

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: P234856

Luminaire Tested: **ARCH-M-AF48-160-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234856  
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-M-AF48-160-D-U-T4W-8027-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 1030mA 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: 10707 lumens  
Efficiency: N/A  
Efficacy: 66.5 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 161  
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

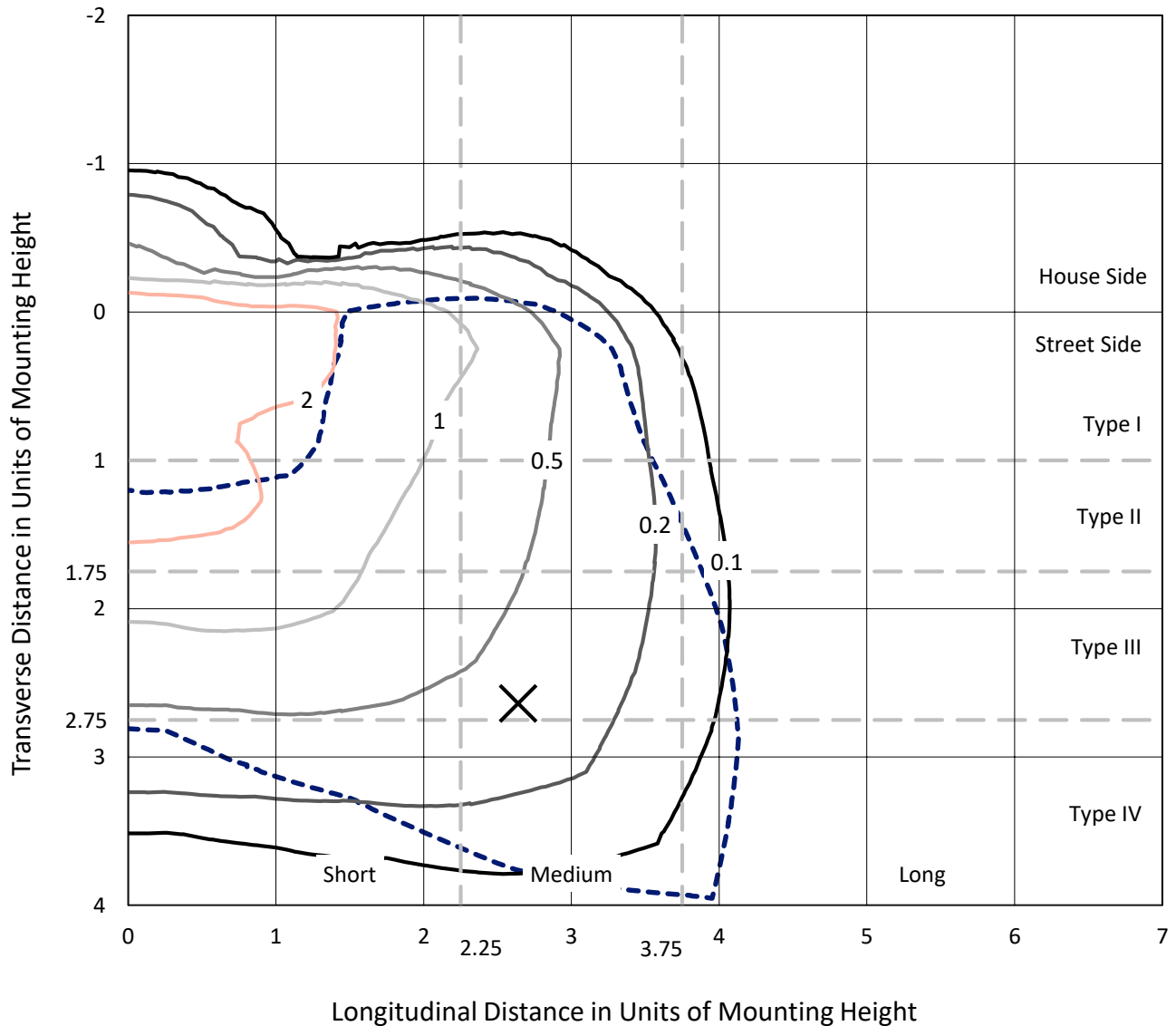


REPORT NUMBER: P234856

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T4W-8027-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

