

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: P545886

Luminaire Tested: **FMR-12-4-LD4-1HI-50-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: P545886
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

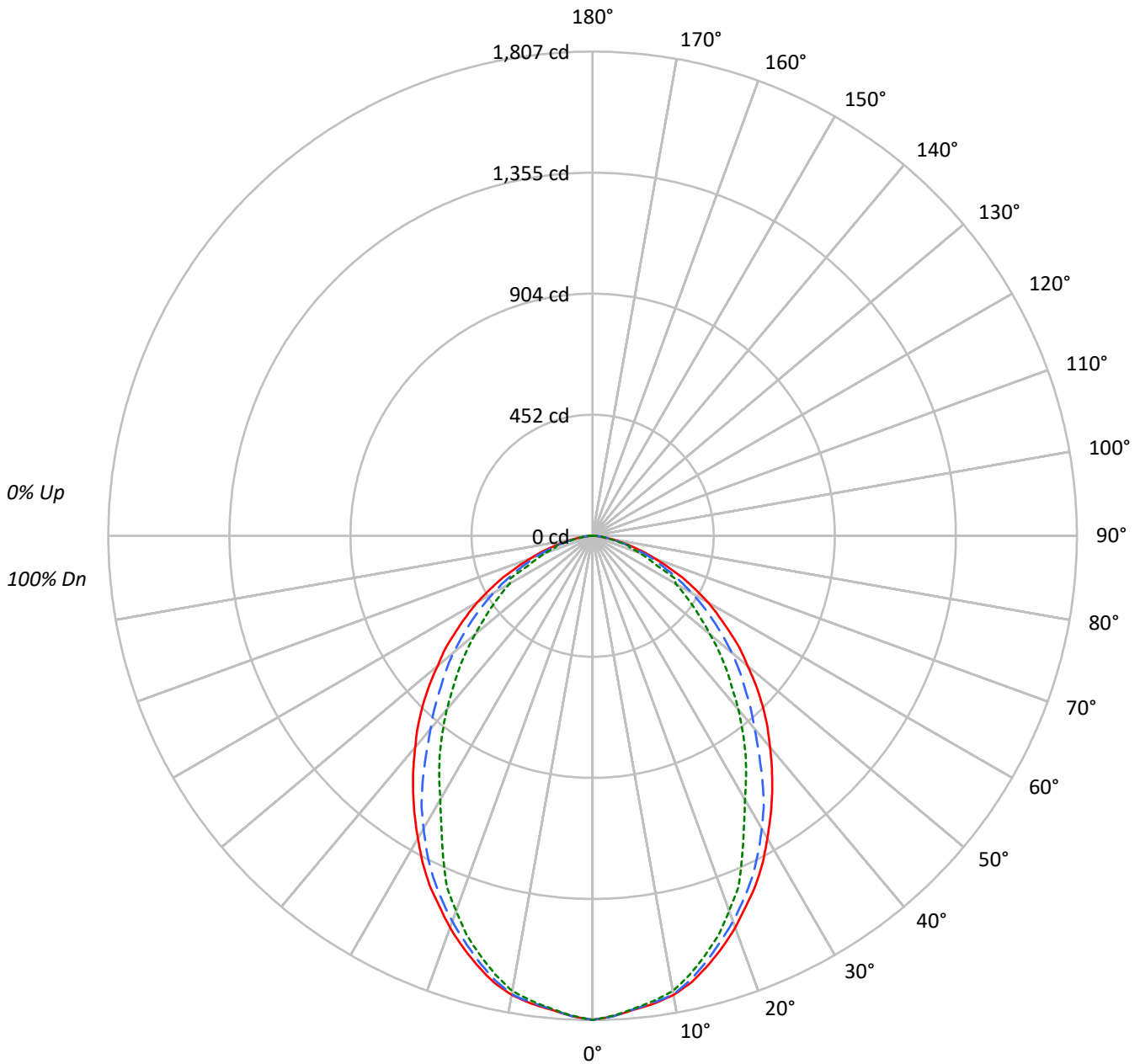
Lumens per Lamp: N/A
Luminaire Lumens: 3547.0 lumens
Efficiency: N/A
Efficacy: 82.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4862	4862	4862
5°	4796	4790	4785
10°	4755	4749	4714
15°	4626	4580	4516
20°	4456	4385	4265
25°	4273	4180	3920
30°	4050	3920	3531
35°	3836	3623	3266
40°	3618	3302	2972
45°	3410	3052	2687
50°	3157	2833	2396
55°	2921	2568	2146
60°	2675	2293	1922
65°	2354	2008	1703
70°	1939	1758	1446
75°	1542	1346	1412
80°	1035	972	907
85°	645	775	902



