

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: STREETWORKS

Report Number: P867888

Luminaire Tested: **MEM2-HSN-SA-130-722-U-T2R**

Issue Date: 08/21/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P867888  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: MEM2-HSN-SA-130-722-U-T2R  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 130W 70CRI 2200K  
FITURE w/ TYPE II ROADWAY DISTRIBUTION OPTIC  
Light Source: (30) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

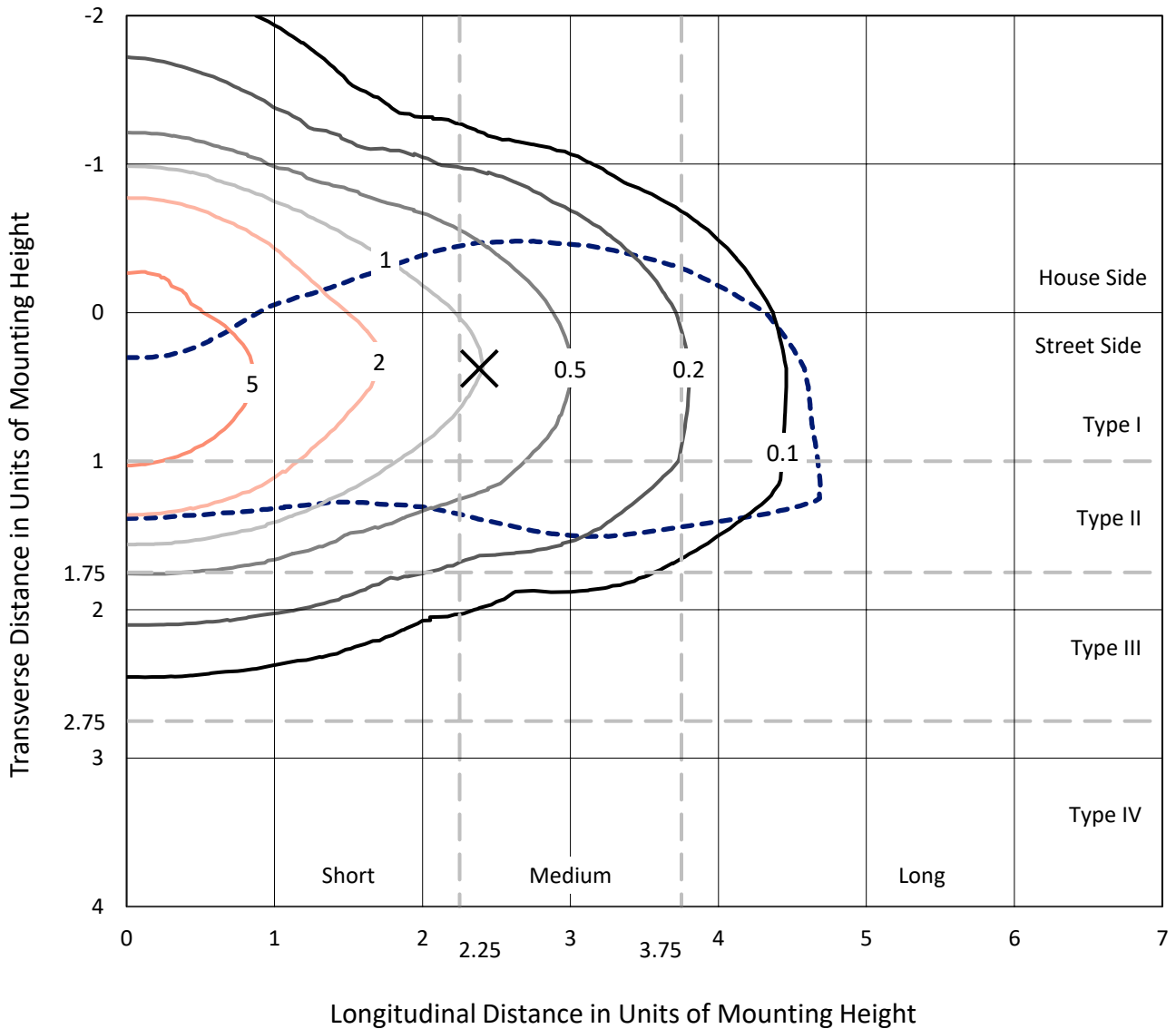
Lumens per Lamp: N/A  
Luminaire Lumens: 14600.7 lumens  
Efficiency: N/A  
Efficacy: 129.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

Input Watts (W): 113  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 7.77%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

