

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: P237451

Luminaire Tested: **ARCH-L-AF72-180-D-U-T4W-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237451  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-L-AF72-180-D-U-T4W-HSS  
Description: ARCHEON-L ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 4000K, 775mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16597.4 lumens  
Efficiency: N/A  
Efficacy: 91.7 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1.5' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G4

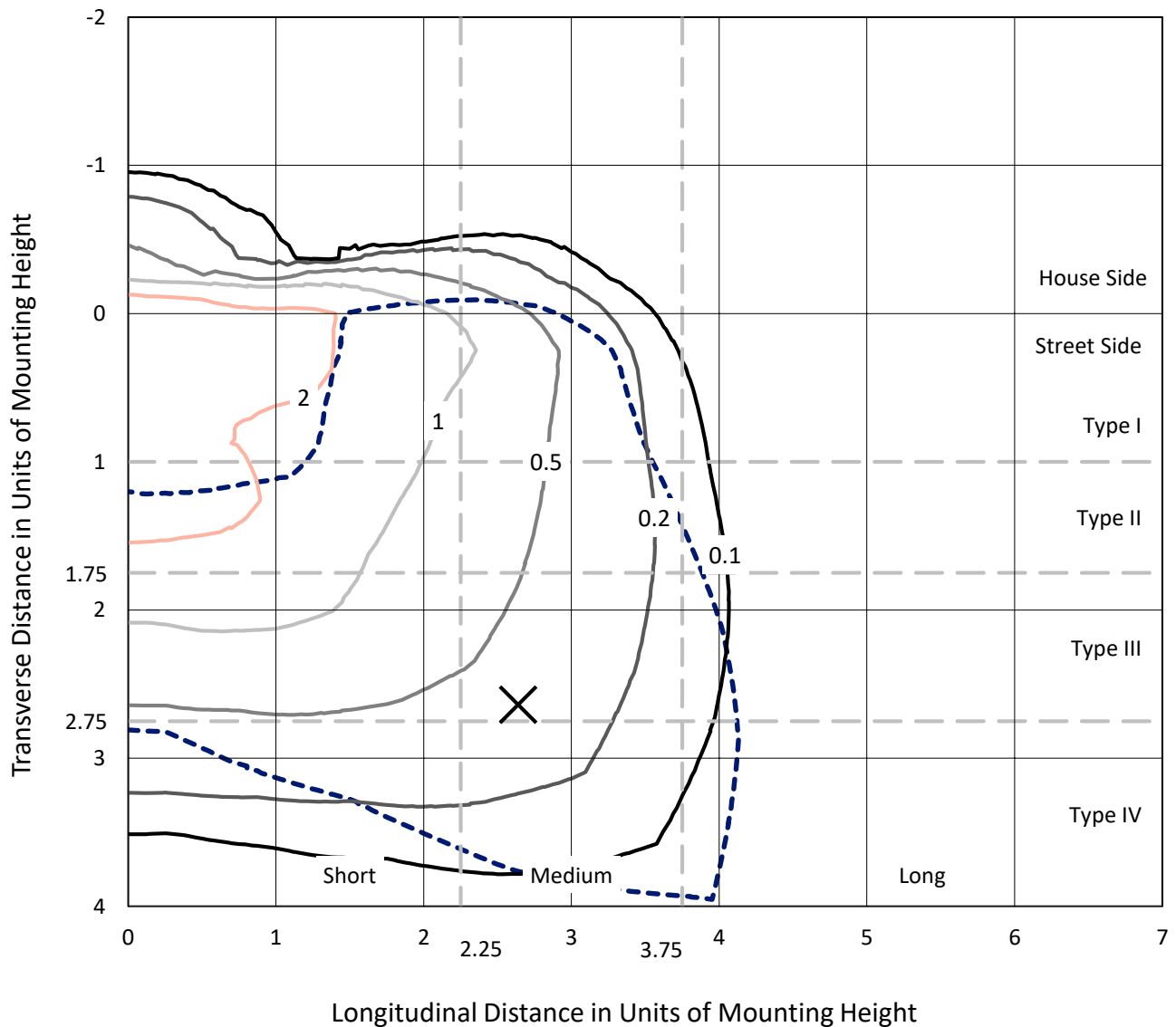
Input Watts (W): 181  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P237451  
 CATALOG NUMBER: ARCH-L-AF72-180-D-U-T4W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

