

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: P510750

Luminaire Tested: **CTN-CA8-230-760-U-T4-HSS**

Issue Date: 4/6/2021

Test Information

Test Method: LM-79-08
Report Number: P510750
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-151-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 4/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-CA8-230-760-U-T4-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (8) 5700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31617 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

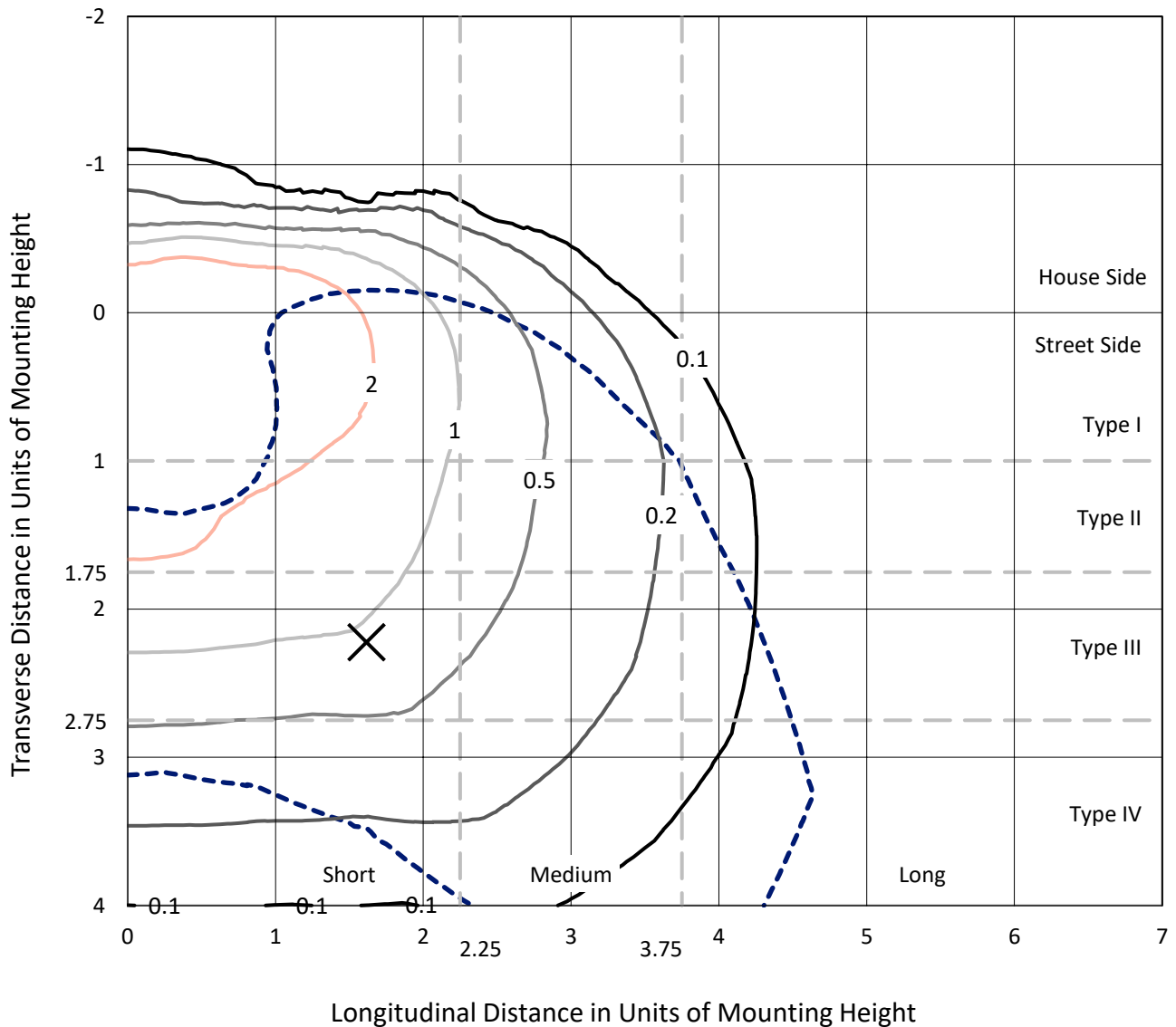
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

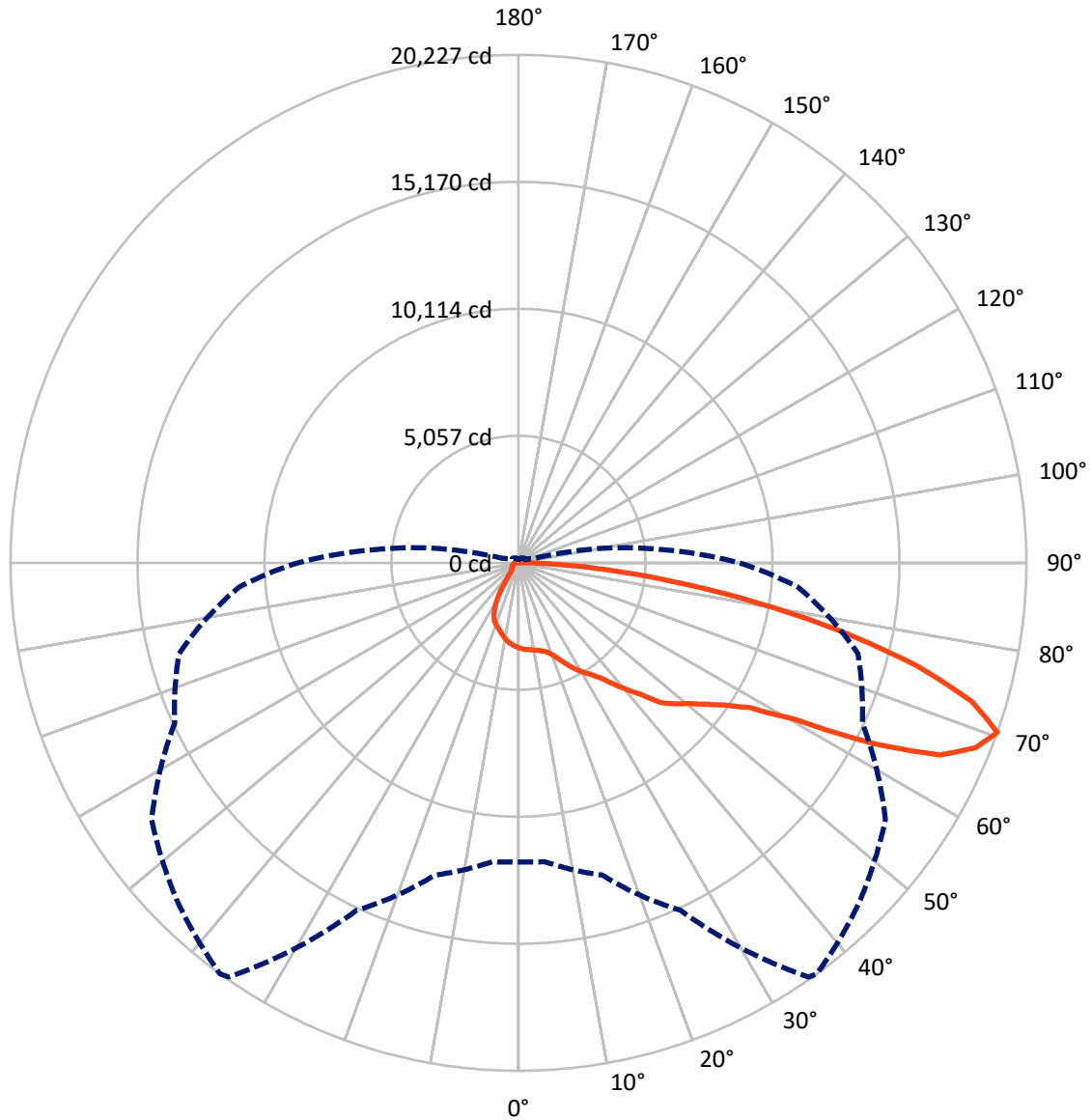
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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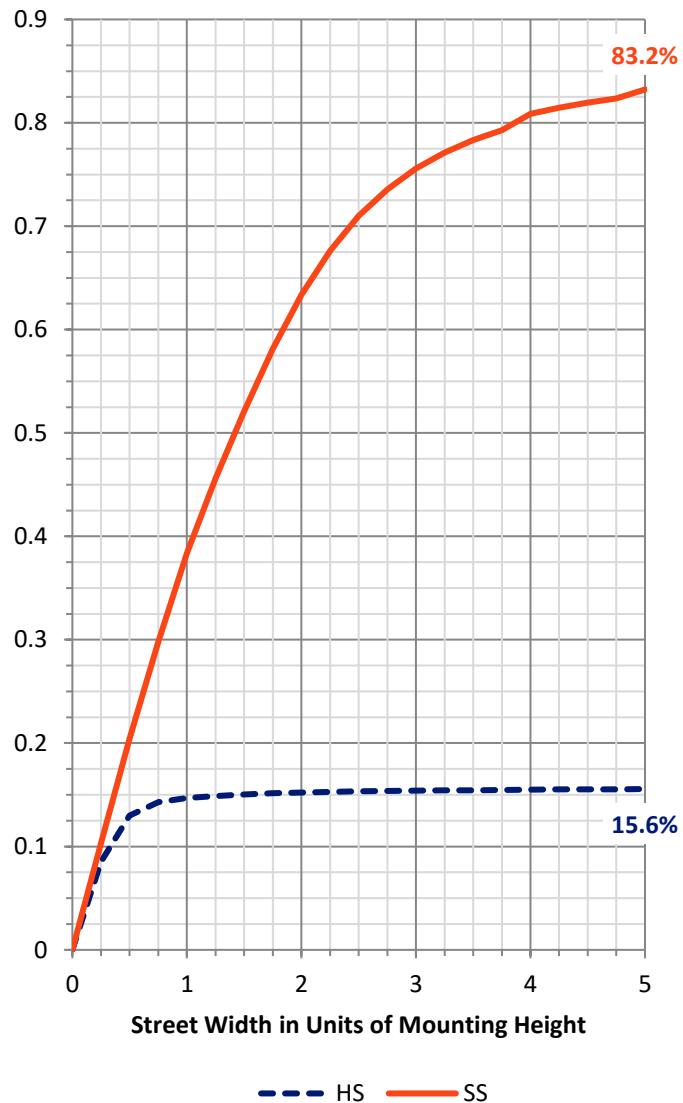
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4989.4 | 0.0 | 4989.4 |
| | % Fixture | 15.8 | 0.0 | 15.8 |
| Street Side | Lumens | 26627.6 | 0.0 | 26627.6 |
| | % Fixture | 84.2 | 0.0 | 84.2 |
| Total | Lumens | 31617.0 | 0.0 | 31617.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 321.3 | 1.0 |
| 10°-20° | 955.4 | 3.0 |
| 20°-30° | 1718.2 | 5.4 |
| 30°-40° | 2718.9 | 8.6 |
| 40°-50° | 4249.2 | 13.4 |
| 50°-60° | 6101.8 | 19.3 |
| 60°-70° | 8276.5 | 26.2 |
| 70°-80° | 6125.5 | 19.4 |
| 80°-90° | 1150.2 | 3.6 |
