

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: P545617

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-93-86-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: P545617
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-93-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

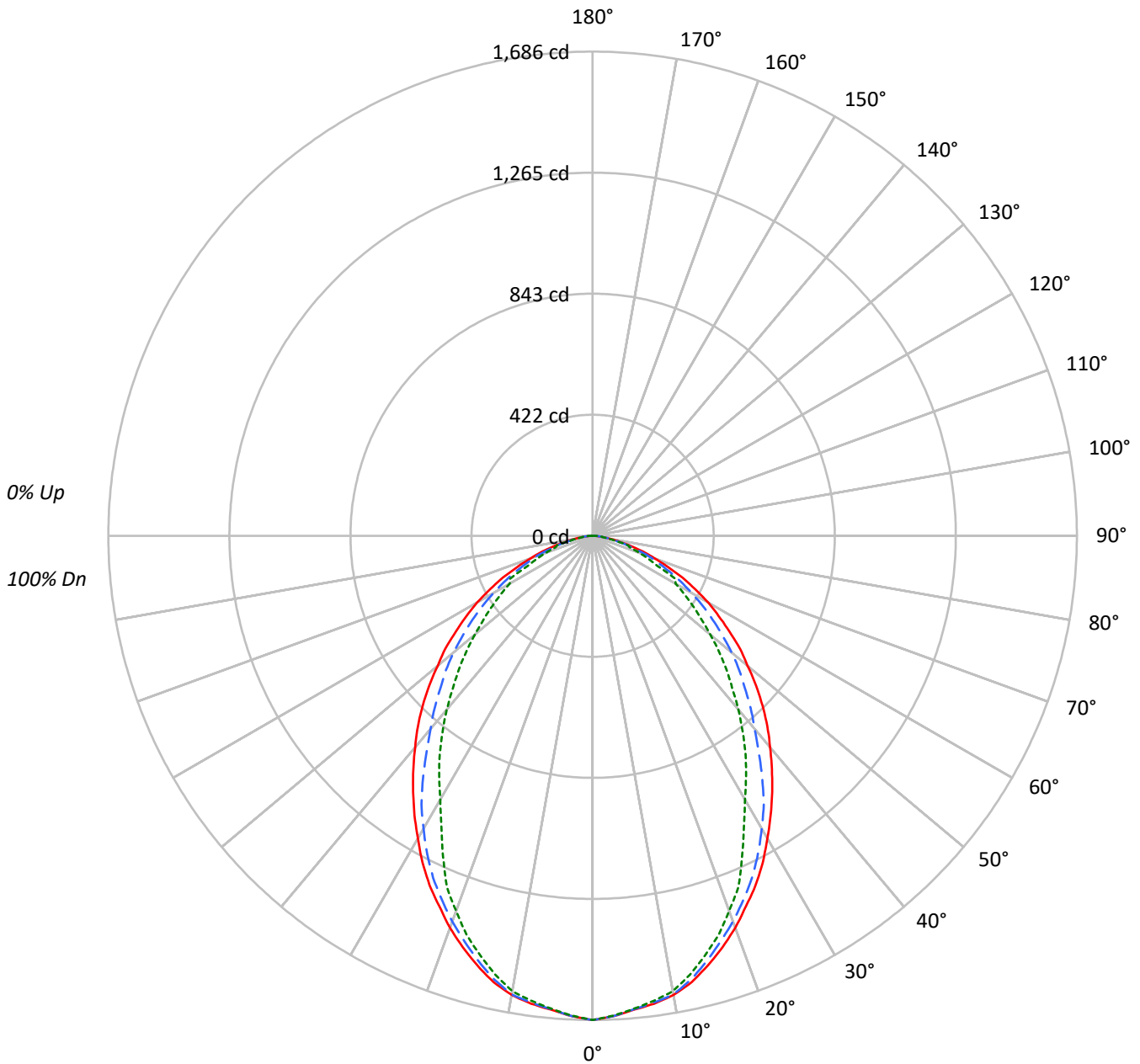
Lumens per Lamp: N/A
Luminaire Lumens: 3310.0 lumens
Efficiency: N/A
Efficacy: 76.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	9075	9075	9075
5°	8951	8941	8930
10°	8873	8863	8799
15°	8634	8547	8428
20°	8317	8183	7960
25°	7975	7802	7315
30°	7559	7316	6590
35°	7159	6762	6096
40°	6752	6162	5546
45°	6365	5697	5014
50°	5892	5287	4472
55°	5451	4792	4006
60°	4993	4280	3588
65°	4394	3748	3177
70°	3619	3282	2699
75°	2878	2514	2635
80°	1934	1813	1692
85°	1204	1445	1686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.9	4.7
10°-20°	430.7	13.0
20°-30°	596.3	18.0
30°-40°	635.9	19.2
40°-50°	580.1	17.5
50°-60°	454.4	13.7
60°-70°	296.2	8.9
70°-80°	131.2	4.0
80°-90°	28.2	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°	1184.0	35.8
0°-40°	1819.9	55.0
0°-60°	2854.4	86.2
0°-90°	3310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3310.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1686	1686	1686	1686	1686	
5°	1657	1655	1655	1653	1653	157
15°	1550	1550	1534	1518	1513	436
25°	1343	1335	1314	1267	1232	617
35°	1090	1082	1029	951	928	681
45°	836	819	748	686	659	644
55°	581	563	511	450	427	521
