

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: P1449855

Luminaire Tested: **TWC150_T2_150W_4000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449855
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_150W_4000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T2 distribution, 150W
4000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24244 lumens
Efficiency: N/A
Efficacy: 165.0 lumens/watt
Luminous Opening: Rectangular (W 1.33' x L: 0.42' x H: 0')
IES Classification: Type II - Short
BUG Rating: B4 - U0 - G4

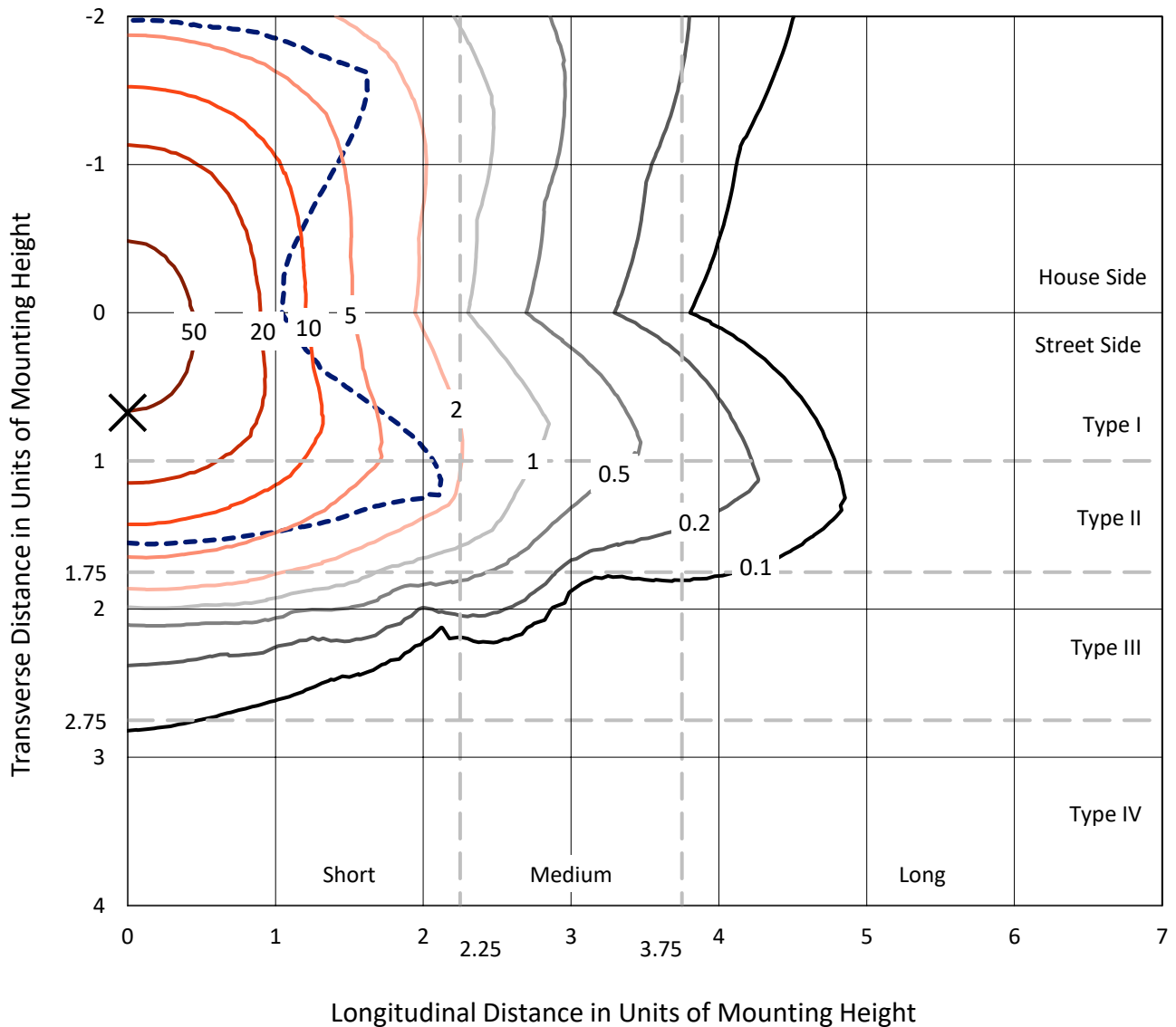
Input Watts (W): 146.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

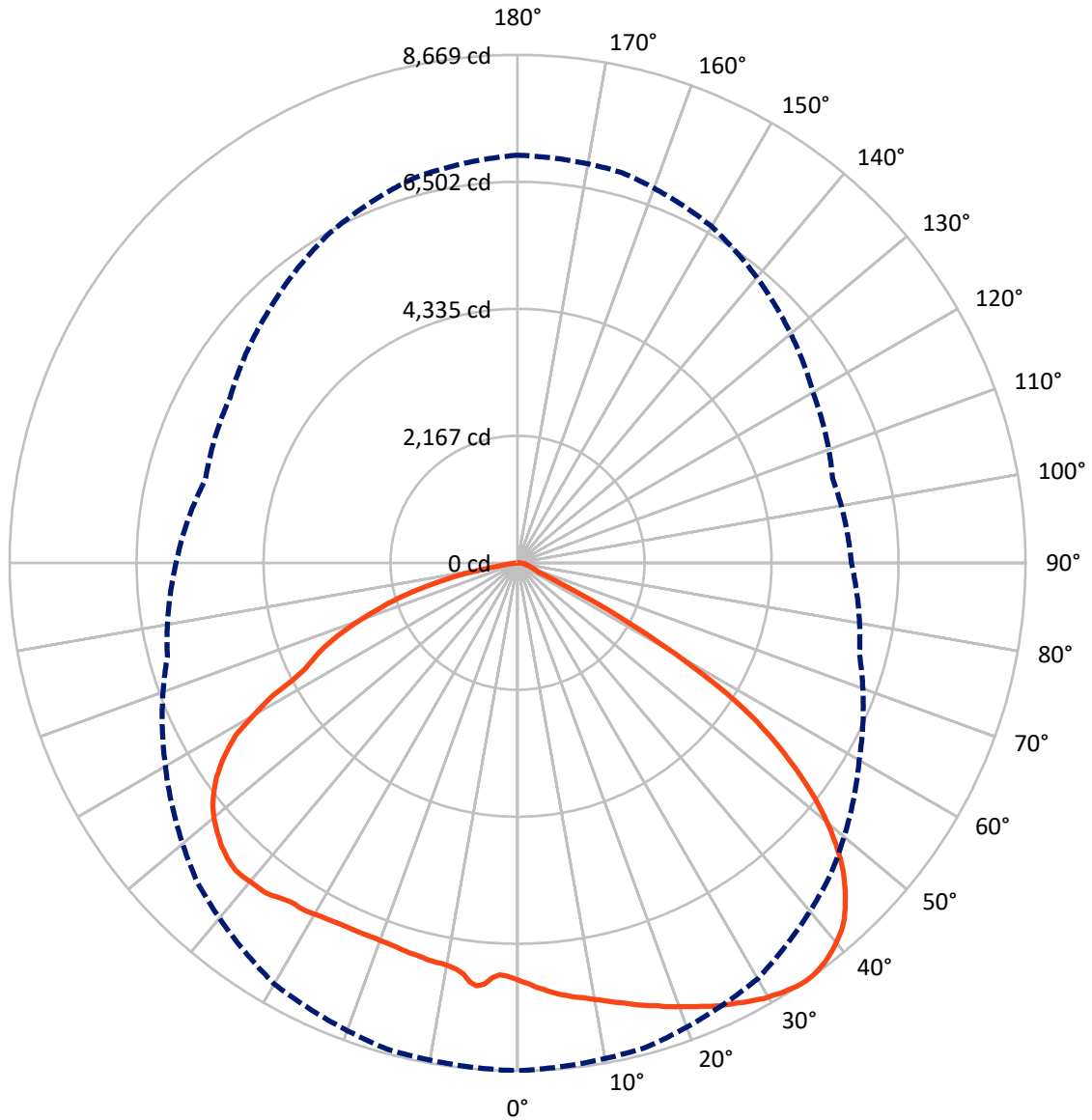
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 73.1 fc
 Type 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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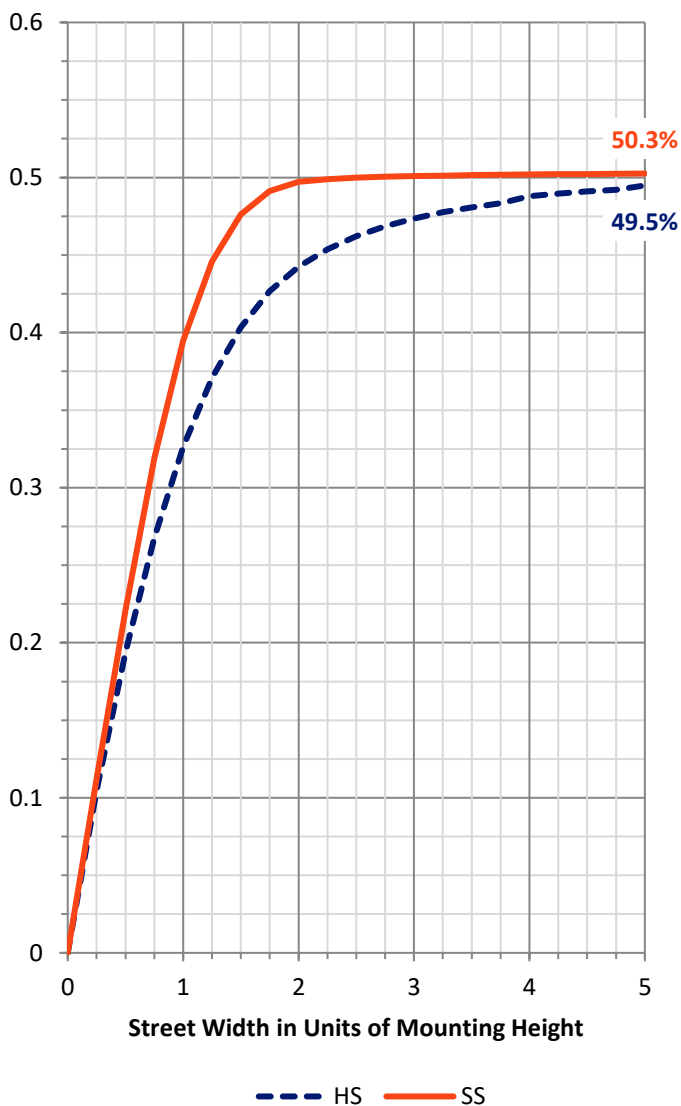
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12062.4	0.0	12062.4
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	12181.6	0.0	12181.6
	% Fixture	50.2	0.0	50.2
Total	Lumens	24244.0	0.0	24244.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	686.9	2.8
10°-20°	2024.4	8.4
20°-30°	3248.0	13.4
30°-40°	4250.6	17.5
40°-50°	4843.4	20.0
50°-60°	4612.1	19.0
60°-70°	2994.0	12.3
70°-80°	1327.0	5.5
80°-90°	257.5	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°	24244.0	100.0
0°-180°	24244.0	100.0