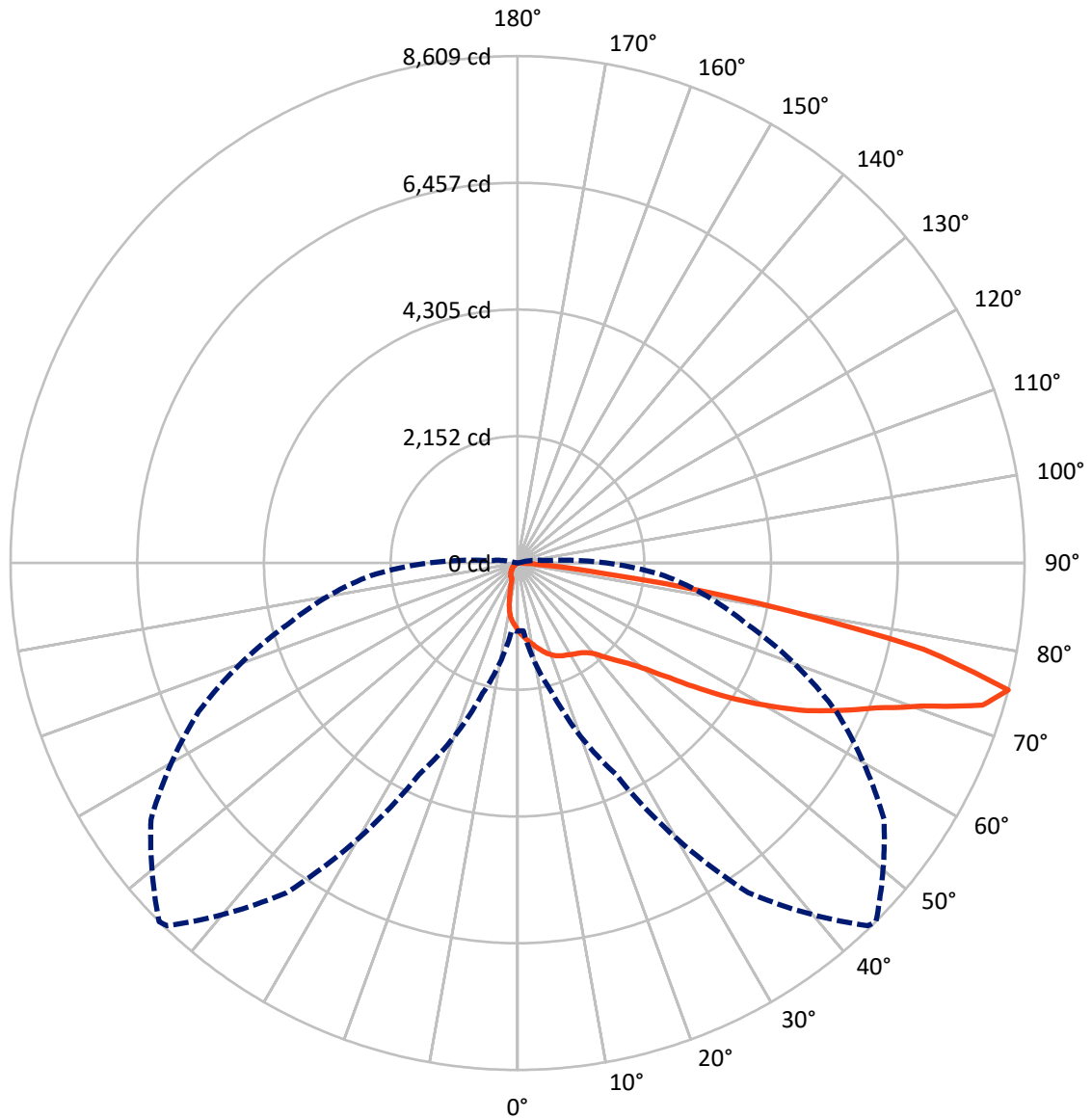


Based on 20 foot mounting height. Maximum calculated value = 3.8 fc  
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P234856

