

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: P437419

Luminaire Tested: **ISS-SA1C-830-U-SL2-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437419  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-SA1C-830-U-SL2-HSS  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT  
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

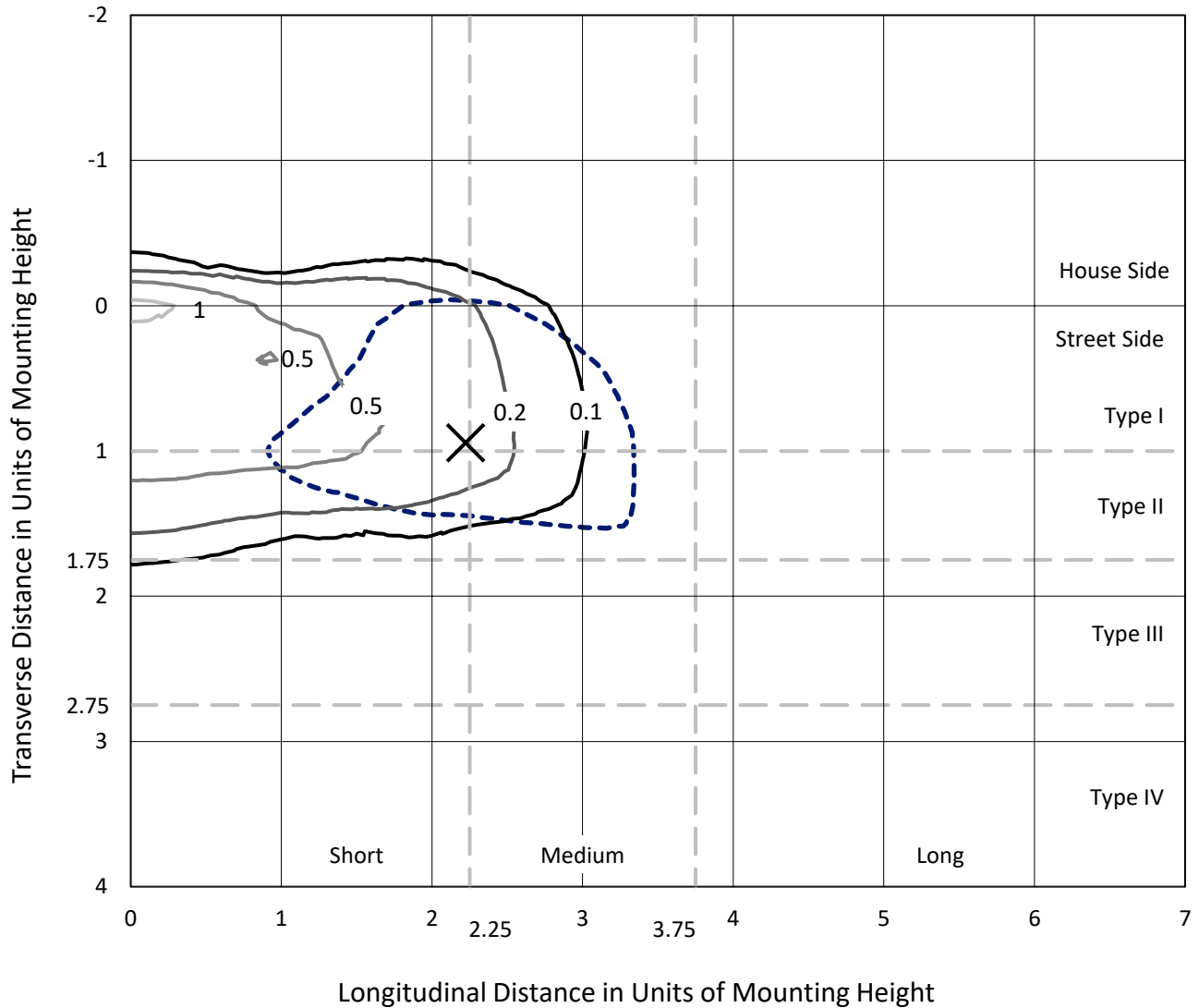
Lumens per Lamp: N/A  
Luminaire Lumens: 2985 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 34.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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



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### Iso-Footcandle Lines of Horizontal Illumination

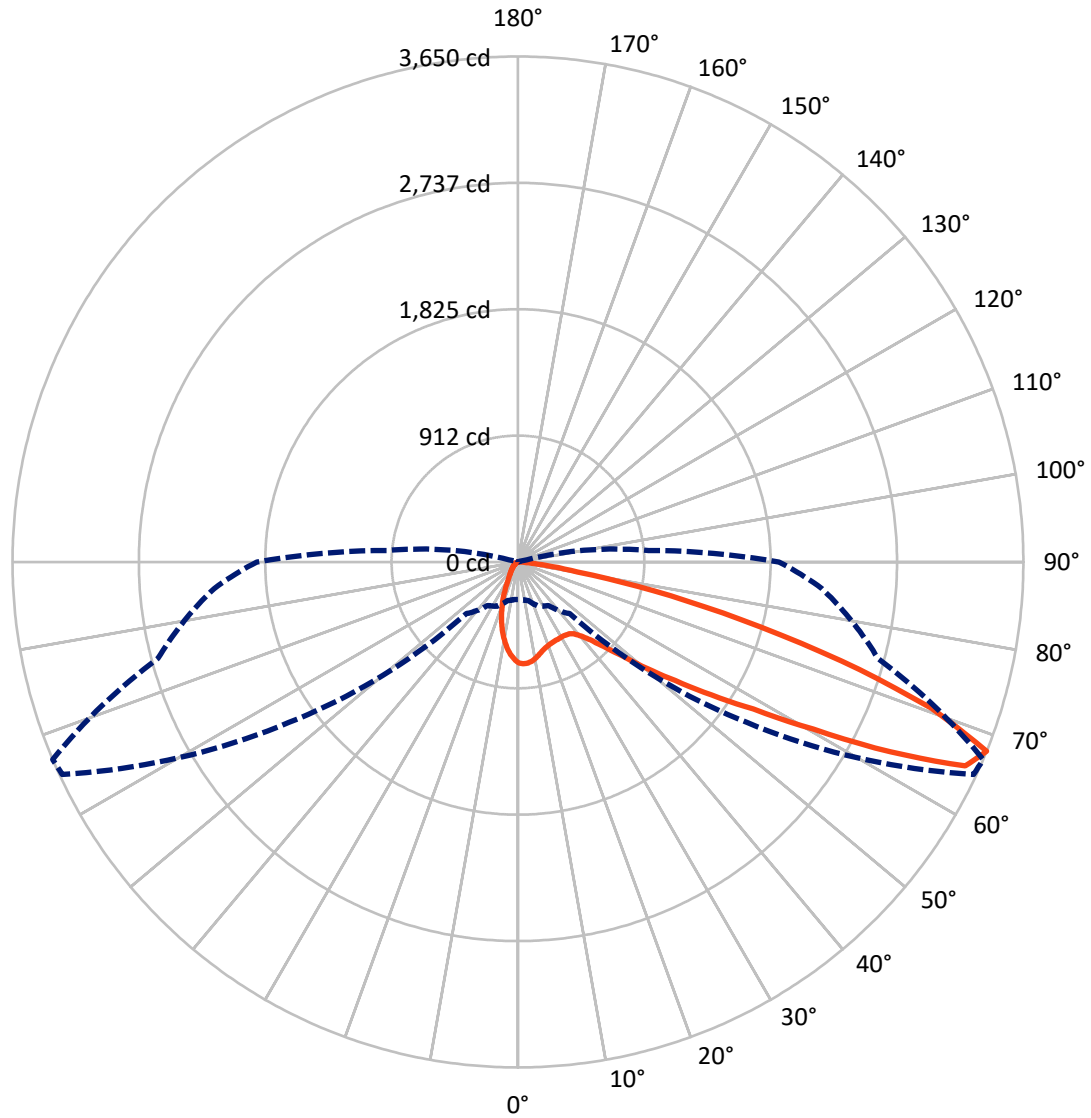
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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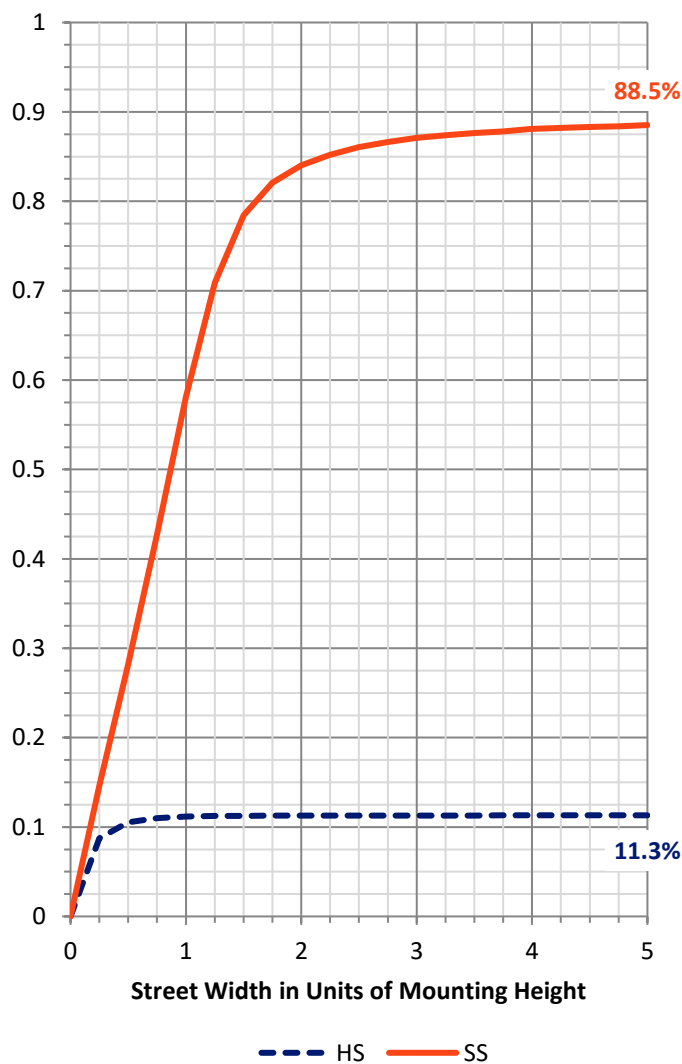
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	340.6	0.0	340.6
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	2644.4	0.0	2644.4
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	2985.0	0.0	2985.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.4	2.0
10°-20°	128.7	4.3
