

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: P591446

Luminaire Tested: **CTN-CA8-230-740-U-T2-SSS-HM-EX120**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591446
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA8-230-740-U-T2-SSS-HM-EX120
Description: CELESTEON HIGH MAST LUMINAIRE, 120D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21954 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

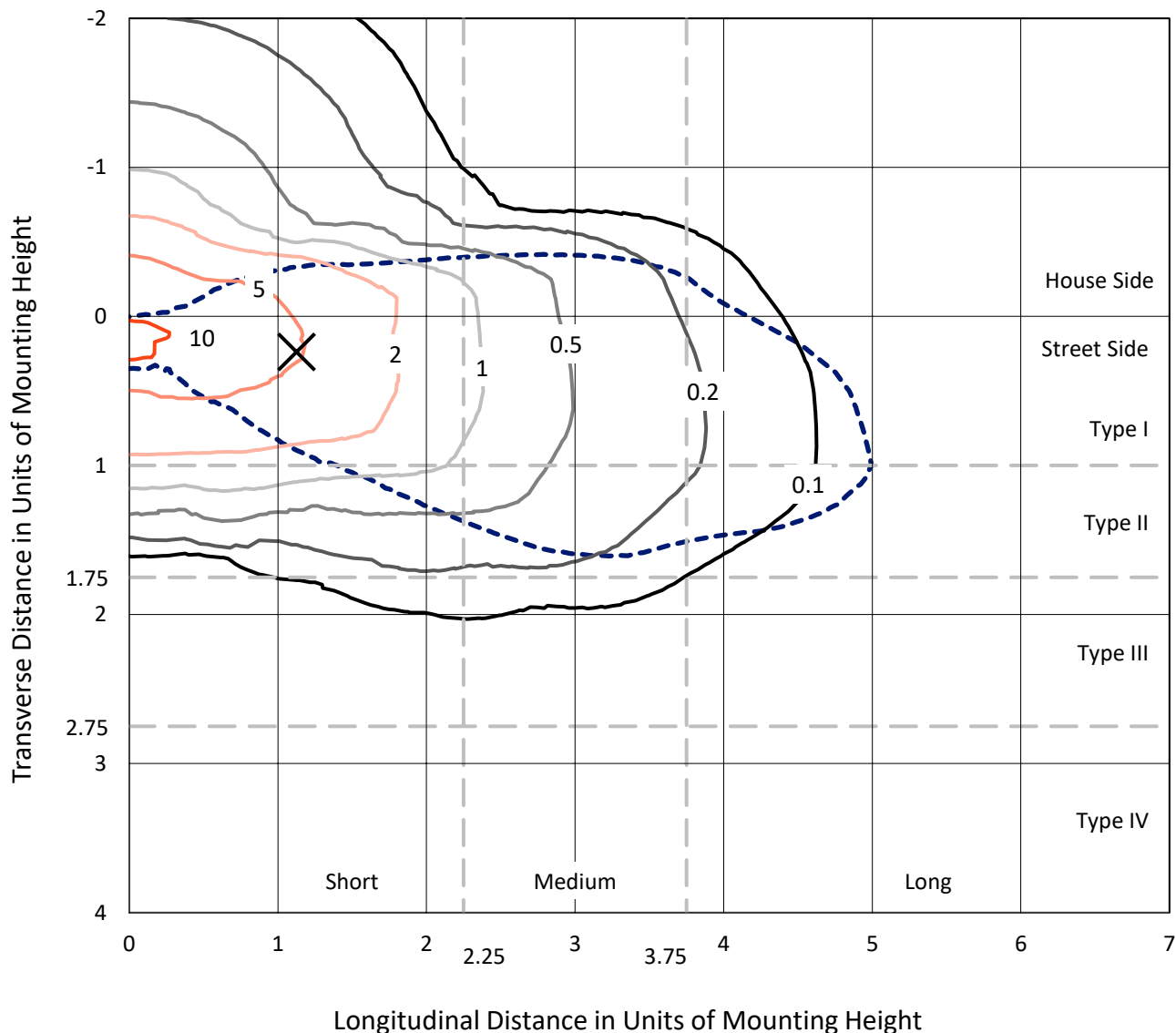
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P591446
 CATALOG NUMBER: CTN-CA8-230-740-U-T2-SSS-HM-EX120

