

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: LUMARK

Report Number: P1449880

Luminaire Tested: **TWC150\_T4\_150W\_5000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449880  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( )  
Test Lab: INNOVATION CENTER  
Issue Date: 5/19/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: TWC150\_T4\_150W\_5000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 150W  
5000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22851 lumens  
Efficiency: N/A  
Efficacy: 152.2 lumens/watt  
Luminous Opening: Rectangular (W 1.33' x L: 0.42' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U0 - G3

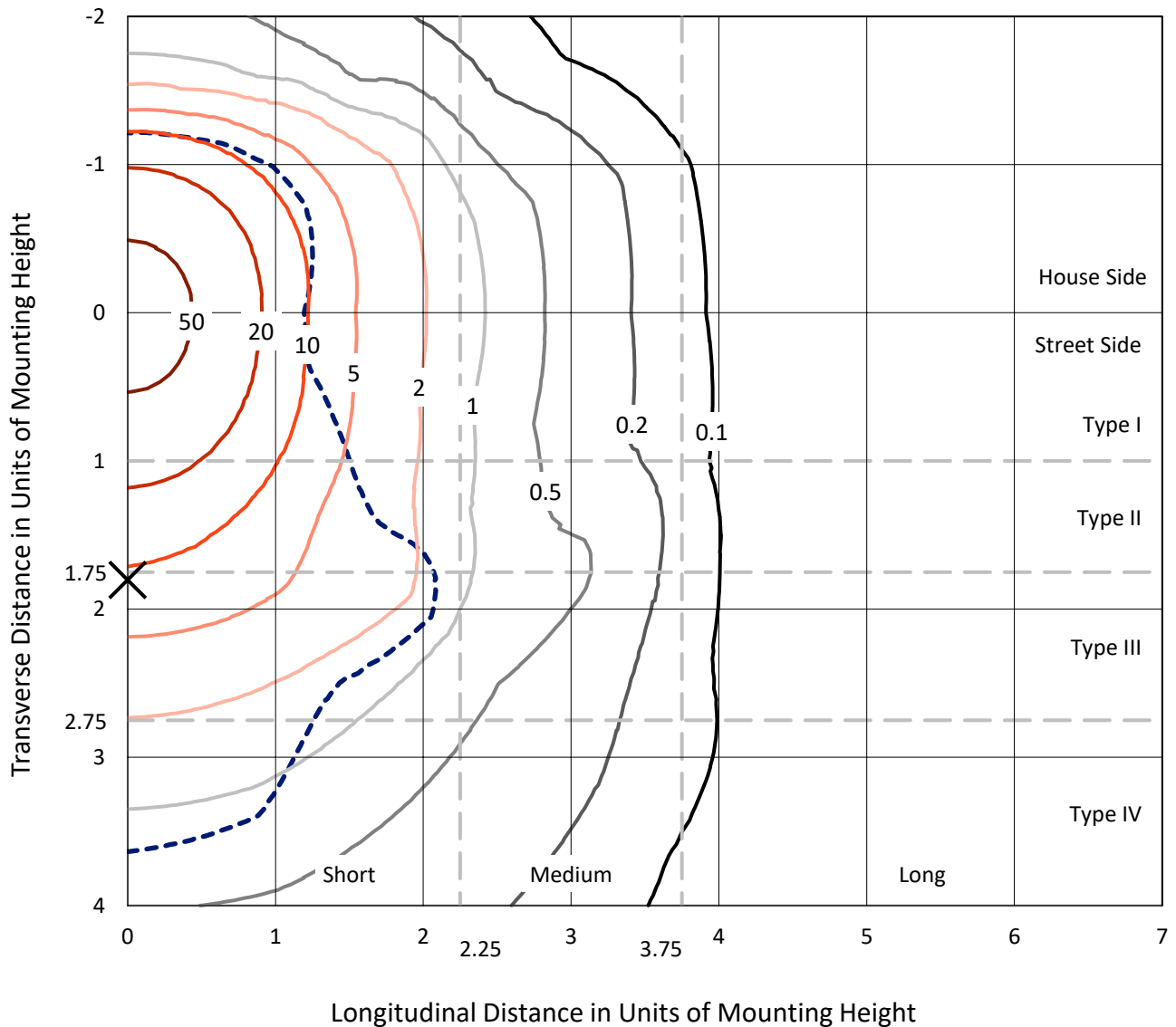
Input Watts (W): 150.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

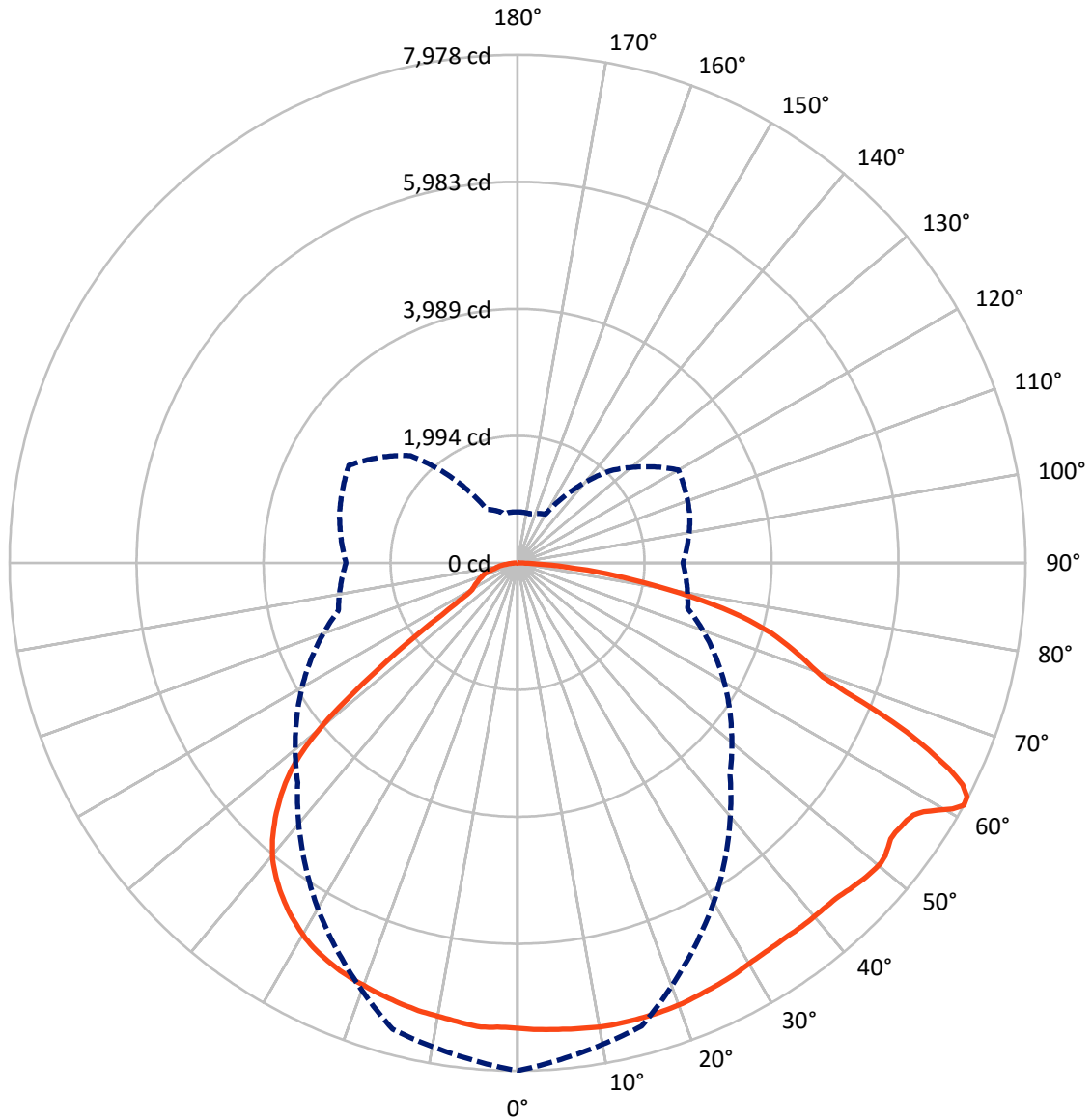
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 73.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 61-Deg Vertical

