

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: P547426

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-81-87-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: P547426
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-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

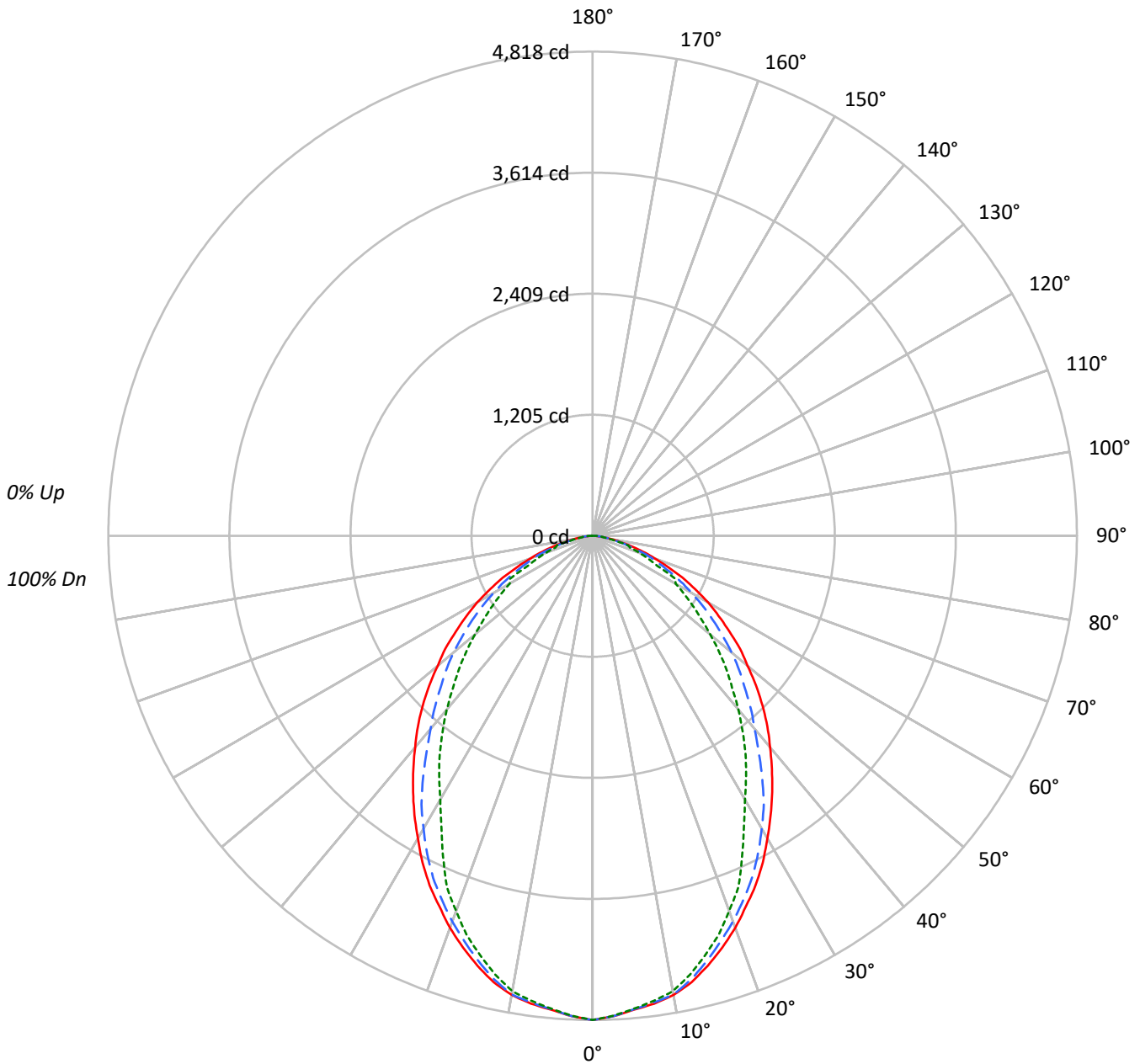
Lumens per Lamp: N/A
Luminaire Lumens: 9459.0 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6483	6483	6483
5°	6395	6387	6380
10°	6339	6332	6286
15°	6169	6106	6021
20°	5942	5846	5687
25°	5698	5574	5226
30°	5400	5227	4708
35°	5115	4831	4355
40°	4823	4403	3962
45°	4547	4070	3583
50°	4209	3778	3195
55°	3894	3423	2862
60°	3567	3058	2563
65°	3139	2678	2270
70°	2586	2345	1928
75°	2056	1796	1882
80°	1381	1295	1209
85°	860	1031	1204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	448.5	4.7
10°-20°	1230.9	13.0
20°-30°	1704.1	18.0
30°-40°	1817.1	19.2
40°-50°	1657.7	17.5
50°-60°	1298.7	13.7
60°-70°	846.4	8.9
70°-80°	375.0	4.0
80°-90°	80.5	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°	3383.6	35.8
0°-40°	5200.7	55.0
0°-60°	8157.1	86.2
0°-90°	9459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9459.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4818	4818	4818	4818	4818	
5°	4735	4729	4729	4724	4724	449
15°	4428	4428	4384	4339	4322	1245
25°	3838	3816	3754	3621	3520	1762
35°	3114	3092	2941	2718	2652	1947
45°	2390	2340	2139	1961	1883	1841
55°	1660	1610	1459	1287	1220	1489
65°	986	930	841	858	713	972
75°	396	368	345	329	362	424
