

Scaled data based on original data using
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact
Fluorescent Lamps

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: SHAPER

Report Number: 19144B

Luminaire Tested: **697-WP-CF1/32**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 19144B
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 697-WP-CF1/32
Description: EXTERIOR WALL MOUNT LUMINAIRE WITH PEBBLE TONE SPECULAR REFLECTOR
AND CLEAR FLAT GLASS LENS
Light Source: ONE 32 WATT CPFL LAMP. LUMEN RATING = 2400 LMS.

Ballast/Driver: -

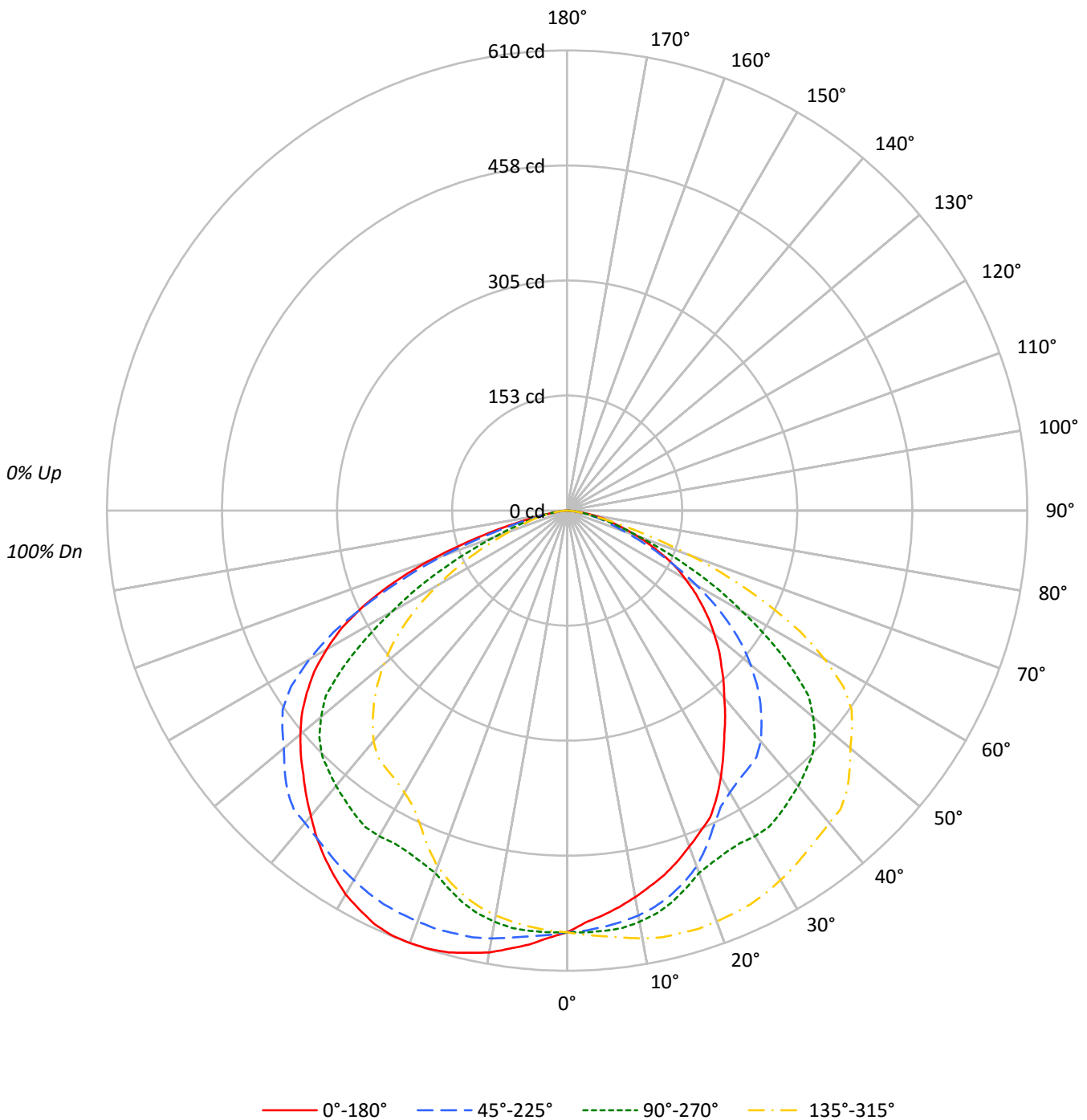
Summary

Lumens per Lamp: 2400 (1 lamp)
Luminaire Lumens: 1681.6 lumens
Efficiency: 70.1%
Efficacy: -
Spacing Criteria (0/90/45): 1.3 / 1.36 / 1.49
Luminous Opening: Rectangular (W 0.67' x L: 0.58' x H: 0')
CIE Type: Direct

Input Watts (W): 0
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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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | 20 | |
| RC | 80 | | | | | 70 | | | | | 50 | | | | | 30 | | | | | 10 | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 83 | 83 | 83 | 83 | 81 | 81 | 81 | 81 | 78 | 78 | 78 | 75 | 75 | 75 | 71 | 71 | 71 | 70 | | | | 70 |
| 1 | 77 | 74 | 71 | 68 | 75 | 72 | 70 | 67 | 69 | 67 | 65 | 66 | 65 | 63 | 64 | 63 | 61 | 60 | | | | 60 |
| 2 | 70 | 64 | 60 | 56 | 68 | 63 | 59 | 55 | 61 | 57 | 54 | 58 | 55 | 53 | 56 | 54 | 52 | 50 | | | | 50 |
| 3 | 64 | 57 | 51 | 47 | 62 | 55 | 50 | 46 | 53 | 49 | 45 | 51 | 48 | 45 | 50 | 47 | 44 | 42 | | | | 42 |
| 4 | 58 | 50 | 44 | 39 | 57 | 49 | 43 | 39 | 47 | 42 | 39 | 46 | 41 | 38 | 44 | 41 | 37 | 36 | | | | 36 |
| 5 | 54 | 45 | 38 | 34 | 52 | 44 | 38 | 34 | 42 | 37 | 33 | 41 | 36 | 33 | 40 | 36 | 32 | 31 | | | | 31 |
| 6 | 49 | 40 | 34 | 29 | 48 | 39 | 33 | 29 | 38 | 33 | 29 | 37 | 32 | 29 | 36 | 32 | 28 | 27 | | | | 27 |
| 7 | 46 | 36 | 30 | 26 | 44 | 36 | 30 | 26 | 35 | 29 | 25 | 34 | 29 | 25 | 33 | 28 | 25 | 24 | | | | 24 |
