

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: McGRAW-EDISON

Report Number: P154563

Luminaire Tested: **TLM-F04-LED-E1-T2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P154563
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33671)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F04-LED-E1-T2-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (28) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8538.8 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 2.21 / 4.51 / 2.52
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

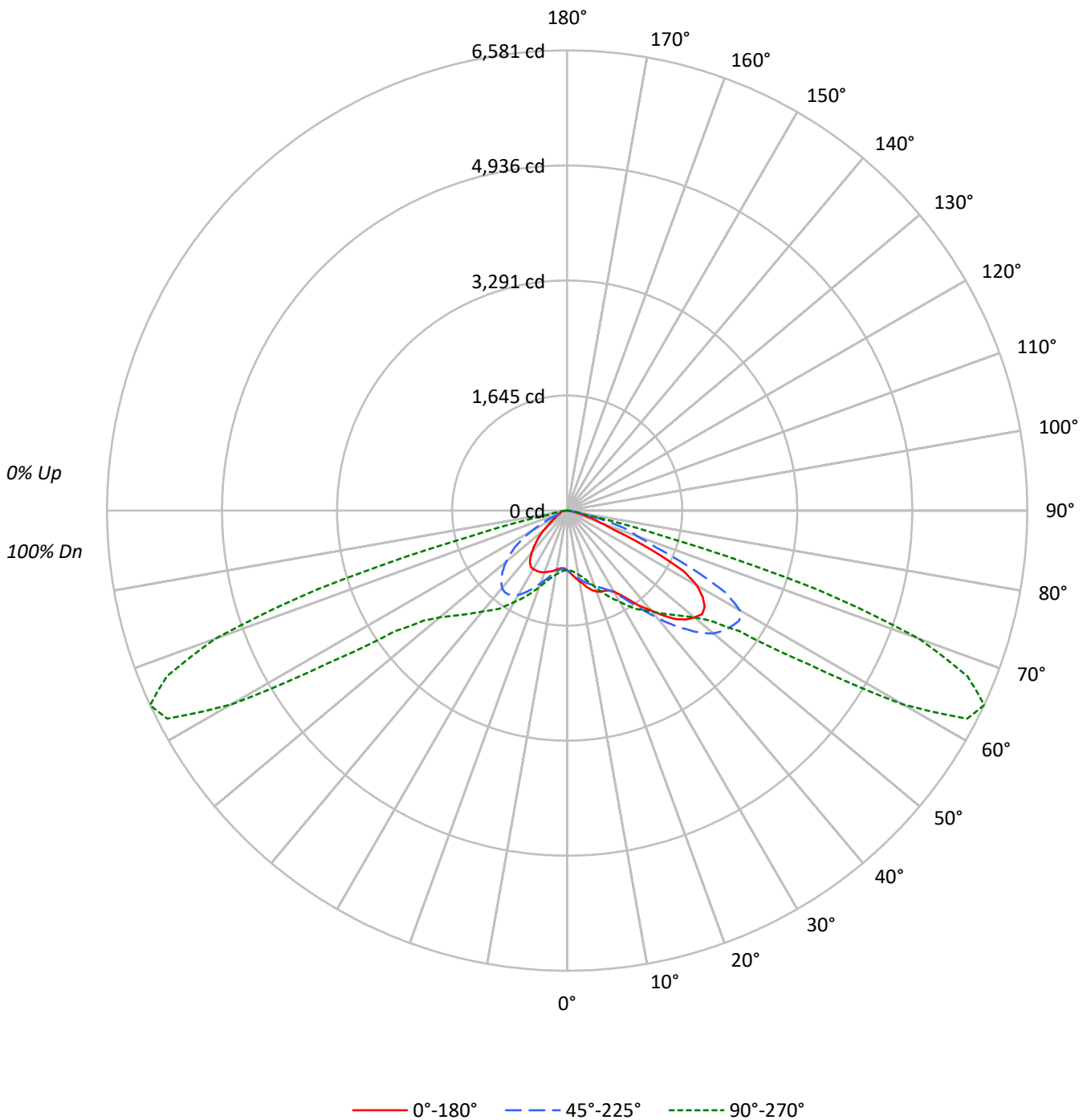
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P154563

