

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: P231085

Luminaire Tested: **ARCH-M-AF48-140-D-U-T2R-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231085  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29623)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-140-D-U-T2R-7030-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 905mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12264 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 141  
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

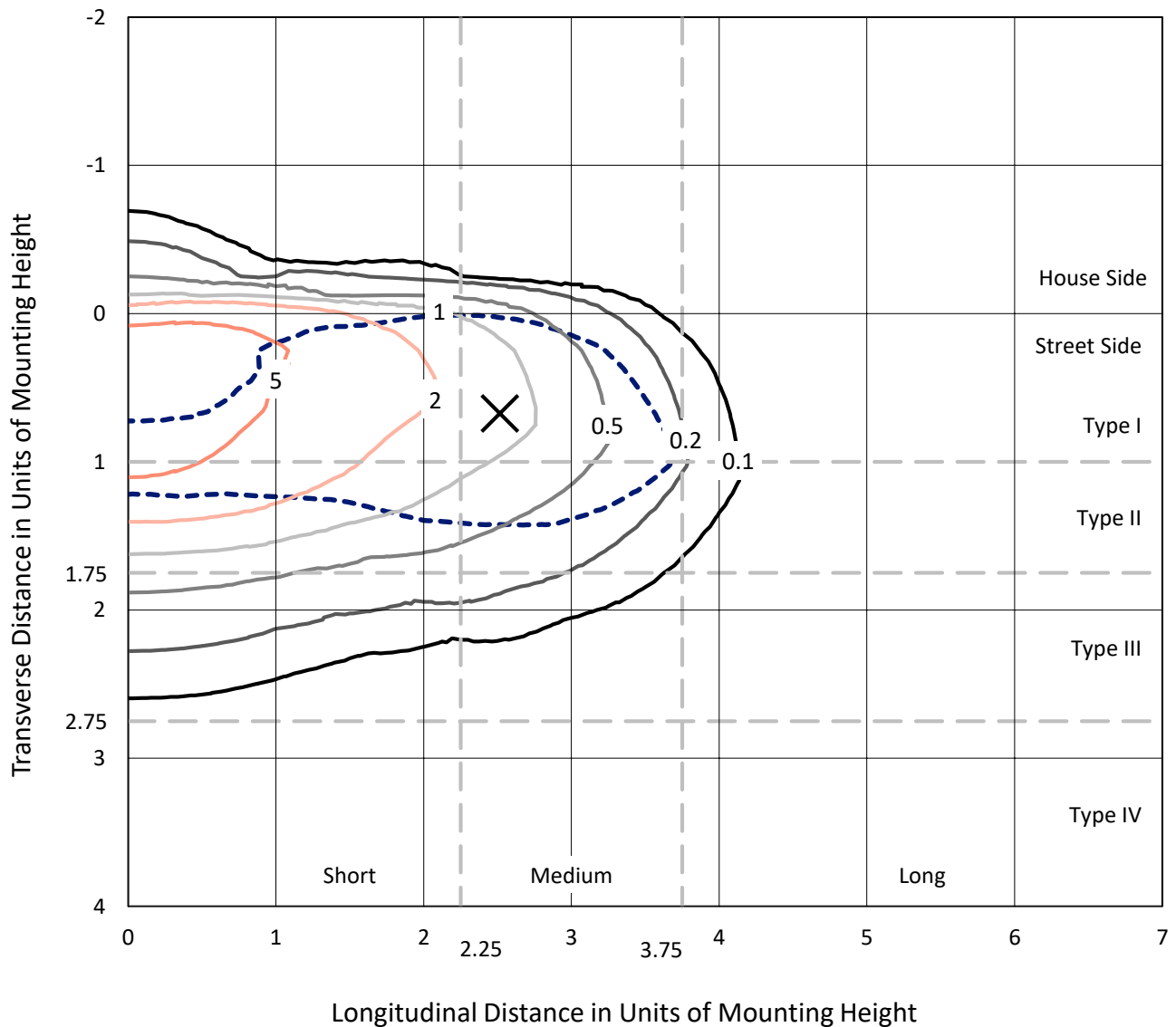


REPORT NUMBER: P231085

CATALOG NUMBER: ARCH-M-AF48-140-D-U-T2R-7030-HSS

### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

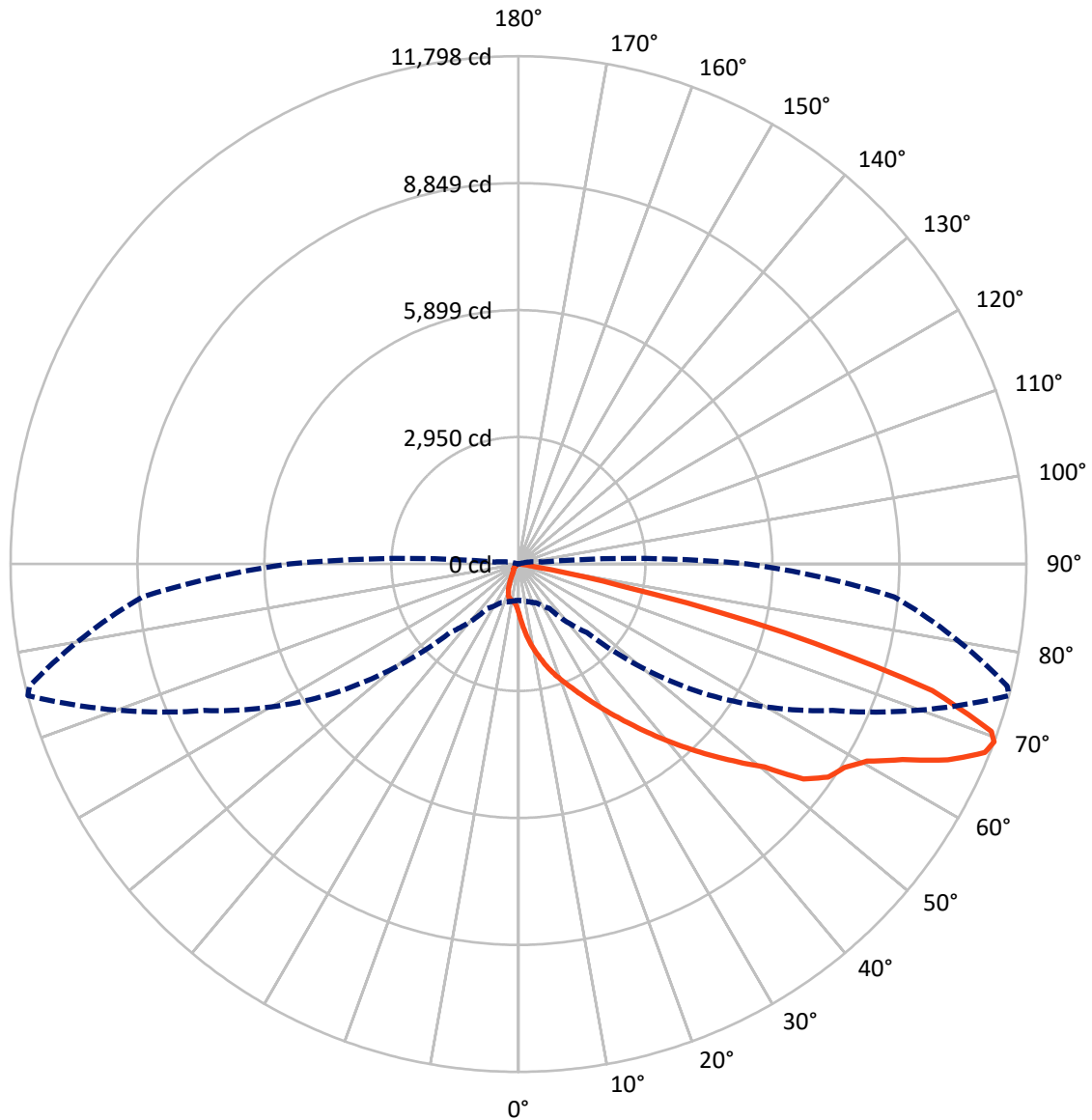


Based on 20 foot mounting height. Maximum calculated value = 7.8 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P231085

