

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: P438451

Luminaire Tested: **IST-SA1C-830-U-SLL-HSS**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438451
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/10/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: IST-SA1C-830-U-SLL-HSS
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2711 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

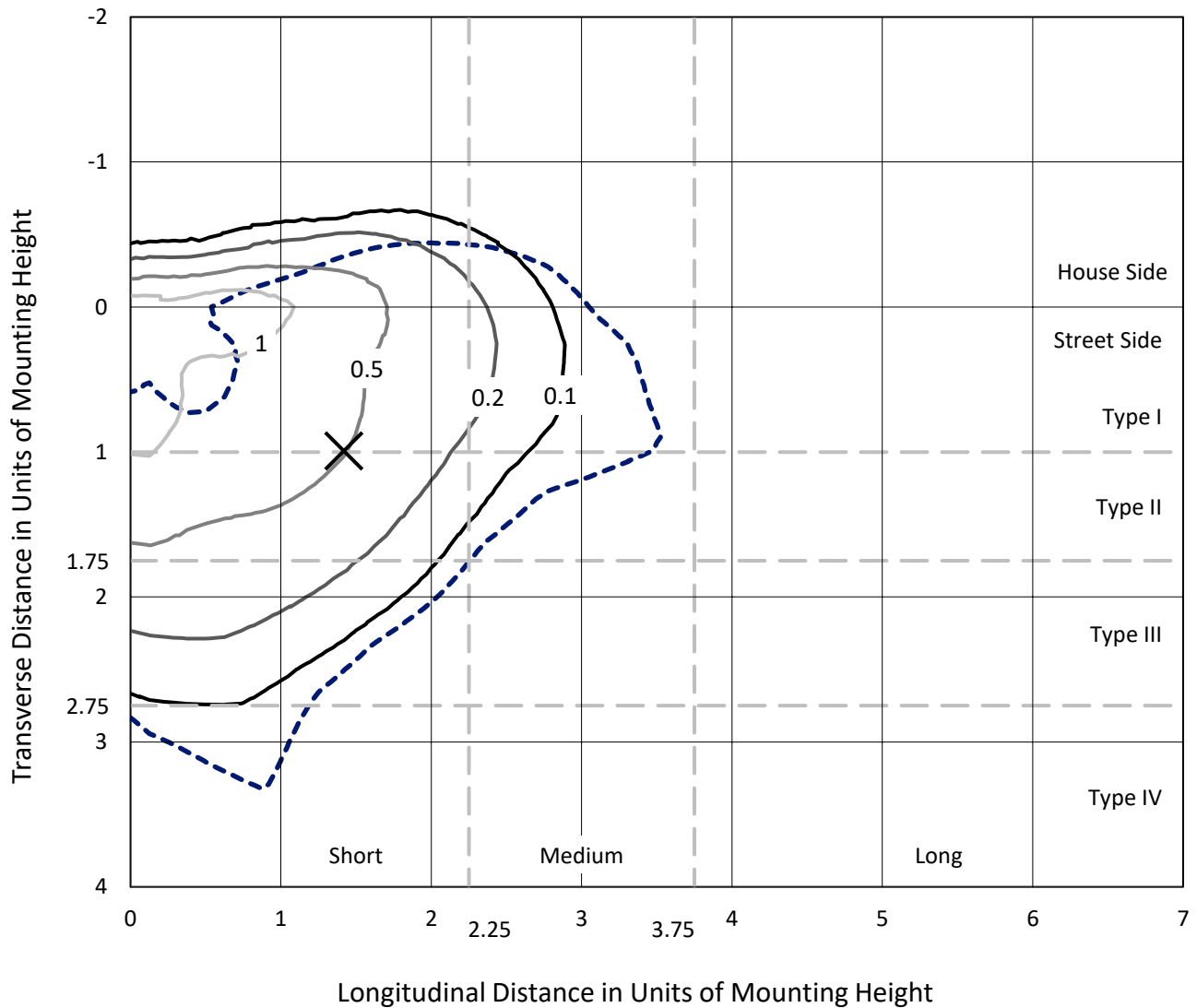
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P438451
 CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

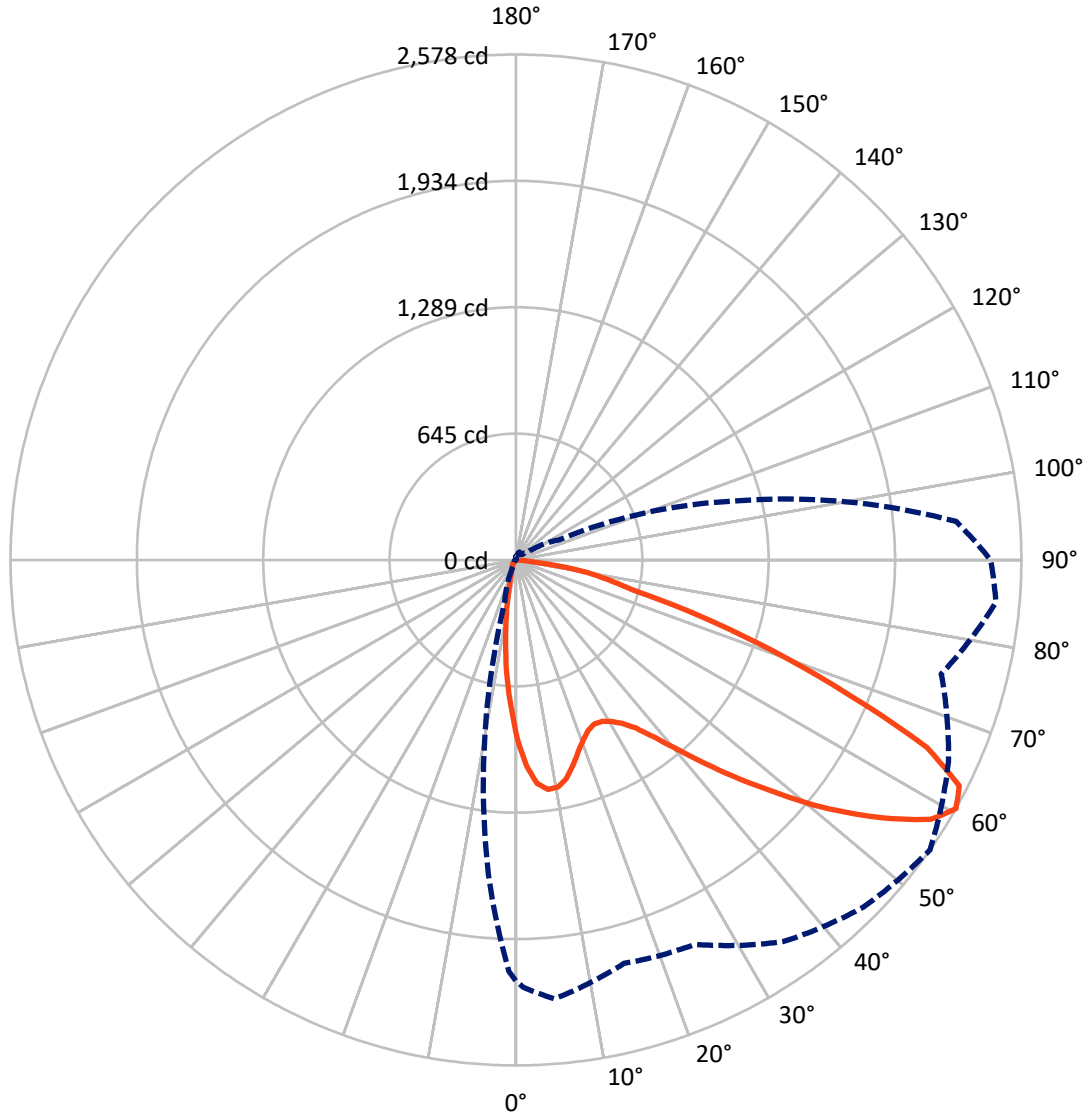
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

REPORT NUMBER: P438451
CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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 CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

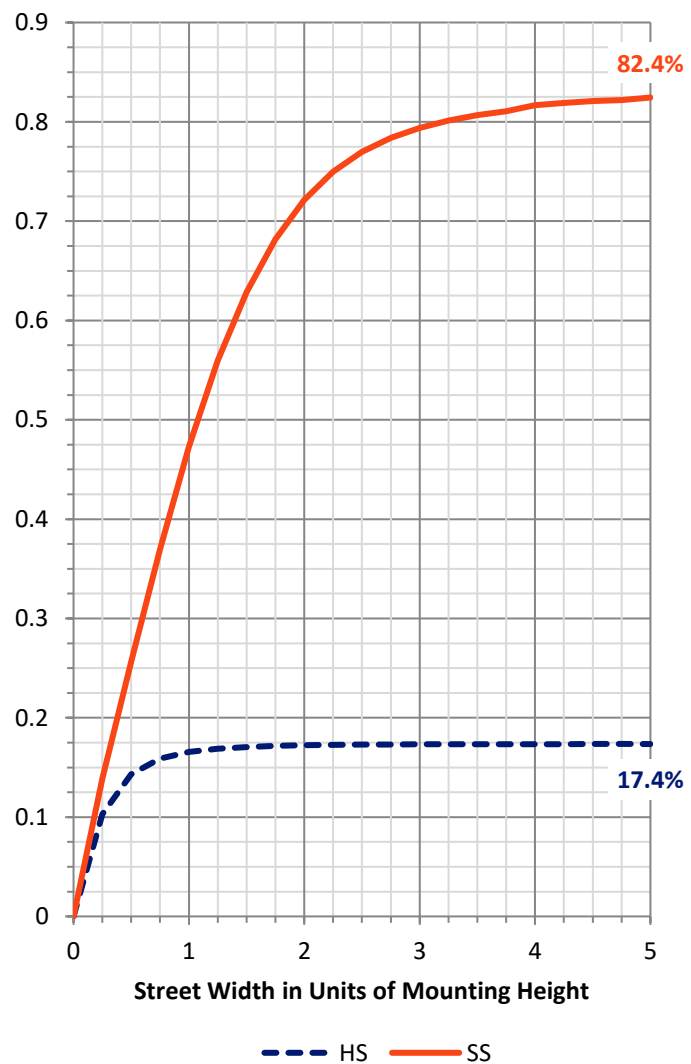
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	474.9	0.0	474.9
	% Fixture	17.5	0.0	17.5
Street Side	Lumens	2236.1	0.0	2236.1
	% Fixture	82.5	0.0	82.5
Total	Lumens	2711.0	0.0	2711.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	2.5
10°-20°	133.5	4.9
20°-30°	196.3	7.2
30°-40°	293.5	10.8
40°-50°	434.2	16.0
50°-60°	624.1	23.0
60°-70°	669.0	24.7
70°-80°	270.3	10.0
80°-90°	21.9	0.8
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°	2711.0	100.0
0°-180°	2711.0	100.0

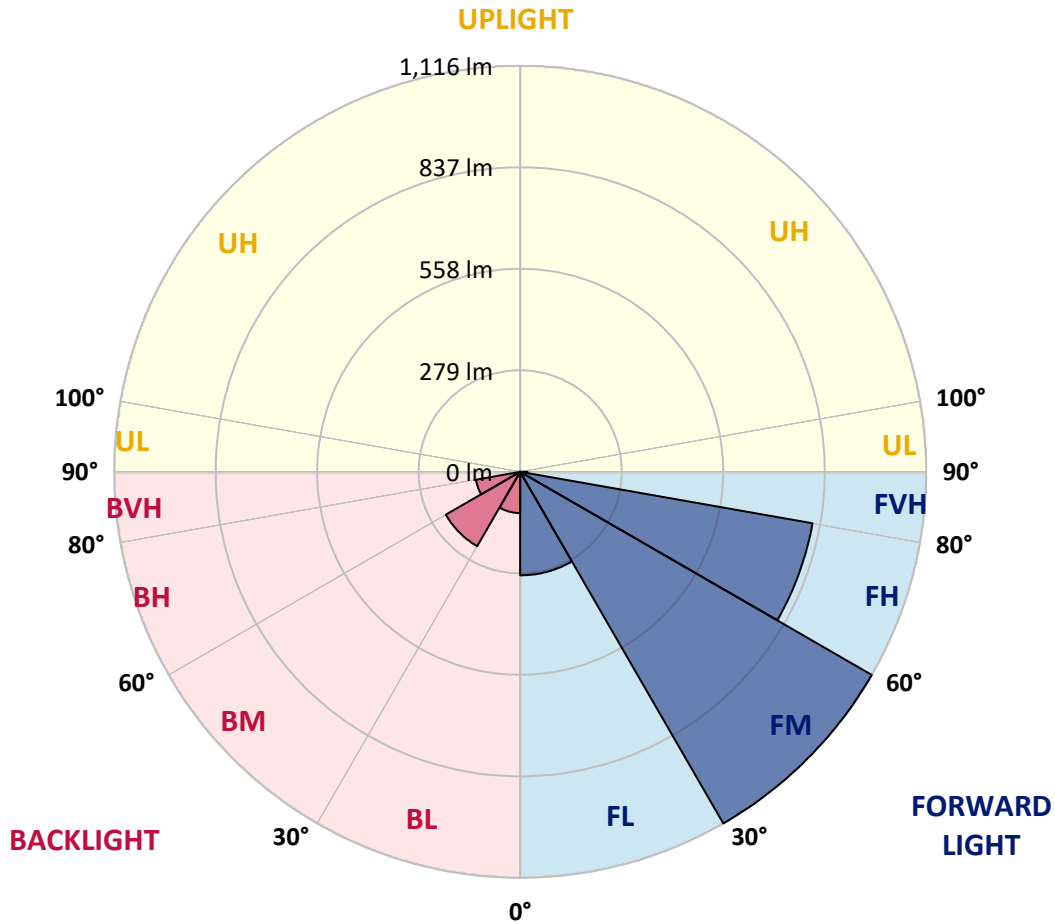


