

# DRAFT - Lighting Design Analysis Report (LDAR)

TOWN OF BAY HARBOR ISLANDS

BROAD CAUSEWAY BRIDGE REPLACEMENT  
PROJECT DEVELOPMENT & ENVIRONMENT STUDY



*Prepared for:*

Town of Bay Harbor Islands, Florida

April 22, 2024





<b>Financial Project Identification</b>	
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<b>Federal-Aid Project</b>	
<b>Number:</b>	N/A
<b>FDOT Efficient Transportation</b>	
<b>Decision Making (ETDM)</b>	
<b>Number:</b>	14520
<b>Town of Bay Harbor Islands</b>	
<b>Project Number:</b>	BC-160

# Lighting Design Analysis Report



April 22, 2024

*The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being or have been carried out by Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated May 26, 2022, and executed by Federal Highway Administration (FHWA) and FDOT.*



*Prepared for:*  
Town of Bay Harbor Islands

*Prepared by:*  
AtkinsRéalis



## EXECUTIVE SUMMARY

This report was prepared to determine the design and detail process required for the development of a design for the roadway lighting and shared-use-path (SUP) at the Broad Causeway Bridge from the Broad Causeway Island on the west side and to east of West Broadview Drive, in the Town of Bay Harbor Islands, Florida.

The Basis of Design (BOD) luminaire used on the lighting calculations is a decorative LED type luminaire similar or equal to Signify® Lumec Domus 50. Other possible luminaires are Signify® Lumec Roadway RSLM or Acuity® Cyclone Lighting, Domia series.

The roadway lighting design is based on a nominal 40-foot poles and 105-watt 3000-degree K LED luminaires with a type 3 photometric distribution, mounted on a two-foot bracket arm, spaced approximately 165 feet on centers, using a staggered pole arrangement. The luminaires used as the BOD is a Signify® Lumec Domus 50.

The roadway width used on the bridge lighting calculations includes the shared-use-path and the outside shoulders.



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## ACRONYMS AND ABBREVIATIONS

<b>A</b>		
<b>B</b>	<b>BOD</b>	Basis of Design
<b>C</b>	<b>CCT</b>	Correlated color temperature
<b>D</b>		
<b>E</b>		
<b>F</b>	<b>FDOT</b>	Florida Department of Transportation
	<b>FDM</b>	FDOT Design Manual
	<b>FHWA</b>	Federal Highway Administration
	<b>FPL</b>	Florida Power and Light Company
<b>G</b>		
<b>H</b>	<b>HDPE</b>	High density polyethylene
<b>I</b>	<b>IES</b>	Illuminating Engineering Society
<b>J</b>		
<b>K</b>		
<b>L</b>	<b>LDAR</b>	Lighting Design Analysis Report
<b>M</b>		
<b>N</b>	<b>NEC</b>	National Electrical Code
<b>O</b>		
<b>P</b>		
<b>Q</b>		
<b>R</b>		
<b>S</b>	<b>SUP</b>	Shared-use-path
<b>T</b>		
<b>U</b>	<b>USCG</b>	United States Coast Guard
<b>V</b>		
<b>W</b>		
<b>X</b>		
<b>Y</b>		
<b>Z</b>		



## PROJECT SUMMARY

### 1.1 Project Description

The project involves the potential replacement of the Broad Causeway Bridge connecting the Town of Bay Harbor Islands (Town) with the City of North Miami, within Miami-Dade County. The bridge is part of Broad Causeway, a roadway classified as “Urban Minor Arterial”. This arterial also begins in Bal Harbour/Surfside and connects those commuters to the mainland. The specific limits of the project extend from the Broad Causeway Island (25°53'19.41 "N, 80° 8'54.52 "W) on the west side and (25°53'11.30 "N, 80° 8'18.93 "W) to east of West Broadview Drive. A graphic depicting the location of the bridge is provided (see **Figure 1**). The project is approximately 0.77 mile in length.

The existing bridge consists of four 10 ft. wide lanes, undivided (two in each direction), without a raised median and a raised sidewalk in each direction. There are no guardrails separating the sidewalk from the travel lane. The existing lighting on the immediate approach to the bridge and on the bridge consist of step lights recessed on the barrier wall. Center-channel navigational lights are presently installed.

On the Causeway Island, the road from the toll plaza to the immediate approach of the bridge is presently illuminated with decorative luminaires mounted on an arm (12 to 15 inch) and an aluminum tapered light pole. The wiring between the light poles is underground. Some poles are equipped with CCTV cameras and surface-mounted metal pull boxes.

Different alternatives were provided for the bridge replacement and the 65 ft. High Level Fixed-Bridge alternative was selected as the Preferred Alternative. The proposed four-lane divided bridge typical section includes four, 11 ft. travel lanes, 2 ft. concrete median and two, 8 ft. outside shoulders. In addition, a 14 ft. shared use path would be included on the north side of the bridge, separated from the shoulder by a concrete barrier wall. A 42-inch-high pedestrian/bicycle railing will be provided on the outside of the 14 ft. shared use path. The proposed bridge typical section is shown in **Figure 2**.

### 1.2 Purpose

The purpose of a highway lighting design analysis report is to specify the lighting criteria utilized; document the methodology used for the selection of the lighting system; determine the proper spacing of the highway lighting poles needed to provide the minimum illumination required by the design criteria; and provide detailed lighting calculations that substantiate compliance to the required criteria.

This report contains the results of a highway lighting design analysis for the proposed Broad Causeway Bridge Replacement with a shared-use-path in the Town of Bay Harbor Islands, Florida. This analysis was performed to determine the maximum pole spacing and arrangement for highway lighting as part of the project design.

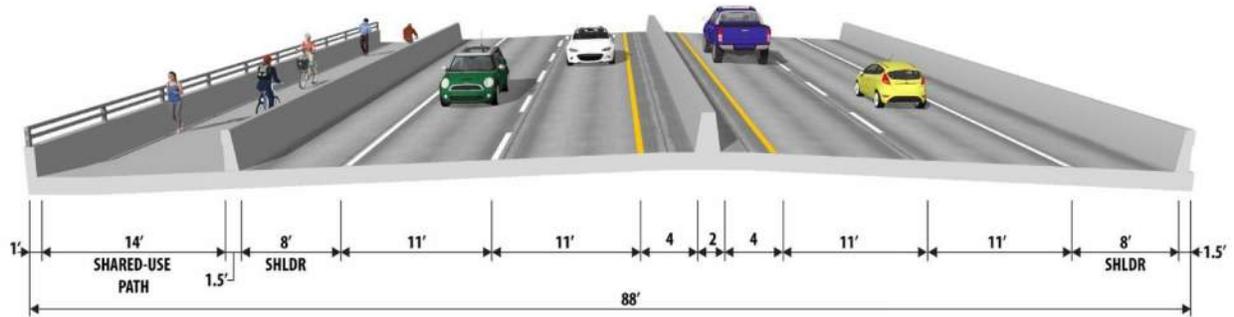


Figure 1 Project Location Map





Figure 2 65 ft. High-Level Fixed Bridge Typical Section





## PROCEDURE

### 1.3 Reference Standards

This project will be designed to comply with the 2018 Florida Green Book, 2024 FDOT standard specifications, 2024 FDOT Design Manual (FDM), and the FDOT FY 2023-24 Standard Plans.

