

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: P545610

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-82-87-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: P545610
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-50-UNV-82-87-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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

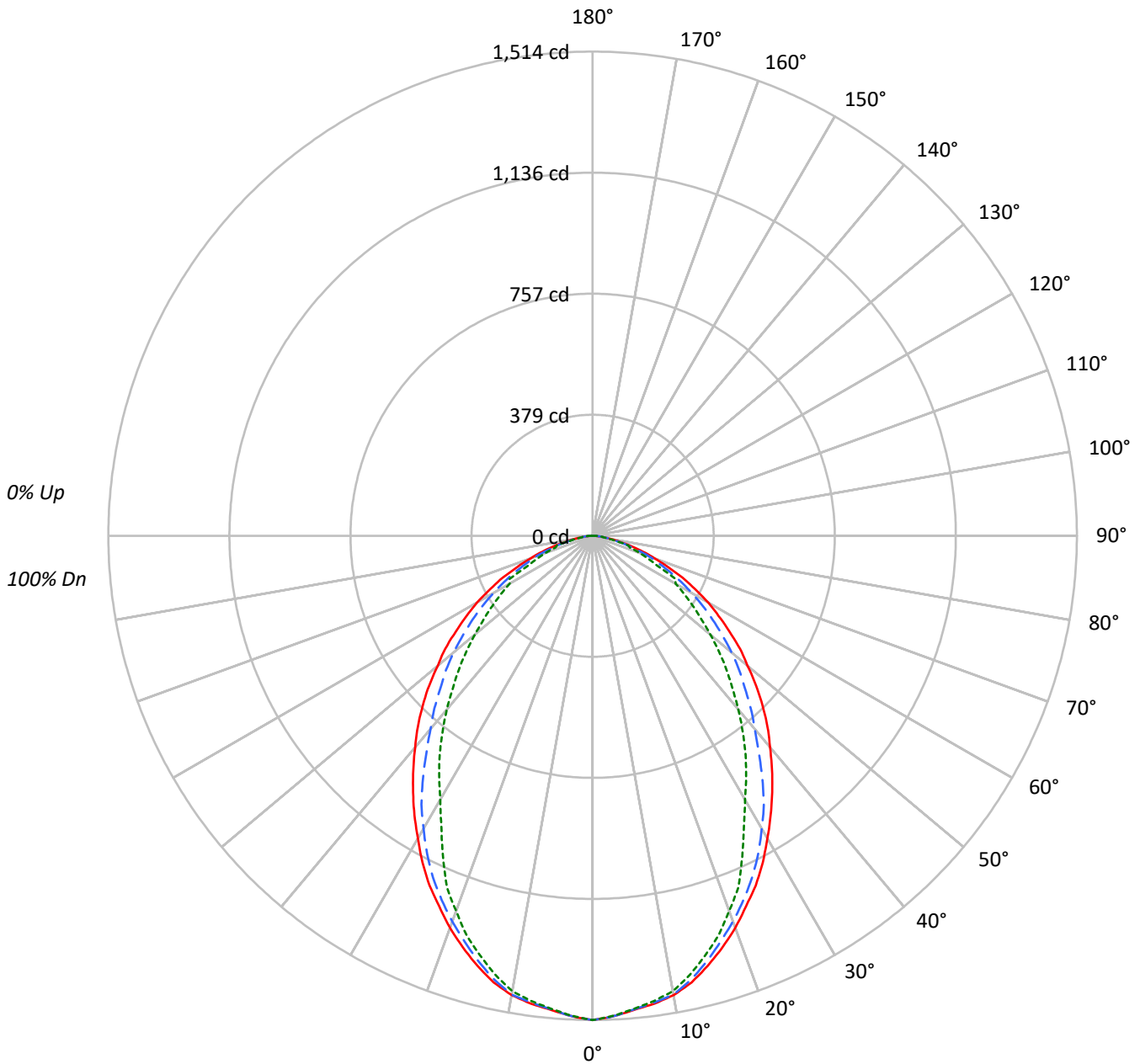
Lumens per Lamp: N/A
Luminaire Lumens: 2973.0 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	8150	8150	8150
5°	8039	8030	8021
10°	7970	7960	7903
15°	7755	7677	7570
20°	7470	7350	7149
25°	7163	7007	6571
30°	6789	6572	5919
35°	6430	6073	5476
40°	6064	5535	4982
45°	5717	5117	4504
50°	5292	4749	4016
55°	4895	4304	3598
60°	4485	3845	3223
65°	3947	3367	2854
70°	3251	2947	2425
75°	2585	2256	2366
80°	1736	1627	1519
85°	1081	1297	1513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.0	4.7
10°-20°	386.9	13.0
20°-30°	535.6	18.0
30°-40°	571.1	19.2
40°-50°	521.0	17.5
50°-60°	408.2	13.7
60°-70°	266.0	8.9
70°-80°	117.9	4.0
80°-90°	25.3	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°	1063.5	35.8
0°-40°	1634.6	55.0
0°-60°	2563.8	86.2
0°-90°	2973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1514	1514	1514	1514	1514	
5°	1488	1486	1486	1485	1485	141
15°	1392	1392	1378	1364	1359	391
25°	1206	1199	1180	1138	1106	554
35°	979	972	924	854	833	612
45°	751	735	672	616	592	579
55°	522	506	459	404	383	468
65°	310	292	264	270	224	305
