

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: P547355

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-80-88-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: P547355
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-LD4-4LO-35-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

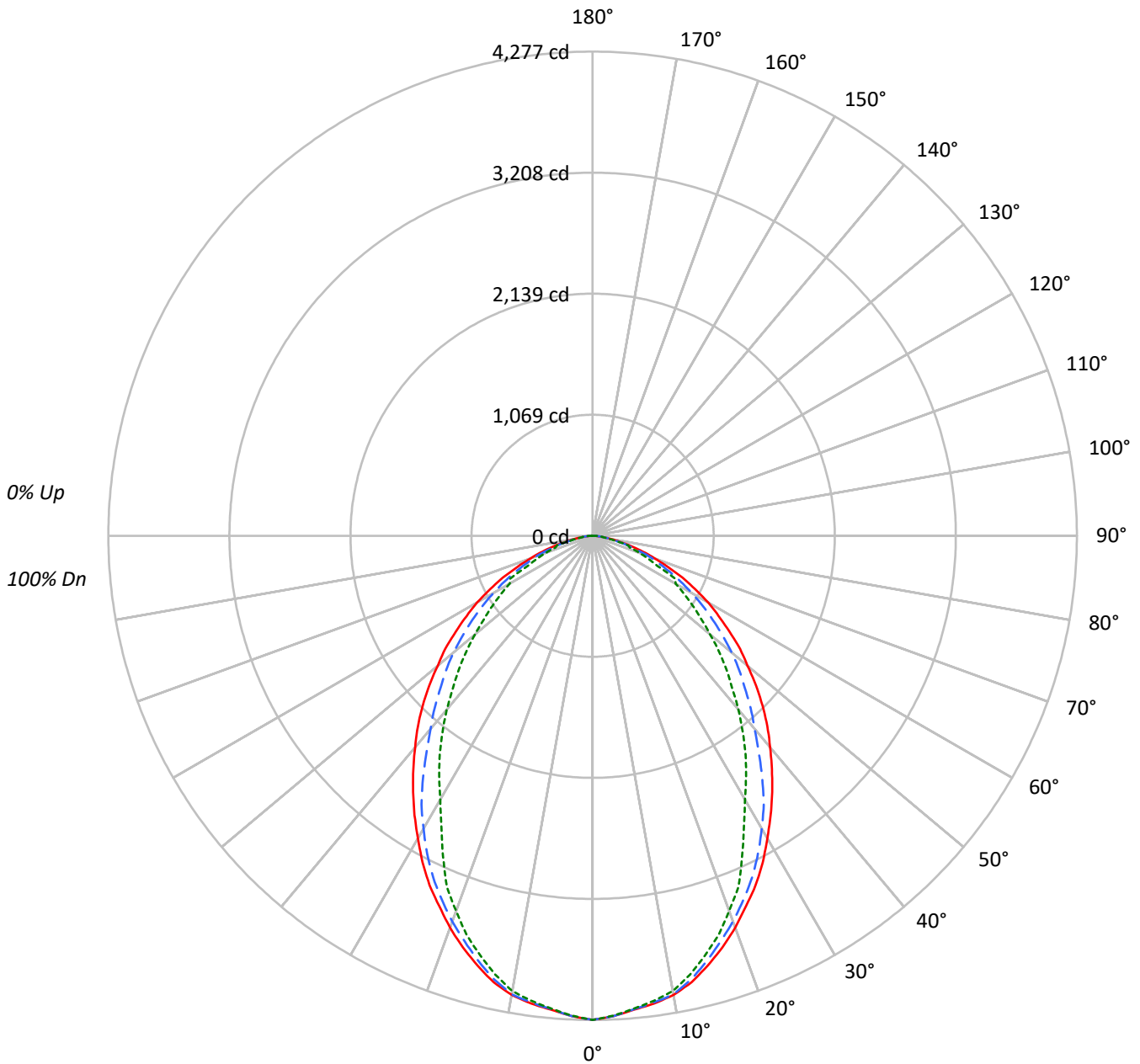
Lumens per Lamp: N/A
Luminaire Lumens: 8396.0 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	5754	5754	5754
5°	5676	5670	5663
10°	5627	5620	5580
15°	5475	5420	5344
20°	5274	5189	5048
25°	5057	4947	4639
30°	4793	4640	4179
35°	4540	4288	3866
40°	4281	3908	3517
45°	4036	3613	3180
50°	3736	3353	2836
55°	3456	3039	2540
60°	3166	2714	2275
65°	2786	2377	2015
70°	2295	2081	1712
75°	1825	1593	1671
80°	1226	1149	1072
85°	763	915	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	398.1	4.7
10°-20°	1092.6	13.0
20°-30°	1512.6	18.0
30°-40°	1612.9	19.2
40°-50°	1471.4	17.5
50°-60°	1152.7	13.7
60°-70°	751.3	8.9
70°-80°	332.9	4.0
80°-90°	71.5	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°	3003.3	35.8
0°-40°	4616.2	55.0
0°-60°	7240.4	86.2
0°-90°	8396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8396.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4277	4277	4277	4277	4277	
5°	4203	4198	4198	4193	4193	399
15°	3931	3931	3891	3852	3837	1105
25°	3407	3387	3332	3214	3125	1564
35°	2764	2744	2611	2413	2354	1728
45°	2121	2077	1899	1740	1671	1634
55°	1473	1429	1295	1142	1083	1322
65°	875	826	747	761	633	862
75°	351	326	306	292	321	376
