

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: P547010

Luminaire Tested: **FMR-24-4-LD4-3HI-40-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: P547010
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-LD4-3HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

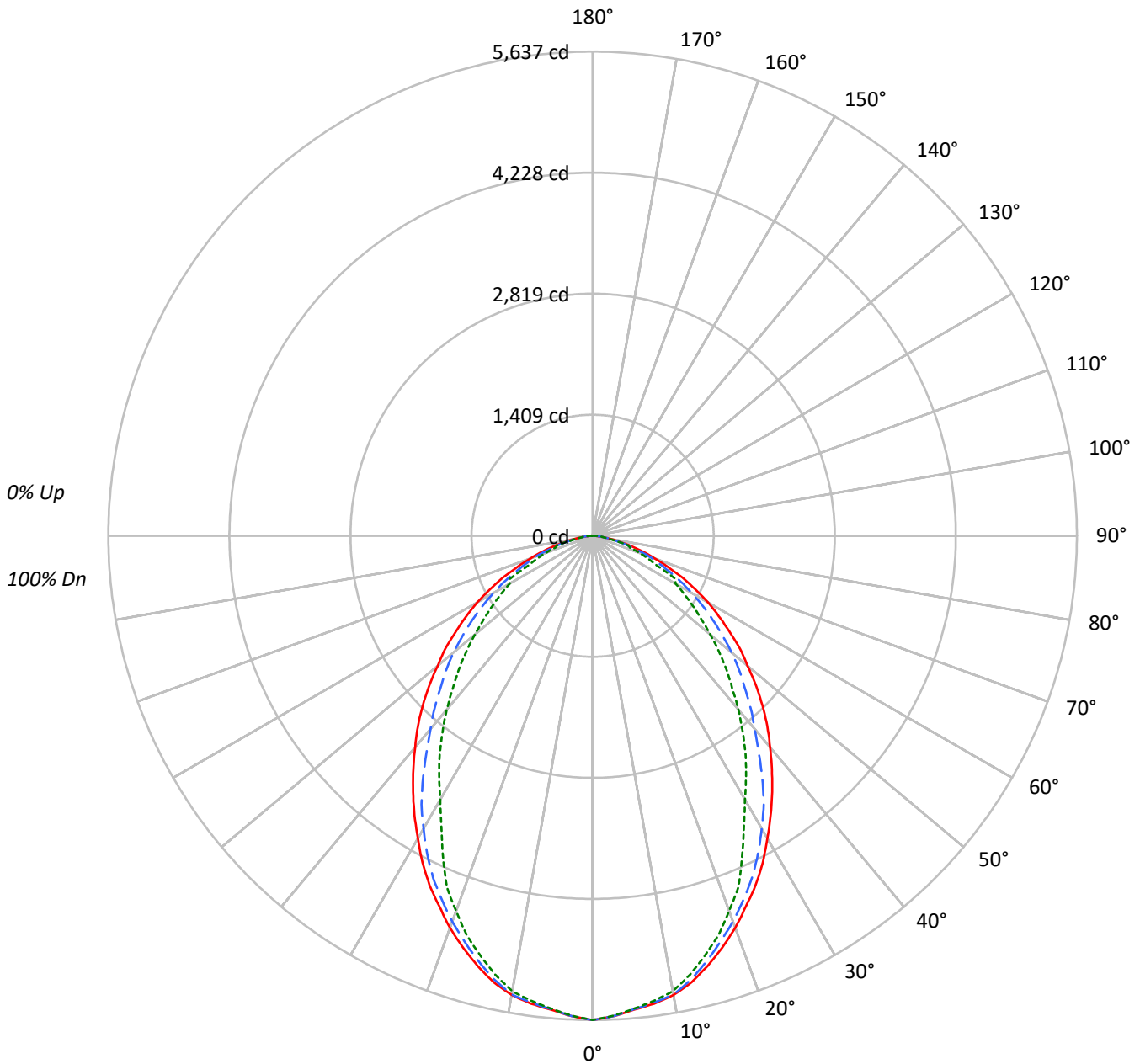
Lumens per Lamp: N/A
Luminaire Lumens: 11067.0 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	7585	7585	7585
5°	7482	7473	7464
10°	7417	7408	7355
15°	7217	7144	7045
20°	6952	6840	6653
25°	6666	6521	6115
30°	6318	6116	5508
35°	5984	5652	5095
40°	5643	5151	4636
45°	5320	4762	4192
50°	4925	4420	3738
55°	4556	4005	3348
60°	4174	3578	2999
65°	3672	3133	2656
70°	3025	2743	2256
75°	2405	2101	2202
80°	1616	1515	1414
85°	1007	1207	1408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	524.8	4.7
10°-20°	1440.2	13.0
20°-30°	1993.8	18.0
30°-40°	2126.0	19.2
40°-50°	1939.5	17.5
50°-60°	1519.5	13.7
60°-70°	990.3	8.9
70°-80°	438.7	4.0
80°-90°	94.2	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°	3958.8	35.8
0°-40°	6084.7	55.0
0°-60°	9543.7	86.2
0°-90°	11067.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11067.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5637	5637	5637	5637	5637	
5°	5540	5533	5533	5527	5527	526
15°	5181	5181	5129	5077	5057	1457
25°	4490	4464	4393	4236	4119	2062
35°	3643	3617	3441	3180	3102	2278
45°	2796	2737	2503	2294	2203	2154
55°	1942	1884	1708	1506	1427	1742
65°	1154	1088	984	1004	834	1137
75°	463	430	404	384	424	496