REPORT NUMBER: P438451
 CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	284.5	10.5			
FM (30°-60°)	1115.9	41.2			
FH (60°-80°)	815.8	30.1			G1/1800
FVH (80°-90°)	19.9	0.7			G1/100
BL (0°-30°)	113.4	4.2	B1/500		
BM (30°-60°)	235.9	8.7	B1/1000		
BH (60°-80°)	123.5	4.6	B1/500		G1/500
BVH (80°-90°)	2.0	0.1			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 IV Short





REPORT NUMBER: P438451
 CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7
2.5°	982.8	982.8	990.6	1014.2	1040.4	1053.4	1067.8	1053.4	1050.8	1029.9	1014.2
5°	952.7	959.2	984.1	1046.9	1113.6	1147.7	1166.0	1146.3	1111.0	1065.2	1007.6
7.5°	884.6	892.5	921.3	1023.3	1114.9	1183.0	1215.7	1181.7	1121.5	1037.7	954.0
10°	811.3	825.7	863.7	980.2	1086.2	1167.3	1213.1	1177.8	1103.2	995.9	892.5
12.5°	762.9	773.4	824.4	940.9	1054.7	1126.7	1151.6	1143.7	1075.7	976.2	867.6
15°	755.1	768.2	821.8	938.3	1024.6	1067.8	1077.0	1087.5	1063.9	978.8	875.5
17.5°	789.1	803.5	863.7	957.9	997.2	997.2	1006.3	1027.3	1049.5	1005.0	922.6
20°	858.5	878.1	944.8	1008.9	982.8	951.4	952.7	980.2	1040.4	1063.9	1006.3
22.5°	951.4	977.5	1058.7	1088.8	998.5	926.5	920.0	943.5	1041.7	1124.1	1121.5
25°	1074.4	1105.8	1184.3	1183.0	1036.4	916.0	909.5	926.5	1053.4	1189.5	1222.2
27.5°	1185.6	1211.8	1290.3	1257.6	1074.4	929.1	914.7	933.0	1062.6	1238.0	1312.5
30°	1279.8	1302.1	1371.4	1311.2	1107.1	951.4	926.5	955.3	1082.2	1264.1	1393.7
