

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: P437590

Luminaire Tested: **ISC-SA1D-830-U-SL2-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437590  
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-SA1D-830-U-SL2-HSS  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 80 CRI, 3000K, 800mA 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: 3734 lumens  
Efficiency: N/A  
Efficacy: 82.6 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

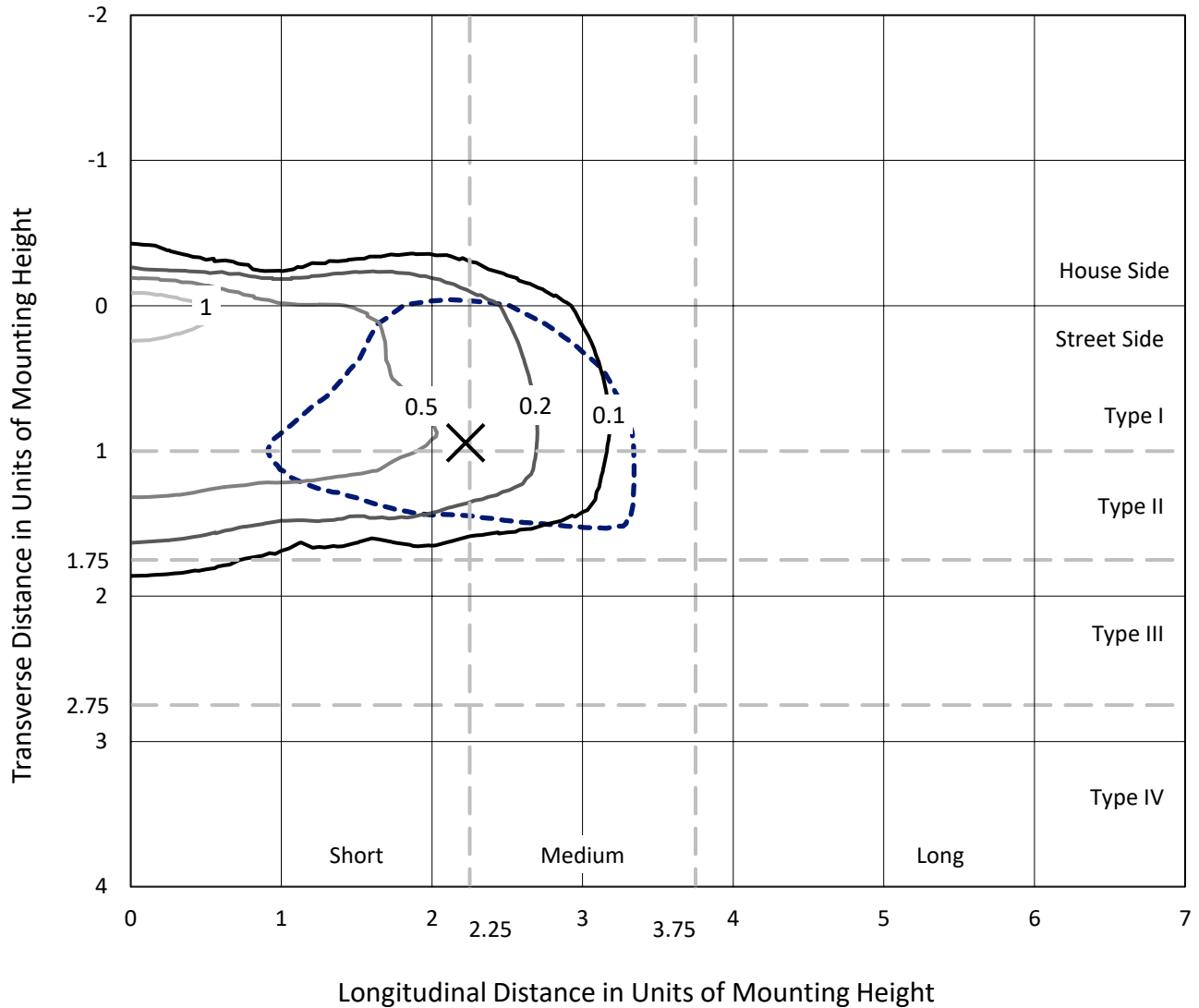
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P437590  
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### Iso-Footcandle Lines of Horizontal Illumination

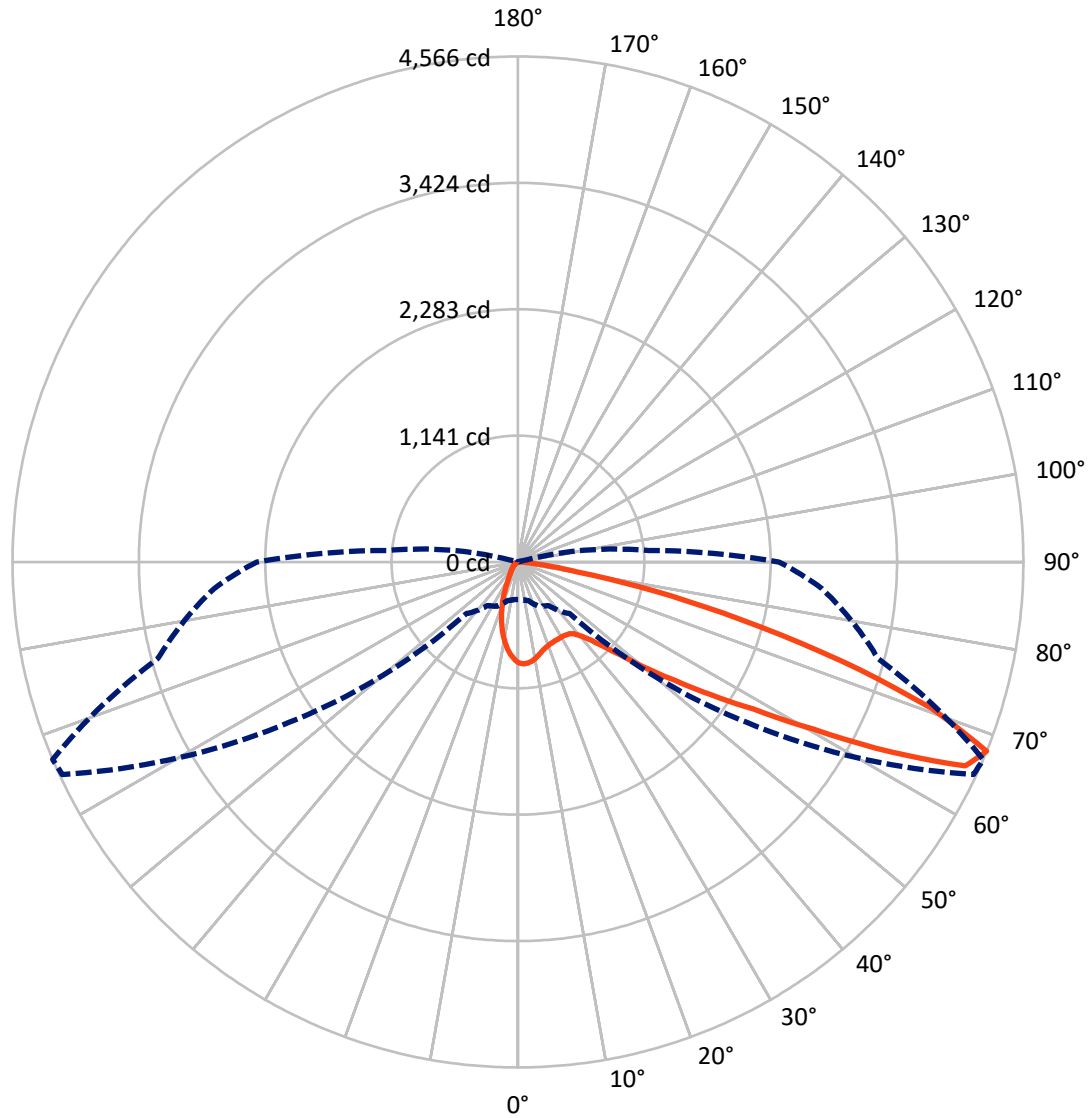
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 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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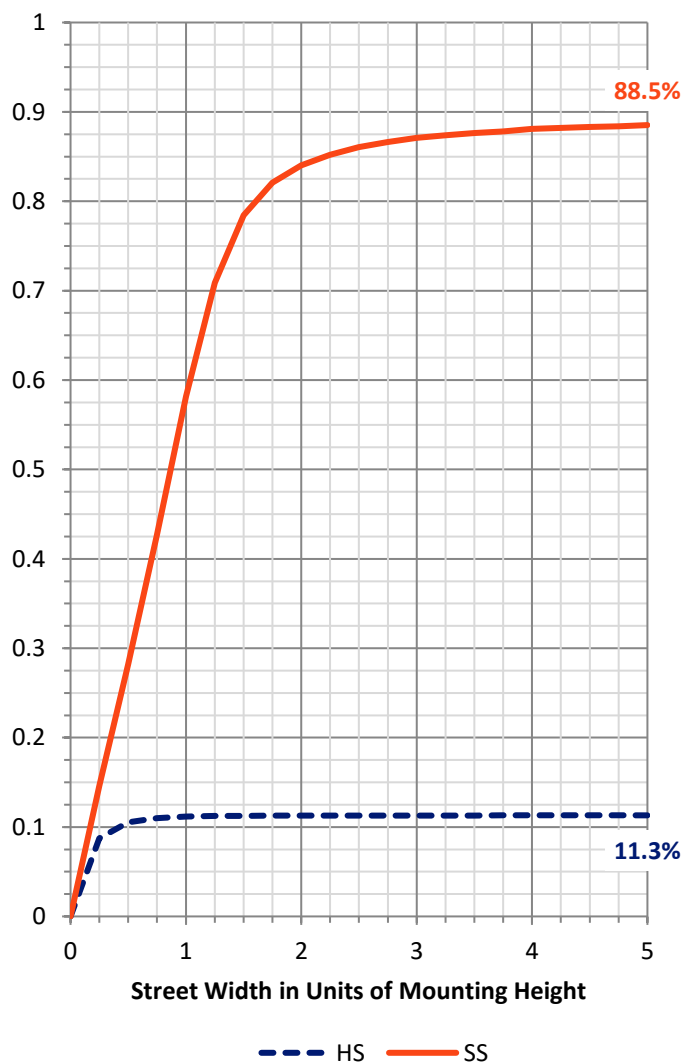
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	426.1	0.0	426.1
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	3307.9	0.0	3307.9
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	3734.0	0.0	3734.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.3	2.0