| 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° | 31617.0 | 100.0 |
| 0°-180° | 31617.0 | 100.0 |

Coefficient of Utilization

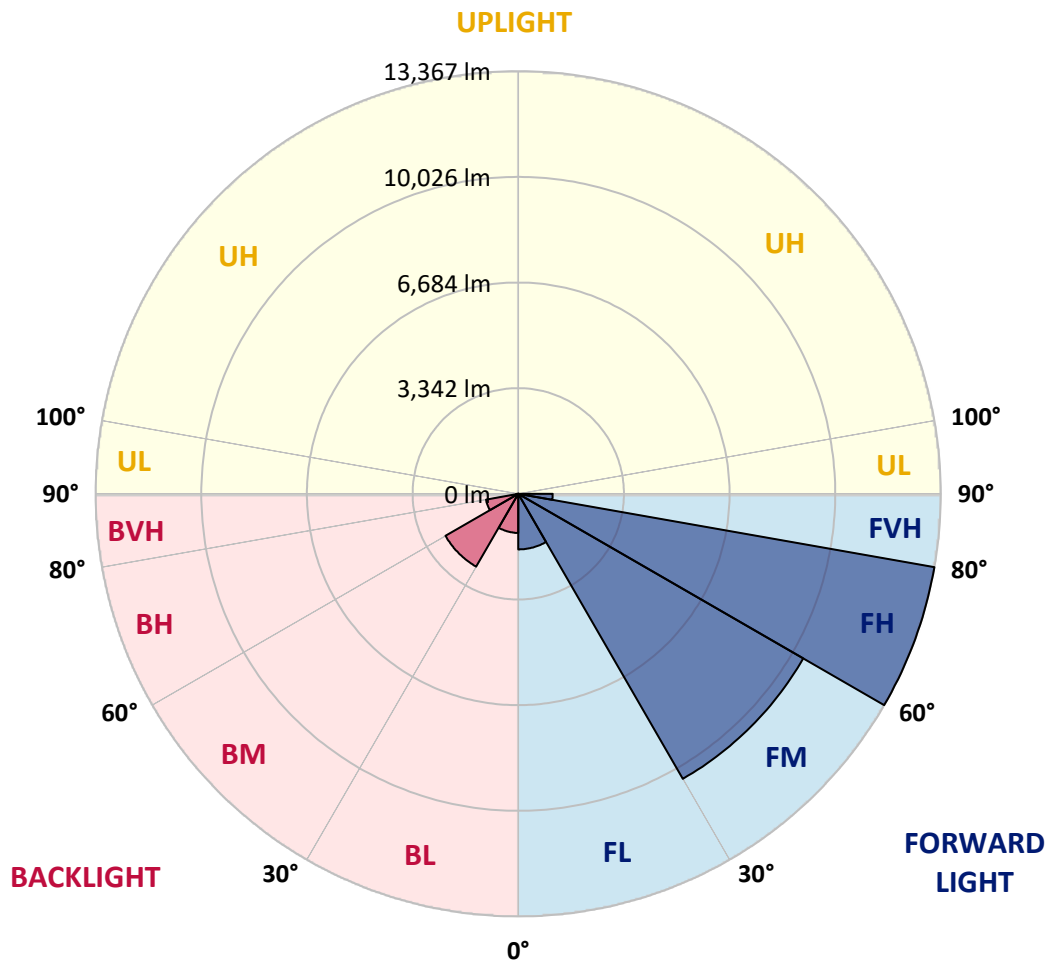


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1758.5 | 5.6 | | | |
| FM (30°-60°) | 10411.2 | 32.9 | | | |
| FH (60°-80°) | 13367.4 | 42.3 | | | G5 |
| FVH (80°-90°) | 1090.5 | 3.4 | | | G5 |
| BL (0°-30°) | 1236.3 | 3.9 | B3/2500 | | |
| BM (30°-60°) | 2658.7 | 8.4 | B3/5000 | | |
| BH (60°-80°) | 1034.7 | 3.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 59.7 | 0.2 | | | G1/100 |
| 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





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 |
| 2.5° | 3456.2 | 3448.9 | 3443.1 | 3445.3 | 3440.9 | 3443.8 | 3437.2 | 3429.2 | 3410.2 | 3402.2 | 3398.6 |
| 5° | 3486.9 | 3484.7 | 3478.8 | 3474.5 | 3466.4 | 3463.5 | 3456.2 | 3462.8 | 3452.6 | 3426.3 | 3411.0 |
| 7.5° | 3505.1 | 3504.4 | 3497.8 | 3488.3 | 3492.7 | 3496.4 | 3503.7 | 3493.4 | 3480.3 | 3467.9 | 3436.5 |
| 10° | 3513.2 | 3513.2 | 3505.1 | 3510.2 | 3532.9 | 3535.0 | 3538.7 | 3545.3 | 3532.9 | 3514.6 | 3483.2 |
| 12.5° | 3533.6 | 3532.1 | 3535.0 | 3551.8 | 3575.2 | 3580.3 | 3598.6 | 3598.6 | 3600.0 | 3589.1 | 3552.6 |
| 15° | 3584.7 | 3584.7 | 3591.3 | 3606.6 | 3646.7 | 3649.6 | 3676.7 | 3700.7 | 3703.7 | 3687.6 | 3659.9 |
| 17.5° | 3702.9 | 3700.0 | 3696.4 | 3705.9 | 3748.9 | 3750.4 | 3797.1 | 3827.8 | 3835.8 | 3853.3 | 3848.9 |
