

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: P546204

Luminaire Tested: **FMR-12-4-LD4-2LO-35-UNV-80-94-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: P546204
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-35-UNV-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

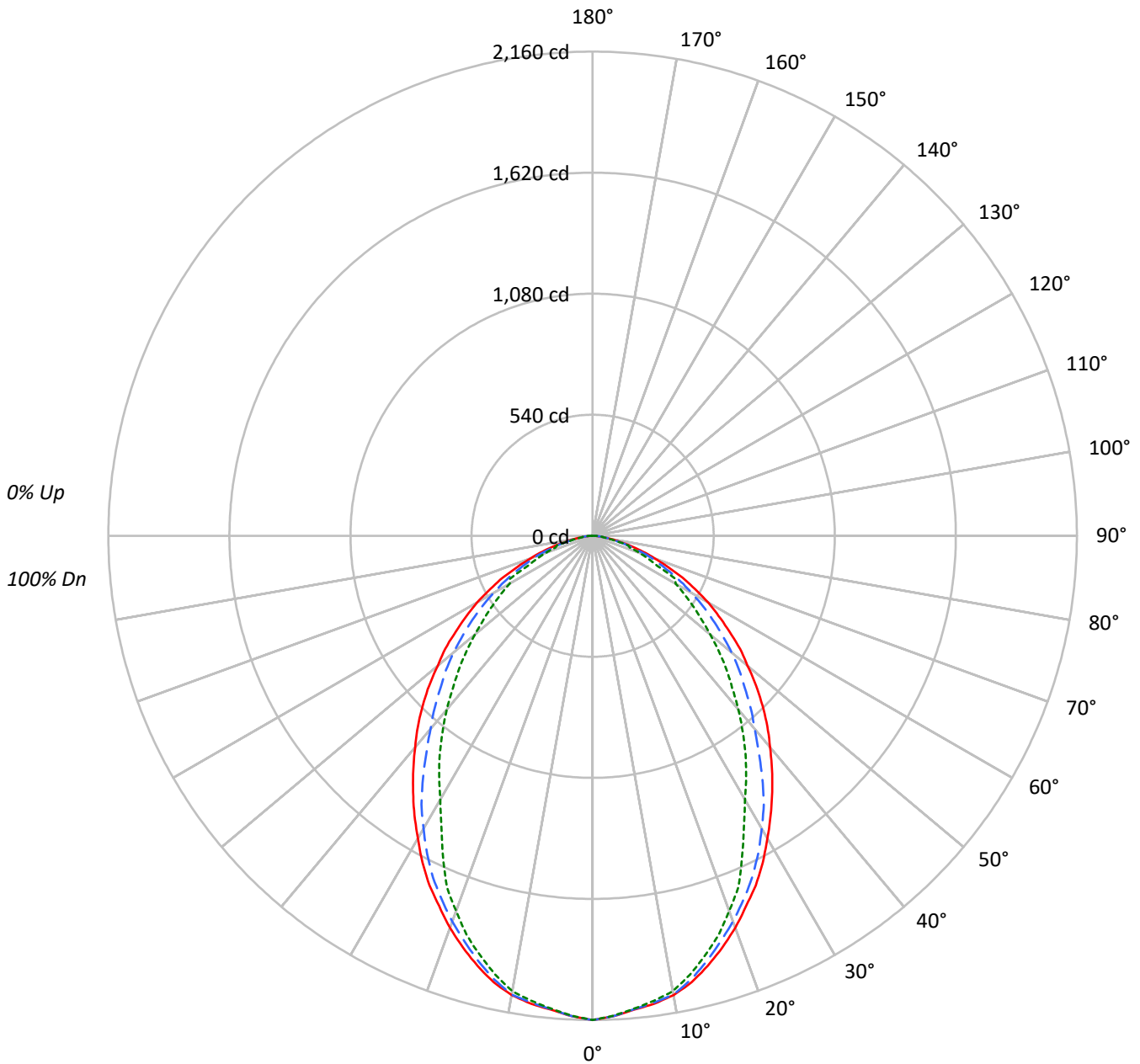
Lumens per Lamp: N/A
Luminaire Lumens: 4241.0 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	5813	5813	5813
5°	5734	5727	5721
10°	5685	5678	5637
15°	5531	5476	5399
20°	5328	5242	5099
25°	5109	4998	4687
30°	4842	4687	4222
35°	4586	4332	3905
40°	4325	3948	3553
45°	4077	3650	3212
50°	3774	3388	2865
55°	3491	3070	2566
60°	3199	2742	2299
65°	2815	2401	2036
70°	2319	2102	1729
75°	1843	1609	1687
80°	1238	1161	1083
85°	772	926	1081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.1	4.7
10°-20°	551.9	13.0
20°-30°	764.1	18.0
30°-40°	814.7	19.2
40°-50°	743.2	17.5
50°-60°	582.3	13.7
60°-70°	379.5	8.9
70°-80°	168.1	4.0
80°-90°	36.1	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°	1517.0	35.8
0°-40°	2331.8	55.0
0°-60°	3657.3	86.2
0°-90°	4241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2160	2160	2160	2160	2160	
5°	2123	2120	2120	2118	2118	202
15°	1986	1986	1966	1946	1938	558
25°	1721	1711	1683	1623	1578	790
35°	1396	1386	1319	1219	1189	873
45°	1071	1049	959	879	844	825
55°	744	722	654	577	547	668
65°	442	417	377	385	320	436
75°	177	165	155	147	162	190
