

A-51™ LED Factory Sealed Luminaires

For Group C, D Locations. Explosionproof

Hazardous Locations. Suitable for use in Wet Locations. UNILETS™ for use with Threaded Metal Conduit.

NEC/CEC — For Group C and D: Class I, Division 1, Groups C, D | Class II, Division 1, Groups E, F, G | Class III | Suitable for use in Wet Locations

Applications

- Ideal for use in:
 - Chemical and petrochemical plants
 - Hydrogen and Biofuels plants
 - LNG (Liquid Natural Gas) plants
 - Other heavy process areas where ignitable vapors, dust, moisture and corrosive atmospheres may be present
- Suitable for use in wet locations.

Features

- All A-51™ LED fixtures are factory sealed; no external sealing fittings required.
- Fixture unit easily threads off mounting hood for convenient servicing or for immediate exchange with new fixture.
- Specially formulated two coat baked epoxy enamel provides superior protective finish to resist corrosion. Applied to all mounting hoods, fixture units and guards.
- Light outputs up to 3,200 lumens.

Nominal Lumens	HID Equivalent	Incandescent Equivalent	Model
1700	100 - 150W	100 - 150W	ALL1CBU ALL1WBU
3200	200 - 300W	200 - 300W	ALL2CBU ALL2WBU

- Globes in A-51™ fixtures are explosionproof, heat- and impact-resistant glass. Prismatic configuration on globe interior provides light control while allowing smooth exterior surface for cleaning.
- Guards to protect globe are easily mounted to globe ring with 3 screws.
- Fixture units have standardized threads to fit all A-51™ LED mounting hoods.
- Ambient Temperature: -25 °C to +55 °C (-13 °F to +131 °F)
- 6 kV Surge Protection.
- Reported L70 is > 55k hours.
- Choice of mountings:
 - Group C, D:
 - Pendant, ceiling, 25° stanchion ①, long bracket and 15° short bracket.
- 5 year standard warranty.



Group C, D

Options

- Reflectors available, purchase separately
- Aluminum guards available, purchase separately
- Colored glass globes available, purchase separately ②

Standard Materials

- Fixtures and guards: copperfree (4/10 of 1% max.) aluminum
- Pendant mounting hoods: copperfree (4/10 of 1% max.) aluminum
- Ceiling and bracket mounting hoods: malleable iron with aluminum adapters
- Reflectors: powder coated aluminum

Standard Finishes

- Fixtures, guards and mounting hoods: electrostatically applied for complete, uniform surface protection

NEC/CEC Certifications and Compliances

- UL Standard: UL 1598; UL 844
- CSA Standard: C22.2 No. 137; C22.2 No 250.0-08
- cULus Listed: E10444
- Suitable for use in Wet Locations

Design Lights™ Consortium

- Check DLC QPL for current list of products

Related Products

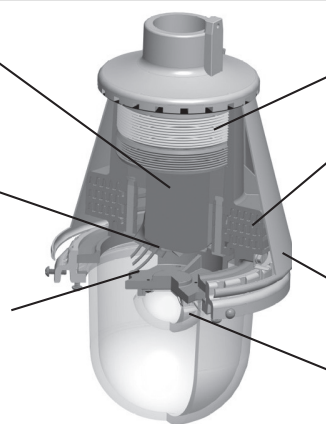
- Code•Master™ LED Factory Sealed Luminaires
- Code•Master™ Jr. LED Factory Sealed Luminaires

Illustrated Features A-51™ LED Class I, Division 1, Groups C, D

Thermally conductive polymer based potting compound maintains low LED driver temperature ensuring long life.

Internal 6 kV protection to prevent voltage spikes from possibly damaging the driver.

Diecast Aluminum heatsink contributes to a reported L70 life of 60,000 hours; CRI > 80.



Socket block with wireless connector ring and pin. As fixture is threaded onto mounting hood, connector ring and pin enter terminal recesses of connection block making electrical contact.

