

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P324633

Luminaire Tested: **GLEON-SA9A-830-U-SLR-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P324633
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-28)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA9A-830-U-SLR-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24541 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B2 - U0 - G4

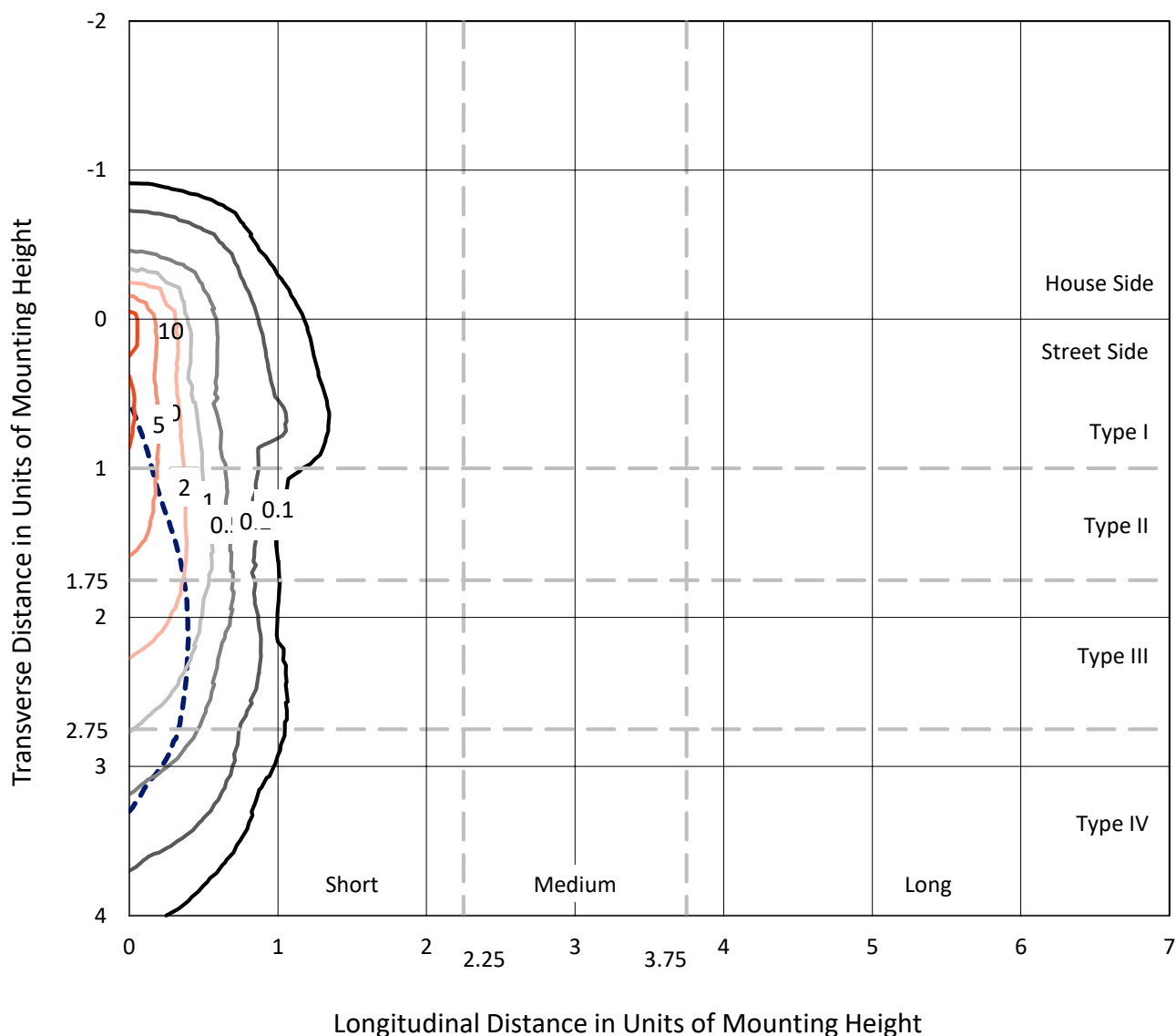
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P324633
 CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

