

Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 250 W, 400 W, 750 W HID Light Level Equivalent

NEC/CEC:
Class I, Division 2, Groups A, B, C, D
Class I, Zone 2 Group IIC
Class II, Division 1, Groups E, F, G

NEC/CEC:
Class II Division 2, Groups F, G
Class III
Simultaneous Exposure
Type 3R, 4, 4X
IP66/67

NEC:
Marine Outside
Type
(Salt Water)
Wet Locations

ATEX/IECEx:
Zones 2 and 22
⊕ II 3 GD
EPL Gc and Dc
Ex nA IIC; Ex tc IIIC
IP66, IK08

ATEX/IECEx:
Zone 21
⊕ II 2 D
EPL Db
Ex tb IIIC
IK08

NBR IEC:
Zone 2 – 21 and 22
Ex nA IIC Gc
Ex tb IIIC Db
IP66

Applications

- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Food processing plants
 - Storage areas
 - Waste and sewage treatment
 - Parking garages
 - Other areas where water, dirt and rough usage are a problem

Features

- Compact in size, attractively styled contemporary design, rugged and dependable.
- Easy to install and service.
- One-piece housing.
- One-piece lens in hinged cover. Secured by four M6 captive stainless steel slotted hex-head bolts.
- Thermal shock- and impact-resistant glass lens standard.
- Diffused polycarbonate lens available as an option.
- Heavy duty, high temperature silicone rubber gasket, mechanically secured.
- Universal design for flood and high bay mounting.
- Floodlight Mounting:
 - Yoke mount, zinc plated steel yoke with architectural bronze polyester finish.
- High Bay Mounting:
 - (1) Conduit entry on back of luminaire with locking set screw.
 - Rotate yoke up or remove.
- Chain Mounting:
 - Mounts via eyebolts threaded into the corners of the fixture.
 - Available with chain mounting, or as an accessory.
 - Rotate yoke up or remove.
- Cool operating temperatures translate into long luminaire life.
- NEC/CEC versions available with a total of three (3) 3/4" NPT entries with integral bushings.
- ATEX/IECEx version provided with one (1) 3/4" NPT/M20 adapter and two (2) close up plugs.
- Two (2) 3/4" NPT aluminum close up plugs provided.
- Electrical:
 - NEC/CEC/ATEX/IECEx: 120-277 Vac, 50/60 Hz
 - NEC/CEC: 347-480 Vac, 50/60 Hz.; 250 Vdc available on AMLED77YBC.
 - ATEX/IECEx and NBR IEC: 220-240 Vac, 50/60 Hz.
- Terminal block (screw type for secure connection) can accept UL/CSA 24-10AWG and IEC 0.2 - 4 mm².

Standard Materials

- Housing and lens door: copperfree (4/10 of 1% max.) aluminum
- Gasket: silicone rubber
- Reflector: metallized high reflectance finish
- Yoke mount: zinc plated steel
- Bolts: stainless steel
- Close up plugs: (2) aluminum provided

Standard Finishes

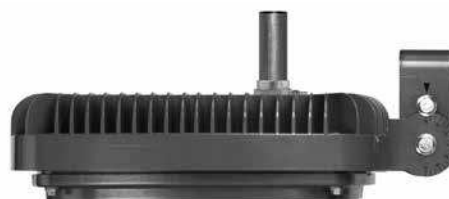
- Housing, lens cover and yoke mount: architectural bronze polyester

NEC/CEC Certifications and Compliances

- UL Standard: UL 1598, UL 1598A, UL 8750, UL 844
- UL Listed: E10794



Floodlight



High Bay

- CSA Standards: C22.2 No. 250.0, C22.2 No. 137
- Ambient Temperature: AMLED67 and AMLED77 -40 °C to +65 °C (-40 °F to +149 °F); AMLED87 -40 °C to +55 °C (-40 °F to +131 °F)

