

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P632048

Luminaire Tested: GWS-SA2B-830-U-SLR-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P632048
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2B-830-U-SLR-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (32) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2924.8 lumens
Efficiency: N/A
Efficacy: 63.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G0

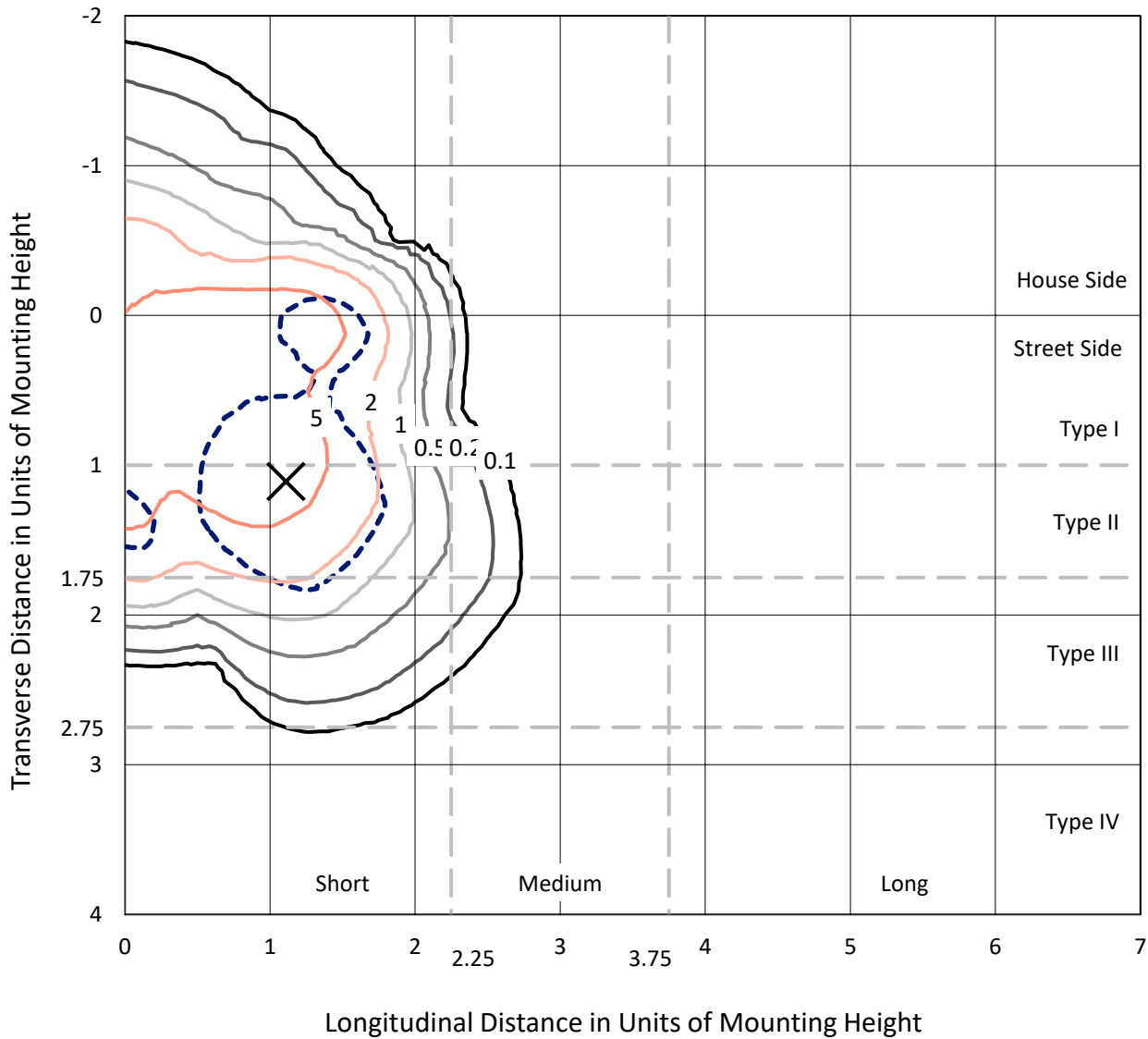
Input Watts (W): 46.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

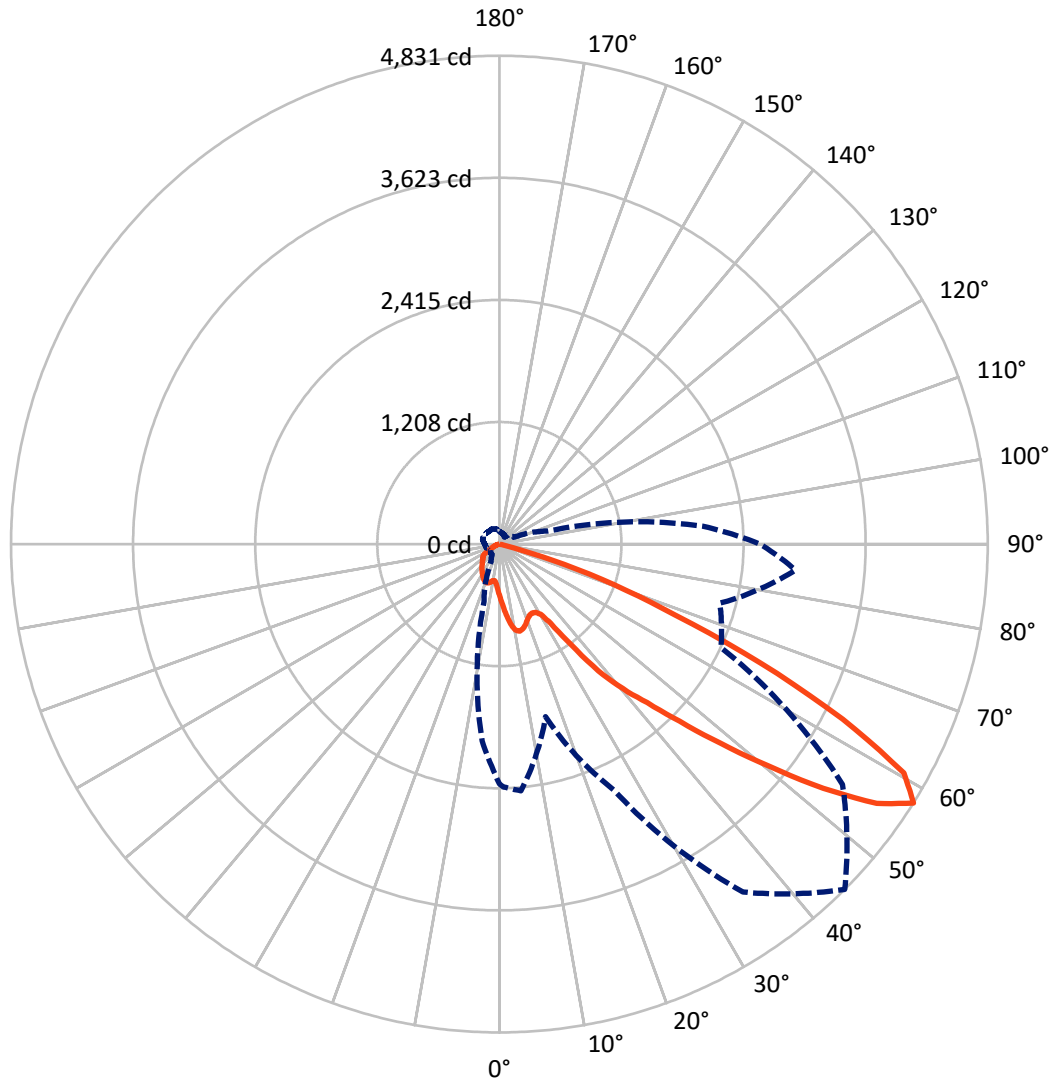
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	654.9	0.0	654.9
	% Fixture	22.4	0.0	22.4
Street Side	Lumens	2269.9	0.0	2269.9
	% Fixture	77.6	0.0	77.6
Total	Lumens	2924.8	0.0	2924.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.6	1.7
10°-20°	163.6	5.6
20°-30°	265.8	9.1
30°-40°	410.6	14.0
40°-50°	658.4	22.5
50°-60°	899.9	30.8
60°-70°	435.9	14.9
70°-80°	39.9	1.4
80°-90°	0.1	0.0
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°	2924.8	100.0
0°-180°	2924.8	100.0

Coefficient of Utilization



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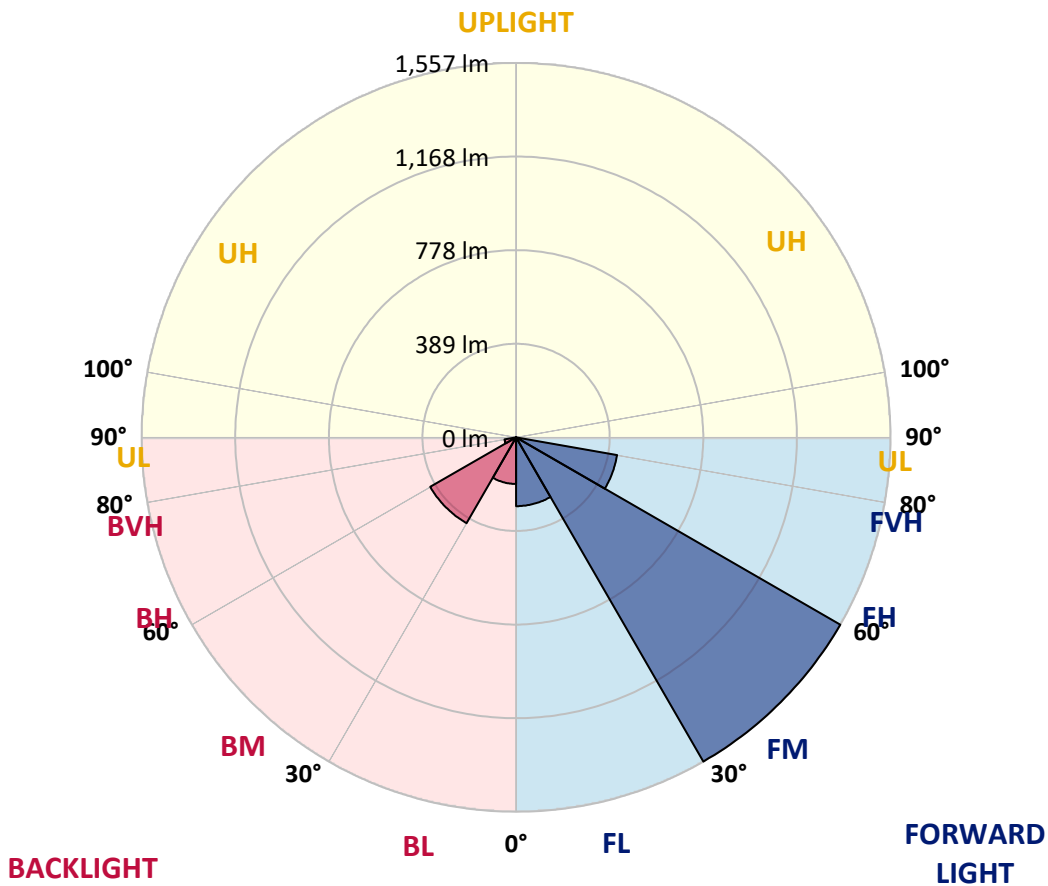
CATALOG NUMBER: GWS-SA2B-830-U-SLR-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	286.1	9.8			
FM (30°-60°)	1556.9	53.2			
FH (60°-80°)	426.7	14.6			G0/660
FVH (80°-90°)	0.1	0.0			G0/10
BL (0°-30°)	193.8	6.6	B1/500		
BM (30°-60°)	412.1	14.1	B1/1000		
BH (60°-80°)	49.1	1.7	B0/110		G0/110
BVH (80°-90°)	0.0	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-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1
