

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: P545581

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-82-96-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: P545581
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-82-96-EDD
Description: 1X2 FMR TROFFER WITH .187 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

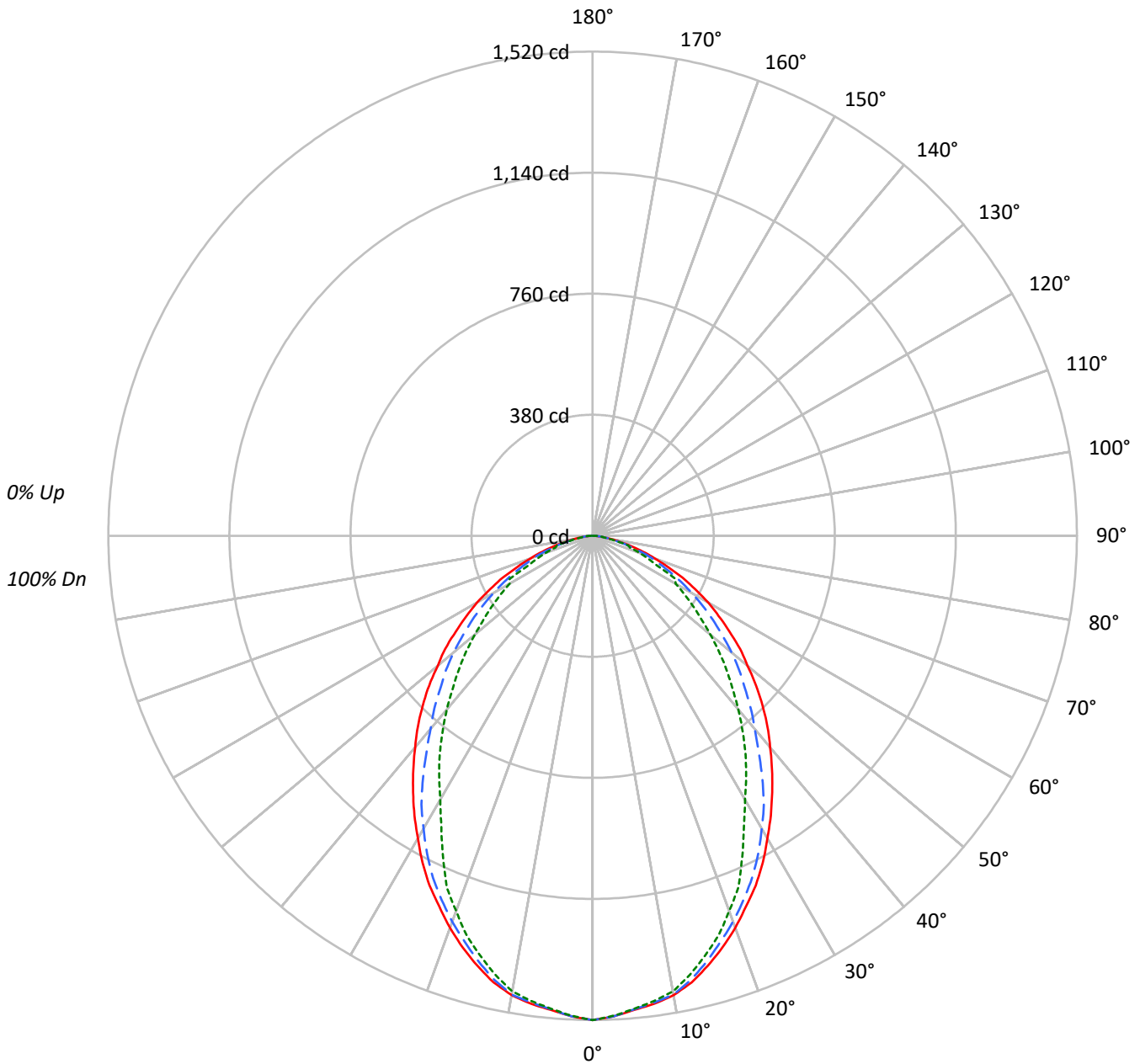
Lumens per Lamp: N/A
Luminaire Lumens: 2985.0 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8183	8183	8183
5°	8072	8063	8053
10°	8002	7993	7935
15°	7787	7708	7601
20°	7501	7380	7178
25°	7192	7036	6597
30°	6817	6598	5943
35°	6456	6098	5497
40°	6088	5557	5002
45°	5740	5138	4522
50°	5313	4768	4032
55°	4915	4322	3613
60°	4504	3860	3236
65°	3962	3380	2865
70°	3264	2960	2434
75°	2595	2267	2377
80°	1745	1633	1525
85°	1087	1303	1519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.5	4.7
10°-20°	388.4	13.0
20°-30°	537.8	18.0
30°-40°	573.4	19.2
40°-50°	523.1	17.5
50°-60°	409.8	13.7
60°-70°	267.1	8.9
70°-80°	118.3	4.0
80°-90°	25.4	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°	1067.8	35.8
0°-40°	1641.2	55.0
0°-60°	2574.1	86.2
0°-90°	2985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2985.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1520	1520	1520	1520	1520	
5°	1494	1492	1492	1491	1491	142
15°	1398	1398	1383	1369	1364	393
25°	1211	1204	1185	1143	1111	556
35°	983	976	928	858	837	614
45°	754	738	675	619	594	581
55°	524	508	461	406	385	470