CATALOG NUMBER: TLM-F04-LED-E1-T2-8030

Luminous Intensity Polar Plot





TEST NUMBER: P154563

CATALOG NUMBER: TLM-F04-LED-E1-T2-8030

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 107 | 101 | 96 | 91 | 104 | 98 | 94 | 90 | 94 | 90 | 87 | 90 | 87 | 84 | 86 | 84 | 81 | 79 |
| 2 | 94 | 84 | 76 | 69 | 91 | 82 | 75 | 68 | 78 | 72 | 66 | 75 | 70 | 65 | 72 | 67 | 63 | 61 |
| 3 | 84 | 71 | 61 | 53 | 81 | 69 | 60 | 53 | 66 | 58 | 51 | 63 | 56 | 50 | 60 | 54 | 50 | 47 |
| 4 | 75 | 60 | 50 | 42 | 72 | 59 | 49 | 41 | 56 | 48 | 41 | 54 | 46 | 40 | 51 | 45 | 39 | 37 |
| 5 | 67 | 52 | 42 | 34 | 65 | 51 | 41 | 33 | 49 | 40 | 33 | 46 | 39 | 33 | 44 | 38 | 32 | 30 |
| 6 | 61 | 46 | 35 | 28 | 59 | 45 | 35 | 27 | 43 | 34 | 27 | 41 | 33 | 27 | 39 | 32 | 27 | 24 |
| 7 | 56 | 40 | 30 | 23 | 54 | 40 | 30 | 23 | 38 | 29 | 23 | 36 | 28 | 23 | 35 | 28 | 22 | 20 |
| 8 | 52 | 36 | 26 | 20 | 50 | 35 | 26 | 20 | 34 | 26 | 19 | 33 | 25 | 19 | 31 | 24 | 19 | 17 |
| 9 | 48 | 33 | 23 | 17 | 46 | 32 | 23 | 17 | 31 | 23 | 17 | 30 | 22 | 17 | 28 | 22 | 17 | 15 |
| 10 | 45 | 30 | 21 | 15 | 43 | 29 | 21 | 15 | 28 | 20 | 15 | 27 | 20 | 15 | 26 | 19 | 15 | 13 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|--------|-------|
| 0° | 13715 | 13715 | 13715 |
| 5° | 14996 | 14053 | 13334 |
| 10° | 16777 | 15201 | 13927 |
| 15° | 19004 | 16980 | 14972 |
| 20° | 21077 | 19885 | 16042 |
| 25° | 22445 | 23631 | 17094 |
| 30° | 24782 | 27936 | 17922 |
| 35° | 30682 | 33706 | 18165 |
| 40° | 38945 | 39530 | 16541 |
| 45° | 49875 | 47828 | 13952 |
| 50° | 59417 | 59255 | 10890 |
| 55° | 67262 | 84227 | 7753 |
| 60° | 68863 | 177932 | 6089 |
| 65° | 50643 | 250168 | 5121 |
| 70° | 24045 | 251698 | 5064 |
| 75° | 13091 | 93475 | 6170 |
| 80° | 6189 | 14951 | 7910 |
| 85° | 2912 | 9253 | 9253 |



TEST NUMBER: P154563

CATALOG NUMBER: TLM-F04-LED-E1-T2-8030

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 85.5 | 1.0 |
| 10°-20° | 293.6 | 3.4 |
| 20°-30° | 576.9 | 6.8 |
| 30°-40° | 958.6 | 11.2 |
| 40°-50° | 1408.5 | 16.5 |
| 50°-60° | 1950.0 | 22.8 |
| 60°-70° | 2327.5 | 27.3 |
| 70°-80° | 823.1 | 9.6 |
| 80°-90° | 115.0 | 1.3 |
| 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° | 956.0 | 11.2 |
| 0°-40° | 1914.6 | 22.4 |
| 0°-60° | 5273.1 | 61.8 |
| 0°-90° | 8538.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 8538.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 854 | 854 | 854 | 854 | 854 | |
| 5° | 930 | 912 | 871 | 838 | 827 | 92 |
| 15° | 1143 | 1071 | 1021 | 980 | 900 | 325 |
| 25° | 1266 | 1228 | 1333 | 1253 | 964 | 590 |
| 35° | 1564 | 1617 | 1719 | 1464 | 926 | 1000 |
| 45° | 2195 | 2396 | 2105 | 1327 | 614 | 1680 |
| 55° | 2401 | 2879 | 3007 | 907 | 277 | 2104 |
| 65° | 1332 | 1985 | 6581 | 281 | 135 | 1299 |
| 75° | 211 | 597 | 1506 | 112 | 99 | 260 |
| 85° | 16 | 32 | 50 | 86 | 50 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P154563

