

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: P239116

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239116  
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  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 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: 6111.2 lumens  
Efficiency: N/A  
Efficacy: 115.3 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

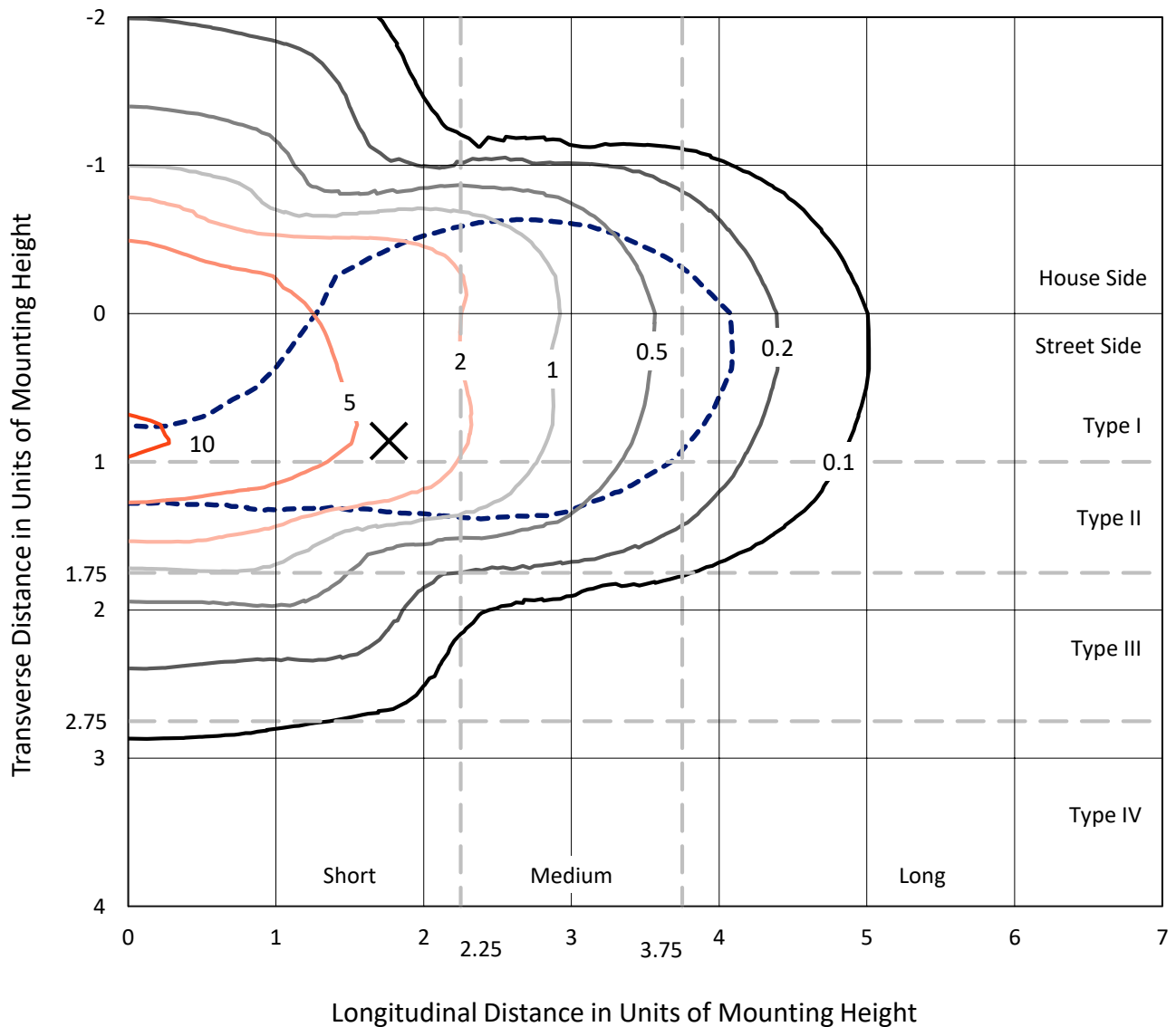
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P239116  
 CATALOG NUMBER: ARCH-AF16-50-D-U-T2U

### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

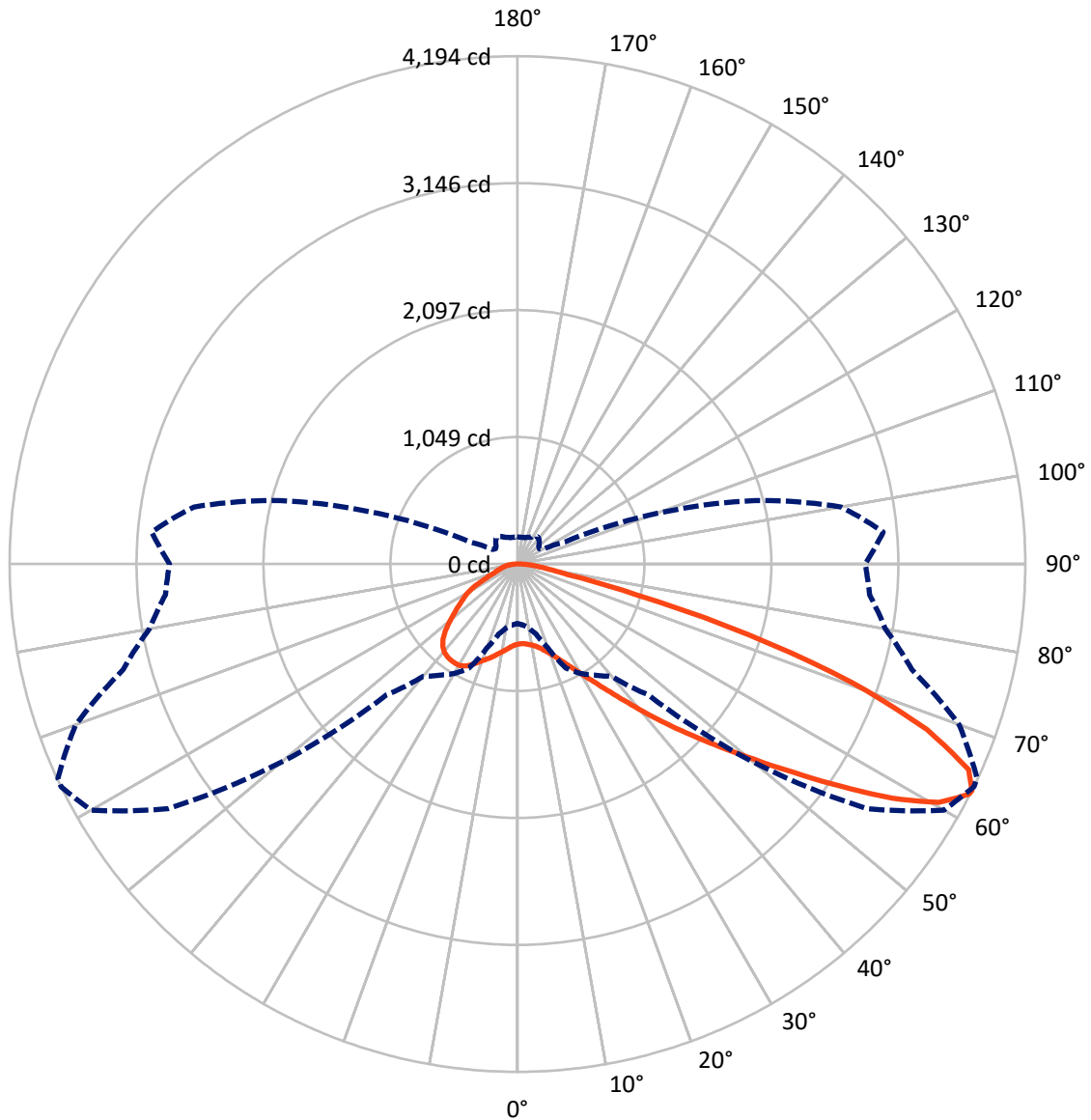


Based on 10 foot mounting height. Maximum calculated value = 10.7 fc  
 Type II - Short - Semi-Cutoff

