

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: P1449877

Luminaire Tested: **TWC150\_T4\_120W\_5000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449877  
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\_120W\_5000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 120W  
5000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18537 lumens  
Efficiency: N/A  
Efficacy: 155.5 lumens/watt  
Luminous Opening: Rectangular (W 1.33' x L: 0.42' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

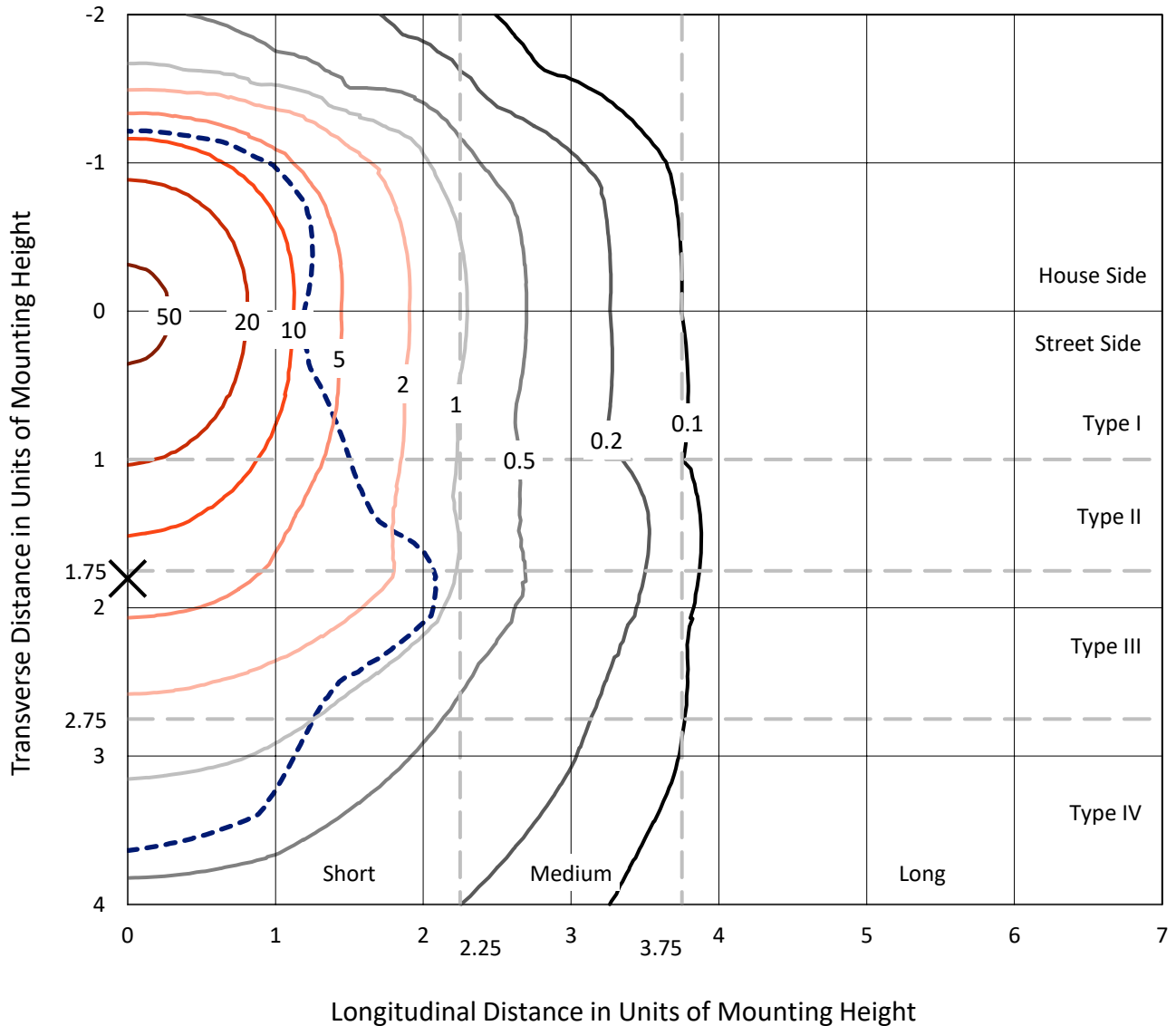
Input Watts (W): 119.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

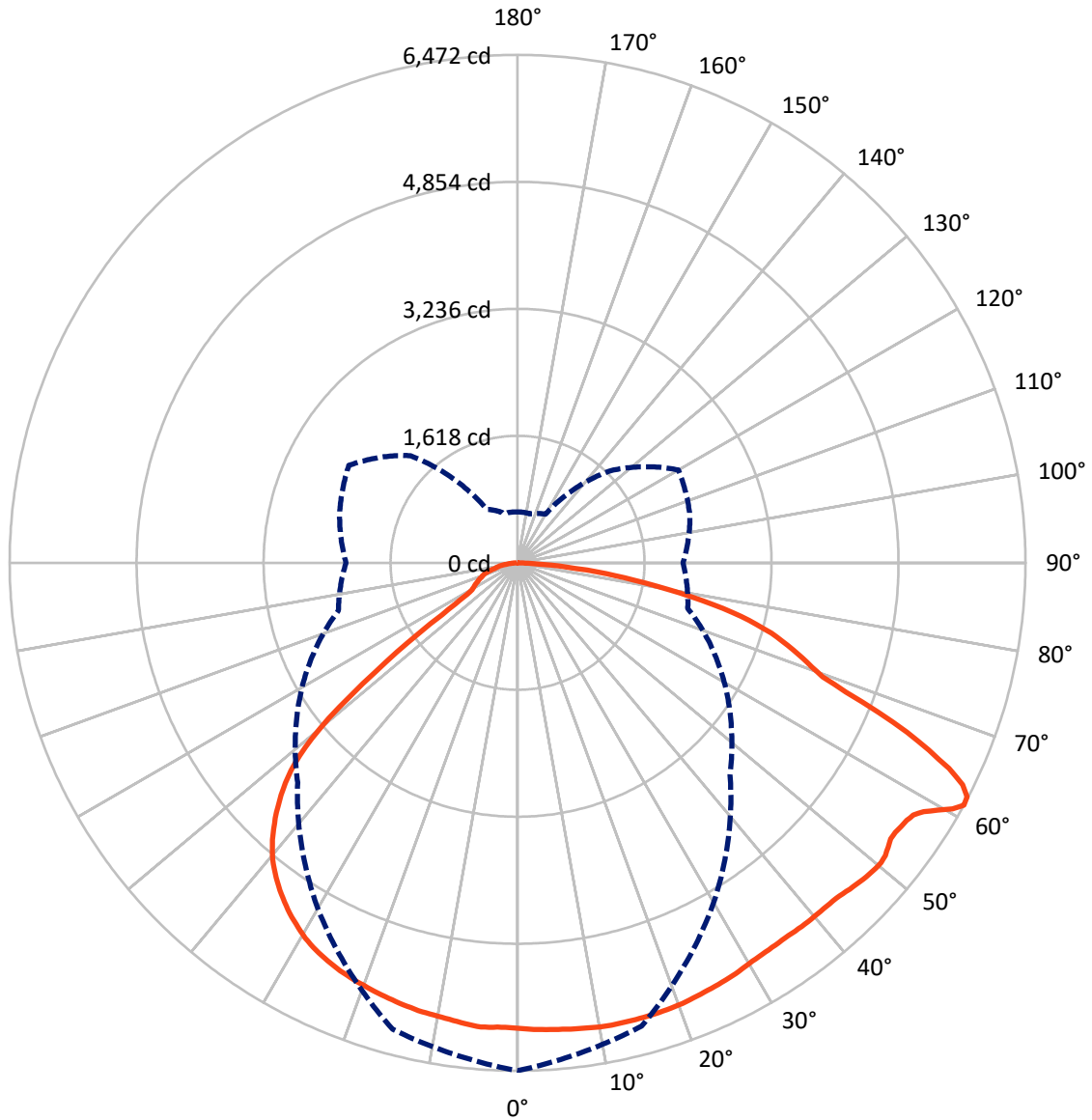
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 59.3 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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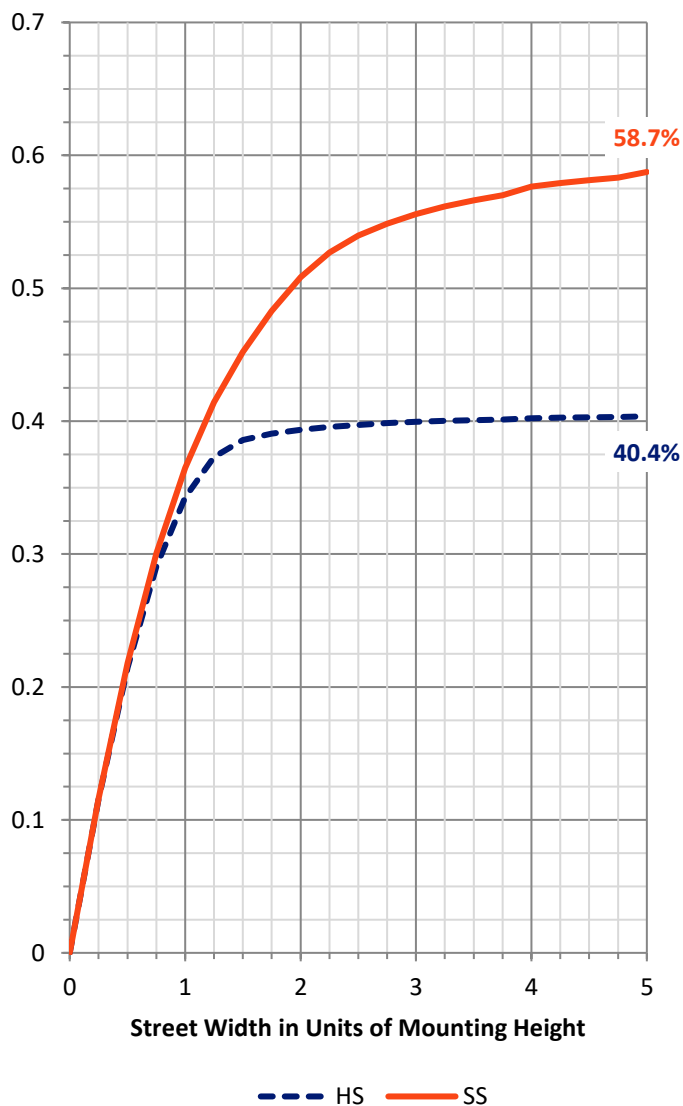
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7536.0	0.0	7536.0
	% Fixture	40.7	0.0	40.7
<b>Street Side</b>	Lumens	11001.0	0.0	11001.0
	% Fixture	59.3	0.0	59.3
<b>Total</b>	Lumens	18537.0	0.0	18537.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	564.4	3.0
10°-20°	1639.9	8.8
20°-30°	2549.6	13.8
30°-40°	3195.2	17.2
40°-50°	3479.2	18.8
50°-60°	3142.9	17.0
60°-70°	2392.8	12.9
70°-80°	1265.2	6.8
80°-90°	307.8	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°	18537.0	100.0
0°-180°	18537.0	100.0

