

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: P547341

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-82-96-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: P547341
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-LD4-4HI-50-UNV-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

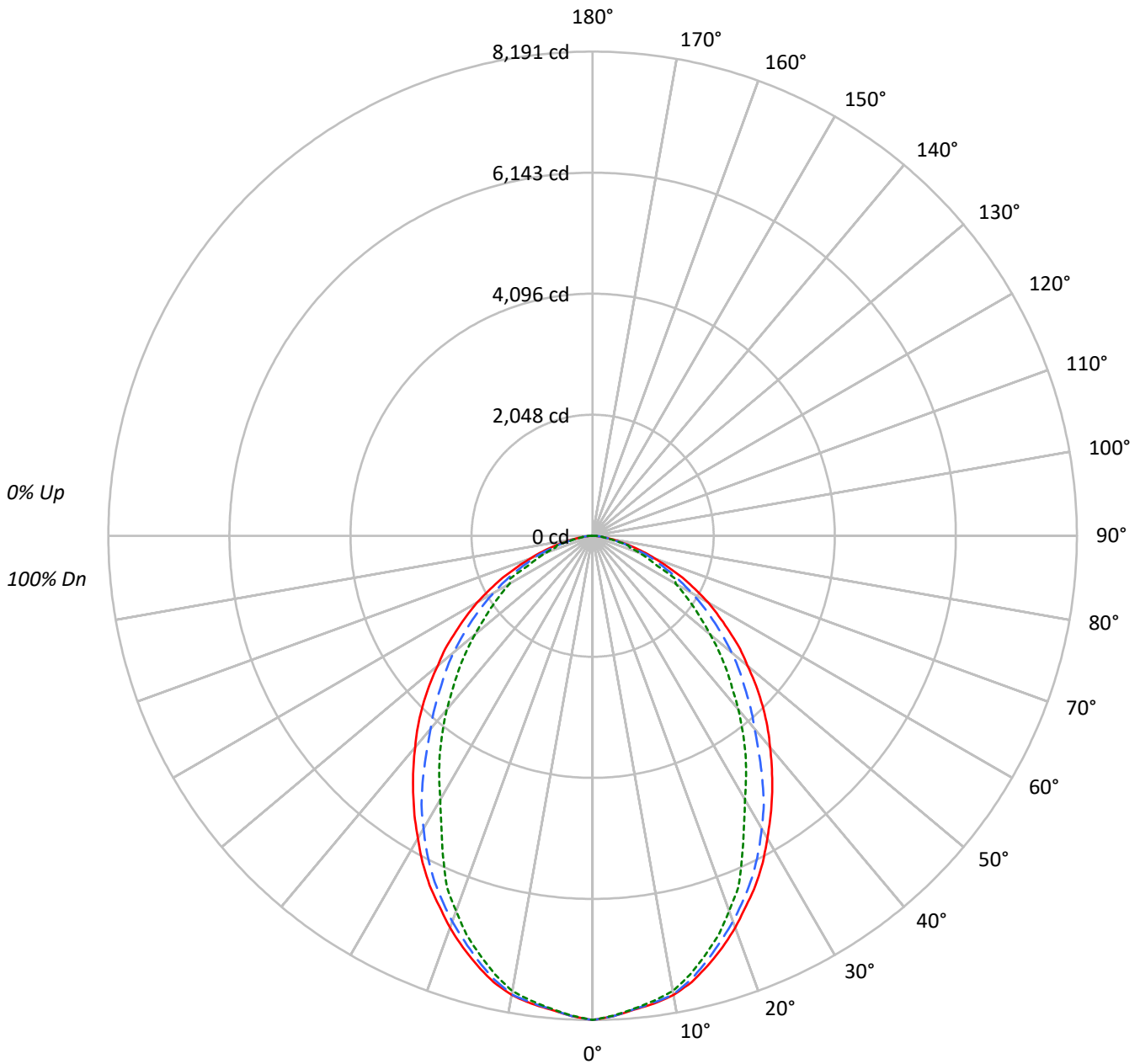
Lumens per Lamp: N/A
Luminaire Lumens: 16080.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	11021	11021	11021
5°	10871	10858	10846
10°	10777	10764	10686
15°	10486	10381	10236
20°	10101	9938	9667
25°	9686	9475	8885
30°	9180	8886	8003
35°	8694	8212	7404
40°	8200	7484	6736
45°	7730	6919	6090
50°	7155	6422	5431
55°	6619	5820	4865
60°	6065	5198	4357
65°	5336	4552	3859
70°	4396	3986	3278
75°	3495	3052	3200
80°	2348	2201	2054
85°	1462	1754	2047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	762.5	4.7
10°-20°	2092.5	13.0
20°-30°	2897.0	18.0
30°-40°	3089.0	19.2
40°-50°	2818.1	17.5
50°-60°	2207.7	13.7
60°-70°	1438.9	8.9
70°-80°	637.5	4.0
80°-90°	136.9	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°	5751.9	35.8
0°-40°	8840.9	55.0
0°-60°	13866.7	86.2
0°-90°	16080.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16080.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8191	8191	8191	8191	8191	
5°	8049	8039	8039	8030	8030	764
15°	7528	7528	7452	7377	7348	2116
25°	6524	6486	6382	6155	5985	2995
35°	5293	5256	5000	4621	4507	3309
45°	4062	3977	3636	3333	3201	3129
55°	2822	2737	2481	2187	2074	2531
65°	1676	1581	1430	1458	1212	1652
75°	672	625	587	559	616	721