REPORT NUMBER: P239116

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

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P239116

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

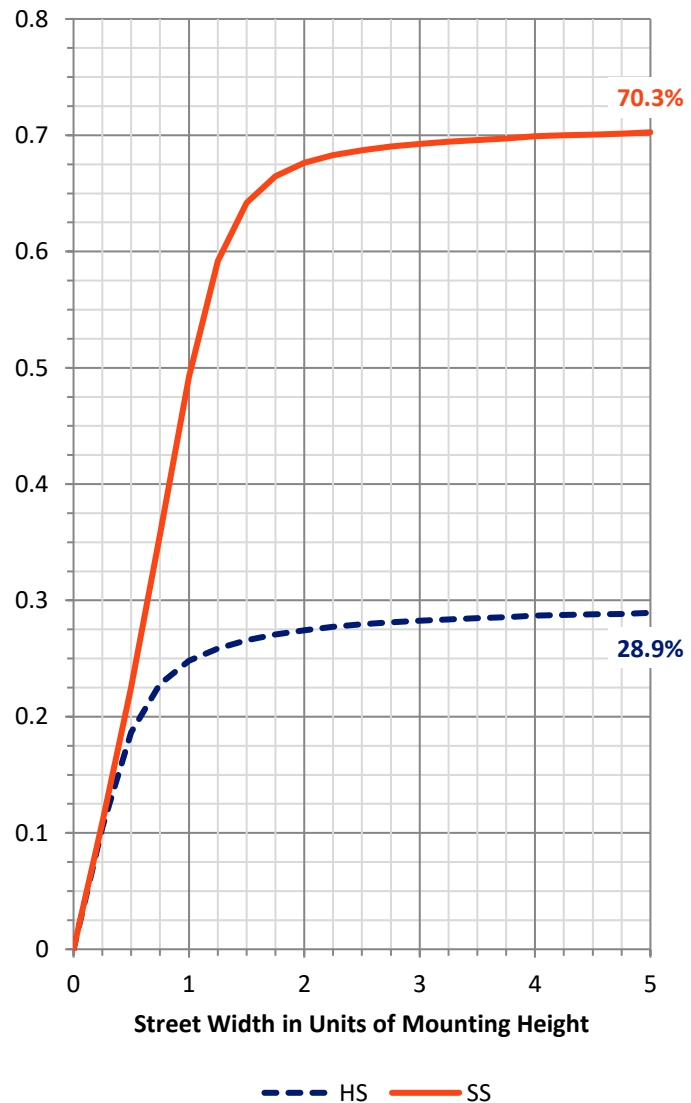
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1796.5	0.0	1796.5
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	4314.7	0.0	4314.7
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	6111.2	0.0	6111.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.1	1.1
10°-20°	220.1	3.6
20°-30°	413.2	6.8
30°-40°	692.5	11.3
40°-50°	1161.8	19.0
50°-60°	1472.8	24.1
60°-70°	1299.3	21.3
70°-80°	670.7	11.0
80°-90°	114.8	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°	6111.2	100.0
0°-180°	6111.2	100.0



