Patent Application/Patent No.	Country
JP2017147467 (A)	Japan
WO2007100824 (A2) (Expired)	WIPO

38. Complainants are not aware of any issued foreign patents corresponding to the '973 Patent other than those listed in Exhibit 8. Complainants are not aware of any foreign patent applications corresponding to the '973 Patent that are pending or that have been denied, abandoned or withdrawn other than those listed in Exhibit 8.

B. U.S. Patent No. 9,680,067

1. Identification of the Patent and Ownership by Current Lighting Solutions, LLC

39. The '067 Patent is entitled "Heavily Phosphor Loaded LED Packages Having Higher Stability." The '067 Patent issued on June 13, 2017 from U.S. Application Serial No. 14/217,831 (the "'831 Application"), filed on March 18, 2014. The '831 Application identifies Ashfaqul Islam Chowdhury, Gary Robert Allen, and Dengke Cai as the inventors.

40. Current is the sole owner by assignment of all right, title, and interest in the '067 Patent. Exhibit 7 is a certified copy of an assignment of U.S. Patent Application 14/217,831, which became the '067 Patent, from the inventors to GE Lighting Solutions, LLC on March 12, 2014. Exhibit 39 is a printout of a record from the Delaware Secretary of State, Division of Corporations showing the change of name from GE Lighting Solutions, LLC to Current Lighting Solutions, LLC on April 1, 2019.[6]

[6] A certified copy of the change of name record will be provided when it is available.

41. GE holds an exclusive license to the '067 Patent within a certain field of use. Current and GE together hold all substantial rights across all fields of use, including the right to sue and recover for all past, current, and future infringement.

42. The '067 Patent is valid, enforceable, and in full force and effect.

43. As required by Rule 210.12(c), Appendix C to this Complaint includes a certified copy and three additional copies of the prosecution history of the '067 Patent, and Appendix D to this Complaint includes four copies of each technical reference cited in the prosecution history of the '067 Patent.

44. The '067 Patent will expire on March 18, 2034.

2. Non-Technical Description of the Patented Invention

45. In non-technical terms, the '067 Patent discloses and claims phosphor-loaded LED packages with high stability in which the phosphor is contained in an encapsulant that surrounds an LED chip. The packages comprise at least an LED chip, a first layer comprising a blend of phosphor and silicone overlaying the LED, and an overlayer comprising silicone that overlays the first layer. Phosphors used in various embodiments of the disclosed packages include $K_2SiF_6:Mn^{4+}$ (PFS) phosphor, yttrium aluminum garnet (YAG), and cerium-doped yttrium aluminum garnet (YAG:Ce)—known as BSY.

3. Foreign Counterparts to the '067 Patent

46. The following foreign patents and patent applications correspond to the '067 Patent, *see also* Exhibit 9:

Patent Application/Patent No.	Country
CA2942044 (A1)	Canada
CN106463584 (A)	China

Patent Application/Patent No.	Country
EP3120394 (A1)	Europe[7]
JP2017511599 (A)	Japan
KR20160133528 (A)	South Korea
MX2016012013 (A)	Mexico
TW201547060 (A)	Taiwan
WO2015142478 (A1) (Expired)	WIPO
PI2016702904	Malaysia
1601005106	Thailand
1-2016-03368	Vietnam
20164703131	India
P00201606207	Indonesia

47. Complainants are not aware of any issued foreign patents corresponding to the '067 Patent other than those listed in Exhibit 9. Complainants are not aware of any foreign patent applications corresponding to the '067 Patent that are pending or that have been denied, abandoned or withdrawn other than those listed in Exhibit 9.

[7] EP3120394 (A1) designates the following countries: Albania, Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Croatia, Hungary, Ireland, Iceland, Italy, Liechtenstein, Lithuania, Luxembourg, Latvia, Monaco, Republic of North Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Sweden, Slovenia, Slovakia, San Marino, and Tajikistan.

VI. UNLAWFUL AND UNFAIR ACTS – PATENT INFRINGEMENT

A. Representative Involved Article

48. On information and belief, Respondents design, develop, manufacture, import into the United States, sell for importation into the United States, and/or sell after importation into the United States products, including LED packages that comprise fluoride-based phosphors activated with manganese, and products containing the same, that infringe, literally and/or by equivalence, claims 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, and 22 of the '973 Patent, and claims 1, 3, 4, 7, 11, and 12 of the '067 Patent, in violation of 35 U.S.C. § 271(a).