REPORT NUMBER: P867888  
 CATALOG NUMBER: MEM2-HSN-SA-130-722-U-T2R

### Iso-Footcandle Lines of Horizontal Illumination

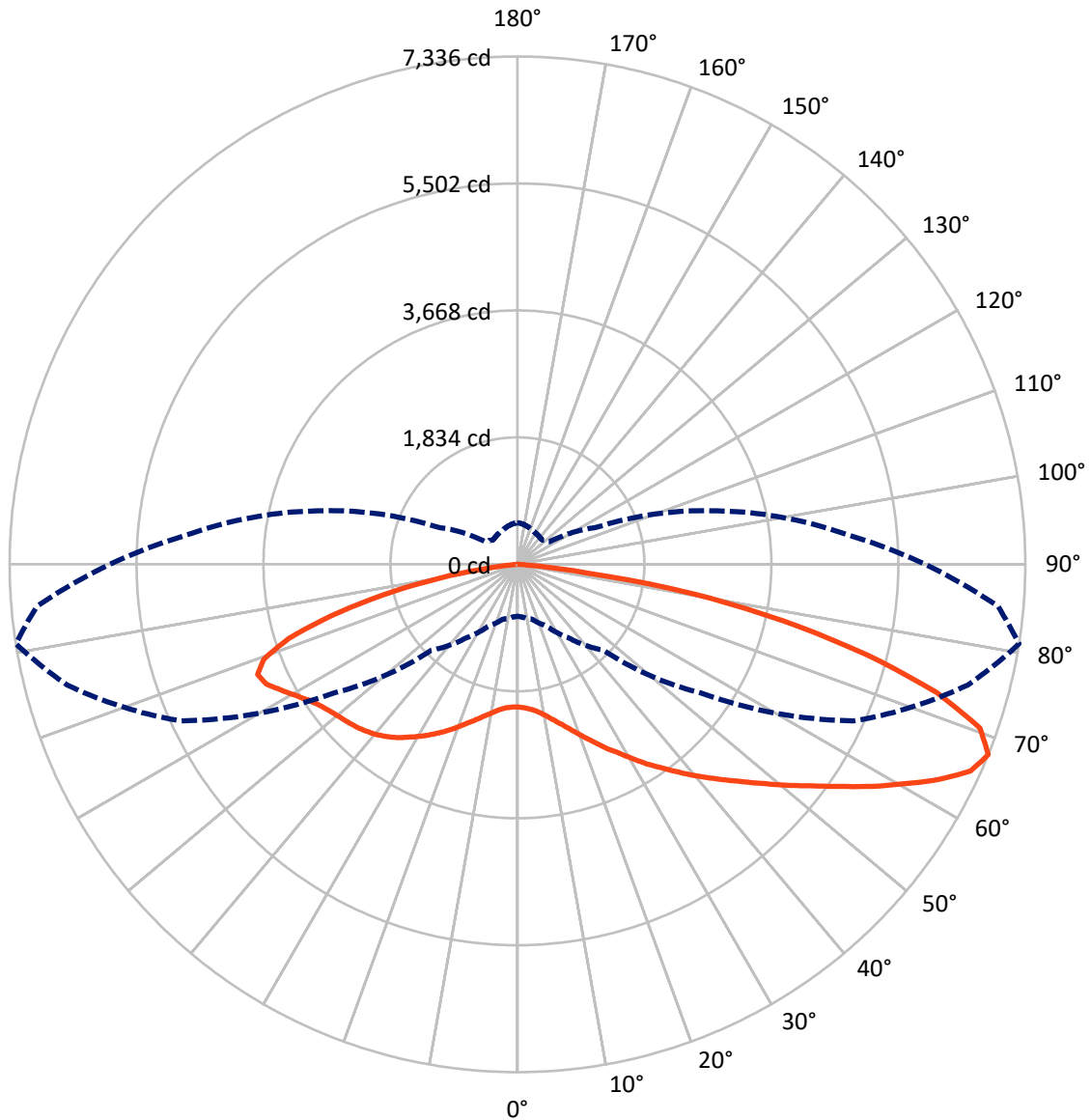
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.3 fc  
 Type II - Medium - N/A

REPORT NUMBER: P867888  
CATALOG NUMBER: MEM2-HSN-SA-130-722-U-T2R

### Luminous Intensity Polar Plot



— Vertical Plane Through 81-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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 CATALOG NUMBER: MEM2-HSN-SA-130-722-U-T2R

