

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: P637504

Luminaire Tested: GWS-SA4C-830-U-T2R-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637504
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4C-830-U-T2R-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12436.2 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

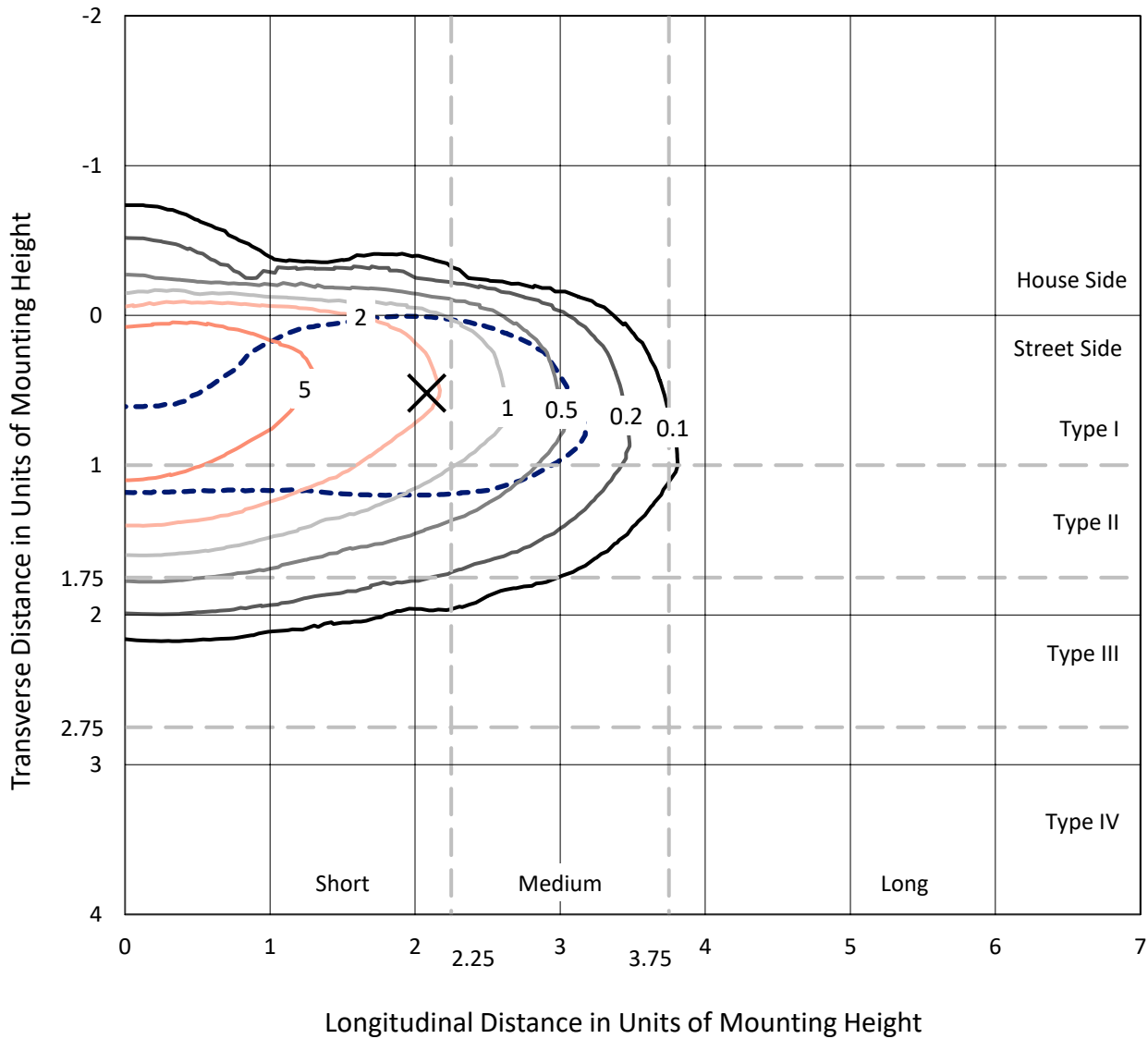
Input Watts (W): 128.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P637504
 CATALOG NUMBER: GWS-SA4C-830-U-T2R-W-HSS

