

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: P231241

Luminaire Tested: **ARCH-M-AF48-140-D-U-T3-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231241
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-T3-7050-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 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: 12772 lumens
Efficiency: N/A
Efficacy: 90.6 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 - G3

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

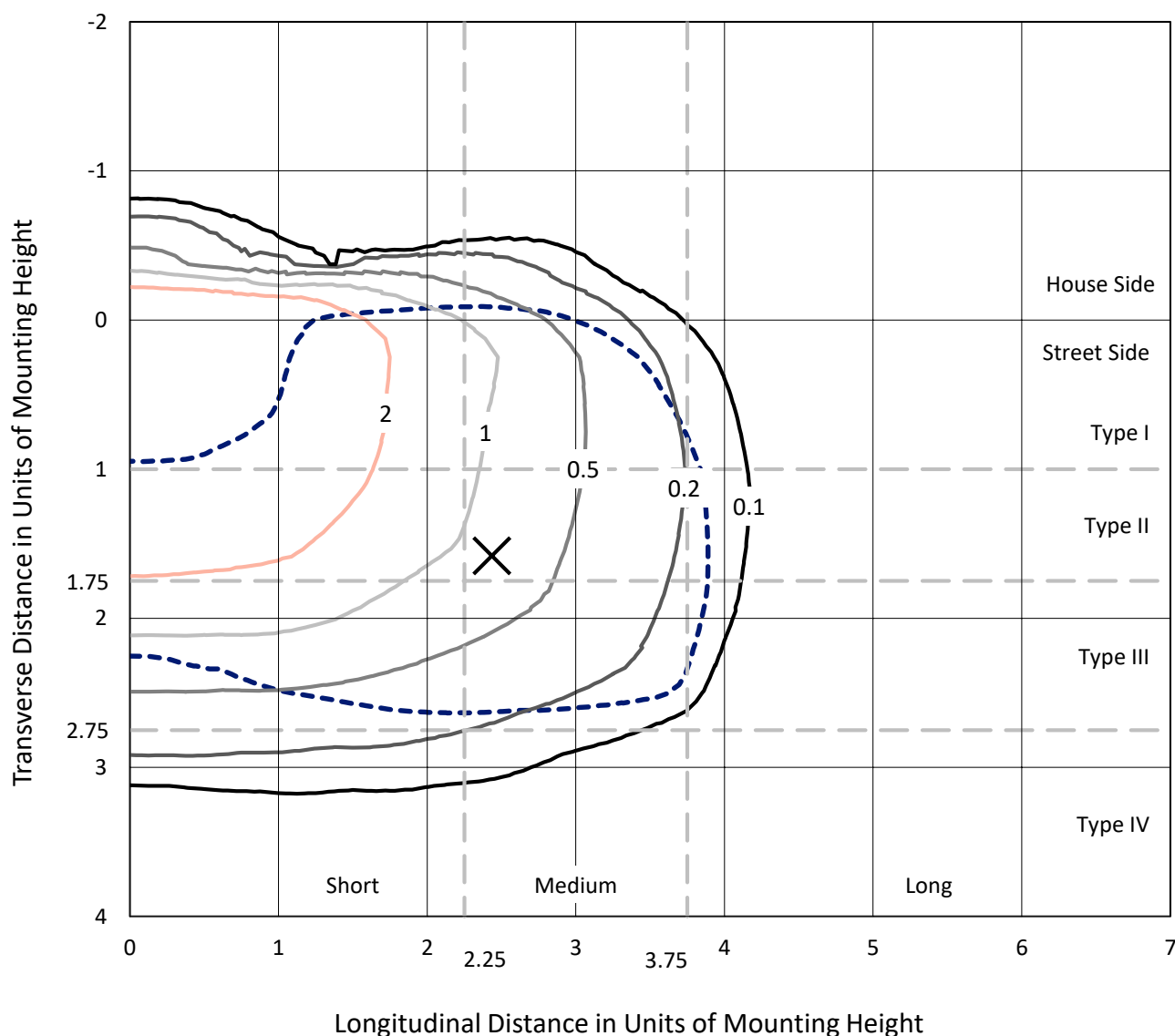


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

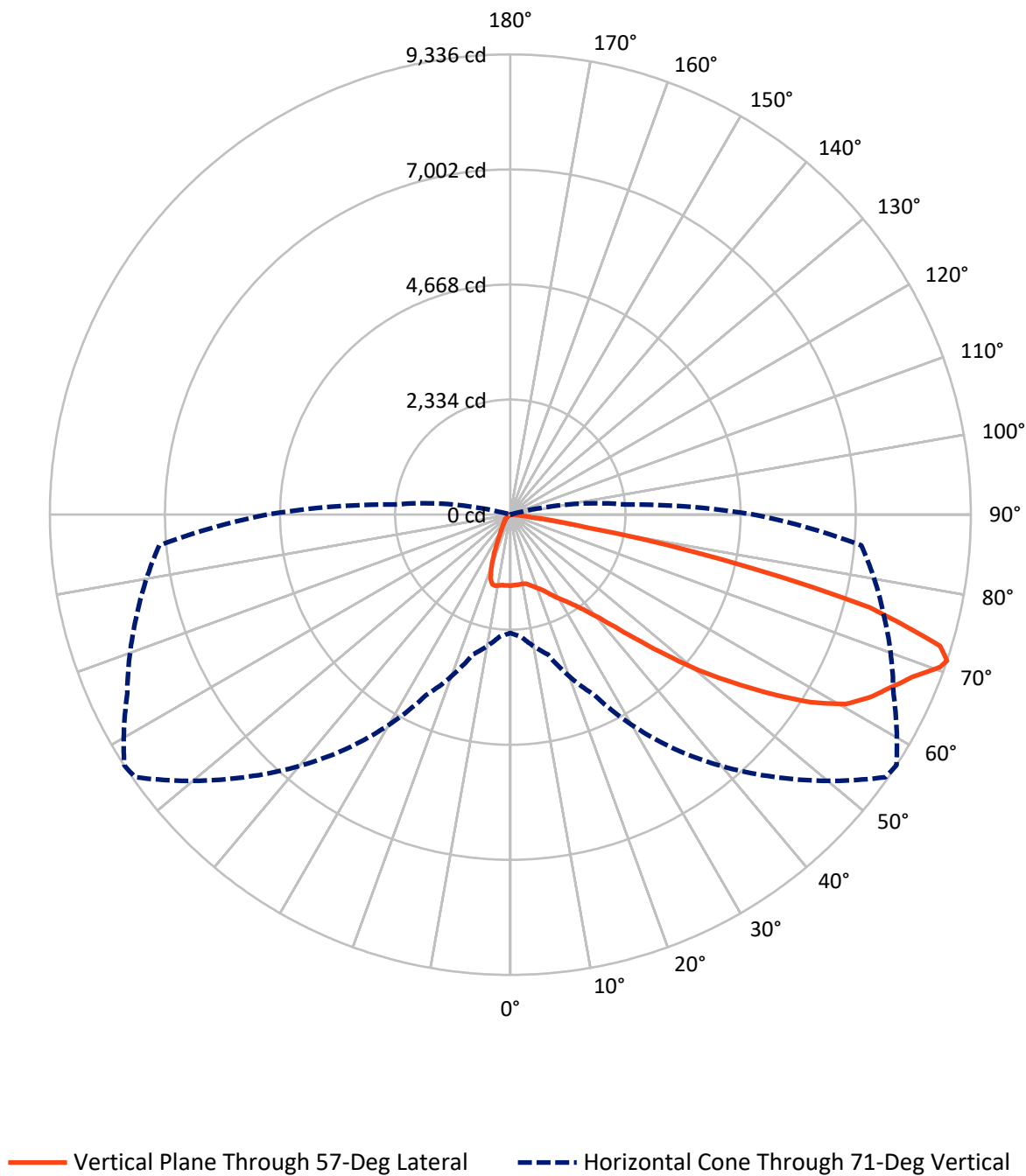


Based on 20 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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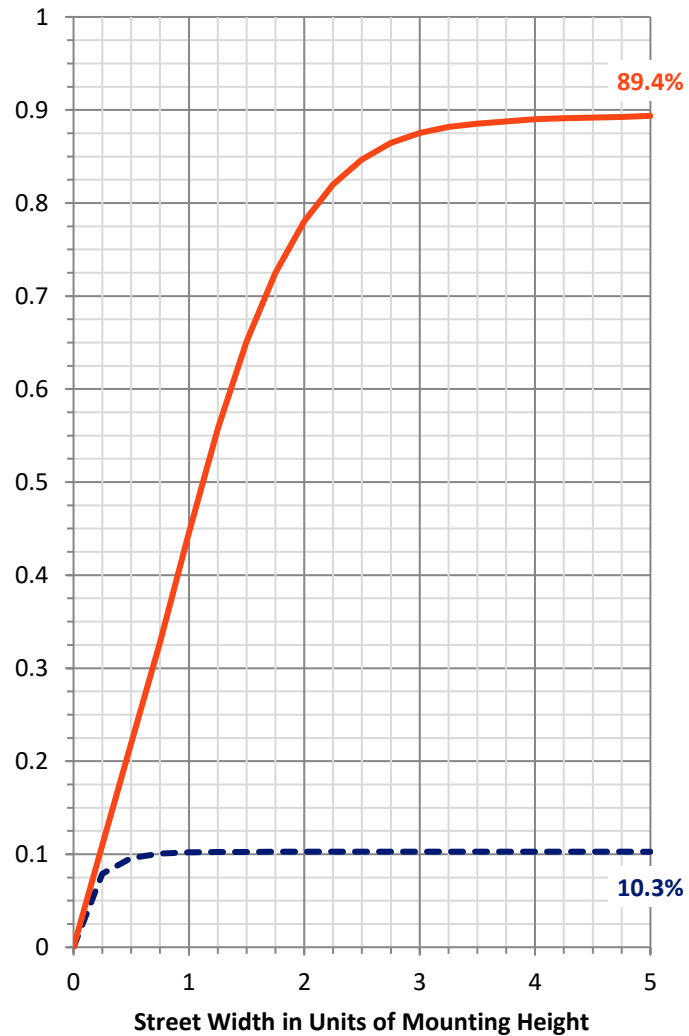
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1323.6	0.0	1323.6
	% Fixture	10.4	0.0	10.4
Street Side	Lumens	11448.4	0.0	11448.4
	% Fixture	89.6	0.0	89.6
Total	Lumens	12772.0	0.0	12772.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.6	1.1
10°-20°	362.4	2.8
20°-30°	565.4	4.4
30°-40°	955.6	7.5
40°-50°	1856.1	14.5
50°-60°	3117.0	24.4
60°-70°	3719.8	29.1
70°-80°	1960.4	15.3
