

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: STREETWORKS

Report Number: P257780

Luminaire Tested: **ARCH-M-AF48-160-D-U-T2U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P257780  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1802-616-1)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-160-D-U-T2U  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 1030mA LIGHT ENGINES WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18869.3 lumens  
Efficiency: N/A  
Efficacy: 117.2 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 161  
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: 28.75 FT

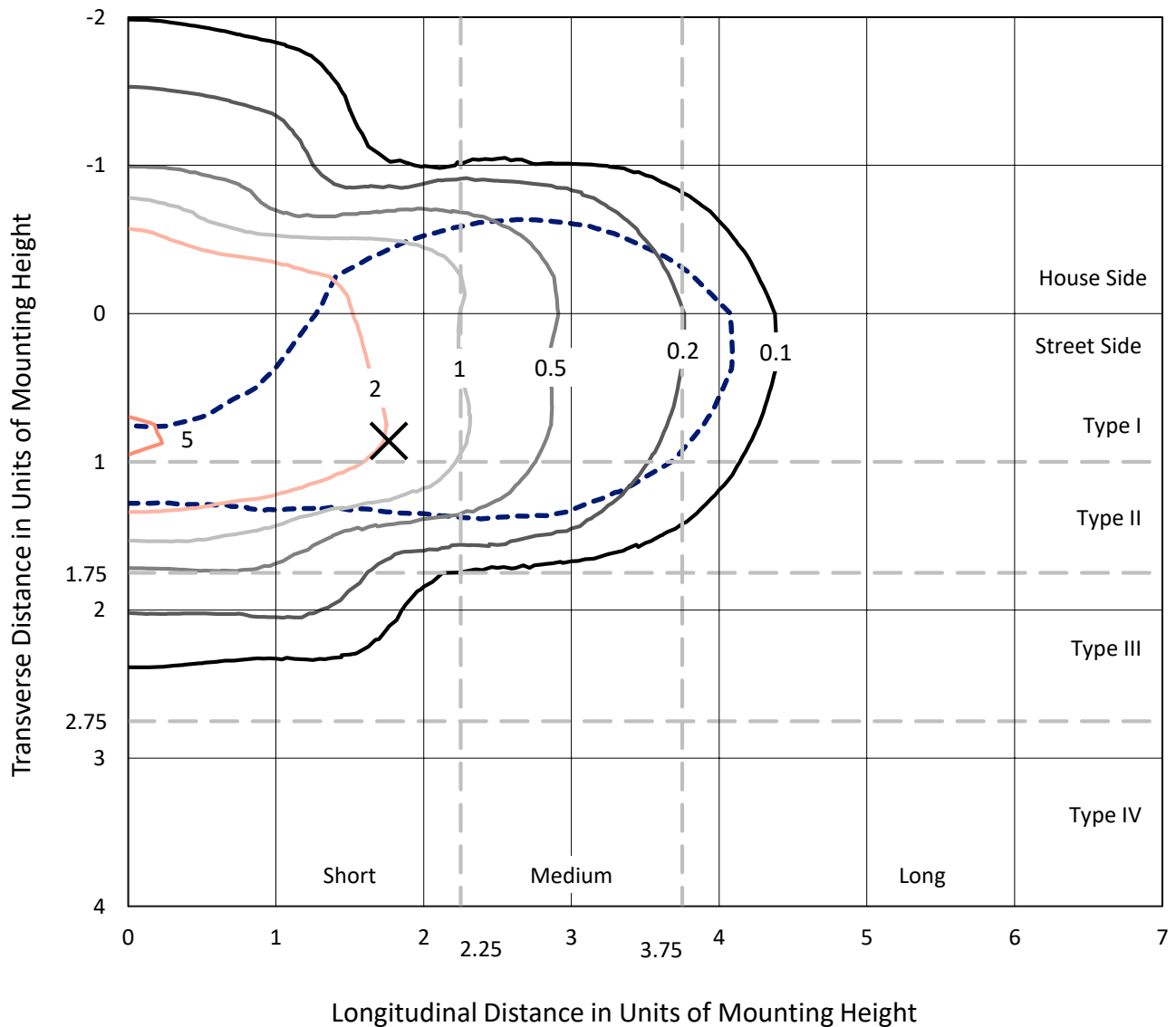


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

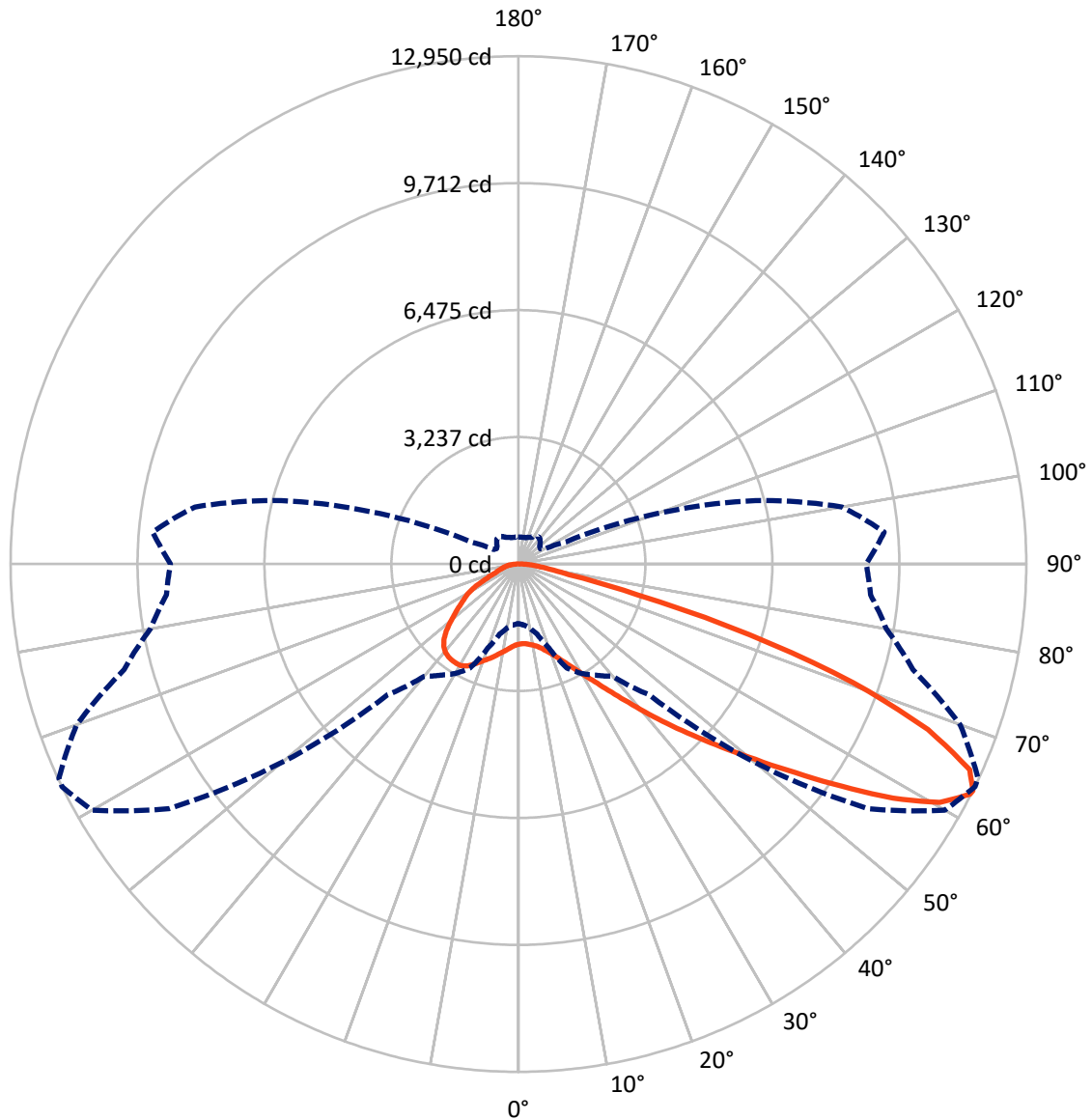


Based on 25 foot mounting height. Maximum calculated value = 5.3 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral      - - - Horizontal Cone Through 63-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5546.9	0.0	5546.9
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	13322.4	0.0	13322.4
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	18869.3	0.0	18869.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	204.0	1.1
10°-20°	679.6	3.6
20°-30°	1275.7	6.8
30°-40°	2138.1	11.3
40°-50°	3587.3	19.0
50°-60°	4547.6	24.1
60°-70°	4011.7	21.3
70°-80°	2070.9	11.0
80°-90°	354.4	1.9
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°	18869.3	100.0
0°-180°	18869.3	100.0



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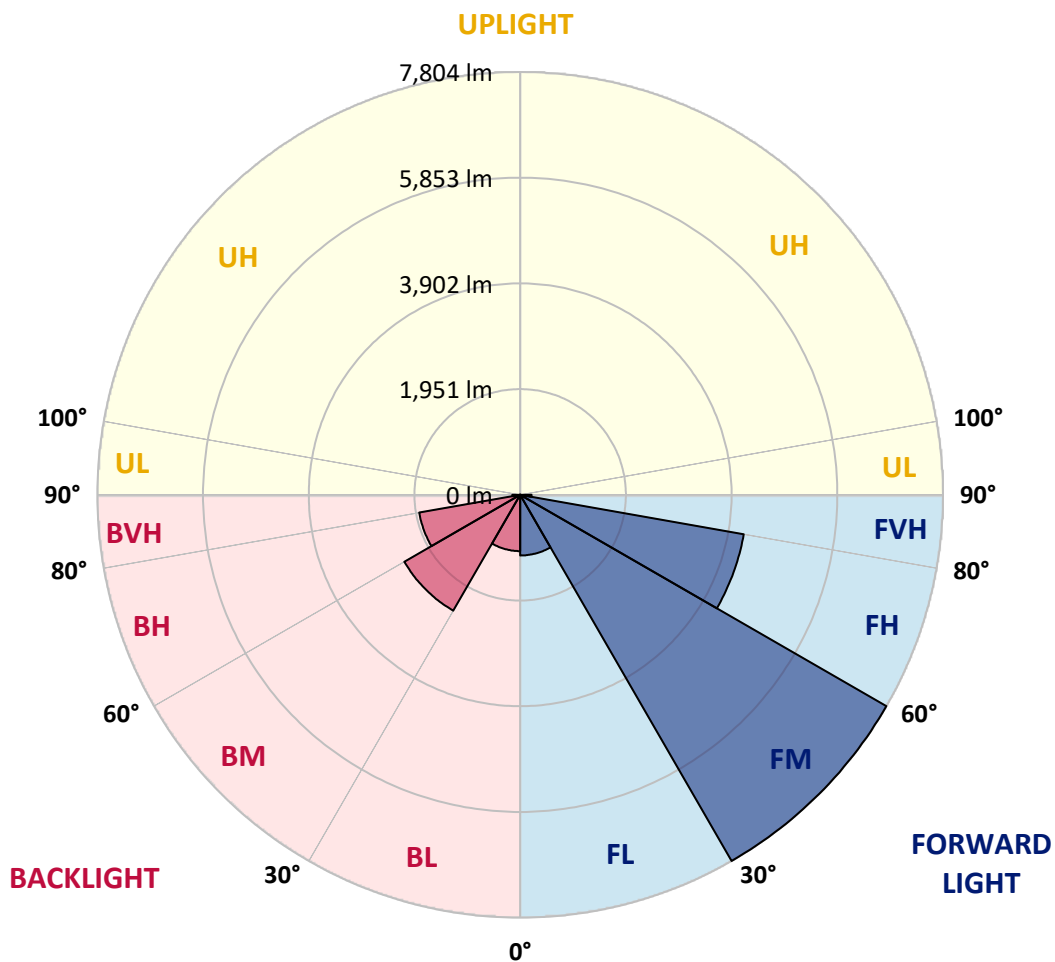
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1120.0	5.9			
FM	(30°-60°)	7803.9	41.4			
FH	(60°-80°)	4190.1	22.2			G2/5000
FVH	(80°-90°)	208.5	1.1			G2/225
BL	(0°-30°)	1039.3	5.5	B3/2500		
