

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: P437078

Luminaire Tested: **ISS-SA1A-830-U-SL2**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437078  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-SA1A-830-U-SL2  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT  
ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2196 lumens  
Efficiency: N/A  
Efficacy: 109.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1

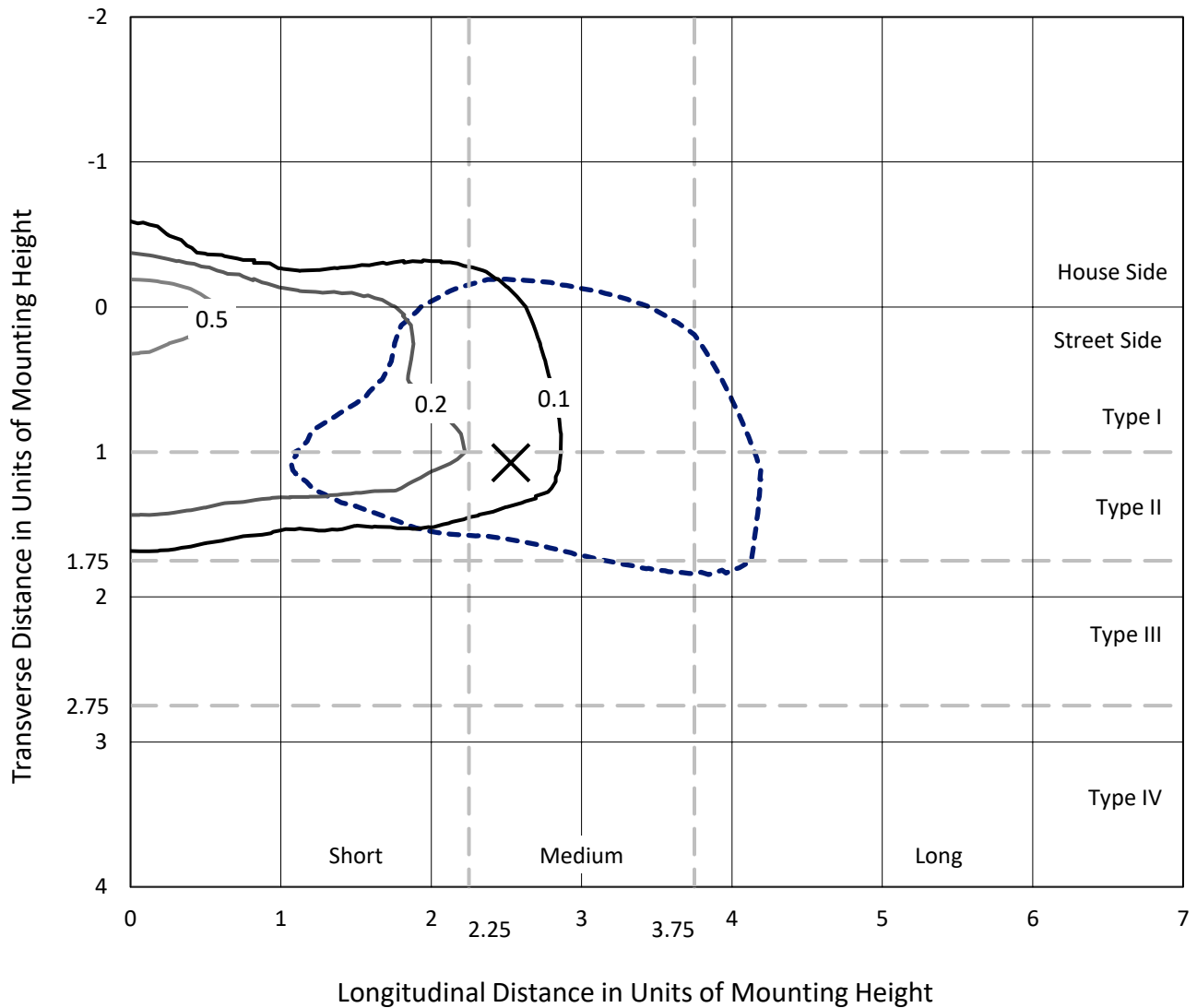
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P437078  
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### Iso-Footcandle Lines of Horizontal Illumination

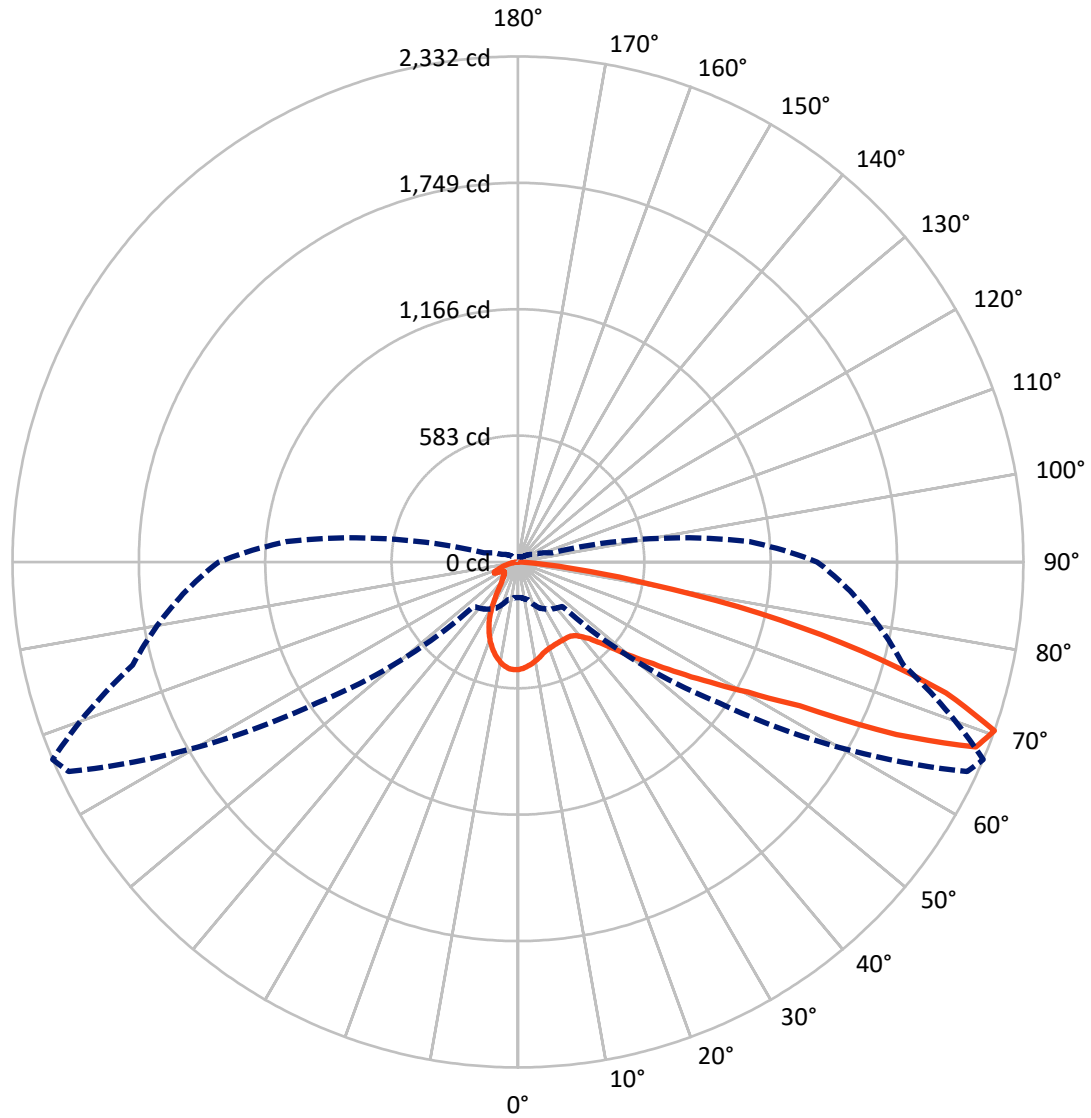
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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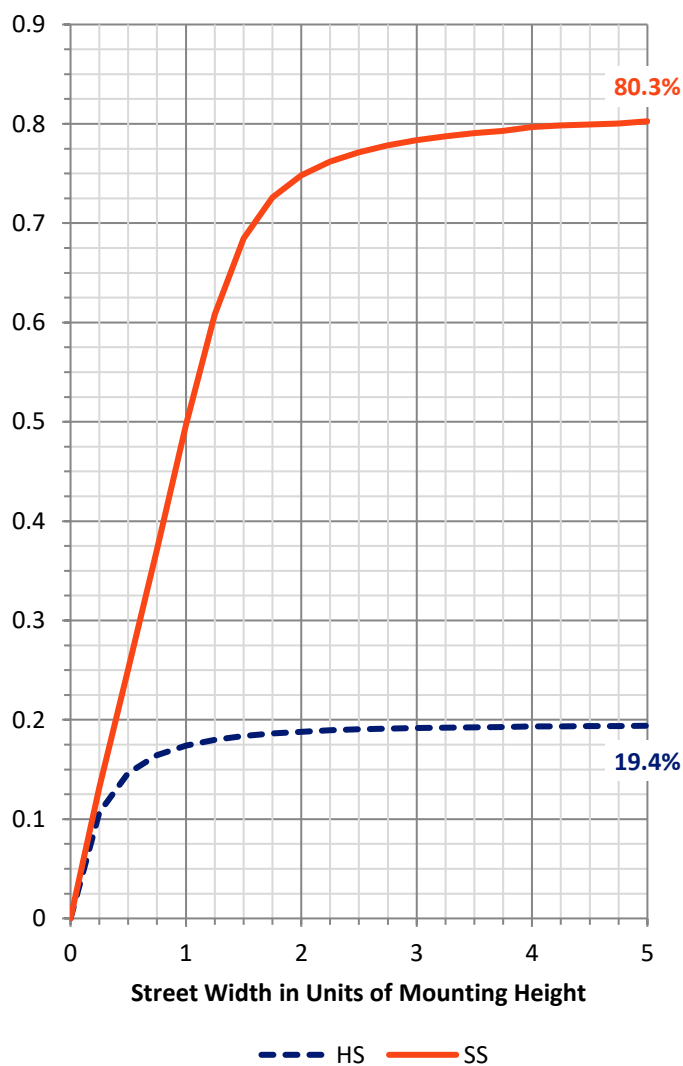
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	430.1	0.0	430.1
	% Fixture	19.6	0.0	19.6
<b>Street Side</b>	Lumens	1765.9	0.0	1765.9
	% Fixture	80.4	0.0	80.4
<b>Total</b>	Lumens	2196.0	0.0	2196.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	2.0
10°-20°	105.4	4.8
20°-30°	145.3	6.6
30°-40°	196.2	8.9