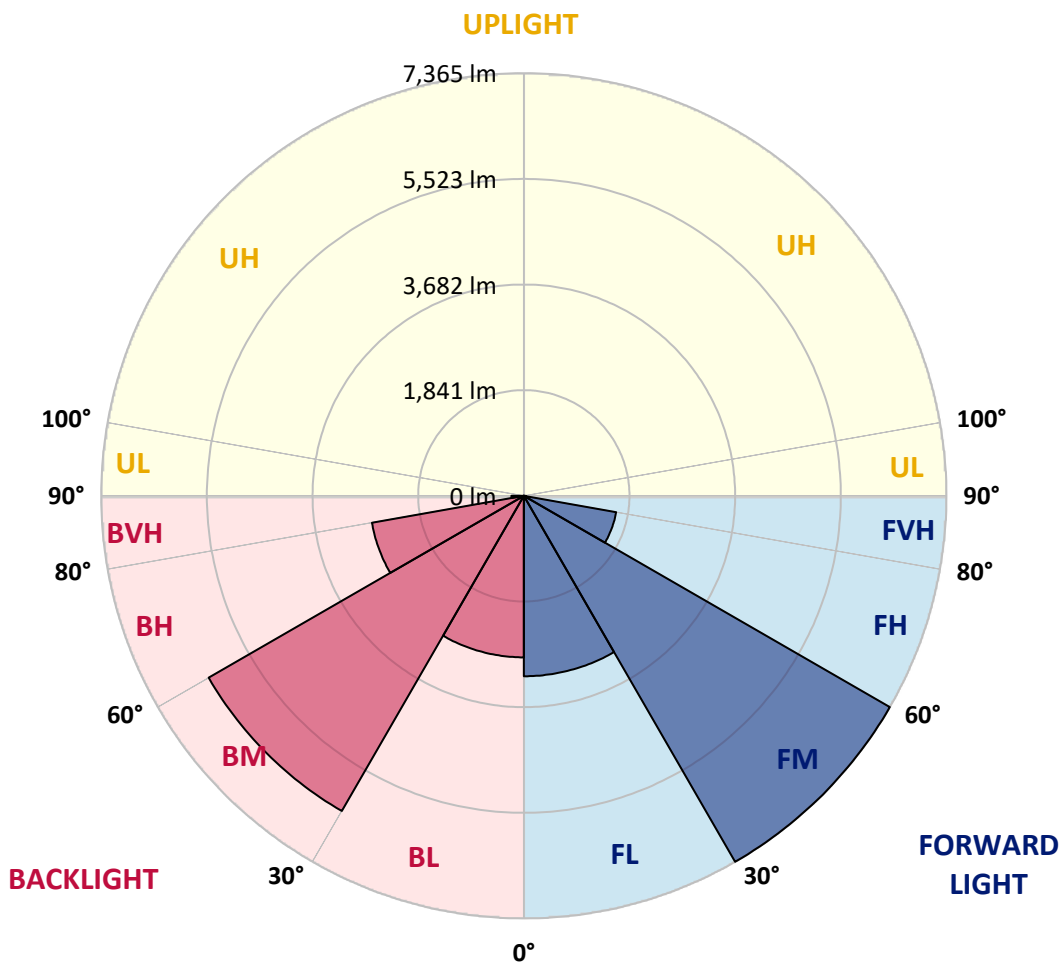


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3144.2	13.0			
FM (30°-60°)	7364.5	30.4			
FH (60°-80°)	1633.3	6.7			G1/1800
FVH (80°-90°)	39.5	0.2			G1/100
BL (0°-30°)	2815.1	11.6	B4/5000		
BM (30°-60°)	6341.6	26.2	B4/8500		
BH (60°-80°)	2687.7	11.1	B4/5000		G4/5000
BVH (80°-90°)	218.0	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-G4
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0
1°	7185.5	7181.2	7183.9	7166.4	7153.2	7147.5	7141.3	7127.9	7116.0	7107.1	7100.1
2°	7246.7	7235.1	7222.4	7202.2	7177.7	7154.0	7134.9	7110.4	7090.1	7080.2	7067.5
3°	7294.9	7289.3	7266.4	7234.6	7201.7	7155.9	7126.8	7091.0	7062.4	7043.3	7033.6
4°	7349.9	7334.0	7308.9	7268.5	7213.6	7157.8	7112.5	7070.2	7037.6	7035.2	7063.2
5°	7395.4	7380.3	7345.9	7297.9	7228.6	7160.5	7104.2	7049.2	7019.0	7069.4	7155.6
6°	7434.8	7416.2	7381.4	7323.2	7243.2	7152.4	7074.0	7015.0	7026.0	7153.2	7234.6
7°	7473.3	7448.8	7401.1	7339.9	7249.4	7150.5	7059.2	6994.2	7067.8	7218.9	7245.1
8°	7506.4	7482.5	7432.9	7353.1	7259.4	7145.1	7037.9	6976.4	7123.0	7225.9	7152.7
9°	7547.4	7520.5	7452.3	7376.0	7256.9	7131.9	7010.7	6959.7	7174.8	7170.2	7045.1
10°	7586.5	7549.8	7485.4	7386.3	7263.1	7112.2	6984.2	6968.9	7172.3	7054.0	6995.8
11°	7632.3	7596.7	7506.2	7397.1	7254.2	7102.0	6959.2	6989.6	7141.6	6970.8	6960.0
12°	7680.8	7640.4	7536.9	7415.1	7255.9	7085.6	6918.5	7010.9	7042.2	6928.7	6934.1
13°	7723.6	7680.0	7569.8	7421.6	7253.2	7062.7	6882.1	7025.5	6945.7	6891.0	6916.1
14°	7779.1	7727.4	7604.3	7435.6	7248.0	7038.9	6847.9	7034.6	6870.5	6859.2	6904.0
15°	7834.9	7779.9	7636.9	7450.9	7234.6	7010.1	6808.3	7005.5	6815.3	6832.5	6872.7
16°	7881.0	7824.7	7681.3	7463.1	7235.9	6992.3	6769.8	6954.6	6773.0	6803.4	6853.0
17°	7928.1	7872.6	7711.5	7486.8	7232.7	6967.8	6732.6	6874.6	6723.1	6773.0	6836.0
18°	7986.1	7911.7	7744.9	7505.1	7228.1	6940.3	6700.2	6764.9	6685.4	6735.0	6819.1
19°	8038.4	7963.2	7782.1	7524.2	7216.5	6906.4	6665.8	6665.5	6646.1	6707.0	6791.6
20°	8086.0	8000.1	7807.7	7535.8	7216.2	6882.1	6640.4	6581.1	6597.9	6672.5	6764.1
21°	8140.5	8049.4	7846.5	7545.8	7197.1	6857.1	6626.7	6517.0	6542.9	6635.0	6749.3
22°	8195.7	8090.9	7867.8	7557.4	7178.8	6827.2	6611.6	6453.7	6488.2	6602.2	6732.6
23°	8252.6	8146.9	7895.5	7559.5	7157.8	6784.6	6595.2	6390.1	6442.1	6568.5	6705.1
24°	8307.3	8194.4	7925.2	7566.5	7140.3	6747.4	6570.4	6333.2	6390.6	6537.5	6689.2
25°	8352.3	8238.6	7957.2	7562.2	7113.6	6687.3	6538.0	6276.1	6339.7	6503.8	6682.2
26°	8395.6	8283.8	7987.2	7558.7	7078.0	6630.2	6483.6	6198.3	6277.7	6462.0	6669.3
27°	8449.8	8325.1	8028.4	7564.9	7050.0	6577.1	6417.9	6132.5	6222.2	6428.6	6653.1
28°	8491.6	8363.0	8048.6	7552.3	7010.1	6511.1	6327.6	6054.9	6168.1	6400.1	6648.8
29°	8543.3	8410.7	8078.8	7555.0	6965.1	6448.0	6233.3	5979.2	6118.2	6363.4	6645.5
30°	8570.5	8454.4	8096.0	7547.9	6926.3	6369.4	6115.8	5901.3	6059.8	6331.6	6632.6
31°	8609.9	8482.7	8129.7	7555.8	6880.5	6293.1	6005.9	5823.4	5996.2	6303.3	6631.5
32°	8633.6	8516.6	8147.2	7551.4	6829.9	6216.0	5897.3	5737.5	5942.3	6273.2	6624.5
33°	8659.7	8534.1	8175.8	7546.9	6781.6	6129.3	5790.3	5653.7	5876.5	6244.9	6628.8
34°	8669.1	8553.5	8196.8	7546.1	6733.9	6041.2	5695.7	5566.6	5821.0	6217.7	6627.0
35°	8663.8	8557.6	8218.3	7542.3	6686.8	5956.3	5592.8	5479.9	5751.5	6184.8	6620.5
36°	8636.3	8554.1	8218.1	7529.1	6637.7	5859.5	5488.5	5393.1	5691.4	6165.4	6591.1
37°	8606.6	8526.6	8231.3	7532.3	6590.0	5763.9	5381.5	5303.9	5629.7	6129.0	6588.4
38°	8556.0	8490.2	8221.8	7537.7	6550.7	5674.2	5274.8	5215.6	5572.6	6089.9	6590.6
39°	8495.1	8446.0	8199.8	7536.1	6508.1	5578.2	5164.1	5132.8	5511.4	6040.6	6604.9
40°	8428.5	8384.6	8180.4	7539.6	6468.8	5479.6	5053.1	5050.1	5451.3	6006.4	6620.8
41°	8354.7	8315.6	8139.9	7539.6	6431.9	5389.9	4942.1	4967.4	5388.0	5995.4	6614.6