65°	345	326	294	300	250	340
75°	138	129	121	115	127	148
85°	20	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1686.1	1686.1	1686.1	1686.1	1686.1
2.5°	1674.4	1674.4	1674.4	1672.4	1672.4
5°	1656.8	1654.9	1654.9	1652.9	1652.9
7.5°	1643.2	1641.2	1639.3	1637.3	1633.4
10°	1623.7	1623.7	1621.7	1612.0	1610.1
12.5°	1592.5	1590.6	1582.8	1569.1	1565.2
15°	1549.6	1549.6	1534.0	1518.4	1512.6
17.5°	1502.8	1500.9	1481.4	1465.8	1458.0
20°	1452.2	1448.3	1428.8	1403.4	1389.8
22.5°	1395.6	1395.6	1372.2	1339.1	1325.5
25°	1343.0	1335.2	1313.8	1267.0	1231.9
27.5°	1282.6	1270.9	1247.5	1181.2	1140.3
30°	1216.3	1210.5	1177.3	1091.6	1060.4
32.5°	1153.9	1144.2	1109.1	1019.4	994.1
35°	1089.6	1081.8	1029.2	951.2	927.8
37.5°	1025.3	1015.5	949.3	886.9	857.7
40°	961.0	949.3	877.1	820.6	789.4
42.5°	900.5	884.9	814.8	754.3	719.3
45°	836.2	818.7	748.5	686.1	658.8
47.5°	771.9	756.3	692.0	627.6	596.5
50°	703.7	690.0	631.5	567.2	534.1
52.5°	647.1	625.7	569.2	504.8	477.6
55°	580.9	563.3	510.7	450.3	426.9
57.5°	520.4	502.9	454.2	397.6	378.1
60°	463.9	438.6	397.6	348.9	333.3
62.5°	401.5	382.0	347.0	306.0	325.5
65°	345.0	325.5	294.3	300.2	249.5
67.5°	282.6	272.9	245.6	218.3	210.5
70°	230.0	218.3	208.6	179.3	171.5
72.5°	183.2	171.5	157.9	142.3	136.4
75°	138.4	128.6	120.9	115.0	126.7
77.5°	95.5	91.6	85.8	79.9	78.0
80°	62.4	60.4	58.5	56.5	54.6
82.5°	37.0	37.0	37.0	37.0	37.0
85°	19.5	21.4	23.4	25.3	27.3
87.5°	11.7	11.7	13.6	15.6	17.5
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)