

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: P239157

Luminaire Tested: **ARCH-AF16-40-D-U-T2U-8027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P239157
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-8027
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 2700K, 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: 3695 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

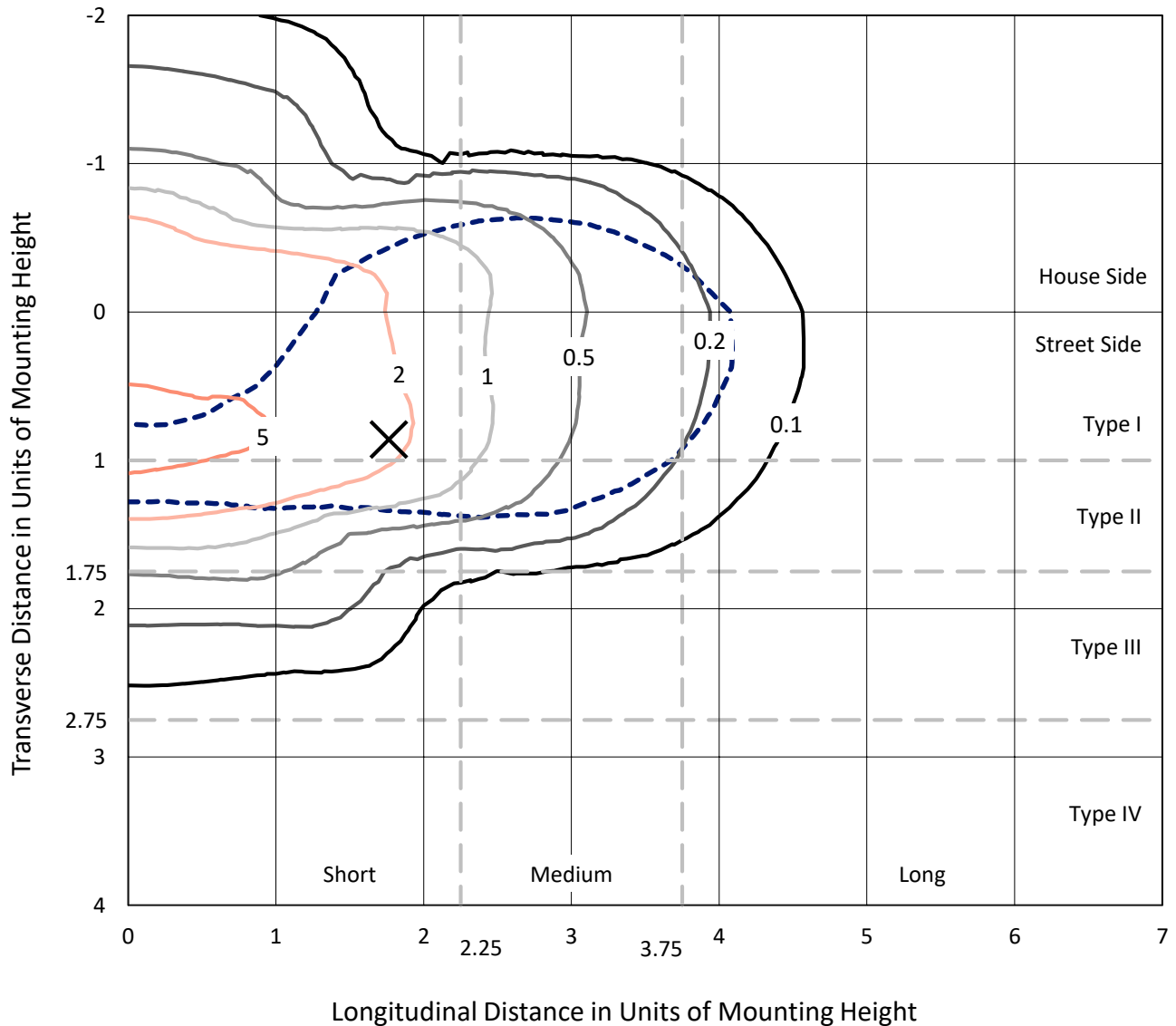
Input Watts (W): 42
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

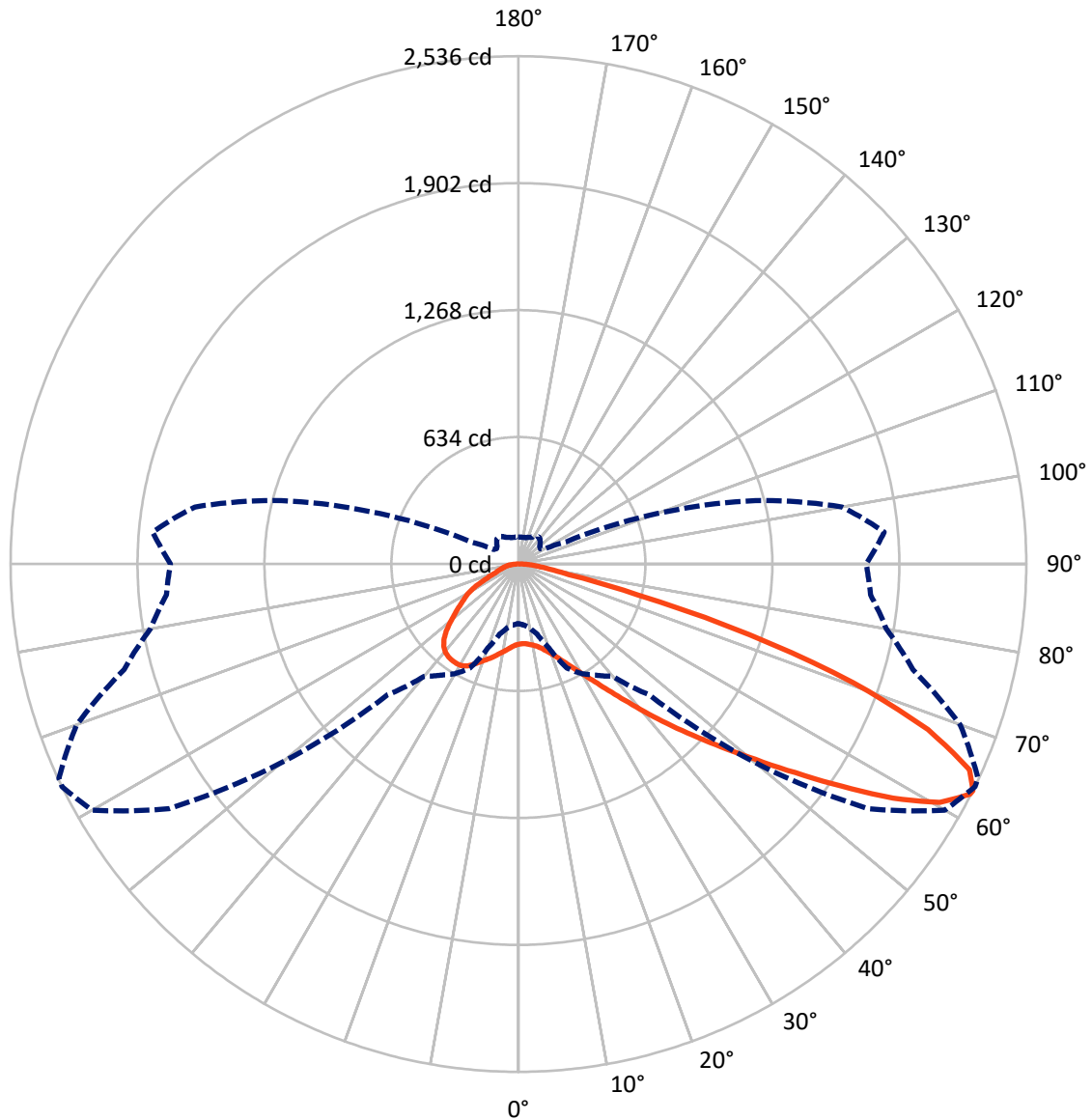
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.5 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	1086.2	0.0	1086.2
	% Fixture	29.4	0.0	29.4
Street Side	Lumens	2608.8	0.0	2608.8
	% Fixture	70.6	0.0	70.6
Total	Lumens	3695.0	0.0	3695.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	1.1
10°-20°	133.1	3.6
20°-30°	249.8	6.8
30°-40°	418.7	11.3
40°-50°	702.5	19.0
50°-60°	890.5	24.1
60°-70°	785.6	21.3
70°-80°	405.5	11.0
80°-90°	69.4	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°	3695.0	100.0
0°-180°	3695.0	100.0



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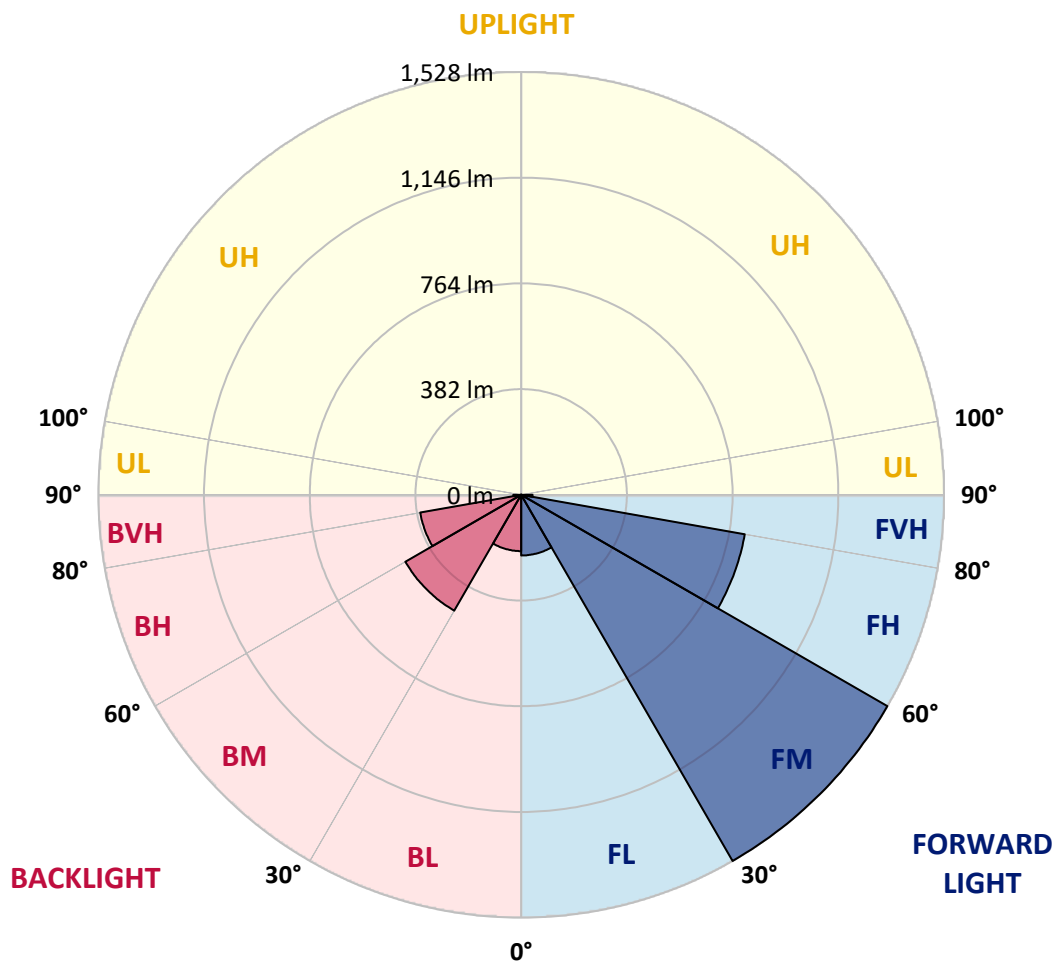
CATALOG NUMBER: ARCH-AF16-40-D-U-T2U-8027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	219.3	5.9			
FM	(30°-60°)	1528.2	41.4			
FH	(60°-80°)	820.5	22.2			G1/1800
FVH	(80°-90°)	40.8	1.1			G1/100
BL	(0°-30°)	203.5	5.5	B1/500		
BM	(30°-60°)	483.5	13.1	B1/1000		
BH	(60°-80°)	370.6	10.0	B1/500		G1/500
BVH	(80°-90°)	28.6	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2
