

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: P239102

Luminaire Tested: **ARCH-AF16-50-D-U-T2U-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239102  
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-AF16-50-D-U-T2U-7030  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 980mA LIGHT ENGINE WITH 16 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5777.6 lumens  
Efficiency: N/A  
Efficacy: 109.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

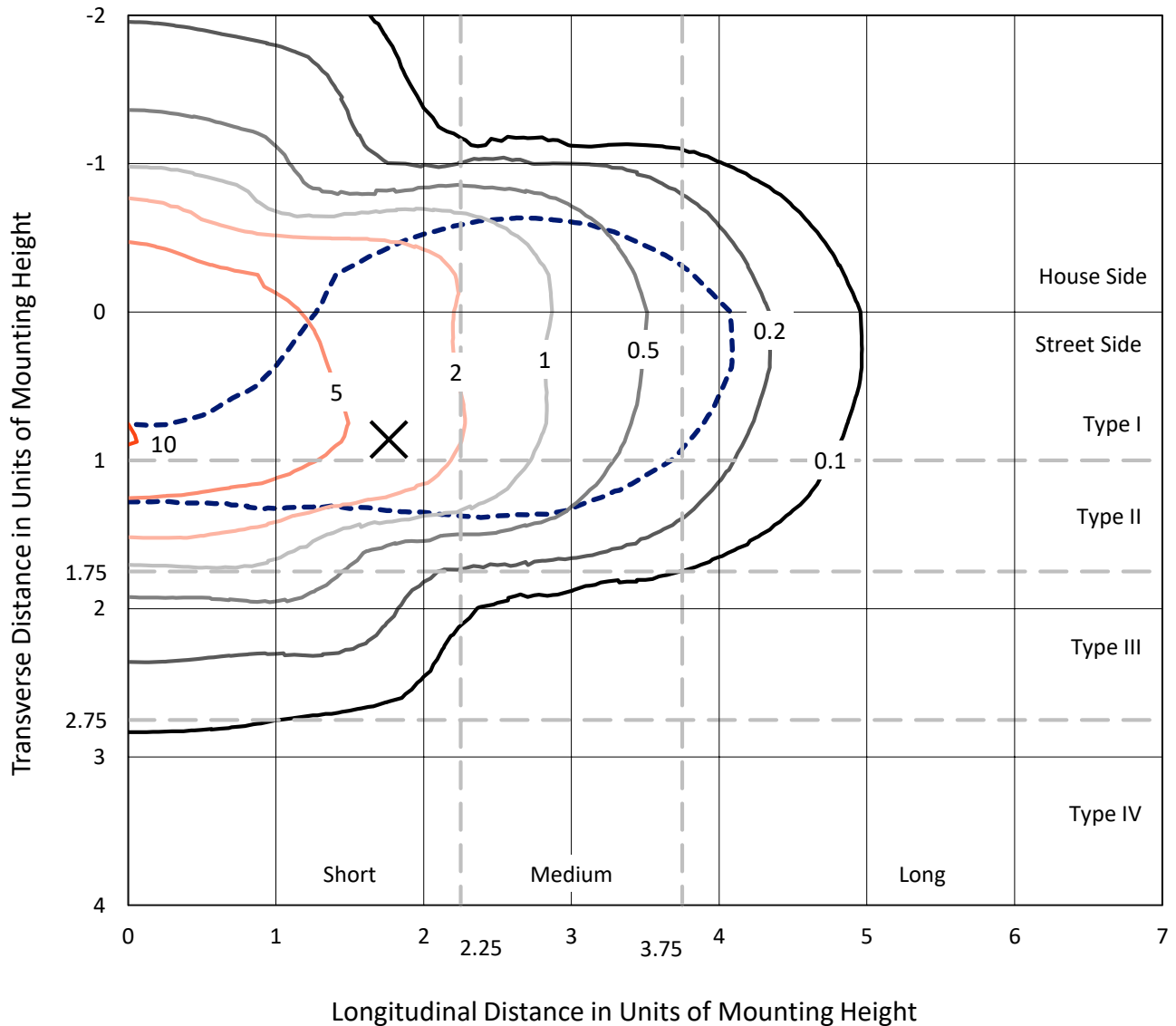
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

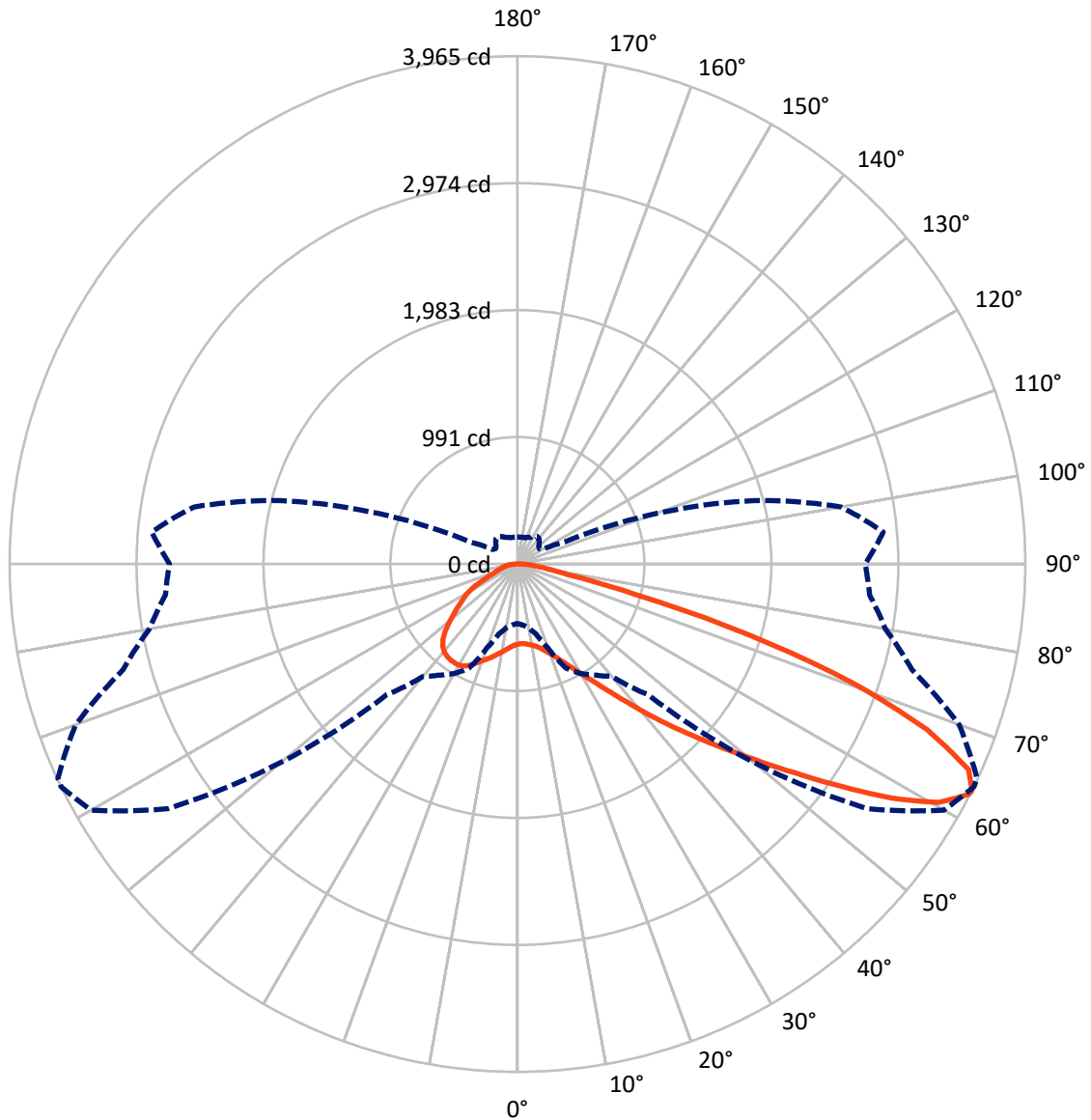
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 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	1698.4	0.0	1698.4
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	4079.2	0.0	4079.2
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	5777.6	0.0	5777.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.5	1.1
10°-20°	208.1	3.6
20°-30°	390.6	6.8
30°-40°	654.7	11.3
40°-50°	1098.4	19.0
50°-60°	1392.4	24.1
60°-70°	1228.3	21.3
70°-80°	634.1	11.0
80°-90°	108.5	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°	5777.6	100.0
0°-180°	5777.6	100.0



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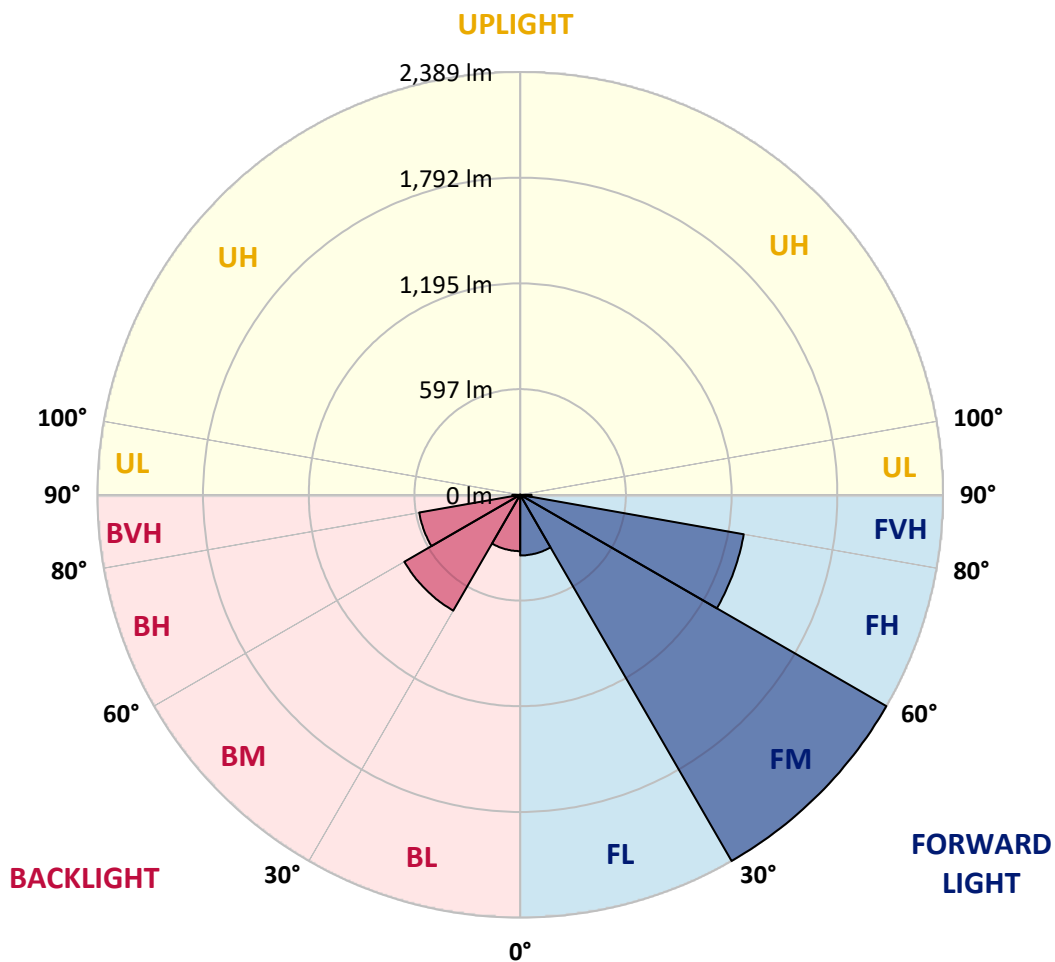
CATALOG NUMBER: ARCH-AF16-50-D-U-T2U-7030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	342.9	5.9			
FM	(30°-60°)	2389.5	41.4			
FH	(60°-80°)	1283.0	22.2			G1/1800
FVH	(80°-90°)	63.9	1.1			G1/100
BL	(0°-30°)	318.2	5.5	B1/500		
BM	(30°-60°)	756.1	13.1	B1/1000		
BH	(60°-80°)	579.5	10.0	B2/1000		G2/1000
