

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: P438964

Luminaire Tested: **IST-SA1F-830-U-SLL-HSS**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438964
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-SA1F-830-U-SLL-HSS
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 80 CRI, 3000K, 1200mA 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: 4642 lumens
Efficiency: N/A
Efficacy: 70.3 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

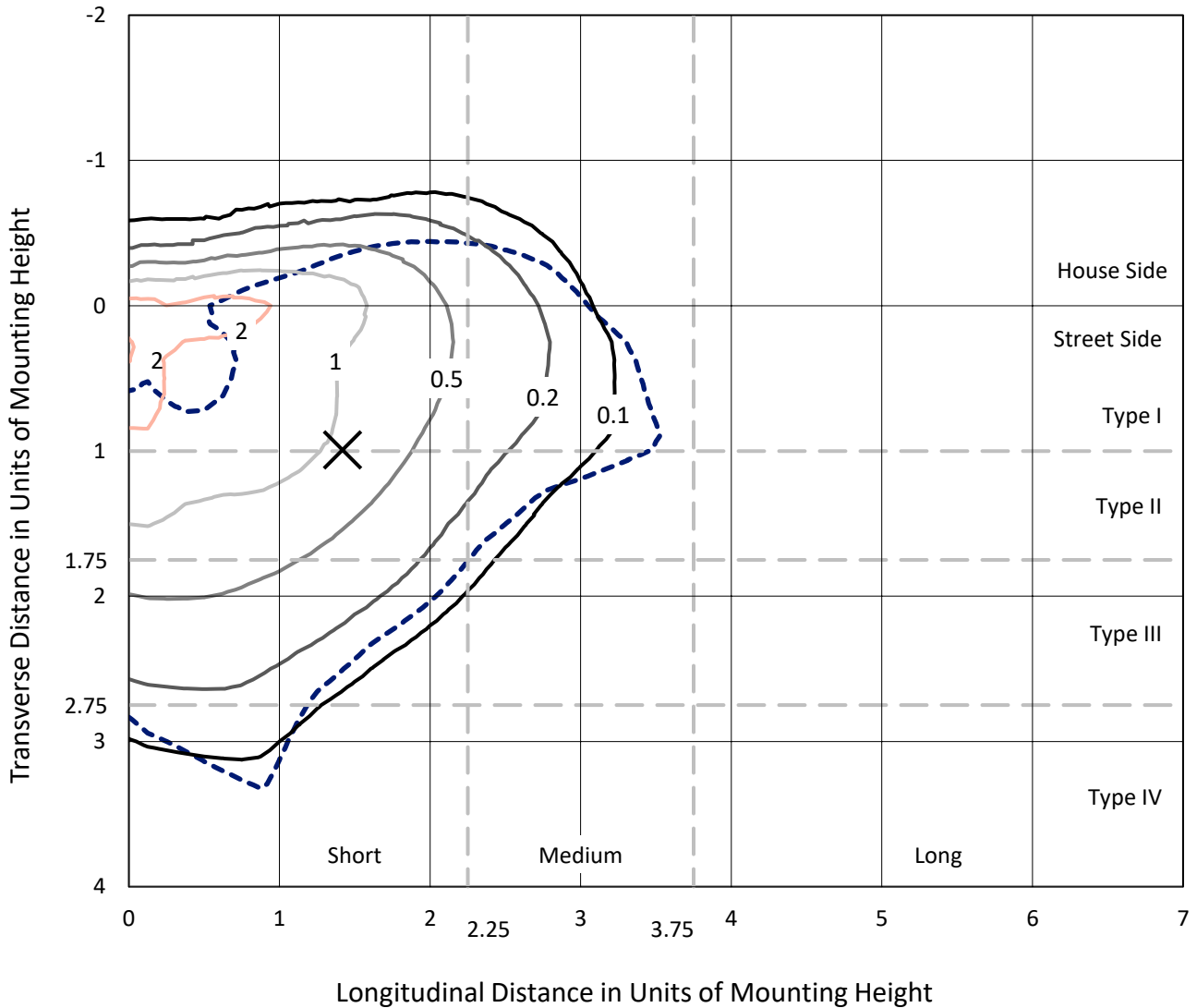
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

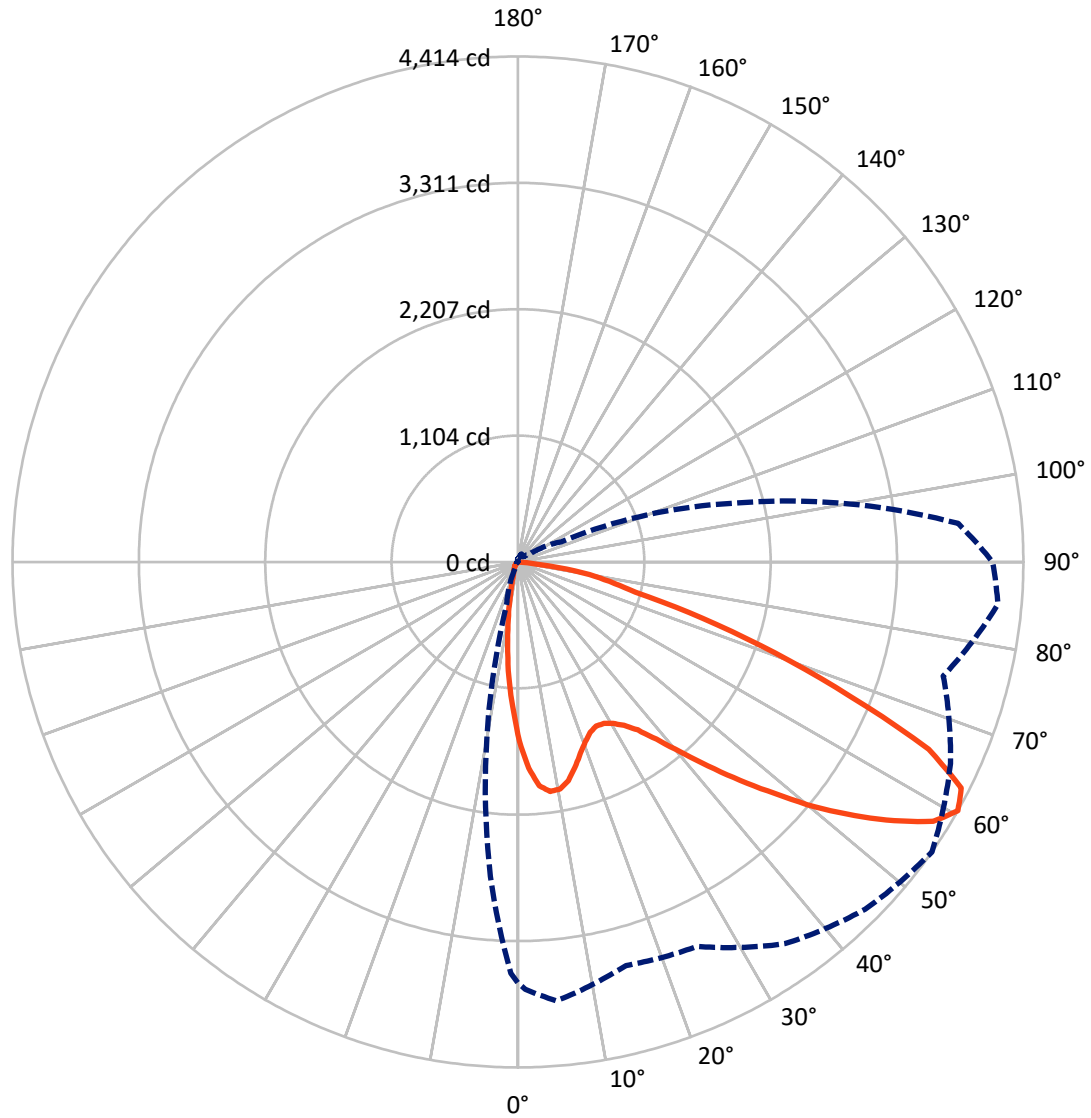
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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

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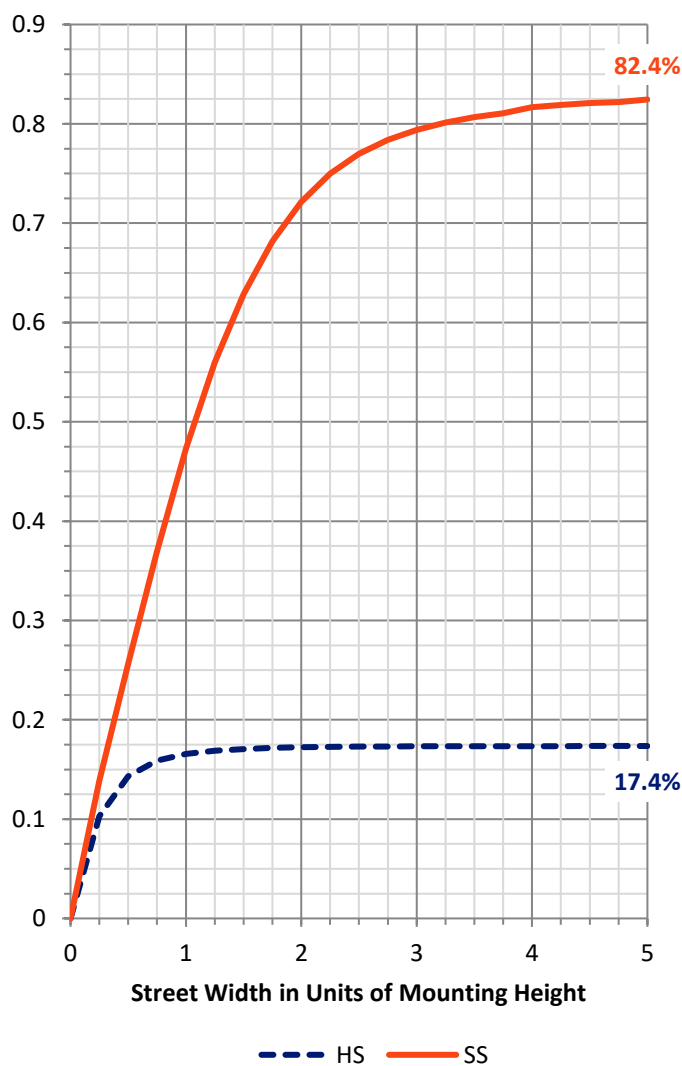
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	813.1	0.0	813.1
	% Fixture	17.5	0.0	17.5
Street Side	Lumens	3828.8	0.0	3828.8
	% Fixture	82.5	0.0	82.5
Total	Lumens	4642.0	0.0	4642.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.7	2.5
10°-20°	228.6	4.9
20°-30°	336.1	7.2
30°-40°	502.6	10.8
40°-50°	743.5	16.0
50°-60°	1068.7	23.0
60°-70°	1145.5	24.7
70°-80°	462.8	10.0
80°-90°	37.5	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°	4642.0	100.0
0°-180°	4642.0	100.0

Coefficient of Utilization



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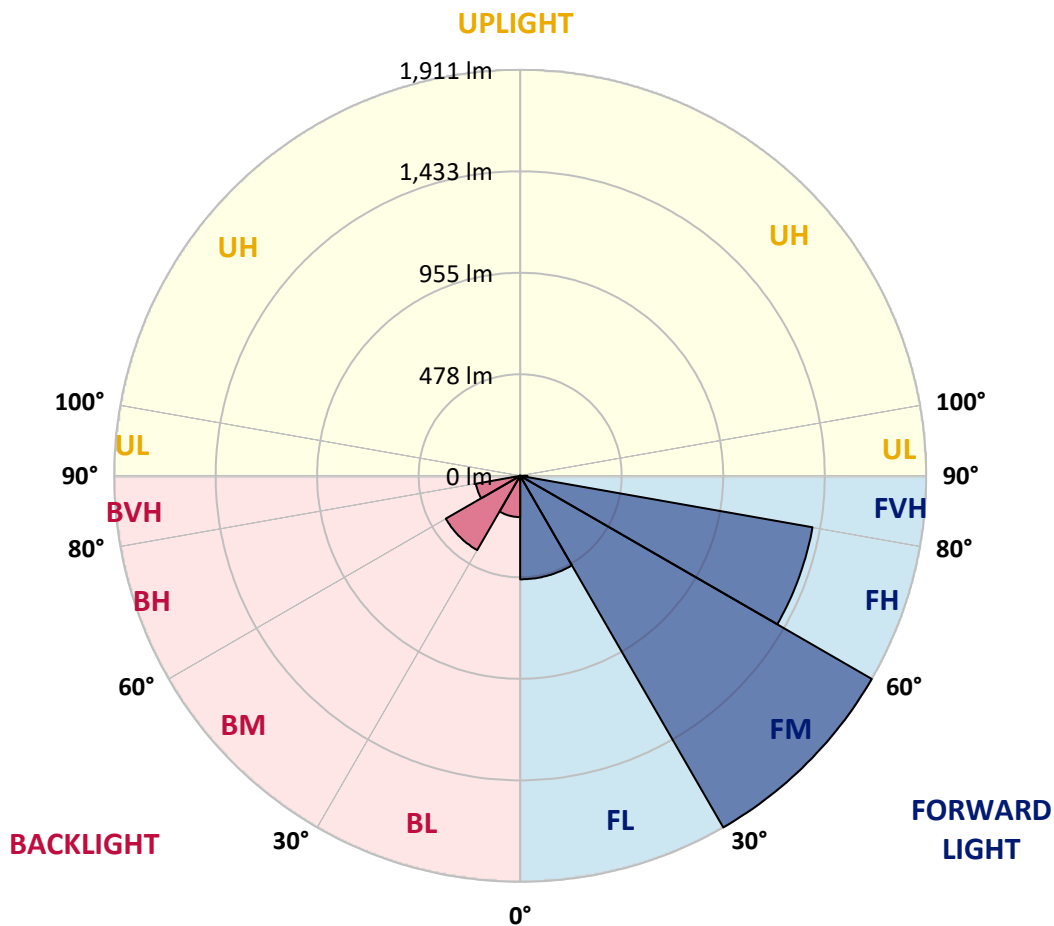
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	487.2	10.5			
