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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

FEDERAL TRADE COMMISSION,
Plaintiff,
v.
LIGHTS OF AMERICA, INC., *et al.*,
Defendants.

Case No. SACV10-01333 JVS
(MLGx)

FINDINGS OF FACT AND
CONCLUSIONS OF LAW

1 This matter was tried to the Court on October 30 and 31 and November 1
2 and 2, 2012. The following issues were tried:

3
4 • Claim 1: Whether defendants violated Section 5 of the Federal Trade
5 Commission Act (“FTC Act”), 15 U.S.C. § 45, by engaging in deceptive acts or
6 practices in making false claims with regard to light emitting diode (“LED”) lamps
7 replacing certain wattage incandescent lamps.

8
9 • Claim 2: Whether defendants violated Section 5 of the FTC Act, 15 U.S.C.
10 § 45, by engaging in deceptive acts or practices in making unsubstantiated and/or
11 false claims with regard to the lifetime of their LED lamps.

12
13 • Claim 3: Whether injunctive relief is proper.

14
15 • Claim 4: Whether the defendants are liable for equitable monetary relief
16 and/or disgorgement of ill-gotten gains.

17
18 (Pretrial Conference Order, ¶ 7, Docket No. 301.) In accordance with the Court’s
19 usual practice in Bench Trials, direct examination was presented by way of
20 declaration, and the witnesses were then tendered for cross-examination, followed
21 in most cases by redirect and recross-examination. The Court has received the
22 parties’s pretrial and post-trial Proposed Findings of Fact and Conclusions of Law
23 (Docket Nos. 311, 314, 355, 356.)

24
25 After reviewing the procedural background, the Court now enter its Findings
26 of Fact and Conclusions of Law.

1 respect to Count II of the Amended Complaint, and denied the Vakils' motion for
2 summary judgment. (Docket No. 243 ["MSJ Order"].)

3
4 8. On September 17, 2012, defendants filed a motion for reconsideration of
5 the Court's order granting the FTC's motion for partial summary judgment.
6 (Docket No. 264. After further briefing, the Court denied defendants' motion for
7 reconsideration on October 24, 2012. (Docket No. 317.)

8
9 FINDINGS OF FACT

10
11 I. The Parties.

12
13 9. The FTC is an independent agency of the United States Government and
14 was created by statute. 15 U.S.C. §§ 41-58. The FTC enforces Section 5(a) of the
15 FTC Act, 15 U.S.C. § 45(a), which prohibits unfair or deceptive acts or practices in
16 or affecting commerce.

17
18 10. The FTC may initiate federal district court proceedings, through its own
19 attorneys, to enjoin violations of the FTC Act and to secure such other equitable
20 relief, including rescission or reformation of contracts, restitution, disgorgement of
21 ill-gotten gains and other equitable monetary relief, as may be appropriate in each
22 case. 15 U.S.C. §§ 53(b), 56(a)(2)(A).

23
24 11. LOA is a California corporation with its principal place of business in
25 Walnut, California. LOA is privately-owned, employing approximately 400
26 people in its manufacturing and distribution facility in Walnut, California, and in
27 its distribution facility in Philadelphia, Pennsylvania. LOA also operates a wholly-

1 owned subsidiary manufacturing facility in Shanghai. (Stipulated Fact 5¹; U.
2 Vakil,² ¶ 13.)

3
4 12. LOA transacts or has transacted business in this District and throughout
5 the United States. At all times relevant to the Amended Complaint, LOA has
6 advertised, marketed, distributed, or sold lighting products to consumers
7 throughout the United States.

8
9 13. Starting in the late 1970s, LOA designed and sold Compact Fluorescent
10 Light Bulbs (“CFLs”). (Stipulated Fact 18.)

11
12 14. Defendant Usman Vakil is the founder, President, and Chairman of the
13 Board of LOA and has a fifty-one % ownership interest in the company.
14 (Stipulated Facts 8-10; U. Vakil Answer ¶ 8.) Usman has a degree in mechanical
15 engineering. (U. Vakil, ¶ 3).

16
17 15. Defendant Farooq Vakil is the Executive Vice President of LOA and has
18 a forty-nine % ownership interest in the company. (Stipulated Facts 11-12; F.
19 Vakil Answer ¶ 9.) Farooq has two degrees in civil engineering. (F. Vakil, ¶ 3.)

20
21 16. At all relevant times, the alleged acts and practices of defendants have
22 been in or affecting commerce, as “commerce” is defined in Section 4 of the FTC
23 Act, 15 U.S.C. § 44. (LOA Answer ¶ 4.)

24
25
26 _____
27 ¹The Stipulated Facts are found at paragraph 5 of the Final Pretrial Conference Order,
Docket No. 301.

28 ²The direct declarations are referred to by the witness’ name; here U. Vakil.

1 B. LOA's Business.

2
3 17. Since 2007, LOA has advertised, marketed and sold light bulbs
4 (“lamps”) that use 5mm LEDs as a light source.

5
6 18. In 2003, Aijaz Taj (“Taj”) joined LOA as an engineer. (Stipulated Fact
7 17.) Taj has been and is responsible for the development and engineering of
8 LOA’s LED Lamps. (Taj, ¶ 2.)

9
10 19. When LOA first decided to enter the LED market, Usman initially put
11 Taj in charge of the LEDs and told him to start exploring what is available, what is
12 not available, and what kind of products can be made using the LED technology.
13 (U. Vakil, ¶ 18.)

14
15 20. In March 1992, Brian Halliwell (“Halliwell”) started working at LOA in
16 marketing and sales. (Stipulated Fact 14.) Halliwell has a degree in electrical
17 engineering. (Halliwell, ¶¶ 1-2.)

18
19 21. In 1997, Halliwell took over as VP of Marketing and Sales to replace
20 Farooq Vakil. (Stipulated Fact 16.)

21
22 22. In 2007, after consultation with Taj and Halliwell, Usman made the
23 executive decision for LOA to produce LED lighting products for consumers. He
24 made Taj, a qualified electrical engineer, with years of experience in lighting
25 technology, the head of the LED-engineering department. Usman delegated to
26 Halliwell, having a degree in electrical engineering and, at the time, fifteen (15)
27 years of marketing experience in lighting products, the responsibility marketing
28 and sales of LED products. (U. Vakil, ¶ 19; Nov. 1 Trial Tr. 170:1-23.)

1
2 23. Halliwell headed the efforts at LOA to develop an LED product line and
3 thus transition LOA's traditional CFL business to the SSL business. (Halliwell, ¶
4 19.)

5
6 24. LOA's LED lamps are light bulbs that can be used in households in
7 place of incandescent bulbs. (LOA Answer ¶ 10.)

8
9 25. An LED is a semiconductor light source. LEDs have been used as
10 indicator lamps in many devices and systems for a long time now and are
11 increasingly used for other specific lighting applications. Appearing as practical
12 electronic components in 1962, early LEDs emitted low-intensity red light and
13 later green, but modern versions are available across the visible, ultraviolet, and
14 infrared wavelength spectrums. (Ronen, ¶ 12.)

15
16 26. When a light-emitting diode is forward-biased (switched on), electrons
17 are able to recombine with holes within the device, releasing energy in the form of
18 photons. This effect is called electroluminescence and the basic color of the light
19 (corresponding to the energy of the photon) is determined by the energy gap of the
20 semiconductor. (Id., ¶ 13.)

21
22 27. An LED is often small in area (less than 1mm²), and optical components
23 integrated into the package, *i.e.*, a lens, may be used to shape its radiation pattern.
24 (Id., ¶ 14.)

1 28. LEDs present many advantages over incandescent light sources
2 including lower energy consumption, longer lifetime, improved physical
3 robustness, smaller size, and faster switching. (Id., ¶ 15.)
4

5 29. The LED lamps manufactured and sold by LOA that are at issue in this
6 case have the following model numbers: 2001LED10-65K, 2001LED53IN-65K,
7 2001LEDE53OUT-65K, 2001LEDE26-65K, 2002LEDP30-65K, 2002LEDR30-
8 65K, 2003LEDP38-65K, 2004LEDDL-35K, 2025LED-30K, 2025LED-65K,
9 2025LEDE12-30K, 2025LEDE12-65K, 2026LED-30K, 2026LED-65K, and
10 2035LED-30K. (Stipulated Fact 1.)
11

12 30. The majority of the LED Lamps at issue in this case were manufactured
13 and produced at LOA's facility in Shanghai, China. (Trial Ex. 585 - LOA Resp.
14 Int. Nos. 40-41.)
15

16 31. LED light bulbs can produce the same amount of light as incandescent,
17 compact fluorescent, and other lamps but LED light bulbs do so by using less
18 energy (i.e., watts). (Stipulated Fact 3.)
19

20 32. LOA sold its LED Lamps through retailers located throughout the
21 United States and Canada, including Walmart, Sam's Club, ACE Hardware,
22 Costco, and Kroger, as well as other retail businesses. (Stipulated Fact 19; LOA
23 Answer ¶ 11.)
24

25 33. Consumers also could purchase defendants' LED Lamps from Internet
26 websites of numerous retailers, such as Amazon.com, Sam's Club, and ACE
27 Hardware through at least October 2010. (LOA Answer ¶ 11.)
28

1 34. LOA widely disseminated its LED Lamps. (LOA Depo. (Halliwell)
2 149.)

3
4 35. LOA continues to advertise and sell LED and other types of lamps to the
5 public through retailers. However, the bulk of LOA's LED lamps presently use
6 "power" LEDs as a light source, not 5 mm LEDs. (LOA Depo. (Halliwell) 113.)

7
8 36. LOA sold seven models of LED Lamps to different retailers: 2001,
9 2002, 2003, 2004, 2025, 2026 and 2035 models. All used 5mm LEDs, all of which
10 pointed in the same direction. (Halliwell, ¶ 22.)

11
12 37. The 2001 model was a small "MR-16" track light. A picture of this
13 product appears on the exhibits referenced on the table below. (Halliwell, ¶ 23.)

14
15 38. The 2002 models were flood lights. A picture of this product appears on
16 the exhibits referenced on the table below and samples of two versions are parts of
17 Exs. 474, 476, and 478. (Id., ¶ 24; F. Vakil, ¶ 55.)

18
19 39. The 2003 models were flood lights. A picture of this product appears on
20 the exhibits referenced on the table below and samples of four versions are parts of
21 Exs. 474, 476, and 479. (Halliwell, ¶ 25; F. Vakil, ¶ 55.)

22
23 40. The 2004 models were accent down lights. A picture of this product
24 appears on the exhibits referenced on the table below and a sample of one version
25 is part of Ex. 474. (Halliwell, ¶ 26; F. Vakil, ¶ 55.)

1 41. The 2025 models were flame tip décor accent lights. A picture of this
2 product appears on the exhibits referenced on the table below and samples of four
3 versions are parts of Exs. 474, 475, 481, and 482. (Halliwell, ¶ 27; F. Vakil, ¶ 55.)
4

5 42. The 2026 models were flame tip lights. A picture of this product
6 appears on the exhibits referenced on the table below and samples of two versions
7 are parts of Ex. 475. (Halliwell, ¶ 28; F. Vakil, ¶ 55.)
8

9 43. The 2035 models were globe lamps. A picture of this product appears
10 on the exhibits referenced on the table below. (Halliwell, ¶ 29.)
11

12 44. LOA made claims about its LED Lamps on its product packaging.
13 (Stipulated Fact 22.)
14

15 45. Starting in February 2008, LOA sold its LED Lamps in product
16 packaging that it designed. (Stipulated Fact 21.)
17

18 46. In its LED Lamps' packaging and product displays, LOA never
19 informed consumers that it was selling its LED Lamps as part of a trial or test run
20 of the products. (Halliwell Depo. 150.)
21

22 47. LOA prepared its LOA LED Lamp packaging with the expectation that
23 consumers would rely on the information on the packaging. (LOA Depo.
24 (Halliwell) 149.)
25

26 48. Consumers purchasing LOA's LED Lamps would believe everything on
27 the product packaging was true. (Halliwell Depo. 150.)
28

1 49. LOA advertised, marketed, promoted, distributed, offered for sale, or
2 sold its LED Lamps using some or all of the following claims: (1) comparing its
3 LED Lamps to incandescent watt³ bulbs; (2) identifying the lumen⁴ output of its
4 LED Lamps; and (3) stating that its LED Lamps would last a specified number of
5 hours. (LOA Answer ¶ 12.)

6
7 50. The parties stipulated that the following Exhibits at the specified Bates-
8 numbered pages show representative images of LED Lamp product packaging that
9 was used by LOA:

10
11

	Model No.	Deposition Exhibit and Bates No.
12 a	2001LED10-65K	Ex. 159 at LOA-00000770
13		Ex. 159 at LOA-00000754
14		Ex. 320 at LOA-00170921
15		Ex. 321 at LOA-00000199
16		Ex. 289 at FTC00117

17
18 ³Watt (W): the unit of electrical power (energy), defined as 1 Joule per
19 second and which equals the product of 1 volt (DC or RMS AC) times 1 amp.
(Ronen, ¶ 53.)

20
21 ⁴Lumen (lm): the unit of luminous flux (Φ), *i.e.*, the amount of light energy
22 per unit time. The overall light output of a luminous source is measured in lumens.
23 A lamp's light output rating is expressed in lumens, and is a measure of the total
24 amount of light emitted in all directions per unit time. By definition, 1 lumen is the
25 amount of light produced by a 1 candela source radiating out through 1 steradian (a
26 specific cone shaped solid unit angle of 65.54 degrees) within an imaginary sphere
27 surrounding the light source. One candela illuminates the entire surface of a 1
28 meter radius sphere at an average 1 lumen for each square meter of surface of the
entire sphere. Because there are 4π or 12.57 steradians in a sphere, any 1 candela
intensity light source produces 12.57 (4π) lumens of total visible light radiated in
all directions. (See Ex. 340, pp. 2, 5; Ronen, ¶ 46.)

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	Model No.	Deposition Exhibit and Bates No.
		Ex. 159 at LOA-00000776
		Ex. 320 at LOA-00170934
		Ex. 321 at LOA-00000196
b	2001LED53IN-65K	Ex. 159 at LOA-00000772
		Ex. 320 at LOA-000170922
		Ex. 321 at LOA-00000200
		Ex. 159 at LOA-00000756
		Ex. 159 at LOA-00000775
		Ex. 289 at FTC00115
		Ex. 320 at LOA-000170935
		Ex. 321 at LOA-00000197
		Ex. 289 at FTC00108
c	2001LED53OUT-65K	Ex. 159 at LOA-00000771
		Ex. 320 at LOA-000170923
		Ex. 321 at LOA-00000201
		Ex. 159 at LOA-00000755
		Ex. 159 at LOA-00000775
		Ex. 289 at FTC00116
		Ex. 320 at LOA-000170936
		Ex. 321 at LOA-00000198
		Ex. 289 at FTC00113
d	2001LEDE26-65K	Ex. 159 at LOA-00000760
		Ex. 159 at LOA-00000759
		Ex. 159 at LOA-00000757
		Ex. 320 at LOA-00170920
		Ex. 321 at LOA-00000199
		Ex. 289 at FTC00114
		Ex. 159 at LOA-00000779
		Ex. 289 at FTC00109
		Ex. 289 at FTC00112
		Ex. 320 at LOA-000170933
		Ex. 321 at LOA-00000195
		Ex. 321 at LOA-00000196
e	2002LEDP30-65K	Ex. 159 at LOA-00000785
		Ex. 159 at LOA-00000783

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	Model No.	Deposition Exhibit and Bates No.
		Ex. 159 at LOA-00000784
		Ex. 289 at FTC00125
		Ex. 289 at FTC00128
f	2002LEDR30-65K	Ex. 159 at LOA-00000794
		Ex. 289 at FTC00126
		Ex. 159 at LOA-00000798
		Ex. 159 at LOA-00000797
		Ex. 321 at LOA-00000203
		Ex. 320 at LOA-000170925
		Ex. 159 at LOA-00000780
		Ex. 289 at FTC00142
		Ex. 289 at FTC00127
g	2003LEDP38-65K	Ex. 159 at LOA-00000807
		Ex. 159 at LOA-00000793
		Ex. 159 at LOA-00000787
		Ex. 159 at LOA-00000786
		Ex. 289 at FTC00143
		Ex. 159 at LOA-00000789
		Ex. 159 at LOA-00000804
		Ex. 320 at LOA-000170926
		Ex. 321 at LOA-00000205
		Ex. 289 at FTC00144
		Ex. 289 at FTC00145
		Ex. 320 at LOA-00170938
		Ex. 289 at FTC00129
		Ex. 289 at FTC00130
		Ex. 320 at LOA-00170937
		Ex. 321 at LOA-00000204
h	2004LEDDL-35K	Ex. 159 at LOA-00000808
		Ex. 159 at LOA-00000769
		Ex. 320 at LOA-00170927
		Ex. 321 at LOA-00000206
		Ex. 159 at LOA-00000774
		Ex. 159 at LOA-00000799
		Ex. 320 at LOA-00170939

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	Model No.	Deposition Exhibit and Bates No.
		Ex. 321 at LOA-00000207
		Ex. 289 at FTC00131
I	2025LED-30K	Ex. 320 at LOA-00170928
		Ex. 321 at LOA-00000210
		Ex. 159 at LOA-00000765
		Ex. 159 at LOA-00000766
		Ex. 289 at FTC00132
		Ex. 320 at LOA-00170940
		Ex. 321 at LOA-00000209
		Ex. 320 at LOA-00170946
		Ex. 321 at LOA-00000208
j	2025LED-65K	Ex. 321 at LOA-00000213
		Ex. 159 at LOA-00000767
		Ex. 159 at LOA-00000768
		Ex. 289 at FTC00134
		Ex. 320 at LOA-00170941
		Ex. 321 at LOA-00000212
k	2025LEDE12-30K	Ex. 320 at LOA-00170929
		Ex. 321 at LOA-00000215
		Ex. 159 at LOA-00000809
		Ex. 159 at LOA-00000761
		Ex. 159 at LOA-00000800
		Ex. 159 at LOA-00000752
		Ex. 159 at LOA-00000753
		Ex. 289 at FTC00147
		Ex. 289 at FTC00148
		Ex. 159 at LOA-00000812
		Ex. 289 at FTC00150
		Ex. 289 at FTC00138
		Ex. 289 at FTC00149
		Ex. 320 at LOA-00170942
		Ex. 321 at LOA-00000216
		Ex. 320 at LOA-00170948
		Ex. 321 at LOA-00000214
l	2025LEDE12-65K	Ex. 320 at LOA-00170930

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	Model No.	Deposition Exhibit and Bates No.
		Ex. 321 at LOA-00000220
		Ex. 159 at LOA-00000795
		Ex. 159 at LOA-00000796
		Ex. 159 at LOA-00000762
		Ex. 289 at FTC00135
		Ex. 289 at FTC00136
		Ex. 289 at FTC00137
		Ex. 321 at LOA-00000212
		Ex. 320 at LOA-00170943
		Ex. 320 at LOA-00170952
		Ex. 321 at LOA-00000222
		Ex. 320 at LOA-00170951
		Ex. 321 at LOA-00000219
		Ex. 321 at LOA-00000221
m	2026LED-30K	Ex. 320 at LOA-00170931
		Ex. 321 at LOA-00000223
		Ex. 159 at LOA-00000810
		Ex. 159 at LOA-00000763
		Ex. 159 at LOA-00000764
		Ex. 159 at LOA-00000802
		Ex. 289 at FTC00151
		Ex. 159 at LOA-00000811
		Ex. 159 at LOA-00000777
		Ex. 289 at FTC00141
		Ex. 320 at LOA-00170944
		Ex. 321 at LOA-00000228
		Ex. 321 at LOA-00000224
n	2026LED-65K	Ex. 320 at LOA-00170932
		Ex. 321 at LOA-00000226
		Ex. 159 at LOA-00000773
		Ex. 159 at LOA-00000778
		Ex. 289 at FTC00139
		Ex. 289 at FTC00140
		Ex. 320 at LOA-00170945
		Ex. 321 at LOA-00000229
		Ex. 320 at LOA-00170954

	Model No.	Deposition Exhibit and Bates No.
		Ex. 321 at LOA-00000227
o	2035LED-30K	Ex. 289 at FTC00152
		Ex. 289 at FTC00153
		Ex. 320 at LOA-00170955
		Ex. 321 at LOA-00000230
		Ex. 321 at LOA-00000231
		Ex. 320 at LOA-00170956
		Ex. 320 at LOA-00170957
		Ex. 320 at LOA-00170958

(Stipulated Fact 23.)

C. LOA’s Replaces Watts Claims.

51. For each of the following model numbers, LOA claimed that its LED lamp “replaces __ watts,” ranging from 20 to 45 watts: 2001LED10-65K, 2001LED53IN-65K, 2001LED53OUT-65K, 2001LEDE26-65K, 2002LEDP30-65K, 2002LEDR30-65K, 2003LEDP38-65K, 2004LEDDL-35K, 2025LED-30K, 2025LED-65K, 2025LEDE12-30K, 2025LEDE12-65K, 2026LED-30K, and 2026LED-65K (the “Replaces Watts Lamps”). (Trial Exs. 159, 289, 320, 321.) The Court refers to these claims collectively as “Replaces Watts claims.”

52. For LOA’s LED Lamp packaging with Replaces Watts claims, the only other light output information on the package was a statement that the LED Lamp produced either “warm white light” or “bright white light.” (Trial Ex. 159 (LOA-00000752-757, 759-775, 780-785, 788-789, 793-800, 802-05, 807-10), Trial Ex. 289 (FTC00114-117, 143), Trial Ex. 320 (LOA-00170921-932, 939), Trial Ex. 321 (LOA-00000199-204, 206-07, 213, 215, 220, 223, 226).)

1 53. For LOA's LED Lamp packaging with Replaces Watts claims, LOA
2 placed other information on the package related to energy use, energy savings,
3 efficiency, and longevity. (Trial Ex. 159 (LOA-00000752-757, 759-775, 780-785,
4 788-789, 793-800, 802-05, 807-10), Trial Ex. 289 (FTC00114-117, 143), Trial Ex.
5 320 (LOA-00170921-932, 939), Trial Ex. 321 (LOA-00000199-204, 206-07, 213,
6 215, 220, 223, 226).)

7
8 54. LOA distributed product brochures to some of its retailer customers
9 from 2007 until at least August 2009. (LOA Answer ¶ 17; Trial Ex. 582-LOA 2d
10 Supp. Resp. Int. Nos. 2 and 7; LOA Depo. (Halliwell) 70.)

11
12 55. In its product brochures, LOA referenced "Incandescent Comparison"
13 claims, instead of the "replaces __ watts" claims. (LOA Answer ¶ 17; Trial Exs.
14 154, 502.)

15
16 1. The Timing of LOA's Replaces Watts Claims.

17
18 56. LOA made its "replaces __ watts" claims on each of the Replaces Watts
19 Lamps until at least February 2009. (Trial Exs. 159, 245, 289, 320, 321.)

20
21 57. Starting in February 2009, LOA gradually phased out the "replaces __
22 watts" claims on its packaging. LOA did not print new packaging to remove the
23 Replaces Watts claims until May 2009, at the earliest. (Halliwell Depo. 158-160,
24 171:8-16.)

25
26 58. Rather than use the Replaces Watts claims, LOA switched to claims
27 stating the measured lumen output for its LED Lamps. (Trial Ex. 580-LOA Resp.
28 Int. No. 6.)

1 59. LOA’s process of a rolling change removing the “replaces __ watts”
2 claim took five to six months. For example, LOA employees discussed on July 31,
3 2009 that LOA would stop shipping LED products with the Replaces Watts claims
4 until those claims could be covered by stickers. As Mr. Halliwell confirmed, it
5 wasn’t until May 2009 that large retailers such as Sam’s Club and Costco received
6 packaging from LOA without the “replaces __ watts” claims, but it was September
7 2009 before all other retailers received the new labels. (Trial Exs. 156, 172, 173;
8 Halliwell Depo. 171:8-16; Oct. 31 Trial Tr. (Halliwell) 79:16-82:13.)