| 20° | 3927.8 | 3924.8 | 3924.1 | 3924.8 | 3921.9 | 3917.5 | 3963.5 | 3996.4 | 4037.2 | 4067.9 | 4083.2 |
| 22.5° | 4249.7 | 4243.1 | 4243.1 | 4207.3 | 4179.6 | 4184.0 | 4191.3 | 4209.5 | 4263.5 | 4317.5 | 4375.2 |
| 25° | 4596.4 | 4592.0 | 4595.6 | 4504.4 | 4467.2 | 4481.8 | 4472.3 | 4500.7 | 4571.6 | 4618.3 | 4679.6 |
| 27.5° | 4879.6 | 4886.1 | 4865.7 | 4794.9 | 4770.8 | 4781.8 | 4759.9 | 4841.6 | 4919.7 | 5001.5 | 5094.2 |
| 30° | 5232.1 | 5197.1 | 5146.7 | 5060.6 | 5051.8 | 5053.3 | 5051.8 | 5183.2 | 5345.3 | 5462.1 | 5590.5 |
| 32.5° | 5692.7 | 5698.6 | 5585.4 | 5382.5 | 5308.0 | 5297.8 | 5327.0 | 5519.7 | 5738.7 | 5997.8 | 6167.2 |
| 35° | 6158.4 | 6167.9 | 6085.4 | 5873.7 | 5661.3 | 5629.2 | 5586.2 | 5836.5 | 6152.6 | 6672.3 | 6927.8 |
| 37.5° | 6652.6 | 6686.2 | 6588.3 | 6399.3 | 6147.5 | 6117.5 | 5913.9 | 6159.9 | 6627.0 | 7470.8 | 7805.9 |
| 40° | 7313.9 | 7278.1 | 7159.9 | 6919.7 | 6685.4 | 6637.3 | 6400.8 | 6530.0 | 7237.3 | 8470.8 | 8713.9 |
| 42.5° | 7801.5 | 7791.3 | 7691.3 | 7454.0 | 7218.3 | 7179.6 | 6989.1 | 7129.2 | 8005.9 | 9484.7 | 9593.5 |
| 45° | 8188.4 | 8251.1 | 8248.9 | 8100.0 | 7967.2 | 7945.3 | 7832.9 | 8039.4 | 8935.1 | 10441.6 | 10388.4 |
| 47.5° | 8532.1 | 8570.8 | 8508.8 | 8443.8 | 8381.8 | 8389.1 | 8472.3 | 8897.1 | 9884.7 | 11277.4 | 11041.6 |