BVH	(80°-90°)	44.6	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7
2.5°	621.8	620.9	620.9	620.9	620.9	619.9	620.9	622.8	621.8	620.9	622.8
5°	623.8	622.8	622.8	622.8	623.8	622.8	623.8	626.7	624.8	624.8	626.7
7.5°	628.6	627.7	628.6	627.7	627.7	627.7	628.6	631.5	630.5	631.5	634.5
10°	634.5	634.5	634.5	634.5	634.5	634.5	636.3	638.3	639.2	640.3	644.1
12.5°	651.8	651.8	651.8	650.8	650.8	647.9	651.8	653.8	655.7	657.6	660.6
15°	688.6	688.6	687.6	683.8	683.8	678.0	678.9	679.9	679.9	681.8	683.8
17.5°	737.0	736.0	734.0	731.2	727.2	720.4	718.6	716.6	713.7	712.8	712.8
20°	804.5	803.7	799.8	792.0	787.2	776.7	768.8	761.1	758.3	753.4	752.4
22.5°	901.4	901.4	893.6	882.0	878.1	855.9	833.6	817.1	811.4	804.5	804.5
25°	1018.4	1017.4	1006.8	993.1	976.8	953.7	926.5	904.2	889.7	874.3	868.5
27.5°	1158.5	1155.6	1141.2	1124.8	1093.8	1064.7	1032.8	1009.7	984.5	965.2	947.8
30°	1323.0	1320.1	1294.9	1264.0	1232.1	1203.1	1156.6	1128.6	1089.0	1065.8	1046.3
32.5°	1513.6	1510.6	1465.1	1435.2	1401.4	1365.5	1310.4	1266.0	1215.6	1182.7	1155.6
35°	1756.3	1744.7	1679.9	1638.3	1585.2	1549.3	1491.3	1431.3	1372.3	1325.9	1286.2
37.5°	2018.3	2004.8	1947.8	1885.9	1833.6	1790.1	1707.9	1632.5	1562.9	1499.0	1449.7
40°	2292.0	2256.2	2195.3	2149.9	2114.0	2072.5	1986.5	1907.1	1797.9	1726.3	1651.8
42.5°	2481.6	2446.8	2404.2	2374.2	2356.8	2324.9	2276.5	2207.9	2110.3	2112.2	1915.9
45°	2606.4	2555.1	2526.1	2528.0	2534.9	2534.9	2526.1	2515.4	2472.9	2501.9	2337.5
47.5°	2561.8	2528.0	2509.5	2548.4	2596.6	2645.0	2701.1	2762.1	2831.7	2913.8	2711.7
50°	2300.8	2313.3	2322.0	2404.2	2507.7	2618.0	2746.6	2913.0	3107.4	3145.0	3047.3
