

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: P130170

Luminaire Tested: **HL612ICAT - HLM6930 - HL6FL - 455TBZ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130170
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33451)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL612ICAT - HLM6930 - HL6FL - 455TBZ
Description: HALO ALLSLOPE 6" 21W, Tuscan Bronze Reflector, Tuscan Bronze Metal Trim Ring using 40 Degree Optic at a 6-12 Pitch
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1477.5 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.55 / 0.65 / 1.05
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

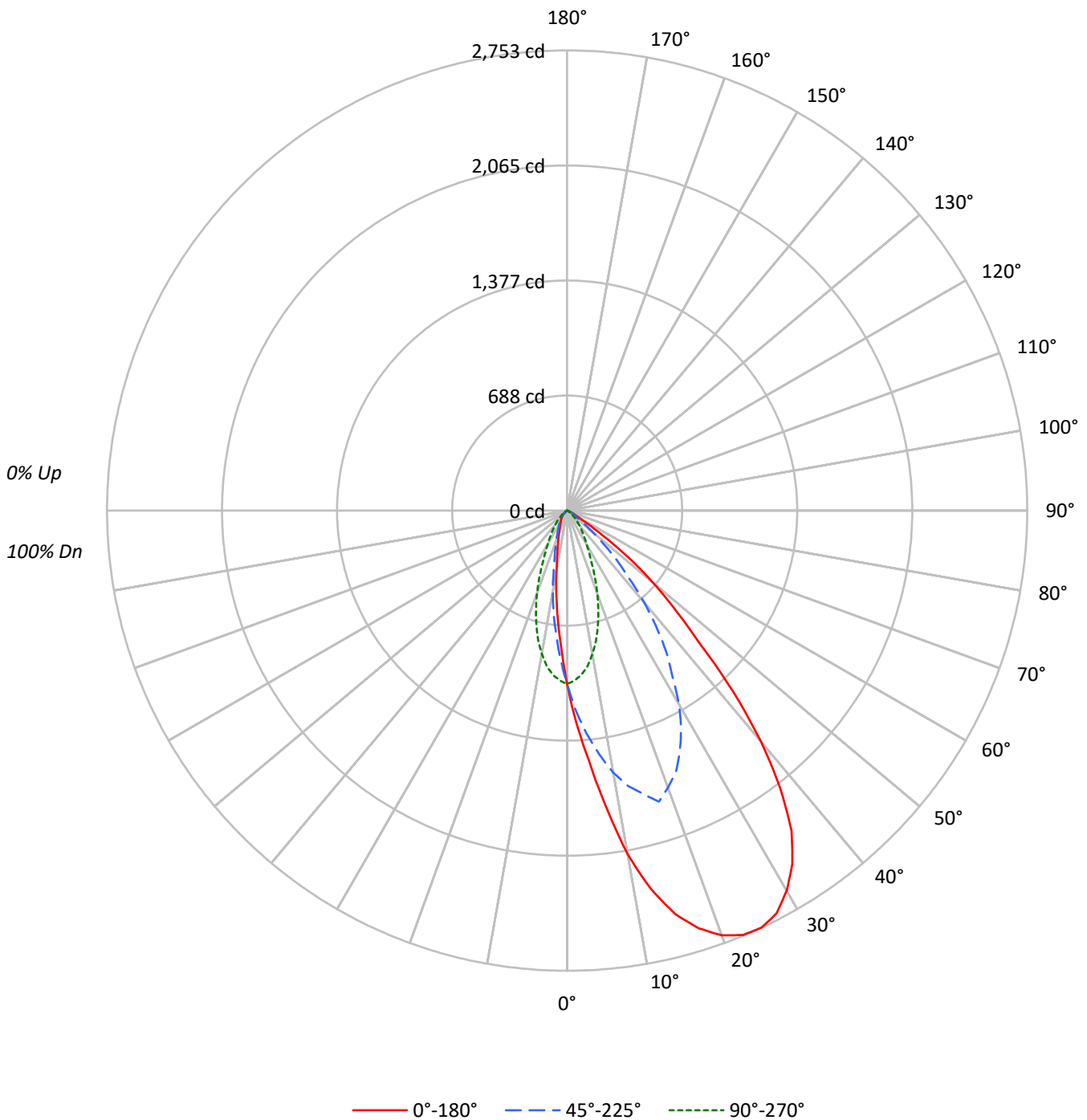
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P130170

