

# Economic Impact Study & Audience Research

## The Inaugural Light City Baltimore

March 23-April 3, 2016

*Produced by*  
*Baltimore Office of Promotion & The Arts*

DJ Jazy Jeff



Lumen by Kristin McWharter and Steven Lynam



Voyage by Aether & Hemera

Photos courtesy of the Baltimore Office of Promotion & The Arts

Report prepared by  
**F | A Forward Analytics**  
[www.forwardanalytics.com](http://www.forwardanalytics.com)

## Highlights of Study

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- Light City Baltimore attracted an estimated 400,000 *nighttime* visitors to downtown Baltimore/Inner Harbor over the seven-day event, March 28 - April 3, 2016. Survey research shows that tremendous gathering included more than 223,000 City residents, while 30.4%, or 121,600 visitors, came from out-of-state. Survey respondents included residents of 17 other states, with most out-of-state visitors coming from Pennsylvania, Virginia, New Jersey and New York.
- Eighty-eight of survey respondents indicated that Light City and was the “main reason for visiting the Baltimore area today.” Twenty-nine percent of visitors indicated that this was the first time this year visiting downtown Baltimore. Moreover, 48.2% revealed that they would NOT have visited Baltimore (today) were it not for the Light City events.
- Viewing art work, enjoying the atmosphere/socializing, and DJ performances were the main attraction to Baltimore’s Inner Harbor during Light City (according to audience research).
- Forty percent of attendees visited Light City more than one day.
- Light City attendees spent an estimated \$1.8 million at local restaurants. Overnight visitors accommodated over 29,000 room nights resulting in a direct impact of \$4.4 million for hotels and other accommodations. Other tourism expenses included retail, attractions, parking, gasoline, and ground transportation. Each non-local visitor spent an estimated \$100 while exploring and enjoying Light City.
- In total, Light City attendees generated \$19.9 million in direct spending which rippled through the local economy injecting another \$13.9 million in indirect impact. The State of Maryland received an estimated \$1.09 million in tax revenue from the economic activity generated by Light City attendees, and the City of Baltimore gained an estimated \$566,300.
- The \$19.9 million in direct spending attributable to Light City generated an additional \$30.5 million in Maryland’s employment wages<sup>1</sup> supporting 818 FTE at an annual salary of approximately \$37,300
- Light City clearly improved the perceptions of Baltimore with 58% having a more positive outlook after attending the Light City. Ninety-eight percent of survey respondents reported feeling very safe or safe while attending Light City in downtown Baltimore/Inner Harbor. Overall satisfaction ratings for Light City Baltimore reached a high of 78.2%.
- The value of Light City’s print, broadcast and online publications coverage totaled more than \$1.96 million. Over 350 media blurbs reached an audience of 227.6 million from November 2015 to April 2016, increasing awareness and transforming perceptions for the City of Baltimore.

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<sup>1</sup> Forward Analytics utilizes the Gross Employment Multiplier of 1.5368 generated by United States Bureau of Economic Analysis to determine the employment wage impact.

## Introduction

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The City of Baltimore hosted the inaugural Light City celebration from March 28-April 3, 2016. The free multi-faceted experience brilliantly combined light, music and innovation to transform downtown Baltimore *after dark* into a unique festival of light.

Light City honors Baltimore's contribution to urban innovation as the first city to debut gas lighting in 1816. The inaugural Light City is a bicentennial event to mark this advancement. Also apropos to Light City, the gas lamp inventor, Rembrandt Peale, was a member of the Peale Museum family and deeply committed to the arts as well as innovation. Peale amazed patrons with his new method of lighting a room full of paintings– gas lights without wicks, oil or smoke.

Now 200 years after the first gas lamp illuminated Baltimore's streets, the city marks another “first” by hosting the first large-scale international light festival in the United States. Light City once again lights the streets of Baltimore but in a new and exciting way. The 1.5 mile colorful trip around Inner Harbor entertained with conceptual exhibits of light, music, performances and food, from a LED Ferris wheel to illuminated cotton candy to a street performance with fire.

