

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: P299908

Luminaire Tested: **GLNA-AF-06-LED-E1-5WQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299908
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-06-LED-E1-5WQ-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(6) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30189.4 lumens
Efficiency: N/A
Efficacy: 121.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 249
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

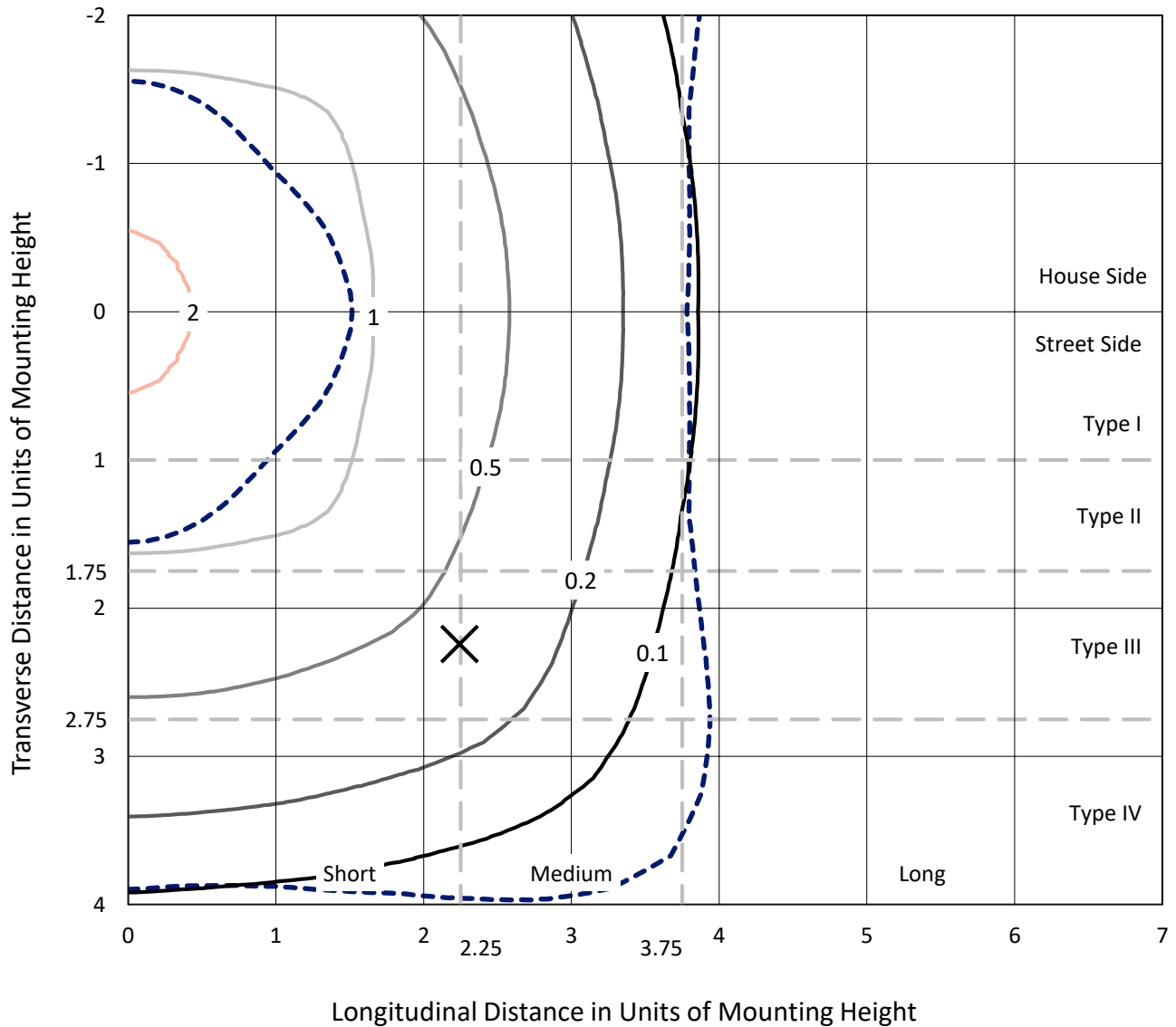


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

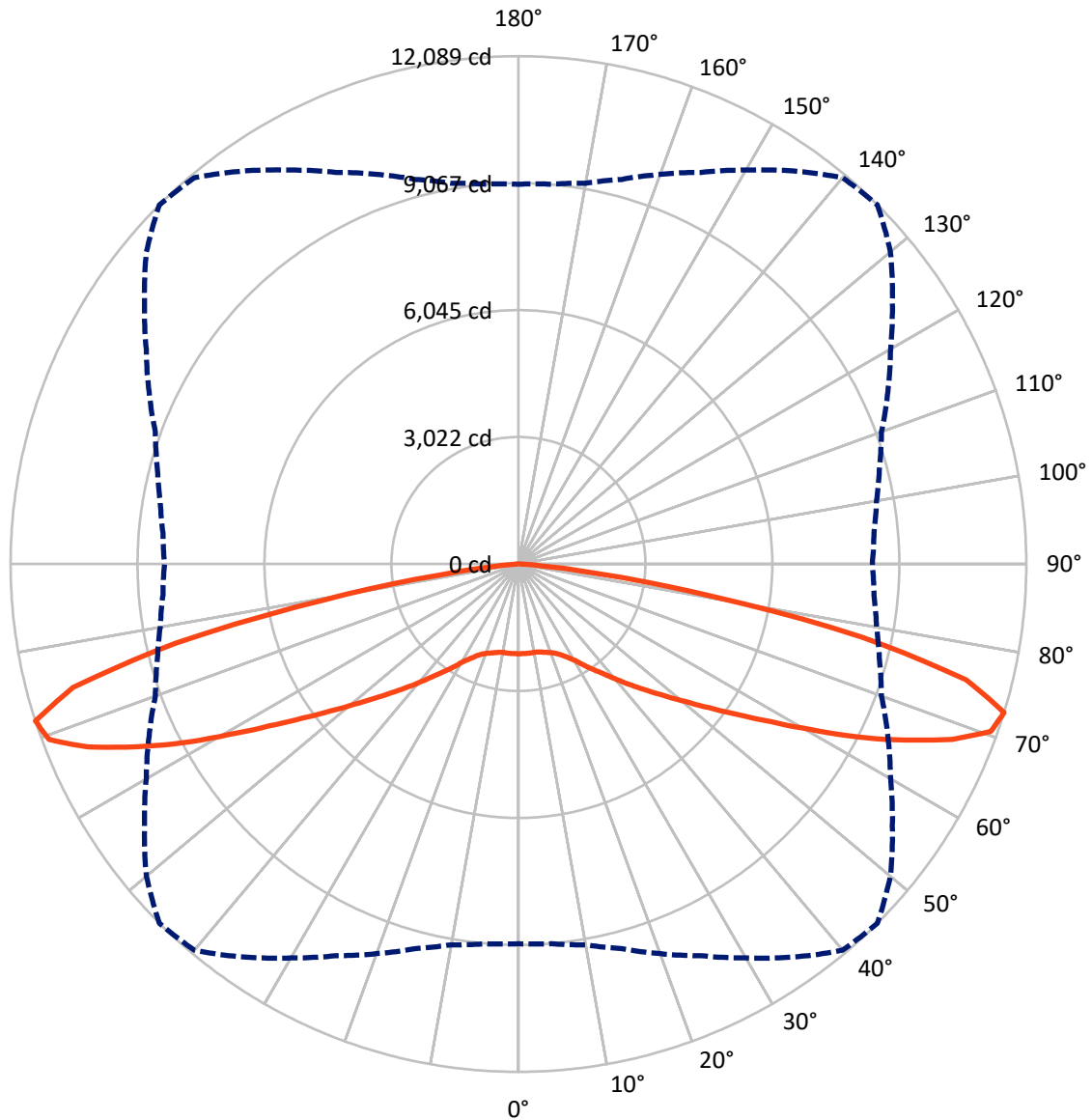


Based on 30 foot mounting height. Maximum calculated value = 2.4 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P299908

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 15094.7 | 0.0 | 15094.7 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 15094.7 | 0.0 | 15094.7 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 30189.4 | 0.0 | 30189.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 204.1 | 0.7 |
| 10°-20° | 620.0 | 2.1 |
| 20°-30° | 1133.0 | 3.8 |
| 30°-40° | 1953.5 | 6.5 |
| 40°-50° | 3339.5 | 11.1 |
| 50°-60° | 5412.9 | 17.9 |
| 60°-70° | 8979.7 | 29.7 |
| 70°-80° | 7909.0 | 26.2 |
| 80°-90° | 637.7 | 2.1 |
| 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° | 30189.4 | 100.0 |
| 0°-180° | 30189.4 | 100.0 |



