

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: P638979

Luminaire Tested: GWS-SA4F-830-U-SLR-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638979
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-43)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4F-830-U-SLR-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21147.1 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

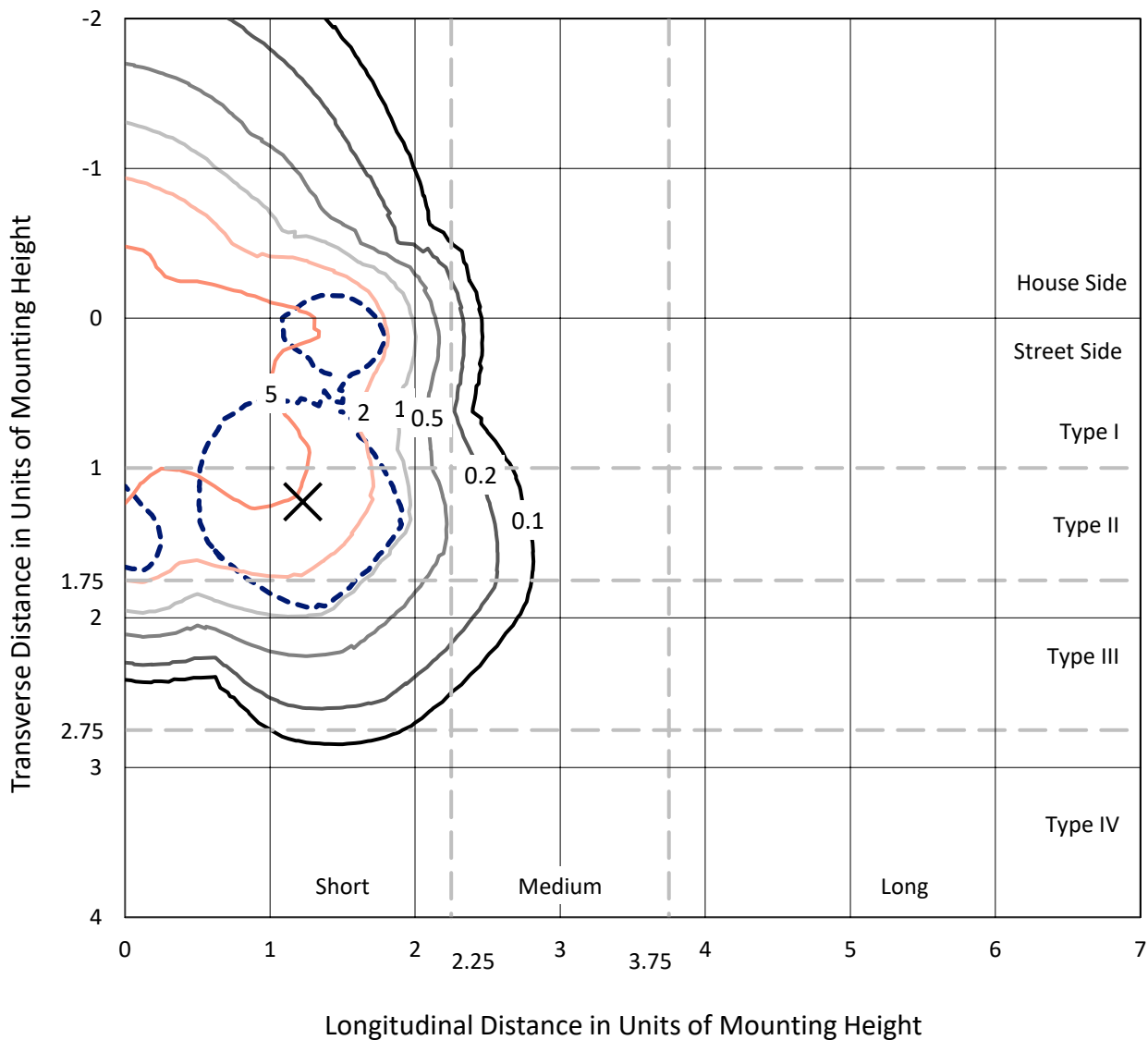
Input Watts (W): 225.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

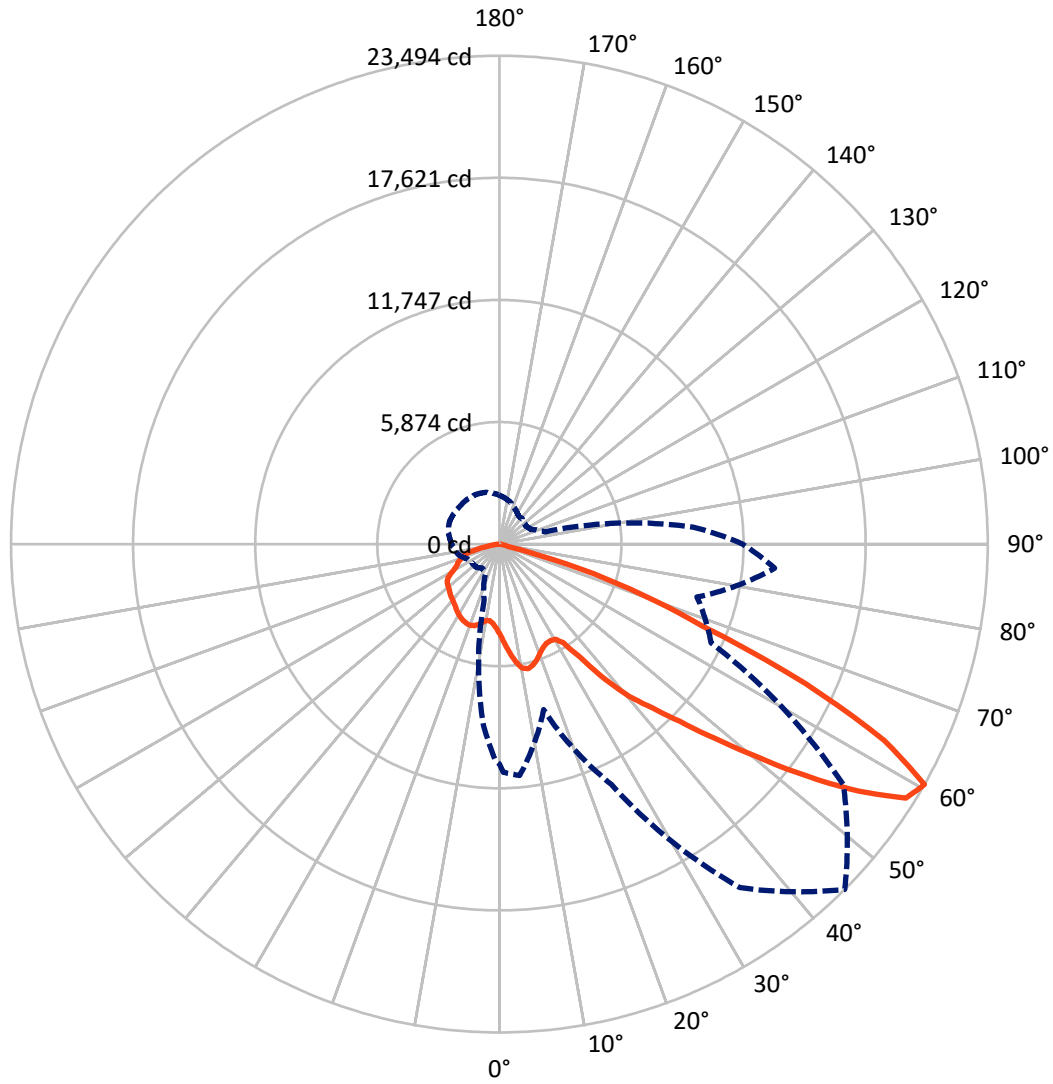
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7412.8	0.0	7412.8
	% Fixture	35.1	0.0	35.1
Street Side	Lumens	13734.3	0.0	13734.3
	% Fixture	64.9	0.0	64.9
Total	Lumens	21147.1	0.0	21147.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.8	2.0
10°-20°	1339.4	6.3
20°-30°	2175.7	10.3
30°-40°	3068.3	14.5
40°-50°	4240.3	20.1
50°-60°	5458.6	25.8
60°-70°	3458.6	16.4
70°-80°	887.5	4.2
80°-90°	94.9	0.4
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°	21147.1	100.0
0°-180°	21147.1	100.0

Coefficient of Utilization



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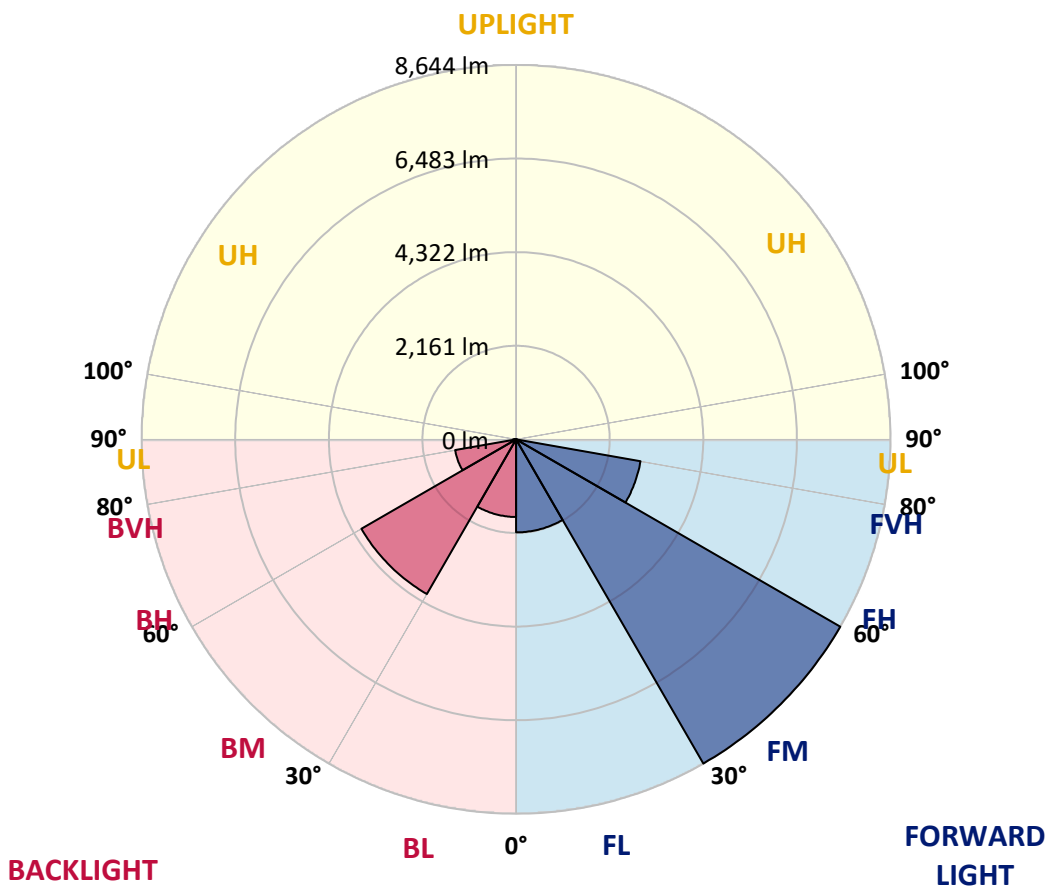
CATALOG NUMBER: GWS-SA4F-830-U-SLR-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2147.2	10.2			
FM (30°-60°)	8643.7	40.9			
FH (60°-80°)	2917.6	13.8			G2/5000
FVH (80°-90°)	25.8	0.1			G1/100
BL (0°-30°)	1791.7	8.5	B3/2500		
BM (30°-60°)	4123.5	19.5	B3/5000		
BH (60°-80°)	1428.5	6.8	B3/2500		G3/2500
BVH (80°-90°)	69.1	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2
2.5°	4543.8	4574.8	4594.2	4631.0	4696.9	4733.7	4774.4	4729.8	4741.5	4735.6	4663.9
