

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: P200750

Luminaire Tested: **VERD-M-A04-E-U-T4-7050-AP**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P200750
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-A04-E-U-T4-7050-AP
Description: VERDEON-M ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K LEDS AND TYPE IV OPTICS, GREY PAINTED FINISH
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29118 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Luminous Opening: Rectangular (W 1.35' x L: 1.58' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

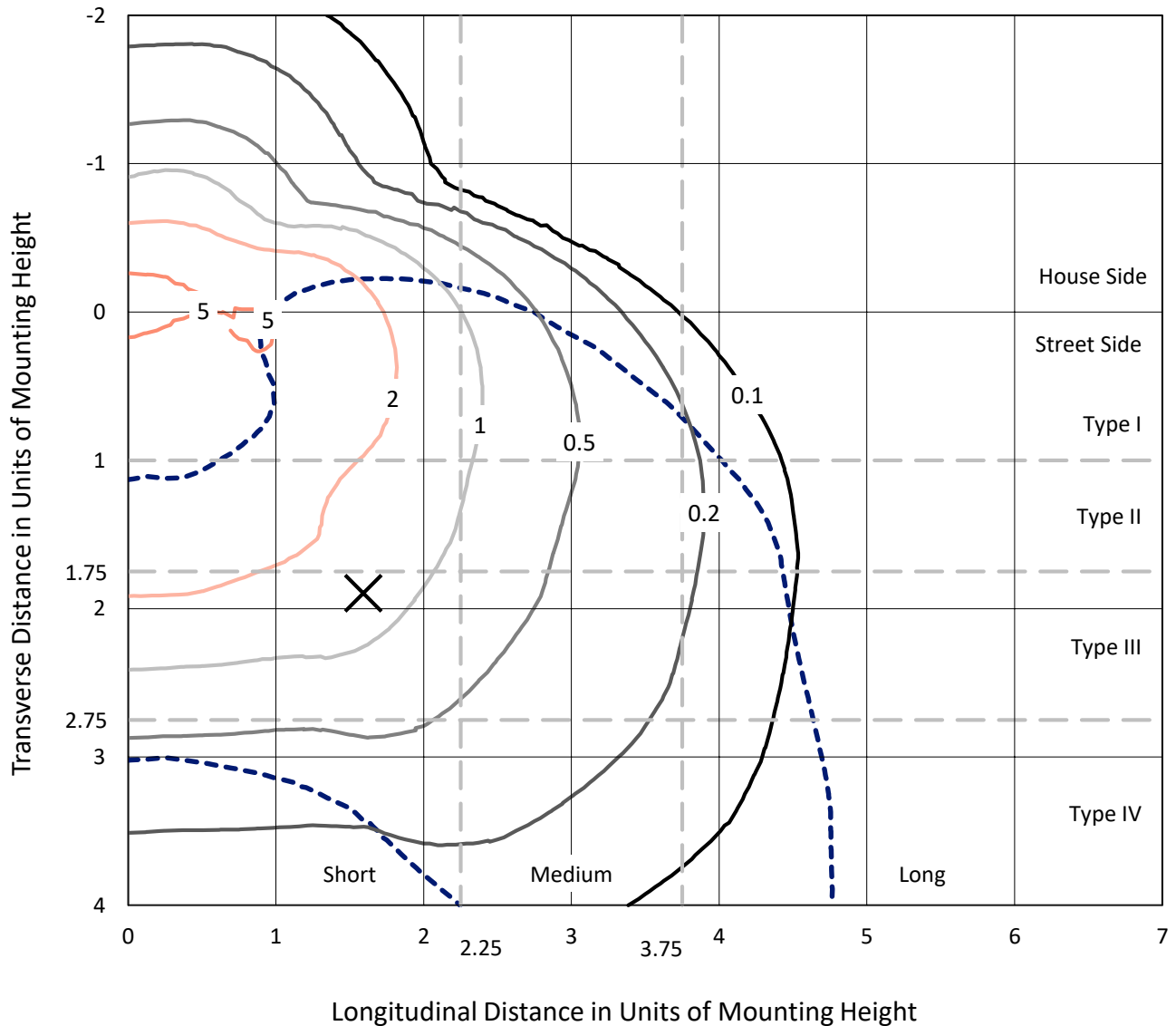
Input Watts (W): 247
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

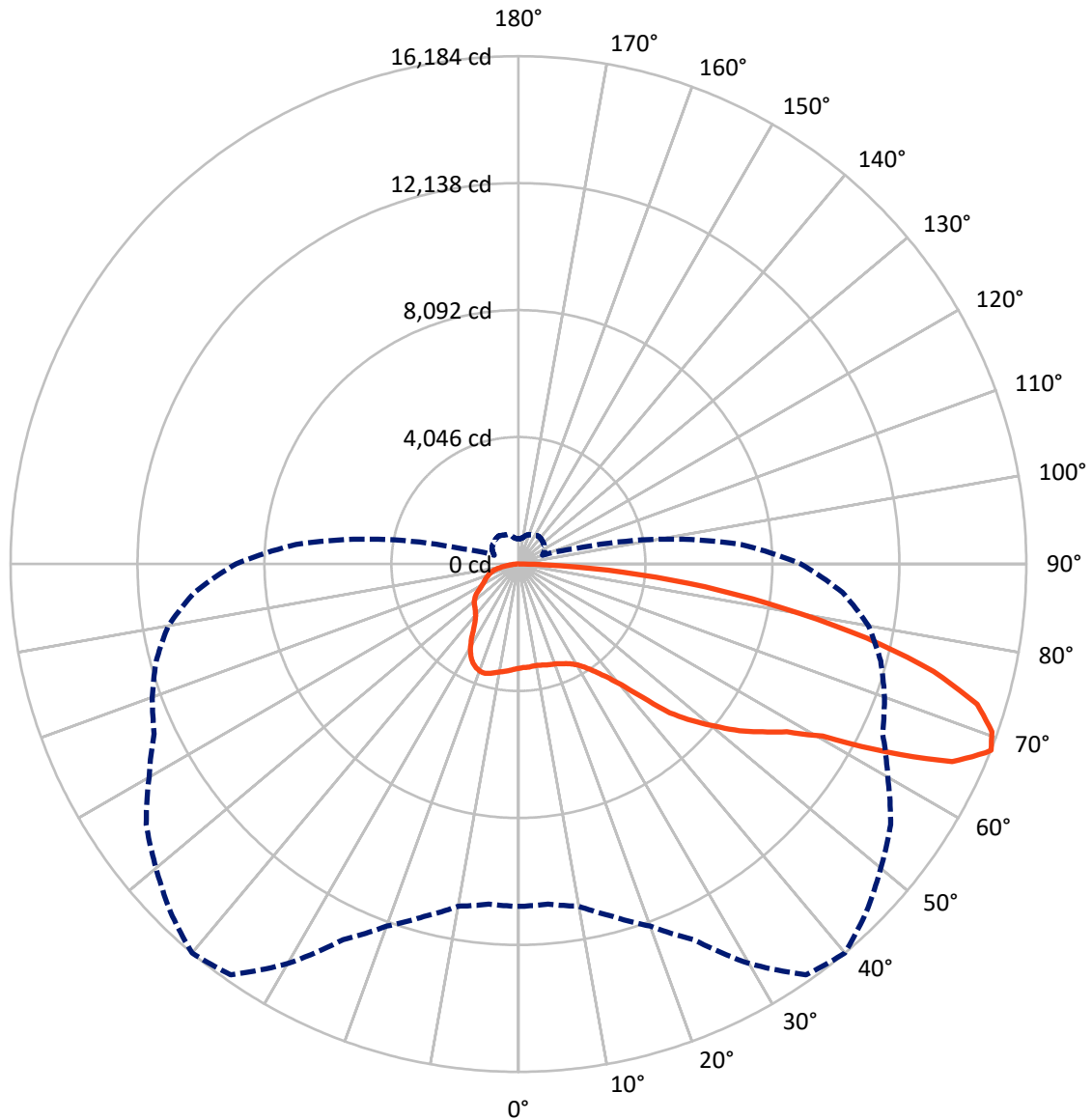
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 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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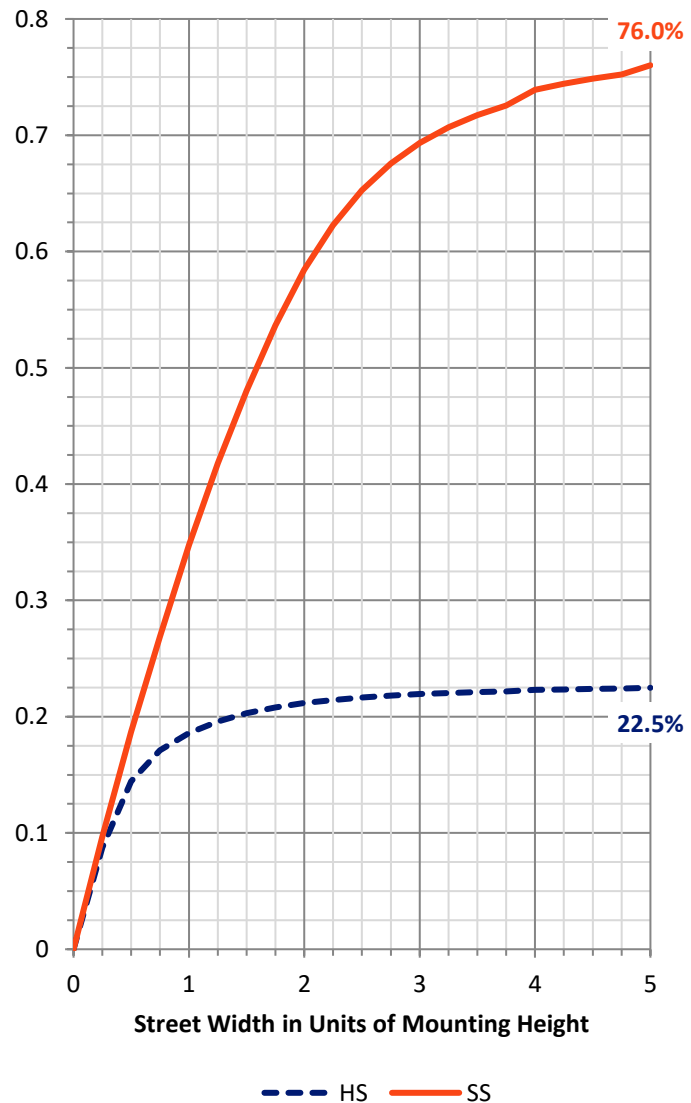
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6626.7	0.0	6626.7
	% Fixture	22.8	0.0	22.8
Street Side	Lumens	22491.3	0.0	22491.3
	% Fixture	77.2	0.0	77.2
Total	Lumens	29118.0	0.0	29118.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	321.1	1.1
10°-20°	985.7	3.4
20°-30°	1659.3	5.7
30°-40°	2487.6	8.5
40°-50°	4074.9	14.0
50°-60°	5811.0	20.0
60°-70°	7322.2	25.1
70°-80°	5379.8	18.5
80°-90°	1076.3	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°	29118.0	100.0
0°-180°	29118.0	100.0



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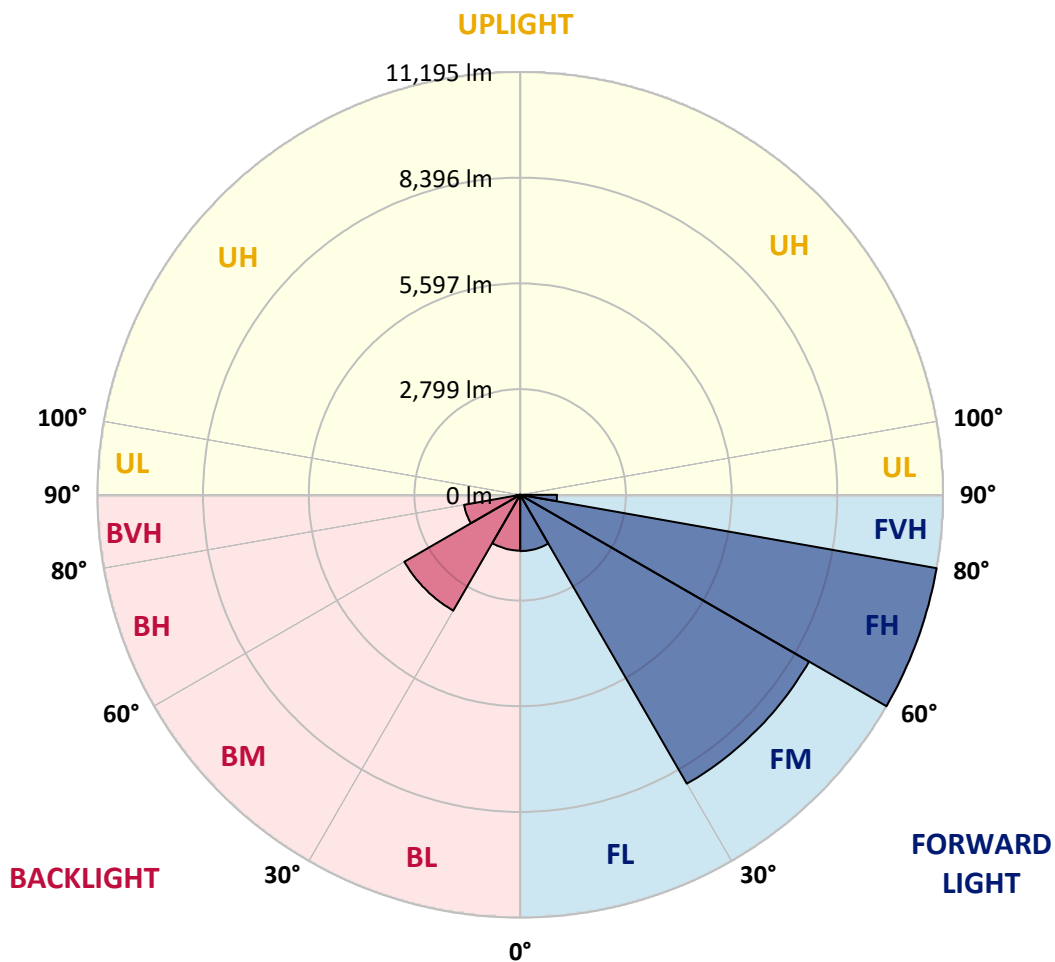
