

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: P545614

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-82-97-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: P545614
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-82-97-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

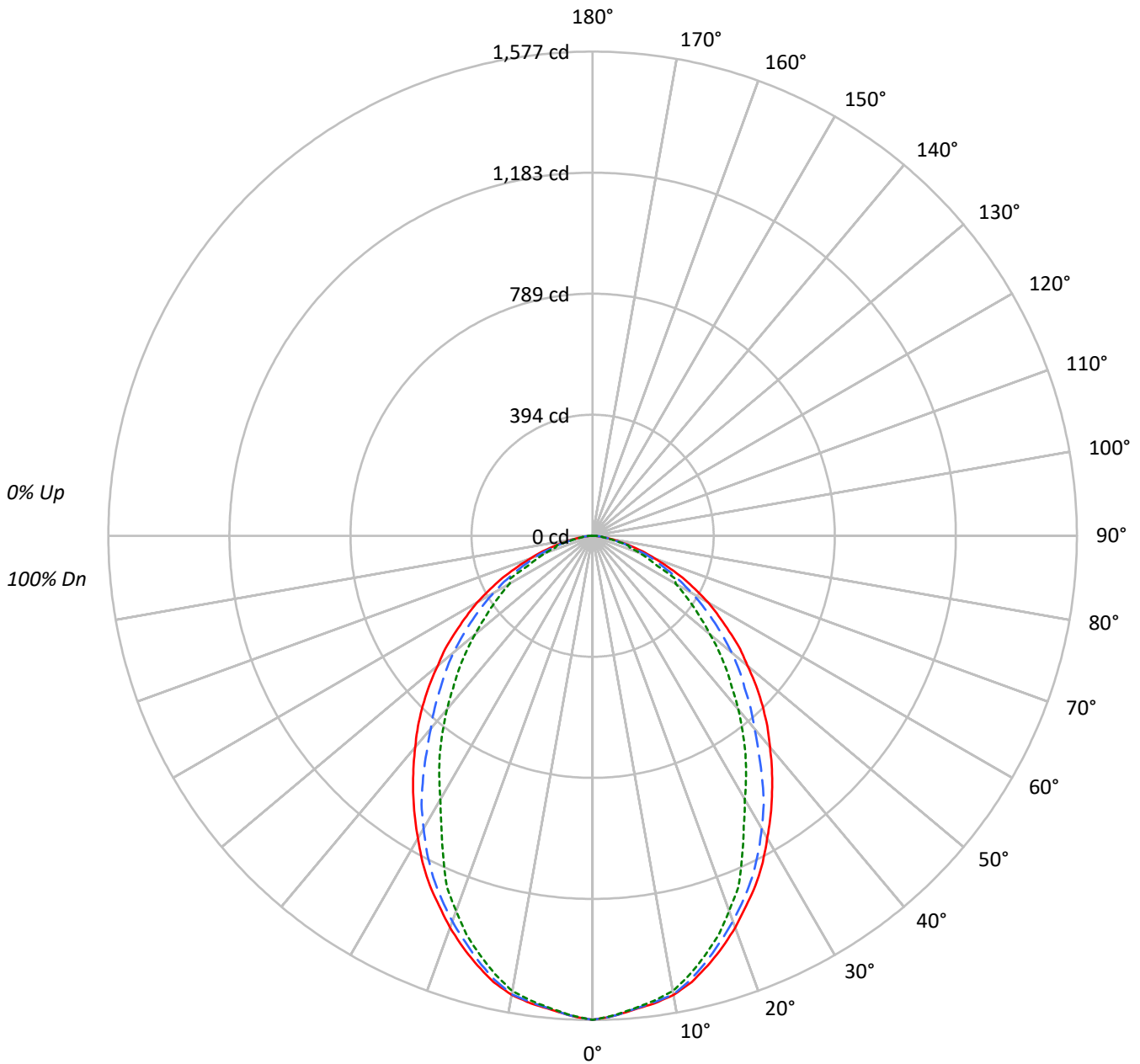
Lumens per Lamp: N/A
Luminaire Lumens: 3095.0 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	8485	8485	8485
5°	8370	8360	8350
10°	8297	8287	8228
15°	8074	7992	7880
20°	7777	7652	7443
25°	7457	7295	6840
30°	7068	6842	6162
35°	6694	6322	5700
40°	6313	5762	5186
45°	5951	5327	4689
50°	5509	4944	4181
55°	5096	4480	3746
60°	4669	4002	3355
65°	4108	3505	2971
70°	3385	3068	2524
75°	2691	2350	2464
80°	1807	1695	1581
85°	1124	1352	1575



