

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: P633038

Luminaire Tested: GWS-SA2D-830-U-SLR-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P633038
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-SA2D-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: 4948.4 lumens
Efficiency: N/A
Efficacy: 60.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

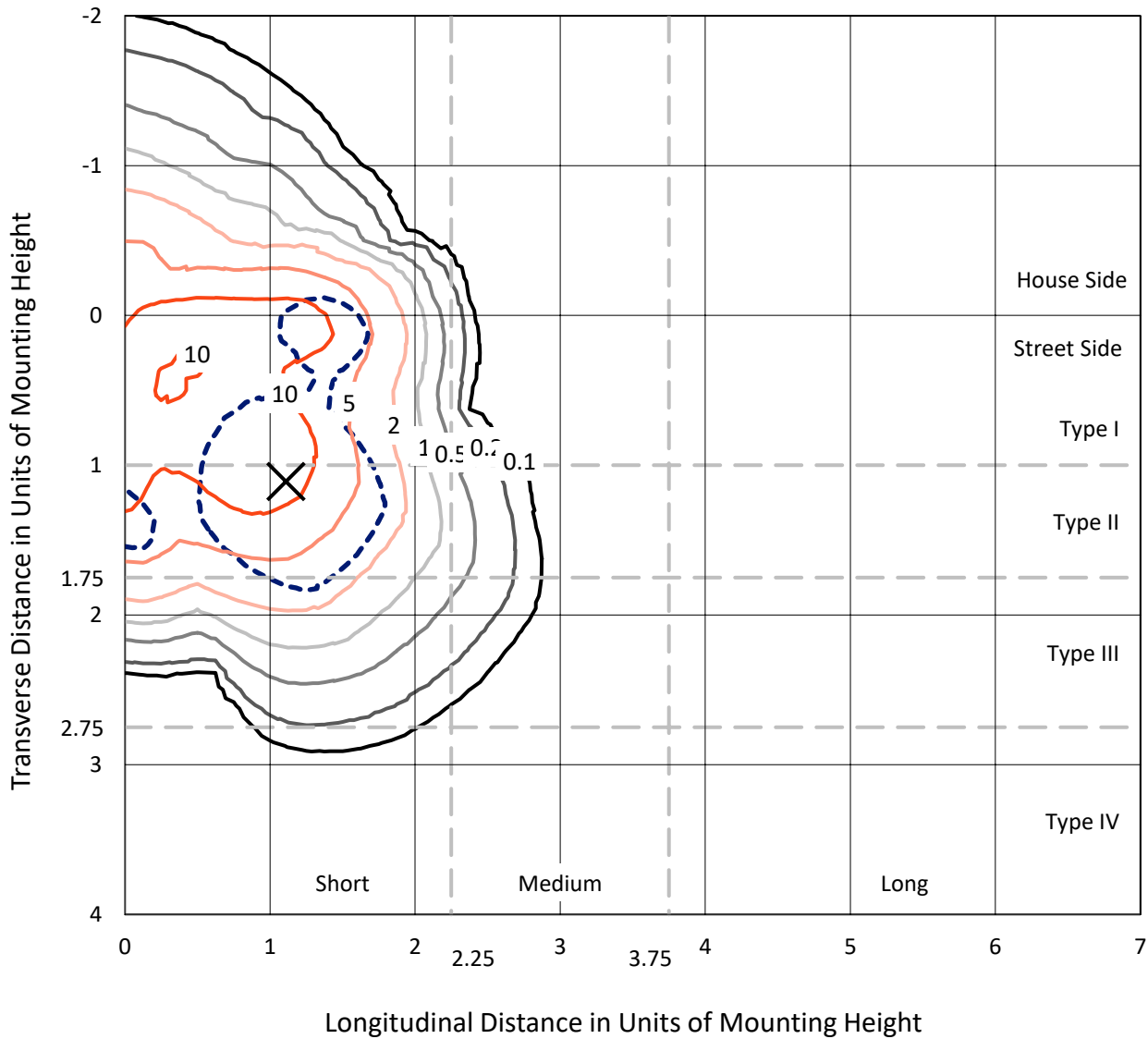
Input Watts (W): 82.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

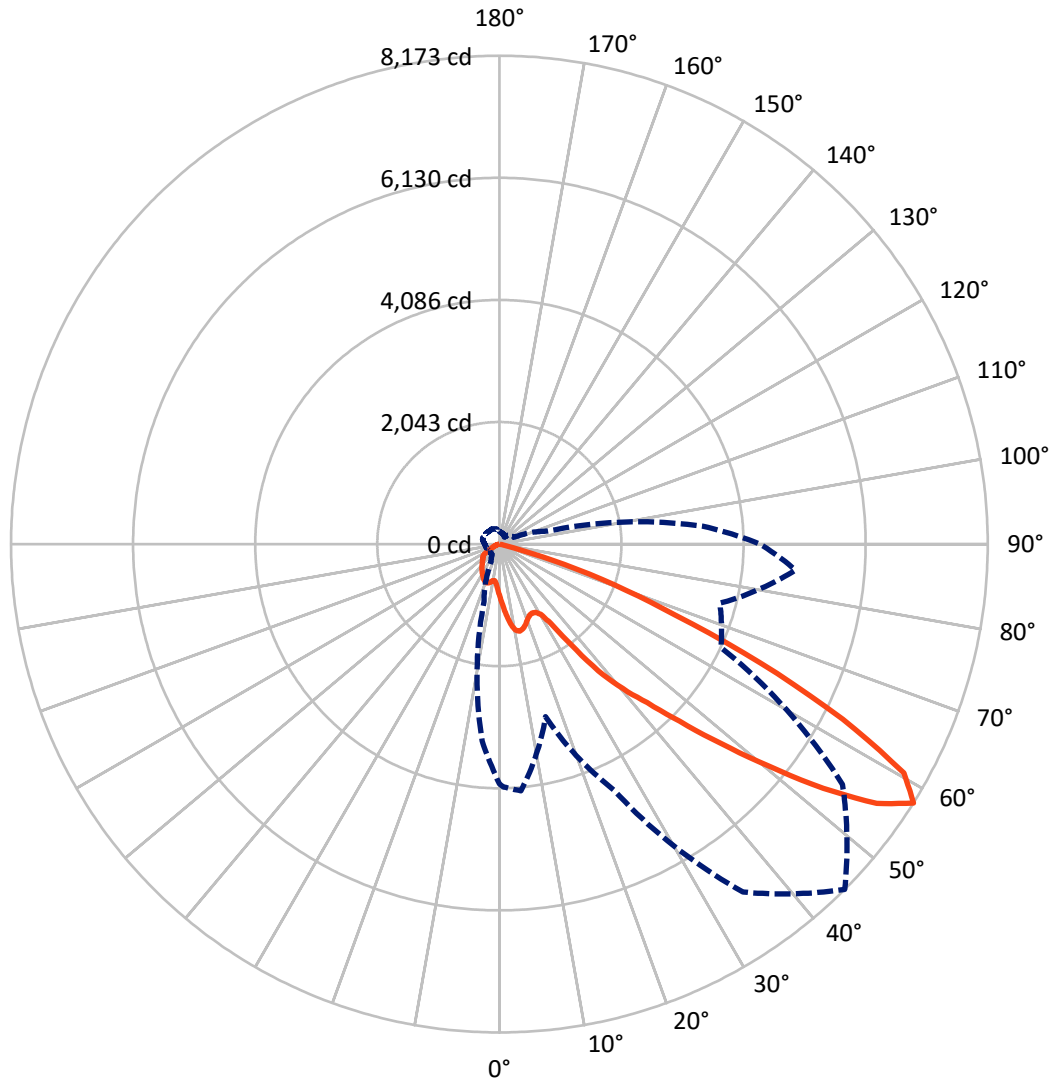
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.5 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	1108.1	0.0	1108.1
	% Fixture	22.4	0.0	22.4
Street Side	Lumens	3840.3	0.0	3840.3
	% Fixture	77.6	0.0	77.6
Total	Lumens	4948.4	0.0	4948.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.6	1.7
10°-20°	276.8	5.6
20°-30°	449.6	9.1
30°-40°	694.7	14.0
40°-50°	1114.0	22.5
50°-60°	1522.6	30.8
60°-70°	737.4	14.9
70°-80°	67.5	1.4
80°-90°	0.2	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°	4948.4	100.0
0°-180°	4948.4	100.0

Coefficient of Utilization

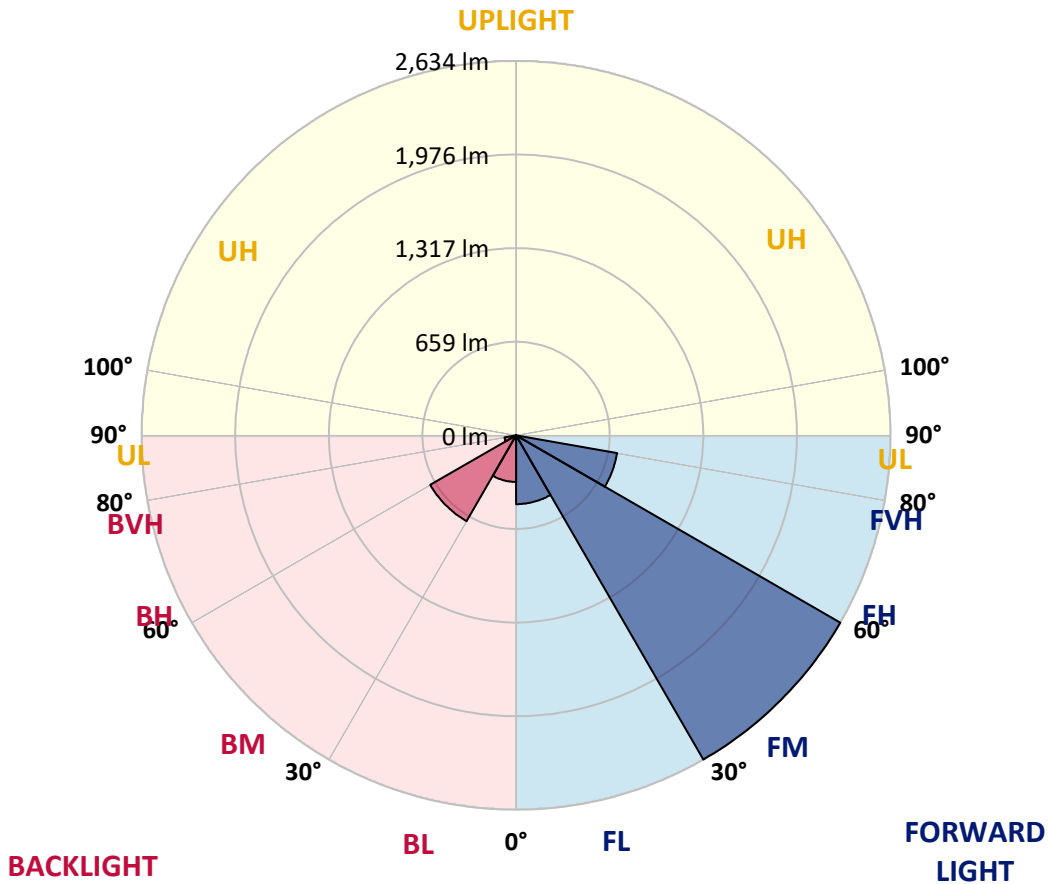


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	484.1	9.8			
FM (30°-60°)	2634.1	53.2			
FH (60°-80°)	721.9	14.6			G1/1800
FVH (80°-90°)	0.2	0.0			G0/10
BL (0°-30°)	327.9	6.6	B1/500		
BM (30°-60°)	697.2	14.1	B1/1000		
BH (60°-80°)	83.1	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-G1
