

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: P637989

Luminaire Tested: GWS-SA4D-830-U-SLR-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637989
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-SA4D-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: 15220.5 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

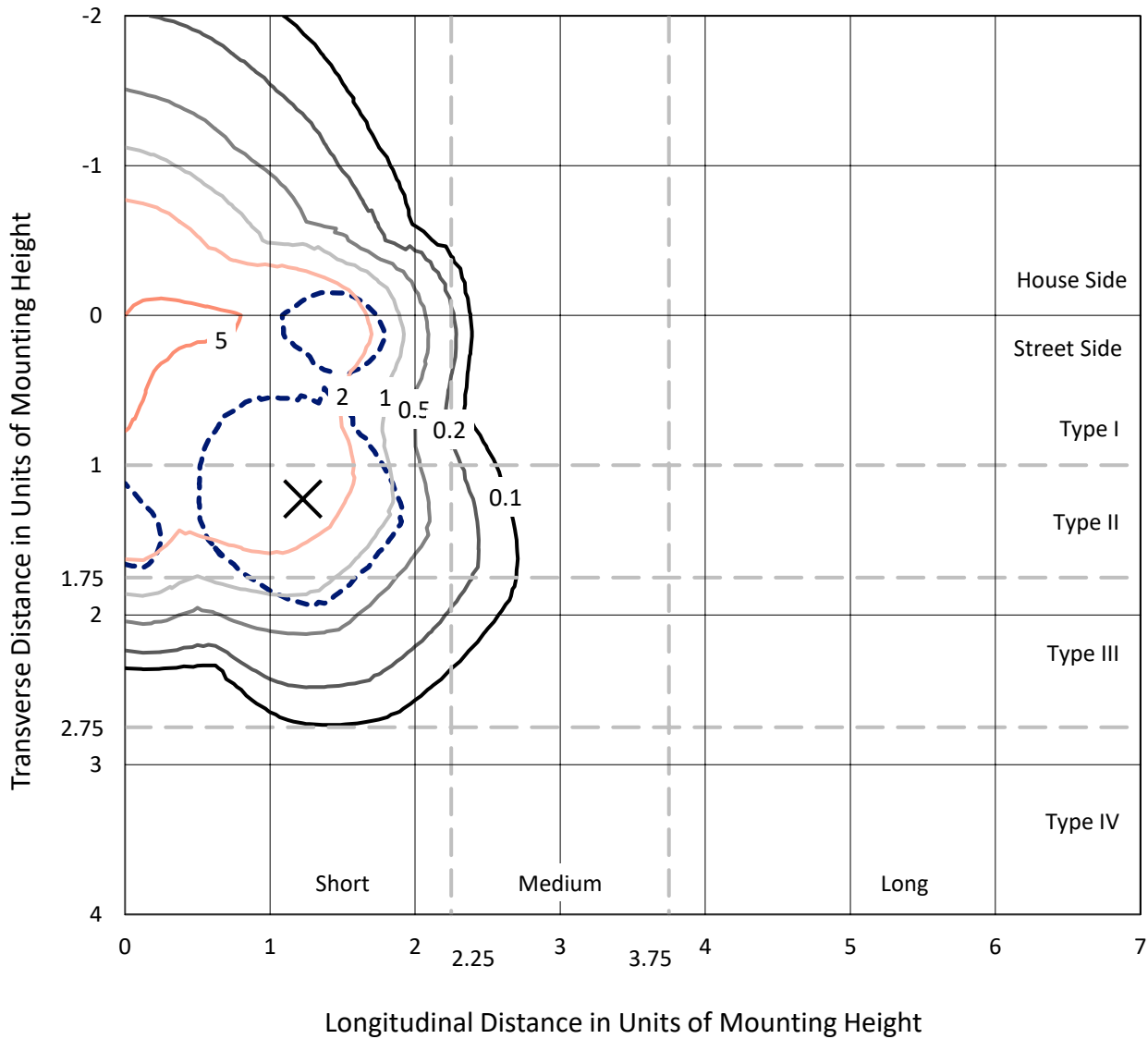
Input Watts (W): 162.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P637989
 CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination

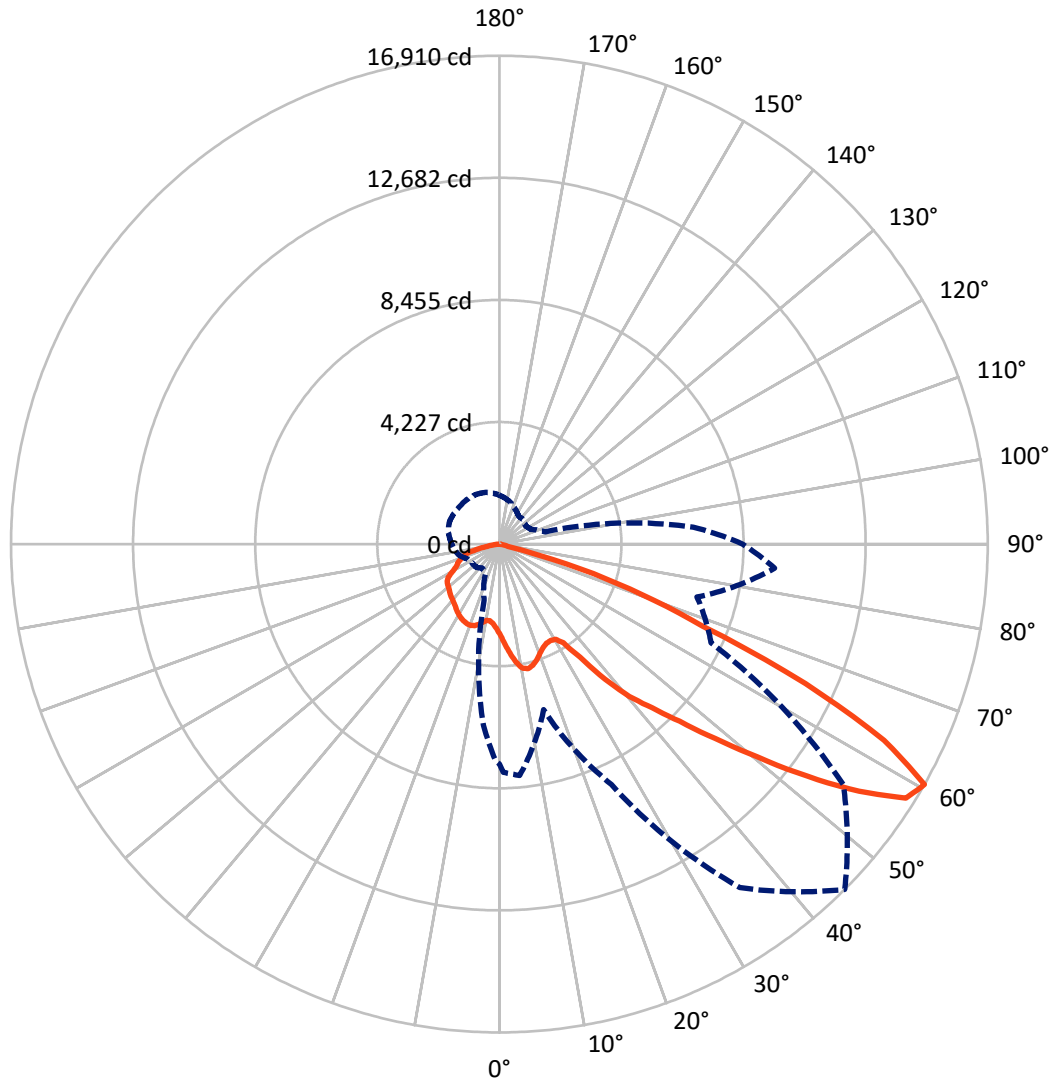
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 fc
 Type III - Short - N/A

