

Town of Brookfield
645 N. Janacek Road
Brookfield, WI 53045
(P) 262-796-3788
(F) 262-796-0339



MEETING NOTICE

Meeting will be held at the
Town of Brookfield Municipal Building, Eric Gnant Room
645 N. Janacek Road, Brookfield, WI

Tuesday, February 25, 2025

PLAN COMMISSION

7:00 p.m.

AGENDA

- 1) Call to Order.
- 2) Meeting Notices.
- 3) Approval of Agenda.
- 4) Approval of Minutes.
 - a. January 28th Plan Commission.
- 5) Citizen Comments: Three-minute limit.
- 6) Old Business:
 - a. None.
- 7) New Business:
 - a. Ken Krahe, representing Silgan Containers, requesting approval to install a backup generator, replace existing lighting with LED fixtures and review proposed signage before Architectural Review Committee review, located at 21027 Crossroads Circle.
- 8) Communication and Announcements.
- 9) Adjourn.

Posted this 20th day of February, 2025
Bryce Hembrook
Town Planner

TOWN OF BROOKFIELD
PLAN COMMISSION MINUTES
January 28, 2025

The regular meeting of the Plan Commission was held in the Erich Gnant Room of the Town Hall, 645 N Janacek Road, Brookfield, WI.

1) CALL TO ORDER.

Town Supervisor Ryan Stanelle called the meeting to order at 7:00p.m., with the following people present: Plan Commission members Len Smeltzer, Kevin Riordan, Tim Probst, and Jeremy Watson; and Town Planner Bryce Hembrook. Chairman Keith Henderson was absent and excused.

2) MEETING NOTICES.

Hembrook confirmed the meeting was noticed in accordance with Open Meeting Law.

3) APPROVAL OF AGENDA

Motion by Watson to approve the agenda.

Seconded by Smeltzer.

Motion Passed Unanimously.

4) APPROVAL OF MINUTES.

a. Motion by Watson to approve the November 26, 2024 regular Plan Commission Minutes as presented.

Seconded by Probst.

Motion Passed Unanimously.

b. Motion by Watson to approve the November 26, 2024 Public Hearing Minutes as presented.

Seconded by Smeltzer.

Motion Passed Unanimously.

5) CITIZEN COMMENTS; Three-minute limit.

None.

6) OLD BUSINESS:

a. None.

7) NEW BUSINESS:

a. Rob Kahler Jr., representing Callister's Christmas and Master Z's, requesting approval for an amended plan of operation, located at 19233 W. Bluemound Road.

Hembrook reviewed the current building usage. The applicant is proposing to have dual occupancy for both businesses that would allow customers to purchase Callister's Christmas items or Master Z's items year-round. Depending on the time of the season, one business space will occupy a majority of the floor space while the other is reduced. Both businesses are considered allowable uses in the B-2 zoning district. There will be one entrance, with a divider wall.

Motion by Smeltzer to **recommend** approval for an amended plan of operation for Callister's Christmas and Master Z's, located at 19233 W. Bluemound Road.

Seconded by Riordan.

Further Discussion:

None.

Motion passed unanimously.

- b. Jim Taylor, representing Oscars Frozen Custard, requesting review and comment on the conceptual site plan for building reconstruction at 21165 Highway 18.

Hembrook reported that after the packet for tonight's meeting was assembled, the applicant submitted two additional conceptual plans. The staff report was created reviewing the original submittal. Hembrook reported the following: The main difference is that a double drive-thru is proposed. Parking will be allowed on an adjacent property to the east, which is owned by the applicant. There is a shared parking agreement, which is to be renewed. Hembrook referred to the staff report prepared for the first conceptual plan for additional information, including Fire Department, Sanitary District, and Town Engineer comments, regarding this proposal. Hembrook pointed out that on the third conceptual plan submitted the morning of the meeting, an access point is removed, which the applicant pointed out provides more parking on the south side, and enables an outdoor seating area on the north side. Turning radius on the third plan looked tight, as indicated by Assistant Fire Chief D'Amico, who was present. Storm water management will be addressed at subsequent meetings. Hembrook noted that drive-thru's require a conditional use permit. Watson inquired if they already have a conditional use permit from the previous building, why would they have to go through that process again. Hembrook will look into it. Landscaping and green space were discussed briefly. Project Engineer Christopher White (RA Smith) was in attendance with the applicant, and indicated that all of the islands will be landscaped. It was clarified that the existing trash enclosure will remain. Watson opined that having an entrance and exit on the entry to the drive-thru side is a bad idea, it is too busy and will back up, predominantly during lunch and dinner peak times (third option). Other options regarding the turning radius and ingress/egress were discussed. White reported that Option 3 is preferred by the property owners. Watson stated he does not prefer Option 3 because of the entrance and the Fire Department concerns. Taylor suggested removing a parking stall or two. D'Amico suggested possibly shifting the entrance more towards the transformer site. Both applicant and Plan Commission agreed that Option 1 is off the table.

Motion by Watson to **recommend** approval of the conceptual site plan for building reconstruction at 21165 Highway 18 with Options 2 and 3.

Seconded by Smeltzer.

Further Discussion:

Stanelle suggested that if there is a plan for the yellow outlined area, to include that information for meeting with the Town Board. The turn on Option 3 is a concern. Opportunities for outdoor seating were discussed, as that is important to the owners.

Watson amended his motion to **recommend** Option 2, with eliminating the two front parking spots to allow for outdoor seating, and adding two parking spots on the east new parking area.

Motion carried unanimously.

- c. Jim Taylor, representing Oscar's Frozen Custard, requesting approval of a Conditional Use Permit for the drive-thru at 21165 Highway 18.

Hembrook will check with the Town Attorney to verify whether another CUP is required, as discussed in the previous agenda item. Hembrook advised to make a recommendation in the event that it is required.

Motion by Watson to **recommend** approval a Conditional Use Permit for the drive-thru for Oscars Frozen Custard, located at 21165 Highway 18 as presented, with confirmation from the Town Attorney that a CUP is required.
Seconded by Smeltzer.

Further Discussion:

None.

Motion carried unanimously.

- d. Discussion on the Zoning Code Amendment Project and set an additional Plan Commission meeting to discuss project.

Watson suggested Tuesday, February 25, 2025 before regular Plan Commission meeting, from 4:00pm – 7:00pm. Hembrook will verify date and time.

Hembrook stated that a focus is on streamlining the approval process. Currently, depending on the scope of the project, there can be as many as seven meetings. The goal is to get that to three or four at most.

8) COMMUNICATION AND ANNOUNCEMENTS.

None.

9) ADJOURN.

Motion by Watson to adjourn at 7:58pm.

Seconded by Probst.

Motion Passed Unanimously.

Respectfully submitted,

Bryce Hembrook – Town Planner

BH/lr



Building a Better World
for All of Us®

TOWN OF BROOKFIELD PLAN COMMISSION REPORT

TO: Plan Commission

FROM: Bryce Hembrook, AICP
Town Planner

REPORT DATE: February 20, 2025
PC MEETING DATE: February 25, 2025

RE: **Silgan Containers – Site Plan Amendment, Lighting, and Preliminary Signage
21027 Crossroads Circle BKFT1129999047**

SEH No. 171421, TASK 63

Applicant: Ken Krahe – MSI General Corp, representing Silgan Containers

Application Type: Site Plan Amendment Approval including Lighting and Signage Review

Request

Applicant is requesting conceptual approval of the addition of a boiler room and warehouse/mechanical room to the existing building located 21027 Crossroads Circle.

Summary of Request

- The applicant received approval in 2024 for a boiler room addition and a warehouse/mechanical room addition to the building located at 21027 Crossroads Circle.
- The applicant is proposing to install a back-up generator with integral level 2 sound enclosure west of the building addition. Also requesting to replace existing site lighting with LED fixtures in the parking area. The applicant is also providing signage renderings for review and comment by the Plan Commission. The Architectural Review Committee will have final approval of the proposed signage.
- Zoning District = B-2 Limited General Business District
- Lot size = 8.5 acres.
- The generator is proposed to be approximately 51' from the western property line.
- According to the applicant's narrative, the "generator will be equipped with a level 2 sound enclosure which reduces the noise of the generator under full load to an average of 75 decibels at a distance of 7 meters or 22 feet. (See the attached cut sheets for the generator and enclosure performance data.) The generator will be placed approximately 50 feet from the tree lined property line, which will further muffle the sound to the neighboring residences. Lastly, the generator runs for 30 minutes once a week during the middle of the day as test to ensure it is in good working order should it be needed due to a power failure.
- Lighting
 - The Town Engineer reviewed the proposed lighting plan and had the following comments:

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 501 Maple Avenue, Delafield, WI 53018-9351
SEH is 100% employee-owned | **sehinc.com** | 262.646.6855 | 888.908.8166 fax

- The photometric plan should be updated to include the light level at the property line. No point on the property line shall exceed 0.2 foot-candles.
 - The proposed fixtures appear to be full cut off, meeting Town ordinance.
 - The parking lot lighting meets the Town ordinance (minimum 0.4 fc required), but just as an observation, the average light level (5.05 fc - if I'm reading the calculation summary correctly) seems high. Typical parking lot light levels range from 0.5 fc up to 2 or 3 fc. If this property is in an industrial area, that's probably fine, but could be a problem if it's a more commercial area.
- Signage
 - The applicant provided signage renderings for the site. The signs will require review and approval by the Architectural Review Committee but Plan Commission can comment on the signage.



February 11, 2025

Town of Brookfield – Plan Commission Application

RE: Silgan Containers – Back up Generator and Site Lighting Replacement

Bryce,

On behalf of Silgan Containers, please see the following documents requesting Plan Commission approval to install an exterior back up generator and to replace the existing light fixtures at the Silgan Containers facility located at 21027 Crossroads Circle in Waukesha, Wisconsin.

