

PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS \_\_\_\_\_



**IN STOCK**



**ENERGY CHART**

| SIZE | DIAMETER<br>Inches | LUMENS | WATTAGE | EFFICACY<br>lm/w |
|------|--------------------|--------|---------|------------------|
| 6    | 6                  | 1440   | 18      | 80               |
|      |                    | 2160   | 27      | 80               |
|      |                    | 3200   | 40      | 80               |
|      |                    | 4320   | 54      | 80               |
|      |                    | 6400   | 80      | 80               |
| 8    | 8                  | 1440   | 18      | 80               |
|      |                    | 2160   | 27      | 80               |
|      |                    | 3200   | 40      | 80               |
|      |                    | 4320   | 54      | 80               |
|      |                    | 6400   | 80      | 80               |
| 10   | 10                 | 1440   | 18      | 80               |
|      |                    | 2160   | 27      | 80               |
|      |                    | 3200   | 40      | 80               |
|      |                    | 4320   | 54      | 80               |
|      |                    | 6400   | 80      | 80               |

**CDR COMMERCIAL DOWNLIGHT DEEP REGRESS LED**

The CDR series is a COB recessed downlight offering multiple wattage, beam angle, and reflector color options.

- Residential
- Commercial
- Hospitality

**PHYSICAL**

|                  |                                                               |
|------------------|---------------------------------------------------------------|
| Housing Material | Aluminum                                                      |
| Mounting         | Recessed                                                      |
| Trim Finish      | White                                                         |
| CCT              | Single CCT, Field Selectable 3CCT: 3000K, 3500K, 4000K, 5000K |
| CRI              | 80+                                                           |

**PERFORMANCE**

|                |                      |
|----------------|----------------------|
| Warranty       | 5 years              |
| Certifications | CUL, UL, Energy Star |
| Rated Life     | 50,000 hours         |

**ELECTRICAL**

|              |                                   |
|--------------|-----------------------------------|
| Wattage      | 18W, 27W, 40W, 50W, 54W, 65W, 80W |
| Voltage      | 100-277V or 110-347V              |
| Power Factor | >0.9                              |
| Dimmable     | 0-10V                             |

**ORDERING LOGIC**

EX: CDR-6-18-30-10

| FAMILY     | SIZE          | WATTAGE                                        | CCT                                                               | VOLTAGE                         | MOUNTING ACCESSORY OPTIONS |                        |
|------------|---------------|------------------------------------------------|-------------------------------------------------------------------|---------------------------------|----------------------------|------------------------|
| <b>CDR</b> | <b>6</b> 6"   | <b>18</b> 18W                                  | <b>30</b> 3000K                                                   | <b>10</b> 100-277V              | <b>6H</b> 6" Housing       |                        |
|            | <b>8</b> 8"   | <b>27</b> 27W                                  | <b>35</b> 3500K                                                   | <b>11</b> 110-347V <sup>2</sup> | <b>8H</b> 8" Housing       |                        |
|            | <b>10</b> 10" | <b>40</b> 40W                                  | <b>40</b> 4000K                                                   | <b>50</b> 5000K                 |                            | <b>10H</b> 10" Housing |
|            |               | <b>54</b> 54W                                  | <b>50</b> 5000K                                                   |                                 |                            |                        |
|            |               | <b>80</b> 80W                                  | <b>FS3</b> Field Selectable <sup>1</sup><br>3000K / 3500K / 4000K |                                 |                            |                        |
|            |               | <b>FS1</b> Field Selectable<br>18W / 27W / 40W |                                                                   |                                 |                            |                        |
|            |               | <b>FS2</b> Field Selectable<br>50W / 65W / 80W |                                                                   |                                 |                            |                        |

**ORDERING NOTES**

- 1 Not available with 54W, 80W, FS2 wattage options.
- 2 54W wattage option will change to 50W.

**SPECIFICATIONS**

**STRUCTURE**

Spun aluminum reflector integrated with haze finish and white trim ring with shadow free, deeply regressed diffusing lens conceals the LEDs from direct view.

**ELECTRICAL**

LED Driver: Powered by Class 2 high efficiency LED driver, with a standard 1-10V driver which continuous dims to 10% that works with many types of controls. Tested Dimmers: Lutron® Diva-Dvtv, Leviton® IP-710-DL.