### 1.4 Lighting Software

Acuity® Visual Roadway Tool lighting software program was used for the preliminary lighting calculations to determine the number of light poles needed and the maximum spacing of the light poles. Acuity® Visual Professional lighting software will be used for the final lighting calculations by providing a point-by-point photometric analysis with independent analysis zones for the roadway segments and the SUP. This program is based on a point-by-point calculation method; the program is commonly used for roadway lighting calculations; and the program follows the Illuminating Engineering Society (IES) recommendations. Calculations meet the required Florida Green Book and the FDM lighting design criteria.



## LIGHTING ANALYSIS

### 1.5 Design Basis

The project is located away from the Wildlife Sensitive turtle nesting area and is not near the shore, therefore, Wildlife Sensitive amber LED luminaires are not required.

All existing luminaires within the project limits will be replaced with LED type luminaires, on existing light poles where applicable.

Color changing LED luminaires will be provided to illuminate the bridge beams and piers. Up to seven color themes will be provided.

A United States Coast Guard (USCG) compliant navigation lighting system will be provided over the Intracoastal Waterway.

The first step in the analysis was to define the lighting systems preferences (i.e., pole arrangement, mounting height, luminaire photometric type and wattage). The second step was to perform lighting calculations to determine the pole location/spacing. After the analysis, the results were compiled on a table and conclusions were drawn as to what configurations best met the design criteria.

A decorative LED luminaire with Type III photometric distribution was used for the roadway lighting calculations with a correlated color temperature (CCT) 3000-degree K.

### 1.6 Design Criteria

The roadway lighting design criteria for this project is specified in the 2018 Florida Green Book, Chapter 6, Table 6-2 shown for reference in **Table 3-1** and the FDM Table 231.2.1 shown for reference in **Table 3-2**.

Preliminary lighting calculations were prepared. Preliminary lighting calculations are provided under **Appendix A**.

Final photometric calculations will be prepared with the final lighting plans submittal.

### 1.7 Design Parameters

#### 1.7.1 Decorative Luminaire

A decorative LED type luminaire will be used in this project. The LED luminaire will be similar or equal to Signify® Lumec Roadway RSLM, or Signify® Lumec Domus 50, or Acuity® Cyclone Lighting, Domia series. Catalog cuts are included in **Appendix B**

The bridge lighting design will use nominal 40-foot poles, and 3000-degree-K LED luminaires with a type 3 photometric distribution, mounted on a nominal two-foot bracket arm, spaced approximately 165 feet on centers using a staggered pole arrangement.

The lighting on roadways, other than the bridge, will use nominal 40-foot poles, and 3000-degree K LED luminaires with a type 3 photometric distribution, mounted on a nominal two-foot bracket arm. Spacing will vary depending on the roadway width.



Poles will be provided with frangible type base for those poles not on the bridge; poles on the bridge will be mounted on pilasters on the back of the barrier wall.

### *1.7.2 Pull Boxes*

“Roadside” pull boxes will be provided adjacent to each conventional light pole, and at the distribution points.

### *1.7.3 Conductors*

The minimum conductor size will be No. 6 for the roadway lighting and will be copper.

### *1.7.4 Conduits*

The minimum conduit size will be 2-inch PVC.

Directional bore method will be used whenever a new conduit run needs to be installed under existing roadway pavement. The conduit will be UL listed high density polyethylene (HDPE) with UL listed transition coupling.

### *1.7.5 Service Voltage and Voltage Drop Calculations*

In discussions with the power company, a 120/240-volt, single-phase, three-wire electrical service is available. The luminaires will be rated for 240-volt operation.

The location of the service points coordinating with Florida Power and Light Company (FPL).

Voltage drop calculations will be provided for each branch circuit on the next submittal once the power company provides location of the service point. Voltage drop will be limited to 5% at the last pole from the load center.

## **1.8 LIGHTING CALCULATIONS**

Preliminary roadway lighting calculations were performed using of Lithonia® Visual Roadway Tool computer software program. The widths and the arrangement of the roads and shared-use-path used on the calculations were obtained from the roadway typical roadway section.

The results of the preliminary roadway lighting calculations are summarized in **Table 3-3**.

Preliminary Roadway lighting calculations are included in **Appendix A**. The results fall within the required criteria.

Final photometric lighting calculations using Lithonia® Visual Professional computer software program will be provided with the lighting plans submittal.

Photometric Analysis lighting calculations are included in **Appendix C**.



**Table 3-1 Table 1 Florida Green Book Lighting Design Criteria**

Topic # 625-000-015  
 Manual of Uniform Minimum Standards  
 for Design, Construction and Maintenance  
 for Streets and Highways

2018

**Table 6 – 2 Illuminance and Luminance Design Values**

Roadway and Walkway Classification	Off-Roadway Light Sources	Illuminance Method					Luminance Method			Additional Values (both Methods)
		Average Maintained Illuminance (Horizontal)				Illuminance Uniformity Ratio	Average Maintained Luminance			Veiling Luminance Ratio
		R1	R2	R3	R4		Lavg	Uniformity		
		General Land Use	(foot-candles) (min)	(foot-candles) (min)	(foot-candles) (min)	(foot-candles) (min)	avg/min (max) (6)	cd/m2 (min)	Lavg/Lmin (max)	Lmax/Lmin (max)
Principal Arterials (partial or no control of access)	Commercial	1.1	1.6	1.6	1.4	3:1	1.2	3:1	5:1	0.3:1
	Intermediate	0.8	1.2	1.2	1.0	3:1	0.9	3:1	5:1	0.3:1
	Residential	0.6	0.8	0.8	0.8	3:1	0.6	3.5:1	6:1	0.3:1
Minor Arterials	Commercial	0.9	1.4	1.4	1.0	4:1	1.2	3:1	5:1	0.3:1
	Intermediate	0.8	1.0	1.0	0.9	4:1	0.9	3:1	5:1	0.3:1
	Residential	0.5	0.7	0.7	0.7	4:1	0.6	3.5:1	6:1	0.3:1
Collectors	Commercial	0.8	1.1	1.1	0.9	4:1	0.8	3:1	5:1	0.4:1
	Intermediate	0.6	0.8	0.8	0.6	4:1	0.6	3.5:1	6:1	0.4:1
	Residential	0.4	0.6	0.6	0.5	4:1	0.4	4:1	8:1	0.4:1
Local	Commercial	0.6	0.8	0.8	0.8	6:1	0.6	6:1	10:1	0.4:1
	Intermediate	0.5	0.7	0.7	0.6	6:1	0.5	6:1	10:1	0.4:1
	Residential	0.3	0.4	0.4	0.4	6:1	0.3	6:1	10:1	0.4:1
Alleys	Commercial	0.4	0.6	0.6	0.5	6:1	0.4	6:1	10:1	0.4:1
	Intermediate	0.3	0.4	0.4	0.4	6:1	0.3	6:1	10:1	0.4:1
	Residential	0.2	0.3	0.3	0.3	6:1	0.2	6:1	10:1	0.4:1

Continued next page



Table 3-2 FDM Table 231.2.1 Lighting Values

Topic #625-000-002  
FDOT Design Manual

January 1, 2024

Table 231.2.1 Lighting Values

Roadway Classification Or Location Type	Illumination Level Average Foot Candle		Illumination Uniformity Ratios		Veiling Luminance Ratio
	Horizontal (H.F.C.)	Vertical (V.F.C.)	Avg./Min.	Max./Min.	L <sub>V(MAX)</sub> /L <sub>AVG</sub>
<b>Corridor Lighting</b>					
Limited Access Facilities	1.5	N/A	4:1 or Less	10:1 or Less	0.3:1 or Less
Major Arterials	1.5				
Arterial Lighting Retrofit	1.0-1.5				
Other Roadways	1.0				

Table 3-3 Preliminary Roadway Lighting Calculations Summary

MTG HT	Pole Setback	Maximum Spacing (FT)	Overall			Veiling Luminance
			FC	Avg/Min	Max/Min	
40 ft.	2 feet setback from wall	165	1.5	2.3	3.8	0.1



## ROADWAY LIGHTING RECOMMENDATION

Based on the roadway geometry, photometric analyses, maintenance, cost and safety, the roadway lighting design listed under **Table 3-3** is recommended.

