

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: P546983

Luminaire Tested: **FMR-24-4-LD4-3HI-35-UNV-82-84-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: P546983
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-35-UNV-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

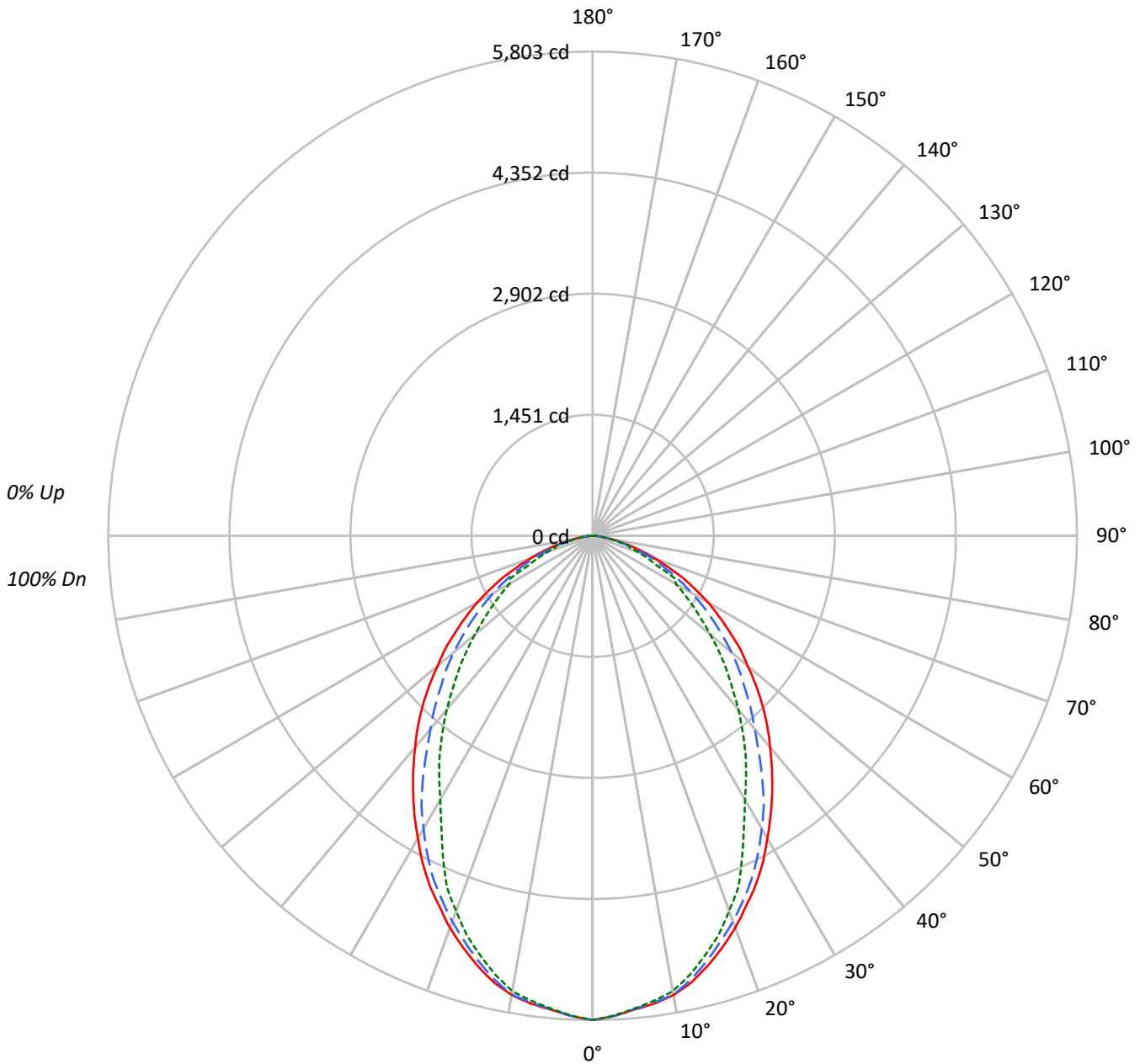
Lumens per Lamp: N/A
Luminaire Lumens: 11393.0 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	7808	7808	7808
5°	7702	7693	7684
10°	7636	7626	7571
15°	7430	7355	7252
20°	7157	7042	6849
25°	6863	6713	6295
30°	6504	6296	5670
35°	6160	5819	5246
40°	5810	5303	4773
45°	5477	4902	4315
50°	5070	4550	3848
55°	4690	4123	3447
60°	4297	3683	3087
65°	3781	3225	2734
70°	3115	2824	2323
75°	2477	2163	2267
80°	1664	1560	1456
85°	1036	1243	1450



