

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: P234828

Luminaire Tested: **ARCH-M-AF48-140-D-U-T3-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234828  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29624)  
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-T3-8027-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 905mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9924 lumens  
Efficiency: N/A  
Efficacy: 70.4 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Semi-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

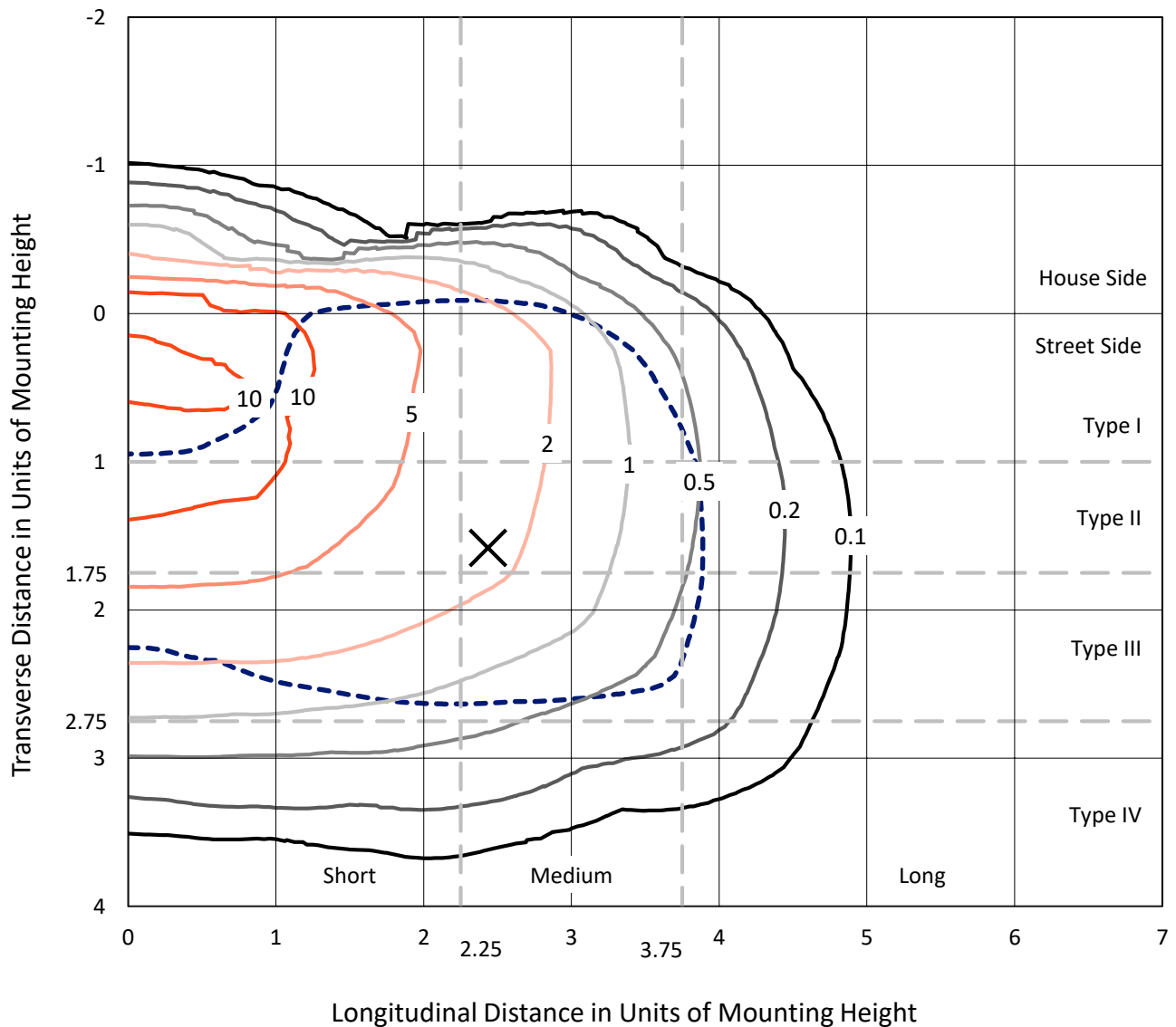


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

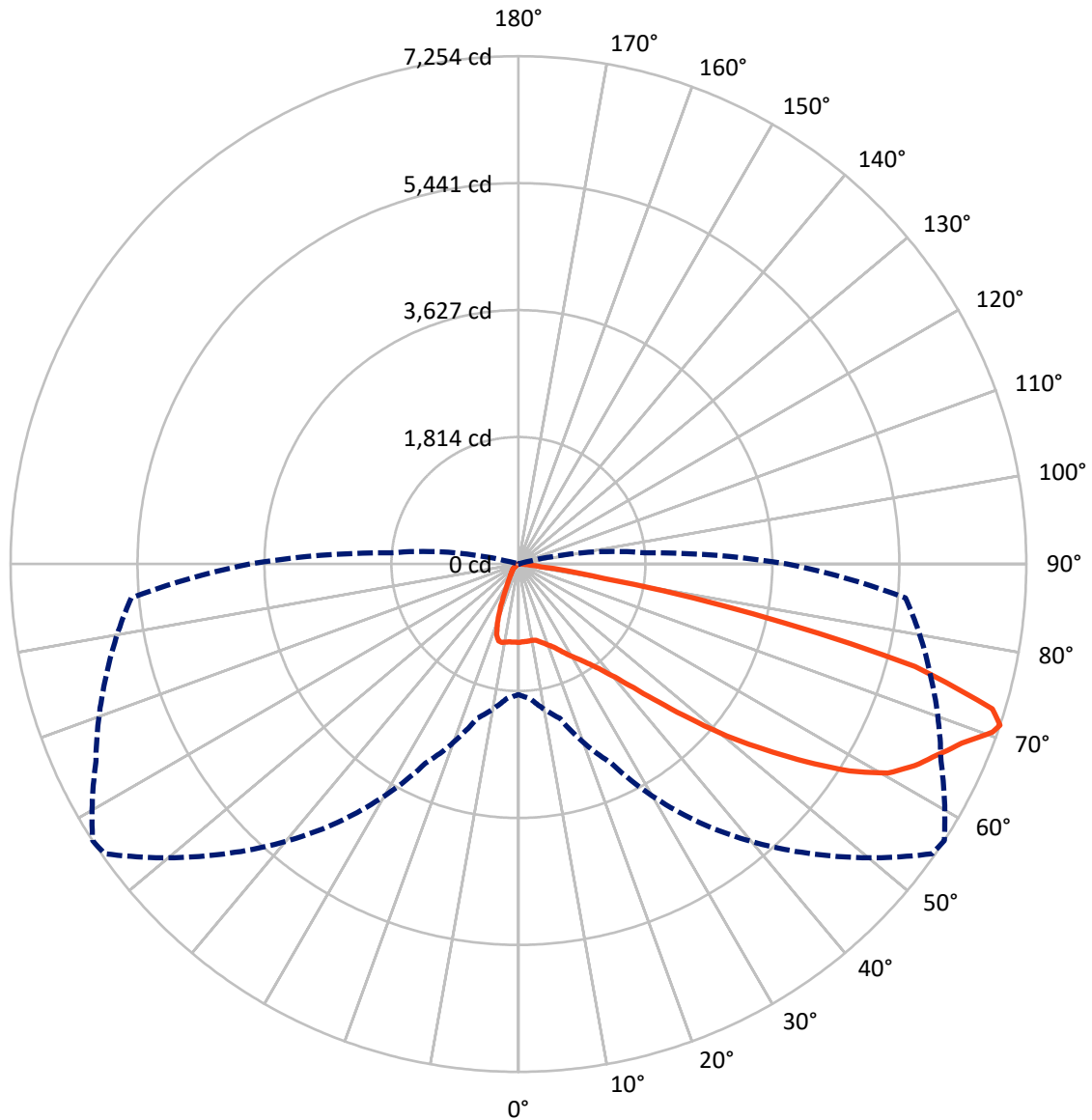


Based on 10 foot mounting height. Maximum calculated value = 13.9 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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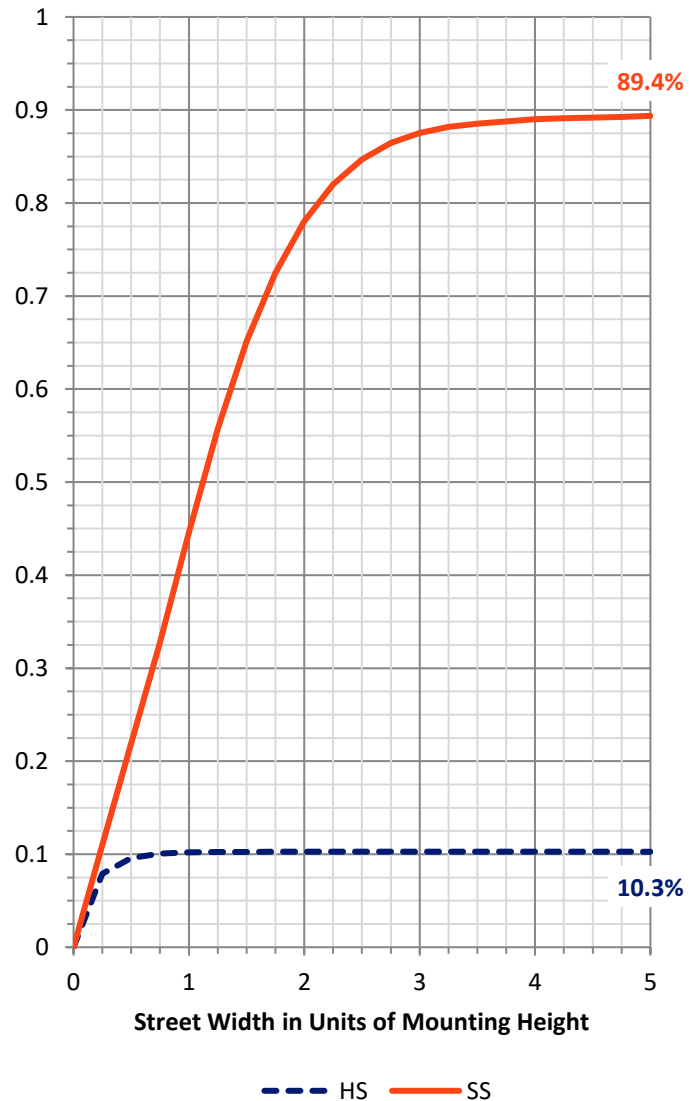
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1028.4	0.0	1028.4
	% Fixture	10.4	0.0	10.4
<b>Street Side</b>	Lumens	8895.5	0.0	8895.5
	% Fixture	89.6	0.0	89.6
<b>Total</b>	Lumens	9924.0	0.0	9924.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.3	1.1
10°-20°	281.6	2.8
20°-30°	439.3	4.4