5°	4813.1	4850.0	4900.3	5008.9	5130.9	5198.7	5262.7	5253.0	5192.9	5092.2	5020.5
7.5°	5065.0	5107.7	5194.9	5371.2	5551.4	5656.0	5733.5	5683.2	5632.8	5473.9	5293.7
10°	5262.7	5287.9	5406.1	5642.5	5851.7	5969.9	6064.9	6053.3	5983.5	5805.2	5563.0
12.5°	5448.7	5466.1	5594.0	5830.4	6018.4	6070.7	6148.2	6173.4	6150.1	6016.4	5778.1
15°	5648.3	5681.2	5799.4	5979.6	6064.9	6010.6	6037.7	6107.5	6173.4	6173.4	5954.4
17.5°	5834.3	5863.4	5983.5	6061.0	5979.6	5836.2	5844.0	5933.1	6090.1	6254.8	6115.3
20°	5999.0	6026.1	6144.3	6070.7	5813.0	5603.7	5597.9	5706.4	5960.2	6307.1	6287.7
22.5°	6179.2	6218.0	6316.8	6078.4	5658.0	5392.5	5390.6	5503.0	5845.9	6359.4	6485.3
25°	6435.0	6495.0	6545.4	6146.3	5574.6	5254.9	5280.1	5386.7	5809.1	6444.7	6777.9
27.5°	6814.8	6863.2	6859.3	6287.7	5570.8	5198.7	5251.1	5375.1	5875.0	6595.8	7086.0
30°	7225.5	7250.7	7210.0	6485.3	5659.9	5233.6	5311.1	5458.4	6041.6	6845.8	7539.4
32.5°	7680.9	7711.9	7634.4	6781.8	5867.2	5491.3	5661.8	5733.5	6276.1	7206.2	8020.0
35°	8204.1	8264.1	8103.3	7173.2	6477.6	6431.1	6679.1	6586.1	6774.1	7632.4	8533.5
37.5°	8754.3	8756.3	8525.7	7752.6	7675.1	7754.5	8250.6	7959.9	7830.1	8107.2	9056.6
40°	9221.3	9209.7	8855.1	8533.5	8717.5	9033.4	9632.1	9186.4	8845.4	8744.7	9490.7
42.5°	9688.3	9645.7	9287.2	9029.5	9436.4	10085.5	10761.8	10215.3	9496.5	9324.0	9918.9
45°	10285.1	10271.5	9839.4	9227.1	10085.5	11263.6	12160.8	11275.2	9882.1	9661.2	10631.9
47.5°	11248.1	11182.2	10378.1	9211.6	10693.9	12833.1	13966.7	12610.3	10151.4	9668.9	11782.9
50°	12189.8	12108.4	11021.4	9209.7	11321.7	14460.8	16098.1	14232.1	10426.5	9715.4	12953.3
