

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: P547466

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-82-87-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: P547466
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-35-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 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

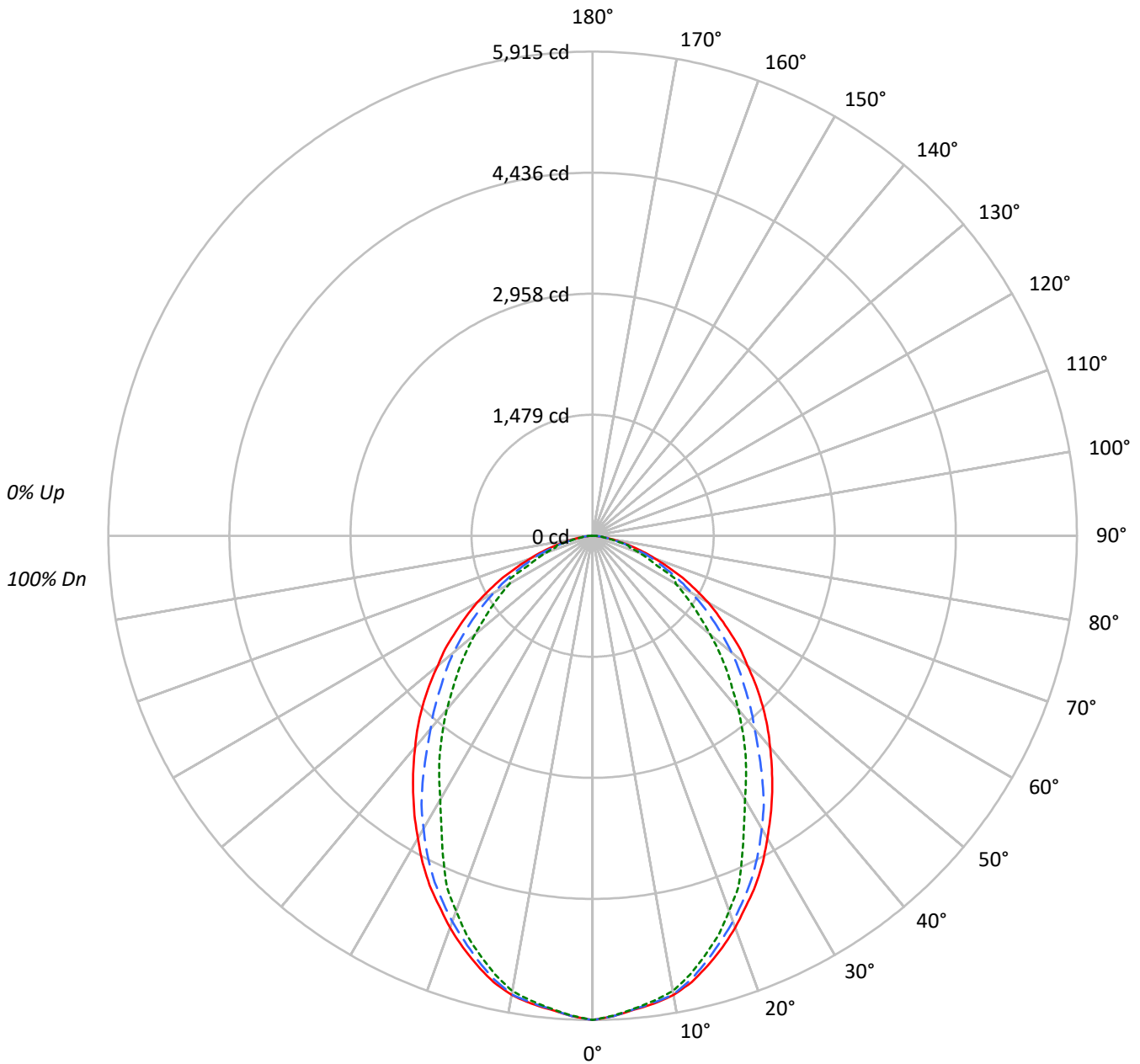
Lumens per Lamp: N/A
Luminaire Lumens: 11612.0 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	7959	7959	7959
5°	7850	7841	7832
10°	7782	7773	7717
15°	7573	7496	7392
20°	7294	7177	6981
25°	6995	6842	6416
30°	6629	6417	5780
35°	6279	5930	5346
40°	5921	5405	4864
45°	5582	4996	4398
50°	5167	4638	3922
55°	4780	4203	3513
60°	4380	3754	3147
65°	3854	3287	2787
70°	3174	2878	2367
75°	2524	2204	2311
80°	1695	1589	1484
85°	1056	1267	1477



