

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: P1449852

Luminaire Tested: **TWC150_T2_120W_4000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449852
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_T2_120W_4000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T2 distribution, 120W
4000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19667 lumens
Efficiency: N/A
Efficacy: 168.5 lumens/watt
Luminous Opening: Rectangular (W 1.33' x L: 0.42' x H: 0')
IES Classification: Type II - Short
BUG Rating: B4 - U0 - G3

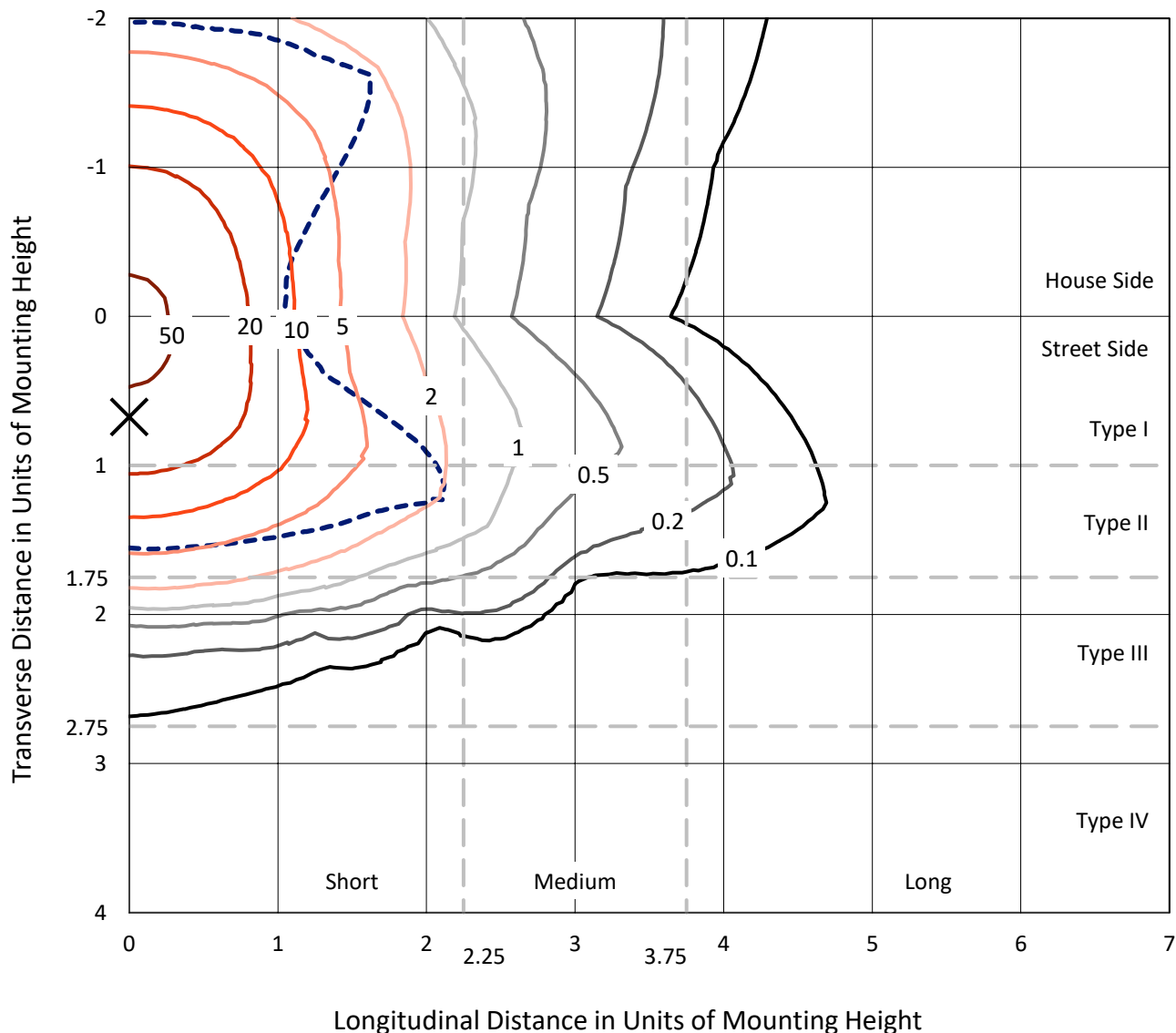
Input Watts (W): 116.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

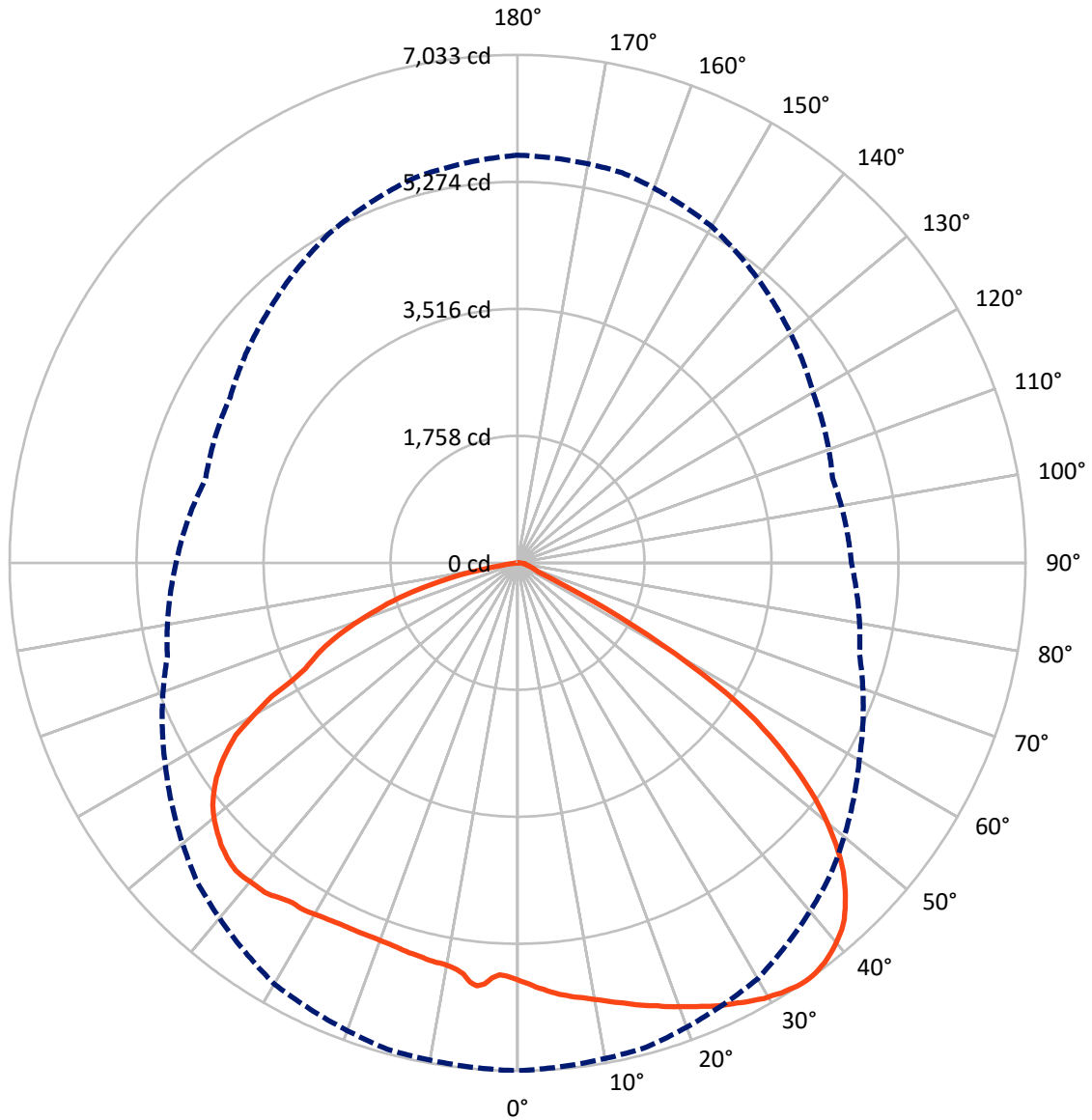
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 59.3 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 34-Deg Vertical