Analysis of the lighting calculations for this project indicate that the proposed lighting system meets the illumination levels required by the Florida Green Book and the FDM.



## APPENDICES

APPENDIX A – PRELIMINARY LIGHTING CALCULATIONS

APPENDIX B – LUMINAIRE CATALOG CUTS



## APPENDIX A – PRELIMINARY LIGHTING CALCULATIONS



12/5/23, 11:25 AM

Roadway Print Out

Visual - Roadway Tool

www.Visual-3D.com



Design Information

Project Name Broad Causeway Bridge  
 Project Description 2-lanes each direction + SUP

Tuesday, December 05, 2023

User Name P. Trevin, PE  
 Company Name AtkinsRealis  
 Your Phone 305-409-3411  
 Your Email pete.trevin@atkinsrealis.com

Roadway

Calculation Method	RP-8-2000 2007 errata	<b>Median</b>		
Road Surface	R3	<b>Width</b>	0 ft	
Road Class	Major	<b>Sidewalk</b>		
Pedestrians	None	<b>Width</b>	Left: 0 ft	Right: 0 ft
Roadway Length	1,000 (13 Pole Locations)	<b>Setback</b>	Left: 0 ft	Right: 0 ft
Lane Quantity	Left: 3 Right: 3	<b>Bikelane</b>		
Lane Width	Left: 14.7 ft Right: 14.7 ft	<b>Width</b>	Left: 0 ft	Right: 0 ft
		<b>Setback</b>	Left: 0 ft	Right: 0 ft

Luminaire Information

Left Side - SIGNIFY CANADA LTD : DMS55-110W64LED3K-G3-LE3F

Cycle Spacing:	166.01 ft	Configuration:	Single
Setback:	1 ft	Arm Length:	2 ft
Orientation:	90	Tilt:	0
Mounting Height:	40 ft	Lamp Lumens:	13916
Staggered:	False	Wattage:	105.4
Light Loss Factor:	1	Lamp Count:	1

Right Side - SIGNIFY CANADA LTD : DMS55-110W64LED3K-G3-LE3F

Cycle Spacing:	166.01 ft	Configuration:	Single
Setback:	1 ft	Arm Length:	2 ft
Orientation:	270	Tilt:	0
Mounting Height:	40 ft	Lamp Lumens:	13916
Staggered:	True	Wattage:	105.4
Light Loss Factor:	1	Lamp Count:	1

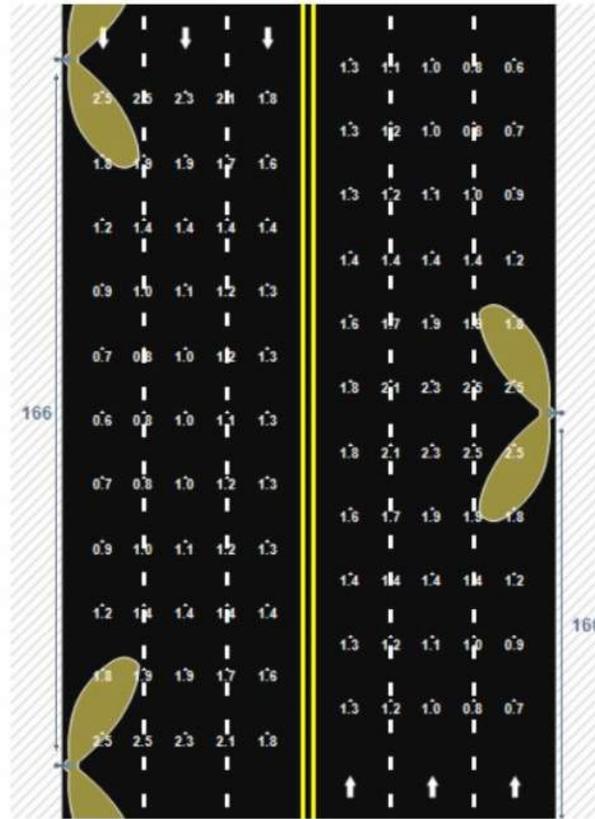
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Visual - Roadway Tool

www.Visual-3D.com



Illuminance

Calculation Results

Luminance	Left	Right		Illuminance	Left	Right	Sidewalk	Left	Right		
Average:	0.9	0.9	cd/m <sup>2</sup>	Average:	1.5	1.5	fc	Average:	--	--	fc
Max:	1.1	1.1	cd/m <sup>2</sup>	Max:	2.5	2.5	fc	Min:	--	--	fc
Min:	0.8	0.8	cd/m <sup>2</sup>	Min:	0.6	0.6	fc	Ave/Min:	--	--	fc
Ave/Min:	1.2	1.2		Ave/Min:	2.3	2.3		Ev Min:	--	--	fc
Max/Min:	1.5	1.5		Max/Min:	3.8	3.8		<b>Bikelane</b>			
Lv Ratio:	0.1	0.1						Average:	--	--	fc
STV:	2.5	2.5						Min:	--	--	fc
								Ave/Min:	--	--	fc
								Ev Min:	--	--	fc

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## APPENDIX B – LUMINAIRE CATALOG CUTS



**Domus 50** is one of the most versatile luminaires offered by Lumec. This classic shape was one of the first in a line of pioneering Lumec designs. **Domus** offers a subtly refined design that balances shape, dimension and proportion.

Project:

Location:

Cat. No:

Type:

Lamps:  Qty:

Notes:

**Ordering guide**

Example: DMS50-90W80LED4K-T-ACDR-LE3F-120-DMG-SMB-RCD-PH8-BKTX

Series	LED module	Gen	Globe material	Optical system	Voltage	Driver options
<b>DMS50</b>		<b>G3</b>				
<b>DMS50</b> Domus	4000K 3000K 35W32LED4K 35W32LED3K 55W32LED4K 55W32LED3K 55W48LED4K 55W48LED3K 70W64LED4K 70W64LED3K 72W32LED4K 72W32LED3K 80W48LED4K 80W48LED3K 90W80LED4K 90W80LED3K 108W48LED4K 108W48LED3K 110W64LED4K 110W64LED3K 135W80LED4K 135W80LED3K 145W64LED4K 145W64LED3K 180W80LED4K 180W80LED3K	<b>G3</b>	<b>ACDR</b> Acrylic globe	<b>Globe</b> LE2A <sup>6</sup> Type II (ASYM) with globe LE3A <sup>6</sup> Type III (ASYM) with globe LE4A <sup>6</sup> Type IV (ASYM) with globe <b>Sag lens</b> LE2S Type II (ASYM) Sag glass lens LE3S Type III (ASYM) Sag glass lens LE4S Type IV (ASYM) Sag glass lens LE5S <sup>1</sup> Type V (SYMM) Sag glass lens <b>Flat lens</b> LE2F Type II (ASYM) Flat glass lens LE3F Type III (ASYM) Flat glass lens LE4F Type IV (ASYM) Flat glass lens LE5F <sup>1</sup> Type V (SYMM) Flat glass lens	120 120V 208 208V 240 240V 277 277V 347 347V 480 480V	<b>AST</b> <sup>1</sup> Pre-set, progressive start-up <b>CLO</b> <sup>1</sup> Pre-set, manage lumen depreciation <b>DALI</b> <sup>1</sup> Pre-set, compatible with the DALI control system <b>OTL</b> <sup>1</sup> Pre-set to signal end of life of the lamp <b>DMG</b> 0-10V <b>CDMGGE25</b> <sup>1</sup> 8 hrs. 25% reduction <b>CDMGGE50</b> <sup>1</sup> 8 hrs. 50% reduction <b>CDMGGE75</b> <sup>1</sup> 8 hrs. 75% reduction <b>CDMGGM25</b> <sup>1</sup> 6 hrs. 25% reduction <b>CDMGGM50</b> <sup>1</sup> 6 hrs. 50% reduction <b>CDMGGM75</b> <sup>1</sup> 6 hrs. 75% reduction <b>CDMGGS25</b> <sup>1</sup> 4 hrs. 25% reduction <b>CDMGGS50</b> <sup>1</sup> 4 hrs. 50% reduction <b>CDMGGS75</b> <sup>1</sup> 4 hrs. 75% reduction <b>SRD</b> <sup>3</sup> Sensor ready driver, standard configuration <b>SRD1</b> <sup>3</sup> Sensor ready driver, alternate configuration

**Ordering guide (continued)**

Adaptors	Luminaire options	Poles & Brackets	Finish
<b>MA1</b> 1 1/4" NPT threaded hole adaptor <b>MA2</b> 1 1/2" NPT threaded hole adaptor <b>SMA</b> <sup>1</sup> Decorative retro side-mounted cast-aluminum, accepts tubes from 1 5/8" to 2 3/8" <b>SMB</b> Decorative contemporary side-mounted cast-aluminum, accepts tubes from 1 5/8" to 2 3/8"	<b>BO</b> Bridge and Overpass <b>DE1</b> Decorative deflector <b>H5</b> House side shield <b>PH7</b> Photoelectric cell, bottom type <b>PH8</b> <sup>2,4</sup> Photoelectric cell <b>PH9</b> <sup>2,4</sup> Shorting cap <b>PHXL</b> <sup>2,4</sup> Photoelectric cell, extended life <b>RC</b> <sup>15</sup> Receptacle 3 pins <b>RCD</b> <sup>2,5</sup> Receptacle 5 pins <b>RCD7</b> <sup>2,5</sup> Receptacle 7 pins <b>SP2</b> Surge protector	Consult signify.com/outdoorluminaires for details and the complete line of Signify poles and brackets.	<b>BE2TX</b> Textured midnight blue <b>BE6TX</b> Textured ocean blue <b>BE8TX</b> Textured royal blue <b>BG2TX</b> Textured Sandstone <b>BKTX</b> Textured black <b>BRTX</b> Textured bronze <b>GN4TX</b> Textured blue green <b>GN6TX</b> Textured forest green <b>GN8TX</b> Textured Dk forest green <b>GNTX</b> Textured green <b>GR</b> Gray sandtex <b>GV3TX</b> Textured medium grey <b>NP</b> Natural aluminum <b>RD2TX</b> Textured burgundy <b>RD4TX</b> Textured scarlet <b>TG</b> Hammettone gold <b>WHTX</b> Textured white

**Footnotes**

1. Not available with HS option.
2. SMA or SMB adaptors is required for this option.
3. Not available 347-480 volt.
4. Luminaire option RC, RCD or RCD7 is required with this options.
5. Use of photoelectric cell or shorting cap is required to ensure proper illumination.
6. Globe Material ACDR is required with this optical system.
7. Only 3 pin receptacle RC is available with SMA adaptor.



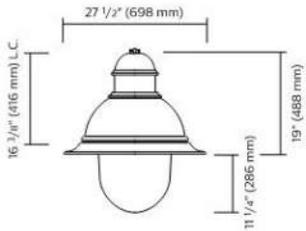
# DMS50 Domus LED Pendant

## Urban Luminaire

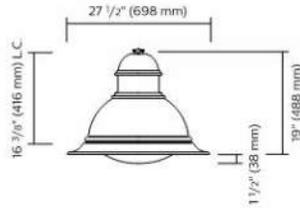
**Dimensions**

EPA: 1.35 ft<sup>2</sup> max.

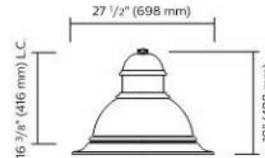
Weight: 42 lbs (19.1kg) max.



**DMS50 - A optics**  
Long drop globe



**DMS50 - S optics**  
Sag lens



**DMS50 - F optics**  
Flat lens

**Predicted Lumen Depreciation Data**

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours.

Ambient Temperature °C	Driver mA	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 60,000 hrs
35°C	700 mA	>100,000 hours	>60,000 hours	>86%