| 50° | 9094.9 | 9045.3 | 8767.2 | 8717.6 | 8805.1 | 8808.8 | 9062.1 | 9716.1 | 10930.7 | 12000.0 | 11594.9 |
| 52.5° | 9845.3 | 9791.3 | 9219.7 | 9135.1 | 9342.4 | 9357.7 | 9778.9 | 10532.2 | 12009.5 | 12690.6 | 12145.3 |
| 55° | 10962.1 | 10836.5 | 10224.1 | 9844.6 | 9939.5 | 10001.5 | 10511.7 | 11316.8 | 12854.1 | 13299.3 | 12562.1 |
| 57.5° | 12333.6 | 12424.9 | 12111.0 | 11253.3 | 10858.4 | 10881.8 | 11350.4 | 12067.9 | 13599.3 | 13832.2 | 12805.9 |
| 60° | 13783.3 | 13761.4 | 13892.8 | 13531.4 | 12775.2 | 12649.7 | 12411.0 | 12834.4 | 14176.7 | 14281.1 | 13057.0 |
| 62.5° | 14577.4 | 14705.2 | 15143.1 | 15215.4 | 15897.9 | 15831.4 | 14204.4 | 13784.7 | 14843.9 | 14562.8 | 13125.6 |
| 65° | 14573.0 | 14628.5 | 15443.9 | 16340.2 | 18472.3 | 18453.4 | 17697.1 | 15159.2 | 15340.9 | 14713.2 | 12988.4 |
| 67.5° | 13631.4 | 13717.6 | 14670.9 | 16422.0 | 19662.1 | 19639.5 | 19116.9 | 17091.3 | 15497.1 | 14532.2 | 12348.2 |
| 70° | 11914.6 | 11943.8 | 12873.8 | 15270.9 | 20140.2 | 20227.1 | 19165.8 | 17832.9 | 15108.8 | 13994.2 | 11181.1 |
| 72.5° | 9829.2 | 9768.6 | 10678.1 | 13040.9 | 18922.7 | 18870.9 | 18355.5 | 16947.5 | 14454.8 | 12949.7 | 9119.0 |
| 75° | 7237.3 | 7405.9 | 8221.9 | 10470.8 | 16201.5 | 16391.3 | 16619.8 | 15592.8 | 12838.0 | 10672.3 | 6305.9 |
| 77.5° | 4778.9 | 4993.4 | 5818.3 | 7851.1 | 12826.3 | 13121.2 | 13713.2 | 13262.1 | 10443.8 | 7655.5 | 3002.9 |
