

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: P239162

Luminaire Tested: **ARCH-AF24-40-D-U-T2U-8027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P239162
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-AF24-40-D-U-T2U-8027
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 2700K, 500mA LIGHT ENGINE WITH 24 LEDS AND TYPE II U OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3998 lumens
Efficiency: N/A
Efficacy: 99.9 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

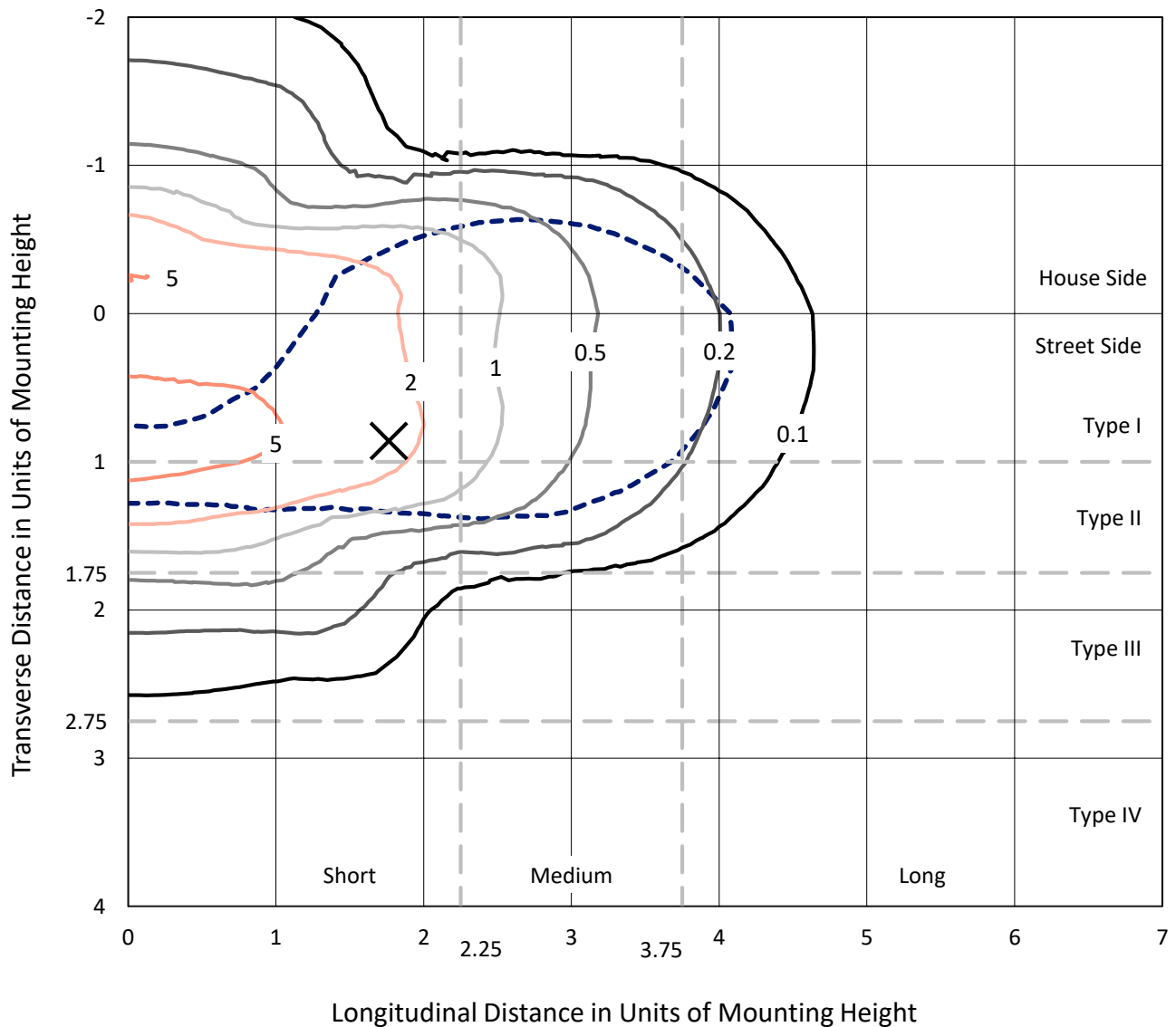
Input Watts (W): 40
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

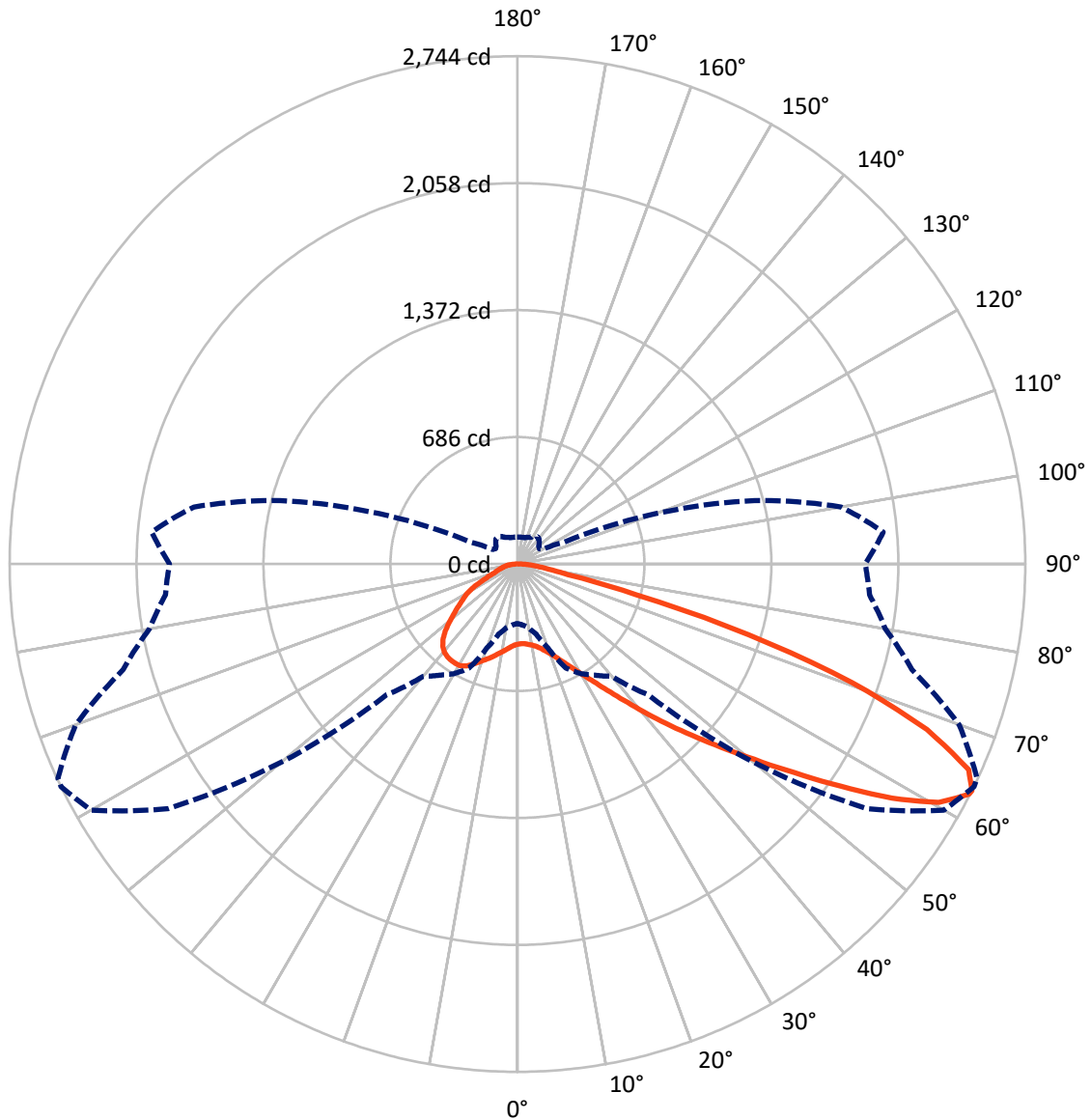
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 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	1175.3	0.0	1175.3
	% Fixture	29.4	0.0	29.4
Street Side	Lumens	2822.7	0.0	2822.7
	% Fixture	70.6	0.0	70.6
Total	Lumens	3998.0	0.0	3998.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.2	1.1
10°-20°	144.0	3.6
20°-30°	270.3	6.8
30°-40°	453.0	11.3
40°-50°	760.1	19.0
50°-60°	963.5	24.1
60°-70°	850.0	21.3
70°-80°	438.8	11.0
80°-90°	75.1	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°	3998.0	100.0
0°-180°	3998.0	100.0



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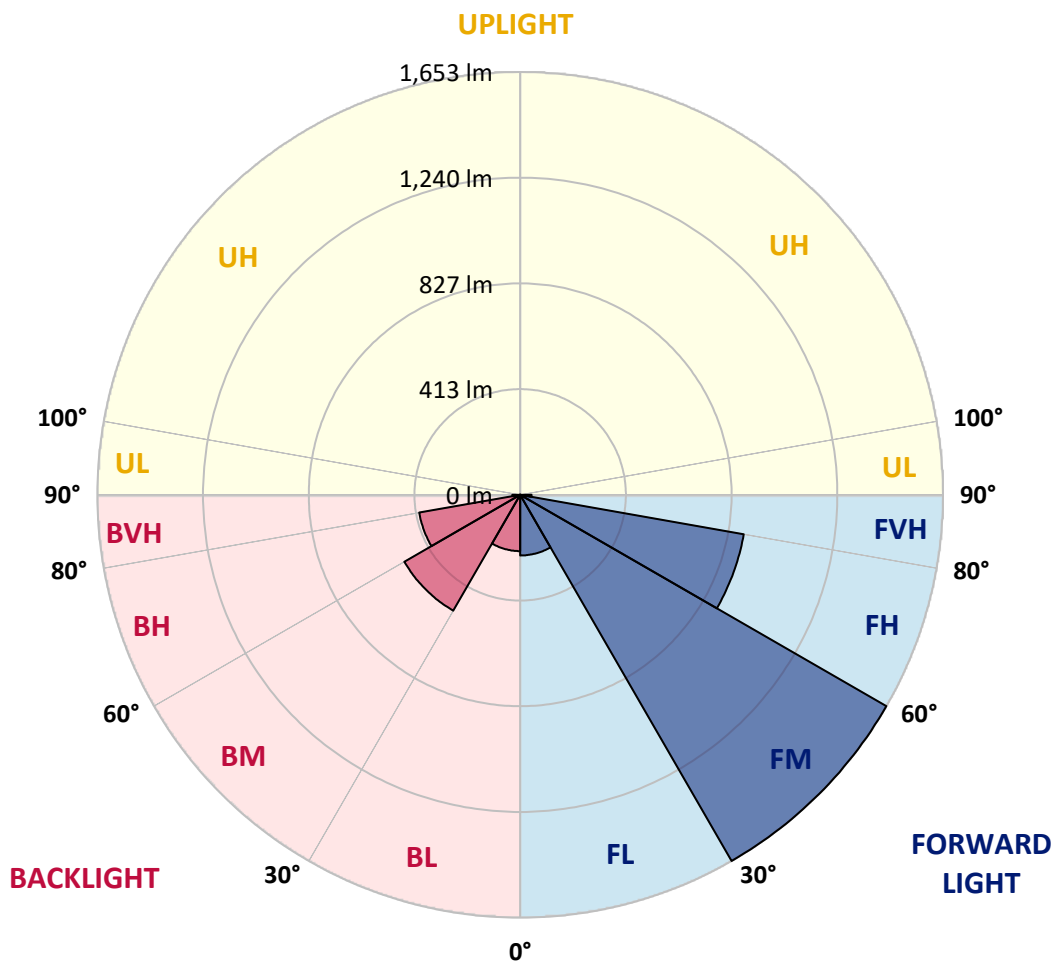
CATALOG NUMBER: ARCH-AF24-40-D-U-T2U-8027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	237.3	5.9			
FM	(30°-60°)	1653.5	41.4			
FH	(60°-80°)	887.8	22.2			G1/1800
FVH	(80°-90°)	44.2	1.1			G1/100
BL	(0°-30°)	220.2	5.5	B1/500		
BM	(30°-60°)	523.2	13.1	B1/1000		
BH	(60°-80°)	401.0	10.0	B1/500		G1/500
