

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P438802

Luminaire Tested: **ISW-SA1E-830-U-T4FT**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438802  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISW-SA1E-830-U-T4FT  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

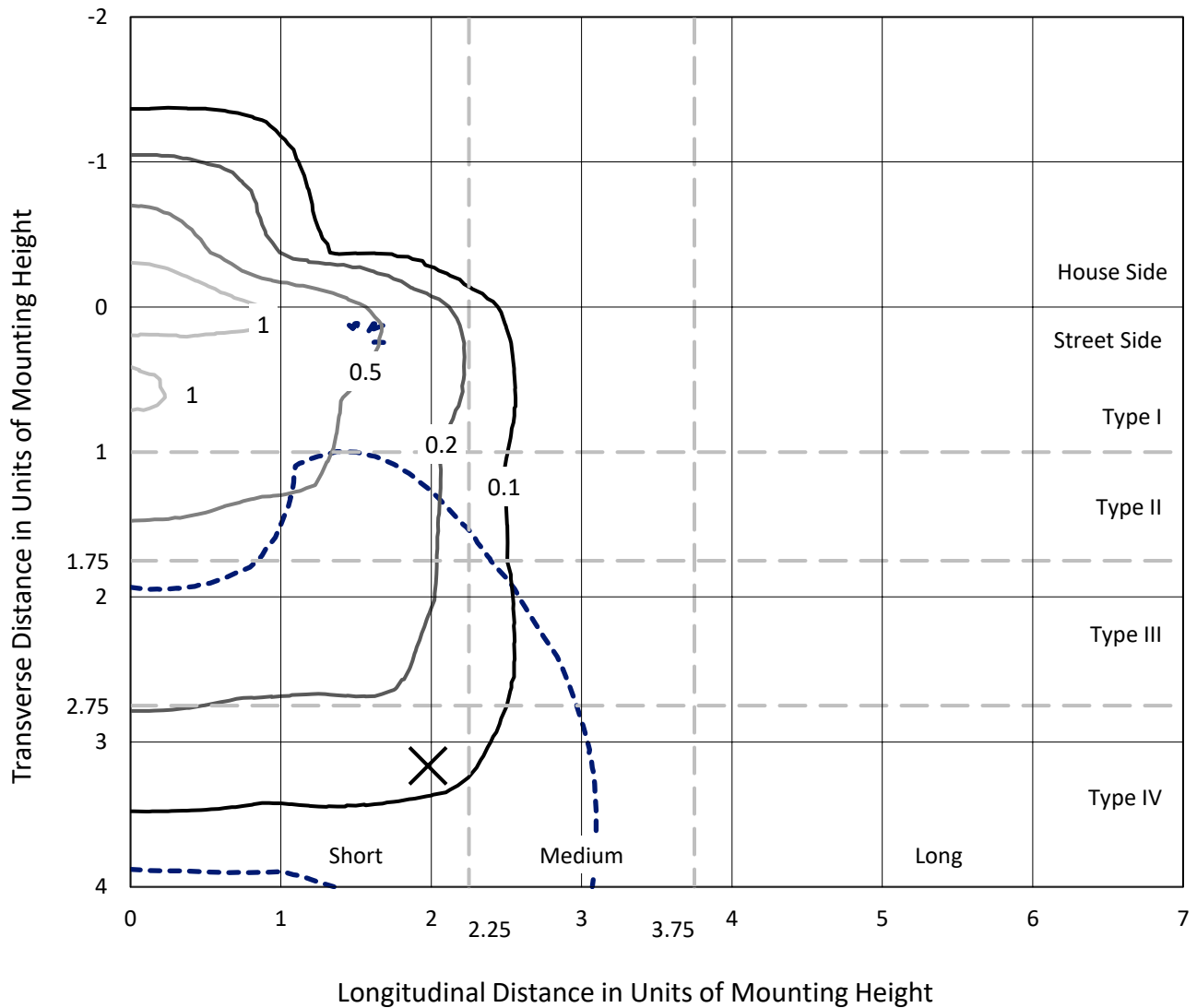
Lumens per Lamp: N/A  
Luminaire Lumens: 5681 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 58.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P438802  
 CATALOG NUMBER: ISW-SA1E-830-U-T4FT