REPORT NUMBER: P239116

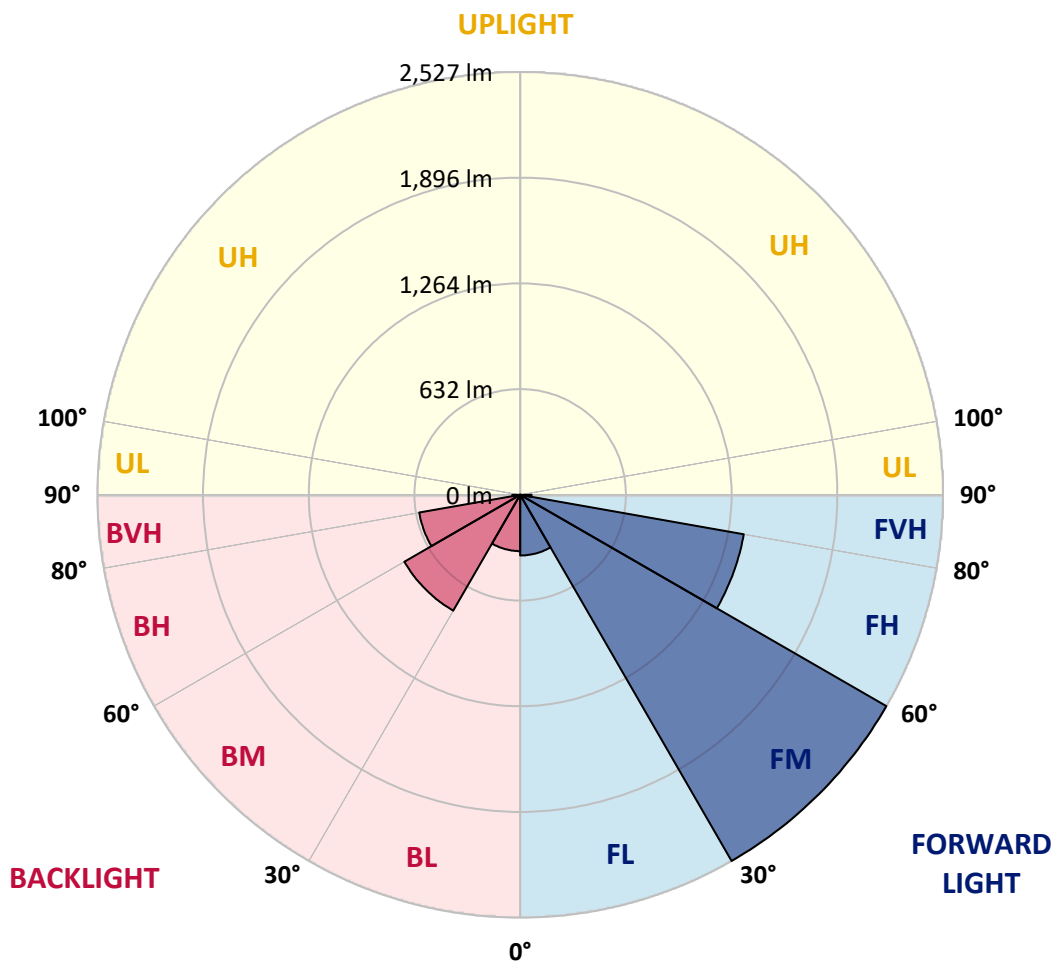
CATALOG NUMBER: ARCH-AF16-50-D-U-T2U

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	362.7	5.9			
FM	(30°-60°)	2527.4	41.4			
FH	(60°-80°)	1357.0	22.2			G1/1800
FVH	(80°-90°)	67.5	1.1			G1/100
BL	(0°-30°)	336.6	5.5	B1/500		
BM	(30°-60°)	799.7	13.1	B1/1000		
BH	(60°-80°)	612.9	10.0	B2/1000		G2/1000
BVH	(80°-90°)	47.2	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





