

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: P547439

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-93-84-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: P547439
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-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

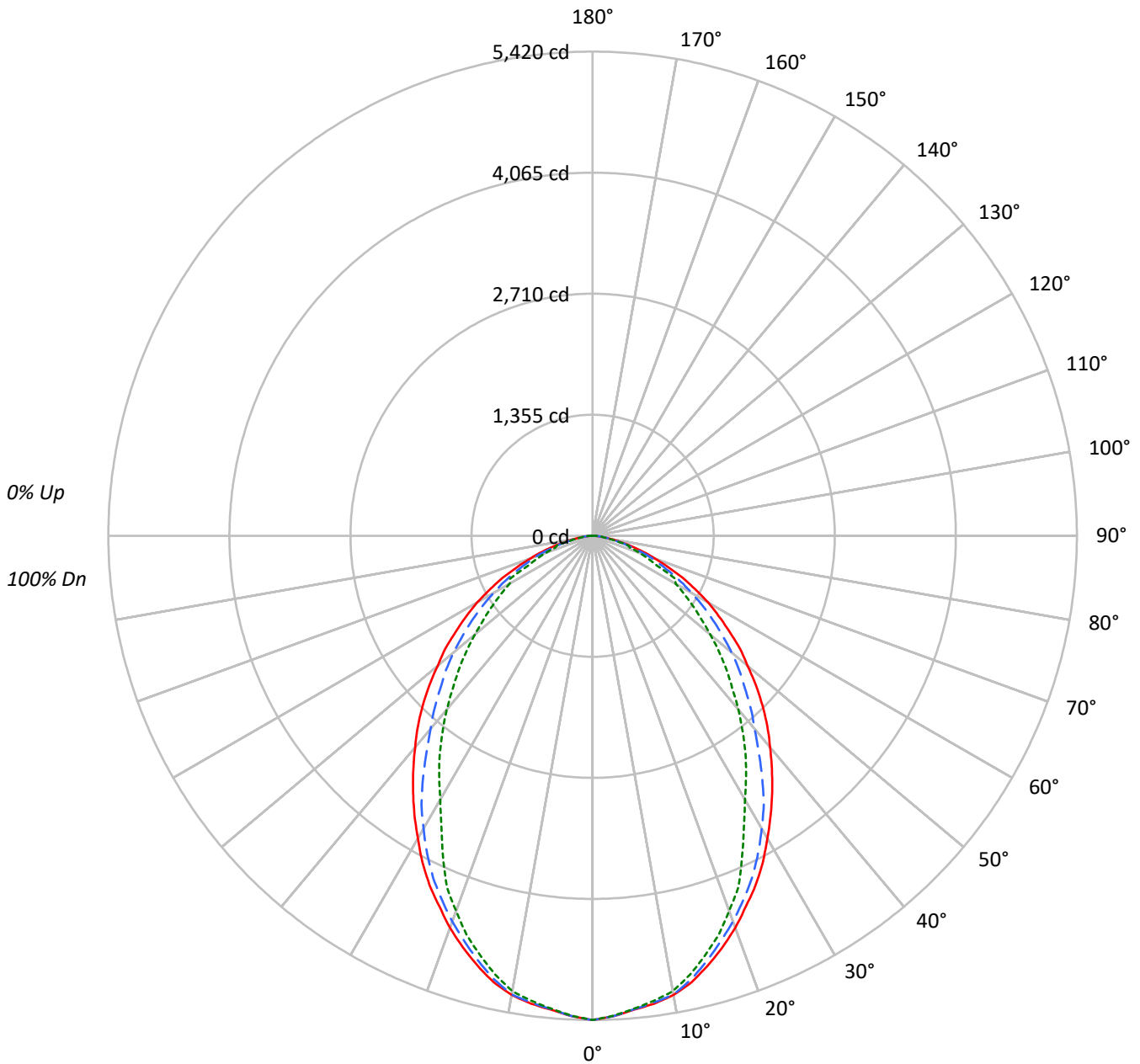
Lumens per Lamp: N/A
Luminaire Lumens: 10641.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V): NR
Input Current (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°	7293	7293	7293
5°	7194	7185	7177
10°	7132	7123	7072
15°	6939	6869	6774
20°	6684	6577	6397
25°	6410	6270	5879
30°	6075	5880	5296
35°	5754	5435	4899
40°	5426	4953	4458
45°	5115	4579	4030
50°	4735	4250	3594
55°	4381	3851	3219
60°	4013	3440	2883
65°	3531	3012	2554
70°	2909	2638	2169
75°	2313	2020	2117
80°	1554	1457	1360
85°	968	1161	1354



