| Bid Request Number | 5950 |
| :--- | :--- |
| Title | Floodlights With Mounts |
| Description |  |
| Bid Type | Quote |
| Open Date | $11 / 19 / 2018$ 03:00:28 PM (CT) |
| Close Date | $11 / 27 / 2018$ 11:00:00 PM (CT) |


| Organization | Lincoln Purchasing |
| :--- | :--- |
| Bid Creator | Sharon Mulder Asst Purchasing Agent |
| Email | smulder@lincoln.ne.gov |
| Phone | $(402) 441-7428 \times$ |
| Fax | $(402) 441-6513 x$ |

Responding Suppliers

| Name | City | State | Response Submitted | Lines Responded | Response Total |
| :--- | :--- | :--- | :--- | ---: | ---: |
| TraStar, Inc. | Richardson | TX | $11 / 27 / 201811: 59: 25 \mathrm{AM}$ | 2 | $\$ 6,160.00$ |
| Sebek Lighting \& Electronics | Lincoln | NE | $11 / 27 / 2018111: 32: 43 \mathrm{AM}$ | 1 | $\$ 9,720.00$ |
| Bell Electrical Supply Co., Inc. Woodside | NY | $11 / 27 / 201811: 49: 34 \mathrm{AM}$ | 2 | $\$ 12,200.00$ |  |
| Graybar Electric | Lncoln | NE | $11 / 20 / 201802: 35: 12 \mathrm{PM}$ | 2 | $\$ 13,186.00$ |
| Midwest Electrical Controls, LL Omaha | NE | $11 / 26 / 201805: 25: 38 \mathrm{PM}$ | 2 | $\$ 17,600.00$ |  |

Response Notes

| Supplier | Notes |
| :--- | :--- |
| Graybar Electric | Pricing is good until 12/27/18. Atlas has announced a price increase after Dec 27 th. Any releases after 12/27 will be subject to the price increase. |

Midwest Electrical Controls, Sharon, My name is wrong in above user profile. Dr. is not an appropriate title?

| Line Items |
| :--- |
| Line 1 |
| Name |
| TraStar, Inc. |
| Sebek Lighting \& Electronics |

# Manufacturer and Model (Required) 

TRASTAR, INC. JXM-ST-A5L
Ileding Lighting - RG-A5FL300W-50K
Atlas PFXL2G300LED
Atlas PFXL2G300LED

Reference attachment PFXL2G300LED

## Manufacturer and Model (Required)

TraStar, Inc. - Mounting is included with flood lights.

Trunnion Mount, Furnished assembled to item $1=16^{\prime \prime}$ wide $\times 17^{\prime} 07^{\prime \prime}$ high $\times 12.21^{\prime \prime}$ deep, cost covered in assembly cost.

## Atlas Trunnion

Trunnion comes with the fixture
Header Attributes

| Supplier Name | 5 (Required) | 6 (Required) |
| :--- | :--- | :--- |
|  | Delivery <br> State number of delivery days after <br> receipt of order (ARO). FOB to the | Contact |
|  | City/County at the location specified |  |
|  | with all transportation charges paid. | Name of person submitting this bid: |
|  | 5 Days | Anthony Baek |
| Bell Electrical Supply Co., Inc. | Appx 1-2wks aro. | Eric Angell |
| Graybar Electric | 35 | Donald E. Reiner |
| Midwest Electrical Controls, LLC. | $60-75$ days from date of order | Rick Sebek |
| Sebek Lighting \& Electronics | $45-60$ days | Sandra Godoy |
| TraStar, Inc. |  |  |

## City of Lincoln/Lancaster County (Lincoln Purchasing) Supplier Response

| Bid Information |  | Contact Information |  | Ship to Information |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bid Creator | Sharon Mulder Asst | Address | Purchasing | Address | Lancaster County |
|  | Purchasing Agent |  | 440 S. 8th St. |  | Corrections |
| Email | smulder@lincoln.ne.gov |  | Lincoln, NE 68508 |  | 3801 West O Street |
| Phone | (402) $441-7428 \mathrm{x}$ | Contact | Sharon Mulder Asst |  | Lincoln, NE 68528 |
| Fax | (402) 441-6513x |  | Purchasing Agent | Contact |  |
| Bid Number | 5950 | Department |  | Department |  |
| Title | Floodlights With Mounts | Building |  | Building |  |
| Bid Type | Quote | Suite 200 |  |  |  |
| Issue Date | 11/19/2018 03:00 PM (CT) | Floor/Room |  | Floor/Room |  |
| Close Date | 11/27/2018 11:00:00 PM (CT) | Telephone | (402) $441-7428 \mathrm{x}$ | Telephone |  |
|  |  | Fax | (402) 441-6513 x | Fax |  |
|  |  | Email | smulder@lincoln.ne.gov | Email |  |