30°-40°	742.5	7.5
40°-50°	1442.2	14.5
50°-60°	2421.9	24.4
60°-70°	2890.3	29.1
70°-80°	1523.2	15.3
80°-90°	77.4	0.8
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°	9924.0	100.0
0°-180°	9924.0	100.0



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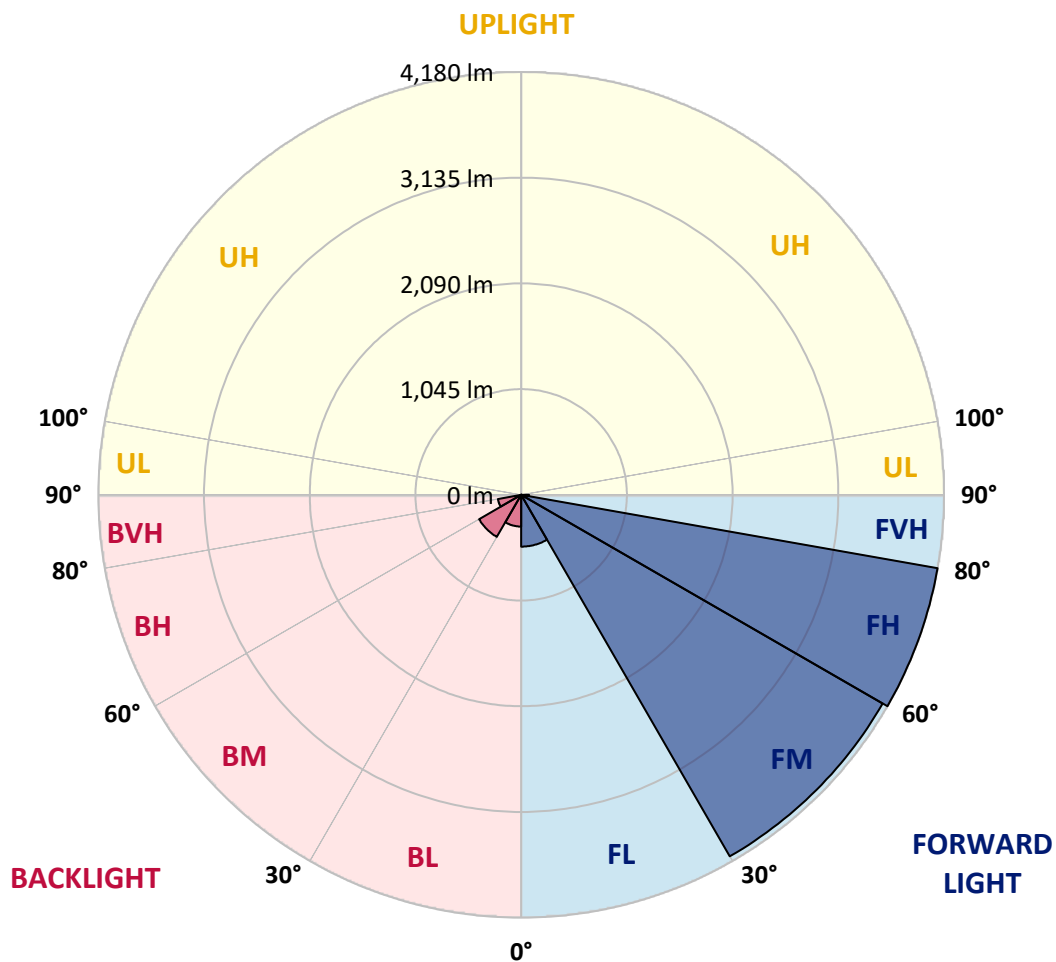
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	512.4	5.2			
FM (30°-60°)	4126.5	41.6			
FH (60°-80°)	4180.0	42.1			G2/5000
FVH (80°-90°)	76.7	0.8			G1/100
BL (0°-30°)	313.9	3.2	B1/500		
BM (30°-60°)	480.2	4.8	B1/1000		
BH (60°-80°)	233.5	2.4	B1/500		G1/500
BVH (80°-90°)	0.7	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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6
2.5°	1105.4	1105.4	1105.4	1107.7	1110.0	1110.0	1114.6	1112.3	1112.3	1112.3	1116.9
5°	1075.3	1077.6	1079.9	1084.6	1093.8	1100.7	1112.3	1112.3	1114.6	1119.2	1121.6
7.5°	1033.7	1036.0	1042.9	1052.2	1070.7	1086.9	1105.4	1110.0	1116.9	1128.5	1133.1
10°	1008.2	1012.9	1022.1	1033.7	1054.5	1075.3	1098.4	1105.4	1126.2	1147.0	1158.6
12.5°	1001.3	1003.6	1012.9	1031.4	1056.8	1082.2	1112.3	1119.2	1149.3	1181.7	1200.2
15°	1012.9	1015.2	1019.8	1040.6	1070.7	1103.1	1142.4	1151.6	1188.6	1225.6	1248.7
