COREBAY™ SERIES

PROJECT SUBMITTAL	
PROJECT NAME	
TYPE / DESIGNATION	
CATALOG NUMBER	
SUBMITTED BY	DATE
NOTES / REMARKS	

ROUND HEAVY-DUTY INDUSTRIAL & INDOOR SPORTS HIGH BAY SYSTEM

DESIGNED IN ACCORDANCE WITH APPLICABLE IES RECOMMENDED PRACTICES

Intended for use as a Basis of Design lighting system for industrial, commercial, and indoor sports applications requiring efficient and uniform high-bay illumination.

100W | 150W | 200W

SYSTEM CONFIGURATIONS



ETL LISTED • DLC PREMIUM • IP20/IP65 • BAA COMPLIANT

SYSTEM ENGINEERING

Lighting system performance is achieved through wide-distribution lens optics designed for uniform horizontal illumination, with fixture spacing and mounting height optimized for efficient coverage of open industrial spaces.

KEY SYSTEM ATTRIBUTES

- Wide-distribution lens optic (standard configuration)
- Uniform illumination for open high-bay environments
- Die-cast aluminum housing for thermal management
- High-efficacy LED platform for energy-efficient operation
- Control-ready driver platform for sensor integration

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SYSTEM OVERVIEW & PERFORMANCE SUMMARY

SYSTEM OVERVIEW

The CoreBay™ Series is a round LED high-bay luminaire designed for industrial and commercial interior environments requiring efficient, uniform illumination and reliable long-term operation.

The luminaire utilizes a die-cast aluminum housing with integrated thermal management to maintain stable LED performance during continuous operation.

CoreBay luminaires utilize wide-distribution lens optics to provide uniform illumination across large interior spaces.

Lighting layouts using CoreBay luminaires are verified through photometric simulation to confirm illumination levels, spacing, and uniformity.

SYSTEM PERFORMANCE IS ACHIEVED THROUGH COORDINATED DESIGN OF OPTICAL DISTRIBUTION, MOUNTING HEIGHT, AND FIXTURE SPACING.

DESIGNED FOR FULL COMPLIANCE WITH ANSI / IES RECOMMENDED PRACTICES.

Duvon sports lighting systems are designed as integrated lighting systems rather than individual luminaires.

