

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: P239121

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P239121
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
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 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: 6787.3 lumens
Efficiency: N/A
Efficacy: 125.7 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

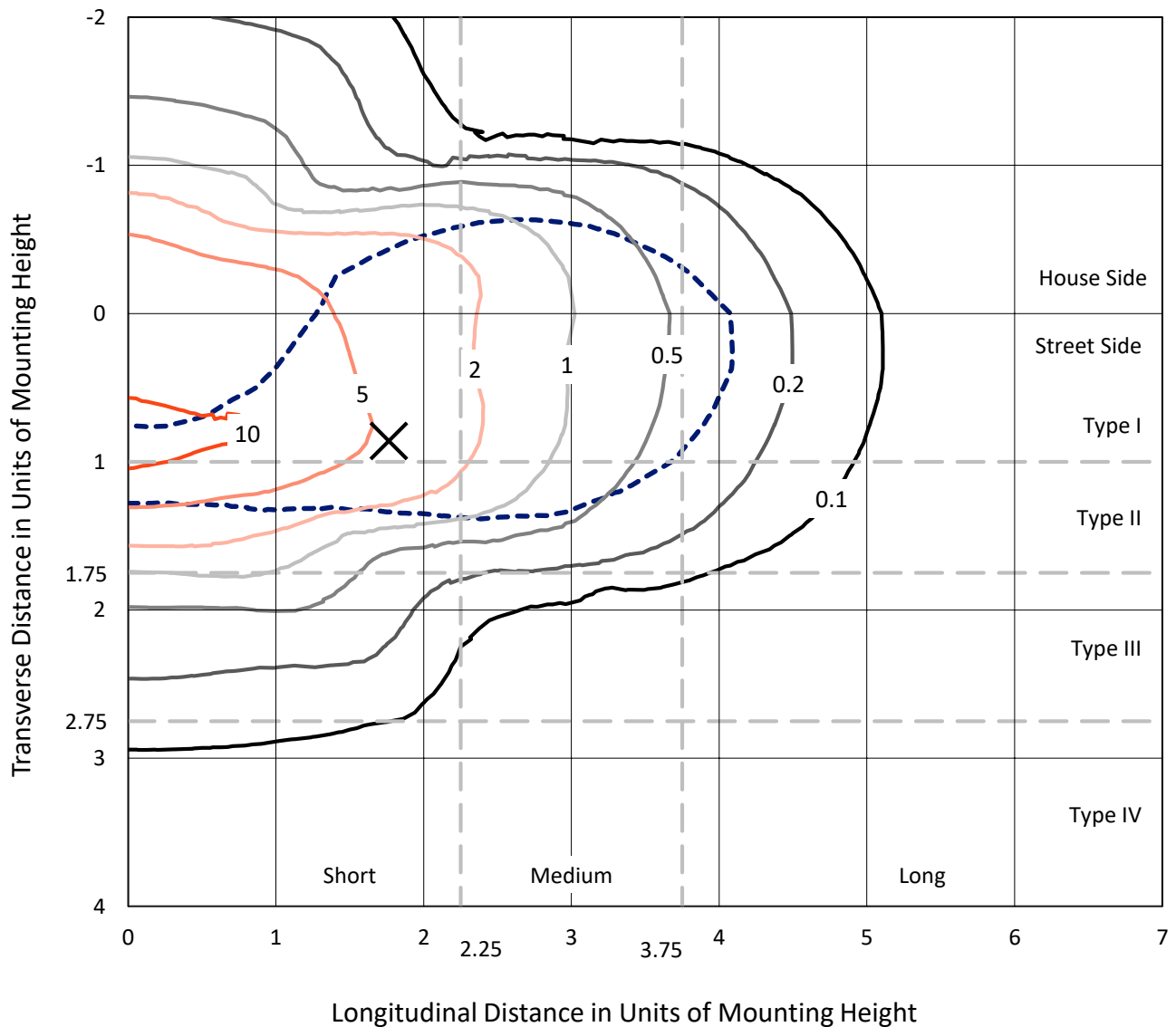
Input Watts (W): 54
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

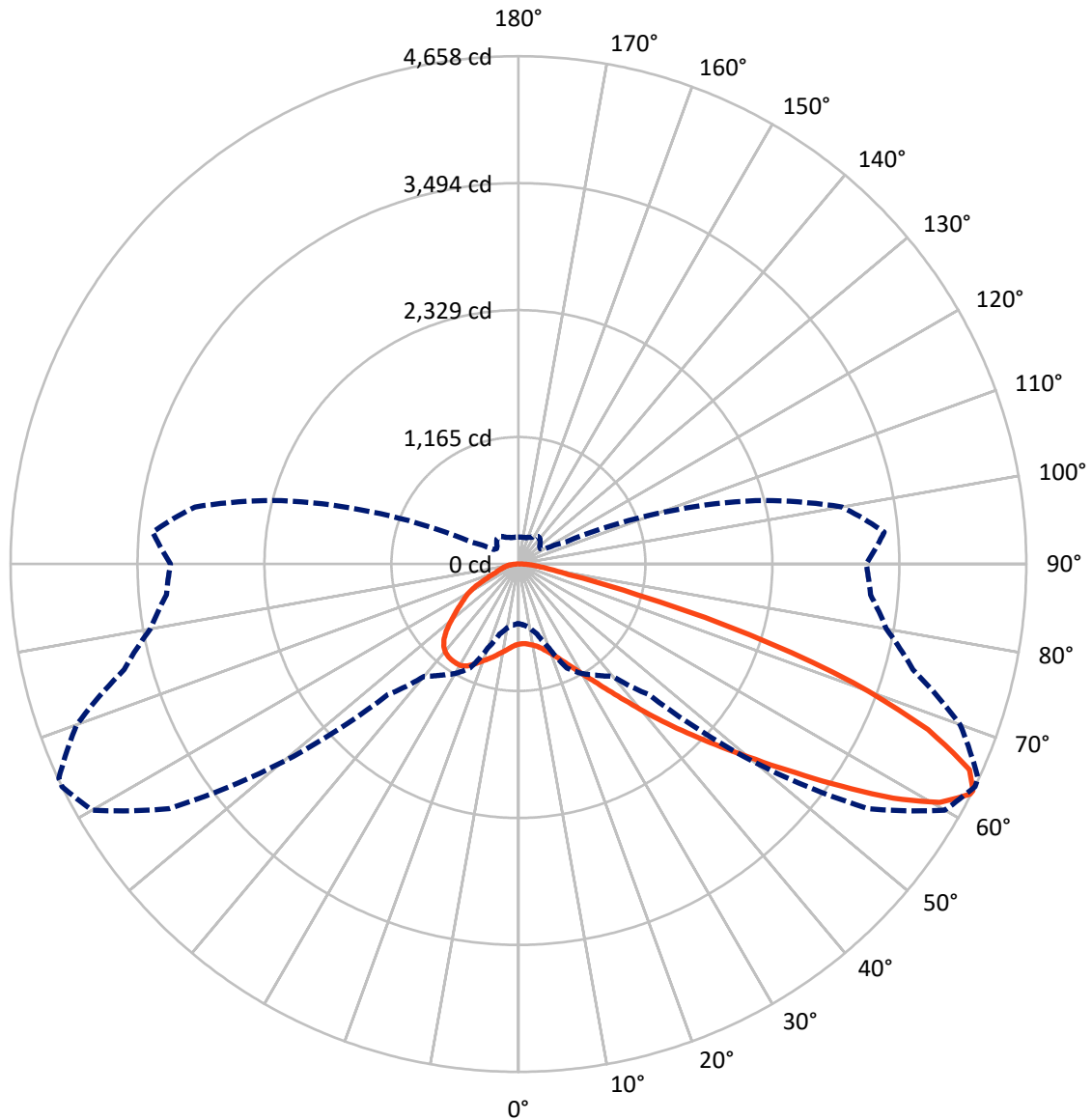


Based on 10 foot mounting height. Maximum calculated value = 11.9 fc
 Type II - Short - Semi-Cutoff

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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	1995.2	0.0	1995.2
	% Fixture	29.4	0.0	29.4
Street Side	Lumens	4792.1	0.0	4792.1
	% Fixture	70.6	0.0	70.6
Total	Lumens	6787.3	0.0	6787.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.4	1.1
10°-20°	244.4	3.6
20°-30°	458.9	6.8
30°-40°	769.1	11.3
40°-50°	1290.4	19.0
50°-60°	1635.8	24.1
60°-70°	1443.0	21.3
70°-80°	744.9	11.0
80°-90°	127.5	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°	6787.3	100.0
0°-180°	6787.3	100.0



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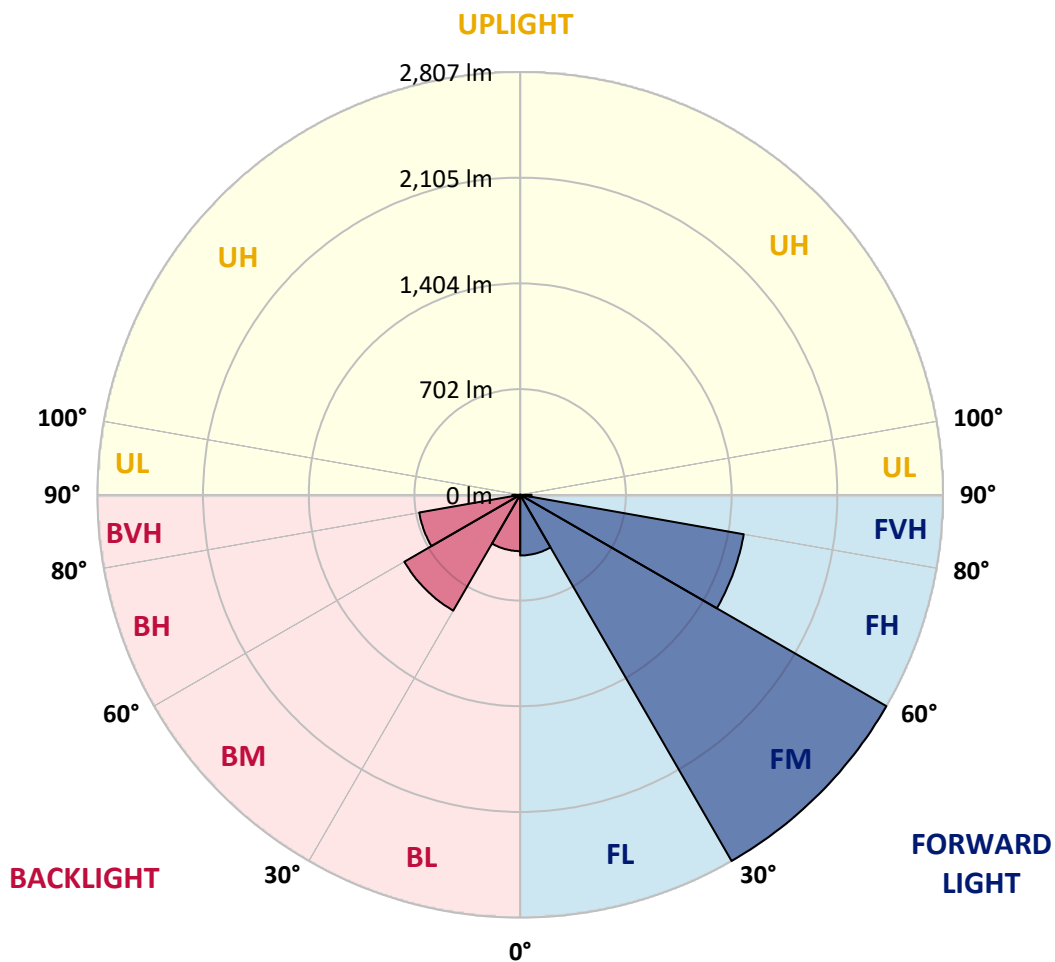
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	402.8	5.9			
FM	(30°-60°)	2807.0	41.4			
FH	(60°-80°)	1507.2	22.2			G1/1800
FVH	(80°-90°)	75.0	1.1			G1/100
BL	(0°-30°)	373.8	5.5	B1/500		
BM	(30°-60°)	888.2	13.1	B1/1000		
BH	(60°-80°)	680.8	10.0	B2/1000		G2/1000
BVH	(80°-90°)	52.4	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1
