

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: P641450

Luminaire Tested: GWS-SA5F-830-U-SLL-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641450
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-SA5F-830-U-SLL-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25808.3 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

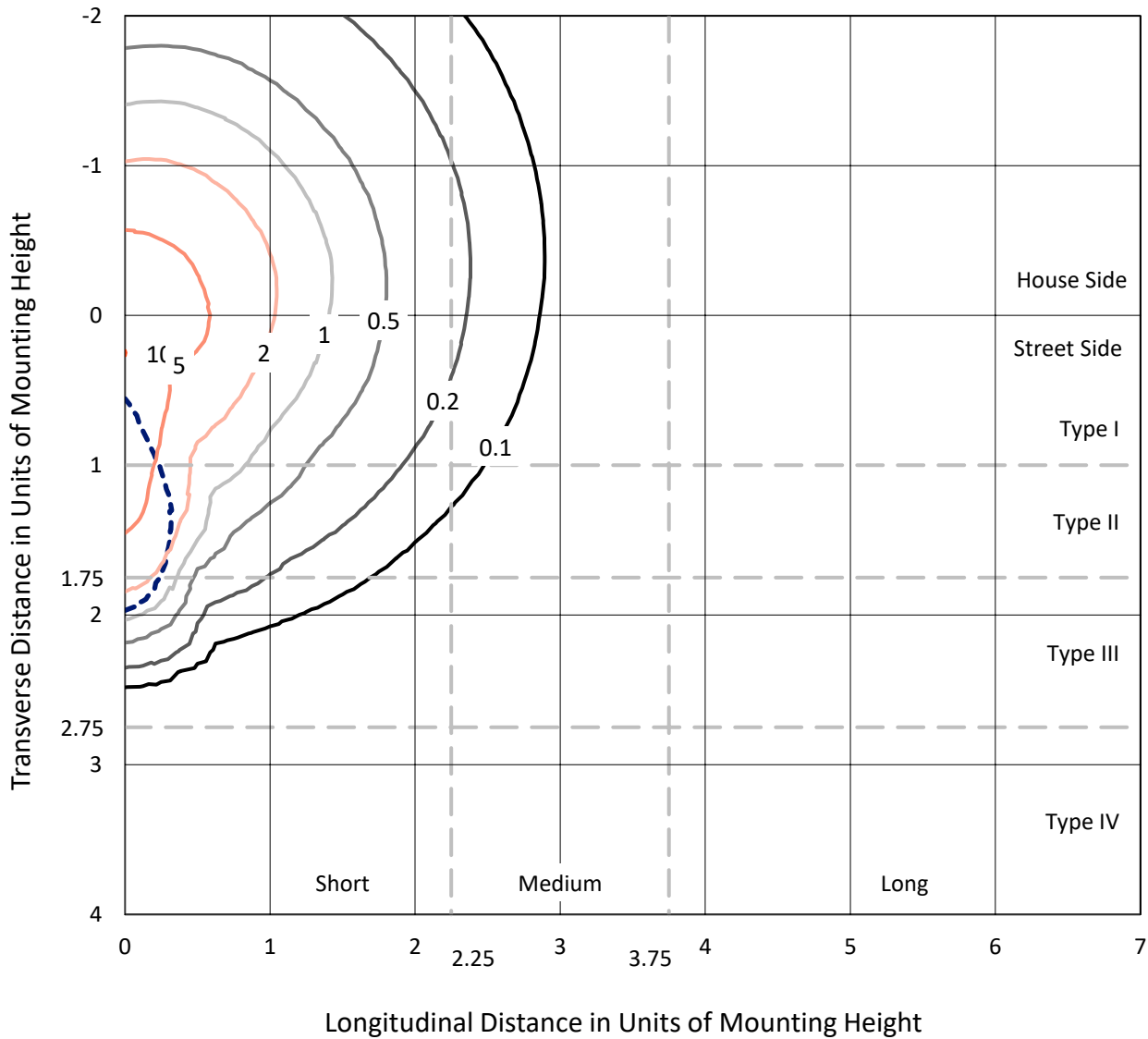
Input Watts (W): 310.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

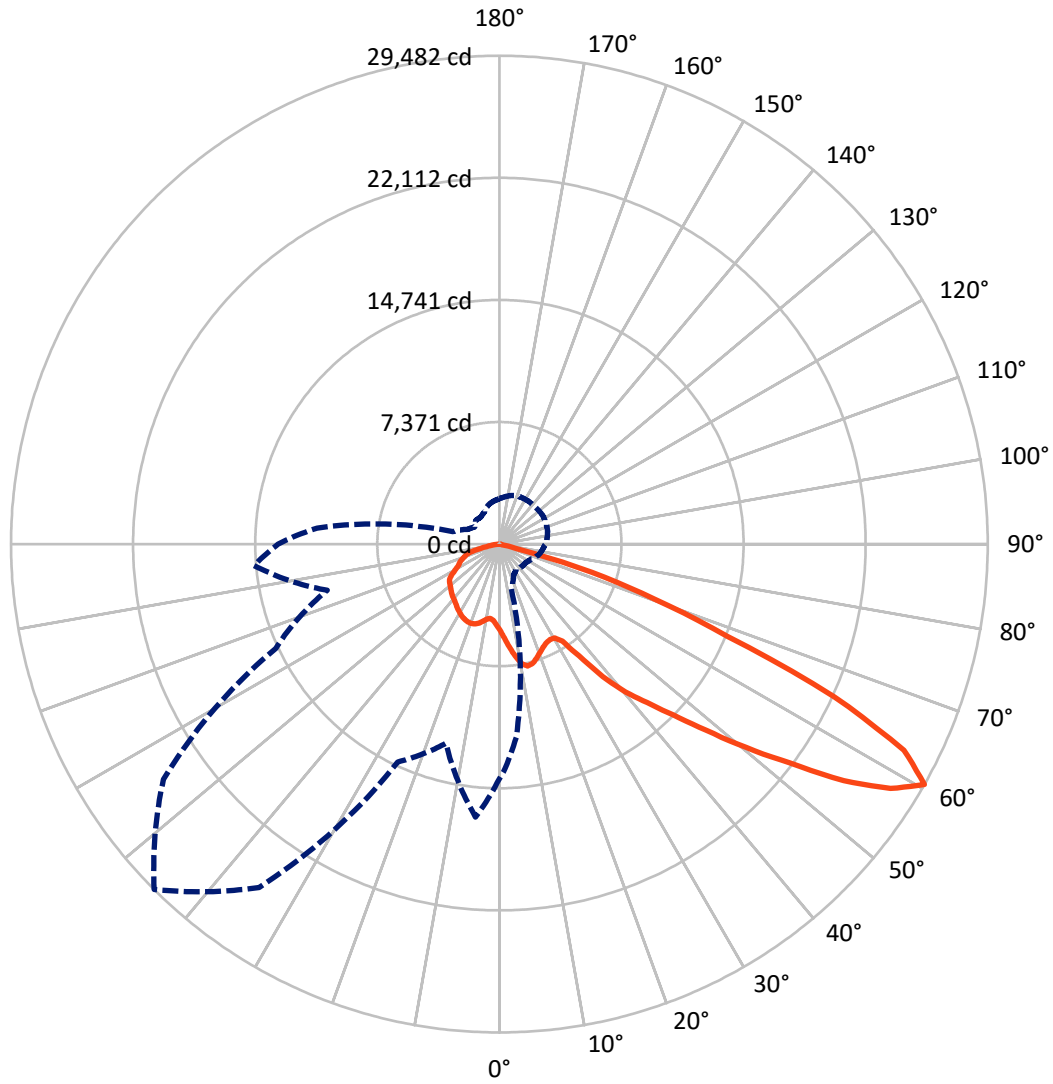
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 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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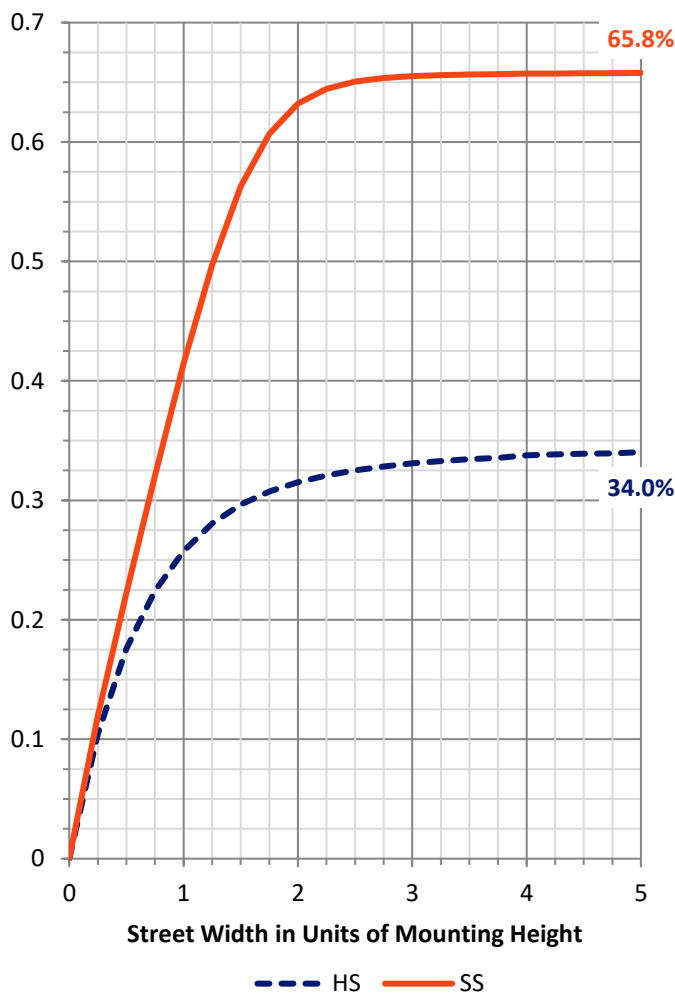
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8828.8	0.0	8828.8
	% Fixture	34.2	0.0	34.2
Street Side	Lumens	16979.5	0.0	16979.5
	% Fixture	65.8	0.0	65.8
Total	Lumens	25808.3	0.0	25808.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	508.6	2.0
10°-20°	1631.2	6.3
20°-30°	2656.5	10.3
30°-40°	3731.9	14.5
40°-50°	5106.6	19.8
50°-60°	6551.6	25.4
60°-70°	4411.6	17.1
70°-80°	1102.9	4.3
80°-90°	107.5	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°	25808.3	100.0
0°-180°	25808.3	100.0

Coefficient of Utilization



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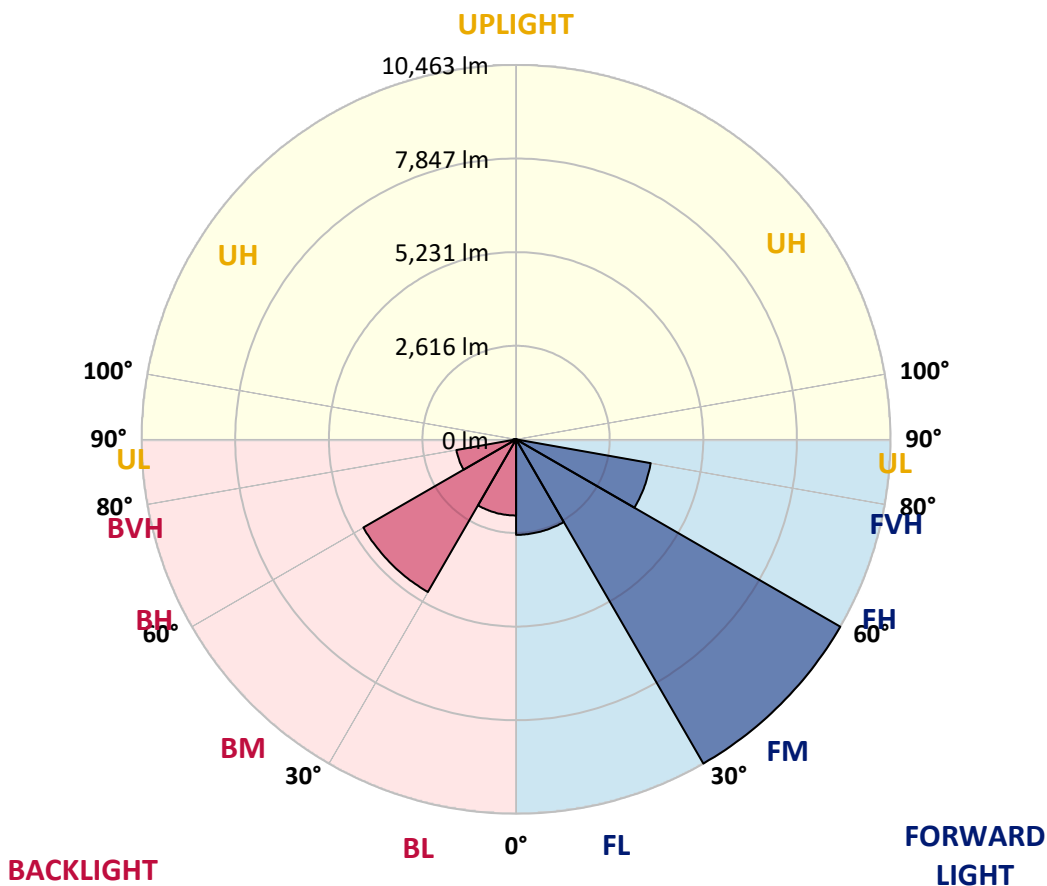
CATALOG NUMBER: GWS-SA5F-830-U-SLL-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2668.0	10.3			
FM (30°-60°)	10462.9	40.5			
FH (60°-80°)	3820.7	14.8			G2/5000
FVH (80°-90°)	27.9	0.1			G1/100
BL (0°-30°)	2128.3	8.2	B3/2500		
BM (30°-60°)	4927.2	19.1	B3/5000		
BH (60°-80°)	1693.8	6.6	B3/2500		G3/2500
BVH (80°-90°)	79.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3
