

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: P638003

Luminaire Tested: GWS-SA4D-830-U-T3-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638003
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-26)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4D-830-U-T3-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14281.9 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

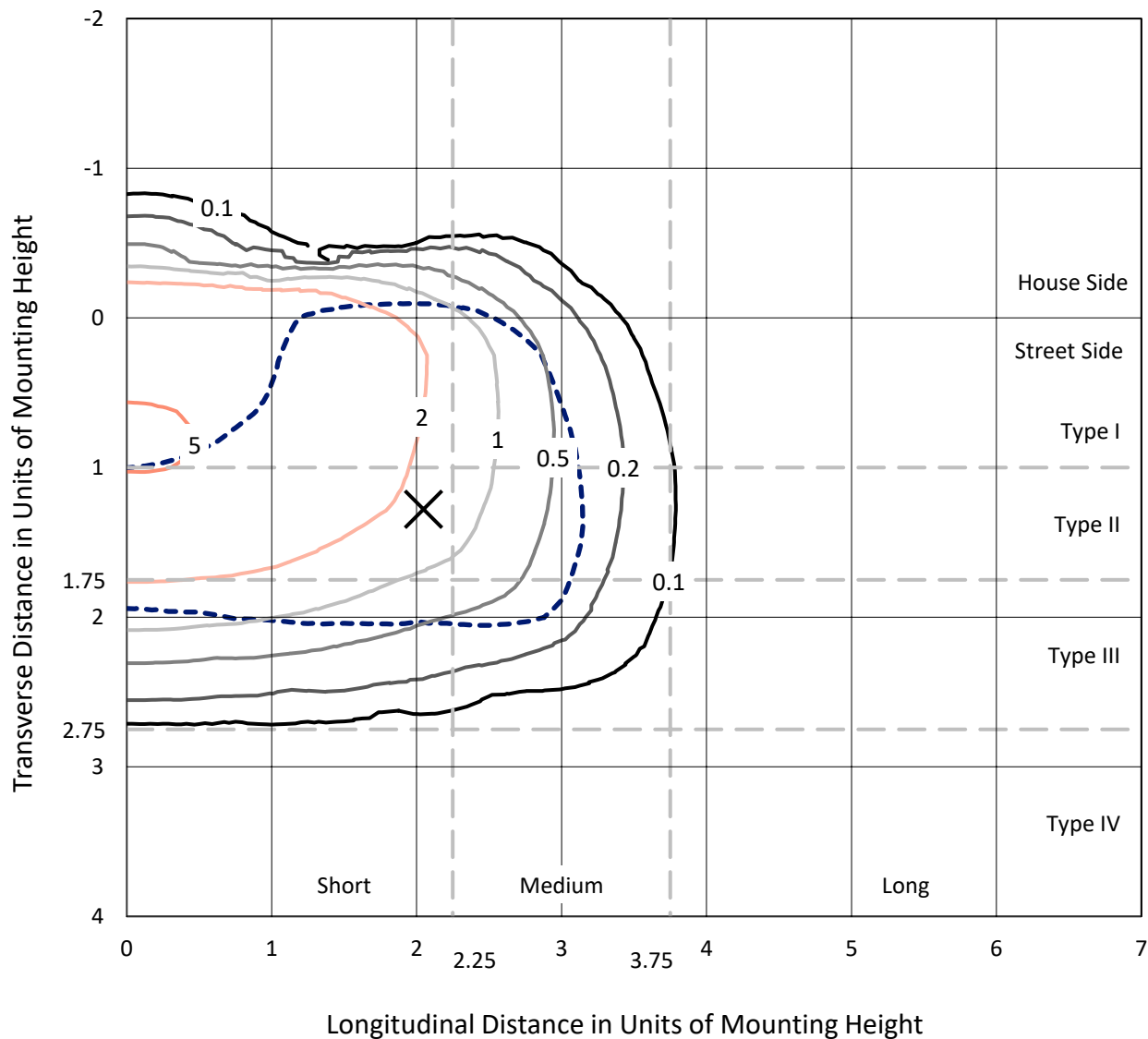
Input Watts (W): 162.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

