

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: P231224

Luminaire Tested: **ARCH-M-AF48-100-D-U-T3-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231224  
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-AF48-100-D-U-T3-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 660mA 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: 10239.7 lumens  
Efficiency: N/A  
Efficacy: 101.4 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): 101  
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

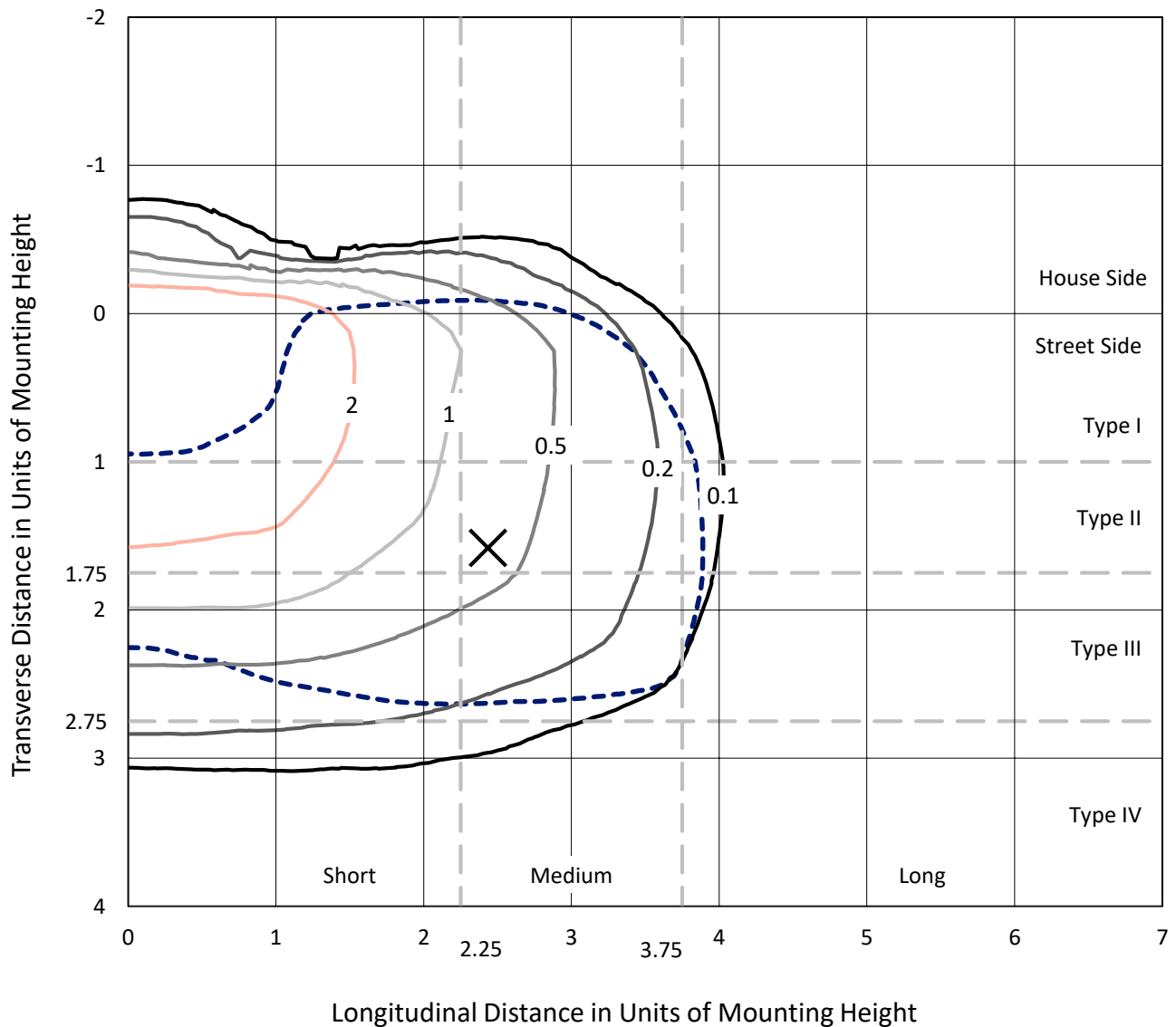


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

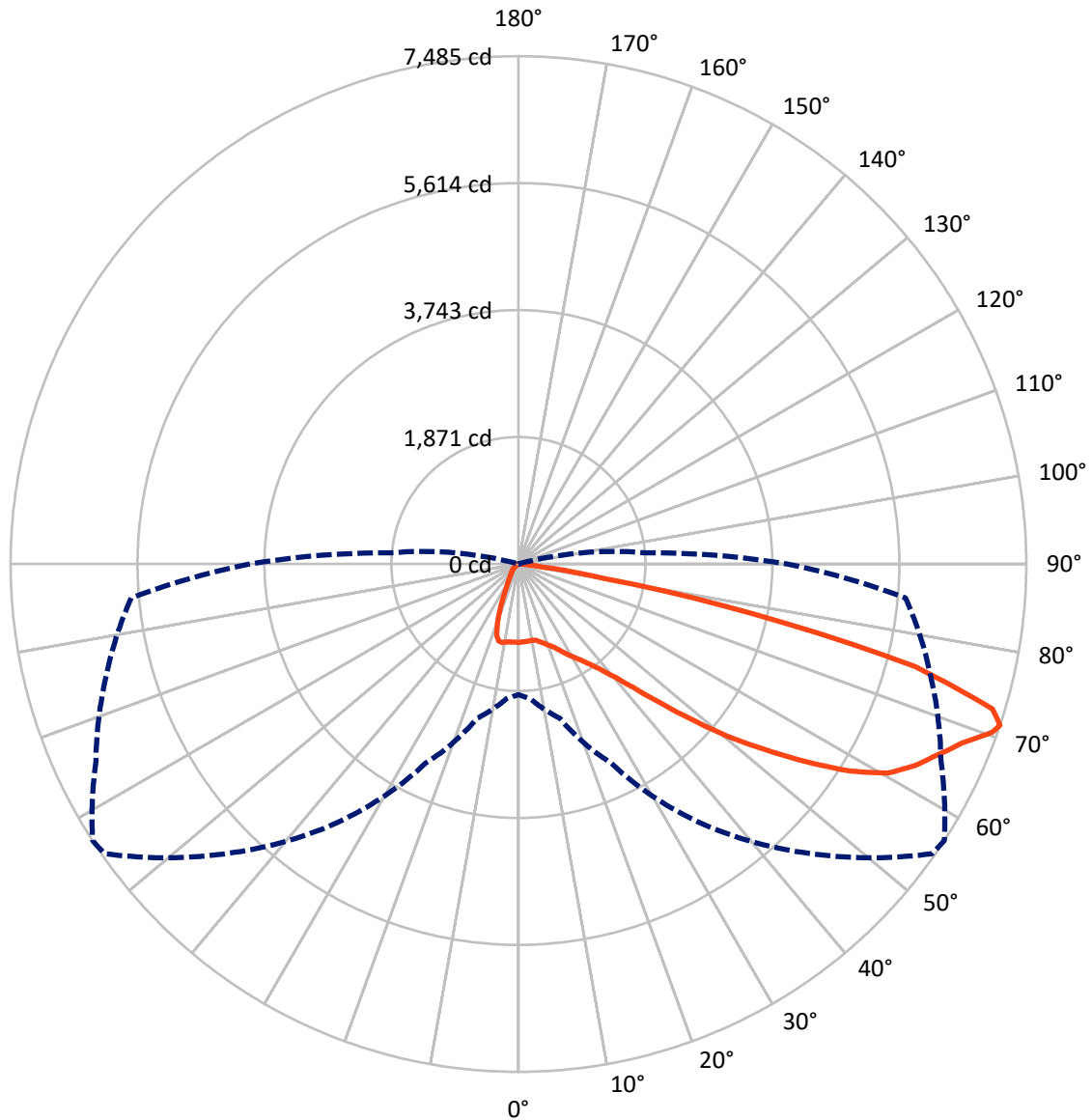


Based on 20 foot mounting height. Maximum calculated value = 3.6 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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



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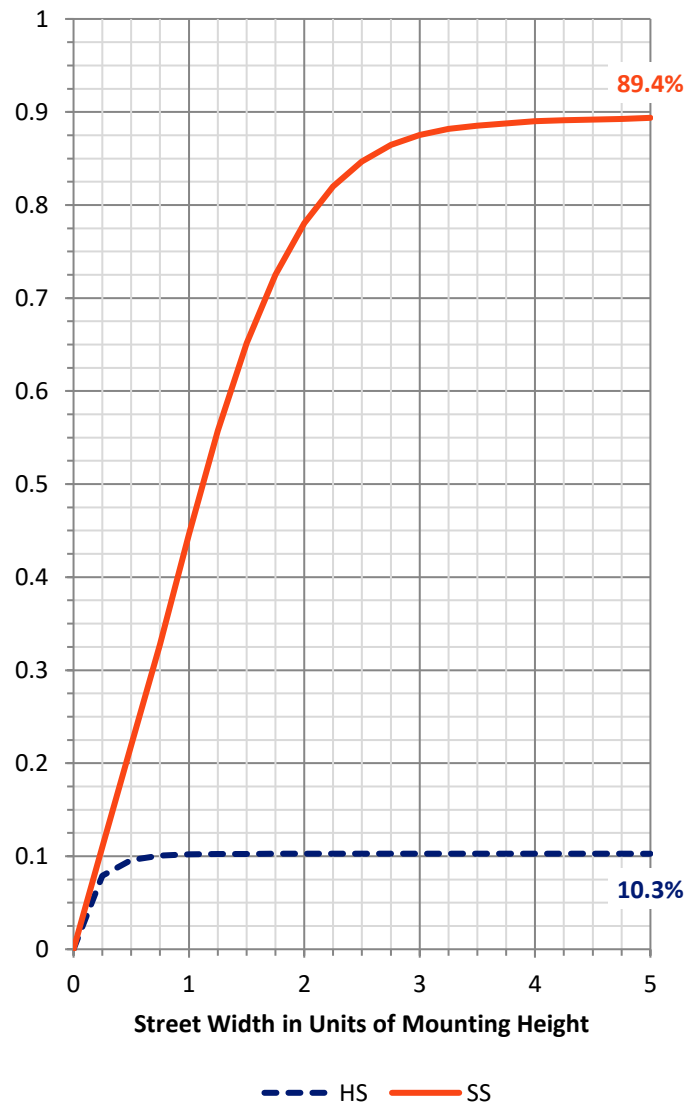
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1061.2	0.0	1061.2
	% Fixture	10.4	0.0	10.4
<b>Street Side</b>	Lumens	9178.6	0.0	9178.6
	% Fixture	89.6	0.0	89.6
<b>Total</b>	Lumens	10239.7	0.0	10239.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.7	1.1
10°-20°	290.6	2.8
20°-30°	453.3	4.4