THD: <20%

Power Factor: >0.9

Input Voltage: Standard electronic drivers are cULus recognized and available for 100-277V or 110-347V AC.

**OPTIONAL FUNCTION**

Optional low voltage 100-277V emergency LED driver for lighting up to 120 minutes in event of power failure, that meets critical life-safety lighting requirements.

**LED SYSTEM**

CRI: Minimum 80 color rendering index

CCT: 3000K, 3500K, 4000K and 5000K with a great color consistency

LED: Life Minimum 50,000h with 87.8% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.

Thermal Management: Aluminum housing acting as the heat sink to maximize life.

**MOUNTING**

It is provided with spring steel friction clips allowing for installation in a variety of commercial recessed open frame rough-in sections.

**APPROVALS**

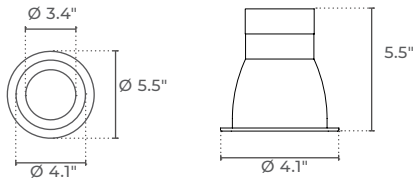
- cULus listed for damp locations
- Energy Star Listed
- Tested to IESNA LM-79 and LM-80

**WARRANTY**

5-year limited warranty on LED and driver.

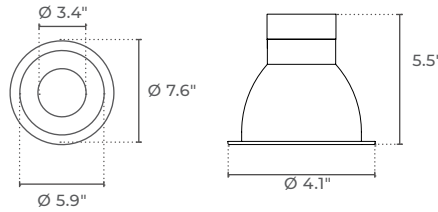
**DIMENSIONS**

6"



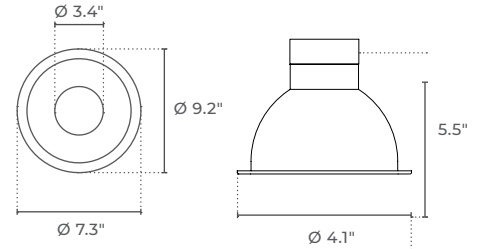
Mounting Diameters: 6"-6.7"

8"



Mounting Diameters: 7.7"-8.4"

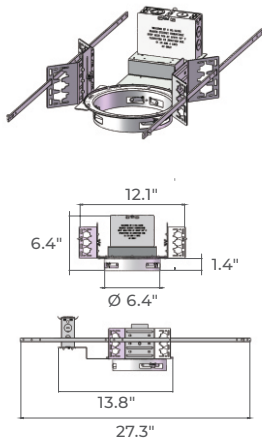
10"



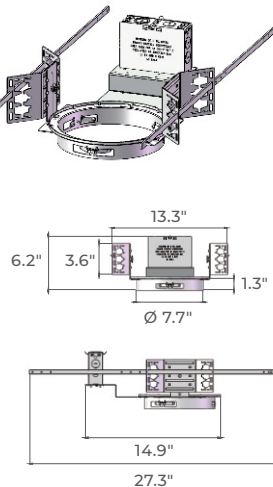
Mounting Diameters: 10"-10.7"

**MOUNTING ACCESSORIES**

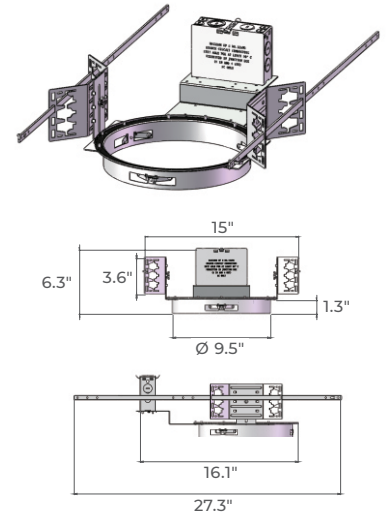
6"



8"



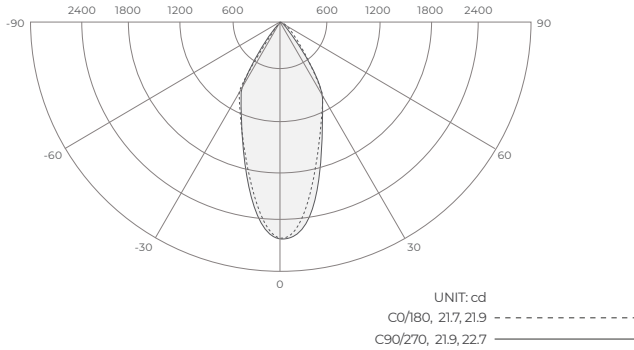
10"