Supplier Information

| Company | TraStar, Inc. <br> Address <br> $860 ~ N . ~ D o r o t h y ~ D r ., ~ S u i t e ~$ <br> 600 |
| :--- | :--- |
|  | Richardson, TX 75081-2770 <br> Claine Davis |
| Contact |  |
| Department |  |
| Building |  |
| Floor/Room |  |
| Telephone | (972) 480-0888 |
| Fax | (972) 480-8884 |
| Email | edavis@trastarusa.com |
| Submitted | $11 / 27 / 201811: 59: 25$ AM (CT) |
| Total | $\$ 6,160.00$ |

By submitting your response, you certify that you are authorized to represent and bind your company.
Signature Sandra Godoy
Email sgodoy@trastarusa.com

Supplier Notes

Bid Notes

Bid Activities

Bid Messages

## Please review the following and respond where necessary

| \# | Name | Note | Response |
| :---: | :---: | :---: | :---: |
| 1 | Instructions to Bidders | I acknowledge reading and understanding the Instructions to Bidders. | Yes |
| 2 | Specifications | I acknowledge reading and understanding the specifications. | Yes |
| 3 | Sample Contract | I acknowledge reading and understanding the sample contract. | Yes |
| 4 | Quantities | I acknowledge that the quantities listed for each line item are an estimated amount. The City/County does not guarantee any dollar amount or order quantities for the term of the contract. | Y |
| 5 | Delivery | State number of delivery days after receipt of order (ARO). FOB to the City/County at the location specified with all transportation charges paid. | 45-60 days |
| 6 | Contact | Name of person submitting this bid: | Sandra Godoy |
| 7 | Tax Exempt Certification Forms | Materials being purchased in this bid are tax exempt and unit prices are reflected as such. A Purchasing Agent Appointment form and a Exempt Sales Certificate form shall be issued with contract documents. (Note: State Tax Law does not provide for sales tax exemption for proprietary functions for government, thereby excluding the purchases of pipes to be installed in water lines and purchase of water meters.) | Yes |
| 8 | U.S. Citizenship Attestation | Is your company legally considered an Individual or Sole Proprietor: YES or NO | YES |
|  |  | As a Vendor who is legally considered an Individual or a Sole Proprietor I hereby understand and agree to comply with the requirements of the United States Citizenship Attestation Form, available at: http://www.sos.ne.gov/business/notary/citizenforminfo.html |  |
|  |  | All awarded Vendors who are legally considered an Individual or a Sole Proprietor must complete the form and submit it with contract documents at time of execution. |  |
|  |  | If a Vendor indicates on such attestation form that he or she is a qualified alien, the Vendor agrees to provide the US Citizenship and Immigration Services documentation required to verify the Vendor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program. |  |
|  |  | Vendor further understands and agrees that lawful presence in the United States is required and the Vendor may be disqualified or the Contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. 4-108. |  |
| 9 | Electronic Signature | Please check here for your electronic signature. | Yes |

## Line Items

| \# | Qty | UOM | Description |  |  | Response |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 20 | EA | Optic Floodlights |  |  | \$308.00 |
|  | Manufacturer: Atlas |  | Manufacturer \#: PFXL2G300LED |  |  |  |
|  | Item Notes: |  |  |  |  |  |
|  | Supplier Notes: |  |  |  |  |  |
|  | Item Attributes: Please review the following and respond where necessary |  |  |  |  |  |
|  | \# Name |  |  | Note | Response |  |
|  | Manufacturer and Model |  |  | Please provide manufacturer and model bidding. | TRASTAR, INC. JXM-ST-A5L |  |
| 2 | 20 EA |  | Mounting Frames |  | \$0.00 |  |
|  | Manufacturer: Atlas Manufacturer \#: Trunnion |  |  |  |  |  |
|  | Item Notes: Size: $16^{\prime \prime}$ W $\mathrm{W} \times 17.07^{\prime \prime} \mathrm{H} \times 12.21{ }^{\prime \prime} \mathrm{D}$ |  |  |  |  |  |
|  | Supplier Notes: |  |  |  |  |  |
|  | Item Attributes: Please review the following and respond where necessary |  |  |  |  |  |
|  |  | Name |  | Note | Response |  |
|  |  | Manufacturer and Model |  | Please provide manufacturer and model bidding. | TraStar, Inc. - Mounting is included with flood lights. |  |
|  |  |  |  |  | Response Total: | \$6,160.00 |

