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

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: P317619

Luminaire Tested: **GLEON-SA5D-830-U-T2R**

Issue Date: 3/3/2020

Report Generated By E0585644

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

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P317619
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-8)
Test Lab:	INNOVATION CENTER
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	GLEON-SA5D-830-U-T2R
Description:	GALLEON AREA AND ROADWAY LUMINAIRE
	(5) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	32104 lumens
Efficiency:	N/A
Efficacy:	100.3 lumens/watt
Luminous Opening:	Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification:	Type II - Short
BUG Rating:	B3 - U0 - G4

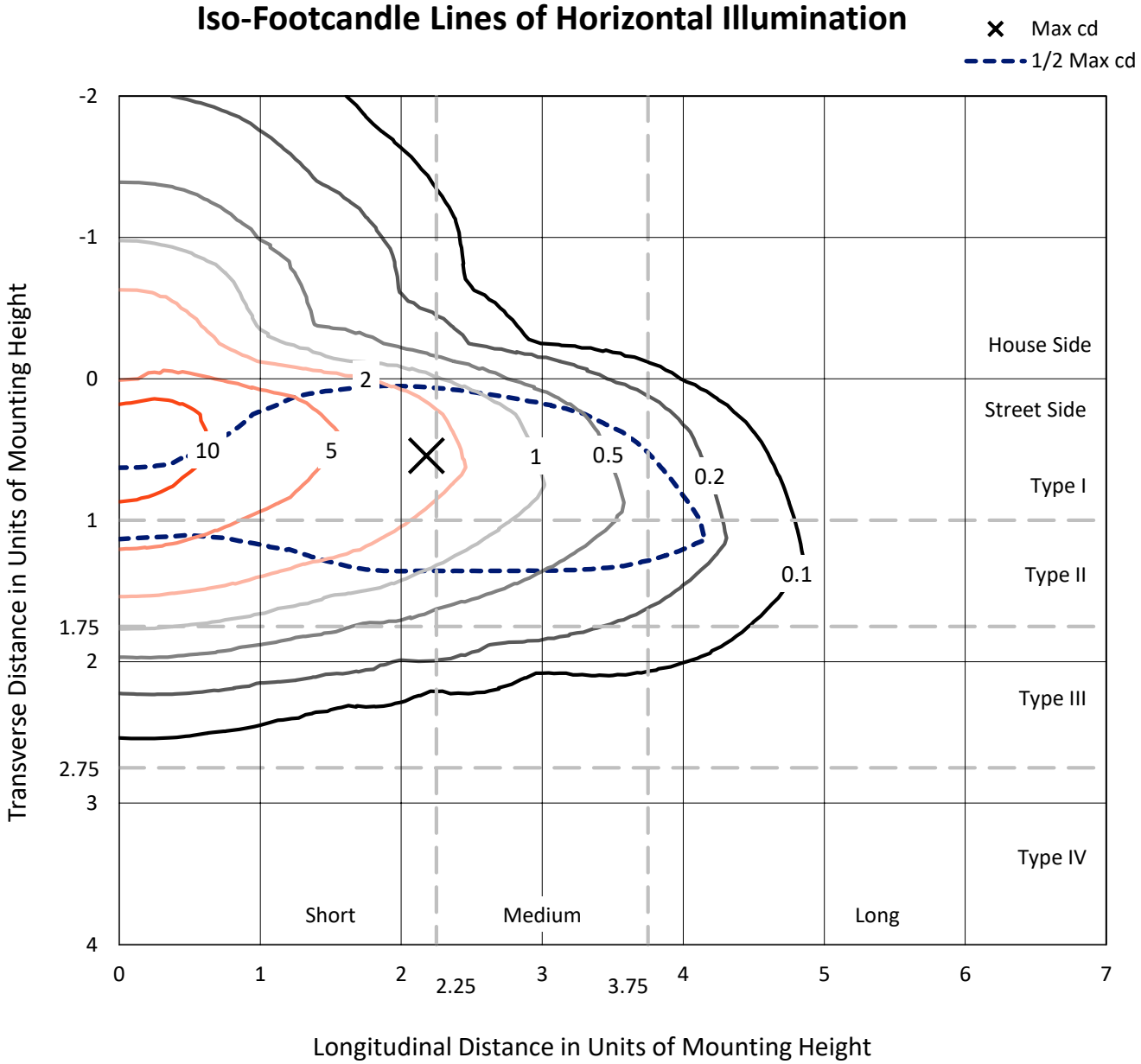
Input Watts (W):	320
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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

Scaled Data Report

REPORT NUMBER: P317619
CATALOG NUMBER: GLEON-SA5D-830-U-T2R

Iso-Footcandle Lines of Horizontal Illumination



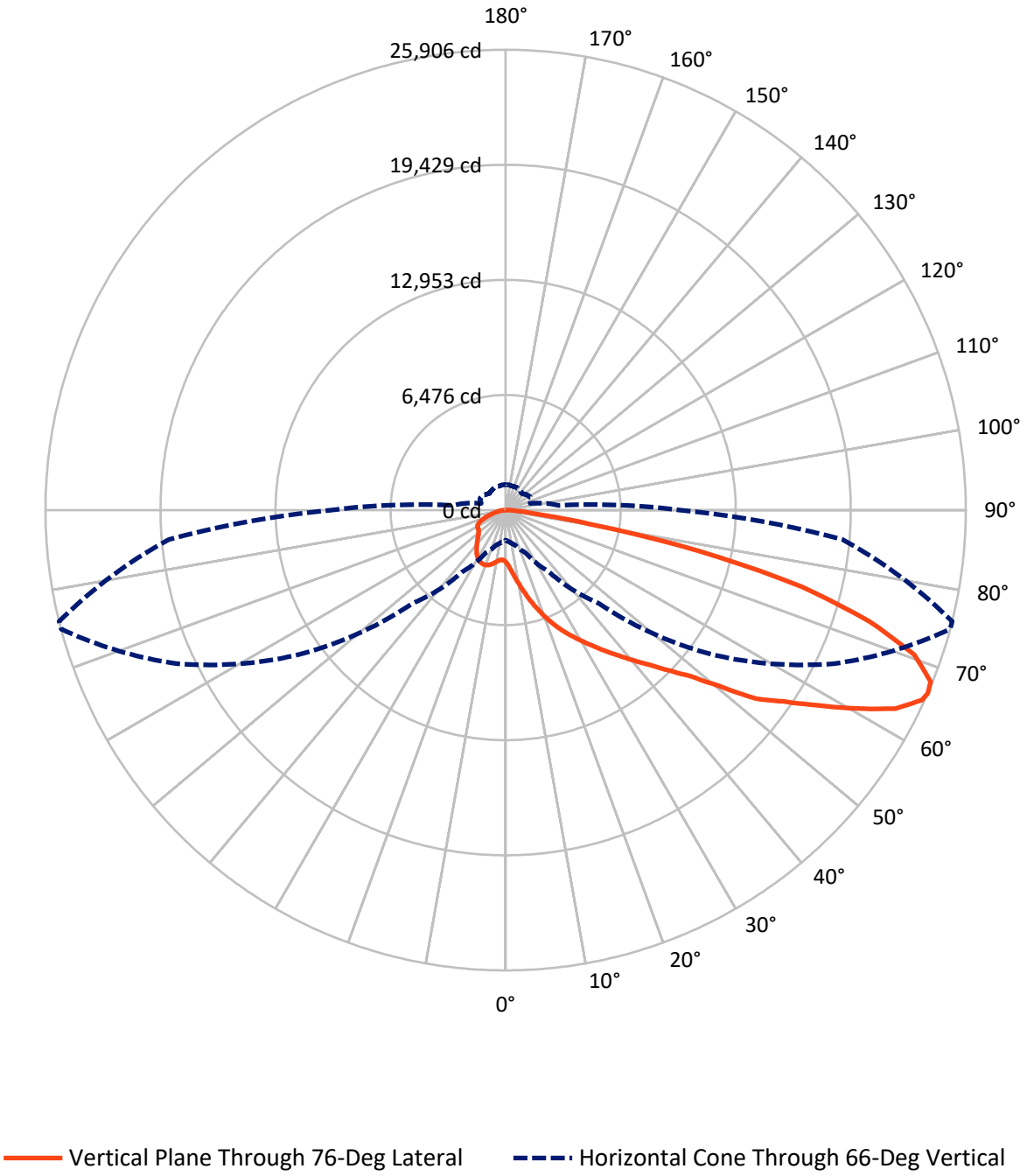
Based on 25 foot mounting height. Maximum calculated value = 12.4 fc
Type II - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P317619
CATALOG NUMBER: GLEON-SA5D-830-U-T2R