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1489.7	5.1			
FM	(30°-60°)	8830.9	30.3			
FH	(60°-80°)	11194.8	38.4			G4/12000
FVH	(80°-90°)	976.0	3.4			G5
BL	(0°-30°)	1476.6	5.1	B3/2500		
BM	(30°-60°)	3542.7	12.2	B3/5000		
BH	(60°-80°)	1507.2	5.2	B3/2500		G3/2500
BVH	(80°-90°)	100.3	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4
2.5°	3337.7	3335.8	3320.5	3316.6	3303.2	3305.1	3301.3	3295.5	3297.5	3286.0	3286.0
5°	3333.9	3333.9	3318.6	3314.7	3307.1	3314.7	3312.8	3301.3	3305.1	3303.2	3301.3
7.5°	3303.2	3299.4	3282.1	3280.2	3274.4	3286.0	3289.8	3280.2	3284.0	3297.5	3301.3
10°	3276.4	3278.3	3262.9	3262.9	3259.1	3278.3	3287.9	3282.1	3286.0	3305.1	3307.1
12.5°	3234.2	3239.9	3230.3	3234.2	3236.1	3262.9	3287.9	3295.5	3305.1	3322.4	3332.0
15°	3215.0	3216.9	3211.1	3218.8	3228.4	3259.1	3289.8	3312.8	3337.7	3362.7	3378.0
17.5°	3245.7	3243.7	3234.2	3236.1	3241.8	3268.7	3307.1	3341.6	3364.6	3389.5	3418.3
20°	3255.3	3261.0	3255.3	3261.0	3270.6	3299.4	3349.3	3379.9	3397.2	3420.2	3458.6
22.5°	3314.7	3307.1	3305.1	3310.9	3309.0	3335.8	3379.9	3426.0	3454.8	3468.2	3508.5
25°	3374.2	3368.4	3368.4	3379.9	3379.9	3401.0	3443.2	3481.6	3514.2	3556.4	3610.1
27.5°	3437.5	3433.7	3433.7	3456.7	3468.2	3487.4	3529.6	3571.8	3606.3	3648.5	3725.2
30°	3566.0	3558.3	3543.0	3569.9	3575.6	3592.9	3646.6	3690.7	3734.8	3790.4	3863.3
32.5°	3788.5	3775.1	3750.2	3752.1	3742.5	3755.9	3836.5	3865.3	3926.6	3984.2	4047.5
35°	4279.6	4231.6	4176.0	4141.5	4095.4	4053.2	4105.0	4145.3	4208.6	4266.2	4348.7
37.5°	5002.8	4912.6	4830.1	4791.8	4707.4	4596.1	4559.7	4502.1	4557.7	4653.7	4753.4
