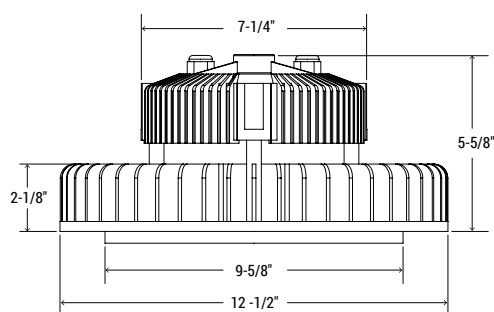




#### DIMENSION:



| NOMINAL LUMENS | DELIVERED LUMENS | WATTAGE |
|----------------|------------------|---------|
| 39000          | 39850            | 302 W   |
| 26000          | 27143            | 202 W   |
| 19000          | 19849            | 150 W   |
| 12000          | 14980            | 100 W   |

Based on 4000K, 85+ CRI. Actual wattage may vary +/- 5%

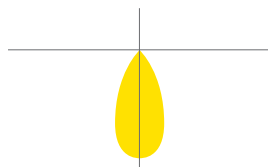
#### FEATURES

The Oracle LED UFO High Bay is a round high bay designed to withstand high temperatures, wet environments, airborne contaminants, and electrical shock. Supplied with both 6-ft. power cord and DIM10 cord. High lumen output and circular form factor leave no dark corners. Built-in hanging hook included for easy installation or optional 3/4" pendant installation. Applications include warehouses, commercial facilities, retail, roadways, campuses, garages with high ceilings, and gymnasiums.

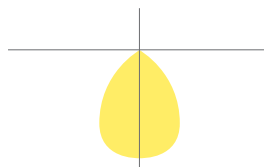
|                     |                                                       |
|---------------------|-------------------------------------------------------|
| LUMENS              | 12000*, 19000 , 26000, 39000                          |
| CCT                 | 30K, 35K, 40K, 50K                                    |
| CRI                 | 85+ Standard                                          |
| COLOR QUALITY       | 3 Step MacAdam Ellipse                                |
| MOUNTING            | Suspended                                             |
| DISTRIBUTION        | Medium( MD), Wide (WD)                                |
| DIMMING             | 0-10V Flicker Free 10% Dimming Standard (DIM10)       |
| EMERGENCY           | 10W - Up to 1000L Output<br>20W - Up to 2000L Output  |
| WORKING TEMPERATURE | -30C to 50C                                           |
| LIFETIME            | L70 at 50,000 Hours                                   |
| PHOTOMETRIC TESTS   | In Accordance with IES LM79-08, LM80 and TM-30, TM-21 |

\*12000L only available in white finish

MD: MEDIUM  
Candlepower Distribution Curve



WD: WIDE  
Candlepower Distribution Curve



#### PERFORMANCE

Efficacy up to 140lm/W, designed to replace 400W metal halide (MH) bulbs while consuming 200W. Increase energy savings with optional bi-level motion sensor.

#### OPTICS

A .16" thick clear tempered glass lens protects LEDs. Reflector and lens options provide maximum versatility and uniformity. Conical, flat, aluminum, prismatic or acrylic clear/frosted drop lenses offer enhanced aesthetics, minimize glare at lower mounting heights when paired with acrylic reflectors.

#### CONSTRUCTION

One-piece, sealed die-cast aluminum housing requires no additional parts. Heat sink included in casting, preventing high bay from heating up during use. Wet location rating serves both indoor and outdoor applications.

#### INSTALLATION

Included: Hook mount, safety cable, 6-ft. power cord, and 0-10V dimming cord. Conduit pendant also possible with optional accessory: pendant/stem mount bracket with 3/4" hub and j-box.

Surge Protection Level: Built-in 5 kV surge protection; class 2 product (shock-resistant).

#### ELECTRICAL

Powered by high-quality constant-current power LED drivers which are rated for 50 to 60Hz at 120/277V input. Available in 347V., produce less than 20% THD, and have a power factor of .90 to 1.00.

#### DIMMING & DRIVER INFORMATION

**DIM10** - Flicker Free 10% Dimming Standard (DIM10) 0-10V dimming on either MVOLT 120, 277V.

#### RATINGS

UL wet location rated  
IP65-rated; completely sealed to protect against water and dirt  
DLC-listed

#### WARRANTY

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

Example: **ORHB1-LED-26000L-MVOLT-40K-WD-BK-ORHB1-ALR-ORHB1-CB**

| ORHB1                                        | LED  |                                                                                                           |                   |                          |                          |                          |                                |                                                                                       |                                                        |  |
|----------------------------------------------|------|-----------------------------------------------------------------------------------------------------------|-------------------|--------------------------|--------------------------|--------------------------|--------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|--|
| SERIES                                       | TYPE | LUMENS                                                                                                    | VOLTAGE           | CCT                      | OPTICS                   | FINISH                   | EMERGENCY                      | REFLECTOR OPTIONS                                                                     | LENS OPTIONS                                           |  |
| ORHB1-Oracle<br>LED Round<br>High Bay Series | LED  | 12000L* - (12000 lumens)<br>19000L - (19000 lumens)<br>26000L - (26000 lumens)<br>39000L - (39000 lumens) | MVOLT<br>277-480V | 30K<br>35K<br>40K<br>50K | WD - WIDE<br>MD - MEDIUM | BK - Black<br>WH - White | O-EMG-LED-10W<br>O-EMG-LED-20W | ORHB1-ALR - Alum. Reflector<br>ORHB1-ARM - Acrylic Milky<br>ORHB1-ARC - Acrylic Clear | ORHB1-CB - Conical Bottom<br>ORHB1-PD - Prismatic Drop |  |
|                                              |      |                                                                                                           |                   |                          |                          |                          |                                | For 90° lens Medium Distribution (MD) - is available with any reflectors              | Lens accessories only for Acrylic reflectors           |  |

