

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: P438454

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

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438454  
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: IST-SA1C-830-U-SLR  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

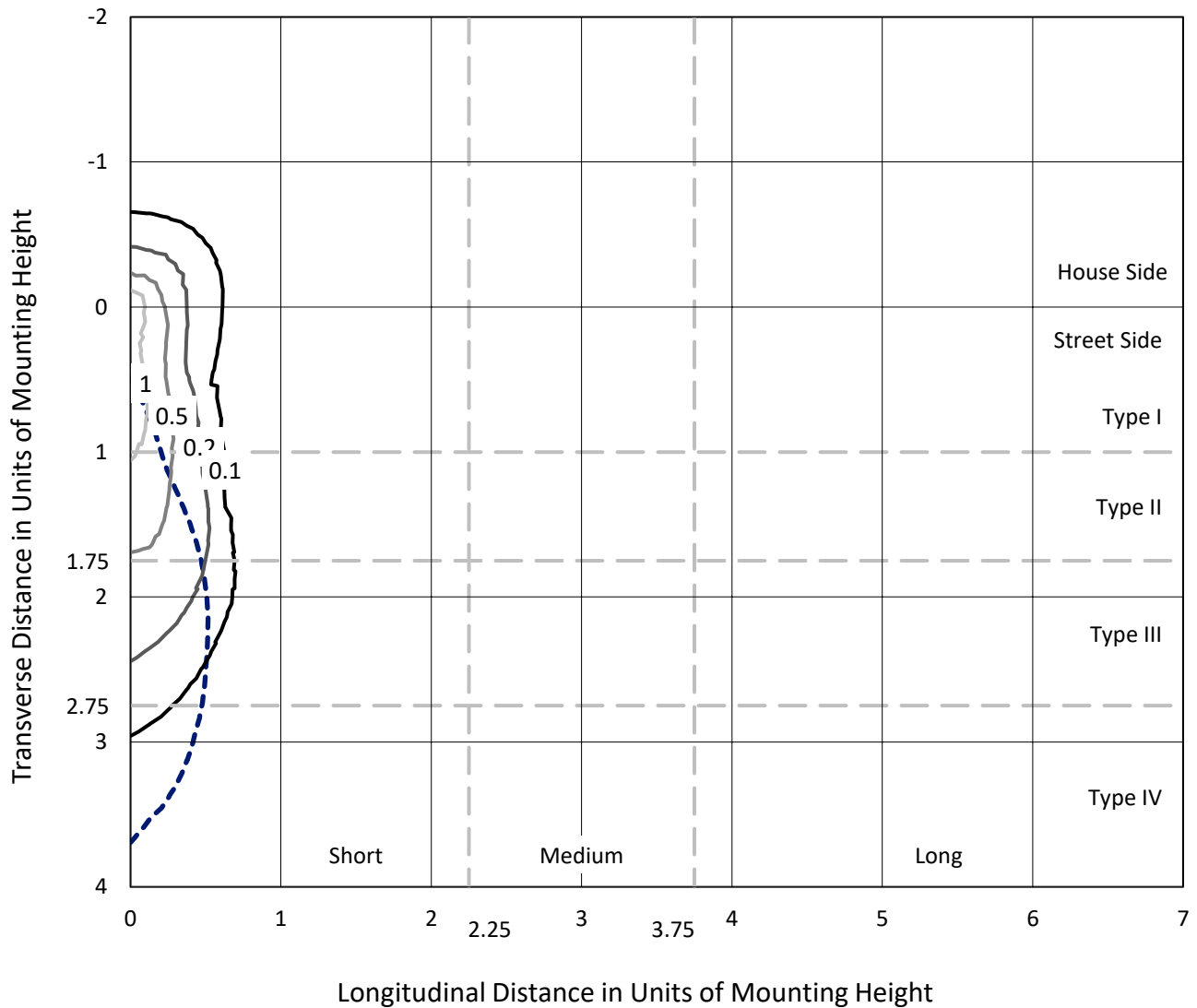
Lumens per Lamp: N/A  
Luminaire Lumens: 3226 lumens  
Efficiency: N/A  
Efficacy: 94.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 34.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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



REPORT NUMBER: P438454  
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### Iso-Footcandle Lines of Horizontal Illumination