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T4W-8027-HSS

### Luminous Intensity Polar Plot



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



REPORT NUMBER: P234856

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T4W-8027-HSS

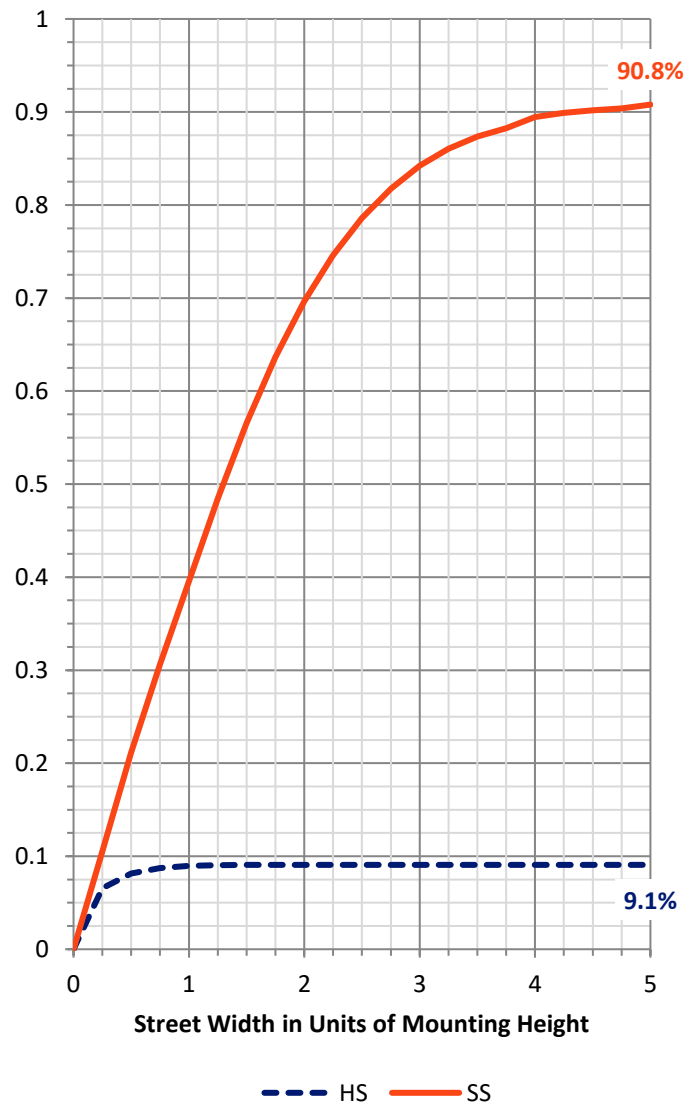
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	979.4	0.0	979.4
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	9727.6	0.0	9727.6
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	10707.0	0.0	10707.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.1	1.0
10°-20°	306.2	2.9
20°-30°	507.1	4.7
30°-40°	733.9	6.9
40°-50°	1201.7	11.2
50°-60°	2141.2	20.0
60°-70°	3147.8	29.4
70°-80°	2374.7	22.2
80°-90°	186.3	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°	10707.0	100.0
0°-180°	10707.0	100.0



