

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: STREETWORKS

Report Number: P177410

Luminaire Tested: **VAL-E02-LED-E-U-GL2-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P177410
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33701)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VAL-E02-LED-E-U-GL2-7060
Description: VALET TUNNEL LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE II W/ GLARE CONTROL
Light Source: (42) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6008.8 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B1 - 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: 28.75 FT

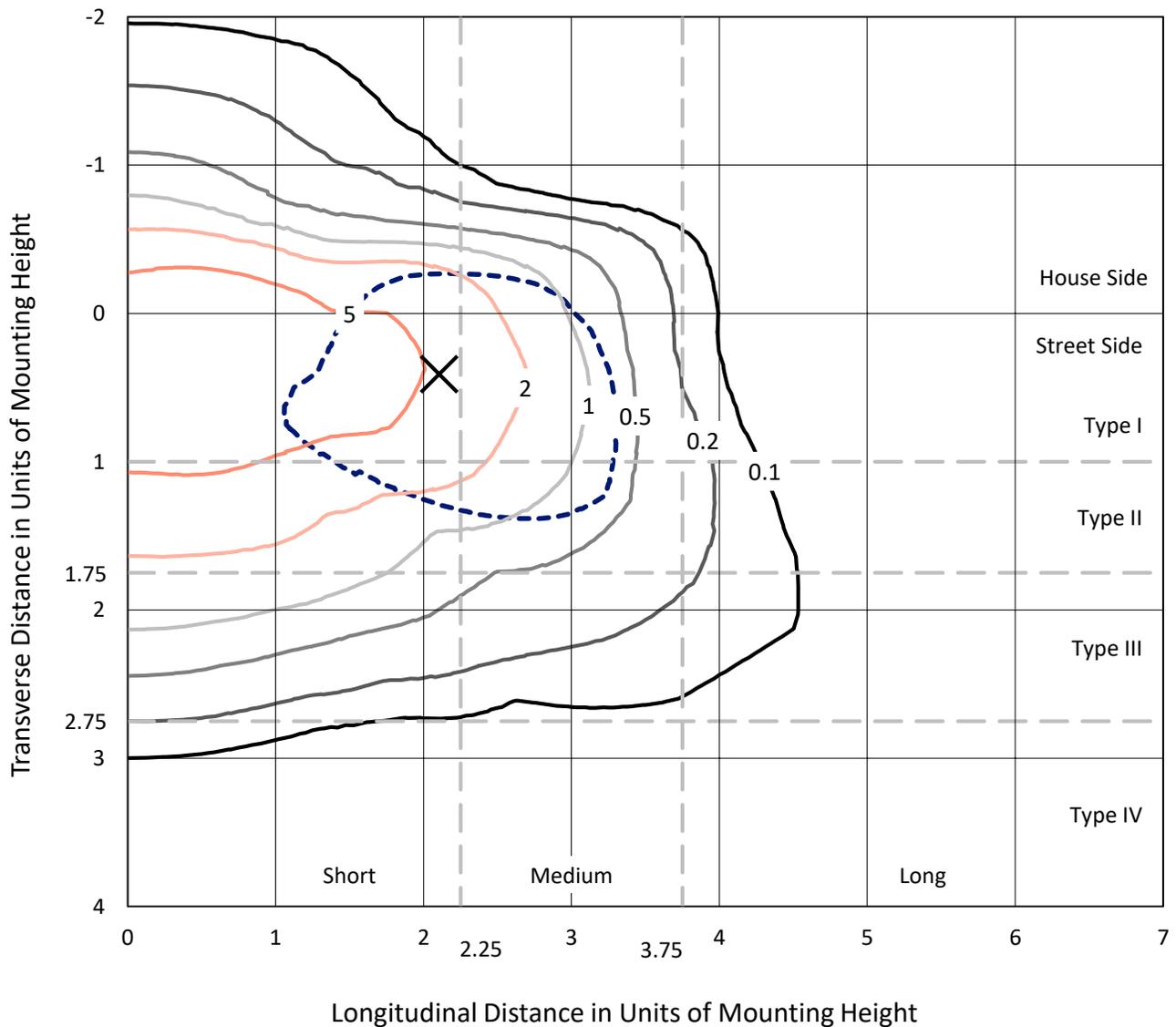


REPORT NUMBER: P177410

CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

Iso-Footcandle Lines of Horizontal Illumination

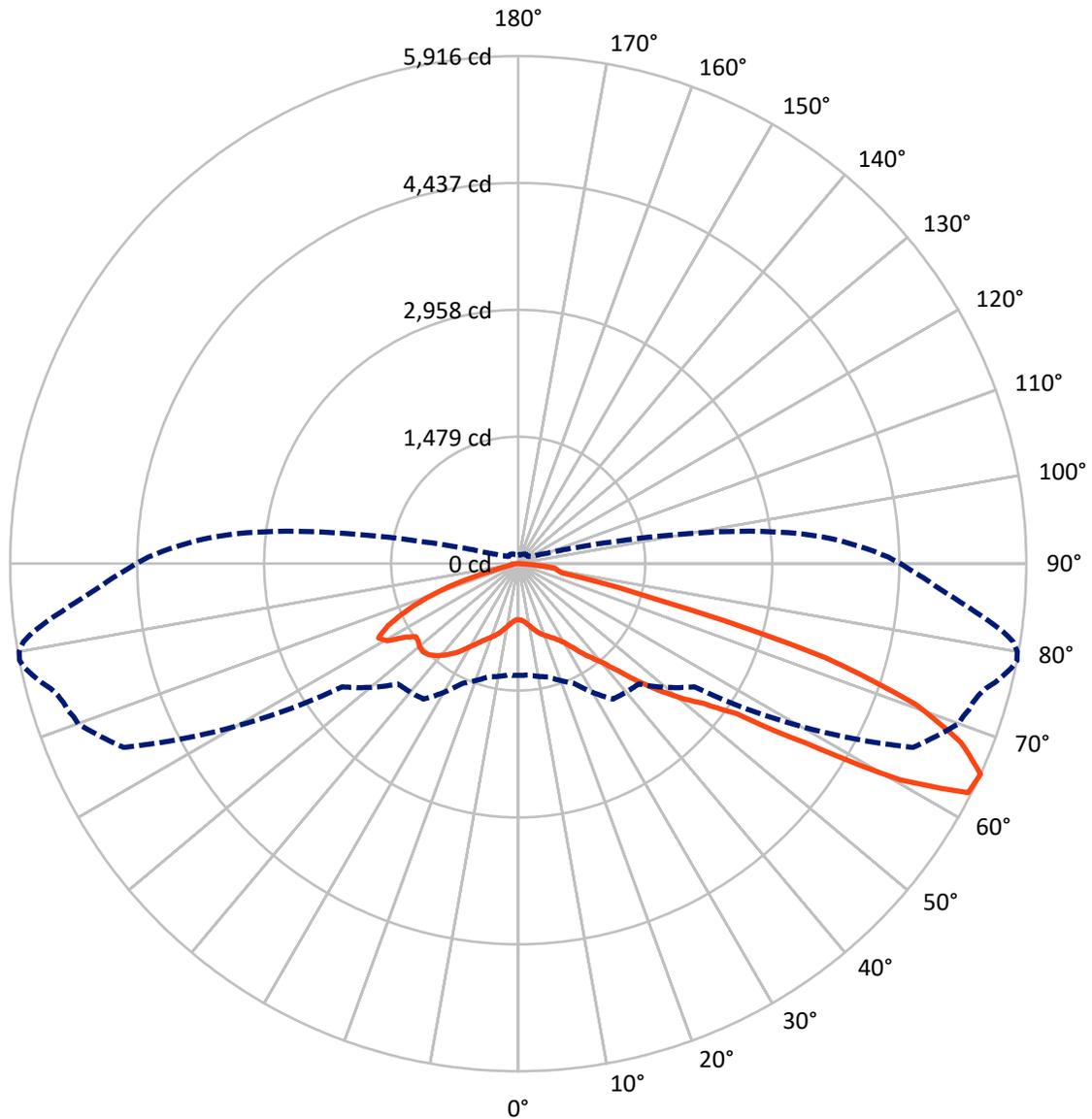
