

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: P510237

Luminaire Tested: **VERD-M-CA4-230-750-U-T2**

Issue Date: 4/6/2021

Test Information

Test Method: LM-79-08
Report Number: P510237
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2103-181-2)
Test Lab: INNOVATION CENTER
Issue Date: 4/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VERD-M-CA4-230-750-U-T2
Description: VERDEON-M ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K, 1050mA LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33000 lumens
Efficiency: N/A
Efficacy: 141.4 lumens/watt
Luminous Opening: Rectangular (W 1.35' x L: 1.58' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G4

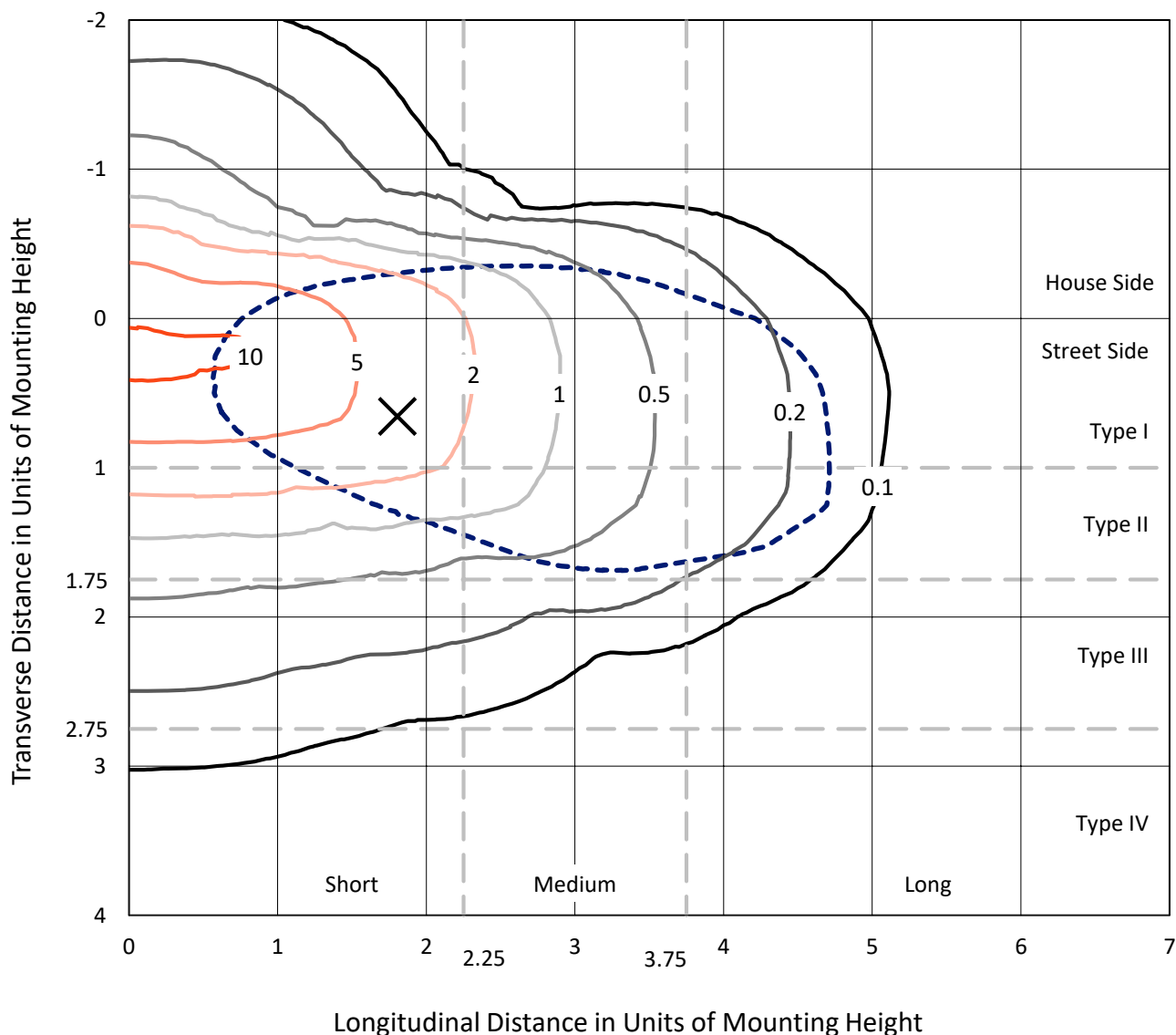
Input Watts (W): 233.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

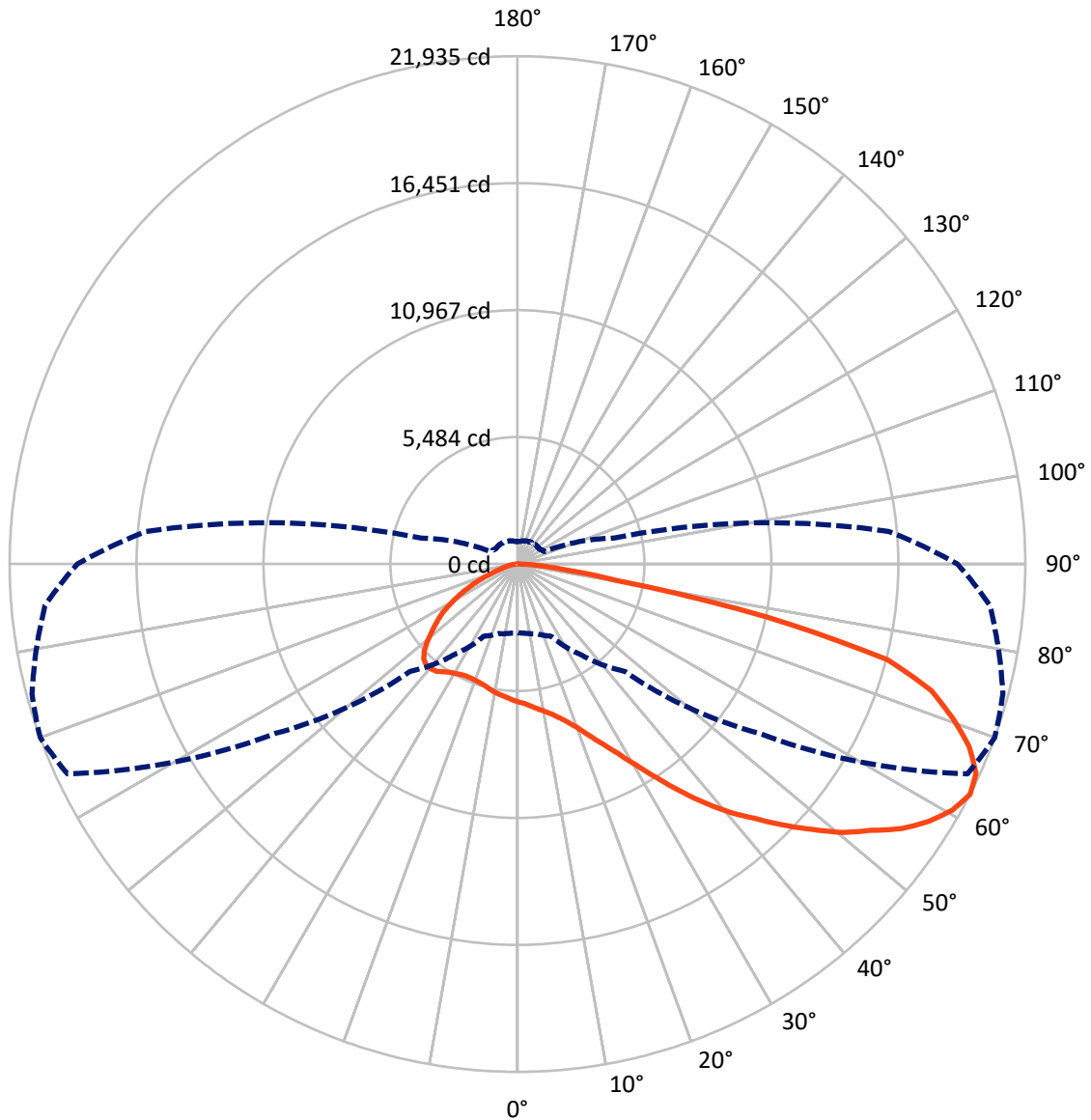
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.9 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8543.9 | 0.0 | 8543.9 |
| | % Fixture | 25.9 | 0.0 | 25.9 |
| Street Side | Lumens | 24456.1 | 0.0 | 24456.1 |
| | % Fixture | 74.1 | 0.0 | 74.1 |
| Total | Lumens | 33000.0 | 0.0 | 33000.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 572.1 | 1.7 |
| 10°-20° | 1737.3 | 5.3 |
| 20°-30° | 2948.5 | 8.9 |
| 30°-40° | 4266.3 | 12.9 |
| 40°-50° | 5598.4 | 17.0 |
| 50°-60° | 6541.6 | 19.8 |
| 60°-70° | 6564.8 | 19.9 |
| 70°-80° | 4183.1 | 12.7 |
| 80°-90° | 587.9 | 1.8 |