40°	5808.4	5808.4	5716.4	5610.9	5474.7	5288.6	5188.8	5091.0	5056.5	5089.1	5236.8
42.5°	6575.7	6600.7	6512.4	6403.1	6288.0	6094.3	5961.9	5879.4	5810.4	5775.8	5825.7
45°	7289.3	7381.4	7325.8	7204.9	7130.1	7049.5	7007.3	6857.7	6765.6	6627.5	6579.6
47.5°	7820.7	7910.8	7851.4	7674.9	7630.8	7617.3	7615.4	7517.6	7460.0	7331.5	7252.9
50°	8373.1	8505.5	8400.0	8089.2	8116.1	8125.7	8144.9	8118.0	8123.8	8095.0	8050.9
52.5°	9240.2	9253.6	8881.5	8630.2	8580.3	8591.8	8676.2	8718.4	8827.8	8733.8	8752.9
55°	10500.5	10091.9	9620.0	9426.2	9219.1	9130.8	9144.3	9269.0	9441.6	9357.2	9368.7
57.5°	10918.6	10987.7	11010.7	10611.7	10492.8	10239.6	10185.9	9926.9	10090.0	9972.9	10011.3
60°	11797.2	11990.9	11946.8	12044.6	11797.2	11787.6	11872.0	11304.2	11141.2	10818.9	10740.2
62.5°	12779.3	12777.4	13044.1	13118.9	13220.5	13065.2	13402.8	13339.5	13209.0	12269.1	11701.3
65°	12384.2	12376.5	12551.1	13140.0	13343.3	13790.3	14287.1	14973.8	15184.8	14737.9	13820.9
67.5°	11039.5	11089.4	11304.2	12004.4	12583.7	13381.7	14597.8	15877.3	16053.8	15604.9	14987.2
68°	10911.0	10880.3	11072.1	11630.3	12278.7	13205.2	14701.4	15982.8	16184.2	15681.6	15075.5
70°	9455.0	9424.3	9781.1	10414.1	11116.2	12460.9	14833.8	15955.9	16007.7	15549.3	15000.7
72.5°	7366.1	7329.6	7665.3	8177.5	8962.0	10419.9	13700.1	15255.8	15286.5	14853.0	14409.8
75°	5351.9	5307.8	5622.4	6075.1	6725.4	8008.7	11336.8	13303.0	13671.3	13721.2	13586.9
77.5°	3692.6	3784.7	4095.4	4423.5	5002.8	5975.3	8568.8	10632.8	11348.3	11799.1	12104.1