ATEX/IECEx Certifications and Compliances

- Certification Type: AMLED
 - Gas: Zone 2
 - Conforming to ATEX 94/9/EC: ⊕ II 3 G
 - Protection Level: EPL Gc
 - Ex Protection: Ex nA IIC
 - T Rating: See Temperature Data table on following page
 - EC Declaration of Conformity: 50307
 - ATEX Certificate: LCIE 14 ATEX 1016X
 - IECEx Certificate: IECEx LCIE 14.0030X
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/EC: ⊕ II 2 D and II 3 D
 - Protection Level: EPL Db and Dc
 - Ex Protection: Ex tb IIIC and Ex tc IIIC
 - T Rating: See Temperature Data table on following page
 - EC Declaration of Conformity: 50307
 - ATEX Certificate, Zone 21: LCIE 14 ATEX 3049X
 - ATEX Certificate, Zone 22: LCIE 14 ATEX 1016X
 - IECEx Certificate: IECEx LCIE 14.0030X
- Ambient Temperature: -40 °C to +55 °C (-40 °F to +131 °F)
- Index of Protection: IP66; IK08
- Ex Standards: EN/IEC 60079-0; 60079-15: 60079-31
- Product Standards: EN/IEC 61347-1; 61347-2; 61598-1
- EMC Standards: EN/IEC 61000.4.2; 61000.4.3; 61000.4.4; 61000.4.5; 61000.4.6; 61000.4.8; 61000.4.11



THORNE & DERRICK
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Ex tb IIIC
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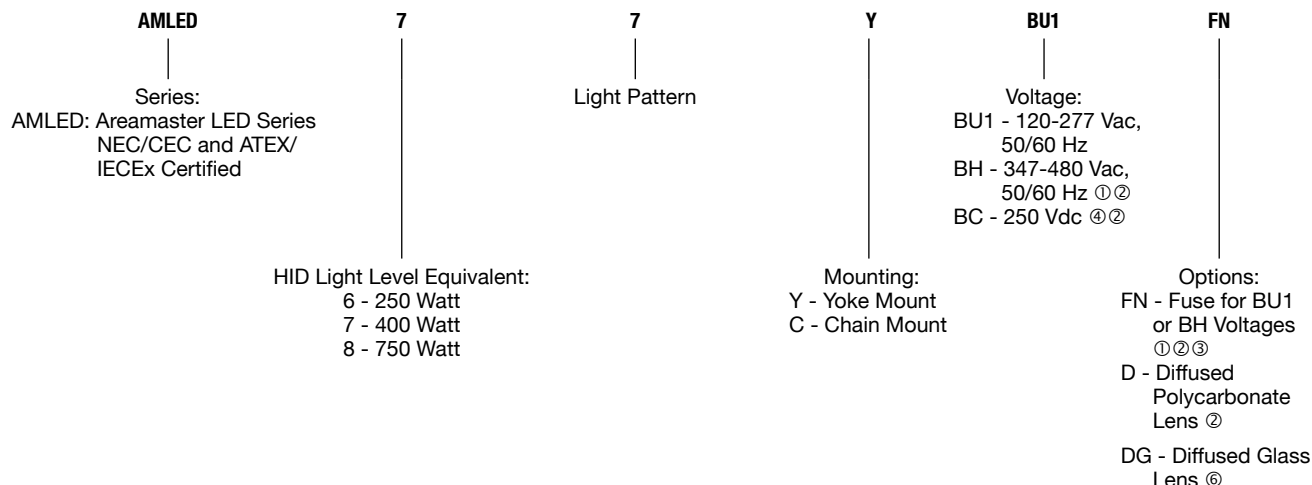
NBR IEC:
Zone 2 – 21 and 22
Ex nA IIC Gc
Ex tb IIIC Db
IP66

