

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: P632541

Luminaire Tested: GWS-SA2C-830-U-SLL-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P632541
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-40)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2C-830-U-SLL-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (32) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4451.6 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

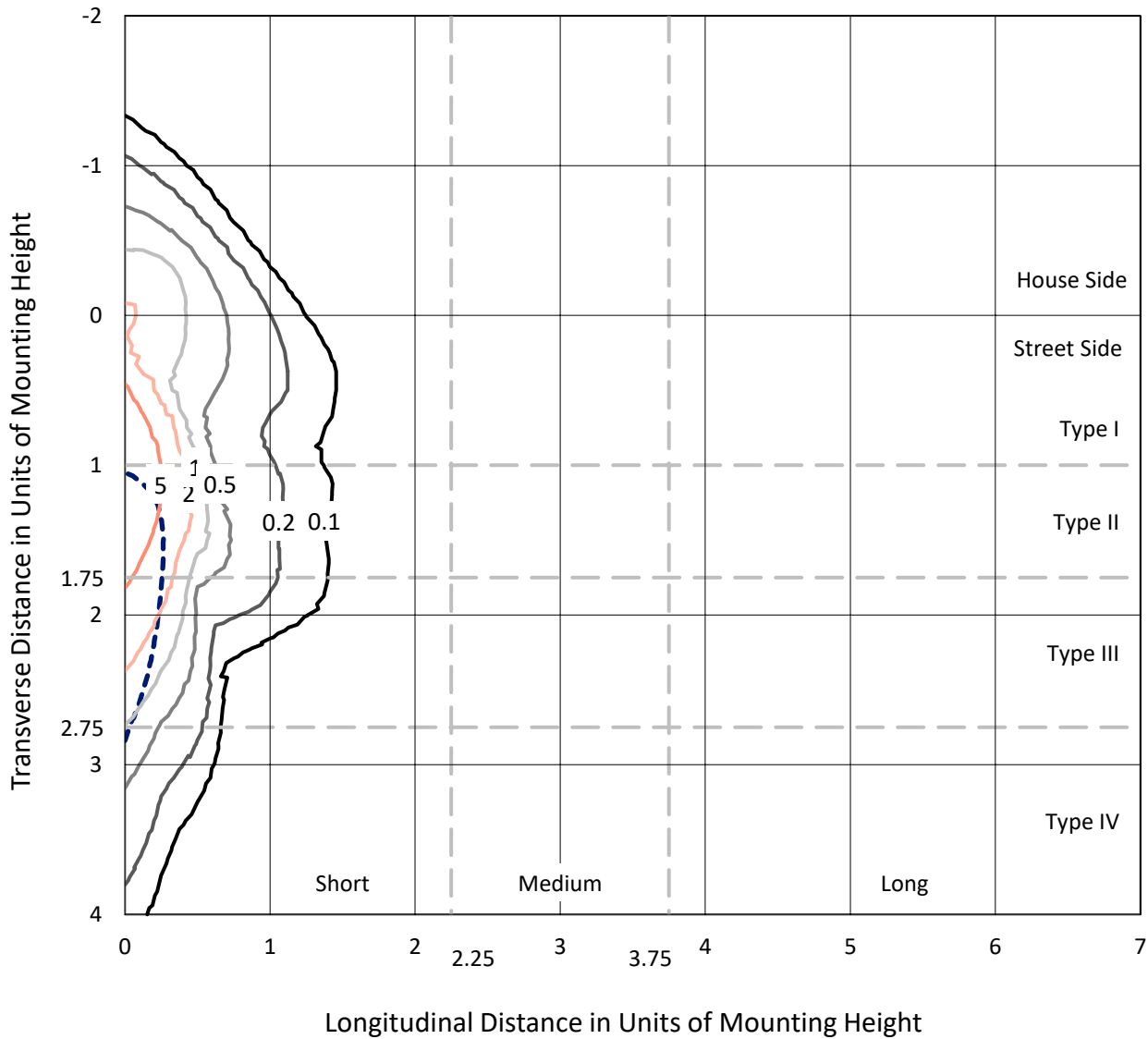
Input Watts (W): 63.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

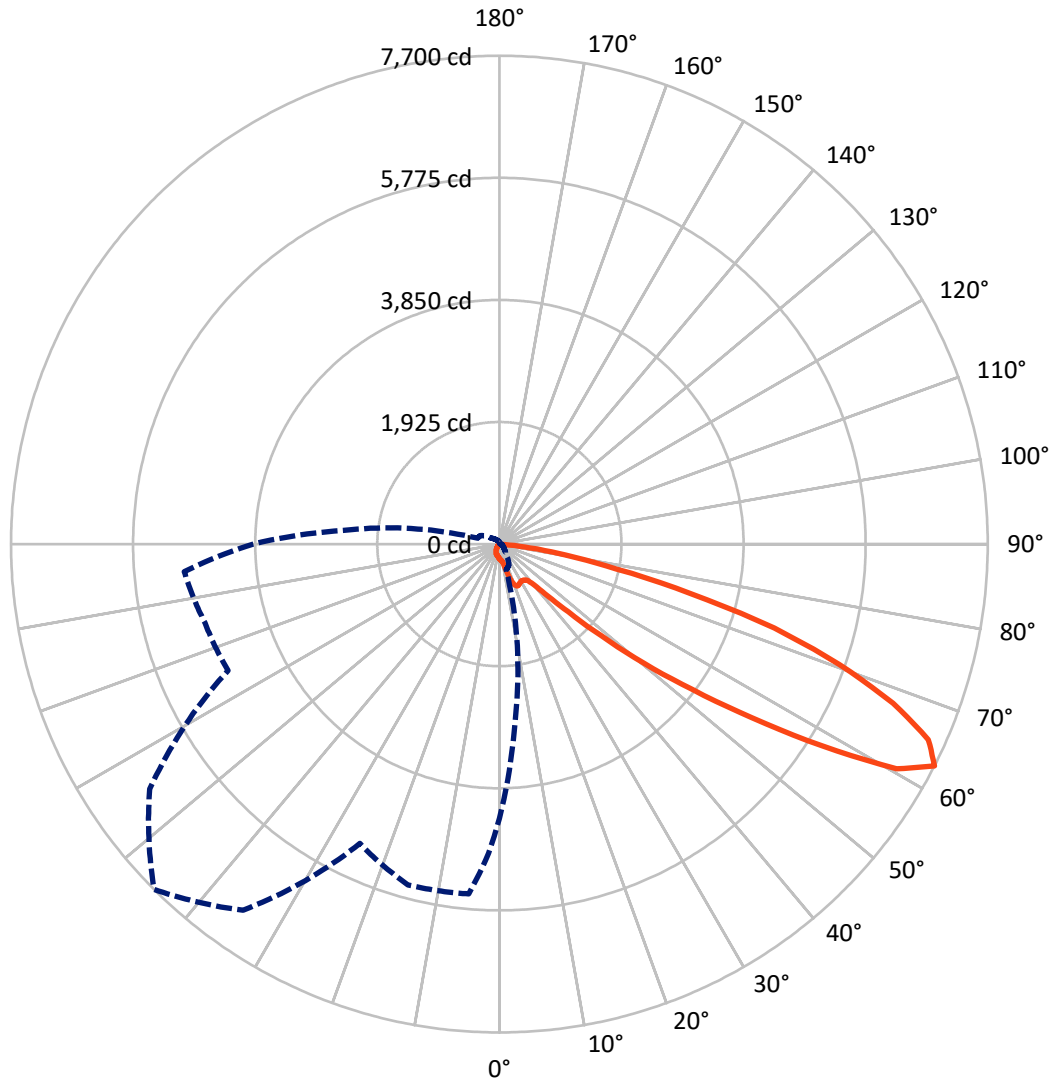
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.9 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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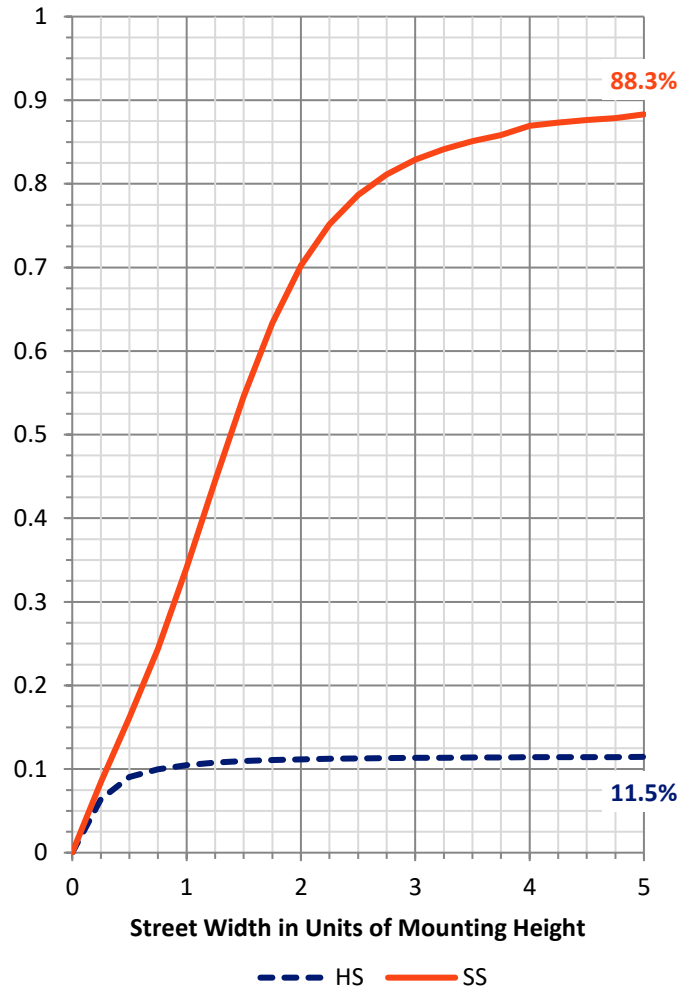
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	517.2	0.0	517.2
	% Fixture	11.6	0.0	11.6
Street Side	Lumens	3934.4	0.0	3934.4
	% Fixture	88.4	0.0	88.4
Total	Lumens	4451.6	0.0	4451.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.9	0.4
10°-20°	68.3	1.5
20°-30°	154.4	3.5
30°-40°	265.9	6.0
40°-50°	501.7	11.3
50°-60°	1120.1	25.2
60°-70°	1498.1	33.7
70°-80°	751.2	16.9
80°-90°	72.0	1.6
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°	4451.6	100.0
0°-180°	4451.6	100.0

Coefficient of Utilization



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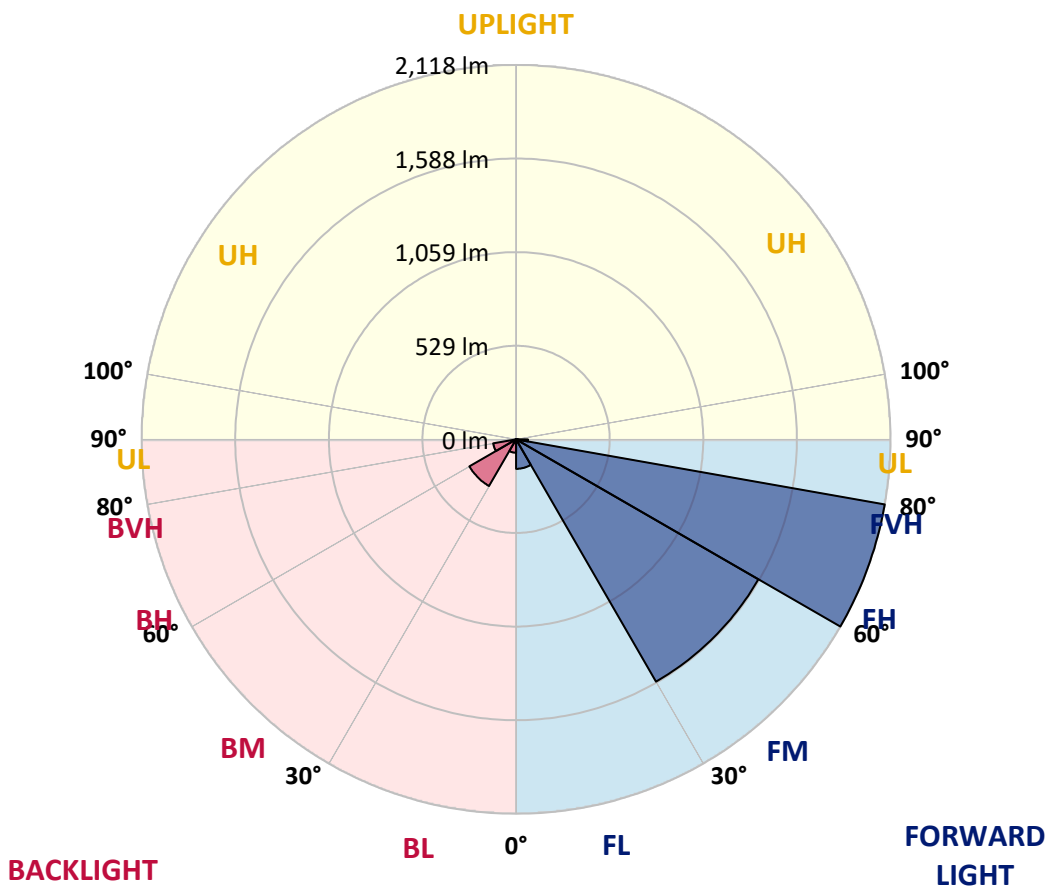