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7
2.5°	942.2	948.2	958.2	979.4	997.4	1009.4	1014.7	1013.4	1006.0	1000.7	990.1
5°	1043.3	1043.3	1062.6	1111.1	1148.3	1171.6	1183.6	1176.3	1161.6	1138.4	1102.5
7.5°	1131.7	1135.0	1167.6	1236.8	1293.3	1326.5	1345.8	1341.8	1315.9	1271.4	1199.5
10°	1200.9	1204.9	1248.1	1332.5	1399.0	1432.9	1461.5	1464.2	1435.6	1376.4	1294.0
12.5°	1268.0	1272.0	1317.2	1398.4	1456.9	1470.8	1496.1	1506.1	1498.8	1456.9	1371.1
15°	1340.5	1349.8	1388.4	1448.9	1473.5	1456.9	1473.5	1491.4	1516.1	1512.1	1434.9
17.5°	1411.7	1418.3	1457.5	1478.8	1451.6	1408.3	1416.3	1437.6	1493.4	1548.0	1498.1
20°	1477.5	1486.8	1519.4	1491.4	1409.0	1341.8	1342.5	1370.4	1455.5	1569.9	1562.6
22.5°	1546.6	1560.6	1583.9	1505.4	1369.8	1289.3	1292.6	1317.9	1425.6	1590.5	1635.7
25°	1637.1	1650.4	1665.7	1540.0	1357.1	1263.4	1276.0	1299.3	1425.6	1625.8	1726.2
27.5°	1759.4	1768.7	1769.4	1604.5	1379.1	1267.4	1294.0	1320.6	1468.2	1696.2	1847.2
30°	1913.0	1927.6	1908.4	1704.9	1447.6	1320.6	1359.8	1393.0	1559.9	1815.3	2025.4
32.5°	2099.9	2120.5	2094.5	1853.8	1590.5	1504.1	1575.2	1594.5	1706.2	1987.5	2227.5
35°	2319.3	2336.6	2308.7	2060.0	1924.3	1940.3	2069.3	2044.7	2000.1	2199.6	2463.6
37.5°	2560.0	2576.0	2522.1	2372.5	2417.7	2486.9	2693.0	2608.5	2464.9	2472.9	2719.6
40°	2780.8	2798.0	2713.6	2712.3	2805.4	2931.7	3180.4	3064.0	2868.5	2830.6	2959.6
42.5°	3009.5	3021.5	2945.0	2893.1	3104.6	3364.6	3627.9	3471.0	3135.8	3094.6	3260.2
