

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



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P436905

Luminaire Tested: **TT-D6-750-U-MQ-HSS**

Issue Date: 12/2/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P436905  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TT-D6-750-U-MQ-HSS  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE  
5000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11155.1 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Luminous Opening: Circular (Dia: 1.12' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U2 - G3

Input Watts (W): 105.2  
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: 28.75 FT

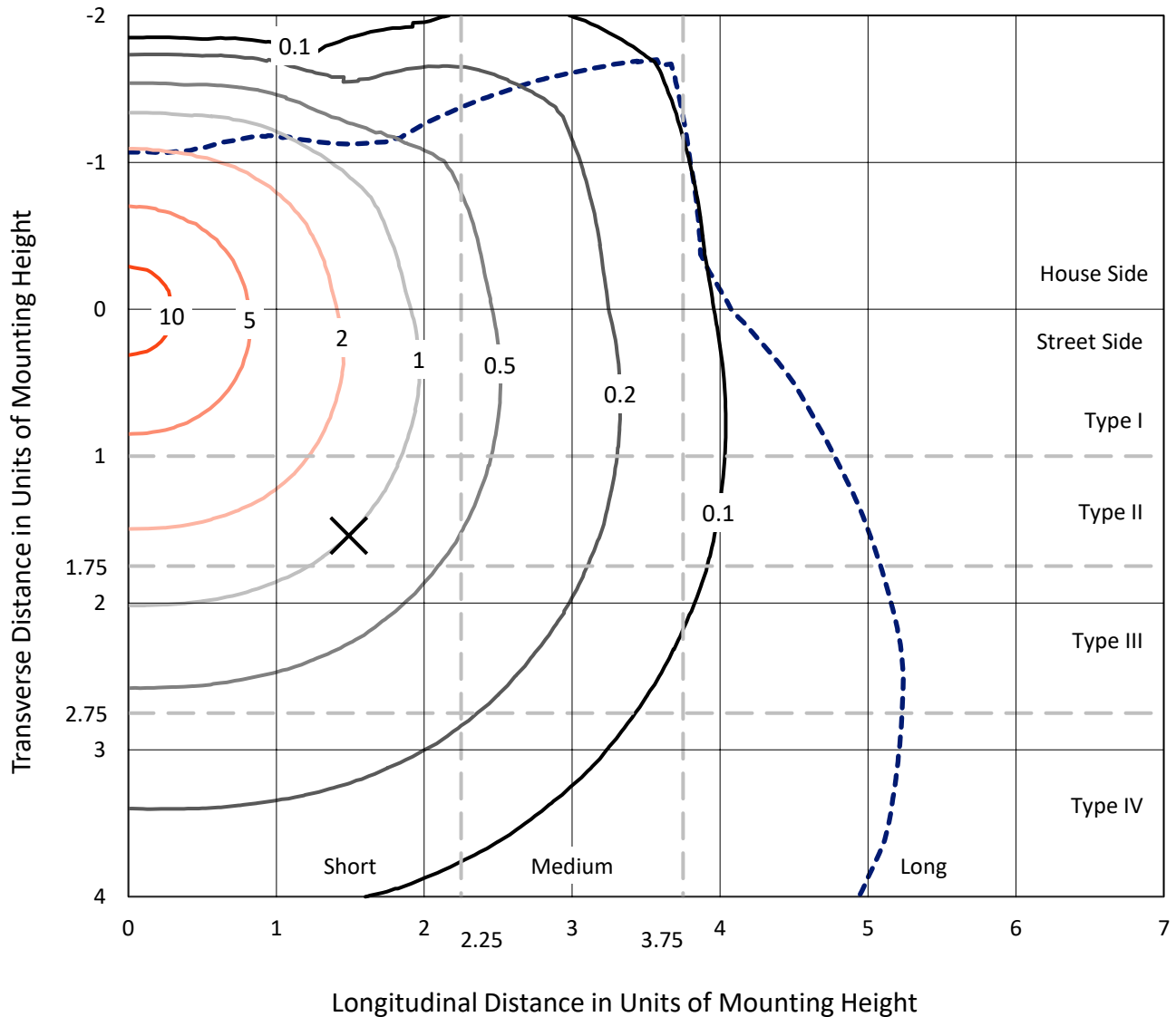
REPORT NUMBER: P436905

CATALOG NUMBER: TT-D6-750-U-MQ-HSS

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

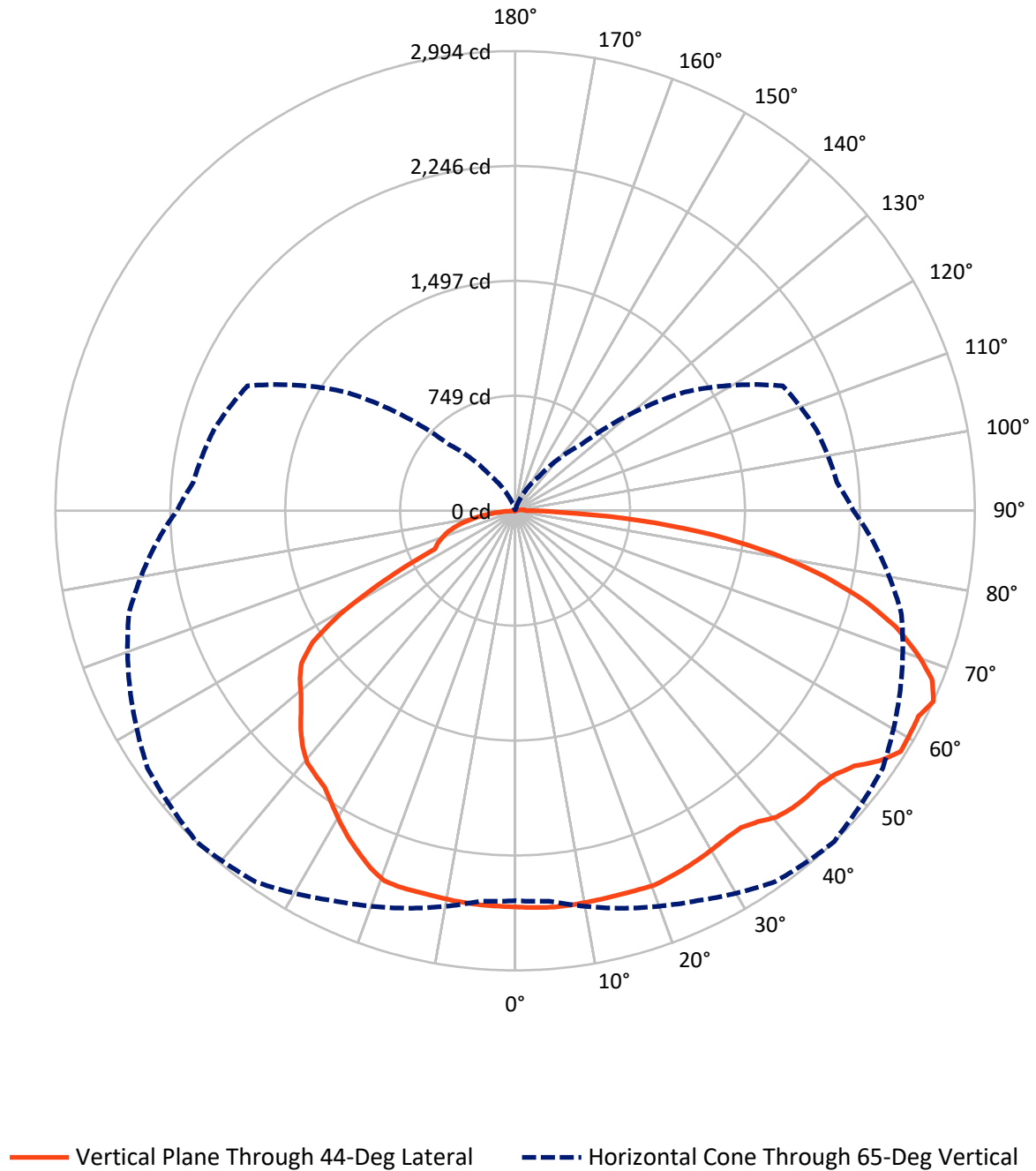


Based on 15 foot mounting height. Maximum calculated value = 11.5 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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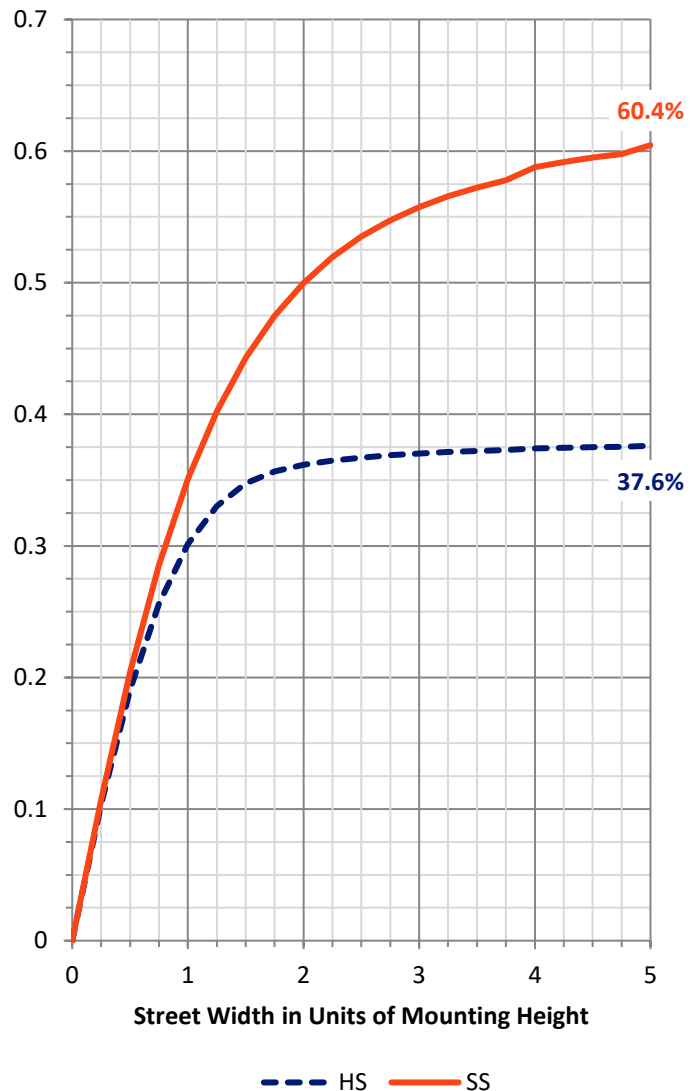