52.5°	13141.2	13141.2	12077.4	9428.7	11980.6	16278.3	18560.8	16253.1	10895.5	10323.9	14392.9
55°	13707.0	13858.1	13265.2	9798.7	12751.7	18417.5	20996.5	18434.9	11620.1	11422.5	15722.2
57.5°	12988.1	13271.0	13185.8	9541.0	13207.1	19988.9	23062.0	20089.7	11978.6	11552.3	15522.6
60°	10583.5	10976.8	11172.5	8238.9	12757.6	20171.0	23494.1	20198.2	11238.4	9837.5	13296.2
62.5°	7035.6	7359.2	7657.6	5886.6	11044.7	18146.2	20779.5	18152.0	9386.0	7341.8	9211.6
65°	3451.0	3691.2	4012.9	3480.0	8628.4	15162.2	16200.8	14668.1	6789.6	4109.8	4698.8
67.5°	902.9	970.8	1015.3	1350.5	6181.1	10893.5	10566.1	10728.8	4361.7	1342.8	1228.5
70°	468.9	472.8	470.9	558.0	4177.6	6923.3	7281.7	6737.2	3044.1	561.9	484.4
72.5°	335.2	337.2	331.3	375.9	2017.1	3966.4	4109.8	4065.2	1594.7	333.3	331.3
75°	219.0	220.9	217.0	220.9	304.2	451.5	416.6	437.9	265.5	211.2	211.2
77.5°	129.8	131.8	129.8	133.7	129.8	129.8	120.1	120.1	114.3	114.3	116.3
80°	87.2	87.2	85.3	89.1	81.4	81.4	77.5	75.6	69.8	67.8	67.8
82.5°	52.3	54.3	52.3	52.3	48.4	48.4	44.6	42.6	36.8	36.8	34.9
85°	27.1	27.1	25.2	25.2	21.3	19.4	15.5	15.5	11.6	9.7	9.7
87.5°	3.9	3.9	1.9	1.9	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°	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2
2.5°	4644.6	4605.8	4547.7	4491.5	4439.2	4384.9	4322.9	4259.0	4204.7	4148.5	4119.5
5°	4925.5	4846.1	4695.0	4561.3	4441.1	4342.3	4235.7	4144.7	4059.4	3989.6	3954.8
7.5°	5179.4	5055.4	4826.7	4615.5	4452.7	4317.1	4169.8	4034.2	3919.9	3834.6	3801.7
10°	5413.8	5266.6	4966.2	4698.8	4508.9	4357.8	4177.6	3993.5	3842.4	3730.0	3702.9
12.5°	5603.7	5435.1	5076.7	4766.6	4541.9	4379.1	4220.2	4061.3	3912.1	3766.8	3743.6