32.5°	1351.8	1384.5	1448.6	1353.1	1146.3	980.2	954.0	993.2	1114.9	1298.1	1464.3
35°	1448.6	1465.7	1541.6	1395.0	1198.7	1041.7	999.8	1052.1	1168.6	1342.6	1542.9
37.5°	1532.4	1576.9	1626.6	1438.2	1262.8	1117.6	1071.8	1146.3	1241.9	1393.7	1634.5
40°	1631.8	1682.9	1736.5	1499.7	1321.7	1217.0	1197.4	1270.7	1351.8	1468.3	1724.8
42.5°	1723.4	1770.6	1807.2	1571.6	1393.7	1329.6	1344.0	1421.2	1464.3	1545.5	1802.0
45°	1796.7	1838.6	1893.6	1621.4	1473.5	1455.2	1528.5	1588.7	1575.6	1612.2	1871.3
47.5°	1872.6	1923.7	1945.9	1673.7	1576.9	1620.1	1750.9	1764.0	1692.0	1673.7	1931.5
50°	1925.0	1962.9	1977.3	1737.8	1703.8	1837.3	1942.0	1964.2	1819.0	1722.1	2010.0
52.5°	1989.1	2025.7	2042.8	1813.7	1839.9	2032.3	2154.0	2148.8	1942.0	1802.0	2087.2
55°	2102.9	2137.0	2154.0	1906.7	1936.8	2199.8	2334.6	2329.3	2088.6	1917.1	2202.4
57.5°	2184.1	2212.9	2240.4	2011.3	2057.1	2307.1	2457.6	2496.8	2265.2	2062.4	2328.0
60°	2147.4	2180.2	2246.9	2130.4	2163.1	2376.4	2504.7	2578.0	2434.0	2245.6	2457.6
62.5°	2044.1	2092.5	2161.8	2224.7	2245.6	2388.2	2439.3	2537.4	2524.3	2430.1	2516.5
65°	1913.2	1962.9	2029.7	2237.7	2227.3	2212.9	2243.0	2301.9	2393.5	2519.1	2487.7
67.5°	1677.6	1749.6	1833.4	2084.6	1936.8	1854.3	1862.2	1829.4	2014.0	2390.8	2341.1
70°	1366.2	1439.5	1529.8	1767.9	1493.1	1384.5	1412.0	1391.1	1536.3	2051.9	2006.1
72.5°	961.8	1040.4	1151.6	1473.5	1040.4	865.0	930.4	985.4	1158.1	1646.2	1473.5
75°	637.3	693.6	773.4	1109.7	742.0	581.0	595.4	617.7	774.7	1244.5	930.4