# DMS50 Domus LED Pendant

## Urban Luminaire

LED Wattage and Lumen Values: for DMS50

Ordering Code:	Total LEDs	LED current (mA)	Average System Wattage (W)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	
<b>Flat Lens 3000K</b>																
					<b>LE2F</b>			<b>LE3F</b>			<b>LE4F</b>			<b>LE5F</b>		
35W32LED3K-G3-x	32	350	37	5051	136	B1-U0-G1	4992	135	B1-U0-G1	4954	134	B1-U0-G1	4925	133	B3-U0-G1	
55W32LED3K-G3-x	32	530	55	7264	132	B2-U0-G1	7178	131	B1-U0-G2	7123	130	B1-U0-G2	7082	129	B3-U0-G2	
72W32LED3K-G3-x	32	700	72	9145	127	B2-U0-G2	9036	126	B2-U0-G2	8968	125	B2-U0-G2	8916	124	B3-U0-G2	
55W48LED3K-G3-x	48	350	54	7555	141	B2-U0-G1	7466	139	B2-U0-G2	7409	138	B1-U0-G2	7366	137	B3-U0-G2	
80W48LED3K-G3-x	48	530	80	10807	135	B2-U0-G2	10679	133	B2-U0-G2	10598	132	B2-U0-G2	10536	132	B4-U0-G2	
108W48LED3K-G3-x	48	700	105	13572	129	B3-U0-G2	13411	128	B2-U0-G2	13309	127	B2-U0-G2	13232	126	B4-U0-G2	
70W64LED3K-G3-x	64	350	69	9825	142	B2-U0-G2	9709	140	B2-U0-G2	9635	139	B2-U0-G2	9579	138	B3-U0-G2	
110W64LED3K-G3-x	64	530	105	14083	134	B3-U0-G2	13917	132	B2-U0-G2	13811	131	B2-U0-G2	13731	130	B4-U0-G2	
145W64LED3K-G3-x	64	700	138	17694	128	B3-U0-G2	17485	127	B3-U0-G2	17352	126	B3-U0-G3	17251	125	B4-U0-G2	
90W80LED3K-G3-x	80	350	86	12264	143	B3-U0-G2	12119	141	B2-U0-G2	12027	140	B2-U0-G2	11957	139	B4-U0-G2	
135W80LED3K-G3-x	80	530	131	17519	134	B3-U0-G2	17311	133	B3-U0-G2	17180	132	B3-U0-G3	17081	131	B4-U0-G2	
180W80LED3K-G3-x	80	700	174	21865	126	B3-U0-G3	21606	124	B3-U0-G3	21442	123	B3-U0-G3	21318	122	B5-U0-G3	
<b>Sag Lens 3000K</b>																
					<b>LE2S</b>			<b>LE3S</b>			<b>LE4S</b>			<b>LE5S</b>		
35W32LED3K-G3-x	32	350	37	5114	138	B1-U0-G1	5068	137	B1-U0-G1	5062	136	B1-U0-G1	5102	138	B3-U0-G1	
55W32LED3K-G3-x	32	530	55	7354	134	B2-U0-G1	7288	133	B1-U0-G2	7279	132	B1-U0-G2	7337	133	B3-U0-G2	
72W32LED3K-G3-x	32	700	72	9258	129	B2-U0-G2	9176	127	B2-U0-G2	9164	127	B2-U0-G2	9237	128	B3-U0-G2	
55W48LED3K-G3-x	48	350	54	7649	143	B2-U0-G1	7581	141	B1-U0-G2	7571	141	B1-U0-G2	7632	142	B3-U0-G2	
80W48LED3K-G3-x	48	530	80	10941	137	B2-U0-G2	10843	136	B2-U0-G2	10830	135	B2-U0-G2	10916	136	B4-U0-G2	
108W48LED3K-G3-x	48	700	105	13740	131	B3-U0-G2	13618	130	B2-U0-G2	13601	130	B2-U0-G2	13709	131	B4-U0-G2	
70W64LED3K-G3-x	64	350	69	9947	143	B2-U0-G2	9858	142	B2-U0-G2	9846	142	B2-U0-G2	9924	143	B4-U0-G2	
110W64LED3K-G3-x	64	530	105	14258	135	B3-U0-G2	14131	134	B2-U0-G2	14114	134	B2-U0-G2	14226	135	B4-U0-G2	
145W64LED3K-G3-x	64	700	138	17913	130	B3-U0-G2	17754	129	B3-U0-G2	17732	128	B3-U0-G3	17873	130	B4-U0-G2	
90W80LED3K-G3-x	80	350	86	12416	145	B2-U0-G2	12305	143	B2-U0-G2	12290	143	B2-U0-G2	12388	144	B4-U0-G2	
135W80LED3K-G3-x	80	530	131	17736	136	B3-U0-G2	17578	135	B3-U0-G2	17557	134	B3-U0-G3	17696	135	B4-U0-G2	
180W80LED3K-G3-x	80	700	174	22136	127	B3-U0-G3	21939	126	B3-U0-G3	21912	126	B3-U0-G3	22086	127	B5-U0-G3	
<b>Prism Globe 3000K</b>																
					<b>LE2A</b>			<b>LE3A</b>			<b>LE4A</b>					
35W32LED3K-G3-x	32	350	37	5081	137	B1-U3-G1	5042	136	B1-U3-G2	5056	136	B1-U3-G2	--	--	--	
55W32LED3K-G3-x	32	530	55	7306	133	B2-U3-G2	7251	132	B2-U3-G2	7271	132	B1-U3-G2	--	--	--	
72W32LED3K-G3-x	32	700	72	9198	128	B2-U3-G2	9128	127	B2-U3-G2	9154	127	B2-U3-G3	--	--	--	
55W48LED3K-G3-x	48	350	54	7599	142	B2-U3-G2	7542	141	B2-U3-G2	7563	141	B2-U3-G2	--	--	--	
80W48LED3K-G3-x	48	530	80	10870	136	B2-U3-G2	10788	135	B2-U3-G2	10818	135	B2-U3-G3	--	--	--	
108W48LED3K-G3-x	48	700	105	13651	130	B3-U3-G3	13548	129	B3-U3-G3	13586	129	B2-U3-G3	--	--	--	
70W64LED3K-G3-x	64	350	69	9883	142	B2-U3-G2	9808	141	B2-U3-G2	9835	142	B2-U3-G3	--	--	--	
110W64LED3K-G3-x	64	530	105	14166	134	B3-U3-G3	14058	133	B3-U3-G3	14098	134	B2-U3-G3	--	--	--	
145W64LED3K-G3-x	64	700	138	17798	129	B3-U3-G3	17663	128	B3-U3-G3	17712	128	B3-U3-G3	--	--	--	
90W80LED3K-G3-x	80	350	86	12336	144	B3-U3-G3	12242	143	B2-U3-G3	12276	143	B2-U3-G3	--	--	--	
135W80LED3K-G3-x	80	530	131	17622	135	B3-U3-G3	17488	134	B3-U3-G3	17537	134	B3-U3-G3	--	--	--	
180W80LED3K-G3-x	80	700	174	21993	126	B3-U3-G3	21826	125	B3-U3-G3	21887	126	B3-U3-G4	--	--	--	

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.: highly recommended to confirm performance with a layout - contact Applications at [signify.com/outdoorluminaire](http://signify.com/outdoorluminaire).  
**Note:** Some data may be scaled based on tests of similar. But not identical luminaires.