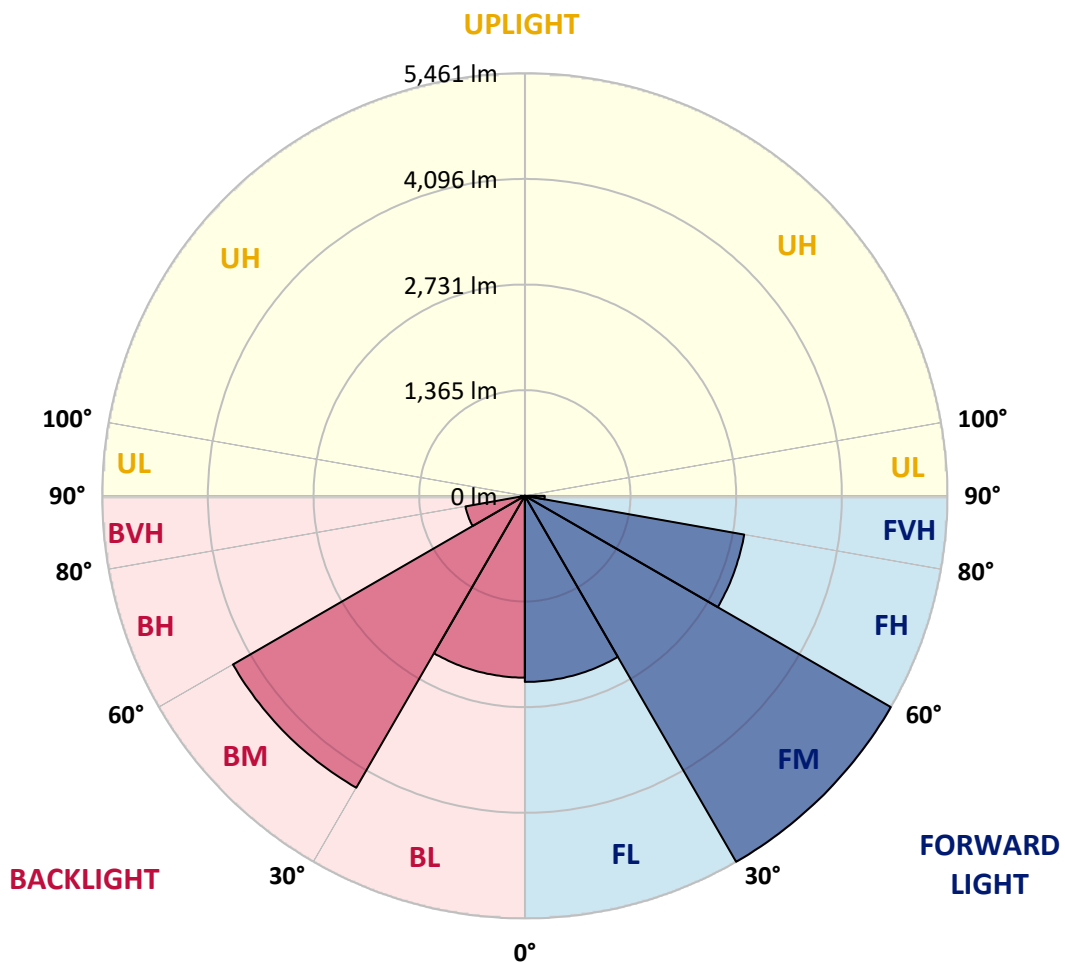


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2404.7	13.0			
FM (30°-60°)	5461.1	29.5			
FH (60°-80°)	2878.9	15.5			G2/5000
FVH (80°-90°)	256.4	1.4			G3/500
BL (0°-30°)	2349.3	12.7	B3/2500		
BM (30°-60°)	4356.2	23.5	B3/5000		
BH (60°-80°)	779.1	4.2	B2/1000		G2/1000
BVH (80°-90°)	51.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9
1°	5943.8	5943.1	5940.3	5936.1	5933.8	5931.3	5931.6	5927.3	5927.9	5925.4	5924.5
2°	5951.8	5949.0	5943.9	5939.0	5934.4	5927.9	5929.8	5920.3	5919.5	5919.8	5917.7
3°	5958.6	5954.6	5948.2	5941.4	5932.2	5924.1	5923.0	5912.2	5911.9	5912.8	5916.0
4°	5965.0	5959.6	5952.4	5940.8	5928.7	5915.7	5911.9	5902.5	5902.4	5909.6	5918.1
5°	5970.5	5963.6	5952.9	5940.2	5920.7	5906.7	5899.9	5889.9	5892.9	5909.3	5921.5
6°	5978.6	5969.6	5955.2	5937.1	5917.5	5894.8	5885.1	5875.1	5885.1	5907.1	5916.5
7°	5985.0	5974.8	5956.1	5931.7	5907.5	5881.1	5867.3	5858.7	5877.4	5898.5	5903.4
8°	5993.8	5980.4	5956.4	5926.4	5895.8	5864.7	5848.9	5841.2	5867.8	5883.1	5885.4
9°	6001.7	5986.7	5957.5	5919.6	5881.9	5847.4	5828.3	5822.6	5854.4	5862.8	5868.2
10°	6008.9	5991.4	5957.6	5914.5	5869.5	5828.5	5803.1	5803.9	5836.0	5840.1	5850.5
11°	6011.4	5995.4	5956.7	5907.6	5855.1	5809.4	5778.6	5784.8	5813.2	5819.1	5833.1
12°	6010.8	5995.5	5953.6	5896.7	5838.7	5784.0	5752.4	5763.3	5788.4	5797.7	5817.4
13°	6010.2	5991.8	5945.8	5882.3	5817.1	5759.2	5722.1	5737.7	5760.4	5772.5	5802.9
14°	6009.6	5990.5	5939.7	5865.7	5794.7	5734.9	5689.5	5709.1	5730.1	5751.2	5788.6
15°	6009.0	5987.7	5928.5	5850.1	5768.1	5704.0	5655.7	5678.7	5697.3	5727.3	5771.4
16°	6008.4	5980.8	5917.7	5829.2	5740.2	5673.2	5621.0	5645.1	5665.4	5704.5	5751.6
17°	6006.5	5975.7	5905.9	5806.5	5706.9	5636.2	5583.5	5610.3	5630.9	5679.8	5731.7
18°	6002.5	5969.0	5892.7	5782.4	5672.4	5597.2	5542.0	5570.5	5597.5	5652.9	5712.4
19°	5997.9	5960.7	5878.3	5758.6	5635.3	5552.4	5501.1	5530.4	5561.3	5623.5	5690.4
20°	5993.2	5952.4	5863.2	5734.2	5597.3	5507.4	5455.7	5488.4	5527.0	5593.5	5668.5
21°	5984.8	5945.1	5847.0	5707.5	5561.6	5456.9	5411.5	5446.1	5489.9	5566.5	5645.7
22°	5975.5	5933.4	5829.7	5681.5	5520.3	5408.0	5364.2	5398.9	5451.3	5535.0	5620.8
23°	5966.1	5920.9	5812.1	5652.6	5478.4	5353.9	5312.7	5354.4	5408.7	5503.4	5594.8
24°	5958.7	5911.4	5793.9	5626.0	5437.1	5299.0	5261.4	5305.6	5364.3	5466.0	5566.3
25°	5949.5	5896.6	5774.6	5592.5	5393.6	5242.5	5204.7	5258.2	5318.1	5431.6	5539.7
26°	5940.6	5885.4	5754.1	5563.2	5350.6	5184.4	5147.0	5205.2	5271.6	5395.0	5509.1
27°	5932.3	5871.4	5733.8	5530.7	5302.9	5126.9	5087.3	5151.6	5223.5	5357.1	5480.7
28°	5918.3	5857.2	5710.0	5496.2	5257.8	5066.0	5027.6	5095.9	5175.3	5316.9	5446.2
29°	5903.7	5839.6	5687.9	5460.6	5207.7	5006.1	4963.1	5038.4	5127.2	5278.6	5412.6
30°	5892.2	5822.7	5662.6	5423.4	5156.7	4942.7	4899.0	4977.1	5077.9	5237.1	5374.3
31°	5885.5	5808.6	5634.7	5386.9	5104.0	4878.8	4834.0	4913.9	5025.0	5191.9	5336.2
32°	5879.4	5796.6	5605.2	5347.9	5051.4	4811.7	4768.4	4848.5	4974.0	5146.6	5294.0
33°	5875.3	5784.8	5580.1	5306.4	4993.8	4744.7	4699.7	4780.2	4919.0	5099.0	5248.6
34°	5873.5	5775.2	5553.9	5264.2	4938.4	4677.3	4629.9	4713.3	4866.8	5051.1	5196.4
35°	5870.4	5768.9	5528.2	5220.6	4879.2	4606.4	4557.2	4641.1	4807.4	4998.0	5142.8
36°	5873.4	5760.8	5504.6	5174.7	4819.6	4534.1	4481.0	4571.9	4750.2	4944.6	5085.0
37°	5878.3	5758.7	5485.3	5130.5	4756.9	4459.0	4404.0	4498.6	4687.5	4886.4	5023.0
38°	5880.6	5756.7	5462.7	5087.2	4693.6	4383.8	4324.1	4424.7	4622.5	4826.3	4957.8
39°	5883.8	5751.6	5443.0	5040.3	4630.3	4302.5	4241.1	4350.2	4554.5	4759.8	4888.8
40°	5882.5	5743.7	5426.2	4998.9	4560.9	4220.4	4156.7	4275.9	4487.1	4692.7	4819.9
41°	5884.4	5735.3	5404.2	4956.8	4491.5	4137.4	4071.2	4201.7	4419.1	4623.0	4741.4
42°	5889.4	5730.3	5379.9	4920.5	4423.5	4052.1	3982.8	4123.7	4347.8	4548.3	4663.5
43°	5895.4	5725.6	5354.1	4876.9	4354.8	3966.3	3894.3	4044.9	4273.0	4471.1	4574.0
44°	5912.0	5726.0	5331.8	4835.4	4286.4	3876.3	3806.0	3966.4	4200.1	4388.0	4481.4



