

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: P1449879

Luminaire Tested: **TWC150\_T4\_150W\_4000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449879  
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\_4000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 150W  
4000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22901 lumens  
Efficiency: N/A  
Efficacy: 156.1 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

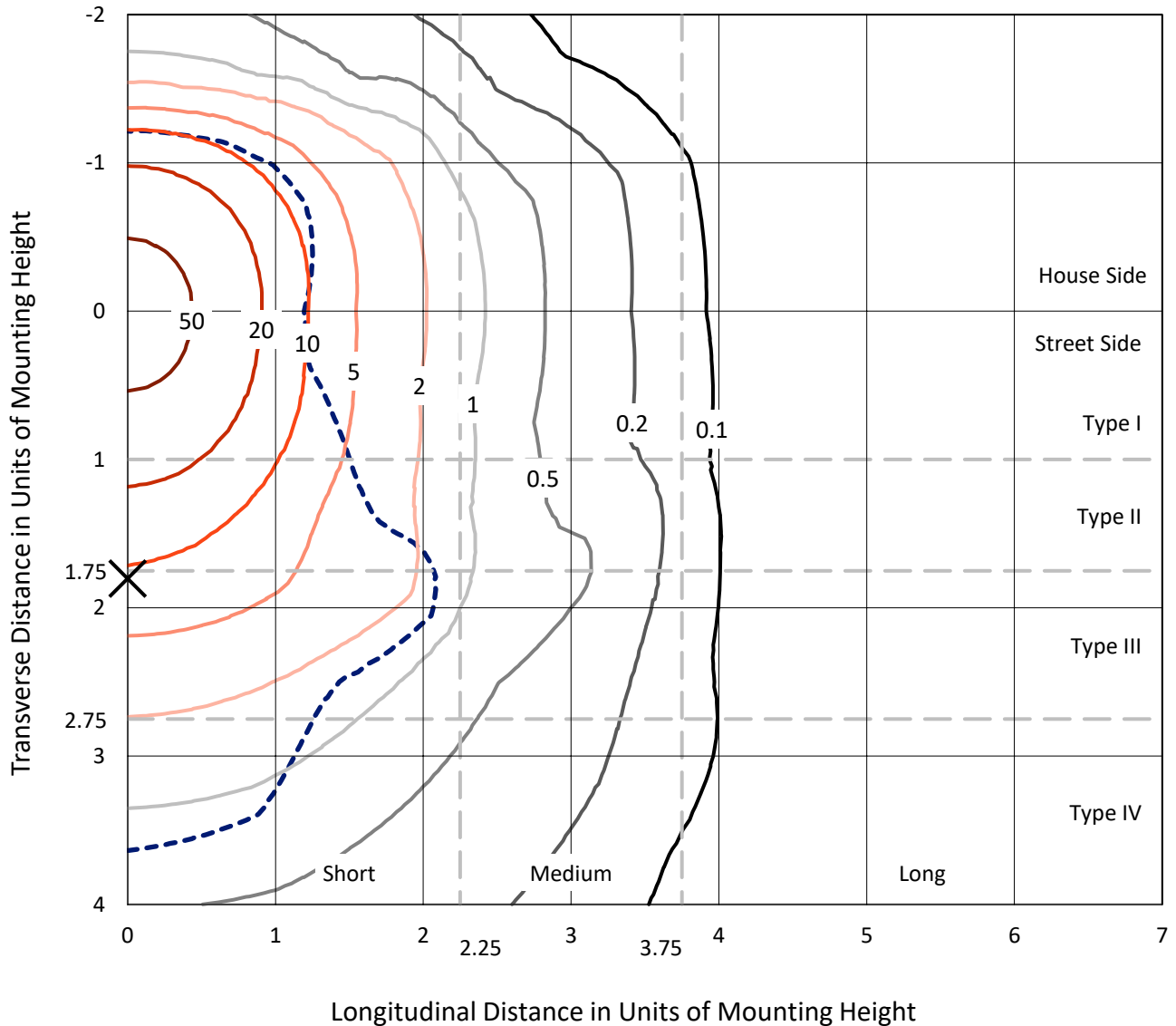
Input Watts (W): 146.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

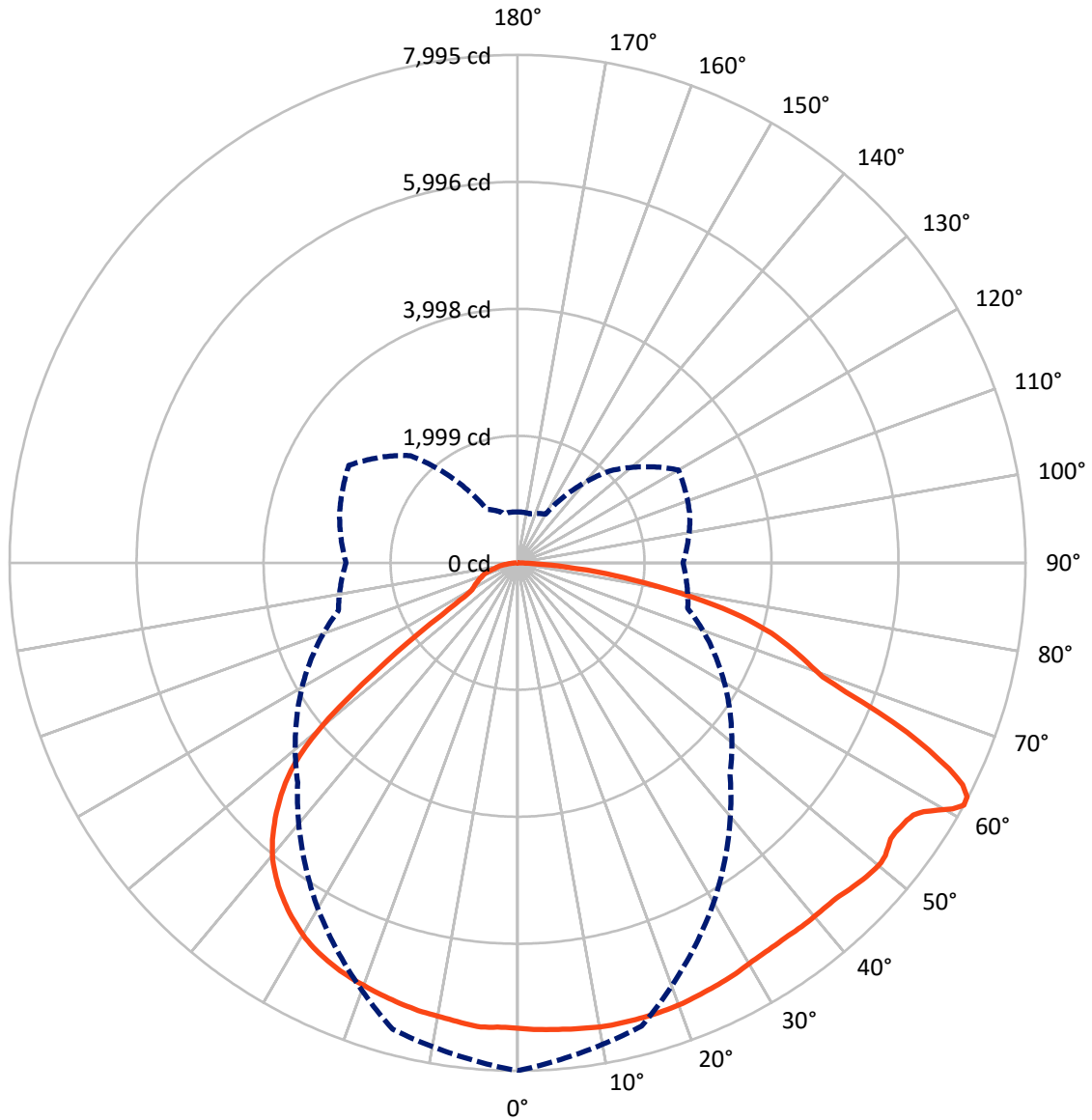
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 73.3 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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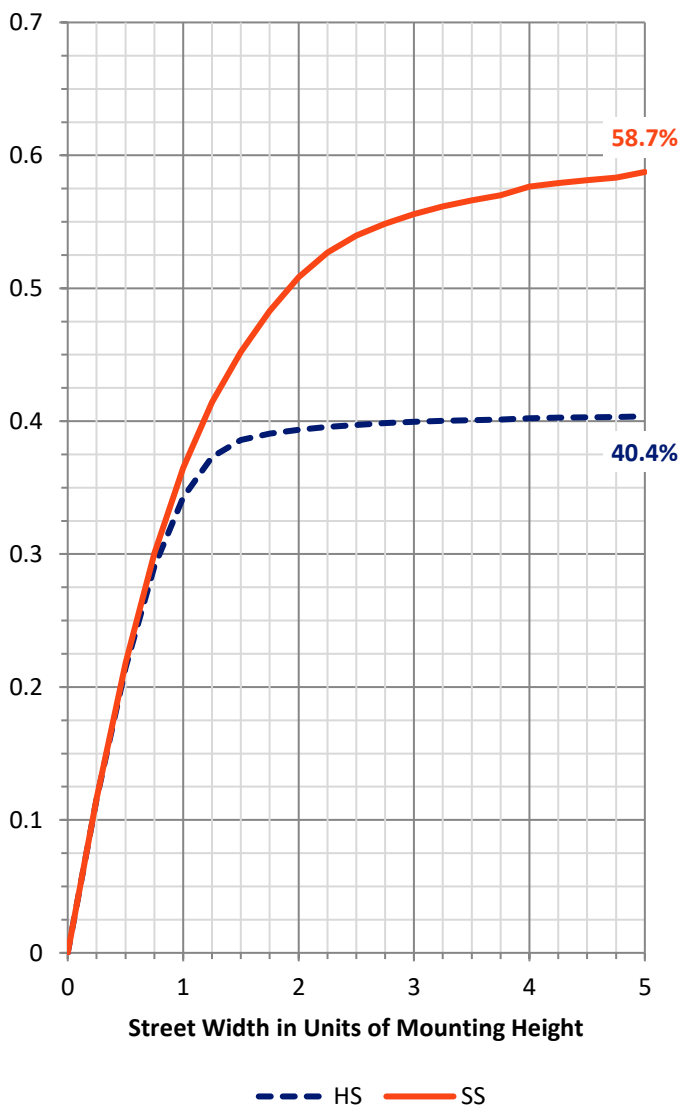
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9310.1	0.0	9310.1
	% Fixture	40.7	0.0	40.7
<b>Street Side</b>	Lumens	13590.9	0.0	13590.9
	% Fixture	59.3	0.0	59.3
<b>Total</b>	Lumens	22901.0	0.0	22901.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	697.3	3.0
10°-20°	2026.0	8.8
20°-30°	3149.9	13.8
30°-40°	3947.4	17.2
40°-50°	4298.3	18.8
50°-60°	3882.9	17.0
60°-70°	2956.1	12.9
70°-80°	1563.1	6.8
80°-90°	380.2	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°	22901.0	100.0
0°-180°	22901.0	100.0