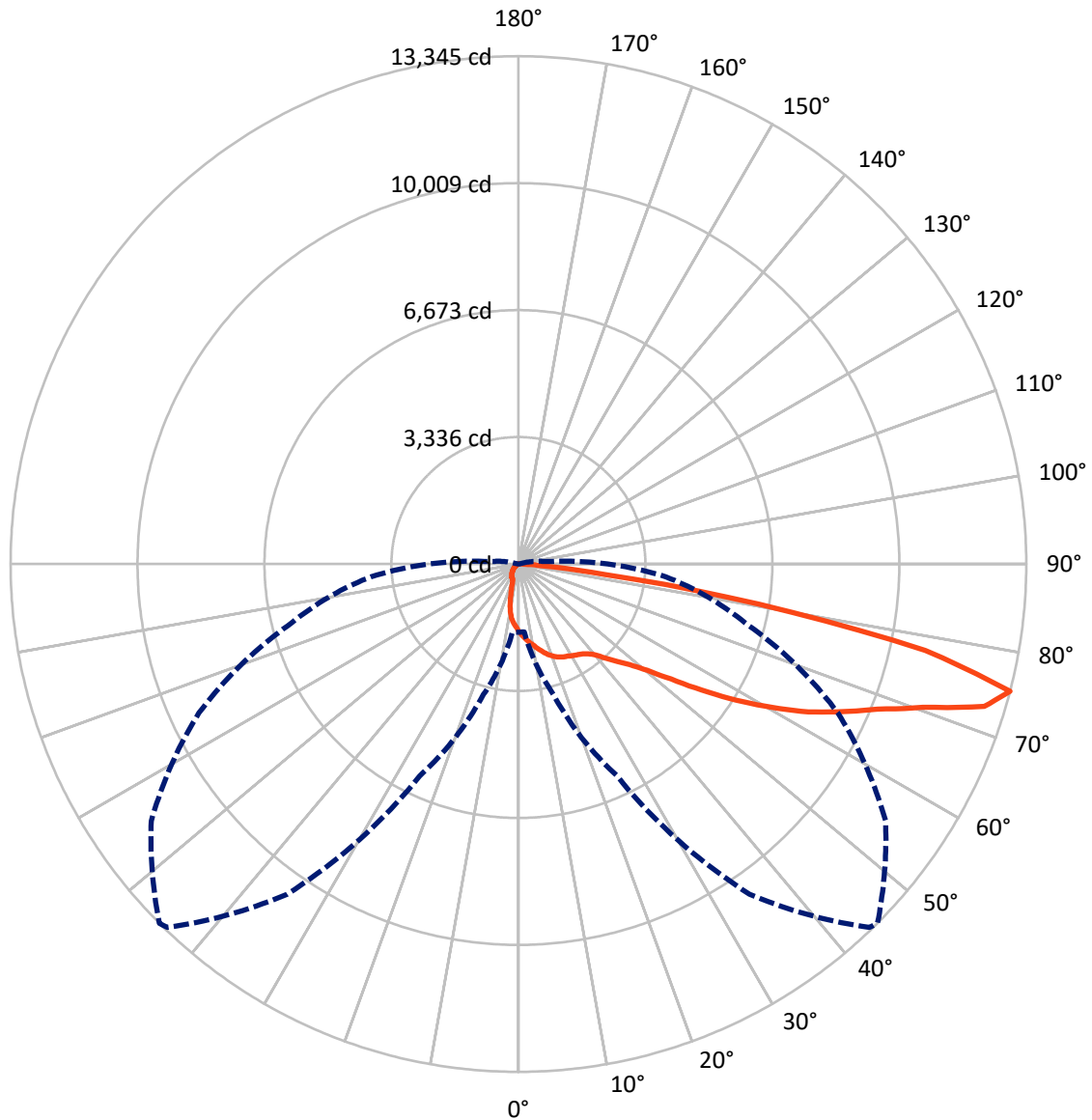
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc  
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P237451  
CATALOG NUMBER: ARCH-L-AF72-180-D-U-T4W-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P237451

