

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: INVUE

Report Number: P869014

Luminaire Tested: **EMM2-HSN-SA2A-727-U-T4W**

Issue Date: 08/22/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P869014  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/22/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM2-HSN-SA2A-727-U-T4W  
Description: EPIC MODERN SHORT HOUSING DISCRETE LED ARRAYS 70W 70CRI 2700K  
FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC  
Light Source: (20) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

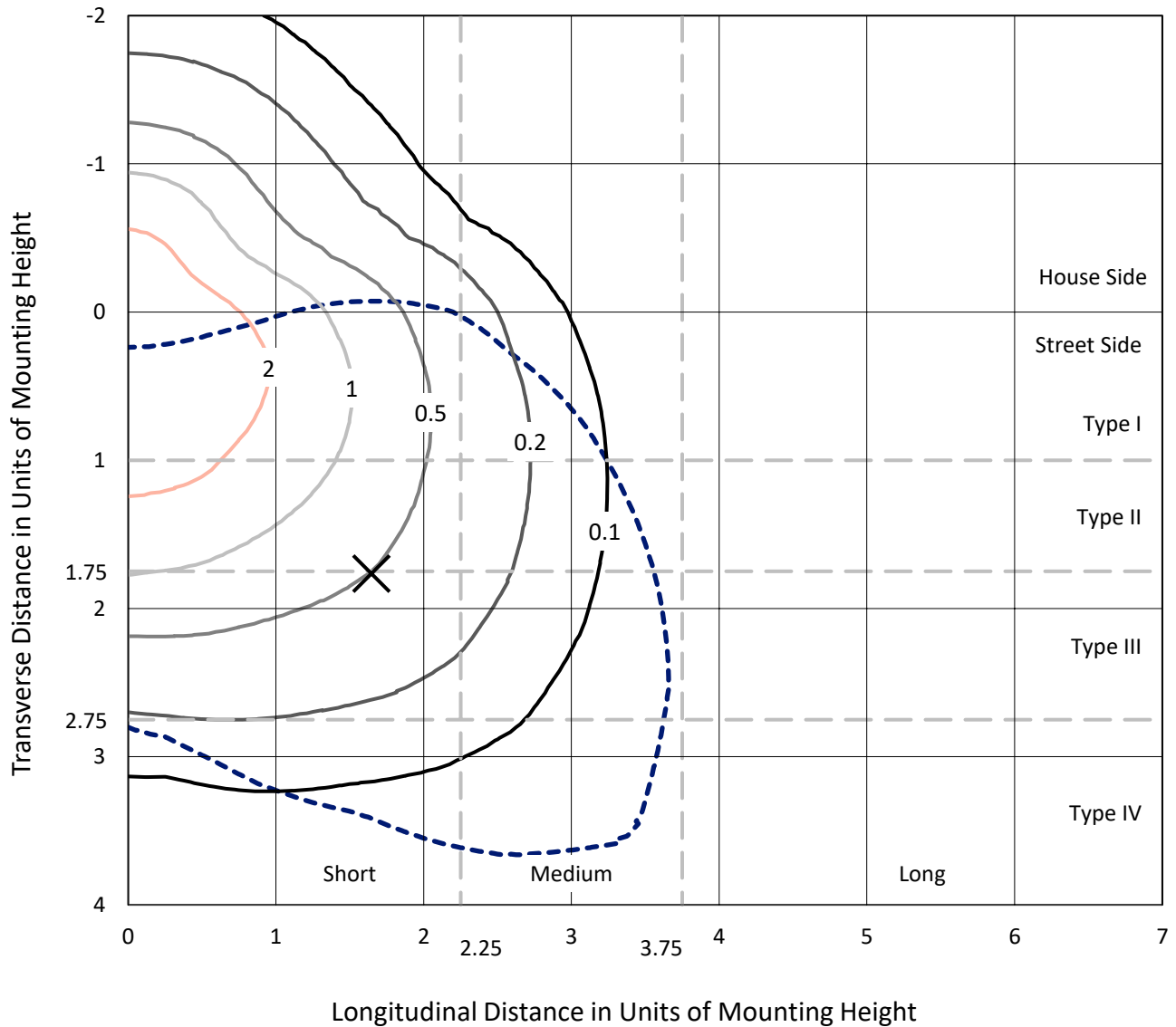
Lumens per Lamp: N/A  
Luminaire Lumens: 8496.7 lumens  
Efficiency: N/A  
Efficacy: 139.3 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

Input Watts (W): 61  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 9.89%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Iso-Footcandle Lines of Horizontal Illumination