Iso-Footcandle Lines of Horizontal Illumination

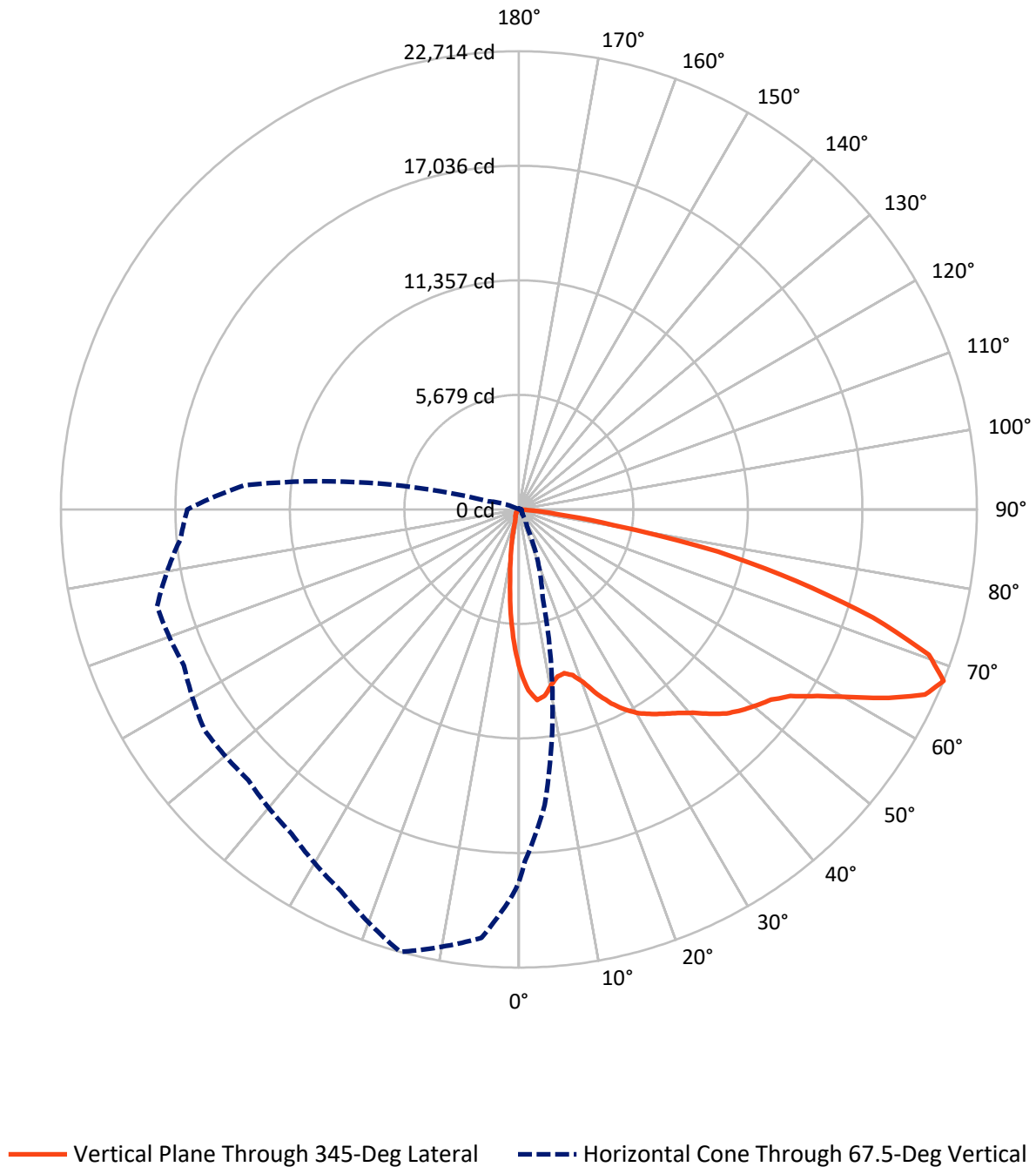
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.8 fc
 Type IV - Medium - N/A

REPORT NUMBER: P324633
CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P324633
 CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

