

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: P546969

Luminaire Tested: **FMR-24-4-LD4-3HI-35-UNV-80-86-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: P546969
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-LD4-3HI-35-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

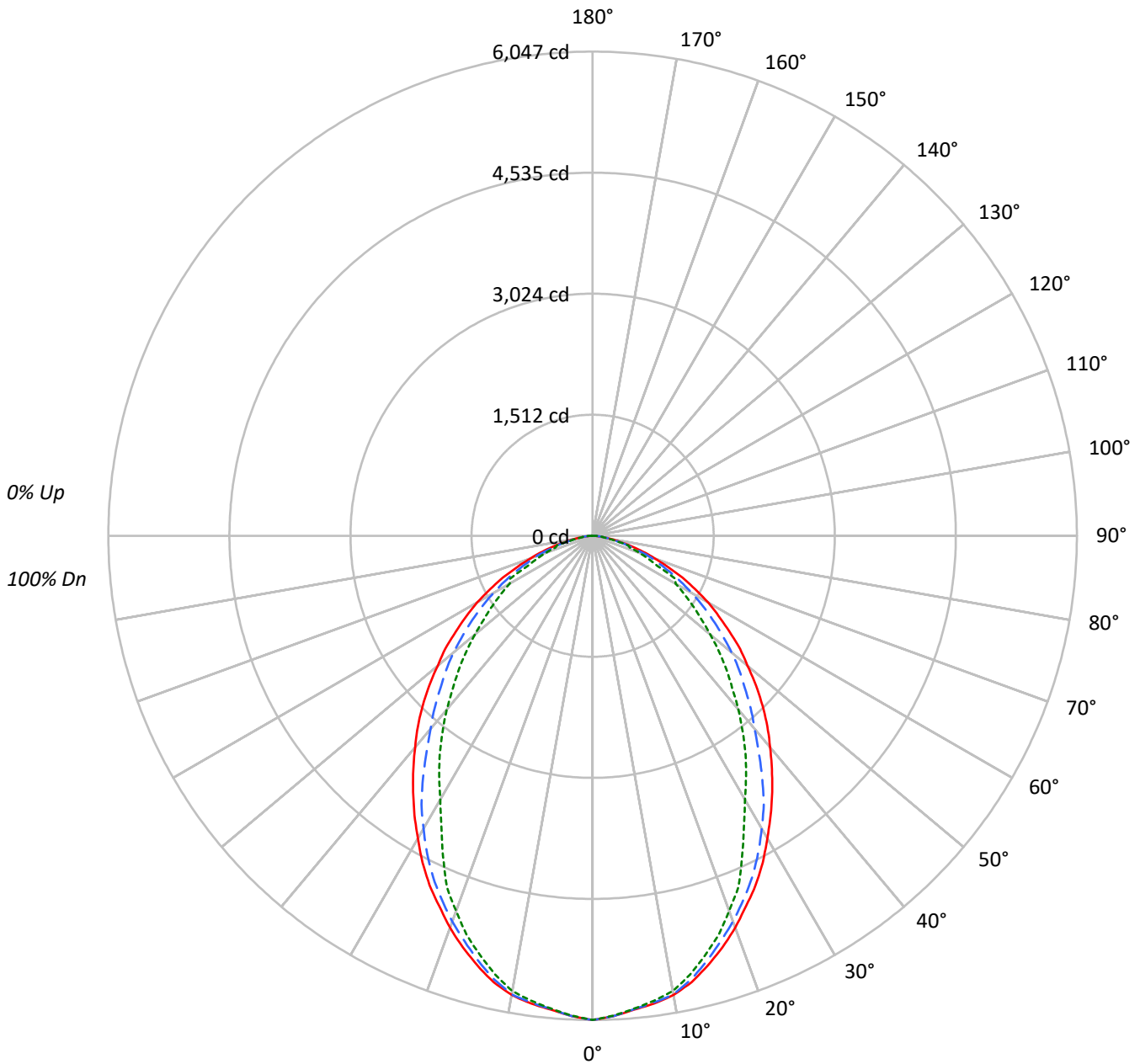
Lumens per Lamp: N/A
Luminaire Lumens: 11871.0 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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				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°	8136	8136	8136
5°	8026	8016	8007
10°	7956	7946	7889
15°	7741	7664	7556
20°	7457	7337	7137
25°	7151	6995	6559
30°	6777	6560	5908
35°	6419	6063	5466
40°	6053	5525	4973
45°	5707	5108	4496
50°	5282	4741	4009
55°	4887	4297	3591
60°	4477	3838	3217
65°	3939	3361	2849
70°	3245	2943	2420
75°	2580	2253	2362
80°	1733	1625	1516
85°	1079	1295	1511



