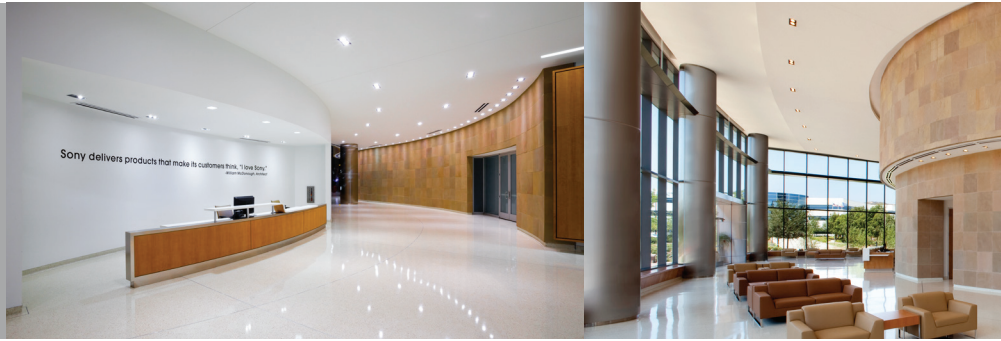




REFLECTOR/ TRIM COLOR



WH-WH-White



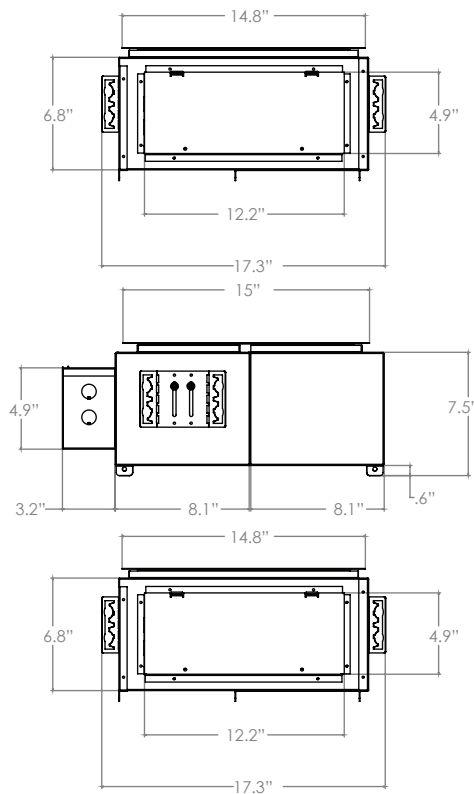
BK-BK-Black



WH-BK-White/Black



BK-WH-Black/White



| NOMINAL LUMENS | DELIVERED LUMENS | WATTAGE |
|----------------|------------------|---------|
| 3000           | 2985             | 31.7W   |
| 2000           | 2124             | 21.1W   |
| 1500           | 1501             | 14.5W   |
| 1000           | 1134             | 10.8W   |

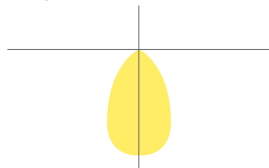
Based on 4000K, 90+ CRI. Actual wattage may vary +/- 5%

## FEATURES

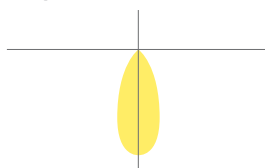
A recessed multiple combo downlight, available in 1, 2, 3 or 4 heads, with precise, glare-free illumination. Each individual luminaire has full aiming adjustability, rotating 365°, pivoting 45° vertically, and locks into place at any desired position. Each luminaire can be specifically designed to fit the appropriate application; combining different lumen packages and field-changeable optics in a single housing. With many CCT options, delivers the full spectrum of cool to warm tones, and ideal for retail merchandising, hospitality, supermarkets, commercial, or high-end residential.

|                         |                                                                                                           |
|-------------------------|-----------------------------------------------------------------------------------------------------------|
| LUMENS/HEAD             | 1000, 1500, 2000, 3000                                                                                    |
| CCT & DYNAMIC PLATFORMS | 27K, 30K, 35K, 40K, 50K, Tunable White, Dims to Warm, RGB + White                                         |
| CRI                     | 90+ Standard, 98+ Optional                                                                                |
| COLOR QUALITY           | 2 Step MacAdam Ellipse                                                                                    |
| DISTRIBUTION PATTERNS   | SP ( Spot), NFL ( Narrow Flood), FL ( Flood)                                                              |
| TRIM OPTIONS            | 1,2,3,4 Trim, Trimless                                                                                    |
| REFLECTOR COLORS        | BK(Black), WH(White)                                                                                      |
| FLANGE COLORS           | BK (Black), WH (White), Custom RAL Colors.                                                                |
| DIMMING                 | 0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUTFTB, LUT2W, ELDO10.1, ELDDMX.1, ELDDALI.1, DIMTR |
| EMERGENCY               | 10W - Up to 1000L Output (Bodine BSL310)<br>20W - Up to 2000L Output (Bodine BSL20)                       |
| LIFETIME                | L70 at 102,000 Hours                                                                                      |
| PHOTOMETRIC TESTS       | In Accordance with IES LM79-08, LM80 and TM-30, TM-21                                                     |

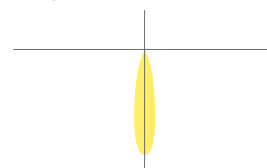
FL: FLOOD  
Candlepower Distribution Curve



NFL: NARROW FLOOD  
Candlepower Distribution Curve



SP: SPOT  
Candlepower Distribution Curve



#### OPTICS AND REFLECTOR

A multi-segmented reflector allows for precise beam control, and offers field-changeable optics in Narrow Spot, Narrow Flood, Flood, and Wall Wash with a variety of lumen options. With exceptional flexibility and controlled optics, each luminaire head can provide task, accent, or general illumination. Trim options include trim or trimless, with black or white interior finish. Merchandising is constantly changing, and the multiple combo is the perfect solution for highlighting up to 4 different displays with a single housing.

#### AIMING

The proprietary hot aiming system allows each individual head to be rotated 365° horizontally and 45° vertically, and to be aimed precisely at the desired position, which can be locked into position without the use of tools.

#### HOUSING

Thermally protected for new construction, non-insulated ceilings, or where insulation can be kept 3" from housing, with the ability to vertically adjust to accommodate various ceiling heights. Fabricated from 18-gauge steel and post-painted. Each luminaire head made of die-cast aluminum to dissipate heat.

#### TRIM OPTION

Post-painted powder coated die-cast trim ring available in white and custom RAL colors. (Please consult factory for custom paint color options). Trim attaches to housing with piano springs for snug fit and zero light leakage.

#### TRIMLESS OPTION

Die-cast perforated mesh cover intended for installation in drywall or plaster ceilings. Mudding may be applied right up to the edge of the luminaire opening to provide a seamless appearance. Trimless accessory is secured to the housing to prevent fractures in the ceiling and/or drywall during and after installation.

#### MOUNTING FRAME & BRACKET

Pre-installed butterfly brackets can be adjusted vertically with C-Channel mounting bars, allowing housing to be positioned and locked at any point within a 24" joist span. Bar hangers can fit onto a T-bar spline with additional slots and holes for special mounting methods.

#### THERMAL MANAGEMENT SYSTEM

Passive cooling die-cast aluminum heat sink, LED light engine and driver are replaceable, upgradeable, and can be accessed from below the ceiling. The consistency in the quality of light is delivered by the use of a unique locking mechanism that aligns the reflector with the light engine.

#### DRIVER ELECTRICAL INFORMATION

The LED driver is rated for 50 to 60Hz at 120V/277V input, produces less than 20% THD, has a power factor between 90% and 100%, and is thermally protected for additional safety. Junction box and driver can be accessed from below and above the ceiling. Junction box is listed for through branch circuit wiring.

