

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: P638492

Luminaire Tested: GWS-SA4E-830-U-T2R-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638492
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4E-830-U-T2R-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16296.4 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G1

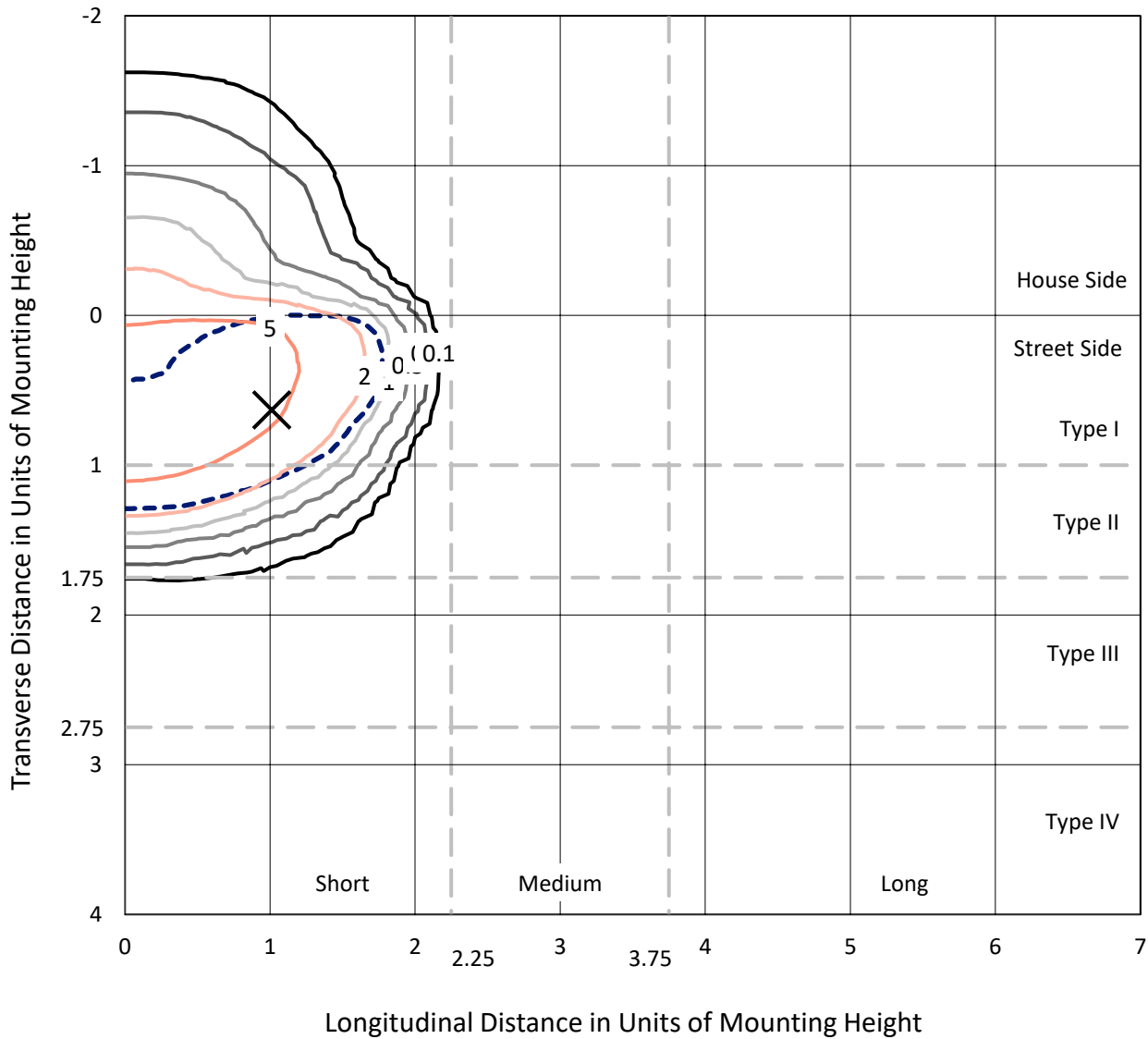
Input Watts (W): 202.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