15°	5772.3	5572.7	5160.0	4809.3	4530.2	4322.9	4189.2	4169.8	4169.8	4005.1	3958.6
17.5°	5917.6	5698.7	5227.8	4828.6	4456.6	4156.3	4074.9	4243.5	4433.4	4315.2	4210.5
20°	6084.3	5818.8	5284.0	4828.6	4321.0	3945.1	3937.3	4224.1	4505.1	4507.0	4396.6
22.5°	6252.8	5958.3	5349.9	4811.2	4135.0	3700.9	3844.3	4146.6	4396.6	4503.1	4427.6
25°	6526.0	6152.1	5454.5	4797.6	3917.9	3534.3	3761.0	4043.9	4255.1	4367.5	4319.0
27.5°	6872.9	6407.8	5613.4	4819.0	3702.9	3435.5	3671.9	3910.2	4102.0	4200.8	4166.0
30°	7260.4	6702.4	5783.9	4855.8	3547.9	3385.1	3565.3	3757.1	3927.6	4026.5	4011.0
32.5°	7754.5	7022.1	5931.2	4805.4	3460.7	3359.9	3452.9	3590.5	3755.2	3817.2	3830.8
35°	8345.5	7374.7	6043.6	4607.8	3381.2	3332.8	3330.8	3416.1	3532.4	3631.2	3640.9
37.5°	8890.0	7787.5	6167.6	4268.7	3237.8	3265.0	3187.5	3237.8	3352.2	3451.0	3489.7
40°	9428.7	8206.0	6340.0	3836.6	3049.9	3113.8	3022.7	3057.6	3148.7	3278.5	3340.5
42.5°	9951.8	8583.8	6522.2	3394.8	2861.9	2902.6	2834.8	2869.7	2964.6	3127.4	3197.1
45°	10521.5	9095.4	6663.6	2978.2	2699.2	2681.7	2627.5	2677.8	2821.2	2999.5	3082.8
47.5°	11598.8	9901.4	6756.6	2701.1	2612.0	2486.0	2424.0	2532.5	2695.3	2875.5	2976.2
50°	12914.5	11067.9	6729.5	2524.8	2536.4	2284.5	2263.2	2406.6	2581.0	2768.9	2879.4
52.5°	13957.0	12213.1	6421.4	2356.2	2389.1	2156.6	2094.6	2303.9	2470.5	2662.3	2776.7
55°	14753.3	12598.7	5475.8	2156.6	2148.9	2063.6	1933.8	2197.3	2360.1	2538.3	2662.3
57.5°	14104.2	11740.3	4059.4	1881.5	1835.0	1879.5	1753.6	2017.1	2224.4	2400.8	2511.2
60°	11705.4	9360.8	2261.2	1666.4	1534.6	1643.1	1623.8	1827.2	2077.2	2263.2	2358.1
62.5°	7946.3	6233.5	1340.9	1317.6	1244.0	1399.0	1501.7	1635.4	1881.5	2032.6	2121.7