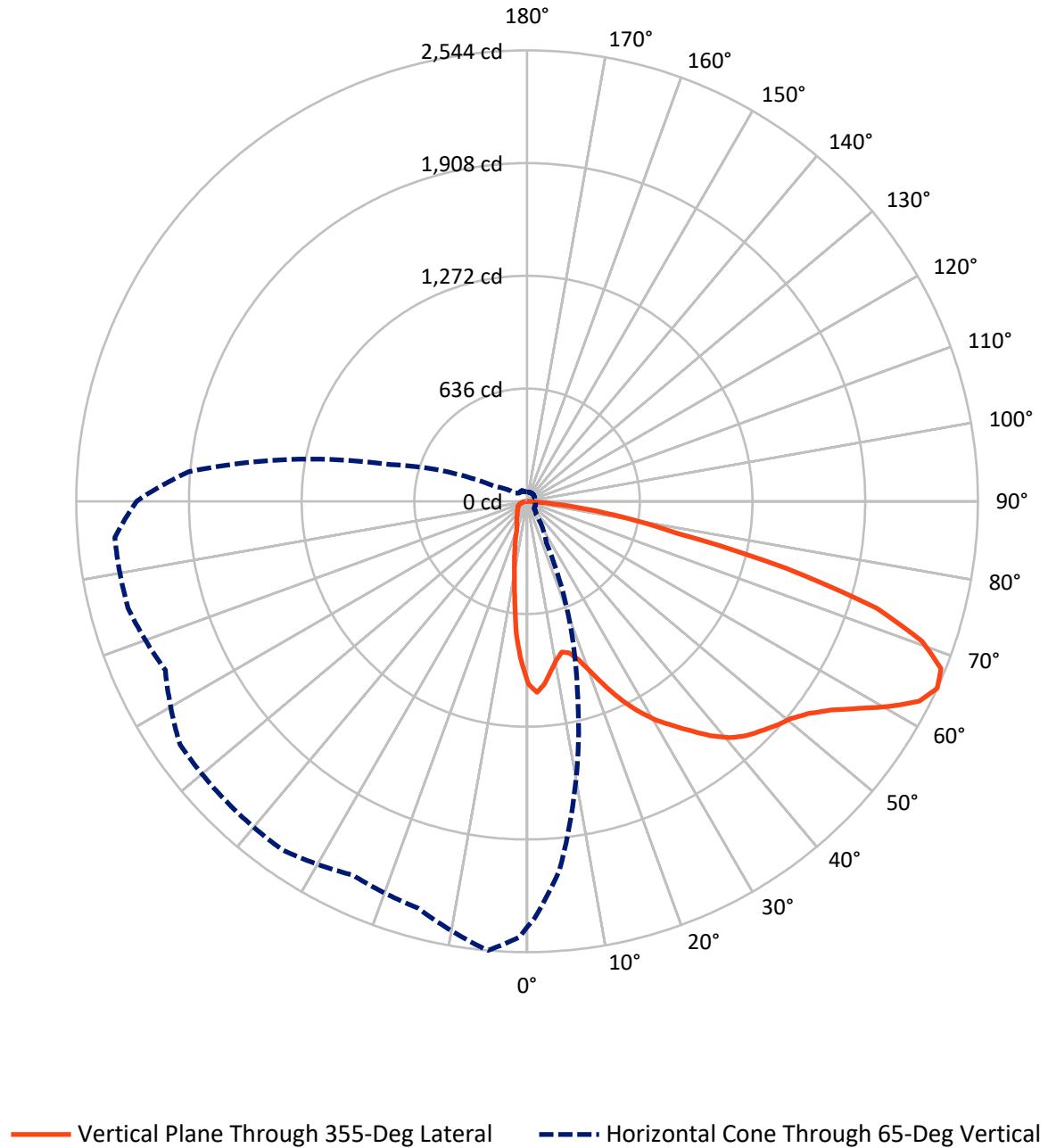
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc  
 Type IV - Short - N/A

