

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: P300606

Luminaire Tested: **GLNA-AF-02-LED-E1-AFL-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300606
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24297)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-02-LED-E1-AFL-7027-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Automotive Frontline WITH HOUSESIDE SHIELD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7869 lumens
Efficiency: N/A
Efficacy: 69.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 113
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

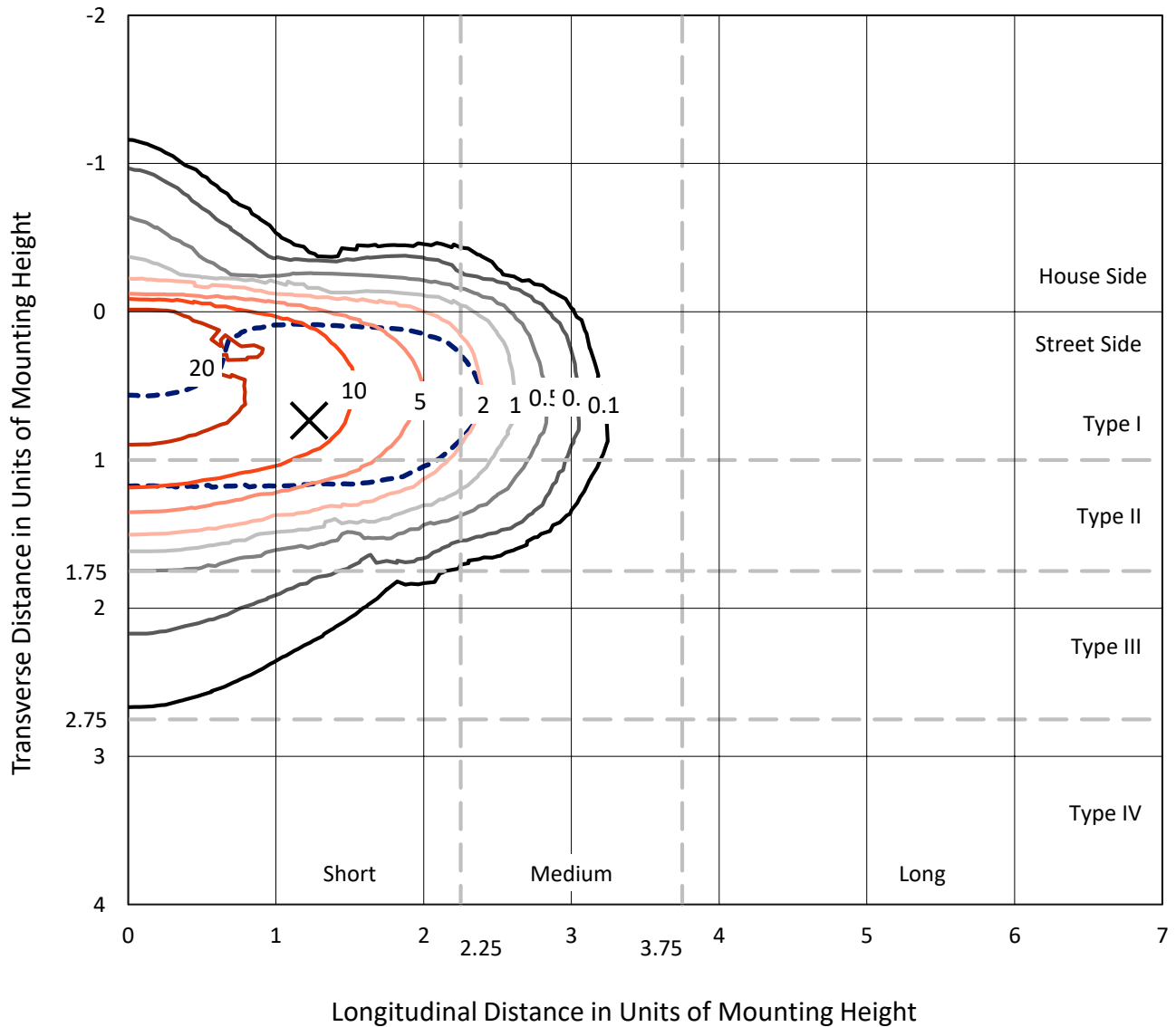


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Iso-Footcandle Lines of Horizontal Illumination

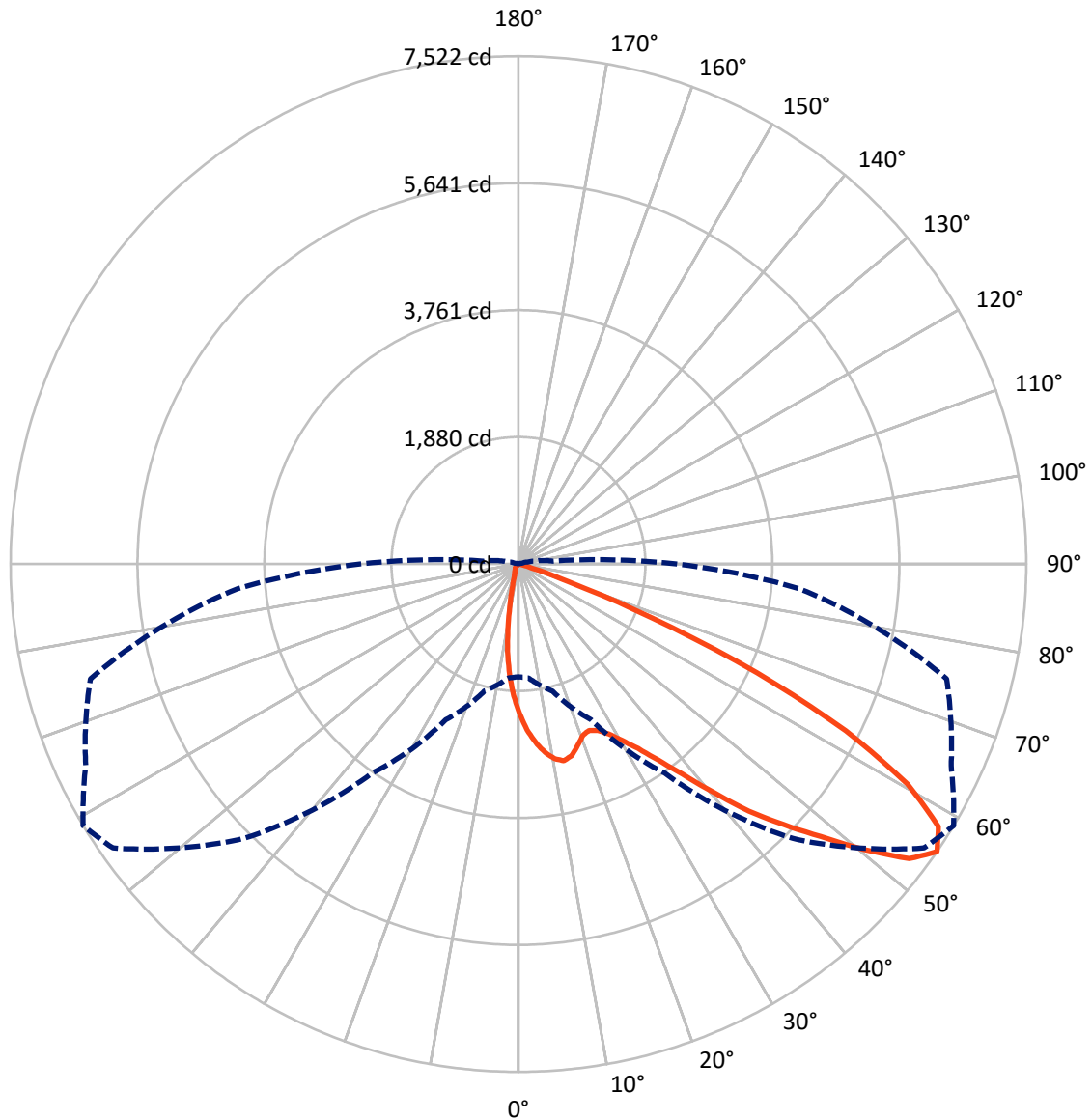
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 27.6 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 439.5 | 0.0 | 439.5 |
| | % Fixture | 5.6 | 0.0 | 5.6 |
| Street Side | Lumens | 7429.5 | 0.0 | 7429.5 |
| | % Fixture | 94.4 | 0.0 | 94.4 |
| Total | Lumens | 7869.0 | 0.0 | 7869.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 185.5 | 2.4 |
| 10°-20° | 444.2 | 5.6 |
| 20°-30° | 755.9 | 9.6 |
| 30°-40° | 1300.0 | 16.5 |
| 40°-50° | 2007.1 | 25.5 |
| 50°-60° | 2017.7 | 25.6 |
| 60°-70° | 1034.7 | 13.1 |
| 70°-80° | 112.1 | 1.4 |
| 80°-90° | 11.7 | 0.1 |
| 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° | 7869.0 | 100.0 |
| 0°-180° | 7869.0 | 100.0 |