| 8 | 42 | 33 | 27 | 23 | 41 | 32 | 27 | 23 | 31 | 26 | 23 | 31 | 26 | 22 | 30 | 26 | 22 | 21 | | | | 21 |
| 9 | 40 | 30 | 24 | 20 | 39 | 30 | 24 | 20 | 29 | 24 | 20 | 28 | 24 | 20 | 27 | 23 | 20 | 19 | | | | 19 |
| 10 | 37 | 28 | 22 | 18 | 36 | 27 | 22 | 18 | 27 | 22 | 18 | 26 | 21 | 18 | 25 | 21 | 18 | 17 | | | | 17 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 15484 | 15484 | 15484 | 15484 |
| 5° | 14979 | 15551 | 16052 | 15551 |
| 10° | 14629 | 15568 | 16730 | 15568 |
| 15° | 14324 | 15411 | 17389 | 15411 |
| 20° | 13966 | 15069 | 17984 | 15069 |
| 25° | 13710 | 15263 | 18475 | 15263 |
| 30° | 13043 | 15938 | 18788 | 15938 |
| 35° | 12288 | 16610 | 18963 | 16610 |
| 40° | 11723 | 17233 | 19106 | 17233 |
| 45° | 11321 | 17996 | 19375 | 17996 |
| 50° | 10963 | 18344 | 19891 | 18344 |
| 55° | 10528 | 17511 | 20341 | 17511 |
| 60° | 9999 | 14869 | 20409 | 14869 |
| 65° | 9209 | 11758 | 19387 | 11758 |
| 70° | 8002 | 8285 | 15760 | 8285 |
| 75° | 6625 | 5972 | 9493 | 5972 |
| 80° | 5168 | 4211 | 4211 | 4211 |
| 85° | 2511 | 3210 | 2670 | 3210 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10° | 53.4 | 3.2 | 2.2 |
| 10°-20° | 155.2 | 9.2 | 6.5 |
| 20°-30° | 239.0 | 14.2 | 10.0 |
| 30°-40° | 302.9 | 18.0 | 12.6 |
| 40°-50° | 334.1 | 19.9 | 13.9 |
| 50°-60° | 311.9 | 18.6 | 13.0 |
| 60°-70° | 202.5 | 12.0 | 8.4 |
| 70°-80° | 71.7 | 4.3 | 3.0 |
| 80°-90° | 10.9 | 0.6 | 0.5 |
| 90°-100° | 0.0 | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 | 0.0 |
| 0°-30° | 447.6 | 26.6 | 18.7 |
| 0°-40° | 750.5 | 44.6 | 31.3 |
| 0°-60° | 1396.6 | 83.1 | 58.2 |
| 0°-90° | 1681.6 | 100.0 | 70.1 |
| 90°-120° | 0.0 | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 | 0.0 |
| 0°-180° | 1681.6 | 100.0 | 70.1 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|-----|-----|------|------|------|------|
| 0° | 559 | 559 | 559 | 559 | 559 | |
| 5° | 539 | 559 | 577 | 559 | 539 | 51 |
| 15° | 500 | 537 | 606 | 537 | 500 | 141 |