REPORT NUMBER: P637989
CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

Luminous Intensity Polar Plot



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

REPORT NUMBER: P637989

CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5335.3	0.0	5335.3
	% Fixture	35.1	0.0	35.1
Street Side	Lumens	9885.2	0.0	9885.2
	% Fixture	64.9	0.0	64.9
Total	Lumens	15220.5	0.0	15220.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.1	2.0
10°-20°	964.0	6.3
20°-30°	1565.9	10.3
30°-40°	2208.4	14.5
40°-50°	3052.0	20.1
50°-60°	3928.8	25.8
60°-70°	2489.3	16.4
70°-80°	638.8	4.2
80°-90°	68.3	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°	15220.5	100.0
0°-180°	15220.5	100.0

Coefficient of Utilization



REPORT NUMBER: P637989

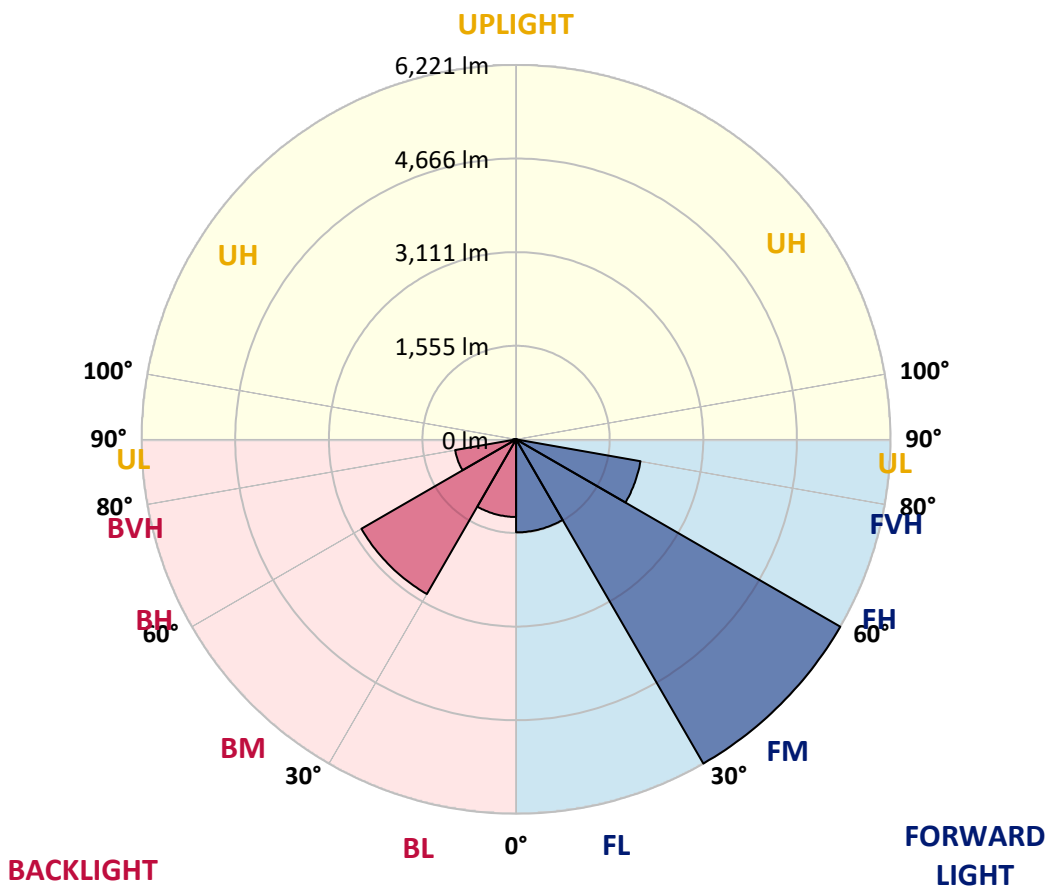
CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1545.5	10.2			
FM (30°-60°)	6221.3	40.9			
FH (60°-80°)	2099.9	13.8			G2/5000
FVH (80°-90°)	18.6	0.1			G1/100
BL (0°-30°)	1289.5	8.5	B3/2500		
BM (30°-60°)	2967.9	19.5	B3/5000		
BH (60°-80°)	1028.2	6.8	B3/2500		G3/2500
BVH (80°-90°)	49.8	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





