

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: P546931

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-93-88-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: P546931
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-93-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

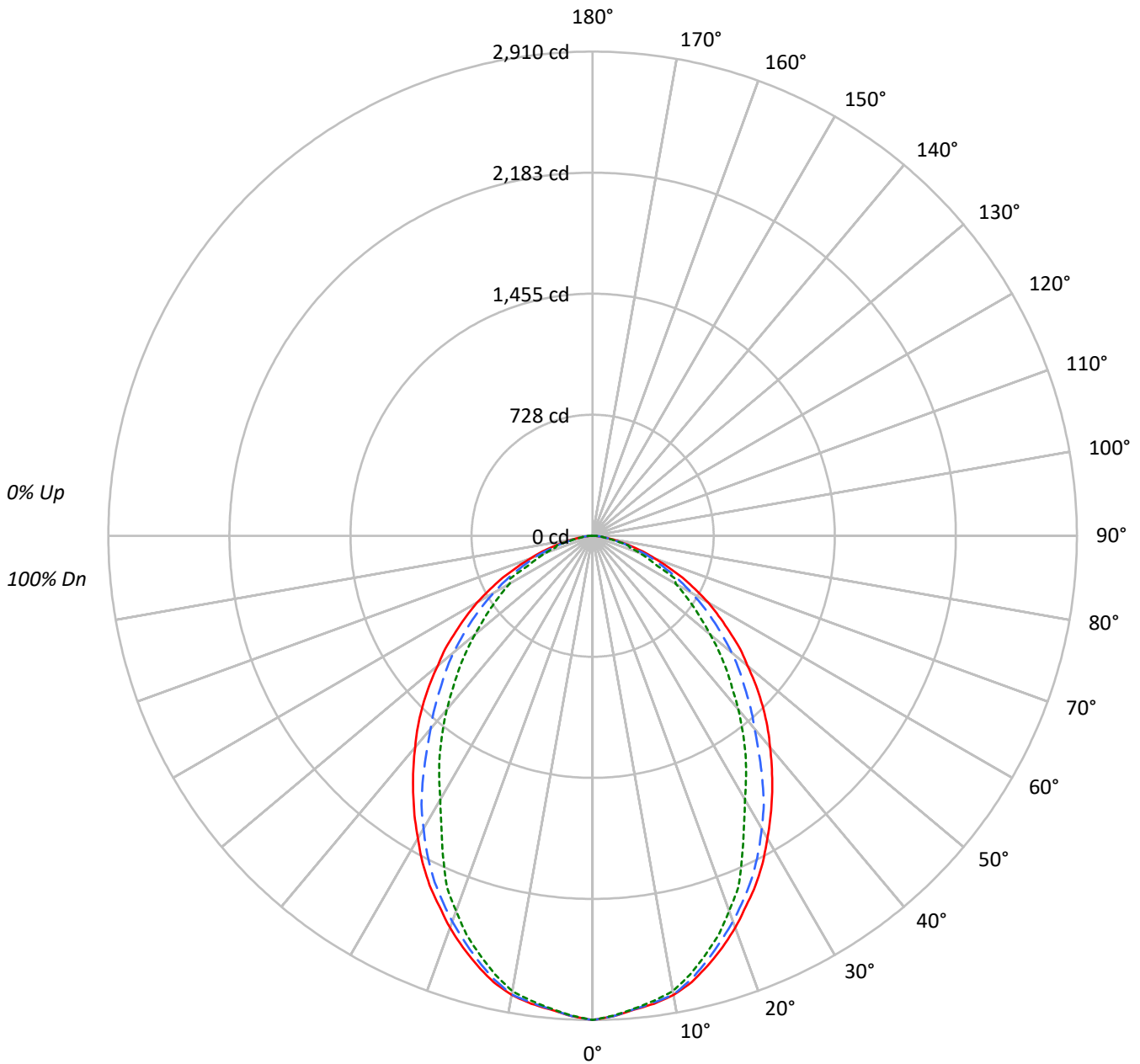
Lumens per Lamp: N/A
Luminaire Lumens: 5713.0 lumens
Efficiency: N/A
Efficacy: 85.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3916	3916	3916
5°	3862	3858	3853
10°	3829	3824	3797
15°	3726	3688	3637
20°	3589	3531	3435
25°	3441	3366	3157
30°	3262	3157	2843
35°	3089	2918	2630
40°	2913	2659	2393
45°	2746	2458	2164
50°	2542	2282	1930
55°	2352	2068	1728
60°	2155	1847	1548
65°	1896	1617	1371
70°	1562	1416	1165
75°	1242	1084	1137
80°	834	782	730
85°	519	624	727



