

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: P510012

Luminaire Tested: **VERD-M-CA4-190-722-U-T2-HSS**

Issue Date: 4/6/2021

Test Information

Test Method: LM-79-08
Report Number: P510012
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2103-181-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VERD-M-CA4-190-722-U-T2-HSS
Description: VERDEON-M ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2200K, 870mA LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20617 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Luminous Opening: Rectangular (W 1.35' x L: 1.58' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

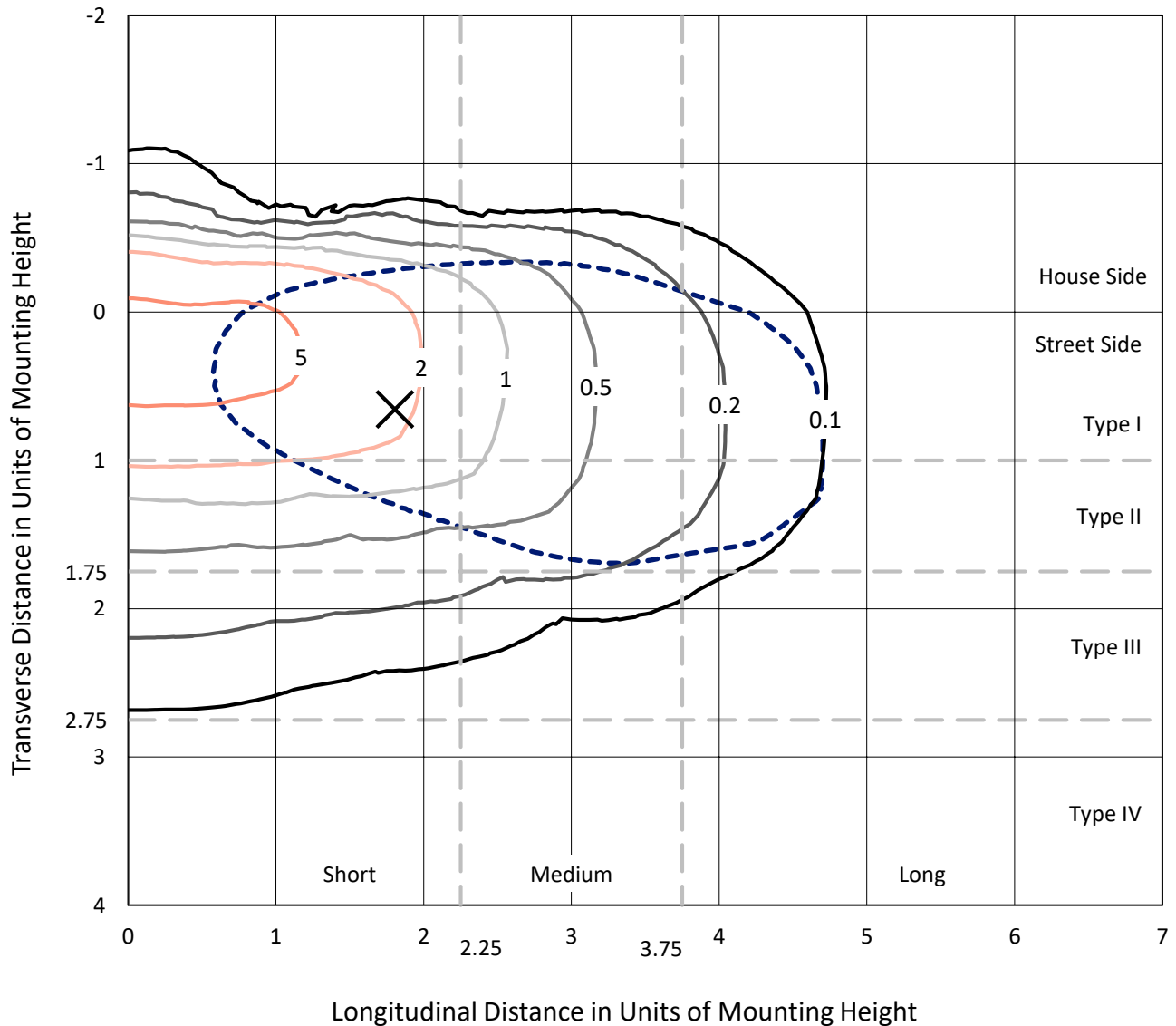
Input Watts (W): 193.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

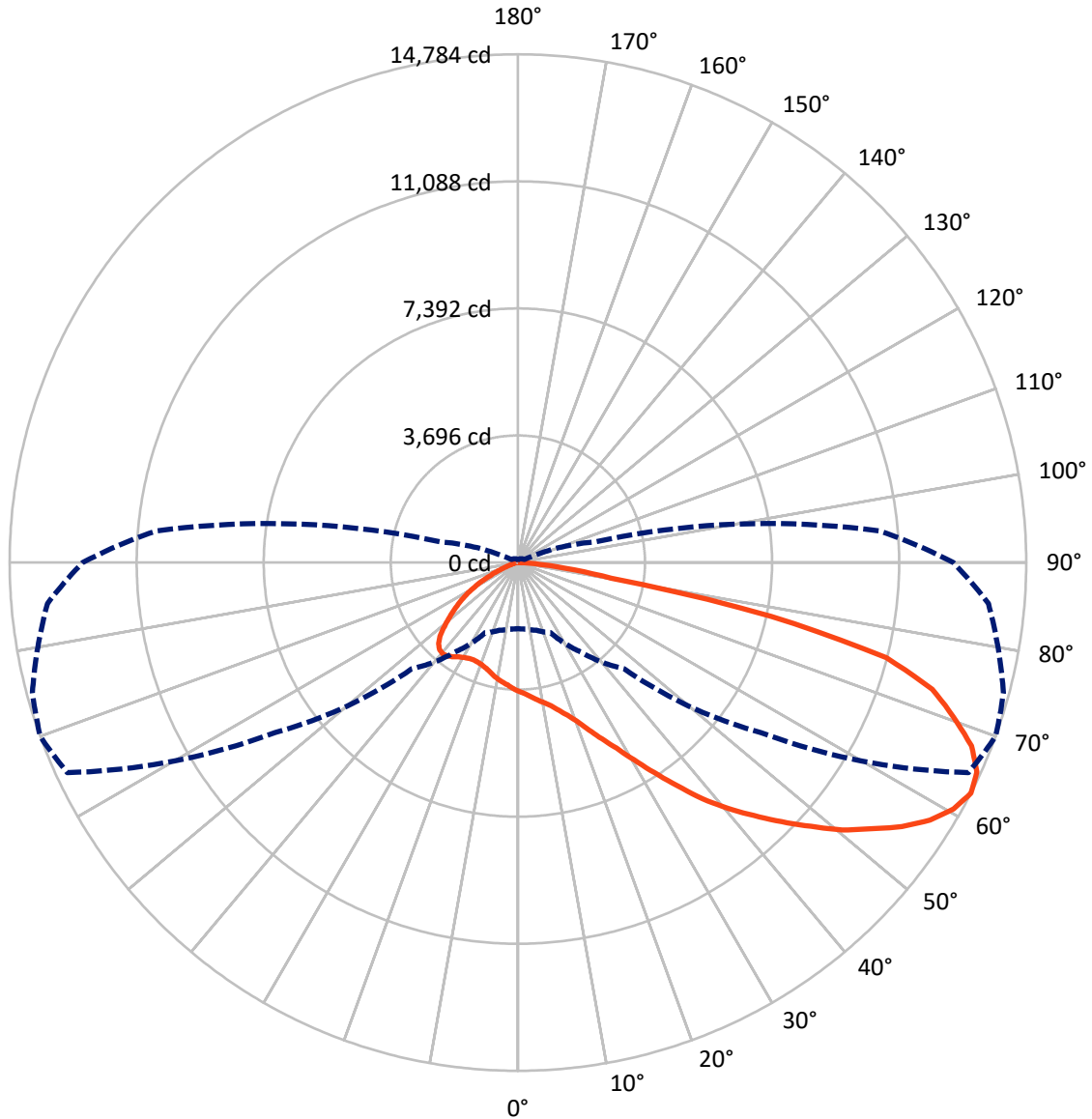
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 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 | 4335.5 | 0.0 | 4335.5 |
| | % Fixture | 21.0 | 0.0 | 21.0 |
| Street Side | Lumens | 16281.5 | 0.0 | 16281.5 |
| | % Fixture | 79.0 | 0.0 | 79.0 |
| Total | Lumens | 20617.0 | 0.0 | 20617.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 355.9 | 1.7 |
| 10°-20° | 1062.0 | 5.2 |
| 20°-30° | 1800.4 | 8.7 |
| 30°-40° | 2647.6 | 12.8 |
| 40°-50° | 3525.7 | 17.1 |
| 50°-60° | 4124.4 | 20.0 |
| 60°-70° | 4148.1 | 20.1 |
| 70°-80° | 2625.8 | 12.7 |
