

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: STREETWORKS

Report Number: P1381085

Luminaire Tested: **VAL-T-SB6C-727-U-T3-HSS**

Issue Date: 02/18/2026

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been  
influenced by sources from within Cooper Lighting Solutions or from external interests.

Report Generated By 670245763

**Test Information**

Test Method: LM-79-08  
Report Number: P1381085  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/18/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VAL-T-SB6C-727-U-T3-HSS  
Description: GALLEON II WALL SLIM HIGH DENSITY LED ARRAYS 65 SQUARE 300W 70CRI  
2700K FIXTURE w/ TYPE III DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (156) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment:

| <u>Sample No.</u> | <u>Condition</u> | <u>Description</u> |
|-------------------|------------------|--------------------|
| a                 | good             | reflector          |
| b                 | good             | lens               |
| c                 | good             | housing            |
| d                 | good             | cord               |

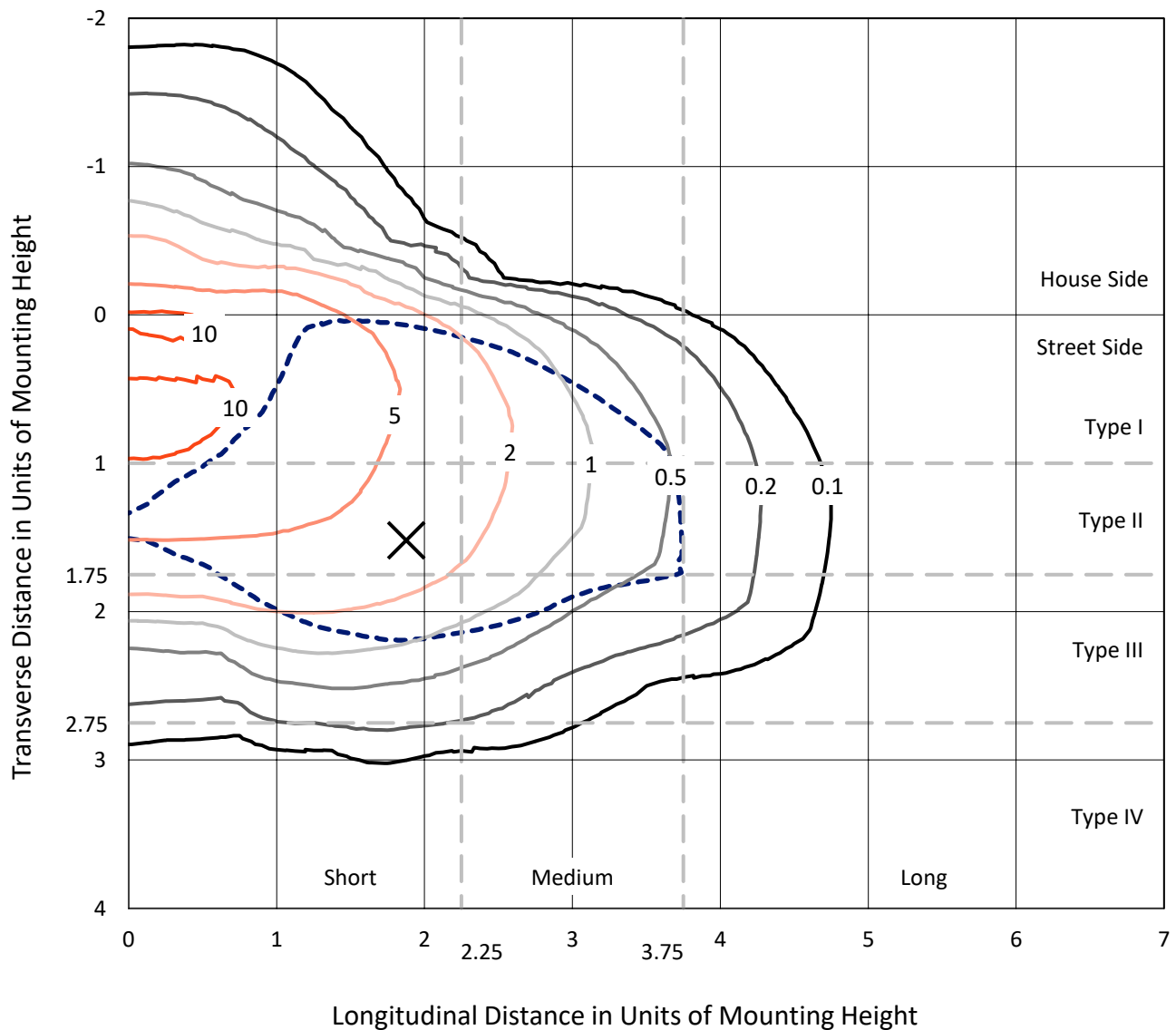
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 29228.6 lumens  
Efficiency: N/A  
Efficacy: 97.4 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G4  
  
Input Watts (W): 300  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.98  
Total Harmonic Distortion (THDi): 6.3%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

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## Iso-Footcandle Lines of Horizontal Illumination

