

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: P547265

Luminaire Tested: **FMR-24-4-LD4-4HI-35-UNV-81-86-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: P547265
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-35-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

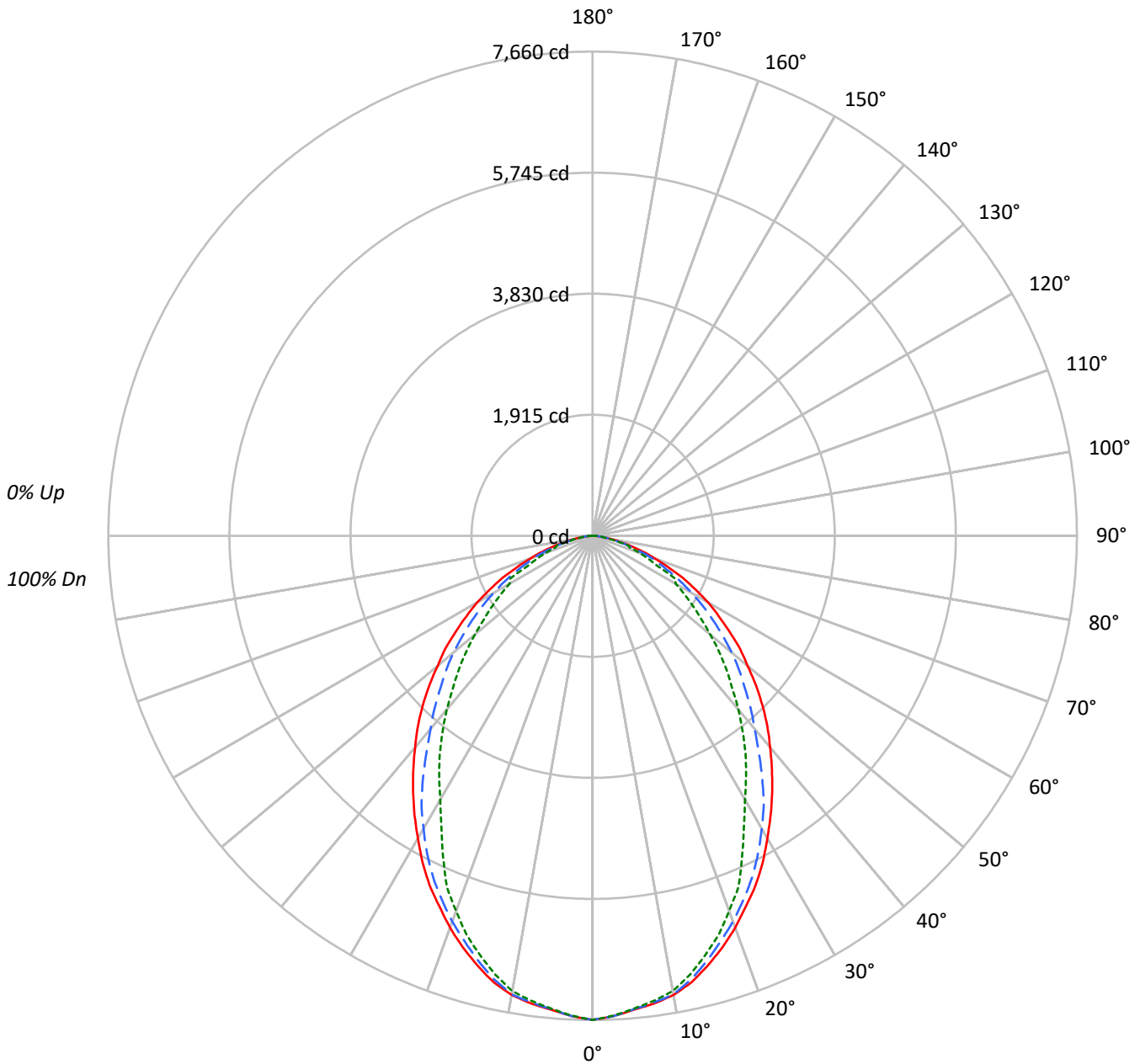
Lumens per Lamp: N/A
Luminaire Lumens: 15037.0 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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					20					
RC	80					70					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				100				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10306	10306	10306
5°	10166	10154	10142
10°	10078	10066	9993
15°	9806	9707	9572
20°	9446	9294	9040
25°	9058	8860	8308
30°	8585	8310	7484
35°	8131	7680	6923
40°	7668	6999	6299
45°	7228	6470	5695
50°	6691	6005	5079
55°	6190	5442	4549
60°	5671	4861	4075
65°	4990	4257	3609
70°	4111	3727	3065
75°	3268	2854	2992
80°	2196	2059	1921
85°	1368	1641	1914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	713.0	4.7
10°-20°	1956.8	13.0
20°-30°	2709.1	18.0
30°-40°	2888.6	19.2
40°-50°	2635.3	17.5
50°-60°	2064.5	13.7
60°-70°	1345.6	8.9
70°-80°	596.1	4.0
80°-90°	128.0	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°	5378.9	35.8
0°-40°	8267.5	55.0
0°-60°	12967.3	86.2
0°-90°	15037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7660	7660	7660	7660	7660	
5°	7527	7518	7518	7509	7509	714
15°	7040	7040	6969	6898	6872	1979
25°	6101	6066	5968	5756	5596	2801
35°	4950	4915	4676	4321	4215	3095
45°	3799	3719	3400	3117	2993	2926
55°	2639	2559	2320	2046	1939	2367