| 80° | 2469.4 | 2631.4 | 3373.7 | 5209.5 | 9194.9 | 9620.5 | 10705.9 | 10044.6 | 7404.4 | 3461.3 | 672.3 |
| 82.5° | 934.3 | 913.1 | 1511.7 | 2981.8 | 5895.6 | 6282.5 | 7071.6 | 6023.4 | 2635.0 | 608.0 | 312.4 |
| 85° | 410.2 | 434.3 | 626.3 | 1359.9 | 3370.8 | 3421.2 | 4005.9 | 2348.2 | 386.1 | 290.5 | 212.4 |
| 87.5° | 177.4 | 203.7 | 262.8 | 391.2 | 1137.2 | 1313.1 | 1624.8 | 746.0 | 116.8 | 100.7 | 106.6 |
| 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-CA8-230-760-U-T4-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 | 3387.6 |
| 2.5° | 3392.0 | 3387.6 | 3380.3 | 3362.1 | 3332.1 | 3328.5 | 3325.6 | 3322.6 | 3316.8 | 3319.7 | 3336.5 |
| 5° | 3399.3 | 3391.3 | 3365.0 | 3338.7 | 3312.4 | 3289.1 | 3260.6 | 3249.6 | 3235.0 | 3225.6 | 3243.1 |
| 7.5° | 3424.1 | 3407.3 | 3368.6 | 3332.9 | 3261.3 | 3227.0 | 3190.5 | 3147.5 | 3116.8 | 3097.1 | 3114.6 |
| 10° | 3465.7 | 3444.5 | 3396.4 | 3322.6 | 3238.7 | 3144.5 | 3080.3 | 3008.8 | 2950.4 | 2934.3 | 2950.4 |
| 12.5° | 3533.6 | 3502.2 | 3446.0 | 3346.0 | 3197.1 | 3073.7 | 2951.8 | 2857.7 | 2763.5 | 2736.5 | 2744.5 |
| 15° | 3643.8 | 3619.0 | 3532.9 | 3394.9 | 3197.8 | 3009.5 | 2828.5 | 2676.7 | 2553.3 | 2510.2 | 2507.3 |
| 17.5° | 3820.5 | 3794.2 | 3694.9 | 3492.0 | 3224.1 | 2959.1 | 2707.3 | 2475.9 | 2289.1 | 2194.2 | 2178.8 |
| 20° | 4073.7 | 4037.2 | 3886.9 | 3635.1 | 3281.0 | 2937.2 | 2594.9 | 2284.0 | 1993.4 | 1815.3 | 1788.3 |
