











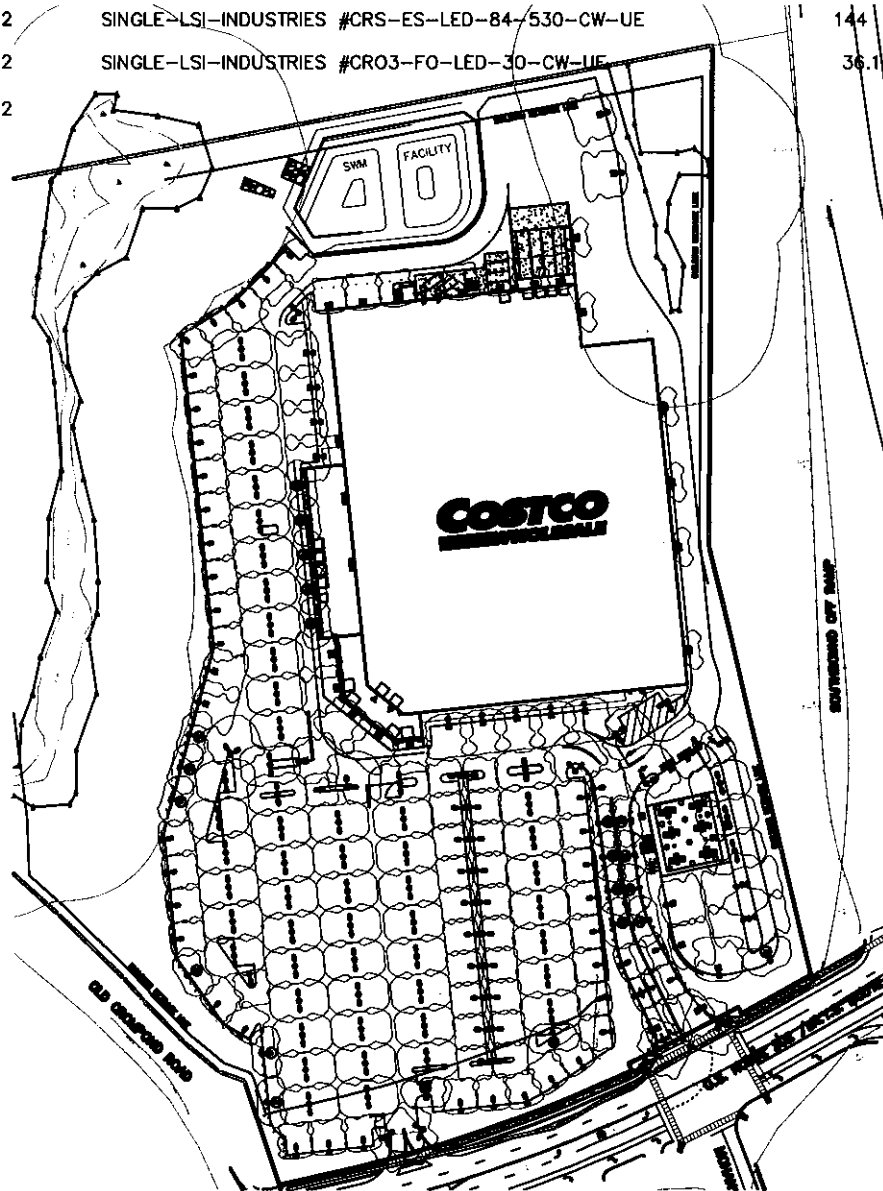


## **VII. APPENDICES**

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### **H. Light Study (Photometric Analysis)**

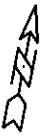
SYMBOL	QUANTITY	DESCRIPTION	WATTAGE	MOUNTING HEIGHT
 A	58	DOUBLE-LSI-INDUSTRIES #XAS3-2-LED-63-350-CW-UE	75	16 FT.
 B	68	SINGLE-LSI-INDUSTRIES #XAS3-FT-LED-63-450-CW-UE-HSS8	98	16 FT.
 C	19	SINGLE-LSI-INDUSTRIES #XAM3-FT-LED-119-450-CW-UE-HSS13	184	16 FT.
 D	1	SINGLE-LSI-INDUSTRIES #XAS3-5-LED-63-450-CW-UE	98	16 FT.
 SSS	22	SINGLE-LSI-INDUSTRIES #XAS3-2-LED-63-350-CW-UE	98	16 FT.
 B2	12	2 @ 90'-LSI-INDUSTRIES #XAS3-FT-LED-63-450-CW-UE-HSS8	98	16 FT.
 DDD	2	2 @ 180'-LSI-INDUSTRIES #XAM3-FT-LED-119-350-CW-UE	184	16 FT.
 AW	6	SINGLE-LSI-INDUSTRIES #XAS3-2-LED-63-350-CW-UE-HSS8	75	16 FT.
 BW	7	SINGLE-LSI-INDUSTRIES #XAWS3-FT-LED-63-450-CW-UE-HSS8	98	16 FT.
 CW	4	SINGLE-LSI-INDUSTRIES #XAWM3-FTA-LED-119-450-CW-UE-HSS13	184	16 FT.
 E	12	SINGLE-LSI-INDUSTRIES #CRS-ES-LED-84-530-CW-UE	144	14.5 FT.
 F	12	SINGLE-LSI-INDUSTRIES #CRO3-FO-LED-30-CW-UE	36.1	14.5 FT.
TOTAL	212			



Q:\Acad160\165213\dwg\Construction\C-503 SiteLightnPlan-16FT.dwg

**TRC**  
 TRC Engineers, Inc.  
 7 Skyline Drive  
 Hawthorne, New York 10532

Appendix VII.H-1  
 (Reference Section III.B)  
**Site Lighting Plan**  
**16' Mounting Height**



**COSTCO WHOLESALE**  
 Town of Yorktown, New York

© TRC Engineers, Inc.

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
□	12	F	SINGLE	N.A.	1.000	LSI-Industries #CRO3-FO-LED-30-CW-UE @ 14.5 Mounting
□	12	E	SINGLE	N.A.	1.000	LSI-Industries #CRS-ES-LED-84-530-CW-UE14.5' MTG HT
□	58	A	D180	N.A.	1.000	LSI-Industries #XAS3-2-LED-63-350-CW-UE @ 16' Mounting
□	63	B	SINGLE	N.A.	1.000	LSI-Industries #XAS3-FT-LED-63-450-CW-UE-HSS8 @ 16' Mounting
□	19	C	SINGLE	N.A.	1.000	LSI-Industries #XAM3-FT-LED-119-450-CW-UE-HSS13 @ 16' Mounting
□	12	B2	2 @ 90 DEGREES	N.A.	1.000	LSI-Industries #XAS3-FT-LED-63-450-CW-UE-HSS8 @ 16' Mounting
□	8	BW	SINGLE	N.A.	1.000	LSI-Industries #XAWS3-FT-LED-119-450-CW-UE-HSS13 @ 16' Mounting
□	4	CW	SINGLE	N.A.	1.000	LSI-Industries #XAM3-FT-LED-119-450-CW-UE-HSS8 @ 16' Mounting
□	1	D	SINGLE	N.A.	1.000	LSI-Industries #XAS3-5-LED-63-450-CW-UE @ 16' Mounting
□	6	AW	SINGLE	N.A.	1.000	LSI-Industries #XAS3-2-LED-63-350-CW-UE
□	22	sss	SINGLE	N.A.	1.000	XAS3-2-LED-63-350-CW-UE
□	2	DDDDDD	D180	N.A.	1.000	XAM3-FT-LED-119-350-CW-UE

