

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: P437761

Luminaire Tested: **ISC-SA1E-830-U-SL2-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437761  
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: ISC-SA1E-830-U-SL2-HSS  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA 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: 4674 lumens  
Efficiency: N/A  
Efficacy: 80.3 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

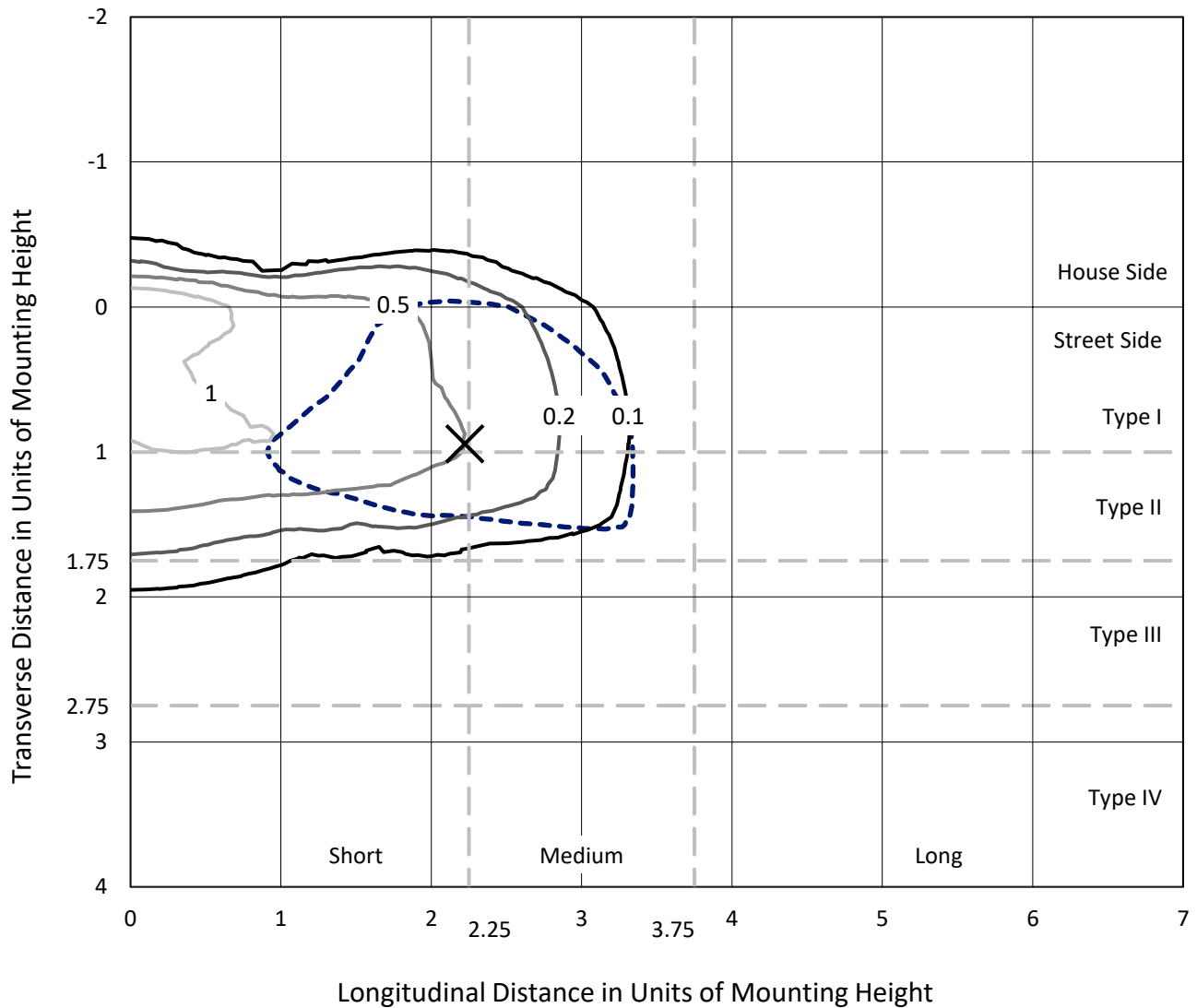
Input Watts (W): 58.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

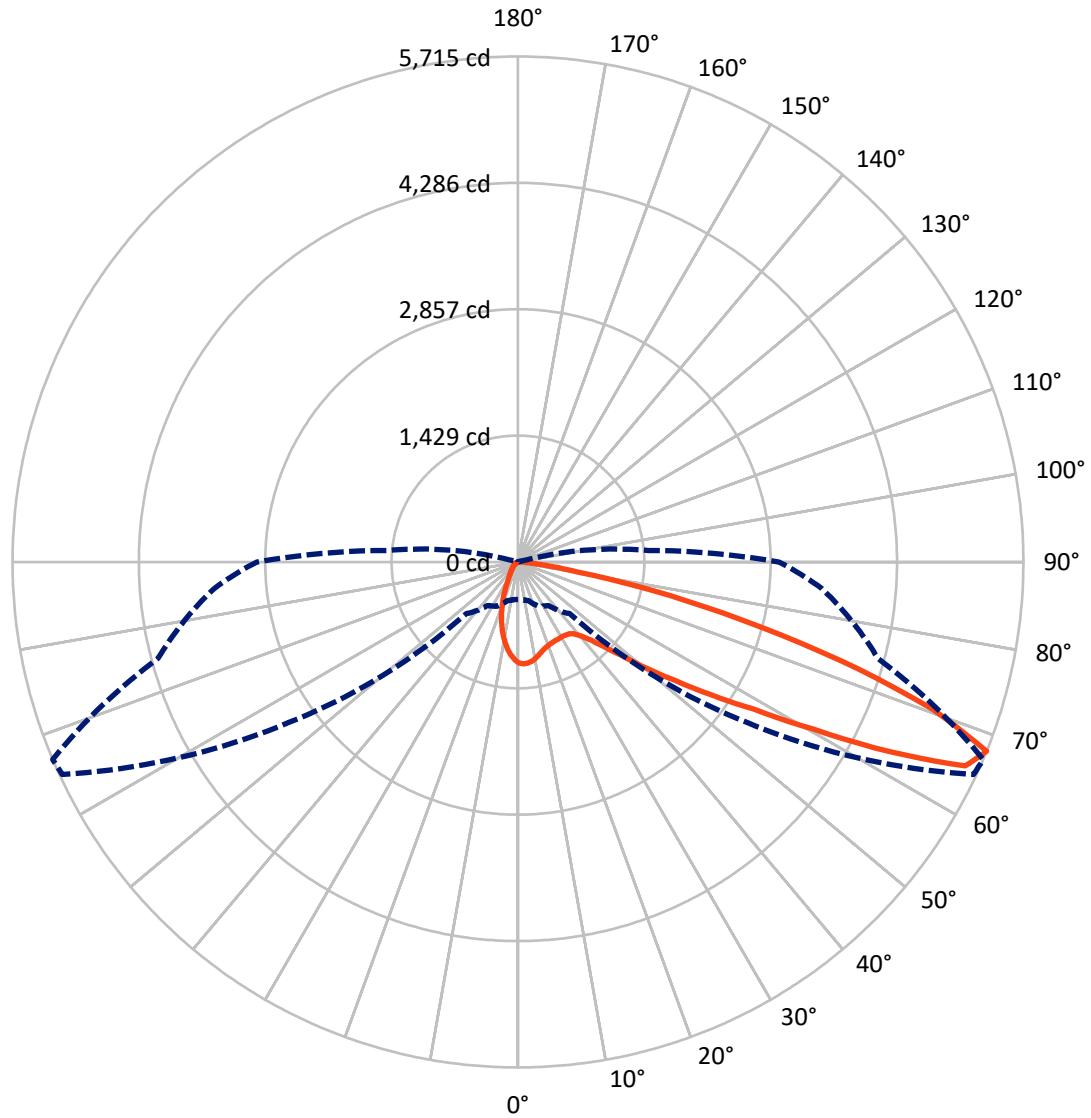
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 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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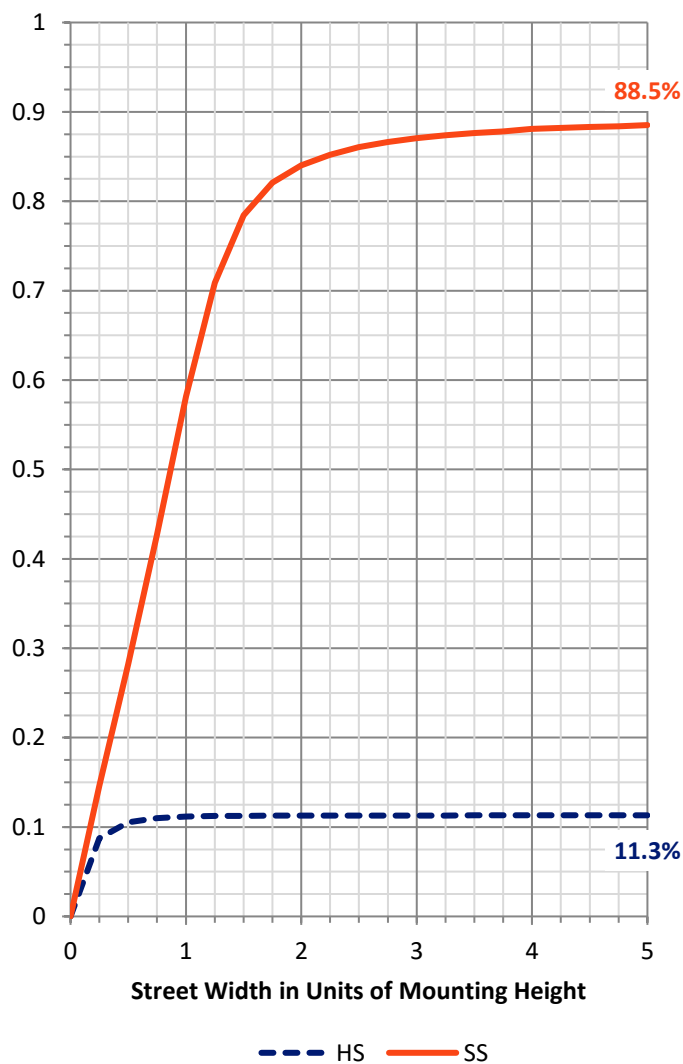
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	533.4	0.0	533.4
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	4140.6	0.0	4140.6
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	4674.0	0.0	4674.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.0	2.0
10°-20°	201.5	4.3
20°-30°	288.6	6.2
30°-40°	424.8	9.1
40°-50°	701.7	15.0
50°-60°	1128.7	24.1
60°-70°	1230.7	26.3
