

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



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

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P643430

Luminaire Tested: GWS-SA6E-830-U-SLL-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P643430
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-39)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SAGE-830-U-SLL-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT 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: 27679.5 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G3

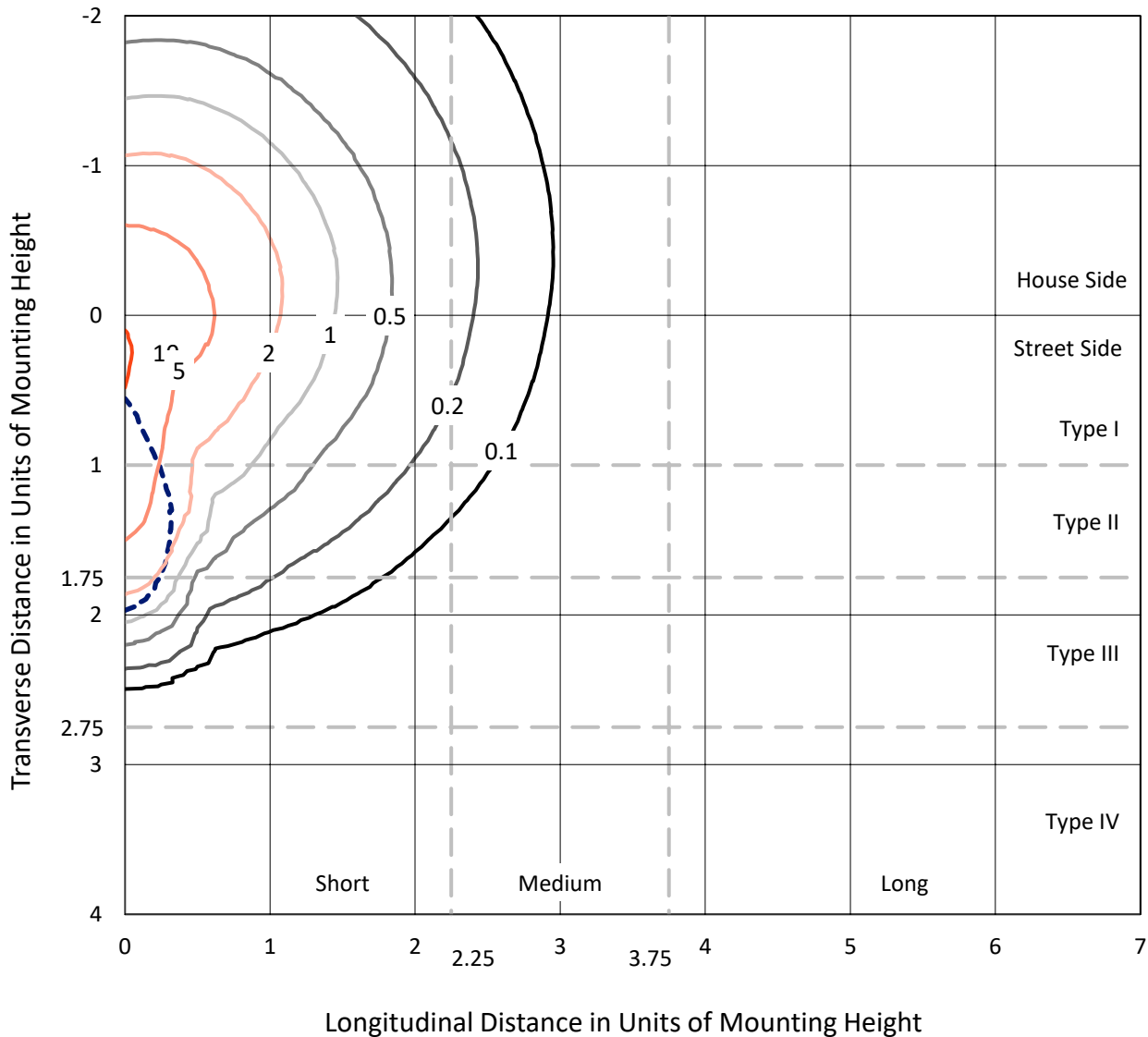
Input Watts (W): 323.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