Luminous Intensity Polar Plot



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

Scaled Data Report

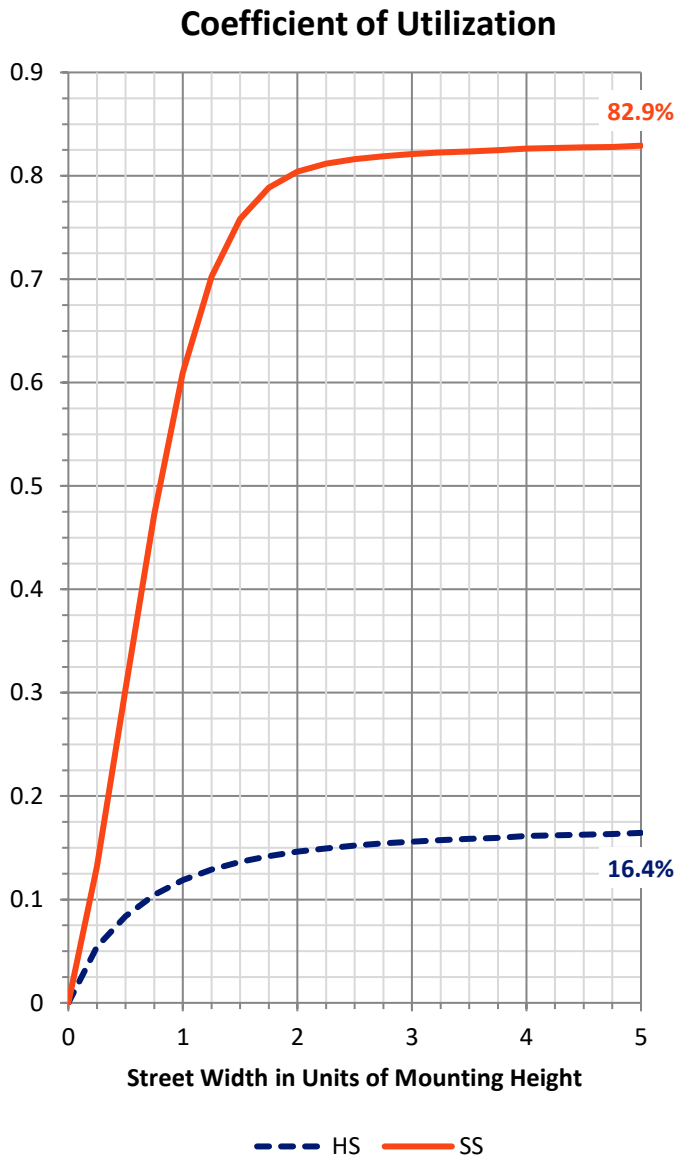
REPORT NUMBER: P317619
CATALOG NUMBER: GLEON-SA5D-830-U-T2R

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5402.0	0.0	5402.0
	% Fixture	16.8	0.0	16.8
Street Side	Lumens	26702.0	0.0	26702.0
	% Fixture	83.2	0.0	83.2
Total	Lumens	32104.0	0.0	32104.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	354.5	1.1
10°-20°	1400.0	4.4
20°-30°	2720.6	8.5
30°-40°	4440.7	13.8
40°-50°	6067.0	18.9
50°-60°	7066.8	22.0
60°-70°	6335.6	19.7
70°-80°	3201.7	10.0
80°-90°	517.0	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°	32104.0	100.0
0°-180°	32104.0	100.0