CATALOG NUMBER: ARCH-M-AF48-140-D-U-T2R-7030-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P231085

CATALOG NUMBER: ARCH-M-AF48-140-D-U-T2R-7030-HSS

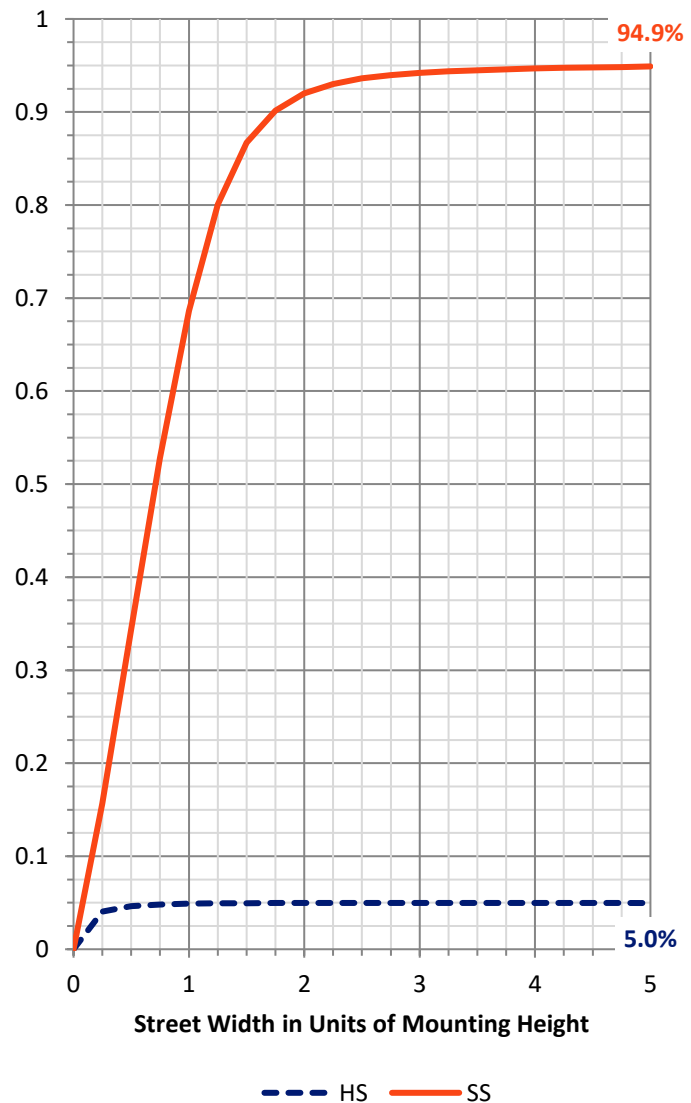
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	611.9	0.0	611.9
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	11652.1	0.0	11652.1
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	12264.0	0.0	12264.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.1	1.1
10°-20°	475.7	3.9
20°-30°	908.2	7.4
30°-40°	1629.1	13.3
40°-50°	2495.9	20.4
50°-60°	2900.9	23.7
60°-70°	2568.8	20.9
70°-80°	1108.0	9.0
80°-90°	44.4	0.4
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°	12264.0	100.0
0°-180°	12264.0	100.0