Interlocking concentric rings assure controlled flame dissipation as well

Aluminum heatsink with gray epoxy powder coat, electrostatically applied paint that resists corrosion.

Silicone optic provides a smooth light distribution with a uniform light coverage.

① 25° stanchion mounting hood is not UL certified for use with A-51 fixtures.

② Colored Globes only available with A-51 LED Series rated for Groups C, D areas.

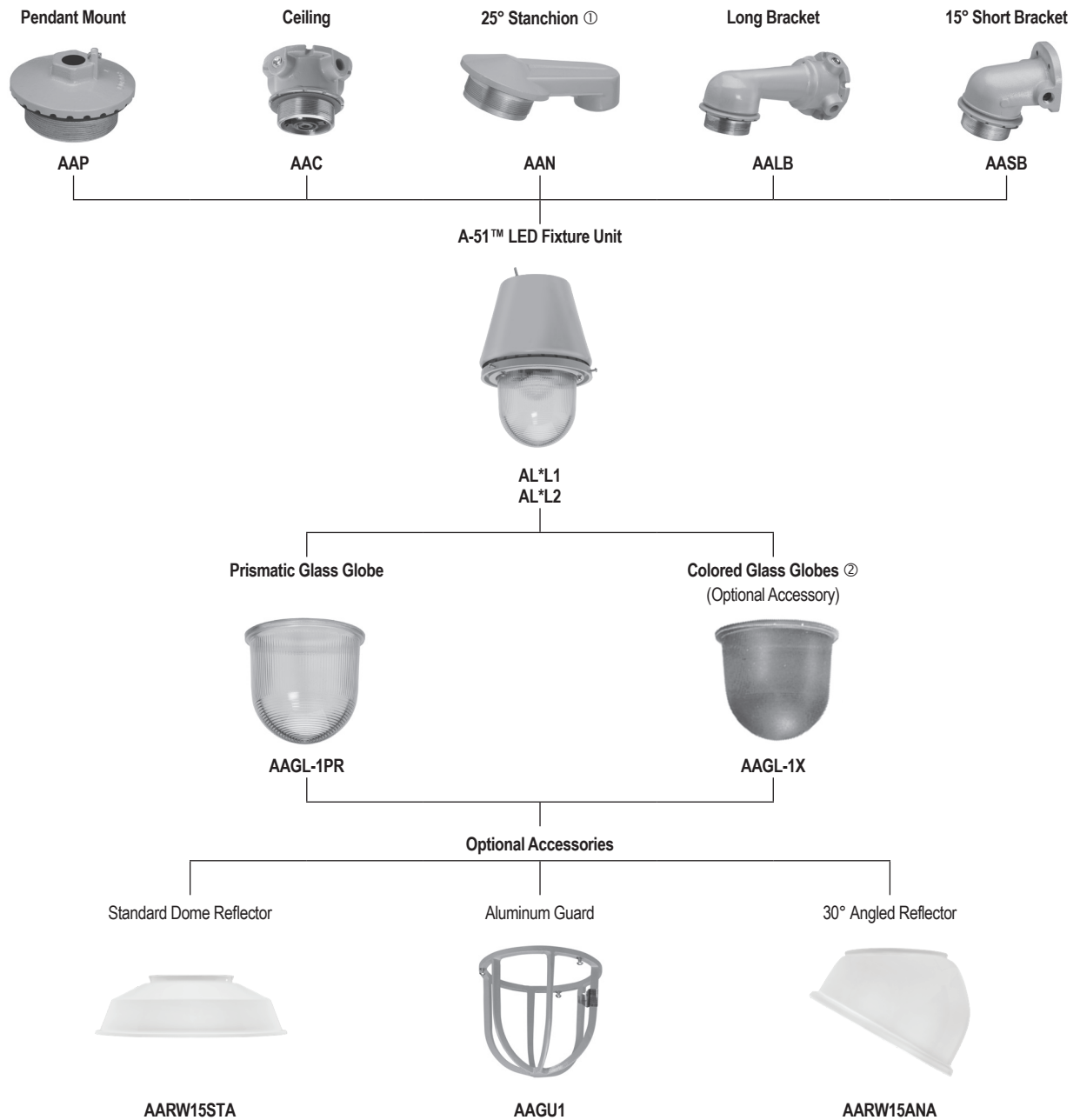
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A-51™ LED Factory Sealed Luminaires Family Tree — Groups B, C, D