CATALOG NUMBER: ARCH-L-AF72-180-D-U-T4W-HSS

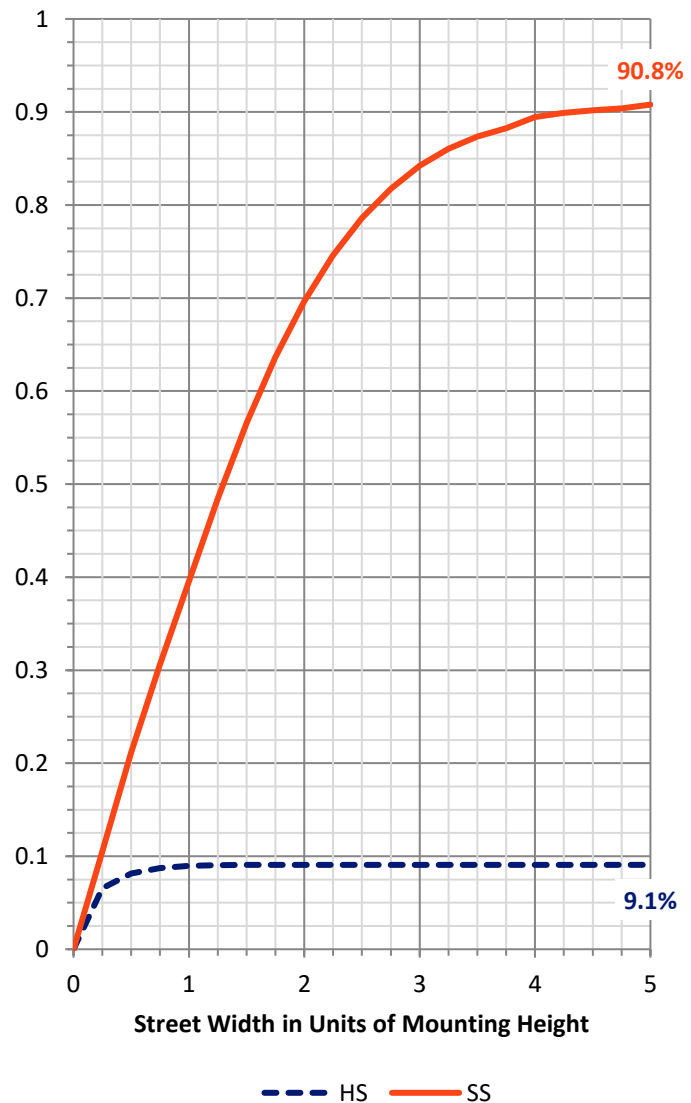
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1518.1	0.0	1518.1
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	15079.2	0.0	15079.2
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	16597.4	0.0	16597.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.5	1.0
10°-20°	474.6	2.9
20°-30°	786.1	4.7
30°-40°	1137.6	6.9
40°-50°	1862.8	11.2
50°-60°	3319.1	20.0
60°-70°	4879.6	29.4
70°-80°	3681.2	22.2
80°-90°	288.8	1.7
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°	16597.4	100.0
0°-180°	16597.4	100.0