Coefficient of Utilization



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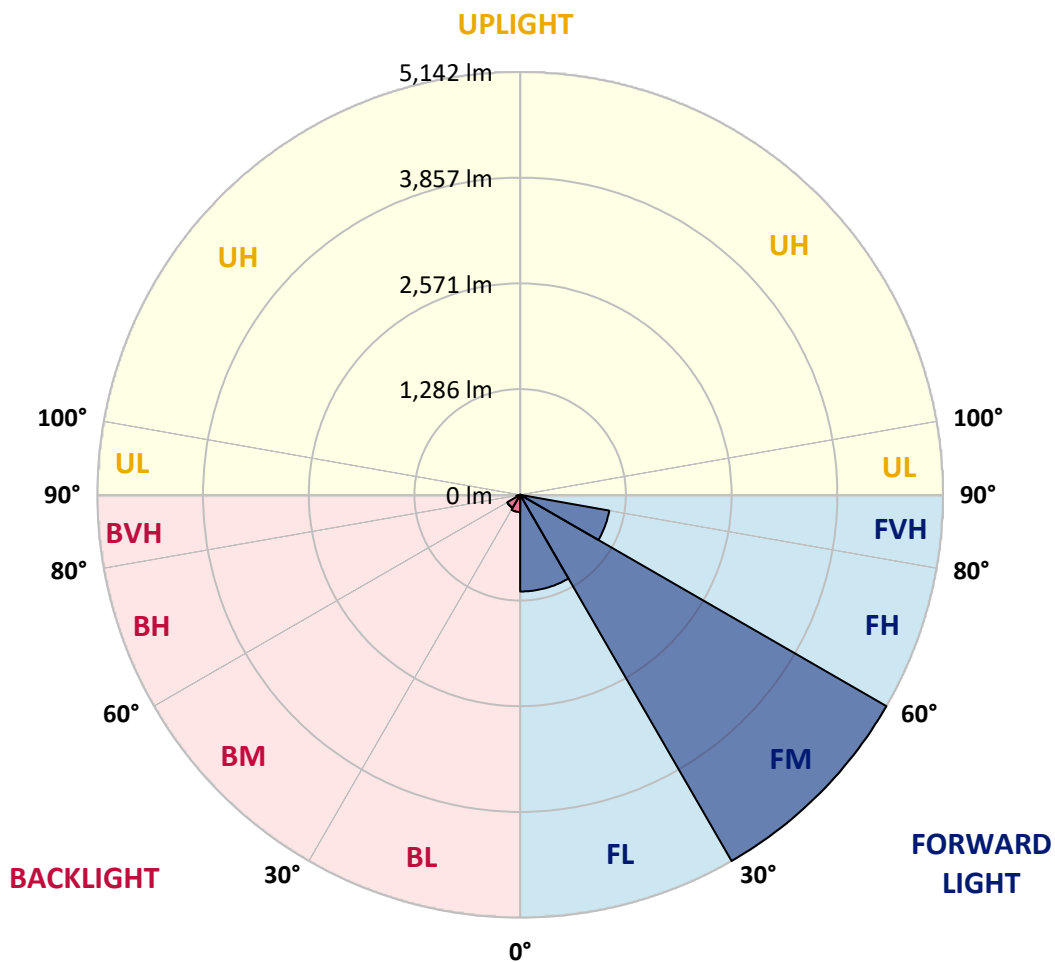
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1175.9 | 14.9 | | | |
| FM | (30°-60°) | 5142.4 | 65.3 | | | |
| FH | (60°-80°) | 1099.8 | 14.0 | | | G1/1800 |
| FVH | (80°-90°) | 11.5 | 0.1 | | | G1/100 |
| BL | (0°-30°) | 209.8 | 2.7 | B1/500 | | |
| BM | (30°-60°) | 182.4 | 2.3 | B0/220 | | |
| BH | (60°-80°) | 47.1 | 0.6 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 0.2 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 |
| 2.5° | 2621.0 | 2593.1 | 2584.8 | 2579.2 | 2553.6 | 2521.6 | 2477.9 | 2457.5 | 2415.7 | 2348.4 | 2265.7 |
| 5° | 2861.1 | 2856.0 | 2837.4 | 2827.2 | 2799.8 | 2754.3 | 2684.6 | 2651.2 | 2584.8 | 2471.4 | 2323.3 |
| 7.5° | 2756.1 | 2788.2 | 2813.7 | 2856.4 | 2910.3 | 2908.4 | 2849.9 | 2815.1 | 2740.8 | 2591.3 | 2387.4 |
| 10° | 2350.7 | 2376.7 | 2418.5 | 2515.6 | 2713.4 | 2888.0 | 2956.7 | 2931.6 | 2872.2 | 2701.3 | 2449.2 |
| 12.5° | 2271.3 | 2268.5 | 2275.9 | 2304.3 | 2407.8 | 2656.7 | 2938.6 | 2989.2 | 2977.2 | 2802.1 | 2507.7 |
| 15° | 2313.6 | 2310.3 | 2309.4 | 2319.1 | 2344.2 | 2449.2 | 2802.5 | 2947.9 | 3041.2 | 2895.4 | 2557.4 |
| 17.5° | 2432.0 | 2418.0 | 2410.6 | 2402.7 | 2395.3 | 2421.3 | 2639.1 | 2832.3 | 3051.0 | 2977.2 | 2598.7 |
| 20° | 2634.9 | 2611.7 | 2584.3 | 2539.7 | 2497.9 | 2484.9 | 2570.4 | 2713.4 | 3016.2 | 3039.4 | 2625.6 |
