



KILLARK®

*LED TECHNOLOGY
for Harsh & Hazardous
Environments*



CERTILITE®

**MBL Series
Compact Size**



CERTILITE® V

**VM1L Series
Reduced Profile**



HOSTILELITE®

**EML Series
Explosion-Proof**



HSI = GREEN
HUBBELL SUSTAINABILITY INITIATIVE



Hubbell is committed to be a recognized leader in conserving natural resources to sustain our environment.



LED TECHNOLOGY



KILLARK® is pleased to announce the addition of LED labor and energy saving technology to several of its time-tested industrial grade luminaire series' for harsh and hazardous locations. Market demand for this long life clean white light is growing significantly - Killark is there with products for Class I Division 2; Class II Division 1, and Class I Division 1 "Explosion-Proof" applications. Killark also satisfies the need for wet and corrosive locations with NEMA 4X ratings.

Key Features & Benefits:

- L70 55,000 hour life at 40° (5+ years to 70% of initial output) equals Minimal Maintenance.
- LM79-08 Certified Photometrics Tested
- Solder-LESS LED Board Connections - Vibration Resistant
- Dual Drivers - Redundant Systems - VM1L, MBL4530 half of fixture can be turned off for greater energy savings
- Less than 50 Watts of Power; 25 for MBL2230
- Instant on - including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
- Crisp white light - 5000°K (CCT); 70 CRI
- Wide variety of optics, including Globes, Refractors (MBL & VM1L), and Reflectors
- Optional Mounting arrangements, including Pendant, Wall, Ceiling, Stanchion and others
- Copper-Free Aluminum Construction with electrostatically applied epoxy/polyester power paint, plus Stainless Steel External Hardware for Corrosion Resistance

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What Makes this Product GREEN?

Saves Energy compared to other lighting sources:

Fixture Type	Light Source	Line Wattage(2)	Delivered Lumens(3)	Lumens per Watt	Photometric Report
VM1L4530(1)	LED	48.2	3080	63.9	BAL15305
VM1S050(1)	HPS	62.0	3360	54.2	HPK009950
VM1H070(1)	MH	90.0	4536	50.4	HPK009935
VQF5230N4(1)	CFL	64.0	2736	42.8	LSI25349
VaporTight (4)	Incan.	150.0	2699	18.0	ET442841

Saves Significant Maintenance Labor Time and \$ (fewer trips for relamping)

	Hours Life (5)	No. Trips
Killark LED	50,000	1.0
50HPS	24000	2.1
70MH	15000	3.3
52CFL (2 x 26W)	10,000	5.0
150 Incan.	750	66.7

Lower facility carbon footprint (emissions) by reducing electrician Maintenance Trips to fixture

- > Service Trucks: direct diesel or gas emissions
- > Forklifts, Sissor-lifts, or Cherry Pickers: use utility electricity to charge batteries, or gas

High Color Rendering (5000°Kelvin - CCT; 70 CRI) for better visibility can reduce the number of fixtures needed. The US DOE recognizes "Spectrally Enhanced Lighting", particularly at low light levels, as a method to maintain visual effectiveness using fewer watts, e.g. vs HPS (2100°Kelvin - CCT; 21CRI). (6).

Killark LED luminaires use RoHS compliant materials to minimize environmental contamination

(1)Using VMG17 standard globe (Class I Division 2; Class II Division 1)
 (2)Wattage from Test Report or Ballast mfg. data (greater than "nominal" wattage)
 (3)Delivered Lumens on LED from Absolute Photometry; for HID, Compact Fluorescent, or Incandescent data is from noted Photometric Report's Zonal Lumen Summary, which is delivered lumens.
 (4)Traditional 3.18" dia. 6.68" high Clear Globe with 150A21 Lamp
 (5)Minimum LED Life to 70% of initial lumen output; HID, CFL, Incandescent from mfg. catalog data
 (6)For more information go to http://www1.eere.energy.gov/buildings/spectrally_enhanced.html





LED Technology



Class I, Div. 2, Groups A,B,C,D
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
Marine
NEMA 3, 4X

 Certified - File LR11713

FEATURES-SPECIFICATIONS

CERTILITE® LED

Applications

CERTILITE® MBL LED fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances

- UL-8750 for LED lighting
- UL Marine type lighting fixtures (HID models) UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- Enclosed and gasketed
- NEMA 3, 4X

Materials

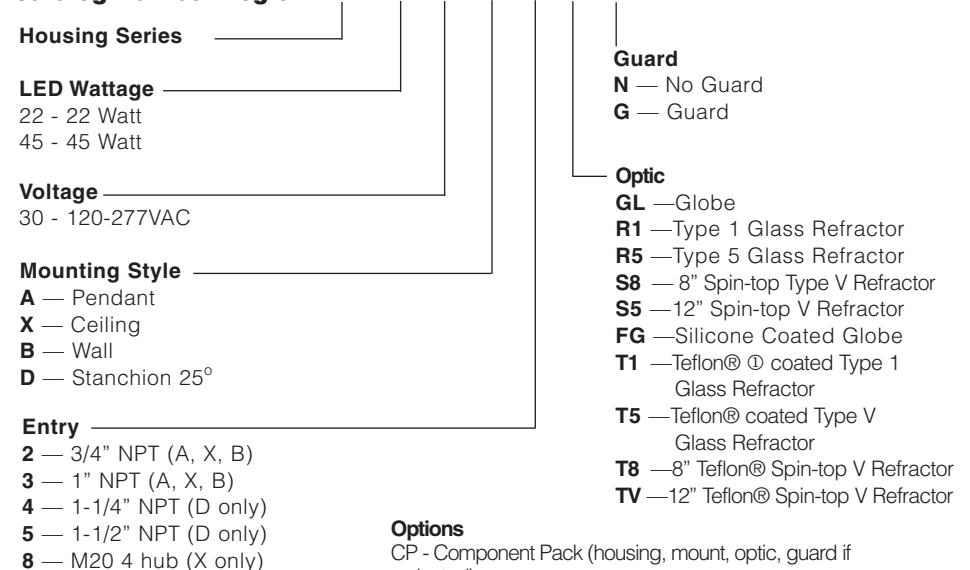
- Ballast tank, splice box and guards (MBAG, VMAG) corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - stainless steel
- Reflectors - Polyester reinforced fiberglass

LED Luminaire Features and Standards

- Compact in Size with Traditional Industrial Appearance and Suitability
- Wide variety of optics including globes, globes with reflectors, all-glass refractors, and spin-top refractors
- Optional Mounting arrangements including Pendant, Wall, Ceiling, and Stanchion
- MBL LED Housings can be retrofitted to existing MB splice boxes; upgrade from Fluorescent or HID
- Energy Savings - less than 50 Watts of Power; 25 Watts for MBL2230
- Long Life - 50,000 - 60,000 maintenance free hours to 70% initial lumens
- Crisp White Light for Excellent Color Rendering - Chromaticity 5000°K (CCT); 70 CRI
- Ambient suitability -40°C to 40°C (to 55°C for MBL2230)
- Instant on - including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
- Solder-LESS LED Board Connections - Vibration Resistant
- Dual Drivers - Redundant Systems (built-in backup), or for additional energy savings half of MBL4530 can be turned off
- LM80-08* Measurement of lumen maintenance for LED light sources
- LM79-08* Certified "Absolute" Photometry, including Chromaticity Color for Solid State Lighting
- L70 Values - Industry Nomenclature for Hours of use to 70% of Initial Lumens

* LM-xx are Illumination Engineering Society Standards designed to promote uniformity in testing procedures among test labs and manufacturers. For more information go to www.ies.org

Catalog Number Logic



Options

CP - Component Pack (housing, mount, optic, guard if selected)

AN - Assembled Fixture (components as selected)

①Teflon® is a registered trademark of DuPont, Inc.



KILLARK®



PENDANT

WALL

CEILING

STANCHION

ORDERING INFORMATION

MBL SERIES PENDANT WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
22	3/4"	120-277VAC	MBL2230A2GLG	MBL2230A2R1G	MBL2230A2R5G	MBL2230A2S8G	MBL2230A2S5G
45	3/4"	120-277VAC	MBL4530A2GLG	MBL4530A2R1G	MBL4530A2R5G	MBL4530A2S8G	MBL4530A2S5G

MBL SERIES CEILING WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
22	3/4"	120-277VAC	MBL2230X2GLG	MBL2230X2R1G	MBL2230X2R5G	MBL2230X2S8G	MBL2230X2S5G
45	3/4"	120-277VAC	MBL4530X2GLG	MBL4530X2R1G	MBL4530X2R5G	MBL4530X2S8G	MBL4530X2S5G

MBL SERIES WALL WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
22	3/4"	120-277VAC	MBL2230B2GLG	MBL2230B2R1G	MBL2230B2R5G	MBL2230B2S8G	MBL2230B2S5G
45	3/4"	120-277VAC	MBL4530B2GLG	MBL4530B2R1G	MBL4530B2R5G	MBL4530B2S8G	MBL4530B2S5G

MBL SERIES 25° STANCHION WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ④	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
22	1-1/4"	120-277VAC	MBL2230D4GLG	MBL2230D4R1G	MBL2230D4R5G	MBL2230D4S8G	MBL2230D4S5G
45	1-1/4"	120-277VAC	MBL4530D4GLG	MBL4530D4R1G	MBL4530D4R5G	MBL4530D4S8G	MBL4530D4S5G