40°-50°	291.1	13.3
50°-60°	448.1	20.4
60°-70°	554.0	25.2
70°-80°	371.1	16.9
80°-90°	41.4	1.9
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°	2196.0	100.0
0°-180°	2196.0	100.0

**Coefficient of Utilization**

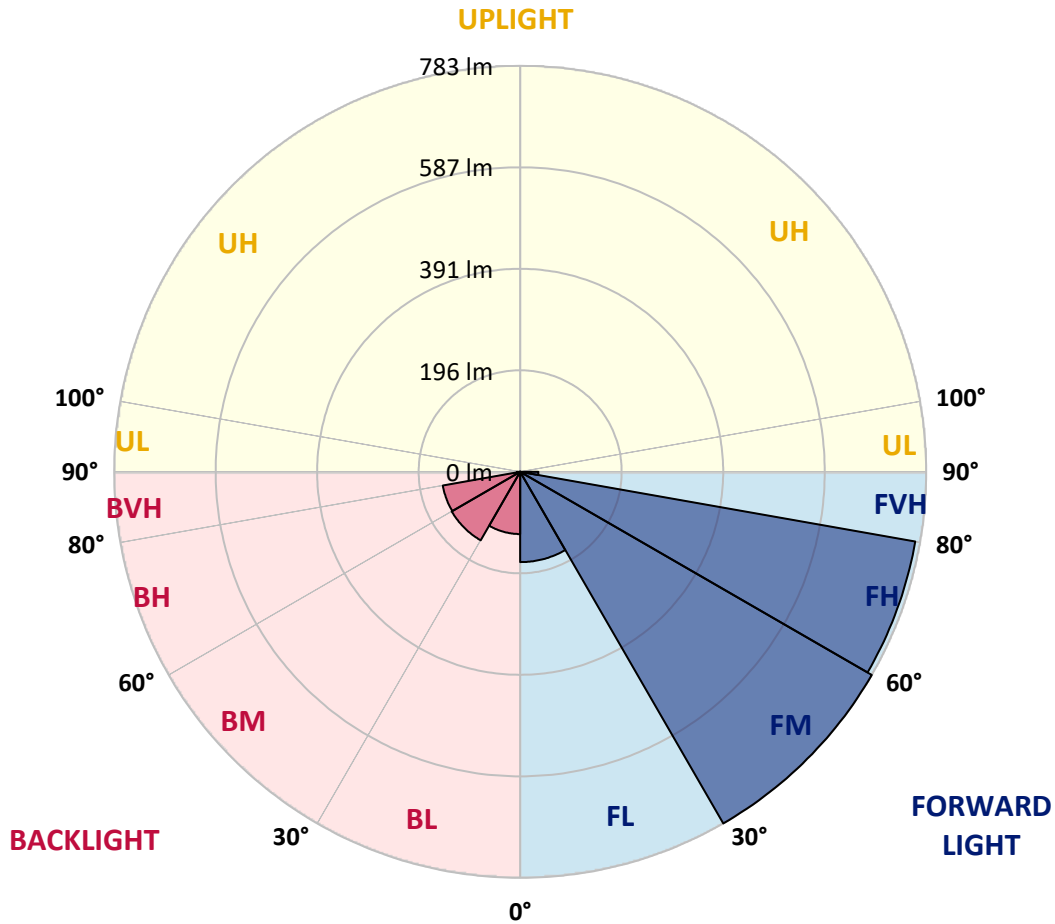


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	174.2	7.9			
FM (30°-60°)	782.9	35.7			
FH (60°-80°)	773.6	35.2			G1/1800
FVH (80°-90°)	35.2	1.6			G1/100
BL (0°-30°)	120.0	5.5	B1/500		
BM (30°-60°)	152.5	6.9	B0/220		
BH (60°-80°)	151.5	6.9	B1/500		G1/500
BVH (80°-90°)	6.1	0.3			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9
2.5°	468.9	472.0	472.8	475.2	478.4	481.6	485.5	490.3	491.1	493.5	498.3
5°	437.1	438.7	440.2	445.0	450.6	460.9	471.2	480.8	482.4	490.3	499.1
7.5°	407.7	411.6	412.4	416.4	425.1	437.9	452.2	468.9	473.6	484.7	498.3
10°	386.2	388.6	390.2	397.3	404.5	418.8	436.3	456.9	461.7	478.4	497.5
12.5°	368.7	372.7	375.1	379.9	391.0	403.7	421.2	443.4	449.8	470.4	494.3
15°	359.2	362.4	363.2	368.7	377.5	390.2	406.9	432.3	437.1	462.5	494.3
17.5°	356.8	357.6	358.4	361.6	368.7	379.1	396.5	422.8	428.3	459.3	494.3
20°	361.6	361.6	361.6	360.0	365.5	373.5	391.0	414.8	422.8	456.1	496.7