80°	2482.2	2633.7	2873.5	3184.3	3646.6	4410.0	6374.3	7945.4	8568.8	9019.6	9240.2
82.5°	1628.6	1651.6	1847.3	2115.8	2514.8	3128.7	4502.1	5637.7	5996.4	6054.0	5833.4
85°	855.5	922.7	1043.5	1212.3	1461.7	1831.9	2493.7	3226.5	3358.8	3333.9	3011.6
87.5°	312.7	339.5	399.0	479.6	598.5	775.0	1003.2	1122.2	849.8	625.3	447.0
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°	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4
2.5°	3291.7	3276.4	3274.4	3303.2	3295.5	3295.5	3291.7	3305.1	3291.7	3291.7	3310.9
5°	3299.4	3289.8	3289.8	3320.5	3328.2	3320.5	3328.2	3328.2	3324.3	3332.0	3345.4
7.5°	3297.5	3301.3	3303.2	3322.4	3345.4	3335.8	3358.8	3345.4	3362.7	3378.0	3381.9
10°	3297.5	3320.5	3330.1	3335.8	3356.9	3358.8	3376.1	3362.7	3389.5	3410.6	3414.5
12.5°	3332.0	3360.8	3395.3	3403.0	3420.2	3445.2	3447.1	3445.2	3479.7	3495.0	3512.3
15°	3389.5	3424.1	3466.3	3485.4	3508.5	3556.4	3550.7	3571.8	3610.1	3627.4	3658.1
17.5°	3450.9	3489.3	3539.2	3575.6	3610.1	3667.7	3663.8	3704.1	3742.5	3769.3	3803.9
20°	3506.5	3558.3	3615.9	3667.7	3725.2	3780.9	3792.4	3840.3	3894.0	3936.2	3965.0
22.5°	3571.8	3629.3	3692.6	3767.4	3840.3	3894.0	3943.9	4014.9	4074.3	4116.6	4133.8
25°	3675.4	3734.8	3805.8	3911.3	3991.9	4059.0	4151.1	4239.3	4294.9	4310.3	4304.5
27.5°	3805.8	3872.9	3959.3	4097.4	4185.6	4285.4	4417.7	4494.4	4525.1	4496.4	4421.6
30°	3957.3	4049.4	4156.8	4302.6	4417.7	4578.8	4740.0	4805.2	4770.7	4659.4	4496.4
32.5°	4166.4	4294.9	4421.6	4578.8	4768.8	4995.1	5162.0	5185.0	5052.7	4826.3	4567.3
35°	4496.4	4651.7	4812.9	5023.9	5371.1	5676.1	5812.3	5731.7	5449.7	5087.2	4697.8
