

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: P300678

Luminaire Tested: **GLNA-AF-04-LED-E1-AFL-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300678
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-04-LED-E1-AFL-7027-800-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Automotive Frontline WITH HOUSESIDE SHIELD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12534.2 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 171
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

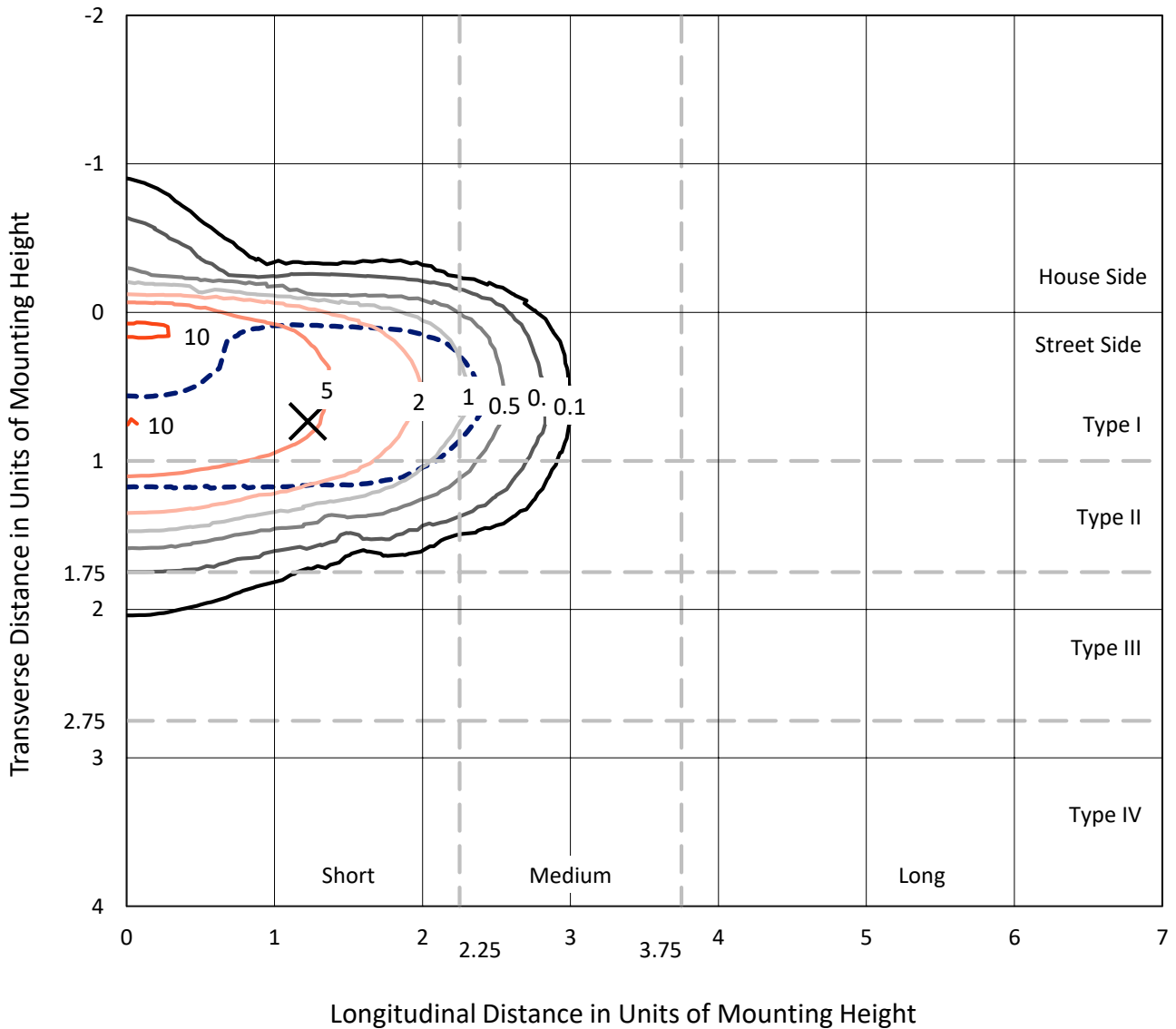


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

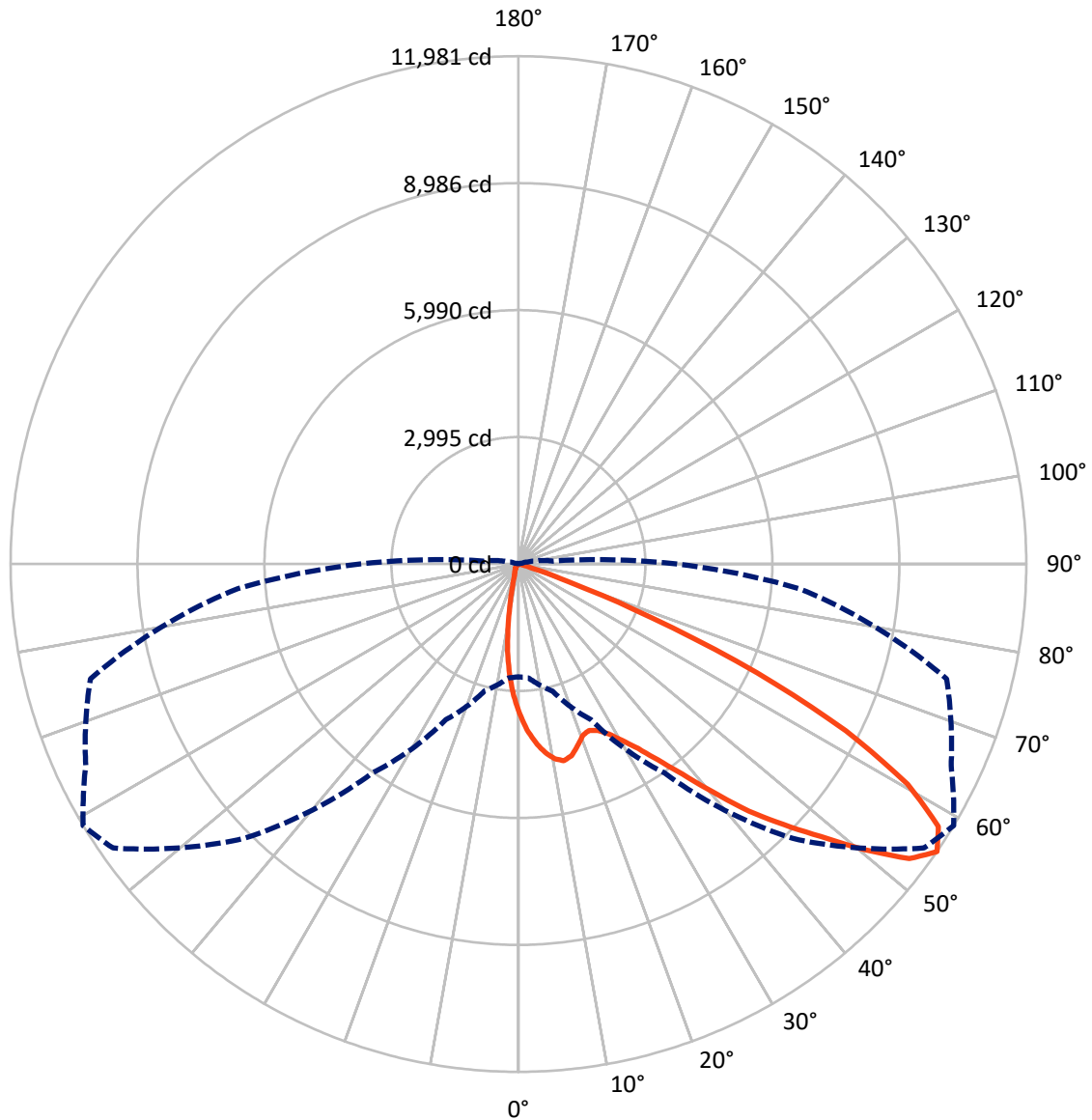


Based on 20 foot mounting height. Maximum calculated value = 11 fc
 Type II - Short - Full Cutoff

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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 | 700.1 | 0.0 | 700.1 |
| | % Fixture | 5.6 | 0.0 | 5.6 |
| Street Side | Lumens | 11834.1 | 0.0 | 11834.1 |
| | % Fixture | 94.4 | 0.0 | 94.4 |
| Total | Lumens | 12534.2 | 0.0 | 12534.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 295.5 | 2.4 |
| 10°-20° | 707.6 | 5.6 |
| 20°-30° | 1204.0 | 9.6 |
| 30°-40° | 2070.7 | 16.5 |
| 40°-50° | 3196.9 | 25.5 |
| 50°-60° | 3213.9 | 25.6 |
| 60°-70° | 1648.1 | 13.1 |
| 70°-80° | 178.6 | 1.4 |
| 80°-90° | 18.7 | 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° | 12534.2 | 100.0 |
| 0°-180° | 12534.2 | 100.0 |

Coefficient of Utilization