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	540.2	4.7
10°-20°	1482.6	13.0
20°-30°	2052.6	18.0
30°-40°	2188.6	19.2
40°-50°	1996.7	17.5
50°-60°	1564.2	13.7
60°-70°	1019.5	8.9
70°-80°	451.7	4.0
80°-90°	97.0	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°	4075.4	35.8
0°-40°	6264.0	55.0
0°-60°	9824.9	86.2
0°-90°	11393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5803	5803	5803	5803	5803	
5°	5703	5696	5696	5689	5689	541
15°	5334	5334	5280	5226	5206	1499
25°	4623	4596	4522	4361	4240	2122
35°	3750	3724	3542	3274	3194	2345
45°	2878	2818	2576	2362	2268	2217
55°	1999	1939	1758	1550	1469	1793
65°	1188	1120	1013	1033	859	1170
75°	476	443	416	396	436	511
85°	67	74	80	87	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5803.4	5803.4	5803.4	5803.4	5803.4
2.5°	5763.2	5763.2	5763.2	5756.5	5756.5
5°	5702.8	5696.1	5696.1	5689.4	5689.4
7.5°	5655.8	5649.1	5642.4	5635.7	5622.3
10°	5588.7	5588.7	5582.0	5548.5	5541.8
12.5°	5481.4	5474.7	5447.9	5400.9	5387.5
15°	5333.8	5333.8	5280.1	5226.5	5206.3
17.5°	5172.8	5166.1	5099.0	5045.3	5018.5
20°	4998.3	4984.9	4917.8	4830.6	4783.6
22.5°	4803.8	4803.8	4723.3	4609.2	4562.2
25°	4622.6	4595.8	4522.0	4361.0	4240.2
27.5°	4414.6	4374.4	4293.9	4065.8	3924.9
30°	4186.5	4166.4	4052.3	3757.1	3649.8
32.5°	3971.8	3938.3	3817.5	3508.9	3421.7
35°	3750.4	3723.6	3542.4	3274.1	3193.6
37.5°	3529.0	3495.5	3267.4	3052.7	2952.0
40°	3307.6	3267.4	3019.1	2824.6	2717.2
42.5°	3099.6	3046.0	2804.4	2596.5	2475.7
45°	2878.2	2817.9	2576.3	2361.6	2267.7
47.5°	2656.8	2603.2	2381.8	2160.4	2053.0
50°	2422.0	2375.1	2173.8	1952.4	1838.3
52.5°	2227.4	2153.6	1959.1	1737.7	1643.7
55°	1999.3	1939.0	1757.8	1549.8	1469.3
57.5°	1791.4	1731.0	1563.2	1368.7	1301.6
60°	1596.8	1509.6	1368.7	1200.9	1147.3
62.5°	1382.1	1315.0	1194.2	1053.3	1120.4
65°	1187.5	1120.4	1013.1	1033.2	858.8
67.5°	972.8	939.3	845.4	751.4	724.6
70°	791.7	751.4	717.9	617.2	590.4
72.5°	630.7	590.4	543.4	489.8	469.6
75°	476.4	442.8	416.0	395.8	436.1
77.5°	328.7	315.3	295.2	275.1	268.4
80°	214.7	208.0	201.3	194.6	187.9
82.5°	127.5	127.5	127.5	127.5	127.5
85°	67.1	73.8	80.5	87.2	93.9
87.5°	40.3	40.3	47.0	53.7	60.4
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)