

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: STREETWORKS

Report Number: P579626

Luminaire Tested: **CST-CA10-310-727-U-T5N-HSS-HM-EX180**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579626  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-6)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-CA10-310-727-U-T5N-HSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 27791 lumens  
Efficiency: N/A  
Efficacy: 89.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U2 - G3

Input Watts (W): 312.4  
Input Voltage (V): 120  
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

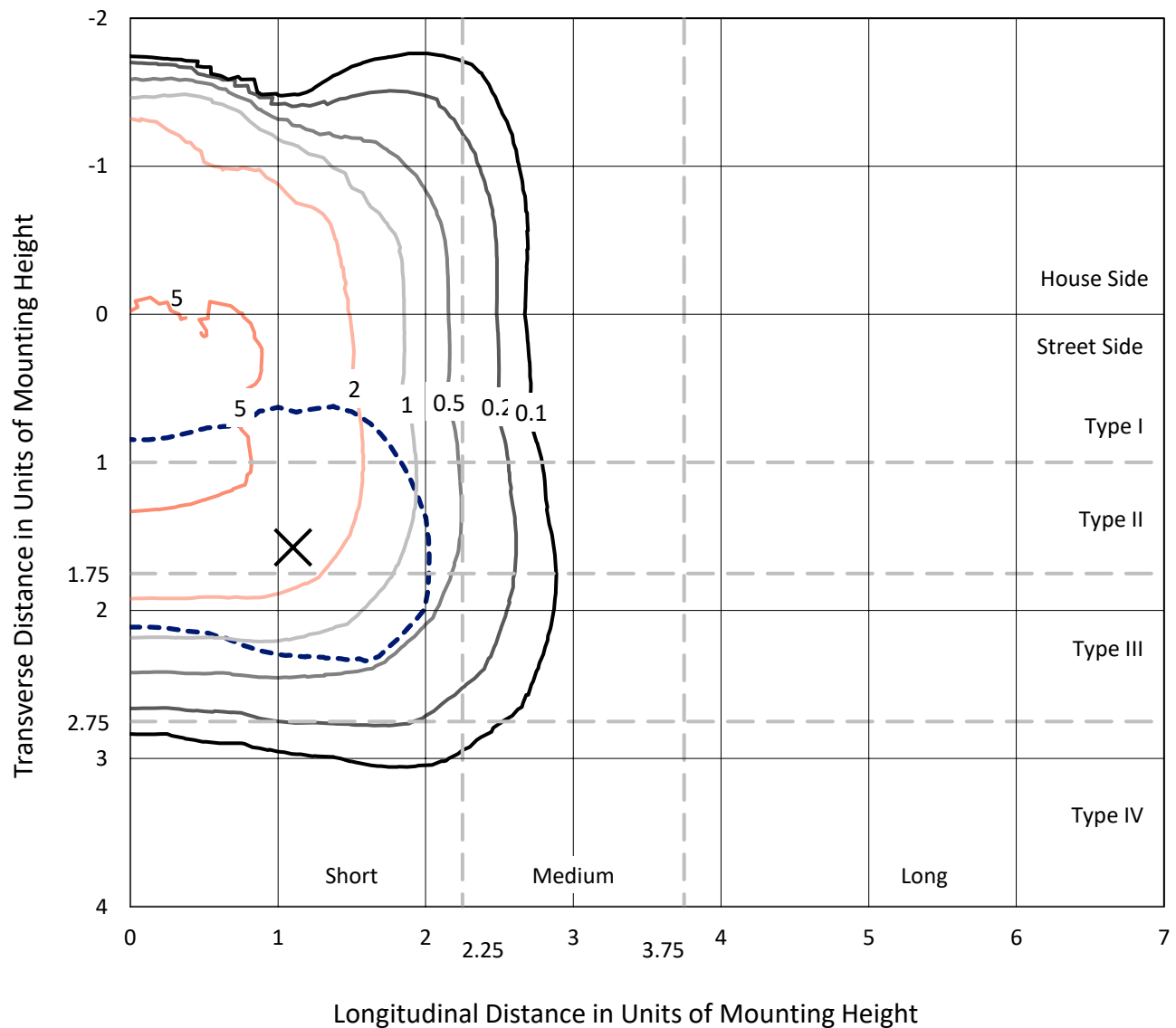


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

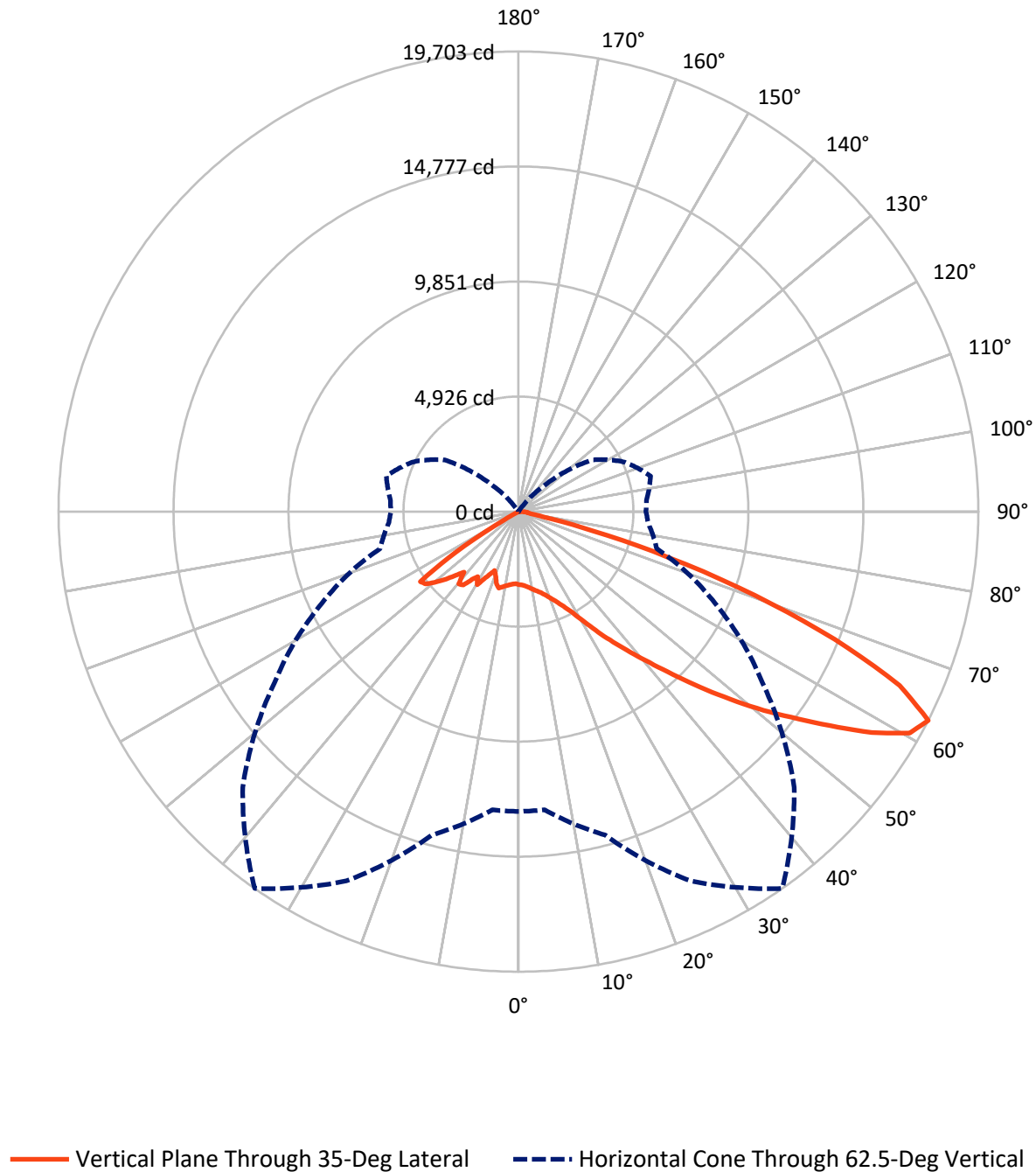


Based on 25 foot mounting height. Maximum calculated value = 6.8 fc  
 Type III - Short - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 8434.7   | 0.0    | 8434.7  |
|                    | % Fixture | 30.4     | 0.0    | 30.4    |
| <b>Street Side</b> | Lumens    | 19332.2  | 24.1   | 19356.3 |
|                    | % Fixture | 69.6     | 0.1    | 69.6    |
| <b>Total</b>       | Lumens    | 27766.9  | 24.1   | 27791.0 |
|                    | % Fixture | 99.9     | 0.1    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 308.8   | 1.1       |
| 10°-20°   | 991.0   | 3.6       |
| 20°-30°   | 1811.4  | 6.5       |
| 30°-40°   | 3451.8  | 12.4      |
| 40°-50°   | 5924.8  | 21.3      |
| 50°-60°   | 7948.2  | 28.6      |
| 60°-70°   | 6042.2  | 21.7      |
| 70°-80°   | 1144.1  | 4.1       |