BVH	(80°-90°)	30.9	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°	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0
2.5°	430.3	429.6	429.6	429.6	429.6	429.0	429.6	431.0	430.3	429.6	431.0
5°	431.6	431.0	431.0	431.0	431.6	431.0	431.6	433.7	432.3	432.3	433.7
7.5°	435.0	434.3	435.0	434.3	434.3	434.3	435.0	437.0	436.3	437.0	439.0
10°	439.0	439.0	439.0	439.0	439.0	439.0	440.3	441.7	442.4	443.0	445.7
12.5°	451.1	451.1	451.1	450.4	450.4	448.4	451.1	452.4	453.7	455.1	457.1
15°	476.5	476.5	475.8	473.1	473.1	469.1	469.8	470.5	470.5	471.8	473.1
17.5°	509.9	509.3	507.9	505.9	503.2	498.6	497.2	495.9	493.9	493.2	493.2
20°	556.8	556.1	553.4	548.1	544.7	537.4	532.0	526.7	524.7	521.3	520.6
22.5°	623.7	623.7	618.4	610.3	607.6	592.3	576.9	565.5	561.5	556.8	556.8
25°	704.7	704.0	696.7	687.3	675.9	659.8	641.1	625.7	615.7	605.0	601.0
27.5°	801.7	799.7	789.7	778.3	756.9	736.8	714.7	698.7	681.3	667.9	655.8
30°	915.5	913.5	896.1	874.7	852.6	832.5	800.4	781.0	753.5	737.5	724.1
32.5°	1047.3	1045.3	1013.9	993.1	969.7	944.9	906.8	876.0	841.2	818.4	799.7
35°	1215.3	1207.3	1162.4	1133.6	1096.8	1072.1	1031.9	990.4	949.6	917.5	890.1
37.5°	1396.7	1387.3	1347.8	1305.0	1268.8	1238.7	1181.8	1129.6	1081.5	1037.3	1003.2
40°	1586.0	1561.3	1519.1	1487.7	1462.9	1434.1	1374.6	1319.7	1244.1	1194.5	1143.0
42.5°	1717.2	1693.1	1663.7	1642.9	1630.9	1608.8	1575.3	1527.8	1460.2	1461.6	1325.7
45°	1803.5	1768.1	1748.0	1749.3	1754.0	1754.0	1748.0	1740.6	1711.2	1731.3	1617.5
47.5°	1772.7	1749.3	1736.6	1763.4	1796.8	1830.3	1869.1	1911.3	1959.5	2016.3	1876.5
50°	1592.1	1600.8	1606.8	1663.7	1735.3	1811.6	1900.6	2015.7	2150.2	2176.3	2108.7