2.5°	397.7	397.1	397.1	397.1	397.1	396.5	397.1	398.3	397.7	397.1	398.3
5°	398.9	398.3	398.3	398.3	398.9	398.3	398.9	400.8	399.5	399.5	400.8
7.5°	402.0	401.4	402.0	401.4	401.4	401.4	402.0	403.9	403.3	403.9	405.7
10°	405.7	405.7	405.7	405.7	405.7	405.7	407.0	408.2	408.8	409.4	411.9
12.5°	416.9	416.9	416.9	416.2	416.2	414.4	416.9	418.1	419.3	420.6	422.4
15°	440.4	440.4	439.8	437.3	437.3	433.6	434.2	434.8	434.8	436.0	437.3
17.5°	471.3	470.7	469.4	467.6	465.1	460.8	459.5	458.3	456.5	455.8	455.8
20°	514.6	514.0	511.5	506.5	503.5	496.7	491.7	486.8	484.9	481.8	481.2
22.5°	576.4	576.4	571.5	564.1	561.6	547.4	533.1	522.6	518.9	514.6	514.6
25°	651.3	650.7	643.9	635.2	624.7	609.8	592.5	578.3	569.0	559.1	555.4
27.5°	741.0	739.1	729.8	719.3	699.5	681.0	660.6	645.7	629.6	617.3	606.1
30°	846.1	844.2	828.2	808.4	788.0	769.4	739.7	721.8	696.4	681.6	669.2
32.5°	967.9	966.1	937.0	917.8	896.2	873.3	838.1	809.6	777.4	756.4	739.1
35°	1123.2	1115.8	1074.3	1047.7	1013.7	990.8	953.7	915.4	877.6	848.0	822.6
37.5°	1290.8	1282.1	1245.7	1206.1	1172.7	1144.8	1092.3	1044.0	999.5	958.7	927.1
40°	1465.8	1443.0	1404.0	1374.9	1352.0	1325.4	1270.4	1219.7	1149.8	1104.0	1056.4
42.5°	1587.1	1564.8	1537.6	1518.4	1507.3	1486.9	1455.9	1412.0	1349.6	1350.8	1225.2
45°	1666.8	1634.1	1615.5	1616.7	1621.1	1621.1	1615.5	1608.7	1581.5	1600.0	1494.9
47.5°	1638.4	1616.7	1605.0	1629.7	1660.7	1691.6	1727.5	1766.4	1811.0	1863.5	1734.3
50°	1471.4	1479.4	1485.0	1537.6	1603.8	1674.3	1756.5	1862.9	1987.2	2011.3	1948.9
52.5°	1204.8	1222.1	1240.7	1321.1	1408.3	1530.2	1674.3	1849.9	2016.9	2115.3	2109.1
