

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: P776573

Luminaire Tested: HCDJBS4050CSD-HCD42TRC-5000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776573
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B049)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD42TRC-5000lm-4000K
Description: 4 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

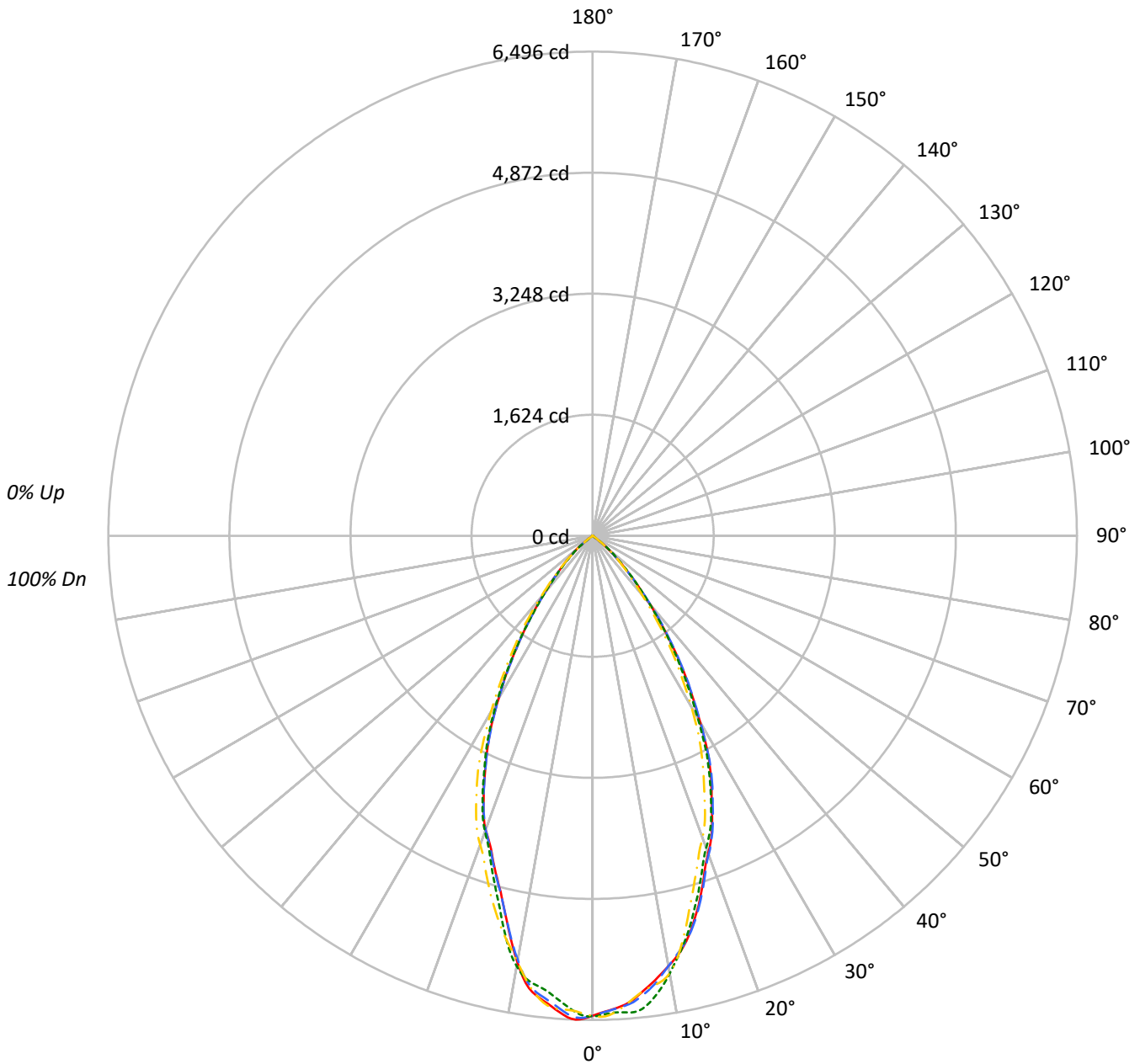
Lumens per Lamp: N/A
Luminaire Lumens: 5300.9 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.84
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 48
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: P776573
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

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 | 0 | | | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | | | | | | | | | | | | | | | |
| 1 | 114 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | | | | | | | | | | | | | | | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 94 | 98 | 95 | 92 | 95 | 93 | 90 | 92 | 90 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 3 | 102 | 96 | 91 | 87 | 100 | 95 | 90 | 86 | 92 | 88 | 85 | 89 | 86 | 84 | 87 | 85 | 82 | 81 | | | | | | | | | | | | | | | | | | | |
| 4 | 97 | 90 | 84 | 80 | 95 | 88 | 83 | 79 | 86 | 82 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | 75 | | | | | | | | | | | | | | | | | | | |
| 5 | 92 | 84 | 78 | 74 | 90 | 83 | 77 | 73 | 81 | 76 | 73 | 79 | 75 | 72 | 78 | 74 | 71 | 70 | | | | | | | | | | | | | | | | | | | |
| 6 | 87 | 78 | 72 | 68 | 86 | 78 | 72 | 68 | 76 | 71 | 67 | 75 | 70 | 67 | 73 | 70 | 66 | 65 | | | | | | | | | | | | | | | | | | | |
| 7 | 83 | 74 | 68 | 63 | 82 | 73 | 67 | 63 | 72 | 67 | 63 | 71 | 66 | 63 | 69 | 65 | 62 | 61 | | | | | | | | | | | | | | | | | | | |
| 8 | 79 | 69 | 63 | 59 | 78 | 69 | 63 | 59 | 68 | 62 | 59 | 67 | 62 | 59 | 66 | 61 | 58 | 57 | | | | | | | | | | | | | | | | | | | |
| 9 | 75 | 65 | 59 | 55 | 74 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 55 | 62 | 58 | 55 | 53 | | | | | | | | | | | | | | | | | | | |
| 10 | 72 | 62 | 56 | 52 | 71 | 61 | 56 | 52 | 61 | 55 | 52 | 60 | 55 | 52 | 59 | 55 | 52 | 50 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|--------|--------|--------|--------|
| 0° | 810699 | 810699 | 810699 | 810699 |
| 5° | 789187 | 810537 | 800670 | 781569 |
| 10° | 749151 | 761687 | 742544 | 749700 |
| 15° | 691406 | 681856 | 633037 | 647759 |
| 20° | 606754 | 596429 | 562009 | 565666 |
| 25° | 524168 | 519655 | 471943 | 476859 |
| 30° | 418852 | 409610 | 367395 | 372815 |
| 35° | 305409 | 296729 | 258797 | 260564 |
| 40° | 195204 | 193561 | 165961 | 162265 |
| 45° | 109012 | 112002 | 99223 | 96411 |
| 50° | 49573 | 52941 | 49182 | 47322 |
| 55° | 2940 | 2830 | 2304 | 2633 |
| 60° | 831 | 1082 | 956 | 956 |
| 65° | 417 | 566 | 566 | 566 |
| 70° | 368 | 368 | 368 | 368 |
| 75° | 243 | 243 | 243 | 243 |
| 80° | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 112002 cd/sqm



TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 587.8 | 11.1 |
| 10°-20° | 1422.2 | 26.8 |
| 20°-30° | 1631.6 | 30.8 |
| 30°-40° | 1140.4 | 21.5 |
| 40°-50° | 465.2 | 8.8 |
| 50°-60° | 51.2 | 1.0 |
| 60°-70° | 2.0 | 0.0 |
| 70°-80° | 0.5 | 0.0 |
| 80°-90° | 0.0 | 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° | 3641.6 | 68.7 |
| 0°-40° | 4782.1 | 90.2 |
| 0°-60° | 5298.4 | 100.0 |
| 0°-90° | 5300.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5300.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 6442 | 6442 | 6442 | 6442 | 6442 | |
| 5° | 6247 | 6416 | 6338 | 6187 | 6247 | 583 |
| 15° | 5307 | 5233 | 4859 | 4972 | 5307 | 1471 |
| 25° | 3775 | 3742 | 3399 | 3434 | 3775 | 1719 |
| 35° | 1988 | 1931 | 1684 | 1696 | 1988 | 1234 |
| 45° | 612 | 629 | 558 | 542 | 612 | 491 |
| 55° | 13 | 13 | 10 | 12 | 13 | 50 |
| 65° | 1 | 2 | 2 | 2 | 1 | 2 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 |
| 0.5° | 6421.2 | 6420.7 | 6420.7 | 6422.2 | 6444.7 | 6446.6 | 6452.3 | 6458.1 | 6460.5 | 6460.0 | 6453.8 |
| 1° | 6404.0 | 6402.6 | 6404.9 | 6408.8 | 6433.2 | 6441.3 | 6454.7 | 6469.1 | 6478.6 | 6478.2 | 6466.2 |
| 1.5° | 6387.2 | 6385.3 | 6389.6 | 6397.3 | 6422.7 | 6431.3 | 6449.0 | 6471.9 | 6491.6 | 6492.5 | 6471.9 |
| 2° | 6371.4 | 6367.1 | 6375.3 | 6389.2 | 6412.1 | 6417.4 | 6434.1 | 6464.3 | 6496.3 | 6500.2 | 6467.2 |
| 2.5° | 6356.1 | 6348.0 | 6360.9 | 6384.4 | 6405.4 | 6401.6 | 6411.2 | 6444.2 | 6487.3 | 6496.3 | 6450.9 |
| 3° | 6340.3 | 6325.5 | 6348.0 | 6384.4 | 6403.0 | 6384.4 | 6382.9 | 6416.0 | 6467.6 | 6478.6 | 6424.6 |
| 3.5° | 6323.1 | 6299.7 | 6334.1 | 6390.1 | 6404.9 | 6366.7 | 6349.9 | 6382.5 | 6439.9 | 6453.8 | 6393.0 |
| 4° | 6303.5 | 6271.9 | 6319.3 | 6397.8 | 6411.2 | 6347.0 | 6313.1 | 6345.1 | 6407.8 | 6421.7 | 6359.5 |
| 4.5° | 6278.1 | 6237.5 | 6301.1 | 6406.4 | 6416.0 | 6324.1 | 6274.3 | 6306.8 | 6373.4 | 6388.2 | 6324.5 |
| 5° | 6247.0 | 6200.1 | 6279.6 | 6409.7 | 6416.0 | 6295.4 | 6235.5 | 6269.0 | 6337.9 | 6355.2 | 6290.6 |
| 5.5° | 6210.7 | 6160.9 | 6250.9 | 6403.0 | 6404.9 | 6261.9 | 6197.7 | 6235.1 | 6305.4 | 6321.2 | 6259.0 |
| 6° | 6172.4 | 6121.6 | 6217.4 | 6384.4 | 6381.0 | 6222.6 | 6163.8 | 6204.9 | 6275.3 | 6287.7 | 6230.3 |
| 6.5° | 6132.6 | 6086.7 | 6181.5 | 6351.8 | 6348.0 | 6186.2 | 6135.0 | 6180.0 | 6245.6 | 6254.7 | 6202.0 |
| 7° | 6095.8 | 6057.5 | 6144.1 | 6306.8 | 6306.8 | 6150.8 | 6113.5 | 6158.5 | 6212.6 | 6218.3 | 6171.4 |
| 7.5° | 6058.0 | 6031.7 | 6104.4 | 6250.4 | 6258.5 | 6116.9 | 6096.8 | 6138.9 | 6175.7 | 6172.8 | 6134.1 |
| 8° | 6021.6 | 6008.7 | 6061.3 | 6182.9 | 6207.8 | 6085.7 | 6081.0 | 6115.4 | 6128.3 | 6115.9 | 6086.2 |
| 8.5° | 5980.9 | 5988.6 | 6013.0 | 6104.9 | 6152.3 | 6053.2 | 6064.2 | 6084.3 | 6065.2 | 6045.6 | 6025.0 |