49. On information and belief, Respondents are knowingly and intentionally inducing infringement of the '973 and '067 Patents in violation of 35 U.S.C. § 271(b) by actively encouraging others to directly infringe by offering to sell, selling, using, and/or importing into the United States the Accused Products.

50. On information and belief, with knowledge and intent, or with willful blindness, Respondents are encouraging and facilitating infringement by others. For example, Respondents are selling the Accused Products or otherwise providing the Accused Products to distributors knowing that these distributors intend to import and/or sell the Accused Products in the United States. Respondents advertise their distributors under the "Where to Buy" section of Respondents' website for purchases being made in the United States. Exhibit 26, an excerpt from "Where to Buy" section, *available at* https://www.cree.com/led-components/where-to-buy (last visited Mar. 11, 2019).

51. On information and belief, as of no later than the filing of this Complaint, Respondents have had knowledge of, or have been willfully blind toward, the Asserted Patents

and Respondents have known that the Accused Products would infringe the Asserted Patents from at least the time they began making, using, selling, offering to sell, and/or importing them.

52. For example, Respondent Cree, Inc.'s knowledge of the '973 Patent is shown by the fact that Cree incorporated by reference the '973 Patent into the written description of its U.S. Patent No. 9,530,944, filed on May 1, 2015. Exhibit 21 ('944 Patent), 32:51–59. Further, Respondent Cree, Inc. cited the '973 Patent to the U.S. Patent and Trademark Office in multiple information disclosure statements, including one filed on June 16, 2016 for U.S. Patent Application No. 15/184,104, Exhibit 22 (Information Disclosure Statement, dated June 16, 2016, excerpt from Cree '104 File History); a second filed on October 26, 2015 for U.S. Patent Application No. 14/298,327, Exhibit 23 (Information Disclosure Statement, dated Oct. 26, 2015, excerpt from Cree '327 File History); and a third filed on December 6, 2017 for U.S. Patent Application No. 15/832,848, Exhibit 24 (Information Disclosure Statement, dated Dec. 6, 2017, excerpt from Cree '848 File History).

53. Furthermore, the existence of the '973 Patent is readily apparent from Complainants' publicly available materials. For example, a 2015 GE Brochure entitled "TriGain™ Phosphor: Simple, High-Performance Red for LED Backlighting" is publicly available online, and indicates that the '973 Patent, as well as others, "are relevant to the use of a PFS phosphor in an LED package and are available for license from GE." Exhibit 25, GE Lighting, *TriGain™ Phosphor: Simple, High-Performance Red for LED Backlighting*, at n.1, *available at* https://products.currentbyge.com/sites/products.currentbyge.com/files/documents/document_file/MISC020-GE-TriGain-Phosphor-for-LED-Screens-Whitepaper.pdf (last visited Mar. 11, 2019).

Therefore, since at least May 1, 2015, Respondents have had knowledge of, or have been willfully blind toward, at least the '973 Patent and Respondents' infringement of that patent.

54. Complainants have obtained an exemplary Cree LED package: CMA1516-0000-00PN0U0A30G (Cree® XLamp® CMA1516 LED), shown in Figure 1 below, which is an Exemplary Accused Product.

Figure 1

55. Exhibit 27 includes a Cree datasheet relating to this exemplary article. *See* Exhibit 27, Cree® XLamp® CMA1516 LED Datasheet, *available at* https://www.cree.com/led-components/media/documents/ds-CMA1516.pdf (last visited Mar. 11, 2019).

56. The Cree CMA1516-0000-00PN0U0A30G was purchased within the United States from Mouser Electronics. Exhibit 28 (Declaration of Danute Abrishami Regarding Specific Instances of Importation and Sale), ¶¶ 2–3. The Cree CMA1516-0000-00PN0U0A30G comprises a semiconductor light source; an Mn^{4+}-doped complex fluoride phosphor, $K_2SiF_6:Mn^{4+}$; and a silicone overlayer. Confidential Exhibit 29C (Confidential Declaration of Ashfaqul Chowdhury, Ph.D.), ¶¶ 18, 21–24, 28–35, 37–49, 51–54, 56, 57–66, 68–70. On information and belief, the Cree CMA1516-0000-00PN0U0A30G was imported into the U.S. from China, as shown by the marking "COO: CN" on the packaging for that part, which on information and belief, stands for "Country of Origin: China." *Id.* ¶ 11.