52.5°	1303.6	1322.4	1342.4	1429.4	1523.8	1655.6	1811.6	2001.6	2182.3	2288.7	2282.0
55°	1012.5	1035.9	1078.8	1143.7	1218.6	1343.1	1535.8	1829.0	2110.7	2280.0	2383.1
57.5°	720.7	754.9	811.1	901.4	967.7	1038.0	1180.5	1505.7	1814.2	2129.4	2366.3
60°	479.2	495.2	532.0	644.5	756.2	829.8	930.9	1048.7	1301.0	1735.3	2193.7
62.5°	340.0	350.7	373.4	424.3	525.3	658.5	719.4	773.6	854.6	1116.2	1761.4
63°	321.2	330.6	349.3	392.2	483.2	621.0	683.3	732.8	791.7	998.5	1666.3
65°	266.3	270.4	280.4	301.1	350.0	464.4	566.2	596.3	606.3	641.8	1044.0
67.5°	224.9	227.5	230.9	236.9	256.3	309.2	422.3	460.4	449.0	425.0	516.0
70°	195.4	197.4	202.8	210.1	216.8	230.2	290.4	347.3	334.6	301.8	315.9
72.5°	155.9	159.3	165.3	178.0	191.4	208.8	223.5	259.0	251.0	219.5	222.8
75°	123.1	125.1	130.5	139.9	152.6	172.7	201.4	213.5	191.4	161.9	161.9
77.5°	97.7	99.7	104.4	111.8	119.8	133.8	153.9	185.4	172.0	121.8	121.1
80°	73.6	75.6	80.3	87.0	95.0	105.1	117.1	131.2	157.9	113.8	91.0
82.5°	54.2	54.9	62.9	67.6	70.3	78.3	88.3	96.4	108.4	105.1	81.0
85°	40.8	40.2	45.5	48.9	49.5	51.5	57.6	65.6	70.9	68.3	62.9
87.5°	22.8	20.1	23.4	26.8	26.8	27.4	28.8	33.5	38.1	36.8	33.5
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°	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0
2.5°	431.0	431.0	430.3	430.3	431.0	431.0	430.3	432.3	433.7	433.7	434.3
5°	433.0	433.7	433.0	433.0	433.7	433.7	434.3	436.3	438.3	439.7	441.7
7.5°	439.0	439.7	439.0	439.0	439.7	440.3	441.7	444.4	445.7	448.4	451.7
10°	445.7	446.4	445.7	446.4	447.0	447.7	449.7	451.7	453.7	456.4	461.8
