

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: P438790

Luminaire Tested: **IST-SA1E-830-U-SL3**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438790  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: IST-SA1E-830-U-SL3  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

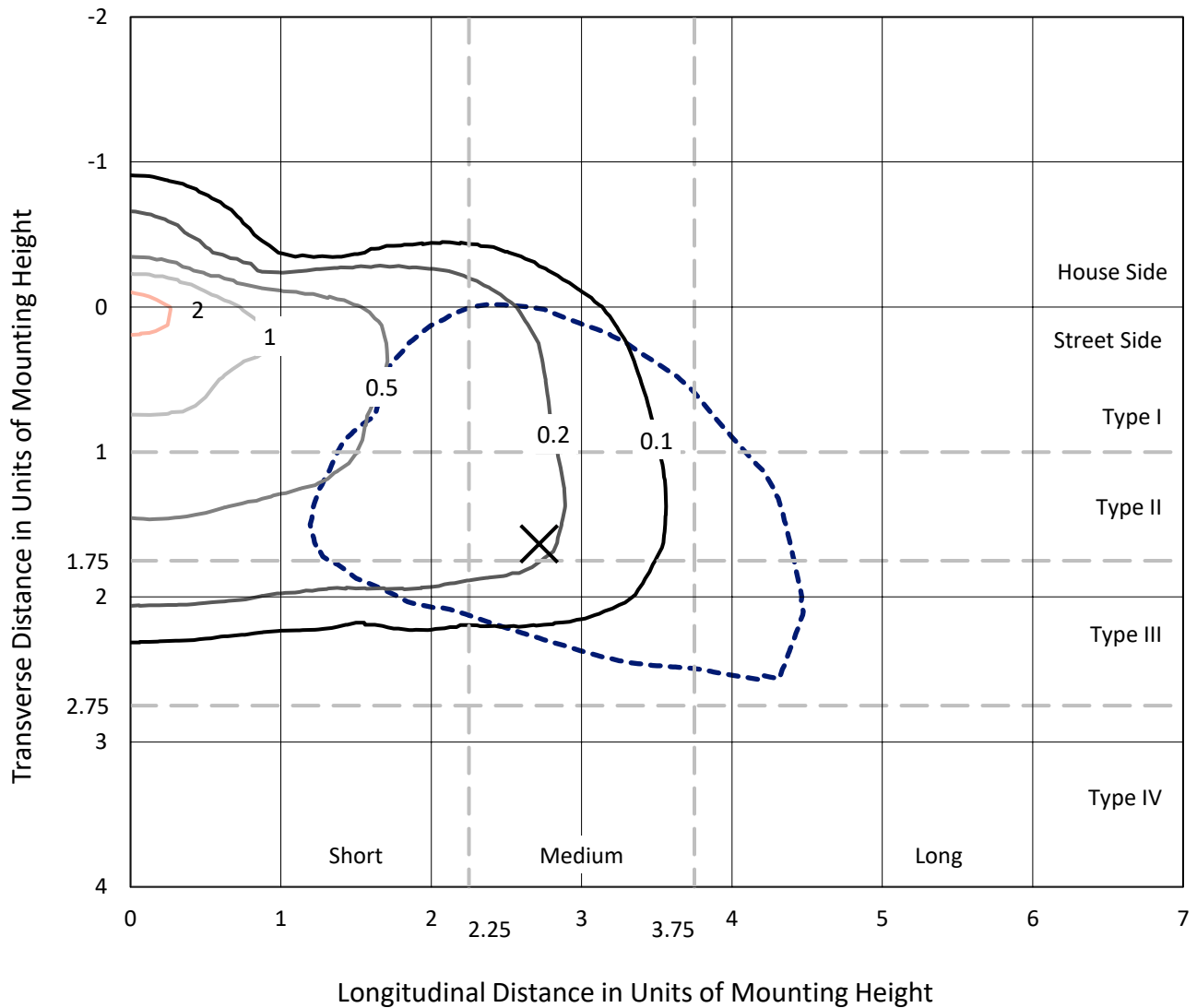
Lumens per Lamp: N/A  
Luminaire Lumens: 5572 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 58.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

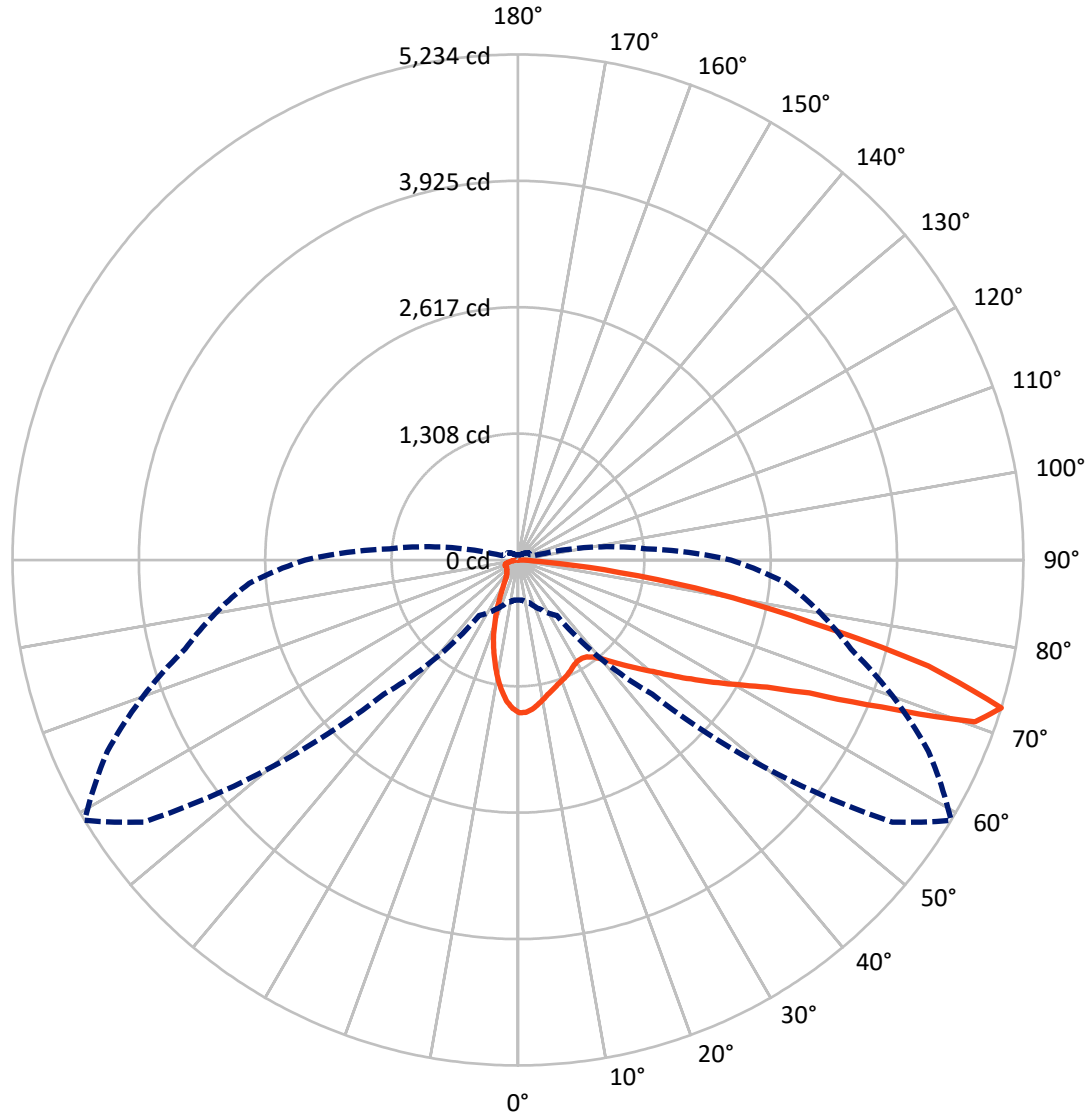
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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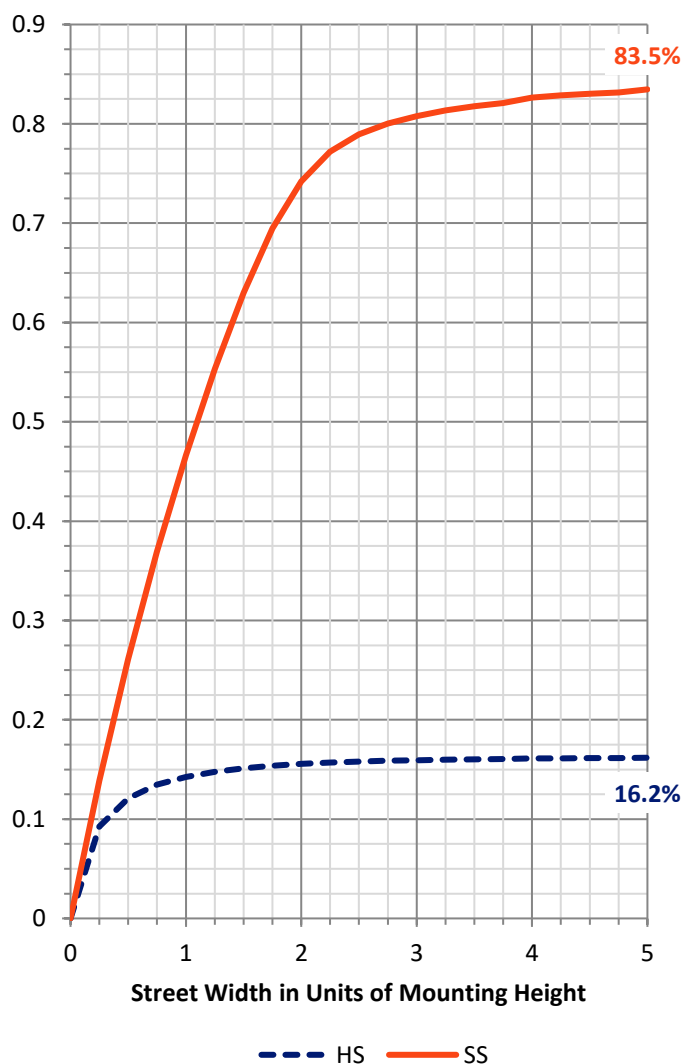
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	909.5	0.0	909.5
	% Fixture	16.3	0.0	16.3
<b>Street Side</b>	Lumens	4662.5	0.0	4662.5
	% Fixture	83.7	0.0	83.7
<b>Total</b>	Lumens	5572.0	0.0	5572.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.7	2.4
10°-20°	305.0	5.5
20°-30°	392.9	7.1
30°-40°	502.7	9.0
40°-50°	697.6	12.5
50°-60°	1028.3	18.5
60°-70°	1383.6	24.8
70°-80°	1006.5	18.1
80°-90°	119.7	2.1
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°	5572.0	100.0
0°-180°	5572.0	100.0