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 61° | 62° | 64° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 |
| 2.5° | 890.9 | 891.8 | 890.0 | 889.0 | 886.2 | 881.6 | 877.9 | 874.2 | 874.2 | 874.2 | 871.4 |
| 5° | 929.9 | 931.8 | 928.1 | 925.3 | 916.9 | 912.3 | 905.8 | 901.1 | 899.3 | 898.3 | 895.5 |
| 7.5° | 979.1 | 976.4 | 970.8 | 968.9 | 962.4 | 952.2 | 940.1 | 930.8 | 930.8 | 929.9 | 930.8 |
| 10° | 1028.4 | 1020.9 | 1018.2 | 1015.4 | 1005.2 | 992.2 | 978.2 | 968.0 | 967.1 | 966.1 | 963.4 |
| 12.5° | 1077.6 | 1074.8 | 1072.0 | 1061.8 | 1051.6 | 1031.2 | 1015.4 | 1005.2 | 1004.2 | 1005.2 | 1001.4 |
| 15° | 1142.6 | 1136.1 | 1133.4 | 1115.7 | 1093.4 | 1071.1 | 1051.6 | 1042.3 | 1039.5 | 1040.5 | 1037.7 |
| 17.5° | 1192.8 | 1192.8 | 1186.3 | 1166.8 | 1138.0 | 1107.3 | 1086.9 | 1081.3 | 1080.4 | 1080.4 | 1081.3 |
| 20° | 1232.8 | 1231.8 | 1225.3 | 1209.5 | 1175.2 | 1144.5 | 1134.3 | 1132.4 | 1131.5 | 1131.5 | 1134.3 |
| 22.5° | 1255.1 | 1253.2 | 1250.4 | 1232.8 | 1205.8 | 1185.4 | 1186.3 | 1191.9 | 1193.7 | 1195.6 | 1199.3 |
| 25° | 1266.2 | 1263.4 | 1262.5 | 1250.4 | 1230.9 | 1228.1 | 1244.8 | 1259.7 | 1263.4 | 1267.1 | 1271.8 |
| 27.5° | 1284.8 | 1280.1 | 1282.0 | 1277.3 | 1272.7 | 1281.1 | 1315.4 | 1331.2 | 1334.0 | 1338.7 | 1341.4 |
| 30° | 1335.9 | 1334.0 | 1341.4 | 1343.3 | 1347.0 | 1359.1 | 1390.7 | 1405.5 | 1412.1 | 1412.1 | 1425.1 |
| 32.5° | 1433.4 | 1434.3 | 1436.2 | 1455.7 | 1462.2 | 1470.6 | 1487.3 | 1499.4 | 1500.3 | 1501.2 | 1513.3 |
| 35° | 1564.4 | 1570.0 | 1585.8 | 1602.5 | 1618.3 | 1617.4 | 1607.1 | 1613.6 | 1609.0 | 1614.6 | 1615.5 |
| 37.5° | 1729.8 | 1722.3 | 1745.6 | 1783.6 | 1807.8 | 1801.3 | 1755.8 | 1726.0 | 1734.4 | 1730.7 | 1727.9 |
| 40° | 1857.0 | 1865.4 | 1910.0 | 1960.1 | 1978.7 | 1999.2 | 1939.7 | 1888.6 | 1881.2 | 1867.3 | 1858.9 |
| 42.5° | 2032.6 | 2033.5 | 2069.8 | 2106.9 | 2160.8 | 2205.4 | 2167.3 | 2093.9 | 2071.6 | 2054.9 | 2018.7 |
| 45° | 2195.2 | 2192.4 | 2222.1 | 2267.6 | 2331.7 | 2395.8 | 2409.8 | 2329.9 | 2321.5 | 2291.8 | 2244.4 |
| 47.5° | 2303.9 | 2300.2 | 2320.6 | 2380.0 | 2484.1 | 2589.1 | 2646.7 | 2622.5 | 2606.7 | 2594.6 | 2520.3 |
| 50° | 2377.3 | 2369.8 | 2393.1 | 2456.2 | 2572.3 | 2734.0 | 2884.5 | 2904.9 | 2898.4 | 2898.4 | 2851.0 |
| 52.5° | 2432.1 | 2432.1 | 2448.8 | 2499.9 | 2617.9 | 2819.5 | 3088.9 | 3192.0 | 3200.3 | 3209.6 | 3206.8 |
| 55° | 2401.4 | 2406.1 | 2447.9 | 2522.2 | 2646.7 | 2878.9 | 3257.9 | 3483.7 | 3530.1 | 3569.1 | 3613.7 |
| 57.5° | 2296.4 | 2312.2 | 2368.0 | 2489.7 | 2654.1 | 2923.5 | 3445.6 | 3892.4 | 4023.4 | 4136.8 | 4313.3 |
| 60° | 2143.2 | 2163.6 | 2244.4 | 2399.6 | 2599.3 | 2851.0 | 3511.5 | 4238.0 | 4446.1 | 4693.2 | 5154.0 |
| 62.5° | 1880.3 | 1900.7 | 1979.7 | 2134.8 | 2305.7 | 2573.3 | 3238.4 | 4289.1 | 4621.7 | 4971.9 | 5668.6 |
| 65° | 1332.2 | 1299.6 | 1390.7 | 1530.0 | 1726.0 | 1985.2 | 2616.9 | 3946.3 | 4424.7 | 4899.4 | 5759.7 |
| 67.5° | 742.3 | 739.5 | 795.2 | 899.3 | 1086.9 | 1365.6 | 1803.2 | 3026.6 | 3467.0 | 4004.8 | 5061.1 |
| 70° | 511.9 | 517.4 | 552.7 | 665.2 | 820.3 | 1060.9 | 1284.8 | 1900.7 | 2217.5 | 2582.6 | 3621.2 |
| 72.5° | 359.5 | 371.6 | 391.1 | 458.0 | 616.8 | 893.7 | 1312.6 | 1136.1 | 1294.1 | 1543.0 | 2177.5 |
| 75° | 210.9 | 219.2 | 233.2 | 265.7 | 351.2 | 597.3 | 1359.1 | 998.7 | 998.7 | 1057.2 | 1317.3 |
| 77.5° | 130.1 | 130.1 | 138.4 | 151.4 | 186.7 | 292.6 | 968.0 | 1122.2 | 1090.6 | 1057.2 | 1060.0 |
| 80° | 66.9 | 71.5 | 83.6 | 90.1 | 104.0 | 133.8 | 434.8 | 1047.0 | 1148.2 | 1216.0 | 1168.7 |
| 82.5° | 30.7 | 34.4 | 51.1 | 54.8 | 60.4 | 70.6 | 149.6 | 595.5 | 798.0 | 1050.7 | 1312.6 |
| 85° | 15.8 | 15.8 | 26.9 | 33.4 | 36.2 | 32.5 | 54.8 | 240.6 | 364.2 | 555.5 | 869.5 |
| 87.5° | 2.8 | 2.8 | 4.6 | 5.6 | 8.4 | 7.4 | 9.3 | 13.9 | 23.2 | 25.1 | 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 |



