

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: P237547

Luminaire Tested: **CTN-8-6-D-E1-T3-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237547
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-26)
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-T3-7050-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 5000K LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 58588 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B4 - U0 - G5

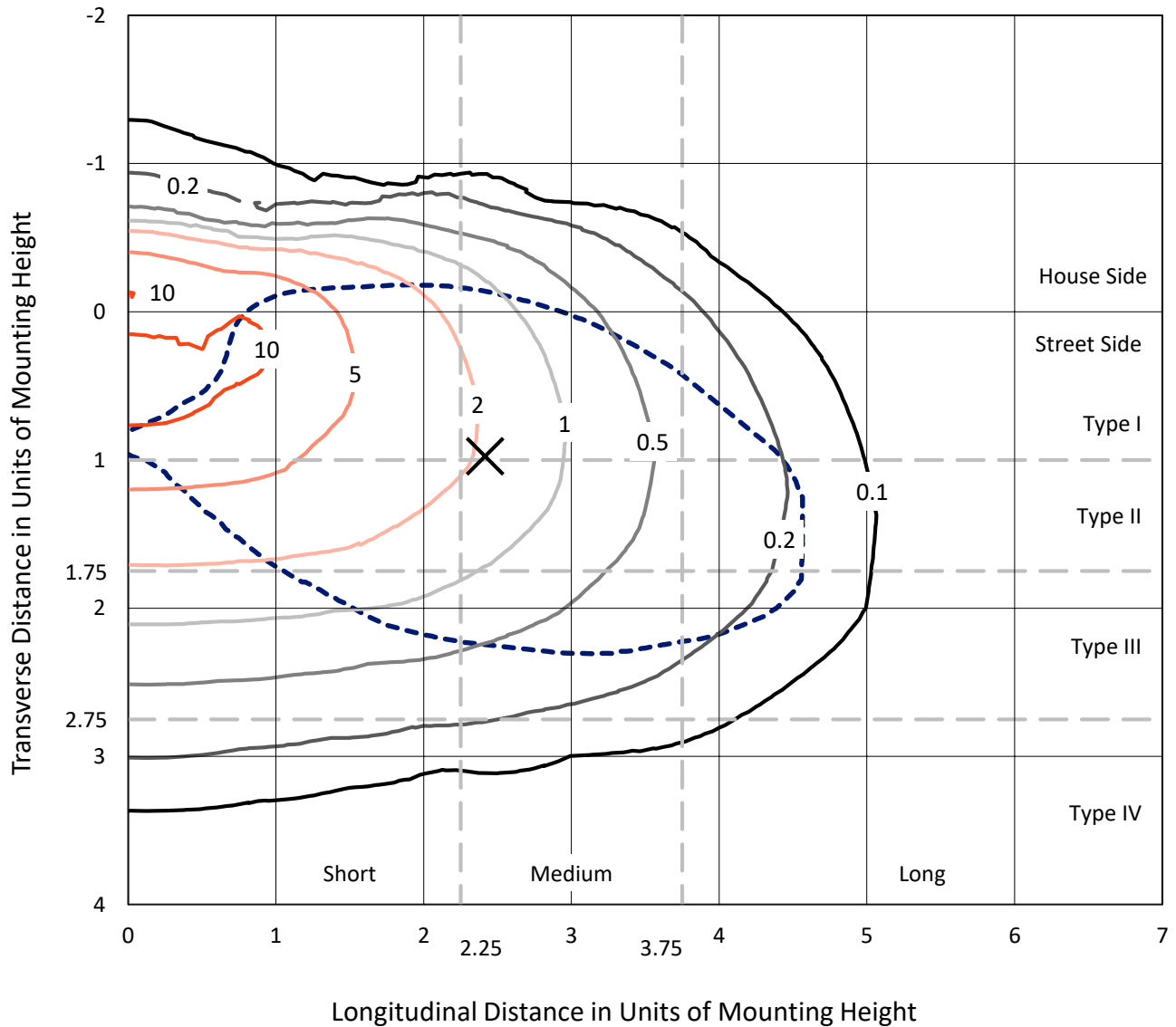
Input Watts (W): 477
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P237547
 CATALOG NUMBER: CTN-8-6-D-E1-T3-7050-HSS

Iso-Footcandle Lines of Horizontal Illumination

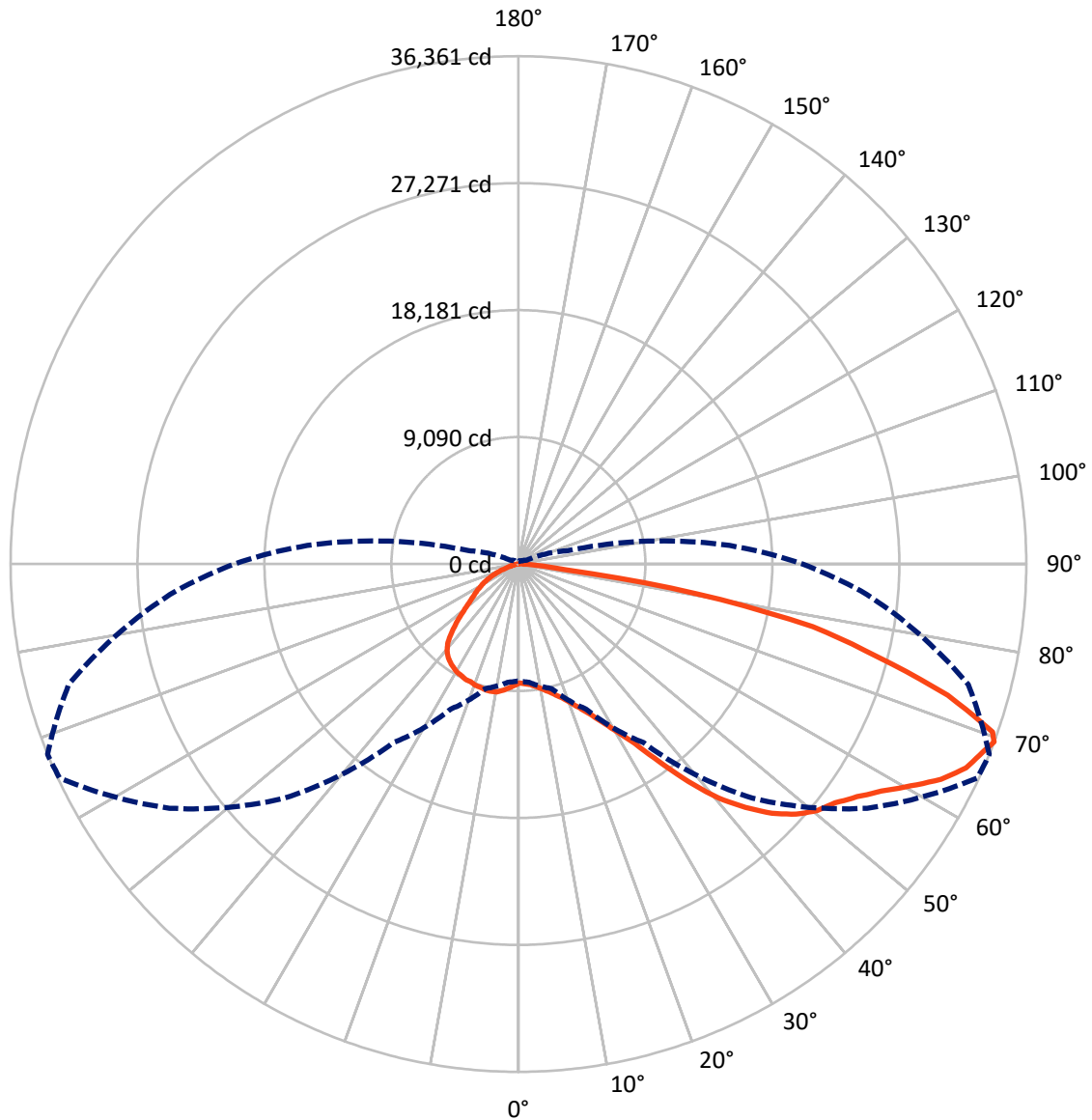
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.6 fc
 Type III - Medium - Non-Cutoff

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CATALOG NUMBER: CTN-8-6-D-E1-T3-7050-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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CATALOG NUMBER: CTN-8-6-D-E1-T3-7050-HSS

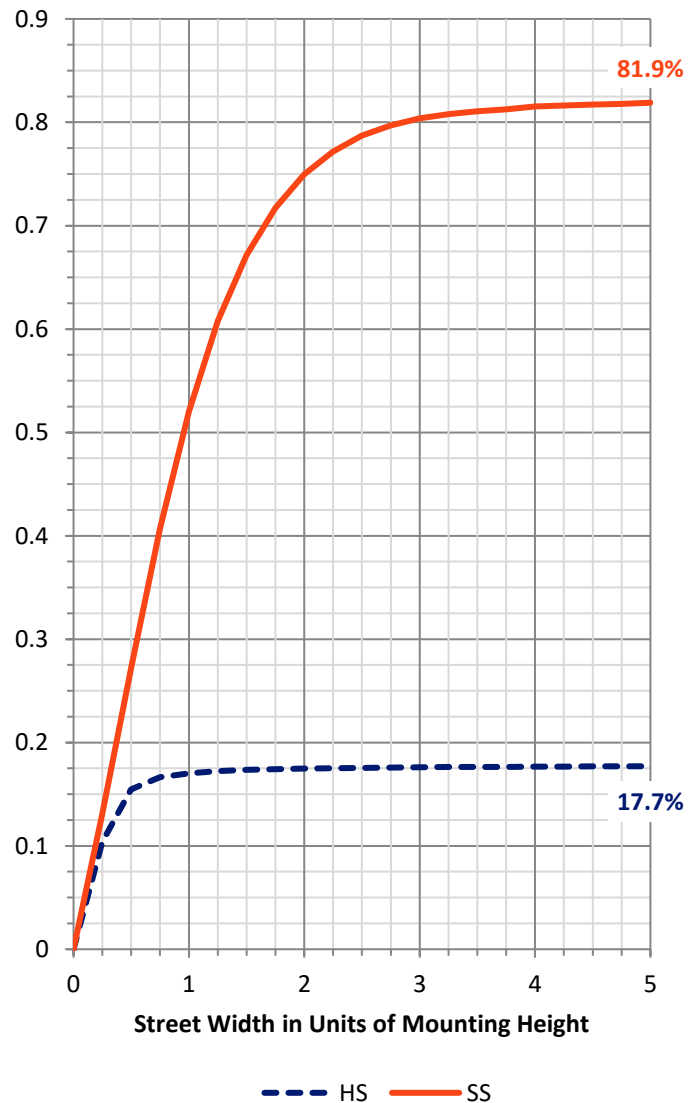
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 10514.4 | 0.0 | 10514.4 |
| | % Fixture | 17.9 | 0.0 | 17.9 |
| Street Side | Lumens | 48073.6 | 0.0 | 48073.6 |
| | % Fixture | 82.1 | 0.0 | 82.1 |
| Total | Lumens | 58588.0 | 0.0 | 58588.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 855.8 | 1.5 |
| 10°-20° | 2685.6 | 4.6 |
| 20°-30° | 4590.8 | 7.8 |
| 30°-40° | 7073.8 | 12.1 |
| 40°-50° | 10151.3 | 17.3 |