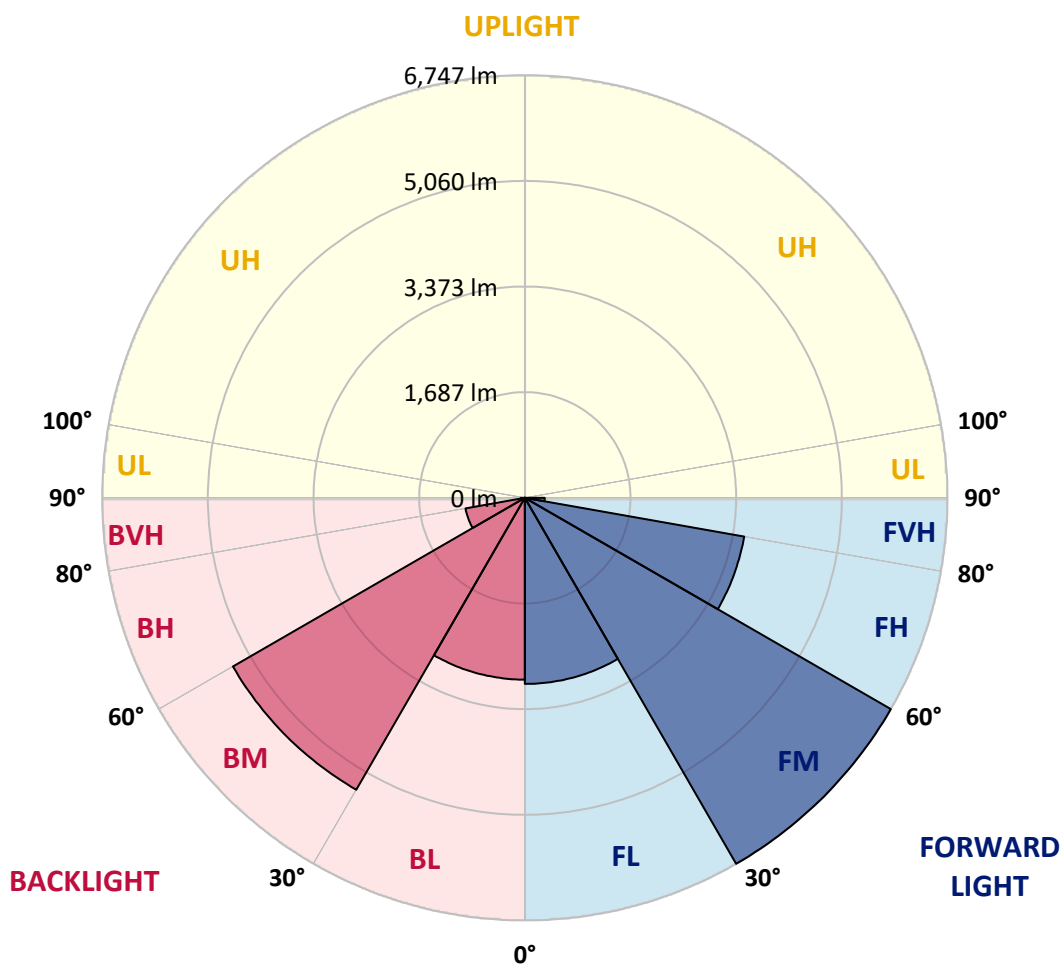


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2970.8	13.0			
FM (30°-60°)	6746.7	29.5			
FH (60°-80°)	3556.6	15.5			G2/5000
FVH (80°-90°)	316.8	1.4			G3/500
BL (0°-30°)	2902.3	12.7	B4/5000		
BM (30°-60°)	5381.8	23.5	B4/8500		
BH (60°-80°)	962.5	4.2	B2/1000		G2/1000
BVH (80°-90°)	63.4	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°	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6
1°	7343.1	7342.2	7338.8	7333.5	7330.8	7327.7	7328.0	7322.7	7323.5	7320.4	7319.2
2°	7353.0	7349.6	7343.3	7337.2	7331.5	7323.5	7325.8	7314.1	7313.0	7313.5	7310.8
3°	7361.4	7356.4	7348.5	7340.2	7328.7	7318.8	7317.4	7304.1	7303.7	7304.8	7308.8
4°	7369.2	7362.6	7353.7	7339.4	7324.5	7308.3	7303.6	7292.1	7292.0	7300.9	7311.3
5°	7376.1	7367.5	7354.4	7338.7	7314.5	7297.2	7288.9	7276.5	7280.2	7300.4	7315.5
6°	7386.1	7375.0	7357.2	7334.8	7310.6	7282.6	7270.6	7258.2	7270.5	7297.8	7309.4
7°	7394.0	7381.4	7358.3	7328.1	7298.2	7265.6	7248.6	7237.9	7261.0	7287.1	7293.2
8°	7404.9	7388.3	7358.7	7321.6	7283.8	7245.3	7225.9	7216.4	7249.3	7268.1	7270.9
9°	7414.6	7396.0	7360.0	7313.1	7266.7	7223.9	7200.4	7193.4	7232.6	7243.1	7249.7
10°	7423.5	7401.9	7360.1	7306.9	7251.3	7200.7	7169.3	7170.3	7210.0	7215.0	7227.8
11°	7426.6	7406.8	7359.1	7298.4	7233.6	7177.1	7139.0	7146.6	7181.8	7189.0	7206.3
12°	7425.8	7406.9	7355.2	7284.9	7213.3	7145.6	7106.7	7120.1	7151.1	7162.6	7186.9
13°	7425.1	7402.3	7345.6	7267.1	7186.6	7115.0	7069.2	7088.5	7116.5	7131.4	7169.0
14°	7424.3	7400.8	7338.0	7246.6	7158.9	7085.1	7028.9	7053.1	7079.1	7105.2	7151.4
15°	7423.6	7397.3	7324.3	7227.4	7126.0	7046.8	6987.2	7015.5	7038.6	7075.7	7130.0
16°	7422.9	7388.8	7310.9	7201.5	7091.6	7008.8	6944.3	6974.1	6999.2	7047.5	7105.7
17°	7420.6	7382.5	7296.3	7173.4	7050.5	6963.1	6898.0	6931.1	6956.6	7016.9	7081.0
18°	7415.6	7374.2	7279.9	7143.7	7007.8	6914.9	6846.8	6881.9	6915.2	6983.7	7057.2
19°	7409.9	7364.0	7262.2	7114.3	6961.9	6859.6	6796.2	6832.3	6870.6	6947.4	7030.1
20°	7404.2	7353.7	7243.5	7084.1	6915.0	6803.9	6740.0	6780.5	6828.2	6910.3	7003.0
21°	7393.7	7344.7	7223.5	7051.2	6870.9	6741.5	6685.4	6728.3	6782.3	6877.0	6974.8
22°	7382.3	7330.2	7202.2	7019.1	6819.8	6681.2	6627.0	6669.9	6734.7	6838.1	6944.1
23°	7370.6	7314.9	7180.4	6983.4	6768.1	6614.3	6563.5	6614.9	6682.0	6799.0	6911.9
24°	7361.5	7303.1	7157.9	6950.5	6717.1	6546.5	6500.0	6554.7	6627.1	6752.9	6876.8
25°	7350.1	7284.7	7134.1	6909.0	6663.3	6476.7	6430.0	6496.1	6570.1	6710.3	6843.9
26°	7339.1	7270.9	7108.7	6872.9	6610.2	6404.9	6358.7	6430.7	6512.6	6665.2	6806.1
27°	7328.8	7253.6	7083.7	6832.8	6551.3	6333.9	6285.0	6364.4	6453.2	6618.3	6771.0
28°	7311.6	7236.1	7054.3	6790.1	6495.6	6258.6	6211.2	6295.5	6393.7	6568.6	6728.4
29°	7293.6	7214.3	7027.0	6746.1	6433.7	6184.7	6131.6	6224.5	6334.2	6521.3	6686.8
30°	7279.4	7193.5	6995.7	6700.2	6370.7	6106.4	6052.3	6148.8	6273.3	6470.0	6639.5
31°	7271.1	7176.1	6961.3	6655.1	6305.6	6027.4	5972.1	6070.8	6207.9	6414.2	6592.4
32°	7263.6	7161.2	6924.8	6606.9	6240.6	5944.4	5891.0	5989.9	6145.0	6358.2	6540.3
33°	7258.5	7146.7	6893.8	6555.7	6169.5	5861.7	5806.1	5905.5	6077.1	6299.4	6484.2
34°	7256.2	7134.7	6861.4	6503.5	6101.0	5778.4	5719.9	5822.8	6012.6	6240.2	6419.8
35°	7252.4	7127.1	6829.7	6449.6	6027.8	5690.8	5630.0	5733.7	5939.2	6174.6	6353.5
36°	7256.1	7117.0	6800.5	6393.0	5954.2	5601.5	5535.9	5648.2	5868.5	6108.7	6282.1
37°	7262.2	7114.5	6776.7	6338.3	5876.8	5508.8	5440.7	5557.7	5791.0	6036.8	6205.5
38°	7265.1	7112.0	6748.8	6284.9	5798.6	5415.9	5342.1	5466.4	5710.8	5962.5	6124.9
39°	7269.0	7105.7	6724.4	6226.9	5720.4	5315.4	5239.5	5374.3	5626.7	5880.3	6039.7
40°	7267.3	7095.9	6703.6	6175.8	5634.6	5214.0	5135.2	5282.5	5543.5	5797.4	5954.6
41°	7269.7	7085.5	6676.5	6123.8	5549.0	5111.4	5029.7	5190.9	5459.4	5711.3	5857.6
42°	7275.9	7079.3	6646.5	6078.9	5464.9	5006.1	4920.4	5094.5	5371.4	5619.0	5761.4
43°	7283.3	7073.5	6614.5	6025.1	5380.0	4900.1	4811.1	4997.2	5279.0	5523.7	5650.9
44°	7303.9	7074.1	6587.0	5973.8	5295.5	4788.9	4702.1	4900.2	5188.9	5421.1	5536.5