**Coefficient of Utilization**

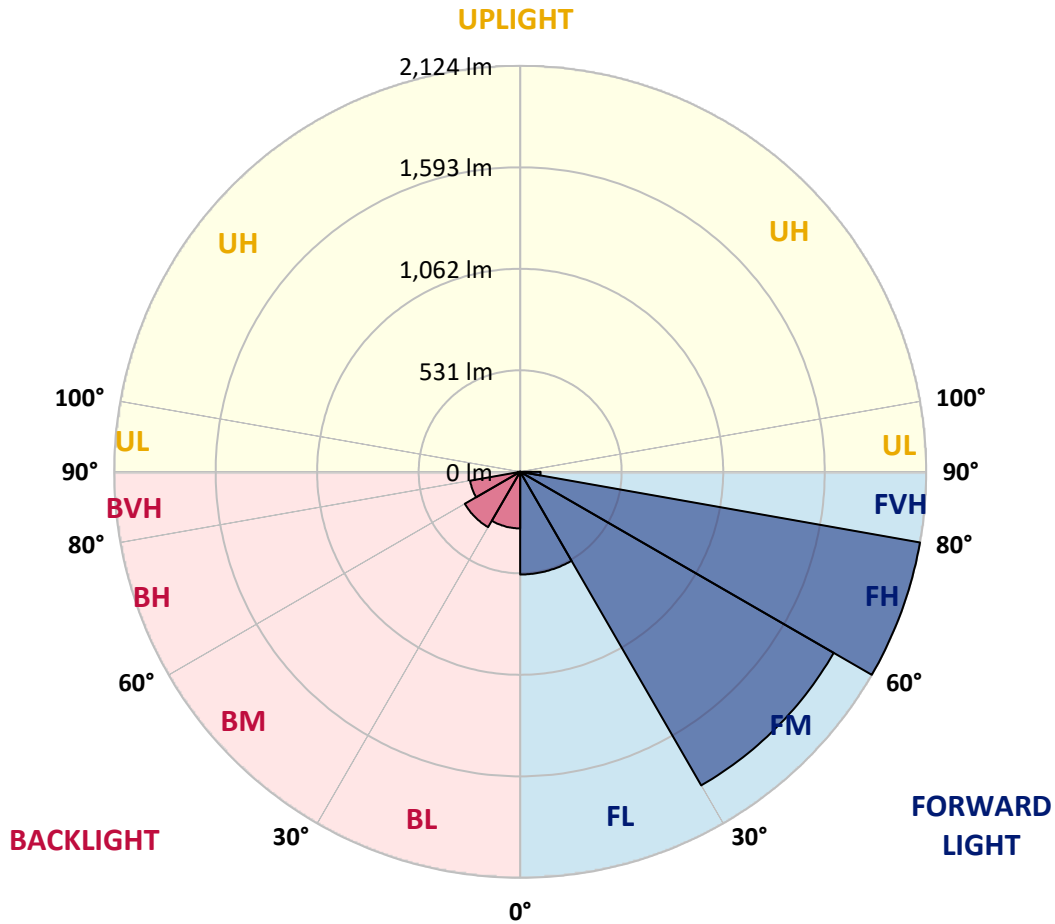


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	537.4	9.6			
FM (30°-60°)	1894.3	34.0			
FH (60°-80°)	2124.0	38.1			G2/5000
FVH (80°-90°)	106.8	1.9			G2/225
BL (0°-30°)	296.2	5.3	B1/500		
BM (30°-60°)	334.3	6.0	B1/1000		
BH (60°-80°)	266.0	4.8	B1/500		G1/500
BVH (80°-90°)	12.9	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4
2.5°	1573.3	1573.3	1579.4	1583.5	1577.4	1583.5	1581.4	1579.4	1581.4	1581.4	1577.4
5°	1508.3	1516.5	1516.5	1518.5	1532.7	1542.9	1546.9	1551.0	1553.0	1555.0	1551.0
7.5°	1429.2	1433.2	1437.3	1455.6	1463.7	1486.0	1500.2	1508.3	1516.5	1520.5	1508.3
10°	1341.9	1348.0	1360.2	1374.4	1394.7	1425.1	1449.5	1463.7	1475.9	1482.0	1467.7
12.5°	1268.8	1270.8	1283.0	1305.3	1329.7	1372.3	1402.8	1419.0	1435.3	1447.4	1431.2
15°	1201.8	1203.8	1214.0	1240.4	1268.8	1315.5	1360.2	1384.5	1406.8	1427.1	1404.8
17.5°	1149.0	1155.1	1159.2	1181.5	1216.0	1266.8	1325.6	1350.0	1384.5	1415.0	1386.5
20°	1118.6	1116.5	1118.6	1132.8	1169.3	1220.1	1289.1	1323.6	1364.2	1406.8	1368.3
22.5°	1100.3	1104.4	1102.3	1108.4	1130.8	1181.5	1250.5	1299.2	1345.9	1400.8	1352.0
25°	1100.3	1106.4	1104.4	1102.3	1110.5	1145.0	1218.0	1266.8	1325.6	1400.8	1333.8
