

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: P635040

Luminaire Tested: GWS-SA3C-830-U-T4FT-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P635040  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-54)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA3C-830-U-T4FT-W  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

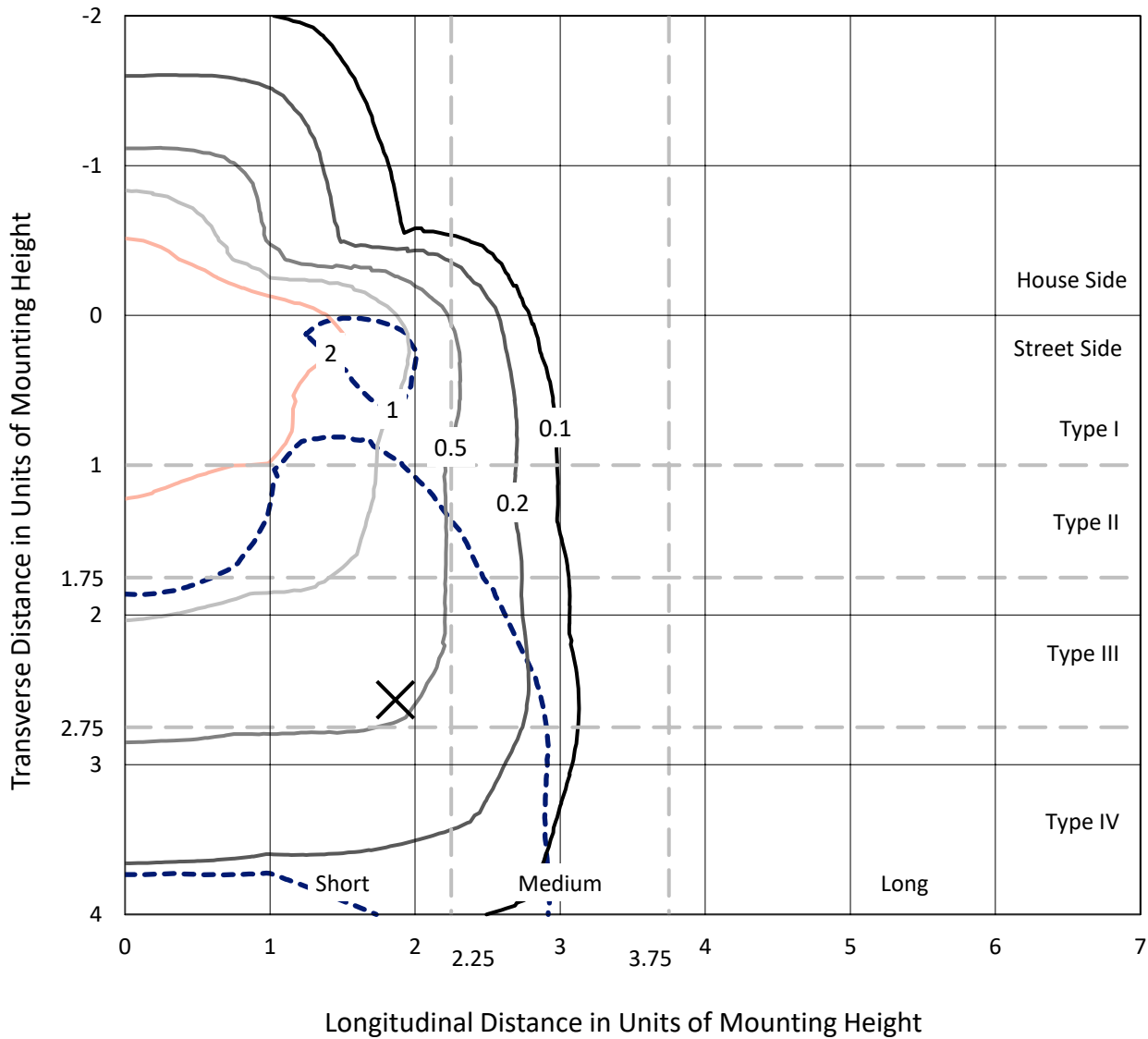
Lumens per Lamp: N/A  
Luminaire Lumens: 10703.6 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 93  
Input Voltage (V): 120  
Input Current (Ain): 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



