

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: P231239

Luminaire Tested: **ARCH-M-AF48-120-D-U-T3-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231239  
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-AF48-120-D-U-T3-7050-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 785mA 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: 11490 lumens  
Efficiency: N/A  
Efficacy: 94.2 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): 122  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

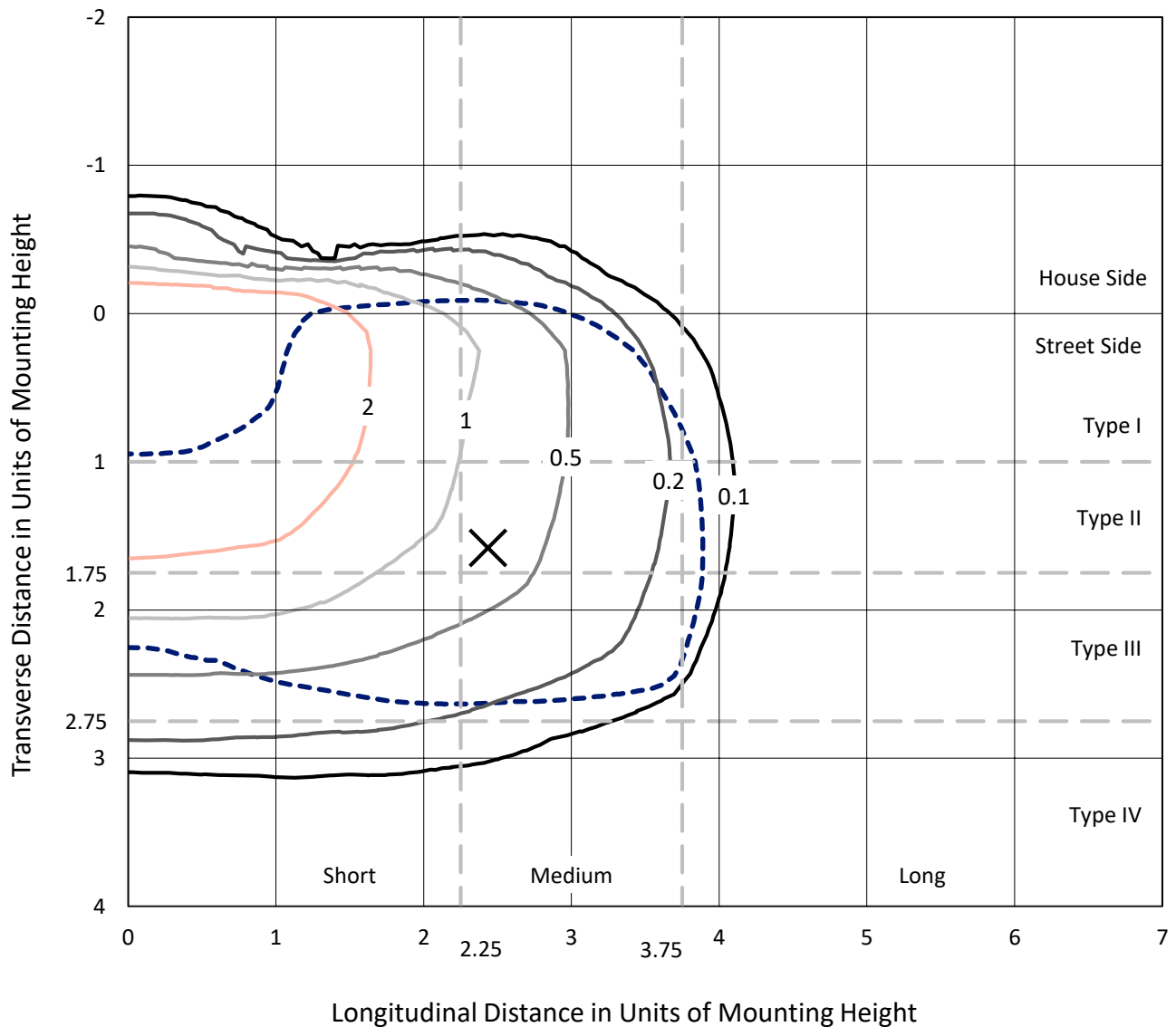


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

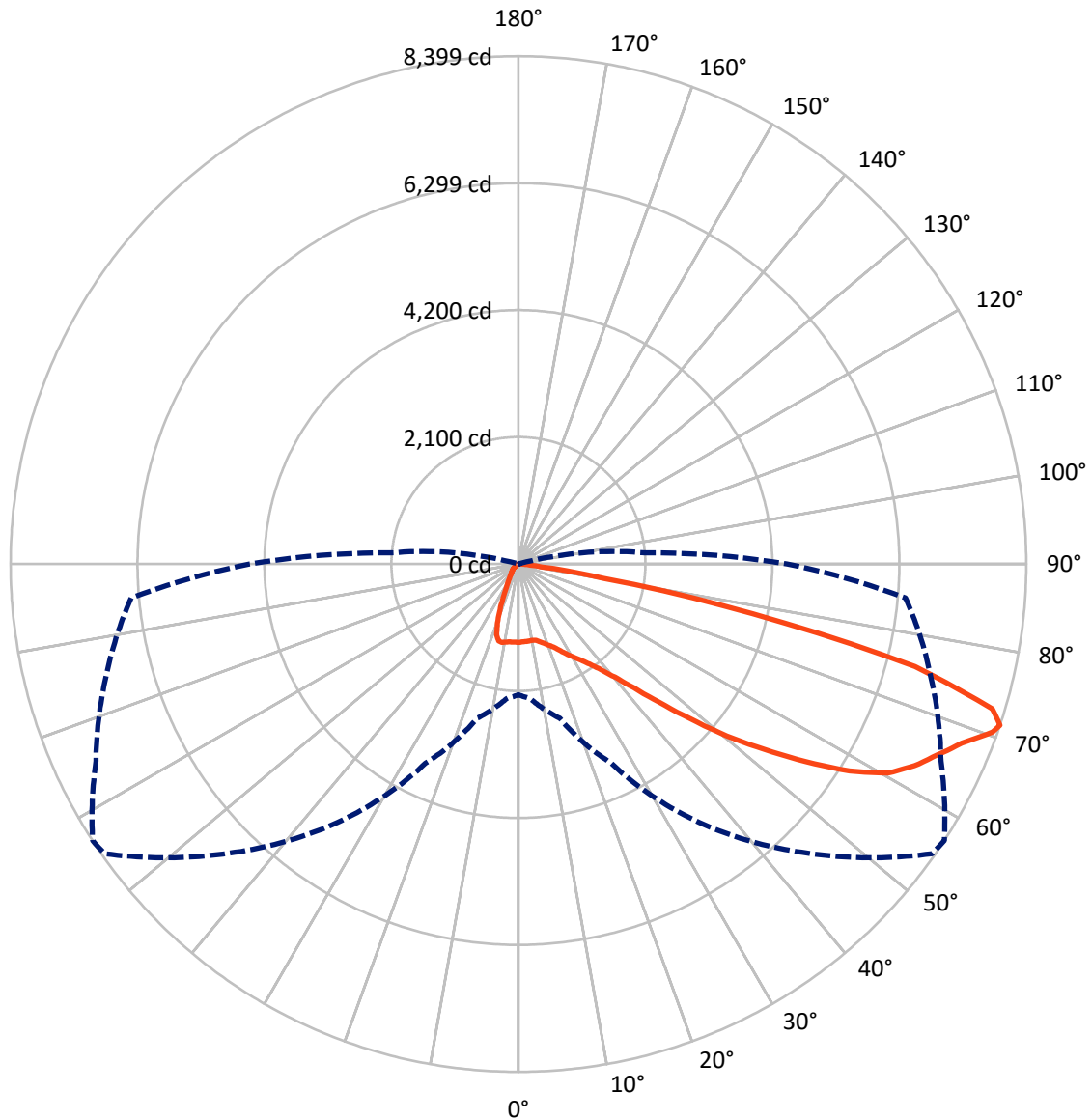


Based on 20 foot mounting height. Maximum calculated value = 4 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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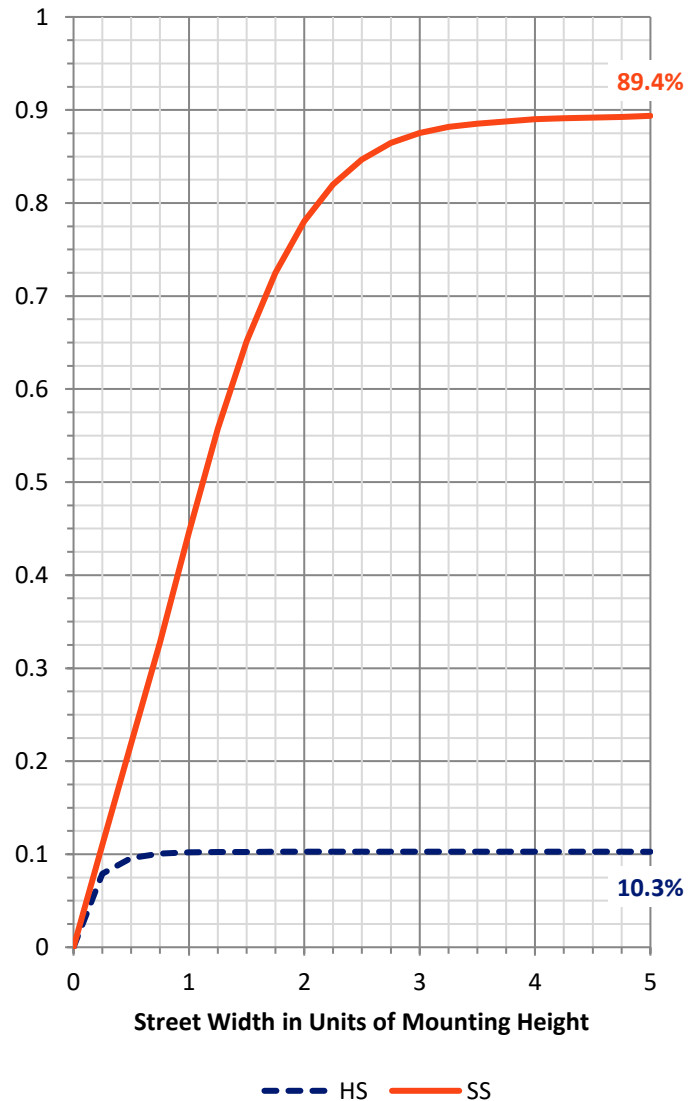
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1190.7	0.0	1190.7
	% Fixture	10.4	0.0	10.4
<b>Street Side</b>	Lumens	10299.3	0.0	10299.3
	% Fixture	89.6	0.0	89.6
<b>Total</b>	Lumens	11490.0	0.0	11490.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.9	1.1
10°-20°	326.1	2.8
20°-30°	508.7	4.4
30°-40°	859.7	7.5
40°-50°	1669.8	14.5
