

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: P546173

Luminaire Tested: **FMR-12-4-LD4-2HI-50-UNV-80-96-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: P546173
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-12-4-LD4-2HI-50-UNV-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

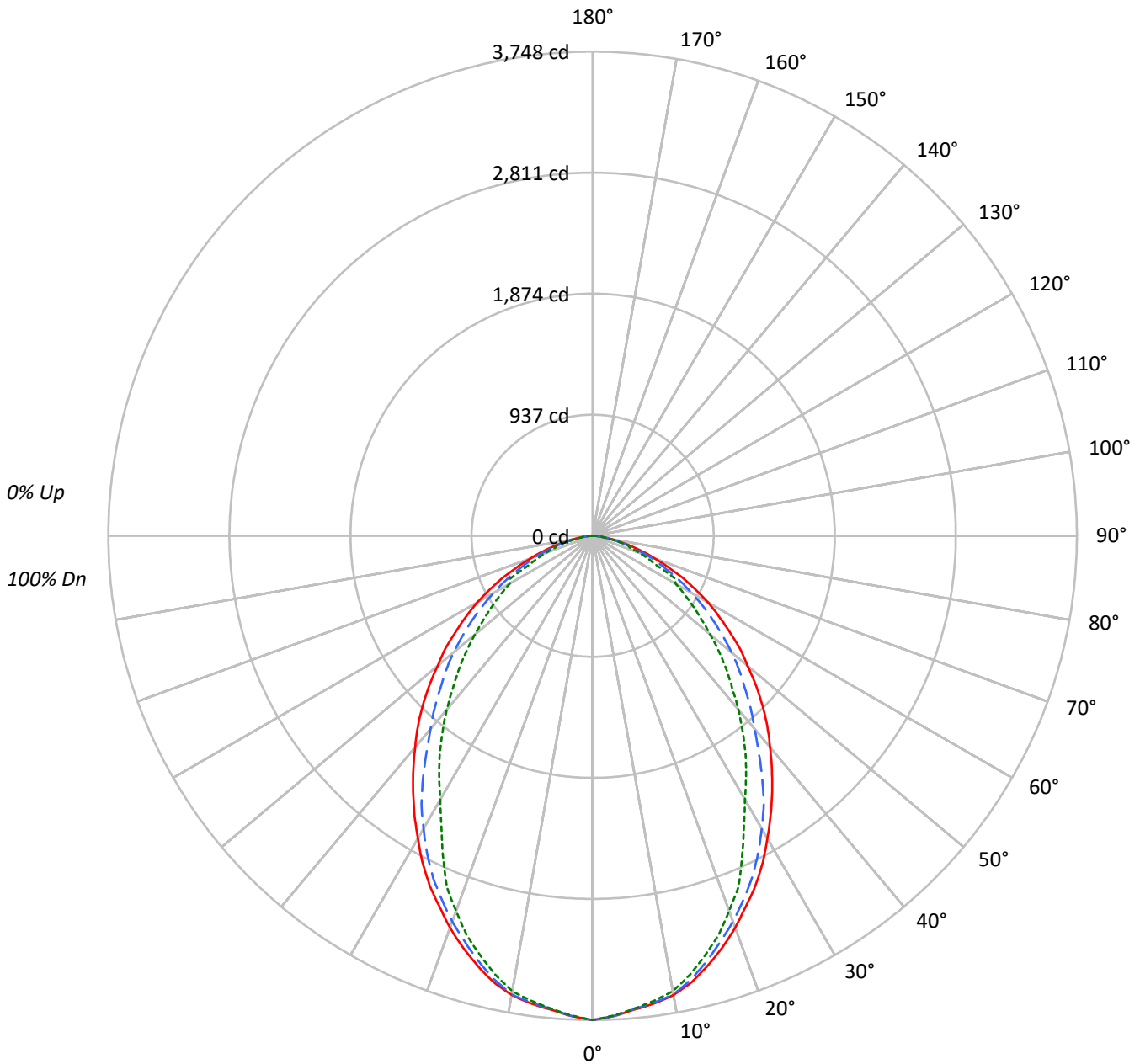
Lumens per Lamp: N/A
Luminaire Lumens: 7358.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	10086	10086	10086
5°	9949	9937	9926
10°	9863	9851	9780
15°	9597	9500	9367
20°	9244	9095	8847
25°	8864	8671	8131
30°	8401	8132	7324
35°	7957	7516	6775
40°	7504	6850	6165
45°	7074	6332	5574
50°	6548	5877	4970
55°	6058	5326	4452
60°	5550	4757	3987
65°	4883	4166	3531
70°	4023	3648	3000
75°	3198	2793	2928
80°	2149	2015	1880
85°	1337	1606	1874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.9	4.7
10°-20°	957.5	13.0
20°-30°	1325.6	18.0
30°-40°	1413.5	19.2
40°-50°	1289.5	17.5
50°-60°	1010.2	13.7
60°-70°	658.4	8.9
70°-80°	291.7	4.0
80°-90°	62.6	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°	2632.0	35.8
0°-40°	4045.5	55.0
0°-60°	6345.2	86.2
0°-90°	7358.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7358.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3748	3748	3748	3748	3748	
5°	3683	3679	3679	3674	3674	350
15°	3445	3445	3410	3375	3362	968
25°	2986	2968	2920	2816	2738	1371
35°	2422	2405	2288	2114	2062	1514
45°	1859	1820	1664	1525	1465	1432
55°	1291	1252	1135	1001	949	1158
65°	767	724	654	667	555	756