27.5°	1120.6	1122.6	1118.6	1112.5	1112.5	1124.7	1189.6	1234.3	1315.5	1398.7	1323.6
30°	1138.9	1142.9	1142.9	1138.9	1132.8	1126.7	1169.3	1216.0	1305.3	1410.9	1315.5
32.5°	1163.2	1167.3	1175.4	1179.5	1171.4	1153.1	1175.4	1214.0	1307.4	1437.3	1317.5
35°	1193.7	1197.7	1209.9	1230.2	1224.1	1193.7	1197.7	1232.3	1323.6	1465.7	1325.6
37.5°	1218.0	1224.1	1250.5	1285.0	1287.1	1254.6	1252.6	1276.9	1354.1	1510.4	1354.1
40°	1242.4	1250.5	1289.1	1345.9	1358.1	1339.8	1327.7	1345.9	1408.9	1575.3	1400.8
42.5°	1274.9	1283.0	1333.8	1404.8	1435.3	1427.1	1419.0	1445.4	1492.1	1662.6	1473.8
45°	1309.4	1325.6	1390.6	1469.8	1524.6	1530.7	1538.8	1555.0	1591.6	1784.4	1577.4
47.5°	1372.3	1386.5	1461.7	1542.9	1613.9	1646.4	1660.6	1680.9	1703.2	1896.1	1703.2
50°	1457.6	1486.0	1553.0	1632.2	1715.4	1778.3	1814.9	1814.9	1839.2	2030.1	1841.3
52.5°	1585.5	1611.9	1652.5	1727.6	1827.1	1926.5	1977.3	1985.4	1977.3	2158.0	1981.4
55°	1693.1	1719.5	1758.0	1812.9	1938.7	2093.0	2180.3	2174.2	2145.8	2294.0	2119.4
57.5°	1812.9	1833.2	1867.7	1912.3	2052.4	2265.6	2393.5	2387.4	2334.6	2432.0	2269.6
60°	1863.6	1892.0	1955.0	2046.3	2229.0	2486.8	2637.1	2618.8	2501.1	2580.2	2403.6
62.5°	1711.4	1764.1	1892.0	2076.8	2434.1	2856.3	2955.8	2896.9	2736.5	2742.6	2584.3
