

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: P239129

Luminaire Tested: **ARCH-AF16-40-D-U-T2U-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P239129
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-AF16-40-D-U-T2U-7050
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 740mA LIGHT ENGINE WITH 16 LEDS AND TYPE II U OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4756 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

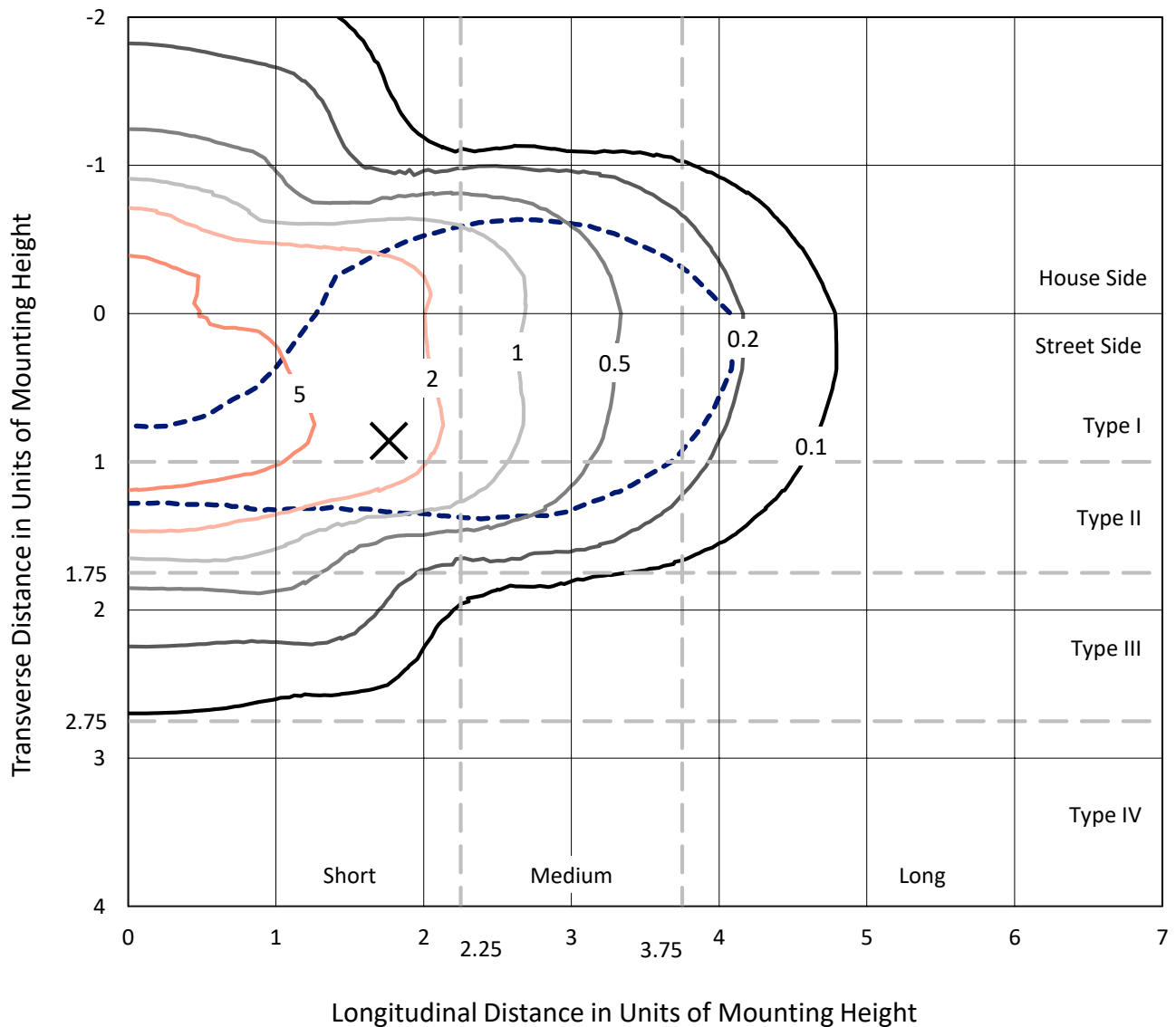
Input Watts (W): 42
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

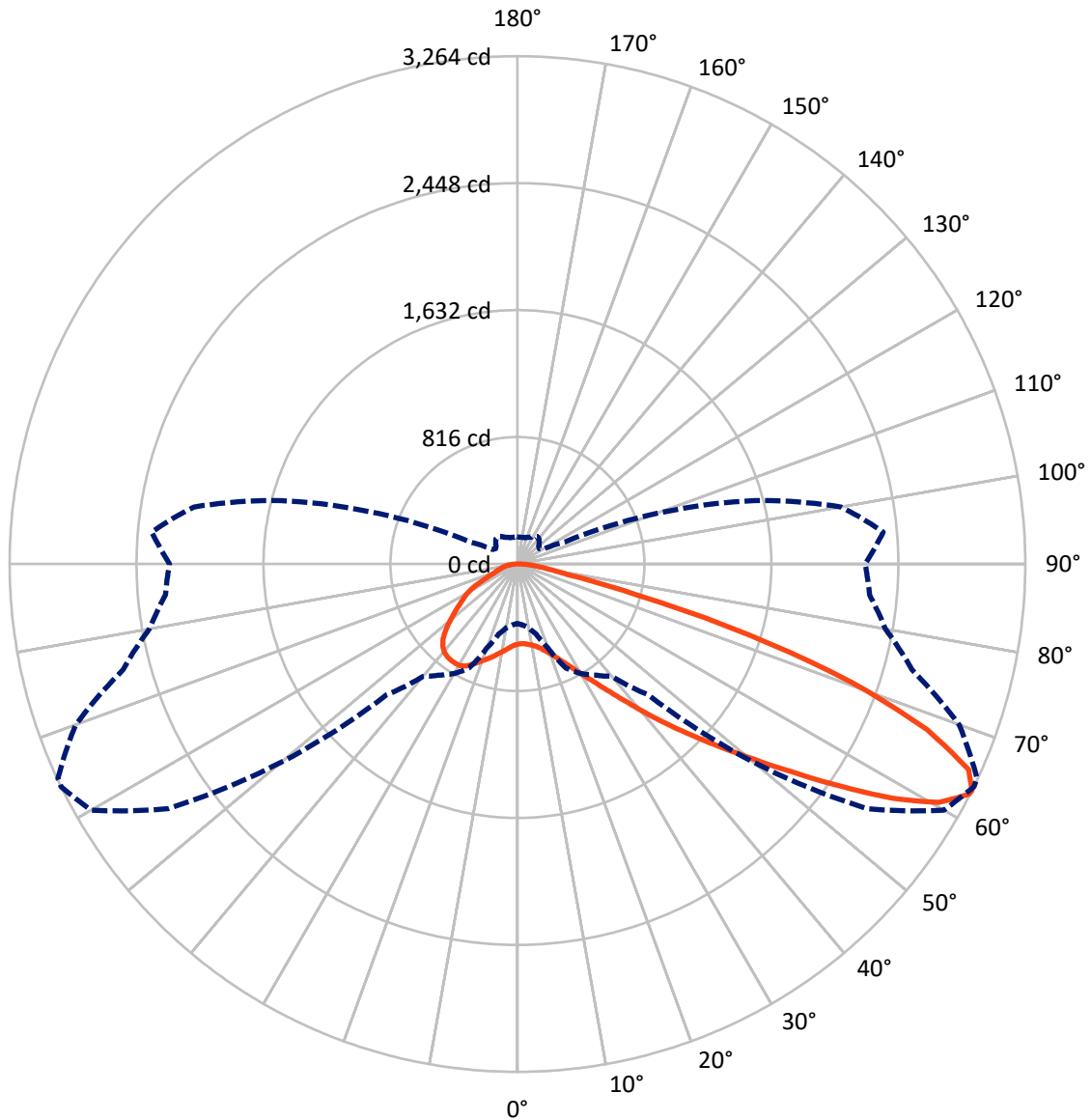
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 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
House Side	Lumens	1398.1	0.0	1398.1
	% Fixture	29.4	0.0	29.4
Street Side	Lumens	3357.9	0.0	3357.9
	% Fixture	70.6	0.0	70.6
Total	Lumens	4756.0	0.0	4756.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.4	1.1
10°-20°	171.3	3.6
20°-30°	321.5	6.8
30°-40°	538.9	11.3
40°-50°	904.2	19.0
50°-60°	1146.2	24.1
60°-70°	1011.1	21.3
70°-80°	522.0	11.0
80°-90°	89.3	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°	4756.0	100.0
0°-180°	4756.0	100.0



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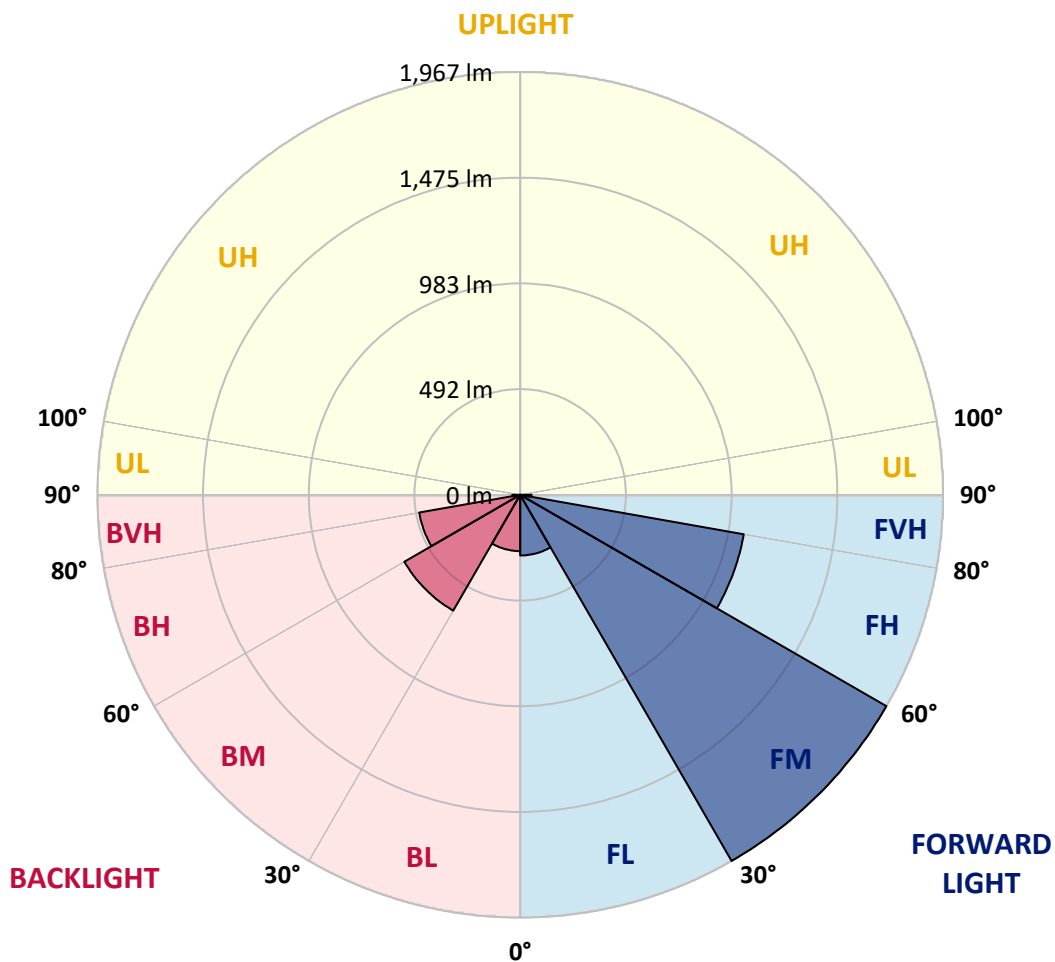
CATALOG NUMBER: ARCH-AF16-40-D-U-T2U-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	282.3	5.9			
FM	(30°-60°)	1967.0	41.4			
FH	(60°-80°)	1056.1	22.2			G1/1800
FVH	(80°-90°)	52.6	1.1			G1/100
BL	(0°-30°)	262.0	5.5	B1/500		
BM	(30°-60°)	622.4	13.1	B1/1000		
BH	(60°-80°)	477.0	10.0	B1/500		G1/500