55°	935.8	957.4	997.0	1057.0	1126.3	1241.3	1419.4	1690.3	1950.7	2107.2	2202.5
57.5°	666.1	697.7	749.6	833.1	894.3	959.3	1091.0	1391.6	1676.7	1968.1	2187.0
60°	442.8	457.7	491.7	595.6	698.9	766.9	860.3	969.2	1202.4	1603.8	2027.4
62.5°	314.2	324.1	345.1	392.1	485.5	608.6	664.9	715.0	789.8	1031.7	1627.9
63°	296.9	305.5	322.9	362.4	446.6	574.0	631.5	677.3	731.7	922.8	1540.1
65°	246.2	249.9	259.1	278.3	323.5	429.2	523.2	551.1	560.4	593.1	964.9
67.5°	207.8	210.3	213.4	218.9	236.9	285.7	390.3	425.5	415.0	392.7	476.9
70°	180.6	182.5	187.4	194.2	200.4	212.8	268.4	321.0	309.2	278.9	291.9
72.5°	144.1	147.2	152.8	164.5	176.9	193.0	206.6	239.4	231.9	202.9	206.0
75°	113.8	115.7	120.6	129.3	141.0	159.6	186.2	197.3	176.9	149.7	149.7
77.5°	90.3	92.2	96.5	103.3	110.7	123.7	142.3	171.3	159.0	112.6	111.9
80°	68.0	69.9	74.2	80.4	87.8	97.1	108.2	121.2	146.0	105.1	84.1
82.5°	50.1	50.7	58.1	62.5	64.9	72.4	81.6	89.1	100.2	97.1	74.8
85°	37.7	37.1	42.1	45.2	45.8	47.6	53.2	60.6	65.6	63.1	58.1
87.5°	21.0	18.6	21.6	24.7	24.7	25.4	26.6	30.9	35.3	34.0	30.9
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°	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2
2.5°	398.3	398.3	397.7	397.7	398.3	398.3	397.7	399.5	400.8	400.8	401.4
5°	400.2	400.8	400.2	400.2	400.8	400.8	401.4	403.3	405.1	406.4	408.2
7.5°	405.7	406.4	405.7	405.7	406.4	407.0	408.2	410.7	411.9	414.4	417.5
10°	411.9	412.5	411.9	412.5	413.2	413.8	415.6	417.5	419.3	421.8	426.8
12.5°	423.1	423.7	422.4	423.1	424.9	424.9	426.1	427.4	430.5	433.6	438.5
15°	438.5	438.5	437.3	437.9	439.8	439.8	440.4	441.6	445.3	449.0	454.0
