

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: P547267

Luminaire Tested: **FMR-24-4-LD4-4HI-35-UNV-81-88-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: P547267
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-LD4-4HI-35-UNV-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

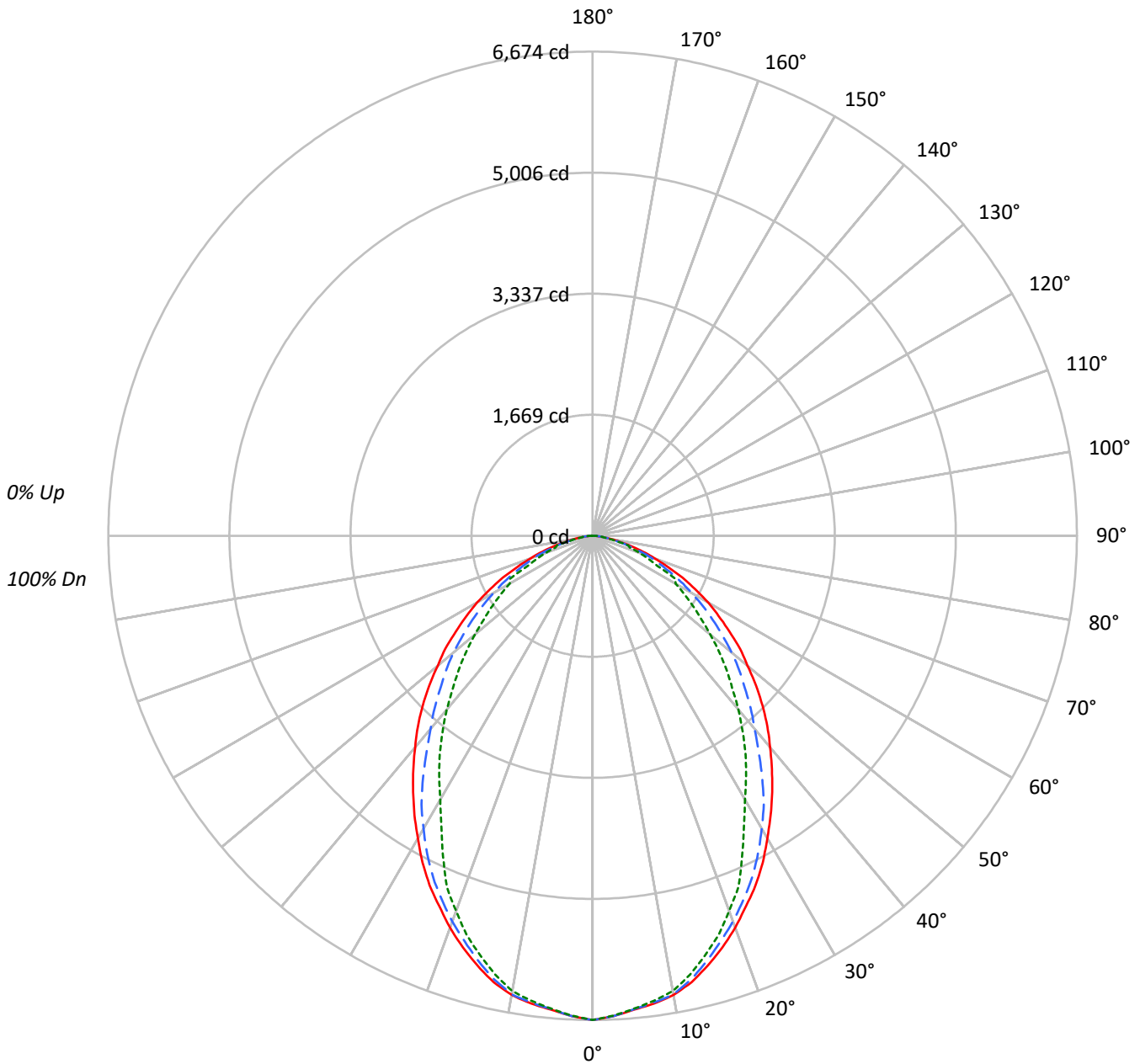
Lumens per Lamp: N/A
Luminaire Lumens: 13102.0 lumens
Efficiency: N/A
Efficacy: 75.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	8980	8980	8980
5°	8858	8847	8837
10°	8781	8770	8707
15°	8544	8458	8340
20°	8230	8098	7877
25°	7892	7720	7239
30°	7480	7240	6521
35°	7084	6691	6032
40°	6681	6098	5488
45°	6298	5638	4962
50°	5830	5233	4425
55°	5393	4742	3964
60°	4941	4236	3550
65°	4348	3709	3144
70°	3581	3248	2671
75°	2848	2487	2607
80°	1913	1794	1674
85°	1192	1430	1667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	621.3	4.7
10°-20°	1705.0	13.0
20°-30°	2360.4	18.0
30°-40°	2516.9	19.2
40°-50°	2296.2	17.5
50°-60°	1798.9	13.7
60°-70°	1172.4	8.9
70°-80°	519.4	4.0
80°-90°	111.5	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°	4686.7	35.8
0°-40°	7203.6	55.0
0°-60°	11298.6	86.2
0°-90°	13102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13102.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6674	6674	6674	6674	6674	
5°	6558	6550	6550	6543	6543	623
15°	6134	6134	6072	6010	5987	1724
25°	5316	5285	5200	5015	4876	2441
35°	4313	4282	4074	3765	3673	2696
45°	3310	3240	2963	2716	2608	2550
55°	2299	2230	2022	1782	1690	2062
65°	1366	1288	1165	1188	988	1346
