

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: P188114

Luminaire Tested: **24SR-LD2-39-UNV-EL7W-L830-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188114
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-LD2-39-UNV-EL7W-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: 607.7 lumens
Efficiency: N/A
Efficacy: 98.0 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

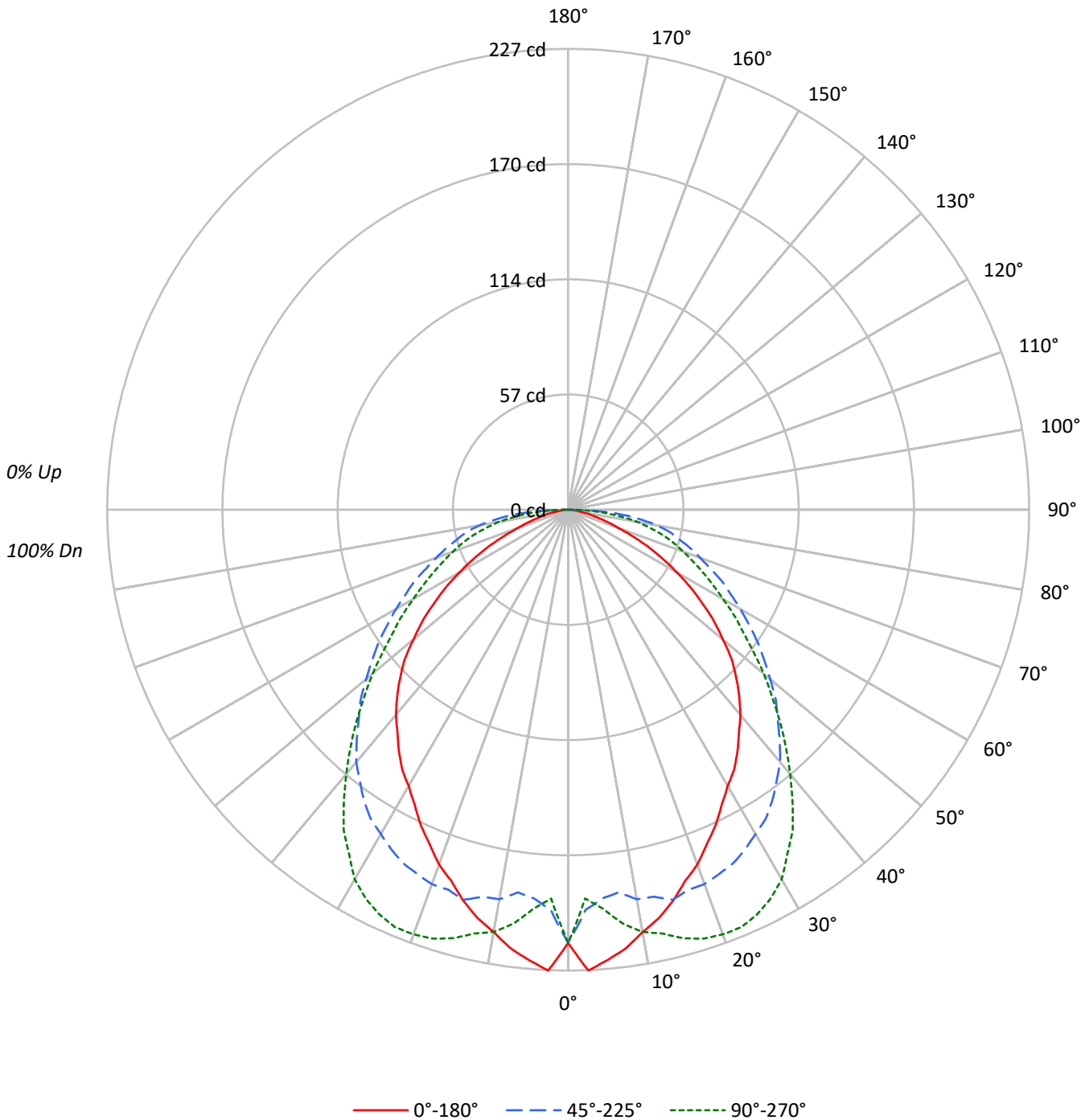
Input Watts (W): 6.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P188114

CATALOG NUMBER: 24SR-LD2-39-UNV-EL7W-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P188114

CATALOG NUMBER: 24SR-LD2-39-UNV-EL7W-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° | 287 | 287 | 287 |
| 5° | 297 | 256 | 265 |
| 10° | 281 | 259 | 285 |
| 15° | 267 | 266 | 299 |
| 20° | 253 | 266 | 310 |
| 25° | 239 | 266 | 316 |
| 30° | 225 | 263 | 313 |
| 35° | 217 | 260 | 301 |
| 40° | 206 | 252 | 281 |
| 45° | 194 | 240 | 261 |
| 50° | 177 | 229 | 242 |
| 55° | 157 | 219 | 223 |
| 60° | 133 | 208 | 210 |
| 65° | 106 | 200 | 202 |
| 70° | 74 | 190 | 198 |
| 75° | 50 | 187 | 198 |
| 80° | 28 | 183 | 189 |
| 85° | 12 | 144 | 152 |