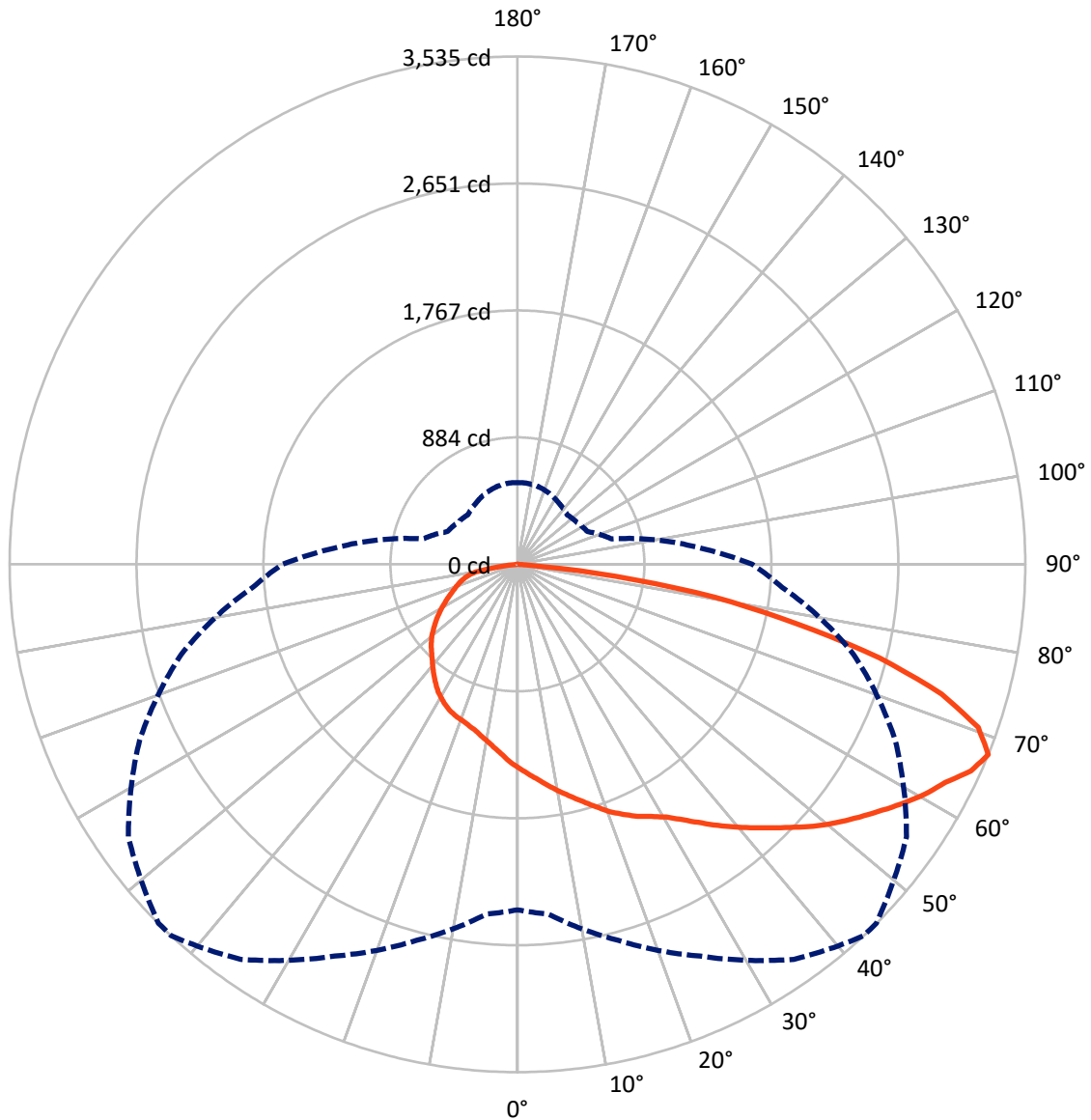
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 43-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2285.7	0.0	2285.7
	% Fixture	26.9	0.0	26.9
<b>Street Side</b>	Lumens	6211.1	0.0	6211.1
	% Fixture	73.1	0.0	73.1
<b>Total</b>	Lumens	8496.7	0.0	8496.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.7	1.6
10°-20°	414.5	4.9
20°-30°	707.3	8.3
30°-40°	1031.5	12.1
40°-50°	1385.7	16.3
50°-60°	1696.3	20.0
60°-70°	1785.3	21.0
70°-80°	1165.5	13.7
80°-90°	174.8	2.1
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°	8496.7	100.0
0°-180°	8496.7	100.0



