

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: HALO COMMERCIAL

Report Number: P776462

Luminaire Tested: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776462
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B062-HCD82TRC)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD82TRC-4000lm-3500K
Description: 8 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4420.2 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 0.66 / 0.66
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

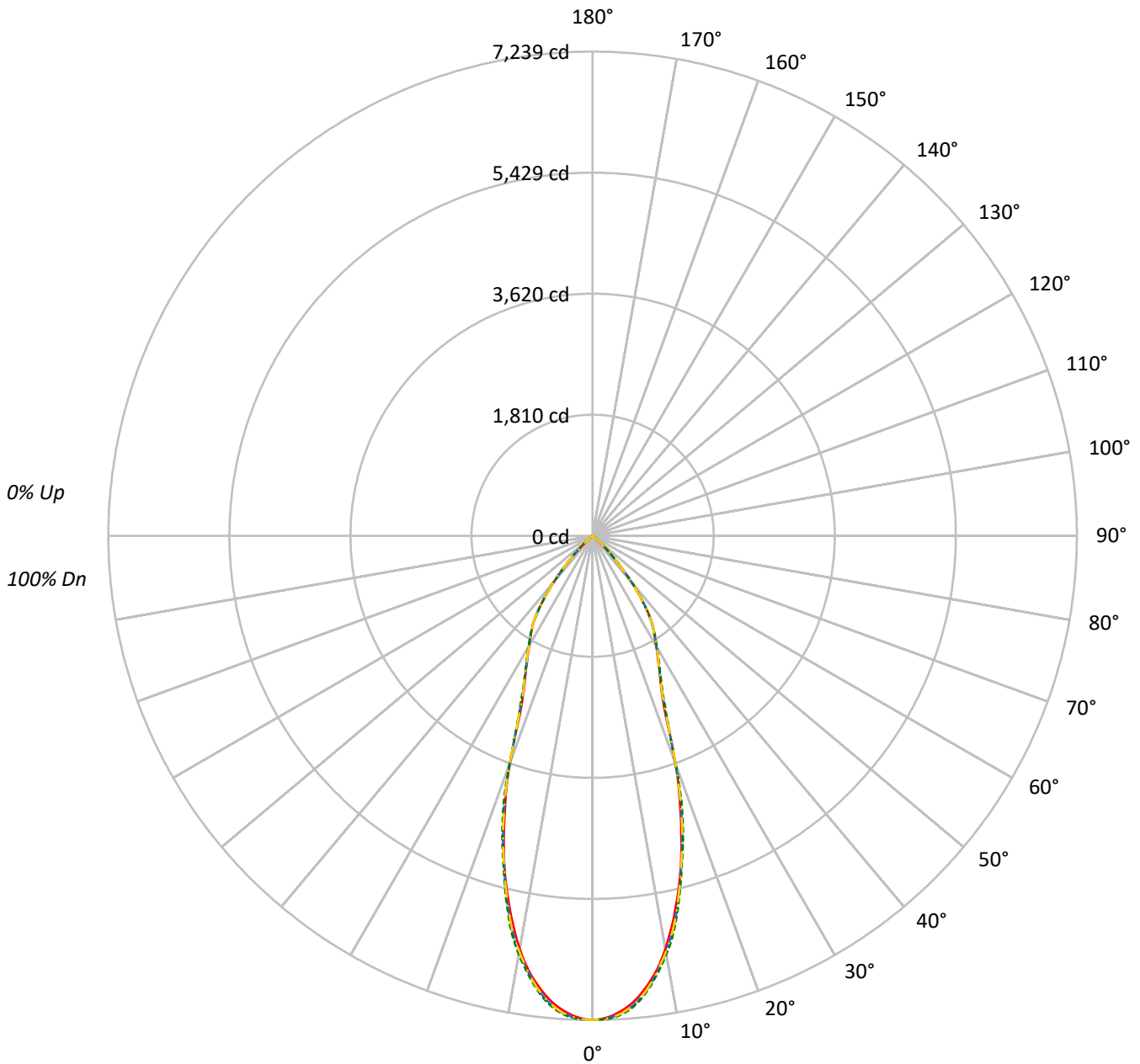
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|---|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | | | | | | | | | | | | | | | | | | | |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 94 | | | | | | | | | | | | | | | | | | | |
| 2 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 93 | 91 | 90 | 88 | | | | | | | | | | | | | | | | | | | |
| 3 | 103 | 97 | 92 | 89 | 101 | 96 | 91 | 88 | 93 | 90 | 87 | 91 | 88 | 85 | 89 | 86 | 84 | 82 | | | | | | | | | | | | | | | | | | | |
| 4 | 98 | 91 | 86 | 82 | 97 | 90 | 85 | 81 | 88 | 84 | 80 | 86 | 82 | 80 | 84 | 81 | 79 | 77 | | | | | | | | | | | | | | | | | | | |
| 5 | 94 | 86 | 80 | 76 | 92 | 85 | 80 | 76 | 83 | 79 | 75 | 81 | 78 | 74 | 80 | 77 | 74 | 72 | | | | | | | | | | | | | | | | | | | |
| 6 | 89 | 81 | 75 | 71 | 88 | 80 | 75 | 71 | 79 | 74 | 70 | 77 | 73 | 70 | 76 | 72 | 69 | 68 | | | | | | | | | | | | | | | | | | | |
| 7 | 85 | 76 | 71 | 67 | 84 | 76 | 70 | 67 | 75 | 70 | 66 | 73 | 69 | 66 | 72 | 68 | 65 | 64 | | | | | | | | | | | | | | | | | | | |
| 8 | 81 | 72 | 67 | 63 | 80 | 72 | 66 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 69 | 65 | 62 | 61 | | | | | | | | | | | | | | | | | | | |
| 9 | 78 | 69 | 63 | 59 | 77 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 66 | 62 | 59 | 57 | | | | | | | | | | | | | | | | | | | |
| 10 | 75 | 65 | 60 | 56 | 74 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 63 | 59 | 56 | 54 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|--------|--------|--------|--------|
| 0° | 220954 | 220954 | 220954 | 220954 |
| 5° | 214354 | 216520 | 214354 | 216520 |
| 10° | 194356 | 196966 | 194356 | 196966 |
| 15° | 161153 | 162550 | 161153 | 162550 |
| 20° | 117353 | 117843 | 117353 | 117843 |
| 25° | 80851 | 81976 | 80851 | 81976 |
| 30° | 66981 | 67683 | 66981 | 67683 |
| 35° | 55910 | 55645 | 55910 | 55645 |
| 40° | 35785 | 36280 | 35785 | 36280 |
| 45° | 14486 | 15910 | 14486 | 15910 |
| 50° | 2717 | 3021 | 2717 | 3021 |
| 55° | 825 | 804 | 825 | 804 |
| 60° | 531 | 531 | 531 | 531 |
| 65° | 376 | 376 | 376 | 376 |
| 70° | 250 | 286 | 250 | 286 |
| 75° | 189 | 189 | 189 | 189 |
| 80° | 141 | 141 | 141 | 141 |
| 85° | 0 | 140 | 0 | 140 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 15910 cd/sqm