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

### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	581.6	0.0	581.6
	% Fixture	18.0	0.0	18.0
<b>Street Side</b>	Lumens	2644.4	0.0	2644.4
	% Fixture	82.0	0.0	82.0
<b>Total</b>	Lumens	3226.0	0.0	3226.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.9	2.4
10°-20°	160.9	5.0
20°-30°	229.4	7.1
30°-40°	327.8	10.2
40°-50°	457.8	14.2
50°-60°	636.7	19.7
60°-70°	775.7	24.0
70°-80°	477.7	14.8
80°-90°	82.1	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°	3226.0	100.0
0°-180°	3226.0	100.0

**Coefficient of Utilization**

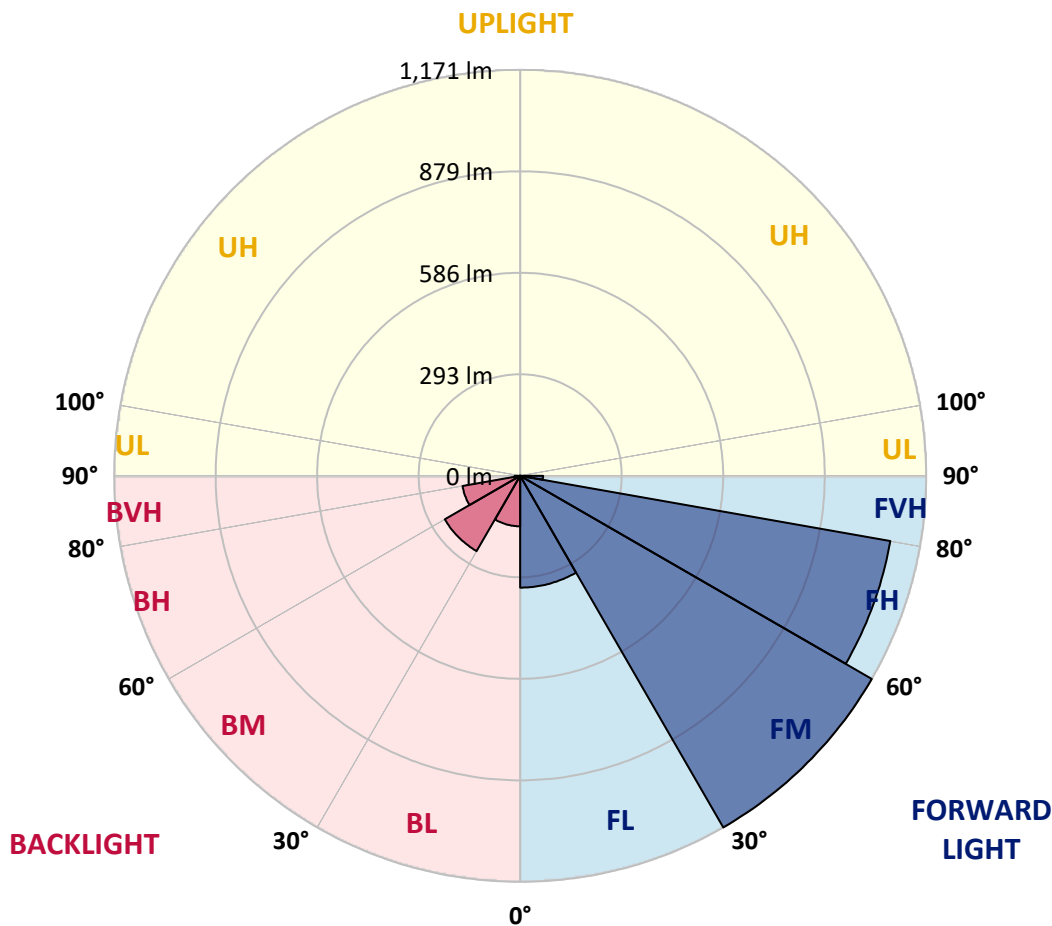


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 CATALOG NUMBER: IST-SA1C-830-U-SLR

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	322.6	10.0			
FM (30°-60°)	1171.4	36.3			
FH (60°-80°)	1084.5	33.6			G1/1800
FVH (80°-90°)	65.9	2.0			G1/100
BL (0°-30°)	145.6	4.5	B1/500		
BM (30°-60°)	250.9	7.8	B1/1000		
BH (60°-80°)	168.9	5.2	B1/500		G1/500
BVH (80°-90°)	16.1	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-G1**  
 Type IV Short