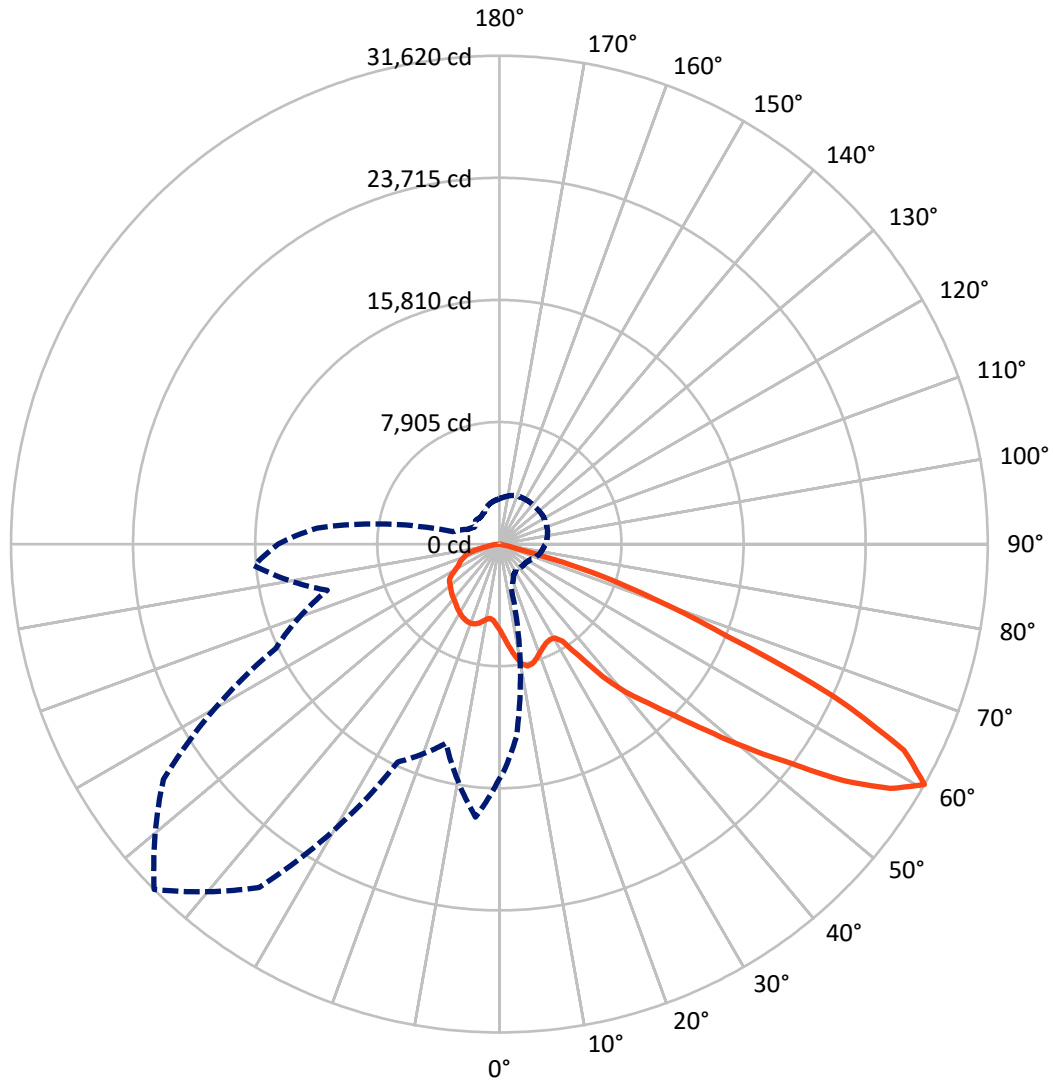
× Max cd
 - - - 1/2 Max cd



Based on 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 315-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9468.9	0.0	9468.9
	% Fixture	34.2	0.0	34.2
Street Side	Lumens	18210.6	0.0	18210.6
	% Fixture	65.8	0.0	65.8
Total	Lumens	27679.5	0.0	27679.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	545.4	2.0
10°-20°	1749.4	6.3
20°-30°	2849.1	10.3
30°-40°	4002.4	14.5
40°-50°	5476.9	19.8
50°-60°	7026.6	25.4
60°-70°	4731.4	17.1
70°-80°	1182.9	4.3
80°-90°	115.3	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°	27679.5	100.0
0°-180°	27679.5	100.0