22.5°	372.7	373.5	371.1	367.1	364.8	370.3	385.4	412.4	419.6	455.3	501.4
25°	388.6	389.4	387.8	382.2	371.1	370.3	383.0	410.1	416.4	454.6	500.6
27.5°	410.1	414.8	410.1	403.7	389.4	376.7	385.4	408.5	415.6	454.6	502.2
30°	440.2	443.4	441.0	430.7	412.4	390.2	388.6	410.1	415.6	453.8	501.4
32.5°	470.4	471.2	473.6	466.5	444.2	410.1	397.3	411.6	416.4	453.0	499.1
35°	493.5	498.3	508.6	509.4	483.2	438.7	415.6	418.0	419.6	455.3	496.7
37.5°	522.9	524.5	541.2	553.9	530.8	478.4	441.0	429.9	430.7	463.3	500.6
40°	549.9	556.3	579.3	595.2	587.3	531.6	476.0	451.4	453.0	477.6	510.2
42.5°	590.4	595.2	619.0	641.3	643.7	592.0	524.5	487.9	484.0	505.4	530.8
45°	626.2	631.8	662.0	694.5	705.7	660.4	584.9	538.0	531.6	552.3	569.0
47.5°	676.3	685.8	709.6	747.0	784.3	743.8	662.0	606.3	600.8	615.1	619.8
50°	723.9	729.5	749.4	794.7	860.6	848.7	756.5	695.3	686.6	689.0	700.1
52.5°	731.1	733.5	754.1	801.8	925.8	976.7	872.5	795.5	779.6	782.0	795.5
55°	677.1	686.6	701.7	768.4	930.6	1118.9	1035.5	927.4	902.7	894.0	905.1
57.5°	565.0	576.1	597.6	666.7	875.7	1196.0	1302.5	1084.7	1046.6	1006.1	1019.6
60°	416.4	428.3	441.8	509.4	736.7	1207.9	1567.9	1275.4	1219.0	1118.1	1125.3
