

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: INVUE

Report Number: P140591

Luminaire Tested: **ECM-E02-LED-E1-5XQ-7050**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P140591  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33688)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ECM-E02-LED-E1-5XQ-7050  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE  
Light Source: (42) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6118.7 lumens  
Efficiency: N/A  
Efficacy: 117.4 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type V - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G2

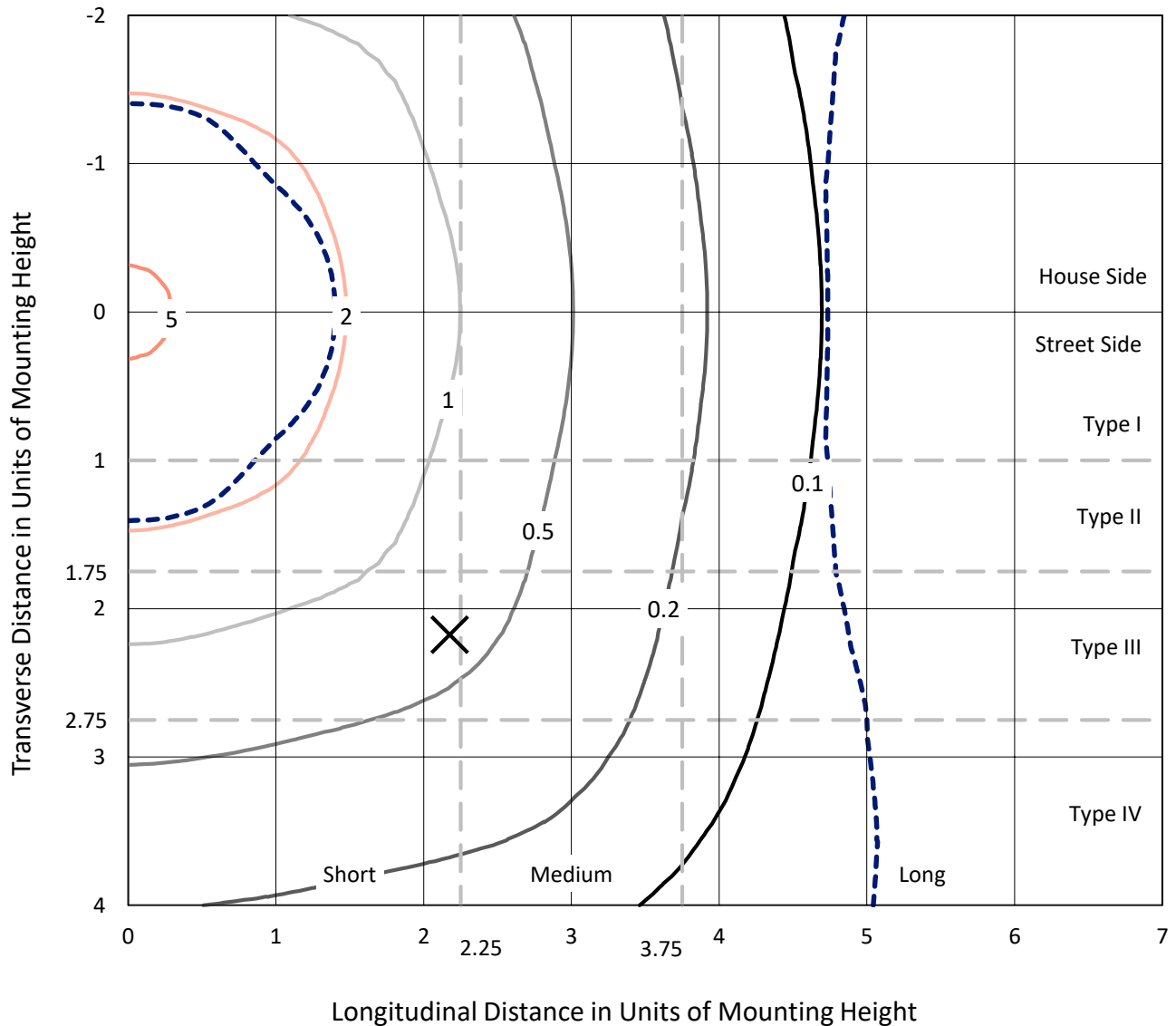
Input Watts (W): 52.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

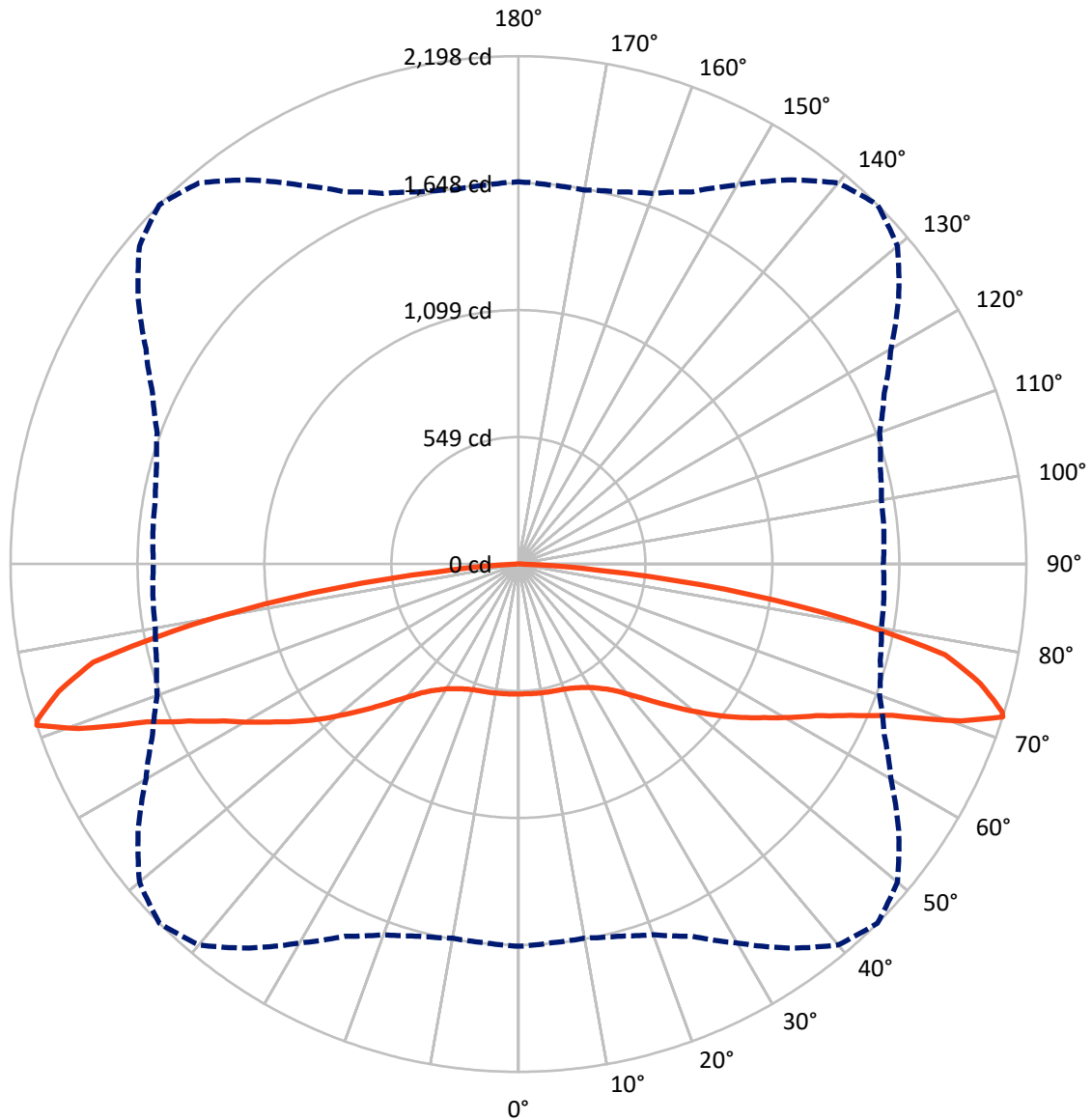
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.6 fc  
 Type V - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 3059.4   | 0.0    | 3059.4 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Street Side</b> | Lumens    | 3059.4   | 0.0    | 3059.4 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Total</b>       | Lumens    | 6118.7   | 0.0    | 6118.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 53.9   | 0.9       |
| 10°-20°   | 162.3  | 2.7       |
| 20°-30°   | 274.7  | 4.5       |
| 30°-40°   | 417.9  | 6.8       |
| 40°-50°   | 661.6  | 10.8      |
| 50°-60°   | 1013.8 | 16.6      |
| 60°-70°   | 1488.4 | 24.3      |
| 70°-80°   | 1688.4 | 27.6      |
| 80°-90°   | 357.7  | 5.8       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 6118.7 | 100.0     |