In addition to the sensory smorgasbord of lights and music, Light City Baltimore hosted four ticketed innovation conferences with around 140 speakers. Social innovation, health, sustainability, and creativity were topics of exploration with focus on improving quality of life for Baltimore residents and throughout the world.

In assessing the success of the inaugural light festival, the city and businesses will take into account such financial measures as attendance numbers and hotel room sales. But Light City was designed and executed to strengthen Baltimore economically, in addition to socially and civically. The following report assesses the success of event in each of these areas.

## Purpose of Study

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City officials and the business community see the power of cultural events as a way to spur short-term tourism while shaping the image of Baltimore City as a cool, dynamic location where companies and citizens in modern, creative industries can thrive. Yet, evaluating the impact of special events and festivals is crucial to analyze the return on investment (ROI) for the citizens, corporate sponsors, government entities and the affected communities.

Forward Analytics, Inc. was contracted by Baltimore Office of Promotions & The Arts (BOPA) to conduct audience research and to analyze the social and economic impact of the inaugural Light City Baltimore. Further, the study will be used to improve the event and to ensure continued community and financial support for future light festivals. The study gathered standard economic impact data and additionally measured the following:

- overall event satisfaction;
- demographics and psychographics of attendees;
- attendance motivators;
- civic pride and social awareness;
- communications and marketing activities,
- and sponsorship awareness.

## The Economic Impact Model

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The economic impact model measures the 1.) direct and 2.) indirect business volume and 3.) government revenues attributed to Light City Baltimore. This impact study employs a linear cash flow methodology first developed by Cafferty & Isaacs for the American Council on Education. The Cafferty & Isaacs methodology is the most widely-used impact study tool and has been used throughout the United States in impact analyses for both profit and not-for-profit organizations, corporations, institutions and events.

The direct impact of a special event like Light City is primarily a function of visitor spending at hotels, restaurants, entertainment, and retail, plus travel sources like transportation, parking, and fuel. The linear cash flow model used in this study takes into account the re-spending of money within the economy as a result of what professional economists term "the multiplier effect." The multiplier effect measures the indirect impact, or the circulation of dollars originally attributable to Light City, and tracks their spending by successive recipients until the funds eventually leak out of the economy. The sum of these direct and indirect expenditures represents the total impact of Light City on the local business volume.

The direct spending of Light City visitors generates government revenues for the City and State. Light City-related taxes.

Economic impact generally measures *new money* brought into the economy by out-of-area visitors and is then spent locally. Spending by local residents (residing in Baltimore City) represents a redistribution of existing money in the community and is not included in this study. Survey research revealed that 55.8% of Light City visitors reside in Baltimore City. That said, 44.2% of Light City visitors spent "new dollars" and impact the local economy as outlined further in this report.

## Methodology

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When calculating the economic impact of an event, it is necessary to know the crowd size or attendance. The inaugural Light City was a seven-day free event spread out over 1.5 miles of Inner Harbor. While there were no ticket sales or admission gates to quantify people participating in Light City, the conservative attendance figure of 400,000 was determined by BOPA after nightly analysis, in communication with the Baltimore police. The crowd estimates also incorporated audience survey data as well as hotel and parking reports.

The study utilized a customized survey to collect spending data, demographics, psychographics, and more from a random sample of Light City visitors. Prior to the event, Forward Analytics collaborated with BOPA to create a 3-page survey.

Forward Analytics administered in-person interviews to 423 adult attendees (ages 18+) during 4 of the 7 days of Light City. The sample size represents a statistical significance of +/-4.75% margin at the 95% confidence interval.

In addition, the methodology incorporated detailed information supplied by BOPA. The event planners reported back the expenditure levels and geo-spatial distribution (spending locally vs. non-locally) along with staffing and other related economic information.

