

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: P231225

Luminaire Tested: **ARCH-M-AF48-110-D-U-T3-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231225  
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-AF48-110-D-U-T3-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 720mA 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: 10952.8 lumens  
Efficiency: N/A  
Efficacy: 98.7 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

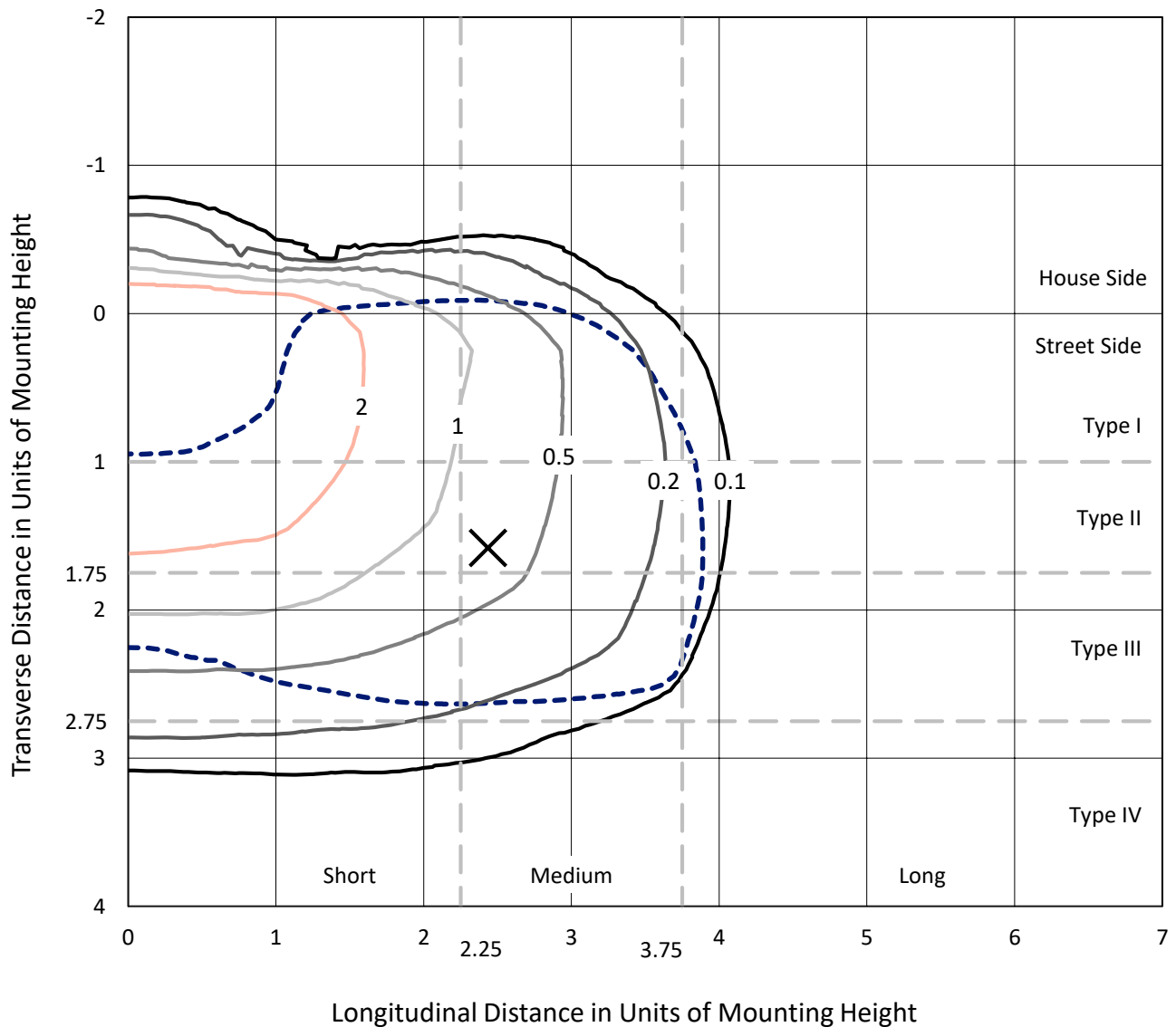
Input Watts (W): 111  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

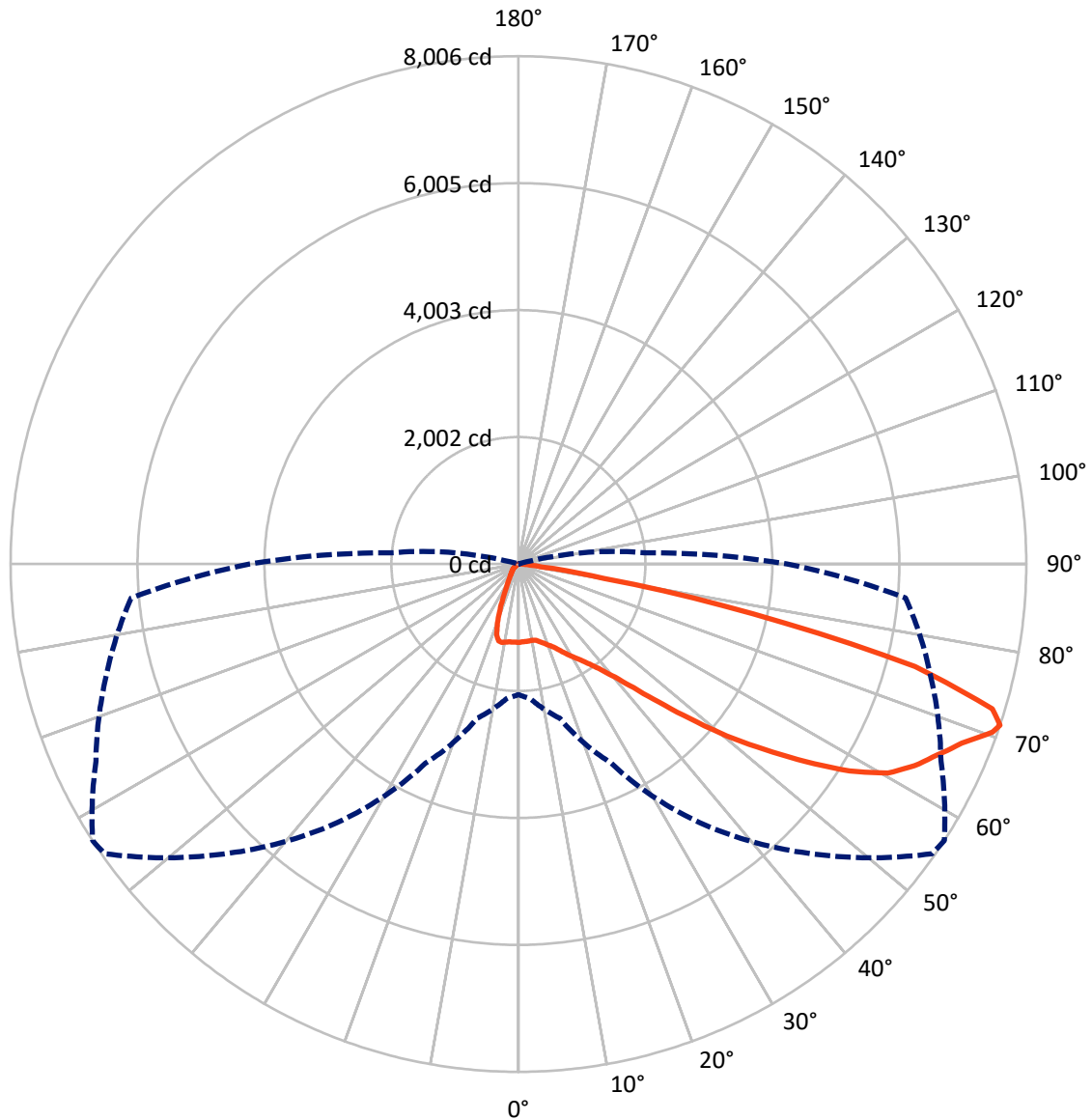
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 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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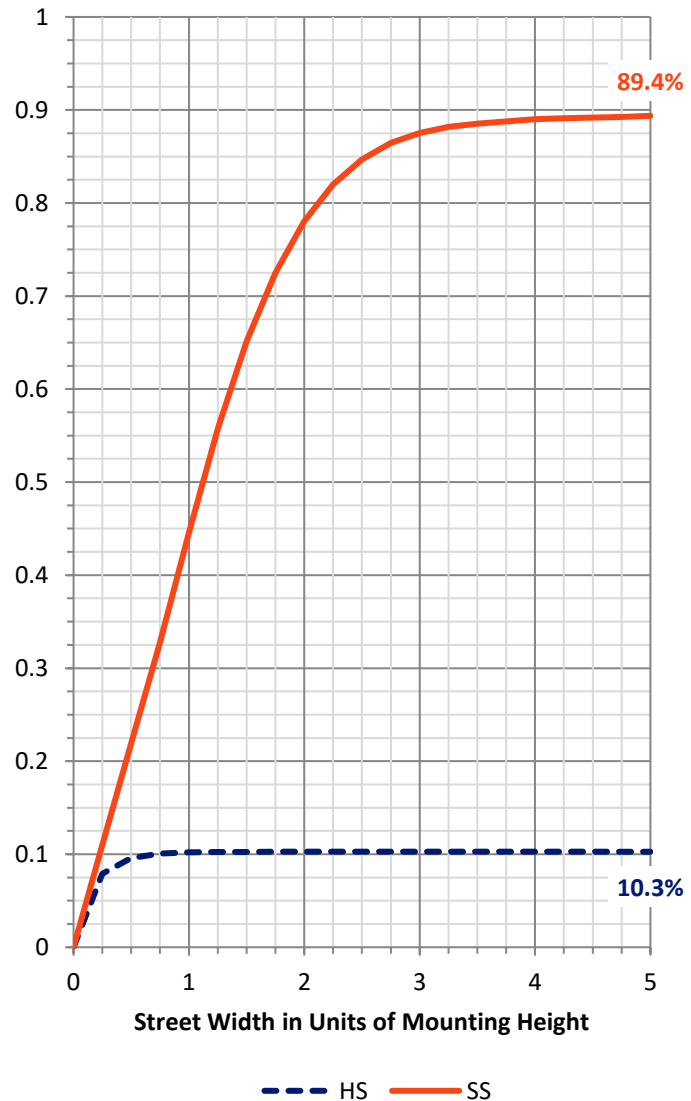
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1135.1	0.0	1135.1
	% Fixture	10.4	0.0	10.4
<b>Street Side</b>	Lumens	9817.7	0.0	9817.7
	% Fixture	89.6	0.0	89.6
<b>Total</b>	Lumens	10952.8	0.0	10952.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.2	1.1
10°-20°	310.8	2.8
20°-30°	484.9	4.4
30°-40°	819.5	7.5
40°-50°	1591.7	14.5
50°-60°	2673.0	24.4
60°-70°	3190.0	29.1