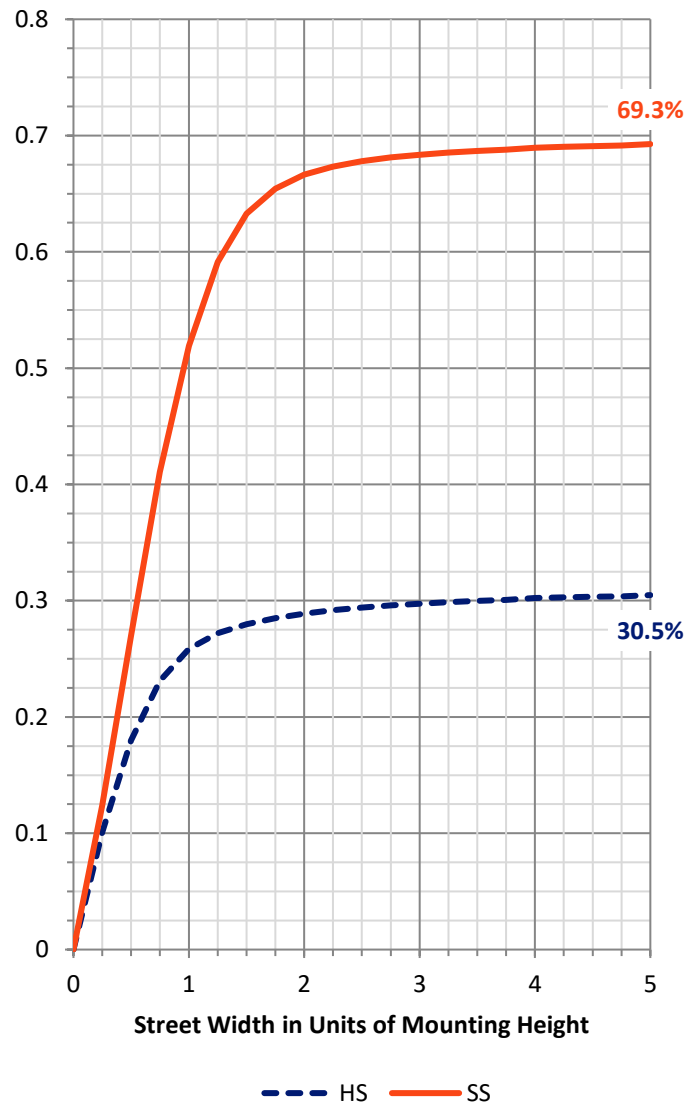
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4474.0	0.0	4474.0
	% Fixture	30.6	0.0	30.6
<b>Street Side</b>	Lumens	10126.7	0.0	10126.7
	% Fixture	69.4	0.0	69.4
<b>Total</b>	Lumens	14600.7	0.0	14600.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.2	1.4
10°-20°	746.2	5.1
20°-30°	1486.2	10.2
30°-40°	2334.8	16.0
40°-50°	2895.6	19.8
50°-60°	2830.6	19.4
60°-70°	2380.4	16.3
70°-80°	1512.5	10.4
80°-90°	204.2	1.4
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°	14600.7	100.0
0°-180°	14600.7	100.0



REPORT NUMBER: P867888

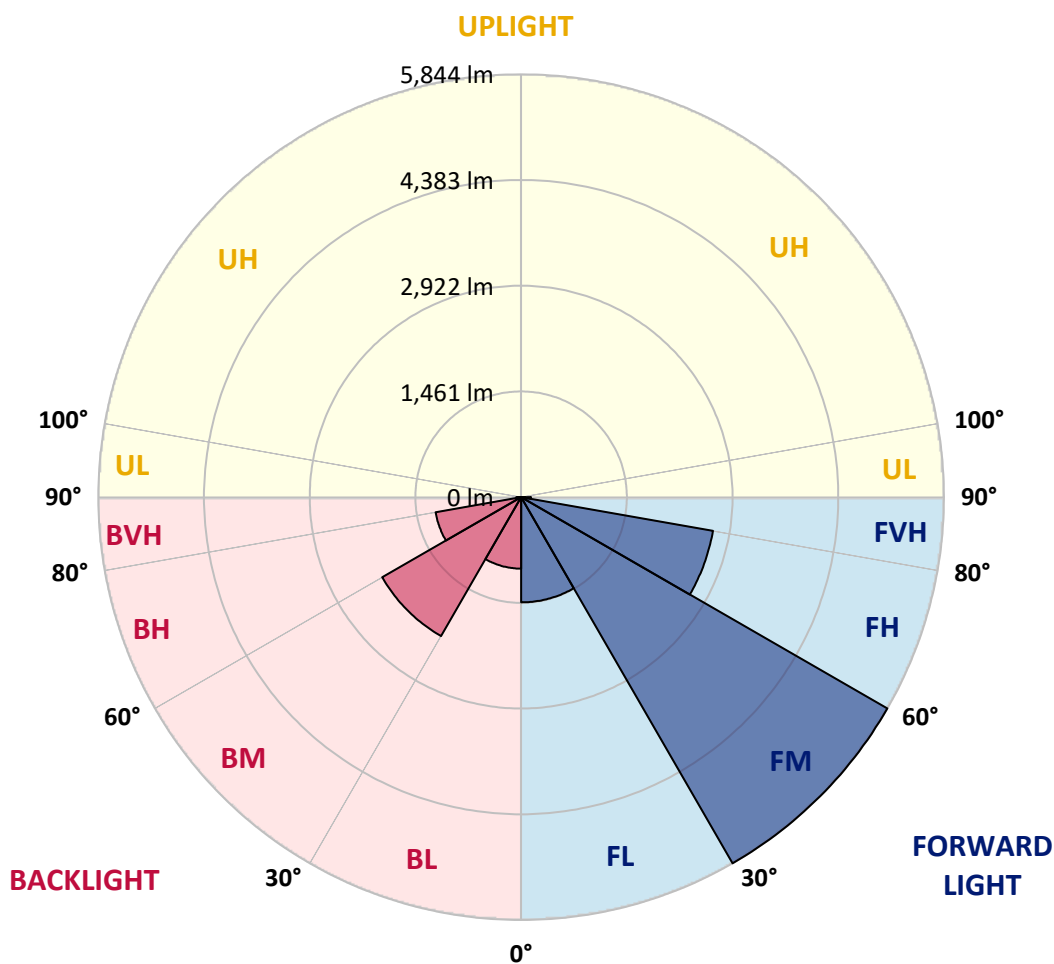
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1454.3	10.0			
FM (30°-60°)	5843.6	40.0			
FH (60°-80°)	2691.9	18.4			G2/5000
FVH (80°-90°)	136.8	0.9			G2/225
BL (0°-30°)	988.2	6.8	B2/1000		
BM (30°-60°)	2217.4	15.2	B2/2500		
BH (60°-80°)	1201.0	8.2	B3/2500		G3/2500
BVH (80°-90°)	67.4	0.5			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 II Medium