10°-20°	161.0	4.3
20°-30°	230.6	6.2
30°-40°	339.4	9.1
40°-50°	560.6	15.0
50°-60°	901.7	24.1
60°-70°	983.2	26.3
70°-80°	447.4	12.0
80°-90°	36.0	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°	3734.0	100.0
0°-180°	3734.0	100.0

**Coefficient of Utilization**



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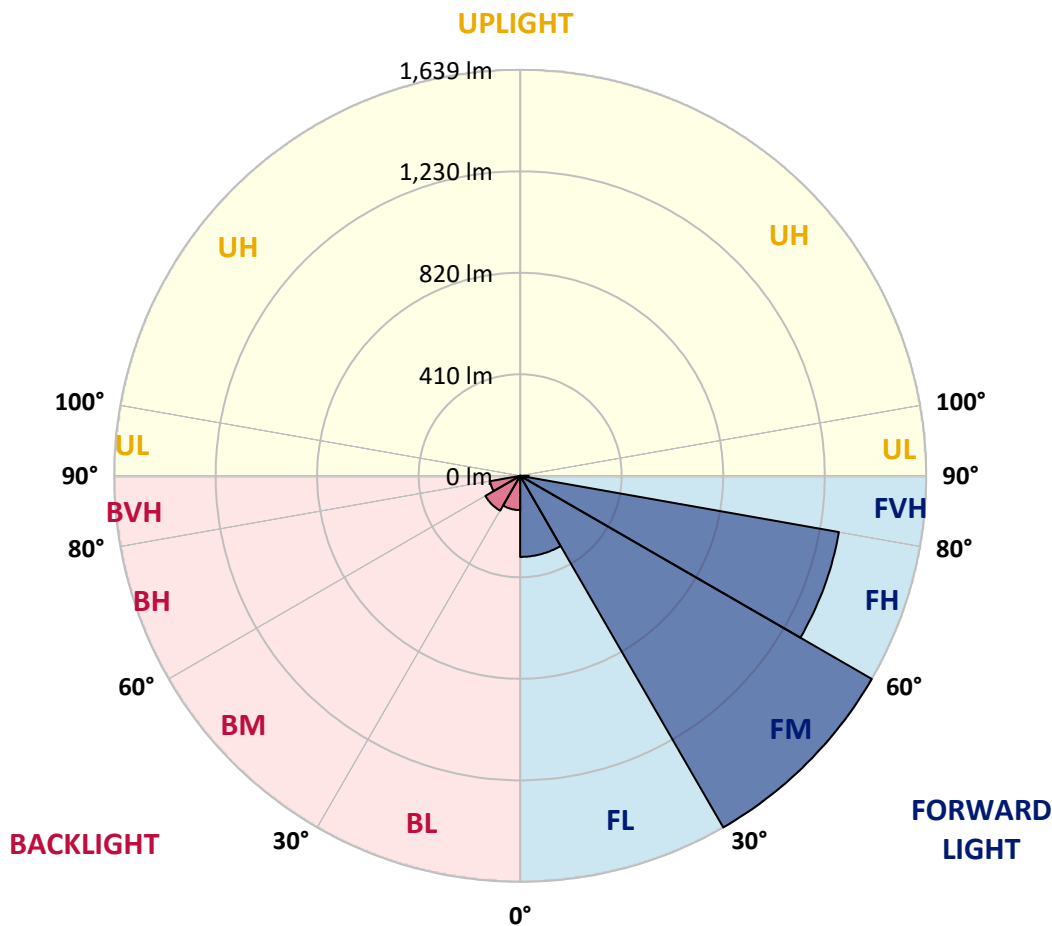
CATALOG NUMBER: ISC-SA1D-830-U-SL2-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	327.4	8.8			
FM (30°-60°)	1639.4	43.9			
FH (60°-80°)	1306.9	35.0			G1/1800
FVH (80°-90°)	34.2	0.9			G1/100
BL (0°-30°)	138.4	3.7	B1/500		
BM (30°-60°)	162.2	4.3	B0/220		
BH (60°-80°)	123.7	3.3	B1/500		G1/500
BVH (80°-90°)	1.8	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°	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1
2.5°	899.7	907.8	909.5	912.8	912.8	917.7	919.3	922.6	921.0	922.6	919.3
5°	837.4	843.9	840.7	857.0	866.9	884.9	902.9	917.7	917.7	922.6	921.0
7.5°	775.1	781.7	781.7	794.8	811.2	837.4	866.9	901.3	904.6	921.0	916.0
10°	726.0	729.2	732.5	747.3	766.9	793.1	832.5	876.7	883.3	911.1	912.8
12.5°	686.6	691.5	696.5	711.2	729.2	755.4	793.1	843.9	855.4	894.7	909.5
