

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: P545535

Luminaire Tested: **FMR-12-2-LD4-2HI-35-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: P545535
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-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

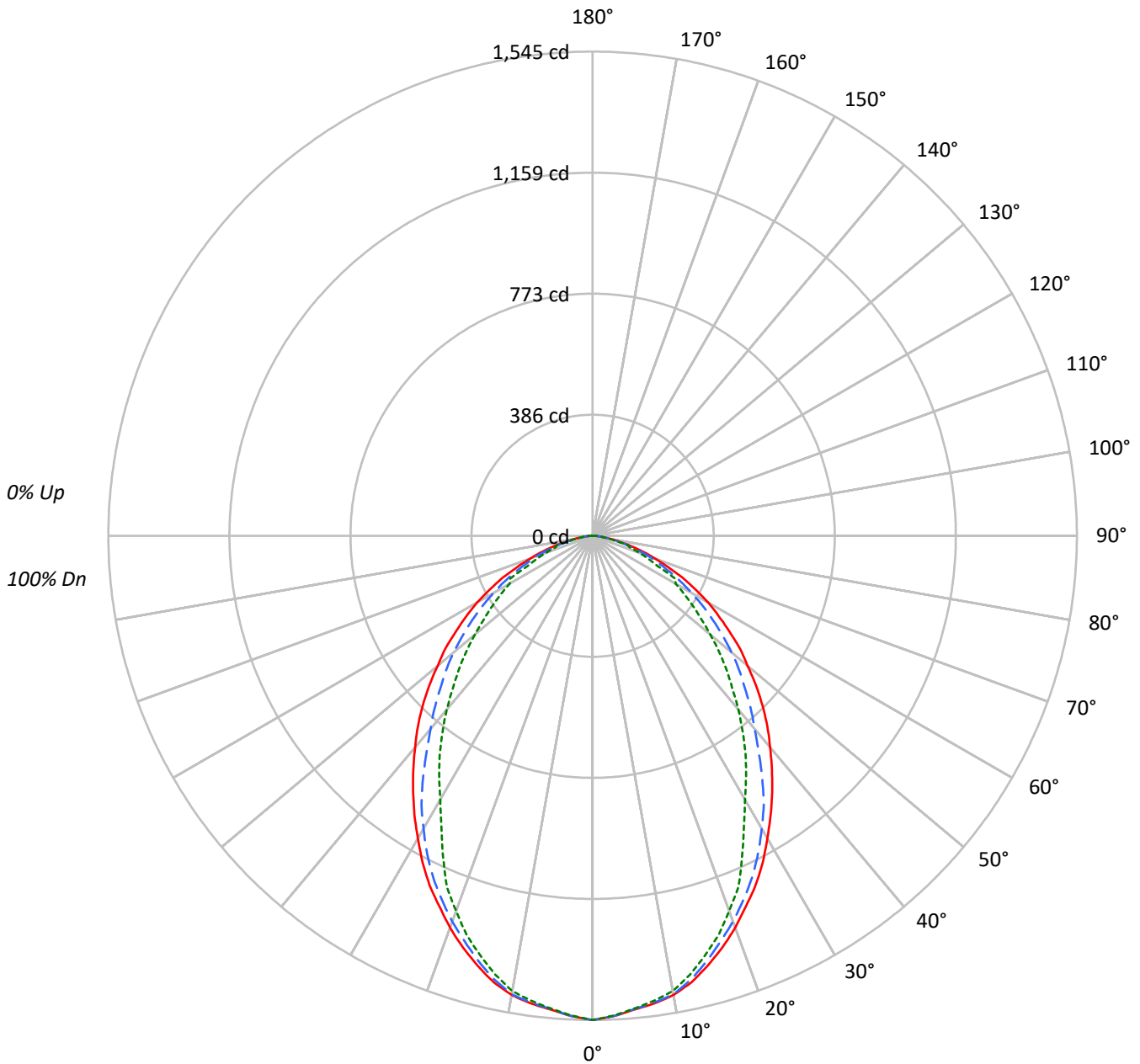
Lumens per Lamp: N/A
Luminaire Lumens: 3033.0 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8315	8315	8315
5°	8202	8192	8183
10°	8131	8121	8062
15°	7911	7832	7723
20°	7621	7498	7294
25°	7308	7149	6703
30°	6926	6704	6038
35°	6560	6196	5586
40°	6186	5647	5082
45°	5832	5221	4595
50°	5399	4845	4098
55°	4995	4391	3671
60°	4576	3922	3287
65°	4025	3435	2911
70°	3317	3007	2474
75°	2637	2302	2414
80°	1773	1661	1550
85°	1105	1321	1544