| 50°-60° | 12217.5 | 20.9 |
| 60°-70° | 12821.2 | 21.9 |
| 70°-80° | 7427.7 | 12.7 |
| 80°-90° | 764.3 | 1.3 |
| 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° | 58588.0 | 100.0 |
| 0°-180° | 58588.0 | 100.0 |



REPORT NUMBER: P237547

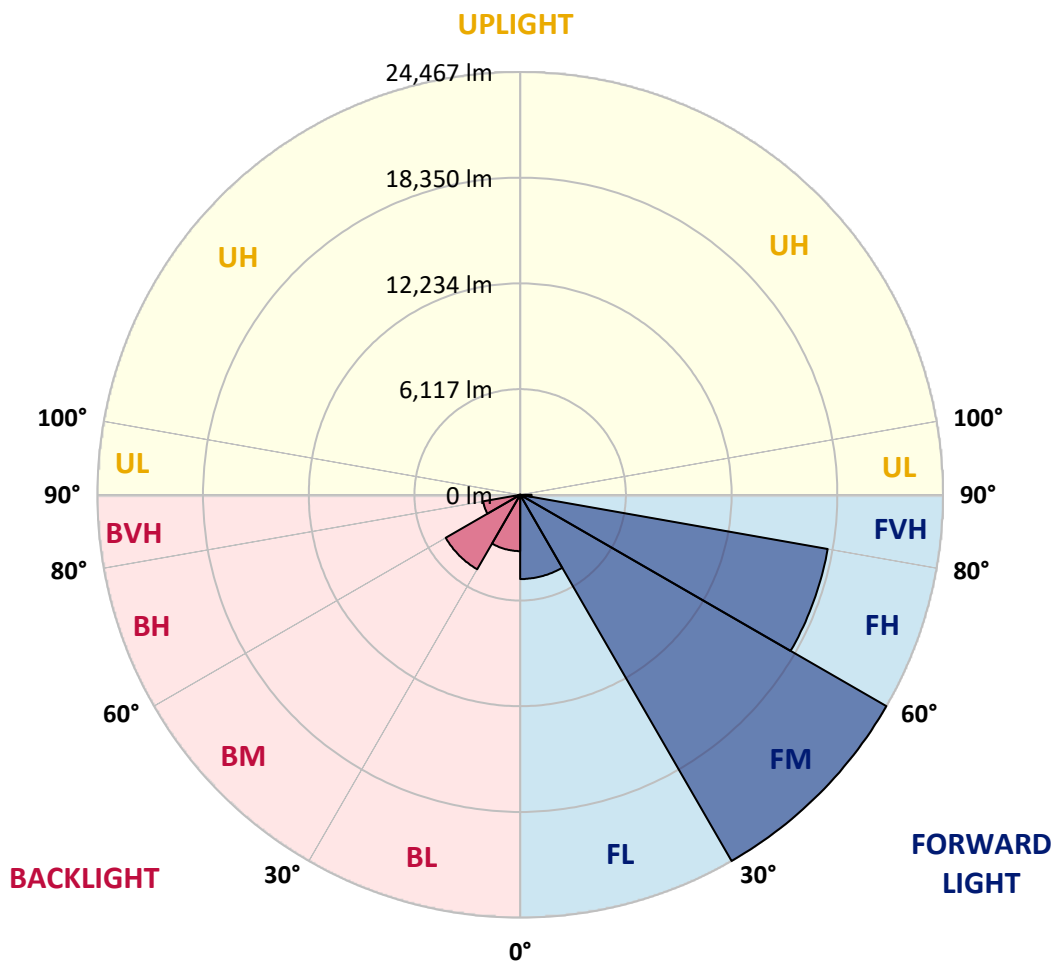
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 4874.3 | 8.3 | | | |
| FM (30°-60°) | 24467.2 | 41.8 | | | |
| FH (60°-80°) | 18067.9 | 30.8 | | | G5 |
| FVH (80°-90°) | 664.2 | 1.1 | | | G4/750 |
| BL (0°-30°) | 3257.9 | 5.6 | B4/5000 | | |
| BM (30°-60°) | 4975.4 | 8.5 | B3/5000 | | |
| BH (60°-80°) | 2181.0 | 3.7 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 100.0 | 0.2 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5

Type III Medium





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CATALOG NUMBER: CTN-8-6-D-E1-T3-7050-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 68° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 |
| 2.5° | 8617.3 | 8548.3 | 8556.4 | 8611.2 | 8448.8 | 8517.9 | 8475.2 | 8564.6 | 8578.8 | 8536.1 | 8574.7 |
| 5° | 8787.9 | 8729.0 | 8727.0 | 8781.8 | 8601.1 | 8653.9 | 8586.9 | 8647.8 | 8666.1 | 8621.4 | 8688.4 |
| 7.5° | 9118.7 | 9055.8 | 9043.6 | 9098.4 | 8869.1 | 8885.3 | 8793.9 | 8824.4 | 8840.6 | 8779.7 | 8846.7 |
| 10° | 9593.8 | 9524.7 | 9480.1 | 9510.5 | 9252.7 | 9212.1 | 9055.8 | 9051.8 | 9076.1 | 8992.9 | 9100.5 |
| 12.5° | 10125.6 | 10044.4 | 9979.5 | 9985.6 | 9691.2 | 9622.2 | 9415.1 | 9342.0 | 9358.3 | 9246.6 | 9376.6 |