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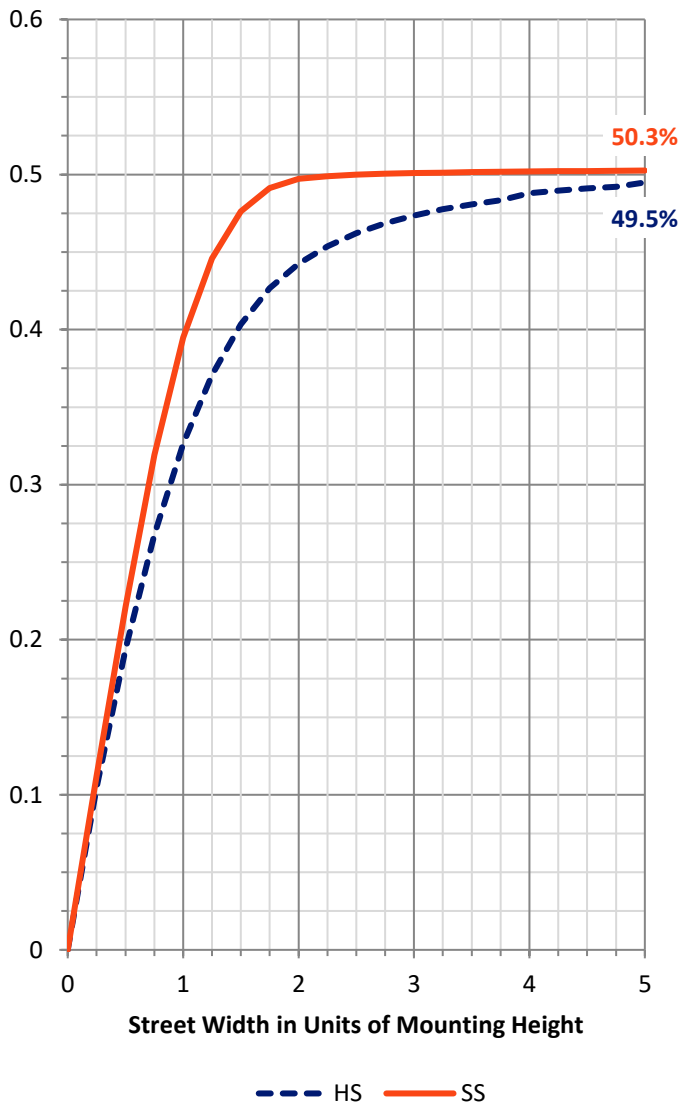
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9785.2	0.0	9785.2
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	9881.8	0.0	9881.8
	% Fixture	50.2	0.0	50.2
Total	Lumens	19667.0	0.0	19667.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	557.2	2.8
10°-20°	1642.2	8.4
20°-30°	2634.9	13.4
30°-40°	3448.2	17.5
40°-50°	3929.0	20.0
50°-60°	3741.4	19.0
60°-70°	2428.8	12.3
70°-80°	1076.5	5.5
80°-90°	208.9	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	19667.0	100.0
0°-180°	19667.0	100.0

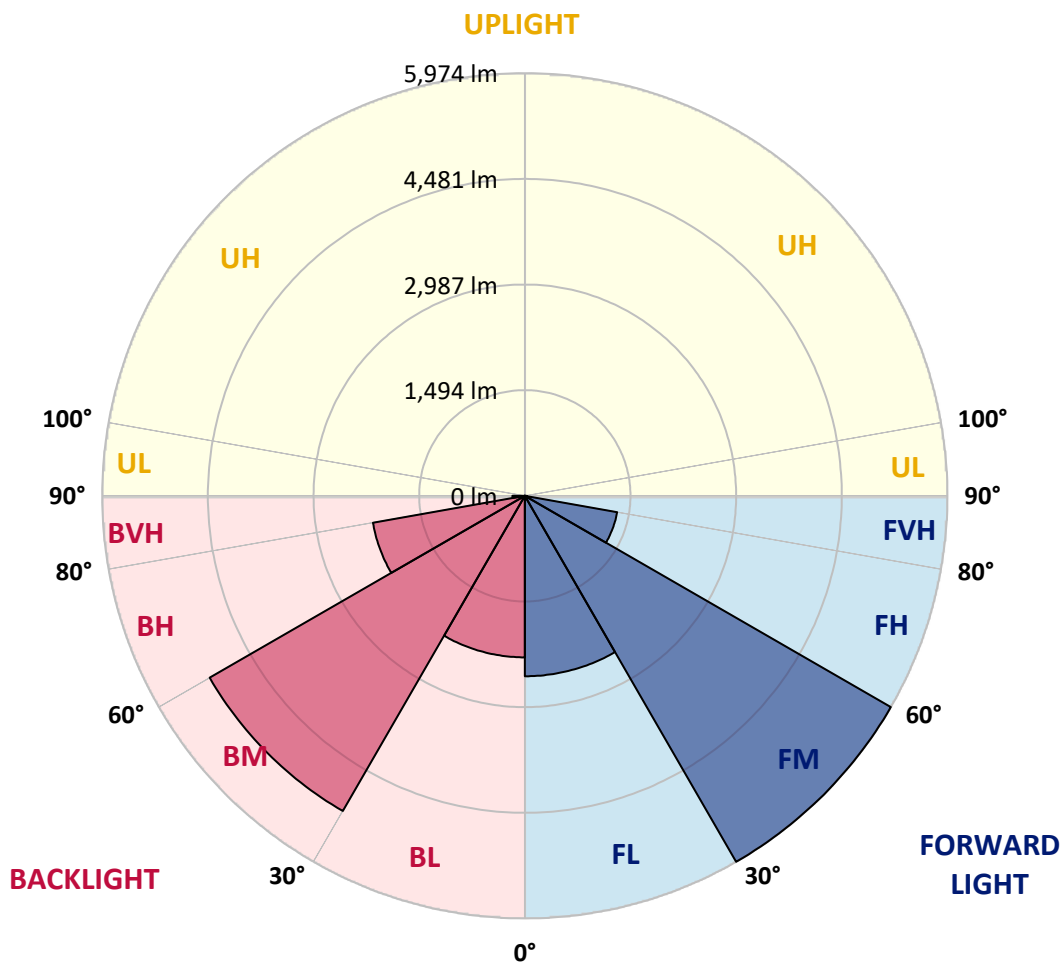


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2550.6	13.0			
FM (30°-60°)	5974.2	30.4			
FH (60°-80°)	1325.0	6.7			G1/1800
FVH (80°-90°)	32.0	0.2			G1/100
BL (0°-30°)	2283.7	11.6	B3/2500		
BM (30°-60°)	5144.4	26.2	B4/8500		
BH (60°-80°)	2180.3	11.1	B3/2500		G3/2500
BVH (80°-90°)	176.8	0.9			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G3
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0
1°	5829.0	5825.5	5827.7	5813.5	5802.8	5798.2	5793.1	5782.2	5772.6	5765.4	5759.7
2°	5878.6	5869.2	5858.9	5842.5	5822.6	5803.4	5787.9	5768.0	5751.6	5743.5	5733.2
3°	5917.7	5913.1	5894.6	5868.8	5842.1	5804.9	5781.3	5752.3	5729.1	5713.6	5705.7
4°	5962.3	5949.4	5929.1	5896.3	5851.7	5806.5	5769.7	5735.4	5709.0	5707.0	5729.7
5°	5999.3	5987.0	5959.0	5920.1	5864.0	5808.7	5763.0	5718.4	5693.9	5734.8	5804.7
6°	6031.2	6016.1	5987.9	5940.7	5875.8	5802.1	5738.5	5690.6	5699.6	5802.8	5868.8
7°	6062.4	6042.5	6003.8	5954.2	5880.8	5800.6	5726.5	5673.8	5733.5	5856.1	5877.3
8°	6089.3	6069.9	6029.6	5964.9	5888.9	5796.2	5709.2	5659.4	5778.3	5861.8	5802.3
9°	6122.5	6100.7	6045.4	5983.5	5886.9	5785.5	5687.1	5645.8	5820.2	5816.5	5715.1
10°	6154.2	6124.5	6072.3	5991.8	5891.9	5769.5	5665.7	5653.2	5818.3	5722.3	5675.1
11°	6191.4	6162.5	6089.1	6000.6	5884.7	5761.2	5645.4	5670.1	5793.4	5654.8	5646.0
12°	6230.7	6198.0	6114.0	6015.2	5886.0	5747.9	5612.4	5687.3	5712.7	5620.7	5625.0
13°	6265.5	6230.1	6140.7	6020.5	5883.8	5729.3	5582.9	5699.1	5634.4	5590.1	5610.4
14°	6310.5	6268.6	6168.7	6031.8	5879.7	5710.1	5555.1	5706.6	5573.5	5564.3	5600.6
15°	6355.8	6311.2	6195.1	6044.3	5868.8	5686.7	5523.0	5683.0	5528.6	5542.6	5575.2
16°	6393.1	6347.5	6231.2	6054.1	5869.9	5672.3	5491.7	5641.7	5494.3	5519.0	5559.2
17°	6431.4	6386.4	6255.7	6073.4	5867.2	5652.4	5461.5	5576.7	5453.9	5494.3	5545.5
18°	6478.4	6418.1	6282.8	6088.2	5863.5	5630.1	5435.3	5487.8	5423.3	5463.5	5531.7
19°	6520.8	6459.8	6312.9	6103.7	5854.1	5602.5	5407.3	5407.1	5391.4	5440.8	5509.4
20°	6559.5	6489.8	6333.7	6113.1	5853.9	5582.9	5386.8	5338.7	5352.2	5412.8	5487.1
21°	6603.6	6529.8	6365.2	6121.2	5838.4	5562.5	5375.6	5286.7	5307.7	5382.4	5475.1
22°	6648.5	6563.4	6382.4	6130.6	5823.5	5538.3	5363.4	5235.3	5263.3	5355.7	5461.5
23°	6694.6	6608.9	6404.9	6132.4	5806.5	5503.7	5350.1	5183.7	5225.9	5328.4	5439.2
24°	6738.9	6647.4	6429.0	6138.1	5792.3	5473.6	5330.0	5137.6	5184.2	5303.3	5426.3
25°	6775.4	6683.2	6455.0	6134.6	5770.6	5424.8	5303.7	5091.3	5142.8	5276.0	5420.7
26°	6810.6	6719.9	6479.3	6131.7	5741.8	5378.5	5259.6	5028.1	5092.6	5242.1	5410.2
27°	6854.6	6753.4	6512.7	6136.7	5719.0	5335.4	5206.2	4974.8	5047.5	5215.0	5397.1
28°	6888.5	6784.2	6529.1	6126.5	5686.7	5281.9	5133.0	4911.8	5003.6	5191.8	5393.6
29°	6930.4	6822.9	6553.6	6128.7	5650.2	5230.7	5056.5	4850.4	4963.2	5162.1	5390.9
30°	6952.5	6858.3	6567.6	6123.0	5618.7	5166.9	4961.2	4787.2	4915.7	5136.3	5380.4
31°	6984.4	6881.2	6594.9	6129.3	5581.5	5105.0	4872.0	4724.0	4864.2	5113.3	5379.6
32°	7003.7	6908.8	6609.1	6125.8	5540.4	5042.5	4783.9	4654.3	4820.4	5088.9	5373.9
33°	7024.9	6923.0	6632.3	6122.1	5501.3	4972.1	4697.2	4586.3	4767.1	5065.9	5377.4
34°	7032.5	6938.7	6649.3	6121.4	5462.6	4900.7	4620.4	4515.7	4722.1	5043.8	5375.9
35°	7028.1	6942.0	6666.8	6118.4	5424.4	4831.8	4536.9	4445.3	4665.7	5017.2	5370.6
36°	7005.8	6939.2	6666.6	6107.7	5384.6	4753.3	4452.3	4375.0	4616.9	5001.4	5346.8
37°	6981.8	6916.9	6677.3	6110.3	5345.9	4675.7	4365.6	4302.6	4566.9	4971.9	5344.6
38°	6940.7	6887.4	6669.7	6114.7	5314.0	4602.9	4279.0	4230.9	4520.5	4940.2	5346.3
39°	6891.3	6851.5	6651.7	6113.4	5279.5	4525.1	4189.2	4163.8	4470.9	4900.2	5357.9
40°	6837.3	6801.7	6636.0	6116.2	5247.5	4445.1	4099.1	4096.7	4422.2	4872.5	5370.8
41°	6777.4	6745.7	6603.2	6116.2	5217.6	4372.3	4009.1	4029.6	4370.8	4863.5	5365.8
42°	6694.6	6677.1	6564.3	6112.7	5187.7	4296.1	3920.7	3952.2	4312.9	4848.2	5363.6
43°	6588.6	6597.5	6511.0	6109.6	5163.4	4224.1	3821.7	3874.8	4244.7	4816.7	5363.0
44°	6475.3	6498.5	6450.0	6104.0	5139.3	4156.2	3720.1	3798.6	4196.4	4781.7	5366.5