| 80°-90°   | 144.5   | 0.5       |
| 90°-100°  | 21.2    | 0.1       |
| 100°-110° | 2.9     | 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°-90°    | 27766.9 | 99.9      |
| 0°-180°   | 27791.0 | 100.0     |

**Coefficient of Utilization**



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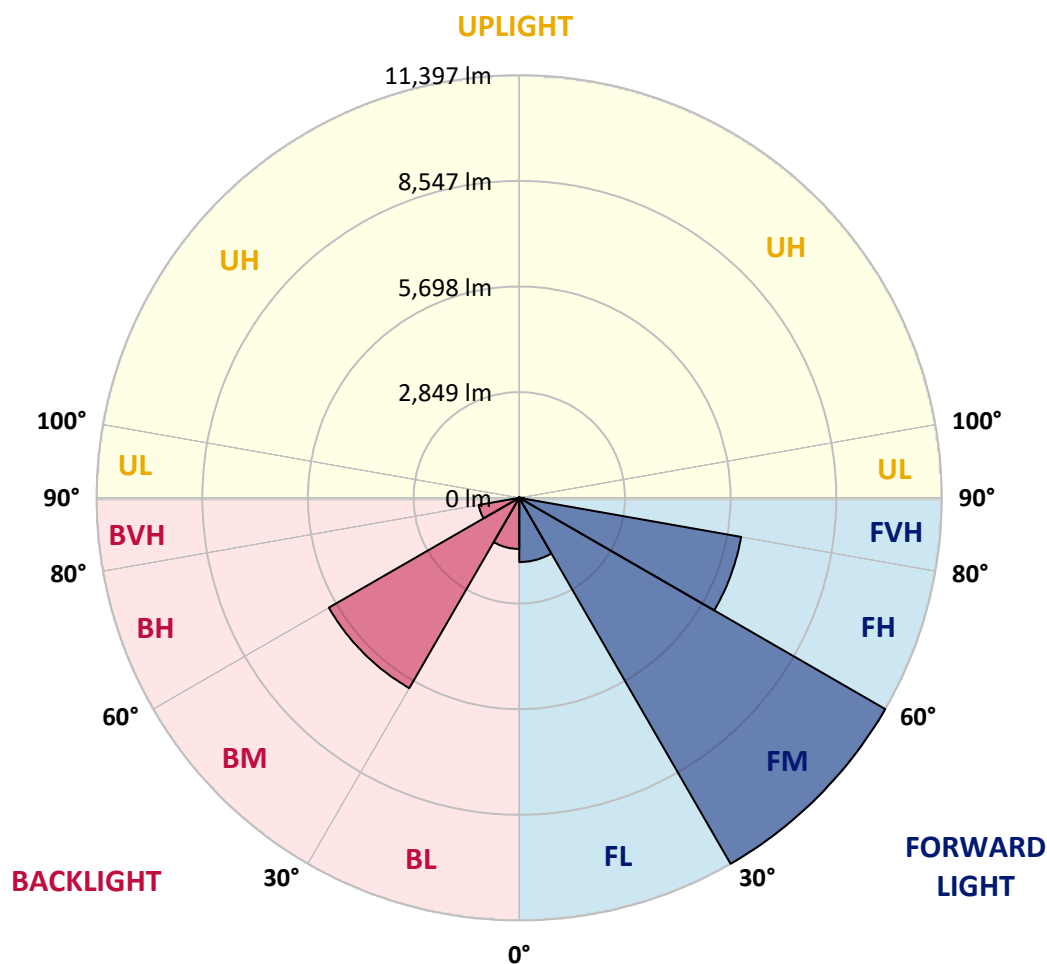
CATALOG NUMBER: CST-CA10-310-727-U-T5N-HSS-HM-EX180

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |       |         |
|------|-------------|---------|-----------|-------------------------|-------|---------|
|      |             |         |           | B                       | U     | G       |
| FL   | (0°-30°)    | 1732.4  | 6.2       |                         |       |         |
| FM   | (30°-60°)   | 11396.6 | 41.0      |                         |       |         |
| FH   | (60°-80°)   | 6075.6  | 21.9      |                         |       | G3/7500 |
| FVH  | (80°-90°)   | 127.5   | 0.5       |                         |       | G2/225  |
| BL   | (0°-30°)    | 1378.8  | 5.0       | B3/2500                 |       |         |
| BM   | (30°-60°)   | 5928.2  | 21.3      | B4/8500                 |       |         |
| BH   | (60°-80°)   | 1110.7  | 4.0       | B3/2500                 |       | G3/2500 |
| BVH  | (80°-90°)   | 16.9    | 0.1       |                         |       | G1/100  |
| UL   | (90°-100°)  | 21.2    | 0.1       |                         | U2/50 |         |
| UH   | (100°-180°) | 2.9     | 0.0       |                         | U1/10 |         |