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	504.6	4.7
10°-20°	1384.7	13.0
20°-30°	1917.1	18.0
30°-40°	2044.2	19.2
40°-50°	1864.9	17.5
50°-60°	1461.0	13.7
60°-70°	952.2	8.9
70°-80°	421.9	4.0
80°-90°	90.6	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°	3806.4	35.8
0°-40°	5850.5	55.0
0°-60°	9176.4	86.2
0°-90°	10641.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10641.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5420	5420	5420	5420	5420	
5°	5326	5320	5320	5314	5314	506
15°	4982	4982	4932	4882	4863	1400
25°	4318	4292	4224	4073	3960	1982
35°	3503	3478	3309	3058	2983	2190
45°	2688	2632	2406	2206	2118	2071
55°	1867	1811	1642	1448	1372	1675
65°	1109	1046	946	965	802	1093
75°	445	414	388	370	407	477
85°	63	69	75	82	88	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5420.4	5420.4	5420.4	5420.4	5420.4
2.5°	5382.8	5382.8	5382.8	5376.5	5376.5
5°	5326.4	5320.1	5320.1	5313.9	5313.9
7.5°	5282.5	5276.3	5270.0	5263.7	5251.2
10°	5219.9	5219.9	5213.6	5182.3	5176.0
12.5°	5119.6	5113.3	5088.3	5044.4	5031.9
15°	4981.7	4981.7	4931.6	4881.5	4862.7
17.5°	4831.3	4825.1	4762.4	4712.3	4687.2
20°	4668.4	4655.9	4593.2	4511.8	4467.9
22.5°	4486.7	4486.7	4411.5	4305.0	4261.1
25°	4317.5	4292.4	4223.5	4073.1	3960.3
27.5°	4123.3	4085.7	4010.5	3797.4	3665.8
30°	3910.2	3891.4	3784.9	3509.1	3408.9
32.5°	3709.7	3678.3	3565.5	3277.3	3195.8
35°	3502.9	3477.8	3308.6	3058.0	2982.8
37.5°	3296.1	3264.8	3051.7	2851.2	2757.2
40°	3089.3	3051.7	2819.9	2638.1	2537.9
42.5°	2895.0	2844.9	2619.3	2425.1	2312.3
45°	2688.3	2631.9	2406.3	2205.8	2118.0
47.5°	2481.5	2431.3	2224.6	2017.8	1917.5
50°	2262.1	2218.3	2030.3	1823.5	1717.0
52.5°	2080.4	2011.5	1829.8	1623.0	1535.3
55°	1867.4	1811.0	1641.8	1447.5	1372.3
57.5°	1673.1	1616.7	1460.1	1278.3	1215.7
60°	1491.4	1409.9	1278.3	1121.7	1071.5
62.5°	1290.9	1228.2	1115.4	983.8	1046.5
65°	1109.1	1046.5	946.2	965.0	802.1
67.5°	908.6	877.3	789.6	701.8	676.8
70°	739.4	701.8	670.5	576.5	551.4
72.5°	589.0	551.4	507.6	457.4	438.6
75°	444.9	413.6	388.5	369.7	407.3
77.5°	307.1	294.5	275.7	256.9	250.7
80°	200.5	194.3	188.0	181.7	175.5
82.5°	119.1	119.1	119.1	119.1	119.1
85°	62.7	68.9	75.2	81.5	87.7
87.5°	37.6	37.6	43.9	50.1	56.4
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)