EXPECTED LED LIFE - $100,000 \mathrm{hrs}$.
LED TECHNOLOGY - Latest technology on Hi-Flux LEDs.
Minimal CRI of 70 .
OPTICS - Special optical lens design to maximize light output \& uniformity. Each lens allows the fixture to generate different lighting patterns. Equipped with diffusing lens to minimize glare.

OPERATING TEMPERATURE - $-40 \mathrm{C}^{\circ} \sim+70 \mathrm{C}^{\circ}$.
HOUSING - Die cast aluminum housing with powder coat finish. Tempered glass. Single, self-contained device, not requiring on-site assembly for installation. Watertight IP66.

THERMAL MANAGEMENT - Heat sink fins are incorporated into the external design of the fixture, allowing it to evenly dispense heat.

MOUNTING - Easy yoke mounting hardware for indoor/outdoor lighting on parking garage/lots, buildings, storage sites, etc.

ELECTRICAL FEATURES - Comes with a variable voltage power supply $120-277 \mathrm{VAC}$. Also available with a step-down transformer built onto the unit to accommodate 480 VAC . ETL listed conforming to UL STD 1598.

LUMINAIRE EFFICIENCY - $\geq 115 \mathrm{~lm} / \mathrm{w}$.
COLOR CORRELATED TEMPERATURE (CCT) - $4,000 \mathrm{~K}$ to $6,000 \mathrm{~K}$.


| Model Number: | JXM-ST-A1 | JXM-ST-A2 | JXM-ST-A3 | JXM-ST-A4 | JXM-ST-A5 | JXM-ST-A5L |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattage Level: | 35 W | 65 W | 130 W | 185 W | 240 W | 300 W |
| Lumen Output: | $\approx 4000$ | $\approx 7500$ | $\approx 15000$ | $\approx 21000$ | $\approx 27000$ | $\approx 35000$ |
| CRI: | $>70$ | $>70$ | $>70$ | $>70$ | $>70$ | $>70$ |
| Power Factor: | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |

Any additional technical information or sales support regarding these and other LED Products, please contact us:

## DISTRIBUTION:

## Typical Distribution Pattern



## ORDERING/OPTIONS

Example:
JXM-ST Flood Light

## PREFIX <br> JXM DURALIGHT <br> LED

$\qquad$
$\square$
ST Lighting Series
$\qquad$ -

| WATTAGE LEVEL |  | CCT |  |
| :---: | :---: | :---: | :---: |
| A1 | $\approx 35 \mathrm{~W}$ | 3K | $3000 \mathrm{~K}( \pm 300)$ |
| A2 | $\approx 65 \mathrm{~W}$ | 4K | 4000K ( $\pm 300$ ) |
| A3 | $\approx 130 \mathrm{~W}$ |  | (Standard CCT) |
| A4 | $\approx 185 \mathrm{~W}$ | 5K | $5000 \mathrm{~K}( \pm 300)$ |
| A5 | $\approx 240 \mathrm{~W}$ | 6K | $6000 \mathrm{~K}( \pm 300)$ |

- 



GR Gray Housing
BK Black ${ }^{2}$
BZ Bronze ${ }^{2}$
DG Dark Green ${ }^{2}$
SP Special Color ${ }^{2}$
(Provide Chip)
-


L Utility Label

NOTE:

1. Fixtures come with a Standard 7-Pin Receptacle.
2. Color other than the standard Gray may incur an extra charge. Please contact us for additional information.