| 15° | 10704.2 | 10586.4 | 10525.5 | 10527.6 | 10196.7 | 10081.0 | 9815.0 | 9695.3 | 9685.1 | 9577.5 | 9652.6 |
| 17.5° | 11400.5 | 11305.1 | 11227.9 | 11187.3 | 10836.1 | 10606.7 | 10290.1 | 10133.7 | 10076.9 | 10005.9 | 9967.3 |
| 20° | 12218.6 | 12098.8 | 12017.6 | 12003.4 | 11573.0 | 11268.5 | 10848.3 | 10641.2 | 10574.3 | 10515.4 | 10342.8 |
| 22.5° | 13130.0 | 13008.2 | 12896.6 | 12878.3 | 12421.6 | 12054.1 | 11489.8 | 11234.0 | 11175.1 | 11108.1 | 10763.0 |
| 25° | 13970.4 | 13956.2 | 13832.4 | 13812.1 | 13371.6 | 12894.5 | 12232.8 | 11905.9 | 11905.9 | 11826.8 | 11296.9 |
| 27.5° | 14908.3 | 14928.6 | 14816.9 | 14792.6 | 14378.5 | 13850.7 | 13063.0 | 12750.4 | 12815.4 | 12673.3 | 11968.9 |
| 30° | 15896.9 | 15854.3 | 15823.8 | 15850.2 | 15466.5 | 14908.3 | 14088.2 | 13824.3 | 13925.8 | 13763.4 | 12870.2 |
| 32.5° | 16782.0 | 16749.5 | 16769.8 | 16871.3 | 16595.2 | 16079.6 | 15375.2 | 15210.8 | 15308.2 | 15409.7 | 14486.1 |
| 35° | 17482.3 | 17413.3 | 17669.1 | 17892.4 | 17813.2 | 17324.0 | 16757.6 | 17104.8 | 17372.7 | 17835.6 | 16867.2 |
| 37.5° | 18099.5 | 18048.7 | 18359.3 | 18816.0 | 18915.5 | 18643.5 | 18468.9 | 19437.2 | 19743.8 | 20367.0 | 18956.1 |
| 40° | 18408.0 | 18397.9 | 18779.5 | 19374.3 | 19778.3 | 19954.9 | 20261.4 | 21580.9 | 22027.5 | 22198.0 | 20545.6 |
| 42.5° | 18308.5 | 18341.0 | 19015.0 | 19932.5 | 20586.2 | 21343.4 | 21960.5 | 23412.0 | 23822.0 | 23681.9 | 21938.2 |
| 45° | 18030.4 | 18046.7 | 18730.8 | 20161.9 | 21286.6 | 22770.5 | 23594.7 | 25109.0 | 25472.4 | 24979.1 | 23046.6 |
