

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: McGRAW-EDISON

Report Number: P237523

Luminaire Tested: **CTN-8-6-D-E1-T4-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237523
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-27)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-8-6-D-E1-T4-7050-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 5000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 55535 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

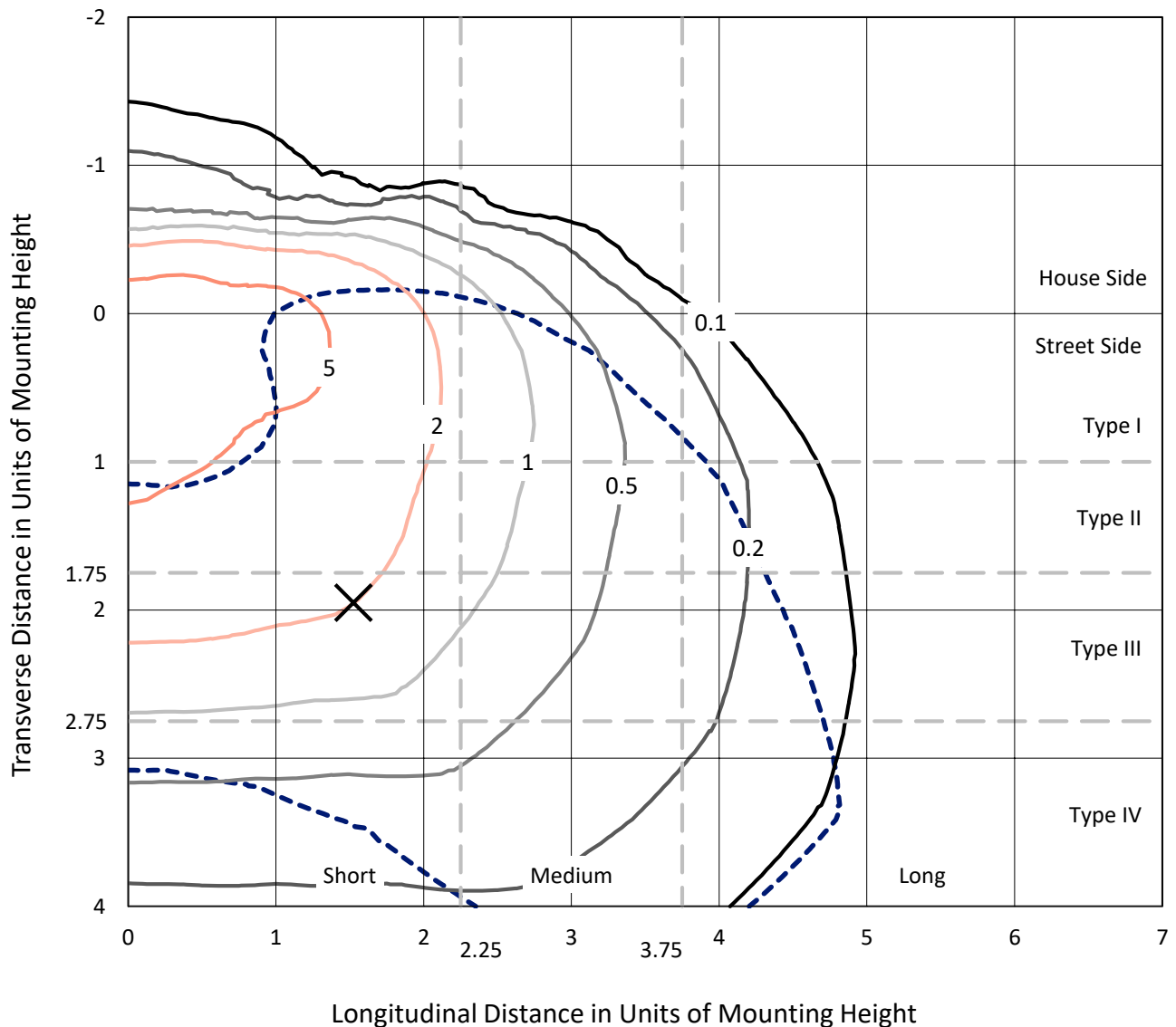
Input Watts (W): 477
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P237523
 CATALOG NUMBER: CTN-8-6-D-E1-T4-7050-HSS