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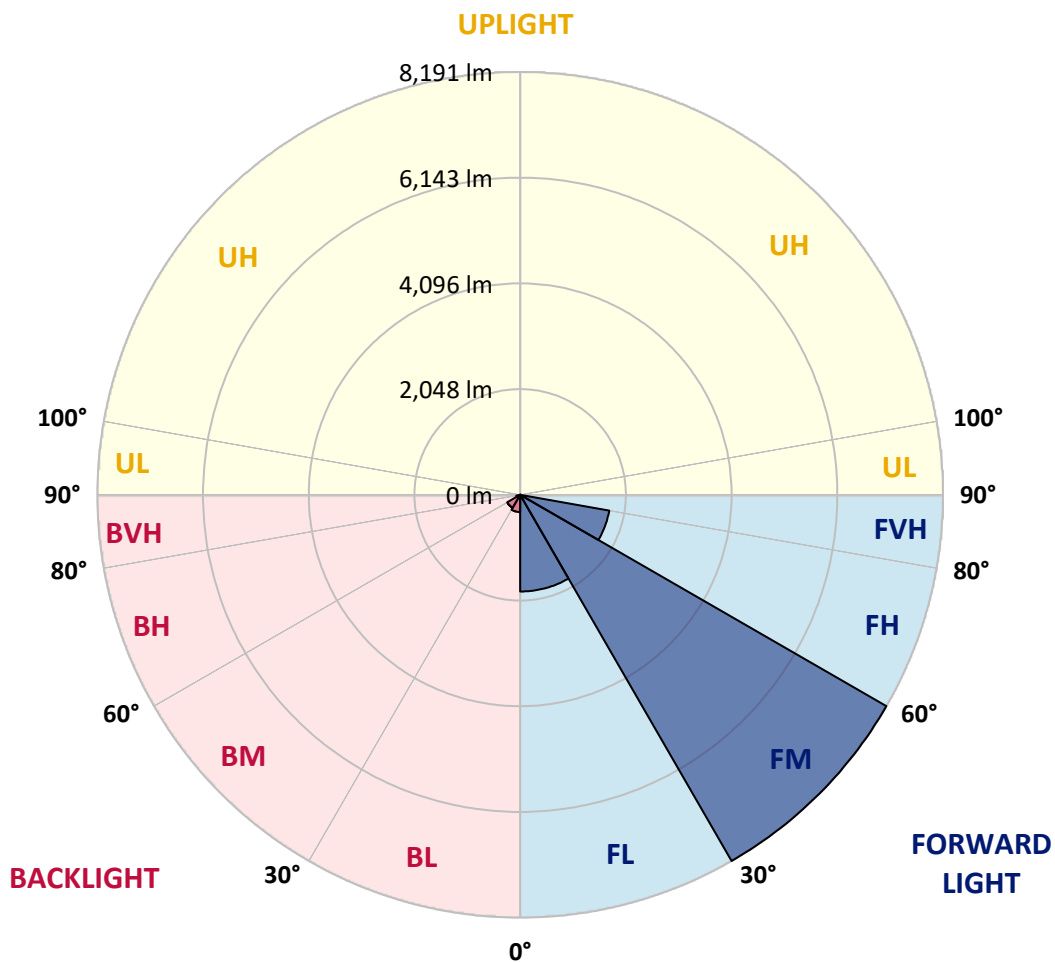
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1873.0 | 14.9 | | | |
| FM (30°-60°) | 8191.0 | 65.3 | | | |
| FH (60°-80°) | 1751.7 | 14.0 | | | G1/1800 |
| FVH (80°-90°) | 18.3 | 0.1 | | | G1/100 |
| BL (0°-30°) | 334.2 | 2.7 | B1/500 | | |
| BM (30°-60°) | 290.6 | 2.3 | B1/1000 | | |
| BH (60°-80°) | 75.0 | 0.6 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.4 | 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° | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 |
| 2.5° | 4174.8 | 4130.4 | 4117.1 | 4108.2 | 4067.6 | 4016.5 | 3947.0 | 3914.4 | 3847.9 | 3740.6 | 3608.9 |
| 5° | 4557.2 | 4549.1 | 4519.5 | 4503.2 | 4459.6 | 4387.1 | 4276.1 | 4222.9 | 4117.1 | 3936.6 | 3700.7 |
| 7.5° | 4390.1 | 4441.1 | 4481.8 | 4549.8 | 4635.6 | 4632.7 | 4539.5 | 4484.0 | 4365.6 | 4127.5 | 3802.7 |
| 10° | 3744.3 | 3785.7 | 3852.3 | 4006.9 | 4322.0 | 4600.1 | 4709.6 | 4669.7 | 4575.0 | 4302.8 | 3901.1 |
| 12.5° | 3617.8 | 3613.4 | 3625.2 | 3670.3 | 3835.3 | 4231.8 | 4680.8 | 4761.4 | 4742.1 | 4463.3 | 3994.3 |
| 15° | 3685.1 | 3680.0 | 3678.5 | 3694.0 | 3734.0 | 3901.1 | 4464.0 | 4695.5 | 4844.2 | 4612.0 | 4073.5 |
| 17.5° | 3873.8 | 3851.6 | 3839.7 | 3827.2 | 3815.3 | 3856.7 | 4203.7 | 4511.4 | 4859.8 | 4742.1 | 4139.3 |
| 20° | 4197.0 | 4160.0 | 4116.4 | 4045.4 | 3978.8 | 3958.1 | 4094.2 | 4322.0 | 4804.3 | 4841.3 | 4182.2 |