\*12000L only available in white finish

#### OPTION/ACCESSORY

**FSP311-B-D** - 0-10V continuous dimming PIR photo/motion sensor with bluetooth control option.  
**PT-A-MSH-C** - Occupancy Sensor with 0-10V Dimming  
**ORBH1-WG** - Wire Guard  
**ORBH1-BRK** - Pendant/Stem mount bracket with 3/4" hub and j-box  
**ORBH-IP67-JBOX** - IP rated J-Box

**REFLECTORS:**



**ORHB1-ALR**  
Aluminum Reflector



**ORHB1-ARM**  
Acrylic Milky Reflector



**ORHB1-ARC**  
Acrylic Clear Reflector

**LENS ACCESSORIES:**



**ORHB1-CB**  
Conical Bottom lens



**ORHB1-PD**  
Prismatic Drop lens

\*ORHB1-CB and ORHB1-PD are not compatible with ORHB1-ALR

**MOUNTING:**



**Hook Mount (included)**  
Hook mount is easy to install and offer one ant-off screw



**6' power cord and 0-10V dimming cord comes installed standard**



**Safety cable (included)**

**ACCESSORY:**



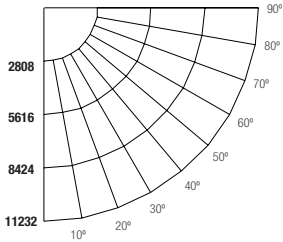
**ORHB1-BRK**  
Pendant/Stem mount bracket with 3/4" hub and j-box

**ORHB1-LED-12000L-MVOLT-50K-WD-WH-ORHB1-ALR**

TEST NO.: **EL08312010**

INPUT WATTS: **100** LUMENS: **13596** CRI: **85** EFFICACY: **135** CCT: **4000K** SPACING CRITERIA: **1.02**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 3770.77  | 27.7  | 27.7  |
| 0-30 | 7152.5   | 52.6  | 52.6  |
| 0-40 | 10486.93 | 77.1  | 77.1  |
| 0-60 | 13507.68 | 99.4  | 99.3  |
| 0-80 | 13589.07 | 99.9  | 99.9  |
| 0-90 | 13590.99 | 100   | 100   |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 5063027    | 5139088     | 5635787     |
| 55               | 1295132    | 1317547     | 1855566     |
| 65               | 168084     | 154865      | 168667      |
| 75               | 63007      | 60468       | 69884       |
| 85               | 12725      | 43517       | 52472       |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 1044.88 |
| 10-20 | 2725.89 |
| 20-30 | 3381.74 |
| 30-40 | 3334.43 |
| 40-50 | 2280.88 |
| 50-60 | 739.87  |
| 60-70 | 64.33   |
| 70-80 | 17.06   |
| 80-90 | 1.92    |

**Candela Tabulation**

| 0 | 1        | 2        | 3       | 4       | 5       | 6      | 7      | 8     | 9     |
|---|----------|----------|---------|---------|---------|--------|--------|-------|-------|
| 0 | 11207.28 | 10975.67 | 9413.46 | 6981.22 | 5112.99 | 2614.7 | 542.54 | 51.88 | 11.91 |
| 5 | 0.81     | 0.06     |         |         |         |        |        |       |       |

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

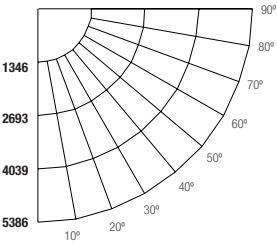
|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |  | 0% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|----|
|                   | 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 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |  |    |
|                   | 1  | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 99  | 100 | 98  | 97  | 96  | 95  | 94  | 92  | 92  |  |    |
|                   | 2  | 106 | 101 | 96  | 92  | 104 | 99  | 95  | 91  | 96  | 92  | 89  | 92  | 90  | 87  | 90  | 87  | 85  | 84  | 84  |  |    |
|                   | 3  | 100 | 92  | 87  | 82  | 98  | 91  | 86  | 81  | 88  | 84  | 80  | 86  | 82  | 79  | 83  | 80  | 78  | 76  | 76  |  |    |
|                   | 4  | 94  | 85  | 79  | 74  | 92  | 84  | 78  | 73  | 81  | 76  | 72  | 79  | 75  | 71  | 77  | 74  | 71  | 69  | 69  |  |    |
|                   | 5  | 88  | 78  | 72  | 67  | 86  | 77  | 71  | 66  | 75  | 70  | 66  | 74  | 69  | 65  | 72  | 68  | 64  | 63  | 63  |  |    |
|                   | 6  | 83  | 72  | 66  | 61  | 81  | 72  | 65  | 60  | 70  | 64  | 60  | 68  | 63  | 60  | 67  | 63  | 59  | 57  | 57  |  |    |
|                   | 7  | 78  | 67  | 60  | 55  | 76  | 66  | 60  | 55  | 65  | 59  | 55  | 64  | 59  | 55  | 63  | 58  | 54  | 53  | 53  |  |    |
|                   | 8  | 73  | 62  | 56  | 51  | 72  | 62  | 55  | 51  | 61  | 55  | 51  | 60  | 54  | 50  | 58  | 54  | 50  | 49  | 49  |  |    |
|                   | 9  | 69  | 58  | 52  | 47  | 68  | 58  | 51  | 47  | 57  | 51  | 47  | 56  | 50  | 47  | 55  | 50  | 46  | 45  | 45  |  |    |
| 10                | 65 | 55  | 48  | 44  | 64  | 54  | 48  | 44  | 53  | 47  | 43  | 52  | 47  | 43  | 52  | 47  | 43  | 42  | 42  |     |  |    |

