

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: P547330

Luminaire Tested: **FMR-24-4-LD4-4HI-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: P547330
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-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

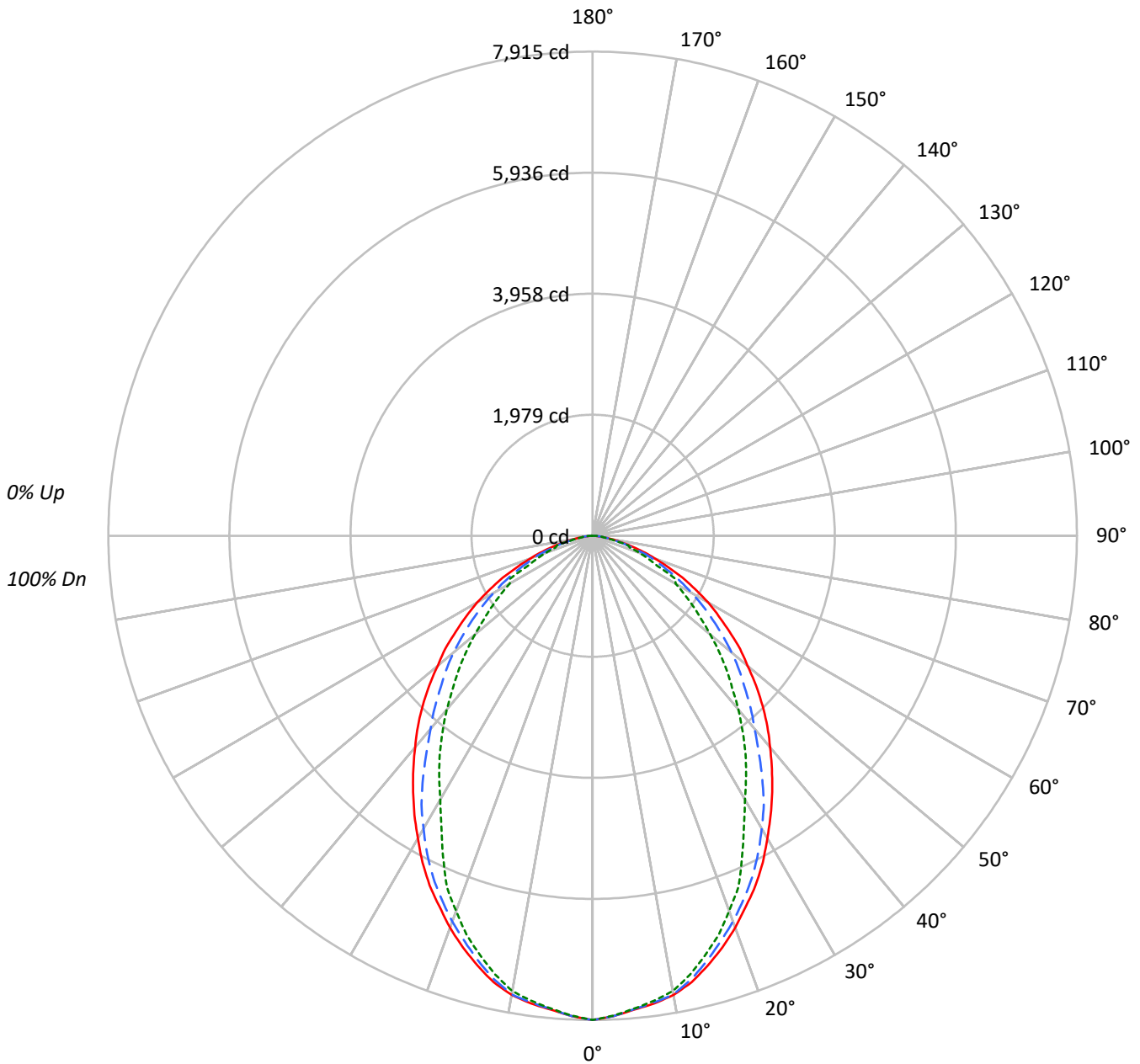
Lumens per Lamp: N/A
Luminaire Lumens: 15538.0 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	10649	10649	10649
5°	10505	10492	10480
10°	10414	10401	10326
15°	10133	10031	9891
20°	9761	9603	9341
25°	9359	9156	8585
30°	8871	8586	7734
35°	8401	7936	7154
40°	7923	7232	6509
45°	7469	6686	5885
50°	6914	6206	5248
55°	6396	5624	4701
60°	5860	5023	4211
65°	5156	4399	3729
70°	4247	3852	3168
75°	3378	2949	3092
80°	2269	2127	1985
85°	1413	1695	1978