REPORT NUMBER: P239116

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

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8
2.5°	657.8	656.7	656.7	656.7	656.7	655.7	656.7	658.8	657.8	656.7	658.8
5°	659.8	658.8	658.8	658.8	659.8	658.8	659.8	662.9	660.8	660.8	662.9
7.5°	664.9	663.9	664.9	663.9	663.9	663.9	664.9	668.0	667.0	668.0	671.1
10°	671.1	671.1	671.1	671.1	671.1	671.1	673.1	675.1	676.2	677.2	681.3
12.5°	689.5	689.5	689.5	688.4	688.4	685.4	689.5	691.5	693.6	695.6	698.7
15°	728.3	728.3	727.3	723.2	723.2	717.1	718.1	719.1	719.1	721.2	723.2
17.5°	779.5	778.5	776.4	773.4	769.3	762.1	760.1	758.0	754.9	753.9	753.9
20°	851.1	850.1	846.0	837.8	832.7	821.4	813.2	805.1	802.0	796.9	795.9
22.5°	953.4	953.4	945.2	932.9	928.8	905.3	881.8	864.4	858.3	851.1	851.1
25°	1077.2	1076.1	1064.9	1050.6	1033.2	1008.6	980.0	956.5	941.1	924.7	918.6
27.5°	1225.5	1222.4	1207.1	1189.7	1157.0	1126.3	1092.5	1068.0	1041.4	1020.9	1002.5
30°	1399.4	1396.3	1369.7	1337.0	1303.2	1272.6	1223.4	1193.8	1151.8	1127.3	1106.8
32.5°	1600.9	1597.8	1549.8	1518.1	1482.3	1444.4	1386.1	1339.0	1285.8	1251.1	1222.4
35°	1857.6	1845.3	1776.9	1732.9	1676.6	1638.8	1577.4	1514.0	1451.6	1402.5	1360.5
37.5°	2134.8	2120.5	2060.1	1994.7	1939.4	1893.4	1806.5	1726.7	1653.1	1585.6	1533.4
40°	2424.3	2386.4	2322.0	2273.9	2236.1	2192.1	2101.0	2017.2	1901.6	1825.9	1747.2
42.5°	2624.8	2588.0	2543.0	2511.2	2492.8	2459.1	2407.9	2335.3	2232.0	2234.0	2026.4
45°	2756.8	2702.5	2671.8	2673.9	2681.1	2681.1	2671.8	2660.6	2615.6	2646.3	2472.4
47.5°	2709.7	2673.9	2654.5	2695.4	2746.5	2797.7	2857.0	2921.4	2995.1	3082.0	2868.3
50°	2433.5	2446.8	2456.0	2543.0	2652.4	2769.0	2905.1	3081.0	3286.6	3326.5	3223.2
52.5°	1992.6	2021.2	2051.9	2184.9	2329.2	2530.7	2769.0	3059.5	3335.7	3498.4	3488.2
55°	1547.7	1583.5	1649.0	1748.2	1862.7	2053.0	2347.6	2795.6	3226.3	3485.1	3642.6
57.5°	1101.7	1153.9	1239.8	1377.9	1479.2	1586.6	1804.5	2301.5	2773.1	3254.9	3617.1
60°	732.4	757.0	813.2	985.1	1155.9	1268.5	1422.9	1603.0	1988.5	2652.4	3353.1
62.5°	519.7	536.0	570.8	648.6	803.0	1006.6	1099.7	1182.5	1306.3	1706.3	2692.3
63°	491.0	505.3	534.0	599.4	738.6	949.3	1044.4	1120.1	1210.2	1526.2	2547.0
65°	407.1	413.3	428.6	460.3	535.0	709.9	865.4	911.4	926.8	981.0	1595.8
67.5°	343.7	347.8	352.9	362.1	391.8	472.6	645.5	703.8	686.4	649.6	788.7
70°	298.7	301.8	310.0	321.2	331.4	351.9	444.0	530.9	511.5	461.4	482.8
72.5°	238.3	243.5	252.7	272.1	292.6	319.2	341.7	395.9	383.6	335.5	340.6
75°	188.2	191.3	199.5	213.8	233.2	263.9	307.9	326.3	292.6	247.6	247.6
77.5°	149.4	152.4	159.6	170.8	183.1	204.6	235.3	283.4	262.9	186.2	185.2
80°	112.5	115.6	122.8	133.0	145.3	160.6	179.0	200.5	241.4	173.9	139.1
82.5°	82.9	83.9	96.2	103.3	107.4	119.7	135.0	147.3	165.7	160.6	123.8
85°	62.4	61.4	69.6	74.7	75.7	78.8	88.0	100.2	108.4	104.3	96.2
87.5°	34.8	30.7	35.8	40.9	40.9	41.9	44.0	51.1	58.3	56.3	51.1
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: P239116

