

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage	Pole Height
□	SLA	8	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-VSQ-M-80LED-700mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 4 CIRCUIT BOARDS EACH WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	EIGHTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION, PRORATED BASED ON RZR-G-120LED ITL & WORSE CASE RZR-80PLED ITL VOLTAGE (120VAC, 60Hz) TO THE DRIVERS.	80	RZR-PLED-VSQ-M-80LED-700mA-NW.IES	278	0.96	173.6	30 ft
□	SLB	43	U.S. ARCHITECTURAL LIGHTING	RZR-WM1-III-20PLED-350mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 1 CIRCUIT BOARD WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	TWENTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION, PRORATED LUMENS BASED ON ITL83067 & TYPE IV SCALE FACTOR	20	RZR-WM1-III-20PLED-NW-350.IES	125	0.96	22.3	15 ft
○	SLC	12	U.S. ARCHITECTURAL LIGHTING	DSAP1-VLED-VSQ-48LED-350mA-NW	FABRICATED METAL HOUSING, 1 LED MODULE CONSISTING OF 48 LEDs, VERTICAL BASE-UP POSITION, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, CLEAR FLAT GLASS LENS.		48	DSAP1-VLED-VSQ-48LED-350mA-NW.IES	125	0.96	53.1	20 ft
□	SLD	16	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-VSQ-M-40LED-525mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 2 CIRCUIT BOARDS EACH WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION, PRORATED BASED ON RZR-G-120LED ITL & WORSE CASE RZR-80PLED ITL VOLTAGE (120VAC, 60Hz) TO THE DRIVERS.	40	RZR-PLED-VSQ-M-40LED-525mA-NW.IES	228	0.96	64.7	30 ft
□	SLF	19	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-VSQ-M-40LED-350mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 2 CIRCUIT BOARDS EACH WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION, PRORATED BASED ON RZR-G-120LED ITL & WORSE CASE RZR-80PLED ITL VOLTAGE (120VAC, 60Hz) TO THE DRIVERS.	40	RZR-PLED-VSQ-M-40LED-350mA-NW.IES	157	0.96	42.7	30 ft

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Stat Zone # 1 Building 1	X	11.1c	2.9f	0.4c	7.3i	2.8i
Stat Zone # 2 Building 2	X	11.1c	1.9f	0.8c	3.2i	1.8i
Stat Zone # 3 Building 3	X	11.1c	2.4f	0.6c	4.0i	1.8i
Stat Zone # 4 Building 4	X	11.1c	2.1f	0.6c	3.5i	1.8i
Stat Zone # 5 Building 5	X	0.7c	1.4f	0.4c	3.5i	1.8i
Stat Zone # 6 Building 6	X	11.1c	1.9f	0.4c	4.8i	2.8i
Stat Zone # 7 Building 7	X	11.1c	2.5f	0.4c	6.3i	2.8i
Stat Zone # 8 Building 8	X	0.7c	1.2f	0.4c	3.0i	1.8i
Stat Zone # 9 Building 9	X	0.7c	1.2f	0.4c	3.0i	1.8i
Stat Zone # 10 Building 10	X	0.9c	1.9f	0.5c	3.8i	1.8i
Stat Zone # 11 Building 11	X	0.7c	1.0f	0.4c	2.5i	1.8i
Stat Zone # 12 Building 12	X	11.1c	2.4f	0.6c	4.0i	1.8i
Stat Zone # 13 Entrance Balch	X	11.1c	2.3f	0.4c	5.8i	2.8i
Stat Zone # 14 Entrance Clubhouse	X	11.1c	3.1f	0.6c	5.2i	1.8i

SOLID STATE AREA LIGHTING RAZAR SERIES-LED SPECIFICATIONS

OPTICAL HOUSING
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance <±.003") to facilitate thermal transfer of heat to housing and cooling fins. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188".

ELECTRICAL HOUSING w/ INTEGRATED ARM
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly with integral cooling fins surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188". Cast and integral support arm combine to create one assembly. Minimum wall thickness is .188". Cast and integral support arm combine to create one assembly. Minimum wall thickness is .188".