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 648.6 | 14.7 |
| 10°-20° | 1398.9 | 31.6 |
| 20°-30° | 1147.5 | 26.0 |
| 30°-40° | 903.2 | 20.4 |
| 40°-50° | 297.1 | 6.7 |
| 50°-60° | 17.3 | 0.4 |
| 60°-70° | 5.4 | 0.1 |
| 70°-80° | 1.9 | 0.0 |
| 80°-90° | 0.3 | 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° | 3195.0 | 72.3 |
| 0°-40° | 4098.2 | 92.7 |
| 0°-60° | 4412.7 | 99.8 |
| 0°-90° | 4420.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4420.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 7237 | 7237 | 7237 | 7237 | 7237 | |
| 5° | 6994 | 7065 | 6994 | 7065 | 6994 | 645 |
| 15° | 5099 | 5143 | 5099 | 5143 | 5099 | 1388 |
| 25° | 2400 | 2434 | 2400 | 2434 | 2400 | 1140 |
| 35° | 1500 | 1493 | 1500 | 1493 | 1500 | 903 |
| 45° | 336 | 368 | 336 | 368 | 336 | 286 |
| 55° | 16 | 15 | 16 | 15 | 16 | 16 |
| 65° | 5 | 5 | 5 | 5 | 5 | 5 |
| 75° | 2 | 2 | 2 | 2 | 2 | 2 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 |
| 0.5° | 7234.0 | 7234.8 | 7238.4 | 7231.2 | 7239.2 | 7231.2 | 7238.4 | 7234.8 | 7234.0 | 7234.8 | 7238.4 |
| 1° | 7226.4 | 7228.0 | 7233.6 | 7226.8 | 7235.2 | 7226.8 | 7233.6 | 7228.0 | 7226.4 | 7228.0 | 7233.6 |
| 1.5° | 7212.9 | 7216.5 | 7224.8 | 7219.7 | 7228.4 | 7219.7 | 7224.8 | 7216.5 | 7212.9 | 7216.5 | 7224.8 |
| 2° | 7195.0 | 7199.8 | 7212.5 | 7208.9 | 7221.3 | 7208.9 | 7212.5 | 7199.8 | 7195.0 | 7199.8 | 7212.5 |
| 2.5° | 7172.0 | 7179.5 | 7195.4 | 7194.6 | 7208.1 | 7194.6 | 7195.4 | 7179.5 | 7172.0 | 7179.5 | 7195.4 |
| 3° | 7145.3 | 7155.3 | 7174.8 | 7175.2 | 7190.7 | 7175.2 | 7174.8 | 7155.3 | 7145.3 | 7155.3 | 7174.8 |
| 3.5° | 7114.3 | 7127.5 | 7149.3 | 7150.5 | 7168.0 | 7150.5 | 7149.3 | 7127.5 | 7114.3 | 7127.5 | 7149.3 |
| 4° | 7079.8 | 7097.2 | 7119.1 | 7120.7 | 7139.8 | 7120.7 | 7119.1 | 7097.2 | 7079.8 | 7097.2 | 7119.1 |
| 4.5° | 7039.6 | 7061.5 | 7082.9 | 7086.5 | 7105.6 | 7086.5 | 7082.9 | 7061.5 | 7039.6 | 7061.5 | 7082.9 |
| 5° | 6994.3 | 7021.7 | 7041.6 | 7046.8 | 7065.0 | 7046.8 | 7041.6 | 7021.7 | 6994.3 | 7021.7 | 7041.6 |
| 5.5° | 6943.8 | 6976.4 | 6992.3 | 7002.2 | 7018.1 | 7002.2 | 6992.3 | 6976.4 | 6943.8 | 6976.4 | 6992.3 |
| 6° | 6888.6 | 6925.1 | 6937.9 | 6953.0 | 6962.9 | 6953.0 | 6937.9 | 6925.1 | 6888.6 | 6925.1 | 6937.9 |
| 6.5° | 6828.1 | 6867.5 | 6875.8 | 6897.7 | 6901.3 | 6897.7 | 6875.8 | 6867.5 | 6828.1 | 6867.5 | 6875.8 |
| 7° | 6764.5 | 6803.1 | 6808.7 | 6838.5 | 6832.9 | 6838.5 | 6808.7 | 6803.1 | 6764.5 | 6803.1 | 6808.7 |
| 7.5° | 6697.0 | 6732.3 | 6734.7 | 6773.7 | 6761.4 | 6773.7 | 6734.7 | 6732.3 | 6697.0 | 6732.3 | 6734.7 |
| 8° | 6624.6 | 6656.0 | 6657.6 | 6703.3 | 6684.3 | 6703.3 | 6657.6 | 6656.0 | 6624.6 | 6656.0 | 6657.6 |
| 8.5° | 6545.5 | 6571.4 | 6575.3 | 6626.2 | 6605.5 | 6626.2 | 6575.3 | 6571.4 | 6545.5 | 6571.4 | 6575.3 |
| 9° | 6461.3 | 6481.1 | 6490.3 | 6541.9 | 6522.1 | 6541.9 | 6490.3 | 6481.1 | 6461.3 | 6481.1 | 6490.3 |
| 9.5° | 6368.2 | 6382.6 | 6403.6 | 6450.5 | 6439.8 | 6450.5 | 6403.6 | 6382.6 | 6368.2 | 6382.6 | 6403.6 |
| 10° | 6269.3 | 6280.0 | 6313.0 | 6350.4 | 6353.5 | 6350.4 | 6313.0 | 6280.0 | 6269.3 | 6280.0 | 6313.0 |
| 10.5° | 6164.3 | 6171.1 | 6219.6 | 6244.2 | 6264.9 | 6244.2 | 6219.6 | 6171.1 | 6164.3 | 6171.1 | 6219.6 |
| 11° | 6057.4 | 6060.2 | 6122.6 | 6133.3 | 6167.9 | 6133.3 | 6122.6 | 6060.2 | 6057.4 | 6060.2 | 6122.6 |
| 11.5° | 5945.7 | 5947.7 | 6018.1 | 6018.8 | 6061.4 | 6018.8 | 6018.1 | 5947.7 | 5945.7 | 5947.7 | 6018.1 |
| 12° | 5833.2 | 5834.8 | 5903.2 | 5905.2 | 5946.9 | 5905.2 | 5903.2 | 5834.8 | 5833.2 | 5834.8 | 5903.2 |
| 12.5° | 5714.8 | 5724.3 | 5778.8 | 5789.5 | 5819.3 | 5789.5 | 5778.8 | 5724.3 | 5714.8 | 5724.3 | 5778.8 |
| 13° | 5598.3 | 5612.2 | 5650.4 | 5671.8 | 5691.3 | 5671.8 | 5650.4 | 5612.2 | 5598.3 | 5612.2 | 5650.4 |
| 13.5° | 5477.5 | 5496.5 | 5516.4 | 5547.0 | 5554.2 | 5547.0 | 5516.4 | 5496.5 | 5477.5 | 5496.5 | 5516.4 |
| 14° | 5355.8 | 5374.9 | 5382.9 | 5416.6 | 5416.2 | 5416.6 | 5382.9 | 5374.9 | 5355.8 | 5374.9 | 5382.9 |
| 14.5° | 5229.4 | 5244.5 | 5250.5 | 5284.7 | 5279.9 | 5284.7 | 5250.5 | 5244.5 | 5229.4 | 5244.5 | 5250.5 |
| 15° | 5098.6 | 5108.2 | 5117.7 | 5148.7 | 5142.8 | 5148.7 | 5117.7 | 5108.2 | 5098.6 | 5108.2 | 5117.7 |
| 15.5° | 4958.7 | 4964.3 | 4985.4 | 5013.2 | 5014.4 | 5013.2 | 4985.4 | 4964.3 | 4958.7 | 4964.3 | 4985.4 |
| 16° | 4816.4 | 4820.0 | 4851.8 | 4876.5 | 4882.4 | 4876.5 | 4851.8 | 4820.0 | 4816.4 | 4820.0 | 4851.8 |