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	7330.8	7088.2	6555.8	5918.9	5216.7	4681.2	4584.4	4799.6	5091.2	5316.5	5409.0
46°	7351.2	7105.6	6525.6	5863.3	5139.6	4564.7	4470.8	4695.3	4992.5	5208.9	5272.6
47°	7377.2	7110.8	6506.1	5803.3	5064.0	4457.7	4354.2	4593.5	4892.2	5099.5	5125.6
48°	7393.4	7122.5	6503.1	5740.1	4992.1	4343.4	4236.4	4483.9	4786.0	4973.5	4968.3
49°	7411.1	7125.1	6484.6	5685.6	4919.9	4235.8	4113.7	4378.9	4676.2	4844.0	4799.8
50°	7417.2	7138.7	6461.0	5621.6	4849.7	4121.9	3990.1	4263.4	4563.6	4701.7	4622.0
51°	7398.3	7146.7	6434.0	5568.0	4776.1	4012.5	3868.1	4147.1	4444.5	4553.6	4435.2
52°	7351.1	7118.9	6401.5	5517.4	4706.1	3903.2	3741.0	4024.2	4320.3	4393.3	4218.5
53°	7305.9	7061.7	6373.5	5463.2	4622.7	3795.0	3613.0	3899.5	4193.7	4226.0	3953.3
54°	7303.0	7014.9	6325.7	5393.2	4529.7	3688.0	3483.4	3771.5	4063.6	4049.4	3618.1
55°	7327.4	7016.5	6257.1	5325.4	4430.4	3573.7	3353.0	3639.8	3924.6	3863.4	3196.1
56°	7345.8	7028.9	6191.3	5249.2	4322.3	3462.6	3225.1	3514.0	3777.4	3664.5	2717.2
57°	7386.5	7038.5	6166.1	5176.2	4210.7	3341.4	3094.5	3382.1	3619.5	3454.0	2258.7
58°	7497.1	7070.7	6163.5	5091.1	4102.5	3216.0	2968.1	3250.1	3452.6	3194.6	1800.3
59°	7671.5	7185.3	6152.1	4963.0	3995.5	3076.5	2843.8	3103.1	3274.7	2880.1	1345.6
60°	7865.9	7355.2	6139.5	4834.8	3877.4	2929.7	2723.3	2963.5	3103.5	2461.3	1075.8
61°	7995.2	7548.4	6174.9	4728.0	3755.6	2773.6	2604.5	2809.9	2924.0	2042.7	884.0
62°	7977.3	7648.1	6298.6	4651.5	3618.1	2618.6	2486.6	2654.2	2744.4	1624.3	778.5
63°	7826.6	7589.9	6480.0	4582.3	3475.2	2459.4	2369.3	2498.7	2552.4	1235.6	726.7
64°	7522.5	7387.9	6639.2	4522.6	3318.6	2300.9	2247.6	2339.1	2352.7	948.5	696.0
65°	7114.9	7018.8	6631.6	4496.3	3137.4	2145.6	2121.3	2189.2	2121.1	764.5	668.4
66°	6685.0	6564.3	6421.9	4538.9	2930.0	1987.9	1995.0	2040.5	1889.4	664.5	641.4
67°	6151.7	6114.9	6003.5	4725.2	2726.9	1847.3	1868.0	1891.7	1655.6	618.7	612.7
68°	5552.8	5497.1	5454.1	4997.4	2545.1	1704.7	1718.3	1734.4	1318.4	587.7	582.9
69°	5129.3	5000.1	4881.9	5057.6	2384.6	1573.4	1567.6	1595.9	980.0	558.0	553.1
70°	4915.2	4697.1	4304.1	4713.2	2229.4	1441.9	1412.0	1457.3	727.3	527.0	523.9
71°	4728.9	4536.2	3899.4	3975.9	2094.8	1323.5	1261.2	1327.0	583.9	495.0	495.4
72°	4546.8	4361.4	3683.1	3239.5	2035.4	1209.0	1114.8	1190.2	513.1	463.2	469.0
73°	4349.4	4184.0	3506.2	2746.0	2253.6	1096.1	975.1	1050.1	473.2	431.7	446.5
74°	4146.6	4002.4	3317.6	2545.5	2840.3	987.2	847.4	912.9	438.0	402.3	421.5
75°	3893.1	3807.5	3110.2	2363.6	2496.1	871.7	727.0	769.3	401.3	374.7	389.4
76°	3620.9	3585.4	2913.6	2215.7	1579.8	756.1	623.3	640.3	368.3	348.7	356.6
77°	3310.9	3355.8	2690.5	2075.0	1123.4	640.6	524.9	506.8	336.0	323.1	322.2
78°	2955.7	3098.3	2477.7	1840.6	961.7	581.8	438.4	405.0	306.1	292.5	287.5
79°	2596.7	2793.2	2310.4	1481.1	1040.8	512.2	360.9	341.1	275.8	259.8	257.4
80°	2218.7	2472.8	2123.5	1245.2	1103.4	441.3	295.8	298.5	248.6	227.1	227.2
81°	1858.7	2122.1	1909.6	1118.3	870.0	402.9	241.3	260.4	221.3	194.3	197.3
82°	1541.8	1781.0	1669.8	1012.8	635.9	352.3	186.7	222.2	194.0	157.2	179.3
83°	1285.6	1514.4	1327.0	859.6	401.8	314.4	144.6	184.1	162.9	125.7	157.3
84°	916.4	1166.8	1089.0	705.3	337.5	253.4	108.0	148.2	131.4	107.5	131.7
85°	658.9	858.1	839.2	551.0	288.7	161.6	78.8	115.7	101.1	89.3	103.8
86°	402.6	550.6	589.2	237.8	236.3	106.1	54.1	85.5	71.9	66.4	73.5
87°	168.6	243.1	339.2	93.6	164.7	85.0	37.6	57.1	51.8	46.9	52.1
88°	84.1	120.9	171.5	68.0	52.1	64.0	21.1	38.3	35.1	27.4	30.7
89°	2.7	2.4	4.1	45.5	39.2	43.0	4.9	19.5	18.4	8.2	9.8



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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: P1449879  
 CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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: P1449879  
CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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: P1449879

CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6	7329.6
1°	7319.8	7320.4	7321.8	7323.4	7320.1	7321.5	7325.4	7333.3	7335.4	7339.0	7341.1
2°	7313.4	7315.5	7314.4	7315.1	7314.0	7315.1	7319.0	7332.7	7333.4	7341.9	7346.8
3°	7310.7	7314.5	7312.7	7310.5	7307.5	7307.5	7312.3	7327.8	7332.7	7344.0	7352.1
4°	7320.2	7324.8	7320.6	7312.8	7303.0	7297.4	7300.5	7317.1	7328.4	7340.2	7354.8
5°	7323.9	7328.1	7325.4	7317.6	7303.3	7288.7	7289.0	7308.2	7320.6	7340.8	7357.6
6°	7315.7	7317.5	7319.0	7315.9	7303.5	7277.9	7272.0	7293.6	7311.0	7336.0	7357.3
7°	7298.8	7301.2	7302.8	7304.2	7295.3	7271.5	7257.0	7276.2	7298.1	7329.3	7355.2
8°	7276.8	7282.5	7282.9	7283.6	7281.5	7264.8	7237.3	7255.2	7284.1	7320.5	7354.4
9°	7261.3	7266.4	7269.0	7262.3	7262.3	7253.4	7215.3	7235.2	7267.6	7309.5	7348.4
10°	7243.1	7249.9	7250.3	7242.1	7236.8	7235.1	7194.3	7210.8	7246.4	7296.6	7338.8
11°	7229.4	7239.0	7235.0	7221.8	7210.7	7209.2	7169.7	7182.3	7225.2	7278.7	7330.3
12°	7215.0	7230.3	7223.0	7204.0	7185.1	7182.0	7147.6	7153.3	7202.2	7256.4	7319.7
13°	7204.4	7218.0	7207.6	7184.5	7156.6	7148.1	7119.6	7122.6	7174.2	7232.6	7309.0
14°	7186.8	7200.4	7193.2	7168.0	7131.9	7112.1	7089.7	7088.4	7142.8	7208.0	7290.9
15°	7170.0	7186.2	7177.7	7149.6	7103.0	7075.8	7055.6	7049.1	7109.3	7178.2	7269.2
16°	7148.5	7168.0	7157.6	7124.6	7077.4	7036.3	7019.2	7009.3	7069.6	7146.0	7241.9
17°	7124.9	7147.5	7136.9	7102.0	7048.6	6996.2	6979.1	6963.9	7026.2	7106.5	7215.8
18°	7106.2	7131.0	7118.2	7078.6	7016.6	6953.9	6933.5	6920.5	6978.8	7064.0	7191.4
19°	7085.4	7112.2	7098.5	7051.7	6983.1	6917.1	6887.7	6869.3	6926.8	7020.6	7161.7
20°	7062.1	7089.0	7074.6	7026.0	6947.9	6873.7	6835.2	6815.8	6869.3	6980.1	7137.5
21°	7039.1	7068.4	7048.8	6999.9	6911.7	6829.9	6785.2	6761.0	6810.2	6936.8	7109.8
22°	7010.8	7048.6	7025.1	6967.9	6875.7	6783.6	6731.5	6702.1	6752.5	6891.8	7078.3
23°	6988.6	7024.1	7002.8	6935.6	6837.6	6735.1	6676.7	6636.6	6690.0	6843.3	7046.1
24°	6965.5	7000.3	6978.0	6900.2	6797.8	6682.1	6620.1	6576.0	6626.2	6794.8	7012.4
25°	6935.2	6973.3	6950.5	6866.2	6754.5	6628.8	6562.2	6505.9	6560.1	6743.9	6979.9
26°	6905.7	6943.3	6919.5	6832.7	6711.2	6567.2	6499.0	6435.8	6490.8	6691.0	6943.4
27°	6872.4	6907.4	6885.4	6798.0	6664.6	6511.3	6433.7	6363.4	6423.5	6639.4	6905.7
28°	6832.0	6872.8	6847.9	6759.9	6617.7	6452.8	6365.3	6292.0	6355.6	6582.5	6865.6
29°	6791.1	6832.2	6807.1	6719.2	6566.3	6391.4	6293.6	6214.6	6278.1	6525.4	6821.8
30°	6747.7	6784.5	6764.7	6676.9	6516.2	6331.9	6221.2	6139.7	6202.5	6463.5	6780.4
31°	6695.8	6731.8	6713.4	6626.4	6464.1	6268.7	6143.3	6059.2	6126.4	6403.3	6737.6
32°	6640.9	6672.6	6656.9	6575.8	6408.1	6206.9	6065.7	5980.9	6048.2	6340.1	6696.9
33°	6577.3	6613.8	6596.5	6515.9	6348.7	6140.6	5979.6	5897.4	5967.5	6276.3	6646.2
34°	6513.5	6547.3	6531.9	6458.0	6289.6	6071.9	5899.3	5814.0	5888.4	6207.3	6599.9
35°	6443.3	6478.0	6464.0	6389.4	6228.5	5999.4	5807.6	5723.7	5802.9	6137.3	6545.6
36°	6371.3	6404.1	6389.5	6321.8	6161.7	5927.0	5722.0	5635.4	5714.2	6067.9	6493.1
37°	6291.3	6327.7	6314.0	6243.2	6092.7	5850.1	5630.4	5539.2	5628.8	5991.7	6438.3
38°	6211.9	6245.0	6234.9	6165.1	6022.2	5772.3	5543.2	5446.3	5532.6	5920.2	6389.8
39°	6123.0	6153.3	6148.2	6078.7	5943.0	5690.4	5450.6	5344.4	5439.2	5840.2	6337.8
40°	6033.3	6056.6	6057.2	5995.8	5860.0	5608.0	5362.0	5242.3	5336.4	5760.6	6285.2
41°	5926.1	5942.5	5954.0	5907.1	5772.7	5525.8	5267.6	5137.4	5242.2	5674.8	6234.2
42°	5807.3	5821.7	5840.4	5810.9	5683.4	5439.6	5171.2	5033.8	5135.1	5591.9	6186.8
43°	5681.8	5682.8	5711.8	5709.2	5588.2	5350.2	5074.3	4922.9	5030.4	5508.6	6141.2
44°	5541.7	5540.2	5582.5	5595.3	5491.4	5260.3	4975.3	4814.1	4921.9	5428.8	6089.5



REPORT NUMBER: P1449879

CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	5394.2	5382.5	5433.0	5473.1	5390.5	5165.1	4878.3	4700.6	4815.7	5355.1	6045.1
46°	5231.2	5216.0	5276.7	5340.8	5285.8	5070.3	4774.3	4582.7	4703.9	5273.5	5986.5
47°	5061.9	5035.0	5108.4	5200.7	5178.1	4972.0	4672.4	4466.5	4593.4	5203.3	5929.9
48°	4879.0	4837.7	4929.5	5047.2	5063.5	4868.3	4564.6	4344.5	4480.5	5126.0	5869.0
49°	4673.3	4579.7	4729.0	4884.0	4937.6	4760.5	4454.2	4228.9	4367.3	5062.1	5820.3
50°	4410.1	4265.1	4486.9	4715.4	4803.0	4652.0	4342.0	4102.7	4254.8	4990.7	5758.5
51°	4081.4	3851.5	4173.7	4529.4	4659.9	4536.4	4224.2	3980.0	4142.5	4926.6	5702.9
52°	3650.9	3358.7	3769.2	4330.5	4507.3	4418.8	4106.6	3850.9	4035.2	4848.2	5654.3
53°	3167.4	2830.1	3295.1	4097.2	4348.1	4290.9	3983.6	3726.2	3922.6	4767.5	5599.2
54°	2669.3	2366.8	2761.7	3799.3	4180.2	4164.3	3864.0	3597.6	3819.6	4680.3	5539.7
55°	2171.2	1903.5	2307.6	3415.3	3999.3	4027.8	3733.7	3464.8	3707.1	4585.6	5467.7
56°	1676.1	1444.4	1853.6	2965.0	3811.5	3887.2	3605.0	3335.1	3597.8	4481.9	5400.6
57°	1323.9	1175.0	1401.7	2484.5	3612.9	3734.9	3470.3	3198.4	3478.5	4367.5	5328.8
58°	1087.3	994.8	1139.5	2003.9	3396.8	3573.3	3335.2	3071.1	3353.5	4264.5	5250.3
59°	928.0	882.8	963.2	1527.6	3138.5	3407.4	3193.2	2940.1	3218.4	4153.2	5133.6
60°	838.1	828.8	857.9	1199.1	2816.0	3241.6	3050.2	2821.7	3069.3	4040.8	5009.8
61°	796.7	801.4	805.0	971.6	2385.6	3066.7	2900.3	2699.2	2920.3	3916.6	4894.4
62°	769.1	776.7	776.7	827.1	1955.3	2890.0	2748.0	2581.4	2756.6	3787.3	4816.8
63°	744.5	754.6	751.0	750.4	1526.8	2710.6	2597.6	2462.0	2601.0	3648.8	4753.0
64°	720.2	730.5	727.2	710.5	1160.0	2529.2	2441.2	2343.6	2433.3	3501.1	4692.8
65°	694.3	703.8	702.0	682.1	898.9	2343.0	2289.7	2217.0	2277.8	3334.2	4661.0
66°	667.0	679.0	673.4	655.0	742.4	2121.6	2139.7	2081.7	2115.2	3126.8	4695.0
67°	642.2	656.8	647.7	626.3	656.2	1900.2	1989.6	1940.5	1969.9	2919.8	4858.2
68°	617.3	634.1	623.5	596.5	611.9	1678.8	1839.6	1787.5	1826.4	2725.3	5144.4
69°	592.7	610.8	597.7	565.4	580.7	1342.3	1696.4	1638.5	1685.9	2566.9	5276.1
70°	568.4	591.7	574.1	535.3	549.8	994.1	1561.2	1485.8	1552.3	2402.7	5029.9
71°	549.0	571.7	553.7	506.2	518.3	732.1	1430.6	1333.2	1423.3	2260.3	4362.8
72°	525.7	543.6	532.3	479.1	487.8	583.1	1300.4	1182.4	1302.4	2172.4	3596.4
73°	493.8	510.5	501.9	454.3	455.5	507.1	1167.6	1041.2	1186.5	2265.2	3004.7
74°	459.4	474.2	469.5	432.8	424.9	465.1	1038.0	917.5	1079.8	2845.1	2677.3
75°	422.9	436.7	432.4	402.6	393.2	428.1	900.5	794.5	961.5	2949.4	2494.2
76°	386.6	399.3	395.4	370.5	366.2	392.7	766.4	671.4	852.7	2010.5	2357.6
77°	347.8	361.4	354.7	335.1	338.0	358.5	633.3	570.6	744.3	1252.8	2193.9
78°	314.1	333.8	317.7	300.9	311.4	327.2	510.0	476.7	635.8	1056.1	2002.0
79°	290.2	310.5	291.8	266.8	278.2	295.7	406.8	396.0	574.6	971.9	1631.2
80°	270.2	289.0	269.7	232.6	244.8	265.5	337.0	324.7	503.9	1222.2	1362.1
81°	240.2	254.8	241.8	198.8	211.4	237.4	291.0	262.0	443.8	910.3	1205.6
82°	210.3	220.5	213.8	180.1	177.8	209.3	251.5	209.3	400.4	672.4	1092.3
83°	180.3	186.3	185.7	161.4	137.3	181.1	211.9	161.4	359.7	436.2	987.1
84°	144.7	149.0	149.8	136.7	112.4	148.6	172.4	122.8	319.9	361.7	761.2
85°	105.3	108.9	113.3	111.8	94.5	117.4	136.8	95.1	222.3	312.3	532.4
86°	77.9	82.1	82.8	81.0	74.4	86.8	102.4	67.7	122.5	260.9	303.6
87°	55.4	58.2	58.9	54.9	51.7	61.8	73.1	40.3	85.2	180.9	127.3
88°	32.8	34.3	35.0	38.0	35.8	42.1	49.3	21.5	48.2	101.9	63.8
89°	10.4	10.7	11.5	21.1	19.8	22.4	25.6	7.9	11.2	76.6	1.6



