

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: P547532

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-82-94-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: P547532
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-LD4-4STD-50-UNV-82-94-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

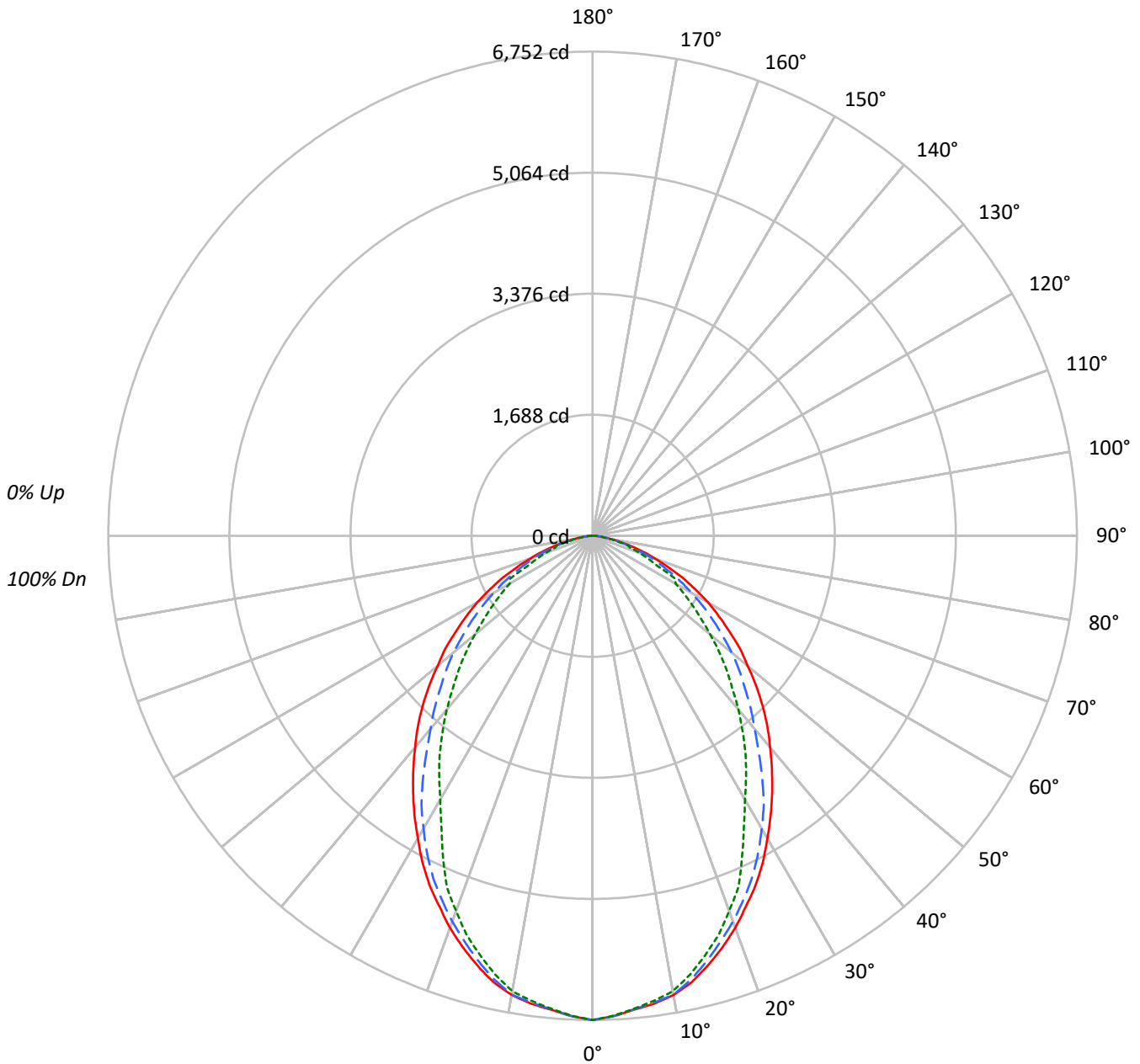
Lumens per Lamp: N/A
Luminaire Lumens: 13256.0 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	9085	9085	9085
5°	8962	8951	8941
10°	8884	8873	8810
15°	8645	8558	8438
20°	8327	8193	7969
25°	7985	7811	7324
30°	7568	7325	6598
35°	7168	6770	6103
40°	6760	6170	5553
45°	6372	5704	5021
50°	5899	5294	4477
55°	5457	4798	4010
60°	5000	4285	3592
65°	4399	3753	3181
70°	3624	3286	2703
75°	2881	2516	2638
80°	1936	1815	1694
85°	1206	1447	1687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	628.6	4.7
10°-20°	1725.0	13.0
20°-30°	2388.2	18.0
30°-40°	2546.5	19.2
40°-50°	2323.1	17.5
50°-60°	1820.0	13.7
60°-70°	1186.2	8.9
70°-80°	525.5	4.0
80°-90°	112.8	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°	4741.8	35.8
0°-40°	7288.3	55.0
0°-60°	11431.4	86.2
0°-90°	13256.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13256.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6752	6752	6752	6752	6752	
5°	6635	6628	6628	6620	6620	630
15°	6206	6206	6144	6081	6058	1745
25°	5378	5347	5261	5074	4934	2469
35°	4364	4332	4122	3810	3716	2728
45°	3349	3279	2998	2748	2638	2580
55°	2326	2256	2045	1803	1710	2087
65°	1382	1304	1179	1202	999	1362
75°	554	515	484	461	507	594
