

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: P438796

Luminaire Tested: **ISW-SA1E-830-U-SLR**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438796
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-22)
Test Lab: INNOVATION CENTER
Issue Date: 12/10/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: ISW-SA1E-830-U-SLR
Description: IMPACT ELITE LED WEDGE LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5058 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

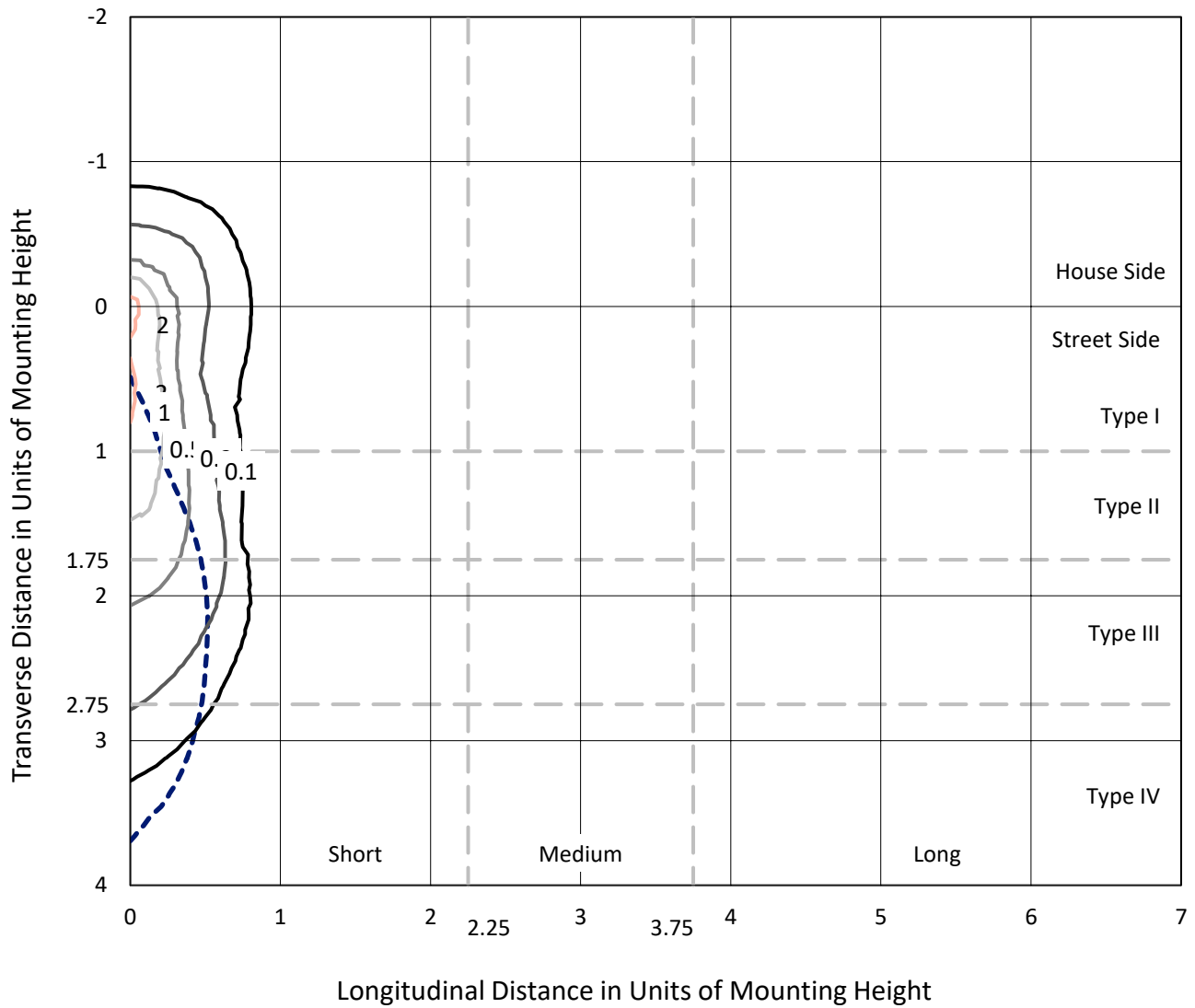
Input Watts (W): 58.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P438796
 CATALOG NUMBER: ISW-SA1E-830-U-SLR