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P177410
CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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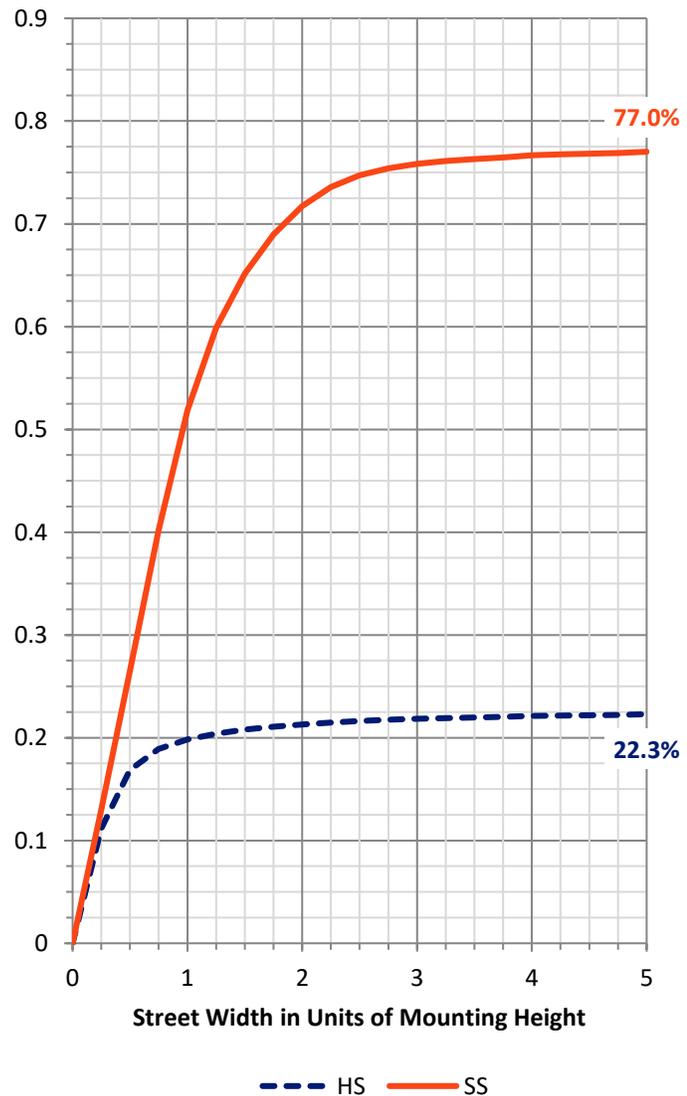
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1363.9 | 0.0 | 1363.9 |
| | % Fixture | 22.7 | 0.0 | 22.7 |
| Street Side | Lumens | 4644.9 | 0.0 | 4644.9 |
| | % Fixture | 77.3 | 0.0 | 77.3 |
| Total | Lumens | 6008.8 | 0.0 | 6008.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 64.8 | 1.1 |
| 10°-20° | 211.0 | 3.5 |
| 20°-30° | 363.8 | 6.1 |
| 30°-40° | 593.2 | 9.9 |
| 40°-50° | 990.3 | 16.5 |
| 50°-60° | 1339.1 | 22.3 |
| 60°-70° | 1663.5 | 27.7 |
| 70°-80° | 666.1 | 11.1 |
| 80°-90° | 117.0 | 1.9 |
| 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° | 6008.8 | 100.0 |
| 0°-180° | 6008.8 | 100.0 |



