

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: P438628

Luminaire Tested: **IST-SA1D-830-U-T3-HSS**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438628  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: IST-SA1D-830-U-T3-HSS  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

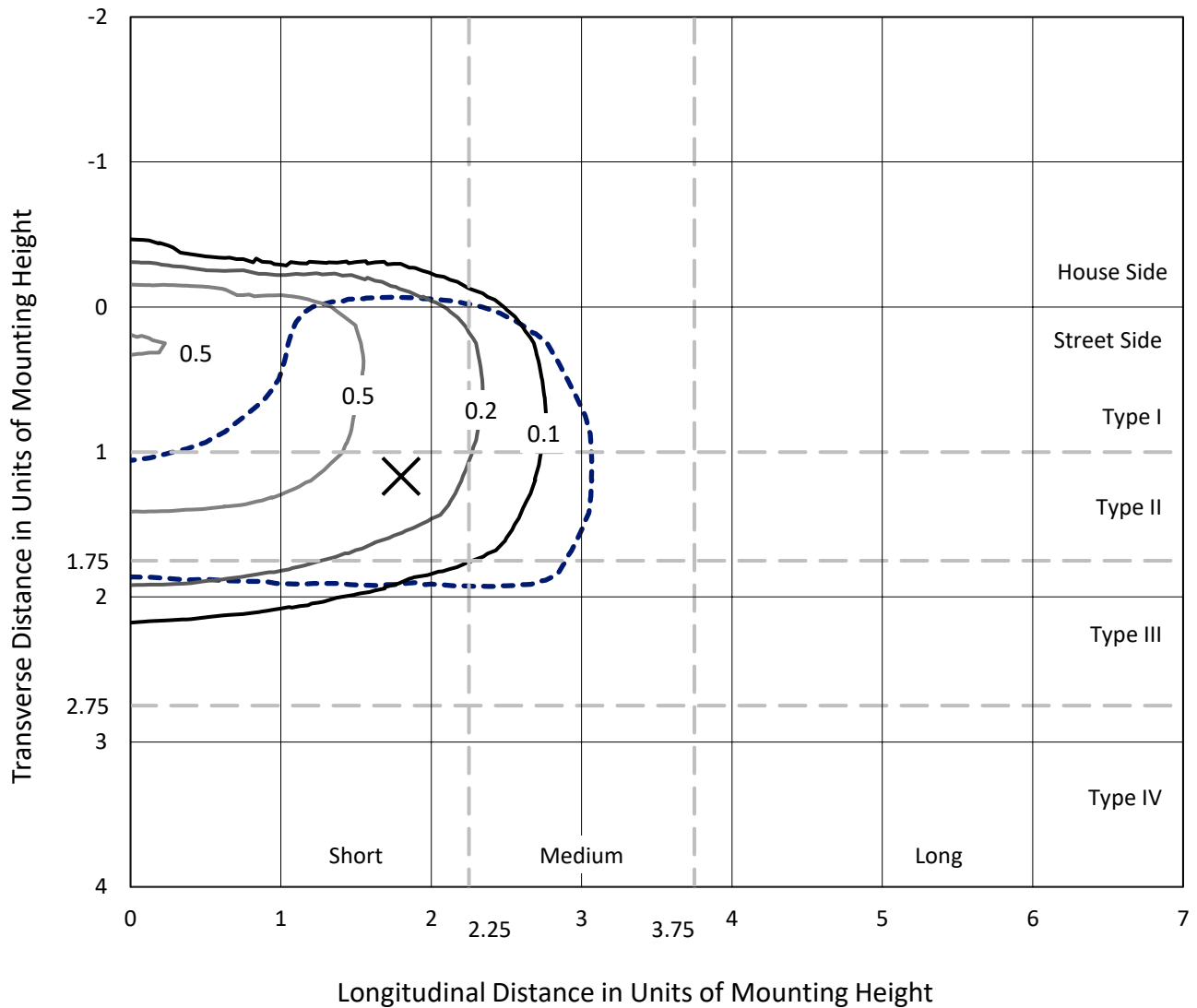
Lumens per Lamp: N/A  
Luminaire Lumens: 3205 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: P438628  
 CATALOG NUMBER: IST-SA1D-830-U-T3-HSS