37.5°	4939.5	5129.4	5369.2	5679.9	6195.9	6545.0	6602.6	6418.4	6000.3	5463.2	4885.8
40°	5459.3	5716.4	6034.8	6566.1	7118.6	7435.1	7415.9	7145.5	6608.3	5898.6	5137.1
42.5°	6111.5	6395.4	6796.3	7414.0	8037.4	8260.0	8167.9	7836.0	7201.1	6362.8	5411.4
45°	6748.4	7038.0	7490.7	8183.2	8781.7	8954.4	8808.6	8432.6	7732.4	6804.0	5722.1
47.5°	7385.2	7584.7	8160.2	8916.0	9478.0	9572.0	9359.1	8883.4	8173.6	7183.8	5946.6
50°	8135.3	8288.7	8889.1	9683.3	10101.5	10120.7	9894.3	9276.6	8484.4	7414.0	6115.4
52.5°	8839.3	9096.3	9717.8	10393.0	10650.1	10561.8	10306.7	9627.7	8710.7	7651.9	6163.3
55°	9520.2	9898.1	10575.3	11016.5	11120.1	10976.2	10582.9	9879.0	8898.7	7653.8	6123.0
57.5°	10176.3	10700.0	11333.0	11620.7	11574.7	11283.1	10694.2	9936.5	8917.9	7546.4	5961.9
60°	10893.7	11436.6	11990.9	12054.2	11854.7	11453.8	10790.1	9955.7	8806.7	7323.9	5687.6
62.5°	11680.2	12100.3	12418.7	12290.2	12012.0	11591.9	10830.4	9769.6	8620.6	6944.0	5050.7
65°	12754.4	12765.9	12737.1	12470.5	12046.6	11469.2	10661.6	9654.5	8154.5	6222.8	3930.5
67.5°	14342.7	13469.9	12835.0	12436.0	11967.9	11340.7	10462.1	9098.2	7358.4	4899.2	2253.9
68°	14480.8	13592.7	12806.2	12414.9	11952.6	11327.2	10362.4	8998.5	7114.8	4544.3	1899.1
70°	14513.4	13592.7	12631.6	12292.1	11891.2	11070.2	9834.8	8043.2	5812.3	2915.7	790.3
72.5°	14079.9	13092.0	12422.5	12184.7	11490.3	10197.4	8377.0	6130.7	3527.6	915.0	602.3
75°	13498.7	12495.4	11680.2	10980.0	9963.4	8142.9	6013.7	3527.6	1030.1	447.0	523.7
77.5°	11774.2	10682.7	9746.6	8843.1	7295.1	5269.4	2979.0	899.7	324.2	358.7	441.2