12.5°	457.7	458.4	457.1	457.7	459.8	459.8	461.1	462.4	465.8	469.1	474.5
15°	474.5	474.5	473.1	473.8	475.8	475.8	476.5	477.8	481.8	485.8	491.2
17.5°	493.9	495.2	494.5	495.2	496.6	497.2	497.2	498.6	501.2	503.9	509.3
20°	520.0	520.6	519.3	520.6	522.0	520.6	519.3	518.6	520.0	521.3	527.3
22.5°	555.4	554.8	551.4	551.4	551.4	548.8	545.4	541.4	541.4	539.4	544.1
25°	597.6	595.6	590.9	591.6	586.9	582.9	576.9	570.8	565.5	563.5	564.1
27.5°	647.1	643.1	638.4	637.1	632.4	625.0	615.0	603.6	594.9	588.2	586.9
30°	709.4	700.7	692.6	691.3	683.9	671.9	655.8	640.4	625.7	614.3	610.3
32.5°	783.0	769.6	756.9	755.5	743.5	727.4	708.0	686.6	665.2	647.1	638.4
35°	869.3	849.2	837.2	833.8	816.4	796.4	775.0	747.5	717.4	692.0	675.9
37.5°	974.4	953.6	932.9	933.6	909.5	886.0	857.3	823.8	785.7	750.2	727.4
40°	1104.2	1074.8	1048.0	1042.0	1021.2	988.4	957.0	918.2	871.3	824.5	791.7
42.5°	1261.5	1213.3	1176.5	1171.1	1143.7	1103.5	1065.4	1013.9	966.3	909.5	870.0
45°	1440.1	1363.2	1319.0	1311.0	1266.8	1226.0	1179.8	1124.9	1066.7	1002.5	955.6
47.5°	1662.3	1552.6	1477.6	1464.2	1403.3	1349.8	1301.6	1240.7	1171.1	1099.5	1048.0
50°	1921.3	1759.4	1658.3	1637.6	1555.9	1493.0	1431.4	1355.2	1280.9	1205.9	1146.4
52.5°	2181.0	2007.0	1872.5	1847.0	1726.6	1642.3	1561.3	1485.0	1397.3	1323.0	1255.4
55°	2389.8	2274.0	2118.1	2082.6	1909.9	1795.5	1689.1	1602.1	1515.1	1456.2	1376.6
57.5°	2515.6	2509.6	2386.4	2337.6	2101.3	1932.0	1813.6	1714.5	1630.2	1605.4	1499.7
60°	2512.2	2668.2	2615.3	2578.5	2294.7	2071.9	1918.0	1810.9	1741.3	1769.4	1623.5
62.5°	2359.0	2674.9	2738.4	2728.4	2500.9	2184.3	2003.6	1893.2	1856.4	1940.1	1752.0
