

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: PORTFOLIO

Report Number: P#

Luminaire Tested: **LD4C08D010 EX4C089050 4LBCSSQMMS**

Issue Date: 5/25/2022



Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209253)
Test Lab: INNOVATION CENTER
Issue Date: 5/25/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C08D010 EX4C089050 4LBCSSQMMS
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

Summary

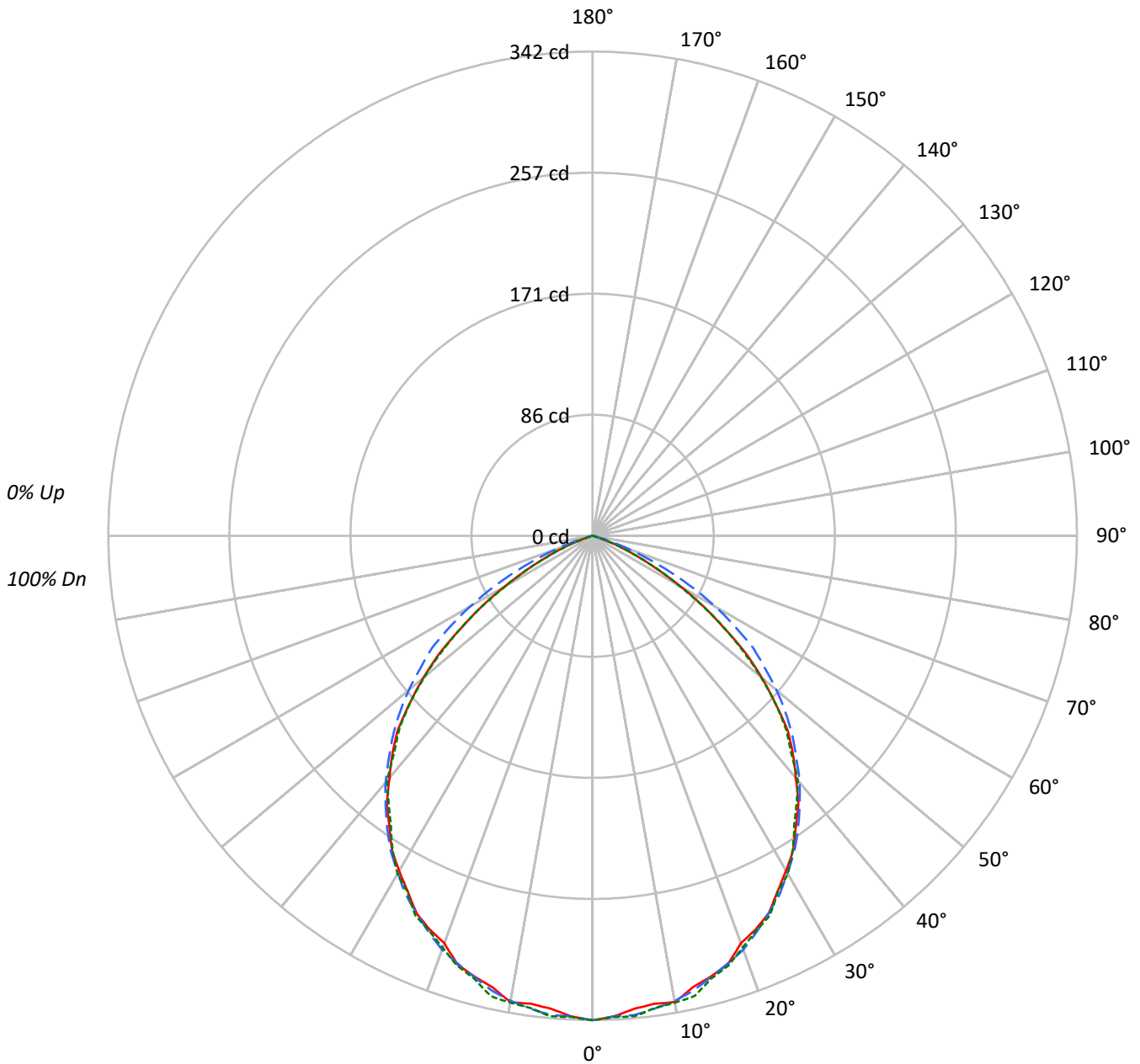
Lumens per Lamp: N/A
Luminaire Lumens: 731.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.87
Input Voltage (V):
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: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBCSSQMMS

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBCSSQMMS

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 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 96 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | | | 89 | | | |
| 2 | 103 | 96 | 91 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 86 | 79 | 74 | 93 | 85 | 78 | 73 | 82 | 76 | 72 | 79 | 74 | 71 | 77 | 73 | 69 | 67 | | | | | 67 | | | |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 63 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | 59 | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 49 | 44 | 54 | 48 | 43 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 39 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 33 | | | | | 33 | | | |
| 10 | 57 | 45 | 38 | 33 | 56 | 44 | 37 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 31 | | | | | 31 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 33018 | 33018 | 33018 |
| 5° | 32486 | 32912 | 32999 |
| 10° | 32764 | 32675 | 32813 |
| 15° | 32195 | 32235 | 32335 |
| 20° | 31441 | 31944 | 31790 |
| 25° | 31311 | 31311 | 31513 |
| 30° | 30439 | 30650 | 30706 |
| 35° | 29483 | 29778 | 29259 |
| 40° | 28101 | 28655 | 28403 |
| 45° | 26595 | 27196 | 26336 |
| 50° | 23417 | 25459 | 23282 |
| 55° | 18976 | 23299 | 19060 |
| 60° | 13875 | 19317 | 13605 |
| 65° | 8425 | 13767 | 8219 |
| 70° | 3301 | 7420 | 3160 |
| 75° | 373 | 2013 | 373 |
| 80° | 278 | 278 | 278 |
| 85° | 0 | 0 | 0 |



TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBCSSQMMS

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 32.3 | 4.4 |
| 10°-20° | 91.4 | 12.5 |
| 20°-30° | 135.6 | 18.6 |
| 30°-40° | 157.1 | 21.5 |
| 40°-50° | 150.7 | 20.6 |
| 50°-60° | 110.8 | 15.2 |
| 60°-70° | 47.8 | 6.5 |
| 70°-80° | 5.2 | 0.7 |
| 80°-90° | 0.1 | 0.0 |
| 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° | 259.3 | 35.5 |
| 0°-40° | 416.5 | 57.0 |
| 0°-60° | 677.9 | 92.7 |
| 0°-90° | 731.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 731.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 342 | 342 | 342 | 342 | 342 | |
| 5° | 335 | 339 | 340 | 340 | 341 | 32 |
| 15° | 322 | 324 | 323 | 323 | 324 | 91 |
| 25° | 294 | 294 | 294 | 295 | 296 | 135 |
| 35° | 250 | 252 | 253 | 252 | 248 | 157 |
| 45° | 195 | 195 | 199 | 196 | 193 | 148 |
| 55° | 113 | 124 | 138 | 124 | 113 | 101 |
| 65° | 37 | 46 | 60 | 46 | 36 | 38 |
| 75° | 1 | 2 | 5 | 1 | 1 | 3 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBCSSQMMS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 |
| 2.5° | 339.8 | 343.7 | 344.1 | 341.7 | 340.7 | 339.3 | 342.7 | 340.3 | 341.2 | 340.3 | 339.8 |
| 5° | 335.4 | 339.8 | 340.3 | 340.3 | 339.3 | 338.8 | 340.3 | 339.8 | 339.3 | 338.3 | 339.8 |
| 7.5° | 333.5 | 335.9 | 338.3 | 335.4 | 336.8 | 336.4 | 339.8 | 338.3 | 337.8 | 337.8 | 336.8 |
| 10° | 334.4 | 333.9 | 335.9 | 333.0 | 333.9 | 333.0 | 335.9 | 335.9 | 334.9 | 333.9 | 333.5 |
| 12.5° | 326.6 | 330.5 | 330.5 | 330.0 | 329.1 | 327.6 | 330.5 | 332.5 | 329.6 | 329.6 | 329.1 |
| 15° | 322.3 | 323.2 | 323.7 | 323.7 | 323.2 | 324.2 | 325.7 | 323.7 | 324.2 | 321.8 | 322.7 |
| 17.5° | 317.4 | 315.5 | 316.9 | 315.9 | 316.4 | 317.4 | 319.4 | 319.4 | 316.4 | 315.9 | 316.9 |
| 20° | 306.2 | 312.1 | 312.6 | 309.6 | 310.1 | 310.1 | 313.5 | 310.6 | 312.6 | 310.1 | 311.1 |
| 22.5° | 300.9 | 304.8 | 305.3 | 301.4 | 303.8 | 300.9 | 304.3 | 299.9 | 304.8 | 301.4 | 302.8 |
| 25° | 294.1 | 293.6 | 295.0 | 293.1 | 293.6 | 293.6 | 296.0 | 294.1 | 295.5 | 293.6 | 294.1 |
| 27.5° | 282.9 | 286.8 | 286.3 | 284.4 | 285.3 | 284.8 | 289.7 | 284.4 | 287.3 | 284.8 | 285.8 |
| 30° | 273.2 | 276.6 | 275.6 | 273.7 | 273.7 | 272.2 | 277.6 | 276.1 | 275.6 | 275.6 | 275.1 |
| 32.5° | 263.5 | 263.9 | 263.0 | 263.5 | 263.9 | 262.0 | 266.4 | 264.4 | 263.9 | 264.4 | 264.9 |
| 35° | 250.3 | 250.3 | 251.3 | 249.8 | 251.8 | 251.8 | 255.7 | 253.2 | 252.8 | 251.3 | 252.8 |
| 37.5° | 238.7 | 237.2 | 237.7 | 237.7 | 238.7 | 239.6 | 241.6 | 240.6 | 240.6 | 239.2 | 240.1 |
| 40° | 223.1 | 222.1 | 223.6 | 223.6 | 225.1 | 225.1 | 227.0 | 226.0 | 227.5 | 227.5 | 227.5 |
| 42.5° | 209.5 | 209.5 | 208.5 | 210.0 | 210.5 | 210.0 | 213.4 | 212.9 | 213.4 | 212.4 | 212.9 |
| 45° | 194.9 | 194.9 | 193.9 | 193.5 | 195.9 | 195.4 | 199.3 | 197.8 | 199.8 | 198.8 | 199.3 |
| 47.5° | 175.0 | 177.4 | 176.0 | 177.4 | 180.3 | 180.8 | 183.2 | 182.3 | 184.2 | 182.8 | 184.7 |
| 50° | 156.0 | 156.0 | 157.5 | 159.4 | 162.3 | 162.8 | 165.8 | 167.7 | 168.7 | 169.1 | 169.6 |
| 52.5° | 136.1 | 135.6 | 137.1 | 139.5 | 141.9 | 143.9 | 146.8 | 149.7 | 151.7 | 154.6 | 153.1 |
| 55° | 112.8 | 113.7 | 115.2 | 118.1 | 122.0 | 124.4 | 126.9 | 130.8 | 134.2 | 135.6 | 138.5 |
| 57.5° | 92.8 | 91.9 | 92.8 | 96.7 | 101.1 | 103.0 | 106.5 | 110.3 | 115.2 | 118.1 | 119.1 |
| 60° | 71.9 | 72.4 | 73.4 | 76.8 | 80.2 | 83.1 | 84.6 | 90.9 | 95.3 | 98.2 | 100.1 |
| 62.5° | 53.0 | 54.0 | 54.9 | 57.9 | 61.2 | 63.7 | 66.1 | 71.5 | 75.3 | 78.3 | 80.2 |
| 65° | 36.9 | 37.4 | 38.9 | 40.3 | 43.7 | 46.2 | 48.1 | 52.5 | 56.4 | 58.8 | 60.3 |
| 67.5° | 22.8 | 23.3 | 24.3 | 26.3 | 28.7 | 30.6 | 32.6 | 35.5 | 38.9 | 41.3 | 41.8 |
| 70° | 11.7 | 12.2 | 12.6 | 14.1 | 16.0 | 17.0 | 18.5 | 20.9 | 23.3 | 25.3 | 26.3 |
| 72.5° | 3.9 | 3.9 | 4.4 | 5.4 | 6.3 | 7.3 | 7.8 | 10.2 | 12.2 | 13.1 | 13.6 |
| 75° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 2.9 | 3.9 | 4.9 | 5.4 |
| 77.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 1.0 |
| 80° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 82.5° | 0.0 | 0.0 | 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 |



TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089050 4LBCSSQMMS

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 | 342.2 |
| 2.5° | 342.2 | 341.2 | 340.7 | 341.2 | 341.2 | 340.7 | 342.2 | 344.1 | 346.6 | 340.3 |
| 5° | 341.7 | 340.7 | 341.7 | 338.8 | 340.3 | 339.3 | 341.2 | 340.7 | 342.7 | 340.7 |
| 7.5° | 340.3 | 338.3 | 338.8 | 337.3 | 339.3 | 336.8 | 338.3 | 341.2 | 339.3 | 336.4 |
| 10° | 335.4 | 334.4 | 337.8 | 333.0 | 332.0 | 333.9 | 337.8 | 334.9 | 333.9 | 334.9 |
| 12.5° | 330.5 | 330.5 | 332.0 | 328.1 | 328.6 | 329.6 | 331.5 | 329.6 | 330.5 | 333.0 |
| 15° | 325.2 | 324.2 | 326.6 | 323.7 | 323.2 | 322.3 | 324.2 | 324.2 | 325.2 | 323.7 |
| 17.5° | 318.9 | 317.4 | 317.4 | 316.4 | 315.9 | 318.4 | 319.4 | 319.8 | 320.3 | 318.4 |
| 20° | 311.1 | 310.6 | 312.1 | 310.6 | 311.1 | 311.6 | 311.6 | 310.6 | 315.0 | 309.6 |
| 22.5° | 302.8 | 304.3 | 302.3 | 301.4 | 302.3 | 303.3 | 303.3 | 303.8 | 302.8 | 301.8 |
| 25° | 294.6 | 295.5 | 296.0 | 293.1 | 294.6 | 293.1 | 296.5 | 297.0 | 295.0 | 296.0 |
| 27.5° | 287.3 | 285.8 | 285.3 | 283.4 | 284.4 | 283.9 | 284.4 | 284.4 | 287.3 | 283.4 |
| 30° | 276.1 | 274.6 | 275.1 | 273.7 | 274.1 | 273.7 | 274.1 | 274.1 | 276.1 | 275.6 |
| 32.5° | 265.4 | 263.9 | 264.4 | 263.0 | 263.0 | 263.5 | 262.5 | 262.5 | 263.9 | 263.0 |
| 35° | 255.2 | 251.8 | 252.3 | 251.8 | 252.3 | 250.3 | 250.3 | 249.8 | 250.8 | 248.4 |
| 37.5° | 240.6 | 239.2 | 238.7 | 238.2 | 238.7 | 237.7 | 238.7 | 237.2 | 238.7 | 236.7 |
| 40° | 227.5 | 226.5 | 227.0 | 224.1 | 224.1 | 224.6 | 223.6 | 223.1 | 223.6 | 225.5 |
| 42.5° | 214.4 | 212.4 | 211.5 | 210.5 | 211.0 | 209.5 | 209.0 | 208.0 | 209.0 | 207.1 |
| 45° | 198.8 | 198.8 | 198.3 | 195.9 | 196.4 | 196.4 | 194.4 | 192.5 | 193.0 | 193.0 |
| 47.5° | 184.7 | 183.7 | 183.2 | 180.8 | 180.3 | 179.9 | 177.9 | 176.4 | 176.4 | 175.0 |
| 50° | 169.1 | 168.2 | 166.7 | 164.3 | 163.3 | 160.4 | 159.0 | 157.0 | 155.1 | 155.1 |
| 52.5° | 154.6 | 151.2 | 149.2 | 145.3 | 143.9 | 142.4 | 138.5 | 137.1 | 135.6 | 134.2 |
| 55° | 137.1 | 134.2 | 130.3 | 125.9 | 124.0 | 121.5 | 117.6 | 114.7 | 112.8 | 113.3 |
| 57.5° | 120.1 | 115.2 | 111.3 | 105.5 | 103.0 | 101.6 | 97.7 | 93.8 | 91.9 | 91.9 |
| 60° | 99.2 | 95.3 | 90.4 | 85.1 | 83.1 | 80.7 | 75.8 | 73.4 | 71.9 | 70.5 |
| 62.5° | 79.2 | 76.3 | 71.9 | 65.1 | 63.7 | 61.2 | 57.9 | 54.9 | 53.5 | 53.5 |
| 65° | 59.3 | 56.4 | 52.5 | 47.6 | 45.7 | 43.7 | 40.8 | 37.9 | 36.5 | 36.0 |
| 67.5° | 41.8 | 38.4 | 35.0 | 31.1 | 29.6 | 28.7 | 25.8 | 23.8 | 22.8 | 22.4 |
| 70° | 25.3 | 23.3 | 20.9 | 18.0 | 16.5 | 15.5 | 13.6 | 12.2 | 11.7 | 11.2 |
| 72.5° | 13.1 | 11.7 | 9.7 | 7.8 | 6.8 | 5.8 | 4.9 | 3.9 | 3.4 | 3.4 |
| 75° | 4.9 | 3.9 | 2.4 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 77.5° | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 80° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 82.5° | 0.0 | 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 |
| 87.5° | 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 |



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°









(END OF REPORT)