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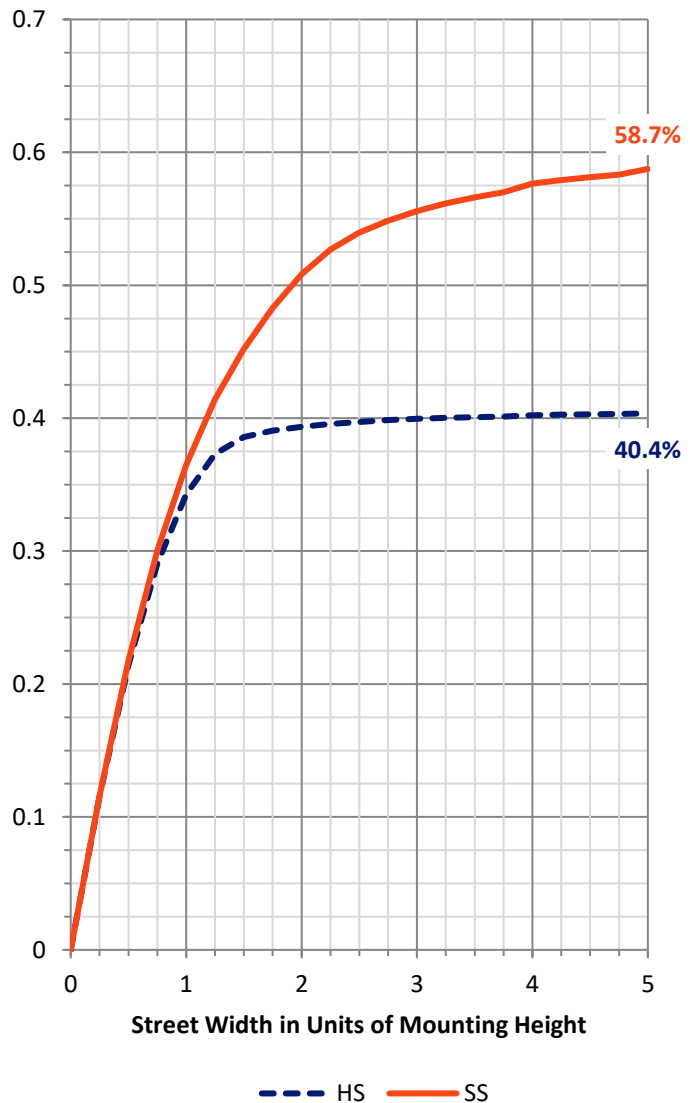
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9289.7	0.0	9289.7
	% Fixture	40.7	0.0	40.7
<b>Street Side</b>	Lumens	13561.3	0.0	13561.3
	% Fixture	59.3	0.0	59.3
<b>Total</b>	Lumens	22851.0	0.0	22851.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	695.8	3.0
10°-20°	2021.5	8.8
20°-30°	3143.0	13.8
30°-40°	3938.7	17.2
40°-50°	4288.9	18.8
50°-60°	3874.4	17.0
60°-70°	2949.6	12.9
70°-80°	1559.7	6.8
80°-90°	379.4	1.7
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°	22851.0	100.0
0°-180°	22851.0	100.0

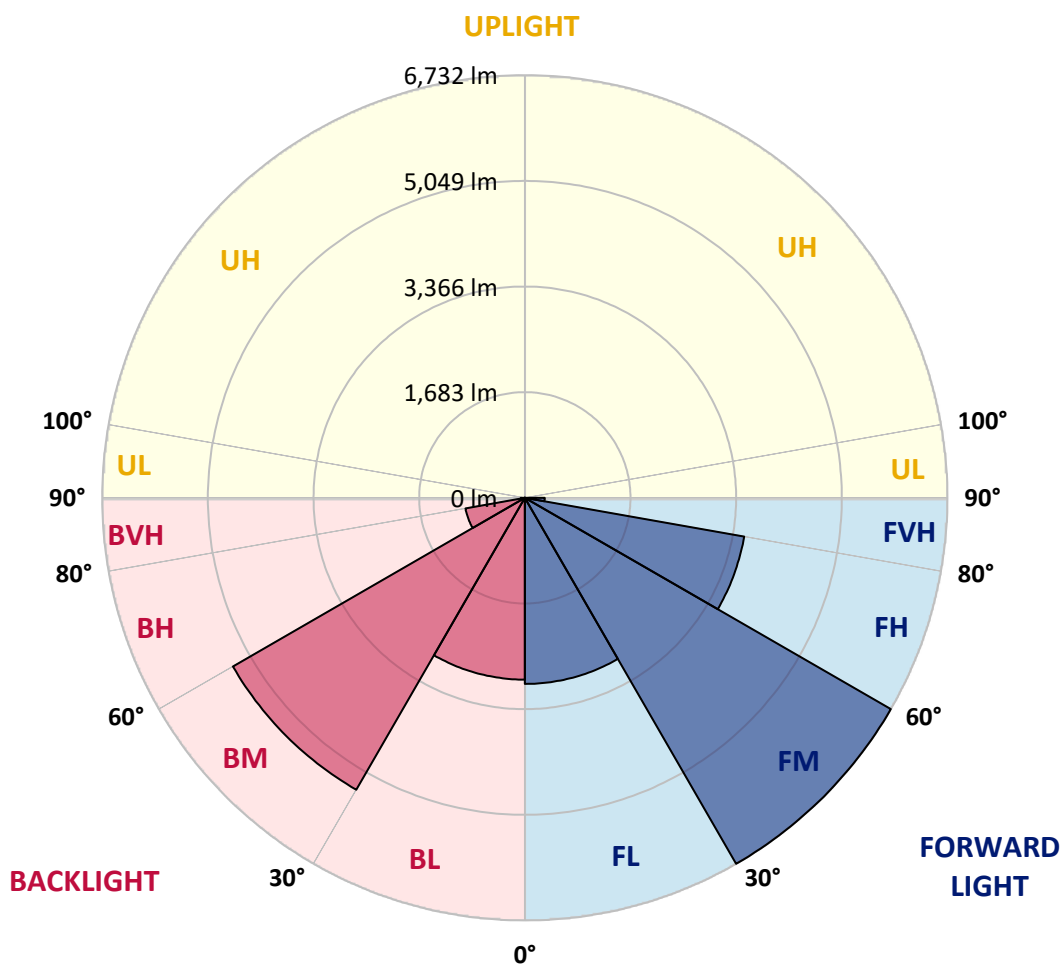


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2964.3	13.0			
FM	(30°-60°)	6732.0	29.5			
FH	(60°-80°)	3548.8	15.5			G2/5000
FVH	(80°-90°)	316.1	1.4			G3/500
BL	(0°-30°)	2896.0	12.7	B4/5000		
BM	(30°-60°)	5370.0	23.5	B4/8500		
BH	(60°-80°)	960.4	4.2	B2/1000		G2/1000
BVH	(80°-90°)	63.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6
1°	7327.0	7326.2	7322.8	7317.5	7314.8	7311.7	7312.0	7306.7	7307.5	7304.4	7303.3
2°	7336.9	7333.5	7327.2	7321.2	7315.5	7307.5	7309.8	7298.1	7297.1	7297.5	7294.8
3°	7345.4	7340.3	7332.5	7324.1	7312.7	7302.8	7301.4	7288.1	7287.8	7288.9	7292.8
4°	7353.1	7346.5	7337.7	7323.4	7308.5	7292.4	7287.7	7276.2	7276.1	7284.9	7295.4
5°	7360.0	7351.4	7338.3	7322.7	7298.6	7281.3	7273.0	7260.6	7264.3	7284.5	7299.5
6°	7370.0	7358.9	7341.1	7318.8	7294.6	7266.7	7254.8	7242.4	7254.6	7281.8	7293.4
7°	7377.9	7365.3	7342.3	7312.1	7282.3	7249.7	7232.8	7222.1	7245.2	7271.2	7277.2
8°	7388.7	7372.2	7342.6	7305.6	7267.9	7229.5	7210.1	7200.6	7233.4	7252.2	7255.1
9°	7398.4	7379.9	7344.0	7297.2	7250.8	7208.2	7184.7	7177.7	7216.8	7227.3	7233.9
10°	7407.3	7385.8	7344.1	7291.0	7235.5	7184.9	7153.6	7154.7	7194.2	7199.2	7212.0
11°	7410.4	7390.7	7343.0	7282.5	7217.8	7161.4	7123.4	7131.0	7166.1	7173.3	7190.6
12°	7409.6	7390.8	7339.2	7269.0	7197.5	7130.0	7091.1	7104.6	7135.5	7147.0	7171.2
13°	7408.9	7386.2	7329.6	7251.2	7170.9	7099.5	7053.7	7073.0	7100.9	7115.9	7153.4
14°	7408.1	7384.7	7322.0	7230.8	7143.3	7069.6	7013.5	7037.7	7063.6	7089.6	7135.8
15°	7407.4	7381.2	7308.3	7211.6	7110.4	7031.4	6972.0	7000.2	7023.2	7060.2	7114.5
16°	7406.6	7372.6	7294.9	7185.8	7076.1	6993.5	6929.1	6958.9	6983.9	7032.1	7090.2
17°	7404.4	7366.4	7280.3	7157.8	7035.1	6947.9	6883.0	6916.0	6941.4	7001.6	7065.6
18°	7399.4	7358.1	7264.0	7128.1	6992.5	6899.8	6831.8	6866.9	6900.1	6968.5	7041.8
19°	7393.7	7347.9	7246.3	7098.8	6946.7	6844.6	6781.4	6817.4	6855.6	6932.2	7014.7
20°	7388.0	7337.7	7227.7	7068.6	6899.9	6789.1	6725.3	6765.7	6813.3	6895.2	6987.7
21°	7377.5	7328.6	7207.7	7035.8	6855.9	6726.8	6670.9	6713.6	6767.5	6862.0	6959.6
22°	7366.1	7314.2	7186.4	7003.7	6804.9	6666.6	6612.5	6655.3	6720.0	6823.2	6928.9
23°	7354.5	7298.9	7164.7	6968.1	6753.4	6599.9	6549.1	6600.5	6667.4	6784.2	6896.8
24°	7345.5	7287.2	7142.3	6935.3	6702.4	6532.2	6485.8	6540.4	6612.7	6738.1	6861.8
25°	7334.1	7268.8	7118.5	6893.9	6648.8	6462.6	6416.0	6481.9	6555.7	6695.7	6828.9
26°	7323.1	7255.1	7093.2	6857.9	6595.8	6390.9	6344.8	6416.6	6498.4	6650.6	6791.2
27°	7312.8	7237.8	7068.2	6817.8	6537.0	6320.1	6271.2	6350.5	6439.1	6603.8	6756.2
28°	7295.7	7220.3	7038.9	6775.3	6481.4	6244.9	6197.6	6281.8	6379.8	6554.2	6713.7
29°	7277.7	7198.6	7011.6	6731.4	6419.6	6171.2	6118.2	6210.9	6320.4	6507.0	6672.2
30°	7263.5	7177.8	6980.4	6685.6	6356.8	6093.0	6039.1	6135.3	6259.6	6455.9	6625.0
31°	7255.2	7160.4	6946.1	6640.6	6291.8	6014.3	5959.0	6057.5	6194.4	6400.2	6578.0
32°	7247.7	7145.6	6909.7	6592.5	6227.0	5931.4	5878.1	5976.8	6131.6	6344.4	6526.0
33°	7242.6	7131.1	6878.7	6541.3	6156.0	5848.9	5793.4	5892.6	6063.8	6285.6	6470.0
34°	7240.4	7119.2	6846.4	6489.3	6087.7	5765.8	5707.4	5810.1	5999.4	6226.6	6405.8
35°	7236.5	7111.5	6814.8	6435.5	6014.7	5678.4	5617.7	5721.1	5926.2	6161.1	6339.7
36°	7240.3	7101.5	6785.7	6379.0	5941.2	5589.3	5523.8	5635.9	5855.6	6095.4	6268.4
37°	7246.3	7098.9	6761.9	6324.4	5864.0	5496.8	5428.9	5545.6	5778.4	6023.6	6191.9
38°	7249.2	7096.5	6734.1	6271.1	5785.9	5404.0	5330.5	5454.4	5698.3	5949.4	6111.6
39°	7253.2	7090.2	6709.8	6213.3	5707.9	5303.8	5228.0	5362.6	5614.4	5867.5	6026.5
40°	7251.5	7080.4	6689.0	6162.3	5622.3	5202.6	5124.0	5271.0	5531.4	5784.8	5941.6
41°	7253.8	7070.0	6661.9	6110.4	5536.8	5100.2	5018.7	5179.5	5447.5	5698.9	5844.8
42°	7260.0	7063.9	6631.9	6065.6	5453.0	4995.1	4909.7	5083.4	5359.7	5606.8	5748.8
43°	7267.4	7058.1	6600.1	6011.9	5368.2	4889.4	4800.6	4986.3	5267.5	5511.7	5638.5
44°	7287.9	7058.6	6572.6	5960.7	5283.9	4778.4	4691.8	4889.5	5177.5	5409.2	5524.4