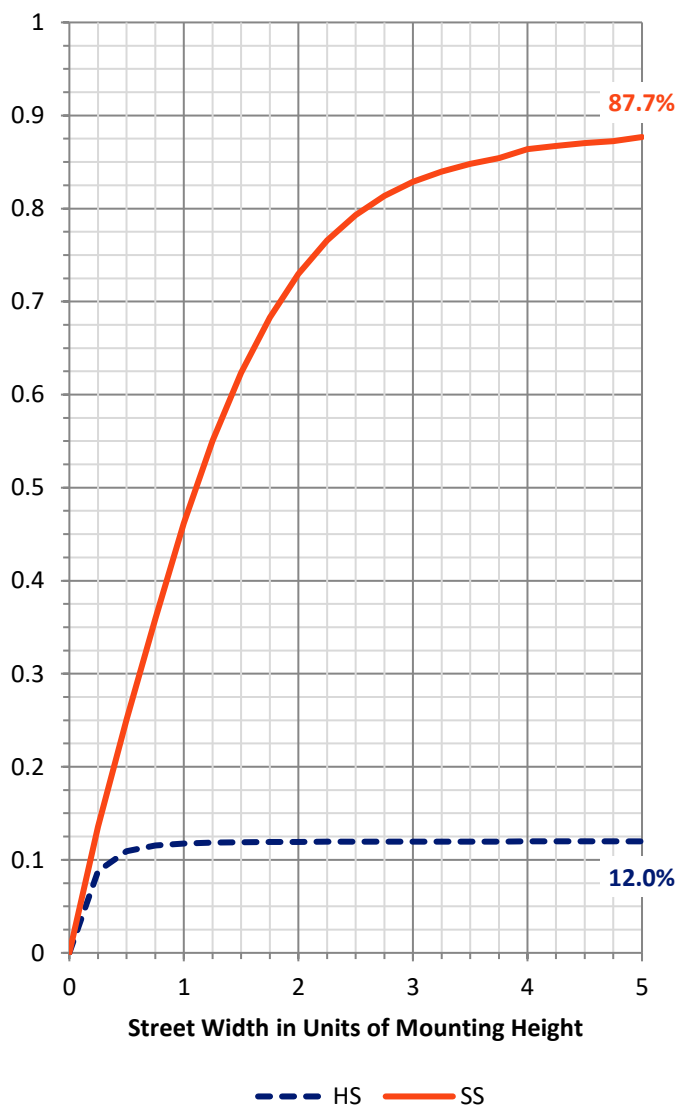
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2970.3	0.0	2970.3
	% Fixture	12.1	0.0	12.1
Street Side	Lumens	21570.7	0.0	21570.7
	% Fixture	87.9	0.0	87.9
Total	Lumens	24541.0	0.0	24541.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	613.5	2.5
10°-20°	1221.2	5.0
20°-30°	1734.2	7.1
30°-40°	2561.5	10.4
40°-50°	3694.2	15.1
50°-60°	5185.9	21.1
60°-70°	6045.3	24.6
70°-80°	3090.5	12.6
80°-90°	394.7	1.6
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°	24541.0	100.0
0°-180°	24541.0	100.0