65°	1368.3	1339.8	1534.7	1841.3	2450.3	3313.1	3443.0	3315.1	3030.9	2949.7	2789.3
67.5°	781.6	793.8	887.1	1218.0	2017.9	3499.9	4287.5	4062.2	3491.7	3272.5	3037.0
70°	529.8	542.0	582.6	722.7	1159.2	3128.3	4975.7	5020.4	4204.3	3558.7	3045.1
72.5°	414.1	416.2	458.8	568.4	702.4	1965.1	4730.1	5233.5	4691.5	3568.9	2793.4
75°	316.7	318.7	357.3	485.2	631.4	952.1	3601.4	4389.0	4401.2	3282.6	2281.8
77.5°	201.0	211.1	255.8	387.7	592.8	631.4	2294.0	3091.8	3173.0	2432.0	1193.7
80°	97.4	101.5	127.9	247.7	521.7	558.3	1366.2	2056.5	1782.4	948.0	363.4
82.5°	40.6	42.6	60.9	107.6	332.9	473.0	684.1	1057.7	688.2	257.8	117.7
85°	8.1	10.2	14.2	26.4	107.6	231.4	280.2	274.1	166.5	79.2	44.7
87.5°	0.0	0.0	0.0	2.0	2.0	4.1	4.1	4.1	4.1	4.1	4.1
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°	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4	1581.4
2.5°	1575.3	1575.3	1559.1	1546.9	1532.7	1522.6	1512.4	1500.2	1498.2	1504.3	1510.4
5°	1542.9	1534.7	1508.3	1484.0	1455.6	1423.1	1402.8	1376.4	1362.2	1368.3	1364.2
7.5°	1500.2	1488.0	1439.3	1398.7	1341.9	1291.1	1256.6	1218.0	1191.7	1181.5	1175.4
10°	1455.6	1431.2	1366.2	1293.2	1218.0	1142.9	1080.0	1019.1	988.6	986.6	954.1
12.5°	1412.9	1380.5	1289.1	1183.5	1080.0	978.5	885.1	818.1	734.9	710.5	718.6