Iso-Footcandle Lines of Horizontal Illumination

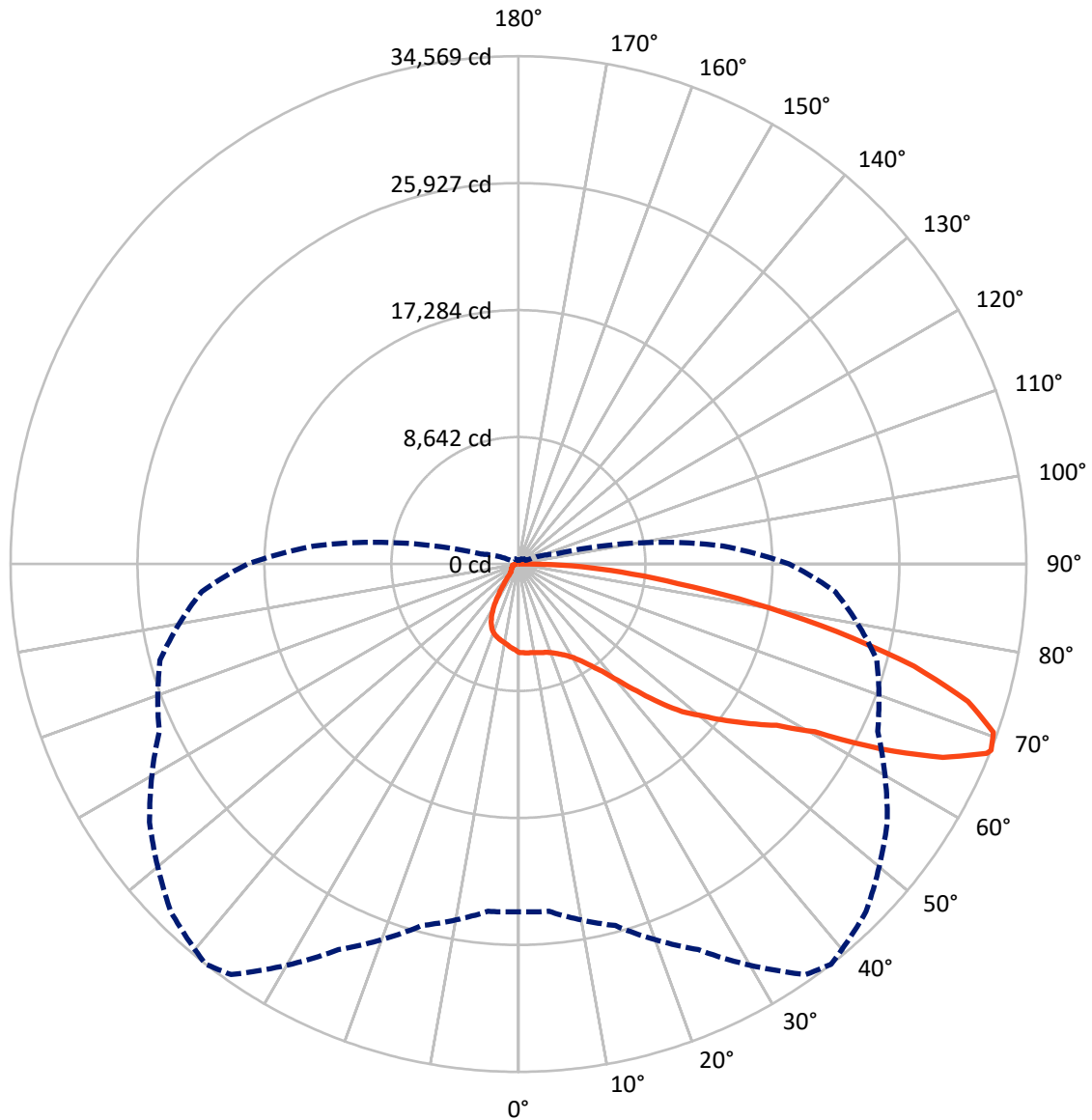
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.6 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P237523
CATALOG NUMBER: CTN-8-6-D-E1-T4-7050-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P237523