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	736.8	4.7
10°-20°	2022.0	13.0
20°-30°	2799.3	18.0
30°-40°	2984.9	19.2
40°-50°	2723.1	17.5
50°-60°	2133.3	13.7
60°-70°	1390.4	8.9
70°-80°	616.0	4.0
80°-90°	132.3	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°	5558.1	35.8
0°-40°	8543.0	55.0
0°-60°	13399.3	86.2
0°-90°	15538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7915	7915	7915	7915	7915	
5°	7778	7768	7768	7759	7759	738
15°	7274	7274	7201	7128	7100	2045
25°	6304	6268	6167	5948	5783	2894
35°	5115	5078	4831	4465	4356	3198
45°	3925	3843	3514	3221	3093	3024
55°	2727	2644	2397	2114	2004	2446
65°	1620	1528	1382	1409	1171	1596
75°	650	604	567	540	595	696
85°	92	101	110	119	128	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7914.8	7914.8	7914.8	7914.8	7914.8
2.5°	7859.9	7859.9	7859.9	7850.8	7850.8
5°	7777.6	7768.4	7768.4	7759.3	7759.3
7.5°	7713.5	7704.4	7695.2	7686.1	7667.8
10°	7622.0	7622.0	7612.9	7567.1	7558.0
12.5°	7475.6	7466.5	7429.9	7365.8	7347.5
15°	7274.3	7274.3	7201.1	7127.9	7100.5
17.5°	7054.7	7045.6	6954.1	6880.9	6844.3
20°	6816.8	6798.5	6707.0	6588.1	6524.0
22.5°	6551.5	6551.5	6441.7	6286.1	6222.1
25°	6304.4	6267.8	6167.2	5947.6	5782.9
27.5°	6020.8	5965.9	5856.1	5545.0	5352.8
30°	5709.7	5682.2	5526.7	5124.1	4977.7
32.5°	5416.9	5371.1	5206.4	4785.5	4666.6
35°	5114.9	5078.3	4831.3	4465.3	4355.5
37.5°	4813.0	4767.2	4456.1	4163.3	4026.1
40°	4511.0	4456.1	4117.6	3852.2	3705.8
42.5°	4227.4	4154.2	3824.7	3541.1	3376.4
45°	3925.4	3843.0	3513.6	3220.8	3092.7
47.5°	3623.4	3550.2	3248.3	2946.3	2799.9
50°	3303.2	3239.1	2964.6	2662.7	2507.1
52.5°	3037.8	2937.2	2671.8	2369.9	2241.8
55°	2726.7	2644.4	2397.3	2113.7	2003.9
57.5°	2443.1	2360.7	2132.0	1866.6	1775.1
60°	2177.7	2058.8	1866.6	1637.9	1564.7
62.5°	1884.9	1793.4	1628.7	1436.6	1528.1
65°	1619.6	1528.1	1381.7	1409.1	1171.2
67.5°	1326.8	1281.0	1152.9	1024.8	988.2
70°	1079.7	1024.8	979.1	841.8	805.2
72.5°	860.1	805.2	741.2	668.0	640.5
75°	649.7	603.9	567.3	539.9	594.8
77.5°	448.4	430.1	402.6	375.2	366.0
80°	292.8	283.7	274.5	265.4	256.2
82.5°	173.9	173.9	173.9	173.9	173.9
85°	91.5	100.7	109.8	119.0	128.1
87.5°	54.9	54.9	64.1	73.2	82.4
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)