| 25° | 449 | 499 | 604 | 499 | 449 | 205 |
| 35° | 363 | 491 | 561 | 491 | 363 | 228 |
| 45° | 289 | 459 | 495 | 459 | 289 | 223 |
| 55° | 218 | 363 | 421 | 363 | 218 | 195 |
| 65° | 140 | 179 | 296 | 179 | 140 | 139 |
| 75° | 62 | 56 | 89 | 56 | 62 | 67 |
| 85° | 8 | 10 | 8 | 10 | 8 | 12 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 0° | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 |
| 2.5° | 546.8 | 551.6 | 557.3 | 562.3 | 559.6 | 559.6 | 563.1 | 564.9 | 566.8 | 564.9 | 563.1 |
| 5° | 538.7 | 544.9 | 554.0 | 561.6 | 559.3 | 558.3 | 566.4 | 573.2 | 577.3 | 573.2 | 566.4 |
| 7.5° | 529.9 | 538.1 | 550.0 | 561.0 | 558.2 | 558.6 | 570.9 | 580.2 | 585.8 | 580.2 | 570.9 |
| 10° | 520.1 | 530.9 | 545.1 | 554.6 | 553.5 | 558.8 | 575.9 | 586.8 | 594.8 | 586.8 | 575.9 |
| 12.5° | 509.8 | 522.8 | 537.9 | 546.8 | 547.1 | 557.9 | 579.6 | 591.4 | 600.4 | 591.4 | 579.6 |
| 15° | 499.5 | 515.8 | 528.3 | 535.4 | 537.4 | 556.3 | 580.0 | 595.7 | 606.4 | 595.7 | 580.0 |
| 17.5° | 487.2 | 506.8 | 516.3 | 517.3 | 524.7 | 553.4 | 581.1 | 599.2 | 609.3 | 599.2 | 581.1 |
| 20° | 473.8 | 494.2 | 502.1 | 495.8 | 511.2 | 549.7 | 579.4 | 601.8 | 610.1 | 601.8 | 579.4 |
| 22.5° | 461.0 | 480.2 | 482.2 | 479.9 | 504.4 | 546.0 | 577.9 | 601.1 | 609.1 | 601.1 | 577.9 |
| 25° | 448.6 | 465.7 | 460.2 | 472.6 | 499.4 | 540.2 | 575.6 | 597.9 | 604.5 | 597.9 | 575.6 |
| 27.5° | 429.2 | 448.8 | 441.8 | 470.5 | 496.9 | 535.0 | 571.3 | 592.0 | 596.3 | 592.0 | 571.3 |
| 30° | 407.8 | 430.7 | 431.3 | 474.2 | 498.3 | 529.4 | 565.6 | 584.8 | 587.4 | 584.8 | 565.6 |
| 32.5° | 385.1 | 409.1 | 423.2 | 477.3 | 497.6 | 527.2 | 559.8 | 574.6 | 574.5 | 574.6 | 559.8 |
| 35° | 363.4 | 386.5 | 417.9 | 474.0 | 491.2 | 527.8 | 552.6 | 563.7 | 560.8 | 563.7 | 552.6 |
| 37.5° | 344.1 | 361.6 | 412.1 | 465.1 | 483.8 | 520.1 | 546.2 | 550.5 | 545.7 | 550.5 | 546.2 |
| 40° | 324.2 | 339.3 | 399.1 | 453.2 | 476.6 | 512.1 | 540.6 | 537.3 | 528.4 | 537.3 | 540.6 |