15°	667.0	667.0	671.9	685.0	701.4	729.2	763.6	822.6	832.5	884.9	907.8
17.5°	657.1	658.8	662.0	668.6	681.7	704.6	742.3	799.7	812.8	876.7	907.8
20°	670.2	670.2	665.3	668.6	675.1	693.2	727.6	783.3	799.7	871.8	916.0
22.5°	698.1	698.1	689.9	685.0	680.1	686.6	717.8	776.8	791.5	871.8	921.0
25°	740.7	740.7	735.8	721.0	699.7	694.8	719.4	775.1	786.6	873.4	927.5
27.5°	791.5	793.1	788.2	771.8	739.1	711.2	724.3	771.8	784.9	871.8	930.8
30°	858.7	865.2	858.7	835.7	796.4	744.0	735.8	770.2	783.3	868.5	932.4
32.5°	925.9	930.8	937.3	922.6	866.9	794.8	760.4	776.8	788.2	870.2	929.2
35°	991.4	1004.5	1016.0	1020.9	963.6	866.9	801.3	791.5	796.4	875.1	929.2
37.5°	1061.9	1075.0	1099.6	1124.2	1076.6	947.2	862.0	824.3	824.3	891.5	939.0
40°	1152.0	1158.6	1206.1	1235.6	1212.6	1076.6	948.8	880.0	878.4	937.3	966.8
42.5°	1238.9	1256.9	1319.2	1363.4	1348.7	1229.0	1053.7	978.3	961.9	1011.1	1017.6
45°	1365.0	1392.9	1442.1	1507.6	1522.4	1399.5	1215.9	1104.5	1088.1	1120.9	1102.9
47.5°	1483.0	1502.7	1550.2	1633.8	1719.0	1619.0	1399.5	1281.5	1266.7	1279.8	1250.3
50°	1520.7	1530.6	1584.6	1687.9	1889.4	1933.7	1651.8	1510.9	1509.3	1499.4	1450.3
52.5°	1455.2	1456.8	1519.1	1645.3	1959.9	2277.8	2009.1	1807.5	1779.6	1758.3	1692.8