70°-80°	560.1	12.0
80°-90°	45.1	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°	4674.0	100.0
0°-180°	4674.0	100.0

**Coefficient of Utilization**



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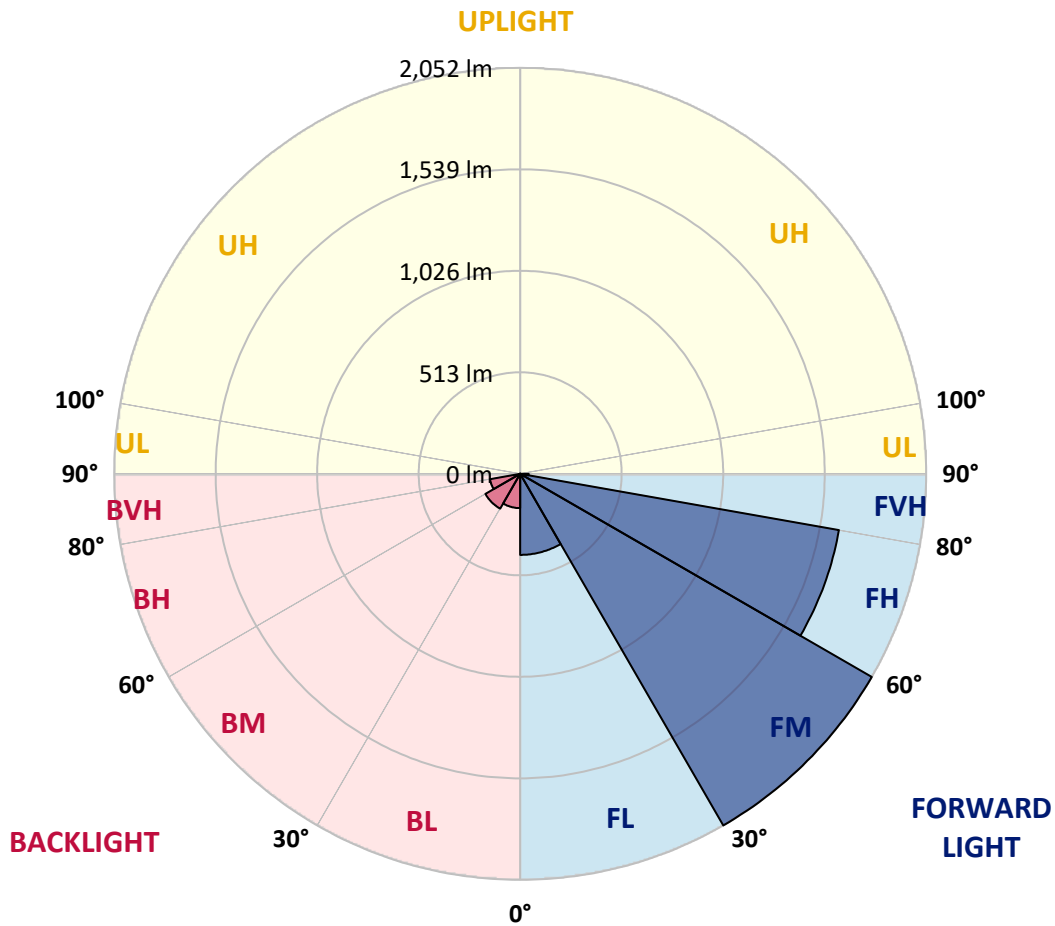
CATALOG NUMBER: ISC-SA1E-830-U-SL2-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	409.8	8.8			
FM (30°-60°)	2052.1	43.9			
FH (60°-80°)	1635.9	35.0			G1/1800
FVH (80°-90°)	42.8	0.9			G1/100
BL (0°-30°)	173.3	3.7	B1/500		
BM (30°-60°)	203.1	4.3	B0/220		
BH (60°-80°)	154.8	3.3	B1/500		G1/500
BVH (80°-90°)	2.2	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°	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5
2.5°	1126.1	1136.4	1138.4	1142.5	1142.5	1148.7	1150.7	1154.9	1152.8	1154.9	1150.7
5°	1048.2	1056.4	1052.3	1072.8	1085.1	1107.7	1130.2	1148.7	1148.7	1154.9	1152.8
7.5°	970.2	978.4	978.4	994.9	1015.4	1048.2	1085.1	1128.2	1132.3	1152.8	1146.6
10°	908.7	912.8	916.9	935.4	960.0	992.8	1042.0	1097.4	1105.6	1140.5	1142.5
12.5°	859.5	865.6	871.8	890.2	912.8	945.6	992.8	1056.4	1070.7	1120.0	1138.4
15°	834.9	834.9	841.0	857.4	877.9	912.8	955.9	1029.7	1042.0	1107.7	1136.4
17.5°	822.5	824.6	828.7	836.9	853.3	882.0	929.2	1001.0	1017.4	1097.4	1136.4