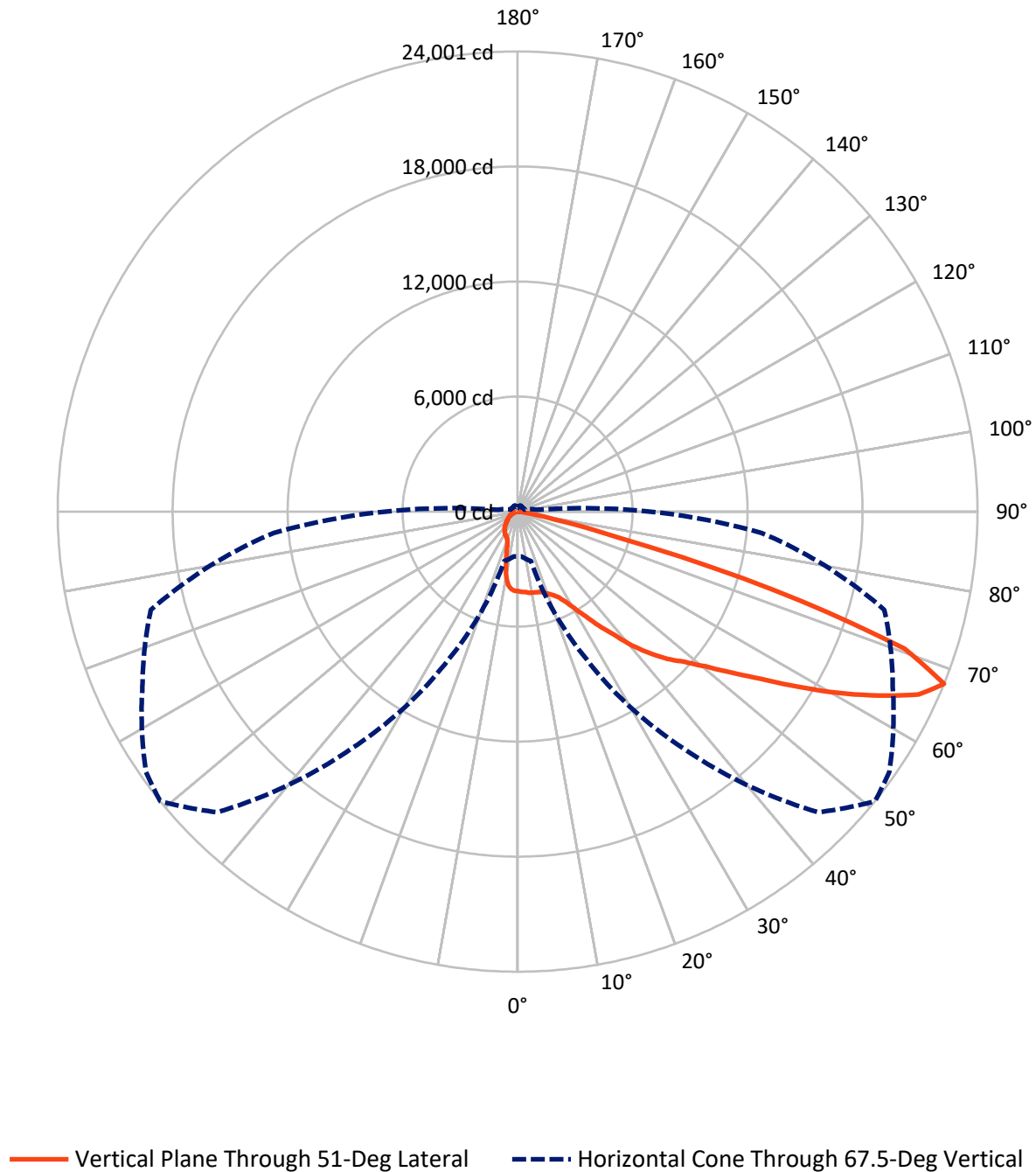
× Max cd  
- - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 13.3 fc  
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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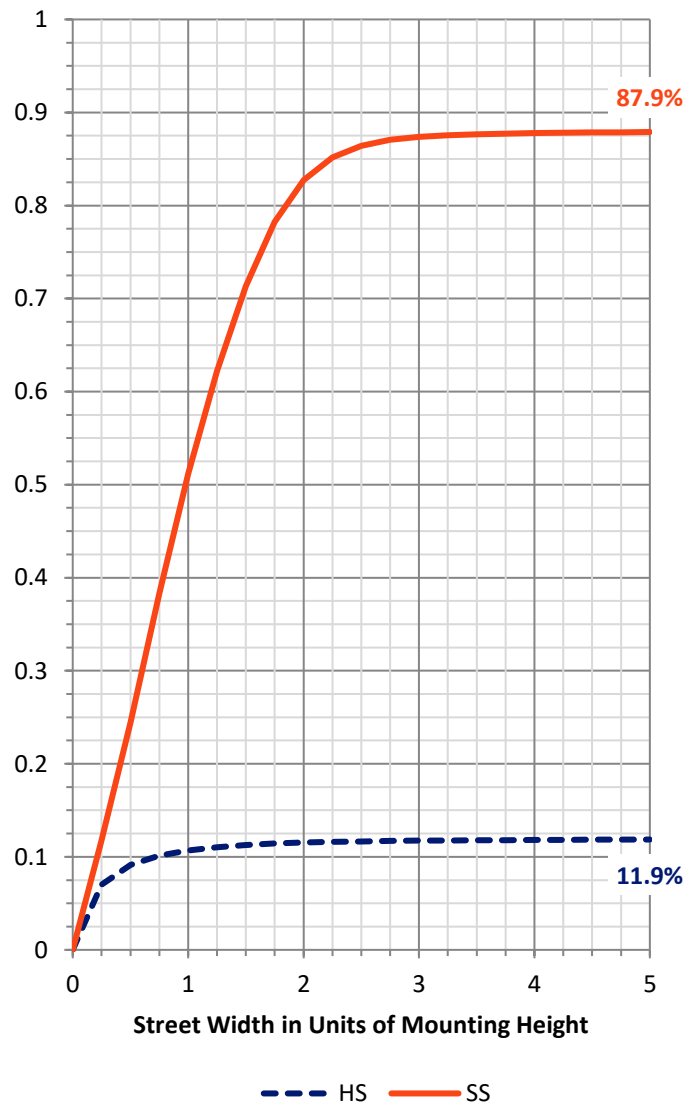
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3494.8   | 0.0    | 3494.8  |
|                    | % Fixture | 12.0     | 0.0    | 12.0    |
| <b>Street Side</b> | Lumens    | 25733.8  | 0.0    | 25733.8 |
|                    | % Fixture | 88.0     | 0.0    | 88.0    |
| <b>Total</b>       | Lumens    | 29228.6  | 0.0    | 29228.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 379.0   | 1.3       |
| 10°-20°   | 974.3   | 3.3       |
| 20°-30°   | 1736.9  | 5.9       |
| 30°-40°   | 3108.6  | 10.6      |
| 40°-50°   | 4896.8  | 16.8      |
| 50°-60°   | 7122.1  | 24.4      |
| 60°-70°   | 7749.1  | 26.5      |
| 70°-80°   | 3130.4  | 10.7      |
| 80°-90°   | 131.5   | 0.4       |
| 90°-100°  | 0.0     | 0.0       |
| 100°-110° | 0.0     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-90°    | 29228.6 | 100.0     |
| 0°-180°   | 29228.6 | 100.0     |