80°	8384.6	7174.2	5814.2	4553.9	2624.2	1001.3	360.6	230.2	234.0	272.4	354.9
82.5°	4609.5	3059.6	1826.2	707.8	245.5	211.0	189.9	157.3	165.0	220.6	259.0
85°	2008.4	968.7	293.5	178.4	155.4	142.0	120.8	109.3	140.0	145.8	140.0
87.5°	189.9	95.9	76.7	72.9	59.5	51.8	38.4	36.4	34.5	34.5	40.3
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°	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4	3322.4
2.5°	3307.1	3310.9	3326.2	3322.4	3333.9	3351.2	3353.1	3362.7	3374.2	3385.7	3401.0
5°	3360.8	3360.8	3368.4	3362.7	3372.3	3381.9	3397.2	3401.0	3416.4	3439.4	3460.5
7.5°	3401.0	3399.1	3401.0	3416.4	3427.9	3427.9	3443.2	3445.2	3460.5	3479.7	3497.0
10°	3441.3	3466.3	3458.6	3470.1	3473.9	3475.9	3483.5	3487.4	3508.5	3516.1	3529.6
12.5°	3529.6	3552.6	3539.2	3556.4	3558.3	3548.8	3537.2	3535.3	3535.3	3527.6	3521.9
15°	3658.1	3669.6	3661.9	3648.5	3638.9	3637.0	3600.5	3571.8	3546.8	3512.3	3485.4
17.5°	3802.0	3796.2	3775.1	3757.8	3719.5	3692.6	3644.7	3581.4	3523.8	3449.0	3397.2
20°	3955.4	3915.1	3903.6	3844.2	3775.1	3708.0	3631.2	3543.0	3439.4	3330.1	3241.8
22.5°	4091.6	4032.1	3978.4	3899.8	3792.4	3690.7	3571.8	3458.6	3328.2	3178.5	3051.9
25°	4220.1	4107.0	4014.9	3899.8	3759.8	3627.4	3477.8	3333.9	3163.2	2977.1	2812.1
27.5°	4291.1	4137.7	3988.0	3832.7	3673.4	3493.1	3328.2	3147.8	2946.4	2735.4	2537.8
30°	4298.8	4112.7	3917.1	3702.2	3510.4	3301.3	3107.6	2883.1	2662.5	2443.8	2294.2
32.5°	4302.6	4041.7	3780.9	3523.8	3287.9	3046.2	2823.7	2576.2	2390.1	2255.9	2140.8
35°	4306.5	3955.4	3621.6	3284.0	3015.5	2754.6	2520.6	2326.8	2194.5	2106.2	2014.2