REPORT NUMBER: P177410

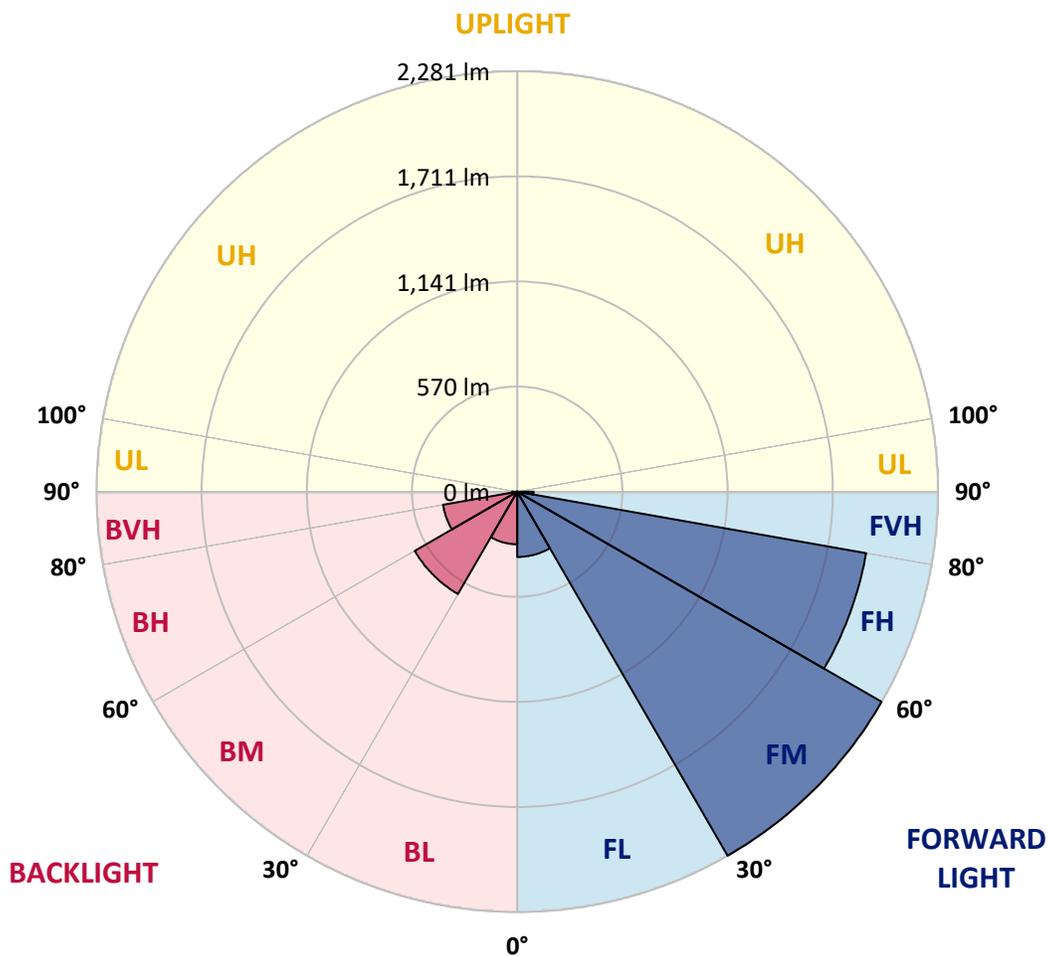
CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 354.3 | 5.9 | | | |
| FM | (30°-60°) | 2281.0 | 38.0 | | | |
| FH | (60°-80°) | 1920.8 | 32.0 | | | G2/5000 |
| FVH | (80°-90°) | 88.8 | 1.5 | | | G1/100 |
| BL | (0°-30°) | 285.3 | 4.7 | B1/500 | | |
| BM | (30°-60°) | 641.5 | 10.7 | B1/1000 | | |
| BH | (60°-80°) | 408.9 | 6.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 28.3 | 0.5 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type II Short





REPORT NUMBER: P177410

CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 70° | 71° | 72° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 |
| 2.5° | 657.9 | 657.5 | 659.6 | 661.2 | 661.2 | 662.0 | 661.6 | 659.2 | 659.6 | 660.4 | 659.6 |
| 5° | 665.3 | 663.7 | 665.7 | 668.2 | 669.8 | 671.9 | 673.9 | 674.4 | 676.0 | 676.0 | 675.6 |
| 7.5° | 681.3 | 680.1 | 683.0 | 683.8 | 687.5 | 690.8 | 694.9 | 697.8 | 699.4 | 700.2 | 701.4 |
| 10° | 708.8 | 708.0 | 708.8 | 710.5 | 712.1 | 715.8 | 722.8 | 728.9 | 732.6 | 732.6 | 734.3 |
| 12.5° | 742.1 | 738.8 | 739.6 | 736.3 | 737.2 | 745.0 | 753.2 | 763.4 | 769.6 | 770.4 | 771.2 |
| 15° | 767.9 | 766.3 | 765.1 | 760.5 | 763.8 | 774.1 | 786.8 | 801.6 | 806.9 | 811.4 | 811.0 |
| 17.5° | 792.2 | 790.1 | 787.2 | 781.1 | 784.4 | 800.8 | 820.1 | 836.5 | 845.5 | 846.3 | 847.2 |
| 20° | 820.9 | 818.4 | 813.1 | 800.4 | 799.5 | 822.5 | 848.4 | 866.0 | 874.2 | 877.9 | 879.2 |
| 22.5° | 857.4 | 854.1 | 844.3 | 819.7 | 813.1 | 840.2 | 871.0 | 892.7 | 901.3 | 905.0 | 907.1 |
| 25° | 904.2 | 897.6 | 882.0 | 843.5 | 829.9 | 858.2 | 895.2 | 921.4 | 933.3 | 937.0 | 939.5 |
| 27.5° | 946.5 | 941.6 | 922.7 | 877.1 | 853.7 | 882.5 | 924.7 | 958.4 | 974.8 | 979.3 | 983.0 |
| 30° | 995.7 | 988.8 | 973.6 | 925.1 | 893.9 | 919.4 | 973.2 | 1015.8 | 1036.0 | 1036.4 | 1044.6 |
| 32.5° | 1111.5 | 1107.0 | 1093.0 | 1039.7 | 987.1 | 988.8 | 1038.8 | 1097.5 | 1117.6 | 1120.9 | 1128.3 |
| 35° | 1283.0 | 1281.4 | 1281.0 | 1251.4 | 1212.4 | 1172.2 | 1175.9 | 1220.7 | 1234.2 | 1239.5 | 1242.0 |
| 37.5° | 1395.9 | 1410.3 | 1445.2 | 1466.5 | 1456.7 | 1465.3 | 1420.1 | 1365.5 | 1357.7 | 1352.0 | 1354.5 |