# Summary of Findings

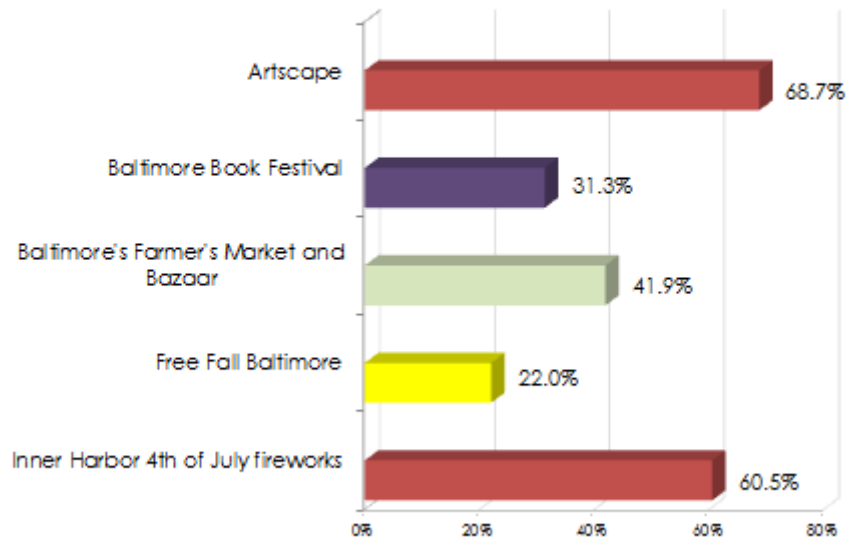
## Social & Civic Impacts of Light City Baltimore

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BOPA is committed to making Baltimore a more vibrant and creative city by inspiring and promoting its high-quality literary, performing and visual arts, and artists. The group creates and manages iconic festivals and special events throughout Baltimore with a mission to “stimulate communities economically, artistically and culturally.” Heralded for its flawless operations, BOPA unites a million people annually in a community defined by immersive participation, boundless positivity, and pure self-expression.

Audience research proves that BOPA's festivals and events engage Baltimore residents and visitors. An overwhelming 86% of Light City attendees also attend at least one other BOPA event.

**BOPA Events Build Community Engagement**  
The majority of Light City visitors revel at other BOPA events, too.

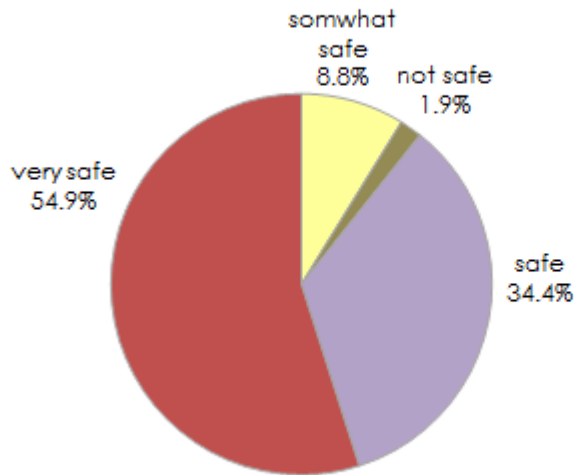


BOPA's latest initiative, Light City Baltimore showcases Baltimore's finest qualities: art, music, and innovation. But the event is also staged to reinvigorate and instill the safety and civility in downtown Baltimore. The community's perception of safety and security is critical to a high quality of life. Studies have shown that when people fear crime, they tend to alter their behavior, isolating or even acting out socially and physically. As such, perceptions of safety are economically grounded as businesses and residents naturally gravitate to communities that feel safe and productive.

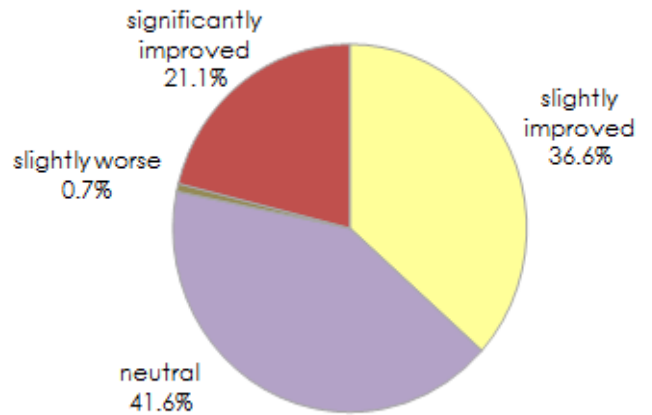
Light City showed a 'lighter' side of Baltimore where artistic expression is showcased as an essential drive within the community. Creativity and imagination are well understood avenues to promote tolerance and expose a community to its myriad of talents and possibilities.

