

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: P231093

Luminaire Tested: **ARCH-M-AF48-90-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231093
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-AF48-90-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 600mA 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: 10263.2 lumens
Efficiency: N/A
Efficacy: 111.6 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): 92
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



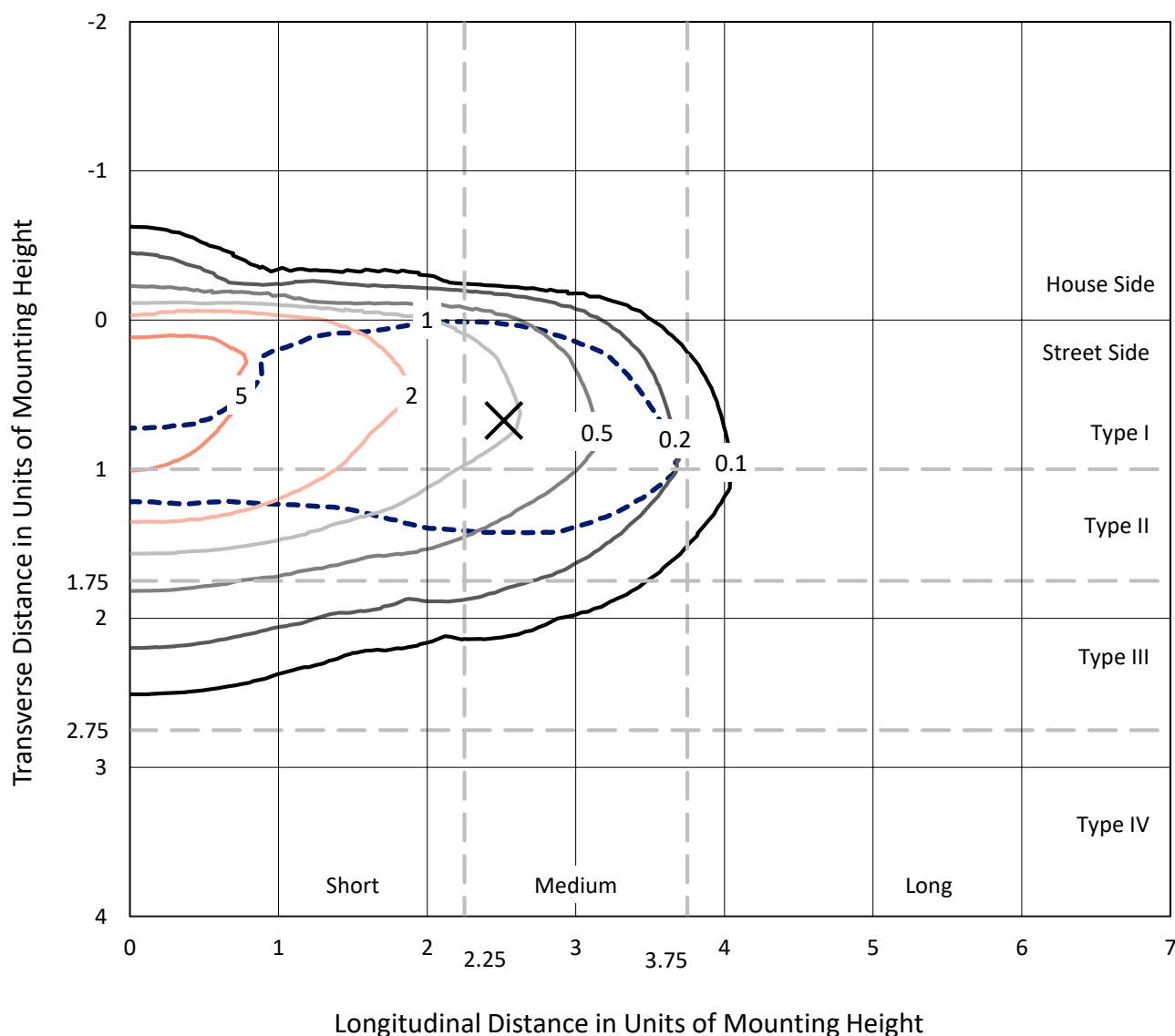
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

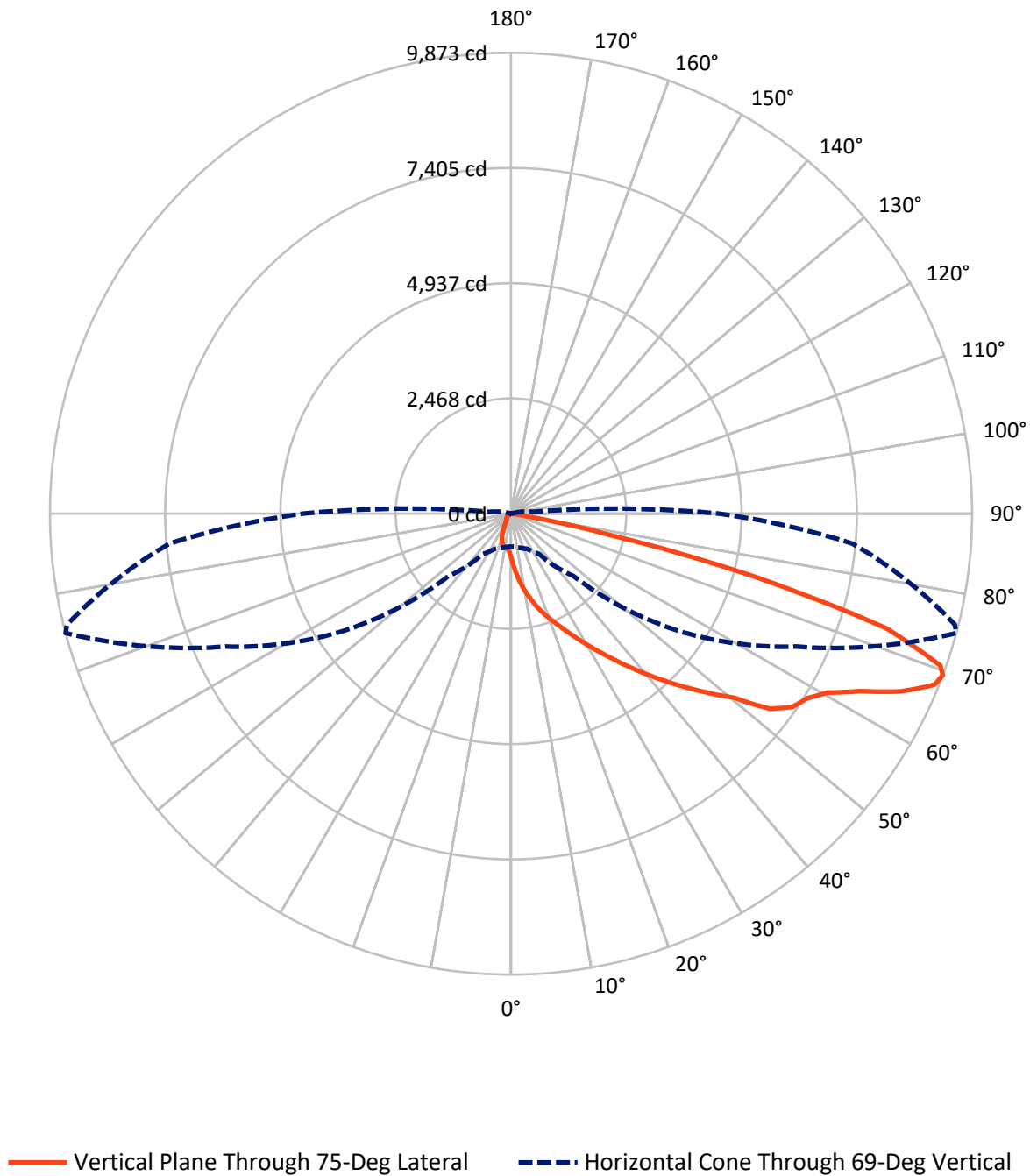


Based on 20 foot mounting height. Maximum calculated value = 6.5 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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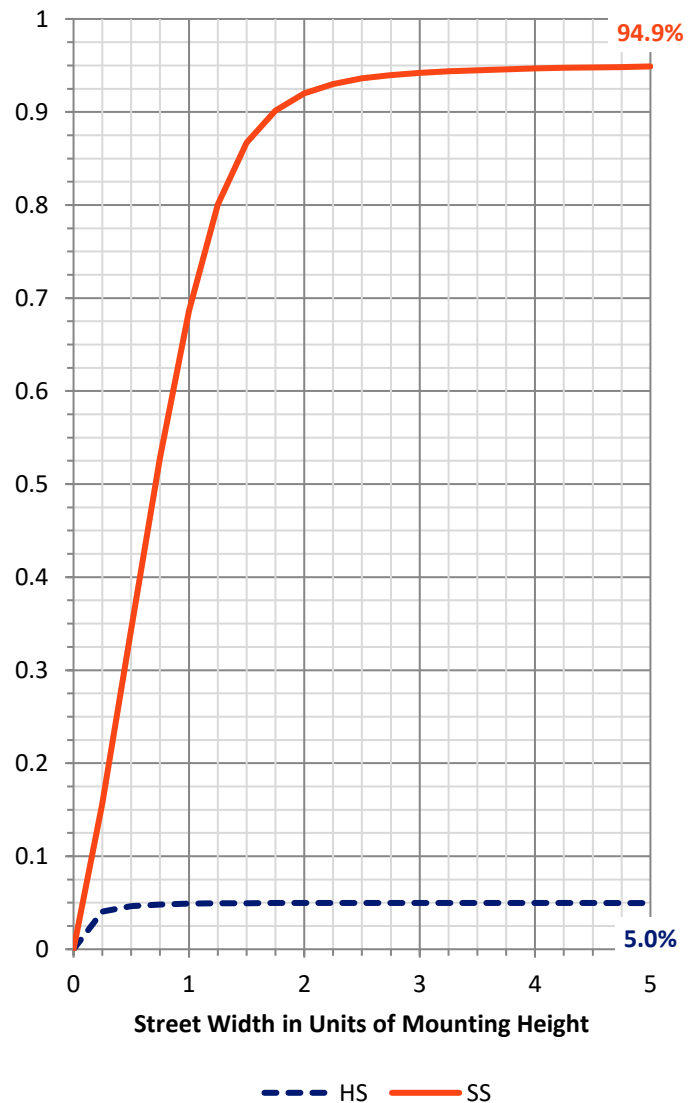
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	512.1	0.0	512.1
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	9751.2	0.0	9751.2
	% Fixture	95.0	0.0	95.0
Total	Lumens	10263.2	0.0	10263.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.4	1.1
10°-20°	398.1	3.9
20°-30°	760.0	7.4
30°-40°	1363.3	13.3
40°-50°	2088.7	20.4
