

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: P324338

Luminaire Tested: **GLEON-SA4D-830-U-SLL-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P324338
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-27)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA4D-830-U-SLL-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18438 lumens
Efficiency: N/A
Efficacy: 71.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

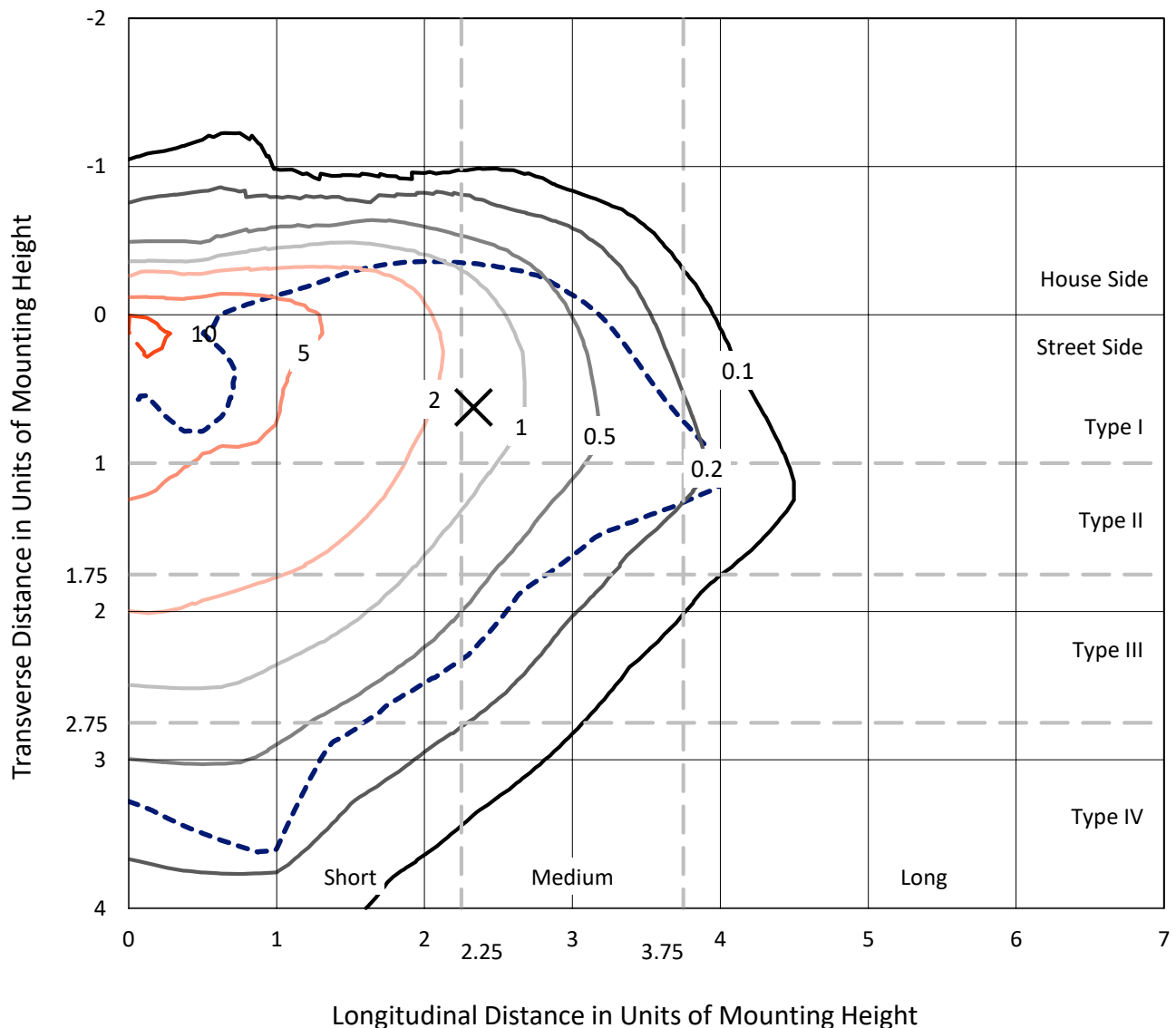
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P324338
 CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