2.5°	5507.1	5495.2	5483.3	5390.7	5366.9	5300.3	5252.8	5193.4	5107.8	5060.3	5019.9
5°	5851.8	5832.7	5768.6	5578.4	5454.8	5319.3	5207.6	5084.0	4953.3	4867.7	4801.2
7.5°	6177.4	6172.6	6063.3	5749.6	5549.9	5355.0	5202.9	5022.2	4834.5	4706.1	4620.6
10°	6479.2	6443.6	6312.9	5904.0	5642.6	5419.2	5255.2	5055.5	4836.9	4663.3	4549.3
12.5°	6745.4	6700.3	6519.6	6046.7	5723.4	5447.7	5269.4	5105.4	4960.4	4815.5	4684.7
15°	6964.1	6909.4	6726.4	6179.8	5794.7	5431.1	5181.5	5053.1	5103.1	5167.2	5022.2
17.5°	7168.5	7111.5	6888.1	6277.2	5816.1	5328.9	4965.2	4910.5	5162.5	5454.8	5388.3
20°	7339.7	7275.5	7016.4	6324.7	5778.1	5134.0	4684.7	4779.8	5112.6	5462.0	5568.9
22.5°	7525.0	7472.8	7161.4	6393.7	5730.5	4865.4	4449.4	4682.4	5027.0	5333.6	5495.2
25°	7822.2	7758.0	7387.2	6514.9	5706.8	4613.4	4280.7	4587.3	4908.2	5186.2	5312.2
27.5°	8252.4	8133.5	7696.2	6726.4	5732.9	4375.7	4173.7	4470.8	4770.3	5008.0	5110.2
30°	8720.6	8578.0	8038.4	6945.1	5770.9	4230.8	4116.7	4337.7	4558.8	4796.4	4908.2
32.5°	9274.4	9148.4	8404.5	7109.1	5690.1	4164.2	4073.9	4192.7	4368.6	4558.8	4651.5
35°	9935.2	9709.4	8803.8	7242.2	5428.7	4066.8	4035.9	4033.5	4126.2	4311.6	4416.2
37.5°	10645.8	10403.4	9295.8	7384.8	5022.2	3912.3	3945.5	3845.7	3931.3	4078.6	4197.5
40°	11228.1	10973.8	9792.5	7579.7	4513.6	3669.8	3745.9	3638.9	3691.2	3843.3	3976.4
42.5°	11798.6	11527.6	10256.0	7800.8	4021.6	3432.1	3470.2	3429.8	3446.4	3605.7	3791.0
45°	12547.3	12243.1	10826.5	7957.6	3579.5	3244.4	3208.7	3139.8	3227.7	3434.5	3631.8
47.5°	13797.5	13433.8	11760.6	8059.8	3258.6	3137.4	2973.4	2933.0	3042.3	3272.9	3477.3
50°	15259.3	14945.5	13253.2	8055.1	3018.6	3047.1	2745.2	2709.6	2890.2	3123.2	3339.4