#### DIMMING & DRIVER INFORMATION

**DIM10** - 0-10V dimming on either MVOLT 120, 277 or 347V. Dimmable down to 1% of initial lumens, standard.

**DIMTR** - Triac & Electronic low voltage dimming. Available in 120V, and up to 3000 lumens only.

**LUT2W** - Lutron LTEA2W Hi-Lume 1%. 2-wire LED Driver Forward Phase Control, 1% dimming in 120V only. Available on all fixtures up to 40 watts.

**LUTH** - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology.

**LUTFB** - Lutron PEQ0 Hi-Lume Premier Eco System. 0.1% dimming with Soft in Fade to Black dimming technology. Available on all fixtures up to 20 watts.

**ELDO10.1** - EldoLED SoloDrive 0-10V. Dimming down to 0.1%.

**DALI** - DALI DT6, DT8 dimming down to 1%.

**ELDODMX** - EldoLED PowerDrive dimming down to 0.1%.

Please see EldoLED website for wiring diagrams and a list of compatible DMX and DALI control systems.

#### WARRANTY

Five-year carefree warranty for parts and components. (Labor not included.)

#### LED DYNAMIC PLATFORM OPTIONS



Tunable White with SmartWhite Technology utilizing the Lumenetix Platform allows you to color tune the luminaire via various controls. Create the perfect environment for the desired use of the space, while maintaining a CRI of 90+ across the tunable range of 8000 to 1650K. (Click here for more details)



Dims to Warm with SmartDimming Technology. At 100% full brightness the luminaire is at 3000K. When dimmed to 1%, the light transitions to 1800K, creating a warm ambiance within the space. (Click here for more details)



RGB+White with SmartHue Technology provides full color mixing of RGB and white colors. Utilizing the Lumenetix Platform allows you to choose from unlimited RGB color options, via various controls. Ideal for Circadian Rhythm applications or to create the perfect human centric environment. (Click here for more details)

#### LISTINGS

c-UL-us - Listed for Feed Through Wiring.

Example: **FCL-LED-N-1500L-DIM10-120-FL-30K-90-F-WH-BK**

| SERIES                             | LUMEN                                                                                                                                | DIMMING                                                                                                                                                                                                                                                                                  | VOLTAGE                                                      | OPTICS                                                                                                                                    | CCT -                                                                                                                        | CRI                          | TRIM OPTION                                                                    | TRIM COLOR                                                                 | INTERIOR COLOR                                                             | ACCESSORIES                                              |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> FCL-LED-N | <input type="checkbox"/> 1000L<br><input type="checkbox"/> 1500L<br><input type="checkbox"/> 2000L<br><input type="checkbox"/> 3000L | <input type="checkbox"/> DIM10<br><input type="checkbox"/> DIMTR<br><input type="checkbox"/> LUTH<br><input type="checkbox"/> LUT2W<br><input type="checkbox"/> LUTFTB<br><input type="checkbox"/> ELDO10-1<br><input type="checkbox"/> ELDODALI-1<br><input type="checkbox"/> ELDODMX-1 | <input type="checkbox"/> 120<br><input type="checkbox"/> 277 | <input type="checkbox"/> SP- Spot-15°<br><input type="checkbox"/> NFL- Narrow Flood-24°-25°<br><input type="checkbox"/> FL- Flood-36°-38° | <input type="checkbox"/> 27K<br><input type="checkbox"/> 30K<br><input type="checkbox"/> 35K<br><input type="checkbox"/> 40K | <input type="checkbox"/> 90+ | <input type="checkbox"/> F (Flanged)<br><input type="checkbox"/> TL (Trimless) | <input type="checkbox"/> WH (White)<br><input type="checkbox"/> BK (Black) | <input type="checkbox"/> WH (White)<br><input type="checkbox"/> BK (Black) | <input type="checkbox"/> BP31- 24" C-channel bar hangers |

**LUTFTB** - up to 2000 lumens

**DIMTR, LUT2W** - 120V only

**LUTH, ELDO10-1, ELDODALI-1, ELDODMX-1** - 120 -277V

**FCL-LED-1000L-DIM10-120-FL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **10.821**

LUMENS: **1134**

CRI: **90**

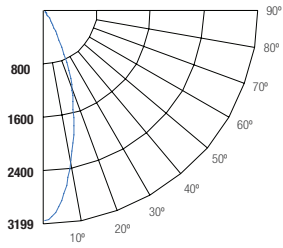
EFFICACY: **105**

CCT: **4000K**

TEST NO.: **EL07021905**

SPACING CRITERIA: **0.60**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 11 fc                       | 10 ft         |
| 8.0               | 2.76 fc                     | 20.1 ft       |
| 12.0              | 1.23 fc                     | 30.1 ft       |
| 16.0              | 0.69 fc                     | 40.1 ft       |
| 20.0              | 0.44 fc                     | 50.2 ft       |
| 24.0              | 0.31 fc                     | 60.2 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 750.44  | 66.20 | 66.20 |
| 0-30 | 1060.99 | 93.50 | 93.50 |
| 0-40 | 1121.69 | 98.90 | 98.90 |
| 0-60 | 1132.21 | 99.80 | 99.80 |
| 0-80 | 1133.25 | 99.90 | 99.90 |
| 0-90 | 1133.26 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 61         | 57          | 56          |
| 55               | 24         | 23          | 23          |
| 65               | 11         | 10          | 10          |
| 75               | 1          | 1           | 1           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 263.57 |
| 10-20 | 486.87 |
| 20-30 | 310.55 |
| 30-40 | 60.71  |
| 40-50 | 7.68   |
| 50-60 | 2.84   |
| 60-70 | 0.97   |
| 70-80 | 0.07   |
| 80-90 | 0.01   |

**Candela Tabulation**

| 0  | 0       |
|----|---------|
| 0  | 3186.93 |
| 5  | 2983.65 |
| 15 | 1778.55 |
| 25 | 678.92  |
| 35 | 76.53   |
| 45 | 9.32    |
| 55 | 3.04    |
| 65 | 1.00    |
| 75 | 0.03    |
| 85 | 0.01    |
| 90 | 0.01    |

**Coefficients of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20

|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     | 10% |     |     | 0% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |    |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |
|                   | 1  | 115 | 112 | 110 | 108 | 112 | 110 | 108 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  |    |
|                   | 2  | 110 | 106 | 103 | 100 | 108 | 105 | 102 | 99  | 102 | 99  | 97  | 99  | 97  | 95  | 96  | 94  | 93  | 92  |    |
|                   | 3  | 106 | 101 | 97  | 94  | 104 | 100 | 96  | 93  | 97  | 94  | 92  | 95  | 92  | 90  | 93  | 91  | 89  | 88  |    |
|                   | 4  | 102 | 96  | 92  | 89  | 101 | 95  | 91  | 88  | 93  | 90  | 87  | 91  | 88  | 86  | 90  | 87  | 85  | 84  |    |
|                   | 5  | 99  | 92  | 88  | 84  | 97  | 91  | 87  | 84  | 90  | 86  | 83  | 88  | 85  | 82  | 87  | 84  | 82  | 80  |    |
|                   | 6  | 95  | 88  | 84  | 80  | 94  | 88  | 83  | 80  | 86  | 82  | 79  | 85  | 81  | 79  | 84  | 81  | 78  | 77  |    |
|                   | 7  | 92  | 85  | 80  | 77  | 91  | 84  | 80  | 76  | 83  | 79  | 76  | 82  | 78  | 76  | 81  | 78  | 75  | 74  |    |
|                   | 8  | 89  | 81  | 77  | 73  | 88  | 81  | 76  | 73  | 80  | 76  | 73  | 79  | 75  | 73  | 78  | 75  | 72  | 71  |    |
|                   | 9  | 86  | 78  | 74  | 71  | 85  | 78  | 73  | 70  | 77  | 73  | 70  | 76  | 73  | 70  | 75  | 72  | 70  | 69  |    |
| 10                | 83 | 75  | 71  | 68  | 82  | 75  | 71  | 68  | 74  | 70  | 68  | 74  | 70  | 67  | 73  | 70  | 67  | 66  |     |    |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-1000L-DIM10-120-NFL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **10.784**