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

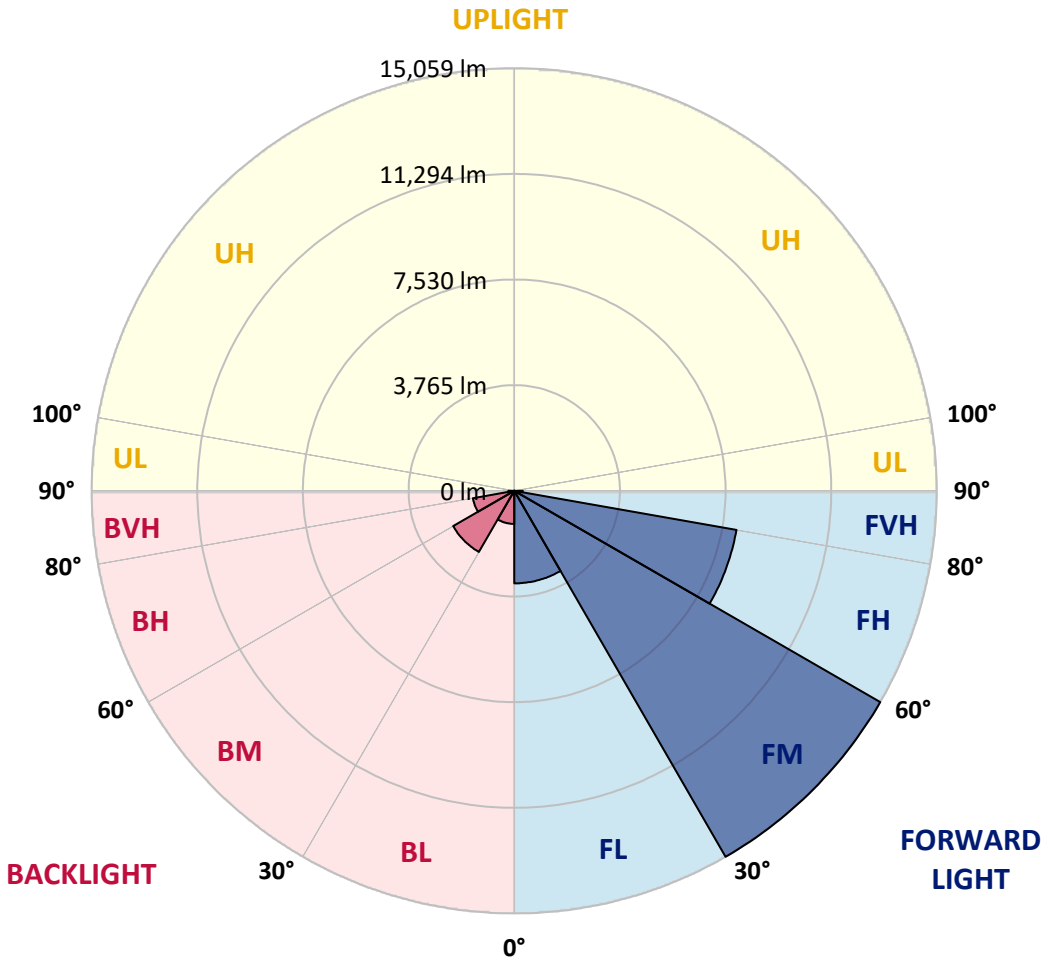
Scaled Data Report

REPORT NUMBER: P317619
CATALOG NUMBER: GLEON-SA5D-830-U-T2R

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	3297.0	10.3			
FM	(30°-60°)	15059.0	46.9			
FH	(60°-80°)	8040.7	25.0			G4/12000
FVH	(80°-90°)	305.3	1.0			G3/500
BL	(0°-30°)	1178.2	3.7	B3/2500		
BM	(30°-60°)	2515.5	7.8	B3/5000		
BH	(60°-80°)	1496.6	4.7	B3/2500		G3/2500
BVH	(80°-90°)	211.7	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4
Type II Short



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

Scaled Data Report

REPORT NUMBER: P317619
CATALOG NUMBER: GLEON-SA5D-830-U-T2R

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	*2931.8*	2931.8
2.5°	3892.0	3833.2	3827.7	3741.6	3722.0	3557.4	3436.4	3310.0	3166.1	*3137.8*	3024.5
5°	4999.4	4993.9	4918.7	4778.1	4668.0	4386.8	4108.9	3814.6	3492.0	*3439.7*	3184.7
7.5°	5995.5	5986.8	5929.0	5777.5	5618.4	5272.9	4876.2	4425.0	3901.8	*3824.4*	3401.6
10°	6751.9	6748.6	6729.0	6617.8	6482.7	6151.4	5713.2	5097.4	4378.1	*4272.4*	3672.9
12.5°	7336.1	7342.6	7355.7	7316.5	7252.2	6969.9	6520.8	5810.2	4886.0	*4781.4*	3974.8
15°	7731.7	7751.3	7818.9	7874.5	7908.3	7735.0	7300.1	6539.4	5454.9	*5329.6*	4309.4
17.5°	7931.2	7953.0	8069.6	8237.4	8392.2	8374.8	8029.3	7234.7	6001.0	*5880.0*	4669.1
20°	8103.4	8119.7	8250.5	8452.1	8725.7	8846.7	8652.7	7903.9	6599.3	*6455.5*	5050.6
22.5°	8602.5	8623.3	8662.5	8776.9	9018.9	9241.2	9147.5	8537.2	7147.5	*7013.5*	5412.4
25°	9566.0	9591.1	9506.1	9409.1	9454.8	9609.6	9627.0	9114.8	7703.4	*7551.9*	5801.5
27.5°	10726.8	10762.7	10617.8	10368.2	10150.2	10090.3	10069.5	9587.8	8234.2	*8058.7*	6186.2
30°	11863.5	11925.6	11737.1	11413.4	11013.4	10732.2	10524.0	10051.0	8757.3	*8589.5*	6549.2
32.5°	12974.1	12949.1	12675.5	12359.4	11890.8	11538.7	11035.2	10548.0	9345.9	*9152.9*	6909.9
35°	13734.9	13743.6	13489.6	13114.7	12667.9	12397.6	11719.6	11084.2	9946.4	*9768.7*	7319.7
37.5°	14382.3	14341.9	14054.2	13704.3	13319.6	13204.1	12520.7	11675.0	10597.1	*10403.1*	7755.7
40°	14598.1	14551.2	14362.6	14110.9	13802.4	13792.6	13404.6	12344.2	11332.7	*11140.9*	8247.2
42.5°	14467.3	14407.3	14329.9	14261.3	14166.5	14210.1	14235.1	13128.9	12141.4	*11926.7*	8816.2
45°	13984.5	13894.0	13948.5	14097.8	14303.8	14550.1	14985.0	13997.5	13047.1	*12867.3*	9484.3
47.5°	13242.2	13160.5	13330.5	13649.9	14210.1	14833.5	15694.5	14956.6	14128.3	*13949.6*	10435.8
50°	12198.1	12222.1	12465.1	13046.1	13892.9	14964.3	16568.6	16226.4	15699.9	*15533.2*	11733.8
52.5°	10484.8	10489.2	11173.6	12127.3	13330.5	14896.7	17053.6	17849.2	17846.0	*17644.3*	12969.8
55°	8893.5	8990.5	9532.2	10799.8	12419.4	14626.4	17392.6	18638.3	19255.2	*19018.7*	14121.8
57.5°	7339.4	7396.0	7909.4	9182.4	11119.1	13906.0	17740.2	19585.4	20879.1	*20729.8*	15553.9
60°	5571.5	5658.7	6189.5	7365.5	9455.9	12627.5	17772.9	20574.0	22820.2	*22669.8*	17152.8
62.5°	3616.3	3766.7	4263.7	5365.6	7444.0	10788.9	17014.4	21220.3	24660.0	*24606.6*	18571.8
65°	2078.4	2191.8	2537.3	3387.4	5135.6	8480.5	15210.6	20971.8	25792.4	*25761.9*	19102.6
66°	*1698.1*	*1768.9*	*2033.7*	*2647.4*	*4237.5*	*7447.3*	*14162.1*	*20447.5*	*25904.6*	*25905.7*	*19041.6*
67.5°	1358.0	1389.6	1508.4	1895.3	3126.9	5902.9	12288.6	19291.2	25765.1	*25803.3*	18648.1
70°	1123.7	1140.0	1177.1	1270.8	1706.8	3559.6	8722.4	16286.3	24364.6	*24394.0*	17112.5
72.5°	1008.2	1018.0	1032.1	1045.2	1204.3	1989.1	5327.4	13028.6	21362.0	*21400.1*	14772.4
75°	913.3	918.8	916.6	917.7	1010.3	1267.5	2753.1	9727.3	17272.7	*17196.4*	11316.4
77.5°	802.2	807.6	796.7	798.9	893.7	974.4	1370.0	6809.7	11656.4	*11118.0*	6375.9
80°	677.9	682.3	677.9	685.5	778.2	735.7	796.7	3831.0	5154.1	*4875.1*	2267.0
82.5°	512.3	530.8	543.9	574.4	640.9	523.1	533.0	1492.1	1569.4	*1494.2*	695.4
85°	224.5	273.6	409.8	439.2	481.7	313.9	349.9	608.2	638.7	*619.1*	252.9
87.5°	58.9	64.3	202.7	255.0	267.0	141.7	182.0	276.8	292.1	*276.8*	83.9
90°	0.0	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