52.5°	16457.2	16138.7	14529.6	7817.4	2821.3	2854.6	2612.1	2512.3	2759.5	2975.8	3192.1
55°	17424.5	17065.6	15116.6	6823.9	2571.7	2548.0	2467.2	2284.1	2595.5	2828.4	3030.5
57.5°	16904.0	16476.2	14406.0	5188.6	2315.0	2165.3	2217.6	2082.1	2372.1	2664.4	2859.3
60°	14173.0	13788.0	11703.5	2761.9	2036.9	1808.8	1918.1	1939.5	2127.3	2467.2	2666.8
62.5°	9735.5	9455.0	7931.5	1675.7	1606.7	1452.2	1623.4	1777.9	1918.1	2205.7	2379.2
65°	4763.2	4680.0	3966.9	1074.3	1124.2	1174.2	1345.3	1533.1	1739.8	1991.8	2174.8
67.5°	1312.0	1321.5	1202.7	839.0	886.6	1024.4	1159.9	1309.6	1516.4	1749.3	1934.7
70°	577.6	587.1	606.1	646.5	736.8	862.8	1003.0	1157.5	1347.7	1542.6	1720.8
72.5°	401.7	411.2	439.7	492.0	572.8	691.7	824.8	972.1	1169.4	1333.4	1480.8
75°	247.2	254.3	280.5	325.6	380.3	470.6	601.3	736.8	910.3	1060.1	1190.8
77.5°	130.7	126.0	142.6	173.5	221.0	268.6	356.5	442.1	565.7	686.9	796.2
80°	71.3	68.9	78.4	95.1	109.3	147.4	206.8	263.8	335.1	404.1	463.5
82.5°	30.9	28.5	30.9	40.4	49.9	71.3	104.6	145.0	185.4	232.9	271.0
85°	0.0	0.0	0.0	2.4	11.9	19.0	35.7	52.3	76.1	104.6	128.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	21.4
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°	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3
2.5°	4996.1	4936.7	4931.9	4884.4	4889.1	4891.5	4844.0	4825.0	4841.6	4860.6	4851.1
5°	4777.4	4715.6	4689.5	4644.3	4639.6	4618.2	4599.2	4575.4	4592.0	4608.7	4618.2
7.5°	4587.3	4546.9	4530.2	4518.4	4523.1	4513.6	4475.6	4454.2	4451.8	4458.9	4468.4
10°	4525.5	4492.2	4513.6	4546.9	4570.6	4587.3	4546.9	4511.2	4477.9	4463.7	4463.7
12.5°	4658.6	4615.8	4658.6	4694.2	4741.8	4753.7	4708.5	4670.5	4658.6	4672.8	4701.4