REPORT NUMBER: P637989

CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7
2.5°	3270.4	3292.7	3306.6	3333.1	3380.6	3407.1	3436.3	3404.3	3412.6	3408.4	3356.8
5°	3464.2	3490.7	3527.0	3605.1	3693.0	3741.8	3787.8	3780.8	3737.6	3665.1	3613.5
7.5°	3645.5	3676.2	3739.0	3865.9	3995.6	4070.9	4126.7	4090.4	4054.2	3939.8	3810.1
10°	3787.8	3805.9	3891.0	4061.1	4211.8	4296.8	4365.2	4356.8	4306.6	4178.3	4004.0
12.5°	3921.7	3934.2	4026.3	4196.4	4331.7	4369.3	4425.1	4443.3	4426.5	4330.3	4158.8
15°	4065.3	4089.0	4174.1	4303.8	4365.2	4326.1	4345.6	4395.8	4443.3	4443.3	4285.7
17.5°	4199.2	4220.1	4306.6	4362.4	4303.8	4200.6	4206.2	4270.3	4383.3	4501.8	4401.4
20°	4317.7	4337.3	4422.3	4369.3	4183.9	4033.2	4029.1	4107.2	4289.8	4539.5	4525.5
22.5°	4447.4	4475.3	4546.5	4374.9	4072.3	3881.2	3879.8	3960.7	4207.6	4577.1	4667.8
25°	4631.5	4674.8	4711.0	4423.7	4012.3	3782.2	3800.3	3877.0	4181.1	4638.5	4878.4
27.5°	4904.9	4939.7	4937.0	4525.5	4009.5	3741.8	3779.4	3868.7	4228.5	4747.3	5100.1
30°	5200.5	5218.7	5189.4	4667.8	4073.7	3766.9	3822.7	3928.6	4348.4	4927.2	5426.5
32.5°	5528.3	5550.6	5494.8	4881.2	4222.9	3952.4	4075.1	4126.7	4517.2	5186.6	5772.3
35°	5904.8	5948.1	5832.3	5162.9	4662.2	4628.7	4807.3	4740.3	4875.6	5493.4	6141.9
37.5°	6300.9	6302.3	6136.3	5579.9	5524.1	5581.3	5938.3	5729.1	5635.7	5835.1	6518.5
40°	6637.0	6628.6	6373.4	6141.9	6274.4	6501.7	6932.7	6611.9	6366.4	6293.9	6830.8
42.5°	6973.1	6942.4	6684.4	6498.9	6791.8	7259.0	7745.7	7352.4	6835.0	6710.9	7139.1
45°	7402.6	7392.9	7081.9	6641.2	7259.0	8106.9	8752.6	8115.3	7112.6	6953.6	7652.3
47.5°	8095.8	8048.3	7469.6	6630.0	7696.9	9236.6	10052.4	9076.2	7306.4	6959.2	8480.7
50°	8773.6	8715.0	7932.6	6628.6	8148.8	10408.0	11586.5	10243.5	7504.4	6992.6	9323.0
52.5°	9458.3	9458.3	8692.7	6786.2	8622.9	11716.2	13359.1	11698.1	7841.9	7430.5	10359.2
55°	9865.5	9974.3	9547.6	7052.6	9178.0	13255.9	15112.1	13268.4	8363.5	8221.3	11315.9
57.5°	9348.1	9551.7	9490.4	6867.1	9505.7	14386.9	16598.8	14459.4	8621.5	8314.7	11172.3
60°	7617.4	7900.5	8041.4	5929.9	9182.2	14518.0	16909.8	14537.5	8088.8	7080.5	9569.9
62.5°	5063.9	5296.8	5511.5	4236.9	7949.3	13060.6	14955.9	13064.8	6755.5	5284.2	6630.0
65°	2483.8	2656.8	2888.3	2504.7	6210.2	10912.9	11660.4	10557.3	4886.7	2958.0	3382.0
67.5°	649.9	698.7	730.8	972.0	4448.8	7840.6	7604.9	7722.0	3139.3	966.5	884.2
70°	337.5	340.3	338.9	401.7	3006.8	4983.0	5241.0	4849.1	2190.9	404.4	348.7
72.5°	241.3	242.7	238.5	270.6	1451.8	2854.8	2958.0	2925.9	1147.8	239.9	238.5
75°	157.6	159.0	156.2	159.0	219.0	324.9	299.8	315.2	191.1	152.0	152.0
77.5°	93.4	94.8	93.4	96.2	93.4	93.4	86.5	86.5	82.3	82.3	83.7
80°	62.8	62.8	61.4	64.2	58.6	58.6	55.8	54.4	50.2	48.8	48.8
82.5°	37.7	39.0	37.7	37.7	34.9	34.9	32.1	30.7	26.5	26.5	25.1
85°	19.5	19.5	18.1	18.1	15.3	13.9	11.2	11.2	8.4	7.0	7.0
87.5°	2.8	2.8	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P637989

CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7
2.5°	3342.9	3315.0	3273.2	3232.7	3195.1	3156.0	3111.4	3065.4	3026.3	2985.9	2965.0
5°	3545.1	3487.9	3379.2	3282.9	3196.5	3125.3	3048.6	2983.1	2921.7	2871.5	2846.4
7.5°	3727.8	3638.6	3474.0	3322.0	3204.8	3107.2	3001.2	2903.6	2821.3	2760.0	2736.2
10°	3896.6	3790.6	3574.4	3382.0	3245.3	3136.5	3006.8	2874.3	2765.5	2684.6	2665.1
12.5°	4033.2	3911.9	3653.9	3430.8	3269.0	3151.8	3037.5	2923.1	2815.7	2711.1	2694.4
15°	4154.6	4010.9	3713.9	3461.4	3260.6	3111.4	3015.2	3001.2	3001.2	2882.7	2849.2
17.5°	4259.2	4101.6	3762.7	3475.4	3207.6	2991.5	2932.9	3054.2	3190.9	3105.8	3030.5
20°	4379.1	4188.0	3803.1	3475.4	3110.0	2839.4	2833.9	3040.3	3242.5	3243.9	3164.4
22.5°	4500.4	4288.5	3850.5	3462.8	2976.1	2663.7	2766.9	2984.5	3164.4	3241.1	3186.7
25°	4697.1	4427.9	3925.9	3453.1	2819.9	2543.8	2707.0	2910.6	3062.6	3143.5	3108.6
27.5°	4946.7	4612.0	4040.2	3468.4	2665.1	2472.7	2642.8	2814.3	2952.4	3023.5	2998.4
30°	5225.6	4824.0	4162.9	3494.9	2553.5	2436.4	2566.1	2704.2	2826.9	2898.0	2886.9
32.5°	5581.3	5054.1	4268.9	3458.7	2490.8	2418.3	2485.2	2584.2	2702.8	2747.4	2757.2
35°	6006.6	5307.9	4349.8	3316.4	2433.6	2398.7	2397.4	2458.7	2542.4	2613.5	2620.5
37.5°	6398.5	5605.0	4439.1	3072.3	2330.4	2349.9	2294.1	2330.4	2412.7	2483.8	2511.7
40°	6786.2	5906.2	4563.2	2761.3	2195.1	2241.2	2175.6	2200.7	2266.3	2359.7	2404.3
42.5°	7162.8	6178.2	4694.3	2443.4	2059.9	2089.1	2040.3	2065.4	2133.8	2250.9	2301.1
45°	7572.8	6546.3	4796.1	2143.5	1942.7	1930.2	1891.1	1927.4	2030.6	2158.9	2218.8
47.5°	8348.2	7126.5	4863.0	1944.1	1879.9	1789.3	1744.7	1822.8	1939.9	2069.6	2142.1
50°	9295.1	7966.1	4843.5	1817.2	1825.6	1644.3	1628.9	1732.1	1857.6	1992.9	2072.4
52.5°	10045.4	8790.3	4621.8	1695.9	1719.6	1552.2	1507.6	1658.2	1778.1	1916.2	1998.5
55°	10618.6	9067.8	3941.2	1552.2	1546.6	1485.3	1391.8	1581.5	1698.6	1827.0	1916.2
57.5°	10151.4	8450.0	2921.7	1354.2	1320.7	1352.8	1262.1	1451.8	1601.0	1727.9	1807.4
60°	8424.9	6737.4	1627.5	1199.4	1104.5	1182.6	1168.7	1315.1	1495.0	1628.9	1697.3
62.5°	5719.3	4486.5	965.1	948.3	895.3	1006.9	1080.8	1177.1	1354.2	1463.0	1527.1
65°	2850.6	2179.8	641.5	709.9	716.8	828.4	967.9	1073.9	1221.7	1333.3	1397.4
67.5°	827.0	677.8	488.1	542.5	617.8	707.1	818.6	944.2	1087.8	1220.3	1295.6
70°	357.0	361.2	387.7	451.9	525.8	617.8	729.4	852.1	973.4	1075.3	1132.4
72.5°	252.4	262.2	291.5	357.0	426.8	514.6	626.2	744.7	832.6	935.8	995.8
75°	161.8	168.7	192.5	242.7	294.3	379.3	485.3	594.1	684.8	758.7	815.9
77.5°	89.3	90.7	110.2	139.5	174.3	228.7	306.8	391.9	458.8	500.7	552.3
80°	51.6	51.6	61.4	79.5	100.4	133.9	177.1	219.0	259.4	285.9	311.0
82.5°	27.9	27.9	32.1	43.2	54.4	73.9	99.0	119.9	145.0	159.0	175.7
85°	8.4	8.4	11.2	15.3	19.5	27.9	39.0	50.2	61.4	71.1	80.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
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: P637989

CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7
2.5°	2960.8	2941.3	2930.1	2916.1	2920.3	2907.8	2900.8	2905.0	2879.9	2905.0	2930.1
5°	2836.7	2808.8	2786.4	2768.3	2760.0	2743.2	2733.5	2733.5	2718.1	2743.2	2773.9
7.5°	2727.9	2705.6	2694.4	2683.2	2670.7	2655.4	2638.6	2633.0	2623.3	2649.8	2676.3
10°	2655.4	2658.1	2665.1	2680.5	2677.7	2667.9	2642.8	2628.9	2628.9	2659.5	2700.0
12.5°	2688.8	2718.1	2734.8	2762.7	2768.3	2760.0	2734.8	2723.7	2751.6	2797.6	2864.5
15°	2818.5	2838.1	2852.0	2874.3	2872.9	2865.9	2846.4	2854.8	2946.8	3036.1	3096.1
17.5°	2959.4	2937.1	2934.3	2948.2	2952.4	2944.0	2932.9	2970.5	3122.6	3206.2	3236.9
20°	3061.2	2984.5	2967.8	2973.3	2984.5	2980.3	2980.3	3041.7	3199.3	3238.3	3199.3
22.5°	3091.9	2983.1	2958.0	2959.4	2974.7	2976.1	2983.1	3047.2	3139.3	3140.7	3080.7
25°	3043.1	2938.5	2920.3	2923.1	2941.3	2939.9	2942.6	2978.9	3019.4	3002.6	2958.0
27.5°	2951.0	2860.4	2854.8	2870.1	2893.8	2881.3	2872.9	2882.7	2902.2	2881.3	2842.2
30°	2846.4	2769.7	2772.5	2801.8	2826.9	2806.0	2785.1	2790.6	2792.0	2769.7	2725.1
32.5°	2736.2	2679.1	2688.8	2719.5	2748.8	2726.5	2704.2	2701.4	2674.9	2648.4	2605.1
35°	2626.1	2603.8	2616.3	2641.4	2666.5	2648.4	2634.4	2626.1	2568.9	2529.8	2493.6
37.5°	2525.7	2542.4	2564.7	2580.0	2588.4	2587.0	2578.7	2559.1	2483.8	2437.8	2390.4
40°	2436.4	2488.0	2511.7	2518.7	2531.2	2528.4	2527.1	2499.2	2400.1	2351.3	2296.9
42.5°	2355.5	2428.0	2468.5	2475.4	2482.4	2483.8	2479.6	2439.2	2326.2	2269.0	2217.4
45°	2277.4	2372.2	2423.8	2416.9	2426.6	2426.6	2430.8	2377.8	2253.7	2195.1	2140.7
47.5°	2209.1	2320.6	2368.1	2359.7	2365.3	2369.5	2373.6	2312.3	2174.2	2118.4	2062.6
50°	2146.3	2264.9	2305.3	2308.1	2308.1	2317.9	2316.5	2256.5	2107.3	2047.3	1991.5
52.5°	2079.4	2207.7	2250.9	2269.0	2274.6	2278.8	2259.3	2189.6	2038.9	1966.4	1914.8
55°	2001.3	2149.1	2188.2	2211.9	2223.0	2220.2	2193.7	2122.6	1969.2	1896.7	1838.1
57.5°	1882.7	2023.6	2079.4	2090.5	2108.7	2097.5	2066.8	2006.9	1857.6	1785.1	1725.1
60°	1753.0	1854.8	1899.5	1909.2	1895.3	1899.5	1895.3	1838.1	1708.4	1651.2	1589.9
62.5°	1582.9	1673.5	1721.0	1733.5	1709.8	1725.1	1719.6	1648.4	1518.7	1458.8	1404.4
65°	1454.6	1553.6	1609.4	1616.4	1609.4	1616.4	1596.8	1510.4	1387.6	1326.3	1270.5
67.5°	1354.2	1456.0	1514.6	1534.1	1527.1	1525.7	1495.0	1394.6	1267.7	1200.8	1129.6
70°	1181.2	1270.5	1345.8	1393.2	1393.2	1366.7	1308.2	1214.7	1112.9	1055.7	999.9
72.5°	1046.0	1158.9	1232.8	1281.7	1291.4	1276.1	1193.8	1094.8	977.6	920.4	861.9
75°	861.9	972.0	1051.5	1115.7	1128.2	1111.5	1016.7	919.1	810.3	754.5	695.9
77.5°	576.0	641.5	705.7	764.3	751.7	762.9	698.7	624.8	557.8	516.0	489.5
80°	324.9	368.2	387.7	419.8	419.8	419.8	377.9	343.1	305.4	281.7	255.2
82.5°	184.1	212.0	220.3	246.8	253.8	255.2	227.3	205.0	181.3	168.7	150.6
85°	85.1	100.4	101.8	117.1	122.7	133.9	121.3	106.0	92.0	86.5	75.3
87.5°	2.8	8.4	11.2	20.9	27.9	32.1	34.9	34.9	29.3	26.5	22.3
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: P637989