| 9° | 5941.2 | 5969.9 | 5962.8 | 6022.1 | 6093.9 | 6017.8 | 6037.9 | 6041.7 | 5990.5 | 5961.8 | 5954.1 |
| 9.5° | 5900.5 | 5952.2 | 5912.5 | 5939.3 | 6027.8 | 5981.4 | 6002.5 | 5986.2 | 5902.0 | 5865.6 | 5869.0 |
| 10° | 5862.3 | 5936.9 | 5862.3 | 5857.5 | 5960.4 | 5940.7 | 5957.5 | 5919.2 | 5810.6 | 5762.2 | 5780.9 |
| 10.5° | 5822.1 | 5921.6 | 5813.9 | 5784.3 | 5891.5 | 5894.8 | 5899.6 | 5844.1 | 5714.4 | 5649.3 | 5690.0 |
| 11° | 5782.8 | 5903.9 | 5768.0 | 5716.8 | 5823.0 | 5841.7 | 5832.1 | 5762.2 | 5614.9 | 5535.4 | 5597.6 |
| 11.5° | 5739.3 | 5877.6 | 5722.0 | 5657.0 | 5757.9 | 5780.4 | 5751.7 | 5677.1 | 5511.5 | 5421.0 | 5500.5 |
| 12° | 5692.9 | 5838.3 | 5676.6 | 5602.4 | 5690.0 | 5710.1 | 5666.5 | 5589.5 | 5410.5 | 5305.2 | 5401.9 |
| 12.5° | 5639.7 | 5784.7 | 5628.7 | 5552.2 | 5620.6 | 5629.7 | 5571.3 | 5498.6 | 5308.1 | 5193.7 | 5301.4 |
| 13° | 5584.2 | 5719.2 | 5580.4 | 5501.9 | 5551.2 | 5545.0 | 5475.1 | 5405.2 | 5206.6 | 5089.9 | 5208.1 |
| 13.5° | 5520.1 | 5645.0 | 5524.4 | 5446.9 | 5476.1 | 5451.7 | 5375.1 | 5305.7 | 5110.0 | 4991.8 | 5112.9 |
| 14° | 5453.6 | 5564.1 | 5464.1 | 5385.6 | 5395.7 | 5356.9 | 5276.5 | 5213.8 | 5018.6 | 4903.2 | 5023.4 |
| 14.5° | 5381.8 | 5479.9 | 5397.6 | 5322.0 | 5314.8 | 5258.8 | 5178.9 | 5119.1 | 4933.4 | 4819.5 | 4941.1 |
| 15° | 5306.7 | 5390.9 | 5327.2 | 5255.0 | 5233.4 | 5164.1 | 5087.5 | 5031.0 | 4858.7 | 4742.0 | 4866.9 |
| 15.5° | 5232.5 | 5306.7 | 5253.5 | 5188.5 | 5152.1 | 5075.0 | 4999.4 | 4944.4 | 4783.6 | 4671.1 | 4794.1 |
| 16° | 5155.4 | 5220.5 | 5177.9 | 5118.1 | 5071.7 | 4988.4 | 4912.3 | 4860.7 | 4711.3 | 4601.3 | 4722.4 |
| 16.5° | 5076.0 | 5131.5 | 5099.9 | 5044.4 | 4991.3 | 4901.3 | 4823.8 | 4773.6 | 4635.7 | 4530.9 | 4647.2 |
| 17° | 4991.8 | 5042.0 | 5018.6 | 4965.5 | 4907.6 | 4814.2 | 4740.5 | 4686.5 | 4561.6 | 4460.6 | 4573.5 |
| 17.5° | 4908.5 | 4949.7 | 4935.8 | 4886.0 | 4822.4 | 4726.7 | 4656.8 | 4600.3 | 4485.9 | 4391.2 | 4498.4 |
| 18° | 4822.4 | 4858.7 | 4849.6 | 4805.1 | 4740.5 | 4640.0 | 4575.0 | 4519.4 | 4414.6 | 4326.1 | 4428.5 |
| 18.5° | 4738.6 | 4771.2 | 4764.5 | 4724.7 | 4657.7 | 4558.7 | 4497.0 | 4440.0 | 4351.5 | 4268.2 | 4362.5 |
| 19° | 4660.6 | 4689.8 | 4684.5 | 4649.6 | 4582.6 | 4485.0 | 4428.0 | 4373.5 | 4296.4 | 4218.0 | 4307.9 |
| 19.5° | 4592.2 | 4618.0 | 4613.2 | 4584.5 | 4512.7 | 4422.3 | 4367.7 | 4313.2 | 4246.7 | 4170.1 | 4251.9 |
| 20° | 4530.5 | 4552.9 | 4550.1 | 4526.1 | 4453.4 | 4363.9 | 4310.8 | 4254.8 | 4196.4 | 4119.4 | 4196.4 |
| 20.5° | 4474.9 | 4491.7 | 4491.7 | 4473.0 | 4397.9 | 4306.0 | 4251.0 | 4190.7 | 4138.5 | 4060.0 | 4132.8 |
| 21° | 4411.8 | 4426.6 | 4426.6 | 4417.5 | 4341.9 | 4242.8 | 4180.6 | 4117.9 | 4071.5 | 3993.0 | 4062.0 |



TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22.5° | 4188.8 | 4204.1 | 4211.7 | 4226.6 | 4148.1 | 4028.9 | 3937.0 | 3852.3 | 3821.7 | 3755.7 | 3822.7 |
| 23° | 4100.2 | 4121.3 | 4128.0 | 4150.0 | 4068.7 | 3948.1 | 3846.6 | 3757.6 | 3737.0 | 3678.2 | 3736.5 |
| 23.5° | 4014.1 | 4040.4 | 4046.2 | 4072.5 | 3986.8 | 3870.1 | 3754.7 | 3670.5 | 3652.3 | 3600.1 | 3650.9 |
| 24° | 3930.8 | 3960.0 | 3962.9 | 3989.7 | 3905.9 | 3794.0 | 3675.8 | 3583.4 | 3568.1 | 3522.6 | 3565.2 |
| 24.5° | 3851.4 | 3884.9 | 3885.4 | 3904.0 | 3823.2 | 3713.6 | 3596.8 | 3496.3 | 3483.4 | 3444.6 | 3479.6 |
| 25° | 3774.8 | 3810.7 | 3805.0 | 3813.1 | 3742.3 | 3636.0 | 3517.8 | 3409.2 | 3398.7 | 3366.6 | 3393.4 |
| 25.5° | 3701.6 | 3738.5 | 3729.8 | 3725.5 | 3658.5 | 3559.0 | 3438.9 | 3327.9 | 3317.8 | 3290.5 | 3307.8 |
| 26° | 3624.6 | 3665.7 | 3649.4 | 3632.2 | 3574.8 | 3481.5 | 3359.9 | 3249.4 | 3238.4 | 3209.2 | 3227.8 |
| 26.5° | 3545.6 | 3589.1 | 3568.6 | 3540.8 | 3490.6 | 3403.9 | 3281.0 | 3169.0 | 3154.6 | 3125.4 | 3143.6 |
| 27° | 3462.8 | 3506.8 | 3481.0 | 3443.7 | 3406.3 | 3314.5 | 3200.1 | 3089.5 | 3070.9 | 3039.3 | 3058.4 |
| 27.5° | 3376.2 | 3421.6 | 3391.0 | 3351.8 | 3322.1 | 3225.9 | 3115.9 | 3006.7 | 2984.3 | 2950.8 | 2972.3 |
| 28° | 3283.3 | 3332.2 | 3295.3 | 3255.6 | 3222.1 | 3133.6 | 3029.7 | 2916.8 | 2895.7 | 2860.3 | 2882.3 |
| 28.5° | 3185.7 | 3239.8 | 3195.3 | 3163.7 | 3119.7 | 3039.3 | 2935.0 | 2825.9 | 2802.4 | 2764.6 | 2789.5 |
| 29° | 3082.8 | 3148.9 | 3093.4 | 3068.5 | 3018.2 | 2946.0 | 2839.7 | 2734.0 | 2711.0 | 2669.8 | 2699.0 |
| 29.5° | 2983.3 | 3052.7 | 2992.4 | 2976.1 | 2917.7 | 2849.3 | 2743.1 | 2638.3 | 2619.6 | 2575.1 | 2606.2 |
| 30° | 2882.3 | 2955.5 | 2893.8 | 2883.3 | 2818.7 | 2752.6 | 2647.4 | 2544.5 | 2528.2 | 2485.1 | 2514.8 |
| 30.5° | 2783.3 | 2858.4 | 2797.1 | 2790.9 | 2721.0 | 2656.9 | 2551.2 | 2455.0 | 2437.3 | 2391.3 | 2422.9 |
| 31° | 2687.5 | 2759.3 | 2703.8 | 2695.7 | 2631.6 | 2566.5 | 2458.8 | 2368.8 | 2349.2 | 2301.8 | 2337.2 |
| 31.5° | 2594.7 | 2663.6 | 2615.3 | 2603.3 | 2532.5 | 2474.1 | 2371.2 | 2283.2 | 2262.1 | 2214.7 | 2249.2 |
| 32° | 2505.2 | 2568.4 | 2527.7 | 2510.5 | 2443.0 | 2383.2 | 2284.6 | 2201.3 | 2175.0 | 2135.8 | 2164.0 |
| 32.5° | 2417.2 | 2473.2 | 2441.6 | 2419.6 | 2353.0 | 2288.9 | 2199.4 | 2117.6 | 2086.5 | 2052.0 | 2079.8 |
| 33° | 2332.5 | 2380.8 | 2357.8 | 2330.5 | 2270.7 | 2200.4 | 2114.2 | 2036.7 | 2002.7 | 1972.6 | 1995.6 |
| 33.5° | 2246.8 | 2289.4 | 2270.3 | 2243.9 | 2179.3 | 2109.9 | 2031.9 | 1957.3 | 1918.0 | 1893.2 | 1914.2 |
| 34° | 2161.1 | 2198.5 | 2183.6 | 2159.7 | 2093.2 | 2024.8 | 1948.7 | 1876.9 | 1840.5 | 1819.9 | 1832.9 |
| 34.5° | 2074.0 | 2106.1 | 2096.5 | 2077.4 | 2010.9 | 1936.7 | 1865.9 | 1793.6 | 1760.6 | 1742.4 | 1755.3 |
| 35° | 1987.9 | 2015.7 | 2010.4 | 1993.6 | 1931.4 | 1853.0 | 1780.7 | 1713.7 | 1684.5 | 1668.2 | 1678.8 |
| 35.5° | 1902.7 | 1927.1 | 1924.7 | 1911.8 | 1849.1 | 1769.7 | 1697.9 | 1635.7 | 1609.8 | 1594.5 | 1603.6 |
| 36° | 1818.0 | 1840.5 | 1838.6 | 1829.0 | 1769.2 | 1692.2 | 1615.1 | 1559.1 | 1538.5 | 1524.7 | 1528.5 |
| 36.5° | 1731.4 | 1755.3 | 1755.3 | 1743.4 | 1691.2 | 1608.9 | 1532.8 | 1479.7 | 1464.4 | 1451.9 | 1455.8 |
| 37° | 1651.5 | 1676.4 | 1675.4 | 1663.9 | 1617.5 | 1530.9 | 1452.4 | 1402.6 | 1392.6 | 1385.9 | 1384.0 |
| 37.5° | 1571.6 | 1597.4 | 1595.5 | 1584.5 | 1538.1 | 1454.3 | 1376.3 | 1331.3 | 1322.2 | 1319.8 | 1314.6 |
| 38° | 1491.6 | 1518.0 | 1516.1 | 1504.6 | 1464.4 | 1383.0 | 1302.1 | 1260.0 | 1255.7 | 1255.7 | 1246.2 |
| 38.5° | 1411.7 | 1439.0 | 1436.1 | 1425.1 | 1390.7 | 1311.2 | 1231.8 | 1189.7 | 1191.1 | 1193.5 | 1181.5 |
| 39° | 1331.8 | 1360.0 | 1356.2 | 1345.7 | 1321.3 | 1242.3 | 1163.4 | 1121.2 | 1128.4 | 1134.2 | 1118.9 |
| 39.5° | 1257.6 | 1284.9 | 1281.1 | 1273.9 | 1246.2 | 1176.3 | 1096.8 | 1055.7 | 1067.2 | 1074.8 | 1059.0 |
| 40° | 1188.2 | 1213.1 | 1206.4 | 1204.5 | 1178.2 | 1113.1 | 1032.7 | 991.6 | 1010.2 | 1018.8 | 1000.2 |
| 40.5° | 1118.9 | 1144.2 | 1132.7 | 1138.0 | 1111.7 | 1051.9 | 971.0 | 931.7 | 956.1 | 964.8 | 946.1 |
| 41° | 1049.9 | 1078.2 | 1064.3 | 1072.0 | 1049.0 | 994.0 | 913.1 | 873.8 | 904.0 | 914.0 | 893.5 |
| 41.5° | 984.9 | 1013.1 | 998.3 | 1008.3 | 986.8 | 937.5 | 858.5 | 822.2 | 854.2 | 864.7 | 843.2 |
| 42° | 926.5 | 952.8 | 936.5 | 946.1 | 931.3 | 884.4 | 807.3 | 772.9 | 805.4 | 817.8 | 795.4 |
| 42.5° | 869.1 | 893.5 | 876.2 | 884.4 | 874.8 | 833.6 | 759.9 | 728.8 | 760.9 | 772.9 | 748.9 |
| 43° | 813.5 | 835.6 | 819.3 | 826.9 | 822.2 | 784.3 | 715.9 | 687.7 | 716.9 | 729.3 | 705.4 |
| 43.5° | 758.0 | 778.1 | 765.2 | 770.0 | 770.9 | 737.0 | 674.3 | 649.9 | 674.3 | 686.7 | 663.8 |



TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 45° | 612.5 | 622.6 | 617.8 | 620.2 | 629.3 | 609.7 | 562.8 | 543.2 | 557.5 | 567.6 | 550.3 |
| 45.5° | 565.2 | 575.7 | 572.3 | 577.1 | 587.2 | 568.0 | 528.8 | 511.1 | 522.1 | 530.2 | 515.9 |
| 46° | 524.5 | 533.1 | 529.8 | 535.5 | 544.6 | 529.3 | 495.3 | 479.5 | 487.6 | 493.9 | 482.4 |
| 46.5° | 482.4 | 490.5 | 488.1 | 494.3 | 505.8 | 492.9 | 464.2 | 449.8 | 456.1 | 461.3 | 451.3 |
| 47° | 444.6 | 450.3 | 449.4 | 456.5 | 468.0 | 459.9 | 433.6 | 420.2 | 425.0 | 429.3 | 420.6 |
| 47.5° | 405.3 | 411.1 | 411.1 | 419.7 | 433.1 | 426.4 | 402.9 | 390.5 | 393.4 | 396.7 | 389.5 |
| 48° | 370.9 | 375.7 | 375.2 | 383.8 | 398.2 | 393.4 | 372.3 | 360.8 | 361.8 | 364.2 | 358.9 |
| 48.5° | 337.9 | 342.2 | 342.2 | 350.8 | 363.2 | 359.9 | 341.7 | 331.6 | 330.7 | 331.6 | 328.3 |
| 49° | 309.1 | 311.5 | 311.5 | 319.2 | 328.8 | 326.9 | 313.9 | 304.4 | 303.4 | 304.8 | 301.5 |
| 49.5° | 280.9 | 281.9 | 282.3 | 288.1 | 298.6 | 297.7 | 287.6 | 278.5 | 276.6 | 278.5 | 275.6 |
| 50° | 253.2 | 253.2 | 253.6 | 259.4 | 270.4 | 269.4 | 259.4 | 252.2 | 251.2 | 252.7 | 249.3 |
| 50.5° | 224.0 | 224.0 | 223.5 | 228.7 | 240.7 | 239.8 | 231.6 | 224.4 | 224.4 | 225.4 | 222.0 |
| 51° | 192.4 | 191.9 | 190.9 | 195.2 | 208.2 | 207.7 | 200.0 | 193.8 | 194.3 | 194.3 | 190.9 |
| 51.5° | 157.4 | 157.0 | 156.5 | 157.0 | 173.7 | 173.2 | 168.0 | 162.7 | 163.2 | 162.2 | 159.4 |
| 52° | 128.7 | 128.3 | 128.3 | 128.7 | 138.3 | 136.4 | 132.6 | 129.7 | 130.2 | 128.3 | 125.4 |
| 52.5° | 100.0 | 99.5 | 100.5 | 100.5 | 105.8 | 102.9 | 100.0 | 98.6 | 97.6 | 96.7 | 94.3 |
| 53° | 71.3 | 71.3 | 72.3 | 71.8 | 87.1 | 84.7 | 81.8 | 80.9 | 79.9 | 79.4 | 77.5 |
| 53.5° | 42.6 | 43.1 | 44.5 | 44.0 | 68.4 | 66.5 | 64.1 | 63.2 | 62.7 | 62.2 | 60.3 |
| 54° | 25.8 | 26.3 | 27.3 | 27.3 | 49.3 | 47.9 | 46.4 | 45.5 | 45.5 | 45.0 | 43.5 |
| 54.5° | 15.3 | 15.8 | 16.7 | 16.3 | 30.6 | 29.7 | 28.7 | 28.2 | 28.2 | 27.8 | 26.3 |
| 55° | 13.4 | 13.4 | 13.9 | 13.9 | 12.9 | 12.0 | 11.0 | 10.5 | 10.5 | 10.5 | 10.5 |
| 55.5° | 11.0 | 11.0 | 11.5 | 11.5 | 10.0 | 9.6 | 8.6 | 8.6 | 8.1 | 8.1 | 8.6 |
| 56° | 8.6 | 8.6 | 9.1 | 9.6 | 8.6 | 8.1 | 7.7 | 7.2 | 7.2 | 7.2 | 7.7 |
| 56.5° | 6.2 | 6.2 | 6.7 | 7.2 | 7.7 | 7.2 | 6.7 | 6.7 | 6.2 | 6.7 | 6.7 |
| 57° | 5.7 | 5.7 | 6.2 | 6.7 | 7.2 | 6.7 | 6.2 | 5.7 | 5.7 | 5.7 | 6.2 |
| 57.5° | 5.3 | 5.3 | 5.7 | 6.2 | 6.2 | 6.2 | 5.7 | 5.3 | 5.3 | 5.3 | 5.7 |
| 58° | 4.8 | 4.8 | 5.3 | 5.7 | 5.7 | 5.7 | 5.3 | 5.3 | 4.8 | 4.8 | 5.3 |
| 58.5° | 4.3 | 4.3 | 4.8 | 5.3 | 5.3 | 5.3 | 4.8 | 4.8 | 4.3 | 4.8 | 4.8 |
| 59° | 3.8 | 4.3 | 4.3 | 4.8 | 5.3 | 4.8 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 59.5° | 3.8 | 3.8 | 4.3 | 4.3 | 4.8 | 4.3 | 4.3 | 3.8 | 3.8 | 3.8 | 4.3 |
| 60° | 3.3 | 3.3 | 3.8 | 4.3 | 4.3 | 4.3 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| 60.5° | 3.3 | 3.3 | 3.3 | 3.8 | 3.8 | 3.8 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| 61° | 2.9 | 2.9 | 3.3 | 3.3 | 3.8 | 3.3 | 3.3 | 3.3 | 2.9 | 3.3 | 3.3 |
| 61.5° | 2.9 | 2.9 | 2.9 | 3.3 | 3.3 | 3.3 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 62° | 2.4 | 2.4 | 2.9 | 2.9 | 3.3 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 62.5° | 2.4 | 2.4 | 2.4 | 2.9 | 2.9 | 2.9 | 2.9 | 2.4 | 2.4 | 2.4 | 2.9 |
| 63° | 2.4 | 2.4 | 2.4 | 2.4 | 2.9 | 2.9 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 63.5° | 1.9 | 1.9 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 64° | 1.9 | 1.9 | 1.9 | 2.4 | 2.4 | 2.4 | 1.9 | 1.9 | 1.9 | 1.9 | 2.4 |
| 64.5° | 1.9 | 1.9 | 1.9 | 1.9 | 2.4 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 65° | 1.4 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 65.5° | 1.4 | 1.4 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.4 | 1.4 | 1.9 | 1.9 |
| 66° | 1.4 | 1.4 | 1.4 | 1.9 | 1.9 | 1.9 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |



TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 67.5° | 1.0 | 1.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 68° | 1.0 | 1.0 | 1.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.0 | 1.0 | 1.0 | 1.4 |
| 68.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.4 | 1.4 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 69° | 1.0 | 1.0 | 1.0 | 1.0 | 1.4 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 69.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 70° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 70.5° | 0.5 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 71° | 0.5 | 0.5 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 71.5° | 0.5 | 0.5 | 0.5 | 1.0 | 1.0 | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 1.0 |
| 72° | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 72.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 73° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 73.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 74° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 74.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 75° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 75.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 76° | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 76.5° | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 77° | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 |
| 78° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84.5° | 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 |
| 85.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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: P776573
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

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: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 0° | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 | 6441.8 |
| 0.5° | 6444.7 | 6450.4 | 6436.5 | 6429.4 | 6424.6 | 6421.2 |
| 1° | 6448.5 | 6441.8 | 6423.6 | 6414.0 | 6408.3 | 6404.0 |
| 1.5° | 6443.2 | 6424.1 | 6406.9 | 6398.7 | 6393.9 | 6387.2 |
| 2° | 6427.0 | 6399.2 | 6385.8 | 6385.3 | 6382.0 | 6371.4 |
| 2.5° | 6399.7 | 6367.1 | 6364.3 | 6375.8 | 6373.8 | 6356.1 |
| 3° | 6366.2 | 6331.7 | 6343.2 | 6370.0 | 6369.1 | 6340.3 |
| 3.5° | 6327.9 | 6294.9 | 6321.7 | 6367.6 | 6367.6 | 6323.1 |
| 4° | 6290.1 | 6259.5 | 6299.2 | 6366.2 | 6367.6 | 6303.5 |
| 4.5° | 6252.3 | 6223.1 | 6272.9 | 6363.3 | 6364.7 | 6278.1 |
| 5° | 6217.4 | 6186.7 | 6243.2 | 6353.3 | 6354.7 | 6247.0 |
| 5.5° | 6185.3 | 6153.2 | 6207.3 | 6331.2 | 6335.1 | 6210.7 |
| 6° | 6157.1 | 6125.0 | 6170.0 | 6298.7 | 6304.9 | 6172.4 |
| 6.5° | 6135.0 | 6101.5 | 6131.7 | 6257.1 | 6264.7 | 6132.6 |
| 7° | 6116.9 | 6081.4 | 6094.4 | 6208.7 | 6216.9 | 6095.8 |
| 7.5° | 6099.6 | 6063.3 | 6057.0 | 6152.7 | 6154.2 | 6058.0 |
| 8° | 6080.0 | 6041.2 | 6017.3 | 6095.3 | 6092.0 | 6021.6 |
| 8.5° | 6050.3 | 6011.6 | 5977.6 | 6027.8 | 6017.8 | 5980.9 |
| 9° | 6009.7 | 5973.3 | 5933.1 | 5955.1 | 5943.6 | 5941.2 |
| 9.5° | 5954.6 | 5924.5 | 5884.8 | 5878.5 | 5865.1 | 5900.5 |
| 10° | 5887.6 | 5866.6 | 5832.6 | 5805.8 | 5793.8 | 5862.3 |
| 10.5° | 5809.1 | 5803.9 | 5776.6 | 5735.0 | 5728.3 | 5822.1 |
| 11° | 5724.9 | 5729.7 | 5715.3 | 5670.4 | 5667.0 | 5782.8 |
| 11.5° | 5637.8 | 5642.1 | 5647.4 | 5607.2 | 5609.6 | 5739.3 |
| 12° | 5543.5 | 5548.3 | 5573.7 | 5545.9 | 5558.4 | 5692.9 |
| 12.5° | 5445.9 | 5450.7 | 5494.3 | 5482.3 | 5507.7 | 5639.7 |
| 13° | 5349.7 | 5349.7 | 5411.5 | 5418.6 | 5457.4 | 5584.2 |
| 13.5° | 5249.7 | 5248.8 | 5322.0 | 5348.3 | 5402.4 | 5520.1 |
| 14° | 5146.8 | 5151.1 | 5229.1 | 5277.0 | 5345.0 | 5453.6 |
| 14.5° | 5051.1 | 5059.3 | 5138.2 | 5203.8 | 5282.3 | 5381.8 |
| 15° | 4959.7 | 4971.7 | 5048.2 | 5131.0 | 5218.6 | 5306.7 |
| 15.5° | 4872.6 | 4887.0 | 4961.6 | 5058.3 | 5154.5 | 5232.5 |
| 16° | 4787.0 | 4802.8 | 4875.0 | 4983.6 | 5086.1 | 5155.4 |
| 16.5° | 4701.3 | 4720.9 | 4788.9 | 4905.6 | 5014.3 | 5076.0 |
| 17° | 4614.2 | 4638.1 | 4705.1 | 4826.7 | 4937.7 | 4991.8 |
| 17.5° | 4527.6 | 4554.9 | 4619.0 | 4747.7 | 4860.2 | 4908.5 |
| 18° | 4443.8 | 4474.5 | 4535.7 | 4667.8 | 4781.2 | 4822.4 |
| 18.5° | 4365.4 | 4404.1 | 4457.7 | 4589.3 | 4702.3 | 4738.6 |
| 19° | 4297.4 | 4338.6 | 4390.7 | 4519.9 | 4630.5 | 4660.6 |
| 19.5° | 4236.1 | 4281.6 | 4331.4 | 4462.5 | 4569.7 | 4592.2 |
| 20° | 4176.8 | 4223.7 | 4272.5 | 4410.8 | 4516.6 | 4530.5 |
| 20.5° | 4111.7 | 4164.8 | 4213.2 | 4357.7 | 4463.5 | 4474.9 |
| 21° | 4039.5 | 4097.4 | 4148.6 | 4298.4 | 4406.0 | 4411.8 |

TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 22.5° | 3788.7 | 3860.5 | 3934.7 | 4084.4 | 4195.0 | 4188.8 |
| 23° | 3703.5 | 3774.8 | 3854.7 | 4002.1 | 4110.3 | 4100.2 |
| 23.5° | 3618.8 | 3689.6 | 3776.3 | 3917.4 | 4026.1 | 4014.1 |
| 24° | 3533.6 | 3602.1 | 3697.3 | 3834.6 | 3938.5 | 3930.8 |
| 24.5° | 3448.9 | 3517.4 | 3618.8 | 3752.8 | 3853.8 | 3851.4 |
| 25° | 3363.7 | 3434.1 | 3534.6 | 3671.5 | 3768.1 | 3774.8 |
| 25.5° | 3287.7 | 3355.1 | 3456.1 | 3589.6 | 3682.0 | 3701.6 |
| 26° | 3209.7 | 3275.2 | 3373.3 | 3503.5 | 3592.5 | 3624.6 |
| 26.5° | 3128.8 | 3195.3 | 3289.6 | 3414.5 | 3504.0 | 3545.6 |
| 27° | 3047.4 | 3113.9 | 3199.1 | 3321.2 | 3410.2 | 3462.8 |
| 27.5° | 2960.8 | 3027.3 | 3110.6 | 3223.5 | 3315.4 | 3376.2 |
| 28° | 2872.7 | 2939.3 | 3015.4 | 3119.2 | 3219.7 | 3283.3 |
| 28.5° | 2778.0 | 2847.9 | 2918.7 | 3018.7 | 3129.7 | 3185.7 |
| 29° | 2683.2 | 2756.0 | 2819.6 | 2918.2 | 3032.1 | 3082.8 |
| 29.5° | 2589.9 | 2658.8 | 2723.0 | 2820.1 | 2938.3 | 2983.3 |
| 30° | 2500.4 | 2565.5 | 2628.2 | 2723.0 | 2841.6 | 2882.3 |
| 30.5° | 2412.4 | 2471.2 | 2531.5 | 2630.1 | 2747.4 | 2783.3 |
| 31° | 2329.6 | 2378.4 | 2440.1 | 2536.3 | 2653.1 | 2687.5 |
| 31.5° | 2245.8 | 2287.5 | 2350.6 | 2445.4 | 2560.3 | 2594.7 |
| 32° | 2167.8 | 2197.5 | 2262.6 | 2355.9 | 2466.9 | 2505.2 |
| 32.5° | 2085.1 | 2112.3 | 2175.0 | 2263.6 | 2375.5 | 2417.2 |
| 33° | 2006.1 | 2028.1 | 2090.3 | 2175.5 | 2288.4 | 2332.5 |
| 33.5° | 1924.3 | 1946.3 | 2004.7 | 2089.4 | 2203.3 | 2246.8 |
| 34° | 1841.9 | 1863.0 | 1919.5 | 2004.7 | 2118.1 | 2161.1 |
| 34.5° | 1761.6 | 1778.3 | 1837.6 | 1923.8 | 2035.3 | 2074.0 |
| 35° | 1683.5 | 1696.0 | 1753.9 | 1841.5 | 1952.0 | 1987.9 |
| 35.5° | 1606.0 | 1617.5 | 1677.3 | 1764.4 | 1872.1 | 1902.7 |
| 36° | 1531.8 | 1538.5 | 1600.8 | 1710.8 | 1788.8 | 1818.0 |
| 36.5° | 1456.7 | 1460.1 | 1524.7 | 1630.9 | 1698.4 | 1731.4 |
| 37° | 1387.3 | 1381.6 | 1448.1 | 1550.0 | 1619.9 | 1651.5 |
| 37.5° | 1313.6 | 1308.4 | 1372.0 | 1469.6 | 1541.9 | 1571.6 |
| 38° | 1242.8 | 1239.9 | 1301.2 | 1389.2 | 1463.4 | 1491.6 |
| 38.5° | 1173.4 | 1172.5 | 1234.2 | 1317.5 | 1385.4 | 1411.7 |
| 39° | 1104.0 | 1110.2 | 1169.6 | 1248.1 | 1313.1 | 1331.8 |
| 39.5° | 1037.0 | 1045.6 | 1106.4 | 1180.1 | 1240.9 | 1257.6 |
| 40° | 973.4 | 987.7 | 1044.7 | 1112.6 | 1172.9 | 1188.2 |
| 40.5° | 913.1 | 929.3 | 987.7 | 1049.5 | 1106.4 | 1118.9 |
| 41° | 858.5 | 877.2 | 932.2 | 988.2 | 1042.3 | 1049.9 |
| 41.5° | 807.8 | 826.0 | 879.6 | 930.8 | 980.6 | 984.9 |
| 42° | 760.4 | 777.6 | 832.2 | 875.8 | 919.3 | 926.5 |
| 42.5° | 717.8 | 734.1 | 783.4 | 824.1 | 862.4 | 869.1 |
| 43° | 677.6 | 691.0 | 737.0 | 771.4 | 806.4 | 813.5 |
| 43.5° | 640.3 | 650.8 | 692.5 | 721.7 | 752.8 | 758.0 |



