

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: P545580

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-82-94-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: P545580
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-82-94-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

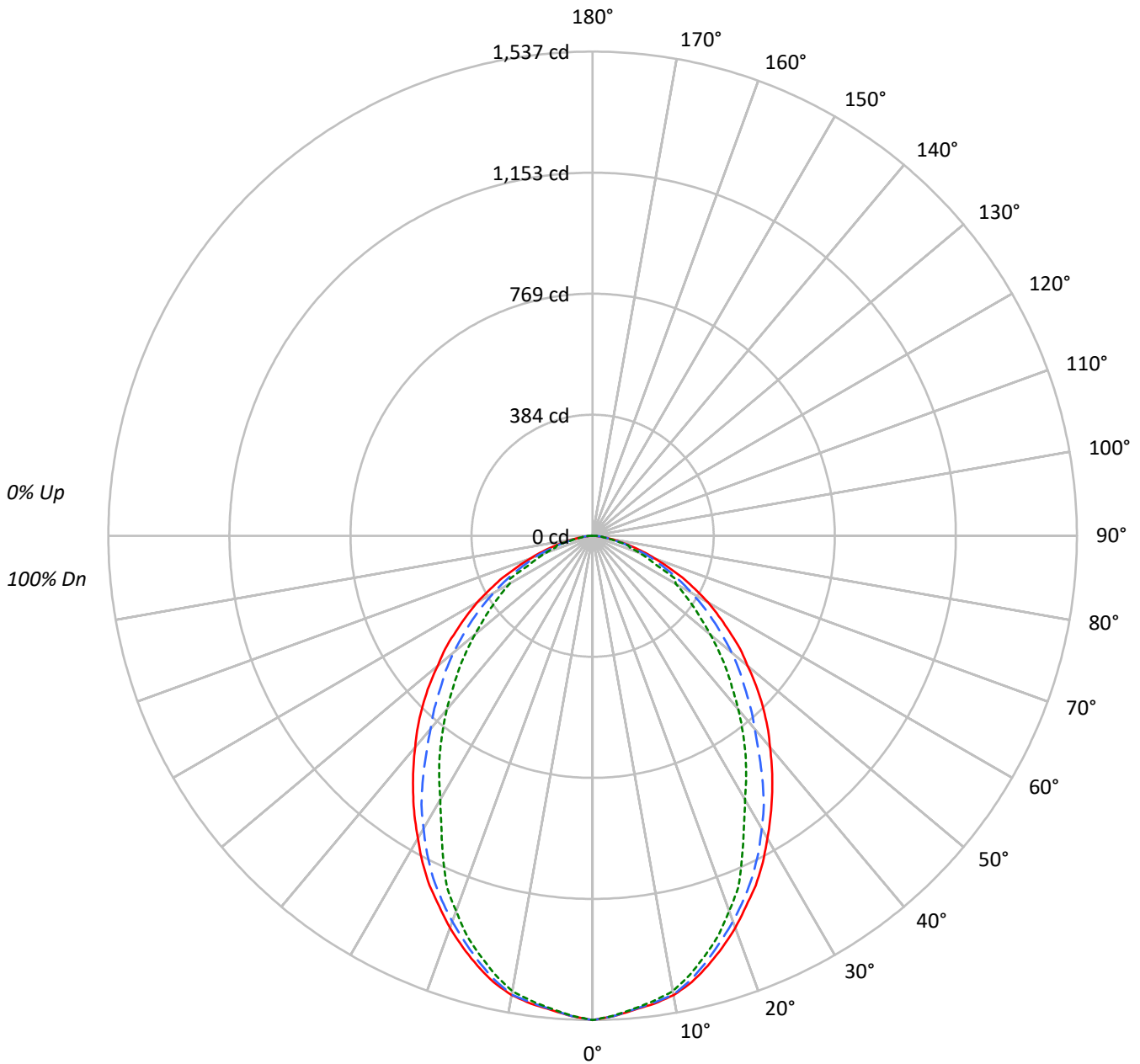
Lumens per Lamp: N/A
Luminaire Lumens: 3018.0 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8274	8274	8274
5°	8162	8152	8142
10°	8091	8081	8023
15°	7872	7793	7685
20°	7584	7461	7258
25°	7271	7114	6670
30°	6892	6671	6008
35°	6527	6165	5558
40°	6156	5619	5057
45°	5803	5195	4572
50°	5372	4821	4078
55°	4969	4369	3652
60°	4553	3903	3271
65°	4006	3418	2897
70°	3300	2993	2461
75°	2624	2292	2402
80°	1764	1652	1543
85°	1099	1315	1538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.1	4.7
10°-20°	392.7	13.0
20°-30°	543.7	18.0
30°-40°	579.8	19.2
40°-50°	528.9	17.5
50°-60°	414.4	13.7
60°-70°	270.1	8.9
70°-80°	119.7	4.0
80°-90°	25.7	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°	1079.6	35.8
0°-40°	1659.3	55.0
0°-60°	2602.6	86.2
0°-90°	3018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3018.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1537	1537	1537	1537	1537	
5°	1511	1509	1509	1507	1507	143
15°	1413	1413	1399	1384	1379	397
25°	1224	1217	1198	1155	1123	562
35°	994	986	938	867	846	621
45°	762	746	682	626	601	587
55°	530	514	466	410	389	475
65°	315	297	268	274	228	310