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	5933.8	5737.5	5306.5	4791.0	4222.6	3789.2	3710.8	3885.0	4121.0	4303.4	4378.3
46°	5950.3	5751.6	5282.1	4746.0	4160.2	3694.8	3618.8	3800.6	4041.1	4216.3	4267.9
47°	5971.4	5755.8	5266.3	4697.4	4099.0	3608.3	3524.5	3718.2	3959.9	4127.8	4148.9
48°	5984.5	5765.2	5263.9	4646.2	4040.8	3515.8	3429.1	3629.5	3874.0	4025.7	4021.5
49°	5998.8	5767.4	5248.9	4602.1	3982.3	3428.6	3329.8	3544.5	3785.1	3920.9	3885.2
50°	6003.8	5778.4	5229.8	4550.3	3925.5	3336.4	3229.7	3451.0	3694.0	3805.8	3741.3
51°	5988.5	5784.8	5207.9	4506.9	3866.0	3247.9	3131.0	3356.8	3597.6	3685.8	3590.0
52°	5950.3	5762.4	5181.6	4466.0	3809.3	3159.4	3028.1	3257.3	3497.0	3556.1	3414.6
53°	5913.7	5716.0	5159.0	4422.1	3741.8	3071.8	2924.5	3156.4	3394.5	3420.7	3200.0
54°	5911.3	5678.1	5120.3	4365.5	3666.6	2985.2	2819.6	3052.8	3289.2	3277.7	2928.7
55°	5931.1	5679.4	5064.7	4310.6	3586.1	2892.7	2714.0	2946.2	3176.7	3127.2	2587.0
56°	5946.0	5689.5	5011.5	4248.9	3498.6	2802.8	2610.5	2844.3	3057.6	2966.2	2199.4
57°	5979.0	5697.2	4991.1	4189.9	3408.3	2704.7	2504.8	2737.6	2929.8	2795.8	1828.3
58°	6068.5	5723.3	4989.0	4120.9	3320.7	2603.2	2402.5	2630.8	2794.7	2585.8	1457.2
59°	6209.7	5816.1	4979.7	4017.3	3234.1	2490.3	2301.8	2511.8	2650.7	2331.2	1089.1
60°	6366.9	5953.6	4969.5	3913.5	3138.5	2371.5	2204.3	2398.8	2512.1	1992.3	870.8
61°	6471.7	6110.0	4998.2	3827.0	3039.9	2245.0	2108.2	2274.4	2366.8	1653.4	715.5
62°	6457.1	6190.7	5098.4	3765.1	2928.7	2119.6	2012.8	2148.5	2221.4	1314.7	630.1
63°	6335.2	6143.6	5245.2	3709.1	2813.0	1990.7	1917.8	2022.6	2066.1	1000.2	588.3
64°	6089.0	5980.1	5374.0	3660.8	2686.2	1862.4	1819.3	1893.4	1904.4	767.8	563.3
65°	5759.1	5681.3	5367.9	3639.5	2539.5	1736.7	1717.1	1772.1	1716.9	618.8	541.1
66°	5411.1	5313.4	5198.2	3674.0	2371.6	1609.1	1614.9	1651.7	1529.3	537.9	519.2
67°	4979.4	4949.7	4859.5	3824.8	2207.3	1495.3	1512.1	1531.3	1340.1	500.8	495.9
68°	4494.7	4449.6	4414.8	4045.1	2060.1	1379.8	1390.8	1403.9	1067.2	475.7	471.8
69°	4151.9	4047.3	3951.6	4093.8	1930.2	1273.6	1268.9	1291.8	793.2	451.7	447.7
70°	3978.5	3802.1	3483.9	3815.0	1804.6	1167.1	1142.9	1179.6	588.7	426.6	424.1
71°	3827.7	3671.8	3156.3	3218.2	1695.6	1071.3	1020.8	1074.1	472.7	400.7	401.0
72°	3680.4	3530.3	2981.2	2622.2	1647.5	978.6	902.4	963.4	415.3	374.9	379.6
73°	3520.6	3386.7	2838.0	2222.7	1824.1	887.2	789.3	850.0	383.1	349.4	361.4
74°	3356.4	3239.7	2685.4	2060.4	2299.1	799.1	685.9	739.0	354.6	325.6	341.2
75°	3151.2	3082.0	2517.5	1913.2	2020.5	705.6	588.4	622.7	324.9	303.3	315.2
76°	2930.9	2902.2	2358.4	1793.5	1278.8	612.1	504.6	518.3	298.1	282.3	288.7
77°	2680.0	2716.3	2177.8	1679.6	909.3	518.5	424.8	410.2	272.0	261.6	260.8
78°	2392.5	2507.9	2005.5	1489.8	778.4	471.0	354.9	327.8	247.7	236.8	232.8
79°	2101.8	2260.9	1870.1	1198.9	842.5	414.6	292.2	276.1	223.3	210.3	208.3
80°	1795.9	2001.5	1718.9	1008.0	893.1	357.2	239.4	241.6	201.2	183.8	183.9
81°	1504.5	1717.7	1545.7	905.2	704.2	326.1	195.3	210.8	179.1	157.3	159.7
82°	1248.0	1441.6	1351.6	819.8	514.7	285.2	151.1	179.9	157.0	127.2	145.1
83°	1040.6	1225.8	1074.1	695.8	325.2	254.5	117.1	149.0	131.8	101.7	127.3
84°	741.8	944.5	881.4	570.9	273.2	205.1	87.4	119.9	106.3	87.0	106.6
85°	533.4	694.6	679.3	446.0	233.7	130.8	63.7	93.6	81.9	72.3	84.0
86°	325.9	445.7	476.9	192.5	191.3	85.9	43.8	69.2	58.2	53.8	59.5
87°	136.5	196.8	274.6	75.7	133.3	68.8	30.4	46.2	42.0	38.0	42.2
88°	68.1	97.8	138.8	55.0	42.2	51.8	17.1	31.0	28.4	22.1	24.8
89°	2.2	1.9	3.3	36.9	31.7	34.8	4.0	15.8	14.9	6.6	7.9