FM (30°-60°)	1910.8	41.2			
FH (60°-80°)	1396.9	30.1			G1/1800
FVH (80°-90°)	34.1	0.7			G1/100
BL (0°-30°)	194.2	4.2	B1/500		
BM (30°-60°)	404.0	8.7	B1/1000		
BH (60°-80°)	211.5	4.6	B1/500		G1/500
BVH (80°-90°)	3.4	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





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1682.8	1682.8	1696.2	1736.6	1781.4	1803.8	1828.4	1803.8	1799.3	1763.5	1736.6
5°	1631.2	1642.5	1685.0	1792.6	1906.9	1965.1	1996.5	1962.9	1902.4	1823.9	1725.4
7.5°	1514.7	1528.2	1577.5	1752.2	1909.1	2025.6	2081.6	2023.4	1920.3	1776.9	1633.5
10°	1389.2	1413.9	1478.9	1678.3	1859.8	1998.7	2077.2	2016.7	1888.9	1705.2	1528.2
12.5°	1306.3	1324.3	1411.7	1611.1	1806.0	1929.3	1971.8	1958.4	1841.9	1671.6	1485.6
15°	1292.9	1315.3	1407.2	1606.6	1754.5	1828.4	1844.1	1862.0	1821.7	1676.1	1499.0
17.5°	1351.2	1375.8	1478.9	1640.2	1707.4	1707.4	1723.1	1759.0	1797.1	1720.9	1579.7
20°	1469.9	1503.5	1617.8	1727.6	1682.8	1629.0	1631.2	1678.3	1781.4	1821.7	1723.1
22.5°	1629.0	1673.8	1812.7	1864.3	1709.7	1586.4	1575.2	1615.6	1783.6	1924.8	1920.3
25°	1839.6	1893.4	2027.9	2025.6	1774.7	1568.5	1557.3	1586.4	1803.8	2036.8	2092.8
27.5°	2030.1	2074.9	2209.4	2153.3	1839.6	1590.9	1566.3	1597.6	1819.5	2119.7	2247.4
30°	2191.4	2229.5	2348.3	2245.2	1895.7	1629.0	1586.4	1635.7	1853.1	2164.5	2386.4
32.5°	2314.7	2370.7	2480.5	2316.9	1962.9	1678.3	1633.5	1700.7	1909.1	2222.8	2507.4
35°	2480.5	2509.6	2639.6	2388.6	2052.5	1783.6	1711.9	1801.5	2001.0	2299.0	2641.8