REPORT NUMBER: P231085

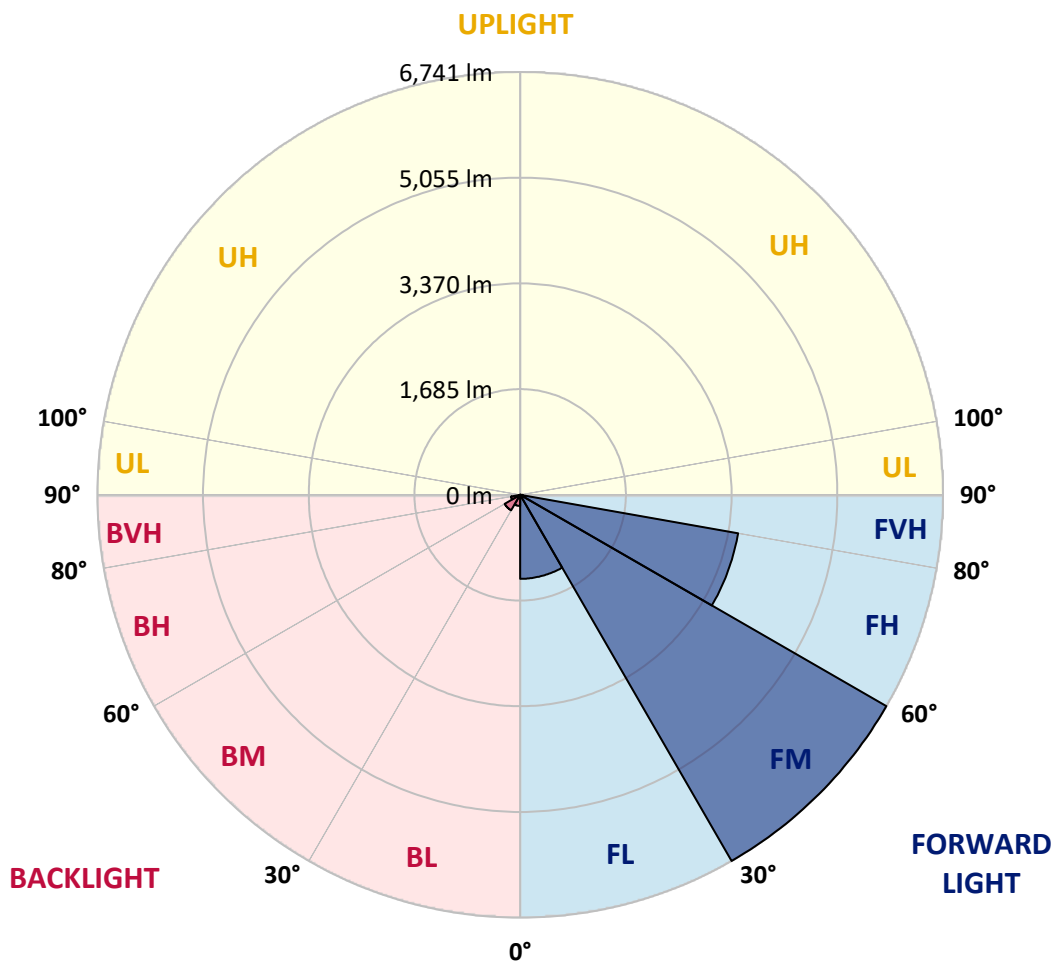
CATALOG NUMBER: ARCH-M-AF48-140-D-U-T2R-7030-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1339.2	10.9			
FM (30°-60°)	6740.6	55.0			
FH (60°-80°)	3528.5	28.8			G2/5000
FVH (80°-90°)	43.7	0.4			G1/100
BL (0°-30°)	177.7	1.4	B1/500		
BM (30°-60°)	285.3	2.3	B1/1000		
BH (60°-80°)	148.2	1.2	B1/500		G1/500
BVH (80°-90°)	0.6	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-G2**

