

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: P188136

Luminaire Tested: **24SR-LD2-53-UNV-EL7W-L835-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188136
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-LD2-53-UNV-EL7W-L835-CD1-U
Description: METALUX SKYRIDGE 2X4 TROFFER

Light Source: EATON LED 3500K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 626.5 lumens
Efficiency: N/A
Efficacy: 101.0 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

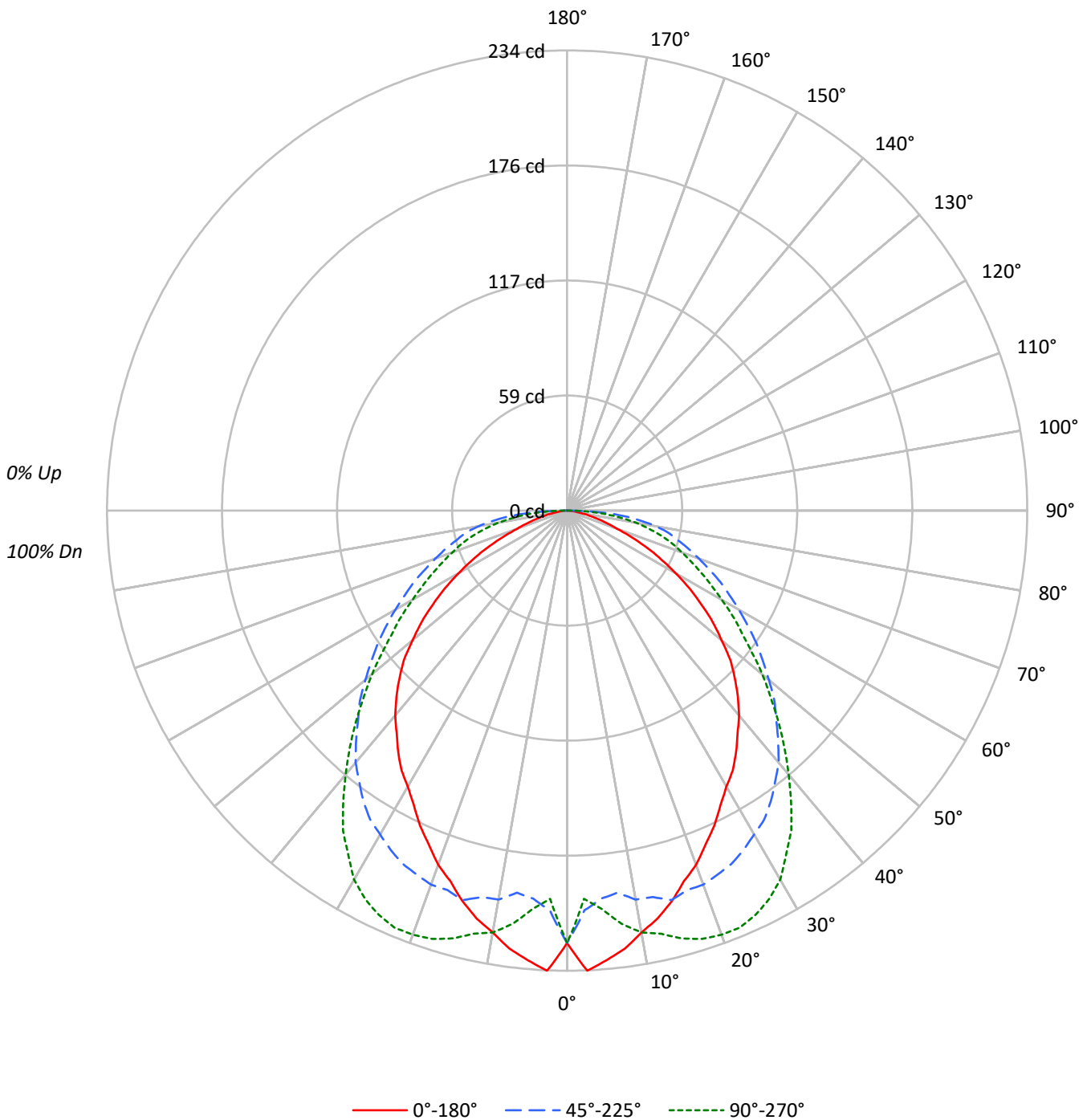
Input Watts (W): 6.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P188136

CATALOG NUMBER: 24SR-LD2-53-UNV-EL7W-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P188136

