

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P130256

Luminaire Tested: **HL612ICAT - HLM6935 - HL6WFL - 456P**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P130256  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33490)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL612ICAT - HLM6935 - HL6WFL - 456P  
Description: HALO ALLSLOPE 6" 21W, Black Coilex Baffle, White Metal Trim Ring using 55 Degree Optic at a 6-12 Pitch  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1519.8 lumens  
Efficiency: N/A  
Efficacy: 79.6 lumens/watt  
Spacing Criteria (0/90/45): 1.36 / 0.77 / 1.12  
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')  
CIE Type: Direct

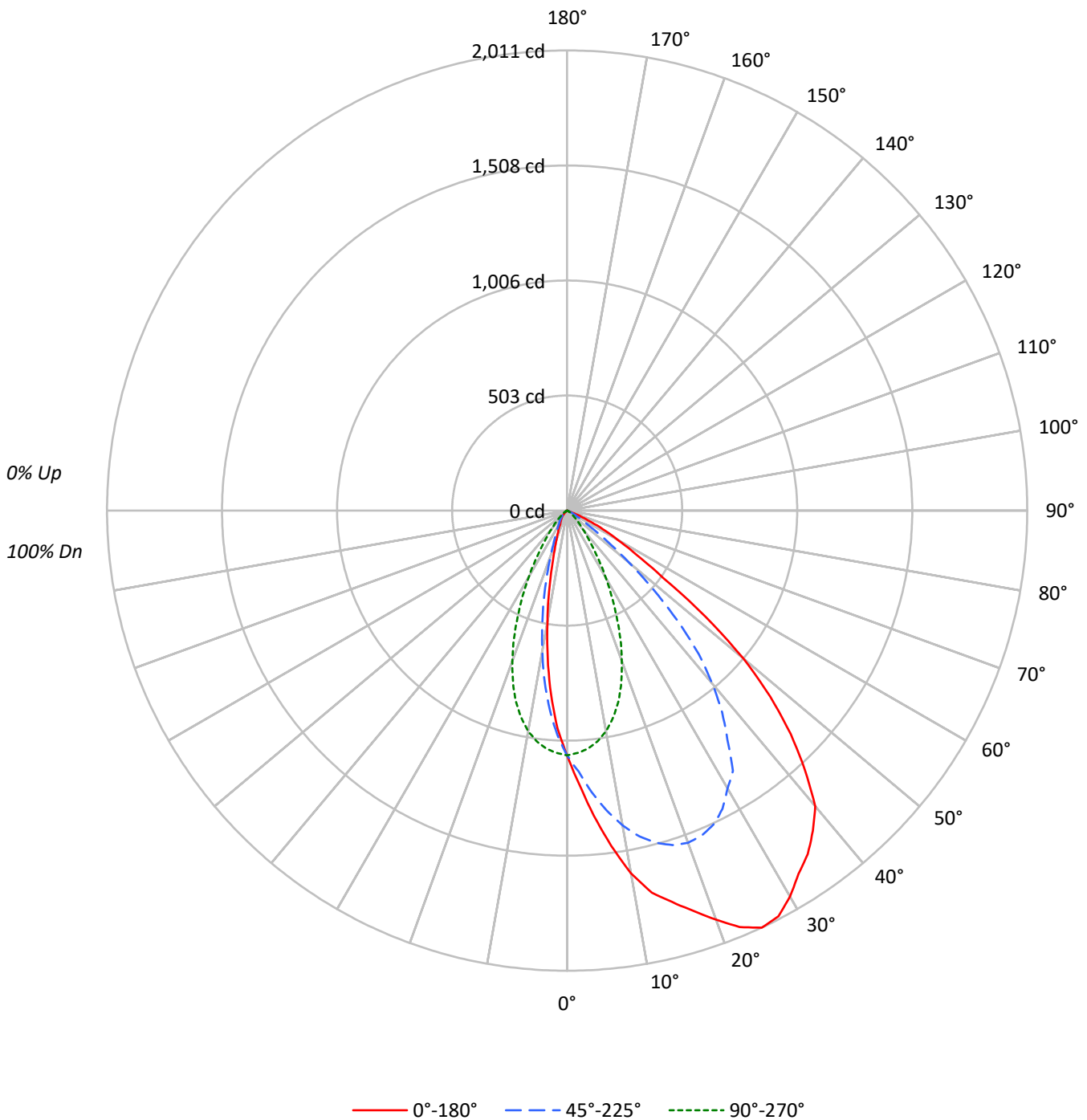
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF  | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |    |    | 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  |     |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    | 100 |
| 1   | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 | 103 | 101 | 99  | 99  | 97  | 96  | 96  | 94  | 93  | 91  |    |    |    | 91  |
| 2   | 105 | 100 | 95  | 91  | 103 | 98  | 94  | 90  | 95  | 91  | 88  | 92  | 89  | 86  | 89  | 86  | 84  | 82  |    |    |    | 82  |
| 3   | 99  | 91  | 85  | 80  | 97  | 90  | 84  | 80  | 87  | 82  | 78  | 84  | 80  | 77  | 82  | 79  | 76  | 74  |    |    |    | 74  |
| 4   | 92  | 83  | 77  | 72  | 90  | 82  | 76  | 71  | 80  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 69  | 67  |    |    |    | 67  |
| 5   | 86  | 76  | 69  | 64  | 85  | 75  | 69  | 64  | 73  | 68  | 63  | 72  | 67  | 63  | 70  | 66  | 62  | 60  |    |    |    | 60  |
| 6   | 81  | 70  | 63  | 58  | 79  | 69  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 65  | 60  | 57  | 55  |    |    |    | 55  |
| 7   | 76  | 65  | 58  | 53  | 74  | 64  | 57  | 53  | 63  | 57  | 52  | 61  | 56  | 52  | 60  | 55  | 52  | 50  |    |    |    | 50  |
| 8   | 71  | 60  | 53  | 48  | 70  | 60  | 53  | 48  | 58  | 52  | 48  | 57  | 52  | 48  | 56  | 51  | 47  | 46  |    |    |    | 46  |
| 9   | 67  | 56  | 49  | 44  | 66  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 44  | 42  |    |    |    | 42  |
| 10  | 63  | 52  | 45  | 41  | 62  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 44  | 41  | 49  | 44  | 40  | 39  |    |    |    | 39  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 90°   | 180°  |
