

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: P547127

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-80-84-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: P547127
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-LD4-3LO-50-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

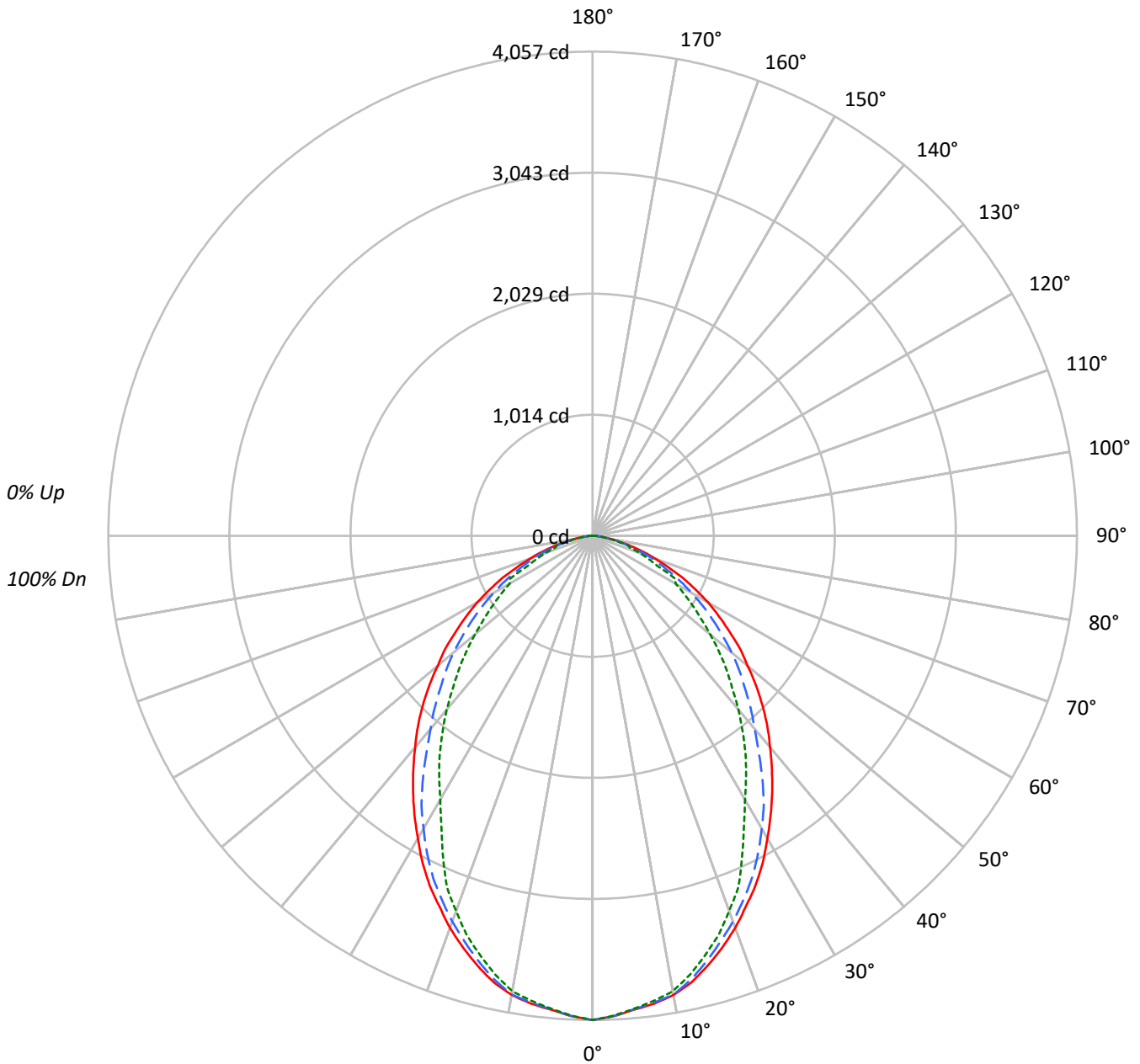
Lumens per Lamp: N/A
Luminaire Lumens: 7965.0 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	5459	5459	5459
5°	5385	5378	5372
10°	5338	5332	5293
15°	5194	5142	5070
20°	5003	4923	4789
25°	4798	4693	4401
30°	4547	4401	3964
35°	4307	4068	3667
40°	4062	3707	3336
45°	3829	3427	3017
50°	3544	3181	2690
55°	3279	2883	2410
60°	3004	2575	2158
65°	2643	2255	1911
70°	2177	1974	1624
75°	1731	1512	1585
80°	1163	1090	1017
85°	724	869	1014