**PHOTOMETRICS - 8"-18W-1584lm**

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

**AVERAGE BEAM ANGLE (50%): 44.1°**

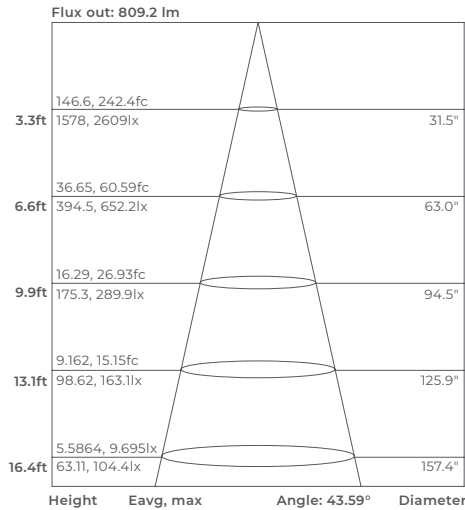


**ZONAL FLUX DIAGRAM**

| T   | C0     | C45    | C90    | C135   | C180   | C225  | C270  | C315  |
|-----|--------|--------|--------|--------|--------|-------|-------|-------|
| 10° | 2070   | 2133   | 2220   | 2134   | 2034   | 2036  | 2100  | 2125  |
| 20° | 1387   | 1414   | 1441   | 1413   | 1383   | 1372  | 1397  | 1399  |
| 30° | 877.5  | 895.9  | 890.6  | 886.3  | 891.3  | 846.0 | 821.9 | 831.0 |
| 40° | 193.5  | 209.9  | 238.0  | 226.1  | 219.1  | 209.8 | 215.7 | 206.7 |
| 50° | 39.22  | 43.94  | 52.91  | 49.93  | 48.69  | 46.36 | 46.76 | 39.83 |
| 60° | 13.01  | 14.78  | 17.95  | 15.89  | 15.62  | 15.75 | 16.34 | 13.34 |
| 70° | 5.343  | 6.119  | 7.261  | 6.352  | 6.104  | 6.266 | 6.507 | 5.457 |
| 80° | 1.969  | 2.286  | 2.690  | 2.434  | 2.309  | 2.310 | 2.313 | 1.985 |
| 90° | 0.0002 | 0.0009 | 0.0032 | 0.0074 | 0.0041 | 0     | 0     | 0     |

LUMINOUS INTENSITY: cd

**Average Illuminance Curve**



**ZONAL LUMEN SUMMARY**

| T     | φ ZONE | φ TOTAL | LUMEN/LAMP percentage |
|-------|--------|---------|-----------------------|
| 0-10  | 223.3  | 223.3   | 13.6,13.6             |
| 10-20 | 479.6  | 702.9   | 42.7,42.7             |
| 20-30 | 528.6  | 1232    | 74.8,74.8             |
| 30-40 | 290.4  | 1522    | 92.5,92.5             |
| 40-50 | 85.04  | 1607    | 97.6,97.6             |
| 50-60 | 24.06  | 1631    | 99.1,99.1             |
| 60-70 | 9.751  | 1641    | 99.7,99.7             |
| 70-80 | 4.278  | 1645    | 99.9,99.9             |
| 80-90 | 0.9728 | 1646    | 100,100               |