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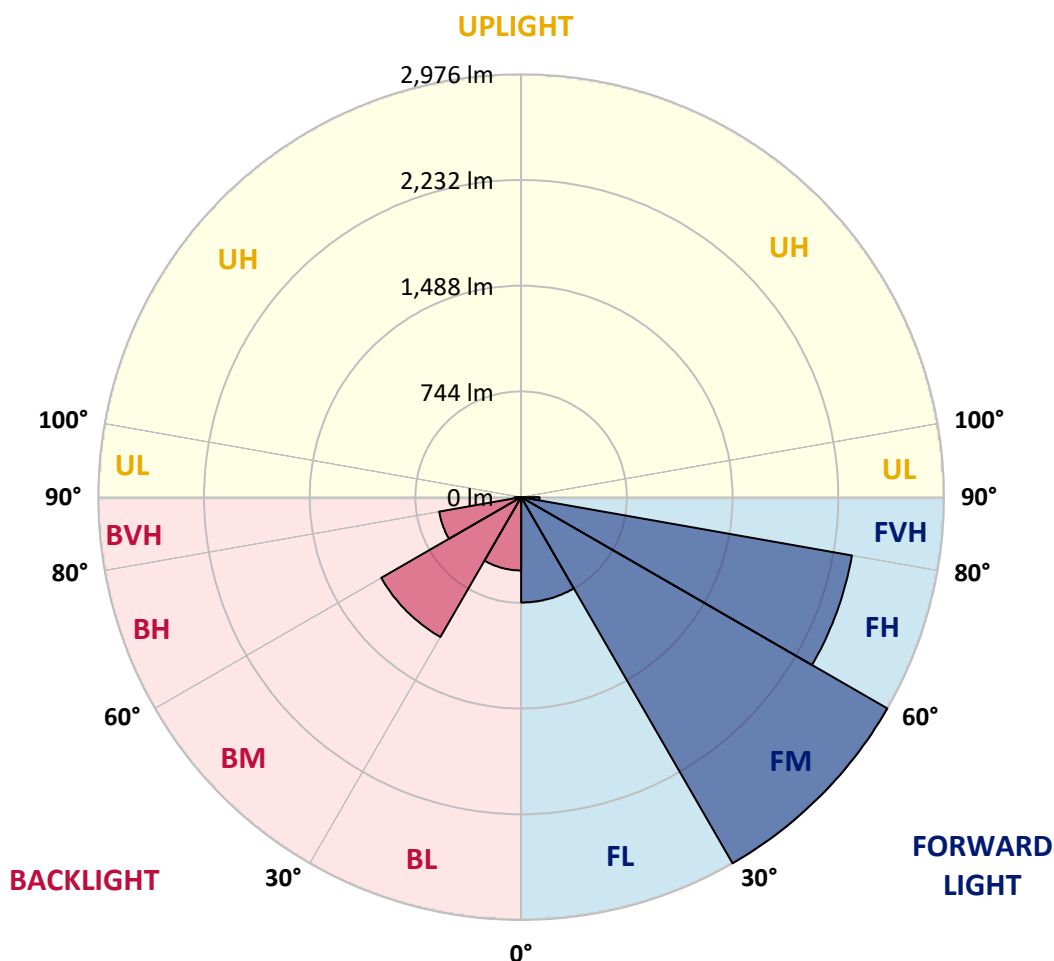
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	741.5	8.7			
FM	(30°-60°)	2976.3	35.0			
FH	(60°-80°)	2364.2	27.8			G2/5000
FVH	(80°-90°)	129.0	1.5			G2/225
BL	(0°-30°)	516.0	6.1	B2/1000		
BM	(30°-60°)	1137.2	13.4	B2/2500		
BH	(60°-80°)	586.6	6.9	B2/1000		G2/1000
BVH	(80°-90°)	45.8	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	43°	45°	55°	65°	75°	85°
0°	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4
2.5°	1483.7	1482.0	1476.8	1473.4	1463.1	1461.3	1461.3	1451.0	1439.0	1432.1	1425.2
5°	1550.7	1542.1	1538.7	1531.8	1514.6	1504.3	1507.8	1488.8	1464.8	1447.6	1428.7
7.5°	1610.9	1607.5	1595.4	1586.8	1566.2	1555.9	1552.5	1523.2	1492.3	1466.5	1435.5
10°	1683.1	1674.5	1667.6	1650.5	1622.9	1607.5	1602.3	1564.5	1524.9	1490.6	1449.3
12.5°	1748.4	1738.1	1729.5	1712.3	1684.8	1659.0	1652.2	1609.2	1559.3	1512.9	1461.3
15°	1798.3	1800.0	1791.4	1776.0	1745.0	1714.1	1708.9	1652.2	1592.0	1535.3	1473.4
17.5°	1844.7	1851.6	1846.4	1836.1	1805.2	1774.2	1769.1	1705.5	1633.3	1561.1	1487.1
20°	1889.4	1889.4	1887.7	1880.8	1858.5	1837.8	1827.5	1763.9	1672.8	1588.6	1506.0
22.5°	1915.2	1922.1	1922.1	1922.1	1908.3	1891.1	1887.7	1825.8	1726.1	1622.9	1523.2
25°	1954.8	1963.3	1963.3	1959.9	1947.9	1942.7	1937.6	1879.1	1777.7	1662.5	1542.1
27.5°	2039.0	2037.3	2023.5	2006.3	1989.1	1987.4	1980.5	1939.3	1837.8	1705.5	1567.9
30°	2155.9	2159.3	2142.1	2088.9	2049.3	2040.7	2042.4	2006.3	1908.3	1755.3	1597.2
32.5°	2334.7	2334.7	2267.6	2198.9	2142.1	2119.8	2114.6	2083.7	1980.5	1810.3	1629.8
35°	2468.8	2463.6	2425.8	2345.0	2274.5	2210.9	2202.3	2161.1	2061.3	1872.2	1665.9
37.5°	2570.2	2580.5	2551.3	2489.4	2420.7	2310.6	2293.4	2235.0	2135.3	1932.4	1702.0
40°	2766.2	2740.4	2669.9	2613.2	2530.7	2408.6	2393.2	2320.9	2210.9	1999.5	1746.7
42.5°	2908.9	2872.8	2792.0	2716.4	2613.2	2506.6	2492.9	2413.8	2298.6	2075.1	1793.1
45°	3113.5	3032.7	2921.0	2853.9	2707.8	2613.2	2596.0	2510.1	2389.7	2155.9	1851.6
47.5°	3311.2	3170.2	3051.6	3020.7	2810.9	2728.4	2714.6	2614.9	2487.7	2243.6	1908.3
50°	3285.4	3192.6	3153.0	3123.8	2900.3	2836.7	2823.0	2721.5	2587.4	2336.4	1965.1
52.5°	3220.1	3228.7	3230.4	3159.9	2984.6	2938.1	2924.4	2836.7	2690.6	2417.2	2020.1
55°	3288.9	3299.2	3297.5	3190.9	3082.6	3039.6	3031.0	2953.6	2790.3	2492.9	2059.6
57.5°	3393.7	3359.4	3354.2	3268.2	3187.4	3147.9	3137.6	3070.5	2874.5	2547.9	2090.6
60°	3412.6	3343.9	3366.2	3285.4	3266.5	3254.5	3251.0	3172.0	2953.6	2592.6	2102.6
62.5°	3201.2	3189.2	3276.8	3244.2	3307.8	3342.2	3343.9	3244.2	2996.6	2609.8	2090.6
65°	2840.1	2888.3	3077.4	3172.0	3369.7	3467.7	3464.2	3287.1	2991.4	2559.9	2016.6
67.5°	2405.2	2443.0	2709.5	3008.6	3355.9	3534.7	3533.0	3306.1	2902.0	2422.4	1849.9
70°	1824.1	1942.7	2320.9	2714.6	3170.2	3402.3	3431.6	3199.5	2697.5	2171.4	1597.2
72.5°	1387.4	1406.3	1863.6	2276.2	2838.4	3087.7	3082.6	2859.1	2355.3	1829.2	1330.7
75°	985.1	1026.4	1402.9	1763.9	2326.1	2602.9	2590.9	2345.0	1879.1	1423.5	1017.8
77.5°	734.1	749.6	1026.4	1308.3	1739.8	1989.1	1984.0	1733.0	1382.3	1045.3	758.2
