

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: P547492

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-81-94-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: P547492
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-40-UNV-81-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

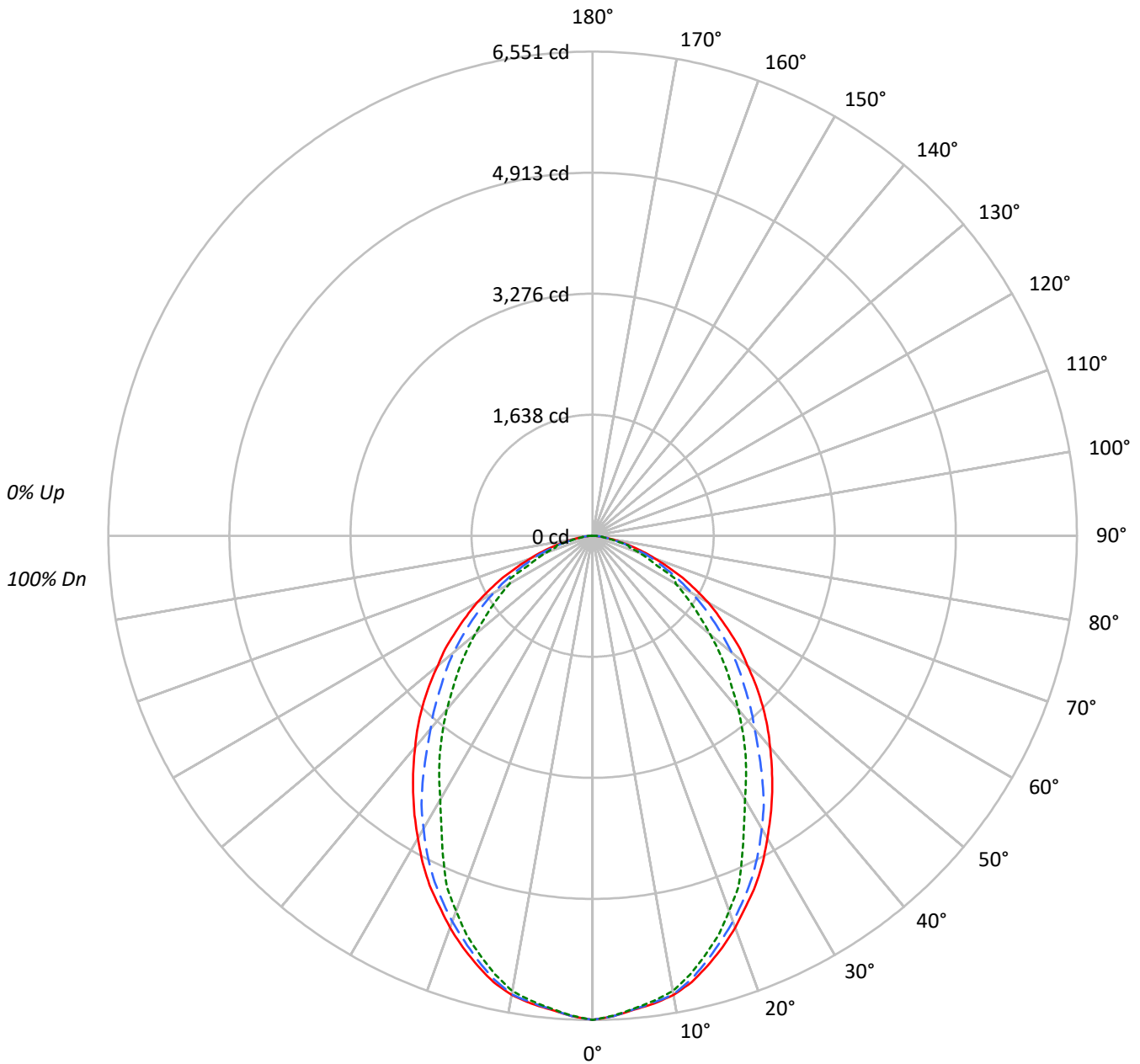
Lumens per Lamp: N/A
Luminaire Lumens: 12860.0 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	8814	8814	8814
5°	8694	8684	8674
10°	8619	8608	8546
15°	8386	8302	8186
20°	8078	7948	7731
25°	7746	7578	7106
30°	7342	7106	6401
35°	6954	6568	5921
40°	6558	5986	5387
45°	6182	5534	4871
50°	5723	5136	4343
55°	5294	4654	3890
60°	4850	4157	3485
65°	4267	3641	3086
70°	3515	3188	2622
75°	2795	2441	2559
80°	1877	1760	1643
85°	1169	1403	1636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	609.8	4.7
10°-20°	1673.5	13.0
20°-30°	2316.8	18.0
30°-40°	2470.4	19.2
40°-50°	2253.8	17.5
50°-60°	1765.6	13.7
60°-70°	1150.8	8.9
70°-80°	509.8	4.0
80°-90°	109.5	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°	4600.1	35.8
0°-40°	7070.6	55.0
0°-60°	11090.0	86.2
0°-90°	12860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6551	6551	6551	6551	6551	
5°	6437	6430	6430	6422	6422	611
15°	6021	6021	5960	5899	5877	1693
25°	5218	5188	5104	4922	4786	2396
35°	4233	4203	3999	3696	3605	2647
45°	3249	3181	2908	2666	2560	2503
55°	2257	2189	1984	1749	1658	2024
65°	1340	1265	1144	1166	969	1321
75°	538	500	470	447	492	576
85°	76	83	91	98	106	105