REPORT NUMBER: P867888

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	81°	85°
0°	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4
2.5°	2133.7	2130.8	2130.8	2107.7	2107.7	2101.9	2104.8	2087.4	2078.7	2075.8	2072.9
5°	2287.2	2287.2	2269.8	2255.3	2226.4	2200.3	2177.2	2142.4	2116.4	2104.8	2096.1
7.5°	2518.8	2501.4	2495.6	2452.2	2391.4	2339.3	2293.0	2217.7	2168.5	2151.1	2139.5
10°	2802.5	2779.4	2735.9	2686.7	2608.5	2530.4	2437.7	2336.4	2255.3	2220.6	2206.1
12.5°	3094.9	3063.1	3002.3	2956.0	2854.6	2735.9	2605.7	2466.7	2353.8	2304.6	2278.5
15°	3416.3	3398.9	3326.6	3233.9	3115.2	2947.3	2785.2	2614.3	2469.6	2400.1	2356.7
17.5°	3763.7	3737.7	3659.5	3546.6	3378.7	3178.9	2990.7	2770.7	2602.8	2513.0	2463.8
20°	4105.4	4099.6	3983.8	3876.6	3679.8	3430.8	3187.6	2956.0	2744.6	2640.4	2576.7
22.5°	4487.5	4449.9	4348.5	4198.0	3963.5	3734.8	3448.1	3147.1	2898.1	2776.5	2704.1
25°	4884.2	4881.3	4756.8	4571.5	4296.4	4006.9	3697.1	3364.2	3080.5	2932.8	2837.3
27.5°	5376.3	5338.7	5179.5	4968.1	4649.6	4316.7	3957.7	3590.0	3254.2	3077.6	2961.8
30°	5807.7	5796.1	5616.6	5379.2	5023.1	4626.5	4238.5	3844.8	3459.7	3251.3	3123.9
32.5°	6158.0	6143.6	5990.1	5752.7	5370.5	4959.4	4513.6	4085.1	3665.3	3439.5	3271.5
35°	6450.4	6427.3	6268.0	6030.6	5700.6	5283.7	4808.9	4337.0	3891.1	3616.1	3456.8
37.5°	6566.2	6546.0	6415.7	6218.8	5914.8	5532.7	5075.2	4614.9	4116.9	3815.8	3636.3
40°	6522.8	6511.2	6418.6	6282.5	6050.9	5732.4	5330.0	4904.4	4371.7	4027.2	3812.9
42.5°	6317.3	6317.3	6259.4	6189.9	6074.1	5845.4	5555.8	5182.4	4617.8	4238.5	3980.9
45°	6027.7	6016.2	5995.9	5969.8	5952.5	5865.6	5703.5	5422.7	4889.9	4470.1	4183.5
47.5°	5642.7	5651.4	5636.9	5648.5	5720.9	5775.9	5767.2	5645.6	5167.9	4724.9	4383.3
50°	5037.6	5078.1	5124.5	5260.5	5408.2	5561.6	5703.5	5804.8	5495.0	5014.4	4614.9
52.5°	4287.7	4305.1	4429.6	4751.0	5066.5	5269.2	5538.5	5877.2	5784.6	5315.5	4887.0
55°	3364.2	3396.0	3584.2	4038.8	4600.4	4988.4	5304.0	5845.4	6079.9	5660.1	5205.5
57.5°	2411.7	2431.9	2733.0	3202.1	3934.5	4586.0	5037.6	5718.0	6317.3	6050.9	5532.7
60°	1713.9	1751.6	1945.6	2403.0	3106.5	4030.1	4794.4	5532.7	6537.3	6433.1	5961.2
62.5°	1265.2	1285.5	1421.5	1754.5	2333.5	3271.5	4478.8	5396.6	6682.1	6844.2	6389.6
65°	952.5	961.2	1053.8	1282.6	1745.8	2411.7	3980.9	5370.5	6763.1	7194.5	6768.9
67.5°	749.8	764.3	822.2	978.6	1299.9	1754.5	3242.6	5353.2	6734.2	7336.4	6968.7
70°	631.1	634.0	677.5	764.3	972.8	1262.3	2423.3	5092.6	6572.0	7087.4	6783.4
72.5°	547.2	547.2	567.5	636.9	781.7	955.4	1650.2	4470.1	6160.9	6331.7	6140.7
75°	443.0	440.1	474.8	541.4	628.3	735.4	1108.9	3384.5	5298.2	5211.3	5055.0
77.5°	385.1	382.2	411.1	469.0	518.2	587.7	758.5	2197.4	4169.0	3908.5	3810.0
80°	330.0	321.4	344.5	399.5	425.6	457.4	524.0	1279.7	2724.4	2562.2	2443.5
82.5°	249.0	228.7	222.9	269.3	286.6	266.4	266.4	448.8	990.1	998.8	923.6
85°	20.3	23.2	29.0	34.7	49.2	55.0	57.9	95.5	147.7	141.9	144.8
87.5°	2.9	2.9	2.9	5.8	5.8	8.7	8.7	8.7	11.6	11.6	11.6
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: P867888