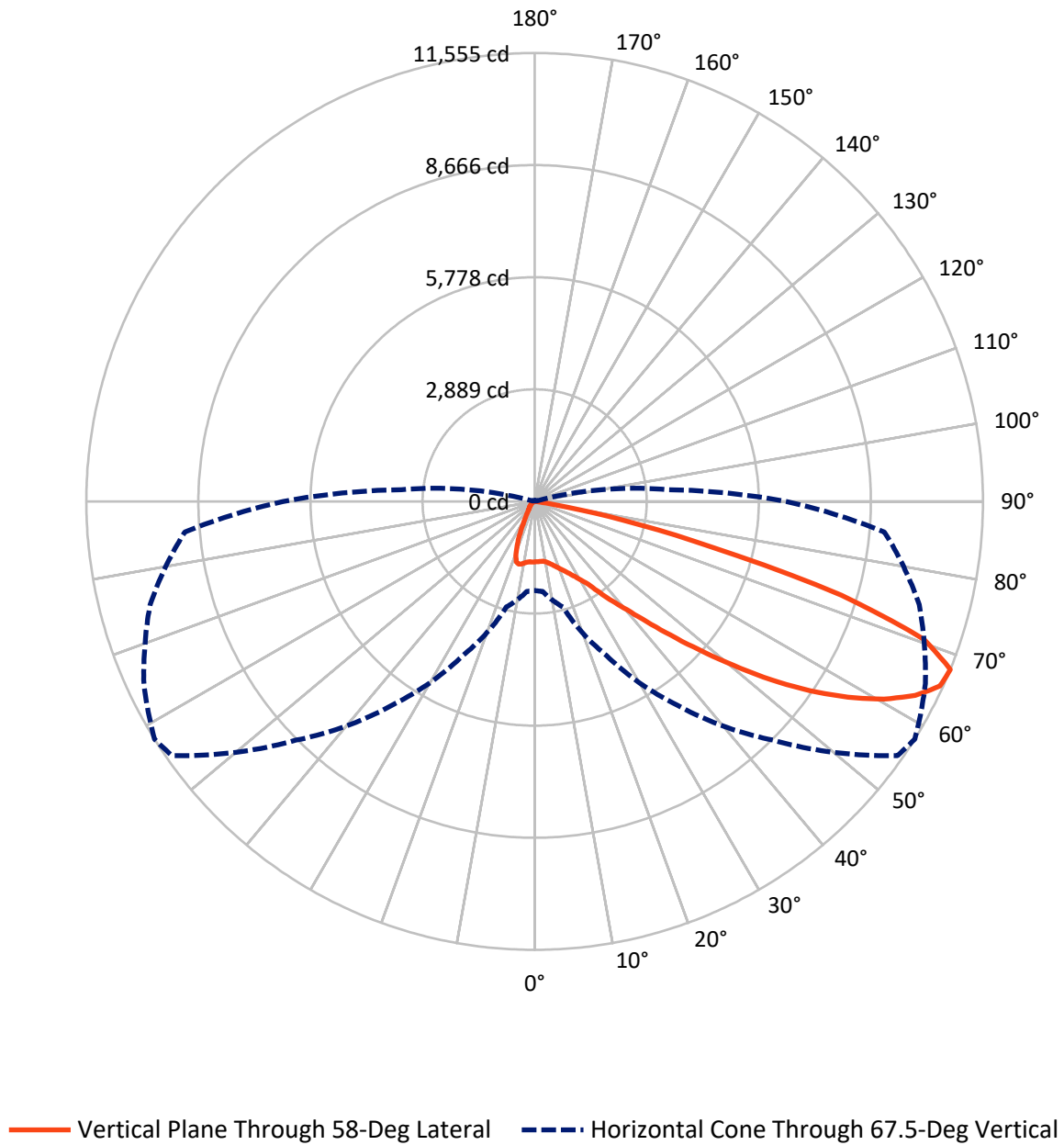
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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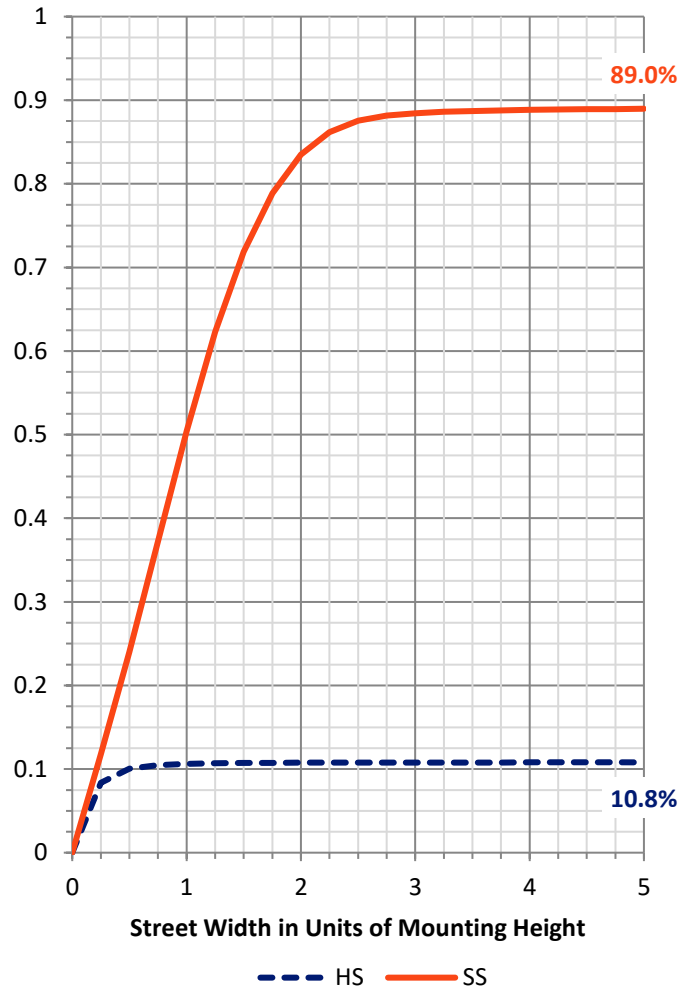
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1558.1	0.0	1558.1
	% Fixture	10.9	0.0	10.9
Street Side	Lumens	12723.8	0.0	12723.8
	% Fixture	89.1	0.0	89.1
Total	Lumens	14281.9	0.0	14281.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.2	1.0
10°-20°	410.5	2.9
20°-30°	716.5	5.0
30°-40°	1279.6	9.0
40°-50°	2338.8	16.4
50°-60°	3889.7	27.2
60°-70°	4224.9	29.6
70°-80°	1240.5	8.7
80°-90°	35.3	0.2
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°	14281.9	100.0
0°-180°	14281.9	100.0