| 16.5° | 4666.6 | 4677.3 | 4715.1 | 4740.9 | 4755.2 | 4740.9 | 4715.1 | 4677.3 | 4666.6 | 4677.3 | 4715.1 |
| 17° | 4521.5 | 4534.2 | 4575.9 | 4606.6 | 4624.8 | 4606.6 | 4575.9 | 4534.2 | 4521.5 | 4534.2 | 4575.9 |
| 17.5° | 4374.8 | 4392.3 | 4430.1 | 4467.4 | 4485.3 | 4467.4 | 4430.1 | 4392.3 | 4374.8 | 4392.3 | 4430.1 |
| 18° | 4233.7 | 4246.4 | 4281.0 | 4321.5 | 4337.1 | 4321.5 | 4281.0 | 4246.4 | 4233.7 | 4246.4 | 4281.0 |
| 18.5° | 4086.6 | 4098.6 | 4125.2 | 4165.7 | 4177.7 | 4165.7 | 4125.2 | 4098.6 | 4086.6 | 4098.6 | 4125.2 |
| 19° | 3936.0 | 3943.9 | 3964.6 | 3994.8 | 4007.1 | 3994.8 | 3964.6 | 3943.9 | 3936.0 | 3943.9 | 3964.6 |
| 19.5° | 3778.6 | 3779.4 | 3794.9 | 3817.9 | 3829.5 | 3817.9 | 3794.9 | 3779.4 | 3778.6 | 3779.4 | 3794.9 |
| 20° | 3612.0 | 3612.0 | 3620.4 | 3633.1 | 3627.1 | 3633.1 | 3620.4 | 3612.0 | 3612.0 | 3612.0 | 3620.4 |
| 20.5° | 3448.3 | 3442.3 | 3445.9 | 3445.5 | 3428.0 | 3445.5 | 3445.9 | 3442.3 | 3448.3 | 3442.3 | 3445.9 |
| 21° | 3279.7 | 3275.7 | 3261.0 | 3275.7 | 3270.2 | 3275.7 | 3261.0 | 3275.7 | 3279.7 | 3275.7 | 3261.0 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22.5° | 2808.3 | 2827.0 | 2852.4 | 2883.0 | 2869.5 | 2883.0 | 2852.4 | 2827.0 | 2808.3 | 2827.0 | 2852.4 |
| 23° | 2698.2 | 2710.9 | 2737.1 | 2778.9 | 2779.3 | 2778.9 | 2737.1 | 2710.9 | 2698.2 | 2710.9 | 2737.1 |
| 23.5° | 2617.1 | 2615.1 | 2631.8 | 2672.0 | 2677.1 | 2672.0 | 2631.8 | 2615.1 | 2617.1 | 2615.1 | 2631.8 |
| 24° | 2530.0 | 2538.8 | 2549.1 | 2581.7 | 2584.1 | 2581.7 | 2549.1 | 2538.8 | 2530.0 | 2538.8 | 2549.1 |
| 24.5° | 2463.3 | 2467.6 | 2476.8 | 2497.5 | 2497.5 | 2497.5 | 2476.8 | 2467.6 | 2463.3 | 2467.6 | 2476.8 |
| 25° | 2400.1 | 2405.6 | 2415.2 | 2434.3 | 2433.5 | 2434.3 | 2415.2 | 2405.6 | 2400.1 | 2405.6 | 2415.2 |
| 25.5° | 2341.2 | 2344.0 | 2354.0 | 2371.8 | 2373.0 | 2371.8 | 2354.0 | 2344.0 | 2341.2 | 2344.0 | 2354.0 |
| 26° | 2284.4 | 2286.8 | 2293.9 | 2307.4 | 2309.4 | 2307.4 | 2293.9 | 2286.8 | 2284.4 | 2286.8 | 2293.9 |
| 26.5° | 2230.7 | 2231.5 | 2239.9 | 2252.2 | 2253.4 | 2252.2 | 2239.9 | 2231.5 | 2230.7 | 2231.5 | 2239.9 |
| 27° | 2176.3 | 2178.7 | 2187.4 | 2202.9 | 2206.9 | 2202.9 | 2187.4 | 2178.7 | 2176.3 | 2178.7 | 2187.4 |
| 27.5° | 2125.0 | 2128.2 | 2136.5 | 2151.6 | 2157.2 | 2151.6 | 2136.5 | 2128.2 | 2125.0 | 2128.2 | 2136.5 |
| 28° | 2076.5 | 2079.7 | 2087.6 | 2098.8 | 2103.9 | 2098.8 | 2087.6 | 2079.7 | 2076.5 | 2079.7 | 2087.6 |
| 28.5° | 2031.6 | 2033.2 | 2040.7 | 2049.5 | 2053.8 | 2049.5 | 2040.7 | 2033.2 | 2031.6 | 2033.2 | 2040.7 |
| 29° | 1987.1 | 1988.3 | 1995.4 | 2003.0 | 2007.7 | 2003.0 | 1995.4 | 1988.3 | 1987.1 | 1988.3 | 1995.4 |
| 29.5° | 1942.9 | 1945.3 | 1951.3 | 1959.6 | 1963.6 | 1959.6 | 1951.3 | 1945.3 | 1942.9 | 1945.3 | 1951.3 |
| 30° | 1900.0 | 1902.4 | 1908.0 | 1915.9 | 1919.9 | 1915.9 | 1908.0 | 1902.4 | 1900.0 | 1902.4 | 1908.0 |
| 30.5° | 1858.3 | 1860.3 | 1865.8 | 1873.4 | 1876.2 | 1873.4 | 1865.8 | 1860.3 | 1858.3 | 1860.3 | 1865.8 |
| 31° | 1817.3 | 1819.3 | 1824.5 | 1832.4 | 1836.4 | 1832.4 | 1824.5 | 1819.3 | 1817.3 | 1819.3 | 1824.5 |
| 31.5° | 1778.0 | 1780.0 | 1785.5 | 1792.7 | 1795.5 | 1792.7 | 1785.5 | 1780.0 | 1778.0 | 1780.0 | 1785.5 |
| 32° | 1740.2 | 1741.8 | 1747.0 | 1754.1 | 1756.9 | 1754.1 | 1747.0 | 1741.8 | 1740.2 | 1741.8 | 1747.0 |
| 32.5° | 1704.1 | 1705.6 | 1709.2 | 1716.0 | 1718.4 | 1716.0 | 1709.2 | 1705.6 | 1704.1 | 1705.6 | 1709.2 |
| 33° | 1669.1 | 1669.9 | 1671.9 | 1675.0 | 1677.4 | 1675.0 | 1671.9 | 1669.9 | 1669.1 | 1669.9 | 1671.9 |
| 33.5° | 1632.9 | 1632.9 | 1632.1 | 1630.5 | 1634.1 | 1630.5 | 1632.1 | 1632.9 | 1632.9 | 1632.9 | 1632.1 |
| 34° | 1592.0 | 1590.4 | 1589.6 | 1584.4 | 1592.4 | 1584.4 | 1589.6 | 1590.4 | 1592.0 | 1590.4 | 1589.6 |
| 34.5° | 1547.8 | 1544.3 | 1543.9 | 1537.1 | 1543.1 | 1537.1 | 1543.9 | 1544.3 | 1547.8 | 1544.3 | 1543.9 |
| 35° | 1500.1 | 1495.4 | 1495.4 | 1489.0 | 1493.0 | 1489.0 | 1495.4 | 1495.4 | 1500.1 | 1495.4 | 1495.4 |
| 35.5° | 1448.1 | 1446.1 | 1443.7 | 1438.1 | 1440.5 | 1438.1 | 1443.7 | 1446.1 | 1448.1 | 1446.1 | 1443.7 |
| 36° | 1394.0 | 1393.2 | 1388.8 | 1385.7 | 1386.1 | 1385.7 | 1388.8 | 1393.2 | 1394.0 | 1393.2 | 1388.8 |
| 36.5° | 1336.8 | 1338.4 | 1332.0 | 1330.0 | 1327.6 | 1330.0 | 1332.0 | 1338.4 | 1336.8 | 1338.4 | 1332.0 |
| 37° | 1275.2 | 1279.9 | 1274.4 | 1273.2 | 1270.0 | 1273.2 | 1274.4 | 1279.9 | 1275.2 | 1279.9 | 1274.4 |
| 37.5° | 1213.9 | 1217.5 | 1215.9 | 1213.9 | 1212.8 | 1213.9 | 1215.9 | 1217.5 | 1213.9 | 1217.5 | 1215.9 |