| 80°-90° | 327.2 | 1.6 |
| 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° | 20617.0 | 100.0 |
| 0°-180° | 20617.0 | 100.0 |

Coefficient of Utilization



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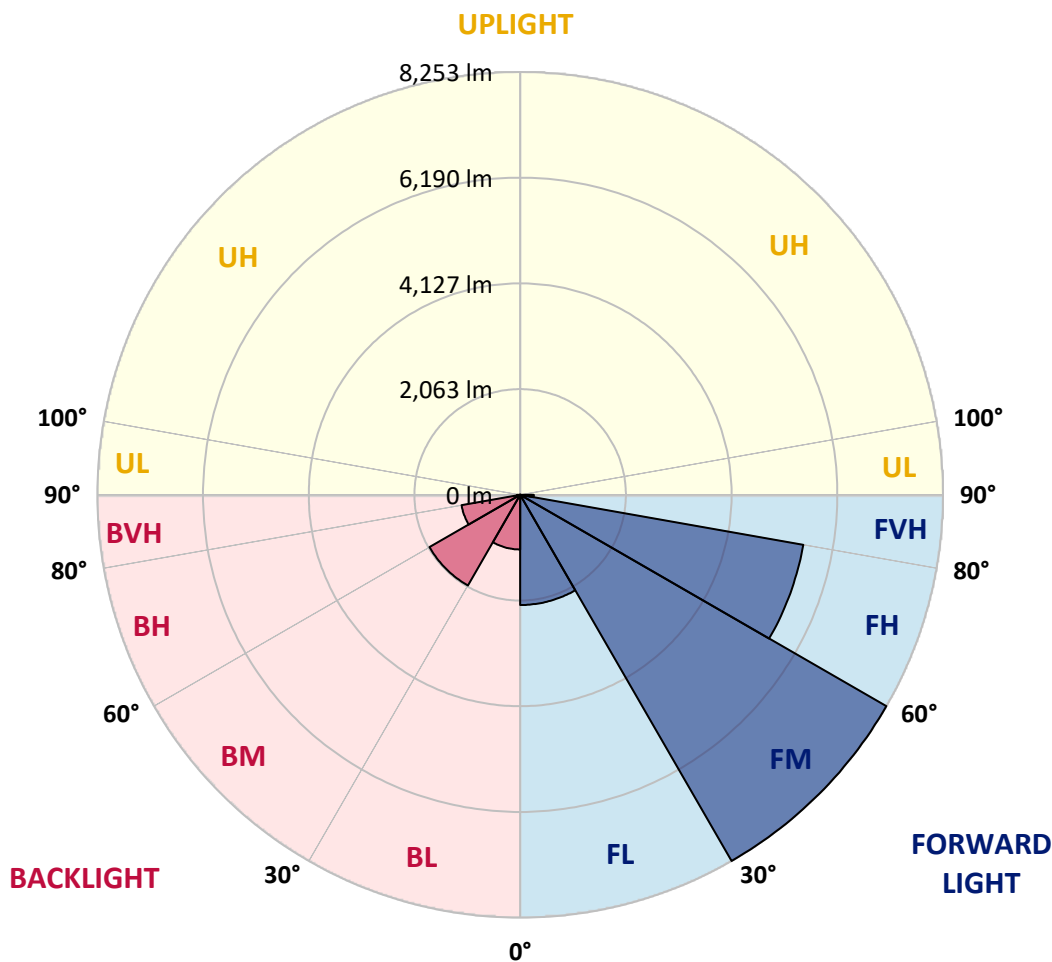
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2150.8 | 10.4 | | | |
| FM (30°-60°) | 8253.4 | 40.0 | | | |
| FH (60°-80°) | 5612.0 | 27.2 | | | G3/7500 |
| FVH (80°-90°) | 265.3 | 1.3 | | | G3/500 |
| BL (0°-30°) | 1067.4 | 5.2 | B3/2500 | | |
| BM (30°-60°) | 2044.3 | 9.9 | B2/2500 | | |
| BH (60°-80°) | 1162.0 | 5.6 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 61.9 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 70° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 |
| 2.5° | 3953.8 | 3988.4 | 3962.0 | 3951.8 | 3959.9 | 3919.2 | 3886.6 | 3839.8 | 3817.4 | 3801.1 | 3774.6 |
| 5° | 4154.4 | 4211.4 | 4176.8 | 4155.4 | 4152.4 | 4078.0 | 4034.2 | 3970.1 | 3920.2 | 3876.4 | 3809.2 |
| 7.5° | 4366.2 | 4399.8 | 4386.6 | 4362.1 | 4345.8 | 4255.2 | 4177.8 | 4087.2 | 4032.2 | 3974.2 | 3861.1 |
| 10° | 4551.5 | 4592.2 | 4579.0 | 4535.2 | 4519.9 | 4427.3 | 4338.7 | 4215.5 | 4140.1 | 4067.8 | 3912.1 |
| 12.5° | 4742.9 | 4788.8 | 4761.3 | 4717.5 | 4704.2 | 4610.6 | 4518.9 | 4369.2 | 4275.6 | 4194.1 | 3978.2 |
| 15° | 4919.1 | 4960.8 | 4941.5 | 4891.6 | 4878.4 | 4798.9 | 4698.1 | 4558.6 | 4456.8 | 4348.9 | 4071.9 |