| 0°-180°   | 6118.7 | 100.0     |



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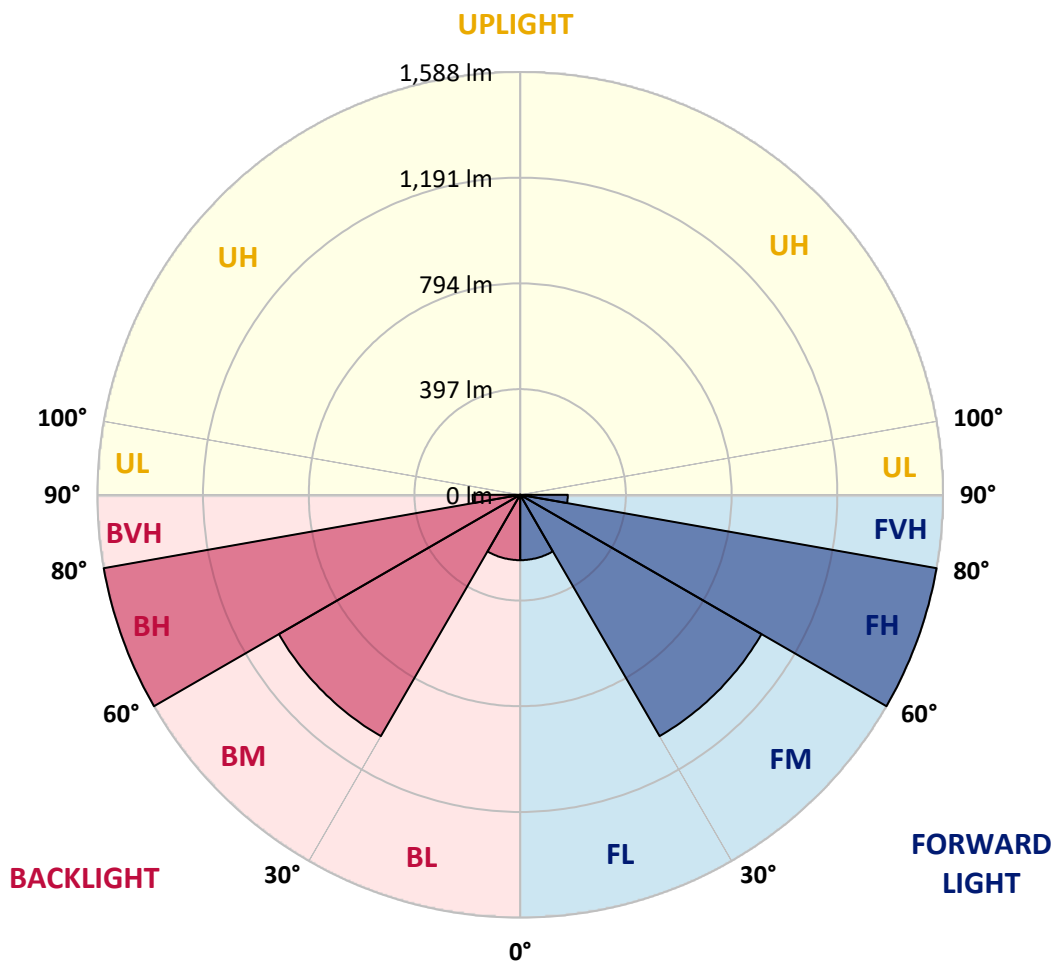
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 245.5  | 4.0       |                         |      |         |
| FM   | (30°-60°)   | 1046.7 | 17.1      |                         |      |         |
| FH   | (60°-80°)   | 1588.4 | 26.0      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 178.8  | 2.9       |                         |      | G2/225  |
| BL   | (0°-30°)    | 245.5  | 4.0       | B1/500                  |      |         |
| BM   | (30°-60°)   | 1046.7 | 17.1      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1588.4 | 26.0      | B3/2500                 |      | G1/1800 |
| BVH  | (80°-90°)   | 178.8  | 2.9       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  |
| 2.5°  | 564.4  | 565.0  | 564.4  | 563.7  | 563.7  | 563.0  | 563.0  | 563.0  | 563.7  | 562.3  | 562.3  |
| 5°    | 565.7  | 566.4  | 565.7  | 564.4  | 564.4  | 564.4  | 563.7  | 563.7  | 564.4  | 563.7  | 563.7  |
| 7.5°  | 567.8  | 568.5  | 567.8  | 566.4  | 566.4  | 565.7  | 565.0  | 565.0  | 566.4  | 565.0  | 565.0  |
| 10°   | 569.8  | 571.2  | 569.8  | 568.5  | 568.5  | 567.8  | 567.1  | 567.1  | 567.8  | 566.4  | 566.4  |
| 12.5° | 573.3  | 573.3  | 572.6  | 571.9  | 571.9  | 571.2  | 570.5  | 569.8  | 569.1  | 568.5  | 567.8  |
| 15°   | 576.0  | 576.7  | 575.3  | 574.6  | 573.9  | 573.3  | 572.6  | 572.6  | 571.2  | 570.5  | 570.5  |
| 17.5° | 579.4  | 580.1  | 578.7  | 577.4  | 577.4  | 576.0  | 575.3  | 575.3  | 573.9  | 573.3  | 572.6  |
