

In the Matter Of:

Jesco Lighting Group, LLC, vs

AGS Lighting Management, LLC

DR. THOMAS KATONA

July 02, 2026



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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JESCO LIGHTING GROUP, LLC,

Petitioner,

VS.

Case No. IPR2025-01328

Patent No. 11,751,302

AGS LIGHTING MANAGEMENT LLC,

Patent Owner.

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REMOTE DEPOSITION

OF

DR. THOMAS KATONA

Thursday, July 2, 2026

Reported by:

AYLETTE GONZALEZ, RPR, CLR, CCR

JOB NO. 2026-1029083

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DATE: July 2, 2026

TIME: 10:00 a.m.

Remote deposition of DR. THOMAS
KATONA, pursuant to NOTICE, before AYLETTE
GONZALEZ, a Registered Professional
Reporter, Certified LiveNote Reporter,
Certified Court Reporter and Notary Public
of the States of New York, New Jersey,
Pennsylvania, Delaware and Texas.

1 R E M O T E A P P E A R A N C E S:

2

3 RADULESCU LLP.

4 Counsel for JESCO LIGHTING GROUP, LLC

5 5 Penn Plaza

6 New York, New York 10001

7 BY: BRYON T. WASSERMAN, ESQ.

8 EMAIL: Bryon@radip.com

9

10

11 CADWELL THOMAS LLP

12 Counsel for AGS LIGHTING MANAGEMENT LLC

13 5373 W Alabama Street

14 Houston, Texas 77056

15 BY: BRADLEY S. BOWLING, ESQ.

16 EMAIL: bbowling@cadwellthomas.com

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18

19 ALSO PRESENT:

20 KIMBERLY VILLALOBOS, Doc Tech

21

22

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1 DR. KATONA (7/2/2026)

2 multiple color temperatures?

3 A. I don't recall. I don't
4 believe so, but I don't recall.

5 Q. Okay. Do you recall if any of
6 these products had phosphors that were
7 located outside the package?

8 MR. BOWLING: Objection. Form.

9 A. I don't believe so.

10 Q. Okay. All right. After Soraa,
11 where did you go?

12 A. I'm sorry, yes, there was one
13 product that had a phosphor located
14 outside.

15 Q. Okay. How many products was
16 that though? Do you have any sense? Was
17 it 20 products that you tore down, 50, 10?

18 A. Probably between 25 to 50.

19 Q. So after Soraa, where did you
20 go?

21 A. NEXT Lighting.

22 Q. What kinds of products did NEXT
23 Lighting sell?

24 A. Our primary product was a
25 linear fluorescent replacement lamp.

1 DR. KATONA (7/2/2026)

2 Q. Okay.

3 A. Using LEDs.

4 Q. And so you said your work
5 involved LED components and vendor
6 selection integration, what did that
7 entail?

8 A. So differently than -- you
9 know, different than Soraa, we -- at NEXT,
10 we designed the lights, but we didn't make
11 the LEDs. We just bought those from
12 vendors and so we had to look at different
13 components that were available and select
14 which ones would work in our product.

15 Q. Okay. Yeah. Actually, you
16 know, I just realized that there was some
17 beginning stuff that I intended to do that
18 we skipped, so I'm going to pause briefly.

19 Can you give me your current
20 address, Dr. Katona?

21 A. Where I'm physically at or my
22 home address?

23 Q. Just for identification
24 purposes -- well, this is a public thing so
25 you don't have to put your home address.

1 DR. KATONA (7/2/2026)

2 Can you give me your work address?

3 A. It's 1 Grand Avenue, San Luis
4 Obispo, California 93407.

5 Q. Okay. And are there any
6 reasons or any reason you can't give
7 accurate testimony today?

8 A. Not that I'm aware of.

9 Q. All right. Going back to NEXT
10 Lighting. So you said that your work
11 included LED component and vendor selection
12 integration. Can you tell me a little bit
13 more about what that involved?

14 MR. BOWLING: Objection. Form.

15 A. So we -- as I -- as I said, we
16 purchased commercially available LEDs and
17 integrated them into our lighting product.
18 So I would meet with vendors, analyze spec
19 sheets, look at how LEDs would fit and work
20 within our designs and then make final
21 selections on which components we were
22 going to purchase.