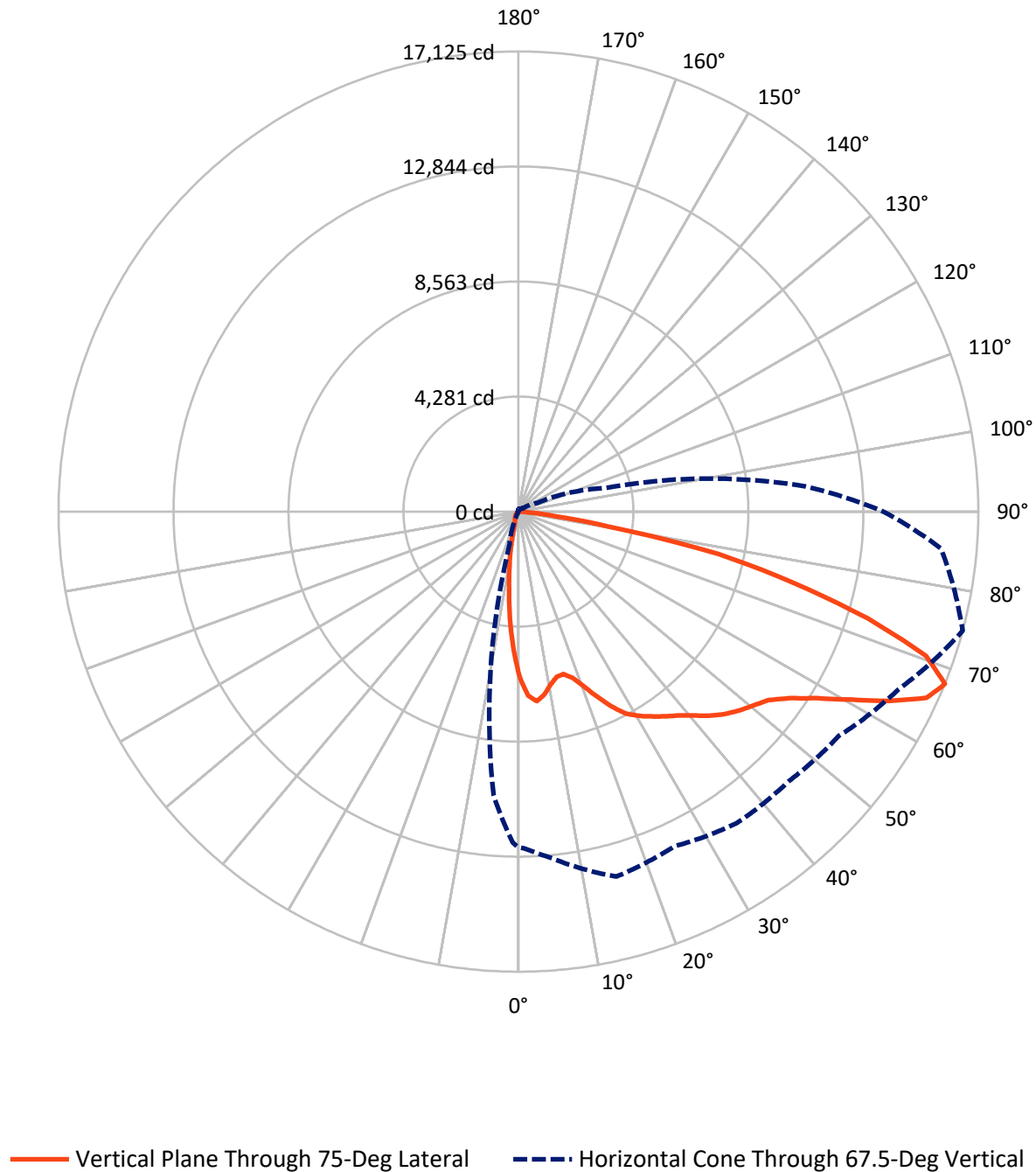
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P324338
CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P324338

CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2766.8	0.0	2766.8
	% Fixture	15.0	0.0	15.0
Street Side	Lumens	15671.2	0.0	15671.2
	% Fixture	85.0	0.0	85.0
Total	Lumens	18438.0	0.0	18438.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	469.2	2.5
10°-20°	923.9	5.0
20°-30°	1307.0	7.1
30°-40°	1921.7	10.4
40°-50°	2762.1	15.0
50°-60°	3888.3	21.1
60°-70°	4541.2	24.6
70°-80°	2316.8	12.6
80°-90°	307.8	1.7
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°	18438.0	100.0
0°-180°	18438.0	100.0