|-----|--------|-------|-------|
| 0°  | 63857  | 63857 | 63857 |
| 5°  | 78315  | 61151 | 47268 |
| 10° | 93182  | 56677 | 28729 |
| 15° | 102156 | 49855 | 14901 |
| 20° | 110193 | 40503 | 7923  |
| 25° | 117863 | 29927 | 4829  |
| 30° | 116377 | 20055 | 3400  |
| 35° | 112603 | 11956 | 2716  |
| 40° | 107467 | 6983  | 2001  |
| 45° | 92144  | 4135  | 1134  |
| 50° | 70838  | 2574  | 536   |
| 55° | 38655  | 1599  | 128   |
| 60° | 20700  | 834   | 139   |
| 65° | 9249   | 306   | 153   |
| 70° | 1453   | 171   | 81    |
| 75° | 93     | 197   | 93    |
| 80° | 0      | 233   | 0     |
| 85° | 0      | 288   | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.9   | 6.6       |
| 10°-20°   | 265.8  | 17.5      |
| 20°-30°   | 364.9  | 24.0      |
| 30°-40°   | 380.3  | 25.0      |
| 40°-50°   | 280.8  | 18.5      |
| 50°-60°   | 105.2  | 6.9       |
| 60°-70°   | 20.5   | 1.4       |
| 70°-80°   | 1.6    | 0.1       |
| 80°-90°   | 0.7    | 0.0       |
| 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°-30°    | 730.6  | 48.1      |
| 0°-40°    | 1111.0 | 73.1      |
| 0°-60°    | 1497.0 | 98.5      |
| 0°-90°    | 1519.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1519.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1070 | 1070 | 1070 | 1070 | 1070 |      |
| 5°  | 1337 | 1236 | 1044 | 874  | 807  | 136  |
| 15° | 1771 | 1502 | 864  | 388  | 258  | 505  |
| 25° | 2011 | 1514 | 511  | 121  | 82   | 915  |
| 35° | 1833 | 1221 | 195  | 57   | 44   | 1143 |
| 45° | 1382 | 685  | 62   | 26   | 17   | 1052 |
| 55° | 512  | 122  | 21   | 5    | 2    | 500  |
| 65° | 103  | 19   | 3    | 2    | 2    | 113  |
| 75° | 1    | 1    | 2    | 1    | 1    | 3    |
| 85° | 0    | 1    | 2    | 1    | 0    | 0    |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 |
| 2.5°  | 1195.5 | 1176.8 | 1169.2 | 1183.6 | 1183.6 | 1187.0 | 1180.2 | 1166.7 | 1171.8 | 1141.2 | 1153.1 |
| 5°    | 1337.4 | 1322.1 | 1322.1 | 1321.3 | 1313.7 | 1316.2 | 1304.3 | 1278.8 | 1272.9 | 1235.5 | 1238.0 |
| 7.5°  | 1477.6 | 1461.5 | 1459.8 | 1460.7 | 1440.3 | 1441.1 | 1421.6 | 1384.2 | 1371.4 | 1321.3 | 1312.0 |
| 10°   | 1609.4 | 1590.7 | 1589.8 | 1581.3 | 1563.5 | 1555.0 | 1526.9 | 1480.2 | 1462.4 | 1396.9 | 1372.3 |
| 12.5° | 1710.5 | 1696.0 | 1685.0 | 1689.2 | 1661.2 | 1654.4 | 1614.5 | 1562.6 | 1533.7 | 1458.1 | 1421.6 |