52.5°	1883.9	1911.0	1940.0	2065.8	2202.1	2392.6	2618.0	2892.6	3153.8	3307.5	3297.8
55°	1463.2	1497.1	1559.0	1652.8	1761.0	1941.0	2219.5	2643.1	3050.2	3294.9	3443.9
57.5°	1041.6	1090.9	1172.2	1302.7	1398.4	1500.0	1706.0	2176.0	2621.7	3077.3	3419.7
60°	692.4	715.6	768.8	931.3	1092.8	1199.2	1345.2	1515.4	1880.1	2507.7	3170.1
62.5°	491.3	506.8	539.6	613.2	759.2	951.6	1039.6	1117.9	1234.9	1613.1	2545.4
63°	464.3	477.8	504.8	566.7	698.2	897.4	987.3	1058.9	1144.1	1442.9	2408.1
65°	384.9	390.7	405.3	435.2	505.8	671.2	818.2	861.7	876.1	927.5	1508.7
67.5°	324.9	328.8	333.7	342.3	370.4	446.8	610.2	665.4	648.9	614.1	745.5
70°	282.4	285.2	293.1	303.6	313.3	332.7	419.8	501.9	483.6	436.2	456.4
72.5°	225.3	230.2	238.8	257.2	276.7	301.8	323.0	374.3	362.6	317.2	322.1
75°	178.0	180.9	188.6	202.1	220.4	249.5	291.0	308.5	276.7	234.1	234.1
77.5°	141.2	144.1	150.9	161.4	173.0	193.4	222.5	267.9	248.6	176.0	175.1
80°	106.4	109.3	116.1	125.7	137.3	151.9	169.3	189.6	228.3	164.4	131.5
82.5°	78.3	79.3	90.9	97.7	101.5	113.2	127.7	139.3	156.7	151.9	117.0
85°	59.0	58.0	65.8	70.6	71.6	74.6	83.1	94.7	102.4	98.7	90.9
87.5°	32.9	29.1	33.9	38.7	38.7	39.7	41.6	48.4	55.1	53.2	48.4
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°	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7
2.5°	622.8	622.8	621.8	621.8	622.8	622.8	621.8	624.8	626.7	626.7	627.7
5°	625.7	626.7	625.7	625.7	626.7	626.7	627.7	630.5	633.4	635.4	638.3
7.5°	634.5	635.4	634.5	634.5	635.4	636.3	638.3	642.1	644.1	647.9	652.9
10°	644.1	645.0	644.1	645.0	646.0	647.1	649.9	652.9	655.7	659.6	667.2
12.5°	661.4	662.4	660.6	661.4	664.4	664.4	666.4	668.2	673.1	678.0	685.7
