

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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Peachtree City, GA 30269

Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1458546

Luminaire Tested: GLAN-SB5D-930-U-T3LG-HSS

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1458546
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/22/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB5D-930-U-T3LG-HSS
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 900mA 5xLight Square PACKAGE 90CRI 3000K FIXTURE w/ TYPE III LOW GLARE WITH HOUSE SIDE SHIELD
Light Source: (130) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

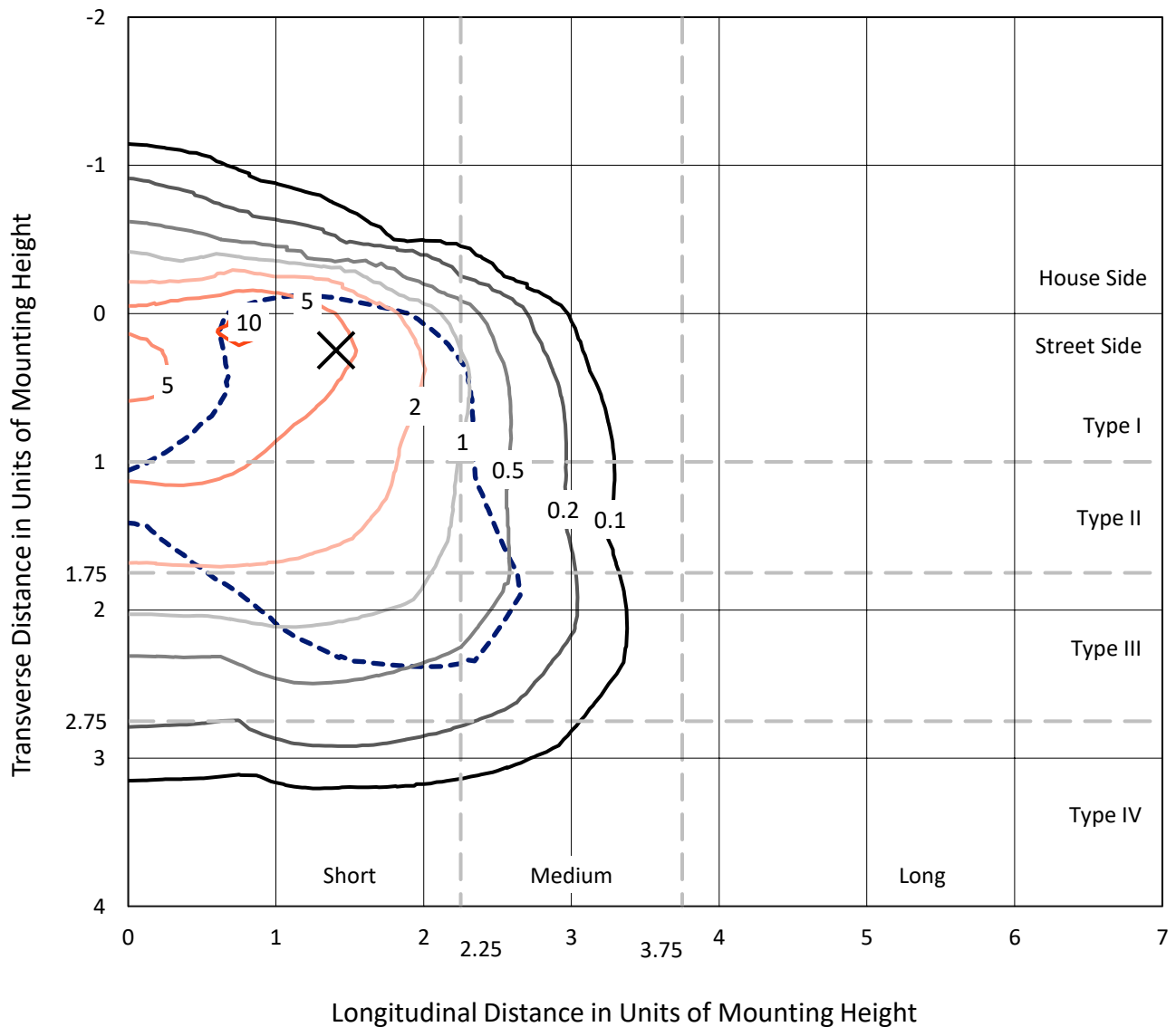
Lumens per Lamp: N/A
Luminaire Lumens: 27350.4 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G4

Input Watts (W): 364.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P1458546
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Iso-Footcandle Lines of Horizontal Illumination

