

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: P438452

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

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438452
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-20)
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
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3226 lumens
Efficiency: N/A
Efficacy: 94.3 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

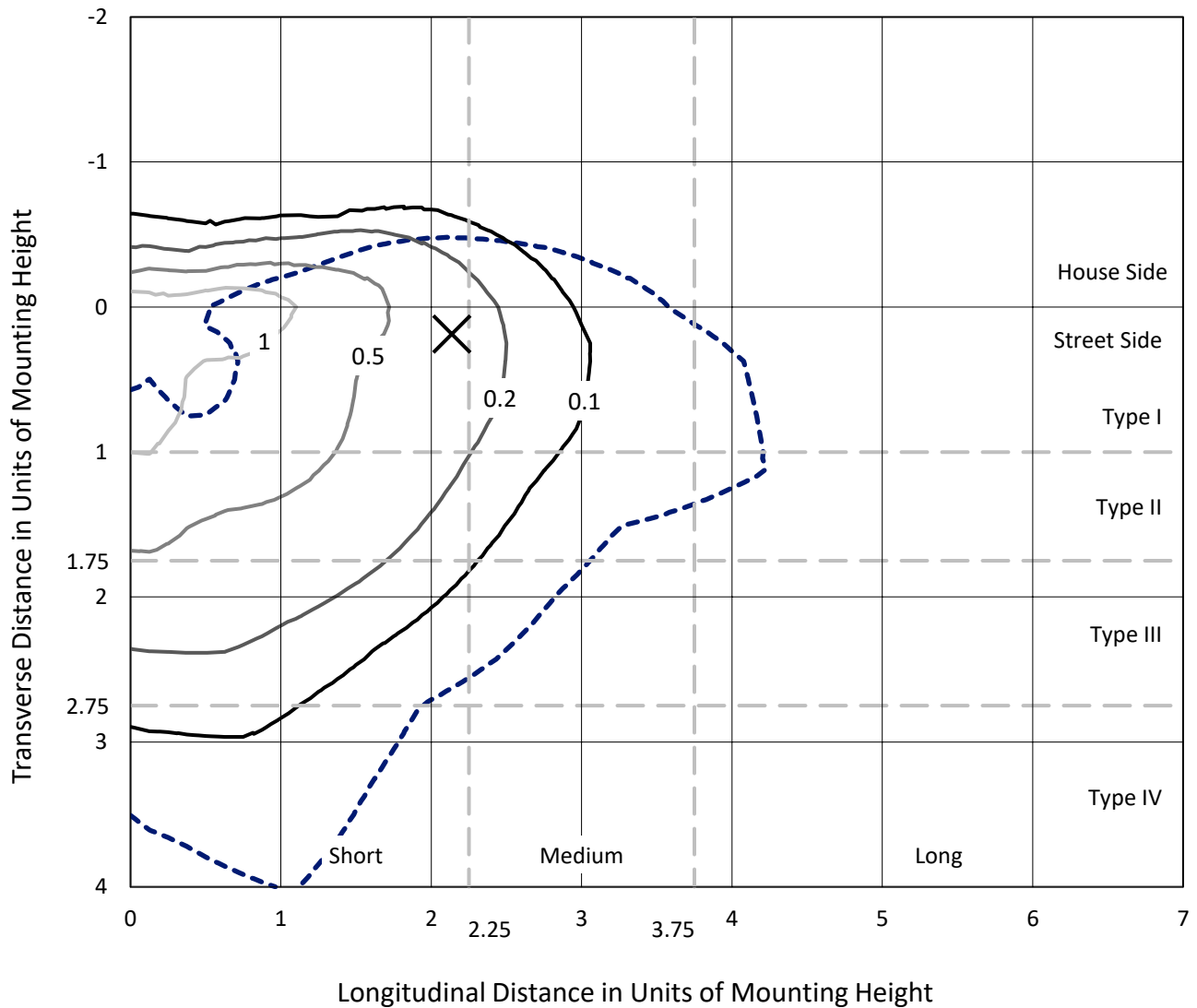
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

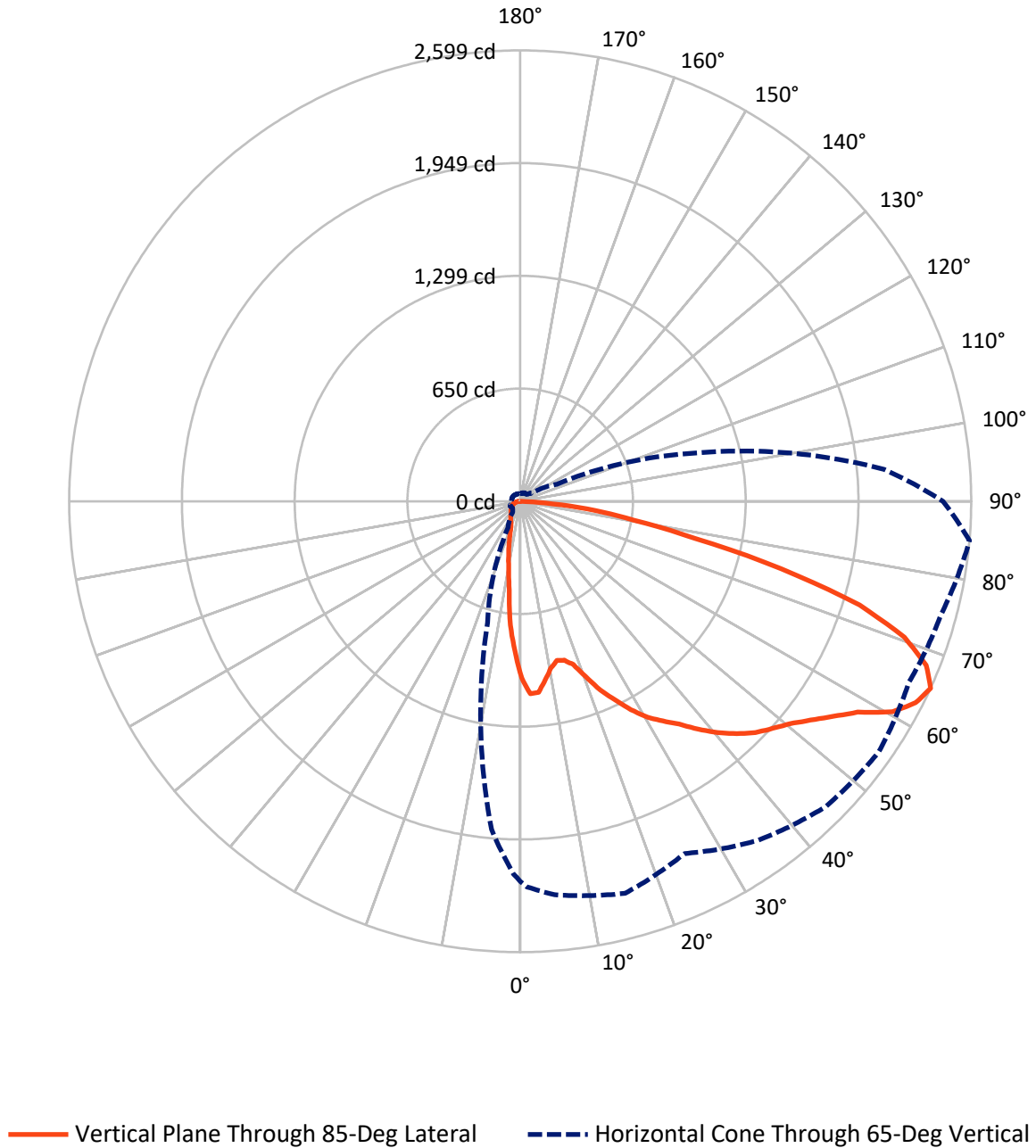
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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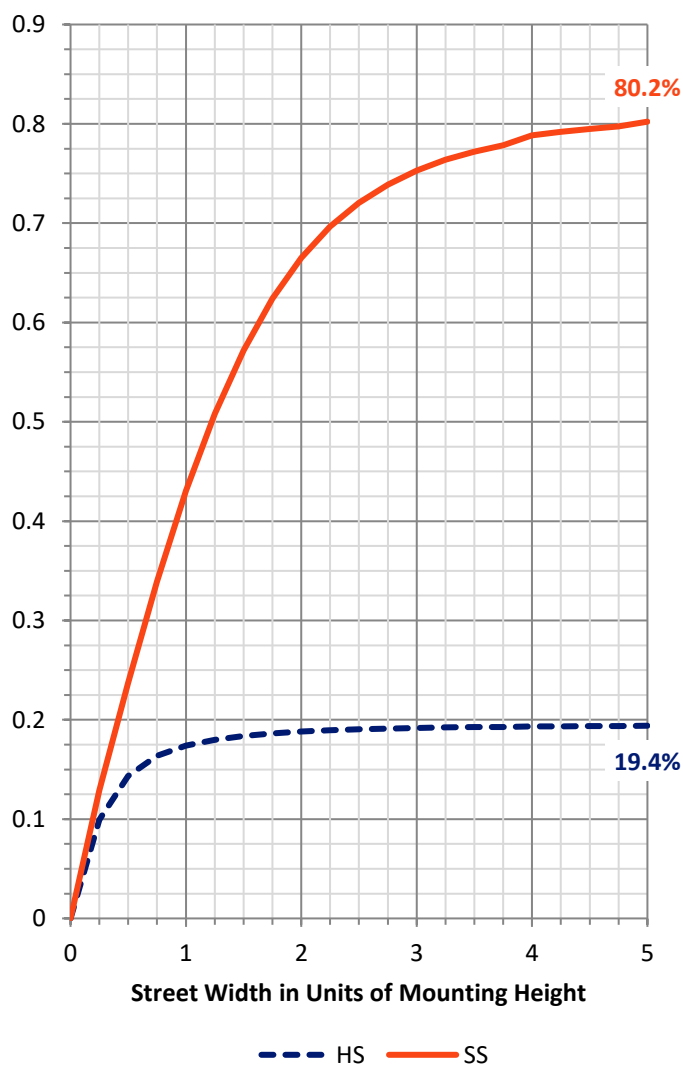
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	631.3	0.0	631.3
	% Fixture	19.6	0.0	19.6
Street Side	Lumens	2594.7	0.0	2594.7
	% Fixture	80.4	0.0	80.4
Total	Lumens	3226.0	0.0	3226.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.6	2.4
10°-20°	161.4	5.0
20°-30°	232.0	7.2
30°-40°	333.1	10.3
40°-50°	471.6	14.6
50°-60°	655.7	20.3
60°-70°	780.8	24.2
70°-80°	451.3	14.0
80°-90°	62.4	1.9
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°	3226.0	100.0
0°-180°	3226.0	100.0

Coefficient of Utilization



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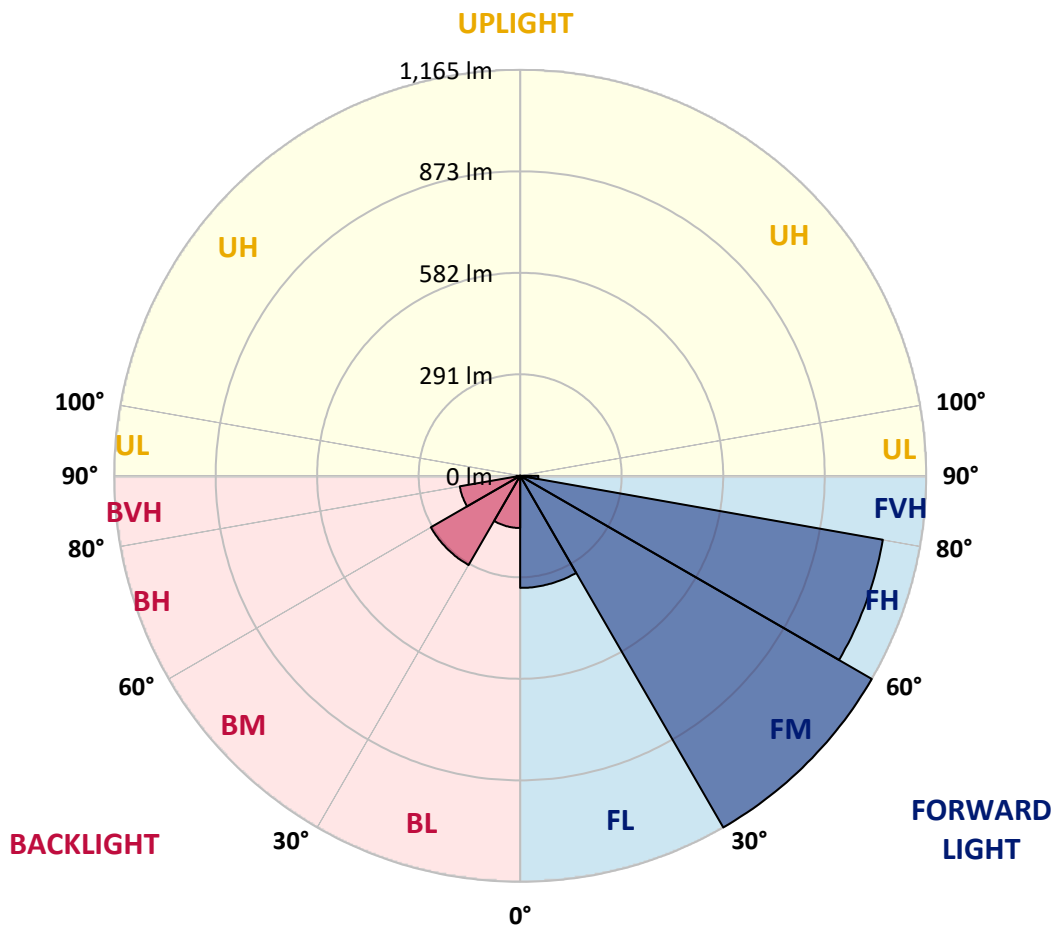
CATALOG NUMBER: IST-SA1C-830-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	321.5	10.0			
FM (30°-60°)	1164.6	36.1			