| 15°   | 1770.8 | 1751.3 | 1755.5 | 1750.4 | 1739.4 | 1730.9 | 1692.6 | 1628.9 | 1589.8 | 1502.3 | 1455.6 |
| 17.5° | 1833.7 | 1815.8 | 1804.8 | 1797.1 | 1778.4 | 1774.2 | 1744.5 | 1677.3 | 1629.7 | 1532.9 | 1474.2 |
| 20°   | 1902.5 | 1883.0 | 1871.9 | 1846.4 | 1819.2 | 1804.8 | 1774.2 | 1708.8 | 1651.8 | 1544.8 | 1472.5 |
| 22.5° | 1969.6 | 1942.4 | 1920.3 | 1883.8 | 1849.0 | 1826.0 | 1792.0 | 1723.2 | 1654.4 | 1537.1 | 1453.9 |
| 25°   | 2011.3 | 1982.4 | 1945.0 | 1900.8 | 1861.7 | 1836.2 | 1801.4 | 1721.5 | 1643.3 | 1514.2 | 1417.3 |
| 27.5° | 1999.4 | 1970.5 | 1936.5 | 1892.3 | 1857.5 | 1834.5 | 1792.0 | 1736.8 | 1611.9 | 1470.0 | 1359.5 |
| 30°   | 1947.5 | 1924.6 | 1899.1 | 1864.3 | 1835.4 | 1822.6 | 1758.1 | 1654.4 | 1550.7 | 1402.0 | 1261.8 |
| 32.5° | 1882.1 | 1866.8 | 1851.5 | 1826.0 | 1806.5 | 1787.8 | 1700.3 | 1587.3 | 1470.0 | 1348.5 | 1198.1 |
| 35°   | 1832.8 | 1801.4 | 1798.0 | 1786.1 | 1761.4 | 1709.6 | 1617.8 | 1502.3 | 1376.5 | 1221.0 | 1099.5 |
| 37.5° | 1764.0 | 1749.6 | 1742.8 | 1724.1 | 1672.2 | 1614.5 | 1512.5 | 1387.6 | 1267.8 | 1112.3 | 984.8  |
| 40°   | 1686.7 | 1668.8 | 1653.5 | 1617.0 | 1559.2 | 1495.5 | 1381.6 | 1256.7 | 1137.8 | 986.5  | 859.1  |
| 42.5° | 1538.0 | 1531.2 | 1498.9 | 1470.8 | 1414.8 | 1344.2 | 1232.1 | 1108.9 | 989.1  | 851.4  | 711.2  |
| 45°   | 1381.6 | 1367.2 | 1334.9 | 1308.6 | 1243.1 | 1176.0 | 1074.9 | 950.0  | 825.9  | 684.9  | 549.8  |
| 47.5° | 1203.2 | 1194.7 | 1175.1 | 1132.7 | 1066.4 | 998.4  | 889.6  | 766.4  | 641.5  | 510.7  | 404.5  |
| 50°   | 1004.4 | 998.4  | 972.1  | 929.6  | 865.0  | 798.7  | 684.0  | 568.5  | 457.1  | 351.8  | 267.7  |
| 52.5° | 762.2  | 743.5  | 724.8  | 679.8  | 626.2  | 561.7  | 462.2  | 372.2  | 293.2  | 220.1  | 154.6  |
| 55°   | 512.4  | 498.8  | 476.7  | 451.2  | 409.6  | 355.2  | 286.4  | 231.1  | 181.0  | 121.5  | 85.0   |
| 57.5° | 356.0  | 345.0  | 330.5  | 304.2  | 271.9  | 236.2  | 194.6  | 147.8  | 109.6  | 72.2   | 53.5   |
| 60°   | 253.2  | 249.8  | 239.6  | 219.2  | 192.9  | 162.3  | 122.4  | 90.1   | 62.9   | 45.0   | 36.5   |
| 62.5° | 176.7  | 172.5  | 161.4  | 144.5  | 120.7  | 94.3   | 68.8   | 48.4   | 37.4   | 29.7   | 24.6   |
| 65°   | 102.8  | 98.6   | 90.9   | 77.3   | 61.2   | 46.7   | 35.7   | 27.2   | 22.9   | 18.7   | 16.1   |
| 67.5° | 47.6   | 43.3   | 40.8   | 33.1   | 28.0   | 23.8   | 18.7   | 14.4   | 12.7   | 10.2   | 8.5    |
