

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: P547328

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-81-85-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: P547328
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-50-UNV-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

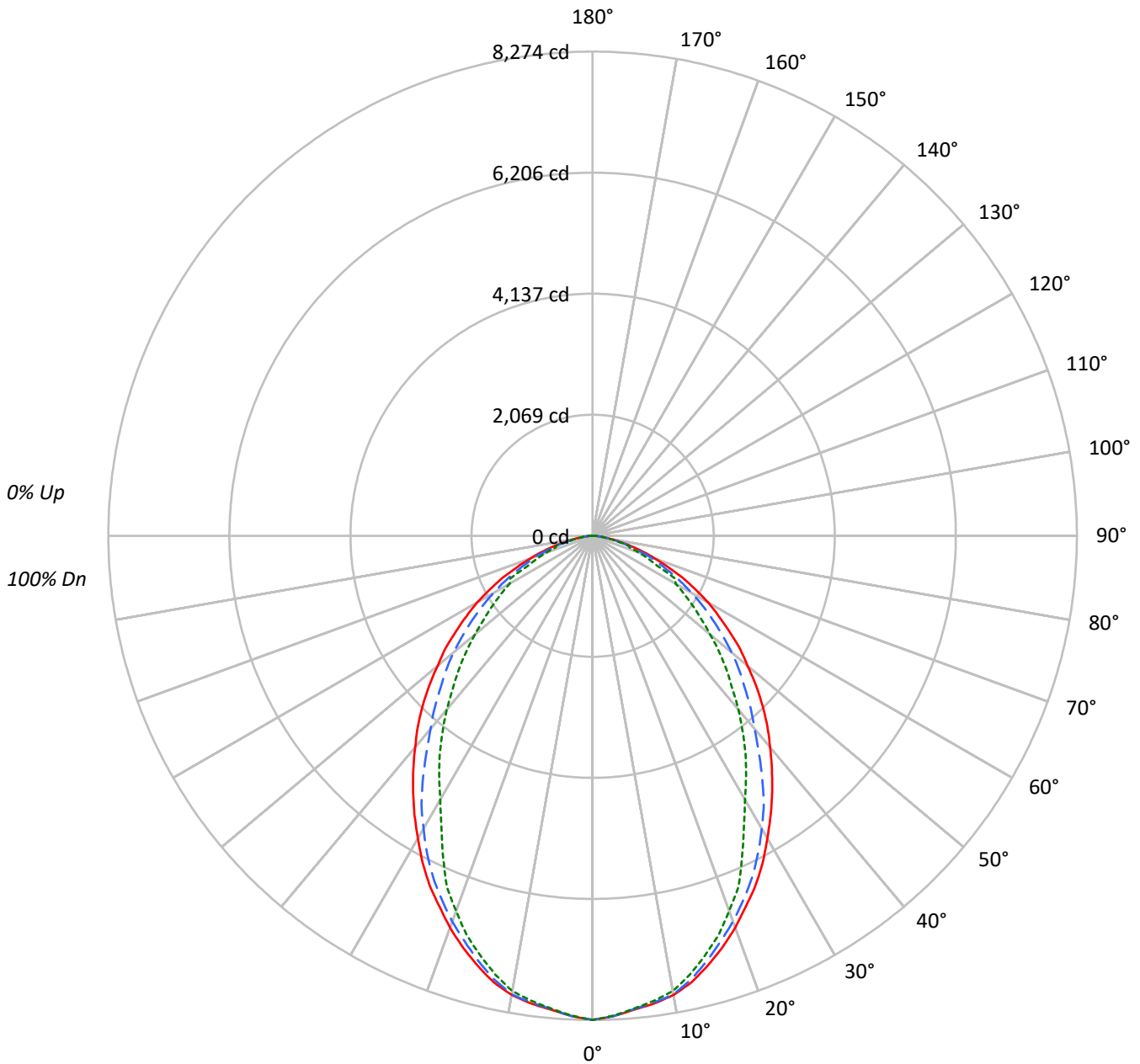
Lumens per Lamp: N/A
Luminaire Lumens: 16242.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	11132	11132	11132
5°	10981	10968	10955
10°	10885	10872	10794
15°	10592	10485	10339
20°	10203	10038	9765
25°	9784	9571	8974
30°	9273	8976	8084
35°	8782	8295	7478
40°	8282	7560	6804
45°	7808	6989	6152
50°	7228	6487	5486
55°	6686	5878	4914
60°	6126	5251	4401
65°	5390	4598	3898
70°	4440	4026	3311
75°	3530	3083	3232
80°	2372	2223	2075
85°	1476	1772	2067