| 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° | 33000.0 | 100.0 |
| 0°-180° | 33000.0 | 100.0 |

Coefficient of Utilization



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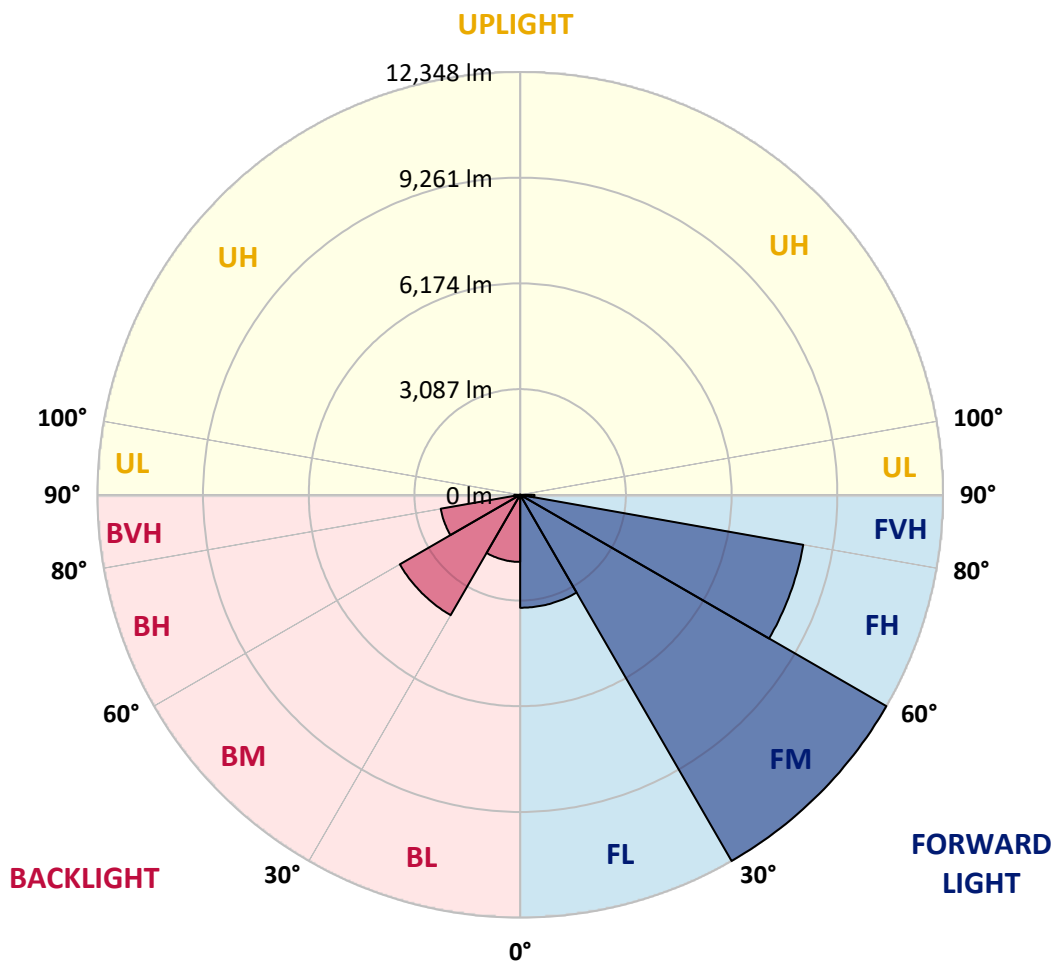
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 3298.4 | 10.0 | | | |
| FM (30°-60°) | 12348.2 | 37.4 | | | |
| FH (60°-80°) | 8394.9 | 25.4 | | | G4/12000 |
| FVH (80°-90°) | 414.7 | 1.3 | | | G3/500 |
| BL (0°-30°) | 1959.5 | 5.9 | B3/2500 | | |
| BM (30°-60°) | 4058.1 | 12.3 | B3/5000 | | |
| BH (60°-80°) | 2353.1 | 7.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 173.2 | 0.5 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 70° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 0° | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 |
| 2.5° | 6184.2 | 6249.8 | 6240.9 | 6200.6 | 6228.9 | 6151.4 | 6123.1 | 6079.8 | 6035.1 | 6020.2 | 5994.8 |
| 5° | 6476.5 | 6563.0 | 6546.6 | 6492.9 | 6491.4 | 6381.1 | 6318.4 | 6236.4 | 6167.8 | 6114.1 | 6035.1 |
| 7.5° | 6749.4 | 6849.3 | 6834.4 | 6782.2 | 6779.2 | 6652.5 | 6522.7 | 6394.5 | 6315.4 | 6246.8 | 6102.2 |
| 10° | 7038.7 | 7114.7 | 7101.3 | 7034.2 | 7020.8 | 6897.0 | 6744.9 | 6583.9 | 6467.5 | 6372.1 | 6166.3 |
| 12.5° | 7305.6 | 7386.2 | 7392.1 | 7308.6 | 7287.7 | 7155.0 | 7022.3 | 6809.0 | 6658.4 | 6549.6 | 6246.8 |
| 15° | 7554.7 | 7650.1 | 7632.2 | 7548.7 | 7526.3 | 7392.1 | 7262.4 | 7065.5 | 6909.0 | 6756.8 | 6378.1 |