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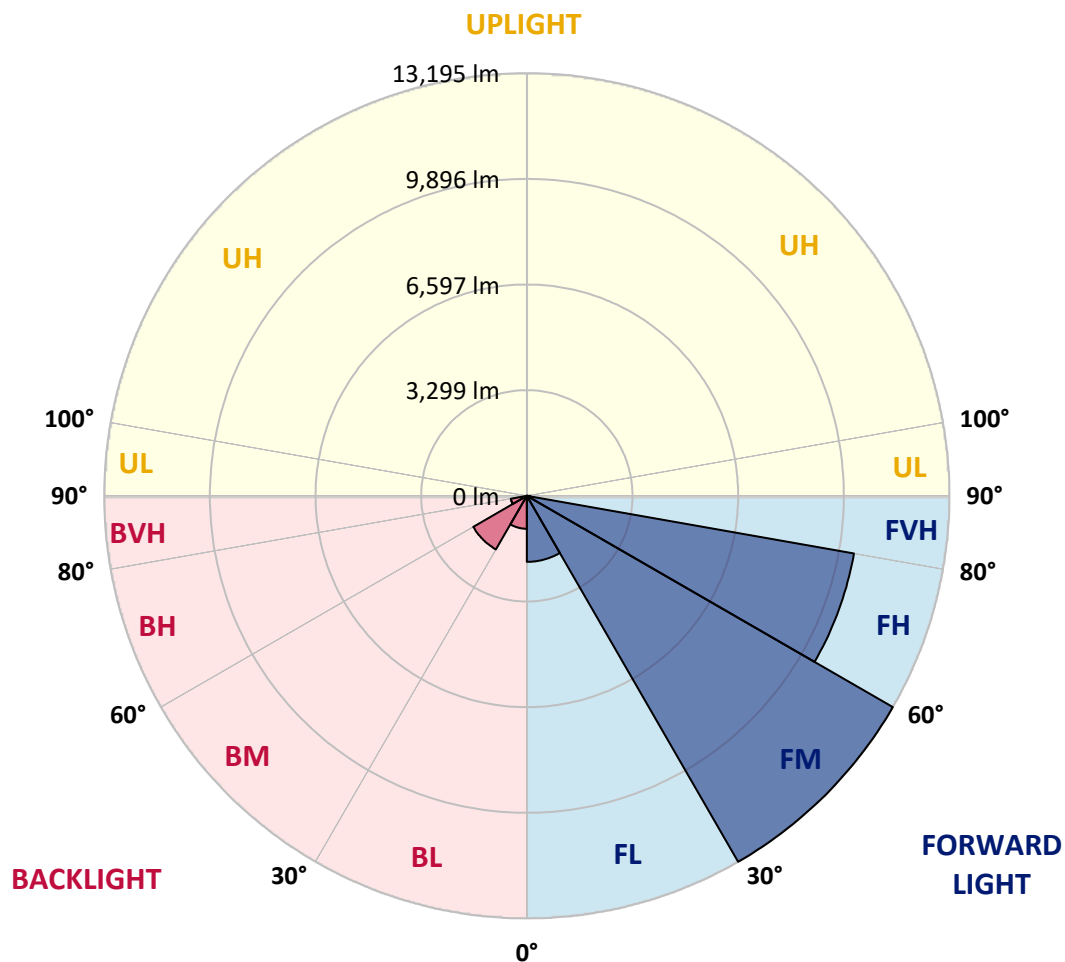
CATALOG NUMBER: VAL-T-SB6C-727-U-T3-HSS