50°-60°	2427.6	23.7
60°-70°	2149.7	20.9
70°-80°	927.3	9.0
80°-90°	37.1	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°	10263.2	100.0
0°-180°	10263.2	100.0

Coefficient of Utilization



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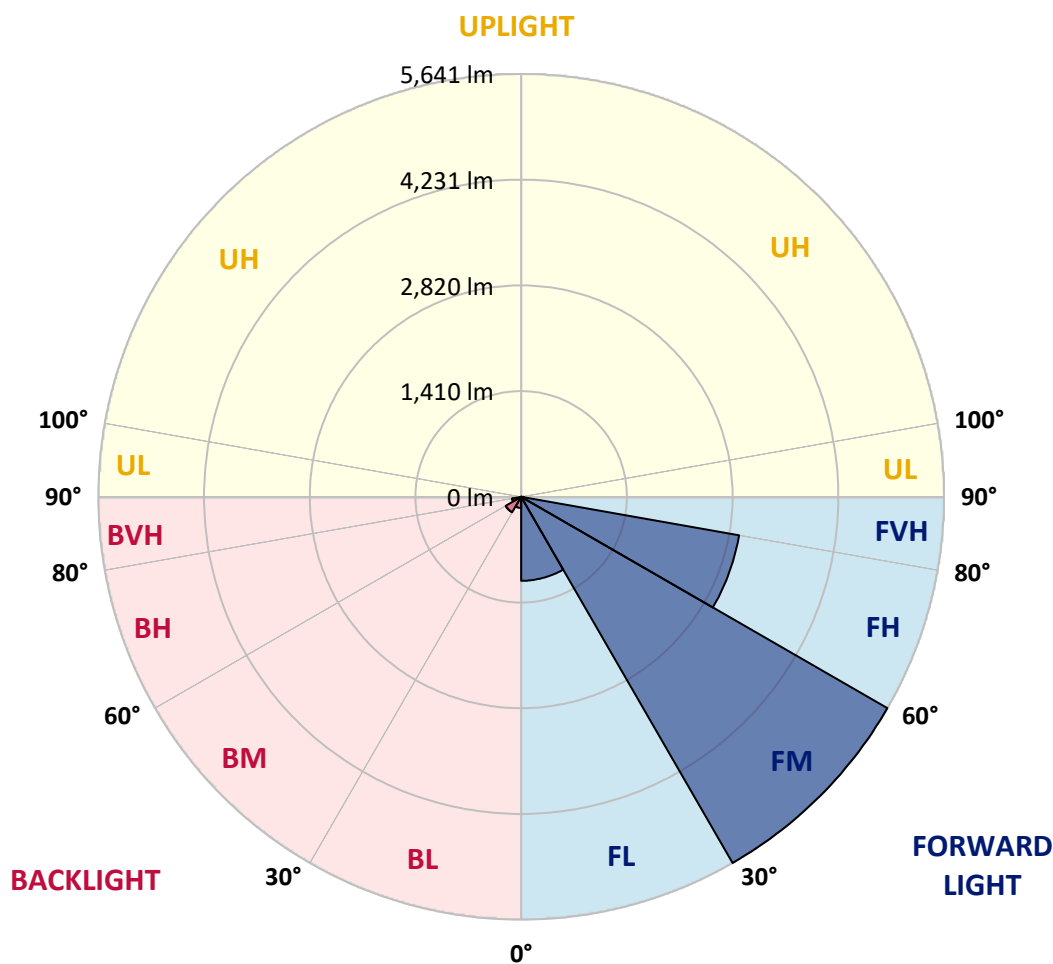
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1120.8	10.9			
FM	(30°-60°)	5640.9	55.0			
FH	(60°-80°)	2952.9	28.8			G2/5000
FVH	(80°-90°)	36.6	0.4			G1/100
BL	(0°-30°)	148.7	1.4	B1/500		
BM	(30°-60°)	238.7	2.3	B1/1000		
BH	(60°-80°)	124.1	1.2	B1/500		G1/500
BVH	(80°-90°)	0.5	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°	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0
2.5°	1573.2	1557.6	1542.2	1524.4	1484.6	1415.9	1329.4	1236.4	1121.2	1101.2	1008.2
5°	1910.0	1903.3	1887.9	1863.4	1819.1	1743.8	1646.3	1509.0	1316.1	1282.9	1085.8
7.5°	2147.1	2142.7	2129.4	2100.5	2060.6	1985.3	1883.4	1734.9	1511.1	1473.5	1183.2
10°	2359.7	2357.6	2346.4	2320.0	2280.1	2198.0	2089.5	1934.4	1697.3	1655.1	1296.2
12.5°	2552.6	2554.8	2550.3	2537.0	2508.3	2430.7	2306.7	2138.2	1876.7	1830.3	1431.4
15°	2665.6	2672.3	2690.0	2716.5	2725.3	2663.4	2534.9	2348.7	2060.6	2020.7	1586.5