### Iso-Footcandle Lines of Horizontal Illumination

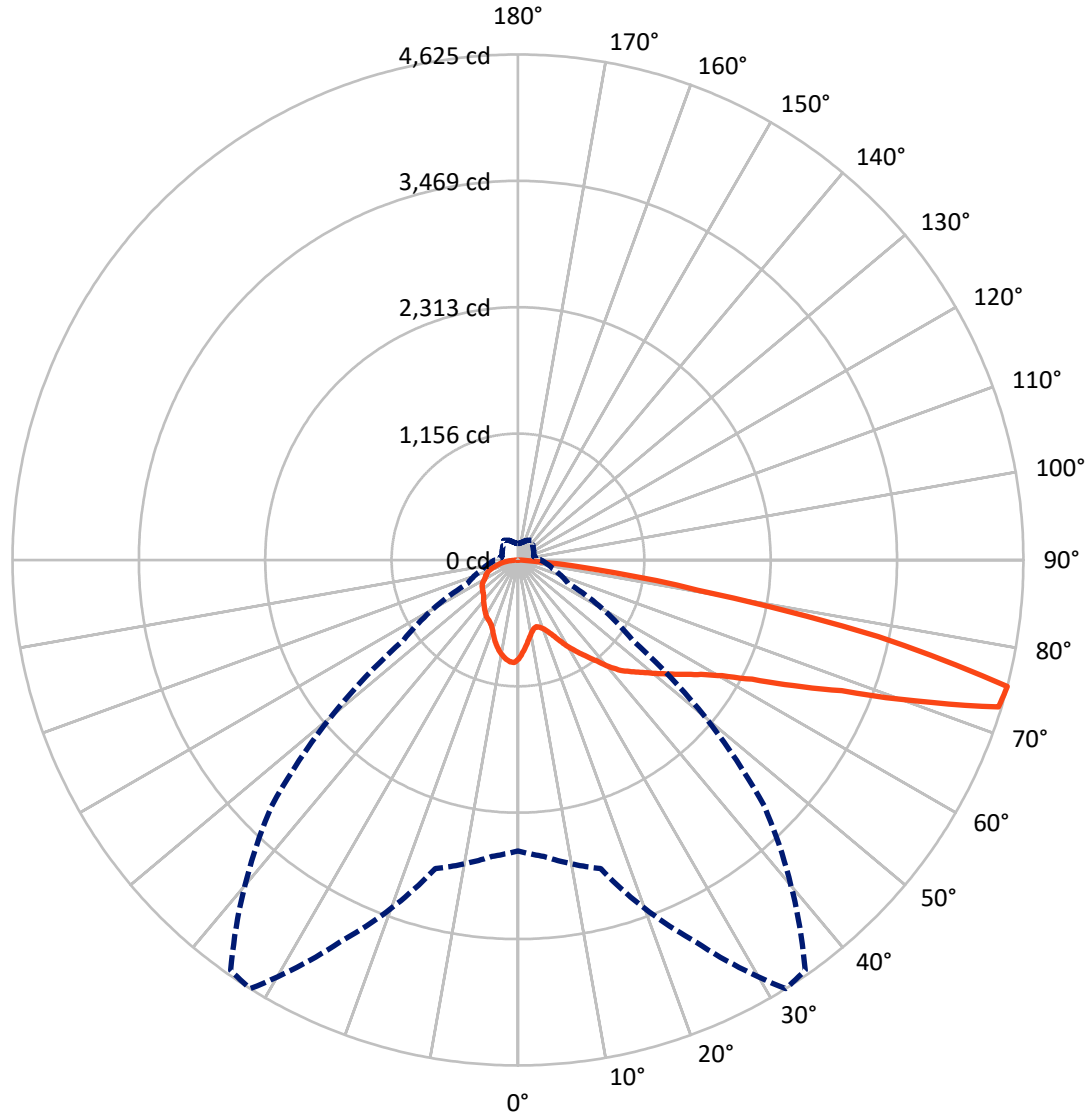
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type IV - Short - N/A