55°	1255.3	1270.0	1322.4	1479.8	1891.1	2476.1	2581.0	2166.4	2120.5	2043.5	1961.5
57.5°	981.6	975.0	1017.6	1161.8	1679.7	2554.8	3144.7	2621.9	2507.2	2276.2	2166.4
60°	714.5	698.1	726.0	807.9	1220.8	2400.7	3470.8	3264.3	3067.7	2526.9	2418.7
62.5°	530.9	530.9	560.4	598.1	748.9	1873.0	3521.6	4000.1	3778.9	2844.8	2685.9
65°	424.4	422.8	447.4	504.7	534.2	1161.8	3266.0	4524.5	4440.9	3175.8	2861.2
67.5°	339.2	339.2	360.5	439.2	480.1	660.4	2526.9	4540.9	4565.5	3365.9	2754.7
70°	239.3	247.4	273.7	367.1	463.8	504.7	1532.2	3900.1	3964.0	3308.6	2471.2
72.5°	134.4	140.9	188.5	272.0	445.7	485.1	857.0	2946.4	3054.6	2772.7	2015.6
75°	63.9	70.5	109.8	186.8	372.0	462.1	521.1	2089.4	2074.6	1800.9	1252.0
77.5°	27.9	31.1	49.2	108.2	263.8	431.0	381.8	1306.1	1247.1	845.6	526.0
80°	9.8	11.5	21.3	62.3	149.1	352.3	317.9	603.0	545.7	234.3	137.7
82.5°	1.6	1.6	8.2	29.5	67.2	196.6	262.2	288.4	249.1	59.0	59.0
85°	0.0	0.0	1.6	9.8	16.4	18.0	118.0	116.3	96.7	19.7	29.5
87.5°	0.0	0.0	0.0	1.6	1.6	3.3	3.3	3.3	3.3	3.3	4.9
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: P437590  
 CATALOG NUMBER: ISC-SA1D-830-U-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1