80°-90°	99.6	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°	12772.0	100.0
0°-180°	12772.0	100.0

Coefficient of Utilization



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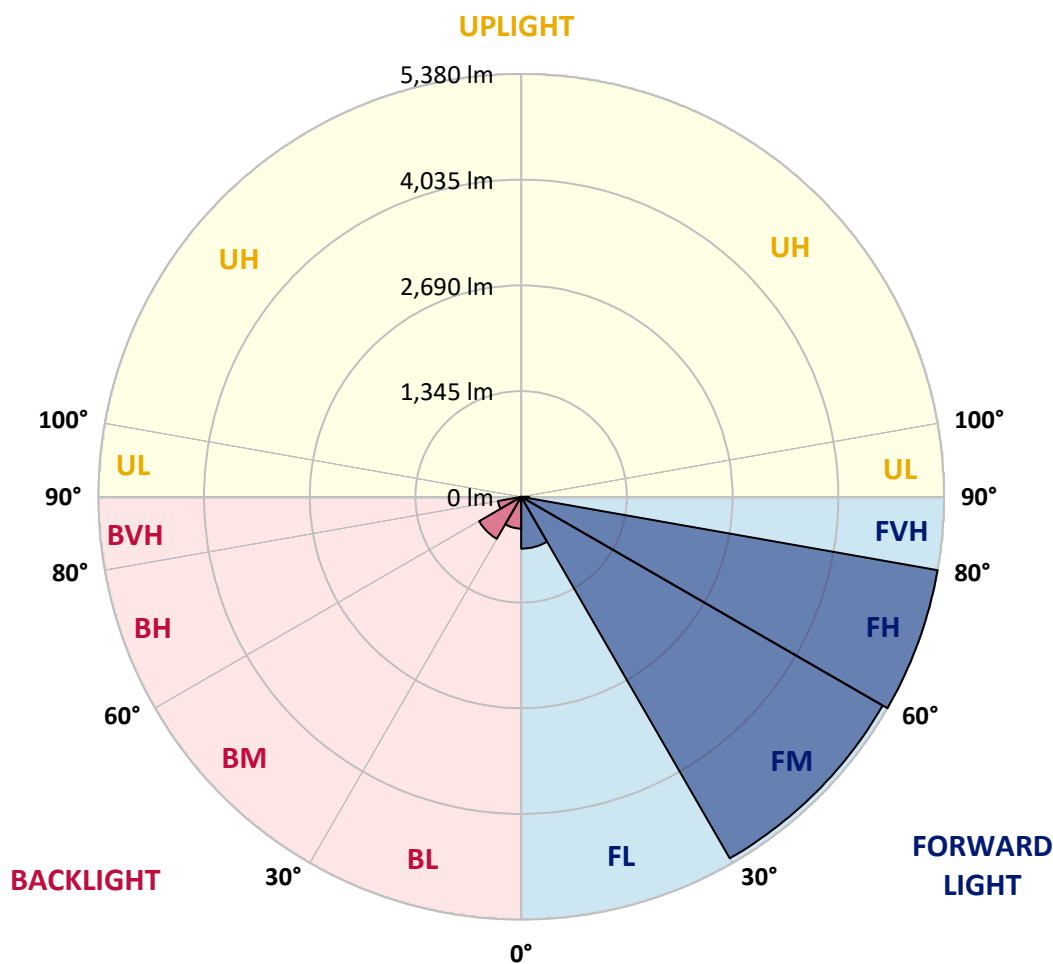
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	659.4	5.2			
FM	(30°-60°)	5310.7	41.6			
FH	(60°-80°)	5379.7	42.1			G3/7500
FVH	(80°-90°)	98.7	0.8			G1/100
BL	(0°-30°)	404.0	3.2	B1/500		
BM	(30°-60°)	618.0	4.8	B1/1000		
BH	(60°-80°)	300.6	2.4	B1/500		G1/500
BVH	(80°-90°)	1.0	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-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4
2.5°	1422.6	1422.6	1422.6	1425.6	1428.5	1428.5	1434.5	1431.5	1431.5	1431.5	1437.5
5°	1383.9	1386.9	1389.9	1395.8	1407.7	1416.6	1431.5	1431.5	1434.5	1440.5	1443.4
7.5°	1330.3	1333.3	1342.2	1354.1	1378.0	1398.8	1422.6	1428.5	1437.5	1452.4	1458.3
10°	1297.6	1303.6	1315.5	1330.3	1357.1	1383.9	1413.7	1422.6	1449.4	1476.2	1491.0
12.5°	1288.7	1291.6	1303.6	1327.4	1360.1	1392.8	1431.5	1440.5	1479.1	1520.8	1544.6
15°	1303.6	1306.5	1312.5	1339.3	1378.0	1419.6	1470.2	1482.1	1529.7	1577.4	1607.1
17.5°	1330.3	1330.3	1336.3	1360.1	1401.8	1449.4	1514.9	1532.7	1586.3	1639.9	1672.6
20°	1348.2	1348.2	1357.1	1380.9	1428.5	1491.0	1568.4	1592.2	1651.8	1711.3	1741.0