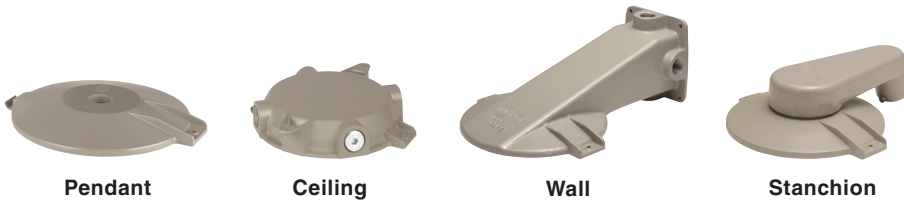
① Catalog numbers shown are with Guard; to omit guard change ending G to N; e.g. MBL2230A2GLN

② Catalog numbers shown are with 3/4" conduit openings; change "2" to "3" for 1" e.g. MBL2230A3GLG

③ 120VAC through 277VAC 50/60Hz

④ Catalog numbers shown are with 1-1/4" conduit openings; change "4" to "5" for 1-1/2" e.g. MBL2230D5GLG





MB MOUNTING BRACKETS				
CATALOG NUMBER				HUB SIZE
PENDANT	CEILING	WALL	STANCHION	
MBA-2	MBX-2	MBB-2	—	3/4"
MBA-3	MBX-3	MBB-3	—	1"
—	MBX-8*	—	—	M20
—	—	—	MBD-4	1-1/4"
—	—	—	MBD-5	1-1/2"

* MBX-8 furnished with 3 non-metallic plugs

MBL LED OPTICS AND ACCESSORIES		
DESCRIPTION	OPTIC LOGIC	GUARD
Globe (glass)	MBG (GL)	MBAG
Reflector (all glass) Type I	VMR171 (R1)	VMAG17
Reflector (all glass) Type V	VMR175 (R5)	VMAG17
Reflector (spin top) 8"Type V	VZRG1550 (S8)	VMRWG8
Reflector (spin top) 12"Type V	VZRG2550 (S5)	VMRWGS
Globe (Silicone coated)	MBGT (FG)	MBAG
Reflector Teflon® ① coated (all glass) Type I	VMR171T (T1)	VMAG17
Reflector Teflon® coated (all glass) Type V	VMR175T (T5)	VMAG17
Reflector (spin top) 8"Type V	VZRG1550T (T8)	VMRWG8
Reflector (spin top) 12"Type V	VZRG2550T (TV)	VMRWGS
Reflector for MBG Globe - DOME ②	VMPSD-17	NA
Reflector for MBG Globe - ANGLE ②	VMPA-17	NA
120VAC Photocell with FS Style Cover	VMFSPC1	NA
208-277VAC Photocell with FS Style Cover	VMFSPC2	NA
3-sided EXIT Accessory (use without guard)	VEXA100B	NA

① Teflon is a registered trademark of DuPont, Inc.

② Reflectors for use with MBG/MBAG only; VMG17 globe with VMAG17 guard will fit without reflector.

MBL LED HOUSINGS WITH DRIVERS AND LEDS - ELECTRICAL RATINGS					
CAT. NO.	VOLTAGE 50/60HZ	WATTAGE	AMPS 120/277	CIL ③	WEIGHT
MBL2230	120-277VAC	25.8	.215/.093	1980	8 LBS
MBL4530	120-277VAC	49.9	.416/.180	3960	15.5 LBS

THERMAL PERFORMANCE DATA (ANY OPTIC)					
CAT. NO.	AMBIENT	C1D2	C2D1	L70	SUPPLY WIRE
MBL2230	40°C	T4A	T4 (EFG)	60,000 HRS	75°C
MBL2230	55°C	T4	T4(EFG)	50,000 HRS	90°C
MBL4530	40°C	T4A	T4(EFG)	55,000 HRS	90°C

③ CIL = Calculated Initial Lumens of LED component based on mfg. data and driver current INSIDE the optic. This value is provided as a reference only for comparison to traditional light sources such as incandescent, HID, or fluorescent which use initial values in "relative" photometry. KILLARK LED luminaires are tested using the Absolute photometry method (LM79-08), which calculates delivered lumens only. KILLARK's LED luminaires provide very bright white 5000° K (CCT) color and can appear brighter than traditional light sources with higher lumen values under both photopic and scotopic conditions.

④ Driver THD < 20%, Powerfactor 99% @ 120V; Line Regulation 2%; Load regulation 5%; Protected against Over-voltage and Over-current.

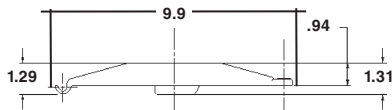
⑤ VMRWG8 Plated Steel, VMRWGS 316 Stainless Steel.

OPTICS

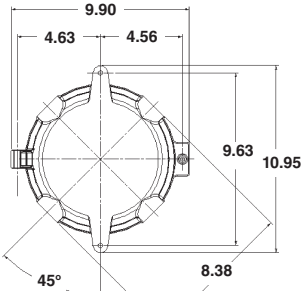


ACCESSORIES

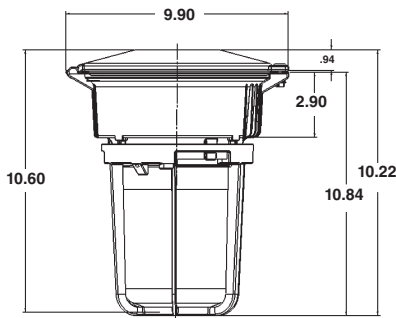
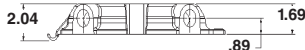




