

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: P546744

Luminaire Tested: **FMR-24-4-LD4-2HI-50-UNV-80-85-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: P546744
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-LD4-2HI-50-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

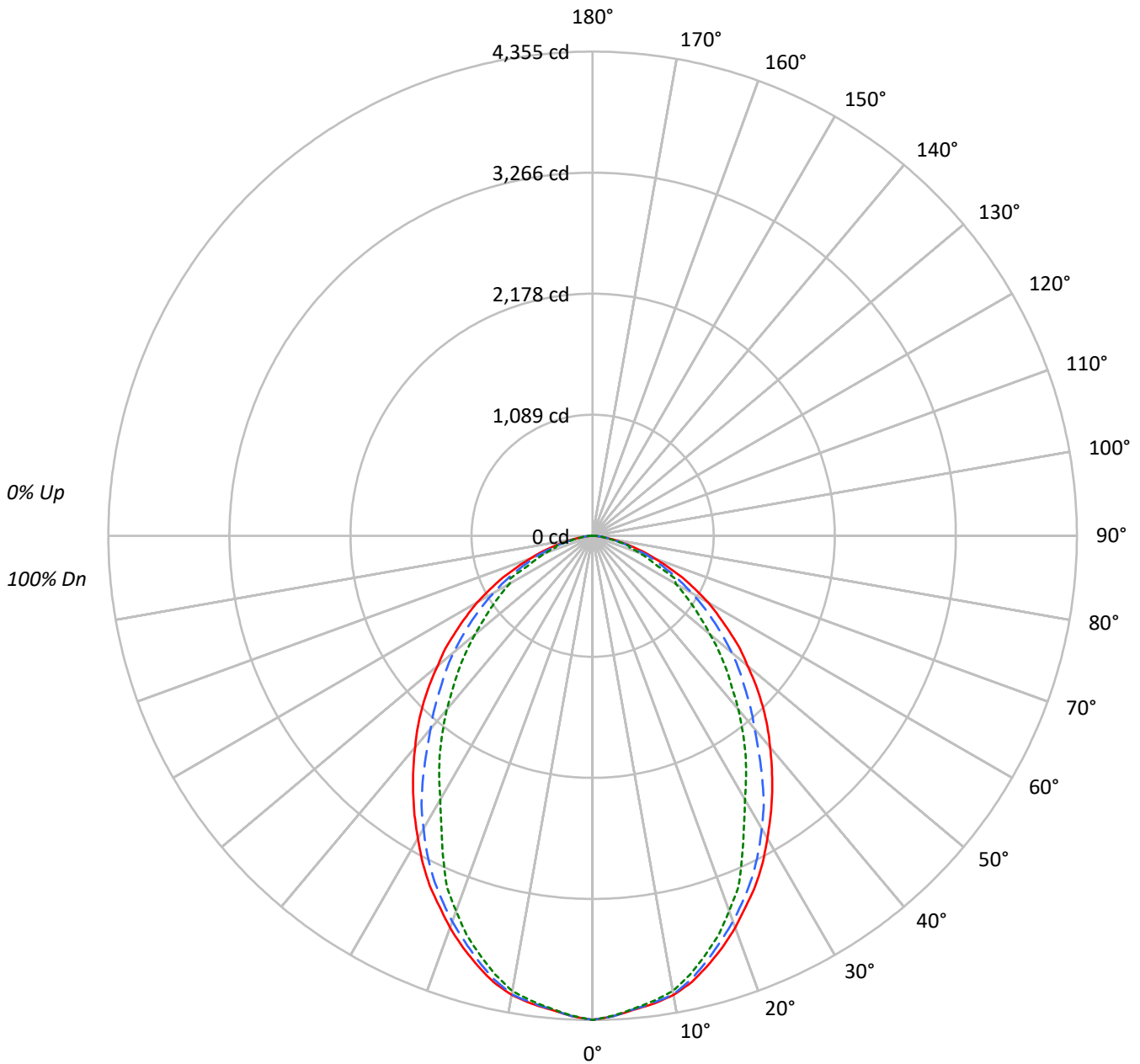
Lumens per Lamp: N/A
Luminaire Lumens: 8549.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	5859	5859	5859
5°	5780	5773	5766
10°	5729	5723	5681
15°	5575	5519	5442
20°	5370	5284	5140
25°	5150	5037	4723
30°	4881	4724	4255
35°	4622	4366	3936
40°	4359	3979	3581
45°	4110	3679	3238
50°	3804	3414	2887
55°	3519	3094	2586
60°	3224	2764	2317
65°	2837	2420	2052
70°	2337	2119	1743
75°	1858	1622	1701
80°	1248	1170	1093
85°	777	932	1088