17.5°	1033.7	1033.7	1038.3	1056.8	1089.2	1126.2	1177.1	1190.9	1232.6	1274.2	1299.6
20°	1047.6	1047.6	1054.5	1073.0	1110.0	1158.6	1218.7	1237.2	1283.4	1329.7	1352.8
22.5°	1061.4	1063.7	1070.7	1091.5	1133.1	1200.2	1269.6	1288.1	1341.2	1389.8	1412.9
25°	1100.7	1098.4	1100.7	1119.2	1167.8	1251.1	1338.9	1362.1	1417.6	1470.7	1482.3
27.5°	1209.4	1204.8	1174.7	1163.2	1200.2	1304.2	1426.8	1449.9	1514.7	1567.9	1567.9
30°	1459.2	1449.9	1375.9	1281.1	1251.1	1352.8	1510.1	1542.4	1625.7	1671.9	1658.1
32.5°	1776.0	1755.2	1660.4	1498.5	1378.2	1417.6	1597.9	1634.9	1741.3	1780.6	1750.6
35°	2122.9	2120.6	2002.6	1794.5	1623.4	1551.7	1711.2	1755.2	1889.3	1924.0	1875.4
37.5°	2490.6	2499.8	2421.2	2134.4	1933.2	1771.4	1861.6	1912.4	2076.6	2118.2	2072.0
40°	2899.9	2897.6	2867.5	2527.6	2305.6	2083.6	2078.9	2125.2	2324.1	2388.8	2324.1
42.5°	3417.9	3413.2	3304.6	2999.3	2756.5	2490.6	2395.7	2411.9	2633.9	2740.3	2645.5
45°	3945.1	3912.7	3787.9	3524.2	3309.2	2994.7	2814.3	2814.3	3003.9	3149.6	3001.6
47.5°	4238.8	4206.4	4155.6	4009.9	3945.1	3593.6	3327.7	3295.3	3443.3	3591.3	3383.2
50°	4625.0	4625.0	4497.8	4442.3	4553.3	4305.9	3894.2	3861.9	3933.6	4051.5	3778.6
52.5°	4930.2	4874.7	4784.6	4833.1	5149.9	5036.6	4460.8	4398.4	4453.9	4483.9	4123.2
