

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P643929

Luminaire Tested: GWS-SA6F-830-U-SLR-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P643929
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-43)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6F-830-U-SLR-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (96) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30933.3 lumens
Efficiency: N/A
Efficacy: 83.0 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G3

Input Watts (W): 372.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



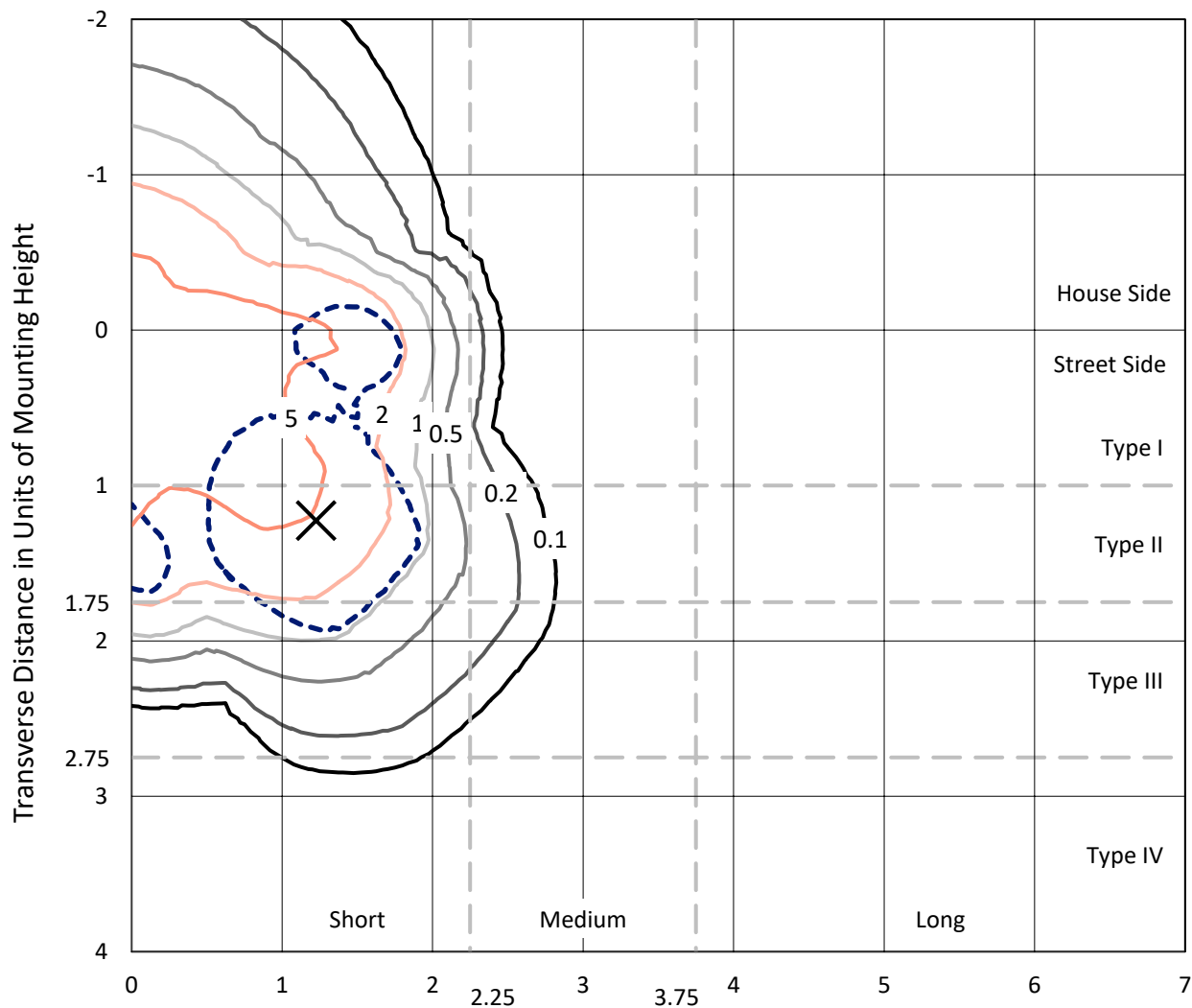
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