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	550.6	4.7
10°-20°	1511.1	13.0
20°-30°	2092.0	18.0
30°-40°	2230.7	19.2
40°-50°	2035.0	17.5
50°-60°	1594.3	13.7
60°-70°	1039.1	8.9
70°-80°	460.4	4.0
80°-90°	98.8	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°	4153.7	35.8
0°-40°	6384.4	55.0
0°-60°	10013.7	86.2
0°-90°	11612.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11612.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5915	5915	5915	5915	5915	
5°	5812	5806	5806	5799	5799	552
15°	5436	5436	5382	5327	5306	1528
25°	4712	4684	4609	4445	4322	2163
35°	3822	3795	3610	3337	3255	2390
45°	2934	2872	2626	2407	2311	2260
55°	2038	1976	1792	1580	1498	1828
65°	1210	1142	1033	1053	875	1193
75°	486	451	424	404	444	520
85°	68	75	82	89	96	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5915.0	5915.0	5915.0	5915.0	5915.0
2.5°	5874.0	5874.0	5874.0	5867.1	5867.1
5°	5812.4	5805.6	5805.6	5798.7	5798.7
7.5°	5764.6	5757.7	5750.9	5744.0	5730.4
10°	5696.2	5696.2	5689.3	5655.1	5648.3
12.5°	5586.8	5579.9	5552.6	5504.7	5491.0
15°	5436.3	5436.3	5381.6	5326.9	5306.4
17.5°	5272.2	5265.4	5197.0	5142.3	5114.9
20°	5094.4	5080.7	5012.4	4923.5	4875.6
22.5°	4896.1	4896.1	4814.1	4697.8	4649.9
25°	4711.5	4684.1	4608.9	4444.8	4321.7
27.5°	4499.5	4458.5	4376.4	4143.9	4000.3
30°	4267.0	4246.5	4130.2	3829.4	3720.0
32.5°	4048.2	4014.0	3890.9	3576.4	3487.5
35°	3822.5	3795.2	3610.5	3337.0	3255.0
37.5°	3596.9	3562.7	3330.2	3111.4	3008.8
40°	3371.2	3330.2	3077.2	2878.9	2769.4
42.5°	3159.2	3104.5	2858.3	2646.4	2523.3
45°	2933.6	2872.0	2625.8	2407.0	2311.3
47.5°	2707.9	2653.2	2427.5	2201.9	2092.5
50°	2468.6	2420.7	2215.6	1989.9	1873.7
52.5°	2270.3	2195.0	1996.7	1771.1	1675.3
55°	2037.8	1976.2	1791.6	1579.6	1497.6
57.5°	1825.8	1764.2	1593.3	1395.0	1326.6
60°	1627.5	1538.6	1395.0	1224.0	1169.3
62.5°	1408.7	1340.3	1217.2	1073.6	1142.0
65°	1210.4	1142.0	1032.6	1053.1	875.3
67.5°	991.5	957.3	861.6	765.9	738.5
70°	806.9	765.9	731.7	629.1	601.8
72.5°	642.8	601.8	553.9	499.2	478.7
75°	485.5	451.3	424.0	403.5	444.5
77.5°	335.1	321.4	300.9	280.4	273.5
80°	218.8	212.0	205.1	198.3	191.5
82.5°	129.9	129.9	129.9	129.9	129.9
85°	68.4	75.2	82.1	88.9	95.7
87.5°	41.0	41.0	47.9	54.7	61.5
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)