63°	2303.4	2659.5	2743.8	2739.8	2540.3	2205.7	2018.4	1909.3	1879.2	1983.6	1775.4
65°	1946.7	2524.9	2678.9	2696.9	2625.3	2279.3	2052.5	1950.1	1946.7	2080.6	1831.0
67.5°	1186.5	2133.5	2386.4	2421.2	2505.5	2302.8	2033.1	1936.0	1984.2	2094.6	1814.2
70°	507.3	1408.0	1918.0	1974.2	2180.3	2186.3	1977.5	1878.5	1975.5	1984.9	1695.1
72.5°	300.5	663.9	1305.6	1428.1	1725.2	1881.2	1850.4	1778.1	1861.1	1743.3	1443.5
75°	212.8	310.5	663.2	793.7	1201.2	1436.1	1554.6	1588.0	1584.7	1382.6	1083.5
77.5°	152.6	199.4	279.7	329.9	670.6	922.2	1066.7	1164.4	1133.0	925.5	667.9
80°	106.4	137.9	171.3	182.0	311.2	473.8	562.1	605.0	586.2	462.4	299.1
82.5°	77.0	90.3	110.4	117.1	156.6	218.8	260.3	229.5	220.2	170.6	129.2
85°	59.6	58.2	68.9	71.6	91.7	114.4	117.1	91.0	79.6	70.9	72.3
87.5°	42.2	36.1	36.8	38.1	47.5	60.9	59.6	37.5	32.1	34.1	38.8
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0	433.0
2.5°	435.7	436.3	437.7	438.3	439.7	439.7	441.0	441.7	443.0	444.4	445.0
5°	443.7	445.7	448.4	449.7	452.4	454.4	457.1	458.4	461.1	463.1	465.8
7.5°	455.7	459.1	462.4	466.4	470.5	473.8	476.5	479.8	484.5	487.9	489.9
10°	467.1	471.8	477.8	482.5	488.5	493.2	497.2	503.2	508.6	513.3	516.0
12.5°	481.8	487.9	493.9	501.2	509.3	515.3	521.3	529.3	536.7	542.1	544.7
15°	499.2	506.6	513.3	522.0	531.4	539.4	548.1	556.8	562.1	562.1	560.8
17.5°	517.3	523.3	531.4	541.4	554.1	564.1	568.8	570.2	568.2	563.5	560.1
20°	535.4	540.7	549.4	561.5	574.9	576.9	572.2	566.2	560.1	552.1	546.7
22.5°	550.1	557.5	570.8	584.9	585.6	574.2	561.5	551.4	542.1	532.7	522.7
25°	567.5	577.5	595.6	601.0	583.6	562.1	544.1	529.3	514.0	498.6	487.2
27.5°	588.9	603.6	621.7	606.3	572.2	542.1	517.3	495.2	475.1	453.7	441.0
