

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : SP-00594 ~ DC03XXSQXT-10LXXK-OSDEX-MWIMW.IES**
**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] SP-00594\_M-10L  
 [TESTLAB] VLS-245-981  
 [MANUFAC] Spectrum Lighting  
 [ISSUE DATE] 7/20/2017  
 [UPDATE] 9/14/2017  
 [LUMCAT] DC03xxSQXT-10L-xxK-OSD-MWI  
 [LUMINAIRE] Nom. 3" Square, LED Decorative Cylinder Downlight  
 [OTHER] Regressed Open Sphere Diffuser  
 [OTHER] Data applicable to 12"H, 18"H, and 24"H Cylinders  
 [OTHER] Matte White interior finish  
 [OTHER] Exterior finish not relevant to optical performance  
 [OTHER] 37.8 Degree Beam Angle  
 [LAMPCAT] N/A, 19mm LES  
 [LAMPCAT] N/A, 83 CRI  
 [OTHER] Total Luminaire Watts is approximate  
 [OTHER] LEDXT lumen output is the same for all available CCT's  
 [OTHER] This report prepared by Spectrum Lighting, scaled from 13L

**CHARACTERISTICS**

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 328             |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 36              |
| Total Luminaire Watts           | 9.1             |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 0.64            |
| Spacing Criterion (90-270)      | 0.66            |
| Spacing Criterion (Diagonal)    | 0.64            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 0.25 ft         |
| Luminous Width (90-270)         | 0.25 ft         |
| Luminous Height                 | 0.00 ft         |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SP-00594 ~ DC03XXSQXT-10LXXK-OSDEX-MWIMW.IES****LUMINANCE DATA (cd/sq.m)**

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 12534            | 12943             | 12206             |
| 55                  | 9056             | 8502              | 9006              |
| 65                  | 6375             | 5712              | 6708              |
| 75                  | 4949             | 4744              | 4729              |
| 85                  | 4930             | 5538              | 5871              |

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**CANDELA TABULATION**

|     | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> | <u>202.5</u> |
|-----|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 0   | 429.047    | 429.047     | 429.047     | 429.047     | 429.047     | 429.047      | 429.047      | 429.047      | 429.047      | 429.047      |
| 5   | 427.356    | 431.486     | 428.701     | 428.968     | 429.078     | 425.183      | 428.101      | 423.741      | 421.175      | 419.520      |
| 10  | 391.436    | 400.243     | 399.308     | 401.928     | 395.730     | 384.543      | 387.116      | 376.462      | 373.597      | 368.979      |
| 15  | 304.104    | 317.240     | 316.337     | 320.406     | 306.651     | 292.861      | 297.219      | 283.948      | 281.033      | 274.089      |
| 20  | 201.868    | 215.544     | 214.083     | 215.910     | 204.027     | 192.991      | 196.966      | 186.782      | 182.646      | 181.227      |
| 25  | 121.463    | 132.647     | 131.487     | 131.308     | 121.877     | 119.664      | 123.488      | 118.502      | 112.907      | 118.136      |
| 30  | 84.783     | 91.731      | 91.152      | 88.922      | 82.275      | 86.633       | 92.468       | 89.407       | 83.763       | 90.948       |
| 35  | 73.811     | 75.913      | 76.884      | 74.825      | 71.865      | 76.277       | 78.207       | 78.247       | 74.265       | 79.794       |
| 40  | 64.544     | 66.379      | 64.187      | 64.628      | 61.666      | 64.075       | 64.406       | 66.313       | 65.283       | 69.079       |
| 45  | 51.508     | 53.984      | 53.189      | 52.210      | 50.163      | 48.754       | 52.948       | 51.854       | 51.134       | 54.471       |
| 50  | 38.714     | 42.224      | 40.027      | 39.587      | 39.222      | 36.871       | 40.406       | 38.379       | 37.881       | 39.921       |
| 55  | 30.190     | 31.523      | 28.342      | 30.171      | 30.023      | 29.010       | 29.567       | 27.956       | 30.751       | 29.819       |
| 60  | 22.469     | 22.881      | 20.948      | 22.480      | 21.856      | 21.303       | 20.588       | 20.292       | 23.100       | 23.207       |
| 65  | 15.658     | 16.115      | 14.029      | 16.239      | 16.476      | 15.024       | 15.341       | 15.432       | 16.224       | 16.072       |
| 70  | 10.905     | 12.354      | 9.961       | 11.074      | 11.651      | 11.356       | 10.591       | 10.293       | 11.141       | 10.694       |
| 75  | 7.445      | 7.108       | 7.136       | 6.266       | 7.114       | 7.083        | 8.186        | 7.799        | 7.802        | 7.687        |
| 80  | 4.633      | 5.044       | 4.476       | 5.711       | 3.920       | 4.594        | 5.182        | 4.907        | 4.716        | 4.539        |
| 85  | 2.497      | 2.293       | 2.805       | 3.094       | 2.974       | 3.555        | 3.322        | 3.490        | 3.076        | 2.756        |
| 90  | 1.823      | 1.376       | 1.768       | 1.806       | 1.538       | 2.024        | 2.024        | 1.934        | 2.126        | 2.509        |
| 95  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 100 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 105 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 110 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 115 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 120 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 125 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 130 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 135 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 140 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 145 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 150 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 155 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 160 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 165 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 170 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 175 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 180 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |

**Vert. Angles**      **Horizontal Angles**

|    | <u>225.0</u> | <u>247.5</u> | <u>270.0</u> | <u>292.5</u> | <u>315.0</u> | <u>337.5</u> | <u>360.0</u> |
|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0  | 429.047      | 429.047      | 429.047      | 429.047      | 429.047      | 429.047      | 429.047      |
| 5  | 423.416      | 419.693      | 422.143      | 425.221      | 427.445      | 427.439      | 427.356      |
| 10 | 374.816      | 367.797      | 371.679      | 386.437      | 389.195      | 393.270      | 391.436      |
| 15 | 284.725      | 277.700      | 278.025      | 301.706      | 300.666      | 308.986      | 304.104      |
| 20 | 189.748      | 184.372      | 182.254      | 204.092      | 204.446      | 208.946      | 201.868      |
| 25 | 124.356      | 122.103      | 117.025      | 131.063      | 131.397      | 131.890      | 121.463      |
| 30 | 97.388       | 95.803       | 89.596       | 96.745       | 96.768       | 95.244       | 84.783       |
| 35 | 83.877       | 82.542       | 78.592       | 83.311       | 84.369       | 82.262       | 73.811       |
| 40 | 70.131       | 70.625       | 68.112       | 71.912       | 71.878       | 70.430       | 64.544       |
| 45 | 57.202       | 57.361       | 53.938       | 58.844       | 57.461       | 56.038       | 51.508       |

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|     |        |        |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|--------|--------|
| 50  | 41.375 | 42.593 | 42.561 | 43.586 | 42.172 | 42.098 | 38.714 |
| 55  | 30.335 | 30.674 | 32.711 | 31.689 | 31.205 | 31.520 | 30.190 |
| 60  | 23.318 | 22.132 | 24.483 | 23.650 | 23.105 | 22.870 | 22.469 |
| 65  | 15.874 | 16.616 | 17.201 | 16.466 | 16.071 | 16.518 | 15.658 |
| 70  | 11.224 | 12.316 | 12.359 | 11.198 | 11.362 | 11.513 | 10.905 |
| 75  | 7.921  | 8.175  | 7.712  | 7.270  | 6.564  | 7.960  | 7.445  |
| 80  | 5.268  | 4.929  | 5.377  | 4.607  | 4.294  | 4.513  | 4.633  |
| 85  | 3.174  | 3.966  | 3.066  | 3.104  | 2.764  | 2.955  | 2.497  |
| 90  | 1.895  | 1.823  | 1.675  | 1.984  | 1.551  | 1.180  | 1.823  |
| 95  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 100 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 105 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 110 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 115 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 120 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 125 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 130 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 135 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 140 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 145 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 150 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 155 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 160 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 165 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 170 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 175 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 180 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |

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| Zone    | Lumens | %Lamp | %Fixt  |
|---------|--------|-------|--------|
| 0-20    | 120.41 | N.A.  | 36.70  |
| 0-30    | 181.44 | N.A.  | 55.30  |
| 0-40    | 230.65 | N.A.  | 70.30  |
| 0-60    | 299.68 | N.A.  | 91.40  |
| 0-80    | 324.07 | N.A.  | 98.80  |
| 0-90    | 327.53 | N.A.  | 99.80  |
| 10-90   | 288.32 | N.A.  | 87.90  |
| 20-40   | 110.24 | N.A.  | 33.60  |
| 20-50   | 151.68 | N.A.  | 46.20  |
| 40-70   | 85.26  | N.A.  | 26.00  |
| 60-80   | 24.38  | N.A.  | 7.40   |
| 70-80   | 8.16   | N.A.  | 2.50   |
| 80-90   | 3.47   | N.A.  | 1.10   |
| 90-110  | 0.50   | N.A.  | 0.20   |
| 90-120  | 0.50   | N.A.  | 0.20   |
| 90-130  | 0.50   | N.A.  | 0.20   |
| 90-150  | 0.50   | N.A.  | 0.20   |
| 90-180  | 0.50   | N.A.  | 0.20   |
| 110-180 | 0.00   | N.A.  | 0.00   |
| 0-180   | 328.03 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 39.22  |
| 10-20   | 81.19  |
| 20-30   | 61.02  |
| 30-40   | 49.21  |
| 40-50   | 41.44  |
| 50-60   | 27.59  |
| 60-70   | 16.22  |
| 70-80   | 8.16   |
| 80-90   | 3.47   |
| 90-100  | 0.50   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |

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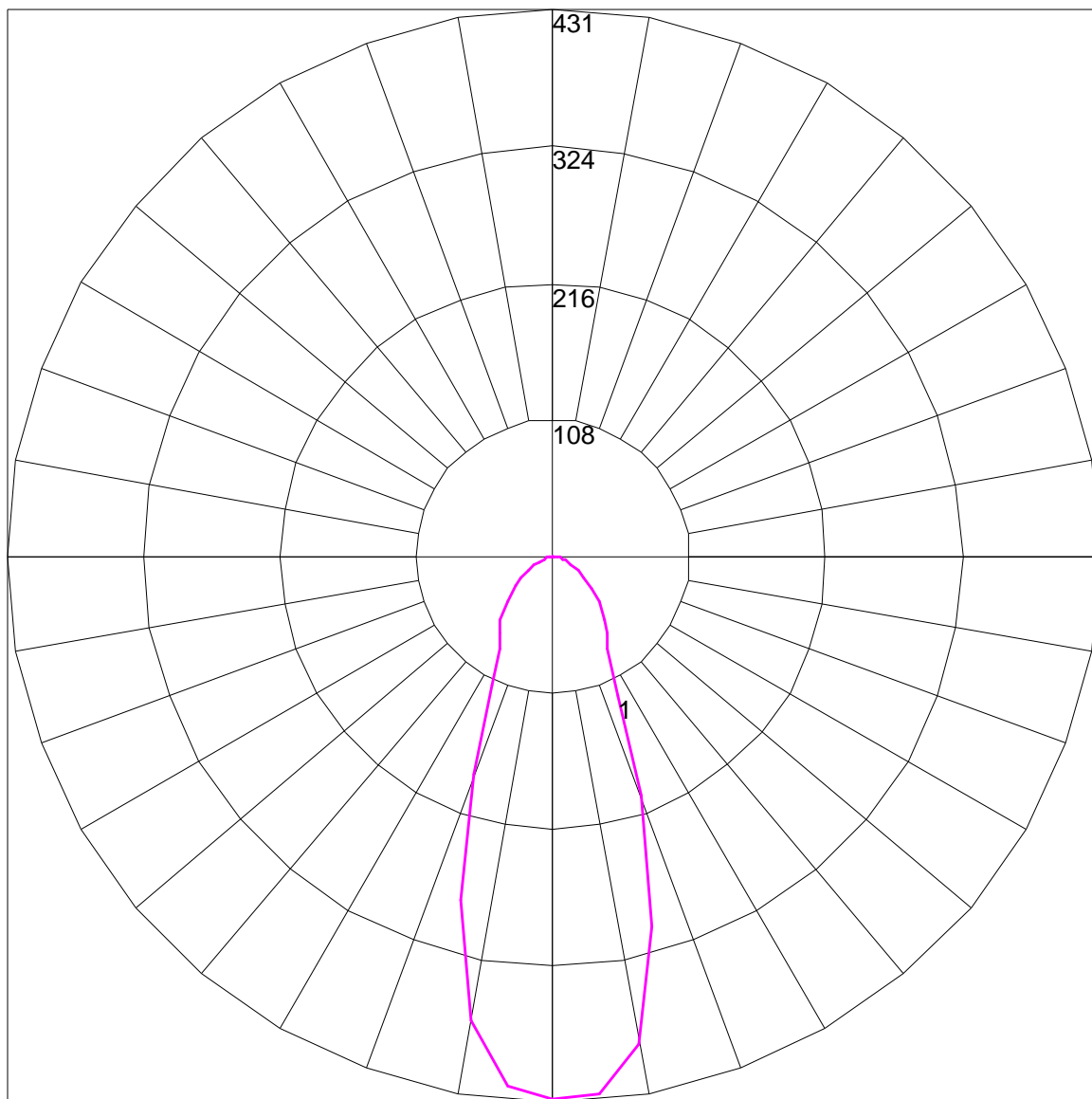
## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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   |
| 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 92  | 90  |
| 2  | 105 | 98  | 93  | 89  | 102 | 97  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 85  | 82  | 81  |
| 3  | 98  | 90  | 84  | 79  | 96  | 89  | 83  | 78  | 86  | 81  | 77  | 83  | 79  | 76  | 81  | 78  | 75  | 73  |
| 4  | 92  | 83  | 76  | 71  | 90  | 82  | 76  | 71  | 79  | 74  | 70  | 77  | 73  | 69  | 75  | 71  | 68  | 66  |
| 5  | 87  | 77  | 70  | 65  | 85  | 76  | 69  | 64  | 74  | 68  | 64  | 72  | 67  | 63  | 70  | 66  | 63  | 61  |
| 6  | 82  | 71  | 65  | 60  | 80  | 71  | 64  | 59  | 69  | 63  | 59  | 67  | 62  | 58  | 66  | 62  | 58  | 56  |
| 7  | 77  | 67  | 60  | 55  | 76  | 66  | 60  | 55  | 65  | 59  | 55  | 63  | 58  | 54  | 62  | 58  | 54  | 52  |
| 8  | 73  | 63  | 56  | 51  | 72  | 62  | 56  | 51  | 61  | 55  | 51  | 60  | 55  | 51  | 59  | 54  | 50  | 49  |
| 9  | 70  | 59  | 52  | 48  | 69  | 59  | 52  | 48  | 58  | 52  | 48  | 57  | 51  | 48  | 56  | 51  | 47  | 46  |
| 10 | 67  | 56  | 49  | 45  | 65  | 55  | 49  | 45  | 55  | 49  | 45  | 54  | 48  | 45  | 53  | 48  | 45  | 43  |

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POLAR GRAPH



Maximum Candela = 431.486 Located At Horizontal Angle = 22.5, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180)