

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: P630554

Luminaire Tested: GWS-SA1D-830-U-SL3-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P630554  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-33)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1D-830-U-SL3-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

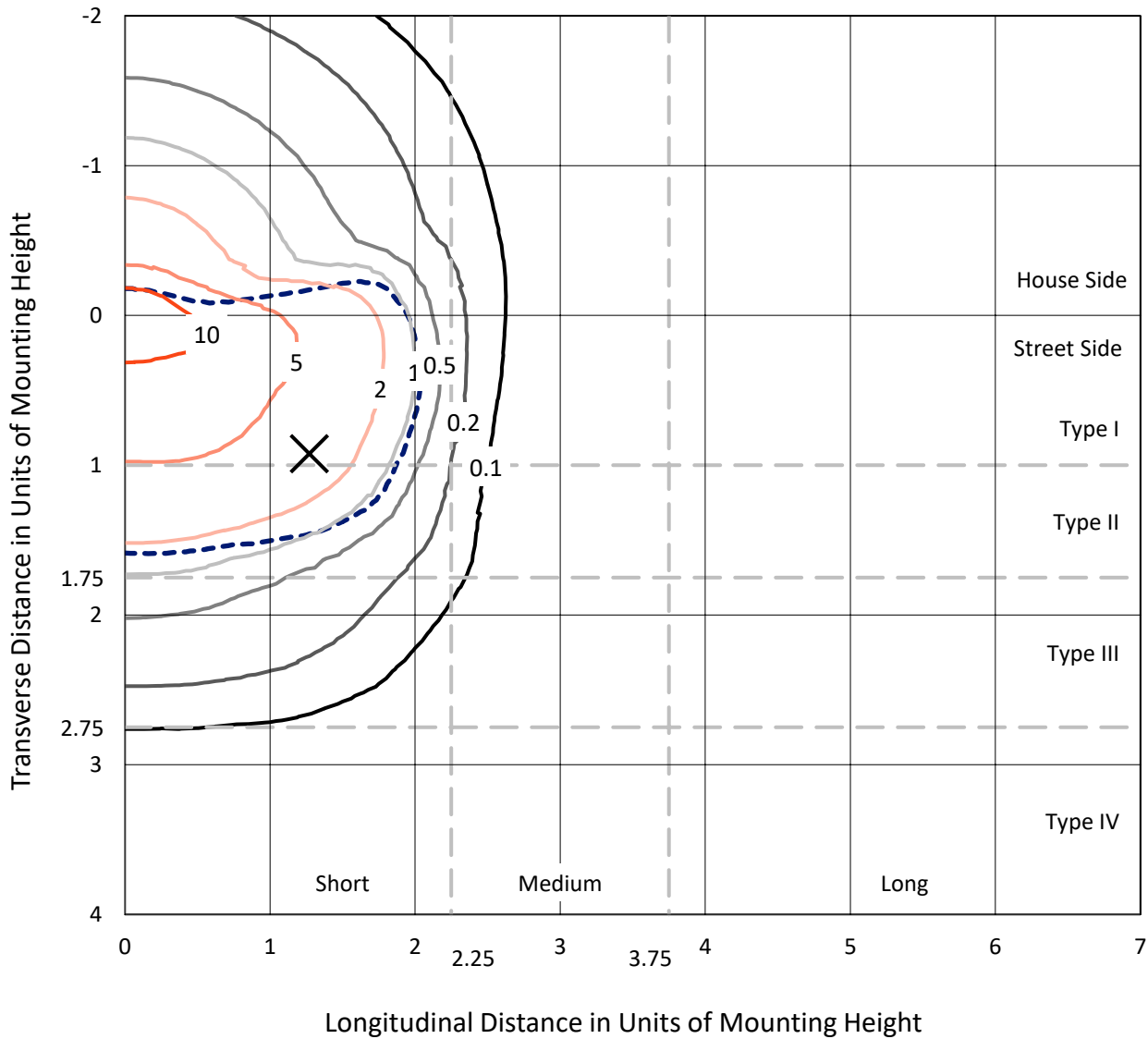
Lumens per Lamp: N/A  
Luminaire Lumens: 4034 lumens  
Efficiency: N/A  
Efficacy: 91.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 44.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
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