1. Please see the attached site plan showing the proposed location of the backup generator to the west of the south building addition. The generator will be equipped with a level 2 sound enclosure which reduces the noise of the generator under full load to an average of 75 decibels at a distance of 7 meters or 22 feet. (See the attached cut sheets for the generator and enclosure performance data.) The generator will be placed approximately 50 feet from the tree lined property line, which will further muffle the sound to the neighboring residences. Lastly, the generator runs for 30 minutes once a week during the middle of the day as test to ensure it is in good working order should it be needed due to a power failure.
2. Please see the attached site photometric plan and LED light fixture cut sheets proposed for replacement of the existing light fixtures.

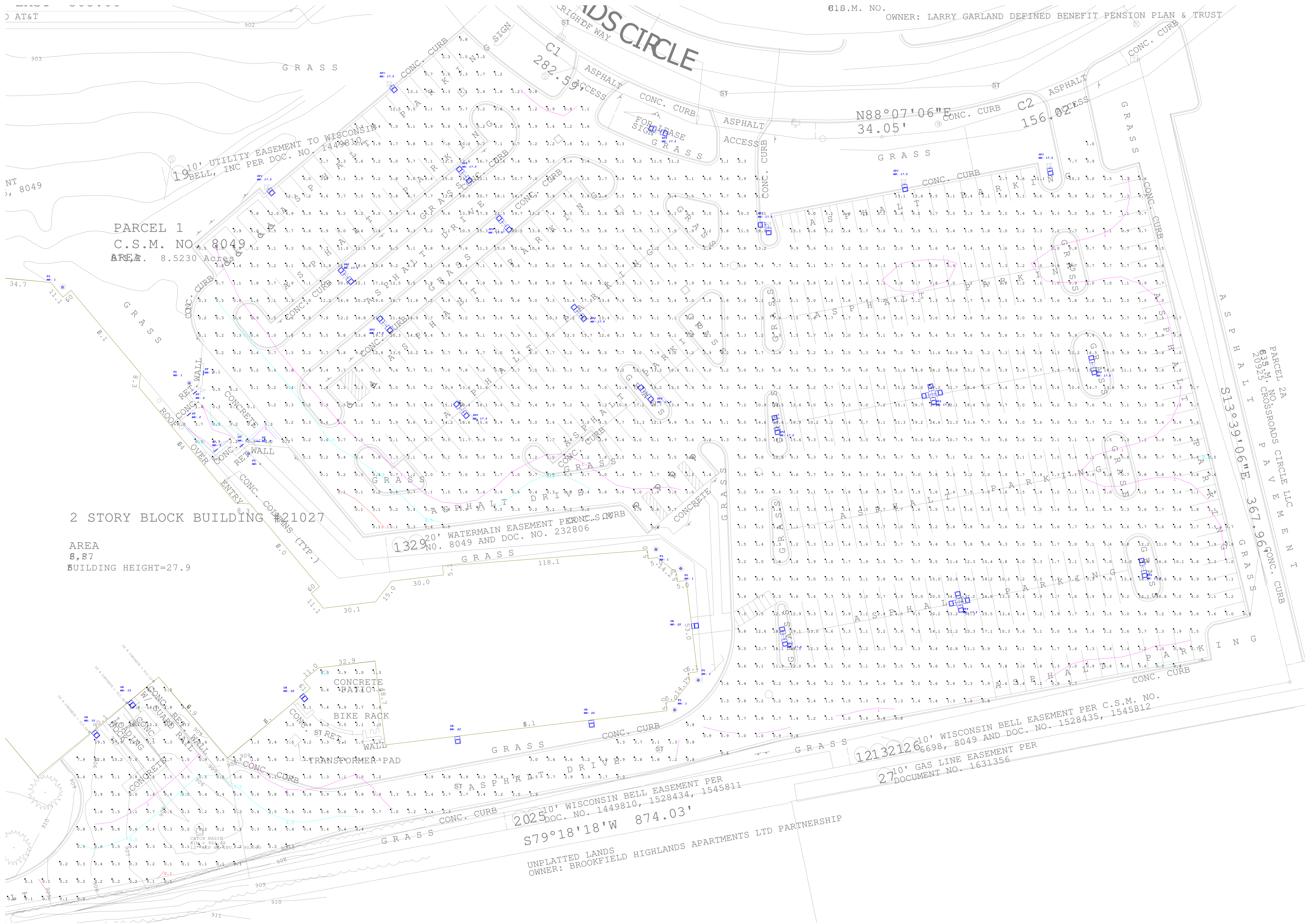
Please let me know if you have any questions or need additional information. I look forward to your favorable approval of the two proposed facility improvements.

Thank you,

A handwritten signature in blue ink, appearing to read 'Ken Krahe'.

Ken Krahe, President & CEO
MSI General Corporation

Cc: Craig Benson



- Standard Reflectance of 80/50/20 unless noted otherwise
- Not a Construction Document, for Design purposes only
- Standard indoor calc points @ 30" A.F.F. unless noted otherwise
- Standard outdoor calc points @ Grade unless noted otherwise
- Egress calc points @ 0' A.F.F.
- Mlazar Associates assumes no responsibility for installed light levels due to field conditions, etc.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
DRIVE LANE AND LOADING DOCK	Illuminance	Fc	2.45	19.8	0.0	N.A.	N.A.
MAIN ENTRY	Illuminance	Fc	0.87	3.7	0.0	N.A.	N.A.
SITE	Illuminance	Fc	5.05	37.6	0.1	50.50	376.00

Luminaire Schedule								
Symbol	Qty	Label	Manufacturer	Description	Arrangement	Lum. Lumens	Lum. Watts	LLF
□	8	FL		FDCX 180 G1 4K	Single	17730	135.1	0.900
□	6	OA		ALF LS230 T4 G1 4K WALL MOUNT	Single	23068	140.4	0.900
□	4	SP1		ALF LS230 T4 G1 4K	Single	23068	140.4	0.900
□	12	SP2		ALF LS230 T5 G1 4K	Back-Back	23566	140.21	0.900
□	1	SP3		ALF LS230 T5 G1 4K	2 @ 90 degrees	23566	140.21	0.900
□	2	SP4		ALF LS230 T5 G1 4K	4 @ 90 Degrees	23566	140.21	0.900
□	6	ST		SL650L	Single	708	12.4952	0.900

PHOTOMETRIC

SILGAN CROSSROADS REMODEL
WAUKESHA, WI

Revisions			
#	Date	Comments	



MLAZGAR ASSOCIATES
14350 W. GIENDALE DR.
NEW BERLIN, WI 53151
(P) 414-943-1915
(F) 952-943-8088
www.mlazar.com

SG100 | 9.0L | 100 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL
POWER

STANDARD FEATURES

DEMAND RESPONSE READY

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Open Set Only)

Fuel System

- NPT Fuel Connection on Frame
- Primary and Secondary Fuel Shutoff

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Amortisseur Winding
- Full Load Capacity Alternator

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby and Demand Response Rated Units)
- 1 Year Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM



Digital H Control Panel- Dual 4x20 Display

Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)

- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level

- Engine Speed
- Battery Voltage
- Frequency

Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Low Fuel Pressure
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

CONFIGURABLE OPTIONS

DEMAND RESPONSE READY

ENGINE SYSTEM

- Engine Block Heater
- Baseframe Cover/Rodent Guard
- Oil Heater
- Air Filter Restriction Indicator
- Radiator Stone Guard (Open Set Only)
- Level 1 Fan and Belt Guards (Enclosed Units Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET

- Extended Factory Testing (3-Phase Only)
- 8 Position Load Center
- IBC Seismic Certification
- Pad Vibration Isolators

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Enclosure Heater (with Motorized Dampers Only)
- Door Open Alarm Switch

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indication with Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote Communication - Modem
- 10A Engine Run Relay
- Ground Fault Annunciator
- Damper Kit Auxiliary Contacts (with Motorized Dampers Only)
- 100 dB Alarm Horn
- 120V GFCI and 240V Outlets

WARRANTY (Standby Gensets Only)

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Ball Valves
- Fluid Containment Pan

ALTERNATOR SYSTEM

- 3rd Breaker System

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

GENERATOR SET

- Special Testing
- Battery Box

APPLICATION AND ENGINEERING DATA

DEMAND RESPONSE READY

ENGINE SPECIFICATIONS

General	
Make	Generac
Cylinder #	8
Type	V
Displacement - in ³ (L)	543 (8.9)
Bore - in (mm)	4.49 (114.23)
Stroke - in (mm)	4.25 (107.95)
Compression Ratio	9.9:1
Intake Air Method	Naturally Aspirated
Number of Main Bearings	5
Connecting Rods	Forged Steel
Cylinder Head	Cast Iron
Ignition	High Energy
Piston Type	Aluminum Alloy
Crankshaft Type	Forged Steel
Lifter Type	Hydraulic Roller
Intake Valve Material	Steel Alloy
Exhaust Valve Material	Stainless Steel
Hardened Valve Seats	Yes
Engine Governing	
Governor	Electronic
Frequency Regulation (Steady State)	±0.25%
Lubrication System	
Oil Pump Type	Gear Driven
Oil Filter Type	Full-Flow Spin-On Cartridge
Crankcase Capacity - qt (L)	10.0 (9.5)

Cooling System	
Cooling System Type	Pressurized Closed
Fan Type	Pusher
Fan Speed - RPM	2,386
Fan Diameter - in (mm)	22 (559)
Fuel System	
Fuel Type	Natural Gas, Propane Vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure - in H ₂ O (kPa)	11 - 14 (2.7 - 3.5)
Optional Operating Fuel Pressure - in H ₂ O (kPa)	7 - 11 (1.7 - 2.7)
Engine Electrical System	
System Voltage	12 VDC
Battery Charger Alternator	40 Amps
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K0130124Y21	Standard Excitation	Synchronous Brushless
Poles	4	Bearings	Sealed Ball
Field Type	Revolving	Coupling	Direct Drive
Insulation Class - Rotor	H	Prototype Short Circuit Test	Yes
Insulation Class - Stator	H	Voltage Regulator Type	Full Digital
Total Harmonic Distortion	<5% (3-Phase)	Number of Sensed Phases	All
Telephone Interference Factor (TIF)	<50	Regulation Accuracy (Steady State)	±0.25%