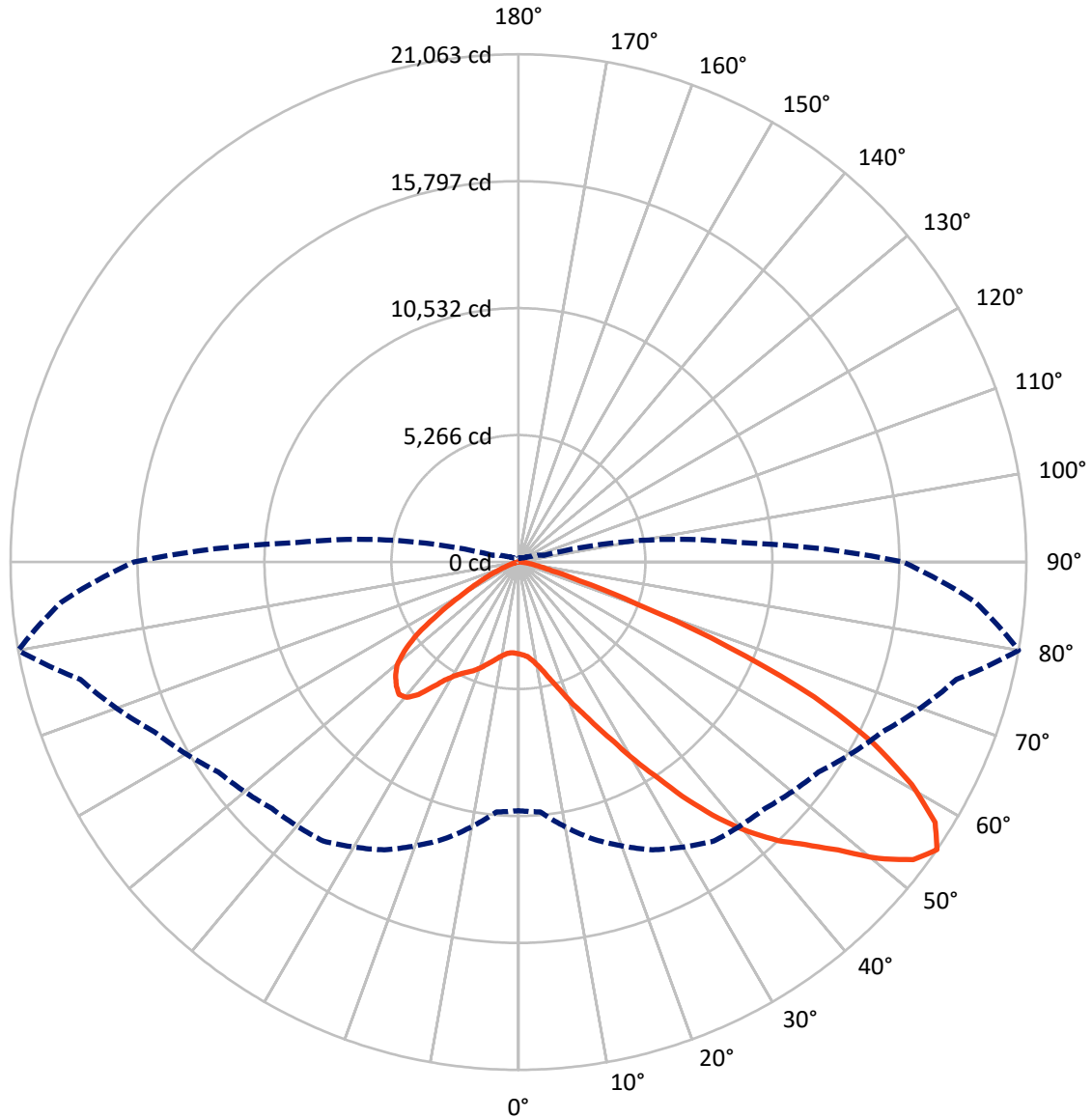
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3324.8 | 0.0 | 3324.8 |
| | % Fixture | 12.2 | 0.0 | 12.2 |
| Street Side | Lumens | 24025.6 | 0.0 | 24025.6 |
| | % Fixture | 87.8 | 0.0 | 87.8 |
| Total | Lumens | 27350.4 | 0.0 | 27350.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 319.7 | 1.2 |
| 10°-20° | 842.9 | 3.1 |
| 20°-30° | 1650.2 | 6.0 |
| 30°-40° | 3357.2 | 12.3 |
| 40°-50° | 5659.7 | 20.7 |
| 50°-60° | 7231.4 | 26.4 |
| 60°-70° | 6173.9 | 22.6 |
| 70°-80° | 1972.9 | 7.2 |
| 80°-90° | 142.5 | 0.5 |
| 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° | 27350.4 | 100.0 |
| 0°-180° | 27350.4 | 100.0 |