REPORT NUMBER: P630554  
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### Iso-Footcandle Lines of Horizontal Illumination

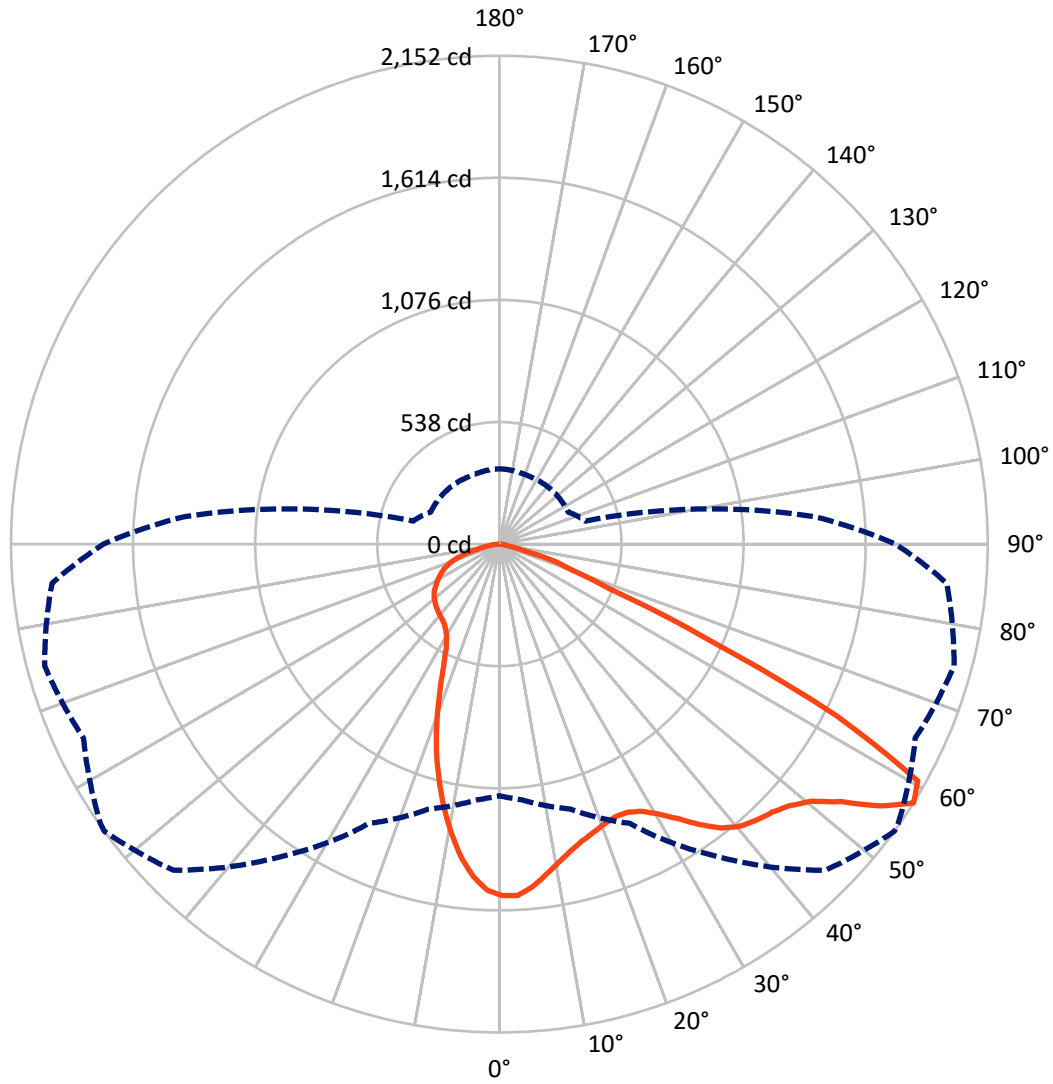
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.5 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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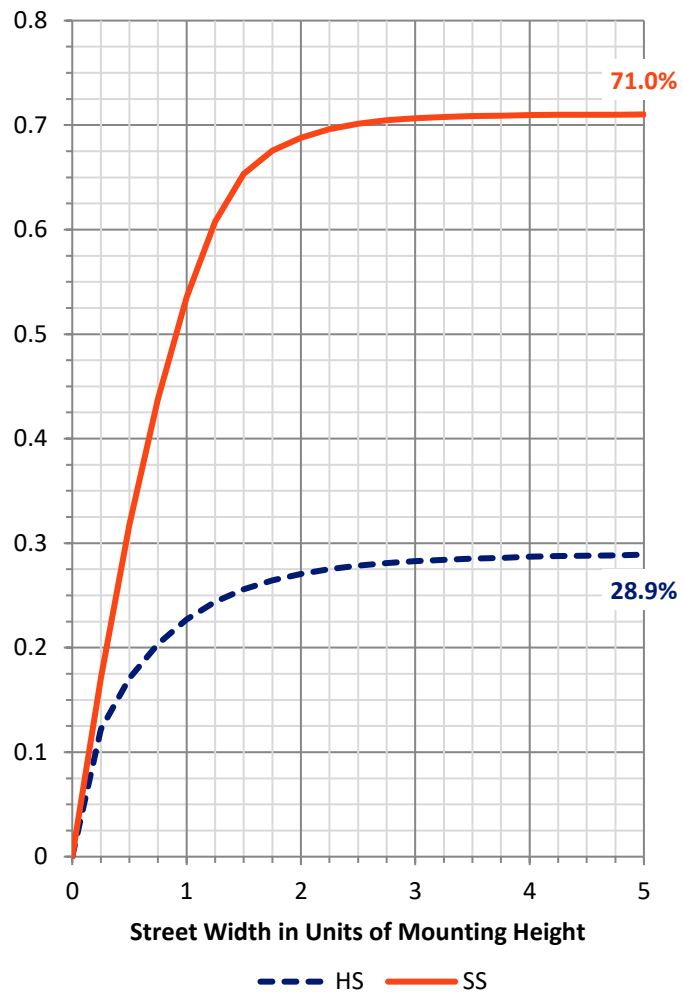
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1172.7	0.0	1172.7
	% Fixture	29.1	0.0	29.1
<b>Street Side</b>	Lumens	2861.3	0.0	2861.3
	% Fixture	70.9	0.0	70.9
<b>Total</b>	Lumens	4034.0	0.0	4034.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.1	3.4
10°-20°	324.8	8.1
20°-30°	449.5	11.1
30°-40°	624.6	15.5
40°-50°	824.9	20.4
50°-60°	980.3	24.3
60°-70°	543.1	13.5
70°-80°	135.2	3.4
80°-90°	15.4	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°	4034.0	100.0
0°-180°	4034.0	100.0