According to survey research, the majority of visitors (98.1%) felt safe visiting Light City. Actually, more than half of visitors felt “very safe” attending the Inner Harbor event. And, clearly, Light City enhanced the outlook of Baltimore. Research asked survey respondents how Light City changed their perceptions of Baltimore and 58% have a more positive outlook after attending the festival.

**Perceptions of Safety at Light City**

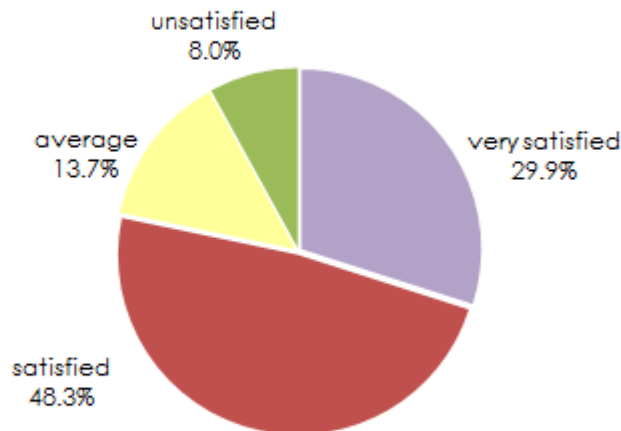


**Light City Improves the Perceptions of Baltimore**



Undoubtedly, the overall satisfaction of a special event determines its effectiveness in building civic pride or enhancing the attractiveness of the destination. Survey research measures a high level of satisfaction (89.5%) among Light City attendees. Ninety-four percent of attendees would recommend *Light City* to a friend. And 81.6% are very likely or likely to visit Light City again next year.

**Overall Satisfaction with the Light City Experience**



The inaugural Light City exceeded expectations in many ways. The event attracted 400,000 people to Inner Harbor, 100,000 more than anticipated. The success of Light City equals success for the Baltimore community. Festival attendees brought high levels of enthusiasm with the media sending accolades about the experience. Waterfront businesses welcomed Light City visitors with festival deals and discounts. Local restaurants used the event as an opportunity to get creative with foods and specials reflecting the festival's theme with colorful cocktails and cuisine coinciding with the illuminated installations. As a result, local businesses reported record-breaking sales during the week of Light City with increased foot traffic night after night and some restaurants even reported running out of food.

The following section reports the measure of economic impact generated as a result of Light City Baltimore.

### **Economic Impact of Light City Baltimore**

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The total economic impact of the 2016 Inaugural Light City, which includes both visitor spending and organizational spending, is estimated at \$33.8 million for the 7-day festival. Light City increased the local business volume by \$19.6 million in direct impact and \$13.9 million in indirect impact.

The direct impact of Light City resulted in government revenues received by the City of Baltimore and State of Maryland. The City gained \$566,300 in government revenues attributable to Light City, and Maryland gained \$1.09 million.

### **Revenues Generated by Light City Attendees**

Visitor spending makes up the majority of economic impact attributable to Light City. The total economic impact of visitor spending (those who do not reside in Baltimore City) is estimated to be \$30.2 million. The total economic impact consists of \$17.8 million in direct impact and \$12.4 in indirect impact.

The following chart illustrates the business revenue generated by non-local visitors who traveled to Baltimore to experience Light City (176,800 people). The chart provides a breakdown of revenue at local restaurants, retailers, attractions, hotels, etc. generated in Baltimore City. Each visitor spent an estimated \$100 while enjoying Light City.

	<b>Visitor Spending in Baltimore City</b>
Food at restaurants/bars	\$5,658,000
Alcohol at restaurants/bars	\$1,149,000
Retail/souvenir purchases	\$1,830,000
Tourist attractions and entertainment	\$1,340,000
Overnight accommodations	\$4,356,000
Parking	\$1,282,000
Gasoline	\$1,139,000
Ground transportation (bus, taxi, car rental, etc.)	\$1,015,000
<b>Direct Impact</b>	<b>\$17,769,000</b>
<b>Indirect Impact</b>	<b>\$12,438,300</b>
<b>Total Impact</b>	<b>\$30,207,300</b>

These economic numbers alone show the weighty impact of Light City on the local economy. Yet there are additional success measures that demonstrate the efforts to revitalize downtown Baltimore even if short-term.