2.5°	730.5	729.4	729.4	729.4	729.4	728.2	729.4	731.6	730.5	729.4	731.6
5°	732.7	731.6	731.6	731.6	732.7	731.6	732.7	736.2	734.0	734.0	736.2
7.5°	738.5	737.3	738.5	737.3	737.3	737.3	738.5	741.8	740.7	741.8	745.3
10°	745.3	745.3	745.3	745.3	745.3	745.3	747.6	749.8	750.9	752.1	756.7
12.5°	765.8	765.8	765.8	764.6	764.6	761.2	765.8	768.0	770.3	772.5	775.9
15°	808.9	808.9	807.7	803.2	803.2	796.4	797.6	798.7	798.7	801.0	803.2
17.5°	865.7	864.6	862.3	858.9	854.4	846.4	844.1	841.9	838.4	837.3	837.3
20°	945.2	944.1	939.6	930.5	924.7	912.3	903.2	894.2	890.7	885.1	883.9
22.5°	1058.9	1058.9	1049.8	1036.1	1031.5	1005.5	979.3	960.0	953.2	945.2	945.2
25°	1196.3	1195.2	1182.6	1166.8	1147.4	1120.2	1088.4	1062.2	1045.3	1027.0	1020.2
27.5°	1361.0	1357.7	1340.6	1321.2	1284.9	1250.9	1213.3	1186.1	1156.5	1133.8	1113.4
30°	1554.2	1550.8	1521.2	1484.9	1447.4	1413.3	1358.8	1325.8	1279.3	1252.0	1229.3
32.5°	1778.0	1774.6	1721.2	1686.0	1646.2	1604.2	1539.4	1487.2	1428.0	1389.5	1357.7
35°	2063.2	2049.5	1973.4	1924.6	1862.1	1820.0	1751.9	1681.4	1612.2	1557.6	1511.0
37.5°	2371.1	2355.1	2288.1	2215.4	2154.0	2102.9	2006.3	1917.7	1836.0	1761.0	1703.0
40°	2692.6	2650.6	2579.0	2525.6	2483.5	2434.6	2333.6	2240.4	2112.0	2027.9	1940.4
42.5°	2915.2	2874.4	2824.4	2789.2	2768.7	2731.2	2674.4	2593.7	2479.0	2481.3	2250.6
45°	3061.8	3001.5	2967.5	2969.7	2977.7	2977.7	2967.5	2955.0	2905.0	2939.1	2746.0
47.5°	3009.5	2969.7	2948.1	2993.7	3050.4	3107.2	3173.1	3244.7	3326.5	3423.1	3185.7
50°	2702.8	2717.6	2727.8	2824.4	2945.9	3075.4	3226.5	3422.0	3650.3	3694.6	3579.8
52.5°	2213.2	2245.0	2279.0	2426.7	2586.9	2810.8	3075.4	3398.0	3704.8	3885.5	3874.1
