

FEATURES & SPECIFICATIONS

INTENDED USE — Provides a minimum of 90 minutes illumination for the rated wattage upon loss of AC power to meet and exceed code required emergency lighting. Ideal for light, heavy and demanding industrial applications requiring LEDs with quick installation and unparalleled performance for mounting heights from 7.5' to 40'. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

CONSTRUCTION — The housing is gray thermoplastic, design to perform in a wide variety of industrial applications. It is 5VA flame rated, impact-resistant, scratch-resistant and corrosion proof. The UV-stable resin resists discoloration from natural and man-made light sources. There is a low-profile, integrated and back-lit test switch with an easily visible multi-color LED status indicator. The back-plate contains a universal j-box mounting pattern to facilitate ease of installation on a wide variety of j-boxes and the front housing allows tool-less access for ease of maintenance. The lamp heads have a unique track-and-swivel arrangement permitting full range of direction of optical aiming.

OPTICS — The SP640L features four high-performance LEDs rated at 6.6 watts and delivers a total of 640 lumens in a spot pattern.

The SP1100L features six high-performance LEDs rated at 10.6 watts and delivers a total of 1,100 lumens in a spot pattern.

The SP2200L features twelve high-performance LEDs rated at 22 watts and delivers a total of 2,200 lumens in a spot pattern.

The typical life of an LED is 10 years. The LED light sources typically never need to be replaced under normal conditions for normal off applications.

CCT: 5000K.

CZQRE and CZQRW LED Remotes, available in 3.3W (SP640L) lamps @ 5VDC-20VDC (-40 - 55°C) input, 5.3W (SP1100L) lamps and 11W (SP2200L) lamps @ 7VDC-30VDC (-30 - 50°C) input.

ELECTRICAL — UVOLT (120 thru 347V, 50/60Hz). Current-limiting charger maximizes battery life and minimizes energy consumption to provide low operating costs. Small battery chargers Certified in the CA Title 20 Appliance Efficiency Database.

Short-circuit protection — current-limiting charger circuitry protects printed circuit board from shorts. Regulated charge voltage maintains a stable charge voltage over a wide range of line voltages.

Prevents over/undercharging that shortens battery life and reduces capacity. Filtered charger input minimizes charge voltage ripple and extends battery life.

BATTERY: Lithium Iron Phosphate battery. Optional High-Output (HO option) and Extra High Output (EHO option), LTP battery type only, provides a wide variety of remote capacities and/or extended run time.

SELF-DIAGNOSTICS AND REMOTE TEST (SDRT and AELR OPTION): Automatic 24-hour recharge after a 90-minute discharge. Advanced electrical design provides constant light output throughout the entire discharge period. Brownout protection is automatically switched to emergency mode when supply voltage drops below approximately 80 percent nominal of 120, 220, 277 or 347. Other input voltages may vary. AC/LVD reset allows battery connection before AC power is applied and prevents battery damage from deep discharge.

Self-Diagnostics: Continuously monitors AC functionality. Standard derangement monitoring will indicate disconnected battery, charger failure and displays green flashing indicator light while in emergency mode. Single multi-chromatic LED indicator to display two-state charging, test activation and three-state self-diagnostics.

Self-diagnostic testing: Five minutes every 30 days and 90 minutes annually. Diagnostic evaluation of lamps, AC to DC transfer, battery charging and condition of microprocessor. Automatic test is easily postponed for eight hours by activating manual test switch or use of remote tester (RTKITHLP accessory).

Manual testing: Test switch and remote tester (RTKITHLP accessory) provides manual activation of 60-second diagnostic testing for on-demand visual inspection.

AELR option: STAR (Self-testing Automated Reporting) radio transmits monthly and annual test results and diagnostics information for automated reporting requirements. For more information visit [AcuityBrands.com/STAR](#)

INSTALLATION — Wall mount standard (ceiling mount capable, no additional hardware required). Steel mounting bracket ensures easy installation and safe maintenance. 7/8" entrance provision at top of unit for standard 1/2" conduit entry. Tool-less removal of front cover from back-plate for ease of installation and maintenance.