80°	536.4	562.2	739.3	912.9	1179.4	1394.3	1387.4	1150.2	887.1	730.7	553.6
82.5°	300.9	319.8	429.8	551.9	622.4	689.4	660.2	551.9	404.0	314.6	271.6
85°	8.6	10.3	15.5	18.9	32.7	55.0	60.2	53.3	63.6	39.5	43.0
87.5°	3.4	3.4	3.4	3.4	3.4	5.2	5.2	5.2	5.2	5.2	5.2
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: EMM2-HSN-SA2A-727-U-T4W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4	1418.4
2.5°	1421.8	1414.9	1401.2	1392.6	1387.4	1380.5	1370.2	1363.3	1358.2	1365.1	1363.3
5°	1420.1	1406.3	1382.3	1365.1	1347.9	1334.1	1318.6	1306.6	1299.7	1303.2	1301.4
7.5°	1420.1	1402.9	1365.1	1337.6	1311.8	1291.1	1273.9	1258.5	1251.6	1253.3	1251.6
10°	1427.0	1402.9	1353.0	1313.5	1279.1	1255.0	1236.1	1222.4	1217.2	1222.4	1224.1
12.5°	1433.8	1402.9	1342.7	1292.9	1248.2	1222.4	1205.2	1196.6	1200.0	1201.7	1203.5
15°	1437.3	1401.2	1332.4	1268.8	1218.9	1191.4	1181.1	1179.4	1188.0	1196.6	1198.3
17.5°	1445.9	1399.4	1316.9	1244.7	1193.1	1170.8	1165.6	1172.5	1189.7	1201.7	1205.2
20°	1456.2	1402.9	1299.7	1215.5	1167.3	1150.2	1158.8	1174.2	1194.9	1212.0	1215.5
22.5°	1466.5	1404.6	1284.3	1189.7	1139.8	1136.4	1155.3	1177.7	1201.7	1218.9	1222.4
25°	1478.5	1404.6	1263.6	1157.0	1112.3	1117.5	1146.7	1175.9	1198.3	1220.6	1224.1
27.5°	1490.6	1408.0	1241.3	1120.9	1078.0	1093.4	1129.5	1165.6	1189.7	1212.0	1217.2
30°	1511.2	1414.9	1222.4	1090.0	1043.6	1064.2	1107.2	1148.4	1174.2	1198.3	1203.5
32.5°	1531.8	1425.2	1206.9	1057.3	1009.2	1033.3	1081.4	1127.8	1155.3	1177.7	1181.1
35°	1559.3	1439.0	1194.9	1024.7	974.8	993.7	1045.3	1096.9	1127.8	1145.0	1153.6
37.5°	1588.6	1457.9	1184.5	995.4	937.0	954.2	1009.2	1064.2	1096.9	1114.1	1117.5
40°	1624.7	1483.7	1177.7	967.9	900.9	914.6	969.6	1029.8	1060.8	1072.8	1079.7
42.5°	1664.2	1511.2	1172.5	940.4	861.3	875.1	933.5	992.0	1022.9	1033.3	1038.4
45°	1714.1	1547.3	1169.1	911.2	828.7	840.7	899.2	957.6	983.4	997.1	1002.3
47.5°	1760.5	1583.4	1158.8	876.8	792.6	809.8	863.0	914.6	943.9	952.4	957.6
50°	1806.9	1614.3	1138.1	839.0	759.9	775.4	823.5	861.3	883.7	894.0	897.4
52.5°	1851.6	1636.7	1105.5	799.4	725.5	735.8	775.4	811.5	826.9	830.4	840.7
55°	1880.8	1648.7	1059.0	753.0	691.1	694.6	723.8	756.5	765.1	766.8	766.8
57.5°	1901.5	1641.9	1004.0	706.6	656.7	656.7	673.9	699.7	703.2	704.9	708.3
60°	1904.9	1617.8	933.5	663.6	618.9	613.8	631.0	646.4	648.1	651.6	655.0
62.5°	1879.1	1564.5	857.9	622.4	582.8	570.8	586.3	601.7	610.3	615.5	618.9
65°	1800.0	1456.2	771.9	581.1	548.4	527.8	546.7	572.5	589.7	591.4	591.4
67.5°	1635.0	1280.8	680.8	538.1	507.2	488.3	512.3	539.8	560.5	569.1	567.3
70°	1385.7	1086.5	596.6	493.4	465.9	453.9	479.7	510.6	527.8	534.7	538.1
72.5°	1115.8	869.9	522.6	448.7	429.8	422.9	448.7	479.7	503.7	514.0	515.8
75°	868.2	684.2	460.8	402.3	386.8	388.5	416.1	447.0	472.8	477.9	462.5
77.5°	673.9	545.0	402.3	347.3	338.7	350.7	378.2	410.9	426.4	431.5	421.2
80°	486.5	417.8	324.9	273.4	273.4	292.3	316.3	354.2	359.3	352.4	355.9
82.5°	230.4	202.9	159.9	132.4	123.8	137.5	146.1	158.2	171.9	175.4	166.8
85°	30.9	20.6	15.5	17.2	15.5	10.3	6.9	6.9	6.9	5.2	5.2
87.5°	5.2	5.2	3.4	3.4	3.4	3.4	3.4	3.4	1.7	1.7	1.7
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: SP1-2407-157-3