LUMENS: **1037**

CRI: **90**

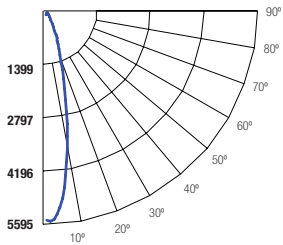
EFFICACY: **96**

CCT: **4000K**

TEST NO.: **EL07161951**

SPACING CRITERIA: **0.40**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 19.3 fc                     | 6.6 ft        |
| 8.0               | 4.81 fc                     | 13.1 ft       |
| 12.0              | 2.14 fc                     | 19.7 ft       |
| 16.0              | 1.2 fc                      | 26.2 ft       |
| 20.0              | 0.77 fc                     | 32.8 ft       |
| 24.0              | 0.53 fc                     | 39.3 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 857.35  | 82.70 | 82.70 |
| 0-30 | 1018.82 | 98.20 | 98.20 |
| 0-40 | 1030.00 | 99.30 | 99.30 |
| 0-60 | 1035.53 | 99.80 | 99.80 |
| 0-80 | 1036.22 | 99.90 | 99.90 |
| 0-90 | 1036.23 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 24         | 22          | 23          |
| 55               | 11         | 10          | 11          |
| 65               | 5          | 5           | 5           |
| 75               | 0          | 0           | 0           |
| 85               | 0          | 0           | 0           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 396.23 |
| 10-20 | 461.12 |
| 20-30 | 461.47 |
| 30-40 | 11.18  |
| 40-50 | 3.87   |
| 50-60 | 1.67   |
| 60-70 | 0.65   |
| 70-80 | 0.03   |
| 80-90 | 0.01   |

**Candela Tabulation**

| 0  | 0       |
|----|---------|
| 0  | 5564.69 |
| 5  | 4690.87 |
| 15 | 1532.76 |
| 25 | 303.58  |
| 35 | 15.56   |
| 45 | 4.61    |
| 55 | 1.77    |
| 65 | 0.56    |
| 75 | 0.01    |
| 85 | 0.01    |
| 90 | 0.01    |

**Coefficients of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20

|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     | 10% |     |     | 0% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |    |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |
|                   | 1  | 115 | 113 | 111 | 110 | 113 | 111 | 109 | 108 | 107 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99  | 97  |    |
|                   | 2  | 112 | 108 | 105 | 103 | 110 | 106 | 104 | 102 | 103 | 101 | 99  | 100 | 99  | 97  | 98  | 97  | 95  | 94  |    |
|                   | 3  | 108 | 104 | 100 | 98  | 106 | 102 | 99  | 97  | 100 | 97  | 95  | 98  | 96  | 94  | 96  | 94  | 92  | 91  |    |
|                   | 4  | 105 | 100 | 96  | 93  | 99  | 95  | 92  | 89  | 93  | 94  | 92  | 92  | 93  | 91  | 93  | 91  | 89  | 88  |    |
|                   | 5  | 102 | 97  | 93  | 90  | 101 | 96  | 92  | 89  | 94  | 91  | 89  | 93  | 90  | 88  | 91  | 89  | 87  | 86  |    |
|                   | 6  | 99  | 94  | 90  | 87  | 98  | 93  | 89  | 86  | 92  | 88  | 86  | 90  | 87  | 85  | 89  | 87  | 85  | 84  |    |
|                   | 7  | 97  | 91  | 87  | 84  | 96  | 90  | 86  | 84  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 85  | 83  | 82  |    |
|                   | 8  | 94  | 88  | 84  | 81  | 93  | 88  | 84  | 81  | 87  | 83  | 81  | 86  | 83  | 81  | 85  | 82  | 80  | 80  |    |
|                   | 9  | 92  | 86  | 82  | 79  | 91  | 85  | 82  | 79  | 85  | 81  | 79  | 84  | 81  | 79  | 83  | 80  | 78  | 78  |    |
| 10                | 90 | 84  | 80  | 77  | 89  | 83  | 80  | 77  | 82  | 79  | 77  | 82  | 79  | 77  | 81  | 79  | 77  | 76  |     |    |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-1000L-DIM10-120-SP-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **10.7878**

LUMENS: **1113**

CRI: **90**

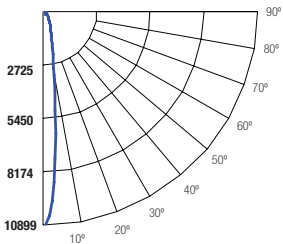
EFFICACY: **103**

CCT: **4000K**

TEST NO.: **EL07151942**

SPACING CRITERIA: **0.26**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 36.8 fc                     | 4.2 ft        |
| 8.0               | 9.21 fc                     | 8.5 ft        |
| 12.0              | 4.09 fc                     | 12.7 ft       |
| 16.0              | 2.3 fc                      | 17 ft         |
| 20.0              | 1.47 fc                     | 21.2 ft       |
| 24.0              | 1.02 fc                     | 25.5 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 948.40  | 85.20 | 85.20 |
| 0-30 | 1098.68 | 98.80 | 98.80 |
| 0-40 | 1107.14 | 99.50 | 99.50 |
| 0-60 | 1111.03 | 99.90 | 99.90 |
| 0-80 | 1111.51 | 99.90 | 99.90 |
| 0-90 | 1111.53 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 18         | 16          | 13          |
| 55               | 8          | 8           | 8           |
| 65               | 3          | 3           | 3           |
| 75               | 0          | 0           | 0           |
| 85               | 1          | 1           | 0           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 559.05 |
| 10-20 | 389.35 |
| 20-30 | 150.28 |
| 30-40 | 8.46   |
| 40-50 | 2.68   |
| 50-60 | 1.21   |
| 60-70 | 0.45   |
| 70-80 | 0.03   |
| 80-90 | 0.02   |

**FCL-LED-1500L-DIM10-120-FL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **14.5985**

LUMENS: **1501**

CRI: **90**

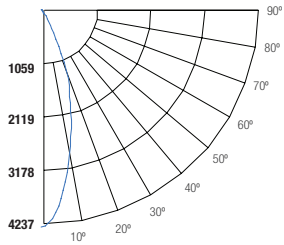
EFFICACY: **103**

CCT: **4000K**

TEST NO.: **EL07021906**

SPACING CRITERIA: **0.60**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 14.6 ft                     | 10 ft         |
| 8.0               | 3.65 ft                     | 20 ft         |
| 12.0              | 1.62 ft                     | 30 ft         |
| 16.0              | 0.91 ft                     | 40.1 ft       |
| 20.0              | 0.58 ft                     | 50.1 ft       |
| 24.0              | 0.41 ft                     | 60.1 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 993.74  | 66.20 | 66.20 |
| 0-30 | 1404.15 | 93.60 | 93.60 |
| 0-40 | 1484.35 | 98.90 | 98.90 |
| 0-60 | 1498.25 | 99.80 | 99.80 |
| 0-80 | 1499.61 | 99.90 | 99.90 |
| 0-90 | 1499.63 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 64         | 59          | 58          |
| 55               | 25         | 24          | 23          |
| 65               | 11         | 11          | 11          |
| 75               | 1          | 1           | 1           |
| 85               | 1          | 1           | 0           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 348.91 |
| 10-20 | 644.84 |
| 20-30 | 410.41 |
| 30-40 | 80.20  |
| 40-50 | 10.15  |
| 50-60 | 3.75   |
| 60-70 | 1.27   |
| 70-80 | 0.09   |
| 80-90 | 0.02   |