57. On information and belief, the exemplary CMA1516-0000-00PN0U0A30G is representative of many other of Respondents' products imported, sold for importation, and/or sold in the United States after importation by Respondents that feature the same or substantially similar characteristics as the exemplary CMA1516-0000-00PN0U0A30G, including, but not limited to, all Cree XLamp eTone LEDs. The datasheets for Cree's XLamp eTone LEDs all include a similar relative spectral power emission, which demonstrates the use of a PFS phosphor. *Compare* Exhibit 27 at 10 *with* Exhibit 30 at 10 (Cree® XLamp® CMT1922 LED Datasheet, *available at* https://www.cree.com/led-components/media/documents/data-sheet-CMT1922.pdf (last visited Mar. 11, 2019). Accordingly, on information and belief, Complainants allege that numerous other of Respondents' products infringe the Asserted Claims of the Asserted Patents and have been and are being imported, sold for importation, and/or sold in the United States after importation by or on behalf of Respondents. Complainants anticipate that discovery will further confirm the full scope of infringing Cree products imported into or sold for importation into the United States.

B. Infringement of the '973 Patent

58. Exhibit 31 includes a chart comparing the Asserted Claims of the '973 Patent to Respondents' CMA1516-0000-00PN0U0A30G, showing that the CMA1516-0000-00PN0U0A30G meets all limitations of at least these claims.

C. Infringement of the '067 Patent

59. Exhibit 32 includes a chart comparing the Asserted Claims of the '067 Patent to Respondents' CMA1516-0000-00PN0U0A30G, showing that the CMA1516-0000-00PN0U0A30G meets all limitations of at least these claims.

D. Specific Instances of Sale and Importation

60. Cree, Inc. and its subsidiaries design, develop, and manufacture LED lighting components. On information and belief, Cree, Inc. produces semiconductor wafers that contain light-emitting LED chips in Durham, North Carolina and exports the wafers to its subsidiaries' wholly owned facility in China. Once in China, the wafers are cut into die and the die are encapsulated with PFS phosphor in silicone and formed into LED packages, including the Accused Products. *See* Exhibit 33 (*China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation Before the Office of the United States Trade Interagency Section 301 Committee* (May 16, 2018) (statement of Greg Merritt, Vice President of Marketing and Public Affairs, Cree, Inc.); *see also* Exhibit 13 (Cree, Inc., Annual Report (Form 10-K) (Aug. 20, 2018) ("LED products are produced at our owned manufacturing facilities located in Huizhou, Guangdong Province, China.")). On information and belief, Cree then imports the infringing LED packages for sale in the United States and/or sells the infringing LED packages for importation by others into the United States. Exhibit 13; Exhibit 33.

61. The exemplary Accused Products were imported into the United States, sold for importation into the United States, and/or sold after importation in the United States by Cree, as follows:

Product No.	Evidence of Sale or Importation
CMT1922-0000-00PN0U0A40G	Complainants purchased CMT1922-0000-00PN0U0A40G, the eTone™ version of the Cree® XLamp® CMT1922 High-Current LED Array from a distributor in the United States. *See* Exhibit 28 (Declaration of Danute Abrishami), ¶¶ 2–3. On information and belief, Cree manufactured the accused products outside the United States in its wholly owned factory in Huizhou, China. *See* Exhibit 13 (Cree, Inc., Annual Report (Form 10-K) (Aug. 20, 2018)); Exhibit 19 (Tim Whitaker, *Cree Opens LED Chip Manufacturing Facility in Huizhou*, LEDs MAGAZINE (Dec. 13, 2010)); Exhibit