55°	1719.0	1758.7	1831.4	1941.6	2068.8	2280.2	2607.4	3105.0	3583.3	3870.7	4045.7
57.5°	1223.6	1281.6	1377.0	1530.3	1642.8	1762.1	2004.1	2556.3	3080.0	3615.1	4017.2
60°	813.5	840.8	903.2	1094.0	1283.8	1408.8	1580.4	1780.2	2208.6	2945.9	3724.2
62.5°	577.1	595.4	633.9	720.3	891.8	1117.9	1221.3	1313.4	1450.9	1895.0	2990.2
63°	545.3	561.2	593.0	665.7	820.3	1054.4	1159.9	1244.0	1344.1	1695.0	2828.9
65°	452.1	459.0	476.0	511.3	594.2	788.5	961.2	1012.3	1029.3	1089.5	1772.4
67.5°	381.8	386.3	392.0	402.2	435.2	524.9	716.9	781.6	762.3	721.4	876.0
70°	331.7	335.1	344.2	356.7	368.1	390.9	493.1	589.6	568.0	512.4	536.2
72.5°	264.7	270.4	280.6	302.2	324.9	354.5	379.4	439.7	426.1	372.7	378.3
75°	209.1	212.5	221.6	237.4	259.0	293.1	342.0	362.4	324.9	275.0	275.0
77.5°	165.8	169.3	177.3	189.8	203.4	227.2	261.3	314.7	292.0	206.7	205.6
80°	125.0	128.4	136.4	147.7	161.3	178.4	198.9	222.7	268.1	193.1	154.5
82.5°	92.1	93.2	106.8	114.8	119.3	132.9	150.0	163.6	184.0	178.4	137.5
85°	69.3	68.1	77.2	83.0	84.1	87.5	97.7	111.3	120.4	115.9	106.8
87.5°	38.7	34.1	39.8	45.4	45.4	46.5	48.9	56.8	64.8	62.5	56.8
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°	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1
2.5°	731.6	731.6	730.5	730.5	731.6	731.6	730.5	734.0	736.2	736.2	737.3
5°	735.1	736.2	735.1	735.1	736.2	736.2	737.3	740.7	744.2	746.4	749.8
7.5°	745.3	746.4	745.3	745.3	746.4	747.6	749.8	754.3	756.7	761.2	766.9
10°	756.7	757.8	756.7	757.8	758.9	760.1	763.4	766.9	770.3	774.8	783.9
12.5°	777.1	778.3	775.9	777.1	780.5	780.5	782.8	785.0	790.7	796.4	805.5
15°	805.5	805.5	803.2	804.3	807.7	807.7	808.9	811.2	818.0	824.8	833.9