| 42.5° | 306.7 | 318.9 | 381.3 | 436.3 | 468.0 | 506.8 | 536.7 | 523.1 | 512.1 | 523.1 | 536.7 |
| 45° | 289.0 | 301.9 | 362.6 | 415.0 | 459.4 | 505.4 | 524.7 | 507.2 | 494.6 | 507.2 | 524.7 |
| 47.5° | 272.4 | 287.6 | 341.0 | 393.8 | 445.5 | 502.8 | 508.0 | 490.2 | 478.9 | 490.2 | 508.0 |
| 50° | 254.4 | 273.7 | 317.2 | 367.7 | 425.7 | 489.9 | 490.1 | 470.9 | 461.6 | 470.9 | 490.1 |
| 52.5° | 237.0 | 259.1 | 292.3 | 341.4 | 403.3 | 469.5 | 475.9 | 451.3 | 443.3 | 451.3 | 475.9 |
| 55° | 218.0 | 238.5 | 262.8 | 306.7 | 362.6 | 445.5 | 460.3 | 428.7 | 421.2 | 428.7 | 460.3 |
| 57.5° | 199.9 | 217.2 | 232.2 | 267.5 | 316.9 | 403.6 | 433.8 | 401.8 | 397.5 | 401.8 | 433.8 |
| 60° | 180.5 | 193.9 | 197.6 | 224.5 | 268.4 | 349.0 | 394.8 | 369.0 | 368.4 | 369.0 | 394.8 |
| 62.5° | 162.8 | 168.1 | 165.8 | 184.2 | 225.1 | 299.3 | 349.2 | 331.1 | 336.8 | 331.1 | 349.2 |
| 65° | 140.5 | 140.9 | 134.5 | 143.2 | 179.4 | 246.1 | 291.9 | 282.6 | 295.8 | 282.6 | 291.9 |
| 67.5° | 119.2 | 116.3 | 104.4 | 109.1 | 137.4 | 194.3 | 232.9 | 234.1 | 248.8 | 234.1 | 232.9 |
| 70° | 98.8 | 94.7 | 79.8 | 81.5 | 102.3 | 144.6 | 174.3 | 182.6 | 194.6 | 182.6 | 174.3 |
| 72.5° | 79.0 | 74.3 | 62.3 | 60.7 | 75.7 | 99.0 | 119.2 | 128.3 | 138.2 | 128.3 | 119.2 |
| 75° | 61.9 | 58.0 | 49.1 | 47.1 | 55.8 | 65.6 | 74.9 | 81.5 | 88.7 | 81.5 | 74.9 |
| 77.5° | 47.9 | 42.7 | 35.5 | 34.5 | 39.1 | 42.7 | 43.9 | 47.6 | 48.7 | 47.6 | 43.9 |
| 80° | 32.4 | 29.7 | 24.2 | 23.7 | 26.4 | 26.9 | 25.8 | 26.0 | 26.4 | 26.0 | 25.8 |
| 82.5° | 19.0 | 16.1 | 13.6 | 15.9 | 16.7 | 15.3 | 14.4 | 13.6 | 14.7 | 13.6 | 14.4 |
| 85° | 7.9 | 7.4 | 7.7 | 9.9 | 10.1 | 8.4 | 8.0 | 7.4 | 8.4 | 7.4 | 8.0 |
| 87.5° | 2.7 | 2.5 | 2.9 | 4.6 | 4.3 | 2.7 | 2.5 | 1.9 | 3.5 | 1.9 | 2.5 |
| 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):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 0° | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 |