FH (60°-80°)	1056.4	32.7			G1/1800
FVH (80°-90°)	52.2	1.6			G1/100
BL (0°-30°)	149.6	4.6	B1/500		
BM (30°-60°)	295.8	9.2	B1/1000		
BH (60°-80°)	175.8	5.4	B1/500		G1/500
BVH (80°-90°)	10.2	0.3			G1/100
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





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	1067.9	1071.9	1081.1	1112.7	1132.5	1148.3	1168.1	1148.3	1143.1	1116.7	1111.4
5°	1029.7	1038.9	1065.3	1124.6	1173.4	1224.8	1251.2	1228.8	1198.4	1152.3	1106.1
7.5°	954.5	966.4	1000.7	1093.0	1185.2	1255.1	1289.4	1265.7	1203.7	1122.0	1038.9
10°	878.1	896.5	937.4	1053.4	1151.0	1228.8	1281.5	1256.4	1181.3	1074.5	975.6
12.5°	831.9	845.1	891.2	1012.5	1115.4	1193.2	1232.7	1218.2	1148.3	1046.8	941.3
15°	821.4	834.5	880.7	998.0	1089.0	1147.0	1156.2	1160.2	1133.8	1056.0	950.6
17.5°	850.4	860.9	924.2	1021.8	1058.7	1070.5	1085.0	1102.2	1115.4	1074.5	988.8
20°	920.2	941.3	996.7	1070.5	1050.8	1023.1	1031.0	1052.1	1102.2	1128.6	1077.1
22.5°	1013.9	1037.6	1107.5	1137.8	1056.0	996.7	990.1	1008.6	1100.9	1187.9	1182.6
25°	1118.0	1151.0	1226.1	1227.4	1078.5	978.3	965.1	982.2	1098.2	1240.6	1267.0
27.5°	1226.1	1256.4	1338.2	1297.3	1122.0	979.6	963.8	980.9	1104.8	1297.3	1360.6
30°	1306.5	1346.1	1417.3	1363.2	1149.6	996.7	973.0	995.4	1119.3	1326.3	1443.7
32.5°	1388.3	1413.3	1488.5	1401.5	1180.0	1023.1	992.8	1027.0	1156.2	1354.0	1509.6
35°	1460.8	1493.7	1570.2	1423.9	1224.8	1067.9	1028.4	1073.2	1209.0	1393.6	1576.8
37.5°	1553.1	1584.7	1654.6	1455.5	1261.7	1124.6	1091.6	1149.6	1273.6	1429.1	1666.5