| 22.5° | 4603.1 | 4555.7 | 4480.3 | 4350.9 | 4215.5 | 4137.1 | 4148.2 | 4262.1 | 4721.4 | 4949.3 | 4202.2 |
| 25° | 5059.5 | 4998.8 | 4898.2 | 4718.5 | 4519.5 | 4380.4 | 4307.9 | 4347.9 | 4683.7 | 5075.7 | 4225.1 |
| 27.5° | 5548.4 | 5481.1 | 5349.4 | 5104.6 | 4879.0 | 4691.1 | 4543.2 | 4538.0 | 4748.1 | 5241.4 | 4262.1 |
| 30° | 6032.9 | 6022.5 | 5850.9 | 5592.0 | 5293.2 | 5064.7 | 4851.6 | 4824.3 | 4927.8 | 5470.7 | 4335.3 |
| 32.5° | 6679.4 | 6601.7 | 6391.7 | 6125.4 | 5780.7 | 5506.2 | 5254.0 | 5190.4 | 5203.7 | 5737.8 | 4448.5 |
| 35° | 7494.5 | 7409.5 | 7113.6 | 6746.0 | 6360.6 | 6036.6 | 5757.7 | 5671.2 | 5638.7 | 6174.9 | 4639.3 |
| 37.5° | 8021.2 | 8019.7 | 7834.0 | 7459.8 | 7046.3 | 6689.0 | 6385.7 | 6284.4 | 6218.6 | 6703.1 | 4935.2 |
| 40° | 8035.2 | 8070.0 | 8094.4 | 8090.7 | 7796.3 | 7467.2 | 7197.9 | 7072.9 | 6919.8 | 7408.7 | 5317.6 |
| 42.5° | 7604.0 | 7693.5 | 7908.8 | 8274.2 | 8448.7 | 8317.8 | 8090.7 | 7967.9 | 7740.1 | 8163.9 | 5783.6 |
| 45° | 7021.1 | 7083.3 | 7459.8 | 8132.9 | 8802.3 | 9161.0 | 8988.0 | 8768.3 | 8468.0 | 8951.7 | 6201.6 |
| 47.5° | 6760.0 | 6771.1 | 7014.5 | 7753.4 | 8828.9 | 9851.9 | 9957.0 | 9599.7 | 9129.2 | 9586.4 | 6528.5 |
| 50° | 5979.6 | 5999.6 | 6335.4 | 7095.8 | 8516.8 | 10178.1 | 10930.4 | 10591.6 | 9850.4 | 10075.3 | 6647.6 |
| 52.5° | 4506.9 | 4535.0 | 4961.1 | 6015.2 | 7658.7 | 10039.1 | 11627.2 | 11545.1 | 10640.4 | 10314.2 | 6654.2 |
| 55° | 2659.2 | 2696.2 | 3103.0 | 4049.1 | 6024.0 | 9154.4 | 11679.0 | 11980.7 | 11264.0 | 10455.5 | 6643.9 |
