

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P976571

Luminaire Tested: 22SR-LD2-C-20-UNV-L940-CD1-PG-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976571
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 22SR-LD2-C-20-UNV-L940-CD1-PG-U
Description: METALUX SKYRIDGE 2x2 2000LM PACKAGE 90CRI 4000K TROFFER with Primary Green SKYTRII
Light Source: 4000K CCT, 90+ CRI LEDS
Ballast/Driver: -

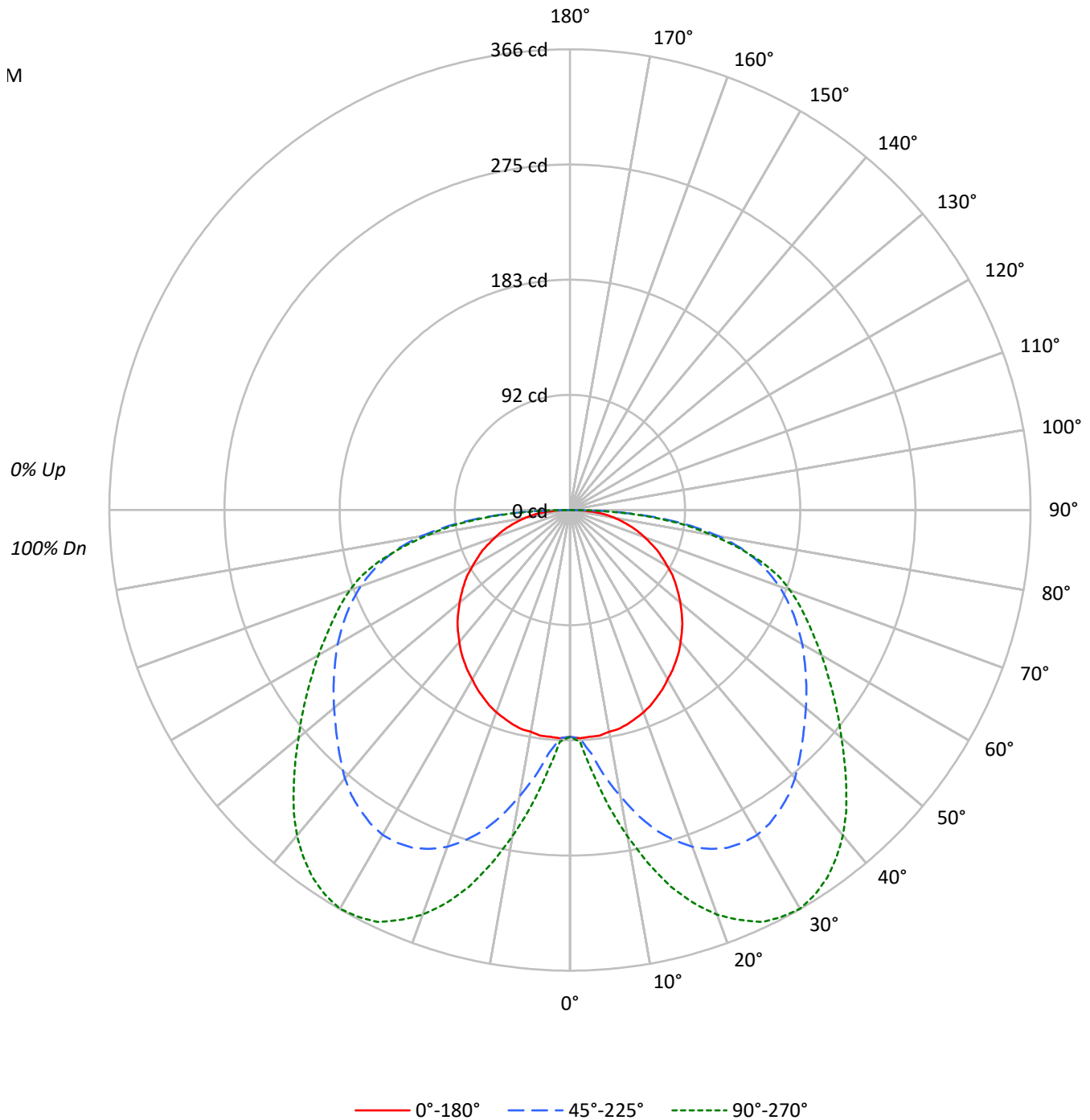
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1136.0 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 2.2 / 2
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 13.8
Input Voltage (V): 120
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: 28.75 FT