REPORT NUMBER: P1449879  
 CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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: P1449879  
 CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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: P1449879  
CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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: P1449879  
CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	7329.6	7329.6	7329.6
1°	7340.8	7342.4	7343.1
2°	7350.4	7352.2	7353.0
3°	7358.9	7360.4	7361.4
4°	7363.2	7369.1	7369.2
5°	7366.1	7375.4	7376.1
6°	7371.8	7384.3	7386.1
7°	7377.1	7389.0	7394.0
8°	7380.1	7397.1	7404.9
9°	7382.3	7403.7	7414.6
10°	7382.6	7411.9	7423.5
11°	7383.3	7416.2	7426.6
12°	7379.2	7415.5	7425.8
13°	7372.3	7414.1	7425.1
14°	7363.6	7414.1	7424.3
15°	7351.3	7409.6	7423.6
16°	7335.9	7401.1	7422.9
17°	7325.4	7397.4	7420.6
18°	7308.2	7389.8	7415.6
19°	7296.3	7383.8	7409.9
20°	7281.7	7375.2	7404.2
21°	7265.8	7364.4	7393.7
22°	7244.1	7352.6	7382.3
23°	7223.6	7337.4	7370.6
24°	7201.7	7324.5	7361.5
25°	7177.5	7311.5	7350.1
26°	7156.3	7295.9	7339.1
27°	7129.1	7278.5	7328.8
28°	7106.7	7266.6	7311.6
29°	7077.8	7244.1	7293.6
30°	7050.8	7224.8	7279.4
31°	7019.7	7206.3	7271.1
32°	6986.1	7193.7	7263.6
33°	6955.8	7181.4	7258.5
34°	6927.1	7174.2	7256.2
35°	6897.2	7161.2	7252.4
36°	6869.9	7157.0	7256.1
37°	6845.8	7154.1	7262.2
38°	6820.9	7151.9	7265.1
39°	6804.7	7150.9	7269.0
40°	6781.7	7142.8	7267.3
41°	6760.2	7132.9	7269.7
42°	6731.1	7128.4	7275.9
43°	6703.7	7126.3	7283.3
44°	6675.3	7125.9	7303.9



REPORT NUMBER: P1449879  
 CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	6650.1	7140.8	7330.8
46°	6620.2	7155.7	7351.2
47°	6607.0	7167.2	7377.2
48°	6601.1	7179.7	7393.4
49°	6584.1	7189.2	7411.1
50°	6564.6	7200.1	7417.2
51°	6539.2	7201.2	7398.3
52°	6516.0	7175.3	7351.1
53°	6490.9	7116.6	7305.9
54°	6453.7	7074.8	7303.0
55°	6387.7	7071.6	7327.4
56°	6315.6	7091.7	7345.8
57°	6276.5	7100.4	7386.5
58°	6270.5	7133.6	7497.1
59°	6260.7	7241.8	7671.5
60°	6253.9	7407.9	7865.9
61°	6287.3	7600.7	7995.2
62°	6401.7	7708.7	7977.3
63°	6584.2	7659.6	7826.6
64°	6763.4	7468.4	7522.5
65°	6774.4	7124.8	7114.9
66°	6603.2	6669.4	6685.0
67°	6226.1	6214.4	6151.7
68°	5702.0	5605.0	5552.8
69°	5120.6	5067.1	5129.3
70°	4535.5	4742.4	4915.2
71°	4062.6	4569.4	4728.9
72°	3805.3	4405.1	4546.8
73°	3618.7	4212.8	4349.4
74°	3435.1	4037.2	4146.6
75°	3223.7	3828.8	3893.1
76°	3011.9	3610.6	3620.9
77°	2780.2	3373.0	3310.9
78°	2560.5	3129.7	2955.7
79°	2381.1	2826.2	2596.7
80°	2206.4	2503.1	2218.7
81°	2003.8	2144.4	1858.7
82°	1761.6	1796.7	1541.8
83°	1442.3	1548.2	1285.6
84°	1149.2	1217.4	916.4
85°	902.5	906.1	658.9
86°	658.7	595.3	402.6
87°	415.1	284.5	168.6
88°	33.5	142.0	84.1
89°	17.2	2.1	2.7



REPORT NUMBER: P1449879  
CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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: P1449879  
CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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
159°	0.0	0.0	0.0
160°	0.0	0.0	0.0
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: P1449879  
CATALOG NUMBER: TWC150\_T4\_150W\_4000K

**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: SP1-2601-659-2

Test Date: 02/12/2026

Luminaire Tested: MWP2460W34VDDKYYAD-T4-24W-4000K

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

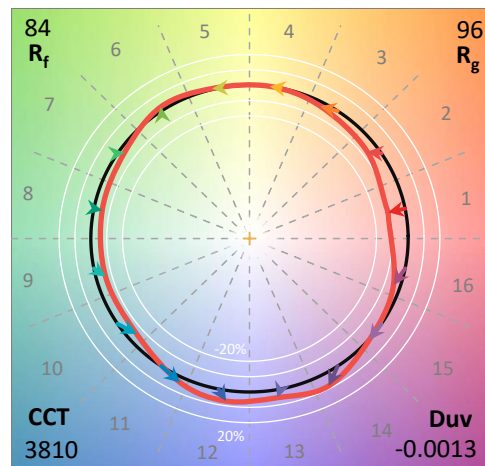
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2601-659-2  
 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-4000K**  
 Description: Mester Wedge, at T4 beam setting, 24W output, 4000K

**Spectral Parameters**

CCT (K): 3810  
 CIE u': 0.2295  
 CIE v': 0.5035  
 Duv: -0.0013  
 CIE x: 0.3881  
 CIE y: 0.3785  
 CIE z: 0.2334  
 Peak Wavelength (nm): 453  
 Dominant Wavelength (nm): 580  
 Purity: 30.07368  
 Rf: 84.4  
 Rg: 96.5

CRI (Ra):	84.5		
R1:	83.7	R9:	15.9
R2:	90.7	R10:	77.2
R3:	95.1	R11:	83.0
R4:	83.6	R12:	62.4
R5:	83.4	R13:	85.6
R6:	86.7	R14:	97.4
R7:	86.3	R15:	77.9
R8:	66.5		



**Test Conditions**

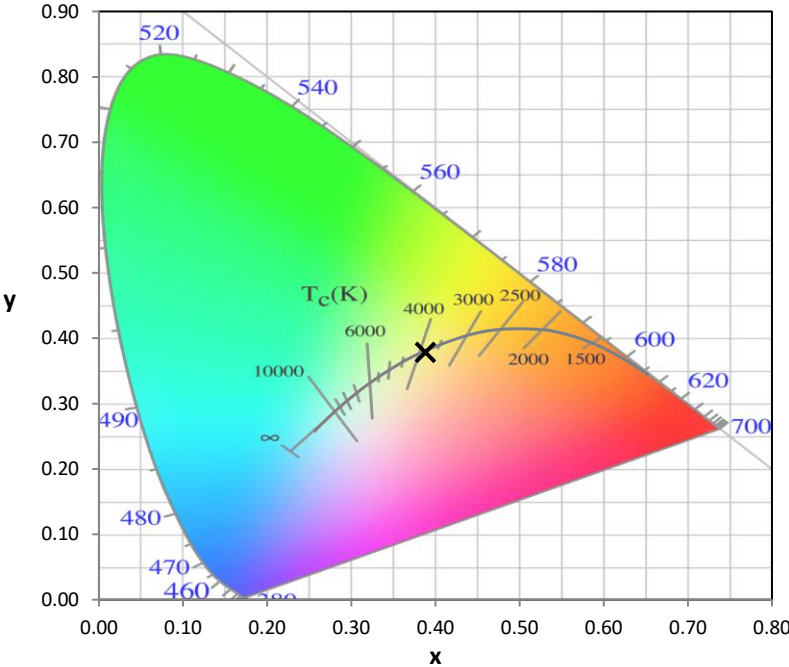
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

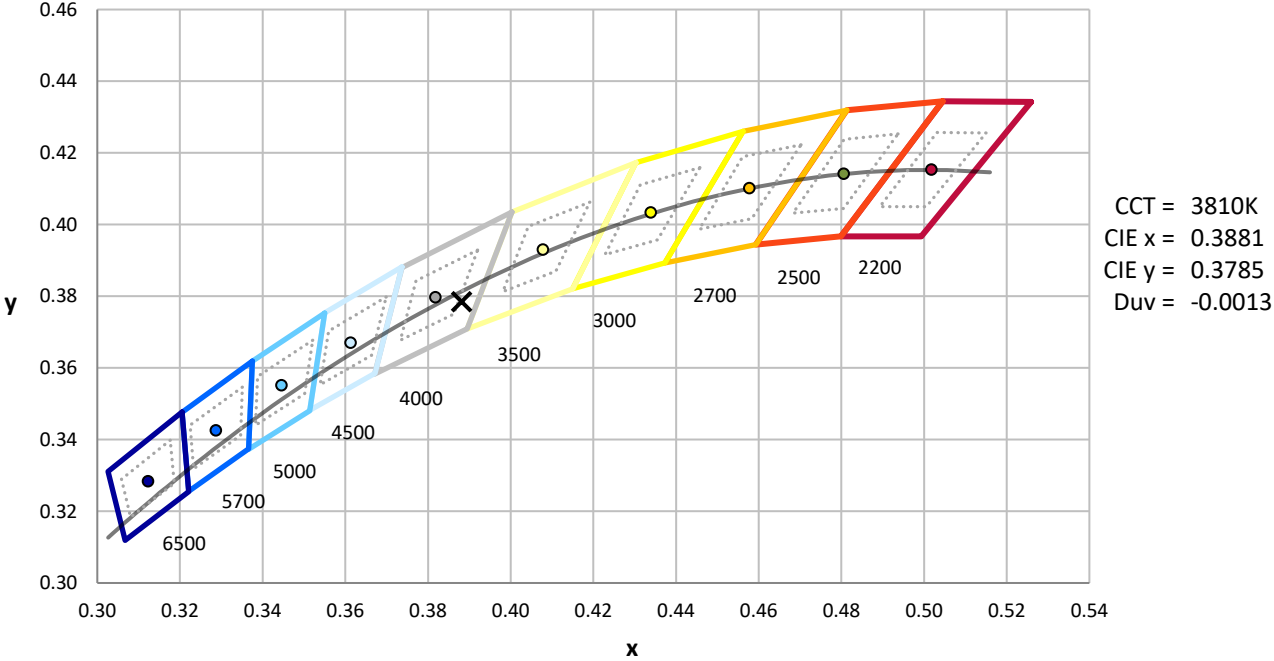
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2601-659-2