| 17.5° | 7754.5 | 7845.5 | 7823.1 | 7785.8 | 7773.9 | 7669.5 | 7562.1 | 7348.9 | 7210.2 | 7014.8 | 6580.9 |
| 20° | 7891.7 | 7976.7 | 7985.6 | 7975.2 | 8043.8 | 7945.4 | 7885.7 | 7735.1 | 7583.0 | 7407.0 | 6858.2 |
| 22.5° | 7945.4 | 8046.8 | 8133.3 | 8200.4 | 8342.0 | 8327.1 | 8316.7 | 8230.2 | 8081.1 | 7824.6 | 7225.1 |
| 25° | 7961.8 | 8063.2 | 8197.4 | 8362.9 | 8616.4 | 8707.4 | 8773.0 | 8793.9 | 8631.3 | 8428.5 | 7681.4 |
| 27.5° | 7964.8 | 8073.6 | 8210.8 | 8477.7 | 8864.0 | 9138.4 | 9294.9 | 9368.0 | 9277.1 | 9116.0 | 8301.8 |
| 30° | 7902.1 | 8014.0 | 8189.9 | 8546.3 | 9057.8 | 9508.2 | 9767.7 | 10091.3 | 10052.5 | 9916.8 | 9078.7 |
| 32.5° | 7721.7 | 7823.1 | 8066.2 | 8534.4 | 9250.2 | 9887.0 | 10291.1 | 10851.8 | 10983.0 | 10895.1 | 9975.0 |
| 35° | 7398.1 | 7521.9 | 7836.5 | 8436.0 | 9354.6 | 10255.3 | 10907.0 | 11779.4 | 12016.5 | 12022.4 | 11074.0 |
| 37.5° | 7071.5 | 7165.4 | 7535.3 | 8251.1 | 9412.8 | 10581.9 | 11491.6 | 12708.4 | 13052.9 | 13060.3 | 11988.1 |
| 40° | 6724.0 | 6810.5 | 7217.6 | 8003.5 | 9353.1 | 10838.4 | 12035.9 | 13601.7 | 14095.3 | 14049.0 | 12885.9 |
| 42.5° | 6273.7 | 6369.1 | 6773.2 | 7666.5 | 9204.0 | 11036.7 | 12589.1 | 14539.7 | 15013.9 | 15066.1 | 13822.4 |
| 45° | 5888.9 | 5965.0 | 6318.4 | 7140.1 | 8931.1 | 11144.1 | 13108.1 | 15540.3 | 16083.1 | 16027.9 | 14821.5 |
| 47.5° | 5414.7 | 5528.1 | 5905.3 | 6712.1 | 8440.5 | 11117.3 | 13604.7 | 16530.5 | 17134.4 | 17083.7 | 15687.9 |
