

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: P547233

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-81-86-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: P547233
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-LD4-3STD-50-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

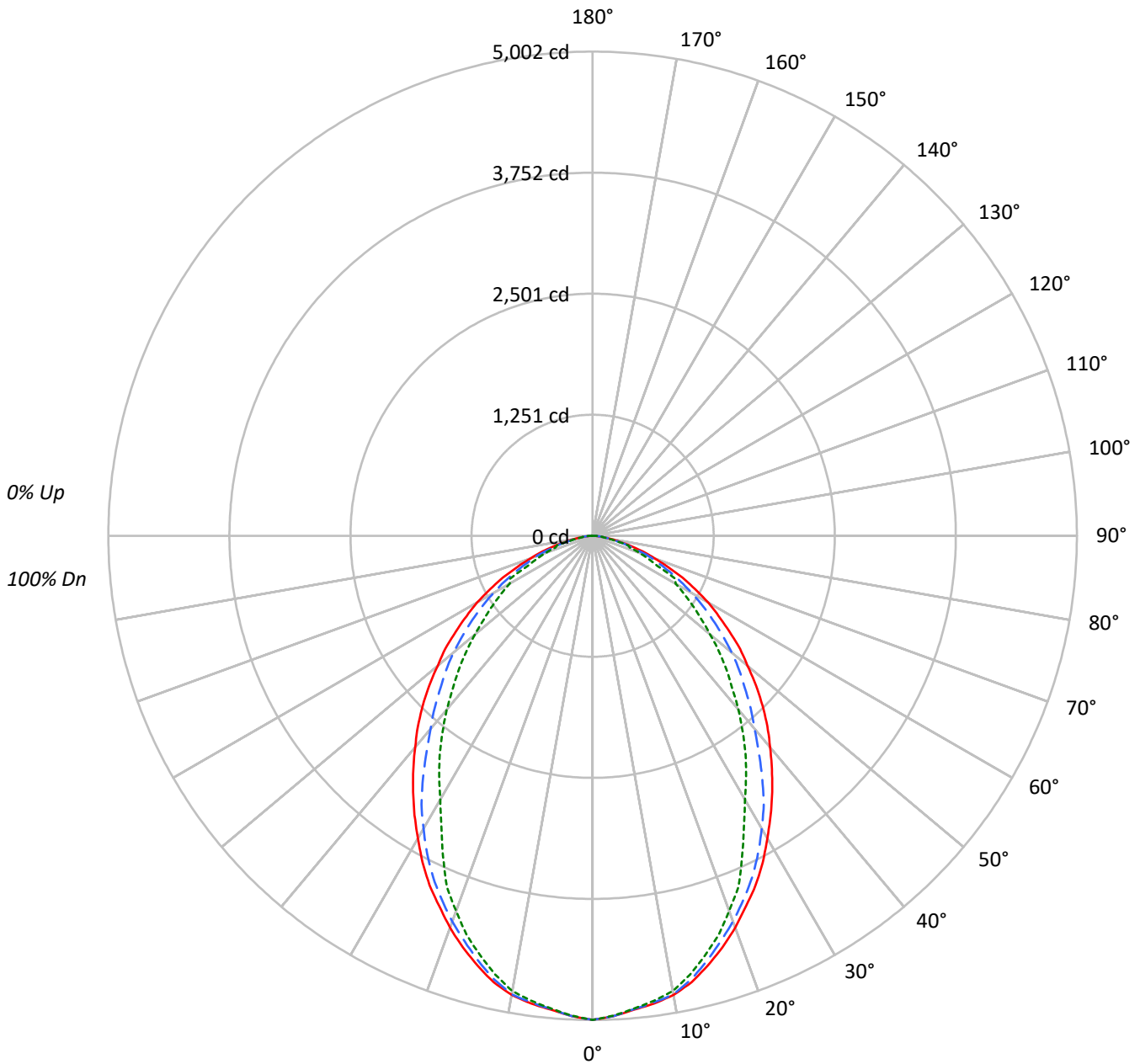
Lumens per Lamp: N/A
Luminaire Lumens: 9819.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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					20					
RC	80					70					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°	6730	6730	6730
5°	6638	6631	6623
10°	6581	6573	6525
15°	6403	6339	6250
20°	6168	6069	5903
25°	5915	5786	5425
30°	5606	5426	4887
35°	5309	5015	4521
40°	5007	4570	4113
45°	4720	4225	3719
50°	4369	3922	3316
55°	4042	3554	2970
60°	3703	3174	2661
65°	3259	2780	2356
70°	2684	2434	2002
75°	2134	1864	1954
80°	1433	1344	1254
85°	892	1071	1250