Type II Medium





REPORT NUMBER: P231085

CATALOG NUMBER: ARCH-M-AF48-140-D-U-T2R-7030-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2
2.5°	1879.9	1861.3	1842.8	1821.6	1774.0	1691.9	1588.6	1477.4	1339.7	1315.9	1204.7
5°	2282.3	2274.4	2255.8	2226.7	2173.8	2083.7	1967.2	1803.1	1572.7	1533.0	1297.4
7.5°	2565.6	2560.3	2544.4	2510.0	2462.4	2372.3	2250.5	2073.2	1805.7	1760.7	1413.9
10°	2819.8	2817.2	2803.9	2772.1	2724.5	2626.5	2496.8	2311.4	2028.1	1977.8	1548.9
12.5°	3050.2	3052.8	3047.5	3031.6	2997.2	2904.5	2756.3	2555.0	2242.6	2187.0	1710.4
15°	3185.2	3193.1	3214.3	3246.1	3256.7	3182.5	3029.0	2806.6	2462.4	2414.7	1895.8
17.5°	3140.2	3148.1	3214.3	3322.9	3426.1	3436.7	3299.0	3044.9	2679.5	2631.8	2078.4
20°	3031.6	3042.2	3111.1	3259.3	3460.5	3600.9	3545.3	3304.3	2886.0	2827.7	2253.2
22.5°	3153.4	3153.4	3174.6	3264.6	3447.3	3667.1	3741.2	3563.8	3097.8	3026.3	2427.9
25°	3571.8	3563.8	3518.8	3481.7	3540.0	3735.9	3889.5	3828.6	3346.7	3264.6	2613.3
27.5°	4101.3	4138.4	4053.6	3918.6	3786.2	3870.9	4021.9	4090.7	3622.1	3537.3	2803.9
30°	4694.4	4710.3	4609.7	4429.6	4196.6	4114.5	4178.1	4315.8	3921.3	3828.6	3002.5
32.5°	5229.2	5216.0	5131.3	4943.3	4654.7	4477.3	4379.3	4495.8	4246.9	4141.0	3206.4
35°	5703.2	5713.7	5610.5	5393.4	5110.1	4922.1	4689.1	4699.7	4612.3	4490.5	3442.0
37.5°	6129.4	6110.9	6012.9	5795.8	5539.0	5335.1	5088.9	4911.5	5012.1	4885.0	3706.8
40°	6476.3	6457.8	6354.5	6142.7	5901.7	5734.9	5541.6	5194.8	5433.1	5287.5	3990.1
42.5°	6751.6	6730.5	6643.1	6439.2	6206.2	6057.9	5965.3	5544.3	5883.2	5737.6	4307.8
45°	6886.7	6868.1	6815.2	6661.6	6457.8	6328.0	6373.0	5946.7	6365.1	6243.3	4657.3
47.5°	6727.8	6719.9	6780.8	6754.3	6637.8	6569.0	6725.2	6386.3	6870.8	6751.6	5059.8
50°	6245.9	6259.2	6436.6	6656.3	6711.9	6794.0	7013.8	6849.6	7413.6	7286.5	5523.1
52.5°	5057.1	5147.1	5682.0	6211.5	6621.9	6931.7	7352.7	7511.5	8297.9	8173.5	6245.9
55°	3775.6	3812.7	4395.2	5300.7	6259.2	6921.1	7604.2	7900.8	8734.8	8607.7	6436.6
57.5°	2994.6	3007.8	3296.4	4220.4	5512.5	6682.8	7736.6	8041.1	8925.4	8819.5	6719.9
60°	2351.2	2367.0	2576.2	3211.7	4461.4	6039.4	7546.0	8162.9	9298.7	9214.0	7215.0
62.5°	1829.6	1845.5	1972.5	2345.9	3346.7	5049.2	7162.0	8358.8	10008.3	9968.6	8025.2
65°	1416.5	1421.8	1509.2	1683.9	2364.4	3976.9	6693.4	8541.5	10966.8	10932.4	8681.8
67.5°	1045.8	1053.8	1114.7	1223.2	1596.6	2856.9	5925.6	8401.2	11689.6	11589.0	8920.1
69°	844.6	852.6	905.5	992.9	1260.3	2250.5	5223.9	8054.3	11798.2	11702.9	8769.2
70°	722.8	728.1	781.1	855.2	1075.0	1911.6	4667.9	7755.1	11655.2	11562.5	8425.0
72.5°	463.3	489.8	542.8	590.4	712.2	1265.6	3150.8	6431.3	10056.0	9897.1	6598.1
75°	256.8	264.8	360.1	418.3	473.9	823.4	1752.8	4011.3	6396.9	6285.7	3529.4
77.5°	211.8	217.1	254.2	317.7	317.7	460.7	661.9	1580.7	2433.2	2194.9	955.8
80°	148.3	153.6	193.3	209.2	227.7	259.5	214.5	346.8	376.0	333.6	143.0