Test Date: 08/07/2024

Luminaire Tested: MEM2-HTN-SA-40-727-U-5WQ-2

Data in this report applies to families of products including MEM2-HTN-SA-40-727-U-5WQ-2

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-157-3  
 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-40-727-U-5WQ-2**  
 Description: Epic Modern Light Square 40W 5WQ Optic and Flare Trim

**Spectral Parameters**

CCT (K): 2747  
 CIE u': 0.2606  
 CIE v': 0.5257  
 Duv: -0.0005  
 CIE x: 0.4552  
 CIE y: 0.4082  
 CIE z: 0.1366  
 Peak Wavelength (nm): 597  
 Dominant Wavelength (nm): 584  
 Purity: 59.16856  
 Rf: 75.5  
 Rg: 93.6

CRI (Ra):	71.7		
R1:	68.1	R9:	-35.3
R2:	83.9	R10:	64.2
R3:	94.7	R11:	61.7
R4:	66.3	R12:	53.9
R5:	67.4	R13:	71.2
R6:	78.7	R14:	97.6
R7:	75.0	R15:	59.3
R8:	39.4		



**Test Conditions**

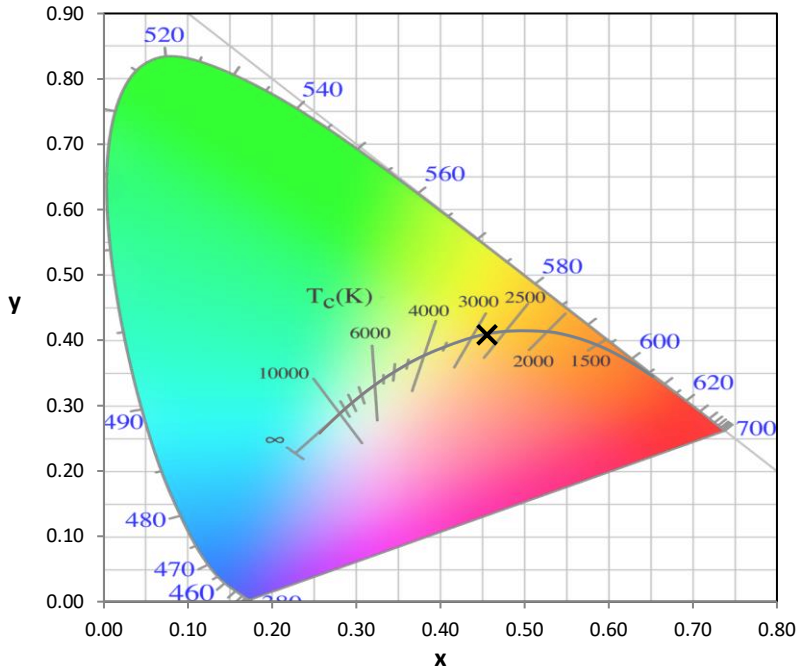
Stabilization Time: 22M  
 Operation Time: 1H 22M  
 Sphere Temperature (°C): 24.2