### Iso-Footcandle Lines of Horizontal Illumination

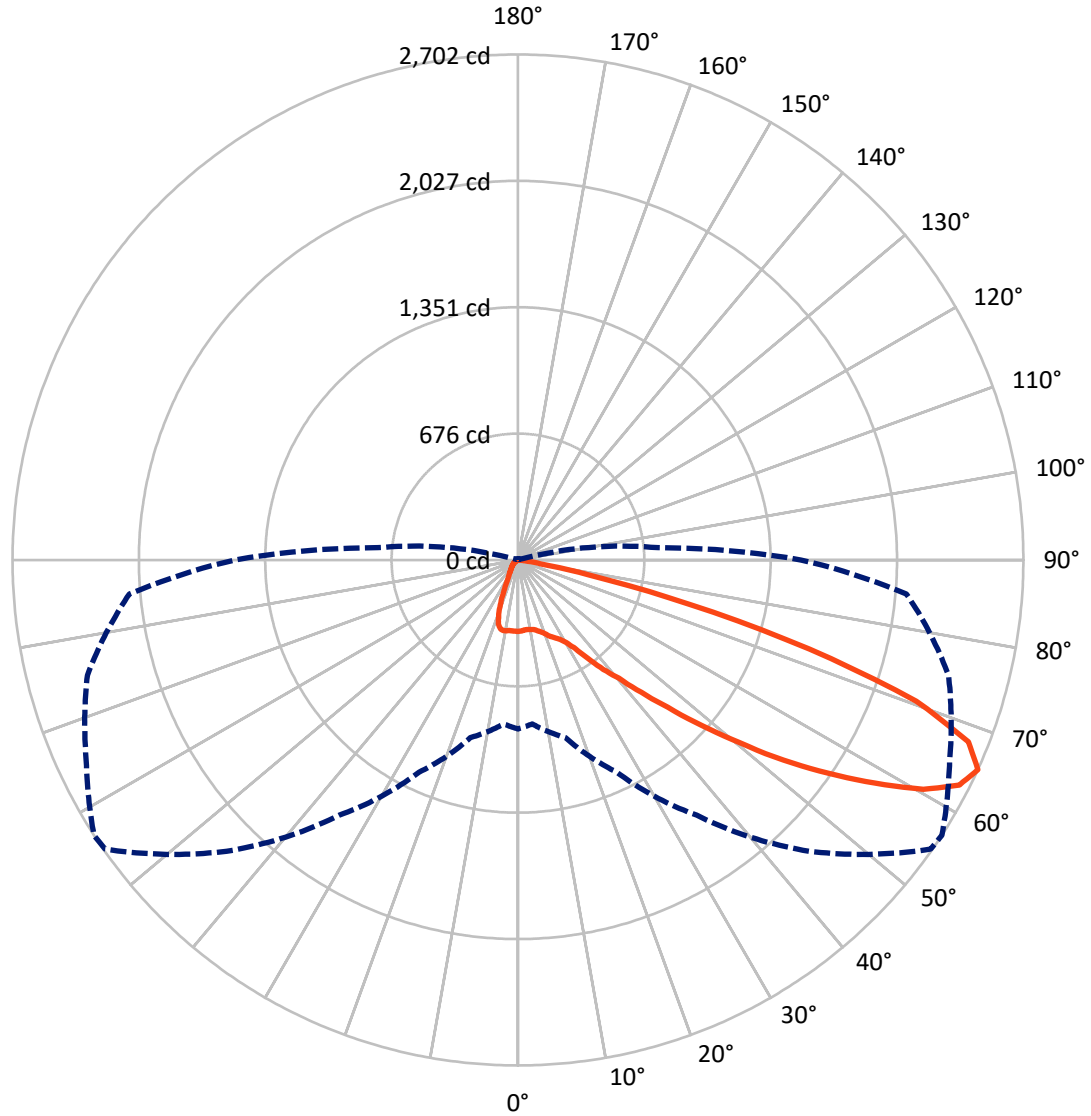
✕ Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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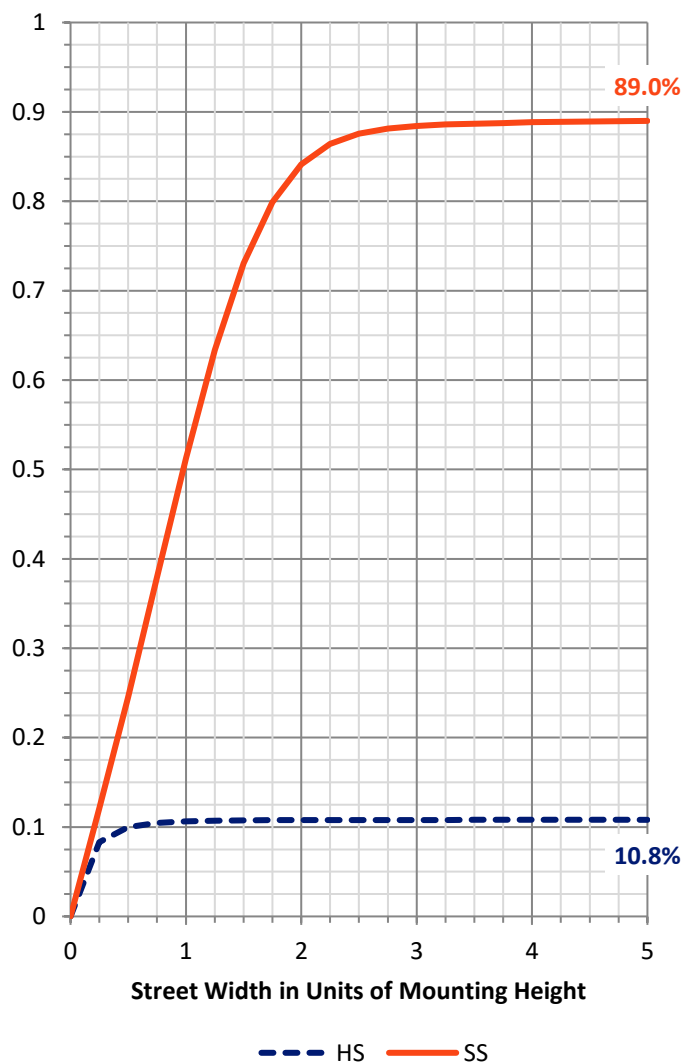
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	349.6	0.0	349.6
	% Fixture	10.9	0.0	10.9
<b>Street Side</b>	Lumens	2855.4	0.0	2855.4
	% Fixture	89.1	0.0	89.1
<b>Total</b>	Lumens	3205.0	0.0	3205.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.5	1.1
10°-20°	95.9	3.0
20°-30°	165.6	5.2
30°-40°	293.4	9.2
40°-50°	532.1	16.6
50°-60°	896.3	28.0
60°-70°	921.7	28.8
70°-80°	255.4	8.0
80°-90°	9.1	0.3
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°	3205.0	100.0
0°-180°	3205.0	100.0