17.5°	456.5	457.7	457.1	457.7	458.9	459.5	459.5	460.8	463.3	465.7	470.7
20°	480.6	481.2	480.0	481.2	482.4	481.2	480.0	479.3	480.6	481.8	487.4
22.5°	513.4	512.7	509.6	509.6	509.6	507.2	504.1	500.4	500.4	498.5	502.8
25°	552.3	550.5	546.1	546.8	542.4	538.7	533.1	527.6	522.6	520.8	521.4
27.5°	598.1	594.4	590.0	588.8	584.5	577.7	568.4	557.9	549.8	543.7	542.4
30°	655.6	647.6	640.1	638.9	632.1	621.0	606.1	591.9	578.3	567.8	564.1
32.5°	723.6	711.3	699.5	698.3	687.1	672.3	654.4	634.6	614.8	598.1	590.0
35°	803.4	784.9	773.7	770.6	754.6	736.0	716.2	690.9	663.0	639.5	624.7
37.5°	900.5	881.4	862.2	862.8	840.5	818.9	792.3	761.4	726.1	693.3	672.3
40°	1020.5	993.3	968.6	963.0	943.8	913.5	884.4	848.6	805.3	762.0	731.7
42.5°	1165.9	1121.3	1087.3	1082.4	1057.0	1019.9	984.6	937.0	893.1	840.5	804.0
45°	1331.0	1259.9	1219.1	1211.6	1170.8	1133.1	1090.4	1039.7	985.9	926.5	883.2
47.5°	1536.3	1434.9	1365.6	1353.3	1297.0	1247.5	1203.0	1146.7	1082.4	1016.2	968.6
50°	1775.7	1626.0	1532.6	1513.5	1438.0	1379.9	1323.0	1252.5	1183.8	1114.5	1059.5
52.5°	2015.7	1854.9	1730.6	1707.0	1595.7	1517.8	1443.0	1372.4	1291.4	1222.8	1160.3
55°	2208.6	2101.6	1957.5	1924.8	1765.2	1659.4	1561.1	1480.7	1400.3	1345.8	1272.2
57.5°	2324.9	2319.4	2205.6	2160.4	1942.1	1785.6	1676.1	1584.6	1506.7	1483.8	1386.0
60°	2321.8	2465.9	2417.1	2383.1	2120.8	1914.9	1772.6	1673.7	1609.3	1635.3	1500.5
62.5°	2180.2	2472.1	2530.9	2521.6	2311.3	2018.8	1851.8	1749.7	1715.7	1793.0	1619.2
63°	2128.9	2457.9	2535.8	2532.1	2347.8	2038.6	1865.4	1764.6	1736.7	1833.2	1640.9