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

**CANDELA DISTRIBUTION (continued):**

	55°	60°	64°	65°	70°	75°	80°	85°	90°	95°	100°
0°	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8
2.5°	658.8	658.8	657.8	657.8	658.8	658.8	657.8	660.8	662.9	662.9	663.9
5°	661.8	662.9	661.8	661.8	662.9	662.9	663.9	667.0	670.0	672.1	675.1
7.5°	671.1	672.1	671.1	671.1	672.1	673.1	675.1	679.2	681.3	685.4	690.5
10°	681.3	682.3	681.3	682.3	683.3	684.4	687.4	690.5	693.6	697.7	705.8
12.5°	699.7	700.7	698.7	699.7	702.8	702.8	704.8	706.9	712.0	717.1	725.3
15°	725.3	725.3	723.2	724.2	727.3	727.3	728.3	730.4	736.5	742.7	750.8
17.5°	754.9	757.0	756.0	757.0	759.0	760.1	760.1	762.1	766.2	770.3	778.5
20°	794.8	795.9	793.8	795.9	797.9	795.9	793.8	792.8	794.8	796.9	806.1
22.5°	849.0	848.0	842.9	842.9	842.9	838.8	833.7	827.6	827.6	824.5	831.7
25°	913.5	910.4	903.3	904.3	897.1	891.0	881.8	872.6	864.4	861.3	862.3
27.5°	989.2	983.1	975.9	973.8	966.7	955.4	940.1	922.7	909.4	899.2	897.1
30°	1084.3	1071.0	1058.8	1056.7	1045.5	1027.0	1002.5	979.0	956.5	939.1	932.9
32.5°	1196.9	1176.4	1157.0	1154.9	1136.5	1111.9	1082.3	1049.5	1016.8	989.2	975.9
35°	1328.8	1298.1	1279.7	1274.6	1248.0	1217.3	1184.6	1142.6	1096.6	1057.7	1033.2
37.5°	1489.4	1457.7	1426.0	1427.0	1390.2	1354.4	1310.4	1259.3	1200.9	1146.7	1111.9
40°	1687.9	1642.9	1601.9	1592.7	1561.0	1510.9	1462.8	1403.5	1331.9	1260.3	1210.2
42.5°	1928.2	1854.5	1798.3	1790.2	1748.2	1686.8	1628.5	1549.8	1477.1	1390.2	1329.8
45°	2201.3	2083.6	2016.1	2003.9	1936.3	1873.9	1803.5	1719.6	1630.6	1532.4	1460.8
47.5°	2540.9	2373.1	2258.6	2238.1	2145.0	2063.2	1989.5	1896.4	1790.2	1680.7	1601.9
50°	2936.8	2689.2	2534.8	2503.1	2378.3	2282.1	2188.0	2071.4	1957.8	1843.3	1752.3
52.5°	3333.7	3067.7	2862.1	2823.2	2639.1	2510.2	2386.4	2269.8	2135.8	2022.3	1919.0
55°	3652.9	3475.9	3237.5	3183.3	2919.4	2744.5	2581.8	2448.8	2315.9	2225.8	2104.1
57.5°	3845.2	3836.0	3647.7	3573.1	3212.0	2953.2	2772.1	2620.7	2491.8	2454.0	2292.3
60°	3840.1	4078.4	3997.6	3941.3	3507.6	3167.0	2931.7	2768.0	2661.6	2704.6	2481.6
62.5°	3605.8	4088.6	4185.8	4170.5	3822.7	3338.8	3062.6	2893.8	2837.6	2965.4	2678.0
63°	3520.9	4065.1	4194.0	4187.9	3883.0	3371.5	3085.1	2918.4	2872.3	3031.9	2713.8
65°	2975.7	3859.5	4094.8	4122.4	4012.9	3484.1	3137.3	2980.8	2975.7	3180.3	2798.7
67.5°	1813.6	3261.1	3647.7	3700.9	3829.8	3519.9	3107.6	2959.3	3032.9	3201.7	2773.1
70°	775.4	2152.2	2931.7	3017.6	3332.7	3341.9	3022.7	2871.3	3019.6	3034.0	2591.0
72.5°	459.3	1014.8	1995.7	2182.9	2637.1	2875.4	2828.4	2717.9	2844.7	2664.7	2206.4
75°	325.3	474.6	1013.7	1213.2	1836.1	2195.2	2376.2	2427.4	2422.2	2113.3	1656.2
77.5°	233.2	304.8	427.6	504.3	1025.0	1409.6	1630.6	1779.9	1731.9	1414.7	1020.9
80°	162.6	210.7	261.9	278.2	475.7	724.2	859.3	924.7	896.1	706.9	457.3
82.5°	117.6	138.1	168.8	179.0	239.4	334.5	397.9	350.9	336.6	260.9	197.4
85°	91.0	89.0	105.4	109.5	140.1	174.9	179.0	139.1	121.7	108.4	110.5
87.5°	64.4	55.2	56.3	58.3	72.6	93.1	91.0	57.3	49.1	52.2	59.3
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: P239116

