

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: P231109

Luminaire Tested: **ARCH-M-AF48-120-D-U-T2R-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231109
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29623)
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-T2R-7050-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 785mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12464 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 122
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

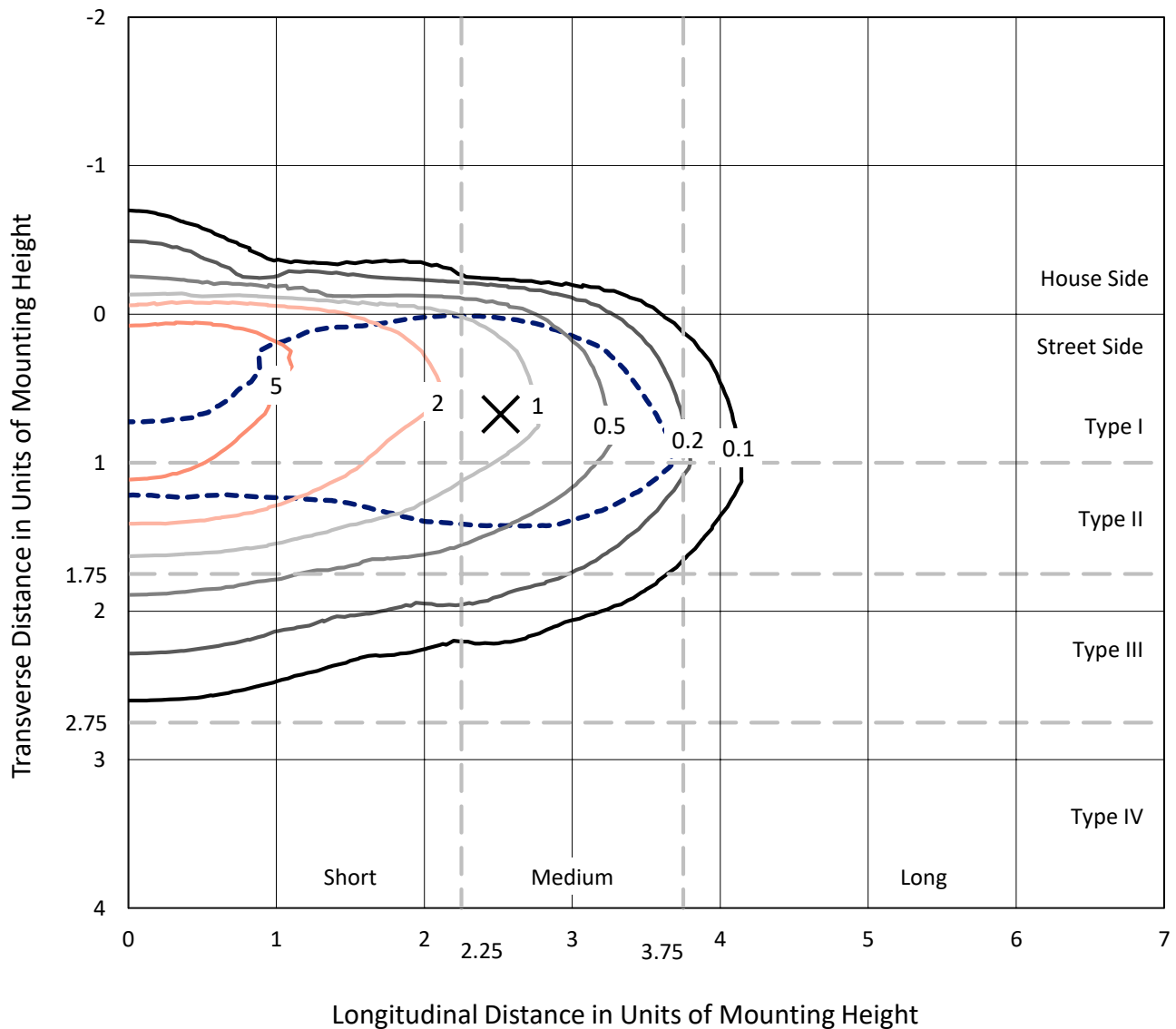


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

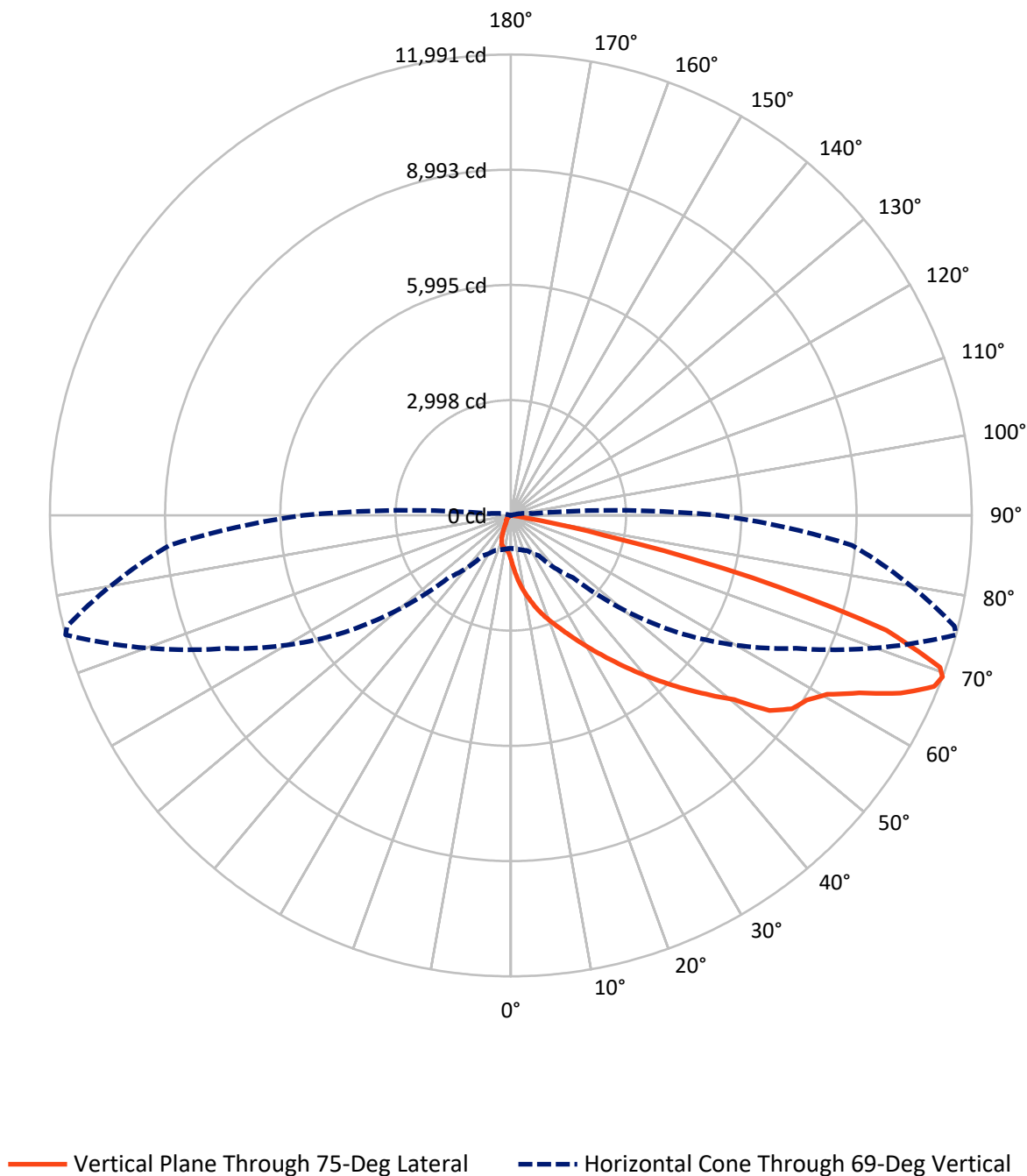


Based on 20 foot mounting height. Maximum calculated value = 7.9 fc
Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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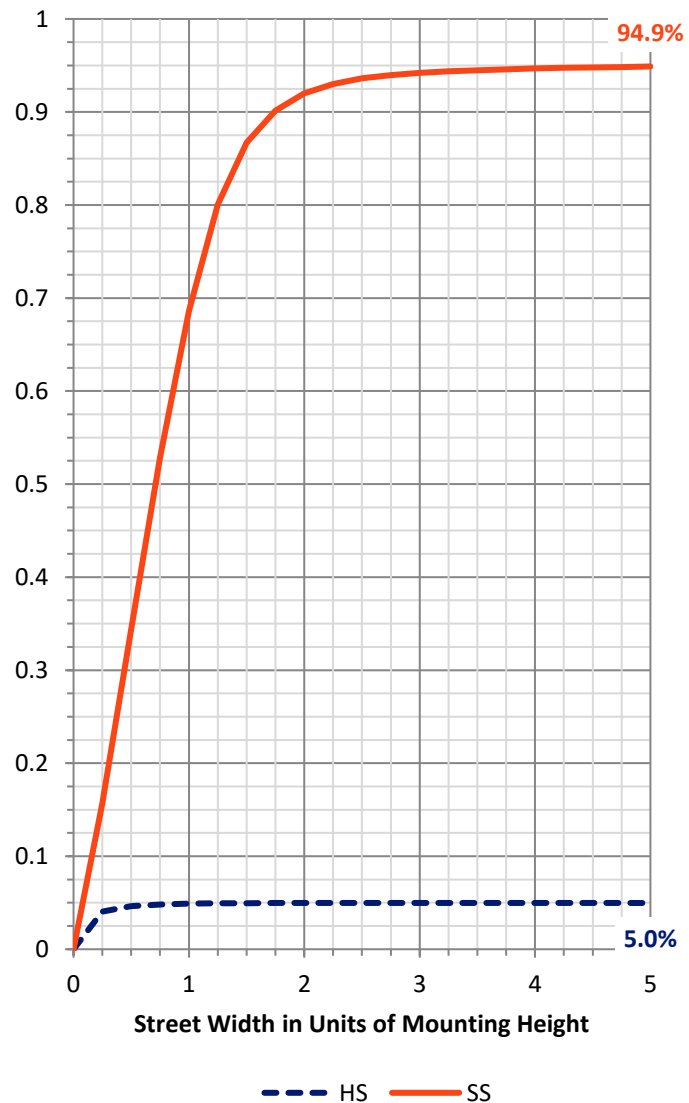
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	621.9	0.0	621.9
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	11842.1	0.0	11842.1
	% Fixture	95.0	0.0	95.0
Total	Lumens	12464.0	0.0	12464.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.2	1.1
10°-20°	483.5	3.9
20°-30°	923.0	7.4
30°-40°	1655.7	13.3