| 17.5° | 5059.6 | 5101.4 | 5076.9 | 5053.5 | 5049.4 | 4971.0 | 4910.9 | 4768.4 | 4671.7 | 4525.0 | 4215.5 |
| 20° | 5162.5 | 5205.2 | 5193.0 | 5204.2 | 5247.0 | 5188.9 | 5152.3 | 5032.1 | 4933.3 | 4774.5 | 4422.2 |
| 22.5° | 5243.9 | 5298.9 | 5347.8 | 5370.2 | 5449.6 | 5445.5 | 5437.4 | 5366.1 | 5288.7 | 5123.8 | 4668.6 |
| 25° | 5252.1 | 5315.2 | 5411.9 | 5516.8 | 5661.4 | 5730.6 | 5781.5 | 5770.3 | 5679.7 | 5516.8 | 5009.7 |
| 27.5° | 5264.3 | 5329.4 | 5429.2 | 5609.5 | 5868.1 | 6030.0 | 6114.5 | 6166.4 | 6113.5 | 6004.5 | 5397.7 |
| 30° | 5237.8 | 5305.0 | 5430.2 | 5660.4 | 6009.6 | 6310.0 | 6460.7 | 6653.1 | 6659.3 | 6567.6 | 5983.1 |
| 32.5° | 5117.6 | 5206.2 | 5358.0 | 5666.5 | 6147.1 | 6602.2 | 6834.4 | 7204.0 | 7284.5 | 7216.2 | 6587.0 |
| 35° | 4917.1 | 4997.5 | 5214.4 | 5612.5 | 6230.6 | 6845.6 | 7270.2 | 7846.5 | 7965.7 | 7961.6 | 7297.7 |
| 37.5° | 4695.1 | 4776.5 | 5020.9 | 5485.2 | 6284.5 | 7062.5 | 7654.1 | 8483.9 | 8721.2 | 8671.3 | 7968.7 |
| 40° | 4449.7 | 4535.2 | 4817.3 | 5325.4 | 6258.1 | 7255.9 | 8060.3 | 9102.0 | 9396.3 | 9402.4 | 8610.2 |
| 42.5° | 4164.6 | 4234.8 | 4517.9 | 5104.4 | 6170.5 | 7398.5 | 8438.1 | 9752.7 | 10062.2 | 10044.9 | 9215.0 |
| 45° | 3891.7 | 3965.0 | 4212.4 | 4762.3 | 5967.9 | 7477.9 | 8808.8 | 10411.5 | 10750.5 | 10695.5 | 9887.1 |