| 50° | 4177.0 | 4308.2 | 5185.1 | 6263.2 | 7814.1 | 10907.0 | 14055.0 | 17477.4 | 18227.5 | 18094.8 | 16605.0 |
| 52.5° | 3793.7 | 3831.0 | 4180.0 | 5747.3 | 7196.8 | 10429.8 | 14386.1 | 18673.4 | 19117.8 | 19065.6 | 17534.1 |
| 55° | 3559.6 | 3631.2 | 3790.8 | 4734.7 | 6642.0 | 9654.3 | 14615.7 | 19672.5 | 20173.6 | 19929.0 | 18375.2 |
| 57.5° | 3353.8 | 3404.5 | 3593.9 | 4053.2 | 6003.8 | 8586.6 | 14548.6 | 20515.1 | 20962.5 | 20621.0 | 19196.8 |
| 60° | 3134.6 | 3167.4 | 3356.8 | 3699.8 | 5314.8 | 7407.0 | 13867.1 | 21384.5 | 21582.8 | 21269.7 | 19891.8 |
| 62.5° | 2964.6 | 2995.9 | 3109.3 | 3438.8 | 4778.0 | 6563.0 | 12751.7 | 21445.6 | 21934.8 | 21706.6 | 20482.3 |
| 65° | 2746.9 | 2767.8 | 2909.4 | 3168.9 | 4279.9 | 6060.4 | 11768.9 | 20871.5 | 21764.8 | 21708.1 | 20709.0 |
| 67.5° | 2506.8 | 2532.1 | 2666.4 | 2849.8 | 3643.1 | 5468.4 | 10125.6 | 20561.3 | 21046.0 | 21101.2 | 20284.0 |
| 70° | 2224.9 | 2242.8 | 2381.5 | 2514.2 | 3116.7 | 4800.3 | 8049.8 | 19372.8 | 19938.0 | 19936.5 | 18971.7 |
| 72.5° | 1920.7 | 1919.2 | 2056.4 | 2196.6 | 2611.2 | 4032.3 | 6302.0 | 17200.1 | 18695.8 | 18583.9 | 17104.6 |
| 75° | 1583.7 | 1606.1 | 1738.8 | 1849.1 | 2172.7 | 3268.8 | 4388.7 | 12459.4 | 16505.1 | 16658.7 | 14761.9 |
| 77.5° | 1012.6 | 1027.5 | 1102.0 | 1215.4 | 1519.6 | 2497.8 | 2863.2 | 6923.9 | 11020.3 | 13293.0 | 11619.8 |
| 80° | 739.7 | 747.1 | 812.7 | 878.3 | 1011.1 | 1521.1 | 1455.5 | 3009.3 | 4367.9 | 6525.7 | 7128.2 |