85°	95	104	114	123	133	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8190.9	8190.9	8190.9	8190.9	8190.9
2.5°	8134.1	8134.1	8134.1	8124.7	8124.7
5°	8048.9	8039.4	8039.4	8030.0	8030.0
7.5°	7982.6	7973.1	7963.7	7954.2	7935.3
10°	7887.9	7887.9	7878.5	7831.1	7821.6
12.5°	7736.4	7726.9	7689.1	7622.8	7603.8
15°	7528.1	7528.1	7452.3	7376.6	7348.2
17.5°	7300.8	7291.4	7196.7	7120.9	7083.0
20°	7054.6	7035.7	6941.0	6817.9	6751.6
22.5°	6780.0	6780.0	6666.4	6505.4	6439.1
25°	6524.3	6486.5	6382.3	6155.0	5984.6
27.5°	6230.8	6174.0	6060.3	5738.4	5539.5
30°	5908.8	5880.4	5719.5	5302.8	5151.3
32.5°	5605.8	5558.5	5388.0	4952.4	4829.3
35°	5293.3	5255.5	4999.8	4621.0	4507.4
37.5°	4980.8	4933.5	4611.5	4308.5	4166.5
40°	4668.4	4611.5	4261.2	3986.6	3835.1
42.5°	4374.8	4299.1	3958.2	3664.6	3494.2
45°	4062.3	3977.1	3636.2	3333.2	3200.6
47.5°	3749.8	3674.1	3361.6	3049.1	2897.6
50°	3418.4	3352.1	3068.1	2755.6	2594.6
52.5°	3143.8	3039.6	2765.0	2452.5	2320.0
55°	2821.8	2736.6	2481.0	2187.4	2073.8
57.5°	2528.3	2443.1	2206.3	1931.7	1837.0
60°	2253.7	2130.6	1931.7	1695.0	1619.2
62.5°	1950.7	1856.0	1685.5	1486.7	1581.4
65°	1676.1	1581.4	1429.9	1458.3	1212.1
67.5°	1373.0	1325.7	1193.1	1060.6	1022.7
70°	1117.4	1060.6	1013.2	871.2	833.3
72.5°	890.1	833.3	767.0	691.3	662.9
75°	672.3	625.0	587.1	558.7	615.5
77.5°	464.0	445.1	416.6	388.2	378.8
80°	303.0	293.5	284.1	274.6	265.1
82.5°	179.9	179.9	179.9	179.9	179.9
85°	94.7	104.2	113.6	123.1	132.6
87.5°	56.8	56.8	66.3	75.8	85.2
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)