CIE 1931 Chromaticity Diagram



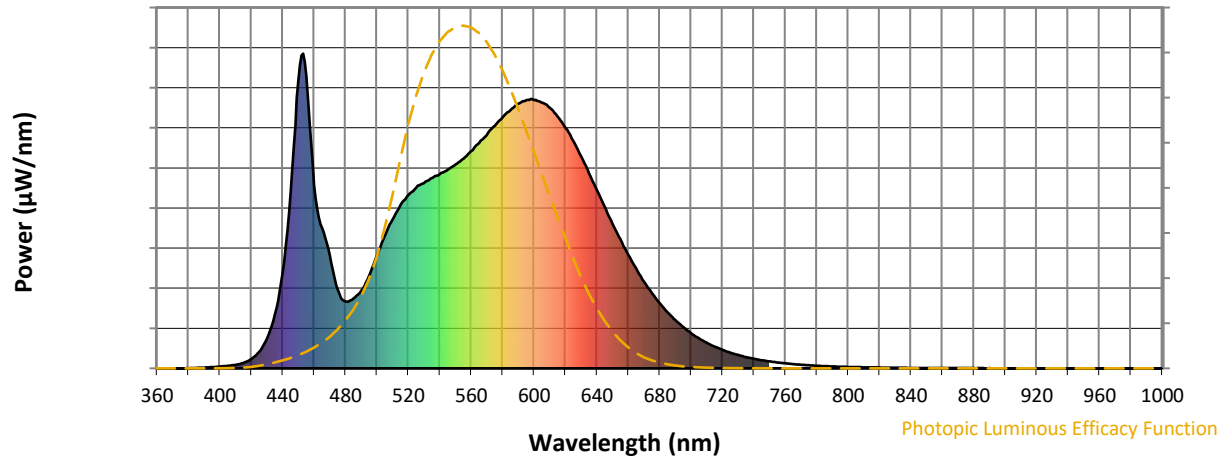
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

**Photopic Flux vs. Wavelength**

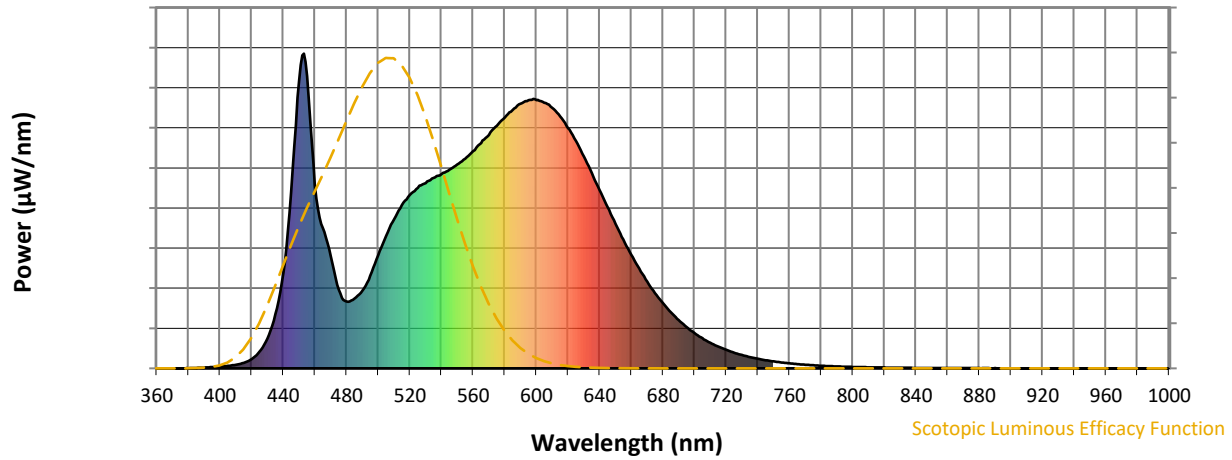


**Photopic Lumens: NR**

$\lambda$ (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	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	NR	630	674	NR	760	16	NR	890	1	NR
375	0	NR	505	421	NR	635	620	NR	765	14	NR	895	0	NR
380	1	NR	510	474	NR	640	566	NR	770	12	NR	900	0	NR
385	1	NR	515	518	NR	645	512	NR	775	10	NR	905	0	NR
390	3	NR	520	552	NR	650	459	NR	780	8	NR	910	0	NR
395	4	NR	525	574	NR	655	410	NR	785	7	NR	915	0	NR
400	6	NR	530	589	NR	660	361	NR	790	6	NR	920	0	NR
405	8	NR	535	605	NR	665	317	NR	795	5	NR	925	0	NR
410	11	NR	540	617	NR	670	276	NR	800	5	NR	930	0	NR
415	18	NR	545	632	NR	675	239	NR	805	4	NR	935	0	NR
420	30	NR	550	648	NR	680	207	NR	810	3	NR	940	0	NR
425	53	NR	555	666	NR	685	178	NR	815	3	NR	945	0	NR
430	95	NR	560	690	NR	690	153	NR	820	3	NR	950	0	NR
435	173	NR	565	716	NR	695	131	NR	825	2	NR	955	0	NR
440	304	NR	570	742	NR	700	112	NR	830	2	NR	960	0	NR
445	559	NR	575	771	NR	705	95	NR	835	2	NR	965	0	NR
450	915	NR	580	798	NR	710	81	NR	840	1	NR	970	0	NR
455	929	NR	585	820	NR	715	69	NR	845	1	NR	975	0	NR
460	582	NR	590	841	NR	720	59	NR	850	1	NR	980	0	NR
465	446	NR	595	852	NR	725	50	NR	855	1	NR	985	0	NR
470	356	NR	600	852	NR	730	42	NR	860	1	NR	990	0	NR
475	250	NR	605	845	NR	735	36	NR	865	1	NR	995	0	NR
480	212	NR	610	827	NR	740	30	NR	870	1	NR	1000	0	NR
485	221	NR	615	801	NR	745	26	NR	875	1	NR			

REPORT NUMBER: SP1-2601-659-2

**Scotopic Flux vs. Wavelength**



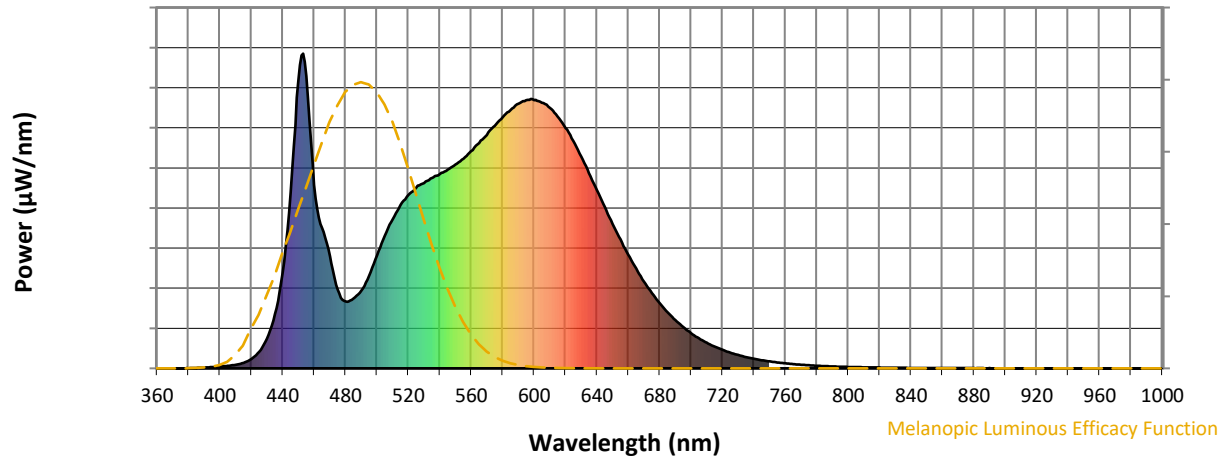
**Scotopic Lumens: NR**

**S/P: 1.64**

$\lambda$ (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	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	NR	630	674	NR	760	16	NR	890	1	NR
375	0	NR	505	421	NR	635	620	NR	765	14	NR	895	0	NR
380	1	NR	510	474	NR	640	566	NR	770	12	NR	900	0	NR
385	1	NR	515	518	NR	645	512	NR	775	10	NR	905	0	NR
390	3	NR	520	552	NR	650	459	NR	780	8	NR	910	0	NR
395	4	NR	525	574	NR	655	410	NR	785	7	NR	915	0	NR
400	6	NR	530	589	NR	660	361	NR	790	6	NR	920	0	NR
405	8	NR	535	605	NR	665	317	NR	795	5	NR	925	0	NR
410	11	NR	540	617	NR	670	276	NR	800	5	NR	930	0	NR
415	18	NR	545	632	NR	675	239	NR	805	4	NR	935	0	NR
420	30	NR	550	648	NR	680	207	NR	810	3	NR	940	0	NR
425	53	NR	555	666	NR	685	178	NR	815	3	NR	945	0	NR
430	95	NR	560	690	NR	690	153	NR	820	3	NR	950	0	NR
435	173	NR	565	716	NR	695	131	NR	825	2	NR	955	0	NR
440	304	NR	570	742	NR	700	112	NR	830	2	NR	960	0	NR
445	559	NR	575	771	NR	705	95	NR	835	2	NR	965	0	NR
450	915	NR	580	798	NR	710	81	NR	840	1	NR	970	0	NR
455	929	NR	585	820	NR	715	69	NR	845	1	NR	975	0	NR
460	582	NR	590	841	NR	720	59	NR	850	1	NR	980	0	NR
465	446	NR	595	852	NR	725	50	NR	855	1	NR	985	0	NR
470	356	NR	600	852	NR	730	42	NR	860	1	NR	990	0	NR
475	250	NR	605	845	NR	735	36	NR	865	1	NR	995	0	NR
480	212	NR	610	827	NR	740	30	NR	870	1	NR	1000	0	NR
485	221	NR	615	801	NR	745	26	NR	875	1	NR			

