

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: P547415

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-80-84-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: P547415
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-LD4-4LO-50-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

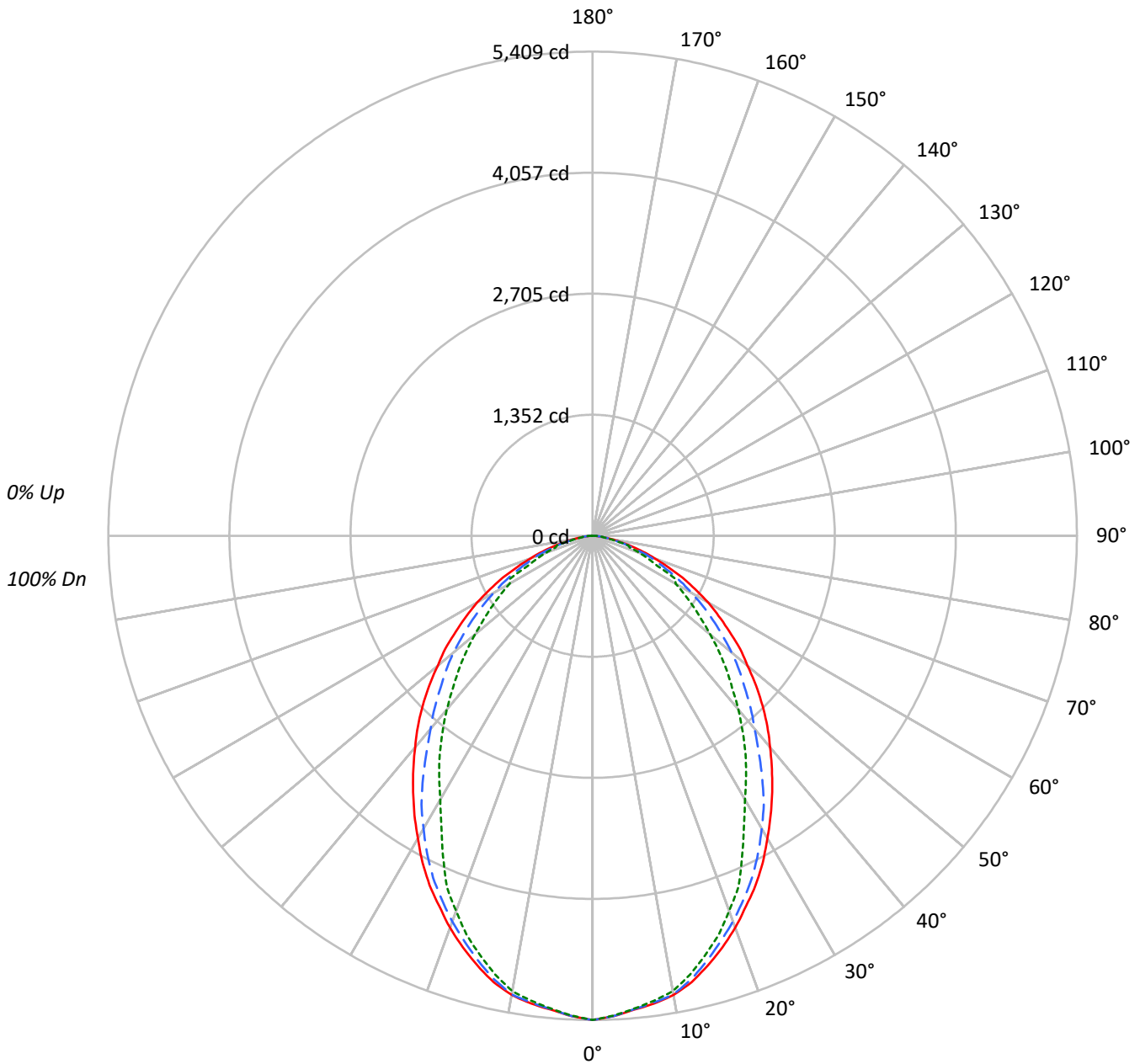
Lumens per Lamp: N/A
Luminaire Lumens: 10619.0 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	7278	7278	7278
5°	7179	7171	7162
10°	7117	7108	7057
15°	6925	6855	6759
20°	6671	6563	6384
25°	6396	6257	5867
30°	6062	5868	5285
35°	5742	5423	4889
40°	5415	4943	4448
45°	5105	4569	4022
50°	4725	4241	3587
55°	4371	3843	3213
60°	4005	3433	2877
65°	3524	3006	2548
70°	2903	2632	2165
75°	2308	2015	2113
80°	1550	1454	1357
85°	965	1158	1351