LED'S
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED reflector. In asymmetric distributions, a micro-reflector inside the reflector re-directs the house side emitter output towards the street side and functions as a house side shielding element. Reflector are injection molded H12 acrylic. Each LED reflector is sealed to the PCB over an emitter and all reflectors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED reflectors produce stoneware splay/area distributions. Panels are held recessed and held recessed in .50" increments.

LED DRIVERS
Constant current electronics with a power factor of >.90 and a minimum operating temperature of -40°F. Drivers are 1/2" dia. and are mounted directly against the Electrical Housing to facilitate thermal transfer. Held down by universal clamps to facilitate easy removal. In-line terminal blocks facilitate wiring between the driver and optical array. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. (0-10V dimmable driver is standard. Driver has a minimum of 3KV minimal surge protection. Luminaires supplied with 20KV surge protector for field accessible installation.)

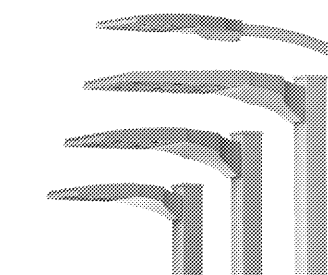
LED Emitter's
High output LED's are utilized with drive currents ranging from 350mA to 1000mA, 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

FINISH
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four stop media blast and non-phosphate pretreatment for protection and paint adhesion. 402°F bake for maximum hardness and durability.

REPLACEABLE ELECTRICAL HOUSING
Replaces standard Electrical Housing. 2 3/8" O.D. Horizontal Mount. Two (2) straps, spaced (2) bolts each are used to secure the housing. The top of the lamp is held in position by the angle of the mounting plate. The angle of the mounting plate is 1.5" ± .1" up from the horizontal. All hardware is standard.

PROJECT NAME: SLA, SLD & SLF

PROJECT TYPE:



RAZAR (MODEL'S: RZR-M, RZR-R, RZR-S & RZR-MAF*)

FIXTURE	A	B	C	D
RZR-G	1.0"	1.8"	1.8"	1.8"
RZR-R	1.0"	1.8"	1.8"	1.8"
RZR-S	1.0"	1.8"	1.8"	1.8"
RZR-MAF*	1.0"	1.8"	1.8"	1.8"

*OLD PENDING AS OF 7/17



SOLID STATE AREA LIGHTING RAZAR WALLMOUNT-LED SPECIFICATIONS

OPTICAL HOUSING
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance <±.003") to facilitate thermal transfer of heat to housing and cooling fins. The Optical Housing seals to the Electrical Housing forming a unified assembly. The minimum wall thickness is .188".

ELECTRICAL HOUSING
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly. Minimum wall thickness is .188". Reflector Mounting Plate allows for mounting over a recessed door. Electrical Housing anchors on the top edge of the Mounting Plate and also has slots for screws that hold the housing together. The Electrical Housing is .188" thick.

LED'S
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED reflector. In asymmetric distributions, a micro-reflector inside the reflector re-directs the house side emitter output towards the street side and functions as a house side shielding element. Reflector are injection molded H12 acrylic. Each LED reflector is sealed to the PCB over an emitter and all reflectors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED reflectors produce stoneware splay/area distributions. Panels are held recessed and held recessed in .50" increments.

LED DRIVERS
Constant current electronics with a power factor of >.90 and a minimum operating temperature of -40°F. Drivers are 1/2" dia. and are mounted to a driver assembly plate that has drilled holes to facilitate ease of assembly. Removable for future installation. Quick disconnects for incoming power and output assembly plate are provided. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. (0-10V dimming, 347V-480V, 50/60Hz also available on some models. Surge protector supplied for field installation of the most commonly accessible location.)

LED Emitter's
High output LED's are utilized with drive currents ranging from 350mA to 1000mA, 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

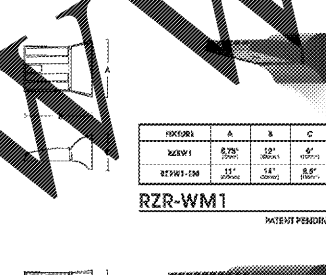
AMBER LED'S
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. PCA (True Amber) LED's utilize materials that emit light in the amber spectral bandwidth only without the use of phosphors.

FINISH
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four stop media blast and non-phosphate pretreatment for protection and paint adhesion. 402°F bake for maximum hardness and durability.