15°	4953.3	4853.5	4851.1	4872.5	4910.5	4929.5	4886.8	4867.7	4867.7	4958.1	5029.4
17.5°	5248.0	5084.0	5015.1	5003.2	5027.0	5034.1	4998.5	4981.8	5024.6	5200.5	5333.6
20°	5454.8	5255.2	5105.4	5076.9	5084.0	5086.4	5057.9	5046.0	5107.8	5321.7	5433.4
22.5°	5433.4	5286.1	5103.1	5067.4	5079.3	5074.5	5048.4	5043.6	5093.5	5278.9	5331.2
25°	5286.1	5172.0	5017.5	4993.7	5012.7	5010.4	4984.2	4972.3	4993.7	5117.3	5122.1
27.5°	5117.3	5017.5	4884.4	4877.3	4908.2	4924.8	4879.6	4844.0	4836.9	4920.0	4901.0
30°	4915.3	4841.6	4734.6	4739.4	4796.4	4806.0	4751.3	4699.0	4684.7	4729.9	4703.7
32.5°	4675.2	4651.5	4594.4	4606.3	4661.0	4680.0	4622.9	4568.3	4551.6	4565.9	4511.2
35°	4470.8	4461.3	4466.1	4487.5	4535.0	4549.3	4501.7	4458.9	4435.2	4385.3	4313.9
37.5°	4259.3	4285.4	4354.4	4394.8	4420.9	4416.2	4390.0	4359.1	4321.1	4228.4	4140.4
40°	4062.0	4128.6	4252.2	4297.3	4306.8	4309.2	4290.2	4264.0	4216.5	4092.9	3993.1
42.5°	3909.9	3983.6	4147.6	4216.5	4221.3	4226.0	4207.0	4185.6	4119.0	3955.0	3857.6
45°	3750.6	3848.1	4040.6	4123.8	4119.0	4116.7	4100.0	4090.5	4012.1	3821.9	3715.0
47.5°	3615.2	3729.2	3936.0	4007.3	4005.0	4002.6	3990.7	3990.7	3912.3	3705.5	3584.3
50°	3482.1	3612.8	3829.1	3888.5	3893.2	3888.5	3883.7	3890.9	3798.2	3577.1	3458.3
52.5°	3337.1	3484.4	3710.2	3764.9	3793.4	3805.3	3805.3	3788.7	3679.3	3448.8	3318.1
55°	3177.8	3318.1	3579.5	3653.2	3677.0	3698.3	3698.3	3665.1	3562.9	3329.9	3189.7
57.5°	2980.5	3104.1	3310.9	3384.6	3441.7	3455.9	3455.9	3401.2	3318.1	3094.6	2980.5
60°	2766.6	2873.6	3013.8	3092.3	3135.0	3106.5	3127.9	3113.6	3047.1	2840.3	2745.2
62.5°	2481.4	2590.7	2745.2	2826.1	2845.1	2816.5	2845.1	2842.7	2752.4	2567.0	2452.9
65°	2277.0	2384.0	2536.1	2640.7	2671.6	2664.4	2683.4	2654.9	2543.2	2367.3	2258.0