| 47.5° | 17644.7 | 17650.8 | 18373.5 | 20003.6 | 21859.0 | 24061.6 | 25003.5 | 26465.1 | 26759.4 | 26063.1 | 23844.3 |
| 50° | 17123.0 | 17133.2 | 17995.9 | 19804.7 | 22352.3 | 25119.2 | 26105.8 | 27516.6 | 27744.0 | 26832.5 | 24534.5 |
| 52.5° | 16463.3 | 16552.6 | 17496.5 | 19485.9 | 22660.9 | 25870.3 | 26940.1 | 28288.0 | 28399.7 | 27752.1 | 25145.6 |
| 55° | 15702.0 | 15795.4 | 16861.2 | 19053.6 | 22780.6 | 26296.6 | 27524.7 | 29238.0 | 29416.7 | 28779.3 | 25642.9 |
| 57.5° | 14800.7 | 14928.6 | 16051.2 | 18351.2 | 22500.5 | 26475.2 | 28119.5 | 30411.4 | 30653.0 | 29853.1 | 26154.5 |
| 60° | 13755.3 | 13913.6 | 15095.1 | 17474.2 | 21852.9 | 26664.0 | 29232.0 | 31984.6 | 32264.8 | 31008.2 | 26601.1 |
| 62.5° | 12663.1 | 12764.6 | 13832.4 | 16278.5 | 20815.6 | 26810.2 | 30429.7 | 33923.3 | 33947.6 | 32021.2 | 26848.7 |
| 65° | 11201.5 | 11309.1 | 12265.2 | 14768.2 | 19258.6 | 26345.3 | 31034.6 | 35283.4 | 35210.3 | 32814.9 | 26765.5 |
| 67.5° | 9528.8 | 9630.3 | 10411.9 | 12890.5 | 17121.0 | 25042.0 | 30827.5 | 35825.4 | 35874.1 | 33391.4 | 25967.7 |
| 69° | 8367.6 | 8501.6 | 9238.5 | 11463.4 | 15610.7 | 23708.3 | 30480.4 | 36247.6 | 36361.3 | 33338.6 | 25044.1 |
| 70° | 7375.0 | 7547.5 | 8247.9 | 10202.8 | 14331.8 | 22496.4 | 29810.5 | 36008.1 | 36016.2 | 32804.8 | 24193.5 |
| 72.5° | 4817.2 | 4922.7 | 5044.5 | 6619.8 | 10310.4 | 17827.4 | 26379.8 | 31933.9 | 32145.0 | 29272.6 | 21152.6 |
| 75° | 2383.2 | 2476.6 | 2931.3 | 3501.7 | 5302.4 | 11942.5 | 20915.1 | 26162.6 | 26562.5 | 24859.3 | 17330.1 |