55°	5057.4	5004.2	4997.3	5175.4	5665.6	5508.4	5041.2	4985.7	4981.1	4833.1	4423.8
57.5°	5082.9	5036.6	5124.5	5436.7	6167.4	5894.6	5619.4	5577.7	5448.2	5078.2	4731.4
60°	4867.8	4890.9	5103.7	5580.1	6463.4	6229.9	6107.3	6063.4	5765.1	5286.4	5073.6
62.5°	4426.1	4481.6	4879.4	5593.9	6354.7	6366.3	6377.9	6347.8	6010.2	5476.0	5418.2
65°	3903.5	3919.7	4398.4	5402.0	6165.1	6324.7	6576.7	6574.4	6197.5	5688.7	5806.7
67.5°	3216.7	3244.4	3658.4	4754.5	5785.9	6306.2	6838.1	6831.1	6410.2	5931.6	6037.9
70°	2393.4	2428.1	2763.4	3697.7	4939.5	6074.9	7180.3	7184.9	6634.6	6116.6	5878.4
71°	1866.2	1928.6	2280.1	3140.4	4507.1	5841.4	7212.7	7254.3	6660.0	6091.1	5550.0
72.5°	915.7	989.7	1431.4	2210.7	3709.2	5318.7	6999.9	7080.9	6500.4	5774.3	4745.2
75°	238.2	252.1	427.8	904.2	1988.7	3524.2	5644.8	5850.6	5314.1	4396.1	2899.9
77.5°	150.3	154.9	201.2	351.5	744.6	1338.9	3316.1	3417.9	3036.3	2226.9	1022.1
80°	106.4	108.7	127.2	226.6	434.7	390.8	1193.2	1237.2	1098.4	589.7	182.7
82.5°	64.7	64.7	92.5	145.7	268.2	212.7	314.5	335.3	296.0	164.2	60.1
85°	37.0	39.3	57.8	99.4	127.2	104.1	117.9	124.9	127.2	108.7	25.4
87.5°	30.1	32.4	50.9	83.2	69.4	50.9	50.9	53.2	55.5	64.7	11.6
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6	1121.6
