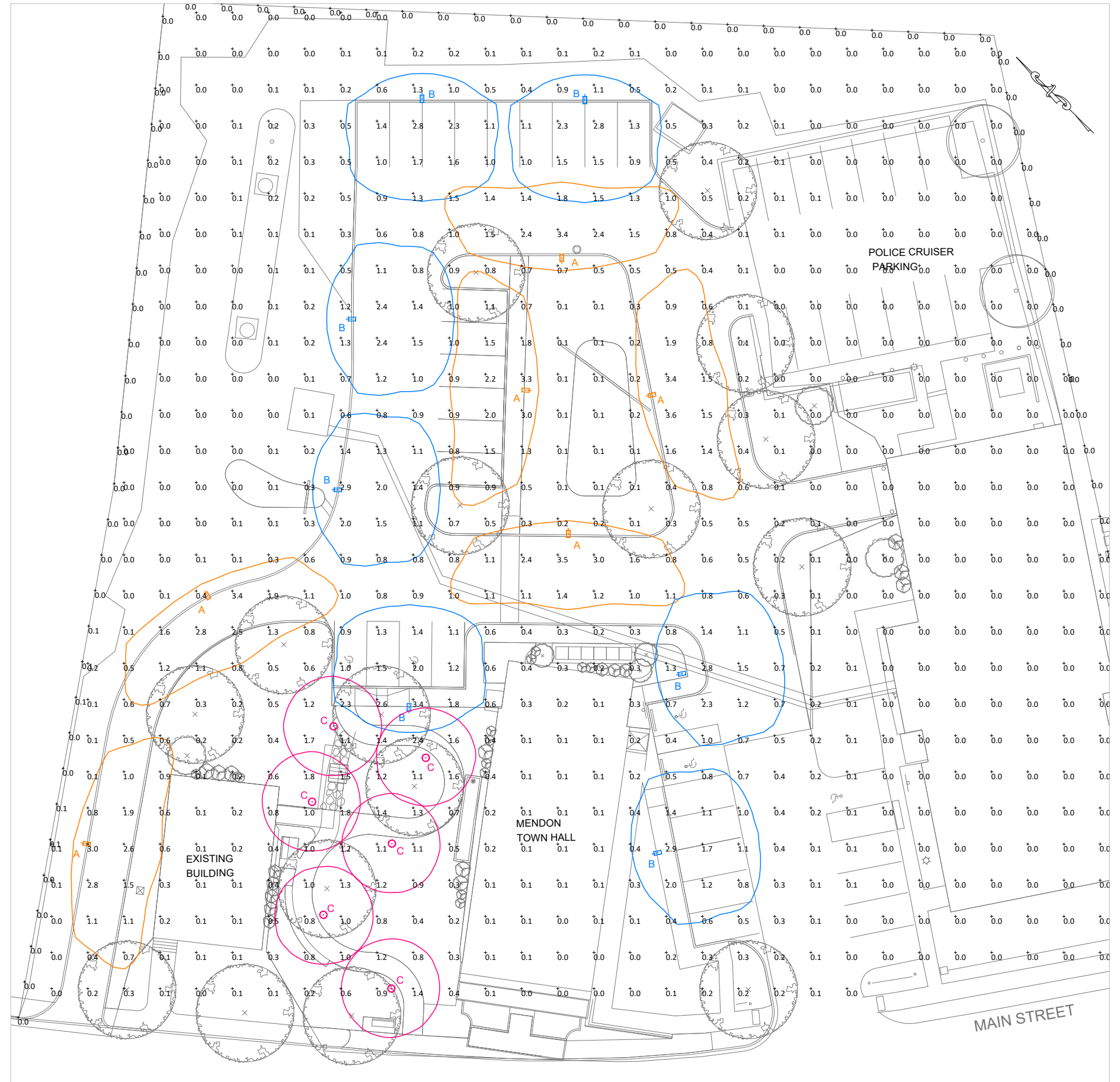


Photometric Study

Luminaire Schedule											
Symbol	Label	Qty	Description	Arrangement	IES Class	CCT	MH	LLF	Lumens	Watts	Filename
	A	6	Lumecon: LDS-SAL, 30W, T3, w/ shield	Single	Type II	4000K	15	0.900	2515	30	LDS-SAL-30-DB-T3-1-40-MAS-BL.ies
	B	7	Lumecon: LDS-SAL, 45W, T4, w/ shield	Single	Type III	4000K	15	0.900	2682	45	LDS-SAL-45-DB-T4-1-40-MAS-BL.ies
	C	6	Lumecon: LBOL2 Bollard	Single	Type VS	4000K	3	0.900	1764	19	LBOL2-SERIES-ROUND.ies

Calculation Summary - Area							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking	Illuminance	Fc	1.3	3.6	0.5	2.6	7.2
Property Line	Illuminance	Fc	0.0	0.1	0.0	N.A.	N.A.





Catalog Number:	
Project:	Mendon Town Hall
Comments:	
Prepared By:	Date:

Description

The LDS-SAL small area light is the first of its kind in Lumecon's LED Detroit Series. Combining a sleek fixture design with energy efficient performance allows this fixture to be used in parking lots, roadways, pathways and general area lighting applications replacing existing fixtures up to 400W HID one-for-one.

Technical Specifications

Input Voltage: 120-277V or 347-480V.

Housing: Die-cast aluminum housing with 60% gloss polyester powder coat finishes for maximum durability. The base aluminum material is prepared using an environmentally-friendly non-chrome 2-step surface cleaning and passivation process. The process results in a more durable conversion layer than traditional chromate conversion coatings and allows maximum adhesion of the powder coating to the aluminum substrate. Housing features an integrated heat sink and driver compartment built into the fixture design.

Mounting: Mounting arm designed for a square / round pole (standard). Additional mounting options include a pole mounting arm adaptor.

Split Circuit: Optional

Effective Projected Area (EPA): 0.83 ft²

Color Temperature: 2200K, 2700K, 3000K, 4000K (standard), 5000K.

LED Lifetime: All LED's are rated for a minimum of 100,000 hours of continuous operation at ambient temperatures from -40°F/-40°C to 95°F/35°C.

Color Rendering Index (CRI): Minimum of 80 or higher. CRI 90+ available upon request. CRI 90+ not available in 2200K.

Dimming: 0-10V standard dimming capability.

Custom Optics: Lumecon meticulously engineered premium acrylic optical lenses to maximize the distribution and uniformity of light while minimizing cost. Our arrays distribute light at least 21% further and with 29% more uniformity than leading competitors. Lumecon custom lenses create a uniform, well-lit environment that mitigates illuminance "hot spots" and use less wattage than typical LED area lights.

Surge Protection: Thermally protected 20kA/ 40kV varistor type surge suppressor is included and meets ANSI C136.2-2015: Extreme Level. Also meets IEC61643-11 Class II / EN61643-11 Type 2, and US Dept of Energy MSSLC Model Spec for surge protection. The device is wired in series with the luminaire input power in order to interrupt power to the luminaire when consumed, protecting the LED power supply and circuit boards from additional electrical surges.