REPORT NUMBER: P635040  
 CATALOG NUMBER: GWS-SA3C-830-U-T4FT-W

### Iso-Footcandle Lines of Horizontal Illumination

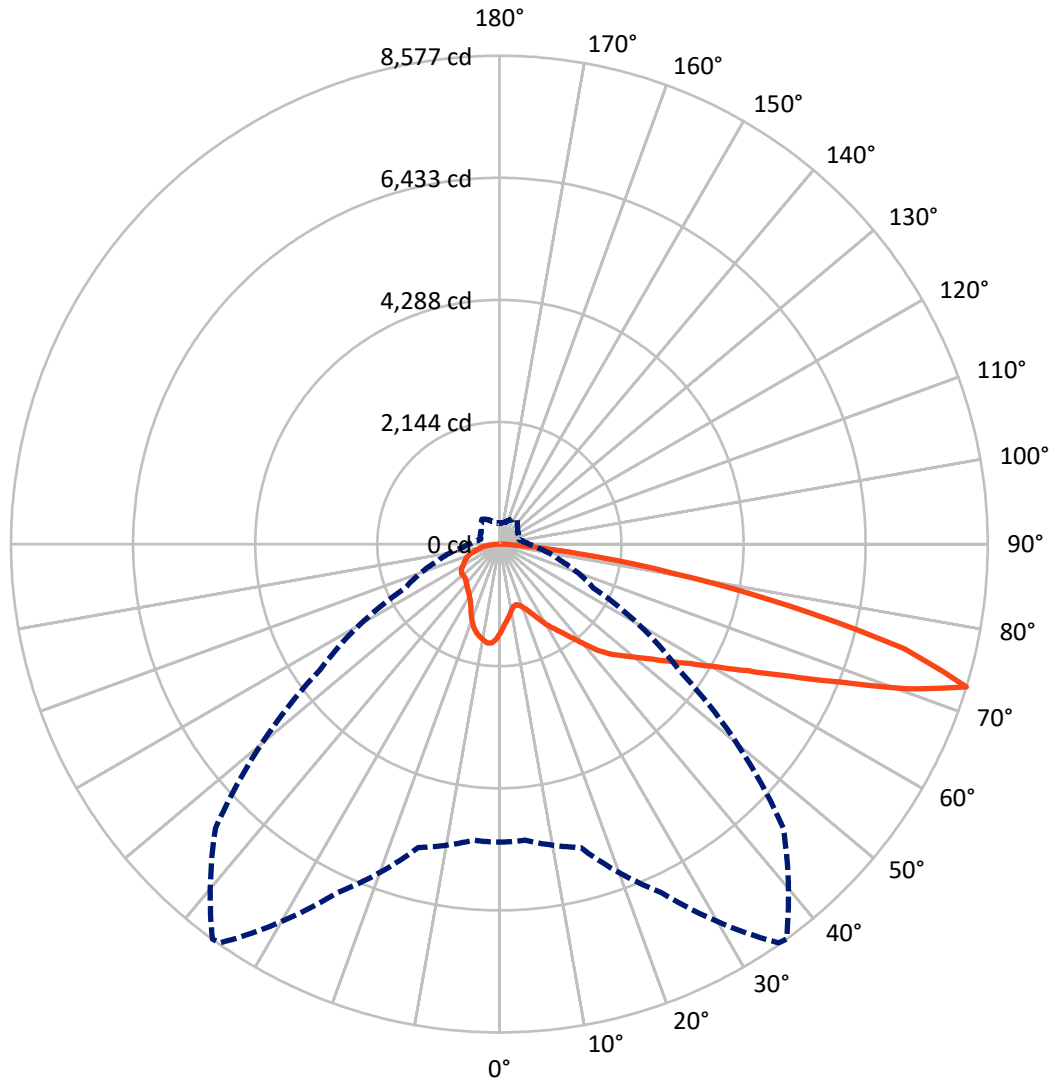
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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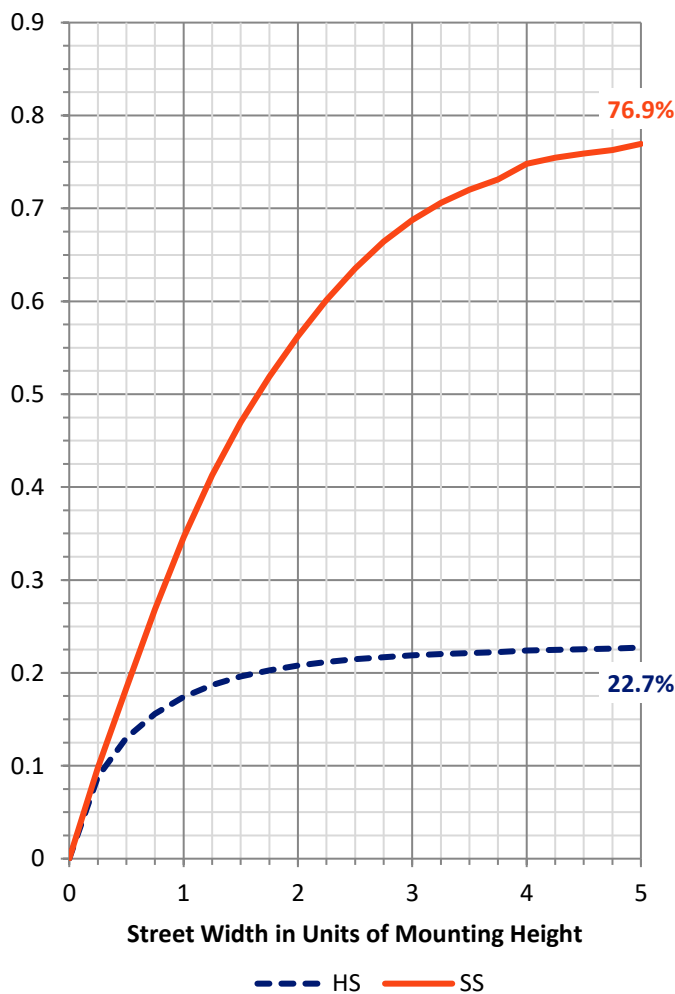
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2467.6	0.0	2467.6
	% Fixture	23.1	0.0	23.1
<b>Street Side</b>	Lumens	8236.0	0.0	8236.0
	% Fixture	76.9	0.0	76.9
<b>Total</b>	Lumens	10703.6	0.0	10703.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.4	1.4
10°-20°	413.1	3.9
20°-30°	684.2	6.4
30°-40°	1024.6	9.6
40°-50°	1494.9	14.0
50°-60°	2127.6	19.9
60°-70°	2688.1	25.1
70°-80°	1915.5	17.9
80°-90°	209.1	2.0
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°	10703.6	100.0
0°-180°	10703.6	100.0