Iso-Footcandle Lines of Horizontal Illumination

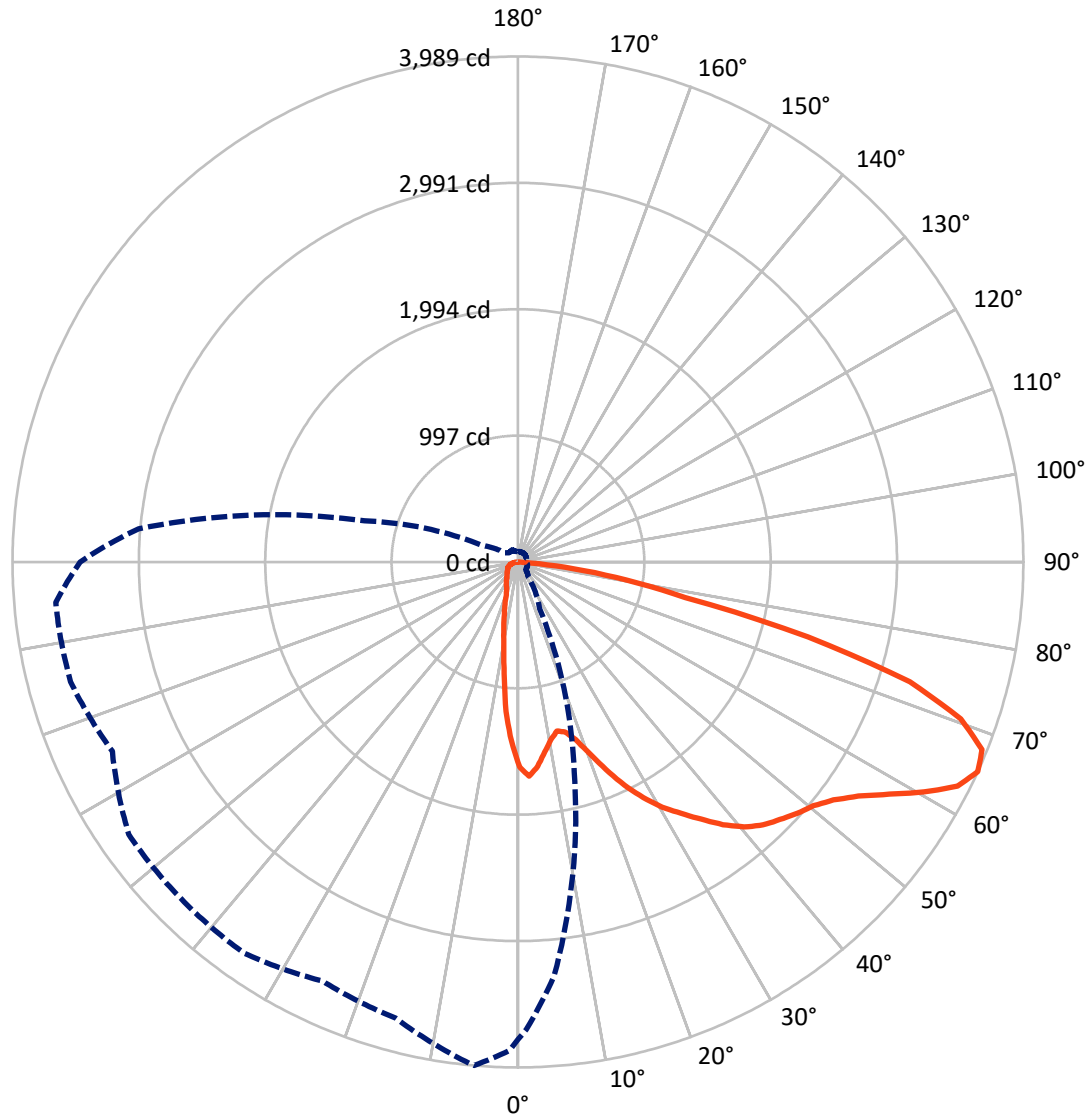
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P438796
CATALOG NUMBER: ISW-SA1E-830-U-SLR

Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical



REPORT NUMBER: P438796
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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	911.8	0.0	911.8
	% Fixture	18.0	0.0	18.0
Street Side	Lumens	4146.2	0.0	4146.2
	% Fixture	82.0	0.0	82.0
Total	Lumens	5058.0	0.0	5058.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	2.4
10°-20°	252.3	5.0
20°-30°	359.6	7.1
30°-40°	514.0	10.2
40°-50°	717.8	14.2
50°-60°	998.3	19.7
60°-70°	1216.2	24.0
70°-80°	749.0	14.8
80°-90°	128.7	2.5
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°	5058.0	100.0
0°-180°	5058.0	100.0

Coefficient of Utilization

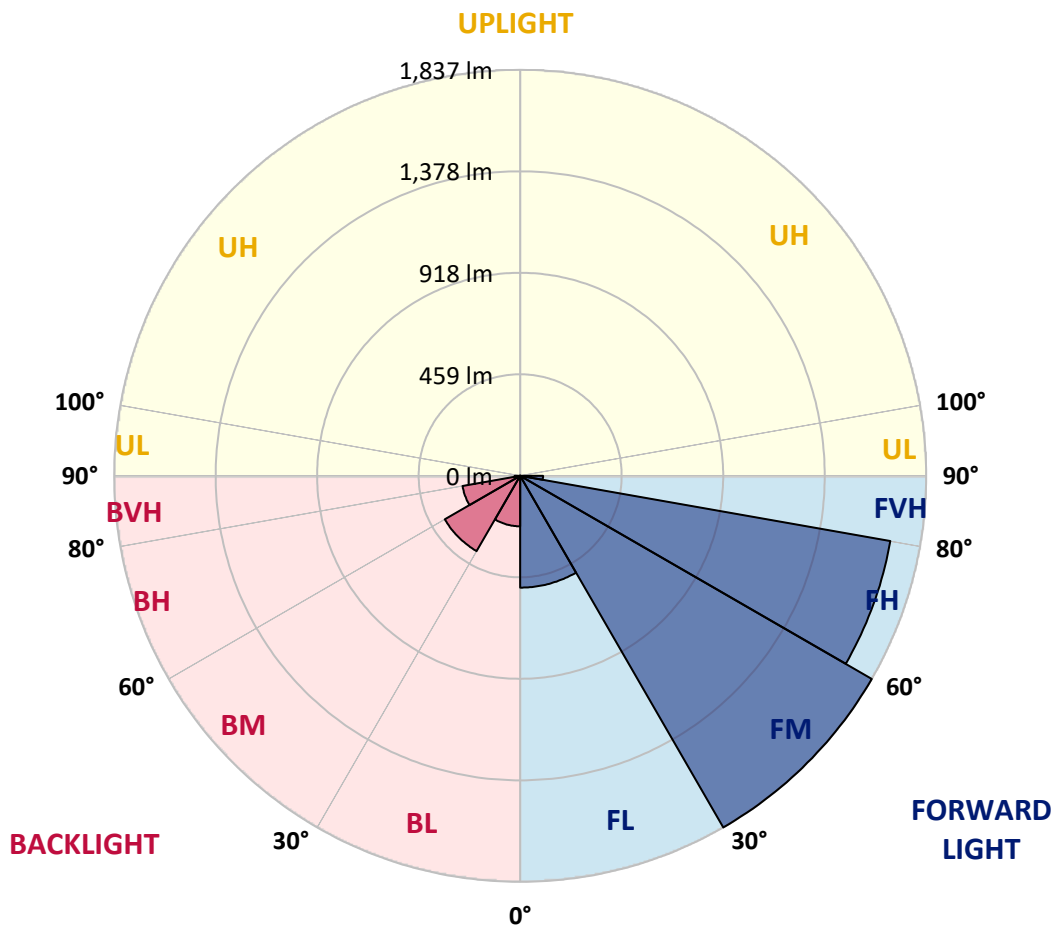


REPORT NUMBER: P438796
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	505.7	10.0			
FM (30°-60°)	1836.7	36.3			
FH (60°-80°)	1700.4	33.6			G1/1800
FVH (80°-90°)	103.4	2.0			G2/225
BL (0°-30°)	228.3	4.5	B1/500		
BM (30°-60°)	393.4	7.8	B1/1000		
BH (60°-80°)	264.8	5.2	B1/500		G1/500
BVH (80°-90°)	25.3	0.5			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 IV Short





REPORT NUMBER: P438796

CATALOG NUMBER: ISW-SA1E-830-U-SLR

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4
2.5°	1659.3	1659.3	1638.9	1587.6	1540.5	1491.4	1475.0	1429.9	1401.2	1374.6	1384.8