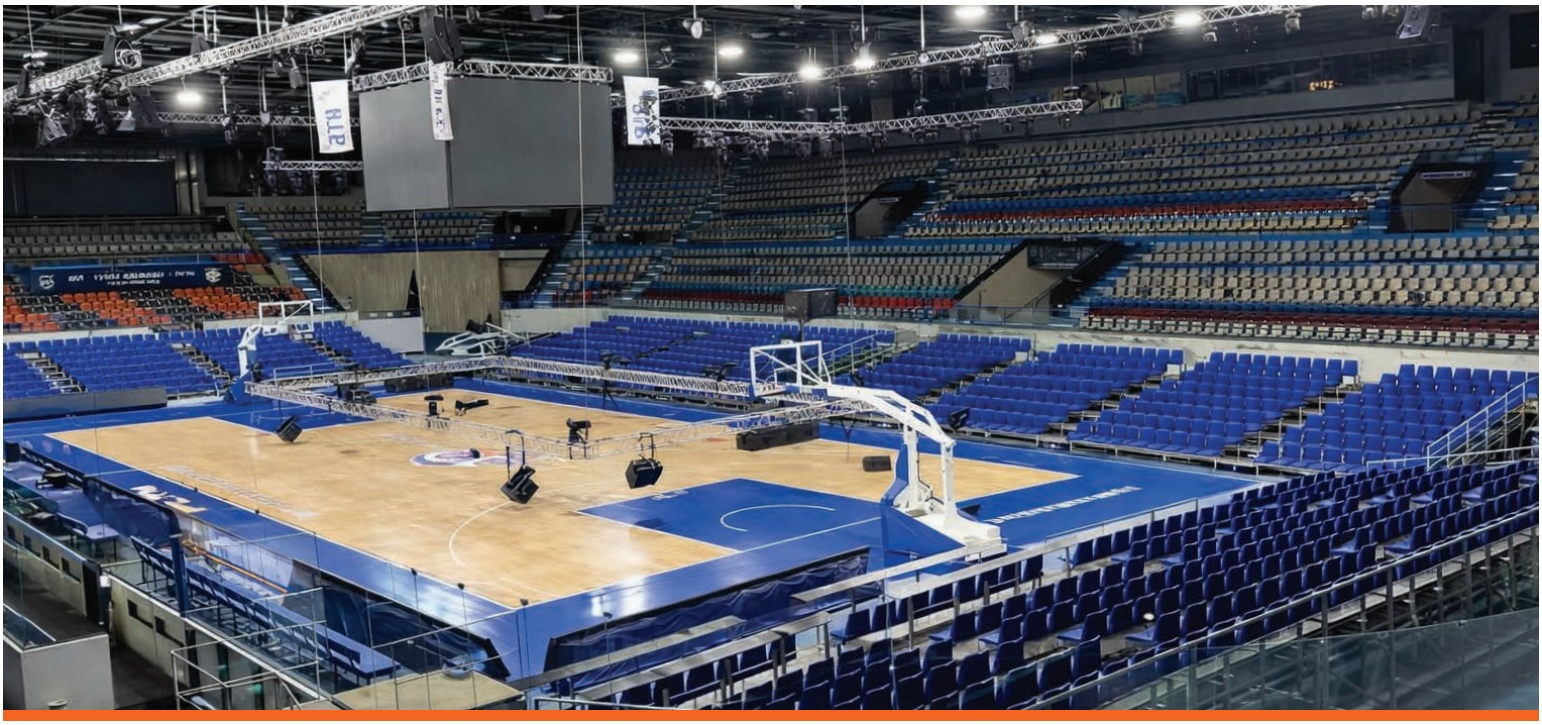
TESTING & COMPLIANCE

Photometric Testing: IES LM-79
LED Reliability: IES LM-80
Lifetime Projection: TM-21
Electrical Safety: UL 1598

SYSTEM PERFORMANCE SUMMARY

ATTRIBUTE	PERFORMANCE
Typical System Efficacy	140–150 lm/W (dependent on configuration)
Rated Life	L70 ≥ 100,000 hours
Input Voltage	100–277 V std. (277–480 V opt.)
Operating Temperature	-40°F to +122°F
Ingress Protection	IP20 std. (IP65 opt.)
Surge Protection	10 kV std. (20 kV opt.)
Warranty	5-years

APPLICATIONS & DESIGN SUPPORT



PRIMARY APPLICATIONS

INDUSTRIAL & LOGISTICS FACILITIES
High-bay warehouse and distribution centers, manufacturing and production floors, maintenance garages and service areas, cold storage and large industrial interiors.

INDOOR SPORTS & RECREATION FACILITIES
School and university gymnasiums, basketball and volleyball courts, indoor soccer and training facilities, multi-purpose recreation centers.

COMMERCIAL & INSTITUTIONAL INTERIORS
Large interior workspaces, athletic training facilities, indoor recreational complexes.

TYPICAL MOUNTING CONDITIONS

Typical mounting heights: 15–35 ft. Final mounting height, fixture spacing, fixture quantity, and layout shall be determined through project-specific lighting design.

ENGINEERING & DESIGN SUPPORT

Duvon provides lighting system design assistance including luminaire selection, optical configuration, and photometric verification.

Engineering services include:

- AGi32 photometric layouts
- Fixture spacing calculations
- Mounting height evaluation
- Uniformity analysisPhotometric

LIGHTING PERFORMANCE

REFERENCE STANDARD

Lighting designs utilizing CoreBay luminaires are developed in accordance with applicable IES recommended practices, including:
· ANSI/IES RP-7 (Industrial Lighting)
· ANSI/IES RP-6 (Sports applications, where applicable)

APPLICATION	IES RECOMMENDED (AVG. MAINTAINED)	DESIGN TARGET (PROJECT-DEPENDENT)
Warehouses / Distribution Centers	10–30 fc	20–30 fc
Manufacturing (General Tasks)	30–50 fc	40–50 fc
Manufacturing (Precision Tasks)	50–100 fc	60–80 fc
Gymnasiums — Recreational (Class IV)	20–30 fc	30 fc
Sports Training Facilities (Class III)	30–50 fc	50 fc
Competitive Play (Class II)	50–75 fc	60–75 fc
Collegiate / Tournament (Class I)	75–100 fc	80–100 fc

Typical lighting designs target uniformity ratios appropriate for the application. Final illumination levels and uniformity shall be verified through project-specific photometric calculations.

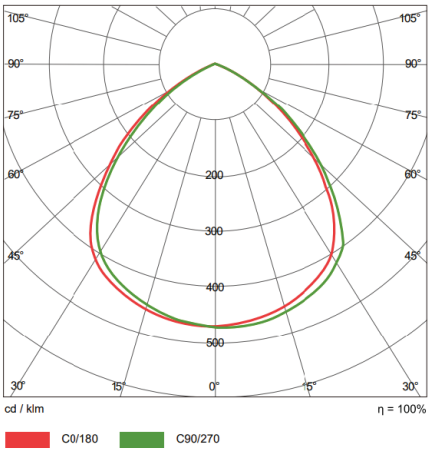
TYPICAL SPACING GUIDANCE

Fixture spacing is commonly evaluated using the spacing-to-mounting-height ratio (S/MH). For wide-distribution high-bay luminaires, typical S/MH ratios range between 1.2 and 1.5 depending on lumen output and target illumination levels.

MOUNTING HEIGHT	TYPICAL FIXTURE SPACING
15 ft	15–20 ft
20 ft	20–25 ft
25 ft	25–30 ft
30 ft and above	30–36 ft

Final fixture layout and uniformity should be verified using project-specific AGi32 photometric analysis.

OPTICAL DISTRIBUTIONS



OPTICAL TYPE	DISTRIBUTION	TYPICAL APPLICATION
Wide Distribution	120° lens optic	Warehouses, manufacturing, and open interior environments

OPTICAL DESIGN

CoreBay luminaires utilize a wide-distribution lens optical system designed to provide uniform illumination across large interior spaces.