37.5°	2623.9	2700.1	2785.2	2462.6	2162.3	1913.6	1835.2	1962.9	2126.4	2386.4	2798.7
40°	2794.2	2881.6	2973.4	2567.9	2263.1	2083.9	2050.3	2175.7	2314.7	2514.1	2953.3
42.5°	2951.0	3031.7	3094.4	2691.1	2386.4	2276.6	2301.2	2433.4	2507.4	2646.3	3085.5
45°	3076.5	3148.2	3242.3	2776.3	2523.1	2491.7	2617.2	2720.2	2697.8	2760.6	3204.2
47.5°	3206.5	3293.9	3332.0	2865.9	2700.1	2774.0	2998.1	3020.5	2897.3	2865.9	3307.3
50°	3296.1	3361.1	3385.7	2975.7	2917.4	3146.0	3325.2	3363.3	3114.6	2948.8	3441.8
52.5°	3405.9	3468.6	3497.8	3105.6	3150.5	3479.8	3688.2	3679.3	3325.2	3085.5	3574.0
55°	3600.8	3659.1	3688.2	3264.7	3316.3	3766.7	3997.5	3988.5	3576.2	3282.7	3771.1
57.5°	3739.8	3789.1	3836.1	3444.0	3522.4	3950.4	4208.1	4275.3	3878.7	3531.4	3986.2
60°	3677.0	3733.0	3847.3	3647.9	3703.9	4069.2	4288.7	4414.2	4167.7	3845.1	4208.1
62.5°	3500.0	3582.9	3701.7	3809.2	3845.1	4089.3	4176.7	4344.8	4322.4	4161.0	4308.9
65°	3275.9	3361.1	3475.4	3831.6	3813.7	3789.1	3840.6	3941.4	4098.3	4313.4	4259.6
67.5°	2872.6	2995.8	3139.3	3569.5	3316.3	3175.1	3188.6	3132.5	3448.5	4093.8	4008.7
70°	2339.3	2464.8	2619.4	3027.2	2556.7	2370.7	2417.7	2381.9	2630.6	3513.5	3435.0
72.5°	1646.9	1781.4	1971.8	2523.1	1781.4	1481.1	1593.2	1687.3	1983.0	2818.8	2523.1
75°	1091.2	1187.6	1324.3	1900.1	1270.5	994.9	1019.5	1057.6	1326.5	2130.9	1593.2
77.5°	564.7	661.0	721.5	1017.3	786.5	784.3	766.3	815.6	829.1	1279.5	831.3
80°	315.9	347.3	378.7	495.2	394.4	466.1	481.8	589.3	546.7	640.8	347.3