50°-60°	2804.1	24.4
60°-70°	3346.5	29.1
70°-80°	1763.6	15.3
80°-90°	89.6	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°	11490.0	100.0
0°-180°	11490.0	100.0



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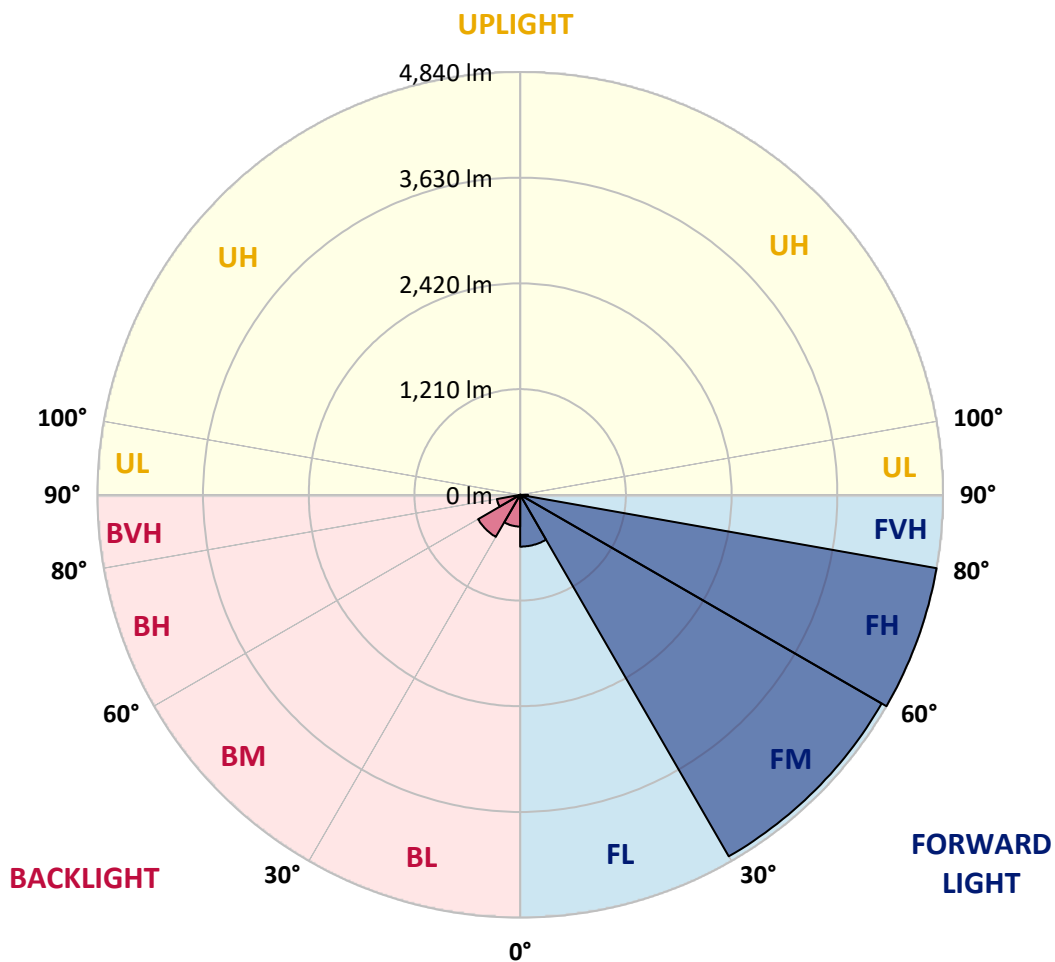
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	593.2	5.2			
FM	(30°-60°)	4777.6	41.6			
FH	(60°-80°)	4839.7	42.1			G2/5000
FVH	(80°-90°)	88.8	0.8			G1/100
BL	(0°-30°)	363.5	3.2	B1/500		
BM	(30°-60°)	556.0	4.8	B1/1000		
BH	(60°-80°)	270.4	2.4	B1/500		G1/500
BVH	(80°-90°)	0.9	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°	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5
2.5°	1279.8	1279.8	1279.8	1282.5	1285.2	1285.2	1290.5	1287.8	1287.8	1287.8	1293.2
5°	1245.0	1247.7	1250.4	1255.7	1266.4	1274.4	1287.8	1287.8	1290.5	1295.9	1298.5
7.5°	1196.8	1199.5	1207.5	1218.2	1239.6	1258.4	1279.8	1285.2	1293.2	1306.6	1311.9
10°	1167.4	1172.7	1183.4	1196.8	1220.9	1245.0	1271.8	1279.8	1303.9	1328.0	1341.4
12.5°	1159.3	1162.0	1172.7	1194.1	1223.6	1253.0	1287.8	1295.9	1330.7	1368.2	1389.6
15°	1172.7	1175.4	1180.7	1204.8	1239.6	1277.1	1322.6	1333.4	1376.2	1419.0	1445.8
17.5°	1196.8	1196.8	1202.2	1223.6	1261.1	1303.9	1362.8	1378.9	1427.1	1475.3	1504.7