15°	685.7	685.7	683.8	684.7	687.6	687.6	688.6	690.5	696.3	702.1	709.8
17.5°	713.7	715.6	714.7	715.6	717.7	718.6	718.6	720.4	724.4	728.2	736.0
20°	751.4	752.4	750.5	752.4	754.3	752.4	750.5	749.5	751.4	753.4	762.1
22.5°	802.7	801.8	796.9	796.9	796.9	793.0	788.2	782.4	782.4	779.4	786.2
25°	863.5	860.8	854.0	855.0	848.2	842.4	833.6	824.9	817.1	814.3	815.3
27.5°	935.1	929.4	922.5	920.7	914.0	903.2	888.8	872.3	859.8	850.0	848.2
30°	1025.2	1012.5	1001.0	999.0	988.4	971.0	947.8	925.5	904.2	887.8	882.0
32.5°	1131.5	1112.1	1093.8	1091.8	1074.4	1051.3	1023.2	992.3	961.3	935.1	922.5
35°	1256.3	1227.2	1209.8	1205.0	1179.9	1150.8	1119.9	1080.2	1036.8	999.9	976.8
37.5°	1408.2	1378.1	1348.1	1349.2	1314.3	1280.4	1238.9	1190.5	1135.4	1084.1	1051.3
40°	1595.7	1553.1	1514.5	1505.8	1475.8	1428.4	1383.0	1326.9	1259.2	1191.5	1144.1
42.5°	1823.0	1753.4	1700.2	1692.4	1652.8	1594.7	1539.6	1465.1	1396.5	1314.3	1257.2
45°	2081.2	1970.0	1906.1	1894.5	1830.7	1771.7	1705.0	1625.7	1541.5	1448.7	1381.0
47.5°	2402.3	2243.6	2135.4	2116.1	2028.0	1950.6	1881.0	1793.1	1692.4	1588.9	1514.5
50°	2776.5	2542.5	2396.5	2366.4	2248.5	2157.7	2068.6	1958.4	1851.1	1742.6	1656.7
52.5°	3151.8	2900.3	2706.0	2669.2	2495.2	2373.2	2256.2	2146.0	2019.3	1911.9	1814.2
55°	3453.4	3286.2	3060.9	3009.6	2760.1	2594.7	2441.0	2315.2	2189.5	2104.5	1989.3
57.5°	3635.4	3626.7	3448.7	3378.1	3036.8	2792.0	2620.8	2477.7	2355.8	2320.1	2167.2
60°	3630.4	3855.9	3779.4	3726.3	3316.2	2994.1	2771.7	2617.0	2516.3	2557.0	2346.3
62.5°	3409.0	3865.5	3957.4	3942.8	3614.1	3156.6	2895.5	2736.0	2682.8	2803.6	2531.9
63°	3328.8	3843.3	3965.1	3959.3	3671.1	3187.5	2916.7	2759.2	2715.6	2866.5	2565.7