40°	1634.8	1684.9	1737.7	1495.1	1303.9	1207.7	1186.6	1265.7	1360.6	1477.9	1753.5
42.5°	1715.2	1757.4	1815.4	1539.9	1358.0	1309.2	1318.4	1401.5	1466.1	1551.8	1831.3
45°	1773.3	1822.0	1873.4	1575.5	1427.8	1418.6	1480.6	1550.4	1574.2	1629.5	1901.1
47.5°	1829.9	1868.2	1914.3	1611.1	1512.2	1541.2	1649.3	1703.4	1679.6	1699.4	1956.5
50°	1905.1	1946.0	1959.1	1667.8	1619.0	1696.8	1814.1	1849.7	1781.2	1754.8	2014.5
52.5°	2013.2	2033.0	2026.4	1735.0	1720.5	1858.9	1955.2	2009.2	1886.6	1807.5	2094.9
55°	2158.2	2192.5	2150.3	1844.4	1824.7	2014.5	2126.6	2153.0	2004.0	1873.4	2187.2
57.5°	2296.7	2327.0	2313.8	1977.6	1960.5	2149.0	2257.1	2282.2	2118.7	1996.1	2292.7
60°	2348.1	2357.3	2404.8	2118.7	2096.3	2263.7	2386.3	2390.3	2255.8	2143.7	2464.1
62.5°	2292.7	2329.6	2375.8	2250.5	2178.0	2362.6	2472.0	2497.1	2386.3	2323.0	2557.7
65°	2189.9	2222.8	2276.9	2338.8	2240.0	2386.3	2489.1	2520.8	2470.7	2511.6	2598.6
67.5°	2071.2	2112.1	2149.0	2353.3	2232.1	2250.5	2336.2	2356.0	2425.9	2594.6	2523.4
70°	1918.3	1964.4	1996.1	2296.7	2043.5	1860.3	1920.9	1975.0	2081.8	2447.0	2348.1
72.5°	1588.7	1662.5	1741.6	2039.6	1653.3	1445.0	1492.4	1528.0	1604.5	2089.7	2044.8
75°	1118.0	1172.1	1269.6	1642.7	1269.6	1023.1	1096.9	1096.9	1193.2	1716.6	1553.1
77.5°	668.4	669.7	764.7	1081.1	772.6	689.5	731.7	751.5	780.5	1215.6	1031.0
80°	378.4	383.7	415.3	698.8	457.5	470.7	520.8	573.5	530.0	754.1	663.2
82.5°	176.7	155.6	164.8	329.6	259.7	307.2	315.1	338.8	341.5	482.5	435.1