Coefficient of Utilization



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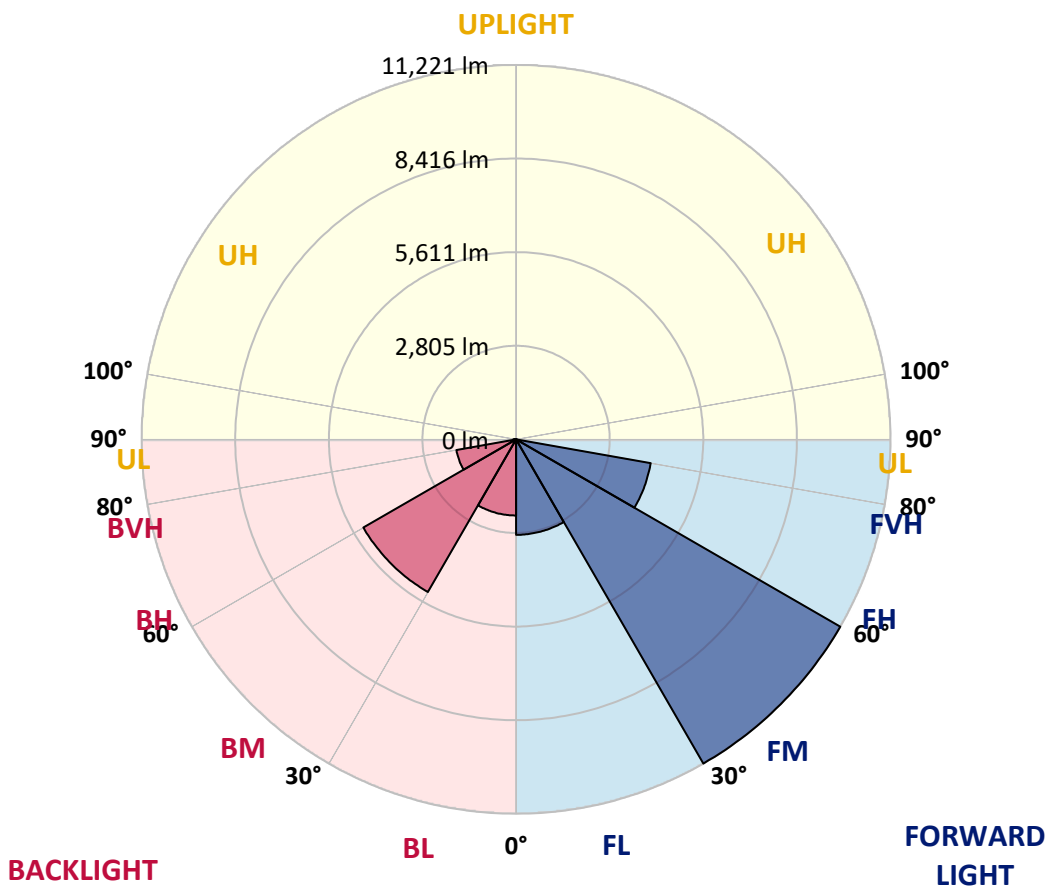
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2861.4	10.3			
FM (30°-60°)	11221.5	40.5			
FH (60°-80°)	4097.7	14.8			G2/5000
FVH (80°-90°)	30.0	0.1			G1/100
BL (0°-30°)	2282.6	8.2	B3/2500		
BM (30°-60°)	5284.4	19.1	B4/8500		
BH (60°-80°)	1816.6	6.6	B3/2500		G3/2500
BVH (80°-90°)	85.3	0.3			G1/100
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°	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7
2.5°	5906.4	5893.7	5880.9	5781.5	5756.0	5684.6	5633.6	5569.9	5478.1	5427.2	5383.8
5°	6276.0	6255.6	6186.8	5982.9	5850.3	5705.0	5585.2	5452.7	5312.4	5220.7	5149.3
7.5°	6625.3	6620.2	6502.9	6166.4	5952.3	5743.3	5580.1	5386.4	5185.0	5047.3	4955.6
10°	6949.0	6910.8	6770.6	6332.1	6051.7	5812.1	5636.2	5422.1	5187.5	5001.5	4879.1
12.5°	7234.5	7186.1	6992.3	6485.1	6138.4	5842.7	5651.5	5475.6	5320.1	5164.6	5024.4
15°	7469.0	7410.4	7214.1	6627.8	6214.9	5824.8	5557.2	5419.5	5473.0	5541.9	5386.4
17.5°	7688.3	7627.1	7387.5	6732.3	6237.8	5715.2	5325.2	5266.6	5536.8	5850.3	5778.9
20°	7871.8	7803.0	7525.1	6783.3	6197.0	5506.2	5024.4	5126.4	5483.2	5858.0	5972.7
22.5°	8070.6	8014.6	7680.6	6857.2	6146.0	5218.1	4772.0	5021.8	5391.5	5720.3	5893.7
25°	8389.3	8320.5	7922.8	6987.2	6120.5	4947.9	4591.0	4919.9	5264.0	5562.3	5697.4
27.5°	8850.7	8723.2	8254.2	7214.1	6148.6	4693.0	4476.3	4795.0	5116.2	5371.1	5480.7
30°	9352.9	9199.9	8621.3	7448.6	6189.4	4537.5	4415.1	4652.2	4889.3	5144.2	5264.0
32.5°	9946.8	9811.7	9013.8	7624.5	6102.7	4466.1	4369.3	4496.7	4685.4	4889.3	4988.7
35°	10655.5	10413.3	9442.1	7767.3	5822.3	4361.6	4328.5	4325.9	4425.3	4624.2	4736.3
37.5°	11417.7	11157.7	9969.8	7920.2	5386.4	4195.9	4231.6	4124.5	4216.3	4374.4	4501.8
40°	12042.2	11769.5	10502.5	8129.3	4840.9	3935.9	4017.5	3902.8	3958.8	4122.0	4264.7
42.5°	12654.0	12363.4	10999.6	8366.3	4313.2	3681.0	3721.8	3678.4	3696.3	3867.1	4065.9
45°	13457.0	13130.7	11611.4	8534.6	3839.0	3479.6	3441.4	3367.4	3461.8	3683.5	3895.1
47.5°	14797.9	14407.9	12613.2	8644.2	3494.9	3364.9	3189.0	3145.7	3262.9	3510.2	3729.4
50°	16365.6	16029.1	14214.1	8639.1	3237.4	3268.0	2944.3	2906.0	3099.8	3349.6	3581.6
52.5°	17650.4	17308.8	15583.0	8384.2	3025.9	3061.5	2801.5	2694.5	2959.6	3191.5	3423.5
