

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: P545853

Luminaire Tested: **FMR-12-4-LD4-1HI-40-UNV-80-96-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: P545853
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-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

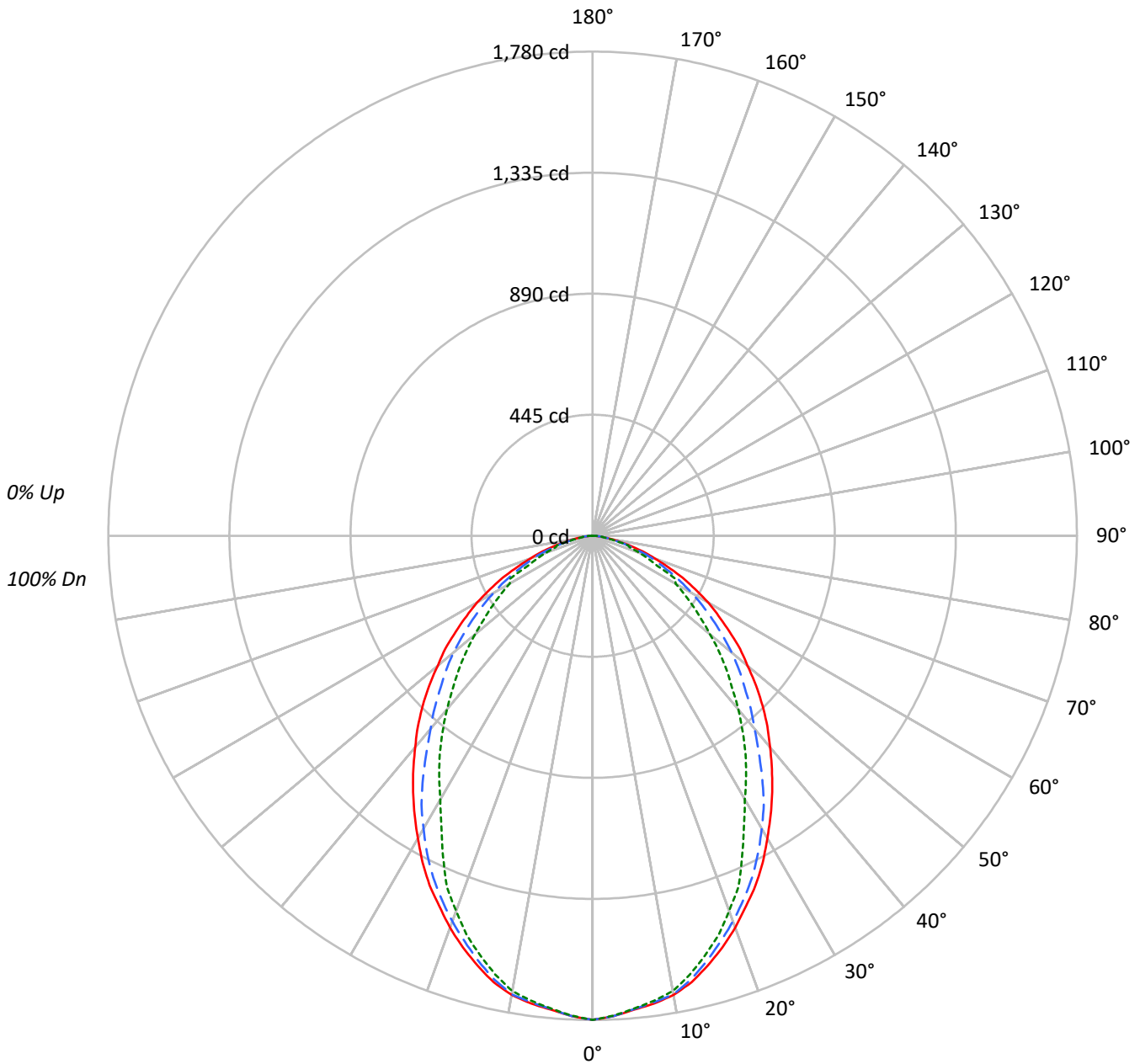
Lumens per Lamp: N/A
Luminaire Lumens: 3494.0 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4789	4789	4789
5°	4724	4719	4713
10°	4683	4678	4644
15°	4557	4511	4448
20°	4390	4319	4201
25°	4209	4118	3861
30°	3989	3862	3478
35°	3778	3569	3217
40°	3563	3253	2927
45°	3359	3007	2647
50°	3110	2791	2360
55°	2877	2529	2114
60°	2636	2259	1893
65°	2319	1978	1677
70°	1910	1733	1425
75°	1519	1327	1390
80°	1020	956	893
85°	636	763	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.7	4.7
10°-20°	454.7	13.0
20°-30°	629.5	18.0
30°-40°	671.2	19.2
40°-50°	612.3	17.5
50°-60°	479.7	13.7
60°-70°	312.7	8.9
70°-80°	138.5	4.0
80°-90°	29.7	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°	1249.8	35.8
0°-40°	1921.0	55.0
0°-60°	3013.1	86.2
0°-90°	3494.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3494.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1780	1780	1780	1780	1780	
5°	1749	1747	1747	1745	1745	166
15°	1636	1636	1619	1603	1597	460
25°	1418	1409	1387	1337	1300	651
35°	1150	1142	1086	1004	979	719
45°	883	864	790	724	696	680
55°	613	595	539	475	451	550
65°	364	344	311	317	263	359