**Coefficient of Utilization**



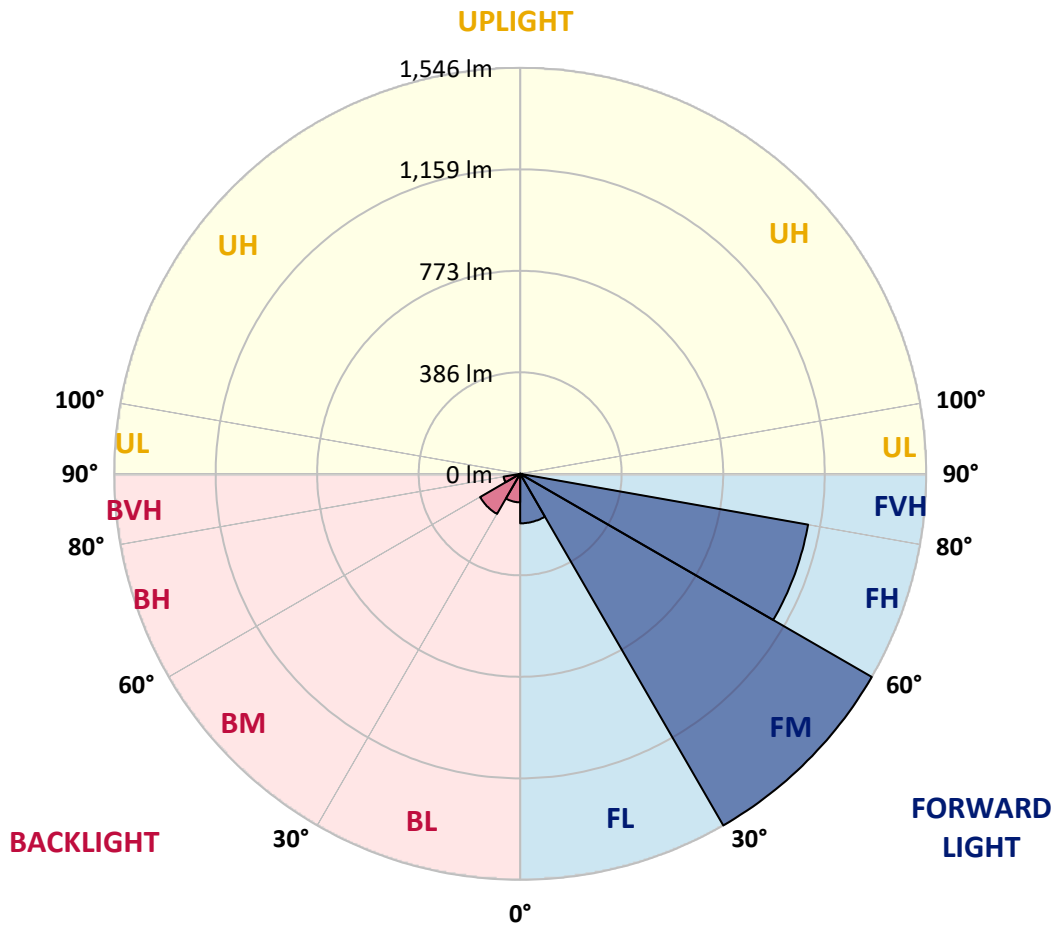
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	188.5	5.9			
FM (30°-60°)	1545.6	48.2			
FH (60°-80°)	1113.0	34.7			G1/1800
FVH (80°-90°)	8.4	0.3			G0/10
BL (0°-30°)	108.5	3.4	B0/110		
BM (30°-60°)	176.3	5.5	B0/220		
BH (60°-80°)	64.1	2.0	B0/110		G0/110
BVH (80°-90°)	0.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