| 70°   | 14.4   | 13.6   | 13.6   | 11.9   | 11.0   | 9.3    | 7.6    | 5.9    | 5.9    | 5.1    | 4.2    |
| 72.5° | 3.4    | 3.4    | 3.4    | 3.4    | 3.4    | 3.4    | 2.5    | 2.5    | 2.5    | 1.7    | 1.7    |
| 75°   | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 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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**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    | 100°   | 105°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 |
| 2.5°  | 1124.2 | 1135.2 | 1121.6 | 1103.8 | 1105.5 | 1087.6 | 1073.2 | 1060.4 | 1057.0 | 1041.7 | 1033.2 |
| 5°    | 1209.1 | 1192.1 | 1167.5 | 1137.8 | 1125.0 | 1095.3 | 1069.8 | 1044.3 | 1029.0 | 1002.7 | 984.0  |
| 7.5°  | 1272.0 | 1242.3 | 1202.3 | 1159.0 | 1133.5 | 1092.7 | 1055.3 | 1017.1 | 991.6  | 953.4  | 925.3  |
| 10°   | 1320.5 | 1277.1 | 1224.4 | 1167.5 | 1130.1 | 1077.4 | 1042.6 | 978.9  | 940.6  | 891.3  | 853.1  |
| 12.5° | 1356.1 | 1299.2 | 1232.9 | 1164.1 | 1114.8 | 1050.2 | 989.9  | 927.0  | 878.6  | 820.8  | 765.6  |
| 15°   | 1376.5 | 1306.9 | 1226.1 | 1145.4 | 1082.5 | 1011.2 | 937.2  | 864.2  | 801.3  | 732.5  | 673.0  |
| 17.5° | 1380.8 | 1295.8 | 1202.3 | 1114.0 | 1040.9 | 956.8  | 884.5  | 787.7  | 712.1  | 636.4  | 566.8  |
| 20°   | 1367.2 | 1280.5 | 1167.5 | 1070.6 | 986.5  | 890.5  | 810.6  | 699.3  | 617.7  | 538.7  | 472.4  |
| 22.5° | 1337.4 | 1228.7 | 1120.8 | 1013.7 | 915.1  | 807.2  | 703.6  | 608.4  | 524.3  | 444.4  | 378.1  |
| 25°   | 1285.6 | 1174.3 | 1057.9 | 942.3  | 836.1  | 714.6  | 605.8  | 510.7  | 428.3  | 356.0  | 291.5  |
| 27.5° | 1223.6 | 1102.9 | 981.4  | 881.1  | 735.8  | 618.6  | 509.8  | 420.6  | 342.4  | 271.1  | 220.9  |
| 30°   | 1147.1 | 1023.9 | 893.9  | 753.7  | 630.5  | 521.7  | 423.2  | 335.6  | 265.1  | 209.9  | 169.1  |
| 32.5° | 1057.9 | 921.9  | 789.4  | 650.9  | 532.8  | 431.7  | 335.6  | 260.0  | 200.5  | 160.6  | 134.3  |
| 35°   | 955.1  | 814.9  | 674.7  | 544.7  | 437.6  | 338.2  | 258.3  | 194.6  | 156.3  | 128.3  | 108.8  |
| 37.5° | 841.2  | 695.1  | 558.3  | 441.8  | 345.0  | 258.3  | 189.5  | 147.0  | 119.0  | 98.6   | 83.3   |
| 40°   | 707.8  | 569.3  | 448.6  | 340.7  | 246.4  | 181.0  | 136.8  | 109.6  | 90.9   | 78.2   | 68.0   |
| 42.5° | 561.7  | 442.7  | 337.3  | 240.5  | 167.4  | 127.5  | 101.1  | 83.3   | 71.4   | 61.2   | 54.4   |