17.5°	838.4	840.8	839.5	840.8	843.0	844.1	844.1	846.4	851.0	855.5	864.6
20°	882.7	883.9	881.6	883.9	886.2	883.9	881.6	880.5	882.7	885.1	895.3
22.5°	943.0	941.8	936.1	936.1	936.1	931.6	926.0	919.1	919.1	915.7	923.6
25°	1014.6	1011.1	1003.2	1004.3	996.4	989.5	979.3	969.1	960.0	956.6	957.7
27.5°	1098.6	1091.8	1083.8	1081.6	1073.6	1061.1	1044.1	1024.8	1010.0	998.6	996.4
30°	1204.3	1189.5	1175.9	1173.6	1161.0	1140.7	1113.4	1087.3	1062.2	1042.9	1036.1
32.5°	1329.2	1306.5	1284.9	1282.7	1262.2	1234.9	1202.0	1165.7	1129.3	1098.6	1083.8
35°	1475.8	1441.7	1421.3	1415.6	1386.0	1351.9	1315.6	1269.1	1217.9	1174.8	1147.4
37.5°	1654.2	1618.9	1583.7	1584.9	1543.9	1504.2	1455.4	1398.6	1333.8	1273.6	1234.9
40°	1874.6	1824.5	1779.1	1768.9	1733.7	1678.0	1624.7	1558.8	1479.2	1399.7	1344.1
42.5°	2141.5	2059.7	1997.3	1988.2	1941.6	1873.4	1808.7	1721.2	1640.5	1543.9	1476.9
45°	2444.9	2314.2	2239.2	2225.6	2150.7	2081.3	2002.9	1909.7	1810.9	1701.9	1622.4
47.5°	2822.1	2635.7	2508.5	2485.8	2382.5	2291.5	2209.7	2106.4	1988.2	1866.6	1779.1
50°	3261.8	2986.8	2815.3	2780.1	2641.5	2534.7	2430.1	2300.6	2174.5	2047.2	1946.2
52.5°	3702.6	3407.1	3178.8	3135.7	2931.2	2788.0	2650.6	2521.1	2372.2	2246.1	2131.3
55°	4057.0	3860.5	3595.8	3535.5	3242.4	3048.2	2867.5	2719.8	2572.1	2472.2	2336.9
57.5°	4270.6	4260.4	4051.4	3968.4	3567.3	3279.9	3078.9	2910.7	2767.6	2725.6	2546.0
60°	4264.9	4529.6	4439.9	4377.4	3895.7	3517.4	3256.1	3074.3	2956.1	3003.9	2756.2
62.5°	4004.8	4541.0	4648.9	4631.9	4245.7	3708.2	3401.5	3214.0	3151.5	3293.6	2974.3
63°	3910.4	4514.9	4658.0	4651.3	4312.7	3744.6	3426.5	3241.3	3190.2	3367.5	3014.1
65°	3304.9	4286.5	4547.8	4578.5	4456.9	3869.6	3484.5	3310.6	3304.9	3532.1	3108.3
