

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: P632027

Luminaire Tested: GWS-SA2B-830-U-AFL-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P632027
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-46)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2B-830-U-AFL-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (32) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4128.9 lumens
Efficiency: N/A
Efficacy: 89.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G0

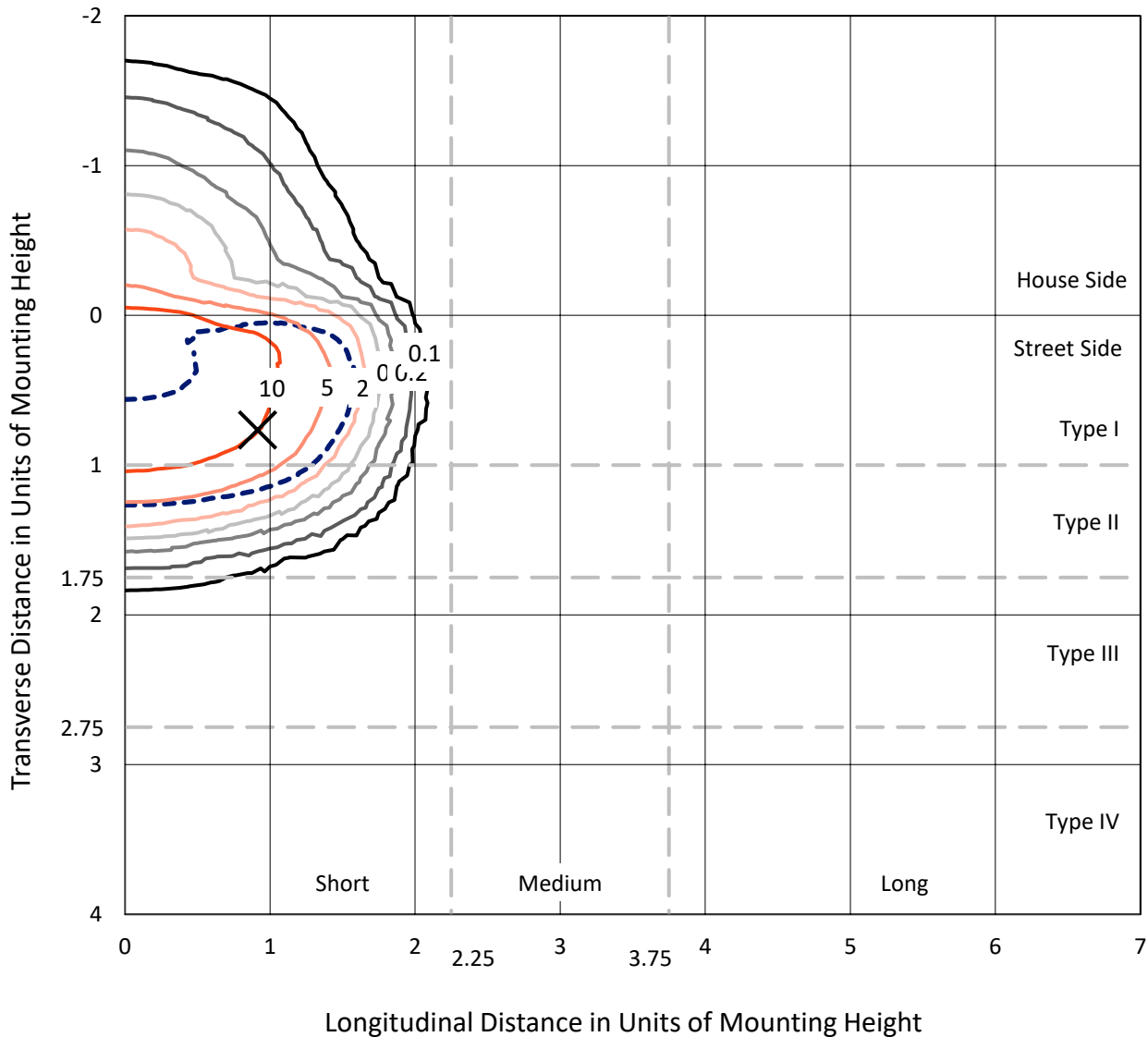
Input Watts (W): 46.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