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.8	4.7
10°-20°	402.8	13.0
20°-30°	557.6	18.0
30°-40°	594.6	19.2
40°-50°	542.4	17.5
50°-60°	424.9	13.7
60°-70°	276.9	8.9
70°-80°	122.7	4.0
80°-90°	26.3	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°	1107.1	35.8
0°-40°	1701.7	55.0
0°-60°	2669.0	86.2
0°-90°	3095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3095.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1577	1577	1577	1577	1577	
5°	1549	1547	1547	1546	1546	147
15°	1449	1449	1434	1420	1414	407
25°	1256	1248	1228	1185	1152	577
35°	1019	1012	962	889	868	637
45°	782	766	700	642	616	602
55°	543	527	478	421	399	487
65°	323	304	275	281	233	318
75°	129	120	113	108	118	139
85°	18	20	22	24	26	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1576.6	1576.6	1576.6	1576.6	1576.6
2.5°	1565.6	1565.6	1565.6	1563.8	1563.8
5°	1549.2	1547.4	1547.4	1545.6	1545.6
7.5°	1536.5	1534.6	1532.8	1531.0	1527.3
10°	1518.2	1518.2	1516.4	1507.3	1505.5
12.5°	1489.1	1487.2	1480.0	1467.2	1463.6
15°	1449.0	1449.0	1434.4	1419.8	1414.3
17.5°	1405.2	1403.4	1385.2	1370.6	1363.3
20°	1357.8	1354.2	1336.0	1312.3	1299.5
22.5°	1305.0	1305.0	1283.1	1252.1	1239.4
25°	1255.8	1248.5	1228.4	1184.7	1151.9
27.5°	1199.3	1188.3	1166.5	1104.5	1066.2
30°	1137.3	1131.8	1100.9	1020.7	991.5
32.5°	1079.0	1069.9	1037.1	953.2	929.5
35°	1018.8	1011.5	962.3	889.4	867.6
37.5°	958.7	949.6	887.6	829.3	801.9
40°	898.5	887.6	820.2	767.3	738.2
42.5°	842.0	827.5	761.8	705.3	672.5
45°	781.9	765.5	699.9	641.6	616.0
47.5°	721.8	707.2	647.0	586.9	557.7
50°	658.0	645.2	590.5	530.4	499.4
52.5°	605.1	585.1	532.2	472.1	446.5
55°	543.1	526.7	477.5	421.0	399.2
57.5°	486.6	470.2	424.7	371.8	353.6
60°	433.8	410.1	371.8	326.2	311.7
62.5°	375.5	357.2	324.4	286.1	304.4
65°	322.6	304.4	275.2	280.7	233.3
67.5°	264.3	255.2	229.6	204.1	196.8
70°	215.1	204.1	195.0	167.7	160.4
72.5°	171.3	160.4	147.6	133.1	127.6
75°	129.4	120.3	113.0	107.5	118.5
77.5°	89.3	85.7	80.2	74.7	72.9
80°	58.3	56.5	54.7	52.9	51.0
82.5°	34.6	34.6	34.6	34.6	34.6
85°	18.2	20.0	21.9	23.7	25.5
87.5°	10.9	10.9	12.8	14.6	16.4
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)