# DMS50 Domus LED Pendant

## Urban Luminaire

LED Wattage and Lumen Values: for DMS55 @ 4000K

Ordering Code:	Total LEDs	LED current (mA)	Average System Wattage (W)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
<b>Flat Lens 4000K</b>															
<b>LE2F</b>															
35W32LED4K-G3-x	32	350	37	5304	143	B1-U0-G1	5241	141	B1-U0-G1	5201	140	B1-U0-G1	5171	139	B3-U0-G1
55W32LED4K-G3-x	32	530	55	7627	139	B2-U0-G1	7537	137	B2-U0-G2	7479	136	B1-U0-G2	7436	135	B3-U0-G2
72W32LED4K-G3-x	32	700	72	9602	133	B2-U0-G1	9488	132	B2-U0-G2	9416	131	B2-U0-G2	9362	130	B3-U0-G2
55W48LED4K-G3-x	48	350	54	7933	148	B2-U0-G2	7839	146	B2-U0-G2	7779	145	B2-U0-G2	7734	144	B4-U0-G2
80W48LED4K-G3-x	48	530	80	11347	142	B2-U0-G2	11213	140	B2-U0-G2	11128	139	B2-U0-G2	11063	138	B4-U0-G2
108W48LED4K-G3-x	48	700	105	14251	136	B3-U0-G2	14082	134	B2-U0-G2	13975	133	B2-U0-G2	13894	132	B4-U0-G2
70W64LED4K-G3-x	64	350	69	10316	149	B3-U0-G2	10194	147	B2-U0-G2	10117	146	B2-U0-G2	10058	145	B4-U0-G2
110W64LED4K-G3-x	64	530	105	14788	140	B3-U0-G2	14613	139	B3-U0-G2	14502	138	B2-U0-G2	14418	137	B4-U0-G2
145W64LED4K-G3-x	64	700	138	18579	135	B3-U0-G2	18359	133	B3-U0-G2	18219	132	B2-U0-G2	18114	131	B4-U0-G2
90W80LED4K-G3-x	80	350	86	12877	150	B3-U0-G2	12724	148	B3-U0-G2	12628	147	B3-U0-G3	12555	146	B4-U0-G2
135W80LED4K-G3-x	80	530	131	18395	141	B3-U0-G3	18177	139	B3-U0-G2	18039	138	B3-U0-G3	17935	137	B5-U0-G3
180W80LED4K-G3-x	80	700	174	22958	132	B3-U0-G3	22686	130	B3-U0-G3	22514	129	B3-U0-G3	22384	128	B5-U0-G3
<b>Sag Lens 4000K</b>															
<b>LE2S</b>															
35W32LED4K-G3-x	32	350	37	5370	145	B1-U0-G1	5322	143	B1-U0-G1	5315	143	B1-U0-G1	5358	144	B3-U0-G1
55W32LED4K-G3-x	32	530	55	7721	140	B2-U0-G1	7653	139	B1-U0-G2	7643	139	B1-U0-G2	7704	140	B3-U0-G2
72W32LED4K-G3-x	32	700	72	9721	135	B2-U0-G1	9634	134	B2-U0-G2	9623	134	B2-U0-G2	9699	135	B4-U0-G2
55W48LED4K-G3-x	48	350	54	8031	150	B2-U0-G2	7960	149	B2-U0-G2	7950	148	B1-U0-G2	8013	149	B3-U0-G2
80W48LED4K-G3-x	48	530	80	11488	144	B2-U0-G2	11386	142	B2-U0-G2	11372	142	B2-U0-G2	11462	143	B4-U0-G2
108W48LED4K-G3-x	48	700	105	14427	137	B3-U0-G2	14299	136	B2-U0-G2	14281	136	B2-U0-G2	14395	137	B4-U0-G2
70W64LED4K-G3-x	64	350	69	10444	150	B3-U0-G2	10351	149	B2-U0-G2	10338	149	B2-U0-G2	10421	150	B4-U0-G2
110W64LED4K-G3-x	64	530	105	14971	142	B3-U0-G2	14838	141	B2-U0-G2	14819	141	B2-U0-G2	14937	142	B4-U0-G2
145W64LED4K-G3-x	64	700	138	18809	136	B3-U0-G2	18642	135	B2-U0-G2	18619	135	B3-U0-G3	18767	136	B5-U0-G3
90W80LED4K-G3-x	80	350	86	13037	152	B3-U0-G2	12921	151	B3-U0-G3	12905	150	B2-U0-G2	13007	152	B4-U0-G2
135W80LED4K-G3-x	80	530	131	18623	143	B3-U0-G3	18457	141	B3-U0-G3	18435	141	B3-U0-G3	18581	142	B4-U0-G2
180W80LED4K-G3-x	80	700	174	23243	133	B3-U0-G3	23036	132	B3-U0-G3	23008	132	B3-U0-G4	23190	133	B5-U0-G3
<b>Prism Globe 4000K</b>															
<b>LE2A</b>															
35W32LED4K-G3-x	32	350	37	5335	144	B1-U3-G1	5294	143	B1-U3-G2	5309	143	B1-U3-G2	-	-	-
55W32LED4K-G3-x	32	530	55	7672	139	B2-U3-G2	7613	138	B2-U3-G2	7635	139	B2-U3-G2	-	-	-
72W32LED4K-G3-x	32	700	72	9658	134	B2-U3-G2	9585	133	B2-U3-G2	9612	134	B2-U3-G3	-	-	-
55W48LED4K-G3-x	48	350	54	7979	149	B2-U3-G2	7919	148	B2-U3-G2	7941	148	B2-U3-G2	-	-	-
80W48LED4K-G3-x	48	530	80	11414	143	B2-U3-G2	11327	142	B2-U3-G3	11359	142	B2-U3-G3	-	-	-
108W48LED4K-G3-x	48	700	105	14334	137	B3-U3-G3	14225	135	B3-U3-G3	14265	136	B2-U3-G3	-	-	-
70W64LED4K-G3-x	64	350	69	10377	150	B2-U3-G2	10298	148	B2-U3-G2	10327	149	B2-U3-G3	-	-	-
110W64LED4K-G3-x	64	530	105	14874	141	B3-U3-G3	14761	140	B3-U3-G3	14803	140	B2-U3-G3	-	-	-
145W64LED4K-G3-x	64	700	138	18688	135	B3-U3-G3	18546	134	B3-U3-G3	18598	135	B3-U3-G4	-	-	-
90W80LED4K-G3-x	80	350	86	12952	151	B3-U3-G3	12854	150	B2-U3-G3	12890	150	B2-U3-G3	-	-	-
135W80LED4K-G3-x	80	530	131	18503	142	B3-U3-G3	18362	141	B3-U3-G3	18413	141	B3-U3-G4	-	-	-
180W80LED4K-G3-x	80	700	174	23093	133	B3-U3-G3	22917	132	B3-U3-G3	22981	132	B3-U3-G4	-	-	-

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.: highly recommended to confirm performance with a layout - contact Applications at [signify.com/outdoorluminaire](http://signify.com/outdoorluminaire).  
**Note:** Some data may be scaled based on tests of similar, but not identical luminaires.

### Specifications:

#### Housing

In a round shape, this housing is made of die cast A380 aluminum, c/w a watertight grommet, mechanically assembled to the bracket with four bolts 5/16 18 UNC. This suspension system permits for a full rotation of the luminaire in 90° increments.

#### Access-mechanism

A die cast A360 aluminum technical ring with latch, hinge and a cast in decorative skirt. The mechanism shall offer tool free access to the inside of the luminaire. An embedded memory retentive gasket shall ensure weatherproofing.

#### Light engine

LED engine composed of 5 main components: **Heat Sink / Lens / LED lamp / Driver / Optical System**  
 Electrical components are RoHS compliant.

# DMS50 Domus LED Pendant

## Urban Luminaire

**Specifications:**

**LED engine**

LED type: Lumileds LUXEON T. Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K) or Warm white, 3000 Kelvin nominal (3045K +/- 175K or 2870K to 3220K), CRI 70 Min. 75 Typical.

**Lens**

**LExF / LExS.** Made of soda lime tempered glass lens, mechanically assembled and sealed onto the lower part of the heat sink.  
**LExA (Globe).** Made of one-piece seamless injection-molded impact-resistant (DR) acrylic having an inner prismatic surface. The globe is mechanically assembled and sealed onto the lower part of the heat sink.

**Heat sink**

Made of cast aluminum optimizing the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

**Driver**

Driver comes standard with dimming compatible 0-10V. High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. Maximum ambient operating temperature from 40F(40C) to 130F(55C) degrees. Certified in compliance to UL1310 cULus requirement. Dry and damp location. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

**Optical system**

Composed of high performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is rated IP66. Performance shall be tested per LM 63, LM 79 and TM 15 (IESNA) certifying its photometric performance. Street side indicated. Flat lens (F optics) is Dark Sky compliant with 0% uplight and U0 per IESNA TM 15.

**Prismatic globe:** IP66 rated optical system, composed of individual pre-oriented lens to achieve desired distribution, assembled with globe having an inner prismatic surface permanently sealed onto the lower part of the heat sink.



- LE2A - Type II (ASYM) with globe (ACDR)
- LE3A - Type III (ASYM) with globe (ACDR)
- LE4A - Type IV (ASYM) with globe (ACDR)

**Sag lens:** IP66 rated optical system, composed of individual pre-oriented lens to achieve desired distribution, assembled with a tempered-glass sag lens permanently sealed onto the lower part of the heat sink.