| 45°   | 421.5  | 319.5  | 229.4  | 161.4  | 118.1  | 91.8   | 73.9   | 62.0   | 53.5   | 46.7   | 42.5   |
| 47.5° | 300.8  | 211.6  | 144.5  | 101.1  | 78.2   | 62.0   | 52.7   | 45.0   | 39.9   | 37.4   | 34.0   |
| 50°   | 187.8  | 126.6  | 84.1   | 63.7   | 52.7   | 44.2   | 39.9   | 36.5   | 32.3   | 28.9   | 26.3   |
| 52.5° | 100.3  | 69.7   | 52.7   | 45.0   | 39.9   | 35.7   | 31.4   | 28.0   | 24.6   | 22.9   | 19.5   |
| 55°   | 57.8   | 48.4   | 39.9   | 35.7   | 31.4   | 27.2   | 23.8   | 21.2   | 19.5   | 17.0   | 14.4   |
| 57.5° | 42.5   | 36.5   | 30.6   | 26.3   | 23.8   | 20.4   | 17.8   | 16.1   | 13.6   | 11.0   | 9.3    |
| 60°   | 29.7   | 25.5   | 22.9   | 20.4   | 17.0   | 14.4   | 12.7   | 10.2   | 8.5    | 6.8    | 5.9    |
| 62.5° | 21.2   | 17.8   | 15.3   | 12.7   | 11.0   | 9.3    | 7.6    | 5.9    | 5.1    | 4.2    | 3.4    |
| 65°   | 12.7   | 11.0   | 9.3    | 7.6    | 6.8    | 5.1    | 4.2    | 3.4    | 2.5    | 2.5    | 1.7    |
| 67.5° | 6.8    | 5.9    | 5.1    | 4.2    | 3.4    | 2.5    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 70°   | 3.4    | 2.5    | 2.5    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 72.5° | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 75°   | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 77.5° | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 80°   | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 82.5° | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 85°   | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 87.5° | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 0.8    |
| 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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**CANDELA DISTRIBUTION (continued):**

|       | 110°   | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   | 150°   | 155°   | 160°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 | 1069.8 |
| 2.5°  | 1029.8 | 1018.0 | 1015.4 | 1004.4 | 1006.1 | 980.6  | 977.2  | 966.1  | 968.7  | 967.0  | 967.8  |
| 5°    | 952.5  | 950.0  | 933.0  | 913.4  | 904.9  | 873.5  | 862.5  | 847.2  | 839.5  | 831.9  | 830.2  |
| 7.5°  | 896.4  | 868.4  | 837.0  | 811.5  | 793.6  | 754.5  | 730.8  | 709.5  | 698.5  | 688.3  | 680.6  |
| 10°   | 812.3  | 773.2  | 732.5  | 701.9  | 680.6  | 626.2  | 599.0  | 568.5  | 555.7  | 536.2  | 529.4  |