LISTINGS — DSL3 is UL wet location listed standard; the DSL46 is NEMA 4X, IP66 and NSF listed at 32-122°F (0-50°C). Meets or exceeds all applicable requirements for UL 924, NFPA 101 (current Life Safety code), NFPA 70 (NEC), NOM (Norma Oficial Mexicana), California Energy Commission Title 20 section 1605.3 (W)(4), FCC Title 47, Part 15, Subpart B and OSHA. List and labeled to comply with Canadian Standards C22.2 No. 141-10. Meets City of Chicago Code.

BUY AMERICAN ACT (DSL46 and DSL4XRE only) — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to [www.acuitybrands.com/buy-american](#) for additional information.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: [www.acuitybrands.com/support/warranty/terms-and-conditions](#)

NOTE: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

† Small Battery Chargers Certified in the CA Title 20 Appliance Efficiency Database.

Catalog Number
Notes
Type

Industrial LED Emergency Lights

DSL3 DESOTO™ Wet Location



DSL46 DESOTO™ NEMA 4X



MOUNTING

All dimensions are inches (centimeters) unless otherwise indicated.

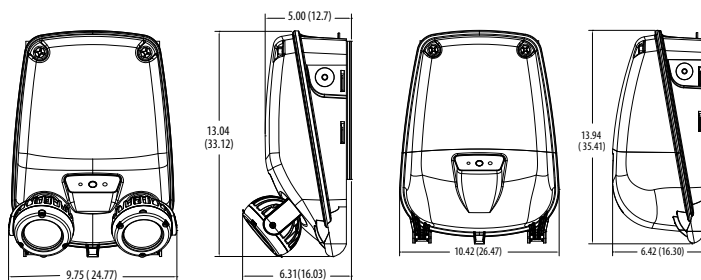
DSL3 SP640L/SP1100L/SP2200L
Specifications

Length: 9.75 (24.77)
Depth: 6.31 (16.03)
Height: 13.04 (33.12)
*Weight of SP640L / SP1100L: 4.90 lbs (2.22kg)
*Weight of SP2200L: 7.0 lbs (3.18kg)

DSL46 SP640L/SP1100L/SP2200L
Specifications

Length: 10.42 (26.47)
Depth: 6.42 (15.85)
Height: 13.94 (35.41)
*Weight of SP640L / SP1100L: 5.55lbs (2.52kg)
*Weight of LP2200L: 7.65 lbs (3.47kg)

*Weight will vary based on battery and CW option



DSL3_DSL46 Industrial LED Emergency Lights

DESOTO™ WET LOCATION

ORDERING INFORMATION For shortest lead times, configure product using bolded options .							Example: DSL3 SP1100L UVOLT LTP SDRT
Series	Lamp Type	Housing Color	Voltage	Battery Type	Automatic Testing	Options	
DSL3 DESOTO™ Wet location	SP640L 640 lumen, 6.6 watt, Spot distribution	(blank) Gray	UVOLT 120-347VAC, 50/60hz	LTP Lithium Iron Phosphate	SDRT Self-Diagnostics, Remote Testing AELR Automatic Emergency Lighting Reporting ²	(blank) Not Required	
	SP1100L 1100 lumen, 10.6 watt, Spot distribution					HO High-Output Battery	
	SP2200L 2200 lumen, 22 watt, Spot distribution ¹					EHO Extra High-Output Battery	
						CW Cold Weather (-30 - 50c)	

Notes

1 SP2200L lumen package only available with EHO option.

2 SDRT required. AELR transmits monthly and annual test results and diagnostics information for automated reporting requirements. Only available with LTP battery type.