| 38° | 1152.7 | 1155.5 | 1153.5 | 1155.1 | 1153.9 | 1155.1 | 1153.5 | 1155.5 | 1152.7 | 1155.5 | 1153.5 |
| 38.5° | 1091.5 | 1089.9 | 1090.7 | 1091.1 | 1094.3 | 1091.1 | 1090.7 | 1089.9 | 1091.5 | 1089.9 | 1090.7 |
| 39° | 1029.1 | 1025.5 | 1027.5 | 1027.5 | 1033.9 | 1027.5 | 1027.5 | 1025.5 | 1029.1 | 1025.5 | 1027.5 |
| 39.5° | 963.5 | 961.5 | 964.3 | 966.7 | 971.5 | 966.7 | 964.3 | 961.5 | 963.5 | 961.5 | 964.3 |
| 40° | 897.9 | 899.5 | 903.1 | 906.7 | 910.3 | 906.7 | 903.1 | 899.5 | 897.9 | 899.5 | 903.1 |
| 40.5° | 832.7 | 836.7 | 840.3 | 849.0 | 848.6 | 849.0 | 840.3 | 836.7 | 832.7 | 836.7 | 840.3 |
| 41° | 769.5 | 773.9 | 779.1 | 789.4 | 787.8 | 789.4 | 779.1 | 773.9 | 769.5 | 773.9 | 779.1 |
| 41.5° | 705.9 | 711.5 | 718.3 | 730.6 | 727.8 | 730.6 | 718.3 | 711.5 | 705.9 | 711.5 | 718.3 |
| 42° | 645.5 | 651.1 | 660.2 | 672.6 | 670.6 | 672.6 | 660.2 | 651.1 | 645.5 | 651.1 | 660.2 |
| 42.5° | 587.1 | 592.3 | 604.2 | 616.9 | 615.7 | 616.9 | 604.2 | 592.3 | 587.1 | 592.3 | 604.2 |
| 43° | 530.7 | 537.4 | 549.7 | 564.0 | 562.9 | 564.0 | 549.7 | 537.4 | 530.7 | 537.4 | 549.7 |
| 43.5° | 480.2 | 483.7 | 496.1 | 510.0 | 511.2 | 510.0 | 496.1 | 483.7 | 480.2 | 483.7 | 496.1 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 45° | 335.5 | 337.1 | 350.6 | 363.3 | 368.5 | 363.3 | 350.6 | 337.1 | 335.5 | 337.1 | 350.6 |
| 45.5° | 289.4 | 293.0 | 308.1 | 319.2 | 325.9 | 319.2 | 308.1 | 293.0 | 289.4 | 293.0 | 308.1 |
| 46° | 248.8 | 251.6 | 267.9 | 280.6 | 287.8 | 280.6 | 267.9 | 251.6 | 248.8 | 251.6 | 267.9 |
| 46.5° | 212.3 | 217.0 | 229.8 | 245.7 | 254.0 | 245.7 | 229.8 | 217.0 | 212.3 | 217.0 | 229.8 |
| 47° | 178.9 | 184.4 | 194.4 | 212.3 | 220.2 | 212.3 | 194.4 | 184.4 | 178.9 | 184.4 | 194.4 |
| 47.5° | 150.3 | 155.8 | 165.0 | 180.5 | 186.4 | 180.5 | 165.0 | 155.8 | 150.3 | 155.8 | 165.0 |
| 48° | 124.4 | 131.2 | 137.5 | 151.4 | 152.6 | 151.4 | 137.5 | 131.2 | 124.4 | 131.2 | 137.5 |
| 48.5° | 102.6 | 108.5 | 113.7 | 125.6 | 123.6 | 125.6 | 113.7 | 108.5 | 102.6 | 108.5 | 113.7 |
| 49° | 85.1 | 88.6 | 92.2 | 103.3 | 100.2 | 103.3 | 92.2 | 88.6 | 85.1 | 88.6 | 92.2 |
| 49.5° | 71.2 | 72.3 | 76.3 | 83.1 | 79.5 | 83.1 | 76.3 | 72.3 | 71.2 | 72.3 | 76.3 |
| 50° | 57.2 | 56.8 | 61.2 | 67.6 | 63.6 | 67.6 | 61.2 | 56.8 | 57.2 | 56.8 | 61.2 |
| 50.5° | 43.3 | 44.9 | 47.3 | 53.7 | 50.1 | 53.7 | 47.3 | 44.9 | 43.3 | 44.9 | 47.3 |
| 51° | 33.4 | 34.2 | 38.6 | 42.9 | 39.7 | 42.9 | 38.6 | 34.2 | 33.4 | 34.2 | 38.6 |
| 51.5° | 25.0 | 28.2 | 30.6 | 35.8 | 35.4 | 35.8 | 30.6 | 28.2 | 25.0 | 28.2 | 30.6 |
| 52° | 21.9 | 23.5 | 25.8 | 28.2 | 31.0 | 28.2 | 25.8 | 23.5 | 21.9 | 23.5 | 25.8 |
| 52.5° | 19.9 | 20.3 | 22.3 | 23.8 | 26.2 | 23.8 | 22.3 | 20.3 | 19.9 | 20.3 | 22.3 |
| 53° | 18.7 | 19.1 | 19.1 | 20.7 | 21.9 | 20.7 | 19.1 | 19.1 | 18.7 | 19.1 | 19.1 |
| 53.5° | 17.9 | 17.9 | 18.3 | 17.9 | 17.5 | 17.9 | 18.3 | 17.9 | 17.9 | 17.9 | 18.3 |
| 54° | 17.1 | 17.1 | 17.1 | 17.1 | 16.7 | 17.1 | 17.1 | 17.1 | 17.1 | 17.1 | 17.1 |
| 54.5° | 16.3 | 16.3 | 16.3 | 16.3 | 15.9 | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 |
| 55° | 15.5 | 15.5 | 15.5 | 15.5 | 15.1 | 15.5 | 15.5 | 15.5 | 15.5 | 15.5 | 15.5 |
| 55.5° | 14.7 | 14.7 | 14.7 | 14.7 | 14.3 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 |
| 56° | 13.9 | 13.9 | 13.9 | 13.9 | 13.5 | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 |
| 56.5° | 13.1 | 13.1 | 13.5 | 13.1 | 12.7 | 13.1 | 13.5 | 13.1 | 13.1 | 13.1 | 13.5 |
| 57° | 12.3 | 12.3 | 12.7 | 12.3 | 12.3 | 12.3 | 12.7 | 12.3 | 12.3 | 12.3 | 12.7 |
| 57.5° | 11.5 | 11.9 | 11.9 | 11.5 | 11.5 | 11.5 | 11.9 | 11.9 | 11.5 | 11.9 | 11.9 |
| 58° | 11.1 | 11.1 | 11.1 | 11.1 | 10.7 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| 58.5° | 10.3 | 10.7 | 10.7 | 10.3 | 10.3 | 10.3 | 10.7 | 10.7 | 10.3 | 10.7 | 10.7 |
| 59° | 9.9 | 9.9 | 9.9 | 9.9 | 9.5 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| 59.5° | 9.1 | 9.5 | 9.5 | 9.5 | 9.1 | 9.5 | 9.5 | 9.5 | 9.1 | 9.5 | 9.5 |
| 60° | 8.7 | 8.7 | 9.1 | 8.7 | 8.7 | 8.7 | 9.1 | 8.7 | 8.7 | 8.7 | 9.1 |
| 60.5° | 8.3 | 8.3 | 8.7 | 8.3 | 8.3 | 8.3 | 8.7 | 8.3 | 8.3 | 8.3 | 8.7 |
| 61° | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 |
| 61.5° | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 |
| 62° | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 62.5° | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 63° | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 |
| 63.5° | 6.0 | 6.0 | 6.4 | 6.0 | 6.0 | 6.0 | 6.4 | 6.0 | 6.0 | 6.0 | 6.4 |