70°-80°	1681.2	15.3
80°-90°	85.4	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°	10952.8	100.0
0°-180°	10952.8	100.0



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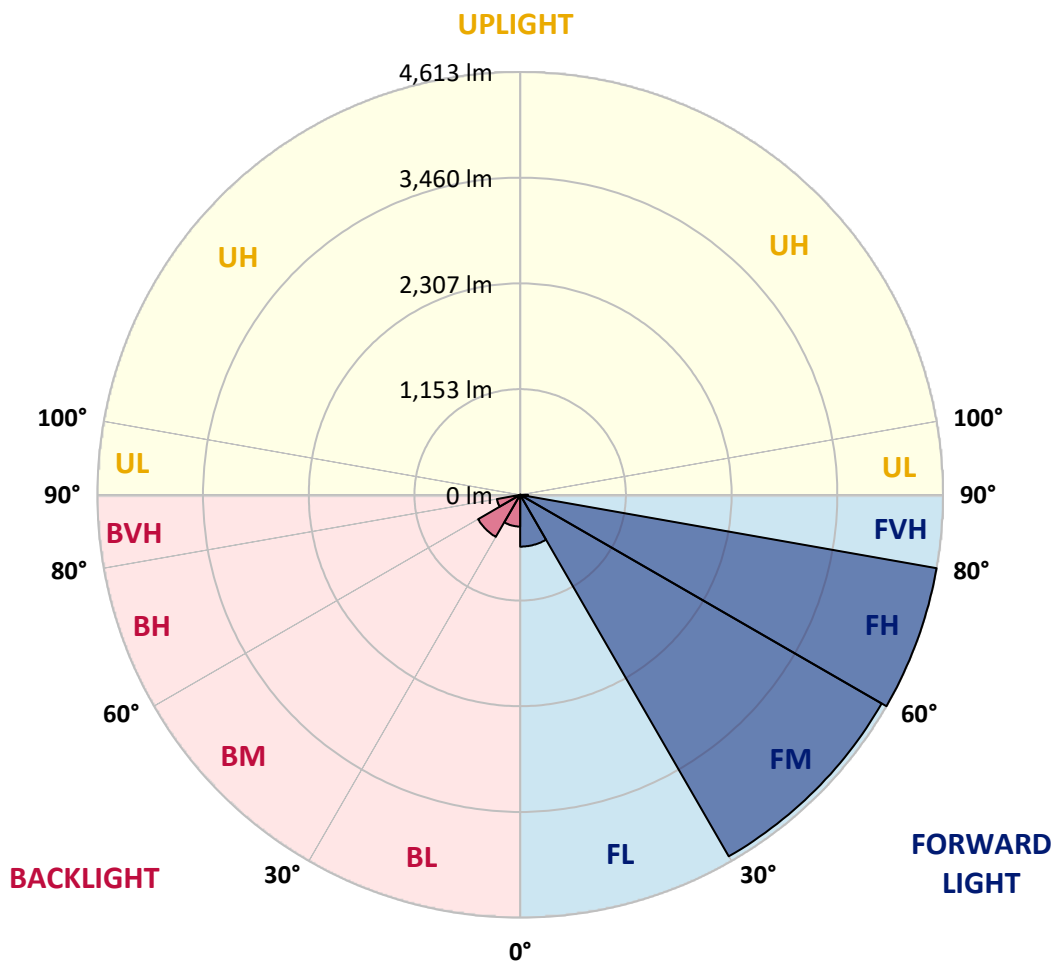
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	565.5	5.2			
FM	(30°-60°)	4554.2	41.6			
FH	(60°-80°)	4613.4	42.1			G2/5000
FVH	(80°-90°)	84.6	0.8			G1/100
BL	(0°-30°)	346.5	3.2	B1/500		
BM	(30°-60°)	530.0	4.8	B1/1000		
BH	(60°-80°)	257.8	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°	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9
2.5°	1220.0	1220.0	1220.0	1222.5	1225.1	1225.1	1230.2	1227.6	1227.6	1227.6	1232.8
5°	1186.8	1189.3	1191.8	1197.0	1207.2	1214.9	1227.6	1227.6	1230.2	1235.3	1237.9
7.5°	1140.8	1143.4	1151.0	1161.3	1181.7	1199.5	1220.0	1225.1	1232.8	1245.4	1250.6
10°	1112.8	1117.9	1128.1	1140.8	1163.8	1186.8	1212.3	1220.0	1242.9	1265.9	1278.7
12.5°	1105.1	1107.7	1117.9	1138.3	1166.4	1194.4	1227.6	1235.3	1268.5	1304.2	1324.6
15°	1117.9	1120.4	1125.6	1148.5	1181.7	1217.4	1260.8	1271.0	1311.8	1352.6	1378.2
17.5°	1140.8	1140.8	1145.9	1166.4	1202.1	1242.9	1299.0	1314.4	1360.3	1406.3	1434.4
20°	1156.1	1156.1	1163.8	1184.3	1225.1	1278.7	1345.0	1365.4	1416.5	1467.5	1493.0
