

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: P546580

Luminaire Tested: **FMR-24-4-LD4-1LO-50-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: P546580
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-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

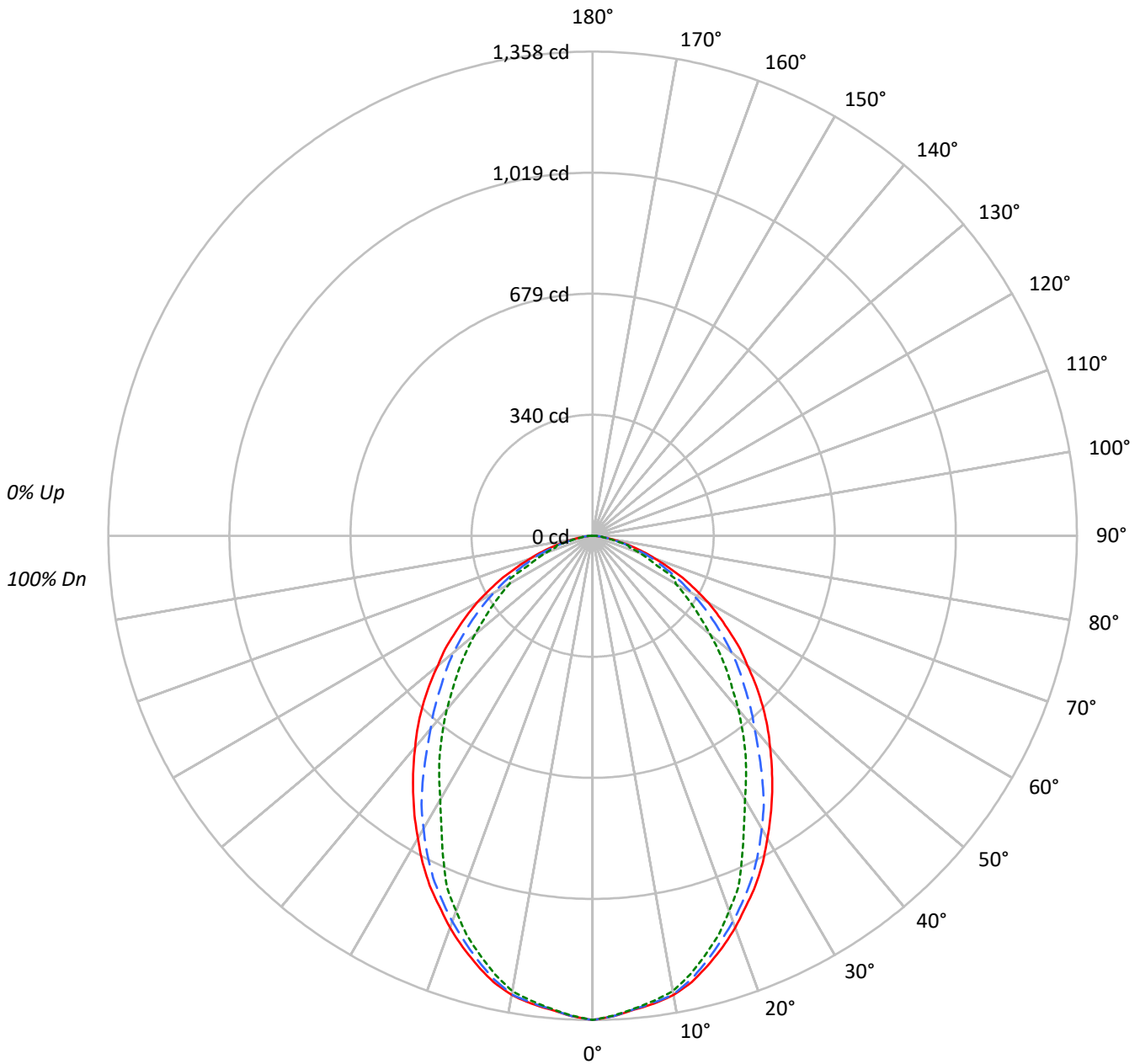
Lumens per Lamp: N/A
Luminaire Lumens: 2666.0 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1827	1827	1827
5°	1802	1800	1798
10°	1787	1785	1772
15°	1739	1721	1697
20°	1675	1648	1603
25°	1606	1571	1473
30°	1522	1473	1327
35°	1441	1362	1227
40°	1359	1241	1117
45°	1282	1147	1010
50°	1186	1065	900
55°	1098	965	806
60°	1006	862	723
65°	885	755	640
70°	729	661	544
75°	580	506	530
80°	389	365	341
85°	242	290	340