20°	1212.9	1212.9	1220.9	1242.3	1285.2	1341.4	1411.0	1432.4	1486.0	1539.5	1566.3
22.5°	1228.9	1231.6	1239.6	1263.7	1311.9	1389.6	1469.9	1491.3	1552.9	1609.1	1635.9
25°	1274.4	1271.8	1274.4	1295.9	1352.1	1448.5	1550.2	1577.0	1641.3	1702.8	1716.2
27.5°	1400.3	1394.9	1360.1	1346.7	1389.6	1510.1	1652.0	1678.7	1753.7	1815.3	1815.3
30°	1689.4	1678.7	1593.1	1483.3	1448.5	1566.3	1748.3	1785.8	1882.2	1935.8	1919.7
32.5°	2056.3	2032.2	1922.4	1735.0	1595.7	1641.3	1850.1	1892.9	2016.1	2061.6	2026.8
35°	2457.9	2455.2	2318.6	2077.7	1879.5	1796.5	1981.3	2032.2	2187.4	2227.6	2171.4
37.5°	2883.6	2894.3	2803.2	2471.3	2238.3	2050.9	2155.3	2214.2	2404.3	2452.5	2399.0
40°	3357.5	3354.8	3320.0	2926.4	2669.4	2412.3	2407.0	2460.5	2690.8	2765.8	2690.8
42.5°	3957.2	3951.9	3826.0	3472.6	3191.5	2883.6	2773.8	2792.5	3049.6	3172.7	3063.0
45°	4567.7	4530.2	4385.6	4080.4	3831.4	3467.2	3258.4	3258.4	3478.0	3646.6	3475.3
47.5°	4907.7	4870.2	4811.3	4642.6	4567.7	4160.7	3852.8	3815.3	3986.7	4158.0	3917.1
50°	5354.8	5354.8	5207.6	5143.3	5271.8	4985.3	4508.8	4471.3	4554.3	4690.8	4374.9
52.5°	5708.2	5644.0	5539.6	5595.8	5962.6	5831.4	5164.7	5092.4	5156.7	5191.5	4773.8
55°	5855.5	5793.9	5785.9	5992.0	6559.7	6377.6	5836.8	5772.5	5767.1	5595.8	5121.9