| 82.5° | 504.0 | 505.5 | 557.7 | 572.6 | 580.1 | 686.0 | 690.4 | 1464.4 | 2080.3 | 2450.1 | 3148.0 |
| 85° | 334.0 | 277.4 | 216.2 | 286.3 | 293.8 | 252.0 | 246.1 | 660.6 | 1031.9 | 1237.7 | 1166.2 |
| 87.5° | 74.6 | 73.1 | 85.0 | 86.5 | 83.5 | 71.6 | 59.6 | 101.4 | 155.1 | 153.6 | 196.8 |
| 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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CATALOG NUMBER: VERD-M-CA4-230-750-U-T2

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 | 5956.0 |
| 2.5° | 5971.0 | 5963.5 | 5921.7 | 5833.8 | 5774.1 | 5713.0 | 5678.7 | 5657.8 | 5665.3 | 5631.0 | 5616.0 |
| 5° | 5985.9 | 5948.6 | 5830.8 | 5726.4 | 5632.4 | 5526.6 | 5438.6 | 5426.7 | 5444.5 | 5413.2 | 5395.3 |
| 7.5° | 6024.6 | 5945.6 | 5795.0 | 5616.0 | 5459.5 | 5359.5 | 5232.8 | 5168.7 | 5164.2 | 5132.9 | 5138.8 |
| 10° | 6047.0 | 5944.1 | 5742.8 | 5526.6 | 5343.1 | 5165.7 | 5030.0 | 4958.4 | 4953.9 | 4909.2 | 4898.7 |
| 12.5° | 6108.2 | 5960.5 | 5681.7 | 5417.7 | 5213.4 | 4976.3 | 4833.1 | 4767.5 | 4760.1 | 4697.4 | 4673.6 |
| 15° | 6202.1 | 5997.8 | 5617.5 | 5290.9 | 5027.0 | 4804.8 | 4633.3 | 4545.3 | 4531.9 | 4458.8 | 4433.5 |
| 17.5° | 6351.2 | 6103.7 | 5598.1 | 5176.1 | 4864.5 | 4621.4 | 4420.1 | 4324.6 | 4247.1 | 4206.8 | 4172.5 |
| 20° | 6552.5 | 6234.9 | 5620.5 | 5068.8 | 4660.1 | 4379.8 | 4129.3 | 4004.0 | 3950.3 | 3884.7 | 3889.2 |