SG100 | 9.0L | 100 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
 EPA Certified Stationary Emergency

OPERATING DATA

DEMAND RESPONSE READY

POWER RATINGS - NATURAL GAS/PROPANE VAPOR

	Standby		Prime	
Single-Phase 120/240 VAC @1.0pf	100 kW/100 kVA	Amps: 417	90 kW/90 kVA	Amps: 375
Three-Phase 120/208 VAC @0.8pf	100 kW/125 kVA	Amps: 347	90 kW/113 kVA	Amps: 313
Three-Phase 120/240 VAC @0.8pf	100 kW/125 kVA	Amps: 301	90 kW/113 kVA	Amps: 271
Three-Phase 277/480 VAC @0.8pf	100 kW/125 kVA	Amps: 151	90 kW/113 kVA	Amps: 135
Three-Phase 346/600 VAC @0.8pf	100 kW/125 kVA	Amps: 120	90 kW/113 kVA	Amps: 108

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip			
277/480 VAC	30%	208/240 VAC	30%
K0130124Y21	327	K0130124Y21	327

FUEL CONSUMPTION RATES*

60 Hz Natural Gas – scfh (m³/hr)			60 Hz Propane Vapor – scfh (m³/hr)			60 Hz LP Liquid – gph (Lph)		
Percent Load	Standby	Prime	Percent Load	Standby	Prime	Percent Load	Standby	Prime
25%	497 (14.1)	475 (13.5)	25%	194 (5.5)	188 (5.3)	25%	5.1 (19.3)	4.8 (18.2)
50%	768 (21.7)	714 (20.2)	50%	294 (8.3)	274 (7.8)	50%	7.9 (29.9)	7.3 (27.6)
75%	1,017 (28.8)	942 (26.7)	75%	394 (11.2)	364 (10.3)	75%	10.5 (39.7)	9.7 (36.7)
100%	1,280 (36.2)	1,175 (33.3)	100%	487 (13.8)	450 (12.7)	100%	12.9 (48.8)	11.9 (45.0)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby	Prime
Air Flow (Fan Air Flow Across Radiator) - Open Set	scfm (m³/min)	6.589 (186)	6.864 (194)
Coolant Flow	gpm (Lpm)	27.5 (104.1)	27.5 (104.1)
Coolant System Capacity	gal (L)	5.5 (20.8)	5.5 (20.8)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD		
Maximum Additional Radiator Backpressure	in H ₂ O (kPa)	0.5 (0.12)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby	Prime
Flow at Rated Power - scfm (m³/min)	230 (6.5)	208 (5.9)

ENGINE

EXHAUST

		Standby	Prime			Standby	Prime
Rated Engine Speed	RPM	1,800	1,800	Exhaust Flow (Rated Output)	scfm (m³/min)	771 (21.8)	682 (19.3)
Horsepower at Rated kW**	hp	154	139	Maximum Exhaust Backpressure	inHg (kPa)	0.75 (2.54)	0.75 (2.54)
Piston Speed	ft/min (m/min)	1,275 (389)	1,275 (389)	Exhaust Temp (Rated Output - Post Catalyst)	°F (°C)	1,350 (732)	1,315 (713)
BMEP	psi (kPa)	123 (846)	112 (775)				

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
 Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.
 Standby - See Bulletin 0187500SSB
 Demand Response - See Bulletin 10000018250.

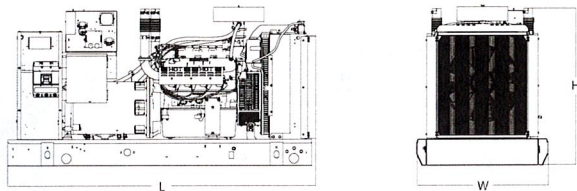
SG100 | 9.0L | 100 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

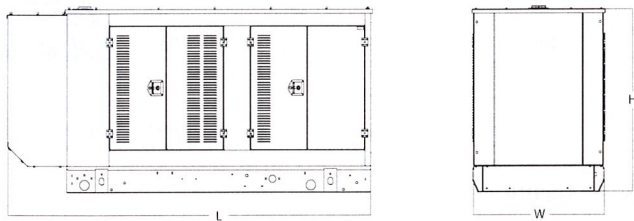
EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*

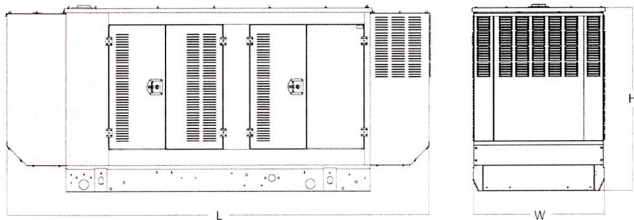
DEMAND RESPONSE READY



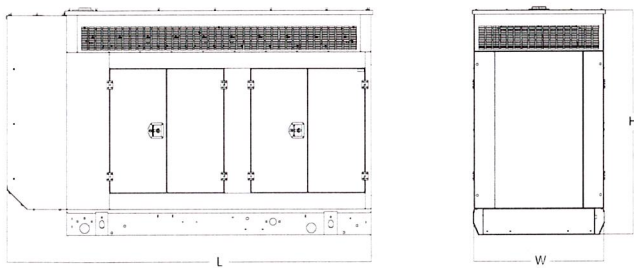
OPEN SET (Includes Exhaust Flex)	
L x W x H - in (mm)	93.0 (2,362) x 40.0 (1,016) x 48.0 (1,219)
Weight - lbs (kg)	Steel: 2,245 - 2,543 (1,018 - 1,153)



WEATHER PROTECTED ENCLOSURE	
L x W x H - in (mm)	129.4 (3,287) x 40.0 (1,016) x 56.2 (1,428)
Weight - lbs (kg)	Steel: 2,774 (1,258) - 3,072 (1,393) Aluminum: 2,504 (1,136) - 2,802 (1,271)



LEVEL 1 SOUND ATTENUATED ENCLOSURE	
L x W x H - in (mm)	129.4 (3,287) x 40.0 (1,016) x 56.2 (1,428)
Weight - lbs (kg)	Steel: 2,935 (1,331) - 3,233 (1,466) Aluminum: 2,630 (1,193) - 2,873 (1,303)



LEVEL 2 SOUND ATTENUATED ENCLOSURE	
L x W x H - in (mm)	111.8 (2,840) x 40.0 (1,016) x 68.6 (1,742)
Weight - lbs (kg)	Steel: 3,062 (1,389) - 3,360 (1,524) Aluminum: 2,630 (1,193) - 2,928 (1,328)

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

LEVEL 2 SOUND ATTENUATED ENCLOSURE

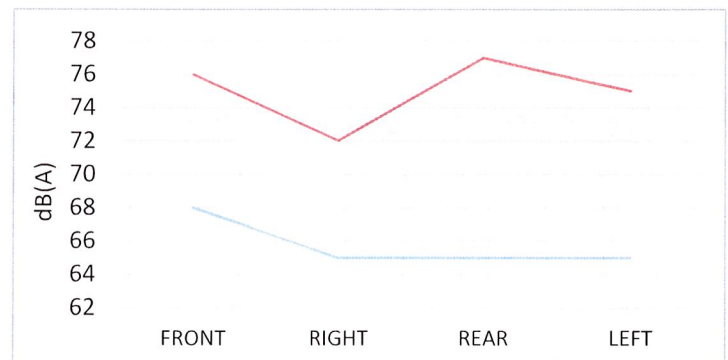
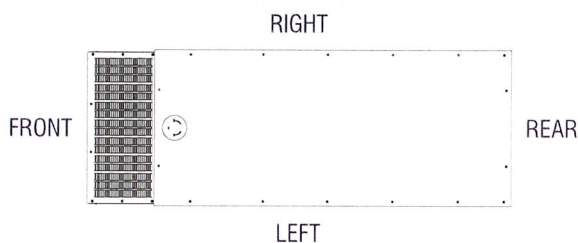
G9.0L SG100

60Hz NO-LOAD, dB(A)
DISTANCE: 7 METERS

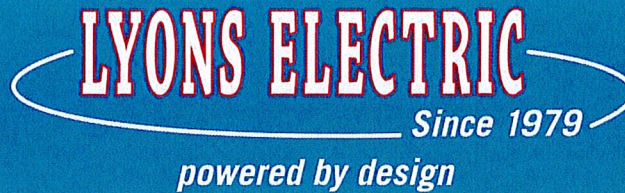
MICROPHONE LOCATION	OCTAVE BAND CENTER FREQUENCY (Hz)									
	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
FRONT	34	53	55	60	64	62	57	57	48	68
RIGHT	39	55	55	56	59	59	57	54	45	65
REAR	39	60	59	55	61	57	50	47	39	65
LEFT	39	53	55	55	59	59	55	54	45	65
AVERAGE	38	55	56	56	61	60	54	53	44	66

60Hz FULL-LOAD, dB(A)
DISTANCE: 7 METERS

MICROPHONE LOCATION	OCTAVE BAND CENTER FREQUENCY (Hz)									
	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
FRONT	39	64	74	63	66	65	58	57	47	76
RIGHT	41	61	70	59	62	60	58	55	45	72
REAR	40	64	76	61	62	58	52	49	40	77
LEFT	42	60	74	58	62	59	56	54	45	75
AVERAGE	40	62	74	60	63	61	56	53	45	75



- All positions at 23 feet (7 meters) from side faces of generator set.
- Test conducted on a 100 foot diameter asphalt surface.
- Sound pressure levels are subject to instrumentation, installation and testing conditions.
- Sound levels are ± 2 dB(A).