CATALOG NUMBER: HL612ICAT - HLM6930 - HL6FL - 455TBZ

Luminous Intensity Polar Plot





TEST NUMBER: P130170

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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 | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | | | | 92 | |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 96 | 92 | 89 | 93 | 90 | 87 | 90 | 88 | 85 | | | | 84 | |
| 3 | 100 | 93 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 84 | 80 | 78 | | | | 76 | |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 75 | 72 | 78 | 74 | 71 | | | | 69 | |
| 5 | 88 | 79 | 72 | 67 | 86 | 78 | 71 | 67 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | | | | 63 | |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 65 | 61 | 70 | 65 | 60 | 69 | 64 | 60 | 67 | 63 | 59 | | | | 58 | |
| 7 | 78 | 67 | 61 | 56 | 76 | 67 | 60 | 56 | 65 | 60 | 55 | 64 | 59 | 55 | 63 | 58 | 55 | | | | 53 | |
| 8 | 73 | 63 | 56 | 51 | 72 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 50 | | | | 49 | |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | | | | 45 | |
| 10 | 66 | 55 | 48 | 44 | 64 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 43 | 52 | 47 | 43 | | | | 42 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|-------|-------|
| 0° | 61935 | 61935 | 61935 |
| 5° | 88111 | 57755 | 37922 |
| 10° | 121014 | 50389 | 21000 |
| 15° | 144176 | 40942 | 12328 |
| 20° | 156604 | 30553 | 8057 |
| 25° | 161303 | 20381 | 5825 |
| 30° | 156917 | 13953 | 4554 |
| 35° | 143777 | 9769 | 3766 |
| 40° | 114916 | 7015 | 2848 |
| 45° | 74117 | 4749 | 1821 |
| 50° | 47190 | 3040 | 931 |
| 55° | 19614 | 2059 | 249 |
| 60° | 5347 | 1218 | 65 |
| 65° | 3203 | 522 | 0 |
| 70° | 1503 | 171 | 0 |
| 75° | 289 | 197 | 0 |
| 80° | 0 | 233 | 0 |
| 85° | 0 | 288 | 0 |



TEST NUMBER: P130170

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 99.7 | 6.8 |
| 10°-20° | 290.8 | 19.7 |
| 20°-30° | 409.2 | 27.7 |
| 30°-40° | 383.0 | 25.9 |
| 40°-50° | 218.9 | 14.8 |
| 50°-60° | 61.4 | 4.2 |
| 60°-70° | 11.8 | 0.8 |
| 70°-80° | 1.8 | 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° | 799.8 | 54.1 |
| 0°-40° | 1182.7 | 80.1 |
| 0°-60° | 1463.1 | 99.0 |
| 0°-90° | 1477.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1477.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1038 | 1038 | 1038 | 1038 | 1038 | |
| 5° | 1505 | 1339 | 986 | 745 | 648 | 162 |
| 15° | 2499 | 1754 | 710 | 290 | 214 | 706 |
| 25° | 2753 | 1593 | 348 | 129 | 99 | 1258 |
| 35° | 2340 | 1035 | 159 | 74 | 61 | 1428 |
| 45° | 1111 | 420 | 71 | 37 | 27 | 896 |
| 55° | 260 | 64 | 27 | 10 | 3 | 268 |
| 65° | 36 | 21 | 6 | 1 | 0 | 36 |
| 75° | 2 | 1 | 2 | 1 | 0 | 5 |
| 85° | 0 | 1 | 2 | 1 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P130170