BM	(30°-60°)	2469.2	13.1	B2/2500		
BH	(60°-80°)	1892.6	10.0	B3/2500		G3/2500
BVH	(80°-90°)	145.8	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5
2.5°	2030.9	2027.8	2027.8	2027.8	2027.8	2024.6	2027.8	2034.0	2030.9	2027.8	2034.0
5°	2037.2	2034.0	2034.0	2034.0	2037.2	2034.0	2037.2	2046.7	2040.4	2040.4	2046.7
7.5°	2053.1	2049.9	2053.1	2049.9	2049.9	2049.9	2053.1	2062.5	2059.3	2062.5	2072.0
10°	2072.0	2072.0	2072.0	2072.0	2072.0	2072.0	2078.3	2084.6	2087.7	2090.9	2103.6
12.5°	2128.9	2128.9	2128.9	2125.7	2125.7	2116.2	2128.9	2135.1	2141.4	2147.8	2157.2
15°	2248.9	2248.9	2245.7	2233.1	2233.1	2214.1	2217.2	2220.4	2220.4	2226.8	2233.1
17.5°	2406.8	2403.6	2397.3	2387.8	2375.2	2353.1	2346.8	2340.4	2331.0	2327.8	2327.8
20°	2627.9	2624.7	2612.1	2586.8	2571.0	2536.3	2511.0	2485.8	2476.3	2460.5	2457.3
22.5°	2943.7	2943.7	2918.5	2880.5	2867.9	2795.2	2722.6	2668.9	2650.0	2627.9	2627.9
25°	3325.9	3322.7	3288.0	3243.8	3190.1	3114.3	3025.8	2953.2	2905.8	2855.3	2836.3
27.5°	3783.9	3774.4	3727.0	3673.3	3572.2	3477.5	3373.3	3297.5	3215.3	3152.2	3095.3
30°	4320.8	4311.3	4229.2	4128.1	4023.9	3929.2	3777.6	3686.0	3556.5	3480.7	3417.5
32.5°	4943.0	4933.6	4785.2	4687.2	4576.7	4459.8	4279.7	4134.5	3970.2	3862.9	3774.4
35°	5735.8	5697.9	5486.3	5350.4	5176.7	5059.9	4870.4	4674.6	4481.9	4330.3	4200.7
37.5°	6591.8	6547.5	6361.2	6159.1	5988.5	5846.4	5577.8	5331.5	5104.1	4895.6	4734.6
40°	7485.6	7368.7	7169.8	7021.3	6904.5	6768.7	6487.6	6228.5	5871.6	5637.9	5394.7
42.5°	8104.6	7991.0	7852.0	7754.1	7697.2	7593.1	7435.1	7210.9	6891.8	6898.2	6257.0
45°	8512.2	8344.7	8250.0	8256.3	8278.4	8278.4	8250.0	8215.2	8076.3	8171.0	7634.1
47.5°	8366.8	8256.3	8196.3	8322.6	8480.6	8638.5	8821.6	9020.7	9248.1	9516.5	8856.4
50°	7514.1	7555.1	7583.5	7852.0	8189.9	8550.0	8970.2	9513.3	10148.2	10271.4	9952.4