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

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8
2.5°	665.9	667.0	669.0	670.0	672.1	672.1	674.1	675.1	677.2	679.2	680.3
5°	678.2	681.3	685.4	687.4	691.5	694.6	698.7	700.7	704.8	707.9	712.0
7.5°	696.6	701.7	706.9	713.0	719.1	724.2	728.3	733.5	740.6	745.7	748.8
10°	714.0	721.2	730.4	737.5	746.8	753.9	760.1	769.3	777.4	784.6	788.7
12.5°	736.5	745.7	754.9	766.2	778.5	787.7	796.9	809.2	820.4	828.6	832.7
15°	763.1	774.4	784.6	797.9	812.2	824.5	837.8	851.1	859.3	859.3	857.2
17.5°	790.7	799.9	812.2	827.6	847.0	862.3	869.5	871.6	868.5	861.3	856.2
20°	818.4	826.5	839.8	858.3	878.7	881.8	874.6	865.4	856.2	843.9	835.8
22.5°	840.9	852.1	872.6	894.1	895.1	877.7	858.3	842.9	828.6	814.3	798.9
25°	867.5	882.8	910.4	918.6	892.0	859.3	831.7	809.2	785.6	762.1	744.7
27.5°	900.2	922.7	950.3	926.8	874.6	828.6	790.7	757.0	726.3	693.6	674.1
30°	935.0	969.8	975.9	914.5	845.0	785.6	734.5	683.3	644.5	614.8	603.5
32.5°	976.9	1021.9	985.1	893.0	805.1	727.3	658.8	597.4	564.7	546.3	541.1
35°	1040.3	1077.2	990.2	870.5	759.0	657.8	571.8	522.7	502.3	490.0	483.9
37.5°	1131.4	1130.4	989.2	842.9	705.8	582.1	502.3	467.5	451.1	440.9	429.6
40°	1237.8	1171.3	983.1	803.0	634.2	509.4	454.2	421.5	406.1	393.8	380.5
42.5°	1343.1	1198.9	965.7	743.7	545.2	457.3	419.4	389.7	373.4	360.1	341.7
45°	1434.2	1210.2	931.9	661.8	465.4	416.3	396.9	371.3	351.9	331.4	317.1
47.5°	1505.8	1208.1	877.7	565.7	412.2	387.7	378.5	361.1	337.6	312.0	293.6
50°	1566.1	1192.8	804.0	480.8	376.4	362.1	359.1	353.9	316.1	294.6	283.4
52.5°	1621.4	1170.3	725.3	423.5	345.8	333.5	339.6	334.5	307.9	289.5	278.2
55°	1697.1	1154.9	647.5	379.5	310.0	306.9	312.0	319.2	302.8	285.4	273.1
57.5°	1786.1	1163.1	588.2	330.4	276.2	278.2	295.6	305.9	297.7	279.3	267.0
60°	1888.3	1187.6	536.0	283.4	248.6	253.7	279.3	293.6	292.6	271.1	256.8
62.5°	2002.8	1213.2	453.2	247.6	225.0	233.2	259.8	278.2	281.3	262.9	245.5
63°	2025.3	1215.3	431.7	240.4	221.0	230.2	254.7	274.2	278.2	260.9	243.5
65°	2080.6	1196.9	347.8	221.0	204.6	214.8	239.4	256.8	264.9	249.6	235.3
67.5°	2034.5	1046.5	261.9	197.4	191.3	198.5	219.9	236.3	243.5	236.3	222.0
70°	1860.6	761.1	204.6	175.9	177.0	182.1	198.5	213.8	222.0	219.9	206.6
72.5°	1498.6	431.7	170.8	157.5	160.6	166.7	178.0	192.3	199.5	198.5	189.2
75°	987.1	221.0	144.2	141.2	143.2	148.3	156.5	167.8	175.9	174.9	170.8
77.5°	489.0	153.4	123.8	124.8	125.8	129.9	136.1	146.3	151.4	152.4	151.4
80°	201.5	119.7	106.4	107.4	108.4	111.5	115.6	124.8	127.9	129.9	130.9
82.5°	120.7	91.0	84.9	87.0	88.0	91.0	94.1	102.3	105.4	108.4	108.4
85°	79.8	63.4	61.4	63.4	65.5	67.5	68.5	73.7	78.8	82.9	84.9
87.5°	43.0	37.8	36.8	37.8	37.8	39.9	41.9	47.1	53.2	57.3	59.3
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: P239116

