

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: P299627

Luminaire Tested: **GAA-AF-09-LED-U-5MQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299627
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24142)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-09-LED-U-5MQ-7050
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 55711.6 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G5

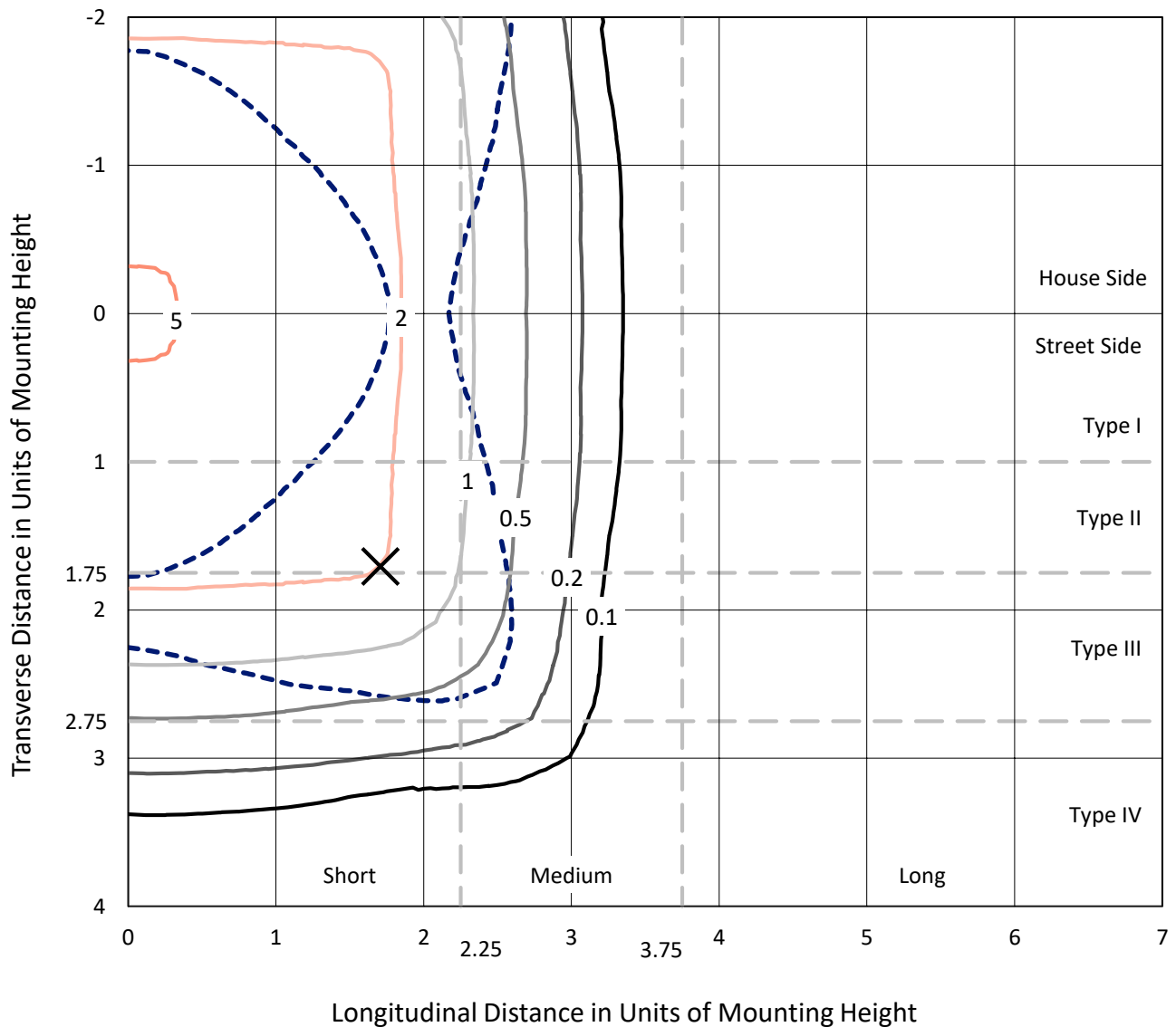
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P299627
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Iso-Footcandle Lines of Horizontal Illumination