85°	49	54	59	64	69	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4276.8	4276.8	4276.8	4276.8	4276.8
2.5°	4247.1	4247.1	4247.1	4242.2	4242.2
5°	4202.6	4197.7	4197.7	4192.8	4192.8
7.5°	4168.0	4163.1	4158.1	4153.2	4143.3
10°	4118.6	4118.6	4113.6	4088.9	4084.0
12.5°	4039.5	4034.5	4014.8	3980.2	3970.3
15°	3930.7	3930.7	3891.2	3851.6	3836.8
17.5°	3812.0	3807.1	3757.7	3718.1	3698.3
20°	3683.5	3673.6	3624.2	3559.9	3525.3
22.5°	3540.1	3540.1	3480.8	3396.7	3362.1
25°	3406.6	3386.8	3332.5	3213.8	3124.8
27.5°	3253.3	3223.7	3164.3	2996.2	2892.4
30°	3085.2	3070.4	2986.4	2768.8	2689.7
32.5°	2927.0	2902.3	2813.3	2585.9	2521.6
35°	2763.9	2744.1	2610.6	2412.8	2353.5
37.5°	2600.7	2576.0	2407.9	2249.7	2175.5
40°	2437.5	2407.9	2224.9	2081.5	2002.4
42.5°	2284.3	2244.7	2066.7	1913.4	1824.4
45°	2121.1	2076.6	1898.6	1740.4	1671.2
47.5°	1957.9	1918.4	1755.2	1592.1	1513.0
50°	1784.9	1750.3	1601.9	1438.8	1354.7
52.5°	1641.5	1587.1	1443.7	1280.6	1211.4
55°	1473.4	1428.9	1295.4	1142.1	1082.8
57.5°	1320.1	1275.6	1152.0	1008.6	959.2
60°	1176.7	1112.5	1008.6	885.0	845.5
62.5°	1018.5	969.1	880.1	776.3	825.7
65°	875.1	825.7	746.6	761.4	632.9
67.5°	716.9	692.2	623.0	553.8	534.0
70°	583.4	553.8	529.0	454.9	435.1
72.5°	464.8	435.1	400.5	360.9	346.1
75°	351.0	326.3	306.5	291.7	321.4
77.5°	242.3	232.4	217.5	202.7	197.8
80°	158.2	153.3	148.3	143.4	138.4
82.5°	93.9	93.9	93.9	93.9	93.9
85°	49.4	54.4	59.3	64.3	69.2
87.5°	29.7	29.7	34.6	39.6	44.5
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)