TRASTAR, INC.
860 N. DOROTHY DRIVE, SUITE 600, RICHARDSON, TX 75081
PH: (972) 480-0888 | FX: (972) 480-8884

# LM-80 Test Report NVSL219B 

| Issue Date: | November 17, 2014 | Revision Date: | - |
| :--- | :--- | :--- | :--- |
| Test Initiation Date: | August 4, 2011 | Test Completion Date: | October 5,2012 |
| Test Duration: | 10,000 hours | Report Number: | SQETMLH17101 |

## Customer Information:

| Company Name: | Nichia Corporation |
| :--- | :--- |
| Address: | $491-100$, Oka, Kaminaka-cho, Anan-shi, Tokushima, 774-8601, JAPAN |

## Description of Test Samples:

| Classification: | LED Package |
| :--- | :--- |
| Model Name: | Warm White LED |
| Model Number: | NVSL219B (Nominal CCT: 2700 K) |

Test Summary:

| Data <br> Set | Case Temperature $\left[T_{s}\right]$ | Ambient Temperature [ $T_{A}$ ] | Drive Current [ $\mathrm{I}_{\mathrm{F}}$ ] | Lumen <br> Maintenance at 10,000 hours | Chromaticity Shift ( $\Delta u^{\prime} v^{\prime}$ ) at 10,000 hours | TM-21 <br> Projection $\mathrm{L}_{70}(10 \mathrm{~K})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $55^{\circ} \mathrm{C}$ | $>50{ }^{\circ} \mathrm{C}$ | 700 mA | 99.3\% | 0.0022 | > 60100 hours |
| 2 | $55^{\circ} \mathrm{C}$ | $>50^{\circ} \mathrm{C}$ | 1200 mA | 97.9 \% | 0.0025 | > 60100 hours |
| 3 | $85^{\circ} \mathrm{C}$ | $>80^{\circ} \mathrm{C}$ | 700 mA | 97.5 \% | 0.0025 | > 60000 hours |
| 4 | $85^{\circ} \mathrm{C}$ | $>80^{\circ} \mathrm{C}$ | 1200 mA | 94.8 \% | 0.0031 | > 60000 hours |
| 5 | $105{ }^{\circ} \mathrm{C}$ | $>100{ }^{\circ} \mathrm{C}$ | 700 mA | 95.5 \% | 0.0027 | > 60100 hours |
| 6 | $105{ }^{\circ} \mathrm{C}$ | $>100^{\circ} \mathrm{C}$ | 1000 mA | 93.7\% | 0.0035 | $>60100$ hours |



Approved Signatory:
Hitoshi TOHYAMA, Lab Manager
Nichia Corporation LED Testing Laboratory
1-1,Tatsumi-Cho, Anan-Shi, TOKUSHIMA 774-0001, JAPAN

## Applicable Model Numbers:

This LM-80 test report applies to the following models:

| Series | Model Number | Case Temperature $\left[{ }^{\circ} \mathrm{C}\right]$ | Forward Current [mA] | Nominal CCT <br> [K] | Data Set <br> Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 219 | NVSW219B | 55 | 700 | $\geq 2700$ | 1 |
|  |  | 55 | 1200 | $\geq 2700$ | 2 |
|  |  | 85 | 700 | $\geq 2700$ | 3 |
|  |  | 85 | 1200 | $\geq 2700$ | 4 |
|  |  | 105 | 700 | $\geq 2700$ | 5 |
|  |  | 105 | 1000 | $\geq 2700$ | 6 |
| 219 | NVSL2198-V1 | 55 | 700 | $\geq 2700$ | 1 |
|  |  | 55 | 1200 | $\geq 2700$ | 2 |
|  |  | 85 | 700 | $\geq 2700$ | 3 |
|  |  | 85 | 1200 | $\geq 2700$ | 4 |
|  |  | 105 | 700 | $\geq 2700$ | 5 |
|  |  | 105 | 1000 | $\geq 2700$ | 6 |
| 219 | NVSW219B-V1 | 55 | 700 | $\geq 2700$ | 1 |
|  |  | 55 | 1200 | $\geq 2700$ | 2 |
|  |  | 85 | 700 | $\geq 2700$ | 3 |
|  |  | 85 | 1200 | $\geq 2700$ | 4 |
|  |  | 105 | 700 | $\geq 2700$ | 5 |
|  |  | 105 | 1000 | $\geq 2700$ | 6 |

## IES LM-80-08 Test Report Requirement :

1. Number of LED light sources tested

See tables.
2. Description of LED light sources

See Description of Test Samples
3. Description of auxiliary equipment

Active cooling life test system
Consisting of small boxes, in which each box contains a reliability test board, and a water-cooled heat sink or a heater to control device temperature.
LED Tester
Consisting of an integrating sphere, a programmable current-source meter, and a spectroradiometer.
4. Operating cycle

Constant direct current (DC).
5. Ambient conditions including airflow, temperature, and relative humidity

Ambient Temperature ( $T_{A}$ ) : See tables
Ambient temperature is the temperature of the air at a distance of 1.5 mm above the reliability test board.
Air flow : $<0.1 \mathrm{~m} / \mathrm{s}$
Relative Humidity : < $45 \%$
6. Case temperature (test point temperature)

See tables.
For the case temperature $\left(T_{5}\right)$ measurement point, see the figure below.