CATALOG NUMBER: MEM2-HSN-SA-130-722-U-T2R

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4	2061.4
2.5°	2070.0	2064.3	2058.5	2058.5	2058.5	2052.7	2049.8	2049.8	2046.9	2038.2	2035.3
5°	2090.3	2081.6	2072.9	2072.9	2072.9	2070.0	2067.2	2070.0	2067.2	2058.5	2055.6
7.5°	2130.8	2119.3	2107.7	2107.7	2113.5	2110.6	2110.6	2113.5	2110.6	2101.9	2099.0
10°	2188.7	2171.4	2165.6	2165.6	2171.4	2168.5	2165.6	2165.6	2162.7	2148.2	2154.0
12.5°	2252.4	2235.1	2229.3	2232.2	2229.3	2223.5	2226.4	2217.7	2214.8	2191.6	2188.7
15°	2333.5	2313.2	2301.7	2304.6	2295.9	2284.3	2272.7	2266.9	2255.3	2235.1	2229.3
17.5°	2426.2	2394.3	2379.8	2379.8	2362.5	2339.3	2321.9	2304.6	2287.2	2264.0	2258.2
20°	2515.9	2487.0	2463.8	2458.0	2423.3	2385.6	2353.8	2324.8	2304.6	2278.5	2272.7
22.5°	2628.8	2588.3	2556.4	2530.4	2478.3	2417.5	2368.3	2327.7	2298.8	2269.8	2261.1
25°	2747.5	2689.6	2637.5	2588.3	2515.9	2429.0	2359.6	2301.7	2264.0	2232.2	2226.4
27.5°	2866.2	2790.9	2715.7	2637.5	2527.5	2414.6	2316.1	2246.7	2197.4	2156.9	2151.1
30°	2993.6	2901.0	2782.3	2669.3	2524.6	2376.9	2252.4	2154.0	2096.1	2049.8	2044.0
32.5°	3123.9	3008.1	2846.0	2692.5	2510.1	2321.9	2159.8	2055.6	1983.2	1931.1	1916.6
35°	3268.6	3126.8	2903.9	2701.2	2469.6	2240.9	2061.4	1931.1	1847.1	1795.0	1783.4
37.5°	3416.3	3236.8	2941.5	2695.4	2411.7	2145.3	1934.0	1800.8	1702.4	1630.0	1618.4
40°	3566.9	3338.1	2964.7	2666.5	2330.6	2026.6	1815.3	1653.1	1511.3	1444.7	1412.8
42.5°	3705.8	3430.8	2976.2	2625.9	2240.9	1902.1	1658.9	1447.6	1314.4	1242.0	1256.5
45°	3850.6	3517.6	2979.1	2576.7	2122.2	1742.9	1462.1	1265.2	1132.0	1077.0	1071.2
47.5°	3975.1	3590.0	2973.3	2507.2	1989.0	1560.5	1256.5	1068.3	969.9	917.8	912.0
50°	4140.1	3671.1	2964.7	2426.2	1815.3	1352.0	1065.4	912.0	822.2	781.7	778.8
52.5°	4305.1	3760.8	2958.9	2313.2	1632.9	1155.2	891.7	770.1	709.3	689.1	683.3
55°	4522.3	3870.8	2961.8	2183.0	1424.4	952.5	755.6	671.7	639.8	631.1	631.1
57.5°	4771.2	4012.7	2979.1	2038.2	1207.3	787.5	657.2	619.6	616.7	622.5	625.4
60°	5072.3	4200.9	3013.9	1887.7	1007.5	665.9	599.3	596.4	605.1	625.4	631.1
62.5°	5411.1	4406.5	3057.3	1690.8	816.4	584.8	567.5	579.0	590.6	613.8	616.7
65°	5709.3	4638.1	3083.4	1502.6	683.3	538.5	547.2	553.0	581.9	613.8	613.8
67.5°	5888.8	4806.0	2984.9	1265.2	570.3	498.0	515.3	532.7	564.6	593.5	599.3
70°	5828.0	4751.0	2649.1	981.5	483.5	460.3	480.6	506.7	538.5	573.2	590.6
72.5°	5405.3	4360.1	2151.1	715.1	419.8	425.6	451.6	486.4	515.3	553.0	576.1
75°	4519.4	3639.2	1551.8	515.3	367.7	390.8	431.4	460.3	480.6	489.3	492.2
77.5°	3430.8	2675.1	1056.7	385.1	318.5	350.3	393.7	425.6	431.4	437.2	443.0
80°	2240.9	1702.4	596.4	269.3	243.2	286.6	321.4	356.1	344.5	361.9	367.7
82.5°	946.7	744.1	272.1	133.2	112.9	121.6	130.3	115.8	107.1	107.1	92.6
85°	124.5	95.5	40.5	17.4	14.5	8.7	8.7	8.7	5.8	5.8	5.8
87.5°	11.6	11.6	8.7	8.7	5.8	5.8	2.9	5.8	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-157-2