TEST NUMBER: P976571
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L940-CD1-PG-U

Luminous Intensity Polar Plot





TEST NUMBER: P976571

CATALOG NUMBER: 22SR-LD2-C-20-UNV-L940-CD1-PG-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 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1 | 106 | 100 | 95 | 90 | 103 | 98 | 93 | 89 | 93 | 89 | 86 | 89 | 86 | 83 | 86 | 83 | 80 | 86 | 83 | 80 | 78 |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 76 | 69 | 80 | 73 | 68 | 76 | 71 | 66 | 73 | 69 | 65 | 73 | 69 | 65 | 62 |
| 3 | 86 | 73 | 64 | 57 | 83 | 72 | 63 | 56 | 69 | 61 | 55 | 66 | 59 | 54 | 63 | 58 | 53 | 63 | 58 | 53 | 51 |
| 4 | 78 | 64 | 54 | 47 | 75 | 63 | 54 | 46 | 60 | 52 | 46 | 58 | 51 | 45 | 55 | 49 | 44 | 55 | 49 | 44 | 42 |
| 5 | 71 | 57 | 47 | 39 | 69 | 56 | 46 | 39 | 53 | 45 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 49 | 43 | 38 | 35 |
| 6 | 65 | 51 | 41 | 34 | 63 | 50 | 40 | 34 | 48 | 39 | 33 | 46 | 39 | 33 | 44 | 38 | 33 | 44 | 38 | 33 | 30 |
| 7 | 60 | 45 | 36 | 29 | 58 | 45 | 36 | 29 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 33 | 28 | 40 | 33 | 28 | 26 |
| 8 | 56 | 41 | 32 | 26 | 54 | 40 | 32 | 26 | 39 | 31 | 25 | 38 | 31 | 25 | 37 | 30 | 25 | 37 | 30 | 25 | 23 |
| 9 | 52 | 38 | 29 | 23 | 50 | 37 | 29 | 23 | 36 | 28 | 23 | 35 | 28 | 22 | 34 | 27 | 22 | 34 | 27 | 22 | 20 |
| 10 | 49 | 34 | 26 | 20 | 47 | 34 | 26 | 20 | 33 | 25 | 20 | 32 | 25 | 20 | 31 | 25 | 20 | 31 | 25 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 485 | 485 | 485 |
| 5° | 488 | 524 | 567 |
| 10° | 489 | 631 | 719 |
| 15° | 491 | 733 | 863 |
| 20° | 490 | 816 | 980 |
| 25° | 486 | 879 | 1072 |
| 30° | 483 | 926 | 1136 |
| 35° | 482 | 955 | 1171 |
| 40° | 481 | 977 | 1185 |
| 45° | 481 | 994 | 1181 |
| 50° | 479 | 1024 | 1178 |
| 55° | 481 | 1073 | 1197 |
| 60° | 482 | 1147 | 1243 |
| 65° | 490 | 1248 | 1324 |
| 70° | 496 | 1392 | 1464 |
| 75° | 520 | 1593 | 1627 |
| 80° | 561 | 1864 | 1784 |
| 85° | 630 | 2174 | 2053 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 2313 cd/sqm