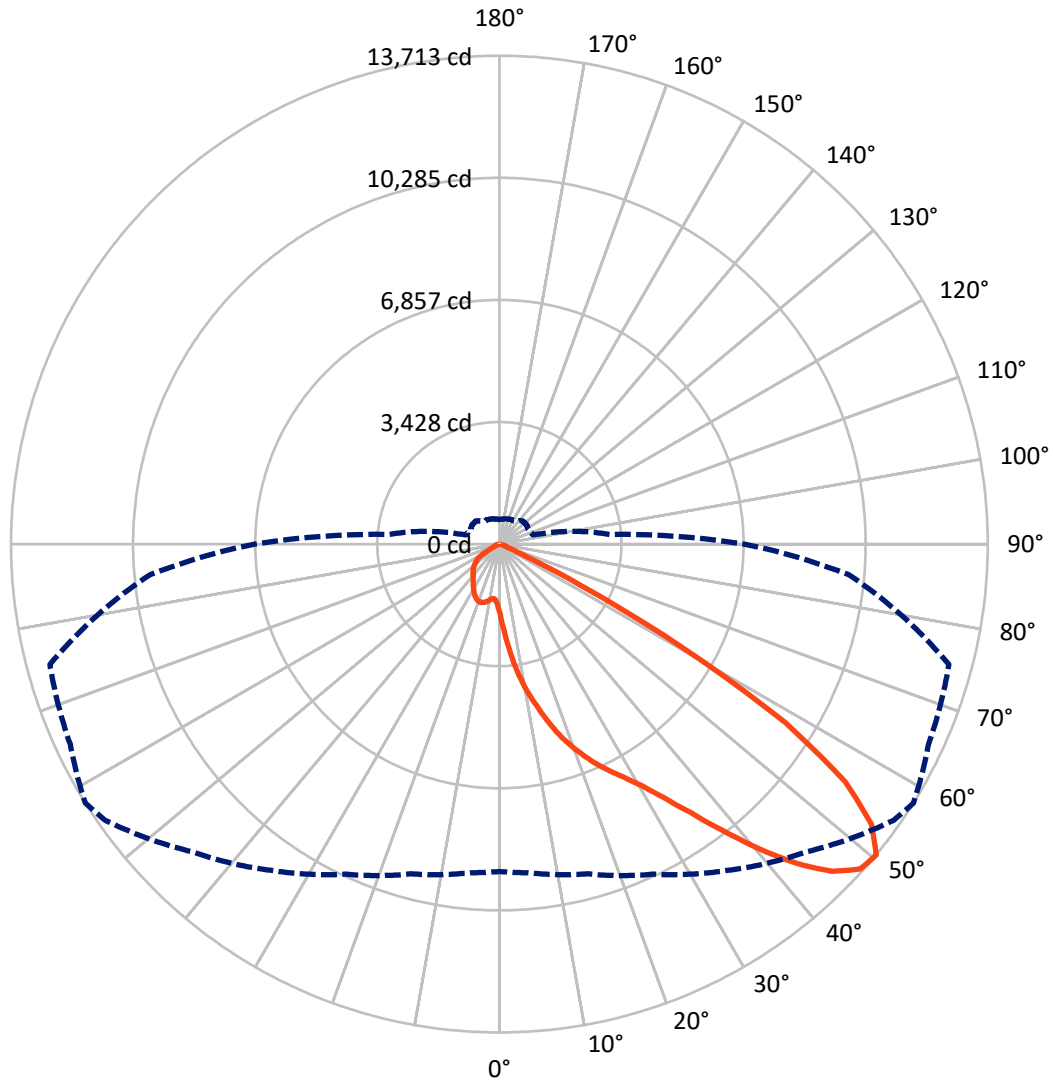
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 50-Deg Vertical



