

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: P545822

Luminaire Tested: **FMR-12-4-LD4-1HI-35-UNV-80-97-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: P545822
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-35-UNV-80-97-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

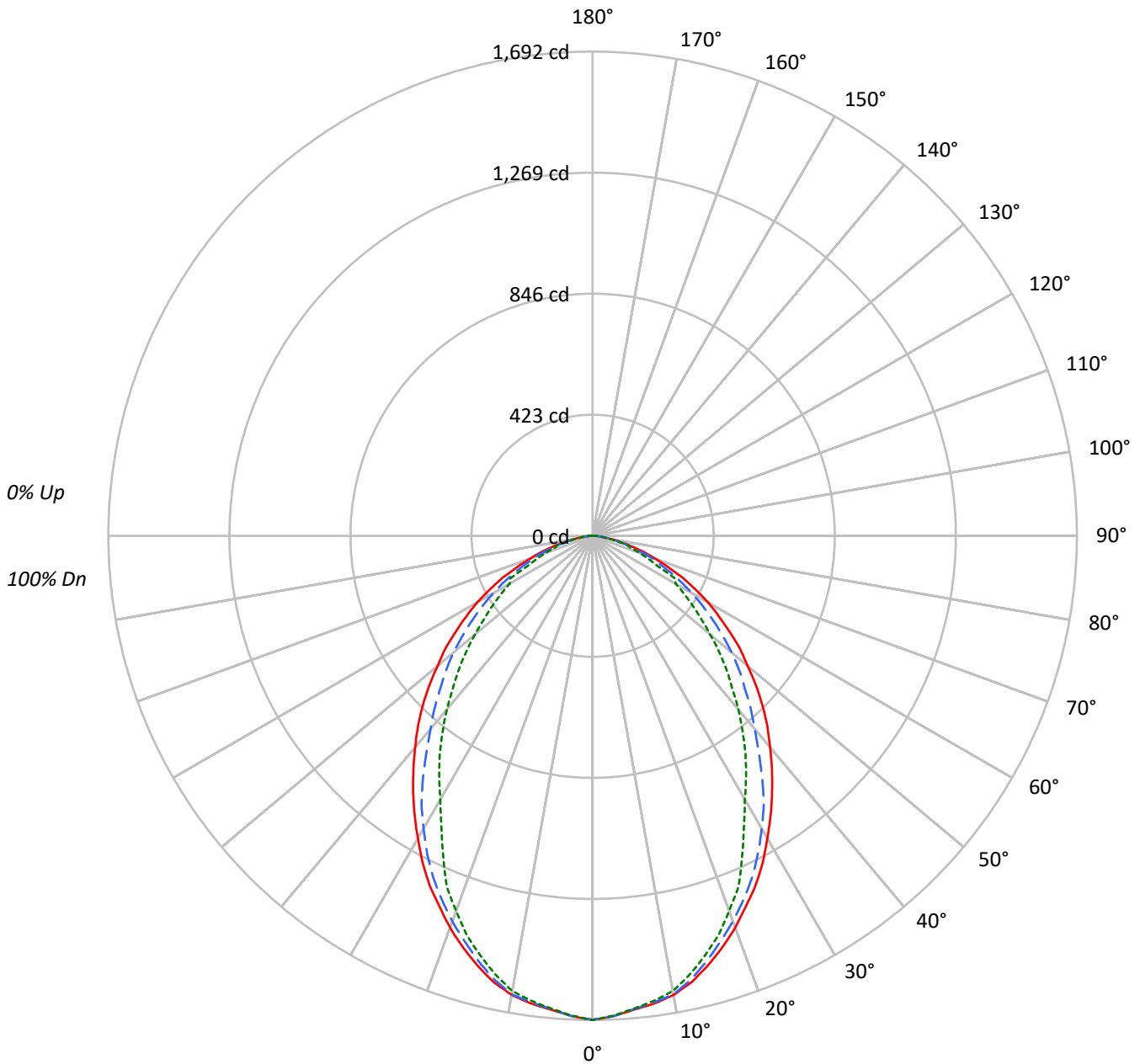
Lumens per Lamp: N/A
Luminaire Lumens: 3321.0 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	4552	4552	4552
5°	4490	4485	4480
10°	4452	4446	4414
15°	4332	4288	4228
20°	4172	4105	3993
25°	4001	3914	3670
30°	3792	3670	3306
35°	3591	3392	3058
40°	3387	3092	2783
45°	3193	2858	2516
50°	2956	2653	2244
55°	2734	2404	2009
60°	2505	2147	1800
65°	2204	1880	1594
70°	1816	1647	1354
75°	1444	1261	1321
80°	970	910	849
85°	605	726	846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.5	4.7
10°-20°	432.2	13.0
20°-30°	598.3	18.0
30°-40°	638.0	19.2
40°-50°	582.0	17.5
50°-60°	456.0	13.7
60°-70°	297.2	8.9
70°-80°	131.7	4.0
80°-90°	28.3	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°	1187.9	35.8
0°-40°	1825.9	55.0
0°-60°	2863.9	86.2
0°-90°	3321.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3321.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1692	1692	1692	1692	1692	
5°	1662	1660	1660	1658	1658	158
15°	1555	1555	1539	1524	1518	437
25°	1348	1340	1318	1271	1236	619
35°	1093	1085	1033	954	931	683
45°	839	821	751	688	661	646
55°	583	565	512	452	428	523
65°	346	327	295	301	250	341