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
Back Area and Side Drive	Illuminance	FC	1.11	6.9	0.0	N.A.
Driveway	Illuminance	FC	4.23	7.5	2.5	1.69
Entrance A	Illuminance	FC	5.28	7.6	3.0	1.76
Entrance B	Illuminance	FC	5.77	9.3	3.5	1.65
Gas Area	Illuminance	FC	5.61	18.8	2.5	2.24
Gas Pump	Illuminance	FC	22.41	107	10.8	2.08
Main Parking Lot	Illuminance	FC	4.15	7.5	2.5	1.66
Property	Illuminance	FC	0.10	6.8	0.0	N.A.
Side Parking Lot	Illuminance	FC	4.33	7.5	2.5	1.73



TRC Engineers, Inc.  
7 Skyline Drive  
Hawthorne, New York 10532

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Appendix VII.H-1  
(Reference Section III.B)  
Site Lighting Plan  
16' Mounting Height

COSTCO WHOLESALE  
Town of Yorktown, New York

Available for  
New Construction &  
Retrofit Projects

## When Selecting Your XAS3 and XAM3 Fixtures, Don't Forget the Poles

**Choose from 4" and 5" Poles –  
straight round or straight square shafts**

Each pole is finished with DuraGrip®, LSI's baked-on polyester-powder finishing process to give the pole an exceptionally attractive appearance. The process electrostatically applies and thermally fuses a polyester powder to the pole. This unique protection process provides an extremely smooth and uniform finish to withstand extreme weather changes without cracking or peeling. DuraGrip finish features a five-year limited warranty.



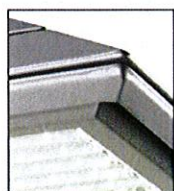
Optional DuraGrip Plus features added protection with a 3.0 to 5.0 mil thickness of polyester powder finish plus an inner coating. This specially developed inner coating is a thermal plastic hydrocarbon resin applied to the inside of the pole to seal and protect against atmospheric and corrosive matter. DuraGrip Plus finish features a seven-year limited warranty.

Standard finish colors available for poles are bronze, black, platinum plus, buff, white, satin verde green, metallic silver, and graphite.

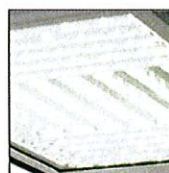


Designed and built around LSI's own **SmartTec** technology platform, the **Crossover** XAS3/XAM3 fixtures contain intelligent components designed, engineered and manufactured by LSI specifically to work in unison to deliver the most efficient and reliable lighting solution possible.

**SmartTec** ensures optimum fixture performance, energy efficiency, delivered lumens per watt, longevity and an impressive ROI. Innovative driver design ensures the highest attainable levels of energy efficiency



■ **Revolutionary Thermal Management System** – LSI's unique patented heat-sink design is integrated into the external surfaces of the luminaire, in place of fins found frequently in traditional fixtures, to effectively dissipate heat and ensure a cool-running fixture. Suitable for high ambient temperatures (50°C).



■ **Exceptional Optical Design** – Tremendous lighting performance specifically designed for area lighting applications. Available with 4 distributions (2, 3, FT, 5).

■ **Low Profile Housing Design** – Lightweight, low profile design gives a clean look when installed.

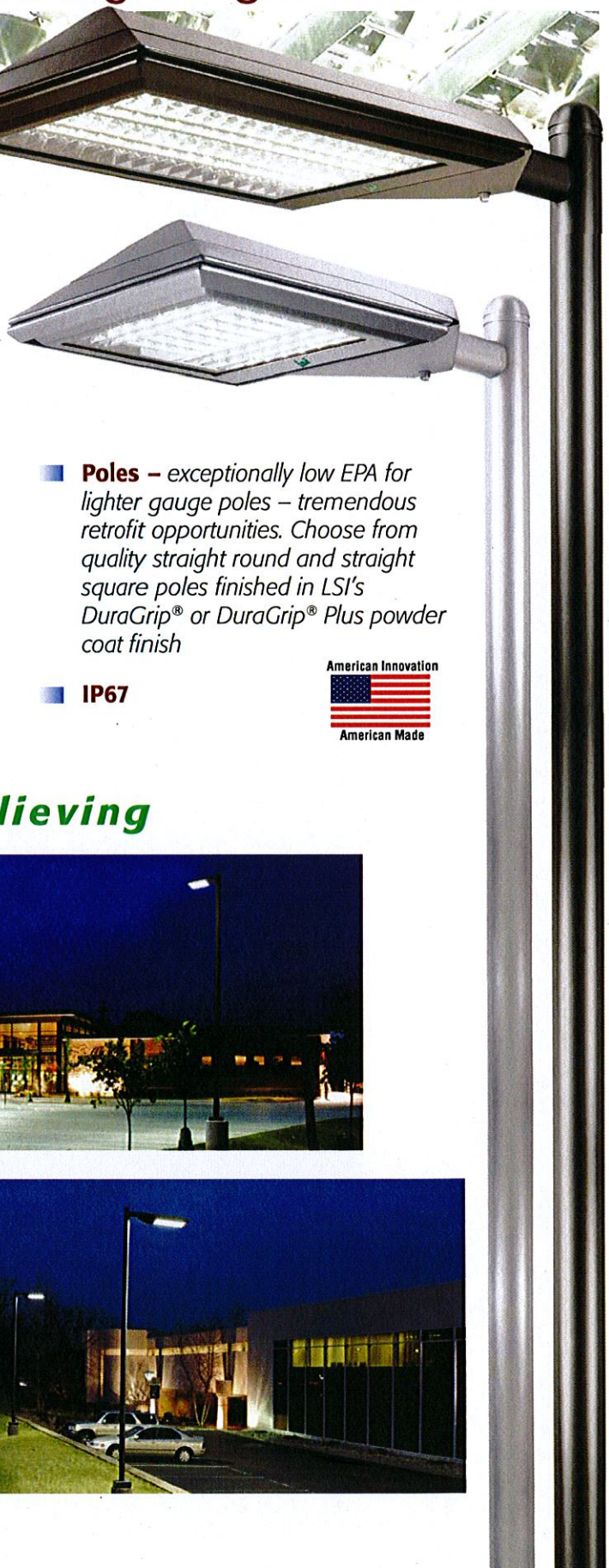


■ **Innovative Driver Design** – Unique high-power driver, 90+% efficient, ensures the highest attainable levels of energy efficiency. Protected by surge protectors that meet location Category C-Medium (10,000 V, 5,000 A) Rated for IP68 Ingress Protection. Available in multiple drive currents (350 mA, 450 mA and 550 mA).