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CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	6351.4	6392.9	6385.7	6087.6	5118.1	4090.6	3619.8	3715.7	4148.1	4745.2	5366.2
46°	6218.5	6269.6	6303.1	6067.0	5098.9	4028.3	3523.8	3634.6	4099.8	4734.1	5353.3
47°	6058.1	6134.1	6220.2	6034.2	5086.7	3962.3	3416.5	3553.1	4046.4	4717.5	5324.3
48°	5884.7	5981.8	6110.1	6002.1	5067.9	3887.7	3314.8	3464.3	3983.3	4693.7	5290.2
49°	5699.1	5808.7	5990.1	5946.6	5054.8	3809.3	3207.3	3367.9	3921.0	4663.5	5251.7
50°	5497.0	5611.9	5858.5	5888.9	5045.8	3724.2	3102.6	3263.0	3872.2	4630.3	5207.1
51°	5275.5	5416.3	5709.2	5826.8	5034.9	3637.0	2995.0	3161.4	3819.5	4588.1	5158.8
52°	5041.6	5191.2	5544.6	5757.5	5029.8	3545.7	2883.8	3074.6	3755.1	4550.7	5112.9
53°	4788.7	4956.8	5355.5	5667.0	5017.4	3439.0	2777.5	2992.4	3685.3	4515.9	5060.2
54°	4527.1	4704.1	5141.3	5561.9	5002.1	3347.0	2672.4	2891.6	3612.8	4474.6	5003.4
55°	4249.5	4435.7	4913.8	5437.3	4990.5	3252.5	2558.1	2788.5	3533.0	4427.9	4941.5
56°	3951.8	4152.0	4669.6	5303.1	4970.4	3160.5	2446.0	2693.4	3466.7	4373.6	4874.0
57°	3614.9	3844.5	4400.5	5148.5	4940.2	3071.8	2334.9	2599.2	3390.5	4318.1	4799.7
58°	3210.3	3508.9	4116.4	4961.0	4892.3	2983.5	2219.5	2500.8	3317.9	4261.5	4714.2
59°	2755.3	3111.1	3810.6	4751.6	4838.8	2896.2	2104.7	2394.4	3239.0	4204.5	4613.2
60°	2284.0	2653.2	3478.5	4508.3	4767.3	2809.0	1985.7	2285.5	3158.1	4147.2	4500.9
61°	1840.1	2180.9	3112.6	4235.9	4690.4	2728.1	1872.1	2176.5	3075.7	4089.7	4365.3
62°	1396.6	1738.4	2673.1	3915.1	4594.4	2658.0	1765.9	2074.3	2998.3	4011.2	4161.8
63°	953.1	1296.0	2215.1	3570.4	4481.6	2595.2	1651.6	1965.4	2925.7	3925.8	3958.6
64°	617.9	853.7	1758.2	3211.7	4346.5	2543.9	1539.1	1864.1	2848.8	3828.7	3750.9
65°	406.1	533.1	1301.2	2791.5	4189.6	2508.7	1431.6	1764.0	2769.9	3729.5	3398.5
66°	312.6	351.2	844.2	2324.4	4001.6	2492.3	1325.3	1664.2	2685.1	3596.4	3142.6
67°	283.6	275.6	516.0	1844.7	3770.4	2483.3	1223.8	1564.3	2601.8	3382.4	2992.4
68°	263.6	250.6	326.7	1364.8	3484.4	2478.7	1121.4	1467.9	2503.7	3117.2	2866.9
69°	244.0	230.7	255.6	884.9	3163.6	2470.9	1022.9	1373.8	2406.8	2911.5	2743.4
70°	224.8	211.9	230.1	515.6	2755.0	2469.1	926.9	1283.6	2314.1	2782.1	2624.8
71°	206.8	195.8	211.3	304.3	2216.0	2482.0	834.2	1192.5	2209.4	2656.7	2515.5
72°	192.4	179.9	192.5	220.7	1640.6	2484.4	750.3	1103.1	2042.3	2519.0	2400.5
73°	178.1	163.9	173.7	195.8	1064.6	2426.1	667.0	1011.1	1885.2	2376.2	2278.7
74°	163.8	149.9	154.9	172.0	488.5	2256.9	587.3	921.8	1781.2	2241.6	2142.1
75°	149.1	134.7	137.2	148.2	271.0	2040.5	512.3	838.1	1694.0	2114.3	1999.0
76°	136.7	121.0	117.1	132.0	228.4	1807.9	437.3	754.7	1598.2	1990.3	1826.7
77°	127.4	110.3	101.8	119.4	188.3	1575.1	362.7	676.1	1503.1	1874.9	1628.1
78°	121.3	101.3	89.1	105.1	148.3	1342.3	300.2	581.3	1415.3	1763.6	1448.6
79°	116.4	95.7	80.0	87.2	134.4	1024.1	244.0	506.9	1321.9	1656.9	1282.4
80°	110.0	90.9	72.9	71.0	134.3	773.9	193.5	432.5	1230.4	1518.6	1153.4
81°	102.6	84.9	67.3	60.3	124.8	541.1	151.3	358.3	1143.1	1373.8	1020.9
82°	93.8	78.2	62.1	52.6	106.8	352.1	114.9	300.8	1048.5	1226.1	727.7
83°	77.5	68.0	56.7	45.9	88.5	207.4	83.2	246.5	954.5	1113.4	434.5
84°	61.3	55.6	48.0	39.9	60.8	154.9	63.6	193.4	824.9	1011.3	146.6
85°	44.0	41.3	36.1	34.0	35.8	102.8	44.1	146.2	664.2	808.0	84.4
86°	30.7	31.2	26.3	25.3	23.0	50.7	24.7	101.9	531.5	604.7	23.2
87°	21.0	21.3	18.0	17.4	15.6	27.8	14.1	69.0	398.9	401.4	11.4
88°	11.2	11.4	9.7	9.5	8.2	18.5	6.4	36.1	266.2	198.1	3.9
89°	1.5	1.6	1.5	1.6	1.7	9.6	2.1	4.0	133.5	1.4	0.9