67.5°	2014.3	3621.9	4051.4	4110.4	4253.5	3909.3	3451.4	3286.7	3368.6	3556.0	3080.0
70°	861.1	2390.3	3256.1	3351.5	3701.4	3711.7	3357.2	3189.0	3353.7	3369.7	2877.8
72.5°	510.1	1127.0	2216.5	2424.5	2928.9	3193.6	3141.3	3018.6	3159.5	2959.6	2450.6
75°	361.3	527.1	1125.9	1347.4	2039.4	2438.1	2639.2	2696.0	2690.3	2347.2	1839.4
77.5°	259.0	338.6	474.9	560.1	1138.3	1565.5	1810.9	1976.9	1923.5	1571.3	1133.8
80°	180.7	234.1	290.8	309.0	528.3	804.3	954.3	1027.0	995.2	785.0	507.8
82.5°	130.6	153.3	187.5	198.9	265.9	371.5	441.9	389.6	373.8	289.7	219.2
85°	101.1	98.8	117.0	121.5	155.7	194.3	198.9	154.5	135.2	120.4	122.7
87.5°	71.6	61.4	62.5	64.8	80.7	103.4	101.1	63.6	54.5	57.9	65.9
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°	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1	735.1
2.5°	739.6	740.7	743.0	744.2	746.4	746.4	748.7	749.8	752.1	754.3	755.6
5°	753.2	756.7	761.2	763.4	768.0	771.4	775.9	778.3	782.8	786.1	790.7
7.5°	773.7	779.4	785.0	791.9	798.7	804.3	808.9	814.6	822.6	828.2	831.7
10°	793.0	801.0	811.2	819.2	829.3	837.3	844.1	854.4	863.5	871.3	876.0
12.5°	818.0	828.2	838.4	851.0	864.6	874.8	885.1	898.7	911.1	920.2	924.7
15°	847.5	860.0	871.3	886.2	902.0	915.7	930.5	945.2	954.3	954.3	952.1
17.5°	878.2	888.4	902.0	919.1	940.7	957.7	965.7	967.9	964.5	956.6	950.9
20°	908.9	918.0	932.7	953.2	975.9	979.3	971.4	961.2	950.9	937.3	928.2
22.5°	933.9	946.3	969.1	993.0	994.1	974.8	953.2	936.1	920.2	904.3	887.3
25°	963.4	980.5	1011.1	1020.2	990.7	954.3	923.6	898.7	872.6	846.4	827.1
27.5°	999.7	1024.8	1055.5	1029.3	971.4	920.2	878.2	840.8	806.6	770.3	748.7