40°-50°	2536.6	20.4
50°-60°	2948.2	23.7
60°-70°	2610.7	20.9
70°-80°	1126.1	9.0
80°-90°	45.1	0.4
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°	12464.0	100.0
0°-180°	12464.0	100.0

Coefficient of Utilization



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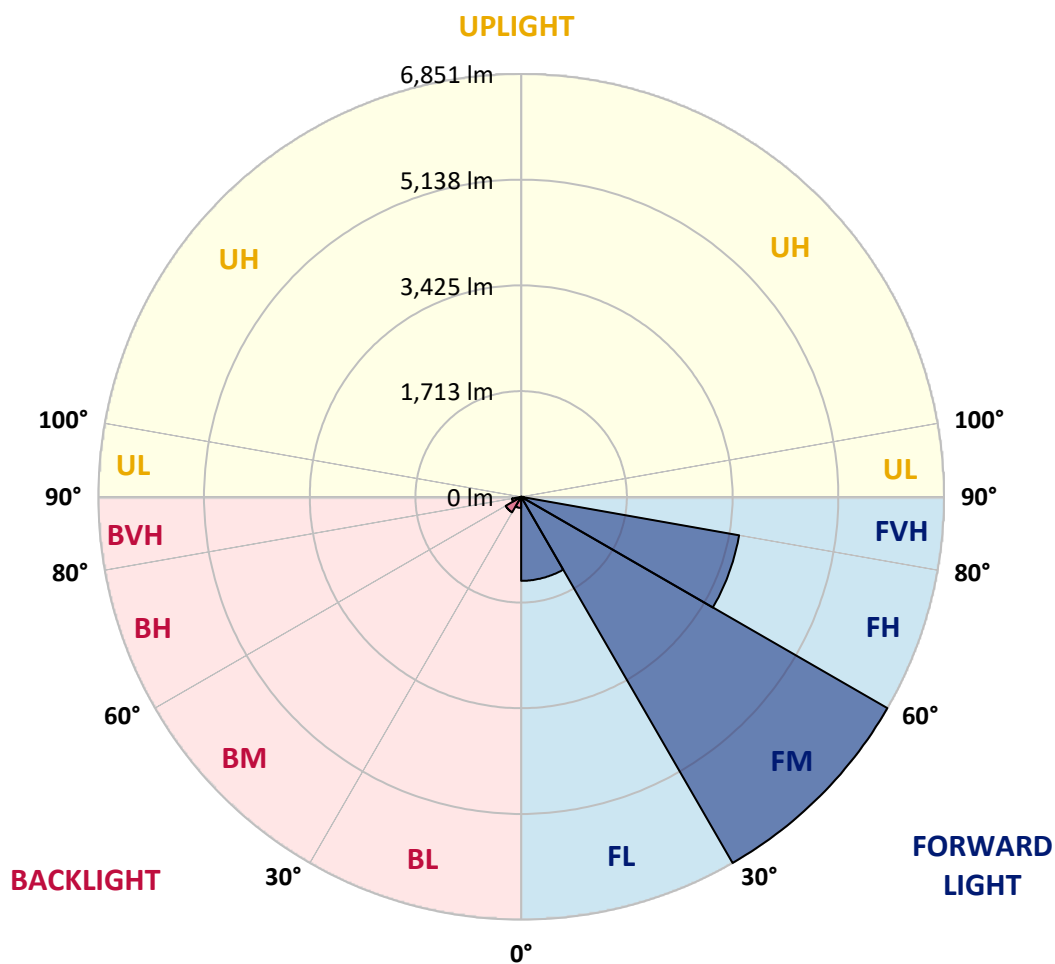
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1361.1	10.9			
FM	(30°-60°)	6850.5	55.0			
FH	(60°-80°)	3586.1	28.8			G2/5000
FVH	(80°-90°)	44.5	0.4			G1/100
BL	(0°-30°)	180.6	1.4	B1/500		
BM	(30°-60°)	289.9	2.3	B1/1000		
BH	(60°-80°)	150.7	1.2	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8
2.5°	1910.5	1891.7	1872.9	1851.3	1802.9	1719.5	1614.5	1501.5	1361.6	1337.4	1224.4
5°	2319.5	2311.5	2292.6	2263.0	2209.2	2117.7	1999.3	1832.5	1598.4	1558.0	1318.5
7.5°	2607.5	2602.1	2585.9	2551.0	2502.5	2411.0	2287.3	2107.0	1835.2	1789.4	1436.9
10°	2865.8	2863.1	2849.6	2817.4	2768.9	2669.4	2537.5	2349.1	2061.2	2010.1	1574.2
12.5°	3099.9	3102.6	3097.2	3081.1	3046.1	2951.9	2801.2	2596.7	2279.2	2222.7	1738.3
15°	3237.1	3245.2	3266.7	3299.0	3309.8	3234.4	3078.4	2852.3	2502.5	2454.1	1926.7
17.5°	3191.4	3199.5	3266.7	3377.1	3482.0	3492.8	3352.8	3094.5	2723.2	2674.7	2112.3