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 |
| 2.5° | 1268.7 | 1261.2 | 1279.4 | 1254.6 | 1231.4 | 1236.4 | 1233.1 | 1224.8 | 1220.6 | 1197.4 | 1165.1 |
| 5° | 1504.7 | 1504.7 | 1516.3 | 1484.0 | 1450.8 | 1448.4 | 1455.8 | 1406.1 | 1387.1 | 1339.1 | 1290.2 |
| 7.5° | 1787.9 | 1794.5 | 1799.5 | 1746.5 | 1704.2 | 1672.8 | 1623.9 | 1585.8 | 1542.8 | 1469.9 | 1399.5 |
| 10° | 2090.1 | 2091.8 | 2095.1 | 2021.4 | 1966.8 | 1917.9 | 1842.5 | 1773.0 | 1691.0 | 1591.6 | 1486.5 |
| 12.5° | 2319.5 | 2330.3 | 2336.1 | 2254.9 | 2186.2 | 2123.3 | 2037.1 | 1940.3 | 1835.1 | 1687.7 | 1545.2 |
| 15° | 2499.2 | 2508.3 | 2519.1 | 2434.6 | 2349.3 | 2289.7 | 2187.0 | 2073.6 | 1928.7 | 1753.9 | 1579.2 |
| 17.5° | 2620.1 | 2636.7 | 2646.6 | 2556.4 | 2468.6 | 2397.4 | 2286.4 | 2148.9 | 1989.9 | 1826.0 | 1580.0 |
| 20° | 2703.8 | 2721.2 | 2725.3 | 2635.0 | 2538.2 | 2464.4 | 2336.9 | 2181.2 | 1995.7 | 1763.0 | 1541.1 |
| 22.5° | 2748.5 | 2762.6 | 2770.0 | 2669.8 | 2567.1 | 2484.3 | 2341.1 | 2159.7 | 1948.5 | 1697.6 | 1470.7 |
| 25° | 2752.6 | 2770.0 | 2771.7 | 2661.5 | 2552.2 | 2457.0 | 2293.0 | 2085.2 | 1846.7 | 1593.3 | 1373.8 |
| 27.5° | 2715.4 | 2732.8 | 2729.4 | 2616.0 | 2495.9 | 2384.1 | 2187.9 | 1961.0 | 1708.4 | 1476.5 | 1261.2 |
| 30° | 2625.9 | 2688.0 | 2640.8 | 2526.6 | 2394.1 | 2260.7 | 2032.2 | 1782.9 | 1551.9 | 1339.1 | 1132.0 |
| 32.5° | 2506.7 | 2523.2 | 2508.3 | 2382.5 | 2223.5 | 2071.1 | 1830.1 | 1584.2 | 1388.7 | 1167.6 | 991.2 |
| 35° | 2340.2 | 2346.0 | 2316.2 | 2171.3 | 1986.6 | 1809.4 | 1593.3 | 1397.0 | 1223.1 | 1035.1 | 847.2 |
| 37.5° | 2094.3 | 2102.6 | 2071.1 | 1903.8 | 1730.7 | 1564.3 | 1394.5 | 1214.0 | 1045.1 | 874.5 | 716.3 |
| 40° | 1803.6 | 1786.2 | 1734.1 | 1594.1 | 1454.2 | 1326.6 | 1180.1 | 1021.1 | 863.7 | 715.5 | 559.8 |
| 42.5° | 1470.7 | 1459.1 | 1414.4 | 1302.6 | 1170.9 | 1063.3 | 934.9 | 795.0 | 669.9 | 545.7 | 428.1 |
| 45° | 1111.3 | 1120.4 | 1085.6 | 1007.8 | 916.7 | 824.0 | 727.1 | 622.7 | 523.4 | 419.9 | 318.0 |
| 47.5° | 873.7 | 879.5 | 862.1 | 793.3 | 727.9 | 642.6 | 565.6 | 476.2 | 386.7 | 297.3 | 234.4 |
| 50° | 669.1 | 679.0 | 665.8 | 611.1 | 549.0 | 488.6 | 411.6 | 321.3 | 252.6 | 194.6 | 154.9 |
| 52.5° | 473.7 | 471.2 | 456.3 | 404.1 | 351.9 | 299.8 | 231.9 | 178.0 | 141.6 | 111.0 | 90.3 |
| 55° | 260.0 | 259.2 | 236.8 | 207.0 | 166.4 | 135.8 | 108.5 | 86.1 | 73.7 | 63.8 | 55.5 |
| 57.5° | 116.8 | 111.8 | 105.2 | 90.3 | 77.8 | 69.6 | 61.3 | 55.5 | 52.2 | 47.2 | 43.1 |
| 60° | 65.4 | 65.4 | 63.8 | 58.0 | 54.7 | 50.5 | 47.2 | 43.9 | 40.6 | 37.3 | 34.0 |
| 62.5° | 48.0 | 48.0 | 46.4 | 43.9 | 41.4 | 38.9 | 36.4 | 34.0 | 31.5 | 29.0 | 26.5 |
| 65° | 35.6 | 34.8 | 34.8 | 32.3 | 30.6 | 29.0 | 27.3 | 25.7 | 23.2 | 20.7 | 19.0 |
| 67.5° | 24.0 | 24.8 | 24.8 | 22.4 | 21.5 | 19.9 | 19.0 | 17.4 | 15.7 | 14.1 | 12.4 |
| 70° | 14.9 | 14.9 | 14.1 | 14.1 | 12.4 | 11.6 | 10.8 | 9.9 | 8.3 | 7.5 | 6.6 |
| 72.5° | 7.5 | 7.5 | 6.6 | 6.6 | 5.8 | 5.8 | 5.0 | 4.1 | 4.1 | 3.3 | 2.5 |
| 75° | 2.5 | 2.5 | 2.5 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 0.8 | 0.8 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 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° | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 |