REPORT NUMBER: P438802  
CATALOG NUMBER: ISW-SA1E-830-U-T4FT

### Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P438802  
 CATALOG NUMBER: ISW-SA1E-830-U-T4FT

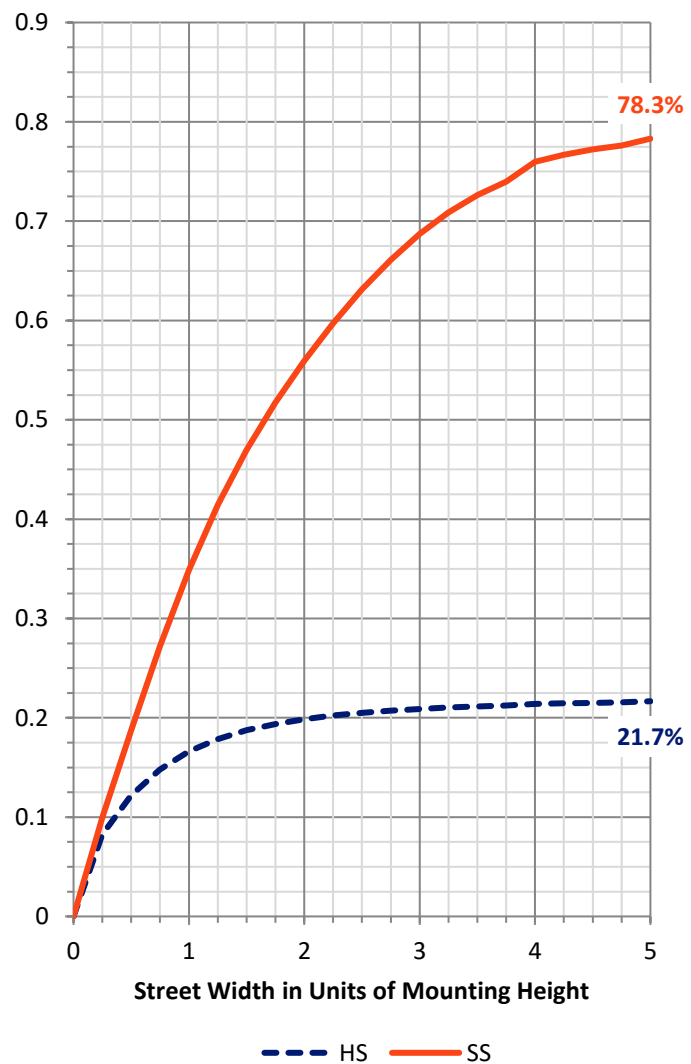
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1244.8	0.0	1244.8
	% Fixture	21.9	0.0	21.9
<b>Street Side</b>	Lumens	4436.2	0.0	4436.2
	% Fixture	78.1	0.0	78.1
<b>Total</b>	Lumens	5681.0	0.0	5681.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.1	1.4
10°-20°	224.5	4.0
20°-30°	371.5	6.5
30°-40°	553.7	9.7
40°-50°	788.4	13.9
50°-60°	1084.6	19.1
60°-70°	1366.9	24.1
70°-80°	1105.0	19.5
80°-90°	104.4	1.8
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°	5681.0	100.0
0°-180°	5681.0	100.0