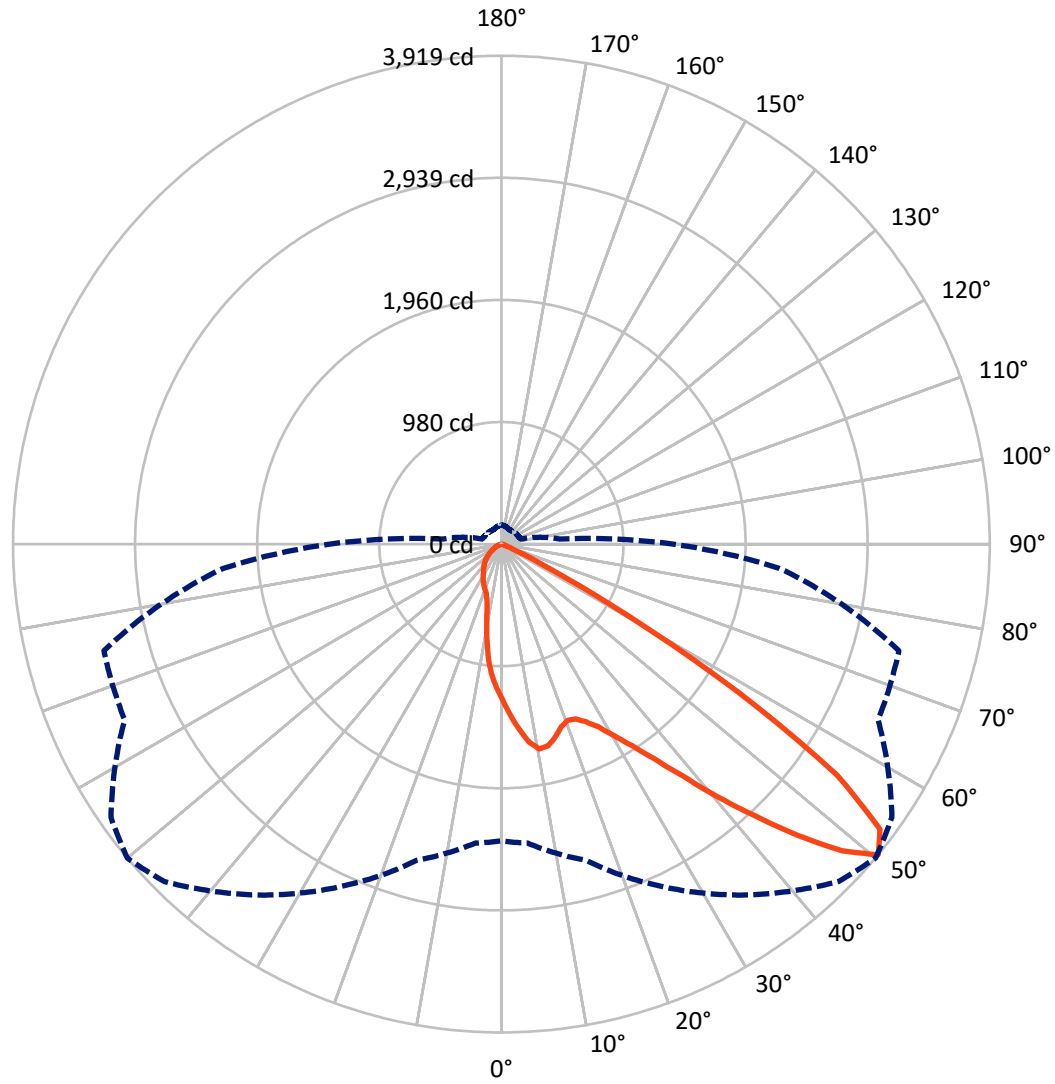
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 50-Deg Lateral - - - Horizontal Cone Through 50-Deg Vertical