Lumecon ETD™ System: The enhanced thermal dissipation system engines are thermally bonded to provide maximum thermal dissipation to the exterior of the fixture to ensure long life. To protect the light engine panel from moisture and corrosion, the LED light engine panel is uniformly coated with a UV stabilized acrylic polymer resin that meets MIL and ASTM dielectric standards, UL, and IPC standards for flammability, moisture resistance and thermal shock.

Certification Data: ETL Listed to UL 1598, UL 8750 Wet Locations. *Full compliance and test documentation is available for TM-21, LM-79, LM-80, ETL Listing to UL1598 and UL 8750. Salt Fog tested for 3,000 hours per ASTM B117-16 / ASTM D610-08. Ingress Protection: IP66 per ANSI/IEC 60529-2004. Passed 3G vibration @ 100K cycles, per ANSI C136.31-2018.

DesignLights Consortium® (DLC) Qualified Product: Unless noted, not all versions of this product may be DLC® qualified. For a complete list of Lumecon DLC® Qualified Products visit: www.designlights.org.

Manufacturing Origin: US Manufactured and Assembled.

Buy American: Meets Buy American requirements within the ARRA.

Warranty: 10 Year L70 performance based warranty. For full warranty terms, please visit our website: www.lumecon.com

Ubicquia® Wireless Controls: Ubicquia Ubicell Wireless Node allows for advanced light control via Ubivu Control Platform. All nodes are self-provisioning on power-up and are global Carrier LTE compatible with no Gateways or Concentrators required. Single SKU 120v to 480v operation, 22 Satellite Global GPS and Celestial Clock, Simultaneous Metering for Line and Load, High Accuracy Tilt and Vibration sensor, 10 second Last Gasp and Nonvolatile Memory, OTA Updates and a 10 year warranty. Ask your local Lumecon Representative for more information.

Dimulator Photo-Control: Maximize the cost-saving benefits of your outdoor LED light fixtures with the stand-alone Dimming solution. All Dimulators (except for CD and DIM 3 versions) have three selectable dimming levels (30%, 50%, 70%) with three different start times (10:00 pm, Midnight, or 2:00 am), which are selectable through the ten position selector switch located on the bottom of the base. All dimming schedules will return to full brightness at 5:00 am. The stand-alone unit is made to work with the ANSI C136.41 receptacle and will provide dimming of LED fixtures.

Limelight Wireless Controls: by Lutron is a wireless lighting control solution for outdoor and industrial facilities that provides remote control and management, saves energy, and enhances facility safety. This option includes a factory-installed wireless control module and sensors that seamlessly integrate data into Lutron's existing data and management platform, Enterprise Vue.

Ordering Information

LDS-SAL – Options / Ordering Example: LDS-SAL-110-DB-T5-1-50-MAS

Wattage	Color	Distribution	Voltage	Color Temperature	Mounting Methods
30 - 30 Watts	DB - Dark Bronze	T2 - Type II	1 - 120v-277v	22 - 2200K ⁹	MAS - Mounting Arm (Square Pole) ⁶ <i>For a Round pole, add UARP option</i>
45 - 45 Watts	GR - Gray	T3 - Type III	2 - 347v-480v	27 - 2700K ⁹	SF - Slip Fitter
60 - 60 Watts	BK - Black	T4 - Type IV		30 - 3000K ⁹	TM - Tenon Mount ⁶
80 - 80 Watts	WH - White	T5 - Type V		40 - 4000K	
110 - 110 Watts	CC - Custom Color			50 - 5000K	
125 - 125 Watts	AF - Automotive Finish				
160 - 160 Watts					

Options & Accessories

UARP - Universal Adaptor Round Pole

R - Receptacle Only

RS - Receptacle Only with Shorting Cap

7P - Seven-pin Twist Lock Photocell Receptacle Only¹

PC1 - 120v-277v Button Eye Photocell²

PC2 - 347v-480v Button Eye Photocell²

PC3 - 120v-277v Twist Lock Photocell (10 year warranty)

PC4 - 347v-480v Twist Lock Photocell (10 year warranty)

OC1 - On/Off³

OC2 - Dim/High^{3,4}

OC3 - On/Off w/Photocell³

OC4 - Dim/High w/Photocell^{3,4}

UBI - Ubiqvia Wireless Controls⁵

SC - Split Circuit^{6,7,8}

DIM4 - 105-305 VAC, 50/60 Hz with 10 position field adjustable selector switch

DIM4-HV - High Voltage 312-530 VAC, 50/60 Hz with 10 position field adjustable selector switch

DIM4-CD - Constant all-night Dimming

DIM4-CD-HV - Constant all-night Dimming, 315-530 VAC 50/60Hz

DIM4-CUL - 120 VAC. 50/60 Hz, cUL certified version with gray cover

DIM4-ALC - Adaptive Lighting Control with 2% per year incremental increase to compensate for aging fixture

DIM3-XX - Factory set dimming schedule (10 position selector switch not available)

BS5 - Bird Spikes (Field Installed)

BL - Backlight Louver(s) snap over LED Array(s) for Backlight Control at the source.¹⁰

LLC- Limerlight by Lutron Radio Module

Not available with 2- 347-480v or PC1, PC2, OC1, OC2, OC3, OC4, UBI, DIM4, DIM4-HV, DIM4-CD, DIM4-CD-HV, DIM4-CUL, DIM4-ALC, DIM3-XX options. Requires the 7P option to be selected.

LLCM- Limerlight by Lutron Radio Module and PIR Sensor Assembly - Medium Mounting Height (>15 to 30' mounting height)

Not available with 2- 347-480v or PC1, PC2, OC1, OC2, OC3, OC4, UBI, DIM4, DIM4-HV, DIM4-CD, DIM4-CD-HV, DIM4-CUL, DIM4-ALC, DIM3-XX options. Requires the 7P option to be selected.

LLCL- Limerlight by Lutron Radio Module and PIR Sensor Assembly - Low Mounting Height (8-15' mounting height)

Not available with 2- 347-480v or PC1, PC2, OC1, OC2, OC3, OC4, UBI, DIM4, DIM4-HV, DIM4-CD, DIM4-CD-HV, DIM4-CUL, DIM4-ALC, DIM3-XX options. Requires the 7P option to be selected.

Notes:

- For units with 7P the mounting must be restricted to +/-45° from horizontal aim per ANSI C1136.10-2010. If more than a 45° Tilt, use PC1 or PC2
- Cannot be combined with Occupancy Sensor. Use OC3 or OC4 when Occupancy Sensor and Photocell are needed and aiming greater than 45° from horizontal.
- Must note on PO Mounting Height for proper lens application
- See Occupancy Sensor Default Settings Table
- UBI requires the 7P option be selected: OC1 or OC2 are optional
- Split circuit is only available for 30W, 45W, 60W, and 80W models.
- Split circuit is not compatible with Occupancy sensing our photo-eye control.
- Split Circuit and Battery Back-up cannot both fit in the same housing. Battery Back-Up will require external. Battery Backup will only control one of the circuits.
- 3000K or warmer, and fixed mounts must be ordered for IDA certification compliance.
- Works with Type 2, Type 3 and Type 4 arrays.