65°	3960.6	3028.6	891.3	986.3	996.0	1151.0	1344.7	1492.0	1697.4	1852.4	1941.5
67.5°	1149.0	941.7	678.2	753.7	858.4	982.4	1137.4	1311.8	1511.4	1695.5	1800.1
70°	496.0	501.9	538.7	627.8	730.5	858.4	1013.4	1183.9	1352.5	1493.9	1573.4
72.5°	350.7	364.3	405.0	496.0	592.9	715.0	870.0	1034.7	1156.8	1300.2	1383.5
75°	224.8	234.5	267.4	337.2	408.8	527.0	674.3	825.4	951.4	1054.1	1133.5
77.5°	124.0	125.9	153.1	193.8	242.2	317.8	426.3	544.5	637.5	695.6	767.3
80°	71.7	71.7	85.3	110.4	139.5	186.0	246.1	304.2	360.4	397.2	432.1
82.5°	38.8	38.8	44.6	60.1	75.6	102.7	137.6	166.6	201.5	220.9	244.1
85°	11.6	11.6	15.5	21.3	27.1	38.8	54.3	69.8	85.3	98.8	112.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
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°	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2
2.5°	4113.7	4086.5	4071.0	4051.6	4057.5	4040.0	4030.3	4036.1	4001.3	4036.1	4071.0
5°	3941.2	3902.4	3871.4	3846.3	3834.6	3811.4	3797.8	3797.8	3776.5	3811.4	3854.0
7.5°	3790.1	3759.1	3743.6	3728.1	3710.6	3689.3	3666.1	3658.3	3644.7	3681.6	3718.4
10°	3689.3	3693.2	3702.9	3724.2	3720.3	3706.7	3671.9	3652.5	3652.5	3695.1	3751.3
12.5°	3735.8	3776.5	3799.8	3838.5	3846.3	3834.6	3799.8	3784.3	3823.0	3886.9	3980.0
15°	3916.0	3943.1	3962.5	3993.5	3991.6	3981.9	3954.8	3966.4	4094.3	4218.3	4301.6
17.5°	4111.7	4080.7	4076.8	4096.2	4102.0	4090.4	4074.9	4127.2	4338.4	4454.7	4497.3
20°	4253.2	4146.6	4123.3	4131.1	4146.6	4140.8	4140.8	4226.0	4445.0	4499.2	4445.0
22.5°	4295.8	4144.7	4109.8	4111.7	4133.0	4135.0	4144.7	4233.8	4361.7	4363.6	4280.3
25°	4228.0	4082.7	4057.5	4061.3	4086.5	4084.6	4088.5	4138.8	4195.0	4171.8	4109.8