REPORT NUMBER: P299908

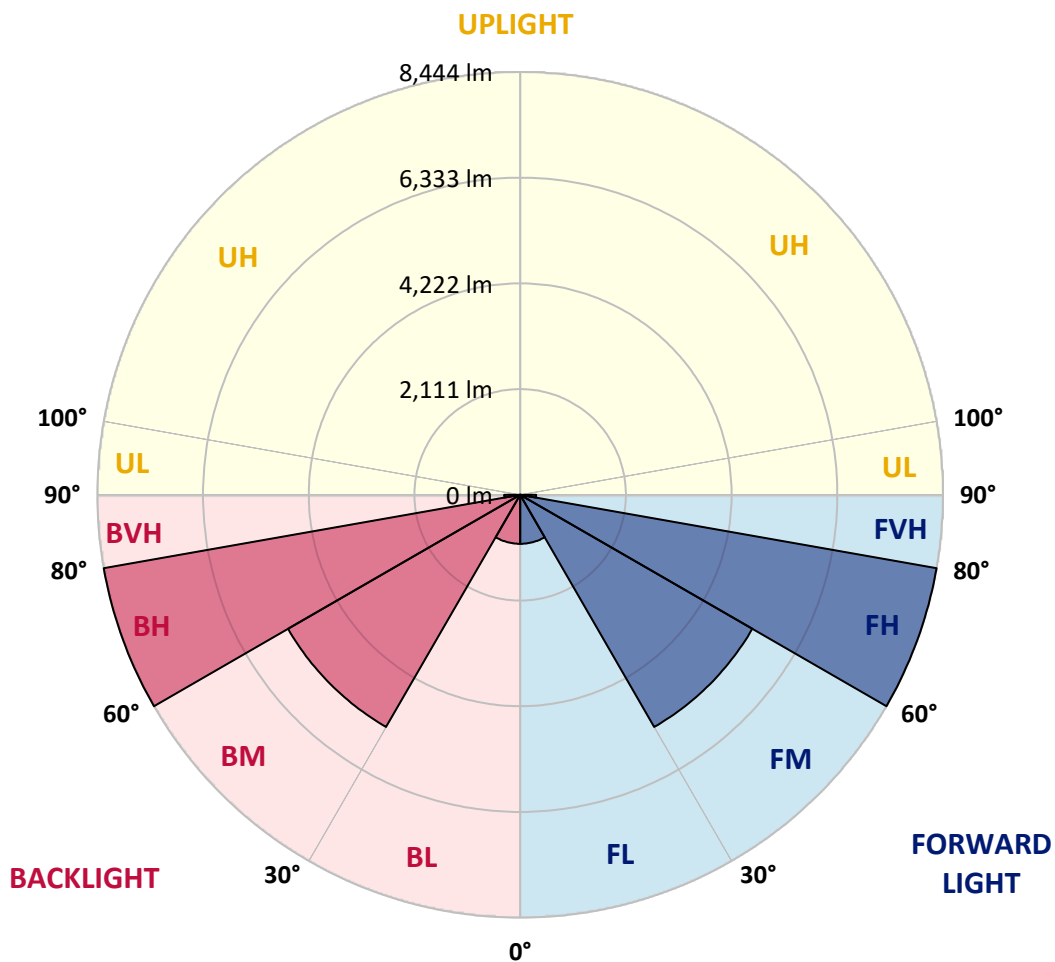
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 978.6 | 3.2 | | | |
| FM | (30°-60°) | 5352.9 | 17.7 | | | |
| FH | (60°-80°) | 8444.4 | 28.0 | | | G4/12000 |
| FVH | (80°-90°) | 318.8 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 978.6 | 3.2 | B2/1000 | | |
| BM | (30°-60°) | 5352.9 | 17.7 | B4/8500 | | |
| BH | (60°-80°) | 8444.4 | 28.0 | B5 | | G4/12000 |
| BVH | (80°-90°) | 318.8 | 1.1 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G4