CATALOG NUMBER: GWS-SA2C-830-U-SLL-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	166.7	3.7			
FM (30°-60°)	1582.7	35.6			
FH (60°-80°)	2117.8	47.6			G2/5000
FVH (80°-90°)	67.2	1.5			G1/100
BL (0°-30°)	75.9	1.7	B0/110		
BM (30°-60°)	305.0	6.9	B1/1000		
BH (60°-80°)	131.5	3.0	B1/500		G1/500
BVH (80°-90°)	4.8	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9
2.5°	228.2	227.7	226.6	223.5	220.9	219.3	216.1	216.1	215.6	214.5	212.4
5°	220.9	218.7	216.6	210.8	204.5	200.8	196.6	196.1	196.1	195.0	194.5
7.5°	209.3	207.1	204.5	195.0	189.2	185.5	181.8	181.3	179.7	179.7	179.7
10°	202.9	199.8	195.6	185.0	179.2	176.0	173.4	171.8	170.8	169.2	168.7
12.5°	216.6	210.8	201.9	182.9	175.0	170.8	167.6	166.6	163.4	161.3	159.7
15°	259.3	245.1	227.2	187.6	173.4	167.1	162.9	160.8	158.1	154.4	151.8
17.5°	329.4	308.9	278.8	202.9	171.8	163.9	158.7	155.0	151.3	147.1	143.9
20°	426.4	395.8	360.0	230.9	171.8	160.2	153.9	149.2	143.9	139.2	135.5
22.5°	549.8	519.2	458.0	278.3	173.9	155.5	148.1	141.8	135.5	131.2	127.0
25°	687.9	644.6	587.7	335.8	179.7	149.2	141.3	134.9	129.1	123.9	119.1
27.5°	841.8	794.9	719.0	417.5	192.4	142.8	133.9	128.1	122.8	117.5	111.2
30°	983.6	955.6	878.1	515.5	212.9	138.6	128.1	122.8	117.5	110.7	104.9
32.5°	1153.8	1104.3	1040.5	627.2	240.4	134.4	123.3	116.0	111.7	105.4	99.1
35°	1325.1	1282.9	1199.1	764.8	270.9	130.2	117.5	110.7	107.0	99.6	92.8
37.5°	1501.7	1492.2	1409.4	917.1	301.0	125.4	110.7	106.5	102.8	94.3	86.4
40°	1675.6	1658.2	1581.8	1091.1	319.4	120.2	104.9	102.3	98.0	88.6	79.6