52.5°	6152.7	6241.1	6336.0	6746.6	7191.9	7814.1	8550.0	9447.1	10299.8	10802.1	10770.4
55°	4778.8	4889.3	5091.5	5397.9	5751.6	6339.1	7248.7	8632.2	9961.9	10760.9	11247.3
57.5°	3401.7	3562.7	3828.1	4254.5	4567.2	4898.8	5571.6	7106.6	8562.7	10050.3	11168.4
60°	2261.4	2337.2	2511.0	3041.6	3569.1	3916.6	4393.5	4949.3	6140.1	8189.9	10353.5
62.5°	1604.5	1655.0	1762.4	2002.5	2479.4	3107.9	3395.4	3651.2	4033.4	5268.4	8313.1
63°	1516.1	1560.3	1648.7	1850.8	2280.5	2931.1	3224.9	3458.6	3736.5	4712.4	7864.7
65°	1257.1	1276.0	1323.4	1421.3	1651.9	2192.0	2672.0	2814.2	2861.6	3029.0	4927.2
67.5°	1061.2	1073.9	1089.6	1118.1	1209.7	1459.2	1993.0	2173.1	2119.3	2005.6	2435.2
70°	922.3	931.7	957.1	991.8	1023.4	1086.5	1370.8	1639.3	1579.2	1424.5	1490.8
72.5°	735.9	751.8	780.1	840.1	903.4	985.4	1055.0	1222.3	1184.5	1035.9	1051.8
75°	581.1	590.7	615.9	660.1	720.2	814.9	950.7	1007.6	903.4	764.3	764.3
77.5°	461.1	470.7	492.8	527.4	565.4	631.7	726.5	874.9	811.7	574.8	571.7
80°	347.4	356.9	379.0	410.6	448.5	495.9	552.7	619.1	745.4	536.9	429.5
82.5°	255.8	259.0	296.9	319.1	331.6	369.6	417.0	454.8	511.7	495.9	382.2
85°	192.6	189.6	214.8	230.6	233.7	243.2	271.6	309.5	334.8	322.1	296.9
87.5°	107.4	94.7	110.6	126.3	126.3	129.5	135.8	157.9	180.0	173.7	157.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	64°	65°	70°	75°	80°	85°	90°	95°	100°
0°	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5
2.5°	2034.0	2034.0	2030.9	2030.9	2034.0	2034.0	2030.9	2040.4	2046.7	2046.7	2049.9
5°	2043.5	2046.7	2043.5	2043.5	2046.7	2046.7	2049.9	2059.3	2068.8	2075.2	2084.6
7.5°	2072.0	2075.2	2072.0	2072.0	2075.2	2078.3	2084.6	2097.3	2103.6	2116.2	2131.9
10°	2103.6	2106.7	2103.6	2106.7	2109.8	2113.0	2122.5	2131.9	2141.4	2154.1	2179.4