Coefficient of Utilization



REPORT NUMBER: P324338

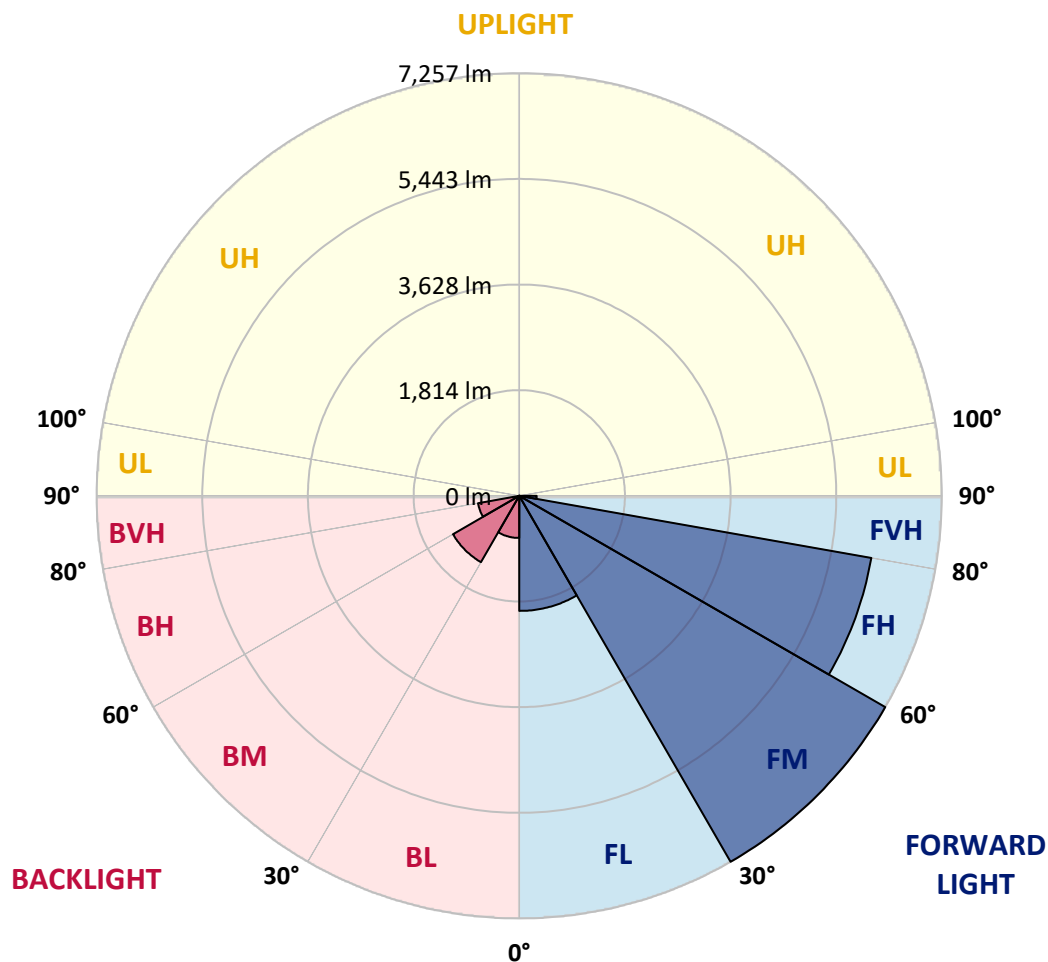
CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1976.6	10.7			
FM	(30°-60°)	7256.9	39.4			
FH	(60°-80°)	6139.3	33.3			G3/7500
FVH	(80°-90°)	298.4	1.6			G3/500
BL	(0°-30°)	723.6	3.9	B2/1000		
BM	(30°-60°)	1315.3	7.1	B2/2500		
BH	(60°-80°)	718.7	3.9	B2/1000		G2/1000
BVH	(80°-90°)	9.3	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium



REPORT NUMBER: P324338

CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6
2.5°	6705.3	6715.8	6770.0	6895.7	7032.9	7043.3	7135.9	7040.7	7008.4	6854.7	6695.7
5°	6756.0	6796.2	6982.2	7351.7	7672.2	7775.3	7848.6	7661.7	7465.2	7089.6	6688.7
7.5°	6348.1	6415.3	6707.9	7401.4	7974.4	8227.7	8275.8	7983.2	7501.9	6883.5	6280.8
10°	5825.8	5902.6	6255.5	7108.0	7894.9	8329.0	8395.4	8012.0	7320.2	6549.9	5839.8
12.5°	5403.0	5493.0	5853.7	6777.8	7621.6	8101.9	8233.0	7915.0	7163.0	6313.2	5538.4
15°	5208.3	5311.3	5690.4	6564.7	7318.5	7696.7	7805.0	7667.8	7075.7	6275.6	5468.5
17.5°	5320.1	5431.9	5823.2	6583.0	7033.7	7195.3	7282.7	7338.6	7075.7	6501.8	5672.9
20°	5778.6	5899.1	6313.2	6769.1	6797.9	6737.6	6831.1	7027.6	7157.8	6931.5	6163.8
22.5°	6412.7	6554.2	7021.5	7087.9	6682.6	6454.7	6466.9	6775.2	7307.1	7476.6	6845.1
25°	7185.7	7358.7	7833.8	7563.0	6730.7	6286.1	6281.7	6567.3	7453.0	8022.5	7604.1
27.5°	7953.5	8143.9	8561.4	8143.0	6928.9	6255.5	6246.8	6504.4	7595.4	8508.1	8433.0
30°	8597.2	8782.3	9142.2	8563.1	7142.9	6327.1	6285.2	6571.7	7680.1	8823.4	9037.4
32.5°	9121.2	9269.7	9560.6	8852.2	7371.8	6466.0	6375.2	6751.6	7824.2	9089.8	9592.9
35°	9697.7	9854.0	9970.2	9127.3	7628.5	6666.0	6535.9	7037.2	8046.0	9360.6	10201.7
37.5°	10355.4	10510.9	10496.9	9378.9	7954.3	6997.1	6914.1	7489.7	8391.0	9628.7	10881.2
40°	10999.1	11158.1	11044.5	9654.0	8336.9	7542.9	7481.8	8169.2	8853.1	9972.0	11677.8
42.5°	11601.8	11773.8	11531.0	9914.3	8792.8	8231.2	8336.0	9044.4	9431.3	10394.7	12364.3
45°	12087.4	12263.0	11938.9	10167.6	9273.2	9066.2	9381.5	10013.9	10126.6	10751.9	12828.1
47.5°	12440.3	12606.2	12221.9	10420.9	9888.1	10087.2	10636.6	11030.6	10754.5	11062.0	13157.4
50°	12665.6	12794.9	12304.9	10738.0	10695.2	11278.6	11944.2	12136.3	11345.9	11341.5	13557.4
52.5°	12808.9	12867.4	12366.0	11069.0	11537.1	12575.7	13224.6	13284.9	11954.6	11648.9	14096.3
55°	13302.3	13349.5	12799.2	11469.9	12233.3	13712.0	14382.8	14326.9	12643.8	12250.7	14732.1
57.5°	14144.3	14194.1	13694.5	12046.4	12796.6	14414.2	15222.1	15322.6	13451.7	13096.2	15413.4
60°	14567.1	14659.7	14481.5	12776.5	13342.5	14863.2	15794.2	16114.8	14461.4	14210.7	16073.7
62.5°	14183.6	14318.1	14576.7	13586.2	13884.9	15110.3	15972.4	16398.7	15495.5	15509.5	16480.8
65°	13418.5	13525.9	13964.4	14029.9	14199.4	15079.8	15532.2	16002.1	16128.8	16702.6	16458.9
67.5°	12494.4	12534.6	12906.7	14064.8	13743.4	14160.9	14209.8	14557.5	15628.3	17125.3	15797.7
70°	11164.2	11186.0	11510.9	12895.3	11810.5	11902.2	11829.7	11900.5	13436.0	16095.6	14128.6
72.5°	8985.0	9040.0	9502.0	10709.1	8604.2	8339.5	8909.0	8877.5	10347.5	13598.4	10493.4
75°	6615.4	6710.6	7408.4	8626.0	6038.9	5462.4	5878.2	5989.1	7356.0	10518.7	6562.1
77.5°	4631.8	4702.5	5378.6	6341.1	4370.6	3906.0	3755.8	3887.6	4855.4	7609.3	3305.9
80°	2668.3	2694.5	3126.0	3661.4	2945.2	3369.7	3052.6	3143.5	2909.4	3385.4	1421.9
82.5°	1746.0	1750.4	1918.9	2179.2	1834.2	2131.2	1577.4	2016.8	1789.7	1359.9	462.9
85°	943.3	948.5	1112.8	1546.8	1038.5	586.9	345.0	708.4	1106.6	311.8	126.6
87.5°	103.9	95.2	335.4	562.5	288.2	53.3	18.3	79.5	177.3	20.1	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