CATALOG NUMBER: 24SR-LD2-53-UNV-EL7W-L835-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° | 296 | 296 | 296 |
| 5° | 306 | 264 | 273 |
| 10° | 290 | 267 | 294 |
| 15° | 276 | 274 | 308 |
| 20° | 261 | 274 | 320 |
| 25° | 246 | 274 | 326 |
| 30° | 232 | 271 | 323 |
| 35° | 223 | 268 | 311 |
| 40° | 213 | 260 | 290 |
| 45° | 200 | 248 | 269 |
| 50° | 183 | 237 | 250 |
| 55° | 162 | 226 | 230 |
| 60° | 137 | 214 | 217 |
| 65° | 109 | 206 | 208 |
| 70° | 76 | 197 | 204 |
| 75° | 52 | 192 | 204 |
| 80° | 29 | 189 | 195 |
| 85° | 12 | 148 | 157 |



TEST NUMBER: P188136

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 19.6 | 3.1 |
| 10°-20° | 57.5 | 9.2 |
| 20°-30° | 89.6 | 14.3 |
| 30°-40° | 107.7 | 17.2 |
| 40°-50° | 108.0 | 17.2 |
| 50°-60° | 94.9 | 15.2 |
| 60°-70° | 74.5 | 11.9 |
| 70°-80° | 52.2 | 8.3 |
| 80°-90° | 22.5 | 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° | 166.6 | 26.6 |
| 0°-40° | 274.3 | 43.8 |
| 0°-60° | 477.2 | 76.2 |
| 0°-90° | 626.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 626.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 220 | 220 | 220 | 220 | 220 | |
| 5° | 230 | 198 | 198 | 206 | 203 | 22 |
| 15° | 206 | 181 | 205 | 222 | 225 | 58 |
| 25° | 177 | 168 | 198 | 222 | 227 | 81 |
| 35° | 150 | 150 | 181 | 196 | 199 | 94 |
| 45° | 121 | 126 | 150 | 154 | 152 | 93 |
| 55° | 83 | 101 | 117 | 113 | 108 | 75 |
| 65° | 45 | 75 | 86 | 78 | 75 | 45 |
| 75° | 15 | 52 | 58 | 52 | 50 | 17 |
| 85° | 2 | 28 | 27 | 21 | 19 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P188136