# LED Area Lighting from LSI

Retrofit Now  
& Start Saving  
Energy Today

- **Lighting Performance, Outstanding Uniformity** – brighter environment at lower light levels; improved backlight cutoff to control light trespass. Available in two sizes to address pedestrian walkways, egress areas and parking lots
- **Life Expectancy** – minimum 60,000 hours to 100,000 hours expected life depending upon the ambient temperature of the installation location
- **Energy Savings** – 50-70% energy reduction when compared to traditional HID
- **Installation Labor Savings** – Loaded with features like tool-less fasteners, terminal block and access door lanyard to make installation a snap
- **Maintenance-free**
- **5-year warranty**

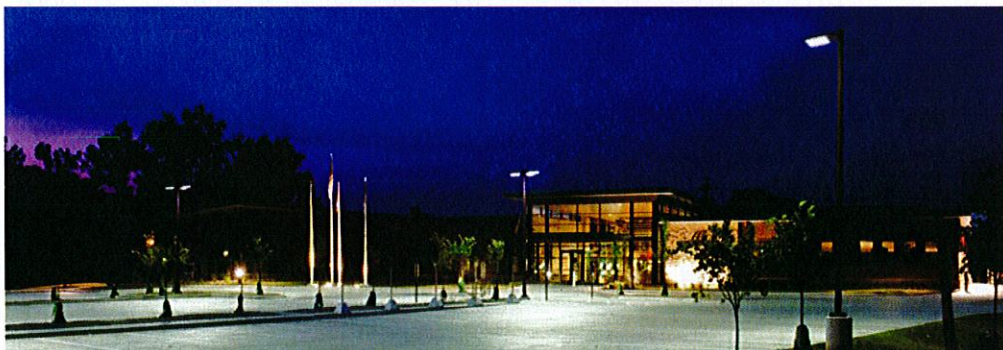


- **Poles** – exceptionally low EPA for lighter gauge poles – tremendous retrofit opportunities. Choose from quality straight round and straight square poles finished in LSI's DuraGrip® or DuraGrip® Plus powder coat finish

- **IP67**



*Seeing is Believing*



# GENERATION 3 LED AREA LIGHTS - SMALL (XAS3)



US patents D598160, D598161 & 7828456 and CN patents 13006 & 13007 and MX patents 30416 & 30418 and US & Int'l. patents pending



**SMARTTEC™ THERMAL CONTROL** - Sensors in both optical unit and driver enclosure reduce drive current when ambient temperatures exceed 50°C. Current is lowered in imperceptible 5% increments every 5 minutes until safe operating temperature is reached.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs. 5800°K color temperature (nominal). 70 CRI (nominal).

**DISTRIBUTION/PERFORMANCE** - Types 2, 3, FT and 5. Exceptional uniformity creates bright environment at lower light levels. Improved backlight cutoff minimizes light trespass.

**HOUSING** - Die-formed aluminum. Weather-tight housing contains factory prewired driver and field connections. Wiring access door (with safety lanyard) is located underneath and utilizes tool-less thumbscrew fastener.

**OPTICAL UNIT** - Clear tempered optical grade flat glass lens sealed to aluminum optics housing creates an IP67 rated, sealed optical unit. Pressure stabilizing breather allows super-tight IP67 protection while preventing temperature cycling from building up internal pressures and vacuums that can stress optical unit seals and components. Optical unit lanyard serves dual purposes of safety and provides positive ground between unit and housing.

**MOUNTING** - Tapered rear design allows fixtures to be mounted in a quad pattern without the need for extension arms. Use with Crossover steel round and steel square poles. See separate data sheets. Wall mount available by ordering wall mounting bracket (see accessory ordering information).

**ELECTRICAL** - A terminal block for attachment of incoming primary wiring is supplied. Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2, Scenario 1, Location Category C-Medium standards (10KV, 5KA). Available with universal voltage power supply 120-277VAC (50/60Hz input), 347VAC and 480VAC. Optional twistlock photocell receptacle is available. Photocell must be ordered separately. Optional button-type photocells (PCI) are also available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

**DRIVER** - Available in multiple drive currents: 350mA, 450mA and 550mA (Drive currents are factory programmed). State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Components are fully encased in potting material for IP68 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed and removed without the use of tools.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, graphite, satin verde green, metallic silver and white.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)

**SHIPPING WEIGHT (in carton)** - 26.8 lbs / 12 kg

**LISTING** - Listed to U.S. and International safety standards. Suitable for wet locations.

Crossover LED Lighting

## lighting facts®

A Program of the U.S. DOE

Light Output (Lumens)	5201
Watts	75
Lumens per Watt (Efficacy)	69

Color Accuracy Color Rendering Index (CRI)	68
---	----

Light Color Correlated Color Temperature (CCT)	6320 (Daylight)		
Warm White	Bright White	Daylight	
2700K	3000K	4500K	6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: KGGN-GYAXZP  
Model Number: XAS3 FT LED 63 350 CW CU  
Type: Outdoor area/roadway fixture

LIGHT OUTPUT - XAS3						
	# of LEDs	Lumens (Nominal)				Watts
		Type 2	Type 3	Type FT	Type 5	
350 mA	63	4977	4922	5201	4423	75
450 mA	63	6347	5582	6276	5110	98
550 mA	63	6958	6181	7058	5622	122

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Intertek  
Suitable for wet locations



Not all versions of this product are CE certified.

# GENERATION 3 LED AREA LIGHTS - SMALL (XAS3)



## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XAS3 5 LED 63 350 CW UE MSV PCI277**

Prefix	Distribution	Light Source	# of LEDs	Drive Current	Color Temperature	Input Voltage	Finish	Options
XAS3 - LED Area Small	2 - Type 2 3 - Type 3 FT - Forward Throw 5 - Type 5	LED	63	350 - 350mA 450 - 450mA 550 - 550mA	CW - Cool White (5800°K nom.)	UE - Universal Voltage (120-277) 347 480	BLK - Black BRZ - Bronze BUF - Buff GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	<b>Bulb Type Photocells</b> PCI 120 - 120v PCI 208 - 208v PCI 240 - 240v PCI 277 - 277v PCI 347 - 347v  PCR - Twistlock Photoelectric Control Receptacle <sup>1</sup>