REPORT NUMBER: P324338

CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6
2.5°	6614.5	6542.0	6361.2	6169.9	6016.2	5872.1	5727.1	5549.8	5412.6	5384.7	5339.3
5°	6473.0	6243.3	5864.2	5483.4	5176.8	4789.9	4544.5	4353.2	4166.3	4154.9	4117.4
7.5°	5978.6	5676.4	5142.8	4616.1	4184.6	3816.0	3443.9	3195.0	2999.4	2930.4	2889.3
10°	5503.5	5163.7	4497.3	3896.4	3511.2	3185.4	2923.4	2663.1	2427.3	2264.8	2191.4
12.5°	5171.6	4796.0	4061.5	3543.5	3267.5	2958.3	2638.6	2313.7	2042.1	1846.4	1726.8
15°	5043.2	4642.3	3915.6	3403.8	3063.1	2671.8	2263.1	1891.9	1590.5	1413.2	1305.8
17.5°	5196.0	4729.6	3904.2	3233.4	2757.4	2270.9	1819.4	1380.9	1097.0	962.5	893.5
20°	5583.8	5007.4	3899.9	3024.7	2394.1	1795.8	1232.4	908.4	736.3	661.2	628.9
22.5°	6132.4	5362.0	3934.8	2818.6	2015.9	1283.1	850.7	667.3	579.1	538.9	520.6
25°	6838.1	5859.8	4033.5	2631.6	1660.4	957.3	662.9	559.0	497.0	465.5	452.4
27.5°	7590.1	6432.8	4187.2	2469.2	1371.3	763.4	567.7	478.6	434.1	412.3	400.0
30°	8210.2	7096.6	4342.7	2288.4	1161.7	665.6	519.7	436.7	385.2	371.2	359.9
32.5°	8752.6	7598.8	4452.7	2125.1	1024.5	591.3	469.9	390.4	355.5	328.4	316.2
35°	9314.3	8017.2	4449.3	2010.6	930.2	535.4	428.0	349.4	307.4	276.0	266.4
37.5°	9922.2	8489.7	4373.3	1912.8	889.2	490.9	404.4	327.5	285.6	254.2	241.9
40°	10634.0	8985.9	4295.5	1821.1	877.8	455.1	387.8	310.1	265.5	235.0	222.7
42.5°	11327.5	9433.0	4227.4	1753.0	828.9	454.2	373.0	297.0	249.8	220.1	206.1
45°	11882.1	9849.7	4214.3	1711.9	777.4	469.9	365.1	288.2	237.6	207.9	194.8
47.5°	12343.3	10302.1	4298.2	1683.1	728.4	428.9	384.3	282.1	226.2	197.4	182.5
50°	12891.8	10857.6	4495.5	1635.9	676.9	386.1	440.2	283.9	216.6	186.9	171.2
52.5°	13657.0	11626.2	4785.5	1556.5	606.2	346.8	433.2	285.6	206.1	175.6	159.8
55°	14514.7	12586.1	5097.3	1424.6	507.5	295.2	371.2	273.4	186.0	163.3	148.5
57.5°	15416.0	13456.9	5282.5	1267.3	403.5	255.0	297.0	248.9	164.2	146.7	137.1
60°	15557.5	13788.0	5197.8	1074.3	320.5	221.9	220.1	253.3	146.7	129.3	122.3
62.5°	15205.5	13372.2	4788.1	902.3	268.1	194.8	180.8	221.0	132.8	115.3	108.3
65°	14528.6	12248.1	4124.3	813.2	248.9	166.8	150.2	155.5	116.2	100.4	94.3
67.5°	13587.1	10747.6	3386.3	762.5	246.3	143.2	128.4	117.9	100.4	87.3	82.1
70°	11662.0	8953.5	2701.5	734.6	239.3	120.5	108.3	96.1	83.8	74.2	69.9
72.5°	8583.2	6344.6	2101.5	704.0	241.1	96.1	94.3	79.5	67.3	57.6	55.9
75°	4959.3	3624.7	1378.3	570.4	229.7	74.2	78.6	55.9	47.2	40.2	40.2
77.5°	2643.0	2210.7	524.9	237.6	83.8	47.2	44.5	33.2	29.7	24.5	23.6
80°	1152.1	973.0	158.1	66.4	46.3	25.3	16.6	14.8	13.1	10.5	9.6
82.5°	407.9	352.0	51.5	32.3	20.1	0.0	0.0	0.0	0.0	0.0	0.0
85°	92.6	66.4	0.0	7.9	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: P324338

CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6
2.5°	5246.7	5227.5	5113.9	5118.3	5138.4	5167.2	5099.1	5130.5	5215.3	5296.5	5327.1
5°	4057.1	4061.5	3992.5	4035.2	4073.7	4099.9	3989.8	3991.6	4058.8	4150.5	4198.6
7.5°	2858.7	2851.8	2855.2	2957.4	3029.9	2977.5	3018.6	2876.2	2884.9	2950.4	2901.5
10°	2125.1	2029.0	1974.8	2051.7	2131.2	2102.3	2031.6	1985.3	2017.6	2090.1	2084.9
12.5°	1670.0	1532.0	1450.8	1395.7	1461.2	1407.1	1405.3	1365.2	1321.5	1329.4	1445.5
15°	1256.0	1155.5	1059.5	971.3	969.5	951.2	857.7	752.9	744.2	749.4	809.7
17.5°	863.8	829.8	790.5	714.5	694.4	617.5	526.7	484.8	463.8	473.4	493.5
20°	607.0	593.9	598.3	557.2	528.4	455.1	401.8	385.2	381.7	391.3	400.9
22.5°	503.1	479.5	476.9	458.6	429.7	376.4	347.6	338.0	333.7	342.4	349.4
25°	440.2	416.6	407.0	395.7	365.1	328.4	310.9	302.2	297.8	303.1	307.4
27.5°	387.8	366.0	357.2	349.4	319.7	293.5	279.5	271.6	268.1	269.9	274.3
30°	348.5	329.3	317.9	308.3	283.0	264.6	252.4	244.6	241.1	241.1	245.4
32.5°	307.4	297.0	286.5	274.3	250.7	238.4	226.2	217.5	214.0	214.9	218.4
35°	255.9	252.4	255.0	243.7	223.6	213.1	200.9	191.3	188.7	189.5	193.0
37.5°	227.1	211.4	221.0	214.9	203.5	189.5	173.8	165.1	160.7	163.3	165.1
40°	208.7	189.5	182.5	188.7	186.9	164.2	150.2	141.5	138.0	138.9	140.6
42.5°	193.0	170.3	154.6	153.7	164.2	143.2	128.4	120.5	116.2	116.2	117.9
45°	178.2	153.7	134.5	119.7	138.0	121.4	107.4	100.4	95.2	95.2	96.1
47.5°	166.8	139.7	117.0	97.8	103.9	99.6	88.2	81.2	76.0	76.0	76.9
50°	156.3	125.8	101.3	82.1	77.7	82.1	71.6	63.8	60.3	59.4	61.1
52.5°	145.0	111.8	86.5	69.9	61.1	62.0	55.9	50.7	46.3	46.3	48.0
55°	133.6	100.4	75.1	59.4	50.7	46.3	44.5	41.1	37.6	37.6	39.3
57.5°	122.3	88.2	63.8	48.9	40.2	36.7	36.7	34.1	31.4	31.4	33.2
60°	111.8	76.0	52.4	40.2	31.4	30.6	31.4	28.8	27.1	27.1	28.8
62.5°	99.6	64.6	42.8	33.2	25.3	24.5	27.1	25.3	23.6	23.6	25.3
65°	84.7	55.0	34.1	25.3	19.2	19.2	22.7	21.0	19.2	19.2	21.0
67.5°	71.6	46.3	26.2	18.3	14.0	14.8	19.2	17.5	16.6	16.6	18.3
70°	59.4	35.8	18.3	11.4	7.9	11.4	14.8	14.8	14.8	14.8	16.6
72.5°	44.5	24.5	10.5	4.4	3.5	7.9	12.2	14.0	13.1	13.1	15.7
75°	28.8	14.0	3.5	0.0	0.0	4.4	9.6	11.4	11.4	10.5	13.1
77.5°	16.6	4.4	0.0	0.0	0.0	0.0	6.1	5.2	4.4	3.5	6.1
80°	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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: P324338