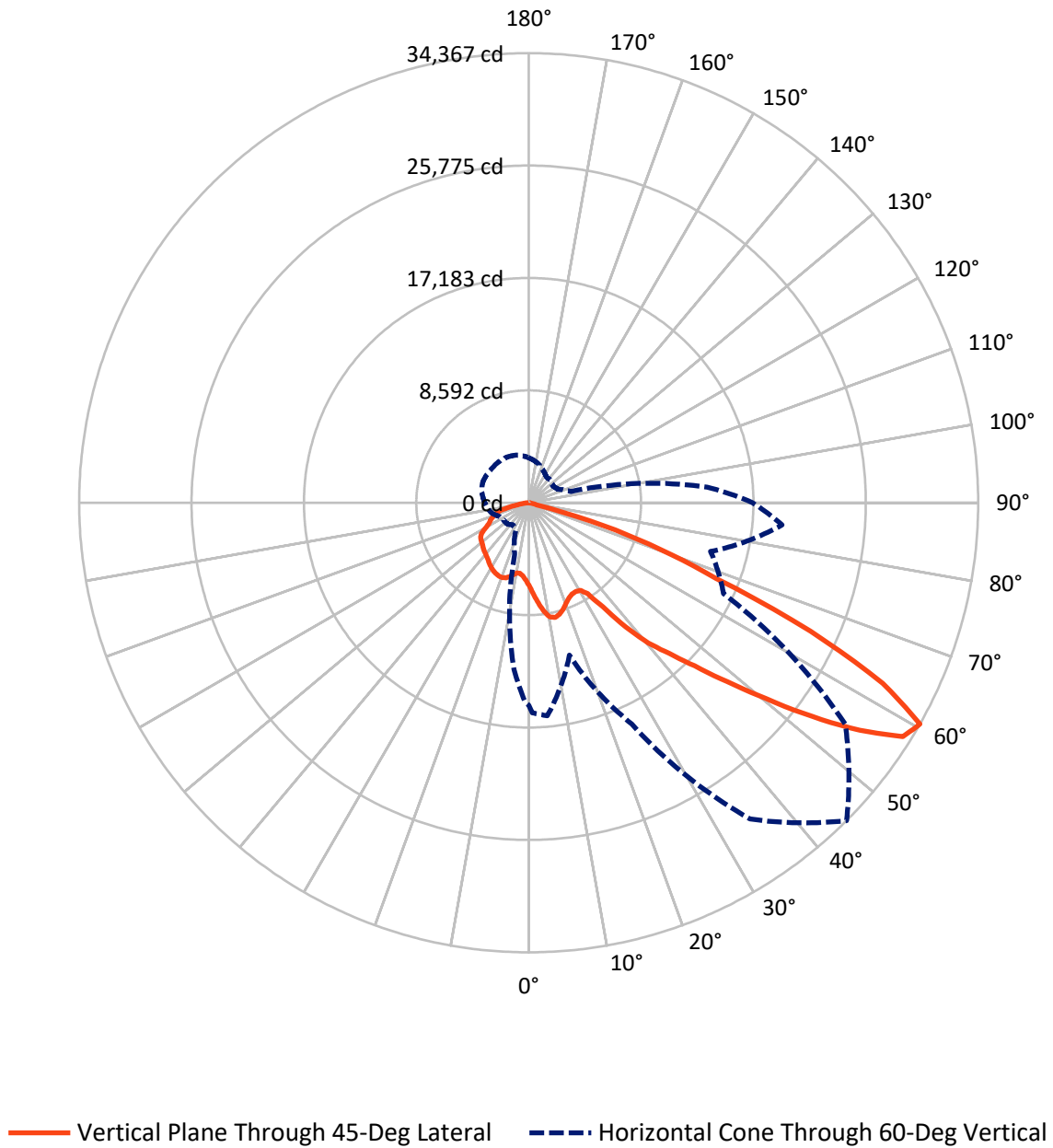


Based on 30 foot mounting height. Maximum calculated value = 9.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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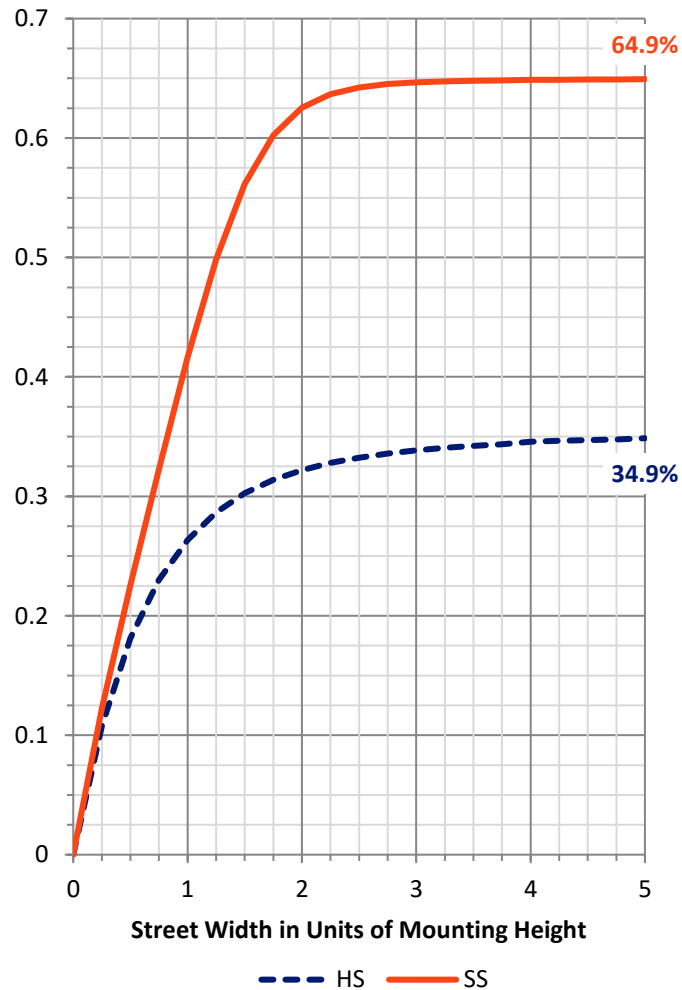
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10843.2	0.0	10843.2
	% Fixture	35.1	0.0	35.1
Street Side	Lumens	20090.1	0.0	20090.1
	% Fixture	64.9	0.0	64.9
Total	Lumens	30933.3	0.0	30933.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	620.0	2.0
10°-20°	1959.2	6.3
20°-30°	3182.5	10.3
30°-40°	4488.2	14.5
40°-50°	6202.6	20.1
50°-60°	7984.6	25.8
60°-70°	5059.1	16.4
70°-80°	1298.2	4.2
80°-90°	138.8	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°	30933.3	100.0
0°-180°	30933.3	100.0