15°	1378.4	1333.8	1205.9	1071.9	937.9	810.0	688.2	588.7	515.6	489.2	479.1
17.5°	1345.9	1283.0	1128.7	968.3	799.8	639.5	491.3	416.2	371.5	355.3	355.3
20°	1309.4	1236.3	1045.5	852.6	647.6	475.0	363.4	326.8	312.6	310.6	308.6
22.5°	1281.0	1189.6	960.2	730.8	505.5	361.4	300.5	284.2	284.2	286.2	286.2
25°	1246.5	1136.8	868.9	600.9	389.8	290.3	265.9	259.8	265.9	272.0	272.0
27.5°	1222.1	1090.2	785.6	479.1	302.5	251.7	239.5	241.6	249.7	257.8	257.8
30°	1201.8	1045.5	698.3	377.6	251.7	223.3	221.3	225.3	233.5	241.6	239.5
32.5°	1181.5	1011.0	602.9	298.4	217.2	205.0	203.0	209.1	215.2	217.2	221.3
35°	1173.4	982.6	507.5	245.6	196.9	190.8	190.8	192.9	194.9	196.9	196.9
37.5°	1179.5	960.2	422.3	209.1	184.7	182.7	180.7	178.6	178.6	178.6	180.7
40°	1203.8	952.1	349.2	188.8	174.6	174.6	170.5	164.4	162.4	164.4	162.4
42.5°	1252.6	968.3	288.3	176.6	166.5	164.4	158.3	154.3	152.3	152.3	150.2
45°	1329.7	996.8	247.7	168.5	160.4	154.3	148.2	144.1	142.1	144.1	144.1
47.5°	1431.2	1049.5	219.2	160.4	154.3	144.1	136.0	134.0	134.0	138.0	138.0
50°	1553.0	1120.6	203.0	156.3	148.2	136.0	127.9	125.9	127.9	132.0	134.0
52.5°	1682.9	1209.9	198.9	154.3	142.1	127.9	121.8	119.8	121.8	125.9	127.9