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 4223.8   | 3.0    | 4226.8  |
|                    | % Fixture | 37.9     | 0.0    | 37.9    |
| <b>Street Side</b> | Lumens    | 6890.4   | 37.9   | 6928.3  |
|                    | % Fixture | 61.8     | 0.3    | 62.1    |
| <b>Total</b>       | Lumens    | 11114.2  | 40.9   | 11155.1 |
|                    | % Fixture | 99.6     | 0.4    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 246.6   | 2.2       |
| 10°-20°   | 730.0   | 6.5       |
| 20°-30°   | 1161.7  | 10.4      |
| 30°-40°   | 1488.3  | 13.3      |
| 40°-50°   | 1763.2  | 15.8      |
| 50°-60°   | 1931.1  | 17.3      |
| 60°-70°   | 1835.5  | 16.5      |
| 70°-80°   | 1461.4  | 13.1      |
| 80°-90°   | 496.5   | 4.5       |
| 90°-100°  | 26.2    | 0.2       |
| 100°-110° | 8.6     | 0.1       |
| 110°-120° | 1.9     | 0.0       |
| 120°-130° | 1.2     | 0.0       |
| 130°-140° | 0.9     | 0.0       |
| 140°-150° | 0.9     | 0.0       |
| 150°-160° | 0.6     | 0.0       |
| 160°-170° | 0.4     | 0.0       |
| 170°-180° | 0.1     | 0.0       |
| 0°-90°    | 11114.2 | 99.6      |
| 0°-180°   | 11155.1 | 100.0     |