| 22.5° | 2889.9 | 2860.1 | 2812.8 | 2731.5 | 2646.5 | 2597.3 | 2604.3 | 2675.8 | 2964.2 | 3107.2 | 2638.2 |
| 25° | 3176.4 | 3138.3 | 3075.1 | 2962.3 | 2837.4 | 2750.1 | 2704.6 | 2729.6 | 2940.5 | 3186.6 | 2652.6 |
| 27.5° | 3483.3 | 3441.1 | 3358.4 | 3204.7 | 3063.1 | 2945.1 | 2852.2 | 2849.0 | 2980.9 | 3290.6 | 2675.8 |
| 30° | 3787.5 | 3781.0 | 3673.3 | 3510.7 | 3323.1 | 3179.6 | 3045.9 | 3028.7 | 3093.7 | 3434.6 | 2721.7 |
| 32.5° | 4193.4 | 4144.6 | 4012.7 | 3845.5 | 3629.1 | 3456.9 | 3298.5 | 3258.6 | 3266.9 | 3602.2 | 2792.8 |
| 35° | 4705.1 | 4651.7 | 4466.0 | 4235.2 | 3993.2 | 3789.8 | 3614.8 | 3560.4 | 3540.0 | 3876.7 | 2912.6 |
| 37.5° | 5035.8 | 5034.8 | 4918.3 | 4683.3 | 4423.7 | 4199.4 | 4009.0 | 3945.4 | 3904.1 | 4208.2 | 3098.4 |
| 40° | 5044.6 | 5066.4 | 5081.7 | 5079.4 | 4894.6 | 4687.9 | 4518.9 | 4440.4 | 4344.3 | 4651.3 | 3338.4 |
| 42.5° | 4773.8 | 4830.0 | 4965.2 | 5194.6 | 5304.2 | 5222.0 | 5079.4 | 5002.3 | 4859.3 | 5125.4 | 3631.0 |
| 45° | 4407.9 | 4446.9 | 4683.3 | 5105.9 | 5526.1 | 5751.4 | 5642.7 | 5504.8 | 5316.2 | 5620.0 | 3893.4 |
| 47.5° | 4244.0 | 4251.0 | 4403.7 | 4867.7 | 5542.9 | 6185.1 | 6251.0 | 6026.8 | 5731.4 | 6018.4 | 4098.6 |
| 50° | 3754.1 | 3766.6 | 3977.4 | 4454.8 | 5346.9 | 6389.9 | 6862.2 | 6649.5 | 6184.2 | 6325.3 | 4173.4 |
| 52.5° | 2829.5 | 2847.1 | 3114.6 | 3776.4 | 4808.2 | 6302.6 | 7299.6 | 7248.1 | 6680.1 | 6475.3 | 4177.6 |
| 55° | 1669.5 | 1692.7 | 1948.1 | 2542.0 | 3781.9 | 5747.2 | 7332.1 | 7521.6 | 7071.6 | 6564.0 | 4171.1 |