42.5°	1842.2	1829.0	1754.7	1257.6	316.8	115.4	99.1	95.9	92.8	83.3	72.2
45°	2046.7	2025.1	1931.3	1381.0	289.9	120.7	93.3	88.0	87.5	78.5	64.8
47.5°	2429.4	2358.2	2199.0	1475.9	263.0	134.4	87.0	80.6	84.3	73.8	57.5
50°	2965.4	2881.6	2651.3	1549.7	262.5	152.3	85.9	73.8	81.7	70.1	51.1
52.5°	3504.1	3356.5	3076.6	1589.2	282.0	165.5	95.4	66.9	78.5	66.4	46.4
55°	4020.1	3713.9	3254.8	1458.5	297.3	179.7	112.8	63.3	72.7	62.2	43.7
57.5°	4511.9	4001.2	3332.3	1153.8	348.4	185.5	123.3	64.8	64.3	56.9	41.6
60°	4579.4	3987.5	3175.7	671.0	384.3	175.5	119.1	72.2	56.4	50.6	38.0
62.5°	4324.3	3722.3	2818.9	418.5	356.8	171.8	105.9	82.2	51.1	44.8	33.2
65°	3936.9	3306.4	2350.3	269.9	270.4	190.8	92.8	80.6	48.0	39.5	28.5
67.5°	3331.2	2767.2	1851.7	180.8	152.9	162.9	81.2	55.3	46.9	33.7	22.1
70°	2431.5	1969.7	1205.5	120.7	91.2	130.2	68.0	39.5	44.3	27.9	15.8
72.5°	1777.4	1323.5	673.1	79.1	51.7	75.9	50.1	28.5	34.3	20.6	11.1
75°	1279.3	910.8	384.3	50.6	34.3	41.6	32.7	19.5	22.1	16.3	10.0
77.5°	615.6	443.8	174.5	27.9	23.2	21.1	17.4	12.1	13.7	14.8	9.0
80°	23.2	17.4	13.2	13.7	14.8	9.5	7.9	6.3	7.9	10.0	4.7
82.5°	0.0	0.0	0.0	1.6	2.1	2.6	3.2	2.6	3.2	3.7	0.5
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°	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9
2.5°	214.0	212.9	214.0	215.1	216.1	217.2	215.6	216.6	217.7	215.1	216.1
5°	197.1	196.6	199.8	201.3	203.5	204.5	203.5	203.5	202.9	199.8	199.8
7.5°	182.4	182.9	185.5	189.2	191.9	193.4	192.4	191.9	190.3	185.5	185.5