Coefficient of Utilization



REPORT NUMBER: P324633

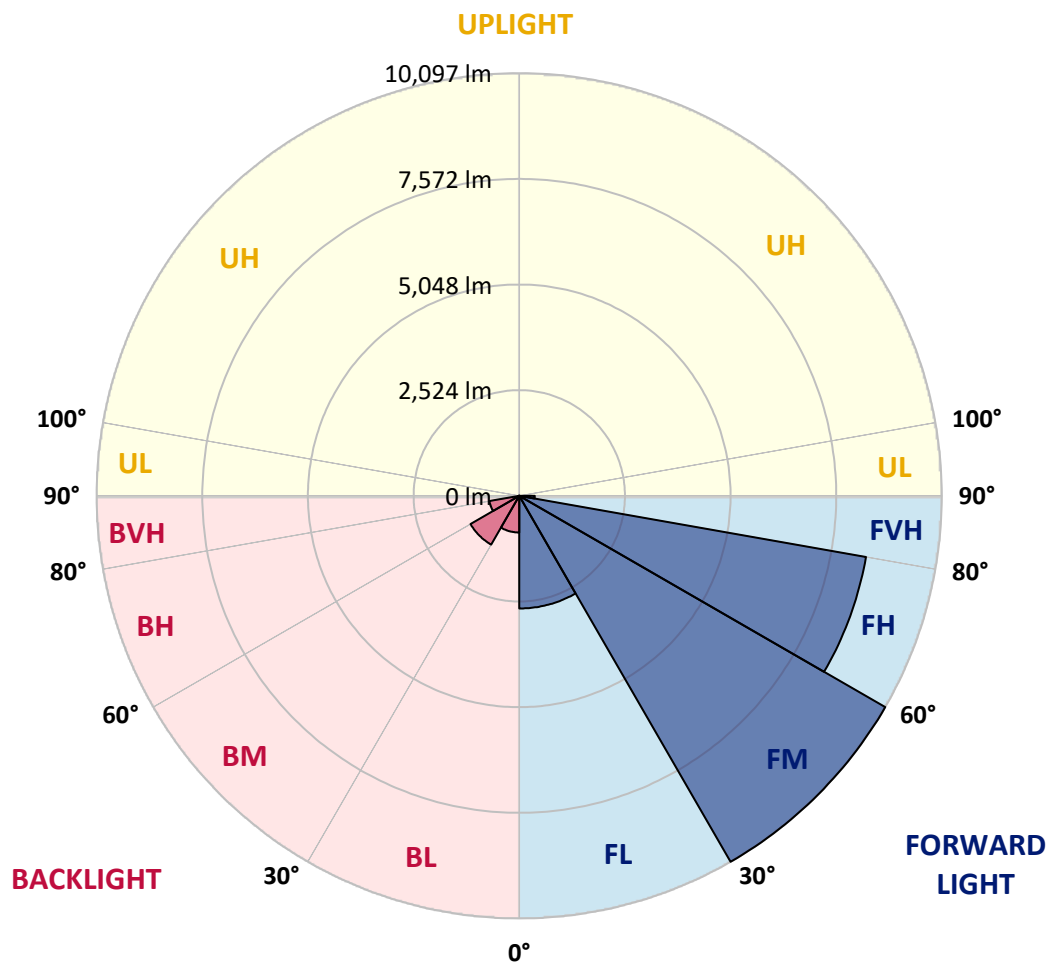
CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2691.7	11.0			
FM	(30°-60°)	10096.6	41.1			
FH	(60°-80°)	8411.8	34.3			G4/12000
FVH	(80°-90°)	370.7	1.5			G3/500
BL	(0°-30°)	877.3	3.6	B2/1000		
BM	(30°-60°)	1345.0	5.5	B2/2500		
BH	(60°-80°)	723.9	2.9	B2/1000		G2/1000
BVH	(80°-90°)	24.0	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Medium