BVH	(80°-90°)	36.8	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1
2.5°	511.9	511.1	511.1	511.1	511.1	510.3	511.1	512.7	511.9	511.1	512.7
5°	513.5	512.7	512.7	512.7	513.5	512.7	513.5	515.9	514.3	514.3	515.9
7.5°	517.5	516.7	517.5	516.7	516.7	516.7	517.5	519.8	519.1	519.8	522.2
10°	522.2	522.2	522.2	522.2	522.2	522.2	523.8	525.4	526.2	527.0	530.2
12.5°	536.6	536.6	536.6	535.8	535.8	533.4	536.6	538.2	539.8	541.3	543.7
15°	566.8	566.8	566.0	562.8	562.8	558.1	558.9	559.7	559.7	561.2	562.8
17.5°	606.6	605.8	604.2	601.8	598.7	593.1	591.5	589.9	587.5	586.7	586.7
20°	662.4	661.6	658.4	652.0	648.0	639.3	632.9	626.5	624.1	620.2	619.4
22.5°	742.0	742.0	735.6	726.0	722.9	704.5	686.2	672.7	667.9	662.4	662.4
25°	838.3	837.5	828.7	817.6	804.1	784.9	762.7	744.3	732.4	719.7	714.9
27.5°	953.7	951.3	939.4	925.9	900.4	876.5	850.2	831.1	810.4	794.5	780.2
30°	1089.1	1086.7	1066.0	1040.5	1014.2	990.3	952.1	929.0	896.4	877.3	861.4
32.5°	1245.9	1243.5	1206.1	1181.4	1153.5	1124.1	1078.7	1042.1	1000.7	973.6	951.3
35°	1445.7	1436.2	1382.8	1348.6	1304.8	1275.3	1227.6	1178.2	1129.7	1091.4	1058.8
37.5°	1661.4	1650.3	1603.3	1552.4	1509.4	1473.6	1405.9	1343.8	1286.5	1233.9	1193.3
40°	1886.7	1857.3	1807.1	1769.7	1740.3	1706.0	1635.2	1569.9	1479.9	1421.0	1359.7
42.5°	2042.8	2014.1	1979.1	1954.4	1940.1	1913.8	1874.0	1817.5	1737.1	1738.7	1577.1
45°	2145.5	2103.3	2079.4	2081.0	2086.6	2086.6	2079.4	2070.6	2035.6	2059.5	1924.2
47.5°	2108.9	2081.0	2065.9	2097.7	2137.5	2177.3	2223.5	2273.6	2331.0	2398.6	2232.2
50°	1893.9	1904.3	1911.4	1979.1	2064.3	2155.0	2260.9	2397.8	2557.8	2588.9	2508.5
52.5°	1550.8	1573.1	1597.0	1700.5	1812.7	1969.5	2155.0	2381.1	2596.1	2722.6	2714.7