Scaled Data Report

REPORT NUMBER: P317619
CATALOG NUMBER: GLEON-SA5D-830-U-T2R

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8	2931.8
2.5°	2964.5	2911.1	2815.2	2730.2	2665.9	2622.3	2578.7	2556.9	2543.8	2530.7	2532.9
5°	3059.3	2951.4	2786.9	2670.2	2604.9	2563.4	2541.6	2532.9	2527.5	2514.4	2514.4
7.5°	3202.1	3049.5	2822.8	2702.9	2651.7	2620.1	2607.0	2602.7	2596.1	2580.9	2583.1
10°	3381.9	3168.3	2898.0	2781.4	2734.5	2699.7	2681.1	2674.6	2662.6	2645.2	2647.4
12.5°	3593.4	3315.5	2997.2	2875.1	2818.5	2771.6	2741.1	2722.6	2701.9	2679.0	2680.1
15°	3824.4	3475.7	3104.0	2959.1	2881.7	2816.3	2767.2	2735.6	2702.9	2674.6	2673.5
17.5°	4058.8	3630.4	3185.8	3004.8	2900.2	2814.1	2747.6	2698.6	2658.3	2623.4	2620.1
20°	4311.6	3769.9	3231.5	3000.5	2865.3	2762.9	2674.6	2613.6	2568.9	2534.0	2528.6
22.5°	4568.8	3900.7	3239.2	2955.8	2788.0	2662.6	2570.0	2502.4	2456.6	2420.7	2407.6
25°	4804.3	4002.1	3207.6	2869.7	2680.1	2544.9	2454.4	2385.8	2348.7	2306.2	2293.1
27.5°	5019.0	4072.9	3144.3	2759.6	2559.1	2426.1	2341.1	2282.2	2241.9	2209.2	2198.3
30°	5211.9	4111.1	3040.8	2628.8	2434.8	2313.8	2241.9	2201.6	2166.7	2125.3	2117.7
32.5°	5395.0	4111.1	2907.8	2486.1	2311.7	2214.7	2172.2	2147.1	2107.9	2067.5	2056.6
35°	5578.1	4086.0	2750.9	2336.7	2198.3	2143.8	2141.6	2112.2	2052.3	1997.8	1983.6
37.5°	5771.0	4034.8	2574.3	2197.2	2105.7	2112.2	2130.7	2065.4	1980.3	1903.0	1882.2
40°	5989.0	3964.0	2391.2	2076.3	2028.3	2098.0	2101.3	1997.8	1832.1	1761.3	1742.7
42.5°	6245.1	3893.1	2221.2	1969.4	1967.3	2055.5	2045.7	1851.7	1752.6	1716.6	1706.8
45°	6581.9	3852.8	2059.9	1868.1	1919.3	1986.9	1950.9	1771.1	1729.7	1709.0	1700.2
47.5°	7112.7	3873.5	1911.7	1787.4	1871.4	1918.2	1774.4	1738.4	1709.0	1683.9	1675.2
50°	7777.5	3861.5	1791.8	1731.8	1816.9	1846.3	1694.8	1695.9	1680.6	1652.3	1639.2
52.5°	8277.8	3767.8	1714.4	1700.2	1768.9	1718.8	1644.7	1654.5	1646.8	1605.4	1591.2
55°	8760.6	3687.1	1675.2	1688.2	1734.0	1559.6	1585.8	1609.8	1602.1	1561.8	1555.3
57.5°	9361.1	3671.9	1651.2	1691.5	1704.6	1480.1	1529.1	1560.7	1555.3	1537.8	1534.6
60°	10096.8	3676.2	1629.4	1697.0	1671.9	1421.2	1475.7	1516.0	1519.3	1516.0	1513.9
62.5°	10501.1	3557.4	1574.9	1681.7	1614.1	1370.0	1420.1	1479.0	1480.1	1486.6	1485.5
65°	10157.8	3202.1	1473.5	1628.3	1517.1	1327.5	1372.2	1436.5	1420.1	1449.6	1449.6
66°	*9824.3*	*2997.2*	*1423.4*	*1593.4*	*1475.7*	*1311.1*	*1356.9*	*1414.7*	*1394.0*	*1434.3*	*1434.3*
67.5°	9143.1	2651.7	1332.9	1519.3	1416.9	1288.3	1339.5	1378.7	1350.4	1410.3	1406.0
70°	7898.5	2051.2	1150.9	1351.5	1319.9	1254.5	1315.5	1306.8	1265.4	1356.9	1339.5
72.5°	6659.3	1558.6	924.2	1131.3	1172.7	1212.0	1281.7	1215.2	1162.9	1227.2	1189.1
75°	5167.2	1171.6	730.2	879.5	990.7	1145.5	1241.4	1109.5	1034.3	1027.8	1007.1
77.5°	2793.4	804.3	578.7	671.4	786.9	1062.6	1214.1	996.2	882.8	856.7	840.3
80°	1106.2	523.1	420.7	509.0	550.4	942.8	1148.8	864.3	728.1	701.9	676.8
82.5°	456.7	309.5	271.4	341.1	358.6	806.5	1031.0	708.4	562.4	778.2	826.1
85°	196.2	170.0	161.3	176.6	202.7	565.7	820.7	540.6	607.1	541.7	430.5
87.5°	58.9	71.9	68.7	67.6	74.1	135.1	437.0	300.8	445.8	168.9	126.4
90°	0.0	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.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