| 40° | 1493.2 | 1505.9 | 1576.5 | 1675.0 | 1734.9 | 1777.2 | 1737.4 | 1569.9 | 1507.6 | 1489.5 | 1482.5 |
| 42.5° | 1550.7 | 1565.0 | 1666.0 | 1823.6 | 1976.3 | 2076.4 | 2087.1 | 1854.4 | 1695.9 | 1693.9 | 1667.6 |
| 45° | 1581.8 | 1596.2 | 1716.9 | 1929.1 | 2145.0 | 2325.6 | 2419.1 | 2204.5 | 1971.8 | 1954.5 | 1918.0 |
| 47.5° | 1575.7 | 1589.2 | 1714.8 | 1968.1 | 2244.7 | 2491.0 | 2678.1 | 2558.3 | 2289.9 | 2248.4 | 2197.9 |
| 50° | 1500.6 | 1510.4 | 1642.2 | 1904.5 | 2218.0 | 2559.9 | 2855.4 | 2882.9 | 2649.8 | 2593.6 | 2518.1 |
| 52.5° | 1423.0 | 1440.7 | 1549.8 | 1791.6 | 2096.9 | 2517.2 | 2961.3 | 3178.5 | 2986.0 | 2947.4 | 2850.5 |
| 55° | 1381.1 | 1395.1 | 1484.2 | 1690.6 | 1969.3 | 2371.5 | 3005.3 | 3457.2 | 3394.4 | 3378.8 | 3310.2 |
| 57.5° | 1379.5 | 1393.0 | 1464.0 | 1629.5 | 1865.5 | 2219.7 | 3018.0 | 3887.7 | 4072.0 | 4076.1 | 4056.4 |
| 60° | 1446.8 | 1460.8 | 1520.3 | 1659.0 | 1833.4 | 2089.6 | 2972.4 | 4498.4 | 4905.6 | 4941.7 | 5002.1 |
| 62.5° | 1456.2 | 1462.8 | 1534.6 | 1721.8 | 1950.0 | 1992.3 | 2784.9 | 5007.0 | 5478.6 | 5511.8 | 5545.1 |
| 65° | 1302.7 | 1302.3 | 1366.0 | 1538.3 | 1925.8 | 1982.4 | 2502.9 | 5069.4 | 5455.6 | 5475.7 | 5517.2 |
| 67.5° | 971.5 | 963.3 | 999.4 | 1157.0 | 1528.1 | 1984.9 | 2168.8 | 4598.6 | 5030.4 | 5068.6 | 5082.5 |
| 70° | 500.7 | 513.5 | 538.1 | 634.5 | 970.3 | 1597.9 | 1863.0 | 3879.9 | 4415.9 | 4430.3 | 4480.0 |
| 72.5° | 205.6 | 200.3 | 217.1 | 266.8 | 485.6 | 1056.1 | 1541.2 | 3061.9 | 3647.2 | 3637.3 | 3646.4 |
| 75° | 114.5 | 116.2 | 121.1 | 139.1 | 236.0 | 530.3 | 1324.1 | 2167.5 | 2480.3 | 2310.4 | 2259.1 |
| 77.5° | 91.9 | 92.8 | 93.2 | 96.5 | 128.9 | 282.8 | 1016.3 | 1427.5 | 1247.3 | 1158.3 | 1124.2 |
| 80° | 67.3 | 71.8 | 76.8 | 77.6 | 88.7 | 160.5 | 557.4 | 1201.8 | 1052.8 | 978.9 | 918.2 |
| 82.5° | 54.2 | 56.2 | 66.9 | 68.5 | 70.6 | 95.6 | 252.4 | 1128.7 | 1048.7 | 973.2 | 889.4 |
| 85° | 32.4 | 36.1 | 54.6 | 55.0 | 55.8 | 58.3 | 139.6 | 459.7 | 571.7 | 505.3 | 462.6 |
| 87.5° | 11.5 | 14.8 | 27.1 | 22.6 | 28.7 | 23.8 | 61.2 | 153.9 | 189.6 | 180.2 | 159.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P177410

CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

CANDELA DISTRIBUTION (continued):

| | 73° | 74° | 75° | 76° | 77° | 78° | 79° | 80° | 81° | 82° | 83° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 |
| 2.5° | 659.2 | 659.2 | 660.0 | 659.6 | 659.6 | 659.6 | 659.6 | 658.8 | 658.8 | 657.5 | 658.3 |
| 5° | 675.6 | 675.2 | 675.6 | 676.0 | 675.6 | 676.4 | 676.0 | 675.6 | 676.0 | 675.6 | 676.0 |
| 7.5° | 701.9 | 699.8 | 702.7 | 701.0 | 700.6 | 703.1 | 701.9 | 703.1 | 703.5 | 703.1 | 702.7 |
| 10° | 735.1 | 736.3 | 736.3 | 736.3 | 735.5 | 738.0 | 738.4 | 739.2 | 739.6 | 741.3 | 741.3 |
| 12.5° | 773.3 | 773.7 | 775.3 | 774.9 | 775.7 | 778.6 | 780.7 | 781.1 | 781.5 | 782.7 | 781.1 |
| 15° | 814.3 | 815.1 | 815.1 | 818.8 | 817.6 | 821.7 | 822.9 | 822.9 | 823.3 | 828.3 | 828.7 |
| 17.5° | 850.8 | 850.8 | 854.1 | 854.1 | 857.4 | 858.2 | 861.9 | 862.3 | 864.0 | 868.5 | 868.9 |
| 20° | 881.6 | 883.3 | 885.3 | 887.8 | 889.0 | 891.5 | 893.9 | 896.4 | 898.5 | 902.2 | 902.6 |
| 22.5° | 910.8 | 912.4 | 915.7 | 917.3 | 920.2 | 921.9 | 923.9 | 926.8 | 930.1 | 935.0 | 936.2 |
| 25° | 944.4 | 946.1 | 949.8 | 952.2 | 955.5 | 958.0 | 961.7 | 965.4 | 967.4 | 972.3 | 976.0 |
| 27.5° | 987.1 | 992.0 | 997.0 | 998.2 | 1000.7 | 1006.4 | 1011.3 | 1016.3 | 1020.8 | 1023.2 | 1027.7 |
| 30° | 1049.5 | 1049.5 | 1059.8 | 1059.8 | 1064.3 | 1069.6 | 1072.9 | 1078.2 | 1086.4 | 1088.9 | 1094.6 |
| 32.5° | 1133.2 | 1135.3 | 1139.0 | 1150.1 | 1158.3 | 1160.7 | 1163.2 | 1171.0 | 1175.9 | 1182.1 | 1189.1 |
| 35° | 1252.7 | 1254.7 | 1256.8 | 1267.4 | 1276.9 | 1279.3 | 1281.8 | 1286.7 | 1294.9 | 1305.6 | 1302.3 |
| 37.5° | 1359.8 | 1361.0 | 1367.6 | 1379.5 | 1384.8 | 1391.4 | 1393.5 | 1402.5 | 1407.0 | 1416.8 | 1417.3 |
| 40° | 1488.7 | 1485.8 | 1489.5 | 1503.0 | 1511.2 | 1510.8 | 1517.4 | 1533.8 | 1537.1 | 1541.6 | 1553.1 |
| 42.5° | 1668.4 | 1657.8 | 1669.3 | 1673.8 | 1686.1 | 1693.9 | 1707.0 | 1718.1 | 1725.9 | 1743.1 | 1751.4 |
| 45° | 1900.8 | 1889.7 | 1899.1 | 1901.2 | 1926.6 | 1934.4 | 1954.1 | 1968.9 | 1985.7 | 2005.4 | 2011.2 |
| 47.5° | 2165.5 | 2145.0 | 2133.5 | 2146.2 | 2176.6 | 2189.3 | 2208.6 | 2222.5 | 2240.2 | 2250.5 | 2247.2 |
| 50° | 2472.1 | 2422.8 | 2399.9 | 2393.3 | 2415.0 | 2433.1 | 2463.1 | 2469.6 | 2477.8 | 2477.4 | 2477.8 |
| 52.5° | 2814.0 | 2762.7 | 2714.7 | 2681.4 | 2678.1 | 2702.4 | 2709.7 | 2711.4 | 2708.9 | 2690.4 | 2679.0 |
| 55° | 3260.6 | 3256.9 | 3206.4 | 3137.4 | 3132.9 | 3130.0 | 3086.9 | 3081.6 | 3071.7 | 3043.4 | 3004.4 |
| 57.5° | 4070.8 | 4111.8 | 4078.6 | 4076.9 | 4040.8 | 4017.0 | 3937.8 | 3898.4 | 3856.9 | 3780.2 | 3719.0 |
| 60° | 5007.4 | 5066.9 | 5099.7 | 5114.1 | 5184.7 | 5184.7 | 5119.9 | 5064.0 | 4996.7 | 4879.7 | 4765.6 |
| 62.5° | 5571.3 | 5623.5 | 5671.9 | 5747.8 | 5837.7 | 5877.5 | 5880.8 | 5831.2 | 5746.2 | 5612.8 | 5451.5 |
| 65° | 5535.6 | 5574.2 | 5632.9 | 5722.4 | 5796.7 | 5868.1 | 5916.1 | 5900.9 | 5836.1 | 5702.7 | 5527.0 |
| 67.5° | 5131.3 | 5187.6 | 5263.5 | 5346.0 | 5415.0 | 5482.3 | 5559.8 | 5565.6 | 5548.4 | 5421.5 | 5262.7 |
| 70° | 4507.5 | 4579.7 | 4627.7 | 4731.6 | 4762.8 | 4830.9 | 4908.9 | 4946.2 | 4918.3 | 4820.6 | 4727.5 |
| 72.5° | 3662.0 | 3719.0 | 3727.2 | 3682.1 | 3697.7 | 3714.5 | 3733.4 | 3646.0 | 3612.3 | 3481.8 | 3421.9 |
| 75° | 2220.5 | 2145.4 | 2082.2 | 2019.4 | 1831.8 | 1765.3 | 1663.1 | 1461.6 | 1438.6 | 1300.3 | 1204.2 |
| 77.5° | 1056.1 | 1024.5 | 967.4 | 871.8 | 744.5 | 622.6 | 516.7 | 419.9 | 383.8 | 316.0 | 269.3 |
| 80° | 884.1 | 846.3 | 795.0 | 724.0 | 635.0 | 546.3 | 462.6 | 390.7 | 318.5 | 259.4 | 207.3 |
| 82.5° | 811.0 | 745.4 | 673.1 | 612.0 | 549.2 | 488.8 | 432.6 | 367.8 | 329.6 | 266.0 | 217.1 |
| 85° | 410.0 | 359.1 | 291.0 | 245.0 | 206.9 | 168.3 | 145.7 | 124.4 | 110.8 | 88.2 | 76.8 |
| 87.5° | 137.5 | 112.5 | 83.7 | 71.0 | 64.0 | 55.0 | 50.5 | 48.0 | 46.8 | 41.5 | 36.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P177410

CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

CANDELA DISTRIBUTION (continued):

| | 84° | 85° | 86° | 87° | 88° | 89° | 90° | 91° | 92° | 93° | 94° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 |
| 2.5° | 658.3 | 658.3 | 658.3 | 658.3 | 657.9 | 657.9 | 657.9 | 657.9 | 657.9 | 657.9 | 658.3 |
| 5° | 675.2 | 675.2 | 675.6 | 676.8 | 674.4 | 675.2 | 676.0 | 674.8 | 676.0 | 674.8 | 676.4 |
| 7.5° | 702.3 | 703.5 | 702.7 | 704.3 | 703.5 | 706.0 | 704.3 | 703.1 | 703.9 | 703.9 | 704.3 |
| 10° | 740.4 | 742.1 | 740.8 | 741.7 | 741.7 | 743.3 | 741.3 | 741.7 | 742.1 | 741.3 | 741.7 |
| 12.5° | 782.7 | 783.5 | 783.1 | 785.6 | 784.4 | 785.6 | 784.4 | 786.0 | 786.8 | 787.6 | 787.6 |
| 15° | 828.7 | 829.5 | 832.0 | 831.6 | 834.0 | 833.2 | 833.6 | 831.6 | 835.7 | 833.2 | 834.0 |
| 17.5° | 871.0 | 870.5 | 873.8 | 875.1 | 875.5 | 875.9 | 877.1 | 875.5 | 875.9 | 877.1 | 876.3 |
| 20° | 903.8 | 906.7 | 907.5 | 910.8 | 913.2 | 914.1 | 913.6 | 914.9 | 916.5 | 914.9 | 914.9 |
| 22.5° | 938.7 | 942.8 | 944.0 | 946.1 | 948.5 | 948.9 | 951.4 | 952.6 | 953.5 | 953.0 | 953.5 |
| 25° | 980.5 | 983.4 | 986.3 | 990.4 | 993.3 | 993.7 | 995.7 | 997.4 | 997.8 | 997.4 | 999.8 |
| 27.5° | 1031.9 | 1035.5 | 1039.2 | 1044.2 | 1047.4 | 1048.3 | 1052.8 | 1052.8 | 1055.2 | 1056.5 | 1057.3 |
| 30° | 1097.9 | 1099.2 | 1108.6 | 1113.5 | 1112.3 | 1118.0 | 1124.2 | 1123.8 | 1126.7 | 1127.5 | 1129.5 |
| 32.5° | 1194.0 | 1194.0 | 1202.2 | 1208.3 | 1214.9 | 1212.9 | 1222.3 | 1220.7 | 1225.2 | 1227.6 | 1226.4 |
| 35° | 1310.5 | 1314.6 | 1320.8 | 1324.5 | 1331.5 | 1335.2 | 1341.7 | 1345.4 | 1347.5 | 1347.1 | 1342.6 |
| 37.5° | 1430.8 | 1437.4 | 1439.8 | 1448.9 | 1455.8 | 1462.0 | 1462.8 | 1458.7 | 1460.4 | 1452.1 | 1449.7 |
| 40° | 1568.3 | 1577.7 | 1583.5 | 1597.0 | 1596.2 | 1604.0 | 1604.8 | 1592.9 | 1590.9 | 1580.2 | 1569.1 |
| 42.5° | 1760.4 | 1773.5 | 1778.0 | 1788.3 | 1780.1 | 1783.8 | 1763.3 | 1758.3 | 1741.9 | 1724.7 | 1699.6 |
| 45° | 2019.4 | 2012.8 | 2015.7 | 2012.8 | 1991.1 | 1975.0 | 1958.2 | 1934.0 | 1909.8 | 1876.5 | 1840.8 |
| 47.5° | 2247.2 | 2250.5 | 2229.1 | 2215.6 | 2180.3 | 2157.7 | 2126.9 | 2084.6 | 2055.1 | 2010.3 | 1963.1 |
| 50° | 2468.4 | 2431.9 | 2401.9 | 2370.7 | 2339.5 | 2298.1 | 2251.7 | 2214.3 | 2171.2 | 2115.4 | 2057.5 |
| 52.5° | 2648.2 | 2601.0 | 2564.9 | 2520.5 | 2478.2 | 2432.3 | 2383.8 | 2329.7 | 2273.0 | 2217.2 | 2145.8 |
| 55° | 2966.7 | 2898.1 | 2851.8 | 2774.2 | 2726.2 | 2661.7 | 2624.0 | 2553.8 | 2475.0 | 2401.1 | 2325.2 |
| 57.5° | 3650.1 | 3547.5 | 3494.5 | 3450.6 | 3375.9 | 3270.0 | 3202.7 | 3087.3 | 2974.9 | 2896.1 | 2769.7 |
| 60° | 4679.5 | 4575.2 | 4487.4 | 4383.5 | 4269.0 | 4125.4 | 4061.3 | 3925.5 | 3764.6 | 3634.5 | 3467.4 |
| 62.5° | 5321.0 | 5176.9 | 5034.5 | 4888.8 | 4773.9 | 4661.4 | 4528.8 | 4391.7 | 4232.5 | 4055.6 | 3872.9 |
| 65° | 5346.8 | 5174.0 | 5003.7 | 4855.1 | 4720.5 | 4574.4 | 4450.0 | 4310.9 | 4143.4 | 3961.2 | 3771.6 |
| 67.5° | 5078.4 | 4885.1 | 4702.4 | 4539.5 | 4385.6 | 4250.1 | 4120.0 | 3989.1 | 3809.7 | 3657.0 | 3462.9 |
| 70° | 4543.6 | 4367.1 | 4201.7 | 4016.2 | 3898.4 | 3746.1 | 3619.3 | 3481.4 | 3352.9 | 3210.1 | 3028.2 |
| 72.5° | 3337.3 | 3204.3 | 3015.5 | 2936.7 | 2873.5 | 2712.2 | 2617.8 | 2606.3 | 2524.2 | 2353.1 | 2217.2 |
| 75° | 1241.2 | 1056.5 | 1000.7 | 1033.9 | 978.5 | 997.0 | 990.0 | 950.6 | 952.2 | 923.1 | 888.6 |
| 77.5° | 243.0 | 225.7 | 212.2 | 215.9 | 200.7 | 194.1 | 208.1 | 204.0 | 196.6 | 198.7 | 195.4 |
| 80° | 165.4 | 140.0 | 126.8 | 121.9 | 115.7 | 112.9 | 112.1 | 110.8 | 108.4 | 107.1 | 103.4 |
| 82.5° | 162.9 | 121.1 | 95.6 | 82.1 | 77.2 | 74.7 | 72.6 | 72.2 | 71.4 | 71.0 | 72.2 |
| 85° | 64.8 | 52.5 | 48.0 | 43.9 | 42.7 | 41.5 | 41.5 | 41.0 | 40.6 | 41.5 | 43.1 |
| 87.5° | 31.6 | 26.7 | 24.2 | 22.2 | 21.3 | 20.9 | 20.9 | 21.3 | 21.8 | 23.4 | 26.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P177410

CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

CANDELA DISTRIBUTION (continued):