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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: P1449852
 CATALOG NUMBER: TWC150_T2_120W_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: P1449852
CATALOG NUMBER: TWC150_T2_120W_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: P1449852

CATALOG NUMBER: TWC150_T2_120W_4000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0	5792.0
1°	5754.2	5753.8	5758.4	5754.4	5763.2	5769.7	5777.2	5794.0	5803.2	5809.1	5816.7
2°	5719.9	5723.0	5721.0	5724.9	5744.8	5754.7	5768.9	5789.0	5813.0	5826.4	5845.4
3°	5703.3	5710.1	5700.7	5702.0	5710.3	5735.4	5751.2	5780.9	5811.5	5842.5	5877.9
4°	5757.3	5756.0	5737.8	5707.9	5689.5	5710.1	5736.1	5777.2	5824.0	5860.0	5903.3
5°	5843.8	5848.2	5821.1	5772.6	5699.6	5686.0	5719.9	5764.9	5821.1	5879.0	5928.9
6°	5884.9	5886.0	5884.5	5834.7	5746.8	5672.0	5699.6	5751.2	5820.2	5892.4	5948.1
7°	5851.7	5840.6	5857.6	5863.7	5804.3	5677.5	5678.6	5740.7	5821.1	5902.0	5968.9
8°	5749.2	5738.3	5757.7	5825.7	5838.4	5699.8	5655.0	5727.1	5822.4	5909.2	5982.9
9°	5693.0	5693.0	5693.7	5726.0	5828.8	5740.7	5626.4	5704.2	5809.5	5911.6	5997.7
10°	5668.1	5666.4	5664.8	5663.7	5758.4	5768.7	5608.6	5686.9	5804.9	5917.5	6014.1
11°	5646.9	5649.1	5643.2	5634.2	5675.3	5773.2	5592.3	5666.1	5788.5	5914.7	6021.1
12°	5642.7	5644.1	5628.5	5603.6	5615.9	5747.9	5582.9	5635.5	5780.9	5914.4	6036.9
13°	5630.1	5635.8	5621.5	5586.4	5581.3	5685.2	5589.0	5607.3	5766.7	5913.8	6051.7
14°	5616.3	5621.1	5598.2	5572.4	5545.5	5603.8	5603.2	5584.4	5754.7	5914.4	6066.1
15°	5602.5	5606.9	5584.8	5553.6	5512.9	5533.5	5601.9	5560.1	5736.5	5920.1	6086.9
16°	5592.7	5602.3	5577.4	5526.5	5489.3	5479.5	5606.5	5520.6	5719.9	5924.7	6103.3
17°	5583.3	5591.4	5564.9	5509.8	5456.1	5441.0	5583.9	5490.8	5700.7	5922.5	6124.1
18°	5567.8	5576.1	5544.8	5486.9	5422.6	5396.2	5544.8	5453.9	5691.1	5922.5	6145.7
19°	5552.0	5570.4	5535.0	5470.9	5386.3	5355.3	5490.0	5425.0	5673.1	5919.0	6164.7
20°	5549.0	5566.0	5519.9	5444.3	5363.4	5315.7	5416.3	5382.4	5653.7	5916.9	6169.5
21°	5544.2	5560.1	5511.8	5421.3	5333.5	5276.8	5333.5	5348.5	5639.2	5917.5	6184.4
22°	5538.3	5558.8	5506.1	5402.7	5297.6	5229.0	5251.3	5311.8	5612.4	5905.3	6194.2
23°	5538.9	5564.5	5500.2	5388.3	5262.4	5171.3	5181.5	5280.8	5585.9	5897.2	6206.7
24°	5533.9	5564.5	5498.0	5362.1	5227.7	5123.2	5119.9	5248.6	5549.4	5880.3	6217.0
25°	5531.1	5566.7	5495.9	5351.4	5198.8	5081.4	5059.1	5230.3	5510.3	5862.4	6221.3
26°	5538.3	5570.4	5487.8	5334.3	5166.0	5027.9	5001.0	5212.8	5473.6	5842.5	6228.6
27°	5536.1	5574.3	5490.0	5323.8	5133.2	4972.6	4939.3	5187.4	5424.6	5828.3	6233.8
28°	5540.7	5585.3	5490.0	5306.6	5096.7	4916.2	4885.6	5162.3	5374.3	5796.8	6237.5
29°	5552.9	5596.0	5492.4	5287.3	5066.6	4869.8	4825.9	5126.9	5321.6	5774.6	6245.4
30°	5555.3	5608.0	5501.1	5275.1	5032.5	4812.8	4757.3	5070.1	5263.3	5743.1	6257.0
31°	5578.5	5627.0	5504.4	5270.5	5000.3	4762.7	4684.9	5006.0	5201.6	5717.1	6262.4
32°	5587.2	5642.7	5519.9	5256.1	4964.5	4704.6	4618.9	4926.4	5145.9	5693.2	6258.1
33°	5592.3	5646.9	5522.1	5252.4	4922.7	4649.1	4541.3	4830.1	5082.5	5659.4	6270.5
34°	5591.6	5643.4	5518.4	5246.5	4896.3	4592.9	4474.0	4727.1	5019.6	5630.5	6264.6
35°	5592.7	5663.9	5512.7	5237.1	4856.9	4539.6	4400.3	4622.4	4953.8	5601.0	6273.4
36°	5615.0	5691.3	5517.3	5218.5	4824.8	4482.3	4323.2	4515.9	4888.4	5583.7	6277.7
37°	5643.6	5726.2	5540.0	5193.1	4793.1	4425.0	4243.2	4425.0	4823.3	5551.4	6286.9
38°	5664.2	5748.1	5563.6	5187.4	4759.2	4364.7	4168.8	4328.6	4761.2	5535.6	6287.1
39°	5673.3	5751.6	5579.1	5183.7	4716.8	4301.3	4094.5	4237.3	4696.3	5512.0	6289.3
40°	5677.9	5757.1	5576.1	5175.0	4669.4	4243.4	4020.2	4141.3	4626.5	5490.4	6284.3
41°	5686.0	5766.2	5574.1	5166.5	4632.5	4187.2	3928.6	4052.3	4558.1	5465.7	6290.8
42°	5693.9	5777.2	5592.5	5153.1	4599.9	4131.0	3839.4	3959.4	4490.2	5452.8	6277.1
43°	5702.4	5775.9	5596.0	5152.5	4575.0	4074.6	3745.9	3861.1	4425.0	5444.9	6266.1
44°	5690.2	5756.6	5595.1	5152.2	4547.6	4001.2	3655.8	3762.7	4352.2	5441.0	6241.0