55°	18687.9	18303.0	16212.7	7318.6	2758.2	2732.7	2646.0	2449.7	2783.7	3033.5	3250.2
57.5°	18129.6	17670.8	15450.5	5564.8	2482.9	2322.3	2378.4	2233.1	2544.1	2857.6	3066.6
60°	15200.6	14787.7	12552.1	2962.1	2184.6	1939.9	2057.2	2080.1	2281.5	2646.0	2860.2
62.5°	10441.4	10140.6	8506.5	1797.2	1723.2	1557.5	1741.1	1906.8	2057.2	2365.6	2551.7
65°	5108.5	5019.3	4254.5	1152.2	1205.8	1259.3	1442.8	1644.2	1866.0	2136.2	2332.5
67.5°	1407.1	1417.3	1289.9	899.9	950.8	1098.7	1244.0	1404.6	1626.4	1876.2	2075.0
70°	619.4	629.6	650.0	693.4	790.2	925.3	1075.7	1241.4	1445.4	1654.4	1845.6
72.5°	430.8	441.0	471.6	527.7	614.3	741.8	884.6	1042.6	1254.2	1430.1	1588.1
75°	265.1	272.8	300.8	349.2	407.9	504.7	644.9	790.2	976.3	1136.9	1277.1
77.5°	140.2	135.1	152.9	186.1	237.1	288.1	382.4	474.1	606.7	736.7	854.0
80°	76.5	73.9	84.1	102.0	117.3	158.0	221.8	283.0	359.4	433.4	497.1
82.5°	33.1	30.6	33.1	43.3	53.5	76.5	112.2	155.5	198.8	249.8	290.6
85°	0.0	0.0	0.0	2.5	12.7	20.4	38.2	56.1	81.6	112.2	137.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	22.9
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°	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7
2.5°	5358.3	5294.6	5289.5	5238.5	5243.6	5246.2	5195.2	5174.8	5192.6	5213.0	5202.8
5°	5123.8	5057.5	5029.5	4981.1	4976.0	4953.0	4932.6	4907.1	4925.0	4942.8	4953.0
7.5°	4919.9	4876.5	4858.7	4846.0	4851.1	4840.9	4800.1	4777.1	4774.6	4782.2	4792.4
10°	4853.6	4817.9	4840.9	4876.5	4902.0	4919.9	4876.5	4838.3	4802.6	4787.3	4787.3
12.5°	4996.4	4950.5	4996.4	5034.6	5085.6	5098.3	5049.9	5009.1	4996.4	5011.6	5042.2
15°	5312.4	5205.4	5202.8	5225.8	5266.6	5287.0	5241.1	5220.7	5220.7	5317.5	5394.0
17.5°	5628.5	5452.7	5378.7	5366.0	5391.5	5399.1	5360.9	5343.0	5388.9	5577.6	5720.3
20°	5850.3	5636.2	5475.6	5445.0	5452.7	5455.2	5424.6	5411.9	5478.1	5707.6	5827.4
22.5°	5827.4	5669.3	5473.0	5434.8	5447.6	5442.5	5414.4	5409.3	5462.9	5661.7	5717.8
25°	5669.3	5547.0	5381.3	5355.8	5376.2	5373.6	5345.6	5332.8	5355.8	5488.3	5493.4
27.5°	5488.3	5381.3	5238.5	5230.9	5264.0	5281.9	5233.4	5195.2	5187.5	5276.8	5256.4
30°	5271.7	5192.6	5077.9	5083.0	5144.2	5154.4	5095.8	5039.7	5024.4	5072.8	5044.8
32.5°	5014.2	4988.7	4927.5	4940.3	4998.9	5019.3	4958.1	4899.5	4881.6	4896.9	4838.3
35°	4795.0	4784.8	4789.9	4812.8	4863.8	4879.1	4828.1	4782.2	4756.7	4703.2	4626.7