TEST NUMBER: P188114

CATALOG NUMBER: 24SR-LD2-39-UNV-EL7W-L830-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 19.0 | 3.1 |
| 10°-20° | 55.7 | 9.2 |
| 20°-30° | 86.9 | 14.3 |
| 30°-40° | 104.5 | 17.2 |
| 40°-50° | 104.8 | 17.2 |
| 50°-60° | 92.1 | 15.2 |
| 60°-70° | 72.3 | 11.9 |
| 70°-80° | 50.6 | 8.3 |
| 80°-90° | 21.9 | 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° | 161.6 | 26.6 |
| 0°-40° | 266.1 | 43.8 |
| 0°-60° | 462.9 | 76.2 |
| 0°-90° | 607.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 607.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 213 | 213 | 213 | 213 | 213 | |
| 5° | 223 | 192 | 192 | 200 | 197 | 21 |
| 15° | 199 | 175 | 199 | 215 | 218 | 56 |
| 25° | 172 | 163 | 192 | 215 | 220 | 79 |
| 35° | 145 | 145 | 175 | 191 | 193 | 91 |
| 45° | 117 | 123 | 146 | 149 | 147 | 90 |
| 55° | 81 | 98 | 114 | 109 | 105 | 72 |
| 65° | 44 | 73 | 84 | 76 | 73 | 43 |
| 75° | 15 | 50 | 57 | 50 | 48 | 17 |
| 85° | 2 | 27 | 26 | 20 | 18 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P188114

