

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: P189863

Luminaire Tested: **VERD-M-A0385-E-U-T4-7030-AP**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P189863
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26232)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VERD-M-A0385-E-U-T4-7030-AP
Description: VERDEON-M ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K LEDS AT 85% STANDARD LUMENS AND TYPE IV OPTICS, GREY
PAINTED FINISH
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18629 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Luminous Opening: Rectangular (W 1.35' x L: 1.58' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

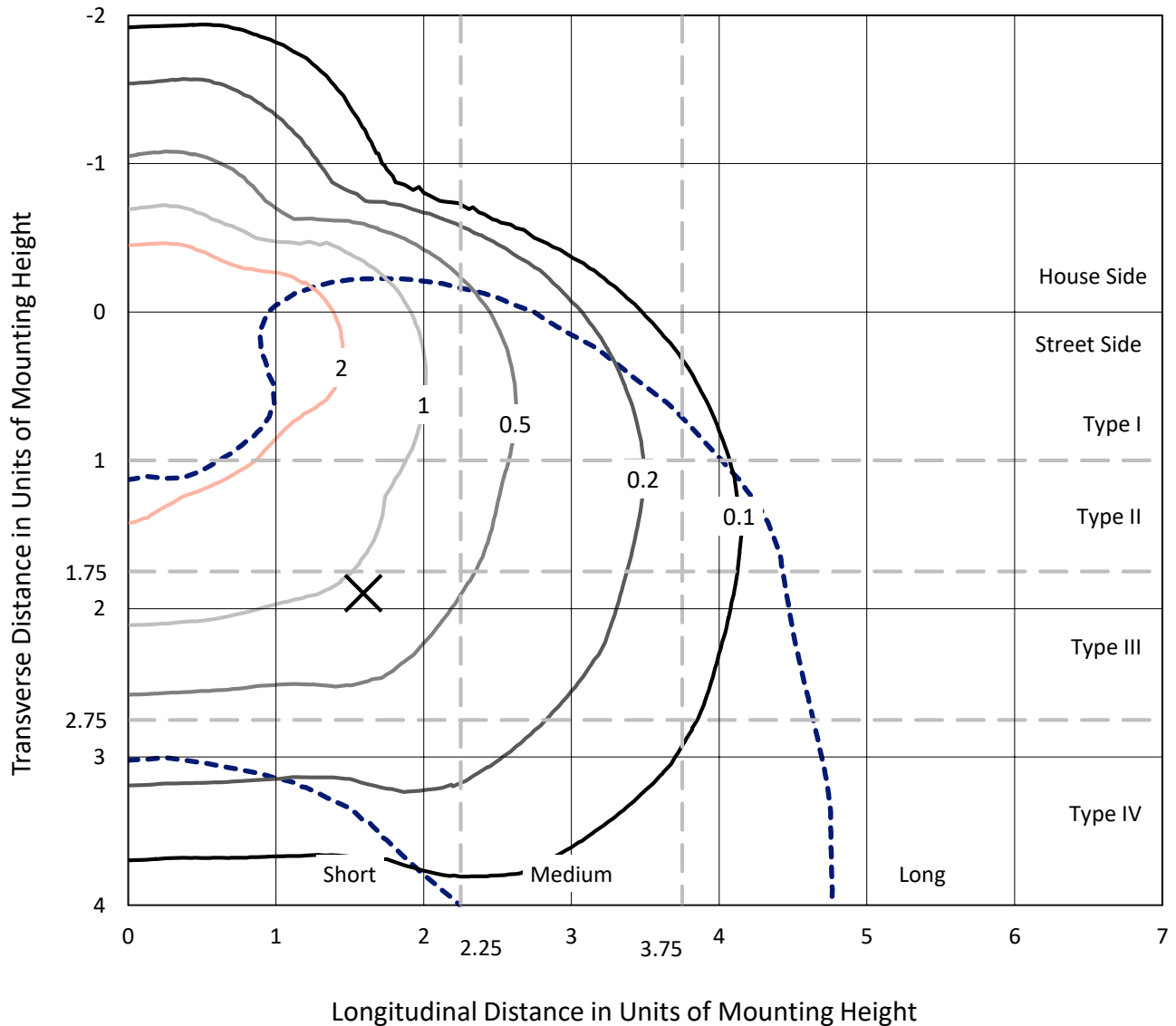
Input Watts (W): 152
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

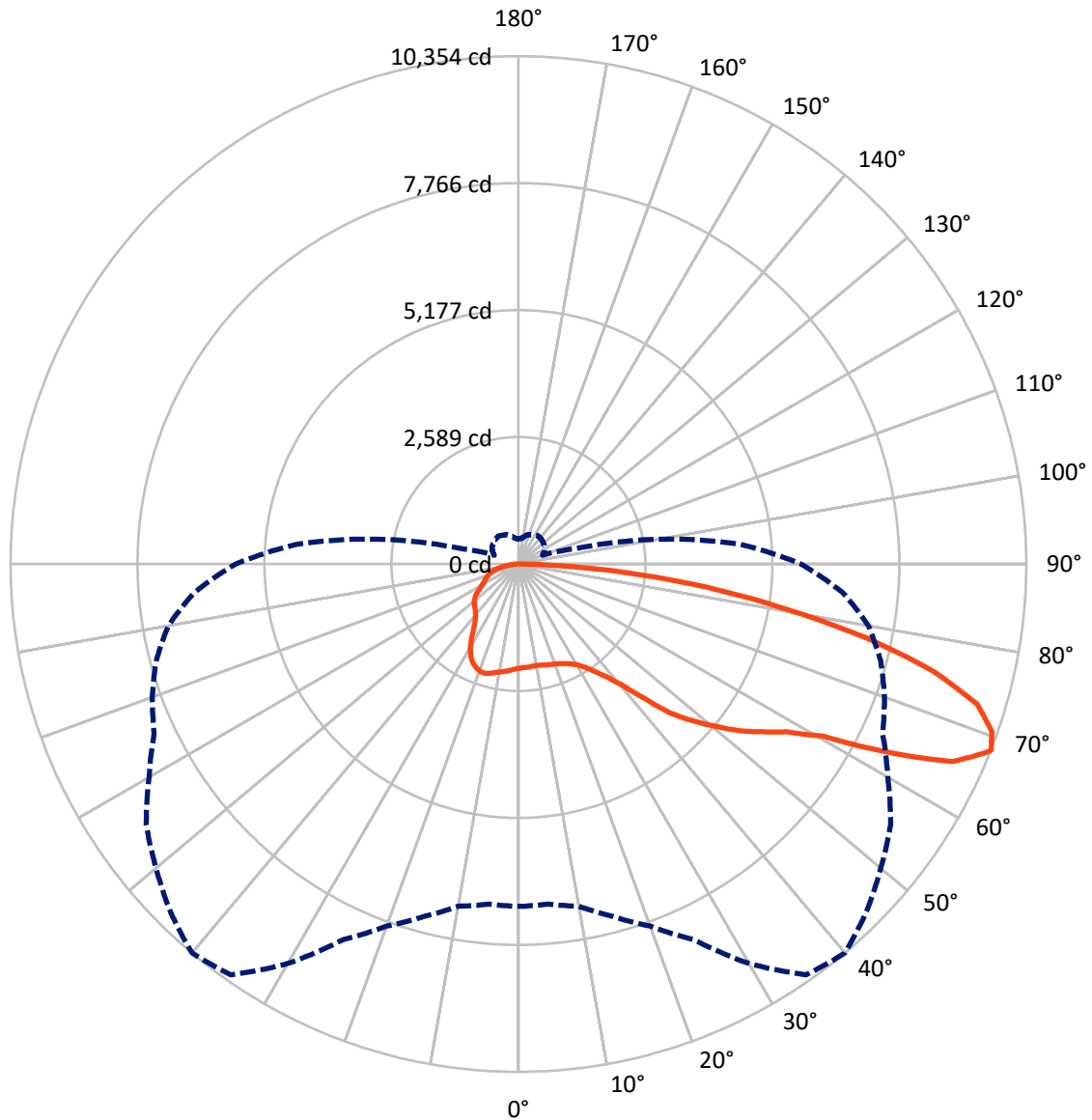
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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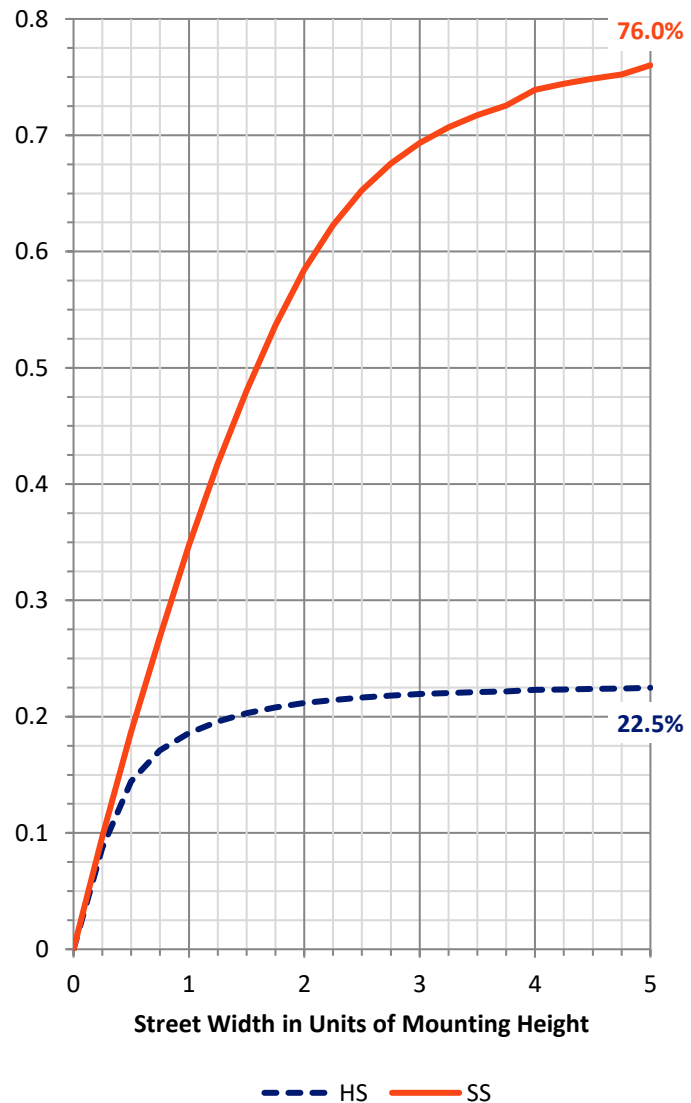
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4239.6	0.0	4239.6
	% Fixture	22.8	0.0	22.8
Street Side	Lumens	14389.4	0.0	14389.4
	% Fixture	77.2	0.0	77.2
Total	Lumens	18629.0	0.0	18629.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.5	1.1
10°-20°	630.6	3.4
20°-30°	1061.6	5.7
30°-40°	1591.5	8.5
40°-50°	2607.0	14.0
50°-60°	3717.8	20.0
60°-70°	4684.5	25.1
70°-80°	3441.9	18.5
80°-90°	688.6	3.7
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°	18629.0	100.0
0°-180°	18629.0	100.0