27.5°	4100.1	3974.1	3966.4	3987.7	4020.6	4003.2	3991.6	4005.1	4032.3	4003.2	3949.0
30°	3954.8	3848.2	3852.1	3892.8	3927.6	3898.6	3869.5	3877.3	3879.2	3848.2	3786.2
32.5°	3801.7	3722.2	3735.8	3778.4	3819.1	3788.1	3757.1	3753.2	3716.4	3679.6	3619.5
35°	3648.6	3617.6	3635.1	3669.9	3704.8	3679.6	3660.2	3648.6	3569.2	3514.9	3464.5
37.5°	3509.1	3532.4	3563.4	3584.7	3596.3	3594.4	3582.7	3555.6	3451.0	3387.0	3321.1
40°	3385.1	3456.8	3489.7	3499.4	3516.9	3513.0	3511.0	3472.3	3334.7	3266.9	3191.3
42.5°	3272.7	3373.5	3429.7	3439.3	3449.0	3451.0	3445.2	3389.0	3232.0	3152.6	3080.9
45°	3164.2	3296.0	3367.7	3358.0	3371.5	3371.5	3377.3	3303.7	3131.3	3049.9	2974.3
47.5°	3069.3	3224.3	3290.1	3278.5	3286.3	3292.1	3297.9	3212.6	3020.8	2943.3	2865.8
50°	2982.1	3146.8	3203.0	3206.8	3206.8	3220.4	3218.5	3135.1	2927.8	2844.5	2767.0
52.5°	2889.1	3067.3	3127.4	3152.6	3160.3	3166.1	3139.0	3042.1	2832.9	2732.1	2660.4
55°	2780.5	2985.9	3040.2	3073.1	3088.6	3084.8	3047.9	2949.1	2736.0	2635.2	2553.8
57.5°	2615.8	2811.5	2889.1	2904.6	2929.7	2914.2	2871.6	2788.3	2581.0	2480.2	2396.9
60°	2435.6	2577.1	2639.1	2652.7	2633.3	2639.1	2633.3	2553.8	2373.6	2294.2	2208.9
62.5°	2199.2	2325.2	2391.1	2408.5	2375.6	2396.9	2389.1	2290.3	2110.1	2026.8	1951.2
65°	2021.0	2158.6	2236.1	2245.7	2236.1	2245.7	2218.6	2098.5	1928.0	1842.7	1765.2
67.5°	1881.5	2022.9	2104.3	2131.4	2121.7	2119.8	2077.2	1937.7	1761.3	1668.3	1569.5
70°	1641.2	1765.2	1869.8	1935.7	1935.7	1898.9	1817.5	1687.7	1546.3	1466.8	1389.3
72.5°	1453.2	1610.2	1712.9	1780.7	1794.3	1773.0	1658.6	1521.1	1358.3	1278.9	1197.5