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A-51™ LED Factory Sealed Luminaires

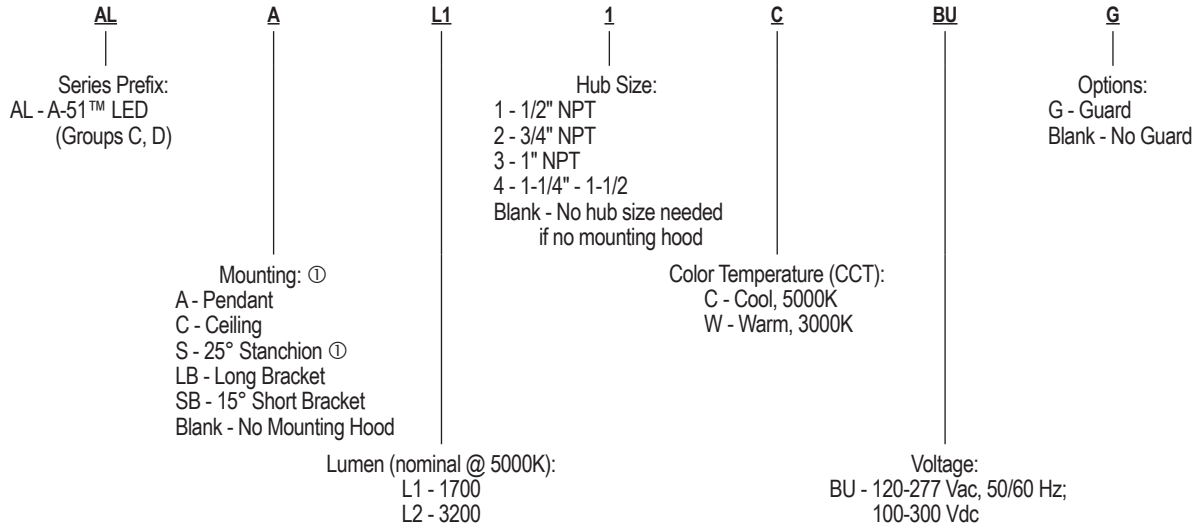
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LED Luminaires | Area / Task | Hazardous Location — Explosionproof | NEC / CEC

Order Using Catalog Numbering Guide — A-51™ LED Factory Sealed Luminaires — For Groups C, D



Lumen Output (Efficacy) ②

Model	HID Equivalency	Incandescent Equivalent	Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output	Efficacy (lm/W)	CCT	CRI	Lumen Output	Efficacy (lm/W)
AL*L1	50W	100 - 150W	Type V	3000K	80	1600	126	5000K	80	1700	134
AL*L2	70 - 100W	200 - 300W	Type V	3000K	80	3000	114	5000K	80	3100	118

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② All lumen values are typical (tolerance +/-10%).

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Electrical Specifications ①

Model	Voltage (V)	Input Power (Watts)	Input Current (Amps)	Power Factor (PF)	Total Harmonic Distortion (THD)
AL*L1	120 Vac	12.7	0.11	>.98	<20%
	277 Vac	13.6	0.05	>.91	<20%
	100 Vdc	12.7	0.13	>.99	<20%
	300 Vdc	13.9	0.05	>.99	<20%
AL*L2	120 Vac	26.3	0.22	>.94	<20%
	277 Vac	26.8	0.10	>.92	<20%
	100 Vdc	26.4	0.26	>.99	<20%
	300 Vdc	27.0	0.09	>.99	<20%