**Candela Tabulation**

| Q  |         |
|----|---------|
| 0  | 4222.16 |
| 5  | 3947.66 |
| 15 | 2350.76 |
| 25 | 893.75  |
| 35 | 88.56   |
| 45 | 12.45   |
| 55 | 4.00    |
| 65 | 1.31    |
| 75 | 0.04    |
| 85 | 0.02    |
| 90 | 0.02    |

**Coefficients of Utilization - Zonal Cavity Method**  
Effective Floor Cavity Reflectance 0.20

|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     | 10% |     |     | 0% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |    |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |
|                   | 1  | 115 | 112 | 110 | 108 | 112 | 110 | 108 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  |    |
|                   | 2  | 110 | 106 | 103 | 100 | 108 | 105 | 102 | 99  | 102 | 99  | 97  | 97  | 95  | 95  | 96  | 94  | 93  | 92  |    |
|                   | 3  | 106 | 101 | 97  | 94  | 104 | 100 | 96  | 93  | 97  | 94  | 92  | 95  | 92  | 90  | 93  | 91  | 89  | 88  |    |
|                   | 4  | 102 | 96  | 92  | 89  | 101 | 95  | 91  | 88  | 93  | 90  | 87  | 91  | 88  | 86  | 89  | 86  | 84  | 83  |    |
|                   | 5  | 99  | 92  | 88  | 84  | 97  | 91  | 87  | 84  | 90  | 86  | 83  | 88  | 85  | 82  | 87  | 84  | 82  | 80  |    |
|                   | 6  | 95  | 88  | 84  | 80  | 94  | 88  | 83  | 80  | 86  | 82  | 79  | 85  | 81  | 79  | 84  | 81  | 78  | 77  |    |
|                   | 7  | 92  | 85  | 80  | 77  | 91  | 84  | 80  | 76  | 83  | 79  | 76  | 82  | 78  | 76  | 81  | 78  | 75  | 74  |    |
|                   | 8  | 89  | 81  | 77  | 73  | 88  | 81  | 76  | 73  | 80  | 76  | 73  | 79  | 75  | 73  | 78  | 75  | 72  | 71  |    |
|                   | 9  | 86  | 78  | 74  | 71  | 85  | 78  | 73  | 70  | 77  | 73  | 70  | 76  | 73  | 70  | 76  | 72  | 70  | 69  |    |
| 10                | 83 | 75  | 71  | 68  | 82  | 75  | 71  | 68  | 74  | 70  | 68  | 74  | 70  | 67  | 73  | 70  | 67  | 66  |     |    |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-1500L-DIM10-120-NFL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **14.5543**

LUMENS: **1376**

CRI: **90**

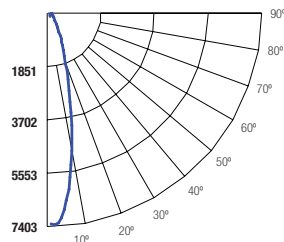
EFFICACY: **95**

CCT: **4000K**

TEST NO.: **EL07151945**

SPACING CRITERIA: **0.40**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 25.5 ft                     | 6.6 ft        |
| 8.0               | 6.38 ft                     | 13.1 ft       |
| 12.0              | 2.84 ft                     | 19.7 ft       |
| 16.0              | 1.59 ft                     | 26.2 ft       |
| 20.0              | 1.02 ft                     | 32.8 ft       |
| 24.0              | 0.71 ft                     | 39.3 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 1136.36 | 82.60 | 82.60 |
| 0-30 | 1351.17 | 98.20 | 98.20 |
| 0-40 | 1366.3  | 99.30 | 99.30 |
| 0-60 | 1373.96 | 99.80 | 99.80 |
| 0-80 | 1374.86 | 99.90 | 99.90 |
| 0-90 | 1374.88 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 36         | 34          | 31          |
| 55               | 15         | 14          | 14          |
| 65               | 6          | 6           | 7           |
| 75               | 0          | 0           | 0           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 525.09 |
| 10-20 | 611.27 |
| 20-30 | 214.81 |
| 30-40 | 15.13  |
| 40-50 | 5.47   |
| 50-60 | 2.19   |
| 60-70 | 0.86   |
| 70-80 | 0.05   |
| 80-90 | 0.02   |

**Candela Tabulation**

| Q  |         |
|----|---------|
| 0  | 7374.32 |
| 5  | 6217.09 |
| 15 | 2034.98 |
| 25 | 405.14  |
| 35 | 21.60   |
| 45 | 7.02    |
| 55 | 2.30    |
| 65 | 0.75    |
| 75 | 0.02    |
| 85 | 0.02    |
| 90 | 0.02    |

**Coefficients of Utilization - Zonal Cavity Method**  
Effective Floor Cavity Reflectance 0.20

|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |  | 0% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |     |  |    |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |  |    |
|                   | 1  | 115 | 113 | 111 | 110 | 113 | 111 | 109 | 108 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99  | 99  | 97  | 97  |  |    |
|                   | 2  | 112 | 108 | 105 | 103 | 110 | 106 | 104 | 102 | 103 | 101 | 99  | 100 | 99  | 97  | 98  | 97  | 95  | 94  |     |  |    |
|                   | 3  | 108 | 104 | 100 | 98  | 106 | 102 | 99  | 97  | 100 | 97  | 95  | 98  | 96  | 94  | 96  | 94  | 92  | 91  |     |  |    |
|                   | 4  | 105 | 100 | 96  | 93  | 104 | 99  | 95  | 93  | 97  | 94  | 92  | 95  | 93  | 91  | 93  | 91  | 89  | 87  |     |  |    |
|                   | 5  | 102 | 97  | 93  | 90  | 101 | 96  | 92  | 89  | 94  | 91  | 89  | 93  | 91  | 89  | 91  | 89  | 87  | 86  |     |  |    |
|                   | 6  | 99  | 93  | 89  | 87  | 98  | 93  | 89  | 86  | 91  | 88  | 86  | 90  | 87  | 85  | 89  | 87  | 85  | 84  |     |  |    |
|                   | 7  | 97  | 91  | 87  | 84  | 96  | 90  | 86  | 84  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 84  | 83  | 82  |     |  |    |
|                   | 8  | 94  | 88  | 84  | 81  | 93  | 88  | 84  | 81  | 87  | 83  | 81  | 86  | 83  | 81  | 85  | 82  | 80  | 79  |     |  |    |
|                   | 9  | 92  | 86  | 82  | 79  | 91  | 85  | 82  | 79  | 85  | 81  | 79  | 84  | 81  | 79  | 83  | 80  | 78  | 78  |     |  |    |
| 10                | 90 | 83  | 80  | 77  | 89  | 83  | 79  | 77  | 82  | 79  | 77  | 82  | 79  | 77  | 81  | 78  | 77  | 76  |     |     |  |    |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-1500L-DIM10-120-SP-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **14.5368**

LUMENS: **1460**

CRI: **90**

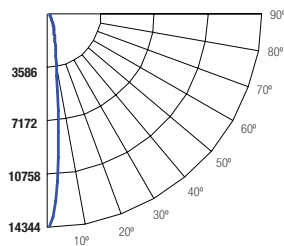
EFFICACY: **100**

CCT: **4000K**

TEST NO.: **EL07151944**

SPACING CRITERIA: **0.26**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 48.3 ft                     | 4.2 ft        |
| 8.0               | 12.1 ft                     | 8.5 ft        |
| 12.0              | 5.36 ft                     | 12.7 ft       |
| 16.0              | 3.02 ft                     | 16.9 ft       |
| 20.0              | 1.93 ft                     | 21.2 ft       |
| 24.0              | 1.34 ft                     | 25.4 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 1244.24 | 85.20 | 85.20 |
| 0-30 | 1441.84 | 98.80 | 98.80 |
| 0-40 | 1452.98 | 99.50 | 99.50 |
| 0-60 | 1458.02 | 99.90 | 99.90 |
| 0-80 | 1458.65 | 99.90 | 99.90 |
| 0-90 | 1458.67 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 21         | 20          | 16          |
| 55               | 11         | 11          | 11          |
| 65               | 4          | 4           | 4           |
| 75               | 0          | 0           | 0           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 731.44 |
| 10-20 | 512.80 |
| 20-30 | 197.60 |
| 30-40 | 11.14  |
| 40-50 | 3.44   |
| 50-60 | 1.60   |
| 60-70 | 0.60   |
| 70-80 | 0.04   |
| 80-90 | 0.02   |