10°	171.3	171.3	175.5	178.7	182.4	184.0	182.9	181.3	179.7	175.0	174.5
12.5°	162.3	162.3	165.5	170.8	175.0	177.1	176.6	174.5	171.8	167.1	166.6
15°	153.9	153.4	158.1	162.9	168.7	171.3	170.3	168.7	163.9	159.7	158.7
17.5°	145.5	145.0	149.2	155.5	161.8	165.5	165.0	161.3	157.1	151.8	150.7
20°	137.0	136.0	141.3	147.6	153.9	157.6	156.5	153.4	148.1	142.8	141.8
22.5°	128.6	128.1	131.8	137.0	142.8	146.0	145.5	142.8	137.6	132.8	132.8
25°	119.1	119.1	121.8	125.4	129.7	131.2	131.8	130.7	127.6	124.9	124.9
27.5°	111.2	109.6	110.7	111.7	113.9	116.5	116.5	117.5	118.1	117.0	117.5
30°	104.9	102.3	100.7	98.6	97.5	98.6	99.6	103.3	107.0	109.1	110.2
32.5°	97.5	94.3	90.1	84.3	80.6	79.6	82.8	89.6	96.5	101.2	103.8
35°	90.1	85.9	78.0	69.6	64.8	63.3	66.9	74.8	84.9	93.3	97.0
37.5°	82.8	77.0	65.9	55.9	50.6	49.5	53.2	61.7	73.3	84.9	89.6
40°	74.3	67.5	54.3	43.7	39.5	38.5	41.6	50.1	62.2	75.4	82.8
42.5°	65.9	57.5	43.7	34.8	30.6	30.6	34.8	41.1	52.2	66.4	75.4
45°	57.5	48.5	35.8	27.9	25.3	25.8	28.5	34.8	43.7	58.5	66.9
47.5°	49.5	41.6	29.5	23.2	21.1	21.6	24.8	30.0	37.4	50.6	59.6
50°	42.7	35.3	25.8	19.5	17.9	19.0	22.1	26.9	33.2	44.8	52.2
52.5°	38.5	31.6	23.7	16.9	15.8	16.9	20.0	24.2	30.0	39.5	46.9
55°	36.4	31.1	23.7	15.3	13.7	14.8	17.9	22.1	26.9	35.8	42.2
57.5°	35.8	32.2	25.3	13.7	11.6	12.7	15.8	20.0	24.8	32.7	38.0
60°	33.7	30.6	24.8	11.1	9.0	10.5	13.2	17.4	22.7	30.6	35.3
62.5°	29.5	26.9	21.6	9.0	6.9	7.9	11.1	15.3	20.6	27.9	33.2
65°	24.2	21.6	16.9	5.8	4.2	5.3	8.4	13.2	17.9	25.3	30.0