Iso-Footcandle Lines of Horizontal Illumination

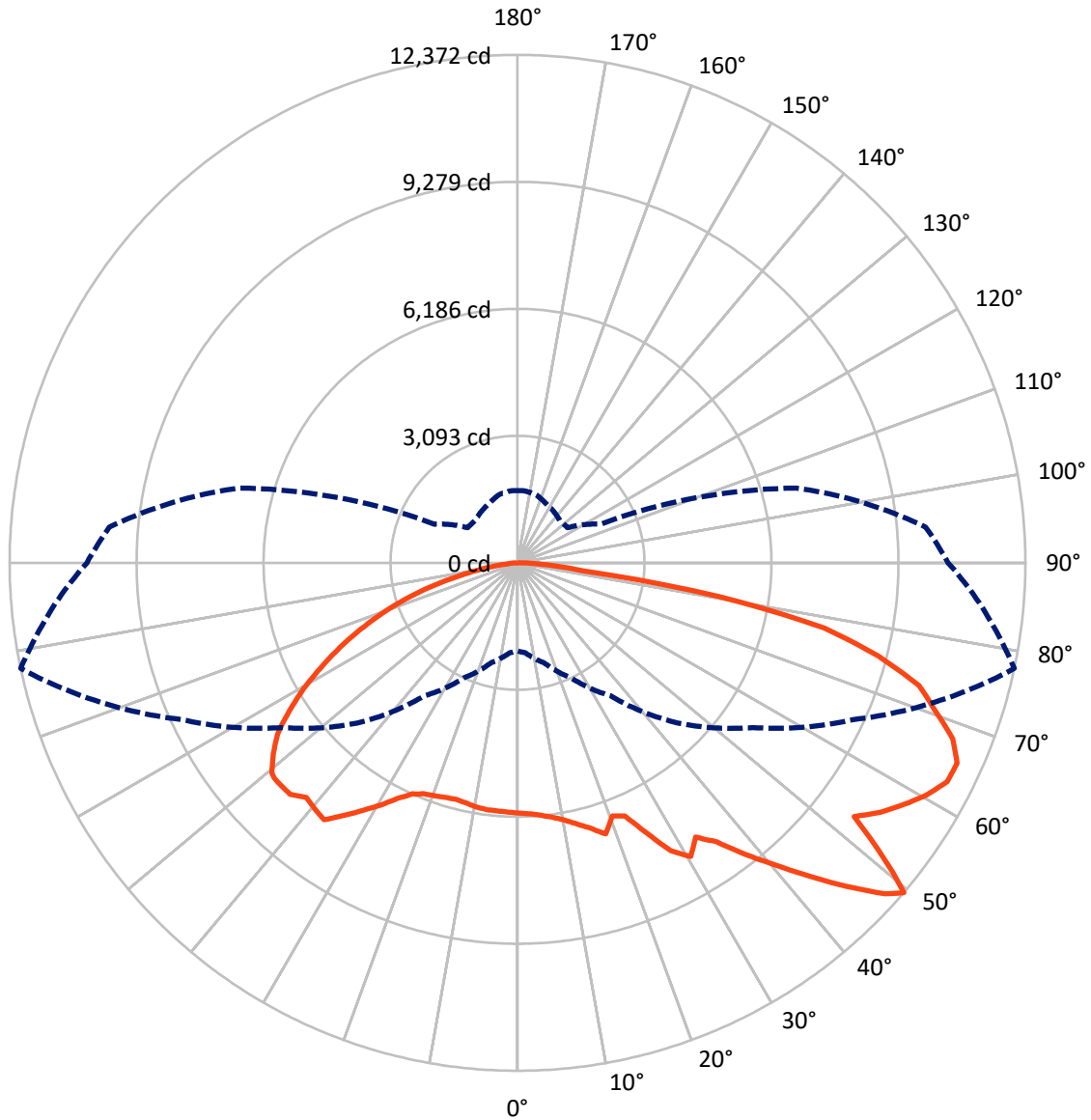
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.1 fc
 Type II - Short - N/A