NBR IEC Brazilian Certifications and Compliances

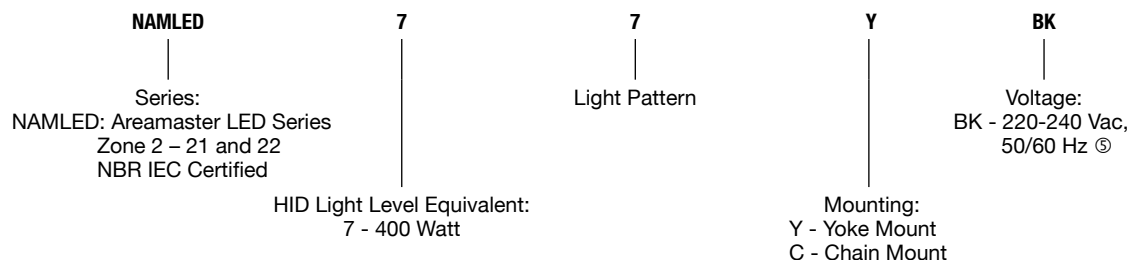
- Certification Type: AMLED
 - Gas: Zone 2
 - IEC Marking: Ex nA IIC Gc
 - T Rating: T4
- Dust: Zone 21 and 22
 - IEC Marking: Ex tb IIIC Db
 - Surface Temperature: T135°C (275°F)
- Ambient Temperature: -25°C to +40°C (-13°F to +104°F)
- Ingress Protection (solid and liquid): IP66
- INMETRO Certificate: TUV 13.0455
- Ex Standards: ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-15, ABNT NBR IEC 60079-31
- Other Standards: ABNT NBR IEC 60529 (IP)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide — NEC/CEC and ATEX/IECEX Certified Areamaster LED



Catalog Numbering Guide — NBR IEC Brazilian Certified Areamaster LED



① Not available for use on the 750 Watt equivalent.

② Not available for use on the ATEX/IECEX certified fixtures.

③ Canadian Electrical Code does NOT allow fusing in hazardous locations. Fuse not CEC rated.

④ Not available for use on the 250 and 750 Watt equivalent.

⑤ 220-240 Vac, 50/60 Hz voltage is certified for use on the NBR IEC 400 Watt equivalent fixtures only.

⑥ For ATEX/IECEX versions.

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NBR IEC:
Zone 2 – 21 and 22
Ex nA IIC Gc
Ex tb IIIC Db
IP66

Technical Data — NEC/CEC

Catalog Number	Lamp		Ambient Temperature °C (°F)	Supply Wire Temperature °C (°F)	Class I, Division 2 ①	Gas		Dust Class II, Division 1 Groups E, F, G
	Line Voltage	Type				Groups	ExnA IIC AExnA IIC	
AMLED67YBU1	120-277 Vac	LED	40 (104)	75 (167)	T4	A,B,C,D	T4	—
			55 (131)	90 (194)	T3C	A,B,C,D	T3	—
			65 (149)	90 (194)	T3C	A,B,C,D	T3	—
AMLED67YBH	347-480 Vac	LED	40 (104)	75 (167)	T4	A,B,C,D	T4	—
			40 (104)	75 (167)	T4	A,B,C,D	T4	—
			55 (131)	90 (194)	T3C	A,B,C,D	T3	—
AMLED77YBU1	120-277 Vac	LED	40 (104)	75 (167)	T4	A,B,C,D	T4	—
			55 (131)	90 (194)	T3C	A,B,C,D	T3	—
			65 (149)	105 (221)	T3C	A,B,C,D	T3	—
AMLED77YBH	347-480 Vac	LED	40 (104)	75 (167)	T4	A,B,C,D	T4	—
			40 (104)	60 (140)	T4	A,B,C,D	T4	—
			40 (104)	75 (167)	T4A	A,B,C,D	T4	—
NAMLED77YBK	220-240 Vac	LED	40 (104)	60 (140)	T4	A,B,C,D	T4	—
			40 (104)	75 (167)	T4A	A,B,C,D	T4	—
			40 (104)	75 (167)	T4A	A,B,C,D	T4	—
AMLED87YBU1	120-277 Vac	LED	40 (104)	75 (167)	T3C	A,B,C,D	T3	—
			55 (131)	90 (194)	T3A	A,B,C,D	T3	—
			55 (131)	90 (194)	T3A	A,B,C,D	T3	—

Technical Data — ATEX/IECEx – Ambient Temperature Ta °C (°F)