Accessories ordered as a separate line item:

33-00112 - External Glare Shield

33-00120 - Full Glare Snoot

If OCC Sensor Option is selected, mounting height specifications need to be clarified: Mounting height between 0' - 10'

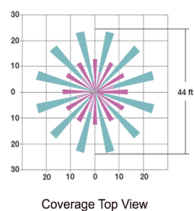
If Mounting height and parameter settings not specified when ordered. Default mounting height is 10-40' lens and preset factory settings.

Mounting height between 10' - 20'

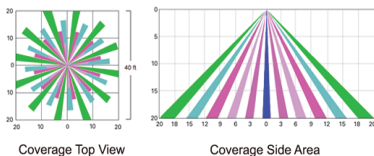
Mounting height over 20'+

OCC Sensor Patterns

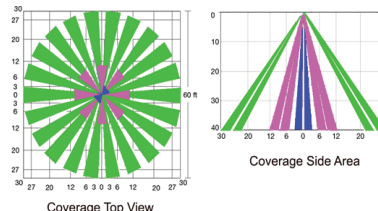
0' - 10' Mounting Height



10' - 40' Mounting Height



40' + Mounting Height



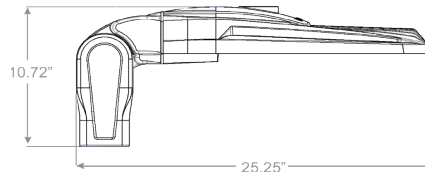
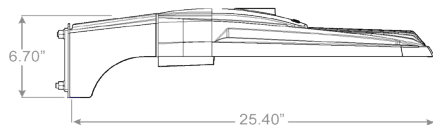
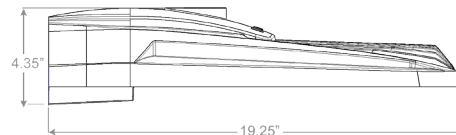
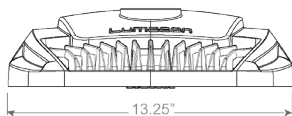
Occupancy Sensor Default Settings - Option OC2

Option	Dimmed State (Unoccupied)	High Level (When occupied)	Photocell Operation (OC4 Option Only*)	Dwell Time (Occupancy time delay)	Ramp-up Time (From unoccupied to occupied)	Ramp-up Time (From occupied to unoccupied)
OC2 and OC4	Approx. 20% Output	100% Output	Enabled @ 1.5 FC*	5 Minutes	Disabled	Disabled

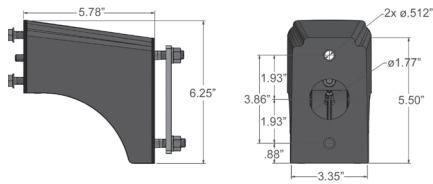
*Note: OC2 and OC4 settings including photocell set point, high/low dim rates, and occupancy sensor time delay are all configurable by using the Wattstopper® App. If any other settings are desired to be set at the factory, please note these changes on Purchase Order.

Dimensions & Weights

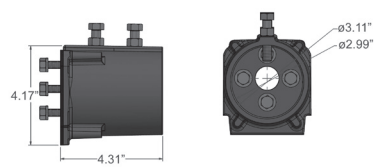
Model	Width	Length	Height	Weight
LDS-SAL	13.25"	19.25"	4.35" 6.70" (MAS) 10.72" (SF)	15 lbs



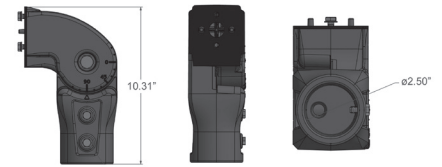
Mounting Method Dimensions



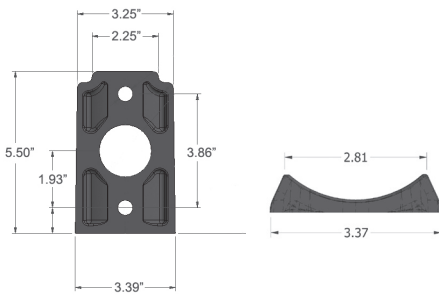
MAS - Square Pole Arm Dimensions



TM - Tenon Arm Dimensions

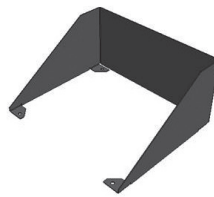
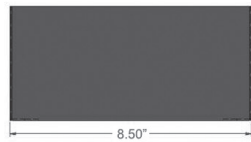
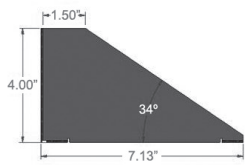


SF - Slip Fitter Arm Dimensions



UARP - Universal Adaptor Round Pole

External Glare Shield and Full Glare Snoot Dimensions

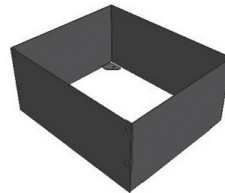
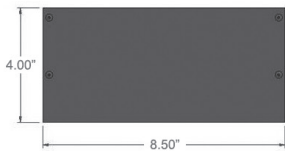


Field Installed for Forward Glare Reduction



Field Installed for Rear Glare Reduction

33-00112 – External Glare Shield



33-00120 – Full Glare Snoot

Backlight Louver(s)



BL - Backlight Louver(s) snap over LED Array(s) for Backlight Control at the source.
Works with Type 2, Type 3 and Type 4 arrays.