67.5°	2034.6	2148.7	2324.5	2441.0	2505.2	2512.3	2538.5	2479.0	2364.9	2172.4	2034.6
70°	1804.0	1901.5	2036.9	2146.3	2236.6	2281.8	2286.5	2200.9	2058.3	1899.1	1799.3
72.5°	1561.6	1661.4	1825.4	1944.2	2058.3	2110.6	2110.6	2006.0	1851.6	1675.7	1568.7
75°	1266.9	1359.5	1509.3	1637.6	1768.4	1834.9	1832.5	1742.2	1571.1	1404.7	1293.0
77.5°	858.0	927.0	1022.0	1119.5	1138.5	1190.8	1216.9	1102.8	1007.8	917.5	817.6
80°	499.1	541.9	594.2	648.9	660.8	677.4	634.6	591.8	541.9	482.5	437.3
82.5°	292.4	320.9	347.0	389.8	396.9	401.7	363.7	344.6	304.2	268.6	240.1
85°	142.6	152.1	175.9	197.3	187.8	183.0	166.4	147.4	130.7	116.5	102.2
87.5°	28.5	28.5	42.8	40.4	33.3	28.5	16.6	21.4	4.8	4.8	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°	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3
2.5°	4882.0	4922.4	4972.3	5038.9	5114.9	5195.8	5274.2	5333.6	5393.0	5481.0	5466.7
5°	4632.4	4701.4	4779.8	4882.0	5005.6	5145.8	5302.7	5459.6	5628.3	5770.9	5832.7
7.5°	4487.5	4563.5	4656.2	4789.3	4948.6	5119.7	5340.7	5595.1	5868.4	6056.2	6172.6
10°	4487.5	4584.9	4706.1	4834.5	4974.7	5150.6	5423.9	5742.4	6094.2	6341.4	6476.9
12.5°	4746.5	4844.0	4870.1	4865.4	4943.8	5138.7	5490.5	5896.9	6317.6	6579.1	6745.4
15°	5150.6	5183.9	4986.6	4806.0	4817.8	5053.1	5521.4	6020.5	6510.1	6823.9	7004.5
17.5°	5421.6	5333.6	4981.8	4665.7	4599.2	4908.2	5521.4	6139.4	6714.5	7068.7	7237.5
20°	5442.9	5224.3	4860.6	4530.2	4359.1	4715.6	5483.3	6229.7	6911.8	7304.0	7484.6
22.5°	5255.2	5038.9	4732.3	4413.8	4161.8	4482.7	5421.6	6298.6	7080.6	7525.0	7748.5
25°	5041.3	4860.6	4601.5	4294.9	4026.4	4247.4	5364.5	6415.1	7315.9	7824.5	8050.3
27.5°	4832.1	4680.0	4444.7	4195.1	3950.3	4043.0	5328.9	6586.2	7596.4	8250.0	8444.9
