

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: P545561

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-80-86-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: P545561
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-12-2-LD4-2HI-40-UNV-80-86-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

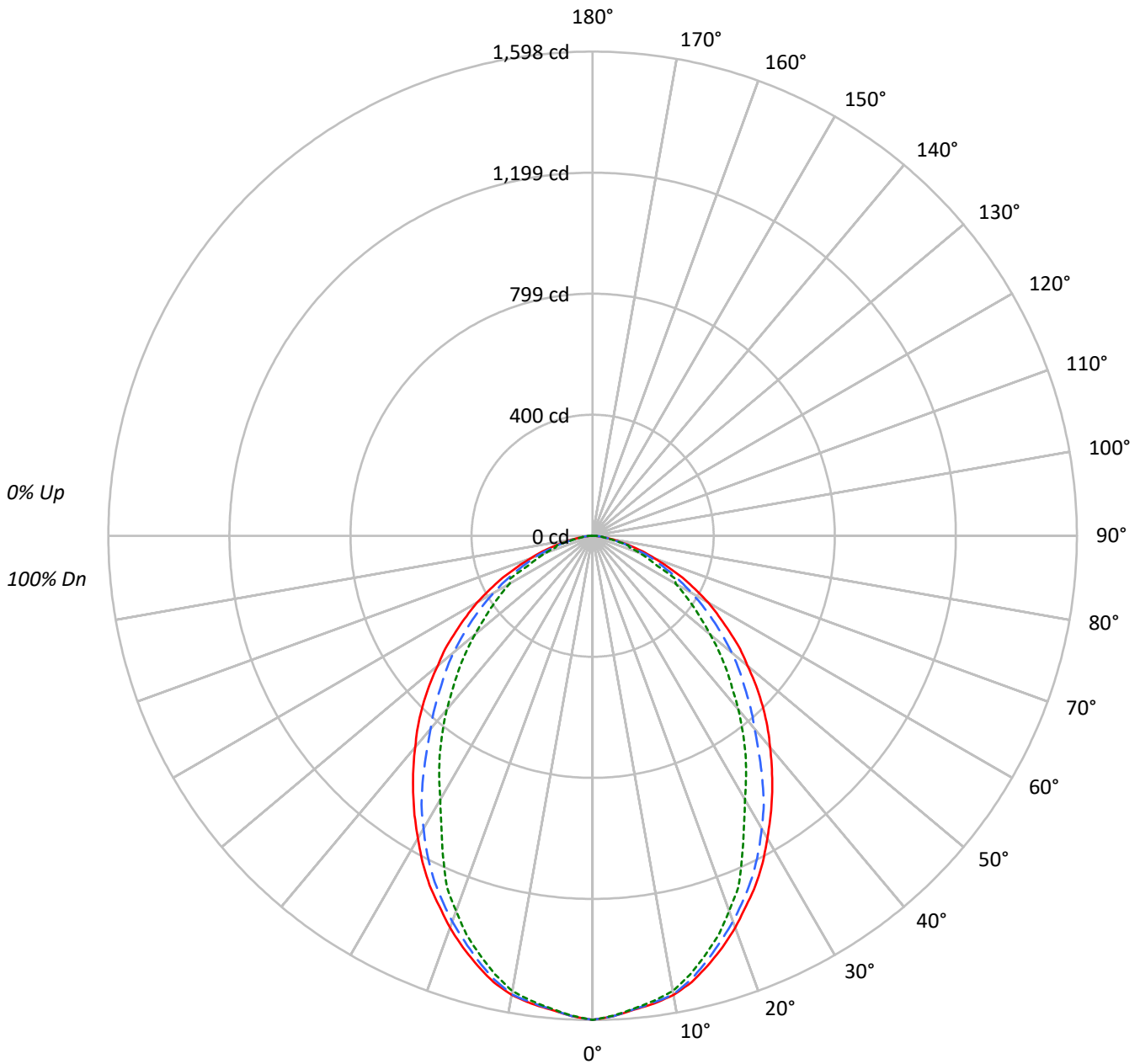
Lumens per Lamp: N/A
Luminaire Lumens: 3137.0 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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

