

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: P545573

Luminaire Tested: **FMR-12-2-LD4-2HI-40-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: P545573
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

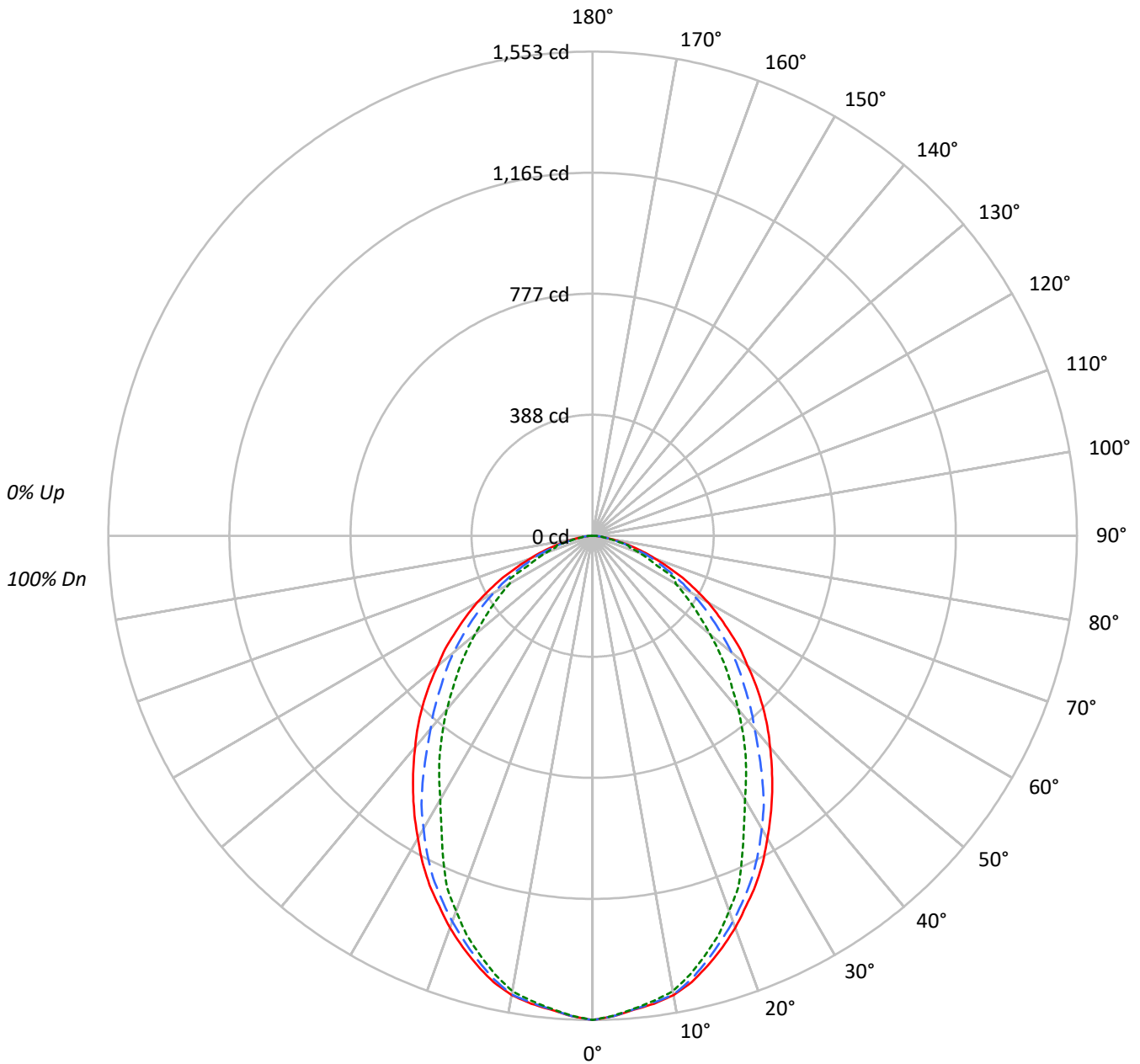
Lumens per Lamp: N/A
Luminaire Lumens: 3049.0 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8359	8359	8359
5°	8245	8236	8226
10°	8174	8164	8105
15°	7953	7874	7763
20°	7661	7538	7332
25°	7346	7187	6739
30°	6963	6740	6070
35°	6594	6229	5616
40°	6219	5677	5109
45°	5863	5248	4619
50°	5427	4870	4119
55°	5021	4414	3689
60°	4599	3943	3305
65°	4047	3452	2926
70°	3334	3023	2486
75°	2651	2314	2427
80°	1782	1671	1559
85°	1112	1328	1550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.6	4.7
10°-20°	396.8	13.0
20°-30°	549.3	18.0
30°-40°	585.7	19.2
40°-50°	534.3	17.5
50°-60°	418.6	13.7
60°-70°	272.8	8.9
70°-80°	120.9	4.0
80°-90°	26.0	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°	1090.7	35.8
0°-40°	1676.4	55.0
0°-60°	2629.3	86.2
0°-90°	3049.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3049.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1553	1553	1553	1553	1553	
5°	1526	1524	1524	1523	1523	145
15°	1427	1427	1413	1399	1393	401
25°	1237	1230	1210	1167	1135	568
35°	1004	996	948	876	855	627
45°	770	754	690	632	607	593
55°	535	519	470	415	393	480
65°	318	300	271	276	230	313
75°	128	118	111	106	117	137