7. Drive current of the LED light sources during lifetime test See tables.
8. Initial luminous flux and forward voltage at photometric measurement current See tables.
9. Lumen maintenance data for each individual LED light source along with median value, standard deviation, minimum and maximum lumen maintenance value for all of the LED light sources. See tables.
10. Observation of LED light sources failures including the failure conditions and time of failure. No failure observed
11. LED light source monitoring interval See tables.
12. Photometric measurement uncertainty
Flux measurement: $\quad 4.8 \%(k=2)$
Lumen maintenance: $\quad 1.8 \%(k=2)$
13. Chromaticity shift reported over the measurement time.

See tables.

Data Set 1:55 ${ }^{\circ} \mathrm{C}, \mathbf{7 0 0} \mathrm{mA}$

| Actual Case Temperature $\left[\mathrm{T}_{\mathrm{S}}\right]$ | $57.0^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Actual Ambient Temperature $\left[\mathrm{T}_{\mathrm{A}}\right]$ | $56.5^{\circ} \mathrm{C}$ |
| Drive Current $\left[\mathrm{I}_{\mathrm{F}}\right]$ | 700 mA |
| Measurement Current | 700 mA |

NOTES:
$T_{S}$ and $T_{A}$ were measured during initial setup.





Data Set 1:55 ${ }^{\circ} \mathrm{C}, 700 \mathrm{~mA}$

| Actual Case Temperature $\left[\mathrm{T}_{\mathrm{S}}\right]$ | $57.0^{\circ} \mathrm{C}$ |
| :--- | :---: |
| Actual Ambient Temperature $\left[\mathrm{T}_{\mathrm{A}}\right]$ | $56.5^{\circ} \mathrm{C}$ |
| Drive Current $\left[\mathrm{I}_{\mathrm{F}}\right]$ | 700 mA |
| Measurement Current | 700 mA |

NOTES:
$T_{S}$ and $T_{A}$ were measured during initial setup.

TABLE 1-1
Initial Characteristics


Data Set $1: 55^{\circ} \mathrm{C}, 700 \mathrm{~mA}$

| Actual Case Temperature $\left[\mathrm{T}_{\mathrm{S}}\right]$ | $57.0^{\circ} \mathrm{C}$ |
| :--- | :---: |
| Actual Ambient Temperature $\left[\mathrm{T}_{\mathrm{A}}\right]$ | $56.5^{\circ} \mathrm{C}$ |
| Drive Current $\left[\mathrm{l}_{\mathrm{F}}\right]$ | 700 mA |
| Measurement Current | 700 mA |

notes:
$T_{S}$ and $T_{A}$ were measured during initial setup.