REPORT NUMBER: P324633

CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2
2.5°	8753.4	8685.9	8611.5	8368.5	8143.0	7884.9	7674.5	7528.0	7344.3	7105.9	7045.5
5°	8690.6	8618.5	8384.8	7844.2	7371.0	6910.6	6466.5	6206.1	5882.9	5555.0	5473.6
7.5°	8059.3	7983.7	7646.6	6906.0	6268.9	5603.8	5027.2	4670.3	4305.2	4005.2	3846.0
10°	7402.4	7319.9	6940.9	6042.1	5257.4	4656.3	4233.1	3892.5	3547.2	3226.3	2970.5
12.5°	6950.2	6842.0	6430.5	5412.0	4728.4	4320.3	3925.0	3516.9	3049.6	2705.4	2424.1
15°	6760.6	6637.4	6202.6	5169.0	4541.2	4062.2	3547.2	3046.1	2498.5	2104.3	1846.2
17.5°	6907.1	6746.7	6280.5	5152.7	4306.3	3654.1	3003.1	2414.8	1820.7	1421.9	1238.2
20°	7404.7	7194.3	6602.5	5148.1	4021.5	3169.3	2343.8	1678.8	1199.8	965.0	868.5
22.5°	8188.3	7910.5	7065.3	5185.3	3727.4	2660.1	1692.8	1140.5	901.0	779.0	722.0
25°	9134.7	8812.7	7731.4	5316.7	3469.3	2164.8	1230.1	901.0	760.4	670.8	623.2
27.5°	10034.6	9773.0	8573.2	5506.2	3269.3	1764.9	998.7	763.8	649.9	590.6	552.2
30°	10933.3	10604.3	9437.0	5731.7	3028.6	1494.0	877.8	696.4	582.5	519.7	495.3
32.5°	11586.7	11313.5	10113.6	5894.5	2771.7	1317.3	784.8	637.1	544.1	480.2	444.1
35°	12355.2	12045.9	10693.8	5930.5	2606.6	1205.6	705.7	573.2	472.0	415.1	376.7
37.5°	13185.3	12800.5	11363.5	5851.5	2477.5	1151.0	646.4	544.1	440.6	382.5	341.8
40°	14103.8	13668.9	12006.4	5737.5	2350.8	1132.4	601.1	522.0	416.2	356.9	315.1
42.5°	15071.1	14558.3	12563.3	5617.8	2270.6	1068.4	596.4	499.9	397.6	333.7	291.8
45°	15883.7	15364.0	13135.3	5578.3	2213.6	998.7	616.2	484.8	384.8	315.1	274.4
47.5°	16531.3	16039.5	13721.3	5666.6	2181.1	934.7	561.5	504.6	377.9	298.8	259.3
50°	17304.5	16747.6	14546.7	5930.5	2133.4	870.8	508.1	577.8	377.9	288.3	246.5
52.5°	18274.1	17723.0	15467.5	6339.8	2038.1	782.4	456.9	579.0	381.3	274.4	230.2
55°	19493.7	19093.7	16782.4	6788.5	1885.8	652.2	395.3	497.6	367.4	248.8	215.1
57.5°	20663.3	20336.6	17981.1	7095.5	1682.3	509.2	344.1	401.1	336.0	218.6	191.8
59°	20983.0	20626.1	18420.6	7109.4	1530.0	444.1	318.6	331.3	329.0	204.6	177.9
60°	20983.0	20604.0	18547.3	7035.0	1419.6	408.1	302.3	295.3	343.0	195.3	169.7
62.5°	20602.8	20070.3	18135.7	6531.6	1158.0	347.6	263.9	244.2	308.1	175.6	150.0
65°	19812.2	19036.8	16733.6	5621.3	1032.4	318.6	227.9	200.0	213.9	154.6	131.4
67.5°	18493.8	17442.8	14711.8	4541.2	982.4	310.4	196.5	169.7	161.6	132.5	115.1
70°	16172.1	15006.0	12257.5	3570.4	939.4	306.9	165.1	143.0	130.2	111.6	97.7
72.5°	11770.4	10554.3	8702.2	2791.5	913.8	313.9	132.5	119.8	107.0	87.2	75.6
75°	6732.7	5936.3	4891.1	1843.9	779.0	300.0	102.3	100.0	76.7	62.8	52.3
77.5°	3478.6	3372.8	2931.0	708.0	373.2	131.4	67.4	58.1	45.3	38.4	31.4
80°	1500.9	1484.7	1284.7	204.6	98.8	73.2	38.4	24.4	20.9	16.3	12.8
82.5°	518.5	518.5	456.9	68.6	44.2	36.0	4.7	0.0	0.0	0.0	0.0
85°	104.6	117.4	82.5	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	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	0.0