ELECTRICAL LIGHTING SUBMITTAL

To: MSI General
Attn: Ken Krahe

Project: Silgan
21027 crossroads circle
Brookfield, WI

Submittal Number: (1)

Division: Electrical
Specification Section: 26 51 00
Description: Product Data- Site Lighting

LYONS ELECTRIC APPROVAL STAMP

☒ **APPROVED**
☐ APPROVED AS NOTED
☐ REVISE & RESUBMIT

Please review and send this submittal back as product will not be ordered until submittal is APPROVED.

Date: July 05, 2024

By: *Kevin Konkell*
Kevin Konkell
Design/Estimating Department Manager
Designer of Engineering Systems
Certified Master Electrician
TC Lyons Electric



Project: SILGAN
Catalog #: ALF LS230 T4 G1 4K
Fixture Type: SP1
Notes: CONTRACTOR-TC LYONS ELECTRIC
BY HEIN ELECTRIC SUPPLY COMPAN

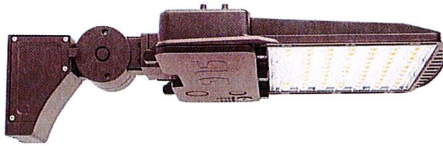
ALF G1

LED Area Light Selectable **CONTRACTOR XP**

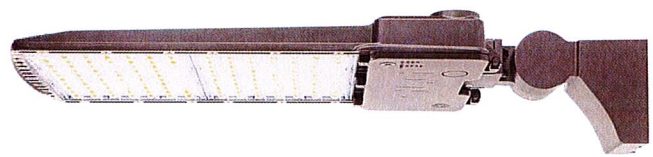
Due to continuous product improvements, specification and/or equipment updates may change without notice.



(Images are shown for illustration purposes only)



ALF Medium Selectable Area Light
(Pictured with Adjustable Pole Mount)



ALF Large Selectable Area Light
(Pictured with Adjustable Pole Mount)

SPECIFICATIONS

Housing One piece, die cast aluminum housing sealed against moisture and environmental contaminants features PIN receptacle.	Mounting Square/Round Pole and Slipfitter Mounting options.	Lumen Output Medium Area Light Field selectable: 10,000 - 23,000 Lm. Large Area Light Field selectable: LS450 model: 20,000 - 45,000 Lm. LS600 model: 47,000 - 60,500 Lm.	Electrical Standard 120-277 VAC HVV Option 277-480 VAC 0-10 V dimming driver.	Warranty 5 year limited warranty. Comprehensive warranty terms can be located on www.slgus.com .	Certifications UL Listed, IP65 rated, FCC compliant, Design Lights Consortium® (DLC) S.I. Premium qualified product.
Ambient Temperature Suitable for use in -40°C to 45°C (-40°F to 113°F). LS600 Model: -40°C to 40°C (-40°F to 104°F).	Efficacy Up to 162 lumens per watt.	CCT and CRI Field selectable: 3000K, 4000K, and 5000K. 70 CRI	Full Cutoff Full cutoff luminaire when installed at a level 90° angle to the ground.	Optics Available in IES Type II, II, IV, and V distributions. Polycarbonate lens. Can conform to dark sky requirements.	Lifespan L70 > 72,000 hours @ 25°C

ORDERING GUIDE

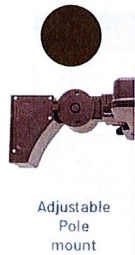
Example: ALF LS220 T3 G1 FSK PSC ASR

Fixture	Selectable Lumen Output	Distribution	Generation	Voltage	Selectable CCT	Photocell	Included Mount	Finish SPECIFY FINISH	Controls (Optional)	Accessories
• ALF LED Area Light-Flexible	• LS230 10,000 Lm / 60 W 15,500 Lm / 85 W 20,000 Lm / 110 W 23,000 Lm / 140 W • LS450 20,000 Lm / 120 W 28,500 Lm / 180 W 38,500 Lm / 240 W 45,000 Lm / 300 W • LS600 [®] 47,000 Lm / 300 W 51,000 Lm / 320 W 56,000 Lm / 360 W 60,500 Lm / 400 W	• T2 Type II • T3 Type III • T4 Type IV • T5 Type V	• G1 First Generation	• BLANK 120-277 V • HVV* 347-480 V	• FSK 3000K 4000K 5000K • FSK [®] 4000K 5000K	PSC Ships with Photocell and Shorting Cap. BLANK Leave this blank when ordering HVU models - these do not include photocell and shorting cap.	• ASR Adjustable Square and Round Pole Mount (ships in same box) • SFD Slipfitter Mount (ships in same box) Additional mounts ship separately. • ALC-SPAR Square and Round Pole Mount • ALC-WMB Wall Mount • ALC-T Trunnion Mount	• BLANK Dark Bronze • B Black • W White • SG Silver Gray • C** Custom Color	• PC-2 Twist-lock Photocell (480V) OSLc Syde • MSB-DCE-06-W-BT5.0 Bluetooth Plug-in Sensor/Controller - Photocell+PIR (MSB-20-L7-W NOT included) • MSB-DCE-06-W Bluetooth Sensor, Daylight Harvest+PIR L3 Medium Bay lens L7 High Bay lens • FCB-DCE-02-W Bluetooth Plug-in Controller Node Standalone Controls • MS-DCE-09-W Standalone Motion Sensor • RM06 Remote controller for standalone motion sensor	• ALF-M-EGS External glare shield for ALF LS230 (available in Dark Bronze, black, silver, and white) • ALF-L-EGS External glare shield for ALF LS450 / LS600 (available in Dark Bronze, black, silver, and white) • ALF-M-HGS Housing side glare shield for ALF LS230 (available in Dark Bronze, black, silver, and white) • ALF-L-HGS Housing side glare shield for ALF LS450 / LS600 (available in Dark Bronze, black, silver, and white) • ALF-M-BLS Back light control for ALF LS230 • ALF-L-BLS Back light control for ALF LS450 / LS600

* HVU option does not ship with PIN receptacle, Photocell, shorting cap, or ASR mount.
**For a custom color, please call to place your order.
① ALF LS600 model is 4000K/5000K switch selectable.

CATALOGUE

DARK BRONZE 120-277V



Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1FSK PSC ASR	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS230 T4 G1FSK PSC ASR	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS230 T5 G1FSK PSC ASR	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1FSK PSC ASR	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T4 G1FSK PSC ASR	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T5 G1FSK PSC ASR	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1FSK PSC ASR	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T4 G1FSK PSC ASR	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T5 G1FSK PSC ASR	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount



Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1FSK PSC SFD	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120V-277V	Included Slipfitter Mount
ALF LS450 T3 G1FSK PSC SFD	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS230 T4 G1FSK PSC SFD	T4	Area Light - 4 Level Wattage Adjustable, T4, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS230 T5 G1FSK PSC SFD	T5	Area Light - 4 Level Wattage Adjustable, T5, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS450 T4 G1FSK PSC SFD	T4	Area Light - 4 Level Wattage Adjustable, T4, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS450 T5 G1FSK PSC SFD	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS600 T3 G1FSK PSC SFD	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS600 T4 G1FSK PSC SFD	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS600 T5 G1FSK PSC SFD	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Slipfitter Mount

DARK BRONZE HVU 277-480V

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1HVU FSK	T3	Area Light - 4 Level Wattage Adjustable, Gen1, High Voltage	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	277 - 480V	NOT INCLUDED
ALF LS450 T3 G1HVU FSK	T3	Area Light - 4 Level Wattage Adjustable, Gen1, High Voltage	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	277 - 480V	NOT INCLUDED
ALF LS600 T3 G1HVU FSK	T3	Area Light - 4 Level Wattage Adjustable, Gen1, High Voltage	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	277 - 480V	NOT INCLUDED

ALF G1



WHITE 120-277V



Adjustable
Pole
mount



Slipfitter
mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1FSK PSC ASR W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1FSK PSC ASR W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1FSK PSC ASR W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS230 T3 G1FSK PSC SFD W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS450 T3 G1FSK PSC SFD W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount



BLACK 120-277V

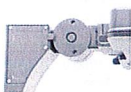


Adjustable
Pole
mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1FSK PSC ASR B	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Black	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1FSK PSC ASR B	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Black	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1FSK PSC ASR B	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Black	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount



SILVER GREY 120-277V



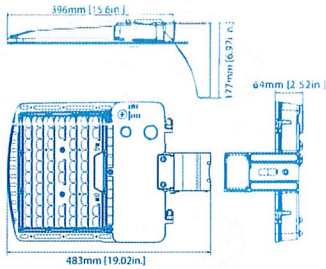
Adjustable
Pole
mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1FSK PSC ASR SG	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Silver Grey	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1FSK PSC ASR SG	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Silver Grey	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1FSK PSC ASR SG	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Silver Grey	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount

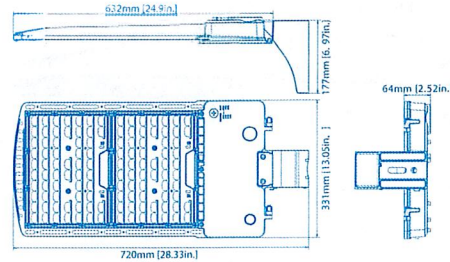
Type II and additional options available upon special request.