**ORHB1-LED-12000L-MVOLT-50K-WD-WH-ORHB1-ARC-ORHB1-CB**

TEST NO.: **EL08312010**

INPUT WATTS: **100** LUMENS: **13117** CRI: **85** EFFICACY: **130** CCT: **4000K** SPACING CRITERIA: **1.35**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 1967.07  | 15    | 15    |
| 0-30 | 4222.96  | 32.2  | 32.2  |
| 0-40 | 6848.92  | 52.2  | 52.2  |
| 0-60 | 11047.5  | 84.2  | 84.2  |
| 0-80 | 12426.39 | 94.7  | 94.7  |
| 0-90 | 12563.08 | 95.8  | 95.8  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 6128167    | 5978408     | 6282863     |
| 55               | 4163976    | 4231891     | 4543464     |
| 65               | 2852722    | 2809502     | 3022522     |
| 75               | 1854554    | 1836832     | 2072778     |
| 85               | 1645313    | 1697156     | 1942390     |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 496.22  |
| 10-20 | 1470.85 |
| 20-30 | 2255.89 |
| 30-40 | 2625.96 |
| 40-50 | 2489.76 |
| 50-60 | 1708.82 |
| 60-70 | 940.49  |
| 70-80 | 438.4   |
| 80-90 | 136.69  |

**Candela Tabulation**

| 0 | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8      | 9      |
|---|---------|---------|---------|---------|---------|---------|---------|--------|--------|
| 0 | 5230.53 | 5149.83 | 5197.92 | 4897.96 | 4075.45 | 3164.77 | 1744.32 | 880.51 | 350.56 |
| 5 | 104.73  | 49.47   |         |         |         |         |         |        |        |

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

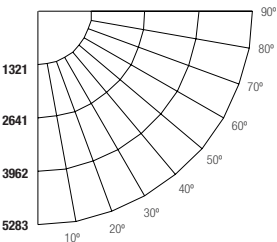
|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     | 10% |     |     | 0%  |     |    |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                   | 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  | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 103 | 103 | 103 | 98  | 98  | 98  | 98  | 96  |     |    |
|                   | 1  | 109 | 105 | 101 | 98  | 106 | 102 | 99  | 96  | 98  | 95  | 92  | 93  | 91  | 89  | 89  | 87  | 85  | 83  | 83  |     |    |
|                   | 2  | 101 | 93  | 87  | 82  | 98  | 91  | 86  | 81  | 87  | 82  | 78  | 83  | 79  | 76  | 80  | 77  | 74  | 72  | 72  |     |    |
|                   | 3  | 92  | 83  | 76  | 70  | 90  | 81  | 74  | 69  | 78  | 72  | 67  | 75  | 70  | 66  | 72  | 68  | 64  | 62  | 62  |     |    |
|                   | 4  | 85  | 74  | 66  | 60  | 83  | 73  | 65  | 60  | 70  | 63  | 58  | 67  | 62  | 57  | 65  | 60  | 56  | 54  | 54  |     |    |
|                   | 5  | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 63  | 56  | 51  | 61  | 55  | 50  | 59  | 54  | 49  | 47  | 47  |     |    |
|                   | 6  | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  | 57  | 51  | 45  | 55  | 49  | 45  | 53  | 48  | 44  | 42  | 42  |     |    |
|                   | 7  | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  | 52  | 46  | 40  | 51  | 45  | 40  | 49  | 44  | 39  | 37  | 37  |     |    |
|                   | 8  | 63  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 48  | 41  | 36  | 46  | 40  | 36  | 45  | 40  | 36  | 34  | 34  |     |    |
|                   | 9  | 59  | 47  | 39  | 34  | 58  | 46  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 42  | 36  | 32  | 30  | 30  |     |    |
| 10                | 56 | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 39  | 33  | 29  | 28  | 28  |     |     |    |

**ORHB1-LED-12000L-MVOLT-50K-WD-WH-ORHB1-ARC-ORHB1-PD**

TEST NO.: **EL08312010**

INPUT WATTS: **100** LUMENS: **13198** CRI: **85** EFFICACY: **110** CCT: **4000K** SPACING CRITERIA: **1.44**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 1901.03  | 14.4  | 14.4  |
| 0-30 | 4181.3   | 31.7  | 31.7  |
| 0-40 | 6950.99  | 52.7  | 52.7  |
| 0-60 | 11514.17 | 87.2  | 87.2  |
| 0-80 | 12568.18 | 95.2  | 95.2  |
| 0-90 | 12707.9  | 96.3  | 96.3  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 6679296    | 6806768     | 7310689     |
| 55               | 4261922    | 4233204     | 4716867     |
| 65               | 2147471    | 2079402     | 2214828     |
| 75               | 1301986    | 1328861     | 1476142     |
| 85               | 1769579    | 1887562     | 2098233     |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 488.91  |
| 10-20 | 1412.12 |
| 20-30 | 2280.28 |
| 30-40 | 2769.68 |
| 40-50 | 2778.14 |
| 50-60 | 1785.05 |
| 60-70 | 742.75  |
| 70-80 | 311.26  |
| 80-90 | 139.73  |