30°-40°	766.2	7.5
40°-50°	1488.1	14.5
50°-60°	2499.0	24.4
60°-70°	2982.3	29.1
70°-80°	1571.7	15.3
80°-90°	79.9	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°	10239.7	100.0
0°-180°	10239.7	100.0

**Coefficient of Utilization**



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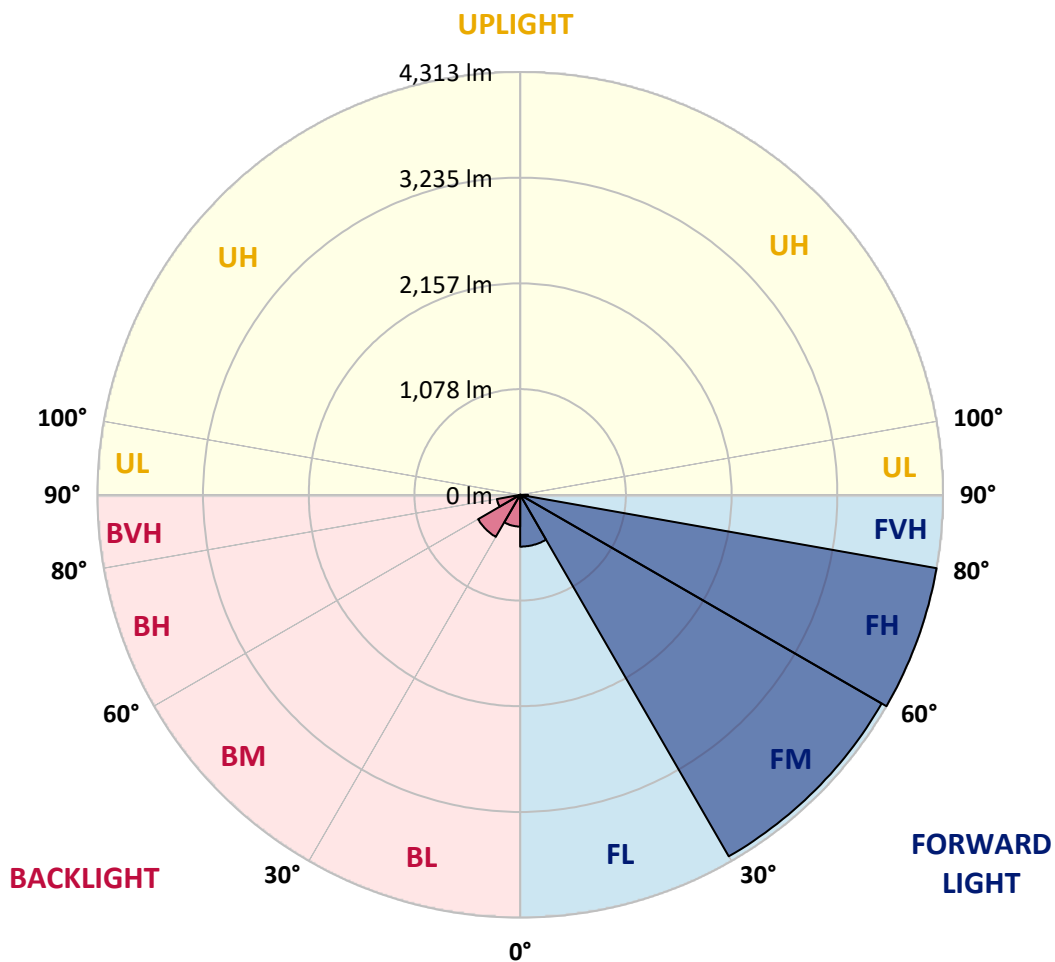
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	528.7	5.2			
FM	(30°-60°)	4257.8	41.6			
FH	(60°-80°)	4313.0	42.1			G2/5000
FVH	(80°-90°)	79.1	0.8			G1/100
BL	(0°-30°)	323.9	3.2	B1/500		
BM	(30°-60°)	495.5	4.8	B1/1000		
BH	(60°-80°)	241.0	2.4	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-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3
2.5°	1140.6	1140.6	1140.6	1142.9	1145.3	1145.3	1150.1	1147.8	1147.8	1147.8	1152.5
5°	1109.5	1111.9	1114.3	1119.1	1128.6	1135.8	1147.8	1147.8	1150.1	1154.8	1157.3
7.5°	1066.5	1069.0	1076.1	1085.7	1104.8	1121.5	1140.6	1145.3	1152.5	1164.4	1169.1
10°	1040.3	1045.1	1054.7	1066.5	1088.0	1109.5	1133.4	1140.6	1162.0	1183.5	1195.4
12.5°	1033.2	1035.5	1045.1	1064.2	1090.5	1116.7	1147.8	1154.8	1185.9	1219.3	1238.4
15°	1045.1	1047.5	1052.3	1073.7	1104.8	1138.1	1178.7	1188.3	1226.4	1264.6	1288.5
17.5°	1066.5	1066.5	1071.3	1090.5	1123.8	1162.0	1214.5	1228.9	1271.7	1314.7	1341.0