55°	1204.5	1232.4	1283.3	1360.5	1449.7	1597.8	1827.0	2175.7	2510.9	2712.3	2834.9
57.5°	857.4	898.0	964.9	1072.3	1151.2	1234.7	1404.3	1791.2	2158.2	2533.2	2815.0
60°	570.0	589.1	632.9	766.6	899.6	987.2	1107.4	1247.5	1547.6	2064.3	2609.6
62.5°	404.4	417.2	444.2	504.7	624.9	783.4	855.8	920.3	1016.6	1327.9	2095.3
63°	382.1	393.3	415.6	466.5	574.8	738.8	812.8	871.7	941.8	1187.8	1982.3
65°	316.8	321.6	333.6	358.2	416.4	552.5	673.5	709.3	721.3	763.5	1241.9
67.5°	267.5	270.7	274.7	281.8	304.9	367.8	502.3	547.7	534.2	505.5	613.8
70°	232.5	234.8	241.2	250.0	257.9	273.9	345.5	413.2	398.0	359.0	375.8
72.5°	185.5	189.5	196.6	211.8	227.7	248.4	265.9	308.1	298.5	261.1	265.1
75°	146.5	148.9	155.2	166.4	181.5	205.4	239.6	254.0	227.7	192.7	192.7
77.5°	116.2	118.6	124.2	132.9	142.5	159.2	183.1	220.5	204.6	144.9	144.1
80°	87.6	90.0	95.5	103.5	113.0	125.0	139.3	156.0	187.9	135.3	108.3
82.5°	64.5	65.3	74.8	80.4	83.6	93.1	105.1	114.6	129.0	125.0	96.3
85°	48.6	47.8	54.1	58.1	58.9	61.3	68.5	78.0	84.4	81.2	74.8
87.5°	27.1	23.9	27.9	31.8	31.8	32.6	34.2	39.8	45.4	43.8	39.8
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°	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1
2.5°	512.7	512.7	511.9	511.9	512.7	512.7	511.9	514.3	515.9	515.9	516.7
5°	515.1	515.9	515.1	515.1	515.9	515.9	516.7	519.1	521.4	523.0	525.4
7.5°	522.2	523.0	522.2	522.2	523.0	523.8	525.4	528.6	530.2	533.4	537.4
10°	530.2	531.0	530.2	531.0	531.8	532.6	535.0	537.4	539.8	542.9	549.3
12.5°	544.5	545.3	543.7	544.5	546.9	546.9	548.5	550.1	554.1	558.1	564.4