| 64° | 5.6 | 5.6 | 6.0 | 6.0 | 5.6 | 6.0 | 6.0 | 5.6 | 5.6 | 5.6 | 6.0 |
| 64.5° | 5.2 | 5.6 | 5.6 | 5.6 | 5.2 | 5.6 | 5.6 | 5.6 | 5.2 | 5.6 | 5.6 |
| 65° | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 |
| 65.5° | 4.8 | 4.8 | 5.2 | 4.8 | 4.8 | 4.8 | 5.2 | 4.8 | 4.8 | 4.8 | 5.2 |
| 66° | 4.4 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.4 | 4.8 | 4.8 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 67.5° | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 68° | 3.6 | 3.6 | 4.0 | 4.0 | 3.6 | 4.0 | 4.0 | 3.6 | 3.6 | 3.6 | 4.0 |
| 68.5° | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| 69° | 3.2 | 3.2 | 3.6 | 3.6 | 3.2 | 3.6 | 3.6 | 3.2 | 3.2 | 3.2 | 3.6 |
| 69.5° | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 70° | 2.8 | 2.8 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 2.8 | 2.8 | 2.8 | 3.2 |
| 70.5° | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 71° | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 71.5° | 2.4 | 2.4 | 2.8 | 2.8 | 2.4 | 2.8 | 2.8 | 2.4 | 2.4 | 2.4 | 2.8 |
| 72° | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 72.5° | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 73° | 2.0 | 2.0 | 2.0 | 2.4 | 2.0 | 2.4 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 73.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 74° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 74.5° | 1.6 | 1.6 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.6 | 1.6 | 1.6 | 2.0 |
| 75° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 75.5° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 76° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 76.5° | 1.2 | 1.2 | 1.2 | 1.6 | 1.6 | 1.6 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 77° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 77.5° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 78° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 78.5° | 0.8 | 0.8 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 | 0.8 | 1.2 |
| 79° | 0.8 | 0.8 | 0.8 | 1.2 | 0.8 | 1.2 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 79.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 80° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 80.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 81° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 81.5° | 0.4 | 0.4 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.4 | 0.4 | 0.4 | 0.8 |
| 82° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 82.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 83° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 83.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 84° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 84.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 85° | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 |
| 85.5° | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87° | 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 |
| 88° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P776462
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-----|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 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: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 0° | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 | 7237.2 |
| 0.5° | 7231.2 | 7239.2 | 7231.2 | 7238.4 | 7234.8 | 7234.0 |
| 1° | 7226.8 | 7235.2 | 7226.8 | 7233.6 | 7228.0 | 7226.4 |
| 1.5° | 7219.7 | 7228.4 | 7219.7 | 7224.8 | 7216.5 | 7212.9 |
| 2° | 7208.9 | 7221.3 | 7208.9 | 7212.5 | 7199.8 | 7195.0 |
| 2.5° | 7194.6 | 7208.1 | 7194.6 | 7195.4 | 7179.5 | 7172.0 |
| 3° | 7175.2 | 7190.7 | 7175.2 | 7174.8 | 7155.3 | 7145.3 |
| 3.5° | 7150.5 | 7168.0 | 7150.5 | 7149.3 | 7127.5 | 7114.3 |
| 4° | 7120.7 | 7139.8 | 7120.7 | 7119.1 | 7097.2 | 7079.8 |
| 4.5° | 7086.5 | 7105.6 | 7086.5 | 7082.9 | 7061.5 | 7039.6 |
| 5° | 7046.8 | 7065.0 | 7046.8 | 7041.6 | 7021.7 | 6994.3 |
| 5.5° | 7002.2 | 7018.1 | 7002.2 | 6992.3 | 6976.4 | 6943.8 |
| 6° | 6953.0 | 6962.9 | 6953.0 | 6937.9 | 6925.1 | 6888.6 |
| 6.5° | 6897.7 | 6901.3 | 6897.7 | 6875.8 | 6867.5 | 6828.1 |
| 7° | 6838.5 | 6832.9 | 6838.5 | 6808.7 | 6803.1 | 6764.5 |
| 7.5° | 6773.7 | 6761.4 | 6773.7 | 6734.7 | 6732.3 | 6697.0 |
| 8° | 6703.3 | 6684.3 | 6703.3 | 6657.6 | 6656.0 | 6624.6 |
| 8.5° | 6626.2 | 6605.5 | 6626.2 | 6575.3 | 6571.4 | 6545.5 |
| 9° | 6541.9 | 6522.1 | 6541.9 | 6490.3 | 6481.1 | 6461.3 |