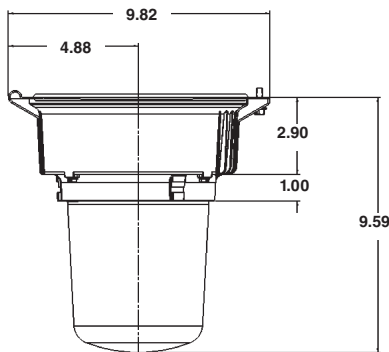
MBA Pendant



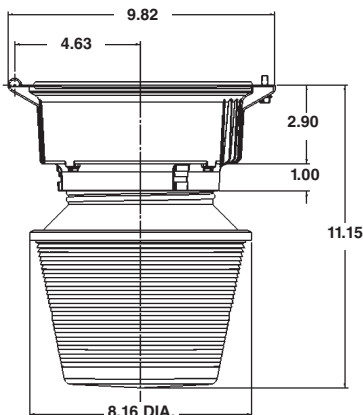
MBX Ceiling



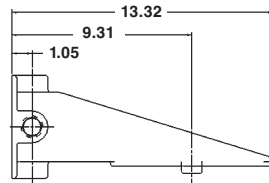
MBL Pendant, Globe, Guard



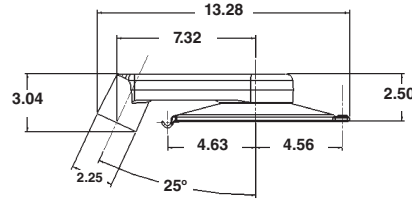
MBL & MBG Globe Only



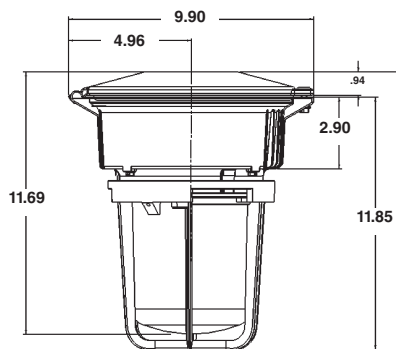
MBL & 8" Type V Spin-top



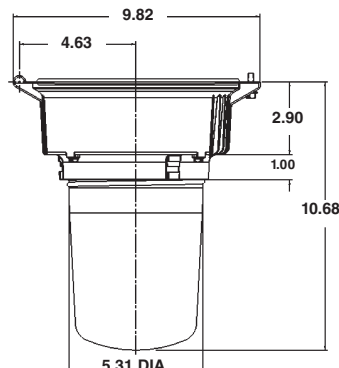
MBB Wall Mount



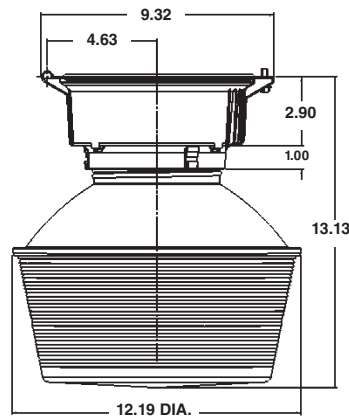
MBD Stanchion



MBL Pendant, Refractor, Guard



MBL & VMR Refractor



MBL & 12" Type V Spin-top

LED 45 Watt Globe Only



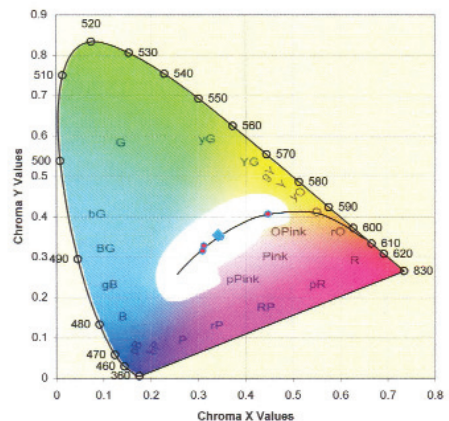
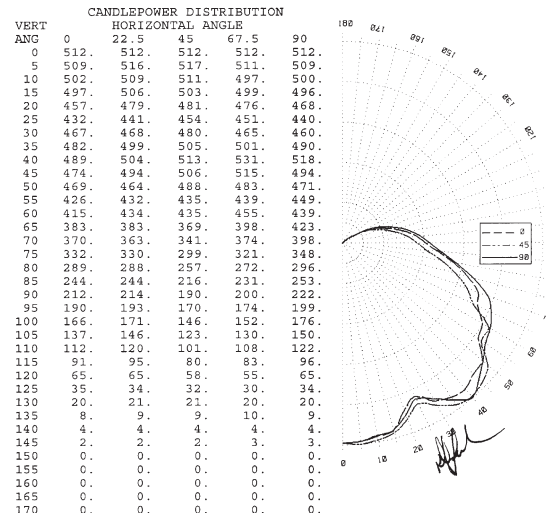
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	397	N.A.	13.5%
0-40	710	N.A.	24.2%
0-60	1488	N.A.	50.6%
0-90	2471	N.A.	84.1%
90-120	430	N.A.	14.6%
90-130	460	N.A.	15.6%
90-150	468	N.A.	15.9%
90-180	468	N.A.	15.9%
0-180	2940	N.A.	100

Absolute Photometry

Total Luminaire Efficiency = N.A.%

Spacing to Mounting Height Ratio 1.5

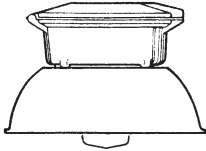


Chromaticity 5101°K (CCT); 72.2 CRI

Certified Report BAL15302.0

① 22W model values approx. 50% of 45W

LED 45Watt Globe & Dome Reflector^①



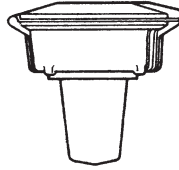
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	502	N.A.	19.4%
0-40	896	N.A.	34.6%
0-60	1859	N.A.	71.8%
0-90	2577	N.A.	99.5%
90-120	7	N.A.	0.3%
90-130	11	N.A.	0.4%
90-150	13	N.A.	0.5%
90-180	13	N.A.	0.5%
0-180	2590	N.A.	100

Absolute Photometry

Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.5

LED 45Watt Glass Type V Refractor^①



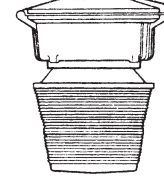
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	386	N.A.	13.3%
0-40	631	N.A.	21.7%
0-60	1305	N.A.	44.8%
0-90	2519	N.A.	86.6%
90-120	315	N.A.	10.8%
90-130	355	N.A.	12.2%
90-150	390	N.A.	13.4%
90-180	391	N.A.	13.4%
0-180	2910	N.A.	100

Absolute Photometry

Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.3

LED 45Watt 8" Spin-top Type V Refractor^①

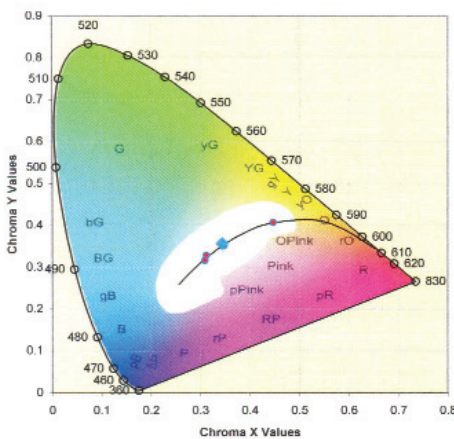
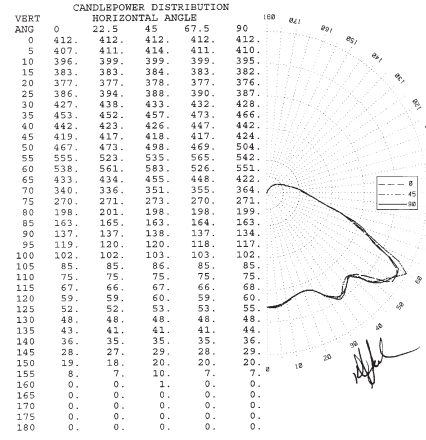
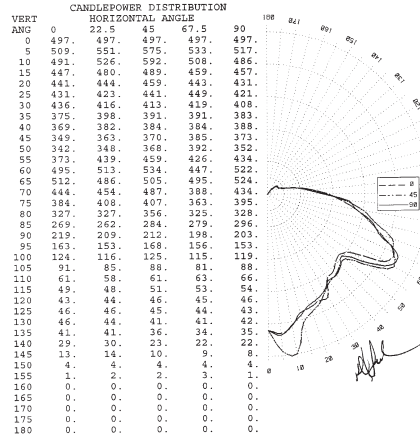
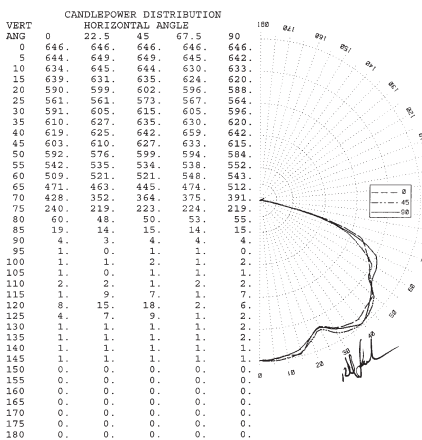


Zonal Lumen Summary

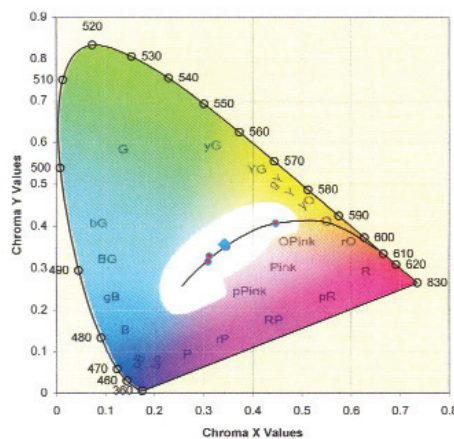
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0-40	617	N.A.	22.7%
0-60	1429	N.A.	52.5%
0-90	2332	N.A.	85.7%
90-120	287	N.A.	10.6%
90-130	334	N.A.	12.3%
90-150	384	N.A.	14.1%
90-180	388	N.A.	14.3%
0-180	2720	N.A.	100

Absolute Photometry

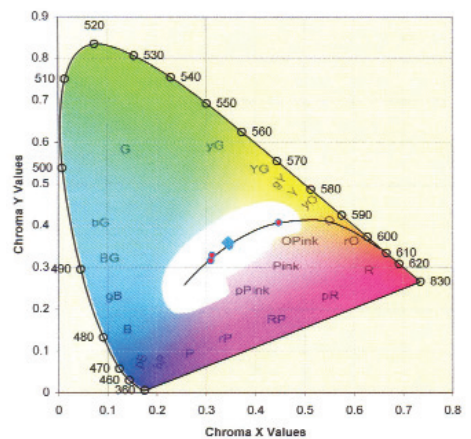
Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.6



Chromaticity 5034°K (CCT); 70.3 CRI
Certified Report BAL15303.0



Chromaticity 5089°K (CCT); 72.3 CRI
Certified Report BAL15309.0



Chromaticity 5010°K (CCT); 70.4 CRI
Certified Report BAL15310.0

① 22W model values approx. 50% of 45W





Class I, Div. 2, Groups A,B,C,D
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
Marine
NEMA 3, 4X

Certified - File LR11713

FEATURES-SPECIFICATIONS

CERTILITE^V LED

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CERTILITE^V VM1L LED fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

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- UL-8750 for LED lighting
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- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- Enclosed and gasketed
- NEMA 3, 4X

Materials

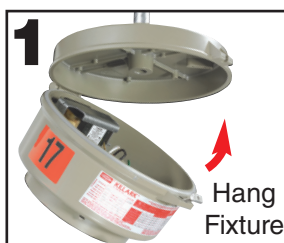
- Ballast tank, splice box and cast guards corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - stainless steel
- Reflectors - Polyester reinforced fiberglass

LED Luminaire Features and Standards

- Reduced profile with Traditional Industrial Appearance and Suitability
- Wide variety of optics including globes, globes with reflectors, all-glass refractors, and spin-top refractors
- Swing-Barrel Nut patented tank mounting system
- Optional Mounting arrangements including Pendant, Wall, Ceiling, Stanchion and others
- VM1L LED Housings can be retrofitted to existing VM splice boxes; upgrade from HID sources
- Energy Savings - less than 50 Watts of Power
- Long Life - 50,000 - 55,000 maintenance free hours to 70% initial lumens
- Crisp White Light for Excellent Color Rendering - Chromaticity 5000°K (CCT); 70 CRI
- Ambient suitability -40°C to 55°C
- Instant on - including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
- Solder-LESS LED Board Connections - Vibration Resistant
- Dual Drivers - Redundant Systems (built-in backup), or for additional energy savings half of VM1L4530 can be turned off
- LM80-08* Measurement of lumen maintenance for LED light sources
- LM79-08* Certified "Absolute" Photometry, including Chromaticity Color for Solid State Lighting
- L70 Values - Industry Nomenclature for Hours of use to 70% of Initial Lumens