CATALOG NUMBER: GWS-SA4D-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7	3126.7
2.5°	2960.8	2994.2	3033.3	3061.2	3111.4	3153.2	3196.5	3243.9	3278.8	3270.4
5°	2811.6	2867.3	2938.5	3004.0	3097.4	3192.3	3296.9	3404.3	3467.0	3464.2
7.5°	2727.9	2807.4	2893.8	2981.7	3091.9	3228.5	3388.9	3556.3	3641.4	3645.5
10°	2772.5	2857.6	2916.1	2990.1	3105.8	3277.4	3469.8	3670.6	3768.3	3787.8
12.5°	2913.4	2906.4	2902.2	2955.2	3094.7	3312.2	3547.9	3787.8	3898.0	3921.7
15°	3047.2	2903.6	2817.1	2853.4	3044.5	3334.5	3624.6	3916.1	4040.2	4065.3
17.5°	3072.3	2854.8	2694.4	2719.5	2965.0	3341.5	3698.5	4041.6	4175.5	4199.2
20°	3002.6	2792.0	2605.1	2570.3	2864.5	3323.4	3744.6	4146.2	4292.6	4317.7
22.5°	2914.8	2736.2	2538.2	2447.6	2741.8	3305.2	3796.2	4256.4	4425.1	4447.4
25°	2822.7	2665.1	2475.4	2337.4	2602.4	3294.1	3882.6	4401.4	4605.0	4631.5
27.5°	2725.1	2578.7	2421.1	2284.4	2474.1	3308.0	4005.3	4635.7	4867.2	4904.9
30°	2620.5	2492.2	2386.2	2266.3	2386.2	3320.6	4140.6	4875.6	5147.5	5200.5
32.5°	2511.7	2412.7	2349.9	2274.6	2331.8	3291.3	4259.2	5144.8	5482.2	5528.3
35°	2402.9	2331.8	2303.9	2290.0	2259.3	3183.9	4355.4	5416.7	5864.4	5904.8
37.5°	2301.1	2248.1	2239.8	2255.1	2147.7	3008.2	4467.0	5762.6	6239.5	6300.9
40°	2206.3	2157.5	2156.1	2153.3	2025.0	2768.3	4617.6	6114.0	6609.1	6637.0
42.5°	2118.4	2057.1	2068.2	2034.7	1924.6	2508.9	4759.8	6413.9	6953.6	6973.1
45°	2040.3	1959.4	1972.0	1930.2	1877.2	2237.0	4885.4	6768.1	7390.1	7402.6
47.5°	1965.0	1878.6	1843.7	1840.9	1868.8	1985.9	5008.1	7450.1	8073.5	8095.8
50°	1895.3	1801.8	1702.8	1764.2	1817.2	1797.7	5161.5	8180.8	8779.1	8773.6