9
10 60. LOA did not instruct retailers or provide labels/stickers to retailers to
11 cover over the Replaces Watts claims on LOA’s LED Lamps that were already on
12 the retailers’ store shelves. Even with big retailers such as Sam’s Club and Costco,
13 Halliwell estimated that those retailers were selling LOA’s Replaces Watts Lamps
14 in packaging that included the Replaces Watts claims until May or June 2009.
15 However, this depended on whether the stores were rotating their stock properly.
16 (Halliwell Depo. 159:20-160:8, 160:23-161:24; Oct. 31 Trial Tr. (Halliwell) 82:6-
17 13.)

18
19 61. It was August 2009 before LOA ensured that the “replaces __ watts”
20 claims would no longer appear on any of LOA’s LED Lamp packaging. (Halliwell
21 Depo. at 171:8-23, 174:11-17.) “We were still stickering in July.” (Id. at 174:17.)
22

23 62. Since about August 2009, LOA had removed or covered the “replaces”
24 language from all its LED Lamps’ packaging. (Stipulated Fact 24.)
25

26 63. LOA had a procedure for reviewing and approving, via dated,
27 handwritten signatures, packaging that would be used on LOA’s LED Lamps.
28 LED Lamp labels with dated, hand-written signatures represents packaging that

1 would be used on LOA's LED Lamps. (Trial Ex. 159; LOA Depo. (Halliwell)
2 121:23-122:5, 122: 20-23, 144:18-25, 147:5-18.)

3
4 64. Another group of LED Lamp labels that LOA produced to the FTC in
5 response to the FTC's Civil Investigative Demand contains dates that indicate
6 when LOA began using that label to sell its LED Lamps. LOA inserted the dates
7 indicated on these labels. (Trial Ex. 289; LOA Depo. (Halliwell) 119:8-121:17.)

8
9 65. The other two sets of LED Lamp labels that LOA produced do not
10 contain the initials or signatures of LOA employees nor did LOA separately mark
11 these labels with particular dates. These LED lamp labels contain date codes
12 printed on the labels themselves. (Trial Exs. 320, 321; LOA Depo. (Halliwell)
13 206:20-207:24.)

14
15 66. The date codes LOA embedded in its packaging are noted in parenthesis
16 and are a combination of the week in the year plus the year. For example, a date
17 code of "(389)" equals the 38th week of 2009, or, roughly, September 14, 2009.
18 (Trial Exs. 320, 321; LOA Depo. (Halliwell) 206:20-207:24, 208:21-209:2.)

19
20 67. Even though LOA modified its LED Lamps' packaging over time, LOA
21 used a particular LED Lamp's label at least until it revised and produced a new
22 label such that the oldest dated label represents the first label used for that model.
23 LOA used that label on packaging at least until LOA produced the next label to
24 follow sequentially in time.

25
26 68. As a result, evidence showing when LOA ceased making its Replaces
27 Watts claims is found in its product packaging – when it changed from Replaces
28 Watts to lumen output. Thus, the first labels LOA produced with a lumen output

1 claim instead of a Replaces Watts claim is the best evidence of when LOA ceased
2 making the Replaces Watts claims.

3
4 69. There is insufficient evidence to conclude that prior to August 2009 all
5 of its LED Lamps were sold in product packaging that either no longer contained
6 the Replaces Watts claims or packaging on which it had covered over the Replaces
7 Watts claims.

8
9 70. The first product packaging LOA designed for the Replaces Watts
10 Lamps that contained lumen output information instead of the “replaces __ watts”
11 claim bears the following dates:

- 12 a. 2001LED10-65K – April 14, 2009 (Trial Ex. 159, LOA-
13 00000776);
- 14 b. 2001LED53IN-65K and 2001LED53OUT-65K – August 24-
15 31, 2009 (from date codes 359 (equals 8/24/2009) and 369
16 (equals 8/31/2009) (Trial Ex. 289, FTC00108, FTC00113; Trial
17 Ex. 320, LOA-00170935, LOA-000170936; Trial Ex. 321,
18 LOA-00000197, LOA-00000198);
- 19 c. 2001LEDE26-65K – April 14, 2009 (Trial Ex. 321, LOA-
20 00000779);
- 21 d. 2002LEDP30-65K – September 1, 2009 (Trial Ex. 289,
22 FTC00128);
- 23 e. 2002LEDR30-65K – March 1, 2009 (Trial Ex. 289,
24 FTC00142);
- 25 f. 2003LEDP38-65K – March 1, 2009 (Trial Ex. 289, FTC00144)
- 26 g. 2004LEDDL-35K – March 27, 2009 (Trial Ex. 159, LOA-
27 00000799);
- 28 h. 2025LED-30K – May 12, 2009 (Trial Ex. 289, FTC00132);

- 1 I. 2025LED-65K – May 12, 2009 (Trial Ex. 289, FTC00134);
- 2 j. 2025LEDE12-30K – February 1, 2009 (Trial Ex. 289,
- 3 FTC00147);
- 4 k. 2025LEDE12-65K – May 12, 2009 (Trial Ex. 289, FTC00137);
- 5 l. 2026LED-30K – February 23, 2009 (Trial Ex. 289, FTC00151);
- 6 m. 2026LED-65K – May 12, 2009 (Trial Ex. 289, FTC00140).

7 (Trial Exs. 159, 289, 320, 321.)

8
9 71. The best evidence before the Court shows that LOA ceased making its
10 Replaces Watts claims on or before the dates indicated in fact **70** above. Thus,
11 LOA sold its Replaces Watts Lamps with the “replaces ___ watts” claims through
12 and including the months indicated for each lamp below:

- 13 a. 2001LED10-65K – April 2009
- 14 b. 2001LED53IN-65K and 2001LED53OUT-65K – August 2009
- 15 c. 2001LEDE26-65K – April 2009
- 16 d. 2002LEDP30-65K – August 2009
- 17 e. 2002LEDR30-65K – February 2009
- 18 f. 2003LEDP38-65K – February 2009
- 19 g. 2004LEDDL-35K – March 2009
- 20 h. 2025LED-30K – May 2009
- 21 I. 2025LED-65K – May 2009
- 22 j. 2025LEDE12-30K – February 2009
- 23 k. 2025LEDE12-65K – May 2009
- 24 l. 2026LED-30K – February 2009
- 25 m. 2026LED-65K – May 2009

26 (Trial Exs. 159, 289, 320, 321.)

27
28 2. Consumer Confusion About LOA’s Replaces Watts Claims.

1 72. LOA learned that its “replaces __ watts” claims were causing confusion
2 among some consumers who purchased LOA’s Replaces Watts Lamps by at least
3 December 2008/January 2009. (Halliwell Depo. 155:11-17, 156:18-24.)
4

5 73. Consumers expressed “potential confusion over the use of the term
6 ‘replaces’ indicating that the LED lamps produced the lumen equivalent of the
7 compared incandescent bulbs.” (Trial Ex. 580-LOA Resp. Int. No. 6.)
8

9 74. In late February 2009, Halliwell noted that consumers were confused
10 about LOA’s Replaces Watts claims in an email to Jim Brodrick at the DOE.
11 (Trial Ex. 12, p. 2.)
12

13 D. LOA Claims About Its Lamps’ Light Output.
14

15 75. Chingez Tarar, LOA’s senior research engineer, evaluated the Replaces
16 Watts claim and concluded it was a “deceptive claim” and “unsubstantiated.”
17 (Trial Ex. 158.)
18

19 76. In fact, LOA’s engineer in charge of LOA’s LED Lamps had no
20 involvement in the “replaces __ watts” claims that appeared on LOA’s packaging.
21 (Oct. 31 Trial Tr. (Taj) 114:9-12.)
22

23 1. LOA’s Replaces Watts Lamps Did Not Provide the Same or
24 Comparable Light Output in Lumens as Incandescent Lamps.
25

26 77. One can fairly compare the light output generated by a variety of lamp
27 types using lumen output measurements. In fact, objective photometric
28 measurements can and should be used to substantiate LOA’s “replaces __ watts”

1 claims. (Houser,⁵ ¶¶ 15, 39-49, 71-72; Oct. 30 Trial Tr. (Houser) 62:14-17, 77:20-
2 24.)

3
4 78. Nothing about LEDs or LED lamps makes them unsuitable for or
5 incapable of measurement of overall light output in lumens. (Houser, ¶¶ 71-72;
6 Oct. 30 Trial Tr. (Houser) 72:9-15.)

7
8 79. The DOE CALiPER “Round 6” tests were conducted on the following
9 LOA LED Lamps: 2001LED53OUT-65K-24, 2025LEDE12-65K-24,
10 2004LEDDL-35K-24 and 2003LEDP38-65K-8.⁶ (Stipulated Fact 37.)

11
12 80. LOA’s Replaces Watts Lamps produced markedly less light (in lumens)
13 compared to comparable incandescent lamps. (Houser, ¶¶ 45-49.)

14
15 81. The typical lumen output range for a 45 watt incandescent lamp is 520-
16 870 lumens. (Houser, ¶ 46.)

17
18 82. LOA made “replaces 45 watts” claims on the following lamps:
19 2002LEDP30-65K, 2002LEDR30-65K, 2003LEDP38-65K, and 2004LEDDL-
20 35K. (Trial Exs. 159 (LOA-00000780, 783-87, 789, 793-94, 804, 807-08), Trial
21 Ex. 289 (FTC00125-26, 143), Trial Ex. 320 (LOA-00170925-27), Trial Ex. 321
22 (LOA-00000203, 205-06).)

23
24

⁵Dr. Kevin Houser was the FTC’s technical expert. LOA attacked Dr. Houser’s
25 credentials prior to trial. (Motion *in Limine*, Docket No. 240.) The Court declined to exclude
26 Dr. Houser. (Docket No. 262, pp. 8-9.) LOA continues to advance the same arguments. (LOA’s
27 Proposed Findings of Fact [“LOAFF”], ¶¶ 279-90.) (Similarly, LOA’s Proposed Conclusions of
Law are referred to as “LOACL.”) Having considered his trial declaration and live testimony,
the Court found Dr. Houser technically competent and credible.

28 ⁶See paragraphs 219 *et. seq.* regarding testing by th Department of Energy.

1 83. Between August 2008 and September 2010, third party laboratories
2 conducted photometric tests on the LED Lamps identified in the preceding
3 paragraph. Those tests provided the following lumen output measurements:

- 4 a. 2002LEDP30-65K: 184-195 lumens;
- 5 b. 2002LEDR30-65K: 172, 179-189, and 275 lumens;
- 6 c. 2003LEDP38-65K: 122-177, 268-302, 282, and 416 lumens; and
- 7 d. 2004LEDDL-35K: 140, 143, and 201 lumens.

8 (Trial Exs. 53, 54, 513-514, 518, 542-546, 548-551; Houser, ¶ 47.)
9

10 84. None of the lumen output readings for the Replaces Watts Lamps in
11 paragraphs 82-82 above equal the typical lumen output range for a 45 watt
12 incandescent. Even the lamp with the highest measured lumen output
13 (2003LEDP38-65K at 416 lumens) provides only 48 % of the highest point in the
14 range of typical lumen output, and 80 % of the lowest point in the range of typical
15 lumen output. Whereas the lamp with the lowest measured lumen output (also
16 2003LEDP38-65K at 122 lumens) provided only 14 % of the highest point in the
17 range of typical lumen output, and 23 % of the lowest point in the range of typical
18 lumen output. (Id., ¶¶ 45-47; Trial Exs. 53, 54, 513- 514, 518, 542-546, 548-551.)
19

20 85. LOA's replaces 45 watts claims for the lamps identified in paragraph 82
21 above were false. (Id., ¶ 45.)
22

23 86. The typical lumen output range for a 40 watt incandescent lamp is 315-
24 540 lumens. (Id., ¶ 46.)
25

26 87. LOA made "replaces 40 watts" claims on the following lamps:
27 2025LEDE12-30K, 2025LEDE12-65K, 2026LED-30K, and 2026LED-65K. (Trial
28 Ex. 159 (LOA-00000752-53, 761-68, 773, 795-96, 800, 802, 809-10), Trial Ex.

1 320 (LOA-00170928-32), Trial Ex. 321(LOA-00000210, 213, 215, 220, 223,
2 226).)

3
4 88. Between December 2008 and September 2010, third party laboratories
5 conducted photometric tests on the LED Lamps identified in the preceding
6 paragraph. Those tests provided the following lumen output measurements:

- 7 a. 2025LEDE12-30K: 41, 66-67, 76, and 90 lumens;
8 b. 2025LEDE12-65K: 67-90, 74, 104-108, and 113 lumens;
9 c. 2026LED-30K: 42, 43, and 90 lumens; and
10 d. 2026LED-65K: 84 lumens.

11 (Trial Exs. 52, 511, 515, 519, 552-561, 565-571; Houser, ¶¶ 47-49.)
12

13 89. None of the lumen output readings for the Replaces Watts Lamps in
14 paragraphs 87-88 above equal the typical lumen output range for a 40 watt
15 incandescent. The lamp with the highest measured lumen output (2025LEDE12-
16 65K at 113 lumens) provides only 23 % of the highest point in the range of typical
17 lumen output, and 36 % of the lowest point in the range of typical lumen output.
18 Whereas the lamp with the lowest measured lumen output (also 2025LEDE12-30K
19 at 41 lumens) provided only 8 % of the highest point in the range of typical lumen
20 output, and 13 % of the lowest point in the range of typical lumen output. (Houser,
21 ¶¶ 45-47; Trial Exs. 52, 511, 515, 519, 552-561, 565-571.)
22

23 90. LOA's replaces 40 watts claims for the lamps identified in paragraph 87
24 above were false. (Houser, ¶ 45.)
25

26 91. LOA made "replaces 20 watts" claims on LED Lamps 2001LED53-
27 OUT-65K, 2001LEDE26-65K, and 2001LEDG53-65K. (Trial Ex. 159 (LOA-
28

1 00000755-60, 771-72, 775), Trial Ex. 289 (FTC00114-16), Trial Ex. 320 (LOA-
2 00170920, 922-23), Trial Ex. 321 (LOA-00000199-201).)

3
4 92. In August 2008, September 2009, and September 2010, a third party
5 laboratory conducted photometric tests on LED Lamp 2001LED53-OUT-65K,
6 2001LEDE26-65K, and 2001LEDG53-65K. Those tests provided the following
7 lumen output measurements:

- 8 a. 2001LED53-OUT-65K: 26.8-29.9 lumens;
9 b. 2001LEDE26-65K: 52, and 86-93 lumens; and
10 c. 2001LEDG53-65K: 32 lumens.

11 (Trial Exs. 51, 517, 540, 541; Houser, ¶ 47.)
12

13 93. None of the lumen output readings for the Replaces Watts Lamps in
14 paragraphs 91-92 above equal the typical lumen output range for a 20 watt
15 incandescent. The lamp with the highest measured lumen output (2001LEDE26-
16 65K at 93 lumens) provides only 39 % of the highest point in the range of typical
17 lumen output, and 60 % of the lowest point in the range of typical lumen output.
18 Whereas the lamp with the lowest measured lumen output (2001LED53-OUT-65K
19 at 27 lumens) provided only 11 % of the highest point in the range of typical lumen
20 output, and 17 % of the lowest point in the range of typical lumen output. (Houser,
21 ¶¶ 45-47; Trial Exs. 51, 517, 540, 541.)
22

23 94. LOA's replaces 20 watts claims for LED Lamps 2001LED53-OUT-
24 65K, 2001LEDE26-65K, and 2001LEDG53-65K were false. (Houser, ¶ 45.)
25

26 95. When compared to comparable incandescent lamps, the light output
27 claims LOA made for the Replaces Watts Lamps were false. (Id., ¶¶ 45-49; Trial
28 Exs. 51, 510, 517, 540, 541.)

1 96. LOA's Replaces Watts Lamps did not provide sufficient light (in
2 lumens) to be comparable to that of the incandescent lamps LOA claimed its lamps
3 would replace, and as a result, LOA made false claims on the Replaces Watts
4 Lamps.

5
6 97. LOA claims that it did not market its LED lamp as general purpose
7 lighting. (Halliwell, ¶ 33.) However, that did not limit the practical use of the
8 LED lamps. Moreover, whether labeled for decorative or complementary lighting
9 or otherwise, the replacement representations are the same, and they were false.

10
11 2. LOA's Center Beam Candle Power Data Also Shows Its
12 Replaces Watts Claims Were False.

13
14 98. The light output of one of LOA's integrated LED Lamps with a
15 directional beam can be compared to a filament lamp with a similar directional
16 beam. (Houser, ¶ 44.)

17
18 99. In order to compare the light output of these types of lamps, one must
19 use a combination of both beam angle measured in degrees and center beam candle
20 power (CBCP) measured in candelas. (Id.; Oct. 30 Trial Tr. (Houser) 84:22-
21 85:18.)

22
23 100. Comparisons of the CBCP of LOA's directional LED lamps to that of
24 other directional lamps is fundamentally flawed if it does not consider beam
25 spread, beam angle, or beam lumens. (Houser, ¶ 55.)

26
27 101. CBCP data is contained in photometric test reports from third party
28 laboratories that tested some of LOA's LED Lamps. (Trial Exs. 53-54.)

1 102. Comparing the CBCP of two of LOA’s directional LED Lamps to
2 those of a filament lamp with a similar beam angle shows that these LED Lamps
3 produced only a small fraction of the light of comparable filament lamps.

4 Specifically:

5 a. LOA LED Lamp 2003LEDP38-65K produced only between 12 %
6 and 21% of the CBCP of comparable filament lamps produced by
7 GE; and

8 b. LOA LED Lamp 2004LEDDL-35K produced 89% less CBCP than
9 that of a comparable filament lamp produced by GE.

10 (Trial Exs. 53-54, 632; Houser, ¶¶ 56-58.)

11
12 103. These two Replaces Watts Lamps did not provide sufficient light (in
13 candelas) to be comparable to that of the incandescent lamps LOA claimed its
14 lamps would “replace[]” and as a result, LOA made false claims on 2003LEDP38-
15 65K and 2004LEDDL-35K.

16
17 104. LOA offered evidence of the visual comparisons which Halliwell
18 conducted and evidence of the results of a focus groups conducted at Wal-Mart.
19 (LOAFF, ¶¶ 178, 181.) LOA asserts that visual observations were truthful. (Id., ¶
20 185.)

21
22 105. However, the Court was unable to come to like conclusions when
23 visual comparisons were offered during the course of the trial. (Oct. 30 Trial Tr.
24 65-71.) Trial Exhibit 475 consisted of five pairs of incandescent lights and LOA
25 LEDS claimed to be replacements for the wattage in the incandescent lights. In
26 several instances, Dr. Houser found the LED of equal or greater brightness. He
27 also remarked that his observation were affected by the manner in which the eye
28 adapts, and those effects continued even when only a single pair was illuminated.

1 (Oct. 30 Trial Tr. 65, 69-70.) Further skewing the comparisons was the fact that
2 LEDs presented were uncharacteristically highly directional, and Dr. Houser only
3 addressed the lights from a position directly in front of him, or on axis. (Oct. 30
4 Trial Tr. 70.) This evidence does not change the conclusion that the Replaces
5 Watts claims were false. Moreover, the Court has previously found such
6 subjective observational data inadequate substantiation. (MSJ Order, pp. 7-9.)
7

8 106. The Court finds that the lumens analysis which Dr. Houser used was
9 scientifically sound. Dr. Houser explained that the luminance analysis used by
10 LOA's expert Dr. Ram S. Rosen was variable with line of sight and thus flawed.
11 (Houser, ¶ 66.) He also explained the lack of scientific support for Dr. Ronen's
12 criticism of the use of lumens as flawed. (Id., ¶¶ 68-71.) In particular, he
13 explained the error in Dr. Ronen's use of the S/P ratio for adjusting data. (Id., ¶
14 69-70.)
15

16 E. Consumer Harm Resulting from LOA's False and Deceptive
17 Replaces Watts Claims.
18

19 107. LOA made false and deceptive Replaces Watts claims on the Replaces
20 Watts Lamps through and including the month identified in paragraph 71.a-m.
21

22 108. During the time LOA made the false Replaces Watts claims, its gross
23 sales for the Replaces Watts Lamps equaled:

- 24 a. 2001LED10-65K – \$250,729.80 (April 2009)
- 25 b. 2001LED53IN-65K and 2001LED53OUT-65K – \$134,206.44
26 (August 2009)
- 27 c. 2001LEDE26-65K – \$119,396.88 (April 2009)
- 28 d. 2002LEDP30-65K – \$239,829.46 (August 2009)

- e. 2002LEDR30-65K – \$540,628.47 (February 2009)
- f. 2003LEDP38-65K – \$2,470,580.43 (February 2009)
- g. 2004LEDDL-35K – \$1,893,174.00 (March 2009)
- h. 2025LED-30K – \$246,102.96 (May 2009)
- I. 2025LED-65K – \$217,123.08 (May 2009)
- j. 2025LEDE12-30K – \$3,644,867.64 (February 2009)
- k. 2025LEDE12-65K – \$210,793.92 (May 2009)
- l. 2026LED-30K – \$177,846.84 (February 2009)
- m. 2026LED-65K – \$351,822.43 (May 2009)

(Kelly Rev., ¶¶ 8-17, 19-21; Trial Exs. 159, 289, 295-299, 320, 321; LOA Depo. (Halliwell) 170:3-174:17.)

109. Total sales for all of the items identified in the preceding paragraph equals: \$10,497,102.35.

110. Total sales, based upon LOA’s wholesale price, for the Replaces Watts Lamps through and including the dates indicated in paragraphs 71 and 108 above constitutes a conservative estimate of the amount of restitution owed to consumers who purchased these lamps. That amount equals: \$10,497,102.35

III. LOA’s False and Deceptive Lifetime Claims.

111. According to LOA’s President, Usman Vakil, substantiation requires scientific data. (U. Vakil Depo. 180:6-181:6.)

112. Usman Vakil testified that he told his managers to “substantiate everything.” (Id., pp. 47:7-12, 73:23-74:2; Nov. 2 Trial Tr. (U. Vakil) 40:8-22.)

1 113. LOA made lifetime claims in marketing and selling the following
2 lamps: 2001LED53IN-65K and 2001LED53OUT-65K, 2001LEDE26-65K,
3 2002LEDP30-65K, 2002LEDR30-65K, 2003LEDP38-65K, 2004LEDDL-35K,
4 2025LED-30K, 2025LED-65K, 2025LEDE12-30K, 2025LEDE12-65K,
5 2025TLEDE12-30K, 2026LED-30K, 2026LED-65K, 2035LED-30K (collectively,
6 the “Lifetime Lamps”). (Trial Exs. 159, 289, 320, 321.) The Court refers to LOA
7 collective lifetime claims as “Lifetime claims.”

8
9 A. Timing of LOA’s Three Lifetime Claims.

10
11 114. From February 2008 until sometime in August 2009, LOA claimed on
12 its LED Lamps’ packaging that those LED Lamps had a 30,000 hour life.
13 (Stipulated Fact 26.)

14
15 115. In August 2009, certain LOA employees discussed the basis for
16 reducing LOA’s lifetime claims from 30,000 hours to 20,000 hours. (Stipulated
17 Fact 30.)

18
19 116. By the end of August 2009, LOA reduced the lifetime claims on all of
20 its LED Lamps’ packaging to 20,000 hours. (Stipulated Fact 31.)

21
22 117. LOA further reduced its lifetime claims for its Lifetime Lamps to
23 12,000-15,000 hours in September 2010. (Trial Ex. 580-LOA Resp. Int. No. 6.)