DESOTO™ WET LOCATION REMOTE

ORDERING INFORMATION For shortest lead times, configure product using bolded options .							Example: DSL3RE SP1100L T
Series	Lamp Type	Housing Color	Voltage	Number of Lamps			
DSL3RE DESOTO™ Wet location remote	SP640L 320 lumen, 3.3 watt, Spot distribution, 5VDC-20VDC input @ (-40 - 55°C)	(blank) Gray	(blank) Universal DC Voltage	SGL Single T Twin ¹			
	SP1100L 550 lumen, 5.3 watt, Spot distribution, 7VDC-30VDC input @ (-30 - 50°C)						
	SP2200L 1100 lumen, 11 watt, Spot distribution, 7VDC-30VDC input @ (-30 - 50°C)						

Notes

1 For twin (T) remote, multiply lumens and watts by 2.

DESOTO™ NEMA 4X



ORDERING INFORMATION For shortest lead times, configure product using bolded options .							Example: DSL46 SP1100L UVOLT LTP SDRT
Series	Lamp Type	Housing Color	Voltage	Battery Type	Automatic Testing	Options	
DSL46 DESOTO™ NEMA 4X	SP640L 640 lumen, 6.6 watt, Spot distribution	(blank) Gray	UVOLT 120-347VAC, 50/60hz	LTP Lithium Iron Phosphate	SDRT Self-Diagnostics, Remote Testing AELR Automatic Emergency Lighting Reporting ²	(blank) Not Required	
	SP1100L 1100 lumen, 10.6 watt, Spot distribution					HO High-Output Battery	
	SP2200L 2200 lumen, 22 watt, Spot distribution ¹					EHO Extra High-Output Battery	
						CW Cold Weather (-30 - 50c)	
						BAA Buy America(n) Act Compliant	

Notes

1 SP2200L lumen package only available with EHO option.

2 SDRT required. AELR transmits monthly and annual test results and diagnostics information for automated reporting requirements. Only available with LTP battery type. Not available with BAA option.

DESOTO™ NEMA 4X REMOTE



ORDERING INFORMATION For shortest lead times, configure product using bolded options .							Example: DSL4XRE SP1100L SGL
Series	Lamp Type	Housing Color	Voltage	Number of Lamps	Options		
DSL4XRE DESOTO™ NEMA 4X Remote	SP640L 320 lumen, 3.3 watt, Spot distribution, 5VDC-20VDC input @ (-40 - 55°C)	(blank) Gray	(blank) Universal DC Voltage	SGL Single T Twin ¹	BAA Buy America(n) Act Compliant		
	SP1100L 550 lumen, 5.3 watt, Spot distribution, 7VDC-30VDC input @ (-30 - 50°C)						
	SP2200L 1100 lumen, 11 watt, Spot distribution, 7VDC-30VDC input @ (-30 - 50°C)						

Notes

1 For twin (T) remote, multiply lumens and watts by 2.

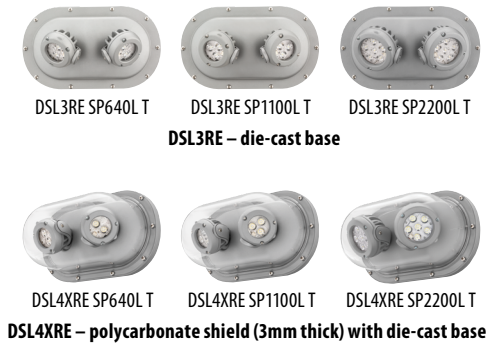
Accessories: Order as separate catalog number.	
RTKITHLP Remote test kit, up to 40' away (includes goggles, laser and battery)	

DSL3_DSL46 Industrial LED Emergency Lights

COMPATIBLE REMOTES

BATTERY CAPACITY AND LOADING				
	Total Capacity	# of Remote SP640L Lamp Heads*	# of Remote SP1100L Lamp Heads*	# of Remote SP2200L Lamp Heads*
DSL3 SP640L / DSL46 SP640L	11W	1	0	0
DSL3 SP640L HO / DSL46 SP640L HO	20.5W	4	2	1
DSL3 SP640L EHO / DSL46 SP640L EHO	32W	7	4	2
DSL3 SP1100L / DSL46 SP1100L	11W	0	0	0
DSL3 SP1100L HO / DSL46 SP1100L HO	20.5W	3	1	0
DSL3 SP1100L EHO / DSL46 SP1100L EHO	32W	6	4	1
DSL3 SP2200L EHO / DSL46 SP2200L EHO	32W	3	1	0

*In addition to the lamp heads on the product

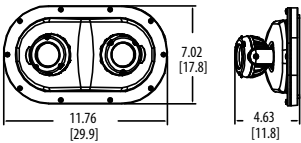


MOUNTING

All dimensions are inches (centimeters) unless otherwise indicated.