Lighting Position	GAS (Zone 2) ①						DUST (Zones 21–22) ②					
	40 (104)		55 (131)		40 (104)		55 (131)		40 (104)		55 (131)	
	Downward	Wall Mounting	Upward	Downward	Wall Mounting	Upward	Downward	Wall Mounting	Upward	Downward	Wall Mounting	Upward
AMLED67YBU1	T4 114 (237)	T4 129 (264)	T4 109 (228)	T4 124 (255)	T4 117 (243)	T3 132 (270)	68 (154)	83 (181)	67 (153)	82 (180)	70 (158)	85 (185)
AMLED77YBU1	T3 144 (291)	T3 159 (318)	T3 146 (295)	T3 161 (322)	T3 150 (302)	T3 165 (329)	75 (167)	90 (194)	74 (165)	89 (192)	77 (171)	92 (198)
AMLED87YBU1	T3 178 (352)	T3 193 (379)	T3 176 (349)	T3 191 (376)	T3 183 (361)	T2 198 (388)	83 (181)	98 (208)	82 (180)	97 (207)	87 (198)	102 (216)

“T” Numbers Represent the Maximum Internal Temperature ① or Maximum Surface Temperature ②

“T” #	NEC/CEC															
	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range °C (°F)	351-450 (664-842)	326-350 (619-662)	301-325 (574-617)	281-300 (538-572)	261-280 (502-536)	231-260 (448-500)	216-230 (421-446)	201-215 (394-419)	181-200 (358-392)	166-180 (331-356)	161-165 (322-329)	136-160 (277-320)	121-135 (250-275)	101-120 (214-248)	86-100 (187-212)	85 (185)
“T” #	ATEX/IECEx and NBR IEC															
	T1			T2			T3			T4			T5			T6
Temp. Range °C (°F)	301-450 (547-842)			201-300 (394-572)			136-200 (277-392)			101-135 (214-275)			86-100 (187-212)			85 (185)

① T numbers represent the maximum internal temperature for Class I, Division 2 and Class I, Zone 2 locations designated by the NEC and ATEX/IECEx.

② T numbers represent the maximum surface temperature under a dust blanket for Class II, Division 1 and 2 as designated by the NEC or Zone 2 (Gas) and 22 (Dust) locations as designated by the IEC.

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Zone 21
II 2 D
EPL Db
Ex tb IIIC
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NBR IEC:
Zone 2 – 21 and 22
Ex nA IIC Gc
Ex tb IIIC Db
IP66

Electrical Specifications — Flood Mount

Catalog Number	Voltage Range	Frequency (Hz)	Watts Input Power (Nom.)	Input Amps (Max.)	Total Harmonic Distortion	Power Factor
AMLED67YBU1	120-277 Vac	50/60	76/74	0.64 - 0.32	0.5	> 0.98
AMLED67YBH	347-480 Vac	50/60	76/76	0.22 - 0.16	0.5	> 0.96
AMLED77YBU1	120-277 Vac	50/60	125/121	1.10 - 0.47	0.5	> 0.98
AMLED77YBH	347-480 Vac	50/60	120/119	0.35 - 0.25	0.5	> 0.96
NAMLED77YBK	220-240 Vac	50/60	117	0.53 - 0.48	0.5	> 0.98
AMLED77YBC	250 Vdc	—	118	0.47	0.5	> 0.98
AMLED87YBU1	120-277 Vac	50/60	174/169	1.60 - 0.70	0.5	> 0.98

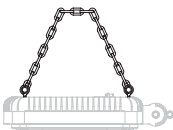


Line Voltage	NEC/CEC	Catalog Number ATEX/IECEX	NBR IEC
120-277 Vac, 50/60 Hz	AMLED67YBU1	AMLED67YBU1	—
120-277 Vac, 50/60 Hz	AMLED77YBU1	AMLED77YBU1	—
120-277 Vac, 50/60 Hz	AMLED87YBU1	AMLED87YBU1	—
347-480 Vac, 50/60 Hz	AMLED67YBH	—	—
347-480 Vac, 50/60 Hz	AMLED77YBH	—	—
250 Vdc	AMLED77YBC	—	—
220-240 Vac, 50/60 Hz	—	—	NAMLED77YBK

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Accessories and Replacement Parts