| 22.5° | 4355.5 | 4316.8 | 4094.9 | 3745.3 | 3321.9 | 2894.2 | 2487.6 | 2071.5 | 1689.1 | 1471.5 | 1440.9 |
| 25° | 4705.9 | 4621.2 | 4294.2 | 3849.6 | 3312.4 | 2803.7 | 2313.1 | 1783.2 | 1368.6 | 1180.3 | 1159.9 |
| 27.5° | 5051.8 | 4944.5 | 4497.1 | 3904.4 | 3270.8 | 2659.9 | 2057.7 | 1446.0 | 1071.5 | 938.0 | 921.2 |
| 30° | 5481.0 | 5273.7 | 4677.4 | 3929.9 | 3165.7 | 2444.5 | 1715.3 | 1099.3 | 802.2 | 710.2 | 694.2 |
| 32.5° | 5991.3 | 5677.4 | 4846.7 | 3901.5 | 2990.5 | 2116.1 | 1333.6 | 805.1 | 596.4 | 538.7 | 538.0 |
| 35° | 6664.3 | 6172.3 | 5032.9 | 3808.0 | 2721.9 | 1762.1 | 935.0 | 550.4 | 465.0 | 445.3 | 448.9 |
| 37.5° | 7451.1 | 6842.4 | 5221.9 | 3654.8 | 2418.3 | 1348.2 | 623.4 | 424.1 | 408.8 | 409.5 | 410.2 |
| 40° | 8281.1 | 7582.5 | 5476.7 | 3439.4 | 2049.6 | 975.9 | 448.9 | 381.0 | 380.3 | 387.6 | 389.8 |
| 42.5° | 9073.8 | 8301.5 | 5790.5 | 3152.6 | 1663.5 | 645.3 | 389.1 | 363.5 | 354.0 | 356.9 | 359.1 |
| 45° | 9810.3 | 8918.3 | 6057.7 | 2873.0 | 1249.6 | 460.6 | 381.8 | 343.1 | 328.5 | 327.0 | 328.5 |
| 47.5° | 10403.7 | 9412.4 | 6220.5 | 2544.5 | 890.5 | 382.5 | 366.4 | 324.1 | 303.7 | 299.3 | 297.1 |
| 50° | 10855.5 | 9779.6 | 6279.6 | 2172.3 | 602.2 | 365.0 | 346.0 | 302.2 | 277.4 | 278.1 | 278.1 |
| 52.5° | 11296.4 | 10113.2 | 6211.0 | 1797.1 | 443.1 | 349.6 | 332.1 | 284.7 | 258.4 | 272.3 | 275.9 |