77.5°	329.8	386.0	421.4	594.1	459.3	458.0	447.5	476.3	484.2	747.2	485.5
80°	184.5	202.8	221.2	289.2	230.3	272.2	281.4	344.2	319.3	374.3	202.8
82.5°	90.3	113.8	124.3	178.0	147.9	108.6	53.7	112.5	189.7	202.8	94.2
85°	1.3	2.6	6.5	14.4	3.9	3.9	0.0	3.9	19.6	24.9	32.7
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: P438451
 CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7
2.5°	997.2	986.7	956.6	930.4	889.9	872.8	845.4	838.8	816.6	794.3	781.2
5°	978.8	948.7	887.2	827.0	772.1	721.0	683.1	651.7	616.4	602.0	611.1
7.5°	905.6	863.7	774.7	704.0	625.5	566.6	513.0	485.5	452.8	439.7	430.5
10°	845.4	794.3	692.3	599.3	524.8	479.0	446.2	407.0	369.0	338.9	335.0
12.5°	807.4	752.5	638.6	540.5	485.5	441.0	403.1	352.0	308.8	280.0	267.0
15°	806.1	738.1	621.6	518.2	454.1	397.8	349.4	291.8	247.3	210.7	197.6
17.5°	853.2	770.8	629.4	494.7	409.6	336.3	273.5	213.3	170.1	145.3	132.2
20°	935.7	845.4	643.8	471.1	366.4	273.5	192.4	145.3	116.5	104.7	99.5
22.5°	1035.1	927.8	670.0	452.8	321.9	206.8	136.1	104.7	91.6	83.8	82.4
25°	1155.5	1032.5	706.7	439.7	281.4	159.7	106.0	86.4	78.5	73.3	70.7
27.5°	1261.5	1133.3	761.6	429.2	242.1	130.9	90.3	75.9	68.0	64.1	62.8
30°	1340.0	1215.7	824.4	405.7	210.7	113.8	85.1	72.0	62.8	57.6	56.3
32.5°	1430.3	1278.5	854.5	382.1	192.4	100.8	74.6	64.1	57.6	52.3	51.0
35°	1529.8	1366.2	884.6	363.8	180.6	90.3	68.0	56.3	48.4	43.2	41.9
37.5°	1644.9	1463.0	912.1	348.1	174.0	83.8	64.1	52.3	44.5	39.3	36.6