Performance Data

	Distribution Type	Watts	2200K				2700K				3000K				4000K				5000K								
			Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy
LDS-SAL-30	Type 2	30W	2,904	1	0	1	98	3,739	1	0	1	131	3,791	1	0	1	132	4,378	1	0	1	147	4,393	1	0	1	148
	Type 3	30W	2,927	1	0	1	99	3,769	1	0	1	132	3,821	1	0	1	133	4,412	1	0	1	149	4,428	1	0	1	149
	Type 4	30W	2,878	1	0	1	97	3,706	1	0	1	129	3,757	1	0	1	131	4,337	1	0	1	146	4,352	1	0	1	147
	Type 5	30W	2,975	2	0	2	100	3,749	2	0	2	131	3,801	2	0	2	133	4,474	2	0	2	151	4,491	2	0	2	151
LDS-SAL-45	Type 2	45W	4,899	1	0	1	103	6,591	1	0	1	147	6,683	1	0	1	149	6,941	1	0	1	154	6,966	1	0	1	155
	Type 3	45W	4,635	1	0	1	97	6,356	1	0	1	141	6,445	1	0	1	143	6,567	1	0	1	146	6,590	1	0	1	146
	Type 4	45W	4,591	1	0	1	96	6,172	1	0	1	137	6,259	1	0	1	139	6,505	1	0	1	145	6,528	1	0	1	145
	Type 5	45W	4,738	3	0	2	99	6,370	3	0	2	142	6,459	3	0	2	144	6,713	3	0	2	149	6,736	3	0	2	150
LDS-SAL-60	Type 2	60W	5,372	1	0	2	90	7,627	1	0	2	127	7,734	1	0	2	130	8,077	1	0	2	135	8,105	1	0	2	135
	Type 3	60W	5,412	2	0	2	90	7,536	2	0	2	126	7,642	2	0	2	128	8,141	2	0	2	136	8,169	2	0	2	137
	Type 4	60W	5,320	2	0	2	89	7,407	2	0	2	124	7,511	2	0	2	126	8,001	2	0	2	134	8,029	2	0	2	134
	Type 5	60W	5,487	3	0	3	92	7,645	3	0	3	128	7,751	3	0	3	130	8,255	3	0	3	138	8,286	3	0	3	139
LDS-SAL-80	Type 2	80W	6,140	2	0	2	76	9,128	2	0	2	112	9,256	2	0	2	114	9,293	2	0	2	114	9,559	2	0	2	117
	Type 3	80W	6,067	2	0	2	75	9,019	2	0	2	111	9,146	2	0	2	113	9,182	2	0	2	113	9,630	2	0	2	118
	Type 4	80W	6,375	2	0	2	79	8,865	2	0	2	109	8,989	2	0	2	111	9,024	2	0	2	111	9,465	2	0	2	116
	Type 5	80W	7,002	3	0	2	86	9,149	3	0	2	112	9,277	3	0	2	114	9,549	3	0	2	119	9,550	3	0	2	117
LDS-SAL-110	Type 2	107W	12,400	2	0	2	115	16,415	2	0	2	153	16,651	2	0	2	156	16,711	2	0	2	156	16,770	2	0	2	157
	Type 3	107W	12,497	3	0	3	116	16,544	3	0	3	155	16,782	3	0	3	157	16,842	3	0	3	157	16,901	3	0	3	158
	Type 4	107W	12,282	3	0	3	114	16,259	3	0	3	152	16,493	3	0	3	154	16,552	3	0	3	155	16,611	3	0	3	155
	Type 5	107W	12,425	4	0	2	116	16,448	4	0	2	154	16,685	4	0	2	156	16,744	4	0	2	156	16,803	4	0	2	157
LDS-SAL-125	Type 2	126W	13,856	2	0	2	109	18,343	2	0	2	146	18,607	2	0	2	148	18,673	2	0	2	148	18,739	2	0	2	149
	Type 3	126W	13,965	3	0	3	110	18,487	3	0	3	147	18,753	3	0	3	149	18,820	3	0	3	149	18,886	3	0	3	150
	Type 4	126W	13,725	3	0	3	108	18,169	3	0	3	144	18,430	3	0	3	146	18,496	3	0	3	147	18,562	3	0	3	147
	Type 5	126W	13,884	4	0	2	110	18,380	4	0	2	146	18,644	4	0	2	148	18,711	4	0	2	148	18,777	4	0	2	149
LDS-SAL-160	Type 2	160W	16,787	2	0	2	105	22,243	2	0	2	139	22,563	2	0	2	141	22,644	2	0	2	142	22,724	2	0	2	142
	Type 3	160W	16,863	3	0	3	106	22,418	3	0	3	140	22,740	3	0	3	142	22,821	3	0	3	143	22,902	3	0	3	143
	Type 4	160W	16,283	3	0	3	104	22,033	3	0	3	138	22,349	3	0	3	140	22,429	3	0	3	140	22,508	3	0	3	141
	Type 5	160W	16,837	5	0	3	105	22,288	5	0	3	139	22,609	5	0	3	141	22,690	5	0	3	142	22,770	5	0	3	142

Performance Data

Electrical Load Data

Fixture Model	Drive Current (mA)	System Watts (W)	AC Current Load (A)				
			120V	208V	240V	277V	480V
LDS-SAL-30	550	30	0.28	0.16	0.14	0.12	0.07
LDS-SAL-45	875	45	0.42	0.24	0.21	0.18	0.10
LDS-SAL-60	1100	60	0.56	0.32	0.28	0.24	0.14
LDS-SAL-80	1475	80	0.74	0.43	0.37	0.32	0.19
LDS-SAL-110	975	110	1.02	0.59	0.51	0.44	0.25
LDS-SAL-125	1150	125	1.16	0.67	0.58	0.50	0.29
LDS-SAL-160	1450	160	1.48	0.85	0.74	0.64	0.37

Lumen Maintenance

Data in the table below references projected performance in a 25°C ambient and is based on 10,000 hours of LED testing. Performance data has been tested per IESNA LM-80-08 and projected per IESNA TM-21-11.

Use the lumen maintenance factor that corresponds to the desired number of operating hours below to calculate LLF.

Fixture Model	Lumen Maintenance Factors @ 25°C, by hours:				
	0	25,000	50,000	70,000	100,000
LDS-SAL-30	1.0	0.99	0.995	0.992	0.986
LDS-SAL-45	1.0	0.99	0.995	0.992	0.986
LDS-SAL-60	1.0	0.99	0.995	0.989	0.986
LDS-SAL-80	1.0	0.99	0.995	0.989	0.986
LDS-SAL-110	1.0	0.99	0.995	0.989	0.986
LDS-SAL-125	1.0	0.99	0.995	0.989	0.986
LDS-SAL-160	1.0	0.99	0.995	0.989	0.986



Catalog Number:	
Project:	Mendon Town Hall
Comments:	
Prepared By:	Date:

Description

The LDS-SAL small area light is the first of its kind in Lumecon's LED Detroit Series. Combining a sleek fixture design with energy efficient performance allows this fixture to be used in parking lots, roadways, pathways and general area lighting applications replacing existing fixtures up to 400W HID one-for-one.

Technical Specifications

Input Voltage: 120-277V or 347-480V.

Housing: Die-cast aluminum housing with 60% gloss polyester powder coat finishes for maximum durability. The base aluminum material is prepared using an environmentally-friendly non-chrome 2-step surface cleaning and passivation process. The process results in a more durable conversion layer than traditional chromate conversion coatings and allows maximum adhesion of the powder coating to the aluminum substrate. Housing features an integrated heat sink and driver compartment built into the fixture design.

Mounting: Mounting arm designed for a square / round pole (standard). Additional mounting options include a pole mounting arm adaptor.

Split Circuit: Optional

Effective Projected Area (EPA): 0.83 ft²

Color Temperature: 2200K, 2700K, 3000K, 4000K (standard), 5000K.

LED Lifetime: All LED's are rated for a minimum of 100,000 hours of continuous operation at ambient temperatures from -40°F/-40°C to 95°F/35°C.

Color Rendering Index (CRI): Minimum of 80 or higher. CRI 90+ available upon request. CRI 90+ not available in 2200K.

Dimming: 0-10V standard dimming capability.

Custom Optics: Lumecon meticulously engineered premium acrylic optical lenses to maximize the distribution and uniformity of light while minimizing cost. Our arrays distribute light at least 21% further and with 29% more uniformity than leading competitors. Lumecon custom lenses create a uniform, well-lit environment that mitigates illuminance "hot spots" and use less wattage than typical LED area lights.

Surge Protection: Thermally protected 20kA/ 40kV varistor type surge suppressor is included and meets ANSI C136.2-2015: Extreme Level. Also meets IEC61643-11 Class II / EN61643-11 Type 2, and US Dept of Energy MSSLC Model Spec for surge protection. The device is wired in series with the luminaire input power in order to interrupt power to the luminaire when consumed, protecting the LED power supply and circuit boards from additional electrical surges.