CATALOG NUMBER: 24SR-LD2-39-UNV-EL7W-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 |
| 2.5° | 227.2 | 226.2 | 223.6 | 221.5 | 219.0 | 216.9 | 215.4 | 210.7 | 206.6 | 203.0 | 197.3 |
| 5° | 222.6 | 219.5 | 212.3 | 205.1 | 195.8 | 192.2 | 190.1 | 187.5 | 188.1 | 190.1 | 192.2 |
| 7.5° | 217.9 | 211.8 | 197.8 | 186.5 | 182.4 | 183.4 | 186.0 | 191.1 | 193.2 | 192.2 | 190.1 |
| 10° | 211.2 | 202.5 | 184.5 | 177.2 | 182.9 | 186.0 | 188.6 | 187.5 | 186.5 | 190.1 | 194.8 |
| 12.5° | 206.1 | 192.7 | 172.6 | 175.7 | 182.4 | 181.9 | 180.8 | 183.9 | 190.6 | 194.2 | 195.3 |
| 15° | 199.4 | 181.9 | 165.9 | 174.7 | 174.7 | 175.2 | 178.3 | 187.0 | 189.1 | 193.7 | 198.9 |
| 17.5° | 191.7 | 170.5 | 161.3 | 168.5 | 168.5 | 174.1 | 178.8 | 182.9 | 189.1 | 194.2 | 196.3 |
| 20° | 186.0 | 160.2 | 158.2 | 160.8 | 167.4 | 172.6 | 174.7 | 181.9 | 187.0 | 191.1 | 196.3 |
| 22.5° | 178.3 | 151.5 | 154.1 | 154.6 | 164.9 | 166.9 | 171.6 | 179.3 | 183.4 | 189.6 | 194.2 |
| 25° | 171.6 | 143.2 | 147.9 | 151.5 | 158.7 | 163.3 | 168.5 | 174.1 | 180.8 | 186.0 | 192.2 |
| 27.5° | 163.8 | 136.5 | 140.7 | 147.9 | 154.6 | 160.2 | 163.3 | 170.5 | 176.2 | 182.4 | 188.6 |
| 30° | 157.1 | 130.9 | 134.0 | 143.2 | 151.5 | 155.1 | 158.7 | 165.9 | 173.1 | 178.3 | 184.5 |
| 32.5° | 152.0 | 125.7 | 128.3 | 137.6 | 146.8 | 149.9 | 154.1 | 161.8 | 168.0 | 174.1 | 180.8 |
| 35° | 145.3 | 121.6 | 124.2 | 132.9 | 141.2 | 145.3 | 148.9 | 156.6 | 163.3 | 169.5 | 175.2 |
| 37.5° | 138.1 | 116.4 | 119.5 | 127.8 | 135.5 | 139.1 | 143.2 | 151.0 | 156.6 | 163.3 | 168.5 |
| 40° | 131.9 | 112.3 | 115.4 | 123.1 | 130.4 | 134.0 | 138.1 | 144.8 | 151.0 | 156.6 | 162.3 |
| 42.5° | 124.7 | 106.7 | 110.3 | 117.5 | 124.2 | 128.8 | 131.9 | 138.6 | 144.3 | 149.4 | 154.1 |
| 45° | 117.0 | 100.5 | 104.1 | 110.8 | 118.5 | 122.6 | 125.7 | 132.9 | 137.6 | 142.2 | 145.8 |
| 47.5° | 109.2 | 94.8 | 97.9 | 105.1 | 112.8 | 115.9 | 119.5 | 125.7 | 130.9 | 135.5 | 138.6 |
| 50° | 99.4 | 88.1 | 91.7 | 99.4 | 106.7 | 110.3 | 113.9 | 120.0 | 124.2 | 127.3 | 129.8 |
| 52.5° | 90.7 | 80.4 | 86.0 | 93.3 | 100.5 | 104.6 | 107.7 | 113.3 | 117.5 | 120.0 | 121.6 |
| 55° | 80.9 | 74.2 | 79.3 | 87.1 | 94.3 | 97.9 | 101.5 | 106.7 | 110.3 | 112.8 | 113.9 |
| 57.5° | 71.6 | 66.5 | 73.7 | 80.9 | 88.6 | 91.7 | 94.8 | 100.5 | 103.0 | 105.1 | 105.6 |
| 60° | 61.8 | 58.7 | 66.5 | 74.7 | 81.9 | 85.5 | 88.6 | 92.7 | 95.3 | 97.9 | 97.9 |
| 62.5° | 52.6 | 52.0 | 60.3 | 69.0 | 76.3 | 79.3 | 82.4 | 86.6 | 89.1 | 90.2 | 90.2 |
| 65° | 43.8 | 45.9 | 54.6 | 63.4 | 70.1 | 73.2 | 75.7 | 79.9 | 82.4 | 83.5 | 83.5 |
| 67.5° | 34.5 | 39.2 | 48.4 | 57.2 | 64.4 | 67.5 | 70.1 | 73.7 | 75.2 | 76.3 | 75.7 |
| 70° | 26.3 | 33.0 | 42.8 | 52.0 | 58.7 | 61.3 | 63.9 | 67.5 | 69.0 | 70.1 | 69.0 |
| 72.5° | 20.6 | 27.3 | 37.6 | 46.9 | 53.1 | 55.6 | 57.7 | 60.8 | 62.9 | 63.4 | 62.9 |
| 75° | 14.9 | 22.7 | 33.5 | 41.7 | 47.9 | 50.0 | 52.0 | 55.1 | 57.2 | 57.7 | 56.7 |
| 77.5° | 10.8 | 19.1 | 28.9 | 37.6 | 43.3 | 45.3 | 47.4 | 50.5 | 51.5 | 52.0 | 51.5 |
| 80° | 6.7 | 14.9 | 24.2 | 32.5 | 37.1 | 39.7 | 41.2 | 43.8 | 45.3 | 45.9 | 44.3 |
| 82.5° | 4.1 | 11.9 | 20.1 | 27.3 | 31.9 | 33.5 | 35.0 | 37.6 | 38.1 | 37.6 | 35.6 |
| 85° | 2.1 | 9.3 | 16.0 | 21.6 | 25.8 | 26.8 | 27.8 | 28.9 | 28.9 | 28.3 | 25.8 |
| 87.5° | 1.5 | 5.7 | 10.3 | 13.9 | 16.5 | 16.0 | 16.0 | 17.5 | 17.0 | 15.5 | 13.9 |
| 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: P188114