| 2.5° | 1162.7 | 1136.2 | 1127.1 | 1106.4 | 1088.1 | 1068.3 | 1059.1 | 1016.9 | 1011.9 | 978.8 | 963.9 |
| 5° | 1271.1 | 1223.1 | 1193.3 | 1153.6 | 1114.6 | 1074.9 | 1061.6 | 986.3 | 963.9 | 917.5 | 887.7 |
| 7.5° | 1362.2 | 1314.2 | 1236.4 | 1177.6 | 1117.1 | 1058.3 | 1011.9 | 937.4 | 900.2 | 844.7 | 800.0 |
| 10° | 1424.3 | 1331.6 | 1256.2 | 1179.2 | 1097.2 | 1021.9 | 954.8 | 870.3 | 822.3 | 757.7 | 703.9 |
| 12.5° | 1458.3 | 1342.4 | 1247.1 | 1152.7 | 1055.0 | 965.6 | 885.2 | 796.6 | 737.8 | 659.2 | 605.3 |
| 15° | 1465.8 | 1329.9 | 1213.2 | 1103.0 | 993.7 | 893.5 | 804.9 | 709.7 | 645.1 | 568.1 | 506.0 |
| 17.5° | 1445.0 | 1292.7 | 1156.9 | 1038.4 | 915.1 | 811.5 | 719.6 | 619.4 | 549.0 | 477.8 | 409.9 |
| 20° | 1392.0 | 1227.3 | 1084.8 | 954.8 | 825.6 | 719.6 | 625.2 | 527.5 | 454.6 | 385.1 | 330.4 |
| 22.5° | 1310.1 | 1142.8 | 993.7 | 861.2 | 731.2 | 626.9 | 526.7 | 433.9 | 366.9 | 308.1 | 270.0 |
| 25° | 1192.5 | 1040.9 | 893.5 | 759.4 | 631.8 | 532.5 | 433.9 | 347.8 | 296.5 | 252.6 | 221.9 |
| 27.5° | 1095.6 | 924.2 | 785.9 | 653.4 | 544.9 | 438.1 | 347.8 | 282.4 | 246.8 | 210.3 | 183.8 |
| 30° | 977.2 | 803.3 | 670.8 | 552.3 | 440.6 | 351.9 | 282.4 | 233.5 | 203.7 | 173.1 | 154.0 |
| 32.5° | 842.2 | 683.2 | 560.6 | 453.8 | 351.9 | 284.9 | 233.5 | 193.8 | 168.1 | 145.7 | 129.2 |
| 35° | 703.9 | 568.9 | 467.1 | 356.1 | 278.2 | 231.0 | 190.5 | 159.0 | 140.0 | 121.7 | 109.3 |
| 37.5° | 579.7 | 451.3 | 347.8 | 278.2 | 222.8 | 186.3 | 155.7 | 133.3 | 117.6 | 102.7 | 93.6 |
| 40° | 453.0 | 342.0 | 265.0 | 219.4 | 178.0 | 149.1 | 129.2 | 110.1 | 98.5 | 87.0 | 79.5 |
| 42.5° | 338.7 | 261.7 | 210.3 | 173.9 | 144.1 | 123.4 | 106.0 | 90.3 | 82.0 | 72.9 | 66.2 |
| 45° | 251.7 | 197.9 | 163.1 | 136.6 | 114.3 | 96.9 | 82.8 | 71.2 | 64.6 | 58.0 | 53.0 |
| 47.5° | 184.7 | 146.6 | 120.1 | 101.0 | 82.0 | 72.0 | 61.3 | 54.7 | 50.5 | 45.5 | 43.1 |
| 50° | 122.6 | 96.9 | 80.3 | 68.7 | 58.8 | 53.0 | 47.2 | 43.1 | 40.6 | 37.3 | 34.0 |
| 52.5° | 73.7 | 62.1 | 54.7 | 49.7 | 44.7 | 42.2 | 38.1 | 34.8 | 32.3 | 29.0 | 26.5 |
| 55° | 50.5 | 46.4 | 42.2 | 39.7 | 36.4 | 33.1 | 29.8 | 27.3 | 24.8 | 23.2 | 20.7 |
| 57.5° | 40.6 | 37.3 | 34.0 | 31.5 | 28.2 | 26.5 | 24.0 | 20.7 | 19.0 | 17.4 | 14.9 |
| 60° | 31.5 | 29.0 | 25.7 | 24.8 | 21.5 | 19.9 | 17.4 | 14.9 | 14.1 | 11.6 | 9.9 |
| 62.5° | 24.0 | 21.5 | 19.0 | 18.2 | 15.7 | 14.1 | 11.6 | 9.9 | 8.3 | 6.6 | 5.8 |
| 65° | 17.4 | 15.7 | 13.2 | 11.6 | 9.9 | 8.3 | 7.5 | 5.8 | 5.0 | 3.3 | 2.5 |
| 67.5° | 10.8 | 9.1 | 8.3 | 6.6 | 5.8 | 5.0 | 4.1 | 2.5 | 2.5 | 1.7 | 1.7 |
| 70° | 5.8 | 5.0 | 4.1 | 3.3 | 2.5 | 2.5 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 72.5° | 2.5 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 75° | 0.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 77.5° | 0.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 80° | 0.8 | 0.8 | 1.7 | 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 | 0.8 |
| 85° | 0.8 | 0.8 | 0.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 0.8 |