TEST NUMBER: P154563

CATALOG NUMBER: TLM-F04-LED-E1-T2-8030

CANDELA DISTRIBUTION (continued):

| | 65° | 66° | 67° | 68° | 69° | 70° | 71° | 72° | 73° | 74° | 75° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 |
| 2.5° | 870.5 | 871.4 | 870.5 | 869.5 | 867.7 | 867.7 | 867.7 | 866.7 | 866.7 | 866.7 | 865.8 |
| 5° | 895.5 | 891.8 | 892.8 | 890.9 | 890.0 | 889.0 | 890.0 | 888.1 | 886.2 | 887.2 | 886.2 |
| 7.5° | 927.1 | 925.3 | 921.5 | 921.5 | 920.6 | 918.8 | 918.8 | 916.0 | 915.0 | 913.2 | 912.3 |
| 10° | 962.4 | 957.8 | 959.6 | 957.8 | 958.7 | 955.0 | 953.1 | 951.3 | 949.4 | 949.4 | 950.3 |
| 12.5° | 998.7 | 997.7 | 994.9 | 993.1 | 993.1 | 990.3 | 991.2 | 990.3 | 987.5 | 986.6 | 983.8 |
| 15° | 1035.8 | 1035.8 | 1033.0 | 1034.0 | 1033.0 | 1031.2 | 1029.3 | 1029.3 | 1027.5 | 1025.6 | 1026.5 |
| 17.5° | 1079.5 | 1079.5 | 1079.5 | 1079.5 | 1080.4 | 1077.6 | 1078.5 | 1076.7 | 1074.8 | 1078.5 | 1078.5 |
| 20° | 1136.1 | 1139.9 | 1139.9 | 1138.9 | 1143.6 | 1140.8 | 1139.9 | 1144.5 | 1139.9 | 1146.4 | 1145.4 |
| 22.5° | 1201.2 | 1204.9 | 1204.9 | 1208.6 | 1209.5 | 1212.3 | 1214.2 | 1212.3 | 1216.0 | 1219.8 | 1219.8 |
| 25° | 1273.6 | 1277.3 | 1280.1 | 1285.7 | 1288.5 | 1286.6 | 1287.6 | 1292.2 | 1294.1 | 1297.8 | 1301.5 |
| 27.5° | 1349.8 | 1350.7 | 1354.5 | 1361.0 | 1365.6 | 1367.5 | 1368.4 | 1375.8 | 1376.7 | 1378.6 | 1382.3 |
| 30° | 1424.1 | 1433.4 | 1431.6 | 1439.9 | 1442.7 | 1445.5 | 1451.1 | 1453.9 | 1460.4 | 1464.1 | 1464.1 |
| 32.5° | 1511.5 | 1509.6 | 1517.0 | 1523.5 | 1528.2 | 1532.8 | 1537.5 | 1541.2 | 1544.9 | 1546.8 | 1556.0 |
| 35° | 1620.1 | 1623.9 | 1623.9 | 1624.8 | 1635.9 | 1636.9 | 1640.6 | 1648.9 | 1651.7 | 1657.3 | 1661.0 |
| 37.5° | 1727.9 | 1721.4 | 1720.5 | 1720.5 | 1716.8 | 1719.5 | 1720.5 | 1721.4 | 1725.1 | 1726.0 | 1729.8 |
| 40° | 1848.7 | 1840.3 | 1832.9 | 1828.2 | 1820.8 | 1810.6 | 1808.7 | 1804.1 | 1806.9 | 1805.9 | 1806.9 |
| 42.5° | 2014.0 | 1990.8 | 1973.2 | 1960.1 | 1945.3 | 1934.1 | 1925.8 | 1913.7 | 1905.3 | 1895.1 | 1893.3 |