**Coefficient of Utilization**



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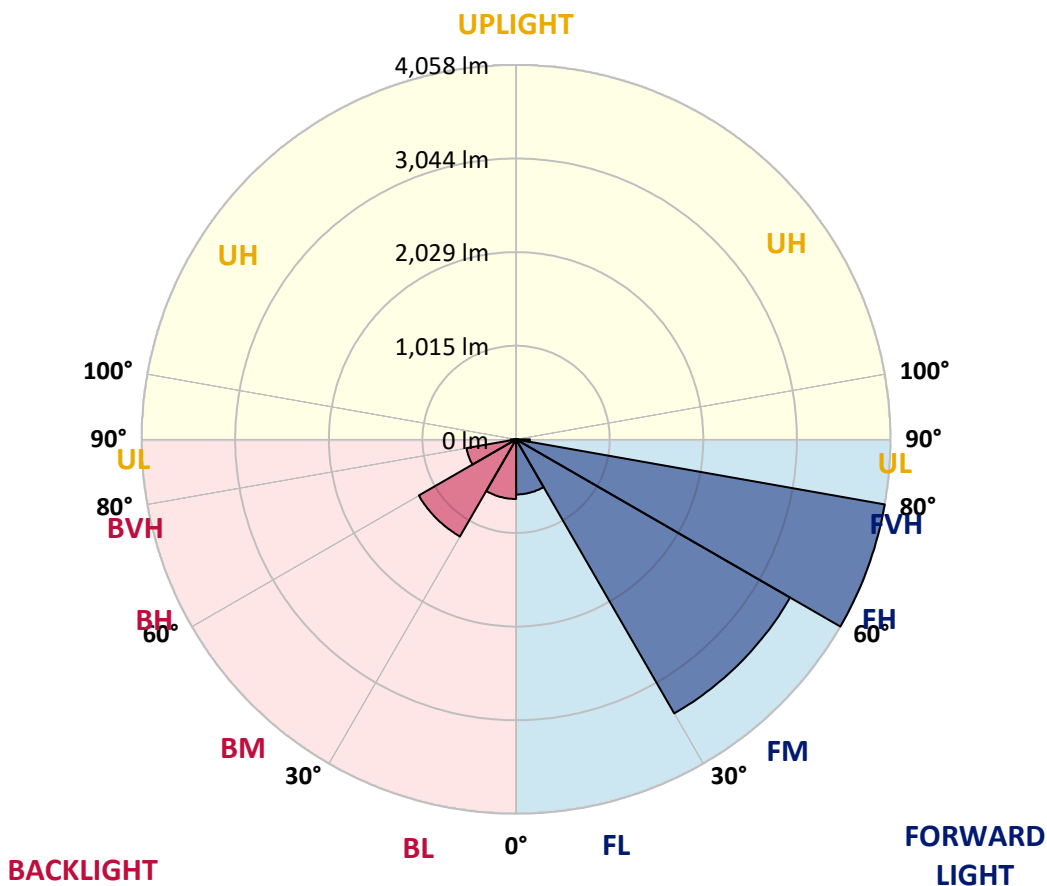
CATALOG NUMBER: GWS-SA3C-830-U-T4FT-W