20°	1080.8	1080.8	1088.0	1107.1	1145.3	1195.4	1257.4	1276.5	1324.3	1372.0	1395.8
22.5°	1095.2	1097.6	1104.8	1126.3	1169.1	1238.4	1310.0	1329.0	1384.0	1434.1	1457.9
25°	1135.8	1133.4	1135.8	1154.8	1204.9	1290.9	1381.5	1405.4	1462.6	1517.5	1529.5
27.5°	1247.9	1243.2	1212.1	1200.2	1238.4	1345.8	1472.2	1496.1	1562.9	1617.8	1617.8
30°	1505.6	1496.1	1419.8	1321.9	1290.9	1395.8	1558.1	1591.5	1677.4	1725.1	1710.8
32.5°	1832.5	1811.0	1713.2	1546.2	1422.1	1462.6	1648.8	1686.9	1796.7	1837.3	1806.2
35°	2190.4	2188.0	2066.4	1851.6	1675.0	1601.0	1765.7	1811.0	1949.4	1985.2	1935.1
37.5°	2569.8	2579.4	2498.3	2202.3	1994.8	1827.7	1920.8	1973.3	2142.7	2185.6	2138.0
40°	2992.1	2989.8	2958.7	2608.0	2378.9	2149.8	2145.1	2192.8	2398.0	2464.8	2398.0
42.5°	3526.6	3521.8	3409.7	3094.7	2844.2	2569.8	2472.0	2488.6	2717.8	2827.5	2729.6
45°	4070.6	4037.3	3908.4	3636.4	3414.5	3089.9	2903.9	2903.9	3099.5	3249.8	3097.1
47.5°	4373.6	4340.3	4287.8	4137.4	4070.6	3708.0	3433.5	3400.2	3552.9	3705.5	3490.8
50°	4772.2	4772.2	4640.9	4583.6	4698.2	4442.9	4018.2	3984.7	4058.8	4180.4	3898.9
52.5°	5087.1	5029.8	4936.8	4986.9	5313.8	5196.9	4602.8	4538.3	4595.6	4626.6	4254.4
55°	5218.4	5163.4	5156.3	5340.0	5845.9	5683.6	5201.6	5144.4	5139.6	4986.9	4564.5