42°	8252.6	8231.0	8092.0	7535.3	6395.0	5295.8	4833.2	4872.0	5316.6	5976.5	6611.9
43°	8121.9	8132.9	8026.2	7531.5	6365.0	5207.2	4711.1	4776.6	5232.5	5937.7	6611.1
44°	7982.3	8010.9	7951.0	7524.5	6335.4	5123.4	4585.8	4682.6	5173.0	5894.6	6615.4



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CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	7829.5	7880.7	7871.8	7504.3	6309.3	5042.6	4462.2	4580.4	5113.4	5849.6	6615.1
46°	7665.7	7728.7	7770.0	7479.0	6285.6	4965.8	4343.9	4480.5	5053.9	5835.8	6599.2
47°	7467.9	7561.7	7667.9	7438.5	6270.5	4884.4	4211.6	4380.0	4988.1	5815.4	6563.4
48°	7254.2	7373.9	7532.0	7398.9	6247.3	4792.5	4086.3	4270.6	4910.3	5786.0	6521.3
49°	7025.5	7160.5	7384.1	7330.5	6231.1	4695.8	3953.7	4151.7	4833.5	5748.8	6473.9
50°	6776.2	6918.0	7221.9	7259.4	6220.1	4591.0	3824.6	4022.4	4773.4	5707.8	6418.9
51°	6503.3	6676.8	7037.9	7182.8	6206.6	4483.4	3692.1	3897.1	4708.4	5655.8	6359.4
52°	6215.0	6399.3	6835.0	7097.4	6200.4	4370.8	3554.9	3790.1	4629.0	5609.8	6302.8
53°	5903.2	6110.4	6601.9	6985.9	6185.0	4239.3	3424.0	3688.8	4543.0	5566.9	6237.9
54°	5580.7	5798.9	6337.8	6856.3	6166.2	4125.9	3294.3	3564.6	4453.5	5516.0	6167.8
55°	5238.5	5468.0	6057.3	6702.7	6151.9	4009.5	3153.4	3437.4	4355.2	5458.3	6091.5
56°	4871.5	5118.3	5756.3	6537.2	6127.1	3896.0	3015.2	3320.2	4273.5	5391.5	6008.3
57°	4456.2	4739.2	5424.6	6346.7	6089.9	3786.6	2878.3	3204.1	4179.5	5323.1	5916.7
58°	3957.5	4325.5	5074.4	6115.5	6030.9	3677.8	2736.0	3082.8	4090.0	5253.3	5811.3
59°	3396.5	3835.1	4697.4	5857.4	5964.9	3570.3	2594.5	2951.6	3992.8	5182.9	5686.8
60°	2815.5	3270.6	4288.1	5557.5	5876.8	3462.8	2447.8	2817.4	3893.1	5112.4	5548.3
61°	2268.4	2688.5	3837.0	5221.7	5781.9	3363.1	2307.8	2683.1	3791.5	5041.5	5381.3
62°	1721.6	2142.9	3295.2	4826.2	5663.7	3276.6	2176.9	2557.0	3696.1	4944.8	5130.4
63°	1174.9	1597.6	2730.6	4401.3	5524.6	3199.2	2036.0	2422.8	3606.6	4839.4	4879.8
64°	761.7	1052.4	2167.4	3959.1	5358.1	3135.9	1897.3	2297.9	3511.8	4719.8	4623.8
65°	500.6	657.2	1604.0	3441.2	5164.6	3092.5	1764.8	2174.5	3414.5	4597.4	4189.5
66°	385.3	432.9	1040.7	2865.4	4932.9	3072.3	1633.7	2051.5	3310.0	4433.3	3873.9
67°	349.6	339.8	636.1	2274.1	4647.8	3061.3	1508.6	1928.3	3207.3	4169.5	3688.8
68°	325.0	308.9	402.8	1682.4	4295.4	3055.6	1382.4	1809.5	3086.3	3842.7	3534.2
69°	300.8	284.4	315.1	1090.8	3899.8	3045.9	1260.9	1693.5	2967.0	3589.1	3381.9
70°	277.1	261.2	283.6	635.6	3396.2	3043.8	1142.7	1582.4	2852.7	3429.6	3235.6
71°	254.9	241.4	260.4	375.2	2731.7	3059.7	1028.3	1470.0	2723.6	3274.9	3100.9
72°	237.2	221.7	237.3	272.0	2022.4	3062.6	924.9	1359.8	2517.6	3105.2	2959.1
73°	219.6	202.1	214.1	241.4	1312.3	2990.7	822.2	1246.4	2323.9	2929.2	2809.1
74°	202.0	184.7	191.0	212.0	602.2	2782.1	724.0	1136.4	2195.7	2763.3	2640.6
75°	183.8	166.0	169.2	182.7	334.1	2515.4	631.5	1033.1	2088.3	2606.4	2464.2
76°	168.5	149.1	144.3	162.7	281.5	2228.7	539.1	930.3	1970.1	2453.5	2251.8
77°	157.0	136.0	125.4	147.2	232.1	1941.7	447.1	833.4	1852.9	2311.3	2007.0
78°	149.6	124.9	109.8	129.5	182.8	1654.7	370.1	716.5	1744.6	2174.1	1785.7
79°	143.5	118.0	98.6	107.5	165.7	1262.4	300.8	624.8	1629.5	2042.5	1580.9
80°	135.6	112.1	89.8	87.6	165.5	953.9	238.6	533.2	1516.8	1872.1	1421.9
81°	126.5	104.7	82.9	74.3	153.9	667.1	186.5	441.7	1409.1	1693.5	1258.5
82°	115.6	96.4	76.6	64.9	131.7	434.0	141.7	370.8	1292.5	1511.4	897.0
83°	95.5	83.8	69.9	56.6	109.1	255.7	102.6	303.9	1176.7	1372.5	535.6
84°	75.5	68.6	59.1	49.2	74.9	191.0	78.5	238.4	1016.9	1246.7	180.7
85°	54.2	50.9	44.5	41.9	44.1	126.7	54.3	180.2	818.8	996.1	104.0
86°	37.9	38.4	32.4	31.2	28.4	62.4	30.4	125.7	655.2	745.5	28.6
87°	25.8	26.3	22.2	21.4	19.2	34.2	17.4	85.1	491.7	494.9	14.0
88°	13.9	14.1	12.0	11.7	10.1	22.8	7.9	44.5	328.1	244.2	4.8
89°	1.9	1.9	1.8	2.0	2.1	11.9	2.6	4.9	164.6	1.8	1.1