Product No.	Evidence of Sale or Importation
	33 (statement of Greg Merritt, Vice President of Marketing and Public Affairs, Cree, Inc.).
CMT1922-0000-00PN0U0A30G	Complainants purchased CMT1922-0000-00PN0U0A30G, the eTone™ version of the Cree® XLamp® CMT1922 High-Current LED Array from a distributor in the United States. *See* Exhibit 28 (Declaration of Danute Abrishami), ¶¶ 2–3. On information and belief, Cree manufactured the accused products outside the United States in its wholly owned factory in Huizhou, China. *See* Exhibit 13 (Cree, Inc., Annual Report (Form 10-K) (Aug. 20, 2018)); Exhibit 19 (Tim Whitaker, *Cree Opens LED Chip Manufacturing Facility in Huizhou*, LEDs MAGAZINE (Dec. 13, 2010)); Exhibit 33 (statement of Greg Merritt, Vice President of Marketing and Public Affairs, Cree, Inc.).
CMA1516-0000-00PN0U0A40G	Complainants purchased CMA1516-0000-00PN0U0A40G, the eTone™ version of the Cree® XLamp® CMA1516 High-Current LED Array from a distributor in the United States. *See* Exhibit 28 (Declaration of Danute Abrishami), ¶¶ 2–3. On information and belief, Cree manufactured the accused products outside the United States in its wholly owned factory in Huizhou, China. *See* Exhibit 13 (Cree, Inc., Annual Report (Form 10-K) (Aug. 20, 2018)); Exhibit 19 (Tim Whitaker, *Cree Opens LED Chip Manufacturing Facility in Huizhou*, LEDs MAGAZINE (Dec. 13, 2010)); Exhibit 33 (statement of Greg Merritt, Vice President of Marketing and Public Affairs, Cree, Inc.).
CMA1516-0000-00PN0U0A30G	Complainants purchased CMA1516-0000-00PN0U0A30G, the eTone™ version of the Cree® XLamp® CMA1516 High-Current LED Array from a distributor in the United States. *See* Exhibit 28 (Declaration of Danute Abrishami), ¶¶ 2–3. On information and belief, Cree manufactured the accused products outside the United States in its wholly owned factory in Huizhou, China. *See* Exhibit 13 (Cree, Inc., Annual Report (Form 10-K) (Aug. 20, 2018)); Exhibit 19 (Tim Whitaker, *Cree Opens LED Chip Manufacturing Facility in Huizhou*, LEDs MAGAZINE (Dec. 13, 2010)); Exhibit 33 (statement of Greg Merritt, Vice President of Marketing and Public Affairs, Cree, Inc.).

62. The exemplary Accused Products were purchased within the United States from Mouser Electronics. Exhibit 28 (Declaration of Danute Abrishami), ¶¶ 2–3. Mouser Electronics

maintains country of origin information on all products in its inventory, which is provided to customers on product labels and product shipping documents. *See* https://www.mouser.com/saleterms/ (Section 7b). The product shipping documents for the exemplary Accused Products bear the country of origin mark "COO:CN." *See* Exhibit 28 (Declaration of Danute Abrishami), Exhibit A. The product packaging for the exemplary Accused Products also bears the country of origin mark "COO:CN." *See* Exhibit 28 (Declaration of Danute Abrishami), Exhibit B. On information and belief, "COO:CN" represents that the product's country of origin in China. *See, e.g.,* Harmonized Tariff Schedule of the United States, 2019 Revision 2, Statistical Annex B (International Standard Country Codes).

VII. CLASSIFICATION OF THE ACCUSED PRODUCTS UNDER THE HARMONIZED TARIFF SCHEDULE

63. The Accused Products are believed to fall within at least the following classifications of the Harmonized Tariff Schedule of the United States: 8541.40.2000. These classifications are intended for illustration only and are not intended to be restrictive of the Accused Products.

VIII. LICENSEES

64. Attached as Confidential Exhibit 34C is a list of entities that have been licensed under the '973 Patent. To the best of Complainants' knowledge, there are no other express licensees under the '973 Patent or the '067 Patent besides those listed in Confidential Exhibit 34C.

IX. COMPLAINANTS SATISFY THE DOMESTIC INDUSTRY REQUIREMENT

65. The Domestic Industry Products are LED packages that practice the Asserted Patents. Each package contains a PFS phosphor activated with manganese, which is an element of all Asserted Claims. *See* Exhibits 1 and 2. The PFS phosphor is a significant component that

is specifically tailored for use in the Domestic Industry Products, and is manufactured by Current in Cleveland, Ohio. *See* Exhibit 11C (Cohen Decl.) ¶¶ 5–7. Current then ships the PFS phosphor to Complainants' licensees and manufacturing partners, which incorporate the PFS phosphor into the Domestic Industry Products. *Id.* ¶ 7.

A. The Technical Prong of the Domestic Industry Requirement Is Satisfied

66. As required by Section 337(a)(2) and defined by Section 337(a)(3), an industry in the United States exists in connection with the Asserted Patents.