This distribution is optimized for applications requiring consistent horizontal illumination and efficient fixture spacing.

Optical selection is standardized to simplify specification and installati

ELECTRICAL & MECHANICAL SPECIFICATIONS

LUMEN OUTPUT

MODEL	WATTS	LUMEN OUTPUT
COREBAY-100	100 W	15,000 lm
COREBAY-150	150 W	22,500 lm
COREBAY-200	200 W	30,000 lm

TYPICAL SYSTEM EFFICACY

140–150 lm/W

Depending on wattage, CCT, and driver configuration.

AVAILABLE CCT OPTIONS

4000K | 5000K

INPUT CURRENT (AMPERAGE)

VOLTAGE	100W	150W	200W
120V	0.83 A	1.25 A	1.67 A
208V	0.48 A	0.72 A	0.96 A
240V	0.42 A	0.63 A	0.83 A
277V	0.36 A	0.54 A	0.72 A
480V	0.21 A	0.31 A	0.42 A

Input current values are nominal. Final branch circuit sizing shall be verified in accordance with NEC and project requirements.

ELECTRICAL CHARACTERISTICS

ATTRIBUTE	SPECIFICATION
Input Voltage	100–277 V std. (277–480 V opt.)
Driver Type	Constant Current LED Driver
Surge Protection	10 kV std. (20 kV opt.)
Dimming	0–10 V compatible
LED Lifetime	L70 ≥ 100,000 hours
CRI	80 std. (90 opt.)

MECHANICAL CONSTRUCTION

COMPONENT	SPECIFICATION
Housing	Die-cast aluminum
Finish	Black polyester powder coating

MOUNTING OPTIONS

Hook Mount (Standard)
Integrated hook mounting point supplied with stainless steel suspension chains for ceiling suspension installations.

U-Bracket Mount (Optional)
Heavy-duty adjustable steel U-bracket mounting system for rigid mounting to structural members or mounting frames.

FIXTURE WEIGHT

Fixture weight varies by wattage and configuration. Final values shall be confirmed in project-specific submittals

NOTES

Fixture dimensions remain consistent across wattage models due to the shared die-cast housing platform. Weight variation reflects driver configuration and internal electrical components.

ENVIRONMENTAL RATINGS

COMPONENT	SPECIFICATION
Operating Temp	-40°F to +122°F
Ingress Protection	IP20 std. (IP65 opt.)
Warranty	5-years

SYSTEM CONTROLS

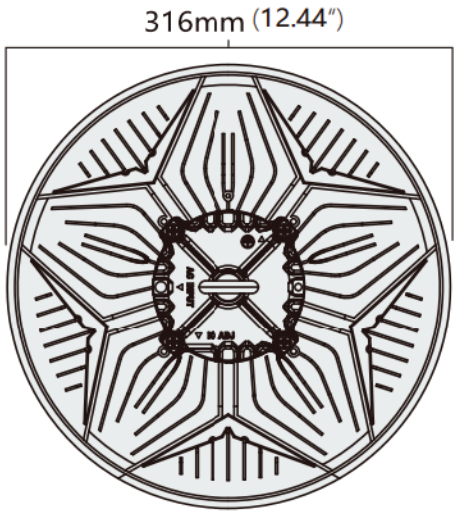
CoreBay luminaires support integration with building lighting control systems.

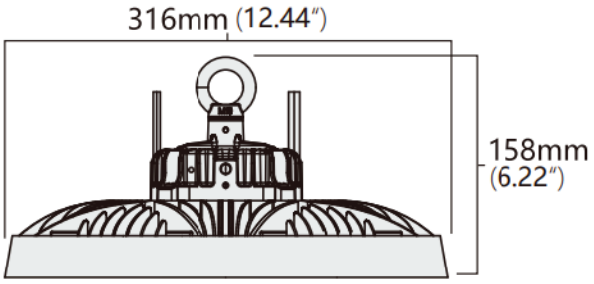
Supported devices include:
- Occupancy sensors
- Wireless lighting controls
- Building management systems

Control features may include:
- On/off control
- Scheduled operation
- Dimming (0-10 V)
- Energy monitoring

Control configuration is determined by project requirements.

DIMENSIONAL DATA





ORDERING INFORMATION & SUBMITTAL SCHEDULE

MODEL SELECTION BUILDER

MODEL	WATTS	CCT	CRI	VOLTAGE	MOUNT	OPTIONS
COREBAY	100 150 200	40K **50K**	**80** 90	**STD** HV	HK UB	MS SC

Bold values indicate standard configuration.

CATALOG NUMBER EXAMPLE COREBAY-150-50K-80-STD-HK-MS

CONFIGURATION CODES

CCT
40K = 4000K
50K = 5000K

MOUNT
HK = HOOK MOUNT
UB = U-BRACKET

VOLTAGE
STD = 100-277V
HV = 277-480V

OPTIONS
MS = MOTION SENSOR
SC = SMART CONTROL INTERFACE

FIXTURE SCHEDULE

TYPE	CATALOG NUMBER	QTY

Final configuration shall be verified against project-specific electrical and photometric requirements.

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