| 45° | 2224.9 | 2181.2 | 2151.5 | 2130.2 | 2108.8 | 2078.1 | 2060.5 | 2041.9 | 2025.2 | 2008.5 | 1994.5 |
| 47.5° | 2501.7 | 2455.3 | 2407.9 | 2368.9 | 2335.5 | 2286.2 | 2236.1 | 2208.2 | 2175.7 | 2146.9 | 2126.4 |
| 50° | 2827.8 | 2772.1 | 2749.8 | 2695.0 | 2653.2 | 2578.9 | 2516.6 | 2471.1 | 2406.1 | 2362.4 | 2324.3 |
| 52.5° | 3161.3 | 3147.4 | 3135.3 | 3088.9 | 3039.6 | 2996.9 | 2942.1 | 2862.2 | 2796.2 | 2746.1 | 2668.0 |
| 55° | 3615.6 | 3622.1 | 3617.5 | 3592.4 | 3574.7 | 3533.8 | 3511.5 | 3441.9 | 3412.1 | 3339.7 | 3257.9 |
| 57.5° | 4380.1 | 4432.2 | 4498.1 | 4524.1 | 4559.4 | 4526.0 | 4565.0 | 4612.4 | 4494.4 | 4535.3 | 4461.9 |
| 60° | 5356.5 | 5595.3 | 5737.4 | 5912.0 | 6026.3 | 6186.1 | 6214.9 | 6256.7 | 6244.6 | 6267.8 | 6315.2 |
| 62.5° | 5952.9 | 6236.2 | 6508.4 | 6706.3 | 6918.1 | 7035.2 | 7176.4 | 7274.8 | 7377.0 | 7445.8 | 7426.3 |
| 65° | 6128.5 | 6420.2 | 6667.3 | 6883.7 | 7073.3 | 7216.3 | 7347.3 | 7470.9 | 7564.7 | 7630.6 | 7669.7 |
| 67.5° | 5483.8 | 5864.7 | 6124.8 | 6378.4 | 6622.7 | 6773.2 | 6882.8 | 7002.7 | 7140.1 | 7254.4 | 7276.7 |
| 70° | 4126.5 | 4697.9 | 5066.7 | 5370.4 | 5657.5 | 5860.0 | 6013.3 | 6124.8 | 6231.6 | 6313.4 | 6402.5 |
| 72.5° | 2580.7 | 3080.5 | 3502.3 | 3896.1 | 4200.9 | 4479.5 | 4608.7 | 4855.8 | 4823.3 | 4885.5 | 4952.4 |
| 75° | 1546.8 | 1790.1 | 2022.4 | 2300.2 | 2459.9 | 2692.2 | 2734.0 | 2774.9 | 2753.5 | 2683.8 | 2735.8 |
| 77.5° | 1074.8 | 1114.8 | 1112.9 | 1097.1 | 1080.4 | 1039.5 | 986.6 | 957.8 | 938.3 | 910.4 | 921.5 |
| 80° | 1081.3 | 994.9 | 863.0 | 725.5 | 599.2 | 515.6 | 482.1 | 482.1 | 516.5 | 565.7 | 615.0 |
| 82.5° | 1292.2 | 1200.2 | 1070.2 | 895.5 | 709.7 | 577.8 | 489.6 | 454.3 | 460.8 | 510.9 | 574.1 |
| 85° | 871.4 | 891.8 | 782.2 | 715.3 | 566.7 | 441.3 | 369.7 | 300.1 | 265.7 | 274.0 | 310.3 |
| 87.5° | 31.6 | 38.1 | 13.9 | 18.6 | 13.0 | 11.1 | 11.1 | 12.1 | 8.4 | 10.2 | 9.3 |
| 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: P154563