20°-30°	184.3	6.2
30°-40°	271.3	9.1
40°-50°	448.1	15.0
50°-60°	720.8	24.1
60°-70°	786.0	26.3
70°-80°	357.7	12.0
80°-90°	28.8	1.0
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°	2985.0	100.0
0°-180°	2985.0	100.0

**Coefficient of Utilization**



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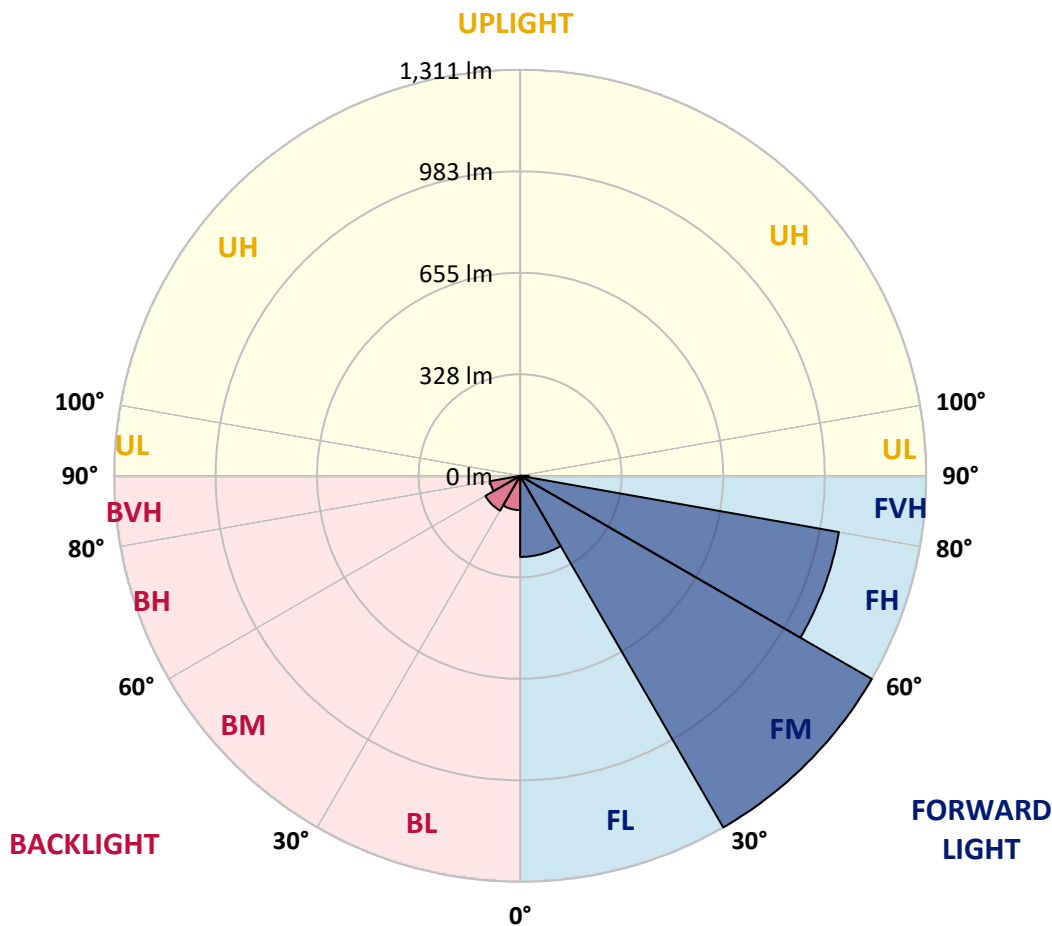
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	261.7	8.8			
FM (30°-60°)	1310.5	43.9			
FH (60°-80°)	1044.8	35.0			G1/1800
FVH (80°-90°)	27.3	0.9			G1/100
BL (0°-30°)	110.7	3.7	B1/500		
BM (30°-60°)	129.7	4.3	B0/220		
BH (60°-80°)	98.9	3.3	B0/110		G0/110
BVH (80°-90°)	1.4	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-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4
2.5°	719.2	725.7	727.1	729.7	729.7	733.6	734.9	737.5	736.2	737.5	734.9
5°	669.4	674.7	672.0	685.1	693.0	707.4	721.8	733.6	733.6	737.5	736.2
7.5°	619.6	624.9	624.9	635.4	648.5	669.4	693.0	720.5	723.1	736.2	732.3
10°	580.3	583.0	585.6	597.4	613.1	634.0	665.5	700.9	706.1	728.4	729.7
12.5°	548.9	552.8	556.8	568.5	583.0	603.9	634.0	674.7	683.8	715.3	727.1
15°	533.2	533.2	537.1	547.6	560.7	583.0	610.5	657.6	665.5	707.4	725.7
17.5°	525.3	526.6	529.2	534.5	545.0	563.3	593.4	639.3	649.8	700.9	725.7