* LM-xx are Illumination Engineering Society Standards designed to promote uniformity in testing procedures among test labs and manufacturers. For more information go to www.ies.org

Swing-Barrel Nut



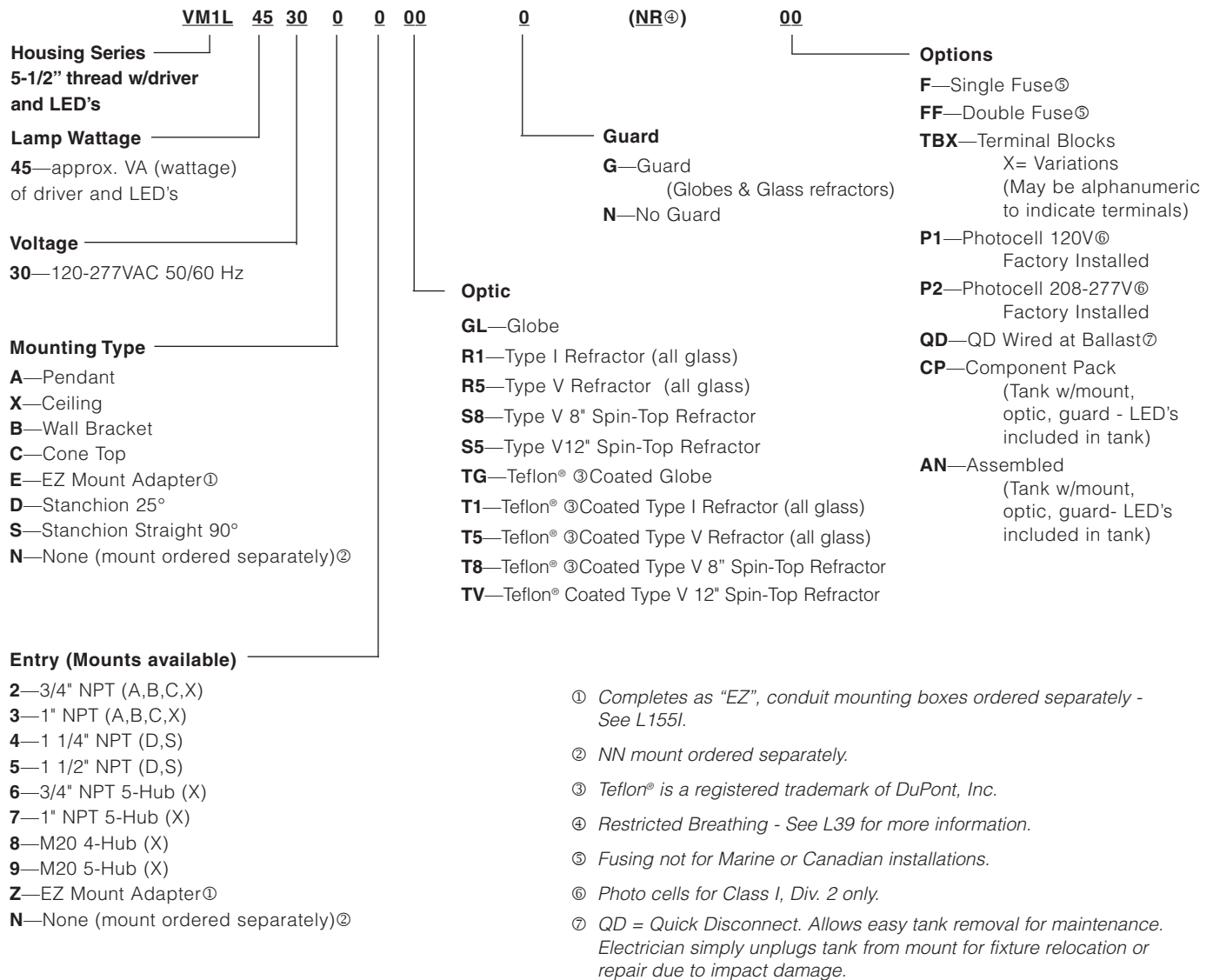
	Sealed Optic Zone 2 AEx nAR Restricted Breathing (suffix NR)
No External Seals. Lower T-codes. Suitable for Class I Div. 2 Classified areas per the NEC®	
	"EZ" Mount Adapter
For easy fixture relocation or repair due to impact damage.	

	Photo controls - Class I Div. 2 / N4X areas
Available as Field or Factory Installed to save energy when light not required.	
	Earthquake Tab - Built-in attachment point for safety cables.
Safety: Secures fixture to structure in case of conduit failure.	





CertiLite®V LED Catalog Number Logic



① Completes as "EZ", conduit mounting boxes ordered separately - See L155I.

② NN mount ordered separately.

③ Teflon® is a registered trademark of DuPont, Inc.

④ Restricted Breathing - See L39 for more information.

⑤ Fusing not for Marine or Canadian installations.

⑥ Photo cells for Class I, Div. 2 only.

⑦ QD = Quick Disconnect. Allows easy tank removal for maintenance. Electrician simply unplugs tank from mount for fixture relocation or repair due to impact damage.



PENDANT



CEILING



WALL



CONE

ORDERING INFORMATION

VM1L SERIES PENDANT WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
45	3/4"	120-277VAC	VM1L4530A2GLG	VM1L4530A2R1G	VM1L4530A2R5G	VM1L4530A2S8G	VM1L4530A2S5G

VM1L SERIES CEILING WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
45	3/4"	120-277VAC	VM1L4530X2GLG	VM1L4530X2R1G	VM1L4530X2R5G	VM1L4530X2S8G	VM1L4530X2S5G

VM1L SERIES WALL WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
45	3/4"	120-277VAC	VM1L4530B2GLG	VM1L4530B2R1G	VM1L4530B2R5G	VM1L4530B2S8G	VM1L4530B2S5G

VM1L SERIES CONE WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
45	3/4"	120-277VAC	VM1L4530C2GLG	VM1L4530C2R1G	VM1L4530C2R5G	VM1L4530C2S8G	VM1L4530C2S5G

① Catalog numbers shown are with Guard; to omit guard change ending G to N; e.g. VM1L4530A2GLN

② Catalog numbers shown are with 3/4" conduit openings; change "2" to "3" for 1" e.g. VM1L4530A3GLG

③ 120VAC through 277VAC 50/60Hz





STANCHION 25°



STANCHION STRAIGHT



EZ ADAPTER

ORDERING INFORMATION

VM1L SERIES 25° STANCHION WITH OPTIC AND GUARD ①							
WATTS	HUB SIZE②	VOLTAGE③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
45	1-1/2"	120-277VAC	VM1L4530D5GLG	VM1L4530D5R1G	VM1L4530D5R5G	VM1L4530D5S8G	VM1L4530D5S5G

VM1L SERIES STRAIGHT STANCHION WITH OPTIC AND GUARD ①							
WATTS	HUB SIZE②	VOLTAGE③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
45	1-1/2"	120-277VAC	VM1L4530S5GLG	VM1L4530S5R1G	VM1L4530S5R5G	VM1L4530S5S8G	VM1L4530S5S5G

VM1L SERIES EZ ADAPTER WITH OPTIC AND GUARD ①							
WATTS	HUB SIZE④	VOLTAGE③	GLOBE & GUARD	TYPE I GLASS REFRACTOR & GUARD	TYPE V GLASS REFRACTOR & GUARD	8" SPIN-TOP TYPE V REFRACTOR & GUARD	12" SPIN-TOP TYPE V REFRACTOR & GUARD
45	⊙	120-277VAC	VM1L4530EZGLG	VM1L4530EZR1G	VM1L4530EZR5G	VM1L4530EZR5S8G	VM1L4530EZR5S5G

① Catalog numbers shown are with Guard; to omit guard change ending G to N; e.g. VM1L4530D5GLN

② Catalog numbers shown are with 1-1/2" conduit openings; change "5" to "4" for 1-1/4" e.g. VM1L4530D4GLG

③ 120VAC through 277VAC 50/60Hz

④ VMEZA tank adapters UL "classified" as an assembly for use between VM tanks and EZ mounts. Order EZ mounts separately (see below).



Pendant



Ceiling



Wall Bracket

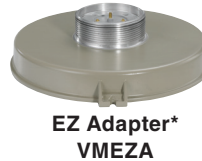


25° Stanchion

MOUNTING BOXES FOR EZ ADAPTER				
CATALOG NUMBER				HUB SIZE
PENDANT	CEILING	BRACKET	STANCHION	
EZA2	EZX2	EZB2	—	3/4"
EZA3	EZX3	EZB3	—	1"
—	—	—	EZD4A*	1-1/4"/1-1/2**

*1-1/2" furnished with 1-1/2"-1-1/4" reducer and extension.