37.5°	4568.1	4596.1	4670.1	4713.4	4741.4	4736.3	4708.3	4675.2	4634.4	4535.0	4440.6
40°	4356.5	4427.9	4560.4	4608.9	4619.1	4621.6	4601.2	4573.2	4522.2	4389.7	4282.6
42.5°	4193.4	4272.4	4448.3	4522.2	4527.3	4532.4	4512.0	4489.1	4417.7	4241.8	4137.3
45°	4022.6	4127.1	4333.6	4422.8	4417.7	4415.1	4397.3	4387.1	4303.0	4099.0	3984.3
47.5°	3877.3	3999.6	4221.4	4297.9	4295.3	4292.8	4280.0	4280.0	4195.9	3974.1	3844.1
50°	3734.5	3874.7	4106.7	4170.4	4175.5	4170.4	4165.3	4173.0	4073.6	3836.5	3709.0
52.5°	3579.0	3737.1	3979.2	4037.9	4068.5	4081.2	4081.2	4063.4	3946.1	3698.8	3558.6
55°	3408.2	3558.6	3839.0	3918.1	3943.6	3966.5	3966.5	3930.8	3821.2	3571.4	3421.0
57.5°	3196.6	3329.2	3551.0	3630.0	3691.2	3706.5	3706.5	3647.8	3558.6	3319.0	3196.6
60°	2967.2	3081.9	3232.3	3316.5	3362.3	3331.8	3354.7	3339.4	3268.0	3046.2	2944.3
62.5°	2661.3	2778.6	2944.3	3031.0	3051.3	3020.8	3051.3	3048.8	2951.9	2753.1	2630.7
65°	2442.1	2556.8	2720.0	2832.1	2865.3	2857.6	2878.0	2847.4	2727.6	2539.0	2421.7
67.5°	2182.1	2304.4	2493.1	2618.0	2686.8	2694.5	2722.5	2658.8	2536.4	2329.9	2182.1
70°	1934.8	2039.3	2184.6	2301.9	2398.8	2447.2	2452.3	2360.5	2207.6	2036.8	1929.7
72.5°	1674.8	1781.9	1957.8	2085.2	2207.6	2263.7	2263.7	2151.5	1985.8	1797.2	1682.4
75°	1358.7	1458.1	1618.7	1756.4	1896.6	1968.0	1965.4	1868.5	1685.0	1506.6	1386.7
77.5°	920.2	994.2	1096.1	1200.7	1221.0	1277.1	1305.2	1182.8	1080.8	984.0	876.9
80°	535.3	581.2	637.3	695.9	708.7	726.5	680.6	634.7	581.2	517.5	469.0
82.5°	313.5	344.1	372.2	418.1	425.7	430.8	390.0	369.6	326.3	288.1	257.5
85°	152.9	163.1	188.6	211.6	201.4	196.3	178.4	158.0	140.2	124.9	109.6
87.5°	30.6	30.6	45.9	43.3	35.7	30.6	17.8	22.9	5.1	5.1	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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7
2.5°	5236.0	5279.3	5332.8	5404.2	5485.8	5572.5	5656.6	5720.3	5784.0	5878.4	5863.1
5°	4968.3	5042.2	5126.4	5236.0	5368.5	5518.9	5687.2	5855.4	6036.4	6189.4	6255.6
7.5°	4812.8	4894.4	4993.8	5136.6	5307.4	5490.9	5728.0	6000.7	6293.9	6495.3	6620.2
10°	4812.8	4917.3	5047.3	5185.0	5335.4	5524.0	5817.2	6158.8	6536.0	6801.2	6946.5
12.5°	5090.7	5195.2	5223.2	5218.1	5302.3	5511.3	5888.6	6324.5	6775.7	7056.1	7234.5
15°	5524.0	5559.7	5348.1	5154.4	5167.1	5419.5	5921.7	6457.0	6982.1	7318.6	7512.4
17.5°	5814.6	5720.3	5343.0	5004.0	4932.6	5264.0	5921.7	6584.5	7201.4	7581.2	7762.2