Iso-Footcandle Lines of Horizontal Illumination

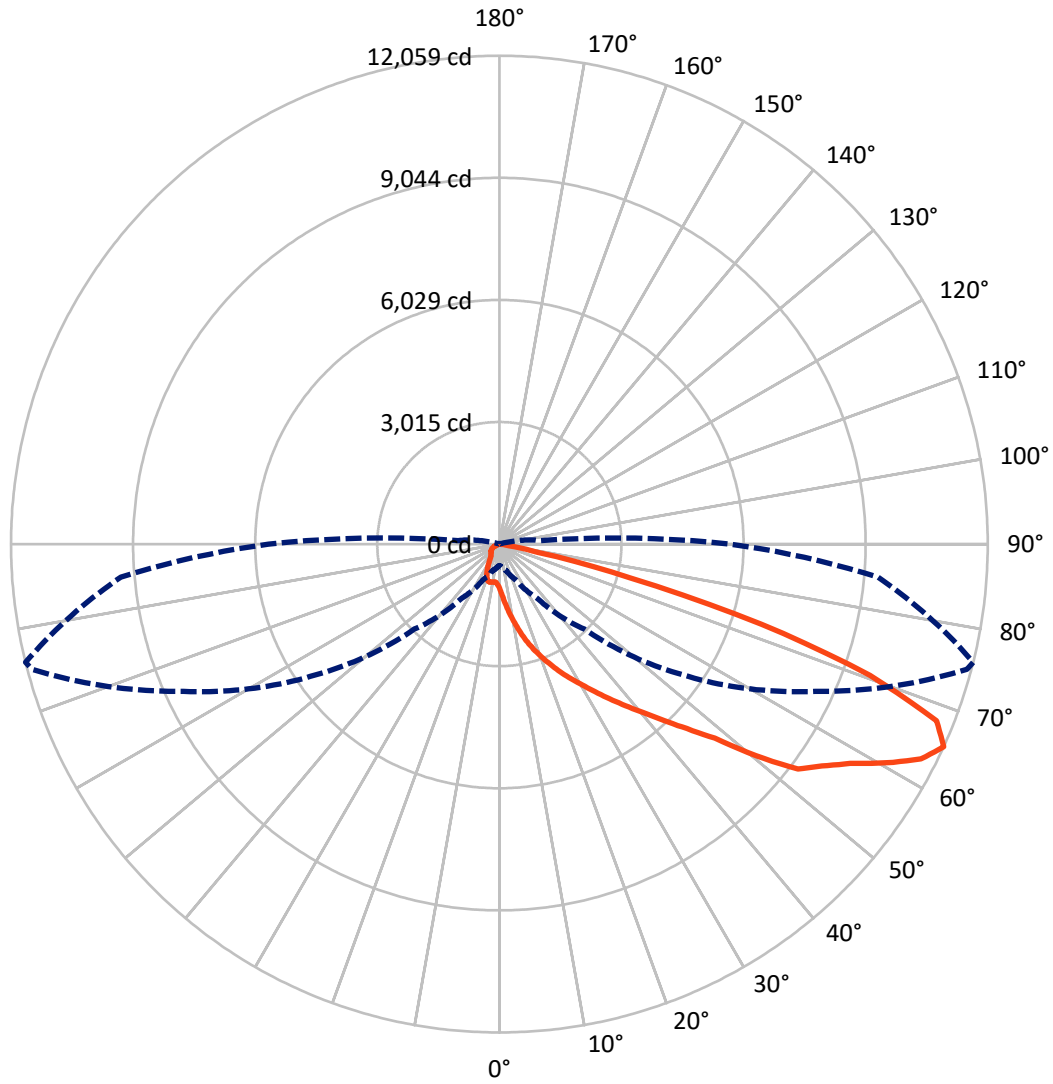
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.3 fc
 Type II - Short - N/A

REPORT NUMBER: P637504
CATALOG NUMBER: GWS-SA4C-830-U-T2R-W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P637504
 CATALOG NUMBER: GWS-SA4C-830-U-T2R-W-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	687.6	0.0	687.6
	% Fixture	5.5	0.0	5.5
Street Side	Lumens	11748.6	0.0	11748.6
	% Fixture	94.5	0.0	94.5
Total	Lumens	12436.2	0.0	12436.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.9	1.1
10°-20°	508.3	4.1
20°-30°	1036.9	8.3
30°-40°	1844.2	14.8
40°-50°	2726.2	21.9
50°-60°	3121.3	25.1
60°-70°	2381.4	19.1
70°-80°	667.1	5.4
80°-90°	16.8	0.1
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°	12436.2	100.0
0°-180°	12436.2	100.0