15°	564.4	564.4	562.8	563.6	566.0	566.0	566.8	568.4	573.2	578.0	584.3
17.5°	587.5	589.1	588.3	589.1	590.7	591.5	591.5	593.1	596.3	599.5	605.8
20°	618.6	619.4	617.8	619.4	621.0	619.4	617.8	617.0	618.6	620.2	627.3
22.5°	660.8	660.0	656.0	656.0	656.0	652.8	648.8	644.0	644.0	641.7	647.2
25°	710.9	708.5	703.0	703.7	698.2	693.4	686.2	679.1	672.7	670.3	671.1
27.5°	769.8	765.0	759.5	757.9	752.3	743.6	731.6	718.1	707.7	699.8	698.2
30°	843.9	833.5	824.0	822.4	813.6	799.3	780.2	761.9	744.3	730.8	726.0
32.5°	931.4	915.5	900.4	898.8	884.5	865.4	842.3	816.8	791.3	769.8	759.5
35°	1034.1	1010.2	995.9	991.9	971.2	947.4	921.9	889.2	853.4	823.2	804.1
37.5°	1159.1	1134.4	1109.8	1110.6	1081.9	1054.0	1019.8	980.0	934.6	892.4	865.4
40°	1313.6	1278.5	1246.7	1239.5	1214.8	1175.8	1138.4	1092.2	1036.5	980.8	941.8
42.5°	1500.6	1443.3	1399.5	1393.2	1360.5	1312.8	1267.4	1206.1	1149.6	1081.9	1034.9
45°	1713.2	1621.6	1569.1	1559.5	1507.0	1458.4	1403.5	1338.2	1269.0	1192.5	1136.8
47.5°	1977.5	1846.9	1757.8	1741.9	1669.4	1605.7	1548.4	1476.0	1393.2	1308.0	1246.7
50°	2285.6	2092.9	1972.7	1948.0	1850.9	1776.1	1702.8	1612.1	1523.7	1434.6	1363.7
52.5°	2594.5	2387.5	2227.5	2197.2	2053.9	1953.6	1857.3	1766.5	1662.2	1573.9	1493.5
55°	2842.9	2705.1	2519.6	2477.4	2272.1	2135.9	2009.3	1905.8	1802.4	1732.3	1637.6
57.5°	2992.5	2985.4	2838.9	2780.8	2499.7	2298.3	2157.4	2039.6	1939.3	1909.8	1784.0
60°	2988.5	3174.0	3111.1	3067.4	2729.8	2464.7	2281.6	2154.2	2071.4	2104.9	1931.3
62.5°	2806.2	3182.0	3257.6	3245.7	2975.0	2598.5	2383.5	2252.1	2208.4	2307.9	2084.2
63°	2740.2	3163.7	3264.0	3259.2	3022.0	2623.9	2401.0	2271.3	2235.4	2359.6	2112.0