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6550.7	6550.7	6550.7	6550.7	6550.7
2.5°	6505.3	6505.3	6505.3	6497.7	6497.7
5°	6437.1	6429.5	6429.5	6422.0	6422.0
7.5°	6384.1	6376.5	6369.0	6361.4	6346.2
10°	6308.4	6308.4	6300.8	6262.9	6255.4
12.5°	6187.2	6179.6	6149.3	6096.3	6081.2
15°	6020.6	6020.6	5960.0	5899.4	5876.7
17.5°	5838.8	5831.3	5755.5	5695.0	5664.7
20°	5641.9	5626.8	5551.1	5452.6	5399.6
22.5°	5422.3	5422.3	5331.4	5202.7	5149.7
25°	5217.9	5187.6	5104.3	4922.5	4786.2
27.5°	4983.1	4937.6	4846.8	4589.3	4430.3
30°	4725.6	4702.9	4574.1	4240.9	4119.8
32.5°	4483.3	4445.4	4309.1	3960.7	3862.3
35°	4233.4	4203.1	3998.6	3695.7	3604.8
37.5°	3983.4	3945.6	3688.1	3445.8	3332.2
40°	3733.5	3688.1	3407.9	3188.3	3067.1
42.5°	3498.8	3438.2	3165.5	2930.8	2794.5
45°	3248.9	3180.7	2908.1	2665.7	2559.7
47.5°	2998.9	2938.4	2688.4	2438.5	2317.4
50°	2733.9	2680.9	2453.7	2203.8	2075.0
52.5°	2514.3	2431.0	2211.3	1961.4	1855.4
55°	2256.8	2188.6	1984.1	1749.4	1658.5
57.5°	2022.0	1953.9	1764.5	1544.9	1469.2
60°	1802.4	1703.9	1544.9	1355.6	1295.0
62.5°	1560.1	1484.3	1348.0	1189.0	1264.7
65°	1340.4	1264.7	1143.5	1166.3	969.4
67.5°	1098.1	1060.2	954.2	848.2	817.9
70°	893.6	848.2	810.3	696.7	666.4
72.5°	711.9	666.4	613.4	552.8	530.1
75°	537.7	499.8	469.5	446.8	492.3
77.5°	371.1	355.9	333.2	310.5	302.9
80°	242.3	234.8	227.2	219.6	212.0
82.5°	143.9	143.9	143.9	143.9	143.9
85°	75.7	83.3	90.9	98.5	106.0
87.5°	45.4	45.4	53.0	60.6	68.2
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)