**Candela Tabulation**

| 0 | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8      | 9      |
|---|---------|---------|---------|---------|---------|---------|---------|--------|--------|
| 0 | 5009.41 | 5117.55 | 4887.29 | 4776.62 | 4225.09 | 3449.39 | 1785.35 | 662.83 | 246.11 |
| 5 | 112.64  | 83.23   |         |         |         |         |         |        |        |

**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  | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 104 | 104 | 104 | 99  | 99  | 99  | 96 |  |  |    |
|                   | 1  | 110 | 106 | 102 | 99  | 107 | 103 | 100 | 97  | 98  | 95  | 93  | 94  | 92  | 90  | 90  | 88  | 86  | 84 |  |  |    |
|                   | 2  | 101 | 94  | 88  | 83  | 98  | 92  | 86  | 82  | 88  | 83  | 79  | 84  | 80  | 77  | 81  | 78  | 75  | 73 |  |  |    |
|                   | 3  | 93  | 84  | 77  | 71  | 90  | 82  | 75  | 70  | 79  | 73  | 68  | 75  | 71  | 67  | 73  | 69  | 65  | 63 |  |  |    |
|                   | 4  | 86  | 75  | 67  | 61  | 83  | 74  | 66  | 61  | 71  | 64  | 59  | 68  | 63  | 58  | 66  | 61  | 57  | 55 |  |  |    |
|                   | 5  | 79  | 68  | 59  | 53  | 77  | 66  | 59  | 53  | 64  | 57  | 52  | 62  | 56  | 51  | 59  | 54  | 50  | 48 |  |  |    |
|                   | 6  | 73  | 61  | 53  | 47  | 71  | 60  | 47  | 42  | 58  | 50  | 45  | 56  | 50  | 45  | 54  | 49  | 45  | 43 |  |  |    |
|                   | 7  | 68  | 56  | 47  | 42  | 66  | 55  | 47  | 42  | 53  | 46  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38 |  |  |    |
|                   | 8  | 64  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 36  | 46  | 40  | 36  | 34 |  |  |    |
|                   | 9  | 59  | 47  | 39  | 34  | 58  | 46  | 39  | 34  | 45  | 38  | 33  | 43  | 37  | 33  | 42  | 37  | 32  | 31 |  |  |    |
| 10                | 56 | 43  | 36  | 31  | 54  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 39  | 34  | 30  | 28  |    |  |  |    |

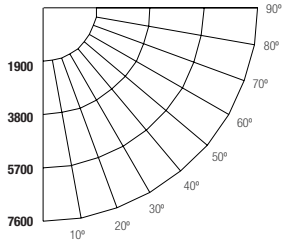


**ORHB1-LED-12000L-MVOLT-50K-WD-WH-ORHB1-ARC**

TEST NO.: **EL08312010**

INPUT WATTS: **100** LUMENS: **14314** CRI: **85** EFFICACY: **142** CCT: **4000K** SPACING CRITERIA: **1.22**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 2687.67  | 18.8  | 18.8  |
| 0-30 | 5518.33  | 38.6  | 38.6  |
| 0-40 | 8623.81  | 60.2  | 60.2  |
| 0-60 | 13220.14 | 92.4  | 92.4  |
| 0-80 | 14122    | 98.7  | 98.7  |
| 0-90 | 14196.88 | 99.2  | 99.2  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 6807871    | 6839008     | 7077046     |
| 55               | 3964839    | 3990836     | 4466908     |
| 65               | 1717867    | 1676850     | 1799381     |
| 75               | 1065088    | 1057841     | 1189939     |
| 85               | 943074     | 986434      | 1076609     |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 711.1   |
| 10-20 | 1976.57 |
| 20-30 | 2830.66 |
| 30-40 | 3105.48 |
| 40-50 | 2846.36 |
| 50-60 | 1749.97 |
| 60-70 | 647.25  |
| 70-80 | 254.61  |
| 80-90 | 74.88   |

**Candela Tabulation**

| Q  |         |
|----|---------|
| 0  | 7589.92 |
| 5  | 7490.28 |
| 15 | 6955.8  |
| 25 | 5988.32 |
| 35 | 4777.53 |
| 45 | 3515.79 |
| 55 | 1660.9  |
| 65 | 530.23  |
| 75 | 201.33  |
| 85 | 60.03   |
| 90 | 31.24   |