| 47.5° | 3561.8 | 3666.7 | 3948.7 | 4475.1 | 5655.3 | 7471.8 | 9132.6 | 11085.5 | 11466.3 | 11421.5 | 10467.5 |
| 50° | 2741.1 | 2803.2 | 3441.6 | 4178.8 | 5231.7 | 7329.3 | 9449.2 | 11747.4 | 12229.0 | 12141.4 | 11086.5 |
| 52.5° | 2469.2 | 2525.2 | 2730.9 | 3823.5 | 4846.8 | 7020.7 | 9712.9 | 12504.9 | 12865.4 | 12797.2 | 11718.9 |
| 55° | 2333.8 | 2364.3 | 2489.6 | 3153.5 | 4471.1 | 6519.8 | 9889.1 | 13178.0 | 13552.7 | 13402.0 | 12310.5 |
| 57.5° | 2163.7 | 2201.4 | 2347.0 | 2693.2 | 4008.8 | 5751.0 | 9848.4 | 13784.9 | 14131.1 | 13899.9 | 12831.8 |
| 60° | 2033.4 | 2061.9 | 2198.4 | 2424.4 | 3531.2 | 4954.7 | 9431.9 | 14380.5 | 14554.7 | 14326.6 | 13351.1 |
| 62.5° | 1923.4 | 1939.7 | 2035.5 | 2250.3 | 3167.7 | 4373.3 | 8619.4 | 14460.0 | 14783.8 | 14618.8 | 13738.0 |
| 65° | 1787.0 | 1791.1 | 1904.1 | 2072.1 | 2831.7 | 4024.1 | 7921.9 | 14052.7 | 14669.7 | 14614.7 | 13877.5 |
| 67.5° | 1627.1 | 1635.3 | 1749.3 | 1877.6 | 2427.5 | 3652.4 | 6835.4 | 13833.7 | 14226.8 | 14192.2 | 13601.6 |
| 70° | 1426.5 | 1442.8 | 1547.7 | 1645.5 | 2055.8 | 3206.4 | 5440.4 | 12968.2 | 13434.6 | 13383.7 | 12692.3 |
| 72.5° | 1233.1 | 1223.9 | 1321.7 | 1418.4 | 1712.7 | 2676.9 | 4123.9 | 11478.6 | 12601.7 | 12552.8 | 11511.1 |
| 75° | 1013.1 | 1007.0 | 1107.8 | 1199.5 | 1404.1 | 2162.7 | 2901.0 | 8489.0 | 11072.3 | 11223.0 | 9925.8 |
| 77.5° | 624.2 | 629.3 | 687.3 | 748.4 | 951.0 | 1615.9 | 1851.2 | 4722.6 | 7521.7 | 8919.7 | 7789.5 |
