

Catalog # :

Project :

Prepared By :

Date :



Shown with decorative end caps accessory

Alliance 4' - ALI4 LED 4' Linear High Bay

The new Alliance™ indoor LED high bay was designed to provide flexibility on any project. For use with applications ranging from school gymnasiums to industrial facilities, the Alliance is configurable with lumen packages that target DLC Premium, a variety of distribution patterns & lenses, and flexible control options. The original design features optional end caps that lend a unique, customized look to your project.

Features & Specifications

Optical System

- Optional high transmission impact resistant clear lenses available in Acrylic (CAL) or Polycarbonate (CAP).
- Optional diffuse impact resistant Acrylic (DA) lens available to eliminate bright spots from individual LED's and provide high vertical illumination and visual comfort.
- Less Lens (LL) option available for high efficiency applications.
- Use of closely spaced medium-power, high brightness chips provide uniform lens luminance with no dead spots.
- Choice of 2 high performance distributions; Wide (W), or Narrow / Aisle (N). Narrow / Aisle distribution is available with Less lens (LL), Clear Acrylic (CA), and Clear Polycarbonate (CP) lens options only.
- Available in 5000K, 4000K and 3500K color temperatures.
- Minimum CRI of 80. Optional 90 CRI available, consult factory for lead times.

Electrical

- High-performance driver features over-voltage, under voltage, short-circuit and over temperature protection.
- 0-10 volt dimming (5% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +55°C (-40°F to +131°F), 30°C (86°F) when equipped with EM option.
- Power factor: >.95
- Input power stays constant over life.
- Optional 120v-277v integral emergency battery pack is available to meet critical life safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).



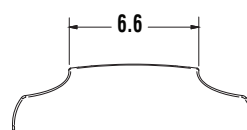
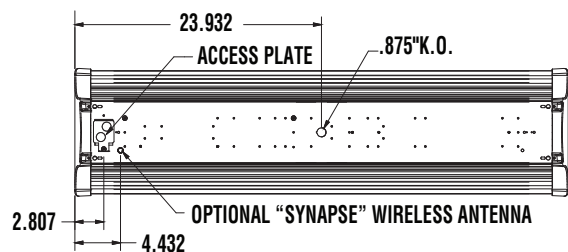
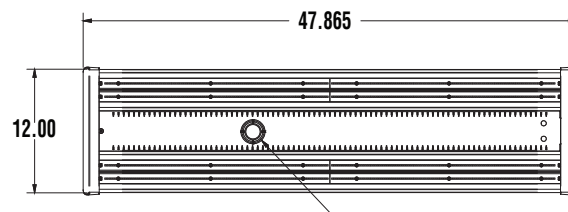
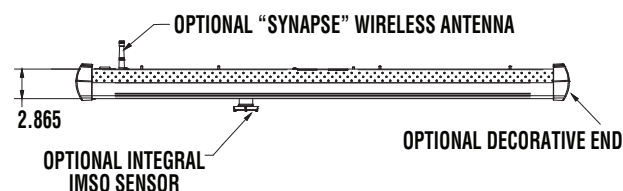
Dimmable

WIRELESS
CONTROLS

damp location

RoHS
COMPLIANTARRA
Funding CompliantTITLE
24
COMPLIANTUL
LISTEDDLC
PREMIUMDLC
PREMIUM

Dimensions





Alliance 4' - ALI4 LED 4' Linear High Bay

Features & Specifications (Cont.)

Controls

- Optional integral passive infrared motion sensors and daylight sensors activate switching of luminaire light levels (see page 5 for more details).
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 6 for more details)
- Osram Encellium™ Wireless Networked Light Management System options. (see page 6 for more details)

Construction

- Rigid extruded aluminum optical housing for consistency and strength with vertical fins that serve as a heat sink and resist accumulation of dust and debris.
- Thick gauge die formed steel driver housing and access panel.
- Access panel provides single screw access to wiring and driver connections.
- Optional injection molded decorative endcaps offer a more customized specifiable appearance.
- Luminaire is proudly made in the U.S.
- All metal parts are painted after fabrication following treatment with phosphate rust inhibitor. Finish coating of housing reflecting surfaces is with high-reflectance white (minimum 92%) polyester powder.
- The Alliance makes it possible to meet ESFR fire suppression system requirements due to the fixtures 12.4" width.
- Shipping weight: 22 lbs in carton.

Installation

- Mounting options include; Hook Cable Hangers (HCH10), Pendant Mount (PM), Single Hub/Cable Mount (SHC), and Surface Mount (SMK).