85°	14.5	11.9	15.8	59.3	46.1	42.2	30.3	58.0	91.0	210.9	187.2
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°	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	1094.3	1081.1	1052.1	1029.7	1008.6	969.0	953.2	930.8	918.9	897.8	903.1
5°	1071.9	1041.5	975.6	930.8	872.8	825.3	796.3	769.9	759.4	737.0	729.1
7.5°	990.1	963.8	880.7	806.9	735.7	679.0	624.9	585.4	566.9	547.1	545.8
10°	920.2	876.7	781.8	694.8	613.1	560.3	520.8	487.8	458.8	433.8	419.3
12.5°	880.7	826.6	721.2	615.7	559.0	522.1	478.6	437.7	404.7	375.7	358.6
15°	880.7	817.4	692.2	589.3	532.6	477.3	427.2	385.0	341.5	307.2	296.6
17.5°	921.6	843.8	698.8	572.2	491.8	429.8	366.5	311.1	269.0	238.6	228.1
20°	1002.0	908.4	714.6	552.4	452.2	366.5	290.0	230.7	192.5	178.0	175.3
22.5°	1095.6	986.2	738.3	534.0	411.3	299.3	217.5	175.3	158.2	152.9	152.9
25°	1198.4	1073.2	768.6	514.2	369.2	237.3	166.1	146.3	139.8	137.1	137.1
27.5°	1294.7	1168.1	822.7	506.3	329.6	192.5	145.0	130.5	126.6	123.9	125.2
30°	1388.3	1252.5	878.1	490.4	286.1	167.4	130.5	120.0	114.7	113.4	114.7
32.5°	1468.7	1325.0	916.3	466.7	255.8	150.3	121.3	110.7	105.5	104.2	105.5
35°	1561.0	1396.2	954.5	449.6	239.9	139.8	114.7	104.2	98.9	96.2	96.2
37.5°	1669.1	1481.9	983.5	424.5	229.4	129.2	109.4	98.9	92.3	89.7	89.7
40°	1814.1	1586.0	1007.3	404.7	217.5	123.9	102.8	93.6	87.0	84.4	83.1
42.5°	1914.3	1677.0	1027.0	391.6	205.7	121.3	98.9	91.0	83.1	79.1	77.8
45°	1982.9	1757.4	1040.2	385.0	195.1	114.7	96.2	88.3	79.1	73.8	73.8