| 9.5° | 6450.5 | 6439.8 | 6450.5 | 6403.6 | 6382.6 | 6368.2 |
| 10° | 6350.4 | 6353.5 | 6350.4 | 6313.0 | 6280.0 | 6269.3 |
| 10.5° | 6244.2 | 6264.9 | 6244.2 | 6219.6 | 6171.1 | 6164.3 |
| 11° | 6133.3 | 6167.9 | 6133.3 | 6122.6 | 6060.2 | 6057.4 |
| 11.5° | 6018.8 | 6061.4 | 6018.8 | 6018.1 | 5947.7 | 5945.7 |
| 12° | 5905.2 | 5946.9 | 5905.2 | 5903.2 | 5834.8 | 5833.2 |
| 12.5° | 5789.5 | 5819.3 | 5789.5 | 5778.8 | 5724.3 | 5714.8 |
| 13° | 5671.8 | 5691.3 | 5671.8 | 5650.4 | 5612.2 | 5598.3 |
| 13.5° | 5547.0 | 5554.2 | 5547.0 | 5516.4 | 5496.5 | 5477.5 |
| 14° | 5416.6 | 5416.2 | 5416.6 | 5382.9 | 5374.9 | 5355.8 |
| 14.5° | 5284.7 | 5279.9 | 5284.7 | 5250.5 | 5244.5 | 5229.4 |
| 15° | 5148.7 | 5142.8 | 5148.7 | 5117.7 | 5108.2 | 5098.6 |
| 15.5° | 5013.2 | 5014.4 | 5013.2 | 4985.4 | 4964.3 | 4958.7 |
| 16° | 4876.5 | 4882.4 | 4876.5 | 4851.8 | 4820.0 | 4816.4 |
| 16.5° | 4740.9 | 4755.2 | 4740.9 | 4715.1 | 4677.3 | 4666.6 |
| 17° | 4606.6 | 4624.8 | 4606.6 | 4575.9 | 4534.2 | 4521.5 |
| 17.5° | 4467.4 | 4485.3 | 4467.4 | 4430.1 | 4392.3 | 4374.8 |
| 18° | 4321.5 | 4337.1 | 4321.5 | 4281.0 | 4246.4 | 4233.7 |
| 18.5° | 4165.7 | 4177.7 | 4165.7 | 4125.2 | 4098.6 | 4086.6 |
| 19° | 3994.8 | 4007.1 | 3994.8 | 3964.6 | 3943.9 | 3936.0 |
| 19.5° | 3817.9 | 3829.5 | 3817.9 | 3794.9 | 3779.4 | 3778.6 |
| 20° | 3633.1 | 3627.1 | 3633.1 | 3620.4 | 3612.0 | 3612.0 |
| 20.5° | 3445.5 | 3428.0 | 3445.5 | 3445.9 | 3442.3 | 3448.3 |
| 21° | 3275.7 | 3270.2 | 3275.7 | 3261.0 | 3275.7 | 3279.7 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 22.5° | 2883.0 | 2869.5 | 2883.0 | 2852.4 | 2827.0 | 2808.3 |
| 23° | 2778.9 | 2779.3 | 2778.9 | 2737.1 | 2710.9 | 2698.2 |
| 23.5° | 2672.0 | 2677.1 | 2672.0 | 2631.8 | 2615.1 | 2617.1 |
| 24° | 2581.7 | 2584.1 | 2581.7 | 2549.1 | 2538.8 | 2530.0 |
| 24.5° | 2497.5 | 2497.5 | 2497.5 | 2476.8 | 2467.6 | 2463.3 |
| 25° | 2434.3 | 2433.5 | 2434.3 | 2415.2 | 2405.6 | 2400.1 |
| 25.5° | 2371.8 | 2373.0 | 2371.8 | 2354.0 | 2344.0 | 2341.2 |
| 26° | 2307.4 | 2309.4 | 2307.4 | 2293.9 | 2286.8 | 2284.4 |
| 26.5° | 2252.2 | 2253.4 | 2252.2 | 2239.9 | 2231.5 | 2230.7 |
| 27° | 2202.9 | 2206.9 | 2202.9 | 2187.4 | 2178.7 | 2176.3 |
| 27.5° | 2151.6 | 2157.2 | 2151.6 | 2136.5 | 2128.2 | 2125.0 |
| 28° | 2098.8 | 2103.9 | 2098.8 | 2087.6 | 2079.7 | 2076.5 |
| 28.5° | 2049.5 | 2053.8 | 2049.5 | 2040.7 | 2033.2 | 2031.6 |
| 29° | 2003.0 | 2007.7 | 2003.0 | 1995.4 | 1988.3 | 1987.1 |
| 29.5° | 1959.6 | 1963.6 | 1959.6 | 1951.3 | 1945.3 | 1942.9 |
| 30° | 1915.9 | 1919.9 | 1915.9 | 1908.0 | 1902.4 | 1900.0 |
| 30.5° | 1873.4 | 1876.2 | 1873.4 | 1865.8 | 1860.3 | 1858.3 |
| 31° | 1832.4 | 1836.4 | 1832.4 | 1824.5 | 1819.3 | 1817.3 |
| 31.5° | 1792.7 | 1795.5 | 1792.7 | 1785.5 | 1780.0 | 1778.0 |
| 32° | 1754.1 | 1756.9 | 1754.1 | 1747.0 | 1741.8 | 1740.2 |
| 32.5° | 1716.0 | 1718.4 | 1716.0 | 1709.2 | 1705.6 | 1704.1 |
| 33° | 1675.0 | 1677.4 | 1675.0 | 1671.9 | 1669.9 | 1669.1 |
| 33.5° | 1630.5 | 1634.1 | 1630.5 | 1632.1 | 1632.9 | 1632.9 |
| 34° | 1584.4 | 1592.4 | 1584.4 | 1589.6 | 1590.4 | 1592.0 |
| 34.5° | 1537.1 | 1543.1 | 1537.1 | 1543.9 | 1544.3 | 1547.8 |
| 35° | 1489.0 | 1493.0 | 1489.0 | 1495.4 | 1495.4 | 1500.1 |
| 35.5° | 1438.1 | 1440.5 | 1438.1 | 1443.7 | 1446.1 | 1448.1 |
| 36° | 1385.7 | 1386.1 | 1385.7 | 1388.8 | 1393.2 | 1394.0 |
| 36.5° | 1330.0 | 1327.6 | 1330.0 | 1332.0 | 1338.4 | 1336.8 |
| 37° | 1273.2 | 1270.0 | 1273.2 | 1274.4 | 1279.9 | 1275.2 |
| 37.5° | 1213.9 | 1212.8 | 1213.9 | 1215.9 | 1217.5 | 1213.9 |
| 38° | 1155.1 | 1153.9 | 1155.1 | 1153.5 | 1155.5 | 1152.7 |
| 38.5° | 1091.1 | 1094.3 | 1091.1 | 1090.7 | 1089.9 | 1091.5 |
| 39° | 1027.5 | 1033.9 | 1027.5 | 1027.5 | 1025.5 | 1029.1 |
| 39.5° | 966.7 | 971.5 | 966.7 | 964.3 | 961.5 | 963.5 |
| 40° | 906.7 | 910.3 | 906.7 | 903.1 | 899.5 | 897.9 |
| 40.5° | 849.0 | 848.6 | 849.0 | 840.3 | 836.7 | 832.7 |
| 41° | 789.4 | 787.8 | 789.4 | 779.1 | 773.9 | 769.5 |
| 41.5° | 730.6 | 727.8 | 730.6 | 718.3 | 711.5 | 705.9 |
| 42° | 672.6 | 670.6 | 672.6 | 660.2 | 651.1 | 645.5 |
| 42.5° | 616.9 | 615.7 | 616.9 | 604.2 | 592.3 | 587.1 |
| 43° | 564.0 | 562.9 | 564.0 | 549.7 | 537.4 | 530.7 |
| 43.5° | 510.0 | 511.2 | 510.0 | 496.1 | 483.7 | 480.2 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 45° | 363.3 | 368.5 | 363.3 | 350.6 | 337.1 | 335.5 |
| 45.5° | 319.2 | 325.9 | 319.2 | 308.1 | 293.0 | 289.4 |
| 46° | 280.6 | 287.8 | 280.6 | 267.9 | 251.6 | 248.8 |