75°	308	286	269	256	282	330
85°	43	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3748.1	3748.1	3748.1	3748.1	3748.1
2.5°	3722.1	3722.1	3722.1	3717.7	3717.7
5°	3683.1	3678.7	3678.7	3674.4	3674.4
7.5°	3652.7	3648.4	3644.1	3639.7	3631.1
10°	3609.4	3609.4	3605.1	3583.4	3579.1
12.5°	3540.1	3535.7	3518.4	3488.1	3479.4
15°	3444.8	3444.8	3410.1	3375.4	3362.4
17.5°	3340.8	3336.4	3293.1	3258.4	3241.1
20°	3228.1	3219.4	3176.1	3119.8	3089.4
22.5°	3102.4	3102.4	3050.4	2976.8	2946.5
25°	2985.5	2968.1	2920.5	2816.5	2738.5
27.5°	2851.1	2825.1	2773.1	2625.8	2534.8
30°	2703.8	2690.8	2617.1	2426.5	2357.2
32.5°	2565.2	2543.5	2465.5	2266.2	2209.8
35°	2422.2	2404.8	2287.8	2114.5	2062.5
37.5°	2279.2	2257.5	2110.2	1971.5	1906.5
40°	2136.2	2110.2	1949.9	1824.2	1754.9
42.5°	2001.9	1967.2	1811.2	1676.9	1598.9
45°	1858.9	1819.9	1663.9	1525.2	1464.6
47.5°	1715.9	1681.2	1538.2	1395.2	1325.9
50°	1564.2	1533.9	1403.9	1260.9	1187.2
52.5°	1438.6	1390.9	1265.2	1122.3	1061.6
55°	1291.2	1252.2	1135.3	1000.9	948.9
57.5°	1156.9	1117.9	1009.6	883.9	840.6
60°	1031.3	974.9	883.9	775.6	740.9
62.5°	892.6	849.3	771.3	680.3	723.6
65°	766.9	723.6	654.3	667.3	554.6
67.5°	628.3	606.6	546.0	485.3	468.0
70°	511.3	485.3	463.6	398.6	381.3
72.5°	407.3	381.3	351.0	316.3	303.3
75°	307.6	286.0	268.6	255.6	281.6
77.5°	212.3	203.7	190.7	177.7	173.3
80°	138.7	134.3	130.0	125.7	121.3
82.5°	82.3	82.3	82.3	82.3	82.3
85°	43.3	47.7	52.0	56.3	60.7
87.5°	26.0	26.0	30.3	34.7	39.0
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)