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	503.5	4.7
10°-20°	1381.9	13.0
20°-30°	1913.1	18.0
30°-40°	2039.9	19.2
40°-50°	1861.0	17.5
50°-60°	1458.0	13.7
60°-70°	950.2	8.9
70°-80°	421.0	4.0
80°-90°	90.4	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°	3798.5	35.8
0°-40°	5838.4	55.0
0°-60°	9157.4	86.2
0°-90°	10619.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10619.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5409	5409	5409	5409	5409	
5°	5315	5309	5309	5303	5303	505
15°	4971	4971	4921	4871	4853	1398
25°	4309	4284	4215	4065	3952	1978
35°	3496	3471	3302	3052	2977	2185
45°	2683	2626	2401	2201	2114	2066
55°	1864	1807	1638	1444	1370	1671
65°	1107	1044	944	963	800	1091
75°	444	413	388	369	406	476
85°	62	69	75	81	88	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5409.2	5409.2	5409.2	5409.2	5409.2
2.5°	5371.7	5371.7	5371.7	5365.4	5365.4
5°	5315.4	5309.1	5309.1	5302.9	5302.9
7.5°	5271.6	5265.3	5259.1	5252.8	5240.3
10°	5209.1	5209.1	5202.8	5171.5	5165.3
12.5°	5109.0	5102.8	5077.7	5034.0	5021.5
15°	4971.4	4971.4	4921.4	4871.4	4852.6
17.5°	4821.4	4815.1	4752.6	4702.5	4677.5
20°	4658.8	4646.3	4583.7	4502.4	4458.7
22.5°	4477.4	4477.4	4402.4	4296.1	4252.3
25°	4308.6	4283.6	4214.8	4064.7	3952.1
27.5°	4114.7	4077.2	4002.2	3789.6	3658.2
30°	3902.1	3883.4	3777.0	3501.9	3401.8
32.5°	3702.0	3670.7	3558.2	3270.5	3189.2
35°	3495.6	3470.6	3301.8	3051.7	2976.6
37.5°	3289.3	3258.0	3045.4	2845.3	2751.5
40°	3082.9	3045.4	2814.0	2632.7	2532.6
42.5°	2889.1	2839.0	2613.9	2420.1	2307.5
45°	2682.7	2626.4	2401.3	2201.2	2113.6
47.5°	2476.3	2426.3	2220.0	2013.6	1913.5
50°	2257.5	2213.7	2026.1	1819.7	1713.4
52.5°	2076.1	2007.3	1826.0	1619.6	1532.1
55°	1863.5	1807.2	1638.4	1444.5	1369.5
57.5°	1669.7	1613.4	1457.0	1275.7	1213.2
60°	1488.3	1407.0	1275.7	1119.4	1069.3
62.5°	1288.2	1225.7	1113.1	981.8	1044.3
65°	1106.8	1044.3	944.3	963.0	800.4
67.5°	906.7	875.5	787.9	700.4	675.4
70°	737.9	700.4	669.1	575.3	550.3
72.5°	587.8	550.3	506.5	456.5	437.7
75°	444.0	412.7	387.7	368.9	406.5
77.5°	306.4	293.9	275.1	256.4	250.1
80°	200.1	193.9	187.6	181.3	175.1
82.5°	118.8	118.8	118.8	118.8	118.8
85°	62.5	68.8	75.0	81.3	87.5
87.5°	37.5	37.5	43.8	50.0	56.3
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)