67.5°	17.9	15.3	11.6	3.7	2.1	3.7	6.9	11.1	16.3	22.7	27.4
70°	11.1	9.0	6.3	2.1	1.6	3.2	6.3	10.5	14.8	21.1	25.8
72.5°	6.3	4.2	2.6	1.1	1.6	3.2	6.3	10.5	14.2	20.0	24.2
75°	4.7	2.6	1.1	0.5	1.1	2.6	5.8	9.5	13.7	19.0	23.2
77.5°	3.2	1.6	0.5	0.0	0.5	2.1	5.3	9.0	12.7	17.9	22.1
80°	0.5	0.0	0.0	0.0	0.0	1.6	4.7	7.9	11.6	15.8	19.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.5	3.7	6.9	10.0	13.2	15.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.3	7.9	10.0	11.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3	6.3	7.4
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°	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9
2.5°	215.6	218.7	218.7	220.9	223.5	228.2	230.9	234.6	237.2	239.8	240.9
5°	199.2	199.8	200.3	201.3	204.5	209.8	214.5	220.3	227.2	232.4	235.6
7.5°	185.5	185.5	185.5	187.1	190.3	194.0	198.7	206.6	214.5	220.9	226.1
10°	173.9	175.5	176.0	178.7	182.4	187.1	192.4	199.2	208.2	216.6	226.1
12.5°	166.6	168.1	170.8	173.4	177.1	182.4	188.2	197.1	215.6	233.0	253.0
15°	159.7	161.8	165.0	168.7	172.9	178.7	185.0	203.5	246.7	279.4	311.0
17.5°	152.3	155.5	159.7	163.4	168.7	175.0	182.9	218.7	303.6	357.9	411.7
20°	142.8	147.1	151.8	157.6	163.9	171.3	182.9	250.4	385.8	463.8	535.0
22.5°	133.9	138.1	143.9	151.3	158.7	166.0	185.5	298.3	491.8	590.3	680.5
25°	126.5	131.8	137.6	143.9	152.3	160.8	191.9	365.8	619.3	746.4	810.1
27.5°	119.6	126.0	131.8	137.0	144.4	153.9	206.1	455.9	770.1	899.2	949.3
30°	112.8	120.2	126.0	131.2	138.6	148.6	227.7	570.8	937.7	1063.1	1068.4