REPORT NUMBER: P591446
CATALOG NUMBER: CTN-CA8-230-740-U-T2-SSS-HM-EX120

Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 49-Deg Vertical

REPORT NUMBER: P591446
 CATALOG NUMBER: CTN-CA8-230-740-U-T2-SSS-HM-EX120

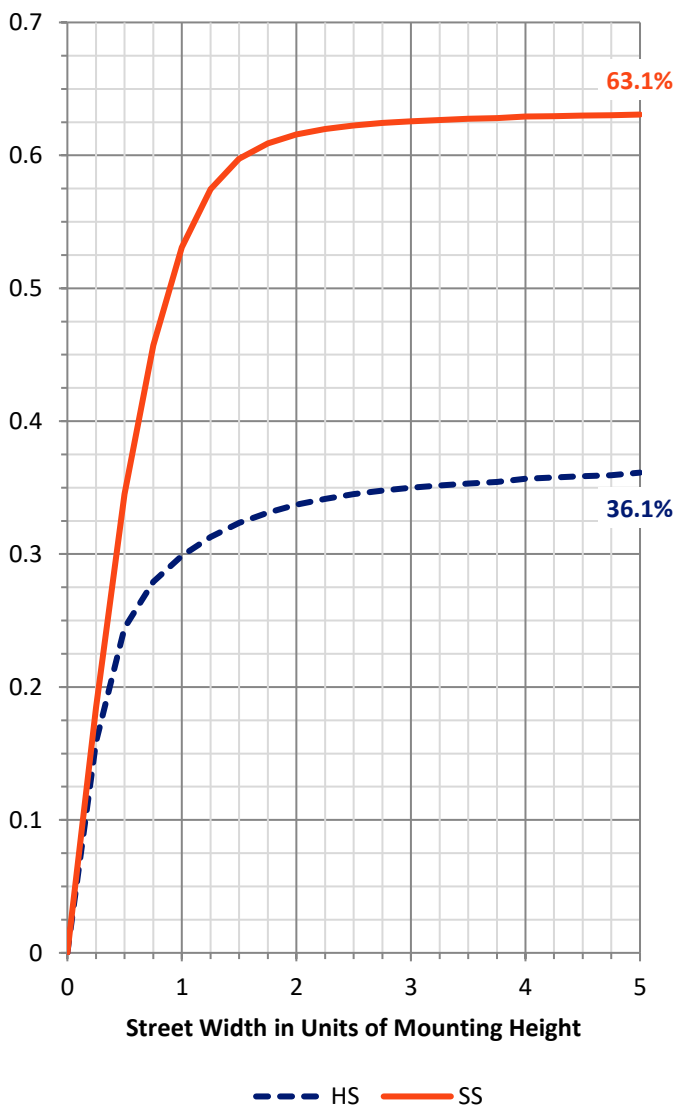
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8128.8 | 0.0 | 8128.8 |
| | % Fixture | 37.0 | 0.0 | 37.0 |
| Street Side | Lumens | 13825.2 | 0.0 | 13825.2 |
| | % Fixture | 63.0 | 0.0 | 63.0 |
| Total | Lumens | 21954.0 | 0.0 | 21954.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 590.9 | 2.7 |
| 10°-20° | 1739.1 | 7.9 |
| 20°-30° | 2482.5 | 11.3 |
| 30°-40° | 3195.8 | 14.6 |
| 40°-50° | 3748.7 | 17.1 |
| 50°-60° | 3867.3 | 17.6 |
| 60°-70° | 3511.4 | 16.0 |
| 70°-80° | 2332.0 | 10.6 |
| 80°-90° | 486.2 | 2.2 |
| 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° | 21954.0 | 100.0 |
| 0°-180° | 21954.0 | 100.0 |