2.5°	911.1	909.5	893.1	878.4	858.7	842.3	827.6	812.8	806.2	807.9	811.2
5°	912.8	902.9	868.5	830.8	791.5	752.2	714.5	691.5	673.5	667.0	673.5
7.5°	904.6	888.2	835.7	775.1	712.8	644.0	586.7	544.1	512.9	493.3	501.4
10°	898.0	873.4	796.4	704.6	616.2	526.0	444.1	383.5	340.9	316.3	311.4
12.5°	886.5	857.0	750.5	634.2	511.3	388.4	290.1	226.1	191.7	173.7	178.6
15°	883.3	837.4	704.6	552.2	399.8	262.2	175.3	139.3	124.5	121.3	121.3
17.5°	880.0	824.3	655.5	471.9	286.8	163.9	121.3	111.4	108.2	106.5	108.2
20°	876.7	806.2	606.3	385.1	193.4	118.0	104.9	100.0	96.7	96.7	95.0
22.5°	880.0	794.8	560.4	303.2	132.7	100.0	91.8	88.5	85.2	83.6	83.6
25°	876.7	780.0	504.7	222.9	103.2	88.5	81.9	75.4	72.1	70.5	68.8
27.5°	871.8	762.0	452.3	160.6	90.1	78.7	70.5	63.9	59.0	57.4	57.4
30°	866.9	739.1	391.7	118.0	81.9	70.5	60.6	54.1	49.2	45.9	45.9
32.5°	853.8	717.8	332.7	95.0	73.7	62.3	52.4	44.2	41.0	39.3	39.3
35°	845.6	693.2	270.4	81.9	67.2	54.1	44.2	37.7	34.4	32.8	32.8
37.5°	843.9	667.0	214.7	73.7	60.6	47.5	37.7	32.8	29.5	27.9	27.9
40°	850.5	653.8	165.5	67.2	52.4	41.0	32.8	27.9	24.6	22.9	22.9
42.5°	876.7	652.2	126.2	60.6	47.5	36.1	29.5	22.9	19.7	18.0	18.0
45°	935.7	662.0	100.0	55.7	41.0	31.1	24.6	19.7	16.4	14.7	14.7