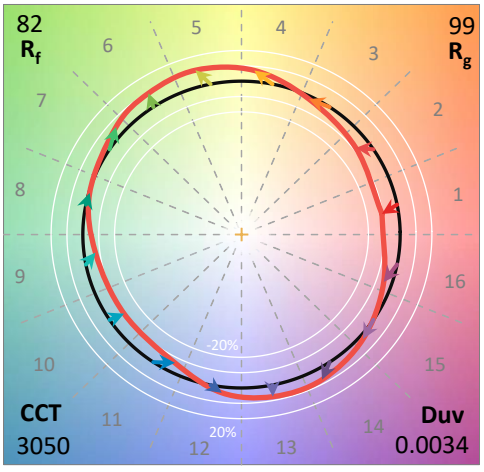
Test Information

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	CRI (Ra):	81.0		
CIE u':	0.2476	R1:	79.6	R9:	7.1
CIE v':	0.5251	R2:	85.6	R10:	67.0
Duv:	0.0034	R3:	92.0	R11:	82.7
CIE x:	0.4383	R4:	82.6	R12:	63.2
CIE y:	0.4131	R5:	78.9	R13:	80.3
CIE z:	0.1487	R6:	81.7	R14:	95.0
Peak Wavelength (nm):	603	R7:	85.2	R15:	71.7
Dominant Wavelength (nm):	581	R8:	62.0		
Purity:	55.55201				

Rf:	81.5
Rg:	99.2



Test Conditions

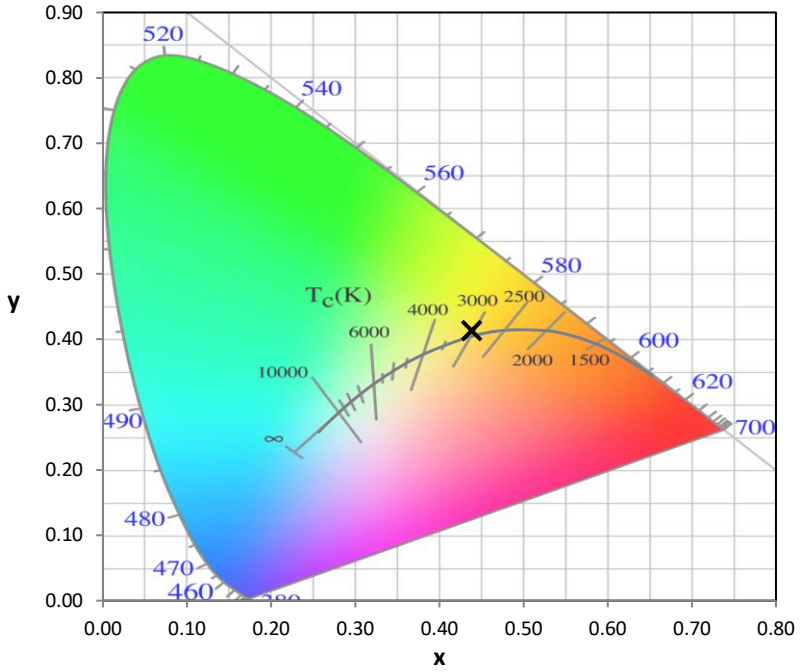
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

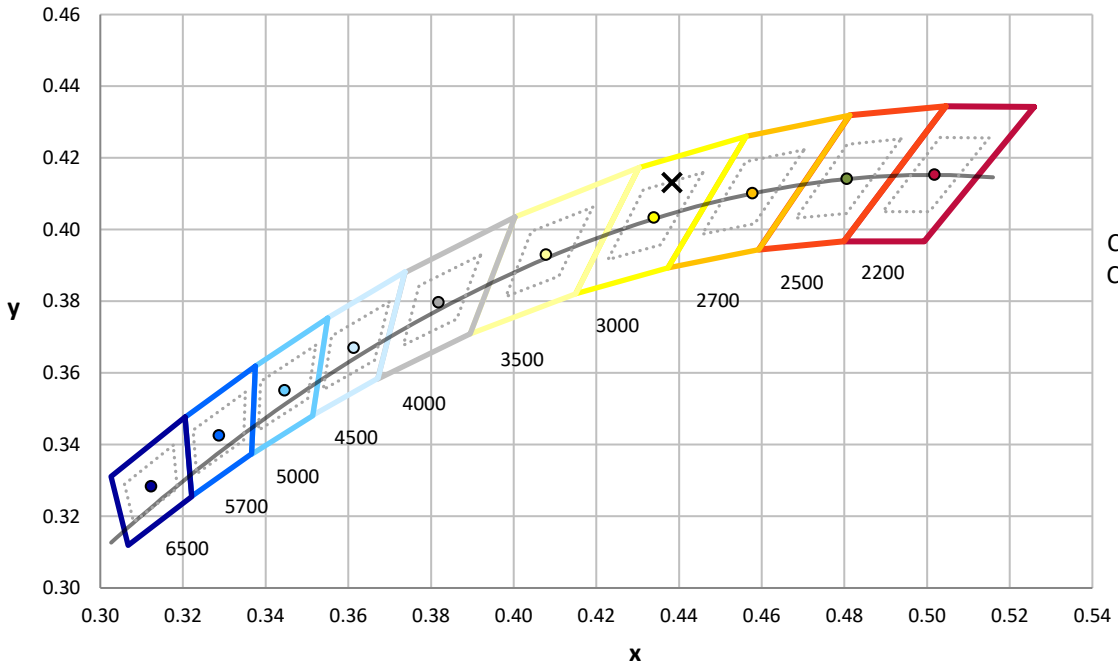
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