**Coefficient of Utilization**



REPORT NUMBER: P237451

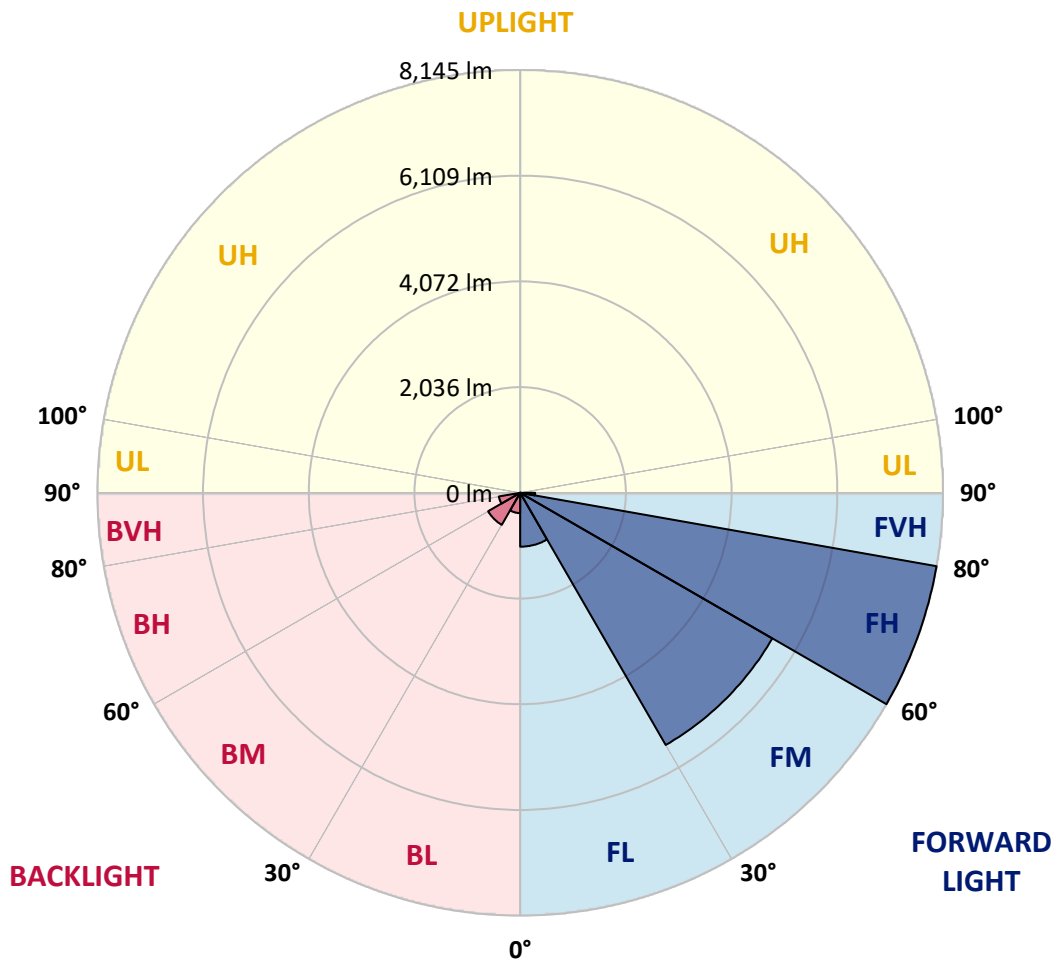
CATALOG NUMBER: ARCH-L-AF72-180-D-U-T4W-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1038.1	6.3			
FM	(30°-60°)	5608.2	33.8			
FH	(60°-80°)	8144.9	49.1			G4/12000
FVH	(80°-90°)	288.0	1.7			G3/500
BL	(0°-30°)	390.1	2.4	B1/500		
BM	(30°-60°)	711.4	4.3	B1/1000		
BH	(60°-80°)	415.8	2.5	B1/500		G1/500
BVH	(80°-90°)	0.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G4**