CERTILITE® VM MOUNTING SPLICE BOXES							
CATALOG NUMBER							
HUB SIZE	PENDANT	CEILING 4 HUB	CEILING 5 HUB	WALL	CONE TOP	25 DEGREE STANCHION	90 DEGREE STANCHION
3/4"	VMA2B	VMX2B	VMX6B	VMB2B	VMC2B	—	—
1"	VMA3B	VMX3B	VMX7B	VMB3B	VMC3B	—	—
1-1/4"	—	—	—	—	—	VMD4B	VMS4B
1-1/2"	—	—	—	—	—	VMD5B	VMS5B
M-20	—	VMX8B**	VMX9B	—	—	—	—

*VMEZA is used between a ballast tank and an EZ mount-ordered separately. See L1551 for more info.

**VMX8B furnished with 3 non-metallic plugs.

VM1L LED OPTICS AND ACCESSORIES		
DESCRIPTION	OPTIC LOGIC	GUARD
Globe (glass)	VMG17 (GL)	VMAG17
Reflector (all glass) Type I	VMR171 (R1)	VMAG17
Reflector (all glass) Type V	VMR175 (R5)	VMAG17
Reflector (spin top) 8" Type V	VZRG1550 (S8)	VMRWG8
Reflector (spin top) 12" Type V	VZRG2550 (S5)	VMRWGS
Globe Teflon® ① coated	VMG17T	VMAG17
Reflector Teflon® coated (all glass) Type I	VMR171T (T1)	VMAG17
Reflector Teflon® coated (all glass) Type V	VMR175T (T5)	VMAG17
Reflector (spin top) Teflon® coated 8" Type V	VZRG1550T (T8)	VMRWG8
Reflector (spin top) Teflon® coated 12" Type V	VZRG2550T (TV)	VMRWGS
DOME REFLECTOR (Polyester reinforced fiberglass)	VMPSD40	NA
ANGLE REFLECTOR (Polyester reinforced fiberglass)	VMPA40	NA
120VAC Photocell with FS Style Cover	VMFSPC1	NA
208-277VAC Photocell with FS Style Cover	VMFSPC2	NA
3-sided EXIT Accessory (use without guard)	VEXA100B	NA
Tank adapter to Crouse-Hinds® VM Series mounts*	VMCHVM	NA

① Teflon is a registered trademark of DuPont, Inc.

* See page L199 for more information.

VM1L LED HOUSINGS WITH DRIVERS AND LEDS - ELECTRICAL RATINGS					
CAT. NO.	VOLTAGE 50/60HZ	WATTAGE	AMPS 120/277	CIL ③	WEIGHT
VM1L4530	120-277VAC	49.9	.416/.180	3960	15.5 LBS

THERMAL PERFORMANCE DATA (ANY OPTIC)						
CAT. NO.	AMBIENT	C1D2	C1Z2 NR	C2D1	L70	SUPPLY WIRE
VM1L4530	40°C	T4A	T6	T4(EFG)	55,000 HRS	75°C
VM1L4530	55°C	T4	T6	T4(EFG)	50,000 HRS	90°C

③ CIL = Calculated Initial Lumens of LED component based on mfg. data and driver current INSIDE the optic. This value is provided as a reference only for comparison to traditional light sources such as incandescent, HID, or fluorescent which use initial values in "relative" photometry. KILLARK LED luminaires are tested using the Absolute photometry method (LM79-08), which calculates delivered lumens only. KILLARK's LED luminaires provide very bright white 5000° K (CCT) color and can appear brighter than traditional light sources with higher lumen values under both photopic and scotopic conditions.

④ Driver THD < 20%, Powerfactor 99% @ 120V; Line Regulation 2%; Load regulation 5%; Protected against Over-voltage and Over-current.

⑤ VMRWG8 Plated Steel, VMRWGS 316 Stainless Steel.

OPTICS



VMG17 VMR175 VZRG1550 VZRG2550
VMR171

ACCESSORIES



VMAG17 VMAG17 VMRWG8 VMRWGS

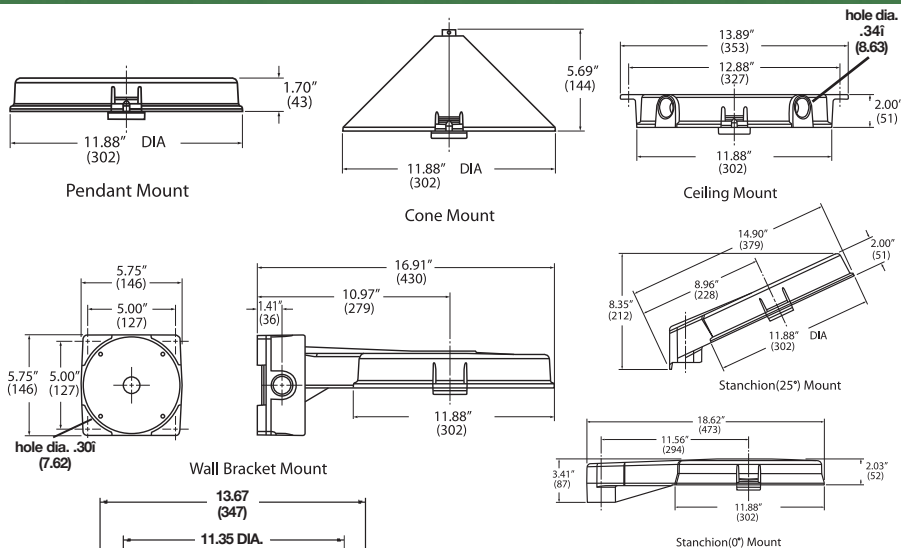


VMPSD40 VMPA40 VMFSPC1

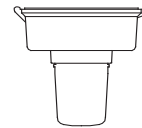


VEXA100B





LED 45 Watt Globe Only



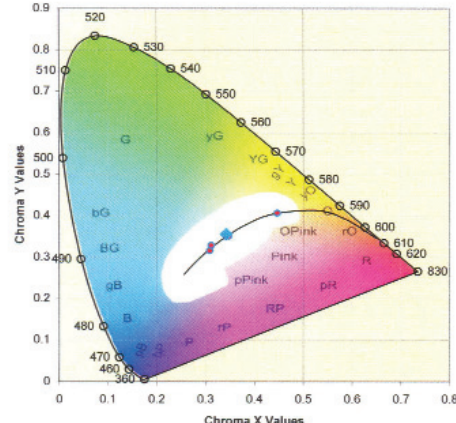
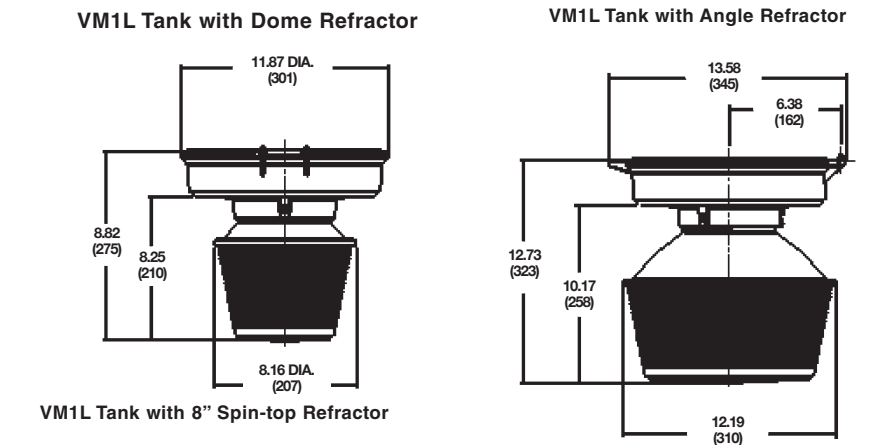
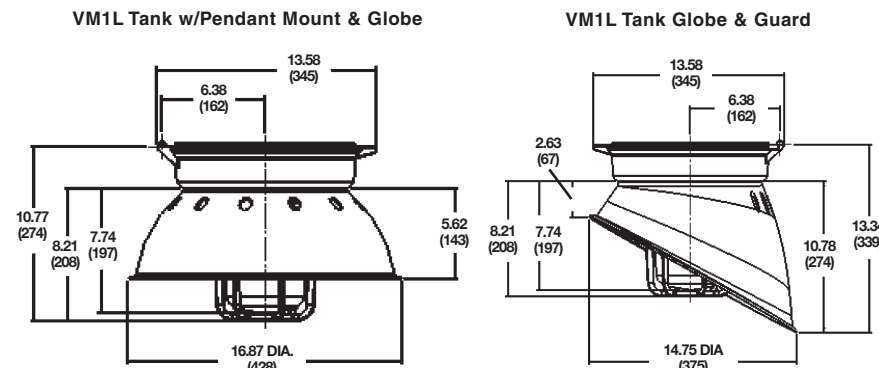
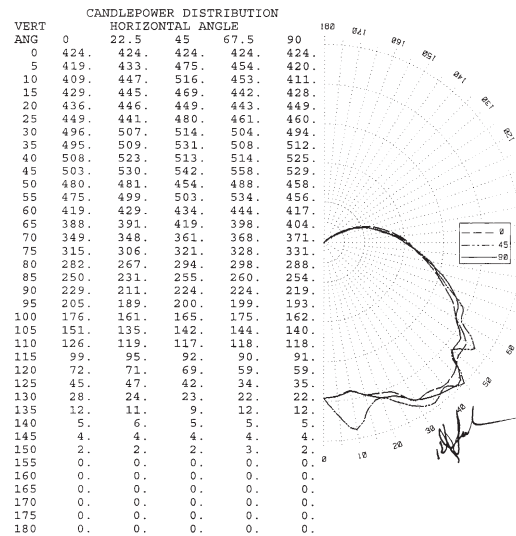
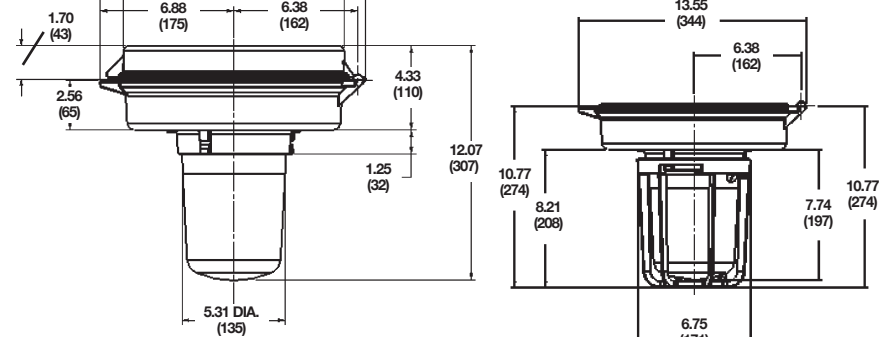
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	381	N.A.	12.4%
0-40	704	N.A.	22.9%
0-60	1568	N.A.	50.9%
0-90	2576	N.A.	83.6%
90-120	456	N.A.	14.8%
90-130	492	N.A.	16.0%
90-150	504	N.A.	16.4%
90-180	504	N.A.	16.4%
0-180	3080	N.A.	100