REPORT NUMBER: P1449852

CATALOG NUMBER: TWC150_T2_120W_4000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	5667.0	5731.7	5576.3	5146.6	4498.9	3921.8	3565.3	3663.3	4279.7	5436.0	6210.0
46°	5632.5	5695.6	5544.4	5138.0	4456.5	3843.8	3475.3	3563.4	4213.6	5426.6	6168.4
47°	5597.1	5662.6	5506.1	5119.9	4418.5	3768.8	3386.1	3457.8	4143.3	5416.5	6117.1
48°	5557.7	5613.2	5468.8	5095.8	4384.8	3710.0	3294.5	3357.5	4079.2	5411.3	6053.5
49°	5510.9	5566.9	5422.4	5063.3	4343.5	3638.3	3201.8	3247.5	4012.3	5403.2	5992.5
50°	5460.9	5514.7	5380.4	5026.3	4298.9	3564.2	3106.1	3138.6	3943.0	5391.6	5917.7
51°	5405.1	5454.8	5330.8	4974.3	4247.7	3492.1	3008.8	3034.2	3880.3	5378.5	5831.8
52°	5350.3	5392.0	5273.6	4930.6	4201.0	3421.7	2902.6	2926.0	3815.2	5363.4	5720.1
53°	5276.0	5305.5	5211.0	4877.0	4164.2	3358.3	2794.6	2818.4	3756.1	5337.4	5601.9
54°	5196.6	5217.2	5145.9	4825.0	4127.7	3283.1	2686.6	2706.1	3704.8	5298.9	5460.4
55°	5105.9	5117.5	5059.6	4766.2	4091.2	3203.6	2590.2	2592.2	3656.0	5253.4	5304.4
56°	5002.3	5000.3	4966.2	4708.5	4042.3	3111.5	2487.9	2476.8	3618.2	5184.6	5130.6
57°	4883.8	4876.4	4856.7	4637.0	3988.5	3023.0	2379.3	2360.9	3592.9	5117.9	4922.3
58°	4751.4	4728.2	4734.3	4570.8	3938.0	2930.6	2270.7	2245.1	3561.6	5036.2	4699.3
59°	4609.1	4575.2	4602.3	4489.1	3889.9	2844.2	2165.6	2131.7	3536.3	4940.0	4438.8
60°	4452.8	4338.7	4456.9	4404.2	3825.9	2756.1	2061.7	2021.0	3504.6	4832.0	4154.8
61°	4170.1	4102.2	4208.8	4299.3	3759.4	2671.5	1958.3	1910.9	3474.0	4699.6	3844.2
62°	3887.7	3865.0	3961.0	4162.1	3689.3	2581.3	1851.1	1800.7	3461.1	4552.9	3503.5
63°	3605.3	3496.9	3712.2	4024.8	3602.5	2486.0	1739.1	1687.3	3447.1	4367.5	3132.5
64°	3317.7	3280.3	3372.5	3884.7	3518.1	2398.7	1627.9	1573.3	3440.5	4160.1	2722.7
65°	3163.8	3154.4	3170.8	3613.4	3420.8	2308.0	1517.0	1467.2	3425.6	3912.2	2259.5
66°	3047.7	3036.8	3036.8	3285.3	3322.0	2213.6	1409.9	1362.5	3416.9	3620.2	1792.0
67°	2931.4	2905.6	2928.4	3055.1	3207.7	2119.4	1305.3	1258.0	3410.6	3288.8	1324.5
68°	2796.3	2753.5	2813.6	2904.1	3065.6	2022.8	1202.0	1146.4	3372.3	2880.5	857.0
69°	2649.5	2583.7	2680.9	2758.3	2850.8	1922.3	1101.2	1038.4	3288.8	2406.0	515.2
70°	2496.0	2414.9	2548.5	2621.5	2655.8	1826.4	1004.1	934.2	3143.2	1857.4	314.5
71°	2322.2	2223.9	2394.6	2494.7	2538.2	1729.2	914.7	830.9	2931.6	1306.6	234.1
72°	2145.6	2050.6	2233.9	2387.8	2438.7	1635.4	831.4	735.4	2733.6	755.8	208.5
73°	1976.8	1888.7	2061.4	2287.7	2321.1	1533.5	745.5	644.1	2572.5	413.2	188.4
74°	1799.1	1708.5	1883.6	2185.1	2206.4	1385.9	667.2	563.0	2315.0	245.2	168.5
75°	1623.9	1524.9	1704.0	2078.3	2090.0	1265.1	592.0	483.6	2018.1	209.2	148.5
76°	1435.9	1318.0	1530.8	1959.9	1974.3	1176.1	526.6	411.5	1604.9	175.6	127.2
77°	1244.8	1120.4	1351.4	1810.6	1854.6	1090.5	461.2	351.7	1187.7	141.9	109.1
78°	1070.5	930.5	1189.9	1629.1	1726.1	1000.9	396.0	301.6	770.4	129.7	92.1
79°	882.3	700.3	1021.7	1434.4	1601.9	917.1	341.1	259.2	430.5	123.6	76.8
80°	637.2	470.1	840.3	1256.6	1470.2	838.3	280.0	215.9	232.7	113.0	65.4
81°	392.2	241.6	553.0	1131.4	1326.9	757.5	227.3	176.0	189.1	92.2	58.0
82°	152.3	79.1	267.1	1032.3	1192.7	677.7	185.0	136.1	147.4	73.1	51.6
83°	111.4	62.4	188.4	725.0	1043.2	595.2	145.0	96.2	105.8	52.9	46.0
84°	70.5	45.7	109.7	417.6	928.6	504.8	110.8	69.0	102.3	37.0	40.6
85°	30.1	29.0	31.6	110.6	820.3	414.3	80.7	47.9	88.9	28.8	33.6
86°	18.4	17.2	19.9	61.3	513.2	324.2	58.4	31.0	65.7	22.6	23.2
87°	8.8	8.5	9.2	12.1	209.9	241.8	36.1	21.1	39.0	15.1	14.3
88°	3.3	3.3	3.4	3.5	103.9	160.9	13.9	11.3	25.9	7.5	5.6
89°	0.7	0.7	0.7	0.9	1.4	79.9	2.0	1.4	13.3	1.5	1.6



REPORT NUMBER: P1449852
 CATALOG NUMBER: TWC150_T2_120W_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: P1449852
 CATALOG NUMBER: TWC150_T2_120W_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: P1449852
CATALOG NUMBER: TWC150_T2_120W_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: P1449852
 CATALOG NUMBER: TWC150_T2_120W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	5792.0	5792.0	5792.0
1°	5825.9	5830.1	5829.0
2°	5862.4	5868.1	5878.6
3°	5893.9	5910.5	5917.7
4°	5933.5	5950.1	5962.3
5°	5963.8	5985.9	5999.3
6°	5990.5	6019.4	6031.2
7°	6016.3	6055.4	6062.4
8°	6042.3	6083.6	6089.3
9°	6064.6	6107.2	6122.5
10°	6085.2	6133.5	6154.2
11°	6109.9	6169.8	6191.4
12°	6136.3	6211.3	6230.7
13°	6170.0	6246.9	6265.5
14°	6199.5	6292.2	6310.5
15°	6233.8	6326.0	6355.8
16°	6265.7	6366.9	6393.1
17°	6292.4	6397.5	6431.4
18°	6321.9	6441.7	6478.4
19°	6352.1	6480.8	6520.8
20°	6383.3	6518.0	6559.5
21°	6415.9	6553.6	6603.6
22°	6441.0	6601.7	6648.5
23°	6464.6	6642.1	6694.6
24°	6500.9	6682.1	6738.9
25°	6525.8	6728.5	6775.4
26°	6558.2	6761.2	6810.6
27°	6587.9	6789.9	6854.6
28°	6613.3	6830.8	6888.5
29°	6629.4	6869.4	6930.4
30°	6664.2	6899.6	6952.5
31°	6686.7	6925.4	6984.4
32°	6707.9	6947.9	7003.7
33°	6728.2	6963.2	7024.9
34°	6733.7	6971.1	7032.5
35°	6752.7	6972.6	7028.1
36°	6759.9	6963.2	7005.8
37°	6750.1	6942.9	6981.8
38°	6744.6	6913.8	6940.7
39°	6723.9	6864.6	6891.3
40°	6692.2	6810.9	6837.3
41°	6646.3	6755.8	6777.4
42°	6598.2	6677.5	6694.6
43°	6537.4	6597.3	6588.6
44°	6469.0	6493.9	6475.3



REPORT NUMBER: P1449852
CATALOG NUMBER: TWC150_T2_120W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	6391.0	6371.1	6351.4
46°	6298.7	6240.8	6218.5
47°	6183.5	6100.0	6058.1
48°	6064.6	5935.2	5884.7
49°	5922.1	5747.9	5699.1
50°	5766.7	5555.1	5497.0
51°	5594.4	5351.2	5275.5
52°	5404.1	5121.9	5041.6
53°	5206.7	4874.2	4788.7
54°	4976.5	4619.8	4527.1
55°	4730.8	4348.1	4249.5
56°	4467.0	4050.4	3951.8
57°	4186.1	3738.0	3614.9
58°	3881.4	3373.0	3210.3
59°	3562.5	2943.5	2755.3
60°	3194.8	2478.5	2284.0
61°	2779.1	1990.1	1840.1
62°	2306.9	1544.5	1396.6
63°	1851.6	1099.4	953.1
64°	1396.3	729.5	617.9
65°	941.0	459.2	406.1
66°	593.5	324.3	312.6
67°	367.5	275.7	283.6
68°	270.2	254.0	263.6
69°	238.6	235.1	244.0
70°	218.2	216.4	224.8
71°	201.0	200.3	206.8
72°	182.9	184.2	192.4
73°	164.9	168.1	178.1
74°	150.8	154.1	163.8
75°	134.2	139.3	149.1
76°	116.1	126.0	136.7
77°	101.0	115.7	127.4
78°	90.3	108.2	121.3
79°	82.0	102.7	116.4
80°	75.8	97.5	110.0
81°	70.6	91.0	102.6
82°	65.0	83.5	93.8
83°	58.4	71.4	77.5
84°	47.0	58.0	61.3
85°	36.9	42.9	44.0
86°	24.0	31.0	30.7
87°	16.5	21.1	21.0
88°	9.0	11.3	11.2
89°	1.6	1.4	1.5



REPORT NUMBER: P1449852
CATALOG NUMBER: TWC150_T2_120W_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: P1449852
CATALOG NUMBER: TWC150_T2_120W_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
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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



REPORT NUMBER: P1449852
CATALOG NUMBER: TWC150_T2_120W_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