20°	5837.6	5603.1	5213.0	4858.7	4675.2	5057.5	5880.9	6681.3	7413.0	7833.6	8027.3
22.5°	5636.2	5404.2	5075.4	4733.8	4463.6	4807.7	5814.6	6755.3	7593.9	8070.6	8310.3
25°	5406.8	5213.0	4935.2	4606.3	4318.3	4555.3	5753.5	6880.2	7846.3	8391.8	8634.0
27.5°	5182.4	5019.3	4766.9	4499.3	4236.7	4336.1	5715.2	7063.7	8147.1	8848.1	9057.2
30°	4963.2	4815.4	4585.9	4397.3	4193.4	4193.4	5682.1	7275.3	8544.8	9360.5	9569.5
32.5°	4741.4	4601.2	4415.1	4297.9	4167.9	4137.3	5590.3	7474.1	8955.2	9921.3	10135.5
35°	4535.0	4394.8	4252.0	4203.6	4155.1	4094.0	5363.4	7629.6	9355.4	10576.5	10760.0
37.5°	4341.2	4206.1	4099.0	4086.3	4091.4	3976.7	5006.6	7759.6	9855.1	11246.9	11343.8
40°	4173.0	4022.6	3938.5	3935.9	3961.4	3788.1	4555.3	7945.7	10426.1	11815.4	11774.6
42.5°	4022.6	3864.5	3762.6	3785.5	3770.2	3599.4	4114.3	8116.5	10923.2	12348.1	12266.6
45°	3874.7	3721.8	3579.0	3612.2	3594.3	3482.2	3739.6	8241.4	11473.8	12988.0	12998.2
47.5°	3732.0	3581.6	3438.8	3398.0	3395.5	3446.5	3451.6	8282.2	12371.1	14017.8	13785.9
50°	3599.4	3449.0	3301.2	3163.5	3217.0	3375.1	3237.4	8251.6	13714.5	15154.8	14507.3
52.5°	3461.8	3319.0	3155.9	2908.6	3048.8	3204.3	3046.2	8142.0	14535.3	16159.1	15771.7
55°	3303.7	3168.6	2946.8	2646.0	2816.8	2850.0	2850.0	7081.6	14884.5	17153.3	17392.9
57.5°	3092.1	2913.7	2561.9	2319.7	2472.7	2345.2	2640.9	4955.6	14308.4	16839.8	17770.2
60°	2852.5	2661.3	2289.1	2115.8	2161.7	1937.4	2250.9	3107.4	11858.7	14328.8	15939.9
62.5°	2536.4	2360.5	2052.1	1917.0	1822.6	1580.5	1812.5	1965.4	8129.3	10640.2	11738.9
65°	2324.8	2131.1	1855.8	1677.3	1483.6	1272.0	1203.2	1289.9	4371.8	5954.8	6696.6
67.5°	2075.0	1883.8	1623.8	1399.5	1244.0	1091.0	971.2	940.6	1498.9	1983.2	2146.4
70°	1837.9	1654.4	1437.7	1228.7	1073.2	922.8	805.5	721.4	693.4	688.3	678.1
72.5°	1595.8	1425.0	1244.0	1050.3	879.5	741.8	637.3	540.4	499.6	486.9	474.1
75°	1307.7	1172.6	991.6	782.6	644.9	517.5	435.9	372.2	336.5	323.7	308.4
77.5°	841.2	780.0	622.0	504.7	390.0	308.4	265.1	224.3	201.4	196.3	183.5
80°	448.7	418.1	344.1	290.6	232.0	188.6	165.7	142.8	130.0	124.9	119.8
82.5°	249.8	226.9	191.2	168.2	135.1	114.7	102.0	91.8	84.1	81.6	79.0
85°	112.2	96.9	76.5	71.4	63.7	58.6	56.1	51.0	48.4	45.9	43.3
87.5°	5.1	10.2	12.7	10.2	10.2	15.3	17.8	17.8	15.3	15.3	12.7
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: P643430