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	7314.8	7072.7	6541.5	5906.0	5205.3	4671.0	4574.4	4789.1	5080.1	5304.9	5397.2
46°	7335.1	7090.1	6511.4	5850.5	5128.4	4554.7	4461.0	4685.1	4981.6	5197.6	5261.1
47°	7361.1	7095.3	6491.9	5790.6	5052.9	4448.0	4344.7	4583.5	4881.5	5088.4	5114.4
48°	7377.2	7106.9	6488.9	5727.5	4981.2	4334.0	4227.2	4474.1	4775.6	4962.6	4957.4
49°	7394.9	7109.6	6470.5	5673.2	4909.1	4226.5	4104.7	4369.4	4666.0	4833.4	4789.3
50°	7401.0	7123.1	6446.9	5609.3	4839.1	4112.9	3981.4	4254.1	4553.6	4691.5	4612.0
51°	7382.1	7131.1	6419.9	5555.8	4765.7	4003.7	3859.6	4138.1	4434.8	4543.6	4425.5
52°	7335.0	7103.4	6387.5	5505.4	4695.8	3894.7	3732.8	4015.4	4310.8	4383.7	4209.3
53°	7289.9	7046.3	6359.6	5451.2	4612.6	3786.7	3605.1	3891.0	4184.5	4216.8	3944.7
54°	7287.1	6999.6	6311.9	5381.4	4519.9	3679.9	3475.8	3763.3	4054.7	4040.5	3610.2
55°	7311.4	7001.2	6243.4	5313.7	4420.7	3565.9	3345.7	3631.9	3916.0	3854.9	3189.1
56°	7329.8	7013.5	6177.8	5237.7	4312.9	3455.0	3218.1	3506.3	3769.1	3656.5	2711.2
57°	7370.4	7023.1	6152.6	5164.9	4201.5	3334.1	3087.7	3374.8	3611.6	3446.5	2253.7
58°	7480.7	7055.2	6150.1	5080.0	4093.5	3209.0	2961.6	3243.0	3445.1	3187.6	1796.4
59°	7654.8	7169.6	6138.6	4952.2	3986.8	3069.8	2837.5	3096.3	3267.5	2873.8	1342.6
60°	7848.7	7339.2	6126.1	4824.3	3868.9	2923.3	2717.3	2957.0	3096.8	2455.9	1073.5
61°	7977.8	7531.9	6161.5	4717.7	3747.4	2767.5	2598.8	2803.8	2917.6	2038.2	882.1
62°	7959.9	7631.4	6284.9	4641.4	3610.2	2612.9	2481.2	2648.5	2738.4	1620.7	776.8
63°	7809.6	7573.4	6465.9	4572.3	3467.6	2454.0	2364.2	2493.3	2546.9	1232.9	725.2
64°	7506.1	7371.8	6624.7	4512.7	3311.3	2295.9	2242.7	2334.0	2347.5	946.4	694.4
65°	7099.3	7003.5	6617.1	4486.5	3130.6	2140.9	2116.7	2184.5	2116.5	762.8	667.0
66°	6670.4	6550.0	6407.9	4529.0	2923.6	1983.5	1990.7	2036.1	1885.3	663.0	640.0
67°	6138.2	6101.6	5990.4	4714.9	2720.9	1843.3	1863.9	1887.6	1651.9	617.3	611.3
68°	5540.7	5485.1	5442.2	4986.5	2539.5	1701.0	1714.5	1730.6	1315.5	586.4	581.6
69°	5118.2	4989.2	4871.3	5046.5	2379.4	1570.0	1564.2	1592.5	977.8	556.8	551.9
70°	4904.4	4686.9	4294.7	4702.9	2224.5	1438.8	1408.9	1454.1	725.7	525.9	522.7
71°	4718.5	4526.3	3890.9	3967.2	2090.2	1320.7	1258.4	1324.1	582.7	494.0	494.3
72°	4536.9	4351.9	3675.0	3232.5	2031.0	1206.4	1112.4	1187.6	512.0	462.2	468.0
73°	4339.9	4174.8	3498.5	2740.0	2248.6	1093.7	973.0	1047.8	472.2	430.8	445.5
74°	4137.5	3993.6	3310.4	2539.9	2834.1	985.0	845.5	910.9	437.1	401.4	420.6
75°	3884.6	3799.2	3103.4	2358.4	2490.7	869.8	725.4	767.6	400.5	373.9	388.5
76°	3613.0	3577.6	2907.3	2210.9	1576.4	754.5	622.0	638.9	367.5	348.0	355.8
77°	3303.7	3348.4	2684.6	2070.5	1120.9	639.2	523.7	505.7	335.3	322.4	321.5
78°	2949.2	3091.5	2472.3	1836.6	959.6	580.6	437.4	404.1	305.4	291.9	286.9
79°	2591.0	2787.1	2305.3	1477.9	1038.5	511.1	360.2	340.4	275.2	259.2	256.8
80°	2213.9	2467.4	2118.9	1242.5	1101.0	440.3	295.2	297.9	248.0	226.6	226.7
81°	1854.7	2117.4	1905.4	1115.9	868.1	402.0	240.7	259.8	220.8	193.9	196.8
82°	1538.4	1777.1	1666.1	1010.6	634.5	351.6	186.3	221.7	193.6	156.9	178.9
83°	1282.8	1511.1	1324.1	857.8	400.9	313.7	144.3	183.7	162.5	125.4	157.0
84°	914.4	1164.3	1086.6	703.8	336.7	252.9	107.8	147.8	131.1	107.3	131.4
85°	657.5	856.2	837.3	549.8	288.0	161.2	78.6	115.4	100.9	89.1	103.6
86°	401.7	549.4	587.9	237.3	235.8	105.9	54.0	85.3	71.8	66.3	73.3
87°	168.2	242.6	338.5	93.4	164.4	84.8	37.5	57.0	51.7	46.8	52.0
88°	83.9	120.6	171.2	67.9	52.0	63.9	21.0	38.2	35.1	27.3	30.6
89°	2.7	2.4	4.1	45.4	39.1	42.9	4.9	19.5	18.4	8.2	9.7



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449880  
 CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449880  
CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449880

CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6	7313.6
1°	7303.8	7304.4	7305.8	7307.4	7304.1	7305.5	7309.4	7317.3	7319.3	7323.0	7325.1
2°	7297.4	7299.5	7298.5	7299.1	7298.0	7299.1	7303.0	7316.7	7317.4	7325.9	7330.8
3°	7294.7	7298.6	7296.8	7294.5	7291.5	7291.5	7296.3	7311.8	7316.7	7328.0	7336.1
4°	7304.2	7308.8	7304.6	7296.9	7287.1	7281.5	7284.6	7301.1	7312.4	7324.1	7338.7
5°	7307.9	7312.1	7309.4	7301.7	7287.4	7272.8	7273.1	7292.3	7304.6	7324.8	7341.5
6°	7299.7	7301.5	7303.0	7299.9	7287.6	7262.0	7256.1	7277.7	7295.0	7320.0	7341.2
7°	7282.9	7285.2	7286.8	7288.2	7279.4	7255.6	7241.1	7260.3	7282.1	7313.3	7339.2
8°	7260.9	7266.6	7267.0	7267.7	7265.6	7248.9	7221.5	7239.4	7268.2	7304.5	7338.3
9°	7245.5	7250.5	7253.2	7246.4	7246.4	7237.6	7199.5	7219.4	7251.8	7293.6	7332.4
10°	7227.3	7234.1	7234.5	7226.3	7221.0	7219.3	7178.5	7195.1	7230.6	7280.7	7322.8
11°	7213.6	7223.2	7219.2	7206.0	7195.0	7193.5	7154.0	7166.6	7209.5	7262.9	7314.3
12°	7199.2	7214.5	7207.2	7188.2	7169.4	7166.3	7132.0	7137.7	7186.4	7240.6	7303.7
13°	7188.7	7202.2	7191.9	7168.8	7141.0	7132.5	7104.0	7107.0	7158.5	7216.8	7293.0
14°	7171.1	7184.7	7177.5	7152.3	7116.3	7096.6	7074.2	7072.9	7127.2	7192.3	7275.0
15°	7154.3	7170.5	7162.0	7134.0	7087.5	7060.3	7040.2	7033.7	7093.8	7162.6	7253.4
16°	7132.9	7152.3	7142.0	7109.0	7061.9	7020.9	7003.8	6994.0	7054.2	7130.4	7226.1
17°	7109.4	7131.9	7121.3	7086.4	7033.3	6980.9	6963.9	6948.7	7010.9	7091.0	7200.1
18°	7090.7	7115.4	7102.7	7063.1	7001.3	6938.7	6918.4	6905.4	6963.6	7048.6	7175.7
19°	7069.9	7096.7	7083.0	7036.4	6967.8	6902.0	6872.6	6854.3	6911.6	7005.2	7146.0
20°	7046.7	7073.6	7059.2	7010.7	6932.7	6858.7	6820.3	6800.9	6854.3	6964.8	7121.9
21°	7023.8	7053.0	7033.4	6984.7	6896.6	6815.0	6770.4	6746.2	6795.4	6921.7	7094.2
22°	6995.5	7033.3	7009.8	6952.7	6860.7	6768.8	6716.8	6687.5	6737.8	6876.8	7062.9
23°	6973.4	7008.7	6987.5	6920.5	6822.6	6720.4	6662.1	6622.1	6675.4	6828.4	7030.7
24°	6950.3	6985.0	6962.8	6885.1	6783.0	6667.5	6605.6	6561.6	6611.7	6780.0	6997.1
25°	6920.1	6958.1	6935.3	6851.2	6739.7	6614.4	6547.8	6491.7	6545.8	6729.2	6964.6
26°	6890.6	6928.2	6904.4	6817.7	6696.5	6552.9	6484.9	6421.8	6476.6	6676.4	6928.3
27°	6857.4	6892.3	6870.4	6783.2	6650.1	6497.1	6419.6	6349.5	6409.5	6624.9	6890.6
28°	6817.1	6857.8	6833.0	6745.1	6603.3	6438.7	6351.4	6278.3	6341.7	6568.1	6850.6
29°	6776.3	6817.3	6792.3	6704.5	6552.0	6377.4	6279.9	6201.0	6264.4	6511.2	6806.9
30°	6733.0	6769.7	6749.9	6662.3	6502.0	6318.0	6207.6	6126.3	6189.0	6449.4	6765.6
31°	6681.2	6717.1	6698.8	6611.9	6450.0	6255.0	6129.9	6046.0	6113.1	6389.3	6722.9
32°	6626.4	6658.1	6642.4	6561.5	6394.1	6193.3	6052.4	5967.9	6035.0	6326.2	6682.3
33°	6563.0	6599.3	6582.1	6501.7	6334.9	6127.2	5966.5	5884.5	5954.5	6262.6	6631.7
34°	6499.2	6533.0	6517.7	6443.9	6275.8	6058.6	5886.5	5801.3	5875.6	6193.8	6585.5
35°	6429.2	6463.9	6449.9	6375.5	6214.9	5986.3	5794.9	5711.2	5790.2	6123.9	6531.3
36°	6357.4	6390.1	6375.6	6308.0	6148.2	5914.1	5709.5	5623.1	5701.7	6054.7	6478.9
37°	6277.5	6313.9	6300.2	6229.6	6079.4	5837.3	5618.1	5527.1	5616.5	5978.7	6424.2
38°	6198.3	6231.4	6221.3	6151.7	6009.0	5759.7	5531.1	5434.4	5520.5	5907.2	6375.8
39°	6109.7	6139.8	6134.8	6065.4	5930.0	5678.0	5438.7	5332.7	5427.4	5827.4	6324.0
40°	6020.1	6043.4	6044.0	5982.7	5847.2	5595.8	5350.3	5230.8	5324.7	5748.0	6271.5
41°	5913.2	5929.5	5941.0	5894.2	5760.1	5513.7	5256.1	5126.1	5230.7	5662.4	6220.6
42°	5794.6	5809.0	5827.6	5798.2	5671.0	5427.7	5159.9	5022.9	5123.9	5579.7	6173.3
43°	5669.4	5670.4	5699.3	5696.7	5576.0	5338.5	5063.3	4912.1	5019.4	5496.5	6127.8
44°	5529.6	5528.1	5570.3	5583.1	5479.4	5248.8	4964.4	4803.6	4911.2	5416.9	6076.2



REPORT NUMBER: P1449880

CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	5382.4	5370.8	5421.2	5461.2	5378.8	5153.9	4867.7	4690.3	4805.2	5343.4	6032.0
46°	5219.7	5204.6	5265.1	5329.1	5274.3	5059.2	4763.8	4572.7	4693.6	5261.9	5973.4
47°	5050.9	5024.0	5097.3	5189.4	5166.8	4961.1	4662.2	4456.8	4583.4	5191.9	5916.9
48°	4868.3	4827.2	4918.7	5036.2	5052.5	4857.6	4554.6	4335.0	4470.7	5114.8	5856.2
49°	4663.1	4569.7	4718.7	4873.3	4926.8	4750.1	4444.5	4219.7	4357.7	5051.0	5807.6
50°	4400.5	4255.8	4477.1	4705.1	4792.5	4641.8	4332.5	4093.7	4245.5	4979.8	5746.0
51°	4072.5	3843.1	4164.6	4519.5	4649.7	4526.5	4215.0	3971.3	4133.5	4915.8	5690.4
52°	3642.9	3351.4	3760.9	4321.1	4497.5	4409.1	4097.7	3842.5	4026.3	4837.6	5641.9
53°	3160.5	2823.9	3287.9	4088.3	4338.7	4281.5	3974.9	3718.1	3914.0	4757.1	5586.9
54°	2663.5	2361.6	2755.7	3791.0	4171.1	4155.2	3855.6	3589.8	3811.2	4670.0	5527.6
55°	2166.4	1899.3	2302.6	3407.8	3990.5	4019.0	3725.5	3457.3	3699.0	4575.6	5455.7
56°	1672.4	1441.2	1849.6	2958.5	3803.1	3878.7	3597.1	3327.9	3590.0	4472.1	5388.8
57°	1321.0	1172.4	1398.7	2479.1	3605.0	3726.7	3462.7	3191.4	3470.9	4357.9	5317.2
58°	1084.9	992.6	1137.0	1999.5	3389.4	3565.4	3328.0	3064.4	3346.2	4255.2	5238.8
59°	926.0	880.9	961.1	1524.2	3131.6	3399.9	3186.2	2933.7	3211.4	4144.1	5122.4
60°	836.3	827.0	856.0	1196.5	2809.8	3234.5	3043.6	2815.6	3062.6	4032.0	4998.9
61°	795.0	799.6	803.3	969.5	2380.4	3060.0	2893.9	2693.3	2914.0	3908.0	4883.8
62°	767.4	775.0	775.0	825.3	1951.0	2883.7	2742.0	2575.8	2750.6	3779.1	4806.3
63°	742.9	752.9	749.4	748.8	1523.5	2704.7	2592.0	2456.6	2595.4	3640.8	4742.6
64°	718.6	728.9	725.6	708.9	1157.5	2523.6	2435.9	2338.5	2428.0	3493.5	4682.5
65°	692.8	702.3	700.5	680.6	897.0	2337.8	2284.7	2212.2	2272.8	3326.9	4650.9
66°	665.5	677.6	671.9	653.6	740.8	2117.0	2135.0	2077.1	2110.6	3120.0	4684.8
67°	640.8	655.4	646.3	625.0	654.7	1896.0	1985.2	1936.2	1965.6	2913.4	4847.6
68°	616.0	632.7	622.1	595.2	610.6	1675.2	1835.6	1783.6	1822.4	2719.3	5133.2
69°	591.4	609.5	596.4	564.1	579.4	1339.4	1692.7	1634.9	1682.2	2561.3	5264.6
70°	567.1	590.4	572.9	534.1	548.6	992.0	1557.8	1482.6	1548.9	2397.4	5018.9
71°	547.8	570.4	552.4	505.0	517.1	730.5	1427.5	1330.2	1420.2	2255.3	4353.3
72°	524.5	542.4	531.2	478.1	486.7	581.8	1297.5	1179.8	1299.6	2167.6	3588.6
73°	492.7	509.4	500.8	453.4	454.5	506.0	1165.0	1038.9	1183.9	2260.2	2998.2
74°	458.4	473.2	468.5	431.9	424.0	464.1	1035.7	915.5	1077.4	2838.9	2671.5
75°	422.0	435.8	431.5	401.8	392.3	427.2	898.6	792.7	959.4	2943.0	2488.8
76°	385.8	398.5	394.5	369.7	365.4	391.8	764.7	669.9	850.9	2006.1	2352.4
77°	347.1	360.7	353.9	334.4	337.2	357.7	631.9	569.4	742.6	1250.1	2189.2
78°	313.4	333.1	317.0	300.2	310.7	326.5	508.9	475.7	634.4	1053.8	1997.6
79°	289.6	309.9	291.1	266.2	277.6	295.1	405.9	395.2	573.3	969.8	1627.6
80°	269.6	288.4	269.1	232.1	244.3	264.9	336.3	324.0	502.8	1219.5	1359.1
81°	239.7	254.2	241.2	198.4	210.9	236.9	290.3	261.5	442.9	908.3	1203.0
82°	209.8	220.1	213.3	179.7	177.4	208.8	250.9	208.9	399.6	670.9	1089.9
83°	179.9	185.9	185.3	161.0	137.0	180.7	211.5	161.1	358.9	435.3	984.9
84°	144.4	148.7	149.4	136.4	112.2	148.3	172.0	122.5	319.2	360.9	759.5
85°	105.1	108.7	113.0	111.5	94.3	117.1	136.5	94.9	221.8	311.6	531.2
86°	77.8	81.9	82.7	80.8	74.2	86.6	102.2	67.5	122.2	260.4	302.9
87°	55.3	58.1	58.8	54.8	51.6	61.7	72.9	40.2	85.0	180.5	127.0
88°	32.7	34.2	34.9	38.0	35.7	42.0	49.2	21.4	48.1	101.7	63.6
89°	10.3	10.7	11.4	21.1	19.8	22.4	25.6	7.9	11.2	76.5	1.6