23 Q. Right. And did the LEDs that
24 you purchased, did they have the phosphors
25 on the package?

1 DR. KATONA (7/2/2026)

2 MR. BOWLING: Objection. Form.

3 A. They had the phosphors in the
4 package.

5 Q. In the package.

6 So can you just tell me, you
7 said that these were designed to be -- and
8 I want to -- replacements for linear
9 phosphor lights, is that a fair
10 characterization?

11 I don't want to put words in
12 your mouth. I want to make sure I'm using
13 the right terms.

14 MR. BOWLING: Objection. Form.

15 A. Yes, I think what I said was
16 linear fluorescent lights.

17 Q. Linear fluorescent lights, yes.

18 So can you just give me for one
19 of these replacement lights, can you
20 describe the overall structure for me?

21 A. Roughly four feet in length.

22 Q. Right.

23 A. About a little over an inch
24 wide, contained LEDs and would go into a
25 standard fluorescent fixture that you see

1 DR. KATONA (7/2/2026)

2 A. So we didn't make our own
3 drivers.

4 Q. Right.

5 A. So put together the
6 specifications for what we needed and then
7 worked with external driver manufacturers
8 to get the products produced that we needed
9 for our products, to integrate with our
10 products and then did the testing to make
11 sure everything was meeting our
12 specifications.

13 Q. So can you tell me what the
14 difference is between dimming and
15 step-dimming?

16 A. In the context of what I've
17 written here, what I mean by the difference
18 is sort of continuous dimming and dimming
19 in discrete intervals.

20 Q. Right. Why would someone want
21 to have dimming in discrete intervals?

22 MR. BOWLING: Objection. Form.

23 A. I'm sure there are many reasons
24 why someone might want that in different
25 applications.

1 DR. KATONA (7/2/2026)

2 Q. Well what were the reasons you
3 were thinking of when you had those
4 features in your products?

5 A. So in our product specifically,
6 one of the reasons we did it was for
7 applications like parking garages that
8 wanted a setting that reduced the light a
9 certain amount, but never turned off when
10 people weren't there, because people don't
11 like walking into a dark parking garage.

12 Q. Right. Are there other
13 applications where someone might want reset
14 dimming levels?

15 A. People ask for all sorts of
16 things.

17 Q. Well, are you aware of any
18 other applications where someone would want
19 reset dimming levels?

20 A. There are -- there are some
21 codes that don't allow stairwells to be
22 dark.

23 Q. Okay. So in paragraph seven,
24 you said you added "optical based occupancy
25 and energy saving sensors that were

1 DR. KATONA (7/2/2026)

2 designed to integrate with our lights and
3 drivers to adjust the light output."

4 Can you tell me a little bit
5 about that?

6 A. Yeah. So we worked with
7 occupancy sensor manufacturer. We actually
8 white labeled their products. So we had to
9 make sure that essentially our drivers were
10 set up to integrate with those occupancy
11 sensors and have the functionality back to
12 the driver and into the end light that was
13 needed for different applications.

14 Q. Right. So, you know, the
15 products that had optical based occupancy
16 and energy saving sensors that controlled
17 the light output, did they have other
18 mechanisms for controlling the light output
19 too?

20 A. I don't think I understand the
21 question.

22 Q. Sure. So, say, I guess you
23 alluded to it earlier that you may, for
24 example, want a light that turns off or
25 dims when someone is not in the room, would

1 DR. KATONA (7/2/2026)

2 that be a fair characterization of that
3 functionality or if not, you know, tell me,
4 help me understand?

5 MR. BOWLING: Objection to
6 form.

7 A. I think I said specifically in
8 parking garages, that, you know, people
9 didn't want the light -- most parking
10 garage owners like under a building don't
11 want their parking garage to go completely
12 dark because it can make people feel
13 uncomfortable.

14 Q. Right. So I guess give me a
15 use case where you would -- these optical
16 based occupancy sensors would be used?

17 A. So in the parking garage case,
18 you would have occupancy sensors in
19 different locations in the parking garage.
20 The light would turn down some percentage
21 when no one is around to save energy and
22 then when it picks up movement, it would
23 turn up to full brightness.

24 Q. Would these lights be also able
25 to be controlled in other ways? Could

1 DR. KATONA (7/2/2026)

2 someone go and turn them on and turn them
3 off through a switch or other controls?

4 A. So someone could in that
5 application, usually that's reserved for
6 like a building manager or the head of the,
7 you know, maintenance staff because people
8 who own high-rise buildings don't want
9 random people going and flipping switches
10 on and off.

