

CHRIS TROSCLAIR
2125 WILLIAMS BLVD
KENNER, LA 70062



CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

**5000128174 A PURCHASE OF LED LIGHT FIXTURES FOR THE
DEPARTMENT OF PARKS & RECREATION**
Jefferson Parish Government

Project documents obtained from www.CentralBidding.com

25-Sep-2019 10:53:06 AM



CHRIS TROSCLAIR
2125 WILLIAMS BLVD
KENNER, LA 70062

JEFFERSON PARISH

Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

September 23, 2019

ADDENDUM # 1

10/2/19

Bid No.: 50-00128174

Bid Opening Date: ~~9-25-19~~
Postponed to: 10-2-19

For: A purchase of LED Light Fixtures for the Department of Parks & Recreation

This addendum # 1 is issued to clarify the wattage needed for the LED lights.

- Q1. What is the wattage per each fixture as it only states a range of between 70W and 400W. Will my 90W fixture work with that range amount?
- A1. 109 watts LED light fixture that is equivalent to 250 watts metal halide. We would like to have at least the same amount of light.
- Q2. The fixture arms quantity say 2, shouldn't it be 6 to match the amount of light fixtures you are requesting? Let me know the total amount of arms needed.
- A2. We only need two arms because poles #1 and pole #2 has two arms per pole. Pole #3 has no arms attached to it.

Sincerely,

Doris Abraham

Buyer Name, Buyer I
Jefferson Parish Purchasing Department

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form as indicated. Failure to do so will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

DATE: 9/19/2019

INVITATION TO BID
THIS IS NOT AN ORDER

Page: 1

BID NO.: 50-00128174

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETN, LA. 70054-0009
504-364-2678

VENDOR:

BUYER: DABRAHAM@jeffparish.net

Bids will be received until 11:00 AM, 9/25/2019 via online at www.jeffparishbids.net or by hand delivery, USPS mail or other courier service to Purchasing Department, 200 Derbigny Street (General Government Building), Suite 4400, Gretna, LA 70053. For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only.

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law, as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647. A copy of these resolutions may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at purchasing.jeffparish.net and clicking on On-line forms.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Further, a current W-9 form and respective Tax Identification number must be supplied upon contract execution, should you be awarded a contract and/or issued purchase order. Failure to do so may result in delay of payment.

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Delivered, anywhere within the Parish as designated by the Purchasing Department. **JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR.** Items bid must meet specifications. JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit prices shall prevail.

JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the **LOWEST RESPONSIVE and RESPONSIBLE BIDDER**, taking into consideration the **CONFORMITY WITH THE SPECIFICATIONS** and the **DELIVERY AND/OR COMPLETION DATE**.

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in the quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum.

All formal Addenda require written acknowledgment on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected; JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

DATE: 9/19/2019

BID NO.: 50-00128174

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INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

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1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.
4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

DATE: 9/19/2019

BID NO.: 50-00128174

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INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

7. **PUBLIC WORKS BIDS:** All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. **NON-PUBLIC WORKS BIDS:** A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. **NON-PUBLIC WORKS BIDS:** A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Prior to contract executions/purchase order issuance, the successful bidder will be required to provide final insurance certificates which shall name Jefferson Parish as an additional insured in accordance with the instructions in the aforementioned "Standard Insurance Requirements" sheet.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies). If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. **PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required;** This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
15. **NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required** in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.

DATE: 9/19/2019

INVITATION TO BID
THIS IS NOT AN ORDER

Page: 4

BID NO.: 50-00128174

JEFFERSON PARISH
PURCHASING DEPARTMENT
P.O. BOX 9
GRETN, LA. 70054-0009
504-364-2678

VENDOR: NOTOCO INDUSTRIES

BUYER: DABRAHAM

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Agency warehouse or jobsite, anywhere within the Parish as designated by the Purchasing Department.