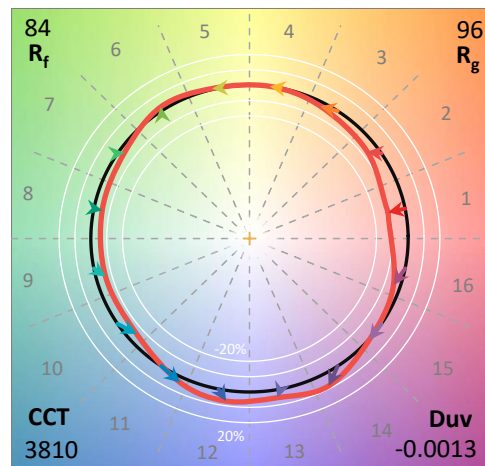
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2601-659-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 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

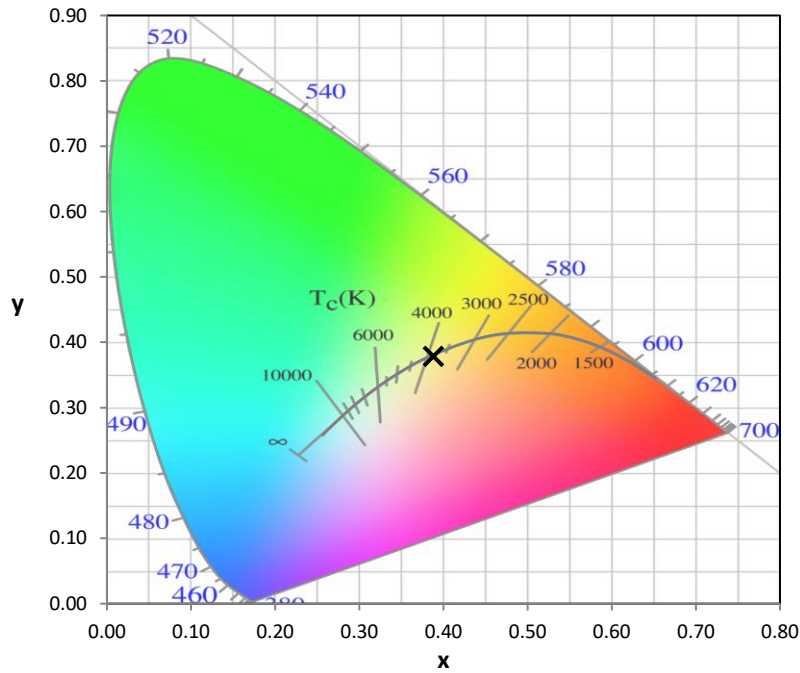
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

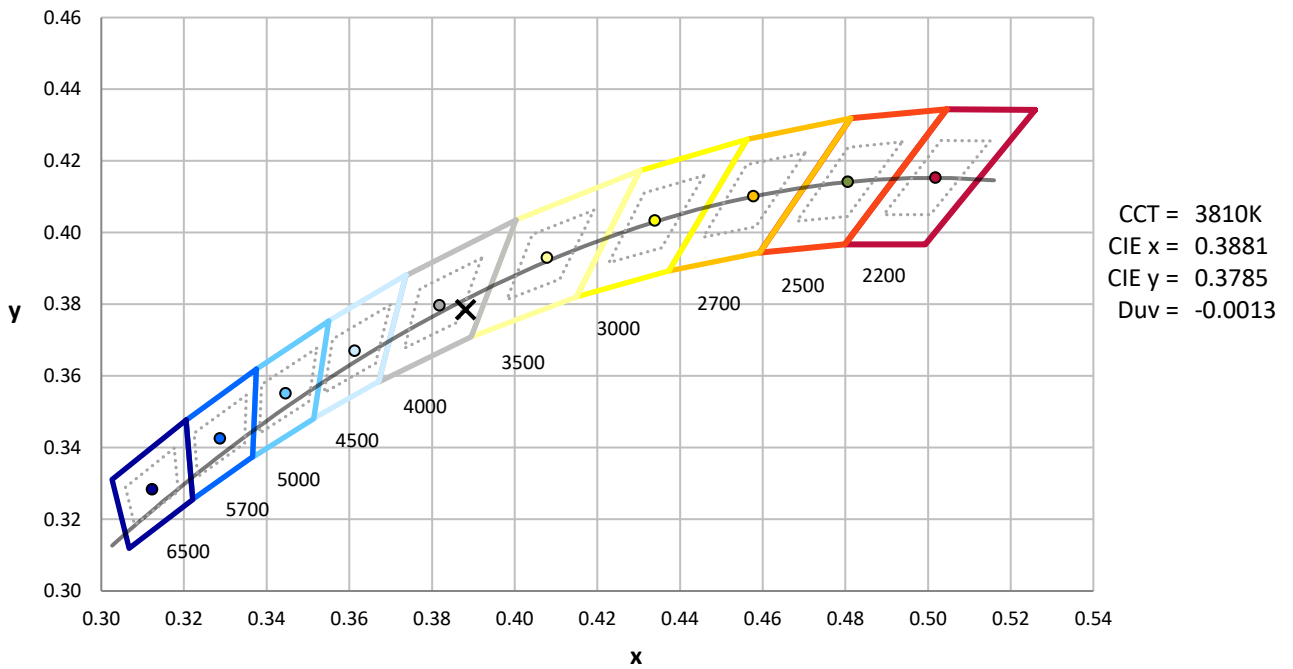
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



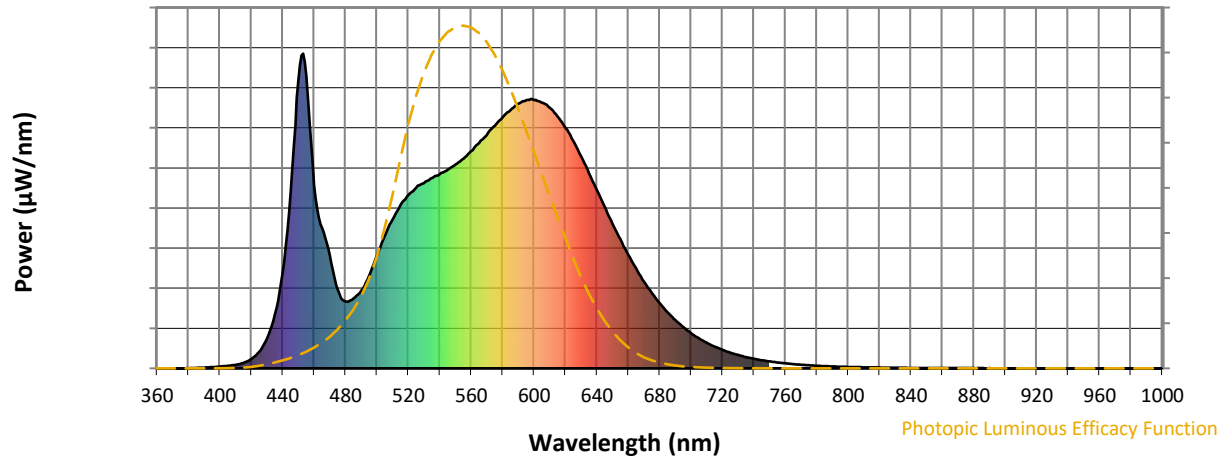
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

Photopic Flux vs. Wavelength

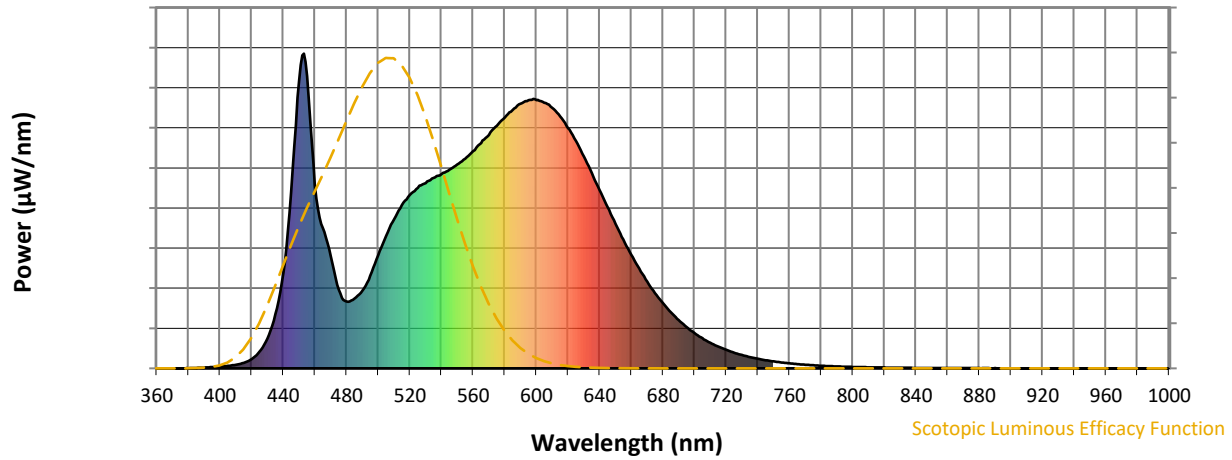


Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /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			