REPORT NUMBER: P1449880  
 CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449880  
 CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449880  
CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449880  
CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	7313.6	7313.6	7313.6
1°	7324.8	7326.4	7327.0
2°	7334.4	7336.2	7336.9
3°	7342.8	7344.3	7345.4
4°	7347.2	7353.0	7353.1
5°	7350.0	7359.3	7360.0
6°	7355.7	7368.2	7370.0
7°	7361.0	7372.9	7377.9
8°	7364.0	7381.0	7388.7
9°	7366.1	7387.6	7398.4
10°	7366.5	7395.7	7407.3
11°	7367.2	7400.0	7410.4
12°	7363.1	7399.3	7409.6
13°	7356.2	7397.9	7408.9
14°	7347.5	7397.9	7408.1
15°	7335.2	7393.4	7407.4
16°	7319.9	7384.9	7406.6
17°	7309.4	7381.3	7404.4
18°	7292.3	7373.7	7399.4
19°	7280.3	7367.6	7393.7
20°	7265.8	7359.1	7388.0
21°	7250.0	7348.3	7377.5
22°	7228.3	7336.5	7366.1
23°	7207.9	7321.4	7354.5
24°	7186.0	7308.5	7345.5
25°	7161.8	7295.6	7334.1
26°	7140.7	7280.0	7323.1
27°	7113.5	7262.6	7312.8
28°	7091.1	7250.7	7295.7
29°	7062.4	7228.3	7277.7
30°	7035.4	7209.0	7263.5
31°	7004.4	7190.6	7255.2
32°	6970.8	7178.0	7247.7
33°	6940.6	7165.8	7242.6
34°	6912.0	7158.5	7240.4
35°	6882.1	7145.6	7236.5
36°	6854.9	7141.3	7240.3
37°	6830.8	7138.5	7246.3
38°	6806.0	7136.3	7249.2
39°	6789.8	7135.3	7253.2
40°	6766.9	7127.2	7251.5
41°	6745.5	7117.4	7253.8
42°	6716.4	7112.9	7260.0
43°	6689.1	7110.8	7267.4
44°	6660.7	7110.3	7287.9



REPORT NUMBER: P1449880  
 CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	6635.6	7125.2	7314.8
46°	6605.7	7140.1	7335.1
47°	6592.6	7151.6	7361.1
48°	6586.6	7164.0	7377.2
49°	6569.7	7173.5	7394.9
50°	6550.3	7184.4	7401.0
51°	6524.9	7185.5	7382.1
52°	6501.8	7159.7	7335.0
53°	6476.8	7101.1	7289.9
54°	6439.7	7059.4	7287.1
55°	6373.8	7056.2	7311.4
56°	6301.8	7076.2	7329.8
57°	6262.8	7084.9	7370.4
58°	6256.9	7118.0	7480.7
59°	6247.0	7226.0	7654.8
60°	6240.2	7391.7	7848.7
61°	6273.6	7584.1	7977.8
62°	6387.7	7691.9	7959.9
63°	6569.8	7642.9	7809.6
64°	6748.7	7452.1	7506.1
65°	6759.6	7109.3	7099.3
66°	6588.8	6654.9	6670.4
67°	6212.5	6200.8	6138.2
68°	5689.6	5592.8	5540.7
69°	5109.4	5056.0	5118.2
70°	4525.6	4732.1	4904.4
71°	4053.7	4559.4	4718.5
72°	3797.0	4395.5	4536.9
73°	3610.7	4203.6	4339.9
74°	3427.6	4028.4	4137.5
75°	3216.7	3820.4	3884.6
76°	3005.3	3602.8	3613.0
77°	2774.1	3365.6	3303.7
78°	2554.9	3122.9	2949.2
79°	2375.9	2820.1	2591.0
80°	2201.6	2497.6	2213.9
81°	1999.4	2139.7	1854.7
82°	1757.8	1792.7	1538.4
83°	1439.2	1544.8	1282.8
84°	1146.7	1214.7	914.4
85°	900.5	904.1	657.5
86°	657.3	594.0	401.7
87°	414.1	283.9	168.2
88°	33.4	141.7	83.9
89°	17.2	2.1	2.7



REPORT NUMBER: P1449880  
CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
90°	0.0	0.0	0.0
91°	0.0	0.0	0.0
92°	0.0	0.0	0.0
93°	0.0	0.0	0.0
94°	0.0	0.0	0.0
95°	0.0	0.0	0.0
96°	0.0	0.0	0.0
97°	0.0	0.0	0.0
98°	0.0	0.0	0.0
99°	0.0	0.0	0.0
100°	0.0	0.0	0.0
101°	0.0	0.0	0.0
102°	0.0	0.0	0.0
103°	0.0	0.0	0.0
104°	0.0	0.0	0.0
105°	0.0	0.0	0.0
106°	0.0	0.0	0.0
107°	0.0	0.0	0.0
108°	0.0	0.0	0.0
109°	0.0	0.0	0.0
110°	0.0	0.0	0.0
111°	0.0	0.0	0.0
112°	0.0	0.0	0.0
113°	0.0	0.0	0.0
114°	0.0	0.0	0.0
115°	0.0	0.0	0.0
116°	0.0	0.0	0.0
117°	0.0	0.0	0.0
118°	0.0	0.0	0.0
119°	0.0	0.0	0.0
120°	0.0	0.0	0.0
121°	0.0	0.0	0.0
122°	0.0	0.0	0.0
123°	0.0	0.0	0.0
124°	0.0	0.0	0.0
125°	0.0	0.0	0.0
126°	0.0	0.0	0.0
127°	0.0	0.0	0.0
128°	0.0	0.0	0.0
129°	0.0	0.0	0.0
130°	0.0	0.0	0.0
131°	0.0	0.0	0.0
132°	0.0	0.0	0.0
133°	0.0	0.0	0.0
134°	0.0	0.0	0.0



REPORT NUMBER: P1449880  
CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
135°	0.0	0.0	0.0
136°	0.0	0.0	0.0
137°	0.0	0.0	0.0
138°	0.0	0.0	0.0
139°	0.0	0.0	0.0
140°	0.0	0.0	0.0
141°	0.0	0.0	0.0
142°	0.0	0.0	0.0
143°	0.0	0.0	0.0
144°	0.0	0.0	0.0
145°	0.0	0.0	0.0
146°	0.0	0.0	0.0
147°	0.0	0.0	0.0
148°	0.0	0.0	0.0
149°	0.0	0.0	0.0
150°	0.0	0.0	0.0
151°	0.0	0.0	0.0
152°	0.0	0.0	0.0
153°	0.0	0.0	0.0
154°	0.0	0.0	0.0
155°	0.0	0.0	0.0
156°	0.0	0.0	0.0
157°	0.0	0.0	0.0
158°	0.0	0.0	0.0
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161°	0.0	0.0	0.0
162°	0.0	0.0	0.0
163°	0.0	0.0	0.0
164°	0.0	0.0	0.0
165°	0.0	0.0	0.0
166°	0.0	0.0	0.0
167°	0.0	0.0	0.0
168°	0.0	0.0	0.0
169°	0.0	0.0	0.0
170°	0.0	0.0	0.0
171°	0.0	0.0	0.0
172°	0.0	0.0	0.0
173°	0.0	0.0	0.0
174°	0.0	0.0	0.0
175°	0.0	0.0	0.0
176°	0.0	0.0	0.0
177°	0.0	0.0	0.0
178°	0.0	0.0	0.0
179°	0.0	0.0	0.0

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

Scaled Data Report



REPORT NUMBER: P1449880  
CATALOG NUMBER: TWC150\_T4\_150W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
180°	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

Lumark

Report Number: SP1-2601-659-3

Test Date: 02/12/2026

Luminaire Tested: MWP2460W34VDDKYYAD-T4-24W-5000K

Data in this report applies to families of products including ;MWP2460W34VDDKYYAD

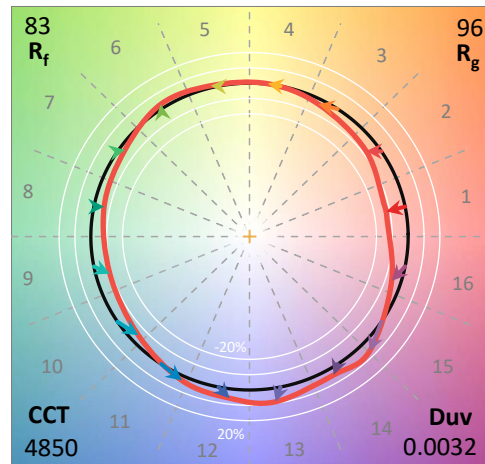
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2601-659-3  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 02/16/2026  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Lumark  
 Catalog Number: **MWP2460W34VDDKYYAD-T4-24W-5000K**  
 Description: Mester Wedge, at T4 beam setting, 24W output, 5000K