Type V Short





REPORT NUMBER: P299908

CATALOG NUMBER: GLNA-AF-06-LED-E1-5WQ-800

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 |
| 2.5° | 2137.9 | 2139.3 | 2140.7 | 2139.3 | 2139.3 | 2137.9 | 2136.5 | 2137.9 | 2136.5 | 2133.7 | 2135.1 |
| 5° | 2144.8 | 2147.6 | 2147.6 | 2144.8 | 2146.2 | 2144.8 | 2142.0 | 2143.4 | 2140.7 | 2136.5 | 2136.5 |
| 7.5° | 2153.1 | 2154.5 | 2154.5 | 2151.7 | 2153.1 | 2150.3 | 2147.6 | 2146.2 | 2143.4 | 2137.9 | 2133.7 |
| 10° | 2165.6 | 2167.0 | 2165.6 | 2162.8 | 2162.8 | 2158.7 | 2151.7 | 2149.0 | 2143.4 | 2135.1 | 2131.0 |
| 12.5° | 2179.4 | 2180.8 | 2179.4 | 2176.7 | 2175.3 | 2168.3 | 2162.8 | 2158.7 | 2154.5 | 2147.6 | 2140.7 |
| 15° | 2198.8 | 2201.6 | 2198.8 | 2193.3 | 2189.1 | 2183.6 | 2180.8 | 2182.2 | 2183.6 | 2178.0 | 2171.1 |
| 17.5° | 2234.8 | 2236.2 | 2232.0 | 2219.6 | 2214.0 | 2208.5 | 2208.5 | 2211.3 | 2215.4 | 2212.7 | 2205.7 |
| 20° | 2301.3 | 2297.1 | 2287.4 | 2272.2 | 2265.3 | 2255.6 | 2254.2 | 2255.6 | 2255.6 | 2254.2 | 2248.7 |
| 22.5° | 2384.3 | 2381.6 | 2369.1 | 2349.7 | 2340.0 | 2334.5 | 2326.2 | 2319.3 | 2317.9 | 2313.7 | 2308.2 |
| 25° | 2484.0 | 2482.7 | 2467.4 | 2450.8 | 2443.9 | 2437.0 | 2430.0 | 2420.3 | 2412.0 | 2402.3 | 2396.8 |
| 27.5° | 2611.4 | 2605.9 | 2583.7 | 2575.4 | 2565.7 | 2561.6 | 2551.9 | 2540.8 | 2533.9 | 2521.4 | 2514.5 |
| 30° | 2751.3 | 2751.3 | 2733.3 | 2730.5 | 2730.5 | 2720.8 | 2709.7 | 2690.4 | 2677.9 | 2665.4 | 2661.3 |
| 32.5° | 2891.1 | 2892.5 | 2874.5 | 2880.0 | 2884.2 | 2891.1 | 2893.9 | 2887.0 | 2878.7 | 2877.3 | 2869.0 |
| 35° | 3093.3 | 3087.7 | 3069.7 | 3073.9 | 3072.5 | 3071.1 | 3071.1 | 3086.4 | 3089.1 | 3091.9 | 3075.3 |
| 37.5° | 3343.9 | 3343.9 | 3325.9 | 3325.9 | 3317.6 | 3309.3 | 3298.2 | 3307.9 | 3323.1 | 3327.3 | 3316.2 |
| 40° | 3630.5 | 3640.2 | 3618.1 | 3616.7 | 3619.4 | 3593.1 | 3580.7 | 3595.9 | 3605.6 | 3622.2 | 3609.8 |
| 42.5° | 3968.4 | 3961.4 | 3939.3 | 3936.5 | 3921.3 | 3913.0 | 3901.9 | 3914.4 | 3929.6 | 3940.7 | 3944.8 |
| 45° | 4292.4 | 4286.8 | 4261.9 | 4261.9 | 4246.7 | 4239.8 | 4245.3 | 4266.1 | 4273.0 | 4288.2 | 4303.5 |
| 47.5° | 4612.2 | 4605.3 | 4588.7 | 4595.6 | 4597.0 | 4609.5 | 4627.5 | 4646.8 | 4666.2 | 4687.0 | 4693.9 |
| 50° | 4939.0 | 4940.4 | 4922.4 | 4939.0 | 4959.8 | 4994.4 | 5042.9 | 5074.7 | 5114.9 | 5141.2 | 5149.5 |