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-40-722-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-40-722-U-5WQ-2

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 08/20/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **MEM2-HTN-SA-40-722-U-5WQ-2**  
 Description: Epic Modern Light Square 40W 5WQ Optic and Flare Trim

**Spectral Parameters**

CCT (K): 2253  
 CIE u': 0.2868  
 CIE v': 0.5332  
 Duv: -0.0014  
 CIE x: 0.4974  
 CIE y: 0.4110  
 CIE z: 0.0915  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 587  
 Purity: 72.69432  
 Rf: 76.9  
 Rg: 92.7

CRI (Ra):	70.6		
R1:	68.4	R9:	-36.0
R2:	88.7	R10:	78.2
R3:	85.4	R11:	61.0
R4:	63.5	R12:	74.2
R5:	69.0	R13:	72.8
R6:	88.9	R14:	92.2
R7:	68.5	R15:	58.0
R8:	32.0		



**Test Conditions**

Stabilization Time: 29M  
 Operation Time: 1H 29M  
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2407-157-2

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: SP1-2407-157-2

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 2200K 4-step quadrangle

REPORT NUMBER: SP1-2407-157-2

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-2

**Scotopic Flux vs. Wavelength**



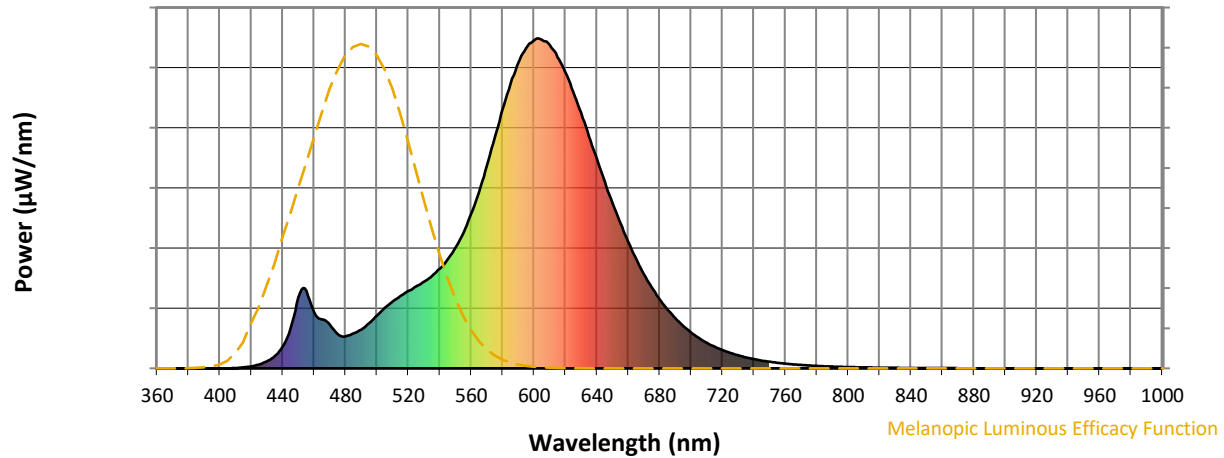
**Scotopic Lumens: NR**

**S/P: 0.96**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

REPORT NUMBER: SP1-2407-157-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.71