75°	124	116	108	103	114	133
85°	18	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1514.4	1514.4	1514.4	1514.4	1514.4
2.5°	1503.9	1503.9	1503.9	1502.2	1502.2
5°	1488.1	1486.4	1486.4	1484.6	1484.6
7.5°	1475.9	1474.1	1472.4	1470.6	1467.1
10°	1458.4	1458.4	1456.6	1447.9	1446.1
12.5°	1430.4	1428.6	1421.6	1409.4	1405.9
15°	1391.9	1391.9	1377.8	1363.8	1358.6
17.5°	1349.8	1348.1	1330.6	1316.6	1309.6
20°	1304.3	1300.8	1283.3	1260.5	1248.3
22.5°	1253.5	1253.5	1232.5	1202.8	1190.5
25°	1206.3	1199.3	1180.0	1138.0	1106.5
27.5°	1152.0	1141.5	1120.5	1061.0	1024.2
30°	1092.5	1087.2	1057.5	980.4	952.4
32.5°	1036.4	1027.7	996.2	915.6	892.9
35°	978.7	971.7	924.4	854.4	833.4
37.5°	920.9	912.1	852.6	796.6	770.3
40°	863.1	852.6	787.8	737.1	709.1
42.5°	808.9	794.8	731.8	677.5	646.0
45°	751.1	735.3	672.3	616.3	591.8
47.5°	693.3	679.3	621.5	563.7	535.7
50°	632.0	619.8	567.2	509.5	479.7
52.5°	581.3	562.0	511.2	453.4	428.9
55°	521.7	506.0	458.7	404.4	383.4
57.5°	467.5	451.7	407.9	357.2	339.6
60°	416.7	393.9	357.2	313.4	299.4
62.5°	360.7	343.1	311.6	274.9	292.4
65°	309.9	292.4	264.4	269.6	224.1
67.5°	253.9	245.1	220.6	196.1	189.1
70°	206.6	196.1	187.3	161.1	154.1
72.5°	164.6	154.1	141.8	127.8	122.6
75°	124.3	115.6	108.5	103.3	113.8
77.5°	85.8	82.3	77.0	71.8	70.0
80°	56.0	54.3	52.5	50.8	49.0
82.5°	33.3	33.3	33.3	33.3	33.3
85°	17.5	19.3	21.0	22.8	24.5
87.5°	10.5	10.5	12.3	14.0	15.8
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)