NEC/CEC Temperature Codes

Model	Maximum Ambient Temperature °C (°F)	Supply Wire °C (°F)	Class I, Division 1	Class II, Division 1
Class I Division 1 and Division 2 Groups C and D				
ALL1CBU				
ALL1WBU	+55 (+131)	+125 (+257)	T6	T6
ALL2CBU				
ALL2WBU				

“T” Numbers Represent the Maximum Surface Temperature for Class I, Division 1 locations and Maximum Surface Temperature Under Dust Blanket for Class II, Division 1 Locations. ② ③

“T” #	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range °C (°F)	+351 to +450 (+664 to +842)	+326 to +350 (+619 to +662)	+301 to +325 (+574 to +617)	+281 to +300 (+538 to +572)	+261 to +280 (+502 to +536)	+231 to +260 (+448 to +500)	+216 to +230 (+421 to +446)	+201 to +215 (+394 to +419)	+181 to +200 (+358 to +392)	+166 to +180 (+331 to +356)	+161 to +165 (+322 to +329)	+136 to +160 (+277 to +320)	+121 to +135 (+250 to +275)	+101 to +120 (+214 to +248)	+86 to +100 (+187 to +212)	+85 (+185)

① All values are typical (tolerance +/-10%).

② T numbers represent the maximum internal temperature for Class I, Division 2 and Class I, Zone 2 locations designated by the NEC.

③ T numbers represent the maximum surface temperature under a dust blanket for Class II, Division 1 as designated by the NEC.

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LED Luminaires | Area / Task | Hazardous Location — Explosionproof | NEC / CEC

Catalog Number for Driver Housing and Globe

	Lumen Level	CCT	Optics	Weight in kg (lbs)	Catalog Number ②
	1700	5000K	Type V	3.7 (8.2)	ALL1CBU
	3100	5000K	Type V		ALL2CBU
	1600	3000K	Type V		ALL1WBU
	3000	3000K	Type V		ALL2WBU

Mounting Hoods

	Hub Size (Inches)	Weight in kg (lbs)	Catalog Number
Pendant — One Hub, Rigid or Flexible Mounting			
	1/2" NPT	0.6 (1.3)	AAP-50
	3/4" NPT		AAP-75
	1" NPT		AAP-100
Ceiling — Four Hubs, Three Close-up Plugs			
	1/2" NPT	2.2 (4.8)	AAC-50
	3/4" NPT		AAC-75
	1" NPT		AAC-100
15° Short Bracket — Two Hubs, One Close-up Plug			
	1/2" NPT	2.2 (4.8)	AASB-50
	3/4" NPT		AASB-75
25° Stanchion — One Hub ②			
	1-1/2" NPT ③	0.7 (1.6)	AAN-150
Long Bracket — Four Hubs, Three Close-up Plugs			
	1/2" NPT	4.0 (8.9)	AALB-50
	3/4" NPT		AALB-75
	1" NPT		AALB-100
15° Short Bracket — Two Hubs, One Close-up Plug			
	1/2" NPT	2.2 (4.8)	AASB-50
	3/4" NPT		AASB-75

① For guard, add suffix **-G** to catalog number.

② 25° stanchion mounting hood is not UL certified for use with A-51™ fixtures.







③ 1-1/2" tapped hub furnished with a 1-1/2" to 1-1/4" reducer. Not UL Listed.

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Accessories and Replacement Parts			
Type	Description	Weight in kg (lbs)	Catalog Number
	Colored Glass Globe - Amber	1.2 (2.6)	AAGL1A ①
	Colored Glass Globe - Green	0.8 (1.8)	AAGL1G ①
	Colored Glass Globe - Red	1.0 (2.3)	AAGL1R ①
	Prismatic Glass Globe with gaskets for use with (ALL1CBU, ALL2CBU, ALL1WBU, or ALL2WBU)	0.9 (2.0)	AAGL1PR
	Aluminum Guard for use with (ALL1CBU, ALL2CBU, ALL1WBU, or ALL2WBU)	0.2 (0.4)	AAGU1
	Connection block for all A-51™ LED mounting hoods	0.05 (0.12)	VPT7
 	Standard dome reflector	0.32 (0.72)	AARW15STA
	30° angled reflector	0.52 (1.16)	AARW15ANA

① Colored Globes only available with A-51 LED Series rated for Groups C, D areas.