| 52.5° | 5236.7 | 5242.2 | 5261.6 | 5300.4 | 5341.9 | 5409.8 | 5492.9 | 5570.4 | 5636.9 | 5681.2 | 5678.4 |
| 55° | 5593.9 | 5602.2 | 5649.3 | 5715.8 | 5783.6 | 5886.1 | 6009.3 | 6146.4 | 6257.2 | 6320.9 | 6280.7 |
| 57.5° | 6050.9 | 6068.9 | 6121.5 | 6211.5 | 6312.6 | 6445.5 | 6614.4 | 6820.7 | 6992.4 | 7078.3 | 7013.2 |
| 60° | 6678.1 | 6689.2 | 6752.9 | 6852.6 | 6974.4 | 7139.2 | 7364.9 | 7641.8 | 7884.1 | 7997.7 | 7922.9 |
| 62.5° | 7504.7 | 7525.5 | 7576.7 | 7677.8 | 7802.4 | 7989.4 | 8264.9 | 8611.1 | 8912.9 | 9070.8 | 8901.8 |
| 65° | 8492.0 | 8558.4 | 8601.4 | 8703.8 | 8820.1 | 9018.1 | 9306.2 | 9677.2 | 10001.2 | 10105.1 | 9909.9 |
| 67.5° | 9469.5 | 9527.7 | 9602.5 | 9720.2 | 9837.9 | 10060.8 | 10328.0 | 10688.0 | 11043.9 | 11138.0 | 10834.8 |
| 70° | 9897.4 | 9930.6 | 10046.9 | 10207.6 | 10433.2 | 10696.3 | 11005.1 | 11409.4 | 11849.7 | 11927.3 | 11542.3 |
| 72.5° | 9040.3 | 9073.5 | 9203.7 | 9476.5 | 9869.7 | 10287.9 | 10826.5 | 11420.5 | 12002.0 | 12089.3 | 11559.0 |
| 75° | 6837.3 | 6783.3 | 6975.8 | 7337.2 | 7867.5 | 8450.4 | 9203.7 | 10055.2 | 10895.7 | 11005.1 | 10372.3 |
| 77.5° | 3533.6 | 3526.7 | 3672.1 | 4120.7 | 4753.5 | 5416.7 | 6246.1 | 7208.4 | 8030.9 | 8363.2 | 7848.1 |
| 80° | 995.6 | 1006.6 | 1075.9 | 1298.8 | 1668.5 | 2147.6 | 2795.6 | 3697.0 | 4369.9 | 4713.3 | 4425.3 |
| 82.5° | 390.5 | 420.9 | 447.2 | 488.8 | 537.2 | 607.9 | 811.4 | 1207.4 | 1620.0 | 1935.7 | 1585.4 |
| 85° | 139.8 | 149.5 | 211.8 | 250.6 | 254.8 | 268.6 | 306.0 | 357.2 | 430.6 | 513.7 | 422.3 |
| 87.5° | 52.6 | 58.2 | 67.8 | 112.2 | 110.8 | 101.1 | 123.2 | 128.8 | 96.9 | 88.6 | 109.4 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|---------|---------|---------|--------|--------|--------|--------|
| 0° | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 | 2137.9 |
| 2.5° | 2132.3 | 2133.7 | 2133.7 | 2135.1 | 2136.5 | 2136.5 | 2139.3 | 2139.3 |
| 5° | 2133.7 | 2133.7 | 2131.0 | 2132.3 | 2131.0 | 2131.0 | 2132.3 | 2132.3 |
| 7.5° | 2131.0 | 2129.6 | 2126.8 | 2125.4 | 2122.7 | 2122.7 | 2122.7 | 2122.7 |
| 10° | 2126.8 | 2125.4 | 2122.7 | 2121.3 | 2119.9 | 2119.9 | 2119.9 | 2119.9 |
| 12.5° | 2137.9 | 2133.7 | 2131.0 | 2129.6 | 2129.6 | 2129.6 | 2129.6 | 2129.6 |
| 15° | 2167.0 | 2157.3 | 2150.3 | 2150.3 | 2151.7 | 2154.5 | 2154.5 | 2157.3 |
| 17.5° | 2203.0 | 2191.9 | 2185.0 | 2179.4 | 2182.2 | 2186.3 | 2189.1 | 2191.9 |