47.5°	2048.8	1823.3	1041.5	375.7	187.2	106.8	100.2	84.4	75.1	69.9	69.9
50°	2122.6	1906.4	1066.6	366.5	178.0	97.6	98.9	83.1	72.5	67.2	65.9
52.5°	2196.5	2019.8	1115.4	353.3	164.8	89.7	93.6	84.4	69.9	64.6	63.3
55°	2328.3	2160.9	1176.0	333.6	147.7	81.7	87.0	83.1	65.9	60.6	59.3
57.5°	2414.0	2292.7	1223.5	312.5	122.6	76.5	76.5	80.4	62.0	56.7	55.4
60°	2462.8	2317.8	1232.7	287.4	100.2	68.6	65.9	81.7	58.0	51.4	51.4
62.5°	2461.5	2232.1	1186.6	263.7	87.0	63.3	59.3	71.2	54.1	48.8	47.5
65°	2436.4	2105.5	1082.4	233.4	81.7	58.0	52.7	54.1	50.1	44.8	43.5
67.5°	2328.3	1886.6	916.3	203.0	79.1	52.7	48.8	46.1	43.5	39.6	38.2
70°	2065.9	1640.1	714.6	188.5	77.8	46.1	42.2	39.6	36.9	34.3	34.3
72.5°	1679.6	1278.8	545.8	180.6	79.1	42.2	35.6	34.3	31.6	30.3	29.0
75°	1162.8	945.3	395.5	159.5	76.5	35.6	30.3	27.7	26.4	23.7	23.7
77.5°	747.5	618.3	262.4	127.9	62.0	29.0	22.4	21.1	19.8	18.5	18.5
80°	491.8	420.6	152.9	91.0	38.2	19.8	15.8	15.8	14.5	11.9	11.9
82.5°	312.5	317.7	79.1	42.2	22.4	11.9	9.2	7.9	7.9	5.3	5.3
85°	68.6	120.0	35.6	17.1	7.9	1.3	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°	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	884.6	874.1	870.1	870.1	853.0	854.3	854.3	864.9	863.6	872.8	868.8
5°	719.8	709.3	709.3	711.9	714.6	702.7	706.7	696.1	715.9	701.4	690.8
7.5°	531.3	530.0	539.2	560.3	556.4	552.4	544.5	524.7	514.2	524.7	519.5
10°	407.4	411.3	408.7	417.9	419.3	417.9	404.7	400.8	395.5	400.8	407.4
12.5°	341.5	325.6	308.5	307.2	317.7	317.7	316.4	317.7	321.7	321.7	327.0