32.5°	107.0	113.9	120.7	126.0	132.8	144.4	257.7	705.2	1109.5	1230.8	1181.2
35°	100.7	108.6	114.9	120.7	128.1	140.7	292.5	850.2	1282.9	1384.7	1293.5
37.5°	94.3	103.3	111.2	115.4	122.8	137.0	317.8	1001.5	1460.0	1534.9	1392.1
40°	88.6	98.6	107.5	111.7	115.4	132.3	321.5	1156.4	1639.8	1683.0	1484.8
42.5°	82.2	93.3	101.2	107.0	110.2	129.1	299.4	1287.2	1790.5	1830.6	1606.0
45°	75.4	88.6	94.9	99.1	105.4	131.2	270.9	1388.4	1962.9	2031.9	1805.8
47.5°	68.5	83.3	88.6	91.7	100.1	143.9	260.4	1455.8	2247.0	2390.4	2142.6
50°	62.2	78.5	84.3	83.8	99.1	160.2	272.0	1507.0	2673.9	2842.6	2604.4
52.5°	55.3	73.3	80.1	78.0	107.0	172.9	295.2	1547.5	3002.3	3372.9	3224.7
55°	49.5	67.5	73.8	73.3	121.8	182.4	313.1	1333.5	3138.3	3865.7	3923.7
57.5°	45.3	61.1	66.4	75.4	131.2	182.4	362.1	946.7	3140.9	4228.3	4851.4
60°	41.6	55.3	59.0	82.8	127.6	172.9	358.4	579.8	2894.8	4203.6	5344.7
62.5°	38.5	50.1	54.8	84.9	112.8	171.3	323.6	359.5	2468.9	3883.6	4986.8
65°	35.8	45.9	52.7	78.0	102.3	183.4	218.2	258.3	2002.4	3518.9	4576.2
67.5°	33.2	42.2	55.9	63.8	92.8	163.9	157.6	183.4	1571.8	3118.8	4199.3
70°	31.1	40.1	59.0	52.2	81.2	128.1	111.7	139.2	1203.4	2602.3	3668.6
72.5°	29.5	37.4	49.5	41.1	65.9	99.1	78.0	101.2	786.4	2031.4	2990.7
75°	27.9	34.3	36.4	33.2	49.0	64.8	59.0	68.0	468.6	1484.8	2269.1
77.5°	27.4	32.2	29.5	26.9	33.2	38.5	44.8	45.9	228.8	742.7	1189.1
80°	24.2	29.0	25.3	22.1	22.7	25.3	33.2	30.6	52.2	188.7	317.3