45°	3336.0	3361.2	3224.9	2982.2	3373.9	3862.6	4229.6	3923.1	3318.0	3284.8	3720.3
47.5°	3816.1	3834.7	3556.7	3038.1	3624.6	4483.0	4981.7	4509.6	3478.3	3402.5	4349.3
50°	4213.0	4225.7	3861.9	3099.3	3891.2	5151.9	5838.8	5205.1	3658.5	3597.3	4936.5
52.5°	4505.6	4553.5	4262.9	3224.9	4241.6	5938.5	6787.7	6029.0	3939.7	3973.6	5423.2
55°	4566.1	4631.3	4536.8	3302.1	4550.1	6739.8	7664.0	6766.4	4220.3	4258.9	5586.8
57.5°	4012.9	4064.7	4143.2	2990.9	4542.8	7106.8	8172.7	7011.1	4092.7	3819.4	4974.4
60°	3006.2	3042.1	3184.4	2286.0	4177.8	6782.3	7776.4	6594.8	3578.7	2914.4	3790.1
62.5°	1782.7	1798.6	1978.8	1480.8	3467.6	5840.8	6449.2	5690.5	2828.0	1960.2	2321.3
65°	684.2	677.6	815.2	730.8	2550.0	4652.5	4796.8	4338.0	1940.3	898.3	885.0
67.5°	105.7	101.1	136.3	216.1	1839.2	3224.3	3165.1	3126.5	1215.5	209.5	182.9
70°	23.9	23.9	29.3	63.8	1123.7	1894.4	2027.4	1933.0	778.0	44.6	23.9
72.5°	11.3	11.3	14.0	27.3	406.9	780.6	909.6	895.7	252.7	14.6	8.6
75°	4.0	4.7	4.7	6.0	24.6	40.6	93.1	66.5	16.0	0.0	0.0
77.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.7	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°	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7
2.5°	966.8	962.2	944.9	921.6	899.0	879.0	858.4	833.8	815.9	795.3	788.6
5°	1074.5	1045.3	998.1	948.9	903.6	865.1	827.8	787.9	758.7	729.4	719.5
7.5°	1165.6	1122.4	1045.9	972.1	910.3	855.8	801.9	747.4	704.8	670.3	659.6
10°	1247.4	1197.5	1095.1	1004.1	926.3	863.1	797.9	729.4	674.2	633.0	623.0