CATALOG NUMBER: CTN-8-6-D-E1-T4-7050-HSS

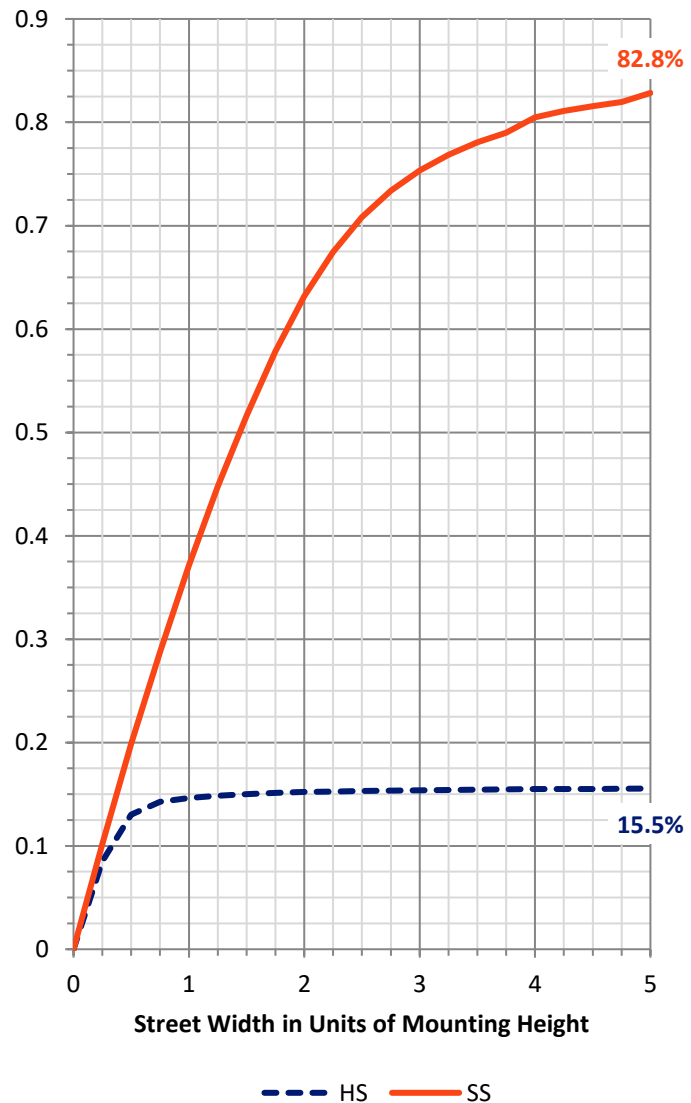
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8759.5 | 0.0 | 8759.5 |
| | % Fixture | 15.8 | 0.0 | 15.8 |
| Street Side | Lumens | 46775.5 | 0.0 | 46775.5 |
| | % Fixture | 84.2 | 0.0 | 84.2 |
| Total | Lumens | 55535.0 | 0.0 | 55535.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 568.6 | 1.0 |
| 10°-20° | 1688.7 | 3.0 |
| 20°-30° | 2818.3 | 5.1 |
| 30°-40° | 4322.9 | 7.8 |
| 40°-50° | 7442.4 | 13.4 |
| 50°-60° | 11060.4 | 19.9 |
| 60°-70° | 14632.0 | 26.3 |
| 70°-80° | 10745.9 | 19.3 |
| 80°-90° | 2255.7 | 4.1 |
| 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° | 55535.0 | 100.0 |
| 0°-180° | 55535.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P237523