CATALOG NUMBER: GWS-SA6E-830-U-SLL-W-GRSWH

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7	5582.7
2.5°	5957.4	6033.9	6041.5	6067.0	6033.9	6026.2	5972.7	5942.1	5914.1	5906.4
5°	6421.3	6574.3	6635.5	6678.8	6638.0	6617.6	6500.4	6378.0	6309.2	6276.0
7.5°	6898.0	7127.5	7247.3	7300.8	7305.9	7214.1	7012.7	6783.3	6668.6	6625.3
10°	7323.7	7606.7	7764.7	7866.7	7831.0	7718.9	7443.5	7132.6	6987.2	6949.0
12.5°	7639.8	7910.0	8032.4	8098.7	8096.1	8035.0	7774.9	7438.4	7272.8	7234.5
15°	7843.8	8004.4	8012.0	8027.3	8070.6	8152.2	8017.1	7706.1	7522.6	7469.0
17.5°	8004.4	7940.6	7820.8	7780.0	7876.9	8103.8	8185.4	7933.0	7734.2	7688.3
20°	8106.3	7785.1	7573.6	7494.5	7606.7	7976.3	8287.3	8136.9	7930.4	7871.8
22.5°	8185.4	7639.8	7298.2	7244.7	7362.0	7838.7	8391.8	8379.1	8152.2	8070.6
25°	8310.3	7543.0	7104.5	7066.3	7175.9	7772.4	8532.0	8707.9	8506.5	8389.3
27.5°	8506.5	7532.8	7005.1	6992.3	7142.7	7831.0	8733.4	9189.7	8937.4	8850.7
30°	8779.3	7629.6	7028.0	7053.5	7237.1	8042.6	9047.0	9740.3	9488.0	9352.9
32.5°	9171.9	7889.7	7377.3	7486.9	7622.0	8381.6	9505.8	10336.8	10145.7	9946.8
35°	9689.4	8603.4	8409.7	8876.2	8748.7	9123.4	10059.0	11060.8	10828.8	10655.5
37.5°	10380.2	10066.6	10245.1	10887.5	10579.0	10525.5	10734.5	11718.5	11591.0	11417.7
40°	11348.9	11412.6	11741.4	12585.2	12139.1	11795.0	11563.0	12213.0	12256.4	12042.2
42.5°	11991.2	12284.4	13077.2	14035.7	13421.3	12597.9	12256.4	12845.2	12847.8	12654.0
45°	12230.9	12998.2	14655.1	15758.9	14731.6	13056.8	12638.7	13704.3	13678.8	13457.0
47.5°	12144.2	13599.8	16294.2	17981.8	16414.0	13383.1	12585.2	14927.9	15134.4	14797.9
50°	11963.2	14203.9	18208.7	20704.3	18478.9	13729.8	12503.6	16284.0	16625.6	16365.6
52.5°	12146.7	14876.9	20472.3	23518.6	21068.8	14282.9	13054.2	18025.1	17963.9	17650.4
55°	12728.0	15672.2	23222.8	27054.2	23913.7	15218.5	14469.0	19684.6	19062.6	18687.9
57.5°	12699.9	16240.7	25634.4	29850.7	26388.9	15985.8	14961.0	19860.5	18603.8	18129.6
60°	11527.3	15980.7	26552.1	31619.8	27135.8	15562.6	13342.3	17739.6	15697.7	15200.6
62.5°	8603.4	14181.0	24772.7	29404.6	25022.6	13441.7	10033.5	12733.1	11280.0	10441.4
65°	5503.6	11093.9	20826.6	23821.9	20625.3	10280.8	5975.2	6826.7	5348.1	5108.5
67.5°	2342.7	7831.0	16189.7	15922.1	15430.1	6661.0	2307.0	1922.1	1432.6	1407.1
70°	774.9	5327.7	9980.0	10619.8	9215.2	4588.5	762.2	644.9	642.4	619.4
72.5°	507.3	2860.2	5618.3	6255.6	5929.3	2640.9	461.4	430.8	441.0	430.8
75°	303.4	622.0	945.7	1228.7	945.7	443.6	277.9	272.8	277.9	265.1
77.5°	178.4	173.3	168.2	168.2	165.7	152.9	140.2	135.1	137.7	140.2
80°	114.7	109.6	104.5	102.0	89.2	84.1	79.0	73.9	73.9	76.5
82.5°	73.9	68.8	63.7	56.1	45.9	38.2	35.7	30.6	30.6	33.1
85°	38.2	30.6	22.9	17.8	10.2	5.1	0.0	0.0	0.0	0.0
87.5°	7.6	0.0	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

