

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: P545605

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-81-96-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: P545605
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-81-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

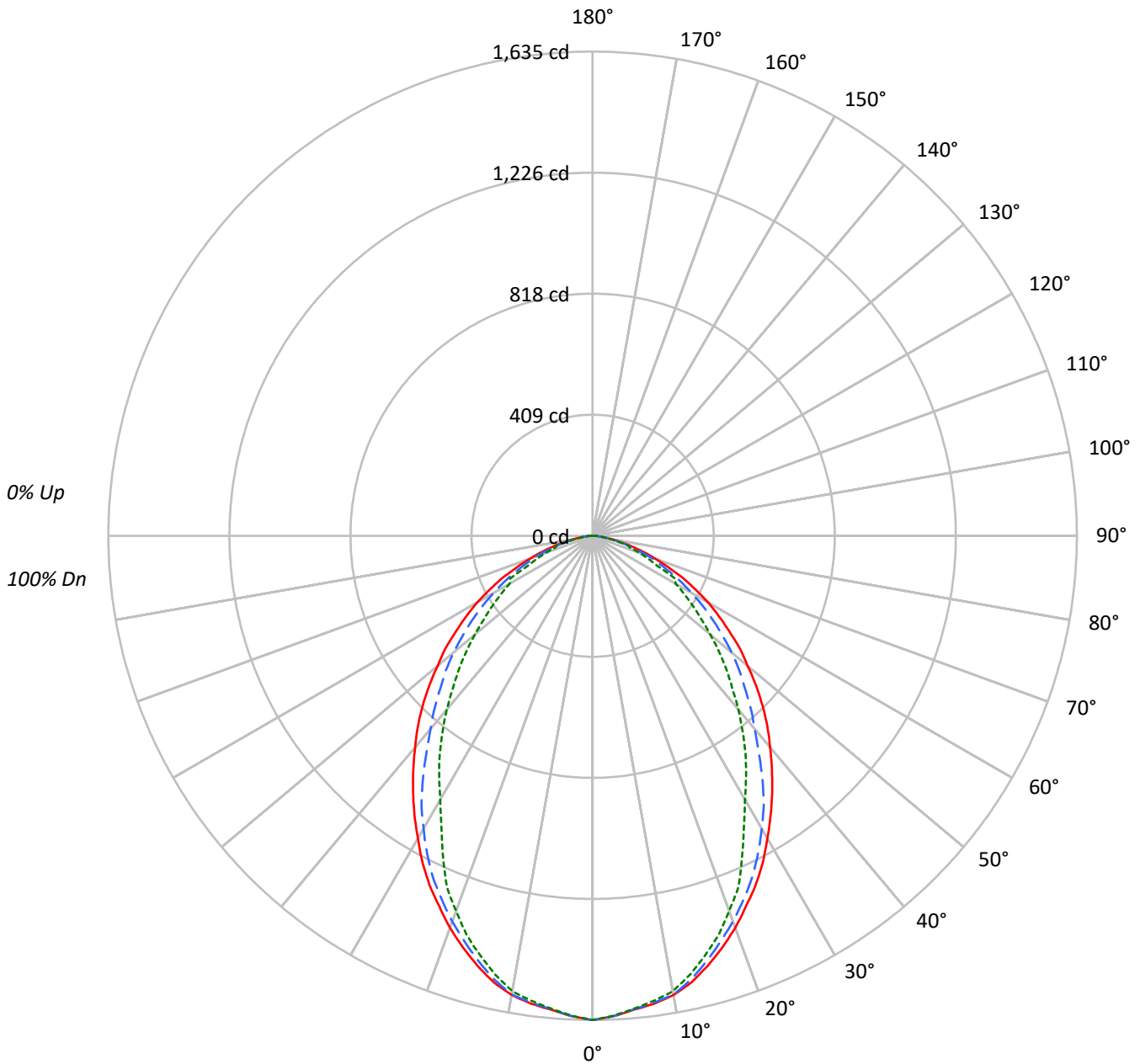
Lumens per Lamp: N/A
Luminaire Lumens: 3210.0 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8800	8800	8800
5°	8681	8670	8660
10°	8605	8595	8533
15°	8373	8289	8173
20°	8066	7936	7719
25°	7734	7566	7095
30°	7331	7096	6390
35°	6943	6558	5912
40°	6547	5976	5379
45°	6172	5525	4863
50°	5714	5128	4336
55°	5286	4647	3885
60°	4843	4151	3479
65°	4261	3635	3082
70°	3511	3183	2617
75°	2791	2437	2556
80°	1875	1757	1640
85°	1167	1402	1636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.2	4.7
10°-20°	417.7	13.0
20°-30°	578.3	18.0
30°-40°	616.6	19.2
40°-50°	562.6	17.5
50°-60°	440.7	13.7
60°-70°	287.2	8.9
70°-80°	127.3	4.0
80°-90°	27.3	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°	1148.2	35.8
0°-40°	1764.9	55.0
0°-60°	2768.2	86.2
0°-90°	3210.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3210.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1635	1635	1635	1635	1635	
5°	1607	1605	1605	1603	1603	153
15°	1503	1503	1488	1473	1467	422
25°	1302	1295	1274	1229	1195	598
35°	1057	1049	998	922	900	661
45°	811	794	726	665	639	625
55°	563	546	495	437	414	505
65°	335	316	285	291	242	330