UNIT: lm

**NOTE**

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

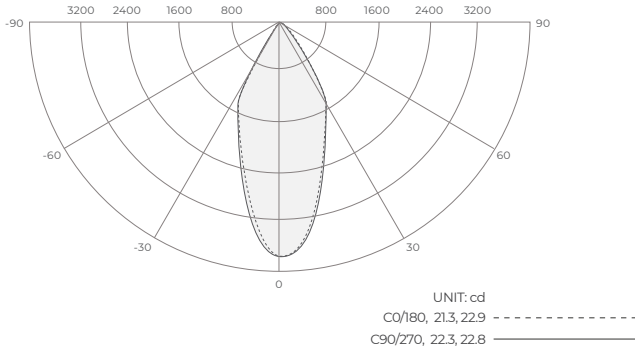
**COEFFICIENTS OF UTILIZATION**

| ppc  | 80%                         |     |     | 70% |     |     | 50% |     |     | 30% |     |     | 10% |     |     | 0  |
|------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|      | 50%                         | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% |    |
| pw   |                             |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 0  |
| pfc  | 20%                         |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 0  |
| RCR  | RCR: Room Cavlty Ratio (CU) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 0.0  | 119                         | 119 | 119 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 00 |
| 1.0  | 111                         | 108 | 106 | 109 | 107 | 105 | 105 | 103 | 101 | 101 | 00  | 98  | 98  | 96  | 96  | 94 |
| 2.0  | 103                         | 99  | 96  | 102 | 98  | 95  | 98  | 96  | 93  | 96  | 93  | 91  | 93  | 91  | 89  | 87 |
| 3.0  | 96                          | 92  | 88  | 95  | 91  | 87  | 93  | 89  | 86  | 90  | 87  | 85  | 88  | 85  | 83  | 82 |
| 4.0  | 90                          | 85  | 81  | 89  | 85  | 81  | 87  | 83  | 80  | 85  | 82  | 79  | 84  | 80  | 78  | 76 |
| 5.0  | 85                          | 80  | 75  | 84  | 79  | 75  | 82  | 78  | 74  | 81  | 77  | 74  | 79  | 76  | 73  | 72 |
| 6.0  | 80                          | 74  | 70  | 79  | 74  | 70  | 78  | 73  | 70  | 77  | 72  | 69  | 75  | 72  | 69  | 67 |
| 7.0  | 75                          | 70  | 66  | 75  | 70  | 66  | 74  | 69  | 65  | 73  | 68  | 65  | 72  | 68  | 65  | 63 |
| 8.0  | 71                          | 66  | 62  | 71  | 66  | 62  | 70  | 65  | 61  | 69  | 65  | 61  | 68  | 64  | 61  | 60 |
| 9.0  | 67                          | 62  | 58  | 67  | 62  | 58  | 66  | 62  | 58  | 66  | 61  | 58  | 65  | 61  | 58  | 56 |
| 10.0 | 64                          | 59  | 55  | 64  | 59  | 55  | 63  | 58  | 55  | 63  | 58  | 55  | 62  | 58  | 55  | 53 |

**PHOTOMETRICS - 8"-27W-2376lm**

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

**AVERAGE BEAM ANGLE (50%): 44.6°**

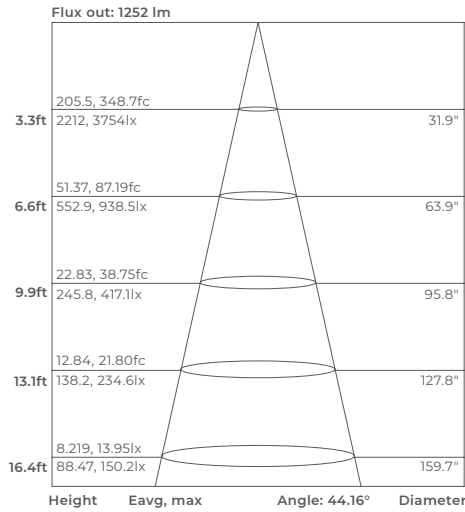


**ZONAL FLUX DIAGRAM**

| T   | C0     | C45    | C90    | C135   | C180  | C225  | C270  | C315  |
|-----|--------|--------|--------|--------|-------|-------|-------|-------|
| 10° | 3075   | 3138   | 3180   | 3033   | 2896  | 2913  | 3044  | 3146  |
| 20° | 2080   | 2099   | 2088   | 2016   | 1958  | 1958  | 2027  | 2072  |
| 30° | 1348   | 1341   | 1274   | 1235   | 1205  | 1193  | 1218  | 1276  |
| 40° | 300.0  | 311.3  | 331.4  | 309.3  | 298.5 | 296.9 | 317.0 | 319.6 |
| 50° | 64.22  | 67.52  | 72.68  | 68.11  | 66.00 | 66.41 | 68.83 | 62.65 |
| 60° | 20.11  | 21.80  | 24.54  | 21.71  | 21.00 | 21.90 | 23.32 | 20.51 |
| 70° | 8.176  | 8.924  | 10.02  | 8.685  | 8.283 | 8.732 | 9.431 | 8.279 |
| 80° | 3.040  | 3.348  | 3.677  | 3.250  | 3.076 | 3.195 | 3.406 | 3.066 |
| 90° | 0.0020 | 0.0021 | 0.0021 | 0.0017 | 0     | 0     | 0     | 0     |