REPORT NUMBER: P324633

CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2
2.5°	6972.2	6831.6	6822.3	6733.9	6623.5	6573.5	6544.4	6595.6	6658.3	6665.3	6759.5
5°	5412.0	5264.4	5326.0	5169.0	5200.4	5169.0	5117.9	5127.2	5155.1	5067.9	5176.0
7.5°	3800.6	3689.0	3759.9	3718.1	3773.9	3796.0	3764.6	3718.1	3580.9	3564.6	3658.8
10°	2864.7	2738.0	2662.4	2583.3	2600.8	2636.8	2625.2	2591.5	2504.3	2508.9	2599.6
12.5°	2302.0	2160.2	2010.2	1816.0	1768.3	1795.1	1768.3	1748.6	1664.9	1671.8	1752.1
15°	1746.3	1630.0	1473.0	1317.3	1232.4	1240.5	1166.1	1113.8	1061.5	998.7	1047.5
17.5°	1178.9	1108.0	1061.5	1015.0	913.8	890.6	796.4	695.2	655.7	626.7	647.6
20°	834.8	796.4	777.8	775.5	717.3	688.3	596.4	533.6	513.9	508.1	520.9
22.5°	697.6	669.7	642.9	627.8	598.8	565.0	495.3	463.9	449.9	443.0	452.3
25°	606.9	586.0	558.1	532.5	520.9	484.8	434.8	411.6	402.3	395.3	399.9
27.5°	539.5	520.9	488.3	472.0	462.7	431.3	388.3	369.7	361.6	359.3	358.1
30°	486.0	468.5	438.3	419.7	403.4	375.5	349.9	331.3	323.2	320.9	318.6
32.5°	432.5	418.5	398.8	380.2	362.7	337.2	315.1	300.0	287.2	284.8	283.7
35°	365.1	351.1	340.6	339.5	323.2	298.8	282.5	262.8	252.3	248.8	250.0
37.5°	324.4	305.8	282.5	290.7	286.0	268.6	246.5	226.7	216.2	213.9	213.9
40°	298.8	279.0	252.3	238.3	252.3	248.8	213.9	194.2	183.7	182.5	180.2
42.5°	274.4	254.6	224.4	201.1	208.1	218.6	184.9	166.3	155.8	153.5	150.0
45°	256.9	236.0	202.3	175.6	161.6	183.7	158.1	134.9	129.1	124.4	122.1
47.5°	240.7	220.9	182.5	152.3	129.1	132.5	126.7	110.4	103.5	98.8	97.7
50°	226.7	205.8	165.1	130.2	107.0	97.7	102.3	87.2	81.4	76.7	74.4
52.5°	210.4	190.7	146.5	112.8	89.5	76.7	77.9	68.6	62.8	59.3	58.1
55°	197.6	177.9	131.4	98.8	79.1	62.8	55.8	53.5	50.0	47.7	46.5
57.5°	180.2	161.6	116.3	83.7	67.4	51.2	43.0	43.0	41.9	39.5	38.4
59°	169.7	153.5	107.0	75.6	61.6	44.2	38.4	39.5	38.4	36.0	34.9
60°	161.6	146.5	100.0	69.8	58.1	40.7	34.9	37.2	36.0	33.7	32.6
62.5°	143.0	132.5	86.0	58.1	51.2	32.6	29.1	31.4	31.4	30.2	29.1
65°	125.6	113.9	73.2	48.8	47.7	27.9	23.3	27.9	29.1	26.7	24.4
67.5°	109.3	97.7	63.9	39.5	44.2	22.1	17.4	23.3	31.4	24.4	22.1
70°	93.0	81.4	50.0	31.4	46.5	15.1	14.0	20.9	37.2	26.7	20.9
72.5°	72.1	62.8	34.9	23.3	50.0	10.5	10.5	17.4	41.9	29.1	19.8
75°	50.0	40.7	20.9	14.0	40.7	7.0	7.0	16.3	39.5	26.7	18.6
77.5°	29.1	22.1	7.0	1.2	20.9	0.0	1.2	11.6	27.9	16.3	8.1
80°	10.5	4.7	0.0	0.0	12.8	0.0	0.0	0.0	2.3	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	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	0.0