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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: P1449855
 CATALOG NUMBER: TWC150_T2_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: P1449855
CATALOG NUMBER: TWC150_T2_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: P1449855

CATALOG NUMBER: TWC150_T2_150W_4000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0	7140.0
1°	7093.4	7092.8	7098.5	7093.6	7104.4	7112.5	7121.7	7142.4	7153.7	7161.0	7170.4
2°	7051.1	7054.8	7052.4	7057.3	7081.8	7093.9	7111.4	7136.2	7165.9	7182.3	7205.7
3°	7030.6	7038.9	7027.4	7029.0	7039.2	7070.2	7089.6	7126.2	7164.0	7202.2	7245.9
4°	7097.1	7095.5	7073.2	7036.3	7013.6	7038.9	7071.0	7121.7	7179.3	7223.8	7277.1
5°	7203.9	7209.2	7175.8	7116.0	7026.0	7009.3	7051.1	7106.6	7175.8	7247.2	7308.7
6°	7254.5	7255.9	7254.0	7192.5	7084.2	6992.1	7026.0	7089.6	7174.8	7263.7	7332.4
7°	7213.6	7199.8	7220.8	7228.4	7155.1	6998.8	7000.1	7076.7	7175.8	7275.5	7358.0
8°	7087.2	7073.7	7097.7	7181.5	7197.1	7026.3	6971.0	7060.0	7177.4	7284.4	7375.2
9°	7017.9	7017.9	7018.7	7058.6	7185.3	7076.7	6935.7	7031.7	7161.5	7287.4	7393.5
10°	6987.2	6985.1	6983.2	6981.8	7098.5	7111.2	6913.9	7010.4	7155.9	7294.7	7413.8
11°	6961.1	6963.8	6956.5	6945.4	6996.1	7116.8	6893.7	6984.8	7135.7	7291.2	7422.4
12°	6956.0	6957.6	6938.4	6907.7	6922.8	7085.6	6882.1	6947.1	7126.2	7290.9	7441.8
13°	6940.3	6947.3	6929.8	6886.4	6880.2	7008.2	6889.7	6912.3	7108.7	7290.1	7460.1
14°	6923.4	6929.3	6901.0	6869.2	6836.0	6908.0	6907.2	6884.0	7093.9	7290.9	7477.9
15°	6906.4	6911.8	6884.5	6846.0	6795.9	6821.2	6905.6	6854.1	7071.6	7297.9	7503.5
16°	6894.2	6906.1	6875.4	6812.6	6766.8	6754.7	6911.2	6805.3	7051.1	7303.6	7523.7
17°	6882.7	6892.6	6860.0	6792.1	6725.8	6707.2	6883.5	6768.7	7027.4	7300.9	7549.3
18°	6863.5	6873.8	6835.2	6763.8	6684.6	6652.0	6835.2	6723.1	7015.5	7300.9	7576.0
19°	6844.1	6866.8	6823.1	6744.2	6639.9	6601.6	6767.6	6687.6	6993.4	7296.5	7599.4
20°	6840.4	6861.4	6804.5	6711.3	6611.6	6552.9	6676.8	6635.0	6969.4	7293.9	7605.3
21°	6834.4	6854.1	6794.6	6683.0	6574.7	6504.9	6574.7	6593.3	6951.6	7294.7	7623.7
22°	6827.2	6852.5	6787.5	6660.1	6530.5	6445.9	6473.4	6548.0	6918.5	7279.6	7635.8
23°	6828.0	6859.5	6780.3	6642.3	6487.1	6374.7	6387.4	6509.7	6885.9	7269.6	7651.1
24°	6821.8	6859.5	6777.6	6610.0	6444.3	6315.5	6311.4	6470.1	6840.9	7248.9	7663.8
25°	6818.3	6862.2	6774.9	6596.8	6408.7	6264.0	6236.5	6447.5	6792.7	7226.8	7669.2
26°	6827.2	6866.8	6764.9	6575.8	6368.3	6198.0	6164.8	6425.9	6747.4	7202.2	7678.1
27°	6824.5	6871.6	6767.6	6562.8	6327.9	6129.8	6088.9	6394.7	6687.0	7184.7	7684.6
28°	6830.1	6885.1	6767.6	6541.5	6282.9	6060.3	6022.6	6363.7	6625.1	7145.9	7689.1
29°	6845.2	6898.3	6770.6	6517.8	6245.7	6003.2	5949.0	6320.0	6560.1	7118.4	7698.8
30°	6848.2	6913.1	6781.3	6502.7	6203.6	5932.8	5864.4	6250.0	6488.2	7079.6	7713.1
31°	6876.7	6936.6	6785.4	6497.1	6164.0	5871.1	5775.2	6171.0	6412.2	7047.6	7719.9
32°	6887.5	6956.0	6804.5	6479.3	6119.8	5799.5	5693.8	6073.0	6343.5	7018.2	7714.5
33°	6893.7	6961.1	6807.2	6474.7	6068.4	5731.0	5598.2	5954.1	6265.3	6976.4	7729.8
34°	6892.9	6956.8	6802.6	6467.4	6035.8	5661.8	5515.2	5827.2	6187.7	6940.9	7722.6
35°	6894.2	6982.1	6795.6	6455.8	5987.3	5596.0	5424.4	5698.1	6106.6	6904.5	7733.3
36°	6921.7	7015.8	6801.3	6432.9	5947.7	5525.4	5329.3	5566.9	6026.1	6883.2	7738.7
37°	6957.0	7058.9	6829.3	6401.7	5908.6	5454.8	5230.6	5454.8	5945.8	6843.3	7750.0
38°	6982.4	7085.8	6858.4	6394.7	5866.8	5380.5	5139.0	5336.0	5869.2	6823.9	7750.3
39°	6993.7	7090.1	6877.5	6390.1	5814.5	5302.3	5047.4	5223.4	5789.2	6794.8	7753.0
40°	6999.3	7096.9	6873.8	6379.3	5756.1	5230.9	4955.8	5105.1	5703.3	6768.1	7746.8
41°	7009.3	7108.2	6871.3	6368.8	5710.5	5161.7	4842.9	4995.4	5618.9	6737.7	7754.9
42°	7019.0	7121.7	6894.0	6352.4	5670.4	5092.4	4733.0	4880.9	5535.1	6721.8	7737.9
43°	7029.5	7120.1	6898.3	6351.6	5639.7	5022.9	4617.6	4759.6	5454.8	6712.1	7724.4
44°	7014.4	7096.3	6897.2	6351.3	5606.0	4932.4	4506.6	4638.4	5365.1	6707.2	7693.5