12.5°	1317.9	1260.1	1137.0	1028.0	932.9	860.4	797.3	742.7	692.9	645.7	633.0
15°	1377.1	1313.2	1172.3	1043.9	922.9	827.2	772.0	763.3	759.4	707.5	682.9
17.5°	1434.9	1363.1	1200.9	1051.3	895.0	768.7	728.8	768.0	809.9	776.0	744.7
20°	1495.4	1413.7	1230.1	1052.6	848.5	702.8	696.2	758.0	811.2	800.6	771.3
22.5°	1566.6	1476.8	1266.7	1051.9	789.9	647.0	672.2	738.7	782.0	781.3	758.0
25°	1669.7	1556.6	1315.9	1055.9	726.1	603.8	645.7	706.2	741.4	740.1	720.8
27.5°	1780.0	1651.7	1379.7	1065.9	671.6	578.5	614.4	661.6	692.2	690.9	674.2
30°	1935.0	1761.4	1440.9	1066.6	632.4	565.2	579.8	612.4	641.7	638.3	625.7
32.5°	2123.1	1885.1	1492.1	1028.7	607.8	552.6	543.9	560.5	583.1	578.5	575.2
35°	2350.5	2032.0	1536.0	945.5	569.8	527.3	504.0	507.3	523.3	526.0	524.6
37.5°	2609.9	2206.9	1590.5	835.8	518.6	490.7	459.5	456.8	466.1	474.8	481.4
40°	2865.9	2403.7	1664.3	724.8	472.1	444.2	414.3	407.6	411.6	426.9	440.9
42.5°	3153.8	2631.8	1744.1	629.7	440.2	393.0	364.4	351.8	363.1	387.7	404.3
45°	3568.7	2951.6	1821.9	553.9	426.9	347.8	309.2	307.9	320.5	352.4	371.0
47.5°	4151.2	3365.2	1873.1	494.7	426.2	312.5	266.6	274.6	289.2	320.5	341.8
50°	4719.0	3883.2	1816.6	449.5	412.3	289.2	234.7	250.7	265.3	292.6	314.5
52.5°	5061.5	4161.8	1596.5	406.9	369.0	278.6	203.5	231.4	234.1	258.7	281.9
55°	5025.6	3981.6	1222.8	341.1	305.2	263.3	170.9	208.8	210.1	228.7	248.7
57.5°	4362.0	3418.4	839.8	276.6	229.4	217.4	141.0	176.2	188.8	200.1	214.8