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	270.9	4.7
10°-20°	743.4	13.0
20°-30°	1029.2	18.0
30°-40°	1097.5	19.2
40°-50°	1001.2	17.5
50°-60°	784.4	13.7
60°-70°	511.2	8.9
70°-80°	226.5	4.0
80°-90°	48.6	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°	2043.6	35.8
0°-40°	3141.1	55.0
0°-60°	4926.7	86.2
0°-90°	5713.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5713.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2910	2910	2910	2910	2910	
5°	2860	2856	2856	2853	2853	271
15°	2675	2675	2648	2621	2611	752
25°	2318	2305	2268	2187	2126	1064
35°	1881	1867	1776	1642	1601	1176
45°	1443	1413	1292	1184	1137	1112
55°	1003	972	881	777	737	899
65°	596	562	508	518	431	587
75°	239	222	209	198	219	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°	2910.1	2910.1	2910.1	2910.1	2910.1
2.5°	2889.9	2889.9	2889.9	2886.6	2886.6
5°	2859.7	2856.3	2856.3	2852.9	2852.9
7.5°	2836.1	2832.7	2829.4	2826.0	2819.3
10°	2802.5	2802.5	2799.1	2782.3	2778.9
12.5°	2748.6	2745.3	2731.8	2708.3	2701.5
15°	2674.6	2674.6	2647.7	2620.8	2610.7
17.5°	2593.9	2590.5	2556.9	2530.0	2516.5
20°	2506.4	2499.7	2466.0	2422.3	2398.8
22.5°	2408.8	2408.8	2368.5	2311.3	2287.7
25°	2318.0	2304.6	2267.5	2186.8	2126.2
27.5°	2213.7	2193.5	2153.2	2038.8	1968.1
30°	2099.3	2089.2	2032.0	1884.0	1830.2
32.5°	1991.7	1974.8	1914.3	1759.5	1715.8
35°	1880.6	1867.2	1776.4	1641.8	1601.4
37.5°	1769.6	1752.8	1638.4	1530.8	1480.3
40°	1658.6	1638.4	1513.9	1416.4	1362.5
42.5°	1554.3	1527.4	1406.3	1302.0	1241.4
45°	1443.3	1413.0	1291.9	1184.2	1137.1
47.5°	1332.3	1305.4	1194.3	1083.3	1029.5
50°	1214.5	1191.0	1090.0	979.0	921.8
52.5°	1117.0	1079.9	982.4	871.4	824.3
55°	1002.6	972.3	881.4	777.2	736.8
57.5°	898.3	868.0	783.9	686.3	652.7
60°	800.7	757.0	686.3	602.2	575.3
62.5°	693.0	659.4	598.8	528.2	561.8
65°	595.5	561.8	508.0	518.1	430.6
67.5°	487.8	471.0	423.9	376.8	363.3
70°	397.0	376.8	360.0	309.5	296.1
72.5°	316.2	296.1	272.5	245.6	235.5
75°	238.9	222.0	208.6	198.5	218.7
77.5°	164.9	158.1	148.0	137.9	134.6
80°	107.7	104.3	100.9	97.6	94.2
82.5°	63.9	63.9	63.9	63.9	63.9
85°	33.6	37.0	40.4	43.7	47.1
87.5°	20.2	20.2	23.6	26.9	30.3
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)