

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: P546906

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-80-87-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: P546906
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

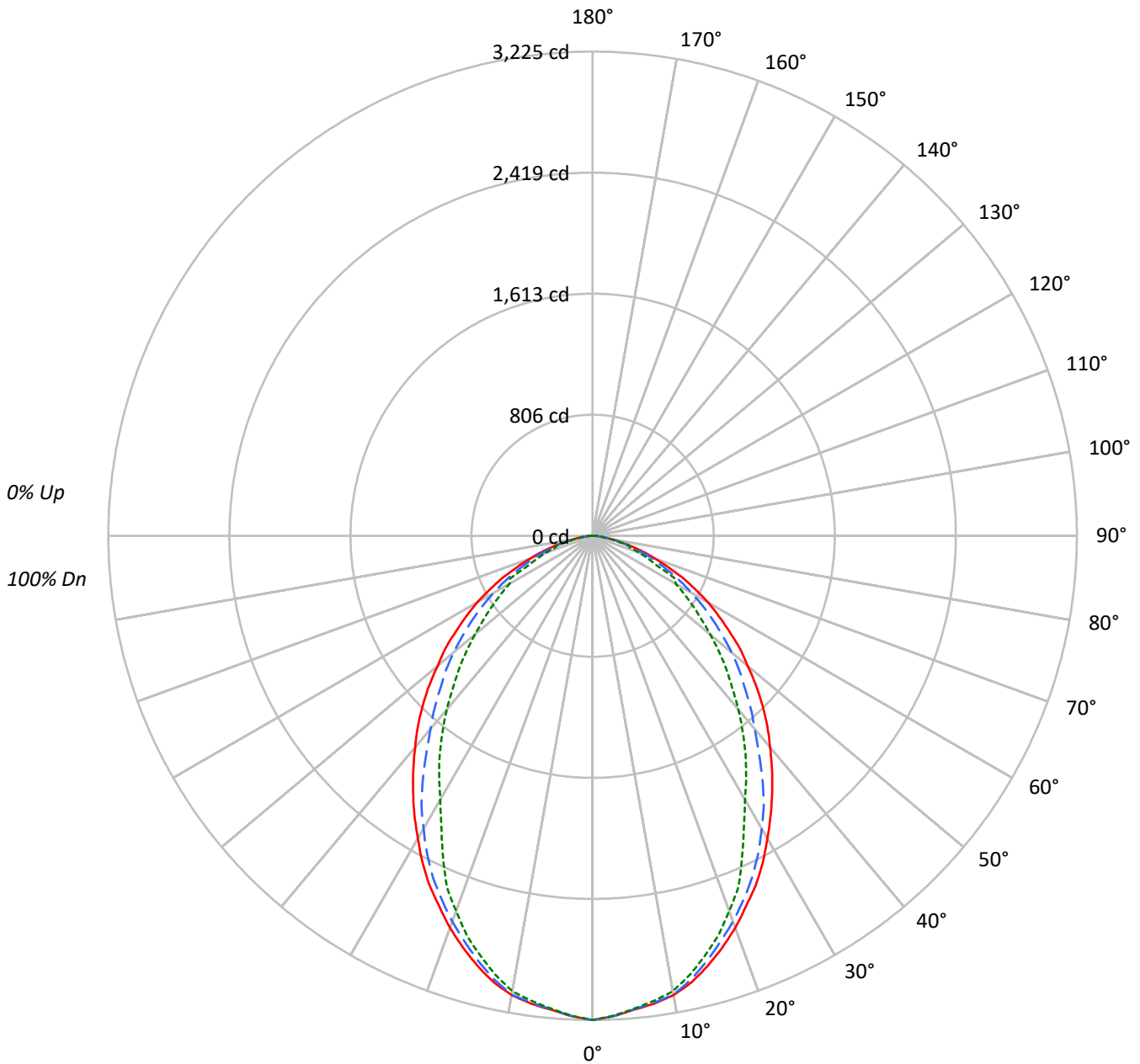
Lumens per Lamp: N/A
Luminaire Lumens: 6332.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4340	4340	4340
5°	4281	4276	4271
10°	4244	4239	4208
15°	4129	4088	4031
20°	3978	3914	3807
25°	3814	3731	3499
30°	3615	3499	3152
35°	3424	3234	2915
40°	3229	2947	2653
45°	3044	2725	2398
50°	2818	2529	2139
55°	2607	2292	1916
60°	2388	2047	1716
65°	2101	1793	1520
70°	1731	1570	1291
75°	1376	1202	1260
80°	924	867	809
85°	576	690	806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.2	4.7
10°-20°	824.0	13.0
20°-30°	1140.8	18.0
30°-40°	1216.4	19.2
40°-50°	1109.7	17.5
50°-60°	869.4	13.7
60°-70°	566.6	8.9
70°-80°	251.0	4.0
80°-90°	53.9	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°	2265.0	35.8
0°-40°	3481.4	55.0
0°-60°	5460.5	86.2
0°-90°	6332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3225	3225	3225	3225	3225	
5°	3170	3166	3166	3162	3162	301
15°	2964	2964	2935	2905	2894	833
25°	2569	2554	2513	2424	2357	1180
35°	2084	2070	1969	1820	1775	1303
45°	1600	1566	1432	1312	1260	1232
55°	1111	1078	977	861	817	997
65°	660	623	563	574	477	650
75°	265	246	231	220	242	284