CATALOG NUMBER: GLEON-SA4D-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6	6185.6
2.5°	5450.2	5553.3	5698.3	5852.0	6088.7	6276.5	6460.8	6618.9	6680.0	6705.3
5°	4313.9	4465.0	4677.2	4949.7	5376.8	5761.1	6150.7	6542.9	6713.2	6756.0
7.5°	3095.4	3288.5	3558.4	3899.9	4400.3	4898.2	5442.3	6017.9	6281.7	6348.1
10°	2291.0	2526.8	2836.0	3195.9	3673.6	4185.5	4778.5	5436.2	5737.6	5825.8
12.5°	1625.5	1944.3	2358.3	2795.9	3209.9	3666.7	4266.7	4991.7	5307.8	5403.0
15°	954.7	1263.0	1753.0	2339.0	2869.2	3332.1	3941.8	4763.7	5112.2	5208.3
17.5°	547.6	701.4	1071.7	1725.0	2444.7	3085.8	3839.6	4820.5	5231.0	5320.1
20°	418.4	467.3	617.5	1111.0	1948.6	2843.9	3839.6	5141.9	5647.6	5778.6
22.5°	366.0	401.8	462.9	662.9	1434.2	2584.5	3884.1	5606.5	6267.7	6412.7
25°	324.9	357.2	409.6	498.7	978.2	2276.2	3989.8	6176.9	6997.9	7185.7
27.5°	290.9	321.4	368.6	436.7	669.0	1904.1	4132.2	6845.9	7803.2	7953.5
30°	260.3	289.1	331.9	379.9	516.2	1482.2	4253.6	7476.6	8435.6	8597.2
32.5°	231.5	257.7	296.1	331.9	422.7	1096.2	4266.7	7976.2	8960.5	9121.2
35°	204.4	228.0	262.9	290.9	350.2	865.6	4063.2	8409.4	9485.5	9697.7
37.5°	178.2	200.9	231.5	252.4	308.3	705.7	3752.3	8892.4	10158.9	10355.4
40°	153.7	173.8	205.3	219.2	291.7	542.4	3414.2	9399.0	10819.2	10999.1
42.5°	131.0	150.2	180.8	207.9	255.9	405.3	3049.1	9874.1	11413.1	11601.8
45°	109.2	129.3	159.8	220.1	212.2	303.1	2658.7	10189.4	11882.1	12087.4
47.5°	88.2	110.9	152.9	209.6	169.4	222.7	2349.5	10488.2	12237.6	12440.3
50°	70.7	93.5	172.1	186.9	138.9	170.3	2220.3	10755.4	12470.8	12665.6
52.5°	57.6	78.6	162.5	143.2	116.2	140.6	2290.1	11188.6	12686.6	12808.9
55°	48.0	62.0	97.8	99.6	98.7	119.7	2376.6	11810.5	13244.7	13302.3
57.5°	41.9	49.8	68.1	76.9	83.0	106.6	2378.4	12703.2	14108.5	14144.3
60°	35.8	43.7	56.8	62.0	71.6	95.2	2291.9	13015.0	14448.3	14567.1
62.5°	31.4	38.4	47.2	51.5	60.3	85.6	2089.2	12563.4	13981.9	14183.6
65°	27.9	34.9	39.3	43.7	53.3	76.9	1755.6	11660.3	13208.0	13418.5
67.5°	24.5	30.6	34.9	39.3	48.0	68.1	1292.7	10611.3	12319.7	12494.4
70°	21.8	27.1	31.4	34.9	41.9	57.6	784.3	9004.2	11091.7	11164.2
72.5°	21.0	24.5	28.8	31.4	36.7	50.7	397.4	6617.1	8867.1	8985.0
75°	18.3	21.8	26.2	27.9	32.3	43.7	161.6	4346.2	6425.8	6615.4
77.5°	14.8	20.1	23.6	25.3	27.9	35.8	82.1	2777.5	4509.5	4631.8
80°	5.2	14.8	20.1	21.0	23.6	26.2	54.2	1520.6	2615.9	2668.3
82.5°	0.0	9.6	15.7	14.8	16.6	20.1	34.9	723.2	1726.8	1746.0
85°	0.0	4.4	12.2	9.6	7.0	14.0	12.2	158.1	905.7	943.3
87.5°	0.0	0.0	0.9	4.4	3.5	5.2	1.7	0.9	82.1	103.9
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.