STR Trend Reports<sup>2</sup> reveal a considerable increase in hotel occupancy and revenue during the week of Light City, March 28th - April 3rd when compared to the same dates in 2015. Light City brings a 38.6% increase in hotel occupancy and a 64.9% increase in revenue for downtown hotels.

The Parking Authority of Baltimore City provided a count and revenue comparison for 2015 vs. 2016. Transient parking increased by 5,668 parkers and increased \$32,928 in revenue for seven waterfront lots during the week of Light City. That's a 46.4% increase in transient revenue from year to year.

### **Revenues Generated by Light City Operations**

In addition to visitor spending, the *production* of Light City has a profound impact on the Baltimore economy. While the 7-day event is free to its attendees, BOPA's cost to produce Light

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<sup>2</sup> STR Trend Reports are a subscription-based service providing daily performance and profitability data for 62 City hotels with over 10,500 rooms.



City Baltimore is approximately \$3.9 million. To elaborate, the operating budget includes PR and advertising, signage, payment and commissions to artists and performers as well as waste management, security, *and so on*.

The light festival's emphasis is on stimulating cultural and economic activity for the local communities. Accordingly, 54% of their operating budget for Light City was spent in Baltimore. That's an estimated \$2.09 million injected into the local economy attributable to the festival. Seven percent of operating expenses were with businesses and services in Baltimore County and 5% were spent elsewhere in Maryland.

Light City's budget is comprised mostly of sponsor dollars. A considerable portion comes from corporations and organizations headquartered outside of Baltimore, but the majority of financial support was from Baltimore area companies.

### **Government Revenues Attributable to Light City Baltimore**

In addition to the direct and indirect and revenues received by local businesses and organizations, Light City generated substantial tax revenues for the City of Baltimore and State of Maryland. The City of Baltimore gained an estimated \$566,258 as a result of the 2016 Light City. The State of Maryland received an estimated \$1.1 million in tax revenues due to Light City. The government revenue impacts allocable to 2016 Light City comprise the following:

#### **Sales & Use Tax**

Sales and use tax revenues were paid directly by Light City visitors on purchases such as retail, food and drinks, overnight lodging, gas and parking. Light City-related direct spending by visitors generated \$1.07 million in sales tax revenues for the State of Maryland. BOPA paid the state of Maryland \$9,860 in sales tax.

#### **Hotel Tax**

Research determined that an estimated \$4.4 million was spent by Light City visitors at Baltimore's overnight accommodations. Consequently, Baltimore City received an estimated \$326,700 in hotel tax revenues attributable to the light festival

#### **Parking Tax**

With an inflow of after 5pm visitors to the Inner Harbor/downtown Baltimore, survey data measured an estimated \$1.3 million which was spent on parking in the City. This impact generated approximately \$205,000 for the City of Baltimore.

#### **State Gasoline Excise Tax**

Light City spent an estimated \$1.3 million in gasoline while traveling to and from Baltimore. A gasoline excise tax of \$.27 per gallon generated \$16,623 for the State of Maryland.

### **Employment Impact**

In addition to measurements of economic impact in terms of dollars, Light City Baltimore in 2016 supported an estimated 818 FTE jobs at an annual salary of approximately \$37,300. (This equates

to \$30.5 million in employment wages for the State of Maryland.) The impacted industries include tourism and hospitality, but also comprise other major employment sectors like construction, manufacturing, transportation and warehousing, professional, etc.

### **Volunteer Impact**

Volunteering is an important part of what makes magical events like Light City possible and an important part of participating in the community at large. Volunteers provide the biggest resource to ensure the success of a *free* festival. Undoubtedly, their wholehearted efforts enhanced the social and economic impacts of Light City.