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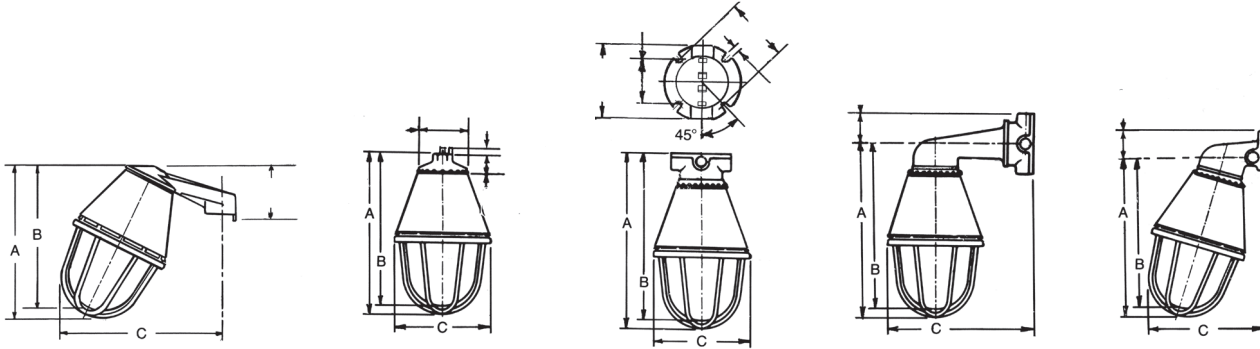
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LED Luminaires | Area / Task | Hazardous Location — Explosionproof | NEC / CEC

Dimensions in Millimeters (Inches)

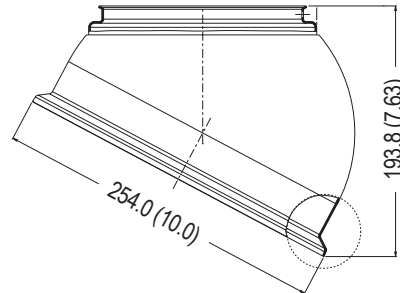
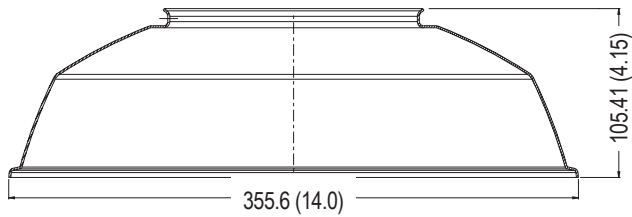


Model	25° Stanchion ①			Pendant			Ceiling			Long Bracket			Short Bracket		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
AL*L1 or AL*L2	291.3 (11.47)	275.6 (10.85)	292.1 (11.50)	311.2 (12.25)	295.4 (11.63)	179.3 (7.06)	349.3 (13.75)	333.5 (13.13)	179.3 (7.06)	349.3 (13.75)	333.5 (13.13)	314.5 (12.38)	344.4 (13.56)	328.7 (12.94)	231.9 (9.13)

Dimensional Drawings in Millimeters (Inches) — Reflector

AARW15STA

AARW15ANA



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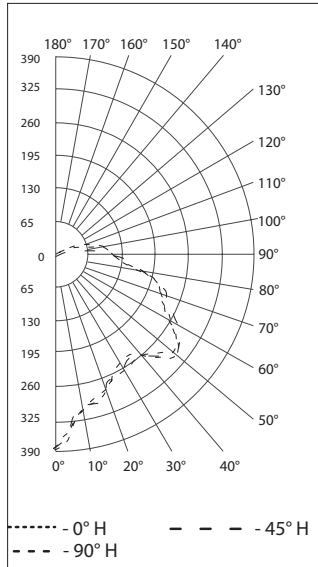
Photometric Data — DATA SHOWN IS ABSOLUTE