75°	139	129	121	115	127	149
85°	20	22	24	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1691.7	1691.7	1691.7	1691.7	1691.7
2.5°	1679.9	1679.9	1679.9	1678.0	1678.0
5°	1662.3	1660.4	1660.4	1658.4	1658.4
7.5°	1648.6	1646.7	1644.7	1642.8	1638.9
10°	1629.1	1629.1	1627.1	1617.4	1615.4
12.5°	1597.8	1595.8	1588.0	1574.3	1570.4
15°	1554.8	1554.8	1539.1	1523.5	1517.6
17.5°	1507.8	1505.9	1486.3	1470.7	1462.9
20°	1457.0	1453.1	1433.5	1408.1	1394.4
22.5°	1400.3	1400.3	1376.8	1343.6	1329.9
25°	1347.5	1339.6	1318.1	1271.2	1236.0
27.5°	1286.8	1275.1	1251.6	1185.1	1144.1
30°	1220.4	1214.5	1181.2	1095.2	1063.9
32.5°	1157.8	1148.0	1112.8	1022.8	997.4
35°	1093.2	1085.4	1032.6	954.4	930.9
37.5°	1028.7	1018.9	952.4	889.8	860.5
40°	964.2	952.4	880.1	823.3	792.1
42.5°	903.5	887.9	817.5	756.9	721.7
45°	839.0	821.4	751.0	688.4	661.0
47.5°	774.5	758.8	694.3	629.7	598.4
50°	706.0	692.3	633.6	569.1	535.9
52.5°	649.3	627.8	571.1	506.5	479.1
55°	582.8	565.2	512.4	451.8	428.3
57.5°	522.2	504.6	455.7	399.0	379.4
60°	465.5	440.0	399.0	350.1	334.4
62.5°	402.9	383.3	348.1	307.0	326.6
65°	346.2	326.6	295.3	301.2	250.3
67.5°	283.6	273.8	246.4	219.0	211.2
70°	230.8	219.0	209.3	179.9	172.1
72.5°	183.8	172.1	158.4	142.8	136.9
75°	138.9	129.1	121.3	115.4	127.1
77.5°	95.8	91.9	86.1	80.2	78.2
80°	62.6	60.6	58.7	56.7	54.8
82.5°	37.2	37.2	37.2	37.2	37.2
85°	19.6	21.5	23.5	25.4	27.4
87.5°	11.7	11.7	13.7	15.6	17.6
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)