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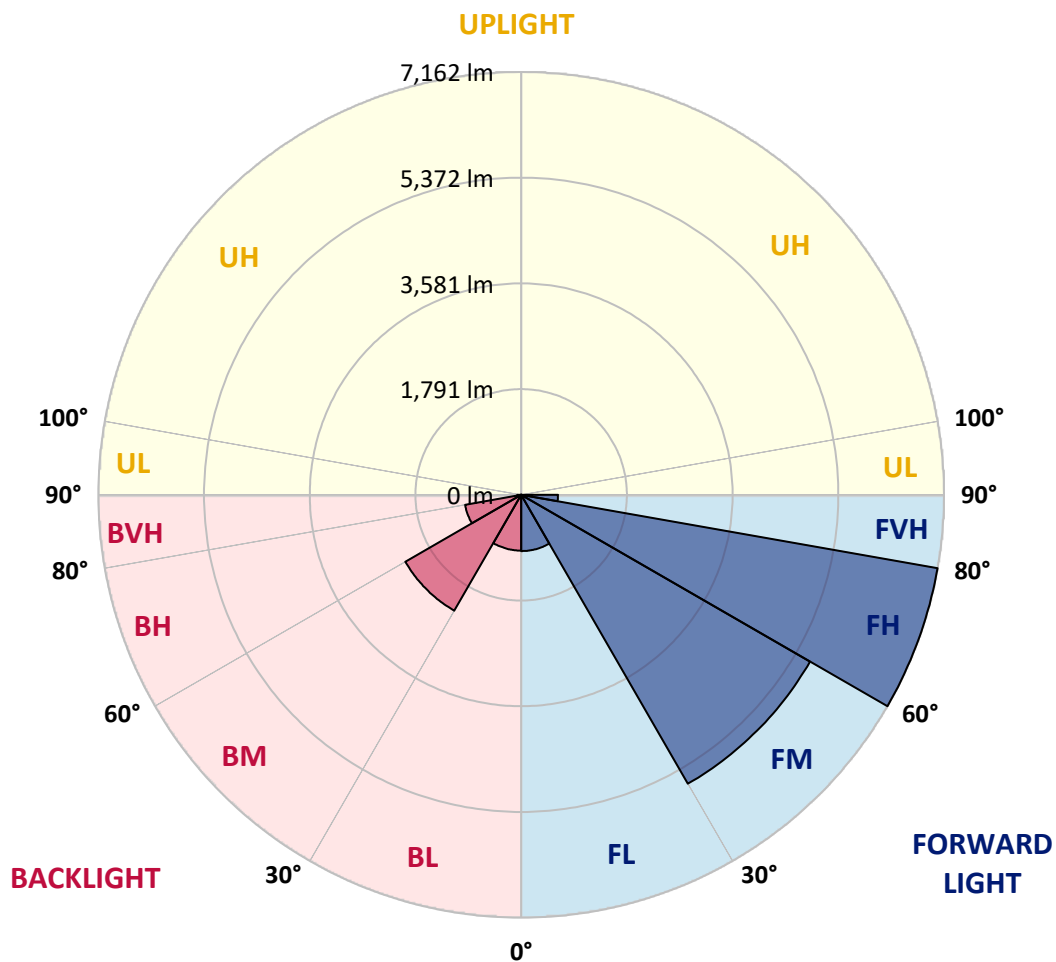
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	953.0	5.1			
FM	(30°-60°)	5649.8	30.3			
FH	(60°-80°)	7162.2	38.4			G3/7500
FVH	(80°-90°)	624.4	3.4			G4/750
BL	(0°-30°)	944.7	5.1	B2/1000		
BM	(30°-60°)	2266.5	12.2	B2/2500		
BH	(60°-80°)	964.3	5.2	B2/1000		G2/1000
BVH	(80°-90°)	64.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6
2.5°	2135.4	2134.2	2124.4	2121.9	2113.3	2114.5	2112.1	2108.4	2109.6	2102.3	2102.3
5°	2133.0	2133.0	2123.1	2120.7	2115.8	2120.7	2119.5	2112.1	2114.5	2113.3	2112.1
7.5°	2113.3	2110.9	2099.8	2098.6	2094.9	2102.3	2104.7	2098.6	2101.0	2109.6	2112.1
10°	2096.1	2097.4	2087.5	2087.5	2085.1	2097.4	2103.5	2099.8	2102.3	2114.5	2115.8
12.5°	2069.1	2072.8	2066.7	2069.1	2070.4	2087.5	2103.5	2108.4	2114.5	2125.6	2131.7
15°	2056.9	2058.1	2054.4	2059.3	2065.5	2085.1	2104.7	2119.5	2135.4	2151.4	2161.2
17.5°	2076.5	2075.3	2069.1	2070.4	2074.0	2091.2	2115.8	2137.9	2152.6	2168.5	2187.0
20°	2082.6	2086.3	2082.6	2086.3	2092.5	2110.9	2142.8	2162.4	2173.5	2188.2	2212.7
22.5°	2120.7	2115.8	2114.5	2118.2	2117.0	2134.2	2162.4	2191.9	2210.3	2218.9	2244.6
25°	2158.7	2155.0	2155.0	2162.4	2162.4	2175.9	2202.9	2227.5	2248.3	2275.3	2309.7
27.5°	2199.2	2196.8	2196.8	2211.5	2218.9	2231.1	2258.1	2285.1	2307.2	2334.2	2383.3
30°	2281.5	2276.5	2266.7	2283.9	2287.6	2298.6	2333.0	2361.2	2389.4	2425.0	2471.7
32.5°	2423.8	2415.2	2399.3	2400.5	2394.4	2402.9	2454.5	2472.9	2512.2	2549.0	2589.5