60°	3250.9	2494.2	374.4	224.7	145.6	147.0	120.4	133.0	152.3	165.6	178.2
62.5°	1915.7	1434.9	152.3	135.0	80.5	92.4	97.1	97.1	109.0	119.0	127.0
65°	724.1	502.0	61.8	67.8	41.9	43.2	57.2	70.5	79.8	88.4	99.1
67.5°	127.0	87.8	31.9	25.3	24.6	21.9	29.3	45.9	51.2	57.8	62.5
70°	21.3	18.0	13.3	12.6	11.3	12.0	19.3	32.6	35.9	37.9	39.9
72.5°	6.0	5.3	4.0	3.3	2.7	3.3	12.0	25.3	26.6	27.9	29.9
75°	0.0	0.0	0.0	0.0	0.0	0.0	4.7	18.0	19.3	19.9	21.9
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	5.3	6.6	5.3
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°	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7
2.5°	784.6	771.3	764.0	760.0	760.0	754.7	748.7	746.7	755.4	755.4	770.0
5°	706.8	696.2	684.2	676.9	665.6	667.6	660.9	660.3	668.9	672.9	688.2
7.5°	653.0	639.7	632.4	627.7	621.7	619.1	613.1	611.1	615.7	622.4	637.0
10°	617.1	615.1	614.4	617.7	617.7	614.4	609.1	605.8	607.1	619.7	636.3
12.5°	626.4	630.4	631.7	637.0	639.7	637.0	633.0	634.3	643.0	666.3	690.9
15°	666.9	663.6	662.3	664.9	666.9	664.3	662.9	672.9	702.8	736.1	764.0
17.5°	710.2	688.9	679.6	679.6	680.9	679.6	680.9	700.2	748.7	782.0	802.6
20°	732.1	692.9	678.2	674.9	677.6	678.2	682.9	704.8	758.0	781.3	786.0
22.5°	725.4	676.2	659.6	657.0	659.6	662.3	666.9	685.5	735.4	747.4	745.4
25°	692.2	643.7	630.4	630.4	636.3	635.7	637.7	651.0	692.2	699.5	696.2
27.5°	650.3	604.4	593.1	599.8	605.1	603.8	604.4	615.7	646.3	648.3	645.0