57.5°	5884.9	5831.4	5933.1	6294.6	7140.7	6824.7	6506.1	6457.9	6308.0	5879.6	5478.0
60°	5635.9	5662.7	5909.0	6460.6	7483.4	7212.9	7071.0	7020.2	6674.8	6120.6	5874.2
62.5°	5124.6	5188.8	5649.3	6476.7	7357.5	7370.9	7384.3	7349.5	6958.6	6340.1	6273.2
65°	4519.5	4538.2	5092.4	6254.4	7138.0	7322.7	7614.6	7611.9	7175.5	6586.4	6723.0
67.5°	3724.3	3756.4	4235.7	5504.8	6698.9	7301.3	7917.1	7909.1	7421.8	6867.6	6990.7
70°	2771.1	2811.3	3199.5	4281.2	5718.9	7033.6	8313.4	8318.7	7681.5	7081.8	6806.0
71°	2160.7	2233.0	2639.9	3635.9	5218.3	6763.1	8350.8	8399.0	7710.9	7052.3	6425.8
72.5°	1060.3	1145.9	1657.3	2559.6	4294.6	6158.0	8104.5	8198.2	7526.2	6685.5	5494.0
75°	275.8	291.8	495.3	1046.9	2302.6	4080.4	6535.6	6773.8	6152.7	5089.8	3357.5
77.5°	174.0	179.4	232.9	407.0	862.1	1550.2	3839.4	3957.2	3515.4	2578.3	1183.4
80°	123.2	125.8	147.3	262.4	503.4	452.5	1381.5	1432.4	1271.8	682.7	211.5
82.5°	75.0	75.0	107.1	168.7	310.6	246.3	364.1	388.2	342.7	190.1	69.6
85°	42.8	45.5	66.9	115.1	147.3	120.5	136.5	144.6	147.3	125.8	29.5
87.5°	34.8	37.5	58.9	96.4	80.3	58.9	58.9	61.6	64.3	75.0	13.4
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°	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5	1298.5