35°	2738.0	2707.3	2671.7	2649.6	2620.2	2593.2	2626.3	2652.1	2692.6	2729.4	2782.2
37.5°	3200.7	3143.0	3090.2	3065.7	3011.7	2940.5	2917.2	2880.3	2915.9	2977.3	3041.1
40°	3716.1	3716.1	3657.2	3589.7	3502.6	3383.5	3319.7	3257.1	3235.0	3255.9	3350.4
42.5°	4207.0	4223.0	4166.5	4096.5	4022.9	3899.0	3814.3	3761.5	3717.3	3695.2	3727.1
45°	4663.5	4722.4	4686.9	4609.5	4561.7	4510.1	4483.1	4387.4	4328.5	4240.1	4209.5
47.5°	5003.5	5061.2	5023.1	4910.2	4882.0	4873.4	4872.2	4809.6	4772.8	4690.5	4640.2
50°	5356.9	5441.6	5374.1	5175.3	5192.5	5198.6	5210.9	5193.7	5197.4	5179.0	5150.8
52.5°	5911.6	5920.2	5682.1	5521.4	5489.5	5496.8	5550.8	5577.8	5647.8	5587.7	5599.9
55°	6717.9	6456.5	6154.6	6030.7	5898.1	5841.7	5850.3	5930.1	6040.5	5986.5	5993.9
57.5°	6985.5	7029.7	7044.4	6789.1	6713.0	6551.0	6516.7	6351.0	6455.3	6380.5	6405.0
60°	7547.6	7671.5	7643.3	7705.9	7547.6	7541.4	7595.4	7232.2	7127.8	6921.7	6871.4
62.5°	8175.9	8174.7	8345.3	8393.1	8458.2	8358.8	8574.8	8534.3	8450.8	7849.5	7486.2
65°	7923.1	7918.2	8029.9	8406.6	8536.7	8822.7	9140.5	9579.9	9714.9	9428.9	8842.3
67.5°	7062.8	7094.7	7232.2	7680.1	8050.7	8561.3	9339.3	10157.9	10270.8	9983.6	9588.5
68°	6980.6	6960.9	7083.7	7440.8	7855.6	8448.4	9405.6	10225.4	10354.3	10032.7	9644.9
70°	6049.1	6029.5	6257.7	6662.7	7111.9	7972.2	9490.3	10208.2	10241.4	9948.1	9597.1
72.5°	4712.6	4689.3	4904.1	5231.8	5733.7	6666.4	8765.0	9760.3	9779.9	9502.6	9219.1
75°	3424.0	3395.8	3597.1	3886.7	4302.7	5123.8	7253.0	8511.0	8746.6	8778.5	8692.6