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.7	4.7
10°-20°	1036.5	13.0
20°-30°	1435.0	18.0
30°-40°	1530.1	19.2
40°-50°	1395.9	17.5
50°-60°	1093.6	13.7
60°-70°	712.7	8.9
70°-80°	315.8	4.0
80°-90°	67.8	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°	2849.1	35.8
0°-40°	4379.2	55.0
0°-60°	6868.7	86.2
0°-90°	7965.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7965.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4057	4057	4057	4057	4057	
5°	3987	3982	3982	3978	3978	378
15°	3729	3729	3691	3654	3640	1048
25°	3232	3213	3161	3049	2964	1484
35°	2622	2603	2477	2289	2233	1639
45°	2012	1970	1801	1651	1585	1550
55°	1398	1356	1229	1084	1027	1254
65°	830	783	708	722	600	818
75°	333	310	291	277	305	357
85°	47	52	56	61	66	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4057.3	4057.3	4057.3	4057.3	4057.3
2.5°	4029.1	4029.1	4029.1	4024.4	4024.4
5°	3986.9	3982.2	3982.2	3977.5	3977.5
7.5°	3954.1	3949.4	3944.7	3940.0	3930.6
10°	3907.2	3907.2	3902.5	3879.0	3874.3
12.5°	3832.1	3827.4	3808.7	3775.8	3766.5
15°	3728.9	3728.9	3691.4	3653.9	3639.8
17.5°	3616.4	3611.7	3564.8	3527.2	3508.5
20°	3494.4	3485.0	3438.1	3377.1	3344.3
22.5°	3358.4	3358.4	3302.1	3222.4	3189.5
25°	3231.7	3213.0	3161.4	3048.8	2964.4
27.5°	3086.3	3058.2	3001.9	2842.4	2743.9
30°	2926.9	2912.8	2833.0	2626.7	2551.6
32.5°	2776.8	2753.3	2668.9	2453.1	2392.1
35°	2622.0	2603.2	2476.6	2289.0	2232.7
37.5°	2467.2	2443.7	2284.3	2134.2	2063.8
40°	2312.4	2284.3	2110.7	1974.7	1899.6
42.5°	2167.0	2129.5	1960.6	1815.2	1730.8
45°	2012.2	1970.0	1801.1	1651.0	1585.4
47.5°	1857.4	1819.9	1665.1	1510.3	1435.3
50°	1693.3	1660.4	1519.7	1364.9	1285.2
52.5°	1557.2	1505.6	1369.6	1214.8	1149.2
55°	1397.8	1355.5	1228.9	1083.5	1027.2
57.5°	1252.4	1210.1	1092.9	956.9	910.0
60°	1116.3	1055.4	956.9	839.6	802.1
62.5°	966.2	919.3	834.9	736.4	783.3
65°	830.2	783.3	708.3	722.3	600.4
67.5°	680.1	656.7	591.0	525.3	506.6
70°	553.5	525.3	501.9	431.5	412.8
72.5°	440.9	412.8	379.9	342.4	328.3
75°	333.0	309.6	290.8	276.7	304.9
77.5°	229.8	220.5	206.4	192.3	187.6
80°	150.1	145.4	140.7	136.0	131.3
82.5°	89.1	89.1	89.1	89.1	89.1
85°	46.9	51.6	56.3	61.0	65.7
87.5°	28.1	28.1	32.8	37.5	42.2
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)