65°	2315.8	3003.7	3186.8	3208.3	3123.1	2711.5	2441.6	2319.8	2315.8	2475.1	2178.1
67.5°	1411.5	2537.9	2838.9	2880.3	2980.6	2739.4	2418.5	2303.1	2360.4	2491.8	2158.2
70°	603.4	1675.0	2281.6	2348.5	2593.7	2600.8	2352.5	2234.6	2350.1	2361.2	2016.5
72.5°	357.4	789.7	1553.2	1698.9	2052.3	2237.8	2201.2	2115.2	2213.9	2073.8	1717.2
75°	253.2	369.4	788.9	944.2	1429.0	1708.4	1849.3	1889.1	1885.2	1644.7	1288.9
77.5°	181.5	237.2	332.8	392.5	797.7	1097.0	1269.0	1385.2	1347.8	1101.0	794.5
80°	126.6	164.0	203.8	216.5	370.2	563.6	668.7	719.7	697.4	550.1	355.9
82.5°	91.6	107.5	131.4	139.3	186.3	260.3	309.7	273.1	261.9	203.0	153.6
85°	70.9	69.3	82.0	85.2	109.1	136.1	139.3	108.3	94.7	84.4	86.0
87.5°	50.2	43.0	43.8	45.4	56.5	72.4	70.9	44.6	38.2	40.6	46.2
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°	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1
2.5°	518.3	519.1	520.6	521.4	523.0	523.0	524.6	525.4	527.0	528.6	529.4
5°	527.8	530.2	533.4	535.0	538.2	540.5	543.7	545.3	548.5	550.9	554.1
7.5°	542.1	546.1	550.1	554.9	559.7	563.6	566.8	570.8	576.4	580.4	582.7
10°	555.7	561.2	568.4	574.0	581.1	586.7	591.5	598.7	605.0	610.6	613.8
12.5°	573.2	580.4	587.5	596.3	605.8	613.0	620.2	629.7	638.5	644.8	648.0
15°	593.9	602.6	610.6	621.0	632.1	641.7	652.0	662.4	668.7	668.7	667.1
17.5°	615.4	622.5	632.1	644.0	659.2	671.1	676.7	678.3	675.9	670.3	666.3
20°	636.9	643.2	653.6	667.9	683.8	686.2	680.7	673.5	666.3	656.8	650.4
22.5°	654.4	663.1	679.1	695.8	696.6	683.0	667.9	656.0	644.8	633.7	621.7
25°	675.1	687.0	708.5	714.9	694.2	668.7	647.2	629.7	611.4	593.1	579.6
27.5°	700.6	718.1	739.6	721.3	680.7	644.8	615.4	589.1	565.2	539.8	524.6