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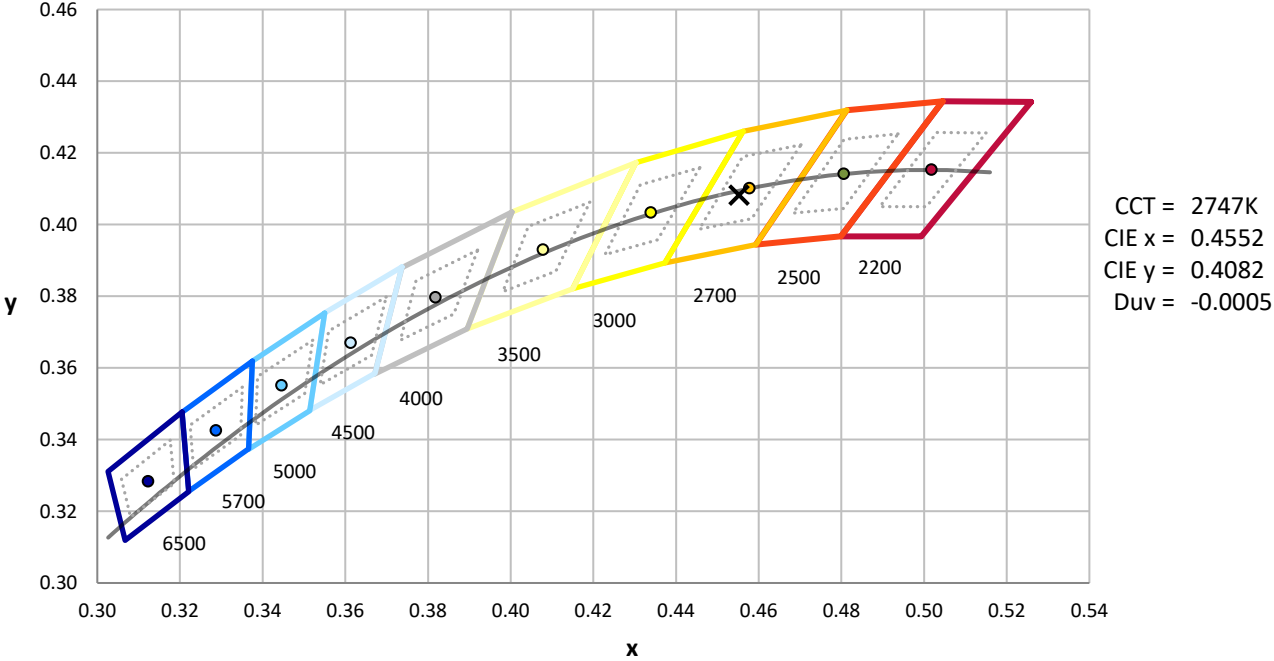
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	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 2700K 4-step quadrangle

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**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

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	103	NR	620	846	NR	750	20	NR	880	0	NR
365	0	NR	495	130	NR	625	784	NR	755	17	NR	885	1	NR
370	0	NR	500	171	NR	630	720	NR	760	15	NR	890	0	NR
375	0	NR	505	221	NR	635	652	NR	765	13	NR	895	0	NR
380	0	NR	510	268	NR	640	587	NR	770	11	NR	900	0	NR
385	0	NR	515	313	NR	645	521	NR	775	9	NR	905	0	NR
390	0	NR	520	350	NR	650	461	NR	780	8	NR	910	0	NR
395	0	NR	525	381	NR	655	406	NR	785	7	NR	915	0	NR
400	0	NR	530	407	NR	660	353	NR	790	6	NR	920	0	NR
405	2	NR	535	435	NR	665	307	NR	795	5	NR	925	0	NR
410	4	NR	540	462	NR	670	264	NR	800	4	NR	930	0	NR
415	9	NR	545	496	NR	675	227	NR	805	4	NR	935	0	NR
420	20	NR	550	534	NR	680	196	NR	810	3	NR	940	0	NR
425	38	NR	555	582	NR	685	167	NR	815	3	NR	945	0	NR
430	69	NR	560	638	NR	690	144	NR	820	2	NR	950	0	NR
435	120	NR	565	700	NR	695	122	NR	825	2	NR	955	0	NR
440	193	NR	570	767	NR	700	103	NR	830	2	NR	960	0	NR
445	316	NR	575	836	NR	705	88	NR	835	2	NR	965	0	NR
450	469	NR	580	898	NR	710	74	NR	840	1	NR	970	0	NR
455	431	NR	585	947	NR	715	63	NR	845	1	NR	975	0	NR
460	264	NR	590	982	NR	720	54	NR	850	1	NR	980	0	NR
465	197	NR	595	997	NR	725	46	NR	855	1	NR	985	0	NR
470	155	NR	600	997	NR	730	39	NR	860	1	NR	990	0	NR
475	108	NR	605	978	NR	735	33	NR	865	1	NR	995	0	NR
480	90	NR	610	947	NR	740	28	NR	870	1	NR	1000	0	NR
485	92	NR	615	900	NR	745	24	NR	875	1	NR			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.13**