TEST NUMBER: P976571
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 19.6 | 1.7 |
| 10°-20° | 71.9 | 6.3 |
| 20°-30° | 129.7 | 11.4 |
| 30°-40° | 171.8 | 15.1 |
| 40°-50° | 188.6 | 16.6 |
| 50°-60° | 186.5 | 16.4 |
| 60°-70° | 171.3 | 15.1 |
| 70°-80° | 137.0 | 12.1 |
| 80°-90° | 59.7 | 5.3 |
| 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° | 221.2 | 19.5 |
| 0°-40° | 393.0 | 34.6 |
| 0°-60° | 768.1 | 67.6 |
| 0°-90° | 1136.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1136.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 180 | 180 | 180 | 180 | 180 | |
| 5° | 181 | 182 | 194 | 206 | 210 | 17 |
| 15° | 176 | 211 | 263 | 296 | 310 | 50 |
| 25° | 164 | 225 | 296 | 344 | 361 | 76 |
| 35° | 147 | 217 | 291 | 339 | 356 | 92 |
| 45° | 126 | 196 | 261 | 299 | 310 | 97 |
| 55° | 103 | 171 | 229 | 251 | 255 | 92 |
| 65° | 77 | 144 | 196 | 206 | 208 | 76 |
| 75° | 50 | 110 | 153 | 156 | 156 | 53 |
| 85° | 20 | 50 | 70 | 66 | 66 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976571
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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 |
| 2.5° | 181.5 | 181.5 | 180.8 | 181.5 | 180.8 | 181.5 | 180.8 | 180.8 | 181.5 | 181.5 | 182.2 |
| 5° | 180.8 | 180.8 | 180.8 | 180.8 | 181.5 | 182.9 | 184.8 | 187.5 | 190.7 | 194.0 | 197.3 |
| 7.5° | 180.8 | 180.8 | 180.8 | 181.5 | 184.8 | 190.1 | 196.0 | 201.9 | 208.4 | 213.7 | 218.4 |
| 10° | 178.9 | 179.6 | 179.6 | 183.5 | 190.7 | 199.3 | 208.4 | 215.8 | 223.6 | 230.9 | 237.4 |
| 12.5° | 178.2 | 178.9 | 180.2 | 187.5 | 198.0 | 209.8 | 219.7 | 229.5 | 239.4 | 248.0 | 255.9 |
| 15° | 176.2 | 176.2 | 180.8 | 191.4 | 204.5 | 217.0 | 229.5 | 241.3 | 252.6 | 263.1 | 272.3 |
| 17.5° | 173.6 | 173.6 | 180.8 | 194.7 | 209.1 | 223.6 | 237.4 | 250.6 | 263.8 | 274.9 | 285.4 |
| 20° | 171.0 | 171.7 | 180.8 | 197.3 | 213.1 | 229.5 | 244.0 | 258.5 | 272.3 | 284.8 | 296.6 |
| 22.5° | 167.8 | 168.3 | 180.8 | 198.6 | 215.8 | 232.8 | 248.7 | 263.8 | 278.2 | 291.4 | 303.9 |
| 25° | 163.8 | 165.7 | 179.6 | 198.0 | 216.4 | 234.1 | 250.6 | 267.0 | 282.8 | 296.0 | 309.2 |
| 27.5° | 159.9 | 162.5 | 177.6 | 196.6 | 215.8 | 234.1 | 251.2 | 268.4 | 283.5 | 297.9 | 311.1 |
| 30° | 155.3 | 158.5 | 175.6 | 195.4 | 214.4 | 232.8 | 250.6 | 267.7 | 283.5 | 297.9 | 311.1 |
| 32.5° | 151.3 | 155.3 | 172.9 | 192.7 | 211.8 | 230.2 | 248.0 | 265.1 | 280.9 | 295.3 | 308.5 |
| 35° | 146.7 | 150.6 | 169.0 | 188.7 | 207.9 | 226.2 | 244.0 | 260.5 | 276.9 | 290.7 | 303.9 |
| 37.5° | 142.1 | 146.7 | 165.1 | 184.8 | 203.9 | 222.3 | 239.4 | 255.9 | 271.0 | 285.4 | 297.9 |
| 40° | 136.8 | 142.1 | 160.4 | 180.2 | 198.6 | 216.4 | 233.5 | 249.2 | 264.4 | 278.2 | 290.0 |
| 42.5° | 131.6 | 137.5 | 155.3 | 175.0 | 193.3 | 211.1 | 227.6 | 242.7 | 257.1 | 269.6 | 280.9 |
| 45° | 126.3 | 132.8 | 150.6 | 169.0 | 187.5 | 204.5 | 220.4 | 235.5 | 248.7 | 261.1 | 271.6 |
| 47.5° | 120.3 | 127.5 | 145.3 | 163.8 | 181.5 | 198.0 | 213.7 | 228.3 | 241.3 | 252.6 | 262.4 |
| 50° | 114.5 | 122.4 | 140.1 | 157.8 | 175.0 | 192.1 | 207.2 | 220.9 | 233.5 | 244.7 | 253.8 |
| 52.5° | 108.5 | 117.1 | 134.2 | 151.9 | 169.0 | 185.5 | 200.6 | 213.7 | 226.2 | 236.8 | 244.7 |
| 55° | 102.6 | 111.2 | 128.9 | 146.0 | 163.1 | 178.9 | 194.0 | 207.2 | 219.0 | 228.8 | 236.1 |
| 57.5° | 96.7 | 105.9 | 123.0 | 139.5 | 156.5 | 172.9 | 187.5 | 200.6 | 211.8 | 220.9 | 228.3 |
| 60° | 89.5 | 99.9 | 116.4 | 133.5 | 150.0 | 166.4 | 180.8 | 193.3 | 204.5 | 213.1 | 219.7 |
| 62.5° | 82.9 | 94.1 | 110.5 | 127.0 | 143.4 | 159.2 | 173.6 | 186.1 | 196.6 | 204.5 | 210.5 |
| 65° | 77.0 | 87.4 | 103.9 | 119.7 | 136.1 | 152.6 | 166.4 | 178.9 | 188.7 | 196.0 | 201.2 |
| 67.5° | 69.7 | 80.9 | 96.7 | 112.4 | 128.9 | 144.7 | 158.5 | 170.4 | 180.2 | 186.8 | 191.4 |
| 70° | 63.1 | 74.4 | 89.5 | 105.2 | 121.0 | 136.1 | 150.0 | 161.8 | 170.4 | 176.9 | 180.2 |
| 72.5° | 56.6 | 67.7 | 82.2 | 97.3 | 112.4 | 127.5 | 140.7 | 151.3 | 159.9 | 165.7 | 168.3 |
| 75° | 50.0 | 60.5 | 74.4 | 88.8 | 102.6 | 117.1 | 130.2 | 140.7 | 147.9 | 153.2 | 155.3 |
| 77.5° | 42.7 | 53.3 | 65.8 | 79.0 | 92.1 | 105.9 | 117.7 | 127.5 | 134.9 | 138.8 | 140.7 |
| 80° | 36.2 | 44.7 | 55.9 | 68.4 | 80.2 | 92.7 | 103.2 | 111.8 | 117.7 | 120.3 | 119.7 |
| 82.5° | 29.0 | 35.5 | 44.7 | 55.2 | 65.1 | 75.6 | 84.8 | 92.1 | 96.0 | 97.3 | 97.3 |
| 85° | 20.4 | 24.3 | 30.9 | 38.2 | 46.1 | 54.0 | 61.2 | 66.5 | 69.7 | 70.4 | 70.4 |
| 87.5° | 10.5 | 11.8 | 14.4 | 18.4 | 22.3 | 26.9 | 32.2 | 35.5 | 36.8 | 37.5 | 37.5 |
| 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: P976571