30°	727.6	754.7	759.5	711.7	657.6	611.4	571.6	531.8	501.5	478.5	469.7
32.5°	760.3	795.3	766.6	695.0	626.5	566.0	512.7	464.9	439.4	425.1	421.1
35°	809.6	838.3	770.6	677.5	590.7	511.9	445.0	406.8	390.9	381.3	376.6
37.5°	880.5	879.7	769.8	656.0	549.3	453.0	390.9	363.8	351.1	343.1	334.4
40°	963.3	911.5	765.0	624.9	493.6	396.5	353.5	328.0	316.0	306.5	296.1
42.5°	1045.3	933.0	751.5	578.8	424.3	355.9	326.4	303.3	290.6	280.2	265.9
45°	1116.1	941.8	725.2	515.1	362.2	324.0	308.9	289.0	273.9	257.9	246.8
47.5°	1171.9	940.2	683.0	440.2	320.8	301.7	294.6	281.0	262.7	242.8	228.5
50°	1218.8	928.2	625.7	374.2	293.0	281.8	279.4	275.4	246.0	229.3	220.5
52.5°	1261.8	910.7	564.4	329.6	269.1	259.5	264.3	260.3	239.6	225.3	216.5
55°	1320.7	898.8	503.9	295.4	241.2	238.8	242.8	248.4	235.6	222.1	212.6
57.5°	1390.0	905.2	457.8	257.1	214.9	216.5	230.1	238.0	231.7	217.3	207.8
60°	1469.6	924.3	417.2	220.5	193.5	197.4	217.3	228.5	227.7	211.0	199.8
62.5°	1558.8	944.2	352.7	192.7	175.1	181.5	202.2	216.5	218.9	204.6	191.1
63°	1576.3	945.8	336.0	187.1	172.0	179.1	198.2	213.4	216.5	203.0	189.5
65°	1619.3	931.4	270.7	172.0	159.2	167.2	186.3	199.8	206.2	194.2	183.1
67.5°	1583.4	814.4	203.8	153.6	148.9	154.4	171.2	183.9	189.5	183.9	172.8
70°	1448.1	592.3	159.2	136.9	137.7	141.7	154.4	166.4	172.8	171.2	160.8
72.5°	1166.3	336.0	132.9	122.6	125.0	129.8	138.5	149.7	155.2	154.4	147.3
75°	768.2	172.0	112.2	109.9	111.5	115.4	121.8	130.6	136.9	136.1	132.9
77.5°	380.5	119.4	96.3	97.1	97.9	101.1	105.9	113.8	117.8	118.6	117.8
80°	156.8	93.1	82.8	83.6	84.4	86.8	90.0	97.1	99.5	101.1	101.9