20°	535.8	535.8	531.9	534.5	539.7	554.1	581.6	626.2	639.3	696.9	732.3
22.5°	558.1	558.1	551.5	547.6	543.7	548.9	573.8	620.9	632.7	696.9	736.2
25°	592.1	592.1	588.2	576.4	559.4	555.4	575.1	619.6	628.8	698.2	741.5
27.5°	632.7	634.0	630.1	617.0	590.8	568.5	579.0	617.0	627.5	696.9	744.1
30°	686.4	691.7	686.4	668.1	636.7	594.7	588.2	615.7	626.2	694.3	745.4
32.5°	740.2	744.1	749.3	737.5	693.0	635.4	607.8	620.9	630.1	695.6	742.8
35°	792.6	803.0	812.2	816.1	770.3	693.0	640.6	632.7	636.7	699.5	742.8
37.5°	848.9	859.4	879.0	898.7	860.7	757.2	689.1	658.9	658.9	712.6	750.6
40°	920.9	926.2	964.2	987.7	969.4	860.7	758.5	703.5	702.2	749.3	772.9
42.5°	990.4	1004.8	1054.6	1089.9	1078.1	982.5	842.3	782.1	769.0	808.3	813.5
45°	1091.2	1113.5	1152.8	1205.2	1217.0	1118.7	972.0	882.9	869.8	896.0	881.6
47.5°	1185.6	1201.3	1239.3	1306.1	1374.2	1294.3	1118.7	1024.4	1012.6	1023.1	999.5
50°	1215.7	1223.5	1266.8	1349.3	1510.4	1545.8	1320.5	1207.8	1206.5	1198.7	1159.4
52.5°	1163.3	1164.6	1214.4	1315.2	1566.8	1820.9	1606.1	1444.9	1422.7	1405.6	1353.2
55°	1003.5	1015.3	1057.2	1182.9	1511.7	1979.4	2063.3	1731.8	1695.1	1633.6	1568.1
57.5°	784.7	779.5	813.5	928.8	1342.8	2042.3	2513.9	2096.0	2004.3	1819.6	1731.8