REPORT NUMBER: P438802

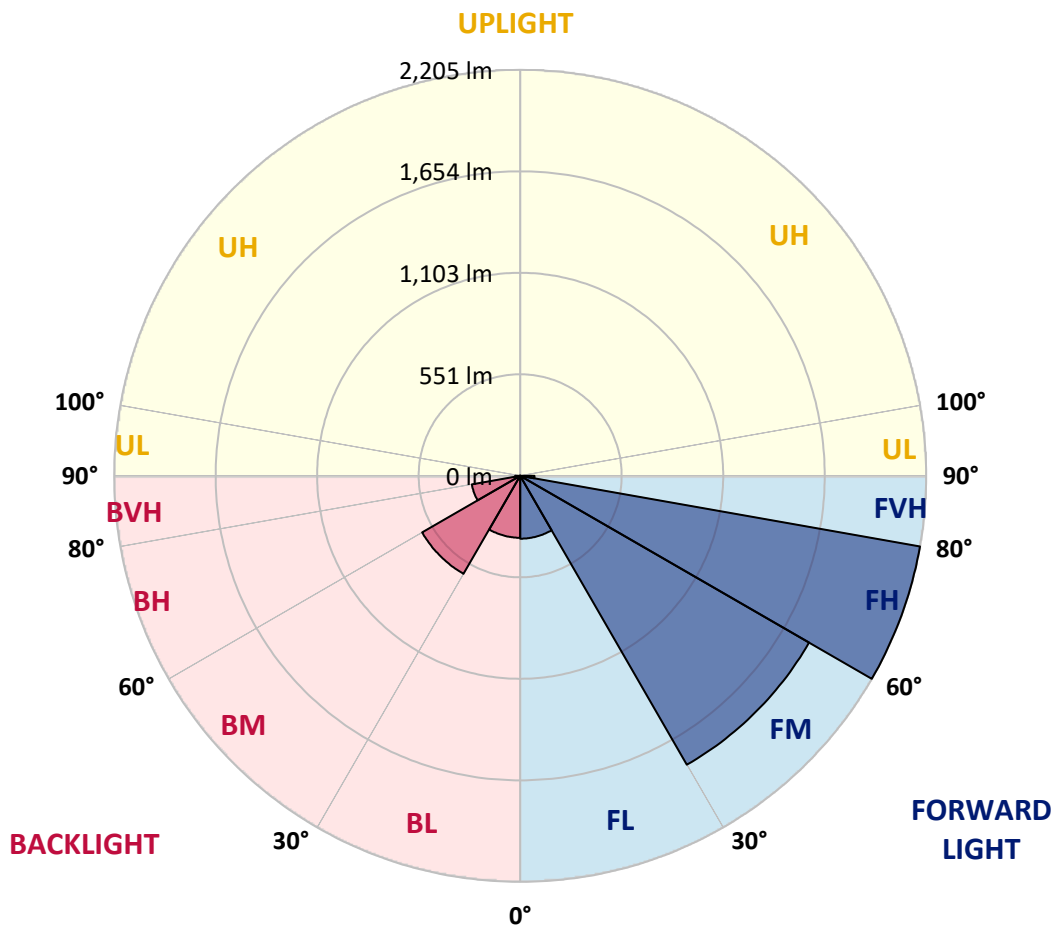
CATALOG NUMBER: ISW-SA1E-830-U-T4FT

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	341.6	6.0			
FM (30°-60°)	1811.9	31.9			
FH (60°-80°)	2205.3	38.8			G2/5000
FVH (80°-90°)	77.6	1.4			G1/100
BL (0°-30°)	336.5	5.9	B1/500		
BM (30°-60°)	614.9	10.8	B1/1000		
BH (60°-80°)	266.6	4.7	B1/500		G1/500
BVH (80°-90°)	26.8	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