Absolute Photometry

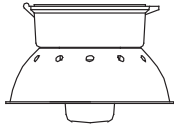
Total Luminaire Efficiency = N.A.%

Spacing to Mounting Height Ratio 1.8



Chromaticity 5080°K (CCT); 72.4 CRI
Certified Report BAL15305.0

**LED 45 Watt
Globe & Dome Reflector**



Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	495	N.A.	18.1%
0-40	898	N.A.	32.8%
0-60	1964	N.A.	71.7%
0-90	2725	N.A.	99.4%
90-120	9	N.A.	0.3%
90-130	13	N.A.	0.5%
90-150	15	N.A.	0.6%
90-180	15	N.A.	0.6%
0-180	2740	N.A.	100

Absolute Photometry
Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.7

**LED 45 Watt
Globe & Type V Refractor**

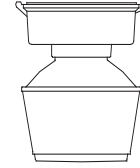


Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	386	N.A.	13.3%
0-40	631	N.A.	21.7%
0-60	1305	N.A.	44.8%
0-90	2519	N.A.	86.6%
90-120	315	N.A.	10.8%
90-130	355	N.A.	12.2%
90-150	390	N.A.	13.4%
90-180	391	N.A.	13.4%
0-180	2910	N.A.	100

Absolute Photometry
Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.3

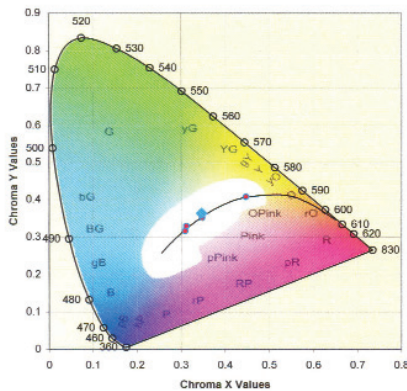
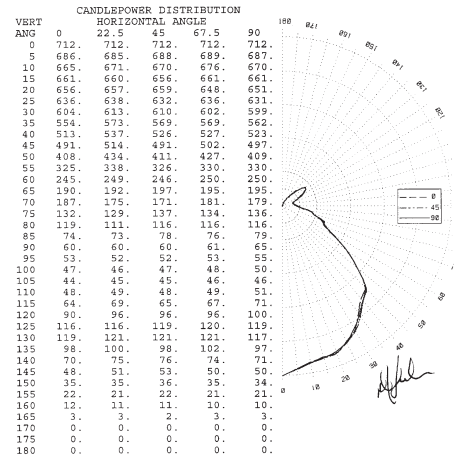
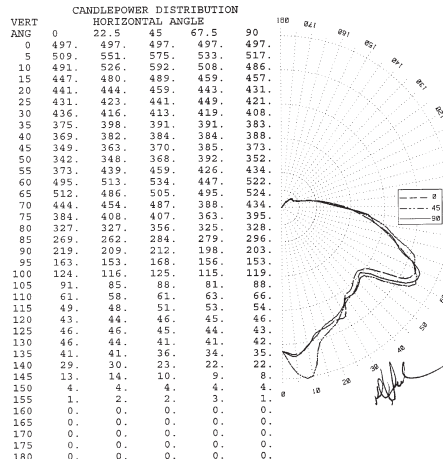
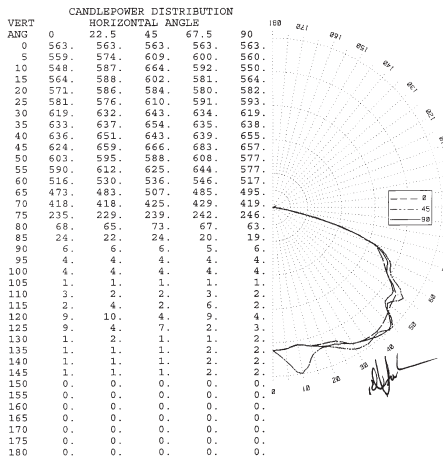
**LED 45 Watt 12" Spin-top
Type V Refractor**



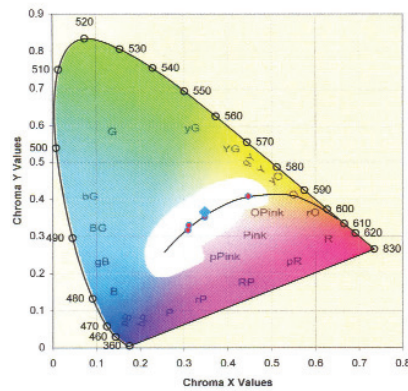
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	547	N.A.	22.8%
0-40	903	N.A.	37.6%
0-60	1587	N.A.	66.1%
0-90	2003	N.A.	83.5%
90-120	172	N.A.	7.2%
90-130	278	N.A.	11.6%
90-150	386	N.A.	16.1%
90-180	397	N.A.	16.5%
0-180	2400	N.A.	100

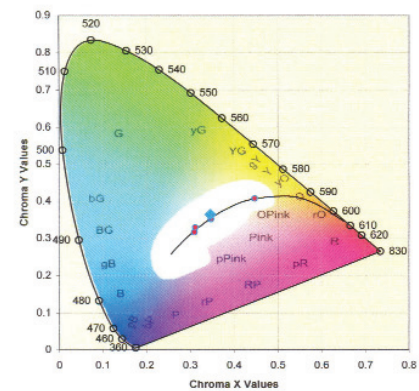
Absolute Photometry
Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.3



Chromaticity 5015°K (CCT); 70.6 CRI
Certified Report BAL15306.0



Chromaticity 5089°K (CCT); 72.3 CRI
Certified Report BAL15309.0



Chromaticity 4960°K (CCT); 70.3 CRI
Certified Report BAL15311.0



Class I, Div. 1 & 2, Groups C,D
Class I, Zones 1 & 2, Groups IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III, Div. 1 & 2
Suitable for wet locations
Marine
NEMA 3, 4, 4X
Factory Sealed

 Certified - File LR11713

FEATURES-SPECIFICATIONS

HOSTILELITE® LED

Applications

HOSTILELITE® EML LED Series fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4x areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous due to the presence of flammable or explosive gases, vapors and combustible dusts as defined by the NEC.

Applications include classified areas such as paint manufacturing plants, ammunition facilities, oil and gas producing and refining plants, off-shore and dockside installations, tank farms, pipeline pumping stations and marine loading and fuel transfer terminals.