65°	1799.2	2333.6	2475.8	2492.5	2426.4	2106.6	1896.9	1802.3	1799.2	1922.9	1692.2
67.5°	1096.6	1971.8	2205.6	2237.7	2315.6	2128.2	1879.0	1789.3	1833.8	1935.9	1676.7
70°	468.8	1301.3	1772.6	1824.6	2015.1	2020.6	1827.7	1736.1	1825.8	1834.5	1566.7
72.5°	277.7	613.5	1206.7	1319.9	1594.5	1738.6	1710.1	1643.3	1720.0	1611.2	1334.1
75°	196.7	287.0	612.9	733.5	1110.2	1327.3	1436.8	1467.7	1464.6	1277.8	1001.3
77.5°	141.0	184.3	258.5	304.9	619.7	852.3	985.9	1076.2	1047.1	855.4	617.3
80°	98.3	127.4	158.3	168.2	287.6	437.9	519.5	559.1	541.8	427.4	276.5
82.5°	71.1	83.5	102.1	108.2	144.7	202.2	240.6	212.1	203.5	157.7	119.4
85°	55.0	53.8	63.7	66.2	84.7	105.8	108.2	84.1	73.6	65.6	66.8
87.5°	39.0	33.4	34.0	35.3	43.9	56.3	55.0	34.6	29.7	31.5	35.9
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2
2.5°	402.6	403.3	404.5	405.1	406.4	406.4	407.6	408.2	409.4	410.7	411.3
5°	410.1	411.9	414.4	415.6	418.1	420.0	422.4	423.7	426.1	428.0	430.5
7.5°	421.2	424.3	427.4	431.1	434.8	437.9	440.4	443.5	447.8	450.9	452.7
10°	431.7	436.0	441.6	445.9	451.5	455.8	459.5	465.1	470.1	474.4	476.9
12.5°	445.3	450.9	456.5	463.3	470.7	476.2	481.8	489.2	496.0	501.0	503.5
15°	461.4	468.2	474.4	482.4	491.1	498.5	506.5	514.6	519.5	519.5	518.3
17.5°	478.1	483.7	491.1	500.4	512.1	521.4	525.7	527.0	525.1	520.8	517.7
20°	494.8	499.7	507.8	518.9	531.3	533.1	528.8	523.2	517.7	510.3	505.3
22.5°	508.4	515.2	527.6	540.6	541.2	530.7	518.9	509.6	501.0	492.3	483.0
25°	524.5	533.8	550.5	555.4	539.3	519.5	502.8	489.2	475.0	460.8	450.3
27.5°	544.3	557.9	574.6	560.4	528.8	501.0	478.1	457.7	439.1	419.3	407.6