30°	607.8	567.9	557.2	565.2	572.5	571.2	571.8	583.1	602.4	600.4	595.8
32.5°	564.5	535.3	527.3	531.9	543.3	541.9	544.6	556.6	563.9	555.2	549.9
35°	524.6	509.3	503.4	506.0	514.7	516.7	521.3	529.3	529.3	518.6	509.3
37.5°	487.4	485.4	481.4	478.1	486.1	492.1	498.7	508.0	494.7	479.4	470.8
40°	452.8	461.5	456.1	447.5	452.2	460.8	474.1	481.4	465.5	450.2	435.5
42.5°	420.9	435.5	433.5	422.9	426.9	434.9	450.2	456.1	437.5	420.2	406.3
45°	390.3	410.9	412.3	399.0	403.0	410.9	428.9	430.9	406.9	388.3	378.3
47.5°	363.7	386.3	387.0	377.0	378.3	389.7	406.3	406.9	379.7	362.4	349.8
50°	338.5	364.4	366.4	357.7	359.1	372.4	386.3	383.7	354.4	336.5	325.2
52.5°	307.9	343.1	347.8	343.8	349.1	359.7	368.4	359.1	325.2	307.2	297.2
55°	274.6	320.5	330.5	327.8	333.8	342.4	344.4	338.5	295.9	277.9	268.6
57.5°	236.1	264.0	281.3	275.9	280.6	289.2	295.2	290.6	258.7	244.7	236.7
60°	195.5	214.1	218.1	209.5	205.5	220.8	234.7	228.7	201.5	192.8	183.5
62.5°	143.0	164.2	166.9	155.6	150.9	167.6	179.5	173.5	143.6	134.3	127.0
65°	114.4	134.3	139.6	129.0	126.3	139.0	146.3	131.7	110.4	100.4	92.4
67.5°	75.1	91.1	105.1	104.4	99.1	103.1	97.7	85.8	70.5	65.2	59.8
70°	46.5	55.9	64.5	67.8	67.2	65.8	58.5	49.9	45.2	43.2	40.6
72.5°	35.9	45.2	51.9	53.9	54.5	52.5	46.5	38.6	33.9	31.3	29.3
75°	26.6	33.9	39.2	41.9	43.2	41.9	35.9	30.6	25.9	23.9	21.9
77.5°	9.3	11.3	14.0	15.3	14.6	14.0	12.6	12.6	10.0	9.3	8.0
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: GWS-SA2D-830-U-SLR-W-GRSBK