75°	134	125	117	112	123	144
85°	19	21	23	25	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1635.1	1635.1	1635.1	1635.1	1635.1
2.5°	1623.8	1623.8	1623.8	1621.9	1621.9
5°	1606.8	1604.9	1604.9	1603.0	1603.0
7.5°	1593.5	1591.7	1589.8	1587.9	1584.1
10°	1574.6	1574.6	1572.8	1563.3	1561.4
12.5°	1544.4	1542.5	1534.9	1521.7	1517.9
15°	1502.8	1502.8	1487.7	1472.6	1466.9
17.5°	1457.4	1455.6	1436.6	1421.5	1414.0
20°	1408.3	1404.5	1385.6	1361.0	1347.8
22.5°	1353.5	1353.5	1330.8	1298.7	1285.4
25°	1302.4	1294.9	1274.1	1228.7	1194.7
27.5°	1243.8	1232.5	1209.8	1145.5	1105.8
30°	1179.6	1173.9	1141.8	1058.6	1028.3
32.5°	1119.1	1109.6	1075.6	988.6	964.1
35°	1056.7	1049.1	998.1	922.5	899.8
37.5°	994.3	984.9	920.6	860.1	831.7
40°	931.9	920.6	850.6	795.8	765.6
42.5°	873.3	858.2	790.2	731.6	697.5
45°	810.9	793.9	725.9	665.4	638.9
47.5°	748.6	733.4	671.1	608.7	578.4
50°	682.4	669.2	612.5	550.1	517.9
52.5°	627.6	606.8	552.0	489.6	463.1
55°	563.3	546.3	495.3	436.7	414.0
57.5°	504.7	487.7	440.4	385.6	366.7
60°	449.9	425.3	385.6	338.4	323.2
62.5°	389.4	370.5	336.5	296.8	315.7
65°	334.6	315.7	285.4	291.1	242.0
67.5°	274.1	264.6	238.2	211.7	204.2
70°	223.1	211.7	202.3	173.9	166.3
72.5°	177.7	166.3	153.1	138.0	132.3
75°	134.2	124.8	117.2	111.5	122.9
77.5°	92.6	88.8	83.2	77.5	75.6
80°	60.5	58.6	56.7	54.8	52.9
82.5°	35.9	35.9	35.9	35.9	35.9
85°	18.9	20.8	22.7	24.6	26.5
87.5°	11.3	11.3	13.2	15.1	17.0
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)