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 2061.0  | 7.1       |                         |      |          |
| FM   | (30°-60°)   | 13194.6 | 45.1      |                         |      |          |
| FH   | (60°-80°)   | 10371.4 | 35.5      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 106.7   | 0.4       |                         |      | G2/225   |
| BL   | (0°-30°)    | 1029.2  | 3.5       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 1932.8  | 6.6       | B2/2500                 |      |          |
| BH   | (60°-80°)   | 508.0   | 1.7       | B2/1000                 |      | G2/1000  |
| BVH  | (80°-90°)   | 24.8    | 0.1       |                         |      | G1/100   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G4**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 51°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4150.4  | 4150.4  | 4150.4  | 4150.4  | 4150.4  | 4150.4  | 4150.4  | 4150.4  | 4150.4  | 4150.4  | 4150.4  |
| 2.5°  | 4185.4  | 4176.7  | 4185.4  | 4150.4  | 4167.9  | 4176.7  | 4194.2  | 4167.9  | 4159.2  | 4167.9  | 4159.2  |
| 5°    | 4167.9  | 4159.2  | 4167.9  | 4176.7  | 4194.2  | 4220.5  | 4211.7  | 4211.7  | 4229.2  | 4194.2  | 4194.2  |
| 7.5°  | 4019.1  | 4010.3  | 4062.8  | 4080.4  | 4150.4  | 4211.7  | 4281.8  | 4255.5  | 4290.5  | 4281.8  | 4255.5  |
| 10°   | 3835.2  | 3808.9  | 3861.5  | 3957.8  | 4062.8  | 4220.5  | 4290.5  | 4308.0  | 4386.8  | 4421.8  | 4404.3  |
| 12.5° | 3730.1  | 3703.8  | 3773.9  | 3843.9  | 4010.3  | 4202.9  | 4325.5  | 4369.3  | 4456.9  | 4526.9  | 4544.4  |
| 15°   | 3651.3  | 3677.6  | 3747.6  | 3879.0  | 4036.6  | 4238.0  | 4343.0  | 4430.6  | 4614.5  | 4684.5  | 4684.5  |
| 17.5° | 3703.8  | 3695.1  | 3756.4  | 3887.7  | 4080.4  | 4281.8  | 4439.4  | 4526.9  | 4745.8  | 4842.1  | 4833.4  |
| 20°   | 4220.5  | 4167.9  | 4159.2  | 4089.1  | 4150.4  | 4386.8  | 4579.5  | 4667.0  | 4877.2  | 5008.5  | 4999.8  |
| 22.5° | 4885.9  | 4938.5  | 4798.4  | 4640.8  | 4448.1  | 4526.9  | 4728.3  | 4850.9  | 5061.0  | 5201.1  | 5148.6  |
| 25°   | 5787.8  | 5761.5  | 5665.2  | 5350.0  | 4999.8  | 4833.4  | 4938.5  | 5061.0  | 5323.7  | 5437.6  | 5350.0  |
| 27.5° | 6742.2  | 6628.4  | 6505.8  | 6068.0  | 5603.9  | 5297.5  | 5315.0  | 5393.8  | 5700.2  | 5770.3  | 5568.9  |
| 30°   | 7766.7  | 7784.2  | 7582.8  | 6987.4  | 6348.2  | 5884.1  | 5849.1  | 5884.1  | 6129.3  | 6120.5  | 5840.3  |
| 32.5° | 8940.0  | 8896.2  | 8703.6  | 8064.4  | 7355.2  | 6593.4  | 6505.8  | 6444.5  | 6549.6  | 6453.3  | 6129.3  |
| 35°   | 9763.1  | 9806.9  | 9596.7  | 9176.4  | 8467.2  | 7521.5  | 7311.4  | 7162.5  | 7057.4  | 6952.4  | 6602.1  |
| 37.5° | 10498.6 | 10446.1 | 10323.5 | 10087.1 | 9395.3  | 8528.5  | 8125.7  | 7994.4  | 7766.7  | 7477.7  | 7153.8  |
| 40°   | 10665.0 | 10638.7 | 10577.4 | 10586.2 | 10139.6 | 9465.4  | 9176.4  | 8940.0  | 8546.0  | 8309.6  | 7889.3  |
| 42.5° | 10638.7 | 10726.3 | 10743.8 | 10813.8 | 10559.9 | 10393.5 | 10095.8 | 9868.2  | 9500.4  | 9211.5  | 8773.6  |
| 45°   | 10778.8 | 10927.7 | 11050.2 | 11111.5 | 10945.2 | 10927.7 | 10962.7 | 10857.6 | 10603.7 | 10306.0 | 9806.9  |
| 47.5° | 11059.0 | 11312.9 | 11505.6 | 11636.9 | 11601.9 | 11890.8 | 11707.0 | 11680.7 | 11785.8 | 11496.8 | 10997.7 |
| 50°   | 11584.4 | 11654.4 | 12109.7 | 12302.4 | 12626.3 | 13046.6 | 12687.6 | 12775.2 | 12985.3 | 13011.6 | 12092.2 |
| 52.5° | 11978.4 | 12039.7 | 12495.0 | 13064.2 | 13782.2 | 14246.2 | 13922.3 | 13913.5 | 14290.0 | 14395.1 | 13151.7 |
| 55°   | 12083.5 | 12223.6 | 12810.2 | 13799.7 | 15148.1 | 15620.9 | 15393.3 | 15314.5 | 15813.6 | 15997.5 | 14088.6 |
| 57.5° | 11934.6 | 11987.1 | 12827.7 | 14255.0 | 16137.6 | 17162.0 | 17232.1 | 16986.9 | 17442.2 | 17486.0 | 14780.4 |
| 60°   | 10323.5 | 10551.1 | 12022.2 | 14543.9 | 16978.1 | 18834.4 | 19202.2 | 19062.1 | 19097.1 | 19018.3 | 15297.0 |
| 62.5° | 7136.3  | 7180.0  | 9342.8  | 14237.5 | 17669.9 | 20524.4 | 21137.3 | 21032.2 | 20734.5 | 19990.3 | 15034.3 |
| 65°   | 3397.4  | 3633.8  | 5017.3  | 12048.4 | 17766.2 | 21811.5 | 23002.4 | 23072.4 | 21688.9 | 19999.0 | 14018.6 |
| 67.5° | 2337.9  | 2346.6  | 2670.6  | 8502.2  | 15069.3 | 22179.3 | 24000.6 | 23676.6 | 21601.4 | 19815.1 | 12775.2 |
| 70°   | 1479.8  | 1374.7  | 1541.1  | 4850.9  | 10183.4 | 17416.0 | 21408.8 | 22547.0 | 21233.6 | 18615.5 | 10796.3 |
| 72.5° | 586.7   | 630.4   | 726.8   | 1593.6  | 4991.0  | 9920.7  | 13983.5 | 17162.0 | 19149.7 | 16102.5 | 8432.2  |
| 75°   | 262.7   | 280.2   | 367.8   | 665.5   | 1287.2  | 4045.3  | 5411.3  | 7582.8  | 15323.2 | 12713.9 | 5971.7  |
| 77.5° | 175.1   | 183.9   | 236.4   | 385.3   | 586.7   | 1129.5  | 1978.9  | 2320.4  | 9185.2  | 6952.4  | 2802.0  |
| 80°   | 105.1   | 113.8   | 157.6   | 236.4   | 324.0   | 402.8   | 604.2   | 700.5   | 2425.4  | 2302.9  | 770.5   |
| 82.5° | 70.0    | 61.3    | 105.1   | 131.3   | 192.6   | 166.4   | 192.6   | 227.7   | 665.5   | 586.7   | 210.1   |
| 85°   | 26.3    | 26.3    | 43.8    | 52.5    | 70.0    | 87.6    | 78.8    | 96.3    | 157.6   | 157.6   | 96.3    |
| 87.5° | 0.0     | 0.0     | 8.8     | 8.8     | 26.3    | 35.0    | 43.8    | 43.8    | 61.3    | 61.3    | 52.5    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |



REPORT NUMBER: P1381085

CATALOG NUMBER: VAL-T-SB6C-727-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4150.4  | 4150.4 | 4150.4 | 4150.4 | 4150.4 | 4150.4 | 4150.4 | 4150.4 | 4150.4 | 4150.4 | 4150.4 |
| 2.5°  | 4167.9  | 4141.7 | 4150.4 | 4132.9 | 4141.7 | 4124.1 | 4089.1 | 4124.1 | 4097.9 | 4097.9 | 4124.1 |
| 5°    | 4194.2  | 4185.4 | 4159.2 | 4115.4 | 4089.1 | 4027.8 | 3931.5 | 3887.7 | 3843.9 | 3817.7 | 3835.2 |
| 7.5°  | 4281.8  | 4246.7 | 4202.9 | 4097.9 | 3957.8 | 3773.9 | 3581.3 | 3362.4 | 3196.0 | 3178.5 | 3117.2 |
| 10°   | 4395.6  | 4360.6 | 4264.2 | 4027.8 | 3738.9 | 3213.5 | 2793.2 | 2504.3 | 2329.1 | 2215.3 | 2171.5 |
| 12.5° | 4544.4  | 4500.7 | 4325.5 | 3922.7 | 3213.5 | 2478.0 | 1978.9 | 1768.7 | 1707.4 | 1681.2 | 1672.4 |
| 15°   | 4684.5  | 4632.0 | 4325.5 | 3581.3 | 2600.6 | 1865.1 | 1611.1 | 1558.6 | 1549.8 | 1558.6 | 1549.8 |
| 17.5° | 4815.9  | 4745.8 | 4281.8 | 3117.2 | 1996.4 | 1576.1 | 1514.8 | 1488.5 | 1479.8 | 1471.0 | 1471.0 |
| 20°   | 4973.5  | 4859.7 | 4159.2 | 2609.3 | 1646.2 | 1497.3 | 1471.0 | 1436.0 | 1436.0 | 1401.0 | 1409.7 |
| 22.5° | 5122.3  | 4964.7 | 3922.7 | 2101.5 | 1514.8 | 1453.5 | 1427.3 | 1392.2 | 1374.7 | 1348.4 | 1348.4 |
| 25°   | 5271.2  | 5069.8 | 3642.6 | 1742.5 | 1436.0 | 1409.7 | 1383.5 | 1348.4 | 1304.7 | 1269.6 | 1269.6 |
| 27.5° | 5490.1  | 5209.9 | 3309.8 | 1593.6 | 1392.2 | 1348.4 | 1322.2 | 1278.4 | 1225.9 | 1182.1 | 1182.1 |
| 30°   | 5735.3  | 5402.5 | 3038.4 | 1567.3 | 1374.7 | 1269.6 | 1225.9 | 1155.8 | 1120.8 | 1085.8 | 1085.8 |
| 32.5° | 6033.0  | 5665.2 | 2837.0 | 1611.1 | 1330.9 | 1164.6 | 1094.5 | 1024.5 | 998.2  | 998.2  | 998.2  |
| 35°   | 6470.8  | 6050.5 | 2618.1 | 1619.9 | 1278.4 | 1059.5 | 945.7  | 875.6  | 875.6  | 910.6  | 910.6  |
| 37.5° | 7057.4  | 6470.8 | 2504.3 | 1602.4 | 1234.6 | 954.4  | 823.1  | 770.5  | 761.8  | 796.8  | 796.8  |
| 40°   | 7731.7  | 6934.9 | 2548.0 | 1541.1 | 1173.3 | 849.3  | 726.8  | 683.0  | 674.2  | 683.0  | 691.7  |
| 42.5° | 8467.2  | 7434.0 | 2653.1 | 1453.5 | 1068.2 | 761.8  | 656.7  | 630.4  | 621.7  | 621.7  | 621.7  |
| 45°   | 9246.5  | 7775.4 | 2758.2 | 1366.0 | 963.2  | 691.7  | 612.9  | 595.4  | 586.7  | 586.7  | 586.7  |
| 47.5° | 9990.8  | 8046.9 | 2688.1 | 1287.2 | 875.6  | 648.0  | 577.9  | 577.9  | 569.1  | 569.1  | 569.1  |
| 50°   | 10629.9 | 8020.6 | 2390.4 | 1208.3 | 779.3  | 612.9  | 560.4  | 551.6  | 551.6  | 542.9  | 542.9  |
| 52.5° | 10988.9 | 7486.5 | 1926.3 | 1120.8 | 691.7  | 577.9  | 542.9  | 534.1  | 525.4  | 516.6  | 516.6  |
| 55°   | 11129.0 | 6777.2 | 1497.3 | 989.4  | 630.4  | 551.6  | 525.4  | 516.6  | 499.1  | 490.3  | 481.6  |
| 57.5° | 10883.9 | 5735.3 | 1155.8 | 788.1  | 577.9  | 516.6  | 499.1  | 490.3  | 472.8  | 446.6  | 437.8  |