67. Below is a chart summarizing the representative Domestic Industry Products that correspond to the Asserted Patents. Nichia manufactures the representative part listed below under authorization from Current for inclusion in Current TriGain™ fixtures. Complainants' licensees under the '973 Patent also manufacture parts for use in displays.

Asserted Patent	Technical Prong Product
'973 Patent	Nichia Part No. NF2L757DRT-V1H5 Display LED Domestic Industry Products manufactured by Complainants' licensees are listed in Exhibit 34C
'067 Patent	Nichia Part No. NF2L757DRT-V1H5

68. The Domestic Industry Products are LED packages that practice the Asserted Patents. Each package contains a PFS phosphor activated with manganese, which is an element of all Asserted Claims. *See* Exhibits 1 and 2. These packages provide advantages not realized by the prior art; for example, better color rendering coupled with increased efficiency. *See* Exhibit 1 ('973 Patent), 2–3; Exhibit 11C (Cohen Decl.) ¶¶ 10–11). Complainants manufacture and sell these phosphors, and products derived therefrom, under the trade name "TriGain™". *See* Exhibit 38C (Confidential Declaration of Douglas J. Naab) ¶¶ 8–9.

69. Claim charts and explanatory information for products that currently practice at least one claim of the '973 and '067 Patents (hereinafter "the Domestic Industry Products") accompany this Complaint. *See* Exhibits 29C, 35C, 36C, and 37C.

1. Practice of the '973 Patent

70. Exhibit 35C is a claim chart that discloses how representative Nichia Part No. NF2L757DRT-V1H5 practices at least claim 1 of the '973 Patent.

71. Exhibit 36C is a claim chart that discloses how display LED products manufactured by GE's licensees practice at least claim 1 of the '973 Patent.

2. Practice of the '067 Patent

72. Exhibit 37C is a claim chart that discloses how the representative Nichia Part No. NF2L757DRT-V1H5 practices at least claim 12 of the '067 Patent.

B. The Economic Prong of the Domestic Industry Requirement is Satisfied

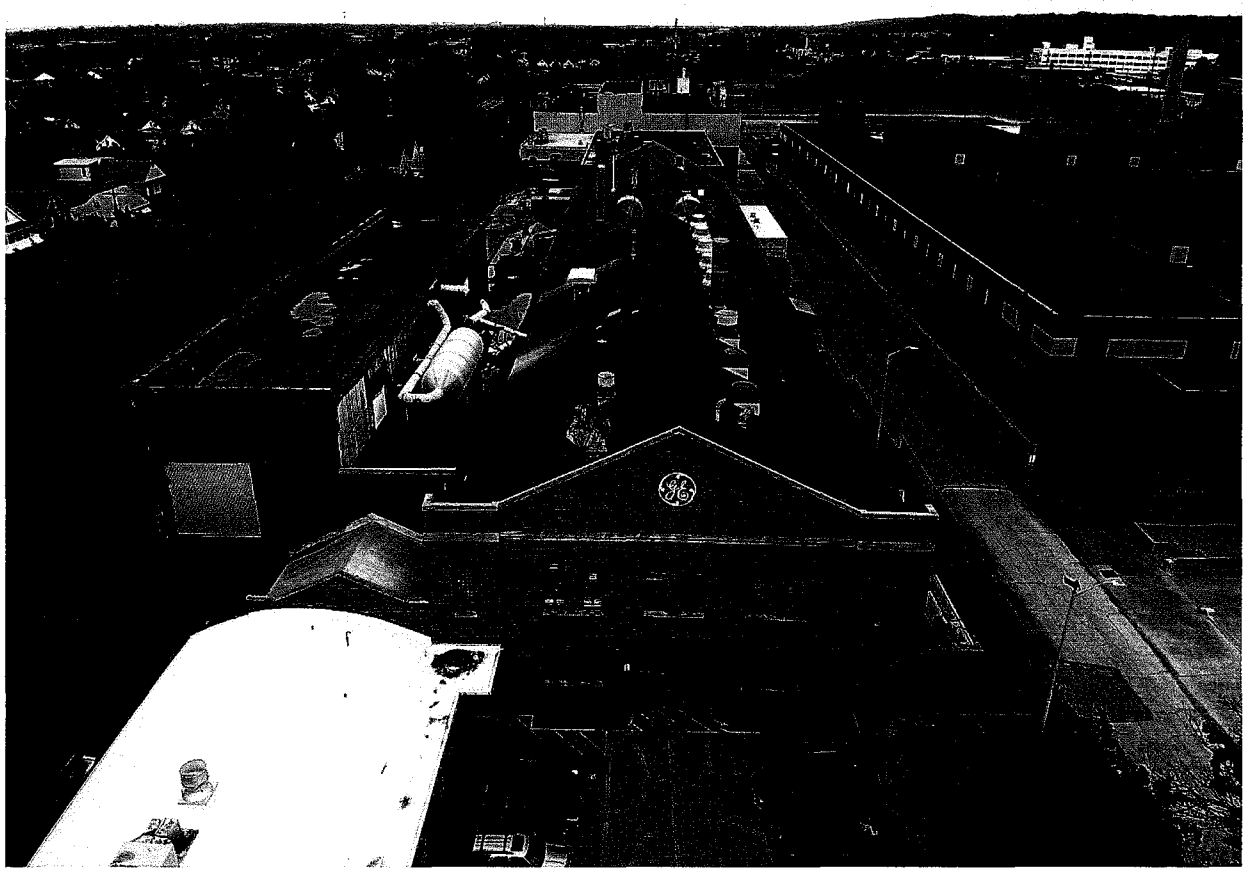
73. As required by Section 337(a)(3)(A)–(C), a domestic industry exists by virtue of Complainants' activities in the United States, including (i) significant investments in plant and equipment for the manufacture of the phosphor that forms a key component of the patented invention, (ii) significant employment of labor and capital for the manufacture of the phosphor that forms a key component of the patented invention, (iii) significant employment of labor and capital related to research and development relating to the patented invention, and (iv) exploitation of the '973 Patent through licensing.[8]