CATALOG NUMBER: TLM-F04-LED-E1-T2-8030

CANDELA DISTRIBUTION (continued):

| | 76° | 77° | 78° | 79° | 80° | 81° | 82° | 83° | 84° | 85° | 86° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 |
| 2.5° | 864.9 | 864.0 | 864.0 | 862.1 | 862.1 | 861.2 | 861.2 | 860.2 | 859.3 | 859.3 | 858.4 |
| 5° | 885.3 | 884.4 | 882.5 | 881.6 | 879.7 | 879.7 | 878.8 | 877.0 | 877.0 | 875.1 | 874.2 |
| 7.5° | 914.1 | 912.3 | 910.4 | 909.5 | 908.5 | 905.8 | 905.8 | 903.9 | 903.9 | 902.0 | 901.1 |
| 10° | 948.5 | 946.6 | 944.8 | 945.7 | 942.9 | 942.0 | 940.1 | 940.1 | 937.3 | 936.4 | 936.4 |
| 12.5° | 985.6 | 984.7 | 984.7 | 981.9 | 981.0 | 980.1 | 976.4 | 976.4 | 976.4 | 974.5 | 975.4 |
| 15° | 1025.6 | 1026.5 | 1023.7 | 1026.5 | 1025.6 | 1022.8 | 1022.8 | 1022.8 | 1019.1 | 1023.7 | 1020.0 |
| 17.5° | 1079.5 | 1082.3 | 1080.4 | 1081.3 | 1079.5 | 1079.5 | 1080.4 | 1079.5 | 1081.3 | 1081.3 | 1086.9 |
| 20° | 1146.4 | 1147.3 | 1151.9 | 1150.1 | 1150.1 | 1149.1 | 1151.0 | 1151.9 | 1155.7 | 1153.8 | 1157.5 |
| 22.5° | 1219.8 | 1224.4 | 1225.3 | 1229.0 | 1229.0 | 1228.1 | 1230.0 | 1233.7 | 1235.5 | 1238.3 | 1237.4 |
| 25° | 1303.4 | 1306.1 | 1309.9 | 1305.2 | 1312.6 | 1312.6 | 1314.5 | 1319.2 | 1320.1 | 1320.1 | 1326.6 |
| 27.5° | 1381.4 | 1388.8 | 1389.8 | 1394.4 | 1391.6 | 1393.5 | 1400.0 | 1402.8 | 1406.5 | 1406.5 | 1408.3 |
| 30° | 1469.6 | 1472.4 | 1474.3 | 1479.9 | 1478.9 | 1479.9 | 1480.8 | 1485.4 | 1485.4 | 1490.1 | 1494.7 |
| 32.5° | 1560.7 | 1562.5 | 1564.4 | 1570.0 | 1571.8 | 1575.6 | 1573.7 | 1577.4 | 1582.1 | 1583.0 | 1585.8 |
| 35° | 1669.4 | 1671.2 | 1673.1 | 1681.5 | 1682.4 | 1688.9 | 1690.7 | 1688.9 | 1696.3 | 1691.7 | 1696.3 |
| 37.5° | 1732.5 | 1740.9 | 1742.8 | 1748.3 | 1746.5 | 1751.1 | 1753.9 | 1757.6 | 1759.5 | 1763.2 | 1770.6 |
| 40° | 1809.7 | 1812.4 | 1818.0 | 1820.8 | 1824.5 | 1825.4 | 1829.2 | 1832.0 | 1834.7 | 1843.1 | 1851.5 |
| 42.5° | 1888.6 | 1892.3 | 1895.1 | 1898.8 | 1903.5 | 1907.2 | 1910.0 | 1918.3 | 1920.2 | 1925.8 | 1941.6 |
| 45° | 1984.3 | 1982.4 | 1983.4 | 1984.3 | 1986.2 | 1990.8 | 1999.2 | 2007.5 | 2013.1 | 2026.1 | 2039.1 |
| 47.5° | 2103.2 | 2091.1 | 2086.5 | 2079.1 | 2080.9 | 2091.1 | 2093.0 | 2106.9 | 2118.1 | 2130.2 | 2145.9 |
| 50° | 2283.4 | 2250.9 | 2231.4 | 2211.9 | 2210.0 | 2215.6 | 2223.1 | 2237.9 | 2250.9 | 2266.7 | 2289.0 |
| 52.5° | 2586.3 | 2524.0 | 2485.0 | 2431.1 | 2416.3 | 2413.5 | 2407.9 | 2416.3 | 2420.0 | 2441.4 | 2483.2 |
| 55° | 3199.4 | 3084.2 | 3009.9 | 2926.3 | 2848.3 | 2825.0 | 2780.4 | 2789.7 | 2780.4 | 2793.4 | 2855.7 |
| 57.5° | 4479.5 | 4387.6 | 4315.1 | 4208.3 | 4074.5 | 3932.4 | 3897.1 | 3751.2 | 3780.0 | 3863.6 | 3809.7 |
| 60° | 6338.4 | 6305.0 | 6253.0 | 6201.9 | 6018.9 | 5915.7 | 5747.6 | 5729.0 | 5611.0 | 5612.0 | 5534.9 |
| 62.5° | 7378.9 | 7421.6 | 7390.0 | 7375.2 | 7365.0 | 7332.4 | 7248.8 | 7148.5 | 6998.0 | 6889.3 | 6729.5 |
| 65° | 7676.2 | 7639.9 | 7605.6 | 7600.9 | 7598.1 | 7651.1 | 7663.2 | 7592.6 | 7456.0 | 7286.9 | 7103.0 |
| 67.5° | 7329.7 | 7309.2 | 7311.1 | 7272.1 | 7296.2 | 7388.2 | 7452.3 | 7432.8 | 7307.4 | 7103.0 | 6868.9 |
| 70° | 6504.7 | 6464.8 | 6505.7 | 6556.7 | 6593.0 | 6645.9 | 6710.0 | 6725.8 | 6611.6 | 6401.6 | 6162.9 |
| 72.5° | 4870.6 | 4877.1 | 4916.2 | 4930.1 | 5076.0 | 5061.1 | 5118.7 | 4931.0 | 4848.4 | 4648.6 | 4526.0 |
| 75° | 2563.1 | 2521.3 | 2629.9 | 2399.6 | 2304.8 | 2370.8 | 2185.9 | 2008.5 | 2045.6 | 2076.3 | 1855.2 |
| 77.5° | 905.8 | 847.2 | 747.8 | 707.9 | 589.0 | 498.9 | 407.8 | 367.9 | 346.5 | 335.4 | 321.4 |
| 80° | 650.3 | 668.9 | 648.4 | 600.1 | 510.0 | 408.8 | 322.4 | 254.5 | 218.3 | 198.8 | 185.8 |
| 82.5° | 657.7 | 731.1 | 763.6 | 749.7 | 667.9 | 505.4 | 333.5 | 212.7 | 157.9 | 131.9 | 122.6 |
| 85° | 353.0 | 386.5 | 371.6 | 313.1 | 281.5 | 168.1 | 115.2 | 77.1 | 65.0 | 59.5 | 54.8 |
| 87.5° | 13.9 | 11.1 | 9.3 | 9.3 | 10.2 | 11.1 | 9.3 | 10.2 | 9.3 | 9.3 | 9.3 |
| 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: P154563