22.5°	1366.0	1369.0	1378.0	1404.7	1458.3	1544.6	1633.9	1657.7	1726.2	1788.7	1818.4
25°	1416.6	1413.7	1416.6	1440.5	1503.0	1610.1	1723.2	1752.9	1824.4	1892.8	1907.7
27.5°	1556.5	1550.6	1511.9	1497.0	1544.6	1678.5	1836.3	1866.0	1949.4	2017.8	2017.8
30°	1877.9	1866.0	1770.8	1648.8	1610.1	1741.0	1943.4	1985.1	2092.2	2151.8	2133.9
32.5°	2285.7	2258.9	2136.9	1928.5	1773.8	1824.4	2056.5	2104.1	2241.0	2291.6	2252.9
35°	2732.1	2729.1	2577.3	2309.5	2089.3	1997.0	2202.3	2258.9	2431.5	2476.2	2413.7
37.5°	3205.3	3217.2	3116.0	2747.0	2488.1	2279.7	2395.8	2461.3	2672.6	2726.1	2666.6
40°	3732.1	3729.1	3690.4	3252.9	2967.2	2681.5	2675.6	2735.1	2991.0	3074.4	2991.0
42.5°	4398.7	4392.8	4252.9	3860.1	3547.6	3205.3	3083.3	3104.1	3389.8	3526.7	3404.7
45°	5077.3	5035.6	4874.9	4535.6	4258.9	3854.1	3622.0	3622.0	3866.0	4053.5	3863.0
47.5°	5455.3	5413.6	5348.1	5160.6	5077.3	4624.9	4282.7	4241.0	4431.5	4622.0	4354.1
50°	5952.3	5952.3	5788.6	5717.2	5860.0	5541.6	5011.8	4970.2	5062.4	5214.2	4863.0
52.5°	6345.1	6273.7	6157.6	6220.1	6627.9	6482.0	5741.0	5660.6	5732.1	5770.7	5306.5
55°	6508.8	6440.4	6431.4	6660.6	7291.6	7089.2	6488.0	6416.6	6410.6	6220.1	5693.4