**Spectral Parameters**

CCT (K): 4850  
 CIE u': 0.2108  
 CIE v': 0.4905  
 Duv: 0.0032  
 CIE x: 0.3503  
 CIE y: 0.3623  
 CIE z: 0.2875  
 Peak Wavelength (nm): 452  
 Dominant Wavelength (nm): 571  
 Purity: 13.81051  
 Rf: 83.1  
 Rg: 95.8

CRI (Ra):	82.6		
R1:	80.9	R9:	8.5
R2:	87.6	R10:	69.7
R3:	92.0	R11:	80.6
R4:	81.9	R12:	52.2
R5:	80.4	R13:	82.7
R6:	82.0	R14:	95.7
R7:	88.2	R15:	74.9
R8:	67.7		



**Test Conditions**

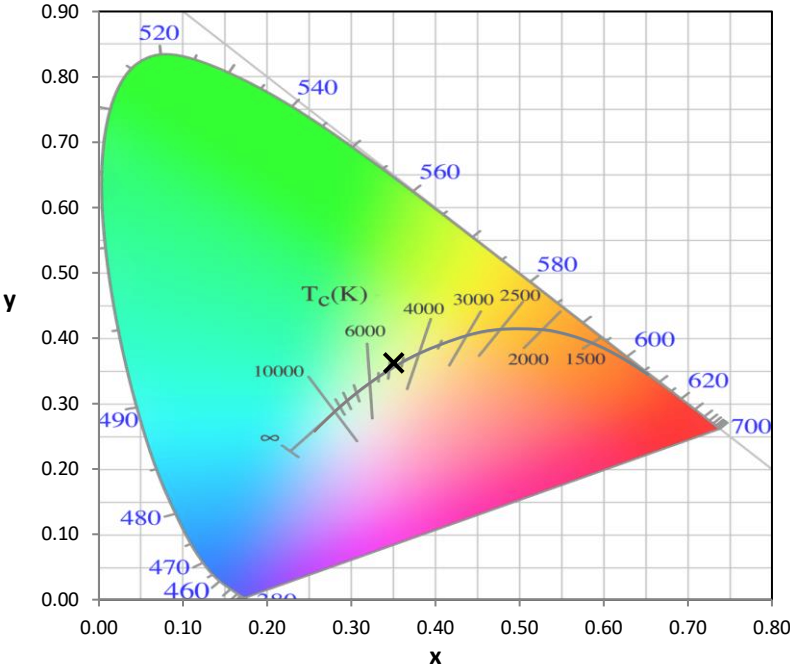
Stabilization Time: 25M  
 Operation Time: 1H 25M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-3

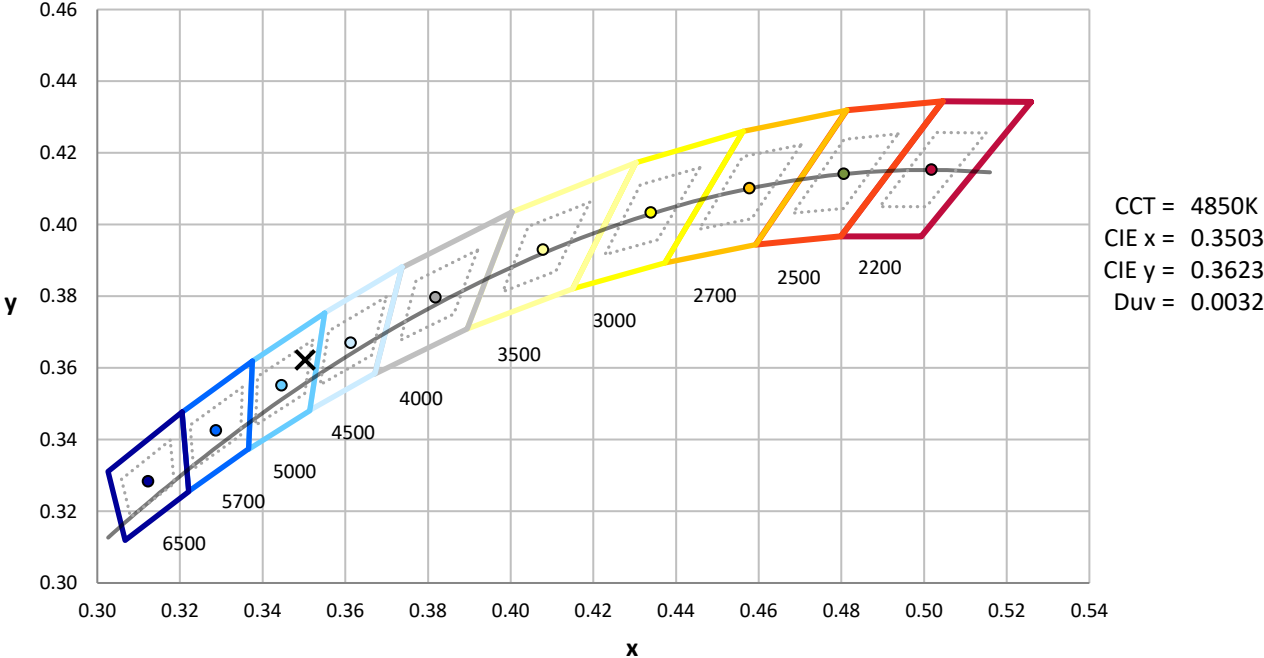
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	10/21/2025	10/21/2026
Sphere Thermometer	ONSET IN0085	10/21/2025	10/21/2026
Room Thermometer	ONSET IN0046	10/21/2025	10/21/2026

REPORT NUMBER: SP1-2601-659-3

CIE 1931 Chromaticity Diagram



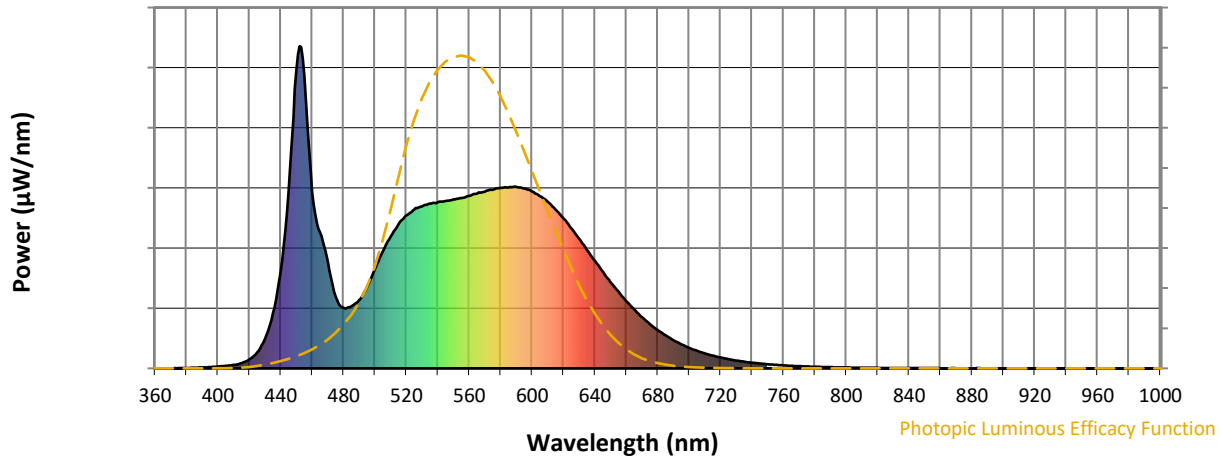
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-3

**Photopic Flux vs. Wavelength**

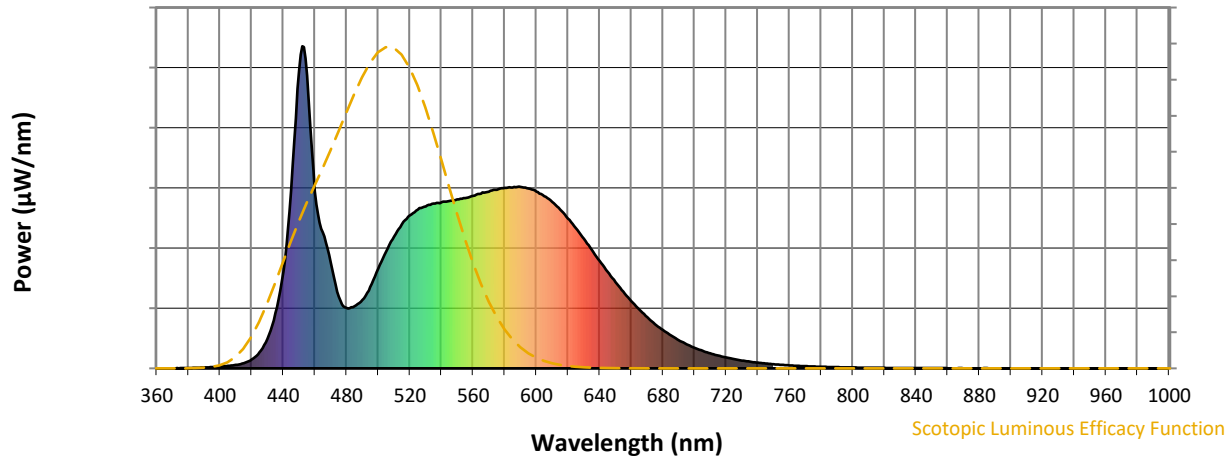


**Photopic Lumens: NR**

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	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