75°	146	136	128	121	134	157
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1779.8	1779.8	1779.8	1779.8	1779.8
2.5°	1767.5	1767.5	1767.5	1765.4	1765.4
5°	1748.9	1746.9	1746.9	1744.8	1744.8
7.5°	1734.5	1732.5	1730.4	1728.4	1724.2
10°	1714.0	1714.0	1711.9	1701.6	1699.6
12.5°	1681.0	1679.0	1670.7	1656.3	1652.2
15°	1635.8	1635.8	1619.3	1602.8	1596.7
17.5°	1586.4	1584.3	1563.8	1547.3	1539.1
20°	1532.9	1528.8	1508.2	1481.4	1467.0
22.5°	1473.2	1473.2	1448.5	1413.5	1399.1
25°	1417.7	1409.4	1386.8	1337.4	1300.4
27.5°	1353.9	1341.5	1316.8	1246.9	1203.7
30°	1283.9	1277.8	1242.8	1152.2	1119.3
32.5°	1218.1	1207.8	1170.8	1076.1	1049.4
35°	1150.2	1142.0	1086.4	1004.1	979.4
37.5°	1082.3	1072.0	1002.0	936.2	905.3
40°	1014.4	1002.0	925.9	866.2	833.3
42.5°	950.6	934.1	860.1	796.3	759.2
45°	882.7	864.2	790.1	724.3	695.5
47.5°	814.8	798.3	730.4	662.5	629.6
50°	742.8	728.4	666.7	598.8	563.8
52.5°	683.1	660.5	600.8	532.9	504.1
55°	613.2	594.6	539.1	475.3	450.6
57.5°	549.4	530.9	479.4	419.7	399.2
60°	489.7	463.0	419.7	368.3	351.8
62.5°	423.9	403.3	366.2	323.0	343.6
65°	364.2	343.6	310.7	316.9	263.4
67.5°	298.3	288.1	259.3	230.4	222.2
70°	242.8	230.4	220.2	189.3	181.1
72.5°	193.4	181.1	166.7	150.2	144.0
75°	146.1	135.8	127.6	121.4	133.7
77.5°	100.8	96.7	90.5	84.4	82.3
80°	65.8	63.8	61.7	59.7	57.6
82.5°	39.1	39.1	39.1	39.1	39.1
85°	20.6	22.6	24.7	26.7	28.8
87.5°	12.3	12.3	14.4	16.5	18.5
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)