Coefficient of Utilization



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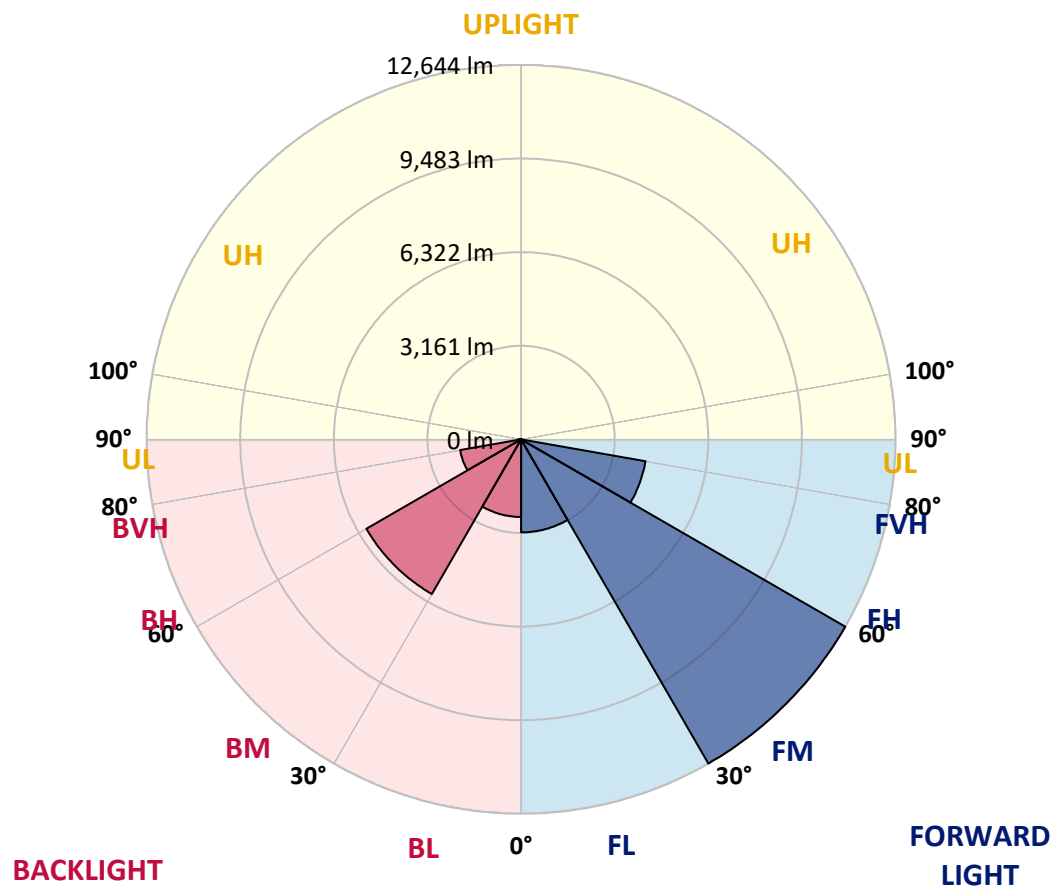
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3140.9	10.2			
FM	(30°-60°)	12643.7	40.9			
FH	(60°-80°)	4267.7	13.8			G2/5000
FVH	(80°-90°)	37.7	0.1			G1/100
BL	(0°-30°)	2620.8	8.5	B4/5000		
BM	(30°-60°)	6031.8	19.5	B4/8500		
BH	(60°-80°)	2089.6	6.8	B3/2500		G3/2500
BVH	(80°-90°)	101.1	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6
2.5°	6646.5	6691.9	6720.2	6774.1	6870.5	6924.3	6983.8	6918.6	6935.6	6927.1	6822.3
5°	7040.5	7094.4	7168.1	7326.8	7505.4	7604.6	7698.1	7683.9	7596.1	7448.7	7343.8
7.5°	7409.0	7471.3	7598.9	7856.8	8120.4	8273.5	8386.8	8313.1	8239.4	8007.0	7743.4
10°	7698.1	7734.9	7907.8	8253.6	8559.7	8732.6	8871.5	8854.5	8752.5	8491.7	8137.4
12.5°	7970.2	7995.7	8182.8	8528.6	8803.5	8880.0	8993.4	9030.2	8996.2	8800.6	8452.0
15°	8262.1	8310.3	8483.2	8746.8	8871.5	8792.1	8831.8	8933.9	9030.2	9030.2	8709.9
17.5°	8534.2	8576.7	8752.5	8865.8	8746.8	8537.1	8548.4	8678.8	8908.4	9149.3	8945.2
20°	8775.1	8814.8	8987.7	8880.0	8503.0	8196.9	8188.4	8347.2	8718.5	9225.8	9197.5
22.5°	9038.7	9095.4	9240.0	8891.3	8276.3	7888.0	7885.2	8049.5	8551.2	9302.3	9486.6
25°	9412.9	9500.7	9574.4	8990.5	8154.4	7686.7	7723.6	7879.5	8497.4	9427.0	9914.5
27.5°	9968.4	10039.3	10033.6	9197.5	8148.7	7604.6	7681.1	7862.5	8593.7	9648.1	10365.2
30°	10569.3	10606.1	10546.6	9486.6	8279.1	7655.6	7768.9	7984.4	8837.5	10013.7	11028.4
32.5°	11235.4	11280.7	11167.3	9920.2	8582.4	8032.5	8282.0	8386.8	9180.5	10540.9	11731.4
35°	12000.6	12088.5	11853.2	10492.8	9475.2	9407.2	9770.0	9633.9	9908.9	11164.5	12482.5
37.5°	12805.6	12808.4	12471.1	11340.2	11226.8	11343.1	12068.7	11643.5	11453.6	11858.9	13247.7
40°	13488.7	13471.7	12953.0	12482.5	12751.7	13213.7	14089.5	13437.6	12938.8	12791.4	13882.6
42.5°	14171.7	14109.4	13585.0	13208.1	13803.3	14752.8	15742.0	14942.7	13891.1	13638.9	14509.0
45°	15044.7	15024.9	14392.8	13497.2	14752.8	16476.1	17788.4	16493.1	14455.2	14132.1	15552.1
47.5°	16453.4	16357.0	15180.8	13474.5	15642.8	18771.9	20430.0	18445.9	14849.1	14143.4	17235.7
50°	17830.9	17711.8	16121.8	13471.7	16561.1	21152.7	23547.8	20818.3	15251.6	14211.4	18947.6
52.5°	19222.5	19222.5	17666.5	13791.9	17524.8	23811.4	27150.2	23774.5	15937.5	15101.4	21053.5
55°	20050.2	20271.3	19403.9	14333.3	18652.8	26940.5	30713.0	26966.0	16997.6	16708.5	22997.9
57.5°	18998.6	19412.4	19287.7	13956.3	19318.9	29239.1	33734.4	29386.5	17521.9	16898.4	22706.0
60°	15481.2	16056.6	16342.8	12051.6	18661.3	29505.6	34366.5	29545.2	16439.2	14390.0	19449.3
62.5°	10291.5	10764.9	11201.3	8610.7	16155.8	26543.7	30395.5	26552.2	13729.6	10739.3	13474.5
65°	5048.0	5399.4	5869.9	5090.5	12621.3	22178.8	23698.0	21456.0	9931.6	6011.7	6873.3
67.5°	1320.8	1420.0	1485.2	1975.5	9041.6	15934.7	15455.7	15693.8	6380.1	1964.2	1797.0
70°	685.9	691.6	688.7	816.3	6110.9	10127.1	10651.5	9855.0	4452.8	822.0	708.6
72.5°	490.3	493.2	484.7	549.9	2950.6	5801.9	6011.7	5946.5	2332.7	487.5	484.7
75°	320.3	323.1	317.4	323.1	445.0	660.4	609.4	640.6	388.3	308.9	308.9
77.5°	189.9	192.7	189.9	195.6	189.9	189.9	175.7	175.7	167.2	167.2	170.1
80°	127.5	127.5	124.7	130.4	119.0	119.0	113.4	110.5	102.0	99.2	99.2
82.5°	76.5	79.4	76.5	76.5	70.9	70.9	65.2	62.4	53.9	53.9	51.0
85°	39.7	39.7	36.8	36.8	31.2	28.3	22.7	22.7	17.0	14.2	14.2
87.5°	5.7	5.7	2.8	2.8	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6
2.5°	6793.9	6737.2	6652.2	6570.0	6493.5	6414.1	6323.4	6229.9	6150.5	6068.3	6025.8
5°	7204.9	7088.7	6867.6	6672.1	6496.3	6351.8	6195.9	6062.7	5938.0	5835.9	5784.9
7.5°	7576.2	7394.8	7060.4	6751.4	6513.3	6314.9	6099.5	5901.1	5733.9	5609.2	5561.0
10°	7919.2	7703.8	7264.4	6873.3	6595.5	6374.4	6110.9	5841.6	5620.5	5456.1	5416.4
12.5°	8196.9	7950.3	7426.0	6972.5	6643.7	6405.6	6173.2	5940.8	5722.5	5510.0	5476.0
15°	8443.5	8151.6	7547.9	7034.8	6626.7	6323.4	6127.9	6099.5	6099.5	5858.6	5790.6
17.5°	8656.1	8335.8	7647.1	7063.2	6519.0	6079.7	5960.6	6207.2	6485.0	6312.1	6159.0
20°	8899.9	8511.5	7729.3	7063.2	6320.6	5770.7	5759.4	6178.9	6589.9	6592.7	6431.1
22.5°	9146.4	8715.6	7825.6	7037.7	6048.5	5413.6	5623.3	6065.5	6431.1	6587.0	6476.5
25°	9546.1	8999.1	7978.7	7017.8	5731.1	5169.8	5501.5	5915.3	6224.2	6388.6	6317.8
27.5°	10053.4	9373.2	8211.1	7049.0	5416.4	5025.3	5371.1	5719.7	6000.3	6144.9	6093.8
30°	10620.3	9804.0	8460.5	7102.9	5189.7	4951.6	5215.2	5495.8	5745.2	5889.8	5867.1
32.5°	11343.1	10271.7	8675.9	7029.2	5062.1	4914.8	5050.8	5252.0	5493.0	5583.7	5603.5
35°	12207.5	10787.5	8840.3	6740.1	4945.9	4875.1	4872.2	4997.0	5167.0	5311.6	5325.7
37.5°	13004.0	11391.2	9021.7	6244.1	4736.2	4775.9	4662.5	4736.2	4903.4	5048.0	5104.7
40°	13791.9	12003.5	9274.0	5612.0	4461.3	4554.8	4421.6	4472.6	4605.8	4795.7	4886.4
42.5°	14557.2	12556.2	9540.4	4965.8	4186.3	4245.9	4146.6	4197.7	4336.6	4574.6	4676.7
45°	15390.5	13304.4	9747.3	4356.4	3948.2	3922.7	3843.4	3917.1	4126.8	4387.6	4509.4
47.5°	16966.4	14483.5	9883.4	3951.1	3820.7	3636.5	3545.8	3704.5	3942.6	4206.2	4353.6
50°	18890.9	16189.8	9843.7	3693.2	3710.2	3341.7	3310.5	3520.3	3775.4	4050.3	4211.8
52.5°	20415.8	17864.9	9393.0	3446.6	3494.8	3154.6	3063.9	3370.0	3613.8	3894.4	4061.6
55°	21580.7	18428.9	8009.9	3154.6	3143.3	3018.6	2828.7	3214.1	3452.2	3713.0	3894.4
57.5°	20631.2	17173.3	5938.0	2752.2	2684.1	2749.3	2565.1	2950.6	3253.8	3511.8	3673.3
60°	17122.3	13692.7	3307.7	2437.5	2244.8	2403.5	2375.2	2672.8	3038.4	3310.5	3449.4
62.5°	11623.7	9118.1	1961.4	1927.4	1819.7	2046.4	2196.6	2392.2	2752.2	2973.2	3103.6
65°	5793.4	4430.1	1303.8	1442.7	1456.9	1683.6	1967.0	2182.4	2482.9	2709.6	2840.0
67.5°	1680.8	1377.5	992.0	1102.6	1255.6	1437.0	1663.8	1918.9	2210.8	2480.1	2633.1
70°	725.6	734.1	787.9	918.3	1068.5	1255.6	1482.4	1731.8	1978.4	2185.3	2301.5
72.5°	513.0	532.9	592.4	725.6	867.3	1045.9	1272.6	1513.5	1692.1	1901.8	2023.7
75°	328.8	343.0	391.1	493.2	598.0	770.9	986.4	1207.4	1391.7	1541.9	1658.1
77.5°	181.4	184.2	223.9	283.4	354.3	464.8	623.6	796.5	932.5	1017.5	1122.4
80°	104.9	104.9	124.7	161.6	204.1	272.1	360.0	445.0	527.2	581.0	632.1
82.5°	56.7	56.7	65.2	87.9	110.5	150.2	201.2	243.8	294.8	323.1	357.1
85°	17.0	17.0	22.7	31.2	39.7	56.7	79.4	102.0	124.7	144.6	164.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
90°	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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6
2.5°	6017.3	5977.6	5955.0	5926.6	5935.1	5909.6	5895.4	5903.9	5852.9	5903.9	5955.0
5°	5765.1	5708.4	5663.0	5626.2	5609.2	5575.2	5555.3	5555.3	5524.1	5575.2	5637.5
7.5°	5544.0	5498.6	5476.0	5453.3	5427.8	5396.6	5362.6	5351.2	5331.4	5385.3	5439.1
10°	5396.6	5402.3	5416.4	5447.6	5441.9	5422.1	5371.1	5342.7	5342.7	5405.1	5487.3
12.5°	5464.6	5524.1	5558.2	5614.8	5626.2	5609.2	5558.2	5535.5	5592.2	5685.7	5821.7
15°	5728.2	5767.9	5796.2	5841.6	5838.8	5824.6	5784.9	5801.9	5989.0	6170.4	6292.3
17.5°	6014.5	5969.1	5963.5	5991.8	6000.3	5983.3	5960.6	6037.2	6346.1	6516.2	6578.5
20°	6221.4	6065.5	6031.5	6042.8	6065.5	6057.0	6057.0	6181.7	6502.0	6581.4	6502.0
22.5°	6283.7	6062.7	6011.7	6014.5	6045.7	6048.5	6062.7	6193.0	6380.1	6382.9	6261.1
25°	6184.5	5972.0	5935.1	5940.8	5977.6	5974.8	5980.5	6054.2	6136.4	6102.3	6011.7
27.5°	5997.5	5813.2	5801.9	5833.1	5881.3	5855.8	5838.8	5858.6	5898.3	5855.8	5776.4
30°	5784.9	5629.0	5634.7	5694.2	5745.2	5702.7	5660.2	5671.5	5674.4	5629.0	5538.3
32.5°	5561.0	5444.8	5464.6	5527.0	5586.5	5541.1	5495.8	5490.1	5436.3	5382.4	5294.6
35°	5337.1	5291.7	5317.2	5368.3	5419.3	5382.4	5354.1	5337.1	5220.9	5141.5	5067.8
37.5°	5133.0	5167.0	5212.4	5243.5	5260.5	5257.7	5240.7	5201.0	5048.0	4954.4	4858.1
40°	4951.6	5056.5	5104.7	5118.8	5144.3	5138.7	5135.8	5079.2	4877.9	4778.7	4668.2
42.5°	4787.2	4934.6	5016.8	5031.0	5045.1	5048.0	5039.5	4957.3	4727.7	4611.5	4506.6
45°	4628.5	4821.2	4926.1	4911.9	4931.8	4931.8	4940.3	4832.6	4580.3	4461.3	4350.7
47.5°	4489.6	4716.4	4812.7	4795.7	4807.1	4815.6	4824.1	4699.3	4418.7	4305.4	4192.0
50°	4362.1	4603.0	4685.2	4690.8	4690.8	4710.7	4707.9	4586.0	4282.7	4160.8	4047.4
52.5°	4226.0	4486.8	4574.6	4611.5	4622.8	4631.3	4591.6	4449.9	4143.8	3996.4	3891.6
55°	4067.3	4367.7	4447.1	4495.3	4517.9	4512.3	4458.4	4313.9	4002.1	3854.7	3735.7
57.5°	3826.4	4112.6	4226.0	4248.7	4285.5	4262.9	4200.5	4078.6	3775.4	3628.0	3506.1
60°	3562.8	3769.7	3860.4	3880.2	3851.9	3860.4	3851.9	3735.7	3472.1	3355.9	3231.2
62.5°	3217.0	3401.2	3497.6	3523.1	3474.9	3506.1	3494.8	3350.2	3086.6	2964.7	2854.2
65°	2956.2	3157.5	3270.8	3285.0	3270.8	3285.0	3245.3	3069.6	2820.2	2695.5	2582.1
67.5°	2752.2	2959.1	3078.1	3117.8	3103.6	3100.8	3038.4	2834.3	2576.4	2440.4	2295.8
70°	2400.7	2582.1	2735.1	2831.5	2831.5	2777.7	2658.6	2468.7	2261.8	2145.6	2032.2
72.5°	2125.8	2355.3	2505.6	2604.8	2624.6	2593.4	2426.2	2225.0	1986.9	1870.7	1751.6
75°	1751.6	1975.5	2137.1	2267.5	2293.0	2259.0	2066.2	1867.8	1646.8	1533.4	1414.3
77.5°	1170.6	1303.8	1434.2	1553.2	1527.7	1550.4	1420.0	1269.8	1133.7	1048.7	994.9
80°	660.4	748.3	787.9	853.1	853.1	853.1	768.1	697.2	620.7	572.5	518.7
82.5°	374.1	430.8	447.8	501.7	515.9	518.7	462.0	416.6	368.5	343.0	306.1
85°	172.9	204.1	206.9	238.1	249.4	272.1	246.6	215.4	187.1	175.7	153.1
87.5°	5.7	17.0	22.7	42.5	56.7	65.2	70.9	70.9	59.5	53.9	45.3
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: P643929