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7	869.7
2.5°	786.6	798.6	820.5	840.5	861.8	883.7	907.6	932.2	943.5	942.2
5°	711.5	737.4	773.3	812.6	856.4	903.6	956.2	1010.0	1033.3	1043.3
7.5°	664.3	700.8	748.1	797.9	855.8	922.9	1002.1	1086.5	1120.4	1131.7
10°	670.3	712.8	752.0	800.6	862.4	949.5	1047.9	1148.3	1188.2	1200.9
12.5°	718.8	728.1	738.7	778.6	856.4	969.5	1089.8	1209.5	1255.4	1268.0
15°	762.7	719.5	699.5	736.1	835.2	983.4	1132.4	1275.3	1325.9	1340.5
17.5°	764.7	699.5	655.0	683.6	800.6	989.4	1174.3	1342.5	1397.7	1411.7
20°	740.1	677.6	620.4	621.0	753.4	988.1	1208.9	1403.0	1464.9	1477.5
22.5°	704.2	651.6	592.5	571.8	702.8	985.4	1246.8	1467.5	1534.7	1546.6
25°	664.3	618.4	565.9	534.6	652.3	988.1	1299.9	1552.0	1625.8	1637.1
27.5°	621.0	581.8	545.2	520.0	609.7	998.1	1363.8	1659.7	1747.4	1759.4
30°	575.8	546.6	531.9	516.7	583.1	1000.7	1432.9	1785.3	1896.4	1913.0
32.5°	531.3	515.3	516.0	518.6	557.9	982.1	1496.1	1925.0	2073.3	2099.9
35°	490.1	485.4	498.7	512.0	521.3	934.2	1551.3	2089.9	2292.0	2319.3
37.5°	454.8	458.8	475.4	488.7	481.4	866.4	1624.4	2296.0	2536.7	2560.0
40°	420.9	430.9	450.2	456.1	450.8	787.3	1712.2	2494.8	2748.8	2780.8
42.5°	389.7	397.0	424.2	425.6	442.2	706.8	1796.7	2708.9	2992.9	3009.5
45°	364.4	363.1	391.0	399.6	453.5	617.7	1879.1	2994.2	3312.0	3336.0
47.5°	339.8	338.5	345.1	384.3	458.1	535.3	1960.9	3411.8	3774.8	3816.1
50°	316.5	318.5	297.9	377.0	432.9	472.1	1998.1	3798.1	4195.7	4213.0