12.5°	2160.4	2163.5	2157.2	2160.4	2169.9	2169.9	2176.2	2182.5	2198.3	2214.1	2239.3
15°	2239.3	2239.3	2233.1	2236.2	2245.7	2245.7	2248.9	2255.2	2274.1	2293.0	2318.3
17.5°	2331.0	2337.2	2334.2	2337.2	2343.6	2346.8	2346.8	2353.1	2365.7	2378.4	2403.6
20°	2454.2	2457.3	2451.0	2457.3	2463.6	2457.3	2451.0	2447.8	2454.2	2460.5	2488.8
22.5°	2621.5	2618.3	2602.6	2602.6	2602.6	2590.0	2574.2	2555.2	2555.2	2545.7	2567.8
25°	2820.6	2811.1	2789.0	2792.1	2769.9	2751.0	2722.6	2694.1	2668.9	2659.5	2662.6
27.5°	3054.2	3035.3	3013.2	3006.9	2984.8	2950.0	2902.6	2848.9	2807.9	2776.3	2769.9
30°	3348.0	3306.9	3269.0	3262.7	3228.0	3171.1	3095.3	3022.7	2953.2	2899.5	2880.5
32.5°	3695.4	3632.3	3572.2	3565.9	3509.1	3433.2	3341.7	3240.6	3139.5	3054.2	3013.2
35°	4102.9	4008.1	3951.2	3935.5	3853.4	3758.6	3657.6	3528.1	3385.9	3265.9	3190.1
37.5°	4598.8	4500.9	4403.0	4406.1	4292.4	4181.8	4046.0	3888.1	3708.1	3540.6	3433.2
40°	5211.5	5072.5	4946.2	4917.7	4819.8	4665.1	4516.6	4333.4	4112.4	3891.3	3736.5
42.5°	5953.8	5726.4	5552.6	5527.3	5397.9	5208.4	5028.3	4785.2	4560.8	4292.4	4106.0
45°	6797.1	6433.8	6225.4	6187.5	5979.0	5786.3	5568.4	5309.4	5034.7	4731.5	4510.3
47.5°	7845.7	7327.7	6974.0	6910.7	6623.4	6370.6	6143.2	5855.9	5527.3	5189.4	4946.2
50°	9068.0	8303.7	7826.7	7728.8	7343.5	7046.6	6756.0	6395.9	6045.3	5691.6	5410.5
52.5°	10293.5	9472.3	8837.5	8717.4	8148.9	7750.9	7368.7	7008.6	6595.0	6244.3	5925.3
55°	11279.0	10732.6	9996.6	9829.2	9014.3	8474.2	7972.1	7561.4	7150.8	6872.9	6497.0
57.5°	11872.8	11844.3	11263.2	11032.6	9917.6	9118.6	8559.5	8092.1	7694.1	7577.2	7078.2
60°	11856.9	12592.9	12343.3	12169.6	10830.5	9778.7	9052.2	8546.9	8218.4	8351.1	7662.5
62.5°	11133.7	12624.4	12924.6	12877.2	11803.3	10309.3	9456.6	8935.4	8761.7	9156.4	8268.9
63°	10871.5	12551.8	12949.8	12930.8	11989.6	10410.4	9526.0	9011.2	8869.1	9361.7	8379.5