REPORT NUMBER: P438454  
 CATALOG NUMBER: IST-SA1C-830-U-SLR

**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2
2.5°	1058.3	1058.3	1045.3	1012.6	982.6	951.2	940.7	912.0	893.7	876.7	883.3
5°	996.9	993.0	969.5	901.5	849.3	798.3	767.0	719.9	714.7	672.9	670.3
7.5°	914.6	912.0	876.7	799.6	739.5	659.8	612.8	572.3	537.0	512.2	504.3
10°	858.4	849.3	806.2	712.1	624.5	567.1	540.9	505.6	475.6	444.2	418.1
12.5°	821.8	811.4	768.3	665.1	580.1	540.9	504.3	462.5	422.0	385.4	359.3
15°	828.4	811.4	763.0	653.3	564.4	508.3	457.3	407.7	360.6	320.1	287.4
17.5°	875.4	854.5	800.9	661.1	539.6	465.1	395.9	338.4	280.9	239.1	213.0
20°	957.7	927.7	859.7	683.3	521.3	424.6	333.2	257.4	197.3	168.5	160.7
22.5°	1058.3	1032.2	939.4	701.6	501.7	378.9	263.9	185.5	155.5	141.1	137.2
25°	1162.9	1134.1	1030.9	731.7	486.0	337.1	207.7	147.6	133.3	126.7	124.1
27.5°	1270.0	1241.3	1121.1	780.0	467.8	292.7	167.2	129.4	118.9	113.7	113.7
30°	1345.8	1322.3	1202.1	823.1	446.9	257.4	147.6	120.2	111.1	105.8	104.5
32.5°	1430.7	1398.0	1277.8	851.9	431.2	230.0	134.6	112.4	104.5	98.0	98.0
35°	1526.1	1489.5	1348.4	880.6	415.5	216.9	125.4	107.1	99.3	92.8	91.5
37.5°	1630.6	1583.6	1420.3	905.5	398.5	210.4	120.2	101.9	94.1	88.8	86.2
40°	1745.6	1695.9	1515.6	926.4	386.7	202.5	116.3	98.0	90.2	83.6	82.3
42.5°	1842.3	1797.9	1582.3	939.4	381.5	192.1	115.0	94.1	87.5	79.7	77.1
45°	1891.9	1854.0	1663.3	943.4	378.9	185.5	108.4	94.1	84.9	77.1	73.2
47.5°	1935.1	1907.6	1722.1	963.0	372.4	179.0	100.6	99.3	83.6	73.2	69.2
50°	2008.2	1979.5	1813.5	999.5	364.5	171.2	92.8	95.4	83.6	70.6	66.6
52.5°	2095.8	2087.9	1933.7	1057.0	352.8	160.7	84.9	90.2	83.6	69.2	64.0
55°	2223.8	2212.0	2093.1	1131.5	338.4	146.3	77.1	82.3	82.3	65.3	60.1
57.5°	2332.3	2333.6	2239.5	1183.8	325.3	122.8	71.9	70.6	78.4	61.4	56.2
60°	2381.9	2381.9	2286.5	1203.4	308.4	103.2	67.9	62.7	81.0	57.5	52.3
62.5°	2413.3	2387.1	2221.2	1185.1	288.8	92.8	61.4	57.5	65.3	53.6	48.3
65°	2404.1	2354.5	2090.5	1092.3	260.0	90.2	57.5	52.3	52.3	49.7	45.7
67.5°	2321.8	2244.7	1898.5	935.5	230.0	88.8	52.3	48.3	47.0	44.4	41.8
70°	2098.4	2043.5	1669.8	763.0	210.4	88.8	48.3	43.1	41.8	39.2	37.9
72.5°	1715.5	1634.5	1332.7	572.3	194.7	88.8	44.4	37.9	36.6	35.3	34.0
75°	1172.0	1079.2	936.8	351.5	152.9	77.1	39.2	31.4	31.4	30.1	28.7
77.5°	646.8	625.9	527.9	185.5	95.4	47.0	30.1	24.8	26.1	24.8	23.5
80°	375.0	352.8	313.6	90.2	54.9	27.4	18.3	18.3	19.6	19.6	18.3
82.5°	181.6	158.1	162.0	36.6	19.6	11.8	7.8	9.1	10.5	13.1	13.1
85°	6.5	6.5	13.1	2.6	0.0	0.0	0.0	0.0	0.0	2.6	3.9
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: P438454  
 CATALOG NUMBER: IST-SA1C-830-U-SLR