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	465.6	4.7
10°-20°	1277.8	13.0
20°-30°	1769.0	18.0
30°-40°	1886.3	19.2
40°-50°	1720.8	17.5
50°-60°	1348.1	13.7
60°-70°	878.6	8.9
70°-80°	389.3	4.0
80°-90°	83.6	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°	3512.3	35.8
0°-40°	5398.6	55.0
0°-60°	8467.5	86.2
0°-90°	9819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5002	5002	5002	5002	5002	
5°	4915	4909	4909	4903	4903	467
15°	4597	4597	4551	4504	4487	1292
25°	3984	3961	3897	3758	3654	1829
35°	3232	3209	3053	2822	2752	2021
45°	2481	2429	2220	2035	1954	1911
55°	1723	1671	1515	1336	1266	1546
65°	1024	966	873	890	740	1009
75°	410	382	358	341	376	440
85°	58	64	69	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5001.7	5001.7	5001.7	5001.7	5001.7
2.5°	4967.0	4967.0	4967.0	4961.2	4961.2
5°	4914.9	4909.2	4909.2	4903.4	4903.4
7.5°	4874.5	4868.7	4862.9	4857.1	4845.5
10°	4816.6	4816.6	4810.9	4781.9	4776.2
12.5°	4724.1	4718.3	4695.2	4654.7	4643.2
15°	4596.9	4596.9	4550.7	4504.4	4487.0
17.5°	4458.1	4452.4	4394.5	4348.3	4325.1
20°	4307.8	4296.2	4238.4	4163.2	4122.8
22.5°	4140.1	4140.1	4070.7	3972.4	3931.9
25°	3984.0	3960.9	3897.3	3758.5	3654.4
27.5°	3804.7	3770.0	3700.7	3504.1	3382.6
30°	3608.1	3590.8	3492.5	3238.1	3145.6
32.5°	3423.1	3394.2	3290.1	3024.1	2949.0
35°	3232.3	3209.2	3053.0	2821.7	2752.4
37.5°	3041.5	3012.6	2816.0	2630.9	2544.2
40°	2850.7	2816.0	2602.0	2434.3	2341.8
42.5°	2671.4	2625.2	2417.0	2237.7	2133.7
45°	2480.6	2428.6	2220.4	2035.4	1954.4
47.5°	2289.8	2243.5	2052.7	1861.9	1769.4
50°	2087.4	2046.9	1873.5	1682.6	1584.3
52.5°	1919.7	1856.1	1688.4	1497.6	1416.7
55°	1723.1	1671.1	1515.0	1335.7	1266.3
57.5°	1543.9	1491.8	1347.3	1179.6	1121.8
60°	1376.2	1301.0	1179.6	1035.0	988.8
62.5°	1191.1	1133.3	1029.2	907.8	965.6
65°	1023.5	965.6	873.1	890.5	740.1
67.5°	838.4	809.5	728.6	647.6	624.5
70°	682.3	647.6	618.7	532.0	508.8
72.5°	543.5	508.8	468.4	422.1	404.8
75°	410.5	381.6	358.5	341.2	375.8
77.5°	283.3	271.8	254.4	237.1	231.3
80°	185.0	179.3	173.5	167.7	161.9
82.5°	109.9	109.9	109.9	109.9	109.9
85°	57.8	63.6	69.4	75.2	81.0
87.5°	34.7	34.7	40.5	46.3	52.0
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)