

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: P547513

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-80-86-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: P547513
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-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

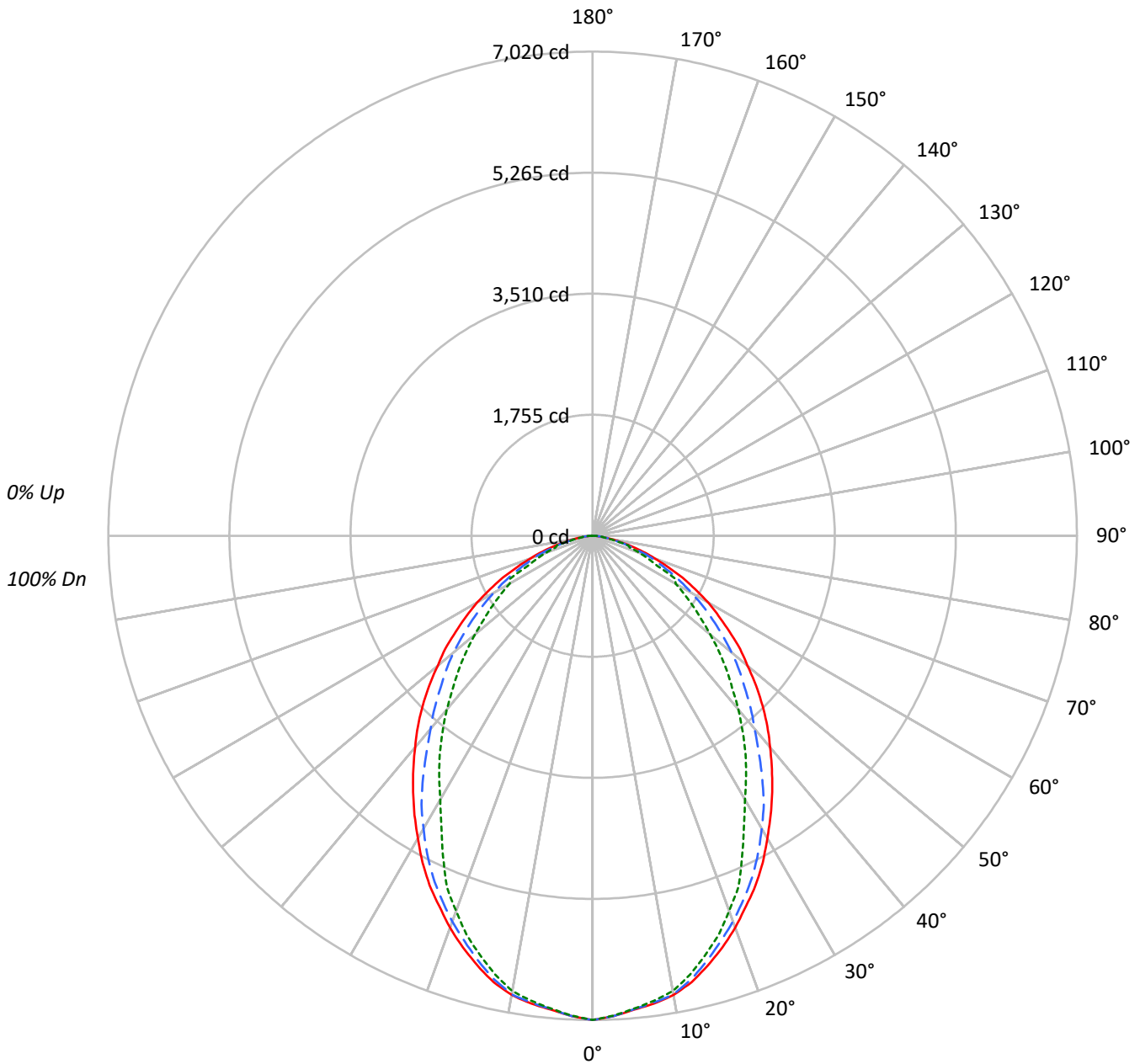
Lumens per Lamp: N/A
Luminaire Lumens: 13781.0 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	9445	9445	9445
5°	9317	9306	9295
10°	9236	9225	9158
15°	8987	8897	8772
20°	8657	8517	8285
25°	8301	8120	7614
30°	7868	7615	6859
35°	7451	7038	6345
40°	7027	6414	5773
45°	6625	5930	5219
50°	6132	5504	4654
55°	5673	4988	4169
60°	5198	4455	3734
65°	4573	3901	3307
70°	3767	3416	2810
75°	2995	2616	2742
80°	2012	1887	1760
85°	1254	1504	1754