| 22.5° | 6838.9 | 6440.7 | 5659.3 | 4985.2 | 4475.2 | 4121.8 | 3840.0 | 3699.8 | 3602.9 | 3547.7 | 3550.7 |
| 25° | 7241.5 | 6750.9 | 5735.3 | 4906.2 | 4273.9 | 3840.0 | 3507.4 | 3312.1 | 3213.6 | 3177.8 | 3140.6 |
| 27.5° | 7750.0 | 7122.2 | 5915.8 | 4809.3 | 4035.3 | 3520.8 | 3152.5 | 2924.3 | 2824.4 | 2770.7 | 2763.3 |
| 30° | 8403.2 | 7609.8 | 6127.5 | 4737.7 | 3784.8 | 3122.7 | 2712.6 | 2532.1 | 2444.2 | 2368.1 | 2332.3 |
| 32.5° | 9199.5 | 8298.8 | 6363.2 | 4666.1 | 3474.6 | 2676.8 | 2305.5 | 2166.8 | 2026.6 | 1929.7 | 1934.1 |
| 35° | 10124.1 | 9048.9 | 6713.6 | 4575.1 | 3110.7 | 2260.7 | 2004.2 | 1825.3 | 1694.1 | 1629.9 | 1600.1 |
| 37.5° | 10996.5 | 9818.4 | 7125.2 | 4482.7 | 2703.6 | 1990.8 | 1707.5 | 1542.0 | 1440.5 | 1391.3 | 1401.8 |
| 40° | 11879.3 | 10611.7 | 7480.1 | 4256.0 | 2247.3 | 1746.3 | 1413.7 | 1319.8 | 1279.5 | 1240.7 | 1245.2 |
| 42.5° | 12669.6 | 11244.0 | 7739.6 | 4004.0 | 1928.2 | 1465.9 | 1204.9 | 1225.8 | 1249.7 | 1227.3 | 1221.3 |
| 45° | 13492.8 | 11983.7 | 7967.7 | 3574.5 | 1661.3 | 1245.2 | 1152.7 | 1210.9 | 1263.1 | 1260.1 | 1252.6 |
| 47.5° | 14319.0 | 12669.6 | 7990.1 | 3004.9 | 1418.2 | 1170.6 | 1151.2 | 1194.5 | 1263.1 | 1275.0 | 1266.1 |
| 50° | 15170.5 | 13388.4 | 7858.9 | 2333.8 | 1315.3 | 1179.6 | 1152.7 | 1160.2 | 1236.2 | 1249.7 | 1245.2 |
| 52.5° | 16114.4 | 14165.4 | 7535.3 | 1774.6 | 1275.0 | 1194.5 | 1157.2 | 1146.8 | 1190.0 | 1213.9 | 1218.3 |