**BUG Rating: B4-U2-G3**

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°    | 75°    | 85°    | 90°    |
|--------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| 0°     | 3129.6  | 3129.6  | 3129.6  | 3129.6  | 3129.6  | 3129.6  | 3129.6  | 3129.6 | 3129.6 | 3129.6 | 3129.6 |
| 2.5°   | 3206.9  | 3183.3  | 3184.6  | 3205.6  | 3145.3  | 3167.6  | 3141.4  | 3167.6 | 3153.2 | 3163.7 | 3168.9 |
| 5°     | 3263.2  | 3239.6  | 3237.0  | 3259.3  | 3208.2  | 3223.9  | 3197.7  | 3216.1 | 3196.4 | 3209.5 | 3209.5 |
| 7.5°   | 3348.4  | 3324.8  | 3316.9  | 3334.0  | 3286.8  | 3298.6  | 3271.1  | 3281.6 | 3259.3 | 3276.3 | 3267.2 |
| 10°    | 3449.2  | 3423.0  | 3413.9  | 3423.0  | 3382.4  | 3389.0  | 3356.2  | 3368.0 | 3335.3 | 3354.9 | 3341.8 |
| 12.5°  | 3556.7  | 3522.6  | 3522.6  | 3530.5  | 3487.2  | 3488.5  | 3458.4  | 3465.0 | 3432.2 | 3453.2 | 3437.5 |
| 15°    | 3673.3  | 3635.3  | 3640.5  | 3648.4  | 3602.5  | 3610.4  | 3578.9  | 3589.4 | 3555.4 | 3576.3 | 3560.6 |
| 17.5°  | 3827.8  | 3787.2  | 3782.0  | 3805.6  | 3762.3  | 3776.8  | 3741.4  | 3754.5 | 3724.4 | 3730.9 | 3723.0 |
| 20°    | 4041.4  | 3990.3  | 3978.5  | 4009.9  | 3961.5  | 3971.9  | 3945.7  | 3971.9 | 3940.5 | 3893.3 | 3761.0 |
| 22.5°  | 4296.8  | 4252.3  | 4232.6  | 4253.6  | 4196.0  | 4214.3  | 4213.0  | 4254.9 | 4168.4 | 3871.1 | 3738.8 |
| 25°    | 4633.5  | 4603.4  | 4565.4  | 4568.0  | 4498.6  | 4526.1  | 4575.9  | 4608.6 | 4240.5 | 3979.8 | 3982.4 |
| 27.5°  | 5082.8  | 5052.7  | 5000.3  | 4980.6  | 4879.8  | 4946.6  | 5023.9  | 4704.2 | 4414.7 | 4481.5 | 4444.9 |
| 30°    | 5656.6  | 5651.4  | 5545.3  | 5511.2  | 5401.2  | 5485.0  | 5418.2  | 4870.6 | 4970.2 | 5063.2 | 5006.8 |
| 32.5°  | 6420.3  | 6383.7  | 6230.4  | 6168.8  | 6053.5  | 6102.0  | 5512.5  | 5433.9 | 5581.9 | 5707.7 | 5648.8 |
| 35°    | 7343.9  | 7232.6  | 7076.7  | 6954.8  | 6754.4  | 6484.5  | 5871.5  | 6024.7 | 6246.1 | 6419.0 | 6133.5 |
| 37.5°  | 8416.8  | 8296.3  | 8052.6  | 7833.8  | 7518.1  | 6677.1  | 6412.5  | 6719.0 | 6996.7 | 6809.4 | 6150.5 |
| 40°    | 9521.1  | 9413.7  | 9184.5  | 8902.8  | 8369.6  | 7274.5  | 7068.8  | 7435.6 | 7751.3 | 6678.4 | 6350.9 |
| 42.5°  | 10617.6 | 10525.9 | 10341.2 | 10063.5 | 9377.0  | 7985.8  | 7788.0  | 8182.3 | 7884.9 | 6933.9 | 6923.4 |
| 45°    | 11723.3 | 11677.4 | 11467.8 | 11230.7 | 10570.4 | 8896.3  | 8593.6  | 8901.5 | 7587.6 | 7545.6 | 7520.8 |
| 47.5°  | 12619.3 | 12627.2 | 12553.8 | 12430.7 | 11843.8 | 9895.8  | 9501.5  | 8588.4 | 7949.1 | 7995.0 | 8006.8 |
| 50°    | 13542.9 | 13483.9 | 13480.0 | 13487.8 | 13242.9 | 11183.5 | 10119.8 | 8446.9 | 8422.0 | 8418.1 | 8407.6 |
| 52.5°  | 14283.0 | 14208.3 | 14362.9 | 14486.1 | 14631.5 | 12620.6 | 10026.8 | 8926.4 | 8783.6 | 8733.8 | 8428.6 |
| 55°    | 14885.6 | 14856.8 | 15108.3 | 15524.9 | 16172.0 | 14142.8 | 10849.5 | 9394.1 | 9108.5 | 7945.2 | 7167.1 |
| 57.5°  | 15251.1 | 15293.0 | 15811.8 | 16630.5 | 17842.3 | 15404.4 | 11807.1 | 9868.3 | 7798.5 | 6998.1 | 6948.3 |
| 60°    | 14551.6 | 14773.0 | 15655.9 | 17453.2 | 19254.5 | 16591.2 | 12519.7 | 9963.9 | 7017.7 | 6589.3 | 6489.8 |
| 62.5°  | 12839.4 | 12818.4 | 14335.4 | 17453.2 | 19702.5 | 16709.1 | 12745.1 | 9286.6 | 6130.8 | 5572.8 | 5461.4 |
| 65°    | 9087.5  | 9142.5  | 10763.0 | 15727.9 | 17948.4 | 15541.9 | 11756.0 | 7895.4 | 4890.3 | 4378.0 | 4227.4 |
| 67.5°  | 5623.9  | 5619.9  | 7206.4  | 11583.1 | 14610.5 | 13012.3 | 9897.1  | 6052.2 | 3394.2 | 2910.8 | 2747.1 |
| 70°    | 1942.7  | 1997.8  | 3241.0  | 6778.0  | 10755.2 | 10194.5 | 7406.8  | 3821.3 | 1789.5 | 1275.9 | 1076.8 |
| 72.5°  | 772.9   | 791.2   | 1163.3  | 3022.2  | 6719.0  | 6810.7  | 4501.2  | 1856.3 | 535.8  | 340.6  | 319.6  |
| 75°    | 505.7   | 508.3   | 558.1   | 1091.2  | 3260.6  | 3664.1  | 2090.8  | 533.2  | 248.9  | 227.9  | 222.7  |
| 77.5°  | 436.2   | 437.5   | 463.7   | 552.8   | 1062.4  | 1425.3  | 594.7   | 315.7  | 208.3  | 187.3  | 182.1  |
| 80°    | 404.8   | 406.1   | 419.2   | 475.5   | 512.2   | 486.0   | 317.0   | 254.1  | 175.5  | 166.4  | 165.1  |
| 82.5°  | 382.5   | 387.8   | 394.3   | 428.4   | 414.0   | 365.5   | 263.3   | 205.7  | 134.9  | 144.1  | 148.0  |
| 85°    | 352.4   | 357.6   | 361.6   | 381.2   | 345.8   | 267.2   | 204.4   | 154.6  | 86.5   | 94.3   | 93.0   |
| 87.5°  | 264.6   | 267.2   | 262.0   | 259.4   | 241.0   | 187.3   | 134.9   | 98.3   | 34.1   | 31.4   | 28.8   |
| 90°    | 127.1   | 125.8   | 120.5   | 111.4   | 96.9    | 76.0    | 56.3    | 31.4   | 14.4   | 6.6    | 2.6    |
| 92.5°  | 100.9   | 99.6    | 96.9    | 87.8    | 76.0    | 56.3    | 40.6    | 22.3   | 13.1   | 5.2    | 1.3    |
| 95°    | 68.1    | 65.5    | 62.9    | 56.3    | 47.2    | 34.1    | 23.6    | 15.7   | 10.5   | 3.9    | 1.3    |
| 97.5°  | 44.5    | 43.2    | 39.3    | 34.1    | 26.2    | 18.3    | 14.4    | 11.8   | 9.2    | 3.9    | 1.3    |
| 100°   | 27.5    | 27.5    | 24.9    | 19.7    | 13.1    | 10.5    | 9.2     | 9.2    | 6.6    | 2.6    | 0.0    |
| 102.5° | 17.0    | 15.7    | 14.4    | 9.2     | 6.6     | 6.6     | 6.6     | 6.6    | 5.2    | 2.6    | 0.0    |
| 105°   | 9.2     | 9.2     | 6.6     | 5.2     | 3.9     | 2.6     | 3.9     | 5.2    | 3.9    | 1.3    | 0.0    |
| 107.5° | 2.6     | 2.6     | 2.6     | 1.3     | 1.3     | 0.0     | 1.3     | 2.6    | 2.6    | 1.3    | 0.0    |
| 110°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 1.3    | 2.6    | 1.3    | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 5°  | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180°   | 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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**CANDELA DISTRIBUTION (continued):**