30°	611.7	634.4	638.4	598.3	552.8	514.0	480.5	447.0	421.6	402.2	394.8
32.5°	639.1	668.5	644.5	584.2	526.7	475.8	431.0	390.8	369.4	357.4	354.0
35°	680.6	704.7	647.8	569.5	496.6	430.3	374.1	342.0	328.6	320.6	316.5
37.5°	740.2	739.5	647.1	551.4	461.8	380.8	328.6	305.8	295.1	288.4	281.1
40°	809.7	766.3	643.1	525.3	414.9	333.3	297.1	275.7	265.7	257.6	248.9
42.5°	878.7	784.3	631.7	486.5	356.7	299.1	274.4	255.0	244.3	235.6	223.5
45°	938.2	791.7	609.7	433.0	304.5	272.4	259.7	242.9	230.2	216.8	207.5
47.5°	985.1	790.3	574.2	370.1	269.7	253.6	247.6	236.2	220.8	204.1	192.1
50°	1024.6	780.3	526.0	314.5	246.3	236.9	234.9	231.5	206.8	192.7	185.4
52.5°	1060.7	765.6	474.5	277.1	226.2	218.2	222.2	218.8	201.4	189.4	182.0
55°	1110.2	755.5	423.6	248.3	202.8	200.8	204.1	208.8	198.1	186.7	178.7
57.5°	1168.4	760.9	384.8	216.2	180.7	182.0	193.4	200.1	194.7	182.7	174.7
60°	1235.4	777.0	350.7	185.4	162.6	166.0	182.7	192.1	191.4	177.3	168.0
62.5°	1310.3	793.7	296.5	161.9	147.2	152.6	170.0	182.0	184.0	172.0	160.6
63°	1325.0	795.0	282.4	157.3	144.6	150.6	166.6	179.3	182.0	170.6	159.3
65°	1361.2	783.0	227.5	144.6	133.8	140.5	156.6	168.0	173.3	163.3	153.9
67.5°	1331.1	684.6	171.3	129.2	125.1	129.8	143.9	154.6	159.3	154.6	145.2
70°	1217.3	497.9	133.8	115.1	115.8	119.1	129.8	139.9	145.2	143.9	135.2
72.5°	980.4	282.4	111.8	103.1	105.1	109.1	116.4	125.8	130.5	129.8	123.8
75°	645.8	144.6	94.4	92.4	93.7	97.0	102.4	109.8	115.1	114.4	111.8
77.5°	319.9	100.4	81.0	81.6	82.3	85.0	89.0	95.7	99.0	99.7	99.0
80°	131.8	78.3	69.6	70.3	70.9	72.9	75.6	81.6	83.7	85.0	85.7