20°	3081.1	3091.8	3161.8	3312.5	3517.0	3659.6	3603.1	3358.2	2933.1	2873.9	2289.9
22.5°	3204.8	3204.8	3226.4	3317.9	3503.5	3726.9	3802.2	3621.9	3148.3	3075.7	2467.5
25°	3630.0	3621.9	3576.2	3538.5	3597.7	3796.8	3952.9	3891.0	3401.3	3317.9	2655.9
27.5°	4168.2	4205.9	4119.7	3982.5	3848.0	3934.1	4087.5	4157.4	3681.1	3595.0	2849.6
30°	4770.9	4787.1	4684.8	4501.8	4265.0	4181.6	4246.2	4386.1	3985.2	3891.0	3051.5
32.5°	5314.5	5301.0	5214.9	5023.9	4730.6	4550.3	4450.7	4569.1	4316.2	4208.5	3258.7
35°	5796.2	5806.9	5702.0	5481.3	5193.4	5002.4	4765.6	4776.3	4687.5	4563.7	3498.1
37.5°	6229.4	6210.6	6111.0	5890.3	5629.3	5422.1	5171.9	4991.6	5093.8	4964.7	3767.2
40°	6581.9	6563.1	6458.1	6242.8	5998.0	5828.5	5632.0	5279.5	5521.7	5373.7	4055.2
42.5°	6861.8	6840.2	6751.4	6544.2	6307.4	6156.7	6062.6	5634.7	5979.1	5831.1	4378.1
45°	6999.0	6980.2	6926.3	6770.3	6563.1	6431.2	6477.0	6043.7	6468.9	6345.1	4733.3
47.5°	6837.5	6829.5	6891.4	6864.4	6746.0	6676.1	6834.8	6490.4	6982.8	6861.8	5142.3
50°	6347.8	6361.2	6541.5	6764.9	6821.4	6904.8	7128.1	6961.3	7534.5	7405.3	5613.2
52.5°	5139.6	5231.1	5774.6	6312.8	6729.9	7044.7	7472.6	7634.0	8433.2	8306.8	6347.8