LUMINOUS INTENSITY: cd

**Average Illuminance Curve**



**ZONAL LUMEN SUMMARY**

| T     | φ ZONE | φ TOTAL | LUMEN/LAMP percentage |
|-------|--------|---------|-----------------------|
| 0-10  | 322.7  | 322.7   | 13.5,13.5             |
| 10-20 | 696.5  | 1019    | 42.6,42.6             |
| 20-30 | 768.7  | 1788    | 74.8,74.8             |
| 30-40 | 423.0  | 2211    | 92.5,92.5             |
| 40-50 | 123.0  | 2334    | 97.6,97.6             |
| 50-60 | 34.63  | 2369    | 99.1,99.1             |
| 60-70 | 13.98  | 2382    | 99.7,99.7             |
| 70-80 | 6.112  | 2389    | 99.9,99.9             |
| 80-90 | 1.376  | 2390    | 100,100               |

UNIT: lm

**NOTE**

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

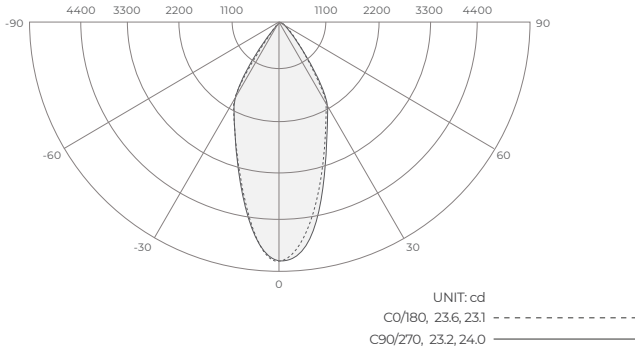
**COEFFICIENTS OF UTILIZATION**

| ppc  | 80%                         |     |     | 70% |     |     | 50% |     |     | 30% |     |     | 10% |     |     | 0  |
|------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| pw   | 50%                         | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0  |
| pfc  | 20%                         |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 0  |
| RCR  | RCR: Room Cavlty Ratio (CU) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 0.0  | 119                         | 119 | 119 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 00 |
| 1.0  | 111                         | 108 | 106 | 109 | 107 | 105 | 105 | 103 | 101 | 101 | 00  | 98  | 98  | 96  | 96  | 94 |
| 2.0  | 103                         | 99  | 96  | 102 | 98  | 95  | 98  | 96  | 93  | 96  | 93  | 91  | 93  | 91  | 89  | 87 |
| 3.0  | 97                          | 92  | 88  | 95  | 91  | 87  | 93  | 89  | 86  | 90  | 87  | 85  | 88  | 85  | 83  | 82 |
| 4.0  | 91                          | 85  | 81  | 89  | 85  | 81  | 87  | 83  | 80  | 85  | 82  | 79  | 84  | 80  | 78  | 76 |
| 5.0  | 85                          | 80  | 75  | 84  | 79  | 75  | 82  | 78  | 74  | 81  | 77  | 74  | 79  | 76  | 73  | 72 |
| 6.0  | 80                          | 74  | 70  | 79  | 74  | 70  | 78  | 73  | 70  | 77  | 72  | 69  | 75  | 72  | 69  | 67 |
| 7.0  | 76                          | 70  | 66  | 75  | 70  | 66  | 74  | 69  | 65  | 73  | 68  | 65  | 72  | 68  | 65  | 63 |
| 8.0  | 72                          | 66  | 62  | 71  | 66  | 62  | 70  | 65  | 61  | 69  | 65  | 61  | 68  | 64  | 61  | 60 |
| 9.0  | 68                          | 62  | 58  | 67  | 62  | 58  | 66  | 62  | 58  | 66  | 61  | 58  | 65  | 61  | 58  | 56 |
| 10.0 | 64                          | 59  | 55  | 64  | 59  | 55  | 63  | 58  | 55  | 63  | 58  | 55  | 62  | 58  | 55  | 53 |