| 20°   | 582.8  | 583.5  | 582.1  | 581.5  | 580.8  | 580.1  | 578.7  | 579.4  | 578.7  | 577.4  | 577.4  |
| 22.5° | 586.9  | 586.9  | 586.2  | 585.6  | 585.6  | 584.9  | 584.2  | 585.6  | 584.2  | 584.2  | 583.5  |
| 25°   | 591.0  | 591.7  | 591.0  | 591.0  | 591.7  | 591.7  | 592.4  | 593.8  | 593.8  | 593.1  | 592.4  |
| 27.5° | 599.9  | 599.9  | 599.9  | 599.9  | 602.0  | 602.0  | 602.7  | 604.7  | 605.4  | 605.4  | 605.4  |
| 30°   | 611.6  | 612.2  | 611.6  | 611.6  | 613.6  | 614.3  | 616.3  | 618.4  | 619.8  | 619.8  | 620.5  |
| 32.5° | 628.7  | 628.0  | 628.7  | 630.0  | 631.4  | 632.8  | 634.8  | 638.2  | 640.3  | 641.0  | 641.0  |
| 35°   | 650.6  | 651.2  | 650.6  | 651.2  | 654.0  | 656.0  | 658.1  | 662.2  | 663.5  | 664.9  | 665.6  |
| 37.5° | 682.7  | 684.8  | 683.4  | 683.4  | 686.8  | 688.2  | 690.9  | 694.3  | 697.1  | 698.4  | 697.8  |
| 40°   | 729.2  | 728.5  | 727.2  | 727.9  | 728.5  | 729.9  | 732.6  | 739.5  | 742.9  | 742.9  | 742.9  |
| 42.5° | 782.6  | 783.3  | 781.2  | 780.5  | 781.2  | 782.6  | 786.7  | 792.2  | 797.6  | 796.3  | 796.9  |
| 45°   | 843.5  | 838.7  | 840.0  | 838.7  | 839.4  | 844.1  | 851.0  | 853.7  | 859.2  | 859.2  | 860.6  |
| 47.5° | 903.0  | 900.9  | 900.2  | 899.6  | 901.6  | 906.4  | 914.6  | 923.5  | 928.3  | 931.0  | 933.1  |
| 50°   | 970.0  | 966.6  | 965.9  | 966.6  | 967.3  | 968.6  | 984.4  | 993.3  | 1004.9 | 1007.0 | 1006.3 |
| 52.5° | 1035.0 | 1032.3 | 1030.9 | 1030.9 | 1033.6 | 1038.4 | 1054.8 | 1069.2 | 1082.2 | 1090.4 | 1087.0 |
| 55°   | 1105.5 | 1105.5 | 1101.4 | 1100.0 | 1104.1 | 1108.9 | 1131.5 | 1147.9 | 1166.3 | 1172.5 | 1162.9 |
