

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: P547362

Luminaire Tested: **FMR-24-4-LD4-4LO-35-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: P547362
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-LD4-4LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

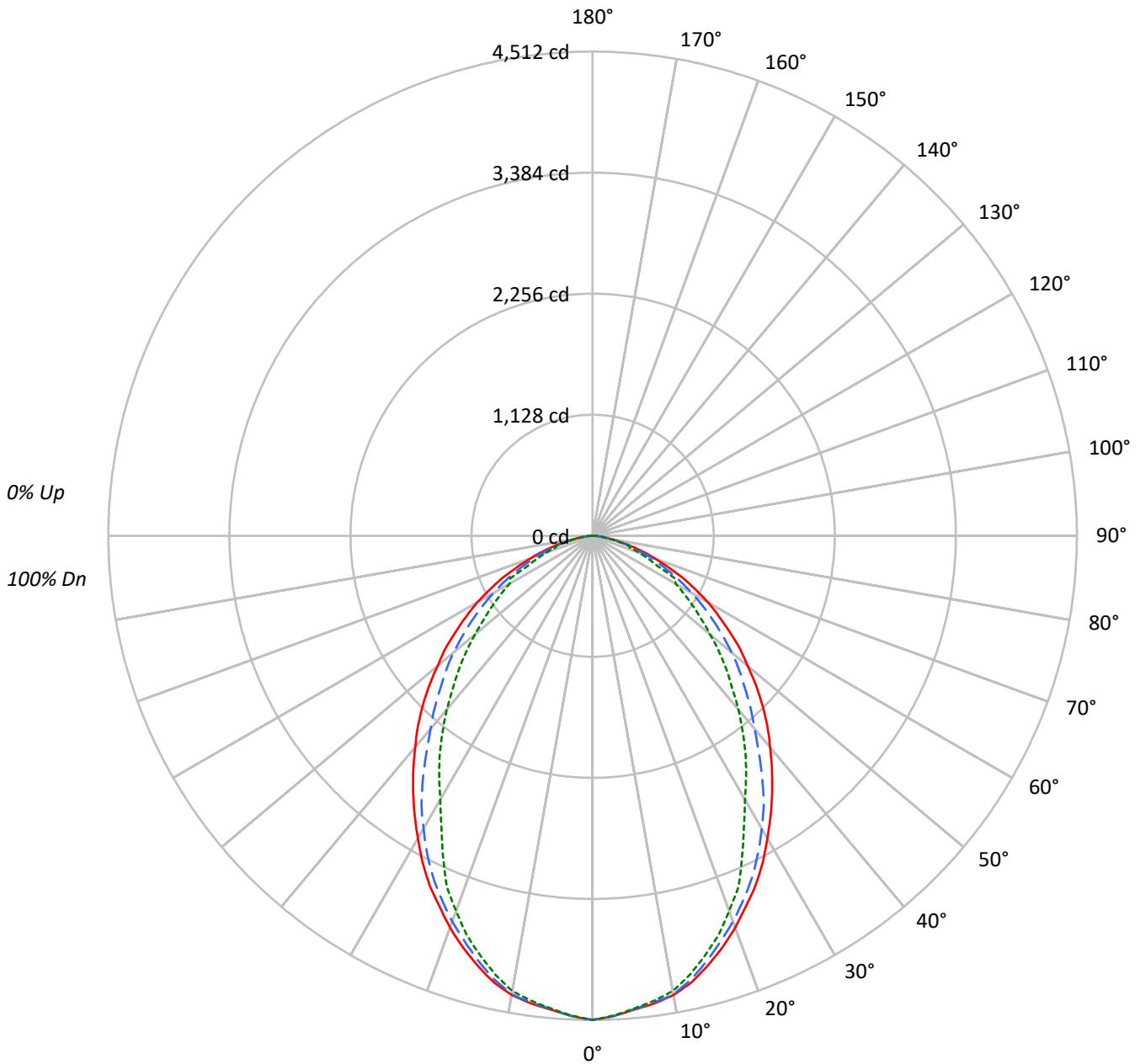
Lumens per Lamp: N/A
Luminaire Lumens: 8857.0 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6070	6070	6070
5°	5988	5981	5974
10°	5936	5929	5886
15°	5776	5718	5638
20°	5564	5474	5325
25°	5335	5219	4894
30°	5056	4894	4408
35°	4789	4523	4078
40°	4516	4122	3710
45°	4258	3811	3354
50°	3941	3537	2991
55°	3646	3206	2680
60°	3341	2863	2400
65°	2939	2507	2125
70°	2421	2196	1806
75°	1925	1681	1762
80°	1293	1213	1131
85°	806	966	1127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	420.0	4.7
10°-20°	1152.6	13.0
20°-30°	1595.7	18.0
30°-40°	1701.4	19.2
40°-50°	1552.2	17.5
50°-60°	1216.0	13.7
60°-70°	792.6	8.9
70°-80°	351.1	4.0
80°-90°	75.4	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°	3168.2	35.8
0°-40°	4869.7	55.0
0°-60°	7637.9	86.2
0°-90°	8857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4512	4512	4512	4512	4512	
5°	4433	4428	4428	4423	4423	421
15°	4146	4146	4105	4063	4047	1166
25°	3594	3573	3515	3390	3296	1650
35°	2916	2895	2754	2545	2483	1823
45°	2238	2191	2003	1836	1763	1724
55°	1554	1507	1366	1205	1142	1394
65°	923	871	788	803	668	910
75°	370	344	323	308	339	397