75°	1197.5	1350.5	1461.0	1550.1	1567.6	1544.3	1412.6	1276.9	1125.8	1048.3	966.9
77.5°	800.3	891.3	980.5	1061.8	1044.4	1059.9	970.8	868.1	775.1	716.9	680.1
80°	451.5	511.5	538.7	583.2	583.2	583.2	525.1	476.7	424.3	391.4	354.6
82.5°	255.8	294.5	306.2	343.0	352.7	354.6	315.8	284.8	251.9	234.5	209.3
85°	118.2	139.5	141.4	162.8	170.5	186.0	168.6	147.3	127.9	120.1	104.6
87.5°	3.9	11.6	15.5	29.1	38.8	44.6	48.4	48.4	40.7	36.8	31.0
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: P638979

CATALOG NUMBER: GWS-SA4F-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2	4344.2
2.5°	4113.7	4160.2	4214.4	4253.2	4322.9	4381.0	4441.1	4507.0	4555.4	4543.8
5°	3906.3	3983.8	4082.7	4173.7	4303.5	4435.3	4580.6	4729.8	4817.0	4813.1
7.5°	3790.1	3900.5	4020.6	4142.7	4295.8	4485.7	4708.5	4941.0	5059.2	5065.0
10°	3852.1	3970.3	4051.6	4154.3	4315.2	4553.5	4820.9	5099.9	5235.6	5262.7
12.5°	4047.8	4038.1	4032.3	4105.9	4299.7	4601.9	4929.4	5262.7	5415.8	5448.7
15°	4233.8	4034.2	3914.1	3964.5	4229.9	4632.9	5036.0	5440.9	5613.4	5648.3
17.5°	4268.7	3966.4	3743.6	3778.4	4119.5	4642.6	5138.7	5615.3	5801.4	5834.3
20°	4171.8	3879.2	3619.5	3571.1	3980.0	4617.4	5202.6	5760.7	5964.1	5999.0
22.5°	4049.7	3801.7	3526.5	3400.6	3809.4	4592.3	5274.3	5913.7	6148.2	6179.2
25°	3921.8	3702.9	3439.3	3247.5	3615.7	4576.8	5394.4	6115.3	6398.2	6435.0
27.5°	3786.2	3582.7	3363.8	3173.9	3437.4	4596.1	5565.0	6440.8	6762.4	6814.8
30°	3640.9	3462.6	3315.3	3148.7	3315.3	4613.6	5752.9	6774.1	7151.9	7225.5
32.5°	3489.7	3352.2	3265.0	3160.3	3239.8	4572.9	5917.6	7148.0	7616.9	7680.9
35°	3338.6	3239.8	3201.0	3181.6	3139.0	4423.7	6051.3	7525.9	8147.9	8204.1