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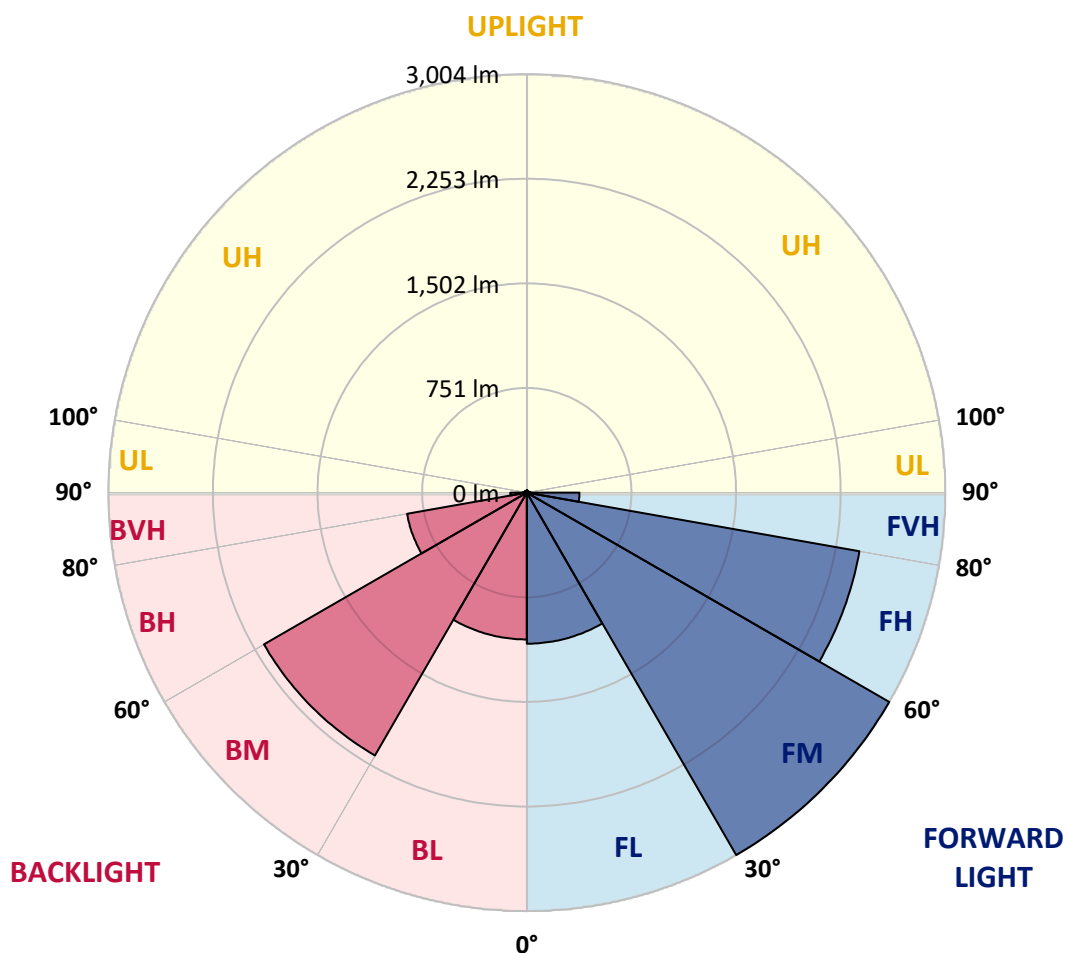
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |       |         |
|------|-------------|--------|-----------|-------------------------|-------|---------|
|      |             |        |           | B                       | U     | G       |
| FL   | (0°-30°)    | 1084.2 | 9.7       |                         |       |         |
| FM   | (30°-60°)   | 3003.9 | 26.9      |                         |       |         |
| FH   | (60°-80°)   | 2424.1 | 21.7      |                         |       | G2/5000 |
| FVH  | (80°-90°)   | 378.2  | 3.4       |                         |       | G3/500  |
| BL   | (0°-30°)    | 1054.0 | 9.4       | B3/2500                 |       |         |
| BM   | (30°-60°)   | 2178.7 | 19.5      | B2/2500                 |       |         |
| BH   | (60°-80°)   | 872.8  | 7.8       | B2/1000                 |       | G2/1000 |
| BVH  | (80°-90°)   | 118.3  | 1.1       |                         |       | G2/225  |
| UL   | (90°-100°)  | 26.2   | 0.2       |                         | U2/50 |         |
| UH   | (100°-180°) | 14.7   | 0.1       |                         | U2/50 |         |

**BUG Rating: B3-U2-G3**

Type IV Short





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CATALOG NUMBER: TT-D6-750-U-MQ-HSS