REPORT NUMBER: P438628  
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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3
2.5°	370.4	370.4	373.5	375.1	375.1	376.7	378.2	379.8	379.8	379.8	382.9
5°	351.7	350.1	353.2	356.3	361.0	367.3	372.0	375.1	379.8	384.5	386.0
7.5°	334.5	334.5	337.6	342.3	351.7	361.0	370.4	375.1	382.9	392.3	395.4
10°	329.8	328.2	332.9	337.6	347.0	357.9	372.0	378.2	389.2	401.7	406.4
12.5°	326.6	326.6	328.2	336.0	345.4	359.5	376.7	381.3	398.5	412.6	423.5
15°	325.1	325.1	328.2	334.5	345.4	361.0	384.5	392.3	412.6	432.9	442.3
17.5°	337.6	336.0	334.5	337.6	348.5	365.7	397.0	404.8	429.8	454.8	465.7
20°	375.1	373.5	368.8	357.9	357.9	378.2	412.6	422.0	454.8	479.8	486.1
22.5°	445.4	450.1	432.9	404.8	384.5	393.9	432.9	443.9	481.4	507.9	507.9
25°	547.0	540.8	525.1	478.3	437.6	418.9	450.1	461.1	506.4	537.6	531.4
27.5°	653.3	654.9	633.0	579.8	514.2	464.2	468.9	481.4	533.0	568.9	554.8
30°	737.7	731.4	720.5	676.7	604.8	536.1	504.8	512.6	562.6	603.3	590.8
32.5°	812.7	809.6	795.5	758.0	693.9	620.5	564.2	565.8	604.8	654.9	639.2
35°	879.9	883.0	876.8	834.6	776.8	708.0	643.9	648.6	678.3	729.9	698.6
37.5°	964.3	964.3	953.4	914.3	870.5	801.8	740.8	742.4	758.0	800.2	761.1
40°	1037.8	1040.9	1039.3	1009.6	967.4	904.9	831.5	831.5	836.2	886.2	865.9
42.5°	1137.8	1142.5	1140.9	1112.8	1080.0	1034.6	972.1	967.4	964.3	1026.8	1005.0
45°	1266.0	1276.9	1281.6	1247.2	1217.5	1190.9	1142.5	1123.7	1131.5	1189.4	1172.2
47.5°	1387.9	1400.4	1422.2	1405.1	1391.0	1391.0	1325.3	1322.2	1309.7	1376.9	1330.0
50°	1503.5	1505.1	1536.3	1562.9	1605.1	1597.3	1553.5	1534.8	1516.0	1561.3	1476.9
52.5°	1569.2	1587.9	1628.6	1705.1	1797.3	1834.9	1789.5	1778.6	1741.1	1734.8	1619.2
55°	1630.1	1630.1	1694.2	1827.0	1983.3	2063.0	2025.5	2013.0	1938.0	1916.1	1766.1
57.5°	1650.4	1644.2	1730.1	1898.9	2133.4	2272.5	2280.3	2252.2	2147.4	2080.2	1916.1
60°	1548.8	1537.9	1628.6	1852.0	2174.0	2424.1	2508.5	2489.7	2328.7	2239.6	2074.0
62.5°	1256.6	1270.6	1386.3	1628.6	2030.2	2408.4	2660.1	2649.1	2463.1	2347.5	2136.5
65°	903.4	879.9	983.1	1251.9	1666.1	2202.1	2694.5	2702.3	2546.0	2383.4	2084.9
67.5°	506.4	484.5	570.5	775.2	1184.7	1806.7	2553.8	2597.6	2486.6	2294.3	1863.0
70°	193.8	206.3	265.7	382.9	698.6	1247.2	2197.4	2260.0	2180.3	1914.6	1387.9
72.5°	68.8	78.1	109.4	170.4	323.5	672.1	1536.3	1630.1	1606.7	1330.0	794.0
75°	40.6	42.2	56.3	82.8	142.2	262.6	867.4	945.6	908.0	658.0	328.2
77.5°	28.1	28.1	35.9	50.0	81.3	104.7	339.2	384.5	395.4	237.6	96.9
80°	17.2	18.8	25.0	32.8	46.9	48.5	104.7	123.5	115.7	84.4	34.4
82.5°	7.8	7.8	14.1	21.9	23.4	20.3	32.8	35.9	42.2	37.5	15.6
85°	0.0	0.0	4.7	7.8	6.3	4.7	10.9	10.9	14.1	17.2	7.8
87.5°	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	3.1	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



