

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: P239163

Luminaire Tested: **ARCH-AF24-50-D-U-T2U-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239163  
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-AF24-50-D-U-T2U-8027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 670mA LIGHT ENGINE WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5155 lumens  
Efficiency: N/A  
Efficacy: 95.5 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

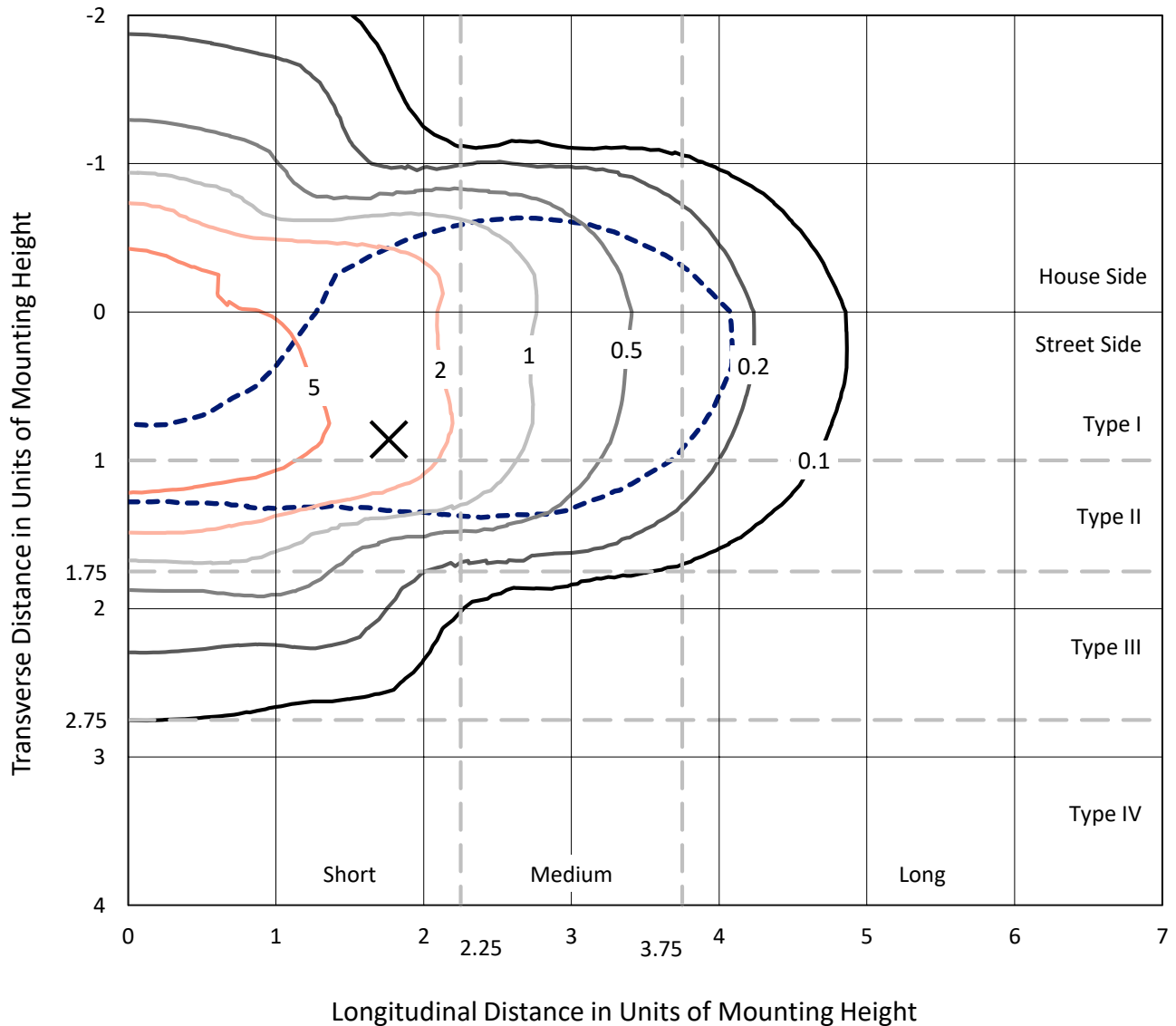
Input Watts (W): 54  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P239163  
 CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