57.5°	5244.6	5196.9	5287.5	5609.7	6363.7	6082.1	5798.2	5755.2	5621.6	5239.9	4881.9
60°	5022.7	5046.5	5266.0	5757.6	6669.0	6428.1	6301.6	6256.3	5948.5	5454.6	5235.1
62.5°	4567.0	4624.2	5034.7	5771.9	6556.9	6568.9	6580.7	6549.7	6201.4	5650.3	5590.5
65°	4027.7	4044.4	4538.3	5573.9	6361.3	6525.9	6785.9	6783.6	6394.7	5869.7	5991.4
67.5°	3319.1	3347.7	3774.8	4905.8	5969.9	6506.8	7055.6	7048.4	6614.2	6120.3	6230.1
70°	2469.6	2505.4	2851.4	3815.3	5096.6	6268.2	7408.7	7413.5	6845.7	6311.2	6065.4
71°	1925.6	1989.9	2352.7	3240.3	4650.4	6027.2	7442.2	7485.1	6871.9	6284.9	5726.6
72.5°	944.9	1021.2	1476.9	2281.1	3827.3	5487.9	7222.6	7306.1	6707.3	5958.1	4896.3
75°	245.8	260.0	441.4	932.9	2052.0	3636.4	5824.4	6036.7	5483.2	4536.0	2992.1
77.5°	155.1	159.9	207.6	362.6	768.3	1381.5	3421.7	3526.6	3132.9	2297.8	1054.7
80°	109.8	112.1	131.2	233.8	448.6	403.2	1231.2	1276.5	1133.4	608.5	188.5
82.5°	66.8	66.8	95.4	150.4	276.8	219.5	324.5	346.0	305.5	169.4	62.0
85°	38.2	40.6	59.6	102.6	131.2	107.4	121.7	128.9	131.2	112.1	26.3
87.5°	31.0	33.5	52.5	85.9	71.6	52.5	52.5	54.8	57.3	66.8	12.0
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°	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3	1157.3