REPORT NUMBER: P438628  
 CATALOG NUMBER: IST-SA1D-830-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3	381.3
2.5°	382.9	384.5	382.9	381.3	381.3	379.8	379.8	379.8	379.8	379.8	379.8
5°	386.0	387.6	386.0	382.9	379.8	376.7	373.5	373.5	373.5	373.5	376.7
7.5°	395.4	395.4	392.3	386.0	378.2	375.1	368.8	367.3	364.2	362.6	364.2
10°	409.5	409.5	403.2	393.9	381.3	368.8	357.9	342.3	332.9	326.6	325.1
12.5°	423.5	422.0	414.2	401.7	381.3	353.2	317.3	278.2	254.8	237.6	234.4
15°	442.3	440.7	428.2	406.4	372.0	312.6	242.3	189.1	161.0	148.5	146.9
17.5°	462.6	459.5	442.3	409.5	342.3	236.0	159.4	123.5	112.5	109.4	109.4
20°	484.5	479.8	453.2	404.8	282.9	161.0	111.0	103.2	101.6	100.0	100.0
22.5°	501.7	493.9	461.1	381.3	211.0	111.0	98.5	96.9	95.3	93.8	93.8
25°	520.4	507.9	467.3	329.8	139.1	95.3	92.2	90.6	87.5	86.0	86.0
27.5°	542.3	523.6	476.7	259.4	96.9	86.0	82.8	81.3	76.6	73.5	73.5
30°	570.5	547.0	481.4	189.1	81.3	75.0	71.9	68.8	62.5	59.4	59.4
32.5°	615.8	595.5	472.0	126.6	73.5	67.2	62.5	56.3	50.0	46.9	45.3
35°	673.6	645.5	439.2	89.1	65.6	59.4	51.6	43.8	39.1	37.5	37.5
37.5°	737.7	700.2	389.2	71.9	59.4	51.6	43.8	35.9	31.3	29.7	29.7
40°	828.3	770.5	320.4	62.5	51.6	43.8	35.9	29.7	26.6	25.0	25.0
42.5°	947.1	859.6	242.3	57.8	46.9	37.5	29.7	25.0	21.9	20.3	20.3
45°	1080.0	953.4	176.6	51.6	40.6	31.3	23.4	20.3	17.2	15.6	15.6
47.5°	1212.8	1020.6	121.9	46.9	34.4	26.6	20.3	15.6	12.5	12.5	10.9
50°	1328.5	1056.5	87.5	40.6	31.3	21.9	15.6	12.5	10.9	9.4	9.4
52.5°	1430.1	1072.2	67.2	35.9	26.6	18.8	12.5	10.9	9.4	9.4	9.4
55°	1516.0	1059.7	53.1	31.3	23.4	15.6	10.9	9.4	7.8	7.8	7.8
57.5°	1600.4	1022.1	42.2	26.6	18.8	10.9	9.4	7.8	6.3	6.3	6.3
60°	1644.2	973.7	34.4	21.9	15.6	9.4	7.8	6.3	6.3	4.7	4.7
62.5°	1614.5	875.2	28.1	18.8	10.9	7.8	6.3	4.7	4.7	3.1	3.1
65°	1514.5	750.2	21.9	14.1	7.8	6.3	4.7	4.7	3.1	1.6	1.6
67.5°	1276.9	587.7	17.2	10.9	6.3	4.7	3.1	3.1	1.6	0.0	0.0
70°	912.7	387.6	14.1	7.8	4.7	4.7	3.1	1.6	0.0	0.0	0.0
72.5°	526.7	187.5	10.9	4.7	3.1	3.1	1.6	1.6	0.0	0.0	0.0
75°	196.9	65.6	9.4	4.7	3.1	1.6	1.6	1.6	0.0	0.0	0.0
77.5°	65.6	26.6	7.8	6.3	4.7	1.6	1.6	0.0	0.0	0.0	0.0
80°	20.3	12.5	3.1	3.1	3.1	3.1	1.6	0.0	0.0	0.0	0.0
82.5°	10.9	6.3	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
85°	4.7	3.1	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	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

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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**

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)