TABLE 1-2
Lumen Maintenance

| $\begin{aligned} & \text { LED } \\ & \text { No. } \end{aligned}$ | Lumen Maintenance \% ( Normalized to $100 \%$ at 0 hours ) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Oh | 519 h | 1013 h | 1752 h | 2417 h | 3109 h | 3798 h | 4513 h | 5251h | 6014 h | 6797h | 7609 h | 8443 h | 9181h | 10012 h |
| 1 | 100.0 | 100.3 | 100.4 | 100.5 | 99.8 | 100.2 | 99.9 | 99.9 | 99.8 | 99.9 | 99.6 | 99.7 | 99.4 | 99.7 | 99.6 |
| 2 | 100.0 | 100.2 | 100.1 | 100.3 | 100.0 | 100.1 | 100.0 | 99.4 | 99.5 | 99.7 | 99.6 | 99.5 | 99.3 | 99.6 | 99.4 |
| 3 | 100.0 | 100.6 | 100.2 | 100.6 | 100.5 | 100.0 | 100.1 | 99.4 | 99.4 | 99.7 | 99.5 | 99.6 | 99.3 | 99.5 | 99.4 |
| 4 | 100.0 | 100.7 | 100.5 | 100.6 | 100.3 | 99.7 | 99.8 | 99.3 | 99.3 | 99.5 | 99.3 | 99.4 | 99.1 | 99.3 | 99.1 |
| 5 | 100.0 | 100.4 | 100.3 | 100.4 | 99.7 | 99.4 | 99.3 | 99.1 | 99.1 | 99.3 | 99.1 | 99.1 | 98.8 | 98.7 | 98.9 |
| 6 | 100.0 | 100.3 | 100.3 | 100.4 | 99.6 | 99.9 | 99.7 | 99.7 | 99.6 | 99.7 | 99.3 | 99.4 | 99.1 | 99.4 | 99.2 |
| 7 | 100.0 | 100.0 | 100.0 | 100.2 | 99.5 | 99.7 | 99.6 | 99.4 | 99.3 | 99.0 | 99.3 | 99.2 | 98.9 | 99.2 | 99.1 |
| 8 | 100.0 | 100.1 | 100.0 | 100.3 | 99.9 | 100.0 | 99.7 | 99.3 | 99.3 | 99.5 | 99.5 | 99.5 | 99.3 | 99.6 | 99.4 |
| 9 | 100.0 | 100.6 | 100.6 | 100.8 | 100.7 | 100.1 | 100.0 | 99.8 | 99.7 | 99.8 | 99.8 | 99.9 | 99.6 | 99.9 | 99.7 |
| 10 | 100.0 | 100.3 | 100.2 | 100.3 | 100.0 | 99.5 | 99.4 | 99.2 | 99.1 | 99.2 | 99.2 | 98.5 | 99.0 | 99.3 | 99.1 |
| 11 | 100.0 | 100.3 | 100.2 | 100.1 | 99.6 | 99.2 | 99.2 | 99.2 | 99.1 | 99.2 | 99.0 | 99.0 | 98.8 | 99.1 | 98.9 |
| 12 | 100.0 | 100.6 | 100.5 | 100.7 | 100.1 | 100.3 | 100.1 | 100.2 | 100.1 | 100.3 | 99.8 | 99.9 | 99.5 | 99.8 | 99.7 |
| 13 | 100.0 | 100.1 | 100.1 | 100.3 | 99.7 | 99.9 | 99.9 | 99.7 | 99.5 | 99.6 | 99.5 | 99.4 | 99.2 | 99.5 | 99.3 |
| 14 | 100.0 | 99.7 | 100.4 | 100.5 | 100.3 | 100.2 | 100.0 | 99.7 | 99.5 | 99.7 | 99.8 | 99.5 | 99.6 | 100.0 | 99.9 |
| 15 | 100.0 | 99.7 | 100.4 | 100.4 | 100.4 | 99.9 | 99.7 | 99.5 | 99.4 | 99.5 | 99.6 | 99.7 | 99.4 | 99.6 | 99.5 |
| 16 | 100.0 | 100.1 | 100.1 | 100.2 | 100.0 | 99.7 | 98.7 | 99.3 | 99.1 | 99.4 | 99.4 | 99.4 | 99.1 | 99.0 | 99.1 |
| 17 | 100.0 | 99.8 | 99.7 | 100.0 | 99.5 | 99.2 | 99.1 | 99.0 | 98.9 | 99.0 | 98.8 | 98.8 | 98.6 | 98.7 | 98.7 |
| 18 | 100.0 | 100.2 | 100.1 | 100.3 | 99.7 | 99.9 | 100.0 | 99.9 | 99.2 | 99.1 | 99.5 | 99.2 | 99.2 | 99.5 | 99.4 |
| 19 | 100.0 | 100.1 | 100.0 | 100.1 | 99.6 | 99.8 | 99.9 | 99.6 | 99.5 | 99.7 | 99.5 | 99.4 | 99.2 | 99.5 | 99.4 |
| 20 | 100.0 | 100.1 | 100.1 | 100.0 | 99.9 | 99.9 | 99.7 | 99.4 | 99.3 | 99.6 | 99.5 | 99.5 | 99.3 | 99.6 | 99.4 |
| 21 | 100.0 | 100.1 | 100.4 | 100.4 | 100.3 | 100.0 | 99.8 | 99.5 | 99.5 | 99.7 | 99.6 | 99.6 | 99.5 | 99.6 | 99.6 |
| 22 | 100.0 | 100.1 | 100.0 | 100.1 | 99.9 | 99.3 | 99.2 | 98.8 | 99.1 | 99.3 | 99.2 | 99.2 | 98.9 | 99.0 | 99.0 |
| 23 | 100.0 | 100.1 | 100.0 | 100.1 | 99.8 | 99.4 | 99.3 | 99.2 | 99.2 | 99.5 | 99.2 | 99.2 | 98.9 | 99.2 | 99.0 |
| 24 | 100.0 | 100.3 | 100.1 | 100.2 | 99.4 | 99.8 | 99.9 | 99.7 | 99.7 | 99.8 | 99.5 | 99.5 | 99.3 | 99.6 | 99.4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $n$ | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| Avg. | 100.0 | 100.2 | 100.2 | 100.3 | 99.9 | 99.8 | 99.7 | 99.5 | 99.4 | 99.5 | 99.4 | 99.4 | 99.2 | 99.4 | 99.3 |
| Med. | 100.0 | 100.2 | 100.2 | 100.3 | 99.9 | 99.9 | 99.7 | 99.4 | 99.4 | 99.6 | 99.5 | 99.4 | 99.2 | 99.5 | 99.4 |
| $\sigma$ | 0.00 | 0.27 | 0.21 | 0.21 | 0.34 | 0.32 | 0.36 | 0.32 | 0.28 | 0.32 | 0.25 | 0.32 | 0.27 | 0.34 | 0.29 |
| Min. | 100.0 | 99.7 | 99.7 | 100.0 | 99.4 | 99.2 | 98.7 | 98.8 | 98.9 | 99.0 | 98.8 | 98.5 | 98.6 | 98.7 | 98.7 |
| Max. | 100.0 | 100.7 | 100.6 | 100.8 | 100.7 | 100.3 | 100.1 | 100.2 | 100.1 | 100.3 | 99.8 | 99.9 | 99.6 | 100.0 | 99.9 |