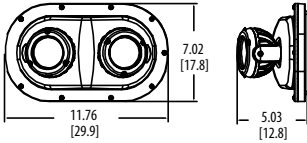
DSL3RE SP640L SGL / T DSL3RE SP1100L SGL / T
Specifications

Length: 11.76 (29.9)
Depth: 4.63 (11.8)
Height: 7.02 (17.8)
Weight of SGL: 3.05 lbs (1.38 kg)
Weight of T: 3.65 lbs (1.65 kg)



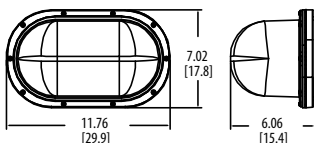
DSL3RE SP2200L SGL / T
Specifications

Length: 11.76 (29.9)
Depth: 5.03 (12.8)
Height: 7.02 (17.8)
Weight of SGL: 3.3 lbs (1.49 kg)
Weight of T: 4.25 lbs (1.92 kg)



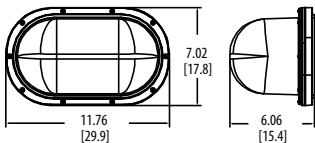
DSL4XRE SP640L SGL / T DSL4XRE SP1100L SGL / T
Specifications

Length: 11.76 (29.9)
Depth: 6.06 (15.4)
Height: 7.02 (17.8)
Weight of SGL: 3.65 lbs (1.65 kg)
Weight of T: 4.25 lbs (1.92 kg)



DSL4XRE SP2200L SGL / T
Specifications

Length: 11.76 (29.9)
Depth: 6.06 (15.4)
Height: 7.02 (17.8)
Weight of SGL: 3.95 lbs (1.79 kg)
Weight of T: 4.9 lbs (2.22 kg)



*SGL and T lamp head options use same mounting plate.

SPECIFICATIONS

Lamp Wattage	
Lamp Type	Watts per Lamp Head
SP640L	3.3W
SP1100L	5.3W
SP2200L	11W

ELECTRICAL				
Unit Type	Battery Type	Input Voltage(V)	Input Current (A)	Watts (W)
Cold weather- With Heater	Lithium Iron Phosphate (STD)	120	0.108	12.84
		347	0.087	15.2
	Lithium Iron Phosphate (HO)	120	0.157	18.69
		347	0.119	23.57
	Lithium Iron Phosphate (EHO)	120	0.202	23.95
		347	0.157	27.74
Non Cold weather- Without Heater	Lithium Iron Phosphate (STD)	120	0.028	2.72
		347	0.041	3.84
	Lithium Iron Phosphate (HO)	120	0.042	4.56
		347	0.043	6.62
	Lithium Iron Phosphate (EHO)	120	0.05	5.69
		347	0.047	7.65

Battery Capacity and Loading — Extended Run-Times		
Battery Option	Total Capacity* 2 hours	Total Capacity* 4 hours
DSL3	8.25W	4.125W
DSL3 HO	15.37W	7.68W
DSL3 EHO	24W	12W
DSL46	8.25W	4.125W
DSL46 HO	15.37W	7.68W
DSL46 EHO	24W	12W

*Total capacity including the lamp types shipped standard on luminaire. SP640L LED lamp heads are 3.3 watts each, SP1100L LED lamp heads are 5.3 watts each, and the SP2200L LED lamp heads are 11 watts each.




