

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: METALUX

Report Number: P188117

Luminaire Tested: **24SR-LD2-45-UNV-EL14W-L830-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188117
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34279)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24SR-LD2-45-UNV-EL14W-L830-CD1-U
Description: METALUX SKYRIDGE 2X4 TROFFER

Light Source: EATON LED 3000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1210.2 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.39 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 4' x L: 2' x H: 0.29')
CIE Type: Direct

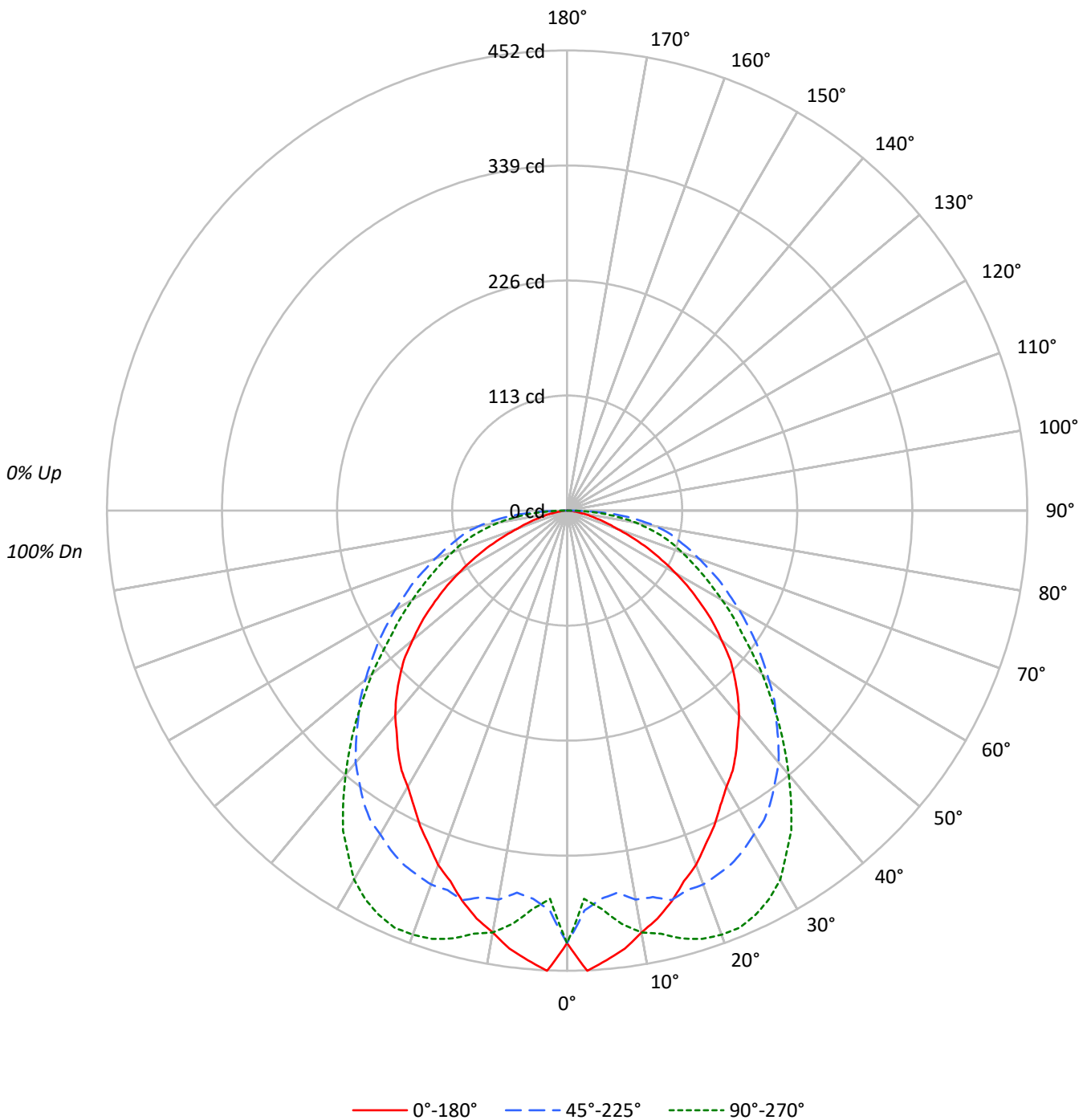
Input Watts (W): 12.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P188117