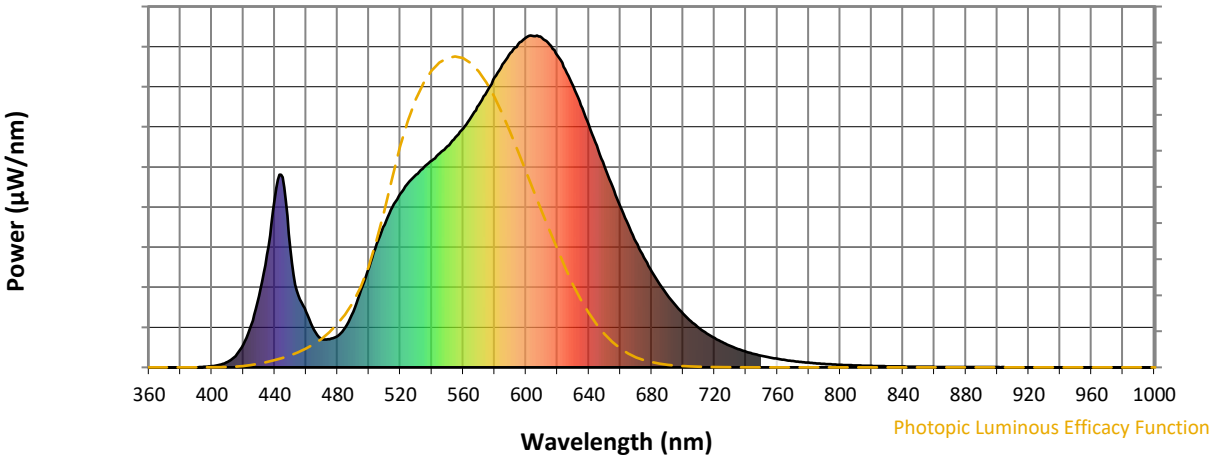


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

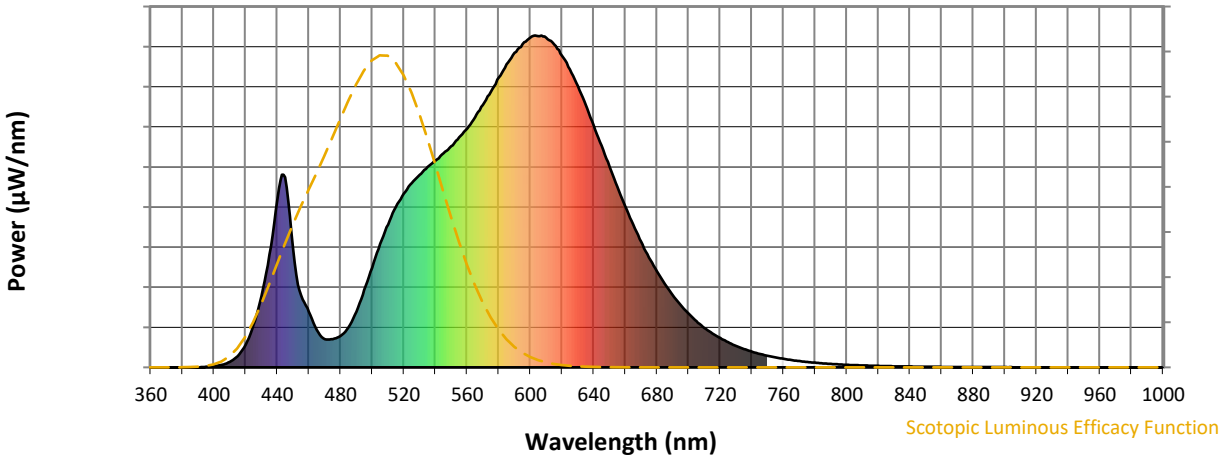


Photopic Lumens: NR

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

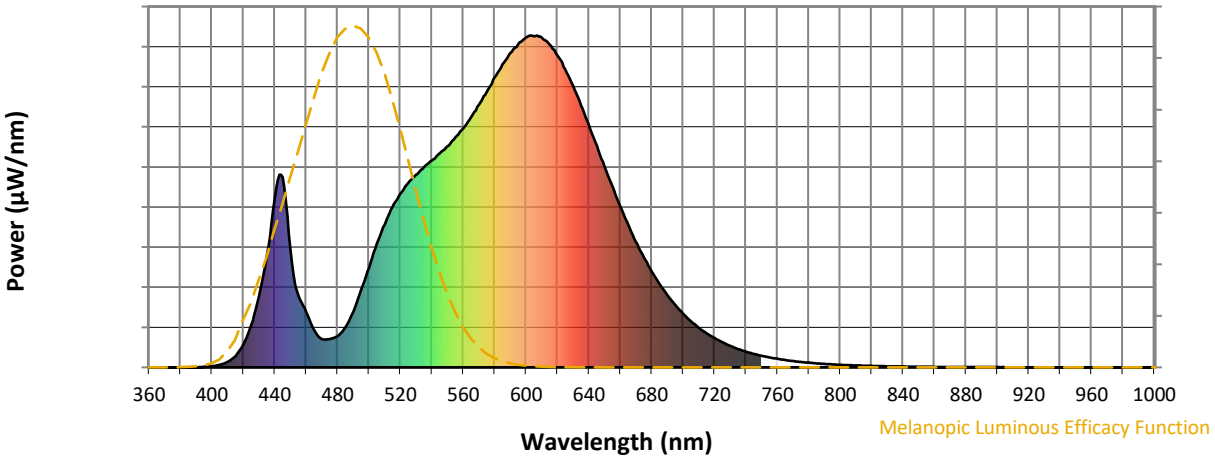


Scotopic Lumens: NR **S/P: 1.27**

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			

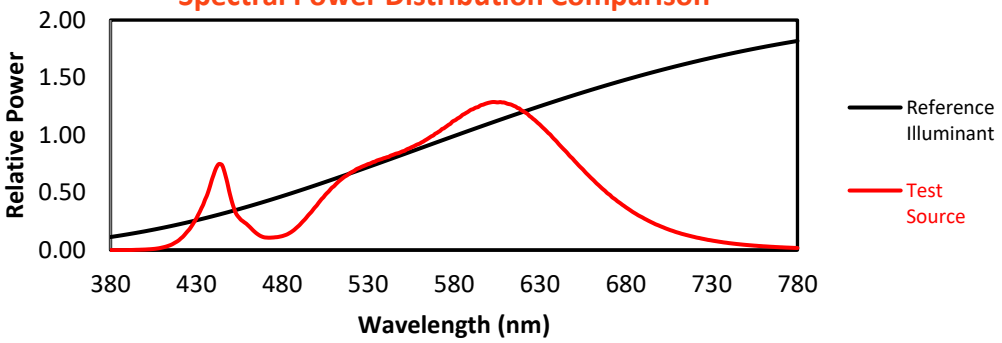
REPORT NUMBER: SP1-2408-195-9

TM-30-18

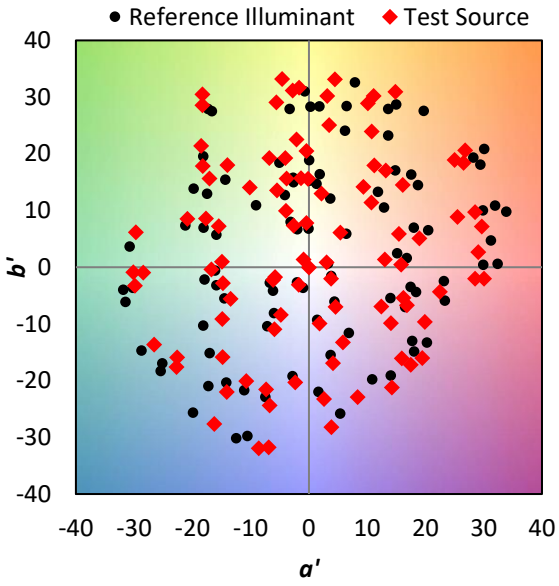
Summary

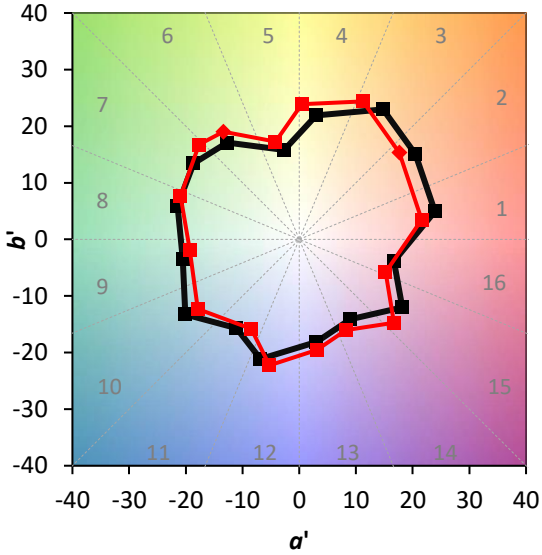
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