| 46.5° | 245.7 | 254.0 | 245.7 | 229.8 | 217.0 | 212.3 |
| 47° | 212.3 | 220.2 | 212.3 | 194.4 | 184.4 | 178.9 |
| 47.5° | 180.5 | 186.4 | 180.5 | 165.0 | 155.8 | 150.3 |
| 48° | 151.4 | 152.6 | 151.4 | 137.5 | 131.2 | 124.4 |
| 48.5° | 125.6 | 123.6 | 125.6 | 113.7 | 108.5 | 102.6 |
| 49° | 103.3 | 100.2 | 103.3 | 92.2 | 88.6 | 85.1 |
| 49.5° | 83.1 | 79.5 | 83.1 | 76.3 | 72.3 | 71.2 |
| 50° | 67.6 | 63.6 | 67.6 | 61.2 | 56.8 | 57.2 |
| 50.5° | 53.7 | 50.1 | 53.7 | 47.3 | 44.9 | 43.3 |
| 51° | 42.9 | 39.7 | 42.9 | 38.6 | 34.2 | 33.4 |
| 51.5° | 35.8 | 35.4 | 35.8 | 30.6 | 28.2 | 25.0 |
| 52° | 28.2 | 31.0 | 28.2 | 25.8 | 23.5 | 21.9 |
| 52.5° | 23.8 | 26.2 | 23.8 | 22.3 | 20.3 | 19.9 |
| 53° | 20.7 | 21.9 | 20.7 | 19.1 | 19.1 | 18.7 |
| 53.5° | 17.9 | 17.5 | 17.9 | 18.3 | 17.9 | 17.9 |
| 54° | 17.1 | 16.7 | 17.1 | 17.1 | 17.1 | 17.1 |
| 54.5° | 16.3 | 15.9 | 16.3 | 16.3 | 16.3 | 16.3 |
| 55° | 15.5 | 15.1 | 15.5 | 15.5 | 15.5 | 15.5 |
| 55.5° | 14.7 | 14.3 | 14.7 | 14.7 | 14.7 | 14.7 |
| 56° | 13.9 | 13.5 | 13.9 | 13.9 | 13.9 | 13.9 |
| 56.5° | 13.1 | 12.7 | 13.1 | 13.5 | 13.1 | 13.1 |
| 57° | 12.3 | 12.3 | 12.3 | 12.7 | 12.3 | 12.3 |
| 57.5° | 11.5 | 11.5 | 11.5 | 11.9 | 11.9 | 11.5 |
| 58° | 11.1 | 10.7 | 11.1 | 11.1 | 11.1 | 11.1 |
| 58.5° | 10.3 | 10.3 | 10.3 | 10.7 | 10.7 | 10.3 |
| 59° | 9.9 | 9.5 | 9.9 | 9.9 | 9.9 | 9.9 |
| 59.5° | 9.5 | 9.1 | 9.5 | 9.5 | 9.5 | 9.1 |
| 60° | 8.7 | 8.7 | 8.7 | 9.1 | 8.7 | 8.7 |
| 60.5° | 8.3 | 8.3 | 8.3 | 8.7 | 8.3 | 8.3 |
| 61° | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 |
| 61.5° | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 |
| 62° | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| 62.5° | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 63° | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 |
| 63.5° | 6.0 | 6.0 | 6.0 | 6.4 | 6.0 | 6.0 |
| 64° | 6.0 | 5.6 | 6.0 | 6.0 | 5.6 | 5.6 |
| 64.5° | 5.6 | 5.2 | 5.6 | 5.6 | 5.6 | 5.2 |
| 65° | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 |
| 65.5° | 4.8 | 4.8 | 4.8 | 5.2 | 4.8 | 4.8 |
| 66° | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.4 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|------|--------|------|--------|------|
| 67.5° | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 68° | 4.0 | 3.6 | 4.0 | 4.0 | 3.6 | 3.6 |
| 68.5° | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| 69° | 3.6 | 3.2 | 3.6 | 3.6 | 3.2 | 3.2 |
| 69.5° | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 70° | 3.2 | 3.2 | 3.2 | 3.2 | 2.8 | 2.8 |
| 70.5° | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 71° | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 71.5° | 2.8 | 2.4 | 2.8 | 2.8 | 2.4 | 2.4 |
| 72° | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 72.5° | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 73° | 2.4 | 2.0 | 2.4 | 2.0 | 2.0 | 2.0 |
| 73.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 74° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 74.5° | 2.0 | 2.0 | 2.0 | 2.0 | 1.6 | 1.6 |
| 75° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 75.5° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 76° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 76.5° | 1.6 | 1.6 | 1.6 | 1.2 | 1.2 | 1.2 |
| 77° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 77.5° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 78° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 78.5° | 1.2 | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 |
| 79° | 1.2 | 0.8 | 1.2 | 0.8 | 0.8 | 0.8 |
| 79.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 80° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 80.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 81° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 81.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.4 | 0.4 |
| 82° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 82.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 83° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 83.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 84° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 84.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 85° | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 |
| 85.5° | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 |
| 86° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87° | 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 |
| 88° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P776462