[8] Complainants are not asserting a licensing-based domestic industry with respect to the '067 patent.

1. Significant Investments in Plant and Equipment for the Manufacture of a Key Component of the Patented Invention

74. A domestic industry exists relating to articles that practice the Asserted Patents based on Current's manufacture, in the United States, of the PFS phosphors used in TriGain™ products ("TriGain™ phosphors") that form a critical component of the LED packages that practice the patented inventions.

75. Current manufactures the TriGain™ phosphors at its wholly owned facility located in Cleveland, Ohio in the United States (the "Ivanhoe Road Plant"). Exhibit 11C (Cohen Decl.) ¶¶ 6–7. The Ivanhoe Road Plant is pictured below:



76. Complainants have owned the Ivanhoe Road Plant for decades. *Id.* (Cohen Decl.) ¶ 19. The Ivanhoe Road Plant required significant renovations to accommodate a modern specialized chemical manufacturing facility. *Id.* Starting in 2014, Complainants invested significant amounts in plant and equipment at the Ivanhoe Road Plant to accommodate TriGain™ phosphor manufacturing. *Id.* ¶¶ 20–21. The renovated Ivanhoe Road Plant, and Complainants' nearby Nela Park facility in East Cleveland, include significant space and equipment dedicated to manufacturing, testing, and research and development of the TriGain™ phosphors. *Id.* ¶ 22.

77. Since commercial PFS phosphor production began in 2016, PFS phosphor has represented a rapidly growing share of the Ivanhoe Road Plant's total activity, production output,

and costs. *Id.* ¶ 23. The revenue and business generated by the manufacture of PFS phosphor is highly significant to the continued operation of the Ivanhoe Road Plant. *Id.* On information and belief, the Ivanhoe Road Plant is the only U.S. commercial manufacturing facility producing PFS phosphor, and the only facility in the world at which Complainants produce PFS phosphor. *Id.* ¶ 6. If the plant were to close, there would be no domestic source for these materials. *Id.*

78. Complainants' investments in plant and equipment for the manufacture of TriGain™ phosphors at Current's Ivanhoe Road Plant are directly related to the Domestic Industry Products and their practice of the Asserted Patents. *Id.* ¶¶ 7–9. As shown above, and in the supporting evidence, such activities represent a significant and substantial investment by Current. *See, e.g., id.* ¶¶ 30–34.

2. Significant Employment of Labor and Capital for the Manufacture of a Key Component of the Patented Invention

79. The Ivanhoe Road Plant is also home to a significant number of employees dedicated to the manufacturing of the TriGain™ phosphors. *Id.* ¶¶ 24–27. The Ivanhoe Road Plant is one of the largest commercial phosphor manufacturing facilities in the United States. *Id.* ¶ 24. On information and belief, the Ivanhoe Road Plant is the only commercial PFS phosphor powder manufacturing facility in the United States. *Id.* If the plant were to close, there would be no domestic source for these materials. *Id.* ¶ 6.