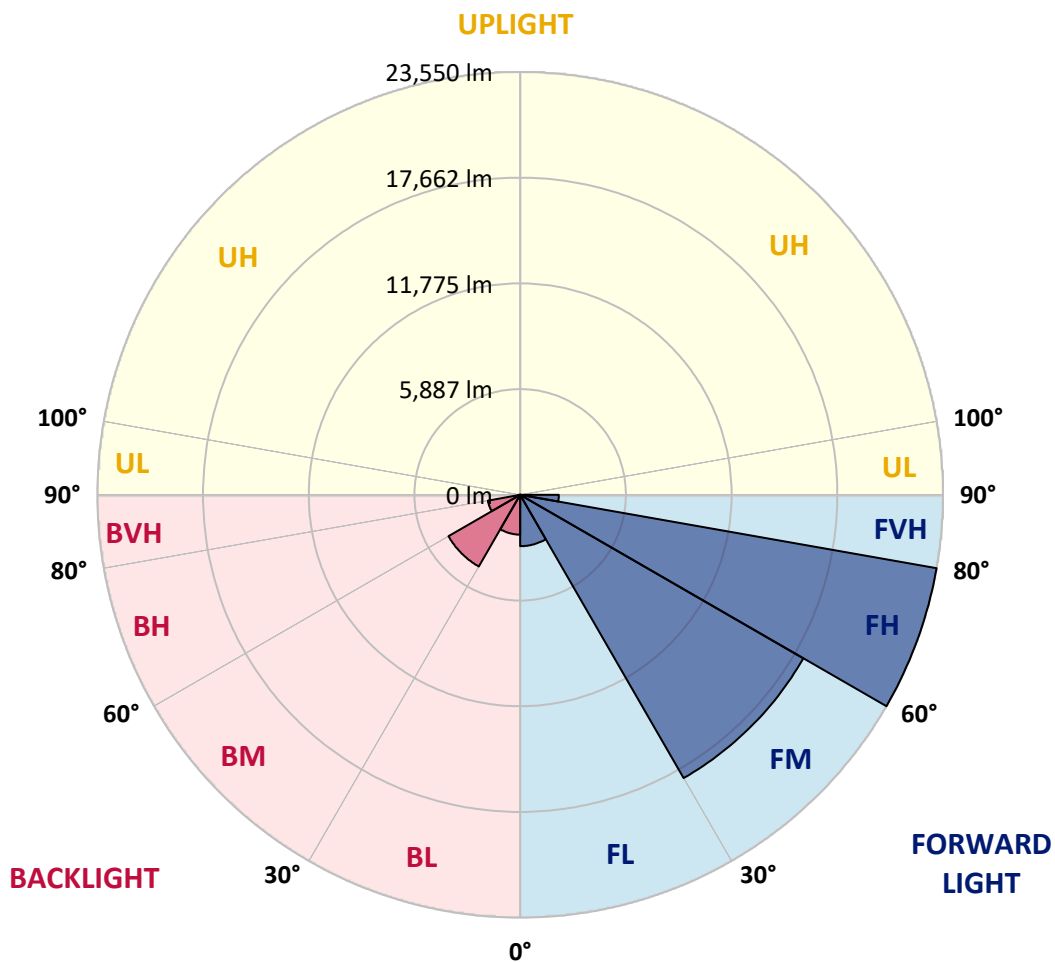
CATALOG NUMBER: CTN-8-6-D-E1-T4-7050-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 2859.4 | 5.1 | | | |
| FM | (30°-60°) | 18214.6 | 32.8 | | | |
| FH | (60°-80°) | 23549.6 | 42.4 | | | G5 |
| FVH | (80°-90°) | 2151.9 | 3.9 | | | G5 |
| BL | (0°-30°) | 2216.3 | 4.0 | B3/2500 | | |
| BM | (30°-60°) | 4611.1 | 8.3 | B3/5000 | | |
| BH | (60°-80°) | 1828.3 | 3.3 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 103.7 | 0.2 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type IV Short