| 87.5° | 0.8 | 0.8 | 0.8 | 1.7 | 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° | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 | 1037.6 |
| 2.5° | 958.1 | 939.1 | 934.9 | 913.4 | 907.6 | 891.9 | 866.2 | 840.5 | 859.6 | 850.5 | 854.6 |
| 5° | 864.5 | 835.6 | 822.3 | 786.7 | 767.7 | 745.3 | 731.2 | 705.5 | 693.1 | 690.6 | 674.1 |
| 7.5° | 763.5 | 729.6 | 702.2 | 669.1 | 657.5 | 618.6 | 591.3 | 567.3 | 547.4 | 539.9 | 522.5 |
| 10° | 665.8 | 619.4 | 587.1 | 547.4 | 519.2 | 490.2 | 462.9 | 435.6 | 419.9 | 405.8 | 386.7 |
| 12.5° | 561.5 | 514.3 | 474.5 | 431.4 | 398.3 | 374.3 | 345.3 | 323.8 | 314.7 | 303.1 | 293.2 |
| 15° | 457.9 | 405.8 | 372.6 | 339.5 | 313.0 | 289.8 | 273.3 | 258.4 | 247.6 | 236.8 | 228.6 |
| 17.5° | 362.7 | 325.4 | 301.4 | 267.5 | 250.9 | 231.0 | 217.0 | 205.4 | 194.6 | 187.2 | 180.5 |
| 20° | 292.3 | 261.7 | 241.0 | 219.4 | 202.1 | 185.5 | 173.9 | 165.6 | 159.0 | 153.2 | 149.1 |
| 22.5° | 242.6 | 217.0 | 195.4 | 178.0 | 165.6 | 155.7 | 146.6 | 137.5 | 130.8 | 127.5 | 124.2 |
| 25° | 197.1 | 176.4 | 161.5 | 149.1 | 139.1 | 129.2 | 119.2 | 114.3 | 111.0 | 106.8 | 105.2 |
| 27.5° | 164.0 | 148.2 | 136.6 | 125.0 | 116.8 | 109.3 | 105.2 | 98.5 | 95.2 | 92.7 | 91.9 |
| 30° | 138.3 | 125.0 | 115.1 | 106.8 | 100.2 | 95.2 | 91.1 | 87.0 | 84.5 | 82.8 | 81.2 |
| 32.5° | 116.8 | 106.8 | 99.4 | 92.7 | 87.8 | 84.5 | 81.2 | 77.8 | 76.2 | 73.7 | 72.9 |
| 35° | 100.2 | 91.9 | 87.0 | 81.2 | 77.8 | 74.5 | 72.0 | 69.6 | 67.9 | 65.4 | 64.6 |
| 37.5° | 86.1 | 80.3 | 76.2 | 71.2 | 67.9 | 65.4 | 62.9 | 60.5 | 58.8 | 57.1 | 56.3 |
| 40° | 75.4 | 69.6 | 65.4 | 61.3 | 58.8 | 55.5 | 53.0 | 50.5 | 49.7 | 48.0 | 47.2 |
| 42.5° | 62.1 | 57.1 | 53.8 | 50.5 | 48.0 | 46.4 | 43.9 | 41.4 | 40.6 | 38.9 | 38.9 |
| 45° | 49.7 | 46.4 | 43.9 | 41.4 | 39.7 | 37.3 | 34.8 | 33.1 | 31.5 | 30.6 | 29.0 |
| 47.5° | 40.6 | 38.1 | 35.6 | 32.3 | 30.6 | 28.2 | 26.5 | 25.7 | 24.0 | 23.2 | 22.4 |
| 50° | 32.3 | 29.0 | 27.3 | 24.8 | 23.2 | 21.5 | 20.7 | 18.2 | 17.4 | 16.6 | 15.7 |
| 52.5° | 24.8 | 23.2 | 21.5 | 19.0 | 17.4 | 15.7 | 14.1 | 12.4 | 11.6 | 9.9 | 9.1 |
| 55° | 19.0 | 17.4 | 14.9 | 13.2 | 11.6 | 9.9 | 9.1 | 7.5 | 5.8 | 5.0 | 5.0 |
| 57.5° | 13.2 | 11.6 | 9.9 | 8.3 | 6.6 | 5.8 | 4.1 | 3.3 | 2.5 | 2.5 | 1.7 |
| 60° | 8.3 | 6.6 | 5.8 | 4.1 | 3.3 | 2.5 | 1.7 | 1.7 | 0.8 | 0.8 | 0.8 |
| 62.5° | 5.0 | 3.3 | 2.5 | 1.7 | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 65° | 2.5 | 1.7 | 1.7 | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 67.5° | 1.7 | 1.7 | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 70° | 1.7 | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 |
| 72.5° | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 |
| 75° | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 |
| 77.5° | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 |
| 80° | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 |
| 82.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 | 0.0 |
| 85° | 1.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | 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: P130170