85°	56	61	67	72	78	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4818.3	4818.3	4818.3	4818.3	4818.3
2.5°	4784.9	4784.9	4784.9	4779.3	4779.3
5°	4734.7	4729.2	4729.2	4723.6	4723.6
7.5°	4695.7	4690.2	4684.6	4679.0	4667.9
10°	4640.0	4640.0	4634.5	4606.6	4601.0
12.5°	4550.9	4545.3	4523.1	4484.1	4472.9
15°	4428.4	4428.4	4383.8	4339.2	4322.5
17.5°	4294.7	4289.1	4233.4	4188.8	4166.6
20°	4149.9	4138.7	4083.0	4010.6	3971.6
22.5°	3988.3	3988.3	3921.5	3826.8	3787.8
25°	3837.9	3815.6	3754.4	3620.7	3520.4
27.5°	3665.2	3631.8	3565.0	3375.6	3258.6
30°	3475.9	3459.1	3364.4	3119.4	3030.2
32.5°	3297.6	3269.8	3169.5	2913.3	2840.8
35°	3113.8	3091.5	2941.1	2718.3	2651.5
37.5°	2930.0	2902.1	2712.7	2534.5	2450.9
40°	2746.1	2712.7	2506.6	2345.1	2256.0
42.5°	2573.5	2528.9	2328.4	2155.7	2055.4
45°	2389.6	2339.5	2139.0	1960.7	1882.8
47.5°	2205.8	2161.3	1977.4	1793.6	1704.5
50°	2010.9	1971.9	1804.8	1621.0	1526.3
52.5°	1849.3	1788.1	1626.5	1442.7	1364.7
55°	1659.9	1609.8	1459.4	1286.7	1219.9
57.5°	1487.3	1437.1	1297.9	1136.3	1080.6
60°	1325.7	1253.3	1136.3	997.1	952.5
62.5°	1147.5	1091.8	991.5	874.5	930.2
65°	985.9	930.2	841.1	857.8	713.0
67.5°	807.7	779.8	701.9	623.9	601.6
70°	657.3	623.9	596.0	512.5	490.2
72.5°	523.6	490.2	451.2	406.6	389.9
75°	395.5	367.6	345.4	328.6	362.1
77.5°	272.9	261.8	245.1	228.4	222.8
80°	178.2	172.7	167.1	161.5	156.0
82.5°	105.8	105.8	105.8	105.8	105.8
85°	55.7	61.3	66.8	72.4	78.0
87.5°	33.4	33.4	39.0	44.6	50.1
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)