85°	52	57	63	68	73	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4511.6	4511.6	4511.6	4511.6	4511.6
2.5°	4480.3	4480.3	4480.3	4475.1	4475.1
5°	4433.4	4428.2	4428.2	4423.0	4423.0
7.5°	4396.9	4391.7	4386.5	4381.2	4370.8
10°	4344.7	4344.7	4339.5	4313.4	4308.2
12.5°	4261.3	4256.1	4235.2	4198.7	4188.3
15°	4146.5	4146.5	4104.8	4063.1	4047.4
17.5°	4021.4	4016.1	3964.0	3922.3	3901.4
20°	3885.7	3875.3	3823.2	3755.4	3718.8
22.5°	3734.5	3734.5	3671.9	3583.2	3546.7
25°	3593.7	3572.8	3515.4	3390.2	3296.4
27.5°	3432.0	3400.7	3338.1	3160.8	3051.2
30°	3254.6	3239.0	3150.3	2920.8	2837.4
32.5°	3087.7	3061.7	2967.8	2727.8	2660.0
35°	2915.6	2894.8	2753.9	2545.3	2482.7
37.5°	2743.5	2717.4	2540.1	2373.2	2294.9
40°	2571.4	2540.1	2347.1	2195.8	2112.4
42.5°	2409.7	2368.0	2180.2	2018.5	1924.6
45°	2237.6	2190.6	2002.9	1835.9	1762.9
47.5°	2065.4	2023.7	1851.6	1679.5	1596.0
50°	1882.9	1846.4	1689.9	1517.8	1429.1
52.5°	1731.6	1674.3	1523.0	1350.9	1277.9
55°	1554.3	1507.4	1366.5	1204.8	1142.3
57.5°	1392.6	1345.7	1215.3	1064.0	1011.9
60°	1241.4	1173.5	1064.0	933.6	891.9
62.5°	1074.4	1022.3	928.4	818.9	871.0
65°	923.2	871.0	787.6	803.2	667.6
67.5°	756.3	730.2	657.2	584.2	563.3
70°	615.5	584.2	558.1	479.9	459.0
72.5°	490.3	459.0	422.5	380.8	365.1
75°	370.3	344.2	323.4	307.7	339.0
77.5°	255.6	245.1	229.5	213.8	208.6
80°	166.9	161.7	156.5	151.3	146.0
82.5°	99.1	99.1	99.1	99.1	99.1
85°	52.2	57.4	62.6	67.8	73.0
87.5°	31.3	31.3	36.5	41.7	46.9
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)