57.5°	6541.6	6482.0	6595.1	6996.9	7937.4	7586.2	7232.0	7178.5	7011.8	6535.6	6089.2
60°	6264.8	6294.5	6568.3	7181.4	8318.3	8017.7	7860.0	7803.4	7419.5	6803.5	6529.7
62.5°	5696.3	5767.8	6279.7	7199.3	8178.4	8193.3	8208.2	8169.5	7735.0	7047.5	6973.1
65°	5023.7	5044.6	5660.6	6952.3	7934.4	8139.8	8464.2	8461.2	7976.1	7321.3	7473.1
67.5°	4139.8	4175.5	4708.3	6119.0	7446.3	8115.9	8800.5	8791.5	8249.9	7633.8	7770.7
70°	3080.3	3125.0	3556.5	4758.9	6357.0	7818.3	9240.9	9246.9	8538.6	7871.9	7565.4
71°	2401.7	2482.1	2934.5	4041.6	5800.5	7517.7	9282.6	9336.2	8571.3	7839.2	7142.7
72.5°	1178.6	1273.8	1842.2	2845.2	4773.7	6845.1	9008.8	9113.0	8365.9	7431.4	6107.0
75°	306.5	324.4	550.6	1163.7	2559.5	4535.6	7264.8	7529.6	6839.2	5657.6	3732.1
77.5°	193.4	199.4	258.9	452.4	958.3	1723.2	4267.8	4398.7	3907.7	2866.0	1315.5
80°	136.9	139.9	163.7	291.7	559.5	503.0	1535.7	1592.2	1413.7	758.9	235.1
82.5°	83.3	83.3	119.0	187.5	345.2	273.8	404.8	431.5	380.9	211.3	77.4
85°	47.6	50.6	74.4	128.0	163.7	133.9	151.8	160.7	163.7	139.9	32.7
87.5°	38.7	41.7	65.5	107.1	89.3	65.5	65.5	68.5	71.4	83.3	14.9
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°	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4	1443.4
2.5°	1437.5	1437.5	1440.5	1437.5	1437.5	1437.5	1440.5	1440.5	1440.5	1446.4	1449.4