20°	839.0	839.0	832.8	836.9	845.1	867.7	910.8	980.5	1001.0	1091.3	1146.6
22.5°	873.8	873.8	863.6	857.4	851.3	859.5	898.4	972.3	990.8	1091.3	1152.8
25°	927.2	927.2	921.0	902.5	875.9	869.7	900.5	970.2	984.6	1093.3	1161.0
27.5°	990.8	992.8	986.6	966.1	925.1	890.2	906.7	966.1	982.5	1091.3	1165.1
30°	1074.9	1083.1	1074.9	1046.1	996.9	931.3	921.0	964.1	980.5	1087.2	1167.2
32.5°	1159.0	1165.1	1173.3	1154.9	1085.1	994.9	951.8	972.3	986.6	1089.2	1163.1
35°	1241.0	1257.4	1271.8	1277.9	1206.1	1085.1	1003.1	990.8	996.9	1095.4	1163.1
37.5°	1329.2	1345.6	1376.4	1407.2	1347.7	1185.6	1079.0	1031.8	1031.8	1115.9	1175.4
40°	1442.0	1450.2	1509.7	1546.6	1517.9	1347.7	1187.7	1101.5	1099.5	1173.3	1210.2
42.5°	1550.7	1573.3	1651.3	1706.6	1688.2	1538.4	1319.0	1224.6	1204.1	1265.6	1273.8
45°	1708.7	1743.6	1805.1	1887.1	1905.6	1751.8	1522.0	1382.5	1362.0	1403.1	1380.5
47.5°	1856.4	1881.0	1940.5	2045.1	2151.8	2026.6	1751.8	1604.1	1585.6	1602.0	1565.1
50°	1903.6	1915.9	1983.6	2112.8	2365.1	2420.5	2067.7	1891.2	1889.2	1876.9	1815.4
52.5°	1821.5	1823.6	1901.5	2059.4	2453.3	2851.2	2514.8	2262.5	2227.7	2201.0	2118.9
55°	1571.3	1589.7	1655.4	1852.3	2367.1	3099.4	3230.7	2711.7	2654.3	2557.9	2455.3