82.5°	154.6	194.9	212.9	304.7	253.2	186.0	91.9	192.7	324.9	347.3	161.3
85°	2.2	4.5	11.2	24.6	6.7	6.7	0.0	6.7	33.6	42.6	56.0
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°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1707.4	1689.5	1638.0	1593.2	1523.7	1494.6	1447.5	1436.3	1398.2	1360.1	1337.7
5°	1676.1	1624.5	1519.2	1416.1	1322.0	1234.6	1169.7	1115.9	1055.4	1030.7	1046.4
7.5°	1550.6	1478.9	1326.5	1205.5	1071.1	970.2	878.4	831.3	775.3	752.9	737.2
10°	1447.5	1360.1	1185.3	1026.3	898.5	820.1	764.1	696.9	631.9	580.3	573.6
12.5°	1382.5	1288.4	1093.5	925.4	831.3	755.1	690.1	602.8	528.8	479.5	457.1
15°	1380.3	1263.8	1064.3	887.3	777.5	681.2	598.3	499.7	423.5	360.8	338.3
17.5°	1461.0	1319.8	1077.8	847.0	701.3	575.9	468.3	365.2	291.3	248.7	226.3
20°	1602.1	1447.5	1102.4	806.7	627.4	468.3	329.4	248.7	199.4	179.3	170.3
22.5°	1772.4	1588.7	1147.3	775.3	551.2	354.0	233.0	179.3	156.9	143.4	141.2
25°	1978.6	1767.9	1210.0	752.9	481.8	273.4	181.5	147.9	134.4	125.5	121.0
27.5°	2160.1	1940.5	1304.1	735.0	414.5	224.1	154.6	130.0	116.5	109.8	107.6
30°	2294.5	2081.6	1411.7	694.6	360.8	194.9	145.6	123.2	107.6	98.6	96.4
32.5°	2449.1	2189.2	1463.2	654.3	329.4	172.5	127.7	109.8	98.6	89.6	87.4
35°	2619.4	2339.3	1514.7	622.9	309.2	154.6	116.5	96.4	82.9	73.9	71.7
37.5°	2816.6	2505.1	1561.8	596.0	298.0	143.4	109.8	89.6	76.2	67.2	62.7
40°	3036.2	2635.1	1593.2	578.1	282.3	136.7	105.3	85.1	71.7	60.5	58.3