| 12.5° | 717.2  | 667.9  | 625.4  | 581.2  | 538.7  | 500.5  | 476.7  | 451.2  | 426.6  | 411.3  | 396.0  |
| 15°   | 610.1  | 557.4  | 510.7  | 466.5  | 432.5  | 387.5  | 361.1  | 332.2  | 309.3  | 292.3  | 277.9  |
| 17.5° | 507.3  | 452.0  | 407.9  | 365.4  | 321.2  | 288.1  | 260.0  | 232.8  | 219.2  | 203.9  | 196.3  |
| 20°   | 408.7  | 356.9  | 305.9  | 261.7  | 235.4  | 207.3  | 182.7  | 167.4  | 159.7  | 150.4  | 145.3  |
| 22.5° | 321.2  | 268.5  | 229.4  | 193.7  | 170.8  | 152.9  | 141.9  | 130.0  | 124.1  | 117.3  | 113.0  |
| 25°   | 241.3  | 199.7  | 169.9  | 151.2  | 136.8  | 120.7  | 111.3  | 102.0  | 96.0   | 91.8   | 88.4   |
| 27.5° | 181.8  | 154.6  | 133.4  | 119.0  | 107.9  | 96.0   | 88.4   | 81.6   | 77.3   | 73.9   | 70.5   |
| 30°   | 144.5  | 124.1  | 107.1  | 96.9   | 87.5   | 78.2   | 72.2   | 66.3   | 63.7   | 62.0   | 60.3   |
| 32.5° | 115.6  | 100.3  | 86.7   | 79.0   | 71.4   | 64.6   | 61.2   | 57.8   | 56.1   | 54.4   | 53.5   |
| 35°   | 92.6   | 80.7   | 70.5   | 64.6   | 61.2   | 56.9   | 53.5   | 51.0   | 49.3   | 48.4   | 46.7   |
| 37.5° | 73.9   | 65.4   | 60.3   | 56.1   | 53.5   | 49.3   | 46.7   | 44.2   | 42.5   | 41.6   | 40.8   |
| 40°   | 60.3   | 55.2   | 51.0   | 47.6   | 44.2   | 41.6   | 38.2   | 36.5   | 35.7   | 34.0   | 33.1   |
| 42.5° | 48.4   | 44.2   | 40.8   | 38.2   | 36.5   | 34.0   | 31.4   | 29.7   | 28.0   | 27.2   | 25.5   |
| 45°   | 39.1   | 35.7   | 32.3   | 30.6   | 28.9   | 26.3   | 23.8   | 21.2   | 21.2   | 19.5   | 18.7   |
| 47.5° | 31.4   | 28.0   | 25.5   | 23.8   | 21.2   | 19.5   | 17.8   | 16.1   | 15.3   | 14.4   | 13.6   |
| 50°   | 22.9   | 21.2   | 18.7   | 17.8   | 16.1   | 13.6   | 12.7   | 11.0   | 10.2   | 9.3    | 8.5    |
| 52.5° | 17.8   | 16.1   | 13.6   | 11.9   | 11.0   | 9.3    | 8.5    | 6.8    | 5.9    | 5.1    | 5.1    |
| 55°   | 12.7   | 11.0   | 9.3    | 7.6    | 6.8    | 5.1    | 4.2    | 3.4    | 3.4    | 2.5    | 2.5    |
| 57.5° | 8.5    | 6.8    | 5.9    | 4.2    | 3.4    | 3.4    | 2.5    | 1.7    | 1.7    | 1.7    | 0.8    |
| 60°   | 5.1    | 4.2    | 3.4    | 2.5    | 1.7    | 1.7    | 1.7    | 1.7    | 0.8    | 0.8    | 1.7    |
| 62.5° | 2.5    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 65°   | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    |
| 67.5° | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 0.8    | 0.8    | 1.7    | 0.8    |