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

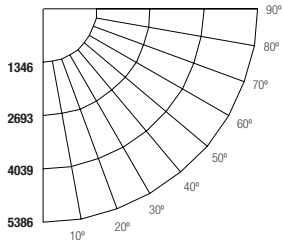
| RC                |    | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |     | 0%  |     |     |    |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| RW                |    | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0% |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99  |     |     |     |     |     |    |
|                   | 1  | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |     |     |     |     |     |    |
|                   | 2  | 103 | 96  | 91  | 86  | 100 | 94  | 89  | 85  | 91  | 87  | 83  | 88  | 84  | 81  | 85  | 82  | 79  | 77  |     |     |     |     |     |    |
|                   | 3  | 95  | 87  | 80  | 74  | 93  | 85  | 79  | 74  | 82  | 77  | 72  | 79  | 75  | 71  | 77  | 73  | 70  | 68  |     |     |     |     |     |    |
|                   | 4  | 88  | 78  | 71  | 65  | 86  | 77  | 70  | 65  | 74  | 68  | 64  | 72  | 67  | 63  | 70  | 66  | 62  | 60  |     |     |     |     |     |    |
|                   | 5  | 82  | 71  | 63  | 57  | 80  | 70  | 63  | 57  | 68  | 61  | 56  | 66  | 60  | 56  | 64  | 59  | 55  | 53  |     |     |     |     |     |    |
|                   | 6  | 76  | 65  | 57  | 51  | 75  | 64  | 56  | 51  | 62  | 55  | 50  | 60  | 54  | 50  | 59  | 54  | 50  | 48  |     |     |     |     |     |    |
|                   | 7  | 71  | 59  | 51  | 46  | 70  | 58  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 43  |     |     |     |     |     |    |
|                   | 8  | 67  | 54  | 47  | 41  | 65  | 54  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 39  |     |     |     |     |     |    |
|                   | 9  | 62  | 50  | 43  | 38  | 61  | 50  | 43  | 38  | 49  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |     |     |     |     |     |    |
|                   | 10 | 59  | 47  | 39  | 35  | 58  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |     |     |     |     |     |    |

**ORHB1-LED-12000L-MVOLT-50K-WD-WH-ORHB1-ARM-ORHB1-CB**

TEST NO.: **EL08312010**

INPUT WATTS: **100** LUMENS: **13182** CRI: **85** EFFICACY: **131** CCT: **4000K** SPACING CRITERIA: **1.28**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 1967.07  | 15    | 15    |
| 0-30 | 4222.96  | 32.2  | 32.2  |
| 0-40 | 6848.92  | 52.2  | 52.2  |
| 0-60 | 11047.5  | 84.2  | 84.2  |
| 0-80 | 12426.39 | 94.7  | 94.7  |
| 0-90 | 12563.08 | 95.8  | 95.8  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 6128167    | 5978408     | 6282863     |
| 55               | 4163976    | 4231891     | 4543464     |
| 65               | 2852722    | 2809502     | 3022522     |
| 75               | 1854554    | 1836832     | 2072778     |
| 85               | 1645313    | 1697156     | 1942390     |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 496.22  |
| 10-20 | 1470.85 |
| 20-30 | 2255.89 |
| 30-40 | 2625.96 |
| 40-50 | 2489.76 |
| 50-60 | 1708.82 |
| 60-70 | 940.49  |
| 70-80 | 438.4   |
| 80-90 | 136.69  |

**Candela Tabulation**

| Q  |         |
|----|---------|
| 0  | 5230.53 |
| 5  | 5149.83 |
| 15 | 5197.92 |
| 25 | 4897.96 |
| 35 | 4075.45 |
| 45 | 3164.77 |
| 55 | 1744.32 |
| 65 | 880.51  |
| 75 | 350.56  |
| 85 | 104.73  |
| 90 | 49.47   |

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

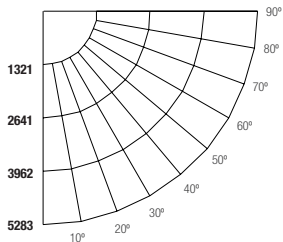
| RC                |    | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |     | 0%  |     |     |    |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| RW                |    | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0% |
| ROOM CAVITY RATIO | 0  | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 103 | 103 | 103 | 98  | 98  | 98  | 96  |     |     |     |     |     |    |
|                   | 1  | 109 | 105 | 101 | 98  | 106 | 102 | 99  | 96  | 98  | 95  | 92  | 93  | 91  | 89  | 89  | 87  | 85  | 83  |     |     |     |     |     |    |
|                   | 2  | 101 | 93  | 87  | 82  | 98  | 91  | 86  | 81  | 87  | 82  | 78  | 83  | 79  | 76  | 76  | 74  | 72  | 72  |     |     |     |     |     |    |
|                   | 3  | 92  | 83  | 76  | 70  | 90  | 81  | 74  | 69  | 78  | 72  | 67  | 75  | 70  | 66  | 72  | 68  | 64  | 62  |     |     |     |     |     |    |
|                   | 4  | 85  | 74  | 66  | 60  | 83  | 73  | 65  | 60  | 70  | 63  | 58  | 67  | 62  | 57  | 65  | 60  | 56  | 54  |     |     |     |     |     |    |
|                   | 5  | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 63  | 56  | 51  | 61  | 55  | 50  | 59  | 54  | 49  | 47  |     |     |     |     |     |    |
|                   | 6  | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  | 57  | 51  | 45  | 55  | 49  | 45  | 53  | 48  | 44  | 42  |     |     |     |     |     |    |
|                   | 7  | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  | 52  | 46  | 40  | 51  | 45  | 40  | 49  | 44  | 39  | 37  |     |     |     |     |     |    |
|                   | 8  | 63  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 36  | 34  |     |     |     |     |     |    |
|                   | 9  | 59  | 47  | 39  | 34  | 58  | 46  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 42  | 36  | 32  | 30  |     |     |     |     |     |    |
|                   | 10 | 56  | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 39  | 33  | 29  | 28  |     |     |     |     |     |    |