REPORT NUMBER: SP1-2601-659-3

**Scotopic Flux vs. Wavelength**



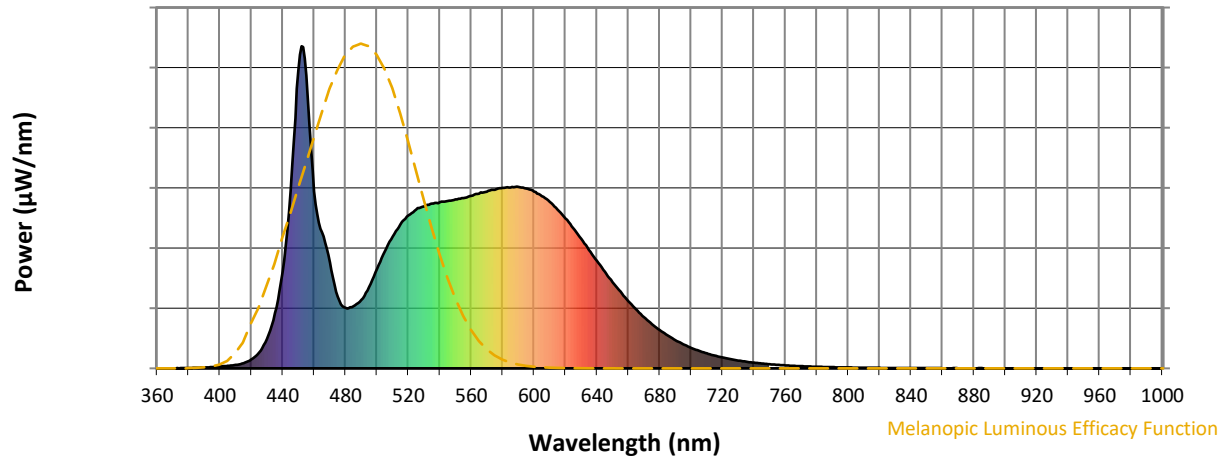
**Scotopic Lumens: NR**

**S/P: 1.9**

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	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

REPORT NUMBER: SP1-2601-659-3

**Melanopic Flux vs. Wavelength**



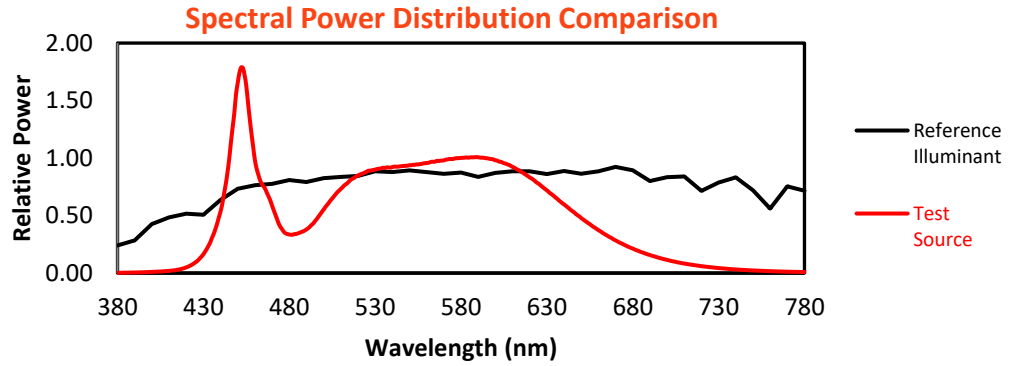
**Melanopic Lumens: NR**

**M/P: 4**

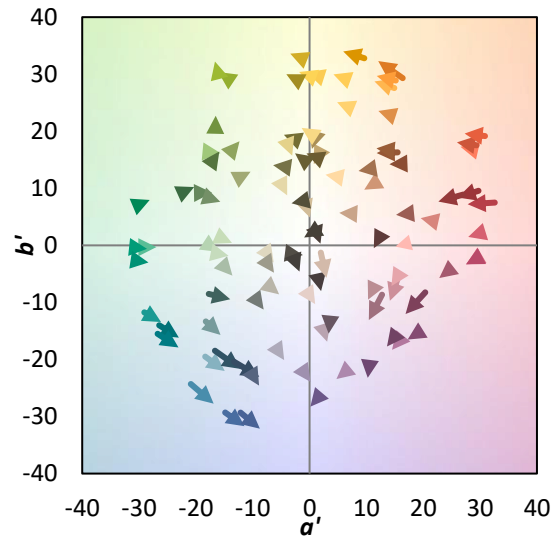
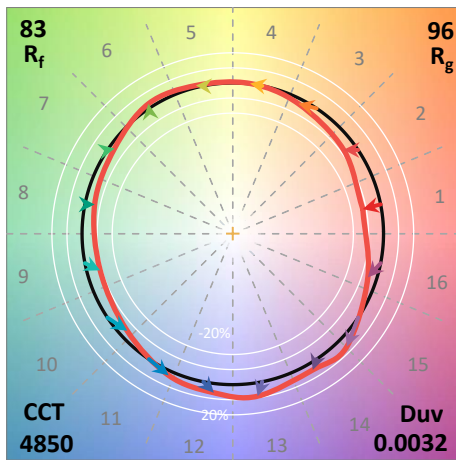
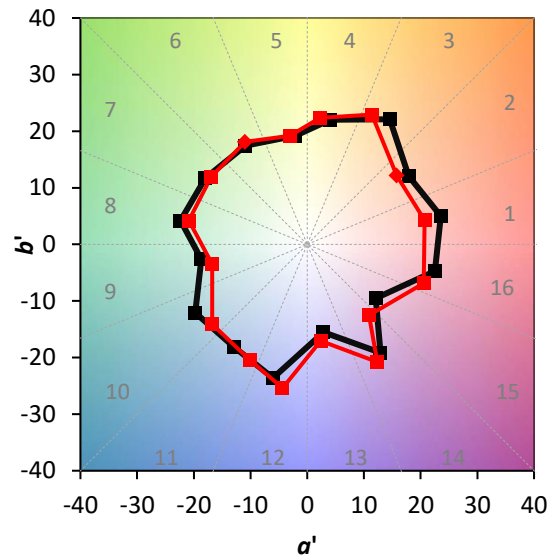
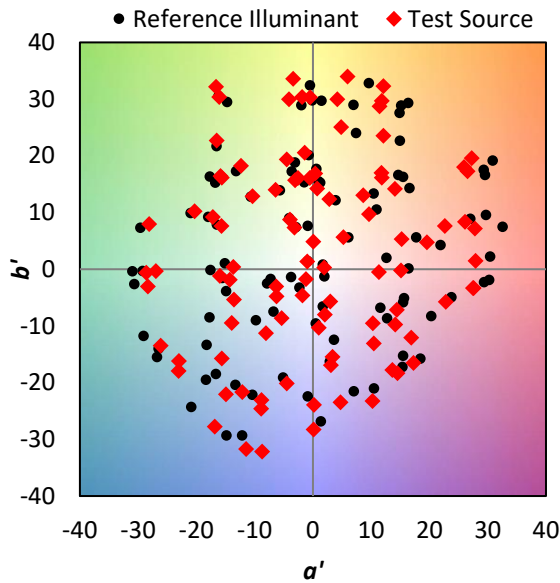
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