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	597.6	5.6			
FM (30°-60°)	3430.2	32.0			
FH (60°-80°)	4058.1	37.9			G2/5000
FVH (80°-90°)	150.1	1.4			G2/225
BL (0°-30°)	646.2	6.0	B2/1000		
BM (30°-60°)	1216.9	11.4	B2/2500		
BH (60°-80°)	545.5	5.1	B2/1000		G2/1000
BVH (80°-90°)	59.0	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type IV Short





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CATALOG NUMBER: GWS-SA3C-830-U-T4FT-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5
2.5°	1429.1	1426.7	1421.9	1436.2	1450.5	1449.0	1468.8	1487.9	1508.5	1530.0	1558.6
5°	1314.7	1313.1	1309.1	1330.6	1352.0	1351.2	1383.8	1414.8	1456.9	1503.0	1560.2
7.5°	1200.3	1196.3	1201.9	1228.9	1259.1	1262.3	1306.8	1357.6	1418.8	1487.9	1568.9
10°	1099.4	1098.6	1101.0	1131.2	1176.5	1179.7	1236.9	1307.6	1388.6	1480.7	1588.8
12.5°	1073.2	1071.6	1065.3	1080.4	1114.5	1119.3	1182.0	1268.6	1367.9	1484.7	1615.8
15°	1116.1	1112.1	1089.9	1082.7	1099.4	1103.4	1156.6	1245.6	1356.0	1491.8	1649.9
17.5°	1190.0	1187.6	1145.5	1116.1	1127.2	1130.4	1170.1	1241.6	1352.8	1506.1	1692.0
20°	1298.0	1287.7	1221.8	1177.3	1177.3	1182.0	1205.9	1259.1	1356.8	1523.6	1739.7
22.5°	1441.0	1420.4	1327.4	1267.0	1251.2	1257.5	1267.8	1302.8	1373.5	1553.0	1799.3
25°	1601.5	1582.4	1472.0	1387.0	1364.7	1367.1	1358.4	1364.7	1410.0	1593.5	1873.2
27.5°	1772.3	1759.6	1642.0	1534.0	1499.0	1499.0	1468.0	1452.9	1460.9	1639.6	1955.8
30°	1924.8	1907.3	1808.0	1689.6	1643.6	1643.6	1584.8	1552.2	1533.2	1696.0	2066.2
32.5°	2005.0	1994.7	1928.8	1838.2	1781.8	1773.1	1722.2	1684.1	1639.6	1779.4	2215.5
35°	2109.9	2107.5	2067.8	1997.1	1925.6	1912.9	1877.9	1847.7	1770.7	1883.5	2414.1
37.5°	2241.7	2237.8	2231.4	2189.3	2103.5	2101.1	2070.2	2033.6	1933.5	2033.6	2654.8
40°	2389.5	2382.3	2374.4	2373.6	2322.0	2313.2	2310.9	2269.5	2129.7	2214.7	2905.8
42.5°	2592.9	2568.2	2493.6	2526.9	2565.1	2557.1	2587.3	2525.3	2374.4	2430.0	3143.4
45°	2843.1	2782.7	2635.0	2644.5	2740.6	2756.5	2861.4	2846.3	2643.7	2678.7	3393.6
47.5°	2993.2	2940.8	2803.4	2795.4	2915.4	2935.2	3163.2	3191.8	2933.6	2978.1	3702.6
50°	3116.4	3079.8	2967.0	2978.1	3105.2	3125.1	3462.7	3523.9	3206.9	3284.8	4061.7
52.5°	3264.9	3212.5	3125.1	3177.5	3333.2	3357.1	3795.6	3861.5	3453.2	3621.6	4433.4
55°	3348.3	3326.9	3328.5	3408.7	3604.1	3636.7	4144.3	4133.2	3678.8	3909.9	4713.1
57.5°	3540.6	3532.6	3605.7	3635.9	3920.3	3962.4	4493.0	4397.7	3883.7	4133.2	4847.3
60°	3879.8	3859.9	3923.4	3969.5	4311.1	4370.7	4882.3	4656.7	4022.7	4299.2	4802.0
62.5°	4356.4	4331.8	4334.1	4407.2	4834.6	4897.4	5315.2	4872.7	4065.6	4324.6	4515.3
65°	4949.0	4913.2	4872.7	4972.0	5529.7	5582.1	5786.3	5030.0	3963.2	4079.9	3916.3
67.5°	5574.2	5544.8	5497.1	5705.2	6429.7	6461.5	6314.5	5016.5	3638.3	3425.4	2747.0
70°	5610.7	5617.9	5843.5	6596.5	7604.6	7612.6	6814.2	4744.8	2946.4	2220.3	1368.7
72.5°	5234.2	5222.3	5516.2	6759.4	8549.9	8576.9	7050.1	3844.0	1820.7	1107.4	641.9
75°	4251.5	4272.2	4581.2	5914.2	7328.2	7352.0	5747.3	2266.4	865.1	541.8	410.7
77.5°	1830.3	1945.4	2554.7	4166.5	5248.5	5174.6	2962.2	918.3	461.5	386.1	314.6
80°	528.3	573.5	910.4	1981.2	3145.0	3089.3	1172.5	344.0	321.7	289.9	225.6