Coefficient of Utilization



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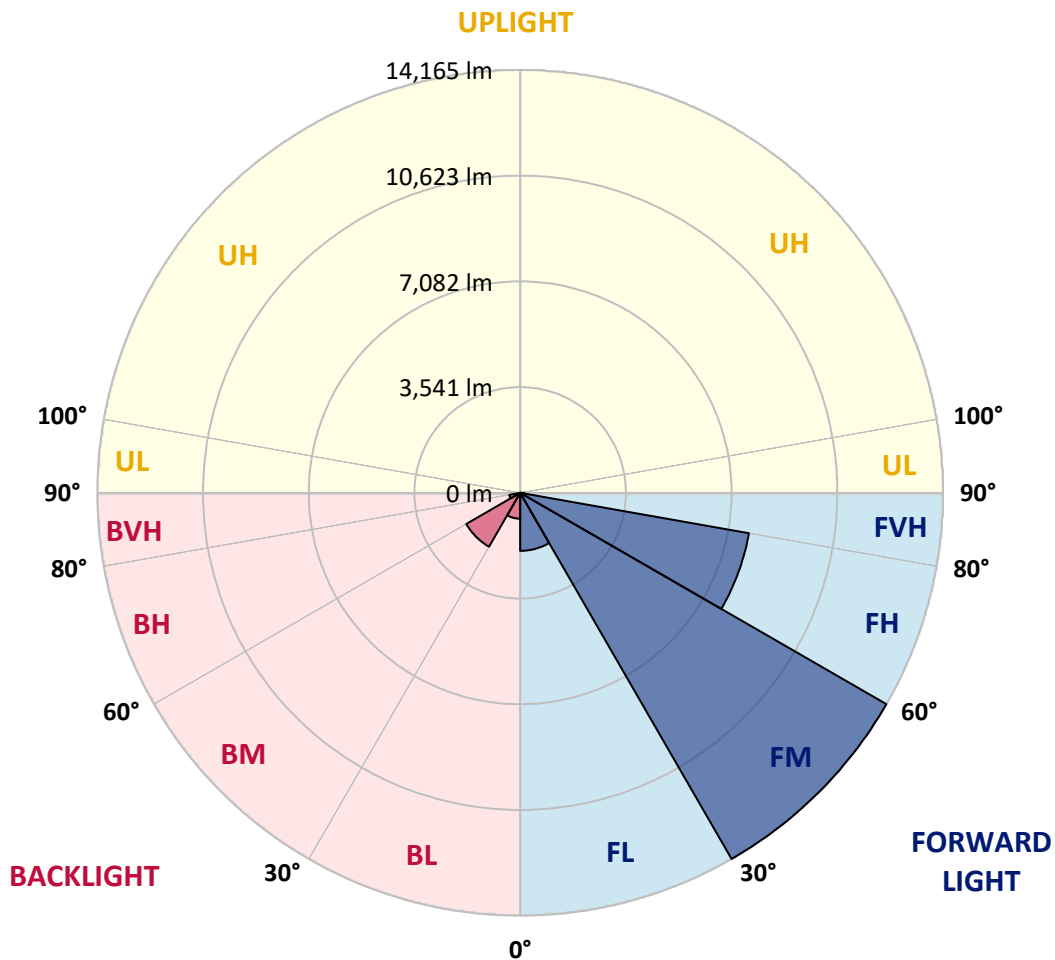
CATALOG NUMBER: GLAN-SB5D-930-U-T3LG-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1944.7 | 7.1 | | | |
| FM (30°-60°) | 14164.5 | 51.8 | | | |
| FH (60°-80°) | 7781.4 | 28.5 | | | G4/12000 |
| FVH (80°-90°) | 135.0 | 0.5 | | | G2/225 |
| BL (0°-30°) | 868.2 | 3.2 | B2/1000 | | |
| BM (30°-60°) | 2083.7 | 7.6 | B2/2500 | | |
| BH (60°-80°) | 365.4 | 1.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 7.4 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type III Short