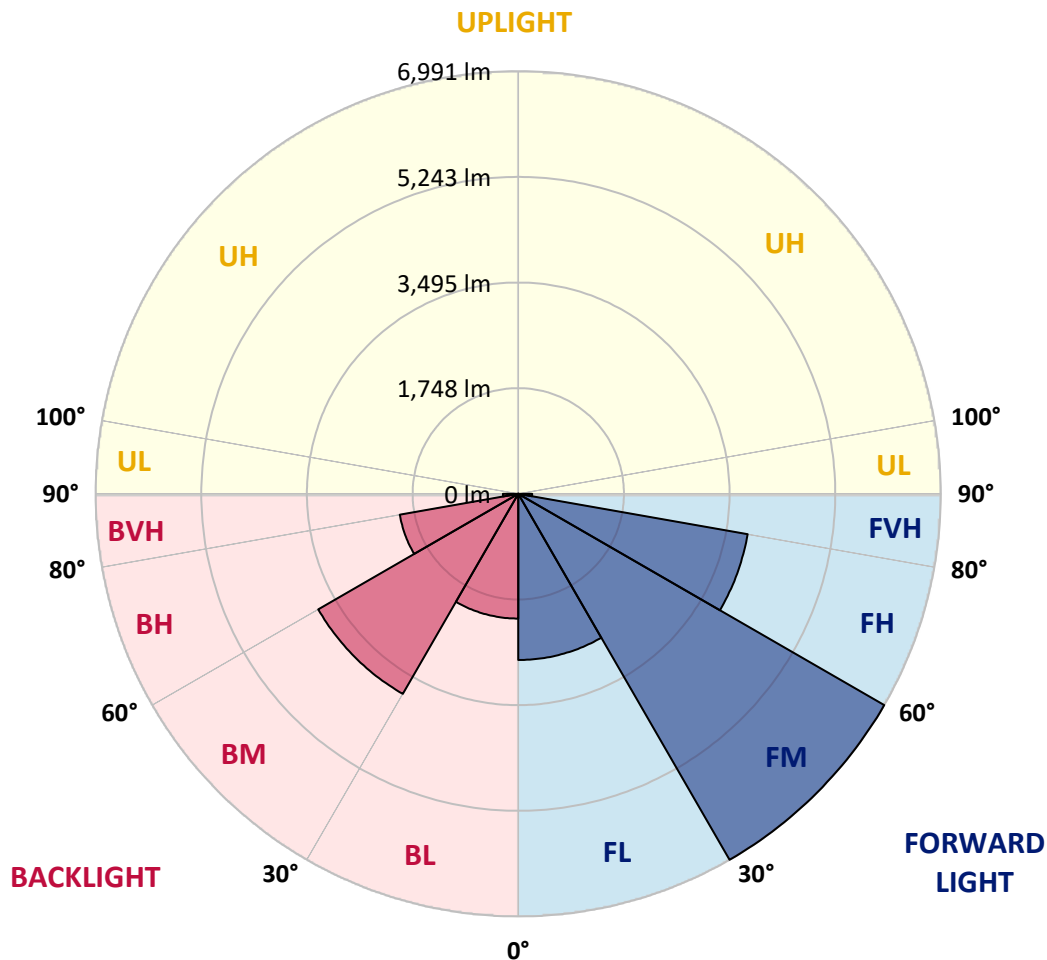
REPORT NUMBER: P591446
 CATALOG NUMBER: CTN-CA8-230-740-U-T2-SSS-HM-EX120