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH is expecting all products to be new and all work to be done in workman-like manner, according to standard practices. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

7-10 DAYS A.R.O

INDICATE STARTING TIME (IN DAYS) FOR CONSTRUCTION WORK

N-A

INDICATE COMPLETION TIME (IN DAYS) FOR CONSTRUCTION WORK

N-A

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: #1

NUMBER: _____

NUMBER: _____

NUMBER: _____

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) N-A

*** ALL BIDDERS MUST COMPLETE SECTION BELOW ***	
FIRM NAME: <u>NOTOCO INDUSTRIES</u>	
SIGNATURE: (Must be signed here)	TITLE: <u>Deals</u>
PRINT OR TYPE NAME: <u>CHRIS TROSCLAIR</u>	
ADDRESS: <u>2125 WILLIAMS BLVD</u>	
CITY, STATE: <u>KENNER, LA</u>	ZIP: <u>70062</u>
TELEPHONE: <u>504 469-2801</u>	FAX: <u>504 469 2975</u>
EMAIL ADDRESS: <u>CTROSCLAIR@NOTOCOINDS.COM</u>	

TOTAL PRICE OF ALL BID ITEMS: \$ 1028.82

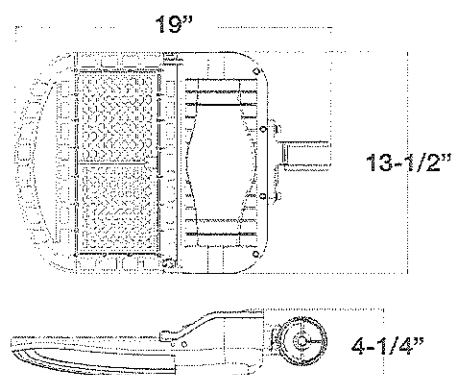
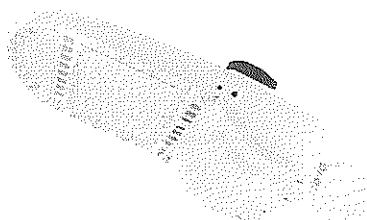
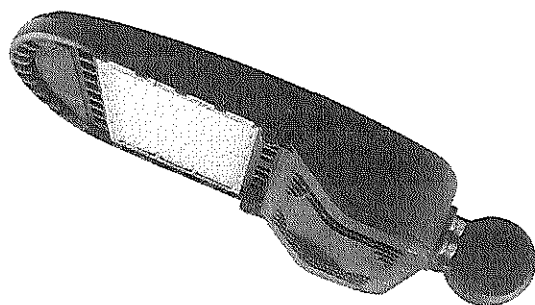
ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	6.00	EA	<p>A purchase of LED light fixtures for the Department of Parks & Recreation</p> <p>0010 LED Light Fixtures, LITHONIA RSX1 LED P3 40K R4 MVOLT MA DDBXD</p> <p><u>or equal</u></p>	171.47	1028.82
2	2.00	EA	<p>0020 6 foot light fixture arms for the wooden pole,</p> <p>LITHONIA AMACE T20 US6 DNA 6 FOOT ARM MNTNG or equal</p> <p>(Equal) #1 MORRIS 74009A W/SLIP FITTER 74034A</p> <p>NQ = No Quote</p>	N-Q	N-Q



Area Light Gen 3

150W

CHRIS TROSCLAIR
2125 WILLIAMS BLVD
KENNER, LA 70062



Features:

Bronze Diecast Aluminum Housing

Heat Resistant Directed Optics Frosted Polycarbonate Lens

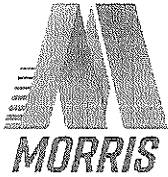
Excellent Heat Dissipation - Maximum Life Expectancy