| 60°   | 10384.8 | 4597.0 | 866.9  | 604.2  | 516.6  | 472.8  | 472.8  | 464.1  | 429.1  | 385.3  | 376.5  |
| 62.5° | 9509.2  | 3301.1 | 656.7  | 490.3  | 446.6  | 429.1  | 446.6  | 429.1  | 376.5  | 315.2  | 306.5  |
| 65°   | 8274.5  | 2040.2 | 507.9  | 420.3  | 394.0  | 376.5  | 402.8  | 385.3  | 324.0  | 253.9  | 236.4  |
| 67.5° | 6917.3  | 1042.0 | 394.0  | 359.0  | 332.7  | 315.2  | 341.5  | 341.5  | 280.2  | 210.1  | 201.4  |
| 70°   | 5341.2  | 577.9  | 315.2  | 297.7  | 271.4  | 245.2  | 289.0  | 297.7  | 245.2  | 183.9  | 175.1  |
| 72.5° | 3966.5  | 367.8  | 253.9  | 245.2  | 210.1  | 175.1  | 236.4  | 253.9  | 210.1  | 140.1  | 131.3  |
| 75°   | 2591.8  | 289.0  | 192.6  | 192.6  | 148.9  | 140.1  | 201.4  | 218.9  | 183.9  | 105.1  | 105.1  |
| 77.5° | 1243.4  | 218.9  | 148.9  | 131.3  | 105.1  | 105.1  | 175.1  | 183.9  | 131.3  | 78.8   | 78.8   |
| 80°   | 411.5   | 148.9  | 105.1  | 87.6   | 70.0   | 70.0   | 140.1  | 105.1  | 70.0   | 61.3   | 61.3   |
| 82.5° | 140.1   | 96.3   | 70.0   | 61.3   | 52.5   | 43.8   | 43.8   | 52.5   | 52.5   | 43.8   | 43.8   |
| 85°   | 70.0    | 61.3   | 52.5   | 43.8   | 35.0   | 35.0   | 35.0   | 35.0   | 43.8   | 43.8   | 43.8   |
| 87.5° | 43.8    | 43.8   | 35.0   | 26.3   | 26.3   | 26.3   | 26.3   | 26.3   | 35.0   | 17.5   | 17.5   |
| 90°   | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-3

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-727-U-5WQ

Data in this report applies to families of products including GSS-SB1A-727-U-5WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-3  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/15/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GSS-SB1A-727-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI  
 2700K CCT 26 LEDS

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 2672     | CRI (Ra): | 71.1 |      |       |
| CIE u':                   | 0.2638   | R1:       | 68.3 | R9:  | -27.8 |
| CIE v':                   | 0.5276   | R2:       | 79.8 | R10: | 54.4  |
| Duv:                      | -0.0002  | R3:       | 91.2 | R11: | 65.8  |
| CIE x:                    | 0.4619   | R4:       | 69.4 | R12: | 45.6  |
| CIE y:                    | 0.4106   | R5:       | 66.5 | R13: | 69.8  |
| CIE z:                    | 0.1275   | R6:       | 72.6 | R14: | 94.5  |
| Peak Wavelength (nm):     | 601      | R7:       | 77.0 | R15: | 60.1  |
| Dominant Wavelength (nm): | 584      | R8:       | 44.1 |      |       |
| Purity:                   | 61.88407 |           |      |      |       |
| Rf:                       | 67.9     |           |      |      |       |
| Rg:                       | 98.6     |           |      |      |       |



### Test Conditions

Stabilization Time: 21M  
 Operation Time: 1H 21M  
 Sphere Temperature (°C): 25.2