**PHOTOMETRICS - 8"-40W-3400lm**

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

**AVERAGE BEAM ANGLE (50%): 46.9°**

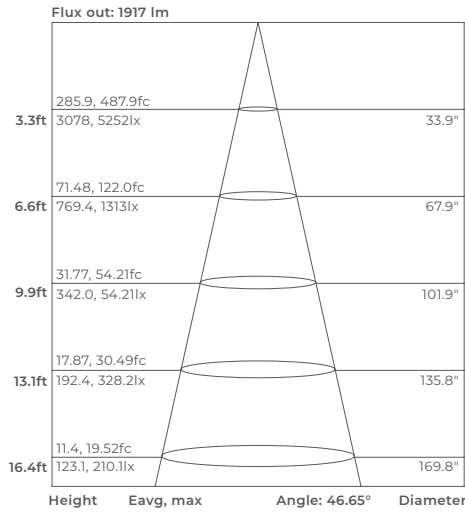


**ZONAL FLUX DIAGRAM**

| T   | C0     | C45    | C90    | C135   | C180   | C225   | C270   | C315   |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|
| 10° | 4207   | 4415   | 4558   | 4486   | 4303   | 4317   | 4343   | 4361   |
| 20° | 2908   | 2989   | 3048   | 3017   | 2951   | 2915   | 2939   | 2924   |
| 30° | 1783   | 1845   | 1841   | 1886   | 1860   | 1768   | 1722   | 1715   |
| 40° | 404.4  | 449.3  | 484.6  | 473.0  | 456.1  | 447.0  | 450.8  | 437.9  |
| 50° | 86.32  | 93.34  | 102.6  | 97.79  | 98.80  | 98.58  | 100.2  | 88.29  |
| 60° | 28.65  | 31.97  | 35.80  | 31.96  | 31.76  | 33.20  | 33.99  | 29.04  |
| 70° | 11.68  | 13.27  | 14.63  | 12.86  | 12.69  | 13.51  | 13.68  | 11.78  |
| 80° | 4.325  | 4.949  | 5.424  | 4.908  | 4.774  | 4.959  | 4.903  | 4.340  |
| 90° | 0.0042 | 0.0048 | 0.0057 | 0.0085 | 0.0064 | 0.0028 | 0.0019 | 0.0025 |

LUMINOUS INTENSITY: cd

**Average Illuminance Curve**



**ZONAL LUMEN SUMMARY**

| T     | φ ZONE | φ TOTAL | LUMEN/LAMP percentage |
|-------|--------|---------|-----------------------|
| 0-10  | 456.9  | 456.9   | 13.2,13.2             |
| 10-20 | 1007   | 1464    | 42.4,42.4             |
| 20-30 | 1112   | 2576    | 74.6,74.6             |
| 30-40 | 618.6  | 3195    | 92.5,92.5             |
| 40-50 | 177.5  | 3372    | 97.6,97.6             |
| 50-60 | 50.50  | 3423    | 99.1,99.1             |
| 60-70 | 20.55  | 3443    | 99.7,99.7             |
| 70-80 | 9.028  | 3452    | 99.9,99.9             |
| 80-90 | 2.048  | 3454    | 100,100               |

