

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: P546270

Luminaire Tested: **FMR-12-4-LD4-2LO-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: P546270
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-LD4-2LO-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

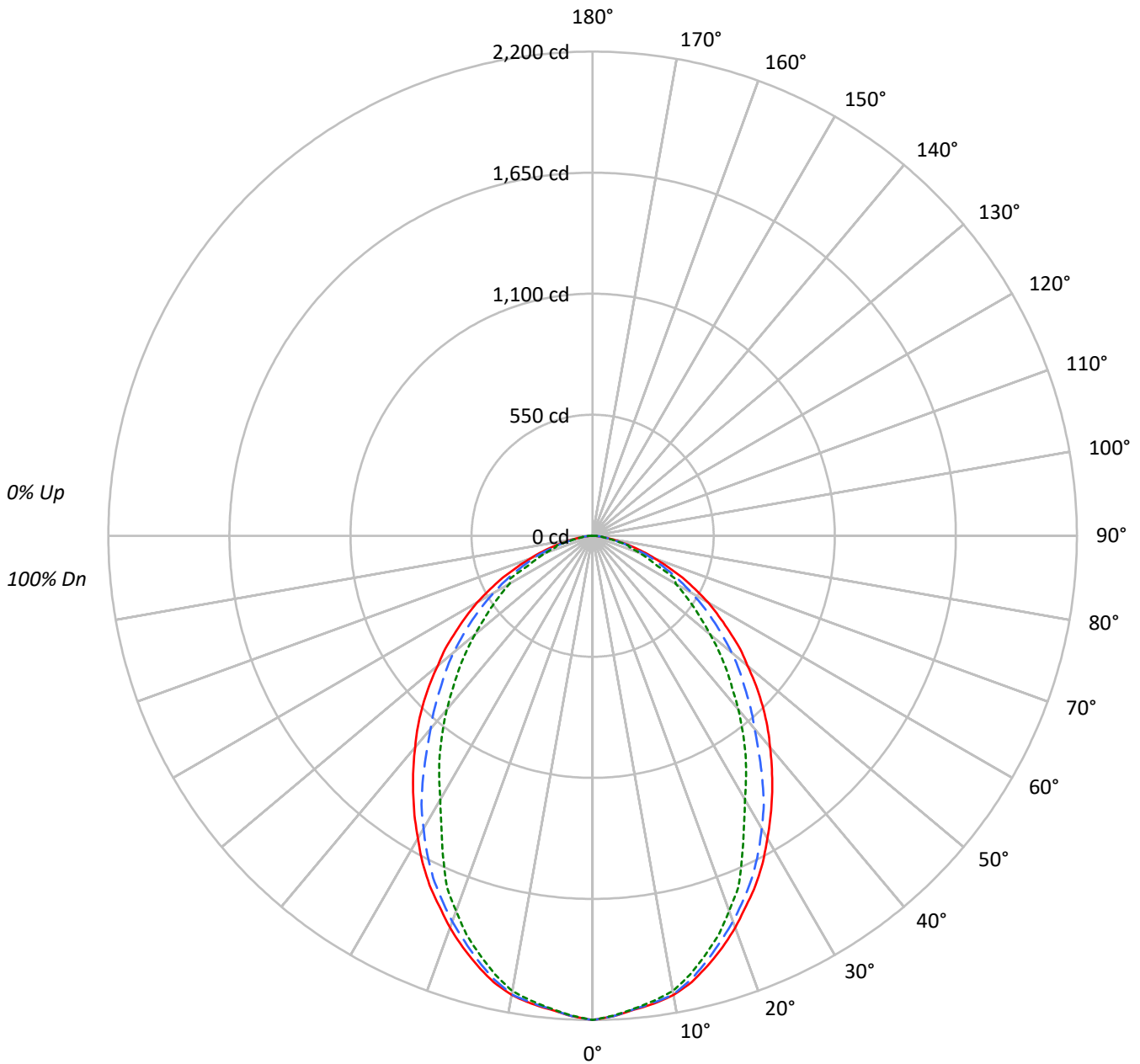
Lumens per Lamp: N/A
Luminaire Lumens: 4319.0 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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