Lumecon ETD™ System: The enhanced thermal dissipation system engines are thermally bonded to provide maximum thermal dissipation to the exterior of the fixture to ensure long life. To protect the light engine panel from moisture and corrosion, the LED light engine panel is uniformly coated with a UV stabilized acrylic polymer resin that meets MIL and ASTM dielectric standards, UL, and IPC standards for flammability, moisture resistance and thermal shock.

Certification Data: ETL Listed to UL 1598, UL 8750 Wet Locations. *Full compliance and test documentation is available for TM-21, LM-79, LM-80, ETL Listing to UL1598 and UL 8750. Salt Fog tested for 3,000 hours per ASTM B117-16 / ASTM D610-08. Ingress Protection: IP66 per ANSI/IEC 60529-2004. Passed 3G vibration @ 100K cycles, per ANSI C136.31-2018.

DesignLights Consortium® (DLC) Qualified Product: Unless noted, not all versions of this product may be DLC® qualified. For a complete list of Lumecon DLC® Qualified Products visit: www.designlights.org.

Manufacturing Origin: US Manufactured and Assembled.

Buy American: Meets Buy American requirements within the ARRA.

Warranty: 10 Year L70 performance based warranty. For full warranty terms, please visit our website: www.lumecon.com

Ubicquia® Wireless Controls: Ubicquia Ubicell Wireless Node allows for advanced light control via Ubivu Control Platform. All nodes are self-provisioning on power-up and are global Carrier LTE compatible with no Gateways or Concentrators required. Single SKU 120v to 480v operation, 22 Satellite Global GPS and Celestial Clock, Simultaneous Metering for Line and Load, High Accuracy Tilt and Vibration sensor, 10 second Last Gasp and Nonvolatile Memory, OTA Updates and a 10 year warranty. Ask your local Lumecon Representative for more information.

Dimulator Photo-Control: Maximize the cost-saving benefits of your outdoor LED light fixtures with the stand-alone Dimming solution. All Dimulators (except for CD and DIM 3 versions) have three selectable dimming levels (30%, 50%, 70%) with three different start times (10:00 pm, Midnight, or 2:00 am), which are selectable through the ten position selector switch located on the bottom of the base. All dimming schedules will return to full brightness at 5:00 am. The stand-alone unit is made to work with the ANSI C136.41 receptacle and will provide dimming of LED fixtures.

Limelight Wireless Controls: by Lutron is a wireless lighting control solution for outdoor and industrial facilities that provides remote control and management, saves energy, and enhances facility safety. This option includes a factory-installed wireless control module and sensors that seamlessly integrate data into Lutron's existing data and management platform, Enterprise Vue.

Ordering Information

LDS-SAL – Options / Ordering Example: LDS-SAL-110-DB-T5-1-50-MAS

Wattage	Color	Distribution	Voltage	Color Temperature	Mounting Methods
30 - 30 Watts	DB - Dark Bronze	T2 - Type II	1 - 120v-277v	22 - 2200K ⁹	MAS - Mounting Arm (Square Pole) ⁶ <i>For a Round pole, add UARP option</i>
45 - 45 Watts	GR - Gray	T3 - Type III	2 - 347v-480v	27 - 2700K ⁹	SF - Slip Fitter
60 - 60 Watts	BK - Black	T4 - Type IV		30 - 3000K ⁹	TM - Tenon Mount ⁶
80 - 80 Watts	WH - White	T5 - Type V		40 - 4000K	
110 - 110 Watts	CC - Custom Color			50 - 5000K	
125 - 125 Watts	AF - Automotive Finish				
160 - 160 Watts					

Options & Accessories
UARP - Universal Adaptor Round Pole

R - Receptacle Only

RS - Receptacle Only with Shorting Cap

 7P - Seven-pin Twist Lock Photocell Receptacle Only¹

 PC1 - 120v-277v Button Eye Photocell²

 PC2 - 347v-480v Button Eye Photocell²

PC3 - 120v-277v Twist Lock Photocell (10 year warranty)

PC4 - 347v-480v Twist Lock Photocell (10 year warranty)

 OC1 - On/Off³

 OC2 - Dim/High^{3,4}

 OC3 - On/Off w/Photocell³

 OC4 - Dim/High w/Photocell^{3,4}
UBI - Ubiqvia Wireless Controls⁵

 SC - Split Circuit^{6,7,8}

DIM4 - 105-305 VAC, 50/60 Hz with 10 position field adjustable selector switch

DIM4-HV - High Voltage 312-530 VAC, 50/60 Hz with 10 position field adjustable selector switch

DIM4-CD - Constant all-night Dimming

DIM4-CD-HV - Constant all-night Dimming, 315-530 VAC 50/60Hz

DIM4-CUL - 120 VAC, 50/60 Hz, cUL certified version with gray cover

DIM4-ALC - Adaptive Lighting Control with 2% per year incremental increase to compensate for aging fixture

DIM3-XX - Factory set dimming schedule (10 position selector switch not available)

BS5 - Bird Spikes (Field Installed)

BL - Backlight Louver(s) snap over LED Array(s) for Backlight Control at the source.¹⁰

LLC- Limerlight by Lutron Radio Module

Not available with 2- 347-480v or PC1, PC2, OC1, OC2, OC3, OC4, UBI, DIM4, DIM4-HV, DIM4-CD, DIM4-CD-HV, DIM4-CUL, DIM4-ALC, DIM3-XX options. Requires the 7P option to be selected.

LLCM- Limerlight by Lutron Radio Module and PIR Sensor Assembly - Medium Mounting Height (>15 to 30' mounting height)

Not available with 2- 347-480v or PC1, PC2, OC1, OC2, OC3, OC4, UBI, DIM4, DIM4-HV, DIM4-CD, DIM4-CD-HV, DIM4-CUL, DIM4-ALC, DIM3-XX options. Requires the 7P option to be selected.

LLCL- Limerlight by Lutron Radio Module and PIR Sensor Assembly - Low Mounting Height (8-15' mounting height)

Not available with 2- 347-480v or PC1, PC2, OC1, OC2, OC3, OC4, UBI, DIM4, DIM4-HV, DIM4-CD, DIM4-CD-HV, DIM4-CUL, DIM4-ALC, DIM3-XX options. Requires the 7P option to be selected.
Notes:

- For units with 7P the mounting must be restricted to +/-45° from horizontal aim per ANSI C1136.10-2010. If more than a 45° Tilt, use PC1 or PC2
- Cannot be combined with Occupancy Sensor. Use OC3 or OC4 when Occupancy Sensor and Photocell are needed and aiming greater than 45° from horizontal.
- Must note on PO Mounting Height for proper lens application
- See Occupancy Sensor Default Settings Table
- UBI requires the 7P option be selected: OC1 or OC2 are optional
- Split circuit is only available for 30W, 45W, 60W, and 80W models.
- Split circuit is not compatible with Occupancy sensing our photo-eye control.
- Split Circuit and Battery Back-up cannot both fit in the same housing. Battery Back-Up will require external. Battery Backup will only control one of the circuits.
- 3000K or warmer, and fixed mounts must be ordered for IDA certification compliance.
- Works with Type 2, Type 3 and Type 4 arrays.