80. Production of the TriGain™ phosphor is a complex manufacturing process that must comply with multiple regulations, requiring a team of highly trained employees. *Id.* ¶ 25. Current employs a significant number of highly trained employees at the Ivanhoe Road Plant, a significant number of which can be allocated to the production of PFS powder. *Id.* ¶¶ 26–27. Current has invested significant amounts in employing this workforce. *Id.* ¶ 27.

81. Complainants' investments in labor and capital regarding the manufacture of TriGain™ phosphors at Current's Ivanhoe Road Plant are directly related to the Domestic Industry Products and their practice of the Asserted Patents. *Id.* ¶¶ 7–9. As shown above, and in the supporting evidence, such activities represent a significant and substantial investment by Complainants. *See, e.g., id.* ¶¶ 30–34.

3. Significant Employment of Labor and Capital in the Research and Development of the Patented Invention

82. Complainants have been at the forefront of LED research since the 1960s. Beginning in the early 2000s, Complainants' engineers were working on developing LEDs that could deliver the high level of color rendering accuracy required by commercial and retail customers along with improved efficiency and reliability sufficient to make them workable in these settings. Complainants dedicated substantial resources to these research and development efforts for over a decade, which led to the filing of the applications for the Asserted Patents in 2006 and 2014. Complainants' research and development efforts did not stop there: Complainants continued to work on refining the technology and innovations underlying the Asserted Patents through the release of the first commercial TriGain™ product in 2016 and to the present day.

i. Current's Employment of Labor and Capital in Research and Development

83. Current continues to invest in research and development relating to TriGain™. For example, Current has a significant number of employees located within the United States who are dedicated to the research and development of the specialized phosphor product that underlies the patented TriGain™ technology. Exhibit 11C (Cohen Decl.) ¶ 16. These employees' research and development has resulted in over 20 patents related to the manufacture and use of the specialized phosphor product. *Id.* ¶ 17. This research further enables Current to

exploit the patented inventions by making further innovations related to PFS phosphors. *Id.* ¶ 18.

84. Current has invested significant amounts in employing personnel for research and development of PFS phosphor. *Id.* ¶ 28. Current's research and development personnel are located at the Ivanhoe Road Plant and Nela Park facilities in Ohio. *Id.* Current has also invested significant amounts of capital to support the efforts of its research and development teams in Ohio. *Id.* ¶ 29.

85. Current's investments in research and development in the United States regarding TriGain™ technology and the related specialized phosphor products are directly related to the Domestic Industry Products and their practice of the Asserted Patents. *Id.* ¶¶ 7–10. Current's investment in the research and development of TriGain™ technology in the United States is ongoing. *Id.* ¶ 18. Such activities represent a significant and substantial investment by Current. *See, e.g., id.* ¶¶ 30–34.

ii. GE's Employment of Labor and Capital in Research and Development

86. In addition to and separate from Current's ongoing investment in research and development, GE also invests in the research and development of PFS phosphors. *See* Exhibit 38C ¶ 28.

87. GE's Global Research Center ("GRC") is headquartered at 1 Research Circle, Niskayuna, New York 12309. *Id.* ¶ 27. The Niskayuna facility has seen the development of many critical technological innovations, such as x-ray technology, CT scanning, and MRI systems. *See id.*

88. GE has a team located at the Niskayuna facility that is dedicated to the research and development of PFS phosphor technology. *Id.* ¶ 28. The Niskayuna team operates

separately from the research and development teams at Nela Park and the Ivanhoe Road Plant facilities in Ohio. *Id.* The Niskayuna team has been responsible for many of GE's breakthroughs in PFS technology, and its members once included at least one of the named inventors of the '973 Patent. *Id.*

89. The PFS research and development team at Niskayuna is funded by the GE licensing team responsible for licensing the PFS Patents. *Id.* ¶ 29. GE invests substantial amounts in research and development through the team at Niskayuna, including investments in personnel, equipment, and materials necessary for their work. *Id.*

90. GE's investment in the research and development of PFS at Niskayuna is ongoing. *Id.* ¶ 30. GE expects to invest substantial amounts in the research and development of PFS at Niskayuna in 2019. *Id.*

4. Substantial Investment in the Exploitation of the '973 Patent Through Licensing

91. A domestic industry also exists with respect to the licensing of the '973 Patent.

92. Complainant GE operates a comprehensive and globally renowned IP licensing program. GE's portfolio of intellectual property is highly diversified, covering multiple technologies and multiple fields. However, GE has specifically targeted the licensing of key intellectual property related to PFS phosphor. *See* Exhibit 38C ¶¶ 7–10. This licensing has focused on five patents - "the PFS Patents" - which contain key technological advancements that are highly desirable for participants in markets relating to PFS phosphor, such as display products. *Id.* ¶¶ 13–14.