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.4	4.7
10°-20°	1112.5	13.0
20°-30°	1540.2	18.0
30°-40°	1642.3	19.2
40°-50°	1498.2	17.5
50°-60°	1173.7	13.7
60°-70°	765.0	8.9
70°-80°	338.9	4.0
80°-90°	72.8	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°	3058.0	35.8
0°-40°	4700.3	55.0
0°-60°	7372.3	86.2
0°-90°	8549.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8549.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4355	4355	4355	4355	4355	
5°	4279	4274	4274	4269	4269	406
15°	4002	4002	3962	3922	3907	1125
25°	3469	3449	3393	3272	3182	1592
35°	2814	2794	2658	2457	2396	1759
45°	2160	2114	1933	1772	1702	1664
55°	1500	1455	1319	1163	1102	1346
65°	891	841	760	775	644	878
75°	357	332	312	297	327	383
85°	50	55	60	65	70	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4354.7	4354.7	4354.7	4354.7	4354.7
2.5°	4324.5	4324.5	4324.5	4319.5	4319.5
5°	4279.2	4274.2	4274.2	4269.2	4269.2
7.5°	4244.0	4239.0	4233.9	4228.9	4218.8
10°	4193.6	4193.6	4188.6	4163.4	4158.4
12.5°	4113.1	4108.1	4087.9	4052.7	4042.6
15°	4002.3	4002.3	3962.1	3921.8	3906.7
17.5°	3881.5	3876.5	3826.1	3785.9	3765.7
20°	3750.6	3740.6	3690.2	3624.8	3589.5
22.5°	3604.6	3604.6	3544.2	3458.6	3423.4
25°	3468.7	3448.6	3393.2	3272.4	3181.7
27.5°	3312.6	3282.4	3222.0	3050.8	2945.1
30°	3141.5	3126.4	3040.8	2819.3	2738.7
32.5°	2980.4	2955.2	2864.6	2633.0	2567.5
35°	2814.2	2794.1	2658.2	2456.8	2396.4
37.5°	2648.1	2622.9	2451.7	2290.6	2215.1
40°	2482.0	2451.7	2265.5	2119.5	2038.9
42.5°	2325.9	2285.6	2104.4	1948.3	1857.7
45°	2159.8	2114.4	1933.2	1772.1	1701.6
47.5°	1993.6	1953.3	1787.2	1621.1	1540.5
50°	1817.4	1782.2	1631.1	1465.0	1379.4
52.5°	1671.4	1616.0	1470.0	1303.9	1233.4
55°	1500.2	1454.9	1319.0	1162.9	1102.5
57.5°	1344.2	1298.9	1173.0	1027.0	976.7
60°	1198.2	1132.7	1027.0	901.2	860.9
62.5°	1037.1	986.7	896.1	790.4	840.7
65°	891.1	840.7	760.2	775.3	644.4
67.5°	730.0	704.8	634.3	563.9	543.7
70°	594.1	563.9	538.7	463.2	443.0
72.5°	473.2	443.0	407.8	367.5	352.4
75°	357.4	332.3	312.1	297.0	327.2
77.5°	246.7	236.6	221.5	206.4	201.4
80°	161.1	156.1	151.0	146.0	141.0
82.5°	95.7	95.7	95.7	95.7	95.7
85°	50.3	55.4	60.4	65.4	70.5
87.5°	30.2	30.2	35.2	40.3	45.3
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)