CATALOG NUMBER: GWS-SA6F-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6	6354.6
2.5°	6017.3	6085.3	6164.7	6221.4	6323.4	6408.5	6496.3	6592.7	6663.6	6646.5
5°	5714.0	5827.4	5972.0	6105.2	6295.1	6487.8	6700.4	6918.6	7046.2	7040.5
7.5°	5544.0	5705.5	5881.3	6059.8	6283.7	6561.5	6887.5	7227.6	7400.5	7409.0
10°	5634.7	5807.6	5926.6	6076.8	6312.1	6660.7	7051.9	7460.0	7658.4	7698.1
12.5°	5921.0	5906.8	5898.3	6006.0	6289.4	6731.6	7210.6	7698.1	7922.0	7970.2
15°	6193.0	5901.1	5725.4	5799.1	6187.4	6776.9	7366.5	7958.8	8211.1	8262.1
17.5°	6244.1	5801.9	5476.0	5527.0	6025.8	6791.1	7516.7	8213.9	8486.0	8534.2
20°	6102.3	5674.4	5294.6	5223.7	5821.7	6754.2	7610.2	8426.5	8724.1	8775.1
22.5°	5923.8	5561.0	5158.5	4974.3	5572.3	6717.4	7715.1	8650.4	8993.4	9038.7
25°	5736.7	5416.4	5031.0	4750.4	5288.9	6694.7	7890.8	8945.2	9359.0	9412.9
27.5°	5538.3	5240.7	4920.4	4642.7	5028.1	6723.1	8140.2	9421.4	9891.9	9968.4
30°	5325.7	5065.0	4849.6	4605.8	4849.6	6748.6	8415.2	9908.9	10461.6	10569.3
32.5°	5104.7	4903.4	4775.9	4622.8	4739.0	6689.1	8656.1	10455.9	11141.8	11235.4
35°	4883.6	4739.0	4682.3	4654.0	4591.6	6470.8	8851.7	11008.6	11918.4	12000.6
37.5°	4676.7	4569.0	4552.0	4583.1	4364.9	6113.7	9078.4	11711.5	12680.9	12805.6
40°	4483.9	4384.7	4381.9	4376.2	4115.5	5626.2	9384.5	12425.8	13432.0	13488.7
42.5°	4305.4	4180.7	4203.3	4135.3	3911.4	5099.0	9673.6	13035.2	14132.1	14171.7
45°	4146.6	3982.3	4007.8	3922.7	3815.0	4546.3	9928.7	13755.1	15019.2	15044.7
47.5°	3993.6	3817.9	3747.0	3741.3	3798.0	4036.1	10178.1	15141.1	16408.0	16453.4
50°	3851.9	3662.0	3460.7	3585.4	3693.2	3653.5	10489.9	16626.3	17842.2	17830.9
52.5°	3715.8	3466.4	3180.1	3421.1	3421.1	3370.0	10402.1	17527.6	19027.0	19222.5
55°	3559.9	3151.8	2888.2	3146.1	3021.4	3114.9	8846.0	17822.4	19772.4	20050.2
57.5°	3251.0	2763.5	2533.9	2672.8	2485.7	2888.2	6354.6	16359.9	18505.5	18998.6
60°	2953.4	2477.2	2327.0	2301.5	2057.7	2355.3	4118.3	12808.4	15231.8	15481.2
62.5°	2604.8	2230.6	2103.1	1907.5	1655.3	1714.8	2494.2	8429.3	10234.8	10291.5
65°	2341.2	2020.9	1777.1	1544.7	1354.8	1244.3	1473.9	4064.5	5116.0	5048.0
67.5°	2009.6	1731.8	1499.4	1332.1	1176.3	1037.4	980.7	1207.4	1366.2	1320.8
70°	1788.5	1522.0	1298.1	1139.4	994.9	856.0	756.8	711.4	697.2	685.9
72.5°	1541.9	1309.5	1077.1	924.0	787.9	660.4	569.7	515.9	501.7	490.3
75°	1230.1	1011.9	799.3	654.7	535.7	445.0	385.5	340.1	331.6	320.3
77.5°	813.5	649.1	476.2	388.3	317.4	269.3	229.6	201.2	195.6	189.9
80°	447.8	374.1	291.9	235.3	189.9	164.4	150.2	133.2	130.4	127.5
82.5°	266.4	223.9	167.2	133.2	110.5	99.2	90.7	82.2	79.4	76.5
85°	133.2	104.9	73.7	62.4	56.7	51.0	51.0	42.5	39.7	39.7
87.5°	34.0	28.3	17.0	14.2	14.2	14.2	11.3	8.5	8.5	5.7
90°	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: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