An overwhelming 239 vibrant volunteers are to be commended for all their energy and the many hours they gave to help make the inaugural Light City an overwhelming success. Volunteers provided guest services, administrative services, safety, set-up and logistics, etc. They donated an estimated 1,670 volunteer work hours.

Appraising the exact dollar amount is less critical than the notion that those who volunteered their time could have spent it in many ways but decided the event and their community was of key importance and worth donating their time. If the total of 1,670 volunteer hours is calculated at the *government dollar value of a volunteer hour* (2015), an estimated \$44,488 is donated in time to Light City, Baltimore and its residents.

### **Marketing Impact**

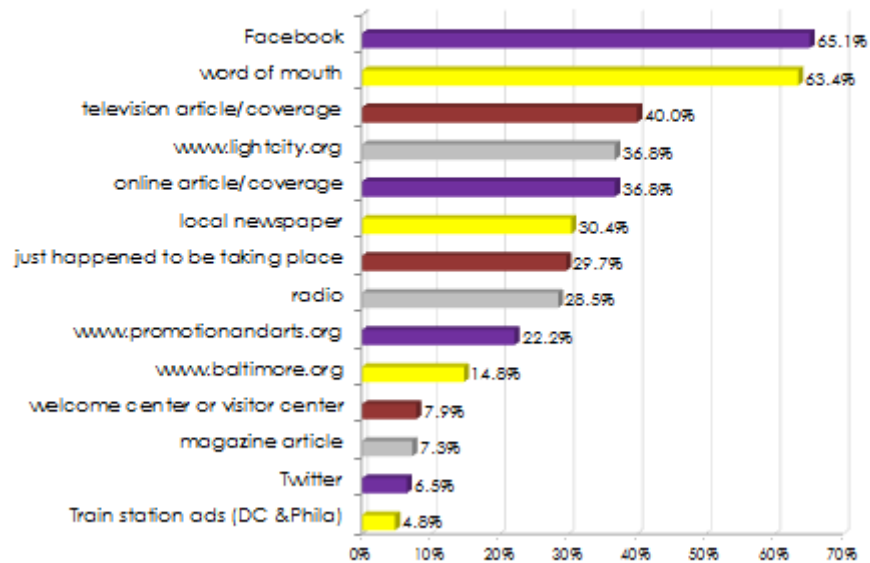
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Light City showcases Baltimore to the region by generating valuable media coverage. The festival allows Baltimore to become increasingly recognized as a forward thinking place where creativity and innovation are mutually valued and nurtured.

Media coverage not only further cements the city's core identity but also represents an incredible return on Baltimore's investments. The value of Light City's print, broadcast and online publications coverage totaled more than \$1.96 million. Over 350 media blurbs reached an audience of 227.6 million from November 2015 to April 2016.

Social media and digital marketing, predominantly Facebook, proved to be the most effective (and economic) promotional tool for Light City Baltimore. Audience research shows that 65% of attendees learned about the light festival through Facebook, 36.8% were captured by [www.lightcity.org](http://www.lightcity.org), and another 36.8% online article/coverage.

### How did you learn about Light City Baltimore and its events?



While social media brought people together, it also turned the entire Light City experience into a shareable one. With 1.8 million social media impressions by 821,500 users, Twitter accounted for 65.3% of all mentions and Instagram at 30%. The majority of social media mentions were from Baltimore, recognition emanates from Canada, United Kingdom, Germany and South Korea, to name a few places. And 90% of these mentions are favorable.

Several hashtags were used to pull the conversations together, increasing awareness and visibility for both Light City and Baltimore. According to analytical software, Sysomos, the most frequently used hashtags are as follows:

- #lightcity 3,056 mentions
- #lightcitybaltimore 1,190 mentions
- #baltimore 1,041 mentions
- #lightcitybmore 192 mentions
- #visitbaltimore 176 mentions

The additional analytics below reconfirm that Light City created a lively community environment in both downtown Baltimore as well as in the digital world.