85°	37	41	45	48	52	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3225.4	3225.4	3225.4	3225.4	3225.4
2.5°	3203.1	3203.1	3203.1	3199.3	3199.3
5°	3169.5	3165.8	3165.8	3162.0	3162.0
7.5°	3143.4	3139.7	3135.9	3132.2	3124.8
10°	3106.1	3106.1	3102.4	3083.7	3080.0
12.5°	3046.5	3042.7	3027.8	3001.7	2994.2
15°	2964.4	2964.4	2934.6	2904.8	2893.6
17.5°	2874.9	2871.2	2833.9	2804.1	2789.2
20°	2778.0	2770.5	2733.2	2684.8	2658.7
22.5°	2669.8	2669.8	2625.1	2561.7	2535.6
25°	2569.2	2554.2	2513.2	2423.7	2356.6
27.5°	2453.6	2431.2	2386.4	2259.7	2181.4
30°	2326.8	2315.6	2252.2	2088.1	2028.5
32.5°	2207.5	2188.8	2121.7	1950.2	1901.7
35°	2084.4	2069.5	1968.8	1819.7	1774.9
37.5°	1961.4	1942.7	1815.9	1696.6	1640.7
40°	1838.3	1815.9	1678.0	1569.8	1510.2
42.5°	1722.7	1692.9	1558.7	1443.1	1375.9
45°	1599.7	1566.1	1431.9	1312.5	1260.3
47.5°	1476.6	1446.8	1323.7	1200.7	1141.0
50°	1346.1	1320.0	1208.1	1085.1	1021.7
52.5°	1238.0	1197.0	1088.8	965.8	913.6
55°	1111.2	1077.6	977.0	861.4	816.6
57.5°	995.6	962.0	868.8	760.7	723.4
60°	887.5	839.0	760.7	667.5	637.6
62.5°	768.1	730.9	663.7	585.4	622.7
65°	660.0	622.7	563.1	574.2	477.3
67.5°	540.7	522.0	469.8	417.6	402.7
70°	440.0	417.6	399.0	343.1	328.1
72.5°	350.5	328.1	302.0	272.2	261.0
75°	264.7	246.1	231.2	220.0	242.4
77.5°	182.7	175.3	164.1	152.9	149.2
80°	119.3	115.6	111.9	108.1	104.4
82.5°	70.8	70.8	70.8	70.8	70.8
85°	37.3	41.0	44.7	48.5	52.2
87.5°	22.4	22.4	26.1	29.8	33.6
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)