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 15°    | 25°    | 35°    | 44°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 |
| 2.5°   | 2592.2 | 2590.2 | 2590.2 | 2590.2 | 2590.2 | 2588.2 | 2590.2 | 2586.2 | 2588.2 | 2582.3 | 2582.3 |
| 5°     | 2598.1 | 2594.1 | 2596.1 | 2596.1 | 2596.1 | 2594.1 | 2596.1 | 2590.2 | 2592.2 | 2584.3 | 2582.3 |
| 7.5°   | 2600.0 | 2598.1 | 2598.1 | 2598.1 | 2598.1 | 2594.1 | 2596.1 | 2592.2 | 2590.2 | 2584.3 | 2580.3 |
| 10°    | 2600.0 | 2598.1 | 2598.1 | 2598.1 | 2596.1 | 2592.2 | 2594.1 | 2588.2 | 2588.2 | 2580.3 | 2576.4 |
| 12.5°  | 2600.0 | 2598.1 | 2600.0 | 2596.1 | 2596.1 | 2592.2 | 2592.2 | 2586.2 | 2586.2 | 2576.4 | 2572.4 |
| 15°    | 2598.1 | 2596.1 | 2596.1 | 2598.1 | 2596.1 | 2592.2 | 2592.2 | 2586.2 | 2584.3 | 2572.4 | 2568.5 |
| 17.5°  | 2596.1 | 2594.1 | 2596.1 | 2598.1 | 2600.0 | 2596.1 | 2598.1 | 2588.2 | 2584.3 | 2572.4 | 2566.5 |
| 20°    | 2598.1 | 2596.1 | 2598.1 | 2602.0 | 2602.0 | 2602.0 | 2602.0 | 2592.2 | 2584.3 | 2572.4 | 2562.6 |
| 22.5°  | 2592.2 | 2592.2 | 2592.2 | 2592.2 | 2596.1 | 2590.2 | 2590.2 | 2584.3 | 2574.4 | 2564.6 | 2554.7 |
| 25°    | 2578.4 | 2578.4 | 2580.3 | 2582.3 | 2582.3 | 2576.4 | 2576.4 | 2570.5 | 2562.6 | 2550.8 | 2538.9 |
| 27.5°  | 2562.6 | 2562.6 | 2564.6 | 2564.6 | 2568.5 | 2562.6 | 2562.6 | 2554.7 | 2546.8 | 2533.0 | 2519.2 |
| 30°    | 2544.9 | 2544.9 | 2544.9 | 2548.8 | 2550.8 | 2548.8 | 2548.8 | 2538.9 | 2529.1 | 2513.3 | 2495.6 |
| 32.5°  | 2525.1 | 2525.1 | 2531.1 | 2535.0 | 2537.0 | 2537.0 | 2537.0 | 2525.1 | 2513.3 | 2493.6 | 2468.0 |
| 35°    | 2509.4 | 2509.4 | 2517.3 | 2531.1 | 2538.9 | 2535.0 | 2533.0 | 2525.1 | 2507.4 | 2485.7 | 2444.3 |
| 37.5°  | 2519.2 | 2519.2 | 2537.0 | 2556.7 | 2574.4 | 2570.5 | 2570.5 | 2556.7 | 2533.0 | 2497.5 | 2446.3 |
| 40°    | 2542.9 | 2544.9 | 2572.4 | 2598.1 | 2619.8 | 2623.7 | 2623.7 | 2607.9 | 2572.4 | 2527.1 | 2456.1 |
| 42.5°  | 2548.8 | 2552.7 | 2580.3 | 2617.8 | 2637.5 | 2647.4 | 2647.4 | 2625.7 | 2588.2 | 2535.0 | 2452.2 |
| 45°    | 2548.8 | 2550.8 | 2582.3 | 2621.7 | 2653.3 | 2661.2 | 2661.2 | 2637.5 | 2590.2 | 2538.9 | 2438.4 |
| 47.5°  | 2548.8 | 2546.8 | 2574.4 | 2629.6 | 2661.2 | 2667.1 | 2667.1 | 2641.4 | 2596.1 | 2531.1 | 2418.7 |
| 50°    | 2542.9 | 2552.7 | 2594.1 | 2637.5 | 2692.7 | 2700.6 | 2698.6 | 2671.0 | 2607.9 | 2540.9 | 2402.9 |
| 52.5°  | 2556.7 | 2554.7 | 2609.9 | 2696.6 | 2745.9 | 2763.7 | 2765.6 | 2730.1 | 2665.1 | 2568.5 | 2393.1 |
| 55°    | 2613.8 | 2615.8 | 2669.0 | 2769.6 | 2844.5 | 2878.0 | 2874.0 | 2828.7 | 2736.1 | 2623.7 | 2420.7 |
| 57.5°  | 2633.6 | 2653.3 | 2730.1 | 2816.9 | 2931.2 | 2960.8 | 2960.8 | 2905.6 | 2793.2 | 2667.1 | 2440.4 |
| 60°    | 2594.1 | 2602.0 | 2696.6 | 2844.5 | 2949.0 | 2954.9 | 2956.8 | 2917.4 | 2799.1 | 2643.4 | 2401.0 |
| 62.5°  | 2584.3 | 2600.0 | 2673.0 | 2838.6 | 2905.6 | 2949.0 | 2947.0 | 2893.8 | 2793.2 | 2625.7 | 2387.2 |
| 65°    | 2540.9 | 2552.7 | 2680.9 | 2803.1 | 2950.9 | 2994.3 | 2984.4 | 2923.3 | 2767.6 | 2606.0 | 2343.8 |
| 67.5°  | 2452.2 | 2464.0 | 2582.3 | 2753.8 | 2887.8 | 2929.2 | 2939.1 | 2868.1 | 2706.5 | 2513.3 | 2251.1 |
| 70°    | 2304.4 | 2322.1 | 2442.3 | 2609.9 | 2751.8 | 2775.5 | 2771.5 | 2728.2 | 2566.5 | 2359.6 | 2115.1 |
| 72.5°  | 2097.4 | 2125.0 | 2276.8 | 2436.4 | 2558.7 | 2594.1 | 2578.4 | 2529.1 | 2397.0 | 2174.3 | 1929.8 |
| 75°    | 1878.6 | 1904.2 | 2024.4 | 2203.8 | 2332.0 | 2355.6 | 2343.8 | 2284.7 | 2150.6 | 1931.8 | 1711.0 |
| 77.5°  | 1640.1 | 1661.7 | 1764.2 | 1947.6 | 2042.2 | 2061.9 | 2067.8 | 1989.0 | 1862.8 | 1665.7 | 1468.6 |
| 80°    | 1318.8 | 1328.6 | 1466.6 | 1586.8 | 1669.6 | 1709.1 | 1705.1 | 1646.0 | 1519.8 | 1356.2 | 1159.1 |
| 82.5°  | 973.8  | 981.7  | 1088.1 | 1190.6 | 1265.5 | 1301.0 | 1281.3 | 1222.2 | 1121.6 | 981.7  | 831.9  |
| 85°    | 597.3  | 583.5  | 670.2  | 747.1  | 792.4  | 816.1  | 796.4  | 762.9  | 674.2  | 563.8  | 459.3  |
| 87.5°  | 214.9  | 203.0  | 242.5  | 254.3  | 305.5  | 297.7  | 315.4  | 254.3  | 205.0  | 145.9  | 102.5  |
| 90°    | 94.6   | 94.6   | 92.6   | 88.7   | 80.8   | 72.9   | 71.0   | 59.1   | 43.4   | 27.6   | 9.9    |
| 92.5°  | 86.7   | 86.7   | 84.8   | 80.8   | 72.9   | 65.1   | 65.1   | 53.2   | 39.4   | 25.6   | 9.9    |
| 95°    | 72.9   | 72.9   | 71.0   | 67.0   | 61.1   | 55.2   | 55.2   | 43.4   | 33.5   | 21.7   | 7.9    |
| 97.5°  | 57.2   | 57.2   | 55.2   | 53.2   | 47.3   | 43.4   | 43.4   | 35.5   | 25.6   | 15.8   | 5.9    |
| 100°   | 43.4   | 43.4   | 41.4   | 39.4   | 37.5   | 33.5   | 31.5   | 25.6   | 19.7   | 11.8   | 3.9    |
| 102.5° | 31.5   | 31.5   | 31.5   | 29.6   | 25.6   | 23.7   | 23.7   | 19.7   | 13.8   | 9.9    | 3.9    |
| 105°   | 21.7   | 21.7   | 21.7   | 19.7   | 17.7   | 15.8   | 15.8   | 13.8   | 9.9    | 5.9    | 2.0    |
| 107.5° | 13.8   | 13.8   | 13.8   | 13.8   | 11.8   | 9.9    | 9.9    | 7.9    | 5.9    | 3.9    | 2.0    |
| 110°   | 7.9    | 5.9    | 7.9    | 7.9    | 7.9    | 5.9    | 5.9    | 3.9    | 3.9    | 2.0    | 2.0    |