60°	571.2	558.1	580.3	645.8	976.0	1919.2	2774.6	2609.5	2452.3	2020.0	1933.6
62.5°	424.4	424.4	448.0	478.2	598.7	1497.3	2815.2	3197.7	3020.9	2274.2	2147.1
65°	339.3	338.0	357.6	403.5	427.1	928.8	2610.8	3616.9	3550.1	2538.8	2287.3
67.5°	271.2	271.2	288.2	351.1	383.8	527.9	2020.0	3630.0	3649.7	2690.8	2202.1
70°	191.3	197.8	218.8	293.4	370.7	403.5	1224.9	3117.8	3168.9	2644.9	1975.5
72.5°	107.4	112.7	150.7	217.5	356.3	387.8	685.1	2355.4	2441.8	2216.5	1611.3
75°	51.1	56.3	87.8	149.3	297.4	369.4	416.6	1670.3	1658.5	1439.7	1000.8
77.5°	22.3	24.9	39.3	86.5	210.9	344.5	305.2	1044.1	996.9	676.0	420.5
80°	7.9	9.2	17.0	49.8	119.2	281.7	254.1	482.1	436.2	187.3	110.0
82.5°	1.3	1.3	6.6	23.6	53.7	157.2	209.6	230.6	199.1	47.2	47.2
85°	0.0	0.0	1.3	7.9	13.1	14.4	94.3	93.0	77.3	15.7	23.6
87.5°	0.0	0.0	0.0	1.3	1.3	2.6	2.6	2.6	2.6	2.6	3.9
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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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4	728.4
2.5°	728.4	727.1	714.0	702.2	686.4	673.3	661.6	649.8	644.5	645.8	648.5
5°	729.7	721.8	694.3	664.2	632.7	601.3	571.2	552.8	538.4	533.2	538.4