Coefficient of Utilization



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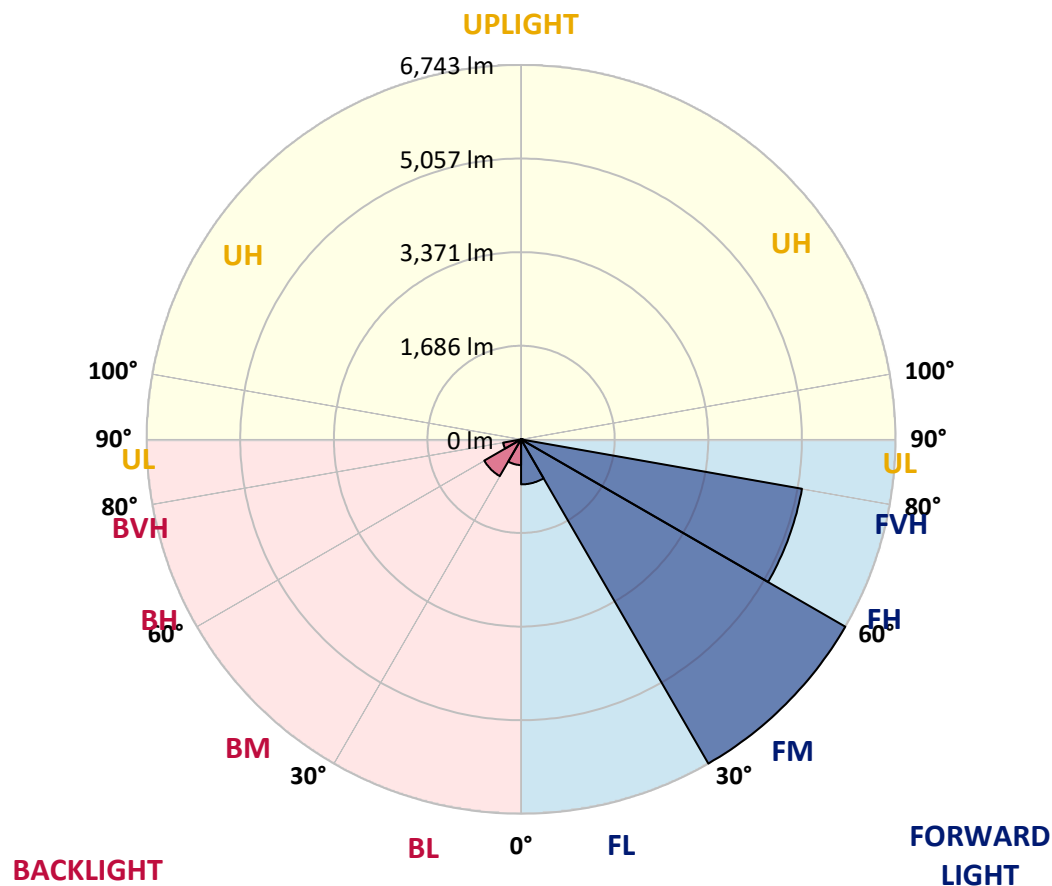
CATALOG NUMBER: GWS-SA4D-830-U-T3-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	811.0	5.7			
FM	(30°-60°)	6742.8	47.2			
FH	(60°-80°)	5136.4	36.0			G3/7500
FVH	(80°-90°)	33.6	0.2			G1/100
BL	(0°-30°)	462.2	3.2	B1/500		
BM	(30°-60°)	765.3	5.4	B1/1000		
BH	(60°-80°)	328.9	2.3	B1/500		G1/500
BVH	(80°-90°)	1.7	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-G3