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.8	4.7
10°-20°	394.7	13.0
20°-30°	546.4	18.0
30°-40°	582.6	19.2
40°-50°	531.5	17.5
50°-60°	416.4	13.7
60°-70°	271.4	8.9
70°-80°	120.2	4.0
80°-90°	25.8	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°	1084.9	35.8
0°-40°	1667.6	55.0
0°-60°	2615.6	86.2
0°-90°	3033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1518	1516	1516	1515	1515	144
15°	1420	1420	1406	1391	1386	399
25°	1231	1224	1204	1161	1129	565
35°	998	991	943	872	850	624
45°	766	750	686	629	604	590
55°	532	516	468	413	391	477
65°	316	298	270	275	229	312
75°	127	118	111	105	116	136
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°	1545.0	1545.0	1545.0	1545.0	1545.0
2.5°	1534.3	1534.3	1534.3	1532.5	1532.5
5°	1518.2	1516.4	1516.4	1514.6	1514.6
7.5°	1505.7	1503.9	1502.1	1500.3	1496.7
10°	1487.8	1487.8	1486.0	1477.1	1475.3
12.5°	1459.2	1457.5	1450.3	1437.8	1434.2
15°	1419.9	1419.9	1405.7	1391.4	1386.0
17.5°	1377.1	1375.3	1357.4	1343.1	1336.0
20°	1330.6	1327.1	1309.2	1286.0	1273.5
22.5°	1278.8	1278.8	1257.4	1227.0	1214.5
25°	1230.6	1223.5	1203.8	1161.0	1128.8
27.5°	1175.2	1164.5	1143.1	1082.4	1044.9
30°	1114.5	1109.2	1078.8	1000.2	971.6
32.5°	1057.4	1048.4	1016.3	934.1	910.9
35°	998.4	991.3	943.1	871.6	850.2
37.5°	939.5	930.6	869.8	812.7	785.9
40°	880.5	869.8	803.7	751.9	723.4
42.5°	825.2	810.9	746.6	691.2	659.1
45°	766.2	750.2	685.9	628.7	603.7
47.5°	707.3	693.0	634.1	575.1	546.5
50°	644.8	632.3	578.7	519.8	489.4
52.5°	593.0	573.3	521.5	462.6	437.6
55°	532.3	516.2	468.0	412.6	391.2
57.5°	476.9	460.8	416.2	364.4	346.5
60°	425.1	401.9	364.4	319.7	305.4
62.5°	367.9	350.1	317.9	280.4	298.3
65°	316.1	298.3	269.7	275.1	228.6
67.5°	259.0	250.1	225.0	200.0	192.9
70°	210.8	200.0	191.1	164.3	157.2
72.5°	167.9	157.2	144.7	130.4	125.0
75°	126.8	117.9	110.7	105.4	116.1
77.5°	87.5	83.9	78.6	73.2	71.4
80°	57.2	55.4	53.6	51.8	50.0
82.5°	33.9	33.9	33.9	33.9	33.9
85°	17.9	19.6	21.4	23.2	25.0
87.5°	10.7	10.7	12.5	14.3	16.1
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)