REPORT NUMBER: P234856

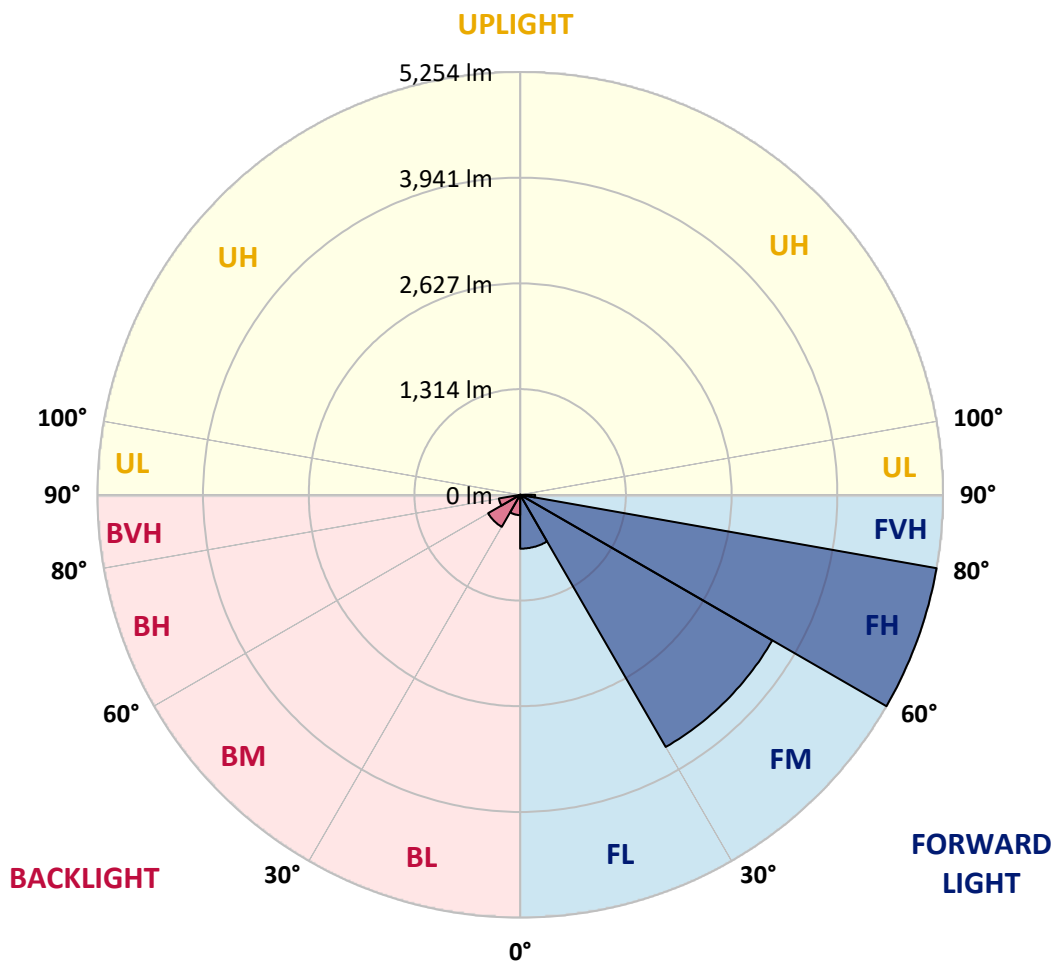
CATALOG NUMBER: ARCH-M-AF48-160-D-U-T4W-8027-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	669.7	6.3			
FM	(30°-60°)	3617.8	33.8			
FH	(60°-80°)	5254.3	49.1			G3/7500
FVH	(80°-90°)	185.8	1.7			G2/225
BL	(0°-30°)	251.7	2.4	B1/500		
BM	(30°-60°)	458.9	4.3	B1/1000		
BH	(60°-80°)	268.2	2.5	B1/500		G1/500
BVH	(80°-90°)	0.5	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-G3**