55°	1812.9	1307.4	209.1	154.3	136.0	121.8	117.7	111.7	113.7	117.7	119.8
57.5°	1950.9	1412.9	239.5	150.2	132.0	117.7	111.7	105.6	105.6	109.6	109.6
60°	2099.1	1532.7	296.4	150.2	127.9	113.7	103.5	97.4	97.4	97.4	99.5
62.5°	2263.5	1676.8	363.4	152.3	129.9	109.6	95.4	87.3	87.3	89.3	87.3
65°	2507.1	1892.0	381.7	154.3	134.0	105.6	89.3	81.2	79.2	79.2	79.2
67.5°	2657.4	1916.4	296.4	150.2	140.1	105.6	83.2	73.1	71.1	69.0	69.0
70°	2547.7	1682.9	211.1	144.1	140.1	105.6	79.2	67.0	62.9	58.9	58.9
72.5°	2204.7	1335.8	172.6	136.0	129.9	99.5	73.1	60.9	54.8	50.8	50.8
75°	1766.2	948.0	146.2	125.9	109.6	79.2	60.9	50.8	46.7	44.7	44.7
77.5°	860.8	466.9	113.7	109.6	87.3	58.9	48.7	42.6	40.6	36.5	36.5
80°	251.7	172.6	85.3	87.3	54.8	40.6	36.5	34.5	32.5	28.4	30.5
82.5°	115.7	97.4	60.9	54.8	34.5	24.4	24.4	22.3	20.3	18.3	18.3
85°	46.7	48.7	32.5	26.4	16.2	12.2	10.2	10.2	8.1	8.1	8.1
87.5°	4.1	6.1	6.1	4.1	4.1	2.0	0.0	0.0	0.0	2.0	2.0
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

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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

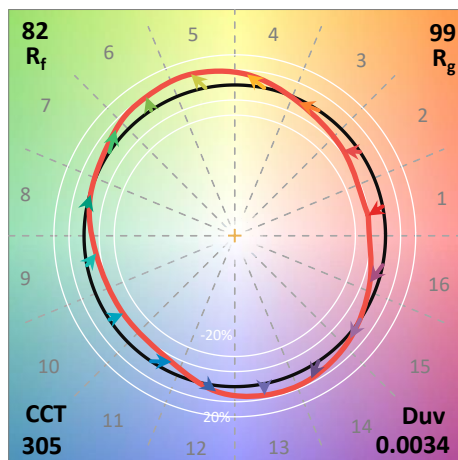
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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