15°	284.8	274.2	251.8	241.3	249.2	243.9	245.2	250.5	254.5	259.7	257.1
17.5°	226.8	217.5	207.0	200.4	204.4	200.4	199.1	197.8	197.8	196.4	201.7
20°	172.7	171.4	175.3	172.7	174.0	171.4	167.4	162.2	158.2	160.8	163.5
22.5°	150.3	151.6	154.3	156.9	156.9	154.3	147.7	142.4	141.1	141.1	142.4
25°	138.4	138.4	142.4	143.7	145.0	141.1	133.2	129.2	129.2	129.2	129.2
27.5°	125.2	127.9	130.5	133.2	134.5	130.5	123.9	120.0	120.0	118.7	117.3
30°	116.0	117.3	120.0	121.3	122.6	118.7	114.7	110.7	110.7	110.7	109.4
32.5°	105.5	109.4	110.7	112.1	113.4	110.7	106.8	104.2	102.8	101.5	98.9
35°	97.6	98.9	102.8	102.8	104.2	102.8	100.2	97.6	93.6	92.3	92.3
37.5°	89.7	89.7	92.3	94.9	97.6	96.2	92.3	88.3	87.0	87.0	87.0
40°	84.4	83.1	84.4	88.3	91.0	91.0	85.7	83.1	83.1	81.7	81.7
42.5°	77.8	77.8	77.8	81.7	87.0	84.4	79.1	79.1	79.1	77.8	77.8
45°	73.8	72.5	73.8	73.8	80.4	76.5	75.1	73.8	75.1	73.8	75.1
47.5°	68.6	68.6	68.6	69.9	73.8	71.2	69.9	69.9	71.2	71.2	71.2
50°	64.6	64.6	64.6	65.9	67.2	67.2	67.2	67.2	67.2	68.6	68.6
52.5°	62.0	60.6	62.0	62.0	63.3	64.6	63.3	64.6	64.6	64.6	65.9
55°	59.3	58.0	59.3	59.3	62.0	60.6	60.6	62.0	62.0	63.3	64.6
57.5°	55.4	54.1	56.7	56.7	59.3	59.3	58.0	59.3	59.3	60.6	60.6
60°	51.4	51.4	52.7	52.7	55.4	56.7	56.7	56.7	56.7	56.7	56.7
62.5°	47.5	47.5	48.8	50.1	52.7	52.7	54.1	54.1	54.1	54.1	52.7
65°	43.5	44.8	46.1	46.1	48.8	50.1	50.1	50.1	50.1	50.1	50.1
67.5°	38.2	40.9	42.2	43.5	46.1	46.1	47.5	47.5	46.1	46.1	46.1
70°	34.3	35.6	36.9	38.2	42.2	42.2	43.5	43.5	42.2	42.2	43.5