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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: P1449877  
 CATALOG NUMBER: TWC150\_T4\_120W\_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: P1449877  
CATALOG NUMBER: TWC150\_T4\_120W\_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: P1449877

CATALOG NUMBER: TWC150\_T4\_120W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9	5932.9
1°	5924.9	5925.4	5926.6	5927.9	5925.2	5926.3	5929.5	5935.9	5937.5	5940.5	5942.2
2°	5919.7	5921.5	5920.6	5921.1	5920.2	5921.1	5924.3	5935.4	5936.0	5942.8	5946.8
3°	5917.6	5920.7	5919.2	5917.4	5915.0	5915.0	5918.9	5931.4	5935.4	5944.5	5951.1
4°	5925.3	5929.0	5925.6	5919.3	5911.3	5906.8	5909.4	5922.8	5931.9	5941.4	5953.3
5°	5928.3	5931.7	5929.5	5923.2	5911.6	5899.8	5900.0	5915.6	5925.6	5942.0	5955.5
6°	5921.6	5923.1	5924.3	5921.8	5911.8	5891.0	5886.3	5903.7	5917.8	5938.1	5955.3
7°	5908.0	5909.9	5911.2	5912.3	5905.1	5885.8	5874.1	5889.6	5907.4	5932.6	5953.6
8°	5890.2	5894.7	5895.1	5895.6	5894.0	5880.4	5858.2	5872.7	5896.0	5925.5	5952.9
9°	5877.6	5881.7	5883.8	5878.4	5878.4	5871.2	5840.4	5856.4	5882.7	5916.6	5948.1
10°	5862.8	5868.4	5868.7	5862.1	5857.7	5856.3	5823.3	5836.7	5865.5	5906.2	5940.3
11°	5851.8	5859.5	5856.3	5845.6	5836.6	5835.4	5803.4	5813.6	5848.4	5891.7	5933.5
12°	5840.1	5852.5	5846.6	5831.2	5815.9	5813.4	5785.5	5790.2	5829.7	5873.6	5924.8
13°	5831.5	5842.5	5834.1	5815.5	5792.9	5786.0	5762.9	5765.3	5807.1	5854.4	5916.2
14°	5817.3	5828.3	5822.5	5802.0	5772.8	5756.8	5738.7	5737.6	5781.6	5834.5	5901.6
15°	5803.7	5816.8	5809.9	5787.2	5749.5	5727.4	5711.1	5705.8	5754.6	5810.3	5884.0
16°	5786.3	5802.0	5793.7	5766.9	5728.7	5695.4	5681.6	5673.6	5722.4	5784.2	5861.9
17°	5767.2	5785.4	5776.9	5748.6	5705.5	5663.0	5649.2	5636.9	5687.3	5752.3	5840.8
18°	5752.1	5772.1	5761.8	5729.7	5679.5	5628.8	5612.3	5601.7	5648.9	5717.9	5821.0
19°	5735.2	5756.9	5745.8	5708.0	5652.4	5599.0	5575.2	5560.3	5606.8	5682.7	5796.9
20°	5716.4	5738.1	5726.5	5687.1	5623.9	5563.8	5532.7	5517.0	5560.3	5650.0	5777.4
21°	5697.8	5721.5	5705.6	5666.0	5594.6	5528.4	5492.2	5472.6	5512.5	5614.9	5754.9
22°	5674.9	5705.5	5686.4	5640.1	5565.5	5490.9	5448.7	5425.0	5465.8	5578.5	5729.5
23°	5656.9	5685.6	5668.4	5614.0	5534.6	5451.7	5404.4	5372.0	5415.2	5539.3	5703.4
24°	5638.2	5666.3	5648.3	5585.3	5502.4	5408.8	5358.6	5322.8	5363.5	5500.0	5676.2
25°	5613.6	5644.5	5626.0	5557.8	5467.3	5365.6	5311.7	5266.1	5310.0	5458.8	5649.8
26°	5589.8	5620.2	5600.9	5530.6	5432.3	5315.8	5260.6	5209.4	5253.9	5416.0	5620.3
27°	5562.8	5591.2	5573.3	5502.6	5394.6	5270.5	5207.7	5150.8	5199.5	5374.2	5589.8
28°	5530.1	5563.1	5543.0	5471.7	5356.7	5223.1	5152.3	5093.0	5144.5	5328.1	5557.3
29°	5497.0	5530.3	5510.0	5438.8	5315.1	5173.4	5094.3	5030.3	5081.8	5281.9	5521.8
30°	5461.9	5491.6	5475.6	5404.6	5274.5	5125.3	5035.7	4969.7	5020.6	5231.8	5488.3
31°	5419.9	5449.0	5434.1	5363.7	5232.3	5074.2	4972.7	4904.6	4959.0	5183.1	5453.7
32°	5375.4	5401.1	5388.4	5322.8	5187.0	5024.1	4909.8	4841.2	4895.7	5131.9	5420.7
33°	5324.0	5353.5	5339.4	5274.3	5138.9	4970.5	4840.1	4773.6	4830.3	5080.3	5379.7
34°	5272.3	5299.7	5287.2	5227.4	5091.0	4914.8	4775.2	4706.1	4766.3	5024.4	5342.2
35°	5215.5	5243.6	5232.2	5171.9	5041.6	4856.2	4700.9	4633.0	4697.1	4967.8	5298.3
36°	5157.2	5183.7	5172.0	5117.1	4987.5	4797.6	4631.6	4561.5	4625.3	4911.6	5255.7
37°	5092.4	5121.9	5110.8	5053.5	4931.7	4735.3	4557.4	4483.7	4556.1	4850.0	5211.4
38°	5028.2	5055.0	5046.8	4990.3	4874.6	4672.4	4486.9	4408.5	4478.3	4792.0	5172.1
39°	4956.2	4980.7	4976.6	4920.3	4810.5	4606.0	4411.9	4326.0	4402.7	4727.3	5130.1
40°	4883.6	4902.4	4903.0	4853.2	4743.3	4539.4	4340.2	4243.3	4319.5	4662.8	5087.5
41°	4796.9	4810.1	4819.4	4781.5	4672.7	4472.8	4263.8	4158.4	4243.2	4593.4	5046.2
42°	4700.6	4712.3	4727.4	4703.6	4600.4	4403.0	4185.8	4074.6	4156.6	4526.3	5007.8
43°	4599.1	4599.9	4623.3	4621.2	4523.3	4330.6	4107.4	3984.8	4071.8	4458.9	4970.9
44°	4485.7	4484.5	4518.7	4529.1	4444.9	4257.9	4027.2	3896.7	3984.0	4394.3	4929.1