UNIT: lm

**NOTE**

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

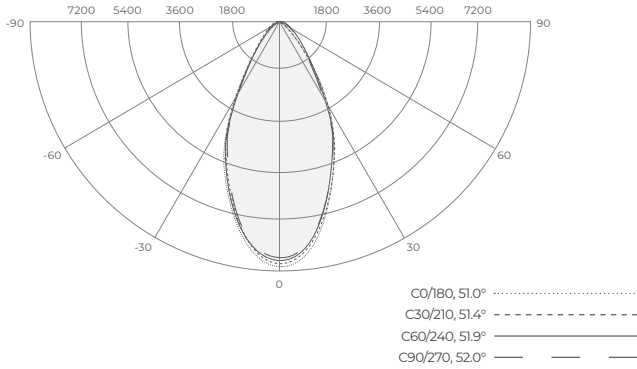
**COEFFICIENTS OF UTILIZATION**

| ppc  | 80%                         |     |     | 70% |     |     | 50% |     |     | 30% |     |     | 10% |     |     | 0  |
|------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|      | 50%                         | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0  |
| pw   |                             |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 0  |
| pfc  | 20%                         |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 0  |
| RCR  | RCR: Room Cavlty Ratio (CU) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 0.0  | 119                         | 119 | 119 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 00 |
| 1.0  | 111                         | 108 | 106 | 109 | 107 | 105 | 105 | 103 | 101 | 101 | 00  | 98  | 98  | 96  | 95  | 94 |
| 2.0  | 103                         | 99  | 96  | 102 | 98  | 95  | 98  | 96  | 93  | 96  | 93  | 91  | 93  | 91  | 89  | 87 |
| 3.0  | 97                          | 92  | 88  | 95  | 91  | 87  | 93  | 89  | 86  | 90  | 87  | 85  | 88  | 85  | 83  | 82 |
| 4.0  | 91                          | 85  | 81  | 89  | 84  | 81  | 87  | 83  | 80  | 85  | 82  | 79  | 83  | 80  | 78  | 76 |
| 5.0  | 85                          | 80  | 75  | 84  | 79  | 75  | 82  | 78  | 74  | 81  | 77  | 74  | 79  | 76  | 73  | 71 |
| 6.0  | 80                          | 74  | 70  | 79  | 74  | 70  | 78  | 73  | 70  | 77  | 72  | 69  | 75  | 71  | 68  | 67 |
| 7.0  | 76                          | 70  | 66  | 75  | 69  | 65  | 74  | 69  | 65  | 73  | 68  | 65  | 71  | 67  | 64  | 63 |
| 8.0  | 72                          | 66  | 62  | 71  | 65  | 62  | 70  | 65  | 61  | 69  | 65  | 61  | 68  | 64  | 61  | 59 |
| 9.0  | 68                          | 62  | 58  | 67  | 62  | 58  | 66  | 62  | 58  | 66  | 61  | 58  | 65  | 60  | 57  | 56 |
| 10.0 | 64                          | 59  | 55  | 64  | 59  | 55  | 63  | 58  | 55  | 63  | 58  | 55  | 62  | 57  | 54  | 53 |

**PHOTOMETRICS - 8"-80W-6800lm**

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

**AVERAGE BEAM ANGLE (50%): 51.6°**

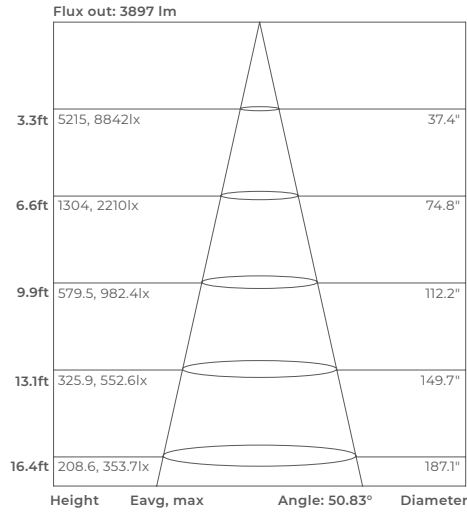


**ZONAL FLUX DIAGRAM**

| T   | C0     | C45    | C90    | C135   | C180   | C225   | C270   | C315   |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|
| 10° | 7872   | 7743   | 7625   | 7552   | 7858   | 7706   | 7709   | 7577   |
| 20° | 5741   | 5648   | 5579   | 5538   | 5777   | 5662   | 5706   | 5565   |
| 30° | 3072   | 3196   | 3154   | 3133   | 3168   | 3217   | 3245   | 3126   |
| 40° | 863.6  | 934.3  | 935.4  | 979.2  | 923.3  | 931.5  | 976.9  | 922.3  |
| 50° | 154.7  | 156.7  | 165.2  | 184.7  | 180.9  | 153.9  | 152.0  | 154.7  |
| 60° | 31.91  | 32.07  | 35.00  | 42.64  | 40.87  | 31.96  | 31.38  | 33.02  |
| 70° | 11.69  | 11.21  | 11.99  | 13.96  | 13.43  | 11.35  | 11.46  | 12.17  |
| 80° | 4.327  | 4.261  | 4.534  | 4.810  | 4.632  | 4.185  | 4.544  | 4.519  |
| 90° | 0.1629 | 0.1966 | 0.1448 | 0.1684 | 0.1504 | 0.1854 | 0.1127 | 0.1762 |

LUMINOUS INTENSITY: cd

**Average Illuminance Curve**



**ZONAL LUMEN SUMMARY**

| T     | φ ZONE | φ TOTAL | LUMEN/LAMP percentage |
|-------|--------|---------|-----------------------|
| 0-10  | 775.2  | 775.2   | 12.3,12.3             |
| 10-20 | 1854   | 2630    | 41.8,41.8             |
| 20-30 | 2027   | 4656    | 74,74                 |
| 30-40 | 1166   | 5823    | 92.6,92.6             |
| 40-50 | 346.1  | 6169    | 98.1,98.1             |
| 50-60 | 71.72  | 6241    | 99.2,99.2             |
| 60-70 | 20.38  | 6261    | 99.2,99.2             |
| 70-80 | 8.342  | 6269    | 99.7,99.7             |
| 80-90 | 1.889  | 6271    | 99.7,99.7             |