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2748.9 | 12.5 | | | |
| FM (30°-60°) | 6990.8 | 31.8 | | | |
| FH (60°-80°) | 3853.7 | 17.6 | | | G2/5000 |
| FVH (80°-90°) | 231.7 | 1.1 | | | G3/500 |
| BL (0°-30°) | 2063.6 | 9.4 | B3/2500 | | |
| BM (30°-60°) | 3821.0 | 17.4 | B3/5000 | | |
| BH (60°-80°) | 1989.7 | 9.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 254.5 | 1.2 | | | G3/500 |
| 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





REPORT NUMBER: P591446

CATALOG NUMBER: CTN-CA8-230-740-U-T2-SSS-HM-EX120

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 78° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 |
| 2.5° | 6345.7 | 6296.9 | 6312.4 | 6339.0 | 6218.3 | 6244.9 | 6192.8 | 6213.8 | 6149.6 | 6125.2 | 6136.3 |
| 5° | 6794.3 | 6742.3 | 6761.1 | 6770.0 | 6594.9 | 6524.0 | 6361.2 | 6326.8 | 6226.0 | 6181.7 | 6177.3 |
| 7.5° | 7015.9 | 6959.4 | 6963.8 | 6969.4 | 6829.8 | 6839.8 | 6692.4 | 6516.3 | 6329.0 | 6261.5 | 6231.6 |
| 10° | 7380.4 | 7301.7 | 7275.1 | 7264.1 | 7075.7 | 6997.1 | 6868.6 | 6772.2 | 6479.7 | 6377.8 | 6301.4 |
| 12.5° | 7605.3 | 7547.7 | 7547.7 | 7536.6 | 7337.2 | 7276.2 | 7046.9 | 6945.0 | 6657.0 | 6536.2 | 6404.4 |
| 15° | 7646.3 | 7607.5 | 7657.3 | 7647.4 | 7516.6 | 7445.7 | 7343.8 | 7131.1 | 6836.4 | 6711.2 | 6556.2 |
| 17.5° | 7183.2 | 7080.2 | 6883.0 | 6912.9 | 6914.0 | 7058.0 | 6988.2 | 7134.4 | 7048.0 | 6946.1 | 6778.8 |
| 20° | 5899.2 | 5934.7 | 6250.4 | 6174.0 | 6145.1 | 6450.9 | 6763.3 | 6772.2 | 6600.5 | 6583.8 | 6809.8 |
| 22.5° | 5139.2 | 5012.9 | 5364.1 | 5874.8 | 5907.0 | 6315.8 | 6680.2 | 7118.9 | 6844.2 | 6696.8 | 6524.0 |
| 25° | 4377.0 | 4423.6 | 4953.1 | 5614.5 | 6082.0 | 6172.8 | 6591.6 | 7291.8 | 7409.2 | 7272.9 | 6911.8 |
| 27.5° | 4245.2 | 4243.0 | 4473.4 | 5206.8 | 6166.2 | 6507.4 | 6645.9 | 7194.3 | 8013.0 | 7936.5 | 7480.1 |
| 30° | 4216.4 | 4198.7 | 4319.4 | 4928.7 | 5775.1 | 6808.7 | 7072.4 | 7268.5 | 7965.3 | 8305.4 | 8116.0 |
| 32.5° | 4090.1 | 4074.6 | 4203.1 | 4522.2 | 5461.6 | 7029.2 | 7479.0 | 7771.4 | 7803.6 | 7964.2 | 8787.3 |
| 35° | 3891.8 | 3904.0 | 4082.4 | 4429.1 | 5008.5 | 6499.7 | 7895.5 | 8337.5 | 8453.9 | 8343.1 | 8457.2 |
| 37.5° | 3689.1 | 3702.4 | 3877.4 | 4270.7 | 4929.9 | 6278.1 | 8164.7 | 8884.8 | 9126.3 | 9007.8 | 8480.5 |