CATALOG NUMBER: 24SR-LD2-45-UNV-EL14W-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P188117

CATALOG NUMBER: 24SR-LD2-45-UNV-EL14W-L830-CD1-U

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 108 | 103 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 89 | 86 | 84 | 82 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 72 | 77 | 73 | 70 | 68 |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 62 | 73 | 67 | 61 | 71 | 65 | 60 | 68 | 63 | 59 | 57 |
| 4 | 81 | 69 | 60 | 53 | 79 | 68 | 59 | 53 | 65 | 58 | 52 | 63 | 57 | 51 | 61 | 55 | 51 | 48 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 58 | 51 | 45 | 56 | 50 | 44 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 46 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 39 | 37 |
| 7 | 64 | 50 | 41 | 35 | 62 | 50 | 41 | 35 | 48 | 40 | 35 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 38 | 31 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 36 | 30 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|-----|-----|
| 0° | 572 | 572 | 572 |
| 5° | 591 | 510 | 527 |
| 10° | 560 | 516 | 567 |
| 15° | 532 | 530 | 594 |
| 20° | 504 | 530 | 618 |
| 25° | 475 | 530 | 629 |
| 30° | 449 | 524 | 624 |
| 35° | 431 | 517 | 600 |
| 40° | 411 | 502 | 560 |
| 45° | 387 | 479 | 521 |
| 50° | 353 | 457 | 482 |
| 55° | 313 | 436 | 445 |
| 60° | 264 | 414 | 419 |
| 65° | 211 | 397 | 401 |
| 70° | 147 | 380 | 394 |
| 75° | 100 | 372 | 394 |
| 80° | 56 | 364 | 377 |
| 85° | 24 | 286 | 302 |



TEST NUMBER: P188117

CATALOG NUMBER: 24SR-LD2-45-UNV-EL14W-L830-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 37.8 | 3.1 |
| 10°-20° | 111.0 | 9.2 |
| 20°-30° | 173.0 | 14.3 |
| 30°-40° | 208.0 | 17.2 |
| 40°-50° | 208.6 | 17.2 |
| 50°-60° | 183.4 | 15.2 |
| 60°-70° | 144.0 | 11.9 |
| 70°-80° | 100.8 | 8.3 |
| 80°-90° | 43.5 | 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°-30° | 321.8 | 26.6 |
| 0°-40° | 529.8 | 43.8 |
| 0°-60° | 921.8 | 76.2 |
| 0°-90° | 1210.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1210.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 425 | 425 | 425 | 425 | 425 | |
| 5° | 443 | 383 | 383 | 398 | 393 | 42 |
| 15° | 397 | 349 | 396 | 428 | 435 | 112 |
| 25° | 342 | 325 | 383 | 428 | 438 | 157 |
| 35° | 289 | 289 | 349 | 380 | 384 | 181 |
| 45° | 233 | 244 | 290 | 298 | 294 | 179 |
| 55° | 161 | 195 | 227 | 218 | 209 | 144 |
| 65° | 87 | 146 | 166 | 151 | 146 | 86 |
| 75° | 30 | 100 | 113 | 100 | 96 | 33 |
| 85° | 4 | 53 | 51 | 40 | 36 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P188117