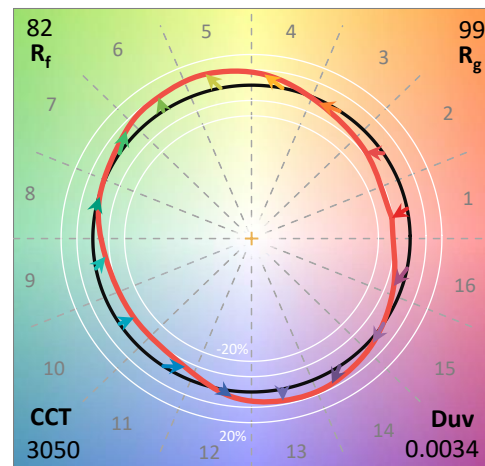
Test Information

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 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

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 $\text{W}^{\wedge}/\text{nm}$	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

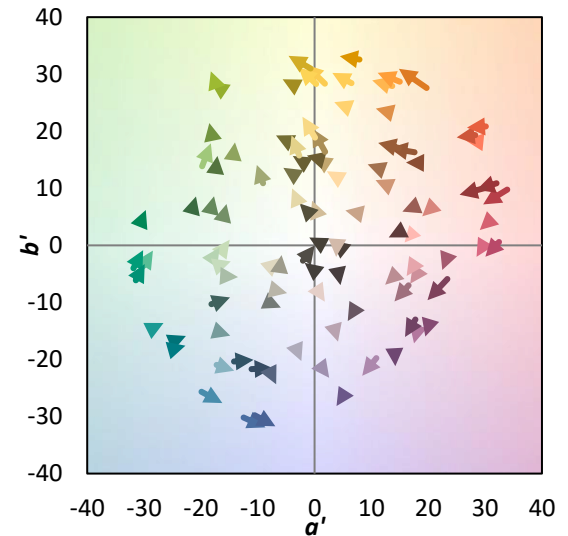
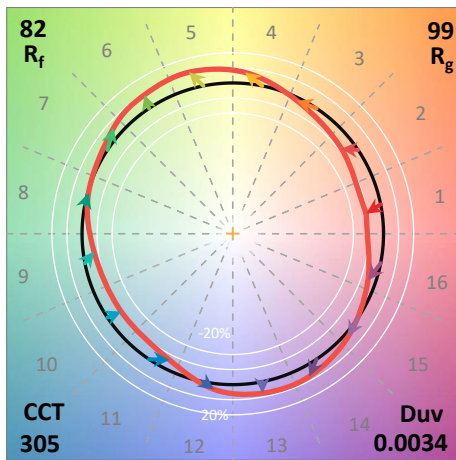
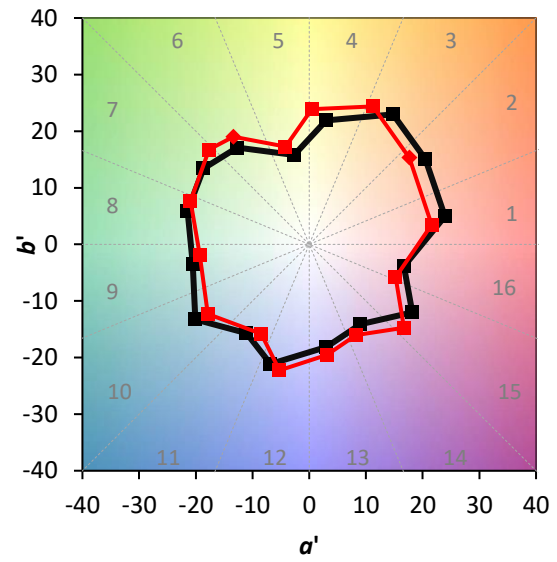
TM-30-18