- LE2S - Type II (ASYM) Sag glass lens
- LE3S - Type III (ASYM) Sag glass lens
- LE4S - Type IV (ASYM) Sag glass lens
- LE5S - Type V (SYMM) Sag glass lens

**Flat lens:** IP66 rated optical system, composed of individual pre-oriented lens to achieve desired distribution, assembled with a tempered-glass flat lens permanently sealed onto the lower part of the heat sink.



- LE2F - Type II (ASYM) Flat glass lens
- LE3F - Type III (ASYM) Flat glass lens
- LE4F - Type IV (ASYM) Flat glass lens
- LE5F - Type V (SYMM) Flat glass lens

**Driver options**

- AST:** Pre-set driver for progressive start-up of the LED module(s) to optimize energy management and enhance visual comfort at start-up.
- CLO:** Pre-set driver to manage the lumen depreciation by adjusting the power given to the LEDs offering the same lighting intensity during the entire lifespan of the LED module.
- DALI:** Pre-set driver compatible with the DALI control system.
- OTL:** Pre-set driver to signal end of life of the LED module(s) for better fixture management.

**DMG:** Dimmable driver 0-10V.

**CDMG:** Dynadimmer standard dimming functionalities including pre-programmed scenarios to suit many applications and needs from safety to maximum energy savings.

Ordering Code	Scenario	Dimming Time	Dimming Level
CDMGS25	Safety	4 hours	25% power
CDMG550	Safety	4 hours	50% power
CDMGS75	Safety	4 hours	75% power
CDMGM25	Median	6 hours	25% power
CDMGM50	Median	6 hours	50% power
CDMGM75	Median	6 hours	75% power
CDMGE25	Economy	8 hours	25% power
CDMGE50	Economy	8 hours	50% power
CDMGE75	Economy	8 hours	75% power

**SRD:** Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle.

**SRD1:** Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the top NEMA twist lock.

**Surge protector**

Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA. **SP2** 20kV/20kA optional.

**Luminaire adaptor**

**MA1:** The luminaire is suspended by means of a mounting adaptor with a 1/4" (32mm) NPT threaded hole accepting a threaded tube from the mounting. Retrofit adaptor for existing mounting



**MA2:** 1/2" (38mm) NPT threaded hole accepting threaded tube from the mounting. Retrofit adaptor for existing mounting.





# DMS50 Domus LED Pendant

## Urban Luminaire

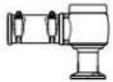
**Specifications (continued):**

**Luminaire adaptor (continued)**

**SMA:** The luminaire is suspended by means of a decorative side-mounted cast aluminum adaptor. This adaptor accepts tubes from 1 1/4" to 2 1/4" (41 to 60mm) and is adjustable to more or less 5°. The adaptor features a cast aluminum decorative cover and finial.



**SMB:** The luminaire is suspended by means of a decorative side-mounted cast aluminum adaptor. This adaptor accepts tubes from 1 1/4" to 2 1/4" (41 to 60mm) and is adjustable to more or less 5°.



**Luminaire options**

**BO:** Bridge and Overpass

**HS:** House side shield

**PH7:** Photoelectric cell, bottom type

**PH8:** Photoelectric Cell, Twist-lock Type. Allows a 90° rotation.



**PHXL:** Extended life photoelectric cell, Twist-lock Type. Allows a 90° rotation.



**Luminaire options**

**PH9:** Shorting cap, Twist-lock Type



**RC:** Receptacle 3 pins



**RCD:** Receptacle 5 pins



**RCD7:** Receptacle 7 pins



**SP2:** Integral surge protector

**Finish**

In accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with +/- 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

**Finish Options Include:**

- BE2TX:** Textured Midnight Blue
- BE6TX:** Textured Ocean Blue
- BE8TX:** Textured Royal Blue
- BG2TX:** Textured Sandstone
- BKTX:** Textured Black
- BRTX:** Textured Bronze
- GN4TX:** Textured Blue Green
- GN6TX:** Textured Forest Green
- GN8TX:** Textured Dark Forest Green
- GNTX:** Textured Green
- GR:** Gray Sandtex
- GY3TX:** Textured Medium Grey
- NP:** Natural Aluminum
- RD2TX:** Textured Burgundy
- RD4TX:** Textured Scarlet
- TG:** Hammer-tone Gold
- WHTX:** Textured White

**Wiring**

Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding from luminaire.

**Hardware**

All exposed screws shall be complete with Ceramic primer-seal base coat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

**Luminaire useful life**

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750. System Reliability Tool, Advance data and Lumileds LM-80/TM-21 data, expected to reach 100,000+ hours with >L70 lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion. Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +35°C / +95°F.

**LED products (manufacturing standard)**

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340 5 1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

**Quality control**

Manufactured to ISO 9001 2008 standards and ISO 14001-2004 International Quality Standards Certification.

**Vibration resistance**

Meets the ANSI C136.31, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G over 100 000 cycles)

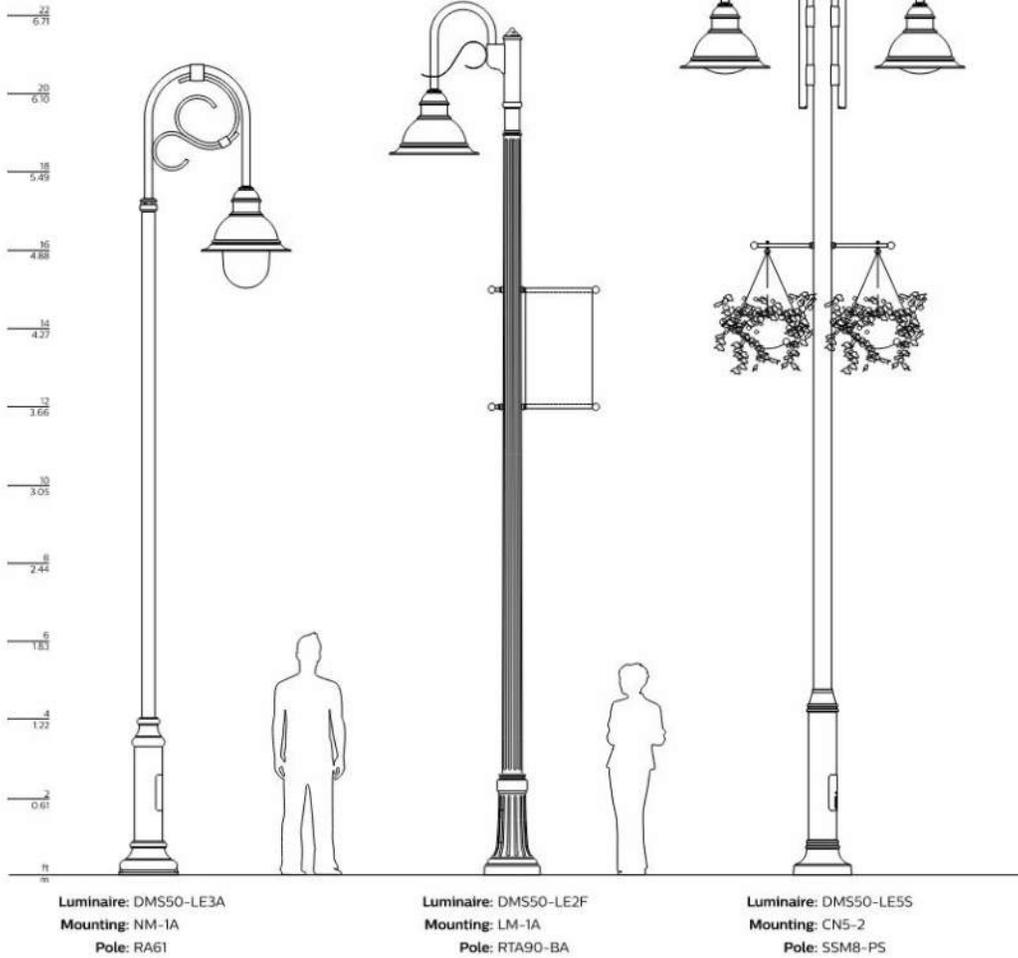
**Certifications and Compliance**

CSA, cULus Listed for Canada and USA. Domus LED luminaires are DesignLights Consortium qualified.