TEST NUMBER: P545561

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-80-86-EDD

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°	8600	8600	8600
5°	8483	8473	8463
10°	8410	8400	8339
15°	8183	8101	7987
20°	7883	7755	7544
25°	7558	7394	6933
30°	7164	6934	6246
35°	6785	6409	5777
40°	6398	5840	5257
45°	6032	5399	4752
50°	5584	5011	4238
55°	5165	4541	3796
60°	4733	4057	3400
65°	4164	3552	3012
70°	3430	3111	2559
75°	2728	2381	2497
80°	1832	1717	1602
85°	1142	1371	1599



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.7	4.7
10°-20°	408.2	13.0
20°-30°	565.2	18.0
30°-40°	602.6	19.2
40°-50°	549.8	17.5
50°-60°	430.7	13.7
60°-70°	280.7	8.9
70°-80°	124.4	4.0
80°-90°	26.7	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°	1122.1	35.8
0°-40°	1724.8	55.0
0°-60°	2705.2	86.2
0°-90°	3137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1598	1598	1598	1598	1598	
5°	1570	1568	1568	1566	1566	149
15°	1469	1469	1454	1439	1434	413
25°	1273	1265	1245	1201	1168	584
35°	1033	1025	975	902	879	646
45°	792	776	709	650	624	610
55°	550	534	484	427	405	494
65°	327	308	279	284	236	322
75°	131	122	114	109	120	141
85°	18	20	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1597.9	1597.9	1597.9	1597.9	1597.9
2.5°	1586.9	1586.9	1586.9	1585.0	1585.0
5°	1570.2	1568.4	1568.4	1566.5	1566.5
7.5°	1557.3	1555.5	1553.6	1551.8	1548.1
10°	1538.8	1538.8	1537.0	1527.7	1525.9
12.5°	1509.3	1507.4	1500.0	1487.1	1483.4
15°	1468.6	1468.6	1453.9	1439.1	1433.5
17.5°	1424.3	1422.4	1404.0	1389.2	1381.8
20°	1376.3	1372.6	1354.1	1330.1	1317.2
22.5°	1322.7	1322.7	1300.5	1269.1	1256.2
25°	1272.8	1265.4	1245.1	1200.8	1167.5
27.5°	1215.5	1204.5	1182.3	1119.5	1080.7
30°	1152.7	1147.2	1115.8	1034.5	1005.0
32.5°	1093.6	1084.4	1051.1	966.2	942.1
35°	1032.7	1025.3	975.4	901.5	879.3
37.5°	971.7	962.5	899.7	840.5	812.8
40°	910.7	899.7	831.3	777.7	748.2
42.5°	853.5	838.7	772.2	714.9	681.7
45°	792.5	775.9	709.4	650.3	624.4
47.5°	731.5	716.8	655.8	594.8	565.3
50°	666.9	654.0	598.5	537.6	506.2
52.5°	613.3	593.0	539.4	478.5	452.6
55°	550.5	533.9	484.0	426.7	404.6
57.5°	493.2	476.6	430.4	376.9	358.4
60°	439.7	415.7	376.9	330.7	315.9
62.5°	380.6	362.1	328.8	290.0	308.5
65°	327.0	308.5	278.9	284.5	236.5
67.5°	267.9	258.6	232.8	206.9	199.5
70°	218.0	206.9	197.7	170.0	162.6
72.5°	173.6	162.6	149.6	134.9	129.3
75°	131.2	121.9	114.5	109.0	120.1
77.5°	90.5	86.8	81.3	75.7	73.9
80°	59.1	57.3	55.4	53.6	51.7
82.5°	35.1	35.1	35.1	35.1	35.1
85°	18.5	20.3	22.2	24.0	25.9
87.5°	11.1	11.1	12.9	14.8	16.6
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)