55°	3837.2	3874.9	4466.9	5387.1	6361.2	7034.0	7728.2	8029.6	8877.2	8748.1	6541.5
57.5°	3043.4	3056.8	3350.1	4289.3	5602.4	6791.8	7862.8	8172.2	9071.0	8963.3	6829.5
60°	2389.5	2405.6	2618.2	3264.0	4534.1	6137.9	7669.0	8296.0	9450.4	9364.3	7332.7
62.5°	1859.4	1875.5	2004.7	2384.1	3401.3	5131.5	7278.8	8495.1	10171.5	10131.2	8156.1
65°	1439.6	1445.0	1533.8	1711.4	2403.0	4041.7	6802.6	8680.8	11145.6	11110.7	8823.4
67.5°	1062.9	1071.0	1132.9	1243.2	1622.6	2903.5	6022.2	8538.2	11880.2	11778.0	9065.6
69°	858.4	866.5	920.3	1009.1	1280.9	2287.3	5309.1	8185.7	11990.6	11893.7	8912.2
70°	734.6	740.0	793.8	869.2	1092.5	1942.8	4744.0	7881.6	11845.3	11751.1	8562.4
72.5°	470.9	497.8	551.6	600.1	723.8	1286.2	3202.2	6536.2	10220.0	10058.5	6705.7
75°	261.0	269.1	366.0	425.2	481.7	836.9	1781.4	4076.7	6501.2	6388.2	3586.9
77.5°	215.3	220.7	258.3	322.9	322.9	468.2	672.7	1606.5	2472.9	2230.7	971.4
80°	150.7	156.1	196.4	212.6	231.4	263.7	218.0	352.5	382.1	339.1	145.3
82.5°	104.9	110.3	134.5	174.9	185.7	123.8	80.7	104.9	110.3	110.3	56.5
85°	18.8	26.9	99.6	145.3	110.3	37.7	45.7	37.7	35.0	37.7	13.5
87.5°	0.0	0.0	61.9	70.0	59.2	16.1	18.8	13.5	8.1	10.8	5.4
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°	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8