### LUMINAIRE EPA CHART - XAS3

Beam Spread	EPA
Single	0.8
D180°	1.7
D90°	1.4
T90°	2.3
TN120°	2.4
Q90°	2.7

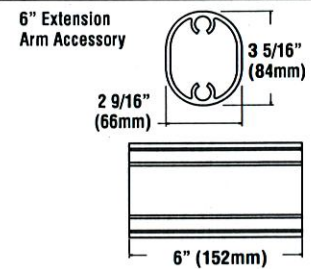
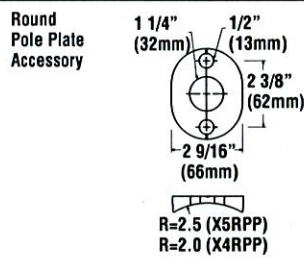
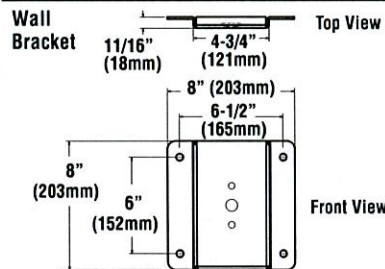
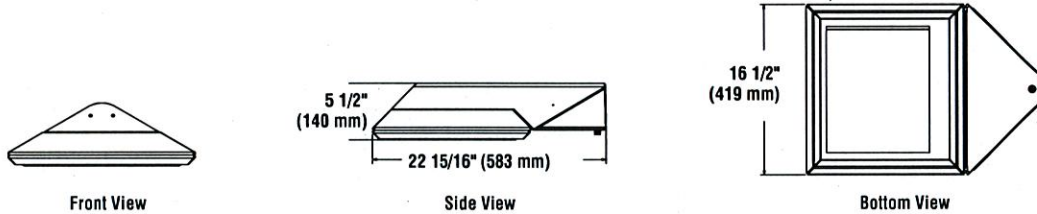
### ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number
BKA-XBO-EC-6-CLR 6" Extension Arm	382136CLR
BKS-XBO-WM-CLR Wall Mounting Bracket	382132CLR
XAS3 2/3/FT/5 HSS8 - House Side Shield <sup>2,3</sup>	454586BLK
DVS - Direct View Shield (rear mount only) <sup>3</sup>	390687CLR
X4RPP Round Pole Plate for 4" Poles	379967CLR
X5RPP Round Pole Plate for 5" Poles	379968CLR
PC 120 - Photocell for use w/ PCR option (120V) <sup>4</sup>	122514
PC 208-277 - Photocell for use w/ PCR option (208V, 240V or 277V) <sup>4</sup>	122515
PC 347 - Photocell for use w/ PCR option (347V) <sup>4</sup>	159516
PC 480 - Photocell for use w/ PCR option (480V) <sup>4</sup>	1225180

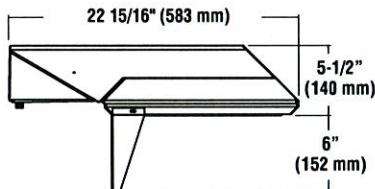
#### NOTES:

- 1 - Photocell must be ordered separately. See Accessories.
- 2 - Black only. Rear Mount.
- 3 - House side shield and direct view shield add to fixture EPA. Consult factory.
- 4 - Factory installed PCR option required. See Options.

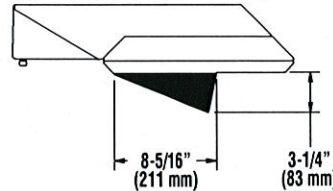
## DIMENSIONS



### DVS - Direct View Shield (390687CLR)



### HSS8 - House Side Shield Types 2, 3, FT, 5 (454586BLK)



# GENERATION 3 LED AREA LIGHTS - MEDIUM (XAM3)



US patents D598160, D598161 & 7828456 and CN patents 13006 & 13007 and MX patents 30416 & 30418 and US & Int'l. patents pending

**SMARTTEC™ THERMAL CONTROL** - Sensors in both optical unit and driver enclosure reduce drive current when ambient temperatures exceed 50°C. Current is lowered in imperceptible 5% increments every 5 minutes until safe operating temperature is reached.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs. 5800°K color temperature (nominal). 70 CRI (nominal).

**DISTRIBUTION/PERFORMANCE** - Types 2, 3, FT and 5. Exceptional uniformity creates bright environment at lower light levels. Improved backlight cutoff minimizes light trespass.

**HOUSING** - Die-formed aluminum. Weather-tight housing contains factory prewired driver and field connections. Wiring access door (with safety lanyard) is located underneath and utilizes tool-less thumbscrew fastener.

**OPTICAL UNIT** - Clear tempered optical grade flat glass lens sealed to aluminum optics housing creates an IP67 rated, sealed optical unit. Pressure stabilizing breather allows super-tight IP67 protection while preventing temperature cycling from building up internal pressures and vacuums that can stress optical unit seals and components. Optical unit lanyard serves dual purposes of safety and provides positive ground between unit and housing.

**MOUNTING** - Tapered rear design allows fixtures to be mounted in a quad pattern without the need for extension arms. Use with Crossover steel round and steel square poles. See separate data sheets.

**ELECTRICAL** - A terminal block for attachment of incoming primary wiring is supplied. Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2, Scenario 1, Location Category C-Medium standards (10KV, 5KA). Available with universal voltage power supply 120-277VAC (50/60Hz input), 347VAC and 480VAC. Optional twistlock photocell receptacle is available. Photocell must be ordered separately. Optional button-type photocells (PCI) are also available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

**DRIVER** - Available in 350mA and 450mA drive currents (Drive currents are factory programmed). State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Components are fully encased in potting material for IP68 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed and removed without the use of tools.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, graphite, satin verde green, metallic silver and white.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)

**SHIPPING WEIGHT (in carton)** - 34.6 lbs (16 kg)

LIGHT OUTPUT - XAM3						
	# of LEDS	Lumens (Nominal)				Watts
		Type 2	Type 3	Type FT	Type 5	
350 mA	119	9770	9549	10028	9148	138
450 mA	119	11960	10437	12342	10396	184

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Suitable for wet locations  
Not all versions of this product are CE certified.

04/25/11

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LSI INDUSTRIES INC.

Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_  
Catalog # \_\_\_\_\_





# GENERATION 3 LED AREA LIGHTS - MEDIUM (XAM3)



## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XAM3 2 LED 119 350 CW UE WHT PCI120**

Prefix	Distribution	Light Source	# of LEDs	Drive Current	Color Temperature	Input Voltage	Finish	Options
XAM3 - LED Area Medium	2 - Type 2 3 - Type 3 FT - Forward Throw 5 - Type 5	LED	119	350 - 350mA 450 - 450mA	CW - Cool White (5800°K nom.)	UE - Universal Voltage (120-277) 347 480	BLK - Black BRZ - Bronze BUF - Buff GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	Button Type Photocells PCI 120 - 120v PCI 208 - 208v PCI 240 - 240v PCI 277 - 277v PCI 347 - 347v PCR - Twistlock Photoelectric Control Receptacle <sup>1</sup>

### LUMINAIRE EPA CHART<sup>2</sup> - XAM3

Single	1.2
D180°	2.4
D90°	2.0
T90°	3.4
TN120°	3.4
Q90°	4.0

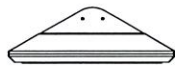
### ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number
BKA-XBO-EC-6-CLR 6' Extension Arm	382136CLR
BKS-XBO-WM-* - CLR Wall Mounting Bracket	382132CLR
XAM3 2/3/FT/5 HSS13 - House Side Shield <sup>2,3</sup>	439436BLK
XAM3 2/3/FT/5 HSS8 - House Side Shield <sup>2,3</sup>	454586BLK
DVS - Direct View Shield (rear mount only) <sup>3</sup>	390687CLR
X4RPP Round Pole Plate for 4" Poles	379967CLR
X5RPP Round Pole Plate for 5" Poles	379968CLR
PC 120 - Photocell for use w/ PCR option (120V) <sup>4</sup>	122514
PC 208-277 - Photocell for use w/ PCR option (208V, 240V or 277V) <sup>4</sup>	122515
PC 347 - Photocell for use w/ PCR option (347V) <sup>4</sup>	159516
PC 480 - Photocell for use w/ PCR option (480V) <sup>4</sup>	1225180

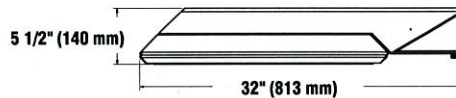
### NOTES:

- Photocell must be ordered separately. See Accessories.
- Black only. Rear mount. Photometry available for HSS13 on XRM3.
- Direct View Shield and House Side Shields add to fixture EPA. Consult factory.
- Factory installed PCR option required. See Options.