5°	1563.1	1556.9	1520.0	1413.5	1331.6	1251.7	1202.5	1128.8	1120.6	1055.0	1050.9
7.5°	1434.0	1429.9	1374.6	1253.7	1159.5	1034.5	960.8	897.3	842.0	803.0	790.8
10°	1345.9	1331.6	1264.0	1116.5	979.2	889.1	848.1	792.8	745.7	696.5	655.5
12.5°	1288.6	1272.2	1204.6	1042.7	909.6	848.1	790.8	725.2	661.7	604.3	563.4
15°	1298.8	1272.2	1196.4	1024.3	885.0	796.9	717.0	639.2	565.4	501.9	450.7
17.5°	1372.5	1339.8	1255.8	1036.6	846.1	729.3	620.7	530.6	440.4	374.9	333.9
20°	1501.6	1454.5	1348.0	1071.4	817.4	665.8	522.4	403.6	309.3	264.3	252.0
22.5°	1659.3	1618.4	1472.9	1100.1	786.7	594.1	413.8	290.9	243.8	221.2	215.1
25°	1823.2	1778.2	1616.3	1147.2	762.1	528.5	325.7	231.5	209.0	198.7	194.6
27.5°	1991.2	1946.1	1757.7	1223.0	733.4	458.9	262.2	202.8	186.4	178.2	178.2
30°	2110.0	2073.2	1884.7	1290.6	700.6	403.6	231.5	188.5	174.1	165.9	163.9
32.5°	2243.2	2192.0	2003.5	1335.7	676.0	360.5	211.0	176.2	163.9	153.6	153.6
35°	2392.7	2335.4	2114.1	1380.7	651.4	340.1	196.7	168.0	155.7	145.4	143.4
37.5°	2556.6	2482.9	2226.8	1419.7	624.8	329.8	188.5	159.8	147.5	139.3	135.2
40°	2736.9	2659.1	2376.3	1452.4	606.4	317.5	182.3	153.6	141.4	131.1	129.1
42.5°	2888.5	2818.8	2480.8	1472.9	598.2	301.1	180.3	147.5	137.3	125.0	120.9