30°	1038.4	1077.1	1083.8	1015.7	938.5	872.6	815.7	758.9	715.8	682.8	670.3
32.5°	1084.9	1135.0	1094.0	991.9	894.2	807.7	731.6	663.5	627.2	606.7	601.0
35°	1155.4	1196.3	1099.8	966.8	843.0	730.5	635.0	580.5	557.8	544.2	537.4
37.5°	1256.5	1255.4	1098.6	936.1	783.9	646.4	557.8	519.2	501.0	489.7	477.2
40°	1374.6	1300.9	1091.8	891.8	704.4	565.8	504.4	468.1	451.0	437.4	422.6
42.5°	1491.7	1331.5	1072.5	825.9	605.6	507.8	465.9	432.8	414.7	399.9	379.4
45°	1592.8	1344.1	1035.0	735.1	516.9	462.4	440.8	412.5	390.9	368.1	352.2
47.5°	1672.3	1341.7	974.8	628.3	457.9	430.6	420.3	401.0	374.9	346.5	326.0
50°	1739.4	1324.7	892.9	534.0	418.1	402.2	398.7	393.1	351.1	327.2	314.7
52.5°	1800.7	1299.7	805.5	470.4	384.0	370.4	377.2	371.5	342.0	321.5	309.0
55°	1884.8	1282.7	719.1	421.5	344.2	340.8	346.5	354.5	336.2	317.0	303.3
57.5°	1983.6	1291.8	653.3	366.9	306.8	309.0	328.4	339.7	330.6	310.2	296.6
60°	2097.3	1319.0	595.4	314.7	276.1	281.7	310.2	326.0	324.9	301.1	285.2
62.5°	2224.5	1347.4	503.3	275.0	249.9	259.0	288.6	309.0	312.4	292.0	272.6
63°	2249.5	1349.7	479.5	267.0	245.4	255.6	282.8	304.4	309.0	289.7	270.4
65°	2310.8	1329.2	386.3	245.4	227.2	238.6	265.9	285.2	294.2	277.2	261.3
67.5°	2259.7	1162.3	290.8	219.2	212.5	220.4	244.3	262.5	270.4	262.5	246.5
70°	2066.6	845.3	227.2	195.4	196.5	202.2	220.4	237.4	246.5	244.3	229.4
72.5°	1664.4	479.5	189.8	174.9	178.4	185.2	197.6	213.6	221.6	220.4	210.2
75°	1096.3	245.4	160.2	156.8	159.1	164.7	173.8	186.3	195.4	194.3	189.8
77.5°	543.1	170.4	137.5	138.6	139.7	144.2	151.1	162.4	168.2	169.3	168.2
80°	223.8	132.9	118.2	119.3	120.4	123.9	128.4	138.6	142.0	144.2	145.5
82.5°	134.1	101.1	94.3	96.6	97.7	101.1	104.5	113.6	117.0	120.4	120.4