Coefficient of Utilization



REPORT NUMBER: P637504

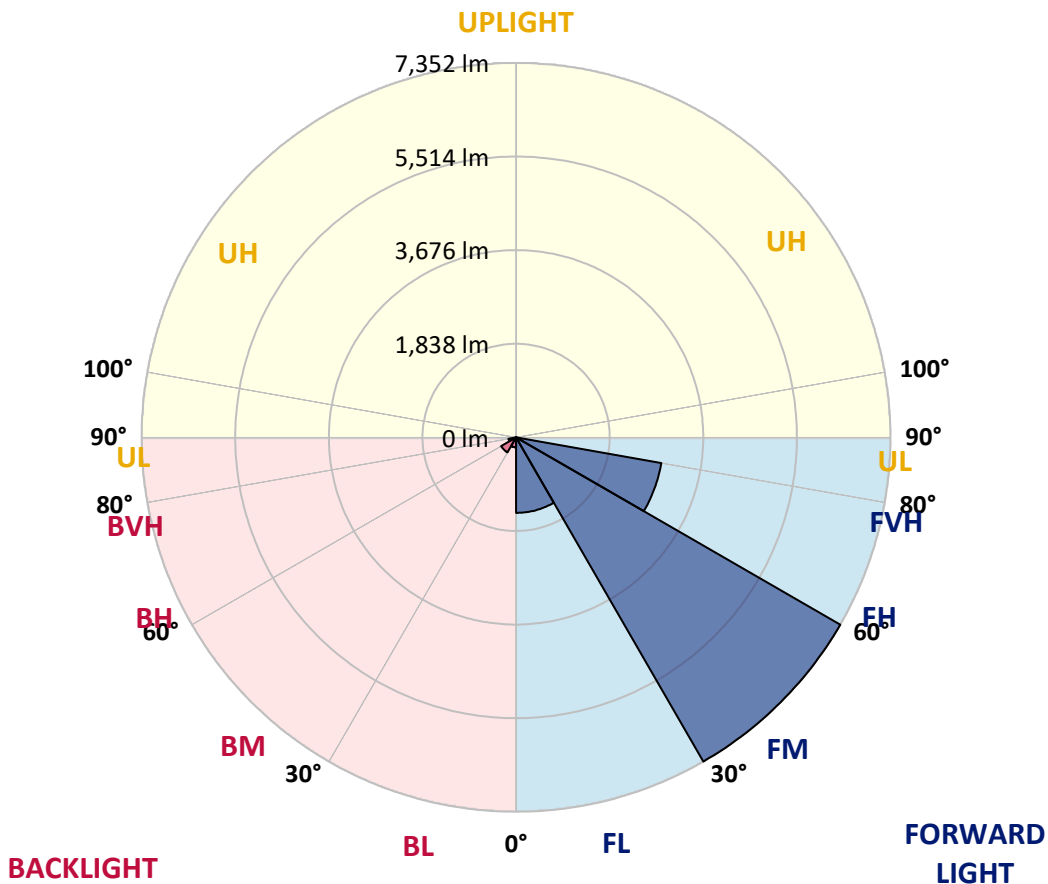
CATALOG NUMBER: GWS-SA4C-830-U-T2R-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1482.9	11.9			
FM (30°-60°)	7352.5	59.1			
FH (60°-80°)	2897.3	23.3			G2/5000
FVH (80°-90°)	15.8	0.1			G1/100
BL (0°-30°)	196.2	1.6	B1/500		
BM (30°-60°)	339.3	2.7	B1/1000		
BH (60°-80°)	151.2	1.2	B1/500		G1/500
BVH (80°-90°)	1.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