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2
2.5°	862.3	862.3	867.6	889.8	871.5	868.9	874.1	883.3	887.2	905.5	904.2
5°	665.1	661.1	676.8	697.7	709.5	716.0	726.5	750.0	740.8	755.2	752.6
7.5°	491.3	497.8	491.3	514.8	533.1	560.5	581.4	576.2	577.5	565.8	582.7
10°	401.1	398.5	382.8	390.7	401.1	418.1	432.5	435.1	448.2	427.3	441.6
12.5°	342.3	331.9	316.2	308.4	305.7	318.8	322.7	329.3	337.1	343.6	346.2
15°	274.4	266.5	256.1	244.3	241.7	241.7	250.9	260.0	270.5	273.1	282.2
17.5°	205.1	201.2	197.3	197.3	197.3	197.3	205.1	209.1	214.3	222.1	220.8
20°	155.5	155.5	156.8	163.3	167.2	169.9	175.1	176.4	175.1	176.4	176.4
22.5°	137.2	135.9	139.8	142.4	149.0	155.5	158.1	156.8	152.9	150.3	152.9
25°	124.1	125.4	126.7	130.7	135.9	142.4	143.7	142.4	138.5	138.5	138.5
27.5°	113.7	115.0	117.6	121.5	126.7	132.0	133.3	130.7	126.7	128.0	126.7
30°	105.8	108.4	109.8	113.7	117.6	122.8	122.8	120.2	117.6	117.6	117.6
32.5°	96.7	99.3	101.9	105.8	111.1	113.7	113.7	112.4	109.8	108.4	108.4
35°	91.5	91.5	94.1	99.3	101.9	104.5	105.8	104.5	101.9	99.3	98.0
37.5°	86.2	86.2	87.5	90.2	95.4	98.0	99.3	96.7	94.1	91.5	91.5
40°	81.0	81.0	82.3	83.6	88.8	92.8	92.8	88.8	86.2	87.5	86.2
42.5°	77.1	77.1	78.4	78.4	81.0	87.5	86.2	83.6	82.3	82.3	81.0
45°	73.2	71.9	73.2	73.2	74.5	81.0	81.0	77.1	77.1	78.4	77.1
47.5°	69.2	67.9	69.2	69.2	70.6	74.5	74.5	73.2	73.2	73.2	74.5
50°	65.3	65.3	65.3	65.3	66.6	67.9	70.6	69.2	69.2	69.2	70.6
52.5°	61.4	61.4	61.4	62.7	62.7	65.3	66.6	65.3	66.6	66.6	66.6
55°	58.8	57.5	57.5	60.1	60.1	62.7	64.0	62.7	64.0	64.0	64.0
57.5°	54.9	54.9	54.9	56.2	57.5	60.1	62.7	60.1	61.4	61.4	62.7
60°	51.0	51.0	51.0	53.6	54.9	57.5	58.8	57.5	58.8	58.8	58.8
62.5°	47.0	48.3	48.3	49.7	51.0	54.9	56.2	54.9	56.2	56.2	56.2
65°	44.4	44.4	45.7	47.0	48.3	51.0	52.3	52.3	52.3	53.6	52.3
67.5°	40.5	40.5	41.8	43.1	44.4	48.3	48.3	48.3	49.7	48.3	48.3
70°	36.6	36.6	37.9	39.2	40.5	44.4	44.4	44.4	45.7	43.1	43.1
72.5°	32.7	32.7	34.0	35.3	37.9	41.8	40.5	40.5	40.5	39.2	39.2
75°	28.7	28.7	30.1	31.4	32.7	37.9	36.6	35.3	35.3	34.0	34.0
77.5°	23.5	23.5	24.8	27.4	28.7	32.7	31.4	30.1	28.7	28.7	28.7
80°	18.3	19.6	20.9	22.2	23.5	26.1	24.8	23.5	22.2	22.2	22.2
82.5°	13.1	14.4	15.7	17.0	18.3	18.3	18.3	18.3	17.0	15.7	15.7
85°	5.2	7.8	10.5	10.5	11.8	10.5	11.8	10.5	9.1	9.1	7.8
87.5°	0.0	0.0	0.0	0.0	0.0	1.3	2.6	3.9	3.9	3.9	3.9
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: P438454  
 CATALOG NUMBER: IST-SA1C-830-U-SLR