Accessories ordered as a separate line item:

33-00112 - External Glare Shield

33-00120 - Full Glare Snoot

If OCC Sensor Option is selected, mounting height specifications need to be clarified: Mounting height between 0' - 10'

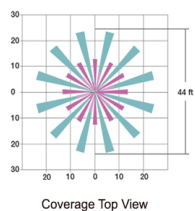
If Mounting height and parameter settings not specified when ordered. Default mounting height is 10-40' lens and preset factory settings.

Mounting height between 10' - 20'

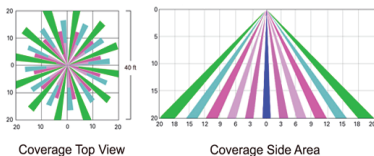
Mounting height over 20'+

OCC Sensor Patterns

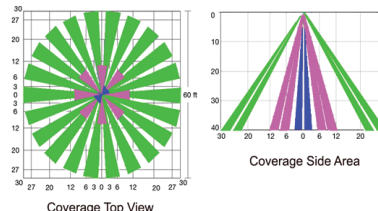
0' - 10' Mounting Height



10' - 40' Mounting Height



40' + Mounting Height



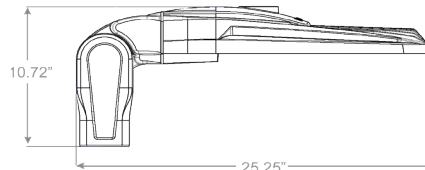
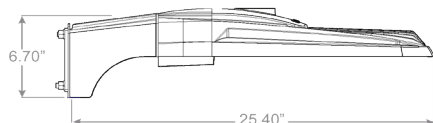
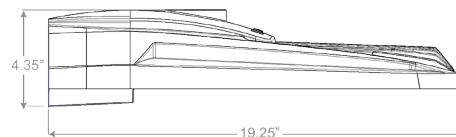
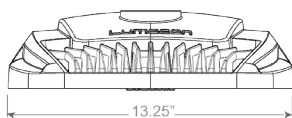
Occupancy Sensor Default Settings - Option OC2

Option	Dimmed State (Unoccupied)	High Level (When occupied)	Photocell Operation (OC4 Option Only*)	Dwell Time (Occupancy time delay)	Ramp-up Time (From unoccupied to occupied)	Ramp-up Time (From occupied to unoccupied)
OC2 and OC4	Approx. 20% Output	100% Output	Enabled @ 1.5 FC*	5 Minutes	Disabled	Disabled

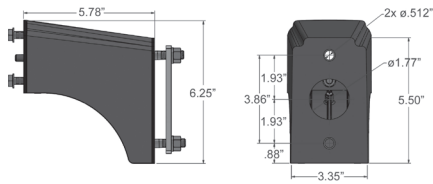
*Note: OC2 and OC4 settings including photocell set point, high/low dim rates, and occupancy sensor time delay are all configurable by using the Wattstopper® App. If any other settings are desired to be set at the factory, please note these changes on Purchase Order.

Dimensions & Weights

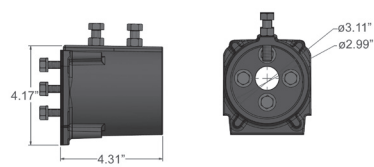
Model	Width	Length	Height	Weight
LDS-SAL	13.25"	19.25"	4.35" 6.70" (MAS) 10.72" (SF)	15 lbs



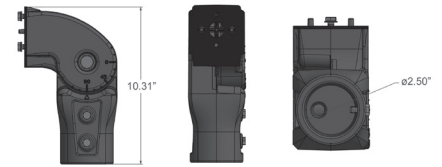
Mounting Method Dimensions



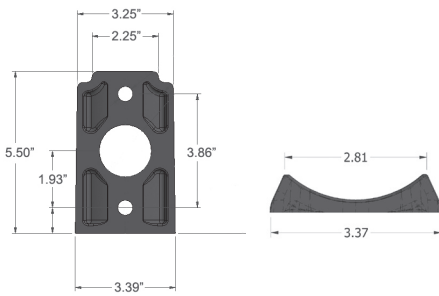
MAS - Square Pole Arm Dimensions



TM - Tenon Arm Dimensions

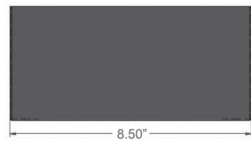
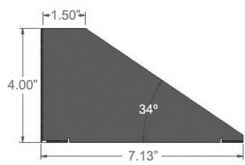


SF - Slip Fitter Arm Dimensions



UARP - Universal Adaptor Round Pole

External Glare Shield and Full Glare Snoot Dimensions

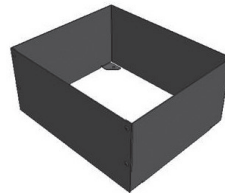


Field Installed for Forward Glare Reduction



Field Installed for Rear Glare Reduction

33-00112 – External Glare Shield



33-00120 – Full Glare Snoot

Backlight Louver(s)



BL - Backlight Louver(s) snap over LED Array(s) for Backlight Control at the source.
Works with Type 2, Type 3 and Type 4 arrays.

