

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: P546650

Luminaire Tested: **FMR-24-4-LD4-1STD-50-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: P546650
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-LD4-1STD-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

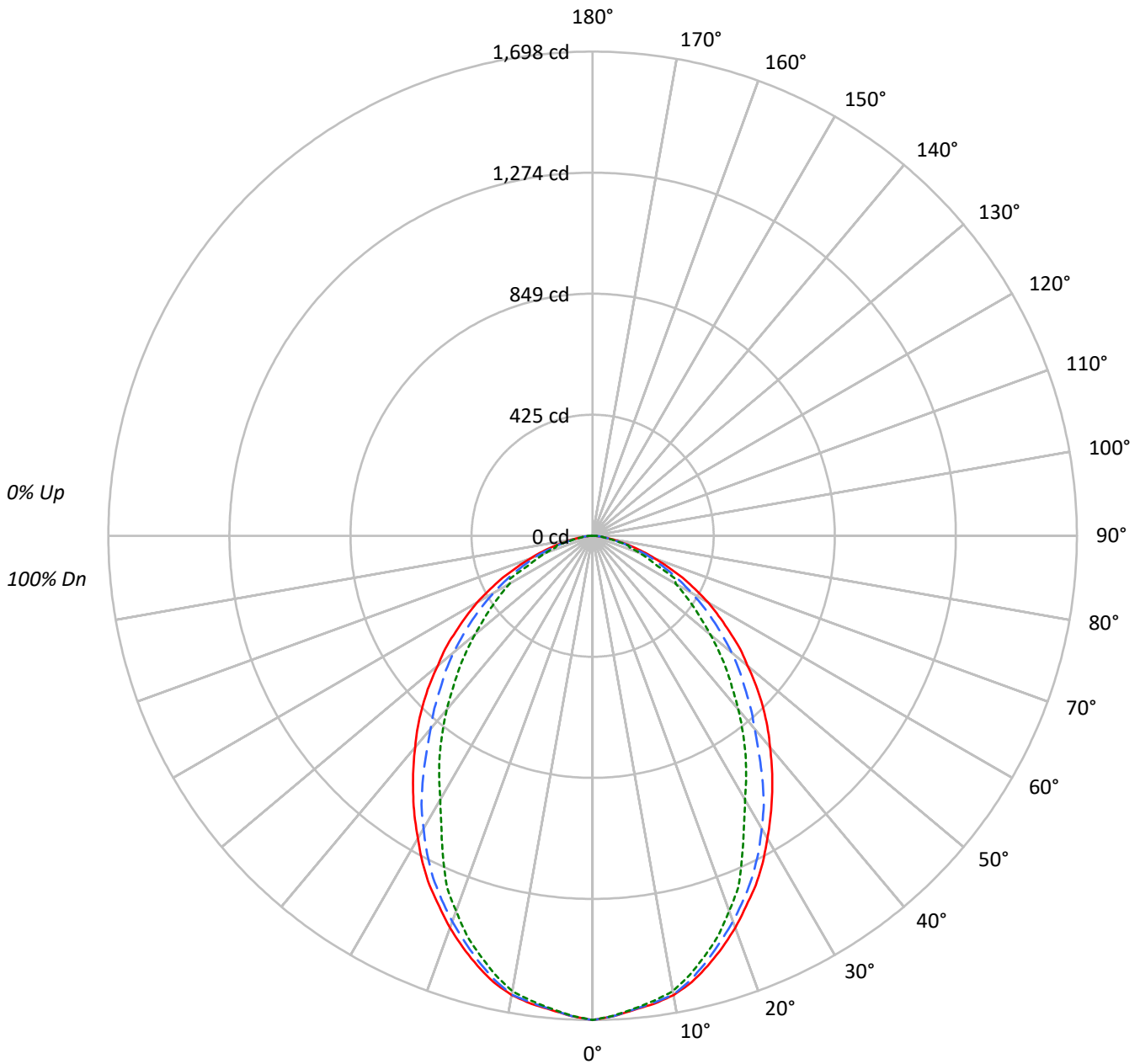
Lumens per Lamp: N/A
Luminaire Lumens: 3334.0 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	2285	2285	2285
5°	2254	2251	2249
10°	2234	2232	2216
15°	2174	2152	2122
20°	2094	2061	2004
25°	2008	1965	1842
30°	1903	1842	1659
35°	1803	1703	1535
40°	1700	1552	1397
45°	1603	1435	1263
50°	1484	1331	1126
55°	1373	1207	1009
60°	1257	1078	903
65°	1106	944	800
70°	911	827	680
75°	725	633	663
80°	487	456	426
85°	303	364	425