UNIT: lm

**NOTE**

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

**COEFFICIENTS OF UTILIZATION**

| ppc  | 80%                         |     |     | 70% |     |     | 50% |     |     | 30% |     |     | 10% |     |     | 0  |
|------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|      | 50%                         | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% |    |
| pw   |                             |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 0  |
| pfc  | 20%                         |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 0  |
| RCR  | RCR: Room Cavity Ratio (CU) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 0.0  | 119                         | 119 | 119 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 00 |
| 1.0  | 111                         | 108 | 106 | 109 | 106 | 105 | 105 | 103 | 101 | 101 | 99  | 98  | 97  | 96  | 95  | 94 |
| 2.0  | 103                         | 99  | 96  | 102 | 98  | 95  | 98  | 95  | 93  | 95  | 93  | 91  | 93  | 91  | 89  | 87 |
| 3.0  | 97                          | 92  | 88  | 95  | 91  | 87  | 93  | 89  | 86  | 90  | 87  | 84  | 88  | 85  | 83  | 81 |
| 4.0  | 90                          | 85  | 81  | 89  | 84  | 80  | 87  | 83  | 80  | 85  | 82  | 79  | 83  | 80  | 78  | 76 |
| 5.0  | 85                          | 79  | 75  | 84  | 79  | 75  | 82  | 78  | 74  | 81  | 77  | 73  | 79  | 75  | 73  | 71 |
| 6.0  | 80                          | 74  | 70  | 79  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 69  | 75  | 71  | 68  | 67 |
| 7.0  | 75                          | 70  | 65  | 75  | 69  | 65  | 73  | 68  | 61  | 72  | 68  | 65  | 71  | 67  | 64  | 63 |
| 8.0  | 71                          | 65  | 61  | 71  | 65  | 61  | 70  | 65  | 61  | 68  | 64  | 61  | 68  | 63  | 60  | 59 |
| 9.0  | 67                          | 62  | 58  | 67  | 61  | 58  | 66  | 61  | 57  | 65  | 61  | 57  | 64  | 60  | 57  | 56 |
| 10.0 | 64                          | 58  | 55  | 64  | 58  | 54  | 63  | 58  | 54  | 62  | 57  | 54  | 61  | 57  | 54  | 53 |

ZONAL LUMEN TABULATION - 8"-54W-4320lm

ZONAL LUMEN SUMMARY

| ZONE   | LUMENS  | % LUMINAIRE |
|--------|---------|-------------|
| 0-30   | 3,230.2 | 72.1%       |
| 0-40   | 4,056.7 | 90.5%       |
| 0-60   | 4,415.3 | 98.5%       |
| 60-90  | 65.1    | 1.5%        |
| 70-100 | 22.8    | 0.5%        |
| 90-120 | 0.0     | 0%          |
| 0-90   | 4,480.4 | 100%        |
| 90-180 | 0.0     | 0%          |
| 0-180  | 4,480.4 | 100%        |

LUMENS PER ZONE

| ZONE  | LUMENS | % TOTAL | ZONE    | LUMENS | % TOTAL |
|-------|--------|---------|---------|--------|---------|
| 0-10  | 536.5  | 12%     | 90-100  | 0.0    | 0%      |
| 10-20 | 1254.1 | 28%     | 100-110 | 0      | 0%      |
| 20-30 | 1439.5 | 32.1%   | 110-120 | 0      | 0%      |
| 30-40 | 826.5  | 18.4%   | 120-130 | 0      | 0%      |
| 40-50 | 265.4  | 5.9%    | 130-140 | 0      | 0%      |
| 50-60 | 93.2   | 2.1%    | 140-150 | 0      | 0%      |
| 60-70 | 42.4   | 0.9%    | 150-160 | 0      | 0%      |
| 70-80 | 18.7   | 0.4%    | 160-170 | 0      | 0%      |
| 80-90 | 4.1    | 0.1%    | 170-180 | 0      | 0%      |