**FCL-LED-2000L-DIM10-120-FL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **21.1845**

LUMENS: **2124**

CRI: **90**

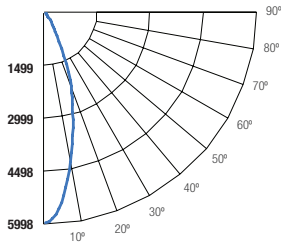
EFFICACY: **100**

CCT: **4000K**

TEST NO.: **EL07021908**

SPACING CRITERIA: **0.60**

**Candle Power Distribution (Candelas)**



| Cone of Light                           |                             |               |
|-----------------------------------------|-----------------------------|---------------|
| 4.0                                     | 20.7 fc                     | 10 ft         |
| 8.0                                     | 5.17 fc                     | 20.1 ft       |
| 12.0                                    | 2.3 fc                      | 30.1 ft       |
| 16.0                                    | 1.29 fc                     | 40.1 ft       |
| 20.0                                    | 0.83 fc                     | 50.2 ft       |
| 24.0                                    | 0.57 fc                     | 60.2 ft       |
| Distance to Plane                       | Initial Footcandle at Nadir | Beam diameter |
| BEAM DIA. MEASURED AT 50% OF NADIR F.C. |                             |               |

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 1406.57 | 66.20 | 66.20 |
| 0-30 | 1988.3  | 93.60 | 93.60 |
| 0-40 | 2100.61 | 98.90 | 98.90 |
| 0-60 | 2120.27 | 99.80 | 99.80 |
| 0-80 | 2122.18 | 99.90 | 99.90 |
| 0-90 | 2122.2  | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 89         | 84          | 82          |
| 55               | 36         | 34          | 33          |
| 65               | 16         | 15          | 15          |
| 75               | 1          | 1           | 1           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 493.90 |
| 10-20 | 912.67 |
| 20-30 | 581.73 |
| 30-40 | 112.31 |
| 40-50 | 14.38  |
| 50-60 | 5.28   |
| 60-70 | 1.79   |
| 70-80 | 0.12   |
| 80-90 | 0.02   |

**Candela Tabulation**

| 0       | 0  |
|---------|----|
| 5978.68 | 5  |
| 5589.50 | 15 |
| 3334.92 | 25 |
| 1285.76 | 35 |
| 140.45  | 45 |
| 17.36   | 55 |
| 5.66    | 65 |
| 1.84    | 75 |
| 0.05    | 85 |
| 0.02    | 90 |
| 0.02    |    |

**Coefficients of Utilization - Zonal Cavity Method**  
Effective Floor Cavity Reflectance 0.20

| RC                |    | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |     | 0%  |     |     |     |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RW                |    | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% |     | 50% | 30% | 10% |     | 50% | 30% | 10% |     | 50% | 30% | 10% | 0%  |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
|                   | 1  | 115 | 112 | 110 | 108 | 112 | 110 | 108 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  | 95  | 94  | 93  | 92  | 91  | 90  |
|                   | 2  | 110 | 106 | 103 | 100 | 108 | 105 | 102 | 99  | 102 | 99  | 97  | 95  | 92  | 90  | 88  | 85  | 82  | 80  | 78  | 75  | 72  | 71  | 70  | 69  |
|                   | 3  | 106 | 101 | 97  | 94  | 104 | 100 | 96  | 93  | 97  | 94  | 92  | 89  | 86  | 84  | 82  | 80  | 78  | 76  | 74  | 72  | 70  | 68  | 67  | 66  |
|                   | 4  | 102 | 96  | 92  | 89  | 101 | 95  | 91  | 88  | 93  | 90  | 87  | 84  | 81  | 79  | 77  | 75  | 73  | 71  | 69  | 67  | 65  | 63  | 61  | 60  |
|                   | 5  | 99  | 92  | 88  | 84  | 97  | 91  | 87  | 84  | 90  | 86  | 83  | 80  | 77  | 75  | 73  | 71  | 69  | 67  | 65  | 63  | 61  | 59  | 57  | 56  |
|                   | 6  | 95  | 88  | 84  | 80  | 94  | 88  | 83  | 80  | 86  | 82  | 79  | 76  | 73  | 71  | 69  | 67  | 65  | 63  | 61  | 59  | 57  | 55  | 53  | 52  |
|                   | 7  | 92  | 85  | 80  | 77  | 91  | 84  | 80  | 76  | 83  | 79  | 76  | 73  | 70  | 68  | 66  | 64  | 62  | 60  | 58  | 56  | 54  | 52  | 50  | 49  |
|                   | 8  | 89  | 81  | 77  | 73  | 88  | 81  | 76  | 73  | 80  | 76  | 73  | 70  | 67  | 65  | 63  | 61  | 59  | 57  | 55  | 53  | 51  | 49  | 47  | 46  |
|                   | 9  | 86  | 78  | 74  | 71  | 85  | 78  | 73  | 70  | 77  | 73  | 70  | 67  | 64  | 62  | 60  | 58  | 56  | 54  | 52  | 50  | 48  | 46  | 44  | 43  |
|                   | 10 | 83  | 75  | 71  | 68  | 82  | 75  | 71  | 68  | 74  | 70  | 68  | 66  | 64  | 62  | 60  | 58  | 56  | 54  | 52  | 50  | 48  | 46  | 44  | 43  |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-2000L-DIM10-120-SP-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **21.3047**

LUMENS: **2116**

CRI: **90**

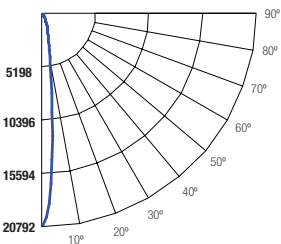
EFFICACY: **99**

CCT: **4000K**

TEST NO.: **EL07151941**

SPACING CRITERIA: **0.26**

**Candle Power Distribution (Candelas)**



| Cone of Light                           |                             |               |
|-----------------------------------------|-----------------------------|---------------|
| 4.0                                     | 70.3 fc                     | 4.2 ft        |
| 8.0                                     | 17.6 fc                     | 8.5 ft        |
| 12.0                                    | 7.81 fc                     | 12.7 ft       |
| 16.0                                    | 4.4 fc                      | 17 ft         |
| 20.0                                    | 2.81 fc                     | 21.2 ft       |
| 24.0                                    | 1.95 fc                     | 25.4 ft       |
| Distance to Plane                       | Initial Footcandle at Nadir | Beam diameter |
| BEAM DIA. MEASURED AT 50% OF NADIR F.C. |                             |               |

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 1806.21 | 85.30 | 85.30 |
| 0-30 | 2091.00 | 98.80 | 98.80 |
| 0-40 | 2106.72 | 99.50 | 99.50 |
| 0-60 | 2113.64 | 99.90 | 99.90 |
| 0-80 | 2114.53 | 99.90 | 99.90 |
| 0-90 | 2114.55 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 29         | 26          | 23          |
| 55               | 16         | 15          | 15          |
| 65               | 6          | 5           | 6           |
| 75               | 0          | 0           | 0           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 1063.89 |
| 10-20 | 742.32  |
| 20-30 | 284.79  |
| 30-40 | 15.72   |
| 40-50 | 4.66    |
| 50-60 | 2.26    |
| 60-70 | 0.85    |
| 70-80 | 0.05    |
| 80-90 | 0.02    |