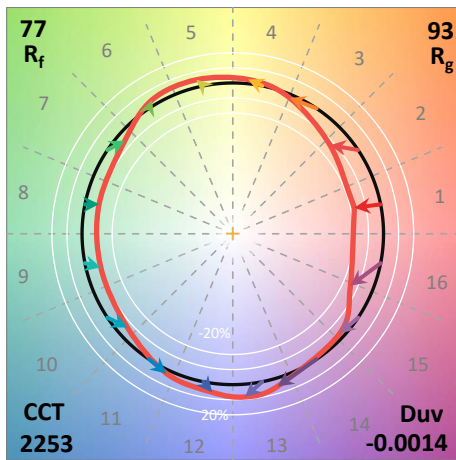
λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>2</sup> /nm	Lumens (φ/nm)
360	0	NR	490	117	NR	620	896	NR	750	20	NR	880	0	NR
365	0	NR	495	137	NR	625	838	NR	755	17	NR	885	0	NR
370	0	NR	500	160	NR	630	774	NR	760	14	NR	890	0	NR
375	0	NR	505	183	NR	635	704	NR	765	12	NR	895	0	NR
380	0	NR	510	202	NR	640	635	NR	770	10	NR	900	0	NR
385	0	NR	515	219	NR	645	565	NR	775	9	NR	905	0	NR
390	0	NR	520	235	NR	650	501	NR	780	7	NR	910	0	NR
395	0	NR	525	249	NR	655	440	NR	785	6	NR	915	0	NR
400	0	NR	530	263	NR	660	383	NR	790	5	NR	920	0	NR
405	0	NR	535	281	NR	665	332	NR	795	5	NR	925	0	NR
410	1	NR	540	302	NR	670	286	NR	800	4	NR	930	0	NR
415	3	NR	545	331	NR	675	245	NR	805	3	NR	935	0	NR
420	6	NR	550	366	NR	680	210	NR	810	3	NR	940	0	NR
425	12	NR	555	411	NR	685	178	NR	815	3	NR	945	0	NR
430	21	NR	560	469	NR	690	152	NR	820	2	NR	950	0	NR
435	38	NR	565	536	NR	695	129	NR	825	2	NR	955	0	NR
440	66	NR	570	614	NR	700	109	NR	830	2	NR	960	0	NR
445	122	NR	575	701	NR	705	92	NR	835	1	NR	965	0	NR
450	215	NR	580	785	NR	710	77	NR	840	1	NR	970	0	NR
455	236	NR	585	863	NR	715	66	NR	845	1	NR	975	0	NR
460	170	NR	590	928	NR	720	55	NR	850	1	NR	980	0	NR
465	148	NR	595	971	NR	725	47	NR	855	1	NR	985	0	NR
470	132	NR	600	994	NR	730	40	NR	860	1	NR	990	0	NR
475	104	NR	605	996	NR	735	33	NR	865	1	NR	995	0	NR
480	97	NR	610	979	NR	740	28	NR	870	1	NR	1000	0	NR
485	105	NR	615	943	NR	745	24	NR	875	0	NR			