57.5°	1228.7	1220.5	1273.8	1454.3	2102.5	3197.9	3936.3	3282.0	3138.4	2849.2	2711.7
60°	894.3	873.8	908.7	1011.3	1528.2	3005.1	4344.5	4086.1	3839.9	3163.0	3027.6
62.5°	664.6	664.6	701.5	748.7	937.4	2344.6	4408.1	5007.1	4730.2	3561.0	3362.0
65°	531.3	529.2	560.0	631.8	668.7	1454.3	4088.1	5663.5	5558.9	3975.3	3581.5
67.5°	424.6	424.6	451.3	549.7	601.0	826.7	3163.0	5684.0	5714.8	4213.3	3448.1
70°	299.5	309.7	342.6	459.5	580.5	631.8	1917.9	4882.0	4962.0	4141.5	3093.3
72.5°	168.2	176.4	235.9	340.5	557.9	607.2	1072.8	3688.1	3823.5	3470.7	2523.0
75°	80.0	88.2	137.4	233.8	465.6	578.5	652.3	2615.3	2596.9	2254.3	1567.2
77.5°	34.9	39.0	61.5	135.4	330.3	539.5	477.9	1634.8	1561.0	1058.4	658.4
80°	12.3	14.4	26.7	77.9	186.7	441.0	397.9	754.9	683.1	293.3	172.3
82.5°	2.1	2.1	10.3	36.9	84.1	246.1	328.2	361.0	311.8	73.8	73.8
85°	0.0	0.0	2.1	12.3	20.5	22.6	147.7	145.6	121.0	24.6	36.9
87.5°	0.0	0.0	0.0	2.1	2.1	4.1	4.1	4.1	4.1	4.1	6.2
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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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5	1140.5
2.5°	1140.5	1138.4	1117.9	1099.5	1074.9	1054.3	1035.9	1017.4	1009.2	1011.3	1015.4