77.5°	2362.4	2421.4	2620.2	2830.0	3200.7	3822.9	5482.1	6802.6	7260.4	7548.8	7743.9
80°	1588.1	1685.0	1838.4	2037.2	2333.0	2821.4	4078.1	5083.3	5482.1	5770.5	5911.6
82.5°	1041.9	1056.7	1181.8	1353.7	1608.9	2001.6	2880.3	3606.9	3836.4	3873.2	3732.1
85°	547.4	590.3	667.6	775.6	935.2	1172.0	1595.4	2064.2	2148.9	2133.0	1926.8
87.5°	200.0	217.2	255.3	306.8	382.9	495.8	641.8	717.9	543.7	400.1	285.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6
2.5°	2106.0	2096.1	2094.9	2113.3	2108.4	2108.4	2106.0	2114.5	2106.0	2106.0	2118.2
5°	2110.9	2104.7	2104.7	2124.4	2129.3	2124.4	2129.3	2129.3	2126.8	2131.7	2140.3
7.5°	2109.6	2112.1	2113.3	2125.6	2140.3	2134.2	2148.9	2140.3	2151.4	2161.2	2163.6
10°	2109.6	2124.4	2130.5	2134.2	2147.7	2148.9	2160.0	2151.4	2168.5	2182.0	2184.5
12.5°	2131.7	2150.1	2172.2	2177.1	2188.2	2204.1	2205.4	2204.1	2226.2	2236.0	2247.1
15°	2168.5	2190.6	2217.6	2229.9	2244.6	2275.3	2271.6	2285.1	2309.7	2320.7	2340.4
17.5°	2207.8	2232.4	2264.3	2287.6	2309.7	2346.5	2344.0	2369.8	2394.4	2411.5	2433.6
20°	2243.4	2276.5	2313.4	2346.5	2383.3	2418.9	2426.3	2456.9	2491.3	2518.3	2536.7
22.5°	2285.1	2321.9	2362.4	2410.3	2456.9	2491.3	2523.2	2568.6	2606.7	2633.7	2644.7
25°	2351.4	2389.4	2434.9	2502.4	2553.9	2596.9	2655.8	2712.2	2747.8	2757.6	2753.9
27.5°	2434.9	2477.8	2533.0	2621.4	2677.9	2741.7	2826.3	2875.4	2895.1	2876.7	2828.8
30°	2531.8	2590.7	2659.4	2752.7	2826.3	2929.4	3032.5	3074.3	3052.2	2981.0	2876.7
32.5°	2665.6	2747.8	2828.8	2929.4	3050.9	3195.7	3302.5	3317.2	3232.6	3087.8	2922.1