62.5°	319.5	319.5	331.4	359.2	492.7	1121.3	1723.6	1598.1	1459.8	1254.8	1246.0
65°	258.3	261.4	273.4	299.6	311.5	796.3	1785.6	2066.9	1919.9	1418.5	1373.2
67.5°	213.8	214.6	228.1	269.4	272.6	437.9	1619.5	2313.3	2278.3	1623.5	1508.3
70°	163.7	164.5	180.4	234.4	265.4	290.1	1133.2	2287.9	2332.4	1841.3	1537.7
72.5°	108.9	113.6	132.7	186.0	264.6	273.4	615.1	2001.0	2065.3	1926.3	1439.1
75°	67.5	68.3	88.2	128.7	243.2	272.6	361.6	1559.1	1638.6	1598.1	1248.4
77.5°	41.3	42.9	52.4	84.2	188.3	273.4	257.5	1072.8	1138.8	1049.0	735.9
80°	25.4	25.4	30.2	50.9	122.4	244.8	221.7	623.8	617.5	387.8	209.0
82.5°	9.5	10.3	15.9	27.8	62.0	189.9	194.7	282.1	259.9	114.4	74.7
85°	1.6	1.6	3.2	8.7	16.7	78.7	108.1	99.3	83.4	35.0	31.0
87.5°	0.0	0.0	0.0	0.8	0.8	1.6	2.4	2.4	2.4	2.4	3.2
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: ISS-SA1A-830-U-SL2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9	495.9
2.5°	498.3	499.8	499.1	496.7	494.3	492.7	488.7	486.3	487.1	487.1	487.9
5°	499.8	502.2	498.3	493.5	484.7	475.2	466.5	461.7	455.3	457.7	456.1
7.5°	502.2	503.8	496.7	482.4	467.3	451.4	436.3	422.8	412.4	407.7	410.8
10°	500.6	503.0	489.5	468.1	445.0	419.6	396.5	374.3	360.0	350.4	352.8