Warranty

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on optional Battery Back Up. Test regularly in accordance with local codes

Listings

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- State of California Title 24.
- American Recovery and Reinvestment Act Funding Compliant.
- Lighting Facts Approved.
- Suitable For Damp Locations.

Performance

ELECTRICAL DATA*

Lumens	120V	208V	240V	277V	347V	480V
09L	0.492	0.284	0.246	0.213	0.170	0.123
12L	0.683	0.394	0.342	0.296	0.236	0.171
15L	0.825	0.476	0.413	0.357	0.285	0.206
18L	1.017	0.587	0.508	0.440	0.352	0.254
24L	1.400	0.808	0.700	0.606	0.484	0.350
30L	1.642	0.947	0.821	0.711	0.568	0.410
36L	2.025	1.168	1.013	0.877	0.700	0.506
48L	2.792	1.611	1.396	1.209	0.965	0.698
60L	3.492	2.014	1.746	1.513	1.207	0.873

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

HIGH EFFICIENCY LED GEN- RECOMMENDED LUMEN MAINTENANCE¹

Ambient Temperature C	Lumen Multiplier				
	0 hrs. ²	25K hrs. ²	50K hrs. ²	75K hrs. ³	100K hrs. ³
25	100.29	94.80	89.60	84.69	80.05
30	100.29	94.80	89.60	84.69	80.05
35	100.29	94.80	89.60	84.69	80.05
40	100.29	94.80	89.60	84.69	80.05
45	100.21	94.16	88.47	83.13	78.11
50	100.21	94.16	88.47	83.13	78.11

1 - Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

3 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

STANDARD EFFICIENCY LED GEN- RECOMMENDED LUMEN MAINTENANCE¹

Ambient Temperature C	Lumen Multiplier				
	0 hrs. ²	25K hrs. ²	50K hrs. ²	75K hrs. ³	100K hrs. ³
25	100.29	94.80	89.60	84.69	80.05
30	100.21	94.16	88.47	83.13	78.11
35	100.21	94.16	88.47	83.13	78.11
40	100.21	94.16	88.47	83.13	78.11
45	100.21	94.16	88.47	83.13	78.11
50	99.97	94.00	88.39	83.12	78.15

1 - Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

3 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).



Alliance 4' - ALI4 LED 4' Linear High Bay

Luminaire Ordering Guide

TYPICAL ORDER EXAMPLE:

ALI4 LEDHE 48L CA W UNV DIM 40 ALSCS U

Family / Size	LED Gen	Lumen Package*	Lens	Distribution	Voltage	Driver	Color Temperature	CRI
ALI4 - 4' Linear High Bay	LEDHE - High Efficiency	09L - 9000	LL - Less Lens	W - Wide N - Narrow / Aisle	UNV - 120-277V HV - 347-480V	DIM - Dims to 5% (0 to 10V dimming)	35 - 3500K 40 - 4000K 50 - 5000K	Blank - 80 CRI 90CRI - 90 CRI ¹¹
		12L - 12000	CA - Clear Acrylic					
		15L - 15000	CP - Clear polycarbonate					
		18L - 18000	DA - Diffused Acrylic ⁸					
		24L - 24000						
		30L - 30000 ⁸						
		36L - 36000 ⁸						
		48L - 48000 ⁸						
		60L - 60000 ⁸						
		*Consult factory for programmable wattages and lumen packages.						

Controls	EM Options	Options	Packaging
Blank - (No Controls)	EM - 10 Watt Emergency Backup ¹¹ EM20 - 20 Watt Emergency Backup ¹¹	BLANK - Standard End Leads CLDS - Center Leads ⁷	Blank - None JP - Job Pack
ALSC - Airlink Synapse Wireless Control System ⁶ ALSCH - Airlink Synapse Wireless Control System with Sensor ⁶		E6C - 6ft cord 16/5 no plug Cord insalled at END E10C - 10ft cord 16/5 no plug Cord insalled at END E15C - 15ft cord 16/5 no plug Cord insalled at END E20C - 20ft cord 16/5 no plug Cord insalled at END C6C - 6ft cord 16/5 no plug Cord installed at CENTER ² C10C - 10ft cord 16/5 no plug Cord installed at CENTER ² C15C - 15ft cord 16/5 no plug Cord installed at CENTER ² C20C - 20ft cord 16/5 no plug Cord installed at CENTER ²	
IMS0M2 - Integral Motion / Daylight Sensor. Mounting Height >20" ⁵ IMS0M4 - Integral Motion / Daylight Sensor. Mounting Height >45" ⁵ OCSUE - Occupancy Sensor 120-347V ¹¹ OCSHV - Occupancy Sensor 480V ¹¹ DHSUE - Daylight Harvesting / Occupancy Sensor 120-277V ¹¹ DHSHV - Daylight Harvesting / Occupancy Sensor 347-480V ¹¹		515P - 5-15P plug only (120V) ^{6,9} L515P - 5-15P Twistlock Plug (125V) ^{6,9} L615P - 6-15P Twistlock Plug only (250V) ^{6,9} L715P - 7-15P twistlock Plug only (277V) ^{6,9} L820P - 8-20P twistlock Plug only (480V) ⁹ L2420P - 24-20P Twistlock Plug only (347V) ⁹	
ENC - Encelium Wireless Control System ⁶ ENCS - Encelium Wireless Control System with Sensor ⁶		RL15___ - Reloc 15' Cord (Must Specify Voltage) RL20___ - Reloc 20' Cord (Must Specify Voltage) MP___ - Modular Plug (Must Specify Voltage)	