65°	9188.0	11917.0	12643.5	12728.7	12390.8	10757.9	9687.0	9203.8	9188.0	9819.7	8641.6
67.5°	5600.0	10069.3	11263.2	11427.4	11825.4	10868.3	9595.5	9137.5	9364.9	9886.1	8562.7
70°	2394.1	6645.5	9052.2	9317.5	10290.4	10318.8	9333.3	8865.9	9323.9	9368.1	8000.5
72.5°	1418.1	3133.2	6162.3	6740.2	8142.6	8878.5	8733.2	8392.1	8783.8	8227.9	6812.9
75°	1004.4	1465.6	3130.0	3745.9	5669.5	6778.1	7337.2	7495.1	7479.3	6525.4	5113.6
77.5°	720.2	941.2	1320.2	1557.1	3164.8	4352.3	5034.7	5495.8	5347.4	4368.2	3152.2
80°	502.2	650.7	808.5	859.1	1468.7	2236.2	2653.1	2855.3	2766.9	2182.5	1411.9
82.5°	363.2	426.4	521.2	552.7	739.1	1032.9	1228.7	1083.4	1039.1	805.4	609.6
85°	281.1	274.8	325.3	338.0	432.7	540.1	552.7	429.5	375.8	334.8	341.2
87.5°	199.0	170.5	173.7	180.0	224.2	287.4	281.1	176.9	151.6	161.1	183.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5	2043.5
2.5°	2056.1	2059.3	2065.6	2068.8	2075.2	2075.2	2081.4	2084.6	2090.9	2097.3	2100.4
5°	2094.1	2103.6	2116.2	2122.5	2135.1	2144.6	2157.2	2163.5	2176.2	2185.6	2198.3
7.5°	2151.0	2166.7	2182.5	2201.5	2220.4	2236.2	2248.9	2264.6	2286.7	2302.6	2312.0
10°	2204.7	2226.8	2255.2	2277.3	2305.7	2327.8	2346.8	2375.2	2400.5	2422.6	2435.2
12.5°	2274.1	2302.6	2331.0	2365.7	2403.6	2432.1	2460.5	2498.4	2533.1	2558.4	2571.0
15°	2356.3	2390.9	2422.6	2463.6	2507.9	2545.7	2586.8	2627.9	2653.1	2653.1	2646.8
17.5°	2441.5	2469.9	2507.9	2555.2	2615.3	2662.6	2684.7	2691.1	2681.6	2659.5	2643.6
20°	2526.8	2552.1	2593.1	2650.0	2713.2	2722.6	2700.5	2672.0	2643.6	2605.8	2580.5
22.5°	2596.2	2631.0	2694.1	2760.5	2763.7	2710.0	2650.0	2602.6	2558.4	2514.2	2466.7
25°	2678.4	2725.8	2811.1	2836.3	2754.2	2653.1	2567.8	2498.4	2425.7	2353.1	2299.4
27.5°	2779.5	2848.9	2934.2	2861.6	2700.5	2558.4	2441.5	2337.2	2242.5	2141.4	2081.4