REPORT NUMBER: P1458546

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 |
| 2.5° | 3833.2 | 3841.0 | 3833.2 | 3841.0 | 3856.5 | 3848.7 | 3879.8 | 3872.1 | 3872.1 | 3864.3 | 3833.2 |
| 5° | 3615.5 | 3623.3 | 3638.8 | 3677.7 | 3732.1 | 3786.5 | 3856.5 | 3903.2 | 3949.8 | 3942.0 | 3910.9 |
| 7.5° | 3187.8 | 3203.4 | 3265.6 | 3343.3 | 3522.2 | 3685.5 | 3864.3 | 3980.9 | 4082.0 | 4113.1 | 4089.8 |
| 10° | 2946.8 | 2962.4 | 3001.2 | 3079.0 | 3242.3 | 3514.4 | 3864.3 | 4105.3 | 4284.2 | 4346.4 | 4354.1 |
| 12.5° | 2923.5 | 2931.3 | 2962.4 | 3047.9 | 3187.8 | 3421.1 | 3856.5 | 4268.6 | 4571.8 | 4665.1 | 4696.2 |
| 15° | 2939.0 | 2954.6 | 2985.7 | 3055.7 | 3218.9 | 3483.3 | 3918.7 | 4525.2 | 4952.8 | 5085.0 | 5092.8 |
| 17.5° | 3001.2 | 3016.8 | 3055.7 | 3133.4 | 3312.2 | 3646.6 | 4113.1 | 4789.5 | 5411.6 | 5559.3 | 5644.8 |
| 20° | 3125.6 | 3133.4 | 3180.1 | 3281.1 | 3483.3 | 3848.7 | 4400.8 | 5147.2 | 5963.6 | 6181.3 | 6243.5 |
| 22.5° | 3288.9 | 3312.2 | 3374.4 | 3498.9 | 3755.4 | 4128.6 | 4797.3 | 5582.6 | 6570.1 | 6795.6 | 6904.4 |
| 25° | 3467.8 | 3498.9 | 3592.2 | 3794.3 | 4120.9 | 4556.3 | 5287.2 | 6158.0 | 7285.4 | 7557.5 | 7705.3 |
| 27.5° | 3833.2 | 3841.0 | 3903.2 | 4159.7 | 4579.6 | 5116.1 | 5909.2 | 6896.6 | 8125.1 | 8443.9 | 8607.2 |
| 30° | 4634.0 | 4641.8 | 4587.4 | 4657.4 | 5085.0 | 5777.0 | 6640.0 | 7759.7 | 9104.8 | 9548.0 | 9680.2 |
| 32.5° | 5613.7 | 5652.6 | 5644.8 | 5598.2 | 5792.5 | 6437.9 | 7510.9 | 8793.8 | 10255.5 | 10722.0 | 10846.4 |
| 35° | 6725.6 | 6818.9 | 6795.6 | 6780.0 | 6803.3 | 7285.4 | 8506.1 | 9936.7 | 11561.8 | 12129.4 | 12230.4 |
| 37.5° | 7814.1 | 7837.4 | 7946.3 | 8078.5 | 8094.0 | 8428.3 | 9656.8 | 11149.7 | 12774.7 | 13497.8 | 13653.3 |
| 40° | 8653.8 | 8731.6 | 9003.7 | 9268.1 | 9540.2 | 9804.6 | 10605.4 | 12129.4 | 13738.8 | 14710.7 | 14780.7 |
| 42.5° | 9307.0 | 9493.6 | 9890.1 | 10302.2 | 10854.2 | 11149.7 | 11507.3 | 12821.4 | 14524.1 | 15791.5 | 15760.4 |
| 45° | 10100.0 | 10177.8 | 10737.6 | 11281.9 | 11841.7 | 12292.6 | 12284.9 | 13404.5 | 15138.4 | 16716.7 | 16522.4 |
| 47.5° | 10636.5 | 10729.8 | 11491.8 | 12129.4 | 12704.7 | 12930.2 | 12976.9 | 14034.3 | 15985.9 | 17836.4 | 17377.6 |
| 50° | 10924.2 | 11087.5 | 11919.4 | 12728.1 | 13350.1 | 13420.0 | 13630.0 | 14858.5 | 17097.7 | 19321.4 | 18458.4 |
| 52.5° | 10955.3 | 11110.8 | 12067.2 | 13109.0 | 13785.5 | 13925.4 | 14283.1 | 15791.5 | 18178.5 | 20511.1 | 19080.4 |
| 55° | 10310.0 | 10403.3 | 11888.3 | 13171.2 | 14127.6 | 14454.2 | 15185.0 | 16654.5 | 18808.3 | 21063.1 | 19026.0 |
| 57.5° | 9703.5 | 9796.8 | 11087.5 | 13062.4 | 14477.5 | 15146.1 | 16149.2 | 17245.5 | 18318.4 | 20378.9 | 17813.1 |
| 60° | 9182.5 | 9229.2 | 10403.3 | 12557.0 | 14609.7 | 15822.6 | 16981.1 | 16662.3 | 17051.1 | 18738.3 | 15737.1 |
| 62.5° | 8202.9 | 8234.0 | 9625.7 | 11647.3 | 14345.3 | 16343.5 | 17268.8 | 15426.1 | 15659.3 | 16475.7 | 13295.6 |
| 65° | 6196.9 | 6313.5 | 7588.6 | 10963.1 | 13909.9 | 16584.6 | 16600.1 | 13917.7 | 13676.6 | 13482.2 | 10457.7 |
| 67.5° | 4206.4 | 4338.6 | 5108.3 | 9859.0 | 13202.3 | 16685.6 | 15301.7 | 11966.1 | 10418.8 | 9415.8 | 6850.0 |
| 70° | 3358.9 | 3358.9 | 3623.3 | 7923.0 | 11522.9 | 15395.0 | 13692.2 | 9034.8 | 6616.7 | 5201.6 | 3669.9 |
| 72.5° | 2208.2 | 2215.9 | 2464.7 | 5030.6 | 8171.8 | 11740.6 | 11165.2 | 5225.0 | 3436.7 | 2651.4 | 1811.6 |
| 75° | 800.8 | 800.8 | 1080.8 | 2013.8 | 4323.0 | 6989.9 | 6803.3 | 2495.8 | 1866.1 | 1446.2 | 1096.3 |
| 77.5° | 427.6 | 443.2 | 520.9 | 831.9 | 1656.1 | 2845.7 | 2659.1 | 1275.1 | 1057.4 | 901.9 | 684.2 |
| 80° | 287.7 | 295.5 | 349.9 | 513.2 | 800.8 | 1096.3 | 855.3 | 715.3 | 715.3 | 606.5 | 458.7 |
| 82.5° | 155.5 | 163.3 | 233.3 | 334.3 | 427.6 | 513.2 | 412.1 | 419.9 | 505.4 | 412.1 | 264.4 |
| 85° | 108.9 | 108.9 | 178.8 | 241.0 | 241.0 | 248.8 | 178.8 | 264.4 | 295.5 | 256.6 | 178.8 |
| 87.5° | 62.2 | 62.2 | 101.1 | 116.6 | 116.6 | 108.9 | 54.4 | 93.3 | 116.6 | 132.2 | 77.8 |
| 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: P1458546