47.5°	1032.4	703.0	83.6	50.8	34.4	26.2	19.7	16.4	11.5	11.5	11.5
50°	1189.7	789.9	73.7	44.2	29.5	21.3	16.4	11.5	8.2	8.2	8.2
52.5°	1422.4	922.6	67.2	39.3	24.6	18.0	13.1	8.2	6.6	6.6	6.6
55°	1663.3	1088.1	62.3	32.8	21.3	14.7	9.8	6.6	4.9	4.9	3.3
57.5°	1882.9	1224.1	55.7	27.9	16.4	11.5	6.6	4.9	3.3	3.3	3.3
60°	2143.4	1360.1	47.5	21.3	13.1	8.2	4.9	3.3	1.6	1.6	1.6
62.5°	2395.8	1437.2	39.3	16.4	9.8	6.6	3.3	1.6	1.6	1.6	1.6
65°	2505.6	1401.1	31.1	13.1	8.2	4.9	1.6	1.6	1.6	0.0	0.0
67.5°	2358.1	1184.8	24.6	9.8	6.6	3.3	1.6	1.6	0.0	0.0	0.0
70°	2030.4	958.6	19.7	8.2	4.9	1.6	1.6	1.6	0.0	0.0	0.0
72.5°	1594.5	706.3	16.4	6.6	3.3	1.6	1.6	1.6	0.0	0.0	0.0
75°	970.1	355.6	14.7	4.9	3.3	3.3	1.6	1.6	1.6	0.0	0.0
77.5°	329.4	111.4	9.8	4.9	3.3	3.3	1.6	1.6	1.6	1.6	1.6
80°	96.7	36.1	8.2	3.3	3.3	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	50.8	16.4	4.9	3.3	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	27.9	8.2	3.3	1.6	1.6	1.6	0.0	0.0	1.6	1.6	1.6
87.5°	4.9	3.3	3.3	1.6	1.6	1.6	0.0	0.0	0.0	1.6	1.6
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**

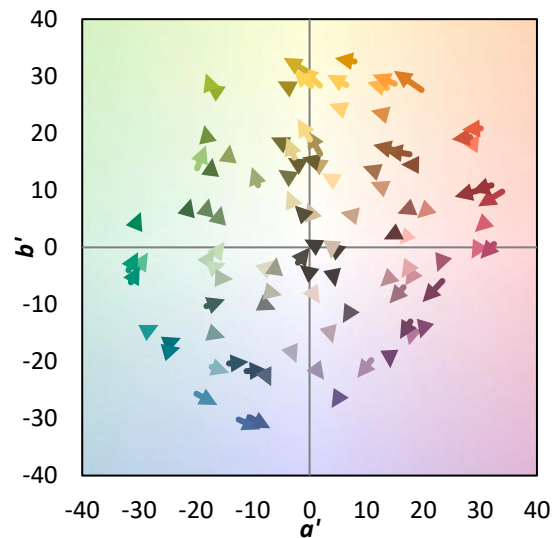
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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