30°	4627.7	4489.8	4275.9	4100.0	3909.9	3909.9	5298.0	6783.5	7967.1	8727.7	8922.6
32.5°	4420.9	4290.2	4116.7	4007.3	3886.1	3857.6	5212.4	6968.9	8349.8	9250.6	9450.3
35°	4228.4	4097.7	3964.6	3919.4	3874.2	3817.2	5000.9	7113.9	8723.0	9861.5	10032.6
37.5°	4047.7	3921.8	3821.9	3810.1	3814.8	3707.9	4668.1	7235.1	9188.8	10486.6	10576.9
40°	3890.9	3750.6	3672.2	3669.8	3693.6	3532.0	4247.4	7408.6	9721.2	11016.6	10978.6
42.5°	3750.6	3603.3	3508.2	3529.6	3515.3	3356.1	3836.2	7567.8	10184.7	11513.4	11437.3
45°	3612.8	3470.2	3337.1	3368.0	3351.3	3246.8	3486.8	7684.3	10698.1	12110.0	12119.5
47.5°	3479.7	3339.4	3206.3	3168.3	3165.9	3213.5	3218.2	7722.3	11534.8	13070.2	12853.9
50°	3356.1	3215.9	3078.0	2949.6	2999.6	3146.9	3018.6	7693.8	12787.4	14130.3	13526.5
52.5°	3227.7	3094.6	2942.5	2712.0	2842.7	2987.7	2840.3	7591.6	13552.7	15066.7	14705.5
55°	3080.4	2954.4	2747.6	2467.2	2626.4	2657.3	2657.3	6602.8	13878.3	15993.7	16217.1
57.5°	2883.1	2716.7	2388.7	2162.9	2305.5	2186.7	2462.4	4620.6	13341.2	15701.3	16568.9
60°	2659.7	2481.4	2134.4	1972.8	2015.6	1806.4	2098.7	2897.4	11057.0	13360.2	14862.3
62.5°	2364.9	2200.9	1913.3	1787.4	1699.4	1473.6	1689.9	1832.5	7579.7	9920.9	10945.3
65°	2167.7	1987.0	1730.3	1564.0	1383.3	1186.0	1121.9	1202.7	4076.3	5552.3	6243.9
67.5°	1934.7	1756.5	1514.0	1304.9	1159.9	1017.3	905.6	877.1	1397.6	1849.2	2001.3
70°	1713.7	1542.6	1340.5	1145.6	1000.6	860.4	751.1	672.6	646.5	641.7	632.2
72.5°	1487.9	1328.6	1159.9	979.3	820.0	691.7	594.2	503.9	465.9	454.0	442.1
75°	1219.3	1093.3	924.6	729.7	601.3	482.5	406.4	347.0	313.7	301.9	287.6
77.5°	784.4	727.3	579.9	470.6	363.7	287.6	247.2	209.2	187.8	183.0	171.1