| 57.5° | 1241.9 | 1267.8 | 1500.8 | 2085.9 | 3746.5 | 7234.9 | 10899.3 | 11681.9 | 11607.9 | 10530.2 | 6717.1 |
| 60° | 659.8 | 667.2 | 723.4 | 903.2 | 1693.1 | 4587.6 | 9377.8 | 10548.7 | 11294.3 | 10633.8 | 6806.6 |
| 62.5° | 504.5 | 506.7 | 503.7 | 525.2 | 711.6 | 2036.4 | 7088.4 | 8672.1 | 10031.7 | 10556.1 | 6707.5 |
| 65° | 437.2 | 440.9 | 420.1 | 415.0 | 456.4 | 726.4 | 4211.1 | 6181.6 | 7882.9 | 9508.0 | 6032.2 |
| 67.5° | 392.0 | 393.5 | 368.4 | 346.9 | 354.3 | 392.8 | 1661.3 | 3384.1 | 5217.8 | 6969.4 | 4372.3 |
| 70° | 361.0 | 359.5 | 332.1 | 298.1 | 288.5 | 268.5 | 528.1 | 1240.5 | 2493.5 | 3534.2 | 2033.4 |
| 72.5° | 319.5 | 320.3 | 307.0 | 262.6 | 239.7 | 187.9 | 244.8 | 361.7 | 744.1 | 963.1 | 476.4 |
| 75° | 283.3 | 279.6 | 263.3 | 235.2 | 197.5 | 123.5 | 121.3 | 161.3 | 229.3 | 227.8 | 102.8 |
| 77.5° | 204.9 | 201.2 | 206.4 | 193.1 | 151.6 | 79.9 | 60.7 | 77.7 | 93.2 | 90.2 | 28.8 |
| 80° | 150.2 | 147.9 | 133.1 | 160.5 | 133.9 | 54.7 | 37.7 | 41.4 | 48.1 | 40.7 | 8.9 |
| 82.5° | 102.8 | 102.1 | 93.9 | 88.8 | 76.2 | 33.3 | 23.7 | 25.9 | 31.1 | 22.9 | 4.4 |
| 85° | 16.3 | 18.5 | 68.1 | 54.0 | 45.1 | 14.8 | 16.3 | 17.8 | 20.7 | 12.6 | 1.5 |
| 87.5° | 0.0 | 0.0 | 31.8 | 28.1 | 8.9 | 5.9 | 9.6 | 10.4 | 10.4 | 6.7 | 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° | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 | 3528.3 |
| 2.5° | 3541.6 | 3467.7 | 3330.8 | 3189.5 | 3058.6 | 2902.5 | 2795.3 | 2714.7 | 2621.5 | 2596.3 | 2651.0 |