| 80° | 452.1 | 452.1 | 494.9 | 531.5 | 629.3 | 984.6 | 921.5 | 1969.3 | 2749.2 | 4305.1 | 4858.0 |
| 82.5° | 293.3 | 281.0 | 307.5 | 339.1 | 350.3 | 426.6 | 421.5 | 987.7 | 1401.1 | 1686.2 | 2023.2 |
| 85° | 152.7 | 169.0 | 101.8 | 143.6 | 151.7 | 141.5 | 145.6 | 463.3 | 622.1 | 797.3 | 877.7 |
| 87.5° | 23.4 | 18.3 | 24.4 | 33.6 | 38.7 | 32.6 | 28.5 | 54.0 | 83.5 | 111.0 | 131.4 |
| 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):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 | 3748.1 |
| 2.5° | 3757.3 | 3752.2 | 3705.4 | 3637.1 | 3581.1 | 3534.3 | 3503.7 | 3483.4 | 3505.8 | 3465.1 | 3460.0 |
| 5° | 3767.5 | 3732.8 | 3631.0 | 3533.3 | 3457.9 | 3357.1 | 3288.9 | 3243.1 | 3261.4 | 3225.8 | 3211.5 |
| 7.5° | 3795.0 | 3731.8 | 3591.3 | 3435.5 | 3293.0 | 3185.0 | 3080.2 | 2979.4 | 2964.1 | 2941.7 | 2942.7 |
| 10° | 3819.4 | 3728.8 | 3545.5 | 3341.8 | 3175.9 | 2985.5 | 2859.2 | 2755.3 | 2731.9 | 2705.5 | 2692.2 |
| 12.5° | 3858.1 | 3735.9 | 3488.5 | 3242.1 | 3020.1 | 2800.1 | 2663.7 | 2541.5 | 2518.1 | 2466.2 | 2455.0 |
| 15° | 3935.5 | 3761.4 | 3432.5 | 3118.9 | 2844.9 | 2623.0 | 2446.8 | 2339.9 | 2297.1 | 2239.1 | 2238.1 |
| 17.5° | 4036.3 | 3835.7 | 3404.0 | 3002.8 | 2696.3 | 2447.8 | 2261.5 | 2153.6 | 2081.3 | 2046.7 | 2037.5 |
| 20° | 4179.9 | 3932.4 | 3402.9 | 2897.9 | 2541.5 | 2260.5 | 2046.7 | 1924.5 | 1863.4 | 1834.9 | 1817.5 |