REPORT NUMBER: SP1-2601-659-2

Scotopic Flux vs. Wavelength



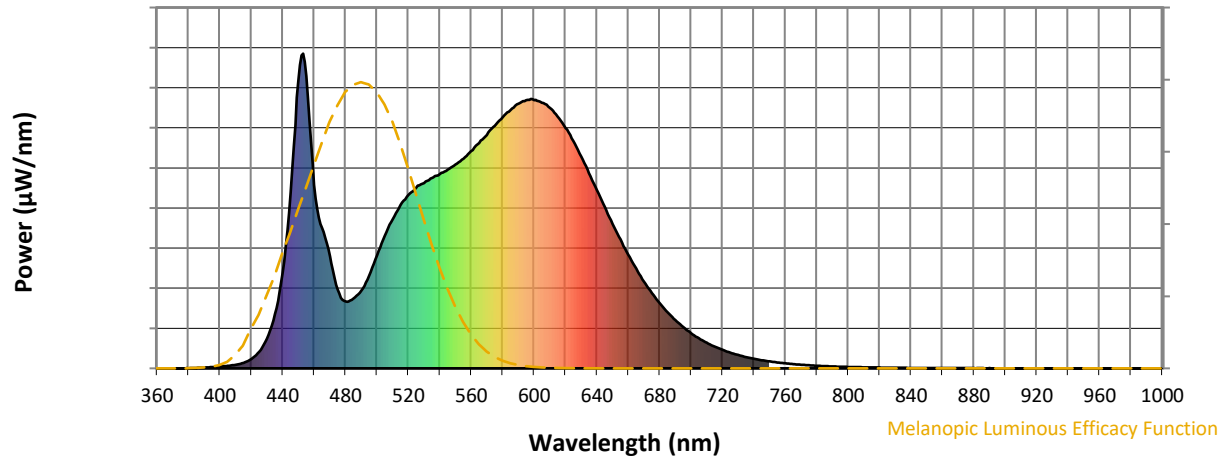
Scotopic Lumens: NR

S/P: 1.64

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /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			

REPORT NUMBER: SP1-2601-659-2

Melanopic Flux vs. Wavelength



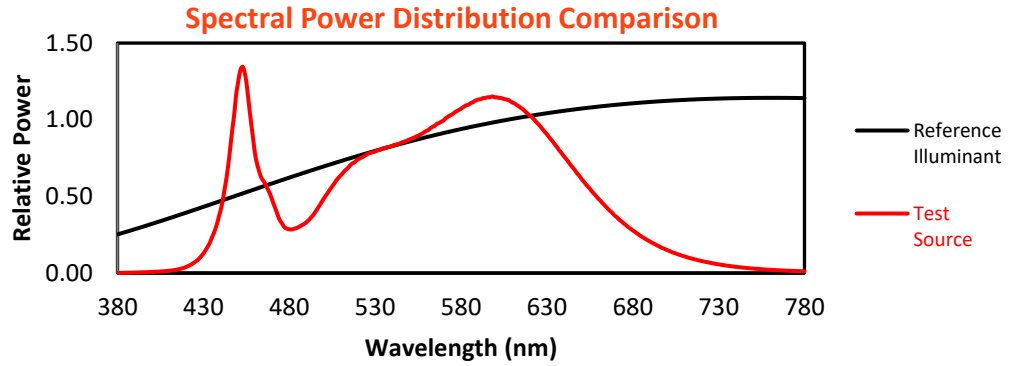
Melanopic Lumens: NR

M/P: 3.35

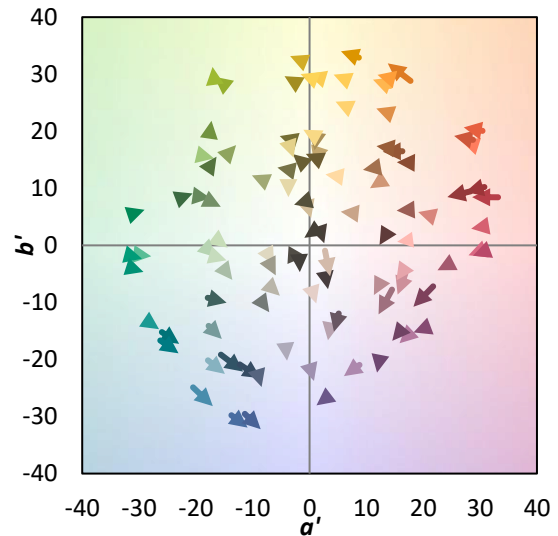
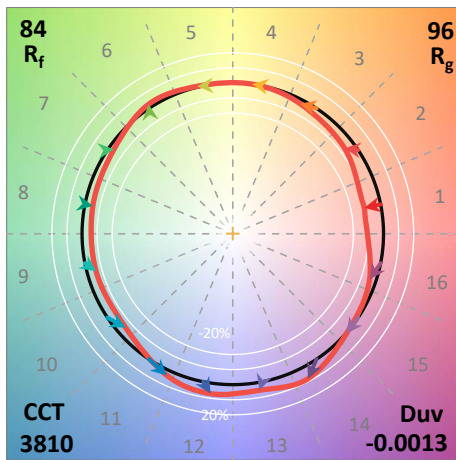
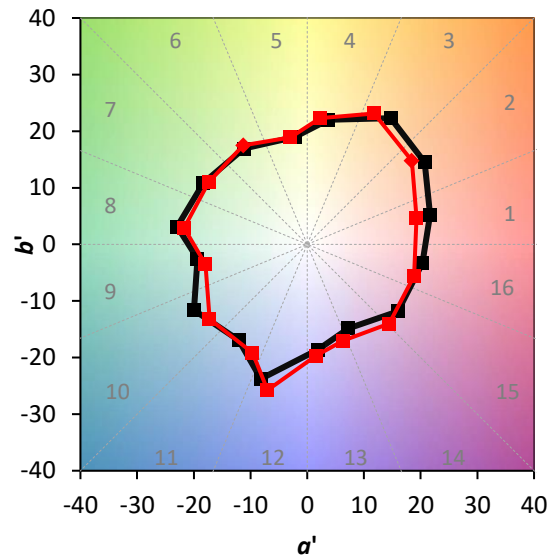
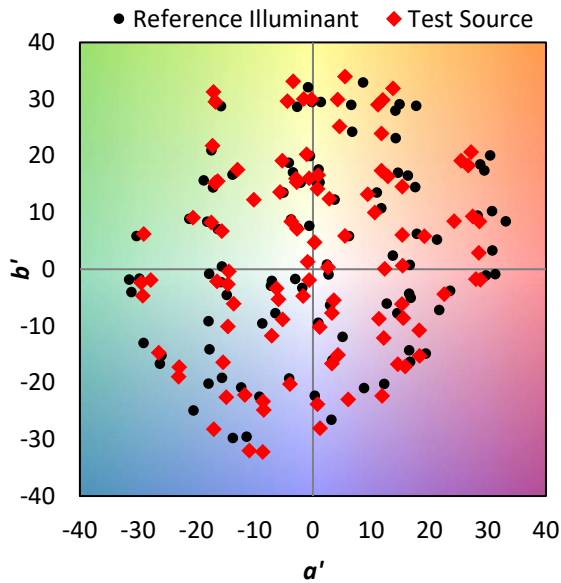
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	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