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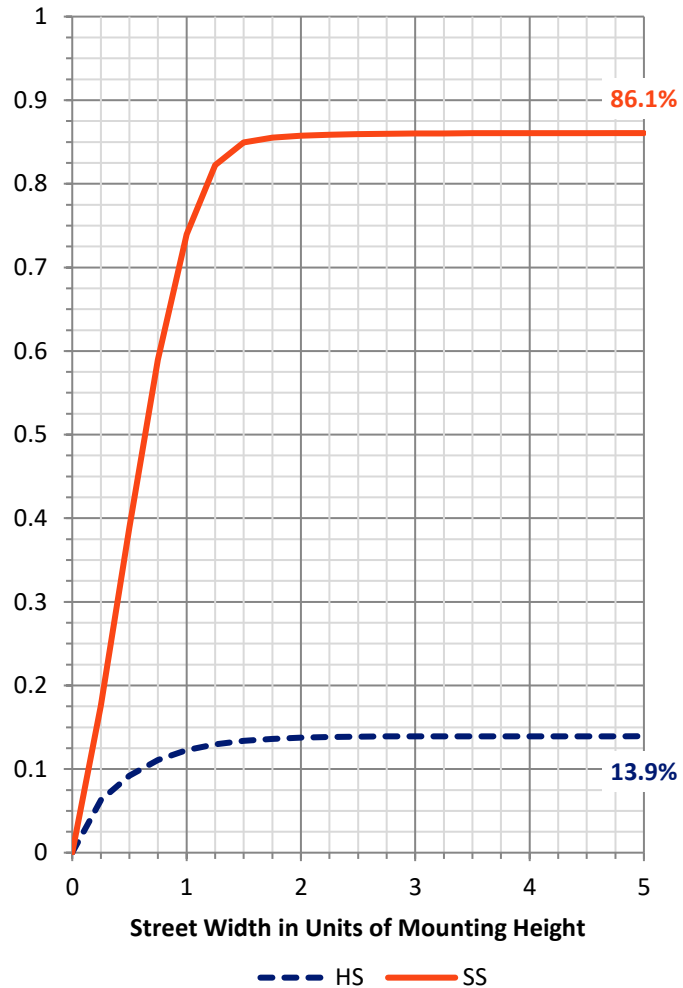
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2282.5	0.0	2282.5
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	14013.9	0.0	14013.9
	% Fixture	86.0	0.0	86.0
Total	Lumens	16296.4	0.0	16296.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.2	1.5
10°-20°	954.6	5.9
20°-30°	1931.8	11.9
30°-40°	3417.5	21.0
40°-50°	4982.0	30.6
50°-60°	3993.2	24.5
60°-70°	719.4	4.4
70°-80°	56.7	0.3
80°-90°	0.0	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°	16296.4	100.0
0°-180°	16296.4	100.0

Coefficient of Utilization



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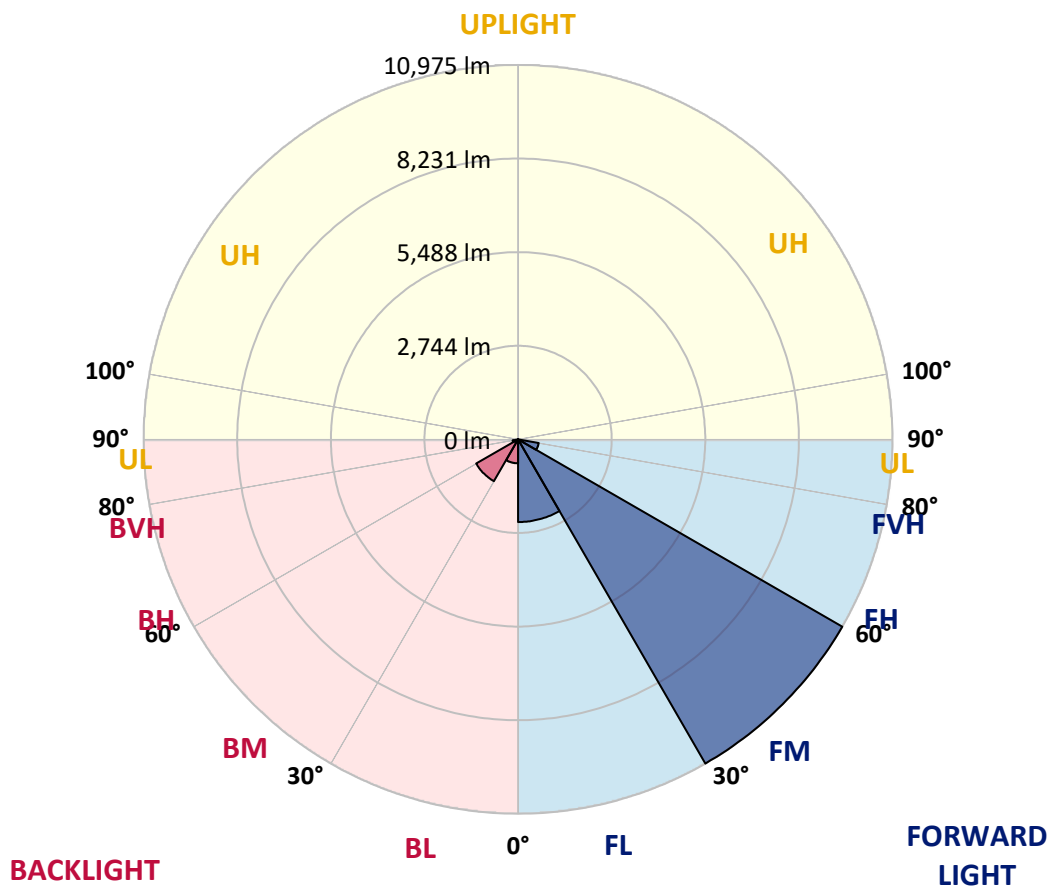
CATALOG NUMBER: GWS-SA4E-830-U-T2R-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2424.9	14.9			
FM (30°-60°)	10975.1	67.3			
FH (60°-80°)	613.9	3.8			G0/660
FVH (80°-90°)	0.0	0.0			G0/10
BL (0°-30°)	702.7	4.3	B2/1000		
BM (30°-60°)	1417.6	8.7	B2/2500		
BH (60°-80°)	162.2	1.0	B1/500		G1/500
BVH (80°-90°)	0.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1