82.5°	170.8	189.1	333.6	788.8	1409.2	1407.6	444.9	203.4	210.5	197.0	145.4
85°	47.7	54.8	102.5	239.1	436.1	427.4	128.7	96.1	112.0	113.6	72.3
87.5°	0.0	0.0	0.8	1.6	1.6	1.6	3.2	14.3	32.6	41.3	29.4
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: P635040  
 CATALOG NUMBER: GWS-SA3C-830-U-T4FT-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5	1566.5
2.5°	1576.1	1573.7	1606.2	1631.7	1655.5	1671.4	1676.1	1679.3	1685.7	1688.9	1685.7
5°	1587.2	1599.1	1653.1	1692.8	1724.6	1743.7	1744.5	1742.9	1747.6	1743.7	1741.3
7.5°	1611.0	1634.0	1702.4	1744.5	1765.1	1765.9	1746.8	1724.6	1713.5	1703.9	1700.8
10°	1642.8	1676.9	1751.6	1779.4	1773.1	1743.7	1701.6	1666.6	1646.8	1632.5	1629.3
12.5°	1686.5	1724.6	1795.3	1794.5	1754.8	1702.4	1653.1	1611.0	1582.4	1565.7	1560.2
15°	1727.8	1776.2	1827.1	1789.7	1727.0	1663.4	1599.9	1543.5	1505.4	1479.1	1474.4
17.5°	1778.6	1830.3	1850.1	1774.6	1692.0	1610.2	1525.2	1451.3	1399.7	1368.7	1366.3
20°	1837.4	1883.5	1861.2	1748.4	1646.8	1539.5	1424.3	1341.7	1286.1	1255.9	1258.3
22.5°	1905.7	1939.1	1864.4	1712.7	1584.0	1439.4	1310.7	1231.3	1194.0	1178.1	1178.9
25°	1978.8	2000.3	1858.9	1664.2	1487.9	1317.1	1194.0	1157.4	1154.2	1150.3	1151.9
27.5°	2065.4	2060.6	1842.2	1595.9	1358.4	1174.9	1112.1	1121.7	1134.4	1132.8	1134.4
30°	2181.4	2136.1	1820.7	1501.4	1204.3	1055.7	1063.7	1090.7	1107.4	1109.0	1113.7
32.5°	2314.0	2219.5	1786.6	1372.7	1057.3	989.0	1018.4	1051.0	1070.8	1074.8	1081.2
35°	2472.1	2314.8	1726.2	1212.2	951.7	949.3	976.3	998.5	1020.0	1021.6	1021.6
37.5°	2654.0	2410.2	1630.1	1035.1	886.5	915.1	940.5	945.3	950.9	946.1	948.5
40°	2820.8	2502.3	1493.4	873.8	833.3	884.9	906.4	890.5	873.0	861.1	863.5
42.5°	2960.7	2565.1	1312.3	761.0	779.3	857.9	874.6	842.0	807.9	785.6	788.8
45°	3117.9	2623.0	1099.4	684.8	733.2	838.9	850.0	807.9	764.2	730.8	726.1
47.5°	3334.8	2741.4	910.4	631.5	700.6	828.5	846.8	789.6	732.4	682.4	676.8
50°	3602.5	2909.0	752.3	596.6	685.6	823.0	846.0	769.8	701.4	642.7	638.7
52.5°	3894.9	3072.7	635.5	569.6	670.5	806.3	842.0	747.5	668.9	605.3	600.6
55°	4089.5	3137.0	556.9	544.2	645.8	780.1	826.2	726.1	619.6	561.6	554.5
57.5°	4146.7	3054.4	502.0	521.1	614.1	743.5	796.0	680.8	589.4	543.4	537.8
60°	4048.2	2846.3	467.9	502.0	579.1	696.7	743.5	654.6	565.6	524.3	520.3
62.5°	3770.1	2525.3	441.7	482.2	543.4	647.4	710.2	622.8	539.4	506.8	501.3
65°	3210.9	2071.0	420.2	461.5	509.2	600.6	673.6	591.0	510.8	486.2	479.8
67.5°	2245.7	1454.5	397.2	436.9	475.0	555.3	635.5	561.6	481.4	463.1	456.8
70°	1097.8	771.3	369.4	408.3	438.5	509.2	597.4	525.9	442.5	432.1	423.4
72.5°	522.7	431.3	336.8	369.4	388.5	448.0	533.8	474.2	396.4	374.2	359.1
75°	350.3	306.6	293.9	323.3	328.1	375.7	457.6	409.1	349.5	324.1	311.4
77.5°	265.3	234.3	247.1	273.3	263.7	309.0	376.5	364.6	315.4	292.3	286.0
80°	186.7	170.8	196.2	212.1	205.0	262.9	339.2	312.2	259.8	234.3	229.6
82.5°	117.6	114.4	144.6	147.0	149.3	208.1	278.8	245.5	201.8	166.0	154.1
85°	58.8	65.1	86.6	86.6	85.8	107.2	158.9	138.2	108.8	86.6	84.2
87.5°	19.9	27.8	37.3	30.2	23.0	18.3	20.7	25.4	27.0	26.2	26.2
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.