|        | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 3129.6 | 3129.6 | 3129.6 | 3129.6 | 3129.6 | 3129.6 | 3129.6 | 3129.6 | 3129.6 | 3129.6 |
| 2.5°   | 3162.4 | 3137.5 | 3144.0 | 3119.1 | 3115.2 | 3089.0 | 3133.5 | 3136.2 | 3124.4 | 3137.5 |
| 5°     | 3203.0 | 3172.8 | 3184.6 | 3154.5 | 3149.3 | 3115.2 | 3150.6 | 3146.6 | 3137.5 | 3147.9 |
| 7.5°   | 3260.6 | 3230.5 | 3237.0 | 3201.7 | 3195.1 | 3157.1 | 3191.2 | 3178.1 | 3166.3 | 3180.7 |
| 10°    | 3340.5 | 3306.5 | 3311.7 | 3269.8 | 3264.5 | 3220.0 | 3259.3 | 3239.6 | 3222.6 | 3242.3 |
| 12.5°  | 3438.8 | 3394.2 | 3389.0 | 3344.4 | 3340.5 | 3298.6 | 3339.2 | 3319.6 | 3302.5 | 3334.0 |
| 15°    | 3551.4 | 3492.5 | 3484.6 | 3428.3 | 3421.7 | 3378.5 | 3417.8 | 3389.0 | 3375.9 | 3416.5 |
| 17.5°  | 3702.1 | 3493.8 | 3377.2 | 3294.7 | 3247.5 | 3223.9 | 3294.7 | 3390.3 | 3361.5 | 3362.8 |
| 20°    | 3640.5 | 3416.5 | 3260.6 | 3189.9 | 3138.8 | 2910.8 | 2596.4 | 2686.8 | 2870.2 | 2960.6 |
| 22.5°  | 3622.2 | 3543.6 | 3479.4 | 3360.2 | 2853.2 | 2724.8 | 2743.2 | 2722.2 | 2376.4 | 2244.0 |
| 25°    | 3973.3 | 3882.9 | 3744.0 | 3119.1 | 2972.4 | 2943.6 | 2954.1 | 2592.5 | 2331.8 | 2369.8 |
| 27.5°  | 4422.6 | 4329.6 | 3644.4 | 3294.7 | 3265.8 | 3227.9 | 3020.9 | 2568.9 | 2604.3 | 2641.0 |
| 30°    | 4988.5 | 4499.9 | 3800.3 | 3692.9 | 3639.2 | 3599.9 | 2832.2 | 2868.9 | 2927.9 | 2973.7 |
| 32.5°  | 5540.0 | 4485.5 | 4247.0 | 4113.4 | 4046.6 | 3284.2 | 3200.3 | 3285.5 | 3345.8 | 3381.1 |
| 35°    | 5546.6 | 4999.0 | 4747.5 | 4575.9 | 4151.4 | 3530.5 | 3607.8 | 3750.6 | 3898.6 | 3926.1 |
| 37.5°  | 5697.2 | 5580.6 | 5292.4 | 5076.3 | 3087.7 | 3940.5 | 4110.8 | 4274.6 | 4422.6 | 4431.8 |
| 40°    | 6297.2 | 6171.4 | 5901.6 | 5426.1 | 3409.9 | 4019.1 | 4664.9 | 4849.6 | 4974.1 | 4967.5 |
| 42.5°  | 6895.9 | 6809.4 | 6529.1 | 4822.1 | 3842.3 | 3482.0 | 5246.6 | 5368.4 | 5447.0 | 5502.0 |
| 45°    | 7498.5 | 7412.0 | 6464.9 | 5295.0 | 4357.1 | 3813.4 | 5105.1 | 5795.5 | 5881.9 | 5909.4 |
| 47.5°  | 7968.8 | 7755.2 | 5923.9 | 5922.5 | 5000.3 | 4237.9 | 4215.6 | 6180.6 | 6256.6 | 6236.9 |
| 50°    | 8403.7 | 6923.4 | 6403.3 | 6128.2 | 5665.8 | 4637.4 | 4482.8 | 5200.7 | 6595.9 | 6567.1 |
| 52.5°  | 7646.5 | 6719.0 | 6814.7 | 5574.1 | 6200.3 | 5034.4 | 4784.1 | 4663.6 | 5993.3 | 6764.9 |
| 55°    | 6838.2 | 6969.2 | 7235.2 | 6124.3 | 4498.6 | 5162.7 | 5039.6 | 4799.9 | 4044.0 | 3403.4 |
| 57.5°  | 6978.4 | 7173.6 | 7186.7 | 6633.9 | 4655.8 | 3225.2 | 4130.5 | 3615.6 | 2284.7 | 2289.9 |
| 60°    | 6510.7 | 6764.9 | 5253.1 | 4422.6 | 2503.4 | 672.0  | 65.5   | 57.6   | 398.2  | 484.7  |
| 62.5°  | 5504.7 | 5858.4 | 5014.7 | 3852.7 | 1606.1 | 24.9   | 6.6    | 1.3    | 0.0    | 0.0    |
| 65°    | 4262.8 | 4688.5 | 4237.9 | 3324.8 | 1425.3 | 7.9    | 0.0    | 0.0    | 0.0    | 0.0    |
| 67.5°  | 2811.3 | 3195.1 | 3220.0 | 2781.1 | 1188.2 | 3.9    | 0.0    | 0.0    | 0.0    | 0.0    |
| 70°    | 1177.7 | 1658.5 | 2004.3 | 2067.2 | 934.0  | 1.3    | 0.0    | 0.0    | 0.0    | 0.0    |
| 72.5°  | 340.6  | 526.6  | 964.2  | 1241.9 | 593.4  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°    | 226.6  | 242.4  | 279.0  | 559.4  | 296.1  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5°  | 187.3  | 191.3  | 159.8  | 153.3  | 85.2   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°    | 170.3  | 167.7  | 128.4  | 90.4   | 31.4   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5°  | 157.2  | 149.3  | 93.0   | 47.2   | 21.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°    | 106.1  | 104.8  | 41.9   | 28.8   | 3.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 28.8   | 36.7   | 9.2    | 3.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 100°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 102.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 105°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 107.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 110°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P579626