REPORT NUMBER: P1449877

CATALOG NUMBER: TWC150\_T4\_120W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	4366.3	4356.8	4397.7	4430.2	4363.3	4180.9	3948.7	3804.8	3898.0	4334.6	4893.2
46°	4234.3	4222.0	4271.1	4323.0	4278.6	4104.1	3864.5	3709.5	3807.5	4268.5	4845.7
47°	4097.3	4075.6	4135.0	4209.7	4191.3	4024.5	3782.0	3615.4	3718.1	4211.7	4799.9
48°	3949.2	3915.8	3990.1	4085.4	4098.6	3940.6	3694.8	3516.6	3626.7	4149.2	4750.6
49°	3782.8	3707.0	3827.8	3953.3	3996.7	3853.3	3605.4	3423.1	3535.0	4097.4	4711.2
50°	3569.7	3452.4	3631.9	3816.8	3887.7	3765.5	3514.6	3320.9	3444.0	4039.7	4661.2
51°	3303.7	3117.6	3378.4	3666.3	3771.9	3671.9	3419.3	3221.6	3353.1	3987.8	4616.1
52°	2955.2	2718.7	3050.9	3505.3	3648.4	3576.7	3324.1	3117.1	3266.2	3924.3	4576.8
53°	2563.8	2290.8	2667.2	3316.5	3519.6	3473.2	3224.5	3016.2	3175.1	3859.0	4532.2
54°	2160.6	1915.8	2235.4	3075.3	3383.6	3370.8	3127.7	2912.0	3091.7	3788.4	4484.0
55°	1757.4	1540.8	1867.9	2764.4	3237.2	3260.3	3022.2	2804.6	3000.7	3711.8	4425.7
56°	1356.7	1169.1	1500.4	2400.0	3085.2	3146.5	2918.0	2699.6	2912.2	3627.8	4371.4
57°	1071.6	951.1	1134.6	2011.1	2924.4	3023.2	2809.0	2588.9	2815.6	3535.2	4313.3
58°	880.1	805.2	922.3	1622.0	2749.5	2892.3	2699.7	2485.9	2714.5	3451.9	4249.8
59°	751.2	714.6	779.7	1236.5	2540.4	2758.1	2584.7	2379.8	2605.1	3361.8	4155.4
60°	678.4	670.9	694.4	970.6	2279.4	2623.9	2469.0	2284.0	2484.4	3270.8	4055.1
61°	644.9	648.7	651.6	786.4	1931.0	2482.3	2347.6	2184.9	2363.8	3170.2	3961.8
62°	622.5	628.7	628.7	669.5	1582.7	2339.3	2224.4	2089.5	2231.3	3065.6	3898.9
63°	602.7	610.8	607.9	607.4	1235.9	2194.1	2102.6	1992.8	2105.4	2953.5	3847.3
64°	582.9	591.3	588.6	575.1	938.9	2047.2	1976.0	1897.0	1969.6	2834.0	3798.5
65°	562.0	569.7	568.2	552.1	727.6	1896.5	1853.3	1794.5	1843.7	2698.8	3772.8
66°	539.9	549.6	545.1	530.2	600.9	1717.3	1731.9	1685.0	1712.1	2531.0	3800.3
67°	519.9	531.7	524.3	507.0	531.1	1538.1	1610.5	1570.7	1594.5	2363.4	3932.4
68°	499.7	513.2	504.6	482.8	495.3	1358.9	1489.1	1446.9	1478.3	2206.0	4164.1
69°	479.7	494.4	483.8	457.6	470.0	1086.5	1373.1	1326.2	1364.6	2077.7	4270.7
70°	460.1	478.9	464.7	433.3	445.0	804.7	1263.7	1202.7	1256.5	1944.8	4071.4
71°	444.4	462.7	448.2	409.7	419.5	592.6	1158.0	1079.1	1152.1	1829.6	3531.4
72°	425.5	440.0	430.9	387.8	394.9	472.0	1052.6	957.1	1054.2	1758.4	2911.1
73°	399.7	413.3	406.3	367.8	368.7	410.4	945.1	842.8	960.4	1833.5	2432.2
74°	371.8	383.9	380.1	350.4	344.0	376.5	840.2	742.7	874.0	2303.0	2167.1
75°	342.3	353.5	350.0	325.9	318.3	346.6	728.9	643.1	778.3	2387.4	2018.9
76°	312.9	323.2	320.0	299.9	296.4	317.8	620.4	543.5	690.2	1627.4	1908.3
77°	281.5	292.6	287.1	271.3	273.6	290.2	512.6	461.9	602.4	1014.1	1775.9
78°	254.2	270.2	257.1	243.5	252.0	264.8	412.8	385.9	514.6	854.8	1620.5
79°	234.9	251.4	236.2	215.9	225.2	239.4	329.3	320.6	465.1	786.7	1320.4
80°	218.7	233.9	218.3	188.3	198.2	214.9	272.8	262.8	407.9	989.3	1102.5
81°	194.5	206.2	195.7	160.9	171.1	192.1	235.5	212.1	359.2	736.8	975.9
82°	170.2	178.5	173.1	145.8	143.9	169.4	203.5	169.4	324.1	544.3	884.1
83°	145.9	150.8	150.3	130.6	111.2	146.6	171.5	130.7	291.1	353.1	799.0
84°	117.2	120.6	121.2	110.6	91.0	120.3	139.6	99.4	258.9	292.8	616.1
85°	85.3	88.2	91.7	90.5	76.5	95.0	110.8	77.0	179.9	252.8	430.9
86°	63.1	66.4	67.1	65.5	60.2	70.3	82.9	54.8	99.1	211.2	245.7
87°	44.8	47.1	47.7	44.5	41.8	50.0	59.2	32.6	69.0	146.5	103.0
88°	26.6	27.8	28.3	30.8	28.9	34.1	39.9	17.4	39.0	82.5	51.6
89°	8.4	8.7	9.3	17.1	16.1	18.2	20.7	6.4	9.1	62.0	1.3



REPORT NUMBER: P1449877  
 CATALOG NUMBER: TWC150\_T4\_120W\_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: P1449877  
 CATALOG NUMBER: TWC150\_T4\_120W\_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: P1449877  
CATALOG NUMBER: TWC150\_T4\_120W\_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: P1449877  
CATALOG NUMBER: TWC150\_T4\_120W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	5932.9	5932.9	5932.9
1°	5942.0	5943.2	5943.8
2°	5949.7	5951.2	5951.8
3°	5956.6	5957.8	5958.6
4°	5960.1	5964.9	5965.0
5°	5962.4	5970.0	5970.5
6°	5967.0	5977.1	5978.6
7°	5971.4	5980.9	5985.0
8°	5973.8	5987.5	5993.8
9°	5975.5	5992.9	6001.7
10°	5975.8	5999.5	6008.9
11°	5976.4	6003.0	6011.4
12°	5973.0	6002.4	6010.8
13°	5967.5	6001.3	6010.2
14°	5960.4	6001.3	6009.6
15°	5950.4	5997.6	6009.0
16°	5938.0	5990.7	6008.4
17°	5929.5	5987.8	6006.5
18°	5915.6	5981.6	6002.5
19°	5905.9	5976.7	5997.9
20°	5894.1	5969.8	5993.2
21°	5881.3	5961.1	5984.8
22°	5863.7	5951.5	5975.5
23°	5847.1	5939.2	5966.1
24°	5829.4	5928.7	5958.7
25°	5809.7	5918.3	5949.5
26°	5792.6	5905.6	5940.6
27°	5770.6	5891.5	5932.3
28°	5752.4	5881.9	5918.3
29°	5729.1	5863.7	5903.7
30°	5707.2	5848.0	5892.2
31°	5682.0	5833.1	5885.5
32°	5654.8	5822.9	5879.4
33°	5630.3	5812.9	5875.3
34°	5607.1	5807.1	5873.5
35°	5582.9	5796.6	5870.4
36°	5560.8	5793.1	5873.4
37°	5541.3	5790.8	5878.3
38°	5521.1	5789.1	5880.6
39°	5508.0	5788.2	5883.8
40°	5489.4	5781.6	5882.5
41°	5472.0	5773.7	5884.4
42°	5448.4	5770.1	5889.4
43°	5426.3	5768.3	5895.4
44°	5403.3	5768.0	5912.0



REPORT NUMBER: P1449877  
 CATALOG NUMBER: TWC150\_T4\_120W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	5382.9	5780.1	5933.8
46°	5358.6	5792.1	5950.3
47°	5348.0	5801.4	5971.4
48°	5343.2	5811.6	5984.5
49°	5329.4	5819.3	5998.8
50°	5313.7	5828.1	6003.8
51°	5293.1	5828.9	5988.5
52°	5274.3	5808.0	5950.3
53°	5254.0	5760.5	5913.7
54°	5223.9	5726.6	5911.3
55°	5170.5	5724.1	5931.1
56°	5112.1	5740.3	5946.0
57°	5080.5	5747.3	5979.0
58°	5075.6	5774.2	6068.5
59°	5067.7	5861.8	6209.7
60°	5062.1	5996.3	6366.9
61°	5089.2	6152.3	6471.7
62°	5181.8	6239.7	6457.1
63°	5329.5	6200.0	6335.2
64°	5474.6	6045.2	6089.0
65°	5483.5	5767.1	5759.1
66°	5344.9	5398.5	5411.1
67°	5039.7	5030.2	4979.4
68°	4615.5	4536.9	4494.7
69°	4144.8	4101.5	4151.9
70°	3671.2	3838.7	3978.5
71°	3288.4	3698.6	3827.7
72°	3080.1	3565.7	3680.4
73°	2929.1	3410.0	3520.6
74°	2780.5	3267.9	3356.4
75°	2609.4	3099.2	3151.2
76°	2437.9	2922.6	2930.9
77°	2250.4	2730.2	2680.0
78°	2072.5	2533.3	2392.5
79°	1927.4	2287.7	2101.8
80°	1786.0	2026.1	1795.9
81°	1622.0	1735.7	1504.5
82°	1425.9	1454.3	1248.0
83°	1167.5	1253.2	1040.6
84°	930.2	985.4	741.8
85°	730.5	733.4	533.4
86°	533.2	481.8	325.9
87°	336.0	230.3	136.5
88°	27.1	115.0	68.1
89°	13.9	1.7	2.2



REPORT NUMBER: P1449877  
CATALOG NUMBER: TWC150\_T4\_120W\_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: P1449877  
CATALOG NUMBER: TWC150\_T4\_120W\_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
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: P1449877  
CATALOG NUMBER: TWC150\_T4\_120W\_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

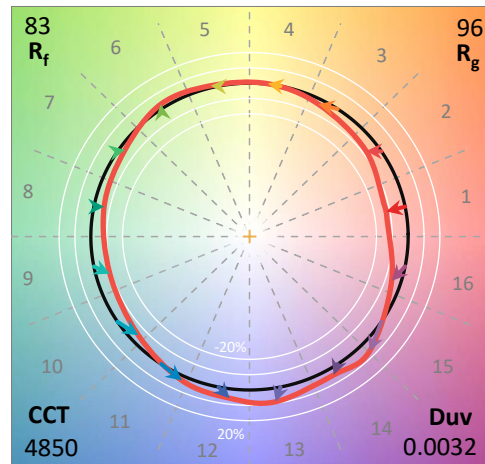
**Test Information**

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  
 R<sub>f</sub>: 83.1  
 R<sub>g</sub>: 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**