85°	78	86	94	102	109	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6752.4	6752.4	6752.4	6752.4	6752.4
2.5°	6705.6	6705.6	6705.6	6697.8	6697.8
5°	6635.3	6627.5	6627.5	6619.7	6619.7
7.5°	6580.7	6572.9	6565.1	6557.3	6541.7
10°	6502.6	6502.6	6494.8	6455.8	6448.0
12.5°	6377.7	6369.9	6338.7	6284.1	6268.4
15°	6206.0	6206.0	6143.5	6081.1	6057.7
17.5°	6018.6	6010.8	5932.8	5870.3	5839.1
20°	5815.7	5800.1	5722.0	5620.5	5565.9
22.5°	5589.3	5589.3	5495.6	5362.9	5308.3
25°	5378.5	5347.3	5261.4	5074.1	4933.6
27.5°	5136.5	5089.7	4996.0	4730.6	4566.7
30°	4871.1	4847.7	4715.0	4371.5	4246.6
32.5°	4621.3	4582.3	4441.8	4082.7	3981.2
35°	4363.7	4332.5	4121.7	3809.5	3715.8
37.5°	4106.1	4067.1	3801.7	3551.9	3434.8
40°	3848.5	3801.7	3512.8	3286.4	3161.5
42.5°	3606.5	3544.0	3263.0	3021.0	2880.5
45°	3348.9	3278.6	2997.6	2747.8	2638.5
47.5°	3091.3	3028.8	2771.2	2513.6	2388.7
50°	2818.1	2763.4	2529.2	2271.6	2138.9
52.5°	2591.7	2505.8	2279.4	2021.8	1912.5
55°	2326.3	2256.0	2045.2	1803.2	1709.6
57.5°	2084.3	2014.0	1818.9	1592.5	1514.4
60°	1857.9	1756.4	1592.5	1397.3	1334.9
62.5°	1608.1	1530.0	1389.5	1225.6	1303.6
65°	1381.7	1303.6	1178.7	1202.2	999.2
67.5°	1131.9	1092.9	983.6	874.3	843.1
70°	921.1	874.3	835.3	718.2	687.0
72.5°	733.8	687.0	632.3	569.9	546.4
75°	554.2	515.2	484.0	460.6	507.4
77.5°	382.5	366.9	343.5	320.1	312.3
80°	249.8	242.0	234.2	226.4	218.6
82.5°	148.3	148.3	148.3	148.3	148.3
85°	78.1	85.9	93.7	101.5	109.3
87.5°	46.8	46.8	54.6	62.5	70.3
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)