85°	25	28	30	32	35	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2160.3	2160.3	2160.3	2160.3	2160.3
2.5°	2145.3	2145.3	2145.3	2142.8	2142.8
5°	2122.8	2120.3	2120.3	2117.9	2117.9
7.5°	2105.4	2102.9	2100.4	2097.9	2092.9
10°	2080.4	2080.4	2077.9	2065.4	2062.9
12.5°	2040.4	2037.9	2027.9	2010.5	2005.5
15°	1985.5	1985.5	1965.5	1945.5	1938.0
17.5°	1925.5	1923.0	1898.1	1878.1	1868.1
20°	1860.6	1855.6	1830.6	1798.2	1780.7
22.5°	1788.2	1788.2	1758.2	1715.8	1698.3
25°	1720.8	1710.8	1683.3	1623.4	1578.4
27.5°	1643.3	1628.3	1598.4	1513.5	1461.0
30°	1558.4	1550.9	1508.5	1398.6	1358.6
32.5°	1478.5	1466.0	1421.1	1306.2	1273.7
35°	1396.1	1386.1	1318.7	1218.8	1188.8
37.5°	1313.7	1301.2	1216.3	1136.3	1098.9
40°	1231.3	1216.3	1123.9	1051.4	1011.5
42.5°	1153.8	1133.8	1043.9	966.5	921.6
45°	1071.4	1048.9	959.0	879.1	844.1
47.5°	989.0	969.0	886.6	804.2	764.2
50°	901.6	884.1	809.2	726.8	684.3
52.5°	829.2	801.7	729.3	646.8	611.9
55°	744.2	721.8	654.3	576.9	546.9
57.5°	666.8	644.3	581.9	509.5	484.5
60°	594.4	561.9	509.5	447.0	427.1
62.5°	514.5	489.5	444.5	392.1	417.1
65°	442.1	417.1	377.1	384.6	319.7
67.5°	362.1	349.6	314.7	279.7	269.7
70°	294.7	279.7	267.2	229.8	219.8
72.5°	234.8	219.8	202.3	182.3	174.8
75°	177.3	164.8	154.8	147.4	162.3
77.5°	122.4	117.4	109.9	102.4	99.9
80°	79.9	77.4	74.9	72.4	69.9
82.5°	47.5	47.5	47.5	47.5	47.5
85°	25.0	27.5	30.0	32.5	35.0
87.5°	15.0	15.0	17.5	20.0	22.5
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)