22.5°	1171.5	1174.0	1181.7	1204.6	1250.6	1324.6	1401.1	1421.6	1480.3	1533.9	1559.4
25°	1214.9	1212.3	1214.9	1235.3	1288.9	1380.8	1477.8	1503.2	1564.5	1623.2	1636.0
27.5°	1334.8	1329.7	1296.5	1283.8	1324.6	1439.5	1574.7	1600.2	1671.7	1730.4	1730.4
30°	1610.4	1600.2	1518.6	1413.9	1380.8	1493.0	1666.6	1702.3	1794.3	1845.3	1830.0
32.5°	1960.1	1937.2	1832.5	1653.8	1521.1	1564.5	1763.6	1804.4	1921.8	1965.2	1932.0
35°	2343.0	2340.4	2210.2	1980.5	1791.7	1712.5	1888.7	1937.2	2085.2	2123.4	2069.8
37.5°	2748.8	2758.9	2672.2	2355.7	2133.7	1955.0	2054.5	2110.7	2291.9	2337.9	2286.8
40°	3200.5	3197.9	3164.7	2789.6	2544.6	2299.6	2294.5	2345.5	2564.9	2636.5	2564.9
42.5°	3772.1	3767.1	3647.1	3310.3	3042.3	2748.8	2644.1	2661.9	2907.0	3024.4	2919.7
45°	4354.1	4318.4	4180.5	3889.6	3652.2	3305.2	3106.1	3106.1	3315.3	3476.1	3312.8
47.5°	4678.3	4642.5	4586.3	4425.6	4354.1	3966.2	3672.6	3636.9	3800.3	3963.6	3733.9
50°	5104.4	5104.4	4964.1	4902.8	5025.3	4752.2	4297.9	4262.2	4341.3	4471.5	4170.4
52.5°	5441.3	5380.1	5280.6	5334.2	5683.8	5558.7	4923.3	4854.3	4915.6	4948.7	4550.6
55°	5581.7	5523.0	5515.3	5711.9	6252.9	6079.4	5563.8	5502.6	5497.4	5334.2	4882.3
57.5°	5609.8	5558.7	5655.7	6000.2	6806.7	6505.6	6201.8	6155.9	6013.0	5604.6	5221.9