| 5° | 3566.0 | 3426.2 | 3131.8 | 2811.6 | 2510.5 | 2176.9 | 1921.7 | 1719.8 | 1537.1 | 1474.9 | 1531.2 |
| 7.5° | 3604.5 | 3396.7 | 2916.6 | 2389.2 | 1865.5 | 1344.8 | 988.2 | 753.7 | 604.3 | 559.9 | 583.6 |
| 10° | 3643.0 | 3353.8 | 2667.3 | 1889.2 | 1173.1 | 654.6 | 426.1 | 340.3 | 308.5 | 301.8 | 305.5 |
| 12.5° | 3674.8 | 3296.1 | 2363.3 | 1343.3 | 627.3 | 350.6 | 278.9 | 264.8 | 260.4 | 260.4 | 261.8 |
| 15° | 3694.0 | 3208.8 | 2003.1 | 854.3 | 361.0 | 264.8 | 243.4 | 238.9 | 238.9 | 239.7 | 241.1 |
| 17.5° | 3691.8 | 3097.8 | 1608.8 | 517.0 | 270.0 | 234.5 | 221.9 | 218.2 | 217.5 | 218.9 | 219.7 |
| 20° | 3664.4 | 2952.8 | 1213.1 | 341.0 | 235.2 | 213.8 | 201.2 | 194.5 | 193.8 | 195.3 | 196.8 |
| 22.5° | 3612.6 | 2773.8 | 867.7 | 262.6 | 212.3 | 193.8 | 178.3 | 172.3 | 172.3 | 173.8 | 175.3 |
| 25° | 3549.8 | 2554.9 | 593.2 | 222.6 | 191.6 | 172.3 | 157.6 | 152.4 | 153.9 | 157.6 | 158.3 |
| 27.5° | 3471.4 | 2308.6 | 403.1 | 190.8 | 166.4 | 150.9 | 139.8 | 136.1 | 139.8 | 145.0 | 146.5 |
| 30° | 3404.0 | 2051.9 | 287.7 | 165.0 | 141.3 | 130.2 | 123.5 | 123.5 | 128.7 | 138.3 | 140.5 |
| 32.5° | 3352.3 | 1803.4 | 221.9 | 145.7 | 122.8 | 113.2 | 109.5 | 113.2 | 121.3 | 130.9 | 133.1 |
| 35° | 3345.6 | 1598.5 | 187.9 | 130.2 | 109.5 | 99.9 | 98.4 | 105.0 | 113.2 | 120.6 | 122.0 |
| 37.5° | 3396.7 | 1409.1 | 169.4 | 117.6 | 97.6 | 88.8 | 87.3 | 95.4 | 103.6 | 112.4 | 114.7 |