| 57.5° | 779.7 | 796.0 | 942.2 | 1309.6 | 2352.1 | 4542.1 | 6842.7 | 7334.0 | 7287.5 | 6610.9 | 4217.1 |
| 60° | 414.2 | 418.9 | 454.2 | 567.0 | 1063.0 | 2880.1 | 5887.4 | 6622.6 | 7090.7 | 6676.0 | 4273.2 |
| 62.5° | 316.7 | 318.1 | 316.2 | 329.7 | 446.7 | 1278.4 | 4450.2 | 5444.4 | 6298.0 | 6627.2 | 4211.0 |
| 65° | 274.4 | 276.8 | 263.8 | 260.5 | 286.5 | 456.0 | 2643.7 | 3880.8 | 4948.9 | 5969.2 | 3787.0 |
| 67.5° | 246.1 | 247.1 | 231.3 | 217.8 | 222.4 | 246.6 | 1043.0 | 2124.5 | 3275.8 | 4375.4 | 2745.0 |
| 70° | 226.6 | 225.7 | 208.5 | 187.1 | 181.1 | 168.6 | 331.6 | 778.8 | 1565.4 | 2218.8 | 1276.6 |
| 72.5° | 200.6 | 201.1 | 192.7 | 164.9 | 150.5 | 118.0 | 153.7 | 227.1 | 467.2 | 604.6 | 299.1 |
| 75° | 177.9 | 175.5 | 165.3 | 147.7 | 124.0 | 77.6 | 76.2 | 101.2 | 144.0 | 143.0 | 64.5 |
| 77.5° | 128.6 | 126.3 | 129.6 | 121.2 | 95.2 | 50.2 | 38.1 | 48.8 | 58.5 | 56.7 | 18.1 |
| 80° | 94.3 | 92.9 | 83.6 | 100.8 | 84.1 | 34.4 | 23.7 | 26.0 | 30.2 | 25.5 | 5.6 |
| 82.5° | 64.5 | 64.1 | 59.0 | 55.7 | 47.8 | 20.9 | 14.9 | 16.3 | 19.5 | 14.4 | 2.8 |
| 85° | 10.2 | 11.6 | 42.7 | 33.9 | 28.3 | 9.3 | 10.2 | 11.1 | 13.0 | 7.9 | 0.9 |
| 87.5° | 0.0 | 0.0 | 20.0 | 17.6 | 5.6 | 3.7 | 6.0 | 6.5 | 6.5 | 4.2 | 0.0 |
| 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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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 | 2215.1 |