### Iso-Footcandle Lines of Horizontal Illumination

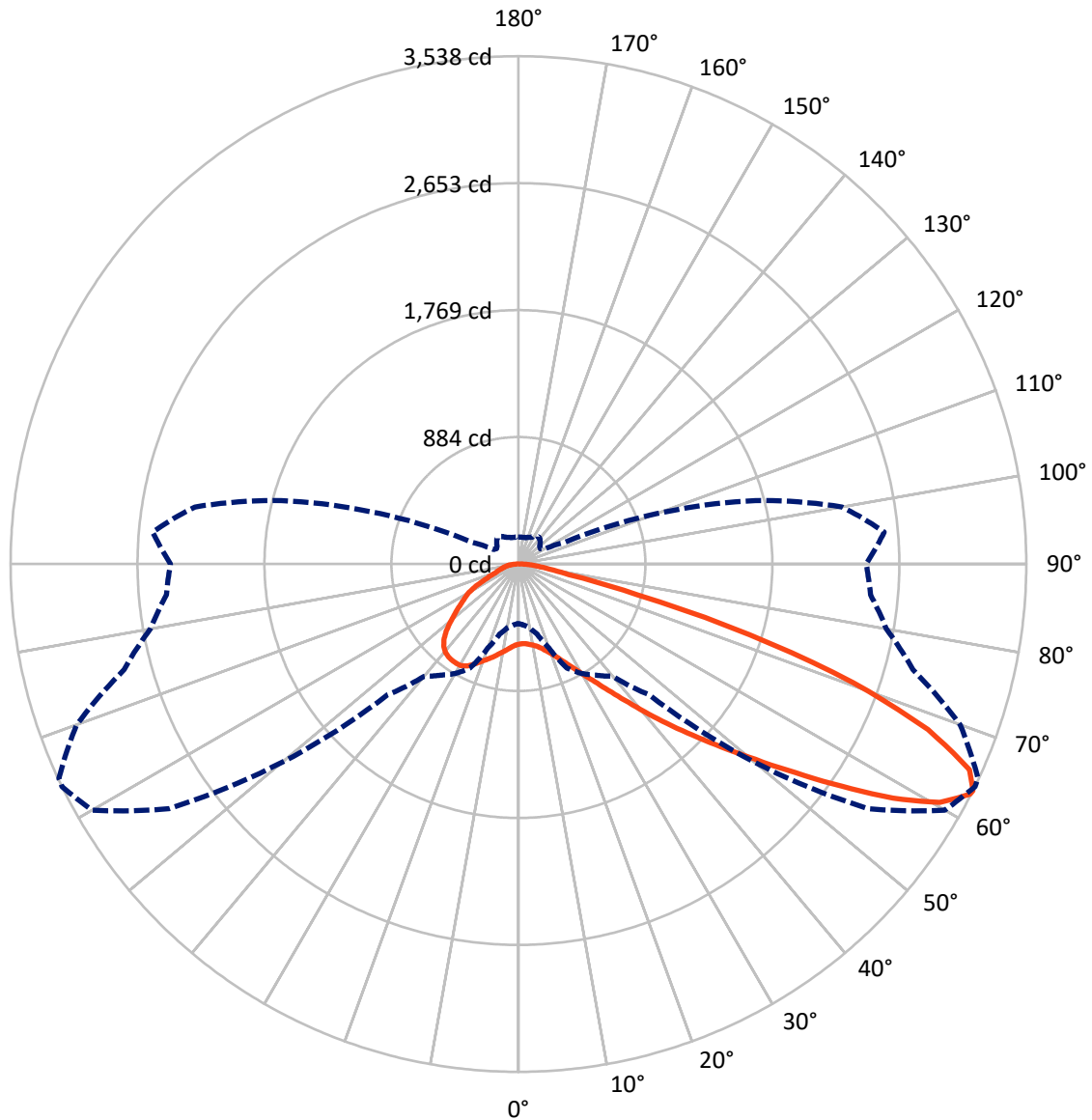
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.1 fc  
 Type II - Short - Semi-Cutoff

REPORT NUMBER: P239163  
CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P239163

CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1515.4	0.0	1515.4
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	3639.6	0.0	3639.6
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	5155.0	0.0	5155.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.7	1.1
10°-20°	185.7	3.6
20°-30°	348.5	6.8
30°-40°	584.1	11.3
40°-50°	980.0	19.0
50°-60°	1242.4	24.1
60°-70°	1096.0	21.3
70°-80°	565.8	11.0
80°-90°	96.8	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°	5155.0	100.0
0°-180°	5155.0	100.0



REPORT NUMBER: P239163

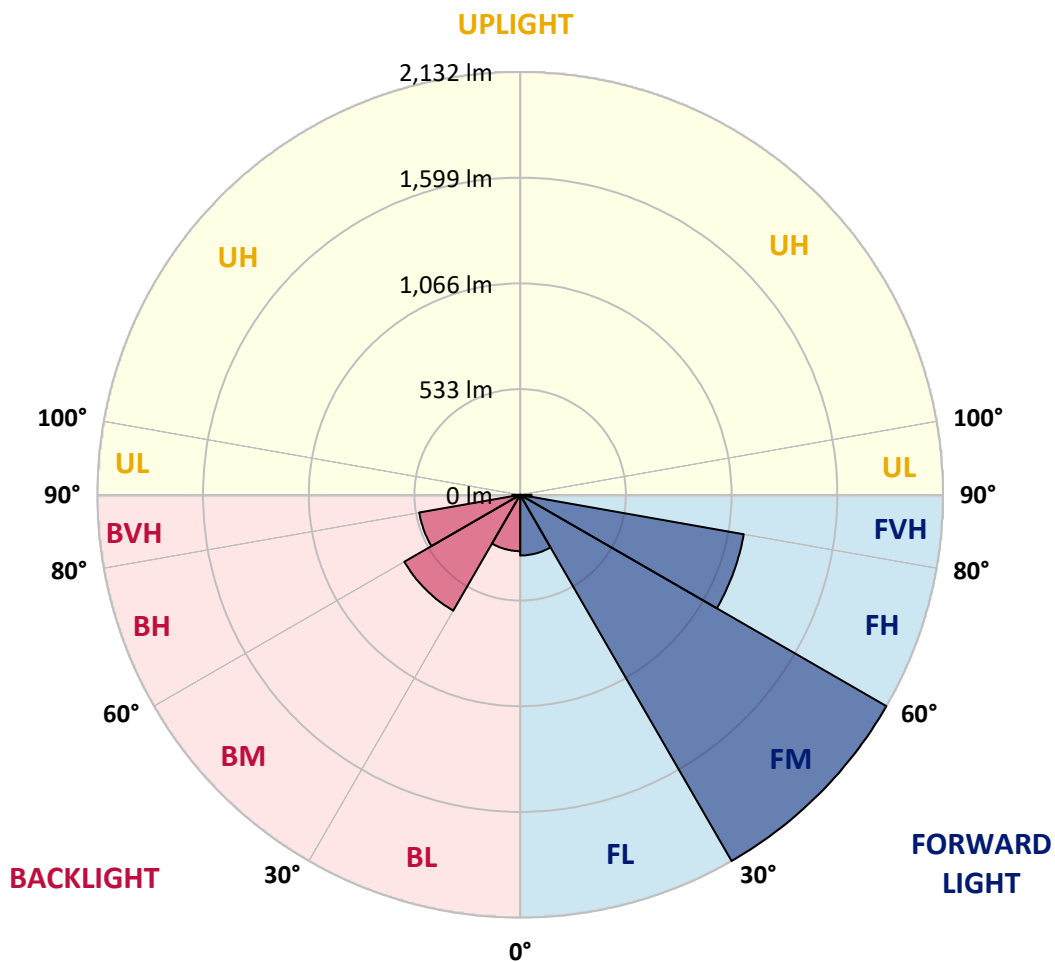
CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	306.0	5.9			
FM	(30°-60°)	2132.0	41.4			
FH	(60°-80°)	1144.7	22.2			G1/1800
FVH	(80°-90°)	57.0	1.1			G1/100
BL	(0°-30°)	283.9	5.5	B1/500		
BM	(30°-60°)	674.6	13.1	B1/1000		
BH	(60°-80°)	517.0	10.0	B2/1000		G2/1000
BVH	(80°-90°)	39.8	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