REPORT NUMBER: P1449855

CATALOG NUMBER: TWC150_T2_150W_4000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	6985.9	7065.6	6874.0	6344.3	5545.9	4834.5	4395.1	4515.8	5275.6	6701.1	7655.2
46°	6943.3	7021.2	6834.7	6333.8	5493.6	4738.3	4284.0	4392.6	5194.3	6689.5	7604.0
47°	6899.6	6980.5	6787.5	6311.4	5446.7	4645.9	4174.1	4262.5	5107.5	6677.1	7540.7
48°	6851.1	6919.6	6741.5	6281.8	5405.2	4573.4	4061.2	4138.8	5028.6	6670.6	7462.3
49°	6793.5	6862.5	6684.3	6241.6	5354.3	4485.1	3947.0	4003.3	4946.1	6660.6	7387.1
50°	6731.8	6798.1	6632.6	6196.1	5299.4	4393.7	3828.9	3869.1	4860.7	6646.4	7294.9
51°	6663.1	6724.2	6571.4	6132.0	5236.3	4304.8	3709.0	3740.3	4783.3	6630.2	7189.0
52°	6595.4	6646.9	6500.8	6078.1	5178.6	4218.0	3578.1	3606.9	4703.0	6611.6	7051.3
53°	6503.8	6540.2	6423.8	6012.1	5133.4	4139.9	3445.0	3474.3	4630.3	6579.5	6905.6
54°	6406.0	6431.3	6343.5	5947.9	5088.4	4047.2	3311.9	3335.8	4567.0	6532.1	6731.2
55°	6294.2	6308.5	6237.1	5875.4	5043.4	3949.1	3193.0	3195.5	4506.9	6476.1	6538.8
56°	6166.5	6164.0	6122.0	5804.3	4983.0	3835.7	3066.9	3053.2	4460.3	6391.2	6324.6
57°	6020.4	6011.2	5987.0	5716.2	4916.7	3726.5	2933.0	2910.4	4429.0	6309.0	6067.8
58°	5857.1	5828.6	5836.1	5634.6	4854.5	3612.6	2799.1	2767.6	4390.5	6208.2	5793.0
59°	5681.7	5639.9	5673.4	5533.8	4795.2	3506.1	2669.6	2627.7	4359.2	6089.7	5471.8
60°	5489.0	5348.4	5494.2	5429.2	4716.3	3397.5	2541.5	2491.3	4320.2	5956.5	5121.8
61°	5140.6	5056.8	5188.3	5299.9	4634.3	3293.3	2414.1	2355.6	4282.4	5793.3	4738.9
62°	4792.5	4764.5	4882.8	5130.7	4547.8	3182.0	2281.9	2219.8	4266.5	5612.5	4318.8
63°	4444.4	4310.7	4576.1	4961.5	4440.9	3064.5	2143.9	2080.0	4249.3	5384.0	3861.5
64°	4089.8	4043.7	4157.4	4788.7	4336.9	2957.0	2006.7	1939.5	4241.2	5128.2	3356.3
65°	3900.1	3888.5	3908.7	4454.3	4217.0	2845.2	1870.0	1808.6	4222.9	4822.7	2785.3
66°	3757.0	3743.5	3743.5	4049.9	4095.2	2728.8	1738.0	1679.6	4212.1	4462.7	2209.1
67°	3613.6	3581.9	3609.9	3766.2	3954.2	2612.7	1609.0	1550.8	4204.3	4054.2	1632.8
68°	3447.1	3394.3	3468.4	3580.0	3779.1	2493.6	1481.7	1413.2	4157.1	3550.9	1056.4
69°	3266.1	3184.9	3304.9	3400.2	3514.2	2369.7	1357.5	1280.1	4054.2	2965.9	635.1
70°	3076.9	2976.9	3141.6	3231.6	3273.9	2251.4	1237.8	1151.6	3874.7	2289.6	387.6
71°	2862.7	2741.4	2951.9	3075.3	3128.9	2131.7	1127.6	1024.3	3613.9	1610.7	288.6
72°	2644.9	2527.8	2753.8	2943.5	3006.3	2016.0	1024.9	906.5	3369.8	931.7	257.1
73°	2436.8	2328.2	2541.1	2820.1	2861.3	1890.4	919.1	794.1	3171.2	509.3	232.3
74°	2217.8	2106.1	2321.9	2693.6	2719.9	1708.4	822.5	694.0	2853.8	302.3	207.7
75°	2001.8	1879.8	2100.6	2561.9	2576.4	1559.5	729.8	596.1	2487.8	257.9	183.1
76°	1770.1	1624.7	1887.1	2416.1	2433.8	1449.8	649.1	507.3	1978.4	216.4	156.8
77°	1534.5	1381.1	1665.9	2231.9	2286.2	1344.3	568.5	433.6	1464.1	174.9	134.5
78°	1319.7	1147.0	1466.8	2008.2	2127.8	1233.9	488.2	371.8	949.7	159.8	113.6
79°	1087.6	863.3	1259.5	1768.2	1974.7	1130.5	420.5	319.5	530.7	152.4	94.7
80°	785.5	579.5	1035.9	1549.0	1812.4	1033.4	345.2	266.1	286.9	139.3	80.6
81°	483.5	297.8	681.7	1394.7	1635.7	933.8	280.2	216.9	233.1	113.7	71.5
82°	187.8	97.5	329.2	1272.6	1470.2	835.4	228.0	167.7	181.7	90.1	63.6
83°	137.3	76.9	232.2	893.7	1285.9	733.8	178.8	118.5	130.4	65.2	56.7
84°	86.9	56.3	135.2	514.8	1144.7	622.3	136.5	85.0	126.1	45.6	50.1
85°	37.1	35.8	39.0	136.3	1011.2	510.8	99.5	59.1	109.6	35.5	41.4
86°	22.7	21.2	24.6	75.6	632.7	399.6	72.0	38.2	81.0	27.9	28.5
87°	10.9	10.4	11.4	14.9	258.7	298.0	44.5	26.0	48.0	18.6	17.7
88°	4.0	4.0	4.2	4.3	128.1	198.3	17.1	13.9	32.0	9.3	6.8
89°	0.9	0.8	0.9	1.1	1.7	98.5	2.4	1.8	16.4	1.8	2.0



REPORT NUMBER: P1449855
 CATALOG NUMBER: TWC150_T2_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: P1449855
 CATALOG NUMBER: TWC150_T2_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: P1449855
CATALOG NUMBER: TWC150_T2_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: P1449855
 CATALOG NUMBER: TWC150_T2_150W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	7140.0	7140.0	7140.0
1°	7181.8	7186.9	7185.5
2°	7226.8	7233.8	7246.7
3°	7265.6	7286.0	7294.9
4°	7314.3	7334.8	7349.9
5°	7351.8	7379.0	7395.4
6°	7384.7	7420.2	7434.8
7°	7416.5	7464.7	7473.3
8°	7448.5	7499.4	7506.4
9°	7476.0	7528.5	7547.4
10°	7501.3	7560.9	7586.5
11°	7531.8	7605.6	7632.3
12°	7564.4	7656.8	7680.8
13°	7605.9	7700.7	7723.6
14°	7642.3	7756.5	7779.1
15°	7684.6	7798.3	7834.9
16°	7723.9	7848.7	7881.0
17°	7756.8	7886.4	7928.1
18°	7793.1	7940.8	7986.1
19°	7830.3	7989.0	8038.4
20°	7868.9	8034.8	8086.0
21°	7909.0	8078.8	8140.5
22°	7940.0	8138.0	8195.7
23°	7969.1	8187.9	8252.6
24°	8013.8	8237.2	8307.3
25°	8044.5	8294.3	8352.3
26°	8084.4	8334.8	8395.6
27°	8121.1	8370.0	8449.8
28°	8152.3	8420.4	8491.6
29°	8172.3	8468.1	8543.3
30°	8215.1	8505.3	8570.5
31°	8242.9	8537.1	8609.9
32°	8269.0	8564.9	8633.6
33°	8294.1	8583.7	8659.7
34°	<i>8300.8</i>	<i>8593.4</i>	<i>8669.1</i>
35°	8324.2	8595.3	8663.8
36°	8333.1	8583.7	8636.3
37°	8321.0	8558.7	8606.6
38°	8314.3	8522.8	8556.0
39°	8288.7	8462.2	8495.1
40°	8249.6	8395.9	8428.5
41°	8193.0	8328.0	8354.7
42°	8133.7	8231.5	8252.6
43°	8058.8	8132.7	8121.9
44°	7974.5	8005.2	7982.3



REPORT NUMBER: P1449855
 CATALOG NUMBER: TWC150_T2_150W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	7878.3	7853.8	7829.5
46°	7764.6	7693.2	7665.7
47°	7622.6	7519.7	7467.9
48°	7476.0	7316.5	7254.2
49°	7300.3	7085.6	7025.5
50°	7108.7	6847.9	6776.2
51°	6896.4	6596.5	6503.3
52°	6661.7	6313.8	6215.0
53°	6418.4	6008.6	5903.2
54°	6134.7	5694.9	5580.7
55°	5831.8	5360.0	5238.5
56°	5506.6	4993.0	4871.5
57°	5160.3	4607.9	4456.2
58°	4784.7	4157.9	3957.5
59°	4391.6	3628.5	3396.5
60°	3938.3	3055.3	2815.5
61°	3425.8	2453.2	2268.4
62°	2843.8	1903.9	1721.6
63°	2282.5	1355.3	1174.9
64°	1721.2	899.3	761.7
65°	1160.1	566.1	500.6
66°	731.6	399.8	385.3
67°	453.0	339.9	349.6
68°	333.1	313.1	325.0
69°	294.1	289.8	300.8
70°	269.0	266.8	277.1
71°	247.7	246.9	254.9
72°	225.5	227.0	237.2
73°	203.3	207.2	219.6
74°	185.9	190.0	202.0
75°	165.4	171.8	183.8
76°	143.1	155.3	168.5
77°	124.5	142.6	157.0
78°	111.3	133.4	149.6
79°	101.1	126.6	143.5
80°	93.4	120.2	135.6
81°	87.1	112.1	126.5
82°	80.1	102.9	115.6
83°	72.0	88.0	95.5
84°	58.0	71.4	75.5
85°	45.5	52.9	54.2
86°	29.6	38.2	37.9
87°	20.4	26.0	25.8
88°	11.2	13.9	13.9
89°	2.0	1.8	1.9



REPORT NUMBER: P1449855
CATALOG NUMBER: TWC150_T2_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: P1449855
CATALOG NUMBER: TWC150_T2_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: P1449855
CATALOG NUMBER: TWC150_T2_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