| 77.5° | 1315.4 | 1333.7 | 1494.1 | 2293.9 | 2748.6 | 5399.8 | 14295.2 | 20856.2 | 21556.5 | 20259.4 | 12445.9 |
| 80° | 820.1 | 816.1 | 852.6 | 1067.8 | 1540.8 | 2559.8 | 6037.2 | 11705.0 | 12963.6 | 10578.3 | 4918.7 |
| 82.5° | 639.4 | 627.3 | 629.3 | 690.2 | 651.6 | 1205.8 | 2513.1 | 3408.4 | 3438.8 | 3053.1 | 1914.3 |
| 85° | 326.8 | 369.5 | 438.5 | 458.8 | 385.7 | 655.7 | 1157.1 | 1345.9 | 1378.4 | 1207.8 | 996.7 |
| 87.5° | 109.6 | 111.6 | 117.7 | 115.7 | 103.5 | 225.3 | 428.3 | 499.4 | 444.6 | 251.7 | 341.0 |
| 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: CTN-8-6-D-E1-T3-7050-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 | 8521.9 |
| 2.5° | 8633.6 | 8615.3 | 8651.8 | 8735.1 | 8666.1 | 8729.0 | 8666.1 | 8877.2 | 8852.8 | 8838.6 | 8879.2 |
| 5° | 8753.3 | 8751.3 | 8810.2 | 8944.2 | 8938.1 | 9049.7 | 8988.8 | 9197.9 | 9167.5 | 9163.4 | 9199.9 |
| 7.5° | 8915.7 | 8954.3 | 9017.2 | 9155.3 | 9157.3 | 9248.7 | 9179.6 | 9344.1 | 9277.1 | 9260.8 | 9311.6 |
| 10° | 9163.4 | 9173.6 | 9222.3 | 9317.7 | 9183.7 | 9224.3 | 9110.6 | 9240.5 | 9147.2 | 9137.0 | 9212.1 |
| 12.5° | 9400.9 | 9415.1 | 9342.0 | 9311.6 | 9139.0 | 9086.3 | 8887.3 | 8956.3 | 8848.8 | 8838.6 | 8875.1 |
| 15° | 9654.7 | 9559.3 | 9384.7 | 9285.2 | 8986.8 | 8796.0 | 8572.7 | 8436.7 | 8251.9 | 8166.7 | 8199.2 |
| 17.5° | 9918.6 | 9733.8 | 9407.0 | 9165.4 | 8765.5 | 8487.4 | 8042.8 | 7811.4 | 7537.4 | 7397.3 | 7370.9 |