CATALOG NUMBER: 24SR-LD2-45-UNV-EL14W-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 |
| 2.5° | 452.5 | 450.5 | 445.3 | 441.2 | 436.1 | 432.0 | 428.9 | 419.7 | 411.5 | 404.3 | 393.0 |
| 5° | 443.3 | 437.1 | 422.8 | 408.4 | 389.9 | 382.7 | 378.6 | 373.5 | 374.5 | 378.6 | 382.7 |
| 7.5° | 434.0 | 421.7 | 394.0 | 371.4 | 363.2 | 365.3 | 370.4 | 380.7 | 384.8 | 382.7 | 378.6 |
| 10° | 420.7 | 403.3 | 367.3 | 353.0 | 364.3 | 370.4 | 375.6 | 373.5 | 371.4 | 378.6 | 387.9 |
| 12.5° | 410.4 | 383.8 | 343.7 | 349.9 | 363.2 | 362.2 | 360.2 | 366.3 | 379.7 | 386.8 | 388.9 |
| 15° | 397.1 | 362.2 | 330.4 | 347.8 | 347.8 | 348.9 | 355.0 | 372.5 | 376.6 | 385.8 | 396.1 |
| 17.5° | 381.7 | 339.6 | 321.2 | 335.5 | 335.5 | 346.8 | 356.1 | 364.3 | 376.6 | 386.8 | 390.9 |
| 20° | 370.4 | 319.1 | 315.0 | 320.1 | 333.5 | 343.7 | 347.8 | 362.2 | 372.5 | 380.7 | 390.9 |
| 22.5° | 355.0 | 301.7 | 306.8 | 307.8 | 328.4 | 332.5 | 341.7 | 357.1 | 365.3 | 377.6 | 386.8 |
| 25° | 341.7 | 285.3 | 294.5 | 301.7 | 316.0 | 325.3 | 335.5 | 346.8 | 360.2 | 370.4 | 382.7 |
| 27.5° | 326.3 | 271.9 | 280.1 | 294.5 | 307.8 | 319.1 | 325.3 | 339.6 | 350.9 | 363.2 | 375.6 |
| 30° | 313.0 | 260.6 | 266.8 | 285.3 | 301.7 | 308.9 | 316.0 | 330.4 | 344.8 | 355.0 | 367.3 |
| 32.5° | 302.7 | 250.4 | 255.5 | 274.0 | 292.4 | 298.6 | 306.8 | 322.2 | 334.5 | 346.8 | 360.2 |
| 35° | 289.4 | 242.2 | 247.3 | 264.7 | 281.2 | 289.4 | 296.5 | 311.9 | 325.3 | 337.6 | 348.9 |
| 37.5° | 275.0 | 231.9 | 238.1 | 254.5 | 269.9 | 277.0 | 285.3 | 300.6 | 311.9 | 325.3 | 335.5 |
| 40° | 262.7 | 223.7 | 229.8 | 245.2 | 259.6 | 266.8 | 275.0 | 288.3 | 300.6 | 311.9 | 323.2 |
| 42.5° | 248.3 | 212.4 | 219.6 | 234.0 | 247.3 | 256.5 | 262.7 | 276.0 | 287.3 | 297.6 | 306.8 |