| 2.5° | 2223.5 | 2177.0 | 2091.1 | 2002.4 | 1920.2 | 1822.2 | 1754.9 | 1704.3 | 1645.8 | 1630.0 | 1664.3 |
| 5° | 2238.8 | 2151.0 | 1966.2 | 1765.1 | 1576.1 | 1366.7 | 1206.5 | 1079.7 | 965.0 | 926.0 | 961.3 |
| 7.5° | 2262.9 | 2132.4 | 1831.1 | 1500.0 | 1171.2 | 844.2 | 620.4 | 473.2 | 379.4 | 351.5 | 366.4 |
| 10° | 2287.1 | 2105.5 | 1674.6 | 1186.0 | 736.5 | 411.0 | 267.5 | 213.6 | 193.6 | 189.5 | 191.8 |
| 12.5° | 2307.1 | 2069.3 | 1483.7 | 843.3 | 393.8 | 220.1 | 175.1 | 166.2 | 163.5 | 163.5 | 164.4 |
| 15° | 2319.1 | 2014.5 | 1257.5 | 536.4 | 226.6 | 166.2 | 152.8 | 150.0 | 150.0 | 150.5 | 151.4 |
| 17.5° | 2317.7 | 1944.8 | 1010.0 | 324.6 | 169.5 | 147.2 | 139.3 | 137.0 | 136.5 | 137.5 | 137.9 |
| 20° | 2300.5 | 1853.8 | 761.6 | 214.1 | 147.7 | 134.2 | 126.3 | 122.1 | 121.7 | 122.6 | 123.5 |
| 22.5° | 2268.0 | 1741.4 | 544.7 | 164.9 | 133.3 | 121.7 | 111.9 | 108.2 | 108.2 | 109.1 | 110.1 |
| 25° | 2228.6 | 1604.0 | 372.4 | 139.8 | 120.3 | 108.2 | 98.9 | 95.7 | 96.6 | 98.9 | 99.4 |
| 27.5° | 2179.3 | 1449.3 | 253.1 | 119.8 | 104.5 | 94.7 | 87.8 | 85.4 | 87.8 | 91.0 | 91.9 |
| 30° | 2137.1 | 1288.2 | 180.6 | 103.6 | 88.7 | 81.7 | 77.6 | 77.6 | 80.8 | 86.8 | 88.2 |
| 32.5° | 2104.6 | 1132.2 | 139.3 | 91.5 | 77.1 | 71.1 | 68.7 | 71.1 | 76.2 | 82.2 | 83.6 |
| 35° | 2100.4 | 1003.5 | 118.0 | 81.7 | 68.7 | 62.7 | 61.8 | 65.9 | 71.1 | 75.7 | 76.6 |
| 37.5° | 2132.4 | 884.6 | 106.3 | 73.8 | 61.3 | 55.7 | 54.8 | 59.9 | 65.0 | 70.6 | 72.0 |