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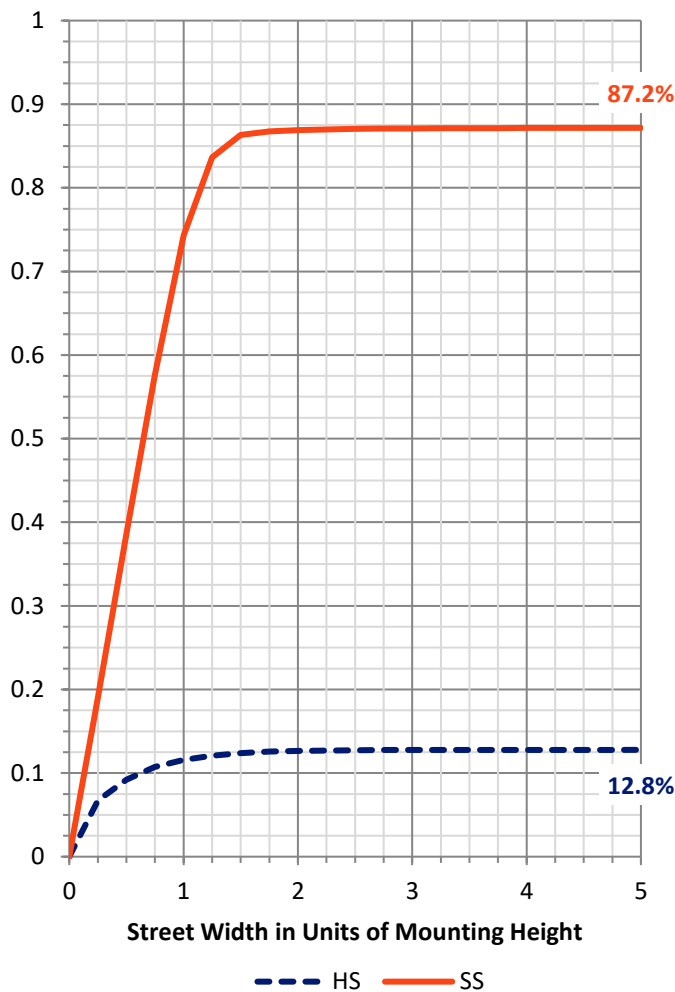
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	530.5	0.0	530.5
	% Fixture	12.8	0.0	12.8
Street Side	Lumens	3598.4	0.0	3598.4
	% Fixture	87.2	0.0	87.2
Total	Lumens	4128.9	0.0	4128.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.0	2.8
10°-20°	299.4	7.3
20°-30°	494.1	12.0
30°-40°	815.4	19.7
40°-50°	1290.1	31.2
50°-60°	976.8	23.7
60°-70°	122.2	3.0
70°-80°	13.8	0.3
80°-90°	1.1	0.0
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°	4128.9	100.0
0°-180°	4128.9	100.0