72.5°	29.0	30.3	31.6	34.3	38.2	38.2	39.6	39.6	38.2	38.2	38.2
75°	25.0	25.0	26.4	29.0	34.3	34.3	34.3	35.6	34.3	34.3	33.0
77.5°	18.5	19.8	21.1	25.0	29.0	30.3	30.3	30.3	29.0	29.0	27.7
80°	11.9	13.2	15.8	18.5	22.4	23.7	25.0	25.0	23.7	23.7	22.4
82.5°	5.3	7.9	9.2	11.9	14.5	18.5	18.5	19.8	18.5	17.1	17.1
85°	0.0	0.0	1.3	4.0	6.6	10.5	11.9	13.2	11.9	10.5	10.5
87.5°	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	1.3	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°	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	883.3	897.8	920.2	933.4	963.8	991.4	1020.4	1058.7	1066.6	1067.9
5°	701.4	718.5	760.7	777.9	833.2	878.1	944.0	1008.6	1025.7	1029.7
7.5°	535.3	548.5	594.6	627.6	688.2	751.5	835.9	912.3	950.6	954.5
10°	417.9	453.5	489.1	537.9	590.6	652.6	740.9	838.5	880.7	878.1
12.5°	352.0	388.9	432.4	481.2	535.3	590.6	671.1	779.2	821.4	831.9
15°	282.1	327.0	374.4	424.5	487.8	541.9	635.5	755.4	806.9	821.4
17.5°	218.9	254.5	300.6	365.2	427.2	503.6	622.3	777.9	835.9	850.4
20°	172.7	199.1	232.0	294.0	373.1	468.0	615.7	820.0	899.2	920.2
22.5°	147.7	158.2	181.9	236.0	319.1	429.8	611.7	879.4	978.3	1013.9
25°	131.8	138.4	151.6	185.9	265.0	396.8	618.3	953.2	1089.0	1118.0
27.5°	120.0	125.2	131.8	156.9	229.4	367.8	630.2	1036.3	1183.9	1226.1
30°	109.4	113.4	122.6	139.8	200.4	338.8	634.2	1118.0	1268.3	1306.5
32.5°	101.5	106.8	114.7	129.2	183.3	319.1	623.6	1180.0	1346.1	1388.3
35°	93.6	100.2	108.1	120.0	168.8	301.9	599.9	1231.4	1419.9	1460.8