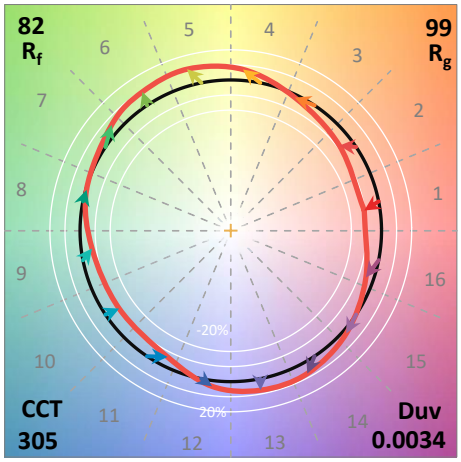
Spectral Power Distribution Comparison

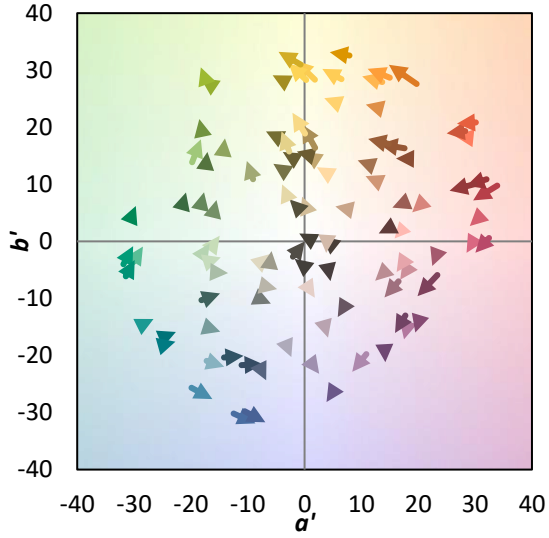


Color Vector Graphics







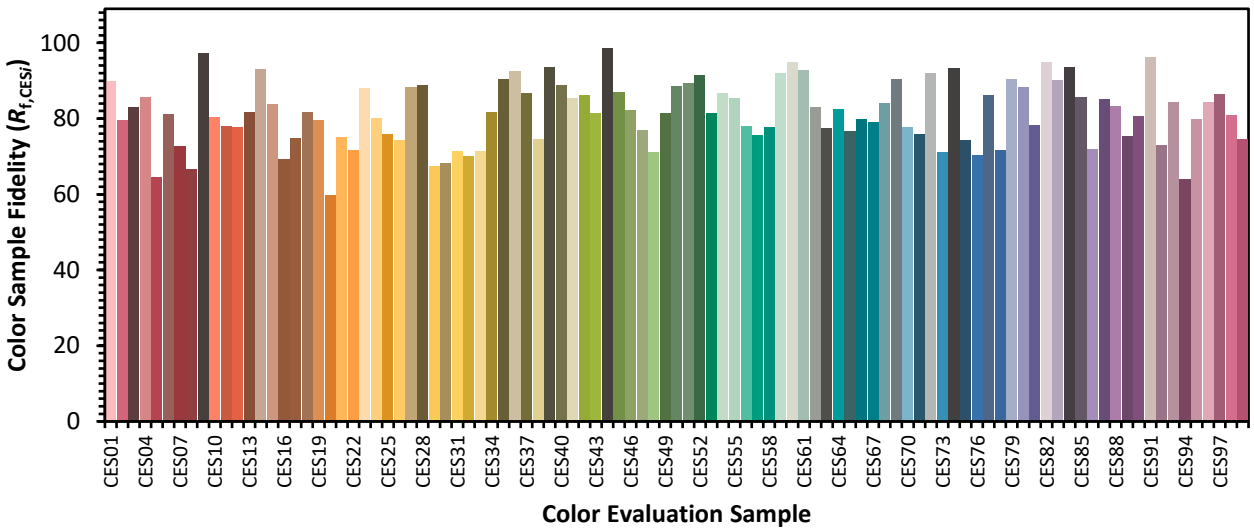


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

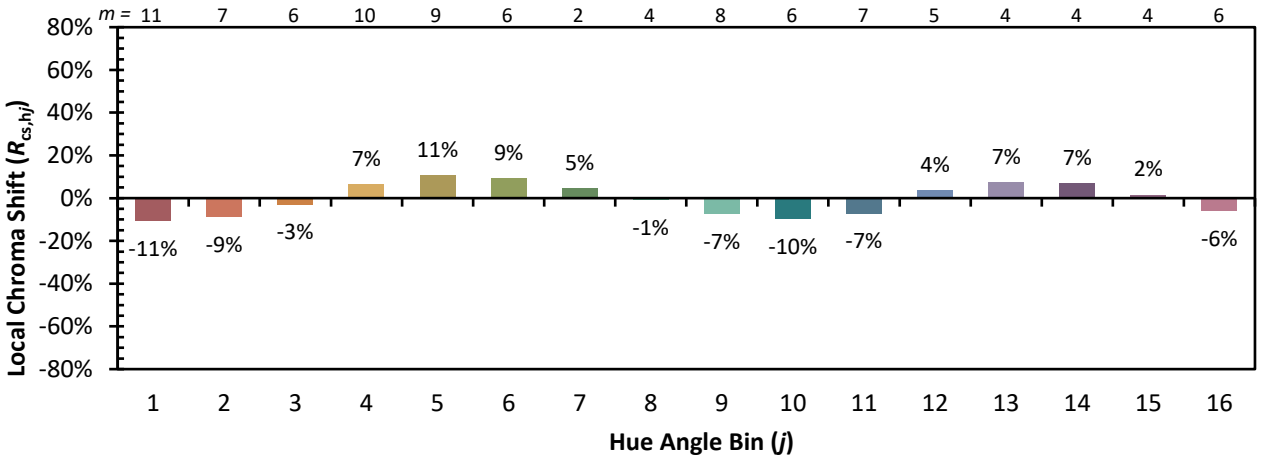
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