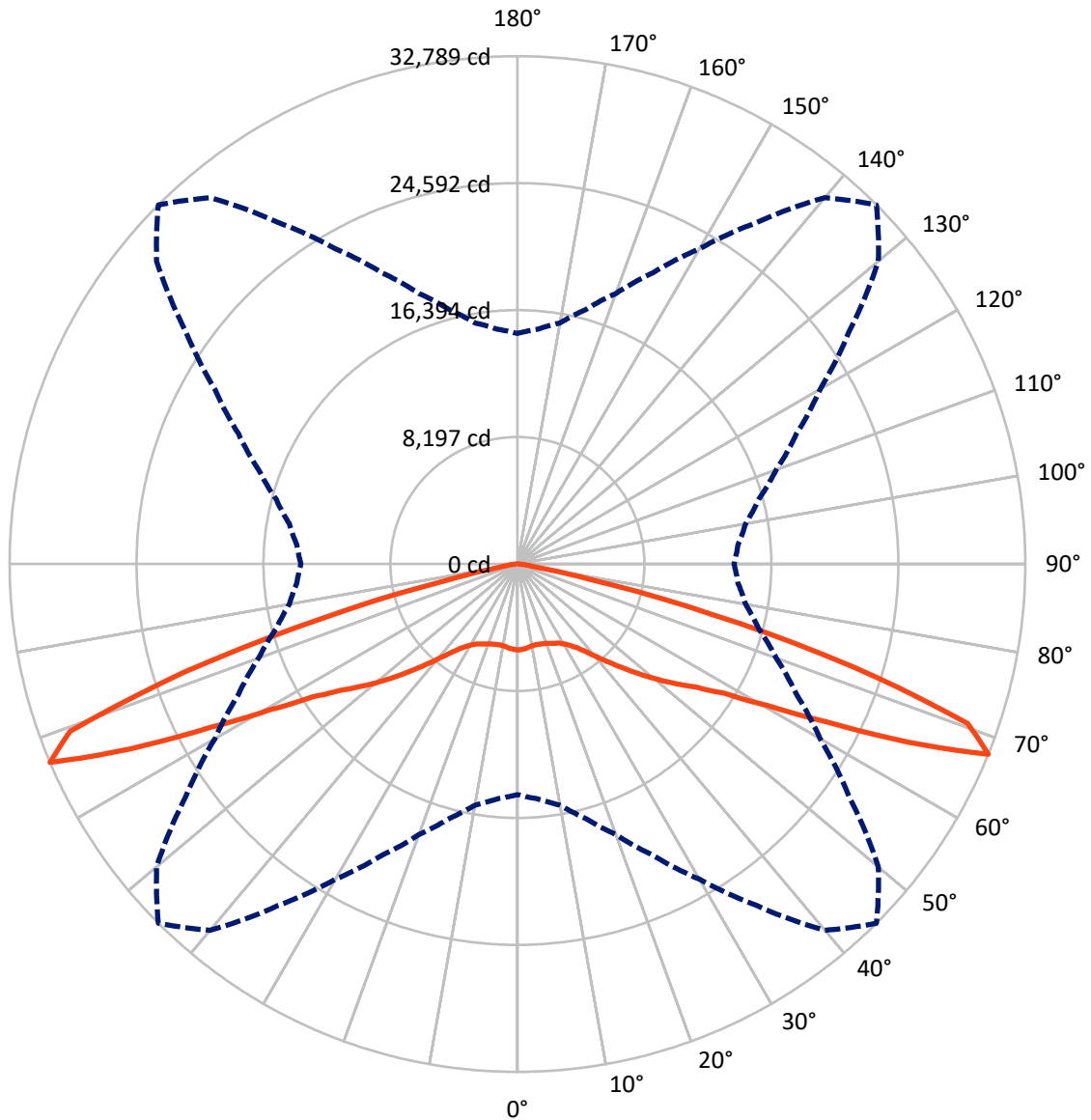
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.2 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P299627
CATALOG NUMBER: GAA-AF-09-LED-U-5MQ-7050

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 27855.8 | 0.0 | 27855.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 27855.8 | 0.0 | 27855.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 55711.6 | 0.0 | 55711.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 519.6 | 0.9 |
| 10°-20° | 1507.9 | 2.7 |
| 20°-30° | 2563.4 | 4.6 |
| 30°-40° | 4190.3 | 7.5 |
| 40°-50° | 7480.4 | 13.4 |
| 50°-60° | 12612.2 | 22.6 |
| 60°-70° | 19572.3 | 35.1 |
| 70°-80° | 6876.8 | 12.3 |
| 80°-90° | 388.6 | 0.7 |
| 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° | 55711.6 | 100.0 |
| 0°-180° | 55711.6 | 100.0 |