**Coefficient of Utilization**



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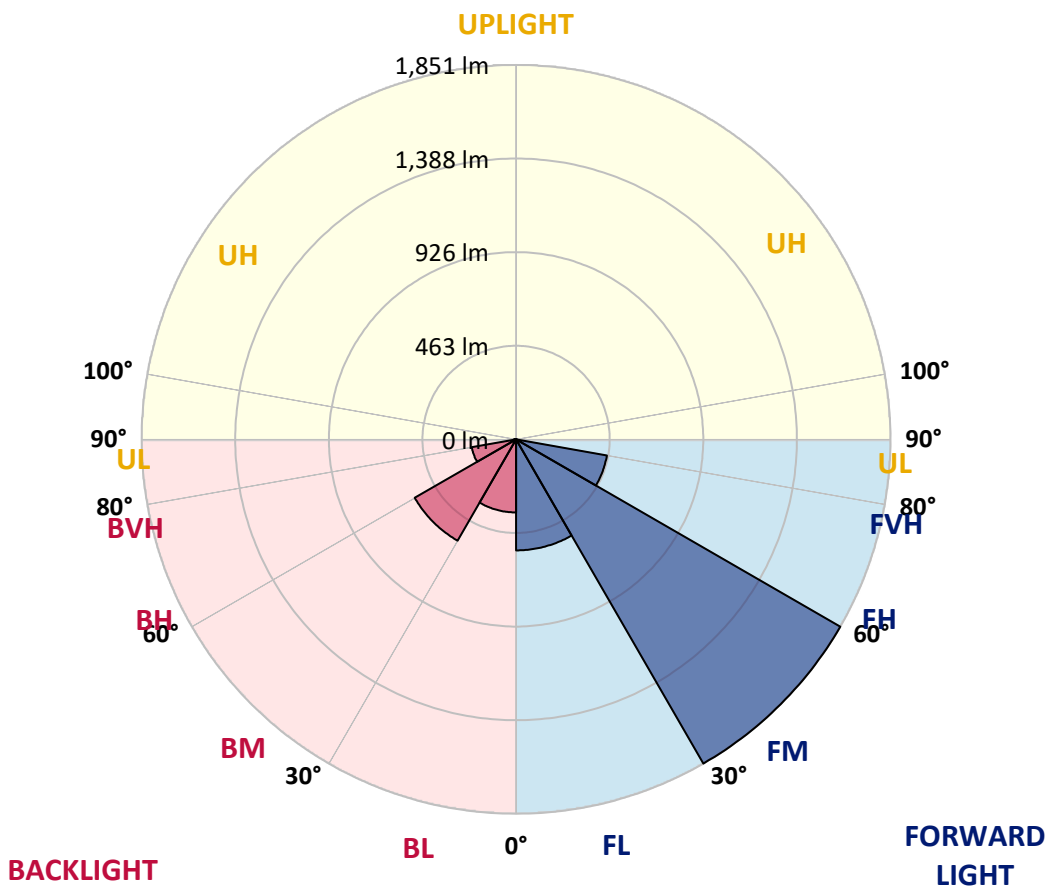
CATALOG NUMBER: GWS-SA1D-830-U-SL3-W-GRSWH

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	549.1	13.6			
FM (30°-60°)	1851.3	45.9			
FH (60°-80°)	456.1	11.3			G0/660
FVH (80°-90°)	4.8	0.1			G0/10
BL (0°-30°)	361.4	9.0	B1/500		
BM (30°-60°)	578.5	14.3	B1/1000		
BH (60°-80°)	222.2	5.5	B1/500		G1/500
BVH (80°-90°)	10.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