FOOTNOTES:

- 1 - Not available with DLC qualification. Consult with Factory.
- 2 - Center leads and Center cords option requires pendant mount "PM" accessory (Part Number 572484)
- 3 - Pendant mount option provides wiring box with 3/4" threaded hub for housing connections and attaching stems. Stems must be ordered as a separate line item accessory. LDS (Center leads) requires pendant mount "PM" accessory
- 4 - Only available in 60L lumen package
- 5 - IMS Remote allows you to configure your settings on the IMS Integral motion/ daylight sensor. See Accessories for ordering information.
- 6 - Not Available in HV. Consult with Factory.
- 7 - Consult factory for Leadtime
- 8 - Not available in Aisle Distribution
- 9 - Comes Standard with 6' cord unless specified with cord/no plug option (E6C, E10C, E15C, E20C, C6C, C10C, C15C, C20C).
- 10 - Internal EM only available from 9,000L to 30,000L. All other configurations will be external mounted.
- 11 - Not Available with Decorative End Caps

Accessory Ordering Information

Description	Order Number
WG - Wireguard	671328
PM - Pendant Mount J-Box Kit	672404
SHC - Single Hub / Chain Mount	572488
HCH10 - 10' Hook Cable Hanger (Pair)	460149
SMK - Surface Mount Kit	672405
IMS Remote	584929
EC - Decorative End Caps (Pair)	666384



Alliance 4'- ALI4 LED 4' Linear High Bay

Performance (Cont.)

DELIVERED LUMENS*											
	LED Gen	Lumen Package	Distribution Type	Lens Type	3500K		4000K		5000K		Wattage
					Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	
ALI4	LEDHE	09L	W	LL	9095	154	9286	157	9632	163	59
				CA	8780	149	8941	151	9299	157	
				CP	8410	143	8554	145	8896	151	
				DA	7736	131	7895	134	8211	139	
			N	LL	8561	145	8726	147	9054	153	
				CA	8219	139	8377	141	8692	147	
				CP	7876	133	8028	135	8330	141	
	LEDHE	12L	W	LL	12453	153	12728	156	13237	162	82
				CA	11955	147	12219	150	12708	156	
				CP	11457	141	11710	144	12178	149	
				DA	10585	130	10819	133	11252	138	
			N	LL	11692	144	11956	147	12443	153	
				CA	11228	138	11478	141	11945	146	
				CP	10761	132	11000	135	11447	140	
	LEDHE	15L	W	LL	14851	148	15450	157	16068	163	99
				CA	14257	142	14832	151	15425	157	
				CP	13663	136	14214	144	14783	150	
				DA	12623	126	13133	133	13658	139	
			N	LL	13979	142	14356	145	15104	153	
				CA	13420	136	13782	139	14500	147	
				CP	12861	131	13208	133	13896	141	
	LEDHE	18L	W	LL	17803	147	18257	150	18987	156	122
				CA	17091	141	17527	144	18228	150	
				CP	16379	135	16796	138	17468	144	
				DA	15133	125	15518	128	16139	133	
			N	LL	16774	138	17145	140	17848	147	
				CA	16103	132	16459	134	17134	141	
				CP	15432	127	15773	129	16420	135	
	LEDHE	24L	W	LL	23869	143	24571	146	25554	152	168
				CA	22914	137	23588	140	24532	146	
				CP	21959	132	22605	134	23510	140	
				DA	20289	122	20885	124	21721	129	
			N	LL	22466	134	23034	137	24021	143	
				CA	21567	129	22113	132	23060	137	
				CP	20669	123	21191	126	22099	131	
	LEDHE	30L	W	LL	29313	149	29904	153	31100	159	197
				CA	28140	143	28708	147	29856	153	
				CP	26968	137	27512	141	28612	146	
				DA	24916	127	25418	130	26435	135	
	LEDHE	36L	W	LL	35363	146	36118	149	37563	155	243
				CA	33948	140	34673	143	36060	149	
				CP	32534	134	33229	137	34558	143	
				DA	30059	124	30700	127	31928	132	
	LEDHE	48L	W	LL	46956	140	48063	143	49986	149	335
				CA	45078	134	46140	137	47986	143	
				CP	43200	129	44218	132	45987	137	
				DA	39913	119	40854	122	42488	126	
	LEDHE	60L	W	LL	56375	135	57800	138	60112	144	419
				CA	54120	130	55488	132	57708	138	
				CP	51865	124	53176	127	55303	132	
				DA	47919	115	49130	117	51095	122	