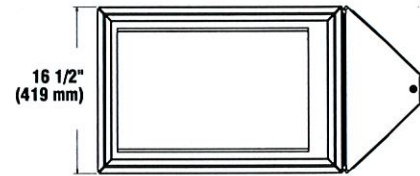
## DIMENSIONS



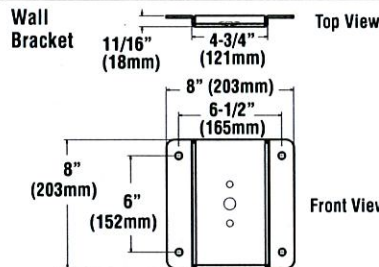
Front View



Side View



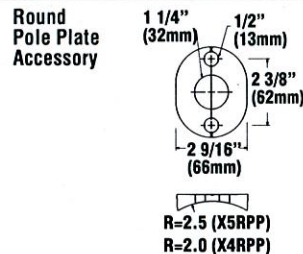
Bottom View



Wall Bracket

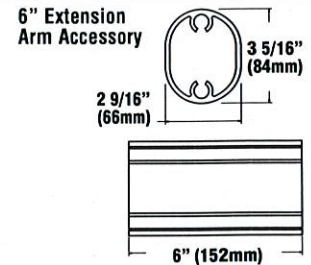
Top View

Front View



Round Pole Plate Accessory

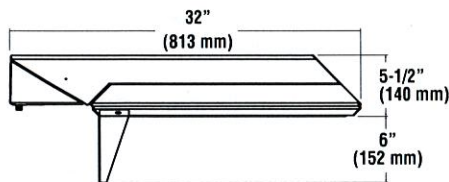
R=2.5 (X5RPP)  
R=2.0 (X4RPP)



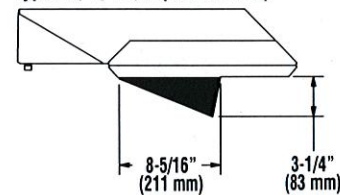
6" Extension Arm Accessory

6" (152mm)

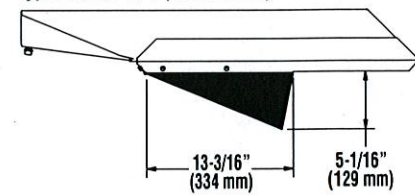
### DVS - Direct View Shield (390687CLR)



### HSS8 - House Side Shield Types 2, 3, FT, 5 (454586BLK)



### HSS13 - House Side Shield Types 2, 3, FT, 5 (439436BLK)



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Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_  
Catalog # \_\_\_\_\_



# GENERATION 3 LED WALL LIGHTS (XAWS3 / XAWM3)



US patents D598160, D598161 & 7828456 and CN patents 13006 & 13007 and MX patents 30416 & 30418 and US & Int'l. patents pending



**SMARTTEC™ THERMAL CONTROL** - Sensors in both optical unit and driver enclosure reduce drive current when ambient temperatures exceed 50°C. Current is lowered in imperceptible 5% increments every 5 minutes until safe operating temperature is reached.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs. 5800°K color temperature (nominal).

**DISTRIBUTION/PERFORMANCE** - Types 2, 3 and FT. Exceptional uniformity creates bright environment at lower light levels.

**HOUSING** - Die-formed aluminum. Weather-tight housing contains factory prewired driver and field connections. Wiring access door (with safety lanyard) is located underneath and utilizes tool-less thumbscrew fastener.

**OPTICAL UNIT** - Clear tempered optical grade flat glass lens sealed to aluminum optics housing creates an IP67 rated, sealed optical unit. Pressure stabilizing breather allows super-tight IP67 protection while preventing temperature cycling from building up internal pressures and vacuums that can stress optical unit seals and components. Optical unit lanyard serves dual purposes of safety and provides positive ground between unit and housing.

**MOUNTING** - Tapered rear design allows fixtures to be easily mounted over a recessed junction box using a simple wall plate (supplied).

**ELECTRICAL** - A terminal block for attachment of incoming primary wiring is supplied. Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2, Scenario 1, Location Category C-Medium standards (10KV, 5KA). Available with universal voltage power supply 120-277VAC (50/60Hz input), 347VAC and 480VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

**DRIVER** - Available in multiple drive currents (Drive currents are factory programmed):

Small - 350mA, 450mA and 550mA

Medium - 350mA and 450mA

State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Components are fully encased in potting material for IP68 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed and removed without the use of tools.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process.

The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, graphite, satin verde green, metallic silver and white.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)

**SHIPPING WEIGHT (in carton)** - 26.8 lbs / 12 kg (Small fixture only) and 34.6 lbs / 16 kg (Medium fixture only). Add 5 lbs / 2 kg for wall plate for total shipment weight.

**LISTING** - ETL listed to U.S. and International safety standards. Suitable for wet locations.

Crossover LED Lighting

## lighting facts®

A Program of the U.S. DOE

<b>Light Output (Lumens)</b>	<b>7035</b>
<b>Watts</b>	<b>122</b>
<b>Lumens per Watt (Efficacy)</b>	<b>57</b>

---

<b>Color Accuracy</b> Color Rendering Index (CRI)	<b>68</b>
--	-----------

---

<b>Light Color</b> Correlated Color Temperature (CCT)	<b>6320 (Daylight)</b>
--	------------------------

2700K    3000K    4500K    6500K

Warm White    Bright White    Daylight

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: KGGN-SPVYKE  
Model Number: XAWS3 FT LED 63 550 CW UE  
Type: Outdoor wall pack

LIGHT OUTPUT - XAWS3					
	# of LEDs	Lumens (Nominal)			Watts
		Type 2	Type 3	Type FT	
350 mA	63	4977	4922	5201	75
450 mA	63	6347	5582	6276	98
550 mA	63	6958	6181	7058	122

LIGHT OUTPUT - XAWM3					
	# of LEDs	Lumens (Nominal)			Watts
		Type 2	Type 3	Type FT	
350 mA	119	9770	9549	10028	138
450 mA	119	11960	10437	12342	184

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Suitable for wet locations

**ARRA**  
Funding Compliant

Not all versions of this product are CE certified.