24
25 118. All of LOA’s lifetime claims noted above are specific, numerical
26 claims about how long its Lifetime Lamps will last.

1 119. When making its 30,000 hour lifetime claims, LOA also claimed its
2 LED Lamp “lasts 15 times longer than 2,000 hour incandescent bulbs.” LOA
3 made these claims based upon the same lifetime data LOA cites as substantiation
4 for the lifetime claims. (Halliwell, ¶93; Halliwell Depo. 140:4-19; LOA Answer ¶
5 39; Trial Ex. 159 (LOA-00000752-53, 792, 795-96, 800, 802, 809-13), Trial Ex.
6 289 (FTC00132, 135-37, 142, 147-48, 151).)

7
8 120. When making its 20,000 hour lifetime claims, LOA also claimed its
9 LED Lamp “lasts 10 times longer than 2,000 hour incandescent bulbs.” (Halliwell
10 ¶ 93; LOA Answer ¶ 39; Trial Ex. 289 (FTC00109, 112, 127-31, 138, 141, 149-50,
11 152-56), Trial Ex. 320 (LOA-00170933-34, 937-945), Trial Ex. 321 (LOA-
12 00000195-96, 204, 207, 209, 212, 216, 221, 228-29).)

13
14 121. When making its 15,000 hour lifetime claims, LOA also claimed its
15 LED Lamp “lasts 7 times longer than 2,000 hour incandescent bulbs.” (Halliwell,
16 ¶ 93; Trial Ex. 320 (LOA-00170946-51, 953-54), Trial Ex. 321 (LOA-00000208,
17 211, 214, 217-19, 224-25, 227, 230-31).)

18
19 122. When making its 12,000 hour lifetime claims, LOA also claimed its
20 LED Lamp “lasts 6 times longer than 2,000 hour incandescent bulbs.” (Trial Ex.
21 320 (LOA-00170952, 955-56), Trial Ex. 321 (LOA-00000222).)

22
23 B. LED Lamps Compared to Other Lamp Types.

24
25 123. LOA’s LED Lamps could be employed in end-use applications where
26 the quantity of light produced by its lamps matters. (Houser, ¶ 17.)
27
28

1 124. LOA’s LED Lamps are general replacement lamps and not limited to
2 categories of accent, décor, or other types of lighting. (Id., ¶¶ 75-79.)

3
4 125. LEDs generally fail gradually over time, growing steadily dimmer
5 rather than failing catastrophically. (Stipulated Fact 2.) Moreover, the particular
6 application of a LED Light has no bearing on a lifetime claim, and is simply
7 irrelevant.

8
9 126. Conditions that affect the long-term performance of LEDs include the
10 amount of current used and temperature. (Stipulated Fact 4.) Taj recognized this
11 when he testified that how the LED performs in the lamp is important. Taj has
12 held this belief since he started as the head of LOA’s LED lamp Engineering
13 department. (Trial Exs. 130, 139, 143; Oct. 31 Trial Tr. (Taj) 96:22-97:2.)

14
15 127. LOA’s engineers who worked on and developed its LED Lamps knew
16 that current and temperature within the lamp can greatly impact the performance
17 and longevity of the LEDs in an LED Lamp. (Trial Exs. 127, 130, 139, 140, 143.)

18
19 128. LOA understood the importance of testing integrated LED lamps to
20 evaluate LED performance. As Taj testified, what is important is how the LED
21 performs in the lamp. LOA acknowledged in its LED Lamp brochure that
22 “because they are sensitive to thermal and electrical conditions, LEDs must be
23 carefully integrated into lighting fixtures.” (Oct. 31 Trial Tr. (Taj) 96:22-24; Trial
24 Ex. 502.)

25
26 129. The various LED lamps LOA sold were not identical. Across
27 products and over time, the differences in LOA’s LED Lamps include: housings,
28 current used to operate the lamps, number of LEDs used in the lamp, type of LED

1 used in the lamps, and the configuration of the LEDs within its lamps. (Halliwell,
2 ¶¶ 99, 148; LOA Depo. (Halliwell) 10:2-13:6; 13:13-21; Trial Exs. 141, 580 - LOA
3 Resp. Int. No. 25, Trial Ex. 585 - LOA Resp. Int. Nos. 35-37.)
4

5 130. Some of those revisions were prompted by complaints about some of
6 LOA's LED Lamps burning out partially or prematurely. (Trial Ex. 141.)
7

8 131. Due to the variations in the LED lamps LOA sold, its substantiation for
9 a particular Lifetime Lamp must reflect the particular conditions present in that
10 lamp. (Oct. 31 Trial Tr. (Houser) 53:16-54:23.)
11

12 132. Adequate substantiation for LOA's lifetime claims would be scientific
13 or engineering data of LOA's integrated LED Lamps indicating that the lamps
14 would last at least as long as the hours stated on the Lifetime Lamps' packaging.
15

16 B. The Lighting Community's Knowledge About LED Lamps.
17

18 133. By the time LOA began to sell its LED Lamps, although there was not
19 single standard, the lighting community had widely adopted L70 to define when
20 LED Lamps reach the end of their useful lives. (Trial Ex. 35; Houser, ¶¶ 17, 35,
21 73.)
22

23 134. LOA offered evidence that life time testing standards were in flux
24 between 2007 and 2012. (LOAFF, ¶¶ 206-227, 331-37.) This includes statements
25 that there were no commonly accepted criteria. (Id., ¶ 121.) Nevertheless, the
26 Court finds that Dr. Houser's use of the L70 standard has support in the literature
27 even if there was no settled way to test, as demonstrated by LOA's own citations.
28

1 (See *id.*, ¶¶ 219, 221.) However, the lack of standards begs the issue because LOA
2 had no scientifically valid data on any basis to support its lifetime claims.

3
4 135. L_{70} is the point at which the light output of an LED lamp diminishes to
5 seventy % of its original light output. (Trial Ex. 35; Houser, ¶ 18.)

6
7 136. L_{50} is the point at which the light output of an LED lamp diminishes to
8 fifty % of its original light output. (Trial Ex. 35; Houser, ¶ 18.)

9
10 137. Because LOA's LED Lamps could be used for general lighting
11 applications, L_{70} is the proper mark for the end of an LED lamp's lifetime, not L_{50} .
12 (Houser, ¶¶ 17-18, 73-79; Oct. 31 Trial Tr. (Houser) 13:24-16:7.) Again, the
13 specific application is irrelevant to a lifetime claim.

14
15 138. Since LOA's LED Lamps could be employed in end-use applications
16 where the quantity of light matters and the LED Lamps were not limited to the
17 narrow category of décor lamps, L_{70} is the proper measure of when LOA's LED
18 Lamps reached the end of their lives. (Houser, ¶¶ 17-18, 73-79; Oct. 30 Trial Tr.
19 (Houser) 111:13-22; Oct. 31 Trial Tr. (Houser) 13:20-16:7.)

20
21 139. LOA's employees most familiar with LOA's lifetime claims, however,
22 do not agree on what defined the end of life for LOA's LED Lamps. According to
23 Halliwell, it was zero light output from the LEDs. Taj claims he defines life as L_{50} .
24 By LOA's own definition, it was mean time before failure – the point at which half
25 the tested sample size fails, meaning zero light output. (Halliwell Depo. 215:24-
26 216:24, 219:1-5; Taj, ¶ 31; LOA Depo. (Halliwell) 246:3-248:16; Oct. 31 Trial Tr.
27 (Halliwell) 82:14-88:20.)

1 140. To the extent LOA and its employees determined the end of the LED
2 Lamps' useful lives occurred at L₅₀, the point at which the lamps emitted no light,
3 or based upon mean time before failure, LOA acted unreasonably and in disregard
4 to the lighting community's consensus on the issue.

5
6 141. To have adequate substantiation, LOA needed to measure and record
7 the light output of its Lifetime Lamps so it could determine when each lamp's
8 lumen maintenance dropped by thirty %. (Oct. 31 Trial Tr. (Houser) 49:17- 50:23;
9 Nov. 2 Trial Tr. (Houser) 15:10-16:23.)

10
11 142. Although not as good of a measure of the lamp's lifetime, LOA could
12 have drawn inferences from data it received about the lumen depreciation of the
13 LEDs used in its LED Lamps. (Houser, ¶ 85.)

14
15 143. At a minimum, LOA's lumen depreciation evidence (from scientific
16 tests conducted on the LEDs used in its LED Lamps) must replicate the conditions
17 found in its integrated LED Lamps. (Oct. 31 Trial Tr. (Houser) 53:16-55:7.)

18
19 144. Although scientific data purporting to represent the lifetime and/or
20 lumen depreciation evidenced in the LEDs used in LOA's LED Lamps is not
21 adequate substantiation, the data is evidence of trends in the LEDs' performance is
22 useful in assessing what other substantiation LOA should have requested and/or
23 whether its lifetime claims were false.

24
25 C. LEDs Used in LOA's Lamps.

1 145. LOA purchased LEDs from two different suppliers: PARA Light
2 Corp. (“Para Light”) and Unity Microelectronics, Inc. (“Unity”). (Trial Ex. 584-
3 LOA Resp. Int. Nos. 30-31.)
4

5 146. The first of LOA’s LED Lamps were all manufactured using Para
6 Light LEDs. LOA began to transition to Unity’s LEDs sometime in or after
7 October 2008. (Halliwell, ¶ 70; Trial Ex. 584-LOA Resp. Int. No. 31, Trial Ex.
8 585 - LOA Resp. Int. Nos. 35-37.)
9

10 147. LOA placed its last order for Para Light’s LEDs in or about March
11 2009. (Trial Ex. 584-LOA Resp. Int. No. 31.)
12

13 148. Between October 2008 and March 2009, LOA used both Unity and
14 Para Light LEDs in its LED Lamps. (Halliwell, ¶ 70; Trial Ex. 584-LOA Resp.
15 Int. No. 31, Trial Ex. 585 - LOA Resp. Int. Nos. 35-37.)
16

17 149. LOA does not have any records showing which LED it used in which
18 LED Lamp for a particular period of time during its transition from Para Light
19 LEDs to Unity LEDs. LOA has indicated that for virtually all of its LED Lamps, it
20 used both Unity and Para Light LEDs during LOA’s transition from Para Light to
21 Unity. (Trial Ex. 585-LOA Resp. Int. No. 37.)
22

23 D. LOA Did Not Have a Reasonable Basis to Make Its Lifetime
24 Claims.
25

26 150. Prior to at least February 27, 2008, LOA had no life test data for Para
27 Light’s LEDs or for LOA’s LED Lamps which incorporated Para Light’s LEDs
28

1 when LOA began to market and sell its LED Lamps. LOA has not identified any
2 substantiation which pre-dates an email Taj received from LED supplier Para
3 Light. In making lifetime claims on the Lifetime Lamps prior to receipt of Para
4 Light's email, LOA acted without any factual or reasonable basis. (Houser, ¶ 81;
5 Trial Ex. 583-LOA Resp. Int. No. 9.)

6
7 151. LOA identified the following documents as substantiation for its
8 lifetime claims:

- 9 a. Unity 5mm White Lamp Brightness Degradation Chart (Trial Ex.
10 290);
- 11 b. Unity LED Burn-in Life Summary, dated June 8, 2009 (Trial Ex.
12 291);
- 13 c. SGS Test Report, dated June 29, 2009 (Trial Ex. 301);
- 14 d. Unity Lights of America PAR38 Bulb Testing Report, dated
15 August 5, 2009 (Trial Ex. 144);
- 16 e. Unity report regarding results of ongoing lumen depreciation
17 study, dated August 9, 2009 (Trial Ex. 292);
- 18 f. OnSpex 1008 Hours – Lumen Depreciation Report, dated February
19 9, 2010 (Trial Ex. 294);
- 20 g. Testing and Inspection Reports (LOA-00000098 through LOA-
21 00000297 and FTC00561 through FTC00662);
- 22 h. February 27, 2008 email from Para Light USA to Aijaz Taj (Trial
23 Ex. 126);
- 24 i. Unity Reliability Test Report, received August 14, 2008 (Trial Ex.
25 400);
- 26 j. Unity Reliability Test Report, received December 4, 2008 (Trial
27 Ex. 140); and

1 k. Test Reports by Lighting Sciences, Inc., dated September 25, 2009
2 (Trial Exs. 540-541).
3 (Trial Ex. 583-LOA Resp. Int. No. 9; LOA Depo. (Halliwell) 243:18-244:19,
4 249:14-250:11.)

5
6 152. Usman Vakil acknowledged that manufacturing issues “resulted in
7 product problems in the products sold.” Those manufacturing issues were related
8 to LOA’s LED Lamp lifetime claims. According to Taj, the manufacturing issues
9 “resulted in the products not performing as they were designed.” (U. Vakil, ¶¶ 32,
10 34, 36-37; Taj, ¶ 43.)

11
12 1. The Para Light Emails.

13
14 153. On February 27, 2008, Joe Chow of LOA LED supplier Para Light
15 sent LOA engineer Taj an email that stated “We estimate our LED life is 30000
16 hr.” (Stipulated Fact 27.)

17
18 154. Neither Para Light nor Joe Chow sent any life test data with the
19 February 27, 2008 email. At that time, LOA did not test its Lifetime Lamps to
20 determine how long they would last. (Trial Ex. 126; Oct. 31 Trial Tr. (Taj) 91:21-
21 92:15, 97:19-98:3.)

22
23 155. LOA did not have written documentation from Para Light that
24 addressed the specific conditions such a drive currents, housings, heat sinks, or
25 thermal conditions of each of its Lifetime Lamps. (Trial Exs. 126, 130.)
26
27
28

1 156. LOA relied on verbal communications from its LED supplier, Para
2 Light, without any supporting documentation, as the basis for its lifetime claims for
3 its LED Lamps. (Oct. 31 Trial Tr. (Taj) 92:23-93:1, 95:21-96:21, 100:20-25,
4 145:14-146:6)

5
6 157. LOA has not identified data specific to each of the Lifetime Lamps to
7 support the claims made on each lamp. (Trial Ex. 126; Houser, ¶¶ 82-83)

8
9 158. LOA's reliance upon Mr. Chow's email, without further supporting
10 test data, does not constitute a reasonable basis for its 30,000 hour lifetime claims
11 generally, nor a reasonable basis for any or all of the Lifetime Lamps. (Id., ¶¶ 82-
12 83; Oct. 30 Trial Tr. (Houser) 200:7-201:1.)

13
14 2. LOA's 2008 and Early 2009 Lifetime Data.

15
16 159. In 2008, LOA relied on tests conducted on the LEDs that it used in its
17 LED lamps in making performance claims on its LED Lamps' product packaging.
18 LOA's witness summarized the chronology of LOA's receipt of its lifetime
19 substantiation at its deposition. (LOA Depo. (Halliwell) 150:4-151:14, 250:12-
20 257:16, 258:15-260:9, 260:20-261:12.)

21
22 160. LOA knew that the critical question to determine lifetime was how a
23 supplier's LED behaves in LOA's lamp. Nonetheless, prior to December 2008
24 LOA did not conduct tests to determine how much lumen depreciation suppliers'
25 LEDs experienced in LOA's lamps. (Oct. 31 Trial Tr. (Taj) 96:22-97:2, 104:7-13.)

1 161. After the Chow email, the next piece of data LOA had arrived on or
2 about August 14, 2008 from LED supplier Unity. Unity sent LOA employees a
3 Reliability Test Report. (Trial Ex. 400.)

4
5 162. In the Reliability Test Report, Unity presented measured data specific
6 LED packages, not lamps, which had been tested for 1,008 hours. (Trial Ex. 400.)

7
8 163. Although of limited value because it is data from a test conducted only
9 on the LED, the data does not support or provide a reasonable basis for LOA's
10 lifetime claim because the amount of lumen depreciation that occurred during the
11 test period was too great, even for the best performing LED tested. (Houser, ¶¶
12 84-88.)

13
14 164. LOA has not provided sufficient evidence that the LEDs tested by
15 Unity were those used in all of its Lifetime Lamps. Rather, its own list of the
16 LEDs it used in its LED Lamps does not identify this Unity LED. (Trial Ex. 585-
17 LOA Resp. Int. No. 35.)

18
19 165. Unity's Reliability Test Report does not support LOA's lifetime claims
20 and does not suffice for a reasonable basis to make the claims on any of the
21 Lifetime Lamps. (Houser, ¶¶ 84-88.)

22
23 166. Through at least August 2008, LOA lacked adequate substantiation for
24 the 30,000 hour lifetime claim it made on the Lifetime Lamps. (Id.)

25
26 167. LOA then received preliminary test data for four of its LED Lamps:
27 2002LEDP30-65K, 2003LEDP38-65K, 2002LEDR30-65K, and 2025LED-65K.

1 The data was sent to LOA by Unity and reflects a test period of 72 hours. Within
2 that short time, the LOA LED Lamps tested showed lumen depreciation of 89.4 %
3 to 74.8 %. (Trial Ex. 139; Houser, ¶ 89).

4
5 168. The data presented in Trial Ex. 139 shows poor lumen maintenance.
6 This data is incompatible with a lifetime claim of 30,000 hours. (Houser, ¶ 89.)

7
8 169. Trial Ex. 139 also includes test data for one of Unity's LEDs. This
9 data also reflects lumen depreciation tests conducted for 72 hours. (Trial Ex. 139.)
10 The Unity LED test data shows rapid depreciation within the time period of testing
11 – 5.3 to 8.3 %. The data also presents questions for LOA's engineers because the
12 LED tested appears to experience less lumen depreciation at a higher temperature,
13 which runs counter to the general theory that higher operating temperatures lead to
14 worse lumen maintenance. At a minimum, LOA should have questioned this data.
15 (Id., ¶ 90.)

16
17 170. The next piece of data is another test report from Unity titled
18 Reliability Test Report. LOA employees received this report on or about
19 December 4, 2008. (Trial Ex. 140.) The test data in Trial Ex. 140 reflects lumen
20 depreciation tests conducted on four of LOA's Lifetime Lamps: 2002LEDP30-
21 65K, 2003LEDP38-65K, 2002 LEDR 30-65K, and 2025LED-65K. (Trial Ex. 140;
22 Houser, ¶ 91.)

23
24 171. When Taj received the data in Trial Ex. 140, he was concerned about
25 the results, which showed three LOA lamps experienced 13 % lumen depreciation
26 within the first 198 hours of the test period and lumen depreciation of 32-48 %
27 within 961 hours. (Oct. 31 Trial Tr. (Taj) 110:9-112:14, 113:24-114:1.)

1 172. Three of the four integrated lamps tested had reached the end of their
2 useful lives within the 961 hour test period, under L₇₀. (Trial Ex. 140; Houser, ¶
3 91.) The fourth had reduced to 78.0 % within 198 hours. (Houser, ¶ 91.)
4

5 173. Unity's test data in Trial Ex. 140 shows that none of the four lamps
6 tested would last for 1,000 hours using L₇₀ as the end of life. This data does not
7 support LOA's 30,000 hour lifetime claim. Rather, it shows the claim for the four
8 lamps tested was false. (Trial Ex. 140; Houser, ¶ 91.)
9

10 174. None of the test data on four of LOA's Lifetime Lamps (2002LEDP30-
11 65K, 2003LEDP38-65K, 2002 LEDR 30-65K, and 2025LED-65K) constitutes
12 substantiation for any of the other Lifetime Lamps. (Houser, ¶ 109.)
13

14 175. Trial Ex. 140 also includes a test report for 1,008 hours of testing
15 conducted on one of Unity's LEDs. (Trial Ex. 140.) The test report for this Unity
16 LED shows the LED itself depreciated to 72.2 % of its original output within 1,008
17 hours of testing. In almost reaching L₇₀ within 1,008 hours of testing, the test data
18 does not support a lifetime claim for this LED of 30,000 hours. This test data also
19 shows that LOA's 30,000 hour lifetime claims for Lifetime Lamps that
20 incorporated this particular LED were false. (Trial Ex. 140; Houser, ¶¶ 92-93.)
21

22 176. Although LOA had begun to transition to Unity LEDs in the Lifetime
23 Lamps by the time LOA received Trial Ex. 140, not all of LOA's Lifetime Lamps
24 were manufactured using the Unity LED tested in this exhibit. (Trial Ex. 584-LOA
25 Resp. Int. No. 31.) Thus, the LED test data in Trial Ex. 140 does not constitute
26 adequate substantiation for any of LOA's Lifetime Lamps. (Trial Ex. 140, Trial
27
28

1 Ex. 584-LOA Resp. Int. No. 31; Houser, ¶¶ 91-92, 101, 109; Oct. 31 Trial Tr.
2 (Houser) 53:16-54:23.)

3
4 177. Although LOA's LED suppliers provided LOA with LED
5 specifications, those specifications sheets did not identify the life of the LEDs in
6 LOA's lamps. As Taj conceded, the suppliers' specification sheets do not actually
7 specify the life claim of the LEDs used in LOA's LED Lamps. (Trial Ex. 143; Oct.
8 31 Trial Tr. (Taj) 92:8-15, 100:20-25.)

9
10 178. Trial Ex. 301 is the next piece of data LOA cited as supporting its
11 lifetime claims. This document contains test reports from SGS, which are dated
12 June 29, 2009. (Trial Ex. 301.)

13
14 179. Trial Ex. 301 contains test results from lumen depreciation tests
15 conducted on four LEDs manufactured by Unity. Specifically, the LEDs tested
16 were several of Unity's "A series" LEDs. (Trial Ex. 301; Houser, ¶¶ 96-97.)

17
18 180. Based upon the 1,000 hour test period, the amount of lumen
19 depreciation that occurred in each of Unity's LEDs, and even assuming the rate of
20 decline may improve, the data does not support even a 20,000 hour lifetime claim.
21 (Trial Ex. 301; Houser, ¶¶ 96-97.)

22
23 181. Trial Ex. 301 does not provide scientific or engineering data which
24 supports LOA's 30,000 hour, or its later 20,000 hour lifetime claim on its Lifetime
25 Lamps. (Houser, ¶¶ 96-97.) As of the end of June 2009, LOA does not have a
26 reasonable basis to make lifetime claims of 30,000 hours for its Lifetime Lamps.
27 (Houser, ¶¶ 96-97.)

1 182. The next documents LOA cites as substantiation for its Lifetime claims
2 are Trial Exs. 290 and 291, which appear to be dated in or around the end of July
3 or August 2009. (Trial Exs. 290, 291.) It is unclear whether Trial Exs. 290 and
4 291 reflect data derived from actual tests. Further, the data appears to relate to
5 LED data – not that of integrated lamps. (Trial Exs. 290, 291; Houser, ¶ 98.)
6

7 183. LOA has not provided sufficient evidence that the information
8 contained in Trial Exs. 290 and 291 reflect measurements taken during a lumen
9 depreciation test, that the items tested were either its LED Lamps or LEDs used in
10 its lamps, or that the data directly relates to products it produced. Given these
11 deficiencies, Trial Exs. 290 and 291 do not provide scientific or engineering data
12 which supports LOA's 30,000 hour, or its later 20,000 hour lifetime claim for any
13 of its Lifetime Lamps. (Trial Exs. 290, 291; Houser, ¶ 98.)
14

15 184. The next document LOA cites as substantiation for its Lifetime claims
16 is dated August 5, 2009 and is titled Unity Lights of America PAR38 Bulb Testing
17 Report. (Trial Ex. 144.) Since Trial Ex. 144 reflects tests conducted on only one
18 of the LED lamp types produced by LOA, it cannot constitute adequate
19 substantiation for all of LOA's Lifetime Lamps. (Houser, ¶ 109; Oct. 31 Trial Tr.
20 (Houser) 53:16-54:23.)
21

22 185. LOA received this test data around the same time as its employees
23 were discussing a reduction of the lifetime claim to 20,000 hours. (Trial Ex. 144;
24 Stipulated Fact 30.)
25

26 186. Trial Ex. 144 contains test data from 1,104 hours of lumen
27 depreciation testing performed on two versions of LOA's PAR 38 LED lamp – one
28

1 which incorporated Unity's "A series" LEDs and the other which incorporated
2 Unity's "T series" LEDs. However, the tests were performed at 18mA drive
3 current, but LOA operated its LED Lamps at 20mA. (Trial Ex. 144; Taj ¶ 65;
4 Houser, ¶¶ 94-95.)