**ORHB1-LED-12000L-MVOLT-50K-WD-WH-ORHB1-ARC-ORHB1-PD**

TEST NO.: **EL08312010**

INPUT WATTS: **100** LUMENS: **13198** CRI: **85** EFFICACY: **110** CCT: **4000K** SPACING CRITERIA: **1.44**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 2366.39  | 18    | 18    |
| 0-30 | 4999.36  | 37.9  | 37.9  |
| 0-40 | 7905.86  | 60    | 60    |
| 0-60 | 11495.94 | 87.2  | 87.2  |
| 0-80 | 12313.9  | 93.4  | 93.4  |
| 0-90 | 12468.37 | 94.6  | 94.6  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 5853163    | 5796060     | 5904845     |
| 55               | 2869370    | 2905440     | 3057168     |
| 65               | 1519005    | 1537634     | 1617690     |
| 75               | 1387371    | 1359968     | 1417367     |
| 85               | 2413848    | 2120385     | 1481771     |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 596.14  |
| 10-20 | 1770.26 |
| 20-30 | 2632.97 |
| 30-40 | 2906.5  |
| 40-50 | 2400.61 |
| 50-60 | 1189.47 |
| 60-70 | 514.08  |
| 70-80 | 303.87  |
| 80-90 | 154.47  |

**Candela Tabulation**

| Q  |         |
|----|---------|
| 0  | 6135.33 |
| 5  | 6255.1  |
| 15 | 6232.84 |
| 25 | 5590.04 |
| 35 | 4643.66 |
| 45 | 3022.75 |
| 55 | 1202    |
| 65 | 468.85  |
| 75 | 262.25  |
| 85 | 153.65  |
| 90 | 128.44  |

**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  | 118 | 118 | 118 | 118 | 114 | 114 | 114 | 114 | 108 | 108 | 108 | 102 | 102 | 102 | 97  | 97  | 97  | 97  | 97  | 97  | 95 |  |
|                   | 1  | 110 | 110 | 106 | 102 | 99  | 107 | 103 | 100 | 97  | 98  | 95  | 93  | 93  | 91  | 89  | 89  | 87  | 86  | 84  | 84  | 84 |  |
|                   | 2  | 102 | 95  | 89  | 85  | 99  | 93  | 88  | 83  | 88  | 84  | 81  | 85  | 81  | 78  | 81  | 78  | 76  | 73  | 73  | 73  | 73 |  |
|                   | 3  | 94  | 86  | 79  | 73  | 92  | 84  | 78  | 73  | 80  | 75  | 71  | 77  | 72  | 69  | 74  | 70  | 67  | 65  | 65  | 65  | 65 |  |
|                   | 4  | 88  | 77  | 70  | 64  | 85  | 76  | 69  | 64  | 73  | 67  | 62  | 70  | 65  | 61  | 67  | 63  | 60  | 58  | 58  | 58  | 58 |  |
|                   | 5  | 81  | 70  | 63  | 57  | 79  | 69  | 62  | 56  | 66  | 60  | 55  | 64  | 59  | 54  | 62  | 57  | 53  | 51  | 51  | 51  | 51 |  |
|                   | 6  | 76  | 64  | 57  | 51  | 74  | 63  | 56  | 50  | 61  | 54  | 50  | 58  | 49  | 45  | 53  | 47  | 43  | 42  | 42  | 42  | 42 |  |
|                   | 7  | 71  | 59  | 51  | 46  | 69  | 58  | 51  | 45  | 56  | 49  | 45  | 54  | 48  | 44  | 52  | 47  | 43  | 42  | 42  | 42  | 42 |  |
|                   | 8  | 66  | 54  | 47  | 41  | 64  | 53  | 46  | 41  | 52  | 45  | 41  | 50  | 44  | 40  | 48  | 43  | 39  | 38  | 38  | 38  | 38 |  |
|                   | 9  | 62  | 50  | 43  | 38  | 60  | 49  | 42  | 37  | 48  | 41  | 37  | 46  | 41  | 37  | 45  | 40  | 36  | 34  | 34  | 34  | 34 |  |
| 10                | 58 | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 44  | 38  | 34  | 43  | 37  | 33  | 42  | 37  | 33  | 31  | 31  | 31  | 31  |    |  |

**ORHB1-LED-12000L-MVOLT-50K-WD-WH**

TEST NO.: **EL08312010**

INPUT WATTS: **100**

LUMENS: **14980**

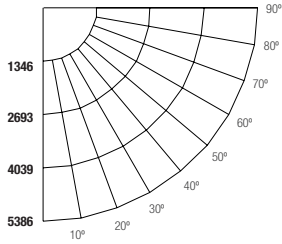
CRI: **85**

EFFICACY: **149**

CCT: **4000K**

SPACING CRITERIA: **1.36**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 1967.07  | 15    | 15    |
| 0-30 | 4222.96  | 32.2  | 32.2  |
| 0-40 | 6848.92  | 52.2  | 52.2  |
| 0-60 | 11047.5  | 84.2  | 84.2  |
| 0-80 | 12426.39 | 94.7  | 94.7  |
| 0-90 | 12563.08 | 95.8  | 95.8  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 6128167    | 5978408     | 6282863     |
| 55               | 4163976    | 4231891     | 4543464     |
| 65               | 2852722    | 2809502     | 3022522     |
| 75               | 1854554    | 1836832     | 2072778     |
| 85               | 1645313    | 1697156     | 1942390     |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 496.22  |
| 10-20 | 1470.85 |
| 20-30 | 2255.89 |
| 30-40 | 2625.96 |
| 40-50 | 2489.76 |
| 50-60 | 1708.82 |
| 60-70 | 940.49  |
| 70-80 | 438.4   |
| 80-90 | 136.69  |