35°	2876.7	2976.1	3079.2	3214.2	3436.3	3631.4	3718.6	3667.0	3486.6	3254.7	3005.5
37.5°	3160.2	3281.7	3435.1	3633.9	3964.0	4187.4	4224.2	4106.4	3838.8	3495.2	3125.8
40°	3492.7	3657.2	3860.9	4200.9	4554.3	4756.8	4744.5	4571.5	4227.9	3773.8	3286.6
42.5°	3910.0	4091.6	4348.1	4743.3	5142.2	5284.5	5225.6	5013.3	4607.1	4070.8	3462.1
45°	4317.5	4502.8	4792.4	5235.4	5618.3	5728.8	5635.5	5395.0	4947.0	4353.0	3660.9
47.5°	4724.9	4852.5	5220.7	5704.2	6063.8	6124.0	5987.7	5683.4	5229.3	4596.0	3804.5
50°	5204.8	5302.9	5687.1	6195.1	6462.7	6475.0	6330.1	5935.0	5428.1	4743.3	3912.5
52.5°	5655.2	5819.6	6217.2	6649.2	6813.7	6757.2	6594.0	6159.5	5572.9	4895.5	3943.1
55°	6090.8	6332.6	6765.8	7048.1	7114.3	7022.3	6770.7	6320.3	5693.2	4896.7	3917.4
57.5°	6510.5	6845.6	7250.6	7434.7	7405.2	7218.7	6841.9	6357.1	5705.5	4828.0	3814.3
60°	6969.5	7316.8	7671.5	7712.0	7584.4	7327.9	6903.3	6369.4	5634.3	4685.6	3638.8
62.5°	7472.7	7741.5	7945.2	7863.0	7685.0	7416.2	6929.0	6250.4	5515.2	4442.6	3231.3
65°	8160.0	8167.3	8148.9	7978.3	7707.1	7337.7	6821.0	6176.7	5217.0	3981.2	2514.6
67.5°	9176.1	8617.7	8211.5	7956.2	7656.8	7255.5	6693.4	5820.8	4707.7	3134.4	1442.0
68°	9264.5	8696.3	8193.1	7942.7	7647.0	7246.9	6629.6	5757.0	4551.9	2907.3	1215.0
70°	9285.3	8696.3	8081.4	7864.2	7607.7	7082.4	6292.1	5145.8	3718.6	1865.4	505.6
72.5°	9008.0	8376.0	7947.6	7795.5	7351.2	6524.0	5359.4	3922.3	2256.9	585.4	385.4
75°	8636.1	7994.3	7472.7	7024.8	6374.3	5209.7	3847.4	2256.9	659.0	285.9	335.0