42.5°	3211.0	2785.2	1602.1	571.4	266.6	134.4	100.8	82.9	67.2	58.3	53.8
45°	3336.4	2917.4	1633.5	564.7	255.4	125.5	98.6	80.7	62.7	53.8	49.3
47.5°	3428.3	3058.6	1662.6	557.9	244.2	114.3	105.3	80.7	60.5	49.3	44.8
50°	3598.6	3224.4	1718.6	540.0	228.6	103.1	105.3	78.4	58.3	47.1	42.6
52.5°	3782.3	3439.5	1844.1	519.8	208.4	91.9	96.4	78.4	56.0	44.8	40.3
55°	3957.1	3701.7	1960.6	493.0	174.8	82.9	89.6	78.4	51.5	42.6	38.1
57.5°	4084.8	3876.5	2023.4	459.3	138.9	73.9	73.9	73.9	44.8	35.9	33.6
60°	4145.3	3858.5	1994.2	416.8	112.0	65.0	60.5	76.2	40.3	31.4	29.1
62.5°	4098.3	3672.5	1866.5	372.0	98.6	56.0	49.3	67.2	35.9	26.9	24.6
65°	3952.6	3358.8	1653.7	336.1	96.4	47.1	40.3	40.3	29.1	22.4	20.2
67.5°	3591.9	2946.6	1400.5	302.5	98.6	40.3	33.6	31.4	24.6	17.9	15.7
70°	2986.9	2368.4	1059.9	286.8	98.6	33.6	29.1	24.6	17.9	15.7	13.4
72.5°	1897.9	1469.9	735.0	253.2	98.6	26.9	24.6	22.4	13.4	11.2	6.7
75°	1124.8	894.0	345.1	194.9	82.9	22.4	17.9	13.4	6.7	4.5	4.5
77.5°	661.0	573.6	150.1	107.6	35.9	13.4	9.0	4.5	2.2	0.0	0.0
80°	271.1	235.3	56.0	31.4	15.7	6.7	2.2	0.0	0.0	0.0	0.0
82.5°	159.1	165.8	20.2	13.4	4.5	0.0	0.0	0.0	0.0	0.0	0.0
85°	49.3	76.2	0.0	2.2	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°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1335.5	1313.1	1304.1	1290.7	1279.5	1266.0	1283.9	1299.6	1281.7	1301.9	1333.2
5°	1030.7	997.1	1041.9	1012.8	1028.5	1010.6	985.9	990.4	994.9	985.9	1010.6
7.5°	714.8	730.5	741.7	739.4	752.9	728.2	728.2	712.6	690.1	699.1	694.6