REPORT NUMBER: P630554

CATALOG NUMBER: GWS-SA1D-830-U-SL3-W-GRSWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7
2.5°	1519.7	1522.8	1524.9	1532.2	1538.4	1543.9	1549.8	1549.8	1549.4	1548.4	1546.3
5°	1459.7	1463.1	1467.9	1478.0	1491.4	1501.1	1517.0	1518.4	1525.3	1528.0	1526.6
7.5°	1389.9	1390.9	1397.2	1410.3	1431.7	1448.9	1471.7	1474.5	1491.1	1500.7	1499.0
10°	1313.6	1310.1	1321.2	1340.5	1368.5	1397.5	1426.8	1429.3	1455.9	1474.2	1472.8
12.5°	1243.8	1244.2	1255.2	1278.7	1313.6	1349.5	1388.9	1394.4	1427.2	1450.7	1448.3
15°	1185.5	1186.9	1200.3	1226.9	1266.6	1309.4	1358.5	1363.7	1405.1	1436.2	1429.3
17.5°	1138.9	1140.2	1152.0	1182.4	1224.8	1276.6	1336.4	1341.6	1393.0	1430.0	1415.8
20°	1106.7	1106.0	1117.4	1146.5	1190.3	1246.6	1317.0	1324.6	1389.2	1432.4	1406.8
22.5°	1093.6	1093.3	1101.6	1125.4	1166.5	1223.5	1305.3	1315.7	1393.4	1443.1	1401.3
25°	1100.2	1098.8	1106.0	1123.7	1156.5	1214.5	1308.7	1319.8	1411.0	1465.2	1402.3
27.5°	1120.6	1118.8	1125.0	1140.9	1165.8	1223.8	1332.9	1345.7	1448.3	1505.6	1416.1
30°	1151.6	1150.6	1156.8	1172.0	1193.8	1254.9	1379.2	1393.7	1505.9	1568.4	1446.2
32.5°	1187.9	1186.2	1197.2	1214.8	1240.0	1311.5	1441.4	1460.3	1574.3	1649.2	1496.6
35°	1228.6	1227.3	1242.4	1268.0	1304.3	1390.2	1516.6	1537.3	1644.1	1740.7	1563.6
37.5°	1268.3	1268.3	1297.7	1335.7	1381.3	1475.9	1587.4	1600.5	1692.4	1821.9	1635.4
40°	1303.6	1305.6	1349.8	1406.8	1464.8	1553.2	1634.0	1645.1	1713.8	1877.8	1697.9
42.5°	1342.6	1344.3	1395.8	1470.4	1539.4	1615.7	1662.4	1667.9	1717.9	1905.8	1742.1
45°	1373.7	1376.1	1440.0	1519.7	1604.3	1662.7	1684.8	1689.6	1723.8	1921.0	1774.2
47.5°	1389.9	1393.4	1466.6	1559.4	1648.2	1704.8	1721.7	1723.8	1748.0	1947.6	1812.9
50°	1387.1	1394.0	1476.6	1579.1	1680.7	1747.3	1781.1	1784.6	1797.4	1986.6	1858.1
52.5°	1411.7	1414.8	1498.0	1602.6	1726.9	1825.7	1884.4	1889.2	1883.4	2016.0	1885.1
55°	1370.9	1385.8	1471.4	1599.2	1797.4	1946.9	2037.4	2034.9	1961.4	2048.8	1930.0
57.5°	1108.8	1130.6	1209.0	1357.4	1681.3	2031.8	2151.7	2145.8	2021.8	2074.0	1978.7
60°	767.6	771.1	841.9	947.2	1297.7	1795.0	2118.2	2130.9	2032.9	2042.2	1888.5
62.5°	614.0	612.9	619.5	622.3	825.3	1261.8	1672.0	1718.6	1688.9	1591.2	1338.4
65°	524.2	528.0	547.3	537.3	538.7	710.7	999.0	1005.6	984.8	949.6	707.9
67.5°	410.2	416.8	451.0	490.0	477.6	457.5	518.3	515.2	406.1	314.2	259.7
70°	256.9	261.1	297.7	384.7	415.8	375.7	333.2	331.8	217.5	178.9	196.1
72.5°	149.9	150.6	160.9	214.4	275.9	256.9	245.2	236.2	139.9	142.6	156.4
75°	82.5	82.5	82.2	92.5	108.8	96.3	93.2	90.8	93.6	106.0	116.4
77.5°	17.3	17.6	18.6	24.5	31.8	38.7	48.7	49.0	61.1	70.8	79.1
80°	7.9	8.3	10.4	13.1	16.9	22.4	29.7	30.0	36.9	44.5	50.1
82.5°	4.1	4.5	5.5	6.9	9.0	11.7	16.6	16.6	22.1	26.2	29.7
85°	1.4	1.4	2.1	2.8	3.8	4.8	6.6	6.6	9.7	12.8	14.8
87.5°	0.0	0.0	0.0	0.0	0.3	0.7	1.4	1.4	1.7	2.1	3.5
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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CATALOG NUMBER: GWS-SA1D-830-U-SL3-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7	1548.7