12.5°	499.8	497.5	479.2	447.4	415.6	380.6	345.7	318.7	294.8	285.3	286.9
15°	496.7	495.1	466.5	425.9	382.2	333.0	286.9	251.9	223.3	213.8	216.9
17.5°	498.3	493.5	451.4	399.7	340.1	279.7	223.3	189.1	174.8	171.6	170.9
20°	496.7	487.9	436.3	371.1	295.6	216.9	166.1	147.8	147.8	152.6	153.4
22.5°	498.3	483.2	419.6	338.5	244.8	162.9	129.5	124.8	131.9	142.2	142.2
25°	498.3	477.6	401.3	302.0	191.5	124.0	110.5	110.5	120.0	129.5	128.7
27.5°	495.1	466.5	380.6	263.0	142.2	102.5	96.9	99.3	105.7	113.6	112.8
30°	487.1	455.3	355.2	217.7	108.1	90.6	89.8	90.6	93.8	98.5	97.7
32.5°	480.0	442.6	330.6	169.3	91.4	84.2	83.4	84.2	85.0	86.6	86.6
35°	475.2	431.5	301.2	130.3	82.6	80.3	78.7	78.7	77.1	77.9	77.9
37.5°	469.7	421.2	271.0	101.7	77.9	76.3	74.7	72.3	72.3	70.7	70.7
40°	469.7	413.2	240.0	85.8	74.7	73.9	70.7	67.5	66.0	66.0	66.0
42.5°	482.4	413.2	211.4	78.7	71.5	70.7	66.8	63.6	62.0	62.0	62.0
45°	503.8	418.0	182.0	73.9	69.1	67.5	62.8	59.6	58.0	58.0	57.2
47.5°	541.2	437.9	155.8	71.5	66.8	64.4	58.8	55.6	54.0	54.0	54.0
50°	603.9	477.6	134.3	69.1	64.4	60.4	55.6	52.4	50.9	50.9	50.1
52.5°	690.6	537.2	124.0	67.5	61.2	56.4	52.4	49.3	47.7	46.9	46.9
55°	794.7	627.0	122.4	66.8	58.0	53.2	49.3	46.1	44.5	43.7	43.7