10°	542.3	510.9	522.1	519.8	544.5	510.9	488.5	463.8	461.6	466.1	461.6
12.5°	432.5	394.4	369.7	356.3	354.0	338.3	318.2	293.5	277.8	275.6	289.1
15°	324.9	295.8	273.4	253.2	251.0	219.6	192.7	174.8	159.1	161.3	170.3
17.5°	224.1	215.1	208.4	190.5	179.3	152.4	130.0	118.8	114.3	114.3	116.5
20°	163.6	159.1	154.6	147.9	136.7	116.5	103.1	98.6	96.4	96.4	98.6
22.5°	136.7	130.0	125.5	123.2	114.3	98.6	89.6	85.1	85.1	85.1	85.1
25°	116.5	112.0	109.8	105.3	98.6	85.1	78.4	76.2	73.9	73.9	76.2
27.5°	105.3	96.4	91.9	91.9	85.1	76.2	69.5	67.2	65.0	65.0	67.2
30°	94.1	87.4	82.9	78.4	73.9	65.0	60.5	58.3	58.3	58.3	58.3
32.5°	82.9	78.4	73.9	69.5	62.7	58.3	53.8	51.5	49.3	49.3	49.3
35°	67.2	62.7	62.7	60.5	53.8	49.3	44.8	42.6	40.3	42.6	42.6
37.5°	58.3	51.5	51.5	51.5	47.1	42.6	38.1	35.9	33.6	33.6	35.9
40°	53.8	44.8	42.6	42.6	42.6	35.9	31.4	29.1	26.9	26.9	29.1
42.5°	47.1	40.3	35.9	33.6	35.9	31.4	24.6	22.4	22.4	22.4	22.4
45°	44.8	35.9	31.4	26.9	29.1	26.9	20.2	17.9	17.9	17.9	17.9
47.5°	40.3	31.4	26.9	20.2	20.2	20.2	15.7	13.4	13.4	13.4	13.4
50°	38.1	29.1	20.2	17.9	15.7	15.7	13.4	11.2	9.0	9.0	11.2
52.5°	35.9	26.9	17.9	13.4	11.2	11.2	9.0	9.0	6.7	6.7	6.7
55°	33.6	22.4	15.7	11.2	9.0	6.7	6.7	6.7	6.7	4.5	6.7
57.5°	29.1	20.2	11.2	9.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5
60°	26.9	15.7	9.0	4.5	2.2	2.2	2.2	2.2	2.2	2.2	2.2
62.5°	22.4	13.4	6.7	4.5	2.2	0.0	2.2	2.2	2.2	2.2	2.2
