

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: P547007

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-81-84-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: P547007
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-LD4-3HI-40-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

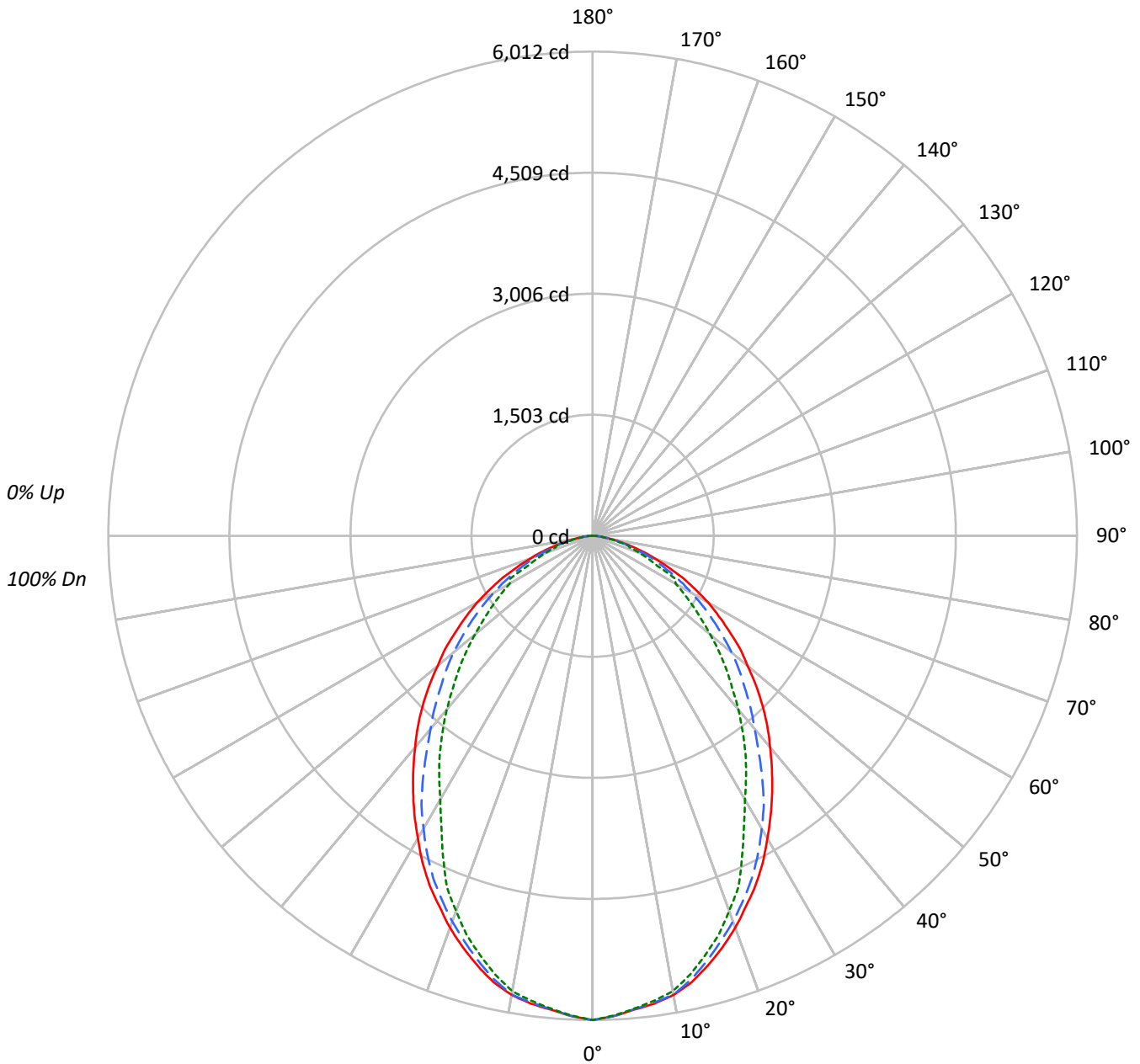
Lumens per Lamp: N/A
Luminaire Lumens: 11803.0 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	8089	8089	8089
5°	7980	7970	7961
10°	7910	7901	7844
15°	7697	7620	7513
20°	7414	7295	7096
25°	7110	6955	6521
30°	6738	6522	5874
35°	6382	6028	5434
40°	6019	5494	4944
45°	5674	5079	4470
50°	5252	4714	3987
55°	4859	4272	3571
60°	4451	3816	3198
65°	3917	3341	2833
70°	3227	2926	2406
75°	2565	2240	2349
80°	1723	1616	1508
85°	1073	1288	1502