Compliances

- UL-8750 for LED lighting
- UL-844 Electric Lighting Fixtures for use in Hazardous Locations
- UL Marine Type Electric Lighting Fixtures
- CSA C22.2 no. 137-M1981 Electric Luminaires for use in Hazardous Locations
- NEMA 3, 4, 4X, 7CD, 9EFG

Materials

- Ballast tank, splice box and guards corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - Stainless Steel
- Reflectors are aluminum with white finish

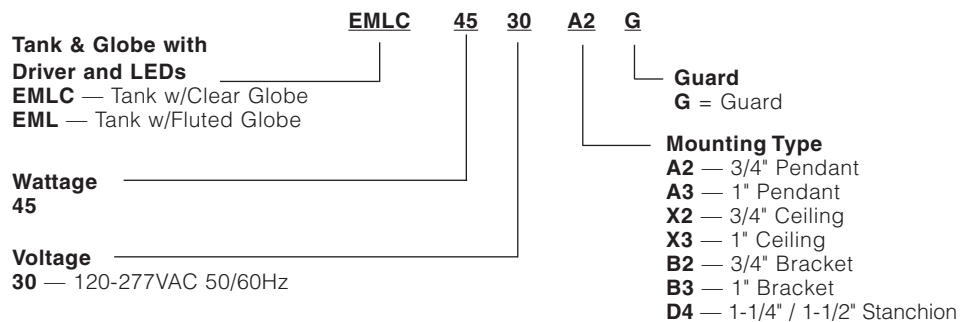
LED Luminaire Features and Standards

- Compact Explosion-proof with Traditional Industrial Appearance and Suitability
- Fluted or Exclusive Clear Globe; Dome or Angle Reflectors
- Optional Mounting arrangements including Pendant, Wall, Ceiling, and Stanchion
- EML LED Housings can be retrofitted to existing EZ splice boxes; upgrade from Incandescent, Fluorescent or HID
- Energy Savings - less than 50 Watts of Power
- Long Life - 50,000 - 55,000 Maintenance Free Hours to 70% Initial Lumens
- Crisp White Light for Excellent Color Rendering - Chromaticity Avg. 4950°K (CCT); 69 CRI
- Ambient suitability -40°C to 55°C

- Instant on - including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
- Solder-LESS LED Board Connections - Vibration Resistant
- Dual Drivers - Redundant Systems (built-in backup)
- LM80-08* Measurement of lumen maintenance for LED light sources
- LM79-08* Certified "Absolute" Photometry, including Chromaticity Color for Solid State Lighting
- L70 Values - Industry Nomenclature for Hours of use to 70% of Initial Lumens
- Factory Sealed Construction - no external seal required, simply wire mounting cap and thread-in fixture to install

* LM-xx are Illumination Engineering Society Standards designed to promote uniformity in testing procedures among test labs and manufacturers. For more information go to www.ies.org

Catalog Number Logic



Accessories (sold separately)

- ERSD30** — Dome Reflector
- ERA30** — Angle Reflector



KILLARK®



Pendant



Ceiling



Wall



Stanchion

Class I, Div. 1 & 2, Groups C,D
Class I, Zones 1 & 2, Groups IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III, Div. 1 & 2
Suitable for wet locations
Marine
NEMA 3, 4, 4X
Factory Sealed

Certified - File LR11713

ORDERING INFORMATION

EML SERIES PENDANT WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ④	FLUTED GLOBE & GUARD	CLEAR GLOBE & GUARD*
45	3/4"	120-277VAC	EML4530A2G	EMLC4530A2G

EML SERIES CEILING WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ④	FLUTED GLOBE & GUARD	CLEAR GLOBE & GUARD*
45	3/4"	120-277VAC	EML4530X2G	EMLC4530X2G

EML SERIES WALL WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ②	VOLTAGE ④	FLUTED GLOBE & GUARD	CLEAR GLOBE & GUARD*
45	3/4"	120-277VAC	EML4530B2G	EMLC4530B2G

EML SERIES 25° STANCHION WITH OPTIC AND GUARD ①

WATTS	HUB SIZE ③	VOLTAGE ④	FLUTED GLOBE & GUARD	CLEAR GLOBE & GUARD*
45	1-1/4"/1-1/2"	120-277VAC	EML4530D4G	EMLC4530D4G

① Catalog numbers shown are with Guard; Omit G if guard not required e.g. EML4530A2.

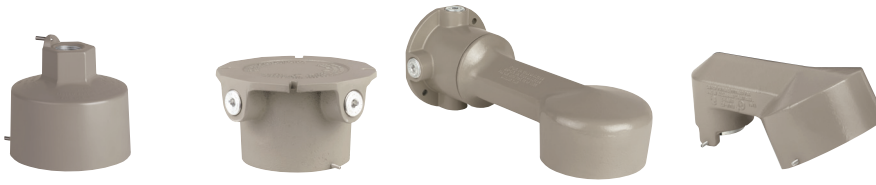
② Catalog numbers shown are with 3/4" conduit openings; change "2" to "3" for 1" e.g. EML4530A3G.

③ Stanchion conduit hub size supplied is 1-1/2" with 1-1/2" to 1-1/4" reducer for 1-1/4" mounting (refer to catalog logic).

④ 120VAC through 277VAC 50/60Hz.

* Exclusive from KILLARK; clear globe for maximum brightness.





Pendant

Ceiling

Wall Bracket

25° Stanchion

EZ MOUNTING BRACKETS				
CATALOG NUMBER				HUB SIZE
PENDANT	CEILING	WALL	STANCHION	
EZA2	EZX2	EZB2	—	3/4"
EZA3	EZX3	EZB3	—	1"
—	—	—	EZD4*	1-1/4" / 1-1/2"*

* 1-1/2" furnished with 1-1/2" - 1-1/4" reducer

EML - EMLC LED ACCESSORIES	
DESCRIPTION	CATALOG NUMBER
Guard ^①	EMG2
Dome Reflector ^②	ERSD30
Angle Reflector ^②	ERA30
C1D1 C2D1 N4X Photocell 120VAC	VMHKPC1
C1D1 C2D1 N4X Photocell 208-277VAC	VMHKPC2
Replacement Fluted Globe & Support	EMGS3
Replacement Clear Globe & Support	EMGS2
Adapter to old Killark "H" Series or Crouse Hinds [®]	EAC/EACH ^③

① Guards are cast of copper-free aluminum with electrostatically applied epoxy/polyester.

② Reflectors are aluminum with white finish.

③ Adapters for discontinued Killark "H" Series and Crouse Hinds[®] available. See page L200 for more information.

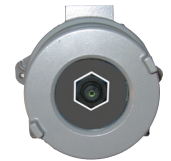
EML(C) LED HOUSINGS & GLOBE, DRIVERS AND LEDS - ELECTRICAL RATINGS					
CAT. NO.	VOLTAGE 50/60HZ	WATTAGE	AMPS 120/277	CIL ^④	WEIGHT
EML(C)4530	120-277VAC	49.4	.412/.178	3960	26 LBS

④ CIL = Calculated Initial Lumens of LED component based on mfg. data and driver current INSIDE the optic. This value is provided as a reference only for comparison to traditional light sources such as incandescent, HID, or fluorescent which use initial values in "relative" photometry. KILLARK LED luminaires are tested using the Absolute photometry method (LM79-08), which calculates delivered lumens only. KILLARK's LED luminaires provide very bright white 5000° K (CCT) color and can appear brighter than traditional light sources with higher lumen values under both photopic and scotopic conditions..

THERMAL PERFORMANCE DATA					
CAT. NO.	AMBIENT	C1D1/C1Z1	C2D1	L70	SUPPLY WIRE
EML(C)4530	40°C	T6	T4A (EFG)	55,000 HRS	75°C
EML(C)4530	55°C	T5	T4 (EFG)	50,000 HRS	90°C