CATALOG NUMBER: CST-CA10-310-727-U-T5N-HSS-HM-EX180

**CANDELA DISTRIBUTION (continued):**

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

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

STREETWORKS

Report Number: SP1-2104-215-5

Luminaire Tested: CST-CA6-230-727-U-T4

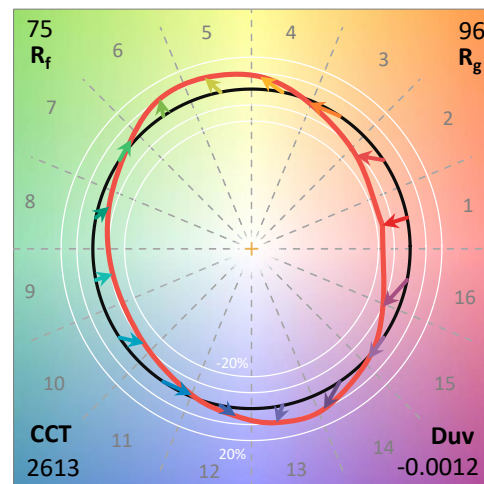
Test Date: 04/22/2021

### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2104-215-5  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/22/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: STREETWORKS  
 Catalog Number: **CST-CA6-230-727-U-T4**  
 Description: STREETWORKS HIGH MAST LUMINAIRE

### Spectral Parameters

|                           |         |           |      |      |       |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K):                  | 2613    | CRI (Ra): | 72.6 |      |       |
| CIE u':                   | 0.2668  | R1:       | 69.4 | R9:  | -28.6 |
| CIE v':                   | 0.5272  | R2:       | 84.5 | R10: | 65.5  |
| Duv:                      | -0.0012 | R3:       | 95.0 | R11: | 63.4  |
| CIE x:                    | 0.4648  | R4:       | 67.5 | R12: | 56.9  |
| CIE y:                    | 0.4082  | R5:       | 68.5 | R13: | 72.3  |
| CIE z:                    | 0.1270  | R6:       | 79.7 | R14: | 97.8  |
| Peak Wavelength (nm):     | 603     | R7:       | 75.4 |      |       |
| Dominant Wavelength (nm): | 585     | R8:       | 41.2 |      |       |
| Purity:                   | 62.2    |           |      |      |       |
|                           |         |           |      |      |       |
| Rf:                       | 75.3    |           |      |      |       |
| Rg:                       | 95.8    |           |      |      |       |



### Test Conditions

Stabilization Time: 121M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 25.5/25%  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2104-215-5

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 1/31/2021        | 7/31/2021            |
| Power Meter                    | IN0071                | 12/1/2020        | 12/1/2021            |
| AC Power Source                | IN0063                | 12/1/2020        | 12/1/2021            |
| DC Power Source                | IN0208                | 12/1/2020        | 12/1/2021            |
| Sphere Thermometer             | IN0085                | 12/1/2020        | 12/1/2021            |
| Room Thermometer               | IN0046                | 12/1/2020        | 12/1/2021            |

REPORT NUMBER: SP1-2104-215-5

**CIE 1931 Chromaticity Diagram**



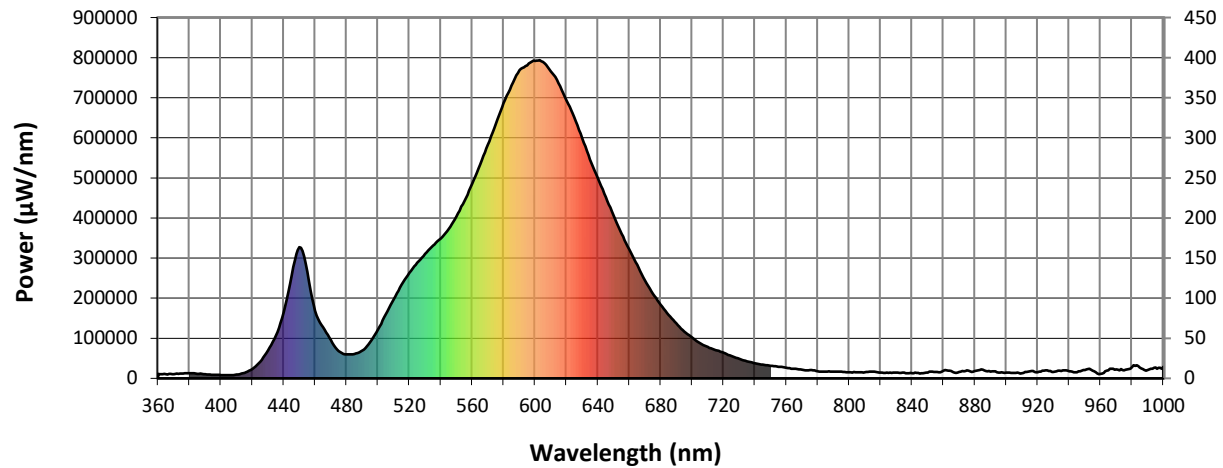
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 2700K 7-step quadrangle