| Test duration used | 4513 h to 10012 h |
| :---: | :---: |
| B | 0.9962 |
| $\alpha$ | $3.2532 \mathrm{E}-07$ |
| $\mathrm{R}^{2}$ | 0.3325 |
| Calculated $\mathrm{L}_{70}(10 \mathrm{~K})$ | 1080000 |
| Reported $\mathrm{L}_{70}(10 \mathrm{~K})$ | $>60100$ |

Curve-fit equation:
$\Phi(t)=B \exp (-\alpha t)$
Lumen maintenance life eqation:
$L_{70}=\ln (B / 0.7) / \alpha$

## TM-21 Report

| Table Me Report ateach murso Test Condition |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Description of LED Light Source Tested (manufacturer, model, catalog number) |  | NICHIA, Nichia Chip Type White LED, NVSL219A-H3 |  |  |  |
| Test Condition $1-55^{\circ} \mathrm{C}$ Case Temp |  | Test Condition $2-85^{\circ} \mathrm{C}$ Case Temp |  | Test Condition 3-105 ${ }^{\circ} \mathrm{C}$ Case Temp |  |
| Sample size | 25 | Sample size | 25 | Sample size | 25 |
| Number of failures | 0 | Number of failures | 0 | Number of failures | 0 |
| DUT drive current used in the test ( mA ) | 1000 | DUT drive current used in the test (mA) | 1000 | DUT drive current used in the test ( mA ) | 1000 |
| Test duration (hours) | 10,000 | Test duration (hours) | 10,000 | Test duration (hours) | 10,000 |
| Test duration used for projection (hour to hour) | 5,234-10,045 | Test duration used for projection (hour to hour) | 5,234-10,045 | Test duration used for projection (hour to hour) | 5,234-10,045 |
| Tested case temperature ( ${ }^{\circ} \mathrm{C}$ ) | 55 | Tested case temperature $\left({ }^{\circ} \mathrm{C}\right)$ | 85 | Tested case temperature ( $\left.{ }^{\circ} \mathrm{C}\right)$ | 105 |
| Q----------------------------------- | 1.738E-06 |  | $2.546 \mathrm{E}-06$ |  | 1.722E-06 |
| B | 0.989 | B | 0.982 | B | 0.976 |
| Calculated L70(10k) (hours) | 199,000 | Calculated L70(10k) (hours) | 133,000 | Calculated L70(10k) (hours) | 193,000 |
| Reported L70(10k) (hours) | >60000 | $\begin{aligned} & \text { Reported L70(10k) } \\ & \text { (hours) } \end{aligned}$ | >60000 | $\begin{array}{l}\text { Reported L70(10k) } \\ \text { (hours) }\end{array}$ | >60000 |