| 55° | 16982.3 | 14782.7 | 6928.3 | 1567.3 | 1245.2 | 1196.0 | 1190.0 | 1155.7 | 1157.2 | 1145.3 | 1175.1 |
| 57.5° | 17711.6 | 15371.8 | 6239.4 | 1454.0 | 1218.3 | 1182.6 | 1204.9 | 1140.8 | 1122.9 | 1073.7 | 1061.8 |
| 60° | 18466.1 | 15850.5 | 5270.1 | 1376.4 | 1187.0 | 1166.2 | 1167.6 | 1115.5 | 1070.7 | 999.1 | 978.3 |
| 62.5° | 19001.5 | 16104.0 | 4329.1 | 1285.5 | 1143.8 | 1140.8 | 1118.4 | 1079.7 | 1039.4 | 976.8 | 967.8 |
| 65° | 19156.6 | 15969.8 | 3325.5 | 1190.0 | 1087.1 | 1099.0 | 1058.8 | 1005.1 | 838.1 | 760.5 | 760.5 |
| 67.5° | 18643.6 | 15143.6 | 2462.1 | 1079.7 | 1018.5 | 1042.4 | 963.3 | 791.9 | 705.4 | 659.1 | 666.6 |
| 70° | 17237.3 | 13809.0 | 1603.1 | 918.6 | 920.1 | 939.5 | 794.8 | 712.8 | 630.8 | 602.5 | 617.4 |
| 72.5° | 15358.4 | 11830.1 | 1057.3 | 732.2 | 775.4 | 742.6 | 726.2 | 656.1 | 583.1 | 550.3 | 560.7 |
| 75° | 12656.2 | 9341.2 | 733.7 | 575.6 | 502.6 | 633.8 | 645.7 | 551.8 | 495.1 | 601.0 | 624.8 |
| 77.5° | 9998.8 | 6492.9 | 605.4 | 402.6 | 371.3 | 468.3 | 517.5 | 511.5 | 818.7 | 961.9 | 951.4 |
| 80° | 5945.6 | 3738.6 | 493.6 | 278.9 | 262.5 | 301.2 | 407.1 | 587.6 | 917.1 | 689.0 | 656.1 |
| 82.5° | 2696.2 | 1700.0 | 262.5 | 146.1 | 171.5 | 199.8 | 304.2 | 730.7 | 601.0 | 441.4 | 416.1 |
| 85° | 1052.8 | 554.7 | 104.4 | 64.1 | 59.6 | 74.6 | 138.7 | 351.9 | 241.6 | 195.4 | 195.4 |
| 87.5° | 135.7 | 99.9 | 29.8 | 22.4 | 19.4 | 23.9 | 44.7 | 195.4 | 113.3 | 95.4 | 92.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)