REPORT NUMBER: SP1-2104-215-5

### Photopic Flux vs. Wavelength

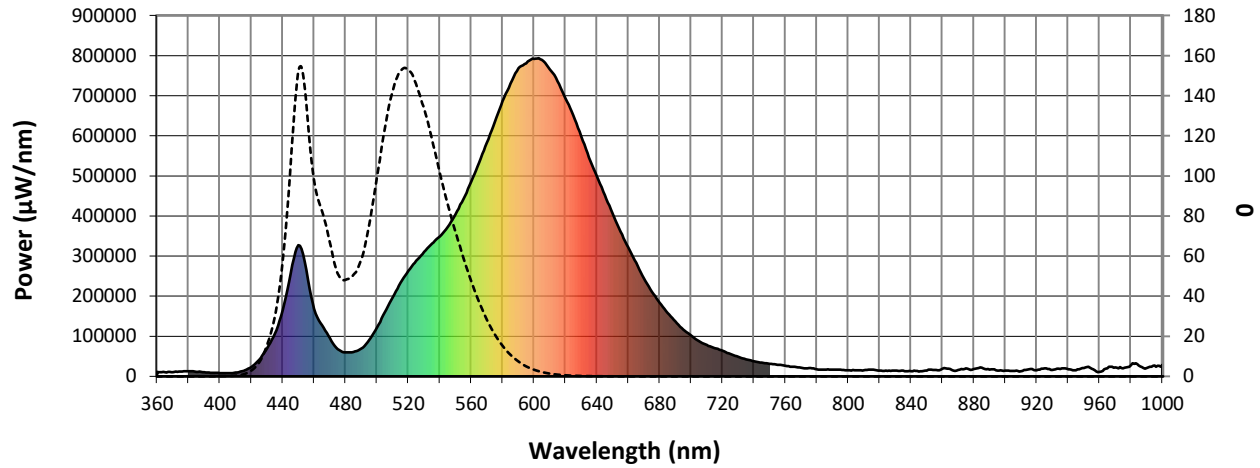


#####

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 11220            | 0.0              | 490       | 69401            | 9.9              | 620       | 692536           | 180.2            | 750       | 31541            | 0.0              | 880       | 18253            | 0.0              |
| 365       | 10182            | 0.0              | 495       | 90053            | 16.3             | 625       | 651217           | 143.7            | 755       | 28760            | 0.0              | 885       | 21369            | 0.0              |
| 370       | 10420            | 0.0              | 500       | 121940           | 26.9             | 630       | 598624           | 108.3            | 760       | 26534            | 0.0              | 890       | 16745            | 0.0              |
| 375       | 12164            | 0.0              | 505       | 159641           | 44.7             | 635       | 546251           | 82.1             | 765       | 24261            | 0.0              | 895       | 14205            | 0.0              |
| 380       | 12715            | 0.0              | 510       | 197034           | 67.7             | 640       | 499000           | 59.6             | 770       | 21584            | 0.0              | 900       | 14113            | 0.0              |
| 385       | 11387            | 0.0              | 515       | 232805           | 96.4             | 645       | 451749           | 43.5             | 775       | 20805            | 0.0              | 905       | 13457            | 0.0              |
| 390       | 10503            | 0.0              | 520       | 263165           | 127.6            | 650       | 406338           | 29.7             | 780       | 17853            | 0.0              | 910       | 12811            | 0.0              |
| 395       | 8950             | 0.0              | 525       | 288012           | 154.6            | 655       | 360522           | 20.7             | 785       | 17033            | 0.0              | 915       | 17471            | 0.0              |
| 400       | 8271             | 0.0              | 530       | 310825           | 183.0            | 660       | 321663           | 13.4             | 790       | 16986            | 0.0              | 920       | 15483            | 0.0              |
| 405       | 7777             | 0.0              | 535       | 330894           | 205.2            | 665       | 283133           | 9.0              | 795       | 16655            | 0.0              | 925       | 19757            | 0.0              |
| 410       | 9299             | 0.0              | 540       | 349086           | 227.5            | 670       | 244093           | 5.3              | 800       | 15070            | 0.0              | 930       | 16307            | 0.0              |
| 415       | 13971            | 0.0              | 545       | 372506           | 247.9            | 675       | 210996           | 3.5              | 805       | 15366            | 0.0              | 935       | 18687            | 0.0              |
| 420       | 23461            | 0.1              | 550       | 403721           | 274.3            | 680       | 183942           | 2.1              | 810       | 15472            | 0.0              | 940       | 17986            | 0.0              |
| 425       | 41887            | 0.2              | 555       | 442032           | 301.9            | 685       | 158373           | 1.4              | 815       | 17184            | 0.0              | 945       | 15266            | 0.0              |
| 430       | 69840            | 0.6              | 560       | 485515           | 329.9            | 690       | 137120           | 0.8              | 820       | 14166            | 0.0              | 950       | 21027            | 0.0              |
| 435       | 106868           | 1.3              | 565       | 532962           | 354.4            | 695       | 116757           | 0.5              | 825       | 13854            | 0.0              | 955       | 19232            | 0.0              |
| 440       | 164642           | 2.6              | 570       | 582457           | 378.7            | 700       | 102093           | 0.3              | 830       | 14283            | 0.0              | 960       | 11261            | 0.0              |
| 445       | 256049           | 5.3              | 575       | 634550           | 394.8            | 705       | 87819            | 0.2              | 835       | 14112            | 0.0              | 965       | 20156            | 0.0              |
| 450       | 327314           | 8.5              | 580       | 686476           | 407.9            | 710       | 78011            | 0.1              | 840       | 13092            | 0.0              | 970       | 22393            | 0.0              |
| 455       | 265614           | 8.9              | 585       | 730571           | 405.9            | 715       | 70264            | 0.1              | 845       | 12158            | 0.0              | 975       | 20121            | 0.0              |
| 460       | 168394           | 6.9              | 590       | 768228           | 397.2            | 720       | 63584            | 0.0              | 850       | 14790            | 0.0              | 980       | 28091            | 0.0              |
| 465       | 127370           | 6.6              | 595       | 780593           | 370.0            | 725       | 55749            | 0.0              | 855       | 15683            | 0.0              | 985       | 27040            | 0.0              |
| 470       | 94724            | 5.9              | 600       | 791888           | 341.3            | 730       | 48683            | 0.0              | 860       | 19011            | 0.0              | 990       | 20772            | 0.0              |
| 475       | 67810            | 5.3              | 605       | 789088           | 305.6            | 735       | 42520            | 0.0              | 865       | 18194            | 0.0              | 995       | 26800            | 0.0              |
| 480       | 59825            | 5.7              | 610       | 765121           | 262.9            | 740       | 37531            | 0.0              | 870       | 15713            | 0.0              | 1000      | 28539            | 0.0              |
| 485       | 61079            | 7.2              | 615       | 735839           | 222.1            | 745       | 34522            | 0.0              | 875       | 19703            | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-215-5