30°	565.3	586.3	590.0	552.9	510.9	475.0	444.1	413.2	389.7	371.7	364.9
32.5°	590.7	617.9	595.6	539.9	486.8	439.8	398.3	361.2	341.4	330.3	327.2
35°	629.0	651.3	598.7	526.3	458.9	397.7	345.7	316.1	303.7	296.3	292.5
37.5°	684.1	683.4	598.1	509.6	426.8	351.9	303.7	282.7	272.8	266.6	259.8
40°	748.4	708.2	594.4	485.5	383.5	308.0	274.6	254.8	245.5	238.1	230.1
42.5°	812.1	724.9	583.9	449.6	329.7	276.5	253.6	235.6	225.8	217.7	206.6
45°	867.1	731.7	563.4	400.2	281.4	251.7	240.0	224.5	212.8	200.4	191.7
47.5°	910.4	730.4	530.7	342.0	249.3	234.4	228.8	218.3	204.1	188.6	177.5
50°	946.9	721.2	486.1	290.7	227.6	218.9	217.1	214.0	191.1	178.1	171.3
52.5°	980.3	707.6	438.5	256.1	209.1	201.6	205.3	202.2	186.2	175.0	168.2
55°	1026.1	698.3	391.5	229.5	187.4	185.5	188.6	193.0	183.1	172.6	165.1
57.5°	1079.9	703.2	355.6	199.8	167.0	168.2	178.7	184.9	180.0	168.8	161.4
60°	1141.7	718.1	324.1	171.3	150.3	153.4	168.8	177.5	176.9	163.9	155.2
62.5°	1211.0	733.5	274.0	149.7	136.1	141.0	157.1	168.2	170.1	159.0	148.4
63°	1224.6	734.8	261.0	145.3	133.6	139.2	154.0	165.8	168.2	157.7	147.2
65°	1258.0	723.6	210.3	133.6	123.7	129.9	144.7	155.2	160.2	150.9	142.3
67.5°	1230.2	632.7	158.3	119.4	115.7	120.0	133.0	142.9	147.2	142.9	134.2
70°	1125.0	460.2	123.7	106.4	107.0	110.1	120.0	129.3	134.2	133.0	124.9
72.5°	906.1	261.0	103.3	95.2	97.1	100.8	107.6	116.3	120.6	120.0	114.4
75°	596.8	133.6	87.2	85.4	86.6	89.7	94.6	101.4	106.4	105.8	103.3
77.5°	295.6	92.8	74.8	75.5	76.1	78.5	82.3	88.4	91.5	92.2	91.5
80°	121.8	72.4	64.3	64.9	65.6	67.4	69.9	75.5	77.3	78.5	79.2
82.5°	73.0	55.0	51.3	52.6	53.2	55.0	56.9	61.8	63.7	65.6	65.6