65°	2813.3	3648.8	3871.3	3897.4	3793.9	3293.9	2966.1	2818.2	2813.3	3006.7	2646.0
67.5°	1714.8	3083.1	3448.7	3499.0	3620.9	3327.8	2938.1	2797.8	2867.5	3027.0	2621.7
70°	733.0	2034.7	2771.7	2853.0	3150.8	3159.6	2857.7	2714.6	2854.8	2868.4	2449.7
72.5°	434.2	959.4	1886.8	2063.8	2493.2	2718.5	2674.0	2569.6	2689.5	2519.3	2086.1
75°	307.6	448.7	958.4	1147.0	1735.9	2075.4	2246.6	2294.9	2290.1	1998.1	1565.6
77.5°	220.4	288.2	404.3	476.8	969.0	1332.6	1541.5	1682.8	1637.2	1337.6	965.2
80°	153.7	199.2	247.6	263.1	449.7	684.7	812.4	874.3	847.2	668.2	432.3
82.5°	111.2	130.6	159.5	169.3	226.2	316.2	376.2	331.7	318.2	246.6	186.7
85°	86.1	84.1	99.7	103.5	132.5	165.4	169.3	131.5	115.0	102.4	104.5
87.5°	60.9	52.2	53.2	55.1	68.7	88.0	86.1	54.2	46.4	49.2	56.0
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°	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7	625.7
2.5°	629.6	630.5	632.5	633.4	635.4	635.4	637.3	638.3	640.3	642.1	643.1
5°	641.3	644.1	647.9	649.9	653.8	656.6	660.6	662.4	666.4	669.2	673.1
7.5°	658.7	663.4	668.2	674.0	679.9	684.7	688.6	693.4	700.2	705.0	707.9
10°	675.0	681.8	690.5	697.3	706.1	712.8	718.6	727.2	735.0	741.8	745.5
12.5°	696.3	705.0	713.7	724.4	736.0	744.7	753.4	765.0	775.6	783.4	787.2
15°	721.4	732.1	741.8	754.3	767.9	779.4	792.0	804.5	812.4	812.4	810.4
17.5°	747.6	756.3	767.9	782.4	800.8	815.3	822.0	824.0	821.1	814.3	809.5
20°	773.7	781.4	794.0	811.4	830.7	833.6	826.9	818.2	809.5	797.8	790.2
22.5°	795.0	805.6	824.9	845.2	846.2	829.9	811.4	796.9	783.4	769.8	755.3
25°	820.1	834.6	860.8	868.5	843.3	812.4	786.2	765.0	742.8	720.4	704.0