Summary

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



Color Vector Graphics

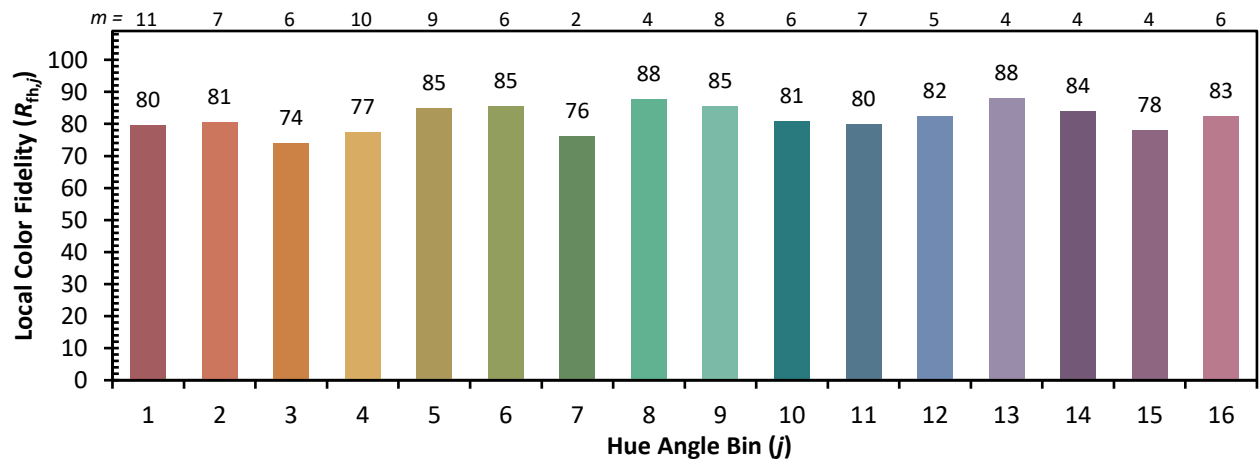
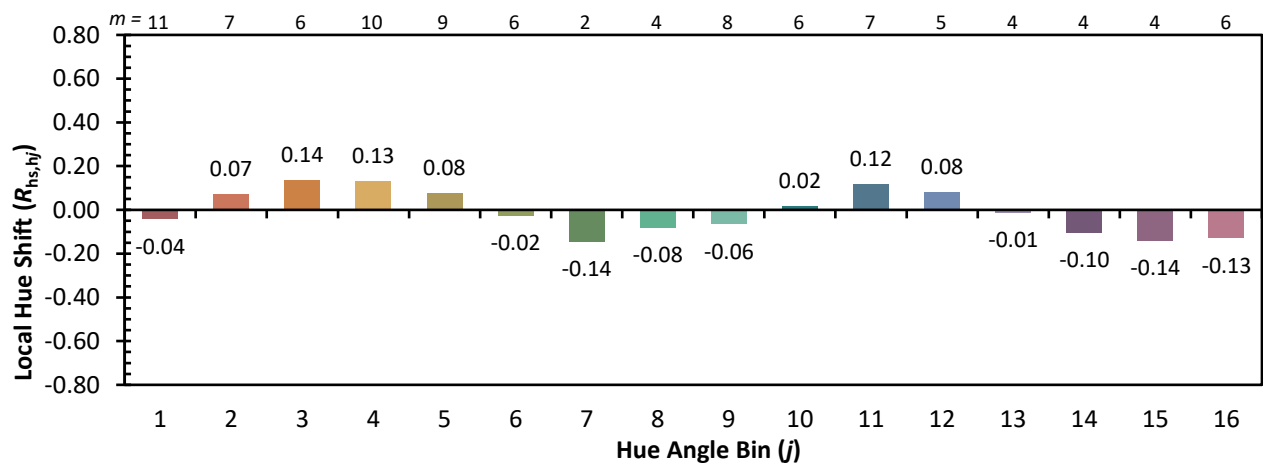


Individual Sample Fidelity Index ($R_{f,i}$)

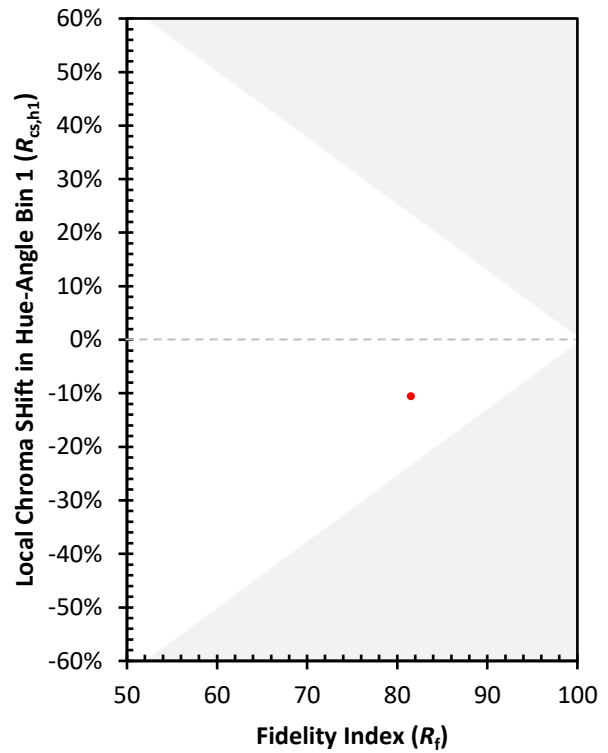
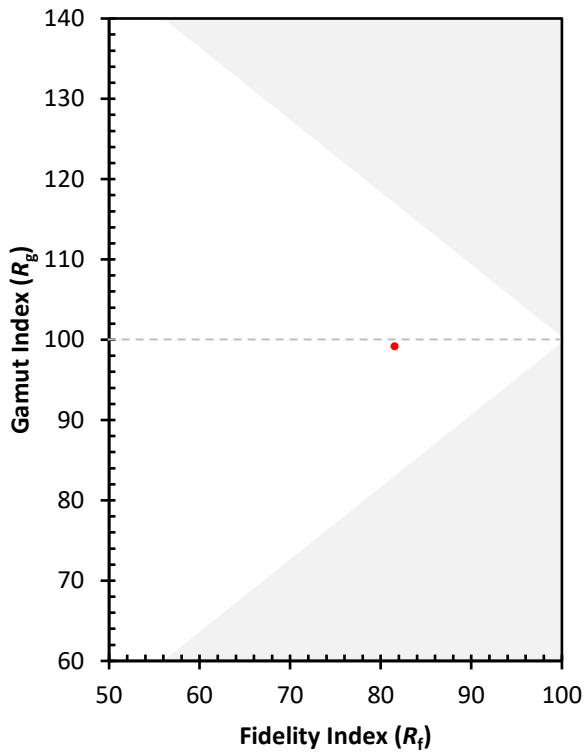
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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)