EMG2



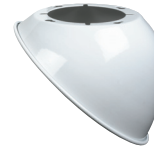
Factory Sealed
Photocell VMHKPC1



ERSD30 Standard Dome



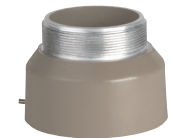
EMGS3
EMGS2



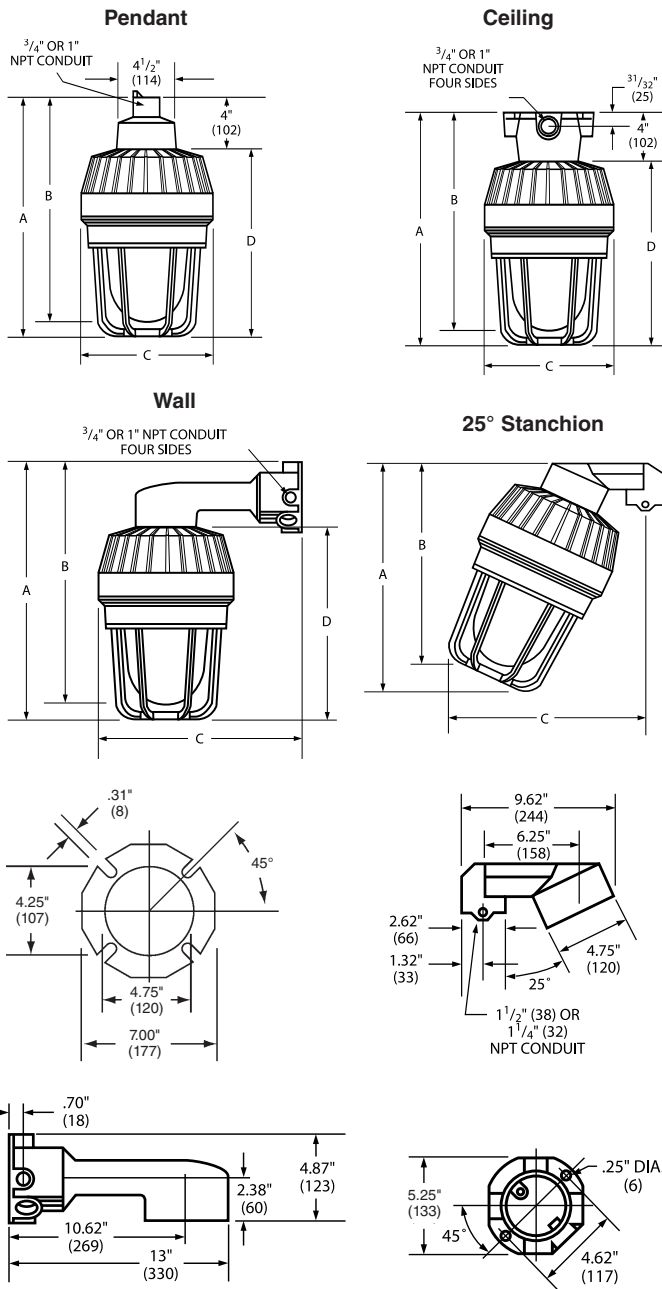
ERA30 Angle Dome



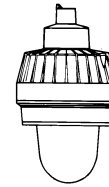
EML4530
EMLC4530



EAC/EACH



LED 45 Watt Fluted Globe Only

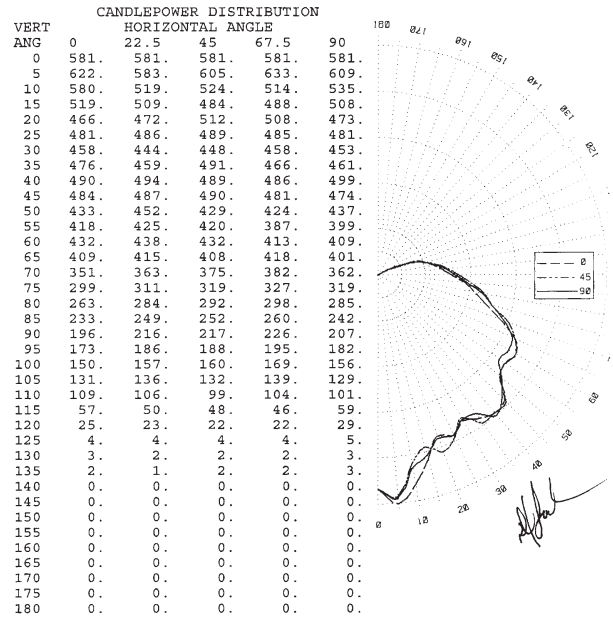


Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	424	N.A.	14.7%
0-40	720	N.A.	25.0%
0-60	1463	N.A.	50.8%
0-90	2479	N.A.	86.1%
90-120	396	N.A.	13.7%
90-130	400	N.A.	13.9%
90-150	401	N.A.	13.9%
90-180	401	N.A.	13.9%
0-180	2880	N.A.	100.00

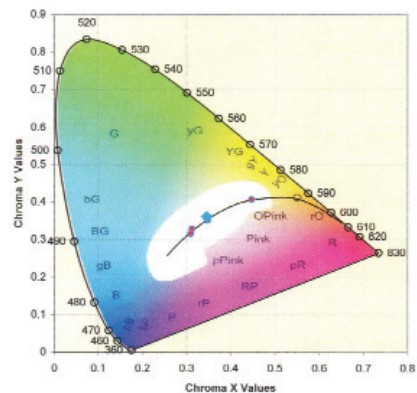
Absolute Photometry

Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.2



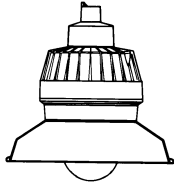
EML(C) DIMENSIONS ①				
TYPE	A	B	C	D
Pendant	15-15/16" (404)	15-1/16" (382)	8-13/16" (224)	11-15/16" (303)
Ceiling	15-15/16" (404)	15-1/16" (382)	8-13/16" (224)	11-15/16" (303)
Wall	16-13/16" (426)	15-15/16" (404)	15" (379)	11-15/16" (303)
Stanchion	15-1/8" (384)	14" (356)	13-1/2" (343)	

① See L126 for reflector dimensions.



Chromaticity 4976°K (CCT); 69.4 CRI
Certified Report BAL15296.0

**LED 45 Watt Fluted
Globe & Dome Reflector**



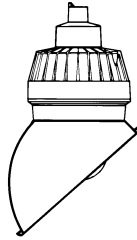
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	677	N.A.	25.1%
0-40	1124	N.A.	41.6%
0-60	2164	N.A.	80.2%
0-90	2700	N.A.	100.0%
90-120	0	N.A.	0.0%
90-130	0	N.A.	0.0%
90-150	0	N.A.	0.0%
90-180	0	N.A.	0.0%
0-180	2700	N.A.	100

Absolute Photometry

Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.2

**LED 45 Watt Fluted
Globe & Angle Reflector**



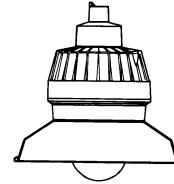
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	602	N.A.	23.7%
0-40	943	N.A.	37.1%
0-60	1619	N.A.	63.7%
0-90	2350	N.A.	92.5%
90-120	185	N.A.	7.3%
90-130	190	N.A.	7.5%
90-150	190	N.A.	7.5%
90-180	190	N.A.	7.5%
0-180	2540	N.A.	100

Absolute Photometry

Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio NA

**LED 45 Watt Clear
Globe & Dome Reflector**

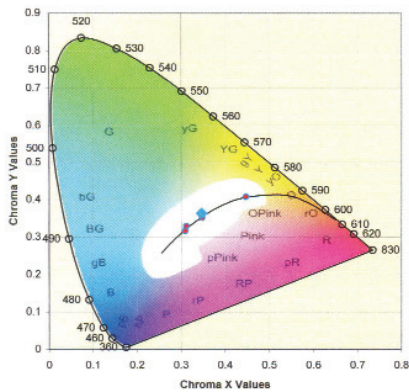
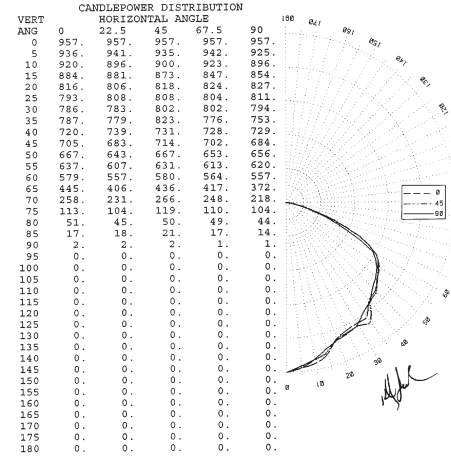
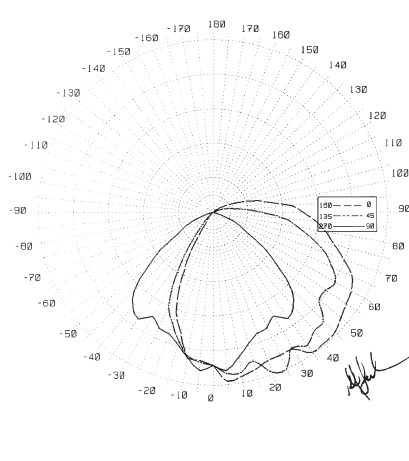
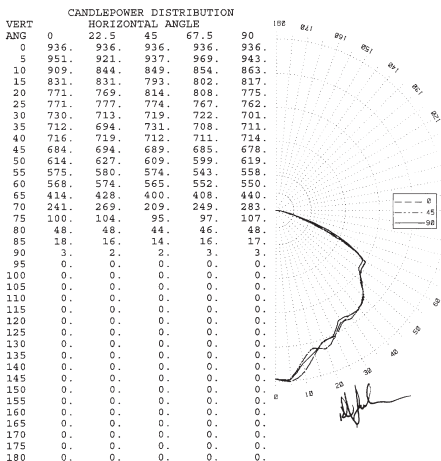


Zonal Lumen Summary

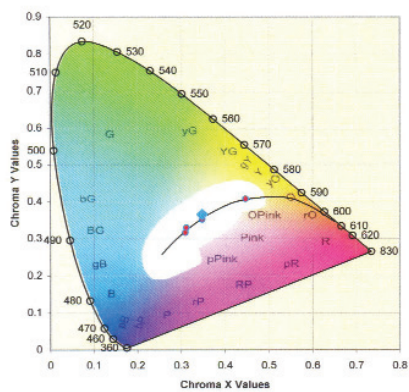
Zone	Lumens	%Lamp	%Fixt
0-30	708	N.A.	24.9%
0-40	1203	N.A.	42.2%
0-60	2299	N.A.	80.7%
0-90	2850	N.A.	100.0%
90-120	0	N.A.	0.0%
90-130	0	N.A.	0.0%
90-150	0	N.A.	0.0%
90-180	0	N.A.	0.0%
0-180	2850	N.A.	100

Absolute Photometry

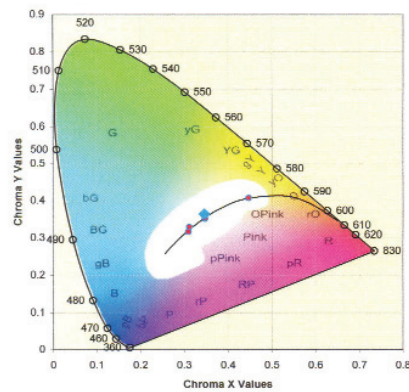
Total Luminaire Efficiency = N.A.%
Spacing to Mounting Height Ratio 1.3



Chromaticity 4949°K (CCT); 69.0 CRI
Certified Report BAL15297.0



Chromaticity 4912°K (CCT); 68.8 CRI
Certified Report BAL15298.0



Chromaticity 4970°K (CCT); 69.1 CRI
Certified Report BAL15300.0



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