

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: P546572

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-82-94-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: P546572
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-82-94-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

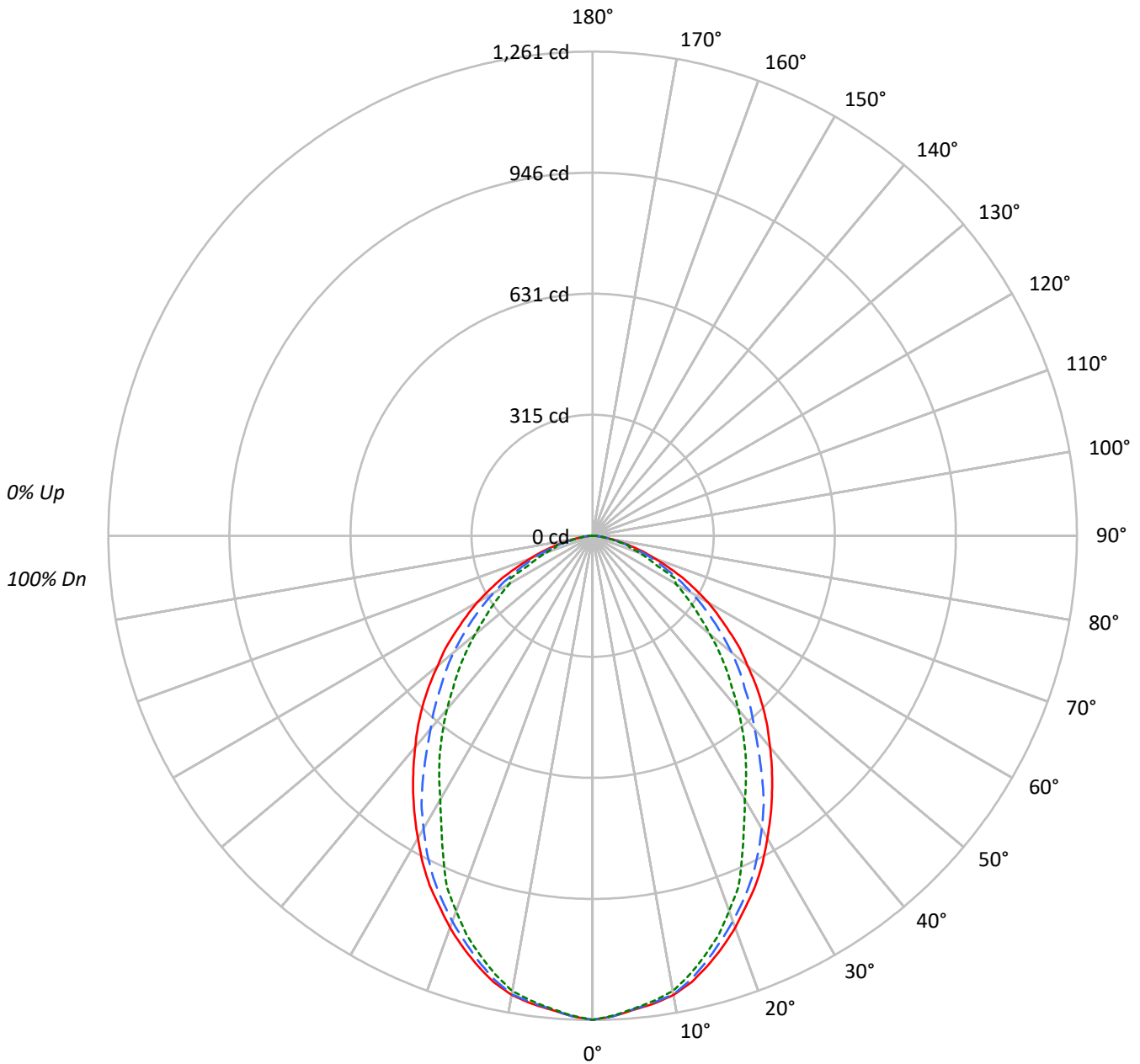
Lumens per Lamp: N/A
Luminaire Lumens: 2475.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	1696	1696	1696
5°	1673	1671	1669
10°	1659	1657	1645
15°	1614	1598	1575
20°	1555	1530	1488
25°	1491	1458	1367
30°	1413	1368	1232
35°	1338	1264	1140
40°	1262	1152	1037
45°	1190	1065	937
50°	1101	988	836
55°	1019	896	749
60°	934	800	671
65°	821	701	594
70°	677	614	505
75°	538	470	492
80°	361	339	316
85°	225	270	315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.4	4.7
10°-20°	322.1	13.0
20°-30°	445.9	18.0
30°-40°	475.5	19.2
40°-50°	433.8	17.5
50°-60°	339.8	13.7
60°-70°	221.5	8.9
70°-80°	98.1	4.0
80°-90°	21.1	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°	885.3	35.8
0°-40°	1360.8	55.0
0°-60°	2134.3	86.2
0°-90°	2475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2475.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1261	1261	1261	1261	1261	
5°	1239	1237	1237	1236	1236	118
15°	1159	1159	1147	1135	1131	326
25°	1004	998	982	947	921	461
35°	815	809	770	711	694	509
45°	625	612	560	513	493	482
55°	434	421	382	337	319	390
65°	258	243	220	224	187	254
75°	104	96	90	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1260.7	1260.7	1260.7	1260.7	1260.7
2.5°	1252.0	1252.0	1252.0	1250.5	1250.5
5°	1238.9	1237.4	1237.4	1236.0	1236.0
7.5°	1228.7	1227.2	1225.8	1224.3	1221.4
10°	1214.1	1214.1	1212.6	1205.3	1203.9
12.5°	1190.8	1189.3	1183.5	1173.3	1170.4
15°	1158.7	1158.7	1147.0	1135.4	1131.0
17.5°	1123.7	1122.3	1107.7	1096.0	1090.2
20°	1085.8	1082.9	1068.3	1049.4	1039.2
22.5°	1043.6	1043.6	1026.1	1001.3	991.1
25°	1004.2	998.4	982.4	947.4	921.1
27.5°	959.0	950.3	932.8	883.2	852.6
30°	909.5	905.1	880.3	816.2	792.9
32.5°	862.8	855.5	829.3	762.3	743.3
35°	814.7	808.9	769.6	711.3	693.8
37.5°	766.6	759.4	709.8	663.2	641.3
40°	718.5	709.8	655.9	613.6	590.3
42.5°	673.4	661.7	609.2	564.1	537.8
45°	625.3	612.1	559.7	513.0	492.6
47.5°	577.2	565.5	517.4	469.3	446.0
50°	526.2	516.0	472.2	424.1	399.4
52.5°	483.9	467.9	425.6	377.5	357.1
55°	434.3	421.2	381.9	336.7	319.2
57.5°	389.2	376.0	339.6	297.3	282.8
60°	346.9	327.9	297.3	260.9	249.2
62.5°	300.2	285.7	259.4	228.8	243.4
65°	258.0	243.4	220.1	224.5	186.6
67.5°	211.3	204.0	183.6	163.2	157.4
70°	172.0	163.2	156.0	134.1	128.3
72.5°	137.0	128.3	118.1	106.4	102.0
75°	103.5	96.2	90.4	86.0	94.7
77.5°	71.4	68.5	64.1	59.8	58.3
80°	46.6	45.2	43.7	42.3	40.8
82.5°	27.7	27.7	27.7	27.7	27.7
85°	14.6	16.0	17.5	18.9	20.4
87.5°	8.7	8.7	10.2	11.7	13.1
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)