CATALOG NUMBER: 24SR-LD2-53-UNV-EL7W-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 |
| 2.5° | 234.2 | 233.2 | 230.5 | 228.4 | 225.7 | 223.6 | 222.0 | 217.2 | 213.0 | 209.3 | 203.4 |
| 5° | 229.5 | 226.3 | 218.8 | 211.4 | 201.8 | 198.1 | 196.0 | 193.3 | 193.9 | 196.0 | 198.1 |
| 7.5° | 224.7 | 218.3 | 204.0 | 192.3 | 188.0 | 189.1 | 191.7 | 197.1 | 199.2 | 198.1 | 196.0 |
| 10° | 217.8 | 208.7 | 190.2 | 182.7 | 188.6 | 191.7 | 194.4 | 193.3 | 192.3 | 196.0 | 200.8 |
| 12.5° | 212.5 | 198.7 | 177.9 | 181.1 | 188.0 | 187.5 | 186.4 | 189.6 | 196.5 | 200.2 | 201.3 |
| 15° | 205.6 | 187.5 | 171.0 | 180.1 | 180.1 | 180.6 | 183.8 | 192.8 | 194.9 | 199.7 | 205.0 |
| 17.5° | 197.6 | 175.8 | 166.3 | 173.7 | 173.7 | 179.5 | 184.3 | 188.6 | 194.9 | 200.2 | 202.4 |
| 20° | 191.7 | 165.2 | 163.1 | 165.7 | 172.6 | 177.9 | 180.1 | 187.5 | 192.8 | 197.1 | 202.4 |
| 22.5° | 183.8 | 156.2 | 158.8 | 159.3 | 170.0 | 172.1 | 176.9 | 184.8 | 189.1 | 195.5 | 200.2 |
| 25° | 176.9 | 147.7 | 152.4 | 156.2 | 163.6 | 168.4 | 173.7 | 179.5 | 186.4 | 191.7 | 198.1 |
| 27.5° | 168.9 | 140.8 | 145.0 | 152.4 | 159.3 | 165.2 | 168.4 | 175.8 | 181.7 | 188.0 | 194.4 |
| 30° | 162.0 | 134.9 | 138.1 | 147.7 | 156.2 | 159.9 | 163.6 | 171.0 | 178.5 | 183.8 | 190.2 |
| 32.5° | 156.7 | 129.6 | 132.3 | 141.8 | 151.4 | 154.6 | 158.8 | 166.8 | 173.2 | 179.5 | 186.4 |
| 35° | 149.8 | 125.4 | 128.0 | 137.0 | 145.5 | 149.8 | 153.5 | 161.5 | 168.4 | 174.8 | 180.6 |
| 37.5° | 142.4 | 120.0 | 123.2 | 131.7 | 139.7 | 143.4 | 147.7 | 155.6 | 161.5 | 168.4 | 173.7 |
| 40° | 136.0 | 115.8 | 119.0 | 126.9 | 134.4 | 138.1 | 142.4 | 149.3 | 155.6 | 161.5 | 167.3 |
| 42.5° | 128.5 | 110.0 | 113.7 | 121.1 | 128.0 | 132.8 | 136.0 | 142.9 | 148.7 | 154.0 | 158.8 |
| 45° | 120.6 | 103.6 | 107.3 | 114.2 | 122.2 | 126.4 | 129.6 | 137.0 | 141.8 | 146.6 | 150.3 |
| 47.5° | 112.6 | 97.7 | 100.9 | 108.4 | 116.3 | 119.5 | 123.2 | 129.6 | 134.9 | 139.7 | 142.9 |
| 50° | 102.5 | 90.8 | 94.5 | 102.5 | 110.0 | 113.7 | 117.4 | 123.8 | 128.0 | 131.2 | 133.9 |
| 52.5° | 93.5 | 82.9 | 88.7 | 96.1 | 103.6 | 107.8 | 111.0 | 116.9 | 121.1 | 123.8 | 125.4 |
| 55° | 83.4 | 76.5 | 81.8 | 89.8 | 97.2 | 100.9 | 104.6 | 110.0 | 113.7 | 116.3 | 117.4 |
| 57.5° | 73.8 | 68.5 | 76.0 | 83.4 | 91.4 | 94.5 | 97.7 | 103.6 | 106.2 | 108.4 | 108.9 |
| 60° | 63.7 | 60.6 | 68.5 | 77.0 | 84.5 | 88.2 | 91.4 | 95.6 | 98.3 | 100.9 | 100.9 |
| 62.5° | 54.2 | 53.6 | 62.1 | 71.2 | 78.6 | 81.8 | 85.0 | 89.2 | 91.9 | 93.0 | 93.0 |
| 65° | 45.1 | 47.3 | 56.3 | 65.3 | 72.2 | 75.4 | 78.1 | 82.3 | 85.0 | 86.0 | 86.0 |
| 67.5° | 35.6 | 40.4 | 49.9 | 59.0 | 66.4 | 69.6 | 72.2 | 76.0 | 77.5 | 78.6 | 78.1 |
| 70° | 27.1 | 34.0 | 44.1 | 53.6 | 60.6 | 63.2 | 65.9 | 69.6 | 71.2 | 72.2 | 71.2 |
| 72.5° | 21.2 | 28.2 | 38.8 | 48.3 | 54.7 | 57.4 | 59.5 | 62.7 | 64.8 | 65.3 | 64.8 |
| 75° | 15.4 | 23.4 | 34.5 | 43.0 | 49.4 | 51.5 | 53.6 | 56.8 | 59.0 | 59.5 | 58.4 |
| 77.5° | 11.2 | 19.7 | 29.7 | 38.8 | 44.6 | 46.7 | 48.9 | 52.1 | 53.1 | 53.6 | 53.1 |
| 80° | 6.9 | 15.4 | 25.0 | 33.5 | 38.2 | 40.9 | 42.5 | 45.1 | 46.7 | 47.3 | 45.7 |
| 82.5° | 4.2 | 12.2 | 20.7 | 28.2 | 32.9 | 34.5 | 36.1 | 38.8 | 39.3 | 38.8 | 36.7 |
| 85° | 2.1 | 9.6 | 16.5 | 22.3 | 26.6 | 27.6 | 28.7 | 29.7 | 29.7 | 29.2 | 26.6 |
| 87.5° | 1.6 | 5.8 | 10.6 | 14.3 | 17.0 | 16.5 | 16.5 | 18.1 | 17.5 | 15.9 | 14.3 |
| 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: P188136