Description	Catalog Number	
	NEC/CEC, ATEX/IEC	NBR IEC
Crossarm Mounting Bracket		
 Has 180° horizontal adjustment — degree marked. Facilitates mounting floodlight to crossarm or other flat surface, or to G-AM-8-WB. Includes floodlight yoke bolts. Malleable iron, zinc plated, chromate sealed, architectural bronze polyester finish.	G-AM-8-CA	NGAM8CA
Pipe or Wall Mount Bracket		
 Used with G-AM-8-CA. Clamps to 1" to 2-1/2" pipe, vertical or horizontal, or mounts on flat surfaces. Includes U-bolt and crossarm bracket bolts. Malleable iron, zinc plated, chromate sealed, with architectural bronze polyester finish.	G-AM-8-WB	NGAM8WB
Poletop Slip-Fitter		
 Slip-fits 1-1/2" or 2" pipe size poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Body is malleable iron-zinc plated, chromate sealed, with cast aluminum cap. Assembly has architectural bronze polyester finish.	G-SF20	—
 Slip-fits 1" or 1-1/2" pipe size poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Body is malleable iron-zinc plated, chromate sealed, with cast aluminum cap. Assembly has architectural bronze polyester finish.	AMLEDSF1	—
Poletop Slip-Fitter		
 Slip-fits 2" or 2-1/2" poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Malleable iron, zinc plated, chromate sealed, with architectural bronze polyester finish.	G-AM-8-SF	—
Chain		
 Chain mount assembly comes with two (2) 914.4 mm (36 inch) long chains, four (4) eye bolts, four (4) hex bolts, four (4) lock washers, four (4) hex nuts, eight (8) plain washers and an instruction sheet for complete assembly and mounting. Chains are galvanized steel, eye bolts are zinc plated steel, all other hardware is stainless steel.	AMLEDCM	NAMLEDCM

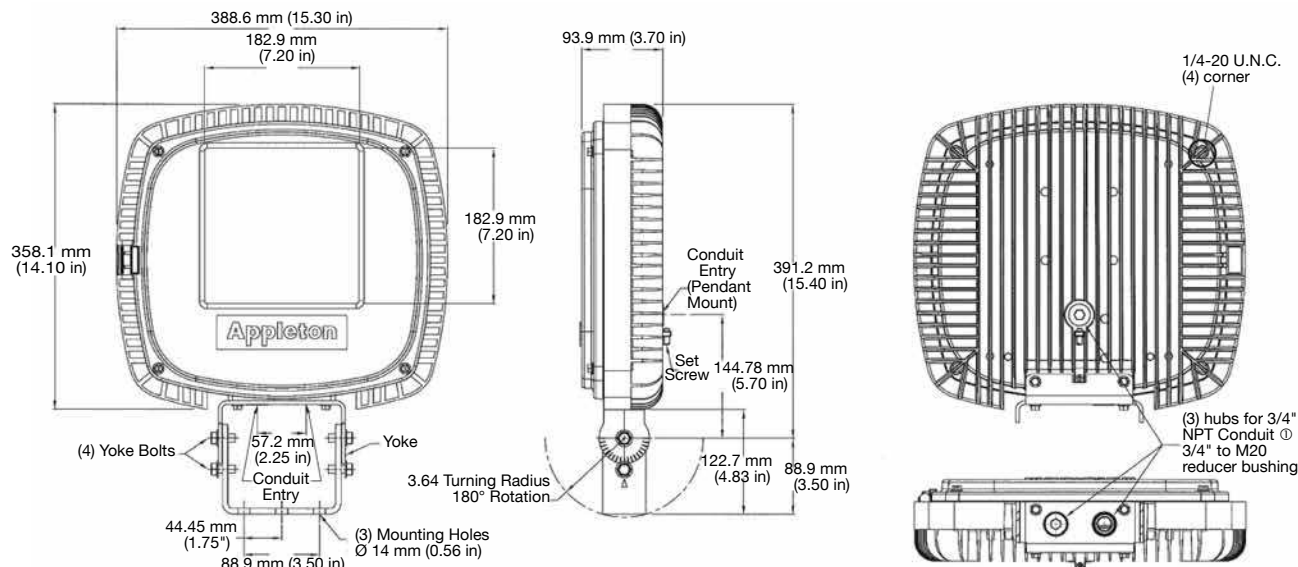
Description	NEC/CEC	Catalog Number	
		ATEX/IEC	NBR IEC
LED Array			
With White LED's for the AMLED67	AMLED67AW	AMLED67AW	—
With White LED's for the AMLED77	AMLED77AW	AMLED77AW	NAMLED77AW
With White LED's for the AMLED87	AMLED87AW	AMLED87AW	—
Drivers			
120 - 277 Vac — BU Version and BC Version	AMLED77DBU	—	—
120 - 277 Vac — BU1 Version — AMLED87: Left Side — AMLED67, AMLED77	AMLEDDBU1L	AMLEDDBU1L	—
120 - 277 Vac — BU1 Version — AMLED87: Right Side	AMLEDDBU1R	AMLEDDBU1R	—
220 - 240 Vac — BK Version	—	—	NAMLED77DBK
347 - 480 Vac — BH Version	AMLED77DBH	—	—
Door Assembly			
With a Glass Lens, Pins	AMLEDMDOOR	AMLEDMDOOR	NAMLEDMDOOR
With a Polycarbonate Lens, Pins	AMLEDMDOORP	—	—