30°	2886.9	2994.3	3013.2	2823.7	2608.9	2425.7	2267.8	2109.8	1989.8	1898.3	1863.5
32.5°	3016.4	3155.3	3041.6	2757.4	2485.8	2245.7	2034.0	1844.6	1743.5	1686.6	1670.9
35°	3212.2	3325.9	3057.4	2687.9	2343.6	2030.9	1765.6	1614.0	1550.8	1512.9	1493.9
37.5°	3493.3	3490.1	3054.2	2602.6	2179.4	1797.2	1550.8	1443.4	1392.8	1361.3	1326.6
40°	3821.7	3616.4	3035.3	2479.4	1958.2	1572.9	1402.4	1301.3	1253.9	1216.0	1175.0
42.5°	4147.1	3701.8	2981.6	2296.2	1683.5	1411.9	1295.0	1203.4	1152.9	1111.7	1055.0
45°	4428.3	3736.5	2877.4	2043.5	1437.1	1285.5	1225.5	1146.5	1086.5	1023.4	979.2
47.5°	4649.3	3730.2	2710.0	1746.7	1272.9	1197.1	1168.6	1114.9	1042.3	963.3	906.4
50°	4835.7	3682.8	2482.6	1484.5	1162.3	1118.1	1108.7	1092.8	976.0	909.6	874.9
52.5°	5006.2	3613.3	2239.3	1307.6	1067.6	1029.7	1048.6	1032.9	950.7	893.9	859.1
55°	5240.0	3565.9	1999.4	1171.8	957.1	947.6	963.3	985.4	934.9	881.2	843.3
57.5°	5514.7	3591.2	1816.1	1020.2	852.8	859.1	912.8	944.4	919.1	862.2	824.4
60°	5830.6	3667.0	1655.0	874.9	767.5	783.3	862.2	906.4	903.4	837.0	792.8
62.5°	6184.4	3745.9	1399.2	764.3	694.9	720.2	802.3	859.1	868.6	811.7	758.0
63°	6253.8	3752.3	1332.9	742.3	682.2	710.6	786.4	846.5	859.1	805.4	751.8
65°	6424.3	3695.4	1073.9	682.2	631.7	663.3	739.1	792.8	818.1	770.7	726.5
67.5°	6282.2	3231.1	808.5	609.6	590.7	612.7	679.0	729.6	751.8	729.6	685.4
70°	5745.3	2349.9	631.7	543.3	546.5	562.2	612.7	660.1	685.4	679.0	638.0
72.5°	4627.2	1332.9	527.4	486.4	495.9	514.9	549.5	593.8	615.9	612.7	584.3
75°	3048.0	682.2	445.4	435.9	442.2	458.0	483.2	518.0	543.3	540.1	527.4
77.5°	1509.8	473.7	382.2	385.3	388.5	401.1	420.1	451.6	467.5	470.7	467.5
80°	622.3	369.6	328.5	331.6	334.8	344.3	356.9	385.3	394.9	401.1	404.3
82.5°	372.7	281.1	262.2	268.4	271.6	281.1	290.6	315.9	325.3	334.8	334.8