5
6 187. The amount of lumen depreciation that occurred within the time period
7 of tested (1,104 hours) does not support either LOA's 30,000 hour or its upcoming
8 20,000 hour lifetime claim for any of LOA's PAR 38 LED lamps. Further, these
9 tests cannot constitute substantiation for other lamp types included in the Lifetime
10 Lamps. (Trial Ex. 144; Houser, ¶¶ 94-95, 109; Oct. 31 Trial Tr. (Houser) 53:16-
11 54:23.)

12
13 188. Shortly after receipt of Trial Ex. 144, LOA's employees received
14 information from Unity, which was identified in an email sent by Taj, dated
15 August 9, 2009. (Trial Ex. 292.) In Trial Ex. 292, Taj states that Unity "simulated
16 our Par 38 environment to extrapolate the following results." Taj then lists three
17 pieces of data which apply to 5mm LEDs. Those data indicate that L₇₀ was reached
18 at 10,000 hours. (Trial Ex. 292.)

19
20 189. The data Taj conveyed in Trial Ex. 292 contradicts LOA's lifetime
21 claims of 30,000 and 20,000 hours. (Trial Ex. 292.)

22
23 190. LOA claims tests on its PAR 38 lamps represent the worst conditions
24 or environment of its Lifetime Lamps. However, test data on this one lamp type
25 cannot constitute adequate substantiation for the other lamp types in the Lifetime
26 Lamps. Moreover, even if the data could be extended to other lamp types, it does
27

1 not support either LOA's 30,000 or 20,000 hour lifetime claims. (Trial Ex. 292;
2 Houser, ¶ 109.)

3
4 191. It was not until late 2009 that LOA began to run lumen maintenance
5 tests on its LED Lamps (internally or through a third-party laboratory). In late
6 2009, LOA began to send its LED Lamps to a third party laboratory (OnSpex) for
7 LM-80 lumen depreciation tests. Prior to November 2009, LOA had not sent its
8 LED Lamps to a laboratory for lumen depreciation tests. (Vasquez, ¶ 10; Oct. 31
9 Trial Tr. (Vasquez) 153:25-154:3.)

10
11 192. After LOA reduced its lifetime claims to 20,000 hours, it received
12 lumen depreciation test reports from OnSpex. (Trial Ex. 294.)

13
14 193. The OnSpex tests were conducted on two of the Lifetime Lamps:
15 2025LEDE12-30K and 2026LED-30K. The test reports indicate that these lamps
16 were operated using 16mA, rather than the 20mA Taj identified as the current
17 driving LOA's LED Lamps. (Trial Ex. 294; Taj ¶ 65; Houser, ¶ 100.)

18
19 194. Tests conducted at a drive current different than that actually used in
20 LOA's Lifetime Lamps cannot be used to support claims on lamps whose
21 operating conditions – drive current – were different from those tested. (Houser, ¶
22 100.) This is particularly so where the drive current is less than actual operating
23 conditions.

24
25 195. The data presented in Trial Ex. 294 is limited. Because the test period
26 for these two lamps was only 1,008 hours, one cannot draw any reasonable
27
28

1 conclusions as to whether these two lamps will meet LOA's 20,000 hour lifetime
2 claim. (Id.)

3
4 196. Regardless of whether conclusions can be drawn on the two lamps
5 tested, the data in Trial Ex. 294 cannot be used to support claims on Lifetime
6 Lamps other than the two models tested (2025LEDE12-30K and 2026LED-30K).
7 Even then, the data does not replicate the conditions actually experienced in the
8 two models tested so it does not constitute adequate substantiation for those two
9 models either. (Id.; Oct. 31 Trial Tr. (Houser) 53:16-54:23.)

10
11 197. In November 2009, Halliwell received a report from Unity entitled
12 "LED Burn-in and Life Extrapolation Summary." (Halliwell, ¶ 180; Trial Ex.
13 287.) For the Par38, one of the tables that states at 66.2 deg C, the L₇₀ time is
14 30,000 hours and the L₅₀ time is 110,000 hours. (Trial Ex. 287, p. 9). While Dr.
15 Houser validated the model used (Oct. 31 Trial Tr. 52-53), he provided a specific
16 critique of the report in his written testimony. (Houser, ¶ 99.) First, the analysis
17 was based on only 2,200 hours of measured data. (Id.) Second, the measured data
18 show a much sharper decline than the extrapolated portion of the analysis. For
19 example, after 2,000 hours 25 % of the lumens had been lost. (Oct. 31 Trial Tr.
20 23.) Given this discrepancy, he did not believe that the overall conclusion with
21 regard to L₅₀ and L₇₀ for single bulb being analyzed supported a 20,000 hour
22 lifetime claim. (Id.) He found that the curve fitting work to create the
23 extrapolations beyond the measured data "quite poor [with respect] to the real
24 data," causing him to conclude that the extrapolated curves seemed "[v]isually . . .
25 implausible."⁷ (Id.) While the report might have provided Halliwell a subjective

26
27 ⁷The Court gives little weight to the fact that Dr. Houser had done no research in
28 extrapolation. (LOAFF, ¶ 403.) Presentation of empirical data and drawing conclusions

1 basis for believing in the conclusions, they do not constitute objective scientific
2 substantiation.

3
4 198. LOA lacked a reasonable basis to make 20,000 hour lifetime claims on
5 its Lifetime Lamps even as of February 2010. (Id.)

6
7 199. None of the documents identified above support any of LOA's lifetime
8 claims (30,000 hours, 20,000 hours, or 12,000-15,000 hours) for the Lifetime
9 Lamps. (Houser, ¶¶ 80-100.)

10
11 200. Generally, the data LOA relies upon as its substantiation for the
12 lifetime claims is inadequate for a variety of reasons, including: most of the data
13 represents tests conducted only on the LEDS, not the integrated LED Lamps; LOA
14 does not rely on test data for each of the models of LED Lamps it produced; the
15 tests were not run long enough to provide reliable, long-term data; and the test data
16 for both LEDs and certain integrated LED Lamps consistently indicates lifetimes
17 of no more than a few thousand hours. (Houser, ¶¶ 17-24, 101-109.)

18
19 201. Many of these problems were things LOA's engineers knew about.
20 For example, Chingez Tarar, a research and design engineer at LOA, knew of the
21 importance of testing the integrated LED lamp. He also recognized that not only
22 should one study the LED itself, but one should then study how the LED behaves
23 in the device. (Oct. 31 Trial Tr. (Taj) 96:22-97:2, 142:17-143:18.)

24
25 202. Tarar also noted that LOA should have test reports to support its claims
26 from the LED supplier. In order to do that, the LED supplier should have test

27
28

therefrom is part of the work of any scientist.

1 reports from a “third party laboratory” that “correlate with the claims being made
2 by the vendor to LOA and LOA to the consumer.” (Trial Ex. 304, p. 2.)

3 203. Ultimately, Tarar concluded LOA’s 30,000 hour lifetime claim was
4 unsubstantiated. (Trial Ex. 158.)

5
6 204. The documents which LOA identified, listed in paragraph 151, show
7 that LOA could not reasonably make lifetime claims for the Lifetime Lamps in
8 excess of 10,000 hours. (Houser, ¶¶ 17-24, 80-109.)

9
10 205. The findings in paragraphs 153-200 above show that LOA did not have
11 engineering or scientific data to sufficiently support its lifetime claims, or any
12 lifetime claims higher than 10,000 hours, at any point in time.

13
14 206. LOA points to the fact that Dr. Houser acknowledged that by 2009,
15 5mm LED manufacturers were routinely quoting lifetimes for 5mm LEDs of
16 50,000 hours. (LOAFF, ¶ 419, citing Oct. 30 Trial Tr. 149:14-18.) This is not
17 scientific evidence to support LOA’s claim for its own LEDs. LOA also points to
18 a 2005 ASSIST report claiming that at three hours per day, LEDs would last
19 100,000 hours. (LOAFF, ¶ 410, citing Ex. 146.) Apart from the methodological
20 problems which Dr. Houser pointed out (Oct. 30 Trial Tr. 161-162),⁸ the report
21 does not speak to LOA’s LEDs.

22
23 207. LOA lacked a reasonable basis for all the Lifetime claims it made on
24 the Lifetime Lamps.

25
26
27 ⁸He characterized the methodology as using a “strawman” to reach its conclusions. (Oct.
28 30 Trial Tr. 161-162.)

1 E. LOA's Lifetime Claims Were Also False.

2
3 208. LOA's substantiation does not support its 30,000 or 20,000 hour
4 lifetime claims. Rather, the documents and data LOA relies upon show that none
5 of the LEDs or Lifetime Lamps tested would last beyond a few thousand hours.
6 (Houser, ¶¶ 80-109.)

7
8 209. The documents which LOA identified, listed in paragraph 151, also
9 show that LOA's Lifetime claims on its Lifetime Lamps were false.

10
11 1. LOA's Internal Lumen Depreciation Tests.

12
13 210. LOA conducted a series of lumen depreciation tests through its Quality
14 Control department starting in late 2009. (Vasquez, ¶ 11.)

15
16 211. Enrique Vasquez ("Vasquez") is the LOA employee who was in
17 charge of the Quality Control department at that time. Vasquez also supervised the
18 lumen depreciation tests other members of his department conducted on the
19 Lifetime Lamps. (Vasquez, ¶¶ 5, 11.)

20
21 212. LOA conducted its own lumen depreciation tests on the following
22 lamps from October 2009 to April 2010:

- 23 a. 2001LEDE26
24 b. 2002LEDR30-65K
25 c. 2003LEDP38-65K
26 d. 2004LEDDL
27 e. 2025LEDE12-30K A SERIES

- f. 2025LEDE12-65K CHINA A SERIES
- g. 2026LED-65K Low Current A-Series
- h. 2026LED-65K
- I. 2026LED-30K
- j. 2035LED-30K
- k. 2025LED-65K LOW CURRENT

(Trial Exs. 520-29, 530-37; Vasquez, ¶ 12 (authenticating tests); Oct. 31 Trial Tr. (Vasquez) 175:25-178:16.)

213. LOA conducted its internal tests for a minimum of 672 hours, and a maximum of 6,888 hours. (Trial Exs. 520-537; Houser, ¶ 115.)

214. LOA's internal tests show that for each of the lamps tested, the end of useful life (defined as L₇₀) was reached as of:

- a. 2001LEDE26: 400-500 hours
- b. 2002LEDR30-65K: 475-575 hours
- c. 2003LEDP38-65K: 300-600 hours
- d. 2004LEDDL: 825-950 hours
- e. 2025LEDE12-30K A SERIES: 2000-2450 hours
- f. 2025LEDE12-65K CHINA A SERIES: 175-1400 hours
- g. 2025LED-65K (low current 0.56mf Cap): 1900-2900 hours
- h. 2026LED-30K (low current A Series): 2100-2300 hours
- I. 2026LED-65K Low Current A-Series: 1100-2900 hours
- j. 2026LED-65K: 250-1025 hours
- k. 2035LED-30K: 2850-3075 hours

(Trial Exs. 520-29, 530-37; Houser, ¶¶ 111.)

1 215. None of the lamps tested by LOA maintained lumen output above L₇₀
2 during the period tested. All had reached the end of life under L₇₀ during the less
3 than 7,000 hours of testing. (Houser, ¶¶ 110-123.)

4
5 216. The two best-performing lamps had lost 45 % of their original lumen
6 output by the end of the 6,888 hour test period. The maximum lifetime for any of
7 the lamps LOA tested was 3,075 hours (2035LED-30K). (Trial Exs. 513-15, 520-
8 29, 530-37; Houser, ¶¶ 111, 115.)

9
10 217. Although LOA claims it made continual improvements in its LED
11 Lamps' designs over time, those improvements did not result in an increase in the
12 lamps' lifetime. (Trial Exs. 513-15, 520-29, 530-37; Houser, ¶¶ 110-123)

13
14 218. LOA's internal tests show that any lifetime claims above a few
15 thousand hours for its Lifetime Lamps were false. (Houser, ¶¶ 110-123.)

16
17 2. Lumen Depreciation Tests Conducted by the Department of
18 Energy.

19
20 219. In addition to LOA's internal tests, several of its Lifetime Lamps were
21 tested through the Department of Energy ("DOE"). (Trial Exs. 15, 16, 513-15)

22
23 220. DOE tested certain LOA LED Lamps through its CALiPER program
24 prior to the filing of this action. (Trial Exs. 15, 16, 513-15) CALiPER is an
25 acronym for Commercially Available LED Product Evaluation and Reporting
26 Program. (Stipulated Fact 33.)

1 221. Pacific Northwest National Laboratory (“PNNL”), which did the
2 Round 6 DOE CALiPER tests on LOA products, purchased the LOA products that
3 were tested from Wal-Mart on July 29, 2008. (Stipulated Fact 34; PNNL Depo.
4 (Paget) 128:20-129:4.) PNNL is operated by Battelle and is a contractor of the
5 DOE. (Stipulated Fact 35.)

6
7 222. James Brodrick is the DOE person who oversaw PNNL’s activities in
8 connection with the CALiPER program. (Stipulated Fact 36.)

9
10 223. The DOE CALiPER program conducted lumen depreciation tests on
11 ten samples each of LOA LED Lamp models 2002LEDR30-65K, 2003LEDP38-
12 65K, and 2025 LEDE12-30K. (Trial Exs. 15-16, 513-15; Paget Depo. 146:23-
13 147:8; Houser, ¶ 118.)

14
15 224. The CALiPER tests are sufficiently reliable to constitute evidence of
16 the falsity of LOA’s lifetime claims in this case. The CALiPER reports are
17 indicative of a product’s performance. (Trial Exs. 16, 513-15; PNNL Depo.
18 (Paget) 29:3-16; Houser, ¶¶ 117-123.)

19
20 225. The CALiPER tests on these lamps show that none of the tested lamps’
21 lifetimes exceeded 375 hours under L₇₀, or 600 hours under L₅₀. (Trial Exs. 513-
22 15; Houser, ¶ 117.)

23
24 226. DOE sent a copy of the CALiPER test report, containing the results of
25 lumen depreciation tests run on three of LOA’s LED Lamps, to Usman Vakil in or
26 about September 2009. (Trial Ex. 580-LOA Resp. Int. No. 13.)

1 227. The CALiPER tests show that LOA's lifetime claims of 30,000 hours
2 on its LED Lamp models 2002LEDR30-65K, 2003LEDP38-65K, and
3 2025LEDE12-30K were false. (Trial Exs. 16, 513-15; Houser, ¶¶ 117-123.)
4

5 228. After receiving these results, Farooq Vakil sent a letter to the DOE in
6 late September and requested that it re-test LOA's LED Lamps. In October 2009,
7 the CALiPER program acquired another ten samples of each of the lamps it
8 previously tested. (Trial Exs. 16, 27, 79.)
9

10 229. In addition to the continuous burn lumen depreciation tests conducted
11 in August 2009 and reported in the CALiPER September 2009 report, the
12 CALiPER program also acceded to LOA's request to test its lamps' lumen
13 depreciation using a rapid cycle test. The different tests, however, did not result in
14 different outcomes for LOA's lamps:

- 15 a. 2002LEDR30-65K: the average lumen depreciation was greater
16 than 50% in under 800 hours when operated continuously, and
17 greater than 30% when cycled on and off;
- 18 b. 2003LEDP38-65K: the average lumen depreciation was greater
19 than 50% in under 800 hours when operated continuously, and
20 greater than 40% when cycled on and off; and
- 21 c. 2025LEDE12-65K: the average lumen depreciation was greater
22 than 50% in under 600 hours when operated continuously and
23 when cycled on and off.

24 (Trial Ex. 16, Figure 4.14.)
25
26
27
28

1 230. The CALiPER re-test report stated: “[w]hether operated continuously
2 or in cycles, none of these lamps came close to achieving its advertised lifetime of
3 30,000 hours.” (Trial Ex. 16 at 4.22.)

4
5 231. The Court notes the limitations on the CALiPER reports to which Dr.
6 Houser agreed. (E.g., Ex. 55; Oct. 30 Trial Tr. (Houser) 153:4-9.) Dr. Houser
7 used the data as a “component” of his work along with “a lot of internal Lights of
8 America tests.” (Oct. 30 Trial Tr. (Houser) 154:18-23.) Moreover, given that
9 LOA acted on the basis of the reports, as noted below, they clearly have
10 evidentiary value supporting a finding that LOA’s Lifetime claims were false.

11
12 232. LOA sent five samples of the same models for third party testing at the
13 same time as the CALiPER tests. The tests conducted by the third party
14 laboratory, OnSpex, do not show more promising results for LOA’s lamps.

15 a. R30-6500K (LOA model number 2002LEDR30-65K): every
16 sample tested showed lumen depreciation greater than 50% in less
17 than 672 hours;

18 b. PAR38 6500K (LOA model number 2003LEDP38-65K): every
19 sample tested showed lumen depreciation greater than 50% in less
20 than 672 hours;

21 c. 1.5 Watt Candlabra (LOA model number 2025LEDE12-65K):
22 every sample tested except one showed lumen depreciation greater
23 than 30% in less than 1008 hours. Only one sample tested showed
24 lumen depreciation greater than 25% in 1008 hours.

25 (Trial Exs. 576-578.)

1 233. After LOA lowered its lifetime claims to 20,000 hours, the CALiPER
2 program tested three of LOA's lamps. Specifically, in August 2010, the CALiPER
3 program tested LOA LED Lamps: 2001LEDE26-65K, 2002LEDP30-65K, and
4 2025LED-65K. The test results for these three lamps show the same patterns as
5 prior tests – none of them could meet a 20,000 hour lifetime claim. The results
6 indicated:

7 a. 2001LEDE26-65K: average lumen depreciation was 28% after
8 1000 hours;

9 b. 2002LEDP30-65K: average lumen depreciation was 88% after
10 1000 hours;

11 c. 2025LED-65K: average lumen depreciation was 58% after 1000
12 hours.

13 (Trial Exs. 517-519.)

14
15 234. The only Lifetime Lamps that were not the subject of lumen
16 depreciation tests conducted by either LOA or through the CALiPER program
17 were the following models: 2001LED53-IN-65K, 2001LED53-OUT-65K,
18 2025LED-30K, and 2025TLEDE12-30K.

19
20 F. LOA Received Consumer Complaints About Both of the Claims
21 at Issue.

22
23 235. LOA received complaints from consumers who purchased numerous
24 LOA LED Lamps. (LOA Answer ¶ 32.)

1 236. LOA used a database named Bridge Track Consumer Communications
2 to track consumer complaints about its products starting in March 2009. (Trial Ex.
3 580-LOA Resp. Rog. No. 12.)

4
5 237. LOA produced portions of its Bridge Track Consumer
6 Communications database reflecting consumer complaints about its LED Lamps to
7 the FTC. Those excerpts from LOA's Bridge Track database are contained in Trial
8 Exs. 538 and 539.

9
10 238. LOA's Bridge Track database included a field where the consumer or
11 LOA could note the product number that was related to the consumer's feedback.
12 (Trial Exs. 538 and 539.)

13
14 239. In total, Trial Exs. 538 and 539 contain approximately 1913 different
15 consumer communications about LOA's products. Of that number, 1087 entries
16 (57 %) contain consumer complaints about the lifetime of LOA's LED Lamps.
17 (Burton, ¶¶ 8-9.)

18
19 240. In 2008, LOA received numerous consumer complaints about LOA's
20 LED Lamps not lasting as long as advertised. (E.g., Trial Ex. 183.)

21
22 241. The complaints persisted in 2009. In August of that year, Duane Shore
23 and Joan Munoz (LOA's Director of Personnel and Operations) took a large stack
24 of consumer complaints about LOA's products to Farooq Vakil. (Trial Exs. 165-
25 66, 185-86, 189-90, 194, 232, 254.)

1 III. LOA Violated Section 5(a) of the FTC Act.

2
3 242. Defendants are aware of the importance of light output and lifetime
4 claims on product packaging for light bulbs. (LOA Answer ¶ 85)

5
6 243. LOA did not have adequate substantiation for its Replaces Watts or
7 lifetime claims, which were both specific, numeric claims that require scientific
8 data.

9
10 244. LOA's Replaces Watts and Lifetime claims were false.

11
12 IV. Usman and Farooq Vakil Had the Authority to Control and Sufficient
13 Knowledge of LOA's Deceptive and False Claims.

14
15 A. The Vakil's Authority to Control.

16
17 245. Usman Vakil was responsible for the day-to-day operations of LOA.
18 (U. Vakil Depo. 237:1-3; Nov. 2 Trial Tr. (U. Vakil) 40:4-7.)

19
20 246. Usman Vakil set the basic policy at LOA to "substantiate everything."
21 (U. Vakil Depo. 73:23-74:2; U. Vakil, ¶ 23; Nov. 2 Trial Tr. (U. Vakil) 40:8-22.)

22
23 247. Usman Vakil states he made the decision for LOA to enter into the
24 LED business. (U. Vakil, ¶ 16.)

1 248. Farooq Vakil worked at LOA at all relevant times. He retained his
2 executive title and oversight of numerous departments at LOA even though he only
3 worked part-time. (F. Vakil, ¶¶ 7, 9.)
4

5 249. LOA's organizational chart shows two positions at the top of all
6 departments: the President and the Executive Vice President. The two individuals
7 who hold those positions are Usman Vakil, and Farooq Vakil, respectively. All
8 other LOA employees report to one of the Vakil. (Trial Ex. 244.)
9

10 250. Usman Vakil conceded that as LOA's chief executive, he "certainly
11 did" get involved with significant issues at the company. He further admitted that
12 he considered "the issue of substantiation of the company's product claims to be a
13 significant issue." (Nov. 2 Trial Tr. (U. Vakil) 50:20-51:9.)
14

15 251. The Vakils had the authority to control any employee at LOA. Farooq
16 Vakil admitted that unless Usman Vakil directed him otherwise, there were no
17 limitations on his ability to tell any LOA employees what to do. (Trial Ex. 244; U.
18 Vakil Depo. 57:14-58:13; Halliwell Depo. 53:9-25; Nov. 2 Trial Tr. (F. Vakil)
19 149:23-150:18.)
20

21 252. As the individuals at the top of all management chains and sole owners
22 of the company, nobody had greater authority to control LOA's activities than
23 Usman and Farooq Vakil.
24

25 B. Usman Vakil Knew or Was Recklessly Indifferent to the Nature of
26 LOA's Representations.
27
28

1 253. Usman Vakil was at LOA's Walnut, California facility almost every
2 work day and made daily rounds of the manufacturing operations at the facility.
3 Specifically, he would "go on rounds to see the manufacturing, look at everything,
4 what people are doing" and sometimes he would tell his managers "what is
5 required." In addition to his rounds, he maintained an "open door" policy that
6 allowed employees to communicate freely with him. (U. Vakil Depo. 47:24-48:18,
7 49:8-14, 51:2-15.)

8
9 254. Usman Vakil testified that as LOA's chief executive, he "certainly did"
10 get involved with significant issues at the company. He further admitted that he
11 considered "the issue of substantiation of the company's product claims to be a
12 significant issue." However, he denies any involvement prior to August 2009.
13 (Nov. 2 Trial Tr. (U. Vakil) 50:20-51:9; U. Vakil, ¶¶ 26-29, 38.)