**Candela Tabulation**

| 0       | 0  |
|---------|----|
| 5230.53 | 0  |
| 5149.83 | 5  |
| 5197.92 | 15 |
| 4897.96 | 25 |
| 4075.45 | 35 |
| 3164.77 | 45 |
| 1744.32 | 55 |
| 880.51  | 65 |
| 350.56  | 75 |
| 104.73  | 85 |
| 49.47   | 90 |

**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% | 50% | 30% | 10% |
| ROOM CAVITY RATIO | 0   | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 103 | 103 | 103 | 98  | 98  | 98  | 98  | 98  | 98  | 98  | 98  | 98  |
|                   | 1   | 109 | 105 | 101 | 98  | 106 | 102 | 99  | 96  | 98  | 95  | 92  | 93  | 91  | 89  | 89  | 87  | 85  | 83  | 81  | 79  | 77  | 74  | 72  |
|                   | 2   | 101 | 93  | 87  | 82  | 98  | 91  | 86  | 81  | 87  | 82  | 78  | 83  | 79  | 76  | 80  | 77  | 74  | 72  | 68  | 64  | 62  | 62  | 62  |
|                   | 3   | 92  | 83  | 76  | 70  | 90  | 81  | 74  | 69  | 78  | 72  | 67  | 75  | 70  | 66  | 72  | 68  | 64  | 62  | 60  | 56  | 54  | 54  | 54  |
|                   | 4   | 85  | 74  | 66  | 60  | 83  | 73  | 65  | 60  | 70  | 63  | 58  | 67  | 62  | 57  | 65  | 60  | 56  | 54  | 52  | 49  | 47  | 47  | 47  |
|                   | 5   | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 63  | 56  | 51  | 61  | 55  | 50  | 59  | 54  | 49  | 47  | 45  | 42  | 42  | 42  | 42  |
|                   | 6   | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  | 57  | 51  | 45  | 55  | 49  | 45  | 53  | 48  | 44  | 42  | 40  | 37  | 37  | 37  | 37  |
|                   | 7   | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  | 52  | 46  | 40  | 51  | 45  | 40  | 49  | 44  | 39  | 37  | 35  | 34  | 34  | 34  | 34  |
|                   | 8   | 63  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 48  | 41  | 36  | 47  | 40  | 36  | 45  | 40  | 36  | 34  | 32  | 30  | 30  | 30  | 30  |
|                   | 9   | 59  | 47  | 39  | 34  | 58  | 46  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 42  | 36  | 32  | 30  | 28  | 28  | 28  | 28  | 28  |
|                   | 10  | 56  | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 39  | 33  | 29  | 28  | 26  | 26  | 26  | 26  | 26  |

**ORHB1-LED-19000L-MVOLT-50K-WD-BK**

TEST NO.: **EL08151982**

INPUT WATTS: **151.093**

LUMENS: **20749**

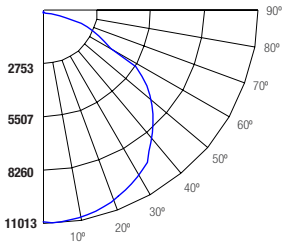
CRI: **85**

EFFICACY: **137**

CCT: **4000K**

SPACING CRITERIA: **1.22**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 3946.07  | 19    | 19    |
| 0-30 | 8148.15  | 39.3  | 39.3  |
| 0-40 | 12808.67 | 61.7  | 61.7  |
| 0-60 | 19599.95 | 94.5  | 94.5  |
| 0-80 | 20734.09 | 99.9  | 99.9  |
| 0-90 | 20734.31 | 99.9  | 99.9  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 33175      | 33564       | 34618       |
| 55               | 22465      | 23251       | 24838       |
| 65               | 9152       | 10014       | 11973       |
| 75               | 305        | 428         | 1041        |
| 85               | 13         | 12          | 11          |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 1037.42 |
| 10-20 | 2908.65 |
| 20-30 | 4202.07 |
| 30-40 | 4660.52 |
| 40-50 | 4081.59 |
| 50-60 | 2709.7  |
| 60-70 | 1043.39 |
| 70-80 | 90.73   |
| 80-90 | 0.24    |

**Candela Tabulation**

| 0        | 0  |
|----------|----|
| 10998.02 | 0  |
| 10925.37 | 5  |
| 10269.62 | 15 |
| 9036.92  | 25 |
| 7319.95  | 35 |
| 5080.28  | 45 |
| 2790.56  | 55 |
| 837.67   | 65 |
| 17.07    | 75 |
| 0.24     | 85 |
| 0.35     | 90 |