Areamaster™ LED Flood/High Bay Luminaires

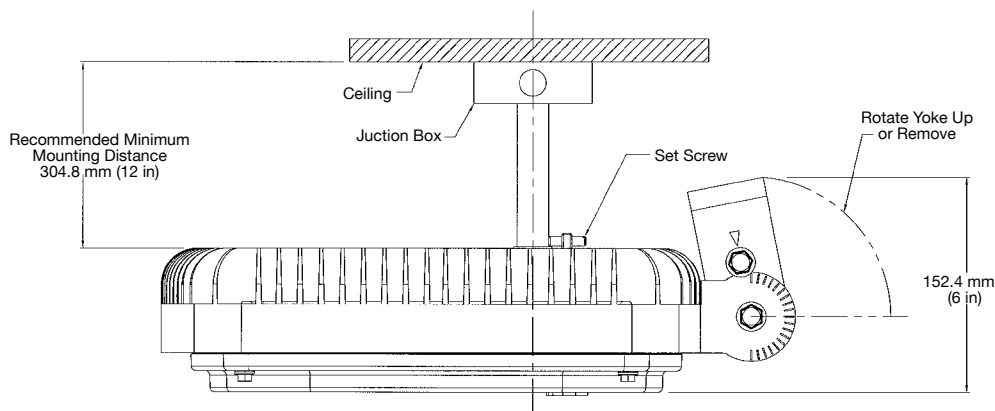
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Dimensions in Millimeters (Inches)

Floodlight



High Bay Pendant Mount



① 3/4" NPT/M20 adapter supplied for ATEX version.

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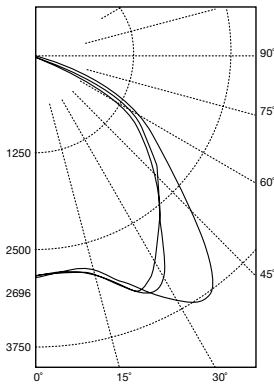
Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **AMLED67YBU1_FLOOD**

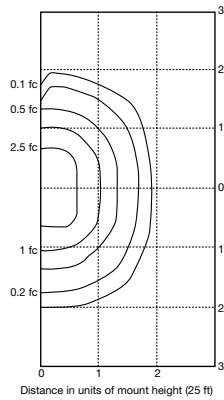
Lamps: Areamaster, High Bay Mount, LED Board 39 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

Luminaire Lumens 8238

POLAR CANDELA DISTRIBUTION



ISOCANDELA CURVES



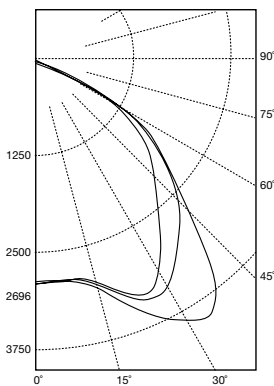
Zonal Lumen and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-10	245.6	N.A.	3.0
10-20	771.8	N.A.	9.4
20-30	1431	N.A.	17.4
30-40	1842	N.A.	22.4
40-50	1785	N.A.	21.7
50-60	1448	N.A.	17.6
60-70	667.1	N.A.	8.1
70-80	43.8	N.A.	0.5
80-90	4.5	N.A.	0.1

REPORT NUMBER: **AMLED67YBU1_HIGHBAY**

Lamps: Areamaster, High Bay Mount, LED Board 39 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