57.5°	908.3	725.5	133.5	65.2	54.8	49.3	46.1	42.9	41.3	40.5	40.5
60°	1018.0	833.6	169.3	63.6	52.4	46.1	42.1	39.7	38.1	37.3	37.3
62.5°	1145.1	947.2	247.9	64.4	50.9	42.9	38.9	36.6	35.8	35.0	35.0
65°	1285.0	1077.6	317.1	70.7	51.7	39.7	35.8	34.2	32.6	31.8	31.8
67.5°	1409.0	1161.8	264.6	81.9	56.4	37.3	31.8	31.0	29.4	28.6	29.4
70°	1381.1	1072.8	162.9	82.6	57.2	35.8	28.6	27.0	25.4	25.4	25.4
72.5°	1259.6	946.5	113.6	71.5	50.9	31.8	24.6	23.0	22.3	22.3	22.3
75°	1060.1	780.4	90.6	58.0	39.7	26.2	20.7	19.9	19.1	18.3	18.3
77.5°	580.1	424.4	67.5	44.5	29.4	19.9	17.5	15.9	15.1	15.1	15.1
80°	170.1	145.4	42.1	31.8	19.1	14.3	13.5	11.9	11.1	11.1	11.1
82.5°	71.5	60.4	25.4	17.5	12.7	9.5	8.7	7.9	7.2	6.4	7.2
85°	27.8	29.4	15.9	10.3	7.2	4.8	4.0	3.2	3.2	2.4	3.2
87.5°	3.2	4.0	3.2	2.4	1.6	0.8	0.8	0.8	0.8	0.8	0.8
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**

$\lambda$ (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			

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**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			

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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)