2.5°	556.9	560.4	566.3	578.9	589.5	596.6	599.7	599.0	594.6	591.5	585.2
5°	616.6	616.6	628.0	656.7	678.7	692.5	699.6	695.2	686.6	672.8	651.6
7.5°	668.9	670.9	690.1	731.0	764.4	784.1	795.5	793.1	777.8	751.4	709.0
10°	709.8	712.1	737.7	787.6	826.9	846.9	863.8	865.4	848.5	813.5	764.8
12.5°	749.5	751.8	778.6	826.5	861.1	869.4	884.3	890.2	885.9	861.1	810.4
15°	792.3	797.8	820.6	856.4	870.9	861.1	870.9	881.5	896.1	893.7	848.1
17.5°	834.4	838.3	861.5	874.1	858.0	832.4	837.1	849.7	882.7	914.9	885.5
20°	873.3	878.8	898.0	881.5	832.8	793.1	793.5	810.0	860.3	927.9	923.6
22.5°	914.2	922.4	936.2	889.8	809.6	762.1	764.0	779.0	842.6	940.1	966.8
25°	967.6	975.5	984.5	910.2	802.1	746.7	754.2	768.0	842.6	960.9	1020.3
27.5°	1039.9	1045.4	1045.8	948.3	815.1	749.1	764.8	780.5	867.8	1002.6	1091.8
30°	1130.7	1139.4	1128.0	1007.7	855.6	780.5	803.7	823.4	922.0	1072.9	1197.1
32.5°	1241.1	1253.3	1238.0	1095.7	940.1	889.0	931.1	942.5	1008.5	1174.7	1316.6
35°	1370.8	1381.1	1364.6	1217.6	1137.4	1146.8	1223.1	1208.5	1182.2	1300.1	1456.1
37.5°	1513.1	1522.5	1490.7	1402.3	1429.0	1469.9	1591.7	1541.8	1456.9	1461.6	1607.4
40°	1643.6	1653.8	1603.9	1603.1	1658.1	1732.8	1879.8	1811.0	1695.5	1673.1	1749.3
42.5°	1778.8	1785.9	1740.7	1710.0	1835.0	1988.7	2144.3	2051.5	1853.5	1829.1	1927.0
45°	1971.8	1986.7	1906.1	1762.7	1994.2	2283.0	2500.0	2318.8	1961.2	1941.5	2198.9
47.5°	2255.5	2266.5	2102.2	1795.7	2142.3	2649.7	2944.5	2665.4	2055.9	2011.1	2570.7
50°	2490.1	2497.6	2282.6	1831.8	2299.9	3045.1	3451.1	3076.5	2162.4	2126.2	2917.8