| 22.5° | 4400.8 | 4075.0 | 3421.3 | 2824.6 | 2385.7 | 2079.2 | 1866.4 | 1698.4 | 1597.6 | 1519.2 | 1530.4 |
| 25° | 4675.7 | 4288.8 | 3463.0 | 2757.4 | 2250.3 | 1906.1 | 1639.4 | 1406.2 | 1226.0 | 1147.6 | 1153.7 |
| 27.5° | 5025.0 | 4544.4 | 3571.0 | 2689.2 | 2096.5 | 1719.8 | 1343.1 | 1046.7 | 910.3 | 818.7 | 825.8 |
| 30° | 5472.0 | 4862.1 | 3712.5 | 2636.2 | 1954.0 | 1459.1 | 1011.1 | 771.8 | 651.7 | 576.3 | 569.2 |
| 32.5° | 6006.6 | 5322.3 | 3867.3 | 2600.6 | 1798.2 | 1133.3 | 729.1 | 566.1 | 449.0 | 406.3 | 412.4 |
| 35° | 6668.4 | 5839.6 | 4103.5 | 2548.6 | 1531.4 | 806.4 | 520.3 | 382.9 | 322.8 | 314.6 | 315.7 |
| 37.5° | 7272.2 | 6369.1 | 4337.7 | 2461.1 | 1208.6 | 573.3 | 353.3 | 291.2 | 278.0 | 274.9 | 279.0 |
| 40° | 7863.8 | 6851.7 | 4549.5 | 2333.8 | 830.9 | 393.0 | 259.6 | 262.7 | 251.5 | 243.4 | 239.3 |
| 42.5° | 8417.7 | 7317.0 | 4715.4 | 2099.6 | 568.2 | 259.6 | 230.1 | 239.3 | 237.2 | 221.0 | 213.8 |
| 45° | 9015.5 | 7808.8 | 4807.1 | 1771.7 | 357.4 | 221.0 | 206.7 | 223.0 | 233.2 | 214.8 | 206.7 |
| 47.5° | 9525.6 | 8288.4 | 4803.0 | 1357.3 | 242.3 | 208.7 | 194.5 | 208.7 | 221.0 | 207.7 | 200.6 |
| 50° | 10114.1 | 8685.5 | 4672.7 | 861.4 | 214.8 | 193.5 | 186.3 | 191.4 | 207.7 | 198.6 | 191.4 |
| 52.5° | 10767.8 | 9229.3 | 4475.1 | 480.6 | 203.6 | 183.3 | 173.1 | 179.2 | 193.5 | 182.3 | 186.3 |