75°	126	117	110	105	116	135
85°	18	20	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°	1537.3	1537.3	1537.3	1537.3	1537.3
2.5°	1526.7	1526.7	1526.7	1524.9	1524.9
5°	1510.7	1508.9	1508.9	1507.1	1507.1
7.5°	1498.2	1496.5	1494.7	1492.9	1489.3
10°	1480.5	1480.5	1478.7	1469.8	1468.0
12.5°	1452.0	1450.2	1443.1	1430.7	1427.1
15°	1412.9	1412.9	1398.7	1384.5	1379.2
17.5°	1370.3	1368.5	1350.7	1336.5	1329.4
20°	1324.1	1320.5	1302.7	1279.6	1267.2
22.5°	1272.5	1272.5	1251.2	1221.0	1208.5
25°	1224.5	1217.4	1197.9	1155.2	1123.2
27.5°	1169.4	1158.8	1137.4	1077.0	1039.7
30°	1109.0	1103.7	1073.5	995.3	966.8
32.5°	1052.1	1043.3	1011.3	929.5	906.4
35°	993.5	986.4	938.4	867.3	846.0
37.5°	934.8	926.0	865.5	808.7	782.0
40°	876.2	865.5	799.8	748.2	719.8
42.5°	821.1	806.9	742.9	687.8	655.8
45°	762.4	746.4	682.5	625.6	600.7
47.5°	703.8	689.6	630.9	572.3	543.8
50°	641.6	629.1	575.8	517.2	487.0
52.5°	590.0	570.5	519.0	460.3	435.4
55°	529.6	513.6	465.6	410.5	389.2
57.5°	474.5	458.5	414.1	362.6	344.8
60°	423.0	399.9	362.6	318.1	303.9
62.5°	366.1	348.3	316.4	279.0	296.8
65°	314.6	296.8	268.4	273.7	227.5
67.5°	257.7	248.8	223.9	199.1	191.9
70°	209.7	199.1	190.2	163.5	156.4
72.5°	167.1	156.4	144.0	129.7	124.4
75°	126.2	117.3	110.2	104.9	115.5
77.5°	87.1	83.5	78.2	72.9	71.1
80°	56.9	55.1	53.3	51.5	49.8
82.5°	33.8	33.8	33.8	33.8	33.8
85°	17.8	19.5	21.3	23.1	24.9
87.5°	10.7	10.7	12.4	14.2	16.0
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)