CATALOG NUMBER: 24SR-LD2-39-UNV-EL7W-L830-CD1-U

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 | 213.3 |
| 2.5° | 194.8 | 194.8 | 194.2 | 193.7 | 193.2 | 192.7 | 193.2 | 192.7 | 192.2 | 191.7 |
| 5° | 194.8 | 197.8 | 198.9 | 199.9 | 199.9 | 199.9 | 199.4 | 198.9 | 198.4 | 197.3 |
| 7.5° | 190.1 | 193.7 | 196.8 | 199.9 | 201.5 | 202.0 | 203.5 | 205.6 | 205.6 | 205.6 |
| 10° | 198.4 | 202.0 | 203.0 | 205.1 | 206.1 | 207.1 | 208.7 | 210.7 | 210.7 | 211.2 |
| 12.5° | 199.4 | 205.6 | 209.2 | 211.2 | 211.8 | 212.3 | 213.3 | 214.3 | 214.3 | 213.8 |
| 15° | 202.5 | 205.6 | 210.2 | 213.8 | 214.8 | 215.9 | 217.9 | 219.0 | 218.5 | 218.5 |
| 17.5° | 202.5 | 207.1 | 210.2 | 214.3 | 215.9 | 217.4 | 220.0 | 221.0 | 221.5 | 221.5 |
| 20° | 200.9 | 207.1 | 211.8 | 214.8 | 216.4 | 217.4 | 220.0 | 222.1 | 222.1 | 222.6 |
| 22.5° | 200.9 | 206.1 | 210.7 | 215.4 | 216.4 | 217.9 | 220.5 | 222.1 | 222.6 | 222.6 |
| 25° | 198.4 | 204.0 | 208.2 | 213.3 | 214.8 | 216.9 | 219.0 | 220.0 | 220.0 | 220.0 |
| 27.5° | 195.8 | 201.5 | 206.1 | 209.2 | 210.7 | 211.8 | 214.3 | 215.4 | 215.9 | 215.9 |
| 30° | 192.2 | 196.8 | 200.9 | 204.5 | 205.6 | 206.6 | 208.7 | 209.7 | 210.2 | 210.2 |
| 32.5° | 187.0 | 191.7 | 195.3 | 198.4 | 198.9 | 199.9 | 200.9 | 201.5 | 201.5 | 200.9 |
| 35° | 181.4 | 185.0 | 188.6 | 189.6 | 190.6 | 191.1 | 192.2 | 192.7 | 192.2 | 192.7 |
| 37.5° | 173.6 | 176.2 | 178.8 | 180.3 | 180.8 | 181.4 | 182.9 | 181.9 | 181.4 | 181.4 |
| 40° | 165.4 | 168.5 | 169.5 | 170.5 | 170.5 | 170.5 | 171.6 | 171.1 | 170.0 | 170.0 |
| 42.5° | 157.1 | 158.7 | 160.2 | 160.2 | 160.2 | 159.7 | 159.7 | 159.7 | 159.7 | 158.7 |
| 45° | 148.4 | 149.4 | 149.4 | 149.4 | 149.4 | 149.4 | 148.4 | 148.4 | 147.4 | 147.4 |
| 47.5° | 140.1 | 140.1 | 140.1 | 139.6 | 139.1 | 138.6 | 138.6 | 137.1 | 137.1 | 136.0 |
| 50° | 130.4 | 130.9 | 130.4 | 129.3 | 128.8 | 127.8 | 127.3 | 126.2 | 125.7 | 125.7 |
| 52.5° | 122.1 | 122.1 | 120.6 | 120.0 | 118.5 | 118.5 | 117.5 | 116.4 | 115.4 | 114.9 |
| 55° | 113.9 | 113.3 | 111.8 | 110.3 | 109.2 | 109.2 | 107.7 | 106.1 | 106.1 | 105.1 |
| 57.5° | 106.1 | 105.1 | 103.0 | 101.0 | 100.0 | 100.0 | 98.4 | 97.4 | 96.9 | 96.9 |
| 60° | 97.4 | 95.3 | 93.8 | 92.2 | 91.7 | 90.7 | 90.2 | 88.6 | 88.1 | 88.1 |
| 62.5° | 89.1 | 88.1 | 86.0 | 84.0 | 83.5 | 83.0 | 81.9 | 81.4 | 80.4 | 80.4 |
| 65° | 81.9 | 79.9 | 78.3 | 76.8 | 75.7 | 75.2 | 74.7 | 73.7 | 73.2 | 73.2 |
| 67.5° | 74.7 | 72.6 | 71.1 | 69.6 | 69.0 | 68.0 | 67.5 | 67.5 | 67.0 | 66.5 |
| 70° | 68.0 | 65.9 | 63.9 | 62.9 | 61.8 | 61.3 | 60.8 | 60.8 | 60.8 | 60.3 |
| 72.5° | 60.8 | 59.3 | 57.7 | 56.7 | 56.2 | 55.6 | 55.1 | 55.1 | 54.6 | 54.6 |
| 75° | 55.6 | 53.6 | 52.0 | 50.5 | 50.0 | 50.0 | 48.9 | 48.9 | 48.4 | 48.4 |
| 77.5° | 49.5 | 47.4 | 45.9 | 44.3 | 43.3 | 43.3 | 42.8 | 41.7 | 41.2 | 41.2 |
| 80° | 41.7 | 39.7 | 38.1 | 36.6 | 36.1 | 35.6 | 34.5 | 34.5 | 34.5 | 34.5 |
| 82.5° | 33.0 | 31.4 | 29.4 | 28.3 | 27.8 | 27.3 | 26.8 | 26.8 | 26.8 | 26.3 |
| 85° | 24.2 | 22.2 | 21.1 | 20.1 | 20.1 | 19.1 | 19.1 | 19.1 | 19.1 | 18.0 |
| 87.5° | 12.4 | 11.3 | 10.8 | 10.3 | 10.3 | 10.3 | 9.8 | 9.3 | 9.8 | 9.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)