45°	2966.3	2906.9	2607.8	1479.1	594.1	290.9	170.0	147.5	133.2	120.9	114.7
47.5°	3033.9	2990.9	2700.0	1509.8	583.8	280.7	157.7	155.7	131.1	114.7	108.6
50°	3148.7	3103.6	2843.4	1567.2	571.6	268.4	145.4	149.5	131.1	110.6	104.5
52.5°	3285.9	3273.6	3031.9	1657.3	553.1	252.0	133.2	141.4	131.1	108.6	100.4
55°	3486.7	3468.2	3281.8	1774.1	530.6	229.4	120.9	129.1	129.1	102.4	94.2
57.5°	3656.7	3658.8	3511.3	1856.0	510.1	192.6	112.7	110.6	122.9	96.3	88.1
60°	3734.6	3734.6	3585.0	1886.7	483.5	161.8	106.5	98.3	127.0	90.1	81.9
62.5°	3783.7	3742.7	3482.6	1858.1	452.7	145.4	96.3	90.1	102.4	84.0	75.8
65°	3769.4	3691.5	3277.7	1712.6	407.7	141.4	90.1	81.9	81.9	77.8	71.7
67.5°	3640.3	3519.5	2976.6	1466.8	360.5	139.3	81.9	75.8	73.7	69.7	65.6
70°	3290.0	3204.0	2618.1	1196.4	329.8	139.3	75.8	67.6	65.6	61.5	59.4
72.5°	2689.8	2562.8	2089.5	897.3	305.2	139.3	69.7	59.4	57.4	55.3	53.3
75°	1837.6	1692.1	1468.8	551.1	239.7	120.9	61.5	49.2	49.2	47.1	45.1
77.5°	1014.0	981.3	827.6	290.9	149.5	73.7	47.1	38.9	41.0	38.9	36.9
80°	587.9	553.1	491.7	141.4	86.0	43.0	28.7	28.7	30.7	30.7	28.7
82.5°	284.8	247.9	254.0	57.4	30.7	18.4	12.3	14.3	16.4	20.5	20.5
85°	10.2	10.2	20.5	4.1	0.0	0.0	0.0	0.0	0.0	4.1	6.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	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