2.5°	1293.2	1293.2	1295.9	1293.2	1293.2	1293.2	1295.9	1295.9	1295.9	1301.2	1303.9
5°	1298.5	1298.5	1298.5	1295.9	1293.2	1293.2	1298.5	1301.2	1301.2	1309.3	1309.3
7.5°	1311.9	1311.9	1306.6	1301.2	1295.9	1287.8	1290.5	1293.2	1290.5	1293.2	1293.2
10°	1341.4	1341.4	1333.4	1322.6	1306.6	1282.5	1250.4	1210.2	1172.7	1159.3	1154.0
12.5°	1389.6	1386.9	1370.8	1352.1	1317.3	1234.3	1113.8	971.9	854.1	822.0	811.3
15°	1443.1	1437.8	1419.0	1386.9	1293.2	1073.6	822.0	639.9	527.4	500.7	495.3
17.5°	1499.4	1491.3	1464.5	1400.3	1183.4	797.9	530.1	401.6	340.0	334.7	337.4
20°	1558.3	1547.5	1510.1	1373.5	955.8	532.8	342.7	310.6	305.2	305.2	307.9
22.5°	1625.2	1611.8	1560.9	1277.1	696.1	353.4	294.5	291.8	289.2	286.5	286.5
25°	1702.8	1686.8	1609.1	1103.1	479.3	289.2	281.1	273.1	267.7	262.4	259.7
27.5°	1796.5	1775.1	1646.6	888.9	329.3	270.4	265.1	251.7	241.0	230.3	230.3
30°	1890.3	1863.5	1635.9	669.4	267.7	251.7	241.0	224.9	208.8	198.1	195.5
32.5°	1989.3	1962.5	1566.3	449.8	243.6	230.3	216.9	192.8	174.0	160.6	158.0
35°	2136.6	2115.2	1429.7	297.2	219.5	203.5	184.7	160.6	136.5	123.2	120.5
37.5°	2356.1	2329.3	1261.1	227.6	192.8	168.7	152.6	125.8	101.7	88.4	85.7
40°	2650.6	2570.3	1060.3	200.8	168.7	139.2	117.8	91.0	72.3	64.3	64.3
42.5°	2993.3	2803.2	843.4	182.1	149.9	115.1	85.7	61.6	50.9	48.2	48.2
