

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: P546522

Luminaire Tested: **FMR-24-4-LD4-1LO-40-UNV-80-87-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: P546522
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

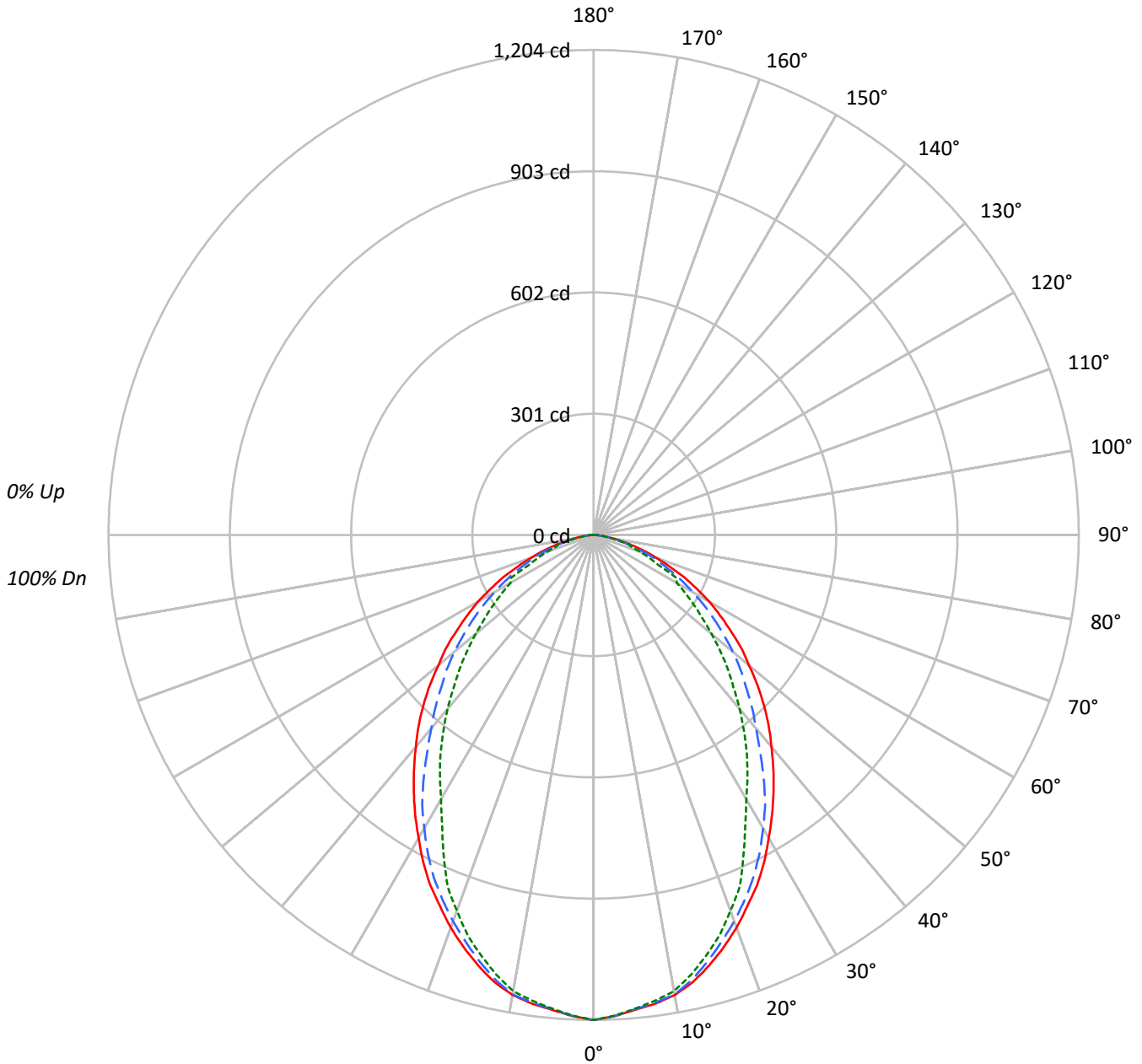
Lumens per Lamp: N/A
Luminaire Lumens: 2364.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1620	1620	1620
5°	1598	1596	1594
10°	1584	1582	1571
15°	1542	1526	1505
20°	1485	1461	1421
25°	1424	1393	1306
30°	1350	1306	1177
35°	1278	1207	1089
40°	1205	1100	990
45°	1136	1017	895
50°	1052	944	798
55°	973	856	715
60°	892	764	641
65°	784	669	567
70°	646	586	482
75°	514	449	470
80°	345	324	302
85°	215	258	301



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.1	4.7
10°-20°	307.6	13.0
20°-30°	425.9	18.0
30°-40°	454.1	19.2
40°-50°	414.3	17.5
50°-60°	324.6	13.7
60°-70°	211.5	8.9
70°-80°	93.7	4.0
80°-90°	20.1	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°	845.6	35.8
0°-40°	1299.8	55.0
0°-60°	2038.6	86.2
0°-90°	2364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1204	1204	1204	1204	1204	
5°	1183	1182	1182	1180	1180	112
15°	1107	1107	1096	1084	1080	311
25°	959	954	938	905	880	440
35°	778	773	735	679	663	487
45°	597	585	535	490	470	460
55°	415	402	365	322	305	372
65°	246	232	210	214	178	243
75°	99	92	86	82	90	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1204.2	1204.2	1204.2	1204.2	1204.2
2.5°	1195.8	1195.8	1195.8	1194.4	1194.4
5°	1183.3	1181.9	1181.9	1180.5	1180.5
7.5°	1173.6	1172.2	1170.8	1169.4	1166.6
10°	1159.6	1159.6	1158.2	1151.3	1149.9
12.5°	1137.4	1136.0	1130.4	1120.7	1117.9
15°	1106.7	1106.7	1095.6	1084.5	1080.3
17.5°	1073.3	1071.9	1058.0	1046.9	1041.3
20°	1037.1	1034.4	1020.4	1002.3	992.6
22.5°	996.8	996.8	980.1	956.4	946.6
25°	959.2	953.6	938.3	904.9	879.8
27.5°	916.0	907.7	891.0	843.6	814.4
30°	868.7	864.5	840.8	779.6	757.3
32.5°	824.1	817.2	792.1	728.1	710.0
35°	778.2	772.6	735.0	679.4	662.7
37.5°	732.3	725.3	678.0	633.4	612.5
40°	686.3	678.0	626.5	586.1	563.8
42.5°	643.2	632.0	581.9	538.8	513.7
45°	597.2	584.7	534.6	490.0	470.5
47.5°	551.3	540.1	494.2	448.3	426.0
50°	502.6	492.8	451.0	405.1	381.4
52.5°	462.2	446.9	406.5	360.6	341.1
55°	414.9	402.3	364.7	321.6	304.9
57.5°	371.7	359.2	324.4	284.0	270.1
60°	331.3	313.2	284.0	249.2	238.1
62.5°	286.8	272.9	247.8	218.6	232.5
65°	246.4	232.5	210.2	214.4	178.2
67.5°	201.9	194.9	175.4	155.9	150.3
70°	164.3	155.9	149.0	128.1	122.5
72.5°	130.9	122.5	112.8	101.6	97.4
75°	98.8	91.9	86.3	82.1	90.5
77.5°	68.2	65.4	61.3	57.1	55.7
80°	44.5	43.2	41.8	40.4	39.0
82.5°	26.5	26.5	26.5	26.5	26.5
85°	13.9	15.3	16.7	18.1	19.5
87.5°	8.4	8.4	9.7	11.1	12.5
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)