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.7	4.7
10°-20°	1535.9	13.0
20°-30°	2126.4	18.0
30°-40°	2267.4	19.2
40°-50°	2068.5	17.5
50°-60°	1620.5	13.7
60°-70°	1056.2	8.9
70°-80°	467.9	4.0
80°-90°	100.5	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°	4222.0	35.8
0°-40°	6489.4	55.0
0°-60°	10178.4	86.2
0°-90°	11803.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11803.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6012	6012	6012	6012	6012	
5°	5908	5901	5901	5894	5894	561
15°	5526	5526	5470	5414	5394	1553
25°	4789	4761	4685	4518	4393	2199
35°	3885	3858	3670	3392	3308	2429
45°	2982	2919	2669	2447	2349	2297
55°	2071	2009	1821	1606	1522	1858
65°	1230	1161	1050	1070	890	1212
75°	494	459	431	410	452	529
85°	70	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6012.3	6012.3	6012.3	6012.3	6012.3
2.5°	5970.6	5970.6	5970.6	5963.6	5963.6
5°	5908.0	5901.1	5901.1	5894.1	5894.1
7.5°	5859.4	5852.4	5845.5	5838.5	5824.6
10°	5789.9	5789.9	5782.9	5748.2	5741.2
12.5°	5678.7	5671.7	5643.9	5595.3	5581.4
15°	5525.7	5525.7	5470.1	5414.5	5393.7
17.5°	5358.9	5352.0	5282.5	5226.9	5199.1
20°	5178.2	5164.3	5094.8	5004.4	4955.8
22.5°	4976.6	4976.6	4893.2	4775.1	4726.4
25°	4789.0	4761.2	4684.7	4517.9	4392.8
27.5°	4573.5	4531.8	4448.4	4212.1	4066.1
30°	4337.2	4316.3	4198.2	3892.3	3781.1
32.5°	4114.8	4080.0	3954.9	3635.2	3544.8
35°	3885.4	3857.6	3669.9	3391.9	3308.5
37.5°	3656.0	3621.3	3385.0	3162.5	3058.3
40°	3426.7	3385.0	3127.8	2926.2	2815.0
42.5°	3211.2	3155.6	2905.4	2689.9	2564.8
45°	2981.8	2919.3	2669.0	2446.6	2349.3
47.5°	2752.4	2696.8	2467.5	2238.1	2126.9
50°	2509.2	2460.5	2252.0	2022.6	1904.5
52.5°	2307.6	2231.2	2029.6	1800.2	1702.9
55°	2071.3	2008.7	1821.1	1605.6	1522.2
57.5°	1855.8	1793.3	1619.5	1417.9	1348.4
60°	1654.2	1563.9	1417.9	1244.2	1188.6
62.5°	1431.8	1362.3	1237.2	1091.2	1160.8
65°	1230.3	1160.8	1049.5	1070.4	889.7
67.5°	1007.8	973.1	875.8	778.5	750.7
70°	820.2	778.5	743.7	639.5	611.7
72.5°	653.4	611.7	563.0	507.4	486.5
75°	493.5	458.7	430.9	410.1	451.8
77.5°	340.6	326.7	305.8	285.0	278.0
80°	222.4	215.5	208.5	201.6	194.6
82.5°	132.1	132.1	132.1	132.1	132.1
85°	69.5	76.5	83.4	90.4	97.3
87.5°	41.7	41.7	48.7	55.6	62.6
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)