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CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 | 180.2 |
| 2.5° | 182.2 | 182.9 | 183.5 | 183.5 | 183.5 | 184.2 | 184.2 | 184.2 |
| 5° | 200.0 | 203.2 | 205.2 | 206.5 | 207.9 | 209.1 | 210.5 | 209.8 |
| 7.5° | 222.3 | 226.2 | 229.5 | 232.2 | 234.1 | 236.1 | 237.4 | 237.4 |
| 10° | 242.7 | 248.0 | 252.6 | 256.5 | 259.8 | 261.1 | 263.1 | 263.1 |
| 12.5° | 263.1 | 269.0 | 274.2 | 279.5 | 282.8 | 285.4 | 287.4 | 287.4 |
| 15° | 280.2 | 287.4 | 293.4 | 299.2 | 303.9 | 307.1 | 308.5 | 309.7 |
| 17.5° | 294.6 | 302.5 | 309.7 | 316.4 | 321.0 | 324.3 | 326.2 | 327.5 |
| 20° | 305.8 | 315.0 | 322.9 | 329.5 | 335.4 | 338.7 | 340.7 | 342.1 |
| 22.5° | 314.3 | 324.3 | 332.8 | 340.0 | 345.3 | 349.3 | 351.9 | 352.5 |
| 25° | 320.3 | 330.8 | 340.0 | 347.2 | 353.2 | 357.2 | 359.7 | 361.1 |
| 27.5° | 322.9 | 333.5 | 343.3 | 351.2 | 357.2 | 361.8 | 363.7 | 364.4 |
| 30° | 323.6 | 334.1 | 344.0 | 351.9 | 358.4 | 362.3 | 364.4 | 365.7 |
| 32.5° | 321.0 | 331.5 | 341.4 | 349.3 | 355.1 | 359.1 | 361.8 | 362.3 |
| 35° | 315.7 | 326.2 | 335.4 | 343.3 | 349.3 | 353.2 | 355.8 | 356.5 |
| 37.5° | 309.2 | 319.0 | 328.2 | 335.4 | 341.4 | 345.3 | 347.2 | 347.9 |
| 40° | 300.6 | 310.4 | 318.3 | 325.6 | 330.8 | 334.1 | 336.8 | 337.4 |
| 42.5° | 291.4 | 300.6 | 308.5 | 314.3 | 319.0 | 322.9 | 324.3 | 324.9 |
| 45° | 280.9 | 289.4 | 296.6 | 301.8 | 305.8 | 309.2 | 310.4 | 310.4 |
| 47.5° | 271.0 | 278.9 | 284.8 | 289.4 | 292.0 | 294.6 | 295.3 | 296.0 |
| 50° | 261.1 | 267.7 | 273.0 | 276.3 | 278.9 | 280.9 | 281.5 | 281.5 |
| 52.5° | 251.9 | 257.1 | 261.1 | 264.4 | 265.7 | 267.7 | 268.4 | 268.4 |
| 55° | 242.7 | 246.6 | 249.9 | 251.9 | 253.2 | 254.5 | 254.5 | 255.2 |
| 57.5° | 233.5 | 236.8 | 238.7 | 240.1 | 241.3 | 242.0 | 242.7 | 242.7 |
| 60° | 223.6 | 226.2 | 227.6 | 228.3 | 228.8 | 230.2 | 230.2 | 230.9 |
| 62.5° | 213.7 | 215.8 | 216.4 | 217.0 | 217.7 | 218.4 | 219.0 | 219.0 |
| 65° | 203.2 | 204.5 | 205.2 | 205.8 | 206.5 | 207.2 | 208.4 | 207.9 |
| 67.5° | 192.7 | 193.3 | 194.0 | 194.7 | 195.4 | 196.6 | 197.3 | 197.3 |
| 70° | 181.5 | 181.5 | 182.2 | 182.9 | 183.5 | 184.8 | 185.5 | 186.1 |
| 72.5° | 169.7 | 169.0 | 169.7 | 170.4 | 171.7 | 172.9 | 173.6 | 173.6 |
| 75° | 155.8 | 155.8 | 155.8 | 155.8 | 155.8 | 156.5 | 156.5 | 156.5 |
| 77.5° | 140.1 | 136.8 | 136.1 | 135.5 | 135.5 | 135.5 | 135.5 | 136.1 |
| 80° | 118.4 | 115.7 | 115.1 | 114.5 | 115.1 | 115.1 | 115.1 | 115.1 |
| 82.5° | 96.0 | 93.4 | 92.7 | 92.1 | 92.1 | 92.1 | 92.1 | 92.7 |
| 85° | 69.1 | 67.7 | 67.0 | 65.8 | 66.5 | 66.5 | 67.0 | 66.5 |
| 87.5° | 37.5 | 35.5 | 35.5 | 34.8 | 36.2 | 35.5 | 35.5 | 34.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976571
 CATALOG NUMBER: 22SR-LD2-C-20-UNV-L940-CD1-PG-U

CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|------|------|------|------|----------------|------|------|------|------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room Dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 10.3 | 12.1 | 10.6 | 12.4 | 12.7 | 13.5 | 15.3 | 13.9 | 15.6 | 15.9 |
| | 3H | 12.2 | 13.8 | 12.6 | 14.2 | 14.5 | 16.2 | 17.8 | 16.5 | 18.1 | 18.5 |
| | 4H | 13.0 | 14.6 | 13.4 | 14.9 | 15.3 | 17.4 | 19.0 | 17.8 | 19.3 | 19.7 |
| | 6H | 13.7 | 15.1 | 14.1 | 15.5 | 15.9 | 18.5 | 20.0 | 18.9 | 20.3 | 20.7 |
| | 8H | 13.9 | 15.3 | 14.3 | 15.7 | 16.1 | 19.0 | 20.3 | 19.4 | 20.7 | 21.1 |
| | 12H | 14.1 | 15.5 | 14.5 | 15.8 | 16.3 | 19.3 | 20.7 | 19.8 | 21.1 | 21.5 |
| 4H | 2H | 12.1 | 13.7 | 12.5 | 14.0 | 14.4 | 14.3 | 15.8 | 14.7 | 16.2 | 16.5 |
| | 3H | 14.6 | 15.9 | 15.0 | 16.3 | 16.7 | 17.2 | 18.5 | 17.6 | 18.9 | 19.3 |
| | 4H | 15.6 | 16.8 | 16.0 | 17.2 | 17.7 | 18.6 | 19.9 | 19.1 | 20.3 | 20.7 |
| | 6H | 16.5 | 17.5 | 16.9 | 18.0 | 18.4 | 19.9 | 21.0 | 20.4 | 21.4 | 21.9 |
| | 8H | 16.8 | 17.8 | 17.2 | 18.2 | 18.7 | 20.4 | 21.5 | 20.9 | 21.9 | 22.4 |
| | 12H | 17.0 | 17.9 | 17.4 | 18.4 | 18.8 | 20.9 | 21.8 | 21.4 | 22.3 | 22.8 |
| 8H | 4H | 16.9 | 17.9 | 17.3 | 18.3 | 18.8 | 19.2 | 20.2 | 19.6 | 20.6 | 21.1 |
| | 6H | 18.1 | 19.0 | 18.6 | 19.5 | 19.9 | 20.7 | 21.5 | 21.1 | 22.0 | 22.5 |
| | 8H | 18.6 | 19.4 | 19.1 | 19.9 | 20.4 | 21.3 | 22.1 | 21.8 | 22.6 | 23.1 |
| | 12H | 19.0 | 19.7 | 19.5 | 20.2 | 20.7 | 21.9 | 22.6 | 22.4 | 23.1 | 23.7 |
| 12H | 4H | 17.1 | 18.0 | 17.6 | 18.5 | 19.0 | 19.3 | 20.2 | 19.7 | 20.7 | 21.1 |
| | 6H | 18.5 | 19.3 | 19.1 | 19.8 | 20.3 | 20.8 | 21.6 | 21.4 | 22.1 | 22.6 |
| | 8H | 19.2 | 19.9 | 19.7 | 20.4 | 20.9 | 21.6 | 22.3 | 22.1 | 22.8 | 23.3 |