65°	311	294	265	271	225	307
75°	125	116	109	104	114	134
85°	18	19	21	23	25	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1520.5	1520.5	1520.5	1520.5	1520.5
2.5°	1510.0	1510.0	1510.0	1508.2	1508.2
5°	1494.2	1492.4	1492.4	1490.6	1490.6
7.5°	1481.8	1480.1	1478.3	1476.6	1473.1
10°	1464.3	1464.3	1462.5	1453.7	1452.0
12.5°	1436.1	1434.4	1427.4	1415.0	1411.5
15°	1397.5	1397.5	1383.4	1369.3	1364.1
17.5°	1355.3	1353.5	1335.9	1321.9	1314.9
20°	1309.6	1306.1	1288.5	1265.6	1253.3
22.5°	1258.6	1258.6	1237.5	1207.6	1195.3
25°	1211.1	1204.1	1184.8	1142.6	1110.9
27.5°	1156.6	1146.1	1125.0	1065.2	1028.3
30°	1096.9	1091.6	1061.7	984.4	956.3
32.5°	1040.6	1031.8	1000.2	919.3	896.5
35°	982.6	975.6	928.1	857.8	836.7
37.5°	924.6	915.8	856.1	799.8	773.4
40°	866.6	856.1	791.0	740.0	711.9
42.5°	812.1	798.1	734.8	680.3	648.6
45°	754.1	738.3	675.0	618.8	594.1
47.5°	696.1	682.0	624.0	566.0	537.9
50°	634.6	622.3	569.5	511.5	481.6
52.5°	583.6	564.3	513.3	455.3	430.7
55°	523.8	508.0	460.6	406.1	385.0
57.5°	469.3	453.5	409.6	358.6	341.0
60°	418.4	395.5	358.6	314.7	300.6
62.5°	362.1	344.5	312.9	276.0	293.6
65°	311.1	293.6	265.4	270.7	225.0
67.5°	254.9	246.1	221.5	196.9	189.8
70°	207.4	196.9	188.1	161.7	154.7
72.5°	165.2	154.7	142.4	128.3	123.0
75°	124.8	116.0	109.0	103.7	114.3
77.5°	86.1	82.6	77.3	72.1	70.3
80°	56.3	54.5	52.7	51.0	49.2
82.5°	33.4	33.4	33.4	33.4	33.4
85°	17.6	19.3	21.1	22.9	24.6
87.5°	10.5	10.5	12.3	14.1	15.8
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)