60°	5372.4	5397.9	5632.8	6158.5	7133.4	6875.7	6740.4	6691.9	6362.7	5834.4	5599.5
62.5°	4884.9	4946.2	5385.2	6173.8	7013.5	7026.2	7039.0	7005.9	6633.2	6043.7	5979.9
65°	4308.2	4326.0	4854.3	5962.0	6804.3	6980.3	7258.6	7256.0	6840.0	6278.5	6408.6
67.5°	3550.2	3580.7	4037.6	5247.3	6385.7	6959.9	7546.9	7539.2	7074.7	6546.5	6663.8
70°	2641.6	2679.8	3049.9	4081.0	5451.5	6704.6	7924.6	7929.7	7322.3	6750.7	6487.8
71°	2059.6	2128.6	2516.5	3465.9	4974.3	6446.9	7960.4	8006.3	7350.4	6722.5	6125.3
72.5°	1010.7	1092.3	1579.8	2439.9	4093.7	5870.1	7725.5	7814.9	7174.3	6372.9	5237.1
75°	262.9	278.2	472.2	997.9	2194.9	3889.6	6230.0	6457.1	5865.0	4851.8	3200.5
77.5°	165.9	171.0	222.1	387.9	821.8	1477.8	3659.9	3772.1	3351.1	2457.7	1128.1
80°	117.4	120.0	140.3	250.1	479.9	431.3	1316.9	1365.4	1212.3	650.8	201.6
82.5°	71.5	71.5	102.1	160.8	296.0	234.8	347.1	370.1	326.7	181.2	66.4
85°	40.8	43.4	63.8	109.8	140.3	114.9	130.1	137.8	140.3	120.0	28.0
87.5°	33.1	35.7	56.2	91.9	76.5	56.2	56.2	58.7	61.3	71.5	12.8
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°	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9
2.5°	1232.8	1232.8	1235.3	1232.8	1232.8	1232.8	1235.3	1235.3	1235.3	1240.3	1242.9