52.5°	2663.1	2691.4	2519.6	1906.1	2507.0	3510.0	4011.9	3563.5	2328.6	2348.7	3205.4
55°	2698.8	2737.4	2681.5	1951.7	2689.4	3983.6	4529.9	3999.3	2494.5	2517.3	3302.1
57.5°	2371.9	2402.5	2448.9	1767.8	2685.1	4200.6	4830.6	4144.0	2419.0	2257.5	2940.2
60°	1776.8	1798.0	1882.2	1351.2	2469.3	4008.8	4596.3	3897.9	2115.2	1722.6	2240.2
62.5°	1053.7	1063.1	1169.6	875.2	2049.6	3452.3	3811.9	3363.4	1671.5	1158.6	1372.0
65°	404.4	400.5	481.8	431.9	1507.2	2749.9	2835.2	2564.0	1146.8	531.0	523.1
67.5°	62.5	59.7	80.6	127.7	1087.1	1905.7	1870.8	1848.0	718.4	123.8	108.1
70°	14.1	14.1	17.3	37.7	664.2	1119.7	1198.3	1142.5	459.8	26.3	14.1
72.5°	6.7	6.7	8.3	16.1	240.5	461.4	537.6	529.4	149.3	8.6	5.1
75°	2.4	2.8	2.8	3.5	14.5	24.0	55.0	39.3	9.4	0.0	0.0
77.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1
2.5°	571.4	568.7	558.5	544.7	531.4	519.6	507.4	492.8	482.2	470.0	466.1
5°	635.1	617.8	589.9	560.8	534.1	511.3	489.3	465.7	448.4	431.1	425.2
7.5°	689.0	663.4	618.2	574.6	538.0	505.8	474.0	441.8	416.6	396.2	389.9
10°	737.3	707.8	647.3	593.5	547.5	510.1	471.6	431.1	398.5	374.2	368.3
12.5°	779.0	744.8	672.1	607.6	551.4	508.6	471.2	439.0	409.5	381.6	374.2
15°	813.9	776.2	692.9	617.0	545.5	488.9	456.3	451.2	448.8	418.2	403.6
17.5°	848.1	805.7	709.8	621.4	529.0	454.3	430.7	453.9	478.7	458.6	440.2
20°	883.9	835.6	727.1	622.1	501.5	415.4	411.5	448.0	479.5	473.2	455.9
22.5°	925.9	872.9	748.7	621.8	466.9	382.4	397.3	436.6	462.2	461.8	448.0
25°	986.9	920.1	777.8	624.1	429.2	356.9	381.6	417.4	438.2	437.4	426.0
27.5°	1052.1	976.3	815.5	630.0	396.9	341.9	363.1	391.1	409.1	408.3	398.5