ALF DIMENSIONS

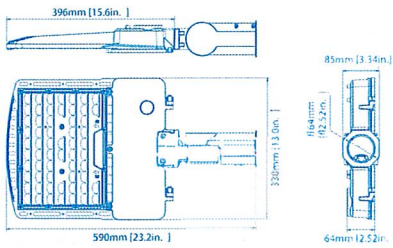
ALF LS230 W/ Adjustable Pole Mount



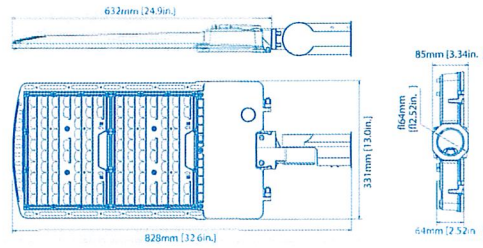
ALF LS450/LS600 W/ Adjustable Pole Mount



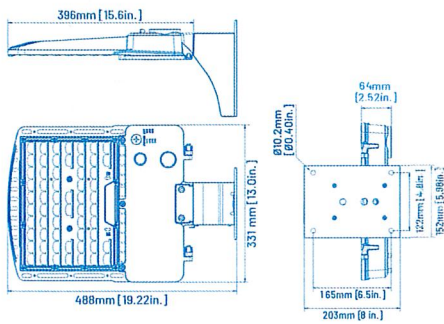
ALF LS230 W/ Adjustable Slipfitter Mount



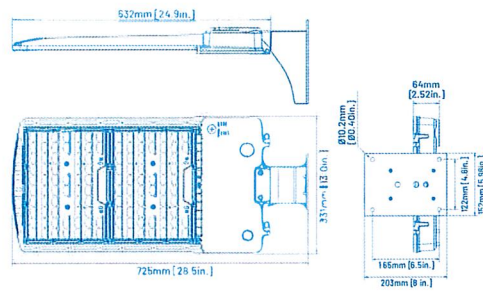
ALF LS450/LS600 W/ Adjustable Slipfitter Mount



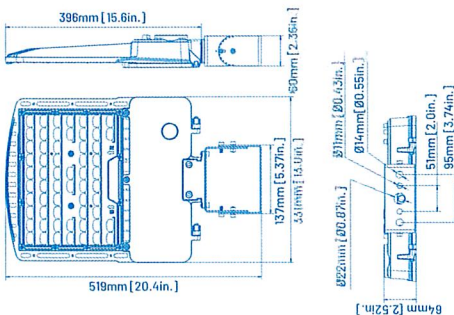
ALF LS230 W/ Wall Mount



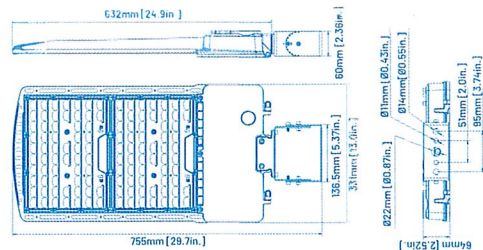
ALF LS450/LS600 W/ Wall Mount



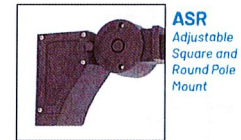
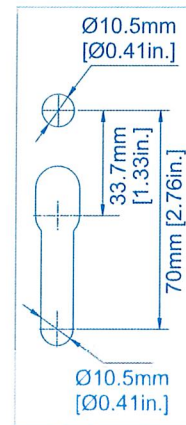
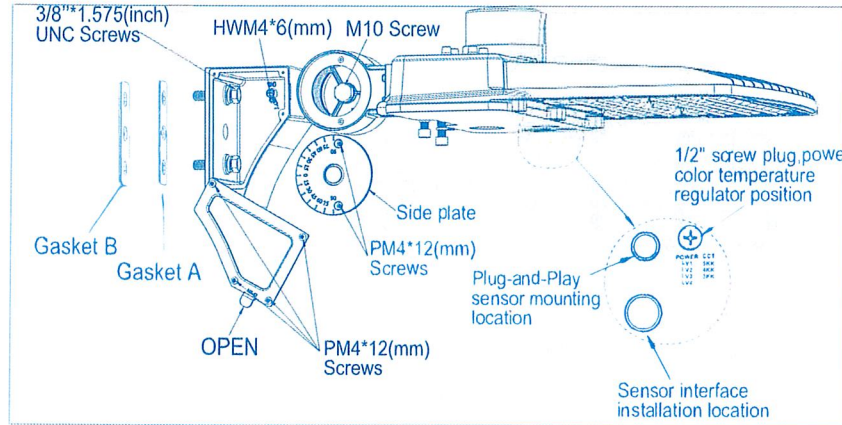
ALF LS230 W/ Trunnion Mount



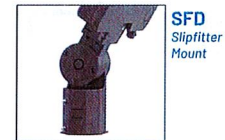
ALF LS450/LS600 W/ Trunnion Mount



MOUNTING DIMENSIONS



ALC-SPAR

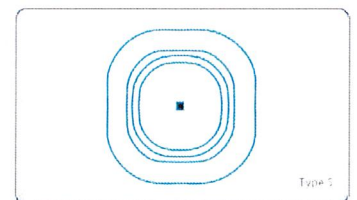
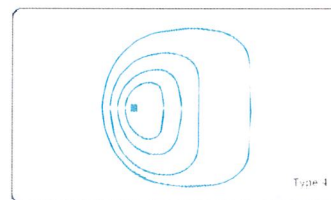
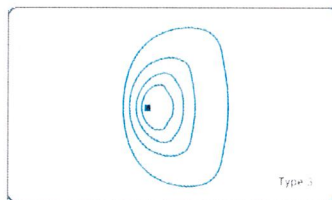
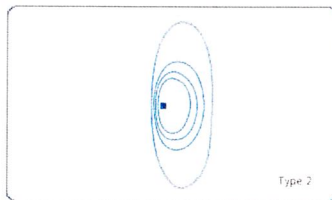


ALC-WMB



ALC-T

PHOTOMETRIC



ALF G1



ELECTRICAL LOAD

	Power Setting	Wattage	Current (A)					Current (A)	
			120V	208V	240V	277V		347V	480V
ALF LS230	Low	60 W	0.5	0.29	0.29	0.22	ALF LS230 HVU	0.17	0.13
	Med	85 W	0.71	0.41	0.41	0.31		0.24	0.18
	High	110 W	0.92	0.53	0.53	0.4		0.32	0.23
	Max	140 W	1.17	0.67	0.67	0.51		0.4	0.29
ALF LS450	Low	120 W	1	0.58	0.5	0.43	ALF LS450 HVU	0.35	0.25
	Med	180 W	1.5	0.87	0.75	0.65		0.52	0.38
	High	240 W	2	1.15	1	0.87		0.69	0.5
	Max	300 W	2.5	1.44	1.25	1.08		0.86	0.63
ALF LS600	Low	300 W	2.5	1.4	1.25	1.1	ALF LS600 HVU	0.86	0.63
	Med	320 W	2.7	1.5	1.3	1.2		0.92	0.67
	High	360 W	3	1.7	1.5	1.3		1	0.75
	Max	400 W	3.3	1.9	1.7	1.4		1.2	0.83

EPA OF AREA LIGHT

ITEM								
140W	0.3632	0.6849	0.8861	0.7264	1.0481	1.2078	1.0481	1.0481
300W / 400W	0.4758	0.8091	1.059	0.9516	1.2849	1.3923	1.2849	1.2849

BUG @5000K

MODEL #	SYSTEM WATTS	VOLTAGE	DIST. TYPE	B	U	G
ALF LS230 T3	140W	120-277V / 277-480V	III	3	0	3
ALF LS450 T3	300W	120-277V / 277-480V	III	4	0	4
ALF LS600 T3	400W	120-277V / 277-480V	III	5	0	5

ALF G1



PERFORMANCE

Series Number	Power Percentage	Wattage	DIST. TYPE	CRI	3000K		4000K		5000K	
					LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
ALF LS230	100%	140 W	III	70	19,200 Lm	143 Lm/W	23,000 Lm	164 Lm/W	21,000 Lm	150 Lm/W
	80%	120 W	III	70	18,000 Lm	150 Lm/W	20,000 Lm	167 Lm/W	18,500 Lm	154 Lm/W
	60%	90 W	III	70	14,000 Lm	156 Lm/W	15,500 Lm	172 Lm/W	14,500 Lm	161 Lm/W
	40%	60 W	III	70	9,700 Lm	162 Lm/W	10,600 Lm	177 Lm/W	10,000 Lm	167 Lm/W
ALF LS450	100%	300 W	III	70	41,000 Lm	137 Lm/W	45,000 Lm	150 Lm/W	42,000 Lm	140 Lm/W
	80%	240 W	III	70	35,000 Lm	146 Lm/W	38,500 Lm	160 Lm/W	36,000 Lm	150 Lm/W
	60%	180 W	III	70	28,000 Lm	156 Lm/W	30,000 Lm	167 Lm/W	28,500 Lm	158 Lm/W
	40%	120 W	III	70	19,200 Lm	160 Lm/W	21,500 Lm	179 Lm/W	20,000 Lm	167 Lm/W
ALF LS600	100%	400 W	III	70	N/A		60,500 Lm	151 Lm/W	60,000 Lm	150 Lm/W
	80%	360 W	III	70			56,000 Lm	156 Lm/W	55,000 Lm	153 Lm/W
	60%	320 W	III	70			51,000 Lm	159 Lm/W	50,000 Lm	156 Lm/W
	40%	300 W	III	70			47,000 Lm	162 Lm/W	46,000 Lm	159 Lm/W

ACCESSORIES



PSC
Twist-lock Photocell (120-277V)
with shorting cap
(ship with all 120-277V ALF models)



PC-2
Twist-lock Photocell (480V)



MSB-DCE-06-W
Bluetooth Plug-in Controller/
Sensor



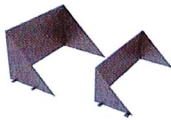
MS-DCE-09-W
Standalone Motion Sensor



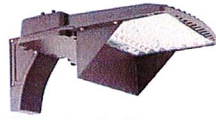
FCB-DCE-02-W
Bluetooth Plug-in Node



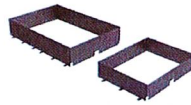
GLARE SHIELDS



ALF-EGS
External Glare Shields



ALF-HGS
Housing Side
Glare Shields



ALF-BLS
Back light control



Catalog Number	Compatible Model	Finish
ALFM-EGS	ALF LS230	Dark Bronze
ALFM-EGS-W	ALF LS230	White
ALFM-EGS-B	ALF LS230	Black
ALFM-EGS-SG	ALF LS230	Silver Grey