CATALOG NUMBER: GLAN-SB5D-930-U-T3LG-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 | 3809.9 |
| 2.5° | 3825.4 | 3802.1 | 3755.4 | 3662.1 | 3615.5 | 3553.3 | 3498.9 | 3428.9 | 3413.3 | 3405.6 | 3374.4 |
| 5° | 3887.6 | 3841.0 | 3701.0 | 3498.9 | 3327.8 | 3164.5 | 3001.2 | 2907.9 | 2830.2 | 2791.3 | 2783.5 |
| 7.5° | 4043.1 | 3949.8 | 3693.2 | 3335.6 | 3016.8 | 2736.9 | 2495.8 | 2285.9 | 2177.1 | 2083.8 | 2091.5 |
| 10° | 4276.4 | 4128.6 | 3708.8 | 3180.1 | 2705.8 | 2254.8 | 1904.9 | 1601.7 | 1384.0 | 1282.9 | 1275.1 |
| 12.5° | 4587.4 | 4377.5 | 3763.2 | 3024.6 | 2324.8 | 1695.0 | 1251.8 | 1073.0 | 1026.3 | 1018.6 | 1010.8 |
| 15° | 4968.4 | 4672.9 | 3817.6 | 2822.4 | 1811.6 | 1174.1 | 1018.6 | 979.7 | 971.9 | 964.1 | 964.1 |
| 17.5° | 5427.1 | 5015.0 | 3848.7 | 2480.3 | 1321.8 | 1010.8 | 956.4 | 933.0 | 925.3 | 917.5 | 917.5 |
| 20° | 6002.5 | 5396.0 | 3887.6 | 2044.9 | 1119.6 | 971.9 | 909.7 | 878.6 | 870.8 | 870.8 | 863.1 |
| 22.5° | 6570.1 | 5823.6 | 3856.5 | 1663.9 | 1080.8 | 925.3 | 855.3 | 824.2 | 808.6 | 808.6 | 800.8 |
| 25° | 7223.2 | 6259.1 | 3763.2 | 1500.6 | 1073.0 | 886.4 | 800.8 | 754.2 | 730.9 | 723.1 | 723.1 |
| 27.5° | 7969.6 | 6756.7 | 3615.5 | 1508.4 | 1073.0 | 855.3 | 730.9 | 668.7 | 653.1 | 637.6 | 637.6 |
| 30° | 8824.9 | 7363.1 | 3506.6 | 1609.5 | 1088.5 | 824.2 | 668.7 | 590.9 | 567.6 | 552.0 | 559.8 |
| 32.5° | 9804.6 | 8039.6 | 3498.9 | 1772.8 | 1111.9 | 777.5 | 598.7 | 513.2 | 489.8 | 482.1 | 489.8 |
| 35° | 10916.4 | 8879.3 | 3677.7 | 1897.2 | 1049.7 | 676.4 | 513.2 | 443.2 | 419.9 | 419.9 | 427.6 |
| 37.5° | 12152.7 | 9843.4 | 3918.7 | 1866.1 | 847.5 | 536.5 | 443.2 | 388.8 | 365.4 | 373.2 | 381.0 |
| 40° | 13280.1 | 10597.6 | 3957.6 | 1593.9 | 637.6 | 458.7 | 381.0 | 342.1 | 326.6 | 334.3 | 342.1 |
| 42.5° | 14135.4 | 11204.1 | 3584.4 | 1236.3 | 536.5 | 388.8 | 326.6 | 295.5 | 287.7 | 303.2 | 303.2 |
| 45° | 14827.4 | 11445.1 | 2993.5 | 917.5 | 474.3 | 334.3 | 287.7 | 272.1 | 256.6 | 264.4 | 264.4 |
| 47.5° | 15550.5 | 11484.0 | 2441.4 | 738.6 | 419.9 | 303.2 | 264.4 | 248.8 | 233.3 | 233.3 | 233.3 |
| 50° | 16250.2 | 11390.7 | 1866.1 | 653.1 | 388.8 | 272.1 | 241.0 | 225.5 | 209.9 | 202.2 | 202.2 |
| 52.5° | 16421.3 | 10644.3 | 1368.4 | 606.5 | 357.7 | 256.6 | 225.5 | 209.9 | 194.4 | 186.6 | 186.6 |
| 55° | 15947.0 | 9229.2 | 1073.0 | 544.3 | 326.6 | 233.3 | 209.9 | 194.4 | 171.1 | 163.3 | 163.3 |
| 57.5° | 14384.2 | 7036.6 | 855.3 | 466.5 | 295.5 | 225.5 | 194.4 | 178.8 | 155.5 | 147.7 | 147.7 |
| 60° | 12354.8 | 4991.7 | 692.0 | 381.0 | 272.1 | 202.2 | 178.8 | 155.5 | 140.0 | 124.4 | 124.4 |
| 62.5° | 10107.8 | 3584.4 | 559.8 | 318.8 | 256.6 | 178.8 | 163.3 | 140.0 | 108.9 | 85.5 | 85.5 |
| 65° | 7751.9 | 2573.6 | 435.4 | 256.6 | 233.3 | 155.5 | 140.0 | 116.6 | 85.5 | 62.2 | 62.2 |
| 67.5° | 5015.0 | 1663.9 | 326.6 | 225.5 | 178.8 | 132.2 | 108.9 | 93.3 | 77.8 | 54.4 | 46.7 |
| 70° | 2643.6 | 971.9 | 241.0 | 194.4 | 132.2 | 101.1 | 93.3 | 77.8 | 62.2 | 38.9 | 38.9 |
| 72.5° | 1368.4 | 637.6 | 178.8 | 171.1 | 101.1 | 70.0 | 77.8 | 62.2 | 46.7 | 23.3 | 23.3 |
| 75° | 878.6 | 427.6 | 132.2 | 140.0 | 62.2 | 54.4 | 54.4 | 38.9 | 23.3 | 15.6 | 7.8 |
| 77.5° | 567.6 | 287.7 | 93.3 | 116.6 | 38.9 | 31.1 | 31.1 | 15.6 | 7.8 | 0.0 | 0.0 |
| 80° | 334.3 | 178.8 | 62.2 | 77.8 | 15.6 | 15.6 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 171.1 | 93.3 | 31.1 | 31.1 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 108.9 | 46.7 | 7.8 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 54.4 | 15.6 | 7.8 | 0.0 | 0.0 | 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 | 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: SP1-2407-184-14