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	653.5	4.7
10°-20°	1793.3	13.0
20°-30°	2482.8	18.0
30°-40°	2647.4	19.2
40°-50°	2415.2	17.5
50°-60°	1892.1	13.7
60°-70°	1233.2	8.9
70°-80°	546.4	4.0
80°-90°	117.3	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°	4929.6	35.8
0°-40°	7576.9	55.0
0°-60°	11884.2	86.2
0°-90°	13781.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13781.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7020	7020	7020	7020	7020	
5°	6898	6890	6890	6882	6882	655
15°	6452	6452	6387	6322	6298	1814
25°	5592	5559	5470	5275	5129	2567
35°	4536	4504	4285	3960	3863	2836
45°	3482	3408	3116	2857	2743	2682
55°	2418	2345	2126	1875	1777	2169
65°	1436	1355	1225	1250	1039	1416
75°	576	536	503	479	528	618
85°	81	89	97	106	114	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7019.9	7019.9	7019.9	7019.9	7019.9
2.5°	6971.2	6971.2	6971.2	6963.0	6963.0
5°	6898.1	6890.0	6890.0	6881.9	6881.9
7.5°	6841.3	6833.2	6825.1	6817.0	6800.7
10°	6760.2	6760.2	6752.0	6711.5	6703.4
12.5°	6630.3	6622.2	6589.7	6532.9	6516.7
15°	6451.8	6451.8	6386.9	6321.9	6297.6
17.5°	6257.0	6248.9	6167.7	6102.8	6070.4
20°	6046.0	6029.8	5948.6	5843.1	5786.3
22.5°	5810.7	5810.7	5713.3	5575.3	5518.5
25°	5591.5	5559.1	5469.8	5275.0	5129.0
27.5°	5340.0	5291.3	5193.9	4918.0	4747.5
30°	5064.0	5039.7	4901.7	4544.6	4414.8
32.5°	4804.3	4763.8	4617.7	4244.4	4138.9
35°	4536.5	4504.1	4285.0	3960.3	3863.0
37.5°	4268.7	4228.1	3952.2	3692.5	3570.8
40°	4000.9	3952.2	3651.9	3416.6	3286.8
42.5°	3749.3	3684.4	3392.3	3140.7	2994.6
45°	3481.5	3408.5	3116.3	2856.6	2743.0
47.5°	3213.7	3148.8	2881.0	2613.2	2483.3
50°	2929.7	2872.9	2629.4	2361.6	2223.6
52.5°	2694.3	2605.1	2369.7	2101.9	1988.3
55°	2418.4	2345.4	2126.2	1874.7	1777.3
57.5°	2166.8	2093.8	1890.9	1655.6	1574.4
60°	1931.5	1826.0	1655.6	1452.7	1387.7
62.5°	1671.8	1590.6	1444.5	1274.1	1355.3
65°	1436.4	1355.3	1225.4	1249.8	1038.8
67.5°	1176.7	1136.2	1022.5	908.9	876.5
70°	957.6	908.9	868.4	746.6	714.2
72.5°	762.9	714.2	657.4	592.4	568.1
75°	576.2	535.6	503.2	478.8	527.5
77.5°	397.7	381.4	357.1	332.7	324.6
80°	259.7	251.6	243.5	235.3	227.2
82.5°	154.2	154.2	154.2	154.2	154.2
85°	81.2	89.3	97.4	105.5	113.6
87.5°	48.7	48.7	56.8	64.9	73.0
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)