Catalog Number	Compatible Model	Finish
ALFL-EGS	ALF LS450 / LS600	Dark Bronze
ALFL-EGS-W	ALF LS450 / LS600	White
ALFL-EGS-B	ALF LS450 / LS600	Black
ALFL-EGS-SG	ALF LS450 / LS600	Silver Grey

Catalog Number	Compatible Model	Finish
ALFM-HGS	ALF LS230	Dark Bronze
ALFM-HGS-W	ALF LS230	White
ALFM-HGS-B	ALF LS230	Black
ALFM-HGS-SG	ALF LS230	Silver Grey

Catalog Number	Compatible Model	Finish
ALFL-HGS	ALF LS450 / LS600	Dark Bronze
ALFL-HGS-W	ALF LS450 / LS600	White
ALFL-HGS-B	ALF LS450 / LS600	Black
ALFL-HGS-SG	ALF LS450 / LS600	Silver Grey

Catalog Number	Compatible Model
ALFM-BLS	ALF LS230
ALFL-BLS	ALF LS450 / LS600

PROJECTED LUMINAIRE MAINTENANCE

ALF LS230 G1 FSK (AT 140W)

LM-80 Testing Details		Test Data for 85°C Case Temp		Test Data for 105°C Case Temp	
		Time (hours)	Lumen Maintenance (%)	Time (hours)	Lumen Maintenance (%)
Total number of units tested per case temp:	30	0	100.00%	0	100.00%
Number of failures:	0	1,000	100.10%	1,000	99.68%
Number of units measured:	30	2,000	99.87%	2,000	99.35%
Test duration (hours):	12,000	3,000	99.56%	3,000	98.90%
Tested drive current (mA):	120	4,000	99.14%	4,000	98.37%
Tested case temperature 1 (T _c , °C):	85	5,000	98.66%	5,000	97.81%
Tested case temperature 2 (T _c , °C):	105	6,000	98.24%	6,000	97.36%
		7,000	97.87%	7,000	96.94%
		8,000	97.54%	8,000	96.48%
		9,000	97.26%	9,000	96.01%
		10,000	96.93%	10,000	95.65%
		11,000	96.74%	11,000	95.10%
		12,000	96.58%	12,000	94.66%

Results	
Time (t) at which to estimate Lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	86.47%
Reported L70 (hours):	>72,000

ALF LS450 G1 FSK (AT 300W)

LM-80 Testing Details		Test Data for 85°C Case Temp		Test Data for 105°C Case Temp	
		Time (hours)	Lumen Maintenance (%)	Time (hours)	Lumen Maintenance (%)
Total number of units tested per case temp:	30	0	100.00%	0	100.00%
Number of failures:	0	1,000	100.10%	1,000	99.68%
Number of units measured:	30	2,000	99.87%	2,000	99.35%
Test duration (hours):	12,000	3,000	99.56%	3,000	98.90%
Tested drive current (mA):	120	4,000	99.14%	4,000	98.37%
Tested case temperature 1 (T _c , °C):	85	5,000	98.66%	5,000	97.81%
Tested case temperature 2 (T _c , °C):	105	6,000	98.24%	6,000	97.36%
		7,000	97.87%	7,000	96.94%
		8,000	97.54%	8,000	96.48%
		9,000	97.26%	9,000	96.01%
		10,000	96.93%	10,000	95.65%
		11,000	96.74%	11,000	95.10%
		12,000	96.58%	12,000	94.66%

Results	
Time (t) at which to estimate Lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	86.47%
Reported L70 (hours):	>72,000

DLC Product ID

MODEL NUMBER	ID NUMBER
ALF LS230 T2 G1 FSK	S-SM1C0N
ALF LS230 T3 G1 FSK	S-IC8M3S
ALF LS230 T4 G1 FSK	S-CNQPL6
ALF LS230 T5 G1 FSK	S-7W51J3
ALF LS450 T2 G1 FSK	S-VGYJNP
ALF LS450 T3 G1 FSK	S-S5LOTG
ALF LS450 T4 G1 FSK	S-9ALW8H
ALF LS450 T5 G1 FSK	S-LOG3PV
ALF LS600 T2 G1 FSK	S-4YMH0H
ALF LS600 T3 G1 FSK	S-TG286H
ALF LS600 T4 G1 FSK	S-LD6LP9
ALF LS600 T5 G1 FSK	S-9YDMMJ

NOTE: ID numbers apply regardless of mount, finish color, or power type.



Project: SILGAN
Catalog #: ALF LS230 T5 G1 4K
Fixture Type: SP2
Notes: CONTRACTOR-TC LYONS ELECTRIC
BY HEIN ELECTRIC SUPPLY COMPANY

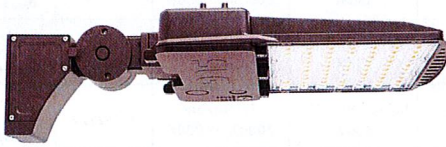
ALF G1

LED Area Light Selectable **CONTRACTOR XP**

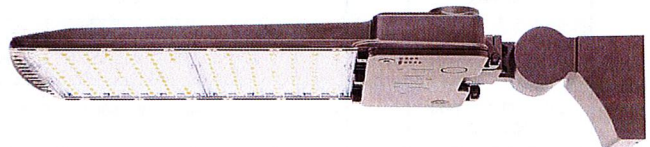
Due to continuous product improvements, specification and/or equipment updates may change without notice.



(Images are shown for illustration purposes only)



ALF Medium Medium Selectable Area Light
(Pictured with Adjustable Pole Mount)



ALF Large Large Selectable Area Light
(Pictured with Adjustable Pole Mount)

SPECIFICATIONS

Housing One piece, die-cast aluminum housing sealed against moisture and environmental contaminants features P/N receptacle.	Mounting Square/Round Pole and Slipfitter Mounting options.	Lumen Output Medium Area Light Field selectable: 10,000 - 23,000 Lm Large Area Light Field selectable: LS450 model: 20,000 - 45,000 Lm LS600 model: 47,000 - 60,500 Lm	Electrical Standard 120-277 VAC HVV Option 277-480 VAC 0-10 V dimming driver.	Warranty 5-year limited warranty. Comprehensive warranty terms can be located on www.slgus.com .	Certifications UL Listed, IP65 rated, FCC compliant, Design Lights Consortium® (DLC) V15.1 Premium qualified product.
Ambient Temperature Suitable for use in -40°C to 45°C (-40°F to 113°F). LS600 Model: -40°C to 40°C (-40°F to 104°F).	Efficacy Up to 162 lumens per watt.	CCT and CRI Field selectable: 3000K, 4000K, and 5000K - 70 CRI	Full Cutoff Full cutoff luminaire when installed at a level 90° angle to the ground	Optics Available in IES Type II, II, IV, and V distributions. Polycarbonate lens. Can conform to dark sky requirements.	Lifespan L70 > 72,000 hours @ 25°C

ORDERING GUIDE

Example: ALF LS220 T3 G1 FSK PSC ASR

Fixture	Selectable Lumen Output	Distribution	Generation	Voltage	Selectable CCT	Photocell	Included Mount	Finish	Controls (Optional)	Accessories
								SPECIFY		
• ALF LED Area Light- Flexible	• LS230 10,000 Lm / 60 W 15,500 Lm / 85 W 20,000 Lm / 110 W 23,000 Lm / 140 W • LS450 20,000 Lm / 120 W 28,500 Lm / 180 W 38,500 Lm / 240 W 45,000 Lm / 300 W • LS600 [Ⓢ] 47,000 Lm / 300 W 51,000 Lm / 320 W 56,000 Lm / 360 W 60,500 Lm / 400 W	• T2 Type II • T3 Type III • T4 Type IV • T5 Type V	• G1 First Generation	• BLANK 120-277 V • HVV [*] 347-480 V	• FSK 3000K 4000K 5000K • FSK [Ⓢ] 4000K 5000K	PSC Ships with Photocell and Shorting Cap. BLANK Leave this blank when ordering HVV models - these do not include photocell and shorting cap.	• ASR Adjustable Square and Round Pole Mount (ships in same box) • SFD Slipfitter Mount (ships in same box) <i>Additional mounts ship separately.</i> • ALC-SPAR Square and Round Pole Mount • ALC-WMB Wall Mount • ALC-T Trunnion Mount	• BLANK Dark Bronze • B Black • W White • SG Silver Gray • C** Custom Color	• PC-2 Twist-lock Photocell (480V) OSLG Sync • MSB-DCE-06-W-BT5.0 Bluetooth Plug-in Sensor/Controller - Photocell+PIR (MSB-20-L7-W NOT included) • MSB-DCE-06-W Bluetooth Sensor, Daylight Harvest+PIR • L3 Medium Bay lens • L7 High Bay lens • FCB-DCE-02-W Bluetooth Plug-in Controller Node Standalone Controls • MS-DCE-09-W Standalone Motion Sensor • RM06 Remote controller for standalone motion sensor	• ALF-M-EGS External glare shield for ALF LS230 (available in Dark Bronze, black, silver, and white) • ALF-L-EGS External glare shield for ALF LS450 / LS600 (available in Dark Bronze, black, silver, and white) • ALF-M-HGS Housing side glare shield for ALF LS230 (available in Dark Bronze, black, silver, and white) • ALF-L-HGS Housing side glare shield for ALF LS450 / LS600 (available in Dark Bronze, black, silver, and white) • ALF-M-BLS Back light control for ALF LS230 • ALF-L-BLS Back light control for ALF LS450 / LS600

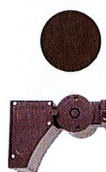
* HVV option does not ship with PIN receptacle, Photocell, shorting cap, or ASR mount.