CATALOG NUMBER: 24SR-LD2-53-UNV-EL7W-L835-CD1-U

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 | 219.9 |
| 2.5° | 200.8 | 200.8 | 200.2 | 199.7 | 199.2 | 198.7 | 199.2 | 198.7 | 198.1 | 197.6 |
| 5° | 200.8 | 204.0 | 205.0 | 206.1 | 206.1 | 206.1 | 205.6 | 205.0 | 204.5 | 203.4 |
| 7.5° | 196.0 | 199.7 | 202.9 | 206.1 | 207.7 | 208.2 | 209.8 | 211.9 | 211.9 | 211.9 |
| 10° | 204.5 | 208.2 | 209.3 | 211.4 | 212.5 | 213.5 | 215.1 | 217.2 | 217.2 | 217.8 |
| 12.5° | 205.6 | 211.9 | 215.7 | 217.8 | 218.3 | 218.8 | 219.9 | 221.0 | 221.0 | 220.4 |
| 15° | 208.7 | 211.9 | 216.7 | 220.4 | 221.5 | 222.6 | 224.7 | 225.7 | 225.2 | 225.2 |
| 17.5° | 208.7 | 213.5 | 216.7 | 221.0 | 222.6 | 224.2 | 226.8 | 227.9 | 228.4 | 228.4 |
| 20° | 207.2 | 213.5 | 218.3 | 221.5 | 223.1 | 224.2 | 226.8 | 228.9 | 228.9 | 229.5 |
| 22.5° | 207.2 | 212.5 | 217.2 | 222.0 | 223.1 | 224.7 | 227.3 | 228.9 | 229.5 | 229.5 |
| 25° | 204.5 | 210.3 | 214.6 | 219.9 | 221.5 | 223.6 | 225.7 | 226.8 | 226.8 | 226.8 |
| 27.5° | 201.8 | 207.7 | 212.5 | 215.7 | 217.2 | 218.3 | 221.0 | 222.0 | 222.6 | 222.6 |
| 30° | 198.1 | 202.9 | 207.2 | 210.9 | 211.9 | 213.0 | 215.1 | 216.2 | 216.7 | 216.7 |
| 32.5° | 192.8 | 197.6 | 201.3 | 204.5 | 205.0 | 206.1 | 207.2 | 207.7 | 207.7 | 207.2 |
| 35° | 187.0 | 190.7 | 194.4 | 195.5 | 196.5 | 197.1 | 198.1 | 198.7 | 198.1 | 198.7 |
| 37.5° | 179.0 | 181.7 | 184.3 | 185.9 | 186.4 | 187.0 | 188.6 | 187.5 | 187.0 | 187.0 |
| 40° | 170.5 | 173.7 | 174.8 | 175.8 | 175.8 | 175.8 | 176.9 | 176.3 | 175.3 | 175.3 |
| 42.5° | 162.0 | 163.6 | 165.2 | 165.2 | 165.2 | 164.7 | 164.7 | 164.7 | 164.7 | 163.6 |
| 45° | 153.0 | 154.0 | 154.0 | 154.0 | 154.0 | 154.0 | 153.0 | 153.0 | 151.9 | 151.9 |
| 47.5° | 144.5 | 144.5 | 144.5 | 143.9 | 143.4 | 142.9 | 142.9 | 141.3 | 141.3 | 140.2 |
| 50° | 134.4 | 134.9 | 134.4 | 133.3 | 132.8 | 131.7 | 131.2 | 130.1 | 129.6 | 129.6 |
| 52.5° | 125.9 | 125.9 | 124.3 | 123.8 | 122.2 | 122.2 | 121.1 | 120.0 | 119.0 | 118.4 |
| 55° | 117.4 | 116.9 | 115.3 | 113.7 | 112.6 | 112.6 | 111.0 | 109.4 | 109.4 | 108.4 |
| 57.5° | 109.4 | 108.4 | 106.2 | 104.1 | 103.0 | 103.0 | 101.5 | 100.4 | 99.9 | 99.9 |
| 60° | 100.4 | 98.3 | 96.7 | 95.1 | 94.5 | 93.5 | 93.0 | 91.4 | 90.8 | 90.8 |
| 62.5° | 91.9 | 90.8 | 88.7 | 86.6 | 86.0 | 85.5 | 84.5 | 83.9 | 82.9 | 82.9 |
| 65° | 84.5 | 82.3 | 80.7 | 79.1 | 78.1 | 77.5 | 77.0 | 76.0 | 75.4 | 75.4 |
| 67.5° | 77.0 | 74.9 | 73.3 | 71.7 | 71.2 | 70.1 | 69.6 | 69.6 | 69.1 | 68.5 |
| 70° | 70.1 | 68.0 | 65.9 | 64.8 | 63.7 | 63.2 | 62.7 | 62.7 | 62.7 | 62.1 |
| 72.5° | 62.7 | 61.1 | 59.5 | 58.4 | 57.9 | 57.4 | 56.8 | 56.8 | 56.3 | 56.3 |
| 75° | 57.4 | 55.2 | 53.6 | 52.1 | 51.5 | 51.5 | 50.5 | 50.5 | 49.9 | 49.9 |
| 77.5° | 51.0 | 48.9 | 47.3 | 45.7 | 44.6 | 44.6 | 44.1 | 43.0 | 42.5 | 42.5 |
| 80° | 43.0 | 40.9 | 39.3 | 37.7 | 37.2 | 36.7 | 35.6 | 35.6 | 35.6 | 35.6 |
| 82.5° | 34.0 | 32.4 | 30.3 | 29.2 | 28.7 | 28.2 | 27.6 | 27.6 | 27.6 | 27.1 |
| 85° | 25.0 | 22.8 | 21.8 | 20.7 | 20.7 | 19.7 | 19.7 | 19.7 | 19.7 | 18.6 |
| 87.5° | 12.7 | 11.7 | 11.2 | 10.6 | 10.6 | 10.6 | 10.1 | 9.6 | 10.1 | 9.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)