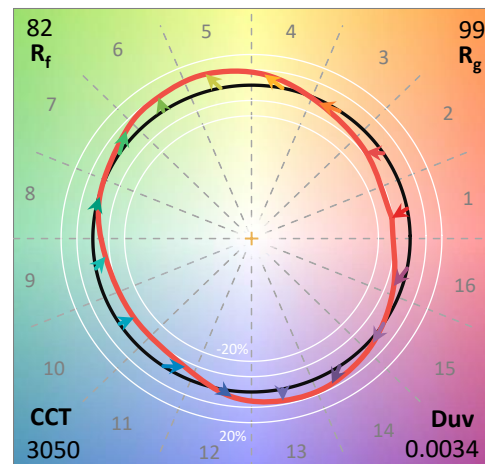
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u' : 0.2476
 CIE v' : 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 81.0
 R1: 79.6
 R2: 85.6
 R3: 92.0
 R4: 82.6
 R5: 78.9
 R6: 81.7
 R7: 85.2
 R8: 62.0
 R9: 7.1
 R10: 67.0
 R11: 82.7
 R12: 63.2
 R13: 80.3
 R14: 95.0
 R15: 71.7



Test Conditions

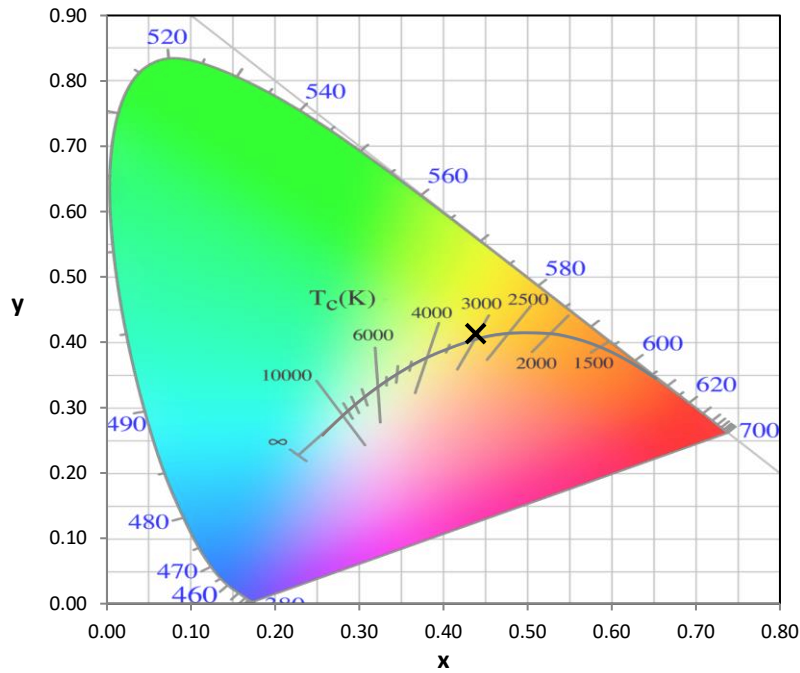
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

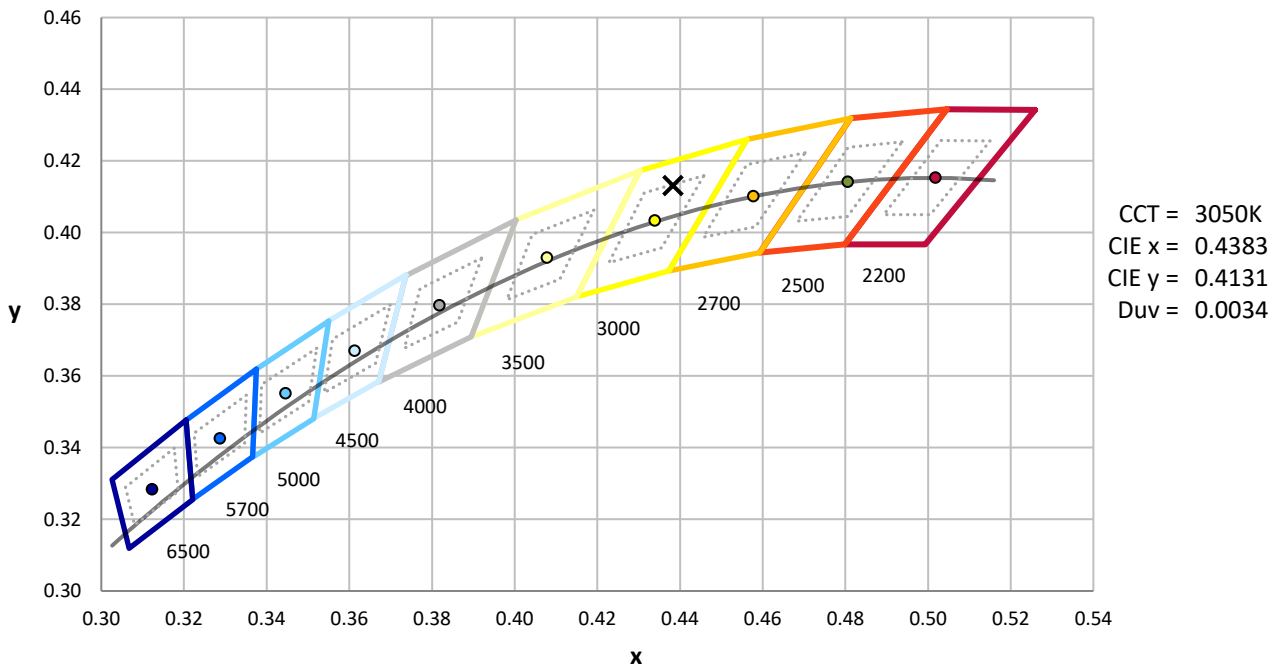
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