CATALOG NUMBER: TLM-F04-LED-E1-T2-8030

CANDELA DISTRIBUTION (continued):

| | 87° | 88° | 89° | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 | 853.7 |
| 2.5° | 856.5 | 856.5 | 856.5 | 855.6 | 853.7 | 849.1 | 844.4 | 840.7 | 837.9 | 835.2 | 831.4 |
| 5° | 873.2 | 871.4 | 871.4 | 871.4 | 864.0 | 856.5 | 850.0 | 843.5 | 837.9 | 833.3 | 829.6 |
| 7.5° | 901.1 | 900.2 | 896.5 | 895.5 | 890.0 | 877.9 | 870.5 | 859.3 | 852.8 | 846.3 | 844.4 |
| 10° | 934.6 | 933.6 | 932.7 | 931.8 | 924.3 | 912.3 | 903.0 | 892.8 | 883.5 | 874.2 | 864.9 |
| 12.5° | 973.6 | 972.6 | 971.7 | 968.9 | 966.1 | 959.6 | 949.4 | 938.3 | 927.1 | 907.6 | 897.4 |
| 15° | 1021.9 | 1023.7 | 1021.9 | 1020.9 | 1019.1 | 1020.0 | 1013.5 | 997.7 | 980.1 | 955.0 | 933.6 |
| 17.5° | 1086.0 | 1084.1 | 1083.2 | 1086.9 | 1086.0 | 1090.6 | 1088.8 | 1068.3 | 1041.4 | 1001.4 | 964.3 |
| 20° | 1156.6 | 1156.6 | 1160.3 | 1163.1 | 1171.4 | 1183.5 | 1177.9 | 1152.9 | 1103.6 | 1047.9 | 999.6 |
| 22.5° | 1241.1 | 1243.0 | 1246.7 | 1244.8 | 1257.8 | 1277.3 | 1279.2 | 1243.9 | 1179.8 | 1102.7 | 1034.9 |
| 25° | 1329.4 | 1331.2 | 1327.5 | 1333.1 | 1354.5 | 1382.3 | 1387.9 | 1337.7 | 1253.2 | 1152.9 | 1064.6 |
| 27.5° | 1413.0 | 1414.8 | 1414.8 | 1422.3 | 1442.7 | 1490.1 | 1495.7 | 1439.9 | 1327.5 | 1196.5 | 1086.0 |
| 30° | 1494.7 | 1502.2 | 1504.0 | 1505.9 | 1536.5 | 1602.5 | 1614.6 | 1533.7 | 1392.5 | 1229.0 | 1100.8 |
| 32.5° | 1597.8 | 1600.6 | 1604.3 | 1609.0 | 1644.3 | 1725.1 | 1725.1 | 1614.6 | 1434.3 | 1249.5 | 1103.6 |
| 35° | 1708.4 | 1709.3 | 1717.7 | 1718.6 | 1768.8 | 1849.6 | 1833.8 | 1681.5 | 1464.1 | 1244.8 | 1083.2 |
| 37.5° | 1775.3 | 1779.0 | 1787.4 | 1798.5 | 1851.5 | 1965.7 | 1929.5 | 1739.1 | 1469.6 | 1214.2 | 1036.7 |
| 40° | 1858.0 | 1865.4 | 1873.8 | 1884.9 | 1963.9 | 2083.7 | 2010.3 | 1775.3 | 1446.4 | 1153.8 | 967.1 |
| 42.5° | 1947.1 | 1957.4 | 1970.4 | 1990.8 | 2084.6 | 2187.7 | 2071.6 | 1780.9 | 1393.5 | 1086.0 | 884.4 |
| 45° | 2047.5 | 2066.1 | 2080.9 | 2105.1 | 2211.0 | 2277.9 | 2108.8 | 1748.3 | 1326.6 | 996.8 | 796.1 |
| 47.5° | 2163.6 | 2178.5 | 2204.5 | 2230.5 | 2336.4 | 2339.2 | 2112.5 | 1685.2 | 1235.5 | 907.6 | 702.3 |
| 50° | 2306.7 | 2315.9 | 2355.0 | 2370.8 | 2470.2 | 2403.3 | 2085.6 | 1599.7 | 1139.9 | 807.3 | 598.3 |
| 52.5° | 2497.1 | 2510.1 | 2560.3 | 2584.4 | 2655.0 | 2490.6 | 2047.5 | 1506.8 | 1030.2 | 694.9 | 491.4 |
| 55° | 2873.3 | 2930.0 | 2965.3 | 3007.1 | 3052.6 | 2688.5 | 2030.8 | 1407.4 | 906.7 | 564.8 | 389.2 |
| 57.5° | 3929.6 | 3911.0 | 3989.0 | 4083.8 | 4082.9 | 3140.9 | 2131.1 | 1321.9 | 760.8 | 432.0 | 299.1 |
| 60° | 5503.3 | 5520.9 | 5481.0 | 5537.7 | 5357.4 | 3702.0 | 2268.6 | 1231.8 | 596.4 | 321.4 | 228.5 |
| 62.5° | 6672.9 | 6570.7 | 6514.0 | 6447.1 | 6050.5 | 3763.3 | 2168.2 | 1047.0 | 433.8 | 225.7 | 175.6 |
| 65° | 6949.7 | 6829.9 | 6708.2 | 6580.9 | 5982.6 | 3392.6 | 1779.0 | 768.3 | 280.6 | 155.1 | 139.3 |
| 67.5° | 6676.6 | 6484.3 | 6329.1 | 6198.2 | 5481.9 | 2812.0 | 1300.6 | 471.9 | 160.7 | 125.4 | 118.9 |
| 70° | 5968.7 | 5756.0 | 5505.1 | 5358.4 | 4616.1 | 2072.6 | 833.3 | 254.5 | 123.6 | 111.5 | 108.7 |
| 72.5° | 4369.0 | 4194.3 | 3920.3 | 3752.2 | 3314.6 | 1259.7 | 465.4 | 143.1 | 115.2 | 106.8 | 103.1 |
| 75° | 1701.9 | 1610.9 | 1496.6 | 1505.9 | 1344.2 | 557.4 | 210.9 | 123.6 | 112.4 | 105.0 | 101.3 |
| 77.5° | 292.6 | 285.2 | 263.8 | 263.8 | 300.1 | 203.4 | 140.3 | 124.5 | 111.5 | 103.1 | 96.6 |
| 80° | 175.6 | 171.9 | 163.5 | 161.6 | 156.1 | 143.1 | 134.7 | 126.3 | 109.6 | 97.5 | 89.2 |
| 82.5° | 115.2 | 110.5 | 107.8 | 106.8 | 116.1 | 125.4 | 126.3 | 125.4 | 104.0 | 84.5 | 72.5 |
| 85° | 49.2 | 49.2 | 49.2 | 50.2 | 66.9 | 101.3 | 104.0 | 111.5 | 85.5 | 66.0 | 52.0 |
| 87.5° | 8.4 | 10.2 | 10.2 | 11.1 | 12.1 | 22.3 | 27.9 | 36.2 | 28.8 | 27.9 | 25.1 |
| 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: P154563