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| 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           |



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### 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               | 52                                   | NR                             | 620               | 888                                  | NR                             | 750               | 27                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 87                                   | NR                             | 625               | 834                                  | NR                             | 755               | 23                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 135                                  | NR                             | 630               | 776                                  | NR                             | 760               | 20                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 196                                  | NR                             | 635               | 712                                  | NR                             | 765               | 17                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 258                                  | NR                             | 640               | 648                                  | NR                             | 770               | 15                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 1                                    | NR                             | 515               | 317                                  | NR                             | 645               | 583                                  | NR                             | 775               | 12                                   | NR                             | 905               | 0                                    | NR                             |
| 390               | 2                                    | NR                             | 520               | 368                                  | NR                             | 650               | 523                                  | NR                             | 780               | 11                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 4                                    | NR                             | 525               | 408                                  | NR                             | 655               | 465                                  | NR                             | 785               | 9                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 6                                    | NR                             | 530               | 443                                  | NR                             | 660               | 410                                  | NR                             | 790               | 8                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 11                                   | NR                             | 535               | 473                                  | NR                             | 665               | 360                                  | NR                             | 795               | 7                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 23                                   | NR                             | 540               | 498                                  | NR                             | 670               | 313                                  | NR                             | 800               | 6                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 51                                   | NR                             | 545               | 530                                  | NR                             | 675               | 272                                  | NR                             | 805               | 5                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 111                                  | NR                             | 550               | 563                                  | NR                             | 680               | 236                                  | NR                             | 810               | 4                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 214                                  | NR                             | 555               | 605                                  | NR                             | 685               | 203                                  | NR                             | 815               | 4                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 339                                  | NR                             | 560               | 651                                  | NR                             | 690               | 175                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 467                                  | NR                             | 565               | 705                                  | NR                             | 695               | 150                                  | NR                             | 825               | 3                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 535                                  | NR                             | 570               | 765                                  | NR                             | 700               | 128                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 372                                  | NR                             | 575               | 824                                  | NR                             | 705               | 110                                  | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 160                                  | NR                             | 580               | 882                                  | NR                             | 710               | 94                                   | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 89                                   | NR                             | 585               | 930                                  | NR                             | 715               | 80                                   | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 53                                   | NR                             | 590               | 968                                  | NR                             | 720               | 69                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 31                                   | NR                             | 595               | 991                                  | NR                             | 725               | 59                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 23                                   | NR                             | 600               | 999                                  | NR                             | 730               | 50                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 21                                   | NR                             | 605               | 992                                  | NR                             | 735               | 43                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 23                                   | NR                             | 610               | 969                                  | NR                             | 740               | 36                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 32                                   | NR                             | 615               | 935                                  | NR                             | 745               | 31                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.02

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 52                          | NR               | 620       | 888                         | NR               | 750       | 27                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 87                          | NR               | 625       | 834                         | NR               | 755       | 23                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 135                         | NR               | 630       | 776                         | NR               | 760       | 20                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 196                         | NR               | 635       | 712                         | NR               | 765       | 17                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 258                         | NR               | 640       | 648                         | NR               | 770       | 15                          | NR               | 900       | 0                           | NR               |
| 385       | 1                           | NR               | 515       | 317                         | NR               | 645       | 583                         | NR               | 775       | 12                          | NR               | 905       | 0                           | NR               |
| 390       | 2                           | NR               | 520       | 368                         | NR               | 650       | 523                         | NR               | 780       | 11                          | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 408                         | NR               | 655       | 465                         | NR               | 785       | 9                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 443                         | NR               | 660       | 410                         | NR               | 790       | 8                           | NR               | 920       | 0                           | NR               |
| 405       | 11                          | NR               | 535       | 473                         | NR               | 665       | 360                         | NR               | 795       | 7                           | NR               | 925       | 0                           | NR               |
| 410       | 23                          | NR               | 540       | 498                         | NR               | 670       | 313                         | NR               | 800       | 6                           | NR               | 930       | 0                           | NR               |
| 415       | 51                          | NR               | 545       | 530                         | NR               | 675       | 272                         | NR               | 805       | 5                           | NR               | 935       | 0                           | NR               |
| 420       | 111                         | NR               | 550       | 563                         | NR               | 680       | 236                         | NR               | 810       | 4                           | NR               | 940       | 0                           | NR               |
| 425       | 214                         | NR               | 555       | 605                         | NR               | 685       | 203                         | NR               | 815       | 4                           | NR               | 945       | 0                           | NR               |
| 430       | 339                         | NR               | 560       | 651                         | NR               | 690       | 175                         | NR               | 820       | 3                           | NR               | 950       | 0                           | NR               |
| 435       | 467                         | NR               | 565       | 705                         | NR               | 695       | 150                         | NR               | 825       | 3                           | NR               | 955       | 0                           | NR               |
| 440       | 535                         | NR               | 570       | 765                         | NR               | 700       | 128                         | NR               | 830       | 3                           | NR               | 960       | 0                           | NR               |
| 445       | 372                         | NR               | 575       | 824                         | NR               | 705       | 110                         | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 160                         | NR               | 580       | 882                         | NR               | 710       | 94                          | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 89                          | NR               | 585       | 930                         | NR               | 715       | 80                          | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 53                          | NR               | 590       | 968                         | NR               | 720       | 69                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 31                          | NR               | 595       | 991                         | NR               | 725       | 59                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 23                          | NR               | 600       | 999                         | NR               | 730       | 50                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 21                          | NR               | 605       | 992                         | NR               | 735       | 43                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 23                          | NR               | 610       | 969                         | NR               | 740       | 36                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 32                          | NR               | 615       | 935                         | NR               | 745       | 31                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.71