85°	88.6	70.5	68.1	70.5	72.7	75.0	76.1	81.8	87.5	92.1	94.3
87.5°	47.7	42.0	40.9	42.0	42.0	44.3	46.5	52.3	59.1	63.6	65.9
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: P239121

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

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	735.1	735.1	735.1	735.1	735.1
2.5°	753.2	754.3	753.2	754.3	755.6
5°	790.7	793.0	791.9	791.9	796.4
7.5°	833.9	838.4	838.4	840.8	843.0
10°	880.5	885.1	888.4	888.4	891.8
12.5°	927.1	929.4	932.7	932.7	932.7
15°	950.9	949.8	948.7	947.6	947.6
17.5°	947.6	943.0	940.7	938.5	939.6
20°	922.5	914.5	912.3	908.9	911.1
22.5°	879.3	868.0	863.5	857.7	860.0
25°	814.6	801.0	798.7	791.9	795.2
27.5°	739.6	732.7	731.6	730.5	736.2
30°	669.2	671.5	672.6	674.8	680.6
32.5°	604.4	609.0	610.1	611.2	619.2
35°	540.8	535.1	540.8	538.5	545.3
37.5°	471.5	467.0	462.4	456.7	461.2
40°	413.6	405.6	392.0	385.1	386.3
42.5°	368.1	357.8	346.5	339.7	339.7
45°	338.6	326.0	315.9	311.3	311.3
47.5°	315.9	310.2	304.4	301.1	301.1
50°	306.8	299.9	296.6	294.2	294.2
52.5°	299.9	293.1	289.7	287.4	285.2
55°	294.2	284.1	280.6	279.5	279.5
57.5°	286.3	277.2	272.6	271.5	271.5
60°	273.8	267.0	262.5	261.3	261.3
62.5°	261.3	254.5	249.9	249.9	249.9
63°	259.0	251.0	247.7	247.7	247.7
65°	248.8	240.9	237.4	237.4	236.3
67.5°	235.2	227.2	224.9	224.9	222.7
70°	219.2	212.5	210.2	211.3	206.7
72.5°	203.4	196.5	193.1	193.1	188.6
75°	185.2	178.4	173.8	172.7	168.2
77.5°	164.7	159.1	154.5	150.0	147.7
80°	143.1	138.6	132.9	129.5	126.1
82.5°	120.4	115.9	112.5	117.0	99.9
85°	94.3	89.7	85.2	92.1	71.6
87.5°	69.3	67.0	62.5	54.5	47.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)