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

Type II Short





REPORT NUMBER: P239163

CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3
2.5°	554.8	554.0	554.0	554.0	554.0	553.1	554.0	555.7	554.8	554.0	555.7
5°	556.6	555.7	555.7	555.7	556.6	555.7	556.6	559.1	557.4	557.4	559.1
7.5°	560.9	560.0	560.9	560.0	560.0	560.0	560.9	563.5	562.6	563.5	566.1
10°	566.1	566.1	566.1	566.1	566.1	566.1	567.8	569.5	570.4	571.2	574.7
12.5°	581.6	581.6	581.6	580.7	580.7	578.1	581.6	583.3	585.0	586.8	589.3
15°	614.4	614.4	613.5	610.1	610.1	604.9	605.7	606.6	606.6	608.3	610.1
17.5°	657.5	656.7	654.9	652.3	648.9	642.8	641.1	639.4	636.8	635.9	635.9
20°	717.9	717.1	713.6	706.7	702.4	692.9	686.0	679.1	676.5	672.2	671.3
22.5°	804.2	804.2	797.3	786.9	783.5	763.7	743.8	729.1	724.0	717.9	717.9
25°	908.6	907.8	898.3	886.2	871.5	850.8	826.6	806.8	793.9	780.0	774.9
27.5°	1033.7	1031.1	1018.2	1003.5	975.9	950.0	921.6	900.8	878.4	861.2	845.6
30°	1180.4	1177.8	1155.4	1127.8	1099.3	1073.4	1032.0	1007.0	971.6	950.9	933.6
32.5°	1350.4	1347.8	1307.3	1280.5	1250.3	1218.4	1169.2	1129.5	1084.6	1055.3	1031.1
35°	1567.0	1556.6	1498.8	1461.7	1414.3	1382.3	1330.6	1277.1	1224.4	1183.0	1147.6
37.5°	1800.8	1788.8	1737.8	1682.6	1636.0	1597.2	1523.8	1456.5	1394.4	1337.5	1293.5
40°	2045.0	2013.1	1958.7	1918.2	1886.3	1849.2	1772.4	1701.6	1604.1	1540.2	1473.8
42.5°	2214.2	2183.1	2145.1	2118.4	2102.8	2074.4	2031.2	1970.0	1882.8	1884.5	1709.4
45°	2325.5	2279.7	2253.8	2255.6	2261.6	2261.6	2253.8	2244.4	2206.4	2232.3	2085.6
47.5°	2285.8	2255.6	2239.2	2273.7	2316.8	2360.0	2410.0	2464.4	2526.5	2599.9	2419.5
50°	2052.8	2064.0	2071.8	2145.1	2237.5	2335.8	2450.6	2599.0	2772.4	2806.1	2718.9
52.5°	1680.9	1705.1	1730.9	1843.1	1964.8	2134.8	2335.8	2580.9	2813.9	2951.1	2942.4
55°	1305.5	1335.7	1391.0	1474.7	1571.3	1731.8	1980.3	2358.3	2721.5	2939.8	3072.7
57.5°	929.3	973.3	1045.8	1162.3	1247.7	1338.3	1522.1	1941.5	2339.3	2745.7	3051.1
60°	617.8	638.5	686.0	831.0	975.1	1070.0	1200.3	1352.1	1677.4	2237.5	2828.5
62.5°	438.3	452.1	481.5	547.1	677.4	849.1	927.6	997.5	1101.9	1439.3	2271.1
63°	414.2	426.3	450.4	505.6	623.0	800.8	881.0	944.9	1020.8	1287.4	2148.6
65°	343.4	348.6	361.5	388.3	451.3	598.8	730.0	768.8	781.8	827.5	1346.1
67.5°	289.9	293.4	297.7	305.5	330.5	398.7	544.5	593.7	579.0	547.9	665.3
70°	252.0	254.6	261.5	270.9	279.6	296.8	374.5	447.8	431.4	389.2	407.3
72.5°	201.1	205.4	213.1	229.5	246.8	269.2	288.2	333.9	323.6	283.0	287.3
75°	158.8	161.4	168.3	180.3	196.7	222.6	259.7	275.3	246.8	208.8	208.8
77.5°	126.0	128.6	134.6	144.1	154.5	172.6	198.5	239.0	221.8	157.0	156.2
80°	94.9	97.5	103.5	112.2	122.5	135.5	151.0	169.1	203.6	146.7	117.4
82.5°	69.9	70.8	81.1	87.2	90.6	101.0	113.9	124.3	139.8	135.5	104.4
85°	52.6	51.8	58.7	63.0	63.9	66.4	74.2	84.6	91.5	88.0	81.1
87.5°	29.3	25.9	30.2	34.5	34.5	35.4	37.1	43.1	49.2	47.5	43.1
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: P239163

CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

**CANDELA DISTRIBUTION (continued):**

	55°	60°	64°	65°	70°	75°	80°	85°	90°	95°	100°
0°	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3
2.5°	555.7	555.7	554.8	554.8	555.7	555.7	554.8	557.4	559.1	559.1	560.0
5°	558.3	559.1	558.3	558.3	559.1	559.1	560.0	562.6	565.2	566.9	569.5
7.5°	566.1	566.9	566.1	566.1	566.9	567.8	569.5	573.0	574.7	578.1	582.4
10°	574.7	575.5	574.7	575.5	576.4	577.3	579.9	582.4	585.0	588.5	595.4
12.5°	590.2	591.1	589.3	590.2	592.8	592.8	594.5	596.3	600.6	604.9	611.8
15°	611.8	611.8	610.1	610.9	613.5	613.5	614.4	616.1	621.3	626.5	633.4
17.5°	636.8	638.5	637.7	638.5	640.3	641.1	641.1	642.8	646.3	649.7	656.7
20°	670.5	671.3	669.6	671.3	673.0	671.3	669.6	668.7	670.5	672.2	680.0
22.5°	716.2	715.3	711.0	711.0	711.0	707.6	703.2	698.1	698.1	695.5	701.5
25°	770.6	768.0	761.9	762.8	756.7	751.6	743.8	736.0	729.1	726.5	727.4
27.5°	834.4	829.2	823.2	821.5	815.4	805.9	793.0	778.3	767.1	758.5	756.7
30°	914.7	903.4	893.1	891.4	881.9	866.3	845.6	825.8	806.8	792.1	786.9
32.5°	1009.6	992.3	975.9	974.2	958.7	938.0	912.9	885.3	857.7	834.4	823.2
35°	1120.9	1095.0	1079.5	1075.2	1052.7	1026.8	999.2	963.8	925.0	892.2	871.5
37.5°	1256.4	1229.6	1202.9	1203.7	1172.7	1142.5	1105.4	1062.2	1013.0	967.3	938.0
40°	1423.8	1385.8	1351.3	1343.5	1316.8	1274.5	1233.9	1183.9	1123.5	1063.1	1020.8
42.5°	1626.5	1564.4	1516.9	1510.0	1474.7	1422.9	1373.7	1307.3	1246.0	1172.7	1121.7
45°	1856.9	1757.7	1700.7	1690.4	1633.4	1580.8	1521.3	1450.5	1375.4	1292.6	1232.2
47.5°	2143.4	2001.9	1905.2	1888.0	1809.5	1740.4	1678.3	1599.8	1510.0	1417.7	1351.3
50°	2477.3	2268.5	2138.2	2111.5	2006.2	1925.1	1845.7	1747.3	1651.6	1554.9	1478.1
52.5°	2812.1	2587.8	2414.3	2381.6	2226.2	2117.5	2013.1	1914.7	1801.7	1705.9	1618.8
55°	3081.3	2932.1	2731.0	2685.3	2462.7	2315.1	2177.9	2065.7	1953.6	1877.6	1774.9
57.5°	3243.6	3235.8	3077.0	3014.0	2709.4	2491.1	2338.4	2210.7	2102.0	2070.1	1933.7
60°	3239.3	3440.3	3372.1	3324.7	2958.8	2671.5	2473.0	2335.0	2245.2	2281.5	2093.4
62.5°	3041.7	3448.9	3530.9	3518.0	3224.6	2816.4	2583.5	2441.1	2393.6	2501.5	2259.0
63°	2970.0	3429.1	3537.8	3532.6	3275.5	2844.1	2602.5	2461.8	2423.0	2557.6	2289.2
65°	2510.1	3255.7	3454.1	3477.4	3385.1	2939.0	2646.5	2514.4	2510.1	2682.7	2360.8
67.5°	1529.9	2750.9	3077.0	3121.9	3230.6	2969.2	2621.4	2496.3	2558.4	2700.8	2339.3
70°	654.1	1815.5	2473.0	2545.5	2811.3	2819.0	2549.8	2422.1	2547.2	2559.3	2185.7
72.5°	387.4	856.0	1683.5	1841.4	2224.5	2425.6	2385.9	2292.7	2399.7	2247.8	1861.2
75°	274.4	400.4	855.1	1023.4	1548.9	1851.7	2004.5	2047.6	2043.3	1782.7	1397.0
77.5°	196.7	257.1	360.7	425.4	864.6	1189.1	1375.4	1501.4	1460.9	1193.4	861.2
80°	137.2	177.8	220.9	234.7	401.2	610.9	724.8	780.0	755.9	596.3	385.7
82.5°	99.2	116.5	142.4	151.0	201.9	282.2	335.7	296.0	283.9	220.0	166.5
85°	76.8	75.1	88.9	92.3	118.2	147.6	151.0	117.4	102.7	91.5	93.2
87.5°	54.4	46.6	47.5	49.2	61.3	78.5	76.8	48.3	41.4	44.0	50.0
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: P239163

CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3
2.5°	561.7	562.6	564.3	565.2	566.9	566.9	568.6	569.5	571.2	573.0	573.8
5°	572.1	574.7	578.1	579.9	583.3	585.9	589.3	591.1	594.5	597.1	600.6
7.5°	587.6	591.9	596.3	601.4	606.6	610.9	614.4	618.7	624.7	629.0	631.6
10°	602.3	608.3	616.1	622.1	629.9	635.9	641.1	648.9	655.8	661.8	665.3
12.5°	621.3	629.0	636.8	646.3	656.7	664.4	672.2	682.5	692.0	698.9	702.4
15°	643.7	653.2	661.8	673.0	685.1	695.5	706.7	717.9	724.8	724.8	723.1
17.5°	667.0	674.8	685.1	698.1	714.5	727.4	733.4	735.2	732.6	726.5	722.2
20°	690.3	697.2	708.4	724.0	741.2	743.8	737.8	730.0	722.2	711.9	705.0
22.5°	709.3	718.8	736.0	754.2	755.0	740.4	724.0	711.0	698.9	686.9	673.9
25°	731.7	744.7	768.0	774.9	752.4	724.8	701.5	682.5	662.7	642.8	628.2
27.5°	759.3	778.3	801.6	781.8	737.8	698.9	667.0	638.5	612.6	585.0	568.6
30°	788.7	818.0	823.2	771.4	712.7	662.7	619.5	576.4	543.6	518.6	509.1
32.5°	824.1	862.0	831.0	753.3	679.1	613.5	555.7	503.9	476.3	460.8	456.5
35°	877.6	908.6	835.3	734.3	640.3	554.8	482.4	440.9	423.7	413.3	408.1
37.5°	954.3	953.5	834.4	711.0	595.4	491.0	423.7	394.3	380.5	371.9	362.4
40°	1044.1	988.0	829.2	677.4	535.0	429.7	383.1	355.5	342.6	332.2	321.0
42.5°	1133.0	1011.3	814.6	627.3	459.9	385.7	353.8	328.8	315.0	303.7	288.2
45°	1209.8	1020.8	786.1	558.3	392.6	351.2	334.8	313.2	296.8	279.6	267.5
47.5°	1270.2	1019.1	740.4	477.2	347.7	327.0	319.3	304.6	284.8	263.2	247.6
50°	1321.1	1006.1	678.2	405.6	317.5	305.5	302.9	298.6	266.6	248.5	239.0
52.5°	1367.7	987.1	611.8	357.2	291.7	281.3	286.5	282.2	259.7	244.2	234.7
55°	1431.5	974.2	546.2	320.1	261.5	258.9	263.2	269.2	255.4	240.7	230.4
57.5°	1506.6	981.1	496.2	278.7	233.0	234.7	249.4	258.0	251.1	235.6	225.2
60°	1592.9	1001.8	452.1	239.0	209.7	214.0	235.6	247.6	246.8	228.7	216.6
62.5°	1689.5	1023.4	382.3	208.8	189.8	196.7	219.2	234.7	237.3	221.8	207.1
63°	1708.5	1025.1	364.1	202.8	186.4	194.1	214.9	231.3	234.7	220.0	205.4
65°	1755.1	1009.6	293.4	186.4	172.6	181.2	201.9	216.6	223.5	210.5	198.5
67.5°	1716.3	882.7	220.9	166.5	161.4	167.4	185.5	199.3	205.4	199.3	187.2
70°	1569.6	642.0	172.6	148.4	149.3	153.6	167.4	180.3	187.2	185.5	174.3
72.5°	1264.1	364.1	144.1	132.9	135.5	140.6	150.1	162.2	168.3	167.4	159.6
75°	832.7	186.4	121.7	119.1	120.8	125.1	132.0	141.5	148.4	147.6	144.1
77.5°	412.5	129.4	104.4	105.3	106.1	109.6	114.8	123.4	127.7	128.6	127.7
80°	170.0	101.0	89.7	90.6	91.5	94.1	97.5	105.3	107.9	109.6	110.4
82.5°	101.8	76.8	71.6	73.3	74.2	76.8	79.4	86.3	88.9	91.5	91.5
85°	67.3	53.5	51.8	53.5	55.2	57.0	57.8	62.1	66.4	69.9	71.6
87.5°	36.2	31.9	31.1	31.9	31.9	33.7	35.4	39.7	44.9	48.3	50.0
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: P239163