Seoul 3030 LEDs

Note: Fixture does not include mount - Pole Arm, Slipfitter, Trunnion,

Yoke, and Universal Mounts sold separately

Part#	Wattage	Volts	Housing Color	Light Pattern	Lumens	CCT	CRI	Dimming	Lumens/Watt	DLC Product ID# Area Light	DLC Product ID# Flood Light
74010A	150	120-277	Bronze	Type III	19186	5000	75.0	0-10V/PWM/VR	130.1	PL3P3X8C8SW2	PLWTUITQXBWO
74012A	150	120-277	White	Type III	19186	5000	75.0	0-10V/PWM/VR	130.1	PL3P3X8C8SW2	PLWTUITQXBWO
74008A	150	120-277	Bronze	Type III	18931	4000	75.0	0-10V/PWM/VR	128.5	PLABV9LGR8KI	PL49WKINNF8K
74014A	150	347-480	Bronze	Type III	19274	5000	75.0	0-10V/PWM/VR	130.0	PLVMLQOE8DUK	PLU184OY5RDH
74011A	150	120-277	Bronze	Type IV	19367	5000	75.0	0-10V/PWM/VR	131.1	PLURUOYEQFOM	PLM8ZY28RS2J
74013A	150	120-277	White	Type IV	19367	5000	75.0	0-10V/PWM/VR	129.7	PLURUOYEQFOM	PLM8ZY28RS2J
74009A	150	120-277	Bronze	Type IV	19139	4000	75.0	0-10V/PWM/VR	129.7	PL1ZLHFSXT7S	PLN6RVZGE4SP
74015A	150	347-480	Bronze	Type IV	18694	5000	75.0	0-10V/PWM/VR	126.3	PL0IENBYK2E7	PL6UBJOLQYCF
74053A	150	120-277	Bronze	Type V	19142	5000	75.0	0-10V/PWM/VR	128.6	PL9IMPD3N3XB	PLIOBVXOE6OL
74055A	150	120-277	Bronze	Type V	18907	4000	75.1	0-10V/PWM/VR	128.0	PL41SCTU1FCK	PLW97EPMTYDP
74054A	150	347-480	Bronze	Type V	18668	5000	75.0	0-10V/PWM/VR	126.2	PL09Q2RXSOYH	PLS5FBC7P82P



Area Light Gen 3

150W

Additional Technical Specifications:

Voltage	L70	Current	PF	THD	R9	DUV	Chromati city (x,y)	Chromati city (u,v)	Driver Output (Volts)	Driver Output (Amps)	BUG Rating	Surge Protection
120-277	>50k hrs	1.2327- 0.5533	0.996- 0.929	7.05%- 9.75%	0	-0.001	x=0.3817 y=0.3754	u=0.2265 v=0.5012	43V	3.1A	G2	10kV
277-480	>50k hrs	0.5366- 0.3268	0.997- 0.935	3.54%- 8.26%	0	-0.0011	x=0.3817 y=0.3752	u=0.2266 v=0.5011	43V	3.1A	G2	10kV

Component Specification:

LED: Seoul 3030

Operating Temperature:

Minimum Starting -40°F - 122°F

Construction:

Housing: Aluminum Alloy, Powder Coated

IP Rating: IP65 suitable for wet locations

Lens Material: Polycarbonate - Heat, UV and Fire Resistant

Mounting:

2 Pc Mount Design for simple 1 person installation

Photo Control:

Twist lock receptacle and shorting included.
Photocell sold separately.

Listings:

UL Listed: E474299

Carton Qty: 1

Weight: 10.4 lbs.

EPA Rating: 0.8ft²

Warranty:

Morris Products carries a 5 year warranty from date of purchase against defects in materials and workmanship (assuming normal and proper usage).

Accessories:

Pole Arm Mount: Slipfitter

Mount:

Yoke Mount:

Trunnion Mount

Universal Mount:

Motion Sensor with cover:

BRONZE:

Cat# 74032A

Cat# 74034A

Cat# 74036A

Cat# 74038A

Cat# 74043A

Cat# 74072A

WHITE:

Cat# 74033A

Cat# 74035A

Cat# 74037A

Cat# 74039A

Cat# 74044A

Cat# N/A

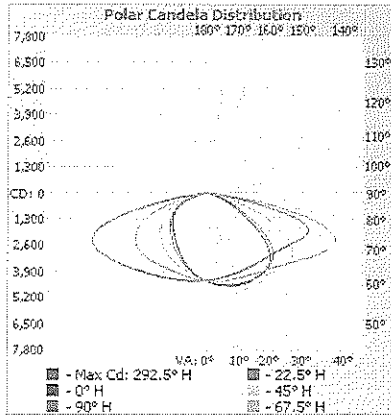


Area Light Gen 3

150W

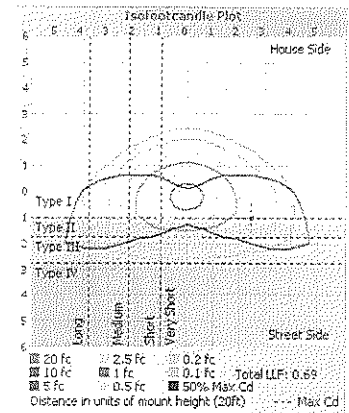
Photometrics:

TYPE III:

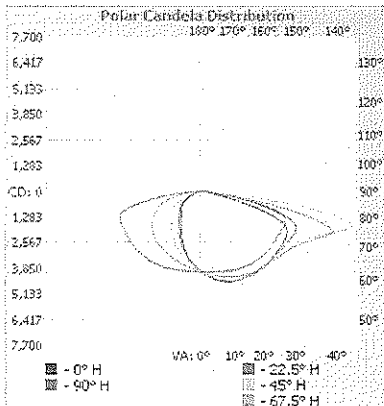


Illuminance at a Distance			
	Center Beam fc	Beam Width	
17.0ft	14.9 fc	40.4 ft	108.4 ft
34.0ft	3.73 fc	80.8 ft	216.7 ft
51.0ft	1.66 fc	121.2 ft	325.1 ft
68.0ft	0.93 fc	161.6 ft	433.5 ft
85.0ft	0.60 fc	201.9 ft	541.9 ft
102.0ft	0.41 fc	242.3 ft	650.2 ft

■ Vert. Spread: 99.8°
 ■ Horiz. Spread: 145.2°

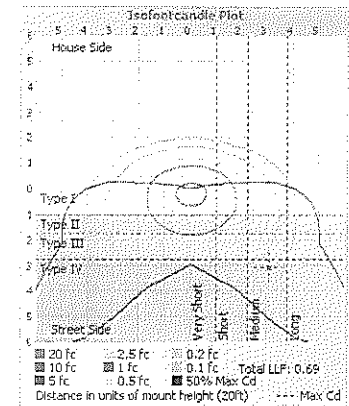


TYPE IV:

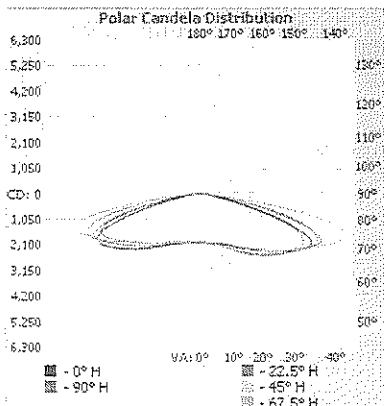


Illuminance at a Distance			
	Center Beam fc	Beam Width	
17.0ft	13.9 fc	35.6 ft	17.2 ft
34.0ft	3.47 fc	71.3 ft	34.4 ft
51.0ft	1.54 fc	106.9 ft	51.6 ft
68.0ft	0.87 fc	142.5 ft	68.8 ft
85.0ft	0.55 fc	178.1 ft	86.0 ft
102.0ft	0.39 fc	213.8 ft	103.2 ft

■ Vert. Spread: 92.7°
 ■ Horiz. Spread: 53.7°



TYPE V:



Illuminance at a Distance			
	Center Beam fc	Beam Width	
17.0ft	6.90 fc	143.8 ft	60.9 ft
34.0ft	1.72 fc	287.5 ft	121.7 ft
51.0ft	0.77 fc	431.3 ft	182.6 ft
68.0ft	0.43 fc	575.1 ft	243.5 ft
85.0ft	0.28 fc	718.9 ft	304.4 ft
102.0ft	0.19 fc	862.6 ft	365.2 ft

■ Vert. Spread: 153.4°
 ■ Horiz. Spread: 121.6°