2.5°	1152.5	1152.5	1154.8	1152.5	1152.5	1152.5	1154.8	1154.8	1154.8	1159.6	1162.0
5°	1157.3	1157.3	1157.3	1154.8	1152.5	1152.5	1157.3	1159.6	1159.6	1166.8	1166.8
7.5°	1169.1	1169.1	1164.4	1159.6	1154.8	1147.8	1150.1	1152.5	1150.1	1152.5	1152.5
10°	1195.4	1195.4	1188.3	1178.7	1164.4	1142.9	1114.3	1078.5	1045.1	1033.2	1028.4
12.5°	1238.4	1236.0	1221.7	1204.9	1173.9	1100.0	992.6	866.1	761.2	732.5	723.0
15°	1286.1	1281.3	1264.6	1236.0	1152.5	956.8	732.5	570.3	470.0	446.2	441.4
17.5°	1336.2	1329.0	1305.2	1247.9	1054.7	711.1	472.4	357.9	303.0	298.3	300.6
20°	1388.7	1379.1	1345.8	1224.1	851.8	474.9	305.5	276.8	272.0	272.0	274.4
22.5°	1448.4	1436.4	1391.1	1138.1	620.4	315.0	262.5	260.0	257.7	255.3	255.3
25°	1517.5	1503.2	1434.1	983.1	427.1	257.7	250.5	243.4	238.7	233.8	231.5
27.5°	1601.0	1582.0	1467.4	792.2	293.5	241.0	236.2	224.3	214.7	205.2	205.2
30°	1684.6	1660.7	1457.9	596.5	238.7	224.3	214.7	200.4	186.1	176.6	174.2
32.5°	1772.9	1749.0	1395.8	400.9	217.2	205.2	193.2	171.8	155.1	143.2	140.8
35°	1904.1	1885.0	1274.2	264.8	195.7	181.4	164.6	143.2	121.7	109.8	107.4
37.5°	2099.7	2075.9	1123.8	202.9	171.8	150.4	136.1	112.1	90.6	78.8	76.3
40°	2362.2	2290.6	944.9	178.9	150.4	124.1	105.0	81.1	64.4	57.3	57.3
