

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: P545851

Luminaire Tested: **FMR-12-4-LD4-1HI-40-UNV-80-88-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: P545851
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-12-4-LD4-1HI-40-UNV-80-88-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

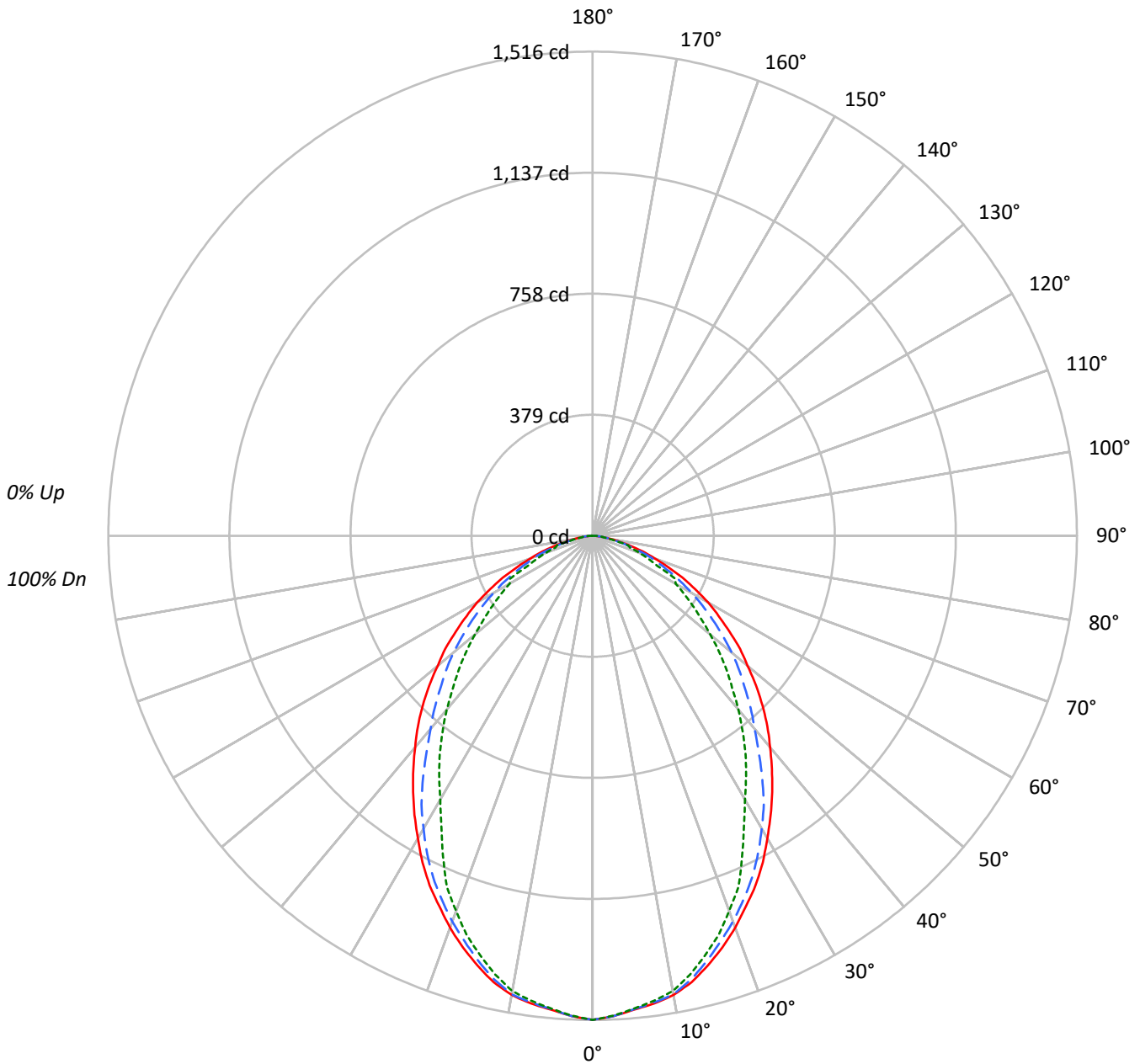
Lumens per Lamp: N/A
Luminaire Lumens: 2976.0 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4079	4079	4079
5°	4024	4019	4014
10°	3989	3984	3956
15°	3882	3842	3789
20°	3739	3679	3578
25°	3585	3507	3289
30°	3398	3289	2962
35°	3218	3040	2740
40°	3035	2770	2493
45°	2861	2561	2254
50°	2649	2377	2010
55°	2450	2154	1801
60°	2245	1924	1613
65°	1975	1685	1428
70°	1627	1475	1213
75°	1293	1130	1184
80°	869	815	761
85°	540	648	756