17.5°	2627.9	2634.5	2690.0	2780.8	2867.2	2876.0	2760.8	2548.2	2242.3	2202.5	1739.3
20°	2537.0	2545.9	2603.5	2727.6	2896.0	3013.4	2966.9	2765.2	2415.2	2366.4	1885.6
22.5°	2639.0	2639.0	2656.7	2732.0	2884.9	3068.9	3130.8	2982.4	2592.5	2532.6	2031.9
25°	2989.1	2982.4	2944.8	2913.8	2962.5	3126.4	3254.9	3204.0	2800.7	2732.0	2187.0
27.5°	3432.2	3463.2	3392.3	3279.4	3168.5	3239.5	3365.7	3423.3	3031.2	2960.2	2346.4
30°	3928.5	3941.8	3857.6	3707.0	3512.0	3443.3	3496.4	3611.7	3281.5	3204.0	2512.7
32.5°	4376.1	4365.0	4294.1	4136.8	3895.3	3746.9	3664.8	3762.4	3554.0	3465.5	2683.3
35°	4772.8	4781.6	4695.2	4513.5	4276.4	4119.1	3924.1	3932.9	3859.9	3757.9	2880.5
37.5°	5129.5	5113.9	5032.0	4850.3	4635.4	4464.8	4258.6	4110.2	4194.4	4088.1	3102.1
40°	5419.8	5404.2	5317.8	5140.5	4938.9	4799.4	4637.5	4347.3	4546.7	4424.9	3339.1
42.5°	5650.2	5632.5	5559.3	5388.7	5193.7	5069.6	4992.1	4639.8	4923.5	4801.5	3605.1
45°	5763.2	5747.7	5703.4	5574.9	5404.2	5295.7	5333.4	4976.6	5326.7	5224.7	3897.5
47.5°	5630.2	5623.6	5674.6	5652.4	5554.9	5497.3	5628.1	5344.4	5749.9	5650.2	4234.3
50°	5227.0	5238.0	5386.6	5570.4	5616.9	5685.7	5869.6	5732.2	6204.1	6097.8	4622.1
52.5°	4232.2	4307.4	4755.0	5198.1	5541.6	5800.8	6153.2	6286.1	6944.2	6840.1	5227.0