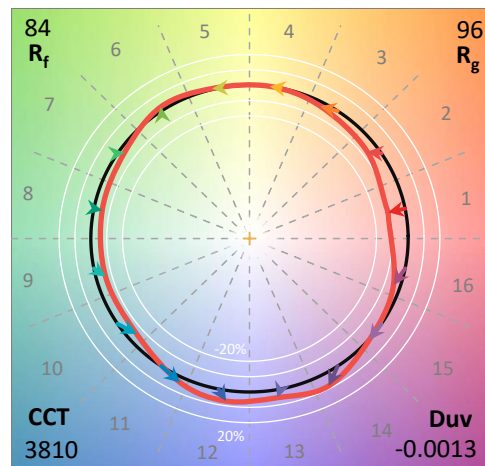
Test Information

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

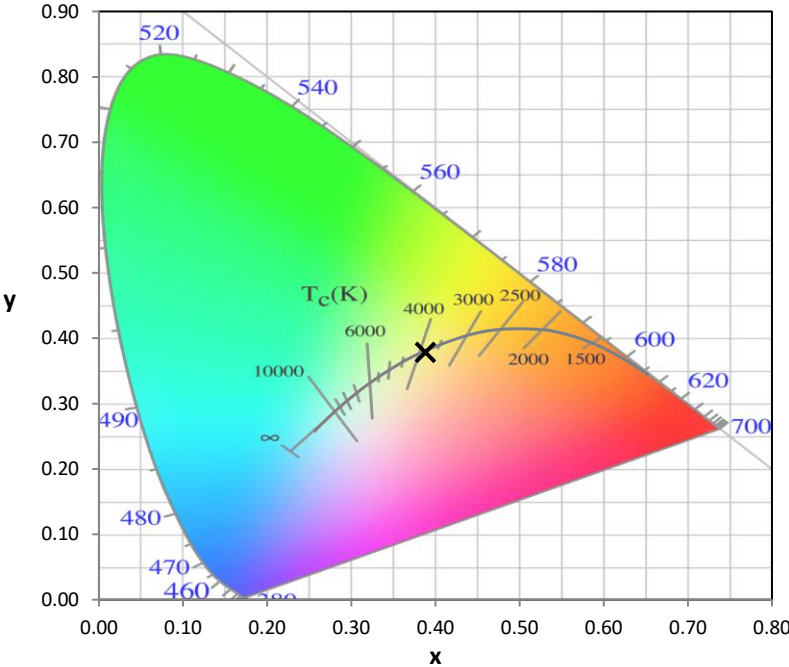
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

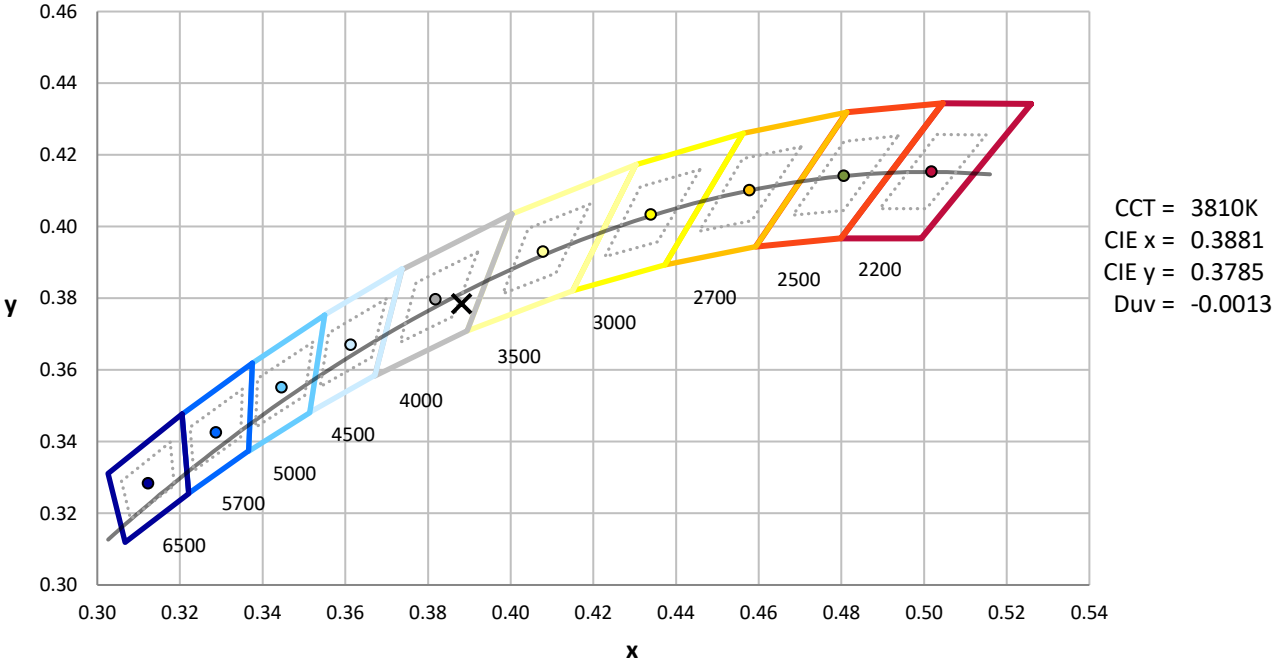
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



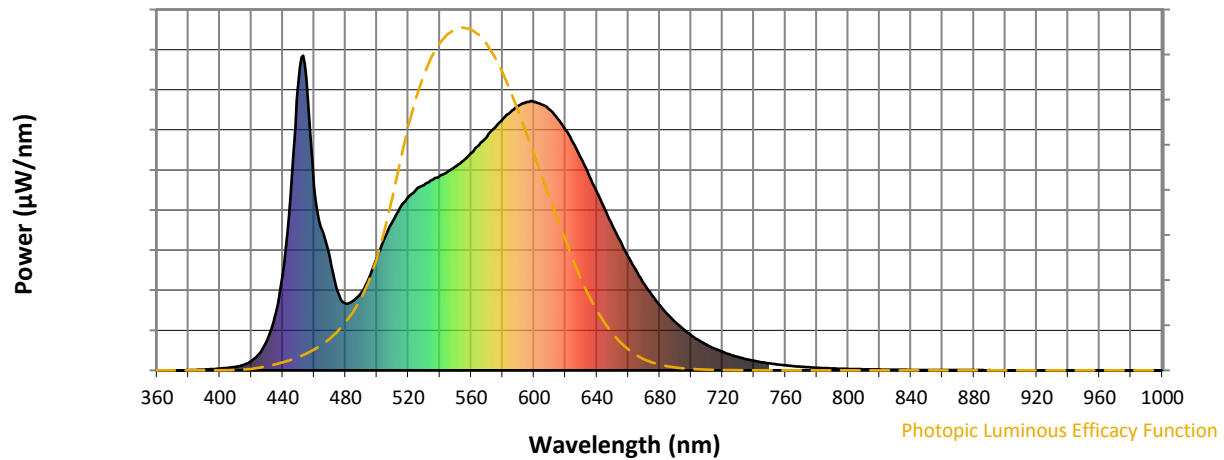
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