2.5°	1167.8	1111.3	1014.5	944.5	885.3	839.6	820.7	791.1	769.6	780.4	766.9
5°	1200.1	1100.6	944.5	844.9	775.0	715.8	667.3	629.7	600.1	594.7	589.3
7.5°	1251.3	1108.6	904.1	780.4	675.4	583.9	508.6	452.1	409.0	409.0	392.9
10°	1321.2	1130.2	879.9	715.8	559.7	435.9	360.6	306.8	285.2	282.5	277.2
12.5°	1418.1	1170.5	861.1	632.4	435.9	317.5	271.8	252.9	244.9	242.2	239.5
15°	1549.9	1229.7	839.6	530.1	331.0	261.0	242.2	226.0	218.0	215.3	212.6
17.5°	1676.4	1283.6	793.8	425.2	269.1	236.8	215.3	201.8	191.1	188.4	188.4
20°	1794.8	1329.3	715.8	331.0	242.2	212.6	191.1	174.9	164.1	161.5	161.5
22.5°	1918.6	1367.0	618.9	269.1	220.7	188.4	166.8	150.7	139.9	137.2	134.5
25°	2050.5	1393.9	508.6	239.5	199.1	166.8	142.6	129.2	121.1	118.4	115.7
27.5°	2193.1	1404.6	403.6	218.0	174.9	145.3	123.8	110.3	104.9	102.3	102.3
30°	2322.2	1393.9	312.1	193.7	153.4	126.5	107.6	96.9	91.5	88.8	88.8
32.5°	2456.8	1367.0	250.3	172.2	134.5	107.6	91.5	83.4	80.7	78.0	78.0
35°	2599.4	1332.0	215.3	153.4	115.7	94.2	80.7	75.3	72.7	70.0	70.0
37.5°	2766.2	1288.9	196.4	137.2	102.3	83.4	70.0	67.3	64.6	64.6	64.6
40°	2954.6	1235.1	183.0	123.8	91.5	72.7	61.9	59.2	56.5	56.5	56.5