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-930-U-5WQ

Data in this report applies to families of products including GSS-SB1A-930-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-14
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGraw-Edison
 Catalog Number: **GSS-SB1A-930-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI 3000K CCT 26 LEDS

Spectral Parameters

CCT (K): 2993
 CIE u': 0.2501
 CIE v': 0.5245
 Duv: 0.0021
 CIE x: 0.4406
 CIE y: 0.4107
 CIE z: 0.1487
 Peak Wavelength (nm): 621
 Dominant Wavelength (nm): 582
 Purity: 55.53327
 Rf: 92.6
 Rg: 98.5

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 92.4 | | |
| R1: | 92.2 | R9: | 58.2 |
| R2: | 95.2 | R10: | 87.7 |
| R3: | 97.0 | R11: | 93.5 |
| R4: | 93.1 | R12: | 81.7 |
| R5: | 91.7 | R13: | 92.9 |
| R6: | 94.2 | R14: | 97.6 |
| R7: | 93.3 | R15: | 88.1 |
| R8: | 82.3 | | |



Test Conditions

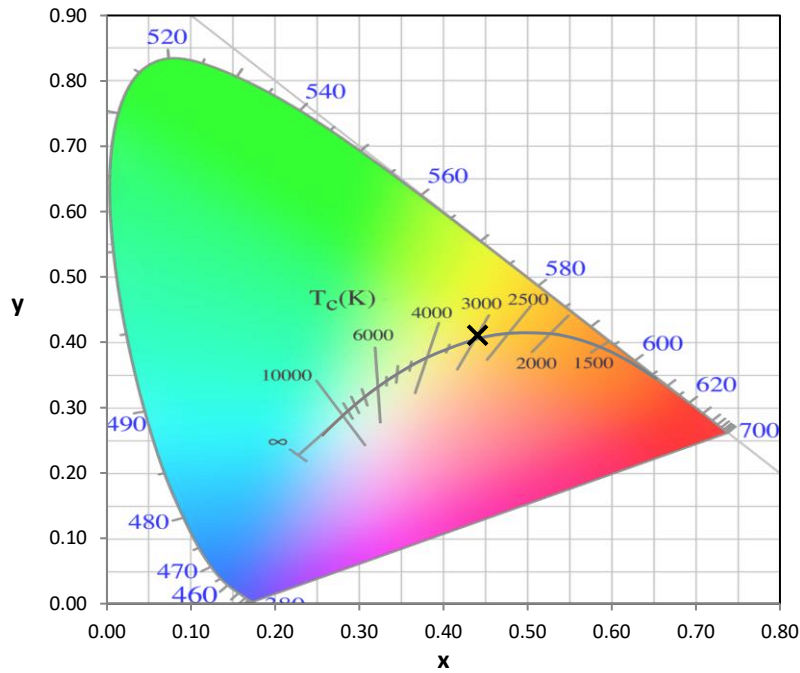
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