| 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       | 52                          | NR               | 620       | 888                         | NR               | 750       | 27                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 87                          | NR               | 625       | 834                         | NR               | 755       | 23                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 135                         | NR               | 630       | 776                         | NR               | 760       | 20                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 196                         | NR               | 635       | 712                         | NR               | 765       | 17                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 258                         | NR               | 640       | 648                         | NR               | 770       | 15                          | NR               | 900       | 0                           | NR               |
| 385       | 1                           | NR               | 515       | 317                         | NR               | 645       | 583                         | NR               | 775       | 12                          | NR               | 905       | 0                           | NR               |
| 390       | 2                           | NR               | 520       | 368                         | NR               | 650       | 523                         | NR               | 780       | 11                          | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 408                         | NR               | 655       | 465                         | NR               | 785       | 9                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 443                         | NR               | 660       | 410                         | NR               | 790       | 8                           | NR               | 920       | 0                           | NR               |
| 405       | 11                          | NR               | 535       | 473                         | NR               | 665       | 360                         | NR               | 795       | 7                           | NR               | 925       | 0                           | NR               |
| 410       | 23                          | NR               | 540       | 498                         | NR               | 670       | 313                         | NR               | 800       | 6                           | NR               | 930       | 0                           | NR               |
| 415       | 51                          | NR               | 545       | 530                         | NR               | 675       | 272                         | NR               | 805       | 5                           | NR               | 935       | 0                           | NR               |
| 420       | 111                         | NR               | 550       | 563                         | NR               | 680       | 236                         | NR               | 810       | 4                           | NR               | 940       | 0                           | NR               |
| 425       | 214                         | NR               | 555       | 605                         | NR               | 685       | 203                         | NR               | 815       | 4                           | NR               | 945       | 0                           | NR               |
| 430       | 339                         | NR               | 560       | 651                         | NR               | 690       | 175                         | NR               | 820       | 3                           | NR               | 950       | 0                           | NR               |
| 435       | 467                         | NR               | 565       | 705                         | NR               | 695       | 150                         | NR               | 825       | 3                           | NR               | 955       | 0                           | NR               |
| 440       | 535                         | NR               | 570       | 765                         | NR               | 700       | 128                         | NR               | 830       | 3                           | NR               | 960       | 0                           | NR               |
| 445       | 372                         | NR               | 575       | 824                         | NR               | 705       | 110                         | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 160                         | NR               | 580       | 882                         | NR               | 710       | 94                          | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 89                          | NR               | 585       | 930                         | NR               | 715       | 80                          | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 53                          | NR               | 590       | 968                         | NR               | 720       | 69                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 31                          | NR               | 595       | 991                         | NR               | 725       | 59                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 23                          | NR               | 600       | 999                         | NR               | 730       | 50                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 21                          | NR               | 605       | 992                         | NR               | 735       | 43                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 23                          | NR               | 610       | 969                         | NR               | 740       | 36                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 32                          | NR               | 615       | 935                         | NR               | 745       | 31                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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TM-30-18

### Summary

$R_f = 67.9$   
 $R_g = 98.6$   
 $\text{CIE } R_a = 71.1$   
 $R_g = -27.8$

### Spectral Power Distribution Comparison



### Color Vector Graphics



**Individual Sample Fidelity Index ( $R_{fi}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 52 | CES31 = 44 | CES56 = 60 | CES81 = 69 |
| CES07 = 42 | CES32 = 47 | CES57 = 54 | CES82 = 92 |
| CES08 = 41 | CES33 = 45 | CES58 = 59 | CES83 = 82 |
| CES09 = 29 | CES34 = 67 | CES59 = 85 | CES84 = 92 |
| CES10 = 77 | CES35 = 84 | CES60 = 86 | CES85 = 87 |
| CES11 = 60 | CES36 = 68 | CES61 = 86 | CES86 = 60 |
| CES12 = 66 | CES37 = 77 | CES62 = 59 | CES87 = 79 |
| CES13 = 44 | CES38 = 40 | CES63 = 66 | CES88 = 70 |
| CES14 = 74 | CES39 = 88 | CES64 = 69 | CES89 = 66 |
| CES15 = 72 | CES40 = 82 | CES65 = 64 | CES90 = 64 |
| CES16 = 48 | CES41 = 70 | CES66 = 65 | CES91 = 81 |
| CES17 = 51 | CES42 = 76 | CES67 = 64 | CES92 = 69 |
| CES18 = 57 | CES43 = 63 | CES68 = 73 | CES93 = 81 |
| CES19 = 73 | CES44 = 97 | CES69 = 83 | CES94 = 53 |
| CES20 = 67 | CES45 = 74 | CES70 = 64 | CES95 = 77 |
| CES21 = 88 | CES46 = 67 | CES71 = 60 | CES96 = 79 |
| CES22 = 80 | CES47 = 55 | CES72 = 87 | CES97 = 78 |
| CES23 = 92 | CES48 = 42 | CES73 = 57 | CES98 = 69 |
| CES24 = 92 | CES49 = 65 | CES74 = 84 | CES99 = 60 |
| CES25 = 73 | CES50 = 74 | CES75 = 60 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)