**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2
2.5°	914.6	935.5	947.3	968.2	990.4	1020.4	1045.3	1080.5	1111.9	1118.4	1126.3
5°	757.8	785.3	798.3	832.3	884.6	917.2	969.5	1024.4	1092.3	1113.2	1140.6
7.5°	569.7	590.6	624.5	654.6	716.0	770.9	841.4	921.1	1000.8	1046.6	1091.0
10°	433.8	459.9	496.5	531.8	591.9	646.8	730.4	819.2	921.1	963.0	1010.0
12.5°	360.6	381.5	418.1	466.5	522.6	574.9	637.6	734.3	841.4	895.0	952.5
15°	291.4	313.6	359.3	412.9	467.8	526.6	586.7	679.4	810.1	865.0	919.8
17.5°	232.6	252.2	291.4	348.9	409.0	474.3	547.5	665.1	816.6	884.6	948.6
20°	180.3	197.3	227.3	279.6	341.0	418.1	512.2	659.8	855.8	951.2	1015.2
22.5°	155.5	162.0	179.0	215.6	278.3	368.5	479.5	663.7	918.5	1041.3	1114.5
25°	138.5	143.7	150.3	172.5	222.1	317.5	450.8	671.6	985.2	1143.3	1226.9
27.5°	128.0	130.7	134.6	145.0	181.6	275.7	422.0	682.0	1075.3	1246.5	1327.5
30°	117.6	117.6	121.5	132.0	159.4	245.6	401.1	702.9	1164.2	1335.3	1415.0
32.5°	107.1	107.1	113.7	122.8	145.0	220.8	380.2	709.5	1230.8	1413.7	1477.7
35°	98.0	100.6	105.8	116.3	135.9	202.5	360.6	697.7	1279.1	1480.4	1545.7
37.5°	92.8	94.1	100.6	109.8	124.1	185.5	341.0	682.0	1344.5	1569.2	1620.2
40°	86.2	88.8	95.4	104.5	116.3	172.5	318.8	665.1	1402.0	1668.5	1694.6
42.5°	82.3	84.9	90.2	99.3	111.1	156.8	297.9	652.0	1463.4	1753.4	1771.7
45°	78.4	81.0	87.5	95.4	111.1	145.0	277.0	642.8	1523.5	1818.8	1833.1
47.5°	74.5	77.1	83.6	94.1	109.8	138.5	262.6	633.7	1561.4	1874.9	1878.9
50°	71.9	74.5	82.3	96.7	105.8	135.9	256.1	642.8	1625.4	1919.4	1907.6
52.5°	67.9	71.9	81.0	100.6	100.6	133.3	250.9	675.5	1705.1	1984.7	1954.7
55°	66.6	69.2	78.4	96.7	91.5	126.7	250.9	700.3	1810.9	2114.1	2064.4
57.5°	62.7	65.3	75.8	90.2	83.6	116.3	248.3	740.8	1961.2	2256.5	2212.0
60°	58.8	62.7	73.2	81.0	75.8	103.2	236.5	785.3	2064.4	2333.6	2341.4
62.5°	56.2	60.1	73.2	70.6	69.2	90.2	218.2	812.7	2054.0	2308.7	2383.2
65°	52.3	56.2	66.6	64.0	65.3	81.0	194.7	799.6	1916.8	2204.2	2334.9
67.5°	48.3	52.3	57.5	57.5	60.1	78.4	169.9	723.8	1767.8	2077.5	2227.7
70°	44.4	47.0	49.7	52.3	54.9	77.1	150.3	620.6	1596.6	1956.0	2074.9
72.5°	39.2	40.5	43.1	45.7	51.0	73.2	142.4	504.3	1360.2	1693.3	1877.6
75°	34.0	35.3	37.9	40.5	44.4	69.2	130.7	382.8	1121.1	1337.9	1516.9
77.5°	28.7	30.1	32.7	34.0	37.9	61.4	112.4	277.0	872.8	964.3	1109.3
80°	22.2	23.5	26.1	26.1	31.4	45.7	87.5	193.4	612.8	683.3	759.1
82.5°	15.7	17.0	18.3	19.6	23.5	31.4	57.5	116.3	415.5	469.1	456.0
85°	9.1	10.5	10.5	13.1	14.4	20.9	32.7	60.1	271.8	214.3	211.7
87.5°	3.9	3.9	3.9	5.2	5.2	7.8	10.5	11.8	26.1	9.1	6.5
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: P438454  
 CATALOG NUMBER: IST-SA1C-830-U-SLR