30°	1143.7	1041.1	851.7	630.4	373.8	334.1	342.7	362.0	379.3	377.3	369.8
32.5°	1254.9	1114.2	881.9	608.0	359.2	326.6	321.5	331.3	344.7	341.9	340.0
35°	1389.3	1201.1	907.9	558.9	336.8	311.7	297.9	299.9	309.3	310.9	310.1
37.5°	1542.6	1304.4	940.1	494.0	306.6	290.0	271.6	270.0	275.5	280.6	284.5
40°	1693.9	1420.8	983.7	428.4	279.0	262.5	244.8	240.9	243.3	252.3	260.6
42.5°	1864.1	1555.6	1030.9	372.2	260.2	232.3	215.4	207.9	214.6	229.1	239.0
45°	2109.3	1744.6	1076.9	327.4	252.3	205.5	182.8	182.0	189.4	208.3	219.3
47.5°	2453.6	1989.1	1107.1	292.4	251.9	184.7	157.6	162.3	171.0	189.4	202.0
50°	2789.2	2295.2	1073.7	265.7	243.7	171.0	138.7	148.2	156.8	172.9	185.9
52.5°	2991.6	2459.9	943.6	240.5	218.1	164.7	120.3	136.8	138.3	152.9	166.6
55°	2970.4	2353.4	722.8	201.6	180.4	155.6	101.0	123.4	124.2	135.2	147.0
57.5°	2578.2	2020.5	496.4	163.5	135.6	128.5	83.3	104.1	111.6	118.3	126.9
60°	1921.5	1474.2	221.3	132.8	86.1	86.9	71.1	78.6	90.0	97.9	105.3
62.5°	1132.3	848.1	90.0	79.8	47.6	54.6	57.4	57.4	64.5	70.3	75.1
65°	428.0	296.7	36.6	40.1	24.8	25.5	33.8	41.7	47.2	52.3	58.6
67.5°	75.1	51.9	18.9	14.9	14.5	13.0	17.3	27.1	30.3	34.2	36.9
70°	12.6	10.6	7.9	7.5	6.7	7.1	11.4	19.3	21.2	22.4	23.6
72.5°	3.5	3.1	2.4	2.0	1.6	2.0	7.1	14.9	15.7	16.5	17.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	2.8	10.6	11.4	11.8	13.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	3.1	3.9	3.1
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1
2.5°	463.8	455.9	451.6	449.2	449.2	446.1	442.5	441.4	446.5	446.5	455.1
5°	417.8	411.5	404.4	400.1	393.4	394.6	390.7	390.3	395.4	397.7	406.8
7.5°	385.9	378.1	373.8	371.0	367.5	365.9	362.4	361.2	363.9	367.9	376.5