*LED Chips are frequently updated therefore values are nominal.



Alliance 4' - ALI4 LED 4' Linear High Bay

Controls

Occupancy Sensor / Daylight Sensor (IMSO)

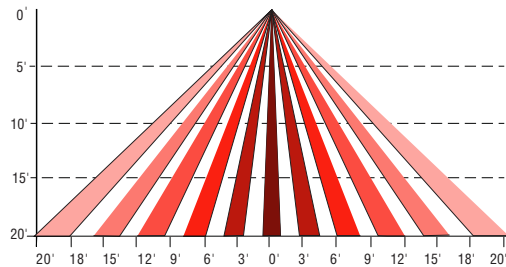
- Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone. Optional configurator tool allows for easy and safe programming of each luminaire from the ground level.

IMS/PC Remote Configurator Tool

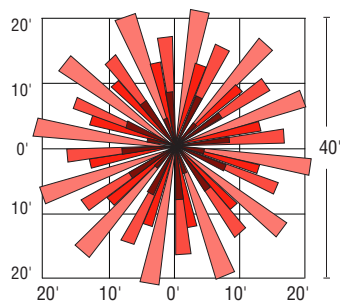


IMS0M2 Coverage Diagram

SIDE VIEW

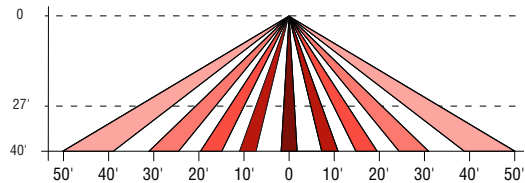


TOP VIEW

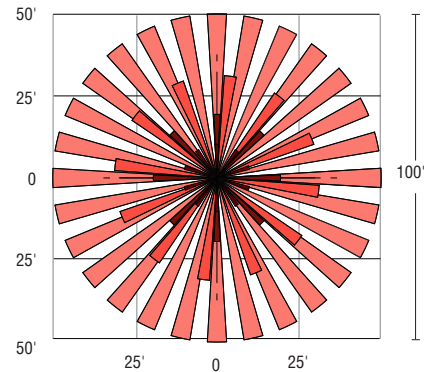


IMS0M4 Coverage Diagram

SIDE VIEW



TOP VIEW



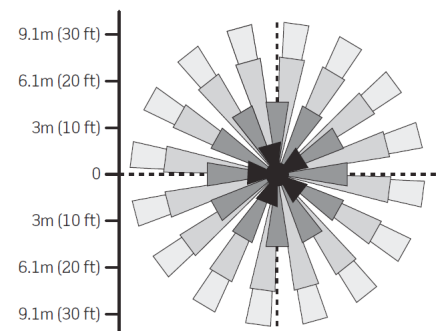
Occupancy Sensor (OCSUE/OCSHV)

- Optional integral passive infrared motion activates switching of luminaire on/off. Standard Factory settings: Luminaire is activated and increased to full bright upon detection of motion. Luminaire powers off when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone. Not available with decorative endcap accessory.

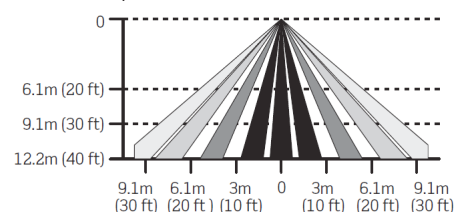
Occupancy Sensor / Daylight Sensor (DHSUE/DHSV)

- Optional integral passive infrared motion and daylight sensor activates switching of luminaire on/off. Standard Factory settings: Luminaire is activated and increased to full bright upon detection of motion. Luminaire powers off when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone. Not available with decorative endcap accessory.

High-Bay 360° Top View



Side View





Alliance 4'- ALI4 LED 4' Linear High Bay

Controls (Cont.)