14
15 255. Usman Vakil was actively involved in LOA's LED Lamp business.
16 According to Halliwell, both Usman Vakil and Farooq Vakil were involved in
17 LOA's LED business. Both Usman and Farooq Vakil participated in meetings
18 with LOA's employees about its LED Lamps. (Halliwell Depo. 186:25-187:19,
19 364:5-13.)

20
21 256. In fact, when asked who was involved with LOA's LED lamp products
22 prior to August 2009, Farooq Vakil stated Usman Vakil along with LOA's LED
23 Lamp engineers. In addition, his brother stated that Usman Vakil is "very involved
24 in every little facet" even when, according to Farooq Vakil, Usman Vakil has
25 qualified people around him. (Nov. 2 Trial Tr. (F. Vakil) 120:10-13; F. Vakil
26 Depo. 166:3-12.)

1 257. According to Farooq Vakil, Usman Vakil “is a manufacturing person.”
2 Moreover, he is “not a detailed person” and his approach when there is an issue is
3 to tell employees “fix it.” (F. Vakil Depo. 64:5-9, 64:18-65:3.)
4

5 258. In about 2007, Usman Vakil discussed with Halliwell and Taj, the head
6 of research for LOA’s engineering department, producing and selling LED lamps
7 at LOA. (U. Vakil, ¶ 19.)
8

9 259. Based on his discussions with Halliwell and Taj, Usman Vakil made
10 the decision for LOA to enter the LED lamp manufacturing business. (U. Vakil, ¶¶
11 16, 19.)
12

13 260. When LOA first entered the LED lamp market Usman Vakil looked at
14 competitor products and surveyed those products at retail stores. (U. Vakil Depo.
15 85:14-86:4.)
16

17 261. When setting prices for LOA’s LED Lamps, Usman Vakil compared
18 LOA’s products to competitors Feit and TCP, who were making the same lifetime
19 claims as LOA “putting down in some cases 30,000, 50,000, 100,000 hours.” In
20 fact, as Halliwell testified, Usman Vakil and he discussed so many products that
21 “we would be here a long time if I was to reference every product I’ve ever
22 referenced to Usman.” (U. Vakil Depo. 131:21-132:5, 133:7-10; Halliwell Depo.
23 114:4-10.)
24

25 262. Usman Vakil set the LED Lamps prices at the introduction of the
26 lamps into the commercial market and thereafter at routine quarterly meetings with
27 Halliwell. Ultimately, decisions about LOA’s LED products’ net pricing was
28

1 entirely up to Usman Vakil. (U. Vakil Depo. 135:12-136:7; Halliwell Depo.
2 79:20-24, 80:5-81:4, 81:21-83:17, 85:1-10, 85:23-86:22.)

3
4 263. In setting prices for LOA's LED Lamps, Usman Vakil made "watt to
5 watt" and "lifetime to lifetime" claim comparisons" between LOA's and
6 competitors' products. (U. Vakil Depo. 131:21-132:5, 133:2-10; Halliwell Depo.
7 110:1-4, 110:14-111:10, 111:19-113:21; Nov. 2 Trial Tr. (U. Vakil) 38:2-40:3.)

8
9 264. If there was an issue regarding an important customer such as Costco,
10 it would be discussed with Usman Vakil. In fact, regarding sales issues generally,
11 Usman Vakil would meet with Halliwell about once a week. (Halliwell Depo.
12 25:23-26:8; Oct. 31 Trial Tr. (Taj) 119:11-120:13.)

13
14 265. Usman Vakil used his daily rounds to discuss LOA's problems with
15 his employees. (U. Vakil Depo. 236:12-14) Usman Vakil likely saw that
16 packaging as he made his rounds through LOA each day.

17
18 266. Taj spoke with Usman Vakil almost every day at LOA. In those
19 conversations, Taj and Usman Vakil spoke about subjects such as LEDs, design,
20 thermal management, and engineering matters, and the testing of Unity's LEDs.
21 (Oct. 31 Trial Tr. (Taj) 117:12-118:17, 121:16-18.)

22
23 267. Taj discussed engineering problems related to LOA LED Lamps with
24 Usman Vakil, including technical engineering and design questions, the pricing or
25 the performance of the LEDs, and the reports, if they were negative. Based on the
26 evidence, the Court finds that Usman Vakil saw that packaging as he made his

1 rounds through LOA each day. (Oct. 31 Trial Tr. (Taj) 117:12-118:17, 121:16-
2 18.)

3
4 268. Taj discussed with Usman Vakil specific engineering decisions related
5 to LOA's LED lamps such as thermal management and the size or shape of the
6 bulb. (Oct. 31 Trial Tr. (Taj) 118:2-17.)

7
8 269. Usman Vakil participated in certain meetings with Unity, one of
9 LOA's LED suppliers. Usman Vakil also set up a meeting with another LED
10 supplier, Nichia, in July 2008. (Oct. 31 Trial Tr. (Taj) 121:19-21, 139:6-11; Trial
11 Exs. 133, 129.)

12
13 270. According to Taj, someone would have discussed with Usman Vakil
14 the need for LOA to conduct a complete redesign of a product it sold to Costco to
15 address concerns about LOA's LED lamps burning out prematurely. (Oct. 31 Trial
16 Tr. (Taj) 120:14-121:15.)

17
18 271. In fact, in 2008, LOA undertook such a redesign of one of its LED
19 lamps that it sold to Costco to address concerns about LOA's LED lamps burning
20 out prematurely. (Trial Ex. 141.)

21
22 272. Usman Vakil received approximately ten to fifteen internal emails a
23 day, and he testified that he at least read the text of emails that contained test data.
24 (U. Vakil Depo. 53:9-11, 152:3-8.)

25
26 273. Usman Vakil received a variety of important documents about LOA's
27 LED Lamps over email, such as product brochures, test reports on components

1 used in LOA's LED Lamps, test reports on selected LED Lamps, retailer
2 complaints about LOA's LED Lamps, and reports of LOA Shanghai failing a
3 factory audit conducted by Home Depot. (Trial Exs. 140, 143, 153, 154, 231, 236,
4 237, 274, 500, 501, 502, 506.)

5
6 274. Usman Vakil also received emails from LOA Shanghai about how to
7 maintain a sufficient supply of LEDs so they could increase production. (Trial Ex.
8 236.)

9
10 275. Between October and December 2008, Usman Vakil received emails
11 and became informed of the need for lumen maintenance testing for LOA's LED
12 Lamps. Even before that, as early as September 2007, Usman Vakil received
13 information about Energy Star's program requirements for solid state luminaires, a
14 category that includes LED lamps. (Trial Exs. 160, 199, 237, 274, 283, 506.)

15
16 276. At least as early as December 2008, Usman Vakil was aware that LOA
17 decided not to perform lifetime testing even though it was selling its LED Lamps
18 in packaging that contained lifetime claims. (Trial Exs. 237 and 506.)

19
20 277. That same month, LOA's employees informed Usman Vakil that LOA
21 would only perform lifetime testing "once we are satisfied with the production
22 quality to have reports on record. [sic]" (Trial Ex. 506.)

23
24 278. Usman Vakil never intervened to ensure that appropriate tests were
25 obtained on LOA's LED Lamps. Nor did Usman Vakil take action to halt LOA's
26 claims even after receiving test reports that showed both that LOA's Lifetime
27 claims were not substantiated and that they were false.

1 279. Specifically, in December 2008, Usman Vakil received test results
2 related to the performance of four of LOA's integrated LED Lamps. Those tests
3 showed all of the lamps had reached the end of their useful lives (under L₇₀) within
4 the 961 hour test period. This data not only shows LOA's 30,000 hour lifetime
5 claim was not supported, but also that it was false. Usman Vakil testified that he
6 did not pay any attention to this report: "I did not go through these details." (Trial
7 Ex. 140; Houser, ¶¶ 91-92; Nov. 1 Trial Tr. (U. Vakil) 179:17-181:21.)

8
9 280. As a lighting engineer, Usman Vakil knew or should have known how
10 to read and interpret the test data he received. At a minimum, he admits that he
11 understood the meaning of a "lumen intensity decay graph." In addition, in
12 October 2008, Halliwell sent an email to Usman Vakil stating that a 25,000 hour
13 lifetime claim would require maintaining 91% of initial light output at 6,000 hours,
14 and a 35,000 lifetime claim would require maintaining 94% of light output at 6,000
15 hours. (U. Vakil Depo. 152:22-24; Trial Ex. 274.)

16
17 281. Nevertheless, Usman Vakil continued to ignore the data presented to
18 him. In February 2009, he received emails claiming Unity had improved its LEDs
19 – ones that LOA was about to purchase for its LED Lamps. However, the test
20 results attached to this email show that Unity's LED life (under L₇₀) was less than
21 10,000 hours when driven at the current found in LOA's LED Lamps. Rather than
22 support LOA's lifetime claims, these tests also show LOA's claims were false.
23 (Trial Ex. 143.)

24
25 282. In about July 2009, Usman Vakil directed that replacement language
26 be remove from LOA packaging after he received test reports from DOE on several
27
28

1 of LOA's LED Lamps which called into serious question the veracity of LOA's
2 claims on its LED Lamps. (U. Vakil, ¶ 38.)

3
4 283. The first communication from DOE to Usman Vakil arrived in
5 September 2008. In that package, Usman Vakil received a report from DOE's
6 CALiPER program on four of LOA's LED Lamp models (2001LED53OUT-65K,
7 2025LEDE12-65K, 2004LEDDL-35K, and 2003LEDP38-65K), in which the
8 claims LOA made on some of its LED Lamps were identified. The report also
9 included pictures of the packaging used for each of the models tested. (Trial Exs.
10 51-54, 503.)

11
12 284. Usman Vakil responded to the CALiPER report by sending a letter to
13 the DOE on September 25, 2008. (Trial Exs. 71, 504.)

14
15 285. A year later, in September 2009, the DOE sent Usman Vakil a letter
16 with CALiPER test reports that showed lumen depreciation of 70 % and greater for
17 three of LOA's LED Lamps. Specifically, the CALiPER reports indicated lumen
18 depreciation of approximately 90 % for model 2025LEDE12-30K, 78 % for model
19 2003LEDP38-65K, and 70 % for model 2002LEDR-65K. (LOA Answer ¶ 64;
20 Trial Exs. 513-15.)

21
22 286. While the 2008 and 2009 DOE reports for a limited number of LED
23 Lamps cannot necessarily be extended to all LOA LED Lamps, they do contrast
24 with LOA's absence of any full product line data.

1 287. In December 2009, Halliwell informed Usman Vakil that, based on
2 tests conducted by OnSpex on LOA's LED Lamps, "all 5mm lamps cannot have a
3 rated life above 1000 hours." (Trial Ex. 148.)

4
5 288. Usman Vakil knew about LOA's Lifetime claims and the basis for
6 those claims, which all showed that LOA lacked a reasonable basis to make all of
7 its Lifetime claims and that the claims were false.

8
9 289. Moreover, to the extent Usman Vakil claims that he never read the
10 attachments which accompanied such a small number of daily emails, the Court is
11 skeptical. Moreover, if believed, he acted with reckless indifference to the truth or
12 falsity of LOA's claims.

13
14 290. Usman Vakil failed to implement any procedures by which he could
15 ensure that his employees followed his edict to "substantiate everything." At trial,
16 he conceded that the only steps he took to ensure product claims were substantiated
17 was just to ask LOA's engineers. He did not ask for documents to substantiate
18 LOA's claims in the end of 2009. (Nov. 2 Trial Tr. (U. Vakil) 40:8-22, 51:10-
19 52:4.)

20
21 291. Usman Vakil took no action in response to reports about both the poor
22 quality of LED lamps produced in LOA Shanghai and a failed factory audit of that
23 facility.

24
25 292. The President of LOA Shanghai, Kamran Mirza ("Mirza"), discussed
26 LOA Shanghai's operations with Usman Vakil. (Mirza Depo. 73:22-24.)

1 293. Usman Vakil also had a live video feed to the LOA Shanghai plant in
2 his office. (U. Vakil Depo. 184: 21-185:5; Nov. 1 Trial Tr. (U. Vakil) 174:23-25.)

3
4 294. Mirza and Usman Vakil received reports evidencing the poor quality of
5 production of the LED Lamps at LOA Shanghai. (Trial Exs. 149, 153, 231, 500.)

6
7 295. One of those reports came from one of its largest retailers – Costco.
8 Usman Vakil received an email in December 2008 wherein various LOA and
9 Costco employees discussed the problems a Costco inspector found at LOA’s
10 Shanghai factory where, at that time, all of LOA’s LED Lamps were manufactured.
11 Those problems continued when Costco returned to re-inspect LOA Shanghai.
12 (Trial Exs. 149, 230, 231.)

13
14 296. The problems with LOA Shanghai’s manufacturing operations were so
15 bad that Mirza stated in May 2009: “I think we should not be in LED business
16 because the way we are running the production is not suitable for LED operation.”
17 Mirza went on to state that LOA Shanghai had “no clean room to produce LED
18 product,” that conditions in the plant were “like freeway one side next to
19 production line and other side trash dumping area. You name it every thing that
20 makes LED’s bad we have.” (Trial Ex. 150; Mirza Depo. 79:13-80:24.)

21
22 297. In November 2009, Usman Vakil was informed that LOA Shanghai
23 had badly failed a Home Depot audit and Home Depot’s “LED program is on
24 hold.” (Trial Ex. 153.)

1 298. The quality control problems at LOA Shanghai caused LOA to cease
2 almost all LED Lamp production at LOA Shanghai in late 2009. (U. Vakil Depo.
3 185:20-24, 186:7-17.)

4
5 299. Usman Vakil knew about quality control issues at LOA's Shanghai
6 facility. Nevertheless, he failed to take any actions to ensure the quality control
7 problems did not result in false or deceptive claims on LOA's LED Lamp
8 packaging. (U. Vakil Depo. 183:24-184:6.)

9
10 300. At no point prior to July 2009 did Usman Vakil take any actions to
11 ensure that LOA had substantiation for the claims it made about its LED Lamps, or
12 to remove claims from LOA's LED Lamp packaging.

13
14 301. Within six months of the date LOA first began to sell its LED Lamps,
15 Usman Vakil received an email containing complaints from one of LOA's largest
16 customers – Costco. He also received a copy of a complaint a consumer filed
17 through LOA's web site to obtain a refund or replacement for the seven LED
18 Lamps the consumer purchased that failed. (Trial Exs. 253, 279.)

19
20 302. The following spring, Usman Vakil received emails containing more
21 complaints from some of LOA's other largest customers – Sam's Club and
22 Walmart. Many of those complained about LOA's LED Lamps burning out early
23 or partially, sometimes within days. (Trial Exs. 166, 186, 190, 232.)

24
25 303. Finally, in July 2009, Usman Vakil admits that he learned about the
26 DOE's concerns over LOA's Replaces Watts claims. In response, Usman Vakil
27
28

1 instructed LOA's employees to remove the claim from all LED Lamp packaging.
2 (U. Vakil, ¶ 38.)

3
4 304. By the summer and fall of 2009, Usman Vakil was also aware of and
5 approved over \$1.5 million in refunds to Costco that Costco requested after
6 receiving a copy of the CALiPER report that tested some of LOA's products.
7 Some of the lamps tested were sold to and through Costco. (Trial Ex. 650-U. Vakil
8 Resp. Int. No. 23; Halliwell, ¶¶ 205-07.)

9
10 305. From at least July 2009, Usman Vakil was fully aware of both the
11 Replaces Watts and Lifetime claims LOA made on its LED Lamps' packaging.
12 (Trial Ex. 650-U. Vakil Resp. Int. No. 8.)

13
14 306. In addition, in August 2009, Usman Vakil was included in the email
15 discussions that took place among LOA employees regarding the basis for
16 reducing LOA's lifetime claims from 30,000 hours to 20,000 hours. Those
17 discussions included what the new lifetime should be and the fact that dropping the
18 lifetime too low would be "detrimental to our current product placement." They
19 also included Halliwell's statements that LOA will "go with 20000 hrs until such
20 time we conduct and complete life testing at which point we will adjust our life
21 claims." Thus, even the face of an admission that no tests had been performed,
22 Usman Vakil did not call for LOA to cease making its Lifetime claims. (Trial Exs.
23 145, 215.)

24
25 307. At about the same time, Usman Vakil received an email from Halliwell
26 in which he stated "we need all 5mm products on test as soon as possible." Thus,
27 it appears that even after becoming aware of LOA's misrepresentations, Usman
28

1 Vakil allowed LOA to continue to make Lifetime claims for which it had no
2 supporting test data. (Trial Ex. 204.)

3
4 308. Following LOA Shanghai's failed Home Depot factory inspection in
5 2009, Halliwell pressed Mirza to complete a response to the report so it could be
6 delivered to Home Depot's buyer before a meeting Halliwell and Umsan Vakil had
7 scheduled with Home Depot. (Trial Ex. 152.)

8
9 309. In December 2009, Usman Vakil and Farooq Vakil continued to
10 receive customer comments about premature burn out of LOA's LED Lamps from
11 retailers, such as Sam's Club. (Trial Ex. 169.)

12
13 310. In April 2010, Usman Vakil was informed that LOA was changing
14 the circuits on some of its 5 mm LED Lamps so it could achieve a life rating of
15 15,000 hours. However, no test data was attached to that email to show LOA had
16 obtained a reliable test result to show those LED Lamps could, in fact, achieve the
17 stated lifetime, nor did the sender of the email (Halliwell) indicate that such testing
18 was already in hand. (Trial Ex. 164.)

19
20 311. Usman Vakil admits he was aware of the lifetime claims LOA made on
21 its LED lamp packaging in July 2009 and thereafter. (Trial Ex. 650-U. Vakil Resp.
22 to Int. No. 8.)

23
24 312. Prior to July 2009, Usman Vakil was knew of or was at least recklessly
25 indifferent to the truth or falsity of LOA's Replaces Watts and Lifetime claims.
26
27
28

1 313. In and after July 2009, Usman Vakil knew of LOA's
2 misrepresentations in making the Replaces Watts claims. In and after August
3 2009, Usman Vakil knew about LOA's Lifetime claims and the basis for those
4 claims, which all showed that LOA lacked a reasonable basis to make all of its
5 Lifetime claims and that the claims were false.

6
7 314. The Court does not find credible the claim that Usman Vakil's
8 management style insulated him from the misleading Replaces Watts claims and
9 the misleading and unsubstantiated Lifetime claims. (LOAFF, ¶¶ 497-506.)
10 Given his involvement in the business, the Court does not believe that his reliance
11 on Halliwell and Taj insulated him from the problems which were occurring. (E.g.,
12 LOAFF, ¶¶ 508, 513, 514.) The above findings indicate that Usman Vakil was
13 receiving information that there were in fact problems with LOA's claims and its
14 products. At a minimum, Usman Vakil was reckless in not ensuring that the
15 problems were addressed and that false Replaces Watts and Lifetime claims were
16 corrected.

17
18 C. Farooq Vakil Knew or Was Recklessly Indifferent to the Falsity of
19 LOA's Deceptive Claims.

20
21 315. Much of Farooq Vakil's argument that he not personally liable stems
22 from a heart attack which he sustained in 1997. (LOAFF, ¶ 12.) To be sure
23 Halliwell's duties expanded (id., ¶ 13), but Farooq continued to be involved in the
24 business, at first working 15 to 18 hours a week until late 2010 or early 2011, and
25 then 20-25 hours a week. (Id., ¶ 12.) As demonstrated below, he was far from an
26 absentee owner.

1 316. Farooq Vakil was actively involved in LOA's LED Lamp business.
2 According to Halliwell, both Usman Vakil and Farooq Vakil are involved in
3 LOA's LED business. Both Usman and Farooq Vakil participated in meetings
4 with LOA's employees about its LED Lamps. (Halliwell Depo. 186:25-187:19,
5 364:5-13.)

6
7 317. In September 2008, Farooq Vakil directed an LOA employee to
8 discuss an extensive list of questions with Unity so LOA could be sure it was
9 getting a quality product from Unity. All of these questions were raised to prepare
10 for a meeting with Unity the following month. (Trial Exs. 132, 133; Nov. 2 Trial
11 Tr. (F. Vakil) 80:22-82:5.)

12
13 318. Prior to that meeting with Unity, Farooq Vakil sent an email describing
14 a meeting he had with Taj about the circuit design used in some of LOA's LED
15 Lamps. Farooq Vakil's instructions were to examine the circuit design to
16 determine whether it needed to be modified prior to product leaving LOA. (Trial
17 Ex. 135.)

18
19 319. Farooq Vakil also received Unity's power point presentation that it
20 intended to present during its meeting with LOA in October 2008. (Trial Ex. 136.)

21
22 320. Following his meeting with Unity, Farooq Vakil contacted Unity's
23 representative directly to request that Unity examine the performance of LOA's
24 circuits and make recommendations. Farooq Vakil also received preliminary
25 lumen depreciation data from a test Unity had begun at LOA's request. He later
26 received more data from Unity from that test, which is discussed more fully below.
27 (Trial Exs. 137, 139, 140.)

1 321. Farooq Vakil's claim that he was not involved in LOA's LED business
2 during the period of time he was requesting reviews of technical items like LOA's
3 LED circuit designs is not credible.

4
5 322. Farooq Vakil received a variety of important documents about LOA's
6 LED Lamps over email, such as product brochures, test reports on components
7 used in LOA's LED Lamps, test reports on selected LED Lamps, and retailer
8 complaints about LOA's LED Lamps. (Trial Exs. 72, 74, 140, 165-166, 237, 283,
9 501.)

10
11 323. Specifically, as early as the fall of 2007, Farooq Vakil received LOA's
12 LED Lamp brochures, in which LOA made lifetime claims, incandescent watt
13 comparison claims, and included pictures of the product packaging. (Trial Ex.
14 501.)

15
16 324. In addition, in October 2008, Farooq Vakil, like Usman Vakil, received
17 an email from Halliwell stating that a 25,000 hour lifetime claim would require
18 maintaining 91% of initial light output at 6,000 hours, and a 35,000 lifetime claim
19 would require maintaining 94% of light output at 6,000 hours. (Trial Ex. 274.)

20
21 325. Farooq Vakil was aware of the need for lifetime testing for LOA's
22 LED Lamps at least by October 2008. Yet, at that time, Farooq Vakil was also
23 aware that LOA was not performing lifetime testing even though it was selling its
24 LED Lamps in packaging that contained lifetime claims. (Trial Exs. 199, 237,
25 283.)

1 326. Then, in December 2008, Farooq Vakil received test results related to
2 the performance of LOA's LED lamps, responded to the email he received and
3 forwarded the test results to Usman Vakil. Those tests showed that all four of
4 LOA's LED Lamps tested had reached the end of their useful lives (under L₇₀)
5 within the 961 hour test period. This data not only shows LOA's 30,000 hour
6 lifetime claim was not supported, but also that it was false. (Trial Ex. 140; Houser
7 ¶¶ 91-92; Nov. 2 Trial Tr. (F. Vakil) 88:1-17.)

8
9 327. In September 2009, Farooq Vakil sent a letter to the DOE about
10 another negative CALiPER report that included tests run on some of LOA's LED
11 products. In that letter, Farooq Vakil acknowledged the CALiPER test report that
12 LOA received in September 2008. This was part of his request for CALiPER to
13 test new production models, rather than those purchased off the shelf through the
14 CALiPER program. (Trial Exs. 72, 74.)

15
16 328. Farooq Vakil also knew LOA's LED Lamps were not performing up to
17 their claims. In 2009, Farooq Vakil received complaints from the Walmart and
18 Sam's Club buyers that LOA's LED Lamps were failing prematurely, and well
19 before the 30,000 hours claimed. (Trial Exs. 165, 166.)