40°	1773.2	1538.9	930.4	337.6	164.9	79.8	61.5	49.7	41.9	35.3	34.0
42.5°	1875.2	1626.6	935.7	333.7	155.7	78.5	58.9	48.4	39.3	34.0	31.4
45°	1948.5	1703.8	954.0	329.8	149.2	73.3	57.6	47.1	36.6	31.4	28.8
47.5°	2002.2	1786.3	971.0	325.8	142.6	66.7	61.5	47.1	35.3	28.8	26.2
50°	2101.6	1883.1	1003.7	315.4	133.5	60.2	61.5	45.8	34.0	27.5	24.9
52.5°	2208.9	2008.7	1077.0	303.6	121.7	53.7	56.3	45.8	32.7	26.2	23.6
55°	2311.0	2161.8	1145.0	287.9	102.1	48.4	52.3	45.8	30.1	24.9	22.2
57.5°	2385.6	2263.9	1181.7	268.3	81.1	43.2	43.2	43.2	26.2	20.9	19.6
60°	2420.9	2253.4	1164.7	243.4	65.4	37.9	35.3	44.5	23.6	18.3	17.0
62.5°	2393.5	2144.8	1090.1	217.2	57.6	32.7	28.8	39.3	20.9	15.7	14.4
65°	2308.4	1961.6	965.8	196.3	56.3	27.5	23.6	23.6	17.0	13.1	11.8
67.5°	2097.7	1720.8	817.9	176.7	57.6	23.6	19.6	18.3	14.4	10.5	9.2
70°	1744.4	1383.2	619.0	167.5	57.6	19.6	17.0	14.4	10.5	9.2	7.9
72.5°	1108.4	858.5	429.2	147.9	57.6	15.7	14.4	13.1	7.9	6.5	3.9
75°	656.9	522.1	201.5	113.8	48.4	13.1	10.5	7.9	3.9	2.6	2.6
77.5°	386.0	335.0	87.7	62.8	20.9	7.9	5.2	2.6	1.3	0.0	0.0
80°	158.3	137.4	32.7	18.3	9.2	3.9	1.3	0.0	0.0	0.0	0.0
82.5°	92.9	96.8	11.8	7.9	2.6	0.0	0.0	0.0	0.0	0.0	0.0
85°	28.8	44.5	0.0	1.3	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



REPORT NUMBER: P438451
 CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7
2.5°	779.9	766.9	761.6	753.8	747.2	739.4	749.8	759.0	748.5	760.3	778.6