Photopic Flux vs. Wavelength

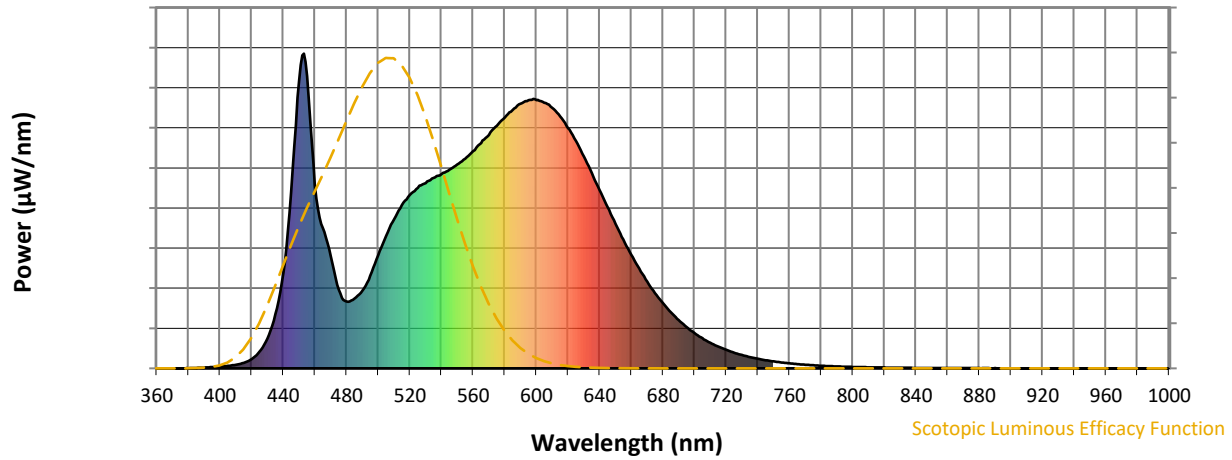


Photopic Lumens: NR

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



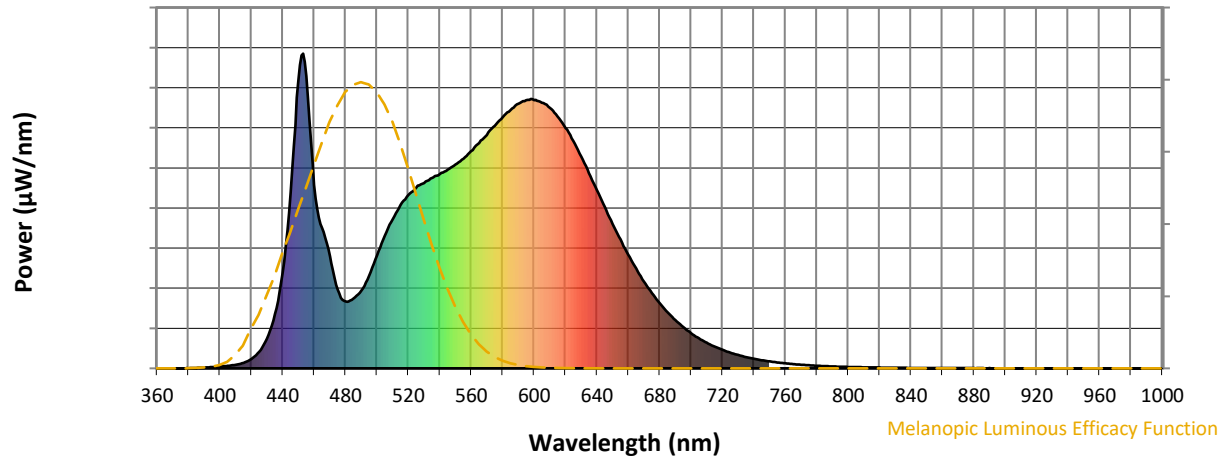
Scotopic Lumens: NR

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



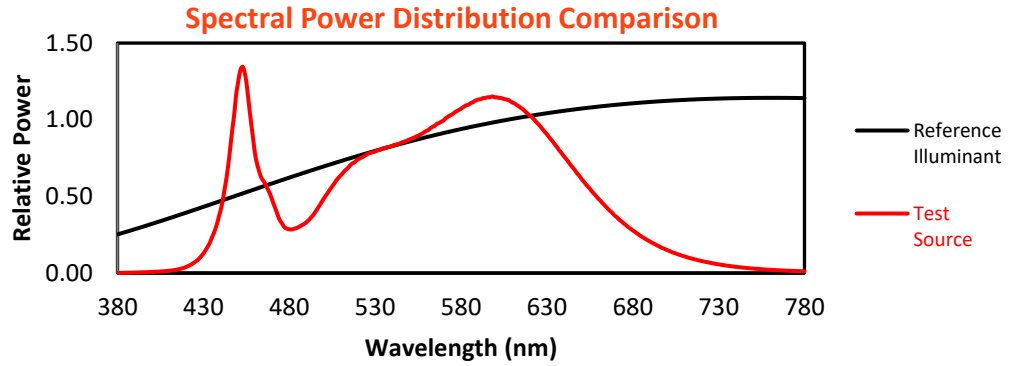
Melanopic Lumens: NR

M/P: 3.35

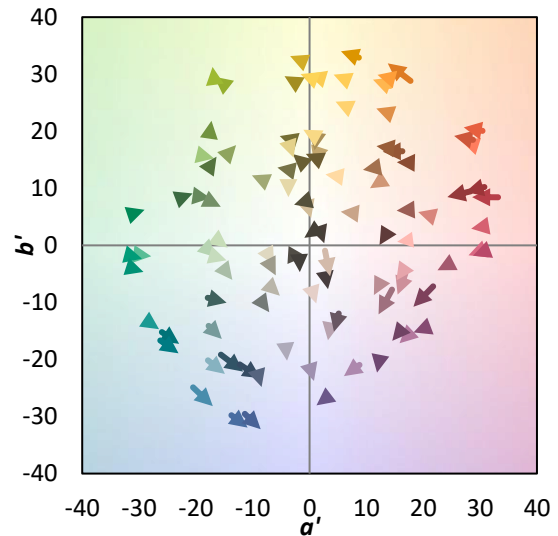
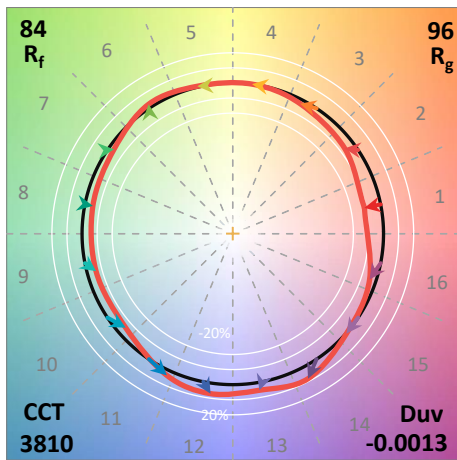
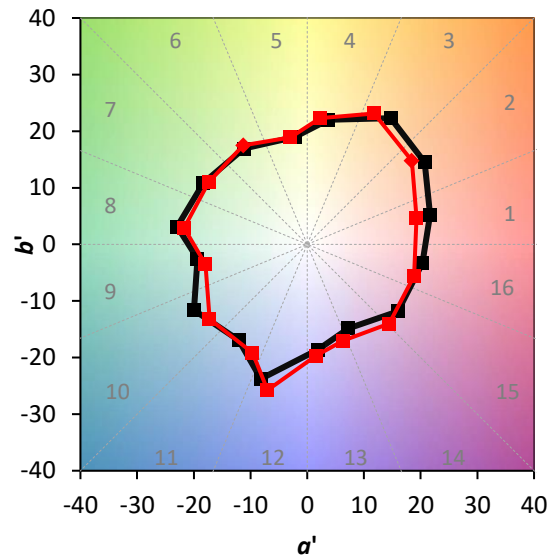
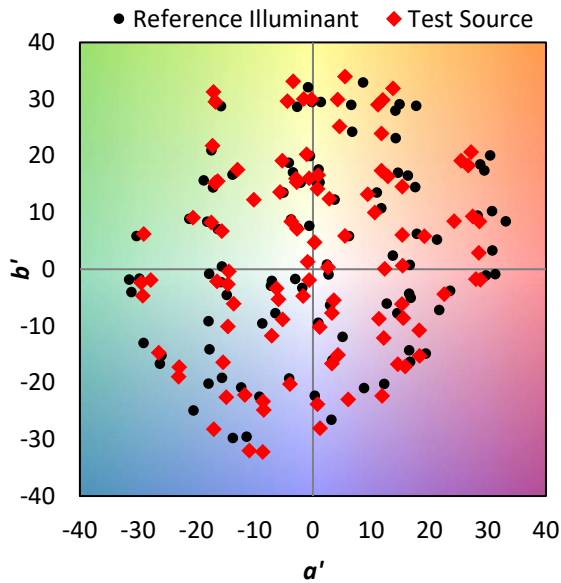
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	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 $R_a = 84.5$
 $R_9 = 15.9$