| 57.5° | 1178.0 | 1177.3 | 1171.1 | 1169.1 | 1172.5 | 1184.8 | 1204.0 | 1229.3 | 1249.1 | 1254.6 | 1249.1 |
| 60°   | 1249.1 | 1249.1 | 1245.7 | 1244.3 | 1247.7 | 1262.8 | 1286.1 | 1314.1 | 1338.0 | 1348.3 | 1339.4 |
| 62.5° | 1330.5 | 1330.5 | 1321.6 | 1325.7 | 1330.5 | 1342.1 | 1371.6 | 1407.8 | 1440.0 | 1445.4 | 1437.2 |
| 65°   | 1422.9 | 1427.0 | 1420.1 | 1418.8 | 1424.9 | 1446.8 | 1480.3 | 1526.2 | 1563.8 | 1578.2 | 1565.8 |
| 67.5° | 1563.8 | 1557.6 | 1549.4 | 1546.0 | 1555.6 | 1576.1 | 1617.1 | 1677.3 | 1732.8 | 1746.4 | 1732.1 |
| 70°   | 1710.2 | 1704.0 | 1701.3 | 1712.2 | 1732.8 | 1775.8 | 1838.8 | 1922.9 | 2000.2 | 2033.1 | 2003.0 |
| 72°   | 1654.1 | 1645.9 | 1643.8 | 1667.1 | 1706.8 | 1777.2 | 1893.5 | 2029.0 | 2152.1 | 2197.9 | 2141.1 |
| 72.5° | 1625.4 | 1618.5 | 1617.8 | 1639.7 | 1682.8 | 1754.0 | 1868.2 | 2007.7 | 2139.8 | 2189.7 | 2128.8 |
| 75°   | 1509.1 | 1502.2 | 1509.1 | 1533.7 | 1576.8 | 1653.4 | 1769.7 | 1900.3 | 2019.4 | 2065.2 | 2005.7 |
| 77.5° | 1348.3 | 1336.0 | 1342.1 | 1376.3 | 1424.2 | 1507.7 | 1630.8 | 1785.4 | 1900.3 | 1888.0 | 1799.8 |
| 80°   | 1076.0 | 1048.7 | 1078.1 | 1088.4 | 1143.1 | 1199.2 | 1318.2 | 1387.3 | 1427.0 | 1429.0 | 1366.1 |
| 82.5° | 470.0  | 480.9  | 517.8  | 548.6  | 587.6  | 652.6  | 700.5  | 775.1  | 861.9  | 902.3  | 853.7  |
| 85°   | 30.8   | 38.3   | 60.9   | 72.5   | 100.6  | 122.4  | 175.8  | 255.8  | 308.5  | 353.0  | 297.6  |
| 87.5° | 5.5    | 7.5    | 13.7   | 16.4   | 17.8   | 19.8   | 19.8   | 27.4   | 28.7   | 23.3   | 26.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