| 70°   | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 72.5° | 1.7    | 1.7    | 1.7    | 1.7    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 75°   | 1.7    | 1.7    | 1.7    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 77.5° | 1.7    | 1.7    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 80°   | 1.7    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    |
| 82.5° | 1.7    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.0    |
| 85°   | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.0    | 0.0    |
| 87.5° | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |





TEST NUMBER: P130256

CATALOG NUMBER: HL612ICAT - HLM6935 - HL6WFL - 456P

**CANDELA DISTRIBUTION (continued):**

|       | 165°   | 170°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|
| 0°    | 1069.8 | 1069.8 | 1069.8 | 1069.8 |
| 2.5°  | 942.3  | 938.9  | 950.0  | 953.4  |
| 5°    | 823.4  | 797.9  | 808.9  | 807.2  |
| 7.5°  | 655.1  | 639.8  | 653.4  | 650.0  |
| 10°   | 503.9  | 489.4  | 498.8  | 496.2  |
| 12.5° | 375.6  | 364.5  | 365.4  | 363.7  |
| 15°   | 263.4  | 257.5  | 254.1  | 258.3  |
| 17.5° | 182.7  | 178.4  | 177.6  | 181.0  |
| 20°   | 137.7  | 133.4  | 133.4  | 136.8  |
| 22.5° | 107.9  | 103.7  | 103.7  | 104.5  |
| 25°   | 83.3   | 82.4   | 80.7   | 82.4   |
| 27.5° | 68.0   | 65.4   | 66.3   | 65.4   |
| 30°   | 57.8   | 56.1   | 56.9   | 56.9   |
| 32.5° | 51.0   | 50.1   | 50.1   | 50.1   |
| 35°   | 45.0   | 44.2   | 44.2   | 44.2   |
| 37.5° | 39.1   | 38.2   | 38.2   | 38.2   |
| 40°   | 31.4   | 30.6   | 30.6   | 31.4   |
| 42.5° | 23.8   | 23.8   | 23.8   | 23.8   |
| 45°   | 17.8   | 17.0   | 17.0   | 17.0   |
| 47.5° | 12.7   | 11.9   | 11.9   | 11.9   |
| 50°   | 7.6    | 6.8    | 6.8    | 7.6    |
| 52.5° | 4.2    | 3.4    | 3.4    | 4.2    |
| 55°   | 1.7    | 1.7    | 1.7    | 1.7    |
| 57.5° | 0.8    | 0.8    | 0.8    | 0.8    |
| 60°   | 0.8    | 0.8    | 0.8    | 1.7    |
| 62.5° | 0.8    | 0.8    | 1.7    | 1.7    |
| 65°   | 0.8    | 0.8    | 1.7    | 1.7    |
| 67.5° | 1.7    | 0.8    | 0.8    | 0.8    |
| 70°   | 0.8    | 0.8    | 0.8    | 0.8    |
| 72.5° | 0.8    | 0.8    | 0.8    | 0.8    |
| 75°   | 0.8    | 0.8    | 0.8    | 0.8    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.8    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)