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.1	4.7
10°-20°	433.9	13.0
20°-30°	600.7	18.0
30°-40°	640.5	19.2
40°-50°	584.3	17.5
50°-60°	457.7	13.7
60°-70°	298.3	8.9
70°-80°	132.2	4.0
80°-90°	28.4	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°	1192.6	35.8
0°-40°	1833.1	55.0
0°-60°	2875.1	86.2
0°-90°	3334.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3334.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1698	1698	1698	1698	1698	
5°	1669	1667	1667	1665	1665	158
15°	1561	1561	1545	1529	1524	439
25°	1353	1345	1323	1276	1241	621
35°	1098	1090	1037	958	935	686
45°	842	825	754	691	664	649
55°	585	567	514	454	430	525
65°	348	328	296	302	251	342
75°	139	130	122	116	128	149
85°	20	22	24	26	28	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1698.3	1698.3	1698.3	1698.3	1698.3
2.5°	1686.5	1686.5	1686.5	1684.6	1684.6
5°	1668.8	1666.9	1666.9	1664.9	1664.9
7.5°	1655.1	1653.1	1651.2	1649.2	1645.3
10°	1635.5	1635.5	1633.5	1623.7	1621.7
12.5°	1604.1	1602.1	1594.2	1580.5	1576.6
15°	1560.9	1560.9	1545.2	1529.4	1523.6
17.5°	1513.7	1511.8	1492.1	1476.4	1468.6
20°	1462.7	1458.8	1439.1	1413.6	1399.9
22.5°	1405.8	1405.8	1382.2	1348.8	1335.1
25°	1352.7	1344.9	1323.3	1276.2	1240.8
27.5°	1291.9	1280.1	1256.5	1189.8	1148.6
30°	1225.1	1219.2	1185.9	1099.5	1068.1
32.5°	1162.3	1152.5	1117.1	1026.8	1001.3
35°	1097.5	1089.7	1036.6	958.1	934.6
37.5°	1032.7	1022.9	956.1	893.3	863.9
40°	967.9	956.1	883.5	826.6	795.2
42.5°	907.1	891.4	820.7	759.8	724.5
45°	842.3	824.6	753.9	691.1	663.6
47.5°	777.5	761.8	697.0	632.2	600.8
50°	708.8	695.0	636.1	571.3	538.0
52.5°	651.8	630.2	573.3	508.5	481.0
55°	585.1	567.4	514.4	453.5	430.0
57.5°	524.2	506.5	457.5	400.5	380.9
60°	467.3	441.8	400.5	351.4	335.7
62.5°	404.4	384.8	349.5	308.2	327.9
65°	347.5	327.9	296.5	302.4	251.3
67.5°	284.7	274.9	247.4	219.9	212.0
70°	231.7	219.9	210.1	180.6	172.8
72.5°	184.6	172.8	159.0	143.3	137.4
75°	139.4	129.6	121.7	115.8	127.6
77.5°	96.2	92.3	86.4	80.5	78.5
80°	62.8	60.9	58.9	56.9	55.0
82.5°	37.3	37.3	37.3	37.3	37.3
85°	19.6	21.6	23.6	25.5	27.5
87.5°	11.8	11.8	13.7	15.7	17.7
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)