77.5°	7532.8	6834.5	6235.6	5657.6	4667.2	3371.2	1905.9	575.6	207.4	229.5	282.3
80°	5364.3	4589.9	3719.8	2913.5	1678.9	640.6	230.7	147.3	149.7	174.3	227.0
82.5°	2949.1	1957.5	1168.3	452.9	157.1	135.0	121.5	100.6	105.5	141.1	165.7
85°	1284.9	619.8	187.8	114.1	99.4	90.8	77.3	70.0	89.6	93.3	89.6
87.5°	121.5	61.4	49.1	46.6	38.0	33.1	24.5	23.3	22.1	22.1	25.8
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6
2.5°	2115.8	2118.2	2128.0	2125.6	2133.0	2144.0	2145.2	2151.4	2158.7	2166.1	2175.9
5°	2150.1	2150.1	2155.0	2151.4	2157.5	2163.6	2173.5	2175.9	2185.7	2200.5	2214.0
7.5°	2175.9	2174.7	2175.9	2185.7	2193.1	2193.1	2202.9	2204.1	2214.0	2226.2	2237.3
10°	2201.7	2217.6	2212.7	2220.1	2222.5	2223.8	2228.7	2231.1	2244.6	2249.5	2258.1
12.5°	2258.1	2272.9	2264.3	2275.3	2276.5	2270.4	2263.0	2261.8	2261.8	2256.9	2253.2
15°	2340.4	2347.7	2342.8	2334.2	2328.1	2326.9	2303.5	2285.1	2269.2	2247.1	2229.9
17.5°	2432.4	2428.7	2415.2	2404.2	2379.6	2362.4	2331.8	2291.3	2254.5	2206.6	2173.5
20°	2530.6	2504.8	2497.4	2459.4	2415.2	2372.3	2323.2	2266.7	2200.5	2130.5	2074.0
22.5°	2617.7	2579.7	2545.3	2495.0	2426.3	2361.2	2285.1	2212.7	2129.3	2033.5	1952.5
25°	2699.9	2627.5	2568.6	2495.0	2405.4	2320.7	2225.0	2133.0	2023.7	1904.7	1799.1
27.5°	2745.3	2647.2	2551.4	2452.0	2350.2	2234.8	2129.3	2013.9	1885.1	1750.1	1623.6
30°	2750.3	2631.2	2506.0	2368.6	2245.9	2112.1	1988.1	1844.6	1703.4	1563.5	1467.8
32.5°	2752.7	2585.8	2418.9	2254.5	2103.5	1948.9	1806.5	1648.2	1529.1	1443.2	1369.6