REPORT NUMBER: P637504

CATALOG NUMBER: GWS-SA4C-830-U-T2R-W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1
2.5°	1696.9	1722.3	1702.4	1669.3	1605.2	1543.2	1463.7	1354.2	1266.9	1255.8	1174.0
5°	2291.7	2289.4	2246.3	2203.2	2135.8	2029.7	1869.4	1666.0	1470.3	1453.7	1270.2
7.5°	2645.4	2648.7	2624.4	2591.2	2524.9	2415.5	2248.5	2003.1	1716.8	1683.6	1401.7
10°	2942.8	2941.7	2924.0	2908.5	2848.8	2775.9	2596.8	2327.0	1982.1	1930.2	1548.8
12.5°	3166.1	3173.8	3182.7	3198.2	3172.7	3100.9	2931.7	2637.7	2250.8	2193.3	1716.8
15°	3343.0	3345.2	3378.3	3438.0	3459.0	3421.5	3267.8	2938.4	2516.1	2466.3	1910.3
17.5°	3396.0	3400.5	3456.8	3566.3	3676.8	3697.8	3581.8	3241.3	2777.0	2723.9	2098.2
20°	3507.7	3517.6	3559.6	3655.8	3795.1	3907.9	3862.5	3547.5	3037.9	2968.2	2290.6
22.5°	3859.2	3864.8	3850.4	3862.5	3934.4	4064.8	4092.5	3843.8	3305.4	3231.3	2498.4
25°	4463.9	4466.1	4365.5	4270.5	4216.3	4240.6	4301.4	4116.8	3570.7	3497.7	2691.8
27.5°	5091.8	5099.6	4979.1	4817.7	4624.2	4513.7	4496.0	4366.6	3838.2	3757.5	2883.1
30°	5683.3	5683.3	5556.1	5359.4	5100.7	4885.1	4758.0	4618.7	4124.5	4036.1	3078.8
32.5°	6215.0	6210.6	6048.1	5834.7	5579.4	5342.8	5075.3	4881.8	4442.9	4344.5	3304.3
35°	6653.9	6642.8	6458.2	6253.7	5980.6	5804.9	5506.4	5164.8	4787.8	4689.4	3536.4
37.5°	6985.5	6973.4	6804.2	6587.6	6334.4	6220.5	5970.7	5504.2	5151.5	5062.0	3794.0
40°	7165.7	7141.4	7024.2	6862.8	6650.6	6551.1	6447.2	5925.4	5579.4	5467.7	4098.0
42.5°	7218.8	7190.0	7112.7	7037.5	6909.2	6830.8	6942.4	6400.7	6049.2	5953.0	4445.1
45°	7061.8	7045.2	7038.6	7092.8	7116.0	7138.1	7413.3	6926.9	6567.7	6494.7	4881.8
47.5°	6683.7	6679.3	6737.9	6963.4	7208.8	7442.1	7925.2	7575.8	7239.8	7161.3	5492.0
50°	5985.1	6030.4	6194.0	6589.8	7080.6	7614.5	8403.9	8475.7	8327.6	8212.6	6288.0
52.5°	4892.9	4980.2	5347.2	5948.6	6653.9	7565.9	8624.9	9196.5	9347.9	9228.5	6858.4
55°	3839.3	3921.1	4248.4	5011.1	5951.9	7195.6	8634.9	9445.2	9775.8	9665.2	7244.2
57.5°	2859.9	2935.0	3232.4	3962.0	4996.8	6467.1	8398.3	9583.4	10283.2	10212.4	7853.3
60°	1869.4	1943.4	2212.1	2849.9	3875.8	5405.8	7815.7	9554.7	10974.1	10967.5	8601.7
62.5°	1036.9	1095.5	1290.1	1787.6	2705.1	4186.4	6900.4	9266.1	11642.9	11684.9	9218.6
65°	530.6	568.2	686.5	982.8	1637.2	2968.2	5696.5	8605.1	11952.4	12058.6	9381.1
67.5°	347.1	359.3	388.0	510.7	876.6	1867.2	4287.0	7544.9	11516.9	11640.7	8836.1
70°	281.9	291.8	308.4	340.5	452.1	991.6	2815.7	6026.0	9623.2	9707.2	7036.4
72.5°	206.7	220.0	252.0	273.1	326.1	543.9	1464.8	3955.4	6608.6	6756.7	4421.9
75°	152.6	160.3	186.8	215.6	266.4	343.8	560.5	2079.4	3412.6	3326.4	1857.2
77.5°	91.8	97.3	119.4	138.2	190.1	214.5	195.7	768.3	1038.0	976.1	448.8
80°	45.3	50.9	78.5	103.9	121.6	86.2	81.8	214.5	231.0	231.0	112.8
82.5°	15.5	19.9	42.0	68.5	59.7	33.2	38.7	55.3	61.9	65.2	33.2
