

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: P547225

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-80-86-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: P547225
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-LD4-3STD-50-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

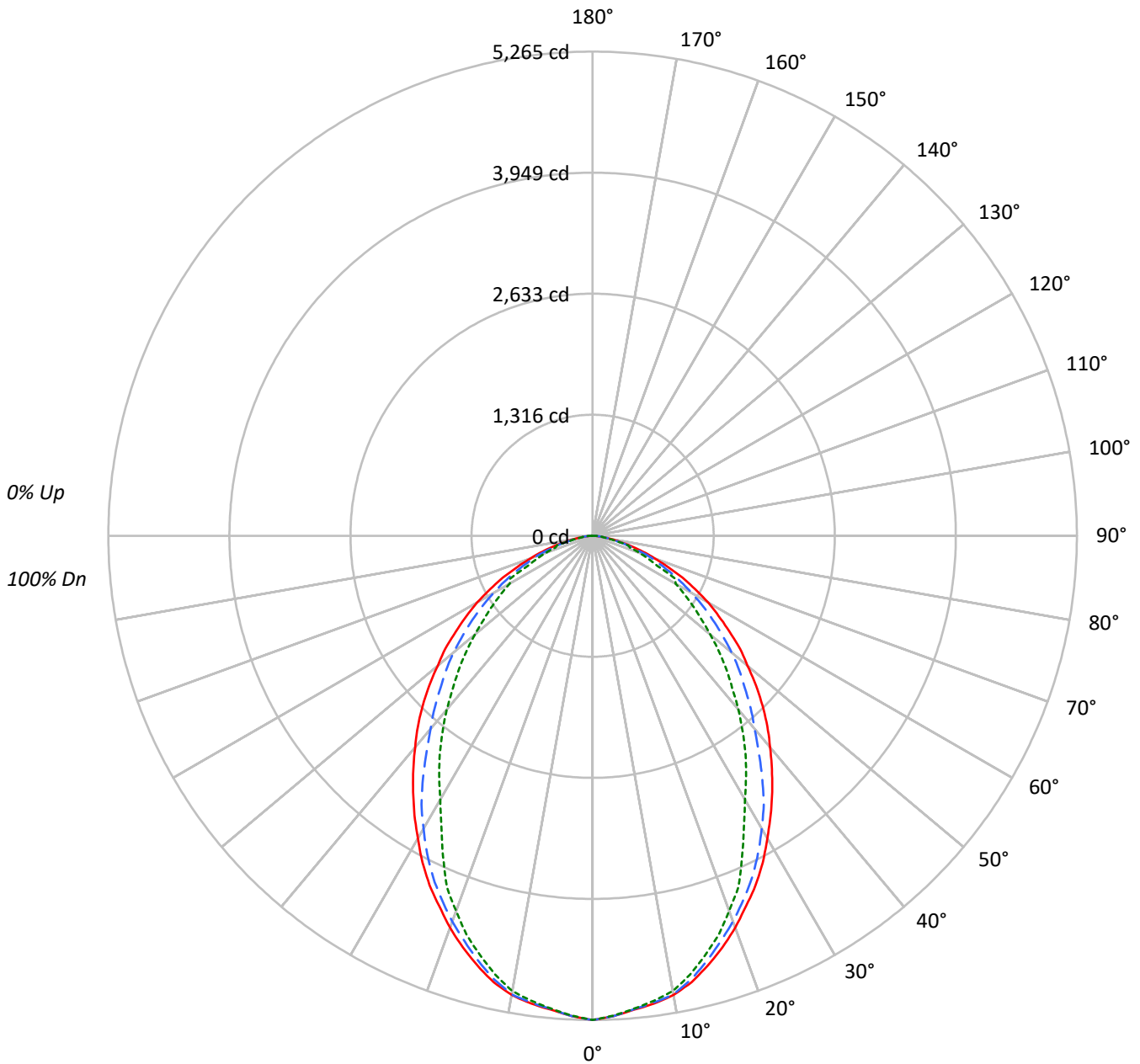
Lumens per Lamp: N/A
Luminaire Lumens: 10336.0 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (A_{in}): 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°	7084	7084	7084
5°	6988	6980	6971
10°	6927	6919	6869
15°	6740	6673	6579
20°	6493	6388	6214
25°	6226	6091	5711
30°	5901	5712	5144
35°	5589	5279	4759
40°	5271	4811	4330
45°	4969	4447	3915
50°	4599	4128	3491
55°	4255	3741	3127
60°	3898	3341	2801
65°	3430	2926	2480
70°	2825	2562	2107
75°	2247	1962	2057
80°	1509	1415	1320
85°	940	1127	1315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.1	4.7
10°-20°	1345.0	13.0
20°-30°	1862.1	18.0
30°-40°	1985.6	19.2
40°-50°	1811.4	17.5
50°-60°	1419.1	13.7
60°-70°	924.9	8.9
70°-80°	409.8	4.0
80°-90°	88.0	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°	3697.3	35.8
0°-40°	5682.8	55.0
0°-60°	8913.3	86.2
0°-90°	10336.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10336.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5265	5265	5265	5265	5265	
5°	5174	5168	5168	5162	5162	491
15°	4839	4839	4790	4742	4723	1360
25°	4194	4169	4102	3956	3847	1925
35°	3402	3378	3214	2970	2897	2127
45°	2611	2556	2337	2142	2057	2011
55°	1814	1759	1595	1406	1333	1627
65°	1077	1016	919	937	779	1062
