

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: P546548

Luminaire Tested: **FMR-24-4-LD4-1LO-40-UNV-93-94-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: P546548
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-40-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

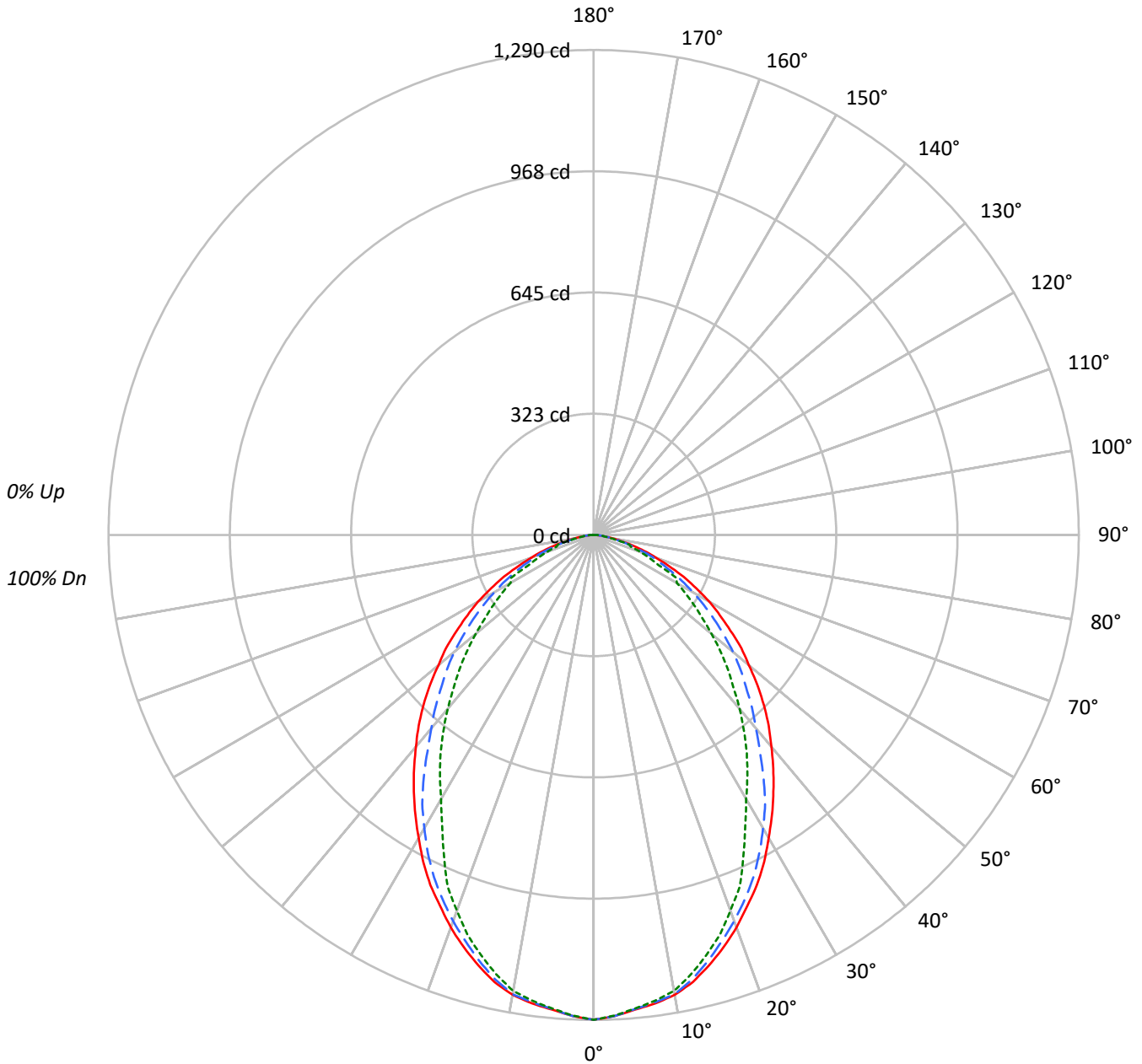
Lumens per Lamp: N/A
Luminaire Lumens: 2532.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	1735	1735	1735
5°	1712	1710	1708
10°	1697	1695	1683
15°	1651	1635	1612
20°	1590	1565	1522
25°	1525	1492	1399
30°	1446	1399	1260
35°	1369	1293	1166
40°	1291	1179	1061
45°	1217	1090	959
50°	1127	1011	855
55°	1042	916	766
60°	955	819	686
65°	840	717	608
70°	692	627	516
75°	551	480	504
80°	370	346	323
85°	230	276	323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.1	4.7
10°-20°	329.5	13.0
20°-30°	456.2	18.0
30°-40°	486.4	19.2
40°-50°	443.7	17.5
50°-60°	347.6	13.7
60°-70°	226.6	8.9
70°-80°	100.4	4.0
80°-90°	21.5	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°	905.7	35.8
0°-40°	1392.1	55.0
0°-60°	2183.5	86.2
0°-90°	2532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1290	1290	1290	1290	1290	
5°	1267	1266	1266	1264	1264	120
15°	1185	1185	1174	1162	1157	333
25°	1027	1021	1005	969	942	472
35°	834	828	787	728	710	521
45°	640	626	573	525	504	493
55°	444	431	391	344	326	399
65°	264	249	225	230	191	260
75°	106	98	92	88	97	113
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1289.8	1289.8	1289.8	1289.8	1289.8
2.5°	1280.8	1280.8	1280.8	1279.3	1279.3
5°	1267.4	1265.9	1265.9	1264.4	1264.4
7.5°	1257.0	1255.5	1254.0	1252.5	1249.5
10°	1242.1	1242.1	1240.6	1233.1	1231.6
12.5°	1218.2	1216.7	1210.7	1200.3	1197.3
15°	1185.4	1185.4	1173.5	1161.5	1157.1
17.5°	1149.6	1148.1	1133.2	1121.3	1115.3
20°	1110.8	1107.9	1092.9	1073.6	1063.1
22.5°	1067.6	1067.6	1049.7	1024.4	1013.9
25°	1027.3	1021.4	1005.0	969.2	942.3
27.5°	981.1	972.2	954.3	903.6	872.3
30°	930.4	925.9	900.6	835.0	811.1
32.5°	882.7	875.3	848.4	779.8	760.4
35°	833.5	827.5	787.3	727.6	709.7
37.5°	784.3	776.8	726.1	678.4	656.1
40°	735.1	726.1	671.0	627.7	603.9
42.5°	688.9	676.9	623.3	577.0	550.2
45°	639.7	626.2	572.6	524.9	504.0
47.5°	590.5	578.5	529.3	480.1	456.3
50°	538.3	527.8	483.1	433.9	408.6
52.5°	495.0	478.6	435.4	386.2	365.3
55°	444.3	430.9	390.7	344.4	326.5
57.5°	398.1	384.7	347.4	304.2	289.3
60°	354.9	335.5	304.2	266.9	255.0
62.5°	307.2	292.2	265.4	234.1	249.0
65°	263.9	249.0	225.2	229.6	190.9
67.5°	216.2	208.7	187.9	167.0	161.0
70°	175.9	167.0	159.5	137.2	131.2
72.5°	140.2	131.2	120.8	108.8	104.4
75°	105.9	98.4	92.4	88.0	96.9
77.5°	73.1	70.1	65.6	61.1	59.6
80°	47.7	46.2	44.7	43.2	41.7
82.5°	28.3	28.3	28.3	28.3	28.3
85°	14.9	16.4	17.9	19.4	20.9
87.5°	8.9	8.9	10.4	11.9	13.4
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)