35°	2755.2	2530.6	2317.0	2101.0	1929.2	1762.3	1612.6	1488.6	1404.0	1347.5	1288.6
37.5°	2782.2	2479.0	2206.6	1950.1	1759.9	1593.0	1467.8	1373.3	1315.6	1273.9	1229.7
40°	2812.8	2417.7	2090.0	1807.7	1611.4	1464.1	1370.8	1311.9	1269.0	1237.1	1201.5
42.5°	2834.9	2310.9	1930.5	1665.4	1476.4	1361.0	1308.2	1276.3	1251.8	1228.5	1189.2
45°	2874.2	2193.1	1751.3	1485.0	1351.2	1281.2	1259.2	1248.1	1229.7	1206.4	1163.4
47.5°	2920.8	2067.9	1569.6	1334.0	1238.3	1227.2	1226.0	1216.2	1190.4	1165.9	1121.7
50°	2945.4	1944.0	1378.2	1207.6	1168.3	1176.9	1184.3	1174.5	1136.4	1100.8	1061.6
52.5°	3021.5	1888.7	1205.2	1107.0	1109.4	1118.0	1122.9	1109.4	1072.6	1035.8	995.3
55°	3143.0	1809.0	1076.3	1007.6	1029.7	1041.9	1054.2	1033.3	1008.8	981.8	951.1
57.5°	2972.4	1515.6	942.5	914.3	927.8	938.8	947.4	947.4	947.4	949.9	927.8
60°	2406.6	1078.7	814.9	796.5	813.7	835.8	864.0	879.9	886.1	888.5	878.7
62.5°	1694.8	765.8	702.0	713.0	735.1	771.9	798.9	816.1	813.7	798.9	776.8
65°	948.7	636.9	648.0	681.1	699.5	729.0	753.5	763.3	744.9	722.8	703.2
67.5°	535.1	584.2	628.4	656.6	672.5	689.7	704.4	715.5	693.4	667.6	652.9
68°	521.6	576.8	623.4	648.0	663.9	681.1	692.2	699.5	676.2	652.9	640.6
70°	486.0	563.3	602.6	622.2	623.4	651.7	654.1	659.0	639.4	612.4	596.4
72.5°	445.5	533.9	553.5	569.4	582.9	592.8	616.1	606.3	581.7	558.4	521.6
75°	411.1	457.8	476.2	513.0	522.8	538.8	551.0	527.7	490.9	468.8	446.7
77.5°	357.1	380.4	400.1	407.4	436.9	449.2	462.7	462.7	440.6	443.0	409.9
80°	274.9	277.4	270.0	292.1	331.4	347.3	352.2	342.4	358.4	355.9	342.4