93. As shown on GE's website discussing the licensing of the PFS patents, http://www.geradiantred.com/licensing/, the '973 Patent is one of the five PFS Patents. *Id.* Indeed, it is no mistake that the '973 Patent is listed as the first of the PFS Patents: while all five

PFS Patents represent an important and innovative advancement in PFS technology, the '973 Patent is the lead PFS Patent. *See id.*¶ 15.

94. GE's licensing of the '973 Patent and the other PFS Patents has been highly successful: a large number of the market participants in the display field, representing the vast majority of the market, have licensed the PFS Patents, and these licenses to the PFS Patents generate significant income for GE. *Id.* ¶¶ 10, 21, 23.

95. GE operates a dedicated and targeted PFS licensing program focused on the PFS Patents, including the '973 Patent, in the display field of use. *Id.* ¶¶ 13–14, 17–18. GE has invested substantial amounts in employing licensing professionals and supporting their work, all of which is directed to the exploitation of the '973 Patent through licensing as part of the PFS Patents. *Id.* ¶¶ 19–20.

96. GE's investments in licensing the '973 Patent are ongoing. *Id.* ¶ 24. GE expects to continue to invest substantial amounts in licensing the '973 Patent in 2019 and beyond. *See id.*

X. RELATED LITIGATION

97. On April 5, Complainants, contemporaneously with or shortly after the filing of the instant Complaint with the United States International Trade Commission, are filing a complaint in the United States District Court for the Middle District of North Carolina, alleging infringement of one or more claims of the '973 Patent and one or more claims of the '067 Patent, the same patents that have been asserted in this Complaint. The named defendant in that action is Cree, Inc.

98. Other than the litigation specified above, to Complainants' knowledge, the Asserted Patents are not and have not been the subject of any current or prior court or agency litigation.

XI. REQUESTED RELIEF

99. WHEREFORE, by reason of the foregoing, Complainants request that the United States International Trade Commission:

(a) institute an immediate investigation, pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to Respondents' violations of Section 337 based on the unlawful importation into the United States, sale for importation into the United States, and/or sale within the United States after importation of articles that infringe one or more claims of the '973 Patent and/or one or more claims of the '067 Patent, as well as the unlawful importation into the United States, sale for importation into the United States, and/or sale within the United States after importation of products containing the same made by or for Respondents;

(b) schedule and conduct a hearing on the unlawful acts and, following the hearing, determine that there has been a violation of Section 337;

(c) issue a permanent limited exclusion order, pursuant to Section 337(d) of the Tariff Act of 1930, as amended, excluding from entry into the United States all of Respondents' PFS phosphor containing LED packages and products containing the same that infringe one or more claims of the '973 Patent and/or one or more claims of the '067 Patent;

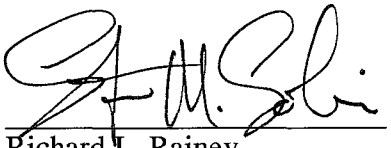
(d) issue a permanent cease and desist order, pursuant to Section 337(f) of the Tariff Act of 1930, as amended, prohibiting Respondents and related companies from at least offering for sale, selling for importation, importing, selling after importation, transferring, distributing, warehousing inventory for distribution, using, assembling, advertising, marketing, demonstrating, qualifying for use in the products of others, testing, or using Respondents' PFS phosphor containing LED packages and products containing the same that infringe one or more claims of the '973 Patent and/or one or more claims of the '067 Patent;

(e) impose a bond during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j)(3) to prevent further injury to Complainants' domestic industry relating to the '973 Patent and/or the '067 Patent; and

(f) grant such other and further relief as the Commission deems just and proper based on the facts determined by the investigation and the authority of the Commission.

Dated: April 11, 2019

Respectfully submitted,



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