**Candela Tabulation**

| 0        | 0  |
|----------|----|
| 20323.92 | 5  |
| 13147.23 | 15 |
| 2324.12  | 25 |
| 506.27   | 35 |
| 18.25    | 45 |
| 5.61     | 55 |
| 2.54     | 65 |
| 0.65     | 75 |
| 0.02     | 85 |
| 0.02     | 90 |
| 0.02     |    |

**Coefficients of Utilization - Zonal Cavity Method**  
Effective Floor Cavity Reflectance 0.20

| RC                |    | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |     | 0%  |     |     |     |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RW                |    | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% |     | 50% | 30% | 10% |     | 50% | 30% | 10% |     | 50% | 30% | 10% | 0%  |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
|                   | 1  | 115 | 114 | 112 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  | 95  | 94  | 93  | 92  |
|                   | 2  | 112 | 109 | 106 | 104 | 110 | 107 | 105 | 103 | 104 | 102 | 101 | 101 | 100 | 99  | 98  | 97  | 96  | 95  | 94  | 93  | 92  | 91  | 90  | 89  |
|                   | 3  | 109 | 105 | 102 | 99  | 107 | 104 | 101 | 98  | 101 | 99  | 97  | 99  | 97  | 96  | 95  | 94  | 93  | 92  | 91  | 90  | 89  | 88  | 87  | 86  |
|                   | 4  | 106 | 102 | 98  | 96  | 105 | 101 | 97  | 95  | 99  | 96  | 94  | 97  | 95  | 93  | 91  | 89  | 87  | 85  | 83  | 81  | 79  | 77  | 75  | 74  |
|                   | 5  | 104 | 99  | 95  | 92  | 103 | 98  | 95  | 92  | 96  | 93  | 91  | 95  | 92  | 90  | 88  | 86  | 84  | 82  | 80  | 78  | 76  | 74  | 72  | 71  |
|                   | 6  | 101 | 96  | 92  | 90  | 100 | 95  | 92  | 89  | 94  | 91  | 89  | 93  | 90  | 88  | 86  | 84  | 82  | 80  | 78  | 76  | 74  | 72  | 70  | 69  |
|                   | 7  | 99  | 94  | 90  | 87  | 98  | 93  | 90  | 87  | 92  | 89  | 87  | 91  | 88  | 86  | 84  | 82  | 80  | 78  | 76  | 74  | 72  | 70  | 68  | 67  |
|                   | 8  | 97  | 91  | 88  | 85  | 96  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 87  | 85  | 83  | 81  | 79  | 77  | 75  | 73  | 71  | 69  | 67  | 66  |
|                   | 9  | 95  | 89  | 86  | 83  | 94  | 89  | 86  | 83  | 88  | 85  | 83  | 88  | 85  | 83  | 81  | 79  | 77  | 75  | 73  | 71  | 69  | 67  | 65  | 64  |
|                   | 10 | 93  | 87  | 84  | 82  | 92  | 87  | 84  | 82  | 87  | 84  | 81  | 86  | 83  | 81  | 79  | 77  | 75  | 73  | 71  | 69  | 67  | 65  | 63  | 62  |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-2000L-DIM10-120-NFL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **21.241**

LUMENS: **1964**

CRI: **90**

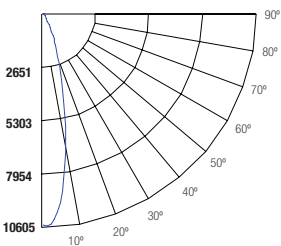
EFFICACY: **92**

CCT: **4000K**

TEST NO.: **EL07161952**

SPACING CRITERIA: **0.40**

**Candle Power Distribution (Candelas)**



| Cone of Light                           |                             |               |
|-----------------------------------------|-----------------------------|---------------|
| 4.0                                     | 36.5 fc                     | 6.6 ft        |
| 8.0                                     | 9.11 fc                     | 13.1 ft       |
| 12.0                                    | 4.05 fc                     | 19.7 ft       |
| 16.0                                    | 2.28 fc                     | 26.2 ft       |
| 20.0                                    | 1.46 fc                     | 32.8 ft       |
| 24.0                                    | 1.01 fc                     | 39.3 ft       |
| Distance to Plane                       | Initial Footcandle at Nadir | Beam diameter |
| BEAM DIA. MEASURED AT 50% OF NADIR F.C. |                             |               |

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 1623.3  | 82.70 | 82.70 |
| 0-30 | 1928.78 | 98.20 | 98.20 |
| 0-40 | 1950.14 | 99.30 | 99.30 |
| 0-60 | 1960.67 | 99.90 | 99.90 |
| 0-80 | 1961.96 | 99.90 | 99.90 |
| 0-90 | 1961.98 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 45         | 42          | 43          |
| 55               | 21         | 20          | 21          |
| 65               | 9          | 9           | 10          |
| 75               | 0          | 0           | 0           |
| 85               | 0          | 0           | 0           |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 750.83 |
| 10-20 | 872.47 |
| 20-30 | 305.49 |
| 30-40 | 21.36  |
| 40-50 | 7.37   |
| 50-60 | 3.16   |
| 60-70 | 1.24   |
| 70-80 | 0.06   |
| 80-90 | 0.01   |

**FCL-LED-3000L-DIM10-120-FL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **31.7618**

LUMENS: **2985**

CRI: **90**

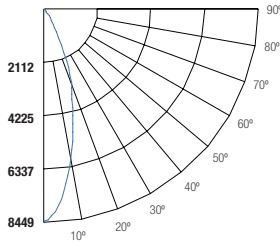
EFFICACY: **94**

CCT: **4000K**

TEST NO.: **EL07021907**

SPACING CRITERIA: **0.58**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 29.1 fc                     | 10 ft         |
| 8.0               | 7.28 fc                     | 20 ft         |
| 12.0              | 3.24 fc                     | 30 ft         |
| 16.0              | 1.82 fc                     | 39.9 ft       |
| 20.0              | 1.16 fc                     | 49.9 ft       |
| 24.0              | 0.81 fc                     | 59.9 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 1975.18 | 66.20 | 66.20 |
| 0-30 | 2794.15 | 93.60 | 93.60 |
| 0-40 | 2952.73 | 98.90 | 98.90 |
| 0-60 | 2980.28 | 99.80 | 99.80 |
| 0-80 | 2982.95 | 99.90 | 99.90 |
| 0-90 | 2982.97 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 125        | 117         | 114         |
| 55               | 50         | 47          | 46          |
| 65               | 22         | 21          | 21          |
| 75               | 1          | 1           | 1           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 694.31  |
| 10-20 | 1280.87 |
| 20-30 | 818.97  |
| 30-40 | 158.58  |
| 40-50 | 20.15   |
| 50-60 | 7.40    |
| 60-70 | 2.50    |
| 70-80 | 0.17    |
| 80-90 | 0.02    |

**Candela Tabulation**

| 0  | 0       |
|----|---------|
| 0  | 8415.85 |
| 5  | 7848.23 |
| 15 | 4666.63 |
| 25 | 1785.49 |
| 35 | 172.67  |
| 45 | 24.31   |
| 55 | 7.88    |
| 65 | 2.57    |
| 75 | 0.07    |
| 85 | 0.02    |
| 90 | 0.02    |