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	103	NR	620	846	NR	750	20	NR	880	0	NR
365	0	NR	495	130	NR	625	784	NR	755	17	NR	885	1	NR
370	0	NR	500	171	NR	630	720	NR	760	15	NR	890	0	NR
375	0	NR	505	221	NR	635	652	NR	765	13	NR	895	0	NR
380	0	NR	510	268	NR	640	587	NR	770	11	NR	900	0	NR
385	0	NR	515	313	NR	645	521	NR	775	9	NR	905	0	NR
390	0	NR	520	350	NR	650	461	NR	780	8	NR	910	0	NR
395	0	NR	525	381	NR	655	406	NR	785	7	NR	915	0	NR
400	0	NR	530	407	NR	660	353	NR	790	6	NR	920	0	NR
405	2	NR	535	435	NR	665	307	NR	795	5	NR	925	0	NR
410	4	NR	540	462	NR	670	264	NR	800	4	NR	930	0	NR
415	9	NR	545	496	NR	675	227	NR	805	4	NR	935	0	NR
420	20	NR	550	534	NR	680	196	NR	810	3	NR	940	0	NR
425	38	NR	555	582	NR	685	167	NR	815	3	NR	945	0	NR
430	69	NR	560	638	NR	690	144	NR	820	2	NR	950	0	NR
435	120	NR	565	700	NR	695	122	NR	825	2	NR	955	0	NR
440	193	NR	570	767	NR	700	103	NR	830	2	NR	960	0	NR
445	316	NR	575	836	NR	705	88	NR	835	2	NR	965	0	NR
450	469	NR	580	898	NR	710	74	NR	840	1	NR	970	0	NR
455	431	NR	585	947	NR	715	63	NR	845	1	NR	975	0	NR
460	264	NR	590	982	NR	720	54	NR	850	1	NR	980	0	NR
465	197	NR	595	997	NR	725	46	NR	855	1	NR	985	0	NR
470	155	NR	600	997	NR	730	39	NR	860	1	NR	990	0	NR
475	108	NR	605	978	NR	735	33	NR	865	1	NR	995	0	NR
480	90	NR	610	947	NR	740	28	NR	870	1	NR	1000	0	NR
485	92	NR	615	900	NR	745	24	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



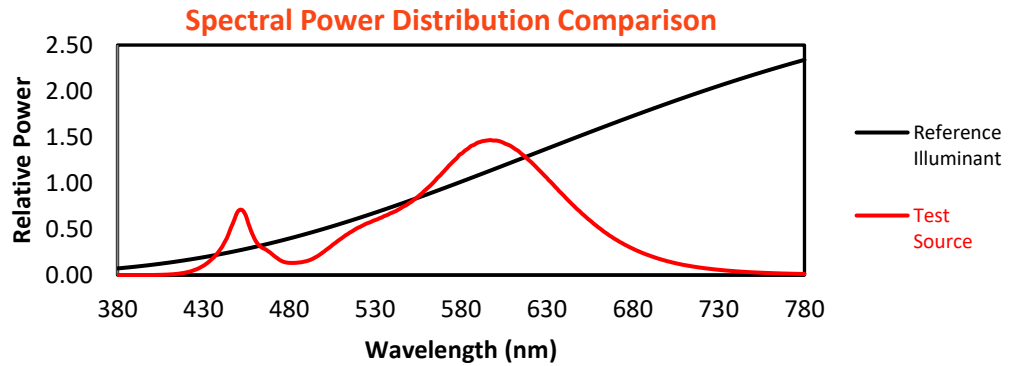
Melanopic Lumens: NR

M/P: 2.04

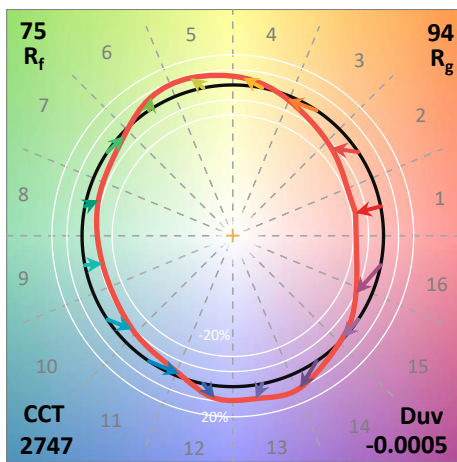
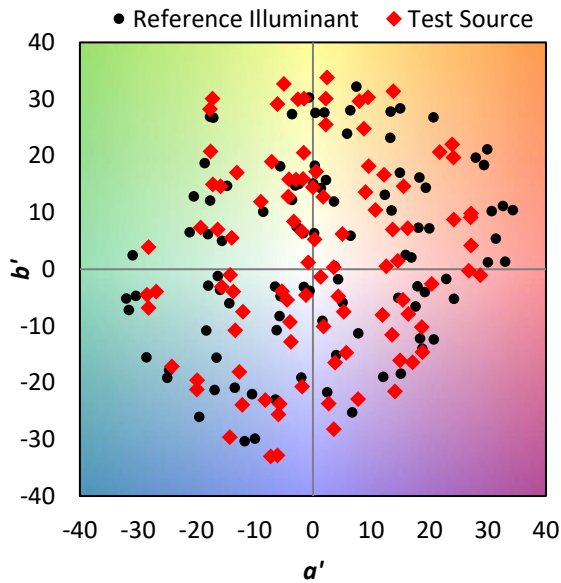
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	103	NR	620	846	NR	750	20	NR	880	0	NR
365	0	NR	495	130	NR	625	784	NR	755	17	NR	885	1	NR
370	0	NR	500	171	NR	630	720	NR	760	15	NR	890	0	NR
375	0	NR	505	221	NR	635	652	NR	765	13	NR	895	0	NR
380	0	NR	510	268	NR	640	587	NR	770	11	NR	900	0	NR
385	0	NR	515	313	NR	645	521	NR	775	9	NR	905	0	NR
390	0	NR	520	350	NR	650	461	NR	780	8	NR	910	0	NR
395	0	NR	525	381	NR	655	406	NR	785	7	NR	915	0	NR
400	0	NR	530	407	NR	660	353	NR	790	6	NR	920	0	NR
405	2	NR	535	435	NR	665	307	NR	795	5	NR	925	0	NR
410	4	NR	540	462	NR	670	264	NR	800	4	NR	930	0	NR
415	9	NR	545	496	NR	675	227	NR	805	4	NR	935	0	NR
420	20	NR	550	534	NR	680	196	NR	810	3	NR	940	0	NR
425	38	NR	555	582	NR	685	167	NR	815	3	NR	945	0	NR
430	69	NR	560	638	NR	690	144	NR	820	2	NR	950	0	NR
435	120	NR	565	700	NR	695	122	NR	825	2	NR	955	0	NR
440	193	NR	570	767	NR	700	103	NR	830	2	NR	960	0	NR
445	316	NR	575	836	NR	705	88	NR	835	2	NR	965	0	NR
450	469	NR	580	898	NR	710	74	NR	840	1	NR	970	0	NR
455	431	NR	585	947	NR	715	63	NR	845	1	NR	975	0	NR
460	264	NR	590	982	NR	720	54	NR	850	1	NR	980	0	NR
465	197	NR	595	997	NR	725	46	NR	855	1	NR	985	0	NR
470	155	NR	600	997	NR	730	39	NR	860	1	NR	990	0	NR
475	108	NR	605	978	NR	735	33	NR	865	1	NR	995	0	NR
480	90	NR	610	947	NR	740	28	NR	870	1	NR	1000	0	NR
485	92	NR	615	900	NR	745	24	NR	875	1	NR			