BATTERY					
Lithium Iron Phosphate					
Type	Voltage	Typical Shelf Life	Typical Life ¹	Maintenance ²	Temperature Range ^{3,4}
STD	9.6V	1 year	6-8 years	none	32°F - 122°F (0°C - 50°C)
HO	9.6V	1 year	6-8 years	none	32°F - 122°F (0°C - 50°C)
EHO	12.8V	1 year	6-8 years	none	32°F - 122°F (0°C - 50°C)
CW	9.6V ⁵ , 12.8V ⁵	1 year	6-8 years	none	-22°F - 122°F (-30°C - 50°C)


- Notes
- At 77°F ambient temperature, charge/discharge cycles and prolonged full discharge may reduce useful life.
 - All life safety equipment, including emergency lighting for path of egress must be tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required testing could jeopardize the safety of occupants and will void all warranties.
 - Temperature range where unit will provide capacity for 90 minutes. Higher and lower temperatures affect life and capacity.
 - Battery life is negatively impacted by many variables including temperature, charging rates, number of cycles and deep discharges due to long periods of time without AC power.
 - CW battery type is compatible with 9.6V (STD and HO) and 12.8V (EHO) options.

Enabled with STAR

Emergency Lighting with Self-Testing Automated Reporting (STAR), enables self-testing and automated reporting to aid in life safety code compliance. Build your solution and choose your preferred deployment from Mobile STAR, where test data is logged in each individual unit and broadcast to the CLAIRity™+ app, or Connected STAR, where test data is logged in the STAR Gateway by IOTA® and emailed directly. **Leave the ladders, disruptions and written records behind with emergency lighting solutions with STAR!**

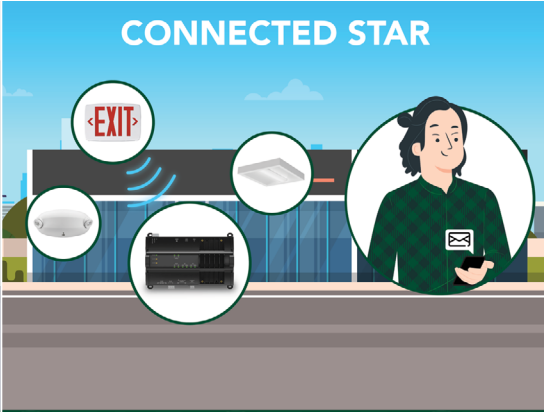
Life Safety Code NFPA 101 testing and reporting requirements for emergency lighting include:

-  Testing for 30 seconds every 30 days
-  Testing for 90 minutes once a year
-  Record keeping and to report to the authority having local jurisdiction



MOBILE STAR

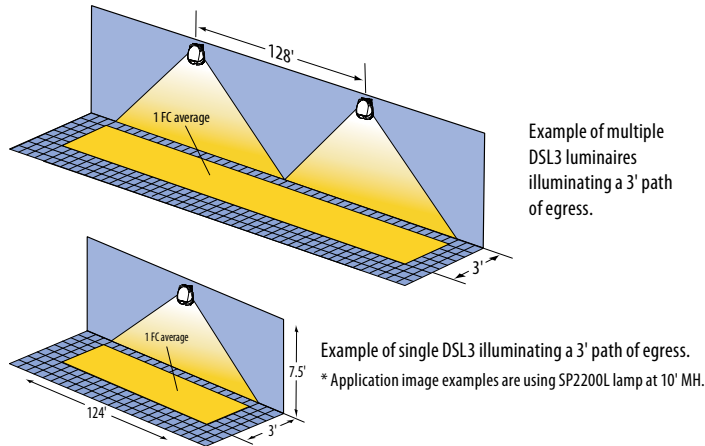
For small scale applications



CONNECTED STAR

For large scale applications

DSL3 SPACING GUIDELINES



Maximum Spacing Guidelines — DSL3 SP640L						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaire		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	58'	56'	63'	57'	Open warehouse: 200'x15'x30' 10/10/10 reflectances
10'	1FC Avg ¹	56'	50'	59'	54'	
12'	1FC Avg ¹	56'	50'	58'	53'	
16'	1FC Avg ¹	52'	48'	54'	50'	
20'	1FC Avg ¹	48'	44'	50'	46'	
24'	1FC Avg ¹	44'	40'	46'	42'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