80°	418.3	389.8	320.9	271.0	216.3	175.9	154.5	133.1	121.2	116.5	111.7
82.5°	232.9	211.5	178.3	156.9	126.0	107.0	95.1	85.6	78.4	76.1	73.7
85°	104.6	90.3	71.3	66.6	59.4	54.7	52.3	47.5	45.2	42.8	40.4
87.5°	4.8	9.5	11.9	9.5	9.5	14.3	16.6	16.6	14.3	14.3	11.9
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: P641450

CATALOG NUMBER: GWS-SA5F-830-U-SLL-W-GRSWH

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3	5205.3
2.5°	5554.7	5626.0	5633.1	5656.9	5626.0	5618.8	5568.9	5540.4	5514.2	5507.1
5°	5987.2	6129.8	6186.9	6227.3	6189.3	6170.3	6060.9	5946.8	5882.7	5851.8
7.5°	6431.7	6645.6	6757.3	6807.2	6812.0	6726.4	6538.7	6324.7	6217.8	6177.4
10°	6828.6	7092.5	7239.8	7334.9	7301.6	7197.0	6940.3	6650.4	6514.9	6479.2
12.5°	7123.4	7375.3	7489.4	7551.2	7548.8	7491.8	7249.3	6935.6	6781.1	6745.4
15°	7313.5	7463.2	7470.4	7484.6	7525.0	7601.1	7475.1	7185.2	7014.0	6964.1
17.5°	7463.2	7403.8	7292.1	7254.1	7344.4	7555.9	7632.0	7396.7	7211.3	7168.5
20°	7558.3	7258.8	7061.6	6987.9	7092.5	7437.1	7727.1	7586.8	7394.3	7339.7
22.5°	7632.0	7123.4	6804.9	6755.0	6864.3	7308.8	7824.5	7812.6	7601.1	7525.0
25°	7748.5	7033.0	6624.2	6588.6	6690.8	7247.0	7955.3	8119.3	7931.5	7822.2
27.5°	7931.5	7023.5	6531.5	6519.6	6659.9	7301.6	8143.0	8568.5	8333.2	8252.4
30°	8185.8	7113.9	6552.9	6576.7	6747.8	7498.9	8435.4	9081.9	8846.6	8720.6
32.5°	8551.8	7356.3	6878.5	6980.8	7106.7	7815.0	8863.2	9638.0	9459.8	9274.4
35°	9034.3	8021.8	7841.2	8276.1	8157.3	8506.7	9379.0	10313.1	10096.8	9935.2
37.5°	9678.5	9386.1	9552.5	10151.4	9863.8	9813.9	10008.8	10926.3	10807.5	10645.8
40°	10581.7	10641.1	10947.7	11734.4	11318.5	10997.6	10781.3	11387.4	11427.8	11228.1
42.5°	11180.6	11453.9	12193.1	13086.8	12514.0	11746.3	11427.8	11976.9	11979.2	11798.6