Type II Short





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CATALOG NUMBER: GWS-SA4E-830-U-T2R-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6
2.5°	2880.7	2835.3	2809.2	2788.3	2695.9	2549.5	2453.7	2403.2	2319.5	2178.4	2056.4
5°	3759.0	3725.9	3664.9	3623.0	3504.5	3297.2	3082.8	2997.4	2807.5	2488.6	2202.8
7.5°	4341.0	4316.6	4294.0	4238.2	4126.7	3938.5	3701.5	3612.6	3319.8	2866.7	2397.9
10°	4788.9	4769.7	4743.6	4741.8	4654.7	4485.7	4253.9	4161.5	3844.4	3278.0	2628.0
12.5°	5182.7	5167.1	5161.8	5210.6	5154.9	5029.4	4778.4	4663.4	4327.1	3698.0	2882.4
15°	5452.9	5449.4	5472.0	5567.9	5599.2	5541.7	5330.9	5207.1	4820.3	4119.7	3163.0
17.5°	5576.6	5587.0	5630.6	5796.2	5935.6	5984.4	5822.3	5717.7	5310.0	4546.7	3462.7
20°	5787.5	5784.0	5810.1	5966.9	6137.7	6312.0	6263.2	6174.3	5804.9	4998.0	3795.6
22.5°	6381.7	6331.2	6275.4	6299.8	6360.8	6564.7	6655.3	6610.0	6315.5	5461.6	4138.9
25°	7294.9	7242.6	7063.1	6888.8	6773.8	6866.2	6989.9	7012.6	6822.6	5937.3	4497.9
27.5°	8263.8	8216.8	8014.6	7753.2	7423.8	7263.5	7355.9	7401.2	7321.0	6503.7	4879.5
30°	9171.7	9109.0	8887.7	8563.5	8181.9	7936.2	7831.6	7863.0	7910.0	7174.6	5327.4
32.5°	9959.4	9912.4	9647.5	9305.9	8938.2	8682.0	8438.1	8490.4	8605.4	7995.4	5900.7
35°	10626.9	10602.5	10321.9	9982.1	9593.5	9462.8	9253.6	9264.1	9379.1	8987.0	6599.5
37.5°	11207.2	11165.4	10910.9	10595.5	10287.1	10266.1	10208.6	10213.9	10273.1	10142.4	7402.9
40°	11573.2	11534.8	11353.6	11158.4	10938.8	10942.3	11240.3	11263.0	11195.0	11276.9	8251.6
42.5°	11710.8	11682.9	11585.4	11587.1	11564.4	11667.3	12226.7	12268.5	12024.5	12167.4	8976.6
45°	11472.1	11459.9	11466.9	11717.8	11989.7	12306.8	13033.5	13106.7	12761.7	12758.2	9542.9
47.5°	10701.8	10677.4	10881.3	11308.3	11937.4	12554.3	13521.5	13634.8	13277.5	13096.3	9898.4
50°	9192.7	9262.4	9584.8	10226.1	11182.8	12214.5	13516.2	13713.2	13296.7	13066.6	9839.2
52.5°	6658.8	6644.9	7350.6	8232.4	9396.5	11127.0	12798.3	13085.8	12831.4	12775.6	9706.7
55°	3623.0	3750.3	4226.0	5393.6	6847.0	9068.9	11158.4	11785.8	12080.3	12669.3	9945.5
57.5°	1331.4	1387.2	1685.2	2511.2	3624.8	5639.3	8523.5	9469.7	10379.4	12373.0	9905.4
60°	536.7	547.2	665.7	923.6	1523.1	2870.2	5113.0	5953.0	6810.4	9471.5	7601.6
62.5°	390.4	404.3	451.4	540.2	770.3	1254.7	2204.5	2563.5	2802.2	4691.3	3745.0
65°	315.4	325.9	364.2	404.3	508.9	674.4	711.0	684.9	681.4	1212.9	859.1
67.5°	261.4	271.9	299.7	327.6	366.0	336.3	244.0	256.2	209.1	207.4	169.0
70°	191.7	203.9	231.8	261.4	219.6	90.6	141.2	209.1	158.6	132.4	129.0
72.5°	144.6	153.4	179.5	170.8	64.5	34.9	94.1	151.6	122.0	97.6	95.8
75°	108.0	113.3	90.6	27.9	7.0	8.7	34.9	62.7	68.0	55.8	55.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.5	5.2	7.0	8.7	10.5
80°	0.0	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



