

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: P547128

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-80-85-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: P547128
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-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

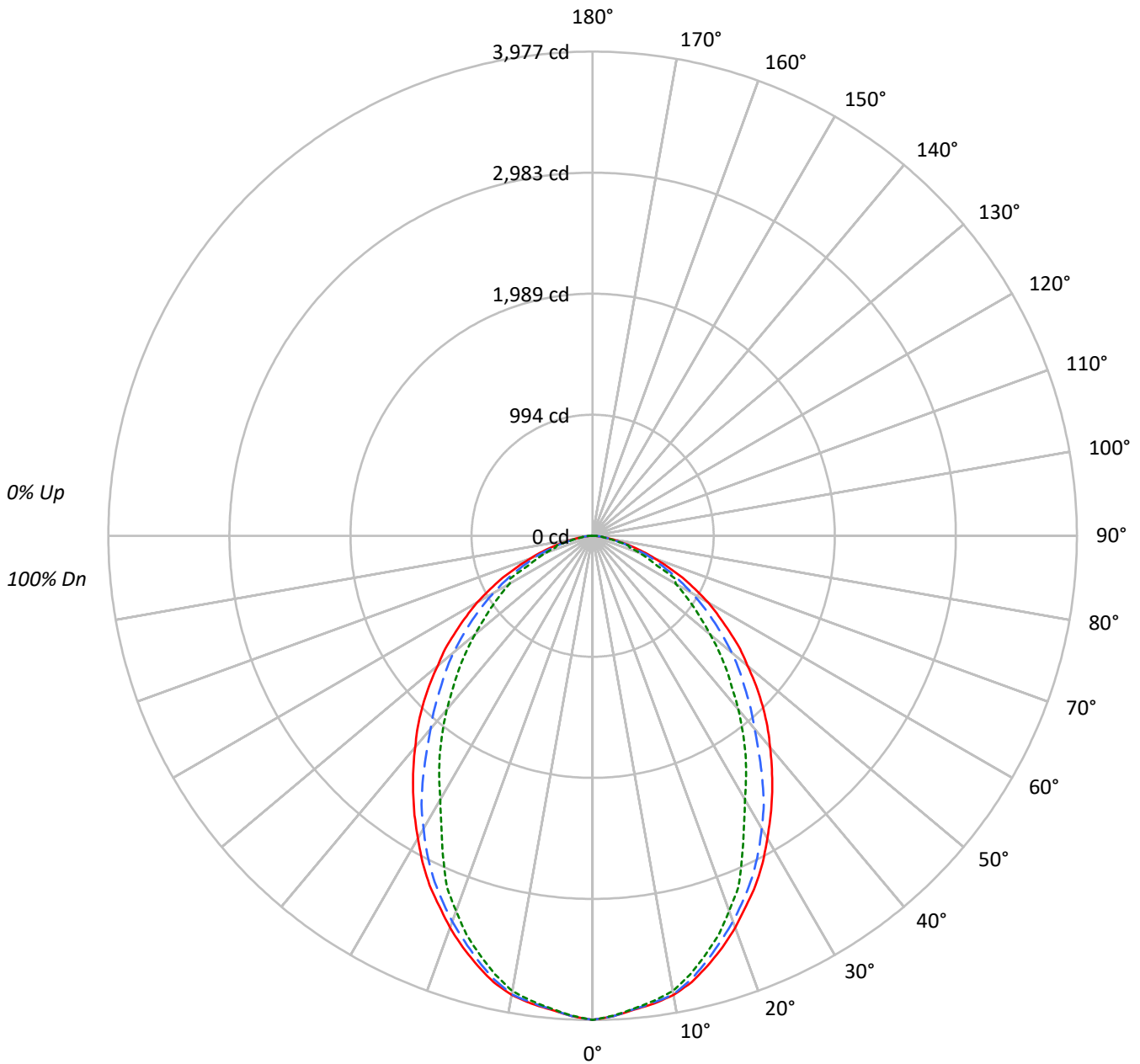
Lumens per Lamp: N/A
Luminaire Lumens: 7807.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5351	5351	5351
5°	5278	5272	5266
10°	5232	5226	5188
15°	5091	5040	4969
20°	4904	4825	4694
25°	4703	4600	4314
30°	4457	4314	3886
35°	4221	3987	3595
40°	3981	3634	3270
45°	3753	3359	2957
50°	3474	3118	2637
55°	3214	2826	2362
60°	2944	2524	2116
65°	2591	2210	1874
70°	2134	1935	1592
75°	1697	1482	1553
80°	1140	1068	997
85°	710	852	994