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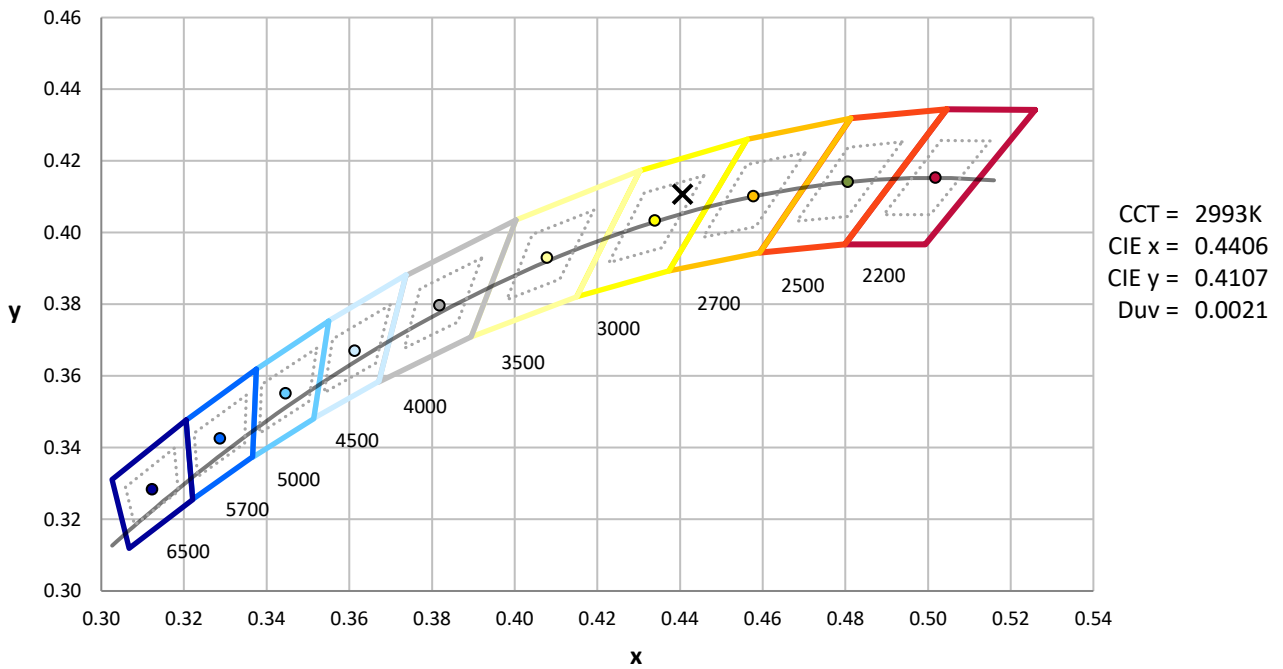
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 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 |

REPORT NUMBER: SP1-2407-184-14

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-14

Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-14

Scotopic Flux vs. Wavelength



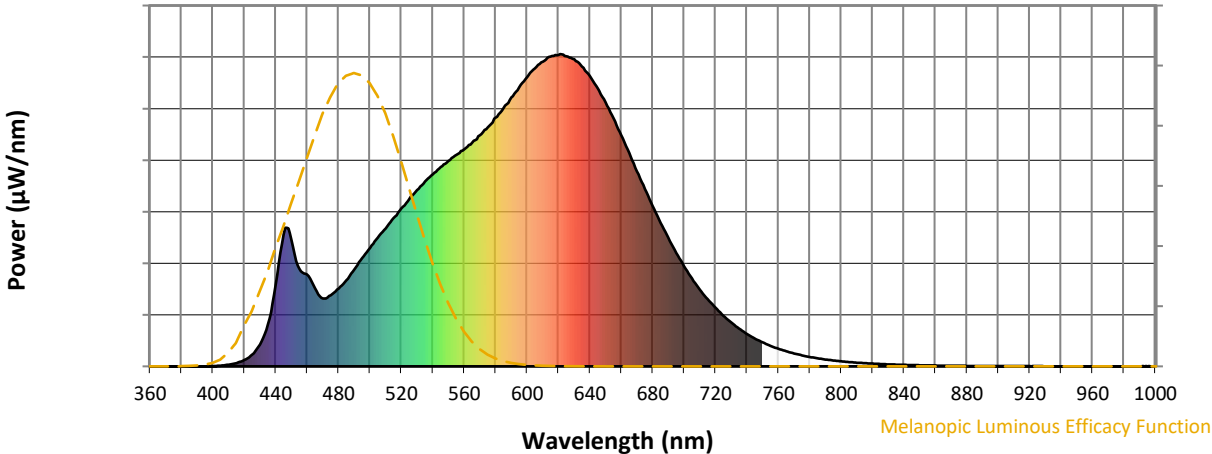
Scotopic Lumens: NR

S/P: 1.39

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-14

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.69

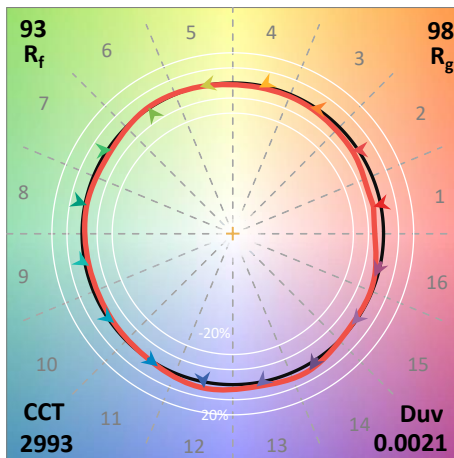
| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