85°	48.2	38.3	37.1	38.3	39.6	40.8	41.4	44.5	47.6	50.1	51.3
87.5°	26.0	22.9	22.3	22.9	22.9	24.1	25.4	28.5	32.2	34.6	35.9
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):

	160°	165°	170°	175°	180°
0°	400.2	400.2	400.2	400.2	400.2
2.5°	410.1	410.7	410.1	410.7	411.3
5°	430.5	431.7	431.1	431.1	433.6
7.5°	454.0	456.5	456.5	457.7	458.9
10°	479.3	481.8	483.7	483.7	485.5
12.5°	504.7	505.9	507.8	507.8	507.8
15°	517.7	517.1	516.4	515.8	515.8
17.5°	515.8	513.4	512.1	510.9	511.5
20°	502.2	497.9	496.7	494.8	496.0
22.5°	478.7	472.5	470.1	467.0	468.2
25°	443.5	436.0	434.8	431.1	432.9
27.5°	402.6	398.9	398.3	397.7	400.8
30°	364.3	365.5	366.1	367.4	370.5
32.5°	329.0	331.5	332.1	332.8	337.1
35°	294.4	291.3	294.4	293.2	296.9
37.5°	256.7	254.2	251.7	248.6	251.1
40°	225.1	220.8	213.4	209.7	210.3
42.5°	200.4	194.8	188.6	184.9	184.9
45°	184.3	177.5	171.9	169.5	169.5
47.5°	171.9	168.8	165.8	163.9	163.9
50°	167.0	163.3	161.4	160.2	160.2
52.5°	163.3	159.6	157.7	156.5	155.2
55°	160.2	154.6	152.8	152.2	152.2
57.5°	155.9	150.9	148.4	147.8	147.8
60°	149.1	145.3	142.9	142.3	142.3
62.5°	142.3	138.5	136.1	136.1	136.1
63°	141.0	136.7	134.8	134.8	134.8
65°	135.5	131.1	129.3	129.3	128.6
67.5°	128.0	123.7	122.5	122.5	121.2
70°	119.4	115.7	114.4	115.0	112.6
72.5°	110.7	107.0	105.1	105.1	102.7
75°	100.8	97.1	94.6	94.0	91.5
77.5°	89.7	86.6	84.1	81.6	80.4
80°	77.9	75.5	72.4	70.5	68.7
82.5°	65.6	63.1	61.2	63.7	54.4
85°	51.3	48.9	46.4	50.1	39.0
87.5°	37.7	36.5	34.0	29.7	26.0
90°	0.0	0.0	0.0	0.0	0.0

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