REPORT NUMBER: SP1-2601-659-2

**Melanopic Flux vs. Wavelength**



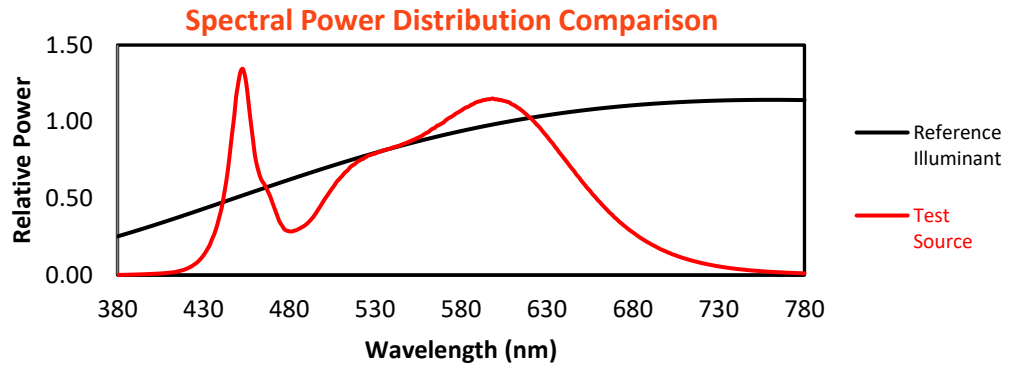
**Melanopic Lumens: NR**

**M/P: 3.35**

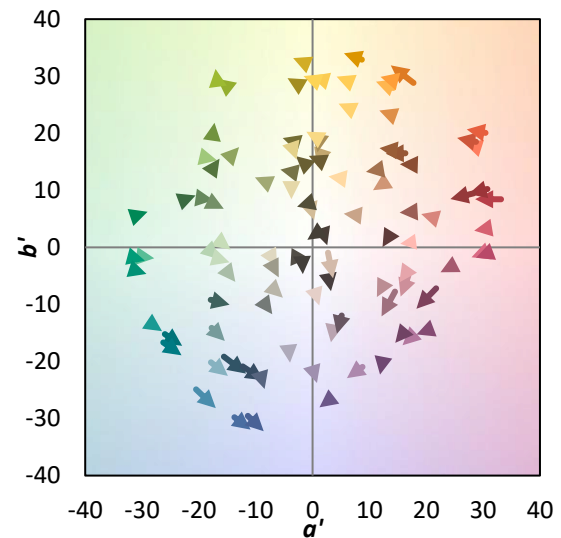
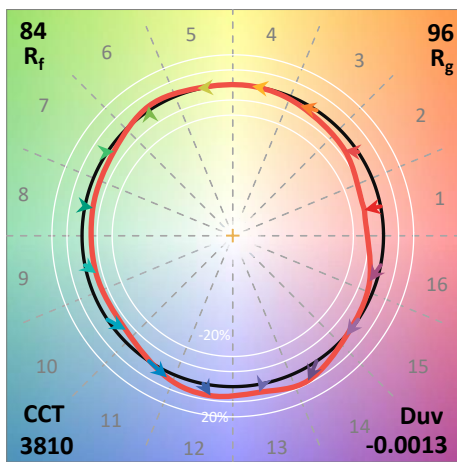
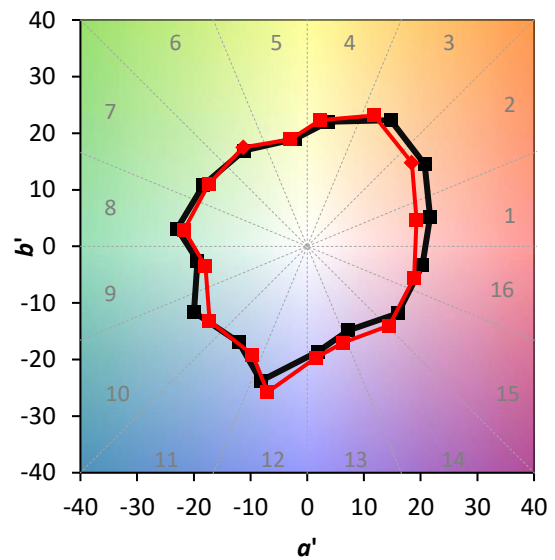
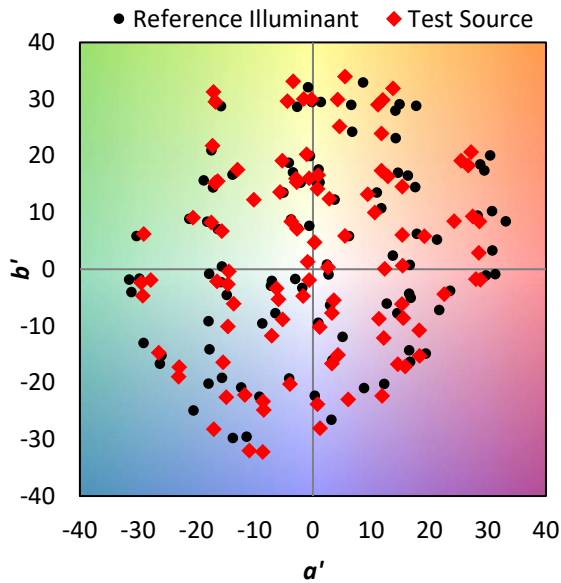
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	NR	630	674	NR	760	16	NR	890	1	NR
375	0	NR	505	421	NR	635	620	NR	765	14	NR	895	0	NR
380	1	NR	510	474	NR	640	566	NR	770	12	NR	900	0	NR
385	1	NR	515	518	NR	645	512	NR	775	10	NR	905	0	NR
390	3	NR	520	552	NR	650	459	NR	780	8	NR	910	0	NR
395	4	NR	525	574	NR	655	410	NR	785	7	NR	915	0	NR
400	6	NR	530	589	NR	660	361	NR	790	6	NR	920	0	NR
405	8	NR	535	605	NR	665	317	NR	795	5	NR	925	0	NR
410	11	NR	540	617	NR	670	276	NR	800	5	NR	930	0	NR
415	18	NR	545	632	NR	675	239	NR	805	4	NR	935	0	NR
420	30	NR	550	648	NR	680	207	NR	810	3	NR	940	0	NR
425	53	NR	555	666	NR	685	178	NR	815	3	NR	945	0	NR
430	95	NR	560	690	NR	690	153	NR	820	3	NR	950	0	NR
435	173	NR	565	716	NR	695	131	NR	825	2	NR	955	0	NR
440	304	NR	570	742	NR	700	112	NR	830	2	NR	960	0	NR
445	559	NR	575	771	NR	705	95	NR	835	2	NR	965	0	NR
450	915	NR	580	798	NR	710	81	NR	840	1	NR	970	0	NR
455	929	NR	585	820	NR	715	69	NR	845	1	NR	975	0	NR
460	582	NR	590	841	NR	720	59	NR	850	1	NR	980	0	NR
465	446	NR	595	852	NR	725	50	NR	855	1	NR	985	0	NR
470	356	NR	600	852	NR	730	42	NR	860	1	NR	990	0	NR
475	250	NR	605	845	NR	735	36	NR	865	1	NR	995	0	NR
480	212	NR	610	827	NR	740	30	NR	870	1	NR	1000	0	NR
485	221	NR	615	801	NR	745	26	NR	875	1	NR			