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	770.1	4.7
10°-20°	2113.6	13.0
20°-30°	2926.1	18.0
30°-40°	3120.1	19.2
40°-50°	2846.5	17.5
50°-60°	2230.0	13.7
60°-70°	1453.4	8.9
70°-80°	643.9	4.0
80°-90°	138.2	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°	5809.9	35.8
0°-40°	8930.0	55.0
0°-60°	14006.5	86.2
0°-90°	16242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16242.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8274	8274	8274	8274	8274	
5°	8130	8120	8120	8111	8111	772
15°	7604	7604	7527	7451	7422	2138
25°	6590	6552	6447	6217	6045	3026
35°	5347	5308	5050	4668	4553	3343
45°	4103	4017	3673	3367	3233	3161
55°	2850	2764	2506	2209	2095	2557
65°	1693	1597	1444	1473	1224	1668
75°	679	631	593	564	622	728
85°	96	105	115	124	134	133
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8273.5	8273.5	8273.5	8273.5	8273.5
2.5°	8216.1	8216.1	8216.1	8206.5	8206.5
5°	8130.0	8120.4	8120.4	8110.9	8110.9
7.5°	8063.0	8053.5	8043.9	8034.3	8015.2
10°	7967.4	7967.4	7957.8	7910.0	7900.4
12.5°	7814.4	7804.8	7766.5	7699.6	7680.4
15°	7603.9	7603.9	7527.4	7450.9	7422.2
17.5°	7374.4	7364.8	7269.2	7192.6	7154.4
20°	7125.7	7106.6	7010.9	6886.6	6819.6
22.5°	6848.3	6848.3	6733.5	6570.9	6504.0
25°	6590.1	6551.8	6446.6	6217.0	6044.9
27.5°	6293.6	6236.2	6121.4	5796.2	5595.3
30°	5968.4	5939.7	5777.1	5356.2	5203.2
32.5°	5662.3	5614.5	5442.3	5002.3	4878.0
35°	5346.7	5308.4	5050.2	4667.6	4552.8
37.5°	5031.0	4983.2	4658.0	4351.9	4208.5
40°	4715.4	4658.0	4304.1	4026.7	3873.7
42.5°	4418.9	4342.4	3998.0	3701.5	3529.4
45°	4103.3	4017.2	3672.8	3366.8	3232.9
47.5°	3787.6	3711.1	3395.5	3079.8	2926.8
50°	3452.9	3385.9	3099.0	2783.3	2620.7
52.5°	3175.5	3070.3	2792.9	2477.3	2343.3
55°	2850.3	2764.2	2505.9	2209.4	2094.7
57.5°	2553.8	2467.7	2228.6	1951.2	1855.6
60°	2276.4	2152.1	1951.2	1712.1	1635.6
62.5°	1970.3	1874.7	1702.5	1501.7	1597.3
65°	1693.0	1597.3	1444.3	1473.0	1224.3
67.5°	1386.9	1339.1	1205.2	1071.2	1033.0
70°	1128.6	1071.2	1023.4	880.0	841.7
72.5°	899.1	841.7	774.7	698.2	669.5
75°	679.1	631.3	593.0	564.3	621.7
77.5°	468.7	449.5	420.8	392.2	382.6
80°	306.1	296.5	286.9	277.4	267.8
82.5°	181.7	181.7	181.7	181.7	181.7
85°	95.6	105.2	114.8	124.3	133.9
87.5°	57.4	57.4	67.0	76.5	86.1
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)