42.5°	2667.7	2498.3	751.7	162.2	133.6	102.6	76.3	54.8	45.3	43.0	43.0
45°	2992.1	2691.5	558.3	150.4	116.9	81.1	54.8	38.2	33.5	31.0	31.0
47.5°	3326.2	2849.0	388.9	136.1	97.8	62.0	38.2	28.6	23.8	21.5	21.5
50°	3638.7	2951.6	274.4	121.7	83.5	45.3	28.6	21.5	16.7	16.7	16.7
52.5°	3855.9	2942.0	198.0	105.0	64.4	31.0	19.1	14.3	14.3	14.3	14.3
55°	4046.8	2906.2	155.1	90.6	50.1	21.5	14.3	12.0	12.0	9.5	9.5
57.5°	4209.0	2849.0	131.2	74.0	35.8	16.7	9.5	9.5	7.2	7.2	7.2
60°	4347.4	2777.4	109.8	62.0	23.8	12.0	7.2	4.8	4.8	2.4	4.8
62.5°	4536.0	2732.1	95.4	47.8	16.7	7.2	4.8	2.4	2.4	0.0	0.0
65°	4674.3	2646.2	81.1	33.5	9.5	4.8	2.4	2.4	0.0	0.0	0.0
67.5°	4679.1	2491.1	59.6	19.1	7.2	4.8	2.4	0.0	0.0	0.0	0.0
70°	4302.1	2123.6	38.2	9.5	4.8	2.4	2.4	0.0	0.0	0.0	0.0
71°	3956.2	1880.2	31.0	7.2	4.8	2.4	0.0	0.0	0.0	0.0	0.0
72.5°	3259.3	1381.5	23.8	7.2	2.4	2.4	0.0	0.0	0.0	0.0	0.0
75°	1796.7	501.0	12.0	4.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	575.0	152.7	7.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	97.8	23.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	33.5	9.5	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	9.5	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.8	2.4	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)