Coefficient of Utilization



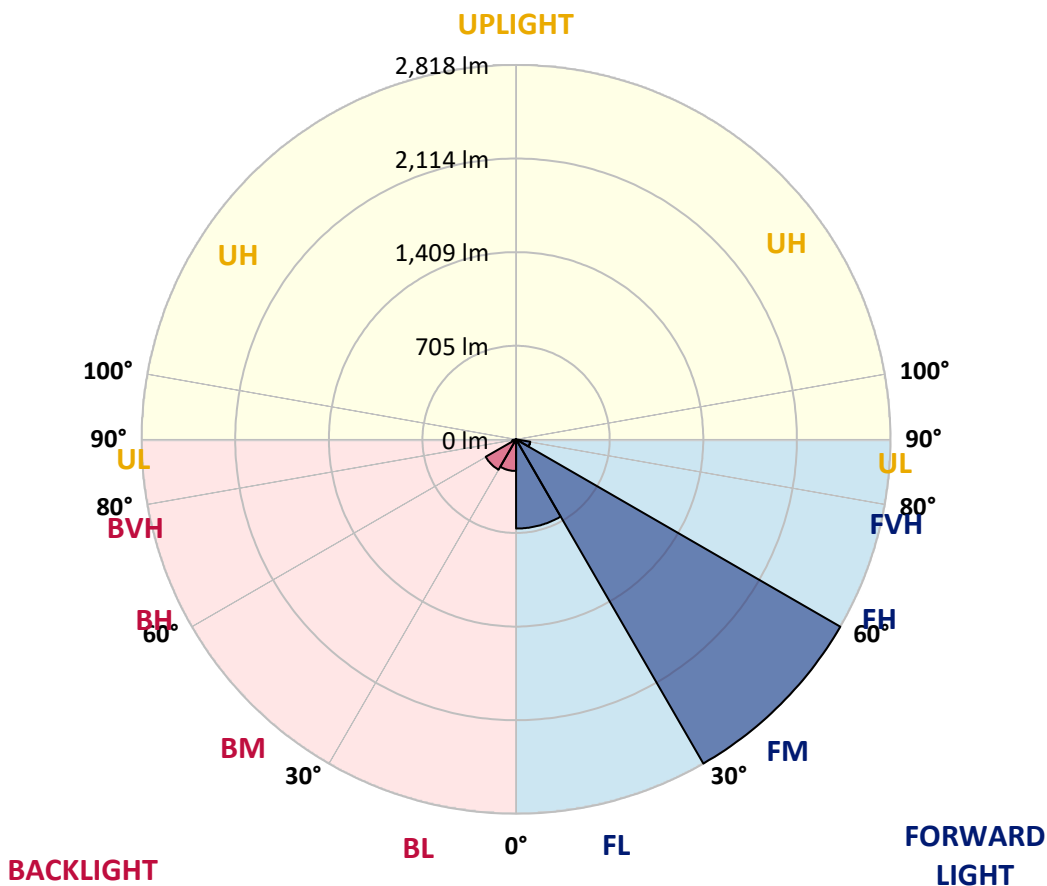
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	671.4	16.3			
FM (30°-60°)	2818.4	68.3			
FH (60°-80°)	108.1	2.6			G0/660
FVH (80°-90°)	0.5	0.0			G0/10
BL (0°-30°)	238.1	5.8	B1/500		
BM (30°-60°)	263.8	6.4	B1/1000		
BH (60°-80°)	28.0	0.7	B0/110		G0/110
BVH (80°-90°)	0.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G0
 Type II Short