**Summary**

$R_f = 84.4$   
 $R_g = 96.5$   
 $CIE R_a = 84.5$   
 $R_9 = 15.9$

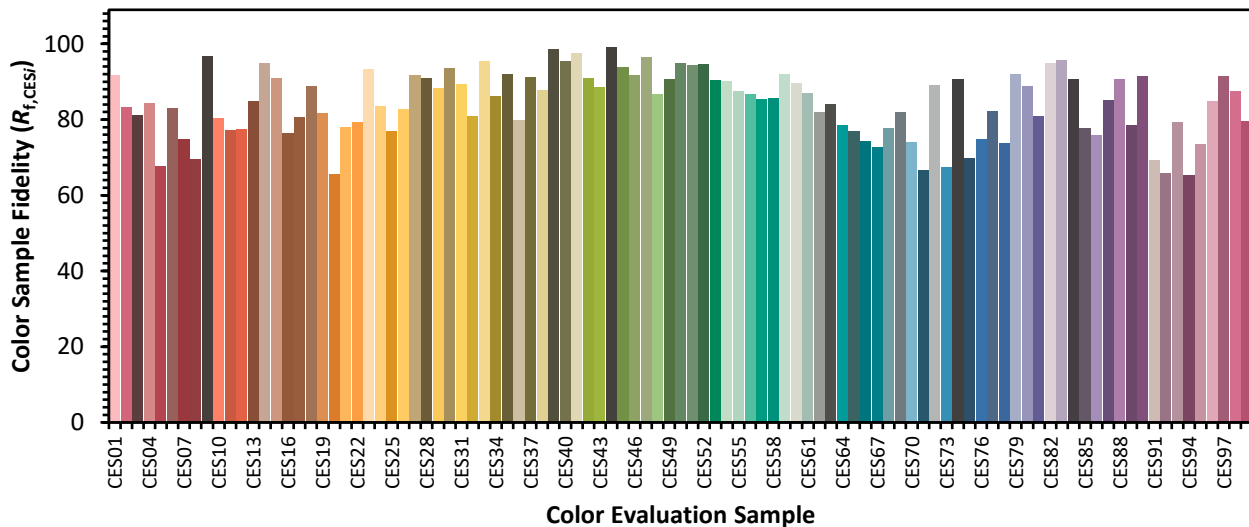


**Color Vector Graphics**

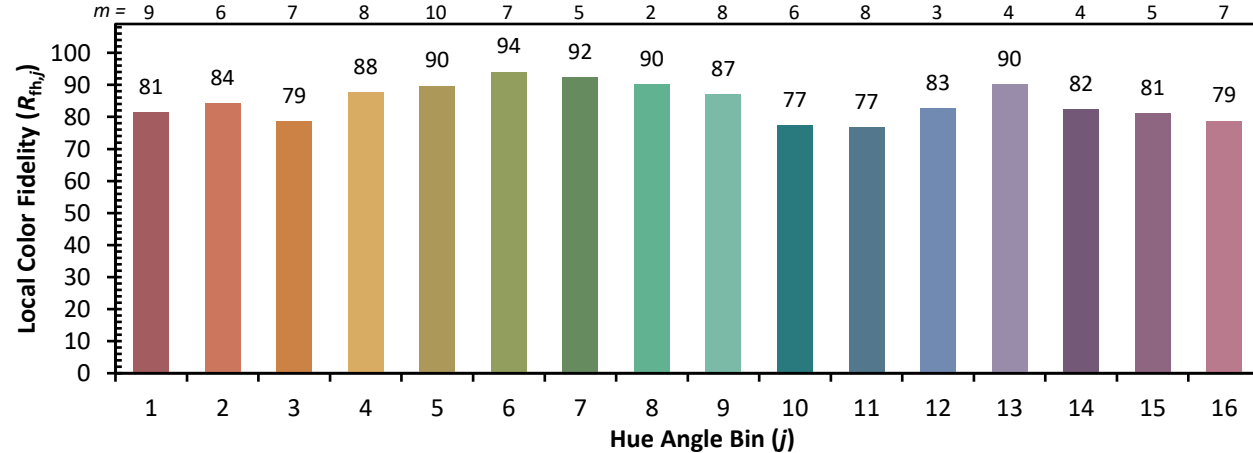
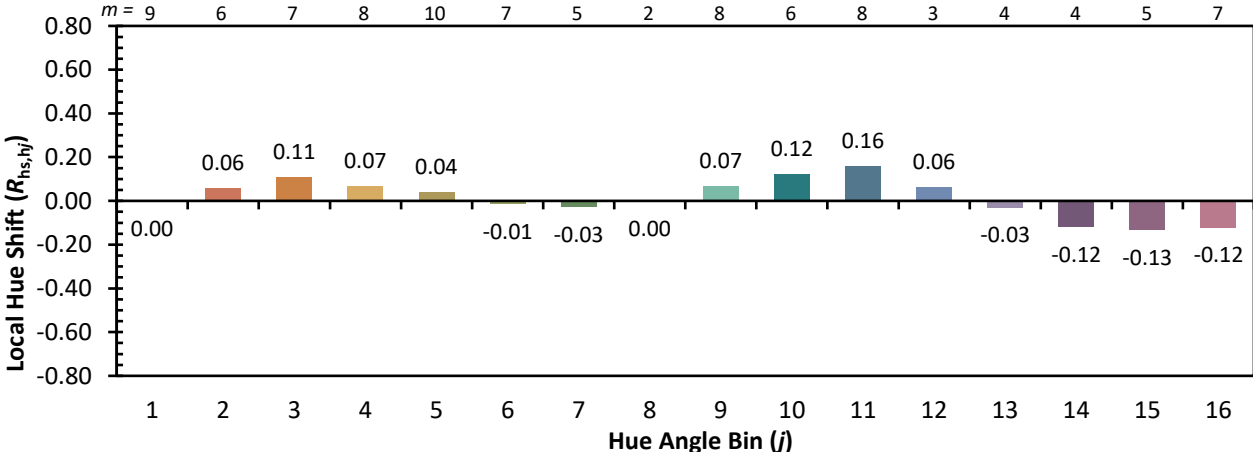
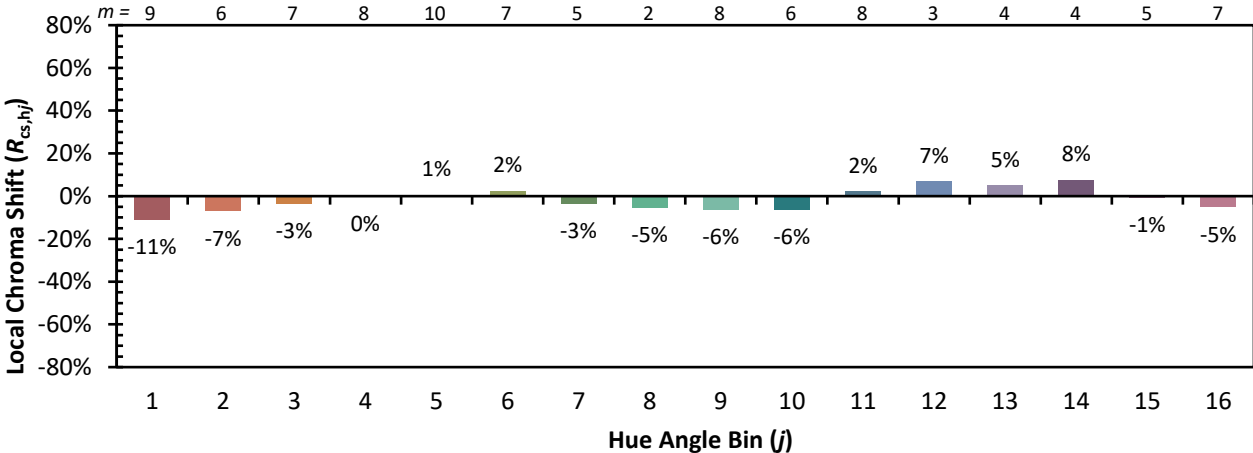


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

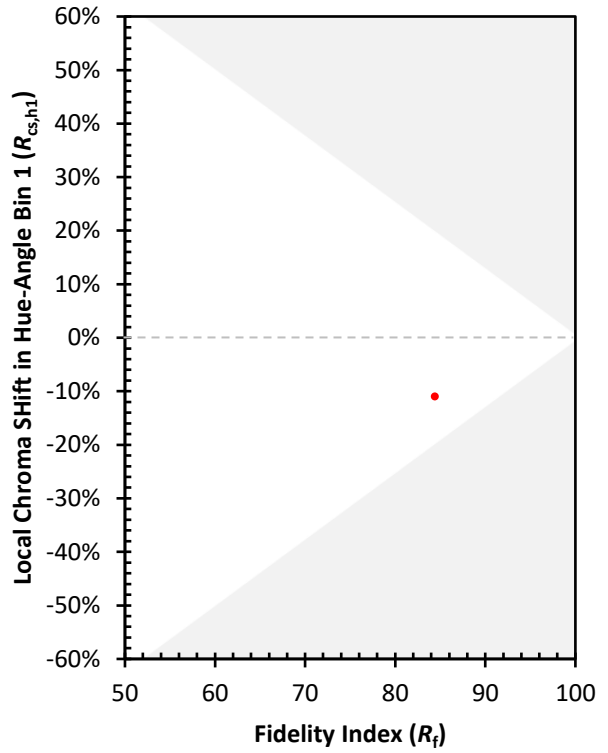
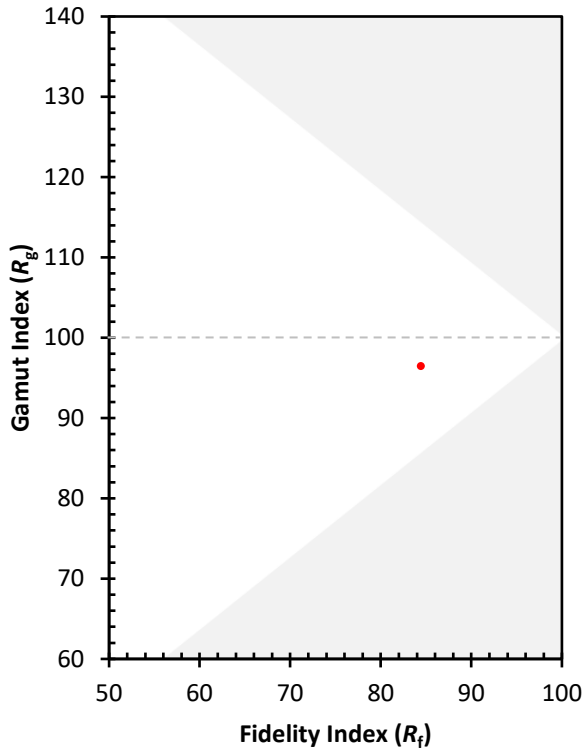
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82 = 95
CES08 = 40	CES33 = 95	CES58 = 86	CES83 = 96
CES09 = 29	CES34 = 86	CES59 = 92	CES84 = 91
CES10 = 75	CES35 = 92	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 80	CES61 = 87	CES86 = 76
CES12 = 63	CES37 = 91	CES62 = 82	CES87 = 85
CES13 = 43	CES38 = 88	CES63 = 84	CES88 = 91
CES14 = 74	CES39 = 98	CES64 = 79	CES89 = 78
CES15 = 71	CES40 = 96	CES65 = 77	CES90 = 92
CES16 = 47	CES41 = 98	CES66 = 74	CES91 = 69
CES17 = 49	CES42 = 91	CES67 = 73	CES92 = 66
CES18 = 56	CES43 = 89	CES68 = 78	CES93 = 79
CES19 = 71	CES44 = 99	CES69 = 82	CES94 = 65
CES20 = 65	CES45 = 94	CES70 = 74	CES95 = 74
CES21 = 86	CES46 = 92	CES71 = 67	CES96 = 85
CES22 = 78	CES47 = 97	CES72 = 89	CES97 = 91
CES23 = 91	CES48 = 87	CES73 = 68	CES98 = 87
CES24 = 90	CES49 = 91	CES74 = 91	CES99 = 80
CES25 = 71	CES50 = 95	CES75 = 70	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)