2STD-50-UNV-82-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546953

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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°	4392	4392	4392
5°	4332	4327	4322
10°	4295	4289	4259
15°	4179	4137	4079
20°	4025	3960	3853
25°	3860	3776	3541
30°	3658	3541	3189
35°	3465	3273	2950
40°	3268	2983	2684
45°	3080	2757	2427
50°	2852	2559	2164
55°	2638	2319	1939
60°	2417	2072	1736
65°	2126	1814	1538
70°	1752	1589	1306
75°	1393	1216	1275
80°	936	877	819
85°	582	699	815



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.8	4.7
10°-20°	833.9	13.0
20°-30°	1154.5	18.0
30°-40°	1231.0	19.2
40°-50°	1123.0	17.5
50°-60°	879.8	13.7
60°-70°	573.4	8.9
70°-80°	254.1	4.0
80°-90°	54.5	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°	2292.2	35.8
0°-40°	3523.2	55.0
0°-60°	5526.0	86.2
0°-90°	6408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6408.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3264	3264	3264	3264	3264	
5°	3208	3204	3204	3200	3200	304
15°	3000	3000	2970	2940	2928	843
25°	2600	2585	2543	2453	2385	1194
35°	2109	2094	1992	1842	1796	1319
45°	1619	1585	1449	1328	1276	1247
55°	1124	1091	989	872	826	1009
65°	668	630	570	581	483	658
75°	268	249	234	223	245	287
85°	38	42	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3264.1	3264.1	3264.1	3264.1	3264.1
2.5°	3241.5	3241.5	3241.5	3237.7	3237.7
5°	3207.5	3203.8	3203.8	3200.0	3200.0
7.5°	3181.1	3177.4	3173.6	3169.8	3162.3
10°	3143.4	3143.4	3139.6	3120.8	3117.0
12.5°	3083.0	3079.2	3064.1	3037.7	3030.2
15°	3000.0	3000.0	2969.8	2939.6	2928.3
17.5°	2909.4	2905.7	2867.9	2837.7	2822.6
20°	2811.3	2803.8	2766.0	2717.0	2690.6
22.5°	2701.9	2701.9	2656.6	2592.5	2566.0
25°	2600.0	2584.9	2543.4	2452.8	2384.9
27.5°	2483.0	2460.4	2415.1	2286.8	2207.5
30°	2354.7	2343.4	2279.2	2113.2	2052.8
32.5°	2234.0	2215.1	2147.2	1973.6	1924.5
35°	2109.4	2094.3	1992.5	1841.5	1796.2
37.5°	1984.9	1966.0	1837.7	1717.0	1660.4
40°	1860.4	1837.7	1698.1	1588.7	1528.3
42.5°	1743.4	1713.2	1577.4	1460.4	1392.5
45°	1618.9	1584.9	1449.1	1328.3	1275.5
47.5°	1494.3	1464.2	1339.6	1215.1	1154.7
50°	1362.3	1335.8	1222.6	1098.1	1034.0
52.5°	1252.8	1211.3	1101.9	977.4	924.5
55°	1124.5	1090.6	988.7	871.7	826.4
57.5°	1007.5	973.6	879.2	769.8	732.1
60°	898.1	849.1	769.8	675.5	645.3
62.5°	777.4	739.6	671.7	592.5	630.2
65°	667.9	630.2	569.8	581.1	483.0
67.5°	547.2	528.3	475.5	422.6	407.5
70°	445.3	422.6	403.8	347.2	332.1
72.5°	354.7	332.1	305.7	275.5	264.2
75°	267.9	249.1	234.0	222.6	245.3
77.5°	184.9	177.4	166.0	154.7	150.9
80°	120.8	117.0	113.2	109.4	105.7
82.5°	71.7	71.7	71.7	71.7	71.7
85°	37.7	41.5	45.3	49.1	52.8
87.5°	22.6	22.6	26.4	30.2	34.0
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)