5°	1237.9	1237.9	1237.9	1235.3	1232.8	1232.8	1237.9	1240.3	1240.3	1248.0	1248.0
7.5°	1250.6	1250.6	1245.4	1240.3	1235.3	1227.6	1230.2	1232.8	1230.2	1232.8	1232.8
10°	1278.7	1278.7	1271.0	1260.8	1245.4	1222.5	1191.8	1153.6	1117.9	1105.1	1100.0
12.5°	1324.6	1322.1	1306.7	1288.9	1255.7	1176.6	1061.7	926.5	814.2	783.6	773.4
15°	1375.7	1370.5	1352.6	1322.1	1232.8	1023.5	783.6	610.0	502.8	477.3	472.2
17.5°	1429.3	1421.6	1396.0	1334.8	1128.1	760.6	505.3	382.8	324.2	319.1	321.6
20°	1485.4	1475.2	1439.5	1309.3	911.1	507.9	326.7	296.0	290.9	290.9	293.5
22.5°	1549.2	1536.5	1488.0	1217.4	663.6	336.9	280.7	278.2	275.7	273.1	273.1
25°	1623.2	1607.9	1533.9	1051.5	456.8	275.7	268.0	260.3	255.2	250.1	247.6
27.5°	1712.5	1692.2	1569.6	847.3	313.9	257.8	252.7	239.9	229.7	219.5	219.5
30°	1801.8	1776.4	1559.4	638.0	255.2	239.9	229.7	214.4	199.1	188.8	186.3
32.5°	1896.3	1870.8	1493.0	428.8	232.2	219.5	206.7	183.7	165.9	153.1	150.6
35°	2036.7	2016.2	1362.9	283.3	209.3	194.0	176.2	153.1	130.1	117.4	114.9
37.5°	2246.0	2220.4	1202.1	217.0	183.7	160.8	145.5	120.0	97.0	84.2	81.6
40°	2526.7	2450.2	1010.7	191.4	160.8	132.7	112.3	86.7	68.9	61.3	61.3
42.5°	2853.4	2672.2	803.9	173.6	142.9	109.8	81.6	58.7	48.5	45.9	45.9