| Table 2e merpolation Repoit (projection based on thestu temperature entered) |  |
| :---: | :---: |
| $\mathrm{T}_{\mathrm{s}, 1}\left({ }^{\circ} \mathrm{C}\right)$ | 55.00 |
| $\mathrm{T}_{\mathrm{s}, 1}$ (K) | 328.15 |
| $\alpha_{1}$ | 1.738E-06 |
| $\mathrm{B}_{1}$ | 0.989 |
| $\mathrm{T}_{\mathrm{s}, 2}\left({ }^{\circ} \mathrm{C}\right)$ | 85.00 |
| $\mathrm{T}_{\mathrm{s}, 2}(\mathrm{~K})$ | 358.15 |
| $\mathrm{a}_{2}$ | $2.546 \mathrm{E}-06$ |
| $\mathrm{B}_{2}$ | 0.982 |
| $E_{a} / k_{b}$ | $1.50 \mathrm{E}+03$ |
| A | 1.657E-04 |
| $\mathrm{B}_{0}$ | 0.986 |
| $\mathrm{T}_{\mathrm{s}, 1}\left({ }^{\circ} \mathrm{C}\right)$ | 69.30 |
| $\mathrm{T}_{\mathrm{s}, \mathrm{i}}(\mathrm{K})$ | 342.45 |
| $\alpha_{1}$ | 2.102E-06 |
| Projected L70(10k) at $69.3^{\circ} \mathrm{C}$ (hours) |  |
| Reported L70(10k) at $69.3^{\circ} \mathrm{C}$ (hours) | >60000 |


| Report Generated By: Corey Gentry | Notes: Duralight LED Area Light, JXM-ST-A5 |
| :--- | :--- |
| Company: TraStar, Inc. |  |
|  |  |

## Sharon R. Mulder

| From: | David M. Scharf |
| :--- | :--- |
| Sent: | Tuesday, December 18, 2018 1:35 PM |
| To: | Sharon R. Mulder |
| Subject: | RE: Floodlights Results |

Sharon,

My recommendation is to go with Trastar JXM-ST-A5L. I was wondering if we could order 25 instead of the 20 on the quote? Let me know how to proceed from this point. Thank you for helping with this endeavor.

## Dave Scharif <br> Facility Manager <br> Lancaster County Adult Detention Facility <br> 402-441-1972 (work) <br> 402-450-5671 (Cell)

From: Sharon R. Mulder [SMulder@lincoln.ne.gov](mailto:SMulder@lincoln.ne.gov)
Sent: Tuesday, December 18, 2018 9:31 AM
To: David M. Scharf [DScharf@lancaster.ne.gov](mailto:DScharf@lancaster.ne.gov)
Subject: RE: Floodlights Results

Hi Dave,
Do you have an award recommendation on this quote?
Thanks,
Sharon

From: David M. Scharf
Sent: Wednesday, November 28, 2018 10:36 AM
To: Sharon R. Mulder [SMulder@lincoln.ne.gov](mailto:SMulder@lincoln.ne.gov)
Subject: RE: Floodlights Results

Sharon,

Can you get me the dimensions of the light that was low bid? Just need to know how big this is in comparison to the lights that are one the building now. Thanks.

## Dave Scharf <br> Facility Manager <br> Lancaster County Adult Detention Facility 402-441-1972 (work) <br> 402-450-5671 (Cell)

From: Sharon R. Mulder [SMulder@lincoln.ne.gov](mailto:SMulder@lincoln.ne.gov)
Sent: Wednesday, November 28, 2018 8:01 AM
To: David M. Scharf [DScharf@lancaster.ne.gov](mailto:DScharf@lancaster.ne.gov)
Subject: Floodlights Results

Hi Dave,

## Sharon R. Mulder

| From: | Sandy Godoy [sgodoy@trastarusa.com](mailto:sgodoy@trastarusa.com) |
| :--- | :--- |
| Sent: | Thursday, December 20, 2018 2:56 PM |
| To: | Sharon R. Mulder |
| Cc: | 'Margaret Chavira'; 'Peter Tian'; Corey Gentry; sherwing@trastarusa.com |
| Subject: | Bid\# 5950 |

Hello Sharon,

The pricing will stay the same for a quantity of 25 for the above bid number.

Thank you.

## Sincerely,

## Sandra Godoy

## TraStar Inc.

860 N. Dorothy Drive \#600, Richardson, Texas 75081
Phone: (972) 480-0888 | Fax: (972) 480-8884
E-mail: sgodov@trastarusa.com | Website: www.trastarusa.com