45°	3357.5	3020.1	626.5	168.7	131.2	91.0	61.6	42.8	37.5	34.8	34.8
47.5°	3732.3	3196.8	436.4	152.6	109.8	69.6	42.8	32.1	26.8	24.1	24.1
50°	4083.1	3312.0	307.9	136.5	93.7	50.9	32.1	24.1	18.7	18.7	18.7
52.5°	4326.7	3301.2	222.2	117.8	72.3	34.8	21.4	16.1	16.1	16.1	16.1
55°	4540.9	3261.1	174.0	101.7	56.2	24.1	16.1	13.4	13.4	10.7	10.7
57.5°	4723.0	3196.8	147.3	83.0	40.2	18.7	10.7	10.7	8.0	8.0	8.0
60°	4878.2	3116.5	123.2	69.6	26.8	13.4	8.0	5.4	5.4	2.7	5.4
62.5°	5089.8	3065.6	107.1	53.5	18.7	8.0	5.4	2.7	2.7	0.0	0.0
65°	5245.0	2969.2	91.0	37.5	10.7	5.4	2.7	2.7	0.0	0.0	0.0
67.5°	5250.4	2795.2	66.9	21.4	8.0	5.4	2.7	0.0	0.0	0.0	0.0
70°	4827.4	2382.9	42.8	10.7	5.4	2.7	2.7	0.0	0.0	0.0	0.0
71°	4439.1	2109.8	34.8	8.0	5.4	2.7	0.0	0.0	0.0	0.0	0.0
72.5°	3657.3	1550.2	26.8	8.0	2.7	2.7	0.0	0.0	0.0	0.0	0.0
75°	2016.1	562.3	13.4	5.4	2.7	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	645.3	171.4	8.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	109.8	26.8	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	37.5	10.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	10.7	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.4	2.7	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)