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

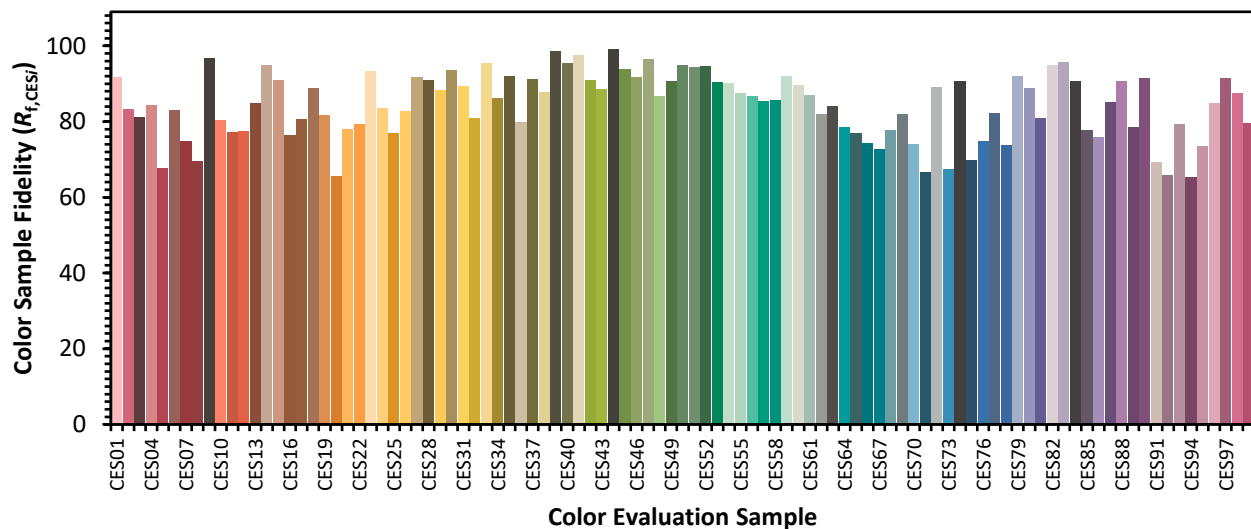


Color Vector Graphics

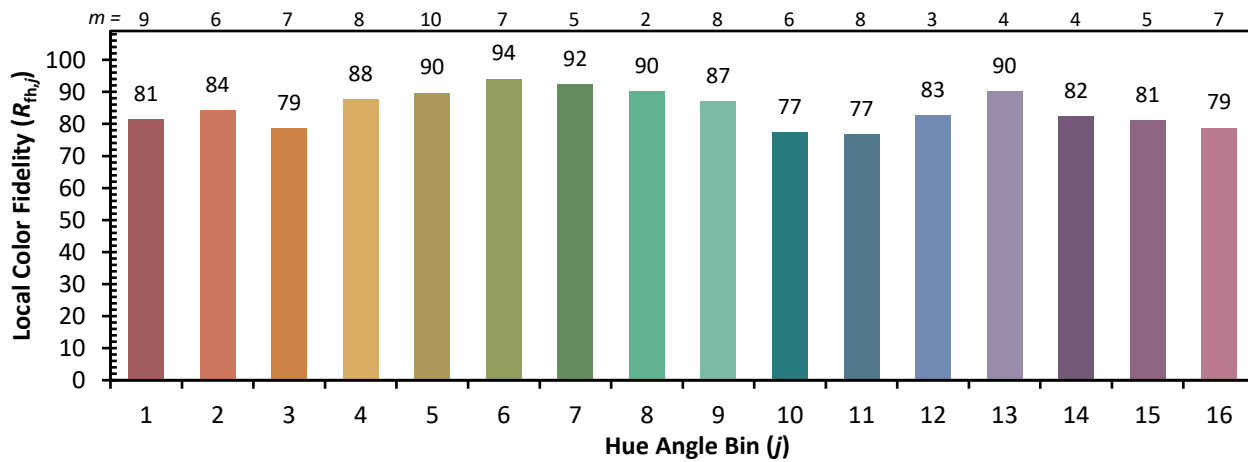
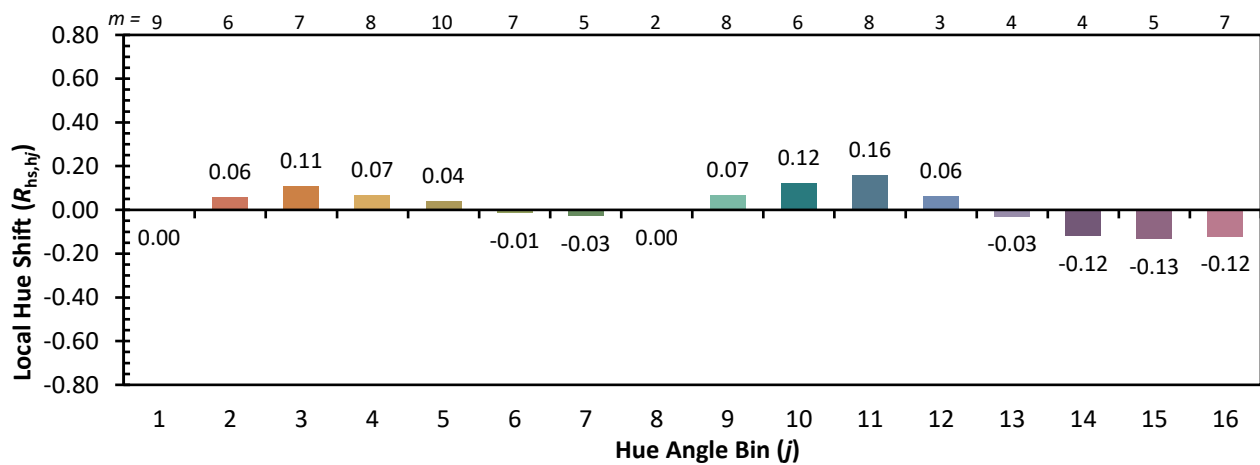
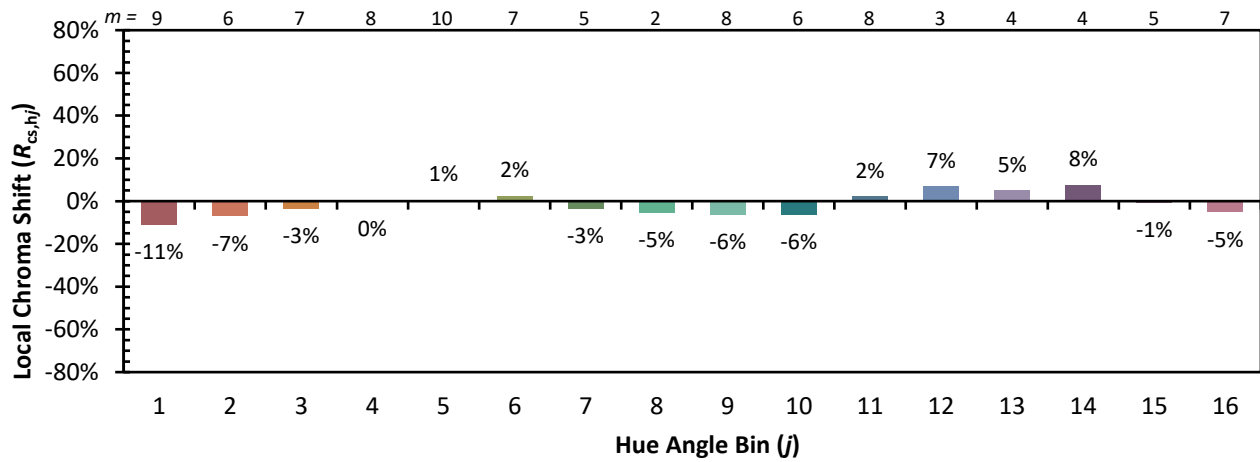


Individual Sample Fidelity Index ($R_{f,i}$)

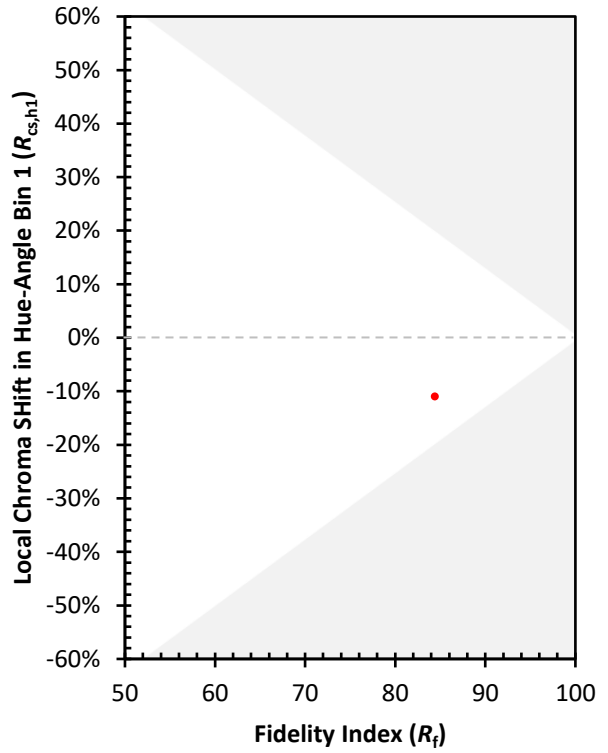
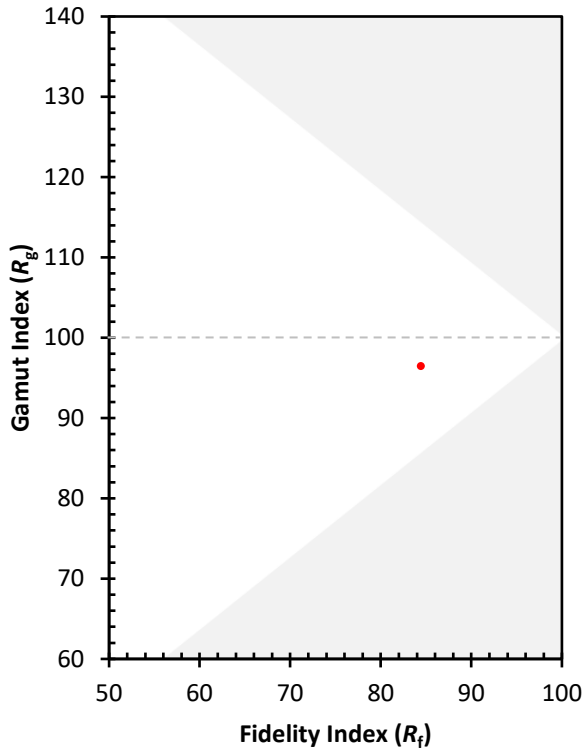
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82 = 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)