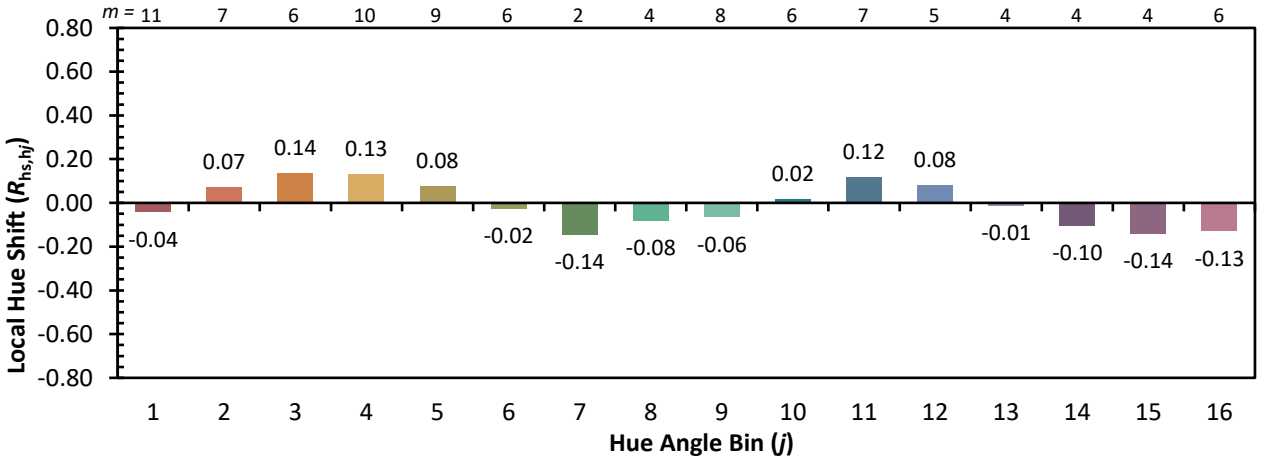


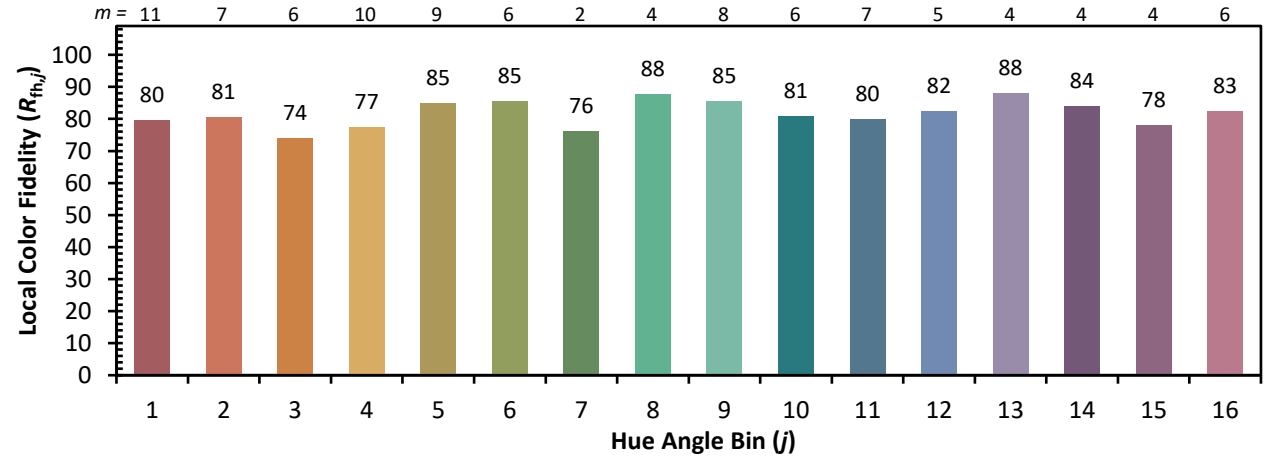
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



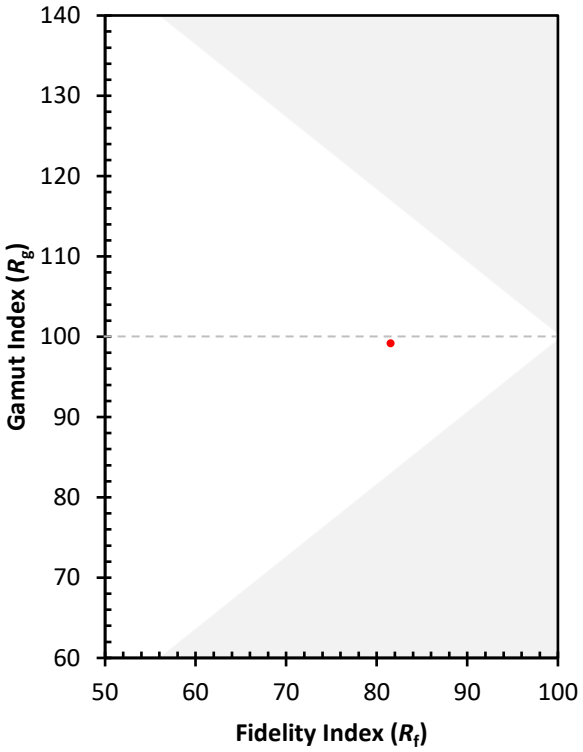


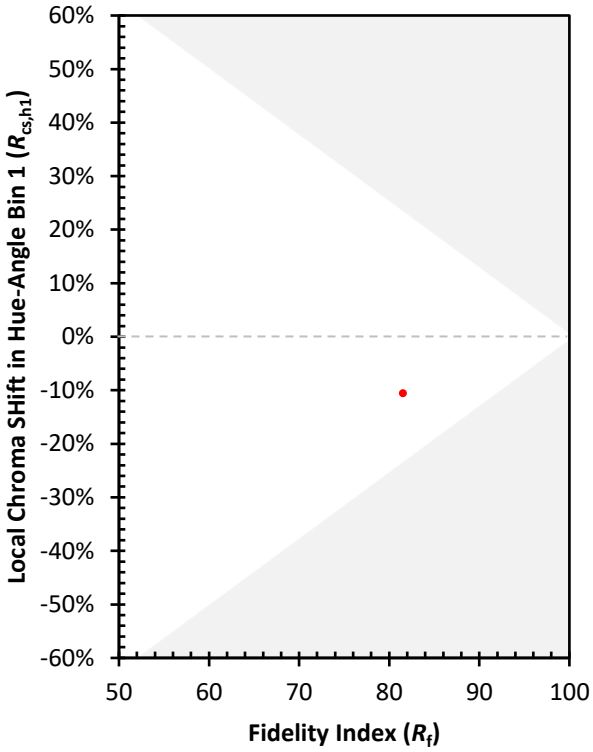


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)