65°	17.9	11.2	4.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	13.4	9.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	11.2	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	6.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.2	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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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1331.0	1344.4	1393.7	1438.5	1487.8	1541.6	1586.4	1651.4	1671.6	1682.8
5°	1006.1	1055.4	1115.9	1169.7	1266.0	1355.6	1461.0	1575.2	1622.3	1631.2
7.5°	726.0	759.6	824.6	932.1	1019.5	1154.0	1290.7	1443.0	1514.7	1514.7
10°	499.7	555.7	638.6	739.4	856.0	974.7	1133.8	1306.3	1373.6	1389.2
12.5°	318.2	380.9	493.0	602.8	737.2	853.7	1012.8	1207.8	1283.9	1306.3
15°	183.7	226.3	329.4	450.4	611.7	759.6	938.9	1176.4	1270.5	1292.9
17.5°	123.2	138.9	194.9	300.3	479.5	676.7	916.5	1210.0	1324.3	1351.2
20°	103.1	109.8	130.0	186.0	338.3	589.3	907.5	1283.9	1422.9	1469.9
22.5°	89.6	96.4	109.8	136.7	242.0	497.4	900.8	1391.5	1579.7	1629.0
25°	78.4	85.1	96.4	116.5	170.3	405.6	912.0	1543.9	1781.4	1839.6
27.5°	69.5	76.2	87.4	100.8	136.7	313.7	914.2	1687.3	1969.6	2030.1
30°	60.5	67.2	76.2	87.4	109.8	242.0	873.9	1832.9	2122.0	2191.4
32.5°	53.8	58.3	67.2	76.2	91.9	188.2	791.0	1944.9	2247.4	2314.7
35°	44.8	49.3	58.3	65.0	80.7	152.4	699.1	2048.0	2397.6	2480.5
37.5°	38.1	42.6	49.3	58.3	71.7	118.8	607.2	2137.7	2543.2	2623.9
40°	31.4	38.1	44.8	51.5	65.0	91.9	506.4	2234.0	2709.0	2794.2
42.5°	26.9	31.4	38.1	47.1	56.0	73.9	416.8	2294.5	2850.2	2951.0