20
21 329. Prior to 2009, Farooq Vakil did not implement any procedures by
22 which he could ensure that his employees followed Usman Vakil's edict to
23 "substantiate everything." In fact, Halliwell, LOA's only other executive, did not
24 know whether Usman and Farooq Vakil had put procedures into place to ensure
25 that LOA's departments were supported both fiscally and with good personnel.
26 (Halliwell Depo. 364:5-16.)

1 330. Farooq Vakil had oversight of the Customer Service department, yet he
2 never implemented procedures by which the employees in that department would
3 inform him of the volume or type of complaints LOA was receiving from the
4 customers who purchased LOA's products. Rather, his message to the head of
5 customer service is always the same, "Take care of it." (F. Vakil Depo. 67:8-17;
6 Nov. 2 Trial Tr. (F. Vakil) 92:1-94:11.)

7
8 331. Nevertheless, LOA's customer service representative, on at least one
9 occasion, took a large stack of consumer complaints about LOA's products to
10 Farooq Vakil. (Nov. 2 Trial Tr. (F. Vakil) 108:14-109:17.)

11
12 332. Similarly, Farooq Vakil had oversight of the accounting department,
13 yet he never implemented procedures by which the employees of that department
14 would inform him of the amount or number of returns, warranty claims, or trends
15 in retailer purchases of LOA's LED products. (Trial Ex. 244.)

16
17 333. In continuing to rely on Halliwell's ability to properly substantiate and
18 make accurate claims on LOA's LED Lamps after receipt of data calling the
19 veracity of LOA's claims into question constitutes reckless indifference to the truth
20 or falsity of LOA's claims.

21
22 334. In 2009, Farooq Vakil became very involved in LOA's LED lamp
23 business.

24
25 335. Halliwell requested that Usman and Farooq Vakil confer about a
26 variety of quality control procedures and processes, which included some LED
27 products. (Trial Ex. 275.)

1 336. In the spring of 2009, Farooq Vakil directed that LOA more robustly
2 establish and outfit a quality control department – one that would include test
3 equipment that it could use to measure the light output and lumen depreciation of
4 its LED Lamps. (F. Vakil, ¶ 31, Trial Exs. 233, 260, 272.)

5
6 337. In March 2009, Farooq Vakil required LOA to perform more quality
7 control and announced a new beginning with improvements for all LOA products,
8 including LED products. Those requirements reached LOA’s engineers
9 responsible for its LED Lamps as well. (F. Vakil Depo. 59:15-25, 75:12-76:9;
10 Trial Ex. 233; Nov. 2 Trial Tr. (F. Vakil) 96:2-98:5.)

11
12 338. In addition, throughout 2009, Farooq Vakil established LOA-wide
13 procedures in multiple areas, including sales and marketing and quality control.
14 (F. Vakil Depo. 181:10-182:24; Trial Exs. 151, 175, 259, 260, 272, 277.)

15
16 339. However, as of April 2009, LOA was not performing quality control
17 tests on components such as the LEDs it received from Unity – one of the
18 procedures outlined by Farooq Vakil. (Trial Exs. 151, 247.)

19
20 340. Further, as of July 2009, Farooq Vakil was instructing an LOA LED
21 engineer to learn how to properly design the product and that he needed to learn all
22 about the LED itself. Farooq Vakil even directed this employee to “information
23 available on the Internet and literature” to determine how to properly design the
24 LED lamp. (Trial Ex. 248; Nov. 2 Trial Tr. (F. Vakil) 98:6-99:13.)

25
26 341. Farooq Vakil even directed his assistant to obtain and provide a report
27 of defective products that the Quality Control department identified. The email
28

1 indicates that one of LOA's engineers, Chingez Tarar, would be receiving these
2 reports daily. (Trial Ex. 224.)

3
4 342. By at least June 2009, Farooq Vakil was fully involved in the
5 marketing of all of LOA's products, including LEDs. (Trial Ex. 272, 277.)

6
7 343. For example, in June 2009, Farooq Vakil directed LOA employees in
8 marketing and told LOA employees "it is time that we follow truth in advertising"
9 on LOA packaging and LOA needed to have products tested and put on packaging
10 only that which can be backed up with "hard results." (F. Vakil Depo. 181:10-
11 182:24; Trial Exs. 272, 277.)

12
13 344. The following month, he directed Taj to "take charge of LED totally."
14 Yet, a few days later, in response from a letter from Brodrick at DOE, Farooq
15 Vakil sent a highly critical email to numerous LOA employees in which he stated:
16 "I also need answers on what controls are in place for this not to happen. This is
17 criminal. Either [c]ase I will actively pursue policies to stop this senseless crime
18 from happening." (Trial Exs. 155, 156.)

19
20 345. By the summer and fall of 2009, Farooq Vakil was also aware of the
21 fact that LOA was refunding Costco over \$1.5 million.

22
23 346. In September 2009, Farooq Vakil sent another highly critical email in
24 which he complained about the rush in preparing certain LED Lamp packaging that
25 caused errors on the labels. He stated "I want to insert some procedures
26 immediately to never have a repeat of this." (Trial Ex. 227.)

1 347. The lack of policies created problems into October 2009 when Farooq
2 Vakil complained of the lack of procedures to test products before making and
3 shipping them out. Specifically, he stated “I would like to see a written plan of
4 how we will control these issues . . .” However, he never followed up on his
5 demands or inquired about the written plan he demanded. (Trial Ex. 228; Oct. 31
6 Trial Tr. (Vasquez) 171:23-172:10, 175:3-12.)

7
8 348. He again questioned whether LOA was performing the proper testing
9 and quality control measures at the same time he questioned whether Unity had
10 provided LOA with accurate lifetime data. One of LOA’s engineers also raised
11 questions to Farooq Vakil about whether Unity even had the ability to run proper
12 lifetime tests. (Trial Exs. 246, 307.)

13
14 349. Even as late as November 2009, Farooq Vakil commented on high
15 rates of lumen depreciation experienced by some of LOA’s LED Lamps that were
16 tested in its Quality Control department. Farooq Vakil noted that while LOA’s
17 LED Lamps’ depreciated quickly, the LED lamps made by LOA’s competitors
18 “hardly depreciate after 500 hours (maybe a few lumens only).” Farooq Vakil
19 requested that LOA’s Quality Control department conduct these tests on
20 competitors’ lamps. (Trial Exs. 242, 264; Nov. 2 Trial Tr. (F. Vakil) 103:12-20,
21 106:12-25.)

22
23 350. By at least July 2009, Farooq Vakil knew or should have known that
24 LOA was making false and unsubstantiated claims about its LED Lamps’ light
25 output and lifetimes.

1 351. As of August 2009, Farooq Vakil knew of and was involved in
2 approving packaging claims on LOA's LED Lamps. (Trial Exs. 207, 215, 272.)

3
4 352. In August 2009, Farooq Vakil and LOA employees discussed the
5 justification for changing LOA's lifetime claims from 30,000 to 20,000 hours.
6 Those discussions also included Halliwell's statements that LOA will "go with
7 20000 hrs until such time we conduct and complete life testing at which point we
8 will adjust our life claims." This change, however, was not made based upon test
9 data. Yet, neither Usman or Farooq Vakil called for LOA to cease making its
10 lifetime claims. (Trial Exs. 145, 215; Oct. 31 Trial Tr. (Vasquez) 166:16-168:22;
11 Nov. 2 Trial Tr. (F. Vakil) 107:4-108:9.)

12
13 353. Farooq Vakil exercised his control by approving lifetime claims on
14 LOA LED product packaging in August 2009. (Trial Ex. 207.)

15
16 354. Farooq Vakil was aware of the lifetime claims LOA made on its LED
17 lamp packaging in July 2009 and thereafter. (Trial Ex. 647-F. Vakil Resp. Int.
18 Nos. 8 and 11.)

19
20 355. However, the complaints continued. In August 2009, Farooq Vakil
21 identified "huge stacks of customer complaints" on LOA's LED products. (Trial
22 Exs.167, 194.)

23
24 356. Usman Vakil and Farooq Vakil continued to receive customer
25 comments about premature burn out from retailers, such as Sam's Club in
26 December 2009. Yet, at trial, Farooq Vakil could not recall whether he read the
27 substance of the complaint. However, given the title of the email conveying this
28

1 complaint (Sam’s Club Buyer Comments – Not good Publicity), Farooq Vakil
2 conceded this should have “tripped me” to read it in full. (Trial Ex. 169; Nov. 2
3 Trial Tr. (F. Vakil) 109:18-110:18.)

4
5 357. In early August 2009, Farooq Vakil knew that LOA was making
6 lifetime claims without proper data. In discussing LED lamp testing, he stated: “It
7 still does not make sense to put life rating on the package without having some
8 method of supporting the claim... .” Moreover, at trial, he conceded that the
9 vendor’s statement in Trial Exhibit 266 that was based on preliminary tests was not
10 adequate to support a claim on LOA’s packaging. (Trial Ex. 266; Nov. 2 Trial Tr.
11 (F. Vakil) 110:21-111:13.)

12
13 358. From August 2009 through at least November 2009, Farooq Vakil sent
14 emails to various LOA employees questioning the accuracy and substantiation for
15 the Lifetime claims LOA made on its LED lamps, noting that LOA took “liberties
16 on claims,” admonishing employees to put “truth (certified) on the package,
17 brochures [sic], and Web,” and identifying packaging claims as “fabricated” and
18 “exaggerated.” (Trial Exs. 257, 264, 267, 270, 271.)

19
20 359. In addition, LOA’s own Quality Control department had begun to test
21 many of its LED Lamps by November 2009. Farooq Vakil received copies of
22 many lumen depreciation tests conducted by LOA’s Quality Control department.
23 The vast majority of those tests indicated that LOA’s LED Lamps were reaching
24 L₇₀ within the 1,000-hour test period. (Trial Ex. 205; Oct. 31 Trial Tr. (Vasquez)
25 162:2-18.) Yet, Farooq Vakil did not call for LOA to re-evaluate or cease making
26 its then 20,000 hour lifetime claim.

1 360. Into 2010, LOA's engineer Taj informed Farooq Vakil that Taj was
2 still working to improve LOA's LED Lamp design to obtain a lifetime of 15,000
3 hours. (Trial Ex. 265.)

4
5 361. LOA had a disorganized operation in which the department responsible
6 for receipt of complaints and defective products returned from through its warranty
7 were not communicating with other departments that might be able to evaluate the
8 defective products and fix problems with the LED Lamps. Farooq Vakil
9 recognized this when he announced the need for a point person for these types of
10 things. He also noted that LOA did not have procedures to test the quality of
11 incoming components and raw materials. (Trial Ex. 175; Oct. 31 Trial Tr.
12 (Vasquez) 157:23-158:8, 172:3-17, 174:1-6.)

13
14 362. Thus, prior to July 2009, Farooq Vakil took no actions to ensure that
15 LOA had substantiation for the claims it made about its LED Lamps, or to remove
16 claims from LOA's LED Lamp packaging. Yet, absent contrary direction from
17 Usman Vakil, Farooq Vakil had full authority to direct LOA's employees to obtain
18 proper substantiation or to remove unsubstantiated or false claims. (Nov. 2 Trial
19 Tr. (F. Vakil) 149:23-150:18.)

20
21 363. Prior to July 2009, Farooq Vakil was recklessly indifferent to the truth
22 or falsity of LOA's Replaces Watts and lifetime claims.

23
24 364. In and after July 2009, Farooq Vakil knew of, or was at least recklessly
25 indifferent to, LOA's misrepresentations in making the Replaces Watts claims. In
26 and after August 2009, Farooq Vakil knew about LOA's Lifetime claims and the
27
28

1 basis for those claims, which all showed that LOA lacked a reasonable basis to
2 make all of its Lifetime claims and that the claims were false.

3
4 365. While not a direct line manager working 40 hours a week, Farooq
5 Vakil was exposed to the operational problems that affected LOA's Replaces Watts
6 and Lifetime claims, and he was sufficiently informed to know what data LOA had
7 to back up, or not back up, those claim. These facts combined with he broad
8 ownership and management authority make him responsible for LOA's actions. At
9 a minimum, he was reckless in failing to investigate further and act.

10
11 V. LOA Sold Over \$20 Million in Deceptively-Advertised LED Lamps.

12
13 366. LOA produced sales records for certain of its LED Lamps for the years
14 2007-2011. (Trial Ex. 581-LOA Supp. Resp. Int. No. 10; Trial Exs. 295-299.)

15
16 367. The sales records LOA produced contain spreadsheets listing products
17 sold by product number, by month, and by retailer. (Kelly Rev., ¶ 4; Trial Exs.
18 295-299.)

19
20 368. Based upon the stipulated facts regarding LOA's use of certain
21 packaging and the claims made on those labels, and the additional evidence the
22 FTC presented at trial, the Court finds LOA made deceptive and/or false claims on
23 the following Replaces Watts Lamps through and including the month and year
24 identified below:

- 25 a. 2001LED10-65K – April 2009
26 b. 2001LED53IN-65K and 2001LED53OUT-65K – August 2009
27 c. 2001LEDE26-65K – April 2009

- 1 d. 2002LEDP30-65K – August 2009
- 2 e. 2002LEDR30-65K – February 2009
- 3 f. 2003LEDP38-65K – February 2009
- 4 g. 2004LEDDL-35K – March 2009
- 5 h. 2025LED-30K – May 2009
- 6 I. 2025LED-65K – May 2009
- 7 j. 2025LEDE12-30K – February 2009
- 8 k. 2025LEDE12-65K – May 2009
- 9 l. 2026LED-30K – February 2009
- 10 m. 2026LED-65K – May 2009

11 (Trial Exs. 159, 289, 320, 321.)

12
13 369. LOA made deceptive and false 30,000 hour lifetime claims on its LED
14 Lamps until at least August 2009. It was not until the end of August 2009 that
15 LOA removed all of its unsubstantiated and false Replaces Watts claims. These
16 two periods of false and deceptive claims overlap. However, LOA did not sell all
17 of the same LED Lamp models with false and deceptive Replaces Watts and
18 lifetime claims.

19
20 370. Only one Replaces Watts Lamp was not sold with a false and deceptive
21 30,000 hour lifetime claim: 2001LED10-65K. LOA sold all other Replaces Watts
22 Lamps with false and deceptive 30,000 hour lifetime claims

23
24 371. Further, LOA made false and deceptive 30,000 hour lifetime claims on
25 two lamps which it did not sell with the false and deceptive Replaces Watts claims:
26 2025TLEDE12-30K and 2035LED-30K.

1 372. Thus, to calculate total consumer harm arising from LOA's sale of its
2 LED Lamps with false and deceptive light output and 30,000 hour lifetime claims,
3 the Court need only calculate the gross revenue earned by LOA for its sale of the
4 Lifetime Lamps, and then add to that number the gross revenue for LOA's sale of
5 the one Replaces Watts Lamp for which it did not make a 30,000 hour lifetime
6 claim (2001LED10-65K).

7
8 373. LOA's gross revenue for the period of time it sold Replaces Watts
9 Lamp 2001LED10-65K with the false and deceptive Replaces Watts claims
10 (through April 2009) is: \$250,729.80. (Kelly Rev., ¶ 8; Trial Exs. 295-299.)

11
12 374. LOA's gross revenue for the Lifetime Lamps through August 2009
13 (when it reduced its 30,000 hour lifetime claim to 20,000 hours) is:
14 \$17,869,239.12. (Kelly Rev., ¶ 24; Trial Exs. 295-299, 469.)

15
16 375. LOA's gross revenue for its sale of the Lifetime Lamps for the period
17 of time it made 20,000 hour lifetime claims (September 2009 to August 2010) is:
18 \$3,045,852.15. (Kelly Rev., ¶ 24; Trial Exs. 295-299, 469.)

19
20 376. LOA's gross revenue for its sale of the Lifetime Lamps for the period
21 of time it made 12,000 and 15,000 hour lifetime claims (September 2010 through
22 at least April 2011) is: \$250,772.20. (Kelly Rev., ¶ 24; Trial Exs. 295-299, 469.)

23
24 377. LOA's total gross sales for all of its LED Lamps that it falsely and
25 deceptively advertised through April 2011 equals: \$21,165,863.47. (Kelly Rev., ¶
26 25; Trial Exs. 295-299, 469.)

1 378. The Court finds that Kenneth H. Kelly, who presented the FTC’s
2 calculations, was well qualified to develop and present his analysis of sales of LOA
3 products made on the basis of deceptive or unsubstantiated claims. (Kelly Rev., ¶
4 1.) The Court further finds that his methodology was reasonable and consistent
5 with the legal standard for the computation of equitable monetary relief. (See
6 Court’s Conclusions of Law, ¶¶ 518-22, 53-37.)

7
8 A. LOA Did Not Adequately Identify Refunds It Purportedly
9 Provided to Consumers.

10
11 379. LOA responded to a discovery request for it to identify the total
12 number and dollar amount of refunds it issued or reimbursements or exchanges
13 provided under its warranty by identifying the total number of “credits and
14 allowances” it provided to retailers. (Trial Ex. 582-LOA 2d Supp. Resp. Int. No.
15 17.)

16
17 380. LOA testified that the “credits and allowances” it identified in its
18 response to the FTC’s Interrogatory No. 17 included items such as automatic
19 refund credits and other automatic allowances built into retailer contracts. These
20 contractual credits do not represent dollars refunded to consumers who purchased
21 LOA’s deceptively advertised products. (LOA Depo. (Halliwell) 180:9-182:14,
22 182:23-188:4, 191:1-193:21; Nov. 2 Trial Tr. (Clifton) 163:12-164:13, 167:15-
23 168:6, 169:2-170:2, 174:12-175:2.)

24
25 381. LOA proffered a witness, Kathy Clifton (“Clifton”), to attest to the
26 number and dollar amount of refunds it provided to consumers.

1 382. The FTC issued specific document requests and interrogatories to LOA
2 for it to identify the amount and number of refunds, exchanges, and warranty
3 claims on its LED Lamps. Two of those discovery requests sought information
4 solely about refunds and exchanges for products sold through Costco. (Trial Ex.
5 580-LOA Resp. Int. Nos. 16-17, Trial Ex. 645-LOA Resp. Req. for Prod. Nos. 8-
6 10.)

7
8 383. The exhibits and data that Clifton relies upon in Trial Exhibit 446 were
9 all responsive to the FTC's discovery requests. However, defendants did not
10 provide this information to the FTC in discovery at all or in a timely manner prior
11 to trial. Thus, the Court excluded this evidence at trial. Moreover, as the Court
12 ruled at trial, LOA had failed to comply with the production requirements for
13 compilations under Federal Rule of Evidence 1008, and the Court excluded Trial
14 Exhibit 446, as well as Trial Exhibits 444 and 447. (Nov. 1 Trial Tr. 47 (Ex. 446);
15 id. 49 (Ex. 447); Nov. 2 Trial Tr. 157 (Ex. 444).)

16
17 384. Much of LOA's evidence of the amount of refunds or credits it claims
18 it issued to retailers was admitted at trial. Clifton testified about a few of the
19 summaries presented in her direct examination. From her testimony on those
20 summary exhibits which the Court admitted, it is evident that not all of the dollars
21 she identifies as refunds represent dollars that actually reached consumers. For
22 example, the Costco charge-backs summarized in Trial Exhibit 443 include freight
23 charges for returned product. These do not represent funds provided to consumers.
24 Moreover, her summary of some of LOA's contracts with large retailers include
25 credits for things like sales commissions. As Clifton admitted, these are not dollars
26 that consumers received. (Nov. 2 Trial 163:12-164:13, 167:15-168:6, 169:2-
27 170:2, 174:12-175:2.)

1 385. To the extent the FTC had any information from LOA regarding
2 refunds issued to consumers, neither LOA or its witnesses identified the amount of
3 purported refunds, credits, or warranty claims with sufficient specificity, and in the
4 case of its response to the FTC's interrogatory on this subject, LOA identified
5 contractual credits which do not represent dollars returned to consumers.

6
7 386. LOA has not produced admissible evidence or sufficient evidence to
8 identify how many refunds or exchanges of LED Lamps it provided to consumers
9 under its warranty or the dollar amount associated with any purported exchanges or
10 refunds.

11
12 387. While the record presented a theoretical basis for credits against the
13 damages claimed by the FTC, the combination of impermissible categories of
14 credits and allowances and the Court's evidentiary rulings eviscerated the showing
15 which LOA advanced through Clifton. Thus, no reduction is appropriate.

16
17 388. LOA has provided no evidence to show errors in the FTC's calculation
18 of consumer harm. In its Proposed Findings of Fact and Conclusions of Law, LOA
19 points to no credits or allowances which it contends should be offset against gross
20 revenues. (LOACL ¶¶ 45-48.)

21
22 B. LOA's Benefits Conferred Theory.

23
24 389. LOA contends that no damages were sustained because the energy
25 savings calculated by its expert A. Michael Cowley are likely in excess of \$100
26 million. (LOAFF, ¶ 478; Cowley, ¶¶ 87-103.) Apart from the fact that the
27 conferral of benefits is not legally cognizable (Court's Conclusions of Law, ¶¶

1 538-39), Cowley overlooks the fact that consumers did not get what was
2 represented, either I in terms of life or replacement equivalents. Indeed, Cowley's
3 calculations consistently assume a usage far below LOA's lifetime representations.
4 (Cowley, ¶¶ 100, 104 (2,000 hours); ¶ 101 (4,000 hours); LOAFF, ¶ 490 (800 to
5 2,000 hours).) Cowley's calculations prove that consumer were entitled to far
6 more than they got even using his methodology.

7
8 390. Any finding of fact more properly characterized as a conclusion of law
9 fact shall be deemed so.

10
11 CONCLUSIONS OF LAW

12
13 I. Jurisdiction and Venue.

14
15 391. The Central District of California has subject matter jurisdiction over
16 the FTC's claims pursuant to 15 U.S.C. §§ 45(a) and 53(b), and 28 U.S.C. §§ 1331,
17 1337(a), and 1345.

18
19 392. Venue in the Central District of California is proper under 15 U.S.C. §
20 53(b), and 28 U.S.C. § 1391(b) and (c).

21
22 393. LOA's marketing, sale and offering for sale of its LED lamps were in
23 or affecting commerce, as "commerce" is defined in Section 4 of FTC Act, 15
24 U.S.C. § 44.

1 II. Violations of Section 5(a)

2
3 394. Section 5(a) of the FTC Act prohibits “unfair or deceptive acts or
4 practices in or affecting commerce.” 15 U.S.C. § 45(a). An act is deceptive if: (1)
5 there is a representation, omission or practice; (2) that is likely to mislead
6 consumers acting reasonably under the circumstances; and (3) the representation,
7 omission or practice is material. FTC v. Stefanchik, 559 F.3d 924, 928 (9th Cir.
8 2009); FTC v. Gill, 265 F.3d 944, 950 (9th Cir. 2001) [hereinafter Gill II]; FTC v.
9 Medlab, Inc., 615 F. Supp. 2d 1068, 1076 (N.D. Cal. 2009); FTC v. Direct
10 Marketing Concepts, Inc., 569 F. Supp. 2d 285, 297 (D. Mass. 2008) [hereinafter
11 Direct Marketing I], aff’d 624 F.3d 1 (1st Cir. 2010) [hereinafter Direct Marketing
12 II].

13
14 395. In order to show that a representation, omission or practice is likely to
15 mislead consumers acting reasonably under the circumstances, the FTC must prove
16 either that LOA lacked a reasonable basis for its representations or that the
17 representations were false. Medlab, 615 F. Supp. 2d at 1079; FTC v. Pantron I
18 Corp., 33 F.3d 1088, 1096 (9th Cir. 1994).

19
20 396. To decide whether a defendant made certain representations or
21 omissions, a court must first review the advertisements. See FTC v. Gill, 71 F.
22 Supp. 2d 1030, 1043-44 (C.D. Cal. 1999) [hereinafter Gill I], aff’d, 265 F.3d 944
23 (9th Cir. 2001).