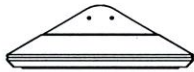
# GENERATION 3 LED WALL LIGHTS - SMALL (XAWS3) & MEDIUM (XAWM3) *Crossover* LED LIGHTING TECHNOLOGY

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XAWS3 3 LED 63 350 CW UE MSV PCI277**

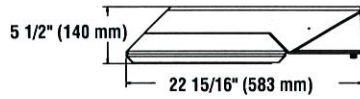
Prefix	Distribution	Light Source	# of LEDs	Drive Current	Color Temperature	Input Voltage	Finish	Options
XAWS3 - LED Wall Mount Small	2 - Type 2 3 - Type 3 FT - Forward Throw	LED	63	350 - 350mA 450 - 450mA 550 - 550mA	CW - Cool White (5800°K nom.)	UE - Universal Voltage (120-277) 347 480	BLK - Black BRZ - Bronze BUF - Buff GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	<b>Button Type Photocells</b> PCI 120 - 120v PCI 208 - 208v PCI 240 - 240v PCI 277 - 277v PCI 347 - 347v
XAWM3 - LED Wall Mount Medium	2 - Type 2 3 - Type 3 FT - Forward Throw		119	350 - 350mA 450 - 450mA				

## DIMENSIONS



Front View

**SMALL**

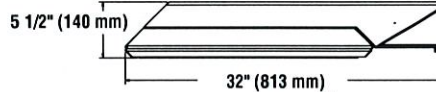


Side View

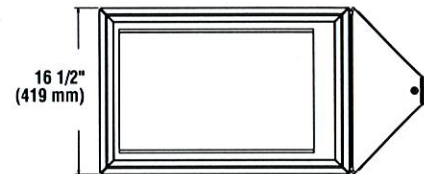


Bottom View

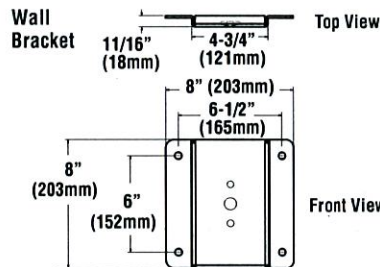
**MEDIUM**



Side View



Bottom View



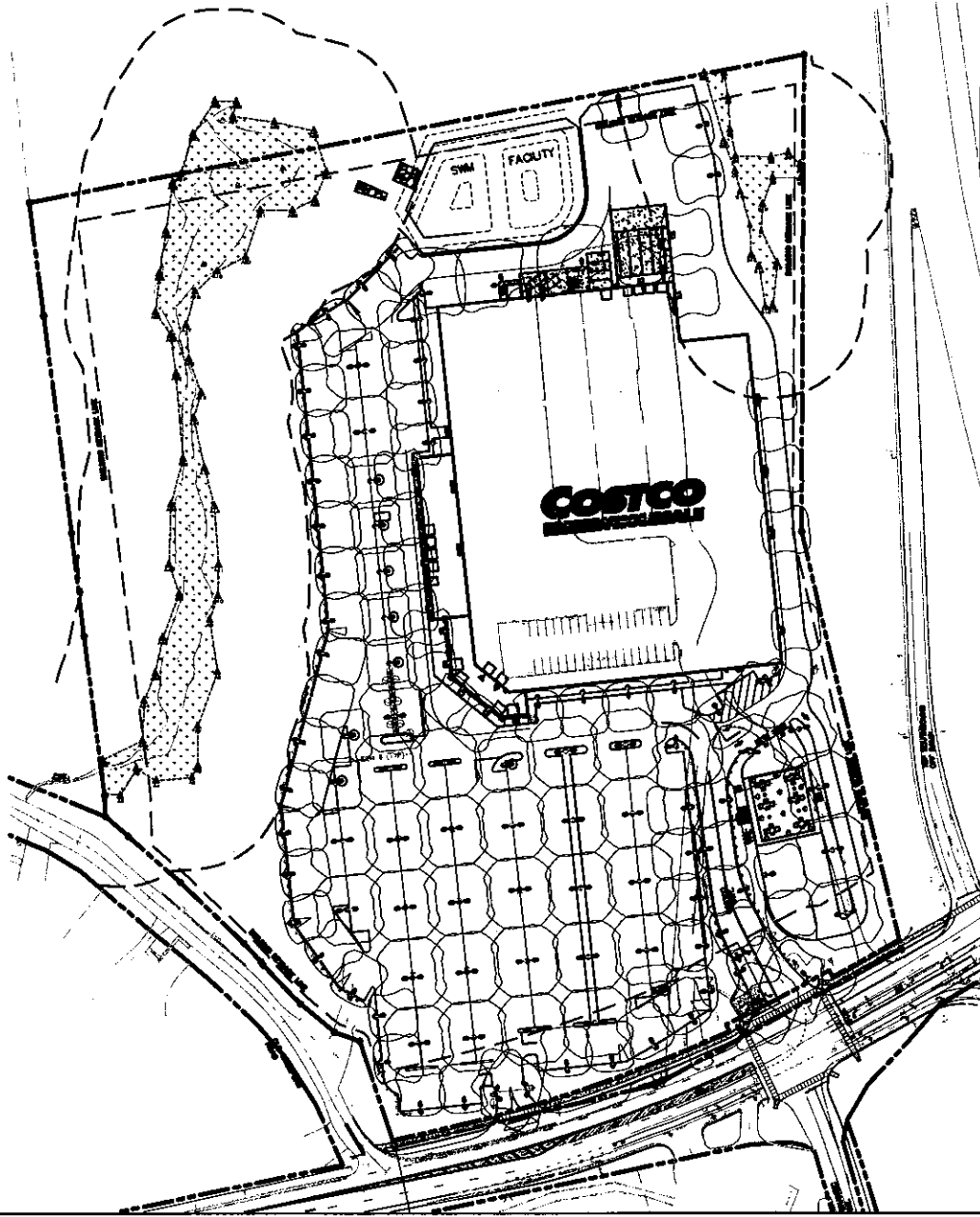
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Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_  
 Catalog # \_\_\_\_\_



<u>SYMBOL</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>	<u>WATTAGE</u>	<u>MOUNTING HEIGHT</u>
●●● A	33	DOUBLE-LSI-INDUSTRIES #XGB3-5-LED-128-350-CW-UE	137	25 FT
●●● A2	9	SINGLE-LSI-INDUSTRIES #XGB3-5-LED-128-450-CW-UE	180	25 FT
●●● B	50	SINGLE-LSI-INDUSTRIES #XGB3-FTA-LED-128-350-CW-UE-HSS	137	25 FT
●●● BB	9	2 @ 90°-LSI-INDUSTRIES #XGB3-FTA-LED-128-350-CW-UE-HSS	137	25 FT
■ BW	15	SINGLE-LSI-INDUSTRIES #XGB3-FTA-LED-128-350-CW-UE-HSS -WALL MOUNT	137	25 FT
○ E	12	SINGLE-LSI-INDUSTRIES #CRS-ES-LED-84-530-CW-UE	144	14.5 FT
□ F	12	SINGLE-LSI-INDUSTRIES #CRO3-FO-LED-30-CW-UE	36.1	14.5 FT
TOTAL	140			



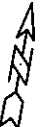
Q:\Acad\160\165213\dwg\Construction\C-502 SiteLightPlan-25FT.dwg



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Hawthorne, New York 10532

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Appendix VII.H-2  
(Reference Section III.B)  
**Site Lighting Plan**  
**25' Mounting Height**