45°	3200.5	2878.9	597.2	160.8	125.1	86.7	58.7	40.8	35.7	33.1	33.1
47.5°	3557.8	3047.4	416.0	145.5	104.6	66.4	40.8	30.6	25.5	23.0	23.0
50°	3892.1	3157.1	293.5	130.1	89.3	48.5	30.6	23.0	17.9	17.9	17.9
52.5°	4124.3	3146.9	211.9	112.3	68.9	33.1	20.5	15.3	15.3	15.3	15.3
55°	4328.5	3108.6	165.9	97.0	53.6	23.0	15.3	12.8	12.8	10.2	10.2
57.5°	4502.1	3047.4	140.3	79.1	38.3	17.9	10.2	10.2	7.7	7.7	7.7
60°	4650.1	2970.8	117.4	66.4	25.5	12.8	7.7	5.1	5.1	2.6	5.1
62.5°	4851.8	2922.3	102.1	51.0	17.9	7.7	5.1	2.6	2.6	0.0	0.0
65°	4999.8	2830.4	86.7	35.7	10.2	5.1	2.6	2.6	0.0	0.0	0.0
67.5°	5004.9	2664.5	63.8	20.5	7.7	5.1	2.6	0.0	0.0	0.0	0.0
70°	4601.6	2271.5	40.8	10.2	5.1	2.6	2.6	0.0	0.0	0.0	0.0
71°	4231.5	2011.1	33.1	7.7	5.1	2.6	0.0	0.0	0.0	0.0	0.0
72.5°	3486.3	1477.8	25.5	7.7	2.6	2.6	0.0	0.0	0.0	0.0	0.0
75°	1921.8	535.9	12.8	5.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	615.1	163.4	7.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	104.6	25.5	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	35.7	10.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	10.2	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.1	2.6	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)