TEST NUMBER: P546270

CATALOG NUMBER: FMR-12-4-LD4-2LO-50-UNV-80-97-EDD

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°	5920	5920	5920
5°	5840	5833	5826
10°	5789	5782	5740
15°	5633	5577	5499
20°	5426	5339	5193
25°	5203	5090	4773
30°	4932	4773	4299
35°	4671	4412	3977
40°	4405	4020	3619
45°	4152	3717	3272
50°	3844	3450	2918
55°	3556	3126	2613
60°	3258	2793	2341
65°	2867	2446	2073
70°	2361	2141	1761
75°	1878	1640	1719
80°	1261	1182	1103
85°	784	942	1099



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.8	4.7
10°-20°	562.0	13.0
20°-30°	778.1	18.0
30°-40°	829.7	19.2
40°-50°	756.9	17.5
50°-60°	593.0	13.7
60°-70°	386.5	8.9
70°-80°	171.2	4.0
80°-90°	36.8	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°	1544.9	35.8
0°-40°	2374.6	55.0
0°-60°	3724.5	86.2
0°-90°	4319.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4319.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2200	2200	2200	2200	2200	
5°	2162	2159	2159	2157	2157	205
15°	2022	2022	2002	1981	1974	568
25°	1752	1742	1714	1653	1607	805
35°	1422	1412	1343	1241	1211	889
45°	1091	1068	977	895	860	840
55°	758	735	666	588	557	680
65°	450	425	384	392	326	444
75°	181	168	158	150	165	194
85°	25	28	30	33	36	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2200.0	2200.0	2200.0	2200.0	2200.0
2.5°	2184.8	2184.8	2184.8	2182.2	2182.2
5°	2161.9	2159.3	2159.3	2156.8	2156.8
7.5°	2144.1	2141.5	2139.0	2136.5	2131.4
10°	2118.7	2118.7	2116.1	2103.4	2100.8
12.5°	2078.0	2075.4	2065.2	2047.4	2042.4
15°	2022.0	2022.0	2001.7	1981.3	1973.7
17.5°	1961.0	1958.4	1933.0	1912.6	1902.5
20°	1894.8	1889.7	1864.3	1831.2	1813.4
22.5°	1821.1	1821.1	1790.6	1747.3	1729.5
25°	1752.4	1742.2	1714.3	1653.2	1607.4
27.5°	1673.6	1658.3	1627.8	1541.3	1487.9
30°	1587.1	1579.5	1536.2	1424.3	1383.6
32.5°	1505.7	1493.0	1447.2	1330.2	1297.1
35°	1421.8	1411.6	1342.9	1241.2	1210.7
37.5°	1337.8	1325.1	1238.6	1157.2	1119.1
40°	1253.9	1238.6	1144.5	1070.8	1030.1
42.5°	1175.1	1154.7	1063.1	984.3	938.5
45°	1091.1	1068.2	976.7	895.3	859.7
47.5°	1007.2	986.8	902.9	819.0	778.3
50°	918.2	900.4	824.1	740.1	696.9
52.5°	844.4	816.4	742.7	658.7	623.1
55°	757.9	735.0	666.4	587.5	557.0
57.5°	679.1	656.2	592.6	518.9	493.4
60°	605.3	572.3	518.9	455.3	434.9
62.5°	523.9	498.5	452.7	399.3	424.7
65°	450.2	424.7	384.1	391.7	325.6
67.5°	368.8	356.1	320.5	284.9	274.7
70°	300.1	284.9	272.1	234.0	223.8
72.5°	239.1	223.8	206.0	185.7	178.0
75°	180.6	167.9	157.7	150.1	165.3
77.5°	124.6	119.5	111.9	104.3	101.7
80°	81.4	78.8	76.3	73.8	71.2
82.5°	48.3	48.3	48.3	48.3	48.3
85°	25.4	28.0	30.5	33.1	35.6
87.5°	15.3	15.3	17.8	20.3	22.9
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)