REPLACEABLE ELECTRICAL HOUSING
Replaces standard Electrical Housing. 2 3/8" O.D. Horizontal Mount. Two (2) straps, spaced (2) bolts each are used to secure the housing. The top of the lamp is held in position by the angle of the mounting plate. The angle of the mounting plate is 1.5" ± .1" up from the horizontal. All hardware is standard.

PROJECT NAME: SLB

PROJECT TYPE:



RZR-WM1

FIXTURE	A	B	C
RZR-WM1	1.0"	1.8"	1.8"

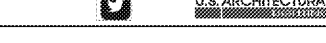


RZR-WM2

FIXTURE	A	B	C
RZR-WM2	1.0"	1.8"	1.8"



RZR-WM3



SOLID STATE AREA LIGHTING DSAP SERIES-LED SPECIFICATIONS

HOUSING
Upper housing is heavy gauge cast aluminum (DSAP25) or 0.125" thick spun aluminum with recess (DSAP1). Lower housing is 0.060" thick spun aluminum with integrated LED module seal. Lower housing is vented at top and bottom for convective cooling of LED module. Top Driver chamber is isolated from LED module chamber. Integral heat coupling mount is welded to housing and facilitates quick leveling and installation.

LED DRIVERS
Low copper A356 alloy (<0.2% copper) cast aluminum housing integrated clear tempered glass lens sealed with a continuous silicone gasket. Optics emitless (LED's) and smaller Reflector-Pharm optics, and seals the module from water intrusion and environmental contaminants. Module is sealed to meet an IP67 rating. Each emitter is optically controlled by a Reflector-Pharm injection molded from H12 acrylic. (3 type per module, one from 0°-50°, one from 50°-65°, one from 65°-72°). Each Reflector-Pharm has indexing pins for aiming and is secured to an optical plate made of milled black anodized aluminum. The optical plate locates every Reflector-Pharm over an emitter. Reflector-Pharm are secured to the optical plate with a UV curing adhesive. The Reflector-Pharm are arrayed to produce LED Type II, III, IV, and VSA distributions. The entire Optical Module is held rotatable in 90° increments. Both module and drivers are factory wired using water resistant, insulated cord.

LED DRIVERS
Drivers are UL and cUL recognized mounted on a single plate and factory provided with quick-disconnect plugs. Constant current driver is electronic and has a power factor of >.90 and a minimum operating temperature of -40°F. Drivers accept an input of 120-277V, 50/60Hz or 347-480V, 50/60Hz. (0-10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaires supplied with 20KV surge protector for field accessible installation.)

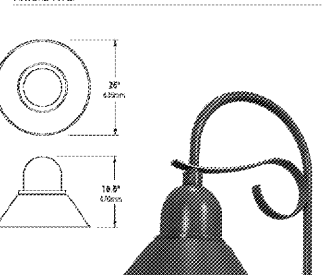
LED Emitter's
High output LED's are utilized with drive currents ranging from 350mA to 1000mA, 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

AMBER LED'S
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. PCA (True Amber) LED's utilize materials that emit light in the amber spectral bandwidth only without the use of phosphors.

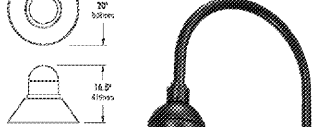
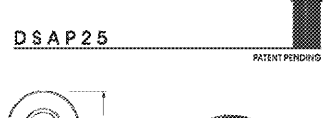
FINISH
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four stop media blast and non-phosphate pretreatment for protection and paint adhesion. 402°F bake for maximum hardness and durability. Texture finish is standard.

PROJECT NAME: SLC

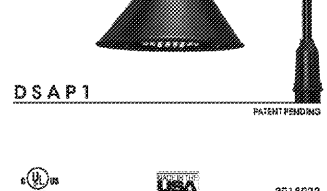
PROJECT TYPE:



DSAP25



DSAP1



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JOB PROGRESS:
ITEM: DATE:

REVISIONS:
TAG: DATE:
SITE REVISION 11-18-2018

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HUNTSVILLE APARTMENTS
AN APARTMENT COMMUNITY
FOR
JAMES BOBO
HUNTSVILLE, ALABAMA

JOB NUMBER:

DRAWN BY:

CHECKED BY:

SITE PLAN LIGHTING COMPLIANCE

SHEET NO.

E-2.3