5°	602.0	582.3	608.5	591.5	600.7	590.2	575.8	578.4	581.0	575.8	590.2
7.5°	417.4	426.6	433.2	431.8	439.7	425.3	425.3	416.1	403.1	408.3	405.7
10°	316.7	298.4	304.9	303.6	318.0	298.4	285.3	270.9	269.6	272.2	269.6
12.5°	252.6	230.3	215.9	208.1	206.8	197.6	185.8	171.4	162.3	161.0	168.8
15°	189.7	172.7	159.7	147.9	146.6	128.2	112.5	102.1	92.9	94.2	99.5
17.5°	130.9	125.6	121.7	111.2	104.7	89.0	75.9	69.4	66.7	66.7	68.0
20°	95.5	92.9	90.3	86.4	79.8	68.0	60.2	57.6	56.3	56.3	57.6
22.5°	79.8	75.9	73.3	72.0	66.7	57.6	52.3	49.7	49.7	49.7	49.7
25°	68.0	65.4	64.1	61.5	57.6	49.7	45.8	44.5	43.2	43.2	44.5
27.5°	61.5	56.3	53.7	53.7	49.7	44.5	40.6	39.3	37.9	37.9	39.3
30°	55.0	51.0	48.4	45.8	43.2	37.9	35.3	34.0	34.0	34.0	34.0
32.5°	48.4	45.8	43.2	40.6	36.6	34.0	31.4	30.1	28.8	28.8	28.8
35°	39.3	36.6	36.6	35.3	31.4	28.8	26.2	24.9	23.6	24.9	24.9
37.5°	34.0	30.1	30.1	30.1	27.5	24.9	22.2	20.9	19.6	19.6	20.9
40°	31.4	26.2	24.9	24.9	24.9	20.9	18.3	17.0	15.7	15.7	17.0
42.5°	27.5	23.6	20.9	19.6	20.9	18.3	14.4	13.1	13.1	13.1	13.1
45°	26.2	20.9	18.3	15.7	17.0	15.7	11.8	10.5	10.5	10.5	10.5
47.5°	23.6	18.3	15.7	11.8	11.8	11.8	9.2	7.9	7.9	7.9	7.9
50°	22.2	17.0	11.8	10.5	9.2	9.2	7.9	6.5	5.2	5.2	6.5
52.5°	20.9	15.7	10.5	7.9	6.5	6.5	5.2	5.2	3.9	3.9	3.9
55°	19.6	13.1	9.2	6.5	5.2	3.9	3.9	3.9	3.9	2.6	3.9
57.5°	17.0	11.8	6.5	5.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6
60°	15.7	9.2	5.2	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3