Prismatic Glass, 5000K CCT

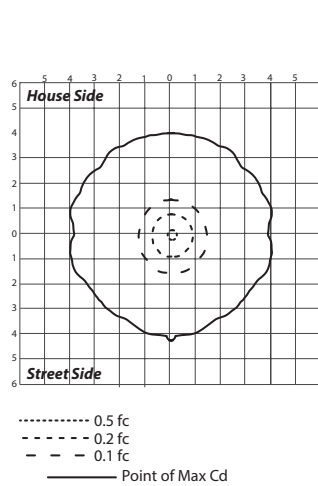
REPORT NUMBER: ALL1CBU

Luminaire Lumens 1,700

POLAR CANDELA DISTRIBUTION



ISOFOOT CANDLE PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	239.1	14.3%
0-40	394.6	23.6%
0-60	867.3	51.8%
60-90	588.8	35.2%
70-100	475.0	28.4%
90-120	213.7	12.8%
0-90	1,456.1	87%
90-180	218.0	13%
0-180	1,674.1	100%

LUMENS PER ZONE

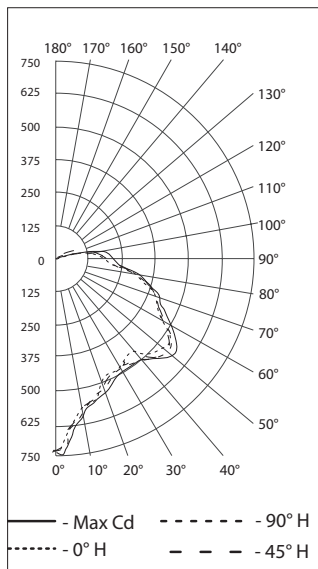
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	32.1	1.9%	90-100	120.1	7.2%
10-20	84.6	5.1%	100-110	80.0	4.8%
20-30	122.4	7.3%	110-120	13.7	0.8%
30-40	155.5	9.3%	120-130	3.5	0.2%
40-50	219.8	13.1%	130-140	0.8	0%
50-60	253.0	15.1%	140-150	0.0	0%
60-70	233.9	14.0%	150-160	0	0%
70-80	205.8	12.3%	160-170	0	0%
80-90	149.1	8.9%	170-180	0	0%

Prismatic Glass, 5000K CCT

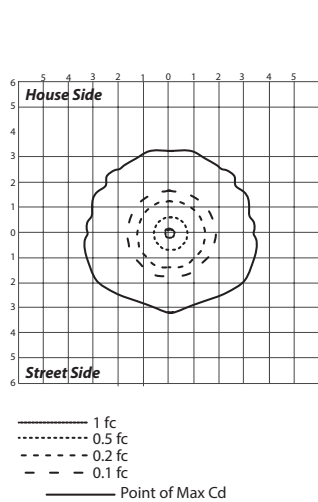
REPORT NUMBER: ALL2CBU

Luminaire Lumens 3,100

POLAR CANDELA DISTRIBUTION



ISOFOOT CANDLE PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	453.8	14.6%
0-40	757.9	24.4%
0-60	1,625.8	52.3%
60-90	1,069.3	34.4%
70-100	862.9	27.7%
90-120	406.3	13.1%
0-90	2,695.1	86.7%
90-180	415.0	13.3%
0-180	3,110.0	100%

LUMENS PER ZONE

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	62.2	2.0%	90-100	219.1	7%
10-20	158.9	5.1%	100-110	153.6	4.9%
20-30	232.7	7.5%	110-120	33.6	1.1%
30-40	304.1	9.8%	120-130	6.8	0.2%
40-50	406.9	13.1%	130-140	1.6	0.1%
50-60	461.1	14.8%	140-150	0.3	0%
60-70	425.5	13.7%	150-160	0	0%
70-80	371.3	11.9%	160-170	0	0%
80-90	272.5	8.8%	170-180	0	0%