

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: P545599

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-81-84-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: P545599
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-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

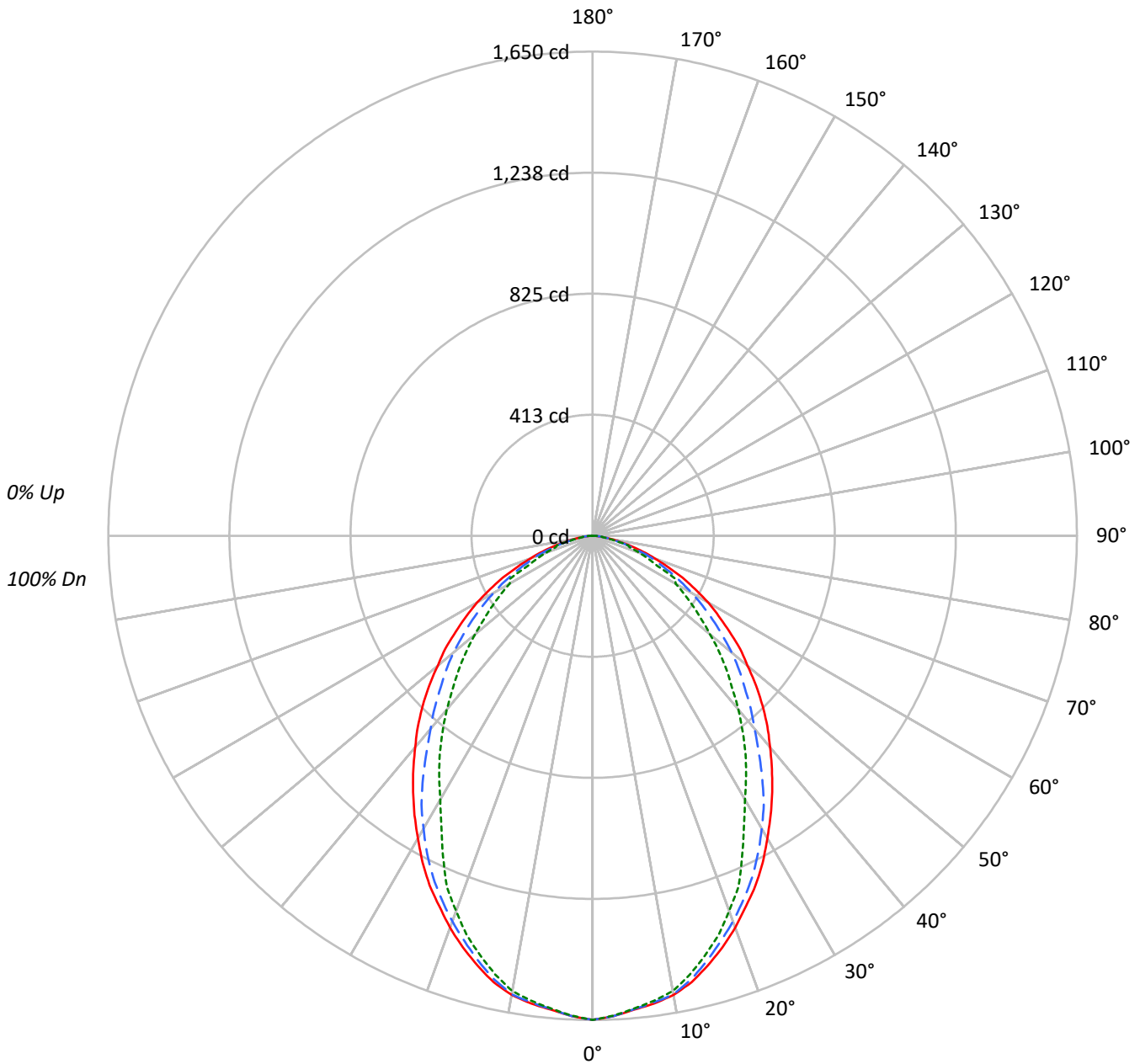
Lumens per Lamp: N/A
Luminaire Lumens: 3239.0 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	8880	8880	8880
5°	8759	8749	8739
10°	8683	8673	8610
15°	8449	8364	8247
20°	8139	8007	7789
25°	7804	7634	7159
30°	7397	7160	6448
35°	7005	6617	5965
40°	6606	6030	5427
45°	6228	5574	4907
50°	5766	5174	4376
55°	5333	4689	3919
60°	4887	4188	3511
65°	4299	3668	3109
70°	3542	3212	2642
75°	2816	2460	2578
80°	1891	1773	1655
85°	1179	1414	1649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.6	4.7
10°-20°	421.5	13.0
20°-30°	583.5	18.0
30°-40°	622.2	19.2
40°-50°	567.6	17.5
50°-60°	444.7	13.7
60°-70°	289.8	8.9
70°-80°	128.4	4.0
80°-90°	27.6	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°	1158.6	35.8
0°-40°	1780.8	55.0
0°-60°	2793.2	86.2
0°-90°	3239.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3239.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1650	1650	1650	1650	1650	
5°	1621	1619	1619	1618	1618	154
15°	1516	1516	1501	1486	1480	426
25°	1314	1307	1286	1240	1206	603
35°	1066	1059	1007	931	908	667
45°	818	801	732	671	645	630
55°	568	551	500	441	418	510