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CATALOG NUMBER: ECM-E02-LED-E1-5XQ-7050

**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  | 562.3  |
| 2.5°  | 562.3  | 562.3  | 563.0  | 562.3  | 562.3  | 562.3  | 561.6  | 561.6  |
| 5°    | 563.0  | 563.0  | 563.7  | 563.7  | 563.0  | 563.0  | 563.0  | 563.0  |
| 7.5°  | 565.0  | 564.4  | 565.0  | 565.0  | 564.4  | 564.4  | 563.7  | 564.4  |
| 10°   | 565.7  | 565.7  | 566.4  | 566.4  | 565.7  | 565.7  | 565.7  | 565.7  |
| 12.5° | 567.8  | 567.8  | 567.8  | 568.5  | 567.8  | 567.8  | 568.5  | 567.8  |
| 15°   | 569.8  | 569.1  | 569.1  | 569.1  | 569.1  | 569.8  | 569.8  | 570.5  |
| 17.5° | 571.9  | 571.9  | 571.2  | 571.9  | 571.9  | 572.6  | 572.6  | 572.6  |
| 20°   | 576.0  | 575.3  | 573.9  | 575.3  | 575.3  | 575.3  | 575.3  | 576.0  |
| 22.5° | 582.1  | 580.8  | 579.4  | 579.4  | 578.7  | 579.4  | 578.7  | 578.7  |
| 25°   | 591.0  | 589.0  | 586.9  | 586.2  | 585.6  | 584.9  | 584.2  | 584.9  |
| 27.5° | 604.0  | 601.3  | 598.6  | 597.2  | 596.5  | 595.1  | 594.5  | 594.5  |
| 30°   | 618.4  | 616.3  | 612.2  | 610.9  | 608.8  | 606.8  | 606.8  | 606.1  |
| 32.5° | 640.3  | 637.6  | 632.8  | 630.7  | 627.3  | 625.2  | 624.6  | 624.6  |
| 35°   | 662.9  | 659.4  | 657.4  | 654.7  | 650.6  | 648.5  | 647.8  | 647.8  |
| 37.5° | 697.1  | 693.0  | 690.2  | 686.8  | 686.1  | 683.4  | 683.4  | 683.4  |
| 40°   | 741.5  | 738.1  | 734.7  | 732.0  | 729.9  | 727.9  | 725.1  | 725.1  |
| 42.5° | 796.3  | 790.8  | 788.7  | 785.3  | 782.6  | 780.5  | 779.2  | 779.2  |