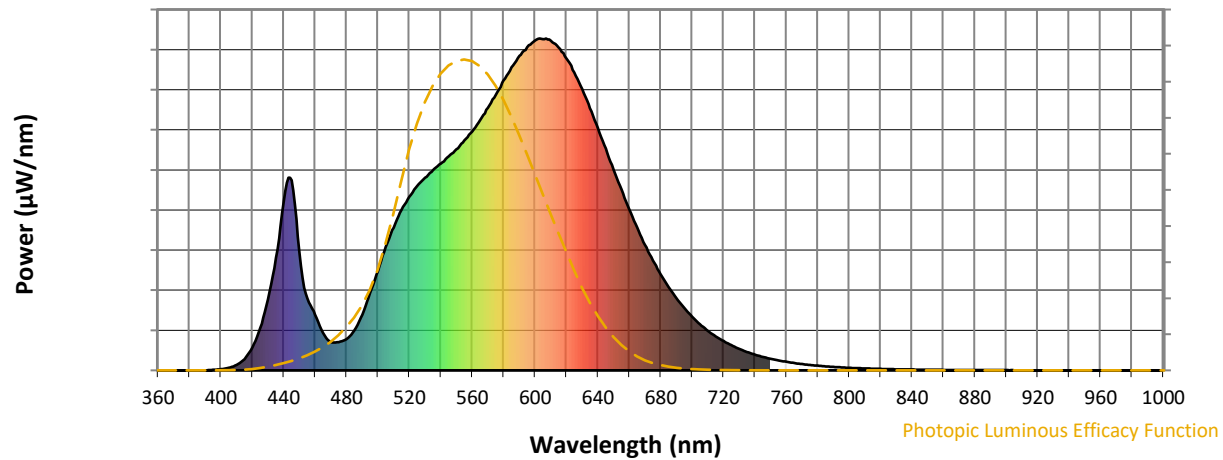
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

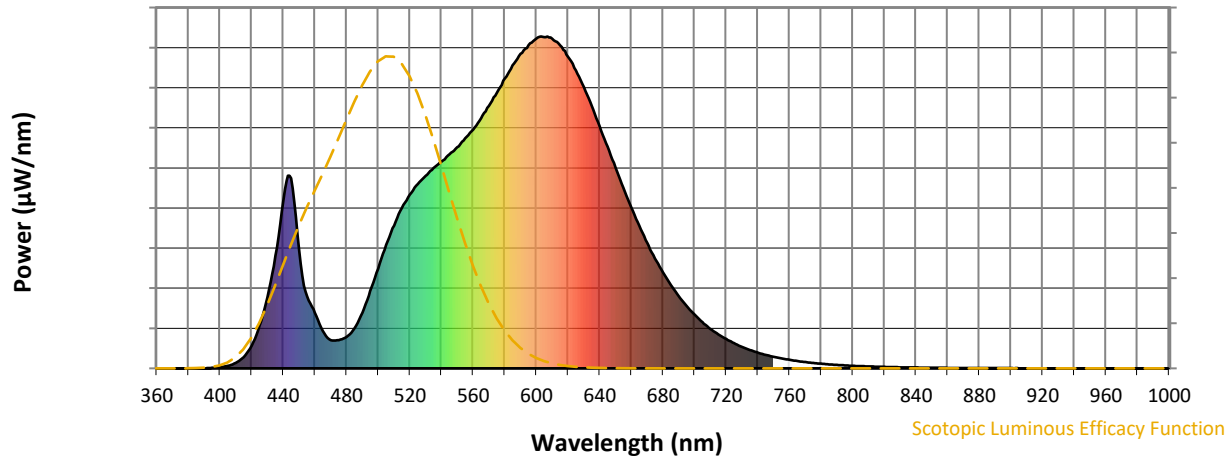


Photopic Lumens: NR

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



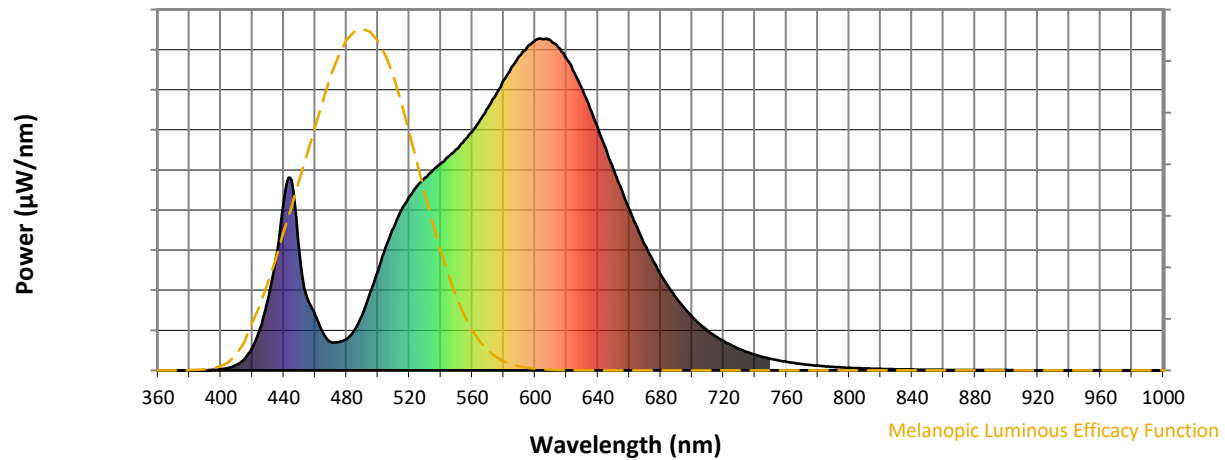
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

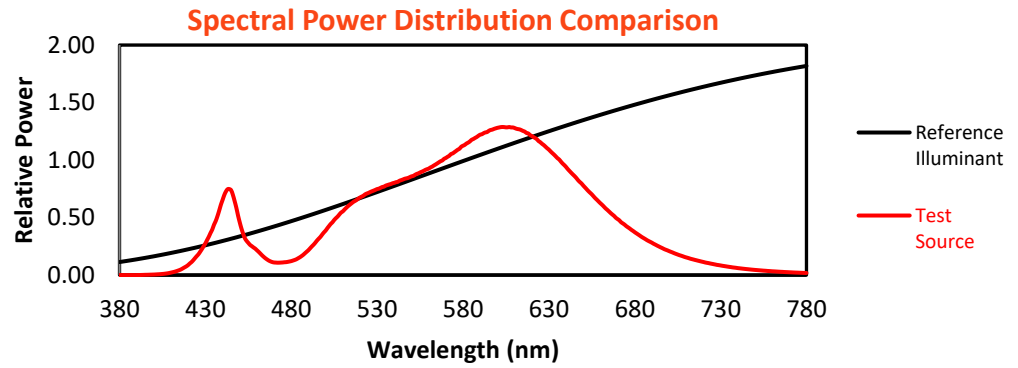
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