| 45° | 232.9 | 200.1 | 207.3 | 220.6 | 236.0 | 244.2 | 250.4 | 264.7 | 274.0 | 283.2 | 290.4 |
| 47.5° | 217.5 | 188.8 | 195.0 | 209.3 | 224.7 | 230.9 | 238.1 | 250.4 | 260.6 | 269.9 | 276.0 |
| 50° | 198.0 | 175.5 | 182.6 | 198.0 | 212.4 | 219.6 | 226.8 | 239.1 | 247.3 | 253.4 | 258.6 |
| 52.5° | 180.6 | 160.1 | 171.4 | 185.7 | 200.1 | 208.3 | 214.5 | 225.7 | 234.0 | 239.1 | 242.2 |
| 55° | 161.1 | 147.8 | 158.0 | 173.4 | 187.8 | 195.0 | 202.1 | 212.4 | 219.6 | 224.7 | 226.8 |
| 57.5° | 142.6 | 132.4 | 146.7 | 161.1 | 176.5 | 182.6 | 188.8 | 200.1 | 205.2 | 209.3 | 210.4 |
| 60° | 123.1 | 117.0 | 132.4 | 148.8 | 163.2 | 170.3 | 176.5 | 184.7 | 189.8 | 195.0 | 195.0 |
| 62.5° | 104.7 | 103.6 | 120.1 | 137.5 | 151.9 | 158.0 | 164.2 | 172.4 | 177.5 | 179.6 | 179.6 |
| 65° | 87.2 | 91.3 | 108.8 | 126.2 | 139.5 | 145.7 | 150.8 | 159.0 | 164.2 | 166.2 | 166.2 |
| 67.5° | 68.7 | 78.0 | 96.5 | 113.9 | 128.3 | 134.4 | 139.5 | 146.7 | 149.8 | 151.9 | 150.8 |
| 70° | 52.3 | 65.7 | 85.2 | 103.6 | 117.0 | 122.1 | 127.2 | 134.4 | 137.5 | 139.5 | 137.5 |
| 72.5° | 41.0 | 54.4 | 74.9 | 93.4 | 105.7 | 110.8 | 114.9 | 121.1 | 125.2 | 126.2 | 125.2 |
| 75° | 29.8 | 45.1 | 66.7 | 83.1 | 95.4 | 99.5 | 103.6 | 109.8 | 113.9 | 114.9 | 112.9 |
| 77.5° | 21.5 | 38.0 | 57.5 | 74.9 | 86.2 | 90.3 | 94.4 | 100.6 | 102.6 | 103.6 | 102.6 |
| 80° | 13.3 | 29.8 | 48.2 | 64.6 | 73.9 | 79.0 | 82.1 | 87.2 | 90.3 | 91.3 | 88.2 |
| 82.5° | 8.2 | 23.6 | 40.0 | 54.4 | 63.6 | 66.7 | 69.8 | 74.9 | 75.9 | 74.9 | 70.8 |
| 85° | 4.1 | 18.5 | 31.8 | 43.1 | 51.3 | 53.4 | 55.4 | 57.5 | 57.5 | 56.4 | 51.3 |
| 87.5° | 3.1 | 11.3 | 20.5 | 27.7 | 32.8 | 31.8 | 31.8 | 34.9 | 33.9 | 30.8 | 27.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P188117