11 Q. But someone like that could
12 also control those lights through a switch
13 presumably?

14 MR. BOWLING: Objection. Form.

15 A. There's -- I think most lights
16 have the ability to be turned on and off.

17 Q. But yours, for example, would
18 they be able to be turned on and off
19 separate from these optical sensors?

20 A. I mean I can't speak to every
21 installation, but it's a general property
22 that many lights can be turned on and off.

23 Q. Were you aware of installations
24 where these optical sensors -- where these
25 lights with the optical sensors could be

1 DR. KATONA (7/2/2026)

2 turned on and off manually?

3 A. I know that we had customers
4 who could turn our lights off.

5 Q. Okay. So what is your current
6 position?

7 A. I'm a professor at California
8 Polytechnic State University in San Luis
9 Obispo.

10 Q. And what does your role
11 involve?

12 A. Teaching.

13 Q. Do you have any other
14 responsibilities other than teaching?

15 A. Research.

16 Q. What does your research
17 involve?

18 A. I have a couple areas of
19 research. So I'm currently looking into
20 the physiological effects of lighting on
21 people. So there's a lot of interest in
22 the effect of blue and infrared and other
23 wavelength, the lights on human health, so
24 that's one area of work that I'm involved
25 in.

1 DR. KATONA (7/2/2026)

2 worked on things that had different color
3 temperatures, can you tell me what that
4 entailed?

5 MR. BOWLING: Objection. Form.

6 A. So at NEXT Lighting, we built a
7 couple of fixtures that had numerous LEDs
8 that could -- had color changing
9 capability, the fixture had color changing
10 capability.

11 Q. And did those LEDs have their
12 phosphors on the packaging or in the
13 packaging or did they have a remote
14 phosphor?

15 A. In that specific application --
16 in that specific application we actually
17 had multiple -- multiple LED colored
18 temperatures with phosphors integrated into
19 the white LED packages and we had
20 additional LEDs, non-white LEDs.

21 Q. Okay. So when you said you had
22 additional non-white LEDs, what would that
23 -- what was the purpose of those?

24 MR. BOWLING: Objection. Form.

25 A. To make light of the color of

1 DR. KATONA (7/2/2026)

2 there's a familiarity with incandescent
3 lights.

4 Q. Would it be safe to say that
5 the predominant form of way to generate
6 white light from an LED is to have the
7 phosphor in the package?

8 A. Yeah, there are -- there's
9 multiple ways to create white light.
10 Phosphor in the package is one of them.
11 You can also combine LEDs of different
12 colors. I think it's probably accurate
13 that there are more phosphor integrated
14 white LEDs for white lighting products.

15 Q. And you say that's true even
16 today?

17 A. I mean I haven't looked through
18 the market data in the last year or two,
19 but I would -- I would guess that's likely
20 true.

21 Q. I would like to talk to you
22 about heat management. I think we referred
23 to it a little bit before.

24 What are some of the approaches
25 for heat management in LED fixtures?

1 DR. KATONA (7/2/2026)

2 A. I mean there have been tons of
3 approaches. People, you know, select
4 materials. There's the way that you do
5 assembly or design of the integration of
6 the products. I mentioned that we use the
7 thermal chimney at NEXT. I've seen people
8 use liquids, fans, all sorts of things.

9 Q. Do they sometimes control
10 managed heat by spacing the LEDs along the
11 array to reduce -- to manage the heat?

12 A. I mean I think -- I don't know
13 what you mean by spacing the LEDs along the
14 array. What array are we talking about?

15 Q. Along the fixture, for example.
16 So, say, we have a bunch of LED packages in
17 a fixture, would the spacing of the LEDs
18 affect of thermal management?

19 A. The heat load per area effects
20 thermal management as a general statement.

21 Q. So we've talked a little bit
22 about controlling color temperature. Is
23 one approach to controlling the color
24 temperature of an LED fixture to have
25 multiple groups of LEDs with different

1 DR. KATONA (7/2/2026)
2 context of Figure 5, and so if you're
3 taking language from one part that's not
4 talking about Figure 5 and then asking me
5 if Figure 5's resistor 31 can turn it off,
6 I don't -- I don't see how that's
7 appropriate.

8 Q. Okay. Well, so what do you
9 understand it to be saying when it says
10 that they can be turned off?

11 MR. BOWLING: Objection. Form.

12 A. I mean I see the statement that
13 says they can be turned off. But you asked
14 me the question whether they can be turned
15 off in Figure 5 with the variable resistor.