24
25 397. A particular advertising claim will be deemed to have been made if
26 consumers, acting reasonably under the circumstances, would interpret the
27
28

1 statements to contain that message. In re Kraft, Inc., 114 F.T.C. 40, 120 (1991),
2 aff'd, 970 F.2d 311 (7th Cir. 1992), cert. denied, 507 U.S. 909 (1993).

3
4 398. Advertisements that are “capable of being interpreted in a misleading
5 way should be construed against the advertiser.” Gill I, 71 F. Supp. 2d at 1045-46
6 (quoting Resort Car Rental Systems, Inc. v. FTC, 518 F.2d 962, 964 (9th Cir.
7 1975)).

8
9 399. The FTC is not required to show that every reasonable consumer
10 would have been, or in fact was, misled. See Stefanchik, 559 F.3d at 929.

11
12 400. The existence of some satisfied customers does not constitute a defense
13 under the FTC Act. Id.

14
15 401. The existence of a warranty and/or return policy is irrelevant to the
16 legal question of whether an advertiser violated Section 5(a). Pantron I, 33 F.3d at
17 1103; FTC v. Cyberspace.com LLC, 453 F.3d 1196, 1201 (9th Cir. 2006).

18
19 402. An advertisement is likely to mislead consumers acting reasonably
20 under the circumstances if the claim is false. Medlab, 615 F. Supp. 2d at 1079; see
21 also Pantron I, 33 F.3d at 1096.

22
23 403. A representation is also likely to mislead consumers acting reasonably
24 under the circumstances, and therefore is deceptive, if the advertiser lacks a
25 “reasonable basis” to support the claims made in the advertisement. Pantron I, 33
26 F.3d at 1096; Thompson Medical Co. v. FTC, 791 F.2d 189, 193 (D.C. Cir. 1986);
27 Direct Marketing I, 569 F. Supp. 2d at 298.

1 404. Advertisers are required to have substantiation not just for express
2 statements but for all reasonable interpretations of their advertisements. Federal
3 Trade Commission, Policy Statement Regarding Advertising Substantiation 2–3
4 (1984), appended to In re Thompson Medical Co., 104 F.T.C. 648, 1984 FTC
5 LEXIS 6, at *435-36 (Nov. 23, 1984), aff'd 791 F.2d 189 (D.C. Cir. 1986).

6
7 405. Defendants bear the burden of establishing what substantiation they
8 relied on when they made the claims in their ads. FTC v. QT, Inc., 448 F. Supp. 2d
9 908, 961 (N.D. Ill. 2006), amended in part by 472 F. Supp. 2d 990 (N.D. Ill. 2007),
10 aff'd, 512 F.3d 858 (7th Cir. 2008). The FTC then bears the burden of establishing
11 that the defendant’s substantiation is inadequate. Id.

12
13 406. The appropriate level of substantiation for an express or implied
14 efficacy claim is determined by looking to the following factors: (1) the product
15 involved; (2) the type of claim; (3) the benefits of a truthful claim; (4) the ease of
16 developing substantiation for the claim; (5) the consequences of a false claim; and
17 (6) the amount of substantiation experts in the field would agree is reasonable. In
18 re Thompson Medical, 1984 FTC LEXIS 6, at *387.

19
20 407. In order to have a reasonable basis for the representation, the advertiser
21 must have “some recognizable substantiation for the representation prior to making
22 it in an advertisement.” Direct Marketing I, 569 F. Supp. 2d at 298.

23
24 408. The type of advertising claim determines what constitutes a
25 “reasonable basis” for the claim. Thompson Medical, 791 F. 2d at 194.

1 409. Where an advertiser makes claims using specific figures or facts, a
2 high level of substantiation, such as scientific or engineering tests, is required.
3 Thompson Medical Co., 104 F.T.C. 648, 1984 FTC LEXIS 6, *387.

4
5 410. Where advertisers “lack adequate substantiation evidence, they
6 necessarily lack any reasonable basis for their claims.” Direct Marketing II, 624
7 F.3d at 8.

8
9 411. To determine whether the claim at issue is material, courts examine
10 whether the representation is likely to affect a consumer’s conduct. Direct
11 Marketing I, 569 F. Supp. 2d at 299; Medlab, 615 F. Supp. 2d at 1081.

12
13 412. Information about a product’s purpose, safety, efficacy, or cost is
14 material. Direct Marketing I, 569 F. Supp. 2d at 299 (citing Novartis Corp. v.
15 FTC, 223 F.3d 783, 786 (D.C. Cir. 2000)).

16
17 413. Express claims or deliberately made implied claims are presumed to be
18 material. Pantron I, 33 F.3d at 1095-96; In re Thompson Medical, 1984 FTC
19 LEXIS 6, at *373.

20
21 414. Implied claims may be material when they address the central
22 characteristics of the product or service offered. Kraft, 970 F.2d at 322; FTC v.
23 Figgie Int’l, Inc., 994 F.2d 595, 603-04 (9th Cir. 1993) (finding that defendant
24 “misled customers about the ‘single most useful piece of information’ they could
25 have used”).

1 A. LOA's Replaces Watts Claims Were Unsubstantiated and False.

2
3 415. In making both the Replaces Watts and Lifetime claims, LOA made
4 express claims using specific facts and figures.

5
6 416. LOA's packaging shows it made the Replaces Watts claims on the
7 Replaces Watts Lamps.

8
9 417. The Court has already ruled that LOA's Replaces Watts claims were
10 express, and therefore *per se* material. Moreover, the Court ruled that even if they
11 were implied claims, they were material because the claims relate to the efficacy of
12 the product. (MSJ Order, p. 7.)

13
14 418. In addition, the Court has ruled that LOA did not have adequate
15 substantiation at the time it made its Replaces Watts claims on the fourteen
16 Replaces Watts Lamps.

17
18 419. Thus, LOA made unsubstantiated claims in violation of Section 5(a)
19 regarding the amount of light its LED Lamps would produce.

20
21 420. LOA had its Replaces Watts Lamps tested to measure each of their
22 lumen outputs. Those tests show that LOA's Replaces Watts Lamps produced
23 only a small fraction of the amount of light (in lumens) compared to incandescent
24 lamps of similar wattage.

1 421. For all of the Replaces Watts Lamps tested, the lumen output data
2 shows that LOA made false claims about the amount of light its Replaces Watts
3 Lamps would produce. Those lamps are:

4 a. “replaces 45 watts” – 520-870 lumens

5 I. 2002LEDP30-65K: 184-195 lumens

6 ii. 2002LEDR30-65K: 172-275 lumens

7 iii. 2003LEDP38-65K: 122-416 lumens

8 iv. 2004LEDDL-35K: 140-201 lumens

9 b. “replaces 40 watts” – 315-495 lumens

10 I. 2025LEDE12-30K: 41-90 lumens

11 ii. 2025LEDE12-65K: 67-113 lumens

12 iii. 2026LED-30K: 42-90 lumens

13 iv. 2026LED-65K: 84 lumens

14 c. “replaces 20 watts” – 156-240 lumens

15 I. 2001LED53-OUT-65K: 27-30 lumens

16 ii. 2001LEDE26-65K: 52-93 lumens

17 iii. 2001LEDG53-65K: 32 lumens.

18
19 422. As a result, LOA violated Section 5(a) of the FTC Act by making false
20 claims about the amount of light the Replaces Watts Lamps identified in paragraph
21 421a through c above would provide to consumers who purchased them.

22
23 B. LOA Made Unsubstantiated and False Lifetime Claims.

24
25 423. LOA’s packaging (Trial Exs. 159, 289, 320, 321) shows it made the
26 Lifetime claims on the Lifetime Lamps. In fact, LOA has conceded it made the
27 Lifetime claims. (Stipulated Facts 26, 31.)

1 424. Like the Replaces Watts Claims, LOA's Lifetime claims are express
2 claims that LOA made using specific facts and figures.

3
4 425. A reasonable consumer would interpret LOA's Lifetime claims to
5 mean that LOA's Lifetime Lamps would last for the number of hours stated on the
6 package (i.e. 30,000 hours, 20,000 hours, or 12,000-15,000 hours).

7
8 426. LOA's Lifetime claims were material both because the claims were
9 express, and because the claims concerned the efficacy of LOA's LED Lamps.

10
11 427. In order to have adequate substantiation, LOA must have scientific or
12 engineering data to support its lifetime claims of 30,000 hours, 20,000 hours, and
13 12,000-15,000 hours.

14
15 428. According to the FTC's expert, Dr. Houser, the definition for the end
16 of LOA's Lifetime Lamps' useful lives is the point at which the lamps' light output
17 diminishes to seventy % of its original output – a point that is called L_{70} .

18
19 429. Prior to at least February 27, 2008, LOA had no scientific or
20 engineering data to support any lifetime claim. Thus, LOA lacked any
21 substantiation for all of the lifetime claims it made on the Lifetime Lamps sold
22 prior to February 27, 2008. (Houser, ¶ 81.)

23
24 430. Until at least August 2008, the only substantiation LOA cites for its
25 Lifetime claims on its lamps is a one line email from one of its LED suppliers, Para
26 Light. This email stating an estimate of the supplier's LED's lifetime is not
27 scientific or engineering data. (Id., ¶¶ 82-83.)

1 431. LOA's reliance upon this one line from Para Light does not constitute
2 a reasonable basis for its 30,000 hour lifetime claims on its Lifetime Lamps. Thus,
3 all Lifetime Lamp sales prior to August 2008 were made with unsubstantiated
4 claims. (Id., ¶¶ 82-83.)

5
6 432. From approximately August 2008 to the end of June 2009, LOA relied
7 upon a mix of test data reflecting tests conducted on both LEDs and some of its
8 Lifetime Lamps.

9
10 433. None of the LED or integrated lamp lumen depreciation tests support a
11 lifetime claim of 30,000 hours under L₇₀, which is the appropriate marker for the
12 end of life for LOA's Lifetime Lamps. (Id., ¶¶ 84-97, 109.)

13
14 434. None of the LED test data supports LOA's 20,000 hour lifetime
15 claims. Test data from Unity shows that the amount of lumen depreciation
16 experienced by the LEDs tested was too great to substantiate a 20,000 hour lifetime
17 claim. (Id., ¶ 98.) Another test report from Unity indicates that its LED
18 depreciated to 72.2 % of its original light output within 1,008 hours of testing.
19 (Trial Ex. 140; Houser, ¶¶ 91, 109-110.) This data does not support LOA's
20 30,000 hour lifetime claims, either.

21
22 435. For the specific models tested in this time period, none of the tests
23 support a lifetime of either 30,000 or 20,000 hours. Specifically, three of the four
24 the models tested (2002LEDP30-65K, 2003LEDP38-65K, 2002 LEDR 30-65K,
25 and 2025LED-65K) reached the end of their useful lives (as defined by L₇₀) within
26 the 961 hour test period. (Houser, ¶¶ 91, 109.) The fourth had reduced to 78.0%
27 after 198 hours. (Id., ¶ 91.)

1 436. Even if the test results were favorable, test data for one integrated
2 Lifetime Lamp is not substantiation for other types of Lifetime Lamps. LOA
3 cannot extrapolate tests conducted on specific integrated Lifetime Lamps to other
4 Lifetime Lamps that differ in lamp type. (Id., ¶¶ 91, 109.)

5
6 437. Thus, LOA made unsubstantiated Lifetime claims on its Lifetime
7 Lamps through at least the end of June 2009. (Id., ¶¶ 91, 109.)

8
9 438. The final pieces of substantiation that LOA relies upon to support its
10 Lifetime claims are tests conducted on two of its Lifetime Lamps (2025LEDE12-
11 30K and 2026LED-30K). (Id., ¶ 100.)

12
13 439. The tests conducted on these two models did not represent the actual
14 operating conditions present in those lamps as they were sold to retailers and
15 consumers. Moreover, the tests do not constitute proper substantiation for the two
16 models at issue (2025LEDE12-30K and 2026LED-30K). (Id.)

17
18 440. These tests cannot form a reasonable basis for Lifetime claims on any
19 of the other Lifetime Lamps. (Id.)

20
21 441. LOA has no other substantiation to support its Lifetime claims of
22 30,000 hours, 20,000 hours or 12,000-15,000 hours after June 2009. Thus, it has
23 no reasonable basis to make any of its lifetime claims after June 2009.

24
25 442. LOA does not and did not have sufficient scientific or engineering tests
26 to support its lifetime claims of 30,000 hours, 20,000 hours, or 12,000-15,000
27 hours. (Id., ¶¶ 80-100.)

1 443. LOA lacked a reasonable basis for all of its Lifetime claims. Thus,
2 LOA made unsubstantiated claims on its Lifetime Lamps in violation of Section
3 5(a).

4
5 444. The information LOA relies upon as substantiation also shows that its
6 Lifetime claims on the Lifetime Lamps were false. All of the data LOA relies upon
7 contradicts its Lifetime claims. Thus, LOA's own substantiation is evidence of the
8 falsity of its Lifetime claims. (Id., ¶¶ 80-100.)

9
10 445. In addition, LOA's own internal tests show that all of the Lifetime
11 Lamps it tested would reach the end of their useful lives (L_{70}) well within 7,000
12 hours. LOA's best performing lamp had a maximum lifetime (under L_{70}) of 3,075
13 hours. (Id., ¶¶ 110-23.)

14
15 446. LOA claimed it was continually making improvements in its LED
16 Lamps to increase light output and lifetime. Thus, the lamps LOA tested starting
17 in October 2009 were better performing lamps than those it produced in 2008, or
18 even earlier in 2009.

19
20 447. LOA's own internal tests show that all of its Lifetime claims were
21 false. LOA's own data indicates that LOA's Lifetime Lamps did not last more
22 than 3,000 hours – an amount not much greater than the average incandescent
23 lamp. (Id., ¶¶ 110-23.)

24
25 448. In addition, the DOE conducted lumen depreciation tests on three of
26 LOA's lifetime Lamps in its CALiPER program. The test results for these three
27
28

1 lamps (2002LEDR30-65K, 2003LEDP38-65K, and 2025LEDE12-65K) show that
2 all had reached L₇₀ within 1,000 hours. (Id., ¶¶ 117-23.)

3
4 449. The CALiPER tests provide further support of the falsity of the
5 lifetime claims made on LOA’s 2002LEDR30-65K, 2003LEDP38-65K, and
6 2025LEDE12-65K lamps. None of these lamps lasted as long as the average
7 incandescent lamp. (Id.)

8
9 450. Based on LOA’s internal test results and those from the CALiPER
10 program, LOA’s lifetime claims on the following lamps were all false:
11 2001LEDE26, 2002LEDR30-65K, 2003LEDP38-65K, 2025LEDE12-30K,
12 2025LEDE12-30K, 2025LEDE12-65K, 2026LED-65K, 2026LED-65K,
13 2026LED-30K, 2035LED-30K, and 2025LED-65K. (Id., ¶¶ 110-23.)

14
15 451. LOA violated Section 5(a) of the FTC Act in making false claims
16 about how long its Lifetime Lamps would last.

17
18 III. Equitable, Monetary, and Other Relief.

19
20 A. Injunctive Relief.

21
22 452. Under Section 13(b) of the FTC Act, “in proper cases the Commission
23 may seek, and after proper proof, the court may issue, a permanent injunction.” 15
24 U.S.C. § 53(b); see also Pantron I, 33 F.3d at 1102; FTC v. H.N. Singer, Inc., 668
25 F.2d 1107, 1110 (9th Cir. 1982).

1 453. This case is a “proper case” for injunctive relief under Section 13(b)
2 because defendants made false and unsubstantiated claims in violation of Section
3 5. See Pantron I, 33 F.3d at 1102; see also FTC v. Minuteman Press, 53 F. Supp.
4 2d 248, 260 (E.D.N.Y. 1998) (“proper case” includes any violation of the FTC
5 Act).

6
7 454. In addition to the requested permanent injunctive relief, “the
8 Commission may frame a remedy which extends beyond the precise illegal conduct
9 found” and includes “fencing-in” provisions. FTC v. Colgate-Palmolive Co., 380
10 U.S. 374, 395 (1965); Sears, Roebuck & Co. v. FTC, 676 F.2d 385, 391 (9th Cir.
11 1982).

12
13 455. A corporation is liable for violations of the FTC Act if it “engaged in
14 misrepresentations or omissions of a kind usually relied upon by reasonably
15 prudent persons and [] consumer injury resulted.” Pantron I, 33 F.3d at 1102.

16
17 456. Injunctive relief against an individual for violations of the FTC Act is
18 appropriate when the defendant participated directly in the violative conduct or had
19 authority to control it. FTC v. Garvey, 383 F.3d 891, 900 (9th Cir. 2004);
20 Stefanchik, 559 F.3d at 931; FTC v. Publishing Clearing House, 104 F.3d 1168,
21 1170 (9th Cir. 1997).

22
23 457. Authority to control “can be evidenced by active involvement in
24 business affairs and the making of corporate policy.” (Minute Order, Mar. 31,
25 2011, Docket No. 87, p. 4. (quoting FTC v. Am. Standard Credit Systems, Inc.,
26 874 F. Supp. 1080, 1089 (C.D. Cal. 1994)).) In addition, an individual defendant’s
27 “status as a corporate officer” or “authority . . . to sign documents on behalf of a
28

1 corporate defendant” is “sufficient to show the requisite control.” Id. (quoting
2 FTC v. Dinamica Financiera, Case No. CV 09-03554 MMM (PJWx), 2010 U.S.
3 Dist. LEXIS 88000, at *40 (C.D. Cal. Aug. 10, 2010).); Publishing Clearing
4 House, 104 F.3d at 1170-71.

5
6 458. The particular kind of injunctive relief requested here accomplishes the
7 primary purposes of the FTC’s administrative powers: (1) to enjoin the illegal
8 conduct alleged in the First Amended Complaint; and (2) to prevent future
9 violations of the law. Colgate-Palmolive, 380 U.S. at 394-95.

10
11 459. In determining whether to exercise the broad relief available under
12 Section 13(b), courts examine whether: (1) a cognizable danger of recurrent
13 violation exists; or (2) some reasonable likelihood of future violations exists.
14 United States v. W.T. Grant Co., 345 U.S. 629, 633 (1945); FTC v. Evans Prods.,
15 Co., 775 F.2d 1084, 1087-88 (9th Cir. 1985).

16
17 460. To determine whether the type of injunctive relief requested is
18 appropriate, the “ultimate question” is the likelihood that defendants will commit
19 the kind of deceptive practices prohibited in the proposed order. Sears, 676 F.2d at
20 391 (internal quotation marks omitted).

21
22 461. Courts often analyze three factors to determine whether defendants are
23 likely to commit future violations: (1) the deliberateness of the violation; (2) the
24 violator’s past conduct with respect to advertising practices; and (3) the
25 adaptability or transferability of the deceptive practice to other products. Sterling
26 Drug, Inc. v. FTC, 741 F.2d 1146, 1155 (9th Cir. 1984) (citing Sears, 676 F.2d at
27 392).

1 462. The fact that the defendants are currently complying with the law
2 “does not preclude an injunction.” Id. (citing Sears, 676 F.2d at 392). All three
3 factors need not be present to award a permanent injunction. Telebrands Corp. v.
4 FTC, 457 F.3d 354, 358-59 (4th Cir. 2006).

5
6 463. Further, no one factor predominates and the importance of any one
7 factor may depend on which others are present and to what degree. Sears, 676
8 F.2d at 392 (“The more egregious the facts with respect to a particular element, the
9 less important it is that another negative factor be present.”); see also Telebrands,
10 457 F.3d at 358; Kraft, 970 F.2d at 327 (same).

11
12 464. For the first factor – the deliberateness of the violation – the Court may
13 consider facts such as whether defendants had substantiation to make the claims at
14 issue. See Telebrands, 457 F.3d at 359 (noting that the first factor favored a
15 permanent injunction because defendant’s violations did not involve inflated
16 claims, but claims made without substantiation).

17
18 465. The fact that defendants persisted in making the deceptive claims
19 despite receiving repeated warnings about the falsity of their claims may also be
20 relevant. Kraft, 970 F.2d at 327.

21
22 466. When defendants persist in making claims that they cannot meet,
23 injunctive relief that prevents them from making misrepresentations in the future is
24 warranted. See FTC v. Zamani, No. SACV 09-0977-DOC(MLGx), 2011 WL
25 2222065, at *12 (C.D. Cal. June 6, 2011); FTC v. Magui Publishers, Inc., Civ. No.
26 89-3818RSWL(GX), 1991 WL 90895, at *15 (C.D. Cal. Mar. 28, 1991)
27 (injunctive relief warranted because “defendants persisted in their conduct despite
28

1 having knowledge that it was illegal”); FTC v. Medical Billers Network, Inc., 543
2 F. Supp. 2d 283, 323 (S.D.N.Y. 2008).

3
4 467. A defendant’s assertions of good faith that are based on its failure to
5 ascertain the law related to its chosen line of business reinforces, and does not
6 excuse, the need for permanent injunctive relief. FTC v. LoanPointe, LLC, No.
7 2:10-CV-225DAK, 2011 WL 4348304, at *9 (D. Utah Sept. 16, 2011).

8
9 468. When the Court evaluates the second factor – likelihood of recurrent
10 violation – “[t]he existence of past violations may give rise to an inference that
11 there will be future violations.” SEC v. Murphy, 626 F.2d 633, 655 (9th Cir.
12 1980).

13
14 469. Past violations need not be present if other factors are sufficiently
15 proven and weigh in favor of the permanent injunction. Kraft, 970 F.2d at 327
16 (finding the seriousness and deliberateness of the violations “took precedence over
17 the absence of any prior Kraft violations”).

18
19 470. A court should be more willing to find a possibility of recurrence
20 “[w]hen the violation has been founded on systematic wrongdoing, rather than an
21 isolated occurrence.” CFTC v. Hunt, 591 F.2d 1211, 1220 (7th Cir. 1979); Gill, 71
22 F. Supp. 2d at 1047; FTC v. Sharp, 782 F. Supp. 1445, 1454 (D. Nev. 1991).

23
24 471. Deceptive practices are transferable to other products when the
25 defendant’s other products can be marketed using similar (deceptive) techniques.
26 Sears, 676 F.2d at 392; Minuteman Press, 53 F. Supp. 2d at 261 (injunctive relief
27 was warranted, in part, because defendants’ current jobs allowed them to “remain
28

1 in a position to commit future violations”); FTC v. Nat’l Urological Group, 645 F.
2 Supp. 2d 1167, 1209-10 (N.D. Ga. 2008) (current business “could serve as a
3 platform for continuing violations of the FTC Act”); Telebrands, 457 F.3d at 361-
4 62 (“Only Telebrands’s imagination and budget would limit its ability to use
5 similar tactics in the future.”).

6
7 1. Injunctive Relief Against LOA Is Warranted.

8
9 472. In advertising and marketing its LED Lamps with false and
10 unsubstantiated claims, LOA misrepresented the light output and lifetime of its
11 LED Lamps. Those misrepresentations are claims consumers rely upon in
12 selecting lighting products. Because LOA’s LED Lamps did not perform as
13 advertised, consumers were harmed because what they purchased was something
14 different than advertised.

15
16 473. Due to the nature of the claims and LOA’s misrepresentations of those
17 claims, injunctive relief against LOA is appropriate and warranted.

18
19 2. Both Usman Vakil and Farooq Vakil Had the Ability to Control,
20 and Thus Injunctive Relief Is Appropriate Against Them.

21
22 474. Injunctive relief against both Usman Vakil and Farooq Vakil is also
23 warranted and appropriate in this case. As the sole owners and highest-ranking
24 officers at LOA (President and Executive Vice President, respectively), both
25 Usman Vakil and Farooq Vakil had the authority to control LOA’s LED Lamp
26 business at all times relevant to this case.