| 40° | 3437.6 | 3458.7 | 3661.4 | 4103.4 | 4839.0 | 5778.5 | 7611.9 | 9506.3 | 9834.2 | 9679.1 | 9092.0 |
| 42.5° | 3151.8 | 3160.6 | 3391.1 | 3848.6 | 4723.8 | 5808.4 | 7041.4 | 10080.2 | 10521.1 | 10435.8 | 9694.6 |
| 45° | 2903.6 | 2903.6 | 3113.0 | 3520.7 | 4461.2 | 5751.9 | 6799.9 | 9652.5 | 11364.1 | 11243.4 | 10298.4 |
| 47.5° | 2565.7 | 2595.7 | 2841.6 | 3245.9 | 4152.2 | 5621.1 | 6938.4 | 8692.1 | 12149.6 | 12048.8 | 10904.4 |
| 49° | 2149.2 | 2200.2 | 2524.8 | 3095.3 | 3953.9 | 5512.6 | 6993.7 | 9031.1 | 11607.9 | 12372.3 | 11297.7 |
| 50° | 1978.6 | 2005.2 | 2008.5 | 2987.8 | 3806.5 | 5414.0 | 7019.2 | 9291.4 | 10693.9 | 11850.5 | 11573.5 |
| 52.5° | 1712.7 | 1545.4 | 1373.7 | 2689.8 | 3510.7 | 5049.5 | 7034.7 | 9998.2 | 10474.6 | 10267.4 | 11358.6 |
| 55° | 723.4 | 947.2 | 1204.2 | 2200.2 | 3191.7 | 4598.6 | 6983.8 | 10774.8 | 10956.5 | 10728.2 | 9739.0 |
| 57.5° | 547.3 | 582.7 | 647.0 | 1707.2 | 2286.6 | 4084.6 | 6812.1 | 11266.7 | 11363.0 | 11103.8 | 10134.5 |
| 60° | 79.8 | 82.0 | 115.2 | 692.4 | 1309.5 | 2915.8 | 6193.9 | 11252.3 | 11665.5 | 11466.1 | 10475.7 |
| 62.5° | 33.2 | 34.3 | 44.3 | 567.2 | 1009.2 | 2244.5 | 5654.4 | 11063.9 | 11959.1 | 11745.2 | 10795.8 |
| 65° | 5.5 | 6.6 | 18.8 | 501.8 | 834.2 | 2097.1 | 5062.8 | 11101.6 | 11854.9 | 11766.3 | 10919.9 |
| 67.5° | 4.4 | 5.5 | 17.7 | 450.9 | 688.0 | 1919.9 | 4479.0 | 10502.3 | 11474.9 | 11436.2 | 10588.7 |
| 70° | 4.4 | 5.5 | 18.8 | 407.7 | 594.9 | 1691.7 | 3757.8 | 9672.5 | 10778.1 | 10793.6 | 10032.5 |
| 72.5° | 5.5 | 5.5 | 18.8 | 364.5 | 517.4 | 1445.7 | 2973.4 | 8564.7 | 10145.5 | 10230.8 | 9241.5 |
| 75° | 5.5 | 5.5 | 17.7 | 316.8 | 444.2 | 1205.3 | 2141.4 | 6298.0 | 9098.6 | 9073.1 | 8104.9 |
| 77.5° | 5.5 | 5.5 | 17.7 | 251.5 | 368.9 | 991.5 | 1394.8 | 3547.3 | 7534.4 | 7641.8 | 6776.6 |
| 80° | 5.5 | 5.5 | 17.7 | 183.9 | 289.1 | 743.4 | 845.3 | 1815.7 | 4022.5 | 4979.7 | 4661.8 |
| 82.5° | 5.5 | 5.5 | 17.7 | 124.1 | 198.3 | 428.7 | 487.4 | 919.5 | 1444.6 | 1583.1 | 1852.3 |
| 85° | 4.4 | 4.4 | 13.3 | 74.2 | 101.9 | 151.8 | 234.9 | 489.7 | 789.9 | 825.3 | 805.4 |
| 87.5° | 2.2 | 2.2 | 6.6 | 26.6 | 44.3 | 55.4 | 105.2 | 197.2 | 290.3 | 296.9 | 258.1 |
| 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: P591446