5°	1443.4	1443.4	1443.4	1440.5	1437.5	1437.5	1443.4	1446.4	1446.4	1455.3	1455.3
7.5°	1458.3	1458.3	1452.4	1446.4	1440.5	1431.5	1434.5	1437.5	1434.5	1437.5	1437.5
10°	1491.0	1491.0	1482.1	1470.2	1452.4	1425.6	1389.9	1345.2	1303.6	1288.7	1282.7
12.5°	1544.6	1541.6	1523.8	1503.0	1464.3	1372.0	1238.1	1080.3	949.4	913.7	901.8
15°	1604.1	1598.2	1577.4	1541.6	1437.5	1193.4	913.7	711.3	586.3	556.5	550.6
17.5°	1666.6	1657.7	1628.0	1556.5	1315.5	886.9	589.3	446.4	378.0	372.0	375.0
20°	1732.1	1720.2	1678.5	1526.8	1062.5	592.3	380.9	345.2	339.3	339.3	342.3
22.5°	1806.5	1791.6	1735.1	1419.6	773.8	392.9	327.4	324.4	321.4	318.4	318.4
25°	1892.8	1875.0	1788.7	1226.2	532.7	321.4	312.5	303.6	297.6	291.7	288.7
27.5°	1997.0	1973.2	1830.3	988.1	366.1	300.6	294.6	279.8	267.9	255.9	255.9
30°	2101.2	2071.4	1818.4	744.0	297.6	279.8	267.9	250.0	232.1	220.2	217.3
32.5°	2211.3	2181.5	1741.0	500.0	270.8	255.9	241.1	214.3	193.4	178.6	175.6
35°	2375.0	2351.2	1589.3	330.4	244.0	226.2	205.4	178.6	151.8	136.9	133.9
37.5°	2619.0	2589.2	1401.8	253.0	214.3	187.5	169.6	139.9	113.1	98.2	95.2
40°	2946.4	2857.1	1178.6	223.2	187.5	154.8	131.0	101.2	80.4	71.4	71.4
42.5°	3327.3	3116.0	937.5	202.4	166.7	128.0	95.2	68.5	56.5	53.6	53.6