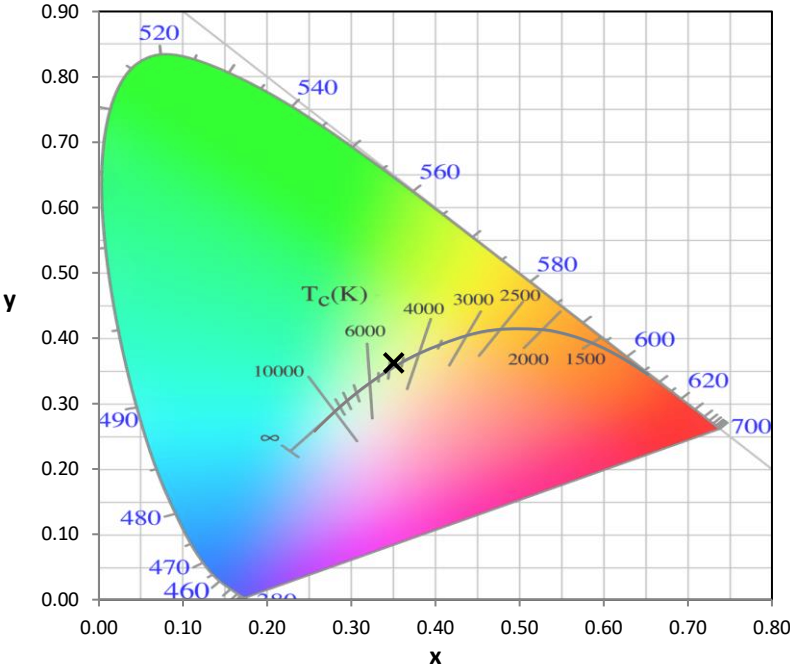
Stabilization Time: 25M  
 Operation Time: 1H 25M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-3

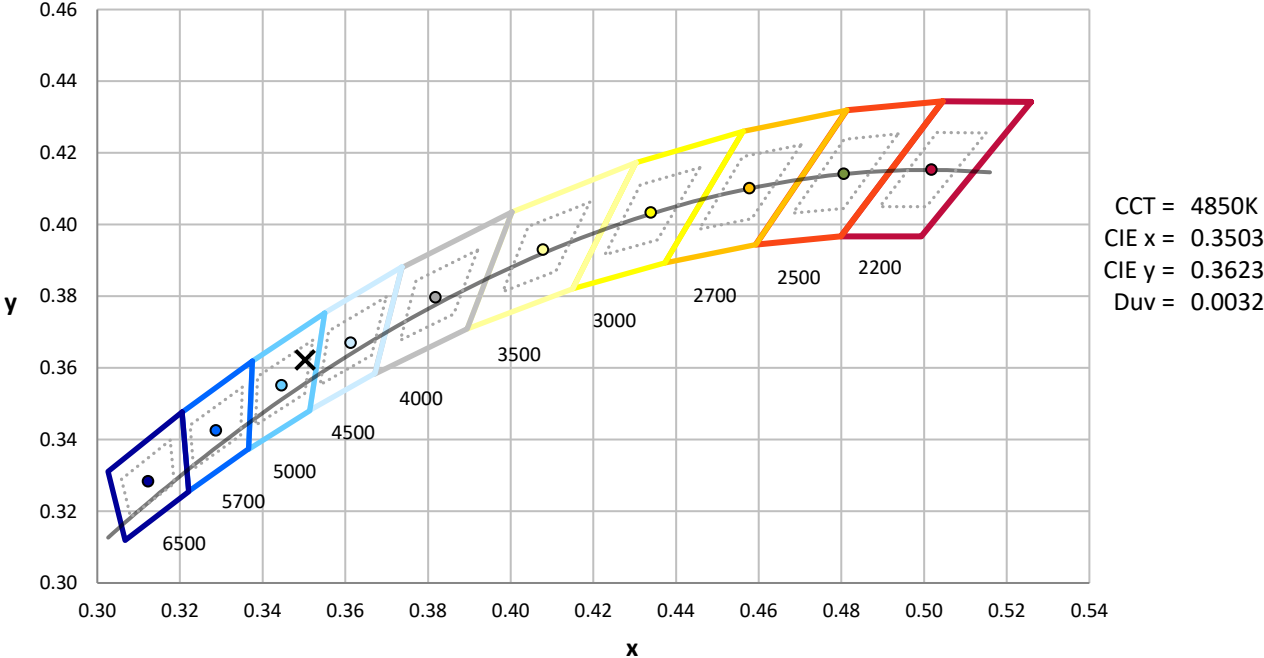
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



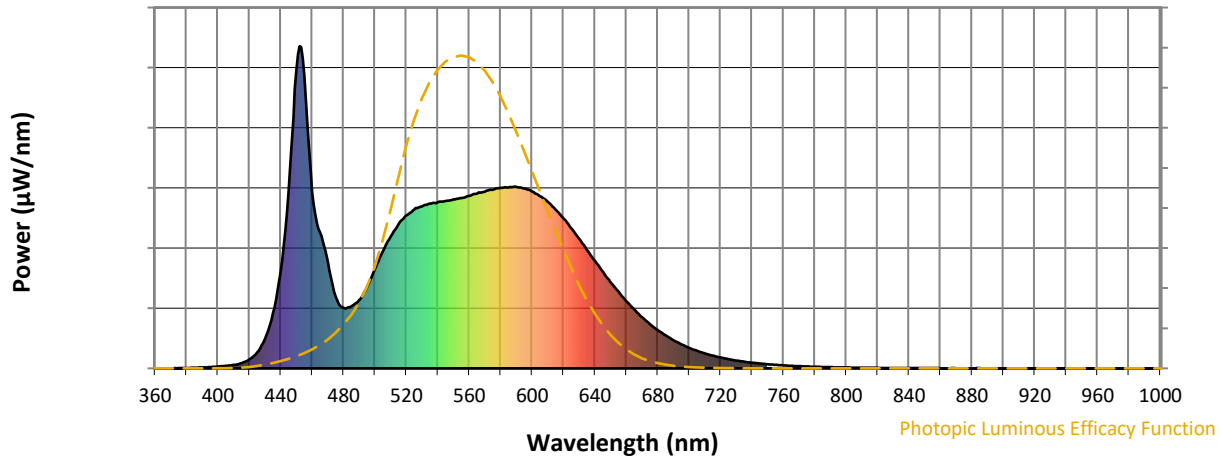
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-3

**Photopic Flux vs. Wavelength**

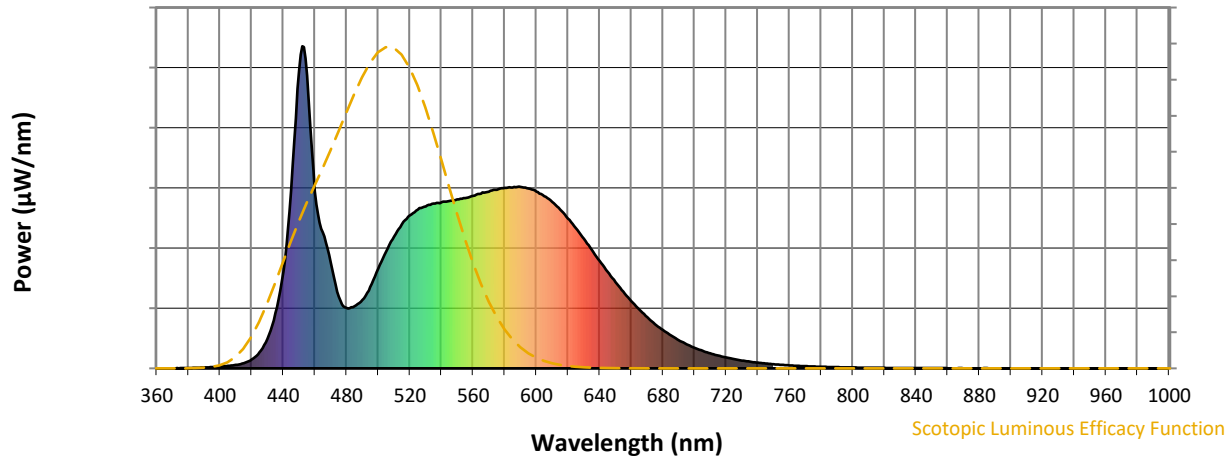


**Photopic Lumens: NR**

$\lambda$ (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	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**