45°	20.2	26.9	35.9	47.1	47.1	58.3	358.5	2339.3	2951.0	3076.5
47.5°	15.7	22.4	31.4	44.8	42.6	49.3	329.4	2417.7	3090.0	3206.5
50°	13.4	17.9	31.4	38.1	35.9	42.6	338.3	2487.2	3195.3	3296.1
52.5°	11.2	15.7	26.9	29.1	31.4	38.1	356.3	2614.9	3327.5	3405.9
55°	9.0	13.4	20.2	24.6	26.9	35.9	385.4	2774.0	3500.0	3600.8
57.5°	6.7	11.2	15.7	20.2	24.6	33.6	405.6	2874.8	3661.3	3739.8
60°	6.7	9.0	13.4	17.9	22.4	31.4	376.4	2756.1	3591.9	3677.0
62.5°	4.5	9.0	11.2	15.7	17.9	24.6	277.8	2496.2	3383.5	3500.0
65°	2.2	6.7	9.0	11.2	13.4	17.9	159.1	2182.5	3137.0	3275.9
67.5°	0.0	4.5	6.7	9.0	9.0	13.4	73.9	1761.2	2731.4	2872.6
70°	0.0	2.2	4.5	4.5	6.7	11.2	38.1	1243.6	2148.9	2339.3
72.5°	2.2	2.2	4.5	4.5	4.5	9.0	24.6	752.9	1445.3	1646.9
75°	2.2	2.2	2.2	2.2	4.5	6.7	15.7	484.0	909.7	1091.2
77.5°	2.2	4.5	2.2	2.2	2.2	4.5	9.0	268.9	497.4	564.7
80°	2.2	2.2	2.2	2.2	2.2	4.5	4.5	24.6	235.3	315.9
82.5°	0.0	0.0	0.0	0.0	2.2	2.2	2.2	2.2	121.0	154.6
85°	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.2	2.2
87.5°	0.0	0.0	0.0	2.2	2.2	2.2	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



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			

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Scotopic Flux vs. Wavelength



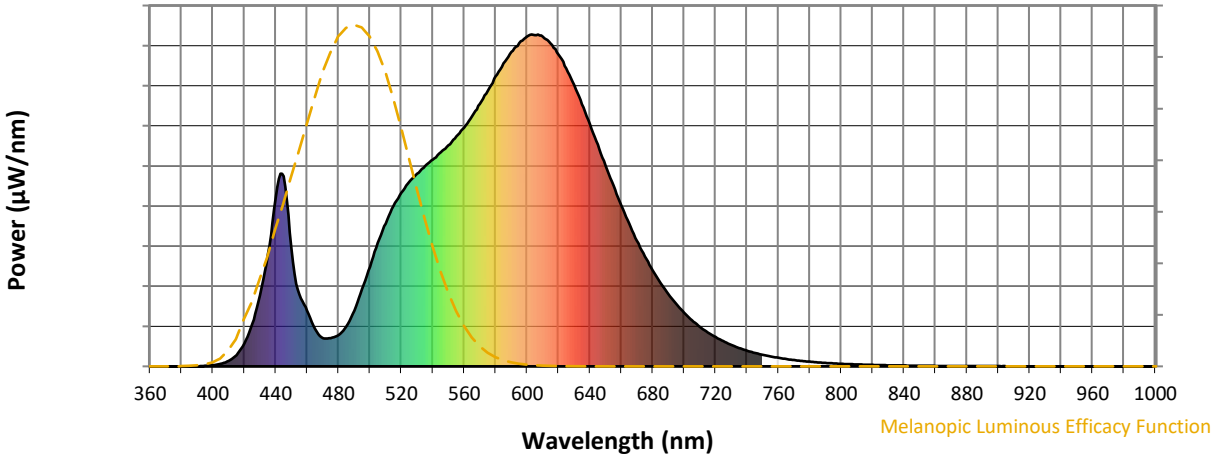
Scotopic Lumens: NR

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

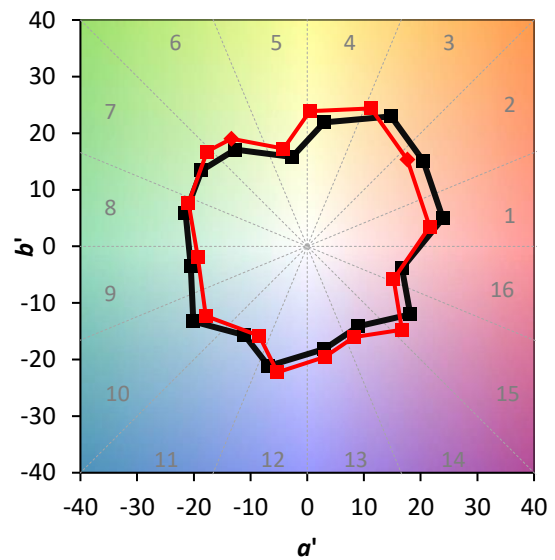
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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