REPORT NUMBER: P438796
 CATALOG NUMBER: ISW-SA1E-830-U-SLR

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4
2.5°	1352.1	1352.1	1360.3	1395.1	1366.4	1362.3	1370.5	1384.8	1391.0	1419.7	1417.6
5°	1042.7	1036.6	1061.2	1093.9	1112.4	1122.6	1139.0	1175.9	1161.5	1184.1	1180.0
7.5°	770.3	780.5	770.3	807.1	835.8	878.8	911.6	903.4	905.5	887.0	913.7
10°	628.9	624.8	600.2	612.5	628.9	655.5	678.1	682.2	702.7	669.9	692.4
12.5°	536.7	520.3	495.8	483.5	479.4	499.9	506.0	516.2	528.5	538.8	542.9
15°	430.2	417.9	401.5	383.1	379.0	379.0	393.3	407.7	424.1	428.2	442.5
17.5°	321.6	315.5	309.3	309.3	309.3	309.3	321.6	327.8	336.0	348.3	346.2
20°	243.8	243.8	245.8	256.1	262.2	266.3	274.5	276.6	274.5	276.6	276.6
22.5°	215.1	213.1	219.2	223.3	233.5	243.8	247.9	245.8	239.7	235.6	239.7
25°	194.6	196.7	198.7	204.9	213.1	223.3	225.3	223.3	217.1	217.1	217.1
27.5°	178.2	180.3	184.4	190.5	198.7	206.9	209.0	204.9	198.7	200.8	198.7
30°	165.9	170.0	172.1	178.2	184.4	192.6	192.6	188.5	184.4	184.4	184.4
32.5°	151.6	155.7	159.8	165.9	174.1	178.2	178.2	176.2	172.1	170.0	170.0
35°	143.4	143.4	147.5	155.7	159.8	163.9	165.9	163.9	159.8	155.7	153.6
37.5°	135.2	135.2	137.3	141.4	149.5	153.6	155.7	151.6	147.5	143.4	143.4
40°	127.0	127.0	129.1	131.1	139.3	145.4	145.4	139.3	135.2	137.3	135.2
42.5°	120.9	120.9	122.9	122.9	127.0	137.3	135.2	131.1	129.1	129.1	127.0
45°	114.7	112.7	114.7	114.7	116.8	127.0	127.0	120.9	120.9	122.9	120.9
47.5°	108.6	106.5	108.6	108.6	110.6	116.8	116.8	114.7	114.7	114.7	116.8
50°	102.4	102.4	102.4	102.4	104.5	106.5	110.6	108.6	108.6	108.6	110.6
52.5°	96.3	96.3	96.3	98.3	98.3	102.4	104.5	102.4	104.5	104.5	104.5
55°	92.2	90.1	90.1	94.2	94.2	98.3	100.4	98.3	100.4	100.4	100.4
57.5°	86.0	86.0	86.0	88.1	90.1	94.2	98.3	94.2	96.3	96.3	98.3
60°	79.9	79.9	79.9	84.0	86.0	90.1	92.2	90.1	92.2	92.2	92.2
62.5°	73.7	75.8	75.8	77.8	79.9	86.0	88.1	86.0	88.1	88.1	88.1
65°	69.7	69.7	71.7	73.7	75.8	79.9	81.9	81.9	81.9	84.0	81.9
67.5°	63.5	63.5	65.6	67.6	69.7	75.8	75.8	75.8	77.8	75.8	75.8
70°	57.4	57.4	59.4	61.5	63.5	69.7	69.7	69.7	71.7	67.6	67.6
72.5°	51.2	51.2	53.3	55.3	59.4	65.6	63.5	63.5	63.5	61.5	61.5
75°	45.1	45.1	47.1	49.2	51.2	59.4	57.4	55.3	55.3	53.3	53.3
77.5°	36.9	36.9	38.9	43.0	45.1	51.2	49.2	47.1	45.1	45.1	45.1
80°	28.7	30.7	32.8	34.8	36.9	41.0	38.9	36.9	34.8	34.8	34.8
82.5°	20.5	22.5	24.6	26.6	28.7	28.7	28.7	28.7	26.6	24.6	24.6
85°	8.2	12.3	16.4	16.4	18.4	16.4	18.4	16.4	14.3	14.3	12.3
87.5°	0.0	0.0	0.0	0.0	0.0	2.0	4.1	6.1	6.1	6.1	6.1
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: P438796
 CATALOG NUMBER: ISW-SA1E-830-U-SLR