**Coefficients of Utilization - Zonal Cavity Method**  
Effective Floor Cavity Reflectance 0.20

|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |     | 0%  |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
|                   | 1  | 115 | 112 | 110 | 108 | 112 | 110 | 108 | 107 | 106 | 105 | 103 | 99  | 97  | 95  | 96  | 94  | 93  | 92  | 91  | 90  | 89  |
|                   | 2  | 110 | 106 | 103 | 100 | 108 | 105 | 102 | 99  | 102 | 99  | 97  | 95  | 92  | 90  | 89  | 87  | 85  | 84  | 83  | 82  | 81  |
|                   | 3  | 106 | 101 | 97  | 94  | 104 | 100 | 96  | 93  | 97  | 94  | 92  | 91  | 87  | 85  | 86  | 84  | 82  | 80  | 78  | 76  | 75  |
|                   | 4  | 102 | 96  | 92  | 89  | 101 | 95  | 91  | 88  | 93  | 90  | 87  | 87  | 85  | 83  | 83  | 81  | 79  | 77  | 75  | 74  | 73  |
|                   | 5  | 99  | 92  | 88  | 84  | 97  | 91  | 87  | 84  | 90  | 86  | 83  | 83  | 81  | 79  | 84  | 81  | 78  | 75  | 74  | 73  | 72  |
|                   | 6  | 95  | 88  | 84  | 80  | 94  | 88  | 83  | 80  | 86  | 82  | 79  | 85  | 81  | 79  | 84  | 81  | 78  | 75  | 74  | 73  | 72  |
|                   | 7  | 92  | 85  | 80  | 77  | 91  | 84  | 80  | 76  | 83  | 79  | 76  | 82  | 78  | 76  | 81  | 78  | 75  | 74  | 73  | 72  | 71  |
|                   | 8  | 89  | 81  | 77  | 73  | 88  | 81  | 76  | 73  | 80  | 76  | 73  | 79  | 75  | 73  | 78  | 75  | 72  | 71  | 70  | 69  | 68  |
|                   | 9  | 86  | 78  | 74  | 71  | 85  | 78  | 73  | 70  | 77  | 73  | 70  | 76  | 72  | 70  | 76  | 72  | 70  | 68  | 67  | 66  | 65  |
| 10                | 83 | 75  | 71  | 68  | 82  | 75  | 71  | 68  | 74  | 70  | 68  | 74  | 70  | 67  | 73  | 70  | 67  | 65  | 64  | 63  | 62  |     |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-3000L-DIM10-120-SP-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **31.9**

LUMENS: **2979**

CRI: **90**

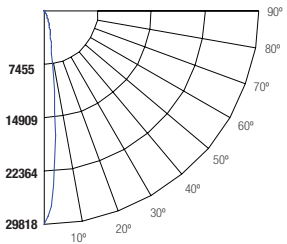
EFFICACY: **93**

CCT: **4000K**

TEST NO.: **EL07151943**

SPACING CRITERIA: **0.26**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 98.7 fc                     | 4.2 ft        |
| 8.0               | 24.7 fc                     | 8.5 ft        |
| 12.0              | 11 fc                       | 12.7 ft       |
| 16.0              | 6.17 fc                     | 17 ft         |
| 20.0              | 3.95 fc                     | 21.2 ft       |
| 24.0              | 2.74 fc                     | 25.5 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 2539.72 | 85.30 | 85.30 |
| 0-30 | 2943.02 | 98.80 | 98.80 |
| 0-40 | 2965.05 | 99.60 | 99.50 |
| 0-60 | 2974.78 | 99.90 | 99.90 |
| 0-80 | 2976.03 | 99.90 | 99.90 |
| 0-90 | 2976.06 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 39         | 36          | 32          |
| 55               | 22         | 22          | 22          |
| 65               | 8          | 8           | 8           |
| 75               | 0          | 0           | 0           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 1498.75 |
| 10-20 | 1040.97 |
| 20-30 | 403.30  |
| 30-40 | 22.03   |
| 40-50 | 6.52    |
| 50-60 | 3.21    |
| 60-70 | 1.19    |
| 70-80 | 0.06    |
| 80-90 | 0.02    |

**Candela Tabulation**

| 0  | 0        |
|----|----------|
| 0  | 28537.15 |
| 5  | 18448.37 |
| 15 | 3265.51  |
| 25 | 720.53   |
| 35 | 25.55    |
| 45 | 7.60     |
| 55 | 3.55     |
| 65 | 0.89     |
| 75 | 0.02     |
| 85 | 0.02     |
| 90 | 0.02     |

**Coefficients of Utilization - Zonal Cavity Method**  
Effective Floor Cavity Reflectance 0.20

| ROOM CAVITY RATIO | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |  |  | 0% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |  |  |    |
|                   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |    |
| 0                 | 1  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |  |  |    |
| 1                 | 2  | 115 | 114 | 112 | 110 | 113 | 111 | 110 | 109 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 99  | 97  |  |  |    |
| 2                 | 3  | 112 | 109 | 106 | 104 | 110 | 107 | 105 | 103 | 104 | 102 | 101 | 101 | 100 | 99  | 99  | 98  | 97  | 95  |  |  |    |
| 3                 | 4  | 109 | 105 | 102 | 99  | 107 | 104 | 101 | 98  | 101 | 99  | 97  | 99  | 97  | 96  | 97  | 95  | 94  | 93  |  |  |    |
| 4                 | 5  | 106 | 102 | 98  | 96  | 105 | 101 | 97  | 95  | 99  | 96  | 94  | 97  | 95  | 93  | 95  | 93  | 92  | 91  |  |  |    |
| 5                 | 6  | 104 | 99  | 95  | 92  | 103 | 98  | 95  | 92  | 96  | 93  | 91  | 95  | 92  | 91  | 93  | 91  | 90  | 89  |  |  |    |
| 6                 | 7  | 101 | 96  | 92  | 90  | 100 | 95  | 92  | 89  | 94  | 91  | 89  | 93  | 90  | 88  | 92  | 90  | 88  | 87  |  |  |    |
| 7                 | 8  | 99  | 94  | 90  | 87  | 98  | 93  | 90  | 87  | 92  | 89  | 87  | 91  | 88  | 86  | 90  | 88  | 86  | 85  |  |  |    |
| 8                 | 9  | 97  | 91  | 88  | 85  | 96  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 87  | 85  | 88  | 86  | 84  | 83  |  |  |    |
| 9                 | 10 | 95  | 89  | 86  | 83  | 94  | 89  | 86  | 83  | 88  | 85  | 83  | 88  | 85  | 83  | 87  | 84  | 83  | 82  |  |  |    |
| 10                |    | 93  | 87  | 84  | 82  | 92  | 87  | 84  | 82  | 87  | 84  | 81  | 86  | 83  | 81  | 85  | 83  | 81  | 80  |  |  |    |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCL-LED-3000L-DIM10-120-NFL-40K-90-F-WH-BK (PER HEAD)**

INPUT WATTS: **32.1**

LUMENS: **2840**

CRI: **90**

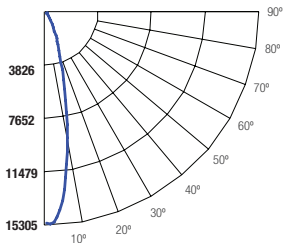
EFFICACY: **88**

CCT: **4000K**

TEST NO.: **EL07161950**

SPACING CRITERIA: **0.40**

**Candle Power Distribution (Candelas)**



| Cone of Light     |                             |               |
|-------------------|-----------------------------|---------------|
| 4.0               | 52.6 fc                     | 6.6 ft        |
| 8.0               | 13.2 fc                     | 13.1 ft       |
| 12.0              | 5.85 fc                     | 19.7 ft       |
| 16.0              | 3.29 fc                     | 26.2 ft       |
| 20.0              | 2.11 fc                     | 32.8 ft       |
| 24.0              | 1.46 fc                     | 39.3 ft       |
| Distance to Plane | Initial Footcandle at Nadir | Beam diameter |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 2345.73 | 82.60 | 82.60 |
| 0-30 | 2789.57 | 98.20 | 98.20 |
| 0-40 | 2820.35 | 99.30 | 99.30 |
| 0-60 | 2835.54 | 99.80 | 99.80 |
| 0-80 | 2837.4  | 99.90 | 99.90 |
| 0-90 | 2837.42 | 99.90 | 99.90 |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 66         | 61          | 62          |
| 55               | 31         | 29          | 30          |
| 65               | 13         | 12          | 15          |
| 75               | 0          | 0           | 0           |
| 85               | 1          | 1           | 1           |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 1084.8  |
| 10-20 | 1260.93 |
| 20-30 | 443.84  |
| 30-40 | 30.78   |
| 40-50 | 10.62   |
| 50-60 | 4.57    |
| 60-70 | 1.78    |
| 70-80 | 0.08    |
| 80-90 | 0.02    |