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-7

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L940-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L940-CD1-U

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-457-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 07/02/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Metalux
 Catalog Number: **24SR-LD2-64-C-UNV-L940-CD1-U**
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K): 3850
 CIE u': 0.2283
 CIE v': 0.5037
 Duv: -0.0006
 CIE x: 0.3868
 CIE y: 0.3794
 CIE z: 0.2338
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 579
 Purity: 29.94798
 Rf: 91.3
 Rg: 99.8

CRI (Ra): 94.0
 R1: 95.3
 R2: 96.3
 R3: 95.7
 R4: 95.2
 R5: 94.4
 R6: 94.3
 R7: 94.1
 R8: 86.7
 R9: 65.3
 R10: 89.6
 R11: 95.5
 R12: 76.1
 R13: 95.5
 R14: 96.8
 R15: 92.3



Test Conditions

Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.4

REPORT NUMBER: SP1-2506-457-7

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 10/22/2024 | 10/22/2025 |
| DC Power Source | AGILENT E3634A IN0208 | 10/22/2024 | 10/22/2025 |
| Sphere Thermometer | ONSET IN0085 | 10/22/2024 | 10/22/2025 |
| Room Thermometer | ONSET IN0046 | 10/22/2024 | 10/22/2025 |

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.74

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.6

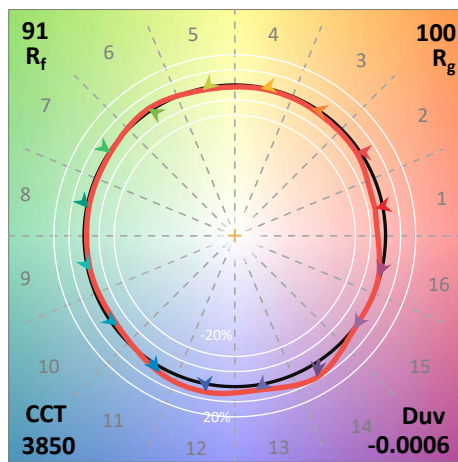
| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.3$
 $R_g = 99.8$
 $CIE R_a = 94.0$
 $R_9 = 65.3$