Type III Short



REPORT NUMBER: P638003

CATALOG NUMBER: GWS-SA4D-830-U-T3-W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3
2.5°	1527.0	1524.2	1524.2	1535.4	1536.8	1542.4	1554.9	1556.3	1563.3	1560.5	1550.7
5°	1447.5	1448.9	1457.3	1476.8	1493.5	1514.5	1545.1	1552.1	1567.5	1575.8	1570.2
7.5°	1373.6	1375.0	1387.6	1418.2	1450.3	1492.2	1542.4	1556.3	1587.0	1609.3	1610.7
10°	1345.7	1344.3	1356.9	1391.7	1433.6	1492.2	1564.7	1582.8	1628.8	1667.9	1674.8
12.5°	1354.1	1352.7	1365.2	1397.3	1443.3	1517.3	1603.7	1628.8	1687.4	1747.4	1759.9
15°	1387.6	1386.2	1394.5	1421.0	1471.2	1547.9	1653.9	1691.6	1765.5	1838.0	1857.5
17.5°	1488.0	1481.0	1472.6	1475.4	1504.7	1584.2	1718.1	1764.1	1856.1	1942.6	1959.3
20°	1666.5	1648.3	1626.0	1596.7	1582.8	1637.2	1792.0	1845.0	1956.5	2055.5	2058.3
22.5°	1935.6	1928.6	1877.0	1792.0	1732.0	1733.4	1878.4	1939.8	2076.5	2185.2	2169.9
25°	2310.7	2306.6	2227.1	2087.6	1931.4	1878.4	1988.6	2051.4	2218.7	2334.5	2285.6
27.5°	2776.5	2747.2	2653.8	2465.5	2232.6	2066.7	2128.1	2183.8	2369.3	2478.1	2386.0
30°	3182.3	3183.7	3095.9	2899.2	2637.1	2349.8	2298.2	2347.0	2507.4	2621.7	2510.2
32.5°	3572.8	3585.3	3489.1	3312.0	3024.7	2719.3	2542.2	2550.6	2684.5	2808.6	2673.3
35°	3935.4	3945.1	3878.2	3727.6	3459.8	3105.6	2882.5	2878.3	2950.8	3077.7	2900.6
37.5°	4341.2	4350.9	4285.4	4150.1	3899.1	3547.7	3268.8	3263.2	3292.5	3395.7	3193.5
40°	4773.5	4791.6	4719.1	4604.8	4364.9	4067.9	3717.8	3667.6	3638.3	3759.7	3572.8
42.5°	5211.4	5239.3	5214.2	5099.8	4894.8	4649.4	4300.7	4222.7	4159.9	4311.9	4113.9
45°	5755.2	5788.7	5777.6	5689.7	5530.7	5331.3	5002.2	4911.6	4882.3	5023.1	4787.4
47.5°	6278.2	6314.5	6354.9	6335.4	6222.4	6130.4	5765.0	5713.4	5705.0	5855.7	5490.3
50°	6667.3	6700.7	6855.5	6967.1	7043.8	7024.3	6707.7	6631.0	6618.5	6714.7	6232.2
52.5°	6946.2	6978.3	7191.6	7540.2	7821.9	7975.3	7656.0	7639.3	7570.9	7537.5	6926.7
55°	7162.3	7207.0	7431.5	7958.6	8526.2	8866.4	8667.0	8607.1	8431.4	8238.9	7570.9
57.5°	7205.6	7223.7	7540.2	8251.5	9072.8	9623.7	9623.7	9519.1	9180.2	8913.9	8315.6
60°	6817.9	6873.7	7301.8	8227.8	9307.1	10118.7	10417.2	10344.7	9887.2	9559.5	9032.4
62.5°	5957.5	6020.2	6541.8	7660.2	9072.8	10220.5	11018.2	11007.1	10491.1	10093.6	9626.5
65°	4568.5	4614.5	5069.1	6407.9	8082.7	9828.7	11447.7	11478.4	10968.0	10446.5	9831.5
67.5°	2295.4	2327.5	2818.4	4377.4	6406.5	8700.5	11418.4	11555.1	11113.0	10259.6	9049.1
70°	801.9	833.9	1065.4	1878.4	3899.1	6643.6	10431.1	10654.2	10261.0	8757.7	6675.6
72.5°	274.7	290.1	442.1	697.3	1517.3	3938.2	7932.1	8268.2	7564.0	5879.4	3836.4
75°	156.2	165.9	237.1	377.9	635.9	1295.5	4500.2	4706.6	4409.5	3204.6	1578.6
77.5°	106.0	114.4	147.8	214.8	351.4	417.0	1835.2	2310.7	2015.1	1045.9	403.0
80°	62.8	68.3	90.6	126.9	179.9	161.8	393.3	523.0	673.6	312.4	121.3
82.5°	29.3	33.5	58.6	83.7	90.6	68.3	115.7	140.8	189.7	153.4	50.2
85°	0.0	0.0	19.5	34.9	33.5	19.5	32.1	34.9	51.6	76.7	19.5
87.5°	0.0	0.0	0.0	0.0	0.0	1.4	2.8	4.2	8.4	15.3	8.4
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-SA4D-830-U-T3-W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3	1556.3