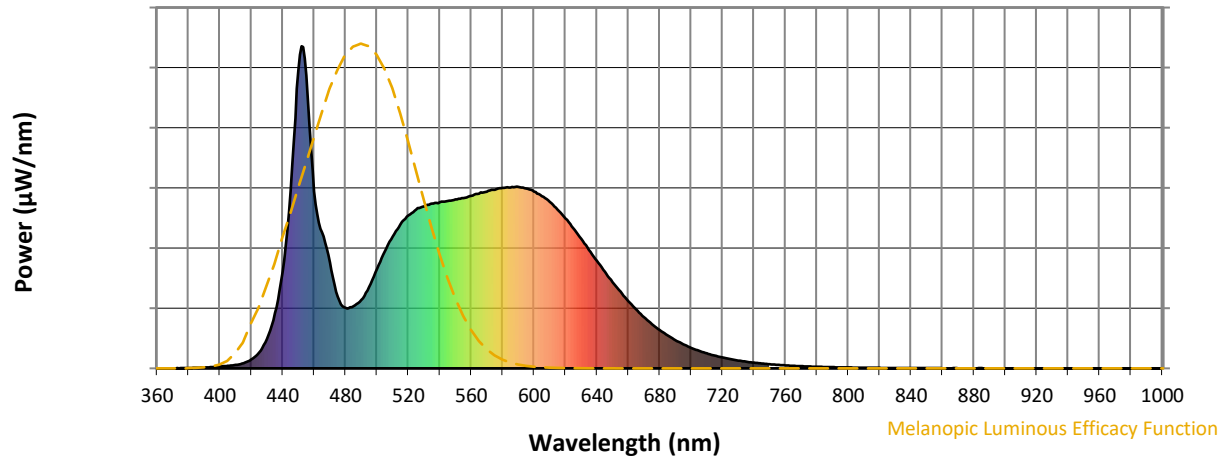
**Scotopic Lumens: NR**

**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



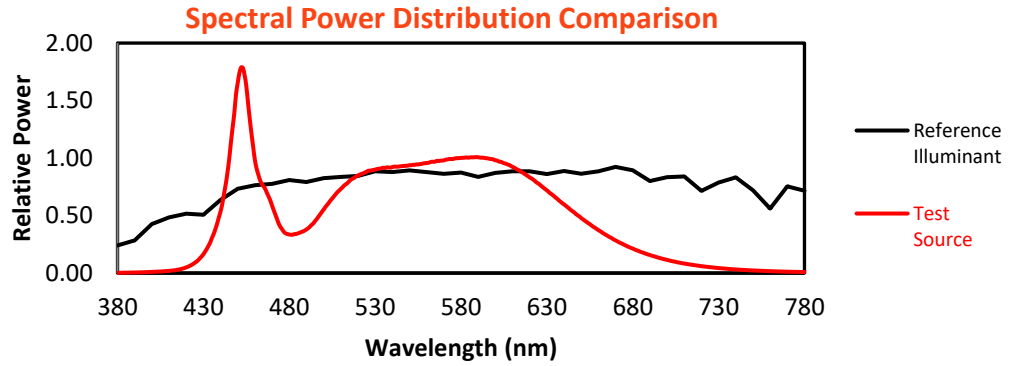
Melanopic Lumens: NR

M/P: 4

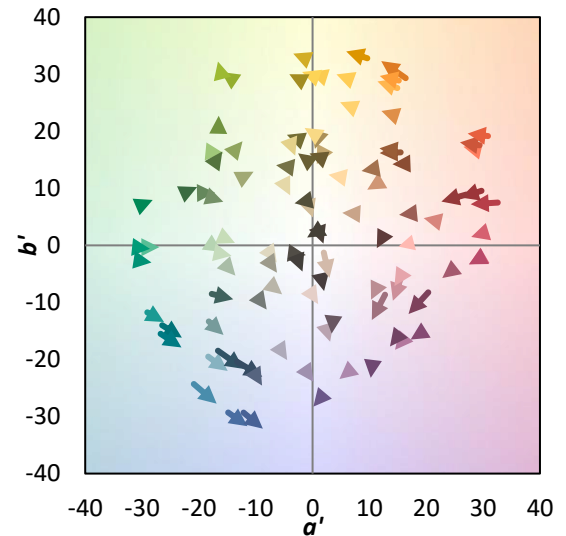
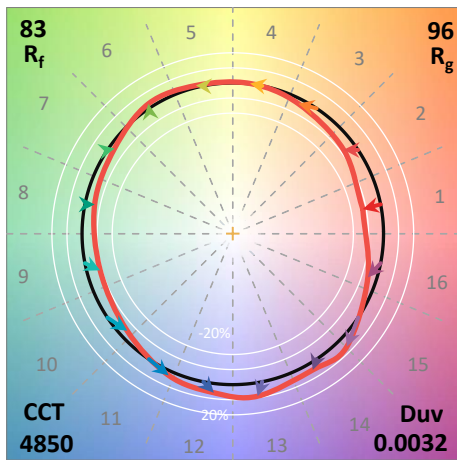
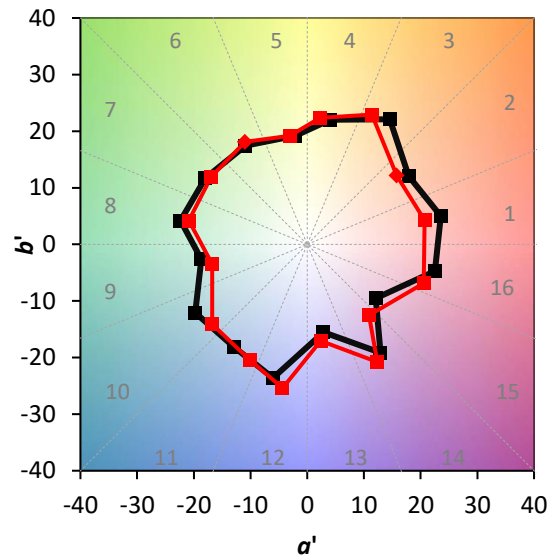
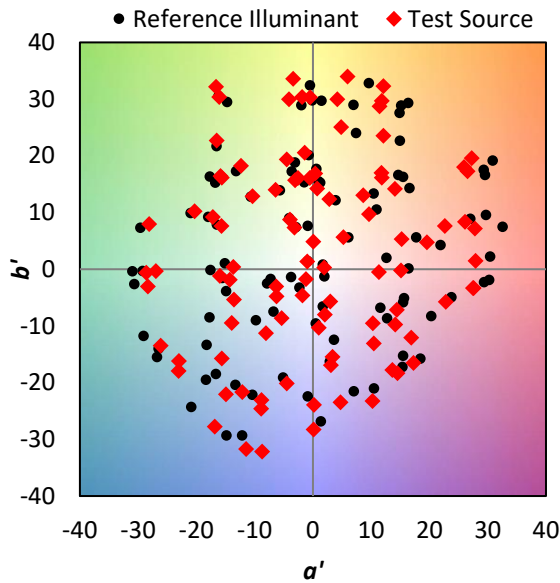
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	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  $R_a = 82.6$   
 $R_9 = 8.5$