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CATALOG NUMBER: TT-D6-750-U-MQ-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 5°  | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 2.0 | 2.0 | 2.0 | 2.0 |
| 115°   | 2.0 | 2.0 | 2.0 | 3.9 | 3.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 117.5° | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 120°   | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 125°   | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 130°   | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 135°   | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 140°   | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 142.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 145°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 147.5° | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 150°   | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 152.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 155°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 157.5° | 2.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 160°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 162.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 165°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 167.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 170°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 172.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 175°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 177.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 180°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |

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CATALOG NUMBER: TT-D6-750-U-MQ-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 | 2582.3 |
| 2.5°   | 2582.3 | 2580.3 | 2578.4 | 2580.3 | 2578.4 | 2578.4 | 2576.4 | 2576.4 | 2574.4 | 2574.4 | 2572.4 |
| 5°     | 2582.3 | 2580.3 | 2578.4 | 2580.3 | 2576.4 | 2578.4 | 2578.4 | 2576.4 | 2574.4 | 2572.4 | 2570.5 |
| 7.5°   | 2580.3 | 2580.3 | 2576.4 | 2578.4 | 2574.4 | 2574.4 | 2572.4 | 2572.4 | 2570.5 | 2570.5 | 2568.5 |
| 10°    | 2576.4 | 2574.4 | 2574.4 | 2574.4 | 2570.5 | 2570.5 | 2568.5 | 2566.5 | 2566.5 | 2564.6 | 2562.6 |
| 12.5°  | 2572.4 | 2570.5 | 2568.5 | 2568.5 | 2566.5 | 2564.6 | 2562.6 | 2562.6 | 2560.6 | 2558.7 | 2556.7 |
| 15°    | 2566.5 | 2564.6 | 2564.6 | 2564.6 | 2562.6 | 2562.6 | 2560.6 | 2558.7 | 2554.7 | 2552.7 | 2550.8 |
| 17.5°  | 2564.6 | 2562.6 | 2564.6 | 2564.6 | 2562.6 | 2564.6 | 2560.6 | 2556.7 | 2552.7 | 2550.8 | 2548.8 |
| 20°    | 2562.6 | 2562.6 | 2562.6 | 2560.6 | 2558.7 | 2556.7 | 2554.7 | 2552.7 | 2550.8 | 2548.8 | 2546.8 |
| 22.5°  | 2552.7 | 2550.8 | 2546.8 | 2535.0 | 2521.2 | 2511.3 | 2509.4 | 2513.3 | 2513.3 | 2513.3 | 2507.4 |
| 25°    | 2535.0 | 2529.1 | 2513.3 | 2491.6 | 2468.0 | 2452.2 | 2442.3 | 2442.3 | 2440.4 | 2436.4 | 2434.5 |
| 27.5°  | 2513.3 | 2501.5 | 2473.9 | 2446.3 | 2412.8 | 2393.1 | 2369.4 | 2355.6 | 2349.7 | 2347.7 | 2343.8 |
| 30°    | 2483.7 | 2466.0 | 2430.5 | 2395.0 | 2353.6 | 2326.0 | 2288.6 | 2264.9 | 2251.1 | 2245.2 | 2241.3 |
| 32.5°  | 2448.3 | 2430.5 | 2389.1 | 2345.8 | 2296.5 | 2257.1 | 2209.7 | 2172.3 | 2146.7 | 2134.8 | 2128.9 |
| 35°    | 2424.6 | 2399.0 | 2351.7 | 2300.4 | 2251.1 | 2194.0 | 2136.8 | 2085.6 | 2046.1 | 2032.3 | 2024.4 |
| 37.5°  | 2414.8 | 2391.1 | 2339.8 | 2288.6 | 2233.4 | 2164.4 | 2097.4 | 2024.4 | 1971.2 | 1947.6 | 1939.7 |
| 40°    | 2420.7 | 2391.1 | 2333.9 | 2278.7 | 2213.7 | 2136.8 | 2048.1 | 1957.4 | 1888.4 | 1854.9 | 1847.0 |
| 42.5°  | 2406.9 | 2373.4 | 2306.3 | 2247.2 | 2166.4 | 2079.6 | 1971.2 | 1866.8 | 1774.1 | 1746.5 | 1734.7 |
| 45°    | 2383.2 | 2341.8 | 2268.9 | 2194.0 | 2109.2 | 2002.8 | 1890.4 | 1756.4 | 1646.0 | 1612.5 | 1602.6 |
| 47.5°  | 2359.6 | 2302.4 | 2215.7 | 2146.7 | 2044.2 | 1920.0 | 1787.9 | 1638.1 | 1500.1 | 1466.6 | 1460.7 |
| 50°    | 2324.1 | 2270.9 | 2178.2 | 2097.4 | 1992.9 | 1849.0 | 1699.2 | 1511.9 | 1356.2 | 1299.0 | 1283.3 |
| 52.5°  | 2308.3 | 2239.3 | 2150.6 | 2087.5 | 1961.4 | 1797.8 | 1608.5 | 1407.5 | 1182.7 | 1111.8 | 1096.0 |
| 55°    | 2324.1 | 2237.3 | 2142.7 | 2081.6 | 1935.7 | 1732.7 | 1500.1 | 1243.8 | 983.6  | 908.7  | 887.1  |
| 57.5°  | 2296.5 | 2221.6 | 2127.0 | 2058.0 | 1868.7 | 1598.7 | 1342.4 | 1013.2 | 743.2  | 646.6  | 638.7  |
| 60°    | 2261.0 | 2154.5 | 2065.8 | 2002.8 | 1728.8 | 1346.3 | 1044.7 | 721.5  | 447.5  | 364.7  | 348.9  |
| 62.5°  | 2247.2 | 2136.8 | 2034.3 | 1957.4 | 1541.5 | 989.6  | 636.7  | 364.7  | 185.3  | 130.1  | 118.3  |
| 65°    | 2203.8 | 2105.3 | 2032.3 | 1923.9 | 1346.3 | 611.1  | 274.0  | 108.4  | 7.9    | 5.9    | 5.9    |
| 67.5°  | 2121.0 | 2020.5 | 1971.2 | 1908.1 | 1326.6 | 583.5  | 248.4  | 98.6   | 3.9    | 0.0    | 0.0    |
| 70°    | 1979.1 | 1900.3 | 1866.8 | 1833.2 | 1269.5 | 540.1  | 226.7  | 88.7   | 2.0    | 0.0    | 0.0    |
| 72.5°  | 1791.8 | 1738.6 | 1732.7 | 1728.8 | 1186.7 | 498.7  | 203.0  | 78.8   | 2.0    | 0.0    | 0.0    |
| 75°    | 1604.6 | 1539.5 | 1549.4 | 1573.0 | 1084.2 | 441.6  | 175.4  | 69.0   | 2.0    | 0.0    | 0.0    |
| 77.5°  | 1368.0 | 1320.7 | 1344.4 | 1383.8 | 950.1  | 374.5  | 143.9  | 55.2   | 2.0    | 0.0    | 0.0    |
| 80°    | 1076.3 | 1044.7 | 1098.0 | 1133.5 | 776.7  | 297.7  | 108.4  | 39.4   | 0.0    | 0.0    | 0.0    |
| 82.5°  | 764.8  | 747.1  | 796.4  | 841.7  | 577.6  | 210.9  | 74.9   | 25.6   | 0.0    | 0.0    | 0.0    |
| 85°    | 412.0  | 402.1  | 449.4  | 498.7  | 346.9  | 120.2  | 37.5   | 11.8   | 0.0    | 0.0    | 0.0    |
| 87.5°  | 102.5  | 94.6   | 96.6   | 116.3  | 84.8   | 25.6   | 5.9    | 2.0    | 0.0    | 0.0    | 0.0    |
| 90°    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 100°   | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 102.5° | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 105°   | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 107.5° | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 110°   | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P436905