Color Vector Graphics

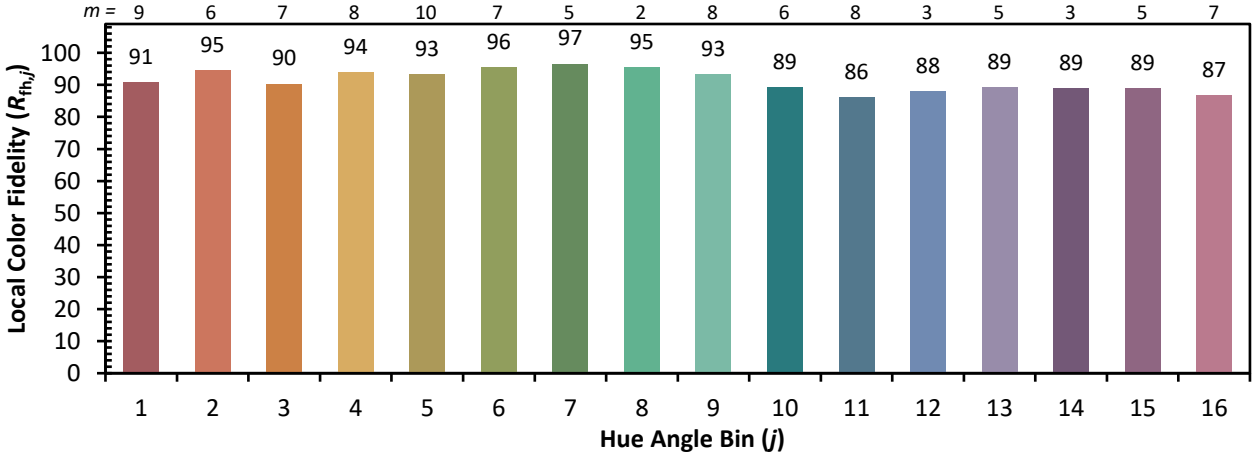


Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 93 | CES51 = 98 | CES76 = 87 |
| CES02 = 62 | CES27 = 91 | CES52 = 99 | CES77 = 88 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 83 |
| CES04 = 69 | CES29 = 96 | CES54 = 94 | CES79 = 93 |
| CES05 = 49 | CES30 = 93 | CES55 = 92 | CES80 = 92 |
| CES06 = 50 | CES31 = 96 | CES56 = 95 | CES81 = 79 |
| CES07 = 42 | CES32 = 88 | CES57 = 94 | CES82 = 96 |
| CES08 = 41 | CES33 = 99 | CES58 = 95 | CES83 = 95 |
| CES09 = 29 | CES34 = 93 | CES59 = 97 | CES84 = 94 |
| CES10 = 74 | CES35 = 96 | CES60 = 93 | CES85 = 81 |
| CES11 = 57 | CES36 = 81 | CES61 = 92 | CES86 = 83 |
| CES12 = 63 | CES37 = 94 | CES62 = 87 | CES87 = 92 |
| CES13 = 43 | CES38 = 88 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 85 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 97 |
| CES16 = 47 | CES41 = 97 | CES66 = 88 | CES91 = 73 |
| CES17 = 49 | CES42 = 93 | CES67 = 87 | CES92 = 77 |
| CES18 = 56 | CES43 = 93 | CES68 = 88 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 89 | CES94 = 76 |
| CES20 = 66 | CES45 = 96 | CES70 = 86 | CES95 = 83 |
| CES21 = 85 | CES46 = 97 | CES71 = 81 | CES96 = 92 |
| CES22 = 78 | CES47 = 93 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 92 | CES73 = 80 | CES98 = 95 |
| CES24 = 90 | CES49 = 96 | CES74 = 91 | CES99 = 93 |
| CES25 = 71 | CES50 = 98 | CES75 = 83 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)