75°	548	509	478	455	502	587
85°	77	85	93	100	108	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6674.0	6674.0	6674.0	6674.0	6674.0
2.5°	6627.7	6627.7	6627.7	6620.0	6620.0
5°	6558.2	6550.5	6550.5	6542.8	6542.8
7.5°	6504.2	6496.5	6488.8	6481.1	6465.7
10°	6427.1	6427.1	6419.4	6380.8	6373.1
12.5°	6303.6	6295.9	6265.1	6211.0	6195.6
15°	6133.9	6133.9	6072.2	6010.4	5987.3
17.5°	5948.7	5941.0	5863.8	5802.1	5771.3
20°	5748.1	5732.7	5655.5	5555.2	5501.2
22.5°	5524.4	5524.4	5431.8	5300.6	5246.6
25°	5316.0	5285.2	5200.3	5015.1	4876.3
27.5°	5076.9	5030.6	4938.0	4675.6	4513.6
30°	4814.5	4791.4	4660.2	4320.7	4197.3
32.5°	4567.6	4529.1	4390.2	4035.3	3934.9
35°	4313.0	4282.2	4073.8	3765.2	3672.6
37.5°	4058.4	4019.8	3757.5	3510.6	3394.9
40°	3803.8	3757.5	3472.0	3248.3	3124.8
42.5°	3564.6	3502.9	3225.1	2985.9	2847.1
45°	3310.0	3240.5	2962.8	2715.9	2607.9
47.5°	3055.4	2993.6	2739.0	2484.4	2361.0
50°	2785.3	2731.3	2499.9	2245.2	2114.1
52.5°	2561.6	2476.7	2253.0	1998.3	1890.3
55°	2299.2	2229.8	2021.5	1782.3	1689.7
57.5°	2060.1	1990.6	1797.7	1574.0	1496.8
60°	1836.3	1736.0	1574.0	1381.1	1319.4
62.5°	1589.4	1512.3	1373.4	1211.3	1288.5
65°	1365.7	1288.5	1165.1	1188.2	987.6
67.5°	1118.8	1080.2	972.2	864.1	833.3
70°	910.4	864.1	825.6	709.8	679.0
72.5°	725.3	679.0	625.0	563.2	540.1
75°	547.8	509.2	478.4	455.2	501.5
77.5°	378.1	362.6	339.5	316.3	308.6
80°	246.9	239.2	231.5	223.8	216.0
82.5°	146.6	146.6	146.6	146.6	146.6
85°	77.2	84.9	92.6	100.3	108.0
87.5°	46.3	46.3	54.0	61.7	69.4
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)