POLAR CANDELA DISTRIBUTION



Zonal Lumen Summary and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-30	2434	N.A.	29.2
0-40	4283	N.A.	51.6
0-60	7553	N.A.	90.6
60-90	780	N.A.	9.4
0-90	8333	N.A.	100.0
90-180	0	N.A.	0
0-180	8333	N.A.	100.0

Zonal Lumen and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-10	244.8	N.A.	2.9
10-20	764.2	N.A.	9.2
20-30	1425	N.A.	17.1
30-40	1849	N.A.	22.2
40-50	1787	N.A.	21.4
50-60	1483	N.A.	17.8
60-70	731.0	N.A.	8.8
70-80	46.7	N.A.	0.6
80-90	2.4	N.A.	0.0

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REPORT NUMBER: **AMLED77YBU1_FLOOD**

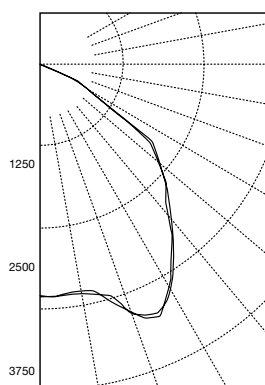
Lamps: Areamaster, High Bay Mount, LED Board 56 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

Characteristics: Maximum Candela: 5818; Maximum Candela Angle: 22.5 H 25.5 V; Horizontal Beam Angle (50%): 97.0; Vertical Beam Angle (50%): 102; Horizontal Field Angle (10%): 134; Vertical Field Angle (10%): 134; Beam Lumens 10414; Field Lumens 12967; Luminaire Lumens 13157

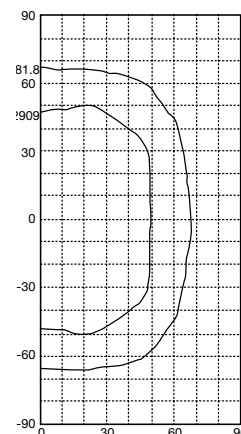
AXIAL CANDELA

DEG.	HOR.	VERT.
90.0	0	0
85.0	21	2
75.0	26	5
65.0	700	733
55.0	2400	2341
47.5	3023	2976
42.5	3375	3307
37.5	3838	3826
33.0	4312	4319
29.0	4670	4719
25.5	4964	4898
22.5	4910	4857
19.5	4700	4660
17.0	4456	4343
15.0	4273	4249
13.0	4184	4165
11.0	4154	4123
9.0	4139	4105
7.0	4124	4119
5.0	4127	4133
3.0	4138	4150
1.0	4149	4153
0.0	4149	4149

AXIAL CANDELA DISPLAY



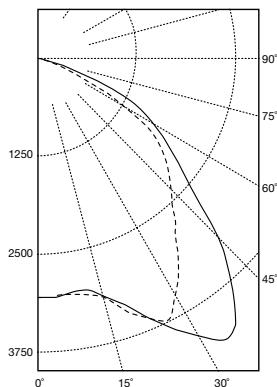
ISOCANDELA CURVES



CIE Type – Direct

Plane	Spacing Criteria
0 Deg	1.5
90 Deg	1.5

Zone	Lumens
0-5	98
5-10	290
10-15	485
15-20	711
20-25	993
25-30	1264
30-35	1440
35-40	1517
40-45	1471
45-50	1392
50-55	1283
55-60	1086
60-65	764
65-70	340
70-75	37
75-80	4
80-85	2
85-90	1



REPORT NUMBER: **AMLED77YBU1_HIGHBAY**

Lamps: Areamaster, High Bay Mount, LED Board 56 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

		Effective Floor Slab Thickness Size																		
% Ceiling	Rcc	80				70				50				30				10		0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	
0		119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	100	
1		111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	
2		102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76	
3		94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65	
4		86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56	
5		79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	50	48	
6		73	60	52	46	71	59	51	45	58	50	45	56	50	45	54	49	44	42	
7		67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37	
8		63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33	
9		58	45	37	32	57	45	37	32	44	37	32	43	36	31	42	36	31	30	
10		55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27	

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	3841	N.A.	29.1	90-130	2	N.A.	0.0
0-40	6798	N.A.	51.5	90-150	6	N.A.	0.0
0-60	12029	N.A.	91.1	90-180	7	N.A.	0.1
0-90	13177	N.A.	99.8	0-180	13199	N.A.	100
90-120	1	N.A.	0.0				