| | 95° | 96° | 97° | 98° | 99° | 100° | 101° | 102° | 103° | 104° | 105° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 |
| 2.5° | 657.5 | 657.9 | 657.1 | 657.5 | 657.1 | 656.3 | 655.9 | 657.1 | 656.7 | 656.3 | 656.3 |
| 5° | 674.4 | 676.0 | 675.2 | 674.4 | 674.4 | 673.9 | 673.9 | 673.9 | 673.5 | 673.9 | 672.7 |
| 7.5° | 703.5 | 703.1 | 703.1 | 702.3 | 701.4 | 702.3 | 701.9 | 700.6 | 701.0 | 700.2 | 699.0 |
| 10° | 740.8 | 739.6 | 741.7 | 741.7 | 740.0 | 739.6 | 738.8 | 737.6 | 737.6 | 736.3 | 736.3 |
| 12.5° | 785.2 | 783.9 | 786.8 | 784.8 | 782.3 | 781.9 | 779.4 | 778.6 | 779.8 | 779.4 | 778.6 |
| 15° | 830.3 | 830.7 | 832.0 | 831.6 | 828.7 | 828.7 | 825.4 | 825.8 | 823.3 | 822.5 | 820.5 |
| 17.5° | 874.2 | 874.7 | 873.4 | 873.4 | 871.4 | 870.1 | 866.4 | 866.9 | 865.2 | 861.9 | 859.5 |
| 20° | 913.6 | 913.2 | 910.4 | 912.8 | 908.7 | 907.9 | 904.6 | 901.3 | 902.2 | 898.9 | 893.9 |
| 22.5° | 952.2 | 951.4 | 950.6 | 949.4 | 947.3 | 946.5 | 942.8 | 942.4 | 938.3 | 933.3 | 929.2 |
| 25° | 997.0 | 996.6 | 995.3 | 995.7 | 991.6 | 992.0 | 985.5 | 983.8 | 981.4 | 976.0 | 972.7 |
| 27.5° | 1054.8 | 1054.8 | 1051.6 | 1050.3 | 1049.1 | 1047.4 | 1041.7 | 1037.6 | 1031.4 | 1025.3 | 1018.7 |
| 30° | 1125.8 | 1125.0 | 1124.2 | 1120.9 | 1116.4 | 1113.9 | 1103.7 | 1097.1 | 1088.9 | 1077.4 | 1067.6 |
| 32.5° | 1227.2 | 1220.2 | 1214.5 | 1207.1 | 1199.7 | 1191.9 | 1175.9 | 1164.8 | 1151.7 | 1133.2 | 1117.6 |
| 35° | 1340.1 | 1328.2 | 1322.0 | 1306.8 | 1292.9 | 1277.3 | 1258.0 | 1235.4 | 1217.4 | 1193.2 | 1167.7 |
| 37.5° | 1433.3 | 1424.2 | 1407.8 | 1390.6 | 1370.9 | 1341.3 | 1319.6 | 1295.4 | 1263.8 | 1237.1 | 1206.3 |
| 40° | 1548.2 | 1527.7 | 1504.3 | 1475.5 | 1448.5 | 1415.2 | 1385.2 | 1350.4 | 1311.8 | 1273.2 | 1233.0 |
| 42.5° | 1668.9 | 1637.3 | 1598.7 | 1565.4 | 1524.4 | 1480.9 | 1441.9 | 1394.7 | 1345.4 | 1293.7 | 1239.9 |
| 45° | 1792.0 | 1753.0 | 1701.7 | 1654.5 | 1597.4 | 1542.9 | 1487.0 | 1422.6 | 1355.3 | 1286.3 | 1218.6 |
| 47.5° | 1904.9 | 1847.8 | 1789.5 | 1725.9 | 1660.2 | 1590.1 | 1510.8 | 1426.3 | 1337.6 | 1246.9 | 1162.4 |
| 50° | 1993.5 | 1922.1 | 1848.6 | 1775.2 | 1694.7 | 1603.6 | 1503.9 | 1393.5 | 1284.3 | 1175.5 | 1078.2 |
| 52.5° | 2071.9 | 1991.9 | 1901.6 | 1810.5 | 1711.1 | 1599.1 | 1474.3 | 1344.2 | 1211.2 | 1091.0 | 981.8 |
| 55° | 2223.8 | 2123.2 | 2004.2 | 1886.8 | 1761.2 | 1620.0 | 1464.5 | 1305.2 | 1152.1 | 1021.2 | 905.0 |
| 57.5° | 2636.3 | 2500.4 | 2316.1 | 2153.2 | 1993.9 | 1788.3 | 1569.1 | 1372.9 | 1178.0 | 1023.2 | 893.9 |
| 60° | 3286.0 | 3064.8 | 2853.8 | 2605.5 | 2347.7 | 2065.8 | 1771.9 | 1507.6 | 1269.9 | 1075.8 | 920.2 |
| 62.5° | 3662.8 | 3429.2 | 3157.9 | 2857.1 | 2523.0 | 2179.4 | 1842.1 | 1533.4 | 1272.8 | 1061.4 | 889.0 |
| 65° | 3561.0 | 3326.2 | 3027.8 | 2720.0 | 2364.6 | 2013.2 | 1678.3 | 1382.0 | 1129.1 | 933.8 | 768.8 |
| 67.5° | 3258.9 | 3013.5 | 2733.1 | 2391.6 | 2051.8 | 1726.3 | 1421.0 | 1141.9 | 918.2 | 735.9 | 590.2 |
| 70° | 2819.3 | 2601.0 | 2330.9 | 2016.1 | 1686.5 | 1393.9 | 1136.5 | 884.9 | 695.7 | 528.6 | 413.7 |
| 72.5° | 2092.4 | 1899.1 | 1730.4 | 1467.3 | 1226.0 | 996.6 | 786.8 | 615.7 | 452.7 | 342.3 | 263.5 |
| 75° | 878.3 | 813.1 | 785.6 | 689.1 | 599.2 | 491.3 | 369.8 | 294.7 | 238.9 | 203.2 | 161.3 |
| 77.5° | 213.0 | 213.0 | 200.3 | 187.6 | 172.4 | 156.0 | 137.9 | 123.1 | 115.7 | 109.2 | 103.8 |
| 80° | 103.4 | 102.6 | 99.3 | 98.9 | 96.0 | 92.3 | 90.3 | 87.4 | 86.2 | 84.6 | 83.7 |
| 82.5° | 72.6 | 72.2 | 71.0 | 72.6 | 72.2 | 73.9 | 74.7 | 75.1 | 75.1 | 75.5 | 75.9 |
| 85° | 46.0 | 47.6 | 50.9 | 55.0 | 58.7 | 63.2 | 67.3 | 70.6 | 73.1 | 75.1 | 76.8 |
| 87.5° | 29.1 | 33.2 | 35.7 | 41.9 | 48.0 | 55.0 | 62.8 | 66.1 | 69.0 | 69.4 | 66.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P177410

CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

CANDELA DISTRIBUTION (continued):