CATALOG NUMBER: TT-D6-750-U-MQ-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|-----|------|------|------|------|------|------|------|------|------|
| 112.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 115°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 117.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 120°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 122.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 125°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 127.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 130°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 132.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 135°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 137.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 140°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 142.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 145°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 147.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 150°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 152.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 155°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 157.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 160°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 162.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 165°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 167.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 170°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 172.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 175°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 177.5° | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 180°   | 2.0 | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |

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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-176-6

Test Date: 09/26/2024

Luminaire Tested: MEM2-HTN-VA-30-750-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-750-U-WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-176-6  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 09/27/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **MEM2-HTN-VA-30-750-U-WQ**  
 Description: EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 4786     | CRI (Ra): | 70.9 |      |       |
| CIE u':                   | 0.2093   | R1:       | 67.8 | R9:  | -29.8 |
| CIE v':                   | 0.4953   | R2:       | 75.1 | R10: | 40.9  |
| Duv:                      | 0.0066   | R3:       | 80.6 | R11: | 67.4  |
| CIE x:                    | 0.3533   | R4:       | 71.6 | R12: | 35.3  |
| CIE y:                    | 0.3716   | R5:       | 67.8 | R13: | 68.5  |
| CIE z:                    | 0.2751   | R6:       | 65.4 | R14: | 89.0  |
| Peak Wavelength (nm):     | 449      | R7:       | 82.0 | R15: | 60.9  |
| Dominant Wavelength (nm): | 570      | R8:       | 57.0 |      |       |
| Purity:                   | 17.53512 |           |      |      |       |
| Rf:                       | 73       |           |      |      |       |
| Rg:                       | 94.6     |           |      |      |       |



### Test Conditions

Stabilization Time: 45M  
 Operation Time: 1H 45M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-176-6

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/18/2024        | 12/18/2024           |
| Power Meter                    | INXT2011004           | 2/8/2024         | 2/8/2025             |
| AC Power Source                | IN0063                | 10/24/2023       | 10/24/2024           |
| DC Power Source                | IN0208                | 10/24/2023       | 10/24/2024           |
| Sphere Thermometer             | IN0085                | 10/24/2023       | 10/24/2024           |
| Room Thermometer               | IN0046                | 10/24/2023       | 10/24/2024           |

REPORT NUMBER: SP1-2407-176-6

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 110                                  | NR                             | 620               | 440                                  | NR                             | 750               | 16                                   | NR                             | 880               | 0                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 150                                  | NR                             | 625               | 407                                  | NR                             | 755               | 14                                   | NR                             | 885               | 0                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 213                                  | NR                             | 630               | 375                                  | NR                             | 760               | 12                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 288                                  | NR                             | 635               | 345                                  | NR                             | 765               | 11                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 364                                  | NR                             | 640               | 314                                  | NR                             | 770               | 9                                    | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 436                                  | NR                             | 645               | 283                                  | NR                             | 775               | 8                                    | NR                             | 905               | 0                                    | NR                             |
| 390               | 1                                    | NR                             | 520               | 492                                  | NR                             | 650               | 254                                  | NR                             | 780               | 7                                    | NR                             | 910               | 0                                    | NR                             |
| 395               | 3                                    | NR                             | 525               | 537                                  | NR                             | 655               | 227                                  | NR                             | 785               | 6                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 5                                    | NR                             | 530               | 570                                  | NR                             | 660               | 200                                  | NR                             | 790               | 5                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 7                                    | NR                             | 535               | 595                                  | NR                             | 665               | 177                                  | NR                             | 795               | 4                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 13                                   | NR                             | 540               | 611                                  | NR                             | 670               | 155                                  | NR                             | 800               | 4                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 25                                   | NR                             | 545               | 624                                  | NR                             | 675               | 136                                  | NR                             | 805               | 3                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 52                                   | NR                             | 550               | 631                                  | NR                             | 680               | 119                                  | NR                             | 810               | 3                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 106                                  | NR                             | 555               | 637                                  | NR                             | 685               | 104                                  | NR                             | 815               | 3                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 204                                  | NR                             | 560               | 640                                  | NR                             | 690               | 91                                   | NR                             | 820               | 2                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 369                                  | NR                             | 565               | 642                                  | NR                             | 695               | 79                                   | NR                             | 825               | 2                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 573                                  | NR                             | 570               | 641                                  | NR                             | 700               | 68                                   | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 844                                  | NR                             | 575               | 638                                  | NR                             | 705               | 59                                   | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 999                                  | NR                             | 580               | 632                                  | NR                             | 710               | 50                                   | NR                             | 840               | 1                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 668                                  | NR                             | 585               | 620                                  | NR                             | 715               | 43                                   | NR                             | 845               | 1                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 361                                  | NR                             | 590               | 607                                  | NR                             | 720               | 36                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 255                                  | NR                             | 595               | 586                                  | NR                             | 725               | 30                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 165                                  | NR                             | 600               | 564                                  | NR                             | 730               | 25                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 106                                  | NR                             | 605               | 537                                  | NR                             | 735               | 22                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 91                                   | NR                             | 610               | 507                                  | NR                             | 740               | 19                                   | NR                             | 870               | 0                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 93                                   | NR                             | 615               | 474                                  | NR                             | 745               | 17                                   | NR                             | 875               | 0                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2407-176-6

### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.69

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 110                                  | NR                             | 620               | 440                                  | NR                             | 750               | 16                                   | NR                             | 880               | 0                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 150                                  | NR                             | 625               | 407                                  | NR                             | 755               | 14                                   | NR                             | 885               | 0                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 213                                  | NR                             | 630               | 375                                  | NR                             | 760               | 12                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 288                                  | NR                             | 635               | 345                                  | NR                             | 765               | 11                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 364                                  | NR                             | 640               | 314                                  | NR                             | 770               | 9                                    | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 436                                  | NR                             | 645               | 283                                  | NR                             | 775               | 8                                    | NR                             | 905               | 0                                    | NR                             |
| 390               | 1                                    | NR                             | 520               | 492                                  | NR                             | 650               | 254                                  | NR                             | 780               | 7                                    | NR                             | 910               | 0                                    | NR                             |
| 395               | 3                                    | NR                             | 525               | 537                                  | NR                             | 655               | 227                                  | NR                             | 785               | 6                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 5                                    | NR                             | 530               | 570                                  | NR                             | 660               | 200                                  | NR                             | 790               | 5                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 7                                    | NR                             | 535               | 595                                  | NR                             | 665               | 177                                  | NR                             | 795               | 4                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 13                                   | NR                             | 540               | 611                                  | NR                             | 670               | 155                                  | NR                             | 800               | 4                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 25                                   | NR                             | 545               | 624                                  | NR                             | 675               | 136                                  | NR                             | 805               | 3                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 52                                   | NR                             | 550               | 631                                  | NR                             | 680               | 119                                  | NR                             | 810               | 3                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 106                                  | NR                             | 555               | 637                                  | NR                             | 685               | 104                                  | NR                             | 815               | 3                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 204                                  | NR                             | 560               | 640                                  | NR                             | 690               | 91                                   | NR                             | 820               | 2                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 369                                  | NR                             | 565               | 642                                  | NR                             | 695               | 79                                   | NR                             | 825               | 2                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 573                                  | NR                             | 570               | 641                                  | NR                             | 700               | 68                                   | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 844                                  | NR                             | 575               | 638                                  | NR                             | 705               | 59                                   | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 999                                  | NR                             | 580               | 632                                  | NR                             | 710               | 50                                   | NR                             | 840               | 1                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 668                                  | NR                             | 585               | 620                                  | NR                             | 715               | 43                                   | NR                             | 845               | 1                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 361                                  | NR                             | 590               | 607                                  | NR                             | 720               | 36                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 255                                  | NR                             | 595               | 586                                  | NR                             | 725               | 30                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 165                                  | NR                             | 600               | 564                                  | NR                             | 730               | 25                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 106                                  | NR                             | 605               | 537                                  | NR                             | 735               | 22                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 91                                   | NR                             | 610               | 507                                  | NR                             | 740               | 19                                   | NR                             | 870               | 0                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 93                                   | NR                             | 615               | 474                                  | NR                             | 745               | 17                                   | NR                             | 875               | 0                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2407-176-6

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.36

| λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 110                         | NR               | 620       | 440                         | NR               | 750       | 16                          | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 150                         | NR               | 625       | 407                         | NR               | 755       | 14                          | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 213                         | NR               | 630       | 375                         | NR               | 760       | 12                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 288                         | NR               | 635       | 345                         | NR               | 765       | 11                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 364                         | NR               | 640       | 314                         | NR               | 770       | 9                           | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 436                         | NR               | 645       | 283                         | NR               | 775       | 8                           | NR               | 905       | 0                           | NR               |
| 390       | 1                           | NR               | 520       | 492                         | NR               | 650       | 254                         | NR               | 780       | 7                           | NR               | 910       | 0                           | NR               |
| 395       | 3                           | NR               | 525       | 537                         | NR               | 655       | 227                         | NR               | 785       | 6                           | NR               | 915       | 0                           | NR               |
| 400       | 5                           | NR               | 530       | 570                         | NR               | 660       | 200                         | NR               | 790       | 5                           | NR               | 920       | 0                           | NR               |
| 405       | 7                           | NR               | 535       | 595                         | NR               | 665       | 177                         | NR               | 795       | 4                           | NR               | 925       | 0                           | NR               |
| 410       | 13                          | NR               | 540       | 611                         | NR               | 670       | 155                         | NR               | 800       | 4                           | NR               | 930       | 0                           | NR               |
| 415       | 25                          | NR               | 545       | 624                         | NR               | 675       | 136                         | NR               | 805       | 3                           | NR               | 935       | 0                           | NR               |
| 420       | 52                          | NR               | 550       | 631                         | NR               | 680       | 119                         | NR               | 810       | 3                           | NR               | 940       | 0                           | NR               |
| 425       | 106                         | NR               | 555       | 637                         | NR               | 685       | 104                         | NR               | 815       | 3                           | NR               | 945       | 0                           | NR               |
| 430       | 204                         | NR               | 560       | 640                         | NR               | 690       | 91                          | NR               | 820       | 2                           | NR               | 950       | 0                           | NR               |
| 435       | 369                         | NR               | 565       | 642                         | NR               | 695       | 79                          | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 573                         | NR               | 570       | 641                         | NR               | 700       | 68                          | NR               | 830       | 2                           | NR               | 960       | 0                           | NR               |
| 445       | 844                         | NR               | 575       | 638                         | NR               | 705       | 59                          | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 999                         | NR               | 580       | 632                         | NR               | 710       | 50                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 668                         | NR               | 585       | 620                         | NR               | 715       | 43                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 361                         | NR               | 590       | 607                         | NR               | 720       | 36                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 255                         | NR               | 595       | 586                         | NR               | 725       | 30                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 165                         | NR               | 600       | 564                         | NR               | 730       | 25                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 106                         | NR               | 605       | 537                         | NR               | 735       | 22                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 91                          | NR               | 610       | 507                         | NR               | 740       | 19                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 93                          | NR               | 615       | 474                         | NR               | 745       | 17                          | NR               | 875       | 0                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2407-176-6