**COSTCO WHOLESALE**  
Town of Yorktown, New York

Luminaire Schedule						
Symbol	Qty	Label	Total Lamp Lumens	LLF	Description	
F	12		N.A.	1.000	ISI-Industries #CRO3-FO-LED-30-CW-UE @ 14.5' Mounting	
E	12		N.A.	1.000	ISI-Industries #CRS-ES-LED-84-530-CW-UE @ 14.5' Mounting	
A	33		N.A.	1.000	ISI-Industries #XGB3-S-LED-128-350-CW-UE @ 25' Mounting	
A2	9		N.A.	1.000	ISI-Industries #XGB3-S-LED-128-450-CW-UE @ 25' Mounting	
B	51		N.A.	1.000	ISI-Industries #XGB3-FTA-LED-128-350-CW-UE-HSS @ 25' Mounting	
BB	9		N.A.	1.000	ISI-Industries #XGB3-FTA-LED-128-350-CW-UE-HSS @ 25' Mounting	
BW	15		N.A.	1.000	ISI-Industries #XGB3-FTA-LED-128-350-CW-UE-HSS-Wall Mount @ 25' Mounting	

Calculation Summary									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min		
Back Area and Side Drive	Illuminance	FC	1.92	7.4	0.0	N.A.	N.A.		
Driveway	Illuminance	FC	4.19	7.5	2.6	1.61	2.88		
Entrance A	Illuminance	FC	5.35	6.5	4.7	1.14	1.38		
Entrance B	Illuminance	FC	6.68	8.3	4.7	1.42	1.77		
Gas Area	Illuminance	FC	4.79	20.1	2.6	1.84	7.73		
Gas Pump	Illuminance	FC	22.85	103	10.6	2.16	9.73		
Main Parking Lot	Illuminance	FC	4.37	7.5	2.8	1.56	2.68		
Property	Illuminance	FC	0.23	8.8	0.0	N.A.	N.A.		
Side Parking Lot	Illuminance	FC	4.44	7.3	2.5	1.78	2.92		



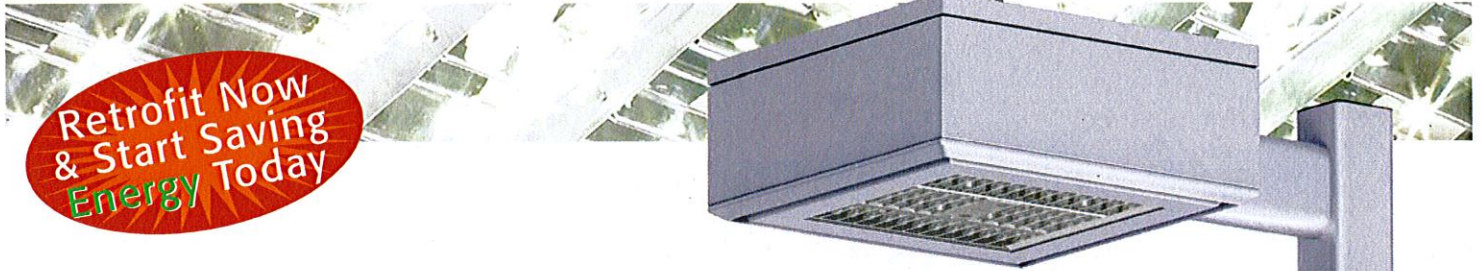
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Appendix VII.H-2  
(Reference Section III.B)  
Site Lighting Plan  
25' Mounting Height

COSTCO WHOLESALE  
Town of Yorktown, New York

# XGB3 LED Area Lighting from LSI



Retrofit Now  
& Start Saving  
Energy Today

## ***XGB3 offers energy-efficient environmentally-friendly LED light source in a conventionally styled area light.***

- **Lighting Performance, Outstanding Uniformity** – *Exceptional high-brightness LEDs results in both higher light levels and significant energy savings; with cool white LED color temperature*
- **Life Expectancy** – *minimum 60,000 hours to 100,000 hours expected life depending upon the ambient temperature of the installation location*
- **Super High Efficiency** – *nearly 90 lumens per watt*
- **Top Access** – *tethered top-access cover provides ease of installation*
- **Maintenance-free**
- **5-year warranty**
- **IP67 Sealed Optical Assembly**
- **Poles** – *exceptionally low EPA for lighter gauge poles – tremendous retrofit opportunities. Choose from quality straight round, straight square, or round tapered poles finished in LSI's DuraGrip® or DuraGrip® Plus powder coat finish*

***Seeing is Believing***



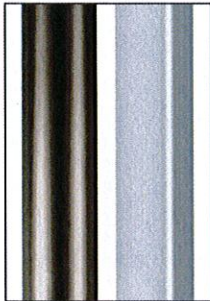
American Made

Available for  
New Construction &  
Retrofit Projects

## When Selecting Your XGB3 Fixtures, Don't Forget the Poles

### Choose from straight round, straight square or round tapered shafts

Each pole is finished with DuraGrip®, LSI's baked-on polyester-powder finishing process to give the pole an exceptionally attractive appearance. The process electrostatically applies and thermally fuses a polyester powder to the pole. This unique protection process provides an extremely smooth and uniform finish to withstand extreme weather changes without cracking or peeling. DuraGrip finish features a five-year limited warranty.



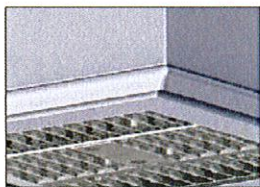
Optional DuraGrip Plus features added protection with a 3.0 to 5.0 mil thickness of polyester powder finish plus an inner coating. This specially developed inner coating is a thermal plastic hydrocarbon resin applied to the inside of the pole to seal and protect against atmospheric and corrosive matter. DuraGrip Plus finish features a seven-year limited warranty.

Standard finish colors available for poles are bronze, black, platinum plus, white, satin verde green, metallic silver, and graphite.

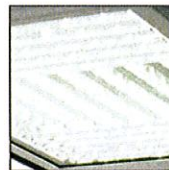


Designed and built around LSI's own **SmartTec** technology platform, the **Crossover** XGB3 fixtures contain intelligent components designed, engineered and manufactured by LSI specifically to work in unison to deliver the most efficient and reliable lighting solution possible.

**SmartTec** ensures optimum fixture performance, energy efficiency, delivered lumens per watt, longevity and an impressive ROI. Innovative driver design ensures the highest attainable levels of energy efficiency



■ **Revolutionary Thermal Management System** – LSI's unique patented heat-sink design is integrated into the external surfaces of the luminaire, in place of fins found frequently in traditional fixtures, to effectively dissipate heat and ensure a cool-running fixture. Suitable for high ambient temperatures (50°C).