82.5°	93.9	70.9	66.1	67.7	68.5	70.9	73.2	79.6	82.0	84.4	84.4
85°	62.1	49.4	47.8	49.4	51.0	52.5	53.3	57.3	61.3	64.5	66.1
87.5°	33.4	29.5	28.7	29.5	29.5	31.0	32.6	36.6	41.4	44.6	46.2
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):

	160°	165°	170°	175°	180°
0°	515.1	515.1	515.1	515.1	515.1
2.5°	527.8	528.6	527.8	528.6	529.4
5°	554.1	555.7	554.9	554.9	558.1
7.5°	584.3	587.5	587.5	589.1	590.7
10°	617.0	620.2	622.5	622.5	624.9
12.5°	649.6	651.2	653.6	653.6	653.6
15°	666.3	665.5	664.7	663.9	663.9
17.5°	663.9	660.8	659.2	657.6	658.4
20°	646.4	640.9	639.3	636.9	638.5
22.5°	616.2	608.2	605.0	601.1	602.6
25°	570.8	561.2	559.7	554.9	557.3
27.5°	518.3	513.5	512.7	511.9	515.9
30°	468.9	470.5	471.3	472.9	476.9
32.5°	423.5	426.7	427.5	428.3	433.9
35°	378.9	375.0	378.9	377.3	382.1
37.5°	330.4	327.2	324.0	320.0	323.2
40°	289.8	284.2	274.7	269.9	270.7
42.5°	257.9	250.8	242.8	238.0	238.0
45°	237.2	228.5	221.3	218.1	218.1
47.5°	221.3	217.3	213.4	211.0	211.0
50°	214.9	210.2	207.8	206.2	206.2
52.5°	210.2	205.4	203.0	201.4	199.8
55°	206.2	199.0	196.6	195.8	195.8
57.5°	200.6	194.2	191.1	190.3	190.3
60°	191.9	187.1	183.9	183.1	183.1
62.5°	183.1	178.3	175.1	175.1	175.1
63°	181.5	175.9	173.5	173.5	173.5
65°	174.3	168.8	166.4	166.4	165.6
67.5°	164.8	159.2	157.6	157.6	156.0
70°	153.6	148.9	147.3	148.1	144.9
72.5°	142.5	137.7	135.3	135.3	132.2
75°	129.8	125.0	121.8	121.0	117.8
77.5°	115.4	111.5	108.3	105.1	103.5
80°	100.3	97.1	93.1	90.8	88.4
82.5°	84.4	81.2	78.8	82.0	70.1
85°	66.1	62.9	59.7	64.5	50.2
87.5°	48.6	47.0	43.8	38.2	33.4
90°	0.0	0.0	0.0	0.0	0.0

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