CATALOG NUMBER: CTN-CA8-230-740-U-T2-SSS-HM-EX120

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 | 6096.4 |
| 2.5° | 6136.3 | 6100.8 | 6068.7 | 6074.2 | 6005.6 | 5985.6 | 5909.2 | 5949.1 | 5910.3 | 5875.9 | 5908.1 |
| 5° | 6146.3 | 6103.0 | 6044.3 | 5987.8 | 5830.5 | 5757.4 | 5665.5 | 5688.7 | 5636.7 | 5595.7 | 5631.1 |
| 7.5° | 6175.1 | 6121.9 | 6031.0 | 5870.4 | 5683.2 | 5566.9 | 5462.7 | 5564.6 | 5552.5 | 5521.4 | 5558.0 |
| 10° | 6188.4 | 6142.9 | 5986.7 | 5798.4 | 5536.9 | 5463.8 | 5369.7 | 5368.6 | 5371.9 | 5377.4 | 5414.0 |
| 12.5° | 6223.8 | 6155.1 | 5908.1 | 5688.7 | 5446.1 | 5297.7 | 5229.0 | 5284.4 | 5184.7 | 5125.9 | 5151.4 |
| 15° | 6308.0 | 6182.8 | 5854.9 | 5534.7 | 5305.4 | 5182.4 | 4963.1 | 4981.9 | 4960.9 | 4903.3 | 4928.7 |
| 17.5° | 6474.2 | 6260.4 | 5852.7 | 5437.2 | 5125.9 | 4925.4 | 4733.8 | 4642.9 | 4614.1 | 4618.6 | 4640.7 |
| 20° | 6678.0 | 6397.7 | 5857.1 | 5312.1 | 4938.7 | 4706.1 | 4410.3 | 4347.1 | 4251.9 | 4254.1 | 4259.6 |
| 22.5° | 6548.4 | 6556.2 | 5859.3 | 5169.1 | 4705.0 | 4413.6 | 4100.1 | 3976.0 | 3902.9 | 3884.1 | 3911.8 |
| 25° | 6899.6 | 6864.1 | 5893.7 | 5092.7 | 4459.0 | 4068.0 | 3740.0 | 3581.6 | 3471.9 | 3463.1 | 3494.1 |
| 27.5° | 7367.1 | 7302.8 | 6070.9 | 4927.6 | 4198.7 | 3653.6 | 3298.0 | 3178.4 | 3084.2 | 3051.0 | 3073.1 |
| 30° | 7935.4 | 7860.1 | 6315.8 | 4799.1 | 3847.5 | 3208.3 | 2903.6 | 2821.6 | 2728.6 | 2667.7 | 2673.2 |
| 32.5° | 8529.2 | 8368.6 | 6567.2 | 4690.6 | 3487.5 | 2818.3 | 2558.0 | 2484.9 | 2375.2 | 2296.5 | 2315.4 |
| 35° | 9127.4 | 8899.2 | 6847.5 | 4498.9 | 3047.6 | 2474.9 | 2264.4 | 2165.8 | 2076.1 | 2005.2 | 1993.0 |
| 37.5° | 8654.4 | 9519.6 | 7118.9 | 4320.5 | 2703.1 | 2213.4 | 1975.3 | 1905.5 | 1852.3 | 1796.9 | 1795.8 |
| 40° | 8693.2 | 8891.5 | 7279.6 | 4004.8 | 2318.7 | 1945.4 | 1706.1 | 1730.4 | 1752.6 | 1710.5 | 1710.5 |
| 42.5° | 9077.6 | 8795.1 | 7215.3 | 3586.1 | 2032.9 | 1677.3 | 1567.6 | 1666.2 | 1736.0 | 1706.1 | 1705.0 |
| 45° | 9619.3 | 9252.6 | 7325.0 | 3114.1 | 1754.8 | 1512.2 | 1528.8 | 1649.6 | 1740.4 | 1734.9 | 1732.6 |