**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% | 50% | 30% | 10% |
| 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 |
|                   | 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  | 87  | 85  | 83  | 81  | 79  |
|                   | 2   | 104 | 97  | 92  | 87  | 101 | 95  | 90  | 86  | 92  | 88  | 84  | 89  | 85  | 83  | 86  | 83  | 81  | 79  | 77  | 74  | 71  | 69  | 69  |
|                   | 3   | 96  | 87  | 81  | 76  | 94  | 86  | 80  | 75  | 83  | 78  | 74  | 81  | 76  | 72  | 78  | 74  | 71  | 67  | 63  | 61  | 61  | 61  | 61  |
|                   | 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 66  | 75  | 69  | 65  | 73  | 68  | 64  | 71  | 67  | 63  | 61  | 58  | 56  | 54  | 54  | 54  |
|                   | 5   | 83  | 72  | 64  | 58  | 81  | 71  | 63  | 58  | 69  | 62  | 57  | 67  | 61  | 57  | 65  | 60  | 56  | 54  | 52  | 49  | 47  | 47  | 47  |
|                   | 6   | 77  | 65  | 57  | 52  | 75  | 64  | 57  | 52  | 63  | 56  | 51  | 61  | 55  | 51  | 60  | 54  | 50  | 49  | 46  | 44  | 44  | 44  | 44  |
|                   | 7   | 72  | 60  | 52  | 47  | 70  | 59  | 52  | 46  | 58  | 51  | 46  | 58  | 50  | 46  | 55  | 50  | 45  | 44  | 42  | 40  | 40  | 40  | 40  |
|                   | 8   | 67  | 55  | 47  | 42  | 66  | 54  | 47  | 42  | 53  | 46  | 42  | 52  | 46  | 42  | 51  | 45  | 41  | 40  | 38  | 36  | 36  | 36  | 36  |
|                   | 9   | 63  | 51  | 43  | 38  | 62  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  | 34  | 33  | 33  | 33  | 33  |
|                   | 10  | 59  | 47  | 40  | 35  | 58  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 35  | 44  | 38  | 35  | 33  | 31  | 30  | 30  | 30  | 30  |

**ORHB1-LED-39000L-MVOLT-40K-WD-BK**

TEST NO.: **EL092619170**

INPUT WATTS: **302.215**

LUMENS: **39850**

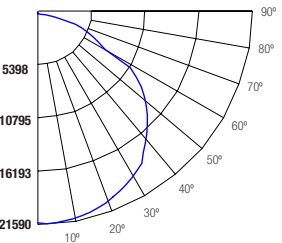
CRI: **85**

EFFICACY: **132**

CCT: **4000K**

SPACING CRITERIA: **1.22**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens   | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 7691.91  | 19.3  | 19.3  |
| 0-30 | 15832.31 | 39.7  | 39.7  |
| 0-40 | 24803.79 | 62.2  | 62.2  |
| 0-60 | 37661.36 | 94.5  | 94.5  |
| 0-80 | 39816.32 | 99.9  | 99.9  |
| 0-90 | 39816.81 | 99.9  | 99.9  |

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

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 513809     | 525000      | 558284      |
| 55               | 337256     | 355058      | 394333      |
| 65               | 135810     | 154352      | 188871      |
| 75               | 5274       | 11759       | 18138       |
| 85               | 201        | 183         | 161         |

**Lumens Per Zone**

| Zone  | Lumens  |
|-------|---------|
| 0-10  | 2027.89 |
| 10-20 | 5664.02 |
| 20-30 | 8140.4  |
| 30-40 | 8971.48 |
| 40-50 | 7777.8  |
| 50-60 | 5079.77 |
| 60-70 | 1966.05 |
| 70-80 | 188.9   |
| 80-90 | 0.5     |

**Candela Tabulation**

| 0        | 0  |
|----------|----|
| 21525.13 | 0  |
| 21329.26 | 5  |
| 19908.71 | 15 |
| 17362.81 | 25 |
| 13938.86 | 35 |
| 9552.48  | 45 |
| 5086.04  | 55 |
| 1509.07  | 65 |
| 35.89    | 75 |
| 0.46     | 85 |
| 0.68     | 90 |

**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 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |  |    |
| 1  | 112               | 108 | 105 | 102 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 90  |  |    |
| 2  | 104               | 97  | 92  | 87  | 87  | 101 | 95  | 91  | 86  | 92  | 88  | 84  | 89  | 86  | 83  | 86  | 83  | 81  | 79  |  |    |
| 3  | 96                | 88  | 81  | 76  | 76  | 94  | 86  | 80  | 75  | 83  | 78  | 74  | 81  | 76  | 73  | 78  | 75  | 71  | 70  |  |    |
| 4  | 89                | 79  | 72  | 66  | 66  | 87  | 78  | 71  | 66  | 76  | 70  | 65  | 73  | 68  | 64  | 71  | 67  | 63  | 61  |  |    |
| 5  | 83                | 72  | 64  | 59  | 59  | 81  | 71  | 64  | 58  | 69  | 62  | 58  | 67  | 61  | 57  | 65  | 60  | 57  | 55  |  |    |
| 6  | 77                | 65  | 58  | 52  | 52  | 75  | 65  | 58  | 52  | 63  | 57  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 51  |  |    |
| 7  | 72                | 60  | 52  | 47  | 47  | 70  | 59  | 52  | 47  | 58  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 44  |  |    |
| 8  | 67                | 55  | 48  | 42  | 42  | 66  | 55  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 40  |  |    |
| 9  | 63                | 51  | 44  | 39  | 39  | 62  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  |  |    |
| 10 | 59                | 47  | 40  | 35  | 35  | 58  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 35  | 44  | 39  | 35  | 33  |  |    |