REPORT NUMBER: P237523

CATALOG NUMBER: CTN-8-6-D-E1-T4-7050-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 38° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 |
| 2.5° | 6159.0 | 6116.4 | 6124.5 | 6150.9 | 6043.3 | 6035.2 | 6069.7 | 6031.1 | 6081.9 | 6057.5 | 6059.5 |
| 5° | 6175.3 | 6134.7 | 6150.9 | 6191.5 | 6090.0 | 6088.0 | 6126.5 | 6077.8 | 6116.4 | 6085.9 | 6077.8 |
| 7.5° | 6161.0 | 6124.5 | 6136.7 | 6175.3 | 6088.0 | 6094.1 | 6144.8 | 6128.6 | 6185.4 | 6155.0 | 6132.6 |
| 10° | 6155.0 | 6130.6 | 6132.6 | 6185.4 | 6116.4 | 6132.6 | 6197.6 | 6207.7 | 6299.1 | 6272.7 | 6262.5 |
| 12.5° | 6100.1 | 6081.9 | 6100.1 | 6183.4 | 6161.0 | 6193.5 | 6280.8 | 6333.6 | 6441.2 | 6431.0 | 6451.3 |
| 15° | 6067.7 | 6059.5 | 6073.8 | 6171.2 | 6197.6 | 6250.4 | 6366.1 | 6469.6 | 6599.5 | 6617.8 | 6664.5 |
| 17.5° | 6106.2 | 6118.4 | 6144.8 | 6224.0 | 6260.5 | 6315.3 | 6445.2 | 6587.3 | 6772.1 | 6851.2 | 6906.0 |
| 20° | 6268.6 | 6282.8 | 6307.2 | 6357.9 | 6398.5 | 6445.2 | 6560.9 | 6723.3 | 6969.0 | 7092.8 | 7180.1 |
| 22.5° | 6504.1 | 6479.7 | 6514.3 | 6556.9 | 6569.1 | 6609.7 | 6727.4 | 6889.8 | 7167.9 | 7354.7 | 7476.5 |
| 25° | 6686.8 | 6670.6 | 6705.1 | 6778.2 | 6776.1 | 6812.7 | 6928.4 | 7094.8 | 7395.3 | 7663.2 | 7878.4 |
| 27.5° | 6877.6 | 6867.5 | 6881.7 | 6979.1 | 7017.7 | 7062.4 | 7163.9 | 7350.6 | 7689.6 | 8026.6 | 8365.6 |
| 30° | 7153.7 | 7176.0 | 7151.7 | 7263.3 | 7346.6 | 7397.3 | 7500.8 | 7730.2 | 8093.6 | 8554.4 | 8982.7 |
| 32.5° | 7582.0 | 7592.2 | 7551.6 | 7675.4 | 7795.2 | 7872.3 | 7971.8 | 8272.2 | 8670.1 | 9232.4 | 9784.6 |
| 35° | 8495.5 | 8497.6 | 8331.1 | 8312.8 | 8379.8 | 8491.5 | 8637.6 | 9084.2 | 9677.0 | 10543.8 | 11169.0 |
| 37.5° | 9880.0 | 9813.0 | 9654.7 | 9346.1 | 9246.6 | 9266.9 | 9476.0 | 10097.2 | 10996.5 | 12596.1 | 13195.0 |
| 40° | 11467.5 | 11390.3 | 11112.2 | 10704.2 | 10411.9 | 10393.6 | 10464.6 | 11209.6 | 12525.1 | 14904.2 | 15206.7 |
| 42.5° | 13180.8 | 13128.0 | 12677.3 | 12255.1 | 11881.6 | 11822.7 | 11662.3 | 12409.4 | 14210.0 | 16964.7 | 16962.7 |
| 45° | 14762.1 | 14752.0 | 14201.9 | 13992.8 | 13596.9 | 13442.6 | 13251.8 | 13832.4 | 15941.6 | 18588.7 | 18393.8 |