75°	432	402	377	359	396	463
85°	61	67	73	79	85	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5265.0	5265.0	5265.0	5265.0	5265.0
2.5°	5228.5	5228.5	5228.5	5222.4	5222.4
5°	5173.7	5167.6	5167.6	5161.5	5161.5
7.5°	5131.1	5125.0	5118.9	5112.9	5100.7
10°	5070.2	5070.2	5064.2	5033.7	5027.6
12.5°	4972.9	4966.8	4942.4	4899.8	4887.6
15°	4838.9	4838.9	4790.3	4741.6	4723.3
17.5°	4692.9	4686.8	4625.9	4577.2	4552.9
20°	4534.6	4522.4	4461.6	4382.4	4339.8
22.5°	4358.1	4358.1	4285.1	4181.6	4139.0
25°	4193.8	4169.4	4102.5	3956.4	3846.8
27.5°	4005.1	3968.5	3895.5	3688.6	3560.7
30°	3798.1	3779.9	3676.4	3408.6	3311.2
32.5°	3603.3	3572.9	3463.3	3183.4	3104.2
35°	3402.5	3378.1	3213.8	2970.3	2897.3
37.5°	3201.6	3171.2	2964.2	2769.5	2678.2
40°	3000.8	2964.2	2739.0	2562.5	2465.1
42.5°	2812.1	2763.4	2544.3	2355.6	2246.0
45°	2611.2	2556.4	2337.3	2142.5	2057.3
47.5°	2410.3	2361.7	2160.8	1959.9	1862.5
50°	2197.3	2154.7	1972.1	1771.2	1667.8
52.5°	2020.8	1953.8	1777.3	1576.5	1491.2
55°	1813.8	1759.1	1594.7	1406.0	1333.0
57.5°	1625.2	1570.4	1418.2	1241.7	1180.8
60°	1448.6	1369.5	1241.7	1089.5	1040.8
62.5°	1253.9	1193.0	1083.4	955.6	1016.5
65°	1077.4	1016.5	919.1	937.4	779.1
67.5°	882.6	852.1	766.9	681.7	657.4
70°	718.2	681.7	651.3	560.0	535.6
72.5°	572.2	535.6	493.0	444.3	426.1
75°	432.2	401.7	377.4	359.1	395.6
77.5°	298.2	286.1	267.8	249.6	243.5
80°	194.8	188.7	182.6	176.5	170.4
82.5°	115.6	115.6	115.6	115.6	115.6
85°	60.9	67.0	73.0	79.1	85.2
87.5°	36.5	36.5	42.6	48.7	54.8
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)