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	562.9	4.7
10°-20°	1544.8	13.0
20°-30°	2138.7	18.0
30°-40°	2280.4	19.2
40°-50°	2080.4	17.5
50°-60°	1629.9	13.7
60°-70°	1062.3	8.9
70°-80°	470.6	4.0
80°-90°	101.0	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°	4246.4	35.8
0°-40°	6526.8	55.0
0°-60°	10237.1	86.2
0°-90°	11871.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11871.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6047	6047	6047	6047	6047	
5°	5942	5935	5935	5928	5928	564
15°	5558	5558	5502	5446	5425	1562
25°	4817	4789	4712	4544	4418	2211
35°	3908	3880	3691	3411	3328	2443
45°	2999	2936	2684	2461	2363	2310
55°	2083	2020	1832	1615	1531	1868
65°	1237	1167	1056	1077	895	1219
75°	496	461	433	412	454	532
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6046.9	6046.9	6046.9	6046.9	6046.9
2.5°	6005.0	6005.0	6005.0	5998.0	5998.0
5°	5942.1	5935.1	5935.1	5928.1	5928.1
7.5°	5893.1	5886.1	5879.2	5872.2	5858.2
10°	5823.2	5823.2	5816.2	5781.3	5774.3
12.5°	5711.4	5704.4	5676.4	5627.5	5613.5
15°	5557.6	5557.6	5501.7	5445.7	5424.8
17.5°	5389.8	5382.8	5312.9	5257.0	5229.0
20°	5208.0	5194.1	5124.2	5033.3	4984.3
22.5°	5005.3	5005.3	4921.4	4802.6	4753.7
25°	4816.6	4788.6	4711.7	4543.9	4418.1
27.5°	4599.9	4557.9	4474.0	4236.3	4089.5
30°	4362.2	4341.2	4222.4	3914.8	3802.9
32.5°	4138.5	4103.5	3977.7	3656.1	3565.2
35°	3907.8	3879.8	3691.1	3411.4	3327.6
37.5°	3677.1	3642.1	3404.5	3180.8	3075.9
40°	3446.4	3404.5	3145.8	2943.1	2831.2
42.5°	3229.7	3173.8	2922.1	2705.4	2579.6
45°	2999.0	2936.1	2684.4	2460.7	2362.8
47.5°	2768.3	2712.4	2481.7	2251.0	2139.1
50°	2523.6	2474.7	2265.0	2034.3	1915.4
52.5°	2320.9	2244.0	2041.3	1810.6	1712.7
55°	2083.2	2020.3	1831.6	1614.8	1531.0
57.5°	1866.5	1803.6	1628.8	1426.1	1356.2
60°	1663.8	1572.9	1426.1	1251.3	1195.4
62.5°	1440.1	1370.2	1244.3	1097.5	1167.4
65°	1237.3	1167.4	1055.6	1076.6	894.8
67.5°	1013.6	978.7	880.8	783.0	755.0
70°	824.9	783.0	748.0	643.1	615.2
72.5°	657.1	615.2	566.2	510.3	489.3
75°	496.3	461.4	433.4	412.4	454.4
77.5°	342.5	328.6	307.6	286.6	279.6
80°	223.7	216.7	209.7	202.7	195.7
82.5°	132.8	132.8	132.8	132.8	132.8
85°	69.9	76.9	83.9	90.9	97.9
87.5°	41.9	41.9	48.9	55.9	62.9
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)