

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: P545554

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-93-87-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: P545554
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-35-UNV-93-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

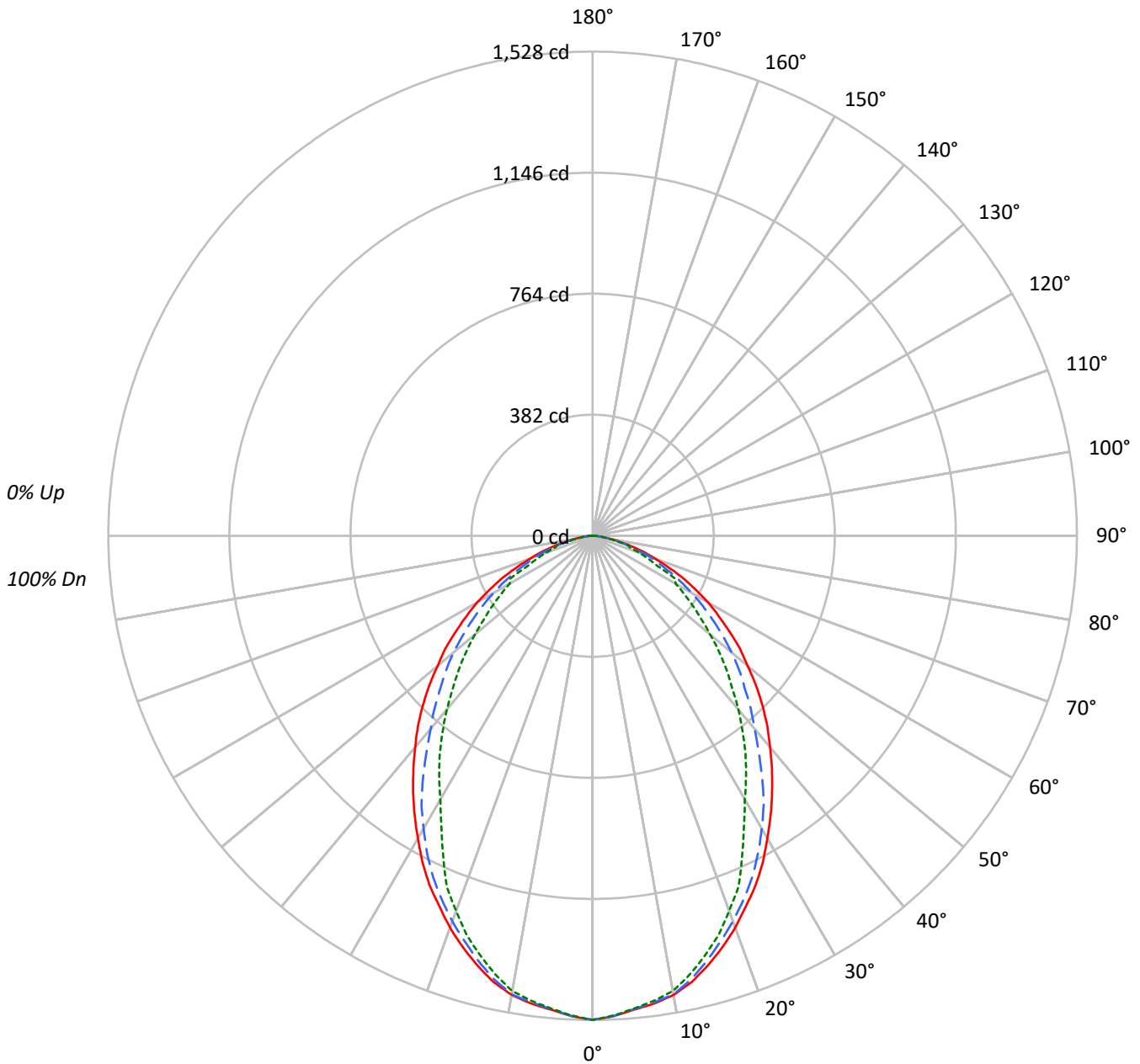
Lumens per Lamp: N/A
Luminaire Lumens: 2999.0 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8222	8222	8222
5°	8110	8101	8091
10°	8040	8030	7972
15°	7823	7744	7636
20°	7535	7414	7212
25°	7226	7068	6628
30°	6848	6629	5970
35°	6486	6127	5523
40°	6117	5583	5025
45°	5766	5162	4543
50°	5339	4791	4052
55°	4938	4342	3629
60°	4524	3878	3251
65°	3981	3396	2879
70°	3279	2974	2445
75°	2608	2277	2387
80°	1751	1643	1531
85°	1093	1309	1525



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	4.7
10°-20°	390.3	13.0
20°-30°	540.3	18.0
30°-40°	576.1	19.2
40°-50°	525.6	17.5
50°-60°	411.8	13.7
60°-70°	268.4	8.9
70°-80°	118.9	4.0
80°-90°	25.5	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°	1072.8	35.8
0°-40°	1648.9	55.0
0°-60°	2586.2	86.2
0°-90°	2999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1501	1499	1499	1498	1498	142
15°	1404	1404	1390	1376	1370	395
25°	1217	1210	1190	1148	1116	559
35°	987	980	932	862	841	617
45°	758	742	678	622	597	584
55°	526	510	463	408	387	472
65°	313	295	267	272	226	308
75°	125	117	110	104	115	134
85°	18	19	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.7	1527.7	1527.7	1527.7	1527.7
2.5°	1517.1	1517.1	1517.1	1515.3	1515.3
5°	1501.2	1499.4	1499.4	1497.6	1497.6
7.5°	1488.8	1487.0	1485.3	1483.5	1480.0
10°	1471.1	1471.1	1469.4	1460.5	1458.8
12.5°	1442.9	1441.1	1434.0	1421.7	1418.2
15°	1404.0	1404.0	1389.9	1375.8	1370.5
17.5°	1361.6	1359.9	1342.2	1328.1	1321.0
20°	1315.7	1312.2	1294.5	1271.6	1259.2
22.5°	1264.5	1264.5	1243.3	1213.3	1200.9
25°	1216.8	1209.8	1190.3	1147.9	1116.2
27.5°	1162.1	1151.5	1130.3	1070.2	1033.2
30°	1102.0	1096.7	1066.7	989.0	960.7
32.5°	1045.5	1036.7	1004.9	923.7	900.7
35°	987.2	980.2	932.5	861.8	840.6
37.5°	929.0	920.1	860.1	803.6	777.1
40°	870.7	860.1	794.7	743.5	715.3
42.5°	815.9	801.8	738.2	683.5	651.7
45°	757.6	741.7	678.2	621.7	596.9
47.5°	699.4	685.2	627.0	568.7	540.4
50°	637.6	625.2	572.2	513.9	483.9
52.5°	586.3	566.9	515.7	457.4	432.7
55°	526.3	510.4	462.7	408.0	386.8
57.5°	471.5	455.6	411.5	360.3	342.6
60°	420.3	397.4	360.3	316.1	302.0
62.5°	363.8	346.1	314.4	277.3	294.9
65°	312.6	294.9	266.7	272.0	226.1
67.5°	256.1	247.2	222.5	197.8	190.7
70°	208.4	197.8	189.0	162.5	155.4
72.5°	166.0	155.4	143.1	128.9	123.6
75°	125.4	116.6	109.5	104.2	114.8
77.5°	86.5	83.0	77.7	72.4	70.6
80°	56.5	54.7	53.0	51.2	49.4
82.5°	33.6	33.6	33.6	33.6	33.6
85°	17.7	19.4	21.2	23.0	24.7
87.5°	10.6	10.6	12.4	14.1	15.9
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)