42.5°	3153.7	1173.2	169.5	110.3	80.7	61.9	53.8	53.8	51.1	51.1	48.4
45°	3377.1	1111.3	156.1	96.9	70.0	53.8	45.7	43.1	43.1	40.4	40.4
47.5°	3640.8	1054.8	142.6	86.1	61.9	45.7	40.4	37.7	35.0	32.3	32.3
50°	4012.1	1049.4	126.5	75.3	56.5	37.7	32.3	29.6	26.9	24.2	24.2
52.5°	4380.8	1001.0	107.6	61.9	45.7	32.3	24.2	21.5	18.8	18.8	16.1
55°	4464.2	920.3	94.2	53.8	35.0	24.2	18.8	13.5	13.5	10.8	10.8
57.5°	4647.2	882.6	80.7	43.1	26.9	18.8	10.8	8.1	8.1	8.1	8.1
60°	5007.7	871.8	70.0	37.7	18.8	13.5	8.1	5.4	5.4	2.7	2.7
62.5°	5505.5	861.1	59.2	32.3	13.5	8.1	5.4	2.7	0.0	0.0	0.0
65°	5780.0	788.4	48.4	24.2	10.8	8.1	2.7	0.0	0.0	0.0	0.0
67.5°	5707.4	651.2	43.1	16.1	8.1	5.4	2.7	0.0	0.0	0.0	0.0
69°	5403.3	548.9	35.0	13.5	8.1	5.4	2.7	0.0	0.0	0.0	0.0
70°	5037.3	473.6	32.3	10.8	5.4	2.7	2.7	0.0	0.0	0.0	0.0
72.5°	3576.2	247.6	21.5	8.1	5.4	2.7	0.0	0.0	0.0	0.0	0.0
75°	1671.0	110.3	13.5	5.4	2.7	2.7	0.0	0.0	0.0	0.0	0.0
77.5°	368.7	51.1	8.1	5.4	2.7	0.0	0.0	0.0	0.0	0.0	0.0
80°	70.0	18.8	5.4	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	24.2	8.1	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	8.1	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.7	0.0	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)