Type IV Medium





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CATALOG NUMBER: ARCH-L-AF72-180-D-U-T4W-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2
2.5°	1928.4	1928.4	1924.4	1920.5	1900.8	1881.2	1877.3	1865.6	1830.2	1806.6	1783.0
5°	2089.4	2093.3	2085.5	2065.8	2022.6	1979.4	1975.5	1944.0	1877.3	1830.2	1779.1
7.5°	2242.5	2250.4	2230.7	2195.5	2144.3	2081.5	2077.6	2018.7	1932.3	1865.6	1790.9
10°	2372.1	2372.1	2344.6	2301.4	2246.5	2179.7	2171.8	2105.1	2006.9	1924.4	1826.3
12.5°	2513.5	2509.6	2470.3	2411.4	2348.6	2285.8	2281.8	2199.3	2105.1	1999.1	1877.3
15°	2643.1	2635.3	2584.2	2529.2	2462.4	2395.8	2391.8	2309.3	2211.1	2085.5	1951.9
17.5°	2713.8	2709.9	2662.7	2607.8	2552.8	2501.7	2497.8	2411.4	2305.4	2175.8	2026.6
20°	2725.7	2729.5	2690.3	2643.1	2611.7	2584.2	2584.2	2505.7	2391.8	2254.3	2105.1
22.5°	2729.5	2741.3	2713.8	2651.0	2643.1	2647.1	2654.9	2592.1	2474.2	2344.6	2187.6
25°	2757.1	2772.7	2753.1	2678.5	2670.6	2698.1	2706.0	2678.5	2572.4	2442.8	2281.8
27.5°	2812.0	2827.7	2812.0	2717.8	2706.0	2733.4	2741.3	2757.1	2678.5	2537.1	2380.0
30°	2922.0	2925.9	2890.6	2772.7	2749.2	2784.5	2796.3	2839.5	2776.7	2627.4	2474.2
32.5°	3114.4	3075.2	2969.1	2812.0	2792.3	2831.6	2843.4	2890.6	2867.0	2713.8	2572.4
35°	3507.2	3302.9	3059.4	2867.0	2847.4	2886.7	2902.3	2969.1	2980.9	2835.6	2694.1
37.5°	3503.2	3318.7	3271.5	2973.0	2945.6	2973.0	2992.6	3075.2	3122.3	2996.6	2870.9
40°	3750.6	3672.1	3672.1	3173.3	3083.0	3122.3	3141.9	3224.3	3306.9	3208.7	3079.1
42.5°	4528.3	4477.3	4422.2	3558.2	3275.5	3385.5	3397.2	3448.3	3546.5	3515.0	3361.8
45°	5396.3	5349.1	5137.1	4210.2	3605.4	3624.9	3652.4	3734.9	3876.4	3935.3	3754.5
47.5°	6075.7	6028.6	5847.9	4995.7	4119.8	3947.1	3947.1	4108.1	4328.0	4477.3	4304.4
50°	6621.6	6566.6	6456.7	5832.1	4964.2	4410.5	4386.9	4575.5	4901.4	5133.1	5015.3
52.5°	7151.8	6990.7	6923.9	6696.2	5918.6	5082.0	5019.2	5152.7	5604.3	5891.1	5792.9
55°	7505.3	7481.7	7411.0	7489.5	6920.1	5898.9	5843.9	5871.4	6437.0	6629.4	6507.7
57.5°	7835.2	7831.2	7988.3	8353.5	8011.9	6833.6	6747.3	6704.0	7242.1	7194.9	7301.0
60°	8243.6	8172.9	8538.2	9060.5	9013.3	7744.8	7646.7	7560.2	7858.7	7725.2	8251.4
62.5°	8263.2	8243.6	8985.9	9736.0	10007.0	8671.7	8557.8	8247.5	8396.8	8243.6	9158.7
65°	7513.1	7611.3	9174.3	10093.4	10839.6	9484.6	9347.2	8864.1	8875.9	8773.7	10227.0
67.5°	7344.2	7395.3	8656.0	10478.3	11440.5	10305.5	10175.9	9574.9	9433.6	9441.4	10859.2
70°	6923.9	7002.5	8011.9	10450.8	11915.7	11401.2	11271.6	10619.7	10278.0	9897.0	10372.2
72.5°	5290.2	5423.7	6751.2	9162.6	11786.1	12834.7	12799.4	11943.2	10615.8	9088.0	7847.0
75°	1790.9	1787.0	3546.5	6154.2	10588.3	13274.5	13345.3	11778.3	9260.8	6268.1	3896.0
77.5°	384.8	388.8	730.5	2493.9	7033.9	10658.9	10929.9	8883.7	5973.5	2792.3	891.5
80°	188.5	192.4	302.4	659.8	2812.0	5977.5	6401.6	4567.6	2207.2	557.7	149.2
82.5°	94.2	98.2	157.1	349.5	1040.8	2124.7	2270.0	1680.9	632.3	314.1	74.6
85°	35.4	35.4	78.6	208.2	475.3	498.8	612.6	487.0	380.9	255.3	19.6
87.5°	7.9	7.9	43.2	102.1	212.1	157.1	157.1	149.2	231.7	172.8	7.9
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: P237451