CATALOG NUMBER: HL612ICAT - HLM6930 - HL6FL - 455TBZ

CANDELA DISTRIBUTION (continued):

| | 165° | 170° | 175° | 180° |
|-------|--------|--------|--------|--------|
| 0° | 1037.6 | 1037.6 | 1037.6 | 1037.6 |
| 2.5° | 843.8 | 828.1 | 828.1 | 815.7 |
| 5° | 672.4 | 650.9 | 660.0 | 647.6 |
| 7.5° | 518.4 | 504.3 | 510.9 | 495.2 |
| 10° | 384.2 | 373.5 | 371.0 | 362.7 |
| 12.5° | 288.2 | 279.9 | 277.4 | 270.0 |
| 15° | 223.6 | 217.0 | 217.0 | 213.7 |
| 17.5° | 176.4 | 171.4 | 172.2 | 171.4 |
| 20° | 145.7 | 141.6 | 140.8 | 139.1 |
| 22.5° | 121.7 | 117.6 | 117.6 | 116.8 |
| 25° | 102.7 | 100.2 | 100.2 | 99.4 |
| 27.5° | 89.4 | 87.8 | 87.8 | 87.0 |
| 30° | 79.5 | 77.8 | 77.8 | 76.2 |
| 32.5° | 71.2 | 69.6 | 70.4 | 69.6 |
| 35° | 62.9 | 62.1 | 62.1 | 61.3 |
| 37.5° | 55.5 | 53.8 | 53.8 | 53.0 |
| 40° | 46.4 | 45.5 | 46.4 | 44.7 |
| 42.5° | 37.3 | 36.4 | 37.3 | 36.4 |
| 45° | 28.2 | 27.3 | 28.2 | 27.3 |
| 47.5° | 21.5 | 20.7 | 19.9 | 19.9 |
| 50° | 14.9 | 14.1 | 14.1 | 13.2 |
| 52.5° | 9.1 | 8.3 | 8.3 | 7.5 |
| 55° | 4.1 | 4.1 | 3.3 | 3.3 |
| 57.5° | 1.7 | 1.7 | 0.8 | 0.8 |
| 60° | 0.8 | 0.8 | 0.8 | 0.8 |
| 62.5° | 0.8 | 0.8 | 0.8 | 0.0 |
| 65° | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)