CATALOG NUMBER: TLM-F04-LED-E1-T2-8030

CANDELA DISTRIBUTION (continued):

| | 165° | 175° | 180° |
|-------|--------|-------|-------|
| 0° | 853.7 | 853.7 | 853.7 |
| 2.5° | 830.5 | 828.7 | 828.7 |
| 5° | 827.7 | 825.9 | 826.8 |
| 7.5° | 838.9 | 835.2 | 836.1 |
| 10° | 859.3 | 855.6 | 853.7 |
| 12.5° | 885.3 | 880.7 | 880.7 |
| 15° | 912.3 | 901.1 | 900.2 |
| 17.5° | 934.6 | 920.6 | 918.8 |
| 20° | 959.6 | 941.1 | 938.3 |
| 22.5° | 982.9 | 957.8 | 954.1 |
| 25° | 999.6 | 968.9 | 964.3 |
| 27.5° | 1007.0 | 970.8 | 967.1 |
| 30° | 1012.6 | 971.7 | 966.1 |
| 32.5° | 1007.0 | 963.4 | 958.7 |
| 35° | 976.4 | 929.0 | 926.2 |
| 37.5° | 923.4 | 870.5 | 866.7 |
| 40° | 853.7 | 798.0 | 788.7 |
| 42.5° | 764.6 | 712.5 | 702.3 |
| 45° | 678.2 | 618.7 | 614.1 |
| 47.5° | 585.3 | 528.6 | 531.4 |
| 50° | 487.7 | 436.6 | 435.7 |
| 52.5° | 394.8 | 350.2 | 347.4 |
| 55° | 311.2 | 279.6 | 276.8 |
| 57.5° | 246.2 | 229.5 | 226.7 |
| 60° | 200.7 | 192.3 | 189.5 |
| 62.5° | 161.6 | 158.9 | 157.9 |
| 65° | 134.7 | 134.7 | 134.7 |
| 67.5° | 117.1 | 118.0 | 118.0 |
| 70° | 107.8 | 108.7 | 107.8 |
| 72.5° | 104.0 | 106.8 | 106.8 |
| 75° | 101.3 | 103.1 | 99.4 |
| 77.5° | 99.4 | 100.3 | 93.8 |
| 80° | 98.5 | 97.5 | 85.5 |
| 82.5° | 85.5 | 82.7 | 72.5 |
| 85° | 78.0 | 59.5 | 50.2 |
| 87.5° | 39.9 | 27.9 | 21.4 |
| 90° | 0.0 | 0.0 | 0.0 |

(END OF REPORT)