5°	1142.5	1130.2	1087.2	1040.0	990.8	941.5	894.3	865.6	843.1	834.9	843.1
7.5°	1132.3	1111.8	1046.1	970.2	892.3	806.1	734.3	681.0	642.0	617.4	627.7
10°	1124.1	1093.3	996.9	882.0	771.3	658.4	555.9	480.0	426.7	395.9	389.7
12.5°	1109.7	1072.8	939.5	793.8	640.0	486.1	363.1	283.1	240.0	217.4	223.6
15°	1105.6	1048.2	882.0	691.3	500.5	328.2	219.5	174.4	155.9	151.8	151.8
17.5°	1101.5	1031.8	820.5	590.8	359.0	205.1	151.8	139.5	135.4	133.3	135.4
20°	1097.4	1009.2	759.0	482.0	242.0	147.7	131.3	125.1	121.0	121.0	119.0
22.5°	1101.5	994.9	701.5	379.5	166.2	125.1	114.9	110.8	106.7	104.6	104.6
25°	1097.4	976.4	631.8	279.0	129.2	110.8	102.6	94.4	90.3	88.2	86.2
27.5°	1091.3	953.8	566.1	201.0	112.8	98.5	88.2	80.0	73.8	71.8	71.8
30°	1085.1	925.1	490.2	147.7	102.6	88.2	75.9	67.7	61.5	57.4	57.4
32.5°	1068.7	898.4	416.4	119.0	92.3	77.9	65.6	55.4	51.3	49.2	49.2
35°	1058.4	867.7	338.5	102.6	84.1	67.7	55.4	47.2	43.1	41.0	41.0
37.5°	1056.4	834.9	268.7	92.3	75.9	59.5	47.2	41.0	36.9	34.9	34.9
40°	1064.6	818.4	207.2	84.1	65.6	51.3	41.0	34.9	30.8	28.7	28.7
42.5°	1097.4	816.4	157.9	75.9	59.5	45.1	36.9	28.7	24.6	22.6	22.6
45°	1171.3	828.7	125.1	69.7	51.3	39.0	30.8	24.6	20.5	18.5	18.5
47.5°	1292.3	880.0	104.6	63.6	43.1	32.8	24.6	20.5	14.4	14.4	14.4