| 47.5° | 10194.3 | 9773.3 | 7114.5 | 2553.6 | 1563.2 | 1461.2 | 1528.8 | 1625.2 | 1733.8 | 1759.2 | 1753.7 |
| 49° | 10490.1 | 9979.4 | 7030.3 | 2226.7 | 1486.7 | 1454.6 | 1531.0 | 1605.2 | 1721.6 | 1760.3 | 1754.8 |
| 50° | 10670.6 | 10090.1 | 6921.7 | 2040.6 | 1445.7 | 1455.7 | 1535.5 | 1593.1 | 1710.5 | 1753.7 | 1750.4 |
| 52.5° | 11077.2 | 10258.5 | 6383.3 | 1717.1 | 1379.3 | 1459.0 | 1564.3 | 1580.9 | 1669.5 | 1716.0 | 1740.4 |
| 55° | 10662.9 | 10642.9 | 5696.5 | 1568.7 | 1343.8 | 1451.3 | 1576.4 | 1592.0 | 1635.2 | 1660.6 | 1679.5 |
| 57.5° | 10598.6 | 10810.2 | 4831.3 | 1488.9 | 1312.8 | 1440.2 | 1562.0 | 1590.8 | 1616.3 | 1611.9 | 1604.1 |
| 60° | 10802.5 | 10956.5 | 3939.5 | 1410.3 | 1277.3 | 1422.5 | 1514.4 | 1556.5 | 1564.3 | 1553.2 | 1535.5 |
| 62.5° | 10834.6 | 10996.3 | 3027.7 | 1330.5 | 1238.6 | 1379.3 | 1444.6 | 1486.7 | 1486.7 | 1459.0 | 1452.4 |
| 65° | 10685.0 | 10747.1 | 2231.2 | 1238.6 | 1192.0 | 1329.4 | 1362.6 | 1393.7 | 1408.1 | 1371.5 | 1373.7 |
| 67.5° | 10256.3 | 9897.4 | 1693.9 | 1128.9 | 1135.5 | 1260.7 | 1284.0 | 1305.0 | 1308.4 | 1287.3 | 1285.1 |
| 70° | 9394.4 | 8946.9 | 1210.9 | 962.7 | 1032.5 | 1152.1 | 1187.6 | 1219.7 | 1208.6 | 1172.1 | 1166.5 |
| 72.5° | 8094.9 | 7697.2 | 823.1 | 771.1 | 908.4 | 1048.0 | 1070.2 | 1071.3 | 1049.1 | 1075.7 | 1094.5 |
| 75° | 6963.8 | 6012.2 | 613.7 | 614.8 | 727.8 | 904.0 | 972.7 | 978.2 | 988.2 | 1134.4 | 1164.3 |
| 77.5° | 5533.6 | 3917.3 | 522.9 | 485.2 | 558.3 | 752.2 | 860.8 | 900.7 | 1195.4 | 1296.2 | 1282.9 |
| 80° | 3398.8 | 2351.9 | 405.5 | 384.4 | 454.2 | 578.3 | 740.0 | 920.6 | 1219.7 | 1146.6 | 1107.8 |
| 82.5° | 1592.0 | 1073.5 | 292.5 | 294.7 | 337.9 | 422.1 | 584.9 | 1071.3 | 1053.5 | 869.6 | 858.6 |
| 85° | 616.0 | 371.1 | 177.3 | 200.5 | 227.1 | 285.8 | 448.7 | 1056.9 | 818.7 | 736.7 | 682.4 |
| 87.5° | 158.4 | 72.0 | 77.5 | 82.0 | 100.8 | 150.7 | 244.8 | 553.9 | 430.9 | 377.8 | 371.1 |
| 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)