65°	338	318	288	294	244	333
75°	135	126	118	112	124	145
85°	19	21	23	25	27	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1638.5	1638.5	1638.5	1636.6	1636.6
5°	1621.3	1619.4	1619.4	1617.5	1617.5
7.5°	1607.9	1606.0	1604.1	1602.2	1598.4
10°	1588.9	1588.9	1587.0	1577.4	1575.5
12.5°	1558.3	1556.4	1548.8	1535.5	1531.6
15°	1516.4	1516.4	1501.1	1485.9	1480.1
17.5°	1470.6	1468.7	1449.6	1434.4	1426.7
20°	1421.0	1417.2	1398.1	1373.3	1360.0
22.5°	1365.7	1365.7	1342.8	1310.4	1297.0
25°	1314.2	1306.6	1285.6	1239.8	1205.5
27.5°	1255.1	1243.6	1220.7	1155.9	1115.8
30°	1190.2	1184.5	1152.1	1068.1	1037.6
32.5°	1129.2	1119.6	1085.3	997.6	972.8
35°	1066.2	1058.6	1007.1	930.8	907.9
37.5°	1003.3	993.8	928.9	867.9	839.3
40°	940.3	928.9	858.3	803.0	772.5
42.5°	881.2	866.0	797.3	738.2	703.8
45°	818.3	801.1	732.4	671.4	644.7
47.5°	755.3	740.1	677.1	614.2	583.7
50°	688.6	675.2	618.0	555.1	522.6
52.5°	633.3	612.3	557.0	494.0	467.3
55°	568.4	551.2	499.7	440.6	417.7
57.5°	509.3	492.1	444.4	389.1	370.0
60°	454.0	429.2	389.1	341.4	326.2
62.5°	392.9	373.9	339.5	299.5	318.5
65°	337.6	318.5	288.0	293.7	244.1
67.5°	276.6	267.0	240.3	213.6	206.0
70°	225.1	213.6	204.1	175.5	167.9
72.5°	179.3	167.9	154.5	139.2	133.5
75°	135.4	125.9	118.3	112.5	124.0
77.5°	93.5	89.6	83.9	78.2	76.3
80°	61.0	59.1	57.2	55.3	53.4
82.5°	36.2	36.2	36.2	36.2	36.2
85°	19.1	21.0	22.9	24.8	26.7
87.5°	11.4	11.4	13.4	15.3	17.2
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)