| | 106° | 107° | 108° | 109° | 110° | 115° | 125° | 135° | 145° | 155° | 165° |
|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 0° | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 | 653.0 |
| 2.5° | 656.3 | 655.9 | 656.7 | 655.9 | 655.9 | 655.5 | 654.2 | 653.0 | 651.8 | 651.4 | 650.1 |
| 5° | 672.3 | 672.3 | 673.1 | 671.5 | 671.9 | 670.3 | 666.6 | 662.5 | 658.8 | 655.5 | 651.8 |
| 7.5° | 699.4 | 698.2 | 698.6 | 698.2 | 697.3 | 694.1 | 685.8 | 675.6 | 665.7 | 655.5 | 647.3 |
| 10° | 735.5 | 733.0 | 733.0 | 732.2 | 731.0 | 726.5 | 709.2 | 688.7 | 668.2 | 649.7 | 636.2 |
| 12.5° | 775.7 | 776.1 | 772.9 | 770.8 | 768.8 | 759.3 | 733.5 | 700.6 | 668.2 | 638.6 | 616.9 |
| 15° | 817.6 | 817.2 | 813.5 | 812.3 | 807.8 | 793.8 | 754.8 | 706.8 | 660.4 | 616.9 | 584.5 |
| 17.5° | 855.4 | 853.7 | 850.0 | 847.6 | 842.6 | 824.2 | 769.2 | 703.9 | 639.9 | 582.8 | 542.2 |
| 20° | 889.8 | 887.8 | 884.5 | 880.0 | 875.1 | 848.4 | 774.5 | 689.1 | 607.5 | 542.2 | 501.1 |
| 22.5° | 925.5 | 921.0 | 917.3 | 911.2 | 905.8 | 870.1 | 770.8 | 662.9 | 570.5 | 497.0 | 453.1 |
| 25° | 965.4 | 960.0 | 952.2 | 944.8 | 936.6 | 887.8 | 760.5 | 630.0 | 526.2 | 448.2 | 403.9 |
| 27.5° | 1008.5 | 1000.7 | 990.4 | 981.0 | 967.8 | 900.9 | 742.9 | 593.5 | 477.8 | 399.8 | 353.8 |
| 30° | 1054.0 | 1039.7 | 1026.9 | 1012.6 | 995.7 | 907.1 | 717.5 | 548.4 | 424.4 | 350.5 | 304.5 |
| 32.5° | 1098.3 | 1079.1 | 1060.2 | 1039.2 | 1016.3 | 904.6 | 681.3 | 495.0 | 371.0 | 304.5 | 266.0 |
| 35° | 1143.5 | 1115.6 | 1089.3 | 1061.0 | 1033.1 | 892.3 | 631.7 | 435.9 | 320.6 | 266.4 | 238.5 |
| 37.5° | 1174.3 | 1139.4 | 1104.5 | 1070.4 | 1036.8 | 865.6 | 565.6 | 369.8 | 275.0 | 238.9 | 218.8 |
| 40° | 1189.9 | 1147.2 | 1104.5 | 1062.2 | 1020.8 | 821.3 | 488.4 | 309.5 | 242.6 | 218.4 | 204.0 |
| 42.5° | 1185.4 | 1132.4 | 1079.5 | 1029.4 | 978.5 | 750.7 | 404.7 | 259.8 | 220.0 | 202.3 | 189.6 |
| 45° | 1148.0 | 1084.8 | 1024.5 | 971.5 | 907.9 | 660.0 | 332.5 | 229.0 | 202.8 | 189.2 | 177.3 |
| 47.5° | 1077.8 | 1007.2 | 933.3 | 873.4 | 813.9 | 554.9 | 276.6 | 209.7 | 187.6 | 176.5 | 164.6 |
| 50° | 988.3 | 906.7 | 832.8 | 767.9 | 709.7 | 456.8 | 238.5 | 193.3 | 175.3 | 165.8 | 153.1 |
| 52.5° | 889.8 | 802.0 | 734.7 | 666.6 | 609.5 | 381.3 | 211.8 | 175.3 | 163.4 | 153.5 | 143.2 |
| 55° | 808.2 | 726.9 | 658.3 | 589.8 | 532.3 | 333.7 | 189.6 | 161.3 | 152.3 | 142.0 | 133.8 |
| 57.5° | 786.4 | 693.6 | 618.9 | 554.1 | 495.0 | 304.5 | 173.6 | 148.6 | 142.4 | 134.6 | 125.6 |
| 60° | 795.4 | 693.2 | 609.5 | 538.5 | 476.5 | 281.2 | 161.7 | 140.0 | 135.0 | 128.1 | 118.6 |
| 62.5° | 763.0 | 655.1 | 570.5 | 495.0 | 436.3 | 251.6 | 153.1 | 135.9 | 132.6 | 123.1 | 112.5 |
| 65° | 650.1 | 551.2 | 470.0 | 404.7 | 354.2 | 211.8 | 146.1 | 139.6 | 136.3 | 119.8 | 108.4 |
| 67.5° | 495.0 | 412.5 | 347.2 | 298.4 | 261.9 | 175.3 | 144.5 | 151.9 | 145.3 | 121.5 | 107.1 |
| 70° | 342.3 | 279.9 | 238.1 | 208.5 | 185.5 | 147.8 | 149.8 | 165.4 | 156.0 | 126.8 | 114.1 |
| 72.5° | 217.1 | 181.4 | 160.9 | 149.8 | 138.7 | 124.8 | 148.6 | 163.8 | 151.0 | 127.6 | 114.1 |
| 75° | 139.1 | 124.4 | 117.4 | 113.3 | 110.0 | 108.8 | 130.9 | 134.6 | 121.5 | 110.8 | 106.3 |
| 77.5° | 98.5 | 96.0 | 94.8 | 94.4 | 94.8 | 97.7 | 108.4 | 101.4 | 88.2 | 88.7 | 91.1 |
| 80° | 83.3 | 83.3 | 82.5 | 82.9 | 83.7 | 85.0 | 86.6 | 74.7 | 67.7 | 73.1 | 81.3 |
| 82.5° | 76.3 | 77.6 | 78.4 | 79.2 | 80.4 | 78.8 | 73.5 | 56.6 | 54.6 | 71.0 | 79.6 |
| 85° | 77.6 | 77.6 | 78.0 | 78.8 | 79.2 | 71.0 | 61.2 | 42.7 | 41.9 | 79.6 | 75.1 |
| 87.5° | 66.5 | 65.7 | 62.8 | 60.7 | 57.9 | 48.8 | 40.6 | 23.8 | 24.6 | 49.3 | 52.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P177410

CATALOG NUMBER: VAL-E02-LED-E-U-GL2-7060

CANDELA DISTRIBUTION (continued):

| | 175° | 180° |
|-------|-------|-------|
| 0° | 653.0 | 653.0 |
| 2.5° | 649.7 | 649.7 |
| 5° | 649.7 | 649.7 |
| 7.5° | 644.4 | 642.8 |
| 10° | 628.8 | 626.7 |
| 12.5° | 605.0 | 602.9 |
| 15° | 568.5 | 566.0 |
| 17.5° | 522.9 | 518.8 |
| 20° | 475.3 | 469.5 |
| 22.5° | 427.7 | 423.2 |
| 25° | 378.8 | 374.7 |
| 27.5° | 330.8 | 326.7 |
| 30° | 286.5 | 284.8 |
| 32.5° | 253.7 | 252.0 |
| 35° | 229.4 | 228.6 |
| 37.5° | 213.0 | 212.2 |
| 40° | 198.7 | 197.8 |
| 42.5° | 185.5 | 184.3 |
| 45° | 172.4 | 172.8 |
| 47.5° | 159.3 | 158.8 |
| 50° | 147.8 | 147.8 |
| 52.5° | 138.3 | 137.9 |
| 55° | 129.7 | 129.3 |
| 57.5° | 121.1 | 120.7 |
| 60° | 113.7 | 112.5 |
| 62.5° | 106.7 | 105.9 |
| 65° | 102.2 | 101.8 |
| 67.5° | 98.9 | 97.7 |
| 70° | 98.1 | 94.8 |
| 72.5° | 95.6 | 91.5 |
| 75° | 89.9 | 87.8 |
| 77.5° | 79.2 | 76.8 |
| 80° | 61.2 | 56.6 |
| 82.5° | 51.3 | 44.3 |
| 85° | 37.8 | 34.9 |
| 87.5° | 27.5 | 21.8 |
| 90° | 0.0 | 0.0 |

(END OF REPORT)