REPORT NUMBER: P438802

CATALOG NUMBER: ISW-SA1E-830-U-T4FT

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4
2.5°	825.9	832.1	834.2	838.3	846.5	842.4	852.7	865.1	881.6	889.9	906.4
5°	755.7	755.7	761.9	772.2	786.7	786.7	805.2	828.0	856.9	879.6	908.5
7.5°	693.8	693.8	699.9	712.3	726.8	737.1	759.8	794.9	834.2	877.5	914.7
10°	642.1	644.2	648.3	660.7	679.3	689.6	722.7	761.9	813.5	869.3	920.9
12.5°	623.6	621.5	619.4	629.7	644.2	652.5	689.6	739.2	799.1	867.2	933.3
15°	638.0	633.9	627.7	627.7	633.9	638.0	669.0	720.6	786.7	865.1	947.7
17.5°	675.2	671.0	656.6	642.1	646.3	648.3	669.0	710.3	780.5	873.4	968.4
20°	726.8	720.6	695.8	677.2	673.1	673.1	685.5	716.5	784.6	889.9	995.2
22.5°	788.7	782.5	753.6	720.6	716.5	714.4	720.6	741.2	797.0	908.5	1036.5
25°	871.3	865.1	830.0	788.7	774.3	772.2	766.0	778.4	817.6	933.3	1065.4
27.5°	960.1	962.2	920.9	865.1	850.7	844.5	828.0	825.9	842.4	953.9	1115.0
30°	1042.7	1038.6	995.2	949.8	929.1	920.9	894.0	881.6	871.3	984.9	1172.8
32.5°	1081.9	1088.1	1067.5	1024.1	1007.6	993.1	962.2	941.5	927.1	1032.4	1243.0
35°	1148.0	1150.1	1141.8	1115.0	1081.9	1071.6	1042.7	1028.2	997.3	1090.2	1327.6
37.5°	1214.1	1220.3	1218.2	1201.7	1172.8	1162.5	1137.7	1131.5	1069.5	1162.5	1432.9
40°	1313.2	1302.9	1288.4	1294.6	1284.3	1278.1	1267.8	1247.1	1170.7	1240.9	1536.2
42.5°	1420.5	1402.0	1350.3	1366.9	1381.3	1387.5	1402.0	1379.2	1276.0	1358.6	1620.8
45°	1507.3	1492.8	1424.7	1428.8	1457.7	1478.4	1546.5	1534.1	1412.3	1486.6	1734.4
47.5°	1556.8	1544.4	1496.9	1517.6	1536.2	1565.1	1697.2	1686.9	1540.3	1625.0	1870.7
50°	1627.0	1606.4	1560.9	1598.1	1631.1	1653.9	1843.8	1839.7	1649.7	1767.4	2025.5
52.5°	1666.2	1645.6	1641.5	1693.1	1732.3	1763.3	2000.7	1988.3	1757.1	1909.9	2172.1
55°	1719.9	1724.1	1750.9	1790.1	1845.9	1897.5	2153.5	2091.6	1856.2	2050.3	2316.6
57.5°	1837.6	1833.5	1885.1	1903.7	1976.0	2042.0	2335.2	2201.0	1938.8	2151.5	2384.8
60°	1994.5	2002.8	2021.4	2068.9	2147.3	2248.5	2510.7	2314.6	1992.5	2223.7	2372.4
62.5°	2291.9	2244.4	2236.1	2248.5	2403.4	2521.1	2682.1	2415.7	2015.2	2225.8	2242.3
65°	2593.3	2574.7	2510.7	2541.7	2766.8	2874.1	2903.0	2481.8	1969.8	2097.8	1953.2
67.5°	2905.1	2903.0	2834.9	2923.7	3194.2	3320.1	3148.7	2469.4	1821.1	1798.4	1501.1
70°	3225.1	3239.6	3239.6	3491.5	3861.1	3894.1	3423.3	2351.7	1525.8	1273.9	877.5
72.5°	3365.5	3373.8	3448.1	4007.7	4598.2	4608.5	3580.3	1996.6	1040.6	679.3	441.9
75°	2661.5	2723.4	2923.7	3859.0	4625.0	4583.7	3190.0	1278.1	507.9	338.6	245.7
77.5°	1044.8	1067.5	1474.2	2457.0	3369.7	3411.0	2064.7	510.0	258.1	214.7	177.6
80°	295.3	309.7	522.4	976.6	1664.2	1839.7	821.8	220.9	173.4	156.9	128.0
82.5°	105.3	119.8	194.1	373.7	710.3	749.5	223.0	109.4	111.5	101.2	78.5
85°	14.5	12.4	26.8	68.1	156.9	132.1	37.2	28.9	45.4	47.5	33.0
87.5°	0.0	0.0	0.0	2.1	2.1	2.1	0.0	0.0	0.0	2.1	2.1
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: P438802  
 CATALOG NUMBER: ISW-SA1E-830-U-T4FT