27.5°	851.0	872.3	898.4	876.1	826.9	783.4	747.6	715.6	686.7	655.7	637.3
30°	883.9	916.8	922.5	864.6	798.8	742.8	694.4	646.0	609.2	581.3	570.6
32.5°	923.6	966.2	931.3	844.2	761.1	687.6	622.8	564.8	533.8	516.5	511.6
35°	983.6	1018.4	936.2	823.0	717.7	621.8	540.7	494.2	474.8	463.3	457.5
37.5°	1069.6	1068.7	935.1	796.9	667.2	550.2	474.8	442.0	426.4	416.9	406.2
40°	1170.1	1107.4	929.4	759.2	599.7	481.7	429.4	398.5	383.9	372.3	359.8
42.5°	1269.8	1133.4	913.0	703.1	515.4	432.3	396.5	368.4	353.0	340.5	323.0
45°	1355.9	1144.1	881.0	625.7	440.0	393.7	375.2	351.0	332.7	313.3	299.8
47.5°	1423.5	1142.2	829.9	534.9	389.7	366.6	357.9	341.4	319.1	295.0	277.5
50°	1480.7	1127.7	760.1	454.5	355.8	342.3	339.5	334.7	298.9	278.5	267.9
52.5°	1532.9	1106.4	685.7	400.3	326.9	315.3	321.1	316.2	291.0	273.7	263.1
55°	1604.5	1091.8	612.2	358.8	293.1	290.1	295.0	301.8	286.3	269.9	258.2
57.5°	1688.6	1099.5	556.1	312.4	261.1	263.1	279.4	289.2	281.5	264.0	252.4
60°	1785.3	1122.8	506.8	267.9	235.0	239.9	264.0	277.5	276.7	256.3	242.8
62.5°	1893.6	1147.0	428.4	234.1	212.7	220.4	245.7	263.1	265.9	248.6	232.0
63°	1914.9	1149.0	408.1	227.3	208.9	217.7	240.8	259.2	263.1	246.6	230.2
65°	1967.1	1131.5	328.8	208.9	193.4	203.1	226.2	242.8	250.5	236.0	222.5
67.5°	1923.6	989.4	247.6	186.7	180.9	187.6	207.9	223.4	230.2	223.4	209.9
70°	1759.2	719.5	193.4	166.3	167.2	172.2	187.6	202.1	209.9	207.9	195.3
72.5°	1416.8	408.1	161.4	148.9	151.9	157.7	168.3	181.8	188.6	187.6	178.9
75°	933.3	208.9	136.3	133.4	135.4	140.2	147.9	158.7	166.3	165.4	161.4
77.5°	462.2	145.1	117.0	118.0	119.0	122.8	128.6	138.3	143.1	144.1	143.1
80°	190.5	113.2	100.6	101.5	102.4	105.4	109.3	118.0	120.8	122.8	123.8