62.5°	13.1	7.9	3.9	2.6	1.3	0.0	1.3	1.3	1.3	1.3	1.3
65°	10.5	6.5	2.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	7.9	5.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	6.5	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	3.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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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 CATALOG NUMBER: IST-SA1C-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7	914.7
2.5°	777.3	785.2	814.0	840.1	868.9	900.3	926.5	964.5	976.2	982.8
5°	587.6	616.4	651.7	683.1	739.4	791.7	853.2	920.0	947.4	952.7
7.5°	424.0	443.6	481.6	544.4	595.4	673.9	753.8	842.7	884.6	884.6
10°	291.8	324.5	373.0	431.8	499.9	569.2	662.2	762.9	802.2	811.3
12.5°	185.8	222.5	287.9	352.0	430.5	498.6	591.5	705.3	749.8	762.9
15°	107.3	132.2	192.4	263.0	357.3	443.6	548.3	687.0	742.0	755.1
17.5°	72.0	81.1	113.8	175.4	280.0	395.2	535.2	706.7	773.4	789.1
20°	60.2	64.1	75.9	108.6	197.6	344.2	530.0	749.8	831.0	858.5
22.5°	52.3	56.3	64.1	79.8	141.3	290.5	526.1	812.7	922.6	951.4
25°	45.8	49.7	56.3	68.0	99.5	236.9	532.6	901.6	1040.4	1074.4
27.5°	40.6	44.5	51.0	58.9	79.8	183.2	533.9	985.4	1150.3	1185.6
30°	35.3	39.3	44.5	51.0	64.1	141.3	510.4	1070.4	1239.3	1279.8
32.5°	31.4	34.0	39.3	44.5	53.7	109.9	461.9	1135.9	1312.5	1351.8
35°	26.2	28.8	34.0	37.9	47.1	89.0	408.3	1196.1	1400.2	1448.6
37.5°	22.2	24.9	28.8	34.0	41.9	69.4	354.6	1248.4	1485.3	1532.4