| 40° | 2193.3 | 791.3 | 98.0 | 66.4 | 55.3 | 49.2 | 47.4 | 51.1 | 58.0 | 65.5 | 67.3 |
| 42.5° | 2272.2 | 714.2 | 88.7 | 59.0 | 49.2 | 40.9 | 38.5 | 42.7 | 50.2 | 58.0 | 60.4 |
| 45° | 2347.5 | 647.8 | 78.5 | 50.6 | 41.3 | 31.6 | 30.6 | 36.2 | 39.9 | 47.8 | 49.7 |
| 47.5° | 2388.8 | 589.3 | 69.7 | 41.3 | 32.0 | 25.5 | 25.5 | 26.9 | 30.6 | 39.9 | 41.8 |
| 50° | 2374.9 | 542.4 | 60.4 | 30.6 | 22.3 | 19.5 | 19.5 | 19.0 | 24.6 | 32.0 | 33.4 |
| 52.5° | 2347.0 | 515.5 | 52.0 | 23.7 | 15.3 | 13.9 | 12.5 | 13.9 | 17.2 | 20.4 | 20.9 |
| 55° | 2342.8 | 510.8 | 43.7 | 19.0 | 10.7 | 9.3 | 7.0 | 7.0 | 7.0 | 6.5 | 5.6 |
| 57.5° | 2375.3 | 518.3 | 36.7 | 15.3 | 7.9 | 6.0 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60° | 2408.8 | 526.1 | 31.6 | 10.7 | 5.6 | 3.3 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62.5° | 2353.0 | 508.5 | 26.5 | 6.5 | 4.2 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 2067.0 | 432.8 | 20.9 | 4.6 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 1470.2 | 289.8 | 13.9 | 2.8 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 671.0 | 121.2 | 8.8 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 143.5 | 37.6 | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 29.3 | 27.4 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 9.3 | 43.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 5.6 | 31.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.9 | 4.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)