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CATALOG NUMBER: GWS-SA4E-830-U-T2R-W-GRSBK

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6	1946.6
2.5°	1986.7	1913.5	1808.9	1721.8	1655.5	1591.1	1542.3	1493.5	1491.7	1467.3	1462.1
5°	2070.3	1937.9	1746.2	1608.5	1524.8	1474.3	1439.5	1422.0	1413.3	1404.6	1401.1
7.5°	2190.6	2000.6	1735.7	1589.3	1519.6	1486.5	1462.1	1451.7	1446.4	1439.5	1437.7
10°	2338.7	2091.2	1774.1	1625.9	1564.9	1533.6	1507.4	1491.7	1483.0	1470.8	1467.3
12.5°	2516.4	2202.8	1835.0	1686.9	1622.4	1580.6	1545.8	1523.1	1510.9	1495.2	1491.7
15°	2708.1	2323.0	1903.0	1742.7	1666.0	1612.0	1568.4	1533.6	1510.9	1491.7	1486.5
17.5°	2906.8	2445.0	1964.0	1781.0	1686.9	1622.4	1559.7	1512.6	1484.8	1460.4	1453.4
20°	3129.9	2570.5	2004.1	1788.0	1679.9	1594.6	1521.4	1462.1	1434.2	1401.1	1394.1
22.5°	3363.4	2687.2	2021.5	1772.3	1641.6	1542.3	1463.9	1402.9	1362.8	1327.9	1317.5
25°	3589.9	2791.8	2012.8	1728.7	1584.1	1469.1	1388.9	1326.2	1282.6	1247.8	1239.0
27.5°	3830.4	2878.9	1981.4	1664.3	1505.7	1388.9	1312.2	1258.2	1218.1	1179.8	1171.1
30°	4100.5	2959.1	1930.9	1585.8	1413.3	1307.0	1247.8	1211.2	1167.6	1127.5	1115.3
32.5°	4426.4	3030.5	1857.7	1491.7	1331.4	1235.6	1202.5	1174.6	1124.0	1082.2	1073.5
35°	4799.3	3089.8	1765.3	1394.1	1251.2	1190.3	1183.3	1146.7	1080.5	1031.7	1021.2
37.5°	5231.5	3147.3	1655.5	1298.3	1192.0	1169.3	1171.1	1108.3	1028.2	968.9	962.0
40°	5696.8	3204.8	1533.6	1214.7	1138.0	1157.1	1141.5	1052.6	921.9	864.4	857.4
42.5°	6181.3	3267.5	1409.8	1136.2	1092.7	1110.1	1087.4	941.0	846.9	817.3	813.8
45°	6618.7	3342.5	1275.6	1057.8	1047.4	1042.1	1003.8	852.2	812.1	791.2	789.4
47.5°	6934.1	3330.3	1132.7	982.9	998.6	981.1	864.4	810.3	777.2	749.4	742.4
50°	6876.6	3117.7	984.6	899.2	935.8	920.1	777.2	761.6	731.9	702.3	691.8
52.5°	6730.2	2828.4	855.7	810.3	867.9	831.3	718.0	702.3	676.2	637.8	625.6
55°	6808.7	2556.5	754.6	738.9	798.1	688.4	651.8	627.4	599.5	557.7	552.4
57.5°	6556.0	2086.0	606.5	616.9	705.8	587.3	571.6	533.3	486.2	458.3	454.8
60°	4537.9	1120.5	379.9	392.1	510.6	493.2	512.3	477.5	420.0	393.8	388.6
62.5°	2084.2	449.6	207.4	198.7	268.4	334.6	439.2	435.7	364.2	322.4	318.9
65°	505.4	205.6	148.1	139.4	151.6	200.4	285.8	343.3	294.5	245.7	240.5
67.5°	163.8	167.3	135.9	127.2	134.2	149.9	170.8	190.0	188.2	172.5	169.0
70°	130.7	151.6	125.5	115.0	115.0	120.2	115.0	92.4	80.2	87.1	90.6
72.5°	97.6	115.0	99.3	88.9	85.4	83.6	71.5	52.3	36.6	33.1	31.4
75°	57.5	64.5	61.0	52.3	48.8	43.6	34.9	22.7	12.2	8.7	5.2
77.5°	10.5	12.2	13.9	10.5	8.7	7.0	5.2	1.7	0.0	0.0	0.0
80°	0.0	1.7	1.7	1.7	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

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)