| 20° | 10206.8 | 9947.0 | 9461.8 | 9104.5 | 8542.2 | 7994.1 | 7452.1 | 6922.3 | 6609.7 | 6465.5 | 6427.0 |
| 22.5° | 10531.6 | 10214.9 | 9539.0 | 8901.5 | 8193.1 | 7527.2 | 6611.7 | 5943.8 | 5489.1 | 5349.0 | 5310.5 |
| 25° | 10937.6 | 10515.4 | 9644.5 | 8850.8 | 7858.1 | 6764.0 | 5625.1 | 4867.9 | 4338.1 | 4125.0 | 4080.3 |
| 27.5° | 11430.9 | 10929.5 | 9817.1 | 8609.2 | 7269.4 | 5913.4 | 4644.6 | 3773.8 | 3223.6 | 2971.9 | 2917.1 |
| 30° | 12149.5 | 11459.3 | 9932.8 | 8467.1 | 6745.7 | 5030.3 | 3609.3 | 2637.0 | 2115.3 | 1930.5 | 1881.8 |
| 32.5° | 13566.5 | 12368.8 | 10168.3 | 8140.3 | 5972.3 | 4003.2 | 2484.7 | 1617.9 | 1252.5 | 1146.9 | 1106.3 |
| 35° | 15671.6 | 14082.1 | 10507.3 | 7752.6 | 5103.4 | 2848.1 | 1475.8 | 937.9 | 753.1 | 714.6 | 702.4 |
| 37.5° | 17589.9 | 15773.1 | 11163.0 | 7155.7 | 3962.6 | 1751.9 | 854.6 | 600.9 | 554.2 | 560.3 | 560.3 |
| 40° | 19037.3 | 17029.6 | 11928.3 | 6368.1 | 2687.7 | 982.5 | 586.7 | 499.4 | 509.5 | 511.6 | 509.5 |
| 42.5° | 20393.4 | 18180.7 | 12297.7 | 5499.3 | 1557.0 | 651.6 | 509.5 | 464.9 | 473.0 | 466.9 | 462.8 |
| 45° | 21459.1 | 19004.8 | 12407.3 | 4330.0 | 852.6 | 582.6 | 479.1 | 432.4 | 428.3 | 432.4 | 436.4 |
| 47.5° | 22151.3 | 19508.3 | 12157.7 | 3315.0 | 643.5 | 542.0 | 460.8 | 410.1 | 399.9 | 428.3 | 426.3 |
| 50° | 22664.9 | 19853.4 | 11189.3 | 2521.3 | 627.3 | 507.5 | 438.5 | 383.7 | 387.7 | 422.2 | 418.2 |
| 52.5° | 23038.4 | 19942.7 | 10127.7 | 2021.9 | 598.8 | 483.1 | 418.2 | 371.5 | 367.4 | 393.8 | 395.8 |