**Summary**

$R_f = 75.5$   
 $R_g = 93.6$   
 $CIE R_a = 71.7$   
 $R_9 = -35.3$



**Color Vector Graphics**



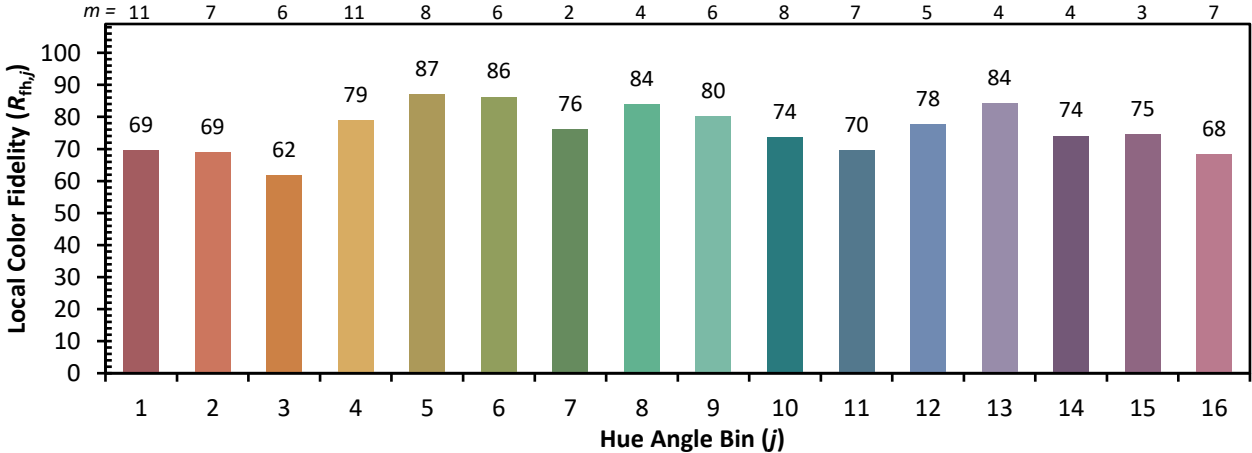


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

CES01 = 86	CES26 = 68	CES51 = 87	CES76 = 63
CES02 = 63	CES27 = 90	CES52 = 85	CES77 = 79
CES03 = 31	CES28 = 87	CES53 = 78	CES78 = 66
CES04 = 71	CES29 = 71	CES54 = 86	CES79 = 87
CES05 = 50	CES30 = 85	CES55 = 84	CES80 = 85
CES06 = 52	CES31 = 74	CES56 = 75	CES81 = 67
CES07 = 42	CES32 = 66	CES57 = 75	CES82 = 93
CES08 = 41	CES33 = 80	CES58 = 76	CES83 = 91
CES09 = 29	CES34 = 79	CES59 = 85	CES84 = 89
CES10 = 77	CES35 = 89	CES60 = 90	CES85 = 72
CES11 = 60	CES36 = 93	CES61 = 81	CES86 = 59
CES12 = 66	CES37 = 88	CES62 = 91	CES87 = 77
CES13 = 43	CES38 = 93	CES63 = 77	CES88 = 79
CES14 = 74	CES39 = 97	CES64 = 67	CES89 = 65
CES15 = 72	CES40 = 93	CES65 = 66	CES90 = 80
CES16 = 48	CES41 = 93	CES66 = 63	CES91 = 80
CES17 = 51	CES42 = 89	CES67 = 61	CES92 = 55
CES18 = 57	CES43 = 78	CES68 = 68	CES93 = 72
CES19 = 73	CES44 = 99	CES69 = 78	CES94 = 48
CES20 = 67	CES45 = 85	CES70 = 63	CES95 = 66
CES21 = 88	CES46 = 81	CES71 = 61	CES96 = 76
CES22 = 80	CES47 = 86	CES72 = 86	CES97 = 81
CES23 = 92	CES48 = 74	CES73 = 56	CES98 = 76
CES24 = 91	CES49 = 79	CES74 = 93	CES99 = 64
CES25 = 73	CES50 = 86	CES75 = 66	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)