| 40° | 3493.6 | 1260.4 | 156.1 | 105.8 | 88.0 | 78.4 | 75.4 | 81.4 | 92.5 | 104.3 | 107.3 |
| 42.5° | 3619.3 | 1137.6 | 141.3 | 93.9 | 78.4 | 65.1 | 61.4 | 68.1 | 79.9 | 92.5 | 96.2 |
| 45° | 3739.1 | 1031.9 | 125.0 | 80.6 | 65.8 | 50.3 | 48.8 | 57.7 | 63.6 | 76.2 | 79.1 |
| 47.5° | 3805.0 | 938.7 | 111.0 | 65.8 | 51.0 | 40.7 | 40.7 | 42.9 | 48.8 | 63.6 | 66.6 |
| 50° | 3782.8 | 864.0 | 96.2 | 48.8 | 35.5 | 31.1 | 31.1 | 30.3 | 39.2 | 51.0 | 53.3 |
| 52.5° | 3738.4 | 821.1 | 82.8 | 37.7 | 24.4 | 22.2 | 20.0 | 22.2 | 27.4 | 32.5 | 33.3 |
| 55° | 3731.7 | 813.7 | 69.5 | 30.3 | 17.0 | 14.8 | 11.1 | 11.1 | 11.1 | 10.4 | 8.9 |
| 57.5° | 3783.5 | 825.5 | 58.4 | 24.4 | 12.6 | 9.6 | 5.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60° | 3836.8 | 838.1 | 50.3 | 17.0 | 8.9 | 5.2 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62.5° | 3748.0 | 810.0 | 42.2 | 10.4 | 6.7 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 3292.4 | 689.4 | 33.3 | 7.4 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 2341.9 | 461.6 | 22.2 | 4.4 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 1068.9 | 193.1 | 14.1 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 228.6 | 59.9 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 46.6 | 43.6 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 14.8 | 68.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 8.9 | 49.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 1.5 | 7.4 | 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)