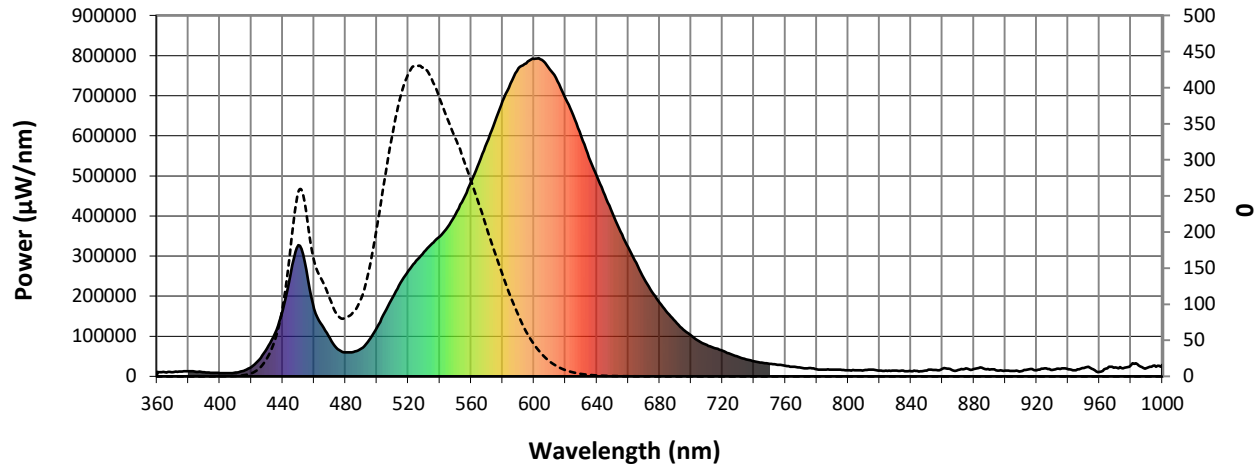
### Scotopic Flux vs. Wavelength


**Scotopic Lumens: 37163.1**
**S/P: 1.07**

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 11220            | 0.0              | 490       | 69401            | 106.9            | 620       | 692536           | 8.7              | 750       | 31541            | 0.0              | 880       | 18253            | 0.0              |
| 365       | 10182            | 0.0              | 495       | 90053            | 145.6            | 625       | 651217           | 5.5              | 755       | 28760            | 0.0              | 885       | 21369            | 0.0              |
| 370       | 10420            | 0.0              | 500       | 121940           | 204.0            | 630       | 598624           | 3.4              | 760       | 26534            | 0.0              | 890       | 16745            | 0.0              |
| 375       | 12164            | 0.0              | 505       | 159641           | 271.4            | 635       | 546251           | 2.1              | 765       | 24261            | 0.0              | 895       | 14205            | 0.0              |
| 380       | 12715            | 0.0              | 510       | 197034           | 334.0            | 640       | 499000           | 1.3              | 770       | 21584            | 0.0              | 900       | 14113            | 0.0              |
| 385       | 11387            | 0.0              | 515       | 232805           | 385.9            | 645       | 451749           | 0.8              | 775       | 20805            | 0.0              | 905       | 13457            | 0.0              |
| 390       | 10503            | 0.0              | 520       | 263165           | 418.3            | 650       | 406338           | 0.5              | 780       | 17853            | 0.0              | 910       | 12811            | 0.0              |
| 395       | 8950             | 0.1              | 525       | 288012           | 430.9            | 655       | 360522           | 0.3              | 785       | 17033            | 0.0              | 915       | 17471            | 0.0              |
| 400       | 8271             | 0.1              | 530       | 310825           | 428.5            | 660       | 321663           | 0.2              | 790       | 16986            | 0.0              | 920       | 15483            | 0.0              |
| 405       | 7777             | 0.2              | 535       | 330894           | 412.3            | 665       | 283133           | 0.1              | 795       | 16655            | 0.0              | 925       | 19757            | 0.0              |
| 410       | 9299             | 0.6              | 540       | 349086           | 385.7            | 670       | 244093           | 0.1              | 800       | 15070            | 0.0              | 930       | 16307            | 0.0              |
| 415       | 13971            | 1.4              | 545       | 372506           | 357.2            | 675       | 210996           | 0.0              | 805       | 15366            | 0.0              | 935       | 18687            | 0.0              |
| 420       | 23461            | 3.9              | 550       | 403721           | 330.1            | 680       | 183942           | 0.0              | 810       | 15472            | 0.0              | 940       | 17986            | 0.0              |
| 425       | 41887            | 10.2             | 555       | 442032           | 302.1            | 685       | 158373           | 0.0              | 815       | 17184            | 0.0              | 945       | 15266            | 0.0              |
| 430       | 69840            | 23.8             | 560       | 485515           | 271.4            | 690       | 137120           | 0.0              | 820       | 14166            | 0.0              | 950       | 21027            | 0.0              |
| 435       | 106868           | 47.8             | 565       | 532962           | 239.1            | 695       | 116757           | 0.0              | 825       | 13854            | 0.0              | 955       | 19232            | 0.0              |
| 440       | 164642           | 92.0             | 570       | 582457           | 205.6            | 700       | 102093           | 0.0              | 830       | 14283            | 0.0              | 960       | 11261            | 0.0              |
| 445       | 256049           | 171.5            | 575       | 634550           | 172.8            | 705       | 87819            | 0.0              | 835       | 14112            | 0.0              | 965       | 20156            | 0.0              |
| 450       | 327314           | 253.7            | 580       | 686476           | 141.4            | 710       | 78011            | 0.0              | 840       | 13092            | 0.0              | 970       | 22393            | 0.0              |
| 455       | 265614           | 232.1            | 585       | 730571           | 111.7            | 715       | 70264            | 0.0              | 845       | 12158            | 0.0              | 975       | 20121            | 0.0              |
| 460       | 168394           | 162.6            | 590       | 768228           | 85.5             | 720       | 63584            | 0.0              | 850       | 14790            | 0.0              | 980       | 28091            | 0.0              |
| 465       | 127370           | 134.5            | 595       | 780593           | 62.2             | 725       | 55749            | 0.0              | 855       | 15683            | 0.0              | 985       | 27040            | 0.0              |
| 470       | 94724            | 109.1            | 600       | 791888           | 44.6             | 730       | 48683            | 0.0              | 860       | 19011            | 0.0              | 990       | 20772            | 0.0              |
| 475       | 67810            | 84.8             | 605       | 789088           | 31.0             | 735       | 42520            | 0.0              | 865       | 18194            | 0.0              | 995       | 26800            | 0.0              |
| 480       | 59825            | 80.8             | 610       | 765121           | 20.7             | 740       | 37531            | 0.0              | 870       | 15713            | 0.0              | 1000      | 28539            | 0.0              |
| 485       | 61079            | 88.5             | 615       | 735839           | 13.6             | 745       | 34522            | 0.0              | 875       | 19703            | 0.0              |           |                  |                  |

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### Melanopic Flux vs. Wavelength