85°	18	20	22	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1553.1	1553.1	1553.1	1553.1	1553.1
2.5°	1542.3	1542.3	1542.3	1540.6	1540.6
5°	1526.2	1524.4	1524.4	1522.6	1522.6
7.5°	1513.6	1511.8	1510.0	1508.2	1504.6
10°	1495.7	1495.7	1493.9	1484.9	1483.1
12.5°	1466.9	1465.1	1458.0	1445.4	1441.8
15°	1427.4	1427.4	1413.1	1398.7	1393.3
17.5°	1384.3	1382.5	1364.6	1350.2	1343.0
20°	1337.7	1334.1	1316.1	1292.8	1280.2
22.5°	1285.6	1285.6	1264.0	1233.5	1220.9
25°	1237.1	1229.9	1210.2	1167.1	1134.8
27.5°	1181.4	1170.7	1149.1	1088.1	1050.4
30°	1120.4	1115.0	1084.5	1005.5	976.8
32.5°	1062.9	1054.0	1021.6	939.1	915.7
35°	1003.7	996.5	948.0	876.2	854.7
37.5°	944.4	935.5	874.4	817.0	790.0
40°	885.2	874.4	808.0	755.9	727.2
42.5°	829.5	815.2	750.5	694.9	662.5
45°	770.3	754.1	689.5	632.0	606.9
47.5°	711.0	696.7	637.4	578.2	549.4
50°	648.2	635.6	581.7	522.5	492.0
52.5°	596.1	576.4	524.3	465.0	439.9
55°	535.1	518.9	470.4	414.8	393.2
57.5°	479.4	463.2	418.4	366.3	348.3
60°	427.3	404.0	366.3	321.4	307.0
62.5°	369.9	351.9	319.6	281.9	299.9
65°	317.8	299.9	271.1	276.5	229.8
67.5°	260.3	251.4	226.2	201.1	193.9
70°	211.9	201.1	192.1	165.2	158.0
72.5°	168.8	158.0	145.4	131.1	125.7
75°	127.5	118.5	111.3	105.9	116.7
77.5°	88.0	84.4	79.0	73.6	71.8
80°	57.5	55.7	53.9	52.1	50.3
82.5°	34.1	34.1	34.1	34.1	34.1
85°	18.0	19.8	21.5	23.3	25.1
87.5°	10.8	10.8	12.6	14.4	16.2
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)