55°	3159.7	3190.7	3678.1	4435.9	5238.0	5792.0	6363.7	6611.8	7309.8	7203.4	5386.6
57.5°	2506.0	2517.1	2758.6	3531.9	4613.2	5592.6	6474.5	6729.3	7469.3	7380.7	5623.6
60°	1967.6	1980.8	2156.0	2687.7	3733.6	5054.2	6314.9	6831.2	7781.8	7710.8	6038.0
62.5°	1531.1	1544.3	1650.7	1963.1	2800.7	4225.5	5993.7	6995.1	8375.6	8342.4	6716.0
65°	1185.4	1189.9	1262.9	1409.2	1978.7	3328.1	5601.5	7148.1	9177.7	9148.9	7265.5
67.5°	875.2	881.9	932.8	1023.7	1336.1	2390.8	4958.9	7030.6	9782.6	9698.4	7464.9
69°	706.9	713.5	757.8	830.9	1054.7	1883.4	4371.7	6740.3	9873.4	9793.6	7338.6
70°	604.9	609.4	653.7	715.7	899.6	1599.8	3906.3	6490.0	9753.7	9676.2	7050.6
72.5°	387.8	409.9	454.2	494.1	596.1	1059.2	2636.8	5382.1	8415.5	8282.5	5521.7
75°	214.9	221.6	301.4	350.1	396.6	689.1	1466.8	3356.9	5353.3	5260.2	2953.6
77.5°	177.3	181.7	212.7	265.9	265.9	385.6	553.9	1322.8	2036.3	1836.9	799.8
80°	124.1	128.5	161.7	175.0	190.6	217.2	179.4	290.3	314.7	279.2	119.7
82.5°	86.4	90.8	110.8	144.0	152.9	101.9	66.5	86.4	90.8	90.8	46.5
85°	15.5	22.2	81.9	119.7	90.8	31.0	37.6	31.0	28.8	31.0	11.0
87.5°	0.0	0.0	50.9	57.6	48.8	13.3	15.5	11.0	6.6	8.9	4.4
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°	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0	955.0