REPORT NUMBER: P299627

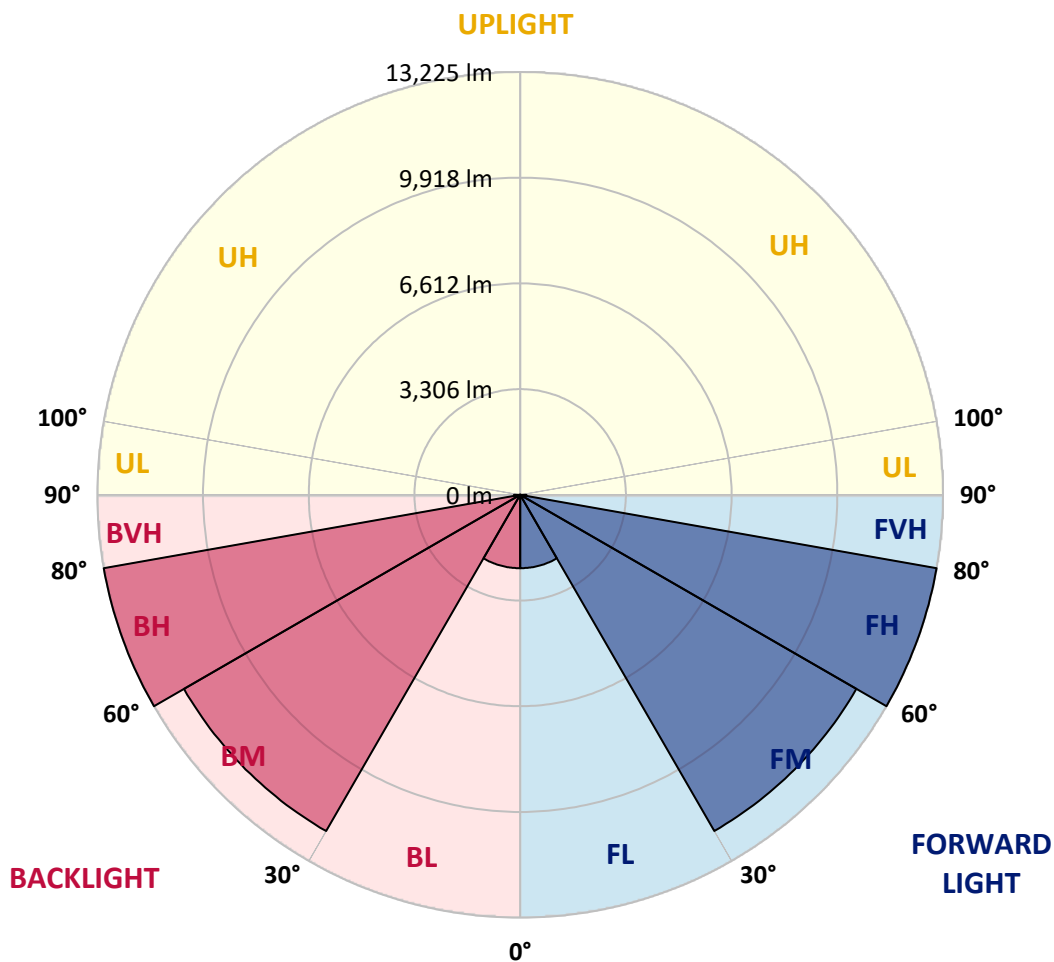
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 2295.4 | 4.1 | | | |
| FM | (30°-60°) | 12141.5 | 21.8 | | | |
| FH | (60°-80°) | 13224.6 | 23.7 | | | G5 |
| FVH | (80°-90°) | 194.3 | 0.3 | | | G2/225 |
| BL | (0°-30°) | 2295.4 | 4.1 | B3/2500 | | |
| BM | (30°-60°) | 12141.5 | 21.8 | B5 | | |
| BH | (60°-80°) | 13224.6 | 23.7 | B5 | | G5 |
| BVH | (80°-90°) | 194.3 | 0.3 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G5