To get the most value from LSI Industries smart fixtures, we recommend OSRAM ENCELIUM, the industry's leading Light Management System. ENCELIUM brings together the hardware, software you need to control your entire lighting system, all from a single control pane. The Polaris 3D® software is the core element of the ENCELIUM Networked Light Management System. It facilitates the commissioning, usage, and data analysis of the lighting installation.

Learn more what OSRAM ENCELIUM can do for you at www.osram.us/encelium

OSRAM Wireless Control Module (ENC/ENCS)

Include the ENC/ENCS in to enable each LED driver to be independently controlled and configured via OSRAM ENCELIUM®. The ENC/ENCS devices are Damp-Rated and enables luminaires to be turned ON or OFF via a relay contained in the module as well as delivers a low voltage dimming signal to any 0-10V dimming driver.



Wireless Lighting Controller (ALC/ALCS)

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect up to two (2) sensors into the outdoor AirLink wireless lighting system.

Features

- 2% Utility Grade Power Monitoring
- Up to 80% Savings through smart dimming
- True On/Off functionality via switched relay
- Seamlessly integrates into the outdoor AirLink wireless lighting control solution & Self-healing Mesh Networking
- Relay closes on power loss
- Supports a wide range of LED drivers and fixtures
- Class 1 / Class 2 0-10V Dimming Control
- Direct Connect up to two (2) to 24V Occupancy Sensors and Photocells (consult sales for compatible list)
- Secure, over-the-air upgrades to support future enhancements
- Excellent RF Range — 1,000ft LoS between controllers
- Lights default to on for safety

Specifications

Regulatory Approvals

- FCC, IC, CE certified
- cULus Listed
- California Title 24 compliant

Power and Performance

- Operating environmental: -40°F to 131°F (-40°C to 55°C)
- Input power: 100-277 VAC +/- 10% (Max 305V) 47/64 Hz
- Switched output: Default ON; Zero Cross Switching
- Load rating: 5A @ 100V to 277V (+/- 10%)
- Dimming: 0-10V control; Output: Class 1/2 - 20mA Source Max / 50mA Sink Max
- Power monitoring: Utility grade - 2% accuracy
- Sensors inputs: 0-10V (photocell sensors), 0-24V (all other sensors); Sensor power supply: 24VDC @ 50mA

Other

- Radio: SNAP 2.4 GHz; 802.15.4; +20 dBm Transmit Power; -105 dBm Receive Sensitivity
- Warranty: 5 years

Contact LSI Controls



Sales
controls.sales@lsi-industries.com



Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com/airlink



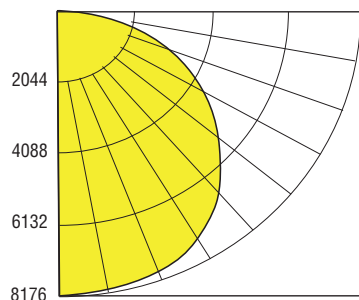
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Photometry

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

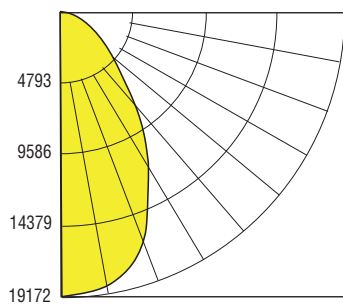
See <http://www.lsi-industries.com/products/led-lighting-solutions.aspx> for detailed photometric data.

ALI4 LEDHE 24L CA W 40



ZONAL LUMEN SUMMARY		
ZONE	LUMENS	% FIXTURE
0-20	3051	12.40%
0-30	6613	26.90%
0-40	11062	45.00%
0-60	20263	82.50%
0-80	24398	99.30%
0-90	24571	100.00%
10-90	23795	96.80%
20-40	8011	32.60%
20-50	12794	52.10%
40-70	12071	49.10%
60-80	4134	16.80%
70-80	1265	5.10%
80-90	174	0.70%
90-180	0.00	0.00%
0-180	24571	100.00%

ALI4 LEDHE 24L CA N 40



ZONAL LUMEN SUMMARY		
ZONE	LUMENS	% FIXTURE
0-20	5931	25.80%
0-30	10498	45.60%
0-40	14521	63.00%
0-60	20306	88.20%
0-80	22858	99.20%
0-90	23034	100.00%
10-90	21281	92.40%
20-40	8589	37.30%
20-50	11885	51.60%
40-70	7489	32.50%
60-80	2552	11.10%
70-80	848	3.70%
80-90	176	0.80%
90-180	0.00	0.00%
0-180	23034	100.00%