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4	904.4
2.5°	910.6	914.7	922.9	927.1	931.2	939.5	937.4	941.5	941.5	939.5	943.6
5°	918.8	929.1	939.5	943.6	945.7	945.7	935.3	929.1	927.1	925.0	927.1
7.5°	927.1	941.5	951.8	949.8	941.5	927.1	914.7	904.4	894.0	889.9	894.0
10°	941.5	956.0	962.2	947.7	925.0	902.3	883.7	869.3	852.7	850.7	852.7
12.5°	953.9	972.5	972.5	939.5	908.5	877.5	848.6	825.9	805.2	799.1	799.1
15°	974.6	989.0	974.6	929.1	885.8	846.5	805.2	776.3	751.6	741.2	743.3
17.5°	997.3	1007.6	970.4	912.6	861.0	809.4	755.7	716.5	697.9	687.6	689.6
20°	1024.1	1026.2	970.4	892.0	823.8	755.7	697.9	669.0	656.6	650.4	652.5
22.5°	1059.2	1051.0	964.2	865.1	776.3	702.0	648.3	640.1	640.1	640.1	646.3
25°	1096.4	1073.7	953.9	830.0	714.4	638.0	617.4	627.7	635.9	635.9	640.1
27.5°	1133.5	1096.4	933.3	778.4	642.1	592.6	600.8	617.4	625.6	625.6	629.7
30°	1179.0	1123.2	908.5	708.2	574.0	561.6	582.3	602.9	615.3	615.3	619.4
32.5°	1236.8	1145.9	871.3	635.9	528.6	534.8	557.5	580.2	594.6	598.8	600.8
35°	1300.8	1176.9	819.7	555.4	497.6	514.1	532.7	553.4	565.7	569.9	569.9
37.5°	1366.9	1207.9	751.6	487.3	470.8	493.5	512.1	522.4	530.6	530.6	530.6
40°	1432.9	1224.4	662.8	433.6	443.9	477.0	493.5	489.3	487.3	481.1	483.1
42.5°	1501.1	1236.8	567.8	394.4	417.1	458.4	470.8	460.4	443.9	433.6	435.7
45°	1575.4	1255.4	489.3	365.5	390.2	441.9	454.2	433.6	412.9	396.4	392.3
47.5°	1660.1	1286.3	419.1	338.6	373.7	431.5	443.9	415.0	388.2	365.5	361.3
50°	1775.7	1333.8	365.5	320.0	363.4	425.3	435.7	398.5	367.5	338.6	336.6
52.5°	1893.4	1368.9	328.3	303.5	351.0	412.9	425.3	386.1	348.9	318.0	313.8
55°	1980.1	1364.8	295.3	287.0	334.5	396.4	415.0	371.7	324.2	295.3	291.1
57.5°	2017.3	1280.1	268.4	272.5	315.9	375.8	398.5	348.9	305.6	280.8	278.7
60°	1953.2	1143.9	249.8	256.0	295.3	348.9	367.5	332.4	293.2	270.5	268.4
62.5°	1841.8	991.1	235.4	243.6	274.6	324.2	348.9	311.8	276.7	260.2	258.1
65°	1577.5	823.8	220.9	229.2	256.0	299.4	332.4	299.4	264.3	247.8	245.7
67.5°	1191.4	592.6	206.5	214.7	239.5	280.8	318.0	282.9	245.7	233.3	233.3
70°	710.3	363.4	187.9	200.3	218.9	258.1	295.3	260.2	223.0	218.9	214.7
72.5°	346.9	231.3	171.4	181.7	196.2	229.2	262.2	231.3	194.1	183.8	181.7
75°	208.5	167.2	148.7	161.0	171.4	192.0	220.9	198.2	169.3	152.8	150.7
77.5°	150.7	125.9	125.9	138.3	138.3	159.0	190.0	169.3	142.5	132.1	130.1
80°	107.4	95.0	103.2	111.5	107.4	134.2	161.0	142.5	115.6	107.4	105.3
82.5°	70.2	66.1	78.5	76.4	76.4	103.2	132.1	107.4	84.7	70.2	66.1
85°	28.9	33.0	45.4	43.4	43.4	57.8	68.1	55.7	39.2	31.0	31.0
87.5°	0.0	2.1	6.2	4.1	4.1	6.2	2.1	2.1	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