Type IV Medium





REPORT NUMBER: P234856

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T4W-8027-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2
2.5°	1244.0	1244.0	1241.4	1238.9	1226.2	1213.6	1211.0	1203.4	1180.6	1165.4	1150.2
5°	1347.9	1350.4	1345.3	1332.7	1304.8	1276.9	1274.4	1254.1	1211.0	1180.6	1147.7
7.5°	1446.7	1451.7	1439.1	1416.3	1383.3	1342.8	1340.3	1302.3	1246.5	1203.4	1155.3
10°	1530.3	1530.3	1512.5	1484.7	1449.2	1406.1	1401.1	1358.0	1294.7	1241.4	1178.1
12.5°	1621.5	1618.9	1593.6	1555.6	1515.1	1474.5	1472.0	1418.8	1358.0	1289.6	1211.0
15°	1705.1	1700.0	1667.1	1631.6	1588.5	1545.5	1542.9	1489.7	1426.4	1345.3	1259.2
17.5°	1750.7	1748.2	1717.8	1682.3	1646.8	1613.9	1611.3	1555.6	1487.2	1403.6	1307.3
20°	1758.3	1760.8	1735.5	1705.1	1684.8	1667.1	1667.1	1616.4	1542.9	1454.3	1358.0
22.5°	1760.8	1768.4	1750.7	1710.2	1705.1	1707.6	1712.7	1672.2	1596.1	1512.5	1411.2
25°	1778.6	1788.7	1776.0	1727.9	1722.8	1740.6	1745.6	1727.9	1659.5	1575.9	1472.0
27.5°	1814.0	1824.2	1814.0	1753.2	1745.6	1763.4	1768.4	1778.6	1727.9	1636.7	1535.3
30°	1885.0	1887.5	1864.7	1788.7	1773.5	1796.3	1803.9	1831.8	1791.2	1695.0	1596.1
32.5°	2009.1	1983.8	1915.4	1814.0	1801.4	1826.7	1834.3	1864.7	1849.5	1750.7	1659.5
35°	2262.5	2130.7	1973.6	1849.5	1836.8	1862.2	1872.3	1915.4	1923.0	1829.2	1738.0
37.5°	2259.9	2140.9	2110.5	1917.9	1900.2	1917.9	1930.6	1983.8	2014.2	1933.1	1852.0
40°	2419.6	2368.9	2368.9	2047.1	1988.8	2014.2	2026.9	2080.1	2133.3	2069.9	1986.3
42.5°	2921.2	2888.3	2852.8	2295.4	2113.0	2183.9	2191.5	2224.5	2287.8	2267.5	2168.7
45°	3481.1	3450.7	3313.9	2716.0	2325.8	2338.5	2356.2	2409.4	2500.6	2538.6	2422.1
47.5°	3919.4	3889.0	3772.5	3222.7	2657.7	2546.2	2546.2	2650.1	2792.0	2888.3	2776.8
50°	4271.6	4236.1	4165.2	3762.3	3202.4	2845.2	2830.0	2951.6	3161.9	3311.4	3235.4
52.5°	4613.6	4509.7	4466.7	4319.7	3818.1	3278.4	3237.9	3324.0	3615.4	3800.3	3737.0
55°	4841.6	4826.4	4780.8	4831.5	4464.1	3805.4	3769.9	3787.7	4152.5	4276.7	4198.1
57.5°	5054.5	5051.9	5153.3	5388.9	5168.5	4408.4	4352.7	4324.8	4671.9	4641.5	4709.9
60°	5318.0	5272.4	5508.0	5844.9	5814.5	4996.2	4932.9	4877.1	5069.7	4983.5	5323.0
62.5°	5330.6	5318.0	5796.8	6280.7	6455.5	5594.1	5520.6	5320.5	5416.8	5318.0	5908.3
65°	4846.7	4910.1	5918.4	6511.3	6992.6	6118.6	6029.9	5718.3	5725.9	5660.0	6597.4
67.5°	4737.8	4770.7	5584.0	6759.6	7380.3	6648.1	6564.5	6176.8	6085.6	6090.7	7005.3
70°	4466.7	4517.3	5168.5	6741.8	7686.8	7354.9	7271.3	6850.8	6630.3	6384.6	6691.1
72.5°	3412.7	3498.9	4355.2	5910.8	7603.2	8279.7	8256.9	7704.6	6848.2	5862.7	5062.1
75°	1155.3	1152.8	2287.8	3970.1	6830.5	8563.5	8609.1	7598.2	5974.1	4043.6	2513.3
77.5°	248.3	250.8	471.2	1608.8	4537.6	6876.1	7050.9	5730.9	3853.6	1801.4	575.1
80°	121.6	124.1	195.1	425.6	1814.0	3856.1	4129.7	2946.5	1423.9	359.8	96.3
82.5°	60.8	63.3	101.3	225.5	671.4	1370.7	1464.4	1084.4	407.9	202.7	48.1
85°	22.8	22.8	50.7	134.3	306.6	321.8	395.2	314.2	245.8	164.7	12.7
87.5°	5.1	5.1	27.9	65.9	136.8	101.3	101.3	96.3	149.5	111.5	5.1
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: P234856