85°	246.3	195.8	189.6	195.8	202.1	208.5	211.6	227.4	243.2	255.8	262.2
87.5°	132.7	116.8	113.8	116.8	116.8	123.2	129.5	145.3	164.3	176.9	183.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P257780

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**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	2043.5	2043.5	2043.5	2043.5	2043.5
2.5°	2094.1	2097.3	2094.1	2097.3	2100.4
5°	2198.3	2204.7	2201.5	2201.5	2214.1
7.5°	2318.3	2331.0	2331.0	2337.2	2343.6
10°	2447.8	2460.5	2469.9	2469.9	2479.4
12.5°	2577.3	2583.7	2593.1	2593.1	2593.1
15°	2643.6	2640.5	2637.4	2634.2	2634.2
17.5°	2634.2	2621.5	2615.3	2608.9	2612.1
20°	2564.7	2542.5	2536.3	2526.8	2533.1
22.5°	2444.6	2413.0	2400.5	2384.7	2390.9
25°	2264.6	2226.8	2220.4	2201.5	2210.9
27.5°	2056.1	2037.2	2034.0	2030.9	2046.7
30°	1860.3	1866.7	1869.9	1876.1	1891.9
32.5°	1680.3	1693.0	1696.2	1699.2	1721.4
35°	1503.4	1487.7	1503.4	1497.1	1516.1
37.5°	1310.8	1298.1	1285.5	1269.7	1282.4
40°	1149.7	1127.6	1089.6	1070.7	1073.9
42.5°	1023.4	994.9	963.3	944.4	944.4
45°	941.2	906.4	878.1	865.4	865.4
47.5°	878.1	862.2	846.5	837.0	837.0
50°	852.8	833.8	824.4	818.1	818.1
52.5°	833.8	814.9	805.4	799.1	792.8
55°	818.1	789.6	780.1	777.0	777.0
57.5°	796.0	770.7	758.0	754.8	754.8
60°	761.2	742.3	729.6	726.5	726.5
62.5°	726.5	707.5	694.9	694.9	694.9
63°	720.2	698.1	688.5	688.5	688.5
65°	691.7	669.6	660.1	660.1	656.9
67.5°	653.8	631.7	625.3	625.3	619.1
70°	609.6	590.7	584.3	587.5	574.8
72.5°	565.4	546.5	536.9	536.9	524.3
75°	514.9	495.9	483.2	480.1	467.5
77.5°	458.0	442.2	429.5	417.0	410.6
80°	397.9	385.3	369.6	360.1	350.6
82.5°	334.8	322.1	312.7	325.3	277.9
85°	262.2	249.5	236.9	255.8	199.0
87.5°	192.6	186.4	173.7	151.6	132.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)