Type V Short





REPORT NUMBER: P299627

CATALOG NUMBER: GAA-AF-09-LED-U-5MQ-7050

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 |
| 2.5° | 5531.4 | 5536.5 | 5536.5 | 5536.5 | 5534.0 | 5534.0 | 5528.8 | 5534.0 | 5531.4 | 5523.7 | 5526.3 |
| 5° | 5485.3 | 5490.4 | 5490.4 | 5487.8 | 5495.5 | 5493.0 | 5485.3 | 5490.4 | 5487.8 | 5482.7 | 5485.3 |
| 7.5° | 5418.7 | 5426.4 | 5426.4 | 5423.8 | 5431.5 | 5428.9 | 5423.8 | 5426.4 | 5426.4 | 5418.7 | 5418.7 |
| 10° | 5344.4 | 5349.5 | 5349.5 | 5346.9 | 5359.7 | 5359.7 | 5357.2 | 5364.9 | 5367.4 | 5359.7 | 5354.6 |
| 12.5° | 5275.2 | 5282.9 | 5282.9 | 5293.1 | 5305.9 | 5311.1 | 5323.9 | 5334.1 | 5344.4 | 5341.8 | 5331.6 |
| 15° | 5234.2 | 5239.3 | 5249.6 | 5262.4 | 5282.9 | 5300.8 | 5321.3 | 5344.4 | 5364.9 | 5370.0 | 5354.6 |
| 17.5° | 5208.6 | 5216.3 | 5231.6 | 5249.6 | 5277.8 | 5308.5 | 5339.2 | 5370.0 | 5398.2 | 5408.4 | 5390.5 |
| 20° | 5200.9 | 5206.0 | 5221.4 | 5252.1 | 5290.6 | 5336.7 | 5380.2 | 5416.1 | 5454.5 | 5467.3 | 5454.5 |
| 22.5° | 5216.3 | 5226.5 | 5244.5 | 5280.3 | 5331.6 | 5390.5 | 5441.7 | 5490.4 | 5539.1 | 5562.1 | 5544.2 |
| 25° | 5285.4 | 5295.7 | 5318.8 | 5364.9 | 5421.2 | 5482.7 | 5541.6 | 5598.0 | 5641.6 | 5664.6 | 5651.8 |
| 27.5° | 5413.5 | 5426.4 | 5454.5 | 5500.7 | 5562.1 | 5628.8 | 5692.8 | 5738.9 | 5774.8 | 5782.5 | 5767.1 |
| 30° | 5605.7 | 5633.9 | 5667.2 | 5718.4 | 5790.2 | 5846.5 | 5910.6 | 5951.6 | 5995.1 | 5995.1 | 5982.3 |
| 32.5° | 5905.5 | 5933.6 | 5969.5 | 6018.2 | 6074.5 | 6136.0 | 6192.4 | 6228.3 | 6274.4 | 6276.9 | 6246.2 |
| 35° | 6353.8 | 6366.6 | 6397.4 | 6428.1 | 6479.3 | 6533.1 | 6581.8 | 6604.9 | 6643.3 | 6645.9 | 6617.7 |
| 37.5° | 6945.6 | 6948.2 | 6968.7 | 6978.9 | 7025.1 | 7084.0 | 7130.1 | 7145.5 | 7181.3 | 7176.2 | 7148.0 |
| 40° | 7634.8 | 7647.6 | 7655.3 | 7670.7 | 7719.4 | 7775.7 | 7824.4 | 7832.1 | 7870.5 | 7862.8 | 7827.0 |
| 42.5° | 8431.6 | 8436.7 | 8480.3 | 8503.3 | 8549.5 | 8577.6 | 8639.1 | 8646.8 | 8692.9 | 8672.4 | 8631.4 |
| 45° | 9325.7 | 9371.9 | 9412.9 | 9459.0 | 9507.7 | 9541.0 | 9589.6 | 9579.4 | 9610.1 | 9579.4 | 9556.3 |