50°	1489.2	988.7	92.3	55.4	36.9	26.7	20.5	14.4	10.3	10.3	10.3
52.5°	1780.5	1154.9	84.1	49.2	30.8	22.6	16.4	10.3	8.2	8.2	8.2
55°	2082.0	1362.0	77.9	41.0	26.7	18.5	12.3	8.2	6.2	6.2	4.1
57.5°	2356.9	1532.3	69.7	34.9	20.5	14.4	8.2	6.2	4.1	4.1	4.1
60°	2683.0	1702.5	59.5	26.7	16.4	10.3	6.2	4.1	2.1	2.1	2.1
62.5°	2998.9	1798.9	49.2	20.5	12.3	8.2	4.1	2.1	2.1	2.1	2.1
65°	3136.4	1753.8	39.0	16.4	10.3	6.2	2.1	2.1	2.1	0.0	0.0
67.5°	2951.7	1483.0	30.8	12.3	8.2	4.1	2.1	2.1	0.0	0.0	0.0
70°	2541.5	1200.0	24.6	10.3	6.2	2.1	2.1	2.1	0.0	0.0	0.0
72.5°	1995.9	884.1	20.5	8.2	4.1	2.1	2.1	2.1	0.0	0.0	0.0
75°	1214.3	445.1	18.5	6.2	4.1	4.1	2.1	2.1	2.1	0.0	0.0
77.5°	412.3	139.5	12.3	6.2	4.1	4.1	2.1	2.1	2.1	2.1	2.1
80°	121.0	45.1	10.3	4.1	4.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	63.6	20.5	6.2	4.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	34.9	10.3	4.1	2.1	2.1	2.1	0.0	0.0	2.1	2.1	2.1
87.5°	6.2	4.1	4.1	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



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**

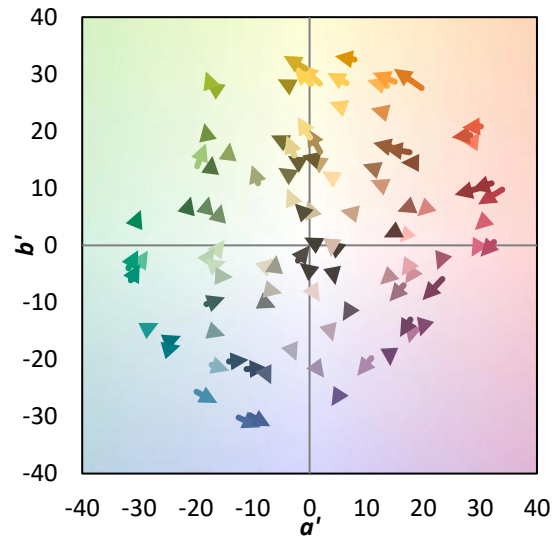
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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