| 55° | 11309.5 | 9680.4 | 4010.8 | 327.9 | 198.6 | 171.1 | 165.0 | 169.0 | 175.1 | 163.9 | 170.0 |
| 57.5° | 11793.2 | 10053.0 | 3541.4 | 268.8 | 191.4 | 162.9 | 161.9 | 153.8 | 152.7 | 145.6 | 139.5 |
| 60° | 12283.0 | 10347.3 | 2908.1 | 243.4 | 184.3 | 163.9 | 146.6 | 135.4 | 126.3 | 119.1 | 116.1 |
| 62.5° | 12658.7 | 10551.0 | 2300.2 | 219.9 | 174.1 | 153.8 | 134.4 | 116.1 | 100.8 | 91.6 | 91.6 |
| 65° | 12768.7 | 10460.3 | 1619.0 | 199.6 | 162.9 | 144.6 | 120.2 | 94.7 | 76.4 | 70.3 | 67.2 |
| 67.5° | 12416.4 | 9940.0 | 1127.2 | 184.3 | 151.7 | 134.4 | 105.9 | 77.4 | 61.1 | 52.9 | 50.9 |
| 70° | 11519.3 | 9069.4 | 664.9 | 162.9 | 137.5 | 117.1 | 96.7 | 63.1 | 49.9 | 41.7 | 39.7 |
| 72.5° | 10193.6 | 7764.0 | 414.4 | 138.5 | 118.1 | 95.7 | 72.3 | 51.9 | 39.7 | 32.6 | 31.6 |
| 75° | 8419.8 | 6052.4 | 270.9 | 106.9 | 93.7 | 75.3 | 55.0 | 41.7 | 34.6 | 27.5 | 25.5 |
| 77.5° | 6751.9 | 4281.7 | 242.3 | 81.5 | 69.2 | 54.0 | 41.7 | 34.6 | 28.5 | 24.4 | 24.4 |
| 80° | 3885.6 | 2443.8 | 198.6 | 56.0 | 42.8 | 40.7 | 32.6 | 28.5 | 26.5 | 23.4 | 22.4 |
| 82.5° | 1909.2 | 1174.0 | 128.3 | 34.6 | 24.4 | 26.5 | 27.5 | 25.5 | 22.4 | 20.4 | 20.4 |
| 85° | 657.8 | 391.0 | 51.9 | 22.4 | 16.3 | 16.3 | 17.3 | 18.3 | 17.3 | 16.3 | 16.3 |
| 87.5° | 101.8 | 74.3 | 14.3 | 13.2 | 10.2 | 9.2 | 10.2 | 11.2 | 11.2 | 10.2 | 10.2 |
| 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)