**Summary**

$R_f = 76.9$   
 $R_g = 92.7$   
 CIE  $R_a = 70.6$   
 $R_9 = -36.0$



**Color Vector Graphics**



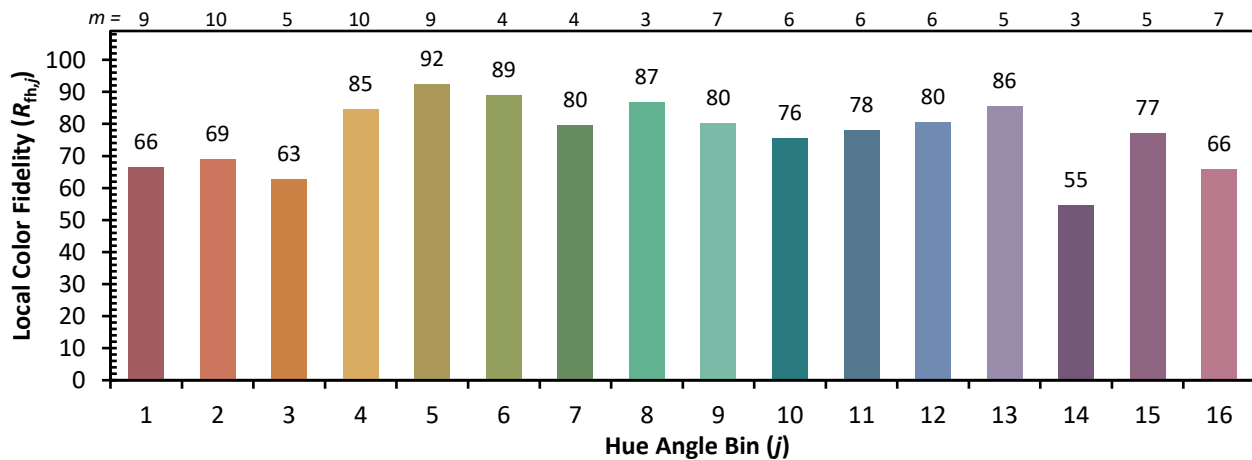
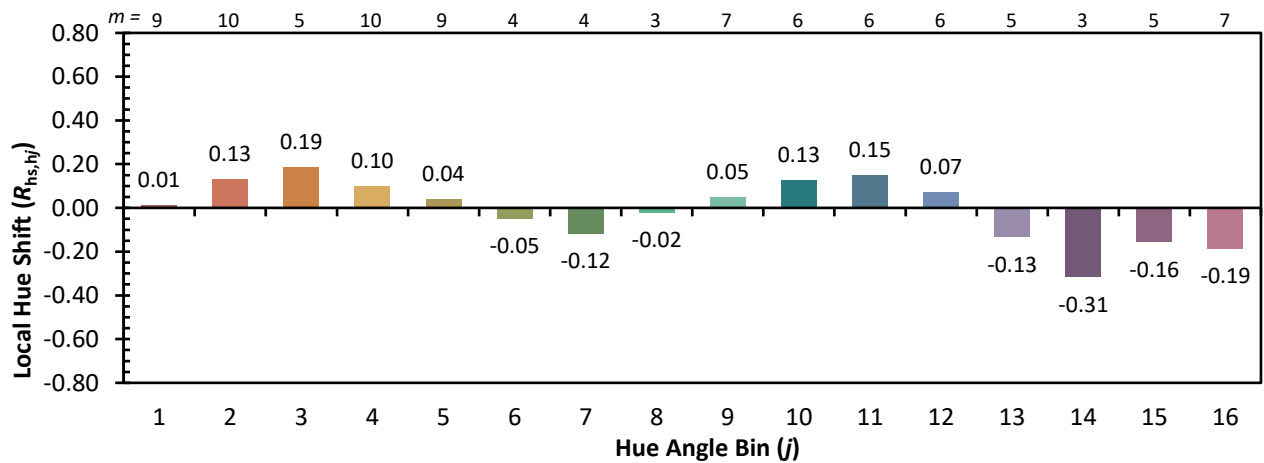
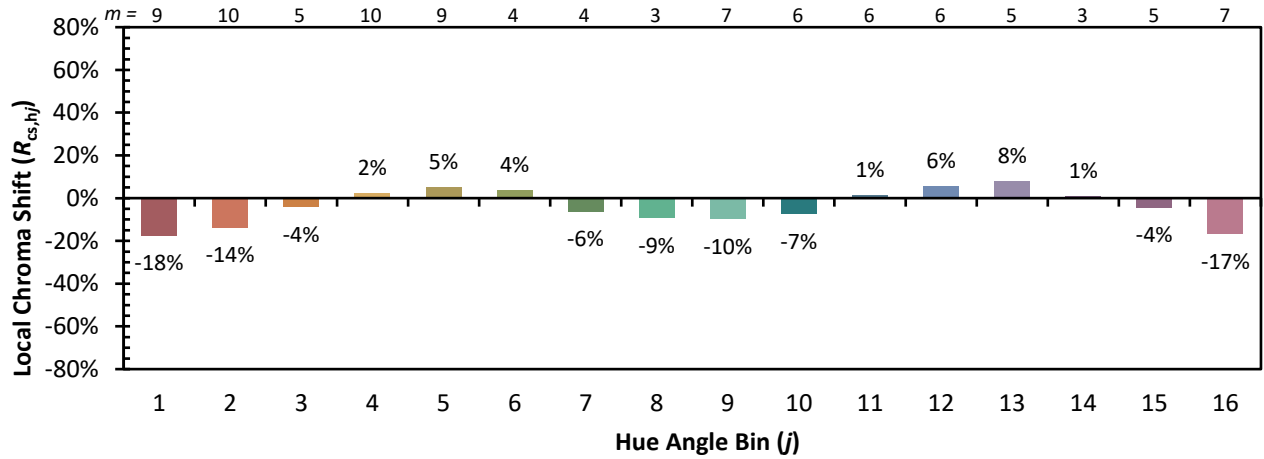


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

CES01 = 87	CES26 = 76	CES51 = 88	CES76 = 78
CES02 = 65	CES27 = 94	CES52 = 85	CES77 = 75
CES03 = 32	CES28 = 93	CES53 = 80	CES78 = 79
CES04 = 72	CES29 = 81	CES54 = 86	CES79 = 82
CES05 = 51	CES30 = 91	CES55 = 83	CES80 = 81
CES06 = 52	CES31 = 83	CES56 = 77	CES81 = 51
CES07 = 44	CES32 = 75	CES57 = 75	CES82 = 92
CES08 = 42	CES33 = 88	CES58 = 76	CES83 = 88
CES09 = 29	CES34 = 88	CES59 = 84	CES84 = 90
CES10 = 79	CES35 = 94	CES60 = 91	CES85 = 65
CES11 = 62	CES36 = 90	CES61 = 82	CES86 = 48
CES12 = 68	CES37 = 97	CES62 = 91	CES87 = 76
CES13 = 45	CES38 = 98	CES63 = 86	CES88 = 78
CES14 = 75	CES39 = 97	CES64 = 70	CES89 = 61
CES15 = 72	CES40 = 94	CES65 = 71	CES90 = 80
CES16 = 48	CES41 = 95	CES66 = 71	CES91 = 80
CES17 = 51	CES42 = 89	CES67 = 70	CES92 = 51
CES18 = 57	CES43 = 80	CES68 = 74	CES93 = 68
CES19 = 74	CES44 = 99	CES69 = 84	CES94 = 44
CES20 = 68	CES45 = 83	CES70 = 72	CES95 = 66
CES21 = 88	CES46 = 81	CES71 = 75	CES96 = 75
CES22 = 81	CES47 = 88	CES72 = 89	CES97 = 76
CES23 = 92	CES48 = 73	CES73 = 68	CES98 = 72
CES24 = 92	CES49 = 82	CES74 = 85	CES99 = 63
CES25 = 73	CES50 = 87	CES75 = 80	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)