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
 Rf: 81.5
 Rg: 99.2

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



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

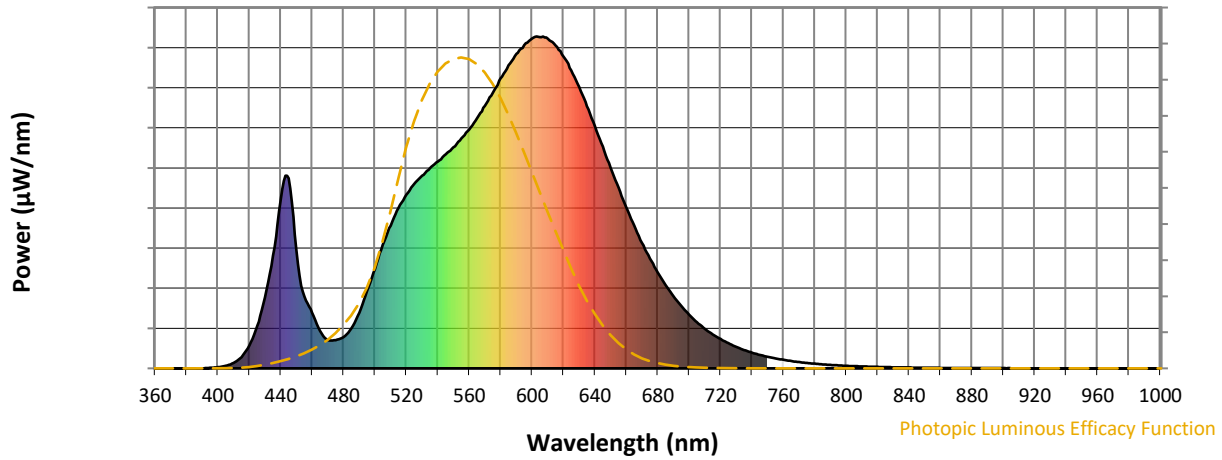


CCT = 3050K
 CIE x = 0.4383
 CIE y = 0.4131
 Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

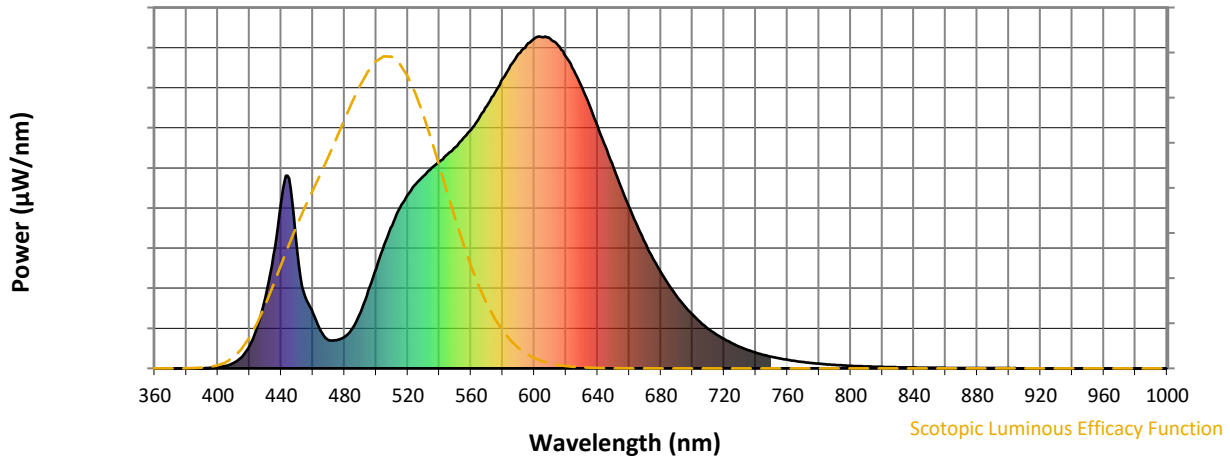


Photopic Lumens: NR

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	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 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	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

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

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	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			

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)