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.2	4.7
10°-20°	461.6	13.0
20°-30°	639.0	18.0
30°-40°	681.4	19.2
40°-50°	621.6	17.5
50°-60°	487.0	13.7
60°-70°	317.4	8.9
70°-80°	140.6	4.0
80°-90°	30.2	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°	1268.8	35.8
0°-40°	1950.2	55.0
0°-60°	3058.8	86.2
0°-90°	3547.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3547.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1807	1807	1807	1807	1807	
5°	1776	1773	1773	1771	1771	169
15°	1661	1661	1644	1627	1621	467
25°	1439	1431	1408	1358	1320	661
35°	1168	1159	1103	1019	994	730
45°	896	877	802	735	706	690
55°	622	604	547	482	457	558
65°	370	349	315	322	267	364
75°	148	138	130	123	136	159
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°	1806.8	1806.8	1806.8	1806.8	1806.8
2.5°	1794.3	1794.3	1794.3	1792.2	1792.2
5°	1775.5	1773.4	1773.4	1771.3	1771.3
7.5°	1760.8	1758.8	1756.7	1754.6	1750.4
10°	1740.0	1740.0	1737.9	1727.4	1725.3
12.5°	1706.5	1704.4	1696.1	1681.5	1677.3
15°	1660.6	1660.6	1643.9	1627.2	1620.9
17.5°	1610.4	1608.4	1587.5	1570.8	1562.4
20°	1556.1	1552.0	1531.1	1503.9	1489.3
22.5°	1495.6	1495.6	1470.5	1435.0	1420.4
25°	1439.2	1430.8	1407.8	1357.7	1320.1
27.5°	1374.4	1361.9	1336.8	1265.8	1221.9
30°	1303.4	1297.1	1261.6	1169.7	1136.3
32.5°	1236.6	1226.1	1188.5	1092.4	1065.3
35°	1167.6	1159.3	1102.9	1019.3	994.3
37.5°	1098.7	1088.3	1017.2	950.4	919.1
40°	1029.8	1017.2	940.0	879.4	846.0
42.5°	965.0	948.3	873.1	808.4	770.8
45°	896.1	877.3	802.1	735.3	706.0
47.5°	827.2	810.4	741.5	672.6	639.2
50°	754.0	739.4	676.8	607.8	572.3
52.5°	693.5	670.5	609.9	541.0	511.8
55°	622.5	603.7	547.3	482.5	457.4
57.5°	557.7	538.9	486.7	426.1	405.2
60°	497.1	470.0	426.1	373.9	357.2
62.5°	430.3	409.4	371.8	327.9	348.8
65°	369.7	348.8	315.4	321.7	267.4
67.5°	302.9	292.4	263.2	233.9	225.6
70°	246.5	233.9	223.5	192.2	183.8
72.5°	196.3	183.8	169.2	152.5	146.2
75°	148.3	137.9	129.5	123.2	135.8
77.5°	102.4	98.2	91.9	85.6	83.6
80°	66.8	64.8	62.7	60.6	58.5
82.5°	39.7	39.7	39.7	39.7	39.7
85°	20.9	23.0	25.1	27.2	29.2
87.5°	12.5	12.5	14.6	16.7	18.8
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)