82.5°	114.0	86.1	80.3	82.2	83.1	86.1	88.9	96.7	99.7	102.4	102.4
85°	75.4	60.0	58.0	60.0	61.8	63.8	64.8	69.6	74.6	78.3	80.3
87.5°	40.7	35.8	34.9	35.8	35.8	37.7	39.7	44.5	50.3	54.2	56.0
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):**

	160°	165°	170°	175°	180°
0°	625.7	625.7	625.7	625.7	625.7
2.5°	641.3	642.1	641.3	642.1	643.1
5°	673.1	675.0	674.0	674.0	678.0
7.5°	709.8	713.7	713.7	715.6	717.7
10°	749.5	753.4	756.3	756.3	759.2
12.5°	789.2	791.0	794.0	794.0	794.0
15°	809.5	808.5	807.5	806.6	806.6
17.5°	806.6	802.7	800.8	798.8	799.8
20°	785.2	778.5	776.7	773.7	775.6
22.5°	748.5	738.9	735.0	730.2	732.1
25°	693.4	681.8	679.9	674.0	677.0
27.5°	629.6	623.8	622.8	621.8	626.7
30°	569.6	571.5	572.5	574.4	579.3
32.5°	514.5	518.3	519.3	520.3	527.0
35°	460.3	455.5	460.3	458.5	464.3
37.5°	401.3	397.4	393.7	388.8	392.7
40°	352.1	345.3	333.7	327.9	328.8
42.5°	313.3	304.7	295.0	289.2	289.2
45°	288.2	277.5	268.9	265.0	265.0
47.5°	268.9	264.0	259.2	256.3	256.3
50°	261.1	255.3	252.4	250.5	250.5
52.5°	255.3	249.5	246.6	244.6	242.8
55°	250.5	241.8	238.8	237.8	237.8
57.5°	243.7	236.0	232.0	231.1	231.1
60°	233.0	227.3	223.4	222.5	222.5
62.5°	222.5	216.7	212.7	212.7	212.7
63°	220.4	213.7	210.9	210.9	210.9
65°	211.8	205.1	202.1	202.1	201.1
67.5°	200.2	193.4	191.5	191.5	189.6
70°	186.7	180.9	178.9	179.8	176.0
72.5°	173.0	167.2	164.4	164.4	160.5
75°	157.7	151.9	147.9	147.0	143.1
77.5°	140.2	135.4	131.5	127.7	125.7
80°	121.9	118.0	113.2	110.3	107.4
82.5°	102.4	98.7	95.7	99.7	85.1
85°	80.3	76.4	72.5	78.3	60.9
87.5°	59.0	57.1	53.2	46.4	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)