REPORT NUMBER: P324633

CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2
2.5°	6783.9	6940.9	7081.5	7294.3	7546.6	7837.2	8087.2	8355.8	8608.0	8712.7	8784.8
5°	5198.1	5392.2	5618.9	5931.7	6347.9	6860.6	7340.8	7883.7	8467.4	8759.2	9033.6
7.5°	3675.0	3872.7	4154.0	4486.6	4990.0	5600.3	6228.2	6978.1	7768.6	8230.2	8684.8
10°	2642.6	2885.6	3148.4	3603.0	4114.5	4693.5	5339.9	6177.0	7058.3	7569.8	8117.4
12.5°	1798.6	2075.3	2472.9	2982.1	3583.2	4150.6	4712.1	5510.8	6533.9	7040.8	7628.0
15°	1078.9	1232.4	1653.2	2242.7	2979.8	3686.7	4301.7	5102.7	6193.3	6814.1	7424.5
17.5°	665.0	735.9	965.0	1448.6	2222.9	3117.0	3959.9	4964.4	6242.1	6997.8	7651.2
20°	530.2	558.1	631.3	855.7	1473.0	2489.2	3575.1	4936.5	6640.9	7571.0	8272.1
22.5°	460.4	487.1	536.0	622.0	926.6	1863.7	3210.0	4962.1	7212.9	8430.2	9248.7
25°	405.8	429.0	475.5	546.4	679.0	1312.6	2819.4	5076.0	7958.1	9496.3	10365.9
27.5°	362.7	382.5	425.5	490.6	582.5	916.1	2376.4	5214.4	8841.7	10586.8	11444.8
30°	323.2	340.6	379.0	439.5	505.7	704.5	1890.4	5308.5	9726.5	11444.8	12215.7
32.5°	289.5	302.3	337.2	388.3	439.5	561.5	1437.0	5293.4	10383.4	12158.7	12770.2
35°	254.6	267.4	297.6	341.8	382.5	463.9	1130.1	5010.9	10955.4	12899.3	13405.0
37.5°	216.2	232.5	261.6	301.1	329.0	408.1	913.8	4670.3	11535.5	13745.7	14113.1
40°	183.7	200.0	225.5	268.6	286.0	387.2	702.2	4255.2	12187.8	14692.0	14889.7
42.5°	152.3	167.4	194.2	231.4	269.7	333.7	519.7	3780.8	12814.4	15501.2	15597.7
45°	123.2	138.4	166.3	203.5	288.3	276.7	402.3	3272.8	13320.2	16174.4	16205.8
47.5°	97.7	111.6	140.7	191.8	268.6	220.9	287.2	2874.0	13744.5	16699.9	16617.3
50°	75.6	87.2	117.4	219.7	234.8	182.5	217.4	2741.5	14124.7	17025.4	16811.5
52.5°	59.3	69.8	96.5	205.8	182.5	151.1	182.5	2865.9	14645.5	17295.2	16920.8
55°	47.7	58.1	75.6	117.4	124.4	127.9	155.8	2982.1	15544.2	17927.6	17566.0
57.5°	39.5	50.0	61.6	82.5	94.2	108.1	138.4	2994.9	16603.4	18978.6	18636.8
59°	36.0	45.3	55.8	73.2	82.5	98.8	130.2	2925.2	16976.6	19361.1	19190.2
60°	33.7	43.0	52.3	67.4	76.7	93.0	125.6	2858.9	16992.9	19347.2	19426.2
62.5°	29.1	38.4	46.5	57.0	65.1	79.1	112.8	2613.6	16304.6	18713.6	19284.4
65°	25.6	33.7	41.9	48.8	55.8	70.9	102.3	2166.0	15129.2	17691.6	18313.6
67.5°	23.3	29.1	38.4	43.0	50.0	62.8	90.7	1544.0	13660.8	16441.8	16845.2
70°	20.9	27.9	34.9	39.5	45.3	54.6	77.9	887.1	11535.5	14611.8	14899.0
72.5°	19.8	26.7	31.4	37.2	40.7	48.8	70.9	417.4	8446.4	11705.3	12455.2
75°	17.4	24.4	29.1	34.9	38.4	44.2	60.5	200.0	5617.8	8470.9	9323.1
77.5°	10.5	19.8	26.7	31.4	33.7	38.4	50.0	115.1	3585.5	5863.1	6906.0
80°	0.0	7.0	19.8	26.7	29.1	32.6	38.4	90.7	1918.3	3349.5	4020.3
82.5°	0.0	0.0	14.0	20.9	19.8	22.1	29.1	57.0	865.0	2189.2	2467.1
85°	0.0	0.0	4.7	16.3	14.0	10.5	19.8	19.8	189.5	1108.0	1382.4
87.5°	0.0	0.0	0.0	1.2	7.0	4.7	8.1	2.3	1.2	82.5	334.8
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: P324633