10°	364.7	363.5	363.1	365.1	365.1	363.1	360.0	358.0	358.8	366.3	376.1
12.5°	370.2	372.6	373.4	376.5	378.1	376.5	374.2	374.9	380.0	393.8	408.3
15°	394.2	392.2	391.4	393.0	394.2	392.6	391.8	397.7	415.4	435.1	451.6
17.5°	419.7	407.2	401.7	401.7	402.4	401.7	402.4	413.8	442.5	462.2	474.4
20°	432.7	409.5	400.9	398.9	400.5	400.9	403.6	416.6	448.0	461.8	464.5
22.5°	428.8	399.7	389.9	388.3	389.9	391.4	394.2	405.2	434.7	441.8	440.6
25°	409.1	380.4	372.6	372.6	376.1	375.7	376.9	384.8	409.1	413.5	411.5
27.5°	384.4	357.3	350.6	354.5	357.6	356.9	357.3	363.9	382.0	383.2	381.2
30°	359.2	335.6	329.3	334.1	338.4	337.6	338.0	344.7	356.1	354.9	352.1
32.5°	333.7	316.4	311.7	314.4	321.1	320.3	321.9	329.0	333.3	328.2	325.0
35°	310.1	301.1	297.5	299.1	304.2	305.4	308.1	312.8	312.8	306.6	301.1
37.5°	288.1	286.9	284.5	282.6	287.3	290.8	294.8	300.3	292.4	283.4	278.3
40°	267.6	272.8	269.6	264.5	267.3	272.4	280.2	284.5	275.1	266.1	257.4
42.5°	248.8	257.4	256.2	250.0	252.3	257.0	266.1	269.6	258.6	248.4	240.1
45°	230.7	242.9	243.7	235.8	238.2	242.9	253.5	254.7	240.5	229.5	223.6
47.5°	215.0	228.3	228.7	222.8	223.6	230.3	240.1	240.5	224.4	214.2	206.7
50°	200.0	215.4	216.6	211.4	212.2	220.1	228.3	226.8	209.5	198.9	192.2
52.5°	182.0	202.8	205.5	203.2	206.3	212.6	217.7	212.2	192.2	181.6	175.7
55°	162.3	189.4	195.3	193.8	197.3	202.4	203.6	200.0	174.9	164.3	158.8
57.5°	139.5	156.0	166.2	163.1	165.9	171.0	174.5	171.7	152.9	144.6	139.9
60°	115.5	126.6	128.9	123.8	121.4	130.5	138.7	135.2	119.1	114.0	108.5
62.5°	84.5	97.1	98.6	92.0	89.2	99.0	106.1	102.6	84.9	79.4	75.1