1 475. Usman Vakil was actively involved in LOA's day-to-day affairs.
2 Usman Vakil admits that he set the standard for LOA's employees to "substantiate
3 everything." There is no evidence that anyone had the ability to over-rule any
4 decisions Usman Vakil would and did make about any matter related to LOA's
5 operations or its LED Lamp business.

6
7 476. Similarly, Farooq Vakil was also actively involved in LOA's day-
8 today affairs. In the time Farooq Vakil was in the office and during the early
9 stages of LOA's LED Lamp sales, he inquired about the compatibility of LOA's
10 LED Lamps with a supplier's LEDs. For all aspects of LOA's business not
11 managed by Usman Vakil, LOA's employees reported to Farooq Vakil.

12
13 477. From at least August 2009, both Usman Vakil and Farooq Vakil
14 actually asserted control over LOA's LED Lamp business.

15
16 478. The evidence supports a finding that both Usman Vakil and Farooq
17 Vakil had the authority to control LOA's LED Lamp business.

18
19 3. Tailored Injunctive Relief.

20
21 479. The particular type of relief the FTC requests accomplishes two
22 important goals: (1) it enjoins defendants' illegal conduct; and (2) it seeks to
23 prevent future violations of the law.

24
25 480. The Court finds that it is reasonably likely that defendants will commit
26 the kinds of deceptive practices at issue in this case.

1 481. Although defendants disclaim any knowledge of their deceptive acts
2 and practices, the Court finds that in continuing to make claims that were not
3 properly substantiated for more than two years, defendants acted deliberately.
4

5 482. In addition, the fact that defendants continued to make false and
6 unsubstantiated Lifetime claims even after receiving test data showing that the
7 claims were not only unsubstantiated, but false, lends to a finding of
8 deliberateness. This is particularly so when some of the data defendants received
9 showing the falsity of LOA's Lifetime claims came from third party tests
10 conducted on certain LED Lamps through the CALiPER program, which is part of
11 the DOE.
12

13 483. Moreover, defendants' claims of good faith, although not a defense or
14 a mitigating factor for injunctive relief, is unsupported when that good faith is, at
15 least in part, premised on an argument that because the lighting community was
16 purportedly undecided and shifting on which test standards to adopt, they could not
17 acquire proper substantiation. Such an argument ignores Section 5(a) of the FTC
18 Act, which requires manufacturers to have a reasonable basis before making a
19 claim.
20

21 484. The Court finds a sufficient likelihood of recurrent violation.
22 Defendants have previously been involved in litigation over false claims about its
23 compact fluorescent products. In addition, the type of activities that led to
24 defendants making false and unsubstantiated claims appears to be a systemic one,
25 involving delegation of much authority with no procedures in place to ensure
26 corporate "policy" is followed. That defendants never had proper substantiation
27
28

1 for their Lifetime claims during more than three years of sales of their products is
2 evidence of a systemic problem warranting injunctive relief.

3
4 485. Finally, the deceptive acts here are easily transferable to LOA's other
5 lighting products. LOA produces light bulbs and lots of them. Its product line
6 includes fluorescents, compact fluorescents, and now, power LEDs. Claims about
7 LOA's lighting products' light output and lifetime are now part of the uniform
8 label printed on light bulbs. All of the defendants remain in position to commit the
9 same deceptive acts again.

10
11 486. For all of these reasons, the Court finds that defendants: (a) acted with
12 sufficient deliberateness; (b) have had prior experience with false claims; and (c)
13 are in position to repeat their deceptive acts with the other lighting products they
14 sell. As a result, injunctive relief is warranted.

15
16 B. Equitable Monetary Relief.

17
18 1. Equitable Monetary Relief: LOA.

19
20 487. To obtain equitable monetary relief for consumers under Section 13(b)
21 of the FTC Act, the FTC must establish that a company "engaged in
22 misrepresentations or omissions of a kind usually relied on by reasonably prudent
23 persons and that consumer injury resulted." Pantron I, 33 F.3d at 1102.

24
25 488. To demonstrate reliance and resulting consumer injury, the FTC must
26 prove that defendant made material representations, that they were widely
27
28

1 disseminated, and that consumers purchased the defendant's product. Figgie Int'l,
2 994 F.2d at 605-06.

3
4 489. The FTC need not prove that every consumer relied upon the
5 misrepresentations in order to prevail. Stefanchik, 559 F.3d at 929 n.12 (quoting
6 FTC v. Amy Travel Serv., Inc., 875 F.2d 564, 572 (7th Cir. 1989)); Figgie Int'l,
7 994 F.2d at 605-06. That there may have been modest rates of returns does not
8 vitiate the misrepresentations or the need for equitable relief. (See LOAFF, ¶ 468.)
9

10 490. Requiring the FTC to prove subjective reliance by each consumer
11 would "thwart effective prosecutions of large consumer redress actions and
12 frustrate the statutory goals of [Section 13(b)]." Figgie Int'l, 994 F.2d at 605
13 (internal quotation marks omitted).
14

15 491. The Commission need only prove that material misrepresentations
16 were widely disseminated and that consumers purchased products bearing those
17 deceptive claims. (Id. at 605-06.)
18

19 492. Here, LOA made the Replaces Watts and Lifetime claims at issue.
20

21 493. In making both the Replaces Watts and Lifetime claims, LOA
22 misrepresented the amount of light its LED Lamps would produce and how long
23 they would last.
24

25 494. LOA designed its product packaging, including the Replaces Watts and
26 Lifetime claims, with the expectation that consumers would rely on the information
27 contained on its packaging.
28

1
2 495. LOA widely disseminated its LED Lamps in product packaging that
3 contained, at various times, both the Replaces Watts and Lifetime claims.

4
5 496. LOA has admitted that it was and is aware of the importance of light
6 output and lifetime claims on product packaging for light bulbs.

7
8 497. Consumers purchased over 3 million of LOA's LED Lamps in
9 packaging with deceptive and/or false claims, and thus, were harmed. (Trial Exs.
10 295-99, 469.)

11
12 498. As a result, LOA is liable for equitable monetary relief.

13
14 2. Equitable Monetary Relief: Usman and Farooq Vakil.

15
16 499. An individual defendant who is liable for injunctive relief is liable for
17 equitable monetary relief if the individual had sufficient "knowledge" of the
18 company's violative conduct. FTC v. Network Services Depot, Inc., 617 F.3d
19 1127, 1138 (9th Cir. 2010); FTC v. Affordable Media, LLC, 179 F.3d 1228, 1234
20 (9th Cir. 1999); Publishing Clearing House, 104 F.3d at 1171.

21
22 500. The requisite degree of knowledge can be demonstrated by showing
23 actual knowledge of material misrepresentations, reckless indifference to the truth
24 or falsity of the misrepresentations, or an awareness of a high probability of fraud
25 along with an intentional avoidance of the truth. Network Services, 617 F.3d at
26 1138; Cyberspace.com, 453 F.3d at 1202; Publishing Clearing House, 104 F.3d at
27 1170-71).

1
2 501. Several courts have found “the degree of participation in business
3 affairs is probative of knowledge.” See, e.g., Amy Travel, 875 F.2d at 574;
4 Medical Billers, 543 F. Supp. 2d at 320.

5
6 502. Reckless indifference to the truth or falsity of the misrepresentations
7 standard is evaluated objectively, and does not require any analysis of a
8 defendant’s subjective state of mind. Network Services, 617 F.3d at 1140 & n.12;
9 FTC v. Solomon Trading Co., No. CIV 91-1184-PHX-SMM, 1994 U.S. Dist.
10 LEXIS 19696, at *12 (D. Ariz. June 28, 1994); Sharp, 782 F. Supp. at 1450.

11
12 503. The FTC need not show intent to defraud for any of the elements
13 demonstrating knowledge. Publishing Clearing House, 104 F.3d at 1171. The
14 issue is whether the individual defendant “knew or should have known” of the
15 company’s violative conduct. FTC v. Freecom Communications, Inc., 401 F.3d
16 1192, 1203 (10th Cir. 2005).

17
18 504. The extent of an individual’s involvement in the business affairs of a
19 company engaged in deception “is sufficient to establish the requisite knowledge
20 for personal restitutionary liability.” Affordable Media, 179 F.3d at 1235; Amy
21 Travel, 875 F.2d at 574; Am. Standard Credit Systems, 874 F. Supp. at 1089.

22
23 505. Additionally, awareness of consumer complaints is sufficient to
24 establish the “knowledge” requirement for individual liability. Cyberspace.com,
25 453 F.3d at 1202; see FTC v. MacGregor, 360 F. App’x 891, 894 (9th Cir. 2009);
26 FTC v. Bay Area Bus. Council, Inc. 423 F.3d 627, 638 (7th Cir. 2005) (“To claim
27
28

1 ignorance in the face of the consumer complaints and returned checks amounts to,
2 at the least reckless indifference to the corporations’ deceptive practices”).

3
4 506. Evidence of “high refund and return rates” may show that the
5 individual knew of the misrepresentations, or was at least recklessly indifferent to
6 the truth of those representations. MacGregor, 360 F. App’x at 894.

7
8 507. A corporate officer acts with reckless indifference when he delegates
9 responsibility to others (who then deceive the officer regarding the truth of the
10 claims), fails to investigate complaints, and constructs an implicit or explicit
11 “Chinese wall” between the delegator and delegee . Network Services, 617 F.3d at
12 1141; see also Sharp, 782 F Supp. at 1451-53 (rejecting arguments that corporate
13 officers’ reliance on others insulated them from liability for reckless indifference).

14
15 508. The Court finds the degree of Usman and Farooq Vakils’ participation
16 in LOA’s business is sufficiently probative of knowledge. The Vakils are the
17 highest ranking officers of the company who have final authority over all aspects
18 of LOA’s operations.

19
20 509. In addition, from at least August 2009 on, both Usman and Farooq
21 Vakil knew of, and asserted actual control over, LOA’s deceptive Lifetime claims.
22 From at least that point forward, knowledge need not be inferred; it was actual.

23
24 510. Prior to August 2009, however, Usman and Farooq Vakil disclaim
25 knowledge of LOA’s claims and whether they were properly substantiated or false.
26 The Court finds sufficient knowledge on their part in the following facts:

- 1 a. Usman Vakil decided that LOA would enter the LED lamp
- 2 business;
- 3 b. LOA's lead engineer on its LED Lamps, Taj, testified that he
- 4 discussed engineering problems and design issues concerning
- 5 LOA's LED Lamps with Usman Vakil;
- 6 c. in 2008, Farooq Vakil discussed circuit designs with Taj and
- 7 requested that Unity examine LOA's LED Lamp circuit designs;
- 8 d. Usman and Farooq Vakil participated in meetings with LOA's
- 9 LED suppliers, such as Unity;
- 10 e. both Usman and Farooq Vakil received copies of LOA's early
- 11 product brochures for its LED Lamps, which brochures included
- 12 the lifetime and "incandescent comparison" claims);
- 13 f. Usman and Farooq Vakil received test data on components used in
- 14 LOA's LED Lamps in 2008 that called into question the veracity
- 15 of LOA's lifetime claims;
- 16 g. both Usman and Farooq Vakil knew of LOA's need to obtain
- 17 lumen maintenance test data on its LED Lamps by the fall of 2008;
- 18 h. Usman Vakil knew about significant problems with the
- 19 manufacturing of LOA's LED Lamps at LOA Shanghai;
- 20 I. both Usman and Farooq Vakil were informed of customer
- 21 complaints from some of LOA's largest retailers;
- 22 j. Usman and Farooq Vakil received test reports on LOA's LED
- 23 Lamps and the LEDs used in those lamps, which showed LOA's
- 24 lifetime claims were not only unsubstantiated, but false; and
- 25 k. Usman Vakil decided and set the price for LOA's LED Lamps and
- 26 in doing so, he compared LOA's LED Lamps to those of its
- 27
- 28

1 competitors by evaluating things like the competitors' lifetime
2 claims.

3
4 511. Even if the evidence of the Vakils' knowledge were not sufficient, the
5 evidence demonstrates at a minimum that they acted with reckless indifference to
6 the truth or falsity of LOA's claims on its LED Lamps.

7
8 512. Both Usman and Farooq Vakil claim they delegated most of their
9 responsibilities to their managers, such as Halliwell and Taj. Yet, neither Usman
10 nor Farooq Vakil put any procedures in place to ensure that the persons to whom
11 they delegated such responsibilities followed through with the Vakils' instructions.

12
13 513. Further, Farooq Vakil sent numerous emails to LOA employees during
14 2009 in which he identified and discussed the need for policies and procedures to
15 address quality control and production problems.

16
17 514. Both Usman and Farooq Vakil knew that one of LOA's largest
18 customers, Costco, required LOA to take back several pallets of its LED Lamps
19 that Costco ordered. Costco took this action after receiving a copy of test data
20 from DOE's CALiPER program showing that all of LOA's LED Lamps that were
21 tested reached the end of their useful lives (under L₇₀) within 1,000 hours. In
22 addition to returning product, Costco also required LOA to inform its customers of
23 this problem and provide refunds to any consumers who requested them. That the
24 Vakils continued to allow LOA to make false and unsubstantiated lifetime claims
25 after this kind of action from a major customer like Costco is evidence of reckless
26 indifference.

1 515. For all the reasons above, the Court finds sufficient evidence of Usman
2 and Farooq Vakils' knowledge of LOA's deceptive acts or at least reckless
3 indifference to the truth or falsity of the representations.

4
5 516. Equitable monetary relief apportioned jointly and severally among
6 LOA, Usman Vakil, and Farooq Vakil is appropriate.

7
8 C. Restitution and Disgorgement.

9
10 517. To determine the appropriate amount of monetary relief for both
11 restitution and equitable disgorgement, the FTC bears the initial burden of showing
12 that its "calculations reasonably approximated the amount of customers' net losses,
13 and then the burden shifts to defendants to show that those figures were
14 inaccurate." FTC v. Febre, 128 F.3d 530, 535 (7th Cir. 1997); FTC v. Medicor,
15 LLC, 217 F. Supp. 2d 1048, 1058 (C.D. Cal. 2002).

16
17 518. The proper measure of recovery for consumers is the full amount the
18 consumers paid. Stefanchik, 559 F.3d at 931; Gill II, 265 F.3d at 958; Figgie Int'l,
19 994 F.2d at 606.

20
21 519. Whether consumers received something of value from a defendant is
22 not relevant in determining liability or restitution under the FTC Act. Figgie Int'l,
23 994 F.2d at 604; see also FTC v. John Beck Amazing Profits, LLC, 888 F. Supp.
24 2d 1006, 1018 (C.D. Cal. 2012) ; FTC v. Bronson Partners, LLC, 674 F. Supp. 2d
25 373, 385-86 (D. Conn. 2009).

1 520. As the Ninth Circuit explained in Figgie, once a defendant is found
2 liable for deceptive acts or practices “[w]e would not limit their recovery to the
3 difference between what they paid and a fair price for [the product]. The seller’s
4 misrepresentations tainted the customers’ purchasing decisions. If they had been
5 told the truth, perhaps they would not have bought [the product] at all or only
6 some.” 994 F.2d at 606.

7
8 521. At a minimum, LOA’s gross revenue is a proper measure for monetary
9 liability in this case and any supposed value received by the consumer should not
10 be deducted. See, e.g., FTC v. Neovi, Inc., 604 F.3d 1150, 1159 (9th Cir. 2010)
11 (disgorgement of total revenue without any offset for development and operating
12 costs of defendant); Stefanchik, 559 F.3d at 931; Bronson Partners, 674 F. Supp.
13 2d at 385-86 (no offset for value of product); FTC v. Transnet Wireless Corp., 506
14 F. Supp. 2d 1247, 1271 (S.D. Fla. 2007) (award of total sales minus refunds
15 already provided to consumers).

16
17 522. LOA’s gross revenue (reflecting wholesale, not retail prices) is a
18 conservative, yet proper measure for monetary liability in this case.

19
20 523. The Court may also enter an award of equitable disgorgement – the
21 amount of LOA’s gross revenues from its illegal conduct in advertising and selling
22 its products with unsubstantiated claims. See generally Bronson Partners, 654 F.3d
23 359 (discussing appropriateness of disgorgement awards in FTC actions); and FTC
24 v. Medicor, LLC, 217 F. Supp. 2d 1048, 1057-58 (C.D. Cal. 2002) (entering award
25 of disgorgement for defendants’ violations of Section 5(a) of the FTC Act).

26 524. Disgorgement means LOA’s gross revenues from its sale of the
27 offending products. Bronson Partners, 654 F.3d at 374-75 (noting that “defendants
28

1 in a disgorgement action are ‘not entitled to deduct costs associated with
2 committing their illegal acts,’” and citing SEC v. Cavanagh, No. 98-Civ-1818,
3 2004 WL 1594818, at *30 (S.D.N.Y. July 16, 2004), aff’d, 445 F.3d 105 (2d Cir.
4 2006)); Febre, 128 F.3d at 537 (noting that disgorgement prevents a defendant
5 from being unjustly enriched by its fraud); Medicor, 217 F. Supp. 2d at 1057-58.

6
7 525. Here, the appropriate amount of equitable relief under both restitution
8 and disgorgement are the same: defendants’ gross revenues from the deceptively
9 advertised products.

10
11 526. Total sales, based upon LOA’s wholesale price, for the Replaces Watts
12 Lamps through and including the dates indicated in paragraphs 70-71 above
13 constitutes a conservative estimate of the amount of restitution owed to consumers
14 who purchased these lamps.

15
16 527. Similarly, total sales, based upon LOA’s wholesale price, for the
17 Lifetime Lamps from the first and last sales of those lamps constitutes a
18 conservative estimate of the amount of restitution owed to consumers who
19 purchased these lamps.

20
21 528. LOA made deceptive and false 30,000 hour lifetime claims on its LED
22 Lamps’ for at least as long as it made unsubstantiated and false Replaces Watts
23 claims on the Replaces Watts Lamps. Thus, these two periods of false and
24 deceptive claims overlap.

25
26 529. However, LOA did not sell all of the same LED Lamp models with
27 false and deceptive Replaces Watts and Lifetime claims. LOA sold only one of the
28

1 Replaces Watts Lamps (2001LED10-65K) in packaging that did not contain a
2 lifetime claim. For all other Replaces Watts Lamps, LOA also made false and
3 deceptive lifetime claims.

4
5 530. Thus, to calculate total consumer harm arising from LOA's sale of its
6 LED Lamps with false and deceptive light output and 30,000 hour lifetime claims,
7 the Court need only calculate the gross revenue earned by LOA for its sale of the
8 Lifetime Lamps, and then add to that number the gross revenue for LOA's sale of
9 the one Replaces Watts Lamp for which it did not make a 30,000 hour lifetime
10 claim (2001LED10-65K).

11
12 531. LOA's gross revenue for the period of time it sold Replaces Watts
13 Lamp 2001LED10-65K with the false and deceptive Replaces Watts claims
14 (through April 2009) is: \$250,729.80.

15
16 532. LOA's gross revenue for the Lifetime Lamps through August 2009
17 (when it reduced its 30,000 hour lifetime claim to 20,000 hours) is:
18 \$17,869,239.12.

19
20 533. LOA's gross revenue for its sale of the Lifetime Lamps for the period
21 of time it made 20,000 hour lifetime claims (September 2009 to August 2010) is:
22 \$3,045,852.15.

23
24 534. LOA's gross revenue for its sale of the lifetime Lamps for the period
25 of time it made 12,000 and 15,000 hour lifetime claims (September 2010 through
26 at least April 2011) is: \$250,772.20.

1 535. LOA's total gross sales for all of its LED Lamps that it falsely and
2 deceptively advertised through April 2011 equals: \$21,165,863.47.

3
4 536. LOA has not provided sufficient admissible evidence of any refunds it
5 issued to consumers either through retailers or its warranty program to reduce the
6 amount of equitable monetary relief that is appropriate in this case.

7
8 537. Neither LOA nor its witnesses identified the amount of purported
9 refunds, credits, or warranty claims with specificity, and in the case of its response
10 to the FTC's interrogatory on this subject and based upon Ms. Clifton's testimony,
11 LOA identified contractual credits which do not represent dollars returned to
12 consumers. LOA produced no documents in response to the FTC's document
13 requests to adequately identify any amount of refunds it may have provided to
14 consumers. For these reasons, defendants have not met their burden to provide
15 evidence of refunds to consumers to support a reduction of the amount of equitable
16 monetary relief that is appropriate in this case. Nor have the defendants provided
17 evidence to show any errors in the FTC's calculation of consumer harm.

18
19 D. Defendants Are Not Entitled To An Offset.

20
21 538. LOA's claim for an offset due to a purported benefit consumers
22 obtained by using its lower-energy LED Lamps has no merit. Any additional cost
23 savings a consumer would obtain by purchasing LOA's LED Lamps which
24 operated by using less electricity was part of the benefit consumers purchased and
25 paid for in the higher cost of LOA's LED Lamps. Thus, none of the defendants are
26 entitled to an offset to either restitution or disgorgement.

1 539. In any event, defendants are not entitled to any value which consumers
2 may have received. Figgie Int'l, 994 F.2d at 604-06 (“The fact that heat detectors
3 have some value does not alter this conclusion” that the defrauded consumer is
4 entitled to a full refund); John Beck Amazing Profits, 888 F. Supp. 2d at 1018.

5
6 540. None of LOA, Usman Vakil, or Farooq Vakil are entitled to claim any
7 offset to the amount of equitable monetary relief awarded in this case.

8
9 541. LOA, Usman Vakil, and Farooq Vakil are hereby found jointly and
10 severally liable in the amount of \$21,165,863.47.

11
12 E. LOA’s Warranty Is Not a Defense To FTC Act Liability.

13
14 542. Whether LOA had a warranty program for its LED Lamps and the
15 scope and nature of that warranty are irrelevant.

16
17 543. Whether LOA or the retailers to which it sold its products had warranty
18 or return policies simply is of no import. Cyberspace.com, 453 F.3d at 1201;
19 Pantron I, 33 F.3d at 1103.

20
21 544. LOA’s warranty is not a defense to any of the claims pled against any
22 of the defendants in this case.

23
24 F. Good Faith Is Not a Defense to FTC Act Liability.

25
26 545. The FTC has established defendants’ violations by proving the three
27 requisite elements of deception. The FTC need not prove that defendants intended
28

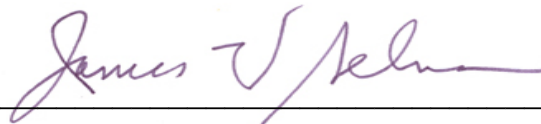
1 to deceive consumers. Direct Marketing I, 569 F. Supp. 2d at 298 (citing Bay Area
2 Bus. Council, 423 F.3d at 635). “Because the statute does not require an intent to
3 deceive, the subjective good faith of the advertiser is not a valid defense to an
4 enforcement action brought under Section 5(a).” FTC v. Sabal, 32 F. Supp. 2d
5 1004, 1007 (N.D. Ill. 1998); FTC v. World Travel Vacation Brokers, 861 F.2d
6 1020, 1029 (7th Cir. 1988); Feil, 285 F.2d at 896 (“Whether good or bad faith
7 exists is not material, if the Commission finds that there is likelihood to deceive.”).

8
9 546. Consequently, defendants’ assertion of “good faith” is an insufficient
10 defense, and any evidence of such is immaterial.

11
12 547. Any conclusion of law more properly characterized as a finding of fact
13 shall be deemed so.

14
15 The FTC is ordered to submit a proposed form of judgment embodying the
16 Court’s ruling on all claims adjudicated in this action.

17
18 DATED: September 17, 2013

19 

20 JAMES V. SELNA
21 UNITED STATES DISTRICT JUDGE
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25
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