| 2.5° | 559.6 | 559.6 | 562.3 | 557.3 | 551.6 | 546.8 |
| 5° | 558.3 | 559.3 | 561.6 | 554.0 | 544.9 | 538.7 |
| 7.5° | 558.6 | 558.2 | 561.0 | 550.0 | 538.1 | 529.9 |
| 10° | 558.8 | 553.5 | 554.6 | 545.1 | 530.9 | 520.1 |
| 12.5° | 557.9 | 547.1 | 546.8 | 537.9 | 522.8 | 509.8 |
| 15° | 556.3 | 537.4 | 535.4 | 528.3 | 515.8 | 499.5 |
| 17.5° | 553.4 | 524.7 | 517.3 | 516.3 | 506.8 | 487.2 |
| 20° | 549.7 | 511.2 | 495.8 | 502.1 | 494.2 | 473.8 |
| 22.5° | 546.0 | 504.4 | 479.9 | 482.2 | 480.2 | 461.0 |
| 25° | 540.2 | 499.4 | 472.6 | 460.2 | 465.7 | 448.6 |
| 27.5° | 535.0 | 496.9 | 470.5 | 441.8 | 448.8 | 429.2 |
| 30° | 529.4 | 498.3 | 474.2 | 431.3 | 430.7 | 407.8 |
| 32.5° | 527.2 | 497.6 | 477.3 | 423.2 | 409.1 | 385.1 |
| 35° | 527.8 | 491.2 | 474.0 | 417.9 | 386.5 | 363.4 |
| 37.5° | 520.1 | 483.8 | 465.1 | 412.1 | 361.6 | 344.1 |
| 40° | 512.1 | 476.6 | 453.2 | 399.1 | 339.3 | 324.2 |
| 42.5° | 506.8 | 468.0 | 436.3 | 381.3 | 318.9 | 306.7 |
| 45° | 505.4 | 459.4 | 415.0 | 362.6 | 301.9 | 289.0 |
| 47.5° | 502.8 | 445.5 | 393.8 | 341.0 | 287.6 | 272.4 |
| 50° | 489.9 | 425.7 | 367.7 | 317.2 | 273.7 | 254.4 |
| 52.5° | 469.5 | 403.3 | 341.4 | 292.3 | 259.1 | 237.0 |
| 55° | 445.5 | 362.6 | 306.7 | 262.8 | 238.5 | 218.0 |
| 57.5° | 403.6 | 316.9 | 267.5 | 232.2 | 217.2 | 199.9 |
| 60° | 349.0 | 268.4 | 224.5 | 197.6 | 193.9 | 180.5 |
| 62.5° | 299.3 | 225.1 | 184.2 | 165.8 | 168.1 | 162.8 |
| 65° | 246.1 | 179.4 | 143.2 | 134.5 | 140.9 | 140.5 |
| 67.5° | 194.3 | 137.4 | 109.1 | 104.4 | 116.3 | 119.2 |
| 70° | 144.6 | 102.3 | 81.5 | 79.8 | 94.7 | 98.8 |
| 72.5° | 99.0 | 75.7 | 60.7 | 62.3 | 74.3 | 79.0 |
| 75° | 65.6 | 55.8 | 47.1 | 49.1 | 58.0 | 61.9 |
| 77.5° | 42.7 | 39.1 | 34.5 | 35.5 | 42.7 | 47.9 |
| 80° | 26.9 | 26.4 | 23.7 | 24.2 | 29.7 | 32.4 |
| 82.5° | 15.3 | 16.7 | 15.9 | 13.6 | 16.1 | 19.0 |
| 85° | 8.4 | 10.1 | 9.9 | 7.7 | 7.4 | 7.9 |
| 87.5° | 2.7 | 4.3 | 4.6 | 2.9 | 2.5 | 2.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)