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

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	661.8	661.8	661.8	661.8	661.8
2.5°	678.2	679.2	678.2	679.2	680.3
5°	712.0	714.0	713.0	713.0	717.1
7.5°	750.8	754.9	754.9	757.0	759.0
10°	792.8	796.9	799.9	799.9	803.0
12.5°	834.7	836.8	839.8	839.8	839.8
15°	856.2	855.2	854.2	853.1	853.1
17.5°	853.1	849.0	847.0	845.0	846.0
20°	830.6	823.5	821.4	818.4	820.4
22.5°	791.8	781.5	777.4	772.3	774.4
25°	733.5	721.2	719.1	713.0	716.1
27.5°	665.9	659.8	658.8	657.8	662.9
30°	602.5	604.6	605.6	607.6	612.7
32.5°	544.2	548.3	549.3	550.3	557.5
35°	486.9	481.8	486.9	484.9	491.0
37.5°	424.5	420.4	416.3	411.2	415.3
40°	372.4	365.2	352.9	346.8	347.8
42.5°	331.4	322.2	312.0	305.9	305.9
45°	304.8	293.6	284.4	280.3	280.3
47.5°	284.4	279.3	274.2	271.1	271.1
50°	276.2	270.1	267.0	264.9	264.9
52.5°	270.1	263.9	260.9	258.8	256.8
55°	264.9	255.7	252.7	251.6	251.6
57.5°	257.8	249.6	245.5	244.5	244.5
60°	246.5	240.4	236.3	235.3	235.3
62.5°	235.3	229.1	225.0	225.0	225.0
63°	233.2	226.1	223.0	223.0	223.0
65°	224.0	216.9	213.8	213.8	212.8
67.5°	211.8	204.6	202.5	202.5	200.5
70°	197.4	191.3	189.2	190.3	186.2
72.5°	183.1	177.0	173.9	173.9	169.8
75°	166.7	160.6	156.5	155.5	151.4
77.5°	148.3	143.2	139.1	135.0	133.0
80°	128.9	124.8	119.7	116.6	113.5
82.5°	108.4	104.3	101.3	105.4	90.0
85°	84.9	80.8	76.7	82.9	64.4
87.5°	62.4	60.4	56.3	49.1	43.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)