**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**

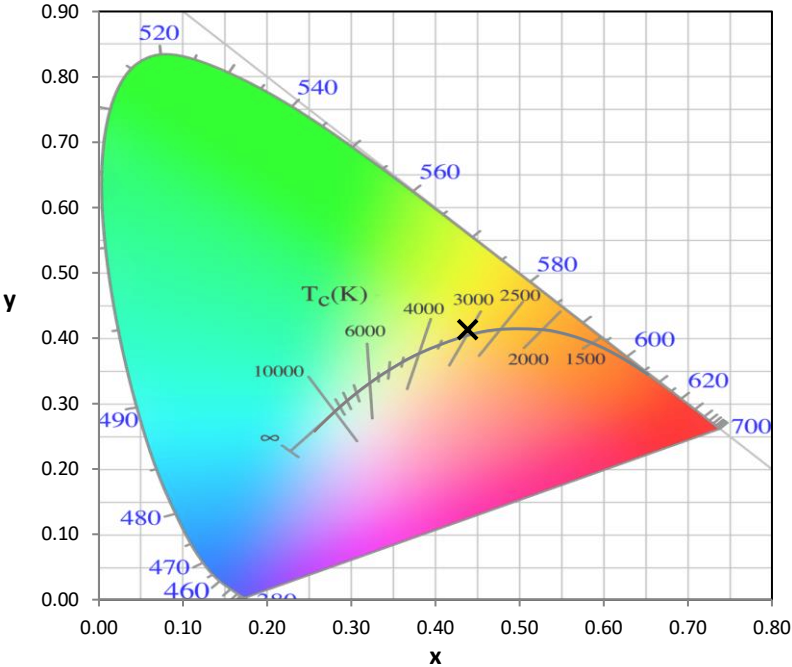
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.27**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 2.32**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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)