45°	11404.0	12119.5	13664.4	14693.6	13735.7	12174.1	11784.3	12777.8	12754.1	12547.3
47.5°	11323.2	12680.4	15192.7	16766.2	15304.4	12478.4	11734.4	13918.7	14111.2	13797.5
50°	11154.5	13243.7	16977.7	19304.6	17229.6	12801.6	11658.4	15183.2	15501.7	15259.3
52.5°	11325.6	13871.2	19088.3	21928.6	19644.5	13317.4	12171.8	16806.6	16749.5	16457.2
55°	11867.5	14612.8	21652.9	25225.3	22297.1	14189.7	13490.9	18353.9	17773.9	17424.5
57.5°	11841.4	15142.8	23901.4	27832.7	24605.0	14905.1	13949.6	18517.9	17346.1	16904.0
60°	10748.0	14900.4	24757.1	29482.2	25301.4	14510.6	12440.3	16540.4	14636.5	14173.0
62.5°	8021.8	13222.3	23098.0	27416.7	23331.0	12533.0	9355.2	11872.3	10517.5	9735.5
65°	5131.6	10344.0	19418.7	22211.5	19230.9	9585.8	5571.3	6365.2	4986.6	4763.2
67.5°	2184.3	7301.6	15095.3	14845.7	14387.0	6210.7	2151.0	1792.1	1335.8	1312.0
70°	722.6	4967.6	9305.3	9901.9	8592.2	4278.3	710.7	601.3	599.0	577.6
72.5°	473.0	2666.8	5238.5	5832.7	5528.5	2462.4	430.2	401.7	411.2	401.7
75°	282.8	579.9	881.8	1145.6	881.8	413.6	259.1	254.3	259.1	247.2
77.5°	166.4	161.6	156.9	156.9	154.5	142.6	130.7	126.0	128.3	130.7
80°	107.0	102.2	97.5	95.1	83.2	78.4	73.7	68.9	68.9	71.3
82.5°	68.9	64.2	59.4	52.3	42.8	35.7	33.3	28.5	28.5	30.9
85°	35.7	28.5	21.4	16.6	9.5	4.8	0.0	0.0	0.0	0.0
87.5°	7.1	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

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



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

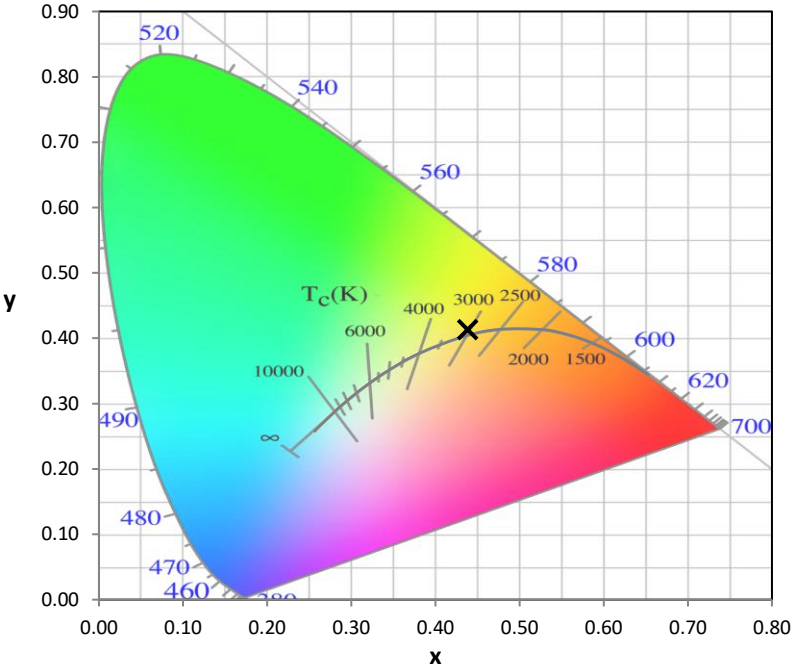
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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



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)