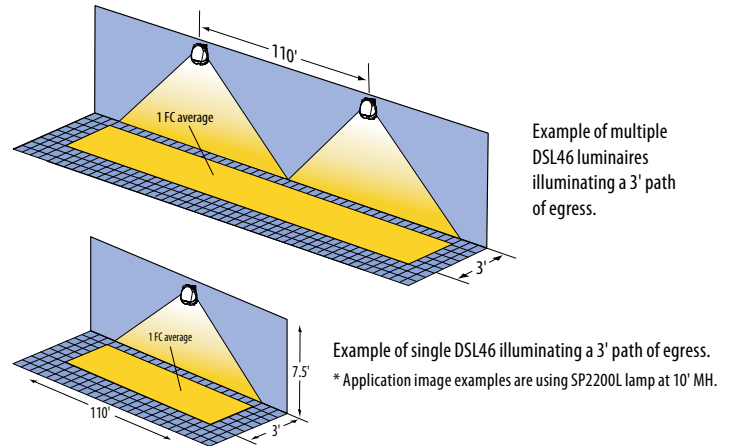
Maximum Spacing Guidelines — DSL3 SP1100L						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaire		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	76'	74'	82'	75'	Open warehouse: 200'x15'x30' 10/10/10 reflectances
10'	1FC Avg ¹	76'	72'	79'	75'	
12'	1FC Avg ¹	72'	70'	78'	74'	
16'	1FC Avg ¹	68'	66'	73'	69'	
20'	1FC Avg ¹	64'	62'	67'	64'	
24'	1FC Avg ¹	60'	58'	63'	60'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

Maximum Spacing Guidelines — DSL3 SP2200L						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaire		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	124'	114'	128'	115'	Open warehouse: 200'x15'x30' 10/10/10 reflectances
10'	1FC Avg ¹	118'	116'	122'	114'	
12'	1FC Avg ¹	120'	116'	121'	114'	
16'	1FC Avg ¹	116'	112'	119'	114'	
20'	1FC Avg ¹	112'	108'	115'	111'	
24'	1FC Avg ¹	106'	104'	108'	107'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

DSL46 SPACING GUIDELINES



Maximum Spacing Guidelines — DSL46 SP640L						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaire		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	54'	48'	57'	50'	Open warehouse: 200'x15'x30' 10/10/10 reflectances
10'	1FC Avg ¹	52'	48'	56'	50'	
12'	1FC Avg ¹	48'	42'	50'	45'	
16'	1FC Avg ¹	46'	40'	48'	43'	
20'	1FC Avg ¹	42'	38'	44'	40'	
24'	1FC Avg ¹	36'	34'	38'	36'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

Maximum Spacing Guidelines — DSL46 SP1100L						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaire		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	69'	67'	72'	67'	Open warehouse: 200'x15'x30' 10/10/10 reflectances
10'	1FC Avg ¹	69'	62'	72'	66'	
12'	1FC Avg ¹	68'	61'	70'	65'	
16'	1FC Avg ¹	62'	60'	66'	62'	
20'	1FC Avg ¹	60'	56'	63'	60'	
24'	1FC Avg ¹	54'	54'	58'	55'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.

Maximum Spacing Guidelines — DSL46 SP2200L						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaire		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg ¹	110'	100'	110'	104'	Open warehouse: 200'x15'x30' 10/10/10 reflectances
10'	1FC Avg ¹	106'	100'	108'	104'	
12'	1FC Avg ¹	104'	100'	108'	104'	
16'	1FC Avg ¹	102'	98'	104'	101'	
20'	1FC Avg ¹	98'	94'	104'	100'	
24'	1FC Avg ¹	94'	90'	100'	92'	

Notes:
1. Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.