| 55° | 11613.9 | 10253.3 | 6011.0 | 1391.2 | 369.3 | 330.7 | 316.8 | 264.2 | 246.0 | 268.6 | 275.9 |
| 57.5° | 11799.3 | 10363.5 | 5643.8 | 1004.4 | 338.7 | 312.4 | 297.1 | 245.3 | 228.5 | 234.3 | 238.0 |
| 60° | 11914.6 | 10209.5 | 5158.4 | 686.9 | 322.6 | 297.8 | 277.4 | 232.8 | 210.2 | 196.4 | 194.2 |
| 62.5° | 11851.1 | 9824.1 | 4519.0 | 472.3 | 305.8 | 281.8 | 260.6 | 221.2 | 191.2 | 173.0 | 171.5 |
| 65° | 11333.6 | 9111.0 | 3469.4 | 382.5 | 295.6 | 274.5 | 250.4 | 210.2 | 178.1 | 160.6 | 158.4 |
| 67.5° | 10373.8 | 7829.2 | 2026.3 | 340.1 | 291.2 | 267.2 | 242.3 | 200.0 | 170.8 | 151.8 | 148.9 |
| 70° | 8796.4 | 5889.1 | 678.8 | 303.7 | 290.5 | 266.4 | 235.8 | 192.7 | 162.8 | 143.1 | 140.1 |
| 72.5° | 6346.0 | 3553.3 | 330.7 | 267.2 | 271.5 | 255.5 | 230.7 | 186.9 | 157.7 | 132.8 | 127.7 |
| 75° | 3606.6 | 1156.9 | 298.5 | 230.7 | 252.6 | 243.8 | 227.7 | 187.6 | 159.9 | 120.4 | 114.6 |
| 77.5° | 1026.3 | 338.0 | 288.3 | 196.4 | 238.7 | 251.8 | 213.1 | 169.3 | 163.5 | 111.7 | 104.4 |
| 80° | 346.7 | 300.7 | 278.1 | 152.6 | 192.7 | 208.0 | 184.7 | 148.9 | 165.0 | 101.5 | 94.2 |
| 82.5° | 278.1 | 302.2 | 233.6 | 121.9 | 146.7 | 157.7 | 146.7 | 133.6 | 133.6 | 90.5 | 84.7 |
| 85° | 222.6 | 280.3 | 148.2 | 97.1 | 109.5 | 121.2 | 103.7 | 100.0 | 93.4 | 75.9 | 73.7 |
| 87.5° | 129.2 | 87.6 | 61.3 | 49.6 | 46.0 | 46.7 | 40.1 | 48.2 | 59.1 | 51.8 | 51.1 |
| 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)