| 47.5° | 10266.0 | 10299.3 | 10391.5 | 10463.3 | 10542.7 | 10570.9 | 10640.1 | 10609.3 | 10640.1 | 10596.5 | 10588.8 |
| 50° | 11301.1 | 11360.0 | 11439.4 | 11521.4 | 11605.9 | 11652.1 | 11741.7 | 11703.3 | 11744.3 | 11703.3 | 11680.2 |
| 52.5° | 12320.7 | 12336.1 | 12510.3 | 12630.8 | 12748.6 | 12802.4 | 12856.2 | 12838.3 | 12840.8 | 12838.3 | 12815.2 |
| 55° | 13289.2 | 13325.1 | 13499.3 | 13663.2 | 13868.2 | 14019.4 | 14111.6 | 14101.4 | 14078.3 | 14055.2 | 14016.8 |
| 57.5° | 14380.6 | 14416.5 | 14616.3 | 14818.7 | 15051.9 | 15267.1 | 15454.1 | 15646.2 | 15720.5 | 15741.0 | 15656.5 |
| 60° | 15856.3 | 15853.8 | 16120.2 | 16366.2 | 16699.2 | 17019.5 | 17429.4 | 17847.0 | 18326.1 | 18549.0 | 18254.4 |
| 62.5° | 17357.7 | 17419.2 | 17803.5 | 18239.0 | 18925.6 | 19594.3 | 20350.1 | 21093.1 | 21851.5 | 22468.9 | 21813.0 |
| 65° | 17178.3 | 17414.0 | 17985.4 | 18971.8 | 20239.9 | 21746.4 | 23375.9 | 25100.1 | 26657.8 | 27728.7 | 26527.1 |
| 67.5° | 14887.9 | 15223.5 | 15805.1 | 17004.1 | 18590.0 | 20762.6 | 23498.8 | 26908.9 | 30872.3 | 32788.7 | 30413.7 |
| 70° | 10791.2 | 11170.4 | 11780.2 | 12951.0 | 14521.5 | 16586.5 | 19558.5 | 23652.6 | 28899.6 | 30831.3 | 28215.5 |
| 72.5° | 5370.0 | 5575.0 | 5951.6 | 6697.1 | 7885.9 | 9561.5 | 12256.7 | 16192.0 | 20834.3 | 22607.3 | 20216.9 |
| 75° | 1824.2 | 1919.0 | 1983.0 | 2226.4 | 2603.0 | 3261.5 | 4601.4 | 7078.9 | 10798.9 | 12945.9 | 10645.2 |
| 77.5° | 1053.0 | 1055.6 | 1099.1 | 1142.7 | 1206.7 | 1278.4 | 1457.8 | 1913.8 | 3310.1 | 4701.3 | 3425.4 |
| 80° | 681.5 | 678.9 | 714.8 | 748.1 | 791.7 | 827.5 | 837.8 | 886.5 | 1022.2 | 1211.8 | 1083.7 |
| 82.5° | 353.6 | 397.1 | 476.5 | 520.1 | 602.1 | 617.4 | 597.0 | 579.0 | 612.3 | 635.4 | 650.8 |
| 85° | 194.7 | 169.1 | 253.6 | 327.9 | 363.8 | 368.9 | 368.9 | 348.4 | 361.2 | 353.6 | 384.3 |
| 87.5° | 89.7 | 82.0 | 99.9 | 161.4 | 171.7 | 146.0 | 153.7 | 135.8 | 97.4 | 94.8 | 107.6 |
| 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: P299627