37.5°	4348.7	3874.9	3449.0	3048.1	2750.8	2489.9	2294.2	2146.5	2056.4	1991.1	1922.1
40°	4396.6	3778.9	3266.8	2825.6	2518.7	2288.5	2142.7	2050.6	1983.5	1933.6	1878.0
42.5°	4431.1	3612.1	3017.4	2603.1	2307.6	2127.3	2044.8	1995.0	1956.6	1920.2	1858.8
45°	4492.5	3427.9	2737.3	2321.1	2112.0	2002.6	1968.1	1950.9	1922.1	1885.6	1818.5
47.5°	4565.4	3232.2	2453.4	2085.1	1935.5	1918.2	1916.3	1901.0	1860.7	1822.3	1753.3
50°	4603.8	3038.5	2154.2	1887.6	1826.2	1839.6	1851.1	1835.8	1776.3	1720.7	1659.3
52.5°	4722.7	2952.2	1883.7	1730.3	1734.1	1747.5	1755.2	1734.1	1676.5	1619.0	1555.7
55°	4912.6	2827.5	1682.3	1574.9	1609.4	1628.6	1647.8	1615.2	1576.8	1534.6	1486.6
57.5°	4646.0	2369.0	1473.2	1429.1	1450.2	1467.5	1480.9	1480.9	1480.9	1484.7	1450.2
60°	3761.7	1686.1	1273.7	1244.9	1271.8	1306.3	1350.4	1375.4	1385.0	1388.8	1373.5
62.5°	2649.1	1197.0	1097.2	1114.5	1149.0	1206.6	1248.8	1275.6	1271.8	1248.8	1214.2
65°	1482.8	995.6	1012.8	1064.6	1093.4	1139.4	1177.8	1193.1	1164.4	1129.8	1099.2
67.5°	836.4	913.1	982.1	1026.3	1051.2	1078.1	1101.1	1118.3	1083.8	1043.5	1020.5
68°	815.3	901.6	974.5	1012.8	1037.8	1064.6	1081.9	1093.4	1057.0	1020.5	1001.3
70°	759.6	880.5	941.9	972.5	974.5	1018.6	1022.4	1030.1	999.4	957.2	932.3
72.5°	696.3	834.4	865.1	890.1	911.2	926.5	963.0	947.6	909.2	872.8	815.3
75°	642.6	715.5	744.3	801.8	817.2	842.1	861.3	824.8	767.3	732.8	698.2
77.5°	558.2	594.7	625.3	636.9	682.9	702.1	723.2	723.2	688.6	692.5	640.7
80°	429.7	433.5	422.0	456.5	517.9	542.9	550.5	535.2	560.1	556.3	535.2