65°	67.6	79.4	82.5	76.2	74.7	82.1	86.5	77.8	65.2	59.3	54.6
67.5°	44.4	53.8	62.1	61.7	58.6	60.9	57.8	50.7	41.7	38.5	35.4
70°	27.5	33.0	38.1	40.1	39.7	38.9	34.6	29.5	26.7	25.5	24.0
72.5°	21.2	26.7	30.7	31.8	32.2	31.0	27.5	22.8	20.0	18.5	17.3
75°	15.7	20.0	23.2	24.8	25.5	24.8	21.2	18.1	15.3	14.1	13.0
77.5°	5.5	6.7	8.3	9.0	8.6	8.3	7.5	7.5	5.9	5.5	4.7
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1	514.1
2.5°	464.9	472.0	485.0	496.8	509.3	522.3	536.5	551.0	557.7	556.9
5°	420.5	435.9	457.1	480.3	506.2	534.1	565.2	597.0	610.7	616.6
7.5°	392.6	414.2	442.1	471.6	505.8	545.5	592.3	642.2	662.2	668.9
10°	396.2	421.3	444.5	473.2	509.7	561.2	619.4	678.7	702.3	709.8
12.5°	424.9	430.4	436.6	460.2	506.2	573.0	644.2	714.9	742.0	749.5
15°	450.8	425.2	413.5	435.1	493.6	581.3	669.3	753.8	783.7	792.3
17.5°	452.0	413.5	387.1	404.0	473.2	584.8	694.1	793.5	826.1	834.4
20°	437.4	400.5	366.7	367.1	445.3	584.0	714.5	829.3	865.8	873.3
22.5°	416.2	385.2	350.2	338.0	415.4	582.4	736.9	867.4	907.1	914.2
25°	392.6	365.5	334.5	316.0	385.5	584.0	768.3	917.3	960.9	967.6
27.5°	367.1	343.9	322.3	307.3	360.4	589.9	806.1	981.0	1032.8	1039.9
30°	340.4	323.1	314.4	305.4	344.7	591.5	846.9	1055.2	1120.9	1130.7
32.5°	314.0	304.6	305.0	306.6	329.7	580.5	884.3	1137.8	1225.4	1241.1
35°	289.7	286.9	294.8	302.6	308.1	552.2	916.9	1235.2	1354.7	1370.8
37.5°	268.8	271.2	281.0	288.9	284.5	512.1	960.1	1357.1	1499.4	1513.1
40°	248.8	254.7	266.1	269.6	266.5	465.3	1012.0	1474.6	1624.7	1643.6
42.5°	230.3	234.6	250.7	251.5	261.4	417.8	1061.9	1601.1	1769.0	1778.8
45°	215.4	214.6	231.1	236.2	268.0	365.1	1110.7	1769.8	1957.6	1971.8