**Melanopic Lumens: 13012.4      M/P: 0.38**

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 11220            | 0.0              | 490       | 69401            | 57.8             | 620       | 692536           | 0.5              | 750       | 31541            | 0.0              | 880       | 18253            | 0.0              |
| 365       | 10182            | 0.0              | 495       | 90053            | 74.3             | 625       | 651217           | 0.3              | 755       | 28760            | 0.0              | 885       | 21369            | 0.0              |
| 370       | 10420            | 0.0              | 500       | 121940           | 98.0             | 630       | 598624           | 0.2              | 760       | 26534            | 0.0              | 890       | 16745            | 0.0              |
| 375       | 12164            | 0.0              | 505       | 159641           | 122.5            | 635       | 546251           | 0.1              | 765       | 24261            | 0.0              | 895       | 14205            | 0.0              |
| 380       | 12715            | 0.0              | 510       | 197034           | 141.5            | 640       | 499000           | 0.1              | 770       | 21584            | 0.0              | 900       | 14113            | 0.0              |
| 385       | 11387            | 0.0              | 515       | 232805           | 152.1            | 645       | 451749           | 0.0              | 775       | 20805            | 0.0              | 905       | 13457            | 0.0              |
| 390       | 10503            | 0.0              | 520       | 263165           | 153.2            | 650       | 406338           | 0.0              | 780       | 17853            | 0.0              | 910       | 12811            | 0.0              |
| 395       | 8950             | 0.0              | 525       | 288012           | 146.1            | 655       | 360522           | 0.0              | 785       | 17033            | 0.0              | 915       | 17471            | 0.0              |
| 400       | 8271             | 0.1              | 530       | 310825           | 134.3            | 660       | 321663           | 0.0              | 790       | 16986            | 0.0              | 920       | 15483            | 0.0              |
| 405       | 7777             | 0.1              | 535       | 330894           | 119.1            | 665       | 283133           | 0.0              | 795       | 16655            | 0.0              | 925       | 19757            | 0.0              |
| 410       | 9299             | 0.4              | 540       | 349086           | 102.2            | 670       | 244093           | 0.0              | 800       | 15070            | 0.0              | 930       | 16307            | 0.0              |
| 415       | 13971            | 0.9              | 545       | 372506           | 86.5             | 675       | 210996           | 0.0              | 805       | 15366            | 0.0              | 935       | 18687            | 0.0              |
| 420       | 23461            | 2.7              | 550       | 403721           | 72.5             | 680       | 183942           | 0.0              | 810       | 15472            | 0.0              | 940       | 17986            | 0.0              |
| 425       | 41887            | 6.5              | 555       | 442032           | 59.6             | 685       | 158373           | 0.0              | 815       | 17184            | 0.0              | 945       | 15266            | 0.0              |
| 430       | 69840            | 14.8             | 560       | 485515           | 47.9             | 690       | 137120           | 0.0              | 820       | 14166            | 0.0              | 950       | 21027            | 0.0              |
| 435       | 106868           | 28.5             | 565       | 532962           | 37.4             | 695       | 116757           | 0.0              | 825       | 13854            | 0.0              | 955       | 19232            | 0.0              |
| 440       | 164642           | 55.0             | 570       | 582457           | 28.5             | 700       | 102093           | 0.0              | 830       | 14283            | 0.0              | 960       | 11261            | 0.0              |
| 445       | 256049           | 101.0            | 575       | 634550           | 21.1             | 705       | 87819            | 0.0              | 835       | 14112            | 0.0              | 965       | 20156            | 0.0              |
| 450       | 327314           | 150.8            | 580       | 686476           | 15.4             | 710       | 78011            | 0.0              | 840       | 13092            | 0.0              | 970       | 22393            | 0.0              |
| 455       | 265614           | 139.2            | 585       | 730571           | 10.9             | 715       | 70264            | 0.0              | 845       | 12158            | 0.0              | 975       | 20121            | 0.0              |
| 460       | 168394           | 99.2             | 590       | 768228           | 7.5              | 720       | 63584            | 0.0              | 850       | 14790            | 0.0              | 980       | 28091            | 0.0              |
| 465       | 127370           | 83.2             | 595       | 780593           | 5.0              | 725       | 55749            | 0.0              | 855       | 15683            | 0.0              | 985       | 27040            | 0.0              |
| 470       | 94724            | 67.8             | 600       | 791888           | 3.3              | 730       | 48683            | 0.0              | 860       | 19011            | 0.0              | 990       | 20772            | 0.0              |
| 475       | 67810            | 51.8             | 605       | 789088           | 2.2              | 735       | 42520            | 0.0              | 865       | 18194            | 0.0              | 995       | 26800            | 0.0              |
| 480       | 59825            | 48.1             | 610       | 765121           | 1.4              | 740       | 37531            | 0.0              | 870       | 15713            | 0.0              | 1000      | 28539            | 0.0              |
| 485       | 61079            | 50.3             | 615       | 735839           | 0.9              | 745       | 34522            | 0.0              | 875       | 19703            | 0.0              |           |                  |                  |

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TM-30-18

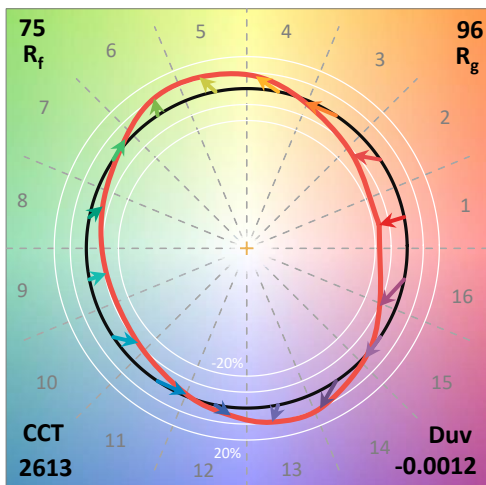
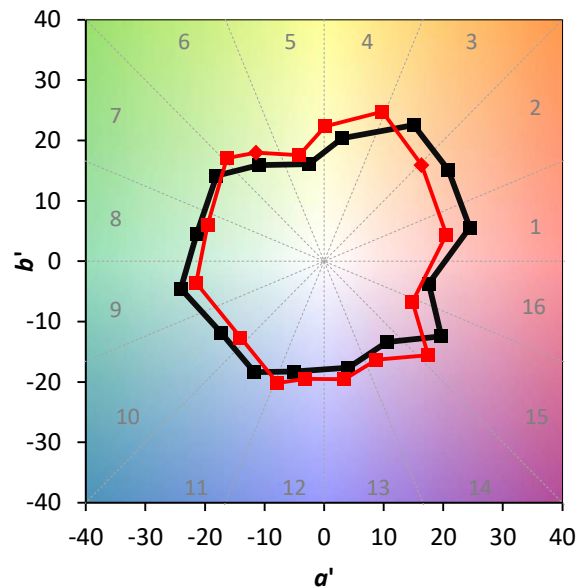
### Summary

$R_f = 75.3$   
 $R_g = 95.8$   
 CIE  $R_a = 72.6$   
 $R_g = -28.6$

### Spectral Power Distribution Comparison



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 87 | CES26 = 66 | CES51 = 86 | CES76 = 63 |
| CES02 = 64 | CES27 = 88 | CES52 = 84 | CES77 = 79 |
| CES03 = 31 | CES28 = 86 | CES53 = 77 | CES78 = 66 |
| CES04 = 71 | CES29 = 65 | CES54 = 86 | CES79 = 87 |
| CES05 = 50 | CES30 = 77 | CES55 = 85 | CES80 = 85 |
| CES06 = 52 | CES31 = 69 | CES56 = 75 | CES81 = 67 |
| CES07 = 42 | CES32 = 63 | CES57 = 75 | CES82 = 93 |
| CES08 = 41 | CES33 = 74 | CES58 = 77 | CES83 = 89 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 77 | CES35 = 88 | CES60 = 92 | CES85 = 74 |
| CES11 = 60 | CES36 = 98 | CES61 = 83 | CES86 = 59 |
| CES12 = 66 | CES37 = 86 | CES62 = 93 | CES87 = 77 |
| CES13 = 44 | CES38 = 85 | CES63 = 76 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 70 | CES89 = 65 |
| CES15 = 72 | CES40 = 91 | CES65 = 68 | CES90 = 78 |
| CES16 = 48 | CES41 = 89 | CES66 = 66 | CES91 = 86 |
| CES17 = 51 | CES42 = 86 | CES67 = 64 | CES92 = 59 |
| CES18 = 57 | CES43 = 75 | CES68 = 70 | CES93 = 74 |
| CES19 = 73 | CES44 = 99 | CES69 = 80 | CES94 = 50 |
| CES20 = 67 | CES45 = 83 | CES70 = 65 | CES95 = 69 |
| CES21 = 88 | CES46 = 78 | CES71 = 64 | CES96 = 77 |
| CES22 = 80 | CES47 = 80 | CES72 = 87 | CES97 = 81 |
| CES23 = 92 | CES48 = 70 | CES73 = 58 | CES98 = 76 |
| CES24 = 91 | CES49 = 76 | CES74 = 93 | CES99 = 66 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)