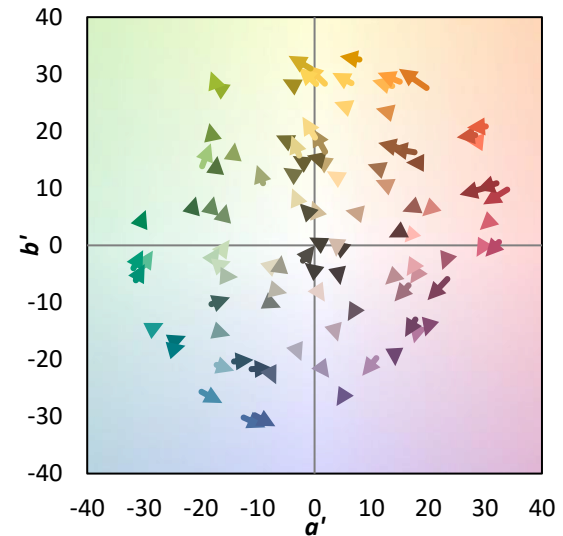
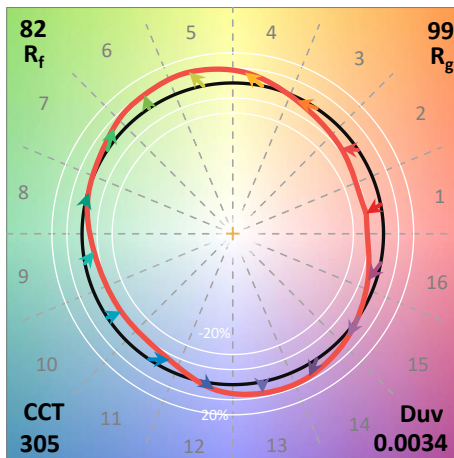
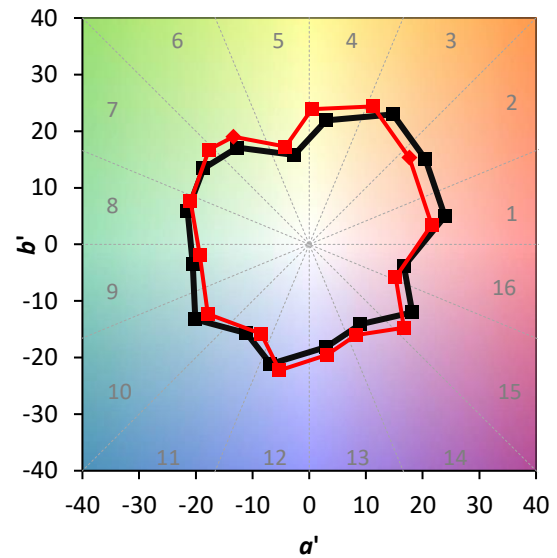
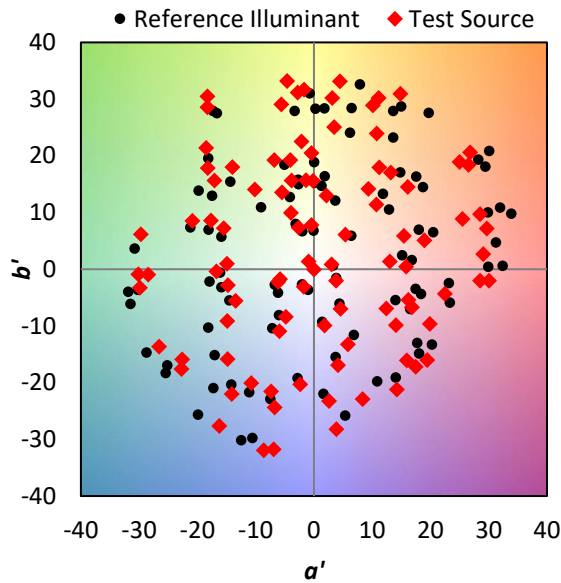
TM-30-18