16 Q. Well, so doesn't it say the
17 combination -- so going back up to Figure
18 12 -- column 12, one to -- lines one to
19 seven -- one to, I guess, five, six, seven,
20 eight, it says, "the combination of the
21 emission product may be modified by
22 altering the drive currents of the LED
23 arrays"?

24 A. Yeah, I see those words.

25 Q. Okay. And, but you agree that

1 DR. KATONA (7/2/2026)

2 it does later say that one of the arrays
3 can be turned off?

4 MR. BOWLING: Objection. Form.

5 A. I see that it says, "second
6 array of LEDs corresponding to the second
7 region of the wavelength conversion
8 component are turned off while the first
9 set of LEDs corresponding to the first set
10 of region remain on."

11 Q. If those LEDs are turned off,
12 are they receiving any current?

13 MR. BOWLING: Objection.

14 A. Presumably not.

15 Q. And so I'd like to go to a
16 little bit farther down where it talks
17 about the -- I guess the other set of
18 arrays, where it says -- this is at lines
19 -- column 12, lines 17 to 20. It then
20 refers to the LEDs of the second region
21 being turned off.

22 Is it fair to say that those
23 are not receiving current if they're turned
24 off?

25 MR. BOWLING: Objection. Form.

1 DR. KATONA (7/2/2026)

2 I've seen it firsthand in commercial
3 products.

4 Q. So you see where it says that
5 it can be free of flicker, how fast would
6 the current have to be switched between the
7 two banks to avoid flicker?

8 MR. BOWLING: Objection to
9 form.

10 A. I don't think I have provided
11 any opinions on that. People's eyes are
12 more or less sensitive to flicker.

13 Q. Okay. But have you ever in any
14 of your work previously tried to avoid
15 flicker?

16 A. If I'm aware of flicker and I'm
17 aware that people tend to not like to see
18 lights strobing.

19 Q. Okay. Do you think if the
20 light were varied, say, every half second,
21 half second on and off, that would have
22 visible flicker?

23 MR. BOWLING: Objection.

24 A. I can only speak for myself. I
25 probably would notice that.

1 DR. KATONA (7/2/2026)

2 Q. If it were a tenth of a second
3 between the two, would you notice that?

4 A. Likely.

5 Q. Okay. If it were 1/100th of a
6 second between the two, would you notice
7 that?

8 A. I mean I don't -- I'm not
9 positive.

10 Q. Right. So in order to avoid
11 flicker at least for you, there would have
12 to be switching a current between the
13 lights at least ten times a second; is that
14 fair to say?

15 A. Again I don't have an exact
16 answer for when people stop seeing flicker.

17 Q. Right. But you said you
18 yourself would notice a flicker if it was
19 less than ten times a second; is that
20 correct?

21 A. Yeah, I mean I'm guessing. If
22 you want to start shining lights at me, I
23 can tell you when I stop seeing it.

24 Q. But at least going based on
25 that estimate, if it were less than ten

1 DR. KATONA (7/2/2026)

2 it then converts that power and provides it
3 to individual strings of the LED emitters;
4 is that correct?

5 MR. BOWLING: Objection. Form.

6 A. It provides it to subcircuits.

7 Q. Are the subcircuits part of the
8 control module or are they separate
9 structures?

10 So let me refer you to the
11 fourth line of that. It says, "The power
12 directed to individual strings of LEDs
13 emitters is governed by one or more
14 parallel driver subcircuits of the control
15 module."

16 Do you see that?

17 A. Yes, I see that.

18 Q. Do you agree that the
19 subcircuits are part of the control module?

20 MR. BOWLING: Objection. Form.

21 A. It says, yeah, parallel driver
22 subcircuits of the control module.

23 Q. Do you understand that to mean
24 that the driver circuits are part of the
25 control module?

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C E R T I F I C A T E

STATE OF NEW YORK)
 : SS.:
COUNTY OF RICHMOND)

I, AYLETTE GONZALEZ, a Notary
Public for and within the State of
New York, do hereby certify:

That the witness, DR. THOMAS
KATONA, whose examination is hereinbefore
set forth was duly sworn and that such
examination is a true record of the
testimony given by that witness.

I further certify that I am not
related to any of the parties to this
action by blood or by marriage and that I
am in no way interested in the outcome of
this matter.

IN WITNESS WHEREOF, I have
hereunto set my hand this 9th day of July,
2026.



AYLETTE GONZALEZ