52.5°	1828.3	1705.6	1564.8	1683.3	1683.3	1658.2	5118.3	8624.3	9362.1	9458.3
55°	1751.6	1550.8	1421.1	1548.0	1486.7	1532.7	4352.6	8769.4	9728.9	9865.5
57.5°	1599.6	1359.8	1246.8	1315.1	1223.1	1421.1	3126.7	8049.7	9105.5	9348.1
60°	1453.2	1218.9	1145.0	1132.4	1012.5	1158.9	2026.4	6302.3	7494.7	7617.4
62.5°	1281.7	1097.6	1034.8	938.6	814.5	843.7	1227.3	4147.6	5036.0	5063.9
65°	1152.0	994.4	874.4	760.1	666.6	612.2	725.2	1999.9	2517.3	2483.8
67.5°	988.8	852.1	737.8	655.5	578.8	510.4	482.5	594.1	672.2	649.9
70°	880.0	748.9	638.7	560.6	489.5	421.2	372.4	350.0	343.1	337.5
72.5°	758.7	644.3	530.0	454.6	387.7	324.9	280.3	253.8	246.8	241.3
75°	605.3	497.9	393.3	322.2	263.6	219.0	189.7	167.4	163.2	157.6
77.5°	400.3	319.4	234.3	191.1	156.2	132.5	113.0	99.0	96.2	93.4
80°	220.3	184.1	143.6	115.8	93.4	80.9	73.9	65.5	64.2	62.8
82.5°	131.1	110.2	82.3	65.5	54.4	48.8	44.6	40.4	39.0	37.7
85°	65.5	51.6	36.3	30.7	27.9	25.1	25.1	20.9	19.5	19.5
87.5°	16.7	13.9	8.4	7.0	7.0	7.0	5.6	4.2	4.2	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u': 0.2476
 CIE v': 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 Rf: 81.5
 Rg: 99.2

CRI (Ra):	81.0		
R1:	79.6	R9:	7.1
R2:	85.6	R10:	67.0
R3:	92.0	R11:	82.7
R4:	82.6	R12:	63.2
R5:	78.9	R13:	80.3
R6:	81.7	R14:	95.0
R7:	85.2	R15:	71.7
R8:	62.0		



Test Conditions

Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

REPORT NUMBER: SP1-2408-195-9

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength



Photopic Lumens: NR

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)