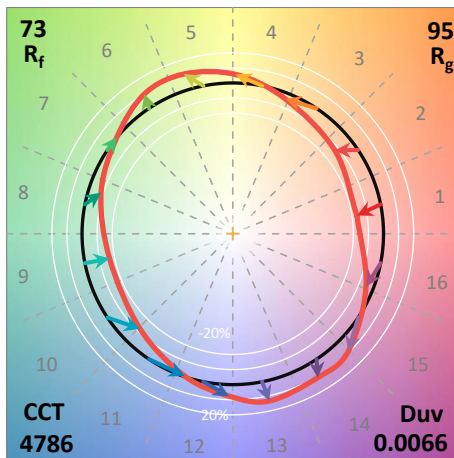
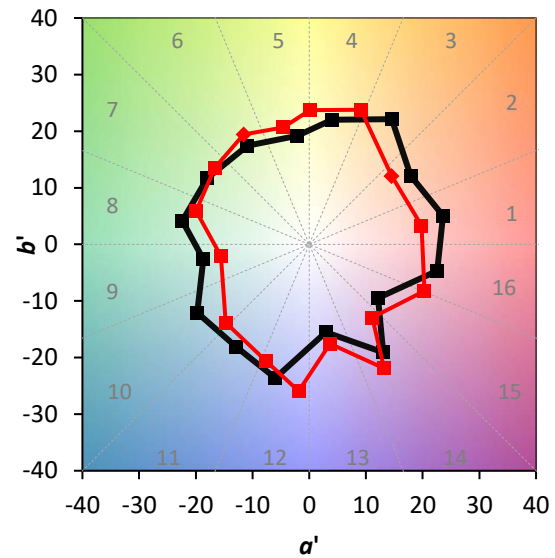
TM-30-18

### Summary

$R_f = 73$   
 $R_g = 94.6$   
 $CIE R_a = 70.9$   
 $R_g = -29.8$



### Color Vector Graphics

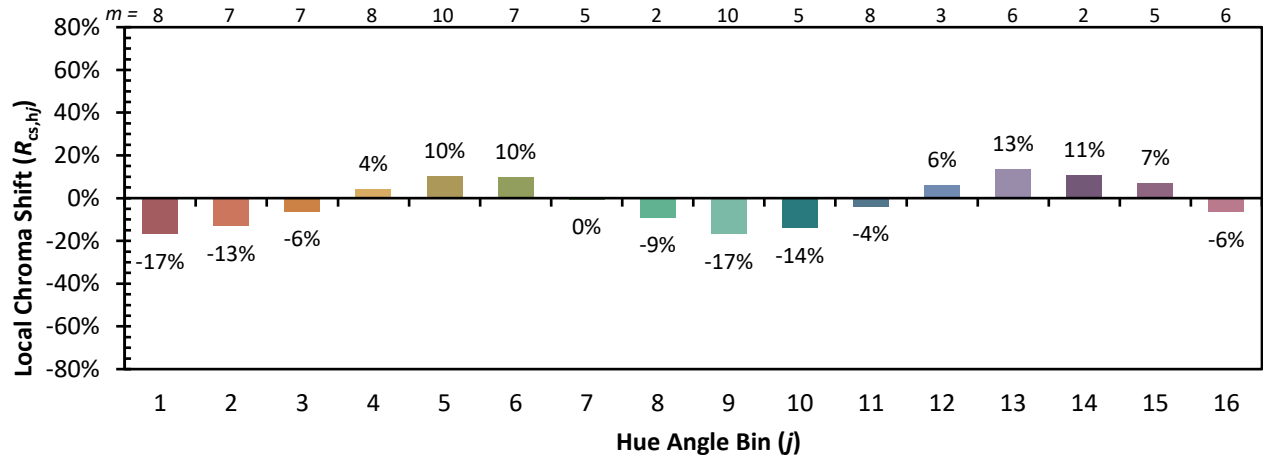


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 60 | CES51 = 89 | CES76 = 46 |
| CES02 = 59 | CES27 = 86 | CES52 = 88 | CES77 = 65 |
| CES03 = 30 | CES28 = 78 | CES53 = 76 | CES78 = 49 |
| CES04 = 69 | CES29 = 62 | CES54 = 83 | CES79 = 78 |
| CES05 = 46 | CES30 = 79 | CES55 = 82 | CES80 = 74 |
| CES06 = 50 | CES31 = 66 | CES56 = 71 | CES81 = 77 |
| CES07 = 39 | CES32 = 58 | CES57 = 70 | CES82 = 89 |
| CES08 = 38 | CES33 = 74 | CES58 = 71 | CES83 = 87 |
| CES09 = 29 | CES34 = 66 | CES59 = 86 | CES84 = 86 |
| CES10 = 72 | CES35 = 81 | CES60 = 90 | CES85 = 79 |
| CES11 = 56 | CES36 = 94 | CES61 = 84 | CES86 = 76 |
| CES12 = 61 | CES37 = 75 | CES62 = 84 | CES87 = 76 |
| CES13 = 41 | CES38 = 88 | CES63 = 72 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 66 | CES89 = 73 |
| CES15 = 70 | CES40 = 88 | CES65 = 61 | CES90 = 78 |
| CES16 = 46 | CES41 = 92 | CES66 = 58 | CES91 = 77 |
| CES17 = 49 | CES42 = 75 | CES67 = 55 | CES92 = 63 |
| CES18 = 55 | CES43 = 74 | CES68 = 65 | CES93 = 77 |
| CES19 = 71 | CES44 = 99 | CES69 = 74 | CES94 = 56 |
| CES20 = 64 | CES45 = 83 | CES70 = 55 | CES95 = 67 |
| CES21 = 85 | CES46 = 82 | CES71 = 47 | CES96 = 76 |
| CES22 = 77 | CES47 = 84 | CES72 = 82 | CES97 = 83 |
| CES23 = 91 | CES48 = 76 | CES73 = 44 | CES98 = 73 |
| CES24 = 90 | CES49 = 80 | CES74 = 92 | CES99 = 62 |
| CES25 = 71 | CES50 = 88 | CES75 = 47 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)