| 20° | 2245.9 | 2240.3 | 2230.7 | 2225.1 | 2225.1 | 2230.7 | 2233.4 | 2234.8 |
| 22.5° | 2305.4 | 2301.3 | 2297.1 | 2290.2 | 2290.2 | 2293.0 | 2298.5 | 2298.5 |
| 25° | 2394.0 | 2391.3 | 2388.5 | 2383.0 | 2381.6 | 2381.6 | 2384.3 | 2387.1 |
| 27.5° | 2504.8 | 2506.2 | 2503.4 | 2502.0 | 2497.9 | 2496.5 | 2500.7 | 2499.3 |
| 30° | 2653.0 | 2659.9 | 2666.8 | 2661.3 | 2654.4 | 2650.2 | 2646.0 | 2640.5 |
| 32.5° | 2853.7 | 2845.4 | 2839.9 | 2830.2 | 2817.7 | 2806.7 | 2798.4 | 2788.7 |
| 35° | 3043.4 | 3029.6 | 3024.0 | 3032.4 | 3031.0 | 3024.0 | 3014.4 | 3006.0 |
| 37.5° | 3276.1 | 3273.3 | 3276.1 | 3291.3 | 3288.5 | 3295.4 | 3276.1 | 3274.7 |
| 40° | 3569.6 | 3572.4 | 3591.8 | 3609.8 | 3619.4 | 3629.1 | 3618.1 | 3607.0 |
| 42.5° | 3910.2 | 3908.8 | 3915.8 | 3940.7 | 3957.3 | 3968.4 | 3944.8 | 3942.1 |
| 45° | 4270.2 | 4260.5 | 4266.1 | 4286.8 | 4303.5 | 4315.9 | 4289.6 | 4289.6 |
| 47.5° | 4666.2 | 4649.6 | 4631.6 | 4655.2 | 4664.8 | 4673.2 | 4652.4 | 4645.5 |
| 50° | 5107.9 | 5073.3 | 5034.5 | 5044.2 | 5044.2 | 5041.5 | 5015.2 | 5013.8 |
| 52.5° | 5614.7 | 5551.0 | 5480.4 | 5454.1 | 5438.9 | 5422.2 | 5376.5 | 5354.4 |
| 55° | 6197.6 | 6102.1 | 5991.3 | 5923.5 | 5887.5 | 5841.8 | 5765.6 | 5744.9 |
| 57.5° | 6878.9 | 6729.3 | 6538.3 | 6455.2 | 6374.9 | 6300.1 | 6215.6 | 6192.1 |
| 60° | 7686.1 | 7466.0 | 7212.6 | 7058.9 | 6971.7 | 6899.7 | 6812.4 | 6808.3 |
| 62.5° | 8586.1 | 8238.6 | 7952.0 | 7813.5 | 7749.8 | 7686.1 | 7603.0 | 7614.1 |
| 65° | 9501.4 | 9138.6 | 8870.0 | 8757.8 | 8698.3 | 8645.7 | 8562.6 | 8575.1 |
| 67.5° | 10404.2 | 10070.5 | 9775.5 | 9660.6 | 9594.2 | 9527.7 | 9452.9 | 9465.4 |
| 70° | 11052.2 | 10638.2 | 10305.9 | 10051.1 | 9891.9 | 9711.9 | 9595.5 | 9566.5 |
| 72.5° | 10866.6 | 10228.3 | 9700.8 | 9195.4 | 8899.1 | 8658.1 | 8494.8 | 8424.1 |
| 75° | 9404.5 | 8532.1 | 7853.7 | 7233.3 | 6884.4 | 6600.6 | 6394.3 | 6265.5 |
| 77.5° | 6984.1 | 6003.8 | 5202.1 | 4487.6 | 3922.7 | 3543.3 | 3276.1 | 3103.0 |
| 80° | 3823.0 | 2907.7 | 2125.4 | 1494.0 | 1098.0 | 912.5 | 805.9 | 754.6 |
| 82.5° | 1190.8 | 768.5 | 566.3 | 488.8 | 454.2 | 434.8 | 402.9 | 351.7 |
| 85° | 379.4 | 332.3 | 308.8 | 294.9 | 281.1 | 245.1 | 168.9 | 153.7 |
| 87.5° | 146.8 | 150.9 | 149.5 | 141.2 | 144.0 | 103.8 | 83.1 | 73.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)