2.5°	1541.8	1531.1	1531.5	1533.6	1527.0	1517.0	1510.4	1502.1	1496.9	1495.9	1499.7
5°	1519.7	1507.3	1498.7	1489.7	1471.0	1448.9	1431.7	1417.5	1408.2	1404.7	1400.6
7.5°	1489.3	1473.1	1451.4	1426.2	1392.3	1352.9	1325.3	1299.4	1281.5	1276.3	1273.9
10°	1459.0	1435.5	1396.8	1349.8	1293.6	1240.4	1190.3	1152.0	1121.6	1104.3	1109.8
12.5°	1427.5	1398.5	1338.1	1265.9	1187.5	1107.4	1041.8	978.3	929.2	904.7	897.5
15°	1399.9	1360.5	1276.3	1178.6	1074.3	973.4	878.5	783.2	721.0	687.2	677.9
17.5°	1376.4	1325.3	1211.0	1089.5	964.8	821.2	704.4	616.0	573.6	554.9	553.5
20°	1353.3	1290.8	1146.5	993.5	838.4	677.5	573.2	531.8	516.6	510.0	509.7
22.5°	1332.6	1254.5	1078.4	897.5	712.7	569.4	512.1	494.1	490.0	490.0	489.3
25°	1315.0	1218.3	1008.7	795.6	599.1	506.9	480.3	472.7	474.5	477.6	477.9
27.5°	1307.7	1190.0	941.3	691.0	520.7	470.7	458.6	457.5	462.4	467.2	467.9
30°	1315.3	1170.6	872.3	590.8	473.8	448.6	443.0	445.1	451.0	455.8	455.8
32.5°	1338.8	1161.0	801.8	517.6	446.5	433.0	431.3	433.4	437.9	440.6	441.0
35°	1378.5	1164.8	729.0	468.2	428.9	421.6	421.3	422.7	424.4	426.1	426.5
37.5°	1428.6	1181.7	650.9	439.6	417.5	413.3	412.7	412.3	412.7	412.7	413.0
40°	1477.6	1207.2	581.2	422.7	409.5	406.1	404.4	401.9	401.6	400.9	400.6
42.5°	1513.9	1226.9	525.6	410.6	402.3	398.1	396.1	392.3	391.9	391.6	391.2
45°	1541.1	1243.5	479.3	398.8	394.7	390.9	386.4	383.0	383.6	384.3	384.3
47.5°	1571.9	1258.0	445.5	387.8	385.4	381.6	376.0	373.6	376.0	378.5	378.5
50°	1609.2	1278.4	417.8	376.7	375.7	371.2	366.4	365.3	368.1	371.6	371.6
52.5°	1636.5	1296.0	398.1	365.7	365.7	359.8	355.7	355.3	358.4	361.9	362.2
55°	1687.6	1337.1	391.2	352.9	351.5	347.0	343.9	341.5	345.3	348.4	348.4
57.5°	1745.2	1391.6	393.0	334.6	332.9	331.5	329.1	326.3	327.4	330.8	331.2
60°	1623.0	1286.0	374.0	316.3	315.3	314.6	311.5	306.6	308.0	310.8	311.1
62.5°	1133.7	854.7	302.5	293.5	297.0	296.6	292.5	287.0	287.3	291.1	291.1
65°	588.4	462.4	265.5	272.8	278.0	275.9	269.0	264.2	263.5	268.3	267.3
67.5°	253.8	252.4	241.7	251.0	256.6	252.1	244.8	236.9	237.6	239.3	237.9
70°	204.4	210.6	215.1	225.1	229.6	221.3	213.4	208.9	205.1	204.8	202.4
72.5°	163.3	172.0	182.0	192.3	193.7	185.4	175.4	171.3	165.4	165.1	162.6
75°	122.9	130.2	138.1	146.4	146.4	138.5	131.9	129.8	122.9	120.9	118.8
77.5°	83.9	88.4	94.6	96.7	98.8	95.7	89.1	85.6	77.7	75.6	72.9
80°	52.8	55.9	59.7	61.1	63.2	59.4	54.2	50.4	44.9	43.2	41.8
82.5°	31.8	33.8	36.3	36.9	38.7	35.9	31.1	28.3	25.2	23.8	22.8
85°	16.2	17.3	18.6	19.0	18.6	15.9	14.2	12.8	10.7	10.4	9.7
87.5°	4.1	4.8	5.2	4.8	4.5	3.5	2.4	1.7	0.7	0.7	0.3
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

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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

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**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	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**

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