Performance Data

	Distribution Type	Watts	2200K					2700K					3000K					4000K					5000K				
			Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy	Lumens	B	U	G	Efficacy
LDS-SAL-30	Type 2	30W	2,904	1	0	1	98	3,739	1	0	1	131	3,791	1	0	1	132	4,378	1	0	1	147	4,393	1	0	1	148
	Type 3	30W	2,927	1	0	1	99	3,769	1	0	1	132	3,821	1	0	1	133	4,412	1	0	1	149	4,428	1	0	1	149
	Type 4	30W	2,878	1	0	1	97	3,706	1	0	1	129	3,757	1	0	1	131	4,337	1	0	1	146	4,352	1	0	1	147
	Type 5	30W	2,975	2	0	2	100	3,749	2	0	2	131	3,801	2	0	2	133	4,474	2	0	2	151	4,491	2	0	2	151
LDS-SAL-45	Type 2	45W	4,899	1	0	1	103	6,591	1	0	1	147	6,683	1	0	1	149	6,941	1	0	1	154	6,966	1	0	1	155
	Type 3	45W	4,635	1	0	1	97	6,356	1	0	1	141	6,445	1	0	1	143	6,567	1	0	1	146	6,590	1	0	1	146
	Type 4	45W	4,591	1	0	1	96	6,172	1	0	1	137	6,259	1	0	1	139	6,505	1	0	1	145	6,528	1	0	1	145
	Type 5	45W	4,738	3	0	2	99	6,370	3	0	2	142	6,459	3	0	2	144	6,713	3	0	2	149	6,736	3	0	2	150
LDS-SAL-60	Type 2	60W	5,372	1	0	2	90	7,627	1	0	2	127	7,734	1	0	2	130	8,077	1	0	2	135	8,105	1	0	2	135
	Type 3	60W	5,412	2	0	2	90	7,536	2	0	2	126	7,642	2	0	2	128	8,141	2	0	2	136	8,169	2	0	2	137
	Type 4	60W	5,320	2	0	2	89	7,407	2	0	2	124	7,511	2	0	2	126	8,001	2	0	2	134	8,029	2	0	2	134
	Type 5	60W	5,487	3	0	3	92	7,645	3	0	3	128	7,751	3	0	3	130	8,255	3	0	3	138	8,286	3	0	3	139
LDS-SAL-80	Type 2	80W	6,140	2	0	2	76	9,128	2	0	2	112	9,256	2	0	2	114	9,293	2	0	2	114	9,559	2	0	2	117
	Type 3	80W	6,067	2	0	2	75	9,019	2	0	2	111	9,146	2	0	2	113	9,182	2	0	2	113	9,630	2	0	2	118
	Type 4	80W	6,375	2	0	2	79	8,865	2	0	2	109	8,989	2	0	2	111	9,024	2	0	2	111	9,465	2	0	2	116
	Type 5	80W	7,002	3	0	2	86	9,149	3	0	2	112	9,277	3	0	2	114	9,549	3	0	2	119	9,550	3	0	2	117
LDS-SAL-110	Type 2	107W	12,400	2	0	2	115	16,415	2	0	2	153	16,651	2	0	2	156	16,711	2	0	2	156	16,770	2	0	2	157
	Type 3	107W	12,497	3	0	3	116	16,544	3	0	3	155	16,782	3	0	3	157	16,842	3	0	3	157	16,901	3	0	3	158
	Type 4	107W	12,282	3	0	3	114	16,259	3	0	3	152	16,493	3	0	3	154	16,552	3	0	3	155	16,611	3	0	3	155
	Type 5	107W	12,425	4	0	2	116	16,448	4	0	2	154	16,685	4	0	2	156	16,744	4	0	2	156	16,803	4	0	2	157
LDS-SAL-125	Type 2	126W	13,856	2	0	2	109	18,343	2	0	2	146	18,607	2	0	2	148	18,673	2	0	2	148	18,739	2	0	2	149
	Type 3	126W	13,965	3	0	3	110	18,487	3	0	3	147	18,753	3	0	3	149	18,820	3	0	3	149	18,886	3	0	3	150
	Type 4	126W	13,725	3	0	3	108	18,169	3	0	3	144	18,430	3	0	3	146	18,496	3	0	3	147	18,562	3	0	3	147
	Type 5	126W	13,884	4	0	2	110	18,380	4	0	2	146	18,644	4	0	2	148	18,711	4	0	2	148	18,777	4	0	2	149
LDS-SAL-160	Type 2	160W	16,787	2	0	2	105	22,243	2	0	2	139	22,563	2	0	2	141	22,644	2	0	2	142	22,724	2	0	2	142
	Type 3	160W	16,863	3	0	3	106	22,418	3	0	3	140	22,740	3	0	3	142	22,821	3	0	3	143	22,902	3	0	3	143
	Type 4	160W	16,283	3	0	3	104	22,033	3	0	3	138	22,349	3	0	3	140	22,429	3	0	3	140	22,508	3	0	3	141
	Type 5	160W	16,837	5	0	3	105	22,288	5	0	3	139	22,609	5	0	3	141	22,690	5	0	3	142	22,770	5	0	3	142

Performance Data

Electrical Load Data

Fixture Model	Drive Current (mA)	System Watts (W)	AC Current Load (A)				
			120V	208V	240V	277V	480V
LDS-SAL-30	550	30	0.28	0.16	0.14	0.12	0.07
LDS-SAL-45	875	45	0.42	0.24	0.21	0.18	0.10
LDS-SAL-60	1100	60	0.56	0.32	0.28	0.24	0.14
LDS-SAL-80	1475	80	0.74	0.43	0.37	0.32	0.19
LDS-SAL-110	975	110	1.02	0.59	0.51	0.44	0.25
LDS-SAL-125	1150	125	1.16	0.67	0.58	0.50	0.29
LDS-SAL-160	1450	160	1.48	0.85	0.74	0.64	0.37

Lumen Maintenance

Data in the table below references projected performance in a 25°C ambient and is based on 10,000 hours of LED testing. Performance data has been tested per IESNA LM-80-08 and projected per IESNA TM-21-11.

Use the lumen maintenance factor that corresponds to the desired number of operating hours below to calculate LLF.

Fixture Model	Lumen Maintenance Factors @ 25°C, by hours:				
	0	25,000	50,000	70,000	100,000
LDS-SAL-30	1.0	0.99	0.995	0.992	0.986
LDS-SAL-45	1.0	0.99	0.995	0.992	0.986
LDS-SAL-60	1.0	0.99	0.995	0.989	0.986
LDS-SAL-80	1.0	0.99	0.995	0.989	0.986
LDS-SAL-110	1.0	0.99	0.995	0.989	0.986
LDS-SAL-125	1.0	0.99	0.995	0.989	0.986
LDS-SAL-160	1.0	0.99	0.995	0.989	0.986



Round

Description

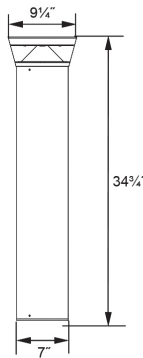
The LBOL2-R walkway bollard is built with a robust die-cast aluminum housing and vandal resistant polycarbonate lens. Available in one wattage version and equivalent to a 100W HID, the LBOL2 is a perfect solution for lighting entrance walkways and for general illumination purposes.

Performance Data

Model	Watts	Equiv	Delivered Lumens	Efficacy
LBOL2-R	19W	100W HID	1,869 Lm	100 LPW

Dimensions & Weights

Model	Width	Depth	Height	Weight
LBOL2-R	9 1/4"	7"	34 3/8"	13.5 lbs.



Catalog Number:

 Project: **Mendon Town Hall**

Comments:

Prepared By:

Date:

Technical Specifications

Input Voltage: 120-277V or 347-480V

Housing: Extruded aluminum housing with a powder coat finish over a chromate conversion coating. Housing features a flush mounting base, vandal-resistant screws and a top.

Lens: Clear polycarbonate lens.

Mounting: 8" anchor bolts and mounting kit provided standard. Additional anchor bolt lengths include 12" and 15" options.

Effective Projected Area (EPA): 1.9 ft²
Color Temperature: 2700K WW, 3000K OW, 4000K NW (standard), 5000K CW.

LED Lifetime: All LED's are rated for a minimum of 100,000 hours of continuous operation at ambient temperatures from -40°F/-40°C to 95°F/35°C.

Color Rendering Index (CRI): Minimum of 80 or higher.

Dimming: 0-10V standard dimming capability.

Surge Protection: Thermally protected 20kA/ 40kV varistor type surge suppressor is included and meets ANSI C136.2-2015: Extreme Level. Also meets IEC61643-11 Class II / EN61643-11 Type 2, and US Dept of Energy MSSLC Model Spec for surge protection. The device is wired in series with the luminaire input power in order to interrupt power to the luminaire when consumed, protecting the LED power supply and circuit boards from additional electrical surges.

Lumecon ETD™ System: The enhanced thermal dissipation system engines are thermally bonded to provide maximum thermal dissipation to the exterior of the fixture to ensure long life. To protect the light engine panel from moisture and corrosion, the LED light engine panel is uniformly coated with a UV stabilized acrylic polymer resin that meets MIL and ASTM dielectric standards, UL, and IPC standards for flammability, moisture resistance and thermal shock.