REPORT NUMBER: P632027
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	50°	55°	65°	75°	85°
0°	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9
2.5°	1425.4	1436.8	1433.6	1418.7	1402.6	1391.2	1373.5	1368.0	1327.9	1300.0	1270.5
5°	1597.5	1601.0	1597.1	1579.0	1550.7	1523.6	1494.5	1477.6	1410.4	1349.9	1288.2
7.5°	1638.8	1634.5	1641.9	1651.0	1647.0	1635.2	1604.6	1586.1	1505.9	1407.3	1313.8
10°	1509.9	1500.0	1528.0	1574.7	1623.8	1679.3	1671.4	1673.0	1599.1	1479.6	1347.2
12.5°	1338.9	1335.0	1355.8	1410.1	1506.3	1632.1	1662.4	1713.1	1684.4	1557.8	1385.3
15°	1263.9	1265.8	1278.4	1312.6	1381.8	1538.2	1610.9	1702.4	1760.6	1633.7	1427.3
17.5°	1275.3	1282.3	1281.9	1293.3	1335.4	1460.8	1545.6	1669.0	1819.6	1720.9	1475.7
20°	1352.7	1359.8	1349.1	1340.5	1354.6	1441.1	1511.4	1635.2	1859.2	1808.9	1526.8
22.5°	1468.6	1476.9	1451.7	1427.0	1417.9	1473.3	1524.4	1621.5	1889.5	1889.5	1572.4
25°	1608.9	1620.3	1581.4	1537.4	1512.2	1541.3	1579.8	1652.5	1920.6	1961.8	1603.4
27.5°	1765.7	1766.1	1732.7	1683.2	1636.0	1639.6	1662.7	1722.5	1954.7	2039.6	1627.8
30°	1942.2	1943.3	1898.9	1839.6	1780.3	1764.1	1783.8	1829.0	2025.9	2137.5	1661.6
32.5°	2170.1	2175.6	2111.9	2024.7	1947.7	1917.4	1928.8	1976.4	2139.1	2260.1	1712.3
35°	2478.2	2484.1	2390.2	2275.0	2152.4	2106.8	2118.2	2166.2	2302.9	2434.2	1793.2
37.5°	2782.4	2790.2	2695.1	2587.9	2419.6	2344.2	2356.0	2401.6	2548.9	2674.7	1922.9
40°	2992.6	3003.2	2973.8	2901.5	2745.4	2646.4	2660.6	2677.1	2819.7	2962.4	2091.1
42.5°	3103.5	3118.4	3131.0	3167.9	3085.8	3002.8	2978.9	2980.1	3095.2	3255.5	2266.0
45°	3110.1	3124.7	3189.1	3331.8	3394.3	3377.0	3333.4	3303.9	3305.5	3450.9	2375.2
47.5°	2894.0	2921.1	3041.8	3321.2	3556.2	3699.6	3677.6	3607.7	3393.9	3463.8	2363.5
50°	2381.9	2408.6	2627.9	3030.0	3438.3	3828.5	3919.3	3825.4	3336.1	3302.3	2242.0
52.5°	1729.9	1732.7	1875.0	2344.6	2960.4	3590.8	3804.6	3795.5	3248.1	3106.6	2076.2
55°	821.7	811.9	971.9	1323.2	2047.5	2904.2	3264.6	3366.8	3123.1	2965.1	1947.7
57.5°	239.3	244.0	315.2	516.4	1024.1	1856.1	2235.7	2425.9	2563.5	2437.7	1510.7
60°	107.3	107.7	119.9	157.2	341.1	863.4	1155.8	1391.2	1532.7	1420.3	749.4
62.5°	77.8	78.2	82.9	88.8	115.9	292.4	433.5	577.7	588.3	385.1	189.8
65°	64.8	64.8	65.6	65.6	69.6	104.5	131.7	169.8	143.0	106.1	74.3
67.5°	52.3	52.7	53.4	53.4	52.3	52.3	56.6	62.1	66.4	82.1	68.4
70°	40.9	40.5	40.5	40.9	39.7	33.8	36.5	41.7	45.6	64.1	59.3
72.5°	31.8	32.2	31.8	30.3	27.5	20.0	21.6	27.1	29.1	40.1	40.1
75°	24.0	24.4	22.8	17.3	11.4	6.3	8.3	13.4	16.9	19.6	14.5
77.5°	3.1	3.1	2.4	2.4	2.0	2.4	2.4	3.1	4.7	4.7	3.5
80°	0.4	0.4	0.4	0.8	1.2	1.6	1.6	1.6	1.6	2.0	2.0
82.5°	0.4	0.4	0.4	0.4	1.2	1.2	1.6	1.6	1.6	1.6	1.6
85°	0.0	0.0	0.0	0.4	0.8	1.2	1.2	1.6	1.6	1.6	1.6
87.5°	0.0	0.0	0.0	0.4	0.8	1.2	1.2	1.2	1.6	1.6	1.6
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-SA2B-830-U-AFL-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9