45°	3732.1	3357.1	696.4	187.5	145.8	101.2	68.5	47.6	41.7	38.7	38.7
47.5°	4148.7	3553.5	485.1	169.6	122.0	77.4	47.6	35.7	29.8	26.8	26.8
50°	4538.6	3681.5	342.3	151.8	104.2	56.5	35.7	26.8	20.8	20.8	20.8
52.5°	4809.4	3669.6	247.0	131.0	80.4	38.7	23.8	17.9	17.9	17.9	17.9
55°	5047.5	3624.9	193.4	113.1	62.5	26.8	17.9	14.9	14.9	11.9	11.9
57.5°	5249.9	3553.5	163.7	92.3	44.6	20.8	11.9	11.9	8.9	8.9	8.9
60°	5422.5	3464.2	136.9	77.4	29.8	14.9	8.9	6.0	6.0	3.0	6.0
62.5°	5657.6	3407.7	119.0	59.5	20.8	8.9	6.0	3.0	3.0	0.0	0.0
65°	5830.3	3300.5	101.2	41.7	11.9	6.0	3.0	3.0	0.0	0.0	0.0
67.5°	5836.2	3107.1	74.4	23.8	8.9	6.0	3.0	0.0	0.0	0.0	0.0
70°	5366.0	2648.8	47.6	11.9	6.0	3.0	3.0	0.0	0.0	0.0	0.0
71°	4934.4	2345.2	38.7	8.9	6.0	3.0	0.0	0.0	0.0	0.0	0.0
72.5°	4065.4	1723.2	29.8	8.9	3.0	3.0	0.0	0.0	0.0	0.0	0.0
75°	2241.0	625.0	14.9	6.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	717.3	190.5	8.9	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	122.0	29.8	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	41.7	11.9	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	11.9	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.0	3.0	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)