37.5°	3197.1	3123.5	3111.9	3133.2	2984.0	4179.5	6206.3	8006.4	8669.1	8754.3
40°	3065.4	2997.6	2995.6	2991.7	2813.5	3846.3	6415.6	8494.7	9182.6	9221.3
42.5°	2943.3	2858.0	2873.6	2827.0	2674.0	3485.9	6613.2	8911.3	9661.2	9688.3
45°	2834.8	2722.4	2739.9	2681.7	2608.1	3108.0	6787.6	9403.5	10267.7	10285.1
47.5°	2730.2	2610.0	2561.6	2557.7	2596.5	2759.2	6958.1	10351.0	11217.1	11248.1
50°	2633.3	2503.5	2365.9	2451.1	2524.8	2497.6	7171.3	11366.3	12197.6	12189.8
52.5°	2540.3	2369.8	2174.1	2338.8	2338.8	2303.9	7111.2	11982.5	13007.5	13141.2
55°	2433.7	2154.7	1974.5	2150.8	2065.5	2129.5	6047.4	12184.0	13517.1	13707.0
57.5°	2222.5	1889.2	1732.3	1827.2	1699.3	1974.5	4344.2	11184.2	12651.0	12988.1
60°	2019.0	1693.5	1590.8	1573.4	1406.7	1610.2	2815.4	8756.3	10413.0	10583.5
62.5°	1780.7	1524.9	1437.7	1304.0	1131.6	1172.3	1705.1	5762.6	6996.9	7035.6
65°	1600.5	1381.6	1214.9	1056.0	926.2	850.6	1007.6	2778.6	3497.5	3451.0
67.5°	1373.8	1183.9	1025.0	910.7	804.1	709.2	670.4	825.4	934.0	902.9
70°	1222.7	1040.5	887.4	778.9	680.1	585.2	517.4	486.4	476.7	468.9
72.5°	1054.1	895.2	736.3	631.7	538.7	451.5	389.5	352.7	343.0	335.2
75°	840.9	691.7	546.4	447.6	366.2	304.2	263.5	232.5	226.7	219.0
77.5°	556.1	443.7	325.5	265.5	217.0	184.1	157.0	137.6	133.7	129.8
80°	306.2	255.8	199.6	160.8	129.8	112.4	102.7	91.1	89.1	87.2
82.5°	182.1	153.1	114.3	91.1	75.6	67.8	62.0	56.2	54.3	52.3
85°	91.1	71.7	50.4	42.6	38.8	34.9	34.9	29.1	27.1	27.1
87.5°	23.3	19.4	11.6	9.7	9.7	9.7	7.8	5.8	5.8	3.9
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

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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)