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4
2.5°	1434.0	1466.8	1485.2	1518.0	1552.8	1599.9	1638.9	1694.2	1743.3	1753.6	1765.9
5°	1188.2	1231.2	1251.7	1304.9	1386.9	1438.1	1520.0	1606.1	1712.6	1745.4	1788.4
7.5°	893.2	926.0	979.2	1026.3	1122.6	1208.7	1319.3	1444.2	1569.2	1640.9	1710.6
10°	680.1	721.1	778.5	833.8	928.0	1014.0	1145.2	1284.5	1444.2	1509.8	1583.5
12.5°	565.4	598.2	655.5	731.3	819.4	901.4	999.7	1151.3	1319.3	1403.3	1493.4
15°	456.8	491.7	563.4	647.4	733.4	825.6	919.8	1065.3	1270.1	1356.2	1442.2
17.5°	364.6	395.4	456.8	547.0	641.2	743.6	858.4	1042.7	1280.4	1386.9	1487.3
20°	282.7	309.3	356.5	438.4	534.7	655.5	803.0	1034.5	1341.8	1491.4	1591.7
22.5°	243.8	254.0	280.7	338.0	436.3	577.7	751.8	1040.7	1440.1	1632.7	1747.4
25°	217.1	225.3	235.6	270.4	348.3	497.8	706.8	1053.0	1544.6	1792.5	1923.6
27.5°	200.8	204.9	211.0	227.4	284.8	432.2	661.7	1069.4	1686.0	1954.3	2081.4
30°	184.4	184.4	190.5	206.9	249.9	385.1	628.9	1102.1	1825.3	2093.6	2218.6
32.5°	168.0	168.0	178.2	192.6	227.4	346.2	596.1	1112.4	1929.8	2216.6	2316.9
35°	153.6	157.7	165.9	182.3	213.1	317.5	565.4	1093.9	2005.6	2321.0	2423.5
37.5°	145.4	147.5	157.7	172.1	194.6	290.9	534.7	1069.4	2108.0	2460.3	2540.2
40°	135.2	139.3	149.5	163.9	182.3	270.4	499.9	1042.7	2198.1	2616.0	2657.0
42.5°	129.1	133.2	141.4	155.7	174.1	245.8	467.1	1022.2	2294.4	2749.2	2777.9
45°	122.9	127.0	137.3	149.5	174.1	227.4	434.3	1007.9	2388.6	2851.6	2874.2
47.5°	116.8	120.9	131.1	147.5	172.1	217.1	411.8	993.6	2448.0	2939.7	2945.9
50°	112.7	116.8	129.1	151.6	165.9	213.1	401.5	1007.9	2548.4	3009.4	2990.9
52.5°	106.5	112.7	127.0	157.7	157.7	209.0	393.3	1059.1	2673.4	3111.8	3064.7
55°	104.5	108.6	122.9	151.6	143.4	198.7	393.3	1098.0	2839.3	3314.6	3236.8
57.5°	98.3	102.4	118.8	141.4	131.1	182.3	389.2	1161.5	3074.9	3537.9	3468.2
60°	92.2	98.3	114.7	127.0	118.8	161.8	370.8	1231.2	3236.8	3658.8	3671.0
62.5°	88.1	94.2	114.7	110.6	108.6	141.4	342.1	1274.2	3220.4	3619.8	3736.6
65°	81.9	88.1	104.5	100.4	102.4	127.0	305.2	1253.7	3005.3	3455.9	3660.8
67.5°	75.8	81.9	90.1	90.1	94.2	122.9	266.3	1134.9	2771.7	3257.2	3492.8
70°	69.7	73.7	77.8	81.9	86.0	120.9	235.6	973.1	2503.4	3066.7	3253.1
72.5°	61.5	63.5	67.6	71.7	79.9	114.7	223.3	790.8	2132.6	2655.0	2943.8
75°	53.3	55.3	59.4	63.5	69.7	108.6	204.9	600.2	1757.7	2097.7	2378.4
77.5°	45.1	47.1	51.2	53.3	59.4	96.3	176.2	434.3	1368.4	1511.8	1739.2
80°	34.8	36.9	41.0	41.0	49.2	71.7	137.3	303.2	960.8	1071.4	1190.2
82.5°	24.6	26.6	28.7	30.7	36.9	49.2	90.1	182.3	651.4	735.4	715.0
85°	14.3	16.4	16.4	20.5	22.5	32.8	51.2	94.2	426.1	336.0	331.9
87.5°	6.1	6.1	6.1	8.2	8.2	12.3	16.4	18.4	41.0	14.3	10.2
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: P438796