2.5°	1252.9	1230.1	1202.6	1183.7	1157.0	1139.3	1114.1	1097.2	1082.7	1071.3	1077.6
5°	1253.3	1217.1	1160.9	1113.0	1060.7	1012.7	961.3	920.8	884.2	867.7	876.8
7.5°	1261.1	1209.2	1123.2	1037.9	937.7	838.6	745.9	670.4	633.1	615.4	620.9
10°	1276.4	1205.7	1081.1	939.6	776.9	641.8	551.8	500.7	479.8	468.8	470.8
12.5°	1290.6	1203.3	1026.5	810.3	613.1	497.9	451.2	444.1	448.4	448.8	448.4
15°	1309.8	1199.0	958.9	677.5	490.5	430.3	431.5	441.7	451.9	455.1	454.3
17.5°	1330.3	1192.3	871.7	550.2	416.2	410.7	424.4	438.2	448.4	450.0	450.4
20°	1351.5	1178.6	772.2	449.2	381.6	395.7	411.1	421.3	428.8	431.1	431.9
22.5°	1361.3	1149.5	657.5	376.9	358.4	377.3	388.7	402.0	404.4	395.7	397.3
25°	1356.2	1100.4	545.5	328.1	335.2	354.1	371.0	364.3	354.5	348.2	350.2
27.5°	1340.1	1035.1	435.8	292.4	310.5	334.4	336.4	328.9	327.4	322.3	323.8
30°	1322.8	960.1	350.5	263.7	285.3	310.5	304.6	307.3	307.7	301.8	303.8
32.5°	1312.2	881.5	279.0	244.4	269.2	273.9	285.7	291.2	291.6	277.8	280.2
35°	1315.7	804.1	236.2	228.7	254.3	253.1	269.6	272.7	249.9	231.1	233.0
37.5°	1344.4	732.5	211.8	216.5	228.3	237.4	249.9	229.1	224.0	215.4	216.5
40°	1397.9	671.6	197.3	209.1	210.6	225.2	205.9	208.7	209.1	203.6	204.7
42.5°	1460.4	620.9	188.6	204.7	200.8	203.2	183.9	189.4	195.3	193.0	193.4
45°	1491.8	571.4	181.2	189.8	191.0	168.6	164.3	170.2	177.6	178.8	179.2
47.5°	1463.9	524.3	173.3	168.2	176.1	153.7	148.6	150.5	159.2	163.9	164.7
50°	1378.6	470.0	161.5	148.9	144.6	137.9	133.2	133.6	143.4	151.7	153.3
52.5°	1258.8	413.4	142.3	126.2	116.3	121.4	122.6	120.3	129.3	137.5	139.1
55°	1142.4	342.7	112.8	102.6	93.5	104.5	107.7	104.5	107.3	112.8	113.2
57.5°	804.5	193.7	86.5	84.9	77.4	89.6	94.7	90.0	85.3	88.8	89.6
60°	372.9	101.4	66.4	66.4	64.5	77.0	85.7	79.0	70.0	71.5	72.7
62.5°	116.7	64.1	48.7	46.0	52.7	65.6	72.7	66.0	55.4	55.4	57.0
65°	66.0	55.0	38.5	35.4	42.8	52.7	57.0	49.9	40.5	39.7	39.7
67.5°	61.3	52.3	34.2	28.7	30.3	33.8	35.4	30.7	27.9	27.5	27.9
70°	50.7	43.6	27.5	19.6	18.5	18.1	18.9	17.7	16.9	17.3	18.5
72.5°	31.4	26.3	17.3	11.8	10.2	9.8	9.8	9.8	9.4	9.4	9.4
75°	11.4	9.8	7.9	5.9	5.1	4.7	4.7	5.1	4.7	4.3	3.9
77.5°	3.5	3.1	3.1	3.1	2.8	2.4	2.0	2.0	1.6	1.2	1.2
80°	2.0	2.0	2.0	2.0	1.6	1.6	1.2	0.8	0.4	0.4	0.0
82.5°	2.0	2.0	2.0	1.6	1.6	1.6	1.2	0.8	0.4	0.0	0.0
85°	1.6	1.6	1.6	1.6	1.6	1.6	1.2	0.8	0.4	0.0	0.0
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.2	0.8	0.4	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

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

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			

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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			

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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			

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)