7.5°	723.1	710.0	668.1	619.6	569.9	514.8	469.0	434.9	410.0	394.3	400.9
10°	717.9	698.2	636.7	563.3	492.6	420.5	355.0	306.5	272.5	252.8	248.9
12.5°	708.7	685.1	600.0	507.0	408.7	310.5	231.9	180.8	153.3	138.9	142.8
15°	706.1	669.4	563.3	441.5	319.6	209.6	140.2	111.4	99.6	96.9	96.9
17.5°	703.5	658.9	524.0	377.3	229.3	131.0	96.9	89.1	86.5	85.2	86.5
20°	700.9	644.5	484.7	307.9	154.6	94.3	83.8	79.9	77.3	77.3	76.0
22.5°	703.5	635.4	448.0	242.4	106.1	79.9	73.4	70.7	68.1	66.8	66.8
25°	700.9	623.6	403.5	178.2	82.5	70.7	65.5	60.3	57.6	56.3	55.0
27.5°	696.9	609.2	361.6	128.4	72.1	62.9	56.3	51.1	47.2	45.9	45.9
30°	693.0	590.8	313.1	94.3	65.5	56.3	48.5	43.2	39.3	36.7	36.7
32.5°	682.5	573.8	265.9	76.0	59.0	49.8	41.9	35.4	32.8	31.4	31.4
35°	676.0	554.1	216.2	65.5	53.7	43.2	35.4	30.1	27.5	26.2	26.2
37.5°	674.7	533.2	171.6	59.0	48.5	38.0	30.1	26.2	23.6	22.3	22.3
40°	679.9	522.7	132.3	53.7	41.9	32.8	26.2	22.3	19.7	18.3	18.3
42.5°	700.9	521.4	100.9	48.5	38.0	28.8	23.6	18.3	15.7	14.4	14.4
45°	748.0	529.2	79.9	44.5	32.8	24.9	19.7	15.7	13.1	11.8	11.8
47.5°	825.3	562.0	66.8	40.6	27.5	21.0	15.7	13.1	9.2	9.2	9.2
50°	951.1	631.4	59.0	35.4	23.6	17.0	13.1	9.2	6.6	6.6	6.6
52.5°	1137.1	737.5	53.7	31.4	19.7	14.4	10.5	6.6	5.2	5.2	5.2