82.5°	247.5	230.2	249.4	259.0	289.7	312.7	351.0	383.6	387.5	376.0	399.0
85°	103.6	92.1	105.5	120.8	153.5	189.9	234.0	251.3	247.5	239.8	220.6
87.5°	42.2	42.2	49.9	59.5	78.6	99.7	113.2	132.4	143.9	147.7	138.1
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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	165°	170°	175°	180°
0°	3322.4	3322.4	3322.4	3322.4
2.5°	3406.8	3404.9	3403.0	3399.1
5°	3466.3	3468.2	3468.2	3466.3
7.5°	3510.4	3520.0	3521.9	3521.9
10°	3544.9	3552.6	3554.5	3552.6
12.5°	3533.4	3535.3	3543.0	3544.9
15°	3479.7	3466.3	3462.4	3460.5
17.5°	3353.1	3318.6	3289.8	3276.4
20°	3153.6	3086.5	3030.8	3017.4
22.5°	2931.1	2827.5	2754.6	2729.7
25°	2662.5	2534.0	2455.4	2430.4
27.5°	2399.7	2273.1	2217.5	2186.8
30°	2183.0	2089.0	2027.6	1996.9
32.5°	2039.1	1947.0	1883.7	1854.9
35°	1920.2	1824.2	1739.8	1701.5
37.5°	1841.5	1728.3	1630.5	1592.1
40°	1795.5	1693.8	1588.3	1546.1
42.5°	1772.5	1686.1	1592.1	1546.1
45°	1736.0	1643.9	1563.4	1513.5
47.5°	1680.4	1594.1	1513.5	1467.5
50°	1578.7	1490.5	1425.3	1388.8
52.5°	1471.3	1373.5	1304.4	1264.1
55°	1398.4	1300.6	1246.9	1220.0
57.5°	1385.0	1292.9	1239.2	1208.5
60°	1306.3	1218.1	1149.0	1116.4
62.5°	1137.5	1051.2	997.5	976.4
65°	1032.0	949.5	897.7	882.4
67.5°	963.0	876.6	822.9	811.4
68°	945.7	859.4	813.3	798.0
70°	867.0	784.6	744.3	728.9
72.5°	700.2	619.6	565.9	546.7
75°	610.0	521.8	477.6	468.1
77.5°	535.2	431.6	387.5	377.9
80°	433.5	341.4	234.0	218.7
82.5°	324.2	209.1	174.6	159.2
85°	188.0	143.9	113.2	105.5
87.5°	118.9	99.7	86.3	80.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)