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T4W-8027-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2	1145.2
2.5°	1142.6	1132.5	1114.8	1097.0	1084.4	1069.2	1061.6	1054.0	1051.4	1048.9	1054.0
5°	1130.0	1114.8	1081.8	1054.0	1028.6	1008.4	993.2	978.0	970.4	965.3	967.8
7.5°	1130.0	1107.2	1059.0	1016.0	975.4	932.4	889.3	856.3	831.0	815.8	818.3
10°	1142.6	1112.2	1048.9	990.6	914.6	823.4	729.7	658.7	610.6	582.7	582.7
12.5°	1170.5	1130.0	1051.4	960.2	831.0	671.4	529.5	443.4	407.9	387.6	390.2
15°	1208.5	1160.4	1064.1	919.7	714.5	499.1	369.9	314.2	314.2	319.2	321.8
17.5°	1251.6	1198.4	1074.2	858.9	565.0	357.2	291.4	286.3	293.9	306.6	306.6
20°	1294.7	1236.4	1079.3	762.6	423.1	283.8	276.2	276.2	281.2	293.9	296.4
22.5°	1347.9	1284.5	1074.2	643.5	316.7	268.6	266.0	266.0	266.0	281.2	281.2
25°	1403.6	1340.3	1054.0	516.8	268.6	258.4	255.9	253.4	253.4	266.0	268.6
27.5°	1466.9	1398.5	1005.8	395.2	253.4	248.3	245.8	240.7	240.7	250.8	250.8
30°	1530.3	1464.4	932.4	299.0	240.7	238.2	233.1	228.0	223.0	233.1	233.1
32.5°	1598.7	1532.8	836.1	238.2	223.0	223.0	220.4	212.8	207.8	212.8	215.4
35°	1689.9	1611.3	727.1	207.8	200.2	200.2	200.2	197.6	187.5	192.6	192.6
37.5°	1811.5	1720.3	600.5	192.6	182.4	177.3	177.3	177.3	169.7	172.3	172.3
40°	1966.0	1847.0	478.8	179.9	169.7	157.1	152.0	154.5	149.5	149.5	146.9
42.5°	2176.3	1983.8	359.8	169.7	159.6	141.9	131.7	129.2	124.1	121.6	121.6
45°	2477.8	2151.0	258.4	159.6	152.0	124.1	114.0	106.4	93.7	86.1	86.1
47.5°	2868.0	2341.0	192.6	149.5	144.4	108.9	96.3	81.1	63.3	58.3	58.3
50°	3344.3	2553.8	162.1	134.3	131.7	96.3	76.0	53.2	35.5	30.4	32.9
52.5°	3807.9	2754.0	144.4	119.1	116.5	83.6	55.7	27.9	15.2	15.2	15.2
55°	4198.1	2895.9	131.7	106.4	101.3	65.9	30.4	12.7	7.6	7.6	7.6
57.5°	4550.3	2976.9	119.1	93.7	81.1	45.6	12.7	5.1	5.1	2.5	2.5
60°	4872.0	3025.1	103.9	81.1	63.3	25.3	5.1	2.5	2.5	0.0	0.0
62.5°	5188.7	3060.5	88.7	65.9	48.1	10.1	2.5	2.5	0.0	0.0	0.0
65°	5429.4	3047.9	70.9	53.2	30.4	5.1	2.5	0.0	0.0	0.0	0.0
67.5°	5421.8	2875.6	53.2	40.5	15.2	2.5	0.0	0.0	0.0	0.0	0.0
70°	4849.2	2422.1	35.5	25.3	5.1	2.5	0.0	0.0	0.0	0.0	0.0
72.5°	3440.6	1553.1	22.8	15.2	2.5	0.0	0.0	0.0	0.0	0.0	0.0
75°	1515.1	471.2	12.7	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	296.4	108.9	7.6	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	70.9	12.7	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	30.4	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.1	2.5	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)