2.5°	961.7	915.1	835.3	777.7	729.0	691.3	675.8	651.4	633.7	642.6	631.5
5°	988.3	906.2	777.7	695.7	638.1	589.4	549.5	518.5	494.1	489.7	485.3
7.5°	1030.3	912.9	744.5	642.6	556.2	480.8	418.8	372.3	336.8	336.8	323.5
10°	1087.9	930.6	724.6	589.4	460.8	359.0	297.0	252.6	234.9	232.6	228.2
12.5°	1167.7	963.8	709.0	520.7	359.0	261.5	223.8	208.3	201.6	199.4	197.2
15°	1276.2	1012.6	691.3	436.5	272.5	214.9	199.4	186.1	179.4	177.3	175.0
17.5°	1380.4	1056.9	653.7	350.1	221.6	195.0	177.3	166.2	157.3	155.1	155.1
20°	1478.0	1094.6	589.4	272.5	199.4	175.0	157.3	144.0	135.1	133.0	133.0
22.5°	1579.8	1125.7	509.6	221.6	181.7	155.1	137.4	124.1	115.2	113.0	110.8
25°	1688.4	1147.8	418.8	197.2	164.0	137.4	117.4	106.4	99.7	97.5	95.2
27.5°	1805.8	1156.7	332.4	179.4	144.0	119.7	101.9	90.8	86.4	84.2	84.2
30°	1912.2	1147.8	257.1	159.6	126.3	104.1	88.6	79.8	75.3	73.1	73.1
32.5°	2023.0	1125.7	206.0	141.8	110.8	88.6	75.3	68.6	66.5	64.2	64.2
35°	2140.4	1096.8	177.3	126.3	95.2	77.5	66.5	62.0	59.8	57.6	57.6
37.5°	2277.8	1061.3	161.7	113.0	84.2	68.6	57.6	55.4	53.2	53.2	53.2
40°	2432.9	1017.0	150.7	101.9	75.3	59.8	50.9	48.8	46.5	46.5	46.5