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	370.2	4.7
10°-20°	1015.9	13.0
20°-30°	1406.5	18.0
30°-40°	1499.7	19.2
40°-50°	1368.2	17.5
50°-60°	1071.9	13.7
60°-70°	698.6	8.9
70°-80°	309.5	4.0
80°-90°	66.5	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°	2792.6	35.8
0°-40°	4292.4	55.0
0°-60°	6732.4	86.2
0°-90°	7807.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7807.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3977	3977	3977	3977	3977	
5°	3908	3903	3903	3899	3899	371
15°	3655	3655	3618	3581	3568	1028
25°	3168	3149	3099	2988	2906	1454
35°	2570	2552	2427	2244	2188	1607
45°	1972	1931	1765	1618	1554	1519
55°	1370	1329	1204	1062	1007	1229
65°	814	768	694	708	588	802
75°	326	303	285	271	299	350
85°	46	51	55	60	64	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3976.8	3976.8	3976.8	3976.8	3976.8
2.5°	3949.2	3949.2	3949.2	3944.6	3944.6
5°	3907.8	3903.2	3903.2	3898.6	3898.6
7.5°	3875.6	3871.0	3866.4	3861.8	3852.7
10°	3829.7	3829.7	3825.1	3802.1	3797.5
12.5°	3756.1	3751.5	3733.1	3700.9	3691.7
15°	3655.0	3655.0	3618.2	3581.4	3567.6
17.5°	3544.6	3540.0	3494.1	3457.3	3438.9
20°	3425.1	3415.9	3369.9	3310.2	3278.0
22.5°	3291.8	3291.8	3236.6	3158.4	3126.3
25°	3167.6	3149.2	3098.7	2988.3	2905.6
27.5°	3025.1	2997.5	2942.4	2786.0	2689.5
30°	2868.8	2855.0	2776.9	2574.6	2501.0
32.5°	2721.7	2698.7	2615.9	2404.5	2344.7
35°	2570.0	2551.6	2427.4	2243.5	2188.4
37.5°	2418.3	2395.3	2239.0	2091.8	2022.9
40°	2266.5	2239.0	2068.8	1935.5	1862.0
42.5°	2124.0	2087.2	1921.7	1779.2	1696.5
45°	1972.3	1930.9	1765.4	1618.3	1553.9
47.5°	1820.6	1783.8	1632.1	1480.4	1406.8
50°	1659.7	1627.5	1489.6	1337.9	1259.7
52.5°	1526.3	1475.8	1342.5	1190.7	1126.4
55°	1370.0	1328.7	1204.5	1062.0	1006.8
57.5°	1227.5	1186.1	1071.2	937.9	891.9
60°	1094.2	1034.4	937.9	822.9	786.2
62.5°	947.1	901.1	818.3	721.8	767.8
65°	813.7	767.8	694.2	708.0	588.5
67.5°	666.6	643.6	579.3	514.9	496.5
70°	542.5	514.9	491.9	423.0	404.6
72.5°	432.2	404.6	372.4	335.6	321.8
75°	326.4	303.4	285.0	271.2	298.8
77.5°	225.3	216.1	202.3	188.5	183.9
80°	147.1	142.5	137.9	133.3	128.7
82.5°	87.4	87.4	87.4	87.4	87.4
85°	46.0	50.6	55.2	59.8	64.4
87.5°	27.6	27.6	32.2	36.8	41.4
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)