**Summary**

$R_f = 83.1$   
 $R_g = 95.8$   
 CIE  $R_a = 82.6$   
 $R_9 = 8.5$

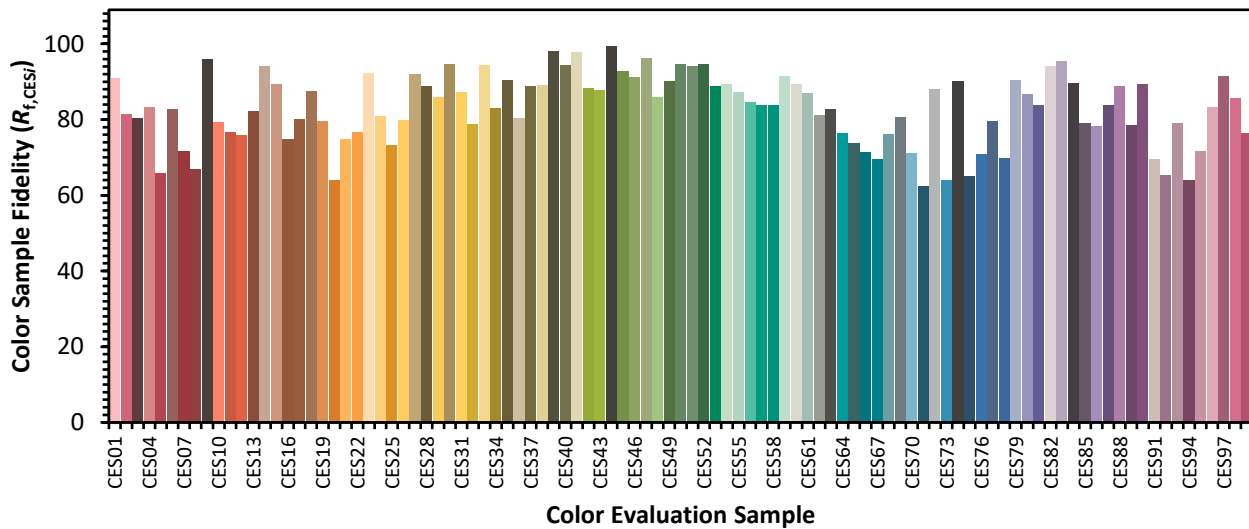


**Color Vector Graphics**

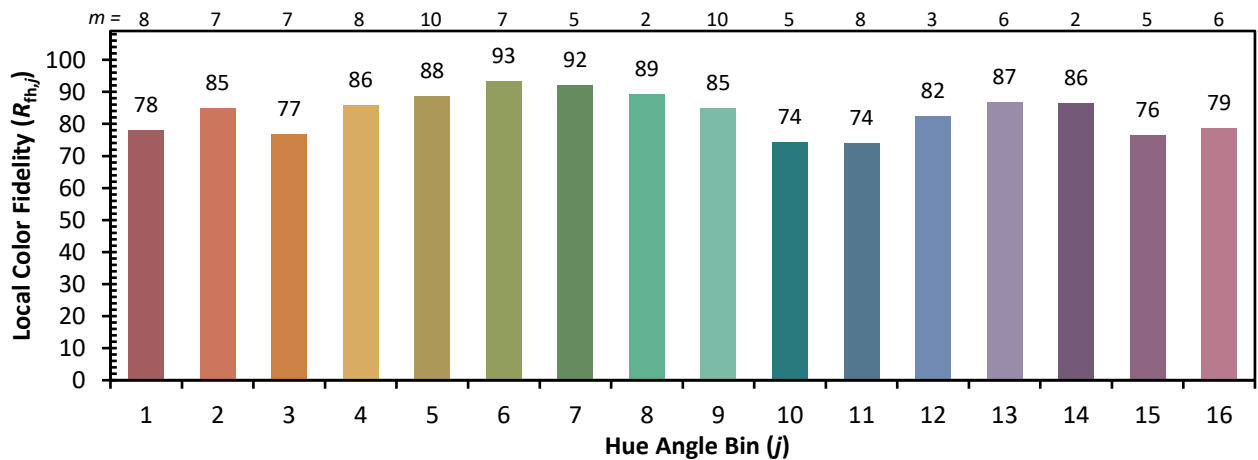
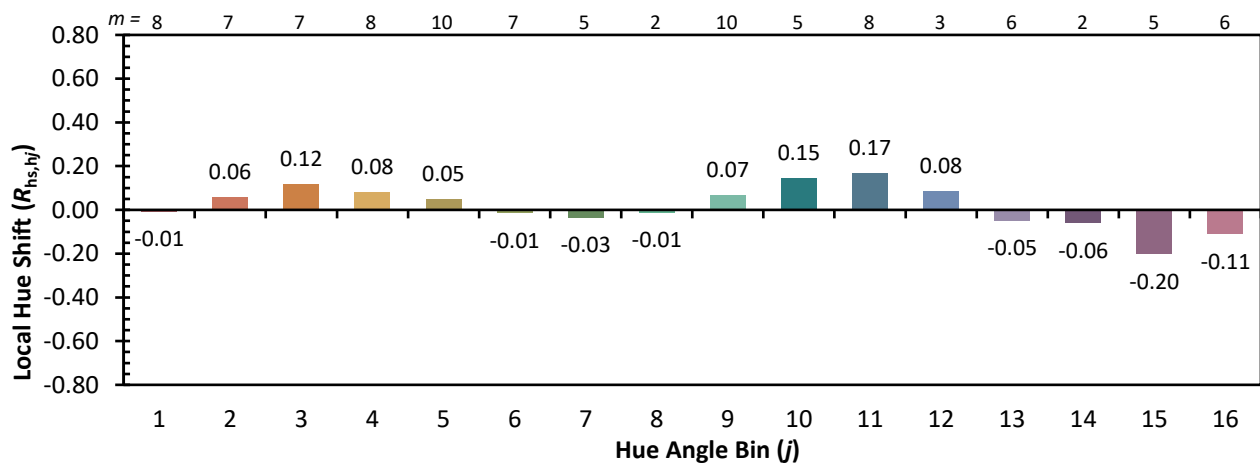
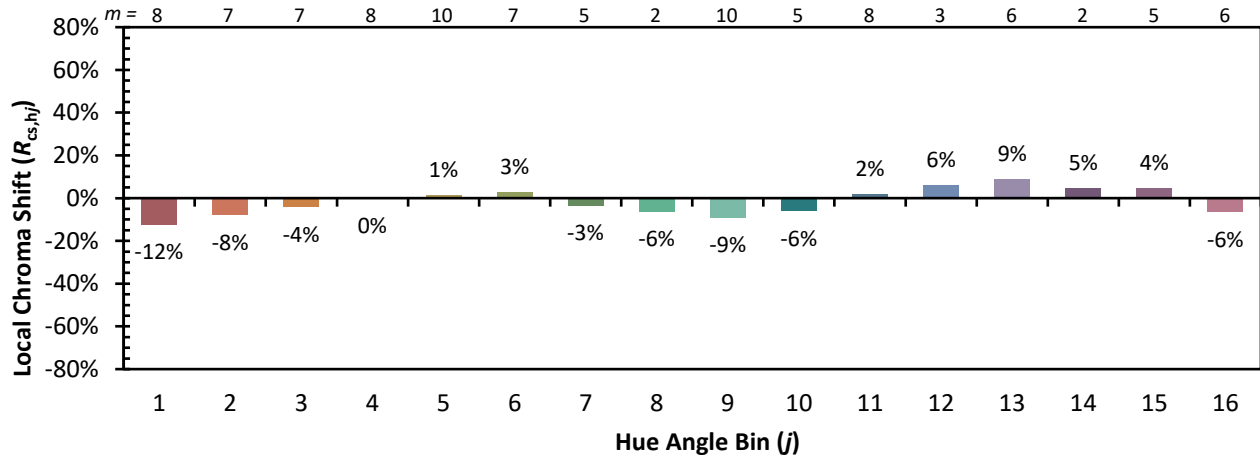


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

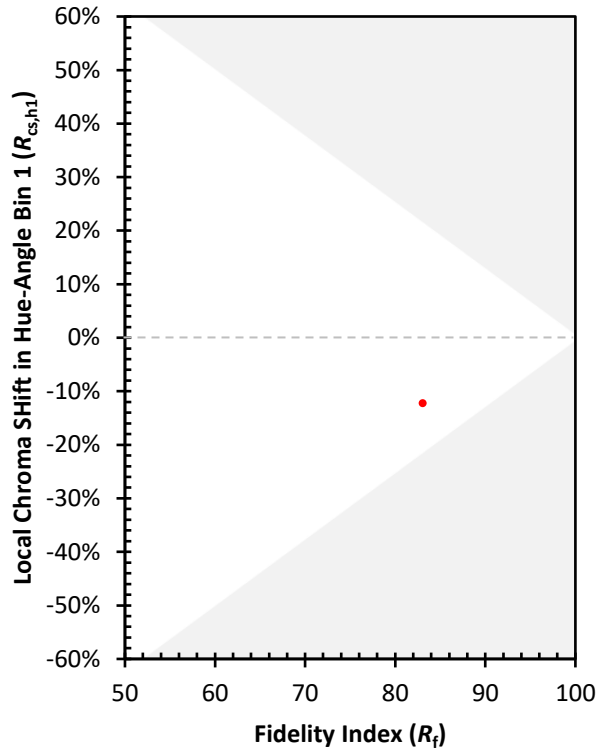
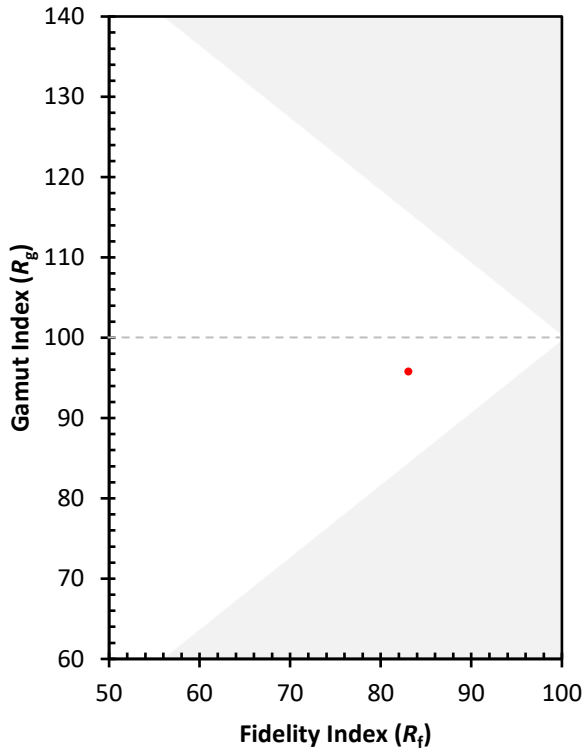
CES01 = 85	CES26 = 80	CES51 = 94	CES76 = 71
CES02 = 60	CES27 = 92	CES52 = 95	CES77 = 80
CES03 = 30	CES28 = 89	CES53 = 89	CES78 = 70
CES04 = 69	CES29 = 86	CES54 = 89	CES79 = 90
CES05 = 47	CES30 = 95	CES55 = 87	CES80 = 87
CES06 = 50	CES31 = 87	CES56 = 85	CES81 = 84
CES07 = 40	CES32 = 79	CES57 = 84	CES82 = 94
CES08 = 39	CES33 = 94	CES58 = 84	CES83 = 95
CES09 = 29	CES34 = 83	CES59 = 91	CES84 = 90
CES10 = 73	CES35 = 90	CES60 = 89	CES85 = 79
CES11 = 56	CES36 = 80	CES61 = 87	CES86 = 78
CES12 = 62	CES37 = 89	CES62 = 81	CES87 = 84
CES13 = 42	CES38 = 89	CES63 = 83	CES88 = 89
CES14 = 74	CES39 = 98	CES64 = 77	CES89 = 79
CES15 = 71	CES40 = 94	CES65 = 74	CES90 = 89
CES16 = 46	CES41 = 98	CES66 = 71	CES91 = 70
CES17 = 49	CES42 = 88	CES67 = 70	CES92 = 65
CES18 = 56	CES43 = 88	CES68 = 76	CES93 = 79
CES19 = 71	CES44 = 99	CES69 = 81	CES94 = 64
CES20 = 64	CES45 = 93	CES70 = 71	CES95 = 72
CES21 = 85	CES46 = 91	CES71 = 62	CES96 = 83
CES22 = 77	CES47 = 96	CES72 = 88	CES97 = 91
CES23 = 91	CES48 = 86	CES73 = 64	CES98 = 86
CES24 = 90	CES49 = 90	CES74 = 90	CES99 = 76
CES25 = 71	CES50 = 95	CES75 = 65	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)