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	4.7
10°-20°	387.3	13.0
20°-30°	536.1	18.0
30°-40°	571.7	19.2
40°-50°	521.6	17.5
50°-60°	408.6	13.7
60°-70°	266.3	8.9
70°-80°	118.0	4.0
80°-90°	25.3	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°	1064.5	35.8
0°-40°	1636.2	55.0
0°-60°	2566.4	86.2
0°-90°	2976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1516	1516	1516	1516	1516	
5°	1490	1488	1488	1486	1486	141
15°	1393	1393	1379	1365	1360	392
25°	1208	1200	1181	1139	1108	554
35°	980	973	925	855	834	612
45°	752	736	673	617	592	579
55°	522	506	459	405	384	468
65°	310	293	265	270	224	306
75°	124	116	109	103	114	133
85°	18	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1515.9	1515.9	1515.9	1515.9	1515.9
2.5°	1505.4	1505.4	1505.4	1503.7	1503.7
5°	1489.6	1487.9	1487.9	1486.1	1486.1
7.5°	1477.4	1475.6	1473.9	1472.1	1468.6
10°	1459.9	1459.9	1458.1	1449.3	1447.6
12.5°	1431.8	1430.1	1423.1	1410.8	1407.3
15°	1393.3	1393.3	1379.2	1365.2	1360.0
17.5°	1351.2	1349.4	1331.9	1317.9	1310.9
20°	1305.6	1302.1	1284.6	1261.8	1249.6
22.5°	1254.8	1254.8	1233.8	1204.0	1191.7
25°	1207.5	1200.5	1181.2	1139.1	1107.6
27.5°	1153.2	1142.6	1121.6	1062.0	1025.2
30°	1093.6	1088.3	1058.5	981.4	953.4
32.5°	1037.5	1028.7	997.2	916.6	893.8
35°	979.7	972.7	925.3	855.2	834.2
37.5°	921.8	913.1	853.5	797.4	771.1
40°	864.0	853.5	788.6	737.8	709.8
42.5°	809.7	795.6	732.6	678.2	646.7
45°	751.8	736.1	673.0	616.9	592.4
47.5°	694.0	680.0	622.1	564.3	536.3
50°	632.7	620.4	567.8	510.0	480.2
52.5°	581.8	562.6	511.7	453.9	429.4
55°	522.3	506.5	459.2	404.8	383.8
57.5°	467.9	452.2	408.3	357.5	340.0
60°	417.1	394.3	357.5	313.7	299.7
62.5°	361.0	343.5	311.9	275.1	292.7
65°	310.2	292.7	264.6	269.9	224.3
67.5°	254.1	245.4	220.8	196.3	189.3
70°	206.8	196.3	187.5	161.2	154.2
72.5°	164.7	154.2	142.0	127.9	122.7
75°	124.4	115.7	108.7	103.4	113.9
77.5°	85.9	82.4	77.1	71.9	70.1
80°	56.1	54.3	52.6	50.8	49.1
82.5°	33.3	33.3	33.3	33.3	33.3
85°	17.5	19.3	21.0	22.8	24.5
87.5°	10.5	10.5	12.3	14.0	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)