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2	1032.2
2.5°	1138.0	1147.2	1153.7	1151.1	1147.2	1125.0	1102.8	1079.2	1058.3	1058.3
5°	1185.1	1223.0	1238.6	1225.6	1196.8	1151.1	1093.6	1033.5	1004.8	996.9
7.5°	1160.2	1232.1	1270.0	1253.0	1215.1	1131.5	1044.0	965.6	922.4	914.6
10°	1110.6	1204.7	1247.8	1242.6	1200.8	1104.1	998.2	909.4	863.7	858.4
12.5°	1053.1	1144.6	1199.4	1202.1	1174.6	1089.7	978.6	872.8	832.3	821.8
15°	1017.8	1097.5	1135.4	1126.3	1134.1	1077.9	986.5	887.2	837.5	828.4
17.5°	1019.1	1053.1	1062.3	1047.9	1077.9	1075.3	1030.9	939.4	884.6	875.4
20°	1053.1	1024.4	995.6	993.0	1032.2	1084.5	1101.5	1027.0	964.3	957.7
22.5°	1111.9	1016.5	956.4	947.3	996.9	1093.6	1169.4	1134.1	1075.3	1058.3
25°	1177.2	1024.4	931.6	919.8	964.3	1100.1	1242.6	1243.9	1178.5	1162.9
27.5°	1247.8	1049.2	931.6	918.5	965.6	1110.6	1290.9	1343.2	1283.1	1270.0
30°	1310.5	1084.5	940.7	926.4	981.2	1121.1	1323.6	1432.0	1364.1	1345.8
32.5°	1348.4	1114.5	963.0	936.8	1008.7	1142.0	1353.6	1507.8	1455.5	1430.7
35°	1378.4	1149.8	999.5	965.6	1049.2	1175.9	1378.4	1590.1	1540.5	1526.1
37.5°	1400.7	1191.6	1037.4	1004.8	1102.8	1221.7	1413.7	1677.7	1662.0	1630.6
40°	1437.2	1217.7	1105.4	1093.6	1195.5	1293.5	1455.5	1753.4	1763.9	1745.6
42.5°	1469.9	1268.7	1202.1	1215.1	1314.4	1373.2	1511.7	1809.6	1865.8	1842.3
45°	1496.0	1339.2	1323.6	1366.7	1451.6	1475.1	1543.1	1848.8	1907.6	1891.9
47.5°	1532.6	1432.0	1485.6	1541.8	1612.3	1581.0	1575.7	1890.6	1950.7	1935.1
50°	1584.9	1540.5	1647.6	1720.8	1766.5	1667.2	1616.2	1928.5	2017.4	2008.2
52.5°	1638.5	1665.9	1812.2	1880.2	1910.2	1774.3	1673.7	1988.6	2095.8	2095.8
55°	1737.8	1788.7	1987.3	2030.4	2070.9	1871.0	1750.8	2078.8	2217.3	2223.8
57.5°	1882.8	1920.7	2120.6	2170.2	2180.7	1979.5	1872.3	2204.2	2320.5	2332.3
60°	2033.0	2051.3	2252.6	2297.0	2261.7	2119.3	2014.8	2350.5	2388.4	2381.9
62.5°	2199.0	2178.1	2344.0	2375.4	2366.2	2242.1	2193.8	2483.8	2438.1	2413.3
65°	2330.9	2252.6	2391.1	2397.6	2402.8	2327.0	2376.7	2543.9	2459.0	2404.1
67.5°	2410.6	2264.3	2295.7	2265.6	2286.5	2304.8	2500.8	2519.1	2370.1	2321.8
70°	2392.4	2098.4	1957.3	1923.3	1924.6	2052.6	2421.1	2363.6	2167.6	2098.4
72.5°	2223.8	1763.9	1558.8	1513.0	1522.2	1533.9	2035.7	2063.1	1752.1	1715.5
75°	1872.3	1358.8	1122.4	1111.9	1098.8	1149.8	1628.0	1507.8	1162.9	1172.0
77.5°	1527.4	1000.8	824.5	770.9	763.0	770.9	1110.6	861.0	675.5	646.8
80°	1101.5	666.4	615.4	603.6	567.1	456.0	581.4	554.0	381.5	375.0
82.5°	725.2	459.9	470.4	392.0	368.5	288.8	352.8	282.2	190.8	181.6
85°	376.3	239.1	197.3	86.2	96.7	81.0	77.1	62.7	6.5	6.5
87.5°	13.1	5.2	3.9	3.9	2.6	1.3	1.3	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**