82.5°	79.0	59.6	55.5	56.9	57.6	59.6	61.6	66.9	68.9	70.9	70.9
85°	52.2	41.5	40.2	41.5	42.8	44.2	44.8	48.2	51.5	54.2	55.5
87.5°	28.1	24.8	24.1	24.8	24.8	26.1	27.4	30.8	34.8	37.5	38.8
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):

	160°	165°	170°	175°	180°
0°	433.0	433.0	433.0	433.0	433.0
2.5°	443.7	444.4	443.7	444.4	445.0
5°	465.8	467.1	466.4	466.4	469.1
7.5°	491.2	493.9	493.9	495.2	496.6
10°	518.6	521.3	523.3	523.3	525.3
12.5°	546.1	547.4	549.4	549.4	549.4
15°	560.1	559.5	558.8	558.1	558.1
17.5°	558.1	555.4	554.1	552.8	553.4
20°	543.4	538.7	537.4	535.4	536.7
22.5°	518.0	511.3	508.6	505.3	506.6
25°	479.8	471.8	470.5	466.4	468.5
27.5°	435.7	431.6	431.0	430.3	433.7
30°	394.2	395.5	396.2	397.5	400.9
32.5°	356.0	358.7	359.4	360.0	364.7
35°	318.5	315.2	318.5	317.2	321.2
37.5°	277.7	275.0	272.4	269.0	271.7
40°	243.6	238.9	230.9	226.9	227.5
42.5°	216.8	210.8	204.1	200.1	200.1
45°	199.4	192.1	186.0	183.4	183.4
47.5°	186.0	182.7	179.3	177.3	177.3
50°	180.7	176.7	174.7	173.3	173.3
52.5°	176.7	172.7	170.6	169.3	168.0
55°	173.3	167.3	165.3	164.6	164.6
57.5°	168.6	163.3	160.6	159.9	159.9
60°	161.3	157.3	154.6	153.9	153.9
62.5°	153.9	149.9	147.2	147.2	147.2
63°	152.6	147.9	145.9	145.9	145.9
65°	146.6	141.9	139.9	139.9	139.2
67.5°	138.5	133.8	132.5	132.5	131.2
70°	129.2	125.1	123.8	124.5	121.8
72.5°	119.8	115.8	113.8	113.8	111.1
75°	109.1	105.1	102.4	101.7	99.0
77.5°	97.0	93.7	91.0	88.3	87.0
80°	84.3	81.6	78.3	76.3	74.3
82.5°	70.9	68.3	66.3	68.9	58.9
85°	55.5	52.9	50.2	54.2	42.2
87.5°	40.8	39.5	36.8	32.1	28.1
90°	0.0	0.0	0.0	0.0	0.0

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