CATALOG NUMBER: ARCH-AF24-50-D-U-T2U-8027

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	558.3	558.3	558.3	558.3	558.3
2.5°	572.1	573.0	572.1	573.0	573.8
5°	600.6	602.3	601.4	601.4	604.9
7.5°	633.4	636.8	636.8	638.5	640.3
10°	668.7	672.2	674.8	674.8	677.4
12.5°	704.1	705.8	708.4	708.4	708.4
15°	722.2	721.4	720.5	719.6	719.6
17.5°	719.6	716.2	714.5	712.7	713.6
20°	700.7	694.6	692.9	690.3	692.0
22.5°	667.9	659.2	655.8	651.5	653.2
25°	618.7	608.3	606.6	601.4	604.0
27.5°	561.7	556.6	555.7	554.8	559.1
30°	508.2	510.0	510.8	512.6	516.9
32.5°	459.1	462.5	463.4	464.2	470.3
35°	410.7	406.4	410.7	409.0	414.2
37.5°	358.1	354.6	351.2	346.9	350.3
40°	314.1	308.0	297.7	292.5	293.4
42.5°	279.6	271.8	263.2	258.0	258.0
45°	257.1	247.6	239.9	236.4	236.4
47.5°	239.9	235.6	231.3	228.7	228.7
50°	233.0	227.8	225.2	223.5	223.5
52.5°	227.8	222.6	220.0	218.3	216.6
55°	223.5	215.7	213.1	212.3	212.3
57.5°	217.4	210.5	207.1	206.2	206.2
60°	208.0	202.8	199.3	198.5	198.5
62.5°	198.5	193.3	189.8	189.8	189.8
63°	196.7	190.7	188.1	188.1	188.1
65°	189.0	182.9	180.3	180.3	179.5
67.5°	178.6	172.6	170.9	170.9	169.1
70°	166.5	161.4	159.6	160.5	157.0
72.5°	154.5	149.3	146.7	146.7	143.2
75°	140.6	135.5	132.0	131.2	127.7
77.5°	125.1	120.8	117.4	113.9	112.2
80°	108.7	105.3	101.0	98.4	95.8
82.5°	91.5	88.0	85.4	88.9	75.9
85°	71.6	68.2	64.7	69.9	54.4
87.5°	52.6	50.9	47.5	41.4	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)