82.5°	19.0	22.7	21.1	18.4	18.4	18.4	22.1	20.6	16.9	84.9	143.4
85°	13.2	15.8	15.8	14.8	14.2	14.2	13.7	13.2	4.7	5.3	7.9
87.5°	9.0	11.1	11.6	11.1	9.5	8.4	7.4	6.3	2.1	0.0	1.1
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°	358°	360°
0°	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9	230.9
2.5°	244.6	246.2	246.2	244.0	242.5	238.2	234.0	229.8	228.8	228.2
5°	244.6	250.9	254.1	253.5	249.8	243.0	234.0	224.5	221.9	220.9
7.5°	240.9	253.0	262.5	264.1	257.2	245.1	228.8	214.5	210.8	209.3
10°	249.3	273.0	292.0	294.6	286.7	263.0	236.7	212.4	206.6	202.9
12.5°	294.6	333.6	356.8	367.9	352.6	322.6	278.8	235.6	222.4	216.6
15°	386.4	441.7	486.0	486.0	471.7	418.5	363.2	293.1	275.1	259.3
17.5°	503.9	573.5	612.5	608.3	586.7	549.2	482.8	382.1	345.8	329.4
20°	637.8	679.4	688.4	685.7	676.3	654.6	608.8	500.7	451.7	426.4
22.5°	753.7	742.7	729.5	719.0	716.3	722.6	716.3	633.0	594.6	549.8
25°	832.3	769.6	730.0	711.0	720.0	756.4	795.9	764.8	734.2	687.9
27.5°	875.0	766.4	709.5	690.0	705.2	756.9	842.8	895.5	863.9	841.8
30°	898.2	763.8	696.3	677.3	700.5	765.3	875.5	1017.8	1018.9	983.6
32.5°	931.4	780.6	698.9	681.5	712.6	790.6	916.6	1142.2	1172.8	1153.8
35°	968.8	806.5	711.0	695.2	733.7	824.4	962.5	1267.7	1331.4	1325.1
37.5°	1004.1	835.4	739.5	724.2	765.9	853.4	1006.7	1391.0	1479.5	1501.7
40°	1041.0	876.0	827.0	841.8	865.0	899.2	1046.3	1498.0	1642.4	1675.6
42.5°	1128.0	1016.8	1091.6	1119.5	1122.7	1052.1	1132.7	1635.0	1802.7	1842.2
45°	1321.9	1267.1	1481.7	1521.2	1500.6	1286.6	1340.9	1832.7	2026.7	2046.7