**For a custom color, please call to place your order.

Ⓢ ALF LS600 model is 4000K/5000K switch selectable.

CATALOGUE

DARK BRONZE 120-277V



Adjustable
Pole
mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1 FSK PSC ASR	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS230 T4 G1 FSK PSC ASR	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS230 T5 G1 FSK PSC ASR	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1 FSK PSC ASR	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T4 G1 FSK PSC ASR	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T5 G1 FSK PSC ASR	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1 FSK PSC ASR	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T4 G1 FSK PSC ASR	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T5 G1 FSK PSC ASR	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount



Slipfitter
mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1 FSK PSC SFD	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120V-277V	Included Slipfitter Mount
ALF LS450 T3 G1 FSK PSC SFD	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS230 T4 G1 FSK PSC SFD	T4	Area Light - 4 Level Wattage Adjustable, T4, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS230 T5 G1 FSK PSC SFD	T5	Area Light - 4 Level Wattage Adjustable, T5, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS450 T4 G1 FSK PSC SFD	T4	Area Light - 4 Level Wattage Adjustable, T4, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS450 T5 G1 FSK PSC SFD	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS600 T3 G1 FSK PSC SFD	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS600 T4 G1 FSK PSC SFD	T4	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS600 T5 G1 FSK PSC SFD	T5	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Slipfitter Mount

DARK BRONZE HVU 277-480V

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1 HVU FSK	T3	Area Light - 4 Level Wattage Adjustable, Gen1, High Voltage	Selectable 10,000 - 23,000 Lm	Selectable 60 - 140W	Selectable 3000K - 5000K	277 - 480V	NOT INCLUDED
ALF LS450 T3 G1 HVU FSK	T3	Area Light - 4 Level Wattage Adjustable, Gen1, High Voltage	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	277 - 480V	NOT INCLUDED
ALF LS600 T3 G1 HVU FSK	T3	Area Light - 4 Level Wattage Adjustable, Gen1, High Voltage	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	277 - 480V	NOT INCLUDED

ALF G1



WHITE 120-277V



Adjustable Pole mount



Slipfitter mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1 FSK PSC ASR W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 10,000 - 23,000 Lm	Selectable 80 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1 FSK PSC ASR W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1 FSK PSC ASR W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS230 T3 G1 FSK PSC SFD W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 10,000 - 23,000 Lm	Selectable 80 - 140W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount
ALF LS450 T3 G1 FSK PSC SFD W	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, White	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Slipfitter Mount



BLACK 120-277V

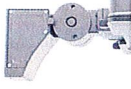


Adjustable Pole mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1 FSK PSC ASR B	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Black	Selectable 10,000 - 23,000 Lm	Selectable 80 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1 FSK PSC ASR B	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Black	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1 FSK PSC ASR B	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Black	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount



SILVER GREY 120-277V



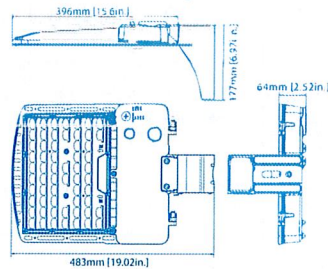
Adjustable Pole mount

Catalog Number	Dist.	Description	Lumens	Watts	CCT	Voltage	Mount
ALF LS230 T3 G1 FSK PSC ASR SG	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Silver Grey	Selectable 10,000 - 23,000 Lm	Selectable 80 - 140W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS450 T3 G1 FSK PSC ASR SG	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Silver Grey	Selectable 20,000 - 45,000 Lm	Selectable 120 - 300W	Selectable 3000K - 5000K	120-277V	Included Adjustable Pole Mount
ALF LS600 T3 G1 FSK PSC ASR SG	T3	Area Light - 4 Level Wattage Adjustable, Gen1, With 3 Pin Photocell & Shorting Cap, Silver Grey	Selectable 47,000 - 60,500 Lm	Selectable 300 - 400W	Selectable 4000K - 5000K	120-277V	Included Adjustable Pole Mount

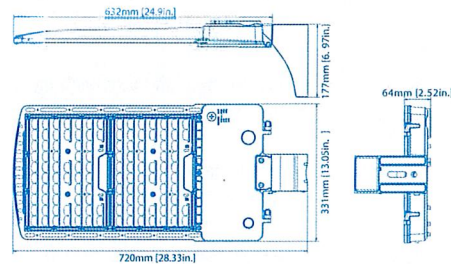
Type II and additional options available upon special request.

ALF DIMENSIONS

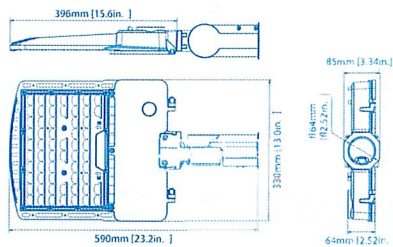
ALF LS230 W/ Adjustable Pole Mount



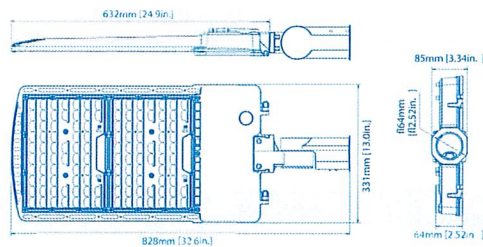
ALF LS450/LS600 W/ Adjustable Pole Mount



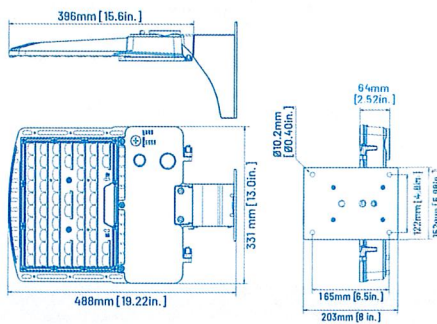
ALF LS230 W/ Adjustable Slipfitter Mount



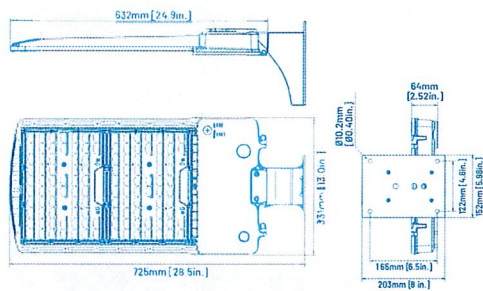
ALF LS450/LS600 W/ Adjustable Slipfitter Mount



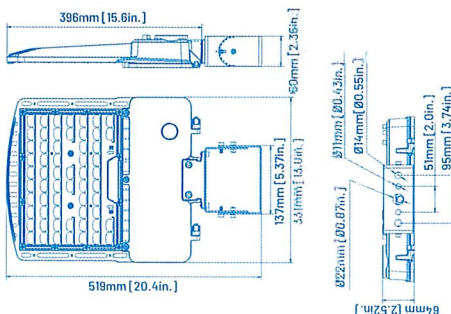
ALF LS230 W/ Wall Mount



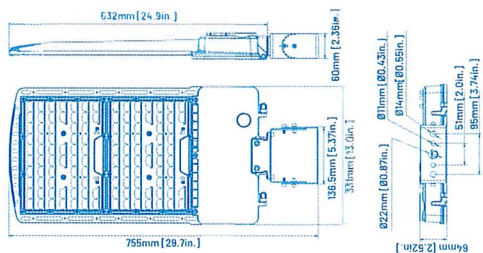
ALF LS450/LS600 W/ Wall Mount



ALF LS230 W/ Trunnion Mount



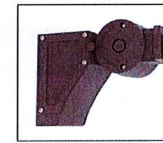
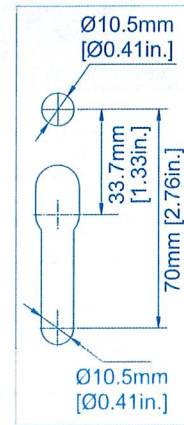
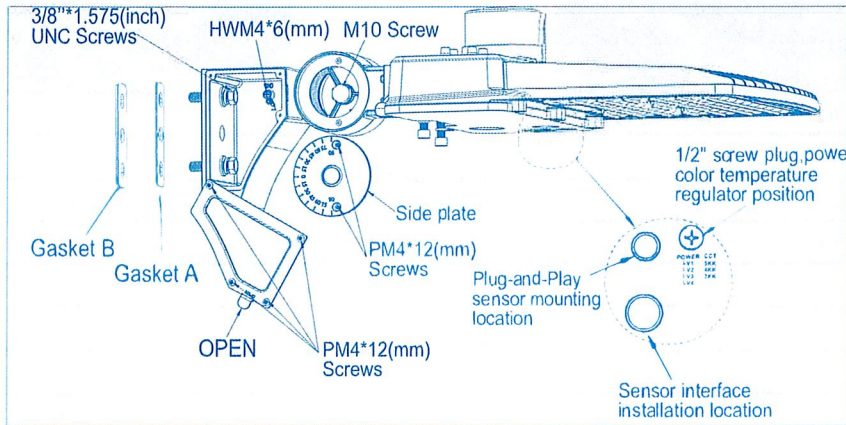
ALF LS450/LS600 W/ Trunnion Mount



ALF G1



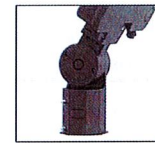
MOUNTING DIMENSIONS



ASR
Adjustable
Square and
Round Pole
Mount



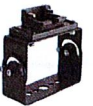
ALC-SPAR



SFD
Slipfitter
Mount

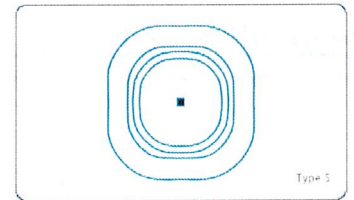
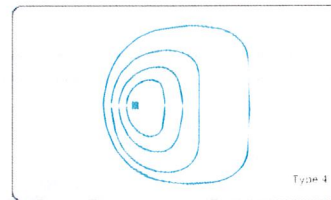
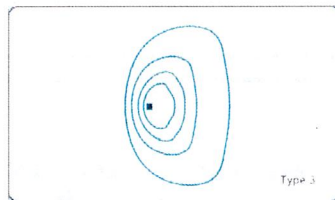
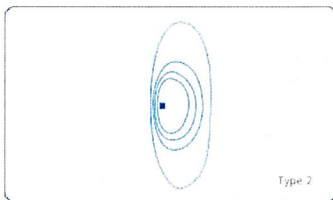