| 45°   | 856.5  | 851.7  | 848.9  | 844.1  | 843.5  | 842.1  | 839.4  | 839.4  |
| 47.5° | 924.2  | 917.3  | 911.9  | 910.5  | 907.1  | 903.7  | 902.3  | 903.0  |
| 50°   | 998.1  | 986.4  | 978.9  | 978.9  | 974.8  | 970.0  | 970.7  | 970.0  |
| 52.5° | 1074.0 | 1061.0 | 1051.4 | 1044.6 | 1039.8 | 1039.1 | 1039.8 | 1039.1 |
| 55°   | 1150.6 | 1136.9 | 1125.3 | 1117.8 | 1113.0 | 1108.2 | 1107.5 | 1107.5 |
| 57.5° | 1230.0 | 1212.9 | 1194.4 | 1187.5 | 1182.8 | 1180.0 | 1180.0 | 1180.7 |
| 60°   | 1319.6 | 1291.5 | 1268.3 | 1259.4 | 1256.0 | 1257.3 | 1256.6 | 1257.3 |
| 62.5° | 1410.6 | 1378.4 | 1351.0 | 1340.8 | 1336.0 | 1335.3 | 1340.8 | 1342.8 |
| 65°   | 1525.5 | 1485.8 | 1455.0 | 1435.9 | 1435.9 | 1433.8 | 1440.0 | 1437.2 |
| 67.5° | 1675.3 | 1619.2 | 1581.6 | 1550.8 | 1551.5 | 1553.5 | 1562.4 | 1561.7 |
| 70°   | 1930.4 | 1831.3 | 1761.5 | 1708.8 | 1688.3 | 1674.6 | 1671.9 | 1671.9 |
| 72°   | 2009.1 | 1861.4 | 1746.4 | 1663.7 | 1621.2 | 1595.3 | 1587.7 | 1579.5 |
| 72.5° | 1988.6 | 1836.7 | 1720.4 | 1634.2 | 1590.5 | 1564.5 | 1552.8 | 1542.6 |
| 75°   | 1859.3 | 1689.7 | 1563.1 | 1472.8 | 1424.2 | 1392.8 | 1386.6 | 1381.8 |
| 77.5° | 1640.4 | 1489.9 | 1359.2 | 1265.5 | 1217.0 | 1176.6 | 1160.2 | 1158.8 |
| 80°   | 1264.8 | 1129.4 | 1028.8 | 955.6  | 911.9  | 881.8  | 883.1  | 873.6  |
| 82.5° | 746.3  | 632.1  | 545.9  | 448.1  | 383.8  | 346.8  | 323.6  | 320.8  |
| 85°   | 219.6  | 149.1  | 95.1   | 68.4   | 49.3   | 36.9   | 27.4   | 24.6   |
| 87.5° | 19.8   | 15.7   | 13.0   | 10.9   | 10.3   | 8.9    | 5.5    | 4.1    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)