47.5°	1567.0	1592.3	2015.6	2152.1	2028.8	1563.4	1593.4	2248.6	2436.7	2429.4
50°	1852.7	1972.4	2621.8	2943.8	2648.6	1922.8	1884.4	2759.9	2988.1	2965.4
52.5°	2190.6	2414.1	3350.2	3807.7	3528.4	2327.1	2311.3	3437.2	3576.3	3504.1
55°	2616.0	2840.5	4188.3	4827.6	4430.2	2820.5	2874.8	4222.5	4249.4	4020.1
57.5°	3250.6	3396.6	5176.0	5997.3	5371.6	3490.9	3884.7	5267.8	4946.2	4511.9
60°	4402.8	4111.8	6130.6	7193.8	6373.1	4433.9	5216.6	5887.1	5178.2	4579.4
62.5°	4803.9	4719.1	6728.3	7699.8	7046.7	5208.2	5562.9	5536.0	4877.7	4324.3
65°	4196.2	4567.8	6621.3	7432.5	6960.3	5080.6	4992.1	5148.6	4539.3	3936.9
67.5°	3876.2	4212.5	6216.0	6695.1	6481.1	4647.9	4449.7	4407.0	3810.9	3331.2
70°	3553.7	3886.8	5628.3	5687.9	5588.2	3942.6	3682.3	3396.1	2848.4	2431.5
72.5°	3165.7	3349.1	4812.9	4530.4	4417.6	3096.7	3041.8	2557.5	2135.3	1777.4
75°	2760.9	2707.7	3752.4	3109.3	3193.7	2409.3	2569.0	1878.0	1564.4	1279.3
77.5°	2008.2	1968.7	2513.2	1888.6	2091.5	1578.1	1417.9	749.5	713.7	615.6
80°	1120.6	1350.9	1357.3	1058.4	1320.4	1028.9	354.7	24.8	15.8	23.2
82.5°	520.8	580.9	735.8	490.7	753.2	509.7	73.3	0.0	0.0	0.0
85°	168.7	246.7	206.6	72.2	182.4	172.4	12.1	0.0	0.0	0.0
87.5°	10.0	20.6	5.3	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

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

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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			

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)