85°	0.0	0.0	9.9	19.9	8.8	4.4	9.9	12.2	15.5	16.6	11.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.3	4.4	4.4
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: P637504
 CATALOG NUMBER: GWS-SA4C-830-U-T2R-W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1
2.5°	1129.8	1077.8	999.4	928.6	874.4	823.6	784.9	753.9	748.4	730.7	732.9
5°	1180.7	1086.7	941.9	830.2	751.7	698.7	654.4	621.3	606.9	592.5	581.5
7.5°	1259.1	1123.2	919.8	783.8	692.0	610.2	541.7	486.4	459.9	443.3	432.2
10°	1355.3	1174.0	920.9	756.1	620.2	495.3	401.3	340.5	311.7	302.9	301.8
12.5°	1470.3	1238.1	929.7	710.8	516.3	368.1	297.4	269.7	260.9	253.2	253.2
15°	1591.9	1310.0	929.7	627.9	393.6	287.4	257.6	239.9	228.8	224.4	222.2
17.5°	1720.1	1377.4	907.6	514.0	301.8	253.2	228.8	212.3	203.4	196.8	194.6
20°	1857.2	1441.5	852.3	393.6	258.7	226.6	203.4	186.8	178.0	171.3	171.3
22.5°	1996.5	1501.2	762.8	302.9	228.8	201.2	179.1	163.6	154.8	148.1	148.1
25°	2125.8	1541.0	647.8	249.8	206.7	179.1	159.2	143.7	133.8	129.3	127.1
27.5°	2246.3	1566.5	520.7	220.0	185.7	160.3	139.3	124.9	117.2	113.9	111.7
30°	2371.3	1573.1	398.0	200.1	168.0	141.5	121.6	110.5	103.9	99.5	99.5
32.5°	2492.9	1565.4	304.0	183.5	152.6	124.9	108.3	98.4	92.9	89.5	88.4
35°	2616.7	1530.0	246.5	169.1	137.1	109.4	96.2	88.4	85.1	80.7	80.7
37.5°	2751.5	1482.4	214.5	154.8	121.6	98.4	86.2	80.7	76.3	73.0	71.9
40°	2919.6	1427.2	196.8	142.6	107.2	88.4	77.4	71.9	68.5	65.2	64.1
42.5°	3118.6	1373.0	187.9	129.3	96.2	78.5	69.6	63.0	59.7	55.3	54.2
45°	3400.5	1360.8	178.0	115.0	86.2	70.8	60.8	54.2	49.7	46.4	45.3
47.5°	3853.7	1395.1	161.4	99.5	76.3	61.9	52.0	46.4	40.9	37.6	35.4
50°	4303.6	1386.3	144.8	86.2	67.4	53.1	44.2	38.7	33.2	29.8	28.7
52.5°	4549.0	1344.3	129.3	76.3	58.6	45.3	37.6	31.0	27.6	24.3	23.2
55°	4771.2	1327.7	113.9	66.3	49.7	39.8	31.0	25.4	23.2	19.9	18.8
57.5°	5206.8	1366.4	100.6	57.5	43.1	34.3	26.5	21.0	18.8	15.5	14.4
60°	5662.3	1370.8	86.2	49.7	37.6	28.7	21.0	16.6	14.4	11.1	9.9
62.5°	5899.9	1259.1	70.8	42.0	31.0	24.3	17.7	13.3	11.1	6.6	6.6
65°	5701.0	1018.1	59.7	34.3	24.3	18.8	13.3	9.9	6.6	3.3	1.1
67.5°	5045.4	724.1	49.7	27.6	17.7	13.3	9.9	6.6	1.1	0.0	0.0
70°	3694.5	413.4	38.7	19.9	13.3	8.8	6.6	3.3	0.0	0.0	0.0
72.5°	2270.7	221.1	28.7	13.3	9.9	6.6	5.5	2.2	0.0	0.0	0.0
75°	861.2	106.1	17.7	8.8	7.7	5.5	3.3	1.1	0.0	0.0	0.0
77.5°	233.3	52.0	9.9	6.6	5.5	3.3	2.2	0.0	0.0	0.0	0.0
80°	60.8	24.3	6.6	4.4	3.3	2.2	0.0	0.0	0.0	0.0	0.0
82.5°	21.0	11.1	3.3	3.3	2.2	1.1	0.0	0.0	0.0	0.0	0.0
85°	8.8	4.4	2.2	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.3	1.1	1.1	1.1	1.1	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

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



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			

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)