37.5°	89.7	93.6	101.5	110.7	158.2	284.8	578.8	1282.8	1496.4	1553.1
40°	84.4	88.3	96.2	104.2	145.0	266.3	564.3	1348.7	1583.4	1634.8
42.5°	80.4	85.7	92.3	101.5	134.5	246.5	549.8	1401.5	1661.2	1715.2
45°	77.8	83.1	89.7	101.5	125.2	230.7	534.0	1447.6	1720.5	1773.3
47.5°	73.8	80.4	89.7	97.6	121.3	220.2	534.0	1503.0	1774.6	1829.9
50°	72.5	79.1	93.6	94.9	118.7	216.2	556.4	1566.3	1852.4	1905.1
52.5°	71.2	77.8	93.6	89.7	116.0	218.9	590.6	1681.0	1952.6	2013.2
55°	67.2	76.5	89.7	83.1	109.4	221.5	628.9	1831.3	2101.5	2158.2
57.5°	64.6	75.1	84.4	76.5	100.2	217.5	680.3	1965.7	2257.1	2296.7
60°	60.6	73.8	73.8	71.2	89.7	205.7	738.3	2051.4	2316.4	2348.1
62.5°	58.0	72.5	65.9	65.9	81.7	187.2	758.1	2030.3	2258.4	2292.7
65°	54.1	63.3	59.3	60.6	75.1	166.1	723.8	1898.5	2149.0	2189.9
67.5°	50.1	54.1	52.7	55.4	72.5	145.0	631.5	1741.6	2007.9	2071.2
70°	44.8	47.5	47.5	50.1	68.6	130.5	527.4	1539.9	1824.7	1918.3
72.5°	40.9	42.2	42.2	46.1	64.6	122.6	416.6	1306.5	1530.7	1588.7
75°	34.3	36.9	36.9	39.6	58.0	104.2	284.8	957.2	1070.5	1118.0
77.5°	30.3	30.3	31.6	33.0	46.1	69.9	167.4	589.3	643.4	668.4
80°	23.7	25.0	23.7	23.7	29.0	46.1	91.0	345.4	391.6	378.4
82.5°	17.1	17.1	14.5	14.5	17.1	25.0	39.6	179.3	183.3	176.7
85°	9.2	6.6	5.3	5.3	5.3	5.3	5.3	38.2	18.5	14.5
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

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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

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)