Summary

$R_f = 92.6$
 $R_g = 98.5$
 $CIE R_a = 92.4$
 $R_9 = 58.2$

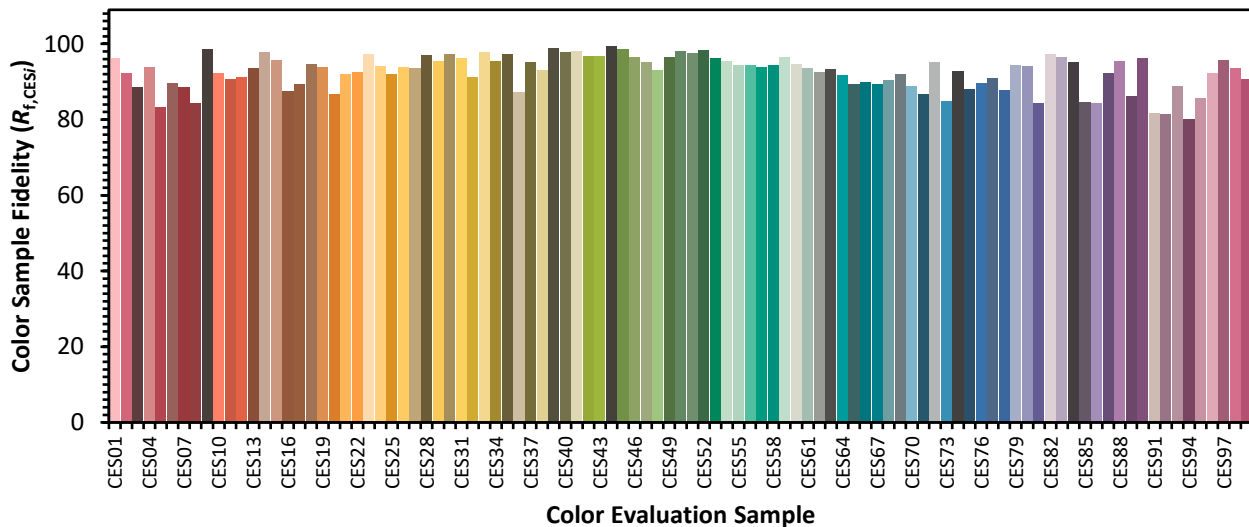


Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 94 | CES51 = 98 | CES76 = 90 |
| CES02 = 63 | CES27 = 94 | CES52 = 98 | CES77 = 91 |
| CES03 = 32 | CES28 = 97 | CES53 = 96 | CES78 = 88 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 94 |
| CES05 = 51 | CES30 = 97 | CES55 = 94 | CES80 = 94 |
| CES06 = 51 | CES31 = 96 | CES56 = 94 | CES81 = 84 |
| CES07 = 43 | CES32 = 91 | CES57 = 94 | CES82 = 97 |
| CES08 = 42 | CES33 = 98 | CES58 = 94 | CES83 = 97 |
| CES09 = 29 | CES34 = 96 | CES59 = 97 | CES84 = 95 |
| CES10 = 76 | CES35 = 97 | CES60 = 95 | CES85 = 85 |
| CES11 = 59 | CES36 = 87 | CES61 = 94 | CES86 = 84 |
| CES12 = 65 | CES37 = 95 | CES62 = 92 | CES87 = 92 |
| CES13 = 44 | CES38 = 93 | CES63 = 93 | CES88 = 95 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 86 |
| CES15 = 72 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 48 | CES41 = 98 | CES66 = 90 | CES91 = 82 |
| CES17 = 50 | CES42 = 97 | CES67 = 89 | CES92 = 81 |
| CES18 = 57 | CES43 = 97 | CES68 = 90 | CES93 = 89 |
| CES19 = 72 | CES44 = 99 | CES69 = 92 | CES94 = 80 |
| CES20 = 67 | CES45 = 99 | CES70 = 89 | CES95 = 86 |
| CES21 = 86 | CES46 = 96 | CES71 = 87 | CES96 = 92 |
| CES22 = 79 | CES47 = 95 | CES72 = 95 | CES97 = 96 |
| CES23 = 92 | CES48 = 93 | CES73 = 85 | CES98 = 94 |
| CES24 = 91 | CES49 = 97 | CES74 = 93 | CES99 = 91 |
| CES25 = 72 | CES50 = 98 | CES75 = 88 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)