| 55° | 23334.8 | 19703.2 | 9465.9 | 1591.5 | 574.5 | 458.8 | 401.9 | 359.3 | 339.0 | 347.1 | 345.1 |
| 57.5° | 23519.5 | 19429.1 | 8710.7 | 1327.6 | 552.2 | 432.4 | 379.6 | 326.8 | 296.4 | 298.4 | 296.4 |
| 60° | 23478.9 | 19246.4 | 7843.9 | 1088.1 | 523.7 | 408.0 | 349.2 | 292.3 | 261.9 | 253.7 | 253.7 |
| 62.5° | 23397.7 | 18870.9 | 6948.7 | 948.0 | 499.4 | 399.9 | 312.6 | 265.9 | 243.6 | 235.5 | 235.5 |
| 65° | 22845.6 | 17975.6 | 5751.0 | 812.0 | 475.0 | 377.6 | 292.3 | 255.8 | 229.4 | 221.3 | 221.3 |
| 67.5° | 21475.3 | 16495.8 | 4453.8 | 706.4 | 456.7 | 341.0 | 286.2 | 249.7 | 221.3 | 211.1 | 211.1 |
| 69° | 20318.2 | 15180.3 | 3658.1 | 649.6 | 438.5 | 324.8 | 286.2 | 251.7 | 217.2 | 205.0 | 205.0 |
| 70° | 19414.9 | 14147.1 | 3026.7 | 615.1 | 420.2 | 314.6 | 286.2 | 253.7 | 215.2 | 201.0 | 198.9 |
| 72.5° | 16660.2 | 11045.2 | 1680.8 | 521.7 | 349.2 | 286.2 | 280.1 | 255.8 | 205.0 | 184.7 | 182.7 |
| 75° | 12782.9 | 7764.7 | 1000.8 | 440.5 | 294.3 | 261.9 | 265.9 | 245.6 | 188.8 | 166.5 | 166.5 |
| 77.5° | 7988.0 | 3566.7 | 745.0 | 345.1 | 239.5 | 227.4 | 231.4 | 217.2 | 170.5 | 152.2 | 152.2 |
| 80° | 2728.3 | 1609.8 | 562.3 | 265.9 | 172.5 | 176.6 | 190.8 | 182.7 | 152.2 | 138.0 | 136.0 |
| 82.5° | 1494.1 | 1047.5 | 397.9 | 184.7 | 119.8 | 146.2 | 146.2 | 148.2 | 131.9 | 121.8 | 119.8 |
| 85° | 812.0 | 546.1 | 245.6 | 111.6 | 85.3 | 107.6 | 103.5 | 111.6 | 107.6 | 99.5 | 97.4 |
| 87.5° | 282.2 | 186.8 | 81.2 | 40.6 | 34.5 | 36.5 | 42.6 | 56.8 | 54.8 | 56.8 | 58.9 |
| 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)