2.5°	1561.9	1552.1	1563.3	1557.7	1563.3	1561.9	1550.7	1543.7	1543.7	1531.2	1527.0
5°	1581.4	1571.6	1574.4	1561.9	1559.1	1552.1	1538.2	1532.6	1532.6	1520.0	1515.9
7.5°	1624.6	1609.3	1606.5	1581.4	1570.2	1550.7	1525.6	1515.9	1514.5	1501.9	1497.7
10°	1693.0	1674.8	1662.3	1630.2	1598.1	1559.1	1506.1	1461.5	1436.4	1402.9	1400.1
12.5°	1776.6	1754.3	1734.8	1686.0	1633.0	1545.1	1389.0	1225.8	1125.4	1045.9	1051.5
15°	1870.1	1849.2	1818.5	1744.6	1635.8	1407.1	1080.8	829.7	707.0	641.5	638.7
17.5°	1971.9	1941.2	1891.0	1790.6	1547.9	1075.2	702.8	496.5	432.3	410.0	404.4
20°	2066.7	2029.0	1966.3	1800.3	1294.1	727.9	439.3	384.9	373.7	366.8	366.8
22.5°	2167.1	2119.7	2026.3	1725.0	962.2	465.8	373.7	361.2	352.8	343.1	341.7
25°	2268.9	2207.5	2080.6	1528.4	630.3	366.8	350.0	336.1	320.7	305.4	301.2
27.5°	2355.4	2275.9	2122.5	1235.6	404.4	330.5	319.3	295.6	274.7	258.0	255.2
30°	2458.6	2356.8	2140.6	903.7	318.0	291.5	274.7	249.6	224.5	207.8	202.2
32.5°	2596.6	2485.1	2112.7	588.5	281.7	256.6	230.1	200.8	175.7	157.6	154.8
35°	2811.4	2678.9	1984.4	375.1	255.2	221.7	189.7	159.0	138.1	124.1	121.3
37.5°	3073.6	2950.8	1773.8	281.7	228.7	192.4	154.8	125.5	110.2	100.4	97.6
40°	3462.6	3291.1	1513.1	246.8	202.2	163.2	126.9	103.2	92.0	83.7	80.9
42.5°	3967.5	3692.7	1213.2	224.5	177.1	136.7	103.2	85.1	75.3	69.7	68.3
45°	4557.3	4084.6	896.7	202.2	153.4	113.0	85.1	69.7	62.8	58.6	57.2
47.5°	5161.2	4427.6	619.2	178.5	131.1	93.4	71.1	60.0	54.4	48.8	47.4
50°	5805.4	4717.7	422.5	154.8	111.6	76.7	61.4	54.4	47.4	43.2	41.8
52.5°	6278.2	4825.1	294.2	133.9	94.8	65.5	54.4	48.8	43.2	37.7	36.3
55°	6714.7	4822.3	223.1	113.0	80.9	57.2	48.8	43.2	37.7	33.5	32.1
57.5°	7149.8	4784.6	175.7	96.2	69.7	51.6	43.2	37.7	34.9	29.3	27.9
60°	7431.5	4642.4	136.7	80.9	60.0	44.6	37.7	33.5	29.3	25.1	23.7
62.5°	7580.7	4444.4	104.6	64.1	48.8	39.0	33.5	29.3	25.1	20.9	19.5
65°	7378.5	4093.0	82.3	50.2	37.7	33.5	27.9	23.7	19.5	15.3	13.9
67.5°	6481.8	3451.5	64.1	40.4	29.3	25.1	23.7	19.5	13.9	11.2	9.8
70°	4581.0	2363.7	50.2	30.7	22.3	19.5	18.1	15.3	11.2	8.4	7.0
72.5°	2514.3	1192.3	36.3	22.3	16.7	15.3	13.9	12.6	9.8	7.0	7.0
75°	967.8	327.7	26.5	15.3	11.2	11.2	9.8	9.8	8.4	5.6	5.6
77.5°	252.4	97.6	16.7	9.8	7.0	7.0	7.0	5.6	5.6	4.2	4.2
80°	80.9	32.1	9.8	7.0	5.6	4.2	4.2	2.8	4.2	2.8	2.8
82.5°	26.5	11.2	5.6	5.6	4.2	2.8	2.8	1.4	1.4	0.0	0.0
85°	9.8	5.6	4.2	2.8	2.8	2.8	1.4	0.0	0.0	0.0	0.0
87.5°	5.6	2.8	2.8	2.8	2.8	1.4	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

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
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 81.0
 R1: 79.6
 R2: 85.6
 R3: 92.0
 R4: 82.6
 R5: 78.9
 R6: 81.7
 R7: 85.2
 R8: 62.0
 R9: 7.1
 R10: 67.0
 R11: 82.7
 R12: 63.2
 R13: 80.3
 R14: 95.0
 R15: 71.7



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 $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	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 $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	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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TM-30-18

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)