Facebook 7,169 followers, 1.8 million impressions, 821,523 users  
 Twitter 2,833 followers, 30,766 interactions, 24,056 users  
 Instagram 3,658 followers

Website 329,522 users, 493,452 sessions, and 1.5 M page views  
 Mobile Site 19,577 users, 49,965 sessions, 547,705 screen views

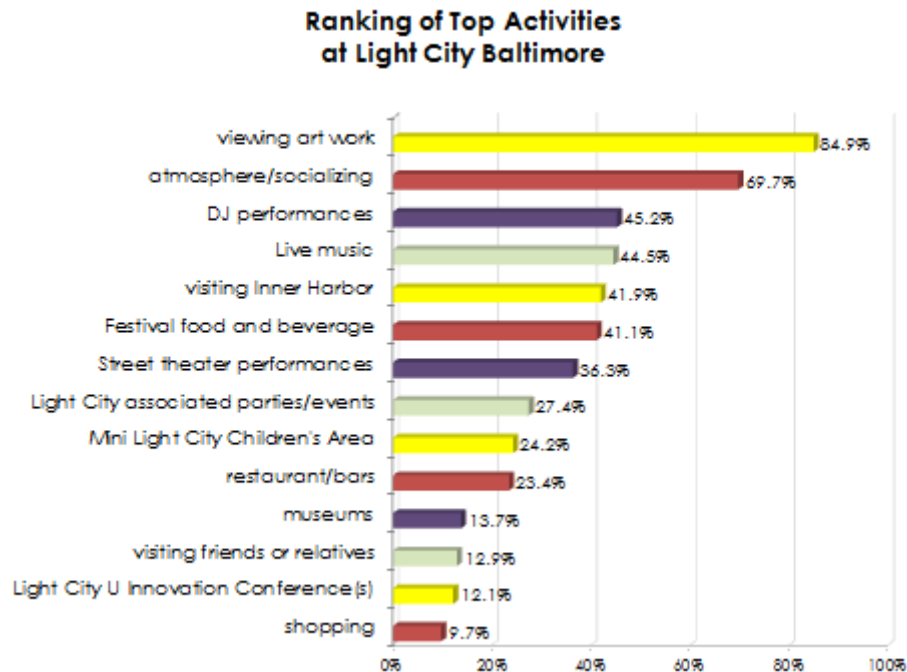
## Demographics and Attendance Information

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A goal of Light City Baltimore is to revitalize downtown Baltimore by turning around perceptions and reality of the City's downtown area for residents and tourists through positive awareness. Research shows that Light City attracted more than 223,000 City residents to the Inner Harbor over the 7-day event. An estimated additional 176,800 visitors came from outside of the City

Eighty-eight percent of visitors said Light City was the "main reason to be in the area today". Moreover, 38% non-residents revealed they would NOT have visited Baltimore (today) if there were no Light City. The illuminating event brought 29% of survey respondents (approximately 116,000 people) to Inner Harbor for the first time this year!

While the illuminating art displays were the main attraction, attendees were taken by the total sensory experience. The top five activities of Light City were viewing art work (84.9%) and enjoying the atmosphere/socializing (69.7%), DJ performances (45.2%), live music (44.5%) and visiting Inner Harbor (41.9%).



Light City was a family-friendly event that appealed to people of all ages. The attendees were more likely to be young with 47.1% under the age of 35, while 27.5% of visitors are ages 50+. Thirty-two percent of visitors live with children under the age 18 or dependent children, and 28.1% of visitors brought children under the age of 18 with them to Light City.

Light City visitors are well-educated with almost two-thirds of attendees earning a four-year degree or higher. An overwhelming 33.2% of all survey respondents earned a post-graduate degree and 25.5% earned a four-year degree. Another 30% of visitors attended earned a

technical or vocational degree. Consequently, nearly half of visitors (45%) have household incomes above \$75,000.

Light City was a transformational event highlighting the rich lifestyle opportunity Baltimore offers. Attitudes toward leisure time have changed over the decades. Among Gen Y and Millennials, leisure activities are a litmus test for a community's attractiveness and livability.

Researcher and author Richard Florida's seminal book, 'Rise of the Creative Class' reiterates the long-term economic value that comes when communities embrace the lifestyles and latest forms of expression championed by this new generation of influencers and leaders.