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$

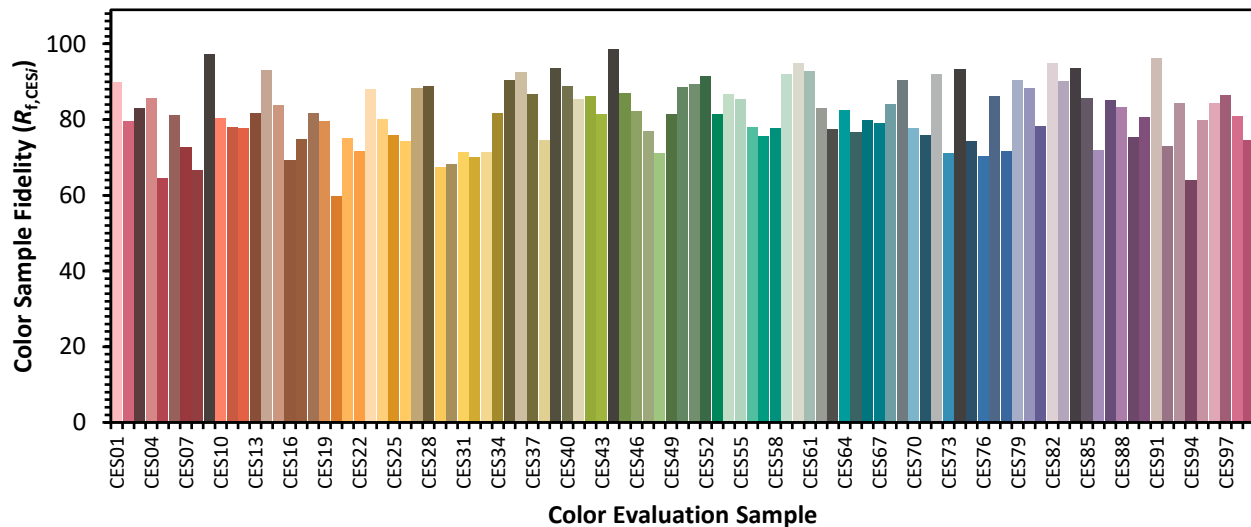


Color Vector Graphics

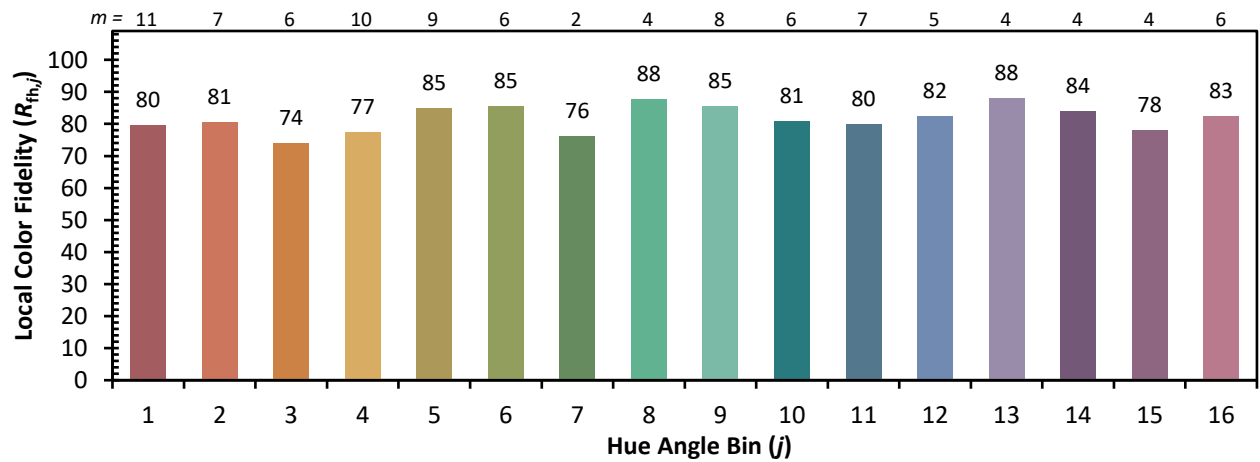
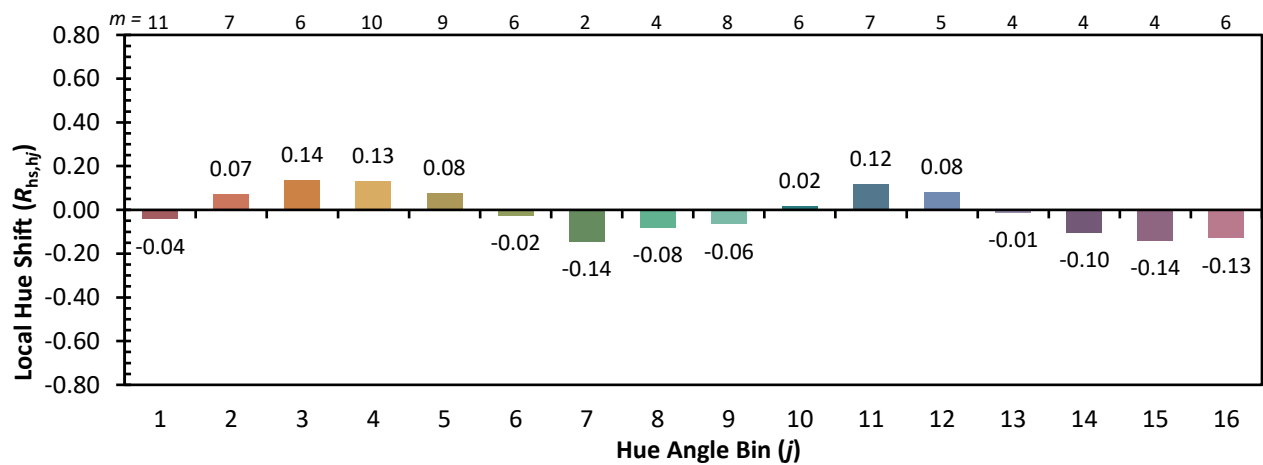
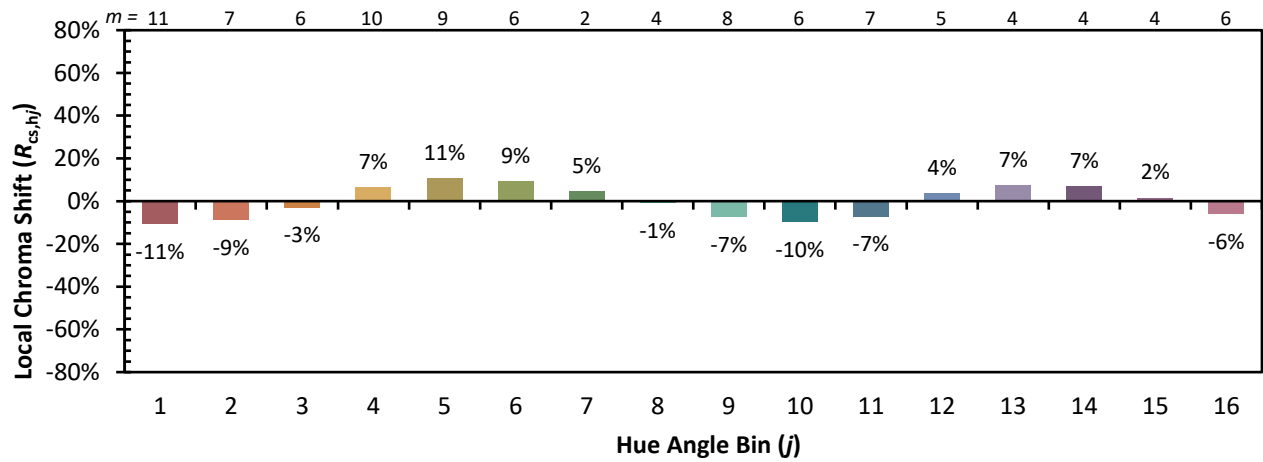


Individual Sample Fidelity Index ($R_{f,i}$)

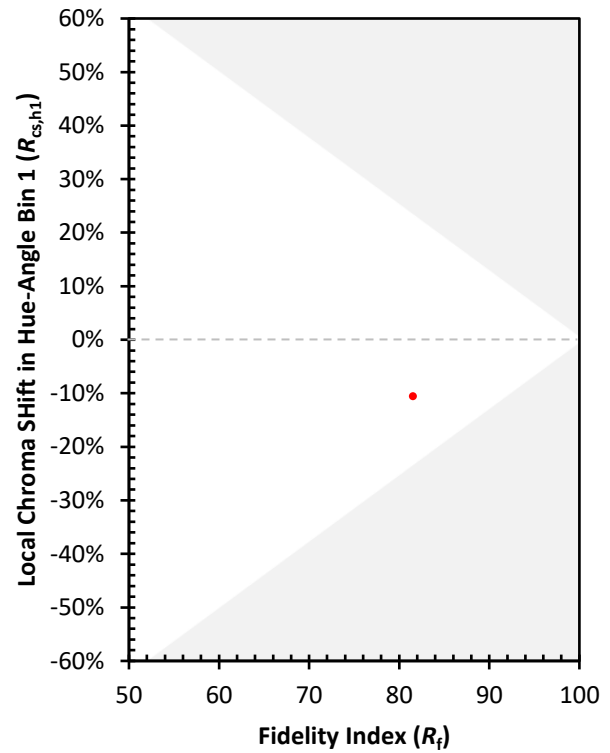
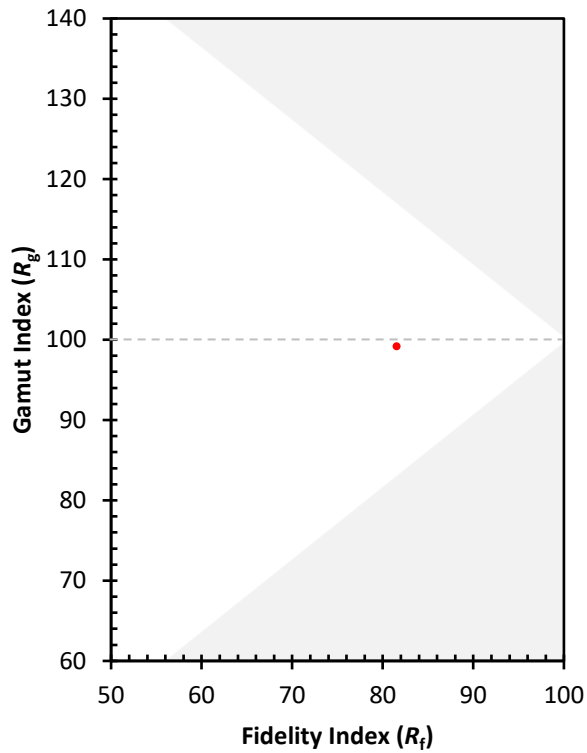
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)