CATALOG NUMBER: ISW-SA1E-830-U-SLR

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4	1618.4
2.5°	1784.3	1798.7	1808.9	1804.8	1798.7	1763.8	1729.0	1692.1	1659.3	1659.3
5°	1858.1	1917.5	1942.1	1921.6	1876.5	1804.8	1714.7	1620.4	1575.4	1563.1
7.5°	1819.1	1931.8	1991.2	1964.6	1905.2	1774.1	1636.8	1513.9	1446.3	1434.0
10°	1741.3	1888.8	1956.4	1948.2	1882.6	1731.0	1565.1	1425.8	1354.1	1345.9
12.5°	1651.2	1794.6	1880.6	1884.7	1841.7	1708.5	1534.4	1368.4	1304.9	1288.6
15°	1595.8	1720.8	1780.2	1765.9	1778.2	1690.1	1546.7	1391.0	1313.1	1298.8
17.5°	1597.9	1651.2	1665.5	1643.0	1690.1	1686.0	1616.3	1472.9	1386.9	1372.5
20°	1651.2	1606.1	1561.0	1556.9	1618.4	1700.3	1726.9	1610.2	1511.8	1501.6
22.5°	1743.3	1593.8	1499.6	1485.2	1563.1	1714.7	1833.5	1778.2	1686.0	1659.3
25°	1845.8	1606.1	1460.6	1442.2	1511.8	1724.9	1948.2	1950.2	1847.8	1823.2
27.5°	1956.4	1645.0	1460.6	1440.1	1513.9	1741.3	2024.0	2105.9	2011.7	1991.2
30°	2054.7	1700.3	1475.0	1452.4	1538.5	1757.7	2075.2	2245.2	2138.7	2110.0
32.5°	2114.1	1747.4	1509.8	1468.8	1581.5	1790.5	2122.3	2364.1	2282.1	2243.2
35°	2161.2	1802.7	1567.2	1513.9	1645.0	1843.7	2161.2	2493.1	2415.3	2392.7
37.5°	2196.1	1868.3	1626.6	1575.4	1729.0	1915.4	2216.6	2630.4	2605.8	2556.6
40°	2253.4	1909.3	1733.1	1714.7	1874.4	2028.1	2282.1	2749.2	2765.6	2736.9
42.5°	2304.6	1989.2	1884.7	1905.2	2060.9	2153.1	2370.2	2837.3	2925.4	2888.5
45°	2345.6	2099.8	2075.2	2142.8	2276.0	2312.8	2419.4	2898.7	2990.9	2966.3
47.5°	2403.0	2245.2	2329.2	2417.3	2527.9	2478.8	2470.6	2964.3	3058.5	3033.9
50°	2484.9	2415.3	2583.3	2698.0	2769.7	2614.0	2534.1	3023.7	3163.0	3148.7
52.5°	2568.9	2611.9	2841.4	2947.9	2995.0	2782.0	2624.2	3117.9	3285.9	3285.9
55°	2724.6	2804.5	3115.9	3183.5	3247.0	2933.6	2745.1	3259.3	3476.4	3486.7
57.5°	2952.0	3011.4	3324.8	3402.7	3419.1	3103.6	2935.6	3455.9	3638.3	3656.7
60°	3187.6	3216.3	3531.7	3601.4	3546.1	3322.8	3158.9	3685.4	3744.8	3734.6
62.5°	3447.8	3415.0	3675.1	3724.3	3710.0	3515.4	3439.6	3894.3	3822.6	3783.7
65°	3654.7	3531.7	3748.9	3759.1	3767.3	3648.5	3726.4	3988.6	3855.4	3769.4
67.5°	3779.6	3550.2	3599.3	3552.2	3585.0	3613.7	3921.0	3949.7	3716.1	3640.3
70°	3750.9	3290.0	3068.8	3015.5	3017.6	3218.3	3796.0	3705.9	3398.6	3290.0
72.5°	3486.7	2765.6	2444.0	2372.3	2386.6	2405.0	3191.7	3234.7	2747.1	2689.8
75°	2935.6	2130.5	1759.7	1743.3	1722.9	1802.7	2552.5	2364.1	1823.2	1837.6
77.5°	2394.8	1569.2	1292.7	1208.7	1196.4	1208.7	1741.3	1350.0	1059.1	1014.0
80°	1726.9	1044.8	964.9	946.4	889.1	715.0	911.6	868.6	598.2	587.9
82.5°	1137.0	721.1	737.5	614.6	577.7	452.7	553.1	442.5	299.1	284.8
85°	590.0	374.9	309.3	135.2	151.6	127.0	120.9	98.3	10.2	10.2
87.5°	20.5	8.2	6.1	6.1	4.1	2.0	2.0	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

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

REPORT NUMBER: SP1-2408-195-9

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

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /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			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /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)