2.5°	1116.9	1116.9	1119.2	1116.9	1116.9	1116.9	1119.2	1119.2	1119.2	1123.9	1126.2
5°	1121.6	1121.6	1121.6	1119.2	1116.9	1116.9	1121.6	1123.9	1123.9	1130.8	1130.8
7.5°	1133.1	1133.1	1128.5	1123.9	1119.2	1112.3	1114.6	1116.9	1114.6	1116.9	1116.9
10°	1158.6	1158.6	1151.6	1142.4	1128.5	1107.7	1079.9	1045.2	1012.9	1001.3	996.7
12.5°	1200.2	1197.9	1184.0	1167.8	1137.7	1066.1	962.0	839.4	737.7	709.9	700.7
15°	1246.4	1241.8	1225.6	1197.9	1116.9	927.3	709.9	552.7	455.6	432.4	427.8
17.5°	1295.0	1288.1	1264.9	1209.4	1022.1	689.1	457.9	346.9	293.7	289.1	291.4
20°	1345.9	1336.6	1304.2	1186.3	825.6	460.2	296.0	268.2	263.6	263.6	265.9
22.5°	1403.7	1392.1	1348.2	1103.1	601.2	305.2	254.4	252.1	249.7	247.4	247.4
25°	1470.7	1456.9	1389.8	952.7	413.9	249.7	242.8	235.9	231.2	226.6	224.3
27.5°	1551.7	1533.2	1422.2	767.7	284.4	233.6	228.9	217.4	208.1	198.9	198.9
30°	1632.6	1609.5	1412.9	578.1	231.2	217.4	208.1	194.2	180.4	171.1	168.8
32.5°	1718.2	1695.1	1352.8	388.5	210.4	198.9	187.3	166.5	150.3	138.7	136.4
35°	1845.4	1826.9	1234.9	256.7	189.6	175.7	159.6	138.7	117.9	106.4	104.1
37.5°	2035.0	2011.9	1089.2	196.6	166.5	145.7	131.8	108.7	87.9	76.3	74.0
40°	2289.4	2220.0	915.7	173.4	145.7	120.2	101.7	78.6	62.4	55.5	55.5