| 47.5° | 16246.1 | 16215.6 | 15631.0 | 15391.4 | 15089.0 | 15005.7 | 14780.4 | 15186.4 | 17421.4 | 20105.1 | 19619.9 |
| 50° | 17821.3 | 17728.0 | 16859.1 | 16617.6 | 16319.1 | 16254.2 | 16136.4 | 16603.3 | 19033.2 | 21430.7 | 20626.8 |
| 52.5° | 19652.4 | 19510.3 | 18324.8 | 17876.2 | 17663.0 | 17705.6 | 17630.5 | 18048.7 | 20835.9 | 22539.1 | 21451.0 |
| 55° | 21818.4 | 21392.1 | 20259.4 | 19445.3 | 18972.3 | 19169.3 | 19023.1 | 19544.8 | 22565.4 | 23401.8 | 22051.9 |
| 57.5° | 23407.9 | 23405.9 | 22945.1 | 21788.0 | 20716.1 | 20726.3 | 20431.9 | 21026.7 | 23964.1 | 24260.5 | 22403.0 |
| 60° | 25226.8 | 25334.4 | 25492.7 | 24979.1 | 23714.4 | 23184.6 | 22149.3 | 22494.4 | 25088.7 | 24883.7 | 22559.4 |
| 62.5° | 26808.1 | 26871.1 | 27571.4 | 27768.3 | 27865.8 | 27735.8 | 25433.8 | 24185.4 | 26008.3 | 25230.8 | 22604.0 |
| 65° | 26751.3 | 26745.2 | 28259.6 | 29579.1 | 31629.4 | 31745.1 | 31081.3 | 26696.5 | 26720.8 | 25275.5 | 22372.6 |
| 67.5° | 24140.7 | 24264.6 | 26290.5 | 29118.3 | 34008.5 | 34373.9 | 33458.4 | 30342.4 | 26984.7 | 25255.2 | 21820.4 |
| 68° | 23673.8 | 23726.6 | 25478.5 | 28955.9 | 34110.0 | 34568.8 | 33462.5 | 30646.9 | 26976.6 | 25257.2 | 21649.9 |
| 70° | 20699.9 | 20779.0 | 22821.2 | 26988.8 | 34138.5 | 34296.8 | 32961.1 | 30813.3 | 26708.7 | 25068.4 | 20419.7 |
| 72.5° | 16341.5 | 16432.8 | 18294.3 | 22772.5 | 32011.0 | 32004.9 | 30713.9 | 29418.7 | 25801.3 | 23688.0 | 17322.0 |
| 75° | 11838.9 | 12137.4 | 13765.4 | 17886.3 | 27402.9 | 27821.1 | 27654.6 | 27396.8 | 23219.1 | 20017.8 | 12224.6 |
| 77.5° | 8300.7 | 8452.9 | 9985.6 | 13452.8 | 21534.2 | 22173.7 | 23296.2 | 23629.2 | 19356.0 | 14865.7 | 5505.4 |
| 80° | 5235.4 | 5521.6 | 6790.3 | 9553.2 | 15687.8 | 16278.5 | 17638.6 | 18198.9 | 14287.1 | 7291.7 | 964.2 |
| 82.5° | 3051.1 | 3221.6 | 4155.4 | 6187.4 | 10547.9 | 10960.0 | 11851.1 | 11163.0 | 5791.6 | 970.3 | 535.9 |
| 85° | 1477.8 | 1634.1 | 2231.0 | 3520.0 | 6585.3 | 7001.5 | 7482.6 | 4867.9 | 958.2 | 381.6 | 361.3 |
| 87.5° | 598.8 | 615.1 | 913.5 | 1563.1 | 3282.5 | 3639.8 | 3522.0 | 1597.6 | 249.7 | 138.0 | 113.7 |
| 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: P237523