Certification Data: CSA Listed to UL 1598, UL 8750 and CSA 22.2 No. 250 for Wet Locations. *Full compliance and test documentation is available for TM-21, LM-79, LM-80, CSA Listing to UL1598 and UL 8750.

Buy American: Meets Buy American requirements within the ARRA.

Warranty: 10 Year L70 performance based warranty. For full warranty terms, please visit our website: www.lumecon.com


Ordering Information

LBOL2-R – Round Options / Ordering Example: LBOL2-R-DB-1-8-NW-X

Type	Color	Voltage	Mounting Methods	Color Temperature	Inline Fuse
R - Round	DB - Dark Bronze	1 - 120v-277v	8 - 8" Anchor Bolts	WW - 2700K	X - None
	BK - Black*	2 - 347v-480v	12 - 12" Anchor Bolts	OW - 3000K	F - Inline Fuse, 2.5A
			15 - 15" Anchor Bolts	NW - 4000K	
				CW - 5000K	

Options & Accessories Image

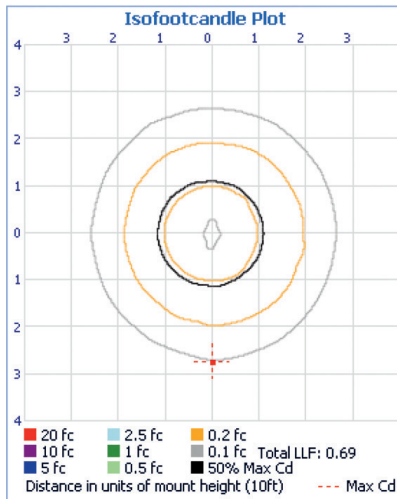


Anchor Bolt Assembly
(included)

Photometric Data

For .ies files of this product, please visit the downloads tabs on the LFS-SFL product page: <http://lumecon.com/products/lbol-walkway-bollard/>

LBOL2 - Round



Performance Data

Electrical Load Data

Fixture Model	Drive Current (mA)	System Watts (W)	AC Current Load (A)	
			120V	277V
LBOL-R	88	18.85	0.17	0.08

Lumen Maintenance

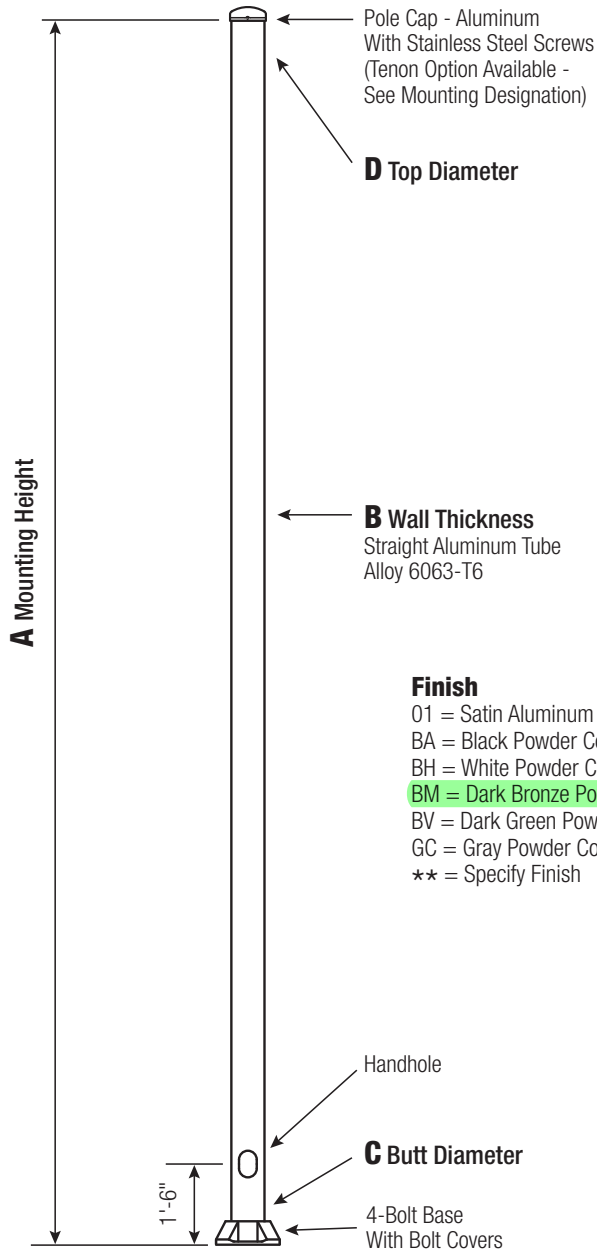
Data in the table below references projected performance in a 25°C ambient and is based on 10,000 hours of LED testing. Performance data has been tested per IESNA LM-80-08 and projected per IESNA TM-21-11.

Use the lumen maintenance factor that corresponds to the desired number of operating hours below to calculate LLF.

Fixture Model	0	Lumen Maintenance Factors @ 25°C, by hours:			
		25,000	50,000	70,000	100,000
LBOL2-R	1.0	0.96	0.93	0.90	0.86

RSA

Round Straight Aluminum Pole No Arm — 4-Bolt Base



- Finish**
- 01 = Satin Aluminum
 - BA = Black Powder Coat
 - BH = White Powder Coat
 - BM = Dark Bronze Powder Coat**
 - BV = Dark Green Powder Coat
 - GC = Gray Powder Coat
 - ** = Specify Finish

WARNING:
Do not install light pole without luminaire.

Satin Aluminum or Powder Coated Finish per Customer Specification.

A Mtg. Hgt.	B Wall Thickness	C Butt Diameter	TOTAL LUM. WEIGHT	MAXIMUM EPA					O.L.D. CAT. NUMBER	CATALOG NUMBER
				90	100	110	120	130		
16	0.125"	5	100	7.1	5.1	4.7	3.8	3.1	78S-011	RSA16B5-4-**

C BUTT DIA.	D TOP DIA.	F BOLT CIR. DIA.	G BASE SQ.	H BOLT PROJ.	I BOLT SIZE
5	5	7.5 - 8	7.5	2	.75 x 17 x 3

Dimensions in Inches

CUSTOMER NAME:	
PROJECT:	LOCATION:
NOTES:	QUANTITY:

RSA16B5-4

CATALOG NUMBER

FINISH

Pole

The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.



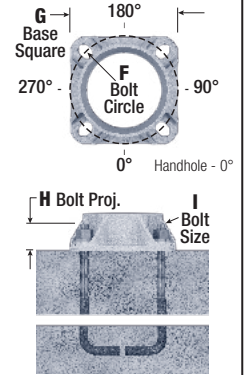
Handhole

2" x 4" Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 1/4"-20NC hole is provided opposite the Handhole.

Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

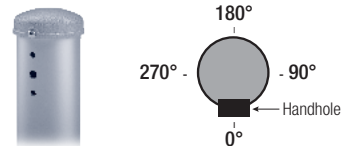


Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

Mounting Designation

Side Drill Mount - For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.



Tenon Mount

For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.).



EPA Notes: Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.



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