52.5°	295.9	288.6	252.7	353.1	379.0	412.3	1892.4	3973.6	4456.4	4505.6
55°	266.6	226.1	208.1	286.6	299.2	359.7	1550.0	3871.9	4479.0	4566.1
57.5°	228.1	177.5	176.9	211.4	211.4	333.8	992.7	3308.0	3859.9	4012.9
60°	175.5	137.6	146.3	147.0	135.6	243.4	557.2	2396.4	2853.9	3006.2
62.5°	125.0	105.1	110.4	87.8	77.8	121.7	267.3	1379.7	1761.4	1782.7
65°	83.8	71.1	57.8	48.5	47.9	51.9	110.4	498.7	606.4	684.2
67.5°	55.2	43.2	30.6	30.6	34.6	34.6	41.9	82.5	115.7	105.7
70°	35.9	29.9	19.3	18.6	22.6	22.6	21.3	22.6	23.9	23.9
72.5°	26.6	22.6	11.3	10.0	12.6	13.3	12.0	11.3	11.3	11.3
75°	19.9	16.0	6.6	4.7	6.0	8.0	6.6	4.7	4.7	4.0
77.5°	8.0	6.0	2.7	2.0	3.3	4.7	4.0	2.0	1.3	1.3
80°	0.7	1.3	1.3	1.3	2.0	2.7	3.3	1.3	0.7	0.7
82.5°	0.0	0.7	0.7	0.7	1.3	2.0	2.7	1.3	0.7	0.7
85°	0.0	0.0	0.0	0.0	1.3	2.0	1.3	0.7	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.7	2.0	1.3	0.7	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



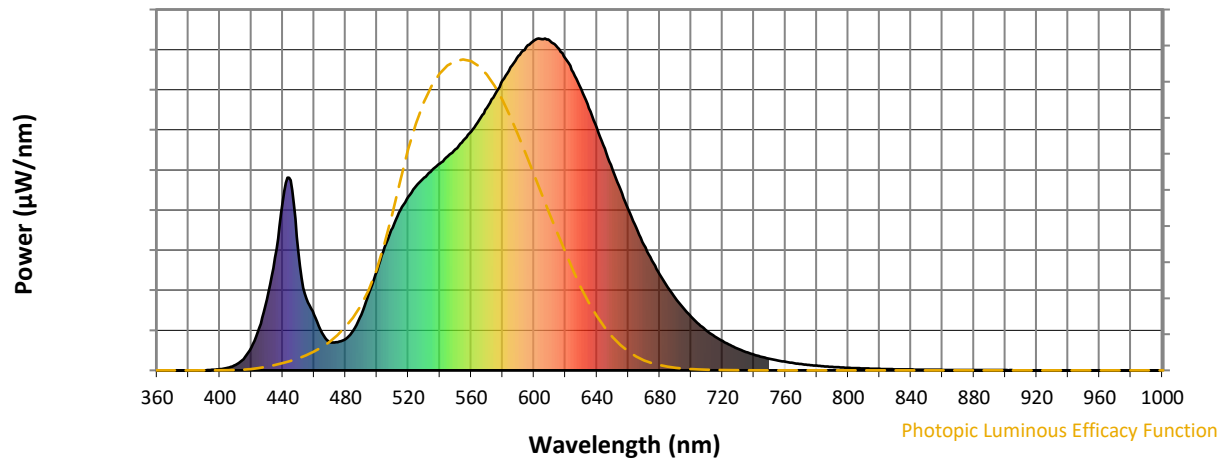
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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			

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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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



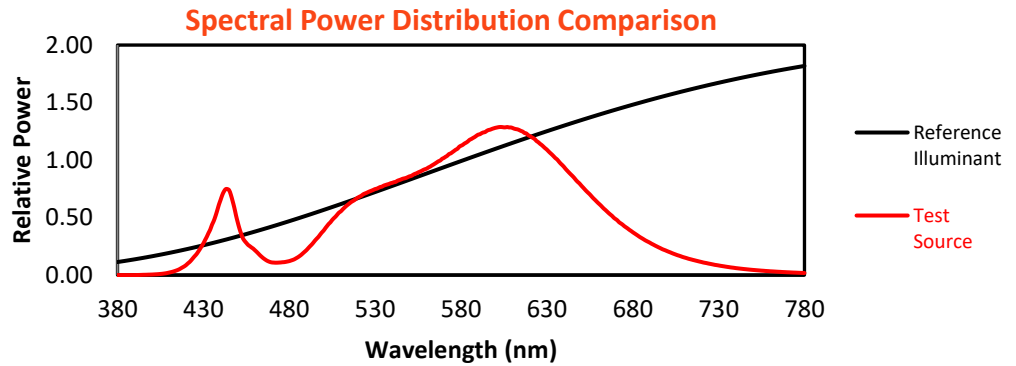
Melanopic Lumens: NR

M/P: 2.32

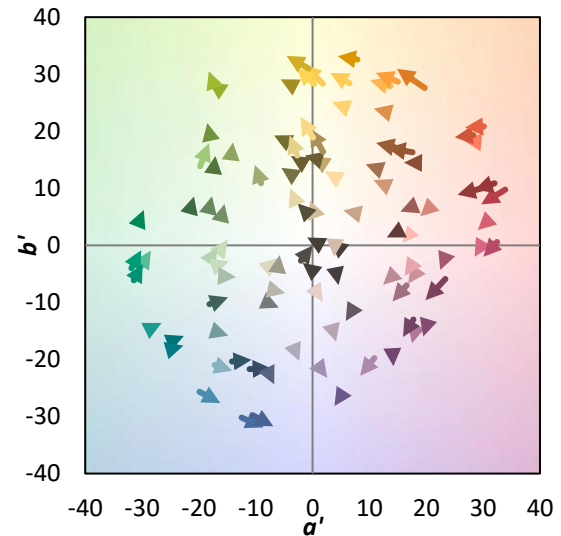
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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