CATALOG NUMBER: CTN-8-6-D-E1-T4-7050-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 | 6031.1 |
| 2.5° | 6069.7 | 6039.2 | 6002.7 | 5990.5 | 5905.3 | 5901.2 | 5830.2 | 5933.7 | 5903.2 | 5905.3 | 5929.6 |
| 5° | 6073.8 | 6039.2 | 5968.2 | 5935.7 | 5844.4 | 5820.0 | 5702.3 | 5767.2 | 5698.2 | 5692.1 | 5732.7 |
| 7.5° | 6116.4 | 6077.8 | 5976.3 | 5925.6 | 5755.0 | 5673.8 | 5562.2 | 5619.0 | 5513.5 | 5491.1 | 5499.3 |
| 10° | 6230.1 | 6181.3 | 6057.5 | 5937.7 | 5726.6 | 5608.9 | 5389.6 | 5407.9 | 5314.5 | 5284.1 | 5310.5 |
| 12.5° | 6402.6 | 6343.7 | 6195.5 | 6018.9 | 5751.0 | 5543.9 | 5276.0 | 5168.4 | 5026.3 | 4979.6 | 4993.8 |
| 15° | 6638.1 | 6569.1 | 6374.2 | 6169.2 | 5803.8 | 5513.5 | 5148.1 | 4924.8 | 4648.7 | 4571.6 | 4543.1 |
| 17.5° | 6895.9 | 6822.8 | 6597.5 | 6339.7 | 5897.1 | 5479.0 | 5001.9 | 4646.7 | 4248.8 | 4074.2 | 4064.1 |
| 20° | 7198.4 | 7119.2 | 6883.7 | 6538.6 | 5972.3 | 5436.3 | 4819.2 | 4309.7 | 3792.0 | 3499.7 | 3479.4 |
| 22.5° | 7545.5 | 7476.5 | 7210.5 | 6715.2 | 6010.8 | 5324.7 | 4543.1 | 3879.3 | 3231.8 | 2866.4 | 2848.1 |
| 25° | 7953.5 | 7888.6 | 7515.0 | 6839.1 | 5968.2 | 5127.8 | 4165.6 | 3351.5 | 2572.0 | 2206.6 | 2190.4 |
| 27.5° | 8440.7 | 8339.2 | 7754.6 | 6875.6 | 5842.3 | 4805.0 | 3692.6 | 2673.5 | 1900.1 | 1622.0 | 1607.8 |
| 30° | 8994.9 | 8814.2 | 7979.9 | 6865.4 | 5619.0 | 4392.9 | 3040.9 | 1971.1 | 1349.9 | 1163.2 | 1157.1 |
| 32.5° | 9693.2 | 9376.6 | 8195.1 | 6784.2 | 5300.3 | 3852.9 | 2314.2 | 1368.2 | 970.3 | 879.0 | 877.0 |
| 35° | 10858.5 | 10180.4 | 8430.6 | 6638.1 | 4867.9 | 3144.5 | 1603.7 | 931.8 | 789.7 | 771.4 | 771.4 |
| 37.5° | 12596.1 | 11506.0 | 8765.5 | 6404.6 | 4307.7 | 2397.4 | 1055.6 | 740.9 | 743.0 | 753.1 | 755.2 |
| 40° | 14380.5 | 13030.5 | 9250.7 | 6057.5 | 3654.0 | 1684.9 | 767.3 | 688.2 | 712.5 | 728.8 | 740.9 |
| 42.5° | 16018.7 | 14410.9 | 9790.7 | 5582.5 | 2915.1 | 1112.4 | 686.1 | 661.8 | 674.0 | 686.1 | 698.3 |
| 45° | 17393.0 | 15620.8 | 10300.2 | 5040.5 | 2159.9 | 791.7 | 680.0 | 631.3 | 625.2 | 633.4 | 641.5 |
| 47.5° | 18552.1 | 16605.4 | 10657.5 | 4429.5 | 1469.7 | 678.0 | 663.8 | 598.8 | 578.5 | 580.6 | 584.6 |
| 50° | 19437.2 | 17301.7 | 10815.8 | 3757.5 | 974.4 | 659.7 | 633.4 | 564.3 | 531.9 | 531.9 | 535.9 |
| 52.5° | 20034.0 | 17738.1 | 10722.4 | 3000.3 | 700.3 | 649.6 | 609.0 | 527.8 | 489.2 | 495.3 | 499.4 |
| 55° | 20476.6 | 17971.6 | 10355.0 | 2204.6 | 617.1 | 619.1 | 580.6 | 485.2 | 452.7 | 468.9 | 475.0 |
| 57.5° | 20649.1 | 17965.5 | 9737.9 | 1522.5 | 613.1 | 572.5 | 540.0 | 448.6 | 422.2 | 444.6 | 454.7 |
| 60° | 20586.2 | 17669.1 | 8840.6 | 1037.3 | 600.9 | 535.9 | 497.3 | 414.1 | 393.8 | 393.8 | 395.8 |
| 62.5° | 20460.3 | 17252.9 | 7539.4 | 769.4 | 572.5 | 509.5 | 464.9 | 385.7 | 361.3 | 349.2 | 345.1 |
| 65° | 19891.9 | 16244.0 | 5535.8 | 663.8 | 544.0 | 495.3 | 434.4 | 359.3 | 326.8 | 306.5 | 302.5 |
| 67.5° | 18767.3 | 14508.4 | 3093.7 | 613.1 | 523.7 | 487.2 | 414.1 | 334.9 | 298.4 | 274.0 | 272.0 |
| 68° | 18422.2 | 13966.4 | 2622.8 | 609.0 | 527.8 | 487.2 | 412.1 | 328.9 | 294.3 | 268.0 | 265.9 |
| 70° | 16380.0 | 11266.5 | 1084.0 | 572.5 | 556.2 | 489.2 | 401.9 | 310.6 | 278.1 | 251.7 | 249.7 |
| 72.5° | 12389.1 | 6526.4 | 572.5 | 497.3 | 542.0 | 481.1 | 406.0 | 296.4 | 263.9 | 233.4 | 229.4 |
| 75° | 6826.9 | 1869.6 | 509.5 | 404.0 | 501.4 | 507.5 | 414.1 | 294.3 | 255.8 | 217.2 | 209.1 |
| 77.5° | 1516.4 | 609.0 | 475.0 | 353.2 | 432.4 | 466.9 | 383.7 | 280.1 | 259.8 | 198.9 | 190.8 |
| 80° | 580.6 | 495.3 | 450.7 | 272.0 | 343.1 | 395.8 | 318.7 | 249.7 | 265.9 | 186.8 | 176.6 |
| 82.5° | 485.2 | 434.4 | 414.1 | 211.1 | 237.5 | 290.3 | 255.8 | 213.1 | 245.6 | 172.5 | 164.4 |
| 85° | 357.3 | 420.2 | 292.3 | 166.5 | 174.6 | 178.6 | 178.6 | 166.5 | 211.1 | 152.2 | 144.1 |
| 87.5° | 144.1 | 203.0 | 123.8 | 77.1 | 89.3 | 83.2 | 73.1 | 89.3 | 121.8 | 107.6 | 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 |

(END OF REPORT)