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CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 | 5551.9 |
| 2.5° | 5526.3 | 5528.8 | 5528.8 | 5536.5 | 5539.1 | 5544.2 | 5549.3 | 5551.9 |
| 5° | 5482.7 | 5490.4 | 5485.3 | 5493.0 | 5493.0 | 5498.1 | 5498.1 | 5500.7 |
| 7.5° | 5418.7 | 5426.4 | 5426.4 | 5426.4 | 5423.8 | 5431.5 | 5431.5 | 5431.5 |
| 10° | 5352.1 | 5357.2 | 5354.6 | 5349.5 | 5344.4 | 5352.1 | 5349.5 | 5346.9 |
| 12.5° | 5331.6 | 5318.8 | 5308.5 | 5303.4 | 5293.1 | 5295.7 | 5288.0 | 5288.0 |
| 15° | 5344.4 | 5321.3 | 5303.4 | 5295.7 | 5285.4 | 5280.3 | 5275.2 | 5277.8 |
| 17.5° | 5377.7 | 5349.5 | 5326.4 | 5313.6 | 5300.8 | 5293.1 | 5282.9 | 5285.4 |
| 20° | 5436.6 | 5403.3 | 5370.0 | 5344.4 | 5321.3 | 5308.5 | 5300.8 | 5298.3 |
| 22.5° | 5523.7 | 5475.0 | 5426.4 | 5387.9 | 5357.2 | 5339.2 | 5331.6 | 5326.4 |
| 25° | 5623.6 | 5569.8 | 5513.5 | 5469.9 | 5439.2 | 5416.1 | 5400.7 | 5400.7 |
| 27.5° | 5749.2 | 5705.6 | 5654.4 | 5603.1 | 5575.0 | 5551.9 | 5541.6 | 5536.5 |
| 30° | 5959.3 | 5918.3 | 5877.3 | 5828.6 | 5792.7 | 5769.7 | 5751.7 | 5736.4 |
| 32.5° | 6228.3 | 6195.0 | 6161.7 | 6125.8 | 6092.5 | 6061.7 | 6033.6 | 6020.7 |
| 35° | 6607.4 | 6581.8 | 6558.8 | 6517.8 | 6505.0 | 6487.0 | 6471.7 | 6458.8 |
| 37.5° | 7130.1 | 7119.9 | 7119.9 | 7076.3 | 7066.0 | 7058.4 | 7043.0 | 7045.6 |
| 40° | 7816.7 | 7827.0 | 7814.2 | 7798.8 | 7791.1 | 7770.6 | 7770.6 | 7788.5 |
| 42.5° | 8628.9 | 8636.6 | 8664.7 | 8639.1 | 8667.3 | 8641.7 | 8626.3 | 8639.1 |
| 45° | 9571.7 | 9599.9 | 9656.2 | 9630.6 | 9648.6 | 9605.0 | 9551.2 | 9553.8 |
| 47.5° | 10629.8 | 10655.4 | 10678.5 | 10660.6 | 10663.1 | 10591.4 | 10519.6 | 10501.7 |
| 50° | 11728.9 | 11739.2 | 11752.0 | 11726.4 | 11731.5 | 11652.1 | 11570.1 | 11572.6 |
| 52.5° | 12815.2 | 12863.9 | 12915.1 | 12846.0 | 12830.6 | 12740.9 | 12625.6 | 12579.5 |
| 55° | 14057.8 | 14127.0 | 14068.0 | 13947.6 | 13827.2 | 13706.8 | 13555.6 | 13530.0 |
| 57.5° | 15589.9 | 15472.0 | 15287.6 | 15059.5 | 14893.0 | 14723.9 | 14570.2 | 14506.2 |
| 60° | 17721.5 | 17278.3 | 16945.2 | 16607.0 | 16394.4 | 16186.8 | 15984.4 | 15953.7 |
| 62.5° | 20734.4 | 19968.4 | 19304.8 | 18605.4 | 18034.1 | 17588.3 | 17232.1 | 17132.2 |
| 65° | 24510.8 | 22699.5 | 21129.0 | 19663.5 | 18390.2 | 17429.4 | 16824.8 | 16558.3 |
| 67.5° | 26135.2 | 22558.6 | 19865.9 | 17785.5 | 16120.2 | 14957.1 | 14303.8 | 13978.4 |
| 70° | 22965.9 | 18707.9 | 15779.5 | 13696.6 | 12179.8 | 10939.8 | 10348.0 | 9999.6 |
| 72.5° | 15800.0 | 11900.6 | 9410.3 | 7680.9 | 6469.1 | 5431.5 | 5021.6 | 4990.8 |
| 75° | 7094.2 | 4698.7 | 3238.4 | 2495.4 | 2100.9 | 1826.7 | 1742.2 | 1678.1 |
| 77.5° | 1985.6 | 1468.0 | 1309.2 | 1224.6 | 1142.7 | 1047.9 | 1012.0 | 1019.7 |
| 80° | 965.9 | 912.1 | 876.2 | 822.4 | 748.1 | 668.7 | 632.8 | 648.2 |
| 82.5° | 640.5 | 632.8 | 655.9 | 617.4 | 509.8 | 433.0 | 363.8 | 333.1 |
| 85° | 389.4 | 394.6 | 402.2 | 404.8 | 343.3 | 240.8 | 164.0 | 184.5 |
| 87.5° | 153.7 | 176.8 | 192.2 | 199.8 | 187.0 | 115.3 | 92.2 | 94.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)