85°	65	72	78	85	91	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5637.4	5637.4	5637.4	5637.4	5637.4
2.5°	5598.3	5598.3	5598.3	5591.8	5591.8
5°	5539.6	5533.1	5533.1	5526.6	5526.6
7.5°	5494.0	5487.5	5481.0	5474.5	5461.4
10°	5428.8	5428.8	5422.3	5389.7	5383.2
12.5°	5324.6	5318.0	5292.0	5246.3	5233.3
15°	5181.2	5181.2	5129.0	5076.9	5057.4
17.5°	5024.8	5018.2	4953.1	4900.9	4874.9
20°	4855.3	4842.3	4777.1	4692.4	4646.8
22.5°	4666.3	4666.3	4588.1	4477.3	4431.7
25°	4490.4	4464.3	4392.6	4236.2	4118.9
27.5°	4288.3	4249.2	4171.0	3949.4	3812.6
30°	4066.7	4047.2	3936.4	3649.6	3545.4
32.5°	3858.2	3825.6	3708.3	3408.5	3323.8
35°	3643.1	3617.0	3441.1	3180.4	3102.2
37.5°	3428.0	3395.5	3173.9	2965.3	2867.6
40°	3213.0	3173.9	2932.7	2743.7	2639.5
42.5°	3010.9	2958.8	2724.2	2522.2	2404.8
45°	2795.9	2737.2	2502.6	2294.1	2202.8
47.5°	2580.8	2528.7	2313.6	2098.5	1994.3
50°	2352.7	2307.1	2111.6	1896.5	1785.7
52.5°	2163.7	2092.0	1903.0	1688.0	1596.7
55°	1942.1	1883.5	1707.5	1505.5	1427.3
57.5°	1740.1	1681.4	1518.5	1329.5	1264.3
60°	1551.1	1466.4	1329.5	1166.6	1114.4
62.5°	1342.5	1277.4	1160.1	1023.2	1088.4
65°	1153.5	1088.4	984.1	1003.6	834.2
67.5°	945.0	912.4	821.2	729.9	703.9
70°	769.0	729.9	697.3	599.6	573.5
72.5°	612.6	573.5	527.9	475.8	456.2
75°	462.7	430.1	404.1	384.5	423.6
77.5°	319.3	306.3	286.8	267.2	260.7
80°	208.6	202.0	195.5	189.0	182.5
82.5°	123.8	123.8	123.8	123.8	123.8
85°	65.2	71.7	78.2	84.7	91.2
87.5°	39.1	39.1	45.6	52.1	58.7
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)