$\lambda$ (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			

REPORT NUMBER: SP1-2408-195-9

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

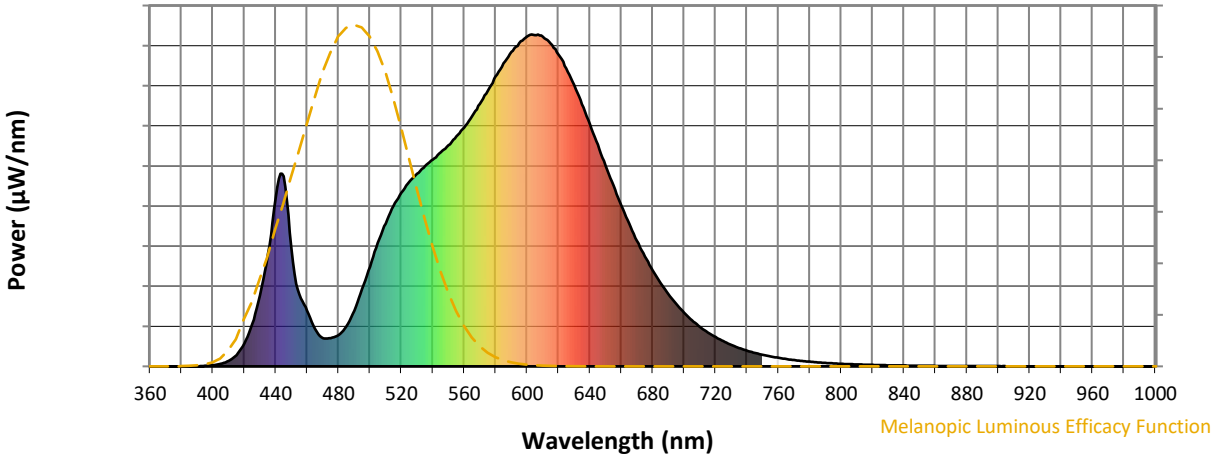
**S/P: 1.27**

$\lambda$ (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			



REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

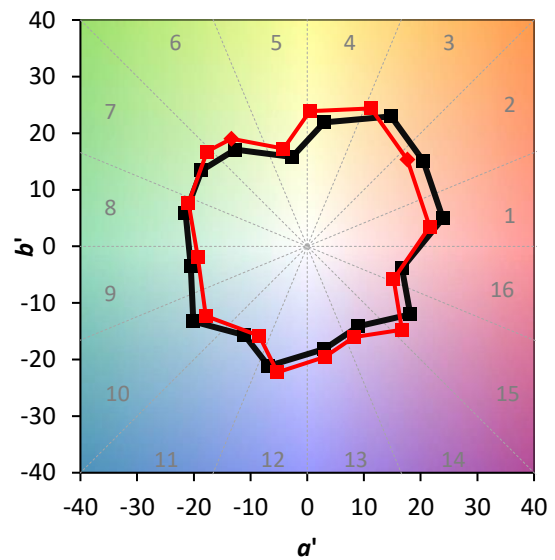
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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