

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: P546555

Luminaire Tested: **FMR-24-4-LD4-1LO-50-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: P546555
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-LD4-1LO-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

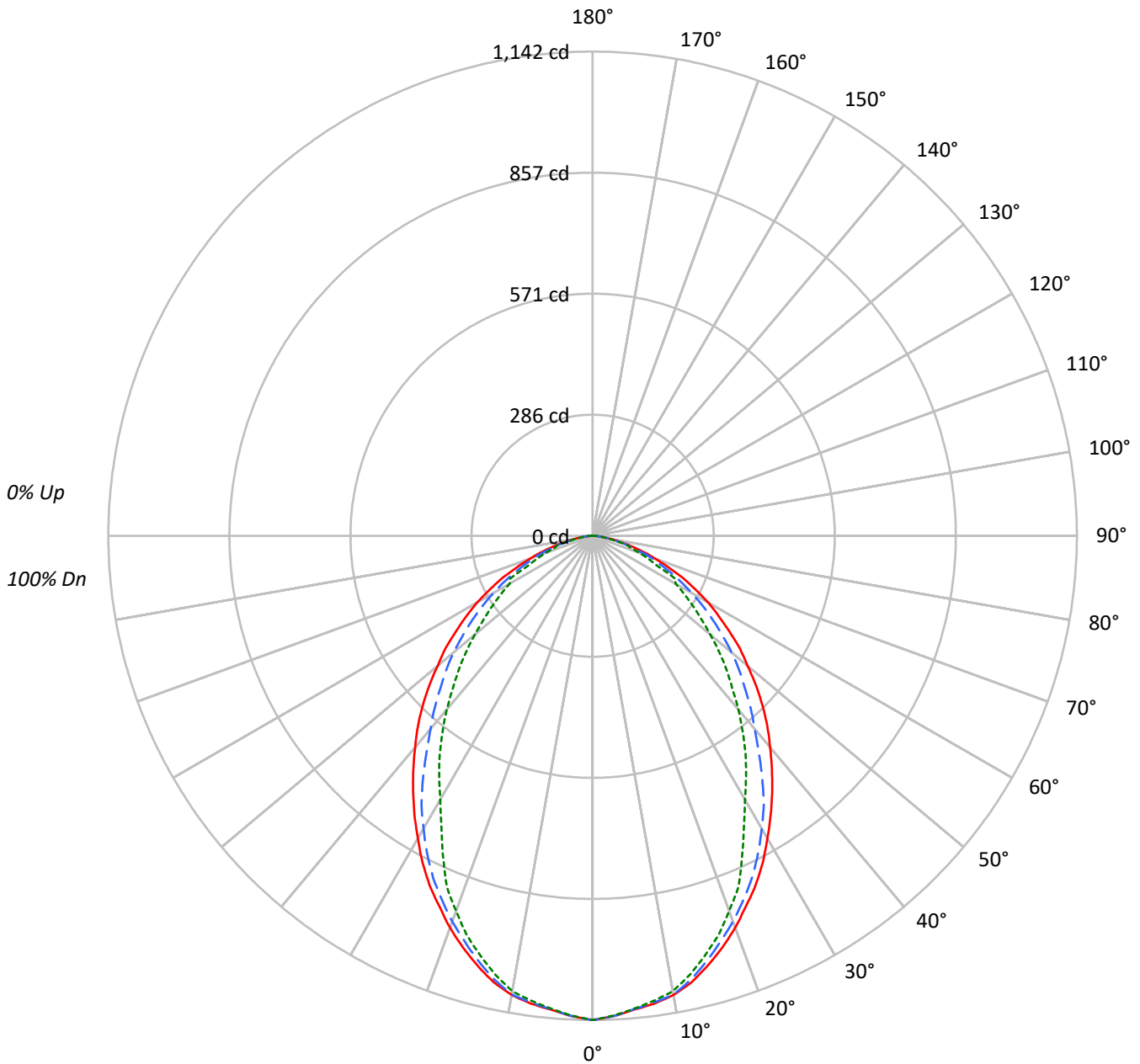
Lumens per Lamp: N/A
Luminaire Lumens: 2242.0 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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				20				20	
RC	80				70				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°	1537	1537	1537
5°	1516	1514	1512
10°	1503	1501	1490
15°	1462	1447	1427
20°	1408	1386	1348
25°	1351	1321	1239
30°	1280	1239	1116
35°	1212	1145	1032
40°	1143	1043	939
45°	1078	965	849
50°	998	895	757
55°	923	811	678
60°	846	725	608
65°	744	635	538
70°	613	556	457
75°	487	426	446
80°	327	307	287
85°	204	244	286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.3	4.7
10°-20°	291.8	13.0
20°-30°	403.9	18.0
30°-40°	430.7	19.2
40°-50°	392.9	17.5
50°-60°	307.8	13.7
60°-70°	200.6	8.9
70°-80°	88.9	4.0
80°-90°	19.1	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°	802.0	35.8
0°-40°	1232.7	55.0
0°-60°	1933.4	86.2
0°-90°	2242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2242.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1142	1142	1142	1142	1142	
5°	1122	1121	1121	1120	1120	107
15°	1050	1050	1039	1028	1024	295
25°	910	904	890	858	834	418
35°	738	733	697	644	628	461
45°	566	554	507	465	446	436
55°	393	382	346	305	289	353
65°	234	220	199	203	169	230
75°	94	87	82	78	86	100
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1142.0	1142.0	1142.0	1142.0	1142.0
2.5°	1134.1	1134.1	1134.1	1132.8	1132.8
5°	1122.2	1120.9	1120.9	1119.6	1119.6
7.5°	1113.0	1111.7	1110.4	1109.0	1106.4
10°	1099.8	1099.8	1098.5	1091.9	1090.6
12.5°	1078.7	1077.4	1072.1	1062.8	1060.2
15°	1049.6	1049.6	1039.1	1028.5	1024.5
17.5°	1017.9	1016.6	1003.4	992.9	987.6
20°	983.6	981.0	967.8	950.6	941.4
22.5°	945.3	945.3	929.5	907.0	897.8
25°	909.7	904.4	889.9	858.2	834.4
27.5°	868.7	860.8	845.0	800.1	772.4
30°	823.9	819.9	797.5	739.4	718.2
32.5°	781.6	775.0	751.2	690.5	673.3
35°	738.0	732.8	697.1	644.3	628.5
37.5°	694.5	687.9	643.0	600.7	580.9
40°	650.9	643.0	594.1	555.8	534.7
42.5°	610.0	599.4	551.9	510.9	487.2
45°	566.4	554.5	507.0	464.7	446.3
47.5°	522.8	512.3	468.7	425.1	404.0
50°	476.6	467.4	427.8	384.2	361.8
52.5°	438.3	423.8	385.5	342.0	323.5
55°	393.4	381.6	345.9	305.0	289.1
57.5°	352.5	340.6	307.6	269.3	256.1
60°	314.2	297.1	269.3	236.3	225.8
62.5°	272.0	258.8	235.0	207.3	220.5
65°	233.7	220.5	199.4	203.3	169.0
67.5°	191.4	184.8	166.4	147.9	142.6
70°	155.8	147.9	141.3	121.5	116.2
72.5°	124.1	116.2	106.9	96.4	92.4
75°	93.7	87.1	81.9	77.9	85.8
77.5°	64.7	62.1	58.1	54.1	52.8
80°	42.2	40.9	39.6	38.3	37.0
82.5°	25.1	25.1	25.1	25.1	25.1
85°	13.2	14.5	15.8	17.2	18.5
87.5°	7.9	7.9	9.2	10.6	11.9
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)