TEST NUMBER: P776573

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 45° | 537.4 | 541.7 | 571.4 | 586.2 | 604.9 | 612.5 |
| 45.5° | 505.4 | 508.2 | 533.1 | 545.1 | 561.3 | 565.2 |
| 46° | 474.2 | 475.7 | 495.8 | 506.3 | 521.1 | 524.5 |
| 46.5° | 444.6 | 442.7 | 459.4 | 468.0 | 481.4 | 482.4 |
| 47° | 415.4 | 411.6 | 424.5 | 431.2 | 443.6 | 444.6 |
| 47.5° | 386.2 | 380.9 | 390.0 | 396.2 | 407.7 | 405.3 |
| 48° | 357.0 | 351.3 | 358.9 | 363.2 | 373.3 | 370.9 |
| 48.5° | 327.3 | 323.5 | 328.8 | 331.6 | 340.3 | 337.9 |
| 49° | 301.5 | 296.7 | 301.5 | 302.9 | 311.1 | 309.1 |
| 49.5° | 275.6 | 269.9 | 274.2 | 274.2 | 282.3 | 280.9 |
| 50° | 248.8 | 241.7 | 246.0 | 246.5 | 254.1 | 253.2 |
| 50.5° | 221.1 | 212.0 | 216.8 | 216.8 | 224.4 | 224.0 |
| 51° | 190.0 | 179.0 | 183.3 | 185.2 | 192.9 | 192.4 |
| 51.5° | 158.9 | 150.7 | 154.6 | 156.0 | 157.9 | 157.4 |
| 52° | 124.4 | 122.5 | 125.4 | 126.8 | 128.7 | 128.7 |
| 52.5° | 95.2 | 94.3 | 96.7 | 97.6 | 99.5 | 100.0 |
| 53° | 78.0 | 66.0 | 67.5 | 68.4 | 70.8 | 71.3 |
| 53.5° | 61.3 | 37.8 | 38.8 | 39.7 | 41.6 | 42.6 |
| 54° | 44.0 | 22.5 | 23.4 | 23.9 | 25.4 | 25.8 |
| 54.5° | 27.3 | 13.4 | 14.4 | 14.4 | 14.8 | 15.3 |
| 55° | 11.0 | 12.0 | 12.4 | 12.0 | 12.4 | 13.4 |
| 55.5° | 9.1 | 10.5 | 10.5 | 10.5 | 10.5 | 11.0 |
| 56° | 8.1 | 8.6 | 8.6 | 8.6 | 8.6 | 8.6 |
| 56.5° | 7.2 | 7.2 | 6.7 | 6.7 | 6.2 | 6.2 |
| 57° | 6.7 | 6.2 | 6.2 | 5.7 | 5.7 | 5.7 |
| 57.5° | 6.2 | 5.7 | 5.7 | 5.3 | 5.3 | 5.3 |
| 58° | 5.7 | 5.3 | 5.3 | 4.8 | 4.8 | 4.8 |
| 58.5° | 5.3 | 5.3 | 4.8 | 4.8 | 4.3 | 4.3 |
| 59° | 4.8 | 4.8 | 4.3 | 4.3 | 4.3 | 3.8 |
| 59.5° | 4.3 | 4.3 | 4.3 | 3.8 | 3.8 | 3.8 |
| 60° | 4.3 | 3.8 | 3.8 | 3.8 | 3.3 | 3.3 |
| 60.5° | 3.8 | 3.8 | 3.8 | 3.3 | 3.3 | 3.3 |
| 61° | 3.3 | 3.3 | 3.3 | 3.3 | 2.9 | 2.9 |
| 61.5° | 3.3 | 3.3 | 3.3 | 2.9 | 2.9 | 2.9 |
| 62° | 2.9 | 2.9 | 2.9 | 2.9 | 2.4 | 2.4 |
| 62.5° | 2.9 | 2.9 | 2.9 | 2.4 | 2.4 | 2.4 |
| 63° | 2.9 | 2.9 | 2.4 | 2.4 | 2.4 | 2.4 |
| 63.5° | 2.4 | 2.4 | 2.4 | 2.4 | 1.9 | 1.9 |
| 64° | 2.4 | 2.4 | 2.4 | 1.9 | 1.9 | 1.9 |
| 64.5° | 2.4 | 2.4 | 1.9 | 1.9 | 1.9 | 1.9 |
| 65° | 1.9 | 1.9 | 1.9 | 1.9 | 1.4 | 1.4 |
| 65.5° | 1.9 | 1.9 | 1.9 | 1.4 | 1.4 | 1.4 |
| 66° | 1.9 | 1.9 | 1.4 | 1.4 | 1.4 | 1.4 |



TEST NUMBER: P776573
 CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|------|--------|------|--------|------|
| 67.5° | 1.4 | 1.4 | 1.4 | 1.4 | 1.0 | 1.0 |
| 68° | 1.4 | 1.4 | 1.4 | 1.0 | 1.0 | 1.0 |
| 68.5° | 1.4 | 1.4 | 1.0 | 1.0 | 1.0 | 1.0 |
| 69° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 69.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 70° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 70.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.5 |
| 71° | 1.0 | 1.0 | 1.0 | 1.0 | 0.5 | 0.5 |
| 71.5° | 1.0 | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 |
| 72° | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 |
| 72.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 73° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 73.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 74° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 74.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 75° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 75.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 76° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 |
| 76.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 |
| 77° | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 |
| 77.5° | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 |
| 78° | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78.5° | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84.5° | 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 |
| 85.5° | 0.0 | 0.0 | 0.0 | 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: P776573
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRC-5000lm-4000K

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
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Peachtree City, GA 30269

Scaled Data Report



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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





| | | | | | | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 21.5° | 4342.4 | 4357.7 | 4359.1 | 4361.5 | 4281.6 | 4176.8 | 4106.0 | 4036.1 | 3995.0 | 3917.0 | 3986.8 |
| 22° | 4265.8 | 4281.1 | 4285.9 | 4297.9 | 4218.0 | 4106.5 | 4024.6 | 3947.6 | 3910.7 | 3838.5 | 3906.9 |



| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 44° | 708.3 | 724.5 | 713.0 | 715.9 | 721.7 | 691.5 | 635.5 | 611.1 | 633.6 | 645.6 | 624.5 |
| 44.5° | 659.9 | 671.9 | 663.8 | 666.1 | 673.8 | 650.4 | 599.6 | 577.1 | 594.4 | 605.8 | 586.7 |



| | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 66.5° | 1.4 | 1.4 | 1.4 | 1.4 | 1.9 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 67° | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |



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

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





| | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|
| 21.5° | 3962.9 | 4024.6 | 4082.1 | 4233.3 | 4342.9 | 4342.4 |
| 22° | 3877.7 | 3944.2 | 4007.4 | 4163.4 | 4271.1 | 4265.8 |



| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 44° | 603.9 | 612.1 | 651.3 | 674.3 | 700.6 | 708.3 |
| 44.5° | 570.0 | 576.7 | 609.7 | 629.3 | 650.8 | 659.9 |

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Peachtree City, GA 30269

Scaled Data Report



| | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|
| 66.5° | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 67° | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |

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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 |

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Scaled Data Report



(END OF REPORT)