Areamaster™ LED High Bay Luminaires

For Hazardous Locations. 250 W, 400 W, 750 W HID Light Level Equivalent



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Photometric Data — DATA SHOWN IS ABSOLUTE

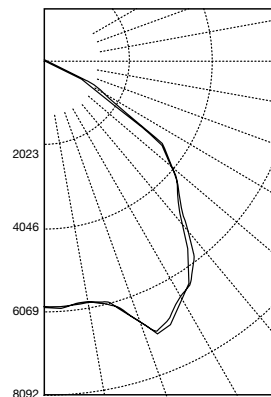
REPORT NUMBER: **AMLED87YBU1_FLOOD**

Lamps: Areamaster, Pendant Mount, LED Board 20 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

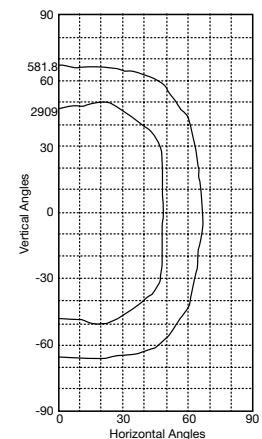
Characteristics: NEMA Type: 7Hx7V; Maximum Candela: 8092; Maximum Candela Angle: 25.5H 25.5V; Horizontal Beam Angle (50%): 97.3; Vertical Beam Angle (50%): 103; Horizontal Field Angle (10%): 137; Vertical Field Angle (10%): 136; Beam Lumens 14933; Field Lumens 18585; Luminaire Lumens 18842

AXIAL CANDELA		
DEG.	HOR.	VERT.
90	0	0
85	31	5
75	36	8
65	1239	938
55	3463	3477
47.5	4393	4345
42.5	4921	4831
37.5	5955	5752
33	6455	6392
29	6656	6778
25.5	6998	7087
22.5	7109	7158
19.5	6665	6664
17	6302	6222
15	6059	6108
13	6027	6044
11	5931	5942
9	5914	5938
7	5933	5956
5	5974	5975
3	6003	5995
1	6002	6004
0	5999	5999

AXIAL CANDELA DISPLAY



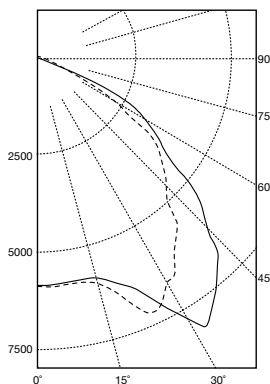
ISOCANDELA CURVES



CIE Type – Direct

Plane	Spacing Criteria
0-180	1.54
90-270	1.54

Zone	Lumens
0- 5	141
5- 10	419
10- 15	697
15- 20	1004
20- 25	1408
25- 30	1794
30- 35	2079
35- 40	2151
40- 45	2143
45- 50	2011
50- 55	1834
55- 60	1567
60- 65	1118
65- 70	514
70- 75	62
75- 80	3
80- 85	2
85- 90	1



REPORT NUMBER: **AMLED87YBU1_HIGHBAY**

Lamps: Areamaster, High Bay Mount, LED Board 20 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling	Rcc	Effective Floor Cavity Reflectance 0.20															
		80				70				50				30			
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102
1	111	107	103	100	108	105	101	99	100	98	95	97	95	93	93	91	90
2	102	95	89	84	99	93	88	83	89	85	81	86	83	79	83	80	77
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67
4	86	75	67	60	84	73	66	60	71	64	59	69	63	58	67	62	58
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50
6	73	60	52	45	71	59	51	45	57	50	45	56	49	45	54	49	44
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	43	39
8	63	49	41	36	61	49	41	35	47	40	35	46	40	35	45	39	35
9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	5462	N.A.	28.8	90-130	3	N.A.	0
0-40	9692	N.A.	51.2	90-150	5	N.A.	0
0-60	17247	N.A.	91.1	90-180	7	N.A.	0
0-90	18946	N.A.	100.1	0-180	18933	N.A.	100
90-120	2	N.A.	0				