82.5°	103.3	108.6	132.4	172.1	182.7	121.8	79.4	103.3	108.6	108.6	55.6
85°	18.5	26.5	98.0	143.0	108.6	37.1	45.0	37.1	34.4	37.1	13.2
87.5°	0.0	0.0	60.9	68.8	58.2	15.9	18.5	13.2	7.9	10.6	5.3
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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CATALOG NUMBER: ARCH-M-AF48-140-D-U-T2R-7030-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2	1141.2
2.5°	1149.1	1093.5	998.2	929.3	871.1	826.1	807.5	778.4	757.2	767.8	754.6
5°	1180.9	1082.9	929.3	831.4	762.5	704.3	656.6	619.6	590.4	585.1	579.8
7.5°	1231.2	1090.9	889.6	767.8	664.6	574.6	500.4	444.8	402.5	402.5	386.6
10°	1300.0	1112.0	865.8	704.3	550.7	428.9	354.8	301.8	280.7	278.0	272.7
12.5°	1395.3	1151.8	847.3	622.2	428.9	312.4	267.4	248.9	240.9	238.3	235.6
15°	1525.1	1210.0	826.1	521.6	325.7	256.8	238.3	222.4	214.5	211.8	209.2
17.5°	1649.5	1263.0	781.1	418.3	264.8	233.0	211.8	198.6	188.0	185.3	185.3
20°	1766.0	1308.0	704.3	325.7	238.3	209.2	188.0	172.1	161.5	158.9	158.9
22.5°	1887.8	1345.0	609.0	264.8	217.1	185.3	164.2	148.3	137.7	135.0	132.4
25°	2017.6	1371.5	500.4	235.6	195.9	164.2	140.3	127.1	119.1	116.5	113.9
27.5°	2157.9	1382.1	397.2	214.5	172.1	143.0	121.8	108.6	103.3	100.6	100.6
30°	2285.0	1371.5	307.1	190.6	150.9	124.4	105.9	95.3	90.0	87.4	87.4
32.5°	2417.4	1345.0	246.2	169.5	132.4	105.9	90.0	82.1	79.4	76.8	76.8
35°	2557.7	1310.6	211.8	150.9	113.9	92.7	79.4	74.1	71.5	68.8	68.8
37.5°	2721.8	1268.3	193.3	135.0	100.6	82.1	68.8	66.2	63.5	63.5	63.5
40°	2907.2	1215.3	180.0	121.8	90.0	71.5	60.9	58.2	55.6	55.6	55.6
42.5°	3103.1	1154.4	166.8	108.6	79.4	60.9	53.0	53.0	50.3	50.3	47.7
45°	3322.9	1093.5	153.6	95.3	68.8	53.0	45.0	42.4	42.4	39.7	39.7
47.5°	3582.3	1037.9	140.3	84.7	60.9	45.0	39.7	37.1	34.4	31.8	31.8
50°	3947.7	1032.6	124.4	74.1	55.6	37.1	31.8	29.1	26.5	23.8	23.8
52.5°	4310.5	984.9	105.9	60.9	45.0	31.8	23.8	21.2	18.5	18.5	15.9
55°	4392.5	905.5	92.7	53.0	34.4	23.8	18.5	13.2	13.2	10.6	10.6
57.5°	4572.6	868.4	79.4	42.4	26.5	18.5	10.6	7.9	7.9	7.9	7.9
60°	4927.4	857.9	68.8	37.1	18.5	13.2	7.9	5.3	5.3	2.6	2.6
62.5°	5417.2	847.3	58.2	31.8	13.2	7.9	5.3	2.6	0.0	0.0	0.0
65°	5687.3	775.8	47.7	23.8	10.6	7.9	2.6	0.0	0.0	0.0	0.0
67.5°	5615.8	640.7	42.4	15.9	7.9	5.3	2.6	0.0	0.0	0.0	0.0
69°	5316.6	540.1	34.4	13.2	7.9	5.3	2.6	0.0	0.0	0.0	0.0
70°	4956.5	466.0	31.8	10.6	5.3	2.6	2.6	0.0	0.0	0.0	0.0
72.5°	3518.8	243.6	21.2	7.9	5.3	2.6	0.0	0.0	0.0	0.0	0.0
75°	1644.2	108.6	13.2	5.3	2.6	2.6	0.0	0.0	0.0	0.0	0.0
77.5°	362.7	50.3	7.9	5.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0
80°	68.8	18.5	5.3	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	23.8	7.9	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.9	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.6	0.0	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)