1- Luminaire will be shipped with Powerpacks pre-installed, ready to be integrated to designated control systems

2- Luminaire will be shipped with Sensors installed on the luminaire, allowing for individual luminaire control. Luminaires will be ready to be integrated with designated control systems

3- Luminaire will be shipped with Sensors to be remotely installed on the ceiling. Luminaires will be ready to be integrated with designated control systems

| BRAND                                          | EASYFIT<br>by EnOcean                                                                                                                                        | LUTRON                                                                                                                                                                                        | enlighted                                                                                                                                                                                                                                                                                                                                                                                                                     | LEVITON                                                                                                                                                        | OSRAM                                                                                                                                                                                                                                                                                                 | PHILIPS<br>EasySense                                                           | legrand®                                                                                                                  |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| CONTROL UNIT                                   | <input type="checkbox"/> LEDRU<br>LED Relay Zone<br>Controller 0-10V <sup>1</sup>                                                                            | <input type="checkbox"/> FCJS-010<br>Lutron Vive 0-10V Individual<br>Pow Pak (Luminaire is<br>shipped Vive Enabled) <sup>1,4</sup>                                                            | <input type="checkbox"/> CU-4E-FMH<br>Fixture Mount Control<br>Unit <sup>1,5</sup>                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/> ZL027 -NOW<br>Intellect Power Control<br>Module <sup>1,6</sup>                                                                        | <input type="checkbox"/> EN-WCM2-ZB-DR<br>Wireless Control Module <sup>1,7</sup>                                                                                                                                                                                                                      | <input type="checkbox"/> SBR -BS<br>Xitanium SR<br>Bridge <sup>1,8</sup>       | <input type="checkbox"/> LMFC-011<br>ON/OFF/0-10V dimming<br>fixture controller <sup>1,9</sup>                            |
|                                                | <input type="checkbox"/> LEDDU<br>LED Zone Controller<br>0-10V <sup>1</sup>                                                                                  | <input type="checkbox"/> FCJS-ECO<br>Lutron Vive Eco-system Pow<br>Pak (Luminaire is shipped Vive<br>Enabled) <sup>1,4</sup>                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> ZL027 -NOW<br>Intellect Power Control<br>Module <sup>1,6</sup>                                                                        | <input type="checkbox"/> EN- ALC-ZB-BK-DR<br>Wireless Area Lighting<br>Control Module <sup>1,7</sup><br><br><input type="checkbox"/> ZBHA-CLM-DIM-ENC<br>Connected Lighting<br>Module DIM <sup>1,7</sup>                                                                                              |                                                                                |                                                                                                                           |
| INTEGRAT<br>SENSOR                             | N/A                                                                                                                                                          | N/A                                                                                                                                                                                           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                           | N/A                                                                                                                                                            | N/A                                                                                                                                                                                                                                                                                                   | N/A                                                                            | N/A                                                                                                                       |
| *WIRELESS<br>OCCUPANCY<br>SENSOR               | <input type="checkbox"/> EOSCU-W-EO<br>Occupancy Sensor<br>- Ceiling Mounted<br>(Must be specified<br>with LEDRU or<br>LEDDU control<br>unit) <sup>3</sup>   | N/A                                                                                                                                                                                           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                           | N/A                                                                                                                                                            | N/A                                                                                                                                                                                                                                                                                                   | N/A                                                                            | <input type="checkbox"/> LMDC-100<br>Dual technology PIR<br>Ceiling Mount Occupancy<br>Sensor <sup>3</sup>                |
| *WIRELESS<br>DAYLIGHT<br>SENSOR                | <input type="checkbox"/> ELLSU-W-EO<br>Light Level Sensor -<br>Ceiling Mounted<br>(Must be specified<br>with LEDRU or<br>LEDDU control<br>unit) <sup>3</sup> | N/A                                                                                                                                                                                           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                           | N/A                                                                                                                                                            | N/A                                                                                                                                                                                                                                                                                                   | N/A                                                                            | <input type="checkbox"/> LMLS-400<br>Single zone switching<br>and dimming digital<br>photosensor <sup>3</sup>             |
| *WIRELESS<br>OCCUPANCY<br>& DAYLIGHT<br>SENSOR | N/A                                                                                                                                                          | N/A                                                                                                                                                                                           | <input type="checkbox"/> SU-5E-IoT<br>IoT Node Micro Sensor <sup>3</sup><br><input type="checkbox"/> SU-5E-CL<br>Connected Lighting<br>Micro Sensor <sup>3</sup><br><input type="checkbox"/> SU-5E-IL<br>Independent Lighting /<br>Enlighted One Micro<br>Sensor <sup>3</sup><br><input type="checkbox"/> SU-5S-H-(IoT/CL/IL)<br>Surface Mount Sensor <sup>3</sup><br><br>(Must be specified with CU-<br>4E-FMH Control Unit) | <input type="checkbox"/> ZL00J -TOW<br>Intellect Intelligent Fixture<br>Control System <sup>3</sup><br><br>(Must be specified with<br>ZL027 -NOW Control Unit) | <input type="checkbox"/> EN-CLM-PIR-DD-ZB<br>SensiLUM™ Wireless<br>Integrated Sensor<br><input type="checkbox"/> EN-SCPPH-1500-ZB<br>Wireless Passive Infrared<br>Occupancy and Photo<br>Sensors <sup>3</sup><br><br>(Must be specified with<br>EN-WCM2-ZB-DR or EN-<br>ALC-ZB-BK-DR Control<br>Unit) | <input type="checkbox"/> SNS200-<br>CMP<br>SNS200 for<br>grouping <sup>3</sup> | N/A                                                                                                                       |
| ACCESSORIES                                    | N/A                                                                                                                                                          | N/A                                                                                                                                                                                           | <input type="checkbox"/> TMC-SU-5E<br>Tile Mount Carrier<br><input type="checkbox"/> CBL-5E-CU4-30N<br>30 inch Sensor Cable for<br>CU-4 and IoT Ready™<br>drivers<br><input type="checkbox"/> CBL-5E-CU4-7F<br>7 foot Sensor Cable for<br>CU-4 and IoT Ready™<br>drivers                                                                                                                                                      | N/A                                                                                                                                                            | N/A                                                                                                                                                                                                                                                                                                   | N/A                                                                            | N/A                                                                                                                       |
| NOTES                                          | N/A                                                                                                                                                          | 4- Luminaire will be compatible with Lutron LRF2-OCR2B-P-WH Ceiling mount 360° occupancy/vacancy sensor & LRF2-DCRB-WH Ceiling-mount daylight sensor. Sensors must be ordered through Lutron. | 5- Luminaire will be compatible with ENLIGHTED SU-5E-IoT, SU-5E-CL, SU-5E-IL, SU-5S-H, Sensors.                                                                                                                                                                                                                                                                                                                               | 6-Luminaire will be compatible with Leviton Intellect App & Keypad Room Controller                                                                             | 7-Luminaire will be compatible with EN-SCPPH-1500-ZB Wireless Passive Infrared Occupancy and Photo Sensors                                                                                                                                                                                            | 8-Luminaire will be compatible with Philips field and wireless switch.         | 9-Luminaire will be compatible with DLM Room control system LMPB-100. DLM control system must be ordered through Legrand. |