# DMS50 Domus LED Pendant Urban Luminaire

Specifications (continued):

Poles & Brackets Sample configurations.



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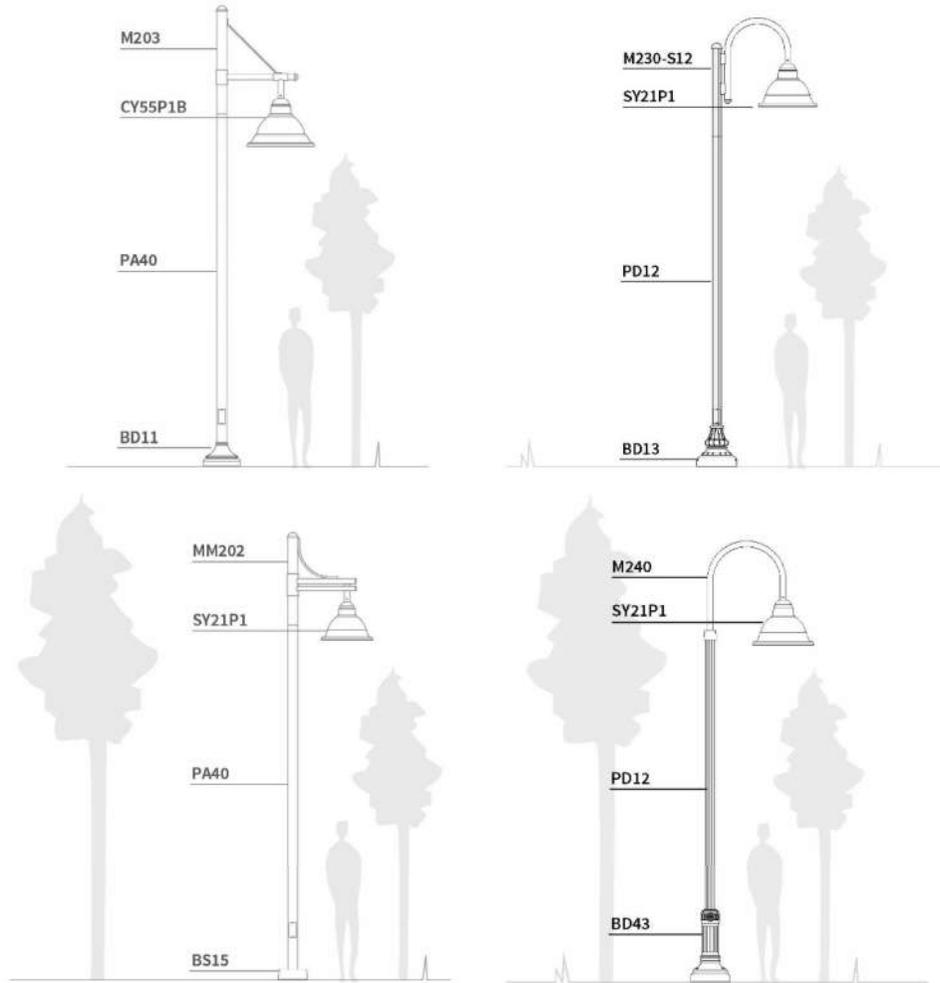


**Domia**



B-7

# Luminaire Scale Guide



B-14

**Domia**



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**AcuityBrands.**

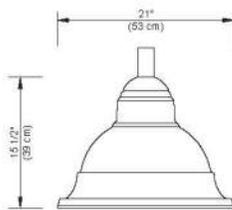
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# Domia Pendant Mini

## Ordering Code

Model	Lens	Distribution	Performance Package	CCT	Volts	Surge Protector
<b>SY21P1</b>	<b>FGC</b> Flat Glass Clear	<b>T1</b> Type 1	<b>P10</b> (3500lm)	<b>30K</b> 3000K	<b>MVOLT</b> 120-277VAC	<b>10KV</b> 10 KV
	<b>FGF</b> Flat Glass Frosted	<b>T1A</b> Type 1A	<b>P20</b> (5000lm)			
	<b>NL</b> No Lens	<b>T1AHS</b> Type 1A with HS	<b>P30</b> (6500lm)			
		<b>T2</b> Type 2	<b>P40</b> (8000lm)			
		<b>T2HS</b> Type 2 with HS	<b>P50</b> (9000lm)			
		<b>T2M</b> Type 2M	<b>P60</b> (12000lm)			
		<b>T2MHS</b> Type 2M with HS	<b>P70</b> (15500lm)			
		<b>T3</b> Type 3				
		<b>T3HS</b> Type 3 with HS				
		<b>T3M</b> Type 3M				
		<b>T3MHS</b> Type 3M with HS				
		<b>T4</b> Type 4				
		<b>T4HS</b> Type 4 with HS				
	<b>T5</b> Type 5					
Adaptor	Photocell	Dimming	Color	Texture	Pre Finish	
Fitted with a vertical tenon of Ø 1 7/8" (4.7cm) O.D. and 0.203" (0.5cm) wall <b>ADV</b> Side Mount Adaptor <b>ADP</b> Suspended Mounting Adaptor	<b>PC</b> Button type Photocell	<b>DIM</b> 0-10 volts dimming <b>PND506</b> Program 50% for 6 hours (11PM to 5AM) <b>PND508</b> Program 50% for 8 hours (9PM to 5AM) <b>SD</b> Field adjustable 10% increment step-dimming switch <small>Contact factory for wireless controls and more information regarding SD option.</small>	<b>BK</b> Black RAL9005 <b>DG</b> Dark green RAL6012 <b>MA</b> Marine blue RAL5013 <b>SI</b> Metallic silver RAL9006 (smooth only) <b>BZ</b> Dark bronze RAL8019 <b>BG</b> Burgundy RAL3005 <b>GM</b> Moss green RAL6005 <b>PG</b> Pale grey RAL7040 <b>WH</b> White RAL9003 <b>BKH*</b> Black Holophane (smooth only) <b>BZH*</b> Dark bronze Holophane (smooth only) <b>GNH*</b> Green Holophane (smooth only) <b>GHH*</b> Graphite Holophane (smooth only) <b>GRH*</b> Gray Holophane (smooth only) <b>SLH*</b> Silver Holophane (smooth only) <b>WHH*</b> White Holophane (smooth only) <small>* Holophane colors.</small>	<b>TX</b> Textured <b>SM</b> Smooth	<b>MG</b> Marine grade pre-finish	



SY21P1

**Notes:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice. Please consult our web site for up-to-date product information and IES files.





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