ALC-WMB



ALC-T








PHOTOMETRIC



ELECTRICAL LOAD

	Power Setting	Wattage	Current (A)					Current (A)	
			120V	208V	240V	277V		347V	480V
ALF LS230	Low	60 W	0.5	0.29	0.29	0.22	ALF LS230 HVU	0.17	0.13
	Med	85 W	0.71	0.41	0.41	0.31		0.24	0.18
	High	110 W	0.92	0.53	0.53	0.4		0.32	0.23
	Max	140 W	1.17	0.67	0.67	0.51		0.4	0.29
ALF LS450	Low	120 W	1	0.58	0.5	0.43	ALF LS450 HVU	0.35	0.25
	Med	180 W	1.5	0.87	0.75	0.65		0.52	0.38
	High	240 W	2	1.15	1	0.87		0.69	0.5
	Max	300 W	2.5	1.44	1.25	1.08		0.86	0.63
ALF LS600	Low	300 W	2.5	1.4	1.25	1.1	ALF LS600 HVU	0.86	0.63
	Med	320 W	2.7	1.5	1.3	1.2		0.92	0.67
	High	360 W	3	1.7	1.5	1.3		1	0.75
	Max	400 W	3.3	1.9	1.7	1.4		1.2	0.83

EPA OF AREA LIGHT

ITEM							
140W	0.3632	0.6849	0.8861	0.7264	1.0481	1.2078	1.0481
300W / 400W	0.4758	0.8091	1.059	0.9516	1.2849	1.3923	1.2849

BUG @5000K

MODEL #	SYSTEM WATTS	VOLTAGE	DIST. TYPE	B	U	G
ALF LS230 T3	140W	120-277V / 277-480V	III	3	0	3
ALF LS450 T3	300W	120-277V / 277-480V	III	4	0	4
ALF LS600 T3	400W	120-277V / 277-480V	III	5	0	5

ALF G1



PERFORMANCE

Series Number	Power Percentage	Wattage	DIST. TYPE	CRI	3000K		4000K		5000K	
					LUMENS	LPW	LUMENS	LPW	LUMENS	LPW
ALF LS230	100%	140 W	III	70	19,200 Lm	143 Lm/W	23,000 Lm	164 Lm/W	21,000 Lm	150 Lm/W
	80%	120 W	III	70	18,000 Lm	150 Lm/W	20,000 Lm	167 Lm/W	18,500 Lm	154 Lm/W
	60%	90 W	III	70	14,000 Lm	156 Lm/W	15,500 Lm	172 Lm/W	14,500 Lm	161 Lm/W
	40%	60 W	III	70	9,700 Lm	162 Lm/W	10,600 Lm	177 Lm/W	10,000 Lm	167 Lm/W
ALF LS450	100%	300 W	III	70	41,000 Lm	137 Lm/W	45,000 Lm	150 Lm/W	42,000 Lm	140 Lm/W
	80%	240 W	III	70	35,000 Lm	146 Lm/W	38,500 Lm	160 Lm/W	36,000 Lm	150 Lm/W
	60%	180 W	III	70	28,000 Lm	156 Lm/W	30,000 Lm	167 Lm/W	28,500 Lm	158 Lm/W
	40%	120 W	III	70	19,200 Lm	160 Lm/W	21,500 Lm	179 Lm/W	20,000 Lm	167 Lm/W
ALF LS600	100%	400 W	III	70	N/A		60,500 Lm	151 Lm/W	60,000 Lm	150 Lm/W
	80%	360 W	III	70			56,000 Lm	156 Lm/W	55,000 Lm	153 Lm/W
	60%	320 W	III	70			51,000 Lm	159 Lm/W	50,000 Lm	156 Lm/W
	40%	300 W	III	70			47,000 Lm	162 Lm/W	46,000 Lm	159 Lm/W

ACCESSORIES



PSC
Twist-lock Photocell (120-277V)
with shorting cap
(ship with all 120-277V ALF models)



PC-2
Twist-lock Photocell (480V)



MSB-DCE-06-W
Bluetooth Plug-in Controller/
Sensor



MS-DCE-09-W
Standalone Motion Sensor



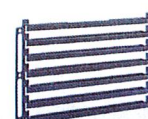
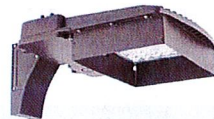
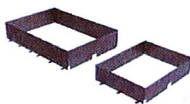
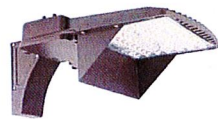
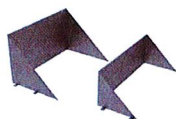
FCB-DCE-02-W
Bluetooth Plug-in Node



RM06
Remote for motion sensor



GLARE SHIELDS



ALF-EGS
External Glare Shields

Catalog Number	Compatible Model	Finish
ALFM-EGS	ALF LS230	Dark Bronze
ALFM-EGS-W	ALF LS230	White
ALFM-EGS-B	ALF LS230	Black
ALFM-EGS-SG	ALF LS230	Silver Grey
ALFL-EGS	ALF LS450 / LS600	Dark Bronze
ALFL-EGS-W	ALF LS450 / LS600	White
ALFL-EGS-B	ALF LS450 / LS600	Black
ALFL-EGS-SG	ALF LS450 / LS600	Silver Grey

ALF-HGS
Housing Side
Glare Shields

Catalog Number	Compatible Model	Finish
ALFM-HGS	ALF LS230	Dark Bronze
ALFM-HGS-W	ALF LS230	White
ALFM-HGS-B	ALF LS230	Black
ALFM-HGS-SG	ALF LS230	Silver Grey
ALFL-HGS	ALF LS450 / LS600	Dark Bronze
ALFL-HGS-W	ALF LS450 / LS600	White
ALFL-HGS-B	ALF LS450 / LS600	Black
ALFL-HGS-SG	ALF LS450 / LS600	Silver Grey

ALF-BLS
Back light control

Catalog Number	Compatible Model
ALFM-BLS	ALF LS230
ALFL-BLS	ALF LS450 / LS600

PROJECTED LUMINAIRE MAINTENANCE

ALF LS230 G1 FSK (AT 140W)

LM-80 Testing Details	
Total number of units tested per case temp:	30
Number of failures:	0
Number of units measured:	30
Test duration (hours):	12,000
Tested drive current (mA):	120
Tested case temperature 1 (T _c , °C):	85
Tested case temperature 2 (T _c , °C):	105

Test Data for 85°C Case Temp	
Time (hours)	Lumen Maintenance (%)
0	100.00%
1,000	100.10%
2,000	99.87%
3,000	99.56%
4,000	99.14%
5,000	98.66%
6,000	98.24%
7,000	97.87%
8,000	97.54%
9,000	97.26%
10,000	96.93%
11,000	96.74%
12,000	96.58%

Test Data for 105°C Case Temp	
Time (hours)	Lumen Maintenance (%)
0	100.00%
1,000	99.68%
2,000	99.35%
3,000	98.90%
4,000	98.37%
5,000	97.81%
6,000	97.36%
7,000	96.94%
8,000	96.48%
9,000	96.01%
10,000	95.65%
11,000	95.10%
12,000	94.66%

Results	
Time (t) at which to estimate Lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	86.47%
Reported L70 (hours):	>72,000

ALF LS450 G1 FSK (AT 300W)

LM-80 Testing Details	
Total number of units tested per case temp:	30
Number of failures:	0
Number of units measured:	30
Test duration (hours):	12,000
Tested drive current (mA):	120
Tested case temperature 1 (T _c , °C):	85
Tested case temperature 2 (T _c , °C):	105

Test Data for 85°C Case Temp	
Time (hours)	Lumen Maintenance (%)
0	100.00%
1,000	100.10%
2,000	99.87%
3,000	99.56%
4,000	99.14%
5,000	98.66%
6,000	98.24%
7,000	97.87%
8,000	97.54%
9,000	97.26%
10,000	96.93%
11,000	96.74%
12,000	96.58%

Test Data for 105°C Case Temp	
Time (hours)	Lumen Maintenance (%)
0	100.00%
1,000	99.68%
2,000	99.35%
3,000	98.90%
4,000	98.37%
5,000	97.81%
6,000	97.36%
7,000	96.94%
8,000	96.48%
9,000	96.01%
10,000	95.65%
11,000	95.10%
12,000	94.66%

Results	
Time (t) at which to estimate Lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	86.47%
Reported L70 (hours):	>72,000

DLC Product ID

MODEL NUMBER	ID NUMBER
ALF LS230 T2 G1 FSK	S-SM1CON
ALF LS230 T3 G1 FSK	S-IC8M3S
ALF LS230 T4 G1 FSK	S-CNQPL6
ALF LS230 T5 G1 FSK	S-7W51J3
ALF LS450 T2 G1 FSK	S-VGYJNP
ALF LS450 T3 G1 FSK	S-S5LOTG
ALF LS450 T4 G1 FSK	S-9ALW8H
ALF LS450 T5 G1 FSK	S-LOG3PV
ALF LS600 T2 G1 FSK	S-4YMH0H
ALF LS600 T3 G1 FSK	S-TG286H
ALF LS600 T4 G1 FSK	S-LD6LP9
ALF LS600 T5 G1 FSK	S-9YDMMJ

NOTE: ID numbers apply regardless of mount, finish color, or power type.