CATALOG NUMBER: GLEON-SA9A-830-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2	7994.2
2.5°	9037.1	9123.1	9268.4	9337.0	9303.3	9160.3	8989.4	8815.0	8712.7	8753.4
5°	9592.8	10035.7	10291.5	10376.4	10234.6	9913.7	9494.0	8940.6	8744.1	8690.6
7.5°	9592.8	10426.4	10954.2	11047.2	10731.0	10102.0	9314.9	8451.1	8163.9	8059.3
10°	9255.6	10390.3	11126.3	11273.9	10832.1	9891.6	8837.1	7851.2	7510.5	7402.4
12.5°	8875.5	10097.4	10872.8	11076.3	10713.6	9682.3	8505.7	7445.4	7044.3	6950.2
15°	8641.8	9737.0	10378.7	10526.4	10372.9	9560.2	8426.7	7323.4	6851.3	6760.6
17.5°	8725.5	9457.9	9689.3	9775.3	9878.8	9517.2	8641.8	7590.8	6993.2	6907.1
20°	9040.5	9163.8	9044.0	9152.2	9431.2	9559.1	9154.5	8237.2	7519.8	7404.7
22.5°	9575.4	9011.5	8675.5	8718.5	9058.0	9697.4	9938.1	9160.3	8332.5	8188.3
25°	10198.5	9134.7	8470.9	8432.5	8781.3	9880.0	10654.3	10164.8	9294.0	9134.7
27.5°	10982.1	9411.4	8429.0	8390.6	8684.8	10050.9	11249.5	11157.7	10306.6	10034.6
30°	11586.7	9683.5	8553.4	8465.0	8781.3	10169.5	11727.4	12000.6	11113.5	10933.3
32.5°	12020.3	10004.4	8755.7	8627.8	9053.3	10374.1	12095.9	12772.6	11859.9	11586.7
35°	12350.5	10353.1	9082.4	8872.0	9427.7	10684.5	12441.2	13594.5	12654.0	12355.2
37.5°	12659.8	10842.6	9592.8	9341.7	10014.8	11184.4	12806.3	14527.0	13542.2	13185.3
40°	13091.1	11397.2	10379.9	10156.7	11001.9	11865.7	13262.0	15498.9	14552.5	14103.8
42.5°	13522.5	11992.4	11185.6	11246.0	12233.1	12693.5	13850.3	16526.7	15550.1	15071.1
45°	13916.6	12606.3	12333.1	12612.1	13376.0	13601.5	14435.1	17120.8	16346.5	15883.7
47.5°	14267.7	13373.6	13473.6	14216.5	14675.8	14423.5	14872.3	17633.5	16939.4	16531.3
50°	14675.8	14366.5	14976.9	16027.9	16172.1	15167.6	15269.9	18240.4	17632.3	17304.5
52.5°	15122.2	15412.9	16641.8	17568.4	17521.9	15975.6	15669.8	18920.5	18582.2	18274.1
55°	15629.1	16258.1	18107.8	19010.0	18970.5	16877.8	16332.5	19761.1	19772.7	19493.7
57.5°	16381.3	16985.9	19103.0	20176.1	20242.4	17919.5	17455.6	20702.8	20849.3	20663.3
59°	16920.8	17457.9	19497.2	20663.3	20933.0	18725.2	18276.4	21249.2	21152.7	20983.0
60°	17320.7	17757.9	19692.5	20917.9	21334.1	19271.6	18882.1	21570.1	21188.8	20983.0
62.5°	18310.1	18411.3	20044.8	21206.2	21795.7	20485.4	20586.5	22116.5	20938.8	20602.8
65°	18771.7	18824.0	20040.1	20690.0	21349.2	21430.6	22132.8	22132.8	20328.4	19812.2
67.5°	18578.7	18326.4	19046.1	18978.6	19636.7	20869.1	22714.1	21321.3	19161.2	18493.8
70°	17009.2	16038.4	15718.6	15747.7	16251.1	18152.0	21563.1	18933.3	16952.2	16172.1
72.5°	14152.6	11823.9	11034.4	11935.5	12066.8	13950.3	18376.4	14258.4	12501.7	11770.4
75°	11383.2	8334.8	7051.3	8002.3	8225.5	10209.0	14215.4	8880.1	7302.4	6732.7
77.5°	8177.9	5982.9	5059.7	4993.5	5281.8	6474.6	10086.9	4469.1	3727.4	3478.6
80°	4645.8	3937.8	4240.1	4000.6	4145.9	4048.2	4792.3	1960.2	1605.6	1500.9
82.5°	2804.2	2327.6	2520.6	2098.5	2655.4	2312.5	1846.2	627.8	545.3	518.5
85°	1824.2	1271.9	662.7	444.1	915.0	1477.7	412.7	170.9	131.4	104.6
87.5°	629.0	324.4	32.6	14.0	97.7	275.5	15.1	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
 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

REPORT NUMBER: SP1-2408-195-9

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 $\text{W}^\wedge/\text{nm}$	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 W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /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 $\text{W}^\wedge/\text{nm}$	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)