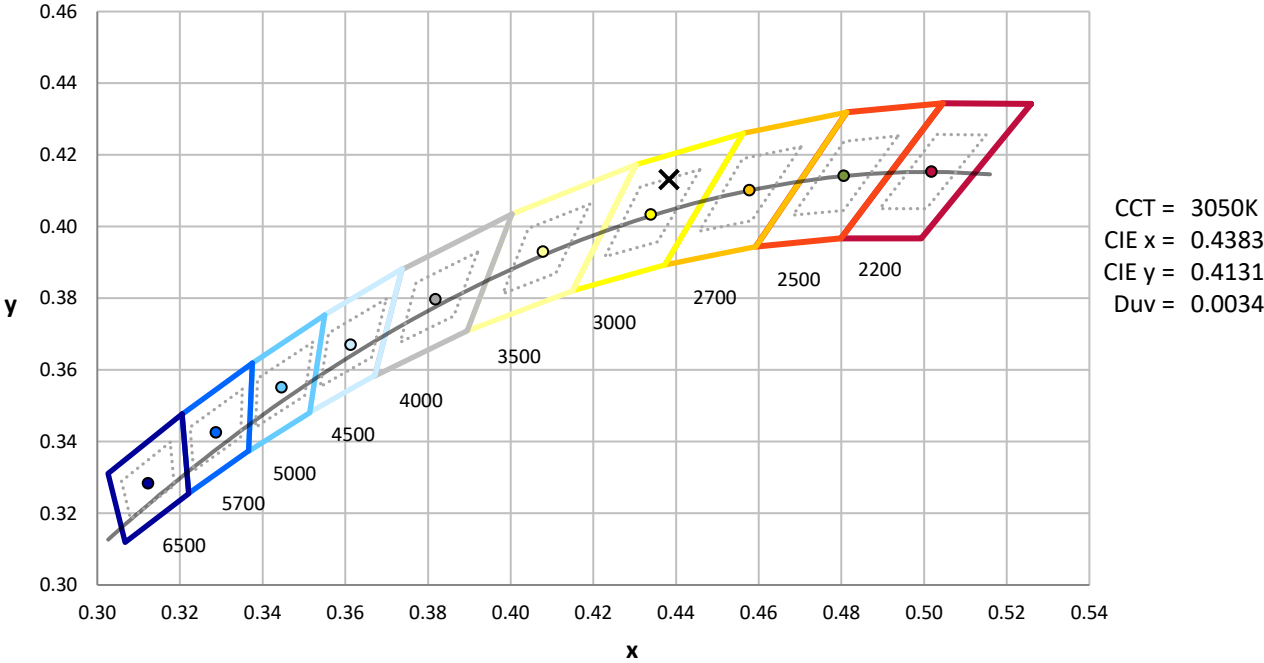
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	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**



CCT = 3050K  
 CIE x = 0.4383  
 CIE y = 0.4131  
 Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (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			

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

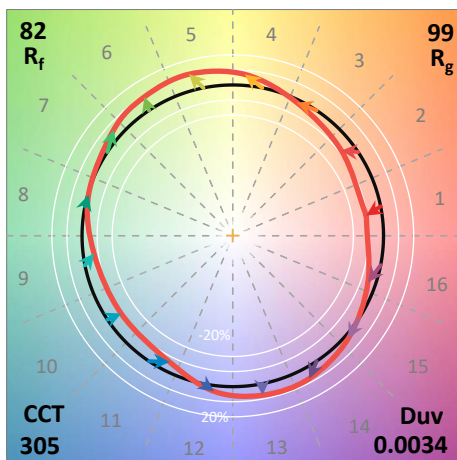
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)