CATALOG NUMBER: 24SR-LD2-45-UNV-EL14W-L830-CD1-U

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 | 424.8 |
| 2.5° | 387.9 | 387.9 | 386.8 | 385.8 | 384.8 | 383.8 | 384.8 | 383.8 | 382.7 | 381.7 |
| 5° | 387.9 | 394.0 | 396.1 | 398.1 | 398.1 | 398.1 | 397.1 | 396.1 | 395.0 | 393.0 |
| 7.5° | 378.6 | 385.8 | 392.0 | 398.1 | 401.2 | 402.2 | 405.3 | 409.4 | 409.4 | 409.4 |
| 10° | 395.0 | 402.2 | 404.3 | 408.4 | 410.4 | 412.5 | 415.6 | 419.7 | 419.7 | 420.7 |
| 12.5° | 397.1 | 409.4 | 416.6 | 420.7 | 421.7 | 422.8 | 424.8 | 426.9 | 426.9 | 425.8 |
| 15° | 403.3 | 409.4 | 418.6 | 425.8 | 427.9 | 429.9 | 434.0 | 436.1 | 435.1 | 435.1 |
| 17.5° | 403.3 | 412.5 | 418.6 | 426.9 | 429.9 | 433.0 | 438.1 | 440.2 | 441.2 | 441.2 |
| 20° | 400.2 | 412.5 | 421.7 | 427.9 | 431.0 | 433.0 | 438.1 | 442.3 | 442.3 | 443.3 |
| 22.5° | 400.2 | 410.4 | 419.7 | 428.9 | 431.0 | 434.0 | 439.2 | 442.3 | 443.3 | 443.3 |
| 25° | 395.0 | 406.3 | 414.5 | 424.8 | 427.9 | 432.0 | 436.1 | 438.1 | 438.1 | 438.1 |
| 27.5° | 389.9 | 401.2 | 410.4 | 416.6 | 419.7 | 421.7 | 426.9 | 428.9 | 429.9 | 429.9 |
| 30° | 382.7 | 392.0 | 400.2 | 407.4 | 409.4 | 411.5 | 415.6 | 417.6 | 418.6 | 418.6 |
| 32.5° | 372.5 | 381.7 | 388.9 | 395.0 | 396.1 | 398.1 | 400.2 | 401.2 | 401.2 | 400.2 |
| 35° | 361.2 | 368.4 | 375.6 | 377.6 | 379.7 | 380.7 | 382.7 | 383.8 | 382.7 | 383.8 |
| 37.5° | 345.8 | 350.9 | 356.1 | 359.1 | 360.2 | 361.2 | 364.3 | 362.2 | 361.2 | 361.2 |
| 40° | 329.4 | 335.5 | 337.6 | 339.6 | 339.6 | 339.6 | 341.7 | 340.7 | 338.6 | 338.6 |
| 42.5° | 313.0 | 316.0 | 319.1 | 319.1 | 319.1 | 318.1 | 318.1 | 318.1 | 318.1 | 316.0 |
| 45° | 295.5 | 297.6 | 297.6 | 297.6 | 297.6 | 297.6 | 295.5 | 295.5 | 293.5 | 293.5 |
| 47.5° | 279.1 | 279.1 | 279.1 | 278.1 | 277.0 | 276.0 | 276.0 | 272.9 | 272.9 | 270.9 |
| 50° | 259.6 | 260.6 | 259.6 | 257.6 | 256.5 | 254.5 | 253.4 | 251.4 | 250.4 | 250.4 |
| 52.5° | 243.2 | 243.2 | 240.1 | 239.1 | 236.0 | 236.0 | 234.0 | 231.9 | 229.8 | 228.8 |
| 55° | 226.8 | 225.7 | 222.7 | 219.6 | 217.5 | 217.5 | 214.5 | 211.4 | 211.4 | 209.3 |
| 57.5° | 211.4 | 209.3 | 205.2 | 201.1 | 199.1 | 199.1 | 196.0 | 193.9 | 192.9 | 192.9 |
| 60° | 193.9 | 189.8 | 186.8 | 183.7 | 182.6 | 180.6 | 179.6 | 176.5 | 175.5 | 175.5 |
| 62.5° | 177.5 | 175.5 | 171.4 | 167.3 | 166.2 | 165.2 | 163.2 | 162.1 | 160.1 | 160.1 |
| 65° | 163.2 | 159.0 | 156.0 | 152.9 | 150.8 | 149.8 | 148.8 | 146.7 | 145.7 | 145.7 |
| 67.5° | 148.8 | 144.7 | 141.6 | 138.5 | 137.5 | 135.4 | 134.4 | 134.4 | 133.4 | 132.4 |
| 70° | 135.4 | 131.3 | 127.2 | 125.2 | 123.1 | 122.1 | 121.1 | 121.1 | 121.1 | 120.1 |
| 72.5° | 121.1 | 118.0 | 114.9 | 112.9 | 111.8 | 110.8 | 109.8 | 109.8 | 108.8 | 108.8 |
| 75° | 110.8 | 106.7 | 103.6 | 100.6 | 99.5 | 99.5 | 97.5 | 97.5 | 96.5 | 96.5 |
| 77.5° | 98.5 | 94.4 | 91.3 | 88.2 | 86.2 | 86.2 | 85.2 | 83.1 | 82.1 | 82.1 |
| 80° | 83.1 | 79.0 | 75.9 | 72.9 | 71.8 | 70.8 | 68.7 | 68.7 | 68.7 | 68.7 |
| 82.5° | 65.7 | 62.6 | 58.5 | 56.4 | 55.4 | 54.4 | 53.4 | 53.4 | 53.4 | 52.3 |
| 85° | 48.2 | 44.1 | 42.1 | 40.0 | 40.0 | 38.0 | 38.0 | 38.0 | 38.0 | 35.9 |
| 87.5° | 24.6 | 22.6 | 21.5 | 20.5 | 20.5 | 20.5 | 19.5 | 18.5 | 19.5 | 18.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)