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-----|--------|------|--------|------|--------|------|
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





| | | | | | | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 21.5° | 3108.0 | 3106.0 | 3111.6 | 3129.1 | 3126.7 | 3129.1 | 3111.6 | 3106.0 | 3108.0 | 3106.0 | 3111.6 |
| 22° | 2933.5 | 2961.3 | 2974.4 | 2997.5 | 2994.7 | 2997.5 | 2974.4 | 2961.3 | 2933.5 | 2961.3 | 2974.4 |



| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 44° | 430.5 | 433.7 | 444.8 | 458.7 | 460.3 | 458.7 | 444.8 | 433.7 | 430.5 | 433.7 | 444.8 |
| 44.5° | 382.4 | 384.4 | 395.1 | 409.4 | 413.4 | 409.4 | 395.1 | 384.4 | 382.4 | 384.4 | 395.1 |



| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 66.5° | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 67° | 4.0 | 4.0 | 4.4 | 4.4 | 4.0 | 4.4 | 4.4 | 4.0 | 4.0 | 4.0 | 4.4 |



| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 89° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 89.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





| | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|
| 21.5° | 3129.1 | 3126.7 | 3129.1 | 3111.6 | 3106.0 | 3108.0 |
| 22° | 2997.5 | 2994.7 | 2997.5 | 2974.4 | 2961.3 | 2933.5 |



| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 44° | 458.7 | 460.3 | 458.7 | 444.8 | 433.7 | 430.5 |
| 44.5° | 409.4 | 413.4 | 409.4 | 395.1 | 384.4 | 382.4 |



| | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|
| 66.5° | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 67° | 4.4 | 4.0 | 4.4 | 4.4 | 4.0 | 4.0 |

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



| | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|
| 89° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 89.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)