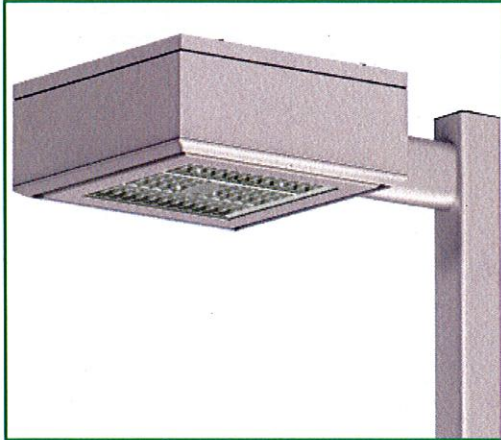
■ **Exceptional Optical Design** – Tremendous lighting performance specifically designed for area lighting and automotive dealership applications. Available with Type 5, FTA, FTA-L, and FTA-R distributions.

■ **Innovative Driver Design** – Unique high-power driver, 90+% efficient, ensures the highest attainable levels of energy efficiency. Protected by surge protectors (6KV, 3KA) Rated for IP68 Ingress Protection. Available in 350 mA and 450 mA drive currents.

# GENERATION 3 LED AREA LIGHTS - XGB3



US patent D574994 & 7,828,456 and MX patent 29631 and US & Int'l. patents pending



**SMARTTEC™ THERMAL CONTROL** - Sensors in both optical unit and driver enclosure reduce drive current when ambient temperatures exceed 50°C. Current is lowered in imperceptible 5% increments every 5 minutes until safe operating temperature is reached.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Select high-brightness LEDs. 5300°K color temperature (nominal). 70 CRI (nominal).

**DISTRIBUTION/PERFORMANCE** - Types 5, FTA, FTA-L and FTA-R. Exceptional uniformity with full cutoff creates bright environment at lower light levels. Improved backlight cutoff minimizes light trespass. FTA-L and FTA-R allows for D180° mounting configurations with factory set optics for front row automotive applications.

**HOUSING** - Square, die-formed aluminum. Fully enclosed weather tight housing contains factory prewired driver and field connections.

**TOP-ACCESS COVER** - Tethered top-access cover provides ease of installation and allows for easy driver access. Four captive stainless-steel fasteners secure the top-access cover to the housing.

**OPTICAL UNIT** - Clear tempered optical grade flat glass lens sealed to aluminum housing creates an IP67 rated, sealed optical unit. Pressure stabilizing breather allows super-tight IP67 protection while preventing temperature cycling from building up internal pressures and vacuums that can stress optical unit seals and components. Patented integral single-blade heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

**MOUNTING** - 2-1/2" x 5-3/8" x 12" extruded aluminum arm mounting bracket shipped standard. 8" bracket available for single or D180 configurations, but must be ordered from the Options column of ordering chart. Use with standard (non-Crossover) steel round, square and round tapered poles. Round Pole Plate (RPP2) required for mounting to 3"-5" round poles. (See Accessory Ordering Information chart.)

**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2, Scenario 1, Location Category C-Medium standards (10KV, 5KA). Available with universal voltage power supply 120-277VAC (UE - 50/60Hz input), and 347-480VAC. Optional button-type photocells (PCI) are also available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

**DRIVER** - Available in 350mA and 450mA drive currents (Drive currents are factory programmed). State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Components are fully encased in potting material for IP68 moisture resistance. Driver complies with IEC and FCC standards.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F).

**FINISH** - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, graphite, satin verde green, metallic silver and white.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)

**SHIPPING WEIGHT (in carton)** - 36.5 lbs (16.6 kg) fixture; 5 lbs. (2kg) arm

**LISTING** - ETL listed to U.S. and Canadian safety standards. Suitable for wet locations.

LIGHT OUTPUT - XGB3				
	# of LEDS	Lumens (Nominal)		Watts
		Type 5	Type FTA	
350 mA	128	10450	12150	137
450 mA	128	12450	14850	180

This product, or selected versions of this product, meet the standards listed below.

Please consult factory for your specific requirements.



Intertek  
Suitable for wet locations



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Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

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Catalog # \_\_\_\_\_





# GENERATION 3 LED AREA LIGHTS - XGB3



## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XGB3 FTA-L LED 128 350 CW UE WHT PCI120**

Prefix	Distribution	Light Source	# of LEDs	Drive Current	Color Temperature	Input Voltage	Finish	Options
XGB3 <sup>1</sup> - LED Greenbriar	FTA - Forward Throw Automotive  FTA-L - FTA Optic Rotated for Parallel D180 Mount (Left Side)  FTA-R - FTA Optic Rotated for Parallel D180 Mount (Right Side)  5 - Type 5	LED	128	350 - 350mA 450 - 450mA	CW - Cool White (5300°K nom.)	UE - Universal Voltage (120-277)  347-480	BLK - Black BRZ - Bronze BUF - Buff GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	8BK - 8" Bracket (S and D180 only) PCI 120 - 120v Button-Type Photocell PCI 208 - 208v Button-Type Photocell PCI 240 - 240v Button-Type Photocell PCI 277 - 277v Button-Type Photocell PCI 347 - 347v Button-Type Photocell TB - Terminal Block

## LUMINAIRE EPA CHART<sup>2</sup> - XGB3

	8" Bracket	12" Bracket
Single	2.1	2.3
D180°	4.3	4.6
D90°	12" Bracket Required	4.1
T90°		6.7
TN120°		6.8
Q90°		8.2

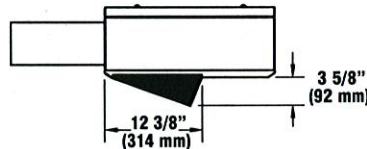
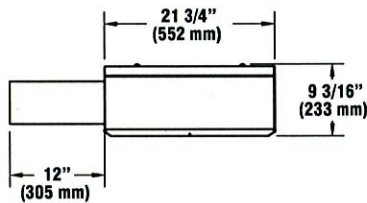
## ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number
XGB3 FTA HSS - House Side Shield (Black only) <sup>2</sup>	465915BLK
RPP2 - Round Pole Plate	162914BLK
BKS-BO-WM-* - CLR - Wall Mount Plate	123111CLR
BKA-BO-RA-8-CLR - Radius Arm	169010CLR
BKU-BO-S-19-CLR - Upsweep Bracket for round or square poles	144191CLR

### NOTES:

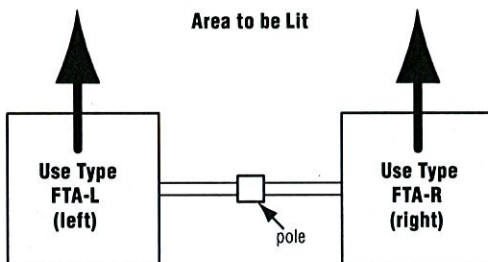
- 1 - Order standard (non-Crossover) LSI bolt-on poles.
- 2 - House Side Shield adds to fixture EPA. Consult Factory.

## DIMENSIONS



**House Side Shield  
Type FTA (465915 BLK)**

## LEFT AND RIGHT VERSIONS OF TYPE FTA REFLECTORS (TOP VIEW)



**Note:** Distributions are not field-rotatable. For D180 Forward Throw installations specify left (FTA-L) and/or right (FTA-R) side mounting. Orientation is based on standing at the pole looking out at the area to be lit.

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Project Name \_\_\_\_\_ Fixture Type \_\_\_\_\_

Catalog # \_\_\_\_\_