CATALOG NUMBER: ARCH-L-AF72-180-D-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2	1775.2
2.5°	1771.2	1755.6	1728.1	1700.6	1680.9	1657.4	1645.6	1633.8	1629.9	1626.0	1633.8
5°	1751.6	1728.1	1677.0	1633.8	1594.5	1563.1	1539.5	1516.0	1504.1	1496.4	1500.3
7.5°	1751.6	1716.3	1641.6	1574.8	1512.0	1445.3	1378.5	1327.5	1288.2	1264.6	1268.6
10°	1771.2	1724.1	1626.0	1535.7	1417.8	1276.4	1131.1	1021.1	946.5	903.3	903.3
12.5°	1814.4	1751.6	1629.9	1488.5	1288.2	1040.8	820.8	687.3	632.3	600.9	604.8
15°	1873.3	1798.8	1649.5	1425.7	1107.5	773.7	573.4	487.0	487.0	494.8	498.8
17.5°	1940.1	1857.7	1665.3	1331.4	875.9	553.7	451.6	443.8	455.6	475.3	475.3
20°	2006.9	1916.6	1673.0	1182.1	655.9	439.9	428.1	428.1	436.0	455.6	459.5
22.5°	2089.4	1991.2	1665.3	997.6	490.9	416.3	412.4	412.4	412.4	436.0	436.0
25°	2175.8	2077.6	1633.8	801.2	416.3	400.6	396.7	392.7	392.7	412.4	416.3
27.5°	2273.9	2167.9	1559.2	612.6	392.7	384.8	380.9	373.1	373.1	388.8	388.8
30°	2372.1	2270.0	1445.3	463.4	373.1	369.2	361.3	353.4	345.7	361.3	361.3
32.5°	2478.2	2376.1	1296.1	369.2	345.7	345.7	341.7	329.9	322.0	329.9	333.8
35°	2619.6	2497.8	1127.2	322.0	310.3	310.3	310.3	306.4	290.6	298.5	298.5
37.5°	2808.1	2666.7	930.8	298.5	282.7	274.9	274.9	274.9	263.1	267.1	267.1
40°	3047.7	2863.0	742.3	278.9	263.1	243.5	235.7	239.6	231.7	231.7	227.8
42.5°	3373.6	3075.2	557.7	263.1	247.5	219.9	204.2	200.3	192.4	188.5	188.5
45°	3841.0	3334.3	400.6	247.5	235.7	192.4	176.8	164.9	145.4	133.5	133.5
47.5°	4445.8	3628.9	298.5	231.7	223.8	168.9	149.2	125.7	98.2	90.3	90.3
50°	5184.1	3958.8	251.3	208.2	204.2	149.2	117.8	82.4	54.9	47.2	51.0
52.5°	5902.8	4269.1	223.8	184.5	180.7	129.6	86.4	43.2	23.5	23.5	23.5
55°	6507.7	4489.0	204.2	164.9	157.1	102.1	47.2	19.6	11.8	11.8	11.8
57.5°	7053.6	4614.6	184.5	145.4	125.7	70.7	19.6	7.9	7.9	3.9	3.9
60°	7552.3	4689.3	161.0	125.7	98.2	39.3	7.9	3.9	3.9	0.0	0.0
62.5°	8043.3	4744.2	137.5	102.1	74.6	15.8	3.9	3.9	0.0	0.0	0.0
65°	8416.4	4724.6	110.0	82.4	47.2	7.9	3.9	0.0	0.0	0.0	0.0
67.5°	8404.6	4457.6	82.4	62.8	23.5	3.9	0.0	0.0	0.0	0.0	0.0
70°	7517.1	3754.5	54.9	39.3	7.9	3.9	0.0	0.0	0.0	0.0	0.0
72.5°	5333.4	2407.5	35.4	23.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0
75°	2348.6	730.5	19.6	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	459.5	168.9	11.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	110.0	19.6	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	47.2	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	11.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	7.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)