65°	1567	1479	1337	1364	1134	1545
75°	629	584	549	522	576	674
85°	89	97	106	115	124	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7659.6	7659.6	7659.6	7659.6	7659.6
2.5°	7606.5	7606.5	7606.5	7597.7	7597.7
5°	7526.8	7518.0	7518.0	7509.1	7509.1
7.5°	7464.8	7456.0	7447.1	7438.3	7420.6
10°	7376.3	7376.3	7367.4	7323.2	7314.3
12.5°	7234.6	7225.7	7190.3	7128.3	7110.6
15°	7039.8	7039.8	6969.0	6898.1	6871.5
17.5°	6827.3	6818.4	6729.9	6659.0	6623.6
20°	6597.0	6579.3	6490.8	6375.7	6313.7
22.5°	6340.2	6340.2	6234.0	6083.4	6021.5
25°	6101.2	6065.7	5968.3	5755.8	5596.4
27.5°	5826.6	5773.5	5667.3	5366.2	5180.2
30°	5525.6	5499.0	5348.5	4958.8	4817.2
32.5°	5242.2	5197.9	5038.5	4631.2	4516.1
35°	4950.0	4914.6	4675.5	4321.3	4215.0
37.5°	4657.8	4613.5	4312.4	4029.1	3896.2
40°	4365.6	4312.4	3984.8	3728.0	3586.3
42.5°	4091.0	4020.2	3701.4	3426.9	3267.5
45°	3798.8	3719.1	3400.4	3117.0	2993.0
47.5°	3506.6	3435.8	3143.6	2851.3	2709.7
50°	3196.7	3134.7	2869.0	2576.8	2426.3
52.5°	2939.9	2842.5	2585.7	2293.5	2169.5
55°	2638.8	2559.1	2320.0	2045.5	1939.3
57.5°	2364.3	2284.6	2063.2	1806.4	1717.9
60°	2107.5	1992.4	1806.4	1585.1	1514.2
62.5°	1824.1	1735.6	1576.2	1390.2	1478.8
65°	1567.3	1478.8	1337.1	1363.7	1133.5
67.5°	1284.0	1239.7	1115.7	991.8	956.3
70°	1044.9	991.8	947.5	814.7	779.2
72.5°	832.4	779.2	717.3	646.4	619.9
75°	628.7	584.4	549.0	522.4	575.6
77.5°	433.9	416.2	389.6	363.1	354.2
80°	283.4	274.5	265.7	256.8	247.9
82.5°	168.2	168.2	168.2	168.2	168.2
85°	88.6	97.4	106.3	115.1	124.0
87.5°	53.1	53.1	62.0	70.8	79.7
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)