82.5°	158.3	147.3	159.5	165.7	185.3	200.0	224.6	245.4	247.9	240.5	255.3
85°	66.3	58.9	67.5	77.3	98.2	121.5	149.7	160.8	158.3	153.4	141.1
87.5°	27.0	27.0	31.9	38.0	50.3	63.8	72.4	84.7	92.0	94.5	88.4
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):

	165°	170°	175°	180°
0°	2125.6	2125.6	2125.6	2125.6
2.5°	2179.6	2178.4	2177.1	2174.7
5°	2217.6	2218.9	2218.9	2217.6
7.5°	2245.9	2252.0	2253.2	2253.2
10°	2268.0	2272.9	2274.1	2272.9
12.5°	2260.6	2261.8	2266.7	2268.0
15°	2226.2	2217.6	2215.2	2214.0
17.5°	2145.2	2123.1	2104.7	2096.1
20°	2017.6	1974.6	1939.0	1930.5
22.5°	1875.2	1809.0	1762.3	1746.4
25°	1703.4	1621.2	1570.9	1554.9
27.5°	1535.3	1454.3	1418.7	1399.1
30°	1396.6	1336.5	1297.2	1277.6
32.5°	1304.6	1245.7	1205.2	1186.7
35°	1228.5	1167.1	1113.1	1088.6
37.5°	1178.2	1105.7	1043.2	1018.6
40°	1148.7	1083.7	1016.2	989.2
42.5°	1134.0	1078.7	1018.6	989.2
45°	1110.7	1051.8	1000.2	968.3
47.5°	1075.1	1019.8	968.3	938.8
50°	1010.0	953.6	911.8	888.5
52.5°	941.3	878.7	834.5	808.8
55°	894.7	832.1	797.7	780.5
57.5°	886.1	827.2	792.8	773.2
60°	835.8	779.3	735.1	714.3
62.5°	727.8	672.5	638.2	624.7
65°	660.3	607.5	574.4	564.5
67.5°	616.1	560.9	526.5	519.1
68°	605.0	549.8	520.4	510.5
70°	554.7	501.9	476.2	466.4
72.5°	447.9	396.4	362.0	349.8
75°	390.3	333.8	305.6	299.4
77.5°	342.4	276.1	247.9	241.8
80°	277.4	218.4	149.7	139.9
82.5°	207.4	133.8	111.7	101.9
85°	120.3	92.0	72.4	67.5
87.5°	76.1	63.8	55.2	51.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)