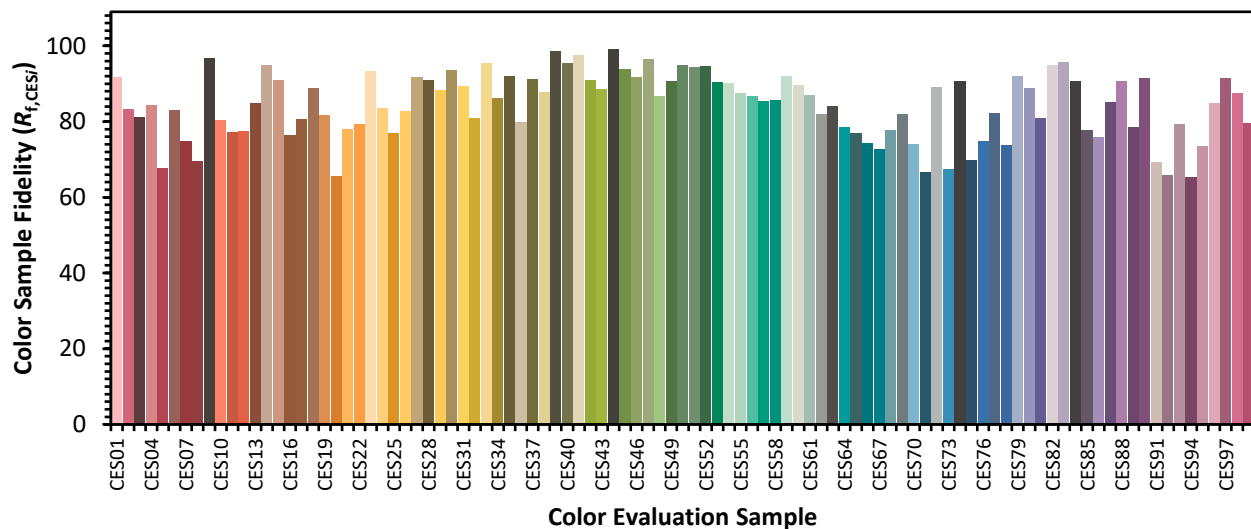


Color Vector Graphics

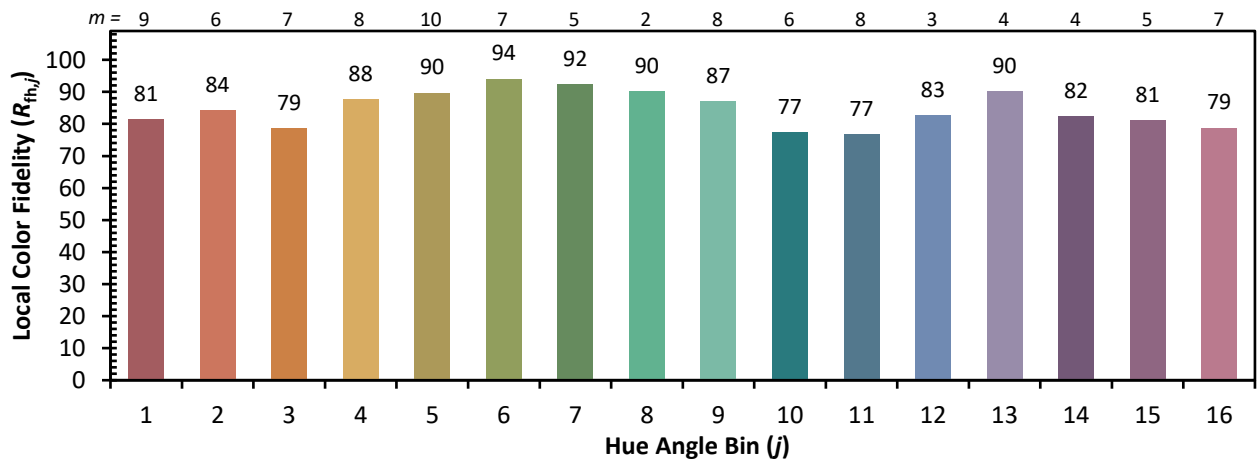
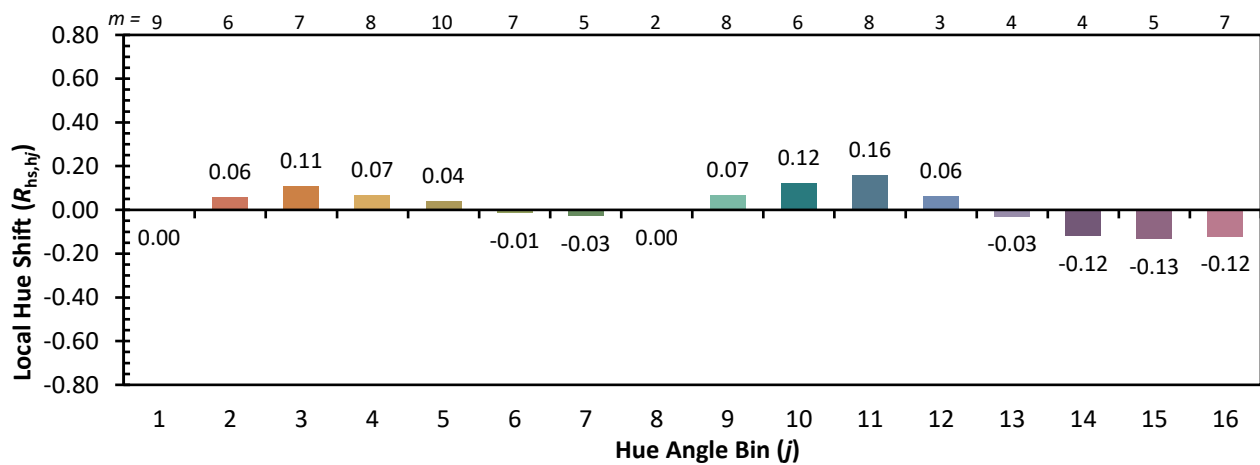
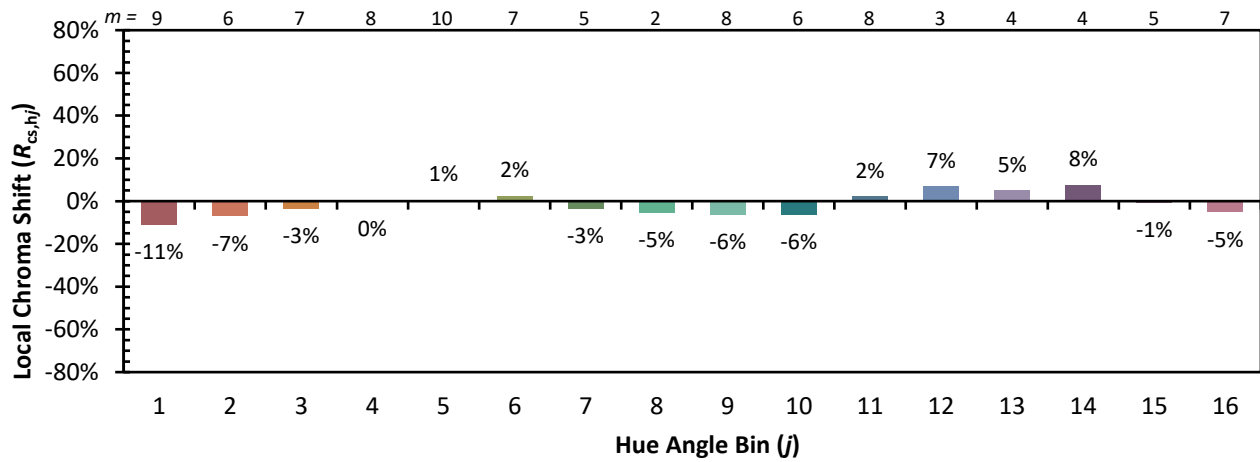


Individual Sample Fidelity Index ($R_{f,i}$)

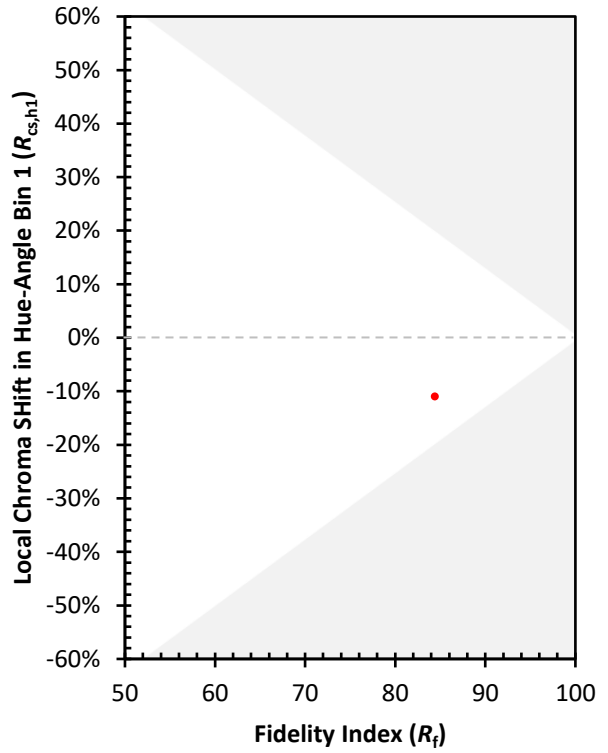
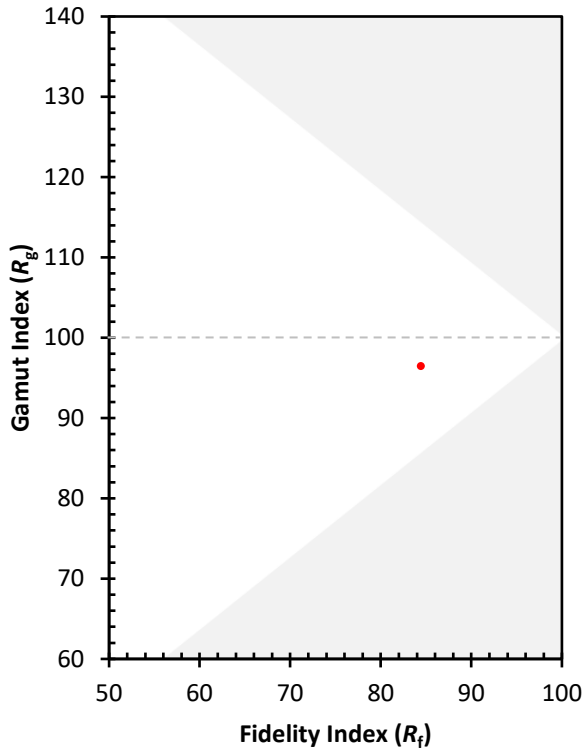
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82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