42.5°	2596.9	966.1	139.6	90.8	66.5	50.9	44.3	44.3	42.1	42.1	39.9
45°	2780.8	915.1	128.5	79.8	57.6	44.3	37.6	35.5	35.5	33.2	33.2
47.5°	2998.0	868.6	117.4	70.9	50.9	37.6	33.2	31.0	28.8	26.6	26.6
50°	3303.7	864.2	104.1	62.0	46.5	31.0	26.6	24.3	22.2	19.9	19.9
52.5°	3607.2	824.3	88.6	50.9	37.6	26.6	19.9	17.7	15.5	15.5	13.3
55°	3676.0	757.8	77.5	44.3	28.8	19.9	15.5	11.0	11.0	8.9	8.9
57.5°	3826.7	726.8	66.5	35.5	22.2	15.5	8.9	6.6	6.6	6.6	6.6
60°	4123.5	717.9	57.6	31.0	15.5	11.0	6.6	4.4	4.4	2.3	2.3
62.5°	4533.4	709.0	48.8	26.6	11.0	6.6	4.4	2.3	0.0	0.0	0.0
65°	4759.5	649.3	39.9	19.9	8.9	6.6	2.3	0.0	0.0	0.0	0.0
67.5°	4699.6	536.2	35.5	13.3	6.6	4.4	2.3	0.0	0.0	0.0	0.0
69°	4449.2	452.0	28.8	11.0	6.6	4.4	2.3	0.0	0.0	0.0	0.0
70°	4147.9	389.9	26.6	8.9	4.4	2.3	2.3	0.0	0.0	0.0	0.0
72.5°	2944.8	203.9	17.7	6.6	4.4	2.3	0.0	0.0	0.0	0.0	0.0
75°	1376.0	90.8	11.0	4.4	2.3	2.3	0.0	0.0	0.0	0.0	0.0
77.5°	303.5	42.1	6.6	4.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0
80°	57.6	15.5	4.4	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	19.9	6.6	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	6.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.3	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)