47.5°	200.8	200.0	204.0	227.2	270.8	316.4	1159.0	2016.6	2231.2	2255.5
50°	187.1	188.3	176.1	222.8	255.9	279.0	1181.0	2244.9	2479.9	2490.1
52.5°	174.9	170.6	149.3	208.7	224.0	243.7	1118.5	2348.7	2634.0	2663.1
55°	157.6	133.6	123.0	169.4	176.9	212.6	916.1	2288.5	2647.4	2698.8
57.5°	134.8	104.9	104.5	125.0	125.0	197.3	586.8	1955.3	2281.5	2371.9
60°	103.8	81.4	86.5	86.9	80.2	143.8	329.3	1416.4	1686.8	1776.8
62.5°	73.9	62.1	65.2	51.9	46.0	71.9	158.0	815.5	1041.1	1053.7
65°	49.5	42.1	34.2	28.7	28.3	30.7	65.2	294.8	358.4	404.4
67.5°	32.6	25.5	18.1	18.1	20.4	20.4	24.8	48.7	68.4	62.5
70°	21.2	17.7	11.4	11.0	13.4	13.4	12.6	13.4	14.1	14.1
72.5°	15.7	13.4	6.7	5.9	7.5	7.9	7.1	6.7	6.7	6.7
75°	11.8	9.4	3.9	2.8	3.5	4.7	3.9	2.8	2.8	2.4
77.5°	4.7	3.5	1.6	1.2	2.0	2.8	2.4	1.2	0.8	0.8
80°	0.4	0.8	0.8	0.8	1.2	1.6	2.0	0.8	0.4	0.4
82.5°	0.0	0.4	0.4	0.4	0.8	1.2	1.6	0.8	0.4	0.4
85°	0.0	0.0	0.0	0.0	0.8	1.2	0.8	0.4	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.4	1.2	0.8	0.4	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

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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



CCT = 3050K
 CIE x = 0.4383
 CIE y = 0.4131
 Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

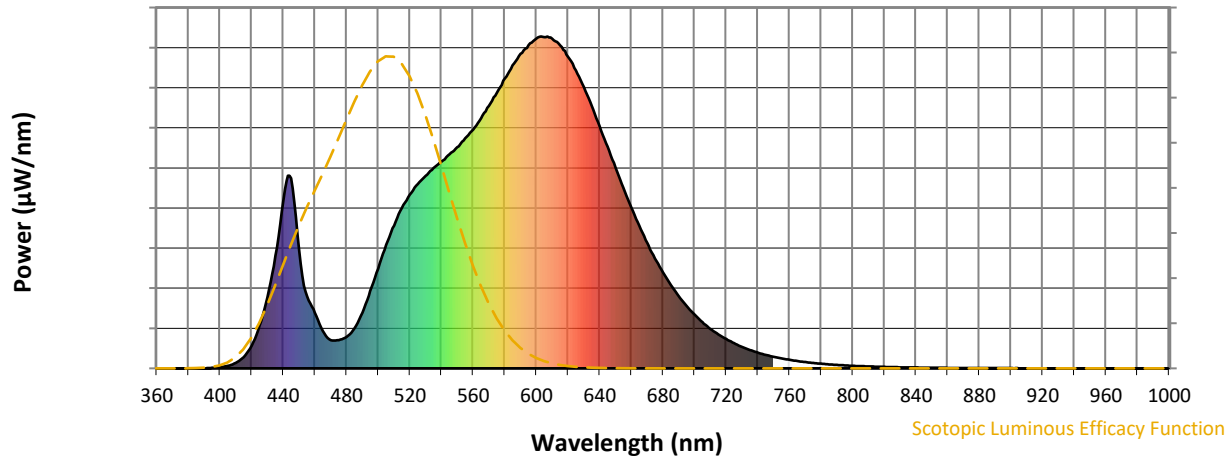


Photopic Lumens: NR

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			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

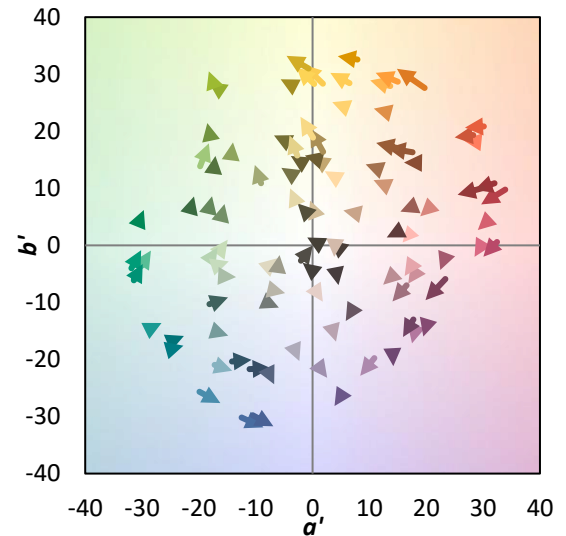
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	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)