40°	18.3	22.2	26.2	30.1	37.9	53.7	295.7	1304.7	1582.1	1631.8
42.5°	15.7	18.3	22.2	27.5	32.7	43.2	243.4	1340.0	1664.6	1723.4
45°	11.8	15.7	20.9	27.5	27.5	34.0	209.4	1366.2	1723.4	1796.7
47.5°	9.2	13.1	18.3	26.2	24.9	28.8	192.4	1412.0	1804.6	1872.6
50°	7.9	10.5	18.3	22.2	20.9	24.9	197.6	1452.6	1866.1	1925.0
52.5°	6.5	9.2	15.7	17.0	18.3	22.2	208.1	1527.2	1943.3	1989.1
55°	5.2	7.9	11.8	14.4	15.7	20.9	225.1	1620.1	2044.1	2102.9
57.5°	3.9	6.5	9.2	11.8	14.4	19.6	236.9	1679.0	2138.3	2184.1
60°	3.9	5.2	7.9	10.5	13.1	18.3	219.8	1609.6	2097.7	2147.4
62.5°	2.6	5.2	6.5	9.2	10.5	14.4	162.3	1457.8	1976.0	2044.1
65°	1.3	3.9	5.2	6.5	7.9	10.5	92.9	1274.6	1832.1	1913.2
67.5°	0.0	2.6	3.9	5.2	5.2	7.9	43.2	1028.6	1595.2	1677.6
70°	0.0	1.3	2.6	2.6	3.9	6.5	22.2	726.3	1255.0	1366.2
72.5°	1.3	1.3	2.6	2.6	2.6	5.2	14.4	439.7	844.1	961.8
75°	1.3	1.3	1.3	1.3	2.6	3.9	9.2	282.7	531.3	637.3
77.5°	1.3	2.6	1.3	1.3	1.3	2.6	5.2	157.0	290.5	329.8
80°	1.3	1.3	1.3	1.3	1.3	2.6	2.6	14.4	137.4	184.5
82.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	70.7	90.3
85°	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	1.3
87.5°	0.0	0.0	0.0	1.3	1.3	1.3	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

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

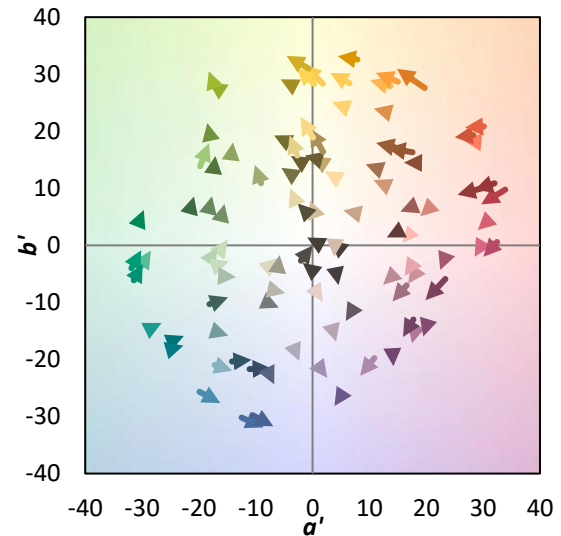
λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500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