42.5°	2585.4	2421.2	728.4	157.2	129.5	99.4	74.0	53.2	43.9	41.6	41.6
45°	2899.9	2608.5	541.1	145.7	113.3	78.6	53.2	37.0	32.4	30.1	30.1
47.5°	3223.6	2761.1	376.9	131.8	94.8	60.1	37.0	27.7	23.1	20.8	20.8
50°	3526.6	2860.6	265.9	117.9	80.9	43.9	27.7	20.8	16.2	16.2	16.2
52.5°	3737.0	2851.3	191.9	101.7	62.4	30.1	18.5	13.9	13.9	13.9	13.9
55°	3922.0	2816.6	150.3	87.9	48.6	20.8	13.9	11.6	11.6	9.2	9.2
57.5°	4079.2	2761.1	127.2	71.7	34.7	16.2	9.2	9.2	6.9	6.9	6.9
60°	4213.4	2691.7	106.4	60.1	23.1	11.6	6.9	4.6	4.6	2.3	4.6
62.5°	4396.1	2647.8	92.5	46.2	16.2	6.9	4.6	2.3	2.3	0.0	0.0
65°	4530.2	2564.6	78.6	32.4	9.2	4.6	2.3	2.3	0.0	0.0	0.0
67.5°	4534.8	2414.2	57.8	18.5	6.9	4.6	2.3	0.0	0.0	0.0	0.0
70°	4169.4	2058.1	37.0	9.2	4.6	2.3	2.3	0.0	0.0	0.0	0.0
71°	3834.1	1822.2	30.1	6.9	4.6	2.3	0.0	0.0	0.0	0.0	0.0
72.5°	3158.9	1338.9	23.1	6.9	2.3	2.3	0.0	0.0	0.0	0.0	0.0
75°	1741.3	485.6	11.6	4.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	557.3	148.0	6.9	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	94.8	23.1	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	32.4	9.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	9.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.6	2.3	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)