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.4	4.7
10°-20°	346.9	13.0
20°-30°	480.3	18.0
30°-40°	512.1	19.2
40°-50°	467.2	17.5
50°-60°	366.0	13.7
60°-70°	238.6	8.9
70°-80°	105.7	4.0
80°-90°	22.7	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°	953.7	35.8
0°-40°	1465.8	55.0
0°-60°	2299.1	86.2
0°-90°	2666.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2666.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1358	1358	1358	1358	1358	
5°	1334	1333	1333	1331	1331	127
15°	1248	1248	1236	1223	1218	351
25°	1082	1075	1058	1020	992	497
35°	878	871	829	766	747	549
45°	674	659	603	553	531	519
55°	468	454	411	363	344	420
65°	278	262	237	242	201	274
75°	112	104	97	93	102	119
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1358.0	1358.0	1358.0	1358.0	1358.0
2.5°	1348.6	1348.6	1348.6	1347.0	1347.0
5°	1334.5	1332.9	1332.9	1331.3	1331.3
7.5°	1323.5	1321.9	1320.3	1318.8	1315.6
10°	1307.8	1307.8	1306.2	1298.4	1296.8
12.5°	1282.7	1281.1	1274.8	1263.8	1260.7
15°	1248.1	1248.1	1235.6	1223.0	1218.3
17.5°	1210.4	1208.9	1193.2	1180.6	1174.3
20°	1169.6	1166.5	1150.8	1130.4	1119.4
22.5°	1124.1	1124.1	1105.3	1078.6	1067.6
25°	1081.7	1075.4	1058.2	1020.5	992.2
27.5°	1033.0	1023.6	1004.8	951.4	918.4
30°	979.7	975.0	948.3	879.2	854.1
32.5°	929.4	921.6	893.3	821.1	800.7
35°	877.6	871.3	828.9	766.1	747.3
37.5°	825.8	818.0	764.6	714.3	690.8
40°	774.0	764.6	706.5	661.0	635.8
42.5°	725.3	712.8	656.2	607.6	579.3
45°	673.5	659.4	602.9	552.6	530.7
47.5°	621.7	609.1	557.3	505.5	480.4
50°	566.8	555.8	508.7	456.9	430.2
52.5°	521.2	504.0	458.4	406.6	384.6
55°	467.9	453.7	411.3	362.7	343.8
57.5°	419.2	405.1	365.8	320.3	304.6
60°	373.7	353.2	320.3	281.0	268.5
62.5°	323.4	307.7	279.5	246.5	262.2
65°	277.9	262.2	237.1	241.8	201.0
67.5°	227.6	219.8	197.8	175.8	169.6
70°	185.3	175.8	168.0	144.4	138.2
72.5°	147.6	138.2	127.2	114.6	109.9
75°	111.5	103.6	97.3	92.6	102.0
77.5°	76.9	73.8	69.1	64.4	62.8
80°	50.2	48.7	47.1	45.5	44.0
82.5°	29.8	29.8	29.8	29.8	29.8
85°	15.7	17.3	18.8	20.4	22.0
87.5°	9.4	9.4	11.0	12.6	14.1
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)