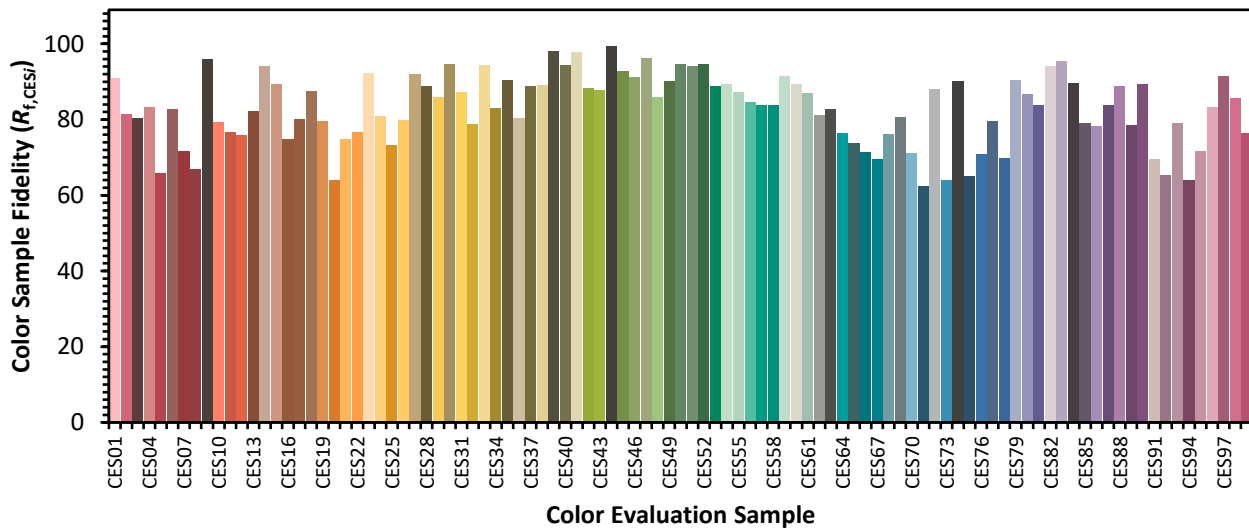


**Color Vector Graphics**

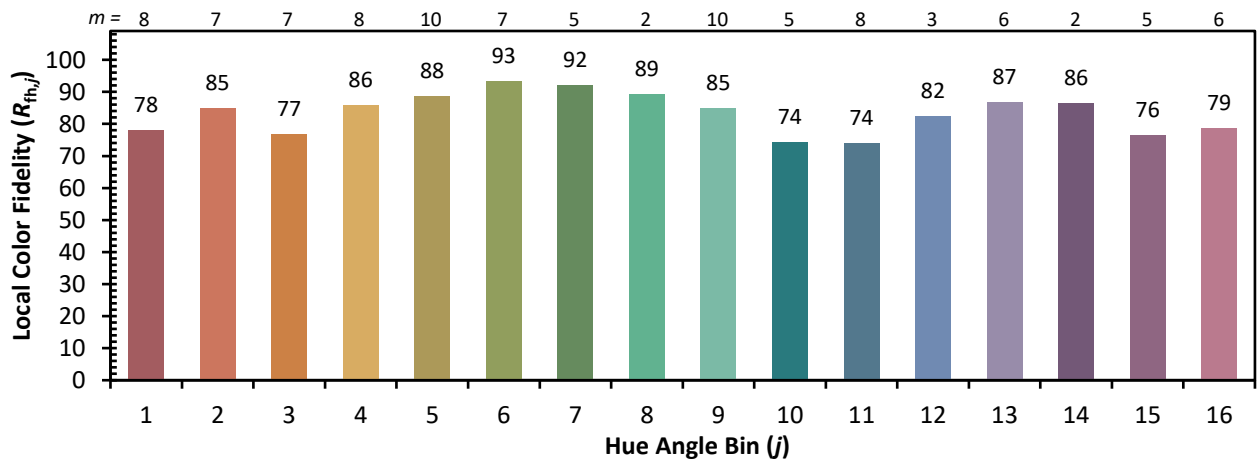
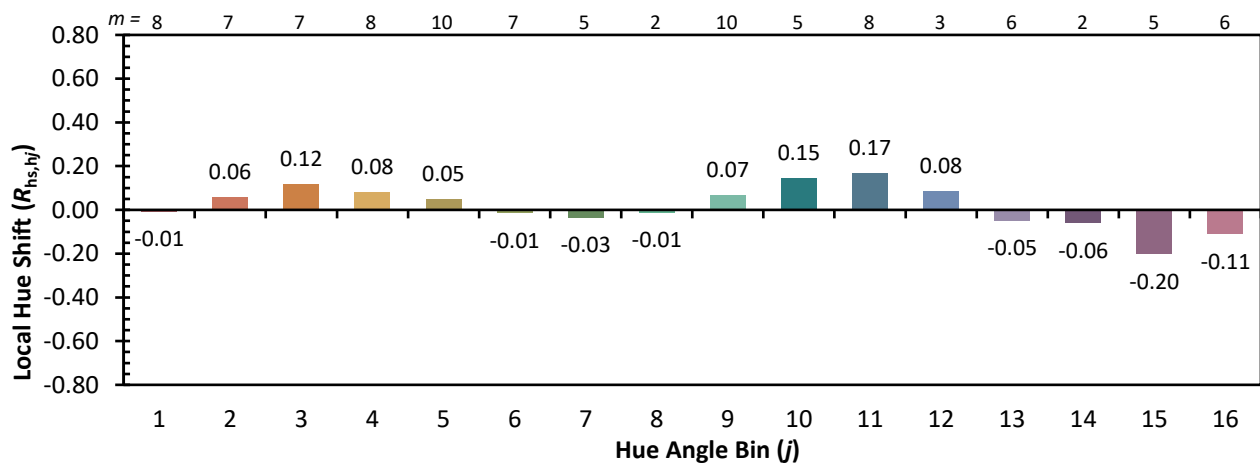
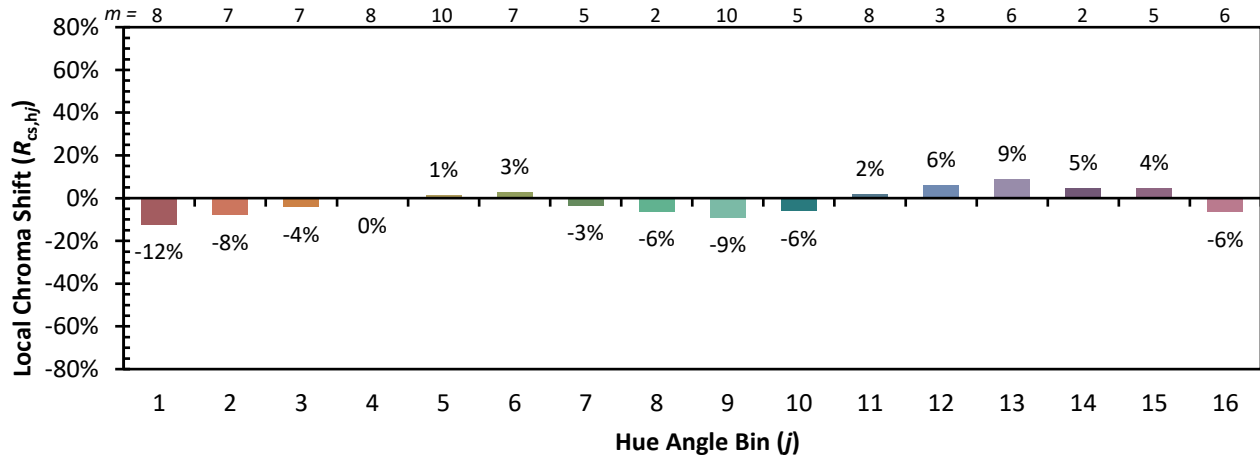


Individual Sample Fidelity Index ( $R_{f,i}$ )

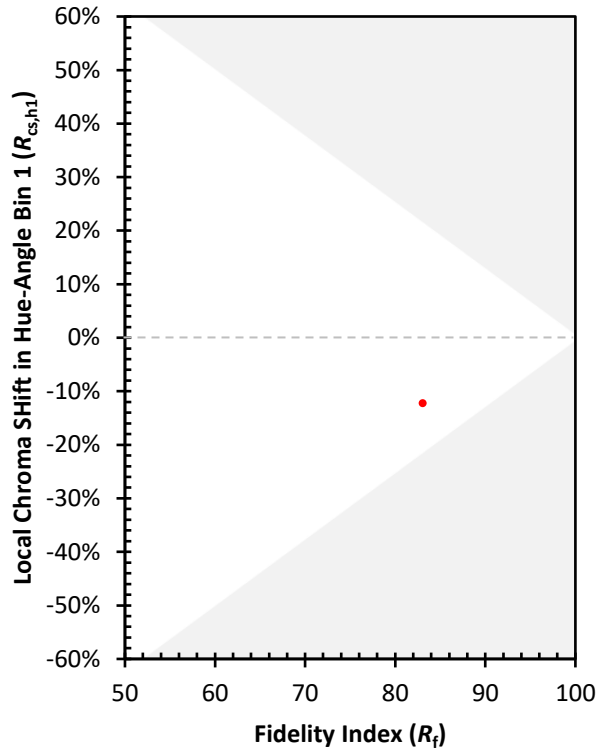
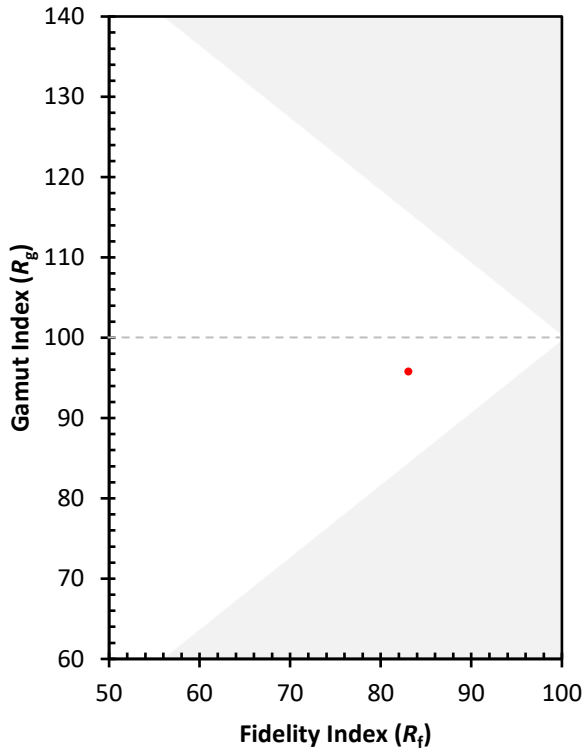
CES01 = 85	CES26 = 80	CES51 = 94	CES76 = 71
CES02 = 60	CES27 = 92	CES52 = 95	CES77 = 80
CES03 = 30	CES28 = 89	CES53 = 89	CES78 = 70
CES04 = 69	CES29 = 86	CES54 = 89	CES79 = 90
CES05 = 47	CES30 = 95	CES55 = 87	CES80 = 87
CES06 = 50	CES31 = 87	CES56 = 85	CES81 = 84
CES07 = 40	CES32 = 79	CES57 = 84	CES82 = 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)