55°	1329.7	869.8	49.8	26.2	17.0	11.8	7.9	5.2	3.9	3.9	2.6
57.5°	1505.2	978.6	44.5	22.3	13.1	9.2	5.2	3.9	2.6	2.6	2.6
60°	1713.5	1087.3	38.0	17.0	10.5	6.6	3.9	2.6	1.3	1.3	1.3
62.5°	1915.2	1148.9	31.4	13.1	7.9	5.2	2.6	1.3	1.3	1.3	1.3
65°	2003.0	1120.1	24.9	10.5	6.6	3.9	1.3	1.3	1.3	0.0	0.0
67.5°	1885.1	947.1	19.7	7.9	5.2	2.6	1.3	1.3	0.0	0.0	0.0
70°	1623.1	766.4	15.7	6.6	3.9	1.3	1.3	1.3	0.0	0.0	0.0
72.5°	1274.6	564.6	13.1	5.2	2.6	1.3	1.3	1.3	0.0	0.0	0.0
75°	775.5	284.3	11.8	3.9	2.6	1.3	1.3	1.3	1.3	0.0	0.0
77.5°	263.3	89.1	7.9	3.9	2.6	1.3	1.3	1.3	1.3	1.3	1.3
80°	77.3	28.8	6.6	2.6	2.